Refrigerant R410A
INVERTER

DESIGN & TECHNICAL MANUAL

AIRSTAGE™ V-II

Variable Refrigerant Flow System

Multi Air Conditioning System for Buildings

- Large Capacity Multi VRF System
- DC Inverter Control Compressor
- Long Piping System Design
- High Efficiency Refrigerant R410A

60 Hz

FUJITSU GENERAL LIMITED

CONTENTS

1. GENERAL INFORMATION

2. MODEL SELECTION

3. OUTDOOR UNITS

4. INDOOR UNITS

5. CONTROL SYSTEM

6. SYSTEM DESIGN

7. FUNCTION SETTING

8. EXTERNAL INPUT & OUTPUT

9. NOTES

10. OPTIONAL PARTS

Refrigerant R410A INVERTER

AIRSTAGE™
Variable Refrigerant Flow System

1. GENERAL INFORMATION

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CONTENTS

1. GENERAL INFORMATION

1. MODEL LINE UP 01-03

1-1. OUTDOOR UNIT 01-03

1-2. INDOOR UNIT 01-05

1-3. CONTROLLER 01-08

1-4. ADAPTOR / CONVERTOR / MAINTENANCE TOOL 01-10

1-5. BRANCH KIT 01-12

1-5-1. OUTDOOR UNIT BRANCH KIT 01-12

1-5-2. SEPARATION TUBE 01-12

1-5-3. HEADER 01-13

1-6. CASSETTE GRILLE 01-14

1-7. OTHER (optional parts) 01-15

GENERAL INFORMATION

1. MODEL LINE UP

1-1. OUTDOOR UNIT

● Extensive line up from 6Ton to 24Ton.

■ LINE UP (SINGLE)

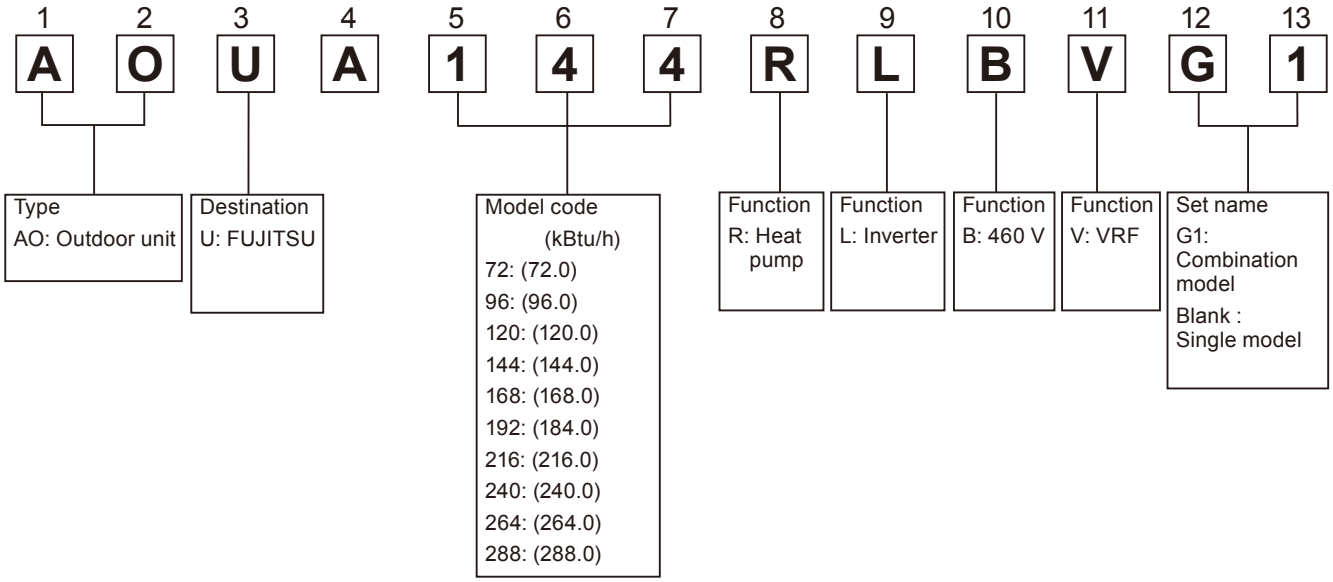
Ton	Capacity (KBtu)	Model name	Chassis
6	72	AOUA72RLBV1	
8	96	AOUA96RLBV1	
10	120	AOUA120RLBV1	

■ LINE UP (COMBINATION)

Ton	Capacity (KBtu)	Set model name	Unit1 (Model name)	Unit2 (Model name)	Unit3 (Model name)	Maximum connectable indoor unit
6	72	AOUA72RLBV1	AOUA72RLBV1	-	-	16
8	96	AOUA96RLBV1	AOUA96RLBV1	-	-	21
10	120	AOUA120RLBV1	AOUA120RLBV1	-	-	26
12	144	AOUA144RLBVG1	AOUA72RLBV1	AOUA72RLBV1	-	32
14	168	AOUA168RLBVG1	AOUA96RLBV1	AOUA72RLBV1	-	37
16	192	AOUA192RLBVG1	AOUA120RLBV1	AOUA72RLBV1	-	42
18	216	AOUA216RLBVG1	AOUA120RLBV1	AOUA96RLBV1	-	47
20	240	AOUA240RLBVG1	AOUA120RLBV1	AOUA120RLBV1	-	52
22	264	AOUA264RLBVG1	AOUA96RLBV1	AOUA96RLBV1	AOUA72RLBV1	58
24	288	AOUA288RLBVG1	AOUA96RLBV1	AOUA96RLBV1	AOUA96RLBV1	63

GENERAL INFORMATION

■ MODEL DESIGNATION



GENERAL INFORMATION

1-2. INDOOR UNIT

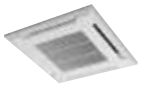
Various combinations of types and capacities, ranging from 4,000 to 96,000 Btu/h.

■ LINE UP (1/3)

Capacity		Compact cassette	Circular flow cassette	Cassette	Mini duct	Slim duct/slim concealed floor	Medium static pressure duct
Btu/h	Model code						
4,000	4	●			●		
7,500	7	●				●	
9,500	9	●				●	
12,000	12	●				●	
14,000	14	●				●	
18,000	18	●	●	●		●	
24,000	24	●	●	●			●
30,000	30		●	●			●
36,000	36		●	●			●
48,000	48		●				
60,000	60						
72,000	72						
96,000	96						

Compact cassette

AUUA4TLAV1
AUUA7TLAV
AUUA9TLAV
AUUA12TLAV
AUUA14TLAV
AUUA18TLAV
AUUA24TLAV



Grid type grille:
UTG-CCGVG

Standard type grille:
UTG-CCGV

Circular flow cassette

AUUB18TLAV1
AUUB24TLAV1
AUUB30TLAV1
AUUB36TLAV1
AUUB48TLAV1

Cassette

AUUB18TLAV
AUUB24TLAV
AUUB30TLAV
AUUB36TLAV

Mini duct

ARUL4TLAV1

Slim duct/slim concealed floor

ARUL7TLAV
ARUL9TLAV
ARUL12TLAV
ARUL14TLAV

ARUL18TLAV

Medium static pressure duct

ARUM24TLAV
ARUM30TLAV
ARUM36TLAV

GENERAL INFORMATION

■ LINE UP (2/3)

Capacity		High static pressure duct	Vertical air handler	Compact floor	Floor / ceiling	Ceiling
Btu/h	Model code					
4,000	4			●		
7,500	7			●		
9,500	9			●		
12,000	12		●	●	●	
14,000	14			●	●	
18,000	18		●		●	
24,000	24		●		●	
30,000	30		●			●
36,000	36	●	●			●
48,000	48	●	●			
60,000	60	●	●			
72,000	72	●				
96,000	96	●				

High static pressure duct

ARUH36TLAV
ARUH48TLAV
ARUH60TLAV
ARUH72TLAV1
ARUH96TLAV

Vertical air handler

ARUV12TLAV
ARUV18TLAV
ARUV24TLAV
ARUV30TLAV
ARUV36TLAV
ARUV48TLAV
ARUV60TLAV

Compact floor

AGUA4TLAV1
AGUA7TLAV1
AGUA9TLAV1
AGUA12TLAV1
AGUA14TLAV1

Floor / Ceiling

ABUA12TLAV
ABUA14TLAV
ABUA18TLAV
ABUA24TLAV

Ceiling

ABUA30TLAV
ABUA36TLAV

GENERAL INFORMATION

■ LINE UP (3/3)

Capacity		Wall mounted
Btu/h	Model code	
4,000	4	●
7,500	7	●
9,500	9	●
12,000	12	●
14,000	14	●
18,000	18	●
24,000	24	●
30,000	30	●
34,000	36	●
48,000	48	
60,000	60	
72,000	72	
96,000	96	

Compact Wall mounted

ASUA4TLAV1
ASUA7TLAV1
ASUA9TLAV1

ASUA12TLAV1
ASUA14TLAV1

ASUB18TLAV1
ASUB24TLAV1

ASUB30TLAV1
ASUB36TLAV1

ASUA7TLAV
ASUA9TLAV
ASUA12TLAV
ASUA14TLAV

ASUB18TLAV
ASUB24TLAV

■ MODEL DESIGNATION

1	2	3	4	5	6	7	8	9	10	11
A	U	U	A	1	2	T	L	A	V	1

Type
AU: Cassette
AR: Duct
AB: Floor/Ceiling or Ceiling
AS: Wall Mounted

Destination
U: FUJITSU

Model
A: Standard (AU, AS)
B: Large (AU, AS)
L: Low Static (AR)
M: Mid Static (AR)
H: High Static Pressure (AR)
V: Vertical air handler (AR)

Model code (kBtu/h)
7 (7.5)
9 (9.5)
12 (12.0)
14 (14.0)
18 (18.0)
24 (24.0)
30 (30.0)
36 (36.0)
48 (48.0)
54 (54.0)
60 (60.0)
72 (72.0)
96 (96.0)

Function
T: Heat pump

Function
L: Inverter

Function
A: 1 Phase

Function
V: VRF

Version
1

GENERAL INFORMATION

1-3. CONTROLLER

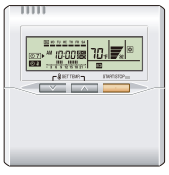
■ LINE UP

Type	Model	
System Controller	UTY-APGXZ1	Option: UTY-PEGXZ1, UTY-PPGXP2
System Controller Lite	UTY-ALGXZ1	Option: UTY-PLGXA2, UTY-PLGXR2, UTY-PLGXE2, UTY-PLGXP2, UTY-PLGXX2
Touch Panel Controller	UTY-DTGYZ1	Option: UTY-PTGXA
Central Remote Controller	UTY-DCGY	
Wired Remote Controller (Touch panel)	UTY-RNRUZ2	
Wired Remote Controller	UTY-RNKU	
Simple Remote Controller (With operation mode)	UTY-RSRY	
Simple Remote Controller (Without operation mode)	UTY-RHRY	
Simple Remote Controller (With operation mode)	UTY-RSKU	
Simple Remote Controller (Without operation mode)	UTY-RHKU	
Wireless Remote Controller	UTY-LNHU	

■ CENTRAL CONTROL

System Controller / System Controller Lite	Touch Panel Controller	Central Remote Controller
UTY-APGXZ1 UTY-ALGXZ1	UTY-DTGYZ1	UTY-DCGY

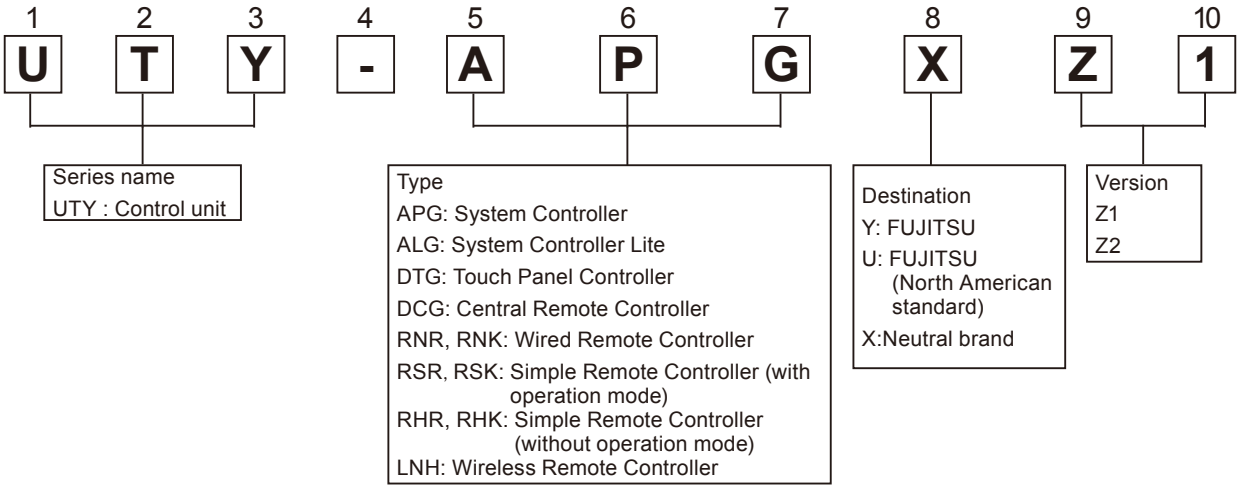
■ INDIVIDUAL CONTROL

Wired Remote Controller	Simple Remote Controller
(Touch panel) UTY-RNRUZ2  UTY-RNKU	(With operation mode) UTY-RSRY UTY-RSKU (Without operation mode) UTY-RHRY UTY-RHKU

Wireless Remote Controller
UTY-LNHU

GENERAL INFORMATION

■ MODEL DESIGNATION



GENERAL INFORMATION

1-4. ADAPTOR / CONVERTOR / MAINTENANCE TOOL

Network Convertor
Model : UTY-VTGX

For two wire type and three wire type remote controller.
Split type systems can be controlled from a central controller via the convertor.

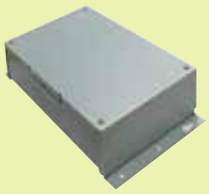
Network Convertor
Model : UTY-VGGXZ1

For three wire type remote controller.
Split type systems can be controlled from a central controller via the convertor.

Network Convertor for LonWorks®
Model : UTY-VLGX

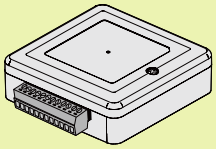
For connection between VRF network system and a LonWorks® open network for management of small to medium-sized BMS.

Modbus® Convertor for VRF
Model : UTY-VMGX



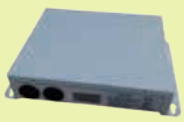
For connection between VRF network system and a Modbus® open network.

Thermostat Convertor
Model: UTY-TTRX



For control Fujitsu General products using a third-party thermostat.

BACnet® Gateway (Hardware)
Model : UTY-VBGX



For connection between VRF network system to the BMS system using BACnet® protocol.
Supports max.128 indoor units.

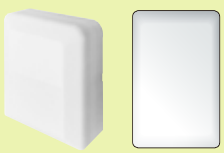
BACnet® Gateway (Software)
Model : UTY-ABGXZ1

The central control of maximum 1600 indoor units can be realized by connecting the VRF network system to the BACnet®, a global standard of the open network.

Signal Amplifier
Model : UTY-VSGXZ1

If the total length of transmission line exceeds 1,640 ft. (500 m), or the number of units exceeds 64, Signal Amplifier will be necessary to use.

External Switch Controller
Models : UTY-TERX, UTY-TEKX



Air conditioner switching can be controlled by connecting other external sensor switches.

GENERAL INFORMATION

Service Tool

Model : UTY-ASGXZ1

Extensive monitoring and analysis functions for installation and maintenance. Operation status and error history can be grasped promptly and adequately.

Web Monitoring Tool

Model : UTY-AMGXZ1

Trouble free operation at all times by web monitoring system. The operation status of the VRF network system within the building can be monitored in real time over the Internet.

GENERAL INFORMATION

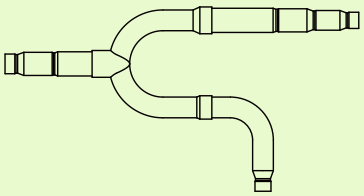
1-5. BRANCH KIT

1-5-1. OUTDOOR UNIT BRANCH KIT

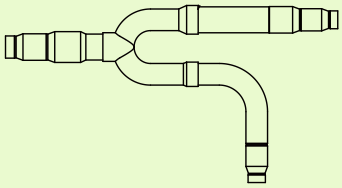
Outdoor Unit Branch Kit

Model :UTP-CX567A

Liquid Pipe



Gas Pipe

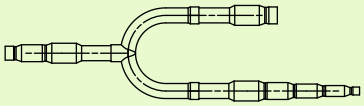


1-5-2. SEPARATION TUBE

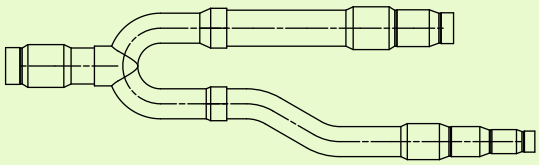
Separation Tube

Model :UTP-AX567A

Liquid Pipe



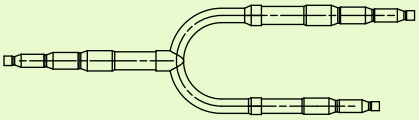
Gas Pipe



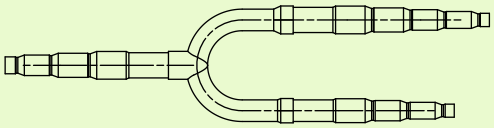
Separation Tube

Model :UTP-AX090A

Liquid Pipe



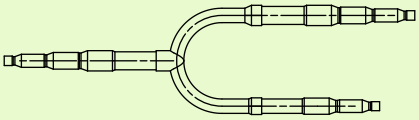
Gas Pipe



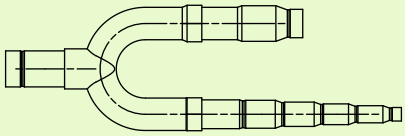
Separation Tube

Model :UTP-AX180A

Liquid Pipe

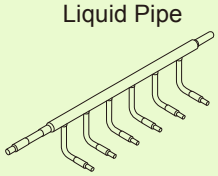
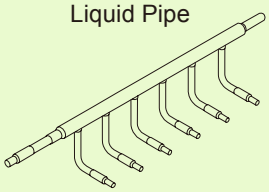
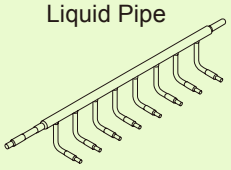
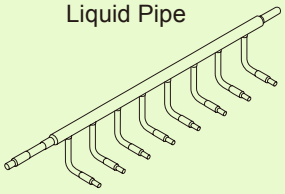
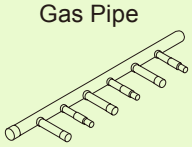
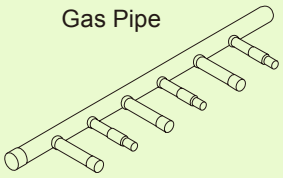
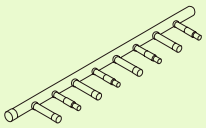
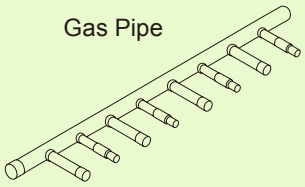


Gas Pipe



GENERAL INFORMATION

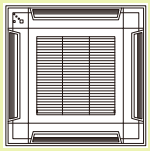
1-5-3. HEADER

Header			
Model : UTR-H0906L	Model : UTR-H1806L	Model : UTR-H0908L	Model : UTR-H1808L
Liquid Pipe 	Liquid Pipe 	Liquid Pipe 	Liquid Pipe 
Gas Pipe 	Gas Pipe 	Gas Pipe 	Gas Pipe 

GENERAL INFORMATION

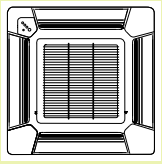
1-6. CASSETTE GRILLE

Grid type grille
Model: UTG-CCGVG



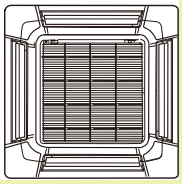
For Compact Cassette type

Standard type grille
Model: UTG-CCGV



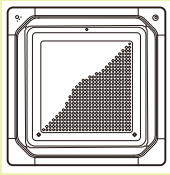
For Compact Cassette type

Cassette grille
Model: UTG-LCGV



For Cassette type

Cassette grille
Models: UTG-LCGVCW
UTG-LCGVCB



For Circular flow cassette type

GENERAL INFORMATION

1-7. OTHER (optional parts)

Flange (Square)

Model : UTD-SF045T

For Medium Static Pressure Duct type

Flange (Round)

Model : UTD-RF204

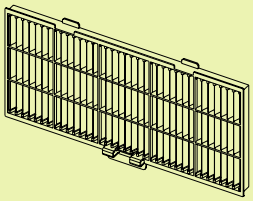
For Medium Static Pressure Duct type
For Ceiling type

x 4 pcs

Air Filter

Model : UTD-LF25NA

For Medium Static Pressure Duct type

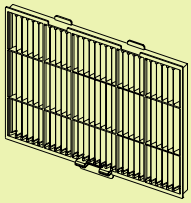


x 2 pcs

Air Filter

Model : UTD-LF60KA

For High Static Pressure Duct type



x 2 pcs

Drain Pump Unit

Model : UTZ-PU1NBA

For Duct type

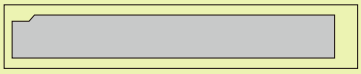
Drain Pump Unit

Model : UTZ-PU1EBA

For Ceiling type

Air outlet shutter plate

Model : UTR-YDZB



For Compact Cassette type

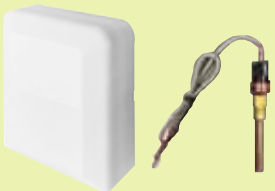
Air outlet shutter plate

Model : UTR-YDZK

For Cassette type
For Circular flow cassette type

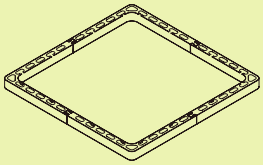
Pressure sensor kit

Model : UTY-SPWX



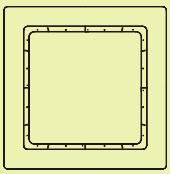
GENERAL INFORMATION

Panel spacer
Model : UTG-BKXA-W



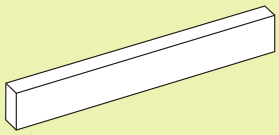
For Cassette type
For Circular flow cassette type

Wide panel
Model : UTG-AKXA-W



For Cassette type
For Circular flow cassette type

Half concealed kit
Model : UTR-STA



For Compact Floor type

IR Receiver Unit
Model: UTB-YWC

IR Receiver Unit
Model : UTY-LRHYB1

For Cassette type

IR Receiver Unit
Model: UTY-LBHXD

For Circular Flow Cassette type

Human Sensor Kit
Model: UTY-SHZXC

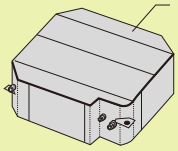
For Circular Flow Cassette type

Remote Sensor Unit
Model : UTY-XSZX

Remote sensing unit provides greater flexibility for optimum temperature sensing.

Insulation Kit for High Humidity Environments
Models : UTZ-KXGC *1
UTZ-KXRA *2

*1 For Compact cassette type
*2 For Cassette type
For Circular flow cassette type



Install when the condition under the roof is over 80% in humidity and over 30°C in temperature.

GENERAL INFORMATION

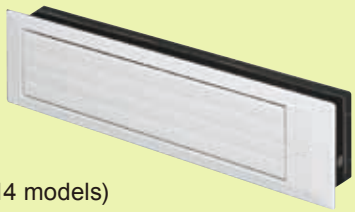
Fresh air intake kit
Model : UTZ-VXRA

For Cassette type
For Circular flow cassette type

Fresh air intake kit
Model : UTZ-VXAA

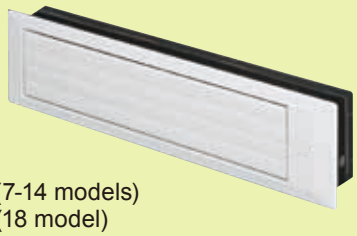
For Compact Cassette type

Auto louver grille kit
Model : UTD-GXTA-W



For Slim Duct (7-14 models)
For Mini Duct

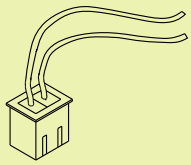
Auto louver grille kit
Models : UTD-GXSA-W *1
UTD-GXSB-W *2



*1 For Slim Duct (7-14 models)
*2 For Slim Duct (18 model)

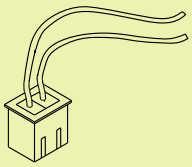
GENERAL INFORMATION

External connect kit
Model: UTY-XWZXZ6



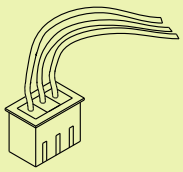
For Outdoor unit

External connect kit
Model : UTY-XWZXZ7



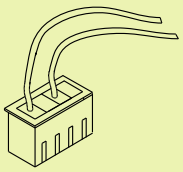
For Indoor unit /
Central remote controller

External connect kit
Model: UTY-XWZXZ8



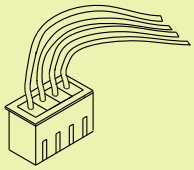
For Central remote controller

External connect kit
Model : UTY-XWZXZ9



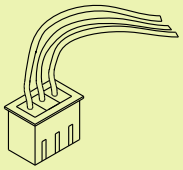
For Outdoor unit

External connect kit
Model : UTY-XWZXZA



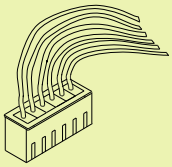
For Touch panel controller /
Central remote controller

External connect kit
Model : UTY-XWZXZB



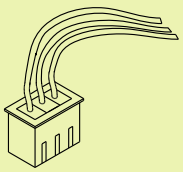
For Indoor unit

External connect kit
Model: UTY-XWZXZC



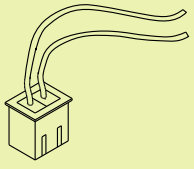
For Indoor unit

External connect kit
Model: UTY-XWZXZD



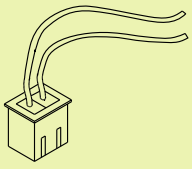
For Indoor unit

External connect kit
Model: UTY-XWZXZE



For Indoor unit

External connect kit
Model: UTY-XWZXZF



For Outdoor unit

Refrigerant R410A INVERTER

AIRSTAGE™
Variable Refrigerant Flow System

2. MODEL SELECTION

CONTENTS

2. MODEL SELECTION

1. MODEL SELECTION PROCEDURE ..... 02 - 01

2. MODEL LINE UP ..... 02 - 02
   - 2-1. OUTDOOR UNIT ..... 02 - 02
   - 2-2. INDOOR UNIT ..... 02 - 03
   - 2-3. OPTIONAL PARTS ..... 02 - 05

3. MODEL SELECTION AND CAPACITY CALCULATION ..... 02 - 07
   - 3-1. SELECTION PROCEDURE OF INDOOR UNIT AND OUTDOOR UNIT ..... 02 - 07
   - 3-2. METHOD OF CAPACITY CALCULATION ..... 02 - 09
   - 3-3. THE EXAMPLE OF CALCULATION ..... 02 - 10

4. CAPACITY TABLE COOLING (OUTDOOR UNIT) ..... 02 - 13

5. CAPACITY TABLE HEATING (OUTDOOR UNIT) ..... 02 - 23

6. CAPACITY COMPENSATION COEFFICIENT ..... 02 - 33

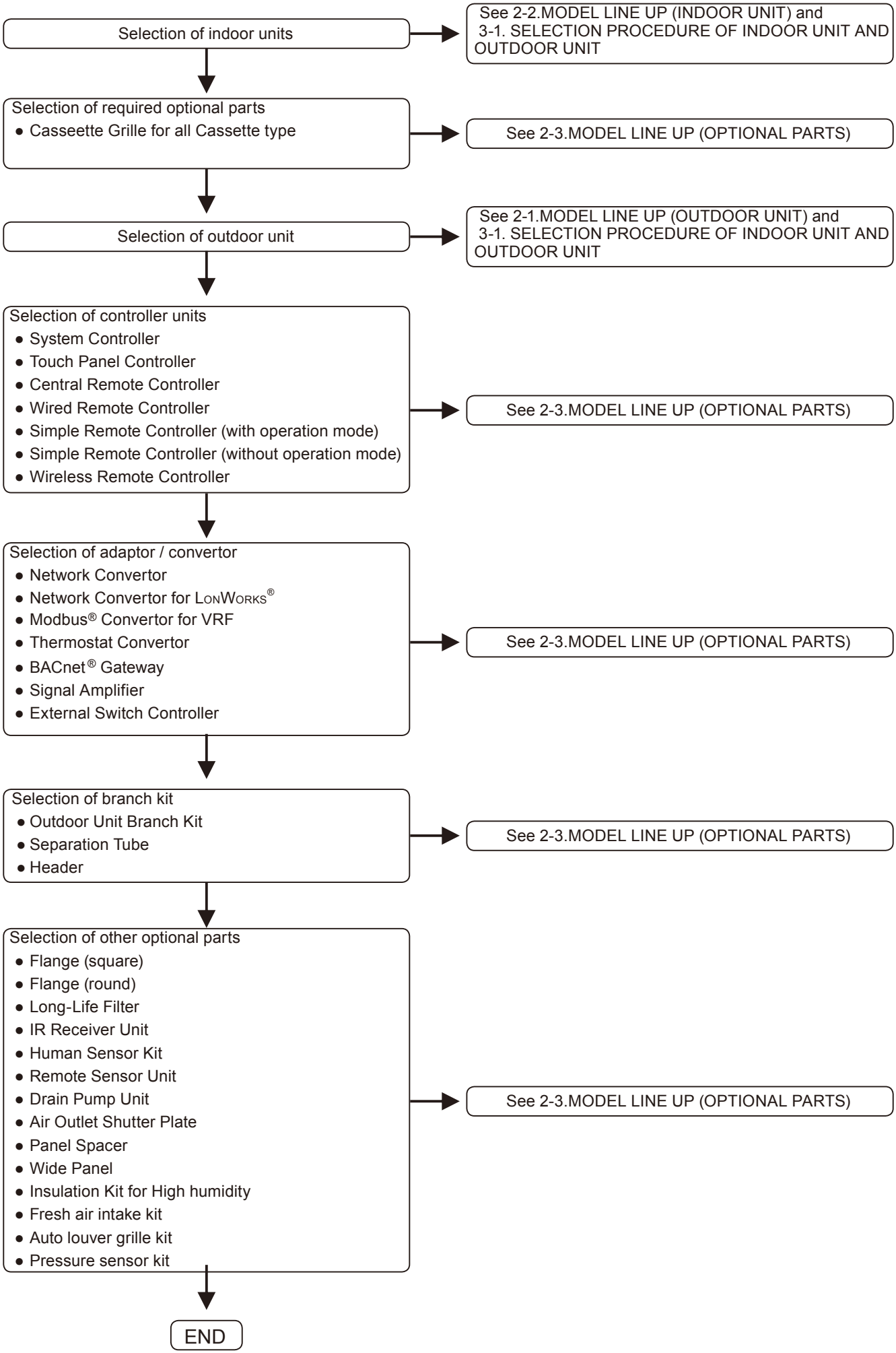
7. CAPACITY TABLE COOLING (INDOOR UNIT) ..... 02 - 34
   - 7-1. COMPACT CASSETTE TYPE ..... 02 - 34
   - 7-2. CIRCULAR FLOW CASSETTE TYPE ..... 02 - 36
   - 7-3. CASSETTE TYPE ..... 02 - 38
   - 7-4. MINI DUCT TYPE ..... 02 - 40
   - 7-5. SLIM DUCT / SLIM CONCEALED FLOOR TYPE ..... 02 - 41
   - 7-6. MEDIUM STATIC PRESSURE DUCT TYPE ..... 02 - 43
   - 7-7. HIGH STATIC PRESSURE DUCT TYPE ..... 02 - 44
   - 7-8. VERTICAL AIR HANDLER TYPE ..... 02 - 46
   - 7-9. COMPACT FLOOR TYPE ..... 02 - 48
   - 7-10. FLOOR / CEILING TYPE ..... 02 - 50
   - 7-11. CEILING TYPE ..... 02 - 51
   - 7-12. WALL MOUNTED TYPE ..... 02 - 52

CONTENTS

2. MODEL SELECTION

8. CAPACITY TABLE HEATING (INDOOR UNIT) ..... 02 - 57
- 8-1. COMPACT CASSETTE TYPE ..... 02 - 57
- 8-2. CIRCULAR FLOW CASSETTE TYPE ..... 02 - 59
- 8-3. CASSETTE TYPE ..... 02 - 61
- 8-4. MINI DUCT TYPE ..... 02 - 63
- 8-5. SLIM DUCT / SLIM CONCEALED FLOOR TYPE ..... 02 - 64
- 8-6. MEDIUM STATIC PRESSURE DUCT TYPE ..... 02 - 66
- 8-7. HIGH STATIC PRESSURE DUCT TYPE ..... 02 - 67
- 8-8. VERTICAL AIR HANDLER TYPE ..... 02 - 69
- 8-9. COMPACT FLOOR TYPE ..... 02 - 71
- 8-10. FLOOR / CEILING TYPE ..... 02 - 73
- 8-11. CEILING TYPE ..... 02 - 74
- 8-12. WALL MOUNTED TYPE ..... 02 - 75

1. MODEL SELECTION PROCEDURE



2. MODEL LINE UP

2-1. OUTDOOR UNIT

■ LINE UP

Ton	Capacity (Btu/h) Cooling	Model name	Unit1 (Ton)	Unit2 (Ton)	Unit3 (Ton)	Maximum connectable indoor unit	Indoor unit connectable capacity (Btu/h)
6	72,000	AOUA72RLBV1	6	-	-	16	36,000 to 108,000
8	96,000	AOUA96RLBV1	8	-	-	21	48,000 to 144,000
10	120,000	AOUA120RLBV1	10	-	-	26	60,000 to 180,800
12	144,000	AOUA144RLBVG1	6	6	-	32	72,000 to 216,000
14	168,000	AOUA168RLBVG1	8	6	-	37	84,000 to 252,000
16	192,000	AOUA192RLBVG1	10	6	-	42	96,000 to 288,000
18	216,000	AOUA216RLBVG1	10	8	-	47	108,000 to 324,000
20	240,000	AOUA240RLBVG1	10	10	-	52	120,000 to 360,000
22	264,000	AOUA264RLBVG1	8	8	6	58	132,000 to 396,000
24	288,000	AOUA288RLBVG1	8	8	8	63	144,000 to 432,000

2-2. INDOOR UNIT

■ LINE UP (1/2)

Type	Rated capacity (Btu/h)		Model name	Remarks
	Cooling	Heating		
Compact Cassette	4,000	4,400	AUUA4TLAV1	UTG-CCGVG (Grid type grille) UTG-CCGV (Standard type grille)
	7,500	9,500	AUUA7TLAV	
	9,500	10,900	AUUA9TLAV	
	12,000	13,500	AUUA12TLAV	
	14,000	15,600	AUUA14TLAV	
	18,000	20,000	AUUA18TLAV	
	24,000	27,000	AUUA24TLAV	
Circular flow cassette	18,000	20,000	AUUB18TLAV1	UTG-LCGVCW (Cassette grille) UTG-LCGVCB (Cassette grille)
	24,000	27,000	AUUB24TLAV1	
	30,000	34,000	AUUB30TLAV1	
	36,000	40,000	AUUB36TLAV1	
	48,000	54,000	AUUB48TLAV1	
Cassette	18,000	20,000	AUUB18TLAV	UTG-LCGV (Cassette grille)
	24,000	27,000	AUUB24TLAV	
	30,000	34,000	AUUB30TLAV	
	36,000	40,000	AUUB36TLAV	
Mini duct	4,000	4,400	ARUL4TLAV1	
Slim Duct / Slim Concealed Floor	7,500	9,500	ARUL7TLAV	
	9,500	10,900	ARUL9TLAV	
	12,000	13,500	ARUL12TLAV	
	14,000	15,600	ARUL14TLAV	
	18,000	20,000	ARUL18TLAV	
Medium Static Pressure Duct	24,000	27,000	ARUM24TLAV	
	30,000	34,000	ARUM30TLAV	
	36,000	40,000	ARUM36TLAV	
High Static Pressure Duct	36,000	40,000	ARUH36TLAV	
	48,000	54,000	ARUH48TLAV	
	60,000	67,000	ARUH60TLAV	
	72,000	81,000	ARUH72TLAV1	
	96,000	108,000	ARUH96TLAV	
Vertical air handler	12,000	13,500	ARUV12TLAV	
	18,000	20,000	ARUV18TLAV	
	24,000	27,000	ARUV24TLAV	
	30,000	34,000	ARUV30TLAV	
	36,000	40,000	ARUV36TLAV	
	48,000	54,000	ARUV48TLAV	
	60,000	67,000	ARUV60TLAV	
Compact floor	4,000	4,400	AGUA4TLAV1	
	7,500	9,500	AGUA7TLAV1	
	9,500	10,900	AGUA9TLAV1	
	12,000	13,500	AGUA12TLAV1	
	14,000	15,600	AGUA14TLAV1	
Floor / Ceiling	12,000	13,500	ABUA12TLAV	
	14,000	15,600	ABUA14TLAV	
	18,000	20,000	ABUA18TLAV	
	24,000	27,000	ABUA24TLAV	
Ceiling	30,000	34,000	ABUA30TLAV	
	36,000	40,000	ABUA36TLAV	

■ LINE UP (1/2)

Type	Rated capacity (Btu/h)		Model name	Remarks
	Cooling	Heating		
Wall Mounted	4,000	4,400	ASUA4TLAV1	
	7,500	9,500	ASUA7TLAV ASUA7TLAV1	
	9,500	10,900	ASUA9TLAV ASUA9TLAV1	
	12,000	13,500	ASUA12TLAV ASUA12TLAV1	
	14,000	15,600	ASUA14TLAV ASUA14TLAV1	
	18,000	20,000	ASUB18TLAV ASUB18TLAV1	
	24,000	27,000	ASUB24TLAV ASUB24TLAV1	
	30,000	34,000	ASUB30TLAV1	
	34,000	38,000	ASUB36TLAV1	

2-3. OPTIONAL PARTS

■ CONTROLLER

Items	Model name	Remarks
System Controller	UTY-APGXZ1	Option: UTY-PEGXZ1, UTY-PPGXP2
System Controller Lite	UTY-ALGXZ1	Option: UTY-PLGXA2, UTY-PLGXR2, UTY-PLGXE2, UTY-PLGXP2, UTY-PLGXX2
Touch Panel Controller	UTY-DTGYZ1	Option: UTY-PTGXA
	UTY-DTGY	
Central Remote Controller	UTY-DCGY	
Wired Remote Controller (Touch panel)	UTY-RNRUZ2	2-wire type
Wired Remote Controller	UTY-RNKU	3-wire type
Simple Remote Controller (With operation mode)	UTY-RSRY	2-wire type
Simple Remote Controller (Without operation mode)	UTY-RHRY	
Simple Remote Controller (With operation mode)	UTY-RSKU	3-wire type
Simple Remote Controller (Without operation mode)	UTY-RHKU	
Wireless Remote Controller	UTY-LNHU	

■ ADAPTOR / CONVERTOR / MAINTENANCE TOOL

Items	Model name	Remarks
Network Convertor	UTY-VTGX	
	UTY-VGGXZ1	
Network Convertor for LonWorks®	UTY-VLGX	
Modbus® Convertor for VRF	UTY-VMGX	
Thermostat Convertor	UTY-TTRX	
BACnet® Gateway (Hardware)	UTY-VBGX	
BACnet® Gateway (Software)	UTY-ABGXZ1	
Signal Amplifier	UTY-VSGXZ1	
External Switch Controller	UTY-TERX	2-wire type
	UTY-TERX	3-wire type
Service Tool	UTY-ASGXZ1	
Web Monitoring Tool	UTY-AMGXZ1	

■ BRANCH KIT

Items	Model name	Total cooling capacity of indoor units (x) (Btu/h) *1
Outdoor Unit Branch Kit	UTP-CX567A	-
Separation Tube	UTP-AX090A	x < 96,500
	UTP-AX180A	96,500 ≤ x < 193,000
	UTP-AX567A	193,000 ≤ x
Header	UTR-H0906L	x < 96,500
	UTR-H1806L	96,500 ≤ x < 193,000
	UTR-H0908L	x < 96,500
	UTR-H1808L	96,500 ≤ x < 193,000

＊1 : Total cooling capacity of indoor units means the total value of indoor unit cooling capacity connected downstream.

■ CASSETTE GRILLE

Items	Model name	Remarks
Cassete Grille	UTG-LCGVCW	For Circular Flow Cassette type
	UTG-LCGVCB	
	UTG-CCGVG	For Compact Cassette type
	UTG-CCGV	
	UTG-LCGV	For Cassette type

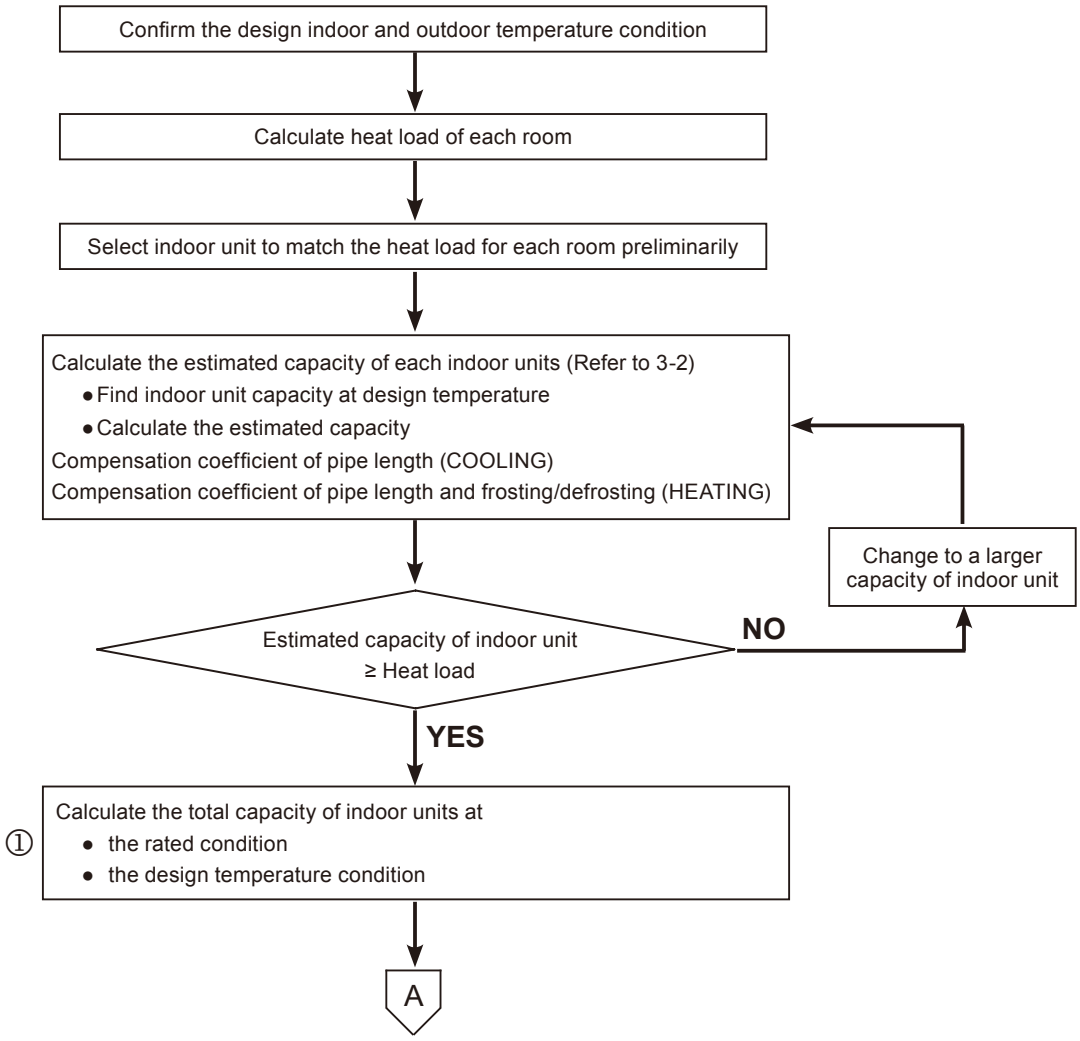
■ OTHERS

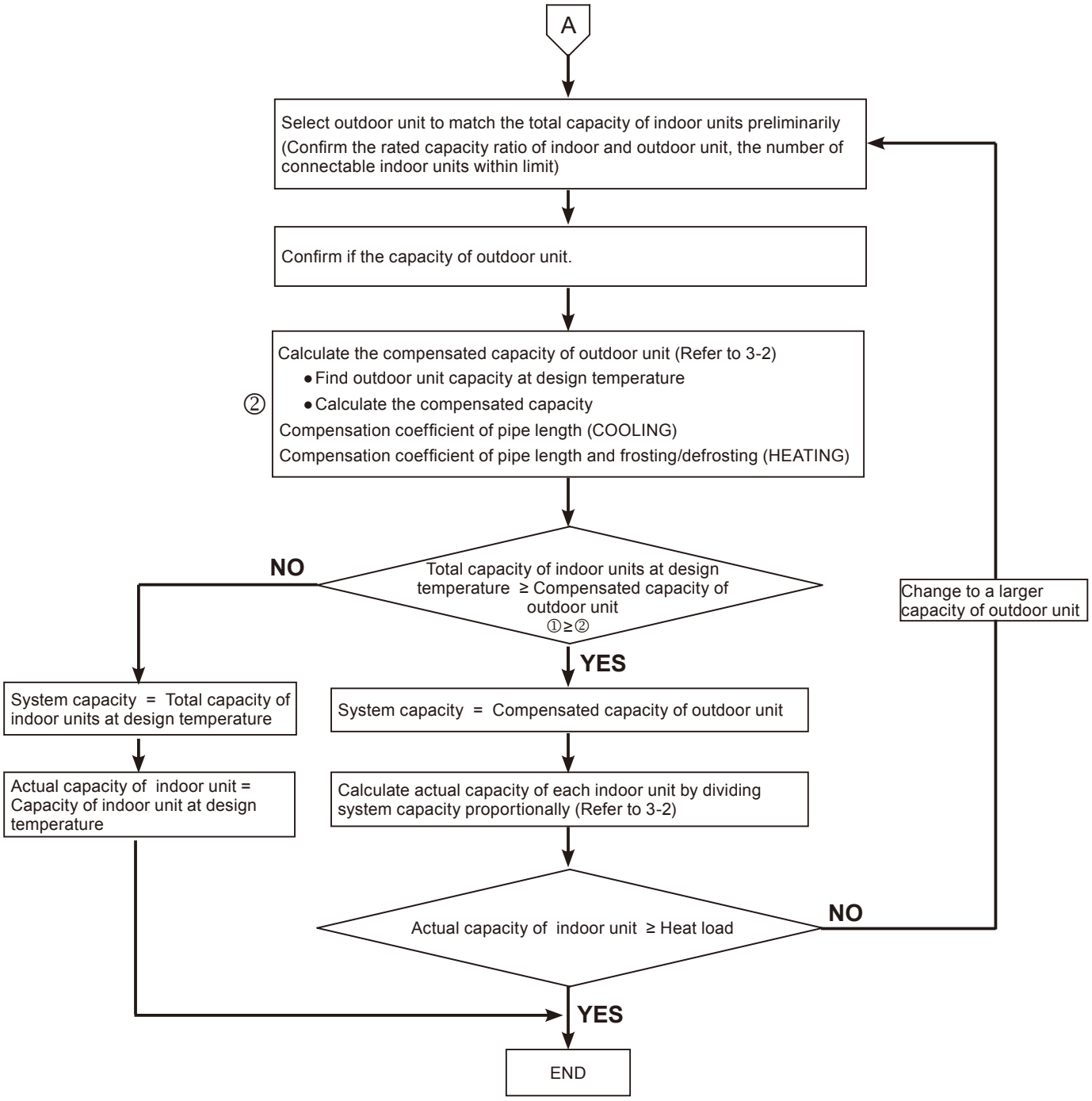
Items	Model name	Remarks
Flange (Square)	UTD-SF045T	For Medium Static Pressure Duct type
Flange (Round)	UTD-RF204	For Medium Static Pressure Duct type For Ceiling type
Air Filter	UTD-LF25NA	For Medium Static Pressure Duct type
	UTD-LF60KA	For High Static Pressure Duct type
Drain Pump Unit	UTZ-PU1NBA	For Medium Static Pressure Duct type
	UTZ-PU1EBA	For Ceiling type
Air Outlet Shutter Plate	UTR-YDZB	For Compact Cassette type
	UTR-YDZK	For Cassette type For Circular Flow Cassette type
Panel Spacer	UTG-BKKA-W	For Cassette type For Circular Flow Cassette type
Wide Panel	UTG-AKXA-W	For Cassette type For Circular Flow Cassette type
Half concealed kit	UTR-STA	For Compact Floor type
IR Receiver Unit	UTB-YWC	For all Duct type
	UTY-LRHYB1	For Cassette type
	UTY-LBHXD	For Circular Flow Cassette type
Human sensor kit	UTY-SHZXC	For Circular Flow Cassette type
Remote Sensor Unit	UTD-XSZX	For all Duct type
Insulation Kit for High Humidity	UTZ-KXGC	For Compact Cassette type
	UTZ-KXRA	For Circular Flow Cassette type For Cassette type
Fresh air intake kit	UTZ-VXAA	For Compact Cassette type
	UTZ-VXRA	For Cassette type
Auto louver grille kit	UTD-GXSA-W	For Slim Duct type (7-14 models)
	UTD-GXSB-W	For Slim Duct type (18 model)
	UTD-GXTA-W	For Slim Duct type (7-14 models) For Mini Duct type
Pressure sensor kit	UTY-SPWX	For V-II series
External connect kit	UTY-XWZXZ6	For Outdoor unit
	UTY-XWZXZ7	For Indoor unit / Central remote controller
	UTY-XWZXZ8	For Central remote controller
	UTY-XWZXZ9	For Outdoor unit
	UTY-XWZXZA	For Touch panel controller / Central remote controller
	UTY-XWZXZB	For Indoor unit
	UTY-XWZXZC	For Indoor unit
	UTY-XWZXZD	For Indoor unit
	UTY-XWZXZE	For Indoor unit
	UTY-XWZXZF	For Outdoor unit

3. MODEL SELECTION AND CAPACITY CALCULATION

3-1. SELECTION PROCEDURE OF INDOOR UNIT AND OUTDOOR UNIT

Please select indoor units and outdoor unit and make the capacity of each indoor unit be larger than cooling and heating load.




A
Select outdoor unit to match the total capacity of indoor units preliminarily
(Confirm the rated capacity ratio of indoor and outdoor unit, the number of connectable indoor units within limit)
Confirm if the capacity of outdoor unit.
Calculate the compensated capacity of outdoor unit (Refer to 3-2)
● Find outdoor unit capacity at design temperature
② ● Calculate the compensated capacity
Compensation coefficient of pipe length (COOLING)
Compensation coefficient of pipe length and frosting/defrosting (HEATING)
NO
Total capacity of indoor units at design temperature ≥ Compensated capacity of outdoor unit
①≥②
Change to a larger capacity of outdoor unit
YES
System capacity = Total capacity of indoor units at design temperature
System capacity = Compensated capacity of outdoor unit
Actual capacity of indoor unit = Capacity of indoor unit at design temperature
Calculate actual capacity of each indoor unit by dividing system capacity proportionally (Refer to 3-2)
Actual capacity of indoor unit ≥ Heat load
NO
YES
END

3-2. METHOD OF CAPACITY CALCULATION

The capacity calculation method which takes the effects of air temperature, pipe length and frosting/defrosting into consideration is shown below.

1. Calculate the estimated capacity of each indoor unit.

(1) Find **capacity of indoor unit at rated condition (TCin)r and at design temperature (TCin)d**
[from 7. CAPACITY TABLE COOLING (INDOOR UNIT) or 8. CAPACITY TABLE HEATING (INDOOR UNIT)]

(2) Find the following compensation coefficient [From 6. CAPACITY COMPENSATION COEFFICIENT].

- **Compensation coefficient of pipe length**
- **Compensation coefficient of frosting/defrosting** (Heating calculation only)

(3) Calculate **the estimated capacity of indoor unit (TCin)e.**

COOLING:

Estimated capacity of indoor unit (TCin)e
= Capacity of indoor unit at design temperature (TCin)d
x Compensation coefficient of pipe length

HEATING:

Estimated capacity of indoor unit (TCin)e
= Capacity of indoor unit at design temperature (TCin)d
x Compensation coefficient of pipe length
x Compensation coefficient of frosting/defrosting

2. Calculate the compensated capacity of outdoor unit.

(4) Find **capacity of outdoor unit at rated condition (TCout)r** [From 2. MODEL LINE UP].

(5) Calculate **total rated capacity of indoor units : ∑(TCin)r**
and **ratio to the rated capacity of outdoor unit : ∑(TCin)r / (TCout)r** .

(6) Find capacity of outdoor unit at design temperature (TCout)d
[using result of (5) and 4. CAPACITY TABLE (OUTDOOR UNIT)].

(7) Calculate the compensated capacity of outdoor unit (TCout)c.

COOLING:

Compensated capacity of outdoor unit (TCout)c
= Capacity of outdoor unit at design temperature (TCout)d
x Compensation coefficient of pipe length

HEATING:

Compensated capacity of outdoor unit (TCout)c
= Capacity of outdoor unit at design temperature (TCout)d
x Compensation coefficient of pipe length
x Compensation coefficient of frosting/defrosting

3. Decide system capacity.

(8) Calculate **total capacity of indoor units at design temperature ∑(TCin)d.**

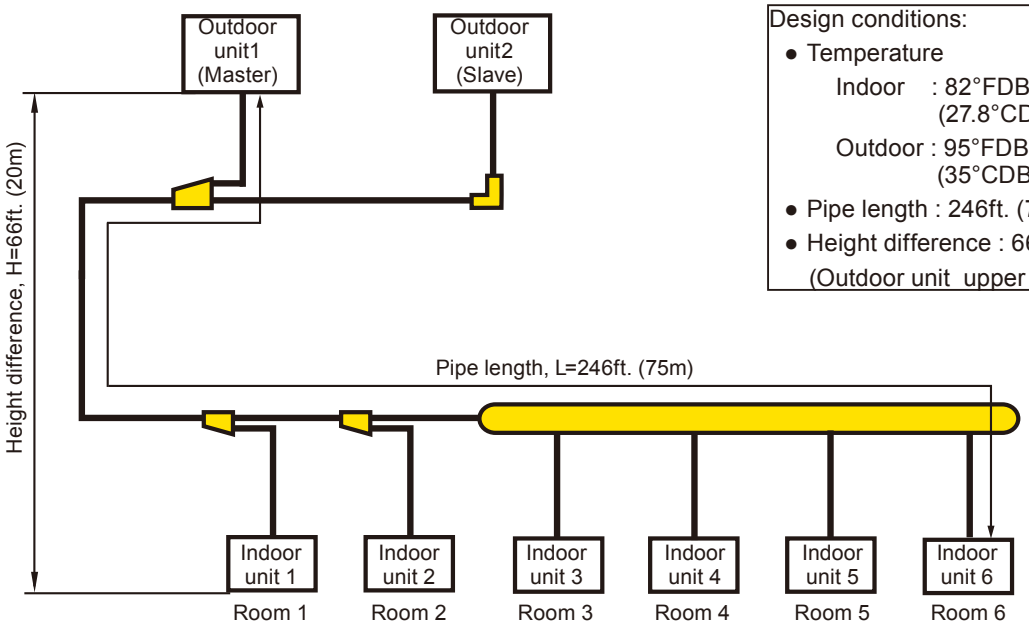
(9) **System capacity** = the smaller one of (TCout)c and ∑(TCin)d. ••••••••• **(7) or (8)**

4. Calculate actual capacity of each indoor unit.

(10) Calculate actual capacity of each indoor unit by dividing system capacity proportionally.

Actual capacity of indoor unit = (System capacity) x (Rated capacity of indoor unit) / (Total rated capacity of indoor unit)
= (System capacity) x (TCin)r / ∑(TCin)r ••••• **(9) x (1) / (5)**

3-3. THE EXAMPLE OF CALCULATION



Design conditions:
- Temperature
  - Indoor : 82°FDB / 68°FWB (27.8°CDB / 20°CWB)
  - Outdoor : 95°FDB (35°CDB)
- Pipe length : 246ft. (75m)
- Height difference : 66ft. (20m) (Outdoor unit upper side)

Fig.1 Outline of the system

● Selection of indoor unit

			Room 1	Room 2	Room 3	Room 4	Room 5	Room 6	Remark
A-1	Cooling heat load	kBtu/h	33.0	33.0	33.0	27.5	27.5	22.0	
A-2	Indoor unit models		AUUB36	AUUB36	AUUB36	AUUB30	AUUB30	AUUB24	
A-3	Capacity of indoor unit $(TC_{in})_r$	kBtu/h	36.0	36.0	36.0	30.0	30.0	24.0	See 7
A-4	Capacity at design temperature $(TC_{in})_d$	kBtu/h	37.7	37.7	37.7	31.4	31.4	25.1	See 7
A-5	Compensation coefficient of pipe length		0.90						See 6
A-6	Estimated capacity of indoor unit $(TC_{in})_e$	kBtu/h	33.9	33.9	33.9	28.3	28.3	22.6	(A-4) x (A-5)
A-7	Total capacity of indoor unit $\sum(TC_{in})_r$	kBtu/h	192.0						Sum of A-3
A-8	Total capacity at design temperature $\sum(TC_{in})_d$	kBtu/h	201.0						Sum of A-4

● Preliminary selection of outdoor unit

				Remark
B-1	Outdoor unit model		14Ton : AOUA168RLBVG1 (AOUA96RLBV1 + AOUA72RLBV1)	
B-2	Nominal capacity $(TC_{out})_r$	kBtu/h	168.0	See 2
B-3	Total capacity of indoor unit / Nominal capacity of outdoor unit $\sum(TC_{in})_r$ / $(TC_{out})_r$	%	114.3	(A-7) / (B-2)
B-4	Capacity at design temperature $(TC_{out})_d$	kBtu/h	177.1	See Fig.2 2)
B-5	Compensation coefficient of pipe length		0.90	See 2-6
B-6	Compensated capacity of outdoor unit $(TC_{out})_c$	kBtu/h	159.4	(B-4) x (B-5)

● Decide system capacity

				Remark
C-1	System capacity	kBtu/h	159.4	Smaller one of (A-8) and (B-6)

● Calculate actual capacity of each indoor unit

		Room 1	Room 2	Room 3	Room 4	Room 5	Room 6	Remark
Actual capacity of each indoor unit	kBtu/h	29.9	29.9	29.9	24.9	24.9	19.9	(C-1) x (A-3) / (A-7)

Since the capacities of indoor units are smaller than the cooling heat loads, change to a larger capacity of outdoor units and calculate again.

● Change to a larger capacity of outdoor unit

				Remark
B'-1	Outdoor unit model		16Ton : AOUA192RLBVG1 (AOUA120RLBV1 + AOUA72RLBV1)	
B'-2	Nominal capacity $(TC_{out})_r$	kBtu/h	192.0	See 2
B'-3	Total capacity of indoor unit / Nominal capacity of outdoor unit $\sum(TC_{in})_r / (TC_{out})_r$	%	100.0	(A-7) / (B'-2)
B'-4	Capacity at design temperature $(TC_{out})_d$	kBtu/h	196.4	See Fig.2 3)
B'-5	Compensation coefficient of pipe length		0.90	See 6
B'-6	Compensated capacity of outdoor unit $(TC_{out})_c$	kBtu/h	176.8	(B'-4) x (B'-5)

● Decide system capacity

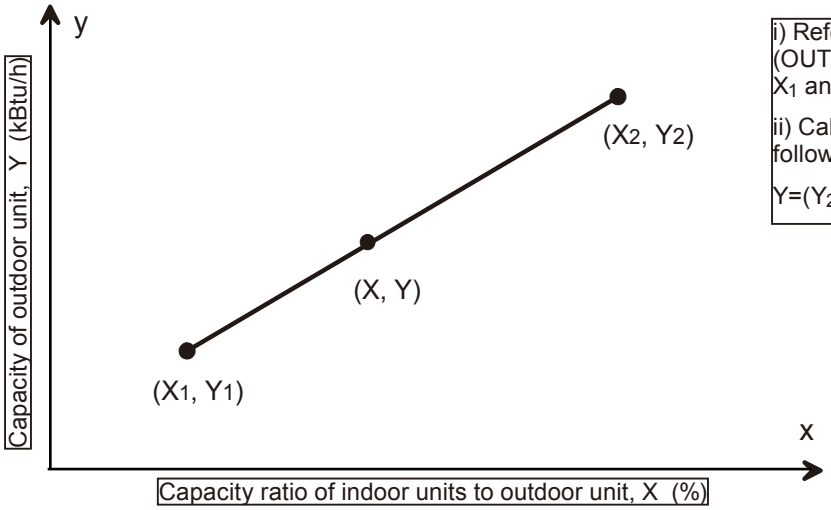
				Remark
C'-1	System capacity	kBtu/h	176.8	Smaller one of (A-8) and (B'-6)

● Calculate actual capacity of each indoor unit

		Room 1	Room 2	Room 3	Room 4	Room 5	Room 6	Remark
Actual capacity of each indoor unit	kBtu/h	33.2	33.2	33.2	27.6	27.6	22.1	(C'-1) x (A-3) / (A-7)

Actual capacity of all indoor units is larger than cooling heat load of each room.

1) Equation for capacity calculation of outdoor unit.



i) Refer to 4. CAPACITY TABLE (OUTDOOR UNIT) to find Y_1 and Y_2 using X_1 and X_2.

ii) Calculate capacity of outdoor unit using following equation:

$Y=(Y_2-Y_1) / (X_2-X_1) \times (X-X1) + Y_1$

2) Cooling capacity table of 14Ton outdoor units: AOUA168RLBVG1 (AOUA96RLBV1 + AOUA72RLBV1)

Total rated cooling capacity of indoor unit	Outdoor temperature	Indoor temperature									
		68°FDB / 59 °FWB		80°FDB / 67 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
	(°FDB)	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
	50	128.5	7.67	198.0	11.32	200.5	11.31	210.9	11.26	213.5	11.25
201.6 (120%) X_2	95	128.5	10.17	177.1	14.63	179.1 Y_2	14.68	187.3	14.88	189.4	14.92
	115	128.5	14.20	158.4	17.63		17.70	167.8	17.98	169.7	18.05
	50	117.8	7.10	184.8	10.69	193.3	11.15	205.6	11.29	208.1	11.28
184.8 (110%) X_1	95	117.8	9.38	173.6	14.55	175.6 Y_1	14.60	183.6	14.79	185.6	14.84
	115	117.8	12.65	155.5	17.52		17.59	164.7	17.87	166.6	17.93

Capacity ratio of indoor units to outdoor unit	X1 = 110 %	X = 114.3 %	X2 = 120 %
Capacity of outdoor units (kBtu/h)	Y1 = 175.6	Y	Y2 = 179.1

Y = (179.1-175.6) / (120-110) × (114.3-110) + 175.6 = **177.1 (kBtu/h)**

3) Cooling capacity table of 16Ton outdoor units: AOUA192RLBVG1 (AOUA120RLBV1 + AOUA72RLBV1)

Total rated cooling capacity of indoor unit	Outdoor temperature	Indoor temperature									
		68°FDB / 59 °FWB		80°FDB / 67 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
	(°DFB)	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
	50	134.6	8.01	211.2	12.08	220.9	12.59	235.4	12.79	238.4	12.77
211.2 (110%)	95	134.6	10.59	198.7	16.49	201.0	16.55	210.2	16.77	212.5	16.82
	115	134.6	14.30	178.0	19.87	180.2	19.95	188.6	20.26	190.7	20.34
	50	122.4	7.36	192.0	11.06	200.8	11.52	228.6	12.82	231.4	12.81
192.0 (100%) X_1	95	122.4	9.71	192.0	16.04	196.4 Y_1	16.43	205.3	16.65	207.5	16.71
	115	122.4	12.66	174.2	19.73		19.81	184.5	20.11	186.6	20.19

Capacity ratio of indoor units to outdoor unit	X1 = 100 %
Capacity of outdoor units (kBtu/h)	Y1 = 196.4

Y = Y1 = **196.4 (kBtu/h)**

Fig.2 Method for calculation of capacity of outdoor unit from capacity tables

4. CAPACITY TABLE COOLING (OUTDOOR UNIT)

COOLING CAPACITY in kBtu/h

■ MODEL : AOUA72RLBV1

Total rated capacity of indoor unit	Outdoor temp.	Indoor temperature (°FDB / °FWB)															
		68 / 59		73 / 61		75 / 63		79 / 64		80 / 67		82 / 68		86 / 72		90 / 73	
	(°FDB)	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
108.0 (150%)	50	68.8	3.56	78.6	4.02	85.2	4.28	86.4	4.28	89.9	4.26	91.1	4.26	95.9	4.23	97.1	4.22
	59	68.8	3.66	78.6	4.14	84.6	4.37	85.7	4.37	89.2	4.35	90.4	4.35	95.1	4.32	96.3	4.31
	70	68.8	3.87	78.6	4.38	83.3	4.54	84.4	4.54	87.9	4.53	89.0	4.52	93.7	4.50	94.9	4.49
	73	68.8	3.94	78.6	4.46	82.9	4.60	84.0	4.59	87.4	4.58	88.6	4.58	93.1	4.57	94.2	4.58
	77	68.8	4.05	78.6	4.59	82.2	4.68	83.4	4.68	86.5	4.71	87.5	4.72	91.5	4.77	92.5	4.78
	81	68.8	4.18	78.6	4.77	81.0	4.85	82.0	4.86	84.9	4.90	85.9	4.92	89.9	4.97	90.9	4.98
	86	68.8	4.35	77.2	5.05	79.2	5.09	80.1	5.10	83.0	5.15	84.0	5.16	87.8	5.21	88.8	5.23
	91	68.8	4.71	75.4	5.29	77.3	5.33	78.3	5.35	81.1	5.39	82.0	5.41	85.8	5.47	86.7	5.48
	95	68.8	5.04	73.9	5.49	75.8	5.53	76.7	5.55	79.4	5.61	80.3	5.63	84.0	5.70	84.9	5.72
	99	68.8	5.43	72.3	5.71	74.1	5.75	75.0	5.77	77.7	5.84	78.6	5.86	82.2	5.93	83.2	5.95
	104	68.6	5.93	70.3	5.98	72.1	6.03	73.0	6.05	75.6	6.12	76.5	6.14	80.0	6.23	80.9	6.25
	109	66.6	6.21	68.3	6.26	70.0	6.31	70.8	6.34	73.4	6.41	74.3	6.43	77.8	6.53	78.6	6.55
	115	64.1	6.53	65.8	6.59	67.5	6.65	68.3	6.68	70.8	6.76	71.7	6.79	75.0	6.89	75.9	6.92
100.8 (140%)	50	64.2	3.34	73.4	3.77	82.5	4.20	84.9	4.28	88.4	4.27	89.6	4.26	94.2	4.24	95.4	4.23
	59	64.2	3.44	73.4	3.88	82.5	4.33	84.3	4.37	87.7	4.36	88.9	4.35	93.5	4.33	94.7	4.32
	70	64.2	3.63	73.4	4.11	81.9	4.54	83.1	4.54	86.4	4.53	87.6	4.53	92.1	4.51	93.3	4.50
	73	64.2	3.70	73.4	4.19	81.5	4.60	82.6	4.60	86.0	4.59	87.1	4.59	91.7	4.57	92.8	4.57
	77	64.2	3.80	73.4	4.30	80.9	4.68	82.0	4.68	85.2	4.69	86.2	4.70	90.2	4.75	91.2	4.76
	81	64.2	3.92	73.4	4.43	79.8	4.83	80.8	4.84	83.7	4.89	84.7	4.90	88.6	4.95	89.6	4.96
	86	64.2	4.08	73.4	4.72	78.1	5.07	79.0	5.08	81.9	5.13	82.8	5.14	86.6	5.20	87.6	5.21
	91	64.2	4.29	73.4	5.15	76.3	5.31	77.2	5.33	80.0	5.38	80.9	5.39	84.6	5.45	85.5	5.46
	95	64.2	4.59	73.0	5.47	74.8	5.51	75.7	5.53	78.4	5.59	79.3	5.61	82.9	5.68	83.8	5.70
	99	64.2	4.92	71.4	5.69	73.2	5.73	74.1	5.75	76.7	5.81	77.6	5.83	81.2	5.91	82.1	5.93
	104	64.2	5.41	69.4	5.96	71.2	6.01	72.0	6.03	74.6	6.10	75.5	6.12	79.0	6.21	79.9	6.23
	109	64.2	5.94	67.4	6.23	69.1	6.28	70.0	6.31	72.5	6.38	73.4	6.41	76.8	6.50	77.7	6.53
	115	63.4	6.51	65.0	6.56	66.7	6.62	67.5	6.65	70.0	6.73	70.8	6.76	74.1	6.86	75.0	6.89
93.6 (130%)	50	59.6	3.12	68.1	3.52	76.6	3.92	80.9	4.13	86.7	4.28	87.8	4.27	92.4	4.25	93.6	4.24
	59	59.6	3.21	68.1	3.63	76.6	4.04	80.9	4.25	86.1	4.37	87.2	4.36	91.7	4.34	92.9	4.33
	70	59.6	3.39	68.1	3.84	76.6	4.28	80.9	4.50	84.8	4.54	85.9	4.53	90.4	4.51	91.5	4.51
	73	59.6	3.46	68.1	3.91	76.6	4.36	80.9	4.58	84.4	4.59	85.5	4.59	89.9	4.57	91.1	4.57
	77	59.6	3.55	68.1	4.02	76.6	4.48	80.5	4.68	83.8	4.68	84.8	4.69	88.7	4.74	89.7	4.75
	81	59.6	3.66	68.1	4.14	76.6	4.62	79.5	4.82	82.4	4.87	83.3	4.88	87.2	4.93	88.2	4.95
	86	59.6	3.81	68.1	4.31	76.6	5.02	77.8	5.06	80.6	5.11	81.5	5.12	85.3	5.18	86.2	5.19
	91	59.6	3.99	68.1	4.65	75.1	5.29	76.0	5.30	78.7	5.35	79.7	5.37	83.3	5.43	84.2	5.44
	95	59.6	4.17	68.1	4.97	73.7	5.48	74.5	5.50	77.2	5.56	78.1	5.58	81.7	5.65	82.6	5.67
	99	59.6	4.45	68.1	5.35	72.1	5.70	73.0	5.72	75.6	5.79	76.5	5.81	80.0	5.89	80.9	5.91
	104	59.6	4.88	68.1	5.88	70.1	5.98	71.0	6.00	73.5	6.07	74.4	6.09	77.8	6.18	78.7	6.20
	109	59.6	5.36	66.5	6.20	68.1	6.25	69.0	6.28	71.5	6.35	72.3	6.38	75.7	6.47	76.5	6.50
	115	59.6	5.99	64.1	6.53	65.7	6.59	66.6	6.62	69.0	6.70	69.8	6.73	73.1	6.83	73.9	6.86
86.4 (120%)	50	55.0	2.90	62.9	3.27	70.7	3.65	74.7	3.83	84.8	4.28	85.9	4.28	90.4	4.26	91.5	4.25
	59	55.0	2.99	62.9	3.37	70.7	3.75	74.7	3.95	84.2	4.37	85.3	4.37	89.7	4.35	90.8	4.35
	70	55.0	3.16	62.9	3.56	70.7	3.97	74.7	4.17	83.0	4.54	84.1	4.54	88.4	4.52	89.6	4.52
	73	55.0	3.22	62.9	3.63	70.7	4.05	74.7	4.25	82.6	4.60	83.7	4.60	88.0	4.58	89.1	4.58
	77	55.0	3.30	62.9	3.73	70.7	4.16	74.7	4.37	82.0	4.68	83.1	4.68	87.0	4.72	88.0	4.73
	81	55.0	3.40	62.9	3.84	70.7	4.28	74.7	4.51	80.9	4.84	81.8	4.86	85.6	4.91	86.5	4.92
	86	55.0	3.54	62.9	4.00	70.7	4.49	74.7	4.84	79.1	5.09	80.0	5.10	83.7	5.16	84.6	5.17
	91	55.0	3.70	62.9	4.19	70.7	4.89	74.7	5.28	77.4	5.33	78.3	5.35	81.8	5.41	82.7	5.42
	95	55.0	3.85	62.9	4.47	70.7	5.24	73.3	5.48	75.9	5.53	76.8	5.55	80.3	5.63	81.1	5.64
	99	55.0	4.02	62.9	4.78	70.7	5.65	71.8	5.69	74.3	5.76	75.2	5.78	78.6	5.86	79.5	5.88
	104	55.0	4.38	62.9	5.25	69.0	5.95	69.8	5.97	72.3	6.04	73.2	6.06	76.6	6.15	77.4	6.17
	109	55.0	4.81	62.9	5.77	67.1	6.22	67.9	6.25	70.3	6.32	71.2	6.34	74.5	6.44	75.3	6.46
	115	55.0	5.37	62.9	6.46	64.7	6.55	65.5	6.58	67.9	6.66	68.7	6.69	71.9	6.79	72.7	6.82
79.2 (110%)	50	50.5	2.69	57.7	3.03	64.8	3.37	68.5	3.54	79.2	4.05	82.8	4.22	88.1	4.27	89.2	4.27
	59	50.5	2.77	57.7	3.12	64.8	3.47	68.5	3.64	79.2	4.17	82.8	4.35	87.5	4.36	88.6	4.36
	70	50.5	2.92	57.7	3.29	64.8	3.66	68.5	3.85	79.2	4.41	82.1	4.54	86.3	4.53	87.3	4.53
	73	50.5	2.97	57.7	3.35	64.8	3.73	68.5	3.93	79.2	4.49	81.7	4.60	85.9	4.59	86.9	4.59
	77	50.5	3.05	57.7	3.44	64.8	3.84	68.5	4.03	79.2	4.62	81.1	4.68	85.1	4.69	86.1	4.70
	81	50.5	3.14	57.7	3.55	64.8	3.95	68.5	4.16	79.1	4.82	80.1	4.83	83.7	4.89	84.7	4.90
	86	50.5	3.27	57.7	3.69	64.8	4.12	68.5	4.33	77.5	5.06	78.4	5.07	82.0	5.13	82.9	5.15
	91	50.5	3.42	57.7	3.86	64.8	4.35	68.5	4.68	75.8	5.30	76.7	5.32	80.2	5.38	81.1	5.39
	95	50.5	3.55	57.7	4.01	64.8	4.65	68.5	5.01	74.4	5.50	75.2	5.52	78.7	5.59	79.5	5.61
	99	50.5	3.70	57.7	4.26	64.8	4.99	68.5	5.39	72.9	5.72	73.7	5.74	77.1	5.82	77.9	5.84
	104	50.5	3.92	57.7	4.66	64.8	5.48	68.5	5.93	71.0	6.00	71.8	6.02	75.1	6.11	75.9	6.13
	109	50.5	4.29	57.7	5.11	64.8	6.02	66.6	6.21	69.0	6.28	69.8	6.31	73.1	6.40	73.9	6.42
	115	50.5	4.78	57.7	5.71	63.5	6.51	64.3	6.54	66.7	6.62	67.5	6.65	70.6	6.75	71.4	6.78

Total rated capacity of indoor unit	Outdoor temp.	Indoor temperature (°FDB / °FWB)															
		68 / 59		73 / 61		75 / 63		79 / 64		80 / 67		82 / 68		86 / 72		90 / 73	
	(°FDB)	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
72.0 (100%)	50	45.9	2.47	52.4	2.78	58.9	3.09	62.2	3.24	72.0	3.71	75.3	3.86	85.5	4.28	86.6	4.28
	59	45.9	2.54	52.4	2.86	58.9	3.18	62.2	3.34	72.0	3.82	75.3	3.98	84.9	4.37	86.0	4.37
	70	45.9	2.68	52.4	3.02	58.9	3.36	62.2	3.53	72.0	4.04	75.3	4.21	83.8	4.54	84.8	4.54
	73	45.9	2.73	52.4	3.08	58.9	3.42	62.2	3.60	72.0	4.11	75.3	4.29	83.4	4.60	84.4	4.59
	77	45.9	2.80	52.4	3.16	58.9	3.51	62.2	3.69	72.0	4.23	75.3	4.41	82.8	4.68	83.9	4.68
	81	45.9	2.88	52.4	3.25	58.9	3.62	62.2	3.81	72.0	4.36	75.3	4.54	81.7	4.86	82.6	4.87
	86	45.9	3.00	52.4	3.39	58.9	3.77	62.2	3.96	72.0	4.60	75.3	4.90	80.0	5.10	80.9	5.11
	91	45.9	3.14	52.4	3.54	58.9	3.94	62.2	4.15	72.0	5.02	74.8	5.28	78.3	5.35	79.1	5.36
	95	45.9	3.26	52.4	3.68	58.9	4.10	62.2	4.40	72.0	5.37	73.5	5.48	76.8	5.55	77.7	5.57
	99	45.9	3.39	52.4	3.83	58.9	4.38	62.2	4.71	71.2	5.68	72.0	5.70	75.3	5.78	76.1	5.80
	104	45.9	3.58	52.4	4.11	58.9	4.80	62.2	5.18	69.4	5.96	70.2	5.98	73.4	6.07	74.2	6.09
	109	45.9	3.81	52.4	4.51	58.9	5.27	62.2	5.68	67.5	6.23	68.3	6.26	71.5	6.35	72.3	6.38
	115	45.9	4.24	52.4	5.03	58.9	5.89	62.2	6.36	65.2	6.57	66.0	6.60	69.1	6.70	69.9	6.73
64.8 (90%)	50	41.3	2.25	47.2	2.53	53.0	2.81	56.0	2.95	64.8	3.37	67.8	3.51	79.5	4.06	82.5	4.20
	59	41.3	2.32	47.2	2.60	53.0	2.89	56.0	3.04	64.8	3.47	67.8	3.61	79.5	4.18	82.5	4.33
	70	41.3	2.44	47.2	2.75	53.0	3.05	56.0	3.21	64.8	3.66	67.8	3.82	79.5	4.43	82.0	4.54
	73	41.3	2.49	47.2	2.80	53.0	3.11	56.0	3.27	64.8	3.73	67.8	3.89	79.5	4.51	81.6	4.60
	77	41.3	2.55	47.2	2.87	53.0	3.19	56.0	3.35	64.8	3.83	67.8	4.00	79.5	4.64	81.1	4.68
	81	41.3	2.63	47.2	2.96	53.0	3.29	56.0	3.46	64.8	3.95	67.8	4.12	79.2	4.82	80.1	4.83
	86	41.3	2.73	47.2	3.08	53.0	3.42	56.0	3.60	64.8	4.12	67.8	4.29	77.7	5.06	78.5	5.08
	91	41.3	2.85	47.2	3.21	53.0	3.58	56.0	3.76	64.8	4.34	67.8	4.61	76.0	5.31	76.9	5.32
	95	41.3	2.96	47.2	3.34	53.0	3.72	56.0	3.91	64.8	4.65	67.8	4.94	74.7	5.51	75.5	5.53
	99	41.3	3.08	47.2	3.48	53.0	3.87	56.0	4.11	64.8	4.98	67.8	5.31	73.3	5.73	74.1	5.75
	104	41.3	3.25	47.2	3.67	53.0	4.18	56.0	4.49	64.8	5.48	67.8	5.84	71.4	6.01	72.2	6.03
	109	41.3	3.46	47.2	3.94	53.0	4.58	56.0	4.92	64.8	6.02	66.5	6.20	69.6	6.30	70.4	6.32
	115	41.3	3.76	47.2	4.39	53.0	5.11	56.0	5.49	63.6	6.51	64.3	6.54	67.3	6.64	68.1	6.67
57.6 (80%)	50	36.7	2.04	41.9	2.28	47.1	2.53	49.8	2.66	57.6	3.02	60.2	3.15	70.7	3.64	73.3	3.77
	59	36.7	2.09	41.9	2.35	47.1	2.60	49.8	2.73	57.6	3.11	60.2	3.24	70.7	3.75	73.3	3.88
	70	36.7	2.20	41.9	2.48	47.1	2.75	49.8	2.88	57.6	3.29	60.2	3.43	70.7	3.97	73.3	4.10
	73	36.7	2.24	41.9	2.52	47.1	2.80	49.8	2.94	57.6	3.35	60.2	3.49	70.7	4.04	73.3	4.18
	77	36.7	2.30	41.9	2.59	47.1	2.87	49.8	3.02	57.6	3.44	60.2	3.59	70.7	4.16	73.3	4.30
	81	36.7	2.37	41.9	2.66	47.1	2.96	49.8	3.10	57.6	3.54	60.2	3.69	70.7	4.28	73.3	4.43
	86	36.7	2.46	41.9	2.77	47.1	3.08	49.8	3.23	57.6	3.69	60.2	3.85	70.7	4.48	73.3	4.72
	91	36.7	2.57	41.9	2.89	47.1	3.21	49.8	3.38	57.6	3.86	60.2	4.02	70.7	4.89	73.3	5.14
	95	36.7	2.66	41.9	3.00	47.1	3.34	49.8	3.51	57.6	4.01	60.2	4.22	70.7	5.23	73.0	5.47
	99	36.7	2.77	41.9	3.12	47.1	3.47	49.8	3.65	57.6	4.26	60.2	4.51	70.7	5.64	71.6	5.69
	104	36.7	2.92	41.9	3.30	47.1	3.67	49.8	3.86	57.6	4.66	60.2	4.95	69.1	5.95	69.9	5.97
	109	36.7	3.11	41.9	3.51	47.1	3.94	49.8	4.22	57.6	5.11	60.2	5.43	67.4	6.23	68.1	6.25
	115	36.7	3.37	41.9	3.81	47.1	4.39	49.8	4.70	57.6	5.71	60.2	6.07	65.3	6.57	66.0	6.60
50.4 (70%)	50	32.1	1.82	36.7	2.04	41.3	2.25	43.6	2.36	50.4	2.68	52.7	2.79	61.8	3.23	64.1	3.33
	59	32.1	1.87	36.7	2.09	41.3	2.32	43.6	2.43	50.4	2.76	52.7	2.87	61.8	3.32	64.1	3.43
	70	32.1	1.97	36.7	2.20	41.3	2.44	43.6	2.56	50.4	2.92	52.7	3.03	61.8	3.51	64.1	3.63
	73	32.1	2.00	36.7	2.24	41.3	2.48	43.6	2.61	50.4	2.97	52.7	3.09	61.8	3.57	64.1	3.70
	77	32.1	2.05	36.7	2.30	41.3	2.55	43.6	2.68	50.4	3.05	52.7	3.17	61.8	3.67	64.1	3.80
	81	32.1	2.11	36.7	2.37	41.3	2.62	43.6	2.75	50.4	3.14	52.7	3.27	61.8	3.78	64.1	3.91
	86	32.1	2.19	36.7	2.46	41.3	2.73	43.6	2.87	50.4	3.27	52.7	3.40	61.8	3.94	64.1	4.08
	91	32.1	2.28	36.7	2.57	41.3	2.85	43.6	2.99	50.4	3.41	52.7	3.56	61.8	4.12	64.1	4.28
	95	32.1	2.37	36.7	2.66	41.3	2.96	43.6	3.11	50.4	3.55	52.7	3.69	61.8	4.37	64.1	4.58
	99	32.1	2.46	36.7	2.77	41.3	3.08	43.6	3.23	50.4	3.69	52.7	3.85	61.8	4.67	64.1	4.91
	104	32.1	2.60	36.7	2.92	41.3	3.25	43.6	3.41	50.4	3.91	52.7	4.14	61.8	5.13	64.1	5.40
	109	32.1	2.76	36.7	3.11	41.3	3.46	43.6	3.64	50.4	4.28	52.7	4.54	61.8	5.63	64.1	5.93
	115	32.1	2.99	36.7	3.37	41.3	3.75	43.6	3.97	50.4	4.77	52.7	5.06	61.8	6.30	63.5	6.51
43.2 (60%)	50	27.5	1.60	31.4	1.79	35.4	1.97	37.3	2.07	43.2	2.34	45.2	2.44	53.0	2.81	55.0	2.90
	59	27.5	1.64	31.4	1.84	35.4	2.03	37.3	2.12	43.2	2.41	45.2	2.51	53.0	2.89	55.0	2.99
	70	27.5	1.73	31.4	1.93	35.4	2.13	37.3	2.24	43.2	2.54	45.2	2.64	53.0	3.05	55.0	3.15
	73	27.5	1.76	31.4	1.97	35.4	2.17	37.3	2.28	43.2	2.59	45.2	2.69	53.0	3.11	55.0	3.21
	77	27.5	1.80	31.4	2.02	35.4	2.23	37.3	2.34	43.2	2.66	45.2	2.76	53.0	3.19	55.0	3.30
	81	27.5	1.85	31.4	2.07	35.4	2.29	37.3	2.40	43.2	2.73	45.2	2.84	53.0	3.29	55.0	3.40
	86	27.5	1.92	31.4	2.15	35.4	2.38	37.3	2.50	43.2	2.84	45.2	2.96	53.0	3.42	55.0	3.54
	91	27.5	2.00	31.4	2.24	35.4	2.49	37.3	2.61	43.2	2.97	45.2	3.09	53.0	3.58	55.0	3.70
	95	27.5	2.07	31.4	2.33	35.4	2.58	37.3	2.71	43.2	3.08	45.2	3.21	53.0	3.71	55.0	3.84
	99	27.5	2.15	31.4	2.42	35.4	2.68	37.3	2.81	43.2	3.21	45.2	3.34	53.0	3.87	55.0	4.01
	104	27.5	2.27	31.4	2.55	35.4	2.83	37.3	2.97	43.2	3.39	45.2	3.53	53.0	4.17	55.0	4.38
	109	27.5	2.41	31.4	2.71	35.4	3.01	37.3	3.16	43.2	3.61	45.2	3.76	53.0	4.57	55.0	4.80
	115	27.5	2.60	31.4	2.93	35.4	3.26	37.3	3.43	43.2	3.93	45.2	4.16	53.0	5.10	55.0	5.36
36.0 (50%)	50	22.9	1.39	26.2	1.54	29.5	1.69	31.1	1.77	36.0	2.00	37.6	2.08	44.2	2.39	45.8	2.47
	59	22.9	1.42	26.2	1.58	29.5	1.74	31.1	1.82	36.0	2.06	37.6	2.14	44.2	2.46	45.8	2.54
	70	22.9	1.49	26.2	1.66	29.5	1.83	31.1	1.91	36.0	2.17	37.6	2.25	44.2	2.59	45.8	2.68
	73	22.9	1.51	26.2	1.69	29.5	1.86	31.1	1.95	36.0	2.21	37.6	2.29	44.2	2.64	45.8	2.73
	77	22.9	1.55	26.2	1.73	29.5	1.91	31.1	2.00	36.0	2.26	37.6	2.35	44.2	2.71	45.8	2.80
	81	22.9	1.59	26.2	1.78	29.5	1.96	31.1	2.05	36.0	2.33	37.6	2.42	44.2	2.79	45.8	2.88
	86	22.9	1.65	26.2	1.84	29.5	2.04	31.1	2.13	36.0	2.42	37.6	2.52	44.2	2.90	45.8	3.00
	91	22.9	1.72	26.2	1.92	29.5	2.12	31.1	2.22	36.0	2.52	37.6	2.63	44.2	3.03	45.8	3.13
	95	22.9	1.78	26.2	1.99	29.5	2.20	31.1	2.30	36.0	2.62	37.6	2.72	44.2	3.15	45.8	3.25
	99	22.9	1.84	26.2	2.06	29.5	2.28	31.1	2.39	36.0	2.72	37.6	2.83	44.2	3.27	45.8	3.38
	104	22.9	1.94	26.2	2.17	29.5	2.41	31.1	2.52	36.0	2.87	37.6	2.99	44.2	3.46	45.8	3.57
	109	22.9	2.06	26.2	2.31	29.5	2.56	31.1	2.68	36.0	3.06	37.6	3.18	44.2	3.68	45.8	3.81
	115	22.9	2.22	26.2	2.49	29.5	2.77	31.1	2.90	36.0	3.31	37.6	3.45	44.2	4.04	45.8	4.23

TC : Total Capacity kBtu/h.

IP : Input Power kW (Compressor + Outdoor fan motor).

The data is based on the following conditions. Pipe length : 25ft. (7.5m) , Height difference : 0ft. (0m)

COOLING CAPACITY in kBtu/h

■ MODEL : AOUA96RLBV1

Total rated capacity of indoor unit	Outdoor temp.	Indoor temperature (°FDB / °FWB)															
		68 / 59		73 / 61		75 / 63		79 / 64		80 / 67		82 / 68		86 / 72		90 / 73	
	(°FDB)	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
144.0 (150%)	50	91.8	5.07	104.8	5.73	113.6	6.11	115.2	6.11	119.9	6.08	121.5	6.08	127.8	6.04	129.5	6.02
	59	91.8	5.22	104.8	5.91	112.8	6.24	114.3	6.23	119.0	6.21	120.6	6.21	126.9	6.17	128.5	6.16
	70	91.8	5.52	104.8	6.25	111.1	6.48	112.6	6.48	117.2	6.46	118.8	6.45	125.0	6.42	126.6	6.41
	73	91.8	5.63	104.8	6.37	110.5	6.56	112.0	6.56	116.6	6.55	118.1	6.54	124.3	6.52	125.6	6.53
	77	91.8	5.79	104.8	6.55	109.7	6.69	111.2	6.68	115.4	6.72	116.7	6.73	122.1	6.80	123.5	6.82
	81	91.8	5.96	104.8	6.80	108.0	6.91	109.4	6.94	113.3	7.00	114.7	7.01	119.9	7.08	121.3	7.10
	86	91.8	6.21	103.0	7.21	105.6	7.26	106.9	7.28	110.7	7.35	112.0	7.37	117.2	7.44	118.5	7.46
	91	91.8	6.73	100.6	7.56	103.1	7.61	104.4	7.63	108.1	7.70	109.4	7.72	114.4	7.80	115.7	7.83
	95	91.8	7.20	98.6	7.84	101.0	7.90	102.3	7.93	105.9	8.01	107.2	8.04	112.1	8.14	113.3	8.16
	99	91.8	7.76	96.5	8.16	98.9	8.22	100.1	8.25	103.7	8.34	104.9	8.37	109.7	8.48	110.9	8.50
	104	91.4	8.48	93.8	8.55	96.1	8.62	97.3	8.65	100.8	8.75	102.0	8.78	106.7	8.90	107.9	8.93
	109	88.7	8.87	91.0	8.95	93.3	9.02	94.5	9.06	97.9	9.16	99.1	9.20	103.7	9.33	104.8	9.37
	115	85.5	9.35	87.7	9.43	89.9	9.51	91.0	9.55	94.4	9.66	95.5	9.70	100.0	9.85	101.2	9.89
134.4 (140%)	50	85.7	4.76	97.9	5.38	110.0	6.00	113.3	6.11	117.9	6.09	119.4	6.09	125.7	6.05	127.2	6.04
	59	85.7	4.90	97.9	5.54	110.0	6.18	112.4	6.24	117.0	6.22	118.5	6.22	124.7	6.18	126.3	6.17
	70	85.7	5.18	97.9	5.86	109.3	6.48	110.8	6.48	115.3	6.47	116.8	6.46	122.9	6.43	124.4	6.42
	73	85.7	5.28	97.9	5.97	108.7	6.57	110.2	6.56	114.7	6.55	116.2	6.55	122.2	6.52	123.8	6.51
	77	85.7	5.43	97.9	6.14	107.9	6.69	109.4	6.69	113.7	6.69	115.0	6.71	120.3	6.78	121.7	6.80
	81	85.7	5.59	97.9	6.33	106.5	6.89	107.8	6.91	111.7	6.97	113.0	6.99	118.2	7.06	119.5	7.08
	86	85.7	5.83	97.9	6.74	104.1	7.23	105.4	7.26	109.2	7.32	110.5	7.34	115.6	7.42	116.9	7.44
	91	85.7	6.12	97.9	7.35	101.7	7.58	103.0	7.61	106.7	7.68	107.9	7.70	112.9	7.78	114.1	7.80
	95	85.7	6.55	97.3	7.81	99.7	7.87	100.9	7.90	104.5	7.98	105.7	8.01	110.6	8.11	111.8	8.13
	99	85.7	7.03	95.2	8.12	97.6	8.19	98.8	8.22	102.3	8.30	103.5	8.33	108.3	8.45	109.5	8.47
	104	85.7	7.73	92.6	8.52	94.9	8.58	96.0	8.62	99.5	8.71	100.7	8.75	105.3	8.87	106.5	8.90
	109	85.7	8.50	89.9	8.91	92.1	8.98	93.3	9.02	96.7	9.13	97.8	9.16	102.4	9.30	103.5	9.33
	115	84.5	9.31	86.6	9.39	88.8	9.47	89.9	9.51	93.2	9.63	94.4	9.66	98.8	9.81	99.9	9.85
124.8 (130%)	50	79.5	4.45	90.9	5.03	102.2	5.60	107.9	5.89	115.6	6.10	117.1	6.10	123.2	6.07	124.8	6.06
	59	79.5	4.58	90.9	5.18	102.2	5.77	107.9	6.07	114.8	6.23	116.3	6.23	122.3	6.20	123.8	6.19
	70	79.5	4.84	90.9	5.47	102.2	6.10	107.9	6.42	113.1	6.48	114.6	6.47	120.6	6.45	122.1	6.44
	73	79.5	4.93	90.9	5.58	102.2	6.22	107.9	6.54	112.5	6.56	114.0	6.55	119.9	6.53	121.4	6.52
	77	79.5	5.07	90.9	5.73	102.2	6.39	107.4	6.69	111.7	6.68	113.1	6.68	118.4	6.75	119.7	6.77
	81	79.5	5.22	90.9	5.91	102.2	6.59	106.1	6.88	109.9	6.94	111.2	6.96	116.3	7.04	117.6	7.06
	86	79.5	5.44	90.9	6.15	102.2	7.17	103.7	7.23	107.5	7.29	108.7	7.32	113.7	7.39	115.0	7.41
	91	79.5	5.69	90.9	6.63	100.1	7.55	101.4	7.58	105.0	7.65	106.3	7.67	111.1	7.75	112.4	7.77
	95	79.5	5.94	90.9	7.10	98.2	7.83	99.4	7.86	103.0	7.95	104.2	7.97	108.9	8.08	110.1	8.10
	99	79.5	6.36	90.9	7.65	96.1	8.15	97.3	8.18	100.8	8.27	102.0	8.30	106.7	8.41	107.8	8.44
	104	79.5	6.97	90.9	8.41	93.5	8.54	94.7	8.58	98.1	8.67	99.2	8.71	103.8	8.83	105.0	8.86
	109	79.5	7.66	88.6	8.87	90.9	8.94	92.0	8.98	95.3	9.08	96.4	9.12	100.9	9.25	102.1	9.29
	115	79.5	8.57	85.5	9.34	87.6	9.42	88.7	9.46	92.0	9.58	93.1	9.62	97.4	9.77	98.5	9.81
115.2 (120%)	50	73.4	4.14	83.9	4.67	94.3	5.20	99.6	5.47	113.1	6.11	114.6	6.11	120.5	6.08	122.0	6.07
	59	73.4	4.26	83.9	4.81	94.3	5.36	99.6	5.63	112.3	6.24	113.8	6.23	119.6	6.21	121.1	6.20
	70	73.4	4.50	83.9	5.08	94.3	5.67	99.6	5.96	110.7	6.48	112.2	6.48	118.0	6.46	119.4	6.45
	73	73.4	4.58	83.9	5.18	94.3	5.77	99.6	6.07	110.2	6.56	111.6	6.56	117.4	6.54	118.8	6.54
	77	73.4	4.71	83.9	5.32	94.3	5.93	99.6	6.24	109.4	6.69	110.8	6.68	116.1	6.73	117.4	6.74
	81	73.4	4.85	83.9	5.48	94.3	6.12	99.6	6.43	107.9	6.91	109.1	6.93	114.2	7.01	115.4	7.03
	86	73.4	5.05	83.9	5.71	94.3	6.40	99.6	6.91	105.5	7.26	106.8	7.28	111.7	7.36	112.9	7.38
	91	73.4	5.28	83.9	5.98	94.3	6.98	99.6	7.54	103.2	7.61	104.4	7.63	109.2	7.72	110.4	7.74
	95	73.4	5.49	83.9	6.37	94.3	7.48	97.7	7.82	101.2	7.90	102.4	7.93	107.0	8.04	108.2	8.06
	99	73.4	5.73	83.9	6.83	94.3	8.07	95.7	8.14	99.1	8.22	100.3	8.25	104.8	8.37	106.0	8.39
	104	73.4	6.26	83.9	7.51	92.0	8.50	93.1	8.53	96.5	8.63	97.6	8.66	102.1	8.78	103.2	8.81
	109	73.4	6.87	83.9	8.25	89.4	8.89	90.5	8.93	93.8	9.04	94.9	9.07	99.3	9.21	100.4	9.24
	115	73.4	7.68	83.9	9.24	86.2	9.37	87.3	9.41	90.5	9.53	91.6	9.57	95.9	9.72	97.0	9.75
105.6 (110%)	50	67.3	3.83	76.9	4.32	86.5	4.80	91.3	5.05	105.6	5.77	110.4	6.02	117.5	6.10	118.9	6.09
	59	67.3	3.94	76.9	4.44	86.5	4.95	91.3	5.20	105.6	5.95	110.4	6.20	116.7	6.22	118.1	6.22
	70	67.3	4.16	76.9	4.69	86.5	5.23	91.3	5.50	105.6	6.29	109.4	6.48	115.1	6.47	116.5	6.46
	73	67.3	4.24	76.9	4.78	86.5	5.33	91.3	5.60	105.6	6.42	108.9	6.57	114.5	6.55	115.9	6.55
	77	67.3	4.35	76.9	4.91	86.5	5.47	91.3	5.76	105.6	6.60	108.1	6.69	113.6	6.69	114.9	6.71
	81	67.3	4.48	76.9	5.06	86.5	5.64	91.3	5.93	105.6	6.87	106.8	6.89	111.7	6.97	113.0	6.99
	86	67.3	4.67	76.9	5.27	86.5	5.88	91.3	6.18	103.3	7.22	104.5	7.24	109.4	7.33	110.6	7.34
	91	67.3	4.88	76.9	5.51	86.5	6.20	91.3	6.67	101.1	7.57	102.2	7.59	106.9	7.68	108.1	7.70
	95	67.3	5.07	76.9	5.73	86.5	6.64	91.3	7.15	99.2	7.86	100.3	7.88	104.9	7.99	106.1	8.01
	99	67.3	5.27	76.9	6.08	86.5	7.12	91.3	7.70	97.2	8.17	98.3	8.20	102.8	8.32	103.9	8.34
	104	67.3	5.59	76.9	6.66	86.5	7.83	91.3	8.47	94.6	8.58	95.7	8.61	100.1	8.73	101.2	8.76
	109	67.3	6.13	76.9	7.31	86.5	8.62	88.8	8.87	92.0	8.98	93.1	9.01	97.4	9.15	98.5	9.18
	115	67.3	6.84	76.9	8.18	84.7	9.32	85.7	9.35	88.9	9.47	89.9	9.51	94.1	9.66	95.2	9.69

Total rated capacity of indoor unit	Outdoor temp.	Indoor temperature (°FDB / °FWB)															
		68 / 59		73 / 61		75 / 63		79 / 64		80 / 67		82 / 68		86 / 72		90 / 73	
	(°FDB)	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
96.0 (100%)	50	61.2	3.52	69.9	3.96	78.6	4.40	83.0	4.63	96.0	5.29	100.4	5.51	114.1	6.11	115.5	6.10
	59	61.2	3.62	69.9	4.08	78.6	4.53	83.0	4.76	96.0	5.45	100.4	5.68	113.3	6.24	114.7	6.23
	70	61.2	3.82	69.9	4.30	78.6	4.79	83.0	5.03	96.0	5.76	100.4	6.00	111.8	6.48	113.1	6.47
	73	61.2	3.89	69.9	4.38	78.6	4.88	83.0	5.13	96.0	5.87	100.4	6.12	111.2	6.56	112.6	6.56
	77	61.2	3.99	69.9	4.50	78.6	5.01	83.0	5.27	96.0	6.03	100.4	6.29	110.5	6.68	111.8	6.68
	81	61.2	4.11	69.9	4.64	78.6	5.16	83.0	5.43	96.0	6.22	100.4	6.48	108.9	6.93	110.1	6.95
	86	61.2	4.28	69.9	4.83	78.6	5.38	83.0	5.66	96.0	6.56	100.4	6.99	106.7	7.28	107.9	7.30
	91	61.2	4.47	69.9	5.05	78.6	5.63	83.0	5.92	96.0	7.16	99.8	7.54	104.4	7.63	105.5	7.65
	95	61.2	4.64	69.9	5.24	78.6	5.85	83.0	6.28	96.0	7.67	98.0	7.83	102.5	7.93	103.6	7.96
	99	61.2	4.83	69.9	5.46	78.6	6.26	83.0	6.73	94.9	8.12	96.1	8.15	100.4	8.26	101.5	8.29
	104	61.2	5.11	69.9	5.87	78.6	6.86	83.0	7.39	92.5	8.51	93.6	8.54	97.9	8.67	99.0	8.70
	109	61.2	5.44	69.9	6.44	78.6	7.53	83.0	8.13	90.0	8.91	91.1	8.95	95.3	9.08	96.3	9.12
	115	61.2	6.05	69.9	7.19	78.6	8.43	83.0	9.11	87.0	9.40	88.0	9.44	92.1	9.59	93.1	9.62
86.4 (90%)	50	55.1	3.21	62.9	3.61	70.7	4.00	74.7	4.20	86.4	4.80	90.4	5.00	106.0	5.80	110.0	6.00
	59	55.1	3.30	62.9	3.71	70.7	4.12	74.7	4.33	86.4	4.94	90.4	5.15	106.0	5.97	110.0	6.18
	70	55.1	3.48	62.9	3.91	70.7	4.35	74.7	4.57	86.4	5.22	90.4	5.44	106.0	6.32	109.3	6.48
	73	55.1	3.54	62.9	3.99	70.7	4.43	74.7	4.66	86.4	5.32	90.4	5.55	106.0	6.44	108.9	6.57
	77	55.1	3.63	62.9	4.09	70.7	4.55	74.7	4.78	86.4	5.47	90.4	5.70	106.0	6.62	108.1	6.69
	81	55.1	3.74	62.9	4.21	70.7	4.69	74.7	4.93	86.4	5.64	90.4	5.88	105.7	6.87	106.9	6.89
	86	55.1	3.89	62.9	4.39	70.7	4.88	74.7	5.13	86.4	5.87	90.4	6.12	103.6	7.22	104.7	7.25
	91	55.1	4.06	62.9	4.58	70.7	5.10	74.7	5.37	86.4	6.20	90.4	6.58	101.4	7.58	102.5	7.60
	95	55.1	4.22	62.9	4.76	70.7	5.30	74.7	5.58	86.4	6.63	90.4	7.05	99.6	7.87	100.7	7.89
	99	55.1	4.39	62.9	4.96	70.7	5.52	74.7	5.86	86.4	7.12	90.4	7.59	97.7	8.19	98.8	8.22
	104	55.1	4.64	62.9	5.24	70.7	5.96	74.7	6.41	86.4	7.83	90.4	8.35	95.3	8.59	96.3	8.62
	109	55.1	4.94	62.9	5.62	70.7	6.54	74.7	7.03	86.4	8.61	88.7	8.87	92.8	9.00	93.8	9.04
	115	55.1	5.36	62.9	6.27	70.7	7.30	74.7	7.86	84.8	9.32	85.8	9.36	89.7	9.50	90.8	9.54
76.8 (80%)	50	48.9	2.90	55.9	3.25	62.9	3.60	66.4	3.78	76.8	4.31	80.3	4.49	94.3	5.20	97.8	5.38
	59	48.9	2.98	55.9	3.34	62.9	3.71	66.4	3.89	76.8	4.44	80.3	4.62	94.3	5.35	97.8	5.54
	70	48.9	3.14	55.9	3.53	62.9	3.91	66.4	4.11	76.8	4.69	80.3	4.89	94.3	5.66	97.8	5.86
	73	48.9	3.19	55.9	3.59	62.9	3.99	66.4	4.19	76.8	4.78	80.3	4.98	94.3	5.77	97.8	5.97
	77	48.9	3.28	55.9	3.68	62.9	4.09	66.4	4.30	76.8	4.91	80.3	5.11	94.3	5.93	97.8	6.14
	81	48.9	3.37	55.9	3.79	62.9	4.21	66.4	4.43	76.8	5.06	80.3	5.27	94.3	6.11	97.8	6.32
	86	48.9	3.51	55.9	3.95	62.9	4.39	66.4	4.61	76.8	5.27	80.3	5.49	94.3	6.40	97.8	6.73
	91	48.9	3.66	55.9	4.12	62.9	4.58	66.4	4.82	76.8	5.51	80.3	5.74	94.3	6.98	97.8	7.34
	95	48.9	3.80	55.9	4.28	62.9	4.76	66.4	5.00	76.8	5.72	80.3	6.02	94.3	7.47	97.4	7.81
	99	48.9	3.95	55.9	4.45	62.9	4.95	66.4	5.21	76.8	6.07	80.3	6.44	94.3	8.06	95.5	8.13
	104	48.9	4.17	55.9	4.70	62.9	5.24	66.4	5.51	76.8	6.65	80.3	7.07	92.2	8.50	93.2	8.53
	109	48.9	4.44	55.9	5.01	62.9	5.62	66.4	6.02	76.8	7.30	80.3	7.76	89.8	8.91	90.8	8.94
	115	48.9	4.81	55.9	5.44	62.9	6.26	66.4	6.72	76.8	8.17	80.3	8.69	87.0	9.40	88.0	9.44
67.2 (70%)	50	42.8	2.59	48.9	2.89	55.0	3.20	58.1	3.36	67.2	3.82	70.3	3.98	82.5	4.60	85.5	4.76
	59	42.8	2.66	48.9	2.98	55.0	3.30	58.1	3.46	67.2	3.94	70.3	4.10	82.5	4.74	85.5	4.90
	70	42.8	2.80	48.9	3.14	55.0	3.48	58.1	3.65	67.2	4.15	70.3	4.33	82.5	5.00	85.5	5.18
	73	42.8	2.85	48.9	3.19	55.0	3.54	58.1	3.71	67.2	4.23	70.3	4.41	82.5	5.10	85.5	5.27
	77	42.8	2.92	48.9	3.28	55.0	3.63	58.1	3.81	67.2	4.35	70.3	4.53	82.5	5.24	85.5	5.42
	81	42.8	3.00	48.9	3.37	55.0	3.74	58.1	3.92	67.2	4.48	70.3	4.66	82.5	5.40	85.5	5.59
	86	42.8	3.12	48.9	3.50	55.0	3.89	58.1	4.08	67.2	4.66	70.3	4.85	82.5	5.62	85.5	5.82
	91	42.8	3.25	48.9	3.66	55.0	4.06	58.1	4.26	67.2	4.87	70.3	5.07	82.5	5.88	85.5	6.11
	95	42.8	3.37	48.9	3.79	55.0	4.22	58.1	4.43	67.2	5.06	70.3	5.27	82.5	6.23	85.5	6.54
	99	42.8	3.51	48.9	3.95	55.0	4.39	58.1	4.61	67.2	5.27	70.3	5.49	82.5	6.67	85.5	7.02
	104	42.8	3.70	48.9	4.17	55.0	4.63	58.1	4.87	67.2	5.58	70.3	5.91	82.5	7.33	85.5	7.72
	109	42.8	3.93	48.9	4.43	55.0	4.94	58.1	5.19	67.2	6.12	70.3	6.48	82.5	8.06	85.5	8.48
	115	42.8	4.26	48.9	4.81	55.0	5.35	58.1	5.67	67.2	6.83	70.3	7.24	82.5	9.02	84.6	9.31
57.6 (60%)	50	36.7	2.28	41.9	2.54	47.2	2.81	49.8	2.94	57.6	3.34	60.2	3.47	70.7	4.00	73.3	4.13
	59	36.7	2.34	41.9	2.61	47.2	2.88	49.8	3.02	57.6	3.43	60.2	3.57	70.7	4.12	73.3	4.26
	70	36.7	2.46	41.9	2.75	47.2	3.04	49.8	3.18	57.6	3.62	60.2	3.77	70.7	4.35	73.3	4.50
	73	36.7	2.50	41.9	2.79	47.2	3.09	49.8	3.24	57.6	3.69	60.2	3.84	70.7	4.43	73.3	4.58
	77	36.7	2.56	41.9	2.87	47.2	3.17	49.8	3.33	57.6	3.78	60.2	3.94	70.7	4.55	73.3	4.70
	81	36.7	2.63	41.9	2.95	47.2	3.26	49.8	3.42	57.6	3.89	60.2	4.05	70.7	4.69	73.3	4.85
	86	36.7	2.73	41.9	3.06	47.2	3.39	49.8	3.56	57.6	4.05	60.2	4.22	70.7	4.88	73.3	5.05
	91	36.7	2.85	41.9	3.19	47.2	3.54	49.8	3.71	57.6	4.23	60.2	4.41	70.7	5.10	73.3	5.28
	95	36.7	2.95	41.9	3.31	47.2	3.67	49.8	3.85	57.6	4.39	60.2	4.58	70.7	5.30	73.3	5.48
	99	36.7	3.06	41.9	3.44	47.2	3.82	49.8	4.01	57.6	4.57	60.2	4.76	70.7	5.52	73.3	5.72
	104	36.7	3.23	41.9	3.63	47.2	4.03	49.8	4.23	57.6	4.83	60.2	5.03	70.7	5.96	73.3	6.25
	109	36.7	3.43	41.9	3.86	47.2	4.29	49.8	4.51	57.6	5.15	60.2	5.37	70.7	6.53	73.3	6.86
	115	36.7	3.71	41.9	4.18	47.2	4.65	49.8	4.89	57.6	5.62	60.2	5.94	70.7	7.30	73.3	7.66
48.0 (50%)	50	30.6	1.96	34.9	2.19	39.3	2.41	41.5	2.52	48.0	2.85	50.2	2.96	58.9	3.40	61.1	3.51
	59	30.6	2.01	34.9	2.24	39.3	2.47	41.5	2.59	48.0	2.93	50.2	3.04	58.9	3.50	61.1	3.62
	70	30.6	2.11	34.9	2.36	39.3	2.60	41.5	2.72	48.0	3.09	50.2	3.21	58.9	3.69	61.1	3.81
	73	30.6	2.15	34.9	2.40	39.3	2.64	41.5	2.77	48.0	3.14	50.2	3.26	58.9	3.76	61.1	3.88
	77	30.6	2.20	34.9	2.46	39.3	2.71	41.5	2.84	48.0	3.22	50.2	3.35	58.9	3.86	61.1	3.99
	81	30.6	2.26	34.9	2.52	39.3	2.79	41.5	2.92	48.0	3.31	50.2	3.45	58.9	3.97	61.1	4.11
	86	30.6	2.34	34.9	2.62	39.3	2.89	41.5	3.03	48.0	3.45	50.2	3.58	58.9	4.13	61.1	4.27
	91	30.6	2.44	34.9	2.73	39.3	3.02	41.5	3.16	48.0	3.60	50.2	3.74	58.9	4.32	61.1	4.46
	95	30.6	2.53	34.9	2.83	39.3	3.13	41.5	3.28	48.0	3.73	50.2	3.88	58.9	4.48	61.1	4.64
	99	30.6	2.62	34.9	2.94	39.3	3.25	41.5	3.41	48.0	3.88	50.2	4.04	58.9	4.67	61.1	4.83
	104	30.6	2.76	34.9	3.09	39.3	3.43	41.5	3.59	48.0	4.09	50.2	4.26	58.9	4.93	61.1	5.10
	109	30.6	2.93	34.9	3.28	39.3	3.64	41.5	3.82	48.0	4.36	50.2	4.54	58.9	5.26	61.1	5.44
	115	30.6	3.16	34.9	3.55	39.3	3.94	41.5	4.14	48.0	4.72	50.2	4.92	58.9	5.77	61.1	6.04

TC : Total Capacity kBtu/h.

IP : Input Power kW (Compressor + Outdoor fan motor).

The data is based on the following conditions. Pipe length : 25ft. (7.5m) , Height difference : 0ft. (0m)

COOLING CAPACITY in kBtu/h

■ MODEL : AOUA120RLBV1

Total rated capacity of indoor unit	Outdoor temp.	Indoor temperature (°FDB / °FWB)															
		68 / 59		73 / 61		75 / 63		79 / 64		80 / 67		82 / 68		86 / 72		90 / 73	
	(°FDB)	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
180.0 (150%)	50	114.7	6.52	131.0	7.37	142.6	7.89	144.5	7.88	150.4	7.86	152.4	7.85	160.4	7.80	162.4	7.78
	59	114.7	6.71	131.0	7.60	141.5	8.06	143.4	8.05	149.3	8.02	151.2	8.01	159.1	7.97	161.2	7.95
	70	114.7	7.10	131.0	8.04	139.4	8.37	141.3	8.36	147.0	8.34	149.0	8.33	156.8	8.29	158.8	8.28
	73	114.7	7.23	131.0	8.19	138.6	8.48	140.5	8.47	146.3	8.45	148.2	8.44	155.8	8.42	157.6	8.44
	77	114.7	7.44	131.0	8.42	137.6	8.63	139.5	8.63	144.7	8.68	146.4	8.70	153.1	8.79	154.8	8.81
	81	114.7	7.66	131.0	8.74	135.5	8.94	137.2	8.96	142.1	9.04	143.8	9.07	150.4	9.16	152.1	9.18
	86	114.7	7.99	129.2	9.33	132.4	9.39	134.0	9.42	138.9	9.50	140.5	9.52	147.0	9.62	148.6	9.64
	91	114.7	8.64	126.2	9.77	129.3	9.84	130.9	9.87	135.6	9.96	137.2	9.98	143.5	10.09	145.0	10.12
	95	114.7	9.26	123.7	10.14	126.7	10.22	128.2	10.25	132.8	10.36	134.4	10.39	140.5	10.53	142.1	10.56
	99	114.7	9.97	121.0	10.55	123.9	10.63	125.5	10.67	130.0	10.78	131.5	10.82	137.5	10.96	139.1	11.00
	104	114.6	10.97	117.5	11.06	120.5	11.14	122.0	11.19	126.4	11.31	127.8	11.36	133.8	11.52	135.3	11.55
	109	111.2	11.47	114.1	11.57	117.0	11.67	118.4	11.71	122.7	11.85	124.2	11.90	130.0	12.07	131.4	12.12
	115	107.1	12.09	109.9	12.19	112.7	12.30	114.1	12.35	118.3	12.50	119.7	12.55	125.4	12.75	126.8	12.79
168.0 (140%)	50	107.1	6.12	122.3	6.91	137.5	7.71	142.1	7.89	147.9	7.87	149.8	7.86	157.6	7.81	159.6	7.80
	59	107.1	6.30	122.3	7.12	137.5	7.95	141.0	8.06	146.7	8.04	148.7	8.03	156.4	7.98	158.4	7.97
	70	107.1	6.66	122.3	7.53	137.1	8.37	139.0	8.37	144.6	8.35	146.5	8.35	154.1	8.31	156.1	8.30
	73	107.1	6.79	122.3	7.68	136.4	8.48	138.2	8.48	143.8	8.46	145.8	8.45	153.4	8.42	155.2	8.42
	77	107.1	6.97	122.3	7.89	135.3	8.64	137.2	8.63	142.6	8.65	144.2	8.67	150.9	8.76	152.6	8.78
	81	107.1	7.19	122.3	8.13	133.6	8.90	135.2	8.93	140.1	9.01	141.7	9.04	148.3	9.13	149.9	9.15
	86	107.1	7.49	122.3	8.66	130.6	9.35	132.2	9.38	136.9	9.47	138.5	9.49	144.9	9.59	146.5	9.62
	91	107.1	7.87	122.3	9.45	127.5	9.80	129.1	9.83	133.7	9.92	135.3	9.95	141.5	10.06	143.1	10.08
	95	107.1	8.43	122.0	10.10	125.0	10.18	126.6	10.21	131.1	10.32	132.6	10.35	138.6	10.49	140.2	10.52
	99	107.1	9.04	119.4	10.50	122.3	10.58	123.8	10.62	128.3	10.74	129.8	10.78	135.7	10.92	137.2	10.96
	104	107.1	9.94	116.1	11.01	118.9	11.10	120.4	11.14	124.7	11.27	126.2	11.31	132.1	11.47	133.5	11.51
	109	107.1	10.93	112.7	11.52	115.5	11.62	116.9	11.67	121.2	11.80	122.6	11.85	128.3	12.02	129.8	12.07
	115	105.9	12.04	108.6	12.14	111.4	12.25	112.7	12.30	116.9	12.45	118.3	12.50	123.8	12.69	125.3	12.74
156.0 (130%)	50	99.4	5.72	113.6	6.46	127.7	7.20	134.8	7.57	145.0	7.88	146.9	7.87	154.6	7.83	156.5	7.82
	59	99.4	5.89	113.6	6.65	127.7	7.41	134.8	7.80	144.0	8.05	145.9	8.04	153.4	8.00	155.3	7.99
	70	99.4	6.22	113.6	7.03	127.7	7.84	134.8	8.25	141.9	8.36	143.8	8.36	151.2	8.32	153.1	8.31
	73	99.4	6.34	113.6	7.17	127.7	8.00	134.8	8.41	141.2	8.47	143.0	8.46	150.5	8.43	152.3	8.42
	77	99.4	6.51	113.6	7.37	127.7	8.22	134.7	8.64	140.1	8.63	141.9	8.64	148.4	8.73	150.1	8.75
	81	99.4	6.71	113.6	7.59	127.7	8.47	133.0	8.89	137.8	8.97	139.4	9.00	145.9	9.10	147.5	9.12
	86	99.4	6.99	113.6	7.91	127.7	9.21	130.1	9.34	134.8	9.43	136.4	9.46	142.6	9.56	144.2	9.58
	91	99.4	7.31	113.6	8.52	125.6	9.76	127.1	9.79	131.7	9.88	133.2	9.91	139.3	10.02	140.9	10.05
	95	99.4	7.64	113.6	9.13	123.2	10.13	124.7	10.17	129.1	10.27	130.6	10.31	136.6	10.44	138.1	10.47
	99	99.4	8.17	113.6	9.83	120.5	10.53	122.0	10.57	126.4	10.69	127.9	10.73	133.7	10.87	135.2	10.91
	104	99.4	8.96	113.6	10.82	117.2	11.05	118.7	11.09	122.9	11.22	124.4	11.26	130.1	11.42	131.6	11.46
	109	99.4	9.85	111.1	11.47	113.9	11.56	115.3	11.61	119.5	11.75	120.9	11.79	126.5	11.97	127.9	12.01
	115	99.4	11.03	107.1	12.08	109.8	12.19	111.2	12.24	115.3	12.39	116.6	12.44	122.1	12.63	123.5	12.68
144.0 (120%)	50	91.8	5.32	104.8	6.00	117.9	6.68	124.5	7.03	141.9	7.89	143.7	7.89	151.2	7.85	153.0	7.84
	59	91.8	5.48	104.8	6.18	117.9	6.88	124.5	7.24	140.9	8.06	142.7	8.05	150.1	8.02	151.9	8.01
	70	91.8	5.78	104.8	6.53	117.9	7.28	124.5	7.66	138.9	8.37	140.7	8.37	148.0	8.34	149.8	8.33
	73	91.8	5.89	104.8	6.66	117.9	7.42	124.5	7.80	138.2	8.48	140.0	8.47	147.2	8.45	149.1	8.44
	77	91.8	6.05	104.8	6.84	117.9	7.63	124.5	8.02	137.2	8.63	139.0	8.63	145.6	8.69	147.2	8.71
	81	91.8	6.23	104.8	7.05	117.9	7.86	124.5	8.27	135.3	8.93	136.8	8.96	143.1	9.06	144.7	9.08
	86	91.8	6.49	104.8	7.34	117.9	8.23	124.5	8.88	132.3	9.38	133.9	9.41	140.0	9.52	141.6	9.54
	91	91.8	6.79	104.8	7.68	117.9	8.97	124.5	9.69	129.4	9.84	130.9	9.87	136.9	9.98	138.4	10.00
	95	91.8	7.05	104.8	8.19	117.9	9.62	122.5	10.11	126.9	10.22	128.3	10.26	134.2	10.39	135.7	10.42
	99	91.8	7.37	104.8	8.78	117.9	10.38	120.0	10.52	124.2	10.63	125.7	10.67	131.4	10.82	132.9	10.85
	104	91.8	8.05	104.8	9.65	115.3	10.99	116.7	11.03	120.9	11.16	122.3	11.20	128.0	11.36	129.4	11.40
	109	91.8	8.83	104.8	10.61	112.1	11.50	113.4	11.55	117.5	11.69	118.9	11.73	124.4	11.91	125.8	11.95
	115	91.8	9.87	104.8	11.90	108.1	12.12	109.4	12.17	113.4	12.32	114.8	12.37	120.2	12.57	121.5	12.61
132.0 (110%)	50	84.1	4.92	96.1	5.54	108.1	6.17	114.1	6.49	132.0	7.42	138.0	7.74	147.3	7.87	149.2	7.86
	59	84.1	5.06	96.1	5.71	108.1	6.35	114.1	6.68	132.0	7.65	138.0	7.97	146.3	8.04	148.1	8.03
	70	84.1	5.34	96.1	6.03	108.1	6.72	114.1	7.06	132.0	8.09	137.3	8.37	144.3	8.35	146.1	8.35
	73	84.1	5.44	96.1	6.14	108.1	6.84	114.1	7.20	132.0	8.25	136.6	8.48	143.6	8.46	145.4	8.46
	77	84.1	5.59	96.1	6.31	108.1	7.03	114.1	7.40	132.0	8.48	135.6	8.64	142.4	8.65	144.0	8.67
	81	84.1	5.76	96.1	6.50	108.1	7.25	114.1	7.62	132.0	8.84	133.9	8.91	140.1	9.01	141.6	9.03
	86	84.1	5.99	96.1	6.77	108.1	7.55	114.1	7.95	129.6	9.33	131.1	9.36	137.1	9.47	138.6	9.49
	91	84.1	6.27	96.1	7.08	108.1	7.97	114.1	8.58	126.7	9.78	128.2	9.81	134.1	9.93	135.6	9.96
	95	84.1	6.51	96.1	7.36	108.1	8.53	114.1	9.19	124.4	10.16	125.8	10.19	131.5	10.33	133.0	10.36
	99	84.1	6.78	96.1	7.82	108.1	9.16	114.1	9.90	121.8	10.57	123.2	10.61	128.9	10.75	130.3	10.79
	104	84.1	7.19	96.1	8.56	108.1	10.07	114.1	10.90	118.6	11.09	120.0	11.13	125.5	11.29	126.9	11.33
	109	84.1	7.88	96.1	9.40	108.1	11.08	111.3	11.48	115.3	11.61	116.7	11.66	122.1	11.83	123.5	11.87
	115	84.1	8.79	96.1	10.52	106.1	12.05	107.5	12.10	111.4	12.25	112.7	12.30	118.0	12.49	119.3	12.54

Total rated capacity of indoor unit	Outdoor temp.	Indoor temperature (°FDB / °FWB)															
		68 / 59		73 / 61		75 / 63		79 / 64		80 / 67		82 / 68		86 / 72		90 / 73	
	(°FDB)	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
120.0 (100%)	50	76.5	4.52	87.4	5.09	98.2	5.66	103.7	5.94	120.0	6.79	125.5	7.08	143.0	7.89	144.8	7.88
	59	76.5	4.65	87.4	5.24	98.2	5.82	103.7	6.12	120.0	7.00	125.5	7.30	142.1	8.05	143.8	8.05
	70	76.5	4.91	87.4	5.53	98.2	6.15	103.7	6.47	120.0	7.40	125.5	7.72	140.2	8.37	141.9	8.36
	73	76.5	5.00	87.4	5.63	98.2	6.27	103.7	6.59	120.0	7.54	125.5	7.86	139.5	8.47	141.2	8.47
	77	76.5	5.13	87.4	5.79	98.2	6.44	103.7	6.77	120.0	7.75	125.5	8.09	138.5	8.63	140.3	8.63
	81	76.5	5.28	87.4	5.96	98.2	6.64	103.7	6.98	120.0	7.99	125.5	8.33	136.6	8.95	138.1	8.98
	86	76.5	5.50	87.4	6.20	98.2	6.91	103.7	7.27	120.0	8.43	125.5	8.98	133.7	9.41	135.2	9.44
	91	76.5	5.74	87.4	6.49	98.2	7.23	103.7	7.61	120.0	9.20	125.1	9.75	130.9	9.87	132.3	9.90
	95	76.5	5.96	87.4	6.74	98.2	7.52	103.7	8.08	120.0	9.86	122.9	10.12	128.4	10.26	129.9	10.29
	99	76.5	6.21	87.4	7.02	98.2	8.04	103.7	8.65	119.0	10.49	120.4	10.53	125.9	10.68	127.3	10.71
	104	76.5	6.56	87.4	7.55	98.2	8.82	103.7	9.51	115.9	11.01	117.3	11.05	122.7	11.21	124.0	11.25
	109	76.5	6.99	87.4	8.28	98.2	9.69	103.7	10.45	112.8	11.53	114.1	11.57	119.4	11.75	120.7	11.79
	115	76.5	7.78	87.4	9.24	98.2	10.85	103.7	11.72	109.0	12.16	110.3	12.21	115.4	12.40	116.7	12.44
1080.0 (90%)	50	68.8	4.12	78.6	4.63	88.4	5.14	93.4	5.40	108.0	6.17	112.9	6.43	132.5	7.45	137.5	7.71
	59	68.8	4.24	78.6	4.76	88.4	5.29	93.4	5.56	108.0	6.35	112.9	6.62	132.5	7.68	137.5	7.94
	70	68.8	4.47	78.6	5.03	88.4	5.59	93.4	5.87	108.0	6.71	112.9	7.00	132.5	8.12	137.1	8.37
	73	68.8	4.55	78.6	5.12	88.4	5.69	93.4	5.98	108.0	6.84	112.9	7.13	132.5	8.28	136.5	8.48
	77	68.8	4.67	78.6	5.26	88.4	5.85	93.4	6.15	108.0	7.03	112.9	7.33	132.5	8.51	135.6	8.64
	81	68.8	4.81	78.6	5.41	88.4	6.02	93.4	6.33	108.0	7.24	112.9	7.55	132.5	8.89	134.0	8.91
	86	68.8	5.00	78.6	5.64	88.4	6.27	93.4	6.60	108.0	7.55	112.9	7.87	129.8	9.34	131.3	9.36
	91	68.8	5.22	78.6	5.89	88.4	6.56	93.4	6.90	108.0	7.96	112.9	8.46	127.1	9.79	128.5	9.82
	95	68.8	5.42	78.6	6.12	88.4	6.82	93.4	7.17	108.0	8.52	112.9	9.06	124.9	10.17	126.3	10.21
	99	68.8	5.64	78.6	6.37	88.4	7.10	93.4	7.53	108.0	9.15	112.9	9.75	122.5	10.59	123.8	10.62
	104	68.8	5.96	78.6	6.73	88.4	7.67	93.4	8.23	108.0	10.06	112.9	10.73	119.4	11.11	120.7	11.15
	109	68.8	6.35	78.6	7.23	88.4	8.41	93.4	9.04	108.0	11.07	111.1	11.47	116.3	11.64	117.6	11.69
	115	68.8	6.89	78.6	8.06	88.4	9.39	93.4	10.11	106.2	12.05	107.5	12.10	112.5	12.29	113.7	12.33
96.0 (80%)	50	61.2	3.72	69.9	4.17	78.6	4.63	83.0	4.86	96.0	5.54	100.4	5.77	117.8	6.68	122.2	6.91
	59	61.2	3.82	69.9	4.29	78.6	4.76	83.0	5.00	96.0	5.70	100.4	5.94	117.8	6.88	122.2	7.12
	70	61.2	4.03	69.9	4.53	78.6	5.03	83.0	5.28	96.0	6.03	100.4	6.28	117.8	7.28	122.2	7.53
	73	61.2	4.10	69.9	4.61	78.6	5.12	83.0	5.38	96.0	6.14	100.4	6.40	117.8	7.42	122.2	7.67
	77	61.2	4.21	69.9	4.73	78.6	5.26	83.0	5.52	96.0	6.31	100.4	6.57	117.8	7.62	122.2	7.89
	81	61.2	4.33	69.9	4.87	78.6	5.41	83.0	5.69	96.0	6.50	100.4	6.77	117.8	7.85	122.2	8.13
	86	61.2	4.50	69.9	5.07	78.6	5.63	83.0	5.92	96.0	6.77	100.4	7.05	117.8	8.22	122.2	8.65
	91	61.2	4.70	69.9	5.29	78.6	5.89	83.0	6.19	96.0	7.08	100.4	7.38	117.8	8.97	122.2	9.44
	95	61.2	4.88	69.9	5.50	78.6	6.12	83.0	6.43	96.0	7.35	100.4	7.74	117.8	9.61	122.0	10.10
	99	61.2	5.07	69.9	5.72	78.6	6.37	83.0	6.69	96.0	7.81	100.4	8.28	117.8	10.37	119.7	10.51
	104	61.2	5.35	69.9	6.04	78.6	6.73	83.0	7.08	96.0	8.55	100.4	9.09	115.5	10.99	116.8	11.03
	109	61.2	5.70	69.9	6.44	78.6	7.23	83.0	7.74	96.0	9.39	100.4	9.98	112.6	11.52	113.8	11.56
	115	61.2	6.18	69.9	6.98	78.6	8.05	83.0	8.64	96.0	10.50	100.4	11.18	109.0	12.16	110.2	12.20
84.0 (70%)	50	53.5	3.32	61.1	3.72	68.8	4.12	72.6	4.32	84.0	4.91	87.8	5.11	103.1	5.91	106.9	6.11
	59	53.5	3.41	61.1	3.82	68.8	4.23	72.6	4.44	84.0	5.06	87.8	5.26	103.1	6.09	106.9	6.29
	70	53.5	3.59	61.1	4.03	68.8	4.46	72.6	4.68	84.0	5.34	87.8	5.56	103.1	6.43	106.9	6.65
	73	53.5	3.65	61.1	4.10	68.8	4.54	72.6	4.77	84.0	5.44	87.8	5.66	103.1	6.55	106.9	6.78
	77	53.5	3.75	61.1	4.21	68.8	4.67	72.6	4.90	84.0	5.58	87.8	5.82	103.1	6.73	106.9	6.97
	81	53.5	3.85	61.1	4.33	68.8	4.80	72.6	5.04	84.0	5.75	87.8	5.99	103.1	6.94	106.9	7.18
	86	53.5	4.00	61.1	4.50	68.8	5.00	72.6	5.25	84.0	5.99	87.8	6.24	103.1	7.23	106.9	7.48
	91	53.5	4.18	61.1	4.70	68.8	5.22	72.6	5.48	84.0	6.26	87.8	6.52	103.1	7.56	106.9	7.86
	95	53.5	4.33	61.1	4.87	68.8	5.42	72.6	5.69	84.0	6.50	87.8	6.77	103.1	8.01	106.9	8.41
	99	53.5	4.50	61.1	5.07	68.8	5.64	72.6	5.92	84.0	6.77	87.8	7.06	103.1	8.57	106.9	9.02
	104	53.5	4.75	61.1	5.35	68.8	5.95	72.6	6.26	84.0	7.18	87.8	7.60	103.1	9.42	106.9	9.92
	109	53.5	5.05	61.1	5.70	68.8	6.34	72.6	6.67	84.0	7.86	87.8	8.33	103.1	10.36	106.9	10.91
	115	53.5	5.47	61.1	6.18	68.8	6.88	72.6	7.29	84.0	8.78	87.8	9.31	103.1	11.61	106.0	12.04
72.0 (60%)	50	45.9	2.92	52.4	3.26	58.9	3.60	62.2	3.77	72.0	4.28	75.3	4.46	88.4	5.14	91.6	5.31
	59	45.9	3.00	52.4	3.35	58.9	3.70	62.2	3.88	72.0	4.41	75.3	4.59	88.4	5.29	91.6	5.47
	70	45.9	3.15	52.4	3.53	58.9	3.90	62.2	4.09	72.0	4.65	75.3	4.84	88.4	5.59	91.6	5.78
	73	45.9	3.21	52.4	3.59	58.9	3.97	62.2	4.16	72.0	4.73	75.3	4.93	88.4	5.69	91.6	5.88
	77	45.9	3.29	52.4	3.68	58.9	4.07	62.2	4.27	72.0	4.86	75.3	5.06	88.4	5.85	91.6	6.04
	81	45.9	3.38	52.4	3.78	58.9	4.19	62.2	4.39	72.0	5.00	75.3	5.21	88.4	6.02	91.6	6.23
	86	45.9	3.51	52.4	3.93	58.9	4.36	62.2	4.57	72.0	5.21	75.3	5.42	88.4	6.27	91.6	6.48
	91	45.9	3.65	52.4	4.10	58.9	4.55	62.2	4.77	72.0	5.44	75.3	5.66	88.4	6.55	91.6	6.78
	95	45.9	3.79	52.4	4.25	58.9	4.72	62.2	4.95	72.0	5.65	75.3	5.88	88.4	6.81	91.6	7.04
	99	45.9	3.93	52.4	4.42	58.9	4.91	62.2	5.15	72.0	5.88	75.3	6.12	88.4	7.09	91.6	7.36
	104	45.9	4.15	52.4	4.66	58.9	5.18	62.2	5.44	72.0	6.21	75.3	6.47	88.4	7.66	91.6	8.04
	109	45.9	4.41	52.4	4.96	58.9	5.51	62.2	5.79	72.0	6.62	75.3	6.90	88.4	8.40	91.6	8.82
	115	45.9	4.76	52.4	5.37	58.9	5.97	62.2	6.28	72.0	7.22	75.3	7.63	88.4	9.38	91.6	9.86
60.0 (50%)	50	38.2	2.52	43.7	2.80	49.1	3.09	51.9	3.23	60.0	3.66	62.7	3.80	73.6	4.37	76.4	4.51
	59	38.2	2.58	43.7	2.88	49.1	3.17	51.9	3.32	60.0	3.76	62.7	3.91	73.6	4.50	76.4	4.64
	70	38.2	2.71	43.7	3.03	49.1	3.34	51.9	3.49	60.0	3.96	62.7	4.12	73.6	4.74	76.4	4.90
	73	38.2	2.76	43.7	3.08	49.1	3.40	51.9	3.56	60.0	4.03	62.7	4.19	73.6	4.83	76.4	4.99
	77	38.2	2.82	43.7	3.15	49.1	3.48	51.9	3.65	60.0	4.14	62.7	4.30	73.6	4.96	76.4	5.12
	81	38.2	2.90	43.7	3.24	49.1	3.58	51.9	3.75	60.0	4.26	62.7	4.43	73.6	5.10	76.4	5.28
	86	38.2	3.01	43.7	3.36	49.1	3.72	51.9	3.90	60.0	4.42	62.7	4.60	73.6	5.31	76.4	5.49
	91	38.2	3.13	43.7	3.50	49.1	3.88	51.9	4.06	60.0	4.62	62.7	4.81	73.6	5.55	76.4	5.74
	95	38.2	3.24	43.7	3.63	49.1	4.02	51.9	4.21	60.0	4.79	62.7	4.99	73.6	5.76	76.4	5.96
	99	38.2	3.36	43.7	3.77	49.1	4.17	51.9	4.38	60.0	4.98	62.7	5.19	73.6	6.00	76.4	6.20
	104	38.2	3.54	43.7	3.97	49.1	4.40	51.9	4.62	60.0	5.26	62.7	5.48	73.6	6.34	76.4	6.55
	109	38.2	3.76	43.7	4.22	49.1	4.68	51.9	4.91	60.0	5.60	62.7	5.83	73.6	6.75	76.4	6.99
	115	38.2	4.06	43.7	4.56	49.1	5.06	51.9	5.32	60.0	6.07	62.7	6.32	73.6	7.42	76.4	7.77

TC : Total Capacity kBtu/h.

IP : Input Power kW (Compressor + Outdoor fan motor).

The data is based on the following conditions. Pipe length : 25ft. (7.5m) , Height difference : 0ft. (0m)

COOLING CAPACITY in kBtu/h

■ MODEL : AOUA144RLBVG1

Total rated capacity of indoor unit	Outdoor temp.	Indoor temperature (°FDB / °FWB)															
		68 / 59		73 / 61		75 / 63		79 / 64		80 / 67		82 / 68		86 / 72		90 / 73	
	(°FDB)	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
216.0 (150%)	50	137.6	7.81	157.2	8.83	170.4	9.41	172.8	9.40	179.8	9.37	182.2	9.35	191.7	9.29	194.2	9.28
	59	137.6	8.05	157.2	9.10	169.1	9.60	171.4	9.59	178.4	9.57	180.8	9.55	190.3	9.50	192.7	9.48
	70	137.6	8.51	157.2	9.62	166.6	9.97	168.9	9.97	175.8	9.94	178.1	9.93	187.4	9.88	189.8	9.87
	73	137.6	8.67	157.2	9.81	165.7	10.10	168.0	10.10	174.8	10.07	177.2	10.06	186.2	10.04	188.3	10.07
	77	137.6	8.91	157.2	10.08	164.4	10.29	166.7	10.28	172.9	10.35	175.0	10.37	183.0	10.48	185.1	10.50
	81	137.6	9.18	157.2	10.48	162.0	10.65	164.0	10.68	169.9	10.77	171.9	10.80	179.8	10.91	181.8	10.94
	86	137.6	9.56	154.5	11.11	158.3	11.18	160.3	11.21	166.0	11.31	168.0	11.34	175.7	11.46	177.6	11.49
	91	137.6	10.35	150.8	11.63	154.6	11.71	156.5	11.75	162.1	11.85	164.0	11.88	171.5	12.01	173.4	12.05
	95	137.6	11.08	147.9	12.07	151.5	12.16	153.4	12.20	158.8	12.33	160.7	12.37	168.0	12.53	169.9	12.56
	99	137.6	11.93	144.7	12.54	148.3	12.64	150.1	12.69	155.4	12.82	157.3	12.87	164.5	13.04	166.3	13.08
	104	137.1	13.04	140.6	13.15	144.1	13.25	145.9	13.30	151.2	13.45	152.9	13.50	160.0	13.69	161.8	13.74
	109	133.1	13.64	136.5	13.75	140.0	13.87	141.7	13.92	146.8	14.09	148.6	14.14	155.5	14.35	157.3	14.40
	115	128.3	14.36	131.6	14.48	134.9	14.61	136.6	14.67	141.6	14.85	143.3	14.91	150.1	15.14	151.8	15.20
201.6 (140%)	50	128.5	7.34	146.7	8.29	165.0	9.24	169.9	9.41	176.8	9.38	179.1	9.37	188.4	9.32	190.8	9.30
	59	128.5	7.55	146.7	8.54	165.0	9.52	168.6	9.60	175.4	9.58	177.7	9.57	187.0	9.52	189.4	9.50
	70	128.5	7.98	146.7	9.03	163.9	9.98	166.1	9.98	172.9	9.96	175.1	9.95	184.3	9.90	186.6	9.89
	73	128.5	8.13	146.7	9.20	163.0	10.11	165.3	10.10	172.0	10.08	174.2	10.08	183.3	10.03	185.5	10.04
	77	128.5	8.36	146.7	9.45	161.8	10.29	164.0	10.29	170.4	10.31	172.4	10.34	180.4	10.45	182.4	10.47
	81	128.5	8.61	146.7	9.74	159.7	10.61	161.6	10.64	167.5	10.74	169.4	10.77	177.2	10.88	179.2	10.91
	86	128.5	8.97	146.7	10.38	156.1	11.14	158.0	11.17	163.7	11.27	165.6	11.31	173.3	11.42	175.2	11.45
	91	128.5	9.43	146.7	11.32	152.5	11.67	154.4	11.71	159.9	11.81	161.8	11.85	169.2	11.97	171.1	12.00
	95	128.5	10.09	145.9	12.02	149.5	12.11	151.4	12.15	156.7	12.28	158.6	12.32	165.8	12.48	167.6	12.52
	99	128.5	10.82	142.8	12.49	146.3	12.59	148.1	12.64	153.4	12.77	155.2	12.82	162.3	12.99	164.1	13.03
	104	128.5	11.88	138.9	13.09	142.3	13.20	144.1	13.25	149.3	13.40	151.0	13.45	158.0	13.64	159.7	13.68
	109	128.5	13.06	134.9	13.70	138.2	13.81	139.9	13.86	145.0	14.03	146.7	14.08	153.6	14.29	155.3	14.34
	115	126.7	14.30	130.0	14.42	133.3	14.55	135.0	14.61	139.9	14.79	141.6	14.85	148.2	15.08	149.9	15.14
187.2 (130%)	50	119.3	6.86	136.3	7.74	153.2	8.62	161.8	9.07	173.4	9.40	175.7	9.39	184.8	9.34	187.1	9.32
	59	119.3	7.06	136.3	7.97	153.2	8.88	161.8	9.34	172.1	9.59	174.4	9.58	183.4	9.54	185.7	9.53
	70	119.3	7.46	136.3	8.43	153.2	9.39	161.8	9.88	169.6	9.97	171.9	9.96	180.8	9.92	183.1	9.91
	73	119.3	7.60	136.3	8.59	153.2	9.58	161.8	10.07	168.8	10.09	171.0	10.09	179.9	10.05	182.1	10.04
	77	119.3	7.81	136.3	8.82	153.2	9.84	161.0	10.29	167.5	10.28	169.6	10.30	177.4	10.41	179.4	10.43
	81	119.3	8.04	136.3	9.09	153.2	10.14	159.0	10.60	164.8	10.69	166.7	10.72	174.4	10.84	176.3	10.87
	86	119.3	8.38	136.3	9.47	153.2	11.03	155.6	11.13	161.1	11.23	163.0	11.26	170.5	11.38	172.4	11.41
	91	119.3	8.76	136.3	10.21	150.2	11.62	152.0	11.66	157.5	11.77	159.3	11.80	166.6	11.93	168.5	11.96
	95	119.3	9.15	136.3	10.93	147.3	12.05	149.1	12.10	154.4	12.22	156.2	12.27	163.3	12.43	165.1	12.46
	99	119.3	9.78	136.3	11.76	144.2	12.53	146.0	12.58	151.2	12.72	152.9	12.76	159.9	12.93	161.7	12.98
	104	119.3	10.73	136.3	12.93	140.3	13.13	142.0	13.19	147.1	13.34	148.8	13.39	155.7	13.58	157.4	13.62
	109	119.3	11.77	133.0	13.63	136.3	13.74	138.0	13.80	143.0	13.96	144.7	14.02	151.4	14.22	153.1	14.28
	115	119.3	13.16	128.2	14.36	131.5	14.48	133.1	14.54	138.0	14.72	139.6	14.78	146.2	15.01	147.8	15.07
172.8 (120%)	50	110.1	6.38	125.8	7.20	141.4	8.01	149.3	8.42	169.7	9.41	171.9	9.40	180.7	9.36	183.0	9.35
	59	110.1	6.57	125.8	7.41	141.4	8.25	149.3	8.68	168.4	9.60	170.6	9.60	179.4	9.56	181.7	9.55
	70	110.1	6.94	125.8	7.83	141.4	8.72	149.3	9.17	166.0	9.98	168.2	9.97	176.9	9.94	179.1	9.93
	73	110.1	7.07	125.8	7.98	141.4	8.89	149.3	9.35	165.2	10.10	167.4	10.10	176.0	10.07	178.2	10.06
	77	110.1	7.26	125.8	8.20	141.4	9.14	149.3	9.61	164.0	10.29	166.2	10.29	174.1	10.36	176.0	10.39
	81	110.1	7.47	125.8	8.44	141.4	9.41	149.3	9.90	161.7	10.64	163.6	10.67	171.1	10.79	173.0	10.82
	86	110.1	7.78	125.8	8.80	141.4	9.86	149.3	10.64	158.2	11.18	160.1	11.21	167.4	11.33	169.3	11.36
	91	110.1	8.14	125.8	9.20	141.4	10.75	149.3	11.60	154.7	11.71	156.5	11.75	163.7	11.88	165.5	11.91
	95	110.1	8.45	125.8	9.81	141.4	11.51	146.6	12.03	151.8	12.16	153.5	12.20	160.5	12.36	162.3	12.40
	99	110.1	8.83	125.8	10.50	141.4	12.41	143.5	12.51	148.6	12.65	150.4	12.69	157.2	12.87	159.0	12.91
	104	110.1	9.63	125.8	11.54	138.0	13.06	139.7	13.12	144.7	13.27	146.4	13.32	153.1	13.51	154.8	13.55
	109	110.1	10.57	125.8	12.67	134.1	13.67	135.8	13.73	140.7	13.89	142.3	13.94	148.9	14.15	150.6	14.20
	115	110.1	11.79	125.8	14.19	129.4	14.40	131.0	14.46	135.8	14.64	137.4	14.70	143.9	14.93	145.5	14.99
158.4 (110%)	50	100.9	5.91	115.3	6.65	129.7	7.40	136.9	7.78	158.4	8.89	165.6	9.27	176.2	9.38	178.4	9.37
	59	100.9	6.08	115.3	6.85	129.7	7.62	136.9	8.01	158.4	9.16	165.6	9.55	174.9	9.58	177.1	9.57
	70	100.9	6.41	115.3	7.23	129.7	8.05	136.9	8.46	158.4	9.69	164.1	9.98	172.5	9.96	174.7	9.95
	73	100.9	6.53	115.3	7.37	129.7	8.20	136.9	8.63	158.4	9.87	163.3	10.11	171.7	10.09	173.8	10.08
	77	100.9	6.71	115.3	7.57	129.7	8.43	136.9	8.86	158.4	10.15	162.2	10.29	170.3	10.31	172.2	10.34
	81	100.9	6.91	115.3	7.80	129.7	8.68	136.9	9.13	158.3	10.58	160.1	10.62	167.5	10.74	169.3	10.77
	86	100.9	7.19	115.3	8.12	129.7	9.05	136.9	9.52	154.9	11.11	156.8	11.15	163.9	11.28	165.8	11.31
	91	100.9	7.51	115.3	8.49	129.7	9.55	136.9	10.28	151.5	11.65	153.3	11.68	160.3	11.82	162.1	11.85
	95	100.9	7.80	115.3	8.82	129.7	10.22	136.9	11.00	148.8	12.09	150.5	12.13	157.3	12.29	159.0	12.33
	99	100.9	8.12	115.3	9.36	129.7	10.96	136.9	11.84	145.7	12.57	147.4	12.62	154.2	12.79	155.9	12.83
	104	100.9	8.61	115.3	10.24	129.7	12.04	136.9	13.02	141.9	13.18	143.6	13.23	150.2	13.42	151.8	13.47
	109	100.9	9.43	115.3	11.24	129.7	13.23	133.2	13.64	138.0	13.80	139.7	13.86	146.1	14.06	147.8	14.11
	115	100.9	10.51	115.3	12.56	127.1	14.31	128.7	14.37	133.3	14.55	134.9	14.61	141.2	14.84	142.8	14.89

Total rated capacity of indoor unit	Outdoor temp.	Indoor temperature (°FDB / °FWB)															
		68 / 59		73 / 61		75 / 63		79 / 64		80 / 67		82 / 68		86 / 72		90 / 73	
	(°FDB)	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
144.0 (100%)	50	91.8	5.43	104.8	6.11	117.9	6.79	124.5	7.13	144.0	8.14	150.6	8.49	171.1	9.41	173.2	9.40
	59	91.8	5.59	104.8	6.28	117.9	6.99	124.5	7.34	144.0	8.39	150.6	8.74	169.9	9.60	172.0	9.59
	70	91.8	5.89	104.8	6.63	117.9	7.38	124.5	7.75	144.0	8.87	150.6	9.24	167.6	9.97	169.7	9.97
	73	91.8	6.00	104.8	6.76	117.9	7.52	124.5	7.90	144.0	9.04	150.6	9.42	166.8	10.10	168.9	10.09
	77	91.8	6.16	104.8	6.94	117.9	7.72	124.5	8.12	144.0	9.29	150.6	9.68	165.7	10.29	167.7	10.28
	81	91.8	6.34	104.8	7.15	117.9	7.96	124.5	8.36	144.0	9.57	150.6	9.98	163.3	10.67	165.1	10.70
	86	91.8	6.60	104.8	7.44	117.9	8.28	124.5	8.71	144.0	10.11	150.6	10.76	159.9	11.21	161.7	11.24
	91	91.8	6.89	104.8	7.78	117.9	8.66	124.5	9.11	144.0	11.02	149.7	11.61	156.5	11.75	158.2	11.78
	95	91.8	7.15	104.8	8.08	117.9	9.01	124.5	9.68	144.0	11.80	147.0	12.04	153.7	12.21	155.3	12.25
	99	91.8	7.44	104.8	8.41	117.9	9.63	124.5	10.35	142.4	12.48	144.1	12.53	150.6	12.70	152.3	12.74
	104	91.8	7.87	104.8	9.04	117.9	10.55	124.5	11.37	138.7	13.09	140.4	13.14	146.8	13.33	148.4	13.37
	109	91.8	8.38	104.8	9.90	117.9	11.58	124.5	12.49	135.0	13.70	136.6	13.75	142.9	13.96	144.5	14.01
	115	91.8	9.31	104.8	11.04	117.9	12.94	124.5	13.98	130.5	14.44	132.0	14.50	138.2	14.73	139.7	14.78
129.6 (90%)	50	82.6	4.95	94.3	5.56	106.1	6.17	112.0	6.48	129.6	7.40	135.5	7.70	159.0	8.92	164.9	9.23
	59	82.6	5.09	94.3	5.72	106.1	6.35	112.0	6.67	129.6	7.61	135.5	7.93	159.0	9.19	164.9	9.51
	70	82.6	5.37	94.3	6.04	106.1	6.71	112.0	7.05	129.6	8.05	135.5	8.39	159.0	9.73	164.0	9.98
	73	82.6	5.46	94.3	6.15	106.1	6.83	112.0	7.18	129.6	8.20	135.5	8.54	159.0	9.91	163.2	10.11
	77	82.6	5.61	94.3	6.31	106.1	7.02	112.0	7.37	129.6	8.43	135.5	8.78	159.0	10.19	162.1	10.29
	81	82.6	5.77	94.3	6.50	106.1	7.23	112.0	7.59	129.6	8.68	135.5	9.05	158.5	10.59	160.2	10.62
	86	82.6	6.00	94.3	6.76	106.1	7.52	112.0	7.91	129.6	9.04	135.5	9.43	155.3	11.12	157.0	11.15
	91	82.6	6.27	94.3	7.06	106.1	7.86	112.0	8.26	129.6	9.54	135.5	10.13	152.1	11.66	153.8	11.69
	95	82.6	6.50	94.3	7.34	106.1	8.17	112.0	8.59	129.6	10.21	135.5	10.85	149.4	12.10	151.0	12.14
	99	82.6	6.77	94.3	7.64	106.1	8.50	112.0	9.02	129.6	10.95	135.5	11.67	146.5	12.59	148.1	12.64
	104	82.6	7.15	94.3	8.07	106.1	9.18	112.0	9.86	129.6	12.03	135.5	12.83	142.9	13.21	144.5	13.26
	109	82.6	7.61	94.3	8.66	106.1	10.06	112.0	10.81	129.6	13.22	133.0	13.63	139.2	13.84	140.7	13.89
	115	82.6	8.25	94.3	9.64	106.1	11.22	112.0	12.07	127.2	14.32	128.7	14.37	134.7	14.60	136.2	14.65
115.2 (80%)	50	73.4	4.47	83.9	5.02	94.3	5.56	99.6	5.83	115.2	6.65	120.5	6.92	141.3	8.01	146.6	8.28
	59	73.4	4.60	83.9	5.16	94.3	5.72	99.6	6.00	115.2	6.84	120.5	7.13	141.3	8.25	146.6	8.53
	70	73.4	4.84	83.9	5.44	94.3	6.04	99.6	6.34	115.2	7.23	120.5	7.53	141.3	8.72	146.6	9.02
	73	73.4	4.93	83.9	5.54	94.3	6.15	99.6	6.45	115.2	7.36	120.5	7.67	141.3	8.88	146.6	9.19
	77	73.4	5.06	83.9	5.68	94.3	6.31	99.6	6.63	115.2	7.56	120.5	7.88	141.3	9.13	146.6	9.45
	81	73.4	5.20	83.9	5.85	94.3	6.50	99.6	6.82	115.2	7.79	120.5	8.12	141.3	9.41	146.6	9.74
	86	73.4	5.41	83.9	6.08	94.3	6.76	99.6	7.10	115.2	8.11	120.5	8.45	141.3	9.85	146.6	10.37
	91	73.4	5.64	83.9	6.35	94.3	7.06	99.6	7.42	115.2	8.48	120.5	8.84	141.3	10.74	146.6	11.30
	95	73.4	5.85	83.9	6.59	94.3	7.33	99.6	7.71	115.2	8.81	120.5	9.27	141.3	11.50	146.0	12.02
	99	73.4	6.09	83.9	6.86	94.3	7.63	99.6	8.02	115.2	9.35	120.5	9.91	141.3	12.40	143.3	12.51
	104	73.4	6.42	83.9	7.24	94.3	8.07	99.6	8.48	115.2	10.23	120.5	10.87	138.3	13.07	139.8	13.12
	109	73.4	6.84	83.9	7.72	94.3	8.65	99.6	9.27	115.2	11.22	120.5	11.93	134.8	13.69	136.3	13.74
	115	73.4	7.41	83.9	8.37	94.3	9.64	99.6	10.33	115.2	12.54	120.5	13.35	130.5	14.44	132.0	14.50
100.8 (70%)	50	64.2	4.00	73.4	4.47	82.5	4.95	87.1	5.19	100.8	5.90	105.4	6.14	123.7	7.09	128.3	7.33
	59	64.2	4.11	73.4	4.60	82.5	5.09	87.1	5.34	100.8	6.07	105.4	6.32	123.7	7.30	128.3	7.55
	70	64.2	4.32	73.4	4.84	82.5	5.36	87.1	5.63	100.8	6.41	105.4	6.67	123.7	7.71	128.3	7.97
	73	64.2	4.40	73.4	4.93	82.5	5.46	87.1	5.73	100.8	6.52	105.4	6.79	123.7	7.86	128.3	8.12
	77	64.2	4.51	73.4	5.06	82.5	5.60	87.1	5.88	100.8	6.70	105.4	6.98	123.7	8.07	128.3	8.35
	81	64.2	4.63	73.4	5.20	82.5	5.77	87.1	6.05	100.8	6.90	105.4	7.18	123.7	8.32	128.3	8.60
	86	64.2	4.81	73.4	5.41	82.5	6.00	87.1	6.30	100.8	7.18	105.4	7.48	123.7	8.66	128.3	8.96
	91	64.2	5.02	73.4	5.64	82.5	6.26	87.1	6.57	100.8	7.50	105.4	7.82	123.7	9.06	128.3	9.42
	95	64.2	5.21	73.4	5.85	82.5	6.50	87.1	6.83	100.8	7.79	105.4	8.12	123.7	9.60	128.3	10.07
	99	64.2	5.41	73.4	6.09	82.5	6.76	87.1	7.10	100.8	8.11	105.4	8.45	123.7	10.27	128.3	10.80
	104	64.2	5.70	73.4	6.42	82.5	7.14	87.1	7.50	100.8	8.60	105.4	9.10	123.7	11.27	128.3	11.86
	109	64.2	6.07	73.4	6.83	82.5	7.60	87.1	7.99	100.8	9.41	105.4	9.97	123.7	12.38	128.3	13.03
	115	64.2	6.57	73.4	7.41	82.5	8.25	87.1	8.73	100.8	10.49	105.4	11.13	123.7	13.85	126.9	14.31
86.4 (60%)	50	55.1	3.52	62.9	3.93	70.7	4.33	74.7	4.54	86.4	5.15	90.3	5.36	106.0	6.17	110.0	6.38
	59	55.1	3.61	62.9	4.03	70.7	4.46	74.7	4.67	86.4	5.30	90.3	5.51	106.0	6.35	110.0	6.56
	70	55.1	3.80	62.9	4.24	70.7	4.69	74.7	4.92	86.4	5.58	90.3	5.81	106.0	6.70	110.0	6.93
	73	55.1	3.86	62.9	4.32	70.7	4.77	74.7	5.00	86.4	5.69	90.3	5.92	106.0	6.83	110.0	7.06
	77	55.1	3.96	62.9	4.43	70.7	4.90	74.7	5.13	86.4	5.84	90.3	6.07	106.0	7.01	110.0	7.25
	81	55.1	4.07	62.9	4.55	70.7	5.04	74.7	5.28	86.4	6.01	90.3	6.25	106.0	7.22	110.0	7.47
	86	55.1	4.22	62.9	4.73	70.7	5.24	74.7	5.49	86.4	6.25	90.3	6.50	106.0	7.52	110.0	7.77
	91	55.1	4.40	62.9	4.93	70.7	5.46	74.7	5.73	86.4	6.53	90.3	6.79	106.0	7.86	110.0	8.13
	95	55.1	4.56	62.9	5.11	70.7	5.67	74.7	5.94	86.4	6.77	90.3	7.05	106.0	8.16	110.0	8.44
	99	55.1	4.73	62.9	5.31	70.7	5.89	74.7	6.18	86.4	7.05	90.3	7.34	106.0	8.50	110.0	8.82
	104	55.1	4.98	62.9	5.60	70.7	6.21	74.7	6.52	86.4	7.44	90.3	7.75	106.0	9.17	110.0	9.62
	109	55.1	5.29	62.9	5.95	70.7	6.61	74.7	6.95	86.4	7.93	90.3	8.26	106.0	10.05	110.0	10.55
	115	55.1	5.72	62.9	6.44	70.7	7.16	74.7	7.53	86.4	8.64	90.3	9.13	106.0	11.21	110.0	11.77
72.0 (50%)	50	45.9	3.04	52.4	3.38	58.9	3.72	62.2	3.89	72.0	4.40	75.3	4.57	88.3	5.25	91.6	5.42
	59	45.9	3.12	52.4	3.47	58.9	3.82	62.2	4.00	72.0	4.52	75.3	4.70	88.3	5.40	91.6	5.58
	70	45.9	3.27	52.4	3.65	58.9	4.02	62.2	4.21	72.0	4.76	75.3	4.95	88.3	5.70	91.6	5.88
	73	45.9	3.33	52.4	3.71	58.9	4.09	62.2	4.28	72.0	4.85	75.3	5.04	88.3	5.80	91.6	5.99
	77	45.9	3.41	52.4	3.80	58.9	4.19	62.2	4.39	72.0	4.97	75.3	5.17	88.3	5.95	91.6	6.15
	81	45.9	3.50	52.4	3.90	58.9	4.31	62.2	4.51	72.0	5.11	75.3	5.32	88.3	6.13	91.6	6.33
	86	45.9	3.63	52.4	4.05	58.9	4.47	62.2	4.69	72.0	5.32	75.3	5.53	88.3	6.37	91.6	6.59
	91	45.9	3.77	52.4	4.22	58.9	4.66	62.2	4.88	72.0	5.55	75.3	5.77	88.3	6.66	91.6	6.88
	95	45.9	3.91	52.4	4.37	58.9	4.83	62.2	5.06	72.0	5.75	75.3	5.99	88.3	6.91	91.6	7.15
	99	45.9	4.05	52.4	4.54	58.9	5.02	62.2	5.26	72.0	5.98	75.3	6.23	88.3	7.19	91.6	7.44
	104	45.9	4.26	52.4	4.77	58.9	5.29	62.2	5.55	72.0	6.31	75.3	6.57	88.3	7.60	91.6	7.86
	109	45.9	4.52	52.4	5.07	58.9	5.62	62.2	5.90	72.0	6.72	75.3	7.00	88.3	8.10	91.6	8.37
	115	45.9	4.88	52.4	5.48	58.9	6.08	62.2	6.38	72.0	7.28	75.3	7.58	88.3	8.88	91.6	9.29

TC : Total Capacity kBtu/h.

IP : Input Power kW (Compressor + Outdoor fan motor).

The data is based on the following conditions. Pipe length : 25ft. (7.5m) , Height difference : 0ft. (0m)

COOLING CAPACITY in kBtu/h

■ MODEL : AOUA168RLBVG1

Total rated capacity of indoor unit	Outdoor temp.	Indoor temperature (°FDB / °FWB)															
		68 / 59		73 / 61		75 / 63		79 / 64		80 / 67		82 / 68		86 / 72		90 / 73	
	(°FDB)	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
252.0 (150%)	50	160.6	9.39	183.4	10.62	198.9	11.32	201.6	11.31	209.8	11.27	212.6	11.25	223.7	11.18	226.5	11.16
	59	160.6	9.68	183.4	10.94	197.3	11.55	200.0	11.54	208.2	11.51	210.9	11.49	222.0	11.42	224.8	11.40
	70	160.6	10.23	183.4	11.58	194.4	12.00	197.1	11.99	205.1	11.96	207.8	11.95	218.7	11.89	221.5	11.87
	73	160.6	10.43	183.4	11.80	193.4	12.15	196.0	12.15	204.0	12.12	206.7	12.11	217.4	12.07	219.8	12.10
	77	160.6	10.71	183.4	12.13	191.9	12.38	194.5	12.37	201.8	12.44	204.2	12.47	213.6	12.60	216.0	12.63
	81	160.6	11.04	183.4	12.60	189.0	12.81	191.4	12.85	198.3	12.96	200.6	12.99	209.8	13.12	212.2	13.15
	86	160.6	11.51	180.3	13.36	184.7	13.45	187.0	13.49	193.8	13.61	196.0	13.64	205.0	13.78	207.3	13.82
	91	160.6	12.45	176.0	14.00	180.4	14.09	182.6	14.13	189.2	14.26	191.4	14.30	200.2	14.45	202.4	14.49
	95	160.6	13.34	172.6	14.52	176.8	14.63	179.0	14.68	185.3	14.83	187.5	14.88	196.1	15.07	198.2	15.12
	99	160.6	14.36	168.8	15.10	173.0	15.21	175.1	15.27	181.4	15.43	183.5	15.49	191.9	15.69	194.1	15.74
	104	160.0	15.70	164.1	15.83	168.2	15.95	170.2	16.01	176.4	16.19	178.4	16.25	186.7	16.48	188.8	16.54
	109	155.3	16.42	159.3	16.56	163.3	16.69	165.3	16.76	171.3	16.96	173.3	17.02	181.4	17.27	183.5	17.34
	115	149.6	17.29	153.5	17.44	157.4	17.59	159.3	17.67	165.2	17.88	167.2	17.96	175.1	18.23	177.1	18.30
235.2 (140%)	50	149.9	8.82	171.2	9.97	192.6	11.11	198.2	11.32	206.3	11.29	209.0	11.27	219.9	11.21	222.6	11.19
	59	149.9	9.08	171.2	10.27	192.5	11.45	196.7	11.55	204.7	11.52	207.4	11.51	218.2	11.45	221.0	11.43
	70	149.9	9.60	171.2	10.86	191.2	12.01	193.8	12.00	201.7	11.98	204.4	11.97	215.0	11.91	217.7	11.90
	73	149.9	9.78	171.2	11.06	190.2	12.16	192.8	12.15	200.7	12.13	203.3	12.12	213.9	12.07	216.5	12.06
	77	149.9	10.05	171.2	11.37	188.8	12.38	191.4	12.38	198.9	12.40	201.2	12.43	210.5	12.56	212.9	12.59
	81	149.9	10.36	171.2	11.72	186.3	12.76	188.6	12.80	195.4	12.91	197.7	12.95	206.8	13.08	209.1	13.11
	86	149.9	10.79	171.2	12.48	182.2	13.40	184.4	13.44	191.1	13.56	193.3	13.60	202.2	13.74	204.4	13.77
	91	149.9	11.34	171.2	13.62	178.0	14.04	180.2	14.08	186.6	14.21	188.8	14.25	197.5	14.40	199.7	14.44
	95	149.9	12.14	170.3	14.46	174.5	14.57	176.6	14.62	182.9	14.78	185.0	14.83	193.5	15.02	195.6	15.06
	99	149.9	13.02	166.6	15.04	170.8	15.15	172.8	15.21	179.0	15.37	181.1	15.43	189.4	15.63	191.5	15.69
	104	149.9	14.31	162.0	15.76	166.0	15.89	168.1	15.95	174.1	16.13	176.2	16.19	184.3	16.42	186.4	16.47
	109	149.9	15.73	157.3	16.49	161.3	16.63	163.3	16.69	169.2	16.89	171.2	16.96	179.2	17.21	181.2	17.27
	115	147.8	17.22	151.6	17.37	155.5	17.52	157.4	17.60	163.2	17.81	165.1	17.88	172.9	18.16	174.9	18.23
218.4 (130%)	50	139.2	8.25	159.0	9.31	178.8	10.37	188.8	10.91	202.3	11.30	205.0	11.29	215.6	11.23	218.3	11.22
	59	139.2	8.49	159.0	9.59	178.8	10.69	188.8	11.24	200.8	11.54	203.5	11.53	214.0	11.47	216.7	11.46
	70	139.2	8.97	159.0	10.14	178.8	11.30	188.8	11.89	197.9	11.99	200.5	11.98	210.9	11.94	213.6	11.92
	73	139.2	9.14	159.0	10.33	178.8	11.52	188.8	12.12	196.9	12.14	199.5	12.14	209.9	12.09	212.5	12.08
	77	139.2	9.39	159.0	10.61	178.8	11.84	187.9	12.38	195.5	12.37	197.9	12.38	207.1	12.51	209.4	12.54
	81	139.2	9.67	159.0	10.94	178.8	12.20	185.6	12.75	192.3	12.86	194.5	12.90	203.5	13.04	205.8	13.07
	86	139.2	10.08	159.0	11.40	178.8	13.27	181.5	13.38	188.1	13.51	190.3	13.55	199.0	13.69	201.2	13.73
	91	139.2	10.53	159.0	12.28	175.2	13.98	177.4	14.03	183.8	14.16	185.9	14.20	194.4	14.35	196.6	14.39
	95	139.2	11.01	159.0	13.15	171.9	14.50	174.0	14.56	180.2	14.71	182.3	14.76	190.6	14.95	192.7	15.00
	99	139.2	11.77	159.0	14.15	168.3	15.08	170.3	15.14	176.4	15.30	178.4	15.36	186.6	15.57	188.7	15.62
	104	139.2	12.91	159.0	15.57	163.7	15.81	165.7	15.87	171.6	16.06	173.6	16.11	181.7	16.34	183.7	16.40
	109	139.2	14.17	155.1	16.41	159.0	16.55	161.0	16.62	166.8	16.81	168.8	16.88	176.6	17.13	178.6	17.19
	115	139.2	15.86	149.6	17.29	153.4	17.44	155.3	17.51	161.0	17.73	162.9	17.80	170.5	18.08	172.5	18.14
201.6 (120%)	50	128.5	7.67	146.8	8.65	165.0	9.63	174.3	10.13	198.0	11.32	200.5	11.31	210.9	11.26	213.5	11.25
	59	128.5	7.90	146.8	8.91	165.0	9.92	174.3	10.44	196.5	11.55	199.1	11.55	209.4	11.50	212.0	11.49
	70	128.5	8.34	146.8	9.42	165.0	10.49	174.3	11.04	193.7	12.00	196.3	11.99	206.4	11.96	209.0	11.95
	73	128.5	8.49	146.8	9.59	165.0	10.69	174.3	11.25	192.8	12.15	195.3	12.15	205.4	12.11	208.0	12.10
	77	128.5	8.73	146.8	9.86	165.0	10.99	174.3	11.56	191.4	12.38	193.9	12.37	203.1	12.46	205.4	12.49
	81	128.5	8.99	146.8	10.16	165.0	11.32	174.3	11.92	188.7	12.80	190.9	12.84	199.7	12.98	202.0	13.01
	86	128.5	9.36	146.8	10.58	165.0	11.86	174.3	12.80	184.7	13.44	186.8	13.48	195.4	13.63	197.6	13.67
	91	128.5	9.78	146.8	11.07	165.0	12.93	174.3	13.96	180.5	14.09	182.6	14.13	191.0	14.29	193.1	14.33
	95	128.5	10.17	146.8	11.80	165.0	13.85	171.0	14.48	177.1	14.63	179.1	14.68	187.3	14.88	189.4	14.92
	99	128.5	10.62	146.8	12.64	165.0	14.94	167.4	15.06	173.4	15.22	175.4	15.28	183.5	15.49	185.5	15.54
	104	128.5	11.59	146.8	13.89	161.0	15.73	162.9	15.79	168.8	15.97	170.8	16.03	178.6	16.26	180.6	16.31
	109	128.5	12.71	146.8	15.26	156.4	16.46	158.4	16.53	164.1	16.72	166.0	16.79	173.7	17.04	175.7	17.10
	115	128.5	14.20	146.8	17.10	151.0	17.35	152.8	17.42	158.4	17.63	160.3	17.70	167.8	17.98	169.7	18.05
184.8 (110%)	50	117.8	7.10	134.5	8.00	151.3	8.90	159.7	9.35	184.8	10.69	193.3	11.15	205.6	11.29	208.1	11.28
	59	117.8	7.30	134.5	8.23	151.3	9.16	159.8	9.63	184.8	11.02	193.3	11.49	204.1	11.53	206.7	11.51
	70	117.8	7.71	134.5	8.69	151.3	9.68	159.7	10.18	184.8	11.66	191.5	12.01	201.3	11.98	203.8	11.97
	73	117.8	7.85	134.5	8.86	151.3	9.86	159.7	10.37	184.8	11.88	190.6	12.16	200.4	12.13	202.8	12.13
	77	117.8	8.06	134.5	9.10	151.3	10.14	159.7	10.66	184.8	12.21	189.2	12.38	198.7	12.39	200.9	12.43
	81	117.8	8.30	134.5	9.37	151.3	10.44	159.7	10.99	184.7	12.73	186.9	12.77	195.5	12.91	197.6	12.95
	86	117.8	8.64	134.5	9.76	151.3	10.88	159.7	11.45	180.8	13.37	182.9	13.41	191.3	13.57	193.4	13.60
	91	117.8	9.03	134.5	10.21	151.3	11.48	159.7	12.36	176.8	14.01	178.9	14.06	187.1	14.22	189.2	14.26
	95	117.8	9.38	134.5	10.61	151.3	12.29	159.7	13.24	173.6	14.55	175.6	14.60	183.6	14.79	185.6	14.84
	99	117.8	9.77	134.5	11.26	151.3	13.19	159.7	14.25	170.0	15.13	172.0	15.19	179.9	15.40	181.9	15.45
	104	117.8	10.36	134.5	12.33	151.3	14.50	159.7	15.68	165.6	15.87	167.5	15.93	175.2	16.16	177.2	16.22
	109	117.8	11.35	134.5	13.53	151.3	15.94	155.4	16.42	161.0	16.62	162.9	16.68	170.5	16.93	172.4	16.99
	115	117.8	12.66	134.5	15.13	148.2	17.24	150.1	17.31	155.5	17.52	157.4	17.59	164.7	17.87	166.6	17.93

Total rated capacity of indoor unit	Outdoor temp.	Indoor temperature (°FDB / °FWB)															
		68 / 59		73 / 61		75 / 63		79 / 64		80 / 67		82 / 68		86 / 72		90 / 73	
	(°FDB)	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
168.0 (100%)	50	107.1	6.52	122.3	7.34	137.5	8.16	145.2	8.57	168.0	9.79	175.7	10.21	199.6	11.31	202.1	11.30
	59	107.1	6.71	122.3	7.55	137.5	8.40	145.2	8.82	168.0	10.09	175.7	10.51	198.2	11.55	200.7	11.54
	70	107.1	7.08	122.3	7.97	137.5	8.87	145.2	9.32	168.0	10.67	175.7	11.12	195.6	12.00	198.0	11.99
	73	107.1	7.21	122.3	8.12	137.5	9.04	145.2	9.50	168.0	10.87	175.7	11.33	194.7	12.15	197.1	12.14
	77	107.1	7.40	122.3	8.34	137.5	9.29	145.2	9.76	168.0	11.17	175.7	11.65	193.3	12.38	195.7	12.37
	81	107.1	7.62	122.3	8.59	137.5	9.57	145.2	10.06	168.0	11.51	175.7	12.01	190.6	12.83	192.7	12.87
	86	107.1	7.93	122.3	8.95	137.5	9.96	145.2	10.48	168.0	12.15	175.7	12.94	186.6	13.48	188.7	13.52
	91	107.1	8.28	122.3	9.35	137.5	10.42	145.2	10.96	168.0	13.26	174.6	13.97	182.6	14.13	184.7	14.17
	95	107.1	8.60	122.3	9.71	137.5	10.84	145.2	11.64	168.0	14.20	171.5	14.49	179.3	14.69	181.3	14.74
	99	107.1	8.95	122.3	10.11	137.5	11.59	145.2	12.46	166.2	15.02	168.1	15.08	175.7	15.29	177.7	15.34
	104	107.1	9.46	122.3	10.87	137.5	12.70	145.2	13.69	161.9	15.76	163.7	15.82	171.3	16.04	173.2	16.10
	109	107.1	10.08	122.3	11.92	137.5	13.94	145.2	15.04	157.5	16.50	159.4	16.56	166.7	16.81	168.6	16.87
	115	107.1	11.20	122.3	13.30	137.5	15.60	145.2	16.84	152.2	17.39	154.0	17.46	161.2	17.74	163.0	17.80
151.2 (90%)	50	96.3	5.95	110.1	6.68	123.8	7.42	130.7	7.79	151.2	8.89	158.1	9.26	185.5	10.73	192.5	11.11
	59	96.3	6.12	110.1	6.88	123.8	7.64	130.7	8.02	151.2	9.16	158.1	9.54	185.5	11.06	192.5	11.44
	70	96.3	6.45	110.1	7.25	123.8	8.06	130.7	8.47	151.2	9.68	158.1	10.08	185.5	11.70	191.3	12.01
	73	96.3	6.56	110.1	7.39	123.8	8.21	130.7	8.63	151.2	9.86	158.1	10.28	185.5	11.92	190.5	12.16
	77	96.3	6.74	110.1	7.59	123.8	8.44	130.7	8.86	151.2	10.13	158.1	10.56	185.5	12.26	189.2	12.38
	81	96.3	6.93	110.1	7.81	123.8	8.69	130.7	9.13	151.2	10.44	158.1	10.88	184.9	12.73	187.0	12.77
	86	96.3	7.21	110.1	8.13	123.8	9.05	130.7	9.51	151.2	10.88	158.1	11.34	181.2	13.38	183.2	13.42
	91	96.3	7.53	110.1	8.49	123.8	9.46	130.7	9.94	151.2	11.48	158.1	12.19	177.5	14.03	179.4	14.07
	95	96.3	7.82	110.1	8.82	123.8	9.82	130.7	10.33	151.2	12.28	158.1	13.05	174.3	14.57	176.2	14.61
	99	96.3	8.13	110.1	9.18	123.8	10.23	130.7	10.85	151.2	13.18	158.1	14.04	171.0	15.16	172.8	15.21
	104	96.3	8.59	110.1	9.70	123.8	11.04	130.7	11.86	151.2	14.49	158.1	15.45	166.7	15.91	168.5	15.96
	109	96.3	9.15	110.1	10.42	123.8	12.10	130.7	13.01	151.2	15.93	155.2	16.42	162.4	16.66	164.2	16.72
	115	96.3	9.93	110.1	11.60	123.8	13.51	130.7	14.54	148.3	17.24	150.1	17.31	157.1	17.58	158.8	17.65
134.4 (80%)	50	85.7	5.37	97.8	6.03	110.0	6.68	116.2	7.01	134.4	7.99	140.6	8.32	164.9	9.63	171.1	9.96
	59	85.7	5.52	97.8	6.20	110.0	6.87	116.2	7.21	134.4	8.22	140.6	8.57	164.9	9.92	171.1	10.26
	70	85.7	5.82	97.8	6.54	110.0	7.25	116.2	7.61	134.4	8.69	140.6	9.05	164.9	10.49	171.1	10.85
	73	85.7	5.92	97.8	6.65	110.0	7.39	116.2	7.76	134.4	8.85	140.6	9.22	164.9	10.69	171.1	11.06
	77	85.7	6.07	97.8	6.83	110.0	7.58	116.2	7.96	134.4	9.09	140.6	9.47	164.9	10.98	171.1	11.36
	81	85.7	6.25	97.8	7.03	110.0	7.81	116.2	8.20	134.4	9.37	140.6	9.76	164.9	11.32	171.1	11.71
	86	85.7	6.50	97.8	7.31	110.0	8.13	116.2	8.54	134.4	9.75	140.6	10.17	164.9	11.85	171.1	12.47
	91	85.7	6.78	97.8	7.63	110.0	8.49	116.2	8.92	134.4	10.20	140.6	10.63	164.9	12.92	171.1	13.60
	95	85.7	7.03	97.8	7.93	110.0	8.82	116.2	9.27	134.4	10.60	140.6	11.15	164.9	13.84	170.4	14.46
	99	85.7	7.32	97.8	8.25	110.0	9.18	116.2	9.65	134.4	11.25	140.6	11.92	164.9	14.93	167.2	15.05
	104	85.7	7.72	97.8	8.71	110.0	9.70	116.2	10.20	134.4	12.31	140.6	13.08	161.3	15.74	163.1	15.80
	109	85.7	8.22	97.8	9.28	110.0	10.41	116.2	11.15	134.4	13.51	140.6	14.37	157.2	16.49	159.0	16.55
	115	85.7	8.91	97.8	10.07	110.0	11.60	116.2	12.43	134.4	15.11	140.6	16.08	152.2	17.39	153.9	17.46
117.6 (70%)	50	74.9	4.80	85.6	5.37	96.3	5.94	101.7	6.23	117.6	7.09	123.0	7.38	144.3	8.52	149.7	8.81
	59	74.9	4.93	85.6	5.52	96.3	6.11	101.7	6.41	117.6	7.29	123.0	7.59	144.3	8.77	149.7	9.07
	70	74.9	5.19	85.6	5.81	96.3	6.44	101.7	6.76	117.6	7.70	123.0	8.02	144.3	9.27	149.7	9.59
	73	74.9	5.28	85.6	5.92	96.3	6.56	101.7	6.88	117.6	7.84	123.0	8.16	144.3	9.45	149.7	9.77
	77	74.9	5.41	85.6	6.07	96.3	6.73	101.7	7.07	117.6	8.05	123.0	8.39	144.3	9.71	149.7	10.04
	81	74.9	5.56	85.6	6.25	96.3	6.93	101.7	7.27	117.6	8.29	123.0	8.64	144.3	10.00	149.7	10.34
	86	74.9	5.78	85.6	6.49	96.3	7.21	101.7	7.57	117.6	8.63	123.0	8.99	144.3	10.42	149.7	10.78
	91	74.9	6.03	85.6	6.78	96.3	7.53	101.7	7.90	117.6	9.02	123.0	9.40	144.3	10.90	149.7	11.32
	95	74.9	6.25	85.6	7.03	96.3	7.81	101.7	8.20	117.6	9.37	123.0	9.76	144.3	11.54	149.7	12.12
	99	74.9	6.50	85.6	7.31	96.3	8.13	101.7	8.54	117.6	9.76	123.0	10.17	144.3	12.35	149.7	12.99
	104	74.9	6.85	85.6	7.72	96.3	8.58	101.7	9.02	117.6	10.34	123.0	10.95	144.3	13.57	149.7	14.28
	109	74.9	7.29	85.6	8.22	96.3	9.14	101.7	9.61	117.6	11.33	123.0	12.00	144.3	14.91	149.7	15.70
	115	74.9	7.89	85.6	8.91	96.3	9.92	101.7	10.51	117.6	12.63	123.0	13.40	144.3	16.69	148.1	17.23
100.8 (60%)	50	64.2	4.22	73.4	4.71	82.5	5.20	87.1	5.45	100.8	6.19	105.4	6.43	123.7	7.41	128.3	7.66
	59	64.2	4.33	73.4	4.84	82.5	5.35	87.1	5.60	100.8	6.36	105.4	6.62	123.7	7.63	128.3	7.89
	70	64.2	4.56	73.4	5.09	82.5	5.63	87.1	5.90	100.8	6.71	105.4	6.98	123.7	8.06	128.3	8.33
	73	64.2	4.63	73.4	5.18	82.5	5.73	87.1	6.01	100.8	6.83	105.4	7.11	123.7	8.21	128.3	8.48
	77	64.2	4.75	73.4	5.32	82.5	5.88	87.1	6.17	100.8	7.01	105.4	7.30	123.7	8.43	128.3	8.72
	81	64.2	4.88	73.4	5.46	82.5	6.05	87.1	6.34	100.8	7.22	105.4	7.51	123.7	8.68	128.3	8.98
	86	64.2	5.07	73.4	5.68	82.5	6.29	87.1	6.60	100.8	7.51	105.4	7.82	123.7	9.04	128.3	9.35
	91	64.2	5.28	73.4	5.92	82.5	6.56	87.1	6.88	100.8	7.84	105.4	8.17	123.7	9.45	128.3	9.77
	95	64.2	5.47	73.4	6.14	82.5	6.81	87.1	7.14	100.8	8.14	105.4	8.48	123.7	9.82	128.3	10.15
	99	64.2	5.68	73.4	6.38	82.5	7.08	87.1	7.43	100.8	8.47	105.4	8.83	123.7	10.22	128.3	10.60
	104	64.2	5.98	73.4	6.73	82.5	7.47	87.1	7.84	100.8	8.95	105.4	9.32	123.7	11.03	128.3	11.57
	109	64.2	6.36	73.4	7.15	82.5	7.95	87.1	8.35	100.8	9.54	105.4	9.94	123.7	12.09	128.3	12.69
	115	64.2	6.88	73.4	7.74	82.5	8.61	87.1	9.05	100.8	10.40	105.4	10.99	123.7	13.50	128.3	14.18
84.0 (50%)	50	53.5	3.65	61.1	4.06	68.8	4.46	72.6	4.67	84.0	5.28	87.8	5.49	103.1	6.31	106.9	6.51
	59	53.5	3.74	61.1	4.16	68.8	4.59	72.6	4.80	84.0	5.43	87.8	5.64	103.1	6.49	106.9	6.70
	70	53.5	3.93	61.1	4.37	68.8	4.82	72.6	5.05	84.0	5.72	87.8	5.95	103.1	6.84	106.9	7.07
	73	53.5	3.99	61.1	4.45	68.8	4.91	72.6	5.14	84.0	5.82	87.8	6.05	103.1	6.97	106.9	7.20
	77	53.5	4.09	61.1	4.56	68.8	5.03	72.6	5.27	84.0	5.97	87.8	6.21	103.1	7.15	106.9	7.39
	81	53.5	4.20	61.1	4.68	68.8	5.17	72.6	5.42	84.0	6.14	87.8	6.39	103.1	7.36	106.9	7.61
	86	53.5	4.35	61.1	4.86	68.8	5.37	72.6	5.63	84.0	6.39	87.8	6.64	103.1	7.66	106.9	7.92
	91	53.5	4.53	61.1	5.06	68.8	5.60	72.6	5.87	84.0	6.66	87.8	6.93	103.1	8.00	106.9	8.27
	95	53.5	4.69	61.1	5.24	68.8	5.80	72.6	6.08	84.0	6.91	87.8	7.20	103.1	8.31	106.9	8.59
	99	53.5	4.86	61.1	5.44	68.8	6.03	72.6	6.32	84.0	7.19	87.8	7.48	103.1	8.65	106.9	8.94
	104	53.5	5.12	61.1	5.73	68.8	6.35	72.6	6.66	84.0	7.59	87.8	7.90	103.1	9.14	106.9	9.45
	109	53.5	5.43	61.1	6.09	68.8	6.75	72.6	7.09	84.0	8.08	87.8	8.41	103.1	9.74	106.9	10.07
	115	53.5	5.86	61.1	6.58	68.8	7.30	72.6	7.67	84.0	8.75	87.8	9.12	103.1	10.69	106.9	11.19

TC : Total Capacity kBtu/h.

IP : Input Power kW (Compressor + Outdoor fan motor).

The data is based on the following conditions. Pipe length : 25ft. (7.5m) , Height difference : 0ft. (0m)

COOLING CAPACITY in kBtu/h

■ MODEL : AOUA192RLBVG1

Total rated capacity of indoor unit	Outdoor temp.	Indoor temperature (°FDB / °FWB)															
		68 / 59		73 / 61		75 / 63		79 / 64		80 / 67		82 / 68		86 / 72		90 / 73	
	(°FDB)	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
288.0 (150%)	50	183.5	10.61	209.6	12.00	227.8	12.82	230.9	12.81	240.3	12.76	243.5	12.75	256.2	12.66	259.5	12.64
	59	183.5	10.93	209.6	12.36	226.0	13.09	229.1	13.08	238.5	13.04	241.6	13.02	254.3	12.94	257.5	12.92
	70	183.5	11.55	209.6	13.07	222.6	13.59	225.7	13.59	234.9	13.55	238.0	13.54	250.5	13.47	253.7	13.45
	73	183.5	11.77	209.6	13.33	221.5	13.77	224.5	13.76	233.7	13.73	236.8	13.72	248.9	13.68	251.7	13.72
	77	183.5	12.10	209.6	13.70	219.8	14.02	222.8	14.02	231.1	14.10	233.9	14.14	244.7	14.28	247.4	14.31
	81	183.5	12.47	209.6	14.23	216.5	14.52	219.1	14.56	227.1	14.69	229.7	14.73	240.3	14.88	243.0	14.91
	86	183.5	12.99	206.4	15.14	211.6	15.24	214.2	15.29	221.9	15.42	224.5	15.47	234.8	15.63	237.4	15.66
	91	183.5	14.06	201.6	15.87	206.6	15.97	209.1	16.02	216.7	16.17	219.2	16.21	229.2	16.39	231.8	16.43
	95	183.5	15.06	197.6	16.46	202.5	16.59	204.9	16.65	212.2	16.82	214.7	16.87	224.5	17.09	227.0	17.14
	99	183.5	16.22	193.3	17.12	198.1	17.25	200.5	17.31	207.7	17.50	210.1	17.56	219.8	17.80	222.2	17.85
	104	183.2	17.80	187.9	17.95	192.5	18.09	194.9	18.16	201.9	18.36	204.3	18.43	213.8	18.69	216.2	18.75
	109	177.8	18.62	182.4	18.78	186.9	18.93	189.3	19.01	196.1	19.23	198.5	19.31	207.7	19.59	210.1	19.66
	115	171.3	19.61	175.7	19.78	180.2	19.95	182.4	20.04	189.1	20.28	191.4	20.36	200.4	20.68	202.7	20.76
268.8 (140%)	50	171.3	9.96	195.7	11.25	220.0	12.55	227.1	12.82	236.2	12.79	239.4	12.77	251.8	12.70	255.0	12.67
	59	171.3	10.26	195.7	11.59	220.0	12.93	225.3	13.09	234.5	13.05	237.6	13.04	249.9	12.97	253.1	12.95
	70	171.3	10.84	195.7	12.26	219.0	13.60	222.0	13.60	231.0	13.57	234.1	13.56	246.3	13.50	249.4	13.48
	73	171.3	11.05	195.7	12.49	217.9	13.77	220.9	13.77	229.8	13.75	232.9	13.73	245.0	13.68	248.0	13.67
	77	171.3	11.35	195.7	12.84	216.2	14.03	219.2	14.02	227.8	14.05	230.5	14.09	241.1	14.23	243.8	14.27
	81	171.3	11.70	195.7	13.24	213.4	14.46	216.0	14.51	223.8	14.64	226.4	14.68	236.9	14.83	239.5	14.87
	86	171.3	12.18	195.7	14.09	208.6	15.19	211.2	15.24	218.8	15.37	221.4	15.42	231.5	15.58	234.1	15.62
	91	171.3	12.81	195.7	15.38	203.8	15.91	206.3	15.97	213.7	16.11	216.2	16.16	226.1	16.33	228.6	16.37
	95	171.3	13.71	195.0	16.40	199.8	16.52	202.2	16.58	209.4	16.75	211.9	16.81	221.5	17.03	224.0	17.08
	99	171.3	14.70	190.8	17.05	195.5	17.18	197.9	17.25	205.0	17.43	207.4	17.49	216.9	17.73	219.3	17.79
	104	171.3	16.17	185.5	17.87	190.1	18.01	192.4	18.09	199.4	18.29	201.7	18.36	211.0	18.62	213.4	18.68
	109	171.3	17.78	180.1	18.70	184.6	18.85	186.9	18.93	193.7	19.15	196.0	19.23	205.1	19.51	207.4	19.58
	115	169.2	19.53	173.6	19.70	178.0	19.87	180.2	19.95	186.8	20.20	189.1	20.28	198.0	20.60	200.2	20.67
249.6 (130%)	50	159.1	9.31	181.7	10.51	204.3	11.71	215.7	12.32	231.7	12.80	234.8	12.79	247.0	12.73	250.1	12.71
	59	159.1	9.59	181.7	10.83	204.3	12.07	215.7	12.69	230.0	13.07	233.0	13.06	245.1	13.00	248.2	12.98
	70	159.1	10.13	181.7	11.45	204.3	12.76	215.7	13.43	226.7	13.58	229.7	13.57	241.6	13.52	244.6	13.51
	73	159.1	10.32	181.7	11.66	204.3	13.01	215.7	13.69	225.6	13.76	228.5	13.75	240.4	13.70	243.4	13.69
	77	159.1	10.60	181.7	11.99	204.3	13.37	215.2	14.03	223.9	14.02	226.7	14.03	237.1	14.18	239.7	14.22
	81	159.1	10.92	181.7	12.35	204.3	13.78	212.5	14.45	220.2	14.58	222.8	14.62	233.0	14.78	235.6	14.81
	86	159.1	11.38	181.7	12.87	204.3	14.99	207.9	15.17	215.3	15.31	217.9	15.36	227.9	15.52	230.4	15.56
	91	159.1	11.90	181.7	13.87	200.7	15.85	203.1	15.90	210.4	16.05	212.9	16.10	222.7	16.27	225.1	16.31
	95	159.1	12.43	181.7	14.85	196.8	16.44	199.2	16.50	206.3	16.68	208.7	16.74	218.2	16.95	220.6	17.01
	99	159.1	13.29	181.7	15.99	192.6	17.10	195.0	17.17	202.0	17.35	204.3	17.42	213.7	17.65	216.1	17.71
	104	159.1	14.58	181.7	17.59	187.4	17.93	189.7	18.00	196.5	18.21	198.8	18.27	208.0	18.53	210.3	18.60
	109	159.1	16.01	177.6	18.61	182.0	18.77	184.3	18.84	191.0	19.07	193.2	19.14	202.2	19.42	204.5	19.49
	115	159.1	17.92	171.2	19.61	175.6	19.78	177.8	19.86	184.3	20.11	186.5	20.19	195.2	20.50	197.4	20.58
230.4 (120%)	50	146.8	8.66	167.7	9.77	188.6	10.88	199.1	11.44	226.7	12.82	229.7	12.81	241.5	12.76	244.5	12.74
	59	146.8	8.92	167.7	10.06	188.6	11.21	199.1	11.78	225.1	13.09	228.0	13.08	239.8	13.03	242.8	13.01
	70	146.8	9.42	167.7	10.63	188.6	11.85	199.1	12.46	221.9	13.60	224.8	13.59	236.4	13.55	239.3	13.53
	73	146.8	9.59	167.7	10.83	188.6	12.08	199.1	12.70	220.8	13.77	223.7	13.76	235.2	13.72	238.2	13.71
	77	146.8	9.85	167.7	11.13	188.6	12.41	199.1	13.06	219.2	14.02	222.1	14.02	232.6	14.12	235.2	14.16
	81	146.8	10.15	167.7	11.47	188.6	12.79	199.1	13.46	216.1	14.51	218.7	14.55	228.7	14.71	231.3	14.75
	86	146.8	10.57	167.7	11.95	188.6	13.39	199.1	14.45	211.4	15.24	213.9	15.29	223.8	15.46	226.2	15.50
	91	146.8	11.05	167.7	12.50	188.6	14.60	199.1	15.77	206.7	15.97	209.1	16.02	218.7	16.20	221.1	16.24
	95	146.8	11.48	167.7	13.33	188.6	15.64	195.8	16.42	202.8	16.59	205.1	16.65	214.4	16.87	216.8	16.92
	99	146.8	11.99	167.7	14.28	188.6	16.88	191.7	17.07	198.6	17.26	200.9	17.32	210.1	17.56	212.4	17.62
	104	146.8	13.10	167.7	15.69	184.3	17.83	186.5	17.90	193.2	18.11	195.5	18.18	204.5	18.44	206.8	18.50
	109	146.8	14.37	167.7	17.25	179.1	18.66	181.3	18.74	187.9	18.96	190.1	19.04	198.9	19.32	201.1	19.39
	115	146.8	16.05	167.7	19.33	172.8	19.67	175.0	19.75	181.4	20.00	183.5	20.08	192.1	20.39	194.3	20.47
211.2 (110%)	50	134.6	8.01	153.7	9.03	172.9	10.04	182.6	10.56	211.2	12.08	220.9	12.59	235.4	12.79	238.4	12.77
	59	134.6	8.24	153.7	9.29	172.9	10.34	182.6	10.87	211.2	12.44	220.8	12.97	233.8	13.06	236.7	13.04
	70	134.6	8.70	153.7	9.82	172.9	10.93	182.6	11.50	211.2	13.17	219.3	13.60	230.6	13.57	233.4	13.56
	73	134.6	8.86	153.7	10.00	172.9	11.14	182.6	11.72	211.2	13.42	218.3	13.77	229.5	13.75	232.3	13.74
	77	134.6	9.10	153.7	10.28	172.9	11.45	182.6	12.04	211.2	13.79	216.7	14.03	227.6	14.05	230.1	14.08
	81	134.6	9.37	153.7	10.59	172.9	11.80	182.6	12.41	211.1	14.38	214.0	14.47	223.8	14.64	226.3	14.68
	86	134.6	9.76	153.7	11.02	172.9	12.29	182.6	12.93	207.0	15.16	209.5	15.20	219.1	15.38	221.5	15.42
	91	134.6	10.20	153.7	11.53	172.9	12.97	182.6	13.96	202.5	15.89	204.9	15.94	214.2	16.12	216.6	16.16
	95	134.6	10.59	153.7	11.98	172.9	13.88	182.6	14.95	198.7	16.49	201.0	16.55	210.2	16.77	212.5	16.82
	99	134.6	11.03	153.7	12.72	172.9	14.89	182.6	16.10	194.7	17.16	196.9	17.22	205.9	17.46	208.2	17.51
	104	134.6	11.70	153.7	13.92	172.9	16.38	182.6	17.72	189.5	18.00	191.8	18.06	200.6	18.32	202.8	18.39
	109	134.6	12.82	153.7	15.29	172.9	18.01	177.9	18.62	184.4	18.85	186.5	18.92	195.2	19.20	197.3	19.27
	115	134.6	14.30	153.7	17.10	169.7	19.55	171.8	19.63	178.0	19.87	180.2	19.95	188.6	20.26	190.7	20.34

Total rated capacity of indoor unit	Outdoor temp.	Indoor temperature (°FDB / °FWB)															
		68 / 59		73 / 61		75 / 63		79 / 64		80 / 67		82 / 68		86 / 72		90 / 73	
	(°FDB)	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
192.0 (100%)	50	122.4	7.36	139.8	8.29	157.2	9.21	166.0	9.68	192.0	11.06	200.8	11.52	228.6	12.82	231.4	12.81
	59	122.4	7.57	139.8	8.53	157.2	9.48	166.0	9.96	192.0	11.39	200.8	11.87	227.0	13.08	229.8	13.07
	70	122.4	7.99	139.8	9.00	157.2	10.02	166.0	10.53	192.0	12.05	200.8	12.56	224.0	13.59	226.7	13.58
	73	122.4	8.14	139.8	9.17	157.2	10.21	166.0	10.73	192.0	12.28	200.8	12.80	222.9	13.77	225.7	13.76
	77	122.4	8.35	139.8	9.42	157.2	10.49	166.0	11.02	192.0	12.62	200.8	13.16	221.4	14.02	224.1	14.01
	81	122.4	8.60	139.8	9.70	157.2	10.80	166.0	11.36	192.0	13.00	200.8	13.56	218.2	14.54	220.6	14.58
	86	122.4	8.95	139.8	10.10	157.2	11.25	166.0	11.83	192.0	13.73	200.8	14.62	213.7	15.28	216.1	15.32
	91	122.4	9.35	139.8	10.56	157.2	11.77	166.0	12.38	192.0	14.97	200.0	15.83	209.1	16.02	211.4	16.07
	95	122.4	9.71	139.8	10.97	157.2	12.24	166.0	13.14	192.0	16.04	196.4	16.43	205.3	16.65	207.5	16.71
	99	122.4	10.11	139.8	11.42	157.2	13.09	166.0	14.07	190.2	17.03	192.4	17.10	201.2	17.33	203.4	17.39
	104	122.4	10.68	139.8	12.28	157.2	14.35	166.0	15.46	185.3	17.87	187.5	17.93	196.1	18.19	198.2	18.26
	109	122.4	11.38	139.8	13.46	157.2	15.75	166.0	16.99	180.3	18.71	182.4	18.78	190.9	19.06	193.0	19.13
	115	122.4	12.66	139.8	15.03	157.2	17.63	165.9	19.04	174.2	19.73	176.3	19.81	184.5	20.11	186.6	20.19
172.8 (90%)	50	110.1	6.71	125.8	7.54	141.5	8.38	149.4	8.80	172.8	10.04	180.7	10.46	212.0	12.12	219.9	12.54
	59	110.1	6.90	125.8	7.76	141.5	8.62	149.4	9.05	172.8	10.34	180.7	10.77	212.0	12.49	219.9	12.92
	70	110.1	7.28	125.8	8.19	141.5	9.10	149.4	9.56	172.8	10.93	180.7	11.39	212.0	13.21	219.1	13.60
	73	110.1	7.41	125.8	8.34	141.5	9.27	149.4	9.74	172.8	11.13	180.7	11.60	212.0	13.47	218.1	13.77
	77	110.1	7.61	125.8	8.57	141.5	9.52	149.4	10.01	172.8	11.44	180.7	11.93	212.0	13.85	216.7	14.03
	81	110.1	7.83	125.8	8.82	141.5	9.81	149.4	10.31	172.8	11.79	180.7	12.29	211.7	14.43	214.1	14.47
	86	110.1	8.14	125.8	9.18	141.5	10.21	149.4	10.74	172.8	12.28	180.7	12.81	207.5	15.16	209.8	15.21
	91	110.1	8.50	125.8	9.59	141.5	10.68	149.4	11.22	172.8	12.96	180.7	13.77	203.2	15.90	205.4	15.95
	95	110.1	8.83	125.8	9.96	141.5	11.09	149.4	11.66	172.8	13.87	180.7	14.74	199.6	16.51	201.8	16.57
	99	110.1	9.18	125.8	10.37	141.5	11.55	149.4	12.26	172.8	14.88	180.7	15.86	195.7	17.19	197.9	17.24
	104	110.1	9.70	125.8	10.95	141.5	12.47	149.4	13.40	172.8	16.37	180.7	17.45	190.8	18.04	192.9	18.10
	109	110.1	10.33	125.8	11.76	141.5	13.67	149.4	14.70	172.8	18.00	177.7	18.61	185.8	18.90	187.9	18.97
	115	110.1	11.21	125.8	13.11	141.5	15.27	149.4	16.43	169.8	19.55	171.8	19.63	179.8	19.94	181.8	20.01
153.6 (80%)	50	97.9	6.06	111.8	6.80	125.7	7.54	132.8	7.91	153.6	9.02	160.6	9.39	188.5	10.87	195.5	11.25
	59	97.9	6.23	111.8	6.99	125.7	7.76	132.8	8.14	153.6	9.29	160.6	9.67	188.5	11.20	195.5	11.58
	70	97.9	6.56	111.8	7.38	125.7	8.19	132.8	8.60	153.6	9.81	160.6	10.22	188.5	11.84	195.5	12.25
	73	97.9	6.68	111.8	7.51	125.7	8.34	132.8	8.76	153.6	9.99	160.6	10.41	188.5	12.07	195.5	12.49
	77	97.9	6.86	111.8	7.71	125.7	8.56	132.8	8.99	153.6	10.27	160.6	10.70	188.5	12.40	195.5	12.83
	81	97.9	7.05	111.8	7.93	125.7	8.81	132.8	9.26	153.6	10.58	160.6	11.02	188.5	12.78	195.5	13.23
	86	97.9	7.33	111.8	8.25	125.7	9.17	132.8	9.64	153.6	11.02	160.6	11.48	188.5	13.38	195.5	14.08
	91	97.9	7.65	111.8	8.62	125.7	9.59	132.8	10.07	153.6	11.52	160.6	12.01	188.5	14.59	195.5	15.36
	95	97.9	7.94	111.8	8.95	125.7	9.95	132.8	10.46	153.6	11.97	160.6	12.59	188.5	15.63	195.0	16.40
	99	97.9	8.26	111.8	9.31	125.7	10.36	132.8	10.90	153.6	12.70	160.6	13.47	188.5	16.86	191.4	17.07
	104	97.9	8.72	111.8	9.83	125.7	10.95	132.8	11.52	153.6	13.91	160.6	14.78	184.7	17.85	186.7	17.91
	109	97.9	9.28	111.8	10.48	125.7	11.76	132.8	12.60	153.6	15.27	160.6	16.23	180.0	18.69	182.0	18.76
	115	97.9	10.06	111.8	11.37	125.7	13.10	132.8	14.05	153.6	17.07	160.6	18.17	174.2	19.73	176.2	19.80
134.4 (70%)	50	85.6	5.41	97.8	6.06	110.0	6.71	116.2	7.03	134.4	8.00	140.5	8.33	164.9	9.62	171.1	9.95
	59	85.6	5.56	97.8	6.23	110.0	6.90	116.2	7.23	134.4	8.23	140.5	8.57	164.9	9.91	171.1	10.24
	70	85.6	5.85	97.8	6.56	110.0	7.27	116.2	7.63	134.4	8.69	140.5	9.05	164.9	10.47	171.1	10.83
	73	85.6	5.95	97.8	6.68	110.0	7.40	116.2	7.77	134.4	8.85	140.5	9.22	164.9	10.67	171.1	11.03
	77	85.6	6.11	97.8	6.85	110.0	7.60	116.2	7.98	134.4	9.09	140.5	9.47	164.9	10.96	171.1	11.34
	81	85.6	6.28	97.8	7.05	110.0	7.82	116.2	8.21	134.4	9.36	140.5	9.75	164.9	11.29	171.1	11.68
	86	85.6	6.52	97.8	7.33	110.0	8.14	116.2	8.54	134.4	9.75	140.5	10.15	164.9	11.76	171.1	12.17
	91	85.6	6.80	97.8	7.65	110.0	8.50	116.2	8.92	134.4	10.19	140.5	10.61	164.9	12.30	171.1	12.79
	95	85.6	7.06	97.8	7.94	110.0	8.82	116.2	9.26	134.4	10.58	140.5	11.03	164.9	13.04	171.1	13.69
	99	85.6	7.34	97.8	8.26	110.0	9.18	116.2	9.64	134.4	11.02	140.5	11.48	164.9	13.95	171.1	14.68
	104	85.6	7.74	97.8	8.71	110.0	9.69	116.2	10.18	134.4	11.68	140.5	12.37	164.9	15.33	171.1	16.14
	109	85.6	8.23	97.8	9.28	110.0	10.32	116.2	10.85	134.4	12.79	140.5	13.56	164.9	16.84	171.1	17.74
	115	85.6	8.91	97.8	10.06	110.0	11.20	116.2	11.87	134.4	14.27	140.5	15.14	164.9	18.87	169.5	19.54
115.2 (60%)	50	73.4	4.76	83.9	5.32	94.3	5.87	99.6	6.15	115.2	6.98	120.5	7.26	141.4	8.37	146.6	8.65
	59	73.4	4.89	83.9	5.46	94.3	6.04	99.6	6.32	115.2	7.18	120.5	7.47	141.4	8.62	146.6	8.90
	70	73.4	5.14	83.9	5.75	94.3	6.36	99.6	6.66	115.2	7.57	120.5	7.88	141.4	9.10	146.6	9.40
	73	73.4	5.23	83.9	5.85	94.3	6.47	99.6	6.78	115.2	7.71	120.5	8.02	141.4	9.27	146.6	9.58
	77	73.4	5.36	83.9	6.00	94.3	6.64	99.6	6.96	115.2	7.92	120.5	8.24	141.4	9.52	146.6	9.84
	81	73.4	5.51	83.9	6.17	94.3	6.83	99.6	7.16	115.2	8.15	120.5	8.48	141.4	9.80	146.6	10.14
	86	73.4	5.72	83.9	6.41	94.3	7.10	99.6	7.45	115.2	8.48	120.5	8.83	141.4	10.21	146.6	10.55
	91	73.4	5.96	83.9	6.68	94.3	7.41	99.6	7.77	115.2	8.85	120.5	9.22	141.4	10.67	146.6	11.04
	95	73.4	6.17	83.9	6.93	94.3	7.68	99.6	8.06	115.2	9.19	120.5	9.57	141.4	11.09	146.6	11.47
	99	73.4	6.41	83.9	7.20	94.3	7.99	99.6	8.39	115.2	9.57	120.5	9.97	141.4	11.54	146.6	11.97
	104	73.4	6.75	83.9	7.59	94.3	8.43	99.6	8.85	115.2	10.11	120.5	10.53	141.4	12.46	146.6	13.07
	109	73.4	7.18	83.9	8.07	94.3	8.97	99.6	9.43	115.2	10.77	120.5	11.22	141.4	13.66	146.6	14.34
	115	73.4	7.76	83.9	8.74	94.3	9.72	99.6	10.22	115.2	11.75	120.5	12.41	141.4	15.26	146.6	16.02
96.0 (50%)	50	61.2	4.11	69.9	4.57	78.6	5.04	83.0	5.27	96.0	5.96	100.4	6.19	117.8	7.12	122.2	7.35
	59	61.2	4.22	69.9	4.70	78.6	5.17	83.0	5.41	96.0	6.13	100.4	6.37	117.8	7.32	122.2	7.56
	70	61.2	4.43	69.9	4.93	78.6	5.44	83.0	5.70	96.0	6.46	100.4	6.71	117.8	7.72	122.2	7.98
	73	61.2	4.50	69.9	5.02	78.6	5.54	83.0	5.80	96.0	6.57	100.4	6.83	117.8	7.87	122.2	8.13
	77	61.2	4.61	69.9	5.14	78.6	5.68	83.0	5.94	96.0	6.74	100.4	7.01	117.8	8.08	122.2	8.35
	81	61.2	4.73	69.9	5.28	78.6	5.83	83.0	6.11	96.0	6.93	100.4	7.21	117.8	8.31	122.2	8.59
	86	61.2	4.91	69.9	5.48	78.6	6.06	83.0	6.35	96.0	7.21	100.4	7.50	117.8	8.65	122.2	8.94
	91	61.2	5.11	69.9	5.71	78.6	6.32	83.0	6.62	96.0	7.52	100.4	7.83	117.8	9.04	122.2	9.34
	95	61.2	5.29	69.9	5.92	78.6	6.55	83.0	6.86	96.0	7.80	100.4	8.12	117.8	9.38	122.2	9.70
	99	61.2	5.49	69.9	6.14	78.6	6.80	83.0	7.13	96.0	8.12	100.4	8.45	117.8	9.76	122.2	10.10
	104	61.2	5.77	69.9	6.47	78.6	7.17	83.0	7.52	96.0	8.57	100.4	8.92	117.8	10.32	122.2	10.67
	109	61.2	6.13	69.9	6.87	78.6	7.62	83.0	8.00	96.0	9.12	100.4	9.50	117.8	10.99	122.2	11.37
	115	61.2	6.61	69.9	7.43	78.6	8.25	83.0	8.66	96.0	9.88	100.4	10.29	117.8	12.07	122.2	12.64

TC : Total Capacity kBtu/h.

IP : Input Power kW (Compressor + Outdoor fan motor).

The data is based on the following conditions. Pipe length : 25ft. (7.5m) , Height difference : 0ft. (0m)

COOLING CAPACITY in kBtu/h

■ MODEL : AOUA216RLBVG1

Total rated capacity of indoor unit	Outdoor temp.	Indoor temperature (°FDB / °FWB)															
		68 / 59		73 / 61		75 / 63		79 / 64		80 / 67		82 / 68		86 / 72		90 / 73	
	(°FDB)	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
324.0 (150%)	50	206.5	12.21	235.9	13.81	256.2	14.75	259.8	14.74	270.3	14.69	273.9	14.67	288.2	14.57	291.9	14.55
	59	206.5	12.58	235.9	14.23	254.2	15.06	257.7	15.05	268.2	15.00	271.8	14.98	286.0	14.89	289.6	14.87
	70	206.5	13.30	235.9	15.05	250.4	15.65	253.9	15.64	264.2	15.60	267.7	15.58	281.8	15.50	285.3	15.48
	73	206.5	13.55	235.9	15.34	249.1	15.85	252.6	15.84	262.9	15.80	266.3	15.79	280.1	15.74	283.2	15.78
	77	206.5	13.93	235.9	15.77	247.2	16.14	250.6	16.13	260.0	16.22	263.1	16.26	275.2	16.43	278.3	16.46
	81	206.5	14.35	235.9	16.38	243.5	16.70	246.5	16.75	255.4	16.90	258.4	16.94	270.4	17.11	273.4	17.15
	86	206.5	14.96	232.2	17.43	238.0	17.54	240.9	17.59	249.6	17.75	252.5	17.80	264.2	17.98	267.1	18.02
	91	206.5	16.19	226.8	18.26	232.4	18.38	235.3	18.44	243.7	18.60	246.6	18.66	257.9	18.85	260.7	18.91
	95	206.5	17.34	222.3	18.95	227.7	19.09	230.5	19.16	238.7	19.36	241.5	19.42	252.6	19.67	255.4	19.73
	99	206.5	18.68	217.4	19.71	222.8	19.86	225.5	19.93	233.6	20.14	236.4	20.21	247.2	20.48	250.0	20.55
	104	206.0	20.49	211.3	20.66	216.6	20.82	219.2	20.90	227.1	21.14	229.8	21.22	240.5	21.52	243.2	21.59
	109	200.0	21.44	205.1	21.62	210.3	21.80	212.9	21.89	220.6	22.14	223.2	22.23	233.7	22.55	236.3	22.64
	115	192.6	22.58	197.6	22.78	202.6	22.97	205.2	23.07	212.7	23.35	215.2	23.45	225.4	23.81	228.0	23.90
302.4 (140%)	50	192.7	11.46	220.1	12.95	247.6	14.45	255.4	14.76	265.7	14.71	269.2	14.70	283.3	14.61	286.8	14.58
	59	192.7	11.81	220.1	13.35	247.6	14.88	253.5	15.06	263.7	15.02	267.2	15.01	281.1	14.93	284.7	14.90
	70	192.7	12.48	220.1	14.11	246.3	15.65	249.7	15.65	259.9	15.62	263.3	15.60	277.0	15.53	280.5	15.51
	73	192.7	12.72	220.1	14.38	245.1	15.85	248.5	15.85	258.5	15.82	261.9	15.81	275.6	15.74	279.0	15.73
	77	192.7	13.07	220.1	14.79	243.2	16.15	246.6	16.14	256.3	16.16	259.3	16.21	271.2	16.38	274.3	16.41
	81	192.7	13.46	220.1	15.24	240.1	16.64	243.0	16.69	251.8	16.84	254.8	16.89	266.5	17.06	269.5	17.10
	86	192.7	14.03	220.1	16.22	234.7	17.48	237.6	17.53	246.1	17.69	249.0	17.74	260.5	17.92	263.4	17.97
	91	192.7	14.74	220.1	17.71	229.3	18.32	232.1	18.37	240.4	18.54	243.2	18.59	254.4	18.79	257.2	18.84
	95	192.7	15.78	219.3	18.87	224.7	19.01	227.5	19.08	235.6	19.28	238.3	19.35	249.2	19.59	252.0	19.65
	99	192.7	16.93	214.6	19.62	219.9	19.78	222.6	19.85	230.6	20.07	233.3	20.14	244.0	20.41	246.7	20.47
	104	192.7	18.62	208.6	20.57	213.8	20.74	216.4	20.82	224.3	21.05	226.9	21.13	237.4	21.43	240.1	21.50
	109	192.7	20.48	202.6	21.53	207.7	21.71	210.2	21.80	217.9	22.05	220.4	22.14	230.7	22.46	233.3	22.54
	115	190.3	22.49	195.2	22.69	200.2	22.88	202.7	22.98	210.1	23.26	212.6	23.35	222.6	23.71	225.2	23.80
280.8 (130%)	50	179.0	10.71	204.4	12.10	229.9	13.48	242.7	14.18	260.7	14.74	264.1	14.72	277.8	14.65	281.3	14.62
	59	179.0	11.03	204.4	12.46	229.9	13.89	242.7	14.61	258.7	15.04	262.1	15.03	275.7	14.96	279.2	14.94
	70	179.0	11.66	204.4	13.18	229.9	14.69	242.7	15.46	255.0	15.63	258.4	15.62	271.8	15.56	275.2	15.54
	73	179.0	11.88	204.4	13.43	229.9	14.98	242.7	15.76	253.7	15.83	257.1	15.82	270.4	15.77	273.8	15.75
	77	179.0	12.20	204.4	13.80	229.9	15.40	242.1	16.15	251.8	16.13	255.0	16.14	266.8	16.32	269.7	16.36
	81	179.0	12.57	204.4	14.22	229.9	15.87	239.1	16.62	247.7	16.77	250.6	16.82	262.2	17.00	265.1	17.04
	86	179.0	13.10	204.4	14.82	229.9	17.25	233.8	17.46	242.3	17.62	245.1	17.67	256.4	17.86	259.2	17.90
	91	179.0	13.69	204.4	15.97	225.7	18.24	228.5	18.30	236.7	18.47	239.5	18.52	250.5	18.72	253.3	18.77
	95	179.0	14.31	204.4	17.10	221.4	18.93	224.1	19.00	232.1	19.20	234.8	19.26	245.5	19.51	248.2	19.57
	99	179.0	15.30	204.4	18.41	216.7	19.68	219.3	19.76	227.2	19.97	229.8	20.05	240.4	20.32	243.0	20.38
	104	179.0	16.79	204.4	20.27	210.7	20.64	213.3	20.72	221.0	20.96	223.6	21.04	233.9	21.33	236.6	21.41
	109	179.0	18.45	199.7	21.43	204.7	21.61	207.3	21.69	214.8	21.95	217.3	22.03	227.4	22.36	230.0	22.44
	115	179.0	20.65	192.6	22.58	197.4	22.77	199.9	22.87	207.2	23.15	209.7	23.24	219.6	23.60	222.1	23.69
259.2 (120%)	50	165.2	9.96	188.7	11.24	212.2	12.52	224.1	13.17	255.0	14.76	258.4	14.75	271.7	14.68	275.1	14.66
	59	165.2	10.26	188.7	11.58	212.2	12.90	224.1	13.57	253.2	15.06	256.5	15.05	269.7	14.99	273.1	14.98
	70	165.2	10.84	188.7	12.24	212.2	13.64	224.1	14.35	249.6	15.65	252.9	15.64	265.9	15.59	269.2	15.57
	73	165.2	11.04	188.7	12.47	212.2	13.90	224.1	14.62	248.4	15.85	251.6	15.84	264.6	15.80	267.9	15.78
	77	165.2	11.34	188.7	12.81	212.2	14.29	224.1	15.03	246.6	16.14	249.8	16.14	261.7	16.24	264.6	16.29
	81	165.2	11.68	188.7	13.20	212.2	14.72	224.1	15.49	243.1	16.69	246.0	16.74	257.3	16.93	260.2	16.97
	86	165.2	12.16	188.7	13.75	212.2	15.41	224.1	16.63	237.9	17.54	240.7	17.59	251.7	17.78	254.5	17.83
	91	165.2	12.72	188.7	14.39	212.2	16.81	224.1	18.16	232.5	18.38	235.3	18.44	246.0	18.65	248.8	18.69
	95	165.2	13.21	188.7	15.34	212.2	18.01	220.2	18.90	228.1	19.10	230.7	19.16	241.2	19.41	243.9	19.47
	99	165.2	13.80	188.7	16.44	212.2	19.44	215.6	19.65	223.3	19.87	225.9	19.94	236.3	20.21	238.9	20.28
	104	165.2	15.08	188.7	18.08	207.3	20.53	209.8	20.61	217.4	20.85	219.9	20.92	230.0	21.22	232.6	21.30
	109	165.2	16.54	188.7	19.87	201.4	21.49	203.9	21.58	211.3	21.83	213.8	21.92	223.7	22.24	226.2	22.32
	115	165.2	18.49	188.7	22.28	194.4	22.65	196.8	22.75	204.0	23.03	206.4	23.12	216.1	23.48	218.5	23.57
237.6 (110%)	50	151.4	9.22	173.0	10.39	194.5	11.56	205.4	12.15	237.6	13.90	248.5	14.50	264.8	14.72	268.1	14.70
	59	151.4	9.48	173.0	10.70	194.5	11.91	205.4	12.52	237.6	14.33	248.5	14.94	263.0	15.03	266.2	15.01
	70	151.4	10.01	173.0	11.30	194.5	12.59	205.4	13.23	237.6	15.16	246.7	15.65	259.3	15.62	262.6	15.61
	73	151.4	10.20	173.0	11.51	194.5	12.82	205.4	13.49	237.6	15.45	245.5	15.85	258.1	15.82	261.3	15.81
	77	151.4	10.48	173.0	11.83	194.5	13.18	205.4	13.86	237.6	15.88	243.8	16.15	256.0	16.16	258.9	16.20
	81	151.4	10.79	173.0	12.18	194.5	13.58	205.4	14.28	237.6	16.55	240.7	16.65	251.8	16.84	254.6	16.88
	86	151.4	11.23	173.0	12.69	194.5	14.15	205.4	14.89	232.9	17.44	235.6	17.49	246.4	17.69	249.2	17.74
	91	151.4	11.74	173.0	13.27	194.5	14.93	205.4	16.07	227.8	18.28	230.4	18.34	241.0	18.55	243.7	18.60
	95	151.4	12.19	173.0	13.79	194.5	15.98	205.4	17.21	223.5	18.98	226.1	19.05	236.4	19.30	239.0	19.36
	99	151.4	12.70	173.0	14.64	194.5	17.15	205.4	18.54	219.0	19.75	221.5	19.82	231.7	20.09	234.2	20.16
	104	151.4	13.47	173.0	16.04	194.5	18.87	205.4	20.41	213.2	20.72	215.7	20.80	225.6	21.09	228.1	21.17
	109	151.4	14.76	173.0	17.60	194.5	20.75	200.1	21.44	207.3	21.70	209.8	21.78	219.5	22.11	222.0	22.19
	115	151.4	16.47	173.0	19.70	190.8	22.51	193.2	22.60	200.2	22.88	202.6	22.97	212.1	23.33	214.5	23.42

Total rated capacity of indoor unit	Outdoor temp.	Indoor temperature (°FDB / °FWB)															
		68 / 59		73 / 61		75 / 63		79 / 64		80 / 67		82 / 68		86 / 72		90 / 73	
	(°FDB)	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
216.0 (100%)	50	137.7	8.47	157.2	9.53	176.8	10.60	186.7	11.14	216.0	12.73	225.9	13.27	257.1	14.75	260.3	14.74
	59	137.7	8.71	157.2	9.81	176.8	10.91	186.7	11.47	216.0	13.11	225.9	13.67	255.3	15.06	258.5	15.04
	70	137.7	9.19	157.2	10.36	176.8	11.53	186.7	12.12	216.0	13.87	225.9	14.46	251.9	15.64	255.0	15.63
	73	137.7	9.36	157.2	10.55	176.8	11.75	186.7	12.35	216.0	14.13	225.9	14.73	250.8	15.84	253.8	15.83
	77	137.7	9.61	157.2	10.84	176.8	12.07	186.7	12.69	216.0	14.53	225.9	15.15	249.0	16.14	252.1	16.13
	81	137.7	9.90	157.2	11.17	176.8	12.43	186.7	13.07	216.0	14.97	225.9	15.61	245.5	16.73	248.2	16.78
	86	137.7	10.30	157.2	11.63	176.8	12.95	186.7	13.62	216.0	15.80	225.9	16.83	240.4	17.58	243.1	17.63
	91	137.7	10.76	157.2	12.15	176.8	13.55	186.7	14.25	216.0	17.24	224.9	18.22	235.2	18.44	237.8	18.49
	95	137.7	11.18	157.2	12.63	176.8	14.09	186.7	15.13	216.0	18.47	220.9	18.91	230.9	19.17	233.4	19.23
	99	137.7	11.63	157.2	13.15	176.8	15.07	186.7	16.20	214.0	19.61	216.5	19.68	226.3	19.95	228.8	20.02
	104	137.7	12.29	157.2	14.14	176.8	16.52	186.7	17.81	208.4	20.57	210.9	20.64	220.5	20.94	223.0	21.02
	109	137.7	13.10	157.2	15.50	176.8	18.14	186.7	19.58	202.8	21.54	205.2	21.62	214.7	21.95	217.1	22.03
	115	137.7	14.57	157.2	17.31	176.8	20.31	186.7	21.94	195.9	22.71	198.3	22.80	207.5	23.16	209.9	23.25
194.4 (90%)	50	123.9	7.72	141.5	8.68	159.2	9.64	168.1	10.12	194.4	11.55	203.3	12.04	238.6	13.96	247.5	14.44
	59	123.9	7.94	141.5	8.93	159.2	9.92	168.1	10.42	194.4	11.90	203.3	12.40	238.6	14.38	247.5	14.88
	70	123.9	8.37	141.5	9.42	159.2	10.47	168.1	11.01	194.4	12.58	203.3	13.11	238.6	15.21	246.5	15.65
	73	123.9	8.52	141.5	9.60	159.2	10.67	168.1	11.21	194.4	12.82	203.3	13.36	238.6	15.51	245.3	15.85
	77	123.9	8.75	141.5	9.86	159.2	10.96	168.1	11.52	194.4	13.17	203.3	13.73	238.6	15.94	243.7	16.15
	81	123.9	9.00	141.5	10.15	159.2	11.29	168.1	11.86	194.4	13.57	203.3	14.15	238.2	16.61	240.8	16.65
	86	123.9	9.37	141.5	10.56	159.2	11.75	168.1	12.36	194.4	14.14	203.3	14.74	233.4	17.45	236.0	17.50
	91	123.9	9.78	141.5	11.04	159.2	12.29	168.1	12.92	194.4	14.92	203.3	15.85	228.6	18.30	231.1	18.35
	95	123.9	10.16	141.5	11.46	159.2	12.77	168.1	13.43	194.4	15.97	203.3	16.97	224.5	19.01	227.0	19.07
	99	123.9	10.57	141.5	11.93	159.2	13.30	168.1	14.11	194.4	17.14	203.3	18.27	220.2	19.78	222.6	19.85
	104	123.9	11.16	141.5	12.61	159.2	14.36	168.1	15.43	194.4	18.85	203.3	20.10	214.6	20.76	217.0	20.84
	109	123.9	11.89	141.5	13.54	159.2	15.75	168.1	16.93	194.4	20.74	199.8	21.43	209.0	21.76	211.4	21.83
	115	123.9	12.90	141.5	15.09	159.2	17.59	168.1	18.93	191.0	22.51	193.2	22.60	202.2	22.96	204.5	23.05
172.8 (80%)	50	110.1	6.97	125.8	7.82	141.5	8.67	149.4	9.10	172.8	10.38	180.7	10.81	212.1	12.51	220.0	12.94
	59	110.1	7.17	125.8	8.05	141.5	8.93	149.4	9.37	172.8	10.69	180.7	11.13	212.1	12.89	220.0	13.34
	70	110.1	7.55	125.8	8.49	141.5	9.42	149.4	9.89	172.8	11.29	180.7	11.76	212.1	13.63	220.0	14.10
	73	110.1	7.68	125.8	8.64	141.5	9.59	149.4	10.08	172.8	11.50	180.7	11.98	212.1	13.89	220.0	14.37
	77	110.1	7.89	125.8	8.87	141.5	9.85	149.4	10.35	172.8	11.82	180.7	12.31	212.1	14.28	220.0	14.78
	81	110.1	8.11	125.8	9.13	141.5	10.14	149.4	10.65	172.8	12.17	180.7	12.69	212.1	14.72	220.0	15.23
	86	110.1	8.44	125.8	9.50	141.5	10.56	149.4	11.09	172.8	12.68	180.7	13.22	212.1	15.40	220.0	16.20
	91	110.1	8.81	125.8	9.92	141.5	11.03	149.4	11.59	172.8	13.26	180.7	13.82	212.1	16.80	220.0	17.69
	95	110.1	9.14	125.8	10.30	141.5	11.46	149.4	12.04	172.8	13.78	180.7	14.50	212.1	18.00	219.4	18.87
	99	110.1	9.50	125.8	10.72	141.5	11.93	149.4	12.54	172.8	14.62	180.7	15.50	212.1	19.42	215.3	19.64
	104	110.1	10.03	125.8	11.32	141.5	12.61	149.4	13.26	172.8	16.01	180.7	17.02	207.7	20.54	210.0	20.62
	109	110.1	10.68	125.8	12.06	141.5	13.54	149.4	14.50	172.8	17.58	180.7	18.70	202.4	21.52	204.7	21.60
	115	110.1	11.58	125.8	13.09	141.5	15.09	149.4	16.18	172.8	19.67	180.7	20.94	196.0	22.71	198.2	22.80
151.2 (70%)	50	96.4	6.22	110.1	6.97	123.8	7.71	130.7	8.09	151.2	9.20	158.1	9.58	185.6	11.07	192.5	11.45
	59	96.4	6.39	110.1	7.16	123.8	7.93	130.7	8.32	151.2	9.47	158.1	9.86	185.6	11.40	192.5	11.79
	70	96.4	6.73	110.1	7.55	123.8	8.37	130.7	8.78	151.2	10.00	158.1	10.41	185.6	12.05	192.5	12.46
	73	96.4	6.85	110.1	7.68	123.8	8.52	130.7	8.94	151.2	10.19	158.1	10.61	185.6	12.28	192.5	12.70
	77	96.4	7.02	110.1	7.88	123.8	8.74	130.7	9.18	151.2	10.46	158.1	10.90	185.6	12.62	192.5	13.05
	81	96.4	7.22	110.1	8.11	123.8	9.00	130.7	9.45	151.2	10.77	158.1	11.22	185.6	13.00	192.5	13.45
	86	96.4	7.50	110.1	8.43	123.8	9.36	130.7	9.83	151.2	11.22	158.1	11.69	185.6	13.54	192.5	14.01
	91	96.4	7.83	110.1	8.80	123.8	9.78	130.7	10.27	151.2	11.72	158.1	12.22	185.6	14.16	192.5	14.72
	95	96.4	8.12	110.1	9.13	123.8	10.15	130.7	10.66	151.2	12.18	158.1	12.69	185.6	15.01	192.5	15.76
	99	96.4	8.44	110.1	9.50	123.8	10.56	130.7	11.10	151.2	12.68	158.1	13.22	185.6	16.06	192.5	16.90
	104	96.4	8.90	110.1	10.03	123.8	11.15	130.7	11.72	151.2	13.44	158.1	14.24	185.6	17.65	192.5	18.58
	109	96.4	9.47	110.1	10.67	123.8	11.88	130.7	12.49	151.2	14.73	158.1	15.61	185.6	19.40	192.5	20.44
	115	96.4	10.25	110.1	11.57	123.8	12.89	130.7	13.66	151.2	16.44	158.1	17.44	185.6	21.74	190.6	22.50
129.6 (60%)	50	82.6	5.47	94.3	6.11	106.1	6.75	112.0	7.07	129.6	8.03	135.5	8.35	159.0	9.63	165.0	9.95
	59	82.6	5.62	94.3	6.28	106.1	6.94	112.0	7.27	129.6	8.26	135.5	8.59	159.0	9.91	165.0	10.25
	70	82.6	5.91	94.3	6.61	106.1	7.31	112.0	7.66	129.6	8.71	135.5	9.07	159.0	10.47	165.0	10.82
	73	82.6	6.01	94.3	6.72	106.1	7.44	112.0	7.80	129.6	8.87	135.5	9.23	159.0	10.66	165.0	11.02
	77	82.6	6.16	94.3	6.90	106.1	7.63	112.0	8.01	129.6	9.11	135.5	9.48	159.0	10.95	165.0	11.33
	81	82.6	6.33	94.3	7.09	106.1	7.85	112.0	8.24	129.6	9.38	135.5	9.76	159.0	11.28	165.0	11.67
	86	82.6	6.57	94.3	7.37	106.1	8.16	112.0	8.56	129.6	9.75	135.5	10.16	159.0	11.75	165.0	12.15
	91	82.6	6.85	94.3	7.68	106.1	8.52	112.0	8.94	129.6	10.19	135.5	10.61	159.0	12.28	165.0	12.70
	95	82.6	7.10	94.3	7.97	106.1	8.84	112.0	9.28	129.6	10.58	135.5	11.02	159.0	12.76	165.0	13.20
	99	82.6	7.37	94.3	8.28	106.1	9.19	112.0	9.65	129.6	11.01	135.5	11.47	159.0	13.29	165.0	13.78
	104	82.6	7.77	94.3	8.73	106.1	9.70	112.0	10.19	129.6	11.63	135.5	12.12	159.0	14.04	165.0	15.05
	109	82.6	8.26	94.3	9.29	106.1	10.33	112.0	10.85	129.6	12.40	135.5	12.92	159.0	15.73	165.0	16.52
	115	82.6	8.93	94.3	10.06	106.1	11.19	112.0	11.76	129.6	13.52	135.5	14.29	159.0	17.57	165.0	18.46
108 (50%)	50	68.8	4.72	78.6	5.26	88.4	5.79	93.4	6.06	108.0	6.85	112.9	7.12	132.5	8.19	137.5	8.46
	59	68.8	4.85	78.6	5.40	88.4	5.95	93.4	6.22	108.0	7.05	112.9	7.32	132.5	8.42	137.5	8.70
	70	68.8	5.09	78.6	5.67	88.4	6.26	93.4	6.55	108.0	7.42	112.9	7.72	132.5	8.89	137.5	9.18
	73	68.8	5.17	78.6	5.77	88.4	6.36	93.4	6.66	108.0	7.56	112.9	7.86	132.5	9.05	137.5	9.35
	77	68.8	5.30	78.6	5.91	88.4	6.52	93.4	6.84	108.0	7.75	112.9	8.06	132.5	9.29	137.5	9.60
	81	68.8	5.44	78.6	6.07	88.4	6.71	93.4	7.03	108.0	7.98	112.9	8.30	132.5	9.56	137.5	9.89
	86	68.8	5.64	78.6	6.30	88.4	6.97	93.4	7.30	108.0	8.29	112.9	8.63	132.5	9.95	137.5	10.29
	91	68.8	5.87	78.6	6.57	88.4	7.26	93.4	7.61	108.0	8.65	112.9	9.01	132.5	10.40	137.5	10.75
	95	68.8	6.08	78.6	6.80	88.4	7.53	93.4	7.89	108.0	8.98	112.9	9.35	132.5	10.80	137.5	11.16
	99	68.8	6.31	78.6	7.06	88.4	7.82	93.4	8.21	108.0	9.34	112.9	9.72	132.5	11.24	137.5	11.62
	104	68.8	6.64	78.6	7.44	88.4	8.25	93.4	8.65	108.0	9.86	112.9	10.26	132.5	11.87	137.5	12.28
	109	68.8	7.04	78.6	7.90	88.4	8.77	93.4	9.20	108.0	10.49	112.9	10.93	132.5	12.66	137.5	13.09
	115	68.8	7.60	78.6	8.55	88.4	9.49	93.4	9.96	108.0	11.37	112.9	11.85	132.5	13.90	137.5	14.55

TC : Total Capacity kBtu/h.

IP : Input Power kW (Compressor + Outdoor fan motor).

The data is based on the following conditions. Pipe length : 25ft. (7.5m) , Height difference : 0ft. (0m)

COOLING CAPACITY in kBtu/h

■ MODEL : AOUA240RLBVG1

Total rated capacity of indoor unit	Outdoor temp.	Indoor temperature (°FDB / °FWB)															
		68 / 59		73 / 61		75 / 63		79 / 64		80 / 67		82 / 68		86 / 72		90 / 73	
	(°FDB)	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
360.0 (150%)	50	229.4	13.52	262.1	15.29	285.1	16.37	289.1	16.35	300.8	16.30	304.8	16.27	320.8	16.17	324.8	16.14
	59	229.4	13.92	262.1	15.75	282.9	16.71	286.8	16.69	298.5	16.64	302.5	16.62	318.3	16.52	322.3	16.49
	70	229.4	14.72	262.1	16.67	278.7	17.36	282.6	17.35	294.1	17.30	298.0	17.29	313.6	17.20	317.5	17.17
	73	229.4	15.00	262.1	16.99	277.3	17.58	281.1	17.57	292.5	17.53	296.4	17.52	311.7	17.47	315.1	17.51
	77	229.4	15.42	262.1	17.46	275.1	17.91	278.9	17.90	289.3	18.00	292.8	18.05	306.3	18.23	309.7	18.27
	81	229.4	15.89	262.1	18.14	271.0	18.53	274.3	18.59	284.2	18.75	287.6	18.81	300.8	18.99	304.2	19.04
	86	229.4	16.56	258.4	19.34	264.8	19.47	268.1	19.53	277.7	19.70	281.0	19.75	293.9	19.96	297.2	20.00
	91	229.4	17.92	252.3	20.27	258.6	20.40	261.8	20.47	271.2	20.65	274.4	20.71	286.9	20.93	290.1	20.99
	95	229.4	19.20	247.3	21.03	253.4	21.19	256.5	21.27	265.6	21.49	268.7	21.56	281.0	21.83	284.1	21.90
	99	229.4	20.68	241.9	21.87	247.9	22.04	250.9	22.12	259.9	22.36	263.0	22.44	275.1	22.74	278.1	22.81
	104	229.2	22.74	235.1	22.93	240.9	23.11	243.9	23.21	252.7	23.47	255.7	23.55	267.5	23.88	270.5	23.97
	109	222.5	23.80	228.2	24.00	233.9	24.20	236.8	24.30	245.4	24.58	248.4	24.68	260.0	25.04	262.9	25.13
	115	214.3	25.07	219.9	25.29	225.4	25.50	228.2	25.61	236.6	25.93	239.5	26.03	250.8	26.44	253.6	26.54
336.0 (140%)	50	214.1	12.69	244.6	14.34	275.1	15.99	284.2	16.37	295.7	16.32	299.6	16.30	315.2	16.21	319.2	16.18
	59	214.1	13.07	244.6	14.77	275.0	16.48	282.1	16.71	293.5	16.67	297.4	16.65	312.9	16.56	316.8	16.53
	70	214.1	13.81	244.6	15.63	274.2	17.37	277.9	17.36	289.2	17.32	293.0	17.31	308.3	17.23	312.2	17.21
	73	214.1	14.08	244.6	15.92	272.7	17.59	276.5	17.58	287.7	17.55	291.5	17.54	306.7	17.46	310.5	17.45
	77	214.1	14.47	244.6	16.37	270.7	17.91	274.4	17.91	285.1	17.94	288.5	17.99	301.8	18.17	305.2	18.22
	81	214.1	14.91	244.6	16.87	267.1	18.47	270.4	18.52	280.2	18.69	283.5	18.74	296.5	18.94	299.8	18.98
	86	214.1	15.53	244.6	17.96	261.1	19.40	264.4	19.46	273.9	19.63	277.1	19.69	289.8	19.89	293.1	19.94
	91	214.1	16.32	244.6	19.60	255.1	20.33	258.2	20.39	267.5	20.58	270.6	20.64	283.1	20.86	286.2	20.91
	95	214.1	17.48	244.0	20.95	250.1	21.10	253.1	21.18	262.1	21.40	265.2	21.47	277.3	21.75	280.4	21.82
	99	214.1	18.75	238.8	21.78	244.7	21.95	247.7	22.03	256.5	22.27	259.5	22.35	271.5	22.65	274.5	22.73
	104	214.1	20.62	232.1	22.84	237.9	23.02	240.8	23.11	249.5	23.37	252.4	23.46	264.1	23.79	267.1	23.87
	109	214.1	22.68	225.4	23.90	231.0	24.10	233.9	24.20	242.4	24.48	245.3	24.57	256.7	24.94	259.6	25.03
	115	211.7	24.96	217.2	25.18	222.7	25.40	225.5	25.51	233.8	25.82	236.6	25.92	247.7	26.33	250.5	26.43
312.0 (130%)	50	198.8	11.86	227.1	13.39	255.4	14.93	269.7	15.70	290.1	16.35	293.9	16.33	309.1	16.25	313.0	16.22
	59	198.8	12.21	227.1	13.80	255.4	15.38	269.7	16.18	287.9	16.69	291.7	16.67	306.8	16.60	310.7	16.57
	70	198.8	12.91	227.1	14.59	255.4	16.27	269.7	17.12	283.8	17.34	287.5	17.33	302.4	17.26	306.2	17.24
	73	198.8	13.15	227.1	14.86	255.4	16.58	269.7	17.45	282.3	17.57	286.1	17.56	300.9	17.49	304.7	17.47
	77	198.8	13.51	227.1	15.28	255.4	17.05	269.4	17.91	280.2	17.90	283.7	17.92	296.8	18.11	300.1	18.15
	81	198.8	13.92	227.1	15.74	255.4	17.57	266.0	18.45	275.6	18.61	278.9	18.67	291.7	18.87	295.0	18.91
	86	198.8	14.50	227.1	16.41	255.4	19.10	260.2	19.38	269.5	19.55	272.7	19.61	285.2	19.82	288.4	19.87
	91	198.8	15.16	227.1	17.68	251.2	20.24	254.2	20.31	263.4	20.50	266.5	20.56	278.7	20.78	281.8	20.83
	95	198.8	15.84	227.1	18.93	246.3	21.01	249.3	21.09	258.2	21.31	261.2	21.38	273.1	21.66	276.1	21.72
	99	198.8	16.95	227.1	20.38	241.1	21.85	244.0	21.93	252.8	22.17	255.7	22.25	267.4	22.55	270.4	22.63
	104	198.8	18.59	227.1	22.44	234.5	22.91	237.3	23.00	245.9	23.26	248.8	23.35	260.3	23.68	263.2	23.76
	109	198.8	20.43	222.2	23.79	227.8	23.98	230.6	24.08	238.9	24.37	241.8	24.46	253.0	24.82	255.9	24.91
	115	198.8	22.88	214.2	25.06	219.7	25.28	222.4	25.39	230.5	25.70	233.3	25.80	244.3	26.20	247.0	26.30
288.0 (120%)	50	183.5	11.03	209.6	12.45	235.8	13.86	248.9	14.58	283.8	16.37	287.5	16.36	302.3	16.29	306.1	16.27
	59	183.5	11.36	209.6	12.82	235.8	14.28	248.9	15.02	281.7	16.71	285.4	16.70	300.1	16.63	303.9	16.61
	70	183.5	12.00	209.6	13.55	235.8	15.10	248.9	15.89	277.7	17.36	281.4	17.35	295.9	17.30	299.6	17.28
	73	183.5	12.22	209.6	13.80	235.8	15.39	248.9	16.19	276.4	17.58	280.0	17.57	294.4	17.52	298.1	17.51
	77	183.5	12.55	209.6	14.19	235.8	15.82	248.9	16.64	274.4	17.91	278.0	17.90	291.2	18.03	294.4	18.07
	81	183.5	12.93	209.6	14.61	235.8	16.30	248.9	17.15	270.5	18.53	273.7	18.58	286.3	18.79	289.5	18.83
	86	183.5	13.47	209.6	15.23	235.8	17.06	248.9	18.41	264.7	19.46	267.8	19.52	280.1	19.74	283.2	19.79
	91	183.5	14.08	209.6	15.93	235.8	18.61	248.9	20.10	258.7	20.40	261.7	20.47	273.8	20.70	276.8	20.75
	95	183.5	14.63	209.6	16.98	235.8	19.95	245.0	20.97	253.7	21.20	256.7	21.27	268.4	21.55	271.3	21.62
	99	183.5	15.28	209.6	18.20	235.8	21.53	239.9	21.82	248.5	22.06	251.4	22.14	262.9	22.44	265.8	22.51
	104	183.5	16.70	209.6	20.01	230.6	22.79	233.4	22.88	241.8	23.14	244.7	23.23	255.9	23.56	258.8	23.64
	109	183.5	18.32	209.6	22.01	224.1	23.85	226.9	23.95	235.1	24.24	237.9	24.33	248.9	24.69	251.7	24.78
	115	183.5	20.47	209.6	24.68	216.2	25.14	218.9	25.25	226.9	25.56	229.6	25.66	240.4	26.06	243.1	26.16
264.0 (110%)	50	168.2	10.20	192.2	11.50	216.1	12.80	228.2	13.45	264.0	15.39	276.1	16.05	294.7	16.33	298.3	16.31
	59	168.2	10.50	192.2	11.84	216.1	13.18	228.2	13.86	264.0	15.86	276.1	16.54	292.6	16.67	296.2	16.65
	70	168.2	11.08	192.2	12.51	216.1	13.93	228.2	14.65	264.0	16.78	274.5	17.37	288.6	17.33	292.2	17.31
	73	168.2	11.29	192.2	12.74	216.1	14.20	228.2	14.93	264.0	17.10	273.2	17.59	287.2	17.55	290.8	17.54
	77	168.2	11.60	192.2	13.09	216.1	14.59	228.2	15.35	264.0	17.58	271.2	17.91	284.8	17.93	288.0	17.98
	81	168.2	11.94	192.2	13.49	216.1	15.03	228.2	15.81	264.0	18.33	267.8	18.48	280.2	18.69	283.3	18.74
	86	168.2	12.43	192.2	14.05	216.1	15.66	228.2	16.48	259.1	19.36	262.2	19.42	274.2	19.64	277.2	19.69
	91	168.2	13.00	192.2	14.69	216.1	16.53	228.2	17.79	253.4	20.29	256.4	20.36	268.1	20.59	271.1	20.65
	95	168.2	13.50	192.2	15.27	216.1	17.69	228.2	19.06	248.7	21.07	251.6	21.14	263.0	21.42	265.9	21.49
	99	168.2	14.06	192.2	16.21	216.1	18.99	228.2	20.52	243.6	21.92	246.5	22.00	257.7	22.30	260.6	22.38
	104	168.2	14.91	192.2	17.75	216.1	20.89	228.2	22.60	237.2	23.00	240.0	23.08	251.0	23.42	253.8	23.50
	109	168.2	16.34	192.2	19.50	216.1	22.98	222.6	23.80	230.7	24.08	233.4	24.18	244.2	24.54	246.9	24.63
	115	168.2	18.23	192.2	21.81	212.3	24.98	214.9	25.09	222.7	25.40	225.4	25.50	235.9	25.90	238.6	26.00

Total rated capacity of indoor unit	Outdoor temp.	Indoor temperature (°FDB / °FWB)															
		68 / 59		73 / 61		75 / 63		79 / 64		80 / 67		82 / 68		86 / 72		90 / 73	
	(°FDB)	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
240.0 (100%)	50	153.0	9.37	174.7	10.55	196.5	11.73	207.4	12.33	240.0	14.09	251.0	14.69	286.1	16.36	289.6	16.35
	59	153.0	9.64	174.7	10.86	196.5	12.08	207.4	12.69	240.0	14.52	251.0	15.13	284.1	16.70	287.6	16.69
	70	153.0	10.17	174.7	11.47	196.5	12.76	207.4	13.42	240.0	15.35	251.0	16.00	280.3	17.35	283.8	17.34
	73	153.0	10.36	174.7	11.68	196.5	13.00	207.4	13.67	240.0	15.64	251.0	16.31	279.0	17.58	282.5	17.57
	77	153.0	10.64	174.7	12.00	196.5	13.36	207.4	14.05	240.0	16.08	251.0	16.77	277.1	17.90	280.5	17.89
	81	153.0	10.95	174.7	12.36	196.5	13.76	207.4	14.47	240.0	16.58	251.0	17.28	273.1	18.57	276.2	18.62
	86	153.0	11.40	174.7	12.87	196.5	14.34	207.4	15.08	240.0	17.49	251.0	18.63	267.5	19.52	270.4	19.57
	91	153.0	11.91	174.7	13.45	196.5	15.00	207.4	15.77	240.0	19.09	250.2	20.22	261.7	20.47	264.6	20.52
	95	153.0	12.37	174.7	13.98	196.5	15.60	207.4	16.75	240.0	20.45	245.7	20.99	256.9	21.28	259.7	21.34
	99	153.0	12.88	174.7	14.56	196.5	16.68	207.4	17.93	238.0	21.76	240.8	21.84	251.8	22.15	254.6	22.22
	104	153.0	13.61	174.7	15.65	196.5	18.29	207.4	19.72	231.9	22.83	234.6	22.92	245.3	23.25	248.1	23.33
	109	153.0	14.51	174.7	17.16	196.5	20.09	207.4	21.68	225.6	23.91	228.2	24.00	238.8	24.36	241.5	24.45
	115	153.0	16.14	174.7	19.17	196.5	22.49	207.4	24.30	218.0	25.21	220.6	25.32	230.8	25.71	233.4	25.81
216.0 (90%)	50	137.7	8.54	157.2	9.60	176.8	10.67	186.7	11.20	216.0	12.79	225.9	13.33	265.1	15.45	274.9	15.99
	59	137.7	8.79	157.2	9.88	176.8	10.98	186.7	11.53	216.0	13.17	225.9	13.73	265.1	15.92	274.9	16.47
	70	137.7	9.26	157.2	10.43	176.8	11.59	186.7	12.18	216.0	13.93	225.9	14.51	265.1	16.84	274.2	17.37
	73	137.7	9.43	157.2	10.62	176.8	11.81	186.7	12.41	216.0	14.19	225.9	14.79	265.1	17.17	273.0	17.59
	77	137.7	9.68	157.2	10.91	176.8	12.13	186.7	12.75	216.0	14.58	225.9	15.20	265.1	17.65	271.2	17.91
	81	137.7	9.97	157.2	11.23	176.8	12.49	186.7	13.13	216.0	15.03	225.9	15.66	265.0	18.43	267.9	18.48
	86	137.7	10.37	157.2	11.69	176.8	13.01	186.7	13.68	216.0	15.66	225.9	16.32	259.7	19.37	262.6	19.42
	91	137.7	10.83	157.2	12.22	176.8	13.60	186.7	14.30	216.0	16.51	225.9	17.54	254.3	20.31	257.1	20.37
	95	137.7	11.24	157.2	12.69	176.8	14.14	186.7	14.86	216.0	17.68	225.9	18.79	249.8	21.10	252.5	21.17
	99	137.7	11.70	157.2	13.21	176.8	14.72	186.7	15.62	216.0	18.98	225.9	20.23	244.9	21.96	247.6	22.03
	104	137.7	12.35	157.2	13.96	176.8	15.90	186.7	17.08	216.0	20.87	225.9	22.26	238.8	23.05	241.4	23.13
	109	137.7	13.17	157.2	14.99	176.8	17.44	186.7	18.75	216.0	22.96	222.3	23.79	232.5	24.15	235.1	24.24
	115	137.7	14.28	157.2	16.72	176.8	19.48	186.7	20.96	212.4	24.99	214.9	25.09	224.9	25.49	227.5	25.58
192.0 (80%)	50	122.3	7.71	139.8	8.66	157.2	9.60	166.0	10.08	192.0	11.49	200.8	11.96	235.6	13.85	244.4	14.33
	59	122.3	7.93	139.8	8.90	157.2	9.88	166.0	10.37	192.0	11.83	200.8	12.32	235.6	14.27	244.4	14.76
	70	122.3	8.36	139.8	9.39	157.2	10.43	166.0	10.95	192.0	12.50	200.8	13.02	235.6	15.09	244.4	15.61
	73	122.3	8.50	139.8	9.56	157.2	10.62	166.0	11.15	192.0	12.73	200.8	13.27	235.6	15.38	244.4	15.91
	77	122.3	8.73	139.8	9.82	157.2	10.91	166.0	11.45	192.0	13.08	200.8	13.63	235.6	15.81	244.4	16.36
	81	122.3	8.98	139.8	10.10	157.2	11.23	166.0	11.79	192.0	13.48	200.8	14.04	235.6	16.29	244.4	16.86
	86	122.3	9.34	139.8	10.51	157.2	11.69	166.0	12.28	192.0	14.04	200.8	14.63	235.6	17.04	244.4	17.94
	91	122.3	9.75	139.8	10.98	157.2	12.21	166.0	12.83	192.0	14.68	200.8	15.30	235.6	18.60	244.4	19.58
	95	122.3	10.11	139.8	11.40	157.2	12.68	166.0	13.33	192.0	15.25	200.8	16.05	235.6	19.92	244.1	20.95
	99	122.3	10.52	139.8	11.86	157.2	13.20	166.0	13.88	192.0	16.19	200.8	17.16	235.6	21.50	239.5	21.80
	104	122.3	11.10	139.8	12.53	157.2	13.95	166.0	14.67	192.0	17.73	200.8	18.84	231.1	22.80	233.6	22.89
	109	122.3	11.82	139.8	13.35	157.2	14.99	166.0	16.06	192.0	19.47	200.8	20.71	225.2	23.89	227.7	23.98
	115	122.3	12.82	139.8	14.49	157.2	16.70	166.0	17.92	192.0	21.79	200.8	23.19	218.0	25.21	220.4	25.31
168.0 (70%)	50	107.1	6.88	122.3	7.71	137.5	8.54	145.2	8.95	168.0	10.19	175.7	10.60	206.2	12.26	213.8	12.67
	59	107.1	7.07	122.3	7.93	137.5	8.78	145.2	9.21	168.0	10.49	175.7	10.92	206.2	12.62	213.8	13.05
	70	107.1	7.45	122.3	8.35	137.5	9.26	145.2	9.72	168.0	11.07	175.7	11.53	206.2	13.34	213.8	13.80
	73	107.1	7.58	122.3	8.50	137.5	9.43	145.2	9.89	168.0	11.28	175.7	11.74	206.2	13.59	213.8	14.06
	77	107.1	7.77	122.3	8.72	137.5	9.68	145.2	10.16	168.0	11.58	175.7	12.06	206.2	13.97	213.8	14.45
	81	107.1	7.99	122.3	8.97	137.5	9.96	145.2	10.46	168.0	11.93	175.7	12.42	206.2	14.39	213.8	14.89
	86	107.1	8.30	122.3	9.33	137.5	10.36	145.2	10.88	168.0	12.42	175.7	12.94	206.2	14.99	213.8	15.51
	91	107.1	8.66	122.3	9.74	137.5	10.82	145.2	11.36	168.0	12.98	175.7	13.52	206.2	15.68	213.8	16.29
	95	107.1	8.98	122.3	10.11	137.5	11.23	145.2	11.80	168.0	13.48	175.7	14.05	206.2	16.61	213.8	17.44
	99	107.1	9.34	122.3	10.51	137.5	11.69	145.2	12.28	168.0	14.04	175.7	14.63	206.2	17.78	213.8	18.71
	104	107.1	9.85	122.3	11.10	137.5	12.34	145.2	12.98	168.0	14.88	175.7	15.76	206.2	19.55	213.8	20.58
	109	107.1	10.48	122.3	11.82	137.5	13.15	145.2	13.83	168.0	16.31	175.7	17.29	206.2	21.49	213.8	22.64
	115	107.1	11.35	122.3	12.81	137.5	14.27	145.2	15.13	168.0	18.20	175.7	19.31	206.2	24.08	212.0	24.97
144.0 (60%)	50	91.8	6.05	104.8	6.76	117.9	7.47	124.5	7.83	144.0	8.89	150.6	9.24	176.7	10.66	183.3	11.02
	59	91.8	6.22	104.8	6.95	117.9	7.68	124.5	8.05	144.0	9.14	150.6	9.51	176.7	10.97	183.3	11.34
	70	91.8	6.54	104.8	7.31	117.9	8.09	124.5	8.48	144.0	9.64	150.6	10.03	176.7	11.59	183.3	11.98
	73	91.8	6.65	104.8	7.44	117.9	8.23	124.5	8.63	144.0	9.82	150.6	10.22	176.7	11.81	183.3	12.20
	77	91.8	6.82	104.8	7.63	117.9	8.45	124.5	8.86	144.0	10.08	150.6	10.49	176.7	12.13	183.3	12.54
	81	91.8	7.00	104.8	7.85	117.9	8.69	124.5	9.12	144.0	10.38	150.6	10.80	176.7	12.49	183.3	12.91
	86	91.8	7.27	104.8	8.15	117.9	9.04	124.5	9.48	144.0	10.80	150.6	11.24	176.7	13.00	183.3	13.45
	91	91.8	7.58	104.8	8.50	117.9	9.43	124.5	9.90	144.0	11.28	150.6	11.75	176.7	13.60	183.3	14.06
	95	91.8	7.85	104.8	8.82	117.9	9.78	124.5	10.27	144.0	11.71	150.6	12.20	176.7	14.13	183.3	14.61
	99	91.8	8.16	104.8	9.16	117.9	10.17	124.5	10.68	144.0	12.19	150.6	12.70	176.7	14.71	183.3	15.26
	104	91.8	8.60	104.8	9.67	117.9	10.74	124.5	11.28	144.0	12.88	150.6	13.42	176.7	15.88	183.3	16.67
	109	91.8	9.14	104.8	10.28	117.9	11.43	124.5	12.01	144.0	13.72	150.6	14.30	176.7	17.42	183.3	18.29
	115	91.8	9.88	104.8	11.13	117.9	12.39	124.5	13.02	144.0	14.97	150.6	15.83	176.7	19.46	183.3	20.44
120.0 (50%)	50	76.5	5.22	87.4	5.81	98.2	6.40	103.7	6.70	120.0	7.59	125.5	7.88	147.3	9.06	152.8	9.36
	59	76.5	5.36	87.4	5.97	98.2	6.58	103.7	6.89	120.0	7.80	125.5	8.11	147.3	9.32	152.8	9.63
	70	76.5	5.63	87.4	6.27	98.2	6.92	103.7	7.25	120.0	8.22	125.5	8.54	147.3	9.84	152.8	10.16
	73	76.5	5.72	87.4	6.38	98.2	7.04	103.7	7.37	120.0	8.36	125.5	8.70	147.3	10.02	152.8	10.35
	77	76.5	5.86	87.4	6.54	98.2	7.22	103.7	7.56	120.0	8.58	125.5	8.92	147.3	10.28	152.8	10.63
	81	76.5	6.02	87.4	6.72	98.2	7.42	103.7	7.78	120.0	8.83	125.5	9.18	147.3	10.59	152.8	10.94
	86	76.5	6.24	87.4	6.97	98.2	7.71	103.7	8.08	120.0	9.18	125.5	9.55	147.3	11.02	152.8	11.39
	91	76.5	6.50	87.4	7.27	98.2	8.04	103.7	8.43	120.0	9.58	125.5	9.97	147.3	11.51	152.8	11.90
	95	76.5	6.72	87.4	7.53	98.2	8.33	103.7	8.74	120.0	9.94	125.5	10.34	147.3	11.95	152.8	12.36
	99	76.5	6.98	87.4	7.82	98.2	8.66	103.7	9.08	120.0	10.34	125.5	10.76	147.3	12.44	152.8	12.86
	104	76.5	7.34	87.4	8.24	98.2	9.13	103.7	9.58	120.0	10.91	125.5	11.36	147.3	13.14	152.8	13.59
	109	76.5	7.79	87.4	8.75	98.2	9.70	103.7	10.19	120.0	11.62	125.5	12.10	147.3	14.01	152.8	14.49
	115	76.5	8.41	87.4	9.46	98.2	10.50	103.7	11.03	120.0	12.59	125.5	13.12	147.3	15.39	152.8	16.11

TC : Total Capacity kBtu/h.

IP : Input Power kW (Compressor + Outdoor fan motor).

The data is based on the following conditions. Pipe length : 25ft. (7.5m) , Height difference : 0ft. (0m)

COOLING CAPACITY in kBtu/h

■ MODEL : AOUA264RLBVG1

Total rated capacity of indoor unit	Outdoor temp.	Indoor temperature (°FDB / °FWB)															
		68 / 59		73 / 61		75 / 63		79 / 64		80 / 67		82 / 68		86 / 72		90 / 73	
	(°FDB)	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
396.0 (150%)	50	252.4	14.93	288.3	16.89	312.5	17.99	316.8	17.98	329.7	17.92	334.1	17.89	351.6	17.77	356.0	17.74
	59	252.4	15.39	288.3	17.40	310.1	18.37	314.4	18.35	327.2	18.30	331.5	18.27	348.9	18.16	353.3	18.13
	70	252.4	16.27	288.3	18.41	305.5	19.08	309.7	19.07	322.3	19.02	326.6	19.00	343.7	18.90	348.0	18.87
	73	252.4	16.58	288.3	18.76	303.9	19.32	308.1	19.31	320.6	19.27	324.9	19.25	341.6	19.19	345.4	19.24
	77	252.4	17.04	288.3	19.29	301.5	19.68	305.7	19.67	317.2	19.78	320.9	19.83	335.7	20.03	339.5	20.07
	81	252.4	17.55	288.3	20.04	297.1	20.36	300.7	20.42	311.6	20.60	315.2	20.66	329.8	20.86	333.5	20.91
	86	252.4	18.29	283.3	21.24	290.3	21.38	293.9	21.45	304.5	21.63	308.1	21.69	322.2	21.92	325.8	21.97
	91	252.4	19.80	276.6	22.26	283.5	22.40	287.0	22.47	297.3	22.67	300.8	22.74	314.6	22.98	318.1	23.04
	95	252.4	21.20	271.2	23.09	277.9	23.26	281.2	23.34	291.3	23.59	294.7	23.66	308.1	23.96	311.5	24.04
	99	252.4	22.83	265.3	24.01	271.8	24.19	275.2	24.28	285.0	24.54	288.4	24.63	301.6	24.96	305.0	25.04
	104	251.4	24.96	257.8	25.17	264.2	25.37	267.5	25.47	277.2	25.75	280.4	25.85	293.4	26.21	296.7	26.30
	109	244.0	26.11	250.3	26.33	256.6	26.55	259.8	26.66	269.2	26.97	272.4	27.07	285.1	27.47	288.3	27.57
	115	235.1	27.50	241.2	27.74	247.3	27.98	250.4	28.10	259.6	28.44	262.7	28.56	275.1	29.00	278.2	29.11
369.6 (140%)	50	235.5	14.02	269.1	15.84	302.6	17.67	311.5	18.00	324.1	17.94	328.4	17.92	345.5	17.82	349.9	17.79
	59	235.5	14.44	269.1	16.32	302.6	18.20	309.2	18.37	321.7	18.32	325.9	18.30	342.9	18.20	347.2	18.17
	70	235.5	15.26	269.1	17.26	300.5	19.09	304.6	19.08	316.9	19.04	321.1	19.03	337.9	18.94	342.1	18.91
	73	235.5	15.55	269.1	17.59	298.9	19.33	303.0	19.33	315.3	19.29	319.5	19.28	336.2	19.19	340.3	19.18
	77	235.5	15.98	269.1	18.08	296.7	19.69	300.7	19.68	312.6	19.71	316.3	19.76	330.9	19.97	334.5	20.01
	81	235.5	16.46	269.1	18.64	292.9	20.28	296.5	20.35	307.1	20.53	310.8	20.59	325.1	20.80	328.7	20.85
	86	235.5	17.15	269.1	19.84	286.3	21.30	289.8	21.37	300.3	21.56	303.8	21.62	317.8	21.85	321.3	21.90
	91	235.5	18.03	269.1	21.65	279.7	22.32	283.1	22.39	293.3	22.60	296.7	22.66	310.4	22.90	313.8	22.96
	95	235.5	19.30	267.6	23.00	274.2	23.17	277.5	23.25	287.4	23.49	290.8	23.57	304.1	23.88	307.4	23.95
	99	235.5	20.70	261.9	23.91	268.3	24.10	271.6	24.19	281.3	24.45	284.6	24.53	297.7	24.86	301.0	24.94
	104	235.5	22.75	254.6	25.06	260.9	25.26	264.1	25.36	273.6	25.65	276.9	25.74	289.7	26.11	292.9	26.20
	109	235.5	25.02	247.2	26.23	253.4	26.44	256.5	26.55	265.9	26.86	269.0	26.96	281.5	27.36	284.7	27.46
	115	232.3	27.39	238.3	27.63	244.3	27.87	247.4	27.98	256.4	28.33	259.5	28.44	271.7	28.88	274.8	28.99
343.2 (130%)	50	218.7	13.11	249.9	14.80	281.0	16.49	296.7	17.35	318.0	17.97	322.1	17.95	338.8	17.86	343.1	17.83
	59	218.7	13.50	249.9	15.24	281.0	16.99	296.7	17.87	315.6	18.35	319.7	18.33	336.3	18.25	340.5	18.22
	70	218.7	14.26	249.9	16.12	281.0	17.97	296.7	18.91	311.0	19.06	315.1	19.05	331.5	18.98	335.6	18.95
	73	218.7	14.53	249.9	16.42	281.0	18.32	296.7	19.27	309.5	19.31	313.6	19.30	329.8	19.23	334.0	19.21
	77	218.7	14.93	249.9	16.87	281.0	18.83	295.3	19.69	307.2	19.67	311.1	19.69	325.4	19.89	329.0	19.94
	81	218.7	15.37	249.9	17.39	281.0	19.41	291.7	20.26	302.2	20.45	305.7	20.51	319.8	20.72	323.4	20.78
	86	218.7	16.02	249.9	18.12	281.0	21.10	285.3	21.28	295.5	21.48	299.0	21.54	312.7	21.77	316.2	21.82
	91	218.7	16.75	249.9	19.53	275.4	22.23	278.8	22.30	288.8	22.51	292.2	22.58	305.6	22.82	309.0	22.88
	95	218.7	17.50	249.9	20.91	270.1	23.06	273.4	23.15	283.1	23.39	286.4	23.47	299.5	23.77	302.8	23.85
	99	218.7	18.71	249.9	22.51	264.4	23.98	267.6	24.08	277.2	24.34	280.4	24.42	293.3	24.75	296.5	24.83
	104	218.7	20.53	249.9	24.76	257.2	25.15	260.3	25.25	269.7	25.53	272.9	25.63	285.5	25.99	288.6	26.08
	109	218.7	22.54	243.7	26.10	249.9	26.32	252.9	26.43	262.1	26.74	265.2	26.84	277.5	27.24	280.7	27.34
	115	218.7	25.23	235.0	27.50	241.0	27.74	244.0	27.85	252.9	28.20	255.9	28.31	268.0	28.75	271.0	28.86
316.8 (120%)	50	201.9	12.19	230.6	13.75	259.4	15.32	273.9	16.10	311.1	18.00	315.2	17.98	331.4	17.91	335.5	17.88
	59	201.9	12.55	230.6	14.17	259.4	15.78	273.9	16.59	308.8	18.37	312.9	18.36	329.0	18.29	333.1	18.26
	70	201.9	13.26	230.6	14.97	259.4	16.68	273.9	17.55	304.5	19.08	308.4	19.07	324.4	19.01	328.4	18.99
	73	201.9	13.50	230.6	15.25	259.4	17.00	273.9	17.88	303.0	19.33	306.9	19.32	322.8	19.26	326.8	19.24
	77	201.9	13.87	230.6	15.67	259.4	17.47	273.9	18.38	300.7	19.68	304.7	19.68	319.3	19.81	322.8	19.86
	81	201.9	14.29	230.6	16.15	259.4	18.01	273.9	18.95	296.6	20.35	300.1	20.41	313.9	20.64	317.4	20.69
	86	201.9	14.88	230.6	16.82	259.4	18.85	273.9	20.34	290.2	21.38	293.6	21.44	307.1	21.68	310.5	21.73
	91	201.9	15.55	230.6	17.60	259.4	20.56	273.9	22.20	283.7	22.41	287.0	22.47	300.2	22.73	303.5	22.78
	95	201.9	16.16	230.6	18.77	259.4	22.02	268.7	23.03	278.3	23.27	281.5	23.35	294.3	23.66	297.6	23.73
	99	201.9	16.88	230.6	20.10	259.4	23.76	263.1	23.95	272.5	24.21	275.7	24.30	288.3	24.63	291.5	24.71
	104	201.9	18.43	230.6	22.09	252.9	25.01	256.0	25.11	265.2	25.40	268.3	25.49	280.7	25.86	283.8	25.94
	109	201.9	20.22	230.6	24.28	245.8	26.18	248.9	26.28	257.9	26.60	260.9	26.70	273.0	27.09	276.1	27.19
	115	201.9	22.59	230.6	27.20	237.2	27.59	240.2	27.70	248.9	28.04	251.9	28.16	263.7	28.59	266.7	28.70
290.4 (110%)	50	185.1	11.28	211.4	12.71	237.7	14.14	251.0	14.86	290.4	17.00	303.7	17.73	323.1	17.95	327.1	17.93
	59	185.1	11.61	211.4	13.09	237.7	14.56	251.0	15.31	290.4	17.52	303.7	18.27	320.8	18.33	324.8	18.31
	70	185.1	12.25	211.4	13.82	237.7	15.39	251.0	16.18	290.4	18.53	300.9	19.09	316.4	19.05	320.3	19.03
	73	185.1	12.48	211.4	14.08	237.7	15.68	251.0	16.49	290.4	18.89	299.5	19.33	314.9	19.29	318.8	19.28
	77	185.1	12.82	211.4	14.47	237.7	16.12	251.0	16.95	290.4	19.42	297.4	19.69	312.3	19.70	315.8	19.76
	81	185.1	13.20	211.4	14.90	237.7	16.61	251.0	17.47	290.3	20.24	293.7	20.30	307.2	20.53	310.6	20.58
	86	185.1	13.74	211.4	15.52	237.7	17.30	251.0	18.20	284.1	21.26	287.5	21.32	300.7	21.57	304.0	21.63
	91	185.1	14.36	211.4	16.23	237.7	18.26	251.0	19.66	277.9	22.28	281.2	22.35	294.1	22.61	297.3	22.67
	95	185.1	14.92	211.4	16.87	237.7	19.54	251.0	21.05	272.8	23.13	275.9	23.21	288.5	23.52	291.6	23.59
	99	185.1	15.53	211.4	17.91	237.7	20.97	251.0	22.66	267.2	24.06	270.3	24.15	282.7	24.48	285.8	24.56
	104	185.1	16.47	211.4	19.60	237.7	23.06	251.0	24.93	260.2	25.24	263.2	25.34	275.3	25.70	278.4	25.79
	109	185.1	18.04	211.4	21.51	237.7	25.35	244.2	26.12	253.0	26.43	256.0	26.53	267.9	26.93	270.9	27.03
	115	185.1	20.13	211.4	24.06	232.9	27.41	235.8	27.53	244.4	27.87	247.3	27.98	258.9	28.42	261.8	28.52

Total rated capacity of indoor unit	Outdoor temp.	Indoor temperature (°FDB / °FWB)															
		68 / 59		73 / 61		75 / 63		79 / 64		80 / 67		82 / 68		86 / 72		90 / 73	
	(°FDB)	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
264.0 (100%)	50	168.3	10.37	192.2	11.66	216.1	12.97	228.2	13.62	264.0	15.57	276.1	16.23	313.7	17.99	317.5	17.97
	59	168.3	10.66	192.2	12.01	216.1	13.35	228.2	14.03	264.0	16.04	276.1	16.72	311.5	18.36	315.3	18.35
	70	168.3	11.25	192.2	12.68	216.1	14.11	228.2	14.82	264.0	16.96	276.1	17.68	307.3	19.08	311.1	19.06
	73	168.3	11.46	192.2	12.91	216.1	14.37	228.2	15.11	264.0	17.28	276.1	18.02	305.9	19.32	309.7	19.31
	77	168.3	11.76	192.2	13.26	216.1	14.76	228.2	15.52	264.0	17.76	276.1	18.52	303.8	19.68	307.5	19.67
	81	168.3	12.11	192.2	13.66	216.1	15.21	228.2	15.99	264.0	18.31	276.1	19.09	299.5	20.40	302.8	20.46
	86	168.3	12.60	192.2	14.22	216.1	15.84	228.2	16.66	264.0	19.32	276.1	20.58	293.3	21.44	296.6	21.49
	91	168.3	13.16	192.2	14.87	216.1	16.57	228.2	17.42	264.0	21.08	274.4	22.21	287.0	22.47	290.2	22.54
	95	168.3	13.67	192.2	15.44	216.1	17.23	228.2	18.50	264.0	22.58	269.5	23.05	281.8	23.36	284.8	23.43
	99	168.3	14.23	192.2	16.08	216.1	18.43	228.2	19.81	261.1	23.89	264.1	23.98	276.2	24.31	279.2	24.39
	104	168.3	15.04	192.2	17.28	216.1	20.20	228.2	21.76	254.3	25.06	257.3	25.15	269.1	25.52	272.1	25.60
	109	168.3	16.03	192.2	18.95	216.1	22.17	228.2	23.92	247.5	26.24	250.4	26.34	262.0	26.73	264.9	26.83
	115	168.3	17.81	192.2	21.15	216.1	24.81	228.2	26.79	239.2	27.66	242.0	27.78	253.3	28.21	256.1	28.32
237.6 (90%)	50	151.4	9.45	173.0	10.62	194.5	11.79	205.4	12.38	237.6	14.14	248.5	14.72	291.6	17.07	302.4	17.66
	59	151.4	9.72	173.0	10.93	194.5	12.14	205.4	12.75	237.6	14.56	248.5	15.17	291.6	17.59	302.4	18.20
	70	151.4	10.25	173.0	11.53	194.5	12.82	205.4	13.47	237.6	15.39	248.5	16.03	291.6	18.60	300.7	19.09
	73	151.4	10.43	173.0	11.74	194.5	13.06	205.4	13.72	237.6	15.68	248.5	16.34	291.6	18.96	299.3	19.33
	77	151.4	10.71	173.0	12.06	194.5	13.41	205.4	14.09	237.6	16.11	248.5	16.79	291.6	19.49	297.3	19.69
	81	151.4	11.02	173.0	12.42	194.5	13.81	205.4	14.51	237.6	16.60	248.5	17.30	290.6	20.24	293.8	20.30
	86	151.4	11.46	173.0	12.92	194.5	14.38	205.4	15.11	237.6	17.29	248.5	18.03	284.8	21.27	288.0	21.33
	91	151.4	11.97	173.0	13.50	194.5	15.03	205.4	15.80	237.6	18.25	248.5	19.38	278.9	22.31	282.0	22.37
	95	151.4	12.43	173.0	14.02	194.5	15.62	205.4	16.42	237.6	19.53	248.5	20.75	274.0	23.16	277.0	23.24
	99	151.4	12.93	173.0	14.60	194.5	16.26	205.4	17.25	237.6	20.95	248.5	22.33	268.7	24.10	271.6	24.19
	104	151.4	13.66	173.0	15.42	194.5	17.56	205.4	18.86	237.6	23.04	248.5	24.57	261.9	25.30	264.8	25.39
	109	151.4	14.55	173.0	16.56	194.5	19.25	205.4	20.69	237.6	25.33	243.9	26.11	255.1	26.50	258.0	26.60
	115	151.4	15.78	173.0	18.45	194.5	21.49	205.4	23.12	233.1	27.42	235.9	27.53	246.8	27.96	249.6	28.07
211.2 (80%)	50	134.6	8.54	153.8	9.58	172.9	10.62	182.6	11.14	211.2	12.70	220.9	13.22	259.2	15.31	268.8	15.83
	59	134.6	8.78	153.8	9.85	172.9	10.92	182.6	11.47	211.2	13.07	220.9	13.62	259.2	15.77	268.8	16.31
	70	134.6	9.24	153.8	10.39	172.9	11.53	182.6	12.10	211.2	13.81	220.9	14.39	259.2	16.67	268.8	17.25
	73	134.6	9.41	153.8	10.58	172.9	11.74	182.6	12.33	211.2	14.07	220.9	14.66	259.2	16.99	268.8	17.58
	77	134.6	9.65	153.8	10.86	172.9	12.06	182.6	12.66	211.2	14.45	220.9	15.06	259.2	17.46	268.8	18.07
	81	134.6	9.93	153.8	11.17	172.9	12.41	182.6	13.04	211.2	14.89	220.9	15.52	259.2	17.99	268.8	18.62
	86	134.6	10.33	153.8	11.62	172.9	12.92	182.6	13.57	211.2	15.51	220.9	16.16	259.2	18.84	268.8	19.82
	91	134.6	10.78	153.8	12.14	172.9	13.50	182.6	14.18	211.2	16.22	220.9	16.90	259.2	20.54	268.8	21.62
	95	134.6	11.18	153.8	12.60	172.9	14.02	182.6	14.73	211.2	16.85	220.9	17.73	259.2	22.00	267.7	23.00
	99	134.6	11.63	153.8	13.11	172.9	14.59	182.6	15.34	211.2	17.88	220.9	18.96	259.2	23.74	262.7	23.94
	104	134.6	12.27	153.8	13.85	172.9	15.42	182.6	16.21	211.2	19.58	220.9	20.80	253.5	25.03	256.3	25.12
	109	134.6	13.07	153.8	14.75	172.9	16.55	182.6	17.73	211.2	21.48	220.9	22.85	247.1	26.22	249.8	26.32
	115	134.6	14.16	153.8	16.01	172.9	18.44	182.6	19.77	211.2	24.03	220.9	25.58	239.2	27.67	241.9	27.77
184.8 (70%)	50	117.8	7.62	134.5	8.53	151.3	9.44	159.8	9.90	184.8	11.26	193.3	11.73	226.8	13.55	235.2	14.01
	59	117.8	7.83	134.5	8.77	151.3	9.71	159.8	10.19	184.8	11.59	193.3	12.07	226.8	13.95	235.2	14.42
	70	117.8	8.24	134.5	9.24	151.3	10.24	159.8	10.74	184.8	12.24	193.3	12.74	226.8	14.74	235.2	15.24
	73	117.8	8.39	134.5	9.41	151.3	10.42	159.8	10.94	184.8	12.47	193.3	12.98	226.8	15.02	235.2	15.53
	77	117.8	8.60	134.5	9.65	151.3	10.70	159.8	11.23	184.8	12.80	193.3	13.33	226.8	15.43	235.2	15.96
	81	117.8	8.84	134.5	9.93	151.3	11.01	159.8	11.56	184.8	13.18	193.3	13.73	226.8	15.90	235.2	16.45
	86	117.8	9.19	134.5	10.32	151.3	11.46	159.8	12.03	184.8	13.72	193.3	14.29	226.8	16.56	235.2	17.14
	91	117.8	9.58	134.5	10.77	151.3	11.96	159.8	12.56	184.8	14.34	193.3	14.94	226.8	17.32	235.2	18.00
	95	117.8	9.94	134.5	11.18	151.3	12.42	159.8	13.04	184.8	14.90	193.3	15.52	226.8	18.35	235.2	19.27
	99	117.8	10.33	134.5	11.62	151.3	12.92	159.8	13.57	184.8	15.51	193.3	16.17	226.8	19.64	235.2	20.66
	104	117.8	10.89	134.5	12.27	151.3	13.65	159.8	14.34	184.8	16.44	193.3	17.41	226.8	21.58	235.2	22.71
	109	117.8	11.59	134.5	13.06	151.3	14.54	159.8	15.28	184.8	18.01	193.3	19.08	226.8	23.71	235.2	24.97
	115	117.8	12.54	134.5	14.16	151.3	15.77	159.8	16.71	184.8	20.09	193.3	21.31	226.8	26.55	232.7	27.40
158.4 (60%)	50	101.0	6.71	115.3	7.49	129.7	8.27	136.9	8.66	158.4	9.83	165.7	10.22	194.4	11.79	201.6	12.18
	59	101.0	6.89	115.3	7.69	129.7	8.50	136.9	8.91	158.4	10.11	165.7	10.52	194.4	12.13	201.6	12.54
	70	101.0	7.24	115.3	8.10	129.7	8.95	136.9	9.38	158.4	10.66	165.7	11.10	194.4	12.81	201.6	13.24
	73	101.0	7.36	115.3	8.24	129.7	9.11	136.9	9.55	158.4	10.86	165.7	11.30	194.4	13.05	201.6	13.49
	77	101.0	7.55	115.3	8.45	129.7	9.35	136.9	9.80	158.4	11.15	165.7	11.60	194.4	13.40	201.6	13.86
	81	101.0	7.75	115.3	8.68	129.7	9.61	136.9	10.08	158.4	11.47	165.7	11.94	194.4	13.80	201.6	14.27
	86	101.0	8.05	115.3	9.02	129.7	9.99	136.9	10.48	158.4	11.94	165.7	12.43	194.4	14.37	201.6	14.86
	91	101.0	8.39	115.3	9.41	129.7	10.43	136.9	10.94	158.4	12.47	165.7	12.98	194.4	15.02	201.6	15.54
	95	101.0	8.69	115.3	9.75	129.7	10.82	136.9	11.35	158.4	12.94	165.7	13.48	194.4	15.61	201.6	16.14
	99	101.0	9.03	115.3	10.14	129.7	11.25	136.9	11.81	158.4	13.47	165.7	14.03	194.4	16.25	201.6	16.86
	104	101.0	9.51	115.3	10.69	129.7	11.87	136.9	12.46	158.4	14.23	165.7	14.83	194.4	17.54	201.6	18.40
	109	101.0	10.11	115.3	11.37	129.7	12.63	136.9	13.27	158.4	15.16	165.7	15.80	194.4	19.23	201.6	20.19
	115	101.0	10.93	115.3	12.31	129.7	13.69	136.9	14.39	158.4	16.54	165.7	17.47	194.4	21.47	201.6	22.55
132.0 (50%)	50	84.1	5.79	96.1	6.44	108.1	7.09	114.1	7.42	132.0	8.40	138.0	8.72	162.0	10.03	168.0	10.35
	59	84.1	5.94	96.1	6.61	108.1	7.29	114.1	7.62	132.0	8.63	138.0	8.97	162.0	10.31	168.0	10.65
	70	84.1	6.24	96.1	6.95	108.1	7.66	114.1	8.02	132.0	9.09	138.0	9.45	162.0	10.88	168.0	11.24
	73	84.1	6.34	96.1	7.07	108.1	7.80	114.1	8.16	132.0	9.25	138.0	9.62	162.0	11.08	168.0	11.44
	77	84.1	6.49	96.1	7.24	108.1	7.99	114.1	8.37	132.0	9.49	138.0	9.87	162.0	11.37	168.0	11.75
	81	84.1	6.66	96.1	7.44	108.1	8.22	114.1	8.61	132.0	9.76	138.0	10.16	162.0	11.70	168.0	12.10
	86	84.1	6.91	96.1	7.72	108.1	8.53	114.1	8.94	132.0	10.15	138.0	10.56	162.0	12.18	168.0	12.59
	91	84.1	7.19	96.1	8.04	108.1	8.89	114.1	9.32	132.0	10.59	138.0	11.02	162.0	12.72	168.0	13.15
	95	84.1	7.45	96.1	8.33	108.1	9.22	114.1	9.66	132.0	10.99	138.0	11.44	162.0	13.21	168.0	13.66
	99	84.1	7.73	96.1	8.65	108.1	9.58	114.1	10.05	132.0	11.43	138.0	11.90	162.0	13.75	168.0	14.21
	104	84.1	8.13	96.1	9.11	108.1	10.10	114.1	10.59	132.0	12.06	138.0	12.56	162.0	14.52	168.0	15.02
	109	84.1	8.63	96.1	9.68	108.1	10.73	114.1	11.26	132.0	12.84	138.0	13.37	162.0	15.48	168.0	16.01
	115	84.1	9.31	96.1	10.46	108.1	11.61	114.1	12.19	132.0	13.91	138.0	14.49	162.0	17.00	168.0	17.79

TC : Total Capacity kBtu/h.

IP : Input Power kW (Compressor + Outdoor fan motor).

The data is based on the following conditions. Pipe length : 25ft. (7.5m) , Height difference : 0ft. (0m)

COOLING CAPACITY in kBtu/h

■ MODEL : AOUA288RLBVG1

Total rated capacity of indoor unit	Outdoor temp.	Indoor temperature (°FDB / °FWB)															
		68 / 59		73 / 61		75 / 63		79 / 64		80 / 67		82 / 68		86 / 72		90 / 73	
	(°FDB)	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
432.0 (150%)	50	275.3	16.71	314.5	18.89	340.9	20.13	345.6	20.12	359.7	20.05	364.5	20.02	383.5	19.89	388.4	19.85
	59	275.3	17.21	314.5	19.47	338.3	20.55	343.0	20.54	356.9	20.47	361.7	20.45	380.6	20.32	385.4	20.29
	70	275.3	18.20	314.5	20.59	333.2	21.35	337.9	21.34	351.6	21.29	356.3	21.26	374.9	21.15	379.7	21.12
	73	275.3	18.55	314.5	20.99	331.5	21.62	336.1	21.61	349.8	21.57	354.4	21.54	372.8	21.47	376.9	21.52
	77	275.3	19.06	314.5	21.58	329.0	22.03	333.5	22.02	346.1	22.12	350.2	22.18	366.3	22.40	370.4	22.46
	81	275.3	19.64	314.5	22.42	324.1	22.78	328.1	22.85	340.0	23.05	344.0	23.11	359.8	23.34	363.8	23.40
	86	275.3	20.47	309.1	23.77	316.8	23.92	320.7	24.00	332.2	24.21	336.1	24.27	351.6	24.52	355.5	24.58
	91	275.3	22.16	301.8	24.91	309.3	25.07	313.1	25.15	324.4	25.37	328.2	25.44	343.2	25.71	347.0	25.79
	95	275.3	23.73	295.8	25.84	303.1	26.03	306.8	26.13	317.8	26.39	321.5	26.48	336.2	26.82	339.9	26.90
	99	275.3	25.56	289.4	26.87	296.6	27.08	300.2	27.18	311.0	27.47	314.6	27.57	329.1	27.93	332.7	28.02
	104	274.3	27.94	281.3	28.17	288.3	28.39	291.8	28.50	302.4	28.83	305.9	28.93	320.1	29.34	323.7	29.44
	109	266.2	29.23	273.0	29.48	279.9	29.72	283.4	29.84	293.7	30.19	297.2	30.31	311.0	30.75	314.5	30.86
	115	256.4	30.79	263.1	31.06	269.7	31.33	273.1	31.46	283.1	31.84	286.5	31.97	300.1	32.46	303.5	32.59
403.2 (140%)	50	257.0	15.69	293.6	17.73	330.1	19.77	339.9	20.14	353.6	20.08	358.3	20.05	377.0	19.94	381.7	19.90
	59	257.0	16.15	293.6	18.26	330.1	20.37	337.3	20.56	350.9	20.50	355.6	20.48	374.1	20.37	378.8	20.34
	70	257.0	17.07	293.6	19.31	327.8	21.36	332.3	21.35	345.8	21.31	350.4	21.29	368.6	21.20	373.3	21.17
	73	257.0	17.40	293.6	19.68	326.1	21.63	330.6	21.63	344.0	21.59	348.6	21.57	366.7	21.48	371.3	21.45
	77	257.0	17.88	293.6	20.23	323.7	22.03	328.1	22.03	341.1	22.05	345.1	22.11	361.0	22.34	365.0	22.39
	81	257.0	18.42	293.6	20.85	319.5	22.70	323.5	22.77	335.1	22.97	339.1	23.03	354.7	23.27	358.6	23.33
	86	257.0	19.19	293.6	22.20	312.4	23.84	316.2	23.91	327.6	24.13	331.5	24.19	346.7	24.45	350.6	24.51
	91	257.0	20.17	293.6	24.23	305.1	24.98	308.9	25.06	320.0	25.29	323.7	25.36	338.6	25.63	342.3	25.69
	95	257.0	21.60	292.0	25.74	299.2	25.93	302.8	26.02	313.6	26.29	317.2	26.38	331.7	26.72	335.4	26.80
	99	257.0	23.17	285.7	26.76	292.7	26.97	296.3	27.07	306.9	27.36	310.5	27.46	324.8	27.83	328.4	27.91
	104	257.0	25.47	277.7	28.05	284.6	28.28	288.1	28.39	298.5	28.71	302.0	28.82	316.0	29.22	319.5	29.32
	109	257.0	28.01	269.7	29.36	276.4	29.60	279.9	29.72	290.0	30.07	293.5	30.18	307.1	30.63	310.6	30.74
	115	253.4	30.66	259.9	30.93	266.5	31.20	269.8	31.33	279.7	31.71	283.1	31.84	296.4	32.33	299.8	32.45
374.4 (130%)	50	238.6	14.66	272.6	16.56	306.5	18.45	323.7	19.41	346.9	20.11	351.4	20.09	369.7	19.99	374.3	19.96
	59	238.6	15.10	272.6	17.05	306.5	19.01	323.7	20.00	344.3	20.53	348.8	20.51	366.9	20.42	371.5	20.39
	70	238.6	15.95	272.6	18.03	306.5	20.11	323.7	21.16	339.3	21.33	343.8	21.32	361.7	21.24	366.2	21.21
	73	238.6	16.25	272.6	18.37	306.5	20.49	323.7	21.56	337.6	21.61	342.1	21.59	359.8	21.52	364.3	21.49
	77	238.6	16.70	272.6	18.88	306.5	21.07	322.1	22.04	335.1	22.01	339.4	22.02	355.1	22.25	359.0	22.31
	81	238.6	17.20	272.6	19.46	306.5	21.72	318.2	22.67	329.7	22.88	333.6	22.94	349.0	23.19	352.8	23.24
	86	238.6	17.92	272.6	20.28	306.5	23.61	311.2	23.81	322.4	24.03	326.2	24.10	341.2	24.36	345.0	24.42
	91	238.6	18.74	272.6	21.85	300.4	24.88	304.1	24.96	315.1	25.19	318.8	25.26	333.4	25.54	337.1	25.60
	95	238.6	19.58	272.6	23.40	294.7	25.81	298.3	25.91	308.9	26.18	312.5	26.27	326.7	26.61	330.3	26.69
	99	238.6	20.94	272.6	25.19	288.4	26.84	292.0	26.95	302.4	27.24	305.9	27.34	320.0	27.70	323.5	27.79
	104	238.6	22.97	272.6	27.72	280.5	28.15	284.0	28.26	294.2	28.58	297.7	28.68	311.4	29.09	314.9	29.19
	109	238.6	25.23	265.9	29.22	272.6	29.46	275.9	29.58	285.9	29.93	289.3	30.05	302.8	30.49	306.2	30.60
	115	238.6	28.25	256.4	30.79	262.9	31.05	266.1	31.18	275.9	31.57	279.2	31.69	292.3	32.18	295.6	32.30
345.6 (120%)	50	220.3	13.64	251.6	15.39	283.0	17.14	298.8	18.02	339.4	20.14	343.8	20.12	361.6	20.04	366.1	20.01
	59	220.3	14.04	251.6	15.85	283.0	17.65	298.8	18.56	336.9	20.56	341.3	20.54	358.9	20.46	363.4	20.44
	70	220.3	14.83	251.6	16.75	283.0	18.66	298.8	19.63	332.2	21.35	336.5	21.34	353.9	21.28	358.3	21.25
	73	220.3	15.10	251.6	17.06	283.0	19.02	298.8	20.01	330.5	21.63	334.8	21.62	352.1	21.55	356.5	21.53
	77	220.3	15.52	251.6	17.54	283.0	19.55	298.8	20.57	328.1	22.03	332.4	22.02	348.4	22.16	352.2	22.21
	81	220.3	15.98	251.6	18.06	283.0	20.15	298.8	21.20	323.6	22.77	327.4	22.84	342.5	23.09	346.3	23.15
	86	220.3	16.65	251.6	18.82	283.0	21.09	298.8	22.76	316.6	23.92	320.3	23.99	335.1	24.26	338.8	24.32
	91	220.3	17.40	251.6	19.69	283.0	23.00	298.8	24.84	309.5	25.07	313.1	25.15	327.5	25.43	331.1	25.50
	95	220.3	18.08	251.6	21.00	283.0	24.64	293.2	25.77	303.6	26.04	307.1	26.13	321.1	26.47	324.7	26.56
	99	220.3	18.89	251.6	22.49	282.9	26.59	287.1	26.80	297.3	27.10	300.8	27.19	314.5	27.56	318.0	27.65
	104	220.3	20.63	251.6	24.73	275.9	28.00	279.3	28.11	289.4	28.43	292.7	28.53	306.2	28.94	309.7	29.04
	109	220.3	22.63	251.6	27.18	268.2	29.30	271.5	29.42	281.3	29.77	284.6	29.89	297.8	30.33	301.2	30.44
	115	220.3	25.29	251.6	30.46	258.7	30.88	262.0	31.01	271.5	31.40	274.8	31.52	287.7	32.01	290.9	32.13
316.8 (110%)	50	201.9	12.61	230.7	14.22	259.4	15.82	273.9	16.63	316.8	19.03	331.3	19.83	352.5	20.08	356.8	20.06
	59	201.9	12.98	230.7	14.64	259.4	16.29	273.9	17.13	316.8	19.60	331.3	20.44	350.0	20.51	354.3	20.49
	70	201.9	13.71	230.7	15.46	259.4	17.22	273.9	18.11	316.8	20.74	328.3	21.36	345.2	21.31	349.4	21.30
	73	201.9	13.96	230.7	15.75	259.4	17.55	273.9	18.45	316.8	21.14	326.7	21.63	343.5	21.59	347.8	21.57
	77	201.9	14.34	230.7	16.19	259.4	18.04	273.9	18.97	316.8	21.73	324.4	22.03	340.8	22.04	344.6	22.10
	81	201.9	14.77	230.7	16.67	259.4	18.58	273.9	19.55	316.7	22.64	320.4	22.71	335.2	22.97	338.9	23.03
	86	201.9	15.37	230.7	17.37	259.4	19.36	273.9	20.37	310.0	23.79	313.6	23.86	328.1	24.13	331.7	24.20
	91	201.9	16.06	230.7	18.16	259.4	20.43	273.9	21.99	303.2	24.94	306.7	25.02	320.8	25.30	324.4	25.37
	95	201.9	16.69	230.7	18.87	259.4	21.87	273.9	23.55	297.6	25.89	301.0	25.98	314.7	26.32	318.2	26.40
	99	201.9	17.38	230.7	20.04	259.4	23.46	273.9	25.36	291.5	26.93	294.9	27.03	308.4	27.40	311.8	27.49
	104	201.9	18.43	230.7	21.94	259.4	25.81	273.9	27.91	283.8	28.25	287.1	28.36	300.4	28.77	303.7	28.87
	109	201.9	20.19	230.7	24.08	259.4	28.39	266.4	29.24	276.0	29.59	279.3	29.70	292.2	30.14	295.5	30.25
	115	201.9	22.53	230.7	26.94	254.1	30.69	257.2	30.82	266.6	31.20	269.8	31.33	282.4	31.81	285.6	31.93

Total rated capacity of indoor unit	Outdoor temp.	Indoor temperature (°FDB / °FWB)															
		68 / 59		73 / 61		75 / 63		79 / 64		80 / 67		82 / 68		86 / 72		90 / 73	
	(°FDB)	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
288.0 (100%)	50	183.6	11.59	209.7	13.05	235.8	14.50	249.0	15.24	288.0	17.42	301.2	18.15	342.2	20.13	346.4	20.11
	59	183.6	11.93	209.7	13.43	235.8	14.93	249.0	15.69	288.0	17.94	301.2	18.70	339.9	20.55	344.0	20.53
	70	183.6	12.58	209.7	14.18	235.8	15.78	249.0	16.58	288.0	18.97	301.2	19.78	335.3	21.35	339.4	21.33
	73	183.6	12.81	209.7	14.44	235.8	16.08	249.0	16.90	288.0	19.34	301.2	20.16	333.7	21.62	337.8	21.61
	77	183.6	13.16	209.7	14.84	235.8	16.52	249.0	17.37	288.0	19.88	301.2	20.73	331.4	22.02	335.5	22.01
	81	183.6	13.54	209.7	15.28	235.8	17.01	249.0	17.89	288.0	20.48	301.2	21.36	326.8	22.83	330.4	22.89
	86	183.6	14.10	209.7	15.91	235.8	17.72	249.0	18.64	288.0	21.62	301.2	23.03	320.0	23.99	323.6	24.05
	91	183.6	14.73	209.7	16.63	235.8	18.53	249.0	19.49	288.0	23.58	299.4	24.85	313.2	25.15	316.6	25.22
	95	183.6	15.29	209.7	17.28	235.8	19.28	249.0	20.70	288.0	25.27	294.0	25.79	307.4	26.14	310.8	26.22
	99	183.6	15.92	209.7	17.99	235.8	20.62	249.0	22.17	284.8	26.74	288.2	26.84	301.3	27.21	304.6	27.30
	104	183.6	16.82	209.7	19.34	235.8	22.60	249.0	24.36	277.5	28.05	280.7	28.15	293.6	28.56	296.9	28.66
	109	183.6	17.93	209.7	21.21	235.8	24.82	249.0	26.77	270.0	29.37	273.2	29.48	285.8	29.93	289.0	30.03
	115	183.6	19.94	209.7	23.67	235.8	27.78	249.0	30.00	260.9	30.97	264.0	31.10	276.3	31.58	279.4	31.70
259.2 (90%)	50	165.2	10.56	188.7	11.88	212.2	13.19	224.1	13.85	259.2	15.81	271.1	16.47	318.1	19.10	330.0	19.76
	59	165.2	10.87	188.7	12.22	212.2	13.58	224.1	14.26	259.2	16.28	271.1	16.97	318.1	19.68	330.0	20.36
	70	165.2	11.46	188.7	12.90	212.2	14.34	224.1	15.06	259.2	17.21	271.1	17.94	318.1	20.82	328.0	21.36
	73	165.2	11.67	188.7	13.13	212.2	14.60	224.1	15.35	259.2	17.54	271.1	18.28	318.1	21.22	326.6	21.63
	77	165.2	11.98	188.7	13.49	212.2	15.00	224.1	15.76	259.2	18.03	271.1	18.79	318.1	21.81	324.4	22.03
	81	165.2	12.32	188.7	13.89	212.2	15.45	224.1	16.24	259.2	18.57	271.1	19.36	317.1	22.65	320.6	22.72
	86	165.2	12.82	188.7	14.45	212.2	16.09	224.1	16.91	259.2	19.35	271.1	20.18	310.7	23.80	314.2	23.87
	91	165.2	13.39	188.7	15.10	212.2	16.82	224.1	17.68	259.2	20.41	271.1	21.69	304.3	24.96	307.6	25.03
	95	165.2	13.90	188.7	15.68	212.2	17.47	224.1	18.37	259.2	21.85	271.1	23.22	298.9	25.92	302.2	26.01
	99	165.2	14.46	188.7	16.33	212.2	18.20	224.1	19.31	259.2	23.45	271.1	24.99	293.1	26.98	296.3	27.07
	104	165.2	15.28	188.7	17.25	212.2	19.65	224.1	21.11	259.2	25.79	271.1	27.50	285.8	28.31	288.9	28.41
	109	165.2	16.28	188.7	18.53	212.2	21.54	224.1	23.16	259.2	28.36	266.0	29.23	278.3	29.67	281.4	29.77
	115	165.2	17.66	188.7	20.65	212.2	24.06	224.1	25.89	254.3	30.70	257.3	30.82	269.2	31.31	272.3	31.42
230.4 (80%)	50	146.8	9.54	167.7	10.71	188.6	11.87	199.2	12.46	230.4	14.20	241.0	14.79	282.8	17.12	293.3	17.71
	59	146.8	9.81	167.7	11.01	188.6	12.22	199.2	12.83	230.4	14.63	241.0	15.23	282.8	17.64	293.3	18.25
	70	146.8	10.34	167.7	11.62	188.6	12.89	199.2	13.54	230.4	15.45	241.0	16.10	282.8	18.65	293.3	19.30
	73	146.8	10.52	167.7	11.83	188.6	13.13	199.2	13.79	230.4	15.74	241.0	16.40	282.8	19.01	293.3	19.67
	77	146.8	10.80	167.7	12.14	188.6	13.49	199.2	14.16	230.4	16.17	241.0	16.85	282.8	19.54	293.3	20.22
	81	146.8	11.11	167.7	12.49	188.6	13.88	199.2	14.58	230.4	16.66	241.0	17.36	282.8	20.14	293.3	20.84
	86	146.8	11.55	167.7	13.00	188.6	14.45	199.2	15.18	230.4	17.35	241.0	18.08	282.8	21.07	293.3	22.18
	91	146.8	12.05	167.7	13.57	188.6	15.10	199.2	15.87	230.4	18.14	241.0	18.91	282.8	22.98	293.3	24.20
	95	146.8	12.50	167.7	14.09	188.6	15.68	199.2	16.48	230.4	18.86	241.0	19.83	282.8	24.62	292.1	25.74
	99	146.8	13.01	167.7	14.67	188.6	16.32	199.2	17.16	230.4	20.01	241.0	21.21	282.8	26.57	286.6	26.79
	104	146.8	13.73	167.7	15.49	188.6	17.25	199.2	18.14	230.4	21.91	241.0	23.28	276.6	28.02	279.6	28.12
	109	146.8	14.62	167.7	16.51	188.6	18.52	199.2	19.84	230.4	24.05	241.0	25.58	269.5	29.35	272.5	29.46
	115	146.8	15.84	167.7	17.91	188.6	20.64	199.2	22.13	230.4	26.90	241.0	28.64	260.9	30.97	263.9	31.09
201.6 (70%)	50	128.5	8.52	146.8	9.54	165.1	10.56	174.3	11.07	201.6	12.60	210.9	13.11	247.4	15.15	256.6	15.67
	59	128.5	8.75	146.8	9.81	165.1	10.86	174.3	11.39	201.6	12.97	210.9	13.50	247.4	15.61	256.6	16.14
	70	128.5	9.21	146.8	10.33	165.1	11.45	174.3	12.01	201.6	13.69	210.9	14.25	247.4	16.49	256.6	17.05
	73	128.5	9.37	146.8	10.52	165.1	11.66	174.3	12.23	201.6	13.94	210.9	14.52	247.4	16.80	256.6	17.38
	77	128.5	9.62	146.8	10.79	165.1	11.97	174.3	12.56	201.6	14.32	210.9	14.91	247.4	17.27	256.6	17.86
	81	128.5	9.89	146.8	11.10	165.1	12.32	174.3	12.93	201.6	14.74	210.9	15.36	247.4	17.79	256.6	18.40
	86	128.5	10.27	146.8	11.54	165.1	12.81	174.3	13.45	201.6	15.35	210.9	15.99	247.4	18.53	256.6	19.17
	91	128.5	10.71	146.8	12.05	165.1	13.38	174.3	14.05	201.6	16.05	210.9	16.72	247.4	19.38	256.6	20.14
	95	128.5	11.11	146.8	12.50	165.1	13.89	174.3	14.59	201.6	16.67	210.9	17.37	247.4	20.53	256.6	21.56
	99	128.5	11.55	146.8	13.00	165.1	14.45	174.3	15.19	201.6	17.36	210.9	18.09	247.4	21.97	256.6	23.12
	104	128.5	12.18	146.8	13.72	165.1	15.26	174.3	16.04	201.6	18.39	210.9	19.48	247.4	24.15	256.6	25.42
	109	128.5	12.96	146.8	14.61	165.1	16.26	174.3	17.10	201.6	20.16	210.9	21.36	247.4	26.54	256.6	27.95
	115	128.5	14.03	146.8	15.84	165.1	17.64	174.3	18.70	201.6	22.49	210.9	23.85	247.4	29.73	253.8	30.68
172.8 (60%)	50	110.1	7.50	125.8	8.37	141.5	9.24	149.4	9.68	172.8	10.99	180.7	11.43	212.1	13.18	220.0	13.62
	59	110.1	7.69	125.8	8.60	141.5	9.50	149.4	9.96	172.8	11.31	180.7	11.76	212.1	13.57	220.0	14.02
	70	110.1	8.09	125.8	9.05	141.5	10.01	149.4	10.49	172.8	11.93	180.7	12.41	212.1	14.33	220.0	14.81
	73	110.1	8.23	125.8	9.21	141.5	10.19	149.4	10.68	172.8	12.14	180.7	12.64	212.1	14.59	220.0	15.09
	77	110.1	8.44	125.8	9.44	141.5	10.45	149.4	10.96	172.8	12.47	180.7	12.98	212.1	14.99	220.0	15.50
	81	110.1	8.67	125.8	9.71	141.5	10.75	149.4	11.27	172.8	12.83	180.7	13.36	212.1	15.44	220.0	15.97
	86	110.1	9.00	125.8	10.09	141.5	11.18	149.4	11.72	172.8	13.35	180.7	13.90	212.1	16.08	220.0	16.62
	91	110.1	9.38	125.8	10.52	141.5	11.66	149.4	12.24	172.8	13.95	180.7	14.52	212.1	16.81	220.0	17.38
	95	110.1	9.72	125.8	10.91	141.5	12.10	149.4	12.70	172.8	14.48	180.7	15.08	212.1	17.46	220.0	18.06
	99	110.1	10.09	125.8	11.34	141.5	12.58	149.4	13.21	172.8	15.07	180.7	15.70	212.1	18.18	220.0	18.86
	104	110.1	10.63	125.8	11.95	141.5	13.28	149.4	13.94	172.8	15.92	180.7	16.59	212.1	19.63	220.0	20.59
	109	110.1	11.30	125.8	12.72	141.5	14.13	149.4	14.85	172.8	16.96	180.7	17.68	212.1	21.53	220.0	22.59
	115	110.1	12.22	125.8	13.77	141.5	15.32	149.4	16.09	172.8	18.50	180.7	19.55	212.1	24.04	220.0	25.25
144.0 (50%)	50	91.8	6.47	104.8	7.20	117.9	7.93	124.5	8.30	144.0	9.39	150.6	9.75	176.7	11.21	183.3	11.58
	59	91.8	6.64	104.8	7.39	117.9	8.14	124.5	8.52	144.0	9.65	150.6	10.03	176.7	11.53	183.3	11.91
	70	91.8	6.97	104.8	7.77	117.9	8.57	124.5	8.97	144.0	10.16	150.6	10.57	176.7	12.16	183.3	12.57
	73	91.8	7.08	104.8	7.90	117.9	8.71	124.5	9.12	144.0	10.34	150.6	10.76	176.7	12.39	183.3	12.80
	77	91.8	7.25	104.8	8.09	117.9	8.93	124.5	9.36	144.0	10.61	150.6	11.04	176.7	12.72	183.3	13.14
	81	91.8	7.45	104.8	8.32	117.9	9.18	124.5	9.62	144.0	10.92	150.6	11.36	176.7	13.09	183.3	13.53
	86	91.8	7.72	104.8	8.63	117.9	9.54	124.5	10.00	144.0	11.35	150.6	11.81	176.7	13.62	183.3	14.08
	91	91.8	8.04	104.8	8.99	117.9	9.94	124.5	10.42	144.0	11.85	150.6	12.33	176.7	14.23	183.3	14.71
	95	91.8	8.32	104.8	9.31	117.9	10.31	124.5	10.81	144.0	12.29	150.6	12.79	176.7	14.78	183.3	15.28
	99	91.8	8.64	104.8	9.67	117.9	10.71	124.5	11.23	144.0	12.78	150.6	13.31	176.7	15.38	183.3	15.90
	104	91.8	9.09	104.8	10.19	117.9	11.29	124.5	11.84	144.0	13.49	150.6	14.05	176.7	16.25	183.3	16.80
	109	91.8	9.64	104.8	10.82	117.9	12.00	124.5	12.60	144.0	14.36	150.6	14.96	176.7	17.32	183.3	17.91
	115	91.8	10.41	104.8	11.70	117.9	12.99	124.5	13.64	144.0	15.57	150.6	16.21	176.7	19.02	183.3	19.91

TC : Total Capacity kBtu/h.

IP : Input Power kW (Compressor + Outdoor fan motor).

The data is based on the following conditions. Pipe length : 25ft. (7.5m) , Height difference : 0ft. (0m)

5. CAPACITY TABLE HEATING (OUTDOOR UNIT)

HEATING CAPACITY in kBtu/h

■ MODEL : AOUA72RLBV1

Total rated capacity of indoor unit	Outdoor temp. °FDB	Outdoor temp. °FWB	61 TC	61 IP	64 TC	64 IP	68 TC	68 IP	70 TC	70 IP	72 TC	72 IP	75 TC	75 IP	79 TC	79 IP
121.5 (150%)	-2.7	**-4.0**	54.4	5.07	54.2	5.11	53.9	5.17	53.7	5.20	53.6	5.22	53.4	5.27	53.1	5.32
	5.0	**3.2**	60.9	5.23	60.7	5.28	60.3	5.34	60.2	5.37	60.0	5.41	59.8	5.46	59.4	5.52
	10.4	**8.6**	65.9	5.34	65.7	5.39	65.3	5.47	65.1	5.50	65.0	5.54	64.7	5.59	64.3	5.66
	15.8	**14.0**	71.0	5.45	70.8	5.51	70.4	5.59	70.2	5.63	70.0	5.67	69.7	5.73	69.3	5.80
	17.0	**15.0**	72.0	5.47	71.7	5.53	71.3	5.61	71.1	5.65	70.9	5.69	70.6	5.75	70.2	5.83
	23.0	**21.2**	78.0	5.59	77.7	5.66	77.2	5.74	77.0	5.79	76.8	5.83	76.4	5.90	76.0	5.98
	26.6	**24.8**	81.5	5.66	81.2	5.73	80.7	5.82	80.5	5.87	80.2	5.91	79.9	5.98	79.4	6.07
	30.2	**28.4**	85.1	5.73	84.7	5.80	84.2	5.89	83.9	5.94	83.7	5.99	83.3	6.06	82.8	6.15
	32.0	**30.2**	86.9	5.76	86.5	5.84	85.9	5.93	85.7	5.98	85.4	6.03	85.0	6.10	84.5	6.20
	35.6	**33.8**	90.4	5.83	90.0	5.90	89.5	6.00	89.2	6.05	88.9	6.10	88.5	6.18	87.9	6.28
	41.0	**39.2**	95.9	5.92	95.4	6.00	94.8	6.11	94.4	6.16	94.1	6.21	93.6	6.29	93.0	6.39
	47.0	**43.0**	99.7	5.99	99.2	6.07	98.5	6.18	98.2	6.23	97.8	6.28	97.3	6.36	96.6	6.47
	48.2	**46.0**	102.7	6.04	102.2	6.12	101.5	6.23	101.1	6.28	100.7	6.34	100.2	6.42	98.9	6.48
	53.6	**51.1**	107.9	6.12	107.3	6.20	106.5	6.31	106.1	6.37	105.7	6.43	105.1	6.51	98.9	6.16
	59.0	**56.3**	113.1	6.20	112.5	6.28	111.6	6.40	111.2	6.46	110.7	6.51	108.9	6.50	98.9	5.85
113.4 (140%)	-2.7	**-4.0**	54.3	5.09	54.1	5.13	53.8	5.19	53.6	5.22	53.5	5.25	53.2	5.29	52.9	5.34
	5.0	**3.2**	60.8	5.25	60.5	5.30	60.2	5.37	60.0	5.40	59.9	5.43	59.6	5.48	59.3	5.55
	10.4	**8.6**	65.8	5.37	65.5	5.43	65.1	5.50	65.0	5.53	64.8	5.57	64.5	5.63	64.2	5.70
	15.8	**14.0**	70.8	5.49	70.6	5.55	70.2	5.63	70.0	5.67	69.8	5.71	69.5	5.76	69.1	5.84
	17.0	**15.0**	71.8	5.51	71.5	5.57	71.1	5.65	70.9	5.69	70.7	5.73	70.4	5.79	70.0	5.87
	23.0	**21.2**	77.8	5.64	77.4	5.71	77.0	5.79	76.8	5.83	76.5	5.88	76.2	5.94	75.7	6.03
	26.6	**24.8**	81.2	5.71	80.9	5.78	80.4	5.87	80.2	5.92	79.9	5.96	79.6	6.03	79.1	6.12
	30.2	**28.4**	84.8	5.79	84.4	5.86	83.9	5.95	83.6	6.00	83.4	6.04	83.0	6.12	82.5	6.21
	32.0	**30.2**	86.5	5.82	86.1	5.89	85.6	5.99	85.4	6.04	85.1	6.08	84.7	6.16	84.1	6.25
	35.6	**33.8**	90.1	5.89	89.7	5.97	89.1	6.07	88.8	6.11	88.5	6.16	88.1	6.24	87.5	6.34
	41.0	**39.2**	95.4	5.99	95.0	6.07	94.3	6.18	94.0	6.23	93.7	6.28	93.2	6.36	92.3	6.44
	47.0	**43.0**	99.2	6.06	98.7	6.14	98.0	6.25	97.7	6.30	97.3	6.36	96.8	6.44	92.3	6.20
	48.2	**46.0**	102.2	6.12	101.7	6.20	100.9	6.31	100.6	6.36	100.2	6.42	99.7	6.50	92.3	6.01
	53.6	**51.1**	107.3	6.20	106.7	6.29	105.9	6.40	105.5	6.46	105.1	6.51	101.7	6.35	92.3	5.72
	59.0	**56.3**	112.4	6.29	111.8	6.37	110.9	6.49	110.5	6.55	108.7	6.49	101.7	6.03	92.3	5.43
105.3 (130%)	-2.7	**-4.0**	54.2	5.12	53.9	5.16	53.6	5.21	53.5	5.24	53.3	5.27	53.1	5.31	52.8	5.37
	5.0	**3.2**	60.6	5.29	60.4	5.34	60.0	5.40	59.9	5.43	59.7	5.47	59.5	5.52	59.1	5.58
	10.4	**8.6**	65.6	5.41	65.3	5.47	65.0	5.54	64.8	5.57	64.6	5.61	64.3	5.66	64.0	5.74
	15.8	**14.0**	70.6	5.53	70.3	5.59	69.9	5.67	69.8	5.71	69.6	5.75	69.3	5.81	68.9	5.89
	17.0	**15.0**	71.6	5.56	71.3	5.62	70.9	5.70	70.7	5.74	70.5	5.78	70.2	5.84	69.8	5.92
	23.0	**21.2**	77.5	5.70	77.1	5.76	76.7	5.85	76.5	5.89	76.3	5.93	75.9	6.00	75.5	6.09
	26.6	**24.8**	80.9	5.77	80.6	5.84	80.1	5.93	79.9	5.98	79.6	6.02	79.3	6.09	78.8	6.18
	30.2	**28.4**	84.4	5.85	84.0	5.92	83.5	6.01	83.3	6.06	83.0	6.11	82.6	6.18	82.1	6.27
	32.0	**30.2**	86.2	5.89	85.8	5.96	85.2	6.06	85.0	6.10	84.7	6.15	84.3	6.22	83.8	6.32
	35.6	**33.8**	89.7	5.97	89.2	6.04	88.7	6.14	88.4	6.19	88.1	6.24	87.7	6.31	85.7	6.28
	41.0	**39.2**	94.9	6.07	94.5	6.15	93.8	6.25	93.5	6.31	93.2	6.36	92.7	6.44	85.7	5.94
	47.0	**43.0**	98.7	6.15	98.2	6.23	97.5	6.33	97.1	6.39	96.8	6.44	94.4	6.35	85.7	5.72
	48.2	**46.0**	101.6	6.21	101.1	6.29	100.4	6.40	100.0	6.45	99.6	6.50	94.4	6.16	85.7	5.55
	53.6	**51.1**	106.6	6.30	106.0	6.39	105.2	6.50	104.8	6.55	101.0	6.30	94.4	5.86	85.7	5.28
	59.0	**56.3**	111.6	6.39	111.0	6.48	109.6	6.55	105.3	6.26	101.0	5.98	94.4	5.56	85.7	5.02
97.2 (120%)	-2.7	**-4.0**	54.0	5.15	53.8	5.19	53.5	5.24	53.3	5.27	53.2	5.30	53.0	5.34	52.6	5.40
	5.0	**3.2**	60.4	5.32	60.2	5.37	59.9	5.44	59.7	5.47	59.5	5.50	59.3	5.55	58.9	5.62
	10.4	**8.6**	65.4	5.46	65.1	5.51	64.7	5.58	64.6	5.62	64.4	5.65	64.1	5.71	63.8	5.78
	15.8	**14.0**	70.4	5.59	70.1	5.65	69.7	5.72	69.5	5.76	69.3	5.80	69.0	5.86	68.6	5.94
	17.0	**15.0**	71.3	5.61	71.0	5.67	70.6	5.75	70.4	5.79	70.2	5.83	69.9	5.89	69.5	5.97
	23.0	**21.2**	77.1	5.76	76.8	5.82	76.4	5.91	76.2	5.95	75.9	6.00	75.6	6.06	75.1	6.15
	26.6	**24.8**	80.6	5.84	80.2	5.91	79.7	6.00	79.5	6.05	79.3	6.09	78.9	6.16	78.4	6.25
	30.2	**28.4**	84.0	5.93	83.6	6.00	83.1	6.09	82.9	6.14	82.6	6.18	82.2	6.25	79.1	6.09
	32.0	**30.2**	85.7	5.97	85.3	6.04	84.8	6.13	84.5	6.18	84.3	6.23	83.9	6.30	79.1	5.98
	35.6	**33.8**	89.2	6.05	88.8	6.12	88.2	6.22	87.9	6.27	87.6	6.32	87.1	6.39	79.1	5.77
	41.0	**39.2**	94.4	6.17	93.9	6.24	93.3	6.35	93.0	6.40	92.6	6.45	87.2	6.05	79.1	5.46
	47.0	**43.0**	98.0	6.25	97.5	6.33	96.8	6.43	96.5	6.49	93.2	6.26	87.2	5.83	79.1	5.26
	48.2	**46.0**	100.9	6.31	100.4	6.39	99.7	6.50	97.2	6.36	93.2	6.07	87.2	5.65	79.1	5.10
	53.6	**51.1**	105.8	6.41	105.2	6.50	101.2	6.32	97.2	6.04	93.2	5.77	87.2	5.37	79.1	4.85
	59.0	**56.3**	110.7	6.51	109.2	6.52	101.2	6.00	97.2	5.74	93.2	5.48	87.2	5.10	79.1	4.61
89.1 (110%)	-2.7	**-4.0**	53.8	5.18	53.6	5.22	53.3	5.28	53.2	5.30	53.0	5.33	52.8	5.37	52.5	5.43
	5.0	**3.2**	60.2	5.37	60.0	5.42	59.6	5.48	59.5	5.51	59.3	5.55	59.1	5.60	58.7	5.66
	10.4	**8.6**	65.1	5.51	64.8	5.56	64.5	5.63	64.3	5.67	64.1	5.71	63.9	5.76	63.5	5.83
	15.8	**14.0**	70.1	5.65	69.8	5.71	69.4	5.79	69.2	5.82	69.0	5.86	68.7	5.92	68.3	6.00
	17.0	**15.0**	71.0	5.68	70.7	5.73	70.3	5.81	70.1	5.85	69.9	5.89	69.6	5.95	69.2	6.03
	23.0	**21.2**	76.8	5.83	76.4	5.90	76.0	5.98	75.8	6.03	75.5	6.07	75.2	6.14	72.5	5.99
	26.6	**24.8**	80.1	5.92	79.8	5.99	79.3	6.08	79.1	6.13	78.8	6.17	78.5	6.24	72.5	5.77
	30.2	**28.4**	83.5	6.01	83.2	6.08	82.6	6.18	82.4	6.22	82.1	6.27	79.9	6.15	72.5	5.56
	32.0	**30.2**	85.2	6.06	84.8	6.13	84.3	6.22	84.0	6.27	83.8	6.32	79.9	6.04	72.5	5.46
	35.6	**33.8**	88.6	6.15	88.2	6.22	87.6	6.32	87.4	6.37	85.4	6.25	79.9	5.82	72.5	5.26
	41.0	**39.2**	93.7	6.28	93.2	6.35	92.6	6.45	89.1	6.20	85.4	5.92	79.9	5.52	72.5	4.99
	47.0	**43.0**	97.3	6.36	96.8	6.44	92.8	6.23	89.1	5.96	85.4	5.70	79.9	5.31	72.5	4.80
	48.2	**46.0**	100.1	6.43	99.6	6.51	92.8	6.05	89.1	5.79	85.4	5.53	79.9	5.16	72.5	4.66
	53.6	**51.1**	104.9	6.55	100.1	6.24	92.8	5.75	89.1	5.50	85.4	5.26	79.9	4.90	72.5	4.44
	59.0	**56.3**	105.7	6.29	100.1	5.93	92.8	5.46	89.1	5.23	85.4	5.00	79.9	4.66	72.5	4.21

Total rated capacity of indoor unit	Outdoor temp. °FDB	Outdoor temp. °FWB	61 TC	61 IP	64 TC	64 IP	68 TC	68 IP	70 TC	70 IP	72 TC	72 IP	75 TC	75 IP	79 TC	79 IP
81.0 (100%)	-2.7	**-4.0**	53.6	5.22	53.4	5.26	53.1	5.32	52.9	5.34	52.8	5.37	52.6	5.41	52.3	5.47
	5.0	**3.2**	59.9	5.42	59.7	5.47	59.4	5.53	59.2	5.57	59.0	5.60	58.8	5.65	58.5	5.71
	10.4	**8.6**	64.8	5.57	64.5	5.63	64.2	5.70	64.0	5.73	63.8	5.77	63.5	5.82	63.2	5.90
	15.8	**14.0**	69.7	5.72	69.4	5.78	69.0	5.86	68.8	5.90	68.6	5.94	68.3	6.00	65.9	5.85
	17.0	**15.0**	70.6	5.75	70.3	5.81	69.9	5.89	69.7	5.93	69.5	5.97	69.2	6.03	65.9	5.79
	23.0	**21.2**	76.3	5.92	76.0	5.99	75.5	6.07	75.3	6.12	75.1	6.16	72.6	6.00	65.9	5.42
	26.6	**24.8**	79.6	6.02	79.3	6.09	78.8	6.18	78.6	6.22	77.7	6.20	72.6	5.78	65.9	5.23
	30.2	**28.4**	83.0	6.12	82.6	6.19	82.1	6.28	81.0	6.24	77.7	5.97	72.6	5.57	65.9	5.04
	32.0	**30.2**	84.6	6.17	84.2	6.24	83.7	6.33	81.0	6.13	77.7	5.86	72.6	5.47	65.9	4.95
	35.6	**33.8**	88.0	6.26	87.5	6.34	84.3	6.17	81.0	5.91	77.7	5.65	72.6	5.27	65.9	4.77
	41.0	**39.2**	92.9	6.40	91.0	6.34	84.3	5.84	81.0	5.60	77.7	5.36	72.6	4.99	65.9	4.52
	47.0	**43.0**	96.1	6.47	91.0	6.10	84.3	5.63	81.0	5.39	77.7	5.16	72.6	4.81	65.9	4.36
	48.2	**46.0**	96.1	6.28	91.0	5.92	84.3	5.46	81.0	5.23	77.7	5.01	72.6	4.67	65.9	4.23
	53.6	**51.1**	96.1	5.97	91.0	5.63	84.3	5.19	81.0	4.97	77.7	4.76	72.6	4.44	65.9	4.02
	59.0	**56.3**	96.1	5.67	91.0	5.35	84.3	4.93	81.0	4.73	77.7	4.52	72.6	4.22	65.9	3.82
72.9 (90%)	-2.7	**-4.0**	53.3	5.27	53.1	5.31	52.8	5.37	52.7	5.39	52.5	5.42	52.3	5.46	52.0	5.52
	5.0	**3.2**	59.6	5.49	59.4	5.53	59.0	5.60	58.9	5.63	58.7	5.66	58.5	5.71	58.1	5.78
	10.4	**8.6**	64.4	5.65	64.1	5.70	63.8	5.77	63.6	5.81	63.4	5.85	63.2	5.90	59.3	5.57
	15.8	**14.0**	69.2	5.81	69.0	5.87	68.6	5.95	68.4	5.99	68.2	6.03	65.4	5.80	59.3	5.25
	17.0	**15.0**	70.2	5.84	69.9	5.90	69.5	5.98	69.3	6.02	69.1	6.06	65.4	5.74	59.3	5.20
	23.0	**21.2**	75.8	6.03	75.4	6.09	75.0	6.18	72.9	6.02	69.9	5.76	65.4	5.38	59.3	4.87
	26.6	**24.8**	79.0	6.14	78.7	6.20	75.9	6.05	72.9	5.80	69.9	5.55	65.4	5.18	59.3	4.69
	30.2	**28.4**	82.3	6.25	81.9	6.31	75.9	5.83	72.9	5.59	69.9	5.35	65.4	4.99	59.3	4.53
	32.0	**30.2**	83.9	6.30	81.9	6.20	75.9	5.72	72.9	5.49	69.9	5.25	65.4	4.90	59.3	4.45
	35.6	**33.8**	86.5	6.33	81.9	5.98	75.9	5.52	72.9	5.29	69.9	5.07	65.4	4.73	59.3	4.29
	41.0	**39.2**	86.5	6.00	81.9	5.67	75.9	5.23	72.9	5.01	69.9	4.80	65.4	4.48	59.3	4.07
	47.0	**43.0**	86.5	5.78	81.9	5.45	75.9	5.04	72.9	4.83	69.9	4.62	65.4	4.32	59.3	3.92
	48.2	**46.0**	86.5	5.61	81.9	5.29	75.9	4.89	72.9	4.69	69.9	4.49	65.4	4.19	59.3	3.81
	53.6	**51.1**	86.5	5.33	81.9	5.03	75.9	4.65	72.9	4.46	69.9	4.27	65.4	3.99	59.3	3.62
	59.0	**56.3**	86.5	5.06	81.9	4.78	75.9	4.42	72.9	4.24	69.9	4.06	65.4	3.79	59.3	3.44
64.8 (80%)	-2.7	**-4.0**	53.0	5.33	52.8	5.37	52.5	5.43	52.3	5.45	52.2	5.48	52.0	5.52	51.7	5.58
	5.0	**3.2**	59.2	5.56	59.0	5.61	58.6	5.68	58.5	5.71	58.3	5.74	58.1	5.79	52.8	5.25
	10.4	**8.6**	63.9	5.74	63.7	5.80	63.3	5.87	63.1	5.90	62.1	5.84	58.1	5.45	52.8	4.94
	15.8	**14.0**	68.7	5.92	68.4	5.98	67.5	6.00	64.8	5.75	62.1	5.51	58.1	5.14	52.8	4.66
	17.0	**15.0**	69.6	5.96	69.3	6.02	67.5	5.93	64.8	5.69	62.1	5.45	58.1	5.09	52.8	4.61
	23.0	**21.2**	75.1	6.16	72.8	6.01	67.5	5.55	64.8	5.33	62.1	5.10	58.1	4.77	52.8	4.33
	26.6	**24.8**	76.9	6.13	72.8	5.79	67.5	5.35	64.8	5.13	62.1	4.92	58.1	4.60	52.8	4.17
	30.2	**28.4**	76.9	5.91	72.8	5.58	67.5	5.16	64.8	4.95	62.1	4.74	58.1	4.43	52.8	4.02
	32.0	**30.2**	76.9	5.80	72.8	5.48	67.5	5.07	64.8	4.86	62.1	4.66	58.1	4.35	52.8	3.95
	35.6	**33.8**	76.9	5.59	72.8	5.29	67.5	4.89	64.8	4.69	62.1	4.49	58.1	4.20	52.8	3.81
	41.0	**39.2**	76.9	5.30	72.8	5.01	67.5	4.63	64.8	4.44	62.1	4.26	58.1	3.98	52.8	3.62
	47.0	**43.0**	76.9	5.10	72.8	4.82	67.5	4.46	64.8	4.28	62.1	4.10	58.1	3.84	52.8	3.49
	48.2	**46.0**	76.9	4.95	72.8	4.68	67.5	4.33	64.8	4.16	62.1	3.98	58.1	3.73	52.8	3.39
	53.6	**51.1**	76.9	4.71	72.8	4.45	67.5	4.12	64.8	3.95	62.1	3.79	58.1	3.55	52.8	3.23
	59.0	**56.3**	76.9	4.47	72.8	4.23	67.5	3.91	64.8	3.76	62.1	3.60	58.1	3.37	52.8	3.07
56.7 (70%)	-2.7	**-4.0**	52.6	5.41	52.4	5.45	52.1	5.50	51.9	5.53	51.8	5.56	50.8	5.51	46.2	5.00
	5.0	**3.2**	58.7	5.67	58.5	5.71	58.1	5.78	56.7	5.65	54.4	5.41	50.8	5.06	46.2	4.60
	10.4	**8.6**	63.3	5.86	63.1	5.92	59.0	5.54	56.7	5.32	54.4	5.10	50.8	4.76	46.2	4.33
	15.8	**14.0**	67.2	5.97	63.7	5.65	59.0	5.23	56.7	5.02	54.4	4.81	50.8	4.50	46.2	4.09
	17.0	**15.0**	67.2	5.91	63.7	5.59	59.0	5.17	56.7	4.96	54.4	4.76	50.8	4.45	46.2	4.04
	23.0	**21.2**	67.2	5.54	63.7	5.24	59.0	4.85	56.7	4.65	54.4	4.46	50.8	4.17	46.2	3.79
	26.6	**24.8**	67.2	5.33	63.7	5.05	59.0	4.67	56.7	4.48	54.4	4.30	50.8	4.02	46.2	3.66
	30.2	**28.4**	67.2	5.14	63.7	4.86	59.0	4.50	56.7	4.32	54.4	4.15	50.8	3.88	46.2	3.53
	32.0	**30.2**	67.2	5.05	63.7	4.78	59.0	4.42	56.7	4.25	54.4	4.07	50.8	3.81	46.2	3.47
	35.6	**33.8**	67.2	4.87	63.7	4.61	59.0	4.27	56.7	4.10	54.4	3.93	50.8	3.68	46.2	3.35
	41.0	**39.2**	67.2	4.61	63.7	4.37	59.0	4.05	56.7	3.89	54.4	3.73	50.8	3.49	46.2	3.18
	47.0	**43.0**	67.2	4.44	63.7	4.21	59.0	3.90	56.7	3.74	54.4	3.59	50.8	3.36	46.2	3.07
	48.2	**46.0**	67.2	4.31	63.7	4.09	59.0	3.79	56.7	3.64	54.4	3.49	50.8	3.27	46.2	2.98
	53.6	**51.1**	67.2	4.10	63.7	3.89	59.0	3.60	56.7	3.46	54.4	3.32	50.8	3.11	46.2	2.84
	59.0	**56.3**	67.2	3.90	63.7	3.70	59.0	3.43	56.7	3.29	54.4	3.16	50.8	2.96	46.2	2.70
48.6 (60%)	-2.7	**-4.0**	52.0	5.51	51.8	5.55	50.6	5.48	48.6	5.26	46.6	5.05	43.6	4.72	39.6	4.29
	5.0	**3.2**	57.6	5.75	54.6	5.44	50.6	5.04	48.6	4.84	46.6	4.64	43.6	4.34	39.6	3.95
	10.4	**8.6**	57.6	5.41	54.6	5.12	50.6	4.74	48.6	4.56	46.6	4.37	43.6	4.09	39.6	3.72
	15.8	**14.0**	57.6	5.10	54.6	4.83	50.6	4.48	48.6	4.30	46.6	4.12	43.6	3.86	39.6	3.52
	17.0	**15.0**	57.6	5.05	54.6	4.78	50.6	4.43	48.6	4.25	46.6	4.08	43.6	3.82	39.6	3.48
	23.0	**21.2**	57.6	4.73	54.6	4.48	50.6	4.15	48.6	3.99	46.6	3.83	43.6	3.59	39.6	3.27
	26.6	**24.8**	57.6	4.56	54.6	4.32	50.6	4.00	48.6	3.85	46.6	3.69	43.6	3.46	39.6	3.16
	30.2	**28.4**	57.6	4.40	54.6	4.17	50.6	3.86	48.6	3.71	46.6	3.56	43.6	3.34	39.6	3.05
	32.0	**30.2**	57.6	4.32	54.6	4.09	50.6	3.79	48.6	3.65	46.6	3.50	43.6	3.28	39.6	3.00
	35.6	**33.8**	57.6	4.16	54.6	3.95	50.6	3.66	48.6	3.52	46.6	3.38	43.6	3.17	39.6	2.89
	41.0	**39.2**	57.6	3.95	54.6	3.74	50.6	3.47	48.6	3.34	46.6	3.21	43.6	3.01	39.6	2.75
	47.0	**43.0**	57.6	3.81	54.6	3.61	50.6	3.35	48.6	3.22	46.6	3.09	43.6	2.90	39.6	2.65
	48.2	**46.0**	57.6	3.70	54.6	3.51	50.6	3.25	48.6	3.13	46.6	3.01	43.6	2.82	39.6	2.58
	53.6	**51.1**	57.6	3.52	54.6	3.34	50.6	3.10	48.6	2.98	46.6	2.86	43.6	2.69	39.6	2.46
	59.0	**56.3**	57.6	3.35	54.6	3.17	50.6	2.95	48.6	2.84	46.6	2.73	43.6	2.56	39.6	2.34
40.5 (50%)	-2.7	**-4.0**	48.0	5.20	45.5	4.93	42.2	4.57	40.5	4.39	38.8	4.21	36.3	3.95	33.0	3.60
	5.0	**3.2**	48.0	4.78	45.5	4.53	42.2	4.20	40.5	4.04	38.8	3.88	36.3	3.64	33.0	3.32
	10.4	**8.6**	48.0	4.50	45.5	4.27	42.2	3.96	40.5	3.81	38.8	3.66	36.3	3.43	33.0	3.13
	15.8	**14.0**	48.0	4.25	45.5	4.03	42.2	3.74	40.5	3.60	38.8	3.46	36.3	3.24	33.0	2.96
	17.0	**15.0**	48.0	4.20	45.5	3.99	42.2	3.70	40.5	3.56	38.8	3.42	36.3	3.21	33.0	2.93
	23.0	**21.2**	48.0	3.94	45.5	3.74	42.2	3.48	40.5	3.34	38.8	3.21	36.3	3.02	33.0	2.76
	26.6	**24.8**	48.0	3.80	45.5	3.61	42.2	3.35	40.5	3.23	38.8	3.10	36.3	2.91	33.0	2.66
	30.2	**28.4**	48.0	3.67	45.5	3.48	42.2	3.24	40.5	3.12	38.8	2.99	36.3	2.81	33.0	2.57
	32.0	**30.2**	48.0	3.61	45.5	3.42	42.2	3.18	40.5	3.06	38.8	2.94	36.3	2.76	33.0	2.53
	35.6	**33.8**	48.0	3.48	45.5	3.30	42.2	3.07	40.5	2.96	38.8	2.84	36.3	2.67	33.0	2.45
	41.0	**39.2**	48.0	3.30	45.5	3.14	42.2	2.92	40.5	2.81	38.8	2.70	36.3	2.54	33.0	2.33
	47.0	**43.0**	48.0	3.18	45.5	3.03	42.2	2.81	40.5	2.71	38.8	2.61	36.3	2.45	33.0	2.25
	48.2	**46.0**	48.0	3.09	45.5	2.94	42.2	2.74	40.5	2.64	38.8	2.53	36.3	2.38	33.0	2.19
	53.6	**51.1**	48.0	2.95	45.5	2.80	42.2	2.61	40.5	2.51	38.8	2.42	36.3	2.27	33.0	2.09
	59.0	**56.3**	48.0	2.81	45.5	2.67	42.2	2.48	40.5	2.39	38.8	2.30	36.3	2.17	33.0	1.99

TC : Total Capacity kBtu/h.

IP : Input Power kW (Compressor + Outdoor fan motor).

The data is based on the following conditions. Pipe length : 25ft. (7.5m) , Height difference : 0ft. (0m)

HEATING CAPACITY in kBtu/h

■ MODEL : AOUA96RLBV1

Total rated capacity of indoor unit	Outdoor temp.		Indoor temperature °FDB													
			61		64		68		70		72		75		79	
	°FDB	°FWB	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
162.0 (150%)	-2.7	**-4.0**	67.7	7.25	67.4	7.32	67.0	7.41	66.8	7.45	66.6	7.50	66.3	7.56	65.9	7.65
	5.0	**3.2**	76.9	7.49	76.6	7.56	76.2	7.67	75.9	7.72	75.7	7.77	75.4	7.85	75.0	7.95
	10.4	**8.6**	84.0	7.66	83.7	7.74	83.2	7.86	83.0	7.91	82.8	7.97	82.4	8.06	81.9	8.17
	15.8	**14.0**	91.3	7.83	90.9	7.92	90.4	8.04	90.1	8.10	89.9	8.17	89.5	8.26	89.0	8.38
	17.0	**15.0**	92.7	7.86	92.3	7.95	91.8	8.08	91.5	8.14	91.2	8.20	90.8	8.30	90.3	8.42
	23.0	**21.2**	101.1	8.05	100.7	8.15	100.1	8.28	99.8	8.35	99.5	8.42	99.1	8.52	98.5	8.66
	26.6	**24.8**	106.1	8.16	105.7	8.26	105.0	8.40	104.7	8.47	104.4	8.54	103.9	8.65	103.3	8.79
	30.2	**28.4**	111.2	8.26	110.7	8.37	110.0	8.52	109.6	8.59	109.3	8.66	108.8	8.77	108.1	8.92
	32.0	**30.2**	113.7	8.31	113.2	8.42	112.5	8.57	112.1	8.65	111.8	8.72	111.2	8.83	110.5	8.98
	35.6	**33.8**	118.7	8.42	118.2	8.53	117.4	8.68	117.1	8.76	116.7	8.84	116.1	8.95	115.3	9.11
	41.0	**39.2**	126.4	8.57	125.7	8.69	124.9	8.85	124.5	8.93	124.1	9.01	123.4	9.13	122.6	9.29
	47.0	**43.0**	131.7	8.67	131.1	8.79	130.2	8.96	129.7	9.04	129.3	9.12	128.6	9.25	127.7	9.41
	48.2	**46.0**	136.0	8.75	135.3	8.87	134.4	9.04	133.9	9.12	133.4	9.21	132.7	9.34	131.7	9.51
	53.6	**51.1**	143.2	8.87	142.5	9.00	141.4	9.18	140.9	9.26	140.4	9.35	139.6	9.48	131.9	9.01
	59.0	**56.3**	150.6	9.00	149.8	9.13	148.6	9.31	148.0	9.40	147.4	9.49	145.3	9.50	131.9	8.52
151.2 (140%)	-2.7	**-4.0**	67.5	7.29	67.2	7.35	66.8	7.44	66.6	7.48	66.4	7.53	66.1	7.59	65.7	7.68
	5.0	**3.2**	76.7	7.53	76.4	7.61	76.0	7.71	75.8	7.76	75.6	7.81	75.2	7.89	74.8	7.99
	10.4	**8.6**	83.8	7.71	83.5	7.79	83.0	7.91	82.8	7.96	82.5	8.02	82.2	8.11	81.7	8.22
	15.8	**14.0**	91.0	7.89	90.7	7.98	90.2	8.10	89.9	8.16	89.6	8.22	89.2	8.32	88.7	8.44
	17.0	**15.0**	92.4	7.92	92.0	8.01	91.5	8.14	91.2	8.20	91.0	8.26	90.6	8.36	90.0	8.48
	23.0	**21.2**	100.8	8.12	100.4	8.22	99.8	8.36	99.5	8.42	99.2	8.49	98.8	8.59	98.2	8.73
	26.6	**24.8**	105.8	8.23	105.3	8.34	104.7	8.48	104.4	8.55	104.1	8.62	103.6	8.73	102.9	8.87
	30.2	**28.4**	110.8	8.35	110.3	8.46	109.6	8.60	109.2	8.67	108.9	8.75	108.4	8.86	107.7	9.01
	32.0	**30.2**	113.3	8.40	112.7	8.51	112.0	8.66	111.7	8.74	111.3	8.81	110.8	8.92	110.1	9.07
	35.6	**33.8**	118.3	8.51	117.7	8.63	117.0	8.78	116.6	8.86	116.2	8.93	115.6	9.05	114.9	9.20
	41.0	**39.2**	125.8	8.67	125.2	8.79	124.4	8.95	123.9	9.03	123.5	9.11	122.9	9.23	122.0	9.40
	47.0	**43.0**	131.1	8.78	130.5	8.91	129.6	9.07	129.1	9.15	128.7	9.24	128.0	9.36	123.1	9.12
	48.2	**46.0**	135.3	8.87	134.6	8.99	133.7	9.16	133.2	9.24	132.7	9.33	132.0	9.46	123.1	8.82
	53.6	**51.1**	142.5	9.01	141.7	9.14	140.6	9.31	140.1	9.40	139.6	9.48	135.6	9.30	123.1	8.35
	59.0	**56.3**	149.7	9.14	148.8	9.27	147.7	9.45	147.1	9.54	145.0	9.48	135.6	8.79	123.1	7.89
140.4 (130%)	-2.7	**-4.0**	67.4	7.32	67.1	7.39	66.7	7.47	66.5	7.52	66.3	7.56	66.0	7.63	65.5	7.72
	5.0	**3.2**	76.5	7.58	76.2	7.65	75.8	7.76	75.6	7.81	75.3	7.86	75.0	7.94	74.6	8.04
	10.4	**8.6**	83.6	7.77	83.2	7.85	82.8	7.96	82.5	8.02	82.3	8.08	81.9	8.16	81.5	8.28
	15.8	**14.0**	90.8	7.96	90.4	8.05	89.9	8.17	89.6	8.23	89.4	8.29	89.0	8.39	88.4	8.51
	17.0	**15.0**	92.1	7.99	91.7	8.08	91.2	8.21	90.9	8.27	90.7	8.33	90.3	8.43	89.8	8.55
	23.0	**21.2**	100.5	8.20	100.0	8.30	99.5	8.44	99.2	8.51	98.9	8.57	98.4	8.68	97.8	8.81
	26.6	**24.8**	105.4	8.32	104.9	8.43	104.3	8.57	104.0	8.64	103.6	8.71	103.2	8.82	102.5	8.96
	30.2	**28.4**	110.3	8.45	109.8	8.55	109.1	8.70	108.8	8.77	108.4	8.85	107.9	8.96	107.2	9.10
	32.0	**30.2**	112.8	8.51	112.3	8.62	111.6	8.76	111.2	8.84	110.9	8.91	110.3	9.02	109.6	9.17
	35.6	**33.8**	117.7	8.62	117.2	8.74	116.4	8.89	116.0	8.97	115.7	9.04	115.1	9.16	114.3	9.31
	41.0	**39.2**	125.2	8.80	124.5	8.92	123.7	9.08	123.3	9.16	122.9	9.24	122.2	9.36	114.3	8.76
	47.0	**43.0**	130.4	8.91	129.7	9.04	128.8	9.20	128.4	9.28	127.9	9.37	125.9	9.35	114.3	8.40
	48.2	**46.0**	134.6	9.01	133.8	9.13	132.9	9.30	132.4	9.38	131.9	9.47	125.9	9.05	114.3	8.13
	53.6	**51.1**	141.5	9.16	140.8	9.29	139.7	9.46	139.2	9.54	134.6	9.22	125.9	8.56	114.3	7.69
	59.0	**56.3**	148.7	9.30	147.8	9.44	146.2	9.57	140.4	9.14	134.6	8.72	125.9	8.09	114.3	7.27
129.6 (120%)	-2.7	**-4.0**	67.2	7.36	66.9	7.43	66.5	7.52	66.3	7.56	66.1	7.61	65.8	7.67	65.4	7.76
	5.0	**3.2**	76.3	7.63	76.0	7.71	75.5	7.81	75.3	7.86	75.1	7.91	74.8	7.99	74.3	8.10
	10.4	**8.6**	83.3	7.83	83.0	7.92	82.5	8.03	82.3	8.09	82.0	8.14	81.7	8.23	81.2	8.34
	15.8	**14.0**	90.4	8.03	90.0	8.13	89.5	8.25	89.3	8.31	89.0	8.37	88.6	8.46	88.1	8.59
	17.0	**15.0**	91.8	8.07	91.4	8.16	90.9	8.29	90.6	8.35	90.3	8.41	89.9	8.51	89.4	8.63
	23.0	**21.2**	100.1	8.30	99.6	8.40	99.0	8.53	98.7	8.60	98.4	8.67	98.0	8.77	97.4	8.91
	26.6	**24.8**	104.9	8.43	104.4	8.53	103.8	8.67	103.5	8.74	103.2	8.82	102.7	8.92	102.1	9.06
	30.2	**28.4**	109.8	8.56	109.3	8.67	108.6	8.81	108.3	8.89	107.9	8.96	107.4	9.07	105.5	9.08
	32.0	**30.2**	112.2	8.62	111.7	8.73	111.0	8.88	110.6	8.96	110.3	9.03	109.8	9.14	105.5	8.89
	35.6	**33.8**	117.1	8.75	116.5	8.87	115.8	9.02	115.4	9.09	115.0	9.17	114.5	9.29	105.5	8.53
	41.0	**39.2**	124.4	8.94	123.8	9.06	123.0	9.22	122.5	9.30	122.1	9.38	116.2	8.93	105.5	8.03
	47.0	**43.0**	129.6	9.07	128.9	9.19	128.0	9.35	127.6	9.43	124.3	9.22	116.2	8.56	105.5	7.70
	48.2	**46.0**	133.6	9.17	132.9	9.29	132.0	9.46	129.6	9.34	124.3	8.92	116.2	8.28	105.5	7.45
	53.6	**51.1**	140.5	9.33	139.7	9.46	135.0	9.25	129.6	8.84	124.3	8.43	116.2	7.83	105.5	7.05
	59.0	**56.3**	147.4	9.49	145.7	9.53	135.0	8.74	129.6	8.35	124.3	7.97	116.2	7.40	105.5	6.67
118.8 (110%)	-2.7	**-4.0**	66.9	7.41	66.6	7.48	66.2	7.57	66.0	7.61	65.8	7.66	65.5	7.72	65.1	7.81
	5.0	**3.2**	76.0	7.70	75.7	7.78	75.3	7.88	75.1	7.93	74.8	7.98	74.5	8.06	74.1	8.16
	10.4	**8.6**	83.0	7.91	82.6	8.00	82.2	8.11	81.9	8.17	81.7	8.22	81.3	8.31	80.9	8.42
	15.8	**14.0**	90.0	8.13	89.7	8.22	89.1	8.34	88.9	8.40	88.6	8.46	88.2	8.56	87.7	8.68
	17.0	**15.0**	91.4	8.17	91.0	8.26	90.5	8.38	90.2	8.45	89.9	8.51	89.5	8.60	89.0	8.73
	23.0	**21.2**	99.6	8.41	99.1	8.51	98.5	8.65	98.2	8.71	98.0	8.78	97.5	8.88	96.7	9.00
	26.6	**24.8**	104.4	8.55	103.9	8.66	103.3	8.80	102.9	8.87	102.6	8.94	102.1	9.04	96.7	8.62
	30.2	**28.4**	109.2	8.69	108.7	8.80	108.0	8.95	107.6	9.02	107.3	9.09	106.5	9.17	96.7	8.26
	32.0	**30.2**	111.6	8.76	111.0	8.87	110.3	9.02	110.0	9.10	109.6	9.17	106.5	8.99	96.7	8.10
	35.6	**33.8**	116.4	8.90	115.8	9.02	115.0	9.17	114.7	9.24	113.9	9.28	106.5	8.62	96.7	7.77
	41.0	**39.2**	123.6	9.10	122.9	9.22	122.1	9.38	118.8	9.15	113.9	8.73	106.5	8.12	96.7	7.31
	47.0	**43.0**	128.6	9.24	127.9	9.37	123.7	9.17	118.8	8.77	113.9	8.37	106.5	7.78	96.7	7.01
	48.2	**46.0**	132.6	9.35	131.9	9.48	123.7	8.87	118.8	8.48	113.9	8.10	106.5	7.53	96.7	6.79
	53.6	**51.1**	139.3	9.53	133.5	9.14	123.7	8.39	118.8	8.02	113.9	7.66	106.5	7.12	96.7	6.42
	59.0	**56.3**	140.9	9.18	133.5	8.64	123.7	7.93	118.8	7.59	113.9	7.24	106.5	6.73	96.7	6.07

Total rated capacity of indoor unit	Outdoor temp.		Indoor temperature °FDB													
			61		64		68		70		72		75		79	
	°FDB	°FWB	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
108.0 (100%)	-2.7	**-4.0**	66.7	7.47	66.4	7.54	66.0	7.63	65.8	7.67	65.6	7.71	65.3	7.78	64.9	7.87
	5.0	**3.2**	75.7	7.78	75.4	7.85	74.9	7.96	74.7	8.01	74.5	8.06	74.2	8.14	73.7	8.24
	10.4	**8.6**	82.6	8.01	82.2	8.09	81.8	8.20	81.5	8.26	81.3	8.32	81.0	8.40	80.5	8.52
	15.8	**14.0**	89.6	8.24	89.2	8.33	88.7	8.45	88.4	8.51	88.2	8.58	87.8	8.67	87.3	8.79
	17.0	**15.0**	90.9	8.28	90.5	8.37	90.0	8.50	89.7	8.56	89.5	8.62	89.1	8.72	87.9	8.77
	23.0	**21.2**	99.0	8.55	98.5	8.65	98.0	8.78	97.7	8.85	97.4	8.92	96.9	9.01	87.9	8.12
	26.6	**24.8**	103.7	8.70	103.2	8.81	102.6	8.94	102.3	9.01	102.0	9.08	96.9	8.63	87.9	7.79
	30.2	**28.4**	108.4	8.85	107.9	8.96	107.2	9.11	106.9	9.18	103.6	8.90	96.9	8.28	87.9	7.47
	32.0	**30.2**	110.8	8.93	110.2	9.04	109.5	9.19	108.0	9.12	103.6	8.71	96.9	8.11	87.9	7.31
	35.6	**33.8**	115.5	9.08	114.9	9.19	112.5	9.15	108.0	8.75	103.6	8.36	96.9	7.78	87.9	7.02
	41.0	**39.2**	122.5	9.30	121.4	9.37	112.5	8.61	108.0	8.24	103.6	7.87	96.9	7.32	87.9	6.61
	47.0	**43.0**	127.4	9.46	121.4	8.98	112.5	8.26	108.0	7.90	103.6	7.55	96.9	7.02	87.9	6.34
	48.2	**46.0**	128.1	9.22	121.4	8.69	112.5	7.99	108.0	7.64	103.6	7.30	96.9	6.80	87.9	6.14
	53.6	**51.1**	128.1	8.72	121.4	8.22	112.5	7.56	108.0	7.23	103.6	6.91	96.9	6.43	87.9	5.81
	59.0	**56.3**	128.1	8.24	121.4	7.77	112.5	7.14	108.0	6.84	103.6	6.53	96.9	6.08	87.9	5.49
97.2 (90%)	-2.7	**-4.0**	66.3	7.54	66.0	7.61	65.6	7.70	65.4	7.74	65.2	7.79	64.9	7.85	64.5	7.94
	5.0	**3.2**	75.3	7.87	75.0	7.95	74.5	8.05	74.3	8.10	74.1	8.15	73.8	8.23	73.3	8.34
	10.4	**8.6**	82.1	8.12	81.8	8.21	81.3	8.32	81.1	8.38	80.8	8.43	80.5	8.52	79.1	8.51
	15.8	**14.0**	89.0	8.37	88.6	8.47	88.1	8.59	87.9	8.65	87.6	8.71	87.2	8.80	79.1	7.94
	17.0	**15.0**	90.3	8.42	89.9	8.51	89.4	8.64	89.1	8.70	88.9	8.76	87.2	8.69	79.1	7.84
	23.0	**21.2**	98.3	8.71	97.8	8.81	97.2	8.94	96.9	9.01	93.2	8.65	87.2	8.05	79.1	7.27
	26.6	**24.8**	102.9	8.88	102.4	8.98	101.2	9.05	97.2	8.67	93.2	8.28	87.2	7.71	79.1	6.97
	30.2	**28.4**	107.5	9.05	107.0	9.15	101.2	8.68	97.2	8.31	93.2	7.94	87.2	7.40	79.1	6.68
	32.0	**30.2**	109.8	9.13	109.3	9.24	101.2	8.50	97.2	8.14	93.2	7.78	87.2	7.25	79.1	6.55
	35.6	**33.8**	114.4	9.30	109.3	8.86	101.2	8.16	97.2	7.81	93.2	7.47	87.2	6.96	79.1	6.29
	41.0	**39.2**	115.3	8.85	109.3	8.34	101.2	7.68	97.2	7.35	93.2	7.03	87.2	6.55	79.1	5.92
	47.0	**43.0**	115.3	8.48	109.3	8.00	101.2	7.36	97.2	7.05	93.2	6.74	87.2	6.28	79.1	5.68
	48.2	**46.0**	115.3	8.21	109.3	7.74	101.2	7.13	97.2	6.82	93.2	6.53	87.2	6.08	79.1	5.50
	53.6	**51.1**	115.3	7.76	109.3	7.32	101.2	6.74	97.2	6.46	93.2	6.18	87.2	5.75	79.1	5.21
	59.0	**56.3**	115.3	7.34	109.3	6.92	101.2	6.37	97.2	6.11	93.2	5.84	87.2	5.44	79.1	4.92
86.4 (80%)	-2.7	**-4.0**	65.9	7.63	65.6	7.70	65.2	7.79	65.0	7.83	64.8	7.88	64.5	7.94	64.1	8.03
	5.0	**3.2**	74.8	7.99	74.5	8.07	74.0	8.17	73.8	8.22	73.6	8.27	73.3	8.35	70.4	8.09
	10.4	**8.6**	81.5	8.26	81.2	8.35	80.7	8.46	80.5	8.52	80.2	8.57	77.5	8.33	70.4	7.52
	15.8	**14.0**	88.3	8.54	87.9	8.63	87.4	8.75	86.4	8.72	82.9	8.33	77.5	7.77	70.4	7.02
	17.0	**15.0**	89.6	8.59	89.2	8.69	88.7	8.81	86.4	8.61	82.9	8.23	77.5	7.67	70.4	6.93
	23.0	**21.2**	97.4	8.91	96.9	9.01	90.0	8.33	86.4	7.98	82.9	7.63	77.5	7.11	70.4	6.43
	26.6	**24.8**	101.9	9.10	97.1	8.66	90.0	7.98	86.4	7.64	82.9	7.31	77.5	6.82	70.4	6.17
	30.2	**28.4**	102.5	8.80	97.1	8.30	90.0	7.65	86.4	7.33	82.9	7.01	77.5	6.54	70.4	5.92
	32.0	**30.2**	102.5	8.62	97.1	8.13	90.0	7.49	86.4	7.18	82.9	6.87	77.5	6.40	70.4	5.80
	35.6	**33.8**	102.5	8.27	97.1	7.80	90.0	7.19	86.4	6.89	82.9	6.59	77.5	6.15	70.4	5.57
	41.0	**39.2**	102.5	7.78	97.1	7.35	90.0	6.77	86.4	6.49	82.9	6.21	77.5	5.79	70.4	5.25
	47.0	**43.0**	102.5	7.46	97.1	7.05	90.0	6.50	86.4	6.23	82.9	5.96	77.5	5.56	70.4	5.03
	48.2	**46.0**	102.5	7.22	97.1	6.82	90.0	6.29	86.4	6.03	82.9	5.77	77.5	5.38	70.4	4.87
	53.6	**51.1**	102.5	6.83	97.1	6.45	90.0	5.95	86.4	5.70	82.9	5.46	77.5	5.09	70.4	4.62
	59.0	**56.3**	102.5	6.46	97.1	6.10	90.0	5.63	86.4	5.39	82.9	5.16	77.5	4.82	70.4	4.37
75.6 (70%)	-2.7	**-4.0**	65.4	7.75	65.1	7.81	64.7	7.90	64.5	7.95	64.3	7.99	64.0	8.06	61.6	7.82
	5.0	**3.2**	74.2	8.14	73.8	8.22	73.4	8.32	73.2	8.37	72.5	8.35	67.8	7.79	61.6	7.05
	10.4	**8.6**	80.8	8.45	80.4	8.53	78.7	8.47	75.6	8.11	72.5	7.76	67.8	7.24	61.6	6.56
	15.8	**14.0**	87.4	8.75	85.0	8.56	78.7	7.90	75.6	7.57	72.5	7.24	67.8	6.76	61.6	6.12
	17.0	**15.0**	88.7	8.81	85.0	8.45	78.7	7.80	75.6	7.47	72.5	7.15	67.8	6.67	61.6	6.05
	23.0	**21.2**	89.7	8.30	85.0	7.84	78.7	7.23	75.6	6.93	72.5	6.64	67.8	6.19	61.6	5.61
	26.6	**24.8**	89.7	7.95	85.0	7.51	78.7	6.93	75.6	6.64	72.5	6.36	67.8	5.94	61.6	5.38
	30.2	**28.4**	89.7	7.62	85.0	7.20	78.7	6.65	75.6	6.37	72.5	6.10	67.8	5.70	61.6	5.17
	32.0	**30.2**	89.7	7.47	85.0	7.05	78.7	6.51	75.6	6.24	72.5	5.98	67.8	5.58	61.6	5.06
	35.6	**33.8**	89.7	7.17	85.0	6.77	78.7	6.25	75.6	6.00	72.5	5.74	67.8	5.36	61.6	4.86
	41.0	**39.2**	89.7	6.75	85.0	6.38	78.7	5.89	75.6	5.65	72.5	5.41	67.8	5.05	61.6	4.59
	47.0	**43.0**	89.7	6.47	85.0	6.12	78.7	5.65	75.6	5.42	72.5	5.19	67.8	4.85	61.6	4.40
	48.2	**46.0**	89.7	6.26	85.0	5.92	78.7	5.47	75.6	5.25	72.5	5.03	67.8	4.70	61.6	4.26
	53.6	**51.1**	89.7	5.93	85.0	5.60	78.7	5.18	75.6	4.97	72.5	4.76	67.8	4.45	61.6	4.04
	59.0	**56.3**	89.7	5.61	85.0	5.30	78.7	4.90	75.6	4.70	72.5	4.50	67.8	4.21	61.6	3.82
64.8 (60%)	-2.7	**-4.0**	64.7	7.90	64.4	7.97	64.0	8.05	63.8	8.10	62.1	7.90	58.1	7.37	52.8	6.68
	5.0	**3.2**	73.3	8.34	72.8	8.40	67.5	7.75	64.8	7.43	62.1	7.12	58.1	6.64	52.8	6.02
	10.4	**8.6**	76.9	8.26	72.8	7.80	67.5	7.21	64.8	6.91	62.1	6.62	58.1	6.18	52.8	5.61
	15.8	**14.0**	76.9	7.70	72.8	7.28	67.5	6.73	64.8	6.45	62.1	6.18	58.1	5.77	52.8	5.24
	17.0	**15.0**	76.9	7.60	72.8	7.19	67.5	6.64	64.8	6.37	62.1	6.10	58.1	5.70	52.8	5.18
	23.0	**21.2**	76.9	7.05	72.8	6.67	67.5	6.16	64.8	5.91	62.1	5.67	58.1	5.30	52.8	4.81
	26.6	**24.8**	76.9	6.76	72.8	6.39	67.5	5.91	64.8	5.67	62.1	5.43	58.1	5.08	52.8	4.61
	30.2	**28.4**	76.9	6.48	72.8	6.13	67.5	5.67	64.8	5.44	62.1	5.22	58.1	4.88	52.8	4.43
	32.0	**30.2**	76.9	6.35	72.8	6.01	67.5	5.56	64.8	5.33	62.1	5.11	58.1	4.78	52.8	4.34
	35.6	**33.8**	76.9	6.10	72.8	5.77	67.5	5.34	64.8	5.12	62.1	4.91	58.1	4.59	52.8	4.17
	41.0	**39.2**	76.9	5.75	72.8	5.44	67.5	5.03	64.8	4.83	62.1	4.63	58.1	4.33	52.8	3.94
	47.0	**43.0**	76.9	5.51	72.8	5.22	67.5	4.83	64.8	4.64	62.1	4.44	58.1	4.16	52.8	3.78
	48.2	**46.0**	76.9	5.34	72.8	5.05	67.5	4.67	64.8	4.49	62.1	4.30	58.1	4.03	52.8	3.66
	53.6	**51.1**	76.9	5.05	72.8	4.78	67.5	4.43	64.8	4.25	62.1	4.08	58.1	3.82	52.8	3.47
	59.0	**56.3**	76.9	4.78	72.8	4.52	67.5	4.19	64.8	4.02	62.1	3.86	58.1	3.61	52.8	3.29
54.0 (50%)	-2.7	**-4.0**	63.8	8.11	60.7	7.71	56.2	7.13	54.0	6.84	51.8	6.55	48.4	6.13	44.0	5.56
	5.0	**3.2**	64.1	7.34	60.7	6.95	56.2	6.43	54.0	6.17	51.8	5.91	48.4	5.53	44.0	5.02
	10.4	**8.6**	64.1	6.83	60.7	6.46	56.2	5.98	54.0	5.74	51.8	5.50	48.4	5.15	44.0	4.68
	15.8	**14.0**	64.1	6.38	60.7	6.03	56.2	5.59	54.0	5.36	51.8	5.14	48.4	4.81	44.0	4.38
	17.0	**15.0**	64.1	6.30	60.7	5.96	56.2	5.52	54.0	5.30	51.8	5.08	48.4	4.75	44.0	4.33
	23.0	**21.2**	64.1	5.84	60.7	5.53	56.2	5.12	54.0	4.92	51.8	4.72	48.4	4.42	44.0	4.02
	26.6	**24.8**	64.1	5.60	60.7	5.31	56.2	4.92	54.0	4.72	51.8	4.53	48.4	4.24	44.0	3.86
	30.2	**28.4**	64.1	5.38	60.7	5.09	56.2	4.72	54.0	4.53	51.8	4.35	48.4	4.07	44.0	3.71
	32.0	**30.2**	64.1	5.27	60.7	4.99	56.2	4.63	54.0	4.44	51.8	4.26	48.4	3.99	44.0	3.64
	35.6	**33.8**	64.1	5.06	60.7	4.80	56.2	4.45	54.0	4.27	51.8	4.10	48.4	3.84	44.0	3.50
	41.0	**39.2**	64.1	4.77	60.7	4.52	56.2	4.19	54.0	4.03	51.8	3.87	48.4	3.62	44.0	3.31
	47.0	**43.0**	64.1	4.58	60.7	4.34	56.2	4.03	54.0	3.87	51.8	3.71	48.4	3.48	44.0	3.18
	48.2	**46.0**	64.1	4.44	60.7	4.20	56.2	3.90	54.0	3.75	51.8	3.60	48.4	3.37	44.0	3.08
	53.6	**51.1**	64.1	4.20	60.7	3.98	56.2	3.70	54.0	3.55	51.8	3.41	48.4	3.20	44.0	2.92
	59.0	**56.3**	64.1	3.98	60.7	3.77	56.2	3.50	54.0	3.37	51.8	3.23	48.4	3.03	44.0	2.77

TC : Total Capacity kBtu/h.

IP : Input Power kW (Compressor + Outdoor fan motor).

The data is based on the following conditions. Pipe length : 25ft. (7.5m) , Height difference : 0ft. (0m)

HEATING CAPACITY in kBtu/h

■ MODEL : AOUA120RLBV1

Total rated capacity of indoor unit	Outdoor temp.		Indoor temperature °FDB													
			61		64		68		70		72		75		79	
	°FDB	°FWB	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
202.5 (150%)	-2.7	**-4.0**	96.2	10.29	95.2	10.34	94.0	10.41	93.4	10.45	92.8	10.48	91.9	10.54	90.7	10.61
	5.0	**3.2**	104.6	10.50	103.8	10.57	102.8	10.66	102.3	10.70	101.8	10.74	101.0	10.81	100.0	10.90
	10.4	**8.6**	111.6	10.66	110.9	10.74	110.0	10.83	109.5	10.88	109.0	10.93	108.4	11.01	107.5	11.11
	15.8	**14.0**	119.1	10.82	118.4	10.90	117.6	11.01	117.2	11.06	116.7	11.12	116.1	11.20	115.3	11.31
	17.0	**15.0**	120.5	10.85	119.9	10.93	119.1	11.04	118.6	11.10	118.2	11.15	117.6	11.24	116.8	11.35
	23.0	**21.2**	129.8	11.02	129.2	11.11	128.4	11.24	128.0	11.30	127.6	11.36	127.0	11.45	126.2	11.58
	26.6	**24.8**	135.4	11.12	134.8	11.22	134.0	11.35	133.6	11.41	133.2	11.48	132.6	11.58	131.8	11.71
	30.2	**28.4**	141.1	11.22	140.5	11.33	139.7	11.46	139.3	11.53	138.9	11.60	138.3	11.70	137.5	11.84
	32.0	**30.2**	144.1	11.27	143.4	11.38	142.6	11.52	142.2	11.59	141.8	11.66	141.2	11.76	140.4	11.90
	35.6	**33.8**	150.0	11.37	149.4	11.48	148.5	11.63	148.1	11.70	147.7	11.77	147.0	11.88	146.2	12.03
	41.0	**39.2**	159.1	11.52	158.4	11.64	157.5	11.79	157.1	11.86	156.6	11.94	155.9	12.06	154.9	12.21
	47.0	**43.0**	165.6	11.63	164.9	11.74	163.9	11.90	163.4	11.98	162.9	12.06	162.2	12.18	161.2	12.34
	48.2	**46.0**	170.9	11.71	170.1	11.83	169.0	11.99	168.5	12.07	168.0	12.15	167.2	12.27	164.9	12.31
	53.6	**51.1**	179.8	11.84	178.9	11.97	177.7	12.13	177.2	12.22	176.6	12.30	175.7	12.43	164.9	11.66
	59.0	**56.3**	188.9	11.98	188.0	12.11	186.7	12.28	186.0	12.37	185.3	12.45	181.6	12.32	164.9	11.04
189.0 (140%)	-2.7	**-4.0**	95.7	10.31	94.7	10.37	93.5	10.44	92.9	10.48	92.3	10.51	91.4	10.57	90.3	10.64
	5.0	**3.2**	104.1	10.54	103.3	10.61	102.3	10.69	101.8	10.74	101.3	10.78	100.6	10.85	99.6	10.94
	10.4	**8.6**	111.1	10.71	110.4	10.78	109.5	10.88	109.1	10.93	108.6	10.98	108.0	11.06	107.1	11.16
	15.8	**14.0**	118.6	10.87	118.0	10.95	117.2	11.06	116.8	11.12	116.3	11.17	115.7	11.26	114.9	11.37
	17.0	**15.0**	120.1	10.90	119.5	10.99	118.6	11.10	118.2	11.15	117.8	11.21	117.2	11.29	116.4	11.41
	23.0	**21.2**	129.3	11.09	128.7	11.18	127.9	11.30	127.5	11.37	127.1	11.43	126.5	11.52	125.7	11.65
	26.6	**24.8**	134.9	11.20	134.3	11.29	133.5	11.42	133.1	11.49	132.7	11.55	132.1	11.65	131.3	11.78
	30.2	**28.4**	140.6	11.31	140.0	11.41	139.2	11.54	138.8	11.61	138.4	11.68	137.8	11.78	137.0	11.92
	32.0	**30.2**	143.6	11.36	142.9	11.46	142.1	11.60	141.7	11.67	141.3	11.74	140.7	11.84	139.9	11.98
	35.6	**33.8**	149.5	11.47	148.8	11.57	148.0	11.72	147.6	11.79	147.1	11.86	146.5	11.97	145.6	12.12
	41.0	**39.2**	158.5	11.62	157.8	11.74	156.9	11.89	156.4	11.97	156.0	12.04	155.3	12.16	153.9	12.27
	47.0	**43.0**	165.0	11.74	164.2	11.85	163.2	12.01	162.7	12.09	162.2	12.17	161.5	12.29	153.9	11.77
	48.2	**46.0**	170.1	11.82	169.3	11.94	168.3	12.10	167.7	12.19	167.2	12.27	166.4	12.39	153.9	11.39
	53.6	**51.1**	178.9	11.97	178.0	12.09	176.9	12.26	176.3	12.34	175.7	12.43	169.5	12.03	153.9	10.79
	59.0	**56.3**	187.9	12.11	186.9	12.24	185.6	12.42	184.9	12.50	181.2	12.29	169.5	11.39	153.9	10.22
175.5 (130%)	-2.7	**-4.0**	95.1	10.35	94.2	10.40	93.0	10.47	92.4	10.51	91.8	10.55	90.9	10.60	89.8	10.68
	5.0	**3.2**	103.6	10.59	102.8	10.65	101.8	10.74	101.3	10.78	100.8	10.83	100.1	10.89	99.1	10.98
	10.4	**8.6**	110.6	10.76	109.9	10.84	109.0	10.93	108.6	10.98	108.2	11.03	107.5	11.11	106.6	11.21
	15.8	**14.0**	118.1	10.94	117.5	11.02	116.7	11.13	116.3	11.18	115.9	11.24	115.2	11.32	114.4	11.43
	17.0	**15.0**	119.6	10.97	119.0	11.05	118.2	11.16	117.7	11.22	117.3	11.27	116.7	11.36	115.9	11.47
	23.0	**21.2**	128.8	11.17	128.2	11.26	127.4	11.38	127.0	11.44	126.6	11.51	126.0	11.60	125.3	11.72
	26.6	**24.8**	134.4	11.28	133.8	11.38	133.0	11.51	132.6	11.57	132.2	11.64	131.6	11.74	130.8	11.87
	30.2	**28.4**	140.1	11.40	139.5	11.50	138.7	11.63	138.3	11.70	137.9	11.77	137.3	11.87	136.4	12.01
	32.0	**30.2**	143.0	11.46	142.4	11.56	141.6	11.70	141.1	11.77	140.7	11.84	140.1	11.94	139.3	12.08
	35.6	**33.8**	148.8	11.57	148.2	11.68	147.4	11.82	146.9	11.89	146.5	11.97	145.9	12.08	142.9	11.99
	41.0	**39.2**	157.8	11.74	157.1	11.86	156.2	12.01	155.7	12.08	155.2	12.16	154.5	12.28	142.9	11.30
	47.0	**43.0**	164.2	11.86	163.4	11.98	162.4	12.14	161.9	12.22	161.4	12.29	157.4	12.07	142.9	10.84
	48.2	**46.0**	169.2	11.96	168.5	12.08	167.4	12.24	166.9	12.32	166.3	12.40	157.4	11.68	142.9	10.50
	53.6	**51.1**	177.9	12.11	177.0	12.24	175.8	12.41	175.2	12.49	168.3	11.93	157.4	11.07	142.9	9.94
	59.0	**56.3**	186.7	12.27	185.7	12.40	182.8	12.41	175.5	11.85	168.3	11.29	157.4	10.47	142.9	9.42
162.0 (120%)	-2.7	**-4.0**	94.4	10.39	93.5	10.44	92.4	10.51	91.8	10.55	91.2	10.59	90.3	10.64	89.2	10.72
	5.0	**3.2**	103.0	10.64	102.2	10.70	101.3	10.79	100.8	10.83	100.3	10.88	99.5	10.95	98.6	11.03
	10.4	**8.6**	110.1	10.82	109.4	10.90	108.5	11.00	108.0	11.05	107.6	11.09	106.9	11.17	106.1	11.27
	15.8	**14.0**	117.6	11.01	117.0	11.09	116.1	11.20	115.7	11.26	115.3	11.31	114.7	11.39	113.9	11.50
	17.0	**15.0**	119.0	11.04	118.4	11.13	117.6	11.24	117.2	11.29	116.8	11.35	116.2	11.43	115.4	11.55
	23.0	**21.2**	128.2	11.26	127.6	11.35	126.9	11.47	126.5	11.53	126.1	11.60	125.5	11.69	124.7	11.81
	26.6	**24.8**	133.8	11.38	133.2	11.48	132.4	11.61	132.0	11.67	131.6	11.74	131.0	11.84	130.2	11.97
	30.2	**28.4**	139.4	11.51	138.8	11.61	138.0	11.74	137.6	11.81	137.2	11.88	136.6	11.98	131.9	11.67
	32.0	**30.2**	142.3	11.57	141.7	11.67	140.9	11.81	140.5	11.88	140.1	11.95	139.4	12.05	131.9	11.44
	35.6	**33.8**	148.1	11.69	147.5	11.80	146.6	11.94	146.2	12.02	145.8	12.09	145.1	12.20	131.9	10.98
	41.0	**39.2**	157.0	11.88	156.3	11.99	155.3	12.14	154.9	12.22	154.4	12.30	145.3	11.51	131.9	10.35
	47.0	**43.0**	163.2	12.01	162.5	12.13	161.5	12.28	161.0	12.36	155.3	11.89	145.3	11.04	131.9	9.93
	48.2	**46.0**	168.2	12.11	167.4	12.23	166.4	12.39	162.0	12.07	155.3	11.51	145.3	10.69	131.9	9.62
	53.6	**51.1**	176.7	12.28	175.8	12.41	168.7	11.97	162.0	11.43	155.3	10.91	145.3	10.13	131.9	9.12
	59.0	**56.3**	185.3	12.46	182.1	12.36	168.7	11.33	162.0	10.82	155.3	10.32	145.3	9.59	131.9	8.63
148.5 (110%)	-2.7	**-4.0**	93.7	10.43	92.8	10.49	91.6	10.56	91.0	10.59	90.5	10.63	89.6	10.69	88.5	10.76
	5.0	**3.2**	102.3	10.70	101.6	10.76	100.6	10.85	100.1	10.89	99.6	10.94	98.9	11.01	97.9	11.09
	10.4	**8.6**	109.4	10.90	108.7	10.97	107.8	11.07	107.4	11.12	107.0	11.17	106.3	11.24	105.4	11.34
	15.8	**14.0**	116.9	11.10	116.3	11.18	115.5	11.29	115.1	11.34	114.7	11.40	114.1	11.48	113.3	11.59
	17.0	**15.0**	118.4	11.13	117.8	11.22	117.0	11.33	116.6	11.38	116.1	11.44	115.5	11.52	114.7	11.64
	23.0	**21.2**	127.6	11.36	127.0	11.46	126.2	11.58	125.8	11.64	125.4	11.70	124.8	11.79	120.9	11.54
	26.6	**24.8**	133.1	11.50	132.5	11.59	131.7	11.72	131.3	11.79	130.9	11.85	130.3	11.95	120.9	11.07
	30.2	**28.4**	138.7	11.63	138.1	11.73	137.3	11.87	136.9	11.94	136.5	12.00	133.2	11.79	120.9	10.62
	32.0	**30.2**	141.5	11.70	140.9	11.80	140.1	11.94	139.7	12.01	139.3	12.08	133.2	11.55	120.9	10.41
	35.6	**33.8**	147.3	11.84	146.6	11.94	145.8	12.09	145.4	12.16	142.4	11.95	133.2	11.10	120.9	10.00
	41.0	**39.2**	156.0	12.04	155.3	12.15	154.4	12.30	148.5	11.79	142.4	11.25	133.2	10.46	120.9	9.43
	47.0	**43.0**	162.2	12.18	161.4	12.30	154.6	11.84	148.5	11.31	142.4	10.80	133.2	10.04	120.9	9.05
	48.2	**46.0**	167.0	12.29	166.2	12.41	154.6	11.46	148.5	10.95	142.4	10.46	133.2	9.72	120.9	8.76
	53.6	**51.1**	175.3	12.48	166.9	11.82	154.6	10.85	148.5	10.38	142.4	9.91	133.2	9.21	120.9	8.31
	59.0	**56.3**	176.1	11.90	166.9	11.19	154.6	10.27	148.5	9.82	142.4	9.38	133.2	8.72	120.9	7.87
135.0 (100%)	-2.7	**-4.0**	92.8	10.49	91.9	10.54	90.8	10.61	90.2	10.65	89.6	10.68	88.8	10.74	87.7	10.81
	5.0	**3.2**	101.5	10.77	100.8	10.83	99.8	10.92	99.3	10.97	98.8	11.01	98.1	11.08	97.2	11.17
	10.4	**8.6**	108.6	10.98	107.9	11.06	107.1	11.15	106.6	11.20	106.2	11.25	105.6	11.33	104.7	11.43
	15.8	**14.0**	116.1	11.20	115.5	11.28	114.7	11.39	114.3	11.44	113.9	11.50	113.3	11.58	109.9	11.36
	17.0	**15.0**	117.6	11.24	117.0	11.32	116.2	11.43	115.8	11.49	115.4	11.54	114.8	11.63	109.9	11.22
	23.0	**21.2**	126.7	11.49	126.2	11.58	125.4	11.70	125.0	11.77	124.6	11.83	121.1	11.56	109.9	10.42
	26.6	**24.8**	132.2	11.64	131.6	11.73	130.8	11.86	130.5	11.93	129.4	11.92	121.1	11.08	109.9	10.00
	30.2	**28.4**	137.8	11.78	137.2	11.89	136.4	12.02	135.0	11.97	129.4	11.43	121.1	10.64	109.9	9.60
	32.0	**30.2**	140.6	11.86	140.0	11.96	139.2	12.10	135.0	11.73	129.4	11.20	121.1	10.42	109.9	9.41
	35.6	**33.8**	146.3	12.01	145.6	12.11	140.6	11.78	135.0	11.27	129.4	10.76	121.1	10.01	109.9	9.04
	41.0	**39.2**	154.8	12.23	151.7	12.08	140.6	11.10	135.0	10.62	129.4	10.14	121.1	9.44	109.9	8.52
	47.0	**43.0**	160.1	12.31	151.7	11.59	140.6	10.65	135.0	10.19	129.4	9.74	121.1	9.06	109.9	8.18
	48.2	**46.0**	160.1	11.91	151.7	11.22	140.6	10.31	135.0	9.87	129.4	9.43	121.1	8.78	109.9	7.93
	53.6	**51.1**	160.1	11.28	151.7	10.63	140.6	9.77	135.0	9.35	129.4	8.93	121.1	8.32	109.9	7.52
	59.0	**56.3**	160.1	10.68	151.7	10.06	140.6	9.25	135.0	8.85	129.4	8.46	121.1	7.88	109.9	7.12
121.5 (90%)	-2.7	**-4.0**	91.7	10.55	90.9	10.60	89.8	10.68	89.2	10.71	88.6	10.75	87.8	10.81	86.7	10.88
	5.0	**3.2**	100.5	10.86	99.8	10.92	98.8	11.01	98.4	11.05	97.9	11.10	97.2	11.16	96.3	11.25
	10.4	**8.6**	107.7	11.09	107.0	11.16	106.2	11.26	105.7	11.31	105.3	11.36	104.7	11.43	98.9	10.86
	15.8	**14.0**	115.2	11.32	114.6	11.40	113.8	11.51	113.4	11.57	113.0	11.62	108.9	11.25	98.9	10.16
	17.0	**15.0**	116.7	11.37	116.1	11.45	115.3	11.56	114.9	11.62	114.5	11.67	108.9	11.11	98.9	10.04
	23.0	**21.2**	125.8	11.64	125.2	11.73	124.4	11.86	121.5	11.60	116.5	11.09	108.9	10.33	98.9	9.33
	26.6	**24.8**	131.2	11.80	130.6	11.90	126.5	11.62	121.5	11.13	116.5	10.64	108.9	9.90	98.9	8.95
	30.2	**28.4**	136.7	11.97	136.1	12.07	126.5	11.16	121.5	10.68	116.5	10.21	108.9	9.51	98.9	8.60
	32.0	**30.2**	139.5	12.05	136.6	11.88	126.5	10.93	121.5	10.47	116.5	10.00	108.9	9.32	98.9	8.43
	35.6	**33.8**	144.1	12.11	136.6	11.41	126.5	10.50	121.5	10.05	116.5	9.61	108.9	8.96	98.9	8.10
	41.0	**39.2**	144.1	11.40	136.6	10.75	126.5	9.90	121.5	9.48	116.5	9.06	108.9	8.45	98.9	7.64
	47.0	**43.0**	144.1	10.94	136.6	10.32	126.5	9.50	121.5	9.10	116.5	8.70	108.9	8.11	98.9	7.34
	48.2	**46.0**	144.1	10.60	136.6	9.99	126.5	9.20	121.5	8.81	116.5	8.43	108.9	7.86	98.9	7.11
	53.6	**51.1**	144.1	10.04	136.6	9.47	126.5	8.72	121.5	8.35	116.5	7.99	108.9	7.45	98.9	6.75
	59.0	**56.3**	144.1	9.50	136.6	8.96	126.5	8.26	121.5	7.91	116.5	7.57	108.9	7.06	98.9	6.40
108.0 (80%)	-2.7	**-4.0**	90.5	10.63	89.6	10.69	88.5	10.76	88.0	10.79	87.5	10.83	86.6	10.89	85.6	10.96
	5.0	**3.2**	99.3	10.96	98.6	11.03	97.7	11.12	97.2	11.16	96.8	11.20	96.1	11.27	87.9	10.29
	10.4	**8.6**	106.5	11.22	105.9	11.29	105.0	11.39	104.6	11.44	103.5	11.40	96.8	10.62	87.9	9.61
	15.8	**14.0**	114.1	11.48	113.5	11.56	112.5	11.64	108.0	11.15	103.5	10.66	96.8	9.94	87.9	8.99
	17.0	**15.0**	115.5	11.53	114.9	11.61	112.5	11.50	108.0	11.01	103.5	10.53	96.8	9.82	87.9	8.88
	23.0	**21.2**	124.6	11.83	121.4	11.59	112.5	10.68	108.0	10.23	103.5	9.79	96.8	9.13	87.9	8.26
	26.6	**24.8**	128.1	11.78	121.4	11.12	112.5	10.24	108.0	9.81	103.5	9.39	96.8	8.76	87.9	7.93
	30.2	**28.4**	128.1	11.31	121.4	10.67	112.5	9.83	108.0	9.42	103.5	9.02	96.8	8.41	87.9	7.62
	32.0	**30.2**	128.1	11.08	121.4	10.45	112.5	9.64	108.0	9.23	103.5	8.84	96.8	8.24	87.9	7.47
	35.6	**33.8**	128.1	10.64	121.4	10.04	112.5	9.26	108.0	8.87	103.5	8.49	96.8	7.92	87.9	7.18
	41.0	**39.2**	128.1	10.03	121.4	9.47	112.5	8.73	108.0	8.37	103.5	8.01	96.8	7.48	87.9	6.78
	47.0	**43.0**	128.1	9.63	121.4	9.09	112.5	8.38	108.0	8.04	103.5	7.69	96.8	7.18	87.9	6.52
	48.2	**46.0**	128.1	9.32	121.4	8.80	112.5	8.12	108.0	7.79	103.5	7.45	96.8	6.96	87.9	6.32
	53.6	**51.1**	128.1	8.83	121.4	8.34	112.5	7.70	108.0	7.38	103.5	7.07	96.8	6.60	87.9	5.99
	59.0	**56.3**	128.1	8.37	121.4	7.90	112.5	7.30	108.0	7.00	103.5	6.70	96.8	6.26	87.9	5.69
94.5 (70%)	-2.7	**-4.0**	88.9	10.73	88.1	10.79	87.0	10.86	86.5	10.90	86.0	10.93	84.7	10.91	76.9	9.88
	5.0	**3.2**	97.9	11.10	97.2	11.17	96.3	11.25	94.5	11.10	90.6	10.62	84.7	9.91	76.9	8.97
	10.4	**8.6**	105.1	11.38	104.5	11.46	98.4	10.80	94.5	10.35	90.6	9.91	84.7	9.25	76.9	8.38
	15.8	**14.0**	112.1	11.60	106.2	10.95	98.4	10.10	94.5	9.69	90.6	9.27	84.7	8.66	76.9	7.85
	17.0	**15.0**	112.1	11.45	106.2	10.82	98.4	9.98	94.5	9.57	90.6	9.16	84.7	8.55	76.9	7.76
	23.0	**21.2**	112.1	10.64	106.2	10.05	98.4	9.28	94.5	8.90	90.6	8.52	84.7	7.96	76.9	7.22
	26.6	**24.8**	112.1	10.21	106.2	9.64	98.4	8.90	94.5	8.54	90.6	8.18	84.7	7.64	76.9	6.94
	30.2	**28.4**	112.1	9.80	106.2	9.26	98.4	8.55	94.5	8.20	90.6	7.86	84.7	7.34	76.9	6.67
	32.0	**30.2**	112.1	9.60	106.2	9.07	98.4	8.38	94.5	8.04	90.6	7.70	84.7	7.20	76.9	6.54
	35.6	**33.8**	112.1	9.23	106.2	8.72	98.4	8.06	94.5	7.73	90.6	7.40	84.7	6.92	76.9	6.29
	41.0	**39.2**	112.1	8.70	106.2	8.22	98.4	7.60	94.5	7.29	90.6	6.99	84.7	6.54	76.9	5.94
	47.0	**43.0**	112.1	8.35	106.2	7.90	98.4	7.30	94.5	7.01	90.6	6.71	84.7	6.28	76.9	5.71
	48.2	**46.0**	112.1	8.09	106.2	7.65	98.4	7.08	94.5	6.79	90.6	6.51	84.7	6.09	76.9	5.54
	53.6	**51.1**	112.1	7.67	106.2	7.26	98.4	6.71	94.5	6.44	90.6	6.18	84.7	5.78	76.9	5.26
	59.0	**56.3**	112.1	7.27	106.2	6.88	98.4	6.36	94.5	6.11	90.6	5.86	84.7	5.48	76.9	5.00
81.0 (60%)	-2.7	**-4.0**	86.9	10.87	86.1	10.92	84.4	10.86	81.0	10.42	77.7	9.98	72.6	9.32	65.9	8.46
	5.0	**3.2**	96.0	11.28	91.0	10.67	84.4	9.86	81.0	9.46	77.7	9.06	72.6	8.47	65.9	7.69
	10.4	**8.6**	96.1	10.53	91.0	9.96	84.4	9.21	81.0	8.83	77.7	8.46	72.6	7.91	65.9	7.19
	15.8	**14.0**	96.1	9.85	91.0	9.32	84.4	8.62	81.0	8.27	77.7	7.93	72.6	7.41	65.9	6.74
	17.0	**15.0**	96.1	9.74	91.0	9.21	84.4	8.52	81.0	8.17	77.7	7.83	72.6	7.33	65.9	6.66
	23.0	**21.2**	96.1	9.05	91.0	8.56	84.4	7.92	81.0	7.60	77.7	7.29	72.6	6.82	65.9	6.21
	26.6	**24.8**	96.1	8.69	91.0	8.22	84.4	7.60	81.0	7.30	77.7	7.00	72.6	6.55	65.9	5.96
	30.2	**28.4**	96.1	8.34	91.0	7.89	84.4	7.31	81.0	7.02	77.7	6.73	72.6	6.30	65.9	5.74
	32.0	**30.2**	96.1	8.18	91.0	7.74	84.4	7.16	81.0	6.88	77.7	6.60	72.6	6.18	65.9	5.63
	35.6	**33.8**	96.1	7.86	91.0	7.44	84.4	6.89	81.0	6.62	77.7	6.35	72.6	5.94	65.9	5.42
	41.0	**39.2**	96.1	7.42	91.0	7.02	84.4	6.51	81.0	6.25	77.7	6.00	72.6	5.62	65.9	5.12
	47.0	**43.0**	96.1	7.12	91.0	6.75	84.4	6.25	81.0	6.01	77.7	5.76	72.6	5.40	65.9	4.93
	48.2	**46.0**	96.1	6.90	91.0	6.54	84.4	6.06	81.0	5.82	77.7	5.59	72.6	5.24	65.9	4.78
	53.6	**51.1**	96.1	6.55	91.0	6.21	84.4	5.75	81.0	5.53	77.7	5.31	72.6	4.98	65.9	4.55
	59.0	**56.3**	96.1	6.21	91.0	5.89	84.4	5.46	81.0	5.25	77.7	5.04	72.6	4.73	65.9	4.32
67.5 (50%)	-2.7	**-4.0**	80.1	10.61	75.8	10.04	70.3	9.30	67.5	8.93	64.7	8.56	60.5	8.01	55.0	7.29
	5.0	**3.2**	80.1	9.66	75.8	9.14	70.3	8.47	67.5	8.14	64.7	7.81	60.5	7.30	55.0	6.65
	10.4	**8.6**	80.1	9.03	75.8	8.55	70.3	7.92	67.5	7.61	64.7	7.31	60.5	6.84	55.0	6.23
	15.8	**14.0**	80.1	8.47	75.8	8.02	70.3	7.43	67.5	7.15	64.7	6.86	60.5	6.42	55.0	5.86
	17.0	**15.0**	80.1	8.36	75.8	7.92	70.3	7.34	67.5	7.06	64.7	6.77	60.5	6.34	55.0	5.79
	23.0	**21.2**	80.1	7.80	75.8	7.38	70.3	6.85	67.5	6.59	64.7	6.33	60.5	5.92	55.0	5.41
	26.6	**24.8**	80.1	7.49	75.8	7.10	70.3	6.59	67.5	6.33	64.7	6.08	60.5	5.70	55.0	5.20
	30.2	**28.4**	80.1	7.21	75.8	6.82	70.3	6.34	67.5	6.09	64.7	5.85	60.5	5.48	55.0	5.01
	32.0	**30.2**	80.1	7.07	75.8	6.69	70.3	6.22	67.5	5.98	64.7	5.74	60.5	5.38	55.0	4.92
	35.6	**33.8**	80.1	6.80	75.8	6.44	70.3	5.98	67.5	5.76	64.7	5.53	60.5	5.19	55.0	4.74
	41.0	**39.2**	80.1	6.43	75.8	6.09	70.3	5.66	67.5	5.45	64.7	5.23	60.5	4.91	55.0	4.49
	47.0	**43.0**	80.1	6.18	75.8	5.86	70.3	5.45	67.5	5.24	64.7	5.04	60.5	4.73	55.0	4.33
	48.2	**46.0**	80.1	5.99	75.8	5.68	70.3	5.28	67.5	5.09	64.7	4.89	60.5	4.59	55.0	4.20
	53.6	**51.1**	80.1	5.70	75.8	5.40	70.3	5.03	67.5	4.84	64.7	4.65	60.5	4.37	55.0	4.00
	59.0	**56.3**	80.1	5.41	75.8	5.13	70.3	4.78	67.5	4.60	64.7	4.42	60.5	4.15	55.0	3.81

TC : Total Capacity kBtu/h.

IP : Input Power kW (Compressor + Outdoor fan motor).

The data is based on the following conditions. Pipe length : 25ft. (7.5m) , Height difference : 0ft. (0m)

HEATING CAPACITY in kBtu/h

■ MODEL : AOUA144RLBVG1

Total rated capacity of indoor unit	Outdoor temp.		Indoor temperature °FDB													
			61		64		68		70		72		75		79	
	°FDB	°FWB	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
243.0 (150%)	-2.7	**-4.0**	108.9	12.05	108.4	12.15	107.8	12.28	107.5	12.35	107.2	12.42	106.7	12.52	106.1	12.65
	5.0	**3.2**	121.8	12.42	121.4	12.54	120.7	12.69	120.4	12.77	120.0	12.85	119.5	12.96	118.9	13.12
	10.4	**8.6**	131.9	12.69	131.3	12.82	130.6	12.99	130.3	13.08	129.9	13.16	129.4	13.29	128.7	13.46
	15.8	**14.0**	142.1	12.95	141.5	13.09	140.7	13.28	140.3	13.37	140.0	13.47	139.4	13.61	138.6	13.80
	17.0	**15.0**	144.0	13.00	143.4	13.14	142.6	13.33	142.2	13.43	141.8	13.52	141.2	13.67	140.4	13.86
	23.0	**21.2**	156.0	13.29	155.3	13.45	154.4	13.65	154.0	13.76	153.6	13.86	152.9	14.01	152.0	14.22
	26.6	**24.8**	163.0	13.46	162.3	13.62	161.4	13.83	160.9	13.94	160.4	14.05	159.7	14.21	158.7	14.43
	30.2	**28.4**	170.1	13.62	169.4	13.79	168.4	14.01	167.9	14.12	167.3	14.23	166.6	14.40	165.5	14.63
	32.0	**30.2**	173.7	13.70	172.9	13.87	171.9	14.10	171.4	14.21	170.8	14.32	170.0	14.50	168.9	14.72
	35.6	**33.8**	180.9	13.86	180.0	14.03	178.9	14.27	178.3	14.38	177.8	14.50	176.9	14.68	175.8	14.92
	41.0	**39.2**	191.7	14.08	190.8	14.27	189.5	14.51	188.9	14.63	188.3	14.76	187.3	14.94	186.0	15.19
	47.0	**43.0**	199.4	14.23	198.3	14.42	197.0	14.68	196.3	14.80	195.6	14.93	194.6	15.12	193.2	15.38
	48.2	**46.0**	205.4	14.35	204.4	14.55	202.9	14.80	202.2	14.93	201.5	15.06	200.4	15.26	197.8	15.40
	53.6	**51.1**	215.7	14.54	214.5	14.74	213.0	15.01	212.2	15.14	211.4	15.28	210.2	15.48	197.8	14.64
	59.0	**56.3**	226.2	14.73	224.9	14.93	223.2	15.21	222.3	15.34	221.5	15.48	217.9	15.46	197.8	13.90
226.8 (140%)	-2.7	**-4.0**	108.6	12.10	108.2	12.20	107.6	12.33	107.3	12.40	106.9	12.47	106.5	12.57	105.9	12.70
	5.0	**3.2**	121.6	12.49	121.1	12.60	120.4	12.76	120.1	12.84	119.8	12.91	119.3	13.03	118.6	13.19
	10.4	**8.6**	131.5	12.77	131.0	12.90	130.3	13.07	129.9	13.15	129.6	13.24	129.0	13.37	128.3	13.54
	15.8	**14.0**	141.7	13.05	141.1	13.19	140.3	13.37	140.0	13.47	139.6	13.56	139.0	13.70	138.2	13.89
	17.0	**15.0**	143.6	13.10	143.0	13.24	142.2	13.43	141.8	13.52	141.4	13.62	140.8	13.76	140.0	13.95
	23.0	**21.2**	155.5	13.41	154.8	13.56	154.0	13.76	153.5	13.87	153.1	13.97	152.4	14.13	151.5	14.33
	26.6	**24.8**	162.5	13.58	161.8	13.74	160.8	13.96	160.4	14.06	159.9	14.17	159.2	14.33	158.2	14.55
	30.2	**28.4**	169.5	13.75	168.8	13.92	167.8	14.14	167.3	14.25	166.7	14.37	166.0	14.53	164.9	14.76
	32.0	**30.2**	173.1	13.84	172.3	14.01	171.2	14.23	170.7	14.35	170.2	14.46	169.4	14.63	168.3	14.86
	35.6	**33.8**	180.2	14.00	179.3	14.18	178.2	14.41	177.6	14.53	177.1	14.65	176.2	14.83	175.0	15.06
	41.0	**39.2**	190.9	14.25	189.9	14.43	188.7	14.68	188.0	14.80	187.4	14.92	186.4	15.11	184.6	15.30
	47.0	**43.0**	198.4	14.41	197.4	14.60	196.1	14.85	195.4	14.98	194.7	15.11	193.7	15.30	184.6	14.73
	48.2	**46.0**	204.4	14.54	203.3	14.73	201.9	14.99	201.2	15.12	200.4	15.25	199.4	15.44	184.6	14.29
	53.6	**51.1**	214.5	14.75	213.3	14.94	211.8	15.21	211.0	15.34	210.2	15.48	203.3	15.09	184.6	13.58
	59.0	**56.3**	224.8	14.94	223.6	15.15	221.8	15.42	221.0	15.56	217.4	15.42	203.3	14.33	184.6	12.90
210.6 (130%)	-2.7	**-4.0**	108.4	12.16	107.9	12.26	107.3	12.39	107.0	12.46	106.7	12.53	106.2	12.63	105.6	12.76
	5.0	**3.2**	121.2	12.56	120.7	12.68	120.1	12.84	119.8	12.91	119.4	12.99	118.9	13.11	118.3	13.26
	10.4	**8.6**	131.1	12.86	130.6	12.99	129.9	13.16	129.6	13.25	129.2	13.33	128.7	13.46	127.9	13.63
	15.8	**14.0**	141.2	13.15	140.7	13.29	139.9	13.48	139.5	13.57	139.1	13.67	138.5	13.81	137.7	14.00
	17.0	**15.0**	143.2	13.21	142.6	13.35	141.8	13.54	141.4	13.63	141.0	13.73	140.4	13.87	139.6	14.06
	23.0	**21.2**	154.9	13.54	154.3	13.69	153.4	13.89	153.0	14.00	152.5	14.10	151.8	14.26	150.9	14.46
	26.6	**24.8**	161.9	13.72	161.2	13.88	160.2	14.10	159.7	14.20	159.3	14.31	158.5	14.47	157.6	14.69
	30.2	**28.4**	168.8	13.91	168.1	14.07	167.1	14.30	166.5	14.41	166.0	14.52	165.3	14.69	164.2	14.91
	32.0	**30.2**	172.3	14.00	171.5	14.17	170.5	14.39	170.0	14.51	169.4	14.62	168.6	14.79	167.6	15.02
	35.6	**33.8**	179.3	14.18	178.5	14.35	177.4	14.59	176.8	14.70	176.2	14.82	175.4	15.00	171.4	14.92
	41.0	**39.2**	189.9	14.44	189.0	14.62	187.7	14.87	187.1	14.99	186.4	15.11	185.5	15.30	171.4	14.13
	47.0	**43.0**	197.3	14.62	196.3	14.80	195.0	15.06	194.3	15.18	193.6	15.31	188.8	15.09	171.4	13.60
	48.2	**46.0**	203.2	14.75	202.1	14.95	200.7	15.20	200.0	15.33	199.3	15.46	188.8	14.64	171.4	13.20
	53.6	**51.1**	213.2	14.98	212.0	15.18	210.4	15.44	209.6	15.57	201.9	14.97	188.8	13.92	171.4	12.55
	59.0	**56.3**	223.3	15.19	222.0	15.40	219.3	15.57	210.6	14.89	201.9	14.22	188.8	13.22	171.4	11.92
194.4 (120%)	-2.7	**-4.0**	108.0	12.23	107.6	12.33	107.0	12.46	106.7	12.53	106.4	12.59	105.9	12.69	105.3	12.83
	5.0	**3.2**	120.9	12.65	120.4	12.77	119.7	12.92	119.4	13.00	119.1	13.08	118.6	13.20	117.9	13.35
	10.4	**8.6**	130.7	12.97	130.2	13.10	129.5	13.27	129.1	13.35	128.8	13.44	128.2	13.57	127.5	13.74
	15.8	**14.0**	140.7	13.28	140.1	13.42	139.4	13.60	139.0	13.70	138.6	13.79	138.0	13.93	137.2	14.12
	17.0	**15.0**	142.6	13.34	142.0	13.48	141.2	13.67	140.8	13.76	140.4	13.86	139.8	14.00	139.0	14.19
	23.0	**21.2**	154.3	13.69	153.6	13.84	152.7	14.05	152.3	14.15	151.9	14.25	151.2	14.41	150.3	14.61
	26.6	**24.8**	161.1	13.89	160.4	14.05	159.5	14.26	159.0	14.37	158.5	14.47	157.8	14.64	156.8	14.85
	30.2	**28.4**	168.0	14.09	167.3	14.25	166.2	14.47	165.7	14.58	165.2	14.70	164.4	14.86	158.3	14.48
	32.0	**30.2**	171.5	14.18	170.7	14.35	169.6	14.58	169.1	14.69	168.6	14.80	167.8	14.97	158.3	14.21
	35.6	**33.8**	178.4	14.38	177.5	14.55	176.4	14.78	175.8	14.90	175.3	15.02	174.3	15.18	158.3	13.70
	41.0	**39.2**	188.8	14.66	187.8	14.84	186.6	15.08	185.9	15.21	185.3	15.33	174.3	14.38	158.3	12.98
	47.0	**43.0**	196.1	14.85	195.0	15.04	193.7	15.29	193.0	15.42	186.4	14.88	174.3	13.84	158.3	12.50
	48.2	**46.0**	201.8	15.00	200.8	15.19	199.3	15.45	194.4	15.11	186.4	14.44	174.3	13.44	158.3	12.13
	53.6	**51.1**	211.6	15.24	210.4	15.44	202.4	15.01	194.4	14.36	186.4	13.72	174.3	12.77	158.3	11.54
	59.0	**56.3**	221.4	15.48	218.5	15.50	202.4	14.25	194.4	13.64	186.4	13.03	174.3	12.13	158.3	10.96
178.2 (110%)	-2.7	**-4.0**	107.7	12.31	107.2	12.41	106.6	12.54	106.3	12.61	106.0	12.67	105.5	12.77	104.9	12.91
	5.0	**3.2**	120.4	12.76	119.9	12.87	119.3	13.03	118.9	13.11	118.6	13.18	118.1	13.30	117.5	13.46
	10.4	**8.6**	130.2	13.09	129.7	13.22	129.0	13.39	128.6	13.48	128.2	13.56	127.7	13.69	127.0	13.86
	15.8	**14.0**	140.1	13.43	139.5	13.57	138.8	13.75	138.4	13.84	138.0	13.94	137.4	14.08	136.6	14.27
	17.0	**15.0**	142.0	13.49	141.4	13.63	140.6	13.82	140.2	13.91	139.8	14.01	139.2	14.15	138.4	14.34
	23.0	**21.2**	153.5	13.86	152.9	14.02	152.0	14.22	151.5	14.32	151.1	14.43	150.4	14.58	145.1	14.23
	26.6	**24.8**	160.3	14.08	159.6	14.24	158.6	14.45	158.2	14.56	157.7	14.67	156.9	14.83	145.1	13.71
	30.2	**28.4**	167.1	14.29	166.3	14.46	165.3	14.68	164.8	14.79	164.3	14.90	159.8	14.62	145.1	13.21
	32.0	**30.2**	170.5	14.40	169.7	14.57	168.6	14.79	168.1	14.91	167.6	15.02	159.8	14.36	145.1	12.97
	35.6	**33.8**	177.3	14.61	176.4	14.78	175.3	15.02	174.7	15.13	170.8	14.86	159.8	13.84	145.1	12.51
	41.0	**39.2**	187.4	14.92	186.5	15.10	185.2	15.34	178.2	14.72	170.8	14.08	159.8	13.11	145.1	11.85
	47.0	**43.0**	194.6	15.13	193.6	15.31	185.6	14.81	178.2	14.18	170.8	13.55	159.8	12.63	145.1	11.42
	48.2	**46.0**	200.2	15.29	199.1	15.48	185.6	14.37	178.2	13.76	170.8	13.15	159.8	12.25	145.1	11.08
	53.6	**51.1**	209.7	15.56	200.3	14.84	185.6	13.66	178.2	13.08	170.8	12.51	159.8	11.65	145.1	10.54
	59.0	**56.3**	211.3	14.95	200.3	14.09	185.6	12.97	178.2	12.42	170.8	11.88	159.8	11.07	145.1	10.02

Total rated capacity of indoor unit	Outdoor temp.		Indoor temperature °FDB													
			61		64		68		70		72		75		79	
	°FDB	°FWB	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
162.0 (100%)	-2.7	**-4.0**	107.2	12.41	106.8	12.50	106.2	12.64	105.9	12.70	105.6	12.77	105.1	12.87	104.5	13.00
	5.0	**3.2**	119.9	12.88	119.4	13.00	118.7	13.15	118.4	13.23	118.1	13.31	117.6	13.43	116.9	13.58
	10.4	**8.6**	129.6	13.24	129.0	13.37	128.3	13.54	128.0	13.63	127.6	13.71	127.1	13.84	126.4	14.01
	15.8	**14.0**	139.4	13.60	138.8	13.74	138.0	13.93	137.6	14.02	137.3	14.11	136.7	14.25	131.9	13.91
	17.0	**15.0**	141.2	13.67	140.6	13.81	139.9	14.00	139.5	14.09	139.1	14.19	138.5	14.33	131.9	13.76
	23.0	**21.2**	152.6	14.08	152.0	14.23	151.1	14.43	150.6	14.53	150.2	14.64	145.3	14.25	131.9	12.89
	26.6	**24.8**	159.3	14.31	158.6	14.47	157.6	14.68	157.1	14.79	155.3	14.73	145.3	13.73	131.9	12.42
	30.2	**28.4**	165.9	14.54	165.2	14.71	164.1	14.93	162.0	14.84	155.3	14.19	145.3	13.23	131.9	11.97
	32.0	**30.2**	169.3	14.66	168.5	14.83	167.4	15.05	162.0	14.57	155.3	13.93	145.3	12.99	131.9	11.76
	35.6	**33.8**	175.9	14.89	175.1	15.06	168.7	14.66	162.0	14.05	155.3	13.44	145.3	12.53	131.9	11.34
	41.0	**39.2**	185.9	15.22	182.1	15.07	168.7	13.89	162.0	13.30	155.3	12.73	145.3	11.87	131.9	10.75
	47.0	**43.0**	192.1	15.37	182.1	14.51	168.7	13.37	162.0	12.81	155.3	12.26	145.3	11.43	131.9	10.35
	48.2	**46.0**	192.1	14.92	182.1	14.08	168.7	12.98	162.0	12.43	155.3	11.90	145.3	11.10	131.9	10.05
	53.6	**51.1**	192.1	14.18	182.1	13.38	168.7	12.34	162.0	11.82	155.3	11.31	145.3	10.56	131.9	9.56
	59.0	**56.3**	192.1	13.47	182.1	12.71	168.7	11.72	162.0	11.23	155.3	10.75	145.3	10.03	131.9	9.09
145.8 (90%)	-2.7	**-4.0**	106.7	12.52	106.2	12.62	105.6	12.75	105.3	12.82	105.0	12.88	104.6	12.98	104.0	13.12
	5.0	**3.2**	119.2	13.04	118.7	13.15	118.1	13.31	117.8	13.38	117.4	13.46	116.9	13.58	116.3	13.73
	10.4	**8.6**	128.8	13.42	128.3	13.55	127.6	13.72	127.2	13.81	126.9	13.89	126.3	14.02	118.7	13.24
	15.8	**14.0**	138.5	13.81	137.9	13.95	137.1	14.14	136.8	14.23	136.4	14.32	130.7	13.79	118.7	12.49
	17.0	**15.0**	140.3	13.89	139.7	14.03	138.9	14.22	138.5	14.31	138.1	14.40	130.7	13.64	118.7	12.35
	23.0	**21.2**	151.5	14.33	150.8	14.48	150.0	14.69	145.8	14.31	139.8	13.69	130.7	12.78	118.7	11.58
	26.6	**24.8**	158.0	14.59	157.3	14.75	151.8	14.38	145.8	13.78	139.8	13.19	130.7	12.31	118.7	11.16
	30.2	**28.4**	164.5	14.84	163.8	15.01	151.8	13.86	145.8	13.28	139.8	12.71	130.7	11.87	118.7	10.76
	32.0	**30.2**	167.8	14.97	163.9	14.74	151.8	13.61	145.8	13.04	139.8	12.48	130.7	11.65	118.7	10.57
	35.6	**33.8**	172.9	15.05	163.9	14.22	151.8	13.12	145.8	12.58	139.8	12.04	130.7	11.24	118.7	10.19
	41.0	**39.2**	172.9	14.26	163.9	13.47	151.8	12.43	145.8	11.92	139.8	11.41	130.7	10.65	118.7	9.66
	47.0	**43.0**	172.9	13.73	163.9	12.96	151.8	11.97	145.8	11.48	139.8	10.99	130.7	10.26	118.7	9.31
	48.2	**46.0**	172.9	13.32	163.9	12.58	151.8	11.62	145.8	11.14	139.8	10.67	130.7	9.96	118.7	9.04
	53.6	**51.1**	172.9	12.67	163.9	11.97	151.8	11.05	145.8	10.60	139.8	10.15	130.7	9.48	118.7	8.61
	59.0	**56.3**	172.9	12.03	163.9	11.37	151.8	10.50	145.8	10.07	139.8	9.64	130.7	9.01	118.7	8.18
129.6 (80%)	-2.7	**-4.0**	106.0	12.67	105.6	12.76	105.0	12.90	104.7	12.96	104.4	13.03	103.9	13.13	103.3	13.26
	5.0	**3.2**	118.4	13.23	117.9	13.34	117.3	13.50	117.0	13.57	116.6	13.65	116.2	13.77	105.5	12.48
	10.4	**8.6**	127.9	13.65	127.4	13.78	126.6	13.95	126.3	14.03	124.3	13.88	116.2	12.96	105.5	11.75
	15.8	**14.0**	137.4	14.08	136.8	14.22	135.0	14.25	129.6	13.67	124.3	13.08	116.2	12.22	105.5	11.09
	17.0	**15.0**	139.2	14.16	138.6	14.30	135.0	14.10	129.6	13.52	124.3	12.94	116.2	12.09	105.5	10.97
	23.0	**21.2**	150.1	14.65	145.7	14.29	135.0	13.20	129.6	12.66	124.3	12.13	116.2	11.33	105.5	10.28
	26.6	**24.8**	153.7	14.57	145.7	13.77	135.0	12.72	129.6	12.20	124.3	11.69	116.2	10.92	105.5	9.92
	30.2	**28.4**	153.7	14.04	145.7	13.27	135.0	12.26	129.6	11.76	124.3	11.27	116.2	10.53	105.5	9.56
	32.0	**30.2**	153.7	13.78	145.7	13.03	135.0	12.04	129.6	11.55	124.3	11.07	116.2	10.34	105.5	9.39
	35.6	**33.8**	153.7	13.29	145.7	12.56	135.0	11.61	129.6	11.14	124.3	10.67	116.2	9.98	105.5	9.07
	41.0	**39.2**	153.7	12.59	145.7	11.90	135.0	11.00	129.6	10.56	124.3	10.12	116.2	9.46	105.5	8.60
	47.0	**43.0**	153.7	12.12	145.7	11.46	135.0	10.60	129.6	10.17	124.3	9.75	116.2	9.12	105.5	8.29
	48.2	**46.0**	153.7	11.77	145.7	11.13	135.0	10.29	129.6	9.88	124.3	9.47	116.2	8.86	105.5	8.05
	53.6	**51.1**	153.7	11.19	145.7	10.58	135.0	9.79	129.6	9.40	124.3	9.01	116.2	8.43	105.5	7.67
	59.0	**56.3**	153.7	10.63	145.7	10.06	135.0	9.30	129.6	8.93	124.3	8.56	116.2	8.01	105.5	7.29
113.4 (70%)	-2.7	**-4.0**	105.2	12.85	104.7	12.95	104.1	13.08	103.8	13.15	103.5	13.21	101.7	13.09	92.3	11.88
	5.0	**3.2**	117.4	13.47	116.9	13.58	116.3	13.74	113.4	13.43	108.7	12.87	101.7	12.03	92.3	10.92
	10.4	**8.6**	126.7	13.94	126.2	14.06	118.1	13.17	113.4	12.64	108.7	12.11	101.7	11.32	92.3	10.29
	15.8	**14.0**	134.5	14.20	127.4	13.43	118.1	12.42	113.4	11.92	108.7	11.43	101.7	10.68	92.3	9.71
	17.0	**15.0**	134.5	14.05	127.4	13.29	118.1	12.29	113.4	11.79	108.7	11.30	101.7	10.57	92.3	9.61
	23.0	**21.2**	134.5	13.16	127.4	12.45	118.1	11.52	113.4	11.06	108.7	10.60	101.7	9.92	92.3	9.02
	26.6	**24.8**	134.5	12.67	127.4	11.99	118.1	11.10	113.4	10.66	108.7	10.22	101.7	9.56	92.3	8.70
	30.2	**28.4**	134.5	12.22	127.4	11.56	118.1	10.70	113.4	10.28	108.7	9.85	101.7	9.22	92.3	8.39
	32.0	**30.2**	134.5	12.00	127.4	11.35	118.1	10.51	113.4	10.09	108.7	9.68	101.7	9.06	92.3	8.25
	35.6	**33.8**	134.5	11.57	127.4	10.95	118.1	10.14	113.4	9.74	108.7	9.34	101.7	8.74	92.3	7.96
	41.0	**39.2**	134.5	10.97	127.4	10.38	118.1	9.61	113.4	9.23	108.7	8.86	101.7	8.30	92.3	7.56
	47.0	**43.0**	134.5	10.56	127.4	10.00	118.1	9.26	113.4	8.90	108.7	8.54	101.7	8.00	92.3	7.29
	48.2	**46.0**	134.5	10.25	127.4	9.71	118.1	9.00	113.4	8.64	108.7	8.29	101.7	7.77	92.3	7.08
	53.6	**51.1**	134.5	9.76	127.4	9.24	118.1	8.56	113.4	8.23	108.7	7.89	101.7	7.40	92.3	6.75
	59.0	**56.3**	134.5	9.27	127.4	8.78	118.1	8.14	113.4	7.82	108.7	7.51	101.7	7.04	92.3	6.42
97.2 (60%)	-2.7	**-4.0**	104.1	13.09	103.6	13.19	101.2	13.03	97.2	12.51	93.2	11.99	87.2	11.22	79.1	10.20
	5.0	**3.2**	115.3	13.66	109.2	12.93	101.2	11.97	97.2	11.50	93.2	11.02	87.2	10.32	79.1	9.39
	10.4	**8.6**	115.3	12.85	109.2	12.17	101.2	11.27	97.2	10.83	93.2	10.38	87.2	9.72	79.1	8.85
	15.8	**14.0**	115.3	12.12	109.2	11.48	101.2	10.64	97.2	10.22	93.2	9.80	87.2	9.18	79.1	8.36
	17.0	**15.0**	115.3	11.99	109.2	11.36	101.2	10.52	97.2	10.11	93.2	9.70	87.2	9.09	79.1	8.28
	23.0	**21.2**	115.3	11.24	109.2	10.65	101.2	9.87	97.2	9.48	93.2	9.10	87.2	8.53	79.1	7.77
	26.6	**24.8**	115.3	10.83	109.2	10.26	101.2	9.52	97.2	9.15	93.2	8.78	87.2	8.23	79.1	7.50
	30.2	**28.4**	115.3	10.45	109.2	9.90	101.2	9.18	97.2	8.82	93.2	8.47	87.2	7.94	79.1	7.24
	32.0	**30.2**	115.3	10.26	109.2	9.72	101.2	9.02	97.2	8.67	93.2	8.32	87.2	7.80	79.1	7.12
	35.6	**33.8**	115.3	9.90	109.2	9.38	101.2	8.70	97.2	8.37	93.2	8.03	87.2	7.53	79.1	6.88
	41.0	**39.2**	115.3	9.39	109.2	8.90	101.2	8.26	97.2	7.94	93.2	7.63	87.2	7.15	79.1	6.53
	47.0	**43.0**	115.3	9.05	109.2	8.58	101.2	7.96	97.2	7.66	93.2	7.35	87.2	6.90	79.1	6.30
	48.2	**46.0**	115.3	8.78	109.2	8.33	101.2	7.73	97.2	7.44	93.2	7.14	87.2	6.71	79.1	6.13
	53.6	**51.1**	115.3	8.36	109.2	7.93	101.2	7.37	97.2	7.09	93.2	6.81	87.2	6.39	79.1	5.84
	59.0	**56.3**	115.3	7.95	109.2	7.54	101.2	7.01	97.2	6.74	93.2	6.48	87.2	6.09	79.1	5.57
81.0 (50%)	-2.7	**-4.0**	96.1	12.36	91.0	11.71	84.3	10.86	81.0	10.44	77.7	10.02	72.6	9.38	65.9	8.55
	5.0	**3.2**	96.1	11.36	91.0	10.77	84.3	9.99	81.0	9.60	77.7	9.22	72.6	8.64	65.9	7.89
	10.4	**8.6**	96.1	10.70	91.0	10.15	84.3	9.42	81.0	9.05	77.7	8.69	72.6	8.15	65.9	7.44
	15.8	**14.0**	96.1	10.10	91.0	9.58	84.3	8.89	81.0	8.55	77.7	8.22	72.6	7.71	65.9	7.04
	17.0	**15.0**	96.1	9.99	91.0	9.48	84.3	8.80	81.0	8.46	77.7	8.13	72.6	7.63	65.9	6.97
	23.0	**21.2**	96.1	9.38	91.0	8.90	84.3	8.26	81.0	7.95	77.7	7.64	72.6	7.17	65.9	6.56
	26.6	**24.8**	96.1	9.04	91.0	8.58	84.3	7.97	81.0	7.67	77.7	7.37	72.6	6.92	65.9	6.33
	30.2	**28.4**	96.1	8.72	91.0	8.28	84.3	7.70	81.0	7.41	77.7	7.12	72.6	6.69	65.9	6.12
	32.0	**30.2**	96.1	8.57	91.0	8.13	84.3	7.56	81.0	7.28	77.7	6.99	72.6	6.57	65.9	6.01
	35.6	**33.8**	96.1	8.27	91.0	7.85	84.3	7.30	81.0	7.03	77.7	6.76	72.6	6.35	65.9	5.81
	41.0	**39.2**	96.1	7.85	91.0	7.46	84.3	6.94	81.0	6.68	77.7	6.42	72.6	6.04	65.9	5.53
	47.0	**43.0**	96.1	7.57	91.0	7.19	84.3	6.69	81.0	6.44	77.7	6.20	72.6	5.83	65.9	5.34
	48.2	**46.0**	96.1	7.36	91.0	6.99	84.3	6.50	81.0	6.26	77.7	6.02	72.6	5.67	65.9	5.20
	53.6	**51.1**	96.1	7.01	91.0	6.66	84.3	6.20	81.0	5.97	77.7	5.74	72.6	5.41	65.9	4.96
	59.0	**56.3**	96.1	6.67	91.0	6.34	84.3	5.90	81.0	5.69	77.7	5.47	72.6	5.15	65.9	4.73

TC : Total Capacity kBtu/h.

IP : Input Power kW (Compressor + Outdoor fan motor).

The data is based on the following conditions. Pipe length : 25ft. (7.5m) , Height difference : 0ft. (0m)

HEATING CAPACITY in kBtu/h

■ MODEL : AOUA168RLBVG1

Total rated capacity of indoor unit	Outdoor temp.		Indoor temperature °FDB													
			61		64		68		70		72		75		79	
	°FDB	°FWB	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
282.0 (150%)	-2.7	**-4.0**	121.5	13.62	120.9	13.74	120.2	13.90	119.9	13.98	119.5	14.06	119.0	14.18	118.3	14.34
	5.0	**3.2**	137.1	14.05	136.5	14.19	135.8	14.38	135.4	14.47	135.0	14.56	134.5	14.70	133.7	14.89
	10.4	**8.6**	149.2	14.37	148.6	14.52	147.7	14.73	147.3	14.83	146.9	14.93	146.3	15.09	145.5	15.29
	15.8	**14.0**	161.5	14.68	160.8	14.84	159.9	15.07	159.5	15.18	159.0	15.29	158.3	15.46	157.4	15.68
	17.0	**15.0**	163.8	14.73	163.1	14.90	162.2	15.13	161.7	15.24	161.3	15.35	160.6	15.53	159.7	15.75
	23.0	**21.2**	178.2	15.08	177.4	15.26	176.4	15.51	175.9	15.63	175.4	15.75	174.6	15.94	173.6	16.18
	26.6	**24.8**	186.7	15.27	185.8	15.46	184.7	15.72	184.2	15.85	183.6	15.98	182.8	16.17	181.7	16.43
	30.2	**28.4**	195.2	15.47	194.3	15.66	193.1	15.93	192.5	16.06	192.0	16.19	191.1	16.40	189.9	16.66
	32.0	**30.2**	199.5	15.56	198.6	15.76	197.3	16.03	196.7	16.17	196.1	16.30	195.2	16.51	194.0	16.78
	35.6	**33.8**	208.1	15.75	207.1	15.96	205.8	16.23	205.1	16.37	204.5	16.51	203.5	16.72	202.1	17.01
	41.0	**39.2**	221.0	16.02	220.0	16.24	218.5	16.53	217.8	16.67	217.0	16.82	215.9	17.04	214.4	17.33
	47.0	**43.0**	230.2	16.20	229.0	16.43	227.5	16.73	226.7	16.88	225.9	17.03	224.7	17.25	223.1	17.56
	48.2	**46.0**	237.5	16.34	236.2	16.57	234.6	16.88	233.7	17.03	232.9	17.18	231.6	17.42	229.4	17.67
	53.6	**51.1**	249.8	16.57	248.4	16.81	246.6	17.13	245.7	17.28	244.8	17.44	243.4	17.68	229.6	16.77
	59.0	**56.3**	262.3	16.80	260.8	17.04	258.8	17.36	257.8	17.53	256.8	17.69	252.9	17.69	229.6	15.88
263.2 (140%)	-2.7	**-4.0**	121.2	13.68	120.7	13.80	120.0	13.96	119.6	14.04	119.3	14.12	118.7	14.24	118.0	14.40
	5.0	**3.2**	136.8	14.13	136.2	14.27	135.5	14.45	135.1	14.55	134.7	14.64	134.1	14.78	133.4	14.97
	10.4	**8.6**	148.8	14.46	148.2	14.61	147.4	14.82	147.0	14.92	146.6	15.02	145.9	15.18	145.1	15.38
	15.8	**14.0**	161.0	14.79	160.4	14.95	159.5	15.17	159.0	15.29	158.6	15.40	157.9	15.57	157.0	15.79
	17.0	**15.0**	163.3	14.85	162.7	15.01	161.8	15.24	161.3	15.35	160.8	15.47	160.1	15.64	159.2	15.86
	23.0	**21.2**	177.6	15.21	176.9	15.39	175.9	15.64	175.3	15.76	174.8	15.88	174.1	16.07	173.0	16.31
	26.6	**24.8**	186.0	15.42	185.2	15.61	184.1	15.86	183.6	15.99	183.0	16.12	182.2	16.31	181.1	16.57
	30.2	**28.4**	194.5	15.62	193.6	15.82	192.4	16.09	191.9	16.22	191.3	16.35	190.4	16.55	189.2	16.82
	32.0	**30.2**	198.7	15.72	197.8	15.93	196.6	16.19	196.0	16.33	195.4	16.46	194.5	16.67	193.2	16.94
	35.6	**33.8**	207.3	15.92	206.3	16.13	205.0	16.41	204.3	16.55	203.7	16.69	202.7	16.90	201.3	17.18
	41.0	**39.2**	220.1	16.21	219.0	16.43	217.5	16.72	216.8	16.87	216.1	17.01	215.0	17.23	213.2	17.50
	47.0	**43.0**	229.1	16.41	227.9	16.64	226.4	16.93	225.6	17.08	224.8	17.23	223.6	17.46	214.3	16.93
	48.2	**46.0**	236.3	16.56	235.0	16.79	233.4	17.10	232.5	17.25	231.7	17.40	230.4	17.63	214.3	16.40
	53.6	**51.1**	248.4	16.81	247.0	17.05	245.2	17.36	244.3	17.52	243.4	17.68	236.0	17.29	214.3	15.54
	59.0	**56.3**	260.7	17.05	259.2	17.30	257.2	17.62	256.2	17.78	252.4	17.65	236.0	16.37	214.3	14.72
244.4 (130%)	-2.7	**-4.0**	120.9	13.75	120.4	13.87	119.7	14.03	119.3	14.11	119.0	14.19	118.4	14.31	117.7	14.47
	5.0	**3.2**	136.4	14.22	135.9	14.36	135.1	14.54	134.7	14.64	134.3	14.73	133.8	14.87	133.0	15.06
	10.4	**8.6**	148.4	14.57	147.8	14.72	146.9	14.92	146.5	15.03	146.1	15.13	145.5	15.28	144.7	15.49
	15.8	**14.0**	160.5	14.91	159.9	15.08	159.0	15.30	158.5	15.41	158.1	15.52	157.4	15.69	156.5	15.92
	17.0	**15.0**	162.8	14.98	162.1	15.14	161.2	15.37	160.8	15.48	160.3	15.59	159.6	15.77	158.7	15.99
	23.0	**21.2**	177.0	15.36	176.2	15.55	175.2	15.79	174.7	15.91	174.2	16.03	173.4	16.22	172.4	16.47
	26.6	**24.8**	185.3	15.58	184.5	15.78	183.4	16.03	182.9	16.16	182.3	16.28	181.5	16.48	180.4	16.73
	30.2	**28.4**	193.7	15.80	192.8	16.00	191.6	16.27	191.0	16.40	190.5	16.53	189.6	16.73	188.4	17.00
	32.0	**30.2**	197.9	15.91	197.0	16.11	195.8	16.38	195.1	16.52	194.5	16.65	193.6	16.85	192.4	17.13
	35.6	**33.8**	206.3	16.13	205.3	16.33	204.0	16.61	203.4	16.75	202.7	16.89	201.7	17.10	199.0	17.23
	41.0	**39.2**	219.0	16.44	217.9	16.66	216.4	16.95	215.7	17.09	214.9	17.24	213.8	17.46	199.0	16.26
	47.0	**43.0**	227.9	16.65	226.7	16.88	225.1	17.17	224.3	17.32	223.5	17.47	219.2	17.35	199.0	15.62
	48.2	**46.0**	234.9	16.82	233.7	17.04	232.0	17.35	231.2	17.50	230.3	17.65	219.2	16.81	199.0	15.13
	53.6	**51.1**	246.8	17.09	245.4	17.32	243.6	17.64	242.7	17.79	234.3	17.15	219.2	15.93	199.0	14.34
	59.0	**56.3**	258.9	17.35	257.4	17.59	254.5	17.82	244.4	17.03	234.3	16.24	219.2	15.09	199.0	13.58
225.6 (120%)	-2.7	**-4.0**	120.6	13.83	120.0	13.95	119.3	14.10	119.0	14.18	118.6	14.26	118.1	14.38	117.4	14.54
	5.0	**3.2**	136.0	14.32	135.4	14.46	134.7	14.65	134.3	14.74	133.9	14.83	133.4	14.97	132.6	15.16
	10.4	**8.6**	147.9	14.69	147.3	14.84	146.5	15.05	146.0	15.15	145.6	15.25	145.0	15.41	144.2	15.61
	15.8	**14.0**	159.9	15.06	159.3	15.22	158.4	15.44	157.9	15.56	157.5	15.67	156.8	15.84	155.9	16.06
	17.0	**15.0**	162.2	15.13	161.5	15.29	160.6	15.52	160.2	15.63	159.7	15.74	159.0	15.91	158.1	16.14
	23.0	**21.2**	176.3	15.54	175.5	15.72	174.5	15.97	174.0	16.09	173.4	16.21	172.7	16.39	171.6	16.64
	26.6	**24.8**	184.5	15.78	183.7	15.97	182.6	16.22	182.0	16.35	181.5	16.48	180.6	16.67	179.5	16.93
	30.2	**28.4**	192.8	16.01	191.9	16.21	190.7	16.47	190.1	16.61	189.5	16.74	188.6	16.94	183.7	16.77
	32.0	**30.2**	196.9	16.13	196.0	16.33	194.8	16.60	194.2	16.73	193.5	16.87	192.6	17.07	183.7	16.44
	35.6	**33.8**	205.2	16.36	204.2	16.57	202.9	16.84	202.3	16.98	201.6	17.12	200.5	17.33	183.7	15.81
	41.0	**39.2**	217.7	16.70	216.6	16.91	215.1	17.20	214.4	17.35	213.6	17.49	202.3	16.55	183.7	14.92
	47.0	**43.0**	226.4	16.93	225.2	17.15	223.7	17.45	222.9	17.60	216.3	17.10	202.3	15.90	183.7	14.33
	48.2	**46.0**	233.3	17.11	232.1	17.34	230.4	17.64	225.6	17.36	216.3	16.57	202.3	15.40	183.7	13.88
	53.6	**51.1**	245.0	17.40	243.6	17.64	234.9	17.20	225.6	16.45	216.3	15.70	202.3	14.60	183.7	13.16
	59.0	**56.3**	256.8	17.69	253.6	17.74	234.9	16.29	225.6	15.58	216.3	14.87	202.3	13.83	183.7	12.46
206.8 (110%)	-2.7	**-4.0**	120.1	13.92	119.6	14.04	118.9	14.20	118.6	14.28	118.2	14.36	117.7	14.48	117.0	14.64
	5.0	**3.2**	135.5	14.44	134.9	14.58	134.2	14.77	133.8	14.86	133.4	14.95	132.9	15.09	132.1	15.28
	10.4	**8.6**	147.3	14.84	146.7	14.99	145.9	15.19	145.5	15.30	145.0	15.40	144.4	15.55	143.6	15.76
	15.8	**14.0**	159.3	15.23	158.6	15.39	157.7	15.62	157.2	15.73	156.8	15.84	156.1	16.01	155.2	16.23
	17.0	**15.0**	161.5	15.30	160.8	15.47	159.9	15.69	159.5	15.81	159.0	15.92	158.3	16.09	157.4	16.32
	23.0	**21.2**	175.4	15.75	174.6	15.93	173.6	16.17	173.1	16.29	172.6	16.42	171.8	16.60	168.4	16.57
	26.6	**24.8**	183.5	16.00	182.7	16.19	181.6	16.45	181.1	16.57	180.5	16.70	179.7	16.89	168.4	15.90
	30.2	**28.4**	191.7	16.26	190.8	16.46	189.6	16.72	189.0	16.85	188.4	16.98	185.4	16.94	168.4	15.28
	32.0	**30.2**	195.7	16.38	194.8	16.58	193.6	16.85	193.0	16.99	192.4	17.12	185.4	16.61	168.4	14.98
	35.6	**33.8**	203.9	16.63	202.9	16.84	201.6	17.12	201.0	17.26	198.3	17.17	185.4	15.97	168.4	14.41
	41.0	**39.2**	216.1	17.00	215.0	17.22	213.6	17.51	206.8	16.96	198.3	16.20	185.4	15.07	168.4	13.60
	47.0	**43.0**	224.7	17.25	223.5	17.48	215.4	17.02	206.8	16.29	198.3	15.56	185.4	14.47	168.4	13.06
	48.2	**46.0**	231.4	17.45	230.2	17.68	215.4	16.49	206.8	15.78	198.3	15.07	185.4	14.02	168.4	12.66
	53.6	**51.1**	242.8	17.77	232.4	17.00	215.4	15.63	206.8	14.95	198.3	14.29	185.4	13.29	168.4	12.00
	59.0	**56.3**	245.3	17.09	232.4	16.10	215.4	14.80	206.8	14.16	198.3	13.53	185.4	12.59	168.4	11.37

Total rated capacity of indoor unit	Outdoor temp.		Indoor temperature °FDB													
			61		64		68		70		72		75		79	
	°FDB	°FWB	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
188.0 (100%)	-2.7	**-4.0**	119.7	14.03	119.1	14.15	118.4	14.31	118.1	14.39	117.7	14.47	117.2	14.59	116.5	14.75
	5.0	**3.2**	134.9	14.59	134.4	14.73	133.6	14.91	133.2	15.01	132.8	15.10	132.3	15.24	131.5	15.43
	10.4	**8.6**	146.6	15.01	146.0	15.16	145.2	15.37	144.8	15.47	144.4	15.57	143.7	15.73	142.9	15.93
	15.8	**14.0**	158.4	15.43	157.8	15.60	156.9	15.82	156.4	15.93	156.0	16.04	155.3	16.21	152.4	16.19
	17.0	**15.0**	160.6	15.51	160.0	15.68	159.1	15.90	158.6	16.02	158.1	16.13	157.5	16.30	153.0	16.09
	23.0	**21.2**	174.4	15.99	173.6	16.18	172.6	16.42	172.1	16.54	171.5	16.66	168.6	16.59	153.0	14.98
	26.6	**24.8**	182.4	16.27	181.5	16.46	180.4	16.72	179.9	16.84	178.7	16.89	168.6	15.93	153.0	14.38
	30.2	**28.4**	190.4	16.55	189.5	16.75	188.3	17.01	186.9	17.05	180.3	16.43	168.6	15.30	153.0	13.82
	32.0	**30.2**	194.4	16.69	193.5	16.89	192.2	17.15	188.0	16.86	180.3	16.11	168.6	15.00	153.0	13.55
	35.6	**33.8**	202.4	16.96	201.4	17.17	195.8	16.93	188.0	16.21	180.3	15.49	168.6	14.43	153.0	13.04
	41.0	**39.2**	214.3	17.36	211.3	17.36	195.8	15.98	188.0	15.30	180.3	14.62	168.6	13.62	153.0	12.31
	47.0	**43.0**	222.3	17.60	211.3	16.67	195.8	15.34	188.0	14.69	180.3	14.04	168.6	13.08	153.0	11.82
	48.2	**46.0**	223.0	17.13	211.3	16.15	195.8	14.87	188.0	14.23	180.3	13.61	168.6	12.67	153.0	11.46
	53.6	**51.1**	223.0	16.24	211.3	15.31	195.8	14.09	188.0	13.49	180.3	12.90	168.6	12.02	153.0	10.87
	59.0	**56.3**	223.0	15.38	211.3	14.50	195.8	13.35	188.0	12.78	180.3	12.22	168.6	11.39	153.0	10.30
169.2 (90%)	-2.7	**-4.0**	119.1	14.16	118.5	14.28	117.8	14.44	117.5	14.52	117.1	14.60	116.6	14.72	115.9	14.88
	5.0	**3.2**	134.2	14.77	133.6	14.90	132.9	15.09	132.5	15.18	132.1	15.27	131.6	15.41	130.8	15.60
	10.4	**8.6**	145.7	15.22	145.1	15.37	144.3	15.58	143.9	15.68	143.5	15.78	142.9	15.94	137.8	15.57
	15.8	**14.0**	157.4	15.68	156.8	15.85	155.9	16.07	155.4	16.18	155.0	16.29	151.7	16.14	137.8	14.58
	17.0	**15.0**	159.6	15.77	158.9	15.93	158.0	16.16	157.6	16.27	157.1	16.38	151.7	15.94	137.8	14.41
	23.0	**21.2**	173.1	16.29	172.3	16.48	171.3	16.72	168.9	16.62	162.2	15.93	151.7	14.84	137.8	13.42
	26.6	**24.8**	180.9	16.60	180.1	16.79	176.2	16.70	169.2	15.99	162.2	15.29	151.7	14.25	137.8	12.89
	30.2	**28.4**	188.8	16.90	187.9	17.10	176.2	16.04	169.2	15.36	162.2	14.69	151.7	13.70	137.8	12.39
	32.0	**30.2**	192.7	17.05	190.2	17.07	176.2	15.72	169.2	15.06	162.2	14.41	151.7	13.43	137.8	12.15
	35.6	**33.8**	199.8	17.28	190.2	16.41	176.2	15.12	169.2	14.48	162.2	13.85	151.7	12.92	137.8	11.69
	41.0	**39.2**	200.7	16.41	190.2	15.48	176.2	14.27	169.2	13.67	162.2	13.08	151.7	12.20	137.8	11.04
	47.0	**43.0**	200.7	15.76	190.2	14.87	176.2	13.71	169.2	13.13	162.2	12.56	151.7	11.72	137.8	10.61
	48.2	**46.0**	200.7	15.27	190.2	14.41	176.2	13.28	169.2	12.73	162.2	12.17	151.7	11.36	137.8	10.28
	53.6	**51.1**	200.7	14.47	190.2	13.66	176.2	12.59	169.2	12.07	162.2	11.55	151.7	10.77	137.8	9.76
	59.0	**56.3**	200.7	13.71	190.2	12.94	176.2	11.93	169.2	11.43	162.2	10.94	151.7	10.21	137.8	9.25
150.4 (80%)	-2.7	**-4.0**	118.3	14.33	117.8	14.45	117.1	14.61	116.8	14.69	116.4	14.77	115.9	14.89	115.2	15.05
	5.0	**3.2**	133.3	14.98	132.7	15.12	132.0	15.31	131.6	15.40	131.2	15.49	130.7	15.63	122.4	14.75
	10.4	**8.6**	144.7	15.48	144.1	15.64	143.3	15.84	142.9	15.94	141.6	15.93	134.9	15.23	122.4	13.78
	15.8	**14.0**	156.2	15.99	155.5	16.15	154.1	16.30	150.4	15.99	144.2	15.30	134.9	14.27	122.4	12.92
	17.0	**15.0**	158.3	16.08	157.6	16.25	155.3	16.29	150.4	15.80	144.2	15.12	134.9	14.10	122.4	12.77
	23.0	**21.2**	171.5	16.66	168.9	16.61	156.6	15.34	150.4	14.71	144.2	14.07	134.9	13.13	122.4	11.89
	26.6	**24.8**	177.8	16.83	169.0	15.97	156.6	14.73	150.4	14.12	144.2	13.52	134.9	12.61	122.4	11.43
	30.2	**28.4**	178.4	16.25	169.0	15.35	156.6	14.16	150.4	13.57	144.2	12.99	134.9	12.12	122.4	10.99
	32.0	**30.2**	178.4	15.93	169.0	15.05	156.6	13.88	150.4	13.31	144.2	12.74	134.9	11.89	122.4	10.78
	35.6	**33.8**	178.4	15.32	169.0	14.47	156.6	13.35	150.4	12.80	144.2	12.25	134.9	11.44	122.4	10.37
	41.0	**39.2**	178.4	14.46	169.0	13.66	156.6	12.61	150.4	12.09	144.2	11.57	134.9	10.80	122.4	9.80
	47.0	**43.0**	178.4	13.89	169.0	13.12	156.6	12.11	150.4	11.61	144.2	11.12	134.9	10.38	122.4	9.42
	48.2	**46.0**	178.4	13.46	169.0	12.71	156.6	11.74	150.4	11.25	144.2	10.78	134.9	10.07	122.4	9.13
	53.6	**51.1**	178.4	12.76	169.0	12.05	156.6	11.13	150.4	10.67	144.2	10.22	134.9	9.55	122.4	8.67
	59.0	**56.3**	178.4	12.08	169.0	11.42	156.6	10.55	150.4	10.12	144.2	9.69	134.9	9.05	122.4	8.22
131.6 (70%)	-2.7	**-4.0**	117.4	14.54	116.9	14.66	116.2	14.82	115.8	14.90	115.5	14.98	114.3	14.99	107.1	14.17
	5.0	**3.2**	132.2	15.26	131.6	15.40	130.8	15.59	129.2	15.50	126.2	15.22	118.0	14.20	107.1	12.87
	10.4	**8.6**	143.4	15.82	142.8	15.97	137.0	15.49	131.6	14.85	126.2	14.22	118.0	13.27	107.1	12.03
	15.8	**14.0**	153.8	16.28	147.9	15.71	137.0	14.51	131.6	13.91	126.2	13.32	118.0	12.44	107.1	11.28
	17.0	**15.0**	155.1	16.27	147.9	15.52	137.0	14.34	131.6	13.75	126.2	13.16	118.0	12.29	107.1	11.15
	23.0	**21.2**	156.1	15.29	147.9	14.45	137.0	13.35	131.6	12.80	126.2	12.26	118.0	11.46	107.1	10.40
	26.6	**24.8**	156.1	14.68	147.9	13.88	137.0	12.82	131.6	12.30	126.2	11.78	118.0	11.01	107.1	9.99
	30.2	**28.4**	156.1	14.11	147.9	13.34	137.0	12.33	131.6	11.82	126.2	11.33	118.0	10.59	107.1	9.61
	32.0	**30.2**	156.1	13.83	147.9	13.08	137.0	12.09	131.6	11.60	126.2	11.11	118.0	10.38	107.1	9.43
	35.6	**33.8**	156.1	13.30	147.9	12.58	137.0	11.63	131.6	11.16	126.2	10.69	118.0	9.99	107.1	9.08
	41.0	**39.2**	156.1	12.56	147.9	11.88	137.0	10.98	131.6	10.54	126.2	10.10	118.0	9.44	107.1	8.58
	47.0	**43.0**	156.1	12.07	147.9	11.41	137.0	10.55	131.6	10.13	126.2	9.71	118.0	9.08	107.1	8.26
	48.2	**46.0**	156.1	11.69	147.9	11.06	137.0	10.23	131.6	9.82	126.2	9.41	118.0	8.80	107.1	8.01
	53.6	**51.1**	156.1	11.09	147.9	10.49	137.0	9.71	131.6	9.32	126.2	8.93	118.0	8.36	107.1	7.60
	59.0	**56.3**	156.1	10.51	147.9	9.94	137.0	9.20	131.6	8.83	126.2	8.47	118.0	7.93	107.1	7.21
112.8 (60%)	-2.7	**-4.0**	116.2	14.82	115.6	14.94	114.0	14.96	111.9	14.77	108.2	14.31	101.2	13.37	91.8	12.13
	5.0	**3.2**	130.3	15.57	126.8	15.29	117.5	14.14	112.8	13.56	108.2	12.99	101.2	12.14	91.8	11.03
	10.4	**8.6**	133.8	15.10	126.8	14.29	117.5	13.21	112.8	12.68	108.2	12.15	101.2	11.36	91.8	10.32
	15.8	**14.0**	133.8	14.15	126.8	13.39	117.5	12.38	112.8	11.88	108.2	11.39	101.2	10.65	91.8	9.68
	17.0	**15.0**	133.8	13.98	126.8	13.23	117.5	12.24	112.8	11.75	108.2	11.26	101.2	10.53	91.8	9.57
	23.0	**21.2**	133.8	13.02	126.8	12.32	117.5	11.40	112.8	10.95	108.2	10.50	101.2	9.82	91.8	8.93
	26.6	**24.8**	133.8	12.51	126.8	11.84	117.5	10.96	112.8	10.52	108.2	10.09	101.2	9.44	91.8	8.59
	30.2	**28.4**	133.8	12.02	126.8	11.38	117.5	10.54	112.8	10.12	108.2	9.70	101.2	9.08	91.8	8.27
	32.0	**30.2**	133.8	11.79	126.8	11.16	117.5	10.34	112.8	9.93	108.2	9.52	101.2	8.91	91.8	8.11
	35.6	**33.8**	133.8	11.35	126.8	10.74	117.5	9.95	112.8	9.55	108.2	9.16	101.2	8.58	91.8	7.81
	41.0	**39.2**	133.8	10.72	126.8	10.15	117.5	9.40	112.8	9.03	108.2	8.66	101.2	8.11	91.8	7.39
	47.0	**43.0**	133.8	10.30	126.8	9.76	117.5	9.04	112.8	8.68	108.2	8.33	101.2	7.81	91.8	7.11
	48.2	**46.0**	133.8	9.98	126.8	9.46	117.5	8.76	112.8	8.42	108.2	8.08	101.2	7.57	91.8	6.90
	53.6	**51.1**	133.8	9.47	126.8	8.97	117.5	8.32	112.8	7.99	108.2	7.67	101.2	7.19	91.8	6.56
	59.0	**56.3**	133.8	8.98	126.8	8.51	117.5	7.89	112.8	7.58	108.2	7.28	101.2	6.82	91.8	6.23
94.0 (50%)	-2.7	**-4.0**	111.2	14.71	105.7	13.97	97.9	12.93	94.0	12.42	90.1	11.90	84.3	11.14	76.5	10.13
	5.0	**3.2**	111.5	13.40	105.7	12.69	97.9	11.75	94.0	11.29	90.1	10.82	84.3	10.13	76.5	9.22
	10.4	**8.6**	111.5	12.53	105.7	11.86	97.9	10.99	94.0	10.56	90.1	10.13	84.3	9.48	76.5	8.64
	15.8	**14.0**	111.5	11.74	105.7	11.13	97.9	10.31	94.0	9.91	90.1	9.51	84.3	8.90	76.5	8.11
	17.0	**15.0**	111.5	11.61	105.7	11.00	97.9	10.19	94.0	9.79	90.1	9.40	84.3	8.80	76.5	8.02
	23.0	**21.2**	111.5	10.82	105.7	10.25	97.9	9.51	94.0	9.14	90.1	8.77	84.3	8.22	76.5	7.50
	26.6	**24.8**	111.5	10.40	105.7	9.86	97.9	9.14	94.0	8.79	90.1	8.43	84.3	7.91	76.5	7.21
	30.2	**28.4**	111.5	10.00	105.7	9.48	97.9	8.80	94.0	8.46	90.1	8.12	84.3	7.61	76.5	6.95
	32.0	**30.2**	111.5	9.81	105.7	9.30	97.9	8.63	94.0	8.30	90.1	7.97	84.3	7.47	76.5	6.82
	35.6	**33.8**	111.5	9.44	105.7	8.96	97.9	8.31	94.0	7.99	90.1	7.67	84.3	7.20	76.5	6.57
	41.0	**39.2**	111.5	8.93	105.7	8.47	97.9	7.86	94.0	7.56	90.1	7.26	84.3	6.81	76.5	6.23
	47.0	**43.0**	111.5	8.58	105.7	8.14	97.9	7.56	94.0	7.27	90.1	6.99	84.3	6.56	76.5	5.99
	48.2	**46.0**	111.5	8.32	105.7	7.90	97.9	7.34	94.0	7.06	90.1	6.78	84.3	6.37	76.5	5.82
	53.6	**51.1**	111.5	7.90	105.7	7.50	97.9	6.97	94.0	6.71	90.1	6.44	84.3	6.05	76.5	5.54
	59.0	**56.3**	111.5	7.50	105.7	7.12	97.9	6.62	94.0	6.37	90.1	6.12	84.3	5.75	76.5	5.26

TC : Total Capacity kBtu/h.

IP : Input Power kW (Compressor + Outdoor fan motor).

The data is based on the following conditions. Pipe length : 25ft. (7.5m) , Height difference : 0ft. (0m)

HEATING CAPACITY in kBtu/h

■ MODEL : AOUA192RLBVG1

Total rated capacity of indoor unit	Outdoor temp.		Indoor temperature °FDB													
			61		64		68		70		72		75		79	
	°FDB	°FWB	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
324.0 (150%)	-2.7	**-4.0**	150.6	15.43	149.4	15.52	147.9	15.65	147.2	15.71	146.4	15.78	145.3	15.88	143.8	16.01
	5.0	**3.2**	165.5	15.80	164.5	15.92	163.1	16.07	162.5	16.15	161.8	16.22	160.8	16.34	159.5	16.50
	10.4	**8.6**	177.5	16.07	176.5	16.20	175.3	16.37	174.6	16.46	174.0	16.55	173.1	16.68	171.8	16.85
	15.8	**14.0**	190.1	16.34	189.2	16.48	188.0	16.67	187.3	16.77	186.7	16.86	185.8	17.00	184.6	17.19
	17.0	**15.0**	192.5	16.39	191.6	16.53	190.4	16.73	189.8	16.82	189.1	16.92	188.2	17.06	187.0	17.26
	23.0	**21.2**	207.8	16.69	206.8	16.85	205.6	17.06	205.0	17.16	204.3	17.27	203.4	17.43	202.2	17.64
	26.6	**24.8**	216.9	16.86	215.9	17.03	214.7	17.25	214.0	17.36	213.4	17.47	212.4	17.64	211.2	17.86
	30.2	**28.4**	226.2	17.03	225.2	17.20	223.9	17.43	223.2	17.55	222.6	17.66	221.6	17.84	220.2	18.07
	32.0	**30.2**	230.9	17.12	229.9	17.29	228.6	17.53	227.9	17.64	227.2	17.76	226.2	17.94	224.8	18.18
	35.6	**33.8**	240.5	17.28	239.4	17.46	238.0	17.71	237.3	17.83	236.6	17.95	235.5	18.14	234.0	18.38
	41.0	**39.2**	255.0	17.53	253.8	17.72	252.3	17.97	251.5	18.10	250.7	18.23	249.5	18.43	247.9	18.69
	47.0	**43.0**	265.3	17.69	264.1	17.89	262.4	18.16	261.6	18.29	260.7	18.42	259.5	18.62	257.8	18.89
	48.2	**46.0**	273.6	17.82	272.3	18.03	270.5	18.30	269.6	18.43	268.7	18.57	267.4	18.78	263.8	18.88
	53.6	**51.1**	287.6	18.04	286.2	18.25	284.2	18.53	283.2	18.67	282.3	18.81	280.8	19.03	263.8	17.90
	59.0	**56.3**	302.0	18.25	300.4	18.47	298.3	18.76	297.2	18.91	296.1	19.05	290.5	18.91	263.8	16.96
302.4 (140%)	-2.7	**-4.0**	150.0	15.48	148.8	15.57	147.3	15.70	146.6	15.76	145.8	15.83	144.7	15.93	143.2	16.06
	5.0	**3.2**	164.9	15.87	163.9	15.98	162.5	16.14	161.9	16.21	161.2	16.29	160.2	16.41	158.9	16.56
	10.4	**8.6**	176.9	16.15	175.9	16.28	174.7	16.45	174.0	16.54	173.4	16.63	172.5	16.76	171.2	16.93
	15.8	**14.0**	189.5	16.44	188.6	16.58	187.3	16.77	186.7	16.86	186.1	16.95	185.2	17.10	184.0	17.29
	17.0	**15.0**	191.9	16.49	191.0	16.63	189.8	16.82	189.1	16.92	188.5	17.02	187.6	17.16	186.4	17.36
	23.0	**21.2**	207.1	16.81	206.1	16.96	204.9	17.17	204.3	17.28	203.7	17.38	202.7	17.54	201.5	17.76
	26.6	**24.8**	216.2	16.99	215.2	17.15	213.9	17.37	213.3	17.48	212.7	17.59	211.7	17.76	210.4	17.98
	30.2	**28.4**	225.4	17.17	224.4	17.34	223.1	17.57	222.5	17.69	221.8	17.80	220.8	17.98	219.5	18.21
	32.0	**30.2**	230.1	17.26	229.1	17.43	227.7	17.67	227.1	17.79	226.4	17.90	225.4	18.08	224.0	18.32
	35.6	**33.8**	239.6	17.44	238.5	17.62	237.1	17.86	236.4	17.98	235.7	18.11	234.6	18.29	233.1	18.54
	41.0	**39.2**	253.9	17.70	252.8	17.89	251.2	18.15	250.4	18.28	249.7	18.40	248.5	18.60	246.2	18.79
	47.0	**43.0**	264.2	17.88	262.9	18.08	261.3	18.34	260.4	18.48	259.6	18.61	258.3	18.81	246.2	18.05
	48.2	**46.0**	272.3	18.02	271.0	18.22	269.2	18.49	268.3	18.63	267.4	18.77	266.1	18.97	246.2	17.48
	53.6	**51.1**	286.2	18.25	284.7	18.46	282.7	18.74	281.8	18.89	280.8	19.03	271.2	18.46	246.2	16.58
	59.0	**56.3**	300.3	18.49	298.7	18.70	296.5	18.99	295.4	19.13	289.9	18.87	271.2	17.49	246.2	15.72
280.8 (130%)	-2.7	**-4.0**	149.3	15.53	148.1	15.63	146.6	15.76	145.9	15.82	145.1	15.89	144.0	15.99	142.6	16.12
	5.0	**3.2**	164.2	15.94	163.2	16.06	161.9	16.21	161.2	16.29	160.6	16.37	159.6	16.48	158.3	16.64
	10.4	**8.6**	176.2	16.25	175.3	16.37	174.0	16.55	173.4	16.63	172.8	16.72	171.8	16.85	170.6	17.02
	15.8	**14.0**	188.8	16.55	187.9	16.69	186.6	16.87	186.0	16.97	185.4	17.06	184.5	17.21	183.3	17.40
	17.0	**15.0**	191.2	16.60	190.3	16.74	189.0	16.94	188.4	17.03	187.8	17.13	186.9	17.27	185.7	17.47
	23.0	**21.2**	206.3	16.94	205.4	17.10	204.1	17.31	203.5	17.41	202.9	17.52	202.0	17.68	200.7	17.89
	26.6	**24.8**	215.3	17.13	214.4	17.30	213.1	17.52	212.5	17.63	211.8	17.74	210.9	17.91	209.6	18.13
	30.2	**28.4**	224.5	17.33	223.5	17.50	222.2	17.73	221.6	17.84	220.9	17.96	219.9	18.13	218.6	18.37
	32.0	**30.2**	229.2	17.42	228.1	17.60	226.8	17.83	226.1	17.95	225.4	18.07	224.4	18.25	223.1	18.48
	35.6	**33.8**	238.5	17.61	237.5	17.80	236.0	18.04	235.3	18.16	234.6	18.28	233.5	18.47	228.6	18.35
	41.0	**39.2**	252.7	17.90	251.6	18.09	250.0	18.35	249.2	18.47	248.5	18.60	247.3	18.80	228.6	17.32
	47.0	**43.0**	262.8	18.09	261.6	18.29	259.9	18.56	259.1	18.69	258.2	18.82	251.8	18.50	228.6	16.64
	48.2	**46.0**	270.8	18.25	269.5	18.45	267.8	18.72	266.9	18.85	266.0	18.99	251.8	17.92	228.6	16.12
	53.6	**51.1**	284.5	18.50	283.0	18.71	281.0	18.99	280.0	19.13	269.2	18.31	251.8	17.00	228.6	15.29
	59.0	**56.3**	298.3	18.75	296.7	18.97	292.4	19.05	280.8	18.19	269.2	17.35	251.8	16.11	228.6	14.50
259.2 (120%)	-2.7	**-4.0**	148.4	15.60	147.3	15.70	145.8	15.83	145.1	15.89	144.4	15.96	143.3	16.05	141.8	16.18
	5.0	**3.2**	163.4	16.03	162.4	16.15	161.1	16.30	160.5	16.38	159.8	16.46	158.8	16.57	157.5	16.73
	10.4	**8.6**	175.4	16.35	174.5	16.48	173.2	16.65	172.6	16.74	172.0	16.82	171.1	16.95	169.8	17.13
	15.8	**14.0**	187.9	16.67	187.0	16.81	185.8	17.00	185.2	17.10	184.6	17.19	183.7	17.33	182.5	17.52
	17.0	**15.0**	190.3	16.73	189.4	16.87	188.2	17.07	187.6	17.16	187.0	17.26	186.1	17.40	184.9	17.60
	23.0	**21.2**	205.4	17.09	204.5	17.25	203.2	17.46	202.6	17.56	202.0	17.67	201.1	17.83	199.8	18.04
	26.6	**24.8**	214.4	17.30	213.4	17.47	212.1	17.69	211.5	17.80	210.9	17.91	209.9	18.07	208.6	18.30
	30.2	**28.4**	223.5	17.51	222.5	17.68	221.2	17.91	220.5	18.03	219.8	18.14	218.8	18.32	211.0	17.84
	32.0	**30.2**	228.1	17.62	227.0	17.79	225.7	18.02	225.0	18.14	224.4	18.26	223.3	18.44	211.0	17.49
	35.6	**33.8**	237.3	17.82	236.3	18.00	234.8	18.25	234.1	18.37	233.4	18.49	232.4	18.67	211.0	16.82
	41.0	**39.2**	251.3	18.13	250.2	18.32	248.6	18.57	247.8	18.70	247.1	18.83	232.4	17.63	211.0	15.88
	47.0	**43.0**	261.3	18.34	260.0	18.54	258.4	18.80	257.5	18.93	248.5	18.23	232.4	16.94	211.0	15.26
	48.2	**46.0**	269.1	18.51	267.8	18.71	266.0	18.98	259.2	18.51	248.5	17.67	232.4	16.42	211.0	14.79
	53.6	**51.1**	282.5	18.78	281.0	18.99	269.9	18.37	259.2	17.55	248.5	16.76	232.4	15.57	211.0	14.03
	59.0	**56.3**	296.0	19.05	291.3	18.97	269.9	17.40	259.2	16.64	248.5	15.88	232.4	14.76	211.0	13.30
237.6 (110%)	-2.7	**-4.0**	147.5	15.68	146.4	15.78	144.9	15.91	144.2	15.97	143.5	16.03	142.4	16.13	141.0	16.26
	5.0	**3.2**	162.5	16.14	161.5	16.25	160.2	16.41	159.6	16.48	158.9	16.56	157.9	16.68	156.7	16.83
	10.4	**8.6**	174.5	16.48	173.5	16.61	172.3	16.78	171.7	16.86	171.1	16.95	170.2	17.08	168.9	17.25
	15.8	**14.0**	187.0	16.82	186.1	16.96	184.9	17.15	184.3	17.24	183.7	17.34	182.8	17.48	181.6	17.67
	17.0	**15.0**	189.4	16.88	188.5	17.03	187.3	17.22	186.7	17.31	186.1	17.41	185.1	17.56	183.9	17.75
	23.0	**21.2**	204.3	17.27	203.4	17.43	202.2	17.64	201.6	17.75	200.9	17.85	200.0	18.01	193.4	17.61
	26.6	**24.8**	213.2	17.50	212.3	17.67	211.0	17.88	210.4	17.99	209.7	18.11	208.8	18.27	193.4	16.91
	30.2	**28.4**	222.2	17.73	221.2	17.90	219.9	18.13	219.3	18.24	218.6	18.36	213.0	18.03	193.4	16.25
	32.0	**30.2**	226.8	17.84	225.8	18.01	224.4	18.25	223.7	18.37	223.1	18.48	213.0	17.67	193.4	15.94
	35.6	**33.8**	235.9	18.06	234.8	18.25	233.4	18.49	232.7	18.61	227.8	18.28	213.0	17.00	193.4	15.33
	41.0	**39.2**	249.7	18.40	248.5	18.59	247.0	18.84	237.6	18.07	227.8	17.25	213.0	16.05	193.4	14.48
	47.0	**43.0**	259.4	18.63	258.2	18.83	247.4	18.15	237.6	17.36	227.8	16.58	213.0	15.42	193.4	13.91
	48.2	**46.0**	267.1	18.81	265.8	19.01	247.4	17.58	237.6	16.82	227.8	16.06	213.0	14.94	193.4	13.49
	53.6	**51.1**	280.1	19.11	267.0	18.15	247.4	16.67	237.6	15.95	227.8	15.24	213.0	14.18	193.4	12.80
	59.0	**56.3**	281.8	18.27	267.0	17.20	247.4	15.80	237.6	15.12	227.8	14.44	213.0	13.44	193.4	12.14

Total rated capacity of indoor unit	Outdoor temp.		Indoor temperature °FDB													
			61		64		68		70		72		75		79	
	°FDB	°FWB	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
216.0 (100%)	-2.7	**-4.0**	146.4	15.78	145.3	15.87	143.9	16.00	143.1	16.06	142.4	16.13	141.4	16.23	139.9	16.36
	5.0	**3.2**	161.4	16.26	160.4	16.38	159.2	16.53	158.5	16.61	157.9	16.68	156.9	16.80	155.6	16.96
	10.4	**8.6**	173.4	16.63	172.5	16.76	171.2	16.93	170.6	17.01	170.0	17.10	169.1	17.23	167.9	17.40
	15.8	**14.0**	185.8	17.00	184.9	17.14	183.7	17.33	183.1	17.42	182.5	17.52	181.6	17.66	175.8	17.29
	17.0	**15.0**	188.2	17.07	187.3	17.21	186.1	17.40	185.5	17.50	184.9	17.59	184.0	17.74	175.8	17.09
	23.0	**21.2**	203.1	17.49	202.1	17.65	200.9	17.86	200.3	17.96	199.7	18.07	193.7	17.63	175.8	15.92
	26.6	**24.8**	211.9	17.74	210.9	17.90	209.7	18.12	209.0	18.23	207.1	18.19	193.7	16.93	175.8	15.29
	30.2	**28.4**	220.8	17.98	219.8	18.16	218.5	18.38	216.0	18.30	207.1	17.48	193.7	16.28	175.8	14.70
	32.0	**30.2**	225.2	18.11	224.2	18.28	222.9	18.52	216.0	17.94	207.1	17.14	193.7	15.96	175.8	14.42
	35.6	**33.8**	234.2	18.35	233.2	18.53	224.9	18.03	216.0	17.25	207.1	16.49	193.7	15.35	175.8	13.87
	41.0	**39.2**	247.7	18.72	242.8	18.50	224.9	17.02	216.0	16.29	207.1	15.57	193.7	14.50	175.8	13.10
	47.0	**43.0**	256.2	18.86	242.8	17.77	224.9	16.35	216.0	15.65	207.1	14.96	193.7	13.93	175.8	12.60
	48.2	**46.0**	256.2	18.27	242.8	17.22	224.9	15.84	216.0	15.17	207.1	14.50	193.7	13.51	175.8	12.21
	53.6	**51.1**	256.2	17.33	242.8	16.33	224.9	15.03	216.0	14.39	207.1	13.75	193.7	12.82	175.8	11.59
	59.0	**56.3**	256.2	16.42	242.8	15.48	224.9	14.25	216.0	13.64	207.1	13.04	193.7	12.15	175.8	11.00
194.4 (90%)	-2.7	**-4.0**	145.1	15.89	144.0	15.99	142.6	16.11	141.9	16.18	141.2	16.24	140.1	16.34	138.7	16.47
	5.0	**3.2**	160.1	16.41	159.2	16.53	157.9	16.68	157.3	16.76	156.6	16.84	155.7	16.95	154.4	17.11
	10.4	**8.6**	172.1	16.81	171.2	16.94	169.9	17.11	169.3	17.20	168.7	17.28	167.8	17.41	158.3	16.51
	15.8	**14.0**	184.5	17.21	183.6	17.35	182.4	17.54	181.8	17.64	181.2	17.73	174.3	17.13	158.3	15.48
	17.0	**15.0**	186.8	17.29	185.9	17.43	184.7	17.62	184.1	17.72	183.6	17.81	174.3	16.93	158.3	15.30
	23.0	**21.2**	201.5	17.75	200.6	17.91	199.4	18.12	194.4	17.70	186.4	16.93	174.3	15.77	158.3	14.26
	26.6	**24.8**	210.2	18.02	209.3	18.19	202.4	17.75	194.4	17.00	186.4	16.26	174.3	15.15	158.3	13.71
	30.2	**28.4**	219.0	18.30	218.0	18.47	202.4	17.06	194.4	16.34	186.4	15.63	174.3	14.57	158.3	13.18
	32.0	**30.2**	223.4	18.43	218.5	18.16	202.4	16.73	194.4	16.02	186.4	15.33	174.3	14.29	158.3	12.93
	35.6	**33.8**	230.6	18.52	218.5	17.47	202.4	16.09	194.4	15.41	186.4	14.74	174.3	13.75	158.3	12.44
	41.0	**39.2**	230.6	17.48	218.5	16.49	202.4	15.19	194.4	14.56	186.4	13.92	174.3	12.99	158.3	11.76
	47.0	**43.0**	230.6	16.79	218.5	15.84	202.4	14.60	194.4	13.99	186.4	13.38	174.3	12.48	158.3	11.31
	48.2	**46.0**	230.6	16.27	218.5	15.35	202.4	14.15	194.4	13.56	186.4	12.97	174.3	12.10	158.3	10.97
	53.6	**51.1**	230.6	15.44	218.5	14.56	202.4	13.43	194.4	12.87	186.4	12.31	174.3	11.49	158.3	10.41
	59.0	**56.3**	230.6	14.63	218.5	13.81	202.4	12.73	194.4	12.20	186.4	11.68	174.3	10.90	158.3	9.88
172.8 (80%)	-2.7	**-4.0**	143.5	16.03	142.4	16.13	141.0	16.26	140.3	16.32	139.6	16.39	138.6	16.48	137.2	16.62
	5.0	**3.2**	158.6	16.60	157.6	16.72	156.4	16.87	155.7	16.95	155.1	17.02	154.2	17.14	140.7	15.61
	10.4	**8.6**	170.5	17.04	169.6	17.17	168.4	17.34	167.8	17.42	165.7	17.31	154.9	16.15	140.7	14.62
	15.8	**14.0**	182.8	17.48	181.9	17.62	179.9	17.71	172.8	16.97	165.7	16.24	154.9	15.15	140.7	13.72
	17.0	**15.0**	185.1	17.56	184.2	17.70	179.9	17.51	172.8	16.77	165.7	16.05	154.9	14.97	140.7	13.56
	23.0	**21.2**	199.6	18.08	194.2	17.68	179.9	16.31	172.8	15.63	165.7	14.96	154.9	13.96	140.7	12.65
	26.6	**24.8**	204.9	17.99	194.2	16.98	179.9	15.67	172.8	15.02	165.7	14.37	154.9	13.41	140.7	12.16
	30.2	**28.4**	204.9	17.29	194.2	16.32	179.9	15.06	172.8	14.44	165.7	13.82	154.9	12.90	140.7	11.70
	32.0	**30.2**	204.9	16.95	194.2	16.01	179.9	14.77	172.8	14.16	165.7	13.55	154.9	12.65	140.7	11.47
	35.6	**33.8**	204.9	16.31	194.2	15.40	179.9	14.21	172.8	13.62	165.7	13.04	154.9	12.18	140.7	11.05
	41.0	**39.2**	204.9	15.40	194.2	14.54	179.9	13.42	172.8	12.87	165.7	12.32	154.9	11.51	140.7	10.45
	47.0	**43.0**	204.9	14.79	194.2	13.97	179.9	12.90	172.8	12.37	165.7	11.85	154.9	11.07	140.7	10.05
	48.2	**46.0**	204.9	14.34	194.2	13.54	179.9	12.51	172.8	12.00	165.7	11.49	154.9	10.73	140.7	9.75
	53.6	**51.1**	204.9	13.60	194.2	12.85	179.9	11.87	172.8	11.39	165.7	10.91	154.9	10.19	140.7	9.26
	59.0	**56.3**	204.9	12.90	194.2	12.19	179.9	11.26	172.8	10.80	165.7	10.35	154.9	9.68	140.7	8.80
151.2 (70%)	-2.7	**-4.0**	141.5	16.21	140.5	16.31	139.1	16.44	138.4	16.50	137.8	16.57	135.6	16.49	123.1	14.95
	5.0	**3.2**	156.6	16.84	155.7	16.96	154.4	17.11	151.2	16.82	145.0	16.10	135.6	15.03	123.1	13.63
	10.4	**8.6**	168.4	17.32	167.6	17.45	157.5	16.42	151.2	15.74	145.0	15.07	135.6	14.08	123.1	12.77
	15.8	**14.0**	179.3	17.65	169.9	16.68	157.5	15.40	151.2	14.77	145.0	14.14	135.6	13.21	123.1	11.99
	17.0	**15.0**	179.3	17.44	169.9	16.48	157.5	15.22	151.2	14.60	145.0	13.98	135.6	13.06	123.1	11.86
	23.0	**21.2**	179.3	16.25	169.9	15.36	157.5	14.19	151.2	13.61	145.0	13.04	135.6	12.18	123.1	11.07
	26.6	**24.8**	179.3	15.61	169.9	14.76	157.5	13.63	151.2	13.08	145.0	12.53	135.6	11.71	123.1	10.64
	30.2	**28.4**	179.3	15.01	169.9	14.19	157.5	13.11	151.2	12.58	145.0	12.05	135.6	11.27	123.1	10.24
	32.0	**30.2**	179.3	14.72	169.9	13.91	157.5	12.86	151.2	12.34	145.0	11.83	135.6	11.06	123.1	10.05
	35.6	**33.8**	179.3	14.16	169.9	13.39	157.5	12.38	151.2	11.88	145.0	11.38	135.6	10.65	123.1	9.68
	41.0	**39.2**	179.3	13.37	169.9	12.65	157.5	11.70	151.2	11.23	145.0	10.76	135.6	10.07	123.1	9.16
	47.0	**43.0**	179.3	12.86	169.9	12.16	157.5	11.25	151.2	10.80	145.0	10.35	135.6	9.69	123.1	8.82
	48.2	**46.0**	179.3	12.46	169.9	11.79	157.5	10.91	151.2	10.47	145.0	10.04	135.6	9.40	123.1	8.56
	53.6	**51.1**	179.3	11.83	169.9	11.19	157.5	10.36	151.2	9.95	145.0	9.54	135.6	8.93	123.1	8.14
	59.0	**56.3**	179.3	11.22	169.9	10.62	157.5	9.83	151.2	9.44	145.0	9.06	135.6	8.48	123.1	7.73
129.6 (60%)	-2.7	**-4.0**	139.0	16.45	138.0	16.55	135.0	16.42	129.6	15.75	124.3	15.09	116.2	14.10	105.5	12.81
	5.0	**3.2**	153.7	17.10	145.7	16.18	135.0	14.96	129.6	14.36	124.3	13.76	116.2	12.87	105.5	11.69
	10.4	**8.6**	153.7	16.01	145.7	15.15	135.0	14.01	129.6	13.45	124.3	12.89	116.2	12.06	105.5	10.96
	15.8	**14.0**	153.7	15.02	145.7	14.21	135.0	13.15	129.6	12.63	124.3	12.10	116.2	11.33	105.5	10.30
	17.0	**15.0**	153.7	14.85	145.7	14.05	135.0	13.00	129.6	12.48	124.3	11.97	116.2	11.20	105.5	10.19
	23.0	**21.2**	153.7	13.84	145.7	13.10	135.0	12.13	129.6	11.65	124.3	11.17	116.2	10.46	105.5	9.52
	26.6	**24.8**	153.7	13.30	145.7	12.59	135.0	11.66	129.6	11.20	124.3	10.74	116.2	10.06	105.5	9.16
	30.2	**28.4**	153.7	12.79	145.7	12.11	135.0	11.22	129.6	10.78	124.3	10.34	116.2	9.68	105.5	8.82
	32.0	**30.2**	153.7	12.55	145.7	11.88	135.0	11.01	129.6	10.57	124.3	10.14	116.2	9.50	105.5	8.66
	35.6	**33.8**	153.7	12.08	145.7	11.44	135.0	10.60	129.6	10.18	124.3	9.77	116.2	9.16	105.5	8.35
	41.0	**39.2**	153.7	11.42	145.7	10.82	135.0	10.03	129.6	9.63	124.3	9.25	116.2	8.67	105.5	7.91
	47.0	**43.0**	153.7	10.98	145.7	10.40	135.0	9.65	129.6	9.27	124.3	8.90	116.2	8.34	105.5	7.61
	48.2	**46.0**	153.7	10.65	145.7	10.09	135.0	9.36	129.6	8.99	124.3	8.63	116.2	8.10	105.5	7.39
	53.6	**51.1**	153.7	10.11	145.7	9.59	135.0	8.89	129.6	8.55	124.3	8.21	116.2	7.70	105.5	7.04
	59.0	**56.3**	153.7	9.60	145.7	9.10	135.0	8.45	129.6	8.12	124.3	7.80	116.2	7.32	105.5	6.69
108.0 (50%)	-2.7	**-4.0**	128.1	15.89	121.3	15.03	112.4	13.93	108.0	13.38	103.6	12.84	96.8	12.01	87.9	10.94
	5.0	**3.2**	128.1	14.50	121.3	13.73	112.4	12.73	108.0	12.23	103.6	11.74	96.8	10.99	87.9	10.01
	10.4	**8.6**	128.1	13.60	121.3	12.87	112.4	11.94	108.0	11.47	103.6	11.01	96.8	10.31	87.9	9.41
	15.8	**14.0**	128.1	12.78	121.3	12.10	112.4	11.23	108.0	10.79	103.6	10.36	96.8	9.71	87.9	8.86
	17.0	**15.0**	128.1	12.63	121.3	11.96	112.4	11.09	108.0	10.67	103.6	10.24	96.8	9.59	87.9	8.76
	23.0	**21.2**	128.1	11.80	121.3	11.18	112.4	10.37	108.0	9.98	103.6	9.58	96.8	8.98	87.9	8.20
	26.6	**24.8**	128.1	11.35	121.3	10.75	112.4	9.98	108.0	9.60	103.6	9.23	96.8	8.65	87.9	7.90
	30.2	**28.4**	128.1	10.92	121.3	10.35	112.4	9.62	108.0	9.25	103.6	8.89	96.8	8.33	87.9	7.62
	32.0	**30.2**	128.1	10.72	121.3	10.16	112.4	9.44	108.0	9.08	103.6	8.73	96.8	8.18	87.9	7.48
	35.6	**33.8**	128.1	10.33	121.3	9.79	112.4	9.10	108.0	8.75	103.6	8.41	96.8	7.89	87.9	7.22
	41.0	**39.2**	128.1	9.77	121.3	9.27	112.4	8.62	108.0	8.29	103.6	7.97	96.8	7.48	87.9	6.85
	47.0	**43.0**	128.1	9.41	121.3	8.93	112.4	8.30	108.0	7.99	103.6	7.68	96.8	7.21	87.9	6.61
	48.2	**46.0**	128.1	9.13	121.3	8.66	112.4	8.05	108.0	7.75	103.6	7.46	96.8	7.00	87.9	6.42
	53.6	**51.1**	128.1	8.68	121.3	8.24	112.4	7.67	108.0	7.38	103.6	7.10	96.8	6.67	87.9	6.12
	59.0	**56.3**	128.1	8.25	121.3	7.83	112.4	7.29	108.0	7.02	103.6	6.76	96.8	6.35	87.9	5.83

TC : Total Capacity kBtu/h.

IP : Input Power kW (Compressor + Outdoor fan motor).

The data is based on the following conditions. Pipe length : 25ft. (7.5m) , Height difference : 0ft. (0m)

HEATING CAPACITY in kBtu/h

■ MODEL : AOUA216RLBVG1

Total rated capacity of indoor unit	Outdoor temp.		Indoor temperature °FDB													
			61		64		68		70		72		75		79	
	°FDB	°FWB	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
364.5 (150%)	-2.7	**-4.0**	163.8	18.49	162.6	18.62	161.0	18.78	160.2	18.87	159.4	18.95	158.2	19.08	156.6	19.26
	5.0	**3.2**	181.5	18.97	180.4	19.12	178.9	19.32	178.2	19.42	177.5	19.52	176.4	19.67	175.0	19.87
	10.4	**8.6**	195.6	19.31	194.6	19.48	193.2	19.70	192.5	19.82	191.8	19.93	190.8	20.10	189.4	20.32
	15.8	**14.0**	210.4	19.66	209.3	19.84	208.0	20.08	207.3	20.21	206.6	20.33	205.6	20.51	204.3	20.76
	17.0	**15.0**	213.2	19.72	212.2	19.91	210.8	20.15	210.1	20.28	209.5	20.40	208.4	20.59	207.1	20.84
	23.0	**21.2**	230.9	20.10	229.9	20.31	228.5	20.58	227.8	20.71	227.1	20.85	226.1	21.06	224.7	21.33
	26.6	**24.8**	241.5	20.32	240.4	20.54	239.0	20.82	238.3	20.96	237.6	21.11	236.5	21.32	235.1	21.61
	30.2	**28.4**	252.3	20.54	251.2	20.76	249.7	21.06	249.0	21.21	248.2	21.36	247.1	21.58	245.6	21.88
	32.0	**30.2**	257.7	20.65	256.6	20.88	255.1	21.18	254.3	21.33	253.6	21.48	252.4	21.71	250.9	22.02
	35.6	**33.8**	268.7	20.86	267.6	21.10	266.0	21.41	265.1	21.57	264.3	21.73	263.1	21.96	261.5	22.28
	41.0	**39.2**	285.5	21.18	284.2	21.42	282.4	21.75	281.5	21.92	280.7	22.08	279.3	22.33	277.5	22.67
	47.0	**43.0**	297.4	21.39	296.0	21.65	294.1	21.99	293.2	22.16	292.2	22.33	290.8	22.59	288.8	22.93
	48.2	**46.0**	306.9	21.56	305.4	21.82	303.4	22.17	302.4	22.34	301.4	22.52	299.8	22.78	296.6	23.00
	53.6	**51.1**	323.0	21.84	321.4	22.11	319.2	22.47	318.0	22.65	316.9	22.83	315.2	23.10	296.8	21.79
	59.0	**56.3**	339.5	22.11	337.7	22.39	335.3	22.76	334.0	22.94	332.8	23.13	326.9	23.00	296.8	20.61
340.2 (140%)	-2.7	**-4.0**	163.2	18.55	162.0	18.68	160.4	18.85	159.6	18.93	158.8	19.02	157.6	19.15	156.0	19.32
	5.0	**3.2**	180.9	19.05	179.8	19.20	178.3	19.40	177.6	19.50	176.9	19.60	175.8	19.75	174.4	19.96
	10.4	**8.6**	195.0	19.42	193.9	19.58	192.5	19.81	191.9	19.92	191.2	20.03	190.1	20.20	188.8	20.43
	15.8	**14.0**	209.7	19.78	208.7	19.96	207.3	20.20	206.6	20.33	206.0	20.45	205.0	20.63	203.6	20.88
	17.0	**15.0**	212.5	19.84	211.5	20.03	210.1	20.28	209.5	20.40	208.8	20.53	207.8	20.72	206.4	20.97
	23.0	**21.2**	230.2	20.25	229.1	20.45	227.7	20.73	227.1	20.86	226.4	21.00	225.3	21.20	223.9	21.48
	26.6	**24.8**	240.7	20.49	239.6	20.70	238.2	20.98	237.5	21.12	236.8	21.27	235.7	21.48	234.3	21.77
	30.2	**28.4**	251.4	20.72	250.3	20.94	248.8	21.23	248.1	21.38	247.3	21.53	246.2	21.76	244.7	22.06
	32.0	**30.2**	256.8	20.83	255.7	21.06	254.2	21.36	253.4	21.51	252.6	21.66	251.5	21.89	249.9	22.20
	35.6	**33.8**	267.7	21.06	266.5	21.30	264.9	21.61	264.1	21.77	263.3	21.92	262.1	22.16	260.5	22.48
	41.0	**39.2**	284.3	21.40	283.0	21.64	281.2	21.97	280.4	22.14	279.5	22.30	278.1	22.55	275.9	22.84
	47.0	**43.0**	296.1	21.63	294.7	21.88	292.8	22.22	291.8	22.39	290.9	22.56	289.4	22.82	277.0	22.02
	48.2	**46.0**	305.4	21.81	303.9	22.07	301.9	22.42	300.9	22.59	299.9	22.77	298.4	23.03	277.0	21.31
	53.6	**51.1**	321.3	22.11	319.7	22.38	317.5	22.74	316.4	22.92	315.2	23.10	305.1	22.48	277.0	20.17
	59.0	**56.3**	337.6	22.41	335.8	22.68	333.3	23.05	332.1	23.24	326.2	22.95	305.1	21.26	277.0	19.08
315.9 (130%)	-2.7	**-4.0**	162.5	18.63	161.2	18.75	159.6	18.92	158.9	19.01	158.1	19.09	156.9	19.22	155.3	19.39
	5.0	**3.2**	180.1	19.15	179.1	19.30	177.6	19.50	176.9	19.60	176.2	19.70	175.1	19.85	173.7	20.05
	10.4	**8.6**	194.2	19.53	193.2	19.70	191.8	19.92	191.1	20.03	190.5	20.15	189.4	20.32	188.1	20.54
	15.8	**14.0**	208.9	19.92	207.9	20.10	206.6	20.34	205.9	20.46	205.2	20.59	204.2	20.77	202.9	21.02
	17.0	**15.0**	211.7	19.99	210.7	20.17	209.4	20.42	208.7	20.54	208.0	20.67	207.0	20.86	205.7	21.11
	23.0	**21.2**	229.3	20.42	228.3	20.62	226.9	20.89	226.2	21.03	225.5	21.17	224.5	21.37	223.1	21.65
	26.6	**24.8**	239.8	20.67	238.7	20.88	237.3	21.17	236.6	21.31	235.9	21.45	234.8	21.67	233.3	21.95
	30.2	**28.4**	250.4	20.92	249.3	21.14	247.8	21.44	247.1	21.58	246.3	21.73	245.2	21.96	243.7	22.26
	32.0	**30.2**	255.8	21.04	254.6	21.27	253.1	21.57	252.3	21.72	251.6	21.87	250.4	22.10	248.9	22.41
	35.6	**33.8**	266.6	21.29	265.4	21.52	263.8	21.84	263.0	21.99	262.2	22.15	260.9	22.39	257.2	22.46
	41.0	**39.2**	283.0	21.65	281.7	21.90	279.9	22.23	279.0	22.39	278.1	22.56	276.8	22.80	257.2	21.15
	47.0	**43.0**	294.6	21.90	293.2	22.16	291.3	22.49	290.3	22.66	289.4	22.83	283.3	22.58	257.2	20.29
	48.2	**46.0**	303.8	22.10	302.3	22.36	300.3	22.70	299.3	22.88	298.3	23.05	283.3	21.85	257.2	19.64
	53.6	**51.1**	319.4	22.42	317.8	22.69	315.5	23.05	314.4	23.23	302.9	22.30	283.3	20.69	257.2	18.59
	59.0	**56.3**	335.4	22.74	333.5	23.02	329.0	23.17	315.9	22.13	302.9	21.09	283.3	19.57	257.2	17.59
291.6 (120%)	-2.7	**-4.0**	161.6	18.71	160.4	18.84	158.8	19.01	158.0	19.09	157.3	19.18	156.1	19.31	154.5	19.48
	5.0	**3.2**	179.3	19.26	178.2	19.41	176.8	19.61	176.1	19.71	175.4	19.81	174.3	19.96	172.9	20.17
	10.4	**8.6**	193.4	19.67	192.3	19.84	191.0	20.06	190.3	20.17	189.6	20.28	188.6	20.45	187.3	20.68
	15.8	**14.0**	208.0	20.08	207.0	20.26	205.7	20.50	205.0	20.63	204.3	20.75	203.3	20.93	202.0	21.18
	17.0	**15.0**	210.8	20.15	209.8	20.34	208.5	20.59	207.8	20.71	207.1	20.83	206.1	21.02	204.8	21.27
	23.0	**21.2**	228.3	20.62	227.3	20.82	225.9	21.09	225.2	21.23	224.5	21.36	223.5	21.57	222.1	21.84
	26.6	**24.8**	238.7	20.89	237.6	21.10	236.2	21.38	235.5	21.52	234.8	21.67	233.7	21.88	232.3	22.17
	30.2	**28.4**	249.2	21.15	248.1	21.37	246.6	21.67	245.9	21.82	245.2	21.97	244.0	22.19	237.4	21.87
	32.0	**30.2**	254.5	21.29	253.4	21.51	251.9	21.81	251.1	21.96	250.4	22.12	249.2	22.34	237.4	21.43
	35.6	**33.8**	265.2	21.55	264.0	21.79	262.4	22.10	261.6	22.25	260.8	22.41	259.6	22.65	237.4	20.58
	41.0	**39.2**	281.4	21.95	280.1	22.19	278.3	22.52	277.4	22.68	276.5	22.85	261.5	21.54	237.4	19.38
	47.0	**43.0**	292.8	22.22	291.4	22.47	289.5	22.81	288.6	22.98	279.6	22.25	261.5	20.66	237.4	18.59
	48.2	**46.0**	301.9	22.43	300.4	22.69	298.4	23.03	291.6	22.58	279.6	21.54	261.5	20.00	237.4	18.00
	53.6	**51.1**	317.2	22.78	315.5	23.05	303.7	22.36	291.6	21.37	279.6	20.39	261.5	18.93	237.4	17.04
	59.0	**56.3**	332.7	23.13	327.8	23.07	303.7	21.16	291.6	20.21	279.6	19.29	261.5	17.91	237.4	16.13
267.3 (110%)	-2.7	**-4.0**	160.6	18.81	159.4	18.94	157.9	19.11	157.1	19.19	156.3	19.28	155.2	19.41	153.6	19.58
	5.0	**3.2**	178.3	19.39	177.3	19.54	175.9	19.74	175.1	19.84	174.4	19.94	173.4	20.10	172.0	20.30
	10.4	**8.6**	192.4	19.83	191.4	20.00	190.0	20.22	189.3	20.33	188.7	20.44	187.7	20.61	186.3	20.84
	15.8	**14.0**	207.0	20.27	206.0	20.45	204.6	20.69	204.0	20.81	203.3	20.94	202.3	21.12	201.0	21.37
	17.0	**15.0**	209.7	20.35	208.7	20.53	207.4	20.78	206.7	20.90	206.1	21.03	205.1	21.22	203.7	21.47
	23.0	**21.2**	227.1	20.85	226.1	21.05	224.7	21.32	224.0	21.46	223.3	21.59	222.3	21.80	217.6	21.65
	26.6	**24.8**	237.4	21.14	236.4	21.35	234.9	21.63	234.2	21.78	233.5	21.92	232.5	22.13	217.6	20.75
	30.2	**28.4**	247.8	21.43	246.7	21.65	245.3	21.94	244.5	22.09	243.8	22.24	239.7	22.10	217.6	19.91
	32.0	**30.2**	253.1	21.57	252.0	21.80	250.4	22.10	249.7	22.25	248.9	22.40	239.7	21.65	217.6	19.51
	35.6	**33.8**	263.6	21.86	262.4	22.10	260.8	22.41	260.0	22.56	256.3	22.37	239.7	20.79	217.6	18.73
	41.0	**39.2**	279.5	22.29	278.2	22.54	276.5	22.86	267.3	22.07	256.3	21.07	239.7	19.58	217.6	17.65
	47.0	**43.0**	290.8	22.59	289.3	22.84	278.4	22.14	267.3	21.17	256.3	20.21	239.7	18.79	217.6	16.93
	48.2	**46.0**	299.6	22.82	298.1	23.08	278.4	21.43	267.3	20.49	256.3	19.56	239.7	18.18	217.6	16.39
	53.6	**51.1**	314.6	23.21	300.4	22.10	278.4	20.29	267.3	19.40	256.3	18.52	239.7	17.22	217.6	15.53
	59.0	**56.3**	317.1	22.21	300.4	20.90	278.4	19.19	267.3	18.35	256.3	17.52	239.7	16.29	217.6	14.70

Total rated capacity of indoor unit	Outdoor temp.		Indoor temperature °FDB													
			61		64		68		70		72		75		79	
	°FDB	°FWB	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
243.0 (100%)	-2.7	**-4.0**	159.5	18.93	158.3	19.06	156.7	19.23	156.0	19.31	155.2	19.40	154.1	19.52	152.6	19.70
	5.0	**3.2**	177.2	19.55	176.1	19.70	174.7	19.90	174.0	20.00	173.3	20.10	172.3	20.25	170.9	20.46
	10.4	**8.6**	191.2	20.02	190.2	20.19	188.9	20.41	188.2	20.52	187.5	20.63	186.5	20.80	185.2	21.03
	15.8	**14.0**	205.7	20.49	204.7	20.67	203.4	20.92	202.7	21.04	202.1	21.16	201.1	21.35	197.2	21.24
	17.0	**15.0**	208.5	20.58	207.5	20.76	206.2	21.01	205.5	21.14	204.8	21.26	203.8	21.45	197.8	21.07
	23.0	**21.2**	225.7	21.12	224.7	21.33	223.3	21.60	222.6	21.73	222.0	21.87	217.9	21.68	197.8	19.55
	26.6	**24.8**	235.9	21.44	234.9	21.65	233.4	21.93	232.7	22.08	231.4	22.14	217.9	20.78	197.8	18.75
	30.2	**28.4**	246.2	21.76	245.1	21.98	243.6	22.27	241.9	22.30	233.0	21.43	217.9	19.94	197.8	17.99
	32.0	**30.2**	251.4	21.91	250.2	22.14	248.7	22.44	243.0	21.98	233.0	21.00	217.9	19.53	197.8	17.62
	35.6	**33.8**	261.7	22.23	260.5	22.46	253.1	22.06	243.0	21.11	233.0	20.16	217.9	18.76	197.8	16.93
	41.0	**39.2**	277.3	22.70	273.1	22.60	253.1	20.78	243.0	19.88	233.0	18.99	217.9	17.67	197.8	15.95
	47.0	**43.0**	287.5	22.94	273.1	21.68	253.1	19.93	243.0	19.07	233.0	18.22	217.9	16.96	197.8	15.31
	48.2	**46.0**	288.2	22.28	273.1	20.98	253.1	19.29	243.0	18.46	233.0	17.64	217.9	16.42	197.8	14.83
	53.6	**51.1**	288.2	21.09	273.1	19.86	253.1	18.26	243.0	17.48	233.0	16.70	217.9	15.55	197.8	14.05
	59.0	**56.3**	288.2	19.95	273.1	18.79	253.1	17.28	243.0	16.54	233.0	15.81	217.9	14.72	197.8	13.30
218.7 (90%)	-2.7	**-4.0**	158.1	19.08	156.9	19.20	155.4	19.37	154.6	19.46	153.9	19.54	152.8	19.67	151.3	19.84
	5.0	**3.2**	175.8	19.74	174.8	19.89	173.4	20.09	172.7	20.19	172.0	20.29	171.0	20.45	169.6	20.65
	10.4	**8.6**	189.8	20.25	188.8	20.42	187.5	20.64	186.8	20.75	186.1	20.86	185.1	21.03	178.1	20.42
	15.8	**14.0**	204.2	20.76	203.2	20.95	201.9	21.19	201.3	21.31	200.6	21.43	196.1	21.13	178.1	19.08
	17.0	**15.0**	207.0	20.86	206.0	21.05	204.7	21.29	204.0	21.42	203.3	21.54	196.1	20.87	178.1	18.85
	23.0	**21.2**	224.0	21.46	223.0	21.66	221.6	21.93	218.5	21.73	209.7	20.80	196.1	19.37	178.1	17.50
	26.6	**24.8**	234.1	21.80	233.0	22.02	227.8	21.80	218.7	20.87	209.7	19.94	196.1	18.57	178.1	16.78
	30.2	**28.4**	244.2	22.15	243.1	22.37	227.8	20.91	218.7	20.02	209.7	19.13	196.1	17.82	178.1	16.11
	32.0	**30.2**	249.3	22.33	245.8	22.26	227.8	20.49	218.7	19.61	209.7	18.75	196.1	17.46	178.1	15.78
	35.6	**33.8**	258.5	22.56	245.8	21.37	227.8	19.67	218.7	18.83	209.7	18.01	196.1	16.77	178.1	15.17
	41.0	**39.2**	259.4	21.35	245.8	20.13	227.8	18.53	218.7	17.74	209.7	16.96	196.1	15.81	178.1	14.30
	47.0	**43.0**	259.4	20.48	245.8	19.31	227.8	17.78	218.7	17.03	209.7	16.28	196.1	15.17	178.1	13.73
	48.2	**46.0**	259.4	19.82	245.8	18.69	227.8	17.21	218.7	16.48	209.7	15.76	196.1	14.69	178.1	13.29
	53.6	**51.1**	259.4	18.77	245.8	17.70	227.8	16.30	218.7	15.61	209.7	14.93	196.1	13.92	178.1	12.60
	59.0	**56.3**	259.4	17.75	245.8	16.75	227.8	15.43	218.7	14.78	209.7	14.13	196.1	13.18	178.1	11.93
194.4 (80%)	-2.7	**-4.0**	156.4	19.26	155.3	19.38	153.8	19.55	153.0	19.64	152.3	19.72	151.2	19.85	149.7	20.02
	5.0	**3.2**	174.1	19.98	173.1	20.13	171.7	20.33	171.1	20.43	170.4	20.53	169.4	20.68	158.3	19.38
	10.4	**8.6**	188.0	20.54	187.1	20.70	185.8	20.93	185.1	21.04	183.8	21.05	174.3	19.97	158.3	18.06
	15.8	**14.0**	202.4	21.10	201.4	21.29	199.9	21.50	194.4	20.94	186.4	20.02	174.3	18.66	158.3	16.88
	17.0	**15.0**	205.1	21.21	204.1	21.39	201.1	21.41	194.4	20.68	186.4	19.78	174.3	18.43	158.3	16.67
	23.0	**21.2**	221.9	21.87	218.3	21.72	202.5	20.04	194.4	19.19	186.4	18.36	174.3	17.12	158.3	15.49
	26.6	**24.8**	230.0	22.01	218.5	20.84	202.5	19.21	194.4	18.40	186.4	17.60	174.3	16.42	158.3	14.86
	30.2	**28.4**	230.6	21.19	218.5	20.00	202.5	18.43	194.4	17.66	186.4	16.90	174.3	15.76	158.3	14.27
	32.0	**30.2**	230.6	20.76	218.5	19.59	202.5	18.06	194.4	17.30	186.4	16.56	174.3	15.44	158.3	13.99
	35.6	**33.8**	230.6	19.93	218.5	18.81	202.5	17.35	194.4	16.62	186.4	15.91	174.3	14.84	158.3	13.44
	41.0	**39.2**	230.6	18.78	218.5	17.72	202.5	16.35	194.4	15.67	186.4	14.99	174.3	13.99	158.3	12.68
	47.0	**43.0**	230.6	18.02	218.5	17.01	202.5	15.69	194.4	15.04	186.4	14.39	174.3	13.43	158.3	12.18
	48.2	**46.0**	230.6	17.44	218.5	16.46	202.5	15.19	194.4	14.56	186.4	13.94	174.3	13.01	158.3	11.80
	53.6	**51.1**	230.6	16.52	218.5	15.59	202.5	14.39	194.4	13.79	186.4	13.21	174.3	12.33	158.3	11.19
	59.0	**56.3**	230.6	15.63	218.5	14.76	202.5	13.62	194.4	13.06	186.4	12.51	174.3	11.68	158.3	10.60
170.1 (70%)	-2.7	**-4.0**	154.3	19.48	153.2	19.61	151.8	19.78	151.0	19.86	150.3	19.95	148.8	20.00	138.5	18.66
	5.0	**3.2**	172.0	20.29	171.0	20.43	169.7	20.63	167.7	20.52	163.1	20.00	152.5	18.65	138.5	16.89
	10.4	**8.6**	185.9	20.90	184.9	21.07	177.1	20.31	170.1	19.47	163.1	18.63	152.5	17.38	138.5	15.75
	15.8	**14.0**	199.5	21.45	191.2	20.57	177.1	18.98	170.1	18.19	163.1	17.41	152.5	16.25	138.5	14.73
	17.0	**15.0**	200.7	21.36	191.2	20.31	177.1	18.75	170.1	17.97	163.1	17.20	152.5	16.05	138.5	14.55
	23.0	**21.2**	201.8	19.96	191.2	18.86	177.1	17.41	170.1	16.69	163.1	15.98	152.5	14.92	138.5	13.53
	26.6	**24.8**	201.8	19.14	191.2	18.08	177.1	16.69	170.1	16.01	163.1	15.33	152.5	14.31	138.5	12.99
	30.2	**28.4**	201.8	18.36	191.2	17.35	177.1	16.02	170.1	15.36	163.1	14.71	152.5	13.74	138.5	12.47
	32.0	**30.2**	201.8	17.99	191.2	17.00	177.1	15.70	170.1	15.06	163.1	14.42	152.5	13.47	138.5	12.23
	35.6	**33.8**	201.8	17.28	191.2	16.33	177.1	15.09	170.1	14.47	163.1	13.86	152.5	12.95	138.5	11.76
	41.0	**39.2**	201.8	16.29	191.2	15.39	177.1	14.22	170.1	13.64	163.1	13.07	152.5	12.22	138.5	11.10
	47.0	**43.0**	201.8	15.63	191.2	14.78	177.1	13.65	170.1	13.10	163.1	12.55	152.5	11.73	138.5	10.66
	48.2	**46.0**	201.8	15.13	191.2	14.31	177.1	13.23	170.1	12.69	163.1	12.16	152.5	11.37	138.5	10.33
	53.6	**51.1**	201.8	14.34	191.2	13.56	177.1	12.53	170.1	12.03	163.1	11.53	152.5	10.78	138.5	9.80
	59.0	**56.3**	201.8	13.57	191.2	12.84	177.1	11.87	170.1	11.40	163.1	10.92	152.5	10.22	138.5	9.30
145.8 (60%)	-2.7	**-4.0**	151.7	19.78	150.6	19.91	148.4	19.94	144.9	19.52	139.8	18.84	130.7	17.60	118.7	15.96
	5.0	**3.2**	169.3	20.68	163.9	20.10	151.8	18.57	145.8	17.81	139.8	17.05	130.7	15.93	118.7	14.46
	10.4	**8.6**	172.9	19.81	163.9	18.72	151.8	17.30	145.8	16.60	139.8	15.90	130.7	14.86	118.7	13.49
	15.8	**14.0**	172.9	18.51	163.9	17.50	151.8	16.18	145.8	15.52	139.8	14.87	130.7	13.90	118.7	12.63
	17.0	**15.0**	172.9	18.28	163.9	17.28	151.8	15.98	145.8	15.33	139.8	14.69	130.7	13.73	118.7	12.48
	23.0	**21.2**	172.9	16.97	163.9	16.06	151.8	14.85	145.8	14.25	139.8	13.66	130.7	12.77	118.7	11.61
	26.6	**24.8**	172.9	16.28	163.9	15.40	151.8	14.25	145.8	13.68	139.8	13.11	130.7	12.26	118.7	11.15
	30.2	**28.4**	172.9	15.63	163.9	14.79	151.8	13.68	145.8	13.13	139.8	12.59	130.7	11.78	118.7	10.72
	32.0	**30.2**	172.9	15.32	163.9	14.49	151.8	13.41	145.8	12.87	139.8	12.34	130.7	11.55	118.7	10.51
	35.6	**33.8**	172.9	14.72	163.9	13.93	151.8	12.89	145.8	12.38	139.8	11.87	130.7	11.11	118.7	10.11
	41.0	**39.2**	172.9	13.88	163.9	13.13	151.8	12.16	145.8	11.68	139.8	11.20	130.7	10.49	118.7	9.55
	47.0	**43.0**	172.9	13.32	163.9	12.61	151.8	11.68	145.8	11.22	139.8	10.76	130.7	10.08	118.7	9.18
	48.2	**46.0**	172.9	12.90	163.9	12.22	151.8	11.32	145.8	10.87	139.8	10.43	130.7	9.77	118.7	8.90
	53.6	**51.1**	172.9	12.23	163.9	11.58	151.8	10.73	145.8	10.31	139.8	9.89	130.7	9.27	118.7	8.46
	59.0	**56.3**	172.9	11.59	163.9	10.98	151.8	10.17	145.8	9.78	139.8	9.38	130.7	8.80	118.7	8.03
121.5 (50%)	-2.7	**-4.0**	143.8	19.74	136.5	18.71	126.5	17.32	121.5	16.62	116.5	15.94	108.9	14.90	98.9	13.55
	5.0	**3.2**	144.1	17.92	136.5	16.96	126.5	15.70	121.5	15.08	116.5	14.46	108.9	13.52	98.9	12.31
	10.4	**8.6**	144.1	16.72	136.5	15.82	126.5	14.66	121.5	14.08	116.5	13.50	108.9	12.63	98.9	11.51
	15.8	**14.0**	144.1	15.65	136.5	14.81	126.5	13.73	121.5	13.19	116.5	12.65	108.9	11.84	98.9	10.79
	17.0	**15.0**	144.1	15.45	136.5	14.63	126.5	13.56	121.5	13.03	116.5	12.50	108.9	11.70	98.9	10.66
	23.0	**21.2**	144.1	14.38	136.5	13.62	126.5	12.62	121.5	12.13	116.5	11.64	108.9	10.90	98.9	9.94
	26.6	**24.8**	144.1	13.81	136.5	13.07	126.5	12.12	121.5	11.65	116.5	11.19	108.9	10.48	98.9	9.56
	30.2	**28.4**	144.1	13.26	136.5	12.56	126.5	11.65	121.5	11.20	116.5	10.76	108.9	10.08	98.9	9.20
	32.0	**30.2**	144.1	13.01	136.5	12.32	126.5	11.43	121.5	10.99	116.5	10.55	108.9	9.88	98.9	9.02
	35.6	**33.8**	144.1	12.51	136.5	11.85	126.5	11.00	121.5	10.57	116.5	10.15	108.9	9.52	98.9	8.69
	41.0	**39.2**	144.1	11.81	136.5	11.19	126.5	10.39	121.5	9.99	116.5	9.59	108.9	9.00	98.9	8.22
	47.0	**43.0**	144.1	11.35	136.5	10.75	126.5	9.99	121.5	9.61	116.5	9.23	108.9	8.65	98.9	7.91
	48.2	**46.0**	144.1	10.99	136.5	10.42	126.5	9.68	121.5	9.31	116.5	8.95	108.9	8.39	98.9	7.68
	53.6	**51.1**	144.1	10.44	136.5	9.89	126.5	9.19	121.5	8.85	116.5	8.50	108.9	7.98	98.9	7.30
	59.0	**56.3**	144.1	9.89	136.5	9.38	126.5	8.72	121.5	8.40	116.5	8.07	108.9	7.58	98.9	6.94

TC : Total Capacity kBtu/h.

IP : Input Power kW (Compressor + Outdoor fan motor).

The data is based on the following conditions. Pipe length : 25ft. (7.5m) , Height difference : 0ft. (0m)

HEATING CAPACITY in kBtu/h

■ MODEL : AOUA240RLBVG1

Total rated capacity of indoor unit	Outdoor temp.		Indoor temperature °FDB													
			61		64		68		70		72		75		79	
	°FDB	°FWB	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
405.0 (150%)	-2.7	**-4.0**	192.3	22.10	190.5	22.22	188.0	22.37	186.8	22.45	185.6	22.53	183.8	22.65	181.5	22.81
	5.0	**3.2**	209.1	22.57	207.6	22.71	205.6	22.90	204.5	23.00	203.5	23.09	202.0	23.24	200.0	23.43
	10.4	**8.6**	223.1	22.92	221.7	23.07	219.9	23.28	219.0	23.39	218.1	23.50	216.7	23.66	214.9	23.88
	15.8	**14.0**	238.1	23.25	236.9	23.43	235.2	23.66	234.3	23.78	233.5	23.90	232.2	24.08	230.6	24.31
	17.0	**15.0**	241.0	23.31	239.8	23.49	238.1	23.73	237.3	23.85	236.5	23.97	235.2	24.15	233.6	24.39
	23.0	**21.2**	259.5	23.69	258.3	23.89	256.7	24.15	255.9	24.28	255.1	24.42	253.9	24.62	252.3	24.88
	26.6	**24.8**	270.7	23.91	269.6	24.12	268.0	24.39	267.2	24.53	266.4	24.67	265.2	24.88	263.6	25.16
	30.2	**28.4**	282.3	24.12	281.1	24.34	279.4	24.63	278.6	24.78	277.8	24.92	276.6	25.14	275.0	25.44
	32.0	**30.2**	288.1	24.23	286.9	24.45	285.3	24.75	284.4	24.90	283.6	25.05	282.4	25.27	280.7	25.58
	35.6	**33.8**	300.0	24.45	298.7	24.68	297.0	24.99	296.2	25.14	295.3	25.30	294.0	25.53	292.3	25.85
	41.0	**39.2**	318.2	24.76	316.9	25.01	315.0	25.34	314.1	25.50	313.2	25.66	311.8	25.91	309.9	26.24
	47.0	**43.0**	331.3	24.98	329.8	25.24	327.9	25.58	326.9	25.75	325.9	25.92	324.3	26.17	322.3	26.52
	48.2	**46.0**	341.7	25.16	340.2	25.42	338.1	25.76	337.0	25.94	336.0	26.11	334.3	26.38	329.7	26.46
	53.6	**51.1**	359.5	25.45	357.8	25.72	355.5	26.08	354.3	26.26	353.1	26.44	351.3	26.71	329.7	25.06
	59.0	**56.3**	377.9	25.74	375.9	26.02	373.3	26.39	372.0	26.58	370.7	26.76	363.2	26.48	329.7	23.72
378.0 (140%)	-2.7	**-4.0**	191.3	22.17	189.5	22.28	187.1	22.44	185.9	22.52	184.7	22.59	182.9	22.71	180.5	22.87
	5.0	**3.2**	208.2	22.66	206.7	22.80	204.7	22.98	203.7	23.08	202.7	23.17	201.2	23.32	199.2	23.51
	10.4	**8.6**	222.2	23.02	220.9	23.17	219.1	23.38	218.2	23.49	217.3	23.60	215.9	23.76	214.1	23.98
	15.8	**14.0**	237.3	23.37	236.0	23.54	234.3	23.78	233.5	23.90	232.7	24.01	231.4	24.19	229.8	24.43
	17.0	**15.0**	240.2	23.43	238.9	23.61	237.3	23.85	236.4	23.97	235.6	24.09	234.4	24.27	232.7	24.52
	23.0	**21.2**	258.6	23.84	257.5	24.03	255.9	24.30	255.1	24.43	254.3	24.56	253.1	24.76	251.5	25.03
	26.6	**24.8**	269.8	24.07	268.6	24.27	267.0	24.55	266.3	24.69	265.5	24.83	264.3	25.04	262.7	25.32
	30.2	**28.4**	281.3	24.30	280.1	24.52	278.5	24.81	277.7	24.95	276.8	25.10	275.6	25.32	274.0	25.61
	32.0	**30.2**	287.1	24.41	285.9	24.63	284.3	24.93	283.4	25.08	282.6	25.23	281.4	25.46	279.7	25.76
	35.6	**33.8**	298.9	24.64	297.7	24.87	296.0	25.18	295.1	25.34	294.2	25.49	293.0	25.73	291.2	26.04
	41.0	**39.2**	317.0	24.98	315.6	25.23	313.8	25.56	312.9	25.72	311.9	25.88	310.5	26.13	307.7	26.36
	47.0	**43.0**	329.9	25.22	328.4	25.48	326.5	25.81	325.5	25.98	324.5	26.15	323.0	26.41	307.7	25.29
	48.2	**46.0**	340.2	25.41	338.7	25.67	336.6	26.02	335.5	26.19	334.4	26.36	332.8	26.63	307.7	24.49
	53.6	**51.1**	357.8	25.72	356.0	25.99	353.7	26.35	352.5	26.53	351.3	26.71	339.0	25.85	307.7	23.19
	59.0	**56.3**	375.8	26.04	373.8	26.31	371.2	26.68	369.9	26.87	362.4	26.42	339.0	24.47	307.7	21.96
351.0 (130%)	-2.7	**-4.0**	190.2	22.24	188.3	22.35	186.0	22.51	184.8	22.59	183.6	22.67	181.8	22.79	179.5	22.95
	5.0	**3.2**	207.2	22.75	205.7	22.89	203.7	23.08	202.7	23.17	201.7	23.27	200.2	23.41	198.2	23.61
	10.4	**8.6**	221.3	23.13	219.9	23.29	218.1	23.50	217.2	23.61	216.3	23.71	215.0	23.87	213.2	24.09
	15.8	**14.0**	236.3	23.50	235.0	23.68	233.4	23.91	232.5	24.03	231.7	24.15	230.5	24.33	228.8	24.57
	17.0	**15.0**	239.2	23.57	238.0	23.75	236.3	23.99	235.5	24.11	234.7	24.23	233.4	24.41	231.8	24.66
	23.0	**21.2**	257.6	24.00	256.4	24.20	254.9	24.46	254.1	24.59	253.3	24.73	252.1	24.93	250.5	25.20
	26.6	**24.8**	268.8	24.25	267.6	24.46	266.0	24.73	265.2	24.87	264.4	25.01	263.2	25.22	261.6	25.51
	30.2	**28.4**	280.2	24.50	279.0	24.71	277.4	25.01	276.6	25.15	275.7	25.30	274.5	25.52	272.9	25.81
	32.0	**30.2**	286.0	24.62	284.7	24.84	283.1	25.14	282.3	25.29	281.5	25.44	280.2	25.66	278.6	25.96
	35.6	**33.8**	297.7	24.87	296.4	25.10	294.7	25.41	293.9	25.56	293.0	25.72	291.7	25.95	285.7	25.77
	41.0	**39.2**	315.6	25.24	314.2	25.48	312.4	25.81	311.4	25.97	310.5	26.14	309.1	26.38	285.8	24.28
	47.0	**43.0**	328.3	25.49	326.9	25.75	324.9	26.08	323.9	26.25	322.9	26.42	314.7	25.94	285.8	23.30
	48.2	**46.0**	338.5	25.70	336.9	25.96	334.8	26.30	333.7	26.48	332.7	26.65	314.7	25.11	285.8	22.56
	53.6	**51.1**	355.8	26.04	354.0	26.31	351.6	26.66	350.5	26.84	336.5	25.65	314.7	23.78	285.8	21.37
	59.0	**56.3**	373.4	26.38	371.4	26.65	365.5	26.68	351.0	25.47	336.5	24.27	314.7	22.51	285.8	20.24
324.0 (120%)	-2.7	**-4.0**	188.9	22.32	187.1	22.44	184.7	22.59	183.5	22.67	182.4	22.75	180.6	22.87	178.3	23.03
	5.0	**3.2**	206.0	22.86	204.5	23.00	202.5	23.19	201.5	23.28	200.5	23.38	199.1	23.52	197.1	23.72
	10.4	**8.6**	220.1	23.26	218.8	23.42	217.0	23.63	216.1	23.74	215.2	23.84	213.9	24.01	212.1	24.22
	15.8	**14.0**	235.2	23.66	233.9	23.84	232.3	24.07	231.4	24.19	230.6	24.31	229.4	24.49	227.8	24.73
	17.0	**15.0**	238.1	23.74	236.8	23.91	235.2	24.15	234.4	24.27	233.6	24.39	232.4	24.58	230.7	24.82
	23.0	**21.2**	256.5	24.19	255.3	24.39	253.7	24.66	252.9	24.79	252.1	24.92	251.0	25.12	249.4	25.39
	26.6	**24.8**	267.6	24.46	266.4	24.67	264.8	24.95	264.0	25.09	263.2	25.23	262.0	25.44	260.4	25.72
	30.2	**28.4**	278.9	24.73	277.7	24.95	276.1	25.24	275.3	25.38	274.5	25.53	273.2	25.75	263.8	25.08
	32.0	**30.2**	284.6	24.86	283.4	25.08	281.8	25.38	281.0	25.53	280.1	25.68	278.9	25.91	263.8	24.58
	35.6	**33.8**	296.3	25.13	295.0	25.36	293.3	25.67	292.4	25.83	291.6	25.98	290.3	26.22	263.8	23.61
	41.0	**39.2**	313.9	25.53	312.5	25.77	310.7	26.10	309.8	26.26	308.8	26.43	290.5	24.73	263.8	22.25
	47.0	**43.0**	326.5	25.81	325.0	26.06	323.0	26.40	322.0	26.57	310.7	25.56	290.5	23.73	263.8	21.35
	48.2	**46.0**	336.5	26.03	334.9	26.29	332.8	26.63	324.0	25.95	310.7	24.74	290.5	22.97	263.8	20.67
	53.6	**51.1**	353.4	26.40	351.6	26.67	337.4	25.72	324.0	24.57	310.7	23.44	290.5	21.76	263.8	19.59
	59.0	**56.3**	370.6	26.77	364.1	26.56	337.4	24.34	324.0	23.26	310.7	22.19	290.5	20.61	263.8	18.55
297.0 (110%)	-2.7	**-4.0**	187.3	22.42	185.6	22.53	183.2	22.69	182.1	22.77	180.9	22.85	179.2	22.97	177.0	23.13
	5.0	**3.2**	204.6	22.99	203.1	23.13	201.2	23.32	200.2	23.41	199.2	23.51	197.8	23.65	195.9	23.84
	10.4	**8.6**	218.8	23.42	217.4	23.58	215.7	23.79	214.8	23.89	213.9	24.00	212.6	24.16	210.9	24.38
	15.8	**14.0**	233.8	23.85	232.6	24.02	231.0	24.26	230.2	24.37	229.3	24.49	228.1	24.67	226.5	24.91
	17.0	**15.0**	236.8	23.93	235.5	24.11	233.9	24.34	233.1	24.46	232.3	24.58	231.1	24.77	229.5	25.01
	23.0	**21.2**	255.1	24.42	253.9	24.62	252.4	24.88	251.6	25.01	250.8	25.15	249.6	25.35	241.8	24.80
	26.6	**24.8**	266.1	24.71	265.0	24.92	263.4	25.20	262.6	25.33	261.8	25.47	260.6	25.68	241.8	23.78
	30.2	**28.4**	277.4	25.00	276.2	25.22	274.6	25.51	273.8	25.65	273.0	25.80	266.3	25.35	241.8	22.83
	32.0	**30.2**	283.1	25.15	281.8	25.37	280.2	25.67	279.4	25.81	278.6	25.96	266.3	24.83	241.8	22.37
	35.6	**33.8**	294.6	25.44	293.3	25.67	291.6	25.98	290.7	26.13	284.8	25.67	266.3	23.85	241.8	21.49
	41.0	**39.2**	312.0	25.87	310.6	26.12	308.7	26.44	297.0	25.34	284.8	24.19	266.3	22.48	241.8	20.26
	47.0	**43.0**	324.3	26.18	322.8	26.43	309.3	25.44	297.0	24.32	284.8	23.21	266.3	21.57	241.8	19.45
	48.2	**46.0**	334.1	26.42	332.5	26.68	309.3	24.62	297.0	23.54	284.8	22.47	266.3	20.89	241.8	18.83
	53.6	**51.1**	350.6	26.82	333.8	25.41	309.3	23.32	297.0	22.30	284.8	21.29	266.3	19.79	241.8	17.85
	59.0	**56.3**	352.3	25.57	333.8	24.05	309.3	22.08	297.0	21.11	284.8	20.16	266.3	18.75	241.8	16.91

Total rated capacity of indoor unit	Outdoor temp.		Indoor temperature °FDB													
			61		64		68		70		72		75		79	
	°FDB	°FWB	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
270.0 (100%)	-2.7	**-4.0**	185.6	22.54	183.8	22.65	181.5	22.81	180.4	22.88	179.3	22.96	177.6	23.08	175.4	23.24
	5.0	**3.2**	203.0	23.15	201.5	23.29	199.6	23.47	198.6	23.57	197.7	23.66	196.2	23.81	194.3	24.00
	10.4	**8.6**	217.2	23.60	215.9	23.76	214.1	23.97	213.3	24.08	212.4	24.19	211.1	24.35	209.4	24.56
	15.8	**14.0**	232.3	24.07	231.1	24.24	229.5	24.48	228.6	24.60	227.8	24.71	226.6	24.89	219.8	24.40
	17.0	**15.0**	235.2	24.15	234.0	24.33	232.4	24.57	231.6	24.69	230.8	24.81	229.6	24.99	219.8	24.11
	23.0	**21.2**	253.5	24.69	252.3	24.89	250.8	25.15	250.0	25.29	249.2	25.42	242.1	24.84	219.8	22.40
	26.6	**24.8**	264.4	25.01	263.3	25.22	261.7	25.49	260.9	25.63	258.9	25.61	242.1	23.82	219.8	21.48
	30.2	**28.4**	275.6	25.33	274.4	25.54	272.8	25.83	270.0	25.73	258.9	24.57	242.1	22.86	219.8	20.63
	32.0	**30.2**	281.2	25.49	280.0	25.71	278.3	26.00	270.0	25.21	258.9	24.08	242.1	22.40	219.8	20.21
	35.6	**33.8**	292.5	25.81	291.3	26.04	281.2	25.32	270.0	24.22	258.9	23.13	242.1	21.52	219.8	19.42
	41.0	**39.2**	309.6	26.28	303.5	25.95	281.2	23.85	270.0	22.82	258.9	21.80	242.1	20.29	219.8	18.32
	47.0	**43.0**	320.2	26.45	303.5	24.90	281.2	22.89	270.0	21.90	258.9	20.92	242.1	19.47	219.8	17.59
	48.2	**46.0**	320.2	25.60	303.5	24.11	281.2	22.16	270.0	21.21	258.9	20.26	242.1	18.86	219.8	17.04
	53.6	**51.1**	320.2	24.25	303.5	22.83	281.2	21.00	270.0	20.09	258.9	19.20	242.1	17.88	219.8	16.16
	59.0	**56.3**	320.2	22.95	303.5	21.62	281.2	19.88	270.0	19.03	258.9	18.18	242.1	16.94	219.8	15.31
243.0 (90%)	-2.7	**-4.0**	183.5	22.68	181.8	22.79	179.5	22.95	178.4	23.02	177.3	23.10	175.6	23.22	173.5	23.38
	5.0	**3.2**	201.0	23.33	199.6	23.47	197.7	23.66	196.8	23.75	195.8	23.85	194.4	23.99	192.5	24.19
	10.4	**8.6**	215.3	23.83	214.0	23.99	212.3	24.20	211.5	24.31	210.6	24.41	209.3	24.57	197.8	23.34
	15.8	**14.0**	230.4	24.34	229.2	24.51	227.6	24.75	226.8	24.86	226.0	24.98	217.9	24.18	197.8	21.84
	17.0	**15.0**	233.3	24.43	232.1	24.61	230.5	24.85	229.8	24.97	229.0	25.09	217.9	23.88	197.8	21.57
	23.0	**21.2**	251.5	25.02	250.4	25.22	248.8	25.48	243.0	24.94	233.0	23.83	217.9	22.19	197.8	20.05
	26.6	**24.8**	262.4	25.37	261.2	25.58	253.1	24.98	243.0	23.91	233.0	22.86	217.9	21.29	197.8	19.24
	30.2	**28.4**	273.4	25.72	272.2	25.94	253.1	23.98	243.0	22.95	233.0	21.94	217.9	20.44	197.8	18.48
	32.0	**30.2**	278.9	25.90	273.1	25.53	253.1	23.49	243.0	22.49	233.0	21.50	217.9	20.03	197.8	18.11
	35.6	**33.8**	288.2	26.02	273.1	24.52	253.1	22.57	243.0	21.61	233.0	20.66	217.9	19.25	197.8	17.41
	41.0	**39.2**	288.2	24.51	273.1	23.10	253.1	21.27	243.0	20.37	233.0	19.47	217.9	18.15	197.8	16.42
	47.0	**43.0**	288.2	23.52	273.1	22.17	253.1	20.42	243.0	19.55	233.0	18.70	217.9	17.43	197.8	15.77
	48.2	**46.0**	288.2	22.77	273.1	21.47	253.1	19.77	243.0	18.94	233.0	18.11	217.9	16.88	197.8	15.29
	53.6	**51.1**	288.2	21.57	273.1	20.34	253.1	18.74	243.0	17.95	233.0	17.17	217.9	16.01	197.8	14.50
	59.0	**56.3**	288.2	20.43	273.1	19.26	253.1	17.75	243.0	17.00	233.0	16.27	217.9	15.17	197.8	13.75
216.0 (80%)	-2.7	**-4.0**	180.9	22.85	179.3	22.96	177.1	23.12	176.0	23.20	174.9	23.28	173.3	23.40	171.2	23.56
	5.0	**3.2**	198.7	23.56	197.3	23.70	195.4	23.89	194.5	23.98	193.6	24.08	192.2	24.22	175.8	22.12
	10.4	**8.6**	213.0	24.11	211.8	24.27	210.1	24.48	209.2	24.58	207.1	24.49	193.7	22.83	175.9	20.64
	15.8	**14.0**	228.2	24.67	227.0	24.84	224.9	25.01	216.0	23.96	207.1	22.91	193.7	21.36	175.9	19.32
	17.0	**15.0**	231.0	24.77	229.9	24.95	224.9	24.71	216.0	23.67	207.1	22.63	193.7	21.10	175.9	19.09
	23.0	**21.2**	249.1	25.43	242.8	24.91	224.9	22.95	216.0	21.99	207.1	21.03	193.7	19.61	175.9	17.76
	26.6	**24.8**	256.2	25.32	242.8	23.89	224.9	22.02	216.0	21.09	207.1	20.18	193.7	18.82	175.9	17.05
	30.2	**28.4**	256.2	24.30	242.8	22.93	224.9	21.13	216.0	20.25	207.1	19.38	193.7	18.07	175.9	16.37
	32.0	**30.2**	256.2	23.81	242.8	22.47	224.9	20.71	216.0	19.85	207.1	18.99	193.7	17.72	175.9	16.05
	35.6	**33.8**	256.2	22.87	242.8	21.58	224.9	19.90	216.0	19.07	207.1	18.25	193.7	17.03	175.9	15.44
	41.0	**39.2**	256.2	21.55	242.8	20.35	224.9	18.76	216.0	17.99	207.1	17.22	193.7	16.07	175.9	14.57
	47.0	**43.0**	256.2	20.69	242.8	19.53	224.9	18.02	216.0	17.27	207.1	16.53	193.7	15.44	175.9	14.00
	48.2	**46.0**	256.2	20.03	242.8	18.92	224.9	17.45	216.0	16.73	207.1	16.02	193.7	14.96	175.9	13.57
	53.6	**51.1**	256.2	18.99	242.8	17.93	224.9	16.55	216.0	15.87	207.1	15.19	193.7	14.19	175.9	12.88
	59.0	**56.3**	256.2	17.98	242.8	16.99	224.9	15.68	216.0	15.04	207.1	14.40	193.7	13.46	175.9	12.22
189.0 (70%)	-2.7	**-4.0**	177.8	23.07	176.2	23.18	174.1	23.34	173.0	23.42	172.0	23.50	169.5	23.45	153.9	21.23
	5.0	**3.2**	195.7	23.86	194.4	24.00	192.6	24.18	189.0	23.85	181.2	22.82	169.5	21.29	153.9	19.29
	10.4	**8.6**	210.2	24.46	209.0	24.62	196.8	23.21	189.0	22.25	181.2	21.30	169.5	19.88	153.9	18.02
	15.8	**14.0**	224.2	24.92	212.4	23.53	196.8	21.72	189.0	20.82	181.2	19.93	169.5	18.61	153.9	16.87
	17.0	**15.0**	224.2	24.62	212.4	23.25	196.8	21.46	189.0	20.57	181.2	19.69	169.5	18.39	153.9	16.67
	23.0	**21.2**	224.2	22.87	212.4	21.60	196.8	19.94	189.0	19.12	181.2	18.31	169.5	17.10	153.9	15.52
	26.6	**24.8**	224.2	21.94	212.4	20.72	196.8	19.14	189.0	18.35	181.2	17.58	169.5	16.42	153.9	14.91
	30.2	**28.4**	224.2	21.06	212.4	19.90	196.8	18.38	189.0	17.63	181.2	16.88	169.5	15.77	153.9	14.33
	32.0	**30.2**	224.2	20.64	212.4	19.50	196.8	18.01	189.0	17.28	181.2	16.55	169.5	15.47	153.9	14.05
	35.6	**33.8**	224.2	19.83	212.4	18.74	196.8	17.32	189.0	16.61	181.2	15.91	169.5	14.87	153.9	13.52
	41.0	**39.2**	224.2	18.70	212.4	17.68	196.8	16.34	189.0	15.68	181.2	15.02	169.5	14.05	153.9	12.77
	47.0	**43.0**	224.2	17.95	212.4	16.97	196.8	15.69	189.0	15.06	181.2	14.43	169.5	13.50	153.9	12.28
	48.2	**46.0**	224.2	17.39	212.4	16.44	196.8	15.21	189.0	14.59	181.2	13.99	169.5	13.09	153.9	11.90
	53.6	**51.1**	224.2	16.49	212.4	15.59	196.8	14.42	189.0	13.85	181.2	13.27	169.5	12.42	153.9	11.31
	59.0	**56.3**	224.2	15.63	212.4	14.78	196.8	13.68	189.0	13.13	181.2	12.59	169.5	11.79	153.9	10.74
162.0 (60%)	-2.7	**-4.0**	173.8	23.36	172.3	23.47	168.7	23.34	162.0	22.39	155.3	21.44	145.3	20.03	131.9	18.17
	5.0	**3.2**	192.0	24.24	182.1	22.93	168.7	21.19	162.0	20.33	155.3	19.47	145.3	18.20	131.9	16.53
	10.4	**8.6**	192.1	22.63	182.1	21.40	168.7	19.78	162.0	18.98	155.3	18.19	145.3	17.00	131.9	15.45
	15.8	**14.0**	192.1	21.18	182.1	20.03	168.7	18.52	162.0	17.77	155.3	17.03	145.3	15.93	131.9	14.48
	17.0	**15.0**	192.1	20.92	182.1	19.79	168.7	18.30	162.0	17.56	155.3	16.83	145.3	15.74	131.9	14.31
	23.0	**21.2**	192.1	19.45	182.1	18.40	168.7	17.02	162.0	16.34	155.3	15.67	145.3	14.66	131.9	13.34
	26.6	**24.8**	192.1	18.67	182.1	17.66	168.7	16.34	162.0	15.69	155.3	15.05	145.3	14.08	131.9	12.82
	30.2	**28.4**	192.1	17.93	182.1	16.96	168.7	15.70	162.0	15.08	155.3	14.46	145.3	13.54	131.9	12.33
	32.0	**30.2**	192.1	17.57	182.1	16.63	168.7	15.40	162.0	14.79	155.3	14.18	145.3	13.28	131.9	12.09
	35.6	**33.8**	192.1	16.89	182.1	15.99	168.7	14.81	162.0	14.22	155.3	13.64	145.3	12.78	131.9	11.64
	41.0	**39.2**	192.1	15.94	182.1	15.09	168.7	13.98	162.0	13.43	155.3	12.89	145.3	12.07	131.9	11.01
	47.0	**43.0**	192.1	15.31	182.1	14.50	168.7	13.44	162.0	12.91	155.3	12.39	145.3	11.61	131.9	10.59
	48.2	**46.0**	192.1	14.84	182.1	14.05	168.7	13.03	162.0	12.52	155.3	12.01	145.3	11.26	131.9	10.28
	53.6	**51.1**	192.1	14.08	182.1	13.34	168.7	12.37	162.0	11.89	155.3	11.41	145.3	10.70	131.9	9.77
	59.0	**56.3**	192.1	13.35	182.1	12.65	168.7	11.73	162.0	11.28	155.3	10.83	145.3	10.16	131.9	9.29
135.0 (50%)	-2.7	**-4.0**	160.1	22.81	151.6	21.57	140.5	19.98	135.0	19.19	129.5	18.41	121.0	17.21	109.9	15.67
	5.0	**3.2**	160.1	20.76	151.6	19.64	140.5	18.20	135.0	17.48	129.5	16.77	121.0	15.69	109.9	14.30
	10.4	**8.6**	160.1	19.41	151.6	18.37	140.5	17.03	135.0	16.36	129.5	15.70	121.0	14.69	109.9	13.40
	15.8	**14.0**	160.1	18.20	151.6	17.23	140.5	15.98	135.0	15.36	129.5	14.74	121.0	13.80	109.9	12.59
	17.0	**15.0**	160.1	17.98	151.6	17.01	140.5	15.78	135.0	15.17	129.5	14.56	121.0	13.63	109.9	12.44
	23.0	**21.2**	160.1	16.76	151.6	15.87	140.5	14.72	135.0	14.16	129.5	13.59	121.0	12.73	109.9	11.63
	26.6	**24.8**	160.1	16.10	151.6	15.25	140.5	14.15	135.0	13.61	129.5	13.07	121.0	12.24	109.9	11.19
	30.2	**28.4**	160.1	15.49	151.6	14.67	140.5	13.62	135.0	13.10	129.5	12.58	121.0	11.79	109.9	10.77
	32.0	**30.2**	160.1	15.19	151.6	14.39	140.5	13.36	135.0	12.85	129.5	12.34	121.0	11.57	109.9	10.57
	35.6	**33.8**	160.1	14.62	151.6	13.85	140.5	12.86	135.0	12.37	129.5	11.89	121.0	11.14	109.9	10.19
	41.0	**39.2**	160.1	13.81	151.6	13.09	140.5	12.16	135.0	11.71	129.5	11.25	121.0	10.55	109.9	9.66
	47.0	**43.0**	160.1	13.29	151.6	12.59	140.5	11.71	135.0	11.27	129.5	10.83	121.0	10.16	109.9	9.30
	48.2	**46.0**	160.1	12.88	151.6	12.21	140.5	11.35	135.0	10.93	129.5	10.51	121.0	9.86	109.9	9.03
	53.6	**51.1**	160.1	12.24	151.6	11.61	140.5	10.80	135.0	10.40	129.5	10.00	121.0	9.39	109.9	8.60
	59.0	**56.3**	160.1	11.63	151.6	11.03	140.5	10.26	135.0	9.88	129.5	9.51	121.0	8.93	109.9	8.19

TC : Total Capacity kBtu/h.

IP : Input Power kW (Compressor + Outdoor fan motor).

The data is based on the following conditions. Pipe length : 25ft. (7.5m) , Height difference : 0ft. (0m)

HEATING CAPACITY in kBtu/h

■ MODEL : AOUA264RLBVG1

Total rated capacity of indoor unit	Outdoor temp.		Indoor temperature °FDB													
			61		64		68		70		72		75		79	
	°FDB	°FWB	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
445.5 (150%)	-2.7	**-4.0**	189.8	21.63	189.0	21.82	187.8	22.08	187.3	22.21	186.7	22.33	185.9	22.53	184.8	22.79
	5.0	**3.2**	214.8	22.32	213.9	22.54	212.7	22.84	212.1	22.99	211.5	23.14	210.6	23.37	209.4	23.67
	10.4	**8.6**	234.0	22.82	233.0	23.07	231.8	23.40	231.1	23.56	230.5	23.73	229.5	23.98	228.2	24.31
	15.8	**14.0**	253.6	23.32	252.6	23.59	251.2	23.94	250.5	24.12	249.7	24.30	248.7	24.57	247.2	24.93
	17.0	**15.0**	257.3	23.41	256.3	23.68	254.8	24.04	254.1	24.22	253.4	24.41	252.3	24.68	250.8	25.05
	23.0	**21.2**	280.3	23.96	279.1	24.26	277.5	24.65	276.7	24.85	275.9	25.04	274.6	25.34	273.0	25.74
	26.6	**24.8**	293.8	24.28	292.5	24.58	290.8	24.99	289.9	25.20	289.0	25.40	287.7	25.71	286.0	26.13
	30.2	**28.4**	307.4	24.58	306.0	24.90	304.1	25.33	303.2	25.54	302.3	25.76	300.9	26.08	299.0	26.51
	32.0	**30.2**	314.2	24.74	312.8	25.06	310.9	25.49	309.9	25.71	308.9	25.93	307.5	26.26	305.5	26.70
	35.6	**33.8**	327.9	25.04	326.4	25.37	324.3	25.82	323.3	26.04	322.2	26.27	320.7	26.61	318.6	27.06
	41.0	**39.2**	348.6	25.47	346.9	25.82	344.6	26.29	343.4	26.53	342.3	26.76	340.5	27.12	338.2	27.59
	47.0	**43.0**	363.2	25.77	361.3	26.13	358.9	26.61	357.6	26.85	356.4	27.09	354.5	27.46	352.0	27.95
	48.2	**46.0**	374.7	26.00	372.8	26.37	370.2	26.86	368.9	27.10	367.5	27.35	365.5	27.72	362.3	28.16
	53.6	**51.1**	394.3	26.37	392.2	26.75	389.3	27.26	387.9	27.51	386.4	27.76	384.2	28.15	362.7	26.72
	59.0	**56.3**	414.3	26.73	412.0	27.12	408.8	27.64	407.2	27.90	405.6	28.16	399.5	28.18	362.7	25.28
415.8 (140%)	-2.7	**-4.0**	189.4	21.72	188.6	21.91	187.4	22.17	186.9	22.30	186.3	22.43	185.5	22.62	184.4	22.88
	5.0	**3.2**	214.3	22.44	213.4	22.66	212.2	22.96	211.6	23.11	211.0	23.26	210.1	23.49	208.9	23.79
	10.4	**8.6**	233.4	22.97	232.5	23.22	231.2	23.54	230.5	23.71	229.9	23.88	228.9	24.12	227.6	24.46
	15.8	**14.0**	252.9	23.49	251.9	23.76	250.5	24.12	249.8	24.30	249.1	24.48	248.0	24.75	246.6	25.11
	17.0	**15.0**	256.6	23.59	255.5	23.86	254.1	24.22	253.4	24.40	252.7	24.59	251.6	24.86	250.1	25.23
	23.0	**21.2**	279.4	24.17	278.2	24.47	276.6	24.86	275.8	25.06	275.0	25.25	273.8	25.55	272.1	25.95
	26.6	**24.8**	292.8	24.51	291.5	24.81	289.8	25.22	288.9	25.43	288.1	25.63	286.7	25.94	285.0	26.36
	30.2	**28.4**	306.3	24.84	304.9	25.16	303.0	25.58	302.1	25.79	301.2	26.01	299.8	26.33	297.9	26.76
	32.0	**30.2**	313.0	25.00	311.6	25.32	309.7	25.76	308.7	25.97	307.8	26.19	306.3	26.52	304.3	26.96
	35.6	**33.8**	326.6	25.32	325.1	25.65	323.0	26.10	322.0	26.33	320.9	26.55	319.4	26.89	317.3	27.34
	41.0	**39.2**	347.1	25.79	345.3	26.14	343.0	26.60	341.9	26.84	340.7	27.07	339.0	27.43	336.4	27.87
	47.0	**43.0**	361.5	26.11	359.6	26.47	357.1	26.95	355.9	27.19	354.6	27.43	352.8	27.79	338.5	26.99
	48.2	**46.0**	372.9	26.35	370.9	26.72	368.3	27.21	367.0	27.46	365.6	27.70	363.6	28.07	338.5	26.14
	53.6	**51.1**	392.2	26.75	390.0	27.13	387.1	27.64	385.7	27.89	384.2	28.14	372.9	27.55	338.5	24.75
	59.0	**56.3**	411.8	27.14	409.5	27.53	406.3	28.05	404.7	28.31	398.7	28.11	372.9	26.07	338.5	23.43
386.1 (130%)	-2.7	**-4.0**	188.9	21.83	188.1	22.02	187.0	22.28	186.4	22.41	185.9	22.53	185.0	22.73	183.9	22.99
	5.0	**3.2**	213.7	22.58	212.8	22.81	211.6	23.10	211.0	23.25	210.4	23.40	209.5	23.63	208.3	23.93
	10.4	**8.6**	232.8	23.14	231.8	23.39	230.5	23.71	229.9	23.88	229.2	24.04	228.2	24.29	226.9	24.63
	15.8	**14.0**	252.2	23.69	251.1	23.96	249.7	24.32	249.0	24.50	248.3	24.68	247.2	24.95	245.8	25.31
	17.0	**15.0**	255.8	23.79	254.7	24.07	253.3	24.43	252.6	24.61	251.8	24.79	250.8	25.07	249.3	25.43
	23.0	**21.2**	278.4	24.42	277.2	24.71	275.6	25.10	274.8	25.30	274.0	25.50	272.8	25.80	271.1	26.19
	26.6	**24.8**	291.7	24.77	290.4	25.08	288.7	25.49	287.8	25.69	286.9	25.90	285.6	26.21	283.8	26.62
	30.2	**28.4**	305.0	25.13	303.6	25.44	301.8	25.87	300.9	26.08	299.9	26.29	298.5	26.62	296.6	27.04
	32.0	**30.2**	311.7	25.30	310.3	25.62	308.4	26.06	307.4	26.27	306.4	26.49	305.0	26.82	303.0	27.25
	35.6	**33.8**	325.1	25.64	323.6	25.98	321.5	26.42	320.5	26.65	319.4	26.87	317.9	27.21	314.4	27.51
	41.0	**39.2**	345.3	26.15	343.6	26.50	341.3	26.96	340.1	27.20	339.0	27.43	337.2	27.78	314.4	25.93
	47.0	**43.0**	359.5	26.49	357.6	26.85	355.2	27.33	353.9	27.57	352.7	27.81	346.2	27.67	314.4	24.89
	48.2	**46.0**	370.7	26.76	368.7	27.12	366.1	27.61	364.8	27.86	363.5	28.10	346.2	26.79	314.4	24.10
	53.6	**51.1**	389.7	27.19	387.5	27.57	384.6	28.07	383.2	28.33	370.2	27.33	346.2	25.38	314.4	22.83
	59.0	**56.3**	409.0	27.62	406.6	28.01	402.1	28.38	386.2	27.12	370.2	25.86	346.2	24.01	314.4	21.61
356.4 (120%)	-2.7	**-4.0**	188.4	21.96	187.5	22.15	186.4	22.40	185.9	22.53	185.3	22.66	184.5	22.85	183.4	23.11
	5.0	**3.2**	213.0	22.75	212.1	22.97	211.0	23.27	210.4	23.42	209.8	23.57	208.8	23.79	207.6	24.10
	10.4	**8.6**	232.0	23.34	231.0	23.58	229.7	23.91	229.1	24.08	228.4	24.24	227.5	24.49	226.1	24.82
	15.8	**14.0**	251.2	23.93	250.2	24.19	248.8	24.55	248.1	24.73	247.3	24.91	246.3	25.18	244.8	25.54
	17.0	**15.0**	254.9	24.03	253.8	24.31	252.3	24.67	251.6	24.85	250.9	25.03	249.8	25.31	248.3	25.67
	23.0	**21.2**	277.3	24.70	276.1	24.99	274.4	25.39	273.6	25.58	272.8	25.78	271.6	26.08	269.9	26.47
	26.6	**24.8**	290.4	25.08	289.1	25.39	287.4	25.80	286.5	26.00	285.6	26.21	284.3	26.52	282.5	26.93
	30.2	**28.4**	303.6	25.46	302.2	25.78	300.3	26.20	299.4	26.41	298.4	26.63	297.0	26.95	290.2	26.79
	32.0	**30.2**	310.2	25.65	308.7	25.97	306.8	26.40	305.8	26.62	304.9	26.84	303.4	27.16	290.2	26.25
	35.6	**33.8**	323.4	26.02	321.9	26.35	319.8	26.80	318.7	27.02	317.7	27.25	316.1	27.58	290.2	25.23
	41.0	**39.2**	343.2	26.56	341.5	26.91	339.2	27.38	338.1	27.61	336.9	27.84	319.6	26.41	290.2	23.78
	47.0	**43.0**	357.2	26.94	355.3	27.30	352.9	27.77	351.6	28.01	341.7	27.28	319.6	25.34	290.2	22.83
	48.2	**46.0**	368.2	27.23	366.2	27.59	363.6	28.08	356.4	27.67	341.7	26.41	319.6	24.54	290.2	22.11
	53.6	**51.1**	386.8	27.70	384.6	28.08	371.2	27.41	356.4	26.20	341.7	25.01	319.6	23.24	290.2	20.94
	59.0	**56.3**	405.6	28.17	400.6	28.26	371.2	25.94	356.4	24.80	341.7	23.67	319.6	22.00	290.2	19.82
326.7 (110%)	-2.7	**-4.0**	187.7	22.10	186.9	22.29	185.8	22.55	185.2	22.68	184.7	22.81	183.8	23.00	182.7	23.26
	5.0	**3.2**	212.3	22.94	211.4	23.16	210.2	23.46	209.6	23.61	209.0	23.76	208.1	23.99	206.9	24.29
	10.4	**8.6**	231.1	23.57	230.1	23.82	228.8	24.15	228.2	24.31	227.5	24.47	226.5	24.72	225.2	25.06
	15.8	**14.0**	250.1	24.20	249.1	24.47	247.7	24.82	247.0	25.00	246.3	25.18	245.2	25.45	243.8	25.81
	17.0	**15.0**	253.7	24.32	252.7	24.59	251.2	24.95	250.5	25.13	249.8	25.31	248.7	25.59	247.2	25.95
	23.0	**21.2**	275.9	25.03	274.7	25.33	273.1	25.72	272.3	25.91	271.4	26.11	270.2	26.41	266.0	26.50
	26.6	**24.8**	288.9	25.45	287.6	25.75	285.8	26.16	285.0	26.36	284.1	26.57	282.8	26.88	266.0	25.42
	30.2	**28.4**	301.8	25.85	300.5	26.17	298.6	26.59	297.7	26.81	296.7	27.02	293.0	27.07	266.0	24.40
	32.0	**30.2**	308.3	26.06	306.9	26.38	305.0	26.81	304.0	27.03	303.0	27.24	293.0	26.53	266.0	23.92
	35.6	**33.8**	321.4	26.46	319.8	26.79	317.7	27.24	316.7	27.46	313.3	27.41	293.0	25.49	266.0	22.98
	41.0	**39.2**	340.8	27.05	339.1	27.40	336.8	27.86	326.7	27.05	313.3	25.84	293.0	24.03	266.0	21.67
	47.0	**43.0**	354.5	27.46	352.6	27.82	340.2	27.14	326.7	25.96	313.3	24.80	293.0	23.07	266.0	20.81
	48.2	**46.0**	365.3	27.77	363.3	28.14	340.2	26.28	326.7	25.14	313.3	24.01	293.0	22.34	266.0	20.15
	53.6	**51.1**	383.4	28.29	367.2	27.09	340.2	24.89	326.7	23.81	313.3	22.74	293.0	21.16	266.0	19.09
	59.0	**56.3**	387.5	27.22	367.2	25.63	340.2	23.56	326.7	22.53	313.3	21.52	293.0	20.03	266.0	18.07

Total rated capacity of indoor unit	Outdoor temp.		Indoor temperature °FDB													
			61		64		68		70		72		75		79	
	°FDB	°FWB	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
297.0 (100%)	-2.7	**-4.0**	187.0	22.28	186.1	22.47	185.0	22.72	184.5	22.85	183.9	22.98	183.1	23.17	182.0	23.43
	5.0	**3.2**	211.3	23.17	210.4	23.40	209.2	23.69	208.6	23.84	208.1	23.99	207.1	24.22	205.9	24.52
	10.4	**8.6**	230.0	23.85	229.0	24.10	227.7	24.42	227.1	24.59	226.4	24.75	225.5	25.00	224.1	25.33
	15.8	**14.0**	248.8	24.53	247.8	24.79	246.4	25.15	245.7	25.33	245.0	25.51	243.9	25.78	240.5	25.89
	17.0	**15.0**	252.4	24.65	251.3	24.92	249.9	25.29	249.2	25.47	248.4	25.65	247.3	25.92	241.8	25.77
	23.0	**21.2**	274.3	25.43	273.1	25.72	271.4	26.11	270.6	26.31	269.8	26.50	266.3	26.53	241.8	23.95
	26.6	**24.8**	287.0	25.88	285.7	26.18	284.0	26.59	283.1	26.79	281.6	26.92	266.3	25.45	241.8	22.98
	30.2	**28.4**	299.8	26.32	298.4	26.64	296.5	27.06	294.8	27.18	284.8	26.25	266.3	24.44	241.8	22.06
	32.0	**30.2**	306.2	26.54	304.7	26.87	302.8	27.29	297.0	26.93	284.8	25.73	266.3	23.95	241.8	21.63
	35.6	**33.8**	318.9	26.98	317.4	27.32	309.3	27.03	297.0	25.87	284.8	24.72	266.3	23.02	241.8	20.79
	41.0	**39.2**	338.0	27.63	333.8	27.70	309.3	25.48	297.0	24.39	284.8	23.31	266.3	21.70	241.8	19.60
	47.0	**43.0**	350.9	28.04	333.8	26.58	309.3	24.46	297.0	23.41	284.8	22.37	266.3	20.83	241.8	18.82
	48.2	**46.0**	352.3	27.31	333.8	25.74	309.3	23.68	297.0	22.67	284.8	21.67	266.3	20.18	241.8	18.23
	53.6	**51.1**	352.3	25.86	333.8	24.38	309.3	22.43	297.0	21.47	284.8	20.53	266.3	19.12	241.8	17.28
	59.0	**56.3**	352.3	24.48	333.8	23.07	309.3	21.23	297.0	20.33	284.8	19.43	266.3	18.10	241.8	16.36
267.3 (90%)	-2.7	**-4.0**	186.0	22.49	185.2	22.68	184.1	22.94	183.6	23.07	183.0	23.19	182.2	23.39	181.1	23.65
	5.0	**3.2**	210.2	23.46	209.3	23.68	208.1	23.98	207.5	24.13	206.9	24.28	206.0	24.50	204.8	24.80
	10.4	**8.6**	228.6	24.19	227.7	24.43	226.4	24.76	225.7	24.92	225.1	25.09	224.1	25.34	217.6	24.97
	15.8	**14.0**	247.3	24.92	246.2	25.19	244.8	25.55	244.1	25.72	243.4	25.90	239.7	25.85	217.6	23.35
	17.0	**15.0**	250.8	25.06	249.7	25.33	248.3	25.69	247.5	25.87	246.8	26.05	239.7	25.53	217.6	23.07
	23.0	**21.2**	272.3	25.91	271.1	26.20	269.5	26.59	266.8	26.56	256.3	25.47	239.7	23.73	217.6	21.45
	26.6	**24.8**	284.8	26.40	283.5	26.70	278.4	26.69	267.3	25.56	256.3	24.43	239.7	22.76	217.6	20.58
	30.2	**28.4**	297.3	26.89	295.9	27.20	278.4	25.62	267.3	24.53	256.3	23.46	239.7	21.86	217.6	19.77
	32.0	**30.2**	303.5	27.13	300.5	27.26	278.4	25.11	267.3	24.05	256.3	22.99	239.7	21.43	217.6	19.38
	35.6	**33.8**	315.3	27.54	300.5	26.19	278.4	24.13	267.3	23.11	256.3	22.10	239.7	20.60	217.6	18.63
	41.0	**39.2**	317.1	26.18	300.5	24.69	278.4	22.75	267.3	21.79	256.3	20.84	239.7	19.43	217.6	17.58
	47.0	**43.0**	317.1	25.12	300.5	23.70	278.4	21.84	267.3	20.92	256.3	20.01	239.7	18.65	217.6	16.88
	48.2	**46.0**	317.1	24.33	300.5	22.95	278.4	21.15	267.3	20.26	256.3	19.38	239.7	18.07	217.6	16.35
	53.6	**51.1**	317.1	23.04	300.5	21.74	278.4	20.04	267.3	19.19	256.3	18.36	239.7	17.12	217.6	15.50
	59.0	**56.3**	317.1	21.81	300.5	20.58	278.4	18.96	267.3	18.17	256.3	17.38	239.7	16.21	217.6	14.68
237.6 (80%)	-2.7	**-4.0**	184.9	22.76	184.1	22.95	183.0	23.20	182.4	23.33	181.9	23.46	181.0	23.65	179.9	23.91
	5.0	**3.2**	208.8	23.81	207.9	24.03	206.7	24.33	206.1	24.48	205.5	24.62	204.6	24.85	193.5	23.69
	10.4	**8.6**	227.0	24.61	226.0	24.85	224.7	25.18	224.1	25.34	222.6	25.40	213.1	24.42	193.5	22.09
	15.8	**14.0**	245.3	25.42	244.3	25.68	242.3	25.97	237.6	25.61	227.8	24.50	213.1	22.84	193.5	20.67
	17.0	**15.0**	248.8	25.57	247.7	25.84	244.8	26.02	237.6	25.30	227.8	24.20	213.1	22.56	193.5	20.42
	23.0	**21.2**	269.8	26.50	266.7	26.56	247.4	24.54	237.6	23.51	227.8	22.49	213.1	20.98	193.5	18.99
	26.6	**24.8**	280.6	26.88	267.1	25.53	247.4	23.54	237.6	22.56	227.8	21.59	213.1	20.14	193.5	18.23
	30.2	**28.4**	281.8	25.96	267.1	24.51	247.4	22.60	237.6	21.66	227.8	20.73	213.1	19.34	193.5	17.52
	32.0	**30.2**	281.8	25.44	267.1	24.02	247.4	22.15	237.6	21.23	227.8	20.32	213.1	18.96	193.5	17.18
	35.6	**33.8**	281.8	24.45	267.1	23.08	247.4	21.29	237.6	20.41	227.8	19.53	213.1	18.23	193.5	16.52
	41.0	**39.2**	281.8	23.05	267.1	21.76	247.4	20.08	237.6	19.25	227.8	18.43	213.1	17.20	193.5	15.59
	47.0	**43.0**	281.8	22.13	267.1	20.90	247.4	19.28	237.6	18.49	227.8	17.70	213.1	16.52	193.5	14.98
	48.2	**46.0**	281.8	21.43	267.1	20.24	247.4	18.68	237.6	17.91	227.8	17.14	213.1	16.00	193.5	14.51
	53.6	**51.1**	281.8	20.30	267.1	19.17	247.4	17.70	237.6	16.97	227.8	16.25	213.1	15.17	193.5	13.76
	59.0	**56.3**	281.8	19.21	267.1	18.15	247.4	16.76	237.6	16.07	227.8	15.39	213.1	14.37	193.5	13.04
207.9 (70%)	-2.7	**-4.0**	183.4	23.10	182.6	23.29	181.5	23.54	181.0	23.67	180.4	23.80	178.9	23.89	169.3	22.81
	5.0	**3.2**	207.0	24.25	206.1	24.47	204.9	24.77	203.1	24.74	199.4	24.44	186.4	22.80	169.3	20.65
	10.4	**8.6**	224.9	25.14	223.9	25.38	216.5	24.83	207.9	23.81	199.4	22.79	186.4	21.26	169.3	19.27
	15.8	**14.0**	242.1	25.94	233.7	25.16	216.5	23.22	207.9	22.27	199.4	21.32	186.4	19.90	169.3	18.04
	17.0	**15.0**	244.6	26.00	233.7	24.85	216.5	22.94	207.9	22.00	199.4	21.06	186.4	19.66	169.3	17.83
	23.0	**21.2**	246.6	24.45	233.7	23.10	216.5	21.33	207.9	20.46	199.4	19.59	186.4	18.29	169.3	16.59
	26.6	**24.8**	246.6	23.46	233.7	22.17	216.5	20.47	207.9	19.63	199.4	18.80	186.4	17.56	169.3	15.93
	30.2	**28.4**	246.6	22.52	233.7	21.29	216.5	19.66	207.9	18.86	199.4	18.06	186.4	16.88	169.3	15.32
	32.0	**30.2**	246.6	22.07	233.7	20.86	216.5	19.28	207.9	18.49	199.4	17.71	186.4	16.55	169.3	15.02
	35.6	**33.8**	246.6	21.22	233.7	20.06	216.5	18.53	207.9	17.78	199.4	17.03	186.4	15.91	169.3	14.45
	41.0	**39.2**	246.6	20.01	233.7	18.92	216.5	17.49	207.9	16.78	199.4	16.07	186.4	15.02	169.3	13.65
	47.0	**43.0**	246.6	19.21	233.7	18.17	216.5	16.79	207.9	16.11	199.4	15.44	186.4	14.43	169.3	13.11
	48.2	**46.0**	246.6	18.61	233.7	17.60	216.5	16.27	207.9	15.61	199.4	14.96	186.4	13.99	169.3	12.71
	53.6	**51.1**	246.6	17.64	233.7	16.68	216.5	15.42	207.9	14.80	199.4	14.19	186.4	13.27	169.3	12.06
	59.0	**56.3**	246.6	16.70	233.7	15.79	216.5	14.61	207.9	14.02	199.4	13.44	186.4	12.57	169.3	11.43
178.2 (60%)	-2.7	**-4.0**	181.5	23.54	180.7	23.73	178.7	23.85	176.3	23.71	170.9	23.03	159.8	21.50	145.1	19.50
	5.0	**3.2**	204.3	24.78	200.3	24.56	185.6	22.69	178.2	21.77	170.9	20.85	159.8	19.48	145.1	17.68
	10.4	**8.6**	211.4	24.22	200.3	22.90	185.6	21.16	178.2	20.31	170.9	19.45	159.8	18.18	145.1	16.51
	15.8	**14.0**	211.4	22.65	200.3	21.42	185.6	19.81	178.2	19.01	170.9	18.21	159.8	17.03	145.1	15.47
	17.0	**15.0**	211.4	22.38	200.3	21.16	185.6	19.57	178.2	18.78	170.9	18.00	159.8	16.82	145.1	15.29
	23.0	**21.2**	211.4	20.80	200.3	19.68	185.6	18.21	178.2	17.48	170.9	16.75	159.8	15.67	145.1	14.24
	26.6	**24.8**	211.4	19.97	200.3	18.89	185.6	17.48	178.2	16.78	170.9	16.09	159.8	15.05	145.1	13.68
	30.2	**28.4**	211.4	19.18	200.3	18.15	185.6	16.80	178.2	16.13	170.9	15.46	159.8	14.47	145.1	13.16
	32.0	**30.2**	211.4	18.80	200.3	17.80	185.6	16.47	178.2	15.81	170.9	15.16	159.8	14.19	145.1	12.91
	35.6	**33.8**	211.4	18.08	200.3	17.11	185.6	15.84	178.2	15.21	170.9	14.58	159.8	13.65	145.1	12.42
	41.0	**39.2**	211.4	17.06	200.3	16.15	185.6	14.95	178.2	14.36	170.9	13.77	159.8	12.89	145.1	11.74
	47.0	**43.0**	211.4	16.38	200.3	15.51	185.6	14.37	178.2	13.80	170.9	13.24	159.8	12.40	145.1	11.29
	48.2	**46.0**	211.4	15.87	200.3	15.03	185.6	13.92	178.2	13.37	170.9	12.83	159.8	12.02	145.1	10.95
	53.6	**51.1**	211.4	15.05	200.3	14.25	185.6	13.21	178.2	12.69	170.9	12.17	159.8	11.40	145.1	10.39
	59.0	**56.3**	211.4	14.26	200.3	13.50	185.6	12.52	178.2	12.03	170.9	11.54	159.8	10.81	145.1	9.86
148.5 (50%)	-2.7	**-4.0**	175.6	23.66	166.9	22.48	154.7	20.80	148.5	19.97	142.4	19.14	133.2	17.90	120.9	16.26
	5.0	**3.2**	176.1	21.51	166.9	20.36	154.7	18.85	148.5	18.09	142.4	17.35	133.2	16.23	120.9	14.76
	10.4	**8.6**	176.1	20.06	166.9	19.00	154.7	17.59	148.5	16.89	142.4	16.20	133.2	15.17	120.9	13.80
	15.8	**14.0**	176.1	18.78	166.9	17.79	154.7	16.48	148.5	15.83	142.4	15.18	133.2	14.22	120.9	12.95
	17.0	**15.0**	176.1	18.56	166.9	17.58	154.7	16.28	148.5	15.64	142.4	15.01	133.2	14.05	120.9	12.80
	23.0	**21.2**	176.1	17.27	166.9	16.36	154.7	15.16	148.5	14.57	142.4	13.98	133.2	13.10	120.9	11.94
	26.6	**24.8**	176.1	16.58	166.9	15.71	154.7	14.57	148.5	14.00	142.4	13.43	133.2	12.59	120.9	11.48
	30.2	**28.4**	176.1	15.94	166.9	15.10	154.7	14.01	148.5	13.46	142.4	12.92	133.2	12.11	120.9	11.04
	32.0	**30.2**	176.1	15.63	166.9	14.81	154.7	13.74	148.5	13.20	142.4	12.67	133.2	11.88	120.9	10.84
	35.6	**33.8**	176.1	15.03	166.9	14.25	154.7	13.22	148.5	12.71	142.4	12.20	133.2	11.44	120.9	10.44
	41.0	**39.2**	176.1	14.19	166.9	13.46	154.7	12.49	148.5	12.01	142.4	11.53	133.2	10.82	120.9	9.87
	47.0	**43.0**	176.1	13.64	166.9	12.93	154.7	12.01	148.5	11.55	142.4	11.09	133.2	10.40	120.9	9.50
	48.2	**46.0**	176.1	13.22	166.9	12.54	154.7	11.64	148.5	11.19	142.4	10.75	133.2	10.09	120.9	9.22
	53.6	**51.1**	176.1	12.54	166.9	11.90	154.7	11.05	148.5	10.63	142.4	10.21	133.2	9.58	120.9	8.76
	59.0	**56.3**	176.1	11.89	166.9	11.28	154.7	10.48	148.5	10.08	142.4	9.69	133.2	9.10	120.9	8.32

TC : Total Capacity kBtu/h.

IP : Input Power kW (Compressor + Outdoor fan motor).

The data is based on the following conditions. Pipe length : 25ft. (7.5m) , Height difference : 0ft. (0m)

HEATING CAPACITY in kBtu/h

■ MODEL : AOUA288RLBVG1

Total rated capacity of indoor unit	Outdoor temp.		Indoor temperature °FDB 61		64		68		70		72		75		79	
	°FDB	°FWB	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
486.0 (150%)	-2.7	**-4.0**	203.1	24.13	202.1	24.35	200.9	24.64	200.3	24.79	199.7	24.94	198.8	25.16	197.6	25.45
	5.0	**3.2**	230.8	24.91	229.8	25.16	228.5	25.50	227.8	25.67	227.2	25.85	226.2	26.10	224.9	26.45
	10.4	**8.6**	252.1	25.48	251.1	25.76	249.7	26.13	249.0	26.32	248.3	26.51	247.2	26.80	245.8	27.18
	15.8	**14.0**	273.9	26.04	272.7	26.35	271.2	26.75	270.4	26.96	269.7	27.16	268.5	27.47	266.9	27.89
	17.0	**15.0**	278.0	26.14	276.8	26.45	275.3	26.87	274.5	27.07	273.7	27.28	272.5	27.60	270.9	28.02
	23.0	**21.2**	303.4	26.77	302.1	27.11	300.4	27.56	299.5	27.78	298.6	28.01	297.3	28.35	295.5	28.80
	26.6	**24.8**	318.4	27.13	317.0	27.48	315.1	27.95	314.2	28.18	313.2	28.42	311.8	28.77	309.9	29.24
	30.2	**28.4**	333.5	27.48	332.0	27.85	329.9	28.33	328.9	28.57	327.9	28.82	326.4	29.18	324.3	29.67
	32.0	**30.2**	341.0	27.66	339.5	28.02	337.4	28.52	336.3	28.77	335.3	29.01	333.7	29.39	331.5	29.89
	35.6	**33.8**	356.2	28.00	354.5	28.38	352.3	28.89	351.2	29.15	350.0	29.40	348.3	29.79	346.0	30.30
	41.0	**39.2**	379.1	28.50	377.2	28.90	374.7	29.43	373.5	29.70	372.2	29.96	370.3	30.37	367.7	30.91
	47.0	**43.0**	395.2	28.83	393.2	29.25	390.5	29.79	389.2	30.07	387.8	30.34	385.8	30.76	383.0	31.31
	48.2	**46.0**	408.0	29.10	405.9	29.52	403.1	30.07	401.6	30.36	400.2	30.64	398.0	31.06	395.1	31.62
	53.6	**51.1**	429.7	29.52	427.4	29.96	424.3	30.53	422.7	30.82	421.1	31.11	418.7	31.55	395.7	29.98
	59.0	**56.3**	451.8	29.94	449.3	30.38	445.8	30.97	444.1	31.27	442.3	31.57	435.8	31.60	395.7	28.34
453.6 (140%)	-2.7	**-4.0**	202.6	24.23	201.7	24.45	200.5	24.75	199.9	24.89	199.3	25.04	198.4	25.26	197.1	25.56
	5.0	**3.2**	230.2	25.05	229.3	25.30	228.0	25.64	227.3	25.81	226.7	25.98	225.7	26.24	224.4	26.59
	10.4	**8.6**	251.5	25.65	250.4	25.93	249.0	26.30	248.3	26.49	247.6	26.68	246.6	26.96	245.1	27.34
	15.8	**14.0**	273.1	26.24	272.0	26.54	270.5	26.95	269.7	27.15	268.9	27.36	267.7	27.67	266.2	28.08
	17.0	**15.0**	277.2	26.35	276.1	26.66	274.5	27.07	273.7	27.28	272.9	27.49	271.7	27.80	270.1	28.22
	23.0	**21.2**	302.5	27.01	301.2	27.35	299.4	27.80	298.6	28.02	297.7	28.25	296.3	28.58	294.5	29.04
	26.6	**24.8**	317.3	27.39	315.9	27.74	314.1	28.21	313.1	28.44	312.2	28.68	310.7	29.03	308.8	29.50
	30.2	**28.4**	332.3	27.77	330.8	28.13	328.8	28.61	327.7	28.86	326.7	29.10	325.2	29.47	323.1	29.96
	32.0	**30.2**	339.8	27.95	338.2	28.32	336.1	28.81	335.1	29.06	334.0	29.31	332.4	29.68	330.3	30.18
	35.6	**33.8**	354.8	28.32	353.1	28.70	350.9	29.21	349.7	29.46	348.6	29.72	346.9	30.11	344.6	30.62
	41.0	**39.2**	377.4	28.85	375.6	29.25	373.1	29.78	371.8	30.05	370.5	30.32	368.6	30.72	366.1	31.26
	47.0	**43.0**	393.4	29.22	391.4	29.63	388.7	30.17	387.3	30.45	386.0	30.72	383.9	31.14	369.3	30.33
	48.2	**46.0**	406.0	29.50	403.9	29.92	401.0	30.48	399.6	30.75	398.1	31.03	395.9	31.46	369.3	29.35
	53.6	**51.1**	427.4	29.96	425.0	30.39	421.9	30.97	420.3	31.25	418.7	31.54	406.8	30.92	369.3	27.76
	59.0	**56.3**	449.1	30.41	446.5	30.85	443.1	31.44	441.3	31.74	435.0	31.53	406.8	29.23	369.3	26.24
421.2 (130%)	-2.7	**-4.0**	202.1	24.36	201.2	24.57	200.0	24.87	199.4	25.01	198.8	25.16	197.9	25.38	196.6	25.68
	5.0	**3.2**	229.6	25.21	228.7	25.46	227.4	25.80	226.7	25.97	226.0	26.14	225.1	26.40	223.7	26.75
	10.4	**8.6**	250.8	25.84	249.7	26.12	248.3	26.49	247.6	26.68	246.9	26.87	245.8	27.16	244.4	27.54
	15.8	**14.0**	272.3	26.46	271.1	26.77	269.6	27.18	268.8	27.38	268.1	27.59	266.9	27.90	265.3	28.31
	17.0	**15.0**	276.3	26.58	275.2	26.89	273.6	27.30	272.8	27.51	272.0	27.72	270.8	28.03	269.3	28.45
	23.0	**21.2**	301.4	27.29	300.1	27.62	298.4	28.07	297.5	28.30	296.6	28.52	295.3	28.86	293.5	29.31
	26.6	**24.8**	316.1	27.69	314.7	28.04	312.8	28.51	311.9	28.74	310.9	28.98	309.5	29.33	307.6	29.80
	30.2	**28.4**	330.9	28.10	329.4	28.46	327.4	28.94	326.4	29.18	325.3	29.43	323.8	29.79	321.7	30.28
	32.0	**30.2**	338.3	28.29	336.8	28.66	334.7	29.15	333.6	29.40	332.6	29.65	331.0	30.02	328.8	30.52
	35.6	**33.8**	353.2	28.69	351.5	29.07	349.3	29.58	348.1	29.83	347.0	30.09	345.3	30.47	343.0	30.98
	41.0	**39.2**	375.5	29.26	373.6	29.66	371.1	30.19	369.9	30.46	368.6	30.72	366.7	31.13	343.0	29.16
	47.0	**43.0**	391.2	29.66	389.2	30.06	386.5	30.61	385.2	30.88	383.8	31.16	377.7	31.10	343.0	27.96
	48.2	**46.0**	403.7	29.96	401.5	30.38	398.7	30.93	397.2	31.21	395.8	31.49	377.7	30.09	343.0	27.05
	53.6	**51.1**	424.6	30.46	422.3	30.89	419.2	31.46	417.6	31.75	403.9	30.68	377.7	28.46	343.0	25.59
	59.0	**56.3**	446.0	30.95	443.4	31.39	438.7	31.84	421.3	30.41	403.9	28.99	377.7	26.90	343.0	24.19
388.8 (120%)	-2.7	**-4.0**	201.5	24.50	200.6	24.71	199.4	25.01	198.8	25.15	198.2	25.30	197.3	25.52	196.1	25.82
	5.0	**3.2**	228.9	25.39	227.9	25.65	226.6	25.99	226.0	26.16	225.3	26.33	224.4	26.59	223.0	26.93
	10.4	**8.6**	249.9	26.06	248.9	26.34	247.5	26.72	246.8	26.91	246.1	27.09	245.0	27.38	243.6	27.76
	15.8	**14.0**	271.3	26.73	270.1	27.03	268.6	27.44	267.8	27.64	267.1	27.85	265.9	28.16	264.3	28.57
	17.0	**15.0**	275.3	26.85	274.1	27.16	272.6	27.57	271.8	27.78	271.0	27.99	269.8	28.30	268.2	28.72
	23.0	**21.2**	300.2	27.61	298.9	27.94	297.1	28.39	296.2	28.61	295.3	28.84	294.0	29.18	292.2	29.63
	26.6	**24.8**	314.7	28.04	313.3	28.39	311.4	28.86	310.5	29.09	309.5	29.33	308.1	29.68	306.2	30.15
	30.2	**28.4**	329.3	28.48	327.8	28.84	325.8	29.32	324.8	29.56	323.8	29.80	322.2	30.17	316.6	30.21
	32.0	**30.2**	336.7	28.69	335.1	29.06	333.0	29.55	331.9	29.79	330.9	30.04	329.3	30.41	316.6	29.58
	35.6	**33.8**	351.3	29.11	349.6	29.49	347.4	30.00	346.2	30.25	345.1	30.51	343.4	30.89	316.6	28.39
	41.0	**39.2**	373.3	29.73	371.4	30.13	368.9	30.66	367.6	30.93	366.4	31.19	348.7	29.69	316.6	26.72
	47.0	**43.0**	388.7	30.16	386.7	30.57	384.0	31.11	382.7	31.39	372.8	30.66	348.7	28.47	316.6	25.62
	48.2	**46.0**	400.9	30.49	398.8	30.91	395.9	31.46	388.8	31.08	372.8	29.66	348.7	27.54	316.6	24.79
	53.6	**51.1**	421.5	31.04	419.1	31.47	404.9	30.77	388.8	29.40	372.8	28.05	348.7	26.05	316.6	23.46
	59.0	**56.3**	442.3	31.57	437.0	31.70	404.9	29.08	388.8	27.79	372.8	26.51	348.7	24.63	316.6	22.17
356.4 (110%)	-2.7	**-4.0**	200.8	24.66	199.9	24.88	198.7	25.17	198.1	25.32	197.5	25.47	196.6	25.69	195.4	25.98
	5.0	**3.2**	228.1	25.61	227.1	25.87	225.8	26.21	225.2	26.38	224.5	26.55	223.5	26.81	222.2	27.15
	10.4	**8.6**	249.0	26.32	247.9	26.61	246.5	26.98	245.8	27.17	245.1	27.36	244.0	27.64	242.6	28.02
	15.8	**14.0**	270.1	27.04	269.0	27.34	267.4	27.75	266.7	27.95	265.9	28.16	264.7	28.47	263.2	28.88
	17.0	**15.0**	274.1	27.17	272.9	27.48	271.4	27.89	270.6	28.10	269.8	28.31	268.6	28.62	267.0	29.04
	23.0	**21.2**	298.7	27.99	297.4	28.32	295.6	28.77	294.7	28.99	293.9	29.21	292.5	29.55	290.2	29.93
	26.6	**24.8**	313.1	28.46	311.7	28.80	309.8	29.27	308.8	29.50	307.9	29.73	306.4	30.09	290.2	28.67
	30.2	**28.4**	327.5	28.92	326.0	29.28	323.9	29.76	322.9	30.01	321.9	30.25	319.6	30.52	290.2	27.49
	32.0	**30.2**	334.7	29.15	333.1	29.52	331.0	30.01	330.0	30.26	328.9	30.50	319.6	29.89	290.2	26.93
	35.6	**33.8**	349.1	29.61	347.4	29.99	345.1	30.50	344.0	30.75	341.8	30.86	319.6	28.69	290.2	25.85
	41.0	**39.2**	370.7	30.29	368.8	30.68	366.3	31.21	356.4	30.43	341.8	29.05	319.6	27.00	290.2	24.33
	47.0	**43.0**	385.8	30.75	383.8	31.16	371.2	30.50	356.4	29.17	341.8	27.85	319.6	25.89	290.2	23.33
	48.2	**46.0**	397.7	31.12	395.6	31.53	371.2	29.51	356.4	28.22	341.8	26.94	319.6	25.05	290.2	22.58
	53.6	**51.1**	417.8	31.71	400.6	30.40	371.2	27.92	356.4	26.69	341.8	25.49	319.6	23.70	290.2	21.37
	59.0	**56.3**	422.8	30.53	400.6	28.73	371.2	26.39	356.4	25.23	341.8	24.09	319.6	22.40	290.2	20.20

Total rated capacity of indoor unit	Outdoor temp.		Indoor temperature °FDB 61		64		68		70		72		75		79	
	°FDB	°FWB	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
324.0 (100%)	-2.7	**-4.0**	200.0	24.86	199.1	25.08	197.9	25.37	197.3	25.52	196.7	25.66	195.8	25.89	194.6	26.18
	5.0	**3.2**	227.1	25.87	226.1	26.13	224.8	26.47	224.2	26.64	223.5	26.81	222.5	27.07	221.2	27.41
	10.4	**8.6**	247.8	26.64	246.7	26.92	245.3	27.29	244.6	27.48	243.9	27.67	242.9	27.95	241.4	28.33
	15.8	**14.0**	268.7	27.41	267.6	27.71	266.0	28.12	265.3	28.32	264.5	28.53	263.3	28.83	261.8	29.25
	17.0	**15.0**	272.7	27.55	271.5	27.86	269.9	28.27	269.1	28.48	268.4	28.69	267.2	29.00	263.8	29.16
	23.0	**21.2**	296.9	28.43	295.6	28.77	293.9	29.21	293.0	29.44	292.1	29.66	290.6	29.97	263.8	27.03
	26.6	**24.8**	311.1	28.94	309.7	29.29	307.8	29.76	306.8	29.99	305.9	30.22	290.6	28.71	263.8	25.90
	30.2	**28.4**	325.2	29.45	323.7	29.81	321.7	30.29	320.7	30.53	310.7	29.59	290.6	27.53	263.8	24.84
	32.0	**30.2**	332.3	29.71	330.7	30.07	328.6	30.56	324.0	30.34	310.7	28.99	290.6	26.97	263.8	24.33
	35.6	**33.8**	346.4	30.21	344.8	30.58	337.4	30.44	324.0	29.12	310.7	27.82	290.6	25.88	263.8	23.36
	41.0	**39.2**	367.6	30.95	364.2	31.16	337.4	28.64	324.0	27.41	310.7	26.18	290.6	24.37	263.8	21.99
	47.0	**43.0**	382.3	31.46	364.2	29.87	337.4	27.47	324.0	26.28	310.7	25.11	290.6	23.37	263.8	21.09
	48.2	**46.0**	384.3	30.68	364.2	28.90	337.4	26.57	324.0	25.43	310.7	24.30	290.6	22.61	263.8	20.42
	53.6	**51.1**	384.3	29.02	364.2	27.34	337.4	25.14	324.0	24.06	310.7	22.99	290.6	21.40	263.8	19.32
	59.0	**56.3**	384.3	27.43	364.2	25.84	337.4	23.76	324.0	22.74	310.7	21.73	290.6	20.23	263.8	18.27
291.6 (90%)	-2.7	**-4.0**	199.0	25.10	198.1	25.32	196.9	25.61	196.3	25.76	195.7	25.90	194.8	26.13	193.6	26.42
	5.0	**3.2**	225.9	26.19	224.9	26.45	223.6	26.79	223.0	26.96	222.3	27.13	221.3	27.39	220.0	27.73
	10.4	**8.6**	246.4	27.02	245.3	27.30	243.9	27.67	243.2	27.86	242.5	28.05	241.4	28.33	237.4	28.32
	15.8	**14.0**	267.0	27.86	265.9	28.16	264.4	28.57	263.6	28.77	262.8	28.97	261.5	29.26	237.4	26.42
	17.0	**15.0**	270.9	28.01	269.7	28.32	268.2	28.73	267.4	28.94	266.6	29.15	261.5	28.89	237.4	26.08
	23.0	**21.2**	294.8	28.98	293.5	29.31	291.7	29.76	290.8	29.98	279.6	28.76	261.5	26.78	237.4	24.18
	26.6	**24.8**	308.7	29.54	307.3	29.88	303.7	30.12	291.6	28.83	279.6	27.55	261.5	25.66	237.4	23.18
	30.2	**28.4**	322.5	30.09	321.0	30.45	303.7	28.88	291.6	27.64	279.6	26.42	261.5	24.61	237.4	22.23
	32.0	**30.2**	329.5	30.37	327.8	30.72	303.7	28.28	291.6	27.08	279.6	25.88	261.5	24.10	237.4	21.78
	35.6	**33.8**	343.2	30.92	327.8	29.49	303.7	27.14	291.6	25.99	279.6	24.84	261.5	23.14	237.4	20.91
	41.0	**39.2**	345.9	29.43	327.8	27.75	303.7	25.55	291.6	24.47	279.6	23.39	261.5	21.79	237.4	19.70
	47.0	**43.0**	345.9	28.22	327.8	26.61	303.7	24.50	291.6	23.46	279.6	22.43	261.5	20.90	237.4	18.90
	48.2	**46.0**	345.9	27.30	327.8	25.75	303.7	23.71	291.6	22.70	279.6	21.71	261.5	20.23	237.4	18.29
	53.6	**51.1**	345.9	25.83	327.8	24.36	303.7	22.43	291.6	21.48	279.6	20.54	261.5	19.14	237.4	17.32
	59.0	**56.3**	345.9	24.41	327.8	23.02	303.7	21.21	291.6	20.31	279.6	19.42	261.5	18.11	237.4	16.38
259.2 (80%)	-2.7	**-4.0**	197.8	25.40	196.9	25.62	195.7	25.91	195.1	26.05	194.5	26.20	193.6	26.42	192.4	26.72
	5.0	**3.2**	224.4	26.59	223.4	26.84	222.1	27.18	221.5	27.35	220.8	27.52	219.8	27.78	211.0	26.93
	10.4	**8.6**	244.6	27.49	243.5	27.77	242.1	28.15	241.4	28.33	240.7	28.52	232.5	27.70	211.0	25.03
	15.8	**14.0**	264.9	28.41	263.8	28.72	262.3	29.12	259.2	28.99	248.6	27.72	232.5	25.83	211.0	23.36
	17.0	**15.0**	268.7	28.59	267.6	28.89	266.0	29.30	259.2	28.63	248.6	27.37	232.5	25.51	211.0	23.07
	23.0	**21.2**	292.1	29.65	290.8	29.98	270.0	27.70	259.2	26.53	248.6	25.38	232.5	23.65	211.0	21.40
	26.6	**24.8**	305.7	30.27	291.4	28.80	270.0	26.54	259.2	25.42	248.6	24.32	232.5	22.67	211.0	20.51
	30.2	**28.4**	307.5	29.26	291.4	27.61	270.0	25.45	259.2	24.38	248.6	23.32	232.5	21.75	211.0	19.68
	32.0	**30.2**	307.5	28.66	291.4	27.05	270.0	24.93	259.2	23.88	248.6	22.85	232.5	21.31	211.0	19.28
	35.6	**33.8**	307.5	27.51	291.4	25.96	270.0	23.93	259.2	22.93	248.6	21.94	232.5	20.46	211.0	18.52
	41.0	**39.2**	307.5	25.89	291.4	24.44	270.0	22.53	259.2	21.59	248.6	20.66	232.5	19.27	211.0	17.45
	47.0	**43.0**	307.5	24.83	291.4	23.44	270.0	21.61	259.2	20.71	248.6	19.82	232.5	18.49	211.0	16.75
	48.2	**46.0**	307.5	24.02	291.4	22.68	270.0	20.92	259.2	20.05	248.6	19.18	232.5	17.90	211.0	16.22
	53.6	**51.1**	307.5	22.73	291.4	21.46	270.0	19.79	259.2	18.97	248.6	18.16	232.5	16.94	211.0	15.36
	59.0	**56.3**	307.5	21.49	291.4	20.29	270.0	18.72	259.2	17.94	248.6	17.17	232.5	16.03	211.0	14.53
226.8 (70%)	-2.7	**-4.0**	196.2	25.78	195.3	26.00	194.2	26.29	193.6	26.44	193.0	26.58	192.1	26.80	184.7	26.02
	5.0	**3.2**	222.5	27.09	221.5	27.34	220.2	27.68	219.6	27.85	217.5	27.79	203.4	25.91	184.7	23.45
	10.4	**8.6**	242.3	28.10	241.3	28.38	236.2	28.17	226.8	26.99	217.5	25.83	203.4	24.09	184.7	21.81
	15.8	**14.0**	262.3	29.12	254.9	28.48	236.2	26.27	226.8	25.18	217.5	24.10	203.4	22.48	184.7	20.36
	17.0	**15.0**	266.0	29.31	254.9	28.12	236.2	25.94	226.8	24.86	217.5	23.80	203.4	22.20	184.7	20.11
	23.0	**21.2**	269.0	27.60	254.9	26.07	236.2	24.05	226.8	23.06	217.5	22.07	203.4	20.60	184.7	18.67
	26.6	**24.8**	269.0	26.44	254.9	24.98	236.2	23.06	226.8	22.10	217.5	21.16	203.4	19.75	184.7	17.90
	30.2	**28.4**	269.0	25.36	254.9	23.96	236.2	22.11	226.8	21.20	217.5	20.30	203.4	18.95	184.7	17.18
	32.0	**30.2**	269.0	24.84	254.9	23.47	236.2	21.66	226.8	20.77	217.5	19.89	203.4	18.57	184.7	16.84
	35.6	**33.8**	269.0	23.84	254.9	22.53	236.2	20.80	226.8	19.95	217.5	19.10	203.4	17.84	184.7	16.18
	41.0	**39.2**	269.0	22.45	254.9	21.22	236.2	19.60	226.8	18.79	217.5	18.00	203.4	16.81	184.7	15.26
	47.0	**43.0**	269.0	21.53	254.9	20.35	236.2	18.80	226.8	18.03	217.5	17.27	203.4	16.13	184.7	14.64
	48.2	**46.0**	269.0	20.84	254.9	19.70	236.2	18.20	226.8	17.46	217.5	16.72	203.4	15.62	184.7	14.18
	53.6	**51.1**	269.0	19.72	254.9	18.64	236.2	17.23	226.8	16.53	217.5	15.83	203.4	14.80	184.7	13.44
	59.0	**56.3**	269.0	18.65	254.9	17.63	236.2	16.29	226.8	15.63	217.5	14.98	203.4	14.00	184.7	12.72
194.4 (60%)	-2.7	**-4.0**	194.2	26.28	193.3	26.50	192.1	26.79	191.5	26.94	186.4	26.28	174.3	24.52	158.3	22.22
	5.0	**3.2**	219.9	27.75	218.5	27.93	202.5	25.79	194.4	24.73	186.4	23.68	174.3	22.11	158.3	20.04
	10.4	**8.6**	230.6	27.46	218.5	25.96	202.5	23.98	194.4	22.99	186.4	22.02	174.3	20.57	158.3	18.66
	15.8	**14.0**	230.6	25.62	218.5	24.22	202.5	22.38	194.4	21.47	186.4	20.56	174.3	19.21	158.3	17.43
	17.0	**15.0**	230.6	25.30	218.5	23.91	202.5	22.10	194.4	21.20	186.4	20.30	174.3	18.97	158.3	17.22
	23.0	**21.2**	230.6	23.46	218.5	22.18	202.5	20.50	194.4	19.67	186.4	18.85	174.3	17.62	158.3	16.00
	26.6	**24.8**	230.6	22.48	218.5	21.26	202.5	19.66	194.4	18.86	186.4	18.08	174.3	16.90	158.3	15.35
	30.2	**28.4**	230.6	21.57	218.5	20.40	202.5	18.86	194.4	18.10	186.4	17.35	174.3	16.22	158.3	14.74
	32.0	**30.2**	230.6	21.13	218.5	19.99	202.5	18.48	194.4	17.74	186.4	17.00	174.3	15.90	158.3	14.45
	35.6	**33.8**	230.6	20.29	218.5	19.20	202.5	17.76	194.4	17.04	186.4	16.34	174.3	15.28	158.3	13.89
	41.0	**39.2**	230.6	19.11	218.5	18.09	202.5	16.73	194.4	16.07	186.4	15.40	174.3	14.41	158.3	13.10
	47.0	**43.0**	230.6	18.34	218.5	17.35	202.5	16.06	194.4	15.42	186.4	14.78	174.3	13.83	158.3	12.58
	48.2	**46.0**	230.6	17.75	218.5	16.80	202.5	15.55	194.4	14.93	186.4	14.32	174.3	13.40	158.3	12.19
	53.6	**51.1**	230.6	16.81	218.5	15.91	202.5	14.73	194.4	14.14	186.4	13.56	174.3	12.70	158.3	11.56
	59.0	**56.3**	230.6	15.90	218.5	15.05	202.5	13.94	194.4	13.39	186.4	12.84	174.3	12.02	158.3	10.95
162.0 (50%)	-2.7	**-4.0**	191.4	26.98	182.1	25.65	168.7	23.72	162.0	22.76	155.3	21.80	145.3	20.38	131.9	18.50
	5.0	**3.2**	192.2	24.43	182.1	23.11	168.7	21.38	162.0	20.52	155.3	19.67	145.3	18.39	131.9	16.71
	10.4	**8.6**	192.2	22.72	182.1	21.50	168.7	19.90	162.0	19.10	155.3	18.31	145.3	17.13	131.9	15.57
	15.8	**14.0**	192.2	21.21	182.1	20.08	168.7	18.58	162.0	17.85	155.3	17.11	145.3	16.01	131.9	14.56
	17.0	**15.0**	192.2	20.95	182.1	19.83	168.7	18.36	162.0	17.63	155.3	16.90	145.3	15.82	131.9	14.39
	23.0	**21.2**	192.2	19.44	182.1	18.41	168.7	17.05	162.0	16.37	155.3	15.70	145.3	14.70	131.9	13.38
	26.6	**24.8**	192.2	18.64	182.1	17.65	168.7	16.35	162.0	15.71	155.3	15.07	145.3	14.11	131.9	12.85
	30.2	**28.4**	192.2	17.89	182.1	16.95	168.7	15.70	162.0	15.08	155.3	14.47	145.3	13.55	131.9	12.35
	32.0	**30.2**	192.2	17.53	182.1	16.61	168.7	15.39	162.0	14.79	155.3	14.18	145.3	13.29	131.9	12.11
	35.6	**33.8**	192.2	16.84	182.1	15.96	168.7	14.79	162.0	14.21	155.3	13.64	145.3	12.78	131.9	11.64
	41.0	**39.2**	192.2	15.87	182.1	15.04	168.7	13.95	162.0	13.41	155.3	12.87	145.3	12.06	131.9	11.00
	47.0	**43.0**	192.2	15.24	182.1	14.44	168.7	13.39	162.0	12.87	155.3	12.36	145.3	11.58	131.9	10.57
	48.2	**46.0**	192.2	14.76	182.1	13.99	168.7	12.97	162.0	12.47	155.3	11.97	145.3	11.23	131.9	10.24
	53.6	**51.1**	192.2	13.98	182.1	13.25	168.7	12.30	162.0	11.82	155.3	11.35	145.3	10.65	131.9	9.72
	59.0	**56.3**	192.2	13.23	182.1	12.55	168.7	11.65	162.0	11.20	155.3	10.75	145.3	10.09	131.9	9.22

TC : Total Capacity kBtu/h.

IP : Input Power kW (Compressor + Outdoor fan motor).

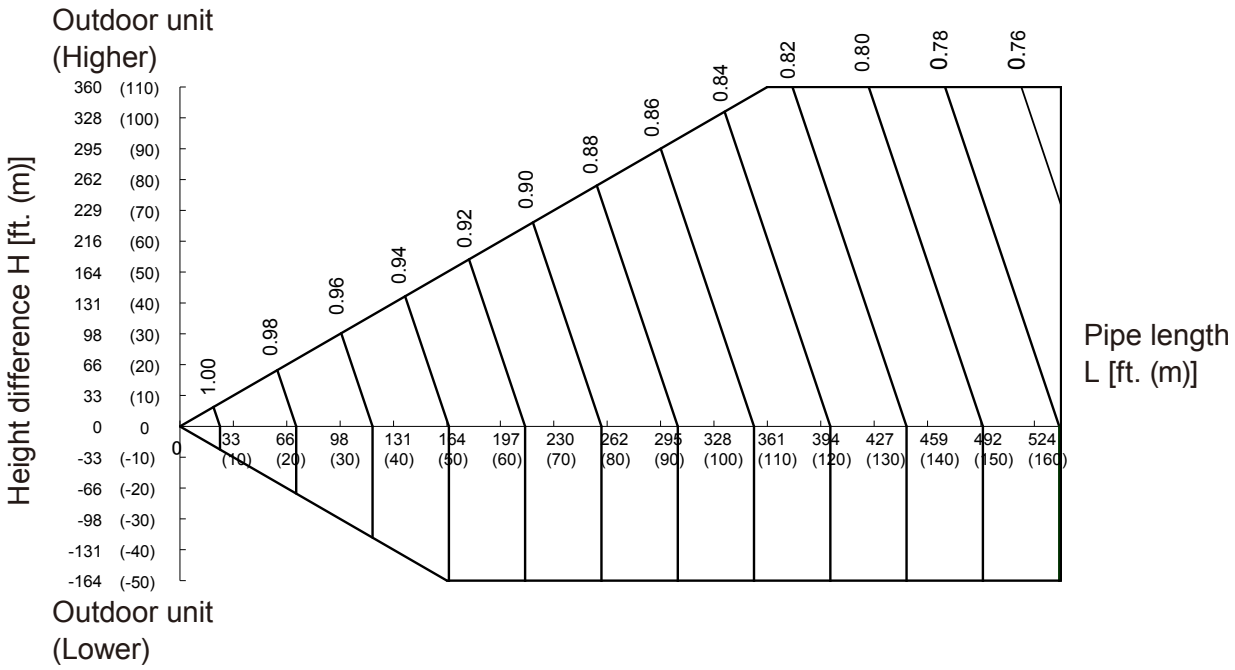
The data is based on the following conditions. Pipe length : 25ft. (7.5m) , Height difference : 0ft. (0m)

6. CAPACITY COMPENSATION COEFFICIENT

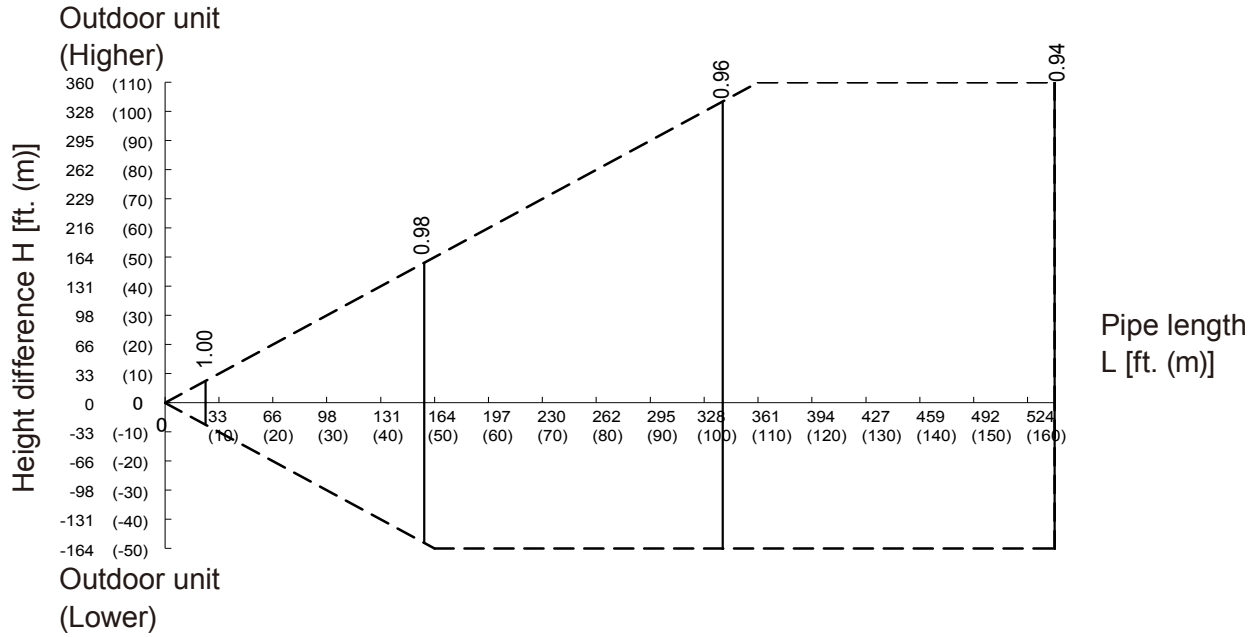
■ COMPENSATION COEFFICIENT OF PIPE LENGTH

The figures give the compensation coefficient of pipe length owing to installation position (pipe length, height difference). Pipe length and height difference are the length and the height difference between the master outdoor unit and indoor unit.

● Cooling



● Heating



■ COMPENSATION COEFFICIENT OF FROSTING / DEFROSTING (HEATING OPERATION)

To take the effects of accumulated frost and defrosting operation on heating capacity into consideration, the capacity of outdoor units should be corrected by compensation coefficient shown in the table below.

Outdoor temperature	°FDB / °FWB	5 / 3	16 / 14	19 / 18	23 / 21	27 / 25	32 / 30	36 / 34	41 / 39	45 / 43
	°CDB / °CWB	-15 / -16	-9 / -10	-7 / -8	-5 / -6	-3 / -4	0 / -1	2 / 1	5 / 4	7 / 6
Compensation coefficient		0.96	0.94	0.92	0.89	0.86	0.83	0.84	0.90	1.00

7. CAPACITY TABLE COOLING (INDOOR UNIT)

7-1. COMPACT CASSETTE TYPE

COOLING CAPACITY in kBtu/h

■ MODEL : AUUA4TLAV1

Outdoor temperature	Indoor temperature															
	68°FDB / 59 °FWB		73°FDB / 61 °FWB		75°FDB / 63 °FWB		79°FDB / 64 °FWB		80°FDB / 67 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
50	2.5	2.1	2.9	2.6	3.3	2.7	3.5	3.1	4.0	3.0	4.2	3.1	4.9	3.3	5.1	3.6
59	2.5	2.1	2.9	2.6	3.3	2.7	3.5	3.1	4.0	3.0	4.2	3.1	4.9	3.3	5.1	3.6
70	2.5	2.1	2.9	2.6	3.3	2.7	3.5	3.1	4.0	3.0	4.2	3.1	4.9	3.3	5.1	3.6
73	2.5	2.1	2.9	2.6	3.3	2.7	3.5	3.1	4.0	3.0	4.2	3.1	4.9	3.3	5.1	3.6
77	2.5	2.1	2.9	2.6	3.3	2.7	3.5	3.1	4.0	3.0	4.2	3.1	4.9	3.3	5.0	3.6
81	2.5	2.1	2.9	2.6	3.3	2.7	3.5	3.1	4.0	3.0	4.2	3.1	4.9	3.2	4.9	3.6
86	2.5	2.1	2.9	2.6	3.3	2.7	3.5	3.1	4.0	3.0	4.2	3.1	4.8	3.2	4.8	3.5
91	2.5	2.1	2.9	2.6	3.3	2.7	3.5	3.1	4.0	3.0	4.2	3.1	4.7	3.2	4.7	3.5
95	2.5	2.1	2.9	2.6	3.3	2.7	3.5	3.1	4.0	3.0	4.2	3.1	4.6	3.1	4.6	3.5
99	2.5	2.1	2.9	2.6	3.3	2.7	3.5	3.1	4.0	3.0	4.2	3.1	4.5	3.1	4.5	3.4
104	2.5	2.1	2.9	2.6	3.3	2.7	3.5	3.1	4.0	3.0	4.2	3.1	4.4	3.1	4.4	3.4
109	2.5	2.1	2.9	2.6	3.3	2.7	3.5	3.1	4.0	3.0	4.1	3.1	4.3	3.0	4.3	3.4
115	2.5	2.1	2.9	2.6	3.3	2.7	3.5	3.1	3.9	3.0	4.0	3.1	4.2	3.0	4.2	3.3

■ MODEL : AUUA7TLAV

Outdoor temperature	Indoor temperature															
	68°FDB / 59 °FWB		73°FDB / 61 °FWB		75°FDB / 63 °FWB		79°FDB / 64 °FWB		80°FDB / 67 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
50	4.8	4.1	5.4	5.0	6.1	5.2	6.5	6.0	7.5	5.7	7.8	6.0	9.2	6.3	9.6	7.0
59	4.8	4.1	5.4	5.0	6.1	5.2	6.5	6.0	7.5	5.7	7.8	6.0	9.2	6.3	9.6	7.0
70	4.8	4.1	5.4	5.0	6.1	5.2	6.5	6.0	7.5	5.7	7.8	6.0	9.2	6.3	9.6	7.0
73	4.8	4.1	5.4	5.0	6.1	5.2	6.5	6.0	7.5	5.7	7.8	6.0	9.2	6.3	9.5	7.0
77	4.8	4.1	5.4	5.0	6.1	5.2	6.5	6.0	7.5	5.7	7.8	6.0	9.2	6.3	9.4	6.9
81	4.8	4.1	5.4	5.0	6.1	5.2	6.5	6.0	7.5	5.7	7.8	6.0	9.1	6.2	9.2	6.9
86	4.8	4.1	5.4	5.0	6.1	5.2	6.5	6.0	7.5	5.7	7.8	6.0	8.9	6.1	9.0	6.8
91	4.8	4.1	5.4	5.0	6.1	5.2	6.5	6.0	7.5	5.7	7.8	6.0	8.7	6.1	8.8	6.7
95	4.8	4.1	5.4	5.0	6.1	5.2	6.5	6.0	7.5	5.7	7.8	6.0	8.6	6.0	8.7	6.7
99	4.8	4.1	5.4	5.0	6.1	5.2	6.5	6.0	7.5	5.7	7.8	6.0	8.4	6.0	8.5	6.6
104	4.8	4.1	5.4	5.0	6.1	5.2	6.5	6.0	7.5	5.7	7.8	6.0	8.2	5.9	8.3	6.6
109	4.8	4.1	5.4	5.0	6.1	5.2	6.5	6.0	7.5	5.7	7.7	6.0	8.0	5.8	8.1	6.5
115	4.8	4.1	5.4	5.0	6.1	5.2	6.5	6.0	7.4	5.7	7.5	5.9	7.8	5.7	7.9	6.4

■ MODEL : AUUA9TLAV

Outdoor temperature	Indoor temperature															
	68°FDB / 59 °FWB		73°FDB / 61 °FWB		75°FDB / 63 °FWB		79°FDB / 64 °FWB		80°FDB / 67 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
50	6.0	4.7	6.9	5.7	7.8	5.9	8.2	6.8	9.5	6.6	9.9	6.9	11.7	7.2	12.1	8.0
59	6.0	4.7	6.9	5.7	7.8	5.9	8.2	6.8	9.5	6.6	9.9	6.9	11.7	7.2	12.1	8.0
70	6.0	4.7	6.9	5.7	7.8	5.9	8.2	6.8	9.5	6.6	9.9	6.9	11.7	7.2	12.1	8.0
73	6.0	4.7	6.9	5.7	7.8	5.9	8.2	6.8	9.5	6.6	9.9	6.9	11.7	7.2	12.1	8.0
77	6.0	4.7	6.9	5.7	7.8	5.9	8.2	6.8	9.5	6.6	9.9	6.9	11.7	7.2	11.9	7.9
81	6.0	4.7	6.9	5.7	7.8	5.9	8.2	6.8	9.5	6.6	9.9	6.9	11.5	7.2	11.7	7.8
86	6.0	4.7	6.9	5.7	7.8	5.9	8.2	6.8	9.5	6.6	9.9	6.9	11.3	7.1	11.4	7.7
91	6.0	4.7	6.9	5.7	7.8	5.9	8.2	6.8	9.5	6.6	9.9	6.9	11.1	7.0	11.2	7.6
95	6.0	4.7	6.9	5.7	7.8	5.9	8.2	6.8	9.5	6.6	9.9	6.9	10.9	6.9	11.0	7.6
99	6.0	4.7	6.9	5.7	7.8	5.9	8.2	6.8	9.5	6.6	9.9	6.9	10.7	6.8	10.8	7.5
104	6.0	4.7	6.9	5.7	7.8	5.9	8.2	6.8	9.5	6.6	9.9	6.9	10.4	6.7	10.5	7.4
109	6.0	4.7	6.9	5.7	7.8	5.9	8.2	6.8	9.5	6.6	9.7	6.8	10.2	6.7	10.3	7.3
115	6.0	4.7	6.9	5.7	7.8	5.9	8.2	6.8	9.3	6.5	9.4	6.7	9.9	6.5	10.0	7.2

■ MODEL : AUUA12TLAV

Outdoor temperature	Indoor temperature															
	68°FDB / 59 °FWB		73°FDB / 61 °FWB		75°FDB / 63 °FWB		79°FDB / 64 °FWB		80°FDB / 67 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
50	7.6	6.0	8.7	7.3	9.8	7.6	10.4	8.7	12.0	8.5	12.6	8.9	14.7	9.3	15.3	10.3
59	7.6	6.0	8.7	7.3	9.8	7.6	10.4	8.7	12.0	8.5	12.6	8.9	14.7	9.3	15.3	10.3
70	7.6	6.0	8.7	7.3	9.8	7.6	10.4	8.7	12.0	8.5	12.6	8.9	14.7	9.3	15.3	10.3
73	7.6	6.0	8.7	7.3	9.8	7.6	10.4	8.7	12.0	8.5	12.6	8.9	14.7	9.3	15.2	10.3
77	7.6	6.0	8.7	7.3	9.8	7.6	10.4	8.7	12.0	8.5	12.6	8.9	14.7	9.3	15.0	10.2
81	7.6	6.0	8.7	7.3	9.8	7.6	10.4	8.7	12.0	8.5	12.6	8.9	14.6	9.2	14.7	10.1
86	7.6	6.0	8.7	7.3	9.8	7.6	10.4	8.7	12.0	8.5	12.6	8.9	14.3	9.1	14.4	10.0
91	7.6	6.0	8.7	7.3	9.8	7.6	10.4	8.7	12.0	8.5	12.6	8.9	14.0	9.0	14.1	9.9
95	7.6	6.0	8.7	7.3	9.8	7.6	10.4	8.7	12.0	8.5	12.6	8.9	13.7	8.9	13.9	9.8
99	7.6	6.0	8.7	7.3	9.8	7.6	10.4	8.7	12.0	8.5	12.6	8.9	13.5	8.8	13.6	9.7
104	7.6	6.0	8.7	7.3	9.8	7.6	10.4	8.7	12.0	8.5	12.6	8.9	13.2	8.7	13.3	9.6
109	7.6	6.0	8.7	7.3	9.8	7.6	10.4	8.7	12.0	8.5	12.3	8.8	12.8	8.6	13.0	9.5
115	7.6	6.0	8.7	7.3	9.8	7.6	10.4	8.7	11.8	8.4	11.9	8.7	12.5	8.4	12.6	9.3

TC : Total Capacity kBtu/h.

SHC : Sensible Heat Capacity kBtu/h.

COOLING CAPACITY in kBtu/h

■ MODEL : AUUA14TLAV

Outdoor temperature	Indoor temperature															
	68°FDB / 59 °FWB		73°FDB / 61 °FWB		75°FDB / 63 °FWB		79°FDB / 64 °FWB		80°FDB / 67 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
50	8.9	7.0	10.2	8.4	11.4	8.8	12.1	10.0	14.0	9.8	14.6	10.3	17.2	10.7	17.9	11.9
59	8.9	7.0	10.2	8.4	11.4	8.8	12.1	10.0	14.0	9.8	14.6	10.3	17.2	10.7	17.9	11.9
70	8.9	7.0	10.2	8.4	11.4	8.8	12.1	10.0	14.0	9.8	14.6	10.3	17.2	10.7	17.9	11.9
73	8.9	7.0	10.2	8.4	11.4	8.8	12.1	10.0	14.0	9.8	14.6	10.3	17.2	10.7	17.8	11.8
77	8.9	7.0	10.2	8.4	11.4	8.8	12.1	10.0	14.0	9.8	14.6	10.3	17.2	10.7	17.5	11.7
81	8.9	7.0	10.2	8.4	11.4	8.8	12.1	10.0	14.0	9.8	14.6	10.3	17.0	10.6	17.2	11.6
86	8.9	7.0	10.2	8.4	11.4	8.8	12.1	10.0	14.0	9.8	14.6	10.3	16.7	10.5	16.8	11.5
91	8.9	7.0	10.2	8.4	11.4	8.8	12.1	10.0	14.0	9.8	14.6	10.3	16.3	10.4	16.5	11.4
95	8.9	7.0	10.2	8.4	11.4	8.8	12.1	10.0	14.0	9.8	14.6	10.3	16.0	10.3	16.2	11.2
99	8.9	7.0	10.2	8.4	11.4	8.8	12.1	10.0	14.0	9.8	14.6	10.3	15.7	10.2	15.9	11.1
104	8.9	7.0	10.2	8.4	11.4	8.8	12.1	10.0	14.0	9.8	14.6	10.3	15.4	10.0	15.5	11.0
109	8.9	7.0	10.2	8.4	11.4	8.8	12.1	10.0	14.0	9.8	14.4	10.1	15.0	9.9	15.1	10.9
115	8.9	7.0	10.2	8.4	11.4	8.8	12.1	10.0	13.8	9.7	13.9	10.0	14.5	9.7	14.7	10.7

■ MODEL : AUUA18TLAV

Outdoor temperature	Indoor temperature															
	68°FDB / 59 °FWB		73°FDB / 61 °FWB		75°FDB / 63 °FWB		79°FDB / 64 °FWB		80°FDB / 67 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
50	11.4	8.5	13.1	10.3	14.7	10.8	15.5	12.2	18.0	12.0	18.8	12.6	22.1	13.2	23.0	14.6
59	11.4	8.5	13.1	10.3	14.7	10.8	15.5	12.2	18.0	12.0	18.8	12.6	22.1	13.2	23.0	14.6
70	11.4	8.5	13.1	10.3	14.7	10.8	15.5	12.2	18.0	12.0	18.8	12.6	22.1	13.2	23.0	14.6
73	11.4	8.5	13.1	10.3	14.7	10.8	15.5	12.2	18.0	12.0	18.8	12.6	22.1	13.2	22.8	14.5
77	11.4	8.5	13.1	10.3	14.7	10.8	15.5	12.2	18.0	12.0	18.8	12.6	22.1	13.2	22.5	14.4
81	11.4	8.5	13.1	10.3	14.7	10.8	15.5	12.2	18.0	12.0	18.8	12.6	21.9	13.1	22.1	14.2
86	11.4	8.5	13.1	10.3	14.7	10.8	15.5	12.2	18.0	12.0	18.8	12.6	21.4	12.9	21.6	14.0
91	11.4	8.5	13.1	10.3	14.7	10.8	15.5	12.2	18.0	12.0	18.8	12.6	21.0	12.7	21.2	13.9
95	11.4	8.5	13.1	10.3	14.7	10.8	15.5	12.2	18.0	12.0	18.8	12.6	20.6	12.6	20.8	13.7
99	11.4	8.5	13.1	10.3	14.7	10.8	15.5	12.2	18.0	12.0	18.8	12.6	20.2	12.4	20.4	13.6
104	11.4	8.5	13.1	10.3	14.7	10.8	15.5	12.2	18.0	12.0	18.8	12.6	19.7	12.3	19.9	13.4
109	11.4	8.5	13.1	10.3	14.7	10.8	15.5	12.2	18.0	12.0	18.5	12.4	19.3	12.1	19.5	13.2
115	11.4	8.5	13.1	10.3	14.7	10.8	15.5	12.2	17.7	11.9	17.9	12.2	18.7	11.9	18.9	13.0

■ MODEL : AUUA24TLAV

Outdoor temperature	Indoor temperature															
	68°FDB / 59 °FWB		73°FDB / 61 °FWB		75°FDB / 63 °FWB		79°FDB / 64 °FWB		80°FDB / 67 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
50	15.2	11.8	17.4	14.2	19.6	14.9	20.7	16.9	24.0	16.5	25.1	17.3	29.5	18.1	30.6	20.1
59	15.2	11.8	17.4	14.2	19.6	14.9	20.7	16.9	24.0	16.5	25.1	17.3	29.5	18.1	30.6	20.1
70	15.2	11.8	17.4	14.2	19.6	14.9	20.7	16.9	24.0	16.5	25.1	17.3	29.5	18.1	30.6	20.1
73	15.2	11.8	17.4	14.2	19.6	14.9	20.7	16.9	24.0	16.5	25.1	17.3	29.5	18.1	30.5	20.0
77	15.2	11.8	17.4	14.2	19.6	14.9	20.7	16.9	24.0	16.5	25.1	17.3	29.5	18.1	30.0	19.8
81	15.2	11.8	17.4	14.2	19.6	14.9	20.7	16.9	24.0	16.5	25.1	17.3	29.2	18.0	29.5	19.6
86	15.2	11.8	17.4	14.2	19.6	14.9	20.7	16.9	24.0	16.5	25.1	17.3	28.6	17.8	28.9	19.4
91	15.2	11.8	17.4	14.2	19.6	14.9	20.7	16.9	24.0	16.5	25.1	17.3	27.9	17.5	28.2	19.2
95	15.2	11.8	17.4	14.2	19.6	14.9	20.7	16.9	24.0	16.5	25.1	17.3	27.5	17.3	27.7	19.0
99	15.2	11.8	17.4	14.2	19.6	14.9	20.7	16.9	24.0	16.5	25.1	17.3	27.0	17.1	27.2	18.8
104	15.2	11.8	17.4	14.2	19.6	14.9	20.7	16.9	24.0	16.5	25.1	17.3	26.3	16.9	26.6	18.5
109	15.2	11.8	17.4	14.2	19.6	14.9	20.7	16.9	24.0	16.5	24.6	17.1	25.7	16.7	26.0	18.3
115	15.2	11.8	17.4	14.2	19.6	14.9	20.7	16.9	23.6	16.3	23.8	16.8	24.9	16.4	25.2	18.0

TC : Total Capacity kBtu/h.
SHC : Sensible Heat Capacity kBtu/h.

7-2. CIRCULAR FLOW CASSETTE TYPE COOLING CAPACITY in kBtu/h

■ MODEL : AUUB18TLAV1

Outdoor temperature	Indoor temperature															
	68°FDB / 59 °FWB		73°FDB / 61 °FWB		75°FDB / 63 °FWB		79°FDB / 64 °FWB		80°FDB / 67 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
50	11.4	9.7	13.1	11.9	14.7	12.3	15.5	14.2	18.0	13.6	18.8	14.3	22.1	14.8	23.0	16.6
59	11.4	9.7	13.1	11.9	14.7	12.3	15.5	14.2	18.0	13.6	18.8	14.3	22.1	14.8	23.0	16.6
70	11.4	9.7	13.1	11.9	14.7	12.3	15.5	14.2	18.0	13.6	18.8	14.3	22.1	14.8	23.0	16.6
73	11.4	9.7	13.1	11.9	14.7	12.3	15.5	14.2	18.0	13.6	18.8	14.3	22.1	14.8	22.8	16.5
77	11.4	9.7	13.1	11.9	14.7	12.3	15.5	14.2	18.0	13.6	18.8	14.3	22.1	14.8	22.5	16.4
81	11.4	9.7	13.1	11.9	14.7	12.3	15.5	14.2	18.0	13.6	18.8	14.3	21.9	14.8	22.1	16.3
86	11.4	9.7	13.1	11.9	14.7	12.3	15.5	14.2	18.0	13.6	18.8	14.3	21.4	14.6	21.6	16.1
91	11.4	9.7	13.1	11.9	14.7	12.3	15.5	14.2	18.0	13.6	18.8	14.3	21.0	14.4	21.2	16.0
95	11.4	9.7	13.1	11.9	14.7	12.3	15.5	14.2	18.0	13.6	18.8	14.3	20.6	14.3	20.8	15.8
99	11.4	9.7	13.1	11.9	14.7	12.3	15.5	14.2	18.0	13.6	18.8	14.3	20.2	14.2	20.4	15.7
104	11.4	9.7	13.1	11.9	14.7	12.3	15.5	14.2	18.0	13.6	18.8	14.3	19.7	14.0	19.9	15.5
109	11.4	9.7	13.1	11.9	14.7	12.3	15.5	14.2	18.0	13.6	18.5	14.2	19.3	13.8	19.5	15.4
115	11.4	9.7	13.1	11.9	14.7	12.3	15.5	14.2	17.7	13.5	17.9	14.0	18.7	13.6	18.9	15.2

■ MODEL : AUUB24TLAV1

Outdoor temperature	Indoor temperature															
	68°FDB / 59 °FWB		73°FDB / 61 °FWB		75°FDB / 63 °FWB		79°FDB / 64 °FWB		80°FDB / 67 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
50	15.2	11.7	17.4	14.2	19.6	14.8	20.7	16.8	24.0	16.4	25.1	17.3	29.5	18.1	30.6	20.0
59	15.2	11.7	17.4	14.2	19.6	14.8	20.7	16.8	24.0	16.4	25.1	17.3	29.5	18.1	30.6	20.0
70	15.2	11.7	17.4	14.2	19.6	14.8	20.7	16.8	24.0	16.4	25.1	17.3	29.5	18.1	30.6	20.0
73	15.2	11.7	17.4	14.2	19.6	14.8	20.7	16.8	24.0	16.4	25.1	17.3	29.5	18.1	30.5	19.9
77	15.2	11.7	17.4	14.2	19.6	14.8	20.7	16.8	24.0	16.4	25.1	17.3	29.5	18.1	30.0	19.7
81	15.2	11.7	17.4	14.2	19.6	14.8	20.7	16.8	24.0	16.4	25.1	17.3	29.2	17.9	29.5	19.5
86	15.2	11.7	17.4	14.2	19.6	14.8	20.7	16.8	24.0	16.4	25.1	17.3	28.6	17.7	28.9	19.3
91	15.2	11.7	17.4	14.2	19.6	14.8	20.7	16.8	24.0	16.4	25.1	17.3	27.9	17.5	28.2	19.1
95	15.2	11.7	17.4	14.2	19.6	14.8	20.7	16.8	24.0	16.4	25.1	17.3	27.5	17.3	27.7	18.9
99	15.2	11.7	17.4	14.2	19.6	14.8	20.7	16.8	24.0	16.4	25.1	17.3	27.0	17.1	27.2	18.7
104	15.2	11.7	17.4	14.2	19.6	14.8	20.7	16.8	24.0	16.4	25.1	17.3	26.3	16.8	26.6	18.4
109	15.2	11.7	17.4	14.2	19.6	14.8	20.7	16.8	24.0	16.4	24.6	17.0	25.7	16.6	26.0	18.2
115	15.2	11.7	17.4	14.2	19.6	14.8	20.7	16.8	23.6	16.3	23.8	16.7	24.9	16.3	25.2	17.9

■ MODEL : AUUB30TLAV1

Outdoor temperature	Indoor temperature															
	68°FDB / 59 °FWB		73°FDB / 61 °FWB		75°FDB / 63 °FWB		79°FDB / 64 °FWB		80°FDB / 67 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
50	19.0	15.3	21.8	18.6	24.5	19.3	25.9	22.1	30.0	21.4	31.4	22.5	36.9	23.4	38.3	26.0
59	19.0	15.3	21.8	18.6	24.5	19.3	25.9	22.1	30.0	21.4	31.4	22.5	36.9	23.4	38.3	26.0
70	19.0	15.3	21.8	18.6	24.5	19.3	25.9	22.1	30.0	21.4	31.4	22.5	36.9	23.4	38.3	26.0
73	19.0	15.3	21.8	18.6	24.5	19.3	25.9	22.1	30.0	21.4	31.4	22.5	36.9	23.4	38.1	26.0
77	19.0	15.3	21.8	18.6	24.5	19.3	25.9	22.1	30.0	21.4	31.4	22.5	36.9	23.4	37.5	25.7
81	19.0	15.3	21.8	18.6	24.5	19.3	25.9	22.1	30.0	21.4	31.4	22.5	36.5	23.3	36.8	25.5
86	19.0	15.3	21.8	18.6	24.5	19.3	25.9	22.1	30.0	21.4	31.4	22.5	35.7	23.0	36.1	25.2
91	19.0	15.3	21.8	18.6	24.5	19.3	25.9	22.1	30.0	21.4	31.4	22.5	34.9	22.7	35.3	25.0
95	19.0	15.3	21.8	18.6	24.5	19.3	25.9	22.1	30.0	21.4	31.4	22.5	34.3	22.5	34.7	24.7
99	19.0	15.3	21.8	18.6	24.5	19.3	25.9	22.1	30.0	21.4	31.4	22.5	33.7	22.3	34.0	24.5
104	19.0	15.3	21.8	18.6	24.5	19.3	25.9	22.1	30.0	21.4	31.4	22.5	32.9	22.0	33.2	24.2
109	19.0	15.3	21.8	18.6	24.5	19.3	25.9	22.1	30.0	21.4	30.8	22.3	32.1	21.7	32.4	23.9
115	19.0	15.3	21.8	18.6	24.5	19.3	25.9	22.1	29.5	21.2	29.8	21.9	31.1	21.3	31.5	23.6

TC : Total Capacity kBtu/h.
SHC : Sensible Heat Capacity kBtu/h.

COOLING CAPACITY in kBtu/h

■ MODEL : AUUB36TLAV1

Outdoor temperature	Indoor temperature															
	68°FDB / 59 °FWB		73°FDB / 61 °FWB		75°FDB / 63 °FWB		79°FDB / 64 °FWB		80°FDB / 67 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
50	22.8	17.5	26.1	21.2	29.4	22.2	31.1	25.3	36.0	24.7	37.7	25.9	44.2	27.1	45.9	29.9
59	22.8	17.5	26.1	21.2	29.4	22.2	31.1	25.3	36.0	24.7	37.7	25.9	44.2	27.1	45.9	29.9
70	22.8	17.5	26.1	21.2	29.4	22.2	31.1	25.3	36.0	24.7	37.7	25.9	44.2	27.1	45.9	29.9
73	22.8	17.5	26.1	21.2	29.4	22.2	31.1	25.3	36.0	24.7	37.7	25.9	44.2	27.1	45.7	29.8
77	22.8	17.5	26.1	21.2	29.4	22.2	31.1	25.3	36.0	24.7	37.7	25.9	44.2	27.1	44.9	29.6
81	22.8	17.5	26.1	21.2	29.4	22.2	31.1	25.3	36.0	24.7	37.7	25.9	43.8	26.9	44.2	29.3
86	22.8	17.5	26.1	21.2	29.4	22.2	31.1	25.3	36.0	24.7	37.7	25.9	42.8	26.5	43.3	28.9
91	22.8	17.5	26.1	21.2	29.4	22.2	31.1	25.3	36.0	24.7	37.7	25.9	41.9	26.2	42.4	28.6
95	22.8	17.5	26.1	21.2	29.4	22.2	31.1	25.3	36.0	24.7	37.7	25.9	41.2	25.9	41.6	28.3
99	22.8	17.5	26.1	21.2	29.4	22.2	31.1	25.3	36.0	24.7	37.7	25.9	40.4	25.6	40.9	28.0
104	22.8	17.5	26.1	21.2	29.4	22.2	31.1	25.3	36.0	24.7	37.7	25.9	39.5	25.2	39.9	27.7
109	22.8	17.5	26.1	21.2	29.4	22.2	31.1	25.3	36.0	24.7	36.9	25.6	38.5	24.9	38.9	27.3
115	22.8	17.5	26.1	21.2	29.4	22.2	31.1	25.3	35.4	24.4	35.8	25.1	37.4	24.5	37.8	26.9

■ MODEL : AUUB48TLAV1

Outdoor temperature	Indoor temperature															
	68°FDB / 59 °FWB		73°FDB / 61 °FWB		75°FDB / 63 °FWB		79°FDB / 64 °FWB		80°FDB / 67 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
50	30.4	23.5	34.8	28.5	39.2	29.7	41.4	33.9	48.0	33.0	50.2	34.7	59.0	36.2	61.2	40.1
59	30.4	23.5	34.8	28.5	39.2	29.7	41.4	33.9	48.0	33.0	50.2	34.7	59.0	36.2	61.2	40.1
70	30.4	23.5	34.8	28.5	39.2	29.7	41.4	33.9	48.0	33.0	50.2	34.7	59.0	36.2	61.2	40.1
73	30.4	23.5	34.8	28.5	39.2	29.7	41.4	33.9	48.0	33.0	50.2	34.7	59.0	36.2	60.9	40.0
77	30.4	23.5	34.8	28.5	39.2	29.7	41.4	33.9	48.0	33.0	50.2	34.7	59.0	36.2	59.9	39.6
81	30.4	23.5	34.8	28.5	39.2	29.7	41.4	33.9	48.0	33.0	50.2	34.7	58.4	36.0	58.9	39.2
86	30.4	23.5	34.8	28.5	39.2	29.7	41.4	33.9	48.0	33.0	50.2	34.7	57.1	35.5	57.7	38.7
91	30.4	23.5	34.8	28.5	39.2	29.7	41.4	33.9	48.0	33.0	50.2	34.7	55.9	35.0	56.5	38.3
95	30.4	23.5	34.8	28.5	39.2	29.7	41.4	33.9	48.0	33.0	50.2	34.7	54.9	34.7	55.5	37.9
99	30.4	23.5	34.8	28.5	39.2	29.7	41.4	33.9	48.0	33.0	50.2	34.7	53.9	34.3	54.5	37.5
104	30.4	23.5	34.8	28.5	39.2	29.7	41.4	33.9	48.0	33.0	50.2	34.7	52.6	33.8	53.2	37.1
109	30.4	23.5	34.8	28.5	39.2	29.7	41.4	33.9	48.0	33.0	49.2	34.2	51.4	33.3	51.9	36.6
115	30.4	23.5	34.8	28.5	39.2	29.7	41.4	33.9	47.2	32.7	47.7	33.6	49.8	32.8	50.4	36.0

TC : Total Capacity kBtu/h.
SHC : Sensible Heat Capacity kBtu/h.

7-3. CASSETTE TYPE

COOLING CAPACITY in kBtu/h

■ MODEL : AUUB18TLAV

Outdoor temperature	Indoor temperature															
	68°FDB / 59 °FWB		73°FDB / 61 °FWB		75°FDB / 63 °FWB		79°FDB / 64 °FWB		80°FDB / 67 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
50	11.4	10.2	13.1	12.5	14.7	13.0	15.5	15.0	18.0	14.3	18.8	15.0	22.1	15.5	23.0	17.4
59	11.4	10.2	13.1	12.5	14.7	13.0	15.5	15.0	18.0	14.3	18.8	15.0	22.1	15.5	23.0	17.4
70	11.4	10.2	13.1	12.5	14.7	13.0	15.5	15.0	18.0	14.3	18.8	15.0	22.1	15.5	23.0	17.4
73	11.4	10.2	13.1	12.5	14.7	13.0	15.5	15.0	18.0	14.3	18.8	15.0	22.1	15.5	22.8	17.4
77	11.4	10.2	13.1	12.5	14.7	13.0	15.5	15.0	18.0	14.3	18.8	15.0	22.1	15.5	22.5	17.3
81	11.4	10.2	13.1	12.5	14.7	13.0	15.5	15.0	18.0	14.3	18.8	15.0	21.9	15.5	22.1	17.1
86	11.4	10.2	13.1	12.5	14.7	13.0	15.5	15.0	18.0	14.3	18.8	15.0	21.4	15.3	21.6	17.0
91	11.4	10.2	13.1	12.5	14.7	13.0	15.5	15.0	18.0	14.3	18.8	15.0	21.0	15.1	21.2	16.8
95	11.4	10.2	13.1	12.5	14.7	13.0	15.5	15.0	18.0	14.3	18.8	15.0	20.6	15.0	20.8	16.7
99	11.4	10.2	13.1	12.5	14.7	13.0	15.5	15.0	18.0	14.3	18.8	15.0	20.2	14.9	20.4	16.6
104	11.4	10.2	13.1	12.5	14.7	13.0	15.5	15.0	18.0	14.3	18.8	15.0	19.7	14.7	19.9	16.4
109	11.4	10.2	13.1	12.5	14.7	13.0	15.5	15.0	18.0	14.3	18.5	14.9	19.3	14.6	19.5	16.3
115	11.4	10.2	13.1	12.5	14.7	13.0	15.5	15.0	17.7	14.2	17.9	14.7	18.7	14.4	18.9	16.1

■ MODEL : AUUB24TLAV

Outdoor temperature	Indoor temperature															
	68°FDB / 59 °FWB		73°FDB / 61 °FWB		75°FDB / 63 °FWB		79°FDB / 64 °FWB		80°FDB / 67 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
50	15.2	12.8	17.4	15.6	19.6	16.2	20.7	18.6	24.0	17.9	25.1	18.8	29.5	19.5	30.6	21.8
59	15.2	12.8	17.4	15.6	19.6	16.2	20.7	18.6	24.0	17.9	25.1	18.8	29.5	19.5	30.6	21.8
70	15.2	12.8	17.4	15.6	19.6	16.2	20.7	18.6	24.0	17.9	25.1	18.8	29.5	19.5	30.6	21.8
73	15.2	12.8	17.4	15.6	19.6	16.2	20.7	18.6	24.0	17.9	25.1	18.8	29.5	19.5	30.5	21.7
77	15.2	12.8	17.4	15.6	19.6	16.2	20.7	18.6	24.0	17.9	25.1	18.8	29.5	19.5	30.0	21.6
81	15.2	12.8	17.4	15.6	19.6	16.2	20.7	18.6	24.0	17.9	25.1	18.8	29.2	19.4	29.5	21.4
86	15.2	12.8	17.4	15.6	19.6	16.2	20.7	18.6	24.0	17.9	25.1	18.8	28.6	19.2	28.9	21.2
91	15.2	12.8	17.4	15.6	19.6	16.2	20.7	18.6	24.0	17.9	25.1	18.8	27.9	19.0	28.2	21.0
95	15.2	12.8	17.4	15.6	19.6	16.2	20.7	18.6	24.0	17.9	25.1	18.8	27.5	18.8	27.7	20.8
99	15.2	12.8	17.4	15.6	19.6	16.2	20.7	18.6	24.0	17.9	25.1	18.8	27.0	18.6	27.2	20.6
104	15.2	12.8	17.4	15.6	19.6	16.2	20.7	18.6	24.0	17.9	25.1	18.8	26.3	18.4	26.6	20.4
109	15.2	12.8	17.4	15.6	19.6	16.2	20.7	18.6	24.0	17.9	24.6	18.6	25.7	18.2	26.0	20.2
115	15.2	12.8	17.4	15.6	19.6	16.2	20.7	18.6	23.6	17.7	23.8	18.3	24.9	17.9	25.2	19.9

TC : Total Capacity kBtu/h.

SHC : Sensible Heat Capacity kBtu/h.

COOLING CAPACITY in kBtu/h

■ MODEL : AUUB30TLAV

Outdoor temperature	Indoor temperature															
	68°FDB / 59 °FWB		73°FDB / 61 °FWB		75°FDB / 63 °FWB		79°FDB / 64 °FWB		80°FDB / 67 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
50	19.0	16.0	21.8	19.5	24.5	20.2	25.9	23.3	30.0	22.4	31.4	23.5	36.9	24.4	38.3	27.3
59	19.0	16.0	21.8	19.5	24.5	20.2	25.9	23.3	30.0	22.4	31.4	23.5	36.9	24.4	38.3	27.3
70	19.0	16.0	21.8	19.5	24.5	20.2	25.9	23.3	30.0	22.4	31.4	23.5	36.9	24.4	38.3	27.3
73	19.0	16.0	21.8	19.5	24.5	20.2	25.9	23.3	30.0	22.4	31.4	23.5	36.9	24.4	38.1	27.2
77	19.0	16.0	21.8	19.5	24.5	20.2	25.9	23.3	30.0	22.4	31.4	23.5	36.9	24.4	37.5	27.0
81	19.0	16.0	21.8	19.5	24.5	20.2	25.9	23.3	30.0	22.4	31.4	23.5	36.5	24.3	36.8	26.8
86	19.0	16.0	21.8	19.5	24.5	20.2	25.9	23.3	30.0	22.4	31.4	23.5	35.7	24.0	36.1	26.5
91	19.0	16.0	21.8	19.5	24.5	20.2	25.9	23.3	30.0	22.4	31.4	23.5	34.9	23.7	35.3	26.2
95	19.0	16.0	21.8	19.5	24.5	20.2	25.9	23.3	30.0	22.4	31.4	23.5	34.3	23.5	34.7	26.0
99	19.0	16.0	21.8	19.5	24.5	20.2	25.9	23.3	30.0	22.4	31.4	23.5	33.7	23.3	34.0	25.8
104	19.0	16.0	21.8	19.5	24.5	20.2	25.9	23.3	30.0	22.4	31.4	23.5	32.9	23.0	33.2	25.5
109	19.0	16.0	21.8	19.5	24.5	20.2	25.9	23.3	30.0	22.4	30.8	23.3	32.1	22.7	32.4	25.2
115	19.0	16.0	21.8	19.5	24.5	20.2	25.9	23.3	29.5	22.2	29.8	22.9	31.1	22.4	31.5	24.9

■ MODEL : AUUB36TLAV

Outdoor temperature	Indoor temperature															
	68°FDB / 59 °FWB		73°FDB / 61 °FWB		75°FDB / 63 °FWB		79°FDB / 64 °FWB		80°FDB / 67 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
50	22.8	18.6	26.1	22.6	29.4	23.5	31.1	27.0	36.0	26.1	37.7	27.4	44.2	28.5	45.9	31.7
59	22.8	18.6	26.1	22.6	29.4	23.5	31.1	27.0	36.0	26.1	37.7	27.4	44.2	28.5	45.9	31.7
70	22.8	18.6	26.1	22.6	29.4	23.5	31.1	27.0	36.0	26.1	37.7	27.4	44.2	28.5	45.9	31.7
73	22.8	18.6	26.1	22.6	29.4	23.5	31.1	27.0	36.0	26.1	37.7	27.4	44.2	28.5	45.7	31.6
77	22.8	18.6	26.1	22.6	29.4	23.5	31.1	27.0	36.0	26.1	37.7	27.4	44.2	28.5	44.9	31.4
81	22.8	18.6	26.1	22.6	29.4	23.5	31.1	27.0	36.0	26.1	37.7	27.4	43.8	28.3	44.2	31.1
86	22.8	18.6	26.1	22.6	29.4	23.5	31.1	27.0	36.0	26.1	37.7	27.4	42.8	28.0	43.3	30.8
91	22.8	18.6	26.1	22.6	29.4	23.5	31.1	27.0	36.0	26.1	37.7	27.4	41.9	27.7	42.4	30.4
95	22.8	18.6	26.1	22.6	29.4	23.5	31.1	27.0	36.0	26.1	37.7	27.4	41.2	27.4	41.6	30.1
99	22.8	18.6	26.1	22.6	29.4	23.5	31.1	27.0	36.0	26.1	37.7	27.4	40.4	27.1	40.9	29.9
104	22.8	18.6	26.1	22.6	29.4	23.5	31.1	27.0	36.0	26.1	37.7	27.4	39.5	26.8	39.9	29.5
109	22.8	18.6	26.1	22.6	29.4	23.5	31.1	27.0	36.0	26.1	36.9	27.1	38.5	26.4	38.9	29.2
115	22.8	18.6	26.1	22.6	29.4	23.5	31.1	27.0	35.4	25.8	35.8	26.7	37.4	26.0	37.8	28.8

TC : Total Capacity kBtu/h.
SHC : Sensible Heat Capacity kBtu/h.

7-4. MINI DUCT TYPE

■ MODEL : ARUL4TLAV1

COOLING CAPACITY in kBtu/h

Outdoor temperature	Indoor temperature															
	68°FDB / 59 °FWB		73°FDB / 61 °FWB		75°FDB / 63 °FWB		79°FDB / 64 °FWB		80°FDB / 67 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
50	2.5	2.0	2.9	2.5	3.3	2.6	3.5	3.0	4.0	2.9	4.2	3.0	4.9	3.1	5.1	3.5
59	2.5	2.0	2.9	2.5	3.3	2.6	3.5	3.0	4.0	2.9	4.2	3.0	4.9	3.1	5.1	3.5
70	2.5	2.0	2.9	2.5	3.3	2.6	3.5	3.0	4.0	2.9	4.2	3.0	4.9	3.1	5.1	3.5
73	2.5	2.0	2.9	2.5	3.3	2.6	3.5	3.0	4.0	2.9	4.2	3.0	4.9	3.1	5.1	3.5
77	2.5	2.0	2.9	2.5	3.3	2.6	3.5	3.0	4.0	2.9	4.2	3.0	4.9	3.1	5.0	3.5
81	2.5	2.0	2.9	2.5	3.3	2.6	3.5	3.0	4.0	2.9	4.2	3.0	4.9	3.1	4.9	3.4
86	2.5	2.0	2.9	2.5	3.3	2.6	3.5	3.0	4.0	2.9	4.2	3.0	4.8	3.1	4.8	3.4
91	2.5	2.0	2.9	2.5	3.3	2.6	3.5	3.0	4.0	2.9	4.2	3.0	4.7	3.0	4.7	3.3
95	2.5	2.0	2.9	2.5	3.3	2.6	3.5	3.0	4.0	2.9	4.2	3.0	4.6	3.0	4.6	3.3
99	2.5	2.0	2.9	2.5	3.3	2.6	3.5	3.0	4.0	2.9	4.2	3.0	4.5	3.0	4.5	3.3
104	2.5	2.0	2.9	2.5	3.3	2.6	3.5	3.0	4.0	2.9	4.2	3.0	4.4	2.9	4.4	3.2
109	2.5	2.0	2.9	2.5	3.3	2.6	3.5	3.0	4.0	2.9	4.1	3.0	4.3	2.9	4.3	3.2
115	2.5	2.0	2.9	2.5	3.3	2.6	3.5	3.0	3.9	2.8	4.0	2.9	4.2	2.9	4.2	3.2

TC : Total Capacity kBtu/h.

SHC : Sensible Heat Capacity kBtu/h.

7-5. SLIM DUCT / SLIM CONCEALED FLOOR TYPE

COOLING CAPACITY in kBtu/h

■ MODEL : ARUL7TLAV

Outdoor temperature	Indoor temperature															
	68°FDB / 59 °FWB		73°FDB / 61 °FWB		75°FDB / 63 °FWB		79°FDB / 64 °FWB		80°FDB / 67 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
50	4.8	4.1	5.4	5.1	6.1	5.2	6.5	6.0	7.5	5.8	7.8	6.1	9.2	6.3	9.6	7.1
59	4.8	4.1	5.4	5.1	6.1	5.2	6.5	6.0	7.5	5.8	7.8	6.1	9.2	6.3	9.6	7.1
70	4.8	4.1	5.4	5.1	6.1	5.2	6.5	6.0	7.5	5.8	7.8	6.1	9.2	6.3	9.6	7.1
73	4.8	4.1	5.4	5.1	6.1	5.2	6.5	6.0	7.5	5.8	7.8	6.1	9.2	6.3	9.5	7.0
77	4.8	4.1	5.4	5.1	6.1	5.2	6.5	6.0	7.5	5.8	7.8	6.1	9.2	6.3	9.4	7.0
81	4.8	4.1	5.4	5.1	6.1	5.2	6.5	6.0	7.5	5.8	7.8	6.1	9.1	6.3	9.2	6.9
86	4.8	4.1	5.4	5.1	6.1	5.2	6.5	6.0	7.5	5.8	7.8	6.1	8.9	6.2	9.0	6.9
91	4.8	4.1	5.4	5.1	6.1	5.2	6.5	6.0	7.5	5.8	7.8	6.1	8.7	6.1	8.8	6.8
95	4.8	4.1	5.4	5.1	6.1	5.2	6.5	6.0	7.5	5.8	7.8	6.1	8.6	6.1	8.7	6.7
99	4.8	4.1	5.4	5.1	6.1	5.2	6.5	6.0	7.5	5.8	7.8	6.1	8.4	6.0	8.5	6.7
104	4.8	4.1	5.4	5.1	6.1	5.2	6.5	6.0	7.5	5.8	7.8	6.1	8.2	6.0	8.3	6.6
109	4.8	4.1	5.4	5.1	6.1	5.2	6.5	6.0	7.5	5.8	7.7	6.0	8.0	5.9	8.1	6.6
115	4.8	4.1	5.4	5.1	6.1	5.2	6.5	6.0	7.4	5.7	7.5	5.9	7.8	5.8	7.9	6.5

■ MODEL : ARUL9TLAV

Outdoor temperature	Indoor temperature															
	68°FDB / 59 °FWB		73°FDB / 61 °FWB		75°FDB / 63 °FWB		79°FDB / 64 °FWB		80°FDB / 67 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
50	6.0	4.9	6.9	5.9	7.8	6.2	8.2	7.1	9.5	6.8	9.9	7.2	11.7	7.5	12.1	8.3
59	6.0	4.9	6.9	5.9	7.8	6.2	8.2	7.1	9.5	6.8	9.9	7.2	11.7	7.5	12.1	8.3
70	6.0	4.9	6.9	5.9	7.8	6.2	8.2	7.1	9.5	6.8	9.9	7.2	11.7	7.5	12.1	8.3
73	6.0	4.9	6.9	5.9	7.8	6.2	8.2	7.1	9.5	6.8	9.9	7.2	11.7	7.5	12.1	8.3
77	6.0	4.9	6.9	5.9	7.8	6.2	8.2	7.1	9.5	6.8	9.9	7.2	11.7	7.5	11.9	8.2
81	6.0	4.9	6.9	5.9	7.8	6.2	8.2	7.1	9.5	6.8	9.9	7.2	11.5	7.4	11.7	8.1
86	6.0	4.9	6.9	5.9	7.8	6.2	8.2	7.1	9.5	6.8	9.9	7.2	11.3	7.3	11.4	8.1
91	6.0	4.9	6.9	5.9	7.8	6.2	8.2	7.1	9.5	6.8	9.9	7.2	11.1	7.2	11.2	8.0
95	6.0	4.9	6.9	5.9	7.8	6.2	8.2	7.1	9.5	6.8	9.9	7.2	10.9	7.2	11.0	7.9
99	6.0	4.9	6.9	5.9	7.8	6.2	8.2	7.1	9.5	6.8	9.9	7.2	10.7	7.1	10.8	7.8
104	6.0	4.9	6.9	5.9	7.8	6.2	8.2	7.1	9.5	6.8	9.9	7.2	10.4	7.0	10.5	7.7
109	6.0	4.9	6.9	5.9	7.8	6.2	8.2	7.1	9.5	6.8	9.7	7.1	10.2	6.9	10.3	7.6
115	6.0	4.9	6.9	5.9	7.8	6.2	8.2	7.1	9.3	6.8	9.4	7.0	9.9	6.8	10.0	7.5

■ MODEL : ARUL12TLAV

Outdoor temperature	Indoor temperature															
	68°FDB / 59 °FWB		73°FDB / 61 °FWB		75°FDB / 63 °FWB		79°FDB / 64 °FWB		80°FDB / 67 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
50	7.6	6.0	8.7	7.3	9.8	7.6	10.4	8.7	12.0	8.5	12.6	8.9	14.7	9.3	15.3	10.3
59	7.6	6.0	8.7	7.3	9.8	7.6	10.4	8.7	12.0	8.5	12.6	8.9	14.7	9.3	15.3	10.3
70	7.6	6.0	8.7	7.3	9.8	7.6	10.4	8.7	12.0	8.5	12.6	8.9	14.7	9.3	15.3	10.3
73	7.6	6.0	8.7	7.3	9.8	7.6	10.4	8.7	12.0	8.5	12.6	8.9	14.7	9.3	15.2	10.3
77	7.6	6.0	8.7	7.3	9.8	7.6	10.4	8.7	12.0	8.5	12.6	8.9	14.7	9.3	15.0	10.2
81	7.6	6.0	8.7	7.3	9.8	7.6	10.4	8.7	12.0	8.5	12.6	8.9	14.6	9.2	14.7	10.1
86	7.6	6.0	8.7	7.3	9.8	7.6	10.4	8.7	12.0	8.5	12.6	8.9	14.3	9.1	14.4	10.0
91	7.6	6.0	8.7	7.3	9.8	7.6	10.4	8.7	12.0	8.5	12.6	8.9	14.0	9.0	14.1	9.9
95	7.6	6.0	8.7	7.3	9.8	7.6	10.4	8.7	12.0	8.5	12.6	8.9	13.7	8.9	13.9	9.8
99	7.6	6.0	8.7	7.3	9.8	7.6	10.4	8.7	12.0	8.5	12.6	8.9	13.5	8.8	13.6	9.7
104	7.6	6.0	8.7	7.3	9.8	7.6	10.4	8.7	12.0	8.5	12.6	8.9	13.2	8.7	13.3	9.6
109	7.6	6.0	8.7	7.3	9.8	7.6	10.4	8.7	12.0	8.5	12.3	8.8	12.8	8.6	13.0	9.5
115	7.6	6.0	8.7	7.3	9.8	7.6	10.4	8.7	11.8	8.4	11.9	8.7	12.5	8.4	12.6	9.3

■ MODEL : ARUL14TLAV

Outdoor temperature	Indoor temperature															
	68°FDB / 59 °FWB		73°FDB / 61 °FWB		75°FDB / 63 °FWB		79°FDB / 64 °FWB		80°FDB / 67 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
50	8.9	7.5	10.2	9.2	11.4	9.5	12.1	10.9	14.0	10.5	14.6	11.1	17.2	11.5	17.9	12.8
59	8.9	7.5	10.2	9.2	11.4	9.5	12.1	10.9	14.0	10.5	14.6	11.1	17.2	11.5	17.9	12.8
70	8.9	7.5	10.2	9.2	11.4	9.5	12.1	10.9	14.0	10.5	14.6	11.1	17.2	11.5	17.9	12.8
73	8.9	7.5	10.2	9.2	11.4	9.5	12.1	10.9	14.0	10.5	14.6	11.1	17.2	11.5	17.8	12.8
77	8.9	7.5	10.2	9.2	11.4	9.5	12.1	10.9	14.0	10.5	14.6	11.1	17.2	11.5	17.5	12.7
81	8.9	7.5	10.2	9.2	11.4	9.5	12.1	10.9	14.0	10.5	14.6	11.1	17.0	11.4	17.2	12.6
86	8.9	7.5	10.2	9.2	11.4	9.5	12.1	10.9	14.0	10.5	14.6	11.1	16.7	11.3	16.8	12.4
91	8.9	7.5	10.2	9.2	11.4	9.5	12.1	10.9	14.0	10.5	14.6	11.1	16.3	11.1	16.5	12.3
95	8.9	7.5	10.2	9.2	11.4	9.5	12.1	10.9	14.0	10.5	14.6	11.1	16.0	11.0	16.2	12.2
99	8.9	7.5	10.2	9.2	11.4	9.5	12.1	10.9	14.0	10.5	14.6	11.1	15.7	10.9	15.9	12.1
104	8.9	7.5	10.2	9.2	11.4	9.5	12.1	10.9	14.0	10.5	14.6	11.1	15.4	10.8	15.5	12.0
109	8.9	7.5	10.2	9.2	11.4	9.5	12.1	10.9	14.0	10.5	14.4	10.9	15.0	10.7	15.1	11.8
115	8.9	7.5	10.2	9.2	11.4	9.5	12.1	10.9	13.8	10.4	13.9	10.8	14.5	10.5	14.7	11.7

TC : Total Capacity kBtu/h.
SHC : Sensible Heat Capacity kBtu/h.

■ MODEL : ARUL18TLAV

COOLING CAPACITY in kBtu/h

Outdoor temperature	Indoor temperature															
	68°FDB / 59 °FWB		73°FDB / 61 °FWB		75°FDB / 63 °FWB		79°FDB / 64 °FWB		80°FDB / 67 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
50	11.4	9.2	13.1	11.2	14.7	11.7	15.5	13.4	18.0	13.0	18.8	13.6	22.1	14.2	23.0	15.8
59	11.4	9.2	13.1	11.2	14.7	11.7	15.5	13.4	18.0	13.0	18.8	13.6	22.1	14.2	23.0	15.8
70	11.4	9.2	13.1	11.2	14.7	11.7	15.5	13.4	18.0	13.0	18.8	13.6	22.1	14.2	23.0	15.8
73	11.4	9.2	13.1	11.2	14.7	11.7	15.5	13.4	18.0	13.0	18.8	13.6	22.1	14.2	22.8	15.7
77	11.4	9.2	13.1	11.2	14.7	11.7	15.5	13.4	18.0	13.0	18.8	13.6	22.1	14.2	22.5	15.6
81	11.4	9.2	13.1	11.2	14.7	11.7	15.5	13.4	18.0	13.0	18.8	13.6	21.9	14.1	22.1	15.4
86	11.4	9.2	13.1	11.2	14.7	11.7	15.5	13.4	18.0	13.0	18.8	13.6	21.4	13.9	21.6	15.3
91	11.4	9.2	13.1	11.2	14.7	11.7	15.5	13.4	18.0	13.0	18.8	13.6	21.0	13.7	21.2	15.1
95	11.4	9.2	13.1	11.2	14.7	11.7	15.5	13.4	18.0	13.0	18.8	13.6	20.6	13.6	20.8	15.0
99	11.4	9.2	13.1	11.2	14.7	11.7	15.5	13.4	18.0	13.0	18.8	13.6	20.2	13.5	20.4	14.8
104	11.4	9.2	13.1	11.2	14.7	11.7	15.5	13.4	18.0	13.0	18.8	13.6	19.7	13.3	19.9	14.7
109	11.4	9.2	13.1	11.2	14.7	11.7	15.5	13.4	18.0	13.0	18.5	13.5	19.3	13.1	19.5	14.5
115	11.4	9.2	13.1	11.2	14.7	11.7	15.5	13.4	17.7	12.8	17.9	13.2	18.7	12.9	18.9	14.3

TC : Total Capacity kBtu/h.
SHC : Sensible Heat Capacity kBtu/h.

7-6. MEDIUM STATIC PRESSURE DUCT TYPE

COOLING CAPACITY in kBtu/h

■ MODEL : ARUM24TLAV

Outdoor temperature	Indoor temperature															
	68°FDB / 59 °FWB		73°FDB / 61 °FWB		75°FDB / 63 °FWB		79°FDB / 64 °FWB		80°FDB / 67 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
50	15.2	12.3	17.4	14.9	19.6	15.5	20.7	17.8	24.0	17.2	25.1	18.1	29.5	18.8	30.6	20.9
59	15.2	12.3	17.4	14.9	19.6	15.5	20.7	17.8	24.0	17.2	25.1	18.1	29.5	18.8	30.6	20.9
70	15.2	12.3	17.4	14.9	19.6	15.5	20.7	17.8	24.0	17.2	25.1	18.1	29.5	18.8	30.6	20.9
73	15.2	12.3	17.4	14.9	19.6	15.5	20.7	17.8	24.0	17.2	25.1	18.1	29.5	18.8	30.5	20.9
77	15.2	12.3	17.4	14.9	19.6	15.5	20.7	17.8	24.0	17.2	25.1	18.1	29.5	18.8	30.0	20.7
81	15.2	12.3	17.4	14.9	19.6	15.5	20.7	17.8	24.0	17.2	25.1	18.1	29.2	18.7	29.5	20.5
86	15.2	12.3	17.4	14.9	19.6	15.5	20.7	17.8	24.0	17.2	25.1	18.1	28.6	18.5	28.9	20.3
91	15.2	12.3	17.4	14.9	19.6	15.5	20.7	17.8	24.0	17.2	25.1	18.1	27.9	18.3	28.2	20.1
95	15.2	12.3	17.4	14.9	19.6	15.5	20.7	17.8	24.0	17.2	25.1	18.1	27.5	18.1	27.7	19.9
99	15.2	12.3	17.4	14.9	19.6	15.5	20.7	17.8	24.0	17.2	25.1	18.1	27.0	17.9	27.2	19.7
104	15.2	12.3	17.4	14.9	19.6	15.5	20.7	17.8	24.0	17.2	25.1	18.1	26.3	17.7	26.6	19.5
109	15.2	12.3	17.4	14.9	19.6	15.5	20.7	17.8	24.0	17.2	24.6	17.9	25.7	17.4	26.0	19.2
115	15.2	12.3	17.4	14.9	19.6	15.5	20.7	17.8	23.6	17.0	23.8	17.6	24.9	17.1	25.2	19.0

■ MODEL : ARUM30TLAV

Outdoor temperature	Indoor temperature															
	68°FDB / 59 °FWB		73°FDB / 61 °FWB		75°FDB / 63 °FWB		79°FDB / 64 °FWB		80°FDB / 67 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
50	19.0	14.0	21.8	16.9	24.5	17.7	25.9	20.0	30.0	19.7	31.4	20.7	36.9	21.7	38.3	23.9
59	19.0	14.0	21.8	16.9	24.5	17.7	25.9	20.0	30.0	19.7	31.4	20.7	36.9	21.7	38.3	23.9
70	19.0	14.0	21.8	16.9	24.5	17.7	25.9	20.0	30.0	19.7	31.4	20.7	36.9	21.7	38.3	23.9
73	19.0	14.0	21.8	16.9	24.5	17.7	25.9	20.0	30.0	19.7	31.4	20.7	36.9	21.7	38.1	23.8
77	19.0	14.0	21.8	16.9	24.5	17.7	25.9	20.0	30.0	19.7	31.4	20.7	36.9	21.7	37.5	23.6
81	19.0	14.0	21.8	16.9	24.5	17.7	25.9	20.0	30.0	19.7	31.4	20.7	36.5	21.6	36.8	23.3
86	19.0	14.0	21.8	16.9	24.5	17.7	25.9	20.0	30.0	19.7	31.4	20.7	35.7	21.3	36.1	23.0
91	19.0	14.0	21.8	16.9	24.5	17.7	25.9	20.0	30.0	19.7	31.4	20.7	34.9	21.0	35.3	22.7
95	19.0	14.0	21.8	16.9	24.5	17.7	25.9	20.0	30.0	19.7	31.4	20.7	34.3	20.7	34.7	22.5
99	19.0	14.0	21.8	16.9	24.5	17.7	25.9	20.0	30.0	19.7	31.4	20.7	33.7	20.5	34.0	22.2
104	19.0	14.0	21.8	16.9	24.5	17.7	25.9	20.0	30.0	19.7	31.4	20.7	32.9	20.1	33.2	21.9
109	19.0	14.0	21.8	16.9	24.5	17.7	25.9	20.0	30.0	19.7	30.8	20.4	32.1	19.8	32.4	21.6
115	19.0	14.0	21.8	16.9	24.5	17.7	25.9	20.0	29.5	19.5	29.8	20.0	31.1	19.5	31.5	21.2

■ MODEL : ARUM36TLAV

Outdoor temperature	Indoor temperature															
	68°FDB / 59 °FWB		73°FDB / 61 °FWB		75°FDB / 63 °FWB		79°FDB / 64 °FWB		80°FDB / 67 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
50	22.8	18.0	26.1	21.9	29.4	22.8	31.1	26.1	36.0	25.3	37.7	26.6	44.2	27.7	45.9	30.8
59	22.8	18.0	26.1	21.9	29.4	22.8	31.1	26.1	36.0	25.3	37.7	26.6	44.2	27.7	45.9	30.8
70	22.8	18.0	26.1	21.9	29.4	22.8	31.1	26.1	36.0	25.3	37.7	26.6	44.2	27.7	45.9	30.8
73	22.8	18.0	26.1	21.9	29.4	22.8	31.1	26.1	36.0	25.3	37.7	26.6	44.2	27.7	45.7	30.7
77	22.8	18.0	26.1	21.9	29.4	22.8	31.1	26.1	36.0	25.3	37.7	26.6	44.2	27.7	44.9	30.4
81	22.8	18.0	26.1	21.9	29.4	22.8	31.1	26.1	36.0	25.3	37.7	26.6	43.8	27.6	44.2	30.1
86	22.8	18.0	26.1	21.9	29.4	22.8	31.1	26.1	36.0	25.3	37.7	26.6	42.8	27.2	43.3	29.8
91	22.8	18.0	26.1	21.9	29.4	22.8	31.1	26.1	36.0	25.3	37.7	26.6	41.9	26.9	42.4	29.4
95	22.8	18.0	26.1	21.9	29.4	22.8	31.1	26.1	36.0	25.3	37.7	26.6	41.2	26.6	41.6	29.2
99	22.8	18.0	26.1	21.9	29.4	22.8	31.1	26.1	36.0	25.3	37.7	26.6	40.4	26.3	40.9	28.9
104	22.8	18.0	26.1	21.9	29.4	22.8	31.1	26.1	36.0	25.3	37.7	26.6	39.5	25.9	39.9	28.5
109	22.8	18.0	26.1	21.9	29.4	22.8	31.1	26.1	36.0	25.3	36.9	26.3	38.5	25.6	38.9	28.2
115	22.8	18.0	26.1	21.9	29.4	22.8	31.1	26.1	35.4	25.1	35.8	25.8	37.4	25.2	37.8	27.8

TC : Total Capacity kBtu/h.
SHC : Sensible Heat Capacity kBtu/h.

7-7. HIGH STATIC PRESSURE DUCT TYPE

COOLING CAPACITY in kBtu/h

■ MODEL : ARUH36TLAV

Outdoor temperature	Indoor temperature															
	68°FDB / 59 °FWB		73°FDB / 61 °FWB		75°FDB / 63 °FWB		79°FDB / 64 °FWB		80°FDB / 67 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
50	22.8	18.1	26.1	22.0	29.4	22.9	31.1	26.2	36.0	25.5	37.7	26.7	44.2	27.9	45.9	30.9
59	22.8	18.1	26.1	22.0	29.4	22.9	31.1	26.2	36.0	25.5	37.7	26.7	44.2	27.9	45.9	30.9
70	22.8	18.1	26.1	22.0	29.4	22.9	31.1	26.2	36.0	25.5	37.7	26.7	44.2	27.9	45.9	30.9
73	22.8	18.1	26.1	22.0	29.4	22.9	31.1	26.2	36.0	25.5	37.7	26.7	44.2	27.9	45.7	30.9
77	22.8	18.1	26.1	22.0	29.4	22.9	31.1	26.2	36.0	25.5	37.7	26.7	44.2	27.9	44.9	30.6
81	22.8	18.1	26.1	22.0	29.4	22.9	31.1	26.2	36.0	25.5	37.7	26.7	43.8	27.7	44.2	30.3
86	22.8	18.1	26.1	22.0	29.4	22.9	31.1	26.2	36.0	25.5	37.7	26.7	42.8	27.4	43.3	30.0
91	22.8	18.1	26.1	22.0	29.4	22.9	31.1	26.2	36.0	25.5	37.7	26.7	41.9	27.0	42.4	29.6
95	22.8	18.1	26.1	22.0	29.4	22.9	31.1	26.2	36.0	25.5	37.7	26.7	41.2	26.7	41.6	29.3
99	22.8	18.1	26.1	22.0	29.4	22.9	31.1	26.2	36.0	25.5	37.7	26.7	40.4	26.5	40.9	29.1
104	22.8	18.1	26.1	22.0	29.4	22.9	31.1	26.2	36.0	25.5	37.7	26.7	39.5	26.1	39.9	28.7
109	22.8	18.1	26.1	22.0	29.4	22.9	31.1	26.2	36.0	25.5	36.9	26.4	38.5	25.8	38.9	28.4
115	22.8	18.1	26.1	22.0	29.4	22.9	31.1	26.2	35.4	25.2	35.8	26.0	37.4	25.3	37.8	28.0

■ MODEL : ARUH48TLAV

Outdoor temperature	Indoor temperature															
	68°FDB / 59 °FWB		73°FDB / 61 °FWB		75°FDB / 63 °FWB		79°FDB / 64 °FWB		80°FDB / 67 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
50	30.4	24.2	34.8	29.4	39.2	30.6	41.4	35.0	48.0	33.9	50.2	35.7	59.0	37.2	61.2	41.3
59	30.4	24.2	34.8	29.4	39.2	30.6	41.4	35.0	48.0	33.9	50.2	35.7	59.0	37.2	61.2	41.3
70	30.4	24.2	34.8	29.4	39.2	30.6	41.4	35.0	48.0	33.9	50.2	35.7	59.0	37.2	61.2	41.3
73	30.4	24.2	34.8	29.4	39.2	30.6	41.4	35.0	48.0	33.9	50.2	35.7	59.0	37.2	60.9	41.1
77	30.4	24.2	34.8	29.4	39.2	30.6	41.4	35.0	48.0	33.9	50.2	35.7	59.0	37.2	59.9	40.8
81	30.4	24.2	34.8	29.4	39.2	30.6	41.4	35.0	48.0	33.9	50.2	35.7	58.4	36.9	58.9	40.4
86	30.4	24.2	34.8	29.4	39.2	30.6	41.4	35.0	48.0	33.9	50.2	35.7	57.1	36.5	57.7	39.9
91	30.4	24.2	34.8	29.4	39.2	30.6	41.4	35.0	48.0	33.9	50.2	35.7	55.9	36.0	56.5	39.5
95	30.4	24.2	34.8	29.4	39.2	30.6	41.4	35.0	48.0	33.9	50.2	35.7	54.9	35.6	55.5	39.1
99	30.4	24.2	34.8	29.4	39.2	30.6	41.4	35.0	48.0	33.9	50.2	35.7	53.9	35.3	54.5	38.8
104	30.4	24.2	34.8	29.4	39.2	30.6	41.4	35.0	48.0	33.9	50.2	35.7	52.6	34.8	53.2	38.3
109	30.4	24.2	34.8	29.4	39.2	30.6	41.4	35.0	48.0	33.9	49.2	35.2	51.4	34.3	51.9	37.8
115	30.4	24.2	34.8	29.4	39.2	30.6	41.4	35.0	47.2	33.6	47.7	34.6	49.8	33.8	50.4	37.3

■ MODEL : ARUH60TLAV

Outdoor temperature	Indoor temperature															
	68°FDB / 59 °FWB		73°FDB / 61 °FWB		75°FDB / 63 °FWB		79°FDB / 64 °FWB		80°FDB / 67 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
50	38.1	31.6	43.5	38.6	49.0	40.0	51.8	46.0	60.0	44.3	62.8	46.6	73.7	48.4	76.5	53.9
59	38.1	31.6	43.5	38.6	49.0	40.0	51.8	46.0	60.0	44.3	62.8	46.6	73.7	48.4	76.5	53.9
70	38.1	31.6	43.5	38.6	49.0	40.0	51.8	46.0	60.0	44.3	62.8	46.6	73.7	48.4	76.5	53.9
73	38.1	31.6	43.5	38.6	49.0	40.0	51.8	46.0	60.0	44.3	62.8	46.6	73.7	48.4	76.1	53.8
77	38.1	31.6	43.5	38.6	49.0	40.0	51.8	46.0	60.0	44.3	62.8	46.6	73.7	48.4	74.9	53.3
81	38.1	31.6	43.5	38.6	49.0	40.0	51.8	46.0	60.0	44.3	62.8	46.6	72.9	48.1	73.7	52.9
86	38.1	31.6	43.5	38.6	49.0	40.0	51.8	46.0	60.0	44.3	62.8	46.6	71.4	47.5	72.1	52.3
91	38.1	31.6	43.5	38.6	49.0	40.0	51.8	46.0	60.0	44.3	62.8	46.6	69.9	47.0	70.6	51.8
95	38.1	31.6	43.5	38.6	49.0	40.0	51.8	46.0	60.0	44.3	62.8	46.6	68.6	46.5	69.3	51.3
99	38.1	31.6	43.5	38.6	49.0	40.0	51.8	46.0	60.0	44.3	62.8	46.6	67.4	46.1	68.1	50.9
104	38.1	31.6	43.5	38.6	49.0	40.0	51.8	46.0	60.0	44.3	62.8	46.6	65.8	45.5	66.5	50.4
109	38.1	31.6	43.5	38.6	49.0	40.0	51.8	46.0	60.0	44.3	61.5	46.1	64.2	44.9	64.9	49.8
115	38.1	31.6	43.5	38.6	49.0	40.0	51.8	46.0	59.0	43.9	59.6	45.3	62.3	44.2	62.9	49.1

TC : Total Capacity kBtu/h.
SHC : Sensible Heat Capacity kBtu/h.

COOLING CAPACITY in kBtu/h

■ MODEL : ARUH72TLAV1

Outdoor temperature	Indoor temperature															
	68°FDB / 59 °FWB		73°FDB / 61 °FWB		75°FDB / 63 °FWB		79°FDB / 64 °FWB		80°FDB / 67 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
50	45.7	34.9	52.3	42.3	58.8	44.2	62.2	50.3	72.0	49.2	75.3	51.6	88.5	54.0	91.8	59.7
59	45.7	34.9	52.3	42.3	58.8	44.2	62.2	50.3	72.0	49.2	75.3	51.6	88.5	54.0	91.8	59.7
70	45.7	34.9	52.2	42.3	58.8	44.2	62.2	50.3	72.0	49.2	75.3	51.6	88.5	54.0	91.8	59.7
73	45.7	34.9	52.2	42.3	58.8	44.2	62.2	50.3	72.0	49.2	75.3	51.6	88.5	54.0	91.4	59.5
77	45.7	34.9	52.3	42.3	58.8	44.2	62.2	50.3	72.0	49.2	75.3	51.6	88.5	54.0	89.9	58.9
81	45.7	34.9	52.3	42.3	58.8	44.2	62.2	50.3	72.0	49.2	75.3	51.6	87.5	53.6	88.4	58.4
86	45.7	34.9	52.2	42.3	58.8	44.2	62.2	50.3	72.0	49.2	75.3	51.6	85.7	52.9	86.6	57.7
91	45.7	34.9	52.3	42.3	58.8	44.2	62.2	50.3	72.0	49.2	75.3	51.6	83.8	52.2	84.7	57.0
95	45.7	34.9	52.3	42.3	58.8	44.2	62.2	50.3	72.0	49.2	75.3	51.6	82.4	51.6	83.2	56.4
99	45.7	34.9	52.3	42.3	58.8	44.2	62.2	50.3	72.0	49.2	75.3	51.6	80.9	51.0	81.7	55.8
104	45.7	34.9	52.2	42.3	58.8	44.2	62.2	50.3	72.0	49.2	75.3	51.6	79.0	50.3	79.8	55.1
109	45.7	34.9	52.3	42.3	58.8	44.2	62.2	50.3	72.0	49.2	73.8	51.0	77.0	49.6	77.9	54.4
115	45.7	34.9	52.3	42.3	58.8	44.2	62.2	50.3	70.7	48.6	71.5	50.0	74.7	48.7	75.5	53.5

■ MODEL : ARUH96TLAV

Outdoor temperature	Indoor temperature															
	68°FDB / 59 °FWB		73°FDB / 61 °FWB		75°FDB / 63 °FWB		79°FDB / 64 °FWB		80°FDB / 67 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
50	60.9	45.6	69.7	55.0	78.4	57.6	82.9	65.4	96.0	64.2	100.4	67.4	118.0	70.7	122.4	77.9
59	60.9	45.6	69.7	55.0	78.4	57.6	82.9	65.4	96.0	64.2	100.4	67.4	118.0	70.7	122.4	77.9
70	60.9	45.6	69.7	55.0	78.4	57.6	82.9	65.4	96.0	64.2	100.4	67.4	118.0	70.7	122.4	77.9
73	60.9	45.6	69.7	55.0	78.4	57.6	82.9	65.4	96.0	64.2	100.4	67.4	118.0	70.7	121.8	77.7
77	60.9	45.6	69.7	55.0	78.4	57.6	82.9	65.4	96.0	64.2	100.4	67.4	118.0	70.7	119.9	76.9
81	60.9	45.6	69.7	55.0	78.4	57.6	82.9	65.4	96.0	64.2	100.4	67.4	116.7	70.2	117.9	76.1
86	60.9	45.6	69.7	55.0	78.4	57.6	82.9	65.4	96.0	64.2	100.4	67.4	114.2	69.2	115.4	75.2
91	60.9	45.6	69.7	55.0	78.4	57.6	82.9	65.4	96.0	64.2	100.4	67.4	111.8	68.2	112.9	74.2
95	60.9	45.6	69.7	55.0	78.4	57.6	82.9	65.4	96.0	64.2	100.4	67.4	109.8	67.4	110.9	73.4
99	60.9	45.6	69.7	55.0	78.4	57.6	82.9	65.4	96.0	64.2	100.4	67.4	107.8	66.7	108.9	72.6
104	60.9	45.6	69.7	55.0	78.4	57.6	82.9	65.4	96.0	64.2	100.4	67.4	105.3	65.7	106.4	71.7
109	60.9	45.6	69.7	55.0	78.4	57.6	82.9	65.4	96.0	64.2	98.4	66.5	102.7	64.7	103.8	70.7
115	60.9	45.6	69.7	55.0	78.4	57.6	82.9	65.4	94.3	63.5	95.4	65.3	99.6	63.5	100.7	69.6

TC : Total Capacity kBtu/h.
SHC : Sensible Heat Capacity kBtu/h.

7-8. VERTICAL AIR HANDLER TYPE

COOLING CAPACITY in kBtu/h

■ MODEL : ARUV12TLAV

Outdoor temperature	Indoor temperature															
	68°FDB / 59 °FWB		73°FDB / 61 °FWB		75°FDB / 63 °FWB		79°FDB / 64 °FWB		80°FDB / 67 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
50	7.6	5.9	8.7	7.2	9.8	7.5	10.4	8.6	12.0	8.3	12.6	8.8	14.7	9.1	15.3	10.1
59	7.6	5.9	8.7	7.2	9.8	7.5	10.4	8.6	12.0	8.3	12.6	8.8	14.7	9.1	15.3	10.1
70	7.6	5.9	8.7	7.2	9.8	7.5	10.4	8.6	12.0	8.3	12.6	8.8	14.7	9.1	15.3	10.1
73	7.6	5.9	8.7	7.2	9.8	7.5	10.4	8.6	12.0	8.3	12.6	8.8	14.7	9.1	15.2	10.1
77	7.6	5.9	8.7	7.2	9.8	7.5	10.4	8.6	12.0	8.3	12.6	8.8	14.7	9.1	15.0	10.0
81	7.6	5.9	8.7	7.2	9.8	7.5	10.4	8.6	12.0	8.3	12.6	8.8	14.6	9.1	14.7	9.9
86	7.6	5.9	8.7	7.2	9.8	7.5	10.4	8.6	12.0	8.3	12.6	8.8	14.3	9.0	14.4	9.8
91	7.6	5.9	8.7	7.2	9.8	7.5	10.4	8.6	12.0	8.3	12.6	8.8	14.0	8.9	14.1	9.7
95	7.6	5.9	8.7	7.2	9.8	7.5	10.4	8.6	12.0	8.3	12.6	8.8	13.7	8.8	13.9	9.6
99	7.6	5.9	8.7	7.2	9.8	7.5	10.4	8.6	12.0	8.3	12.6	8.8	13.5	8.7	13.6	9.5
104	7.6	5.9	8.7	7.2	9.8	7.5	10.4	8.6	12.0	8.3	12.6	8.8	13.2	8.5	13.3	9.4
109	7.6	5.9	8.7	7.2	9.8	7.5	10.4	8.6	12.0	8.3	12.3	8.7	12.8	8.4	13.0	9.3
115	7.6	5.9	8.7	7.2	9.8	7.5	10.4	8.6	11.8	8.2	11.9	8.5	12.5	8.3	12.6	9.1

■ MODEL : ARUV18TLAV

Outdoor temperature	Indoor temperature															
	68°FDB / 59 °FWB		73°FDB / 61 °FWB		75°FDB / 63 °FWB		79°FDB / 64 °FWB		80°FDB / 67 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
50	11.4	9.2	13.1	11.2	14.7	11.7	15.5	13.3	18.0	12.9	18.8	13.6	22.1	14.1	23.0	15.7
59	11.4	9.2	13.1	11.2	14.7	11.7	15.5	13.3	18.0	12.9	18.8	13.6	22.1	14.1	23.0	15.7
70	11.4	9.2	13.1	11.2	14.7	11.7	15.5	13.3	18.0	12.9	18.8	13.6	22.1	14.1	23.0	15.7
73	11.4	9.2	13.1	11.2	14.7	11.7	15.5	13.3	18.0	12.9	18.8	13.6	22.1	14.1	22.8	15.7
77	11.4	9.2	13.1	11.2	14.7	11.7	15.5	13.3	18.0	12.9	18.8	13.6	22.1	14.1	22.5	15.5
81	11.4	9.2	13.1	11.2	14.7	11.7	15.5	13.3	18.0	12.9	18.8	13.6	21.9	14.0	22.1	15.4
86	11.4	9.2	13.1	11.2	14.7	11.7	15.5	13.3	18.0	12.9	18.8	13.6	21.4	13.9	21.6	15.2
91	11.4	9.2	13.1	11.2	14.7	11.7	15.5	13.3	18.0	12.9	18.8	13.6	21.0	13.7	21.2	15.1
95	11.4	9.2	13.1	11.2	14.7	11.7	15.5	13.3	18.0	12.9	18.8	13.6	20.6	13.6	20.8	14.9
99	11.4	9.2	13.1	11.2	14.7	11.7	15.5	13.3	18.0	12.9	18.8	13.6	20.2	13.4	20.4	14.8
104	11.4	9.2	13.1	11.2	14.7	11.7	15.5	13.3	18.0	12.9	18.8	13.6	19.7	13.3	19.9	14.6
109	11.4	9.2	13.1	11.2	14.7	11.7	15.5	13.3	18.0	12.9	18.5	13.4	19.3	13.1	19.5	14.4
115	11.4	9.2	13.1	11.2	14.7	11.7	15.5	13.3	17.7	12.8	17.9	13.2	18.7	12.9	18.9	14.2

■ MODEL : ARUV24TLAV

Outdoor temperature	Indoor temperature															
	68°FDB / 59 °FWB		73°FDB / 61 °FWB		75°FDB / 63 °FWB		79°FDB / 64 °FWB		80°FDB / 67 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
50	15.2	12.7	17.4	15.5	19.6	16.1	20.7	18.5	24.0	17.8	25.1	18.8	29.5	19.5	30.6	21.7
59	15.2	12.7	17.4	15.5	19.6	16.1	20.7	18.5	24.0	17.8	25.1	18.8	29.5	19.5	30.6	21.7
70	15.2	12.7	17.4	15.5	19.6	16.1	20.7	18.5	24.0	17.8	25.1	18.8	29.5	19.5	30.6	21.7
73	15.2	12.7	17.4	15.5	19.6	16.1	20.7	18.5	24.0	17.8	25.1	18.8	29.5	19.5	30.5	21.7
77	15.2	12.7	17.4	15.5	19.6	16.1	20.7	18.5	24.0	17.8	25.1	18.8	29.5	19.5	30.0	21.5
81	15.2	12.7	17.4	15.5	19.6	16.1	20.7	18.5	24.0	17.8	25.1	18.8	29.2	19.4	29.5	21.3
86	15.2	12.7	17.4	15.5	19.6	16.1	20.7	18.5	24.0	17.8	25.1	18.8	28.6	19.1	28.9	21.1
91	15.2	12.7	17.4	15.5	19.6	16.1	20.7	18.5	24.0	17.8	25.1	18.8	27.9	18.9	28.2	20.9
95	15.2	12.7	17.4	15.5	19.6	16.1	20.7	18.5	24.0	17.8	25.1	18.8	27.5	18.7	27.7	20.7
99	15.2	12.7	17.4	15.5	19.6	16.1	20.7	18.5	24.0	17.8	25.1	18.8	27.0	18.6	27.2	20.5
104	15.2	12.7	17.4	15.5	19.6	16.1	20.7	18.5	24.0	17.8	25.1	18.8	26.3	18.3	26.6	20.3
109	15.2	12.7	17.4	15.5	19.6	16.1	20.7	18.5	24.0	17.8	24.6	18.6	25.7	18.1	26.0	20.1
115	15.2	12.7	17.4	15.5	19.6	16.1	20.7	18.5	23.6	17.7	23.8	18.3	24.9	17.8	25.2	19.8

■ MODEL : ARUV30TLAV

Outdoor temperature	Indoor temperature															
	68°FDB / 59 °FWB		73°FDB / 61 °FWB		75°FDB / 63 °FWB		79°FDB / 64 °FWB		80°FDB / 67 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
50	19.0	15.5	21.8	18.9	24.5	19.6	25.9	22.5	30.0	21.8	31.4	22.9	36.9	23.8	38.3	26.5
59	19.0	15.5	21.8	18.9	24.5	19.6	25.9	22.5	30.0	21.8	31.4	22.9	36.9	23.8	38.3	26.5
70	19.0	15.5	21.8	18.9	24.5	19.6	25.9	22.5	30.0	21.8	31.4	22.9	36.9	23.8	38.3	26.5
73	19.0	15.5	21.8	18.9	24.5	19.6	25.9	22.5	30.0	21.8	31.4	22.9	36.9	23.8	38.1	26.4
77	19.0	15.5	21.8	18.9	24.5	19.6	25.9	22.5	30.0	21.8	31.4	22.9	36.9	23.8	37.5	26.2
81	19.0	15.5	21.8	18.9	24.5	19.6	25.9	22.5	30.0	21.8	31.4	22.9	36.5	23.7	36.8	26.0
86	19.0	15.5	21.8	18.9	24.5	19.6	25.9	22.5	30.0	21.8	31.4	22.9	35.7	23.4	36.1	25.7
91	19.0	15.5	21.8	18.9	24.5	19.6	25.9	22.5	30.0	21.8	31.4	22.9	34.9	23.1	35.3	25.4
95	19.0	15.5	21.8	18.9	24.5	19.6	25.9	22.5	30.0	21.8	31.4	22.9	34.3	22.9	34.7	25.2
99	19.0	15.5	21.8	18.9	24.5	19.6	25.9	22.5	30.0	21.8	31.4	22.9	33.7	22.6	34.0	25.0
104	19.0	15.5	21.8	18.9	24.5	19.6	25.9	22.5	30.0	21.8	31.4	22.9	32.9	22.3	33.2	24.7
109	19.0	15.5	21.8	18.9	24.5	19.6	25.9	22.5	30.0	21.8	30.8	22.6	32.1	22.1	32.4	24.4
115	19.0	15.5	21.8	18.9	24.5	19.6	25.9	22.5	29.5	21.6	29.8	22.3	31.1	21.7	31.5	24.1

TC : Total Capacity kBtu/h.

SHC : Sensible Heat Capacity kBtu/h.

COOLING CAPACITY in kBtu/h

■ MODEL : ARUV36TLAV

Outdoor temperature	Indoor temperature															
	68°FDB / 59 °FWB		73°FDB / 61 °FWB		75°FDB / 63 °FWB		79°FDB / 64 °FWB		80°FDB / 67 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
50	22.8	18.7	26.1	22.7	29.4	23.6	31.1	27.1	36.0	26.2	37.7	27.5	44.2	28.6	45.9	31.9
59	22.8	18.7	26.1	22.7	29.4	23.6	31.1	27.1	36.0	26.2	37.7	27.5	44.2	28.6	45.9	31.9
70	22.8	18.7	26.1	22.7	29.4	23.6	31.1	27.1	36.0	26.2	37.7	27.5	44.2	28.6	45.9	31.9
73	22.8	18.7	26.1	22.7	29.4	23.6	31.1	27.1	36.0	26.2	37.7	27.5	44.2	28.6	45.7	31.8
77	22.8	18.7	26.1	22.7	29.4	23.6	31.1	27.1	36.0	26.2	37.7	27.5	44.2	28.6	44.9	31.5
81	22.8	18.7	26.1	22.7	29.4	23.6	31.1	27.1	36.0	26.2	37.7	27.5	43.8	28.4	44.2	31.2
86	22.8	18.7	26.1	22.7	29.4	23.6	31.1	27.1	36.0	26.2	37.7	27.5	42.8	28.1	43.3	30.9
91	22.8	18.7	26.1	22.7	29.4	23.6	31.1	27.1	36.0	26.2	37.7	27.5	41.9	27.8	42.4	30.6
95	22.8	18.7	26.1	22.7	29.4	23.6	31.1	27.1	36.0	26.2	37.7	27.5	41.2	27.5	41.6	30.3
99	22.8	18.7	26.1	22.7	29.4	23.6	31.1	27.1	36.0	26.2	37.7	27.5	40.4	27.2	40.9	30.0
104	22.8	18.7	26.1	22.7	29.4	23.6	31.1	27.1	36.0	26.2	37.7	27.5	39.5	26.9	39.9	29.7
109	22.8	18.7	26.1	22.7	29.4	23.6	31.1	27.1	36.0	26.2	36.9	27.2	38.5	26.5	38.9	29.3
115	22.8	18.7	26.1	22.7	29.4	23.6	31.1	27.1	35.4	25.9	35.8	26.8	37.4	26.1	37.8	28.9

■ MODEL : ARUV48TLAV

Outdoor temperature	Indoor temperature															
	68°FDB / 59 °FWB		73°FDB / 61 °FWB		75°FDB / 63 °FWB		79°FDB / 64 °FWB		80°FDB / 67 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
50	30.4	24.4	34.8	29.7	39.2	30.8	41.4	35.3	48.0	34.2	50.2	35.9	59.0	37.5	61.2	41.6
59	30.4	24.4	34.8	29.7	39.2	30.8	41.4	35.3	48.0	34.2	50.2	35.9	59.0	37.5	61.2	41.6
70	30.4	24.4	34.8	29.7	39.2	30.8	41.4	35.3	48.0	34.2	50.2	35.9	59.0	37.5	61.2	41.6
73	30.4	24.4	34.8	29.7	39.2	30.8	41.4	35.3	48.0	34.2	50.2	35.9	59.0	37.5	60.9	41.5
77	30.4	24.4	34.8	29.7	39.2	30.8	41.4	35.3	48.0	34.2	50.2	35.9	59.0	37.5	59.9	41.1
81	30.4	24.4	34.8	29.7	39.2	30.8	41.4	35.3	48.0	34.2	50.2	35.9	58.4	37.2	58.9	40.8
86	30.4	24.4	34.8	29.7	39.2	30.8	41.4	35.3	48.0	34.2	50.2	35.9	57.1	36.8	57.7	40.3
91	30.4	24.4	34.8	29.7	39.2	30.8	41.4	35.3	48.0	34.2	50.2	35.9	55.9	36.3	56.5	39.9
95	30.4	24.4	34.8	29.7	39.2	30.8	41.4	35.3	48.0	34.2	50.2	35.9	54.9	35.9	55.5	39.5
99	30.4	24.4	34.8	29.7	39.2	30.8	41.4	35.3	48.0	34.2	50.2	35.9	53.9	35.6	54.5	39.1
104	30.4	24.4	34.8	29.7	39.2	30.8	41.4	35.3	48.0	34.2	50.2	35.9	52.6	35.1	53.2	38.7
109	30.4	24.4	34.8	29.7	39.2	30.8	41.4	35.3	48.0	34.2	49.2	35.5	51.4	34.6	51.9	38.2
115	30.4	24.4	34.8	29.7	39.2	30.8	41.4	35.3	47.2	33.9	47.7	34.9	49.8	34.1	50.4	37.7

■ MODEL : ARUV60TLAV

Outdoor temperature	Indoor temperature															
	68°FDB / 59 °FWB		73°FDB / 61 °FWB		75°FDB / 63 °FWB		79°FDB / 64 °FWB		80°FDB / 67 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
50	38.1	31.0	43.5	37.8	49.0	39.2	51.8	45.0	60.0	43.5	62.8	45.7	73.7	47.6	76.5	52.9
59	38.1	31.0	43.5	37.8	49.0	39.2	51.8	45.0	60.0	43.5	62.8	45.7	73.7	47.6	76.5	52.9
70	38.1	31.0	43.5	37.8	49.0	39.2	51.8	45.0	60.0	43.5	62.8	45.7	73.7	47.6	76.5	52.9
73	38.1	31.0	43.5	37.8	49.0	39.2	51.8	45.0	60.0	43.5	62.8	45.7	73.7	47.6	76.1	52.8
77	38.1	31.0	43.5	37.8	49.0	39.2	51.8	45.0	60.0	43.5	62.8	45.7	73.7	47.6	74.9	52.3
81	38.1	31.0	43.5	37.8	49.0	39.2	51.8	45.0	60.0	43.5	62.8	45.7	72.9	47.3	73.7	51.9
86	38.1	31.0	43.5	37.8	49.0	39.2	51.8	45.0	60.0	43.5	62.8	45.7	71.4	46.7	72.1	51.3
91	38.1	31.0	43.5	37.8	49.0	39.2	51.8	45.0	60.0	43.5	62.8	45.7	69.9	46.1	70.6	50.8
95	38.1	31.0	43.5	37.8	49.0	39.2	51.8	45.0	60.0	43.5	62.8	45.7	68.6	45.7	69.3	50.3
99	38.1	31.0	43.5	37.8	49.0	39.2	51.8	45.0	60.0	43.5	62.8	45.7	67.4	45.2	68.1	49.8
104	38.1	31.0	43.5	37.8	49.0	39.2	51.8	45.0	60.0	43.5	62.8	45.7	65.8	44.6	66.5	49.3
109	38.1	31.0	43.5	37.8	49.0	39.2	51.8	45.0	60.0	43.5	61.5	45.2	64.2	44.1	64.9	48.7
115	38.1	31.0	43.5	37.8	49.0	39.2	51.8	45.0	59.0	43.1	59.6	44.5	62.3	43.4	62.9	48.0

TC : Total Capacity kBtu/h.
SHC : Sensible Heat Capacity kBtu/h.

7-9. COMPACT FLOOR TYPE

COOLING CAPACITY in kBtu/h

■ MODEL : AGUA4TLAV1

Outdoor temperature	Indoor temperature															
	68°FDB / 59 °FWB		73°FDB / 61 °FWB		75°FDB / 63 °FWB		79°FDB / 64 °FWB		80°FDB / 67 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
50	2.5	2.0	2.9	2.4	3.3	2.5	3.5	2.9	4.0	2.8	4.2	3.0	4.9	3.1	5.1	3.4
59	2.5	2.0	2.9	2.4	3.3	2.5	3.5	2.9	4.0	2.8	4.2	3.0	4.9	3.1	5.1	3.4
70	2.5	2.0	2.9	2.4	3.3	2.5	3.5	2.9	4.0	2.8	4.2	3.0	4.9	3.1	5.1	3.4
73	2.5	2.0	2.9	2.4	3.3	2.5	3.5	2.9	4.0	2.8	4.2	3.0	4.9	3.1	5.1	3.4
77	2.5	2.0	2.9	2.4	3.3	2.5	3.5	2.9	4.0	2.8	4.2	3.0	4.9	3.1	5.0	3.4
81	2.5	2.0	2.9	2.4	3.3	2.5	3.5	2.9	4.0	2.8	4.2	3.0	4.9	3.1	4.9	3.3
86	2.5	2.0	2.9	2.4	3.3	2.5	3.5	2.9	4.0	2.8	4.2	3.0	4.8	3.0	4.8	3.3
91	2.5	2.0	2.9	2.4	3.3	2.5	3.5	2.9	4.0	2.8	4.2	3.0	4.7	3.0	4.7	3.3
95	2.5	2.0	2.9	2.4	3.3	2.5	3.5	2.9	4.0	2.8	4.2	3.0	4.6	3.0	4.6	3.2
99	2.5	2.0	2.9	2.4	3.3	2.5	3.5	2.9	4.0	2.8	4.2	3.0	4.5	2.9	4.5	3.2
104	2.5	2.0	2.9	2.4	3.3	2.5	3.5	2.9	4.0	2.8	4.2	3.0	4.4	2.9	4.4	3.2
109	2.5	2.0	2.9	2.4	3.3	2.5	3.5	2.9	4.0	2.8	4.1	2.9	4.3	2.8	4.3	3.1
115	2.5	2.0	2.9	2.4	3.3	2.5	3.5	2.9	3.9	2.8	4.0	2.9	4.2	2.8	4.2	3.1

■ MODEL : AGUA7TLAV1

Outdoor temperature	Indoor temperature															
	68°FDB / 59 °FWB		73°FDB / 61 °FWB		75°FDB / 63 °FWB		79°FDB / 64 °FWB		80°FDB / 67 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
50	4.8	3.7	5.4	4.4	6.1	4.6	6.5	5.3	7.5	5.1	7.8	5.4	9.2	5.7	9.6	6.2
59	4.8	3.7	5.4	4.4	6.1	4.6	6.5	5.3	7.5	5.1	7.8	5.4	9.2	5.7	9.6	6.2
70	4.8	3.7	5.4	4.4	6.1	4.6	6.5	5.3	7.5	5.1	7.8	5.4	9.2	5.7	9.6	6.2
73	4.8	3.7	5.4	4.4	6.1	4.6	6.5	5.3	7.5	5.1	7.8	5.4	9.2	5.7	9.5	6.2
77	4.8	3.7	5.4	4.4	6.1	4.6	6.5	5.3	7.5	5.1	7.8	5.4	9.2	5.7	9.4	6.2
81	4.8	3.7	5.4	4.4	6.1	4.6	6.5	5.3	7.5	5.1	7.8	5.4	9.1	5.6	9.2	6.1
86	4.8	3.7	5.4	4.4	6.1	4.6	6.5	5.3	7.5	5.1	7.8	5.4	8.9	5.5	9.0	6.0
91	4.8	3.7	5.4	4.4	6.1	4.6	6.5	5.3	7.5	5.1	7.8	5.4	8.7	5.5	8.8	6.0
95	4.8	3.7	5.4	4.4	6.1	4.6	6.5	5.3	7.5	5.1	7.8	5.4	8.6	5.4	8.7	5.9
99	4.8	3.7	5.4	4.4	6.1	4.6	6.5	5.3	7.5	5.1	7.8	5.4	8.4	5.3	8.5	5.8
104	4.8	3.7	5.4	4.4	6.1	4.6	6.5	5.3	7.5	5.1	7.8	5.4	8.2	5.3	8.3	5.8
109	4.8	3.7	5.4	4.4	6.1	4.6	6.5	5.3	7.5	5.1	7.7	5.3	8.0	5.2	8.1	5.7
115	4.8	3.7	5.4	4.4	6.1	4.6	6.5	5.3	7.4	5.1	7.5	5.2	7.8	5.1	7.9	5.6

■ MODEL : AGUA9TLAV1

Outdoor temperature	Indoor temperature															
	68°FDB / 59 °FWB		73°FDB / 61 °FWB		75°FDB / 63 °FWB		79°FDB / 64 °FWB		80°FDB / 67 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
50	6.0	4.7	6.9	5.7	7.8	5.9	8.2	6.7	9.5	6.6	9.9	6.9	11.7	7.2	12.1	8.0
59	6.0	4.7	6.9	5.7	7.8	5.9	8.2	6.7	9.5	6.6	9.9	6.9	11.7	7.2	12.1	8.0
70	6.0	4.7	6.9	5.7	7.8	5.9	8.2	6.7	9.5	6.6	9.9	6.9	11.7	7.2	12.1	8.0
73	6.0	4.7	6.9	5.7	7.8	5.9	8.2	6.7	9.5	6.6	9.9	6.9	11.7	7.2	12.1	8.0
77	6.0	4.7	6.9	5.7	7.8	5.9	8.2	6.7	9.5	6.6	9.9	6.9	11.7	7.2	11.9	7.9
81	6.0	4.7	6.9	5.7	7.8	5.9	8.2	6.7	9.5	6.6	9.9	6.9	11.5	7.2	11.7	7.8
86	6.0	4.7	6.9	5.7	7.8	5.9	8.2	6.7	9.5	6.6	9.9	6.9	11.3	7.1	11.4	7.7
91	6.0	4.7	6.9	5.7	7.8	5.9	8.2	6.7	9.5	6.6	9.9	6.9	11.1	7.0	11.2	7.6
95	6.0	4.7	6.9	5.7	7.8	5.9	8.2	6.7	9.5	6.6	9.9	6.9	10.9	6.9	11.0	7.5
99	6.0	4.7	6.9	5.7	7.8	5.9	8.2	6.7	9.5	6.6	9.9	6.9	10.7	6.8	10.8	7.5
104	6.0	4.7	6.9	5.7	7.8	5.9	8.2	6.7	9.5	6.6	9.9	6.9	10.4	6.7	10.5	7.4
109	6.0	4.7	6.9	5.7	7.8	5.9	8.2	6.7	9.5	6.6	9.7	6.8	10.2	6.6	10.3	7.3
115	6.0	4.7	6.9	5.7	7.8	5.9	8.2	6.7	9.3	6.5	9.4	6.7	9.9	6.5	10.0	7.2

TC : Total Capacity kBtu/h.

SHC : Sensible Heat Capacity kBtu/h.

COOLING CAPACITY in kBtu/h

■ MODEL : AGUA12TLAV1

Outdoor temperature	Indoor temperature															
	68°FDB / 59 °FWB		73°FDB / 61 °FWB		75°FDB / 63 °FWB		79°FDB / 64 °FWB		80°FDB / 67 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
50	7.6	6.1	8.7	7.4	9.8	7.7	10.4	8.8	12.0	8.6	12.6	9.0	14.7	9.4	15.3	10.4
59	7.6	6.1	8.7	7.4	9.8	7.7	10.4	8.8	12.0	8.6	12.6	9.0	14.7	9.4	15.3	10.4
70	7.6	6.1	8.7	7.4	9.8	7.7	10.4	8.8	12.0	8.6	12.6	9.0	14.7	9.4	15.3	10.4
73	7.6	6.1	8.7	7.4	9.8	7.7	10.4	8.8	12.0	8.6	12.6	9.0	14.7	9.4	15.2	10.4
77	7.6	6.1	8.7	7.4	9.8	7.7	10.4	8.8	12.0	8.6	12.6	9.0	14.7	9.4	15.0	10.3
81	7.6	6.1	8.7	7.4	9.8	7.7	10.4	8.8	12.0	8.6	12.6	9.0	14.6	9.3	14.7	10.2
86	7.6	6.1	8.7	7.4	9.8	7.7	10.4	8.8	12.0	8.6	12.6	9.0	14.3	9.2	14.4	10.1
91	7.6	6.1	8.7	7.4	9.8	7.7	10.4	8.8	12.0	8.6	12.6	9.0	14.0	9.1	14.1	10.0
95	7.6	6.1	8.7	7.4	9.8	7.7	10.4	8.8	12.0	8.6	12.6	9.0	13.7	9.0	13.9	9.9
99	7.6	6.1	8.7	7.4	9.8	7.7	10.4	8.8	12.0	8.6	12.6	9.0	13.5	8.9	13.6	9.8
104	7.6	6.1	8.7	7.4	9.8	7.7	10.4	8.8	12.0	8.6	12.6	9.0	13.2	8.8	13.3	9.7
109	7.6	6.1	8.7	7.4	9.8	7.7	10.4	8.8	12.0	8.6	12.3	8.9	12.8	8.7	13.0	9.6
115	7.6	6.1	8.7	7.4	9.8	7.7	10.4	8.8	11.8	8.5	11.9	8.7	12.5	8.5	12.6	9.4

■ MODEL : AGUA14TLAV1

Outdoor temperature	Indoor temperature															
	68°FDB / 59 °FWB		73°FDB / 61 °FWB		75°FDB / 63 °FWB		79°FDB / 64 °FWB		80°FDB / 67 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
50	8.9	7.1	10.2	8.6	11.4	8.9	12.1	10.2	14.0	9.9	14.6	10.4	17.2	10.8	17.9	12.0
59	8.9	7.1	10.2	8.6	11.4	8.9	12.1	10.2	14.0	9.9	14.6	10.4	17.2	10.8	17.9	12.0
70	8.9	7.1	10.2	8.6	11.4	8.9	12.1	10.2	14.0	9.9	14.6	10.4	17.2	10.8	17.9	12.0
73	8.9	7.1	10.2	8.6	11.4	8.9	12.1	10.2	14.0	9.9	14.6	10.4	17.2	10.8	17.8	12.0
77	8.9	7.1	10.2	8.6	11.4	8.9	12.1	10.2	14.0	9.9	14.6	10.4	17.2	10.8	17.5	11.9
81	8.9	7.1	10.2	8.6	11.4	8.9	12.1	10.2	14.0	9.9	14.6	10.4	17.0	10.8	17.2	11.8
86	8.9	7.1	10.2	8.6	11.4	8.9	12.1	10.2	14.0	9.9	14.6	10.4	16.7	10.6	16.8	11.7
91	8.9	7.1	10.2	8.6	11.4	8.9	12.1	10.2	14.0	9.9	14.6	10.4	16.3	10.5	16.5	11.5
95	8.9	7.1	10.2	8.6	11.4	8.9	12.1	10.2	14.0	9.9	14.6	10.4	16.0	10.4	16.2	11.4
99	8.9	7.1	10.2	8.6	11.4	8.9	12.1	10.2	14.0	9.9	14.6	10.4	15.7	10.3	15.9	11.3
104	8.9	7.1	10.2	8.6	11.4	8.9	12.1	10.2	14.0	9.9	14.6	10.4	15.4	10.2	15.5	11.2
109	8.9	7.1	10.2	8.6	11.4	8.9	12.1	10.2	14.0	9.9	14.4	10.3	15.0	10.0	15.1	11.0
115	8.9	7.1	10.2	8.6	11.4	8.9	12.1	10.2	13.8	9.8	13.9	10.1	14.5	9.9	14.7	10.9

TC : Total Capacity kBtu/h.
SHC : Sensible Heat Capacity kBtu/h.

7-10. FLOOR / CEILING TYPE

COOLING CAPACITY in kBtu/h

■ MODEL : ABUA12TLAV

Outdoor temperature	Indoor temperature															
	68°FDB / 59 °FWB		73°FDB / 61 °FWB		75°FDB / 63 °FWB		79°FDB / 64 °FWB		80°FDB / 67 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
50	7.6	6.5	8.7	7.9	9.8	8.2	10.4	9.5	12.0	9.1	12.6	9.6	14.7	9.9	15.3	11.1
59	7.6	6.5	8.7	7.9	9.8	8.2	10.4	9.5	12.0	9.1	12.6	9.6	14.7	9.9	15.3	11.1
70	7.6	6.5	8.7	7.9	9.8	8.2	10.4	9.5	12.0	9.1	12.6	9.6	14.7	9.9	15.3	11.1
73	7.6	6.5	8.7	7.9	9.8	8.2	10.4	9.5	12.0	9.1	12.6	9.6	14.7	9.9	15.2	11.0
77	7.6	6.5	8.7	7.9	9.8	8.2	10.4	9.5	12.0	9.1	12.6	9.6	14.7	9.9	15.0	11.0
81	7.6	6.5	8.7	7.9	9.8	8.2	10.4	9.5	12.0	9.1	12.6	9.6	14.6	9.9	14.7	10.9
86	7.6	6.5	8.7	7.9	9.8	8.2	10.4	9.5	12.0	9.1	12.6	9.6	14.3	9.7	14.4	10.8
91	7.6	6.5	8.7	7.9	9.8	8.2	10.4	9.5	12.0	9.1	12.6	9.6	14.0	9.6	14.1	10.7
95	7.6	6.5	8.7	7.9	9.8	8.2	10.4	9.5	12.0	9.1	12.6	9.6	13.7	9.5	13.9	10.6
99	7.6	6.5	8.7	7.9	9.8	8.2	10.4	9.5	12.0	9.1	12.6	9.6	13.5	9.5	13.6	10.5
104	7.6	6.5	8.7	7.9	9.8	8.2	10.4	9.5	12.0	9.1	12.6	9.6	13.2	9.3	13.3	10.4
109	7.6	6.5	8.7	7.9	9.8	8.2	10.4	9.5	12.0	9.1	12.3	9.5	12.8	9.2	13.0	10.3
115	7.6	6.5	8.7	7.9	9.8	8.2	10.4	9.5	11.8	9.0	11.9	9.3	12.5	9.1	12.6	10.1

■ MODEL : ABUA14TLAV

Outdoor temperature	Indoor temperature															
	68°FDB / 59 °FWB		73°FDB / 61 °FWB		75°FDB / 63 °FWB		79°FDB / 64 °FWB		80°FDB / 67 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
50	8.9	7.6	10.2	9.3	11.4	9.7	12.1	11.1	14.0	10.7	14.6	11.2	17.2	11.6	17.9	13.0
59	8.9	7.6	10.2	9.3	11.4	9.7	12.1	11.1	14.0	10.7	14.6	11.2	17.2	11.6	17.9	13.0
70	8.9	7.6	10.2	9.3	11.4	9.7	12.1	11.1	14.0	10.7	14.6	11.2	17.2	11.6	17.9	13.0
73	8.9	7.6	10.2	9.3	11.4	9.7	12.1	11.1	14.0	10.7	14.6	11.2	17.2	11.6	17.8	13.0
77	8.9	7.6	10.2	9.3	11.4	9.7	12.1	11.1	14.0	10.7	14.6	11.2	17.2	11.6	17.5	12.9
81	8.9	7.6	10.2	9.3	11.4	9.7	12.1	11.1	14.0	10.7	14.6	11.2	17.0	11.6	17.2	12.8
86	8.9	7.6	10.2	9.3	11.4	9.7	12.1	11.1	14.0	10.7	14.6	11.2	16.7	11.4	16.8	12.6
91	8.9	7.6	10.2	9.3	11.4	9.7	12.1	11.1	14.0	10.7	14.6	11.2	16.3	11.3	16.5	12.5
95	8.9	7.6	10.2	9.3	11.4	9.7	12.1	11.1	14.0	10.7	14.6	11.2	16.0	11.2	16.2	12.4
99	8.9	7.6	10.2	9.3	11.4	9.7	12.1	11.1	14.0	10.7	14.6	11.2	15.7	11.1	15.9	12.3
104	8.9	7.6	10.2	9.3	11.4	9.7	12.1	11.1	14.0	10.7	14.6	11.2	15.4	11.0	15.5	12.2
109	8.9	7.6	10.2	9.3	11.4	9.7	12.1	11.1	14.0	10.7	14.4	11.1	15.0	10.8	15.1	12.1
115	8.9	7.6	10.2	9.3	11.4	9.7	12.1	11.1	13.8	10.6	13.9	10.9	14.5	10.7	14.7	11.9

■ MODEL : ABUA18TLAV

Outdoor temperature	Indoor temperature															
	68°FDB / 59 °FWB		73°FDB / 61 °FWB		75°FDB / 63 °FWB		79°FDB / 64 °FWB		80°FDB / 67 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
50	11.4	9.8	13.1	12.0	14.7	12.4	15.5	14.3	18.0	13.7	18.8	14.4	22.1	14.9	23.0	16.7
59	11.4	9.8	13.1	12.0	14.7	12.4	15.5	14.3	18.0	13.7	18.8	14.4	22.1	14.9	23.0	16.7
70	11.4	9.8	13.1	12.0	14.7	12.4	15.5	14.3	18.0	13.7	18.8	14.4	22.1	14.9	23.0	16.7
73	11.4	9.8	13.1	12.0	14.7	12.4	15.5	14.3	18.0	13.7	18.8	14.4	22.1	14.9	22.8	16.7
77	11.4	9.8	13.1	12.0	14.7	12.4	15.5	14.3	18.0	13.7	18.8	14.4	22.1	14.9	22.5	16.5
81	11.4	9.8	13.1	12.0	14.7	12.4	15.5	14.3	18.0	13.7	18.8	14.4	21.9	14.8	22.1	16.4
86	11.4	9.8	13.1	12.0	14.7	12.4	15.5	14.3	18.0	13.7	18.8	14.4	21.4	14.7	21.6	16.2
91	11.4	9.8	13.1	12.0	14.7	12.4	15.5	14.3	18.0	13.7	18.8	14.4	21.0	14.5	21.2	16.1
95	11.4	9.8	13.1	12.0	14.7	12.4	15.5	14.3	18.0	13.7	18.8	14.4	20.6	14.4	20.8	15.9
99	11.4	9.8	13.1	12.0	14.7	12.4	15.5	14.3	18.0	13.7	18.8	14.4	20.2	14.3	20.4	15.8
104	11.4	9.8	13.1	12.0	14.7	12.4	15.5	14.3	18.0	13.7	18.8	14.4	19.7	14.1	19.9	15.6
109	11.4	9.8	13.1	12.0	14.7	12.4	15.5	14.3	18.0	13.7	18.5	14.3	19.3	13.9	19.5	15.5
115	11.4	9.8	13.1	12.0	14.7	12.4	15.5	14.3	17.7	13.6	17.9	14.0	18.7	13.7	18.9	15.3

■ MODEL : ABUA24TLAV

Outdoor temperature	Indoor temperature															
	68°FDB / 59 °FWB		73°FDB / 61 °FWB		75°FDB / 63 °FWB		79°FDB / 64 °FWB		80°FDB / 67 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
50	15.2	11.5	17.4	13.8	19.6	14.5	20.7	16.5	24.0	16.1	25.1	16.9	29.5	17.7	30.6	19.6
59	15.2	11.5	17.4	13.8	19.6	14.5	20.7	16.5	24.0	16.1	25.1	16.9	29.5	17.7	30.6	19.6
70	15.2	11.5	17.4	13.8	19.6	14.5	20.7	16.5	24.0	16.1	25.1	16.9	29.5	17.7	30.6	19.6
73	15.2	11.5	17.4	13.8	19.6	14.5	20.7	16.5	24.0	16.1	25.1	16.9	29.5	17.7	30.5	19.5
77	15.2	11.5	17.4	13.8	19.6	14.5	20.7	16.5	24.0	16.1	25.1	16.9	29.5	17.7	30.0	19.3
81	15.2	11.5	17.4	13.8	19.6	14.5	20.7	16.5	24.0	16.1	25.1	16.9	29.2	17.6	29.5	19.1
86	15.2	11.5	17.4	13.8	19.6	14.5	20.7	16.5	24.0	16.1	25.1	16.9	28.6	17.4	28.9	18.9
91	15.2	11.5	17.4	13.8	19.6	14.5	20.7	16.5	24.0	16.1	25.1	16.9	27.9	17.1	28.2	18.6
95	15.2	11.5	17.4	13.8	19.6	14.5	20.7	16.5	24.0	16.1	25.1	16.9	27.5	16.9	27.7	18.5
99	15.2	11.5	17.4	13.8	19.6	14.5	20.7	16.5	24.0	16.1	25.1	16.9	27.0	16.7	27.2	18.3
104	15.2	11.5	17.4	13.8	19.6	14.5	20.7	16.5	24.0	16.1	25.1	16.9	26.3	16.5	26.6	18.0
109	15.2	11.5	17.4	13.8	19.6	14.5	20.7	16.5	24.0	16.1	24.6	16.7	25.7	16.3	26.0	17.8
115	15.2	11.5	17.4	13.8	19.6	14.5	20.7	16.5	23.6	16.0	23.8	16.4	24.9	16.0	25.2	17.5

TC : Total Capacity kBtu/h.

SHC : Sensible Heat Capacity kBtu/h.

7-11. CEILING TYPE

COOLING CAPACITY in kBtu/h

■ MODEL : ABUA30TLAV

Outdoor temperature	Indoor temperature															
	68°FDB / 59 °FWB		73°FDB / 61 °FWB		75°FDB / 63 °FWB		79°FDB / 64 °FWB		80°FDB / 67 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
50	19.0	16.1	21.8	19.7	24.5	20.4	25.9	23.5	30.0	22.6	31.4	23.8	36.9	24.6	38.3	27.5
59	19.0	16.1	21.8	19.7	24.5	20.4	25.9	23.5	30.0	22.6	31.4	23.8	36.9	24.6	38.3	27.5
70	19.0	16.1	21.8	19.7	24.5	20.4	25.9	23.5	30.0	22.6	31.4	23.8	36.9	24.6	38.3	27.5
73	19.0	16.1	21.8	19.7	24.5	20.4	25.9	23.5	30.0	22.6	31.4	23.8	36.9	24.6	38.1	27.4
77	19.0	16.1	21.8	19.7	24.5	20.4	25.9	23.5	30.0	22.6	31.4	23.8	36.9	24.6	37.5	27.2
81	19.0	16.1	21.8	19.7	24.5	20.4	25.9	23.5	30.0	22.6	31.4	23.8	36.5	24.5	36.8	27.0
86	19.0	16.1	21.8	19.7	24.5	20.4	25.9	23.5	30.0	22.6	31.4	23.8	35.7	24.2	36.1	26.7
91	19.0	16.1	21.8	19.7	24.5	20.4	25.9	23.5	30.0	22.6	31.4	23.8	34.9	23.9	35.3	26.5
95	19.0	16.1	21.8	19.7	24.5	20.4	25.9	23.5	30.0	22.6	31.4	23.8	34.3	23.7	34.7	26.2
99	19.0	16.1	21.8	19.7	24.5	20.4	25.9	23.5	30.0	22.6	31.4	23.8	33.7	23.5	34.0	26.0
104	19.0	16.1	21.8	19.7	24.5	20.4	25.9	23.5	30.0	22.6	31.4	23.8	32.9	23.2	33.2	25.8
109	19.0	16.1	21.8	19.7	24.5	20.4	25.9	23.5	30.0	22.6	30.8	23.5	32.1	22.9	32.4	25.5
115	19.0	16.1	21.8	19.7	24.5	20.4	25.9	23.5	29.5	22.4	29.8	23.1	31.1	22.6	31.5	25.1

■ MODEL : ABUA36TLAV

Outdoor temperature	Indoor temperature															
	68°FDB / 59 °FWB		73°FDB / 61 °FWB		75°FDB / 63 °FWB		79°FDB / 64 °FWB		80°FDB / 67 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
50	22.8	18.1	26.1	22.0	29.4	22.9	31.1	26.1	36.0	25.4	37.7	26.6	44.2	27.8	45.9	30.8
59	22.8	18.1	26.1	22.0	29.4	22.9	31.1	26.1	36.0	25.4	37.7	26.6	44.2	27.8	45.9	30.8
70	22.8	18.1	26.1	22.0	29.4	22.9	31.1	26.1	36.0	25.4	37.7	26.6	44.2	27.8	45.9	30.8
73	22.8	18.1	26.1	22.0	29.4	22.9	31.1	26.1	36.0	25.4	37.7	26.6	44.2	27.8	45.7	30.7
77	22.8	18.1	26.1	22.0	29.4	22.9	31.1	26.1	36.0	25.4	37.7	26.6	44.2	27.8	44.9	30.5
81	22.8	18.1	26.1	22.0	29.4	22.9	31.1	26.1	36.0	25.4	37.7	26.6	43.8	27.6	44.2	30.2
86	22.8	18.1	26.1	22.0	29.4	22.9	31.1	26.1	36.0	25.4	37.7	26.6	42.8	27.3	43.3	29.8
91	22.8	18.1	26.1	22.0	29.4	22.9	31.1	26.1	36.0	25.4	37.7	26.6	41.9	26.9	42.4	29.5
95	22.8	18.1	26.1	22.0	29.4	22.9	31.1	26.1	36.0	25.4	37.7	26.6	41.2	26.6	41.6	29.2
99	22.8	18.1	26.1	22.0	29.4	22.9	31.1	26.1	36.0	25.4	37.7	26.6	40.4	26.4	40.9	28.9
104	22.8	18.1	26.1	22.0	29.4	22.9	31.1	26.1	36.0	25.4	37.7	26.6	39.5	26.0	39.9	28.6
109	22.8	18.1	26.1	22.0	29.4	22.9	31.1	26.1	36.0	25.4	36.9	26.3	38.5	25.7	38.9	28.3
115	22.8	18.1	26.1	22.0	29.4	22.9	31.1	26.1	35.4	25.1	35.8	25.9	37.4	25.2	37.8	27.8

TC : Total Capacity kBtu/h.

SHC : Sensible Heat Capacity kBtu/h.

7-12. WALL MOUNTED TYPE

COOLING CAPACITY in kBtu/h

■ MODEL : ASUA4TLAV1

Outdoor temperature	Indoor temperature															
	68°FDB / 59 °FWB		73°FDB / 61 °FWB		75°FDB / 63 °FWB		79°FDB / 64 °FWB		80°FDB / 67 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
50	2.5	2.0	2.9	2.4	3.3	2.5	3.5	2.9	4.0	2.8	4.2	2.9	4.9	3.1	5.1	3.4
59	2.5	2.0	2.9	2.4	3.3	2.5	3.5	2.9	4.0	2.8	4.2	2.9	4.9	3.1	5.1	3.4
70	2.5	2.0	2.9	2.4	3.3	2.5	3.5	2.9	4.0	2.8	4.2	2.9	4.9	3.1	5.1	3.4
73	2.5	2.0	2.9	2.4	3.3	2.5	3.5	2.9	4.0	2.8	4.2	2.9	4.9	3.1	5.1	3.4
77	2.5	2.0	2.9	2.4	3.3	2.5	3.5	2.9	4.0	2.8	4.2	2.9	4.9	3.1	5.0	3.3
81	2.5	2.0	2.9	2.4	3.3	2.5	3.5	2.9	4.0	2.8	4.2	2.9	4.9	3.0	4.9	3.3
86	2.5	2.0	2.9	2.4	3.3	2.5	3.5	2.9	4.0	2.8	4.2	2.9	4.8	3.0	4.8	3.3
91	2.5	2.0	2.9	2.4	3.3	2.5	3.5	2.9	4.0	2.8	4.2	2.9	4.7	3.0	4.7	3.2
95	2.5	2.0	2.9	2.4	3.3	2.5	3.5	2.9	4.0	2.8	4.2	2.9	4.6	2.9	4.6	3.2
99	2.5	2.0	2.9	2.4	3.3	2.5	3.5	2.9	4.0	2.8	4.2	2.9	4.5	2.9	4.5	3.2
104	2.5	2.0	2.9	2.4	3.3	2.5	3.5	2.9	4.0	2.8	4.2	2.9	4.4	2.9	4.4	3.1
109	2.5	2.0	2.9	2.4	3.3	2.5	3.5	2.9	4.0	2.8	4.1	2.9	4.3	2.8	4.3	3.1
115	2.5	2.0	2.9	2.4	3.3	2.5	3.5	2.9	3.9	2.8	4.0	2.8	4.2	2.8	4.2	3.1

■ MODEL : ASUA7TLAV1

Outdoor temperature	Indoor temperature															
	68°FDB / 59 °FWB		73°FDB / 61 °FWB		75°FDB / 63 °FWB		79°FDB / 64 °FWB		80°FDB / 67 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
50	4.8	4.1	5.4	5.0	6.1	5.2	6.5	6.0	7.5	5.7	7.8	6.0	9.2	6.3	9.6	7.0
59	4.8	4.1	5.4	5.0	6.1	5.2	6.5	6.0	7.5	5.7	7.8	6.0	9.2	6.3	9.6	7.0
70	4.8	4.1	5.4	5.0	6.1	5.2	6.5	6.0	7.5	5.7	7.8	6.0	9.2	6.3	9.6	7.0
73	4.8	4.1	5.4	5.0	6.1	5.2	6.5	6.0	7.5	5.7	7.8	6.0	9.2	6.3	9.5	7.0
77	4.8	4.1	5.4	5.0	6.1	5.2	6.5	6.0	7.5	5.7	7.8	6.0	9.2	6.3	9.4	6.9
81	4.8	4.1	5.4	5.0	6.1	5.2	6.5	6.0	7.5	5.7	7.8	6.0	9.1	6.2	9.2	6.9
86	4.8	4.1	5.4	5.0	6.1	5.2	6.5	6.0	7.5	5.7	7.8	6.0	8.9	6.2	9.0	6.8
91	4.8	4.1	5.4	5.0	6.1	5.2	6.5	6.0	7.5	5.7	7.8	6.0	8.7	6.1	8.8	6.7
95	4.8	4.1	5.4	5.0	6.1	5.2	6.5	6.0	7.5	5.7	7.8	6.0	8.6	6.0	8.7	6.7
99	4.8	4.1	5.4	5.0	6.1	5.2	6.5	6.0	7.5	5.7	7.8	6.0	8.4	6.0	8.5	6.6
104	4.8	4.1	5.4	5.0	6.1	5.2	6.5	6.0	7.5	5.7	7.8	6.0	8.2	5.9	8.3	6.6
109	4.8	4.1	5.4	5.0	6.1	5.2	6.5	6.0	7.5	5.7	7.7	6.0	8.0	5.8	8.1	6.5
115	4.8	4.1	5.4	5.0	6.1	5.2	6.5	6.0	7.4	5.7	7.5	5.9	7.8	5.8	7.9	6.4

■ MODEL : ASUA9TLAV1

Outdoor temperature	Indoor temperature															
	68°FDB / 59 °FWB		73°FDB / 61 °FWB		75°FDB / 63 °FWB		79°FDB / 64 °FWB		80°FDB / 67 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
50	6.0	5.5	6.9	6.8	7.8	7.0	8.2	8.2	9.5	7.8	9.9	8.2	11.7	8.4	12.1	9.5
59	6.0	5.5	6.9	6.8	7.8	7.0	8.2	8.2	9.5	7.8	9.9	8.2	11.7	8.4	12.1	9.5
70	6.0	5.5	6.9	6.8	7.8	7.0	8.2	8.2	9.5	7.8	9.9	8.2	11.7	8.4	12.1	9.5
73	6.0	5.5	6.9	6.8	7.8	7.0	8.2	8.2	9.5	7.8	9.9	8.2	11.7	8.4	12.1	9.5
77	6.0	5.5	6.9	6.8	7.8	7.0	8.2	8.2	9.5	7.8	9.9	8.2	11.7	8.4	11.9	9.4
81	6.0	5.5	6.9	6.8	7.8	7.0	8.2	8.2	9.5	7.8	9.9	8.2	11.5	8.4	11.7	9.3
86	6.0	5.5	6.9	6.8	7.8	7.0	8.2	8.2	9.5	7.8	9.9	8.2	11.3	8.3	11.4	9.2
91	6.0	5.5	6.9	6.8	7.8	7.0	8.2	8.2	9.5	7.8	9.9	8.2	11.1	8.2	11.2	9.2
95	6.0	5.5	6.9	6.8	7.8	7.0	8.2	8.2	9.5	7.8	9.9	8.2	10.9	8.2	11.0	9.1
99	6.0	5.5	6.9	6.8	7.8	7.0	8.2	8.2	9.5	7.8	9.9	8.2	10.7	8.1	10.8	9.0
104	6.0	5.5	6.9	6.8	7.8	7.0	8.2	8.2	9.5	7.8	9.9	8.2	10.4	8.0	10.5	8.9
109	6.0	5.5	6.9	6.8	7.8	7.0	8.2	8.2	9.5	7.8	9.7	8.1	10.2	7.9	10.3	8.9
115	6.0	5.5	6.9	6.8	7.8	7.0	8.2	8.2	9.3	7.7	9.4	8.0	9.9	7.8	10.0	8.8

TC : Total Capacity kBtu/h.

SHC : Sensible Heat Capacity kBtu/h.

COOLING CAPACITY in kBtu/h

■ MODEL : ASUA12TLAV1

Outdoor temperature	Indoor temperature															
	68°FDB / 59 °FWB		73°FDB / 61 °FWB		75°FDB / 63 °FWB		79°FDB / 64 °FWB		80°FDB / 67 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
50	7.6	6.2	8.7	7.6	9.8	7.9	10.4	9.1	12.0	8.8	12.6	9.2	14.7	9.6	15.3	10.6
59	7.6	6.2	8.7	7.6	9.8	7.9	10.4	9.1	12.0	8.8	12.6	9.2	14.7	9.6	15.3	10.6
70	7.6	6.2	8.7	7.6	9.8	7.9	10.4	9.1	12.0	8.8	12.6	9.2	14.7	9.6	15.3	10.6
73	7.6	6.2	8.7	7.6	9.8	7.9	10.4	9.1	12.0	8.8	12.6	9.2	14.7	9.6	15.2	10.6
77	7.6	6.2	8.7	7.6	9.8	7.9	10.4	9.1	12.0	8.8	12.6	9.2	14.7	9.6	15.0	10.5
81	7.6	6.2	8.7	7.6	9.8	7.9	10.4	9.1	12.0	8.8	12.6	9.2	14.6	9.5	14.7	10.4
86	7.6	6.2	8.7	7.6	9.8	7.9	10.4	9.1	12.0	8.7	12.6	9.2	14.3	9.4	14.4	10.3
91	7.6	6.2	8.7	7.6	9.8	7.9	10.4	9.1	12.0	8.8	12.6	9.2	14.0	9.3	14.1	10.2
95	7.6	6.2	8.7	7.6	9.8	7.9	10.4	9.1	12.0	8.8	12.6	9.2	13.7	9.2	13.9	10.1
99	7.6	6.2	8.7	7.6	9.8	7.9	10.4	9.1	12.0	8.8	12.6	9.2	13.5	9.1	13.6	10.0
104	7.6	6.2	8.7	7.6	9.8	7.9	10.4	9.1	12.0	8.8	12.6	9.2	13.2	9.0	13.3	9.9
109	7.6	6.2	8.7	7.6	9.8	7.9	10.4	9.1	12.0	8.8	12.3	9.1	12.8	8.9	13.0	9.8
115	7.6	6.2	8.7	7.6	9.8	7.9	10.4	9.1	11.8	8.7	11.9	8.9	12.5	8.7	12.6	9.7

■ MODEL : ASUA14TLAV1

Outdoor temperature	Indoor temperature															
	68°FDB / 59 °FWB		73°FDB / 61 °FWB		75°FDB / 63 °FWB		79°FDB / 64 °FWB		80°FDB / 67 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
50	8.9	7.4	10.2	9.1	11.4	9.4	12.1	10.8	14.0	10.4	14.6	10.9	17.2	11.4	17.9	12.7
59	8.9	7.4	10.2	9.1	11.4	9.4	12.1	10.8	14.0	10.4	14.6	10.9	17.2	11.4	17.9	12.7
70	8.9	7.4	10.2	9.1	11.4	9.4	12.1	10.8	14.0	10.4	14.6	10.9	17.2	11.4	17.9	12.7
73	8.9	7.4	10.2	9.1	11.4	9.4	12.1	10.8	14.0	10.4	14.6	10.9	17.2	11.4	17.8	12.6
77	8.9	7.4	10.2	9.1	11.4	9.4	12.1	10.8	14.0	10.4	14.6	10.9	17.2	11.4	17.5	12.5
81	8.9	7.4	10.2	9.1	11.4	9.4	12.1	10.8	14.0	10.4	14.6	10.9	17.0	11.3	17.2	12.4
86	8.9	7.4	10.2	9.1	11.4	9.4	12.1	10.8	14.0	10.4	14.6	10.9	16.7	11.2	16.8	12.3
91	8.9	7.4	10.2	9.1	11.4	9.4	12.1	10.8	14.0	10.4	14.6	10.9	16.3	11.0	16.5	12.2
95	8.9	7.4	10.2	9.1	11.4	9.4	12.1	10.8	14.0	10.4	14.6	10.9	16.0	10.9	16.2	12.1
99	8.9	7.4	10.2	9.1	11.4	9.4	12.1	10.8	14.0	10.4	14.6	10.9	15.7	10.8	15.9	12.0
104	8.9	7.4	10.2	9.1	11.4	9.4	12.1	10.8	14.0	10.4	14.6	10.9	15.4	10.7	15.5	11.8
109	8.9	7.4	10.2	9.1	11.4	9.4	12.1	10.8	14.0	10.4	14.4	10.8	15.0	10.5	15.1	11.7
115	8.9	7.4	10.2	9.1	11.4	9.4	12.1	10.8	13.8	10.3	13.9	10.6	14.5	10.4	14.7	11.5

TC : Total Capacity kBtu/h.
SHC : Sensible Heat Capacity kBtu/h.

COOLING CAPACITY in kBtu/h

■ MODEL : ASUB18TLAV1

Outdoor temperature	Indoor temperature															
	68°FDB / 59 °FWB		73°FDB / 61 °FWB		75°FDB / 63 °FWB		79°FDB / 64 °FWB		80°FDB / 67 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
50	11.4	9.2	13.1	11.2	14.7	11.7	15.5	13.4	18.0	12.9	18.8	13.6	22.1	14.1	23.0	15.7
59	11.4	9.2	13.1	11.2	14.7	11.7	15.5	13.4	18.0	12.9	18.8	13.6	22.1	14.1	23.0	15.7
70	11.4	9.2	13.1	11.2	14.7	11.7	15.5	13.4	18.0	12.9	18.8	13.6	22.1	14.1	23.0	15.7
73	11.4	9.2	13.1	11.2	14.7	11.7	15.5	13.4	18.0	12.9	18.8	13.6	22.1	14.1	22.8	15.7
77	11.4	9.2	13.1	11.2	14.7	11.7	15.5	13.4	18.0	12.9	18.8	13.6	22.1	14.1	22.5	15.5
81	11.4	9.2	13.1	11.2	14.7	11.7	15.5	13.4	18.0	12.9	18.8	13.6	21.9	14.0	22.1	15.4
86	11.4	9.2	13.1	11.2	14.7	11.7	15.5	13.4	18.0	12.9	18.8	13.6	21.4	13.9	21.6	15.2
91	11.4	9.2	13.1	11.2	14.7	11.7	15.5	13.4	18.0	12.9	18.8	13.6	21.0	13.7	21.2	15.1
95	11.4	9.2	13.1	11.2	14.7	11.7	15.5	13.4	18.0	12.9	18.8	13.6	20.6	13.6	20.8	14.9
99	11.4	9.2	13.1	11.2	14.7	11.7	15.5	13.4	18.0	12.9	18.8	13.6	20.2	13.4	20.4	14.8
104	11.4	9.2	13.1	11.2	14.7	11.7	15.5	13.4	18.0	12.9	18.8	13.6	19.7	13.3	19.9	14.6
109	11.4	9.2	13.1	11.2	14.7	11.7	15.5	13.4	18.0	12.9	18.5	13.4	19.3	13.1	19.5	14.5
115	11.4	9.2	13.1	11.2	14.7	11.7	15.5	13.4	17.7	12.8	17.9	13.2	18.7	12.9	18.9	14.2

■ MODEL : ASUB24TLAV1

Outdoor temperature	Indoor temperature															
	68°FDB / 59 °FWB		73°FDB / 61 °FWB		75°FDB / 63 °FWB		79°FDB / 64 °FWB		80°FDB / 67 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
50	15.2	12.2	17.4	14.9	19.6	15.5	20.7	17.7	24.0	17.2	25.1	18.0	29.5	18.8	30.6	20.9
59	15.2	12.2	17.4	14.9	19.6	15.5	20.7	17.7	24.0	17.2	25.1	18.0	29.5	18.8	30.6	20.9
70	15.2	12.2	17.4	14.9	19.6	15.5	20.7	17.7	24.0	17.2	25.1	18.0	29.5	18.8	30.6	20.9
73	15.2	12.2	17.4	14.9	19.6	15.5	20.7	17.7	24.0	17.2	25.1	18.0	29.5	18.8	30.5	20.8
77	15.2	12.2	17.4	14.9	19.6	15.5	20.7	17.7	24.0	17.2	25.1	18.0	29.5	18.8	30.0	20.6
81	15.2	12.2	17.4	14.9	19.6	15.5	20.7	17.7	24.0	17.2	25.1	18.0	29.2	18.7	29.5	20.4
86	15.2	12.2	17.4	14.9	19.6	15.5	20.7	17.7	24.0	17.2	25.1	18.0	28.6	18.4	28.9	20.2
91	15.2	12.2	17.4	14.9	19.6	15.5	20.7	17.7	24.0	17.2	25.1	18.0	27.9	18.2	28.2	20.0
95	15.2	12.2	17.4	14.9	19.6	15.5	20.7	17.7	24.0	17.2	25.1	18.0	27.5	18.0	27.7	19.8
99	15.2	12.2	17.4	14.9	19.6	15.5	20.7	17.7	24.0	17.2	25.1	18.0	27.0	17.8	27.2	19.6
104	15.2	12.2	17.4	14.9	19.6	15.5	20.7	17.7	24.0	17.2	25.1	18.0	26.3	17.6	26.6	19.4
109	15.2	12.2	17.4	14.9	19.6	15.5	20.7	17.7	24.0	17.2	24.6	17.8	25.7	17.4	26.0	19.2
115	15.2	12.2	17.4	14.9	19.6	15.5	20.7	17.7	23.6	17.0	23.8	17.5	24.9	17.1	25.2	18.9

■ MODEL : ASUB30TLAV1

Outdoor temperature	Indoor temperature															
	68°FDB / 59 °FWB		73°FDB / 61 °FWB		75°FDB / 63 °FWB		79°FDB / 64 °FWB		80°FDB / 67 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
50	19.0	15.2	21.8	18.5	24.5	19.2	25.9	22.0	30.0	21.3	31.4	22.4	36.9	23.4	38.3	25.9
59	19.0	15.2	21.8	18.5	24.5	19.2	25.9	22.0	30.0	21.3	31.4	22.4	36.9	23.4	38.3	25.9
70	19.0	15.2	21.8	18.5	24.5	19.2	25.9	22.0	30.0	21.3	31.4	22.4	36.9	23.4	38.3	25.9
73	19.0	15.2	21.8	18.5	24.5	19.2	25.9	22.0	30.0	21.3	31.4	22.4	36.9	23.4	38.1	25.9
77	19.0	15.2	21.8	18.5	24.5	19.2	25.9	22.0	30.0	21.3	31.4	22.4	36.9	23.4	37.5	25.6
81	19.0	15.2	21.8	18.5	24.5	19.2	25.9	22.0	30.0	21.3	31.4	22.4	36.5	23.2	36.8	25.4
86	19.0	15.2	21.8	18.5	24.5	19.2	25.9	22.0	30.0	21.3	31.4	22.4	35.7	22.9	36.1	25.1
91	19.0	15.2	21.8	18.5	24.5	19.2	25.9	22.0	30.0	21.3	31.4	22.4	34.9	22.6	35.3	24.8
95	19.0	15.2	21.8	18.5	24.5	19.2	25.9	22.0	30.0	21.3	31.4	22.4	34.3	22.4	34.7	24.6
99	19.0	15.2	21.8	18.5	24.5	19.2	25.9	22.0	30.0	21.3	31.4	22.4	33.7	22.2	34.0	24.4
104	19.0	15.2	21.8	18.5	24.5	19.2	25.9	22.0	30.0	21.3	31.4	22.4	32.9	21.9	33.2	24.1
109	19.0	15.2	21.8	18.5	24.5	19.2	25.9	22.0	30.0	21.3	30.8	22.2	32.1	21.6	32.4	23.8
115	19.0	15.2	21.8	18.5	24.5	19.2	25.9	22.0	29.5	21.1	29.8	21.8	31.1	21.2	31.5	23.5

■ MODEL : ASUB36TLAV1

Outdoor temperature	Indoor temperature															
	68°FDB / 59 °FWB		73°FDB / 61 °FWB		75°FDB / 63 °FWB		79°FDB / 64 °FWB		80°FDB / 67 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
50	21.6	17.3	24.7	21.1	27.8	21.9	29.4	25.1	34.0	24.3	35.6	25.5	41.8	26.6	43.4	29.5
59	21.6	17.3	24.7	21.1	27.8	21.9	29.4	25.1	34.0	24.3	35.6	25.5	41.8	26.6	43.4	29.5
70	21.6	17.3	24.7	21.1	27.8	21.9	29.4	25.1	34.0	24.3	35.6	25.5	41.8	26.6	43.4	29.5
73	21.6	17.3	24.7	21.1	27.8	21.9	29.4	25.1	34.0	24.3	35.6	25.5	41.8	26.6	43.1	29.5
77	21.6	17.3	24.7	21.1	27.8	21.9	29.4	25.1	34.0	24.3	35.6	25.5	41.8	26.6	42.5	29.2
81	21.6	17.3	24.7	21.1	27.8	21.9	29.4	25.1	34.0	24.3	35.6	25.5	41.3	26.4	41.8	28.9
86	21.6	17.3	24.7	21.1	27.8	21.9	29.4	25.1	34.0	24.3	35.6	25.5	40.5	26.1	40.9	28.6
91	21.6	17.3	24.7	21.1	27.8	21.9	29.4	25.1	34.0	24.3	35.6	25.5	39.6	25.8	40.0	28.3
95	21.6	17.3	24.7	21.1	27.8	21.9	29.4	25.1	34.0	24.3	35.6	25.5	38.9	25.5	39.3	28.0
99	21.6	17.3	24.7	21.1	27.8	21.9	29.4	25.1	34.0	24.3	35.6	25.5	38.2	25.3	38.6	27.8
104	21.6	17.3	24.7	21.1	27.8	21.9	29.4	25.1	34.0	24.3	35.6	25.5	37.3	24.9	37.7	27.5
109	21.6	17.3	24.7	21.1	27.8	21.9	29.4	25.1	34.0	24.3	34.9	25.2	36.4	24.6	36.8	27.2
115	21.6	17.3	24.7	21.1	27.8	21.9	29.4	25.1	33.4	24.1	33.8	24.8	35.3	24.2	35.7	26.8

TC : Total Capacity kBtu/h.

SHC : Sensible Heat Capacity kBtu/h.

COOLING CAPACITY in kBtu/h

■ MODEL : ASUA7TLAV

Outdoor temperature	Indoor temperature															
	68°FDB / 59 °FWB		73°FDB / 61 °FWB		75°FDB / 63 °FWB		79°FDB / 64 °FWB		80°FDB / 67 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
50	4.8	4.2	5.4	5.1	6.1	5.3	6.5	6.1	7.5	5.8	7.8	6.1	9.2	6.4	9.6	7.1
59	4.8	4.2	5.4	5.1	6.1	5.3	6.5	6.1	7.5	5.8	7.8	6.1	9.2	6.4	9.6	7.1
70	4.8	4.2	5.4	5.1	6.1	5.3	6.5	6.1	7.5	5.8	7.8	6.1	9.2	6.4	9.6	7.1
73	4.8	4.2	5.4	5.1	6.1	5.3	6.5	6.1	7.5	5.8	7.8	6.1	9.2	6.4	9.5	7.1
77	4.8	4.2	5.4	5.1	6.1	5.3	6.5	6.1	7.5	5.8	7.8	6.1	9.2	6.4	9.4	7.0
81	4.8	4.2	5.4	5.1	6.1	5.3	6.5	6.1	7.5	5.8	7.8	6.1	9.1	6.3	9.2	7.0
86	4.8	4.2	5.4	5.1	6.1	5.3	6.5	6.1	7.5	5.8	7.8	6.1	8.9	6.3	9.0	6.9
91	4.8	4.2	5.4	5.1	6.1	5.3	6.5	6.1	7.5	5.8	7.8	6.1	8.7	6.2	8.8	6.9
95	4.8	4.2	5.4	5.1	6.1	5.3	6.5	6.1	7.5	5.8	7.8	6.1	8.6	6.1	8.7	6.8
99	4.8	4.2	5.4	5.1	6.1	5.3	6.5	6.1	7.5	5.8	7.8	6.1	8.4	6.1	8.5	6.8
104	4.8	4.2	5.4	5.1	6.1	5.3	6.5	6.1	7.5	5.8	7.8	6.1	8.2	6.0	8.3	6.7
109	4.8	4.2	5.4	5.1	6.1	5.3	6.5	6.1	7.5	5.8	7.7	6.1	8.0	5.9	8.1	6.6
115	4.8	4.2	5.4	5.1	6.1	5.3	6.5	6.1	7.4	5.8	7.5	6.0	7.8	5.9	7.9	6.5

■ MODEL : ASUA9TLAV

Outdoor temperature	Indoor temperature															
	68°FDB / 59 °FWB		73°FDB / 61 °FWB		75°FDB / 63 °FWB		79°FDB / 64 °FWB		80°FDB / 67 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
50	6.0	5.0	6.9	6.1	7.8	6.4	8.2	7.3	9.5	7.0	9.9	7.4	11.7	7.7	12.1	8.6
59	6.0	5.0	6.9	6.1	7.8	6.4	8.2	7.3	9.5	7.0	9.9	7.4	11.7	7.7	12.1	8.6
70	6.0	5.0	6.9	6.1	7.8	6.4	8.2	7.3	9.5	7.0	9.9	7.4	11.7	7.7	12.1	8.6
73	6.0	5.0	6.9	6.1	7.8	6.4	8.2	7.3	9.5	7.0	9.9	7.4	11.7	7.7	12.1	8.6
77	6.0	5.0	6.9	6.1	7.8	6.4	8.2	7.3	9.5	7.0	9.9	7.4	11.7	7.7	11.9	8.5
81	6.0	5.0	6.9	6.1	7.8	6.4	8.2	7.3	9.5	7.0	9.9	7.4	11.5	7.6	11.7	8.4
86	6.0	5.0	6.9	6.1	7.8	6.4	8.2	7.3	9.5	7.0	9.9	7.4	11.3	7.6	11.4	8.3
91	6.0	5.0	6.9	6.1	7.8	6.4	8.2	7.3	9.5	7.0	9.9	7.4	11.1	7.5	11.2	8.2
95	6.0	5.0	6.9	6.1	7.8	6.4	8.2	7.3	9.5	7.0	9.9	7.4	10.9	7.4	11.0	8.2
99	6.0	5.0	6.9	6.1	7.8	6.4	8.2	7.3	9.5	7.0	9.9	7.4	10.7	7.3	10.8	8.1
104	6.0	5.0	6.9	6.1	7.8	6.4	8.2	7.3	9.5	7.0	9.9	7.4	10.4	7.2	10.5	8.0
109	6.0	5.0	6.9	6.1	7.8	6.4	8.2	7.3	9.5	7.0	9.7	7.3	10.2	7.1	10.3	7.9
115	6.0	5.0	6.9	6.1	7.8	6.4	8.2	7.3	9.3	7.0	9.4	7.2	9.9	7.0	10.0	7.8

■ MODEL : ASUA12TLAV

Outdoor temperature	Indoor temperature															
	68°FDB / 59 °FWB		73°FDB / 61 °FWB		75°FDB / 63 °FWB		79°FDB / 64 °FWB		80°FDB / 67 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
50	7.6	6.0	8.7	7.3	9.8	7.6	10.4	8.7	12.0	8.4	12.6	8.9	14.7	9.2	15.3	10.2
59	7.6	6.0	8.7	7.3	9.8	7.6	10.4	8.7	12.0	8.4	12.6	8.9	14.7	9.2	15.3	10.2
70	7.6	6.0	8.7	7.3	9.8	7.6	10.4	8.7	12.0	8.4	12.6	8.9	14.7	9.2	15.3	10.2
73	7.6	6.0	8.7	7.3	9.8	7.6	10.4	8.7	12.0	8.4	12.6	8.9	14.7	9.2	15.2	10.2
77	7.6	6.0	8.7	7.3	9.8	7.6	10.4	8.7	12.0	8.4	12.6	8.9	14.7	9.2	15.0	10.1
81	7.6	6.0	8.7	7.3	9.8	7.6	10.4	8.7	12.0	8.4	12.6	8.9	14.6	9.2	14.7	10.0
86	7.6	6.0	8.7	7.3	9.8	7.6	10.4	8.7	12.0	8.4	12.6	8.9	14.3	9.1	14.4	9.9
91	7.6	6.0	8.7	7.3	9.8	7.6	10.4	8.7	12.0	8.4	12.6	8.9	14.0	8.9	14.1	9.8
95	7.6	6.0	8.7	7.3	9.8	7.6	10.4	8.7	12.0	8.4	12.6	8.9	13.7	8.9	13.9	9.7
99	7.6	6.0	8.7	7.3	9.8	7.6	10.4	8.7	12.0	8.4	12.6	8.9	13.5	8.8	13.6	9.6
104	7.6	6.0	8.7	7.3	9.8	7.6	10.4	8.7	12.0	8.4	12.6	8.9	13.2	8.6	13.3	9.5
109	7.6	6.0	8.7	7.3	9.8	7.6	10.4	8.7	12.0	8.4	12.3	8.8	12.8	8.5	13.0	9.4
115	7.6	6.0	8.7	7.3	9.8	7.6	10.4	8.7	11.8	8.3	11.9	8.6	12.5	8.4	12.6	9.3

■ MODEL : ASUA14TLAV

Outdoor temperature	Indoor temperature															
	68°FDB / 59 °FWB		73°FDB / 61 °FWB		75°FDB / 63 °FWB		79°FDB / 64 °FWB		80°FDB / 67 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
50	8.9	7.1	10.2	8.6	11.4	9.0	12.1	10.3	14.0	9.9	14.6	10.4	17.2	10.9	17.9	12.1
59	8.9	7.1	10.2	8.6	11.4	9.0	12.1	10.3	14.0	9.9	14.6	10.4	17.2	10.9	17.9	12.1
70	8.9	7.1	10.2	8.6	11.4	9.0	12.1	10.3	14.0	9.9	14.6	10.4	17.2	10.9	17.9	12.1
73	8.9	7.1	10.2	8.6	11.4	9.0	12.1	10.3	14.0	9.9	14.6	10.4	17.2	10.9	17.8	12.1
77	8.9	7.1	10.2	8.6	11.4	9.0	12.1	10.3	14.0	9.9	14.6	10.4	17.2	10.9	17.5	11.9
81	8.9	7.1	10.2	8.6	11.4	9.0	12.1	10.3	14.0	9.9	14.6	10.4	17.0	10.8	17.2	11.8
86	8.9	7.1	10.2	8.6	11.4	9.0	12.1	10.3	14.0	9.9	14.6	10.4	16.7	10.7	16.8	11.7
91	8.9	7.1	10.2	8.6	11.4	9.0	12.1	10.3	14.0	9.9	14.6	10.4	16.3	10.6	16.5	11.6
95	8.9	7.1	10.2	8.6	11.4	9.0	12.1	10.3	14.0	9.9	14.6	10.4	16.0	10.4	16.2	11.5
99	8.9	7.1	10.2	8.6	11.4	9.0	12.1	10.3	14.0	9.9	14.6	10.4	15.7	10.3	15.9	11.4
104	8.9	7.1	10.2	8.6	11.4	9.0	12.1	10.3	14.0	9.9	14.6	10.4	15.4	10.2	15.5	11.2
109	8.9	7.1	10.2	8.6	11.4	9.0	12.1	10.3	14.0	9.9	14.4	10.3	15.0	10.1	15.1	11.1
115	8.9	7.1	10.2	8.6	11.4	9.0	12.1	10.3	13.8	9.8	13.9	10.2	14.5	9.9	14.7	10.9

TC : Total Capacity kBtu/h.
SHC : Sensible Heat Capacity kBtu/h.

COOLING CAPACITY in kBtu/h

■ MODEL : ASUB18TLAV

Outdoor temperature	Indoor temperature															
	68°FDB / 59 °FWB		73°FDB / 61 °FWB		75°FDB / 63 °FWB		79°FDB / 64 °FWB		80°FDB / 67 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
50	11.4	9.2	13.1	11.2	14.7	11.7	15.5	13.4	18.0	12.9	18.8	13.6	22.1	14.2	23.0	15.7
59	11.4	9.2	13.1	11.2	14.7	11.7	15.5	13.4	18.0	12.9	18.8	13.6	22.1	14.2	23.0	15.7
70	11.4	9.2	13.1	11.2	14.7	11.7	15.5	13.4	18.0	12.9	18.8	13.6	22.1	14.2	23.0	15.7
73	11.4	9.2	13.1	11.2	14.7	11.7	15.5	13.4	18.0	12.9	18.8	13.6	22.1	14.2	22.8	15.7
77	11.4	9.2	13.1	11.2	14.7	11.7	15.5	13.4	18.0	12.9	18.8	13.6	22.1	14.2	22.5	15.6
81	11.4	9.2	13.1	11.2	14.7	11.7	15.5	13.4	18.0	12.9	18.8	13.6	21.9	14.1	22.1	15.4
86	11.4	9.2	13.1	11.2	14.7	11.7	15.5	13.4	18.0	12.9	18.8	13.6	21.4	13.9	21.6	15.3
91	11.4	9.2	13.1	11.2	14.7	11.7	15.5	13.4	18.0	12.9	18.8	13.6	21.0	13.7	21.2	15.1
95	11.4	9.2	13.1	11.2	14.7	11.7	15.5	13.4	18.0	12.9	18.8	13.6	20.6	13.6	20.8	15.0
99	11.4	9.2	13.1	11.2	14.7	11.7	15.5	13.4	18.0	12.9	18.8	13.6	20.2	13.5	20.4	14.8
104	11.4	9.2	13.1	11.2	14.7	11.7	15.5	13.4	18.0	12.9	18.8	13.6	19.7	13.3	19.9	14.7
109	11.4	9.2	13.1	11.2	14.7	11.7	15.5	13.4	18.0	12.9	18.5	13.5	19.3	13.1	19.5	14.5
115	11.4	9.2	13.1	11.2	14.7	11.7	15.5	13.4	17.7	12.8	17.9	13.2	18.7	12.9	18.9	14.3

■ MODEL : ASUB24TLAV

Outdoor temperature	Indoor temperature															
	68°FDB / 59 °FWB		73°FDB / 61 °FWB		75°FDB / 63 °FWB		79°FDB / 64 °FWB		80°FDB / 67 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
50	15.2	12.2	17.4	14.9	19.6	15.4	20.7	17.7	24.0	17.1	25.1	18.0	29.5	18.7	30.6	20.8
59	15.2	12.2	17.4	14.9	19.6	15.4	20.7	17.7	24.0	17.1	25.1	18.0	29.5	18.7	30.6	20.8
70	15.2	12.2	17.4	14.9	19.6	15.4	20.7	17.7	24.0	17.1	25.1	18.0	29.5	18.7	30.6	20.8
73	15.2	12.2	17.4	14.9	19.6	15.4	20.7	17.7	24.0	17.1	25.1	18.0	29.5	18.7	30.5	20.8
77	15.2	12.2	17.4	14.9	19.6	15.4	20.7	17.7	24.0	17.1	25.1	18.0	29.5	18.7	30.0	20.6
81	15.2	12.2	17.4	14.9	19.6	15.4	20.7	17.7	24.0	17.1	25.1	18.0	29.2	18.6	29.5	20.4
86	15.2	12.2	17.4	14.9	19.6	15.4	20.7	17.7	24.0	17.1	25.1	18.0	28.6	18.4	28.9	20.2
91	15.2	12.2	17.4	14.9	19.6	15.4	20.7	17.7	24.0	17.1	25.1	18.0	27.9	18.2	28.2	20.0
95	15.2	12.2	17.4	14.9	19.6	15.4	20.7	17.7	24.0	17.1	25.1	18.0	27.5	18.0	27.7	19.8
99	15.2	12.2	17.4	14.9	19.6	15.4	20.7	17.7	24.0	17.1	25.1	18.0	27.0	17.8	27.2	19.6
104	15.2	12.2	17.4	14.9	19.6	15.4	20.7	17.7	24.0	17.1	25.1	18.0	26.3	17.6	26.6	19.4
109	15.2	12.2	17.4	14.9	19.6	15.4	20.7	17.7	24.0	17.1	24.6	17.8	25.7	17.3	26.0	19.1
115	15.2	12.2	17.4	14.9	19.6	15.4	20.7	17.7	23.6	17.0	23.8	17.5	24.9	17.1	25.2	18.9

TC : Total Capacity kBtu/h.
SHC : Sensible Heat Capacity kBtu/h.

8. CAPACITY TABLE HEATING (INDOOR UNIT)

8-1. COMPACT CASSETTE TYPE

HEATING CAPACITY in kBtu/h

■ MODEL : AUUA4TLAV1

Outdoor Temperature		Indoor temperature						
		61°FDB	64°FDB	68°FDB	70°FDB	72°FDB	75°FDB	79°FDB
(°FDB)	(°FWB)	TC	TC	TC	TC	TC	TC	TC
-2.7	**-4.0**	2.3	2.3	2.3	2.3	2.3	2.3	2.3
5.0	**3.2**	2.7	2.6	2.6	2.6	2.6	2.6	2.6
10.4	**8.6**	3.0	2.9	2.9	2.9	2.9	2.9	2.9
15.8	**14.0**	3.2	3.2	3.2	3.2	3.2	3.2	3.2
17.0	**15.0**	3.3	3.3	3.3	3.2	3.2	3.2	3.2
23.0	**21.2**	3.7	3.6	3.6	3.6	3.6	3.6	3.6
26.6	**24.8**	3.8	3.8	3.8	3.8	3.8	3.8	3.6
30.2	**28.4**	4.0	4.0	4.0	4.0	4.0	3.9	3.6
32.0	**30.2**	4.2	4.1	4.1	4.1	4.1	3.9	3.6
35.6	**33.8**	4.3	4.3	4.3	4.3	4.2	3.9	3.6
41.0	**39.2**	4.7	4.7	4.6	4.4	4.2	4.0	3.6
47.0	**43.0**	4.9	4.9	4.6	4.4	4.2	4.0	3.6
48.2	**46.0**	5.1	4.9	4.6	4.4	4.2	4.0	3.6
53.6	**51.1**	5.1	4.9	4.6	4.4	4.2	4.0	3.6
59.0	**56.3**	5.1	4.9	4.6	4.4	4.2	4.0	3.6

■ MODEL : AUUA7TLAV

Outdoor Temperature		Indoor temperature						
		61°FDB	64°FDB	68°FDB	70°FDB	72°FDB	75°FDB	79°FDB
(°FDB)	(°FWB)	TC	TC	TC	TC	TC	TC	TC
-2.7	**-4.0**	4.9	4.9	4.9	4.9	4.9	4.9	4.9
5.0	**3.2**	5.7	5.7	5.7	5.7	5.7	5.7	5.6
10.4	**8.6**	6.4	6.4	6.3	6.3	6.3	6.3	6.3
15.8	**14.0**	7.0	7.0	6.9	6.9	6.9	6.9	6.8
17.0	**15.0**	7.1	7.1	7.0	7.0	7.0	7.0	7.0
23.0	**21.2**	7.9	7.9	7.8	7.8	7.8	7.7	7.7
26.6	**24.8**	8.3	8.3	8.2	8.2	8.2	8.2	7.8
30.2	**28.4**	8.7	8.7	8.6	8.6	8.6	8.5	7.8
32.0	**30.2**	9.0	8.9	8.8	8.8	8.8	8.5	7.8
35.6	**33.8**	9.4	9.3	9.3	9.2	9.0	8.5	7.8
41.0	**39.2**	10.1	10.1	9.9	9.5	9.1	8.6	7.9
47.0	**43.0**	10.6	10.5	9.9	9.5	9.1	8.6	7.9
48.2	**46.0**	10.9	10.6	9.9	9.5	9.1	8.6	7.9
53.6	**51.1**	11.1	10.6	9.9	9.5	9.1	8.6	7.9
59.0	**56.3**	11.1	10.6	9.9	9.5	9.1	8.6	7.9

■ MODEL : AUUA9TLAV

Outdoor Temperature		Indoor temperature						
		61°FDB	64°FDB	68°FDB	70°FDB	72°FDB	75°FDB	79°FDB
(°FDB)	(°FWB)	TC	TC	TC	TC	TC	TC	TC
-2.7	**-4.0**	5.7	5.7	5.7	5.6	5.6	5.6	5.6
5.0	**3.2**	6.6	6.5	6.5	6.5	6.5	6.5	6.5
10.4	**8.6**	7.3	7.3	7.3	7.3	7.2	7.2	7.2
15.8	**14.0**	8.0	8.0	7.9	7.9	7.9	7.9	7.8
17.0	**15.0**	8.1	8.1	8.1	8.0	8.0	8.0	8.0
23.0	**21.2**	9.0	9.0	9.0	8.9	8.9	8.9	8.8
26.6	**24.8**	9.5	9.5	9.4	9.4	9.4	9.4	8.9
30.2	**28.4**	10.0	10.0	9.9	9.9	9.9	9.7	8.9
32.0	**30.2**	10.3	10.2	10.1	10.1	10.1	9.7	8.9
35.6	**33.8**	10.8	10.7	10.6	10.6	10.3	9.7	8.9
41.0	**39.2**	11.6	11.6	11.3	10.9	10.5	9.8	9.0
47.0	**43.0**	12.1	12.1	11.3	10.9	10.5	9.8	9.0
48.2	**46.0**	12.6	12.1	11.3	10.9	10.5	9.8	9.0
53.6	**51.1**	12.8	12.1	11.3	10.9	10.5	9.8	9.0
59.0	**56.3**	12.8	12.1	11.3	10.9	10.5	9.8	9.0

■ MODEL : AUUA12TLAV

Outdoor Temperature		Indoor temperature						
		61°FDB	64°FDB	68°FDB	70°FDB	72°FDB	75°FDB	79°FDB
(°FDB)	(°FWB)	TC	TC	TC	TC	TC	TC	TC
-2.7	**-4.0**	7.0	7.0	7.0	7.0	7.0	7.0	6.9
5.0	**3.2**	8.1	8.1	8.1	8.0	8.0	8.0	8.0
10.4	**8.6**	9.1	9.0	9.0	9.0	8.9	8.9	8.9
15.8	**14.0**	9.9	9.9	9.8	9.8	9.8	9.8	9.7
17.0	**15.0**	10.1	10.1	10.0	10.0	10.0	9.9	9.9
23.0	**21.2**	11.2	11.2	11.1	11.1	11.0	11.0	10.9
26.6	**24.8**	11.8	11.8	11.7	11.7	11.6	11.6	11.0
30.2	**28.4**	12.4	12.4	12.3	12.2	12.2	12.1	11.0
32.0	**30.2**	12.7	12.6	12.6	12.5	12.5	12.1	11.0
35.6	**33.8**	13.3	13.2	13.2	13.1	12.8	12.1	11.0
41.0	**39.2**	14.4	14.3	14.0	13.5	12.9	12.2	11.2
47.0	**43.0**	15.0	14.9	14.0	13.5	12.9	12.2	11.2
48.2	**46.0**	15.5	15.0	14.0	13.5	12.9	12.2	11.2
53.6	**51.1**	15.8	15.0	14.0	13.5	12.9	12.2	11.2
59.0	**56.3**	15.8	15.0	14.0	13.5	12.9	12.2	11.2

TC : Total Capacity kBtu/h.

HEATING CAPACITY in kBtu/h

■ MODEL : AUUA14TLAV

Outdoor Temperature		Indoor temperature						
		61°FDB	64°FDB	68°FDB	70°FDB	72°FDB	75°FDB	79°FDB
(°FDB)	(°FWB)	TC	TC	TC	TC	TC	TC	TC
-2.7	**-4.0**	8.1	8.1	8.1	8.1	8.1	8.1	8.0
5.0	**3.2**	9.4	9.4	9.4	9.3	9.3	9.3	9.3
10.4	**8.6**	10.5	10.4	10.4	10.4	10.3	10.3	10.3
15.8	**14.0**	11.5	11.4	11.4	11.4	11.3	11.3	11.2
17.0	**15.0**	11.7	11.6	11.6	11.5	11.5	11.5	11.4
23.0	**21.2**	12.9	12.9	12.8	12.8	12.7	12.7	12.6
26.6	**24.8**	13.6	13.6	13.5	13.5	13.4	13.4	12.7
30.2	**28.4**	14.3	14.3	14.2	14.1	14.1	13.9	12.7
32.0	**30.2**	14.7	14.6	14.5	14.5	14.4	13.9	12.7
35.6	**33.8**	15.4	15.3	15.2	15.2	14.8	13.9	12.7
41.0	**39.2**	16.6	16.5	16.2	15.6	15.0	14.1	12.9
47.0	**43.0**	17.4	17.3	16.2	15.6	15.0	14.1	12.9
48.2	**46.0**	18.0	17.4	16.2	15.6	15.0	14.1	12.9
53.6	**51.1**	18.3	17.4	16.2	15.6	15.0	14.1	12.9
59.0	**56.3**	18.3	17.4	16.2	15.6	15.0	14.1	12.9

■ MODEL : AUUA18TLAV

Outdoor Temperature		Indoor temperature						
		61°FDB	64°FDB	68°FDB	70°FDB	72°FDB	75°FDB	79°FDB
(°FDB)	(°FWB)	TC	TC	TC	TC	TC	TC	TC
-2.7	**-4.0**	10.4	10.4	10.4	10.3	10.3	10.3	10.3
5.0	**3.2**	12.1	12.0	12.0	11.9	11.9	11.9	11.9
10.4	**8.6**	13.4	13.4	13.3	13.3	13.2	13.2	13.2
15.8	**14.0**	14.7	14.6	14.6	14.6	14.5	14.4	14.4
17.0	**15.0**	15.0	14.9	14.8	14.8	14.8	14.7	14.6
23.0	**21.2**	16.6	16.5	16.5	16.4	16.3	16.3	16.2
26.6	**24.8**	17.5	17.4	17.3	17.3	17.2	17.2	16.3
30.2	**28.4**	18.4	18.3	18.2	18.1	18.1	17.9	16.3
32.0	**30.2**	18.9	18.7	18.6	18.5	18.5	17.9	16.3
35.6	**33.8**	19.7	19.6	19.5	19.4	19.0	17.9	16.3
41.0	**39.2**	21.3	21.2	20.8	20.0	19.2	18.0	16.5
47.0	**43.0**	22.3	22.1	20.8	20.0	19.2	18.0	16.5
48.2	**46.0**	23.0	22.3	20.8	20.0	19.2	18.0	16.5
53.6	**51.1**	23.4	22.3	20.8	20.0	19.2	18.0	16.5
59.0	**56.3**	23.4	22.3	20.8	20.0	19.2	18.0	16.5

■ MODEL : AUUA24TLAV

Outdoor Temperature		Indoor temperature						
		61°FDB	64°FDB	68°FDB	70°FDB	72°FDB	75°FDB	79°FDB
(°FDB)	(°FWB)	TC	TC	TC	TC	TC	TC	TC
-2.7	**-4.0**	14.1	14.1	14.1	14.0	14.0	14.0	13.9
5.0	**3.2**	16.3	16.2	16.2	16.1	16.1	16.1	16.0
10.4	**8.6**	18.1	18.1	18.0	18.0	17.9	17.9	17.8
15.8	**14.0**	19.8	19.8	19.7	19.7	19.6	19.5	19.4
17.0	**15.0**	20.2	20.1	20.0	19.9	19.9	19.8	19.8
23.0	**21.2**	22.4	22.3	22.2	22.1	22.1	22.0	21.9
26.6	**24.8**	23.6	23.5	23.3	23.3	23.3	23.2	22.1
30.2	**28.4**	24.8	24.7	24.5	24.4	24.4	24.1	22.1
32.0	**30.2**	25.5	25.3	25.1	25.0	25.0	24.1	22.1
35.6	**33.8**	26.7	26.5	26.3	26.2	25.6	24.1	22.1
41.0	**39.2**	28.7	28.6	28.0	27.0	25.9	24.4	22.3
47.0	**43.0**	30.1	29.9	28.0	27.0	25.9	24.4	22.3
48.2	**46.0**	31.1	30.1	28.0	27.0	25.9	24.4	22.3
53.6	**51.1**	31.6	30.1	28.0	27.0	25.9	24.4	22.3
59.0	**56.3**	31.6	30.1	28.0	27.0	25.9	24.4	22.3

TC : Total Capacity kBtu/h.

8-2. CIRCULAR FLOW CASSETTE TYPE

HEATING CAPACITY in kBtu/h

■ MODEL : AUUB18TLAV1

Outdoor Temperature		Indoor temperature						
		61°FDB	64°FDB	68°FDB	70°FDB	72°FDB	75°FDB	79°FDB
(°FDB)	(°FWB)	TC	TC	TC	TC	TC	TC	TC
-2.7	**-4.0**	10.4	10.4	10.4	10.3	10.3	10.3	10.3
5.0	**3.2**	12.1	12.0	12.0	11.9	11.9	11.9	11.9
10.4	**8.6**	13.4	13.4	13.3	13.3	13.2	13.2	13.2
15.8	**14.0**	14.7	14.6	14.6	14.6	14.5	14.4	14.4
17.0	**15.0**	15.0	14.9	14.8	14.8	14.8	14.7	14.6
23.0	**21.2**	16.6	16.5	16.5	16.4	16.3	16.3	16.2
26.6	**24.8**	17.5	17.4	17.3	17.3	17.2	17.2	16.3
30.2	**28.4**	18.4	18.3	18.2	18.1	18.1	17.9	16.3
32.0	**30.2**	18.9	18.7	18.6	18.5	18.5	17.9	16.3
35.6	**33.8**	19.7	19.6	19.5	19.4	19.0	17.9	16.3
41.0	**39.2**	21.3	21.2	20.8	20.0	19.2	18.0	16.5
47.0	**43.0**	22.3	22.1	20.8	20.0	19.2	18.0	16.5
48.2	**46.0**	23.0	22.3	20.8	20.0	19.2	18.0	16.5
53.6	**51.1**	23.4	22.3	20.8	20.0	19.2	18.0	16.5
59.0	**56.3**	23.4	22.3	20.8	20.0	19.2	18.0	16.5

■ MODEL : AUUB24TLAV1

Outdoor Temperature		Indoor temperature						
		61°FDB	64°FDB	68°FDB	70°FDB	72°FDB	75°FDB	79°FDB
(°FDB)	(°FWB)	TC	TC	TC	TC	TC	TC	TC
-2.7	**-4.0**	14.1	14.1	14.1	14.0	14.0	14.0	13.9
5.0	**3.2**	16.3	16.2	16.2	16.1	16.1	16.1	16.0
10.4	**8.6**	18.1	18.1	18.0	18.0	17.9	17.9	17.8
15.8	**14.0**	19.8	19.8	19.7	19.7	19.6	19.5	19.4
17.0	**15.0**	20.2	20.1	20.0	19.9	19.9	19.8	19.8
23.0	**21.2**	22.4	22.3	22.2	22.1	22.1	22.0	21.9
26.6	**24.8**	23.6	23.5	23.3	23.3	23.3	23.2	22.1
30.2	**28.4**	24.8	24.7	24.5	24.4	24.4	24.1	22.1
32.0	**30.2**	25.5	25.3	25.1	25.0	25.0	24.1	22.1
35.6	**33.8**	26.7	26.5	26.3	26.2	25.6	24.1	22.1
41.0	**39.2**	28.7	28.6	28.0	27.0	25.9	24.4	22.3
47.0	**43.0**	30.1	29.9	28.0	27.0	25.9	24.4	22.3
48.2	**46.0**	31.1	30.1	28.0	27.0	25.9	24.4	22.3
53.6	**51.1**	31.6	30.1	28.0	27.0	25.9	24.4	22.3
59.0	**56.3**	31.6	30.1	28.0	27.0	25.9	24.4	22.3

■ MODEL : AUUB30TLAV1

Outdoor Temperature		Indoor temperature						
		61°FDB	64°FDB	68°FDB	70°FDB	72°FDB	75°FDB	79°FDB
(°FDB)	(°FWB)	TC	TC	TC	TC	TC	TC	TC
-2.7	**-4.0**	17.7	17.7	17.7	17.6	17.6	17.6	17.5
5.0	**3.2**	20.5	20.4	20.4	20.3	20.3	20.3	20.2
10.4	**8.6**	22.8	22.7	22.6	22.6	22.5	22.5	22.4
15.8	**14.0**	25.0	24.9	24.8	24.8	24.7	24.6	24.5
17.0	**15.0**	25.4	25.3	25.2	25.1	25.1	25.0	24.9
23.0	**21.2**	28.2	28.1	28.0	27.9	27.8	27.7	27.6
26.6	**24.8**	29.7	29.6	29.4	29.4	29.3	29.2	27.8
30.2	**28.4**	31.2	31.1	30.9	30.8	30.8	30.4	27.8
32.0	**30.2**	32.1	31.9	31.6	31.5	31.4	30.4	27.8
35.6	**33.8**	33.6	33.4	33.1	33.0	32.3	30.4	27.8
41.0	**39.2**	36.1	36.0	35.3	34.0	32.6	30.7	28.1
47.0	**43.0**	37.9	37.6	35.3	34.0	32.6	30.7	28.1
48.2	**46.0**	39.1	37.9	35.3	34.0	32.6	30.7	28.1
53.6	**51.1**	39.8	37.9	35.3	34.0	32.6	30.7	28.1
59.0	**56.3**	39.8	37.9	35.3	34.0	32.6	30.7	28.1

TC : Total Capacity kBtu/h.

HEATING CAPACITY in kBtu/h

■ MODEL : AUUB36TLAV1

Outdoor Temperature		Indoor temperature						
		61°FDB	64°FDB	68°FDB	70°FDB	72°FDB	75°FDB	79°FDB
(°FDB)	(°FWB)	TC	TC	TC	TC	TC	TC	TC
-2.7	**-4.0**	20.8	20.8	20.8	20.7	20.7	20.7	20.6
5.0	**3.2**	24.1	24.0	24.0	23.8	23.8	23.8	23.7
10.4	**8.6**	26.9	26.8	26.6	26.6	26.5	26.5	26.4
15.8	**14.0**	29.4	29.3	29.1	29.1	29.0	28.9	28.8
17.0	**15.0**	29.9	29.8	29.7	29.5	29.5	29.4	29.3
23.0	**21.2**	33.2	33.1	32.9	32.8	32.7	32.6	32.4
26.6	**24.8**	35.0	34.8	34.6	34.6	34.4	34.3	32.7
30.2	**28.4**	36.7	36.6	36.3	36.2	36.2	35.7	32.7
32.0	**30.2**	37.7	37.5	37.2	37.1	37.0	35.7	32.7
35.6	**33.8**	39.5	39.2	39.0	38.9	38.0	35.7	32.7
41.0	**39.2**	42.5	42.4	41.5	40.0	38.4	36.1	33.1
47.0	**43.0**	44.5	44.3	41.5	40.0	38.4	36.1	33.1
48.2	**46.0**	46.1	44.5	41.5	40.0	38.4	36.1	33.1
53.6	**51.1**	46.8	44.5	41.5	40.0	38.4	36.1	33.1
59.0	**56.3**	46.8	44.5	41.5	40.0	38.4	36.1	33.1

■ MODEL : AUUB48TLAV1

Outdoor Temperature		Indoor temperature						
		61°FDB	64°FDB	68°FDB	70°FDB	72°FDB	75°FDB	79°FDB
(°FDB)	(°FWB)	TC	TC	TC	TC	TC	TC	TC
-2.7	**-4.0**	28.1	28.1	28.1	27.9	27.9	27.9	27.8
5.0	**3.2**	32.5	32.4	32.4	32.2	32.2	32.2	32.0
10.4	**8.6**	36.3	36.1	35.9	35.9	35.8	35.8	35.6
15.8	**14.0**	39.7	39.5	39.4	39.4	39.2	39.0	38.8
17.0	**15.0**	40.4	40.2	40.0	39.9	39.9	39.7	39.5
23.0	**21.2**	44.8	44.6	44.5	44.3	44.1	43.9	43.8
26.6	**24.8**	47.2	47.0	46.7	46.7	46.5	46.3	44.1
30.2	**28.4**	49.6	49.4	49.1	48.9	48.9	48.2	44.1
32.0	**30.2**	50.9	50.6	50.3	50.1	49.9	48.2	44.1
35.6	**33.8**	53.3	53.0	52.6	52.5	51.3	48.2	44.1
41.0	**39.2**	57.4	57.2	56.0	54.0	51.8	48.7	44.6
47.0	**43.0**	60.1	59.8	56.0	54.0	51.8	48.7	44.6
48.2	**46.0**	62.2	60.1	56.0	54.0	51.8	48.7	44.6
53.6	**51.1**	63.2	60.1	56.0	54.0	51.8	48.7	44.6
59.0	**56.3**	63.2	60.1	56.0	54.0	51.8	48.7	44.6

TC : Total Capacity kBtu/h.

8-3. CASSETTE TYPE

HEATING CAPACITY in kBtu/h

■ MODEL : AUUB18TLAV

Outdoor Temperature		Indoor temperature						
		61°FDB	64°FDB	68°FDB	70°FDB	72°FDB	75°FDB	79°FDB
(°FDB)	(°FWB)	TC	TC	TC	TC	TC	TC	TC
-2.7	**-4.0**	10.4	10.4	10.4	10.3	10.3	10.3	10.3
5.0	**3.2**	12.1	12.0	12.0	11.9	11.9	11.9	11.9
10.4	**8.6**	13.4	13.4	13.3	13.3	13.2	13.2	13.2
15.8	**14.0**	14.7	14.6	14.6	14.6	14.5	14.4	14.4
17.0	**15.0**	15.0	14.9	14.8	14.8	14.8	14.7	14.6
23.0	**21.2**	16.6	16.5	16.5	16.4	16.3	16.3	16.2
26.6	**24.8**	17.5	17.4	17.3	17.3	17.2	17.2	16.3
30.2	**28.4**	18.4	18.3	18.2	18.1	18.1	17.9	16.3
32.0	**30.2**	18.9	18.7	18.6	18.5	18.5	17.9	16.3
35.6	**33.8**	19.7	19.6	19.5	19.4	19.0	17.9	16.3
41.0	**39.2**	21.3	21.2	20.8	20.0	19.2	18.0	16.5
47.0	**43.0**	22.3	22.1	20.8	20.0	19.2	18.0	16.5
48.2	**46.0**	23.0	22.3	20.8	20.0	19.2	18.0	16.5
53.6	**51.1**	23.4	22.3	20.8	20.0	19.2	18.0	16.5
59.0	**56.3**	23.4	22.3	20.8	20.0	19.2	18.0	16.5

■ MODEL : AUUB24TLAV

Outdoor Temperature		Indoor temperature						
		61°FDB	64°FDB	68°FDB	70°FDB	72°FDB	75°FDB	79°FDB
(°FDB)	(°FWB)	TC	TC	TC	TC	TC	TC	TC
-2.7	**-4.0**	14.1	14.1	14.1	14.0	14.0	14.0	13.9
5.0	**3.2**	16.3	16.2	16.2	16.1	16.1	16.1	16.0
10.4	**8.6**	18.1	18.1	18.0	18.0	17.9	17.9	17.8
15.8	**14.0**	19.8	19.8	19.7	19.7	19.6	19.5	19.4
17.0	**15.0**	20.2	20.1	20.0	19.9	19.9	19.8	19.8
23.0	**21.2**	22.4	22.3	22.2	22.1	22.1	22.0	21.9
26.6	**24.8**	23.6	23.5	23.3	23.3	23.3	23.2	22.1
30.2	**28.4**	24.8	24.7	24.5	24.4	24.4	24.1	22.1
32.0	**30.2**	25.5	25.3	25.1	25.0	25.0	24.1	22.1
35.6	**33.8**	26.7	26.5	26.3	26.2	25.6	24.1	22.1
41.0	**39.2**	28.7	28.6	28.0	27.0	25.9	24.4	22.3
47.0	**43.0**	30.1	29.9	28.0	27.0	25.9	24.4	22.3
48.2	**46.0**	31.1	30.1	28.0	27.0	25.9	24.4	22.3
53.6	**51.1**	31.6	30.1	28.0	27.0	25.9	24.4	22.3
59.0	**56.3**	31.6	30.1	28.0	27.0	25.9	24.4	22.3

TC : Total Capacity kBtu/h.

HEATING CAPACITY in kBtu/h

■ MODEL : AUUB30TLAV

Outdoor Temperature		Indoor temperature						
		61°FDB	64°FDB	68°FDB	70°FDB	72°FDB	75°FDB	79°FDB
(°FDB)	(°FWB)	TC	TC	TC	TC	TC	TC	TC
-2.7	**-4.0**	17.7	17.7	17.7	17.6	17.6	17.6	17.5
5.0	**3.2**	20.5	20.4	20.4	20.3	20.3	20.3	20.2
10.4	**8.6**	22.8	22.7	22.6	22.6	22.5	22.5	22.4
15.8	**14.0**	25.0	24.9	24.8	24.8	24.7	24.6	24.5
17.0	**15.0**	25.4	25.3	25.2	25.1	25.1	25.0	24.9
23.0	**21.2**	28.2	28.1	28.0	27.9	27.8	27.7	27.6
26.6	**24.8**	29.7	29.6	29.4	29.4	29.3	29.2	27.8
30.2	**28.4**	31.2	31.1	30.9	30.8	30.8	30.4	27.8
32.0	**30.2**	32.1	31.9	31.6	31.5	31.4	30.4	27.8
35.6	**33.8**	33.6	33.4	33.1	33.0	32.3	30.4	27.8
41.0	**39.2**	36.1	36.0	35.3	34.0	32.6	30.7	28.1
47.0	**43.0**	37.9	37.6	35.3	34.0	32.6	30.7	28.1
48.2	**46.0**	39.1	37.9	35.3	34.0	32.6	30.7	28.1
53.6	**51.1**	39.8	37.9	35.3	34.0	32.6	30.7	28.1
59.0	**56.3**	39.8	37.9	35.3	34.0	32.6	30.7	28.1

■ MODEL : AUUB36TLAV

Outdoor Temperature		Indoor temperature						
		61°FDB	64°FDB	68°FDB	70°FDB	72°FDB	75°FDB	79°FDB
(°FDB)	(°FWB)	TC	TC	TC	TC	TC	TC	TC
-2.7	**-4.0**	20.8	20.8	20.8	20.7	20.7	20.7	20.6
5.0	**3.2**	24.1	24.0	24.0	23.8	23.8	23.8	23.7
10.4	**8.6**	26.9	26.8	26.6	26.6	26.5	26.5	26.4
15.8	**14.0**	29.4	29.3	29.1	29.1	29.0	28.9	28.8
17.0	**15.0**	29.9	29.8	29.7	29.5	29.5	29.4	29.3
23.0	**21.2**	33.2	33.1	32.9	32.8	32.7	32.6	32.4
26.6	**24.8**	35.0	34.8	34.6	34.6	34.4	34.3	32.7
30.2	**28.4**	36.7	36.6	36.3	36.2	36.2	35.7	32.7
32.0	**30.2**	37.7	37.5	37.2	37.1	37.0	35.7	32.7
35.6	**33.8**	39.5	39.2	39.0	38.9	38.0	35.7	32.7
41.0	**39.2**	42.5	42.4	41.5	40.0	38.4	36.1	33.1
47.0	**43.0**	44.5	44.3	41.5	40.0	38.4	36.1	33.1
48.2	**46.0**	46.1	44.5	41.5	40.0	38.4	36.1	33.1
53.6	**51.1**	46.8	44.5	41.5	40.0	38.4	36.1	33.1
59.0	**56.3**	46.8	44.5	41.5	40.0	38.4	36.1	33.1

TC : Total Capacity kBtu/h.

8-4. MINI DUCT TYPE

HEATING CAPACITY in kBtu/h

■ MODEL : ARUL4TLAV1

Outdoor Temperature		Indoor temperature						
		61°FDB	64°FDB	68°FDB	70°FDB	72°FDB	75°FDB	79°FDB
(°FDB)	(°FWB)	TC	TC	TC	TC	TC	TC	TC
-2.7	**-4.0**	2.3	2.3	2.3	2.3	2.3	2.3	2.3
5.0	**3.2**	2.7	2.6	2.6	2.6	2.6	2.6	2.6
10.4	**8.6**	3.0	2.9	2.9	2.9	2.9	2.9	2.9
15.8	**14.0**	3.2	3.2	3.2	3.2	3.2	3.2	3.2
17.0	**15.0**	3.3	3.3	3.3	3.2	3.2	3.2	3.2
23.0	**21.2**	3.7	3.6	3.6	3.6	3.6	3.6	3.6
26.6	**24.8**	3.8	3.8	3.8	3.8	3.8	3.8	3.6
30.2	**28.4**	4.0	4.0	4.0	4.0	4.0	3.9	3.6
32.0	**30.2**	4.2	4.1	4.1	4.1	4.1	3.9	3.6
35.6	**33.8**	4.3	4.3	4.3	4.3	4.2	3.9	3.6
41.0	**39.2**	4.7	4.7	4.6	4.4	4.2	4.0	3.6
47.0	**43.0**	4.9	4.9	4.6	4.4	4.2	4.0	3.6
48.2	**46.0**	5.1	4.9	4.6	4.4	4.2	4.0	3.6
53.6	**51.1**	5.1	4.9	4.6	4.4	4.2	4.0	3.6
59.0	**56.3**	5.1	4.9	4.6	4.4	4.2	4.0	3.6

TC : Total Capacity kBtu/h.

8-5. SLIM DUCT / SLIM CONCEALED FLOOR TYPE

HEATING CAPACITY in kBtu/h

■ MODEL : ARUL7TLAV

Outdoor Temperature		Indoor temperature						
		61°FDB	64°FDB	68°FDB	70°FDB	72°FDB	75°FDB	79°FDB
(°FDB)	(°FWB)	TC	TC	TC	TC	TC	TC	TC
-2.7	**-4.0**	4.9	4.9	4.9	4.9	4.9	4.9	4.9
5.0	**3.2**	5.7	5.7	5.7	5.7	5.7	5.7	5.6
10.4	**8.6**	6.4	6.4	6.3	6.3	6.3	6.3	6.3
15.8	**14.0**	7.0	7.0	6.9	6.9	6.9	6.9	6.8
17.0	**15.0**	7.1	7.1	7.0	7.0	7.0	7.0	7.0
23.0	**21.2**	7.9	7.9	7.8	7.8	7.8	7.7	7.7
26.6	**24.8**	8.3	8.3	8.2	8.2	8.2	8.2	7.8
30.2	**28.4**	8.7	8.7	8.6	8.6	8.6	8.5	7.8
32.0	**30.2**	9.0	8.9	8.8	8.8	8.8	8.5	7.8
35.6	**33.8**	9.4	9.3	9.3	9.2	9.0	8.5	7.8
41.0	**39.2**	10.1	10.1	9.9	9.5	9.1	8.6	7.9
47.0	**43.0**	10.6	10.5	9.9	9.5	9.1	8.6	7.9
48.2	**46.0**	10.9	10.6	9.9	9.5	9.1	8.6	7.9
53.6	**51.1**	11.1	10.6	9.9	9.5	9.1	8.6	7.9
59.0	**56.3**	11.1	10.6	9.9	9.5	9.1	8.6	7.9

■ MODEL : ARUL9TLAV

Outdoor Temperature		Indoor temperature						
		61°FDB	64°FDB	68°FDB	70°FDB	72°FDB	75°FDB	79°FDB
(°FDB)	(°FWB)	TC	TC	TC	TC	TC	TC	TC
-2.7	**-4.0**	5.7	5.7	5.7	5.6	5.6	5.6	5.6
5.0	**3.2**	6.6	6.5	6.5	6.5	6.5	6.5	6.5
10.4	**8.6**	7.3	7.3	7.3	7.3	7.2	7.2	7.2
15.8	**14.0**	8.0	8.0	7.9	7.9	7.9	7.9	7.8
17.0	**15.0**	8.1	8.1	8.1	8.0	8.0	8.0	8.0
23.0	**21.2**	9.0	9.0	9.0	8.9	8.9	8.9	8.8
26.6	**24.8**	9.5	9.5	9.4	9.4	9.4	9.4	8.9
30.2	**28.4**	10.0	10.0	9.9	9.9	9.9	9.7	8.9
32.0	**30.2**	10.3	10.2	10.1	10.1	10.1	9.7	8.9
35.6	**33.8**	10.8	10.7	10.6	10.6	10.3	9.7	8.9
41.0	**39.2**	11.6	11.6	11.3	10.9	10.5	9.8	9.0
47.0	**43.0**	12.1	12.1	11.3	10.9	10.5	9.8	9.0
48.2	**46.0**	12.6	12.1	11.3	10.9	10.5	9.8	9.0
53.6	**51.1**	12.8	12.1	11.3	10.9	10.5	9.8	9.0
59.0	**56.3**	12.8	12.1	11.3	10.9	10.5	9.8	9.0

■ MODEL : ARUL12TLAV

Outdoor Temperature		Indoor temperature						
		61°FDB	64°FDB	68°FDB	70°FDB	72°FDB	75°FDB	79°FDB
(°FDB)	(°FWB)	TC	TC	TC	TC	TC	TC	TC
-2.7	**-4.0**	7.0	7.0	7.0	7.0	7.0	7.0	6.9
5.0	**3.2**	8.1	8.1	8.1	8.0	8.0	8.0	8.0
10.4	**8.6**	9.1	9.0	9.0	9.0	8.9	8.9	8.9
15.8	**14.0**	9.9	9.9	9.8	9.8	9.8	9.8	9.7
17.0	**15.0**	10.1	10.1	10.0	10.0	10.0	9.9	9.9
23.0	**21.2**	11.2	11.2	11.1	11.1	11.0	11.0	10.9
26.6	**24.8**	11.8	11.8	11.7	11.7	11.6	11.6	11.0
30.2	**28.4**	12.4	12.4	12.3	12.2	12.2	12.1	11.0
32.0	**30.2**	12.7	12.6	12.6	12.5	12.5	12.1	11.0
35.6	**33.8**	13.3	13.2	13.2	13.1	12.8	12.1	11.0
41.0	**39.2**	14.4	14.3	14.0	13.5	12.9	12.2	11.2
47.0	**43.0**	15.0	14.9	14.0	13.5	12.9	12.2	11.2
48.2	**46.0**	15.5	15.0	14.0	13.5	12.9	12.2	11.2
53.6	**51.1**	15.8	15.0	14.0	13.5	12.9	12.2	11.2
59.0	**56.3**	15.8	15.0	14.0	13.5	12.9	12.2	11.2

■ MODEL : ARUL14TLAV

Outdoor Temperature		Indoor temperature						
		61°FDB	64°FDB	68°FDB	70°FDB	72°FDB	75°FDB	79°FDB
(°FDB)	(°FWB)	TC	TC	TC	TC	TC	TC	TC
-2.7	**-4.0**	8.1	8.1	8.1	8.1	8.1	8.1	8.0
5.0	**3.2**	9.4	9.4	9.4	9.3	9.3	9.3	9.3
10.4	**8.6**	10.5	10.4	10.4	10.4	10.3	10.3	10.3
15.8	**14.0**	11.5	11.4	11.4	11.4	11.3	11.3	11.2
17.0	**15.0**	11.7	11.6	11.6	11.5	11.5	11.5	11.4
23.0	**21.2**	12.9	12.9	12.8	12.8	12.7	12.7	12.6
26.6	**24.8**	13.6	13.6	13.5	13.5	13.4	13.4	12.7
30.2	**28.4**	14.3	14.3	14.2	14.1	14.1	13.9	12.7
32.0	**30.2**	14.7	14.6	14.5	14.5	14.4	13.9	12.7
35.6	**33.8**	15.4	15.3	15.2	15.2	14.8	13.9	12.7
41.0	**39.2**	16.6	16.5	16.2	15.6	15.0	14.1	12.9
47.0	**43.0**	17.4	17.3	16.2	15.6	15.0	14.1	12.9
48.2	**46.0**	18.0	17.4	16.2	15.6	15.0	14.1	12.9
53.6	**51.1**	18.3	17.4	16.2	15.6	15.0	14.1	12.9
59.0	**56.3**	18.3	17.4	16.2	15.6	15.0	14.1	12.9

TC : Total Capacity kBtu/h.

HEATING CAPACITY in kBtu/h

■ MODEL : ARUL18TLAV

Outdoor Temperature		Indoor temperature						
		61°FDB	64°FDB	68°FDB	70°FDB	72°FDB	75°FDB	79°FDB
(°FDB)	(°FWB)	TC	TC	TC	TC	TC	TC	TC
-2.7	**-4.0**	10.4	10.4	10.4	10.3	10.3	10.3	10.3
5.0	**3.2**	12.1	12.0	12.0	11.9	11.9	11.9	11.9
10.4	**8.6**	13.4	13.4	13.3	13.3	13.2	13.2	13.2
15.8	**14.0**	14.7	14.6	14.6	14.6	14.5	14.4	14.4
17.0	**15.0**	15.0	14.9	14.8	14.8	14.8	14.7	14.6
23.0	**21.2**	16.6	16.5	16.5	16.4	16.3	16.3	16.2
26.6	**24.8**	17.5	17.4	17.3	17.3	17.2	17.2	16.3
30.2	**28.4**	18.4	18.3	18.2	18.1	18.1	17.9	16.3
32.0	**30.2**	18.9	18.7	18.6	18.5	18.5	17.9	16.3
35.6	**33.8**	19.7	19.6	19.5	19.4	19.0	17.9	16.3
41.0	**39.2**	21.3	21.2	20.8	20.0	19.2	18.0	16.5
47.0	**43.0**	22.3	22.1	20.8	20.0	19.2	18.0	16.5
48.2	**46.0**	23.0	22.3	20.8	20.0	19.2	18.0	16.5
53.6	**51.1**	23.4	22.3	20.8	20.0	19.2	18.0	16.5
59.0	**56.3**	23.4	22.3	20.8	20.0	19.2	18.0	16.5

TC : Total Capacity kBtu/h.

8-6. MEDIUM STATIC PRESSURE DUCT TYPE

HEATING CAPACITY in kBtu/h

■ MODEL : ARUM24TLAV

Outdoor Temperature		Indoor temperature						
		61°FDB	64°FDB	68°FDB	70°FDB	72°FDB	75°FDB	79°FDB
(°FDB)	(°FWB)	TC	TC	TC	TC	TC	TC	TC
-2.7	**-4.0**	14.1	14.1	14.1	14.0	14.0	14.0	13.9
5.0	**3.2**	16.3	16.2	16.2	16.1	16.1	16.1	16.0
10.4	**8.6**	18.1	18.1	18.0	18.0	17.9	17.9	17.8
15.8	**14.0**	19.8	19.8	19.7	19.7	19.6	19.5	19.4
17.0	**15.0**	20.2	20.1	20.0	19.9	19.9	19.8	19.8
23.0	**21.2**	22.4	22.3	22.2	22.1	22.1	22.0	21.9
26.6	**24.8**	23.6	23.5	23.3	23.3	23.3	23.2	22.1
30.2	**28.4**	24.8	24.7	24.5	24.4	24.4	24.1	22.1
32.0	**30.2**	25.5	25.3	25.1	25.0	25.0	24.1	22.1
35.6	**33.8**	26.7	26.5	26.3	26.2	25.6	24.1	22.1
41.0	**39.2**	28.7	28.6	28.0	27.0	25.9	24.4	22.3
47.0	**43.0**	30.1	29.9	28.0	27.0	25.9	24.4	22.3
48.2	**46.0**	31.1	30.1	28.0	27.0	25.9	24.4	22.3
53.6	**51.1**	31.6	30.1	28.0	27.0	25.9	24.4	22.3
59.0	**56.3**	31.6	30.1	28.0	27.0	25.9	24.4	22.3

■ MODEL : ARUM30TLAV

Outdoor Temperature		Indoor temperature						
		61°FDB	64°FDB	68°FDB	70°FDB	72°FDB	75°FDB	79°FDB
(°FDB)	(°FWB)	TC	TC	TC	TC	TC	TC	TC
-2.7	**-4.0**	17.7	17.7	17.7	17.6	17.6	17.6	17.5
5.0	**3.2**	20.5	20.4	20.4	20.3	20.3	20.3	20.2
10.4	**8.6**	22.8	22.7	22.6	22.6	22.5	22.5	22.4
15.8	**14.0**	25.0	24.9	24.8	24.8	24.7	24.6	24.5
17.0	**15.0**	25.4	25.3	25.2	25.1	25.1	25.0	24.9
23.0	**21.2**	28.2	28.1	28.0	27.9	27.8	27.7	27.6
26.6	**24.8**	29.7	29.6	29.4	29.4	29.3	29.2	27.8
30.2	**28.4**	31.2	31.1	30.9	30.8	30.8	30.4	27.8
32.0	**30.2**	32.1	31.9	31.6	31.5	31.4	30.4	27.8
35.6	**33.8**	33.6	33.4	33.1	33.0	32.3	30.4	27.8
41.0	**39.2**	36.1	36.0	35.3	34.0	32.6	30.7	28.1
47.0	**43.0**	37.9	37.6	35.3	34.0	32.6	30.7	28.1
48.2	**46.0**	39.1	37.9	35.3	34.0	32.6	30.7	28.1
53.6	**51.1**	39.8	37.9	35.3	34.0	32.6	30.7	28.1
59.0	**56.3**	39.8	37.9	35.3	34.0	32.6	30.7	28.1

■ MODEL : ARUM36TLAV

Outdoor Temperature		Indoor temperature						
		61°FDB	64°FDB	68°FDB	70°FDB	72°FDB	75°FDB	79°FDB
(°FDB)	(°FWB)	TC	TC	TC	TC	TC	TC	TC
-2.7	**-4.0**	20.8	20.8	20.8	20.7	20.7	20.7	20.6
5.0	**3.2**	24.1	24.0	24.0	23.8	23.8	23.8	23.7
10.4	**8.6**	26.9	26.8	26.6	26.6	26.5	26.5	26.4
15.8	**14.0**	29.4	29.3	29.1	29.1	29.0	28.9	28.8
17.0	**15.0**	29.9	29.8	29.7	29.5	29.5	29.4	29.3
23.0	**21.2**	33.2	33.1	32.9	32.8	32.7	32.6	32.4
26.6	**24.8**	35.0	34.8	34.6	34.6	34.4	34.3	32.7
30.2	**28.4**	36.7	36.6	36.3	36.2	36.2	35.7	32.7
32.0	**30.2**	37.7	37.5	37.2	37.1	37.0	35.7	32.7
35.6	**33.8**	39.5	39.2	39.0	38.9	38.0	35.7	32.7
41.0	**39.2**	42.5	42.4	41.5	40.0	38.4	36.1	33.1
47.0	**43.0**	44.5	44.3	41.5	40.0	38.4	36.1	33.1
48.2	**46.0**	46.1	44.5	41.5	40.0	38.4	36.1	33.1
53.6	**51.1**	46.8	44.5	41.5	40.0	38.4	36.1	33.1
59.0	**56.3**	46.8	44.5	41.5	40.0	38.4	36.1	33.1

TC : Total Capacity kBtu/h.

8-7. HIGH STATIC PRESSURE DUCT TYPE

HEATING CAPACITY in kBtu/h

■ MODEL : ARUH36TLAV

Outdoor Temperature		Indoor temperature						
		61°FDB	64°FDB	68°FDB	70°FDB	72°FDB	75°FDB	79°FDB
(°FDB)	(°FWB)	TC	TC	TC	TC	TC	TC	TC
-2.7	**-4.0**	20.8	20.8	20.8	20.7	20.7	20.7	20.6
5.0	**3.2**	24.1	24.0	24.0	23.8	23.8	23.8	23.7
10.4	**8.6**	26.9	26.8	26.6	26.6	26.5	26.5	26.4
15.8	**14.0**	29.4	29.3	29.1	29.1	29.0	28.9	28.8
17.0	**15.0**	29.9	29.8	29.7	29.5	29.5	29.4	29.3
23.0	**21.2**	33.2	33.1	32.9	32.8	32.7	32.6	32.4
26.6	**24.8**	35.0	34.8	34.6	34.6	34.4	34.3	32.7
30.2	**28.4**	36.7	36.6	36.3	36.2	36.2	35.7	32.7
32.0	**30.2**	37.7	37.5	37.2	37.1	37.0	35.7	32.7
35.6	**33.8**	39.5	39.2	39.0	38.9	38.0	35.7	32.7
41.0	**39.2**	42.5	42.4	41.5	40.0	38.4	36.1	33.1
47.0	**43.0**	44.5	44.3	41.5	40.0	38.4	36.1	33.1
48.2	**46.0**	46.1	44.5	41.5	40.0	38.4	36.1	33.1
53.6	**51.1**	46.8	44.5	41.5	40.0	38.4	36.1	33.1
59.0	**56.3**	46.8	44.5	41.5	40.0	38.4	36.1	33.1

■ MODEL : ARUH48TLAV

Outdoor Temperature		Indoor temperature						
		61°FDB	64°FDB	68°FDB	70°FDB	72°FDB	75°FDB	79°FDB
(°FDB)	(°FWB)	TC	TC	TC	TC	TC	TC	TC
-2.7	**-4.0**	28.1	28.1	28.1	27.9	27.9	27.9	27.8
5.0	**3.2**	32.5	32.4	32.4	32.2	32.2	32.2	32.0
10.4	**8.6**	36.3	36.1	35.9	35.9	35.8	35.8	35.6
15.8	**14.0**	39.7	39.5	39.4	39.4	39.2	39.0	38.8
17.0	**15.0**	40.4	40.2	40.0	39.9	39.9	39.7	39.5
23.0	**21.2**	44.8	44.6	44.5	44.3	44.1	43.9	43.8
26.6	**24.8**	47.2	47.0	46.7	46.7	46.5	46.3	44.1
30.2	**28.4**	49.6	49.4	49.1	48.9	48.9	48.2	44.1
32.0	**30.2**	50.9	50.6	50.3	50.1	49.9	48.2	44.1
35.6	**33.8**	53.3	53.0	52.6	52.5	51.3	48.2	44.1
41.0	**39.2**	57.4	57.2	56.0	54.0	51.8	48.7	44.6
47.0	**43.0**	60.1	59.8	56.0	54.0	51.8	48.7	44.6
48.2	**46.0**	62.2	60.1	56.0	54.0	51.8	48.7	44.6
53.6	**51.1**	63.2	60.1	56.0	54.0	51.8	48.7	44.6
59.0	**56.3**	63.2	60.1	56.0	54.0	51.8	48.7	44.6

■ MODEL : ARUH60TLAV

Outdoor Temperature		Indoor temperature						
		61°FDB	64°FDB	68°FDB	70°FDB	72°FDB	75°FDB	79°FDB
(°FDB)	(°FWB)	TC	TC	TC	TC	TC	TC	TC
-2.7	**-4.0**	34.9	34.9	34.9	34.7	34.7	34.7	34.5
5.0	**3.2**	40.4	40.2	40.2	39.9	39.9	39.9	39.7
10.4	**8.6**	45.0	44.8	44.6	44.6	44.4	44.4	44.2
15.8	**14.0**	49.2	49.0	48.8	48.8	48.6	48.4	48.2
17.0	**15.0**	50.1	49.9	49.7	49.5	49.5	49.2	49.0
23.0	**21.2**	55.6	55.4	55.2	55.0	54.7	54.5	54.3
26.6	**24.8**	58.5	58.3	57.9	57.9	57.7	57.5	54.7
30.2	**28.4**	61.5	61.3	60.9	60.7	60.7	59.8	54.7
32.0	**30.2**	63.2	62.8	62.4	62.1	61.9	59.8	54.7
35.6	**33.8**	66.2	65.7	65.3	65.1	63.6	59.8	54.7
41.0	**39.2**	71.2	71.0	69.5	67.0	64.3	60.4	55.4
47.0	**43.0**	74.6	74.2	69.5	67.0	64.3	60.4	55.4
48.2	**46.0**	77.1	74.6	69.5	67.0	64.3	60.4	55.4
53.6	**51.1**	78.4	74.6	69.5	67.0	64.3	60.4	55.4
59.0	**56.3**	78.4	74.6	69.5	67.0	64.3	60.4	55.4

TC : Total Capacity kBtu/h.

HEATING CAPACITY in kBtu/h

■ MODEL : ARUH72TLAV1

Outdoor Temperature		Indoor temperature						
		61°FDB	64°FDB	68°FDB	70°FDB	72°FDB	75°FDB	79°FDB
(°FDB)	(°FWB)	TC	TC	TC	TC	TC	TC	TC
-2.7	**-4.0**	42.2	42.2	42.2	41.9	41.9	41.9	41.6
5.0	**3.2**	48.8	48.5	48.5	48.3	48.3	48.3	48.0
10.4	**8.6**	54.4	54.2	53.9	53.9	53.7	53.7	53.4
15.8	**14.0**	59.5	59.3	59.0	59.0	58.8	58.5	58.3
17.0	**15.0**	60.6	60.3	60.0	59.8	59.8	59.5	59.3
23.0	**21.2**	67.2	66.9	66.7	66.4	66.2	65.9	65.7
26.6	**24.8**	70.8	70.5	70.0	70.0	69.8	69.5	66.2
30.2	**28.4**	74.4	74.1	73.6	73.3	73.3	72.3	66.2
32.0	**30.2**	76.4	75.9	75.4	75.1	74.9	72.3	66.2
35.6	**33.8**	80.0	79.5	79.0	78.7	76.9	72.3	66.2
41.0	**39.2**	86.1	85.9	84.1	81.0	77.7	73.1	66.9
47.0	**43.0**	90.2	89.7	84.1	81.0	77.7	73.1	66.9
48.2	**46.0**	93.3	90.2	84.1	81.0	77.7	73.1	66.9
53.6	**51.1**	94.8	90.2	84.1	81.0	77.7	73.1	66.9
59.0	**56.3**	94.8	90.2	84.1	81.0	77.7	73.1	66.9

■ MODEL : ARUH96TLAV

Outdoor Temperature		Indoor temperature						
		61°FDB	64°FDB	68°FDB	70°FDB	72°FDB	75°FDB	79°FDB
(°FDB)	(°FWB)	TC	TC	TC	TC	TC	TC	TC
-2.7	**-4.0**	56.2	56.2	56.2	55.9	55.9	55.9	55.5
5.0	**3.2**	65.1	64.7	64.7	64.4	64.4	64.4	64.1
10.4	**8.6**	72.6	72.2	71.9	71.9	71.5	71.5	71.2
15.8	**14.0**	79.4	79.0	78.7	78.7	78.4	78.0	77.7
17.0	**15.0**	80.7	80.4	80.1	79.7	79.7	79.4	79.0
23.0	**21.2**	89.6	89.3	88.9	88.6	88.2	87.9	87.6
26.6	**24.8**	94.4	94.0	93.4	93.4	93.0	92.7	88.2
30.2	**28.4**	99.1	98.8	98.1	97.8	97.8	96.4	88.2
32.0	**30.2**	101.9	101.2	100.5	100.2	99.8	96.4	88.2
35.6	**33.8**	106.6	106.0	105.3	104.9	102.5	96.4	88.2
41.0	**39.2**	114.8	114.5	112.1	108.0	103.6	97.4	89.3
47.0	**43.0**	120.3	119.6	112.1	108.0	103.6	97.4	89.3
48.2	**46.0**	124.4	120.3	112.1	108.0	103.6	97.4	89.3
53.6	**51.1**	126.4	120.3	112.1	108.0	103.6	97.4	89.3
59.0	**56.3**	126.4	120.3	112.1	108.0	103.6	97.4	89.3

TC : Total Capacity kBtu/h.

8-8. VERTICAL AIR HANDLER TYPE

HEATING CAPACITY in kBtu/h

■ MODEL : ARUV12TLAV

Outdoor Temperature		Indoor temperature						
		61°FDB	64°FDB	68°FDB	70°FDB	72°FDB	75°FDB	79°FDB
(°FDB)	(°FWB)	TC	TC	TC	TC	TC	TC	TC
-2.7	**-4.0**	7.0	7.0	7.0	7.0	7.0	7.0	6.9
5.0	**3.2**	8.1	8.1	8.1	8.0	8.0	8.0	8.0
10.4	**8.6**	9.1	9.0	9.0	9.0	8.9	8.9	8.9
15.8	**14.0**	9.9	9.9	9.8	9.8	9.8	9.8	9.7
17.0	**15.0**	10.1	10.1	10.0	10.0	10.0	9.9	9.9
23.0	**21.2**	11.2	11.2	11.1	11.1	11.0	11.0	10.9
26.6	**24.8**	11.8	11.8	11.7	11.7	11.6	11.6	11.0
30.2	**28.4**	12.4	12.4	12.3	12.2	12.2	12.1	11.0
32.0	**30.2**	12.7	12.6	12.6	12.5	12.5	12.1	11.0
35.6	**33.8**	13.3	13.2	13.2	13.1	12.8	12.1	11.0
41.0	**39.2**	14.4	14.3	14.0	13.5	12.9	12.2	11.2
47.0	**43.0**	15.0	14.9	14.0	13.5	12.9	12.2	11.2
48.2	**46.0**	15.5	15.0	14.0	13.5	12.9	12.2	11.2
53.6	**51.1**	15.8	15.0	14.0	13.5	12.9	12.2	11.2
59.0	**56.3**	15.8	15.0	14.0	13.5	12.9	12.2	11.2

■ MODEL : ARUV18TLAV

Outdoor Temperature		Indoor temperature						
		61°FDB	64°FDB	68°FDB	70°FDB	72°FDB	75°FDB	79°FDB
(°FDB)	(°FWB)	TC	TC	TC	TC	TC	TC	TC
-2.7	**-4.0**	10.4	10.4	10.4	10.3	10.3	10.3	10.3
5.0	**3.2**	12.1	12.0	12.0	11.9	11.9	11.9	11.9
10.4	**8.6**	13.4	13.4	13.3	13.3	13.2	13.2	13.2
15.8	**14.0**	14.7	14.6	14.6	14.6	14.5	14.4	14.4
17.0	**15.0**	15.0	14.9	14.8	14.8	14.8	14.7	14.6
23.0	**21.2**	16.6	16.5	16.5	16.4	16.3	16.3	16.2
26.6	**24.8**	17.5	17.4	17.3	17.3	17.2	17.2	16.3
30.2	**28.4**	18.4	18.3	18.2	18.1	18.1	17.9	16.3
32.0	**30.2**	18.9	18.7	18.6	18.5	18.5	17.9	16.3
35.6	**33.8**	19.7	19.6	19.5	19.4	19.0	17.9	16.3
41.0	**39.2**	21.3	21.2	20.8	20.0	19.2	18.0	16.5
47.0	**43.0**	22.3	22.1	20.8	20.0	19.2	18.0	16.5
48.2	**46.0**	23.0	22.3	20.8	20.0	19.2	18.0	16.5
53.6	**51.1**	23.4	22.3	20.8	20.0	19.2	18.0	16.5
59.0	**56.3**	23.4	22.3	20.8	20.0	19.2	18.0	16.5

■ MODEL : ARUV24TLAV

Outdoor Temperature		Indoor temperature						
		61°FDB	64°FDB	68°FDB	70°FDB	72°FDB	75°FDB	79°FDB
(°FDB)	(°FWB)	TC	TC	TC	TC	TC	TC	TC
-2.7	**-4.0**	14.1	14.1	14.1	14.0	14.0	14.0	13.9
5.0	**3.2**	16.3	16.2	16.2	16.1	16.1	16.1	16.0
10.4	**8.6**	18.1	18.1	18.0	18.0	17.9	17.9	17.8
15.8	**14.0**	19.8	19.8	19.7	19.7	19.6	19.5	19.4
17.0	**15.0**	20.2	20.1	20.0	19.9	19.9	19.8	19.8
23.0	**21.2**	22.4	22.3	22.2	22.1	22.1	22.0	21.9
26.6	**24.8**	23.6	23.5	23.3	23.3	23.3	23.2	22.1
30.2	**28.4**	24.8	24.7	24.5	24.4	24.4	24.1	22.1
32.0	**30.2**	25.5	25.3	25.1	25.0	25.0	24.1	22.1
35.6	**33.8**	26.7	26.5	26.3	26.2	25.6	24.1	22.1
41.0	**39.2**	28.7	28.6	28.0	27.0	25.9	24.4	22.3
47.0	**43.0**	30.1	29.9	28.0	27.0	25.9	24.4	22.3
48.2	**46.0**	31.1	30.1	28.0	27.0	25.9	24.4	22.3
53.6	**51.1**	31.6	30.1	28.0	27.0	25.9	24.4	22.3
59.0	**56.3**	31.6	30.1	28.0	27.0	25.9	24.4	22.3

■ MODEL : ARUV30TLAV

Outdoor Temperature		Indoor temperature						
		61°FDB	64°FDB	68°FDB	70°FDB	72°FDB	75°FDB	79°FDB
(°FDB)	(°FWB)	TC	TC	TC	TC	TC	TC	TC
-2.7	**-4.0**	17.7	17.7	17.7	17.6	17.6	17.6	17.5
5.0	**3.2**	20.5	20.4	20.4	20.3	20.3	20.3	20.2
10.4	**8.6**	22.8	22.7	22.6	22.6	22.5	22.5	22.4
15.8	**14.0**	25.0	24.9	24.8	24.8	24.7	24.6	24.5
17.0	**15.0**	25.4	25.3	25.2	25.1	25.1	25.0	24.9
23.0	**21.2**	28.2	28.1	28.0	27.9	27.8	27.7	27.6
26.6	**24.8**	29.7	29.6	29.4	29.4	29.3	29.2	27.8
30.2	**28.4**	31.2	31.1	30.9	30.8	30.8	30.4	27.8
32.0	**30.2**	32.1	31.9	31.6	31.5	31.4	30.4	27.8
35.6	**33.8**	33.6	33.4	33.1	33.0	32.3	30.4	27.8
41.0	**39.2**	36.1	36.0	35.3	34.0	32.6	30.7	28.1
47.0	**43.0**	37.9	37.6	35.3	34.0	32.6	30.7	28.1
48.2	**46.0**	39.1	37.9	35.3	34.0	32.6	30.7	28.1
53.6	**51.1**	39.8	37.9	35.3	34.0	32.6	30.7	28.1
59.0	**56.3**	39.8	37.9	35.3	34.0	32.6	30.7	28.1

TC : Total Capacity kBtu/h.

HEATING CAPACITY in kBtu/h

■ MODEL : ARUV36TLAV

Outdoor Temperature		Indoor temperature						
		61°FDB	64°FDB	68°FDB	70°FDB	72°FDB	75°FDB	79°FDB
(°FDB)	(°FWB)	TC	TC	TC	TC	TC	TC	TC
-2.7	**-4.0**	20.8	20.8	20.8	20.7	20.7	20.7	20.6
5.0	**3.2**	24.1	24.0	24.0	23.8	23.8	23.8	23.7
10.4	**8.6**	26.9	26.8	26.6	26.6	26.5	26.5	26.4
15.8	**14.0**	29.4	29.3	29.1	29.1	29.0	28.9	28.8
17.0	**15.0**	29.9	29.8	29.7	29.5	29.5	29.4	29.3
23.0	**21.2**	33.2	33.1	32.9	32.8	32.7	32.6	32.4
26.6	**24.8**	35.0	34.8	34.6	34.6	34.4	34.3	32.7
30.2	**28.4**	36.7	36.6	36.3	36.2	36.2	35.7	32.7
32.0	**30.2**	37.7	37.5	37.2	37.1	37.0	35.7	32.7
35.6	**33.8**	39.5	39.2	39.0	38.9	38.0	35.7	32.7
41.0	**39.2**	42.5	42.4	41.5	40.0	38.4	36.1	33.1
47.0	**43.0**	44.5	44.3	41.5	40.0	38.4	36.1	33.1
48.2	**46.0**	46.1	44.5	41.5	40.0	38.4	36.1	33.1
53.6	**51.1**	46.8	44.5	41.5	40.0	38.4	36.1	33.1
59.0	**56.3**	46.8	44.5	41.5	40.0	38.4	36.1	33.1

■ MODEL : ARUV48TLAV

Outdoor Temperature		Indoor temperature						
		61°FDB	64°FDB	68°FDB	70°FDB	72°FDB	75°FDB	79°FDB
(°FDB)	(°FWB)	TC	TC	TC	TC	TC	TC	TC
-2.7	**-4.0**	28.1	28.1	28.1	27.9	27.9	27.9	27.8
5.0	**3.2**	32.5	32.4	32.4	32.2	32.2	32.2	32.0
10.4	**8.6**	36.3	36.1	35.9	35.9	35.8	35.8	35.6
15.8	**14.0**	39.7	39.5	39.4	39.4	39.2	39.0	38.8
17.0	**15.0**	40.4	40.2	40.0	39.9	39.9	39.7	39.5
23.0	**21.2**	44.8	44.6	44.5	44.3	44.1	43.9	43.8
26.6	**24.8**	47.2	47.0	46.7	46.7	46.5	46.3	44.1
30.2	**28.4**	49.6	49.4	49.1	48.9	48.9	48.2	44.1
32.0	**30.2**	50.9	50.6	50.3	50.1	49.9	48.2	44.1
35.6	**33.8**	53.3	53.0	52.6	52.5	51.3	48.2	44.1
41.0	**39.2**	57.4	57.2	56.0	54.0	51.8	48.7	44.6
47.0	**43.0**	60.1	59.8	56.0	54.0	51.8	48.7	44.6
48.2	**46.0**	62.2	60.1	56.0	54.0	51.8	48.7	44.6
53.6	**51.1**	63.2	60.1	56.0	54.0	51.8	48.7	44.6
59.0	**56.3**	63.2	60.1	56.0	54.0	51.8	48.7	44.6

■ MODEL : ARUV60TLAV

Outdoor Temperature		Indoor temperature						
		61°FDB	64°FDB	68°FDB	70°FDB	72°FDB	75°FDB	79°FDB
(°FDB)	(°FWB)	TC	TC	TC	TC	TC	TC	TC
-2.7	**-4.0**	34.9	34.9	34.9	34.7	34.7	34.7	34.5
5.0	**3.2**	40.4	40.2	40.2	39.9	39.9	39.9	39.7
10.4	**8.6**	45.0	44.8	44.6	44.6	44.4	44.4	44.2
15.8	**14.0**	49.2	49.0	48.8	48.8	48.6	48.4	48.2
17.0	**15.0**	50.1	49.9	49.7	49.5	49.5	49.2	49.0
23.0	**21.2**	55.6	55.4	55.2	55.0	54.7	54.5	54.3
26.6	**24.8**	58.5	58.3	57.9	57.9	57.7	57.5	54.7
30.2	**28.4**	61.5	61.3	60.9	60.7	60.7	59.8	54.7
32.0	**30.2**	63.2	62.8	62.4	62.1	61.9	59.8	54.7
35.6	**33.8**	66.2	65.7	65.3	65.1	63.6	59.8	54.7
41.0	**39.2**	71.2	71.0	69.5	67.0	64.3	60.4	55.4
47.0	**43.0**	74.6	74.2	69.5	67.0	64.3	60.4	55.4
48.2	**46.0**	77.1	74.6	69.5	67.0	64.3	60.4	55.4
53.6	**51.1**	78.4	74.6	69.5	67.0	64.3	60.4	55.4
59.0	**56.3**	78.4	74.6	69.5	67.0	64.3	60.4	55.4

TC : Total Capacity kBtu/h.

8-9. COMPACT FLOOR TYPE

HEATING CAPACITY in kBtu/h

■ MODEL : AGUA4TLAV1

Outdoor Temperature		Indoor temperature						
		61°FDB	64°FDB	68°FDB	70°FDB	72°FDB	75°FDB	79°FDB
(°FDB)	(°FWB)	TC	TC	TC	TC	TC	TC	TC
-2.7	**-4.0**	2.3	2.3	2.3	2.3	2.3	2.3	2.3
5.0	**3.2**	2.7	2.6	2.6	2.6	2.6	2.6	2.6
10.4	**8.6**	3.0	2.9	2.9	2.9	2.9	2.9	2.9
15.8	**14.0**	3.2	3.2	3.2	3.2	3.2	3.2	3.2
17.0	**15.0**	3.3	3.3	3.3	3.2	3.2	3.2	3.2
23.0	**21.2**	3.7	3.6	3.6	3.6	3.6	3.6	3.6
26.6	**24.8**	3.8	3.8	3.8	3.8	3.8	3.8	3.6
30.2	**28.4**	4.0	4.0	4.0	4.0	4.0	3.9	3.6
32.0	**30.2**	4.2	4.1	4.1	4.1	4.1	3.9	3.6
35.6	**33.8**	4.3	4.3	4.3	4.3	4.2	3.9	3.6
41.0	**39.2**	4.7	4.7	4.6	4.4	4.2	4.0	3.6
47.0	**43.0**	4.9	4.9	4.6	4.4	4.2	4.0	3.6
48.2	**46.0**	5.1	4.9	4.6	4.4	4.2	4.0	3.6
53.6	**51.1**	5.1	4.9	4.6	4.4	4.2	4.0	3.6
59.0	**56.3**	5.1	4.9	4.6	4.4	4.2	4.0	3.6

■ MODEL : AGUA7TLAV1

Outdoor Temperature		Indoor temperature						
		61°FDB	64°FDB	68°FDB	70°FDB	72°FDB	75°FDB	79°FDB
(°FDB)	(°FWB)	TC	TC	TC	TC	TC	TC	TC
-2.7	**-4.0**	4.9	4.9	4.9	4.9	4.9	4.9	4.9
5.0	**3.2**	5.7	5.7	5.7	5.7	5.7	5.7	5.6
10.4	**8.6**	6.4	6.4	6.3	6.3	6.3	6.3	6.3
15.8	**14.0**	7.0	7.0	6.9	6.9	6.9	6.9	6.8
17.0	**15.0**	7.1	7.1	7.0	7.0	7.0	7.0	7.0
23.0	**21.2**	7.9	7.9	7.8	7.8	7.8	7.7	7.7
26.6	**24.8**	8.3	8.3	8.2	8.2	8.2	8.2	7.8
30.2	**28.4**	8.7	8.7	8.6	8.6	8.6	8.5	7.8
32.0	**30.2**	9.0	8.9	8.8	8.8	8.8	8.5	7.8
35.6	**33.8**	9.4	9.3	9.3	9.2	9.0	8.5	7.8
41.0	**39.2**	10.1	10.1	9.9	9.5	9.1	8.6	7.9
47.0	**43.0**	10.6	10.5	9.9	9.5	9.1	8.6	7.9
48.2	**46.0**	10.9	10.6	9.9	9.5	9.1	8.6	7.9
53.6	**51.1**	11.1	10.6	9.9	9.5	9.1	8.6	7.9
59.0	**56.3**	11.1	10.6	9.9	9.5	9.1	8.6	7.9

■ MODEL : AGUA9TLAV1

Outdoor Temperature		Indoor temperature						
		61°FDB	64°FDB	68°FDB	70°FDB	72°FDB	75°FDB	79°FDB
(°FDB)	(°FWB)	TC	TC	TC	TC	TC	TC	TC
-2.7	**-4.0**	5.7	5.7	5.7	5.6	5.6	5.6	5.6
5.0	**3.2**	6.6	6.5	6.5	6.5	6.5	6.5	6.5
10.4	**8.6**	7.3	7.3	7.3	7.3	7.2	7.2	7.2
15.8	**14.0**	8.0	8.0	7.9	7.9	7.9	7.9	7.8
17.0	**15.0**	8.1	8.1	8.1	8.0	8.0	8.0	8.0
23.0	**21.2**	9.0	9.0	9.0	8.9	8.9	8.9	8.8
26.6	**24.8**	9.5	9.5	9.4	9.4	9.4	9.4	8.9
30.2	**28.4**	10.0	10.0	9.9	9.9	9.9	9.7	8.9
32.0	**30.2**	10.3	10.2	10.1	10.1	10.1	9.7	8.9
35.6	**33.8**	10.8	10.7	10.6	10.6	10.3	9.7	8.9
41.0	**39.2**	11.6	11.6	11.3	10.9	10.5	9.8	9.0
47.0	**43.0**	12.1	12.1	11.3	10.9	10.5	9.8	9.0
48.2	**46.0**	12.6	12.1	11.3	10.9	10.5	9.8	9.0
53.6	**51.1**	12.8	12.1	11.3	10.9	10.5	9.8	9.0
59.0	**56.3**	12.8	12.1	11.3	10.9	10.5	9.8	9.0

TC : Total Capacity kBtu/h.

HEATING CAPACITY in kBtu/h

■ MODEL : AGUA12TLAV1

Outdoor Temperature		Indoor temperature						
		61°FDB	64°FDB	68°FDB	70°FDB	72°FDB	75°FDB	79°FDB
(°FDB)	(°FWB)	TC	TC	TC	TC	TC	TC	TC
-2.7	**-4.0**	7.0	7.0	7.0	7.0	7.0	7.0	6.9
5.0	**3.2**	8.1	8.1	8.1	8.0	8.0	8.0	8.0
10.4	**8.6**	9.1	9.0	9.0	9.0	8.9	8.9	8.9
15.8	**14.0**	9.9	9.9	9.8	9.8	9.8	9.8	9.7
17.0	**15.0**	10.1	10.1	10.0	10.0	10.0	9.9	9.9
23.0	**21.2**	11.2	11.2	11.1	11.1	11.0	11.0	10.9
26.6	**24.8**	11.8	11.8	11.7	11.7	11.6	11.6	11.0
30.2	**28.4**	12.4	12.4	12.3	12.2	12.2	12.1	11.0
32.0	**30.2**	12.7	12.6	12.6	12.5	12.5	12.1	11.0
35.6	**33.8**	13.3	13.2	13.2	13.1	12.8	12.1	11.0
41.0	**39.2**	14.4	14.3	14.0	13.5	12.9	12.2	11.2
47.0	**43.0**	15.0	14.9	14.0	13.5	12.9	12.2	11.2
48.2	**46.0**	15.5	15.0	14.0	13.5	12.9	12.2	11.2
53.6	**51.1**	15.8	15.0	14.0	13.5	12.9	12.2	11.2
59.0	**56.3**	15.8	15.0	14.0	13.5	12.9	12.2	11.2

■ MODEL : AGUA14TLAV1

Outdoor Temperature		Indoor temperature						
		61°FDB	64°FDB	68°FDB	70°FDB	72°FDB	75°FDB	79°FDB
(°FDB)	(°FWB)	TC	TC	TC	TC	TC	TC	TC
-2.7	**-4.0**	8.1	8.1	8.1	8.1	8.1	8.1	8.0
5.0	**3.2**	9.4	9.4	9.4	9.3	9.3	9.3	9.3
10.4	**8.6**	10.5	10.4	10.4	10.4	10.3	10.3	10.3
15.8	**14.0**	11.5	11.4	11.4	11.4	11.3	11.3	11.2
17.0	**15.0**	11.7	11.6	11.6	11.5	11.5	11.5	11.4
23.0	**21.2**	12.9	12.9	12.8	12.8	12.7	12.7	12.6
26.6	**24.8**	13.6	13.6	13.5	13.5	13.4	13.4	12.7
30.2	**28.4**	14.3	14.3	14.2	14.1	14.1	13.9	12.7
32.0	**30.2**	14.7	14.6	14.5	14.5	14.4	13.9	12.7
35.6	**33.8**	15.4	15.3	15.2	15.2	14.8	13.9	12.7
41.0	**39.2**	16.6	16.5	16.2	15.6	15.0	14.1	12.9
47.0	**43.0**	17.4	17.3	16.2	15.6	15.0	14.1	12.9
48.2	**46.0**	18.0	17.4	16.2	15.6	15.0	14.1	12.9
53.6	**51.1**	18.3	17.4	16.2	15.6	15.0	14.1	12.9
59.0	**56.3**	18.3	17.4	16.2	15.6	15.0	14.1	12.9

TC : Total Capacity kBtu/h.

8-10. FLOOR / CEILING TYPE

HEATING CAPACITY in kBtu/h

■ MODEL : ABUA12TLAV

Outdoor Temperature		Indoor temperature						
		61°FDB	64°FDB	68°FDB	70°FDB	72°FDB	75°FDB	79°FDB
(°FDB)	(°FWB)	TC	TC	TC	TC	TC	TC	TC
-2.7	**-4.0**	7.0	7.0	7.0	7.0	7.0	7.0	6.9
5.0	**3.2**	8.1	8.1	8.1	8.0	8.0	8.0	8.0
10.4	**8.6**	9.1	9.0	9.0	9.0	8.9	8.9	8.9
15.8	**14.0**	9.9	9.9	9.8	9.8	9.8	9.8	9.7
17.0	**15.0**	10.1	10.1	10.0	10.0	10.0	9.9	9.9
23.0	**21.2**	11.2	11.2	11.1	11.1	11.0	11.0	10.9
26.6	**24.8**	11.8	11.8	11.7	11.7	11.6	11.6	11.0
30.2	**28.4**	12.4	12.4	12.3	12.2	12.2	12.1	11.0
32.0	**30.2**	12.7	12.6	12.6	12.5	12.5	12.1	11.0
35.6	**33.8**	13.3	13.2	13.2	13.1	12.8	12.1	11.0
41.0	**39.2**	14.4	14.3	14.0	13.5	12.9	12.2	11.2
47.0	**43.0**	15.0	14.9	14.0	13.5	12.9	12.2	11.2
48.2	**46.0**	15.5	15.0	14.0	13.5	12.9	12.2	11.2
53.6	**51.1**	15.8	15.0	14.0	13.5	12.9	12.2	11.2
59.0	**56.3**	15.8	15.0	14.0	13.5	12.9	12.2	11.2

■ MODEL : ABUA14TLAV

Outdoor Temperature		Indoor temperature						
		61°FDB	64°FDB	68°FDB	70°FDB	72°FDB	75°FDB	79°FDB
(°FDB)	(°FWB)	TC	TC	TC	TC	TC	TC	TC
-2.7	**-4.0**	8.1	8.1	8.1	8.1	8.1	8.1	8.0
5.0	**3.2**	9.4	9.4	9.4	9.3	9.3	9.3	9.3
10.4	**8.6**	10.5	10.4	10.4	10.4	10.3	10.3	10.3
15.8	**14.0**	11.5	11.4	11.4	11.4	11.3	11.3	11.2
17.0	**15.0**	11.7	11.6	11.6	11.5	11.5	11.5	11.4
23.0	**21.2**	12.9	12.9	12.8	12.8	12.7	12.7	12.6
26.6	**24.8**	13.6	13.6	13.5	13.5	13.4	13.4	12.7
30.2	**28.4**	14.3	14.3	14.2	14.1	14.1	13.9	12.7
32.0	**30.2**	14.7	14.6	14.5	14.5	14.4	13.9	12.7
35.6	**33.8**	15.4	15.3	15.2	15.2	14.8	13.9	12.7
41.0	**39.2**	16.6	16.5	16.2	15.6	15.0	14.1	12.9
47.0	**43.0**	17.4	17.3	16.2	15.6	15.0	14.1	12.9
48.2	**46.0**	18.0	17.4	16.2	15.6	15.0	14.1	12.9
53.6	**51.1**	18.3	17.4	16.2	15.6	15.0	14.1	12.9
59.0	**56.3**	18.3	17.4	16.2	15.6	15.0	14.1	12.9

■ MODEL : ABUA18TLAV

Outdoor Temperature		Indoor temperature						
		61°FDB	64°FDB	68°FDB	70°FDB	72°FDB	75°FDB	79°FDB
(°FDB)	(°FWB)	TC	TC	TC	TC	TC	TC	TC
-2.7	**-4.0**	10.4	10.4	10.4	10.3	10.3	10.3	10.3
5.0	**3.2**	12.1	12.0	12.0	11.9	11.9	11.9	11.9
10.4	**8.6**	13.4	13.4	13.3	13.3	13.2	13.2	13.2
15.8	**14.0**	14.7	14.6	14.6	14.6	14.5	14.4	14.4
17.0	**15.0**	15.0	14.9	14.8	14.8	14.8	14.7	14.6
23.0	**21.2**	16.6	16.5	16.5	16.4	16.3	16.3	16.2
26.6	**24.8**	17.5	17.4	17.3	17.3	17.2	17.2	16.3
30.2	**28.4**	18.4	18.3	18.2	18.1	18.1	17.9	16.3
32.0	**30.2**	18.9	18.7	18.6	18.5	18.5	17.9	16.3
35.6	**33.8**	19.7	19.6	19.5	19.4	19.0	17.9	16.3
41.0	**39.2**	21.3	21.2	20.8	20.0	19.2	18.0	16.5
47.0	**43.0**	22.3	22.1	20.8	20.0	19.2	18.0	16.5
48.2	**46.0**	23.0	22.3	20.8	20.0	19.2	18.0	16.5
53.6	**51.1**	23.4	22.3	20.8	20.0	19.2	18.0	16.5
59.0	**56.3**	23.4	22.3	20.8	20.0	19.2	18.0	16.5

■ MODEL : ABUA24TLAV

Outdoor Temperature		Indoor temperature						
		61°FDB	64°FDB	68°FDB	70°FDB	72°FDB	75°FDB	79°FDB
(°FDB)	(°FWB)	TC	TC	TC	TC	TC	TC	TC
-2.7	**-4.0**	14.1	14.1	14.1	14.0	14.0	14.0	13.9
5.0	**3.2**	16.3	16.2	16.2	16.1	16.1	16.1	16.0
10.4	**8.6**	18.1	18.1	18.0	18.0	17.9	17.9	17.8
15.8	**14.0**	19.8	19.8	19.7	19.7	19.6	19.5	19.4
17.0	**15.0**	20.2	20.1	20.0	19.9	19.9	19.8	19.8
23.0	**21.2**	22.4	22.3	22.2	22.1	22.1	22.0	21.9
26.6	**24.8**	23.6	23.5	23.3	23.3	23.3	23.2	22.1
30.2	**28.4**	24.8	24.7	24.5	24.4	24.4	24.1	22.1
32.0	**30.2**	25.5	25.3	25.1	25.0	25.0	24.1	22.1
35.6	**33.8**	26.7	26.5	26.3	26.2	25.6	24.1	22.1
41.0	**39.2**	28.7	28.6	28.0	27.0	25.9	24.4	22.3
47.0	**43.0**	30.1	29.9	28.0	27.0	25.9	24.4	22.3
48.2	**46.0**	31.1	30.1	28.0	27.0	25.9	24.4	22.3
53.6	**51.1**	31.6	30.1	28.0	27.0	25.9	24.4	22.3
59.0	**56.3**	31.6	30.1	28.0	27.0	25.9	24.4	22.3

TC : Total Capacity kBtu/h.

8-11. CEILING TYPE

HEATING CAPACITY in kBtu/h

■ MODEL : ABUA30TLAV

Outdoor Temperature		Indoor temperature						
		61°FDB	64°FDB	68°FDB	70°FDB	72°FDB	75°FDB	79°FDB
(°FDB)	(°FWB)	TC	TC	TC	TC	TC	TC	TC
-2.7	**-4.0**	17.7	17.7	17.7	17.6	17.6	17.6	17.5
5.0	**3.2**	20.5	20.4	20.4	20.3	20.3	20.3	20.2
10.4	**8.6**	22.8	22.7	22.6	22.6	22.5	22.5	22.4
15.8	**14.0**	25.0	24.9	24.8	24.8	24.7	24.6	24.5
17.0	**15.0**	25.4	25.3	25.2	25.1	25.1	25.0	24.9
23.0	**21.2**	28.2	28.1	28.0	27.9	27.8	27.7	27.6
26.6	**24.8**	29.7	29.6	29.4	29.4	29.3	29.2	27.8
30.2	**28.4**	31.2	31.1	30.9	30.8	30.8	30.4	27.8
32.0	**30.2**	32.1	31.9	31.6	31.5	31.4	30.4	27.8
35.6	**33.8**	33.6	33.4	33.1	33.0	32.3	30.4	27.8
41.0	**39.2**	36.1	36.0	35.3	34.0	32.6	30.7	28.1
47.0	**43.0**	37.9	37.6	35.3	34.0	32.6	30.7	28.1
48.2	**46.0**	39.1	37.9	35.3	34.0	32.6	30.7	28.1
53.6	**51.1**	39.8	37.9	35.3	34.0	32.6	30.7	28.1
59.0	**56.3**	39.8	37.9	35.3	34.0	32.6	30.7	28.1

■ MODEL : ABUA36TLAV

Outdoor Temperature		Indoor temperature						
		61°FDB	64°FDB	68°FDB	70°FDB	72°FDB	75°FDB	79°FDB
(°FDB)	(°FWB)	TC	TC	TC	TC	TC	TC	TC
-2.7	**-4.0**	20.8	20.8	20.8	20.7	20.7	20.7	20.6
5.0	**3.2**	24.1	24.0	24.0	23.8	23.8	23.8	23.7
10.4	**8.6**	26.9	26.8	26.6	26.6	26.5	26.5	26.4
15.8	**14.0**	29.4	29.3	29.1	29.1	29.0	28.9	28.8
17.0	**15.0**	29.9	29.8	29.7	29.5	29.5	29.4	29.3
23.0	**21.2**	33.2	33.1	32.9	32.8	32.7	32.6	32.4
26.6	**24.8**	35.0	34.8	34.6	34.6	34.4	34.3	32.7
30.2	**28.4**	36.7	36.6	36.3	36.2	36.2	35.7	32.7
32.0	**30.2**	37.7	37.5	37.2	37.1	37.0	35.7	32.7
35.6	**33.8**	39.5	39.2	39.0	38.9	38.0	35.7	32.7
41.0	**39.2**	42.5	42.4	41.5	40.0	38.4	36.1	33.1
47.0	**43.0**	44.5	44.3	41.5	40.0	38.4	36.1	33.1
48.2	**46.0**	46.1	44.5	41.5	40.0	38.4	36.1	33.1
53.6	**51.1**	46.8	44.5	41.5	40.0	38.4	36.1	33.1
59.0	**56.3**	46.8	44.5	41.5	40.0	38.4	36.1	33.1

TC : Total Capacity kBtu/h.

1-8. CAPACITY TABLE HEATING (INDOOR UNIT)

8-12. WALL MOUNTED TYPE

HEATING CAPACITY in kBtu/h

■ MODEL : ASUA4TLAV1

Outdoor Temperature		Indoor temperature						
		61°FDB	64°FDB	68°FDB	70°FDB	72°FDB	75°FDB	79°FDB
(°FDB)	(°FWB)	TC	TC	TC	TC	TC	TC	TC
-2.7	**-4.0**	2.3	2.3	2.3	2.3	2.3	2.3	2.3
5.0	**3.2**	2.7	2.6	2.6	2.6	2.6	2.6	2.6
10.4	**8.6**	3.0	2.9	2.9	2.9	2.9	2.9	2.9
15.8	**14.0**	3.2	3.2	3.2	3.2	3.2	3.2	3.2
17.0	**15.0**	3.3	3.3	3.3	3.2	3.2	3.2	3.2
23.0	**21.2**	3.7	3.6	3.6	3.6	3.6	3.6	3.6
26.6	**24.8**	3.8	3.8	3.8	3.8	3.8	3.8	3.6
30.2	**28.4**	4.0	4.0	4.0	4.0	4.0	3.9	3.6
32.0	**30.2**	4.2	4.1	4.1	4.1	4.1	3.9	3.6
35.6	**33.8**	4.3	4.3	4.3	4.3	4.2	3.9	3.6
41.0	**39.2**	4.7	4.7	4.6	4.4	4.2	4.0	3.6
47.0	**43.0**	4.9	4.9	4.6	4.4	4.2	4.0	3.6
48.2	**46.0**	5.1	4.9	4.6	4.4	4.2	4.0	3.6
53.6	**51.1**	5.1	4.9	4.6	4.4	4.2	4.0	3.6
59.0	**56.3**	5.1	4.9	4.6	4.4	4.2	4.0	3.6

■ MODEL : ASUA7TLAV1

Outdoor Temperature		Indoor temperature						
		61°FDB	64°FDB	68°FDB	70°FDB	72°FDB	75°FDB	79°FDB
(°FDB)	(°FWB)	TC	TC	TC	TC	TC	TC	TC
-2.7	**-4.0**	4.9	4.9	4.9	4.9	4.9	4.9	4.9
5.0	**3.2**	5.7	5.7	5.7	5.7	5.7	5.7	5.6
10.4	**8.6**	6.4	6.4	6.3	6.3	6.3	6.3	6.3
15.8	**14.0**	7.0	7.0	6.9	6.9	6.9	6.9	6.8
17.0	**15.0**	7.1	7.1	7.0	7.0	7.0	7.0	7.0
23.0	**21.2**	7.9	7.9	7.8	7.8	7.8	7.7	7.7
26.6	**24.8**	8.3	8.3	8.2	8.2	8.2	8.2	7.8
30.2	**28.4**	8.7	8.7	8.6	8.6	8.6	8.5	7.8
32.0	**30.2**	9.0	8.9	8.8	8.8	8.8	8.5	7.8
35.6	**33.8**	9.4	9.3	9.3	9.2	9.0	8.5	7.8
41.0	**39.2**	10.1	10.1	9.9	9.5	9.1	8.6	7.9
47.0	**43.0**	10.6	10.5	9.9	9.5	9.1	8.6	7.9
48.2	**46.0**	10.9	10.6	9.9	9.5	9.1	8.6	7.9
53.6	**51.1**	11.1	10.6	9.9	9.5	9.1	8.6	7.9
59.0	**56.3**	11.1	10.6	9.9	9.5	9.1	8.6	7.9

■ MODEL : ASUA9TLAV1

Outdoor Temperature		Indoor temperature						
		61°FDB	64°FDB	68°FDB	70°FDB	72°FDB	75°FDB	79°FDB
(°FDB)	(°FWB)	TC	TC	TC	TC	TC	TC	TC
-2.7	**-4.0**	5.7	5.7	5.7	5.6	5.6	5.6	5.6
5.0	**3.2**	6.6	6.5	6.5	6.5	6.5	6.5	6.5
10.4	**8.6**	7.3	7.3	7.3	7.3	7.2	7.2	7.2
15.8	**14.0**	8.0	8.0	7.9	7.9	7.9	7.9	7.8
17.0	**15.0**	8.1	8.1	8.1	8.0	8.0	8.0	8.0
23.0	**21.2**	9.0	9.0	9.0	8.9	8.9	8.9	8.8
26.6	**24.8**	9.5	9.5	9.4	9.4	9.4	9.4	8.9
30.2	**28.4**	10.0	10.0	9.9	9.9	9.9	9.7	8.9
32.0	**30.2**	10.3	10.2	10.1	10.1	10.1	9.7	8.9
35.6	**33.8**	10.8	10.7	10.6	10.6	10.3	9.7	8.9
41.0	**39.2**	11.6	11.6	11.3	10.9	10.5	9.8	9.0
47.0	**43.0**	12.1	12.1	11.3	10.9	10.5	9.8	9.0
48.2	**46.0**	12.6	12.1	11.3	10.9	10.5	9.8	9.0
53.6	**51.1**	12.8	12.1	11.3	10.9	10.5	9.8	9.0
59.0	**56.3**	12.8	12.1	11.3	10.9	10.5	9.8	9.0

TC : Total Capacity kBtu/h.

HEATING CAPACITY in kBtu/h

■ MODEL : ASUA12TLAV1

Outdoor Temperature		Indoor temperature						
		61°FDB	64°FDB	68°FDB	70°FDB	72°FDB	75°FDB	79°FDB
(°FDB)	(°FWB)	TC	TC	TC	TC	TC	TC	TC
-2.7	**-4.0**	7.0	7.0	7.0	7.0	7.0	7.0	6.9
5.0	**3.2**	8.1	8.1	8.1	8.0	8.0	8.0	8.0
10.4	**8.6**	9.1	9.0	9.0	9.0	8.9	8.9	8.9
15.8	**14.0**	9.9	9.9	9.8	9.8	9.8	9.8	9.7
17.0	**15.0**	10.1	10.1	10.0	10.0	10.0	9.9	9.9
23.0	**21.2**	11.2	11.2	11.1	11.1	11.0	11.0	10.9
26.6	**24.8**	11.8	11.8	11.7	11.7	11.6	11.6	11.0
30.2	**28.4**	12.4	12.4	12.3	12.2	12.2	12.1	11.0
32.0	**30.2**	12.7	12.6	12.6	12.5	12.5	12.1	11.0
35.6	**33.8**	13.3	13.2	13.2	13.1	12.8	12.1	11.0
41.0	**39.2**	14.4	14.3	14.0	13.5	12.9	12.2	11.2
47.0	**43.0**	15.0	14.9	14.0	13.5	12.9	12.2	11.2
48.2	**46.0**	15.5	15.0	14.0	13.5	12.9	12.2	11.2
53.6	**51.1**	15.8	15.0	14.0	13.5	12.9	12.2	11.2
59.0	**56.3**	15.8	15.0	14.0	13.5	12.9	12.2	11.2

■ MODEL : ASUA14TLAV1

Outdoor Temperature		Indoor temperature						
		61°FDB	64°FDB	68°FDB	70°FDB	72°FDB	75°FDB	79°FDB
(°FDB)	(°FWB)	TC	TC	TC	TC	TC	TC	TC
-2.7	**-4.0**	8.1	8.1	8.1	8.1	8.1	8.1	8.0
5.0	**3.2**	9.4	9.4	9.4	9.3	9.3	9.3	9.3
10.4	**8.6**	10.5	10.4	10.4	10.4	10.3	10.3	10.3
15.8	**14.0**	11.5	11.4	11.4	11.4	11.3	11.3	11.2
17.0	**15.0**	11.7	11.6	11.6	11.5	11.5	11.5	11.4
23.0	**21.2**	12.9	12.9	12.8	12.8	12.7	12.7	12.6
26.6	**24.8**	13.6	13.6	13.5	13.5	13.4	13.4	12.7
30.2	**28.4**	14.3	14.3	14.2	14.1	14.1	13.9	12.7
32.0	**30.2**	14.7	14.6	14.5	14.5	14.4	13.9	12.7
35.6	**33.8**	15.4	15.3	15.2	15.2	14.8	13.9	12.7
41.0	**39.2**	16.6	16.5	16.2	15.6	15.0	14.1	12.9
47.0	**43.0**	17.4	17.3	16.2	15.6	15.0	14.1	12.9
48.2	**46.0**	18.0	17.4	16.2	15.6	15.0	14.1	12.9
53.6	**51.1**	18.3	17.4	16.2	15.6	15.0	14.1	12.9
59.0	**56.3**	18.3	17.4	16.2	15.6	15.0	14.1	12.9

TC : Total Capacity kBtu/h.

HEATING CAPACITY in kBtu/h

■ MODEL : ASUB18TLAV1

Outdoor Temperature		Indoor temperature						
		61°FDB	64°FDB	68°FDB	70°FDB	72°FDB	75°FDB	79°FDB
(°FDB)	(°FWB)	TC	TC	TC	TC	TC	TC	TC
-2.7	**-4.0**	10.4	10.4	10.4	10.3	10.3	10.3	10.3
5.0	**3.2**	12.1	12.0	12.0	11.9	11.9	11.9	11.9
10.4	**8.6**	13.4	13.4	13.3	13.3	13.2	13.2	13.2
15.8	**14.0**	14.7	14.6	14.6	14.6	14.5	14.4	14.4
17.0	**15.0**	15.0	14.9	14.8	14.8	14.8	14.7	14.6
23.0	**21.2**	16.6	16.5	16.5	16.4	16.3	16.3	16.2
26.6	**24.8**	17.5	17.4	17.3	17.3	17.2	17.2	16.3
30.2	**28.4**	18.4	18.3	18.2	18.1	18.1	17.9	16.3
32.0	**30.2**	18.9	18.7	18.6	18.5	18.5	17.9	16.3
35.6	**33.8**	19.7	19.6	19.5	19.4	19.0	17.9	16.3
41.0	**39.2**	21.3	21.2	20.8	20.0	19.2	18.0	16.5
47.0	**43.0**	22.3	22.1	20.8	20.0	19.2	18.0	16.5
48.2	**46.0**	23.0	22.3	20.8	20.0	19.2	18.0	16.5
53.6	**51.1**	23.4	22.3	20.8	20.0	19.2	18.0	16.5
59.0	**56.3**	23.4	22.3	20.8	20.0	19.2	18.0	16.5

■ MODEL : ASUB24TLAV1

Outdoor Temperature		Indoor temperature						
		61°FDB	64°FDB	68°FDB	70°FDB	72°FDB	75°FDB	79°FDB
(°FDB)	(°FWB)	TC	TC	TC	TC	TC	TC	TC
-2.7	**-4.0**	14.1	14.1	14.1	14.0	14.0	14.0	13.9
5.0	**3.2**	16.3	16.2	16.2	16.1	16.1	16.1	16.0
10.4	**8.6**	18.1	18.1	18.0	18.0	17.9	17.9	17.8
15.8	**14.0**	19.8	19.8	19.7	19.7	19.6	19.5	19.4
17.0	**15.0**	20.2	20.1	20.0	19.9	19.9	19.8	19.8
23.0	**21.2**	22.4	22.3	22.2	22.1	22.1	22.0	21.9
26.6	**24.8**	23.6	23.5	23.3	23.3	23.3	23.2	22.1
30.2	**28.4**	24.8	24.7	24.5	24.4	24.4	24.1	22.1
32.0	**30.2**	25.5	25.3	25.1	25.0	25.0	24.1	22.1
35.6	**33.8**	26.7	26.5	26.3	26.2	25.6	24.1	22.1
41.0	**39.2**	28.7	28.6	28.0	27.0	25.9	24.4	22.3
47.0	**43.0**	30.1	29.9	28.0	27.0	25.9	24.4	22.3
48.2	**46.0**	31.1	30.1	28.0	27.0	25.9	24.4	22.3
53.6	**51.1**	31.6	30.1	28.0	27.0	25.9	24.4	22.3
59.0	**56.3**	31.6	30.1	28.0	27.0	25.9	24.4	22.3

■ MODEL : ASUB30TLAV1

Outdoor Temperature		Indoor temperature						
		61°FDB	64°FDB	68°FDB	70°FDB	72°FDB	75°FDB	79°FDB
(°FDB)	(°FWB)	TC	TC	TC	TC	TC	TC	TC
-2.7	**-4.0**	17.7	17.7	17.7	17.6	17.6	17.6	17.5
5.0	**3.2**	20.5	20.4	20.4	20.3	20.3	20.3	20.2
10.4	**8.6**	22.8	22.7	22.6	22.6	22.5	22.5	22.4
15.8	**14.0**	25.0	24.9	24.8	24.8	24.7	24.6	24.5
17.0	**15.0**	25.4	25.3	25.2	25.1	25.1	25.0	24.9
23.0	**21.2**	28.2	28.1	28.0	27.9	27.8	27.7	27.6
26.6	**24.8**	29.7	29.6	29.4	29.4	29.3	29.2	27.8
30.2	**28.4**	31.2	31.1	30.9	30.8	30.8	30.4	27.8
32.0	**30.2**	32.1	31.9	31.6	31.5	31.4	30.4	27.8
35.6	**33.8**	33.6	33.4	33.1	33.0	32.3	30.4	27.8
41.0	**39.2**	36.1	36.0	35.3	34.0	32.6	30.7	28.1
47.0	**43.0**	37.9	37.6	35.3	34.0	32.6	30.7	28.1
48.2	**46.0**	39.1	37.9	35.3	34.0	32.6	30.7	28.1
53.6	**51.1**	39.8	37.9	35.3	34.0	32.6	30.7	28.1
59.0	**56.3**	39.8	37.9	35.3	34.0	32.6	30.7	28.1

■ MODEL : ASUB36TLAV1

Outdoor Temperature		Indoor temperature						
		61°FDB	64°FDB	68°FDB	70°FDB	72°FDB	75°FDB	79°FDB
(°FDB)	(°FWB)	TC	TC	TC	TC	TC	TC	TC
-2.7	**-4.0**	19.8	19.8	19.8	19.7	19.7	19.7	19.5
5.0	**3.2**	22.9	22.8	22.8	22.7	22.7	22.7	22.5
10.4	**8.6**	25.5	25.4	25.3	25.3	25.2	25.2	25.1
15.8	**14.0**	27.9	27.8	27.7	27.7	27.6	27.5	27.3
17.0	**15.0**	28.4	28.3	28.2	28.1	28.1	27.9	27.8
23.0	**21.2**	31.5	31.4	31.3	31.2	31.0	30.9	30.8
26.6	**24.8**	33.2	33.1	32.8	32.8	32.7	32.6	31.0
30.2	**28.4**	34.9	34.8	34.5	34.4	34.4	33.9	31.0
32.0	**30.2**	35.8	35.6	35.4	35.2	35.1	33.9	31.0
35.6	**33.8**	37.5	37.3	37.0	36.9	36.1	33.9	31.0
41.0	**39.2**	40.4	40.3	39.4	38.0	36.4	34.3	31.4
47.0	**43.0**	42.3	42.1	39.4	38.0	36.4	34.3	31.4
48.2	**46.0**	43.8	42.3	39.4	38.0	36.4	34.3	31.4
53.6	**51.1**	44.5	42.3	39.4	38.0	36.4	34.3	31.4
59.0	**56.3**	44.5	42.3	39.4	38.0	36.4	34.3	31.4

TC : Total Capacity kBtu/h.

HEATING CAPACITY in kBtu/h

■ MODEL : ASUA7TLAV

Outdoor Temperature		Indoor temperature						
		61°FDB	64°FDB	68°FDB	70°FDB	72°FDB	75°FDB	79°FDB
(°FDB)	(°FWB)	TC	TC	TC	TC	TC	TC	TC
-2.7	**-4.0**	4.9	4.9	4.9	4.9	4.9	4.9	4.9
5.0	**3.2**	5.7	5.7	5.7	5.7	5.7	5.7	5.6
10.4	**8.6**	6.4	6.4	6.3	6.3	6.3	6.3	6.3
15.8	**14.0**	7.0	7.0	6.9	6.9	6.9	6.9	6.8
17.0	**15.0**	7.1	7.1	7.0	7.0	7.0	7.0	7.0
23.0	**21.2**	7.9	7.9	7.8	7.8	7.8	7.7	7.7
26.6	**24.8**	8.3	8.3	8.2	8.2	8.2	8.2	7.8
30.2	**28.4**	8.7	8.7	8.6	8.6	8.6	8.5	7.8
32.0	**30.2**	9.0	8.9	8.8	8.8	8.8	8.5	7.8
35.6	**33.8**	9.4	9.3	9.3	9.2	9.0	8.5	7.8
41.0	**39.2**	10.1	10.1	9.9	9.5	9.1	8.6	7.9
47.0	**43.0**	10.6	10.5	9.9	9.5	9.1	8.6	7.9
48.2	**46.0**	10.9	10.6	9.9	9.5	9.1	8.6	7.9
53.6	**51.1**	11.1	10.6	9.9	9.5	9.1	8.6	7.9
59.0	**56.3**	11.1	10.6	9.9	9.5	9.1	8.6	7.9

■ MODEL : ASUA9TLAV

Outdoor Temperature		Indoor temperature						
		61°FDB	64°FDB	68°FDB	70°FDB	72°FDB	75°FDB	79°FDB
(°FDB)	(°FWB)	TC	TC	TC	TC	TC	TC	TC
-2.7	**-4.0**	5.7	5.7	5.7	5.6	5.6	5.6	5.6
5.0	**3.2**	6.6	6.5	6.5	6.5	6.5	6.5	6.5
10.4	**8.6**	7.3	7.3	7.3	7.3	7.2	7.2	7.2
15.8	**14.0**	8.0	8.0	7.9	7.9	7.9	7.9	7.8
17.0	**15.0**	8.1	8.1	8.1	8.0	8.0	8.0	8.0
23.0	**21.2**	9.0	9.0	9.0	8.9	8.9	8.9	8.8
26.6	**24.8**	9.5	9.5	9.4	9.4	9.4	9.4	8.9
30.2	**28.4**	10.0	10.0	9.9	9.9	9.9	9.7	8.9
32.0	**30.2**	10.3	10.2	10.1	10.1	10.1	9.7	8.9
35.6	**33.8**	10.8	10.7	10.6	10.6	10.3	9.7	8.9
41.0	**39.2**	11.6	11.6	11.3	10.9	10.5	9.8	9.0
47.0	**43.0**	12.1	12.1	11.3	10.9	10.5	9.8	9.0
48.2	**46.0**	12.6	12.1	11.3	10.9	10.5	9.8	9.0
53.6	**51.1**	12.8	12.1	11.3	10.9	10.5	9.8	9.0
59.0	**56.3**	12.8	12.1	11.3	10.9	10.5	9.8	9.0

■ MODEL : ASUA12TLAV

Outdoor Temperature		Indoor temperature						
		61°FDB	64°FDB	68°FDB	70°FDB	72°FDB	75°FDB	79°FDB
(°FDB)	(°FWB)	TC	TC	TC	TC	TC	TC	TC
-2.7	**-4.0**	7.0	7.0	7.0	7.0	7.0	7.0	6.9
5.0	**3.2**	8.1	8.1	8.1	8.0	8.0	8.0	8.0
10.4	**8.6**	9.1	9.0	9.0	9.0	8.9	8.9	8.9
15.8	**14.0**	9.9	9.9	9.8	9.8	9.8	9.8	9.7
17.0	**15.0**	10.1	10.1	10.0	10.0	10.0	9.9	9.9
23.0	**21.2**	11.2	11.2	11.1	11.1	11.0	11.0	10.9
26.6	**24.8**	11.8	11.8	11.7	11.7	11.6	11.6	11.0
30.2	**28.4**	12.4	12.4	12.3	12.2	12.2	12.1	11.0
32.0	**30.2**	12.7	12.6	12.6	12.5	12.5	12.1	11.0
35.6	**33.8**	13.3	13.2	13.2	13.1	12.8	12.1	11.0
41.0	**39.2**	14.4	14.3	14.0	13.5	12.9	12.2	11.2
47.0	**43.0**	15.0	14.9	14.0	13.5	12.9	12.2	11.2
48.2	**46.0**	15.5	15.0	14.0	13.5	12.9	12.2	11.2
53.6	**51.1**	15.8	15.0	14.0	13.5	12.9	12.2	11.2
59.0	**56.3**	15.8	15.0	14.0	13.5	12.9	12.2	11.2

■ MODEL : ASUA14TLAV

Outdoor Temperature		Indoor temperature						
		61°FDB	64°FDB	68°FDB	70°FDB	72°FDB	75°FDB	79°FDB
(°FDB)	(°FWB)	TC	TC	TC	TC	TC	TC	TC
-2.7	**-4.0**	8.1	8.1	8.1	8.1	8.1	8.1	8.0
5.0	**3.2**	9.4	9.4	9.4	9.3	9.3	9.3	9.3
10.4	**8.6**	10.5	10.4	10.4	10.4	10.3	10.3	10.3
15.8	**14.0**	11.5	11.4	11.4	11.4	11.3	11.3	11.2
17.0	**15.0**	11.7	11.6	11.6	11.5	11.5	11.5	11.4
23.0	**21.2**	12.9	12.9	12.8	12.8	12.7	12.7	12.6
26.6	**24.8**	13.6	13.6	13.5	13.5	13.4	13.4	12.7
30.2	**28.4**	14.3	14.3	14.2	14.1	14.1	13.9	12.7
32.0	**30.2**	14.7	14.6	14.5	14.5	14.4	13.9	12.7
35.6	**33.8**	15.4	15.3	15.2	15.2	14.8	13.9	12.7
41.0	**39.2**	16.6	16.5	16.2	15.6	15.0	14.1	12.9
47.0	**43.0**	17.4	17.3	16.2	15.6	15.0	14.1	12.9
48.2	**46.0**	18.0	17.4	16.2	15.6	15.0	14.1	12.9
53.6	**51.1**	18.3	17.4	16.2	15.6	15.0	14.1	12.9
59.0	**56.3**	18.3	17.4	16.2	15.6	15.0	14.1	12.9

TC : Total Capacity kBtu/h.

HEATING CAPACITY in kBtu/h

■ MODEL : ASUB18TLAV

Outdoor Temperature		Indoor temperature						
		61°FDB	64°FDB	68°FDB	70°FDB	72°FDB	75°FDB	79°FDB
(°FDB)	(°FWB)	TC	TC	TC	TC	TC	TC	TC
-2.7	**-4.0**	10.4	10.4	10.4	10.3	10.3	10.3	10.3
5.0	**3.2**	12.1	12.0	12.0	11.9	11.9	11.9	11.9
10.4	**8.6**	13.4	13.4	13.3	13.3	13.2	13.2	13.2
15.8	**14.0**	14.7	14.6	14.6	14.6	14.5	14.4	14.4
17.0	**15.0**	15.0	14.9	14.8	14.8	14.8	14.7	14.6
23.0	**21.2**	16.6	16.5	16.5	16.4	16.3	16.3	16.2
26.6	**24.8**	17.5	17.4	17.3	17.3	17.2	17.2	16.3
30.2	**28.4**	18.4	18.3	18.2	18.1	18.1	17.9	16.3
32.0	**30.2**	18.9	18.7	18.6	18.5	18.5	17.9	16.3
35.6	**33.8**	19.7	19.6	19.5	19.4	19.0	17.9	16.3
41.0	**39.2**	21.3	21.2	20.8	20.0	19.2	18.0	16.5
47.0	**43.0**	22.3	22.1	20.8	20.0	19.2	18.0	16.5
48.2	**46.0**	23.0	22.3	20.8	20.0	19.2	18.0	16.5
53.6	**51.1**	23.4	22.3	20.8	20.0	19.2	18.0	16.5
59.0	**56.3**	23.4	22.3	20.8	20.0	19.2	18.0	16.5

■ MODEL : ASUB24TLAV

Outdoor Temperature		Indoor temperature						
		61°FDB	64°FDB	68°FDB	70°FDB	72°FDB	75°FDB	79°FDB
(°FDB)	(°FWB)	TC	TC	TC	TC	TC	TC	TC
-2.7	**-4.0**	14.1	14.1	14.1	14.0	14.0	14.0	13.9
5.0	**3.2**	16.3	16.2	16.2	16.1	16.1	16.1	16.0
10.4	**8.6**	18.1	18.1	18.0	18.0	17.9	17.9	17.8
15.8	**14.0**	19.8	19.8	19.7	19.7	19.6	19.5	19.4
17.0	**15.0**	20.2	20.1	20.0	19.9	19.9	19.8	19.8
23.0	**21.2**	22.4	22.3	22.2	22.1	22.1	22.0	21.9
26.6	**24.8**	23.6	23.5	23.3	23.3	23.3	23.2	22.1
30.2	**28.4**	24.8	24.7	24.5	24.4	24.4	24.1	22.1
32.0	**30.2**	25.5	25.3	25.1	25.0	25.0	24.1	22.1
35.6	**33.8**	26.7	26.5	26.3	26.2	25.6	24.1	22.1
41.0	**39.2**	28.7	28.6	28.0	27.0	25.9	24.4	22.3
47.0	**43.0**	30.1	29.9	28.0	27.0	25.9	24.4	22.3
48.2	**46.0**	31.1	30.1	28.0	27.0	25.9	24.4	22.3
53.6	**51.1**	31.6	30.1	28.0	27.0	25.9	24.4	22.3
59.0	**56.3**	31.6	30.1	28.0	27.0	25.9	24.4	22.3

TC : Total Capacity kBtu/h.

Refrigerant R410A INVERTER

AIRSTAGE™
Variable Refrigerant Flow System

3. OUTDOOR UNITS

DTV_V2U048E_05--CHAPTER03
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CONTENTS

3. OUTDOOR UNITS

1. SPECIFICATIONS ..... 03 - 01
   1-1. OUTDOOR UNITS ..... 03 - 01
2. DIMENSIONS ..... 03 - 04
   2-1. SINGLE UNIT ..... 03 - 04
   2-2. COMBINATION ..... 03 - 12
3. INSTALLATION SPACE ..... 03 - 16
   3-1. WHEN INSTALLATION IS NEAR LIMITED HEIGHT WALL ..... 03 - 16
   3-2. WHEN INSTALLATION IS NEAR UNLIMITED HEIGHT WALL ..... 03 - 18
   3-3. WHEN THERE IS AN OBSTRUCTION ABOVE THE PRODUCT ..... 03 - 20
   3-4. CONCENTRATED INSTALLATION EXAMPLE ..... 03 - 21
   3-5. INSTALLATION ON EACH FLOOR ..... 03 - 24
4. REFRIGERANT CIRCUIT ..... 03 - 25
5. WIRING DIAGRAM ..... 03 - 27
6. OPERATION RANGE ..... 03 - 28
7. NOISE LEVEL CURVE ..... 03 - 29
8. ELECTRIC CHARACTERISTICS ..... 03 - 32
9. SAFETY DEVICES ..... 03 - 33
10. LOCALLY PURCHASED PARTS ..... 03 - 34
   10-1. AIR DISCHARGE DUCT ..... 03 - 34
   10-2. SNOW HOOD ..... 03 - 36
   10-3. PRESSURE GAUGE ..... 03 - 39
   10-4. CENTRAL DRAIN PAN ..... 03 - 41

1. SPECIFICATIONS

1-1. OUTDOOR UNITS

Nominal system capacity			Ton	6	8	10
Model name				AOUA72RLBV1	AOUA96RLBV1	AOUA120RLBV1
Power source				3Phase ~ 208/230V, 60Hz		
Available voltage range				187 to 253V		
Nominal	Capacity	Cooling	Btu/h	72,000	96,000	120,000
			kW	21.1	28.1	35.2
		Heating	Btu/h	81,000	108,000	135,000
			kW	23.7	31.7	39.6
	Input power *1	Cooling	kW	5.37	7.67	9.86
		Heating		5.39	7.90	10.19
	Current *3 (Rated)	Cooling	A	14.23	20.33	26.14
		Heating		14.29	20.94	27.07
Fan	Type x Quantity			Propeller fan x 1		
	Airflow rate	High	CFM (m^3 / h)	6,533 (11,100)		7,652 (13,000)
	External static pressure (Max)		in.WG (Pa)	0.32 (80)		
	Motor	Type x Quantity		DC motor × 1		
		Output	W	740		
Sound pressure level	Cooling		dB(A)	57	59	61
	Heating			58	59	62
Heat exchanger	Length		in. (mm)	69-5/16 (1,760)		81-1/2 (2,070)
	Fin pitch		FPI (mm)	18 (1.45)		
	Rows x Stages			3 x 60		
	Face area		ft^2. (m^2)	23 (2.2)		28 (2.6)
	Pipe type (Material)			Grooved H-pin (Copper)		
	Fin	Type (Material)		Corrugate (Aluminum)		
		Surface treatment		Corrosion resistance (Blue fin)		
Compressor	Type x Quantity			Rotary (inv) x 1		
	Motor output		kW	7.5		11.0
	Crankcase heater		W	35 X 2		
Refrigerant	Type			R410A		
	Charge		lbs (kg)	25.79 (11.70)		26.01 (11.80)
Refrigerant oil	Type			POE		
Enclosure	Material			Painted galvanized steel		
	Color			Beige (10YR 7.5/1.0NN)		
Dimensions (H x W x D)	Net		in.(mm)	66-9/16 × 36-5/8 × 30-1/8 (1,690 × 930 × 765)		66-9/16 × 48-13/16 × 30-1/8 (1,690 × 1240 × 765)
	Gross			71-5/16 × 39-7/16 × 33-3/8 (1,811 × 1,002 × 847)		71-5/16 × 51-5/8 × 33-3/8 (1,811 × 1,312 × 847)
Weight	Net		lbs (kg)	564 (256)		611 (277)
	Gross			611 (277)		664 (301)
Connection pipe	Pipe diameter	Liquid	in. (mm)	1/2 (12.70)		
		Gas		7/8 (22.22)		1-1/8 (28.58)
	Method	Liquid		Brazing		
		Gas		Brazing		
	Max. length		ft (m)	541 (165)		
	Max. height difference			Outdoor unit Higher: 360 (110)(With Pressure sensor kit) / 164 (50) Lower: 131 (40)		
Operation temperature range	Cooling		°FDB (°CDB)	5 to 115 (-15 to 46) *2		
	Heating			-4 to 70 (-20 to 21)		
Defrost method				Reversed cycle		
Compressor capacity control (Steps / Range)				951 Steps / 20 - 115rps		
Connectable indoor units			Number	16	21	26

Note : Specifications are based on the following conditions.

Cooling : Indoor temperature of 80°F(26.7°C)DB/67°F(19.4°C)WB,and outdoor temperature of 95°F(35.0°C)DB/75°F(23.9°C)WB.

Heating : Indoor temperature of 70°F(21.1°C)DB/60°F(15.6°C)WB,and outdoor temperature of 47°F(8.3°C)DB/43°F(6.1°C)WB.

Pipe length : 25ft.(7.5 m), Height difference : 0ft.(0 m) (Outdoor unit - Indoor unit).

*1: Electrical data is only for outdoor unit.

*2: If multiple outdoor units are used, operating range: 23 to 115°F (-5 to 46°C)

*3: Refer to the section Chapter 6 "4-2 power supply cable wiring" when selecting the circuit breaker.

Built-in protective functions may limit capacity or shut off unit if unit is operated outside of unit design operating temperature ranges.

OUTDOOR UNITS

OUTDOOR UNITS

Nominal system capacity			Ton	12	14	16	18
Set model name				AOUA144RLBVG1	AOUA168RLBVG1	AOUA192RLBVG1	AOUA216RLBVG1
Model name (combination)				AOUA72RLBV1 AOUA72RLBV1	AOUA96RLBV1 AOUA72RLBV1	AOUA120RLBV1 AOUA72RLBV1	AOUA120RLBV1 AOUA96RLBV1
Power source				3Phase ~ 208/230V, 60Hz			
Available voltage range				187 to 253V			
Nominal	Capacity	Cooling	Btu/h	144,000	168,000	192,000	216,000
			kW	42.2	49.2	56.2	63.3
		Heating	Btu/h	162,000	188,000	216,000	243,000
			kW	47.5	55.1	63.3	71.2
	Input power *1	Cooling	kW	11.80	14.20	16.04	18.47
		Heating		12.81	14.69	15.65	19.07
Fan	Type x Quantity			Propeller fan x 2			
	Airflow rate	High	CFM (m^3 / h)	6,533 × 2 (11,100 × 2)		7,652 + 6,533 (13,000 + 11,100)	
	External static pressure (Max)		in.WG (Pa)	0.32 (80)			
	Motor	Type x Quantity		DC motor × 2			
		Output	W	740 × 2			
Sound pressure level	Cooling		dB(A)	60	61	62	63
	Heating			61	62	63	64
Heat exchanger	Length		in. (mm)	69-5/16 × 2 (1,760 × 2)		81-1/2 + 69-5/16 (2,070 + 1,760)	
	Fin pitch		FPI (mm)	18 (1.45)			
	Rows x Stages			(3 x 60) × 2			
	Face area		ft^2 (m^2)	23 × 2 (2.2 × 2)		28 + 23 (2.6 + 2.2)	
	Pipe type (Material)			Grooved H-pin (Copper)			
	Fin	Type (Material)		Corrugate (Aluminum)			
		Surface treatment		Corrosion resistance (Blue fin)			
Compressor	Type x Quantity			(Rotary (inv) x 1) × 2			
	Motor output		kW	7.5 × 2		11.0 + 7.5	
	Crankcase heater		W	(35 × 2) × 2			
Refrigerant	Type			R410A			
	Charge		lbs (kg)	25.79 × 2 (11.70 × 2)		26.01 + 25.79 (11.80 + 11.70)	
Refrigerant oil	Type			POE			
Enclosure	Material			Painted galvanized steel			
	Color			Beige (10YR 7.5/1.0NN)			
Dimensions (H x W x D)	Net		in.(mm)	(66-9/16 × 36-5/8 × 30-1/8) × 2 ((1,690 × 930 × 765) × 2)		66-9/16 × 48-13/16 × 30-1/8 (1,690 × 1,240 × 765) 66-9/16 × 36-5/8 × 30-1/8 (1,690 × 930 × 765)	
	Gross			(71-5/16 × 39-7/16 × 33-3/8) × 2 ((1,811 × 1,002 × 847) × 2)		71-5/16 × 51-5/8 × 33-3/8 (1,811 × 1,312 × 847) 71-5/16 × 39-7/16 × 33-3/8 (1,811 × 1,002 × 847)	
Weight	Net		lbs (kg)	564 × 2 (256 × 2)		611 + 564 (277 +256)	
	Gross			611 × 2 (277 × 2)		664 + 611 (301 +277)	
Connection pipe	Pipe diameter	Liquid	in. (mm)	1/2 (12.70)	5/8 (15.88)		
		Gas		1-1/8 (28.58)			1-3/8 (34.92)
	Method	Liquid		Brazing			
		Gas		Brazing			
	Max. length		ft (m)	541 (165)			
	Max. height difference			Outdoor unit Higher: 360 (110)(With Pressure sensor kit) / 164 (50) Lower: 131 (40)			
Operation temperature range	Cooling		°FDB (°CDB)	23 to 115 (-5 to 46)			
	Heating			-4 to 70 (-20 to 21)			
Defrost method				Reversed cycle			
Connectable indoor units			Number	32	37	42	47

Note : Specifications are based on the following conditions.

Cooling : Indoor temperature of 80°F(26.7°C)DB/67°F(19.4°C)WB,and outdoor temperature of 95°F(35.0°C)DB/75°F(23.9°C)WB.

Heating : Indoor temperature of 70°F(21.1°C)DB/60°F(15.6°C)WB,and outdoor temperature of 47°F(8.3°C)DB/43°F(6.1°C)WB.

Pipe length : 25ft.(7.5 m), Height difference : 0ft.(0 m) (Outdoor unit - Indoor unit).

*1: Electrical data is only for outdoor unit.

The protective function might work when using it outside the operation range.

OUTDOOR UNITS

Nominal system capacity			Ton	20	22	24
Set model name				AOUA240RLBVG1	AOUA264RLBVG1	AOUA288RLBVG1
Model name (combination)				AOUA120RLBV1 AOUA120RLBV1	AOUA96RLBV1 AOUA96RLBV1 AOUA72RLBV1	AOUA96RLBV1 AOUA96RLBV1 AOUA96RLBV1
Power source				3Phase ~ 460V, 60Hz		
Available voltage range				414 to 506V		
Nominal	Capacity	Cooling	Btu/h	240,000	264,000	288,000
			kW	70.3	77.4	84.4
		Heating	Btu/h	270,000	297,000	324,000
			kW	79.1	87.0	95.0
	Input power *1	Cooling	kW	20.45	22.58	25.27
		Heating		21.90	23.41	26.28
Fan	Type x Quantity			Propeller fan x 2	Propeller fan x 3	
	Airflow rate	High	CFM (m^3 / h)	7,652 × 2 (13,000 × 2)	6,533 × 3 (11,100 × 3)	
	External static pressure (Max)		in.WG (Pa)	0.32 (80)		
	Motor	Type x Quantity		DC motor × 2	DC motor × 3	
		Output	W	740 × 2	750 × 3	
Sound pressure level	Cooling		dB(A)	64	63	64
	Heating			65	63	64
Heat exchanger	Length		in. (mm)	81-1/2 × 2 (2,070 × 2)	69-5/16 × 3 (1,760 × 3)	
	Fin pitch		FPI (mm)	18 (1.45)		
	Rows x Stages			(3 x 60) × 2	(3 x 60) × 3	
	Face area		ft^2 (m^2)	28 × 2 (2.6 × 2)	23 × 3 (2.2 × 3)	
	Pipe type (Material)			Grooved H-pin (Copper)		
	Fin	Type (Material)		Corrugate (Aluminum)		
		Surface treatment		Corrosion resistance (Blue fin)		
Compressor	Type x Quantity			(Rotary (inv) x 1) × 2	(Rotary (inv) x 1) × 3	
	Motor output		kW	11.0 × 2	7.5 × 3	
	Crankcase heater		W	(35 × 2) × 2	(35 × 2) × 3	
Refrigerant	Type			R410A		
	Charge		lbs (kg)	26.01 × 2 (11.80 × 2)	25.79 × 3 (11.7 × 3)	
Refrigerant oil	Type			POE		
Enclosure	Material			Painted galvanized steel		
	Color			Beige (10YR 7.5/1.0NN)		
Dimensions (H x W x D)	Net		in.(mm)	(66-9/16 × 48-13/16 × 30-1/8) × 2 ((1,690 × 1,240 × 765) × 2)	(66-9/16 × 36-5/8 × 30-1/8) × 3 ((1,690 × 930 × 765) × 3)	
	Gross			(71-5/16 × 51-5/8 × 33-3/8) × 2 ((1,811 × 1,312 × 847) × 2)	(71-5/16 × 39-7/16 × 33-3/8) × 3 ((1,811 × 1,002 × 847) × 3)	
Weight	Net		lbs (kg)	611 × 2 (277 × 2)	564 × 3 (256 × 3)	
	Gross			664 × 2 (301 × 2)	611 × 3 (277 × 3)	
Connection pipe	Pipe diameter	Liquid	in. (mm)	5/8 (15.88)		3/4(19.05)
		Gas		1-3/8 (34.92)		
	Method	Liquid		Brazing		
		Gas		Brazing		
	Max. length		ft (m)	541 (165)		
	Max. height difference			Outdoor unit Higher: 360 (110)(With Pressure sensor kit) / 164 (50) Lower: 131 (40)		
Operation temperature range	Cooling		°FDB (°CDB)	23 to 115 (-5 to 46)		
	Heating			-4 to 70 (-20 to 21)		
Defrost method				Reversed cycle		
Connectable indoor units			Number	52	58	63

Note : Specifications are based on the following conditions.

Cooling : Indoor temperature of 80°F(26.7°C)DB/67°F(19.4°C)WB,and outdoor temperature of 95.0°F(35°C)DB/75°F(23.9°C)WB.

Heating : Indoor temperature of 70°F(21.1°C)DB/60°F(15.6°C)WB,and outdoor temperature of 47°F(8.3°C)DB/43°F(6.1°C)WB.

Pipe length : 25ft.(7.5 m), Height difference : 0ft.(0 m) (Outdoor unit - Indoor unit).

*1: Electrical data is only for outdoor unit.

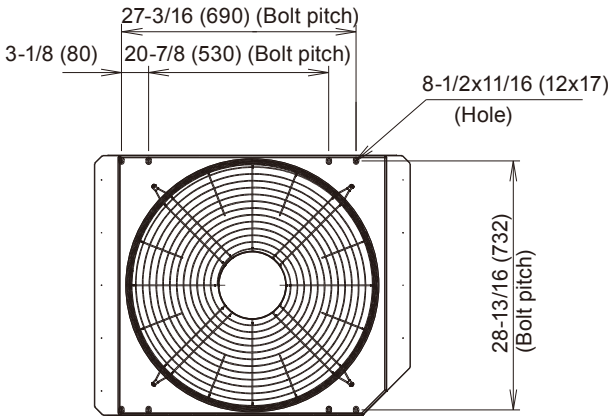
The protective function might work when using it outside the operation range.

2. DIMENSIONS

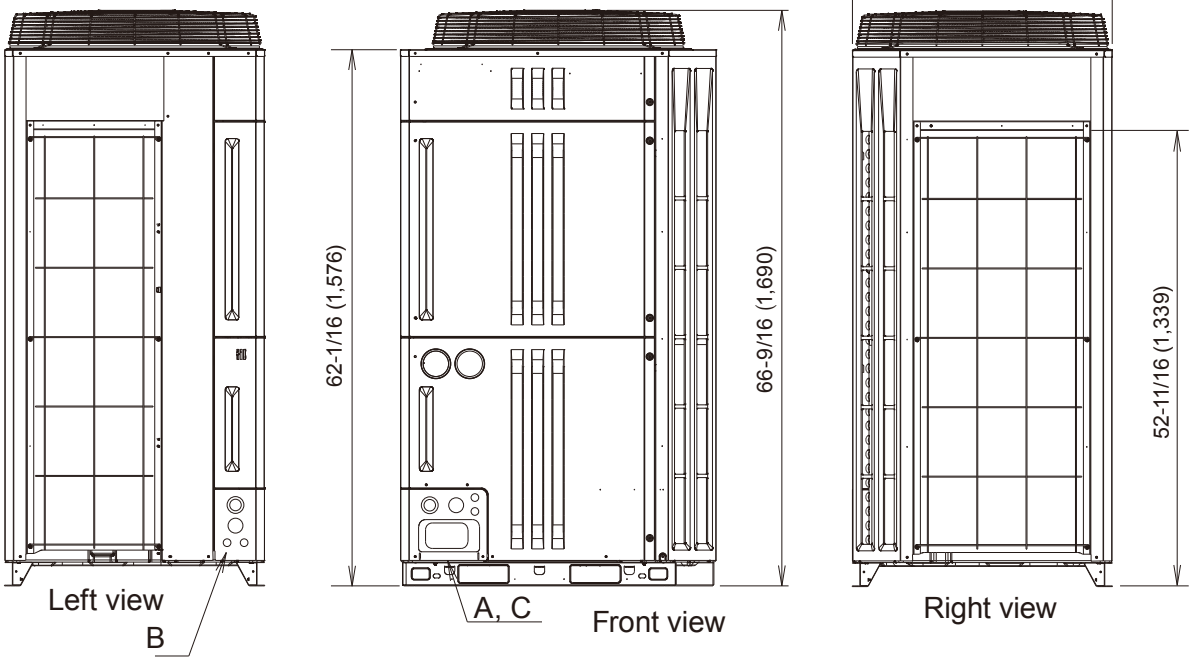
2-1. SINGLE UNIT

■ MODELS : AOUA72RLBV1, AOUA96RLBV1

(Unit : in. (mm))



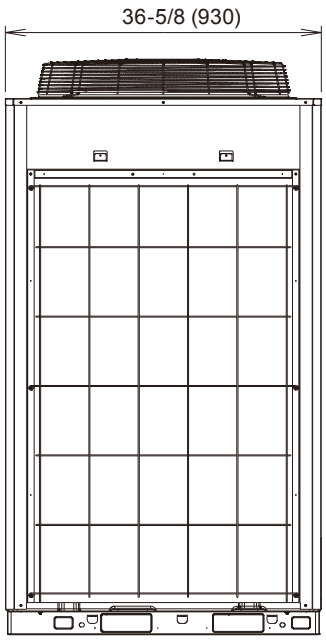
Top view



Left view

Front view

Right view

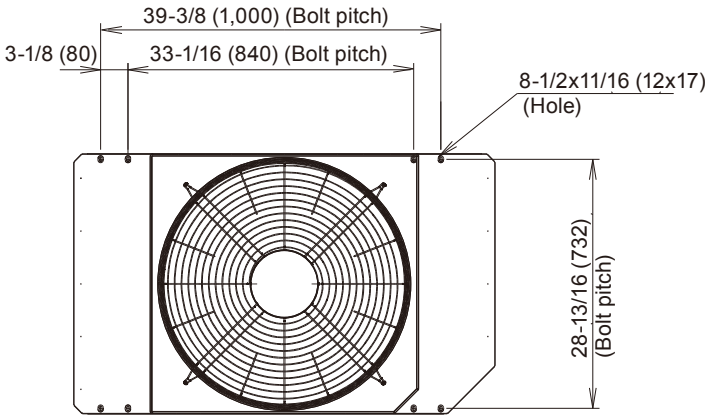


Rear view

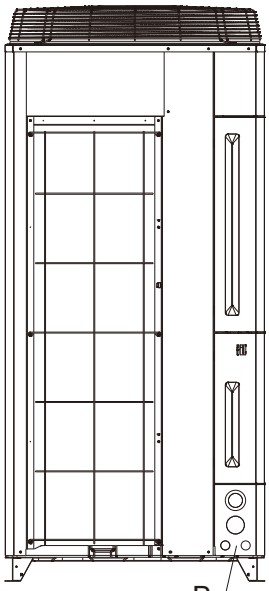
OUTDOOR UNITS

■ MODELS : AOUA120RLBV1

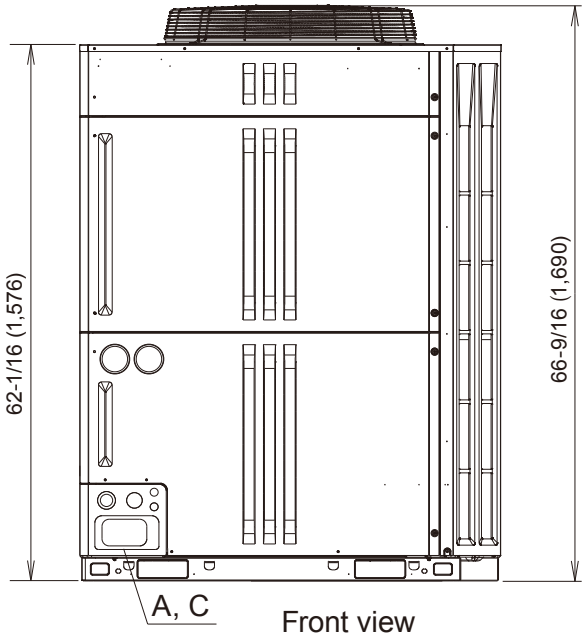
Unit : in.(mm)



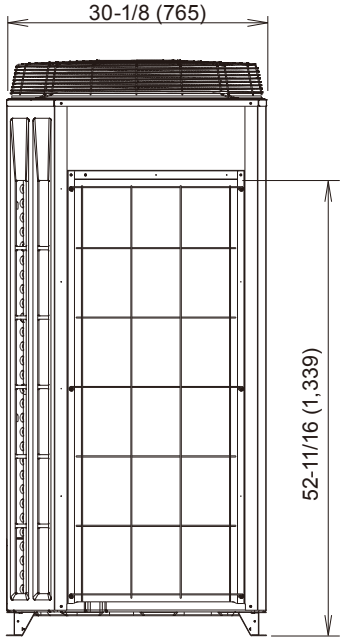
Top view



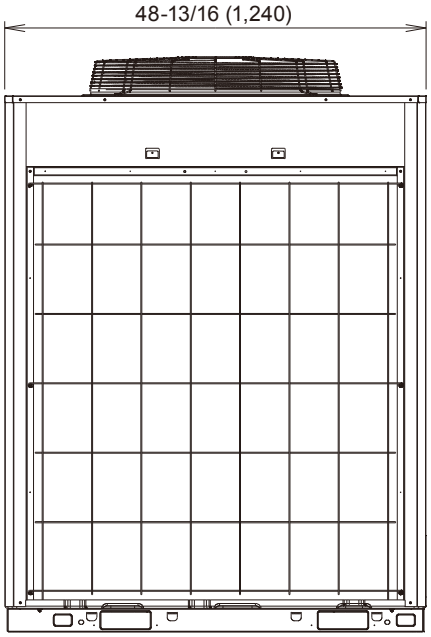
Left view



Front view



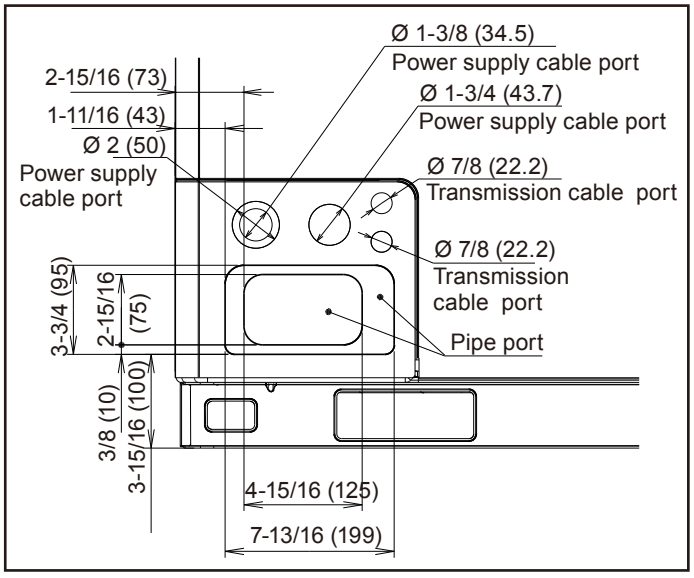
Right view



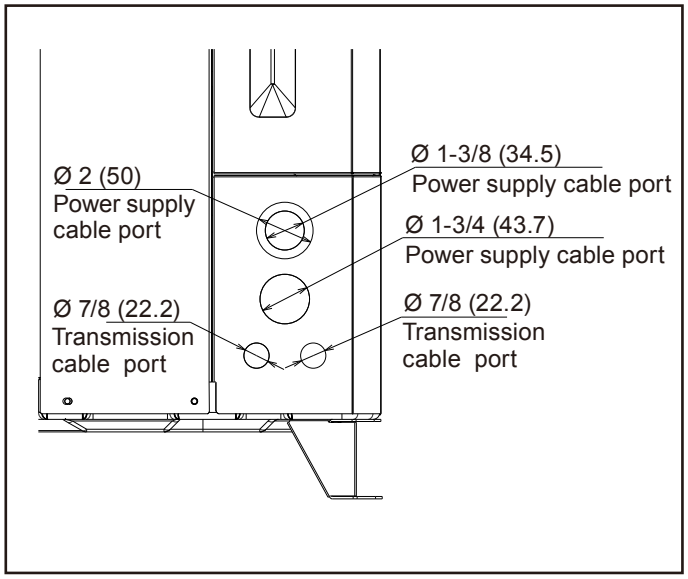
Rear view

■ KNOCKOUT HOLE POSITION

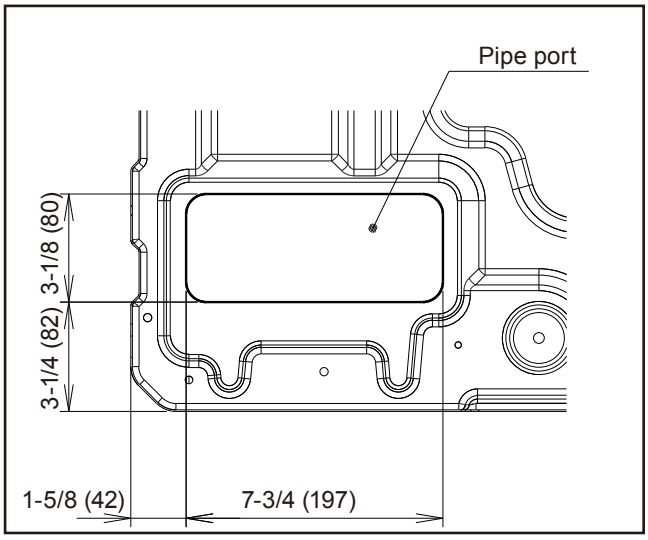
(Unit : mm)



Detail A : Front view



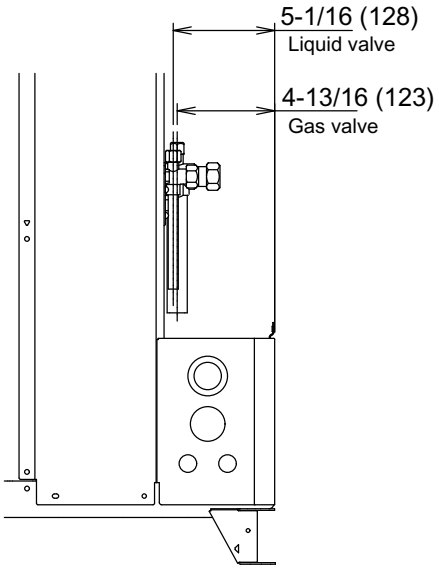
Detail B : Left view



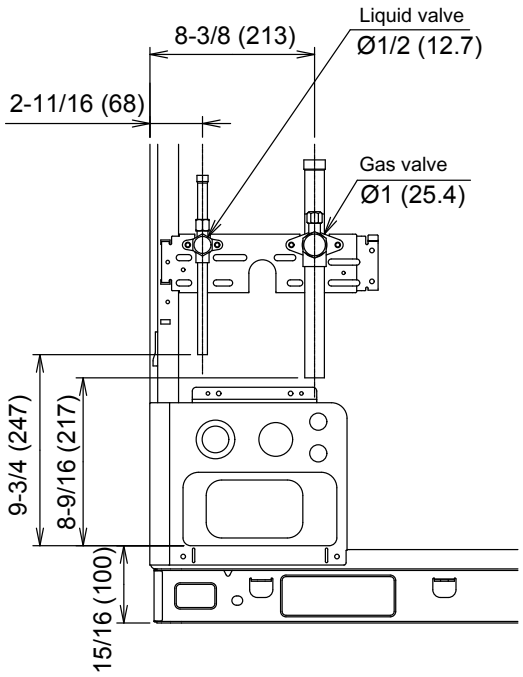
Detail C : Top view

■ VALVE POSITION

(Unit : mm)



Left view



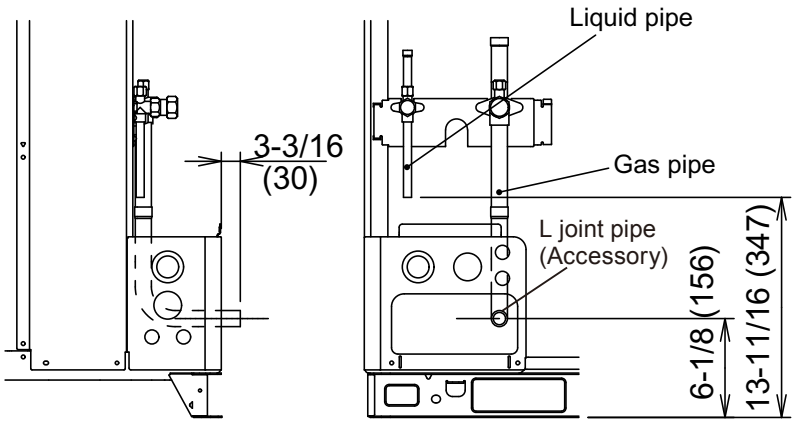
Front view

OUTDOOR UNITS

■ ACCESSORY PIPE

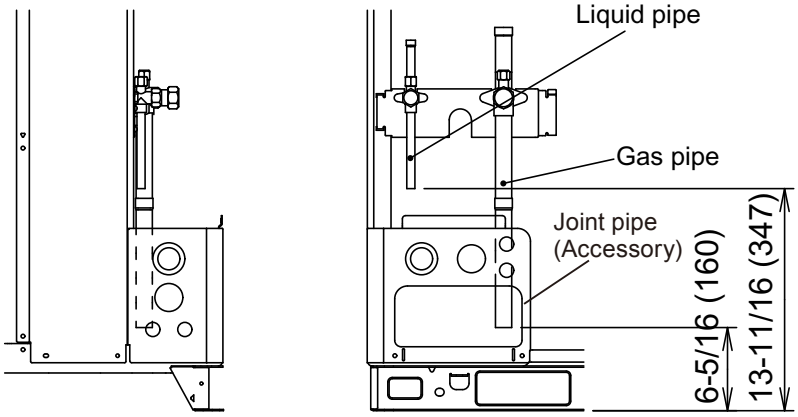
(Unit : mm)

● Front piping



Left view　　Front view

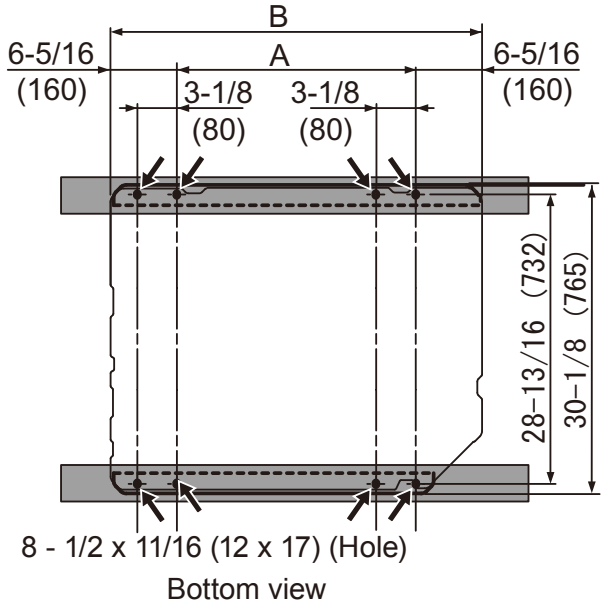
● Bottom piping



Left view　　Front view

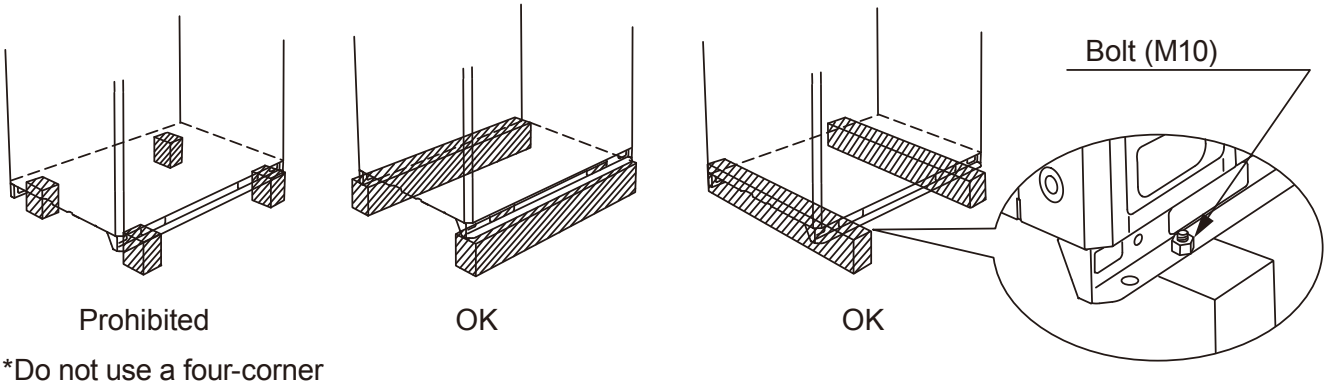
■ INSTALLATION (FOUNDATION)

Unit : in. (mm)

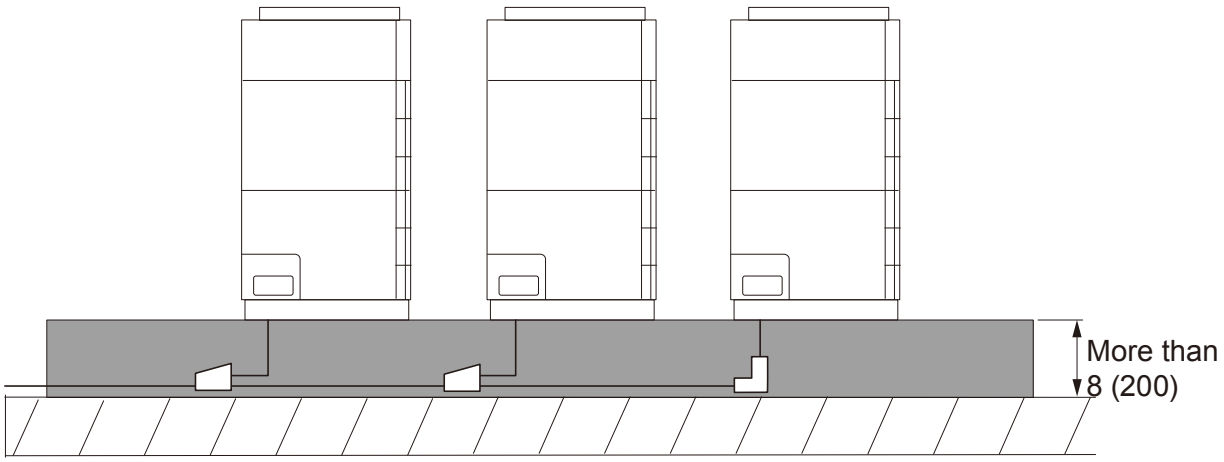


Model	A	B
AOUA72RLBV1	24 (610)	36-5/8 (930)
AOUA96RLBV1	24 (610)	36-5/8 (930)
AOUA120RLBV1	36-1/4 (920)	48-13/16 (1240)

Installation example



*Do not use a four-corner support foundation.



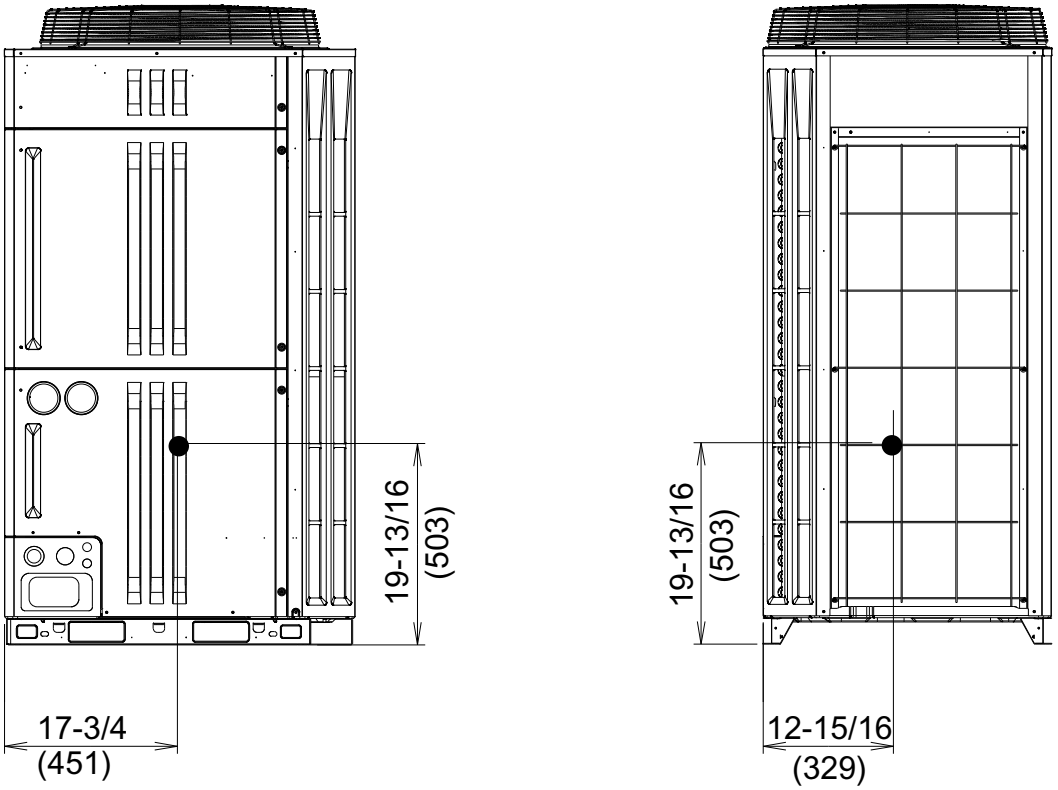
When installing pipe from the bottom of the outdoor units, the required space under the outdoor unit should be ≥ 8 (200).

OUTDOOR UNITS

■ CENTER OF GRAVITY POSITION

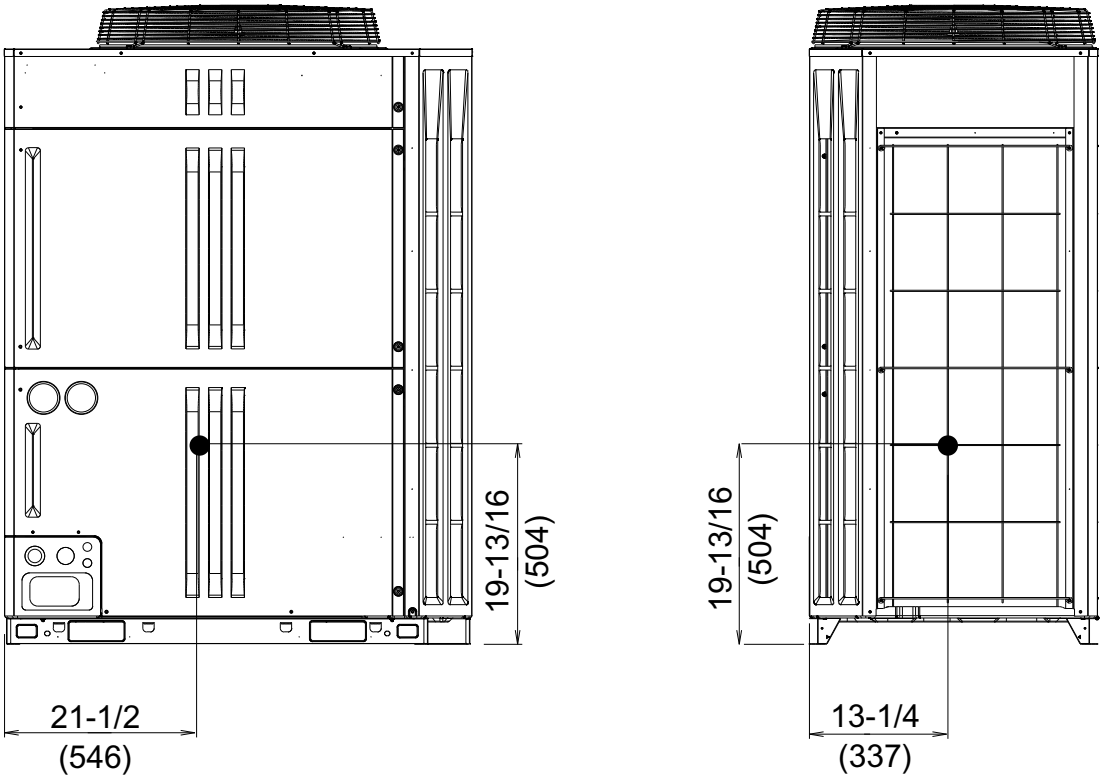
Unit : in. (mm)

● Models : AOUA72RLBV1, AOUA96RLBV1



● : Center of gravity

● Models : AOUA120RLBV1



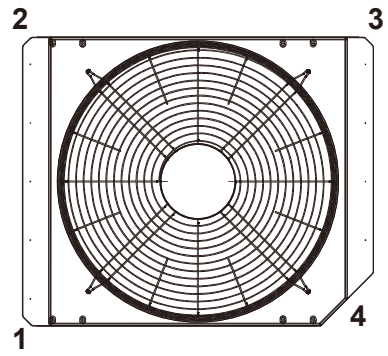
● : Center of gravity

OUTDOOR UNITS

■ CORNER WEIGHTS

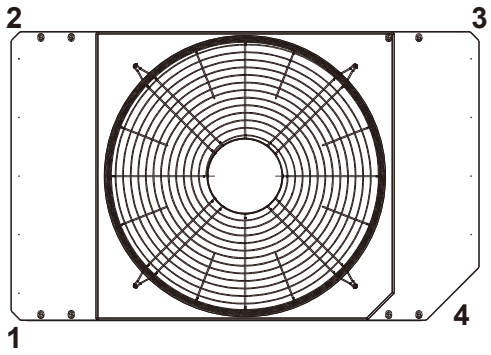
Unit : lbs (kg)

● Models : AOUA72RLBV1, AOUA96RLBV1



Model	1	2	3	4	Total
AOUA72RLBV1	161 (73)	130 (59)	112 (51)	161 (73)	564 (256)
AOUA96RLBV1					

● Models : AOUA120RLBV1



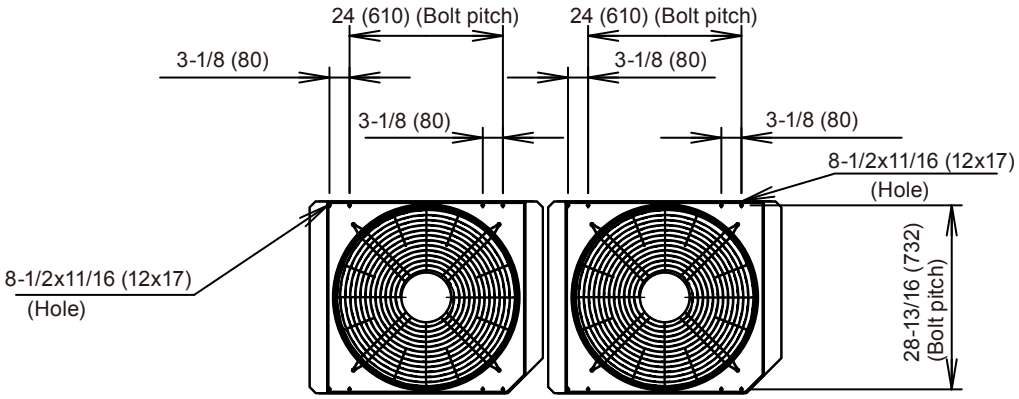
Model	1	2	3	4	Total
AOUA120RLBV1	187 (85)	154 (70)	115 (52)	154 (70)	611 (277)

2-2. COMBINATION

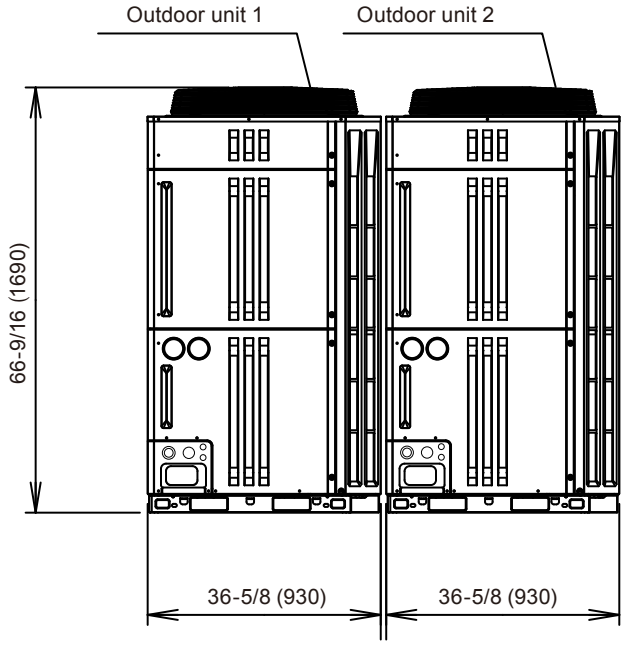
Set model name	Outdoor unit1	Outdoor unit2
AOUA144RLBVG1 (12Ton)	6Ton	6Ton
AOUA168RLBVG1 (14Ton)	8Ton	6Ton

OUTDOOR UNITS

Unit : in. (mm)



Top view

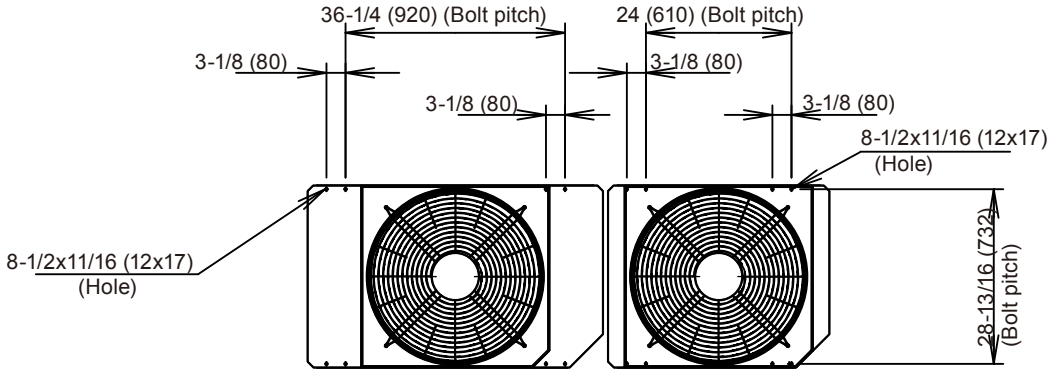


Front view

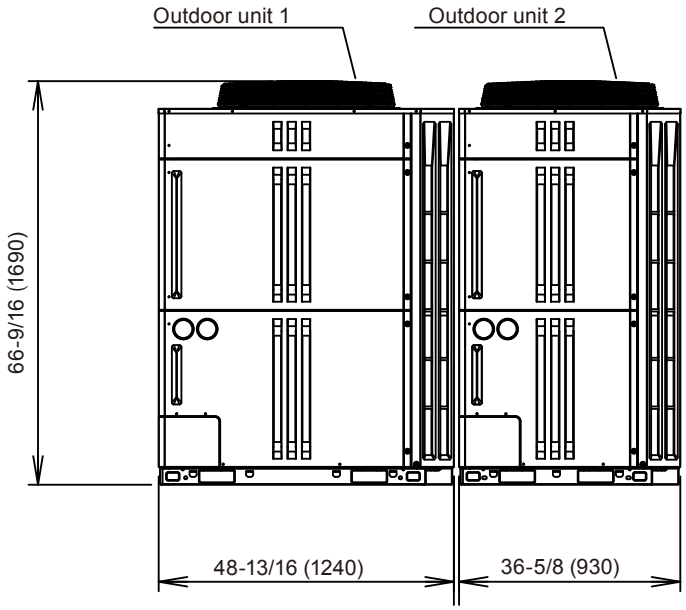
OUTDOOR UNITS

Set model name	Outdoor unit1	Outdoor unit2
AOUA192RLBVG1 (16Ton)	10Ton	6Ton
AOUA216RLBVG1 (18Ton)	10Ton	8Ton

Unit : in. (mm)



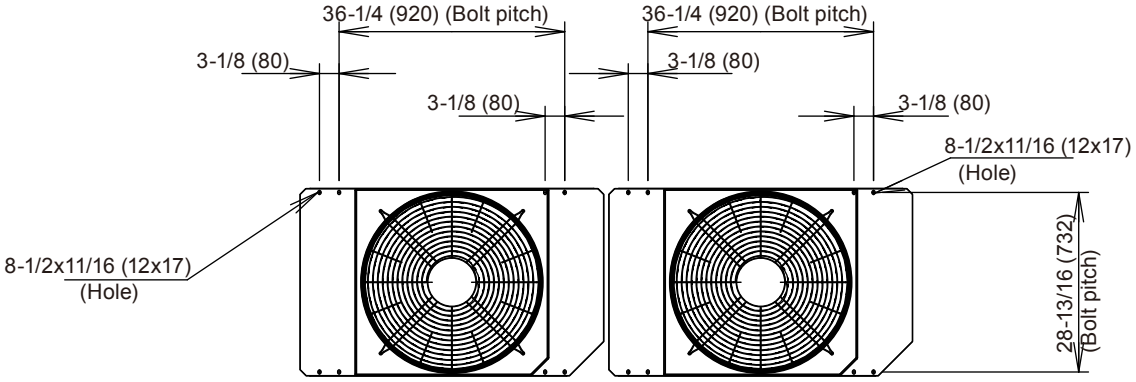
Top view



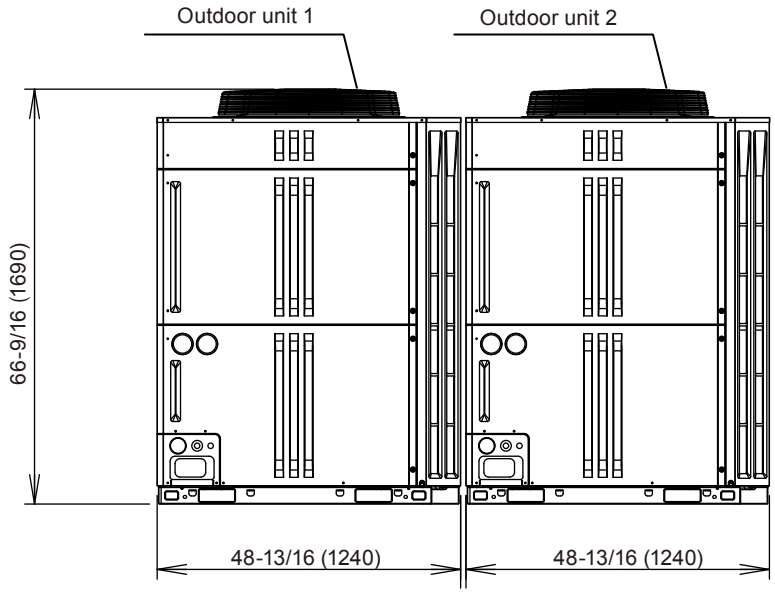
Front view

Set model name	Outdoor unit1	Outdoor unit2
AOUA240RLBVG1 (20Ton)	10Ton	10Ton

Unit : in. (mm)



Top view

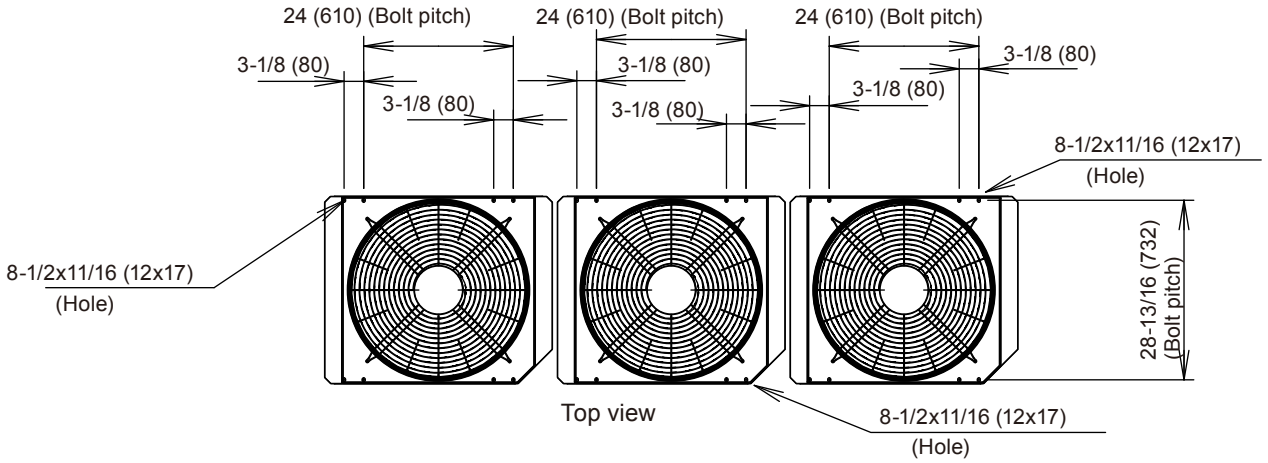


Front view

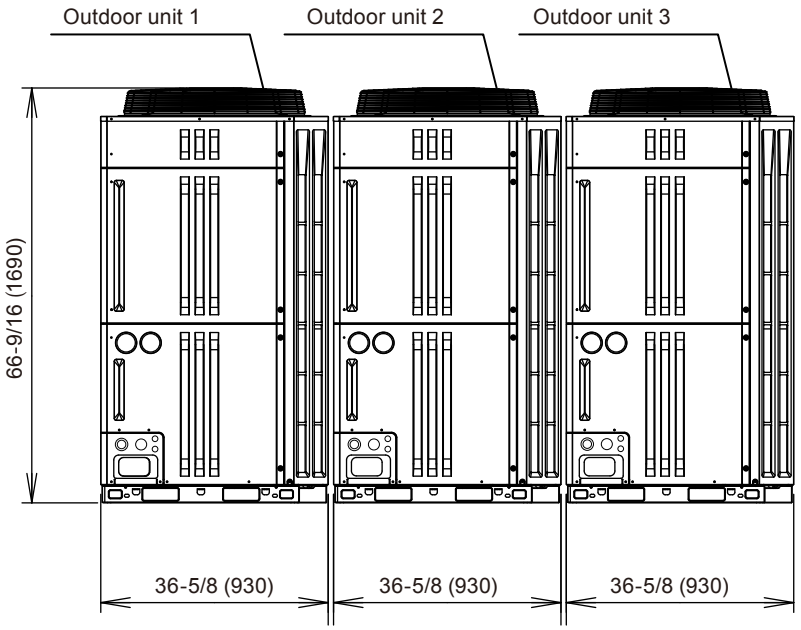
Set model name	Outdoor unit1	Outdoor unit2	Outdoor unit3
AOUA264RLBVG1 (22Ton)	8Ton	8Ton	6Ton
AOUA288RLBVG1 (24Ton)	8Ton	8Ton	8Ton

OUTDOOR UNITS

(Unit : in. (mm))



Top view



Front view

3. INSTALLATION SPACE

⚠ Caution

When installing the outdoor unit, pay attention to the following items.

- To prevent shut down due to discharge air short circuiting, reduction in capacity and high pressure protection, refer to the installation space requirements shown in the following diagrams in order to provide sufficient space.
- Provide sufficient space to allow for rigging and setting of unit, installation, maintenance and access.
- Do not obstruct discharge air flow. Provide discharge duct if required for proper air discharge.
- If there is a wall in front of the unit, provide 20 in. (500mm) or more clearance for maintenance.
- If there is a wall on the left side of the unit, provide 2 in. (30mm) or more clearance for maintenance.
- When installing units, provide sufficient space for refrigerant piping.

OUTDOOR UNITS

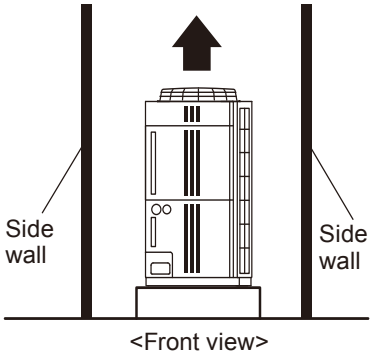
3-1. WHEN INSTALLATION IS NEAR LIMITED HEIGHT WALL

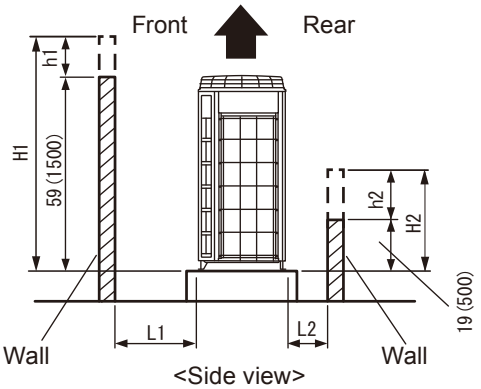
■ SINGLE AND MULTIPLE INSTALLATIONS

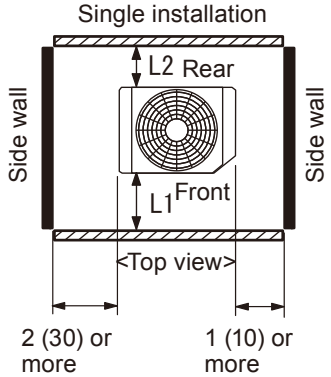
- There are no restrictions on the height of the side wall.
- Provide installation spaces L1 and L2 in accordance with the table below according to the wall height (front side, rear side) conditions.
- Provide installation spaces other than L1 and L2 in accordance with the conditions shown in the figure below.
- Air flow resistance can be ignored when the distance from a wall or other equipment is more than 79 in. (2m)

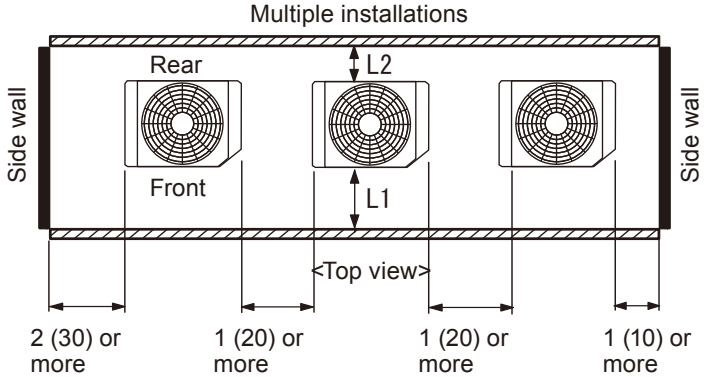
Unit : in. (mm)

Wall height condition	Necessary installation space
When H1 is 59 (1500) or less	L1 ≥ 20 (500)
When H1 is 59 (1500) or more	L1 ≥ 20 (500) + h1 ÷ 2
When H2 is 19 (500) or less	L2 ≥ 4 (100)
When H2 is 19 (500) or more	L2 ≥ 4 (100) + h2 ÷ 2







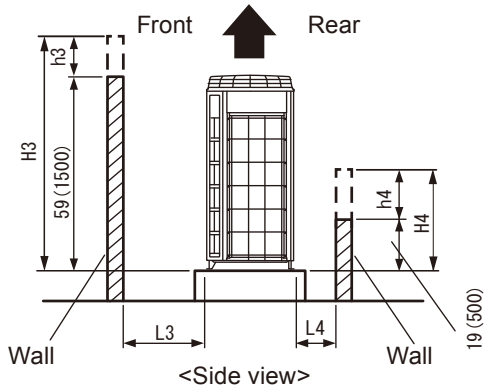


■ CONCENTRATED INSTALLATION

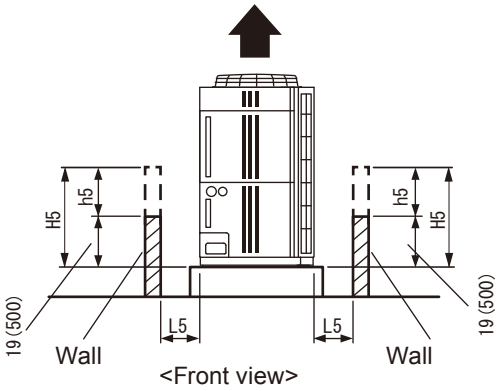
- Provide installation spaces L3, L4, and L5 in accordance with the table below according to the wall height (front side, rear side) conditions.
- Provide installation spaces other than L3, L4, and L5 in accordance with the conditions shown in the figure below.
- Air flow resistance can be ignored when the distance from a wall or other equipment is more than 79 in. (2m)

Unit : in. (mm)

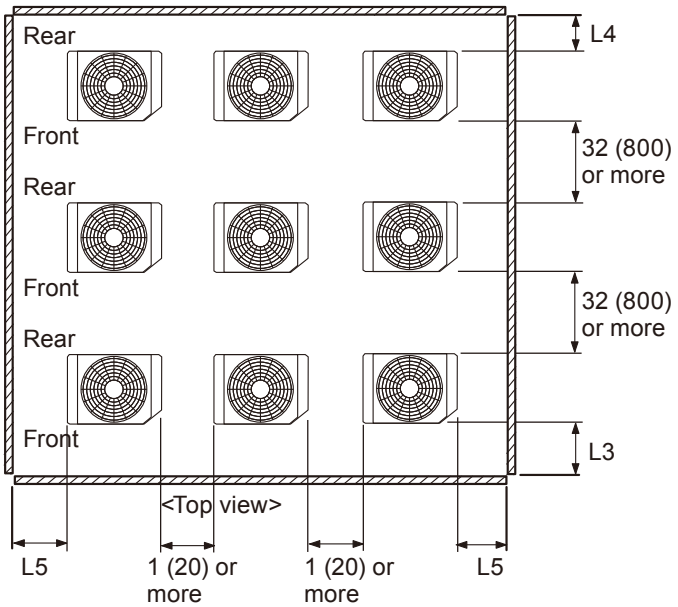
Wall height condition	Necessary installation space
When H3 is 59 (1500) or less	L3 ≥ 20 (500)
When H3 is 59 (1500) or more	L3 ≥ 20 (500) + h3 ÷ 2
When H4 is 19 (500) or less	L4 ≥ 8 (200)
When H4 is 19 (500) or more	L4 ≥ 8 (200) + h4 ÷ 2
When H5 is 19 (500) or less	L5 ≥ 8 (200)
When H5 is 19 (500) or more	L5 ≥ 8 (200) + h5 ÷ 2

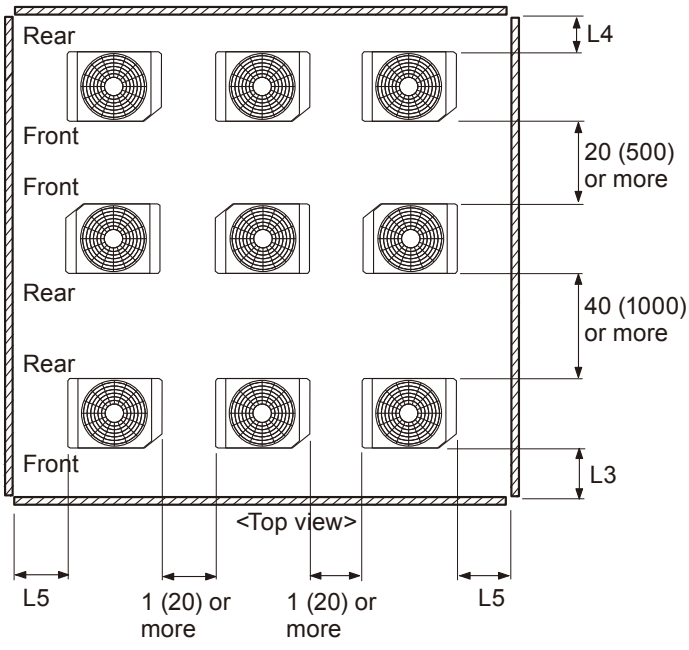


<Side view>



<Front view>





3-2. WHEN INSTALLATION IS NEAR UNLIMITED HEIGHT WALL

■ SINGLE AND MULTIPLE INSTALLATIONS

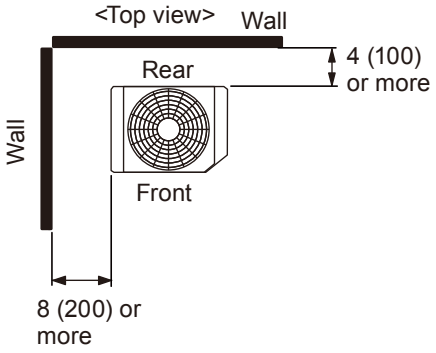
- There are no restrictions on the height of the wall.
- The wall (without height restrictions) must not exist on both left and right sides of the outdoor unit.
- Also, the wall must not exist on both the front and rear of the outdoor unit.
- Provide installation spaces other than L6 in accordance with the conditions shown in the figure below.
- Air flow resistance can be ignored when the distance from a wall or other equipment is more than 79 in. (2m)

● When installing with the REAR of the outdoor unit facing the wall side

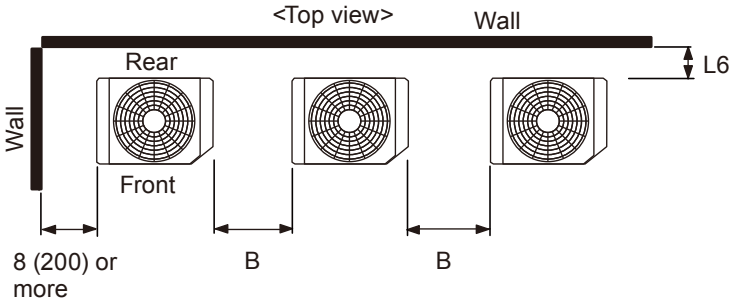
Condition	Necessary installation space
When B ≥ 16 (400)	L6 ≥ 8 (200)
When 1 (20) ≤ B < 16 (400)	L6 ≥ 8 (200) + (16 (400) - B) x 3

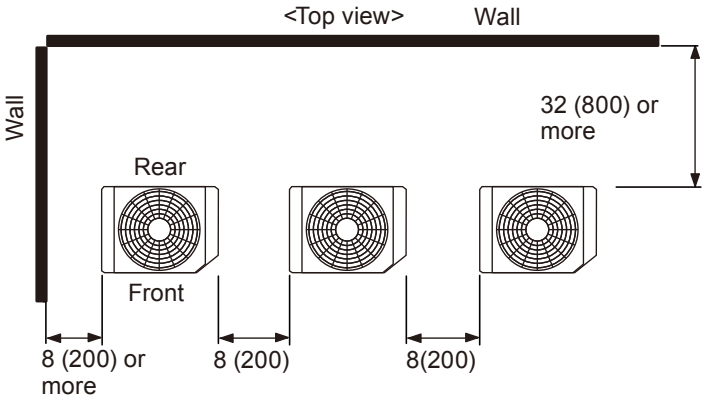
Unit : in. (mm)

Single installation



Multiple installations





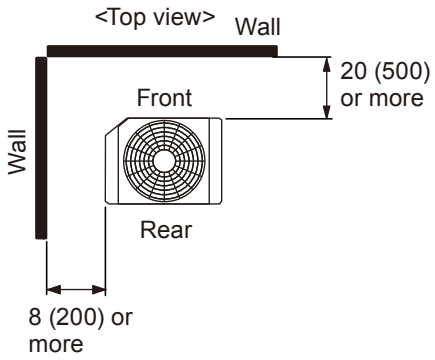
Example :

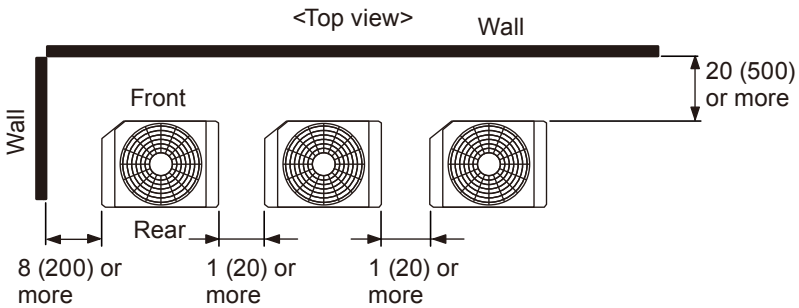
When B is made 8 (200)

L6 ≥ 8 + (16 - 8) x 3 = 32

(200 + (400 - 200) x 3 = 800)

● When installing with the FRONT of the outdoor unit facing the wall side

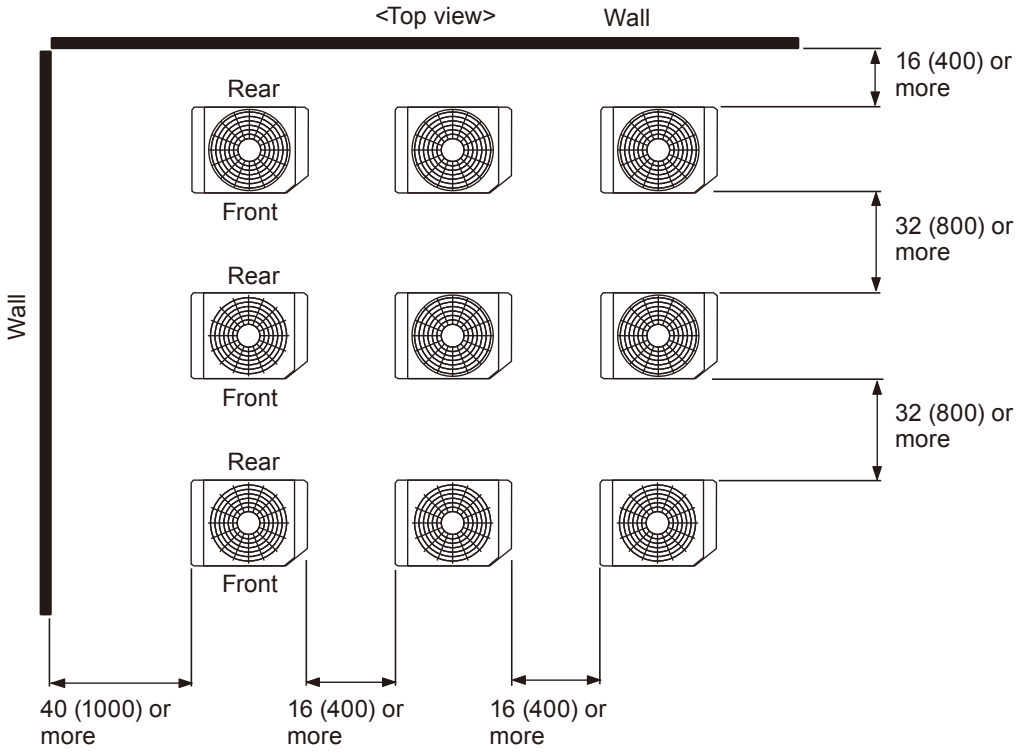


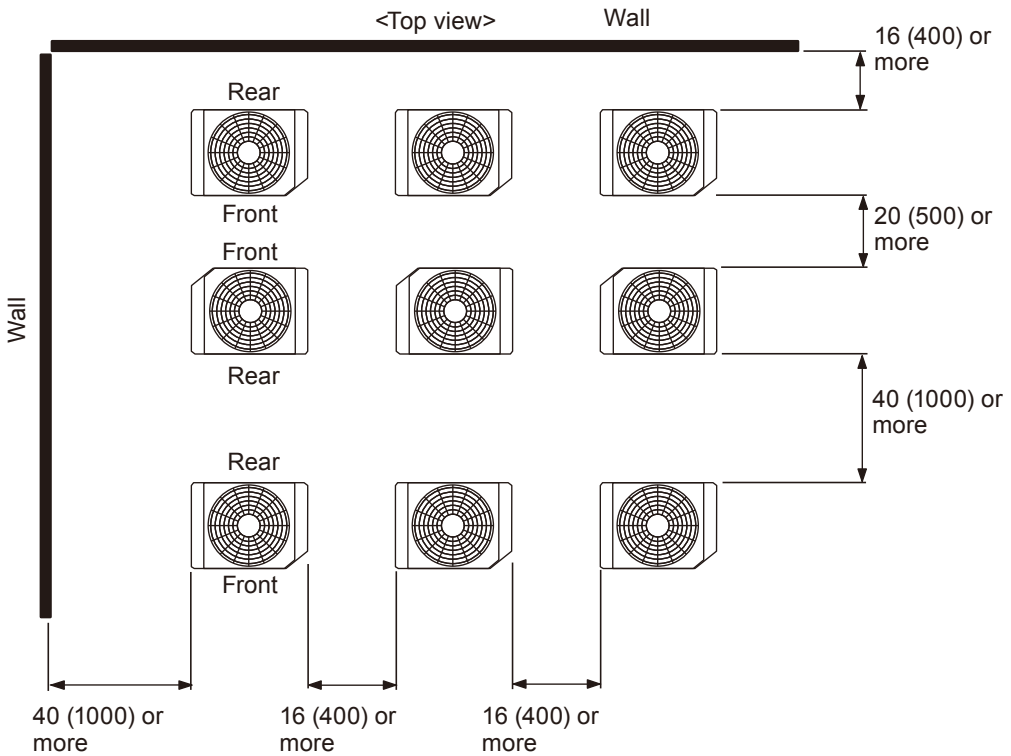


■ CONCENTRATED INSTALLATION

- The wall (without height restrictions) must not exist on both left and right sides of the outdoor unit. Also, the wall must not exist on both the front and rear of the outdoor unit.
- Air flow resistance can be ignored when the distance from a wall or other equipment is more than 79 in. (2m)

Unit : in. (mm)





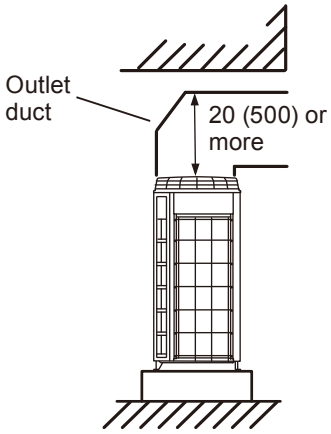
OUTDOOR UNITS

3-3. WHEN THERE IS AN OBSTRUCTION ABOVE THE PRODUCT

● For Side Outlet Installation

- When there is an obstruction above the product, observe the minimum installation height and install an outlet duct as shown in the figure.
- When an outlet duct, etc. is installed; the high static pressure mode must be set by pushbutton switch.
  (Also applies when a snow hood is installed)

Unit : in. (mm)



● High static pressure mode setting

Select the high static pressure mode in accordance with the table below.

Unit : in.WG (Pa)

Condition	High static pressure mode setting *2
Static Pressure(SP) *1 : 0 (0) ≤ SP ≤ 0.12 (30)	Set to Mode 1
Static Pressure(SP) *1 : 0.12 (30) < SP ≤ 0.32 (80)	Set to Mode 2

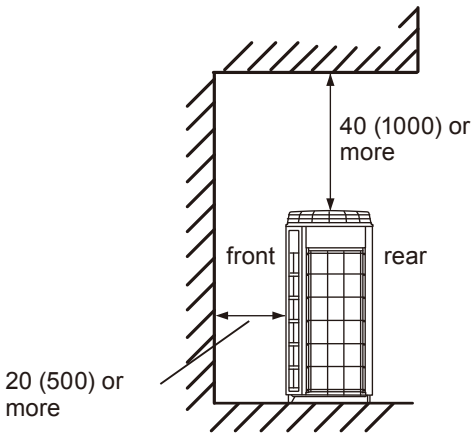
*1 : Static pressure is the air flow resistance that includs the discharge duct resistance & the other additional resistance like discharge grille and so on.

*2 : Refer to the section on Push Switch Setting in "chapter 7. 2.FUNCTION SETTING".

● When an outlet duct is not installed, install the product as shown below.

1) Provide 40in. (1m) or greater clearance to ceiling
2) Do not locate wall at rear of unit
3) Up to three units maximum can be installed in this configuration

Unit : in. (mm)



3-4. CONCENTRATED INSTALLATION EXAMPLE

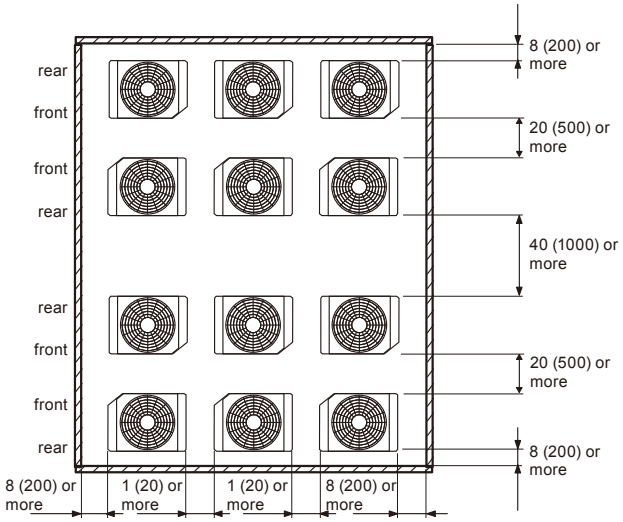
- When installing units in a group, in order to avoid short circuiting that could reduce capacity or cause a shutdown, install units with clearances equal to or greater than shown below.
- To prevent short circuiting, consider elevating the units and provide openings at the bottom of the wall for airflow. When installing more than the number of units shown below, contact your distributor or representative for installation recommendations.

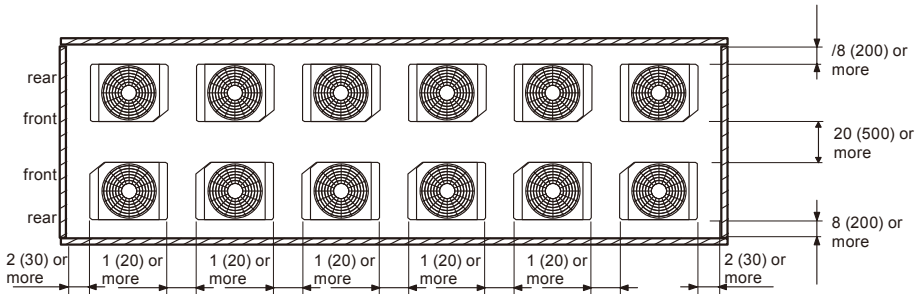
■ CONCENTRATED INSTALLATION EXAMPLE (1)

*Wall height: All 20 (500)

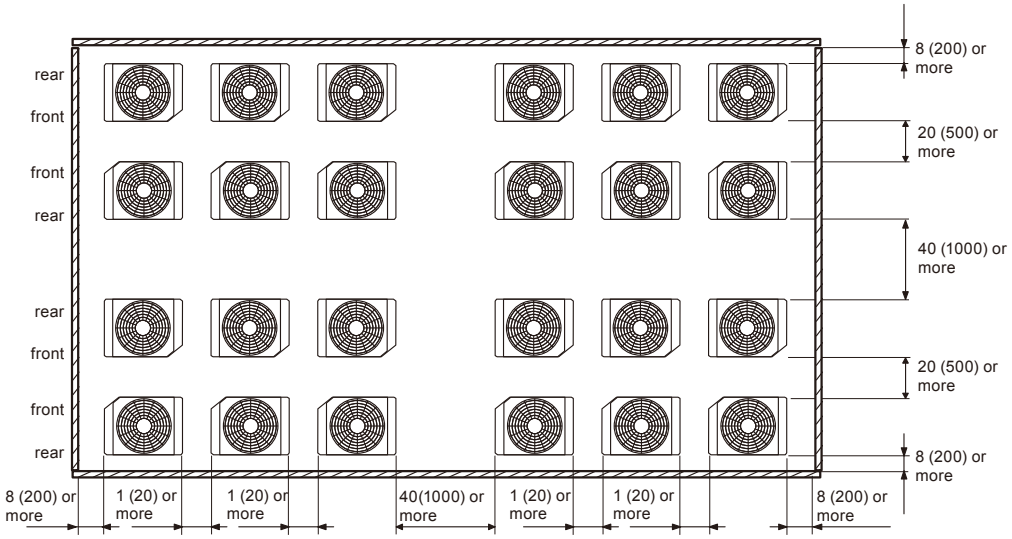
Unit : in. (mm)

● 12 units installation example





● 24 units installation example



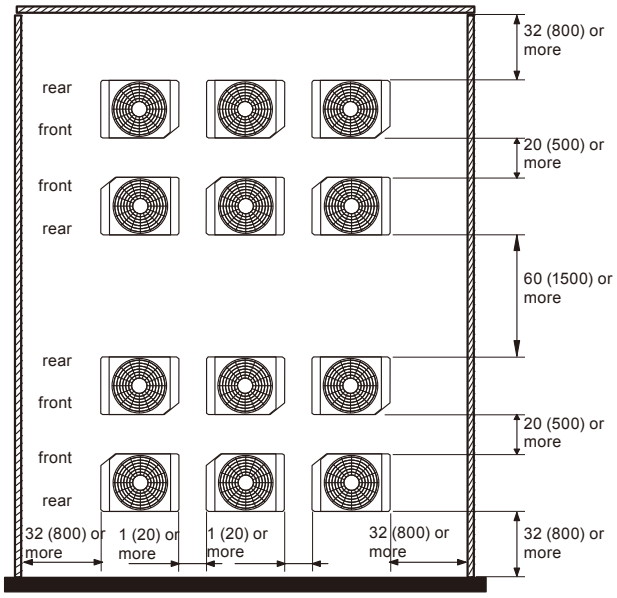
■ CONCENTRATED INSTALLATION EXAMPLE (2)

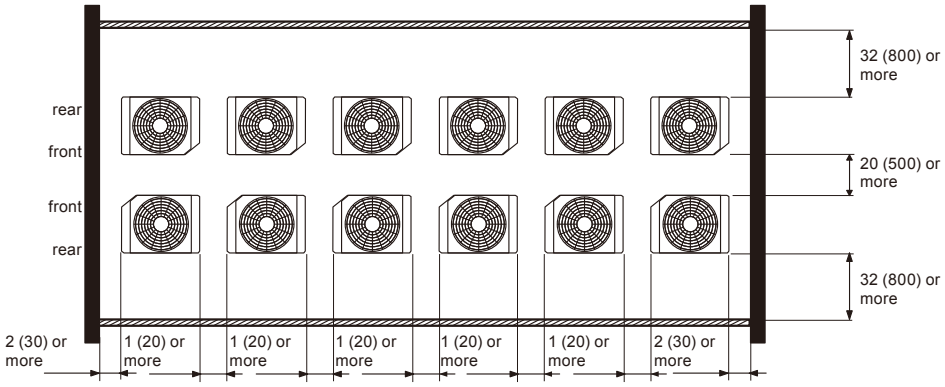
*Wall height: All 67in. (1700mm)

*However, the height of the ▬ wall can be unrestricted.

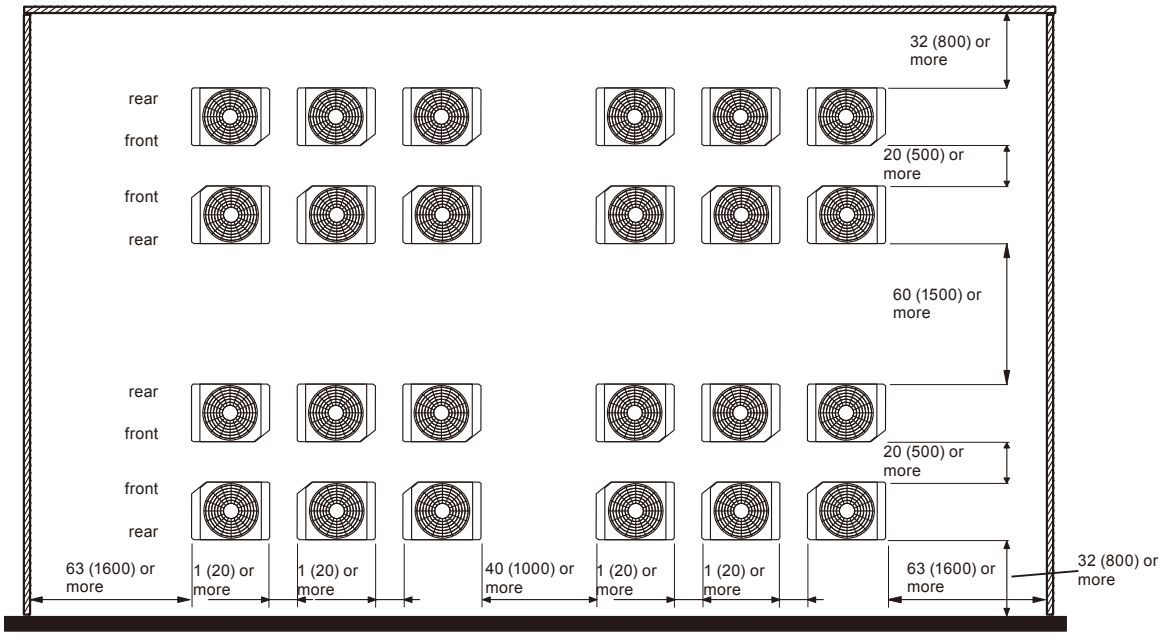
Unit : in. (mm)

● 12 units installation example





● 24 units installation example



■ CONCENTRATED INSTALLATION EXAMPLE (3)

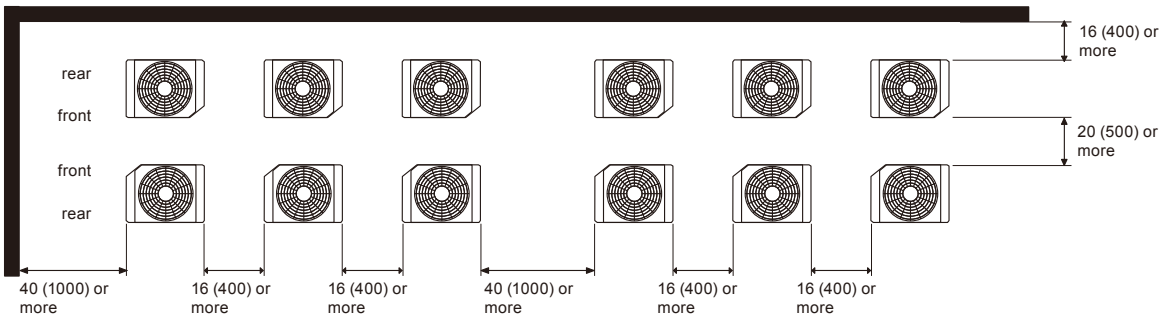
*Wall height is unrestricted.

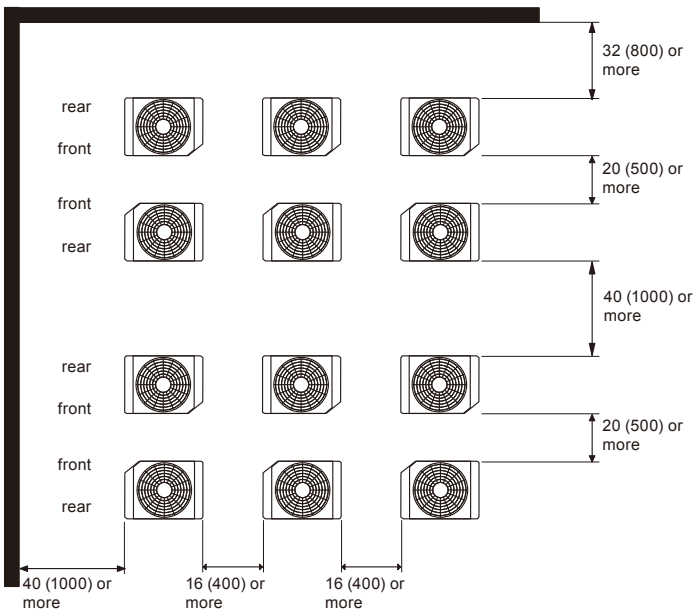
*Of the 4 directions, leave at least 2 directions open. Leave either the front or back direction open.

● 12 units installation example

Installation of more than the number of units shown below is not recommended because short circuit easily occurs at the corners.

Unit : in. (mm)





3-5. INSTALLATION ON EACH FLOOR

● Precautions when installing on each floor

- When installing the product on each floor, be careful because updraft may cause a short circuit. If a short circuit occurred, the cooling and heating capacity and EER, COP (efficiency) may drop and in the worst case, high pressure protection may cause operation to stop.
- Regarding the installation dimensions, refer to the figure below and provide an ample intake space.
- Provide service space and refrigerant piping and electric wiring space.
- Install an outlet duct at each outdoor unit.

● Installation example when installed on each floor

An installation example assuming conditions like those shown in the table below is shown in the figure below

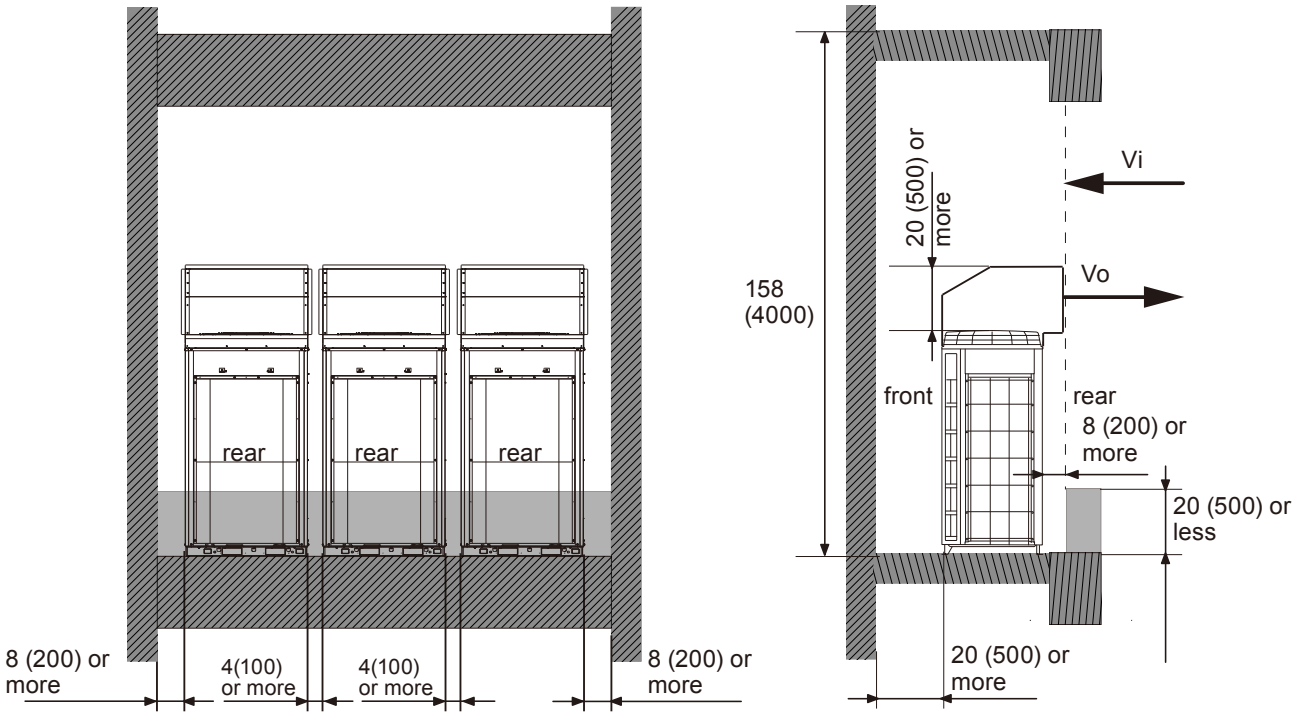
Height / floor	Capacity / floor	Number of installable floors
13ft. (4000mm)	24 Ton	20 floors

If the installation differs from the example, be careful to avoid short circuiting.

- The outlet air velocity Vo = 18 to 25 ft./s (5.5 to 7.5m/s)
- The intake air velocity Vi = 4 ft./s (1.2m/s) or less.

[Example of each floor]

Unit : in. (mm)



● When installing a louver

When installing a louver, pay attention to the following:

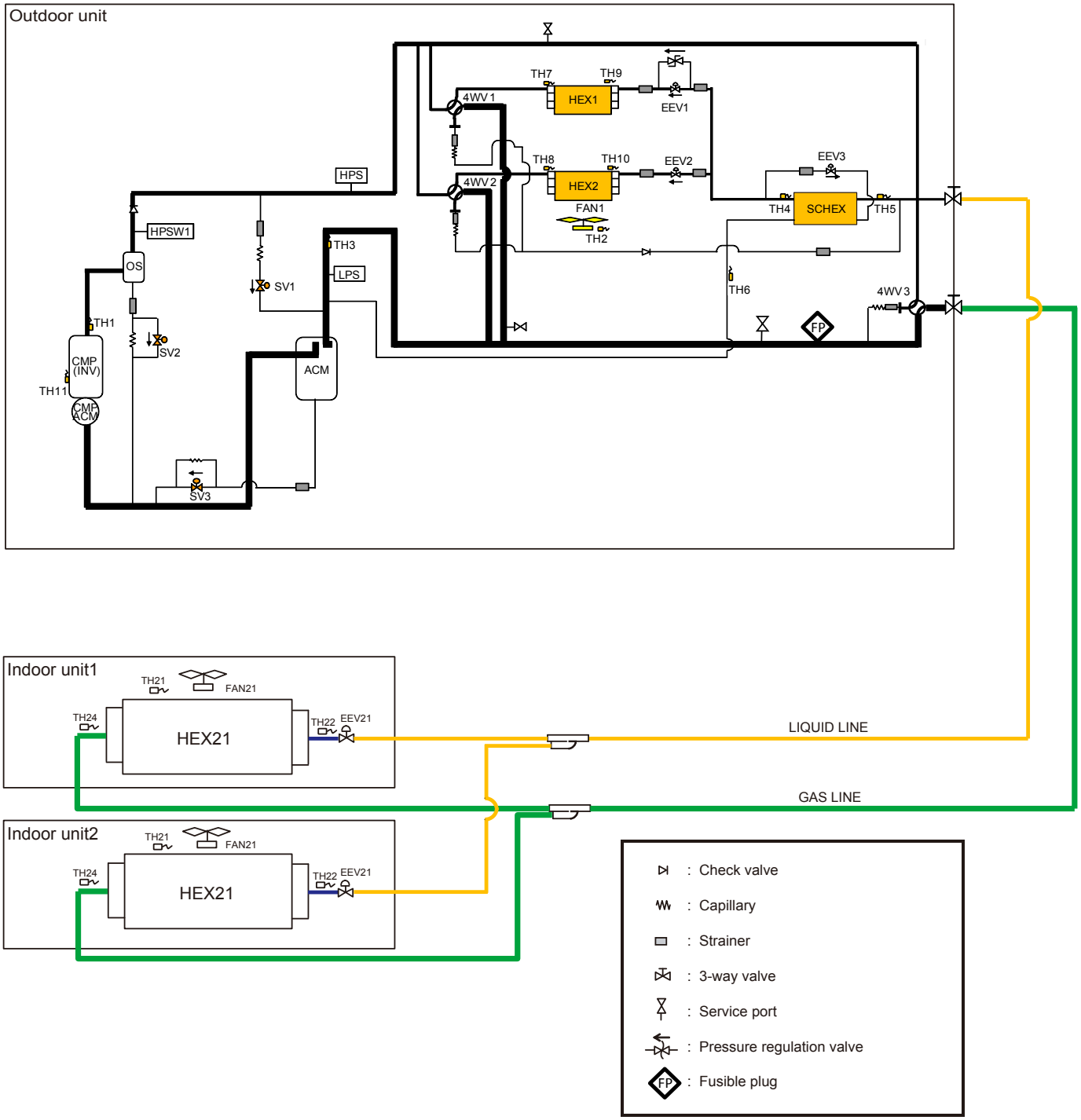
- Fit the outlet duct tightly to the louver so that short circuit will not occur.
- Make the louver angle 0° to 20° down.

If installed facing up, short circuit is easily generated by updraft.

- Make the opening ratio of the outlet louver 75% or greater.

4. REFRIGERANT CIRCUIT

■ MODELS : AOUA72RLBV1, AOUA96RLBV1, AOUA120RLBV1



OUTDOOR UNITS

■ SYMBOL DESCRIPTION

● Outdoor unit

MARK	DESCRIPTION	
CMP	Compressor (Inverter type)	
HEX 1	Heat exchanger 1	
HEX 2	Heat exchanger 2	
FAN 1	Fan 1	
ACM	Accumulator	
OS	Oil separator	
SCHEX	Sub-cool heat exchanger	
HPS	High pressure sensor	
LPS	Low pressure sensor	
HPSW1	High pressure sensor switch 1	
4WV 1	4-way valve 1	
4WV 2	4-way valve 2	
4WV 3	4-way valve 3	
EEV 1	Electric expansion valve 1	
EEV 2	Electric expansion valve 2	
EEV 3	Electric expansion valve 3	
SV 1	Solenoid valve 1	
SV 2	Solenoid valve 2	
SV 3	Solenoid valve 3	
TH 1	Discharge temperature thermistor 1	BLUE
TH 2	Outdoor temperature thermistor –	–
TH 3	Suction temperature thermistor	RED
TH 4	Liquid temperature thermistor 1	WHITE
TH 5	Liquid temperature thermistor 2	BROWN
TH 6	Sub-cool heat exchanger (outlet) thermistor	GREEN
TH 7	Heat exchanger 1 gas thermistor	BLACK
TH 8	Heat exchanger 2 gas thermistor	YELLOW
TH 9	Heat exchanger 1 liquid thermistor	PINK
TH 10	Heat exchanger 2 liquid thermistor	GRAY
TH 11	Compressor 1 temperature thermistor	ORANGE

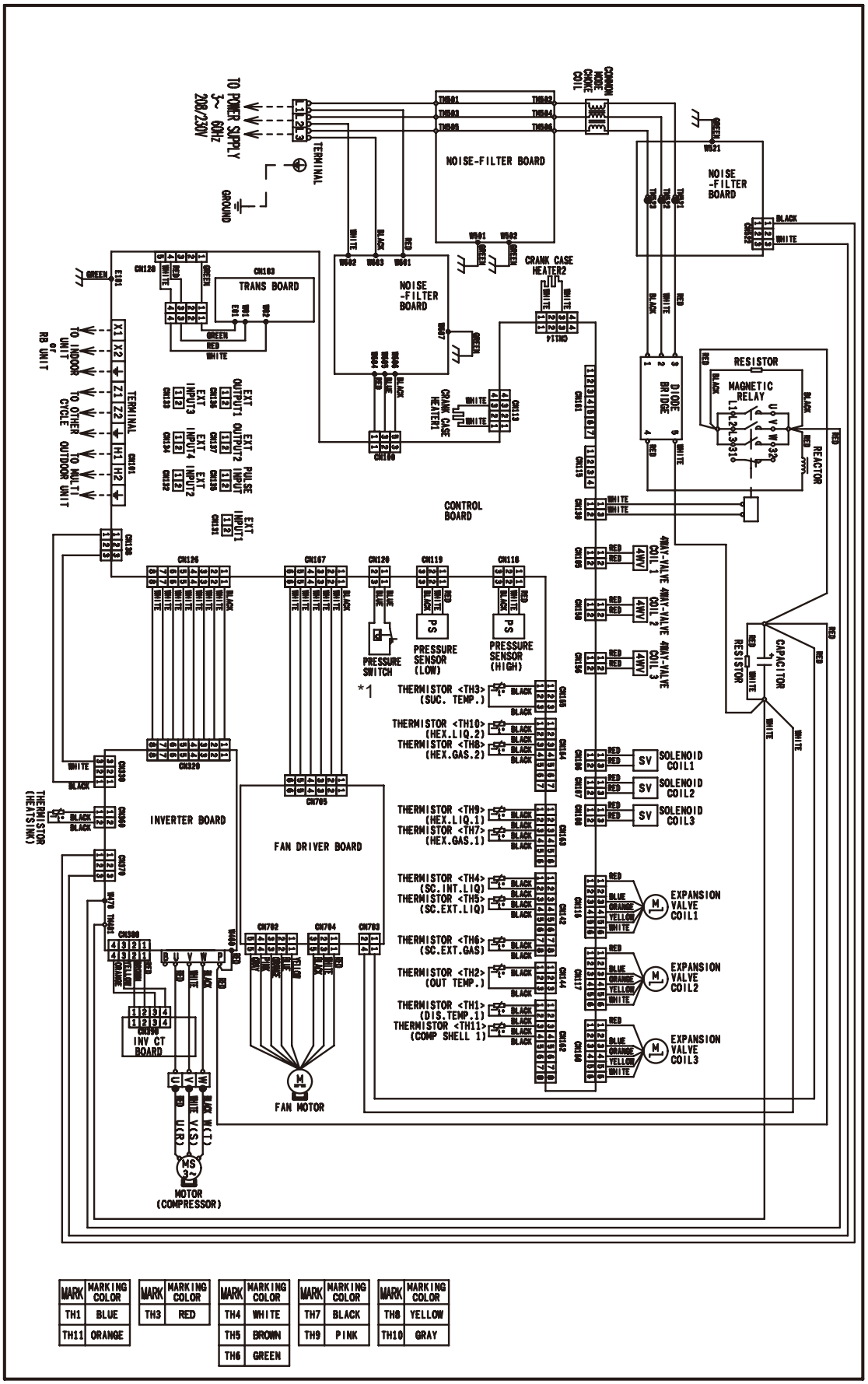
● Indoor unit

MARK	DESCRIPTION
HEX 21	Heat exchanger
FAN 21	Fan
EEV 21	Electric expansion valve
TH 21	Room temperature thermistor
TH 22	Heat exchanger (inlet) thermistor
TH 24	Heat exchanger (outlet) thermistor

OUTDOOR UNITS

5. WIRING DIAGRAM

■ MODELS : AOUA72RLBV1, AOUA96RLBV1, AOUA120RLBV1



MARK	MARKING COLOR
TH1	BLUE
TH11	ORANGE

MARK	MARKING COLOR
TH3	RED

MARK	MARKING COLOR
TH4	WHITE
TH5	BROWN
TH6	GREEN

MARK	MARKING COLOR
TH7	BLACK
TH9	PINK

MARK	MARKING COLOR
TH8	YELLOW
TH10	GRAY

Note : *1
X1, X2 : To be connected to indoor units
Z1, Z2 : To be connected to other master outdoor unit
H1, H2 : To be connected to outdoor unit within same refrigerant system

OUTDOOR UNITS

6. OPERATION RANGE

■ SINGLE OUTDOOR UNIT

Operation mode	Operation range	
	Indoor unit	Outdoor unit
Cooling / Dry	64 to 90°F DB (18 to 32°C DB) R.H. 80% or less	5 to 115°F DB (-15 to 46°C DB)
Heating	50 to 86°F DB (10 to 30°C DB)	-4 to 70°F DB (-20 to 21°C DB)

R.H. : Relative Humidity.

■ MULTIPLE OUTDOOR UNITS

Operation mode	Operation range	
	Indoor unit	Outdoor unit
Cooling / Dry	64 to 90°F DB (18 to 32°C DB) R.H. 80% or less	23 to 115°F DB (-5 to 46°C DB)
Heating	50 to 86°F DB (10 to 30°C DB)	-4 to 70°F DB (-20 to 21°C DB)

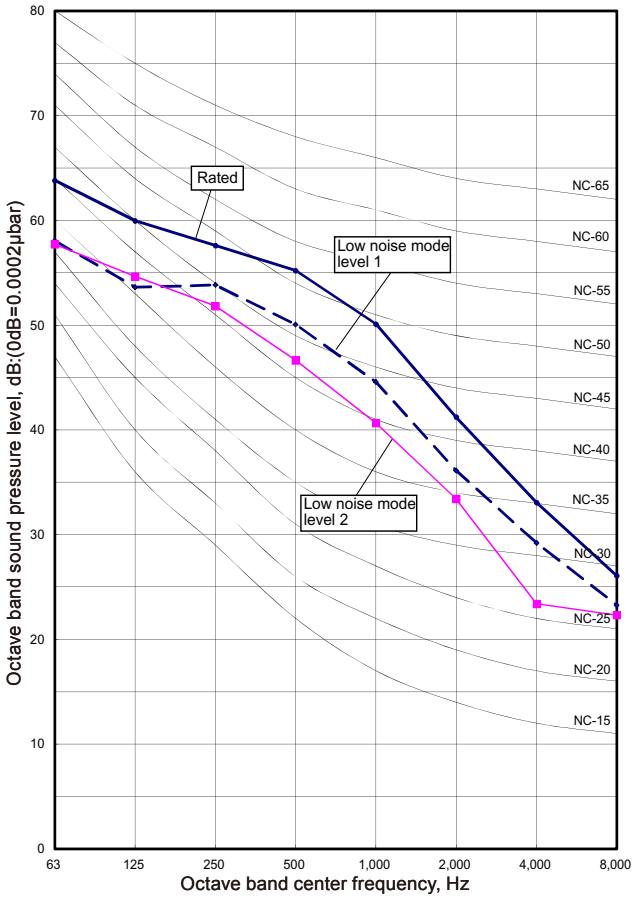
R.H. : Relative Humidity.

OUTDOOR UNITS

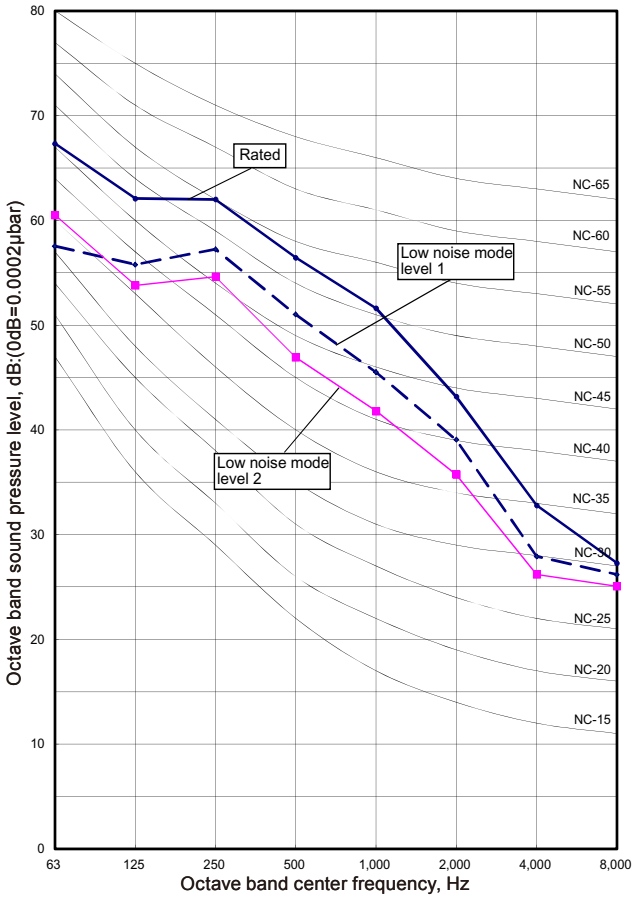
7. NOISE LEVEL CURVE

■ MODEL : AOUA72RLBV1

● Cooling

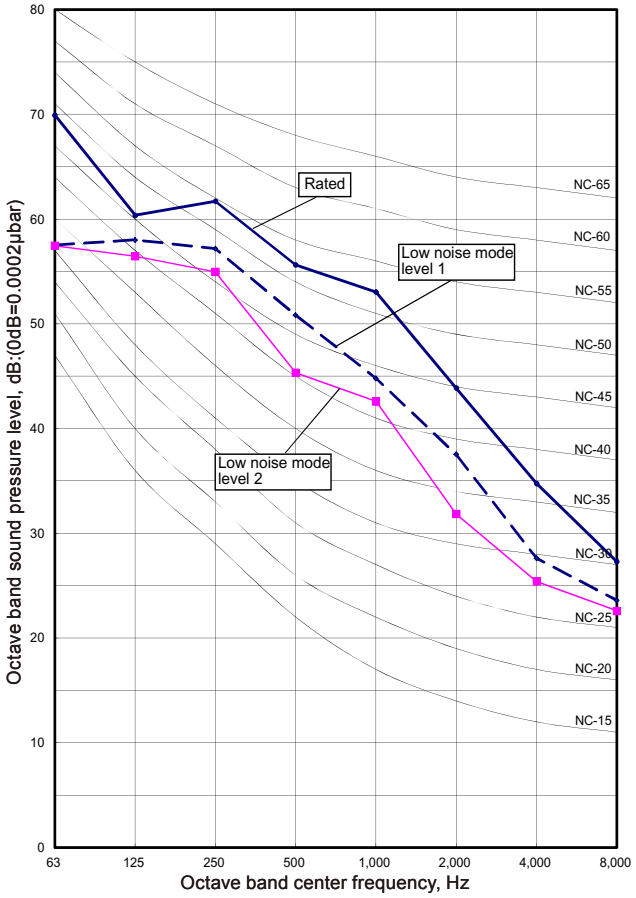


● Heating

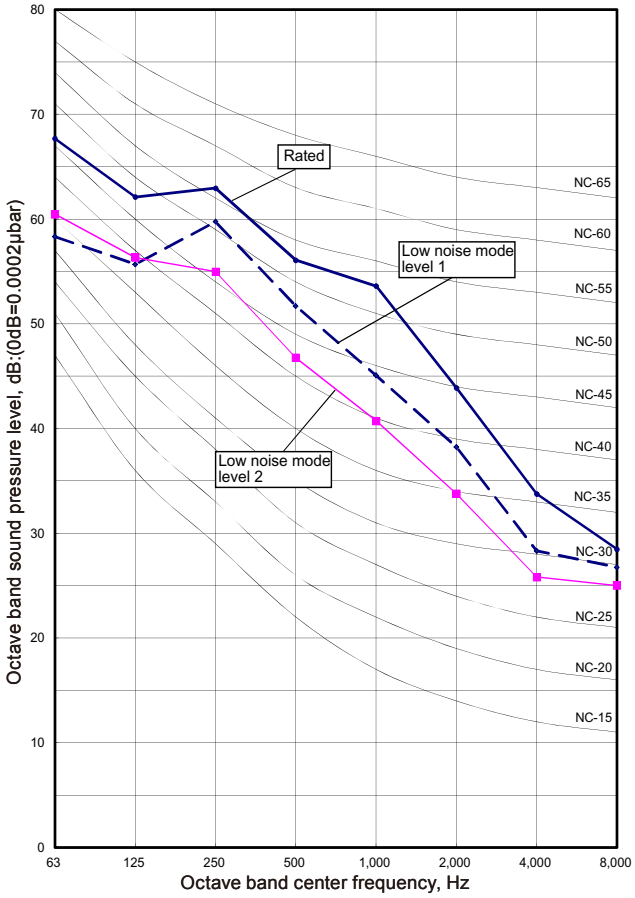


■ MODEL : AOUA96RLBV1

● Cooling



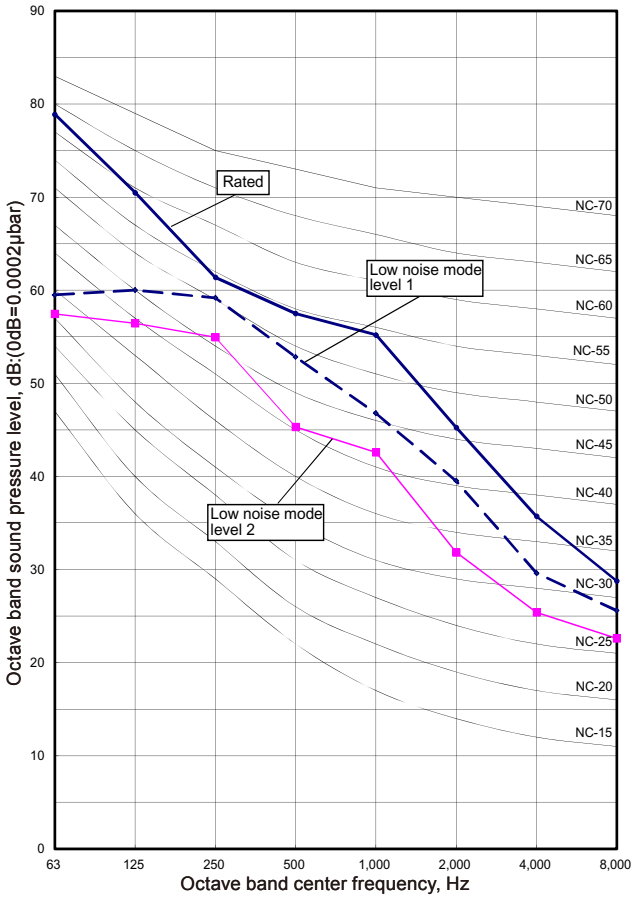
● Heating



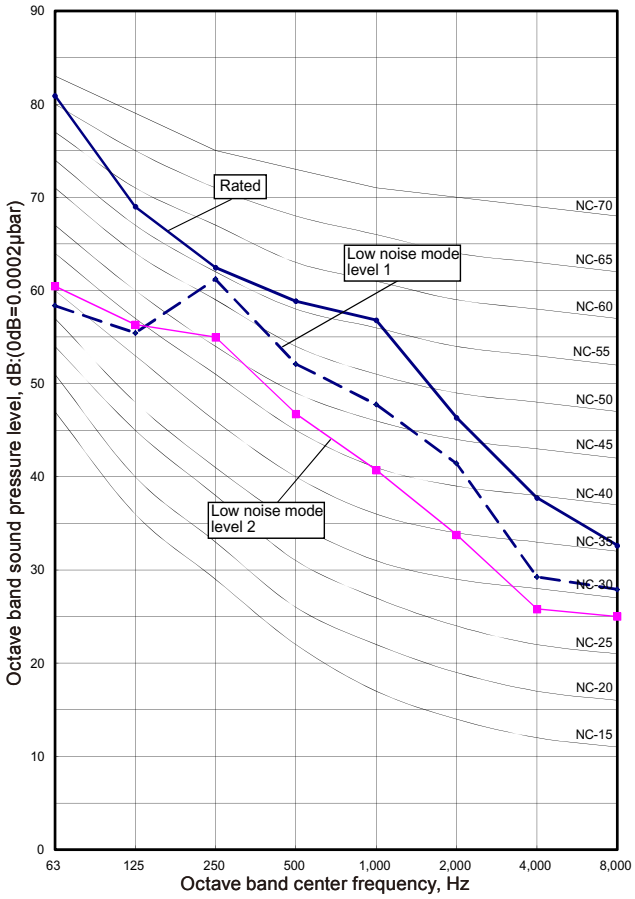
OUTDOOR UNITS

■ MODEL : AOUA120RLBV1

● Cooling



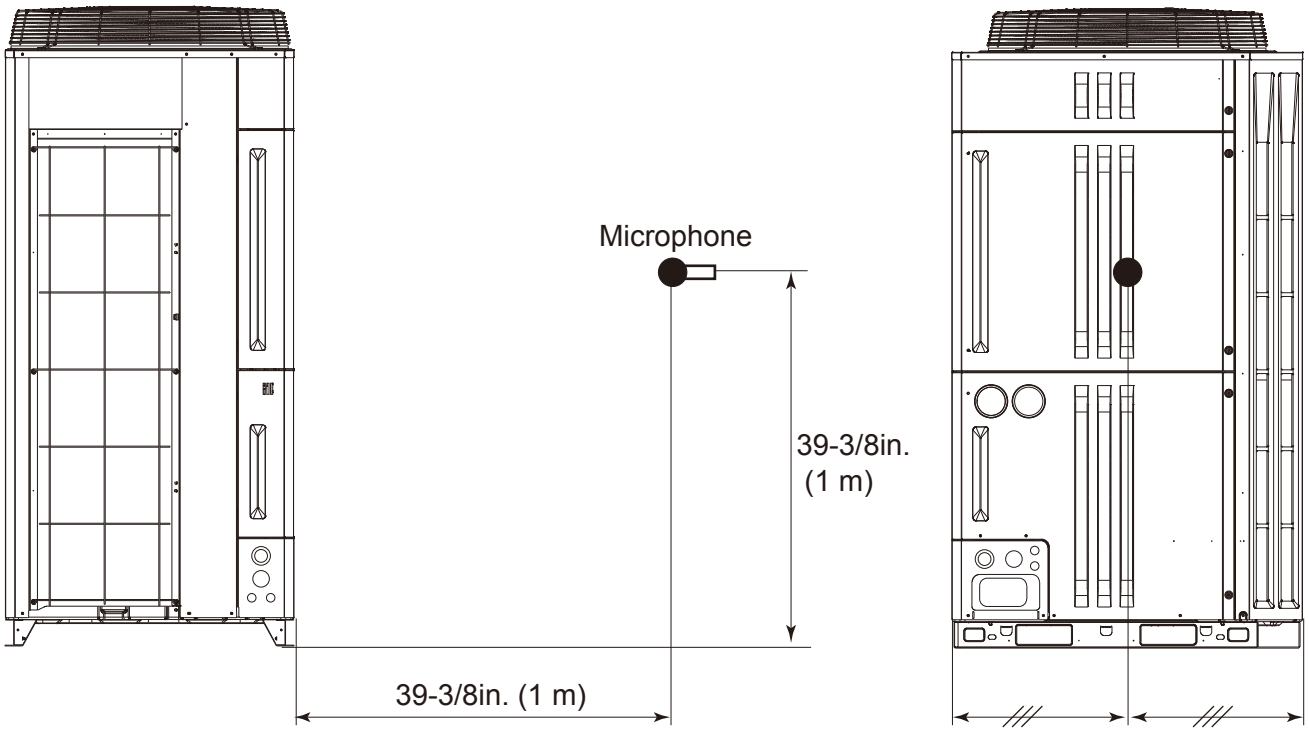
● Heating



OUTDOOR UNITS

1-7. NOISE LEVEL CURVE

■ SOUND LEVEL CHECK POINT



OUTDOOR UNITS

8. ELECTRIC CHARACTERISTICS

		Rated Value		Electric Characteristics						
		Power Supply		Full Load Characteristics			Wiring Specifications	Comp -resser	Outdoor Fan Motor	
Ton	Model name	Hz	Voltage (V)	MCA (A)	TOCA (A)	MSC (A)	MAX.CKT.BKR (A)	RLA (A)	Output (kW)	FLA (A)
6	AOUA72RLBV1	60	208/230	41	45	33.2	50	17	0.74	3.0
8	AOUA96RLBV1	60	208/230	41	45	33.2	50	25	0.74	3.0
10	AOUA120RLBV1	60	208/230	50	55	40.0	60	32	0.74	3.4

OUTDOOR UNITS

			Rated Value		Electric Characteristics		
			Power Supply		Full Load Characteristics		
Ton	Set model name	Model name	Hz	Voltage (V)	MCA (A)	TOCA (A)	MSC (A)
12	AOUA144RLBVG1	AOUA72RLBV1 AOUA72RLBV1	60	208/230	82	90	66.4
14	AOUA168RLBVG1	AOUA96RLBV1 AOUA72RLBV1	60	208/230	82	90	66.4
16	AOUA192RLBVG1	AOUA120RLBV1 AOUA72RLBV1	60	208/230	91	100	73.2
18	AOUA216RLBVG1	AOUA120RLBV1 AOUA96RLBV1	60	208/230	91	100	73.2
20	AOUA240RLBVG1	AOUA120RLBV1 AOUA120RLBV1	60	208/230	100	110	80.0
22	AOUA264RLBVG1	AOUA96RLBV1 AOUA96RLBV1 AOUA72RLBV1	60	208/230	123	135	99.6
24	AOUA288RLBVG1	AOUA96RLBV1 AOUA96RLBV1 AOUA96RLBV1	60	208/230	123	135	99.6

- Select the circuit breaker based on MCA and MAX.CKT.BKR of the table above.
- Select the wire diameter based on the larger value of MCA or TOCA of the table above and select a wire diameter which withstands the breaker capacity.
- Select the correct cable type and size according to the country or region's regulations.
- Limited Wiring Length is in case voltage drop less than 2%. When wiring length extend longer, select the wiring size of larger diameter.

RLA : Rated Load Amp of compressor under the standard condition.
MCA : Min Circuit Amp = Max Operating Current (Full Load)
MSC : Max Starting Current
TOCA : Total Value of Each Over Current Set
MAX.CKT.BKR : Maximum Circuit Breaker

9. SAFETY DEVICES

Safety device	AOUA72RLBV1	AOUA96RLBV1	AOUA120RLBV1
Fuse (Main)	AC 250V 5A		
Protector (INV)	AC 450V 60A		
Fuse (Varistor)	AC 250V 3.15A		
Fuse (Fan Driver)	DC 500V 10A		
Compressor Protector	Overcurrent protection - Temperature protection Activate at 239°F (115°C): Compressor stop Reset at 176°F (80°C): Compressor restart		
High Pressure Protection	Activate at 580 psi (4.0MPa) Reset at 464 psi (3.2 Mpa)		
Low Pressure Protection	Activate at 7.25 psi (0.05MPa)		

OUTDOOR UNITS

10. LOCALLY PURCHASED PARTS

10-1. AIR DISCHARGE DUCT

■ PRECAUTION

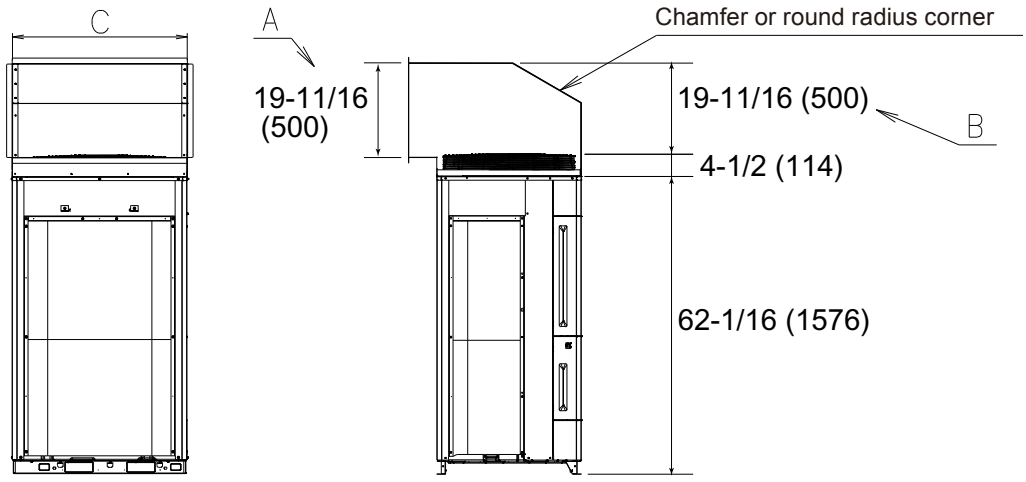
- All components such as the duct, support framework and misc. screws and hardware to be locally purchased.
- Do not install the duct where prevailing wind will blow directly into it.
- Configure installation so that static pressure loss of duct, louvers etc will not exceed 0.32in. WG (80Pa)
- Allow sufficient space for combined height of duct and unit
- Installation conditions may require that the duct is attached before the unit is installed
- Unit noise levels may increase with duct installed

OUTDOOR UNITS

■ DUCT LAYOUT EXAMPLE

Unit : in. (mm)

Model	Dimension C	
	(Minimum)	(Maximum)
AOUA72RLBV1	33-15/16 (862)	36-9/16 (928)
AOUA96RLBV1		
AOUA120RLBV1	46-1/8 (1172)	48-3/4 (1238)

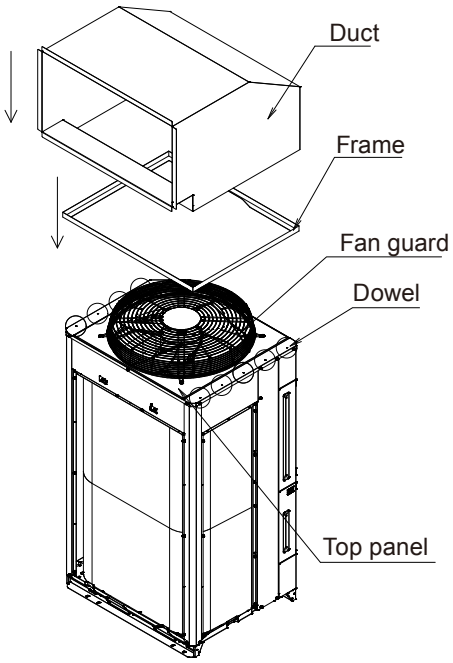


⚠ Caution

- The height A of the duct opening should be 19-11/16in (500mm) or greater
- The height B of the duct opening should be 19-11/16in (500mm) or greater excluding the duct flange
- Provide chamfer or round radius corner
- Duct and components must weigh less than 220lbs (100kg)
- Duct must be designed to allow access to fan motor through top of unit
- Provide adequate support for ductwork.

■ DUCT INSTALLATION PROCEDURE

Unit : in. (mm)

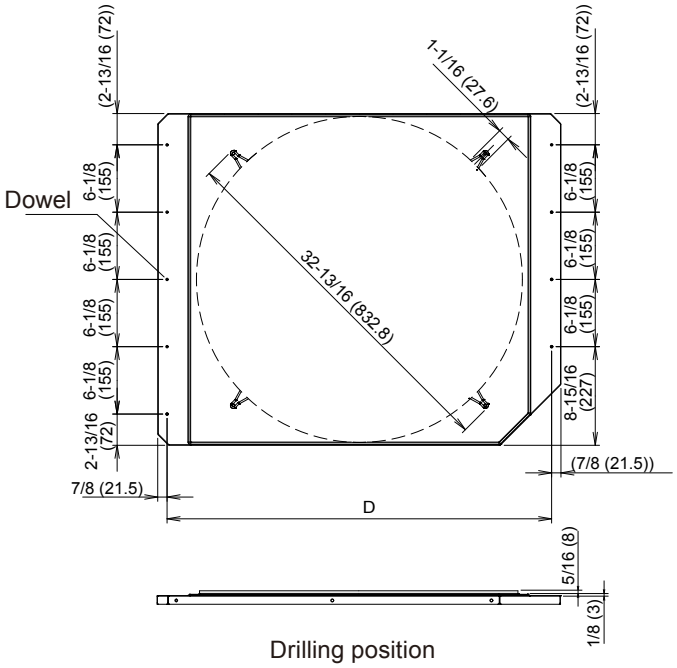


Example of Installation

- Remove the top panel/fan guard assembly from the cabinet.
- Using the 9 dowel markings on the top panel drill 1/4 (6) holes in the top panel/fan guard assembly.
- Reinstall the top panel/fan guard assembly
- Install flange/frame on top of the top panel/fan guard assembly using the predrilled holes and secure with 3/16 (5) screws.
- Install duct onto the flange/frame using 3/16 (5) self tapping screws.

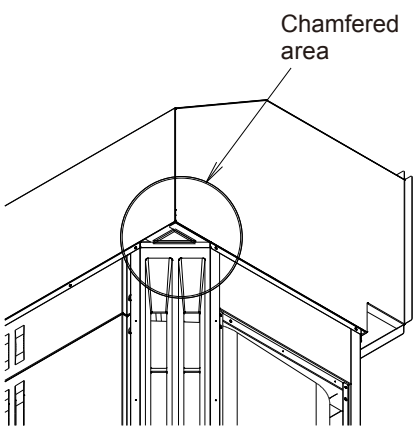
⚠ Caution

- Use 3/16 (5) self tapping screws with a length of 3/8 (10) to 13/16 (20).
- Do not drill in any locations other than the dowels, otherwise damage to the unit could occur and affect unit operation.



Drilling position

Model name	Dimension D
AOUA72RLBV1	34-7/8 (886)
AOUA96RLBV1	
AOUA120RLBV1	47-1/16 (1196)



⚠ Caution

- To prevent air leakage and loss of performance, provide triangular steel cover plate at corner.

10-2. SNOW HOOD

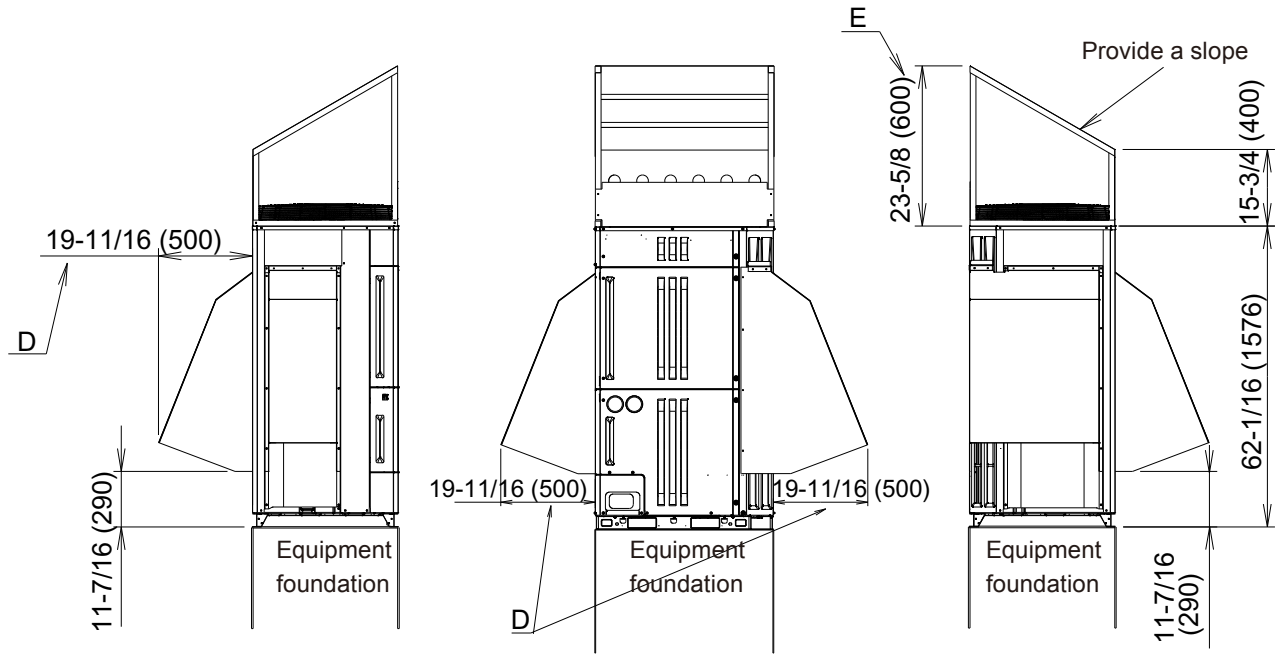
In cold locations where freezing temperatures and snow may occur, install inlet and outlet hoods to help maintain stable operation and to help avoid snow damage.

■ PRECAUTION

- All components including snow hoods, frame and screws are to be locally purchased.
- Prior to installation of snow hoods, install unit on equipment foundation.
- Provide equipment foundation high enough to keep the unit base above the snow level. Foundation width should not exceed unit width.
- Position snow hood and units in an orientation that limits exposure to prevailing winds.
- In multi unit installations, it may be necessary to install snow hoods before units are set in place.
- Static pressure loss of the air flow path including snow hoods must be 0.32in. WG (80Pa) or less.
- Unit noise levels may increase with snow hood installed.

■ EXAMPLE OF INSTALLING SNOW HOOD

Unit : in. (mm)



⚠ Caution

- The depth D of the snow hood should be 19-11/16 (500) or more.
- Provide ample slope so that snow will not accumulate on top of the snow hood. In addition, configure the snow hood so that snow will not fall off and accumulate at the hood inlet.
- Opening height E of the snow hood should be 23-5/8 (600) or more.

OUTDOOR UNITS

Unit : in. (mm)

■ SNOW HOOD INSTALLATION PROCEDURE

● Installing the upper part of snow hood

- The upper part of the snow hood can be installed in the same manner as the Discharge Duct previously described. See Discharge Duct Installation Procedure.

● Installing the sides of snow hood

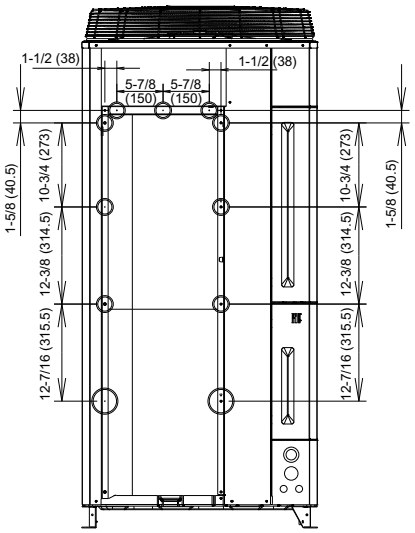
- Before installing the snow hood, remove the screws that keep the screen in place. Remove screen.
- Install the snow hood using the screws holes shown in the figure on the next page.
- Remove the screws that are highlighted with a circle on the next page and drill a 3/16 (4.6) hole in each dowel.

⚠ Caution

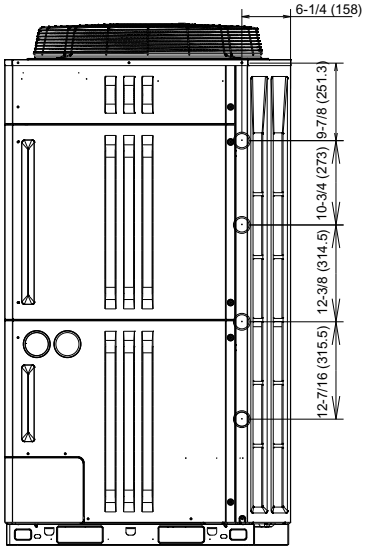
- Use 3/16 (5) self tapping screws having a thread length of 13/32 (10) to 13/16 (20).
- Remove ONLY the screws that are highlighted with a circle on the next page.
- Drill holes in dowels ONLY where highlighted with a circle on the next page, otherwise damage to the unit could occur.

Unit : in. (mm)

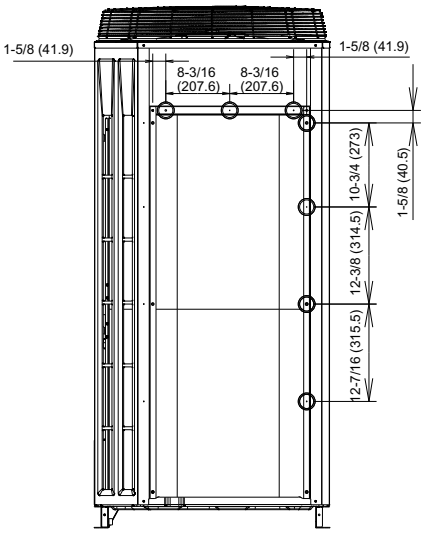
■ SCREW POSITIONS FOR SNOW HOOD SIDES



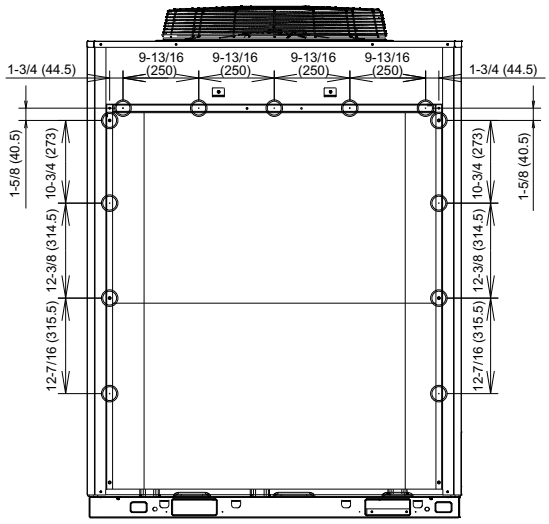
Left-side View



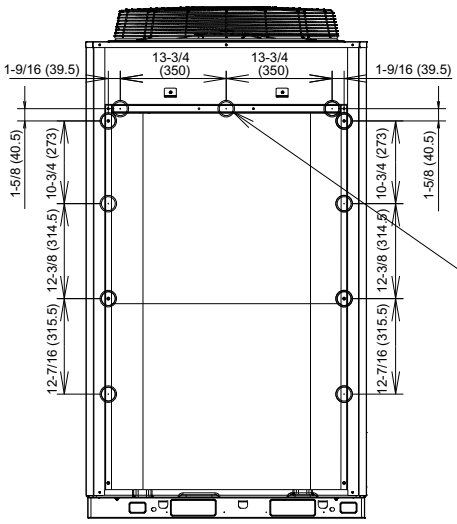
Front View



Right-side View



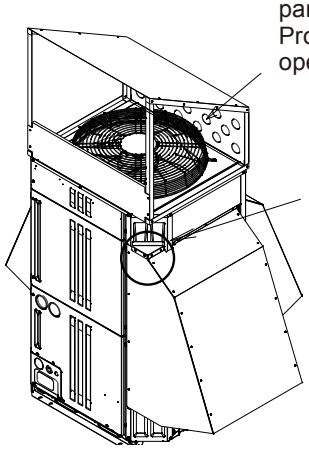
Rear View
(AOUA120RLBV1)



Rear View
(AOUA72,96RLBV1)

Keep in mind that the AOUA120RLBV1 and AOUA72,96RLBV1 have a different number of screws (screw positions) only in the upper part of the rear.

■ NOTES ON INSTALLING SNOW HOOD

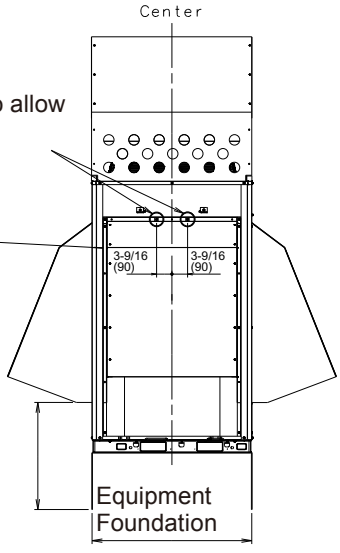


Provide holes in rear panel for ventilation. Provide 20% or more open area.

Chamfered area

Notch the upper part of snow hood so that it can be mounted in place avoiding the column.

Cover with a plate so there is no gap.



Notch the flange to allow access to screws.

Be sure that Snow Hood flange is sloped to prevent build up of snow.

Equipment foundation to be high enough to prevent inlet of hood from being obstructed by snow.

To avoid accumulation of snow on the equipment foundation, the foundation should only be as wide as the equipment.

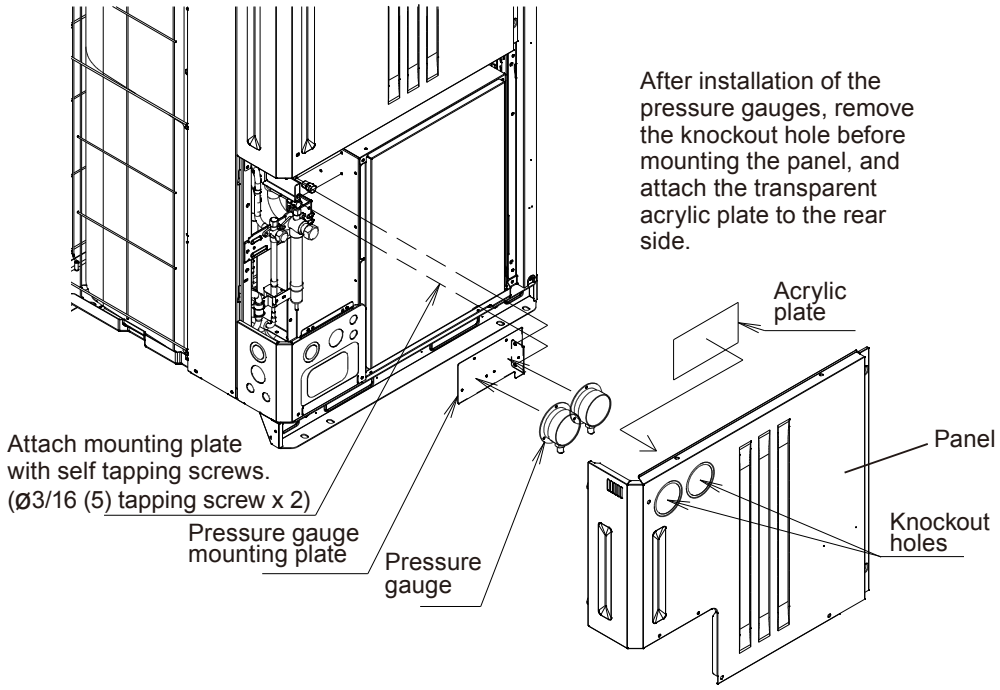
10-3. PRESSURE GAUGE

Unit : in. (mm)

■ HOW TO INSTALL PRESSURE GAUGE

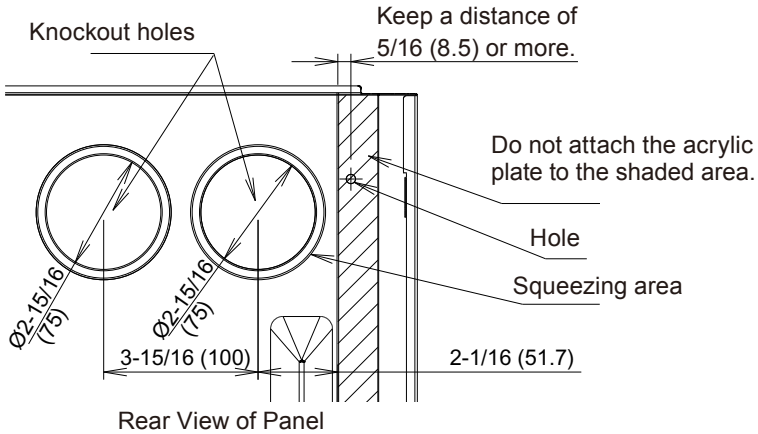
- Note that all the components or parts such as the two pressure gauges, mounting plate, acrylic plate, double-stick tape, and capillary tubes are to be locally purchased.

Remove the panel as shown in the figure below, and install the pressure gauges.



● Attachment of Transparent Acrylic Plate

Prepare a transparent acrylic plate, and attach the acrylic plate with thick double-stick tape in order to completely close the knockout holes.

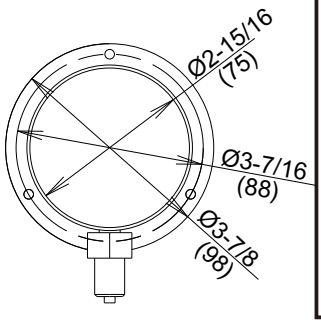


⚠ Caution

- Firmly attach acrylic plate to panel to prevent water from leaking into unit cabinet.
- The acrylic plate must be attached to the left of the shaded area.

■ PRESSURE GAUGES (RECOMMENDED)

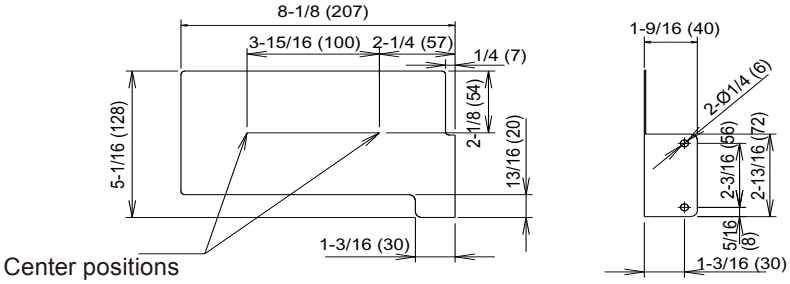
Unit : in. (mm)



⚠ Caution

- Use a pressure gauge having an outside diameter (including the mounting part) of ø3-7/8 (98) or less and a gauge diameter of ø2-15/16 (75) or less
- Measuring ranges of the pressure gauges:
  High-pressure side: 0 to 725 psi (0 to 5 MPa)
  Low-pressure side: 0 to 507 psi (0 to 3.5 MPa)
  However, it is recommended that both pressure gauges should be designed for a measuring range 0 to 725 psi (0 to 5 MPa).

■ PRESSURE GAUGE MOUNTING PLATE

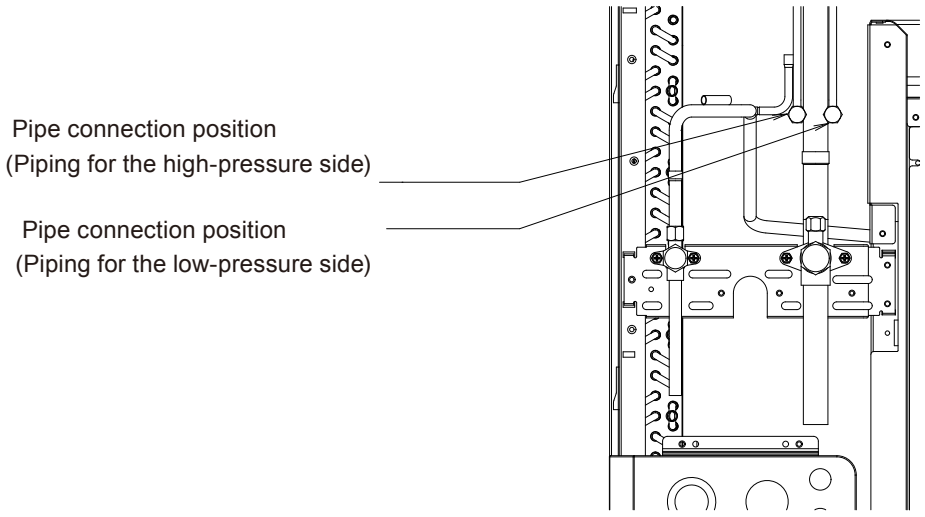


⚠ Caution

- Use a pressure gauge mounting plate of the above outside dimensions.
- The mounting plate must be thick enough to endure the weights of the pressure gauges.
- Make mounting screw holes in accordance with each pressure gauge.
- Each pressure gauge must be installed at the center position shown above

■ PRESSURE GAUGE PIPE CONNECTION POSITIONS

Connect each pressure gauge with the pipe at the connection position shown in the figure.



⚠ Caution

- The connection position is 1/2-20UNF (5/16”) male flare (with valve core).
- Using a 1/2-20UNF (5/16”) female flare (with valve core) R410A refrigerant charge hose, capillary tube, etc. (something that can amply withstand a pressure of 725psi (5MPa)), fasten while being careful that unreasonable stress is not applied to the pressure gauge and the base of the connection piping.
  At this time, pump down the inside of the hose to a vacuum.
- Connect positively so that there is no refrigerant leakage after installation.

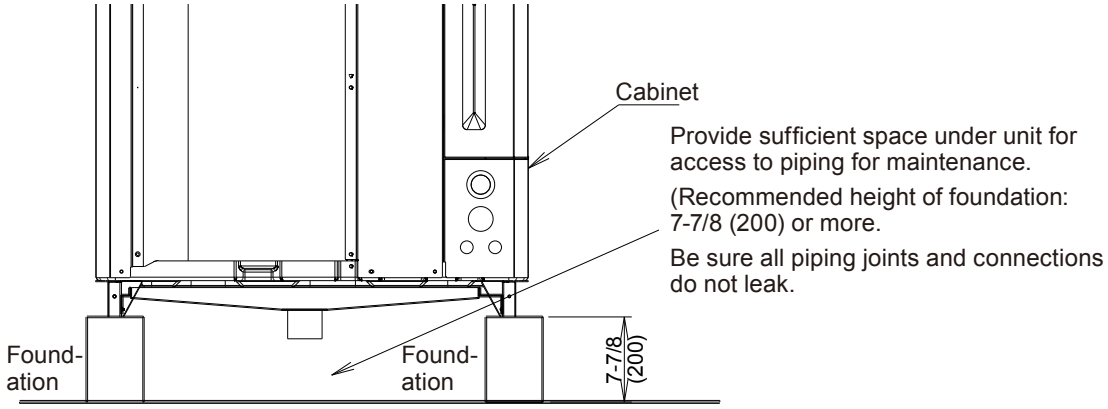
OUTDOOR UNITS

10-4. CENTRAL DRAIN PAN

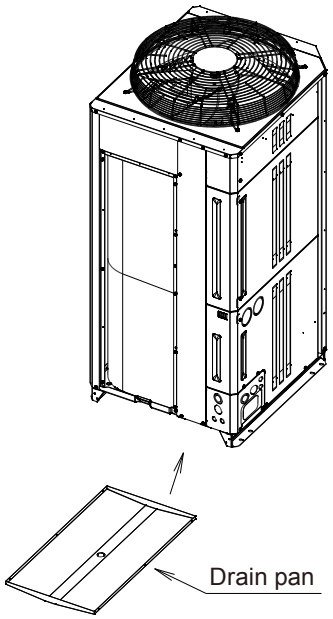
Unit : in. (mm)

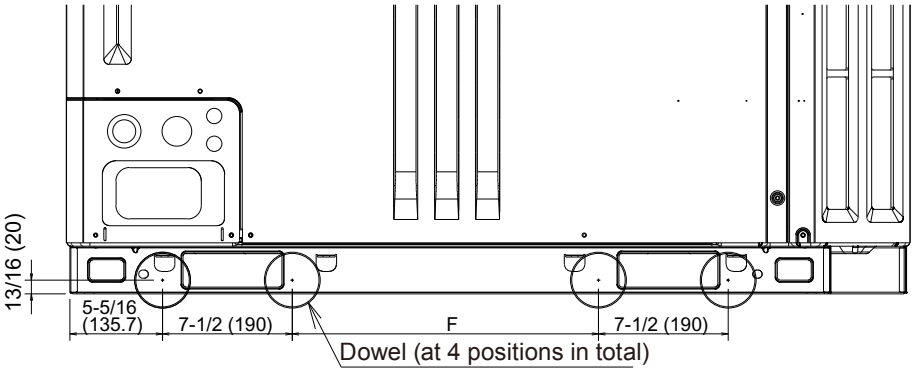
■ HOW TO INSTALL CENTRAL DRAIN PAN

- All components and parts including drain pan and piping materials are to be procured locally.
- If a drain pan is installed, refrigerant piping cannot be routed out the bottom.
- Do not locate the unit over an area that cannot get wet.
- It is possible under certain circumstances that some water may not be captured by the drain pan.
- Do not use a drain pan where freezing conditions in the pan or piping may occur.
- If drain pan piping connections are routed out the bottom of the pan, provide a foundation to raise the unit a minimum of 7-7/8 (200).



■ DRAIN PAN INSTALLATION PROCEDURE





Model name	Dimension F
AOUA72RLBV1	5-1/2 (139)
AOUA96RLBV1	
AOUA120RLBV1	17-11/16 (449)

Drill holes in dowels located in base feet as shown in the figure above (total 8).

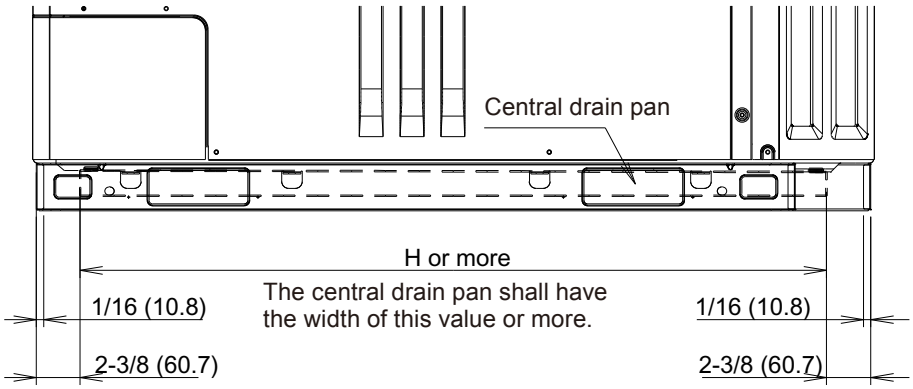
Attach drain pan using self tapping screws at dowel locations.

OUTDOOR UNITS

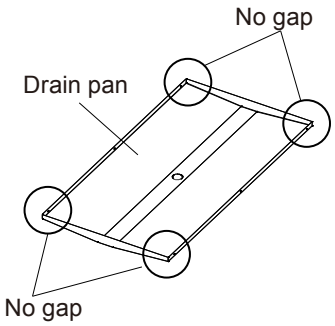
■ NOTES ON INSTALLING CENTRAL DRAIN PAN

- Make sure to design and install drain pan to cover the all drain hole on base completely.
- The gap between drain pan and base should be less than 1/16in. (2mm).
- Be careful of the foot place during the working or design process.
- If the foundation or foot place makes working difficult, the metal fittings should be used as shown below.
- Keep in mind that a drain pan not having the recommended outside dimensions can cause a water leakage or cannot be installed.
- Gaps other than the drain holes cause a water leakage. Completely close all the gaps in the bottom and sides by welding.

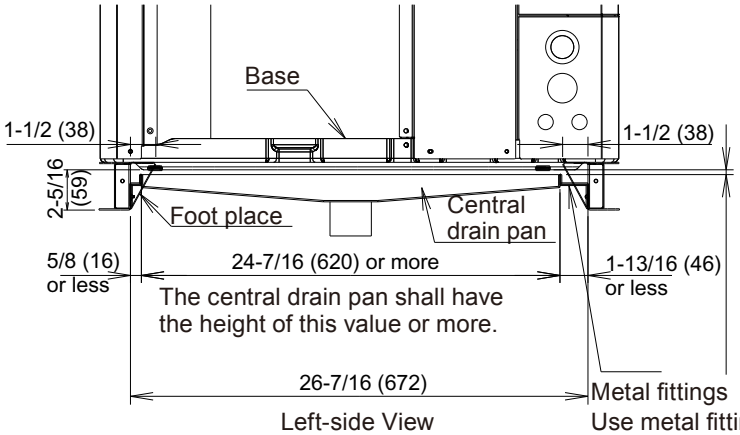
Unit : in. (mm)



Front View



Model name	Dimension H
AOUA72RLBV1	31-5/16 (795)
AOUA96RLBV1	
AOUA120RLBV1	43-1/2 (1105)



Left-side View

Refrigerant R410A INVERTER

AIRSTAGE™
Variable Refrigerant Flow System

4. INDOOR UNITS

DTV_VR2U025E_11-CHAPTER04
2018.09.28

CONTENTS

4. INDOOR UNITS

1. SPECIFICATIONS 04-01
- 1-1. COMPACT CASSETTE TYPE 04-01
- 1-2. CIRCULAR FLOW CASSETTE TYPE 04-03
- 1-3. CASSETTE TYPE 04-04
- 1-4. MINI DUCT TYPE 04-06
- 1-5. SLIM DUCT / SLIM CONCEALED FLOOR TYPE 04-07
- 1-6. MEDIUM STATIC PRESSURE DUCT TYPE 04-09
- 1-7. HIGH STATIC PRESSURE DUCT TYPE 04-10
- 1-8. VERTICAL AIR HANDLER TYPE 04-12
- 1-9. COMPACT FLOOR TYPE 04-14
- 1-10. FLOOR / CEILING TYPE 04-15
- 1-11. CEILING TYPE 04-16
- 1-12. WALL MOUNTED TYPE 04-17

2. ELECTRIC CHARACTERISTICS 04-22

3. DIMENSIONS 04-24
- 3-1. COMPACT CASSETTE TYPE 04-24
- 3-2. CIRCULAR FLOW CASSETTE TYPE 04-26
- 3-3. CASSETTE TYPE 04-30
- 3-4. MINI DUCT TYPE 04-33
- 3-5. SLIM DUCT / SLIM CONCEALED FLOOR TYPE 04-35
- 3-6. MEDIUM STATIC PRESSURE DUCT TYPE 04-39
- 3-7. HIGH STATIC PRESSURE DUCT TYPE 04-41
- 3-8. VERTICAL AIR HANDLER TYPE 04-46
- 3-9. COMPACT FLOOR TYPE 04-52
- 3-10. FLOOR / CEILING TYPE 04-54
- 3-11. CEILING TYPE 04-56
- 3-12. WALL MOUNTED TYPE 04-58

CONTENTS

4. INDOOR UNITS

4. WIRING DIAGRAMS 04-70
4-1. COMPACT CASSETTE TYPE 04-70
4-2. CIRCULAR FLOW CASSETTE TYPE 04-72
4-3. CASSETTE TYPE 04-73
4-4. MINI DUCT TYPE 04-74
4-5. SLIM DUCT / SLIM CONCEALED FLOOR TYPE 04-75
4-6. MEDIUM STATIC PRESSURE DUCT TYPE 04-76
4-7. HIGH STATIC PRESSURE DUCT TYPE 04-77
4-8. VERTICAL AIR HANDLER TYPE 04-79
4-9. COMPACT FLOOR TYPE 04-80
4-10. FLOOR / CEILING TYPE 04-81
4-11. CEILING TYPE 04-82
4-12. WALL MOUNTED TYPE 04-83

5. AIR VELOCITY AND TEMPERATURE DISTRIBUTIONS 04-89
5-1. COMPACT CASSETTE TYPE 04-89
5-2. CIRCULAR FLOW CASSETTE TYPE 04-103
5-3. CASSETTE TYPE 04-113
5-4. MINI DUCT TYPE with Auto louver grille kit 04-121
5-5. SLIM DUCT TYPE with Auto louver grille kit 04-123
5-6. COMPACT FLOOR TYPE 04-133
5-7. FLOOR / CEILING TYPE 04-137
5-8. CEILING TYPE 04-143
5-9. WALL MOUNTED TYPE 04-145

6. FAN PERFORMANCE CURVE 04-159
6-1. MINI DUCT TYPE 04-159
6-2. SLIM DUCT / SLIM CONCEALED FLOOR TYPE 04-161
6-3. MEDIUM STATIC PRESSURE DUCT TYPE 04-171
6-4. HIGH STATIC PRESSURE DUCT TYPE 04-177
6-5. VERTICAL AIR HANDLER TYPE 04-184
6-6. CEILING TYPE (FRESH AIR) 04-198
6-7. CASSETTE TYPE (FRESH AIR) 04-199

CONTENTS

4. INDOOR UNITS

7. AIR FLOW 04-200

8. NOISE LEVEL CURVE 04-202

8-1. COMPACT CASSETTE TYPE 04-202

8-2. CIRCULAR FLOW CASSETTE TYPE 04-204

8-3. CASSETTE TYPE 04-206

8-4. MINI DUCT TYPE 04-207

8-5. SLIM DUCT / SLIM CONCEALED FLOOR TYPE 04-208

8-6. MEDIUM STATIC PRESSURE DUCT TYPE 04-210

8-7. HIGH STATIC PRESSURE DUCT TYPE 04-211

8-8. VERTICAL AIR HANDLER TYPE 04-213

8-9. COMPACT FLOOR TYPE 04-215

8-10. FLOOR / CEILING TYPE 04-217

8-11. CEILING TYPE 04-218

8-12. WALL MOUNTED TYPE 04-219

9. SAFETY DEVICES 04-225

1. SPECIFICATIONS

1-1. COMPACT CASSETTE TYPE

Model name				AUUA4TLAV1	AUUA7TLAV	AUUA9TLAV	AUUA12TLAV	AUUA14TLAV
Power source				1 Phase ~ 208/230V 60Hz				
Available voltage range				187 to 253 V				
Capacity	Cooling		Btu/h	4,000	7,500	9,500	12,000	14,000
			kW	1.2	2.2	2.8	3.5	4.1
	Heating		Btu/h	4,400	9,500	10,900	13,500	15,600
			kW	1.3	2.8	3.2	4.0	4.6
Input power			W	23	25	25	29	35
Fan	Airflow rate	High	CFM (m^3 / h)	312 (530)	318 (540)	324 (550)	353 (600)	400 (680)
		Med		265/247*1 (450/420*1)	265 (450)	265 (450)	312 (530)	347 (590)
		Low		206/177*1 (350/300*1)	206 (350)	206 (350)	230 (390)	230 (390)
	Type x Quantity			Turbo × 1				
	Motor output		W	54				
Sound pressure level	High		dB(A)	34	34	35	37	38
	Med			30/28*1	30	30	34	34
	Low			25/21*1	25	25	27	27
Heat exchanger	Length		in. (mm)	50-3/8 (1,280)				
	Fin pitch		FPI	21				
	Rows x Stages			2 × 10				
	Face Area		ft^2 (m^2)	2.9 (0.27)				
	Pipe type (Material)			Grooved H-pin (Copper)				
	Fin	Type (Material)		Slit(Aluminum)				
		Surface treatment		Hydrophilic coating				
Air filter	Type			Anti-mold				
	Net material			PP honeycomb				
Enclosure	Material			Galvanized sheet iron				
	Color			-				
Dimensions (H x W x D)	Net		in. (mm)	9-5/8 × 22-7/16 × 22-7/16 (245 × 570 × 570)				
	Gross			10-7/16 × 28-3/4 × 24-5/8 (265 × 730 × 625)				
Weight	Net		lbs. (kg)	32 (14.5)	33 (15)			
	Gross			40 (18)			42 (19)	
Connection pipe diameter	Liquid (Flare)		in. (mm)	ø 1/4 (6.35)				
	Gas (Flare)			ø 3/8 (9.52)	ø 1/2 (12.70)			
	Drain hose			ø3/4 (19.05) [I.D.]; ø1-1/16 (26.6) [O.D.]				
Cassette Grille (Grid type)	Model name			UTG-CCGVG				
	Color			WHITE Approximate color of MUNSELL 9PB 9.1/0.2				
	Dimensions (H x W x D)	Net	in. (mm)	1-15/16 × 24-7/16 × 24-7/16 (50 × 620 × 620)				
		Gross		4-3/4 × 30-1/8 × 29-3/4 (120 × 765 × 755)				
	Weight	Net	lbs. (kg)	5 (2.3)				
		Gross		10 (4.5)				
Cassette Grille (Standard type)	Model name			UTG-CCGV				
	Color			WHITE Approximate color of MUNSELL N9.25				
	Dimensions (H x W x D)	Net	in. (mm)	1-15/16 × 27-9/16 × 27-9/16 (50 × 700 × 700)				
		Gross		4-3/4 × 30-1/8 × 29-3/4 (120 × 765 × 755)				
	Weight	Net	lbs. (kg)	6 (2.6)				
		Gross		10 (4.5)				

*1: This value is "cooling operation / heating operation".

Note : Specifications are based on the following conditions.
Cooling : Indoor temperature of 80°F(26.7°C)DB/67°F(19.4°C)WB,and outdoor temperature of 95.0°F(35°C)DB/75°F(23.9°C)WB.
Heating : Indoor temperature of 70°F(21.1°C)DB/60°F(15.6°C)WB,and outdoor temperature of 47°F(8.3°C)DB/43°F(6.1°C)WB.
Pipe length : 25ft.(7.5 m), Height difference : 0ft.(0 m) (Outdoor unit - Indoor unit).
The protective function might work when using it outside the operation range.

INDOOR UNITS

Model name				AUUA18TLAV	AUUA24TLAV
Power source				1 Phase ~ 208/230V 60Hz	
Available voltage range				187 to 253 V	
Capacity	Cooling		Btu/h	18,000	24,000
			kW	5.3	7.0
	Heating		Btu/h	20,000	27,000
			kW	5.9	7.9
Input power			W	36	84
Fan	Airflow rate	High	CFM (m^3 / h)	418 (710)	606 (1,030)
		Med		341 (580)	489 (830)
		Low		235 (400)	265 (450)
	Type x Quantity			Turbo × 1	
	Motor output		W	54	
Sound pressure level	High		dB(A)	41	50
	Med			35	44
	Low			27	30
Heat exchanger	Length		in. (mm)	51-9/16 (1,310)	
	Fin pitch		FPI	19	
	Rows x Stages			3 × 10	
	Face Area		ft^2. (m^2)	3.0 (0.28)	
	Pipe type (Material)			Grooved H-pin (Copper)	
	Fin	Type (Material)		Slit(Aluminum)	
		Surface treatment		Hydrophilic coating	
Air filter	Type			Anti-mold	
	Net material			PP honeycomb	
Enclosure	Material			Galvanized sheet iron	
	Color			-	
Dimensions (H x W x D)	Net		in. (mm)	9-5/8 × 22-7/16 × 22-7/16 (245 × 570 × 570)	
	Gross			10-7/16 × 28-3/4 × 24-5/8 (265 × 730 × 625)	
Weight	Net		lbs. (kg)	37 (17)	
	Gross			44 (20)	
Connection pipe diameter	Liquid (Flare)		in. (mm)	ø 3/8 (9.52)	
	Gas (Flare)			ø 5/8 (15.88)	
	Drain hose			ø3/4 (19.05) [I.D.]; ø1-1/16 (26.6) [O.D.]	
Cassette Grille (Grid type)	Model name			UTG-CCGVG	
	Color			WHITE Approximate color of MUNSELL 9PB 9.1/0.2	
	Dimensions (H x W x D)	Net	in. (mm)	1-15/16 × 24-7/16 × 24-7/16 (50 × 620 × 620)	
		Gross		4-3/4 × 30-1/8 × 29-3/4 (120 × 765 × 755)	
	Weight	Net	lbs. (kg)	5 (2.3)	
		Gross		10 (4.5)	
Cassette Grille (Standard type)	Model name			UTG-CCGV	
	Color			WHITE Approximate color of MUNSELL N9.25	
	Dimensions (H x W x D)	Net	in. (mm)	1-15/16 × 27-9/16 × 27-9/16 (50 × 700 × 700)	
		Gross		4-3/4 × 30-1/8 × 29-3/4 (120 × 765 × 755)	
	Weight	Net	lbs. (kg)	6 (2.6)	
		Gross		10 (4.5)	

INDOOR UNITS

Note : Specifications are based on the following conditions.
Cooling : Indoor temperature of 80°F(26.7°C)DB/67°F(19.4°C)WB,and outdoor temperature of 95.0°F(35°C)DB/75°F(23.9°C)WB.
Heating : Indoor temperature of 70°F(21.1°C)DB/60°F(15.6°C)WB,and outdoor temperature of 47°F(8.3°C)DB/43°F(6.1°C)WB.
Pipe length : 25ft.(7.5 m), Height difference : 0ft.(0 m) (Outdoor unit - Indoor unit).
The protective function might work when using it outside the operation range.

1-2. CIRCULAR FLOW CASSETTE TYPE

Model name				AUUB18TLAV1	AUUB24TLAV1	AUUB30TLAV1	AUUB36TLAV1	AUUB48TLAV1
Power source				1 Phase ~ 208/230V 60Hz				
Available voltage range				187 to 253 V				
Capacity	Cooling		Btu/h	18,000	24,000	30,000	36,000	48,000
			kW	5.3	7.0	8.8	10.6	14.1
	Heating		Btu/h	20,000	27,000	34,000	40,000	54,000
			kW	5.9	7.9	10.0	11.7	15.8
Input power			W	20	25	49	61	116
Fan	Airflow rate	High	CFM (m^3 / h)	618 (1,050)	659 (1,120)	865 (1,470)	954 (1,620)	1,201 (2,040)
		Me-Hi		547 (930)	618 (1,050)	683 (1,160)	883 (1,500)	1,059 (1,800)
		Med		530 (900)	547 (930)	630 (1,070)	824 (1,400)	936 (1,590)
		Lo-Hi		512 (870)	530 (900)	547 (930)	789 (1,340)	848 (1,440)
		Low		477 (810)	512 (870)	530 (900)	753 (1,280)	765 (1,300)
		Quiet		459 (780)	459 (780)	459 (780)	677 (1,150)	677 (1,150)
	Type x Quantity			Turbo × 1				
	Motor output		W	81				
Sound pressure level	High		dB(A)	33	35	40	41	47
	Me-Hi			32	33	36	40	45
	Med			31	32	34	38	42
	Lo-Hi			30	31	32	37	39
	Low			29	30	31	35	36
	Quiet			28	28	28	33	33
Heat exchanger	Length		in. (mm)	82-7/16 (2,094)			81-1/4 (2,064)	
	Fin pitch		FPI	21				
	Rows x Stages			2 × 10			3 × 12	
	Face Area		ft^2. (m^2)	4.7 (0.44)			5.6 (0.52)	
	Pipe type (Material)			Grooved H-pin (Copper)				
	Fin	Type (Material)		Slit (Aluminum)				
		Surface treatment		Hydrophilic coating				
Air filter	Type			Anti-mold				
	Net material			PP honeycomb				
Enclosure	Material			Galvanized sheet iron				
	Color			-				
Dimensions (H x W x D)	Net		in. (mm)	9-11/16 × 33-1/16 × 33-1/16 (246 × 840 × 840)			11-5/16 × 33-1/16 × 33-1/16 (288 × 840 × 840)	
	Gross			11-3/4 × 37-13/16 × 37-3/8 (298 × 960 × 950)			13-3/8 × 37-13/16 × 37-3/8 (340 × 960 × 950)	
Weight	Net		lbs. (kg)	53 (24)	54 (24.5)		65 (29.5)	
	Gross			64 (29)	65 (29.5)		75 (34)	
Connection pipe diameter	Liquid (Flare)		in. (mm)	ø 1/4 (6.35)	ø 3/8 (9.52)			
	Gas (Flare)			ø 1/2 (12.70)	ø 5/8 (15.88)			
	Drain hose			ø3/4 (19.05) [I.D.]; ø1-1/16 (26.6) [O.D.]				
Cassette Grille	Model name			UTG-LCGVCW				
	Color			WHITE Approximate color of MUNSELL N9.25/				
	Dimensions (H x W x D)	Net	in. (mm)	2-1/16 × 37-3/8 × 37-3/8 (53 × 950 × 950)				
		Gross		4-5/16 × 39-3/8 × 39-3/4 (110 × 1,000 × 1,010)				
	Weight	Net	lbs. (kg)	13 (6.0)				
		Gross		22 (10)				

Note : Specifications are based on the following conditions.
Cooling : Indoor temperature of 80°F(26.7°C)DB/67°F(19.4°C)WB,and outdoor temperature of 95.0°F(35°C)DB/75°F(23.9°C)WB.
Heating : Indoor temperature of 70°F(21.1°C)DB/60°F(15.6°C)WB,and outdoor temperature of 47°F(8.3°C)DB/43°F(6.1°C)WB.
Pipe length : 25ft.(7.5 m), Height difference : 0ft.(0 m) (Outdoor unit - Indoor unit).
The protective function might work when using it outside the operation range.

INDOOR UNITS

1-3. CASSETTE TYPE

Model name				AUUB18TLAV	AUUB24TLAV
Power source				1 Phase ~ 208/230V 60Hz	
Available voltage range				187 to 253 V	
Capacity	Cooling		Btu/h	18,000	24,000
			kW	5.3	7.0
	Heating		Btu/h	20,000	27,000
			kW	5.9	7.9
Input power			W	39	46
Fan	Airflow rate	High	CFM (m^3 / h)	677 (1,150)	753 (1,280)
		Med		553 (940)	612 (1,040)
		Low		512 (870)	512 (870)
	Type x Quantity			Turbo × 1	
	Motor output		W	80	
Sound pressure level	High		dB(A)	36	38
	Med			30	33
	Low			29	29
Heat exchanger	Length		in. (mm)	81-15/16 (2,082)	
	Fin pitch		FPI	21	
	Rows x Stages			2 × 10	
	Face Area		ft^2. (m^2)	4.5 (0.42)	
	Pipe type (Material)			Grooved H-pin (Copper)	
	Fin	Type (Material)		Slit(Aluminum)	
		Surface treatment		Hydrophilic coating	
Air filter	Type			Anti-mold	
	Net material			PP honeycomb	
Enclosure	Material			Galvanized sheet iron	
	Color			-	
Dimensions (H x W x D)	Net		in. (mm)	9-11/16 × 33-1/16 × 33-1/16 (246 × 840 × 840)	
	Gross			12-1/2 × 37-13/16 × 38-9/16 (318 × 960 × 980)	
Weight	Net		lbs. (kg)	49 (22)	
	Gross			60 (27)	
Connection pipe diameter	Liquid (Flare)		in. (mm)	ø 3/8 (9.52)	
	Gas (Flare)			ø 5/8 (15.88)	
	Drain hose			ø3/4 (19.05) [I.D.]; ø1-1/16 (26.6) [O.D.]	
Cassette Grille	Model name			UTG-LCGV	
	Color			WHITE Approximate color of MUNSELL N9.25	
	Dimensions (H x W x D)	Net	in. (mm)	1-15/16 × 37-3/8 × 37-3/8 (50 × 950 × 950)	
		Gross		4-1/2 × 40-3/16 × 39-3/8 (115 × 1,020 × 1,000)	
	Weight	Net	lbs. (kg)	13 (5.5)	
		Gross		19 (8.5)	

Note : Specifications are based on the following conditions.
Cooling : Indoor temperature of 80°F(26.7°C)DB/67°F(19.4°C)WB,and outdoor temperature of 95.0°F(35°C)DB/75°F(23.9°C)WB.
Heating : Indoor temperature of 70°F(21.1°C)DB/60°F(15.6°C)WB,and outdoor temperature of 47°F(8.3°C)DB/43°F(6.1°C)WB.
Pipe length : 25ft.(7.5 m), Height difference : 0ft.(0 m) (Outdoor unit - Indoor unit).
The protective function might work when using it outside the operation range.

INDOOR UNITS

Model name				AUUB30TLAV	AUUB36TLAV
Power source				1 Phase ~ 208/230V 60Hz	
Available voltage range				187 to 253 V	
Capacity	Cooling		Btu/h	30,000	36,000
			kW	8.8	10.6
	Heating		Btu/h	34,000	40,000
			kW	10.0	11.7
Input power			W	59	80
Fan	Airflow rate	High	CFM (m^3 / h)	942 (1,600)	1,059 (1,800)
		Med		765 (1,300)	765 (1,300)
		Low		647 (1,100)	647 (1,100)
	Type x Quantity			Turbo × 1	
	Motor output		W	80	
Sound pressure level	High		dB(A)	40	44
	Med			38	38
	Low			33	33
Heat exchanger	Length		in. (mm)	81-15/16 (2,082)	
	Fin pitch		FPI	19	
	Rows x Stages			3 × 12	
	Face Area		ft^2. (m^2)	5.6 (0.52)	
	Pipe type (Material)			Grooved H-pin (Copper)	
	Fin	Type (Material)		Slit(Aluminum)	
		Surface treatment		Hydrophilic coating	
Air filter	Type			Anti-mold	
	Net material			PP honeycomb	
Enclosure	Material			Galvanized sheet iron	
	Color			-	
Dimensions (H x W x D)	Net		in. (mm)	11-5/16 × 33-1/16 × 33-1/16 (288 × 840 × 840)	
	Gross			14-3/16 × 37-13/16 × 38-9/16 (360 × 960 × 980)	
Weight	Net		lbs. (kg)	60 (27)	
	Gross			73 (33)	
Connection pipe diameter	Liquid (Flare)		in. (mm)	ø 3/8 (9.52)	
	Gas (Flare)			ø 5/8 (15.88)	ø 3/4 (19.05)
	Drain hose			ø3/4 (19.05) [I.D.]; ø1-1/16 (26.6) [O.D.]	
Cassette Grille	Model name			UTG-LCGV	
	Color			WHITE Approximate color of MUNSELL N9.25	
	Dimensions (H x W x D)	Net	in. (mm)	1-15/16 × 37-3/8 × 37-3/8 (50 × 950 × 950)	
		Gross		4-1/2 × 40-3/16 × 39-3/8 (115 × 1,020 × 1,000)	
	Weight	Net	lbs. (kg)	13 (5.5)	
		Gross		19 (8.5)	

INDOOR UNITS

Note : Specifications are based on the following conditions.
Cooling : Indoor temperature of 80°F(26.7°C)DB/67°F(19.4°C)WB,and outdoor temperature of 95.0°F(35°C)DB/75°F(23.9°C)WB.
Heating : Indoor temperature of 70°F(21.1°C)DB/60°F(15.6°C)WB,and outdoor temperature of 47°F(8.3°C)DB/43°F(6.1°C)WB.
Pipe length : 25ft.(7.5 m), Height difference : 0ft.(0 m) (Outdoor unit - Indoor unit).
The protective function might work when using it outside the operation range.

1-4. MINI DUCT TYPE

Model name				ARUL4TLAV1
Power source				1 Phase ~ 208/230V 60Hz
Available voltage range				187 to 253 V
Capacity	Cooling		Btu/h	4,000
			kW	1.2
	Heating		Btu/h	4,400
			kW	1.3
Input power			W	26
Static pressure range			in.WG(Pa)	0 to 0.12 (0 to 30)
Standard static pressure			in.WG(Pa)	0.04 (10)
Fan	Airflow rate	High	CFM (m^3 / h)	271 (460)
		Med-Hi		259 (440)
		Med		247 (420)
		Lo-Hi		235 (400)
		Low		218 (370)
		Quiet		200 (340)
	Type x Quantity			Sirocco × 2
	Motor output		W	80
Sound pressure level	High		dB(A)	25
	Med-Hi			24
	Med			23
	Low-Hi			22
	Low			21
	Quiet			20
Heat exchanger	Length		in. (mm)	19-5/16 (490)
	Fin pitch		FPI	19
	Rows x Stages			1 × 16
	Face Area		ft^2. (m^2)	1.7 (0.16)
	Pipe type (Material)			Grooved H-pin (Copper)
	Fin	Type (Material)		Slit (Aluminum)
		Surface treatment		Hydrophilic coating
Air filter	Type			Fungicide type
	Net material			PP honeycomb
Enclosure	Material			Galvanized sheet iron
	Color			-
Dimensions (H x W x D)	Net		in. (mm)	7-13/16 × 27-9/16 × 17-11/16 (198 × 700 × 450)
	Gross			9-13/16 × 36-5/8 × 22-13/16 (250 × 930 × 580)
Weight	Net		lbs. (kg)	32 (14.5)
	Gross			40 (18)
Connection pipe diameter	Liquid (Flare)		in. (mm)	ø 1/4 (6.35)
	Gas (Flare)			ø 3/8 (9.52)
	Drain hose			ø3/4 (19.05) [I.D.]; ø1-1/16 (26.6) [O.D.]

Note : Specifications are based on the following conditions.
Cooling : Indoor temperature of 80°F(26.7°C)DB/67°F(19.4°C)WB,and outdoor temperature of 95.0°F(35°C)DB/75°F(23.9°C)WB.
Heating : Indoor temperature of 70°F(21.1°C)DB/60°F(15.6°C)WB,and outdoor temperature of 47°F(8.3°C)DB/43°F(6.1°C)WB.
Pipe length : 25ft.(7.5 m), Height difference : 0ft.(0 m) (Outdoor unit - Indoor unit).
The protective function might work when using it outside the operation range.

INDOOR UNITS

1-5. SLIM DUCT / SLIM CONCEALED FLOOR TYPE

Model name				ARUL7TLAV	ARUL9TLAV	ARUL12TLAV	ARUL14TLAV
Power source				1 Phase ~ 208/230V 60Hz			
Available voltage range				187 to 253 V			
Capacity	Cooling		Btu/h	7,500	9,500	12,000	14,000
			kW	2.2	2.8	3.5	4.1
	Heating		Btu/h	9,500	10,900	13,500	15,600
			kW	2.8	3.2	4.0	4.6
Input power			W	44	50	54	92
Static pressure range			in.WG(Pa)	0 to 0.36 (0 to 90)			
Standard static pressure			in.WG(Pa)	0.10 (25)			
Fan	Airflow rate	High	CFM (m^3 / h)	324 (550)	353 (600)	353 (600)	471 (800)
		Med		288 (490)	324 (550)	300 (510)	418 (710)
		Low		258 (440)	283 (480)	265 (450)	359 (610)
	Type x Quantity			Sirocco × 2			
	Motor output		W	80		81	
Sound pressure level	High		dB(A)	28	29	30	34
	Med			25	26	27	32
	Low			22	24	24	28
Heat exchanger	Length		in. (mm)	19-11/16 (500)			
	Fin pitch		FPI	19			
	Rows x Stages			2 × 14		3 × 14	
	Face Area		ft^2. (m^2)	1.6 (0.15)			
	Pipe type (Material)			Grooved H-pin (Copper)			
	Fin	Type (Material)		Slit(Aluminum)			
		Surface treatment		Hydrophilic coating			
Air filter	Type			Fungicide type			
	Net material			PP honeycomb			
Enclosure	Material			Galvanized sheet iron			
	Color			-			
Dimensions (H x W x D)	Net		in. (mm)	7-13/16 × 27-9/16 × 24-7/16 (198 × 700 × 620)			
	Gross			10-7/8 × 38-1/8 × 30-3/8 (276 × 968 × 772)			
Weight	Net		lbs. (kg)	37 (17)		40 (18)	
	Gross			46 (21)		51 (23)	
Connection pipe diameter	Liquid (Flare)		in. (mm)	ø 1/4 (6.35)			
	Gas (Flare)			ø 1/2 (12.70)			
	Drain hose			ø3/4 (19.05) [I.D.]; ø1-1/16 (26.6) [O.D.]			

Note : Specifications are based on the following conditions.
Cooling : Indoor temperature of 80°F(26.7°C)DB/67°F(19.4°C)WB,and outdoor temperature of 95.0°F(35°C)DB/75°F(23.9°C)WB.
Heating : Indoor temperature of 70°F(21.1°C)DB/60°F(15.6°C)WB,and outdoor temperature of 47°F(8.3°C)DB/43°F(6.1°C)WB.
Pipe length : 25ft.(7.5 m), Height difference : 0ft.(0 m) (Outdoor unit - Indoor unit).
The protective function might work when using it outside the operation range.

INDOOR UNITS

Model name				ARUL18TLAV
Power source				1 Phase ~ 208/230V 60Hz
Available voltage range				187 to 253 V
Capacity	Cooling		Btu/h	18,000
			kW	5.3
	Heating		Btu/h	20,000
			kW	5.9
Input power			W	83
Static pressure range			in.WG(Pa)	0 to 0.36 (0 to 90)
Standard static pressure			in.WG(Pa)	0.10 (25)
Fan	Airflow rate	High	CFM (m^3 / h)	553 (940)
		Med		494 (840)
		Low		441 (750)
	Type x Quantity			Sirocco × 3
	Motor output		W	81
Sound pressure level	High		dB(A)	34
	Med			32
	Low			28
Heat exchanger	Length		in. (mm)	27-9/16 (700)
	Fin pitch		FPI	19
	Rows x Stages			3 × 14
	Face Area		ft^2. (m^2)	2.3 (0.21)
	Pipe type (Material)			Grooved H-pin (Copper)
	Fin	Type (Material)		Slit(Aluminum)
		Surface treatment		Hydrophilic coating
Air filter	Type			Fungicide type
	Net material			PP honeycomb
Enclosure	Material			Galvanized sheet iron
	Color			-
Dimensions (H x W x D)	Net		in. (mm)	7-13/16 × 35-7/16 × 24-7/16 (198 × 900 × 620)
	Gross			10-7/8 × 46 × 30-3/8 (276 × 1,168 × 772)
Weight	Net		lbs. (kg)	49 (22)
	Gross			60 (27)
Connection pipe diameter	Liquid (Flare)		in. (mm)	ø 3/8 (9.52)
	Gas (Flare)			ø 5/8 (15.88)
	Drain hose			ø3/4 (19.05) [I.D.]; ø1-1/16 (26.6) [O.D.]

INDOOR UNITS

Note : Specifications are based on the following conditions.
Cooling : Indoor temperature of 80°F(26.7°C)DB/67°F(19.4°C)WB,and outdoor temperature of 95.0°F(35°C)DB/75°F(23.9°C)WB.
Heating : Indoor temperature of 70°F(21.1°C)DB/60°F(15.6°C)WB,and outdoor temperature of 47°F(8.3°C)DB/43°F(6.1°C)WB.
Pipe length : 25ft.(7.5 m), Height difference : 0ft.(0 m) (Outdoor unit - Indoor unit).
The protective function might work when using it outside the operation range.

1-6. MEDIUM STATIC PRESSURE DUCT TYPE

Model name				ARUM24TLAV	ARUM30TLAV	ARUM36TLAV
Power source				1 Phase ~ 208/230V 60Hz		
Available voltage range				187 to 253 V		
Capacity	Cooling		Btu/h	24,000	30,000	36,000
			kW	7.0	8.8	10.6
	Heating		Btu/h	27,000	34,000	40,000
			kW	7.9	10.0	11.7
Input power			W	125	190	222
Static pressure range			in.WG(Pa)	0 to 0.60 (0 to 150)		
Standard static pressure			in.WG(Pa)	0.16 (40)		
Fan	Airflow rate	High	CFM (m^3 / h)	859 (1,460)	1,042 (1,770)	1,112 (1,890)
		Med		724 (1,230)	812 (1,380)	895 (1,520)
		Low		589 (1,000)	589 (1,000)	677 (1,150)
	Type x Quantity			Sirocco × 2		
	Motor output		W	197		
Sound pressure level	High		dB(A)	36	40	41
	Med			31	33	35
	Low			28	28	29
Heat exchanger	Length		in. (mm)	39-3/8 (1,000)		
	Fin pitch		FPI	18		
	Rows x Stages			4 × 14		
	Face Area		ft^2. (m^2)	3.1 (0.29)		
	Pipe type (Material)			Grooved H-pin (Copper)		
	Fin	Type (Material)		Slit(Aluminum)		
		Surface treatment		Hydrophilic coating		
Air filter (Option)	Model name			UTD-LF25NA		
	Type			Fungicide type		
	Net material			PP honeycomb		
Enclosure	Material			Galvanized sheet iron		
	Color			-		
Dimensions (H x W x D)	Net		in. (mm)	10-5/16 × 44-11/16 × 27-9/16 (270 × 1,135 × 700)		
	Gross			11-13/16 × 51-15/16 × 31-1/8 (300 × 1,320 × 790)		
Weight	Net		lbs. (kg)	86 (39)		
	Gross			104 (47)		
Connection pipe diameter	Liquid (Flare)		in. (mm)	ø 3/8 (9.52)		
	Gas (Flare)			ø 5/8 (15.88)		ø 3/4 (19.05)
	Drain hose			ø3/4 (19.05) [I.D.]; ø1-1/16 (26.6) [O.D.]		

Note : Specifications are based on the following conditions.
Cooling : Indoor temperature of 80°F(26.7°C)DB/67°F(19.4°C)WB,and outdoor temperature of 95.0°F(35°C)DB/75°F(23.9°C)WB.
Heating : Indoor temperature of 70°F(21.1°C)DB/60°F(15.6°C)WB,and outdoor temperature of 47°F(8.3°C)DB/43°F(6.1°C)WB.
Pipe length : 25ft.(7.5 m), Height difference : 0ft.(0 m) (Outdoor unit - Indoor unit).
The protective function might work when using it outside the operation range.

INDOOR UNITS

1-7. HIGH STATIC PRESSURE DUCT TYPE

Model name				ARUH36TLAV	ARUH48TLAV	ARUH60TLAV
Power source				1 Phase ~ 208/230V 60Hz		
Available voltage range				187 to 253 V		
Capacity	Cooling		Btu/h	36,000	48,000	60,000
			kW	10.6	14.1	17.6
	Heating		Btu/h	40,000	54,000	67,000
			kW	11.7	15.8	19.6
Input power			W	496	752	806
Static pressure range			in.WG(Pa)	0.40 to 0.80 (100 to 200)	0.40 to 1.00 (100 to 250)	
Standard static pressure			in.WG(Pa)	0.40 (100)		
Fan	Airflow rate	High	CFM (m^3 / h)	1,324 (2,250)	1,766 (3,000)	1,972 (3,350)
		Med		1,030 (1,750)	1,589 (2,700)	1,678 (2,850)
		Low		824 (1,400)	1,354 (2,300)	1,501 (2,550)
	Type x Quantity			Sirocco × 2		
	Motor output		W	247	424	482
Sound pressure level	High		dB(A)	43	47	48
	Med			37	43	44
	Low			32	40	41
Heat exchanger	Length		in. (mm)	35-1/16 (890)		
	Fin pitch		FPI	19		17
	Rows x Stages			4 × 16		
	Face Area		ft^2. (m^2)	3.2 (0.30)		
	Pipe type (Material)			Grooved H-pin (Copper)		
	Fin	Type (Material)		Slit(Aluminum)		
		Surface treatment		Hydrophilic coating		
Air filter (Option)	Model name			UTD-LF60KA		
	Type			Fungicide type		
	Net material			PP honeycomb		
Enclosure	Material			Galvanized sheet iron		
	Color			-		
Dimensions (H x W x D)	Net		in. (mm)	15-3/4 × 41-5/16 × 19-11/16 (400 × 1,050 × 500)		
	Gross			18-1/8 × 48-7/16 × 25-3/16 (460 × 1,230 × 640)		
Weight	Net		lbs. (kg)	97 (44)	101 (46)	
	Gross			108 (49)	112 (51)	
Connection pipe diameter	Liquid (Flare)		in. (mm)	ø 3/8 (9.52)		
	Gas (Flare)			ø 3/4 (19.05)		
	Drain hose			ø3/4 (19.05) [I.D.]; ø1-1/16 (26.6) [O.D.]		

Note : Specifications are based on the following conditions.

Cooling : Indoor temperature of 80°F(26.7°C)DB/67°F(19.4°C)WB,and outdoor temperature of 95.0°F(35°C)DB/75°F(23.9°C)WB.

Heating : Indoor temperature of 70°F(21.1°C)DB/60°F(15.6°C)WB,and outdoor temperature of 47°F(8.3°C)DB/43°F(6.1°C)WB.

Pipe length : 25ft.(7.5 m), Height difference : 0ft.(0 m) (Outdoor unit - Indoor unit).

The protective function might work when using it outside the operation range.

INDOOR UNITS

Model name				ARUH72TLAV1	ARUH96TLAV
Power source				1 Phase ~ 208/230V 60Hz	
Available voltage range				187 to 253 V	
Capacity	Cooling		Btu/h	72,000	96,000
			kW	21.1	28.1
	Heating		Btu/h	81,000	108,000
			kW	23.7	31.7
Input power			W	618	838
Static pressure range			in.WG(Pa)	0 to 1.2 (0 to 300)	
Standard static pressure			in.WG(Pa)	0.60(150)	
Fan	Airflow rate	High	CFM (m^3 / h)	2,296 (3,900)	2,855 (4,850)
		Med		1,942 (3,300)	2,502 (4,250)
		Low		1,766 (3,000)	2,119 (3,600)
	Type x Quantity			Sirocco x 2	
	Motor output		W	700 x 2	
Sound pressure level	High		dB(A)	47	48
	Med			43	45
	Low			40	42
Heat exchanger	Length		in. (mm)	49-3/16(1,250)	
	Fin pitch		FPI	17	16
	Rows x Stages			4 x 18	4 x 20
	Face Area		ft^2. (m^2)	5.0 (0.47)	6.9 (0.64)
	Pipe type (Material)			Grooved H-pin (Copper)	
	Fin	Type (Material)		Slit (Aluminum)	Louver (Aluminum)
		Surface treatment		Hydrophilic coating	
Air filter (Option)	Model name			-	
	Type				
	Net material				
Enclosure	Material			Galvanized sheet iron	
	Color			-	
Dimensions (H x W x D)	Net		in. (mm)	17-11/16 x 62-1/2 x 27-9/16 (450 x 1,587 x 700)	21-5/8 x 62-1/2 x 27-9/16 (550 x 1,587 x 700)
	Gross			20-1/2 x 68-7/8 x 32-1/2 (520 x 1,750 x 825)	24-7/16 x 68-7/8 x 32-1/2 (620 x 1,750 x 825)
Weight	Net		lbs. (kg)	203 (92)	231 (105)
	Gross			238 (108)	276 (125)
Connection pipe diameter	Liquid (Brazing)		in. (mm)	ø1/2 (12.70)	
	Gas (Brazing)			ø7/8 (22.22)	
	Drain hose			ø3/4 (19.05) [I.D.]; ø1-1/16 (26.6) [O.D.]	

Note : Specifications are based on the following conditions.

Cooling : Indoor temperature of 80°F(26.7°C)DB/67°F(19.4°C)WB,and outdoor temperature of 95.0°F(35°C)DB/75°F(23.9°C)WB.

Heating : Indoor temperature of 70°F(21.1°C)DB/60°F(15.6°C)WB,and outdoor temperature of 47°F(8.3°C)DB/43°F(6.1°C)WB.

Pipe length : 25ft.(7.5 m), Height difference : 0ft.(0 m) (Outdoor unit - Indoor unit).

The protective function might work when using it outside the operation range.

1-8. VERTICAL AIR HANDLER TYPE

Model name				ARUV12TLAV	ARUV18TLAV	ARUV24TLAV
Power source				1 Phase ~ 208/230V 60Hz		
Available voltage range				187 to 253 V		
Capacity	Cooling		Btu/h	12,000	18,000	24,000
			kW	3.5	5.3	7.0
	Heating		Btu/h	13,500	20,000	27,000
			kW	4.0	5.9	7.9
Input power			W	87	142	233
Static pressure range			in.WG(Pa)	0.10 to 0.70 (25 to 175)	0.10 to 0.80 (25 to 200)	
Standard static pressure			in.WG(Pa)	0.50 (125)		
Fan	Airflow rate	High	CFM (m^3 / h)	394 (670)	630 (1,071)	862 (1,464)
		Med		347 (590)	547 (930)	800 (1,360)
		Low		306 (520)	506 (860)	689 (1,170)
	Type x Quantity			Sirocco × 1		
	Motor output		W	249	249	249
Sound pressure level	High		dB(A)	41	43	45
	Med			39	40	43
	Low			37	39	39
Heat exchanger	Length		in. (mm)	18 (457)		
	Fin pitch		FPI	10		
	Rows x Stages			(3 × 6) × 2	(2 × 12) × 2	(3 × 12) × 2
	Face Area		ft^2. (m^2)	1.5 (0.14)	3.0 (0.28)	3.0 (0.28)
	Pipe type (Material)			Grooved H-pin (Copper)		
	Fin	Type (Material)		Slit (Aluminum)		
Air filter (Locally purchased)	Type			MERV3		
	Size			16 × 22-1/4 × 1 (407 × 565 × 25.4)		
Enclosure	Material			painted galvanized steel		
	Color			Gray		
Dimensions (H x W x D)	Net		in. (mm)	51 × 17-11/16 × 23-13/16 (1,295 × 450 × 605)		
	Gross			58-1/2 × 24 × 30 (1,486 × 610 × 762)		
Weight	Net		lbs. (kg)	139 (63)	148 (67)	151 (69)
	Gross			168 (77)	177 (81)	180 (82)
Connection pipe diameter	Liquid (Flare)		in. (mm)	ø 1/4 (6.35)	ø 3/8 (9.52)	ø 3/8 (9.52)
	Gas (Flare)			ø 1/2 (12.70)	ø 5/8 (15.88)	ø 5/8 (15.88)
	Drain hose			ø 3/4 (19.05) [I.D.]		

Note : Specifications are based on the following conditions.

Cooling : Indoor temperature of 80°F(26.7°C)DB/67°F(19.4°C)WB,and outdoor temperature of 95.0°F(35°C)DB/75°F(23.9°C)WB.

Heating : Indoor temperature of 70°F(21.1°C)DB/60°F(15.6°C)WB,and outdoor temperature of 47°F(8.3°C)DB/43°F(6.1°C)WB.

Pipe length : 25ft.(7.5 m), Height difference : 0ft.(0 m) (Outdoor unit - Indoor unit).

The protective function might work when using it outside the operation range.

INDOOR UNITS

Model name				ARUV30TLAV	ARUV36TLAV	ARUV48TLAV	ARUV60TLAV
Power source				1 Phase ~ 208/230V 60Hz			
Available voltage range				187 to 253 V			
Capacity	Cooling		Btu/h	30,000	36,000	48,000	60,000
			kW	8.8	10.6	14.1	17.6
	Heating		Btu/h	34,000	40,000	54,000	67,000
			kW	10.0	11.7	15.8	19.6
Input power			W	253	427	479	785
Static pressure range			in.WG(Pa)	0.10 to 0.80 (25 to 200)			
Standard static pressure			in.WG(Pa)	0.50 (125)			
Fan	Airflow rate	High	CFM (m^3 / h)	1,092 (1,855)	1,372 (2,331)	1,531 (2,602)	2,013 (3,420)
		Med		942 (1,600)	1,271 (2,160)	1,407 (2,390)	1,883 (3,200)
		Low		818 (1,390)	954 (1,620)	1,130 (1,920)	1,542 (2,620)
	Type x Quantity			Sirocco × 1			
	Motor output		W	373	373	560	746
Sound pressure level	High		dB(A)	45	48	48	53
	Med			43	46	46	50
	Low			40	40	41	45
Heat exchanger	Length		in. (mm)	18 (457)			
	Fin pitch		FPI	10			
	Rows x Stages			(3 × 12) × 2	(4 × 12) × 2	(3 × 20) × 2	(4 × 20) × 2
	Face Area		ft^2. (m^2)	3.0 (0.28)	3.0 (0.28)	5.0 (0.46)	5.0 (0.46)
	Pipe type (Material)			Grooved H-pin (Copper)			
	Fin	Type (Material)		Slit (Aluminum)			
Air filter (Locally purchased)	Type			MERV3			
	Size		in. (mm)	20 × 22-1/4 × 1 (508 × 565 × 25.4)		22 × 22 × 1 (559 × 559 × 25.4)	
Enclosure	Material			Painted galvanized steel			
	Color			Gray			
Dimensions (H x W x D)	Net		in. (mm)	51 × 22-3/16 × 23-13/16 (1,295 × 564 × 605)		57-1/2 × 25-1/8 × 23-13/16 (1,461 × 638 × 605)	
	Gross			58-1/2 × 28 × 33 (1,486 × 711 × 838)		65 × 28 × 33 (1,651 × 711 × 838)	
Weight	Net		lbs. (kg)	174 (79)	179 (81)	212 (96)	223 (101)
	Gross			208 (95)	213 (97)	247 (113)	258 (118)
Connection pipe diameter	Liquid (Flare)		in. (mm)	ø 3/8 (9.52)			
	Gas (Flare)			ø 5/8 (15.88)	ø 3/4 (19.05)		
	Drain hose			ø 3/4 (19.05) [I.D.]			

INDOOR UNITS

Note : Specifications are based on the following conditions.

Cooling : Indoor temperature of 80°F(26.7°C)DB/67°F(19.4°C)WB,and outdoor temperature of 95.0°F(35°C)DB/75°F(23.9°C)WB.

Heating : Indoor temperature of 70°F(21.1°C)DB/60°F(15.6°C)WB,and outdoor temperature of 47°F(8.3°C)DB/43°F(6.1°C)WB.

Pipe length : 25ft.(7.5 m), Height difference : 0ft.(0 m) (Outdoor unit - Indoor unit).

The protective function might work when using it outside the operation range.

1-9. COMPACT FLOOR TYPE

Model name				AGUA4TLAV1	AGUA7TLAV1	AGUA9TLAV1	AGUA12TLAV1	AGUA14TLAV1
Power source				1 Phase ~ 208/230V 60Hz				
Available voltage range				187 to 253 V				
Capacity	Cooling		Btu/h	4,000	7,500	9,500	12,000	14,000
			kW	1.2	2.2	2.8	3.5	4.1
	Heating		Btu/h	4,400	9,500	10,900	13,500	15,600
			kW	1.3	2.8	3.2	4.0	4.6
Input power			W	12/14	16	17	22	29
Fan	Airflow rate	High	CFM (m^3 / h)	224/253 (380/430)	277 (470)	294 (500)	347 (590)	394 (670)
		Med-Hi		206 (350)	247 (420)	265 (450)	306 (520)	347 (590)
		Med		188 (320)	230 (390)	235 (400)	277 (470)	306 (520)
		Low-Hi		182 (310)	212 (360)	212 (360)	247 (420)	265 (450)
		Low		165 (280)	194 (330)	194 (330)	230 (390)	230 (390)
		Quiet		124 (210)	159 (270)	159 (270)	200 (340)	200 (340)
	Type x Quantity			Cross flow × 2				
	Motor output		W	16 × 2				
Sound pressure level	High		dB(A)	35/36	37	38	42	46
	Med-Hi			33	35	36	39	42
	Med			31	33	34	37	39
	Low-Hi			30	31	31	35	36
	Low			28	29	29	33	33
	Quiet			22	22	22	30	30
Heat exchanger	Length		in. (mm)	21-5/8 (550)				
	Fin pitch		FPI	21				
	Rows x Stages			2 × 18				
	Face Area		ft^2. (m^2)	2.3 (0.21)				
	Pipe type (Material)			Grooved H-pin (Copper)				
	Fin	Type (Material)		Slit (Aluminum)				
		Surface treatment		Hydrophilic coating				
Air filter	Type			Anti mold				
	Net material			PP plain weave				
Enclosure	Material			Plastic				
	Color			White Approximate color of MUNSELL 5Y 9/0.5NN				
Dimensions (H x W x D)	Net		in. (mm)	23-5/8 × 29-1/8 × 7-7/8 (600 × 740 × 200)				
	Gross			27-9/16 × 32-5/16 × 12-3/16 (700 × 820 × 310)				
Weight	Net		lbs. (kg)	33 (15)				
	Gross			41 (18.5)	42 (19)			
Connection pipe diameter	Liquid (Flare)		in. (mm)	ø 1/4 (6.35)				
	Gas (Flare)			ø 3/8 (9.52)			ø 1/2 (12.70)	
	Drain hose			ø9/16 (13.8) [I.D.]; ø5/8 (15.8) to 11/16 (16.7) [O.D.]				

Note : Specifications are based on the following conditions.
Cooling : Indoor temperature of 80°F(26.7°C)DB/67°F(19.4°C)WB,and outdoor temperature of 95.0°F(35°C)DB/75°F(23.9°C)WB.
Heating : Indoor temperature of 70°F(21.1°C)DB/60°F(15.6°C)WB,and outdoor temperature of 47°F(8.3°C)DB/43°F(6.1°C)WB.
Pipe length : 25ft.(7.5 m), Height difference : 0ft.(0 m) (Outdoor unit - Indoor unit).
The protective function might work when using it outside the operation range.

INDOOR UNITS

1-10. FLOOR / CEILING TYPE

Model name				ABUA12TLAV	ABUA14TLAV	ABUA18TLAV	ABUA24TLAV
Power source				1 Phase ~ 208/230V 60Hz			
Available voltage range				187 to 253 V			
Capacity	Cooling		Btu/h	12,000	14,000	18,000	24,000
			kW	3.5	4.1	5.3	7.0
	Heating		Btu/h	13,500	15,600	20,000	27,000
			kW	4.0	4.6	5.9	7.9
Input power			W	30	42	74	99
Fan	Airflow rate	High	CFM (m^3 / h)	388 (660)	459 (780)	589 (1,000)	589 (1,000)
		Med		336 (570)	377 (640)	424 (720)	483 (820)
		Low		288 (490)	324 (550)	341 (580)	400 (680)
	Type x Quantity			Sirocco × 2			
	Motor output		W	80			
Sound pressure level	High		dB(A)	36	40	46	47
	Med			32	36	39	42
	Low			28	34	35	37
Heat exchanger	Length		in. (mm)	31-1/2 (800)			
	Fin pitch		FPI	21	19		
	Rows x Stages			2 × 12	3 × 12		4 × 12
	Face Area		ft^2. (m^2)	2.3 (0.20)			
	Pipe type (Material)			Grooved H-pin (Copper)			
	Fin	Type (Material)		Slit(Aluminum)			
		Surface treatment		Hydrophilic coating			
Air filter	Type			Anti-mold			
	Net material			PP monofilament net			
Enclosure	Material			Plastic			
	Color			WHITE Approximate color of MUNSELL N9.25			
Dimensions (H x W x D)	Net		in. (mm)	7-13/16 × 39 × 25-13/16 (199 × 990 × 655)			
	Gross			12-5/8 × 45-1/4 × 31-1/8 (320 × 1,150 × 790)			
Weight	Net		lbs. (kg)	55 (25)	57 (26)		60 (27)
	Gross			77 (35)	79 (36)		84 (38)
Connection pipe diameter	Liquid (Flare)		in. (mm)	ø 1/4 (6.35)		ø 3/8 (9.52)	
	Gas (Flare)			ø 1/2 (12.70)		ø 5/8 (15.88)	
	Drain hose			ø3/4 (19.05) [I.D.]; ø1-1/16 (26.6) [O.D.]			

Note : Specifications are based on the following conditions.
Cooling : Indoor temperature of 80°F(26.7°C)DB/67°F(19.4°C)WB,and outdoor temperature of 95.0°F(35°C)DB/75°F(23.9°C)WB.
Heating : Indoor temperature of 70°F(21.1°C)DB/60°F(15.6°C)WB,and outdoor temperature of 47°F(8.3°C)DB/43°F(6.1°C)WB.
Pipe length : 25ft.(7.5 m), Height difference : 0ft.(0 m) (Outdoor unit - Indoor unit).
The protective function might work when using it outside the operation range.

INDOOR UNITS

1-11. CEILING TYPE

Model name				ABUA30TLAV	ABUA36TLAV
Power source				1 Phase ~ 208/230V 60Hz	
Available voltage range				187 to 253 V	
Capacity	Cooling		Btu/h	30,000	36,000
			kW	8.8	10.6
	Heating		Btu/h	34,000	40,000
			kW	10.0	11.7
Input power			W	66	85
Fan	Airflow rate	High	CFM (m^3 / h)	959 (1,630)	995 (1,690)
		Med		806 (1,370)	824 (1,400)
		Low		671 (1,140)	689 (1,170)
	Type x Quantity			Sirocco × 4	
	Motor output		W	106	
Sound pressure level	High		dB(A)	42	45
	Med			38	38
	Low			33	34
Heat exchanger	Length		in. (mm)	53-1/8 (1,350)	
	Fin pitch		FPI	16	
	Rows x Stages			3 × 12	3 ×12 1×8
	Face Area		ft^2. (m^2)	3.7 (0.34)	
	Pipe type (Material)			Grooved H-pin (Copper)	
	Fin	Type (Material)		Slit(Aluminum)	
		Surface treatment		Hydrophilic coating	
Air filter	Type			Anti-mold	
	Net material			PP monofilament net	
Enclosure	Material			Plastic	
	Color			WHITE Approximate color of MUNSELL N9.25	
Dimensions (H x W x D)	Net		in. (mm)	9-7/16 × 65-3/8 × 27 -9/16 (240 × 1,660 × 700)	
	Gross			12-1/2 × 70-7/8 × 31-1/8 (318 × 1,800 × 790)	
Weight	Net		lbs. (kg)	101 (46)	106 (48)
	Gross			130 (59)	134 (61)
Connection pipe diameter	Liquid (Flare)		in. (mm)	ø 3/8 (9.52)	
	Gas (Flare)			ø 5/8 (15.88)	ø 3/4 (19.05)
	Drain hose			ø3/4 (19.05) [I.D.]; ø1-1/16 (26.6) [O.D.]	

Note : Specifications are based on the following conditions.
Cooling : Indoor temperature of 80°F(26.7°C)DB/67°F(19.4°C)WB,and outdoor temperature of 95.0°F(35°C)DB/75°F(23.9°C)WB.
Heating : Indoor temperature of 70°F(21.1°C)DB/60°F(15.6°C)WB,and outdoor temperature of 47°F(8.3°C)DB/43°F(6.1°C)WB.
Pipe length : 25ft.(7.5 m), Height difference : 0ft.(0 m) (Outdoor unit - Indoor unit).
The protective function might work when using it outside the operation range.

1-12. WALL MOUNTED TYPE

Model name				ASUA4TLAV1	ASUA7TLAV1	ASUA9TLAV1	ASUA12TLAV1	ASUA14TLAV1
Power source				1 Phase ~ 208/230V 60Hz				
Available voltage range				187 to 253 V				
Capacity	Cooling		Btu/h	4,000	7,500	9,500	12,000	14,000
			kW	1.2	2.2	2.8	3.5	4.2
	Heating		Btu/h	4,400	9,500	10,900	13,500	15,600
			kW	1.3	2.8	3.2	4.0	4.6
Input power			W	13	19	34	25	36
Fan	Airflow rate	High	CFM (m^3 / h)	253 (430)	324 (550)	424 (720)	406 (690)	471 (800)
		Med-Hi		247 (420)	271 (460)	336 (570)	359 (610)	436 (740)
		Med		230 (390)	247 (420)	294 (500)	330 (560)	400 (680)
		Low-Hi		224 (380)	230 (390)	241 (410)	312 (530)	359 (610)
		Low		212 (360)	212 (360)	212 (360)	277 (470)	324 (550)
		Quiet		194 (330)	194 (330)	194 (330)	194 (330)	194 (330)
	Type x Quantity			Cross flow × 1				
	Motor output		W	30				
Sound pressure level	High		dB(A)	31	35	43	40	44
	Med-Hi			30	32	38	37	42
	Med			28	30	34	35	40
	Low-Hi			26	27	29	33	37
	Low			24	24	24	30	34
	Quiet			22	22	22	24	24
Heat exchanger	Length		in. (mm)	24-13/16 (630)			Main: 24-13/16 (630) Sub: 24-13/16 (630)	
	Fin pitch		FPI	23			Main: 23 Sub: 18	
	Rows x Stages			2 × 16			Main: 2 × 20 Sub: 1 × 4	
	Face Area		ft^2. (m^2)	2.3 (0.21)			2.2 (0.20)	
	Pipe type (Material)			Groove H-pin (Copper)				
	Fin	Type (Material)		Slit (Aluminum)				
		Surface treatment		Hydrophilic coating				
Air filter	Type			Anti mold				
	Net material			PP honeycomb				
Enclosure	Material			Plastic				
	Color			White Approximate color of MUNSELL N 9.25/				
Dimensions (H x W x D)	Net		in. (mm)	10-5/16 × 32-5/16 × 8-1/8 (262 × 820 × 206)			10-9/16 × 33-1/16 × 8 (268 × 840 × 203)	
	Gross			10-3/8 × 34-1/4 × 12-15/16 (263 × 870 × 328)			10-5/8 × 34-13/16 × 13-1/4 (270 × 884 × 336)	
Weight	Net		lbs. (kg)	17 (7.5)			20 (9)	
	Gross			22 (10)			24 (11)	
Connection pipe diameter	Liquid (Flare)		in. (mm)	ø 1/4 (6.35)				
	Gas (Flare)			ø 3/8 (9.52)			ø 1/2 (12.70)	
	Drain hose			ø9/16 (13.8) [I.D.]; ø5/8 (15.8) to 11/16 (16.7) [O.D.]				

Note : Specifications are based on the following conditions.
Cooling : Indoor temperature of 80°F(26.7°C)DB/67°F(19.4°C)WB,and outdoor temperature of 95.0°F(35°C)DB/75°F(23.9°C)WB.
Heating : Indoor temperature of 70°F(21.1°C)DB/60°F(15.6°C)WB,and outdoor temperature of 47°F(8.3°C)DB/43°F(6.1°C)WB.
Pipe length : 25ft.(7.5 m), Height difference : 0ft.(0 m) (Outdoor unit - Indoor unit).
The protective function might work when using it outside the operation range.

INDOOR UNITS

Model name				ASUB18TLAV1	ASUB24TLAV1
Power source				1 Phase ~ 208/230V 60Hz	
Available voltage range				187 to 253 V	
Capacity	Cooling		Btu/h	18,000	24,000
			kW	5.3	7.0
	Heating		Btu/h	20,000	27,000
			kW	5.9	7.9
Input power			W	32	60
Fan	Airflow rate	High	CFM (m^3 / h)	494 (840)	647 (1,100)
		Med		453 (770)	536 (910)
		Low		406 (690)	430 (730)
	Type x Quantity			Cross flow × 1	
	Motor output		W	42	
Sound pressure level	High		dB(A)	41	48
	Med			39	43
	Low			35	35
Heat exchanger	Length		in. (mm)	Main: 32-3/16 (817) Sub: 32-3/16 (817)	
	Fin pitch		FPI	Main: 21 Sub: 18	
	Rows x Stages			2 × 16 1 × 4 (2 pieces)	
	Face Area		ft^2. (m^2)	3.3 (0.31)	
	Pipe type (Material)			Grooved H-pin (Copper)	
	Fin	Type (Material)		Slit (Aluminum)	
		Surface treatment		Hydrophilic coating	
Air filter	Type			Deodorization / Anti-mold	
	Net material			PP monofilament net	
Enclosure	Material			Plastic	
	Color			White Approximate color of MUNSELL N 9.25/	
Dimensions (H x W x D)	Net		in. (mm)	12-5/8 × 39-5/16 × 9-3/8 (320 × 998 × 238)	
	Gross			12-15/16 × 42-15/16 × 16-7/8 (329 × 1,090 × 429)	
Weight	Net		lbs. (kg)	33 (15)	
	Gross			42 (19)	
Connection pipe diameter	Liquid (Flare)		in. (mm)	ø 1/4 (6.35)	ø 3/8 (9.52)
	Gas (Flare)			ø 1/2 (12.70)	ø 5/8 (15.88)
	Drain hose			ø9/16 (13.8) [I.D.]; ø5/8 (15.8) to 11/16 (16.7) [O.D.]	

Note : Specifications are based on the following conditions.
Cooling : Indoor temperature of 80°F(26.7°C)DB/67°F(19.4°C)WB,and outdoor temperature of 95.0°F(35°C)DB/75°F(23.9°C)WB.
Heating : Indoor temperature of 70°F(21.1°C)DB/60°F(15.6°C)WB,and outdoor temperature of 47°F(8.3°C)DB/43°F(6.1°C)WB.
Pipe length : 25ft.(7.5 m), Height difference : 0ft.(0 m) (Outdoor unit - Indoor unit).
The protective function might work when using it outside the operation range.

Model name				ASUB30TLAV1	ASUB36TLAV1
Power source				1 Phase ~ 208/230V 60Hz	
Available voltage range				187 to 253 V	
Capacity	Cooling		Btu/h	30,000	34,000
			kW	8.8	10.0
	Heating		Btu/h	34,000	38,000
			kW	10.0	11.2
Input power			W	74	103
Fan	Airflow rate	High	CFM (m^3 / h)	848 (1,440)	954/895 (1,620/1,520)
		Med-Hi		706 (1,200)	765 (1,300)
		Med		618 (1,050)	659 (1,120)
		Low-Hi		553 (940)	577 (980)
		Low		524 (890)	524 (890)
		Quiet		412 (700)	412 (700)
	Type x Quantity			Cross flow × 1	
	Motor output		W	61	
Sound pressure level	High		dB(A)	53	55/54
	Med-Hi			49	51
	Med			45	47
	Low-Hi			42	43
	Low			39	39
	Quiet			33	33
Heat exchanger	Length		in. (mm)	Main : 35-7/16 (900) Sub1 : 35-7/16 (900) Sub2 : 35-7/16 (900)	
	Fin pitch		FPI	Main: 21, Sub1: 18, Sub2: 18	
	Rows x Stages			Main: 2 × 22 Sub1: 1 × 6 Sub2: 1 × 4	
	Face Area		ft^2. (m^2)	4.5 (0.42)	
	Pipe type (Material)			Grooved H-pin (Copper)	
	Fin	Type (Material)		Slit (Aluminum)	
		Surface treatment		Hydrophilic coating	
Air filter	Type			Anti mold	
	Net material			PP plain weave	
Enclosure	Material			Plastic	
	Color			White Approximate color of MUNSELL N 9.25/	
Dimensions (H x W x D)	Net		in. (mm)	13-3/8 × 45-1/4 × 11 (340 × 1,150 × 280)	
	Gross			15-15/16 × 50 × 17-11/16 (405 × 1,270 × 450)	
Weight	Net		lbs. (kg)	40 (18)	
	Gross			53 (24)	
Connection pipe diameter	Liquid (Flare)		in. (mm)	ø 3/8 (9.52)	
	Gas (Flare)			ø 5/8 (15.88)	
	Drain hose			ø9/16 (13.8) [I.D.]; ø5/8 (15.8) to 11/16 (16.7) [O.D.]	

INDOOR UNITS

Note : Specifications are based on the following conditions.
Cooling : Indoor temperature of 80°F(26.7°C)DB/67°F(19.4°C)WB,and outdoor temperature of 95.0°F(35°C)DB/75°F(23.9°C)WB.
Heating : Indoor temperature of 70°F(21.1°C)DB/60°F(15.6°C)WB,and outdoor temperature of 47°F(8.3°C)DB/43°F(6.1°C)WB.
Pipe length : 25ft.(7.5 m), Height difference : 0ft.(0 m) (Outdoor unit - Indoor unit).
The protective function might work when using it outside the operation range.

Model name				ASUA7TLAV	ASUA9TLAV	ASUA12TLAV	ASUA14TLAV
Power source				1 Phase ~ 208/230V 60Hz			
Available voltage range				187 to 253 V			
Capacity	Cooling		Btu/h	7,500	9,500	12,000	14,000
			kW	2.2	2.8	3.5	4.1
	Heating		Btu/h	9,500	10,900	13,500	15,600
			kW	2.8	3.2	4.0	4.6
Input power			W	17	18	22	34
Fan	Airflow rate	High	CFM (m^3 / h)	288 (490)	294 (500)	330 (560)	394 (670)
		Med		265 (450)	265 (450)	283 (480)	288 (490)
		Low		247/218 *1 (420/370 *1)	247/218 *1 (420/370 *1)	247 (420)	247 (420)
	Type x Quantity			Cross flow × 1			
	Motor output		W	42			
Sound pressure level	High		dB(A)	35	36	39	44
	Med			33	33	35	37
	Low			31 /27 *1	31 /27 *1	31	32
Heat exchanger	Length		in. (mm)	23-5/8 (600)			
	Fin pitch		FPI	21			
	Rows x Stages			2×16			
	Face Area		ft^2. (m^2)	2.3 (0.20)			
	Pipe type (Material)			Grooved H-pin (Copper)			
	Fin	Type (Material)		Slit(Aluminum)			
		Surface treatment		Hydrophilic coating			
Air filter	Type			Antibacterial and Mold proofing, Ion deodorization			
	Net material			PP honeycomb			
Enclosure	Material			Plastic			
	Color			WHITE Approximate color of MUNSELL N9.25			
Dimensions (H x W x D)	Net		in. (mm)	10-13/16 × 31-1/8 × 8-7/16 (275 × 790 × 215)			
	Gross			11-7/16 × 32-7/8 × 13-9/16 (290 × 835 × 345)			
Weight	Net		lbs. (kg)	20 (9)			
	Gross			26 (12)			
Connection pipe diameter	Liquid (Flare)		in. (mm)	ø 1/4 (6.35)			
	Gas (Flare)			ø 1/2 (12.70)			
	Drain hose			ø 9/16 (13.8) [I.D.] ; ø 5/8 (15.8) - ø 11/16 (16.7) [O.D.]			

*1: This value is "cooling operation / heating operation".

Note : Specifications are based on the following conditions.
Cooling : Indoor temperature of 80°F(26.7°C)DB/67°F(19.4°C)WB,and outdoor temperature of 95.0°F(35°C)DB/75°F(23.9°C)WB.
Heating : Indoor temperature of 70°F(21.1°C)DB/60°F(15.6°C)WB,and outdoor temperature of 47°F(8.3°C)DB/43°F(6.1°C)WB.
Pipe length : 25ft.(7.5 m), Height difference : 0ft.(0 m) (Outdoor unit - Indoor unit).
The protective function might work when using it outside the operation range.

INDOOR UNITS

Model name				ASUB18TLAV	ASUB24TLAV
Power source				1 Phase ~ 208/230V 60Hz	
Available voltage range				187 to 253 V	
Capacity	Cooling		Btu/h	18,000	24,000
			kW	5.3	7.0
	Heating		Btu/h	20,000	27,000
			kW	5.9	7.9
Input power			W	32	60
Fan	Airflow rate	High	CFM (m^3 / h)	494 (840)	647 (1,100)
		Med		453 (770)	536 (910)
		Low		406 (690)	430 (730)
	Type x Quantity			Cross flow × 1	
	Motor output		W	42	
Sound pressure level	High		dB(A)	41	48
	Med			39	43
	Low			35	35
Heat exchanger	Length		in. (mm)	32-3/16 (817)	
	Fin pitch		FPI	21 18	
	Rows x Stages			2 × 18 1×4(2 pieces)	
	Face Area		ft^2. (m^2)	3.3 (0.31)	
	Pipe type (Material)			Grooved H-pin (Copper)	
	Fin	Type (Material)		Slit (Aluminum)	
		Surface treatment		Hydrophilic coating	
Air filter	Type			Deodorization / Anti-mold	
	Net material			PP monofilament net	
Enclosure	Material			Plastic	
	Color			WHITE Approximate color of MUNSELL N9.25	
Dimensions (H x W x D)	Net		in. (mm)	12-5/8 × 39-5/16 × 9 (320 × 998 × 228)	
	Gross			12-9/16 × 42-15/16 × 16-7/8 (319 × 1,090 × 429)	
Weight	Net		lbs. (kg)	33 (15)	
	Gross			42 (19)	
Connection pipe diameter	Liquid (Flare)		in. (mm)	ø 3/8 (9.52)	
	Gas (Flare)			ø 5/8 (15.88)	
	Drain hose			ø 1/2 (12) [I.D.] ; ø 5/8 (16) [O.D.]	

INDOOR UNITS

Note : Specifications are based on the following conditions.
Cooling : Indoor temperature of 80°F(26.7°C)DB/67°F(19.4°C)WB,and outdoor temperature of 95.0°F(35°C)DB/75°F(23.9°C)WB.
Heating : Indoor temperature of 70°F(21.1°C)DB/60°F(15.6°C)WB,and outdoor temperature of 47°F(8.3°C)DB/43°F(6.1°C)WB.
Pipe length : 25ft.(7.5 m), Height difference : 0ft.(0 m) (Outdoor unit - Indoor unit).
The protective function might work when using it outside the operation range.

2. ELECTRIC CHARACTERISTICS

Indoor Unit		Power Supply				Indoor Rated		
Type	Model	Voltage (V)	Frequency (Hz)	MCA (A)	MAX.CKT. BKR (A)	Input Power (kW)	Current (A)	FLA (A)
Compact cassette	AUUA4TLAV1	230	60	0.29	15	0.023	0.17	0.23
	AUUA7TLAV			0.51		0.025	0.17	0.41
	AUUA9TLAV			0.51		0.025	0.17	0.41
	AUUA12TLAV			0.51		0.029	0.20	0.41
	AUUA14TLAV			0.51		0.035	0.24	0.41
	AUUA18TLAV			0.51		0.036	0.25	0.41
	AUUA24TLAV			0.78		0.084	0.62	0.62
Circular flow cassette	AUUB18TLAV1	230	60	0.33	15	0.020	0.20	0.26
	AUUB24TLAV1			0.40		0.025	0.24	0.32
	AUUB30TLAV1			0.68		0.049	0.41	0.54
	AUUB36TLAV1			0.78		0.061	0.47	0.62
	AUUB48TLAV1			1.40		0.116	0.86	1.12
Cassette (slim type)	AUUB18TLAV	230	60	0.43	15	0.039	0.27	0.34
	AUUB24TLAV			0.43		0.046	0.32	0.34
Cassette	AUUB30TLAV	230	60	0.68	15	0.059	0.42	0.54
	AUUB36TLAV			0.68		0.080	0.53	0.54
Mini duct	ARUL4TLAV1	230	60	0.35	15	0.026	0.21	0.28
Slim duct / Slim concealed floor	ARUL7TLAV	230	60	0.71	15	0.044	0.31	0.57
	ARUL9TLAV			0.71		0.050	0.35	0.57
	ARUL12TLAV			0.71		0.054	0.38	0.57
	ARUL14TLAV			0.76		0.092	0.61	0.61
	ARUL18TLAV			0.76		0.083	0.55	0.61
Medium static Pressure duct	ARUM24TLAV	230	60	1.10	15	0.125	0.75	0.88
	ARUM30TLAV			1.40		0.190	1.12	1.12
	ARUM36TLAV			1.74		0.222	1.29	1.39
High static Pressure duct	ARUH36TLAV	230	60	2.70	15	0.496	2.16	2.16
	ARUH48TLAV			4.83		0.752	3.27	3.86
	ARUH60TLAV			4.83		0.806	3.57	3.86
	ARUH72TLAV1			8.13		0.62	3.61	6.50
	ARUH96TLAV			9.40		0.84	4.89	7.52
Vertical air handler	ARUV12TLAV	230	60	1.75	15	0.087	0.79	1.40
	ARUV18TLAV			2.14		0.142	1.22	1.71
	ARUV24TLAV			2.81		0.233	1.77	2.25
	ARUV30TLAV			3.38		0.253	1.85	2.70
	ARUV36TLAV			4.45		0.427	3.05	3.56
	ARUV48TLAV			5.24		0.479	3.28	4.19
	ARUV60TLAV			6.98		0.785	5.34	5.58

INDOOR UNITS

MCA : Min Circuit Amps = Max Operating Current (Full Load).

MAX.CKT.BKR : Maximum Circuit Breaker.

FLA : Full Load Amps.

Indoor Unit		Power Supply				Indoor Rated		
Type	Model	Voltage (V)	Frequency (Hz)	MCA (A)	MAX.CKT. BKR (A)	Input Power (kW)	Current (A)	FLA (A)
Compact floor	AGUA4TLAV1	230	60	0.22	15	0.014	0.13	0.17
	AGUA7TLAV1			0.24		0.016	0.14	0.19
	AGUA9TLAV1			0.25		0.017	0.15	0.20
	AGUA12TLAV1			0.30		0.022	0.18	0.24
	AGUA14TLAV1			0.38		0.029	0.23	0.30
Floor / ceiling	ABUA12TLAV	230	60	0.40	15	0.030	0.25	0.32
	ABUA14TLAV			0.43		0.042	0.34	0.34
	ABUA18TLAV			0.71		0.074	0.57	0.57
	ABUA24TLAV			0.93		0.099	0.70	0.74
Ceiling	ABUA30TLAV	230	60	0.61	15	0.066	0.43	0.49
	ABUA36TLAV			0.69		0.085	0.55	0.55
Wall mounted	ASUA4TLAV1	230	60	0.22	15	0.013	0.13	0.17
	ASUA7TLAV1			0.32		0.019	0.19	0.25
	ASUA9TLAV1			0.52		0.034	0.31	0.41
	ASUA12TLAV1			0.42		0.025	0.25	0.33
	ASUA14TLAV1			0.49		0.036	0.30	0.39
	ASUB18TLAV1			0.53		0.032	0.33	0.42
	ASUB24TLAV1			0.65		0.060	0.52	0.52
	ASUB30TLAV1			0.90		0.074	0.55	0.72
	ASUB36TLAV1			1.18		0.103	0.72	0.94
	ASUA7TLAV			0.51		0.017	0.17	0.41
	ASUA9TLAV			0.51		0.018	0.18	0.41
	ASUA12TLAV			0.51		0.022	0.20	0.41
	ASUA14TLAV			0.51		0.034	0.30	0.41
	ASUB18TLAV			0.53		0.032	0.33	0.42
	ASUB24TLAV			0.65		0.060	0.52	0.52

INDOOR UNITS

MCA : Min Circuit Amps = Max Operating Current (Full Load).

MAX.CKT.BKR : Maximum Circuit Breaker.

FLA : Full Load Amps.

3. DIMENSIONS

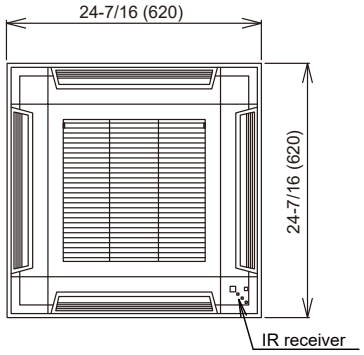
3-1. COMPACT CASSETTE TYPE

■ MODELS : AUUA4TLAV1, AUUA7TLAV, AUUA9TLAV, AUUA12TLAV, AUUA14TLAV, AUUA18TLAV, AUUA24TLAV

Unit : in. (mm)

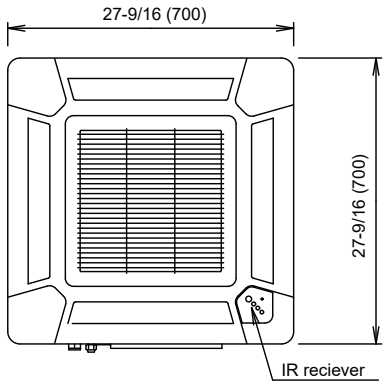
INDOOR UNITS

Grid type grille

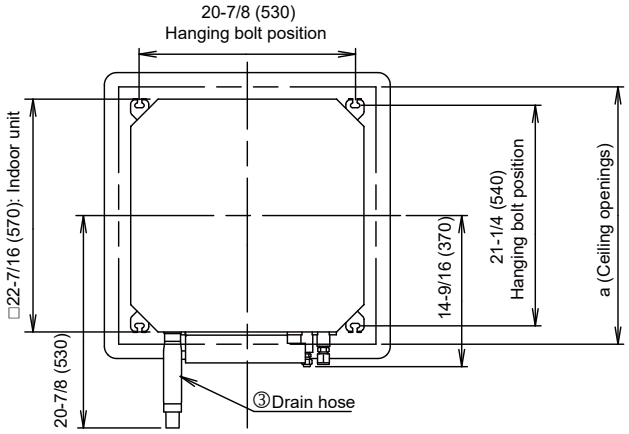


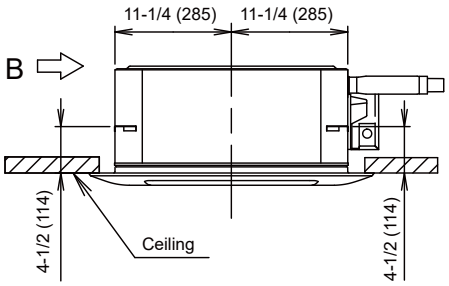
	Cassette grille	
	Standard type	Grid type
a	22-13/16 to 26 (580 to 660)	22-13/16 to 24 (580 to 610)

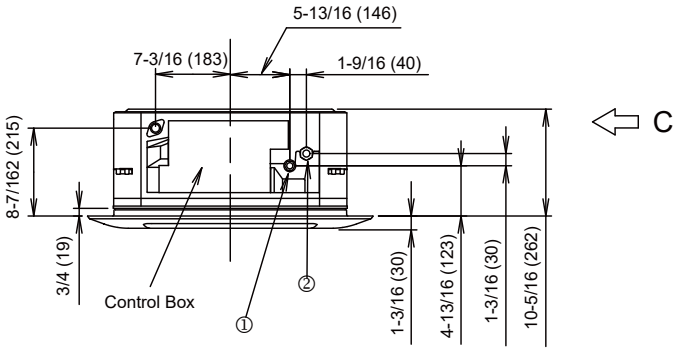
Standard type grille



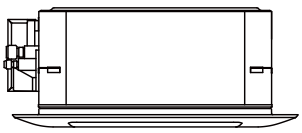
View A







View B



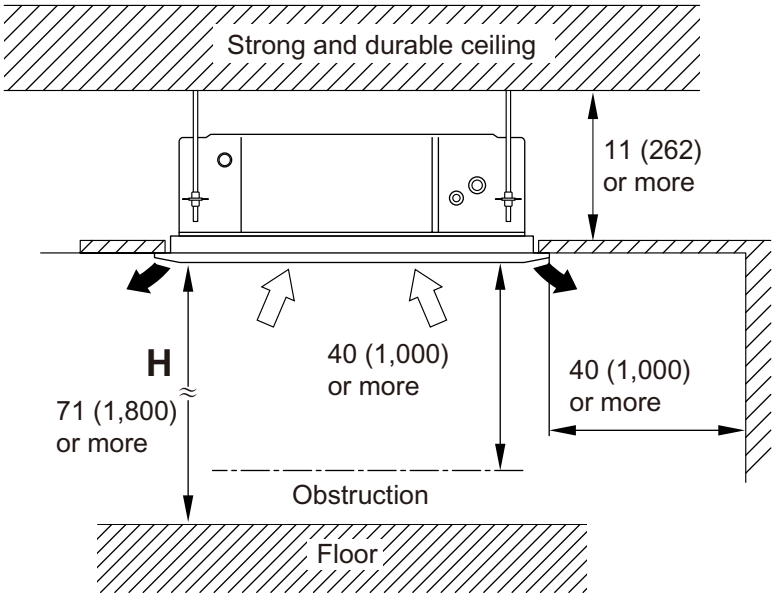
View C

A

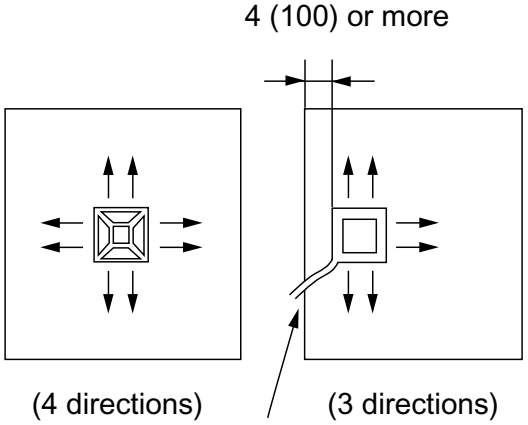
			AUUA4, AUUA7, AUUA9, AUUA12, AUUA14	AUUA18, AUUA24
①	Refrigerant pipe flare connection	Liquid	ø 1/4 (6.35)	ø 3/8 (9.52)
②		Gas	ø 1/2 (12.70)	ø 5/8 (15.88)
③	Drain hose		ø 3/4 (I.D.), ø 1-1/16 (O.D.)	

■ INSTALLATION LOCATION

Unit : in. (mm)



	H (The maximum height from floor to ceiling)					
Model name	AUUA7	AUUA9	AUUA12	AUUA14	AUUA18	AUUA24
Standard mode	106 (2,700)	106 (2,700)	106 (2,700)	106 (2,700)	106 (2,700)	106 (2,700)
High Ceiling mode	-	-	118 (3,000)	118 (3,000)	118 (3,000)	118 (3,000)



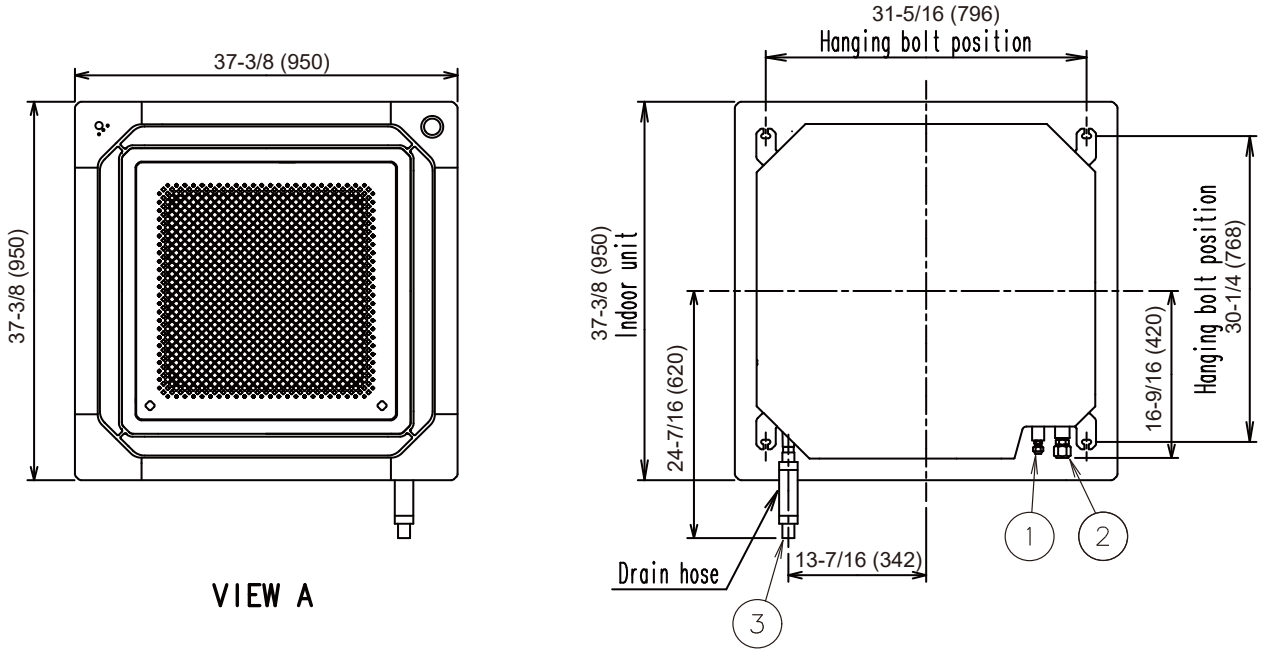
NOTE: Use the “Insulation kit for high humidity” (option), when the condition under the roof is over 80% in humidity and over 30°C in temperature. Otherwise, there is a risk of condensation on the ceiling.

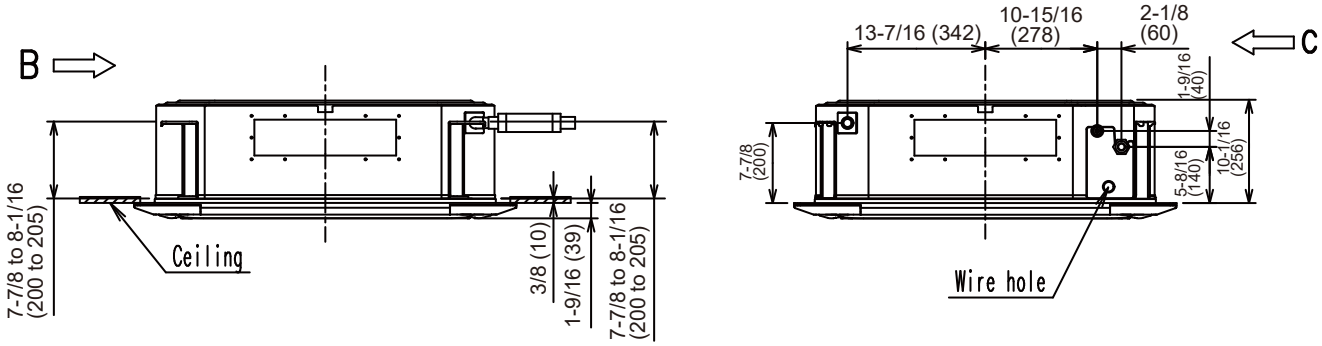
INDOOR UNITS

3-2. CIRCULAR FLOW CASSETTE TYPE

■ MODELS: AUUB18TLAV1, AUUB24TLAV1, AUUB30TLAV1

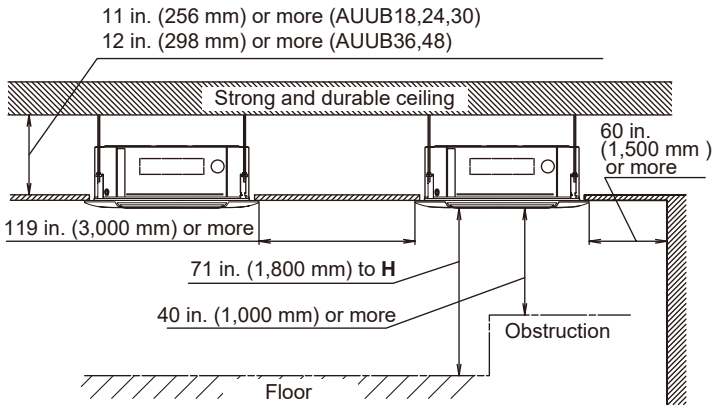
Unit : in. (mm)



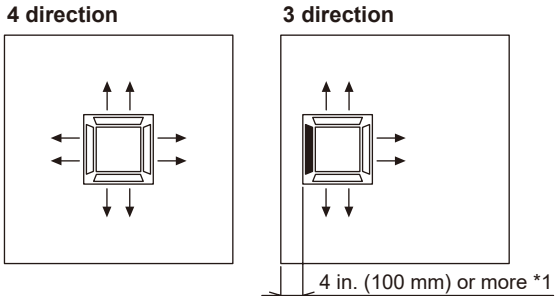


			AUUB18	AUUB24, AUUB30
①	Refrigerant pipe flare connection	Liquid	ø 1/4 (6.35)	ø 3/8 (9.52)
②		Gas	ø 1/2 (12.70)	ø 5/8 (15.88)
③	Drain hose		ø 3/4 (I.D.), ø 1-1/16 (O.D.)	

■ INSTALLATION PLACE



	H (The maximum height from floor to ceiling) in. (mm)
Model name	AUUB18/24/30
Standard mode	118 (3,000)
High Ceiling mode	138 (3,500)



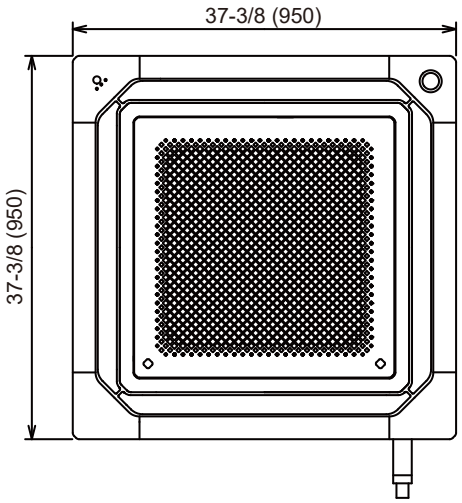
*1: Ensure sufficient service access during installation.

NOTE: Use the “Insulation kit for high humidity” (option), when the condition under the roof is over 80% in humidity and over 30°C in temperature. Otherwise, there is a risk of condensation on the ceiling.

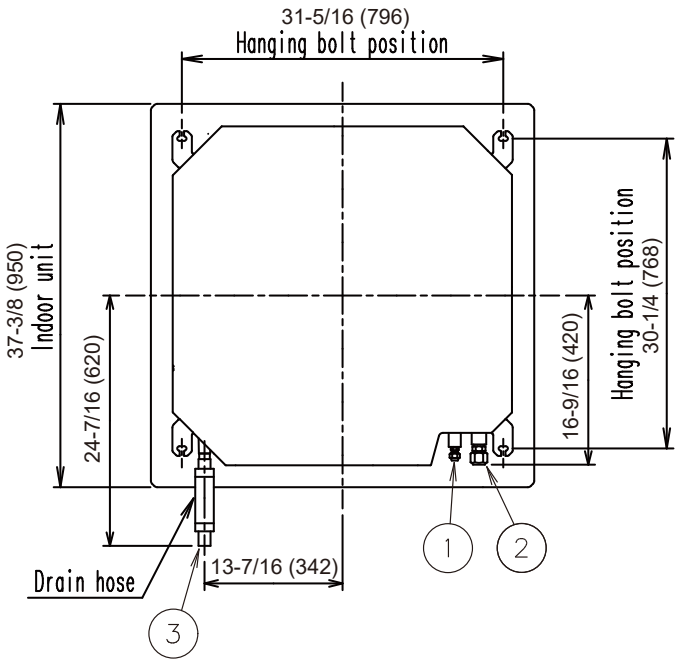
INDOOR UNITS

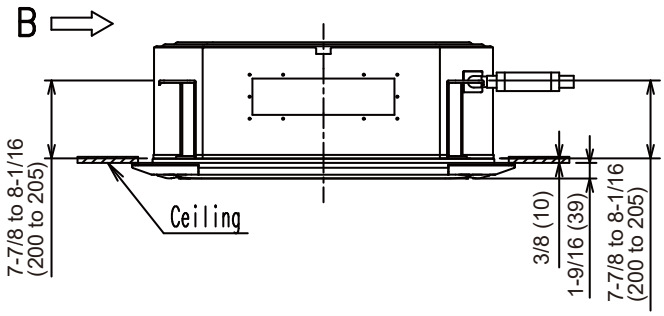
■ MODELS:AUUB36TLAV1, AUUB48TLAV1

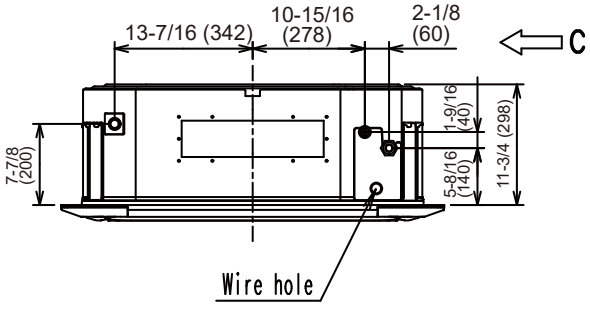
Unit : in. (mm)

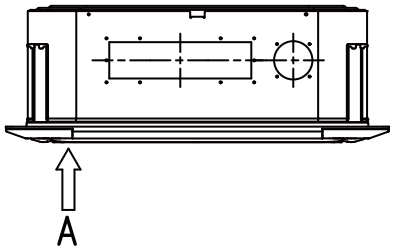


VIEW A

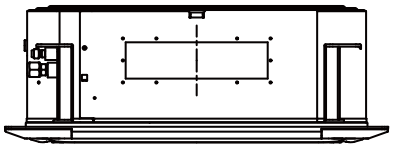








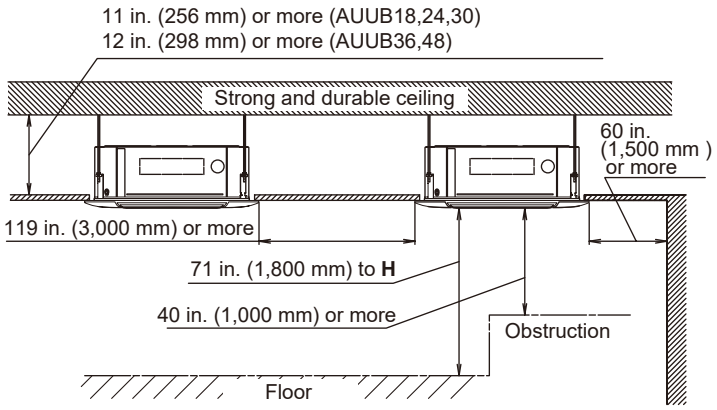
VIEW B



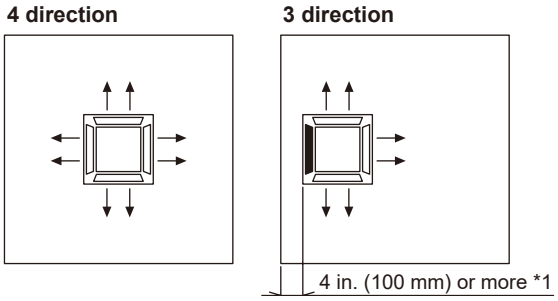
VIEW C

			AUUB36, AUUB48
①	Refrigerant pipe flare connection	Liquid	ø 3/8 (9.52)
②		Gas	ø 5/8 (15.88)
③	Drain hose		ø 3/4 (I.D.), ø 1-1/16 (O.D.)

■ INSTALLATION PLACE



	H (The maximum height from floor to ceiling) in. (mm)
Model name	AUUB36/48
Standard mode	126 (3,200)
High Ceiling mode	166 (4,200)



*1: Ensure sufficient service access during installation.

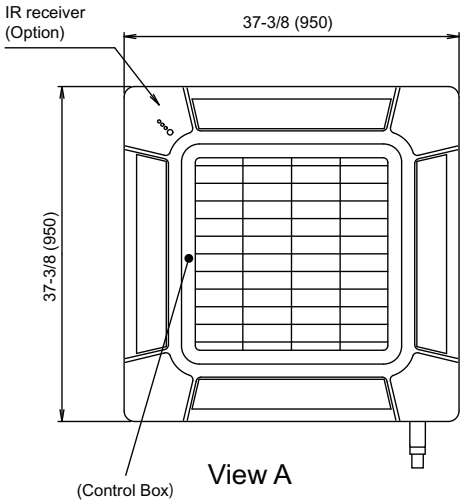
NOTE: Use the “Insulation kit for high humidity” (option), when the condition under the roof is over 80% in humidity and over 30°C in temperature. Otherwise, there is a risk of condensation on the ceiling.

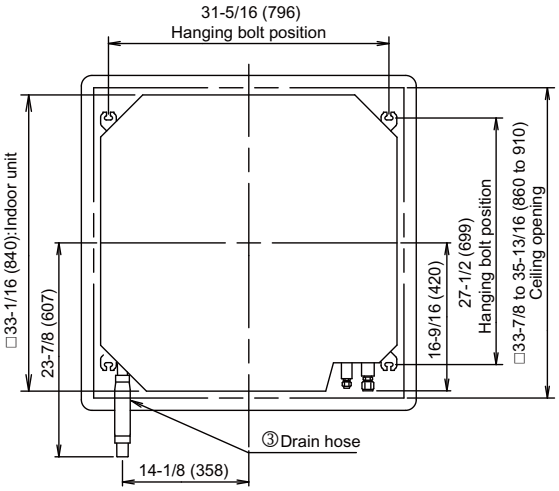
INDOOR UNITS

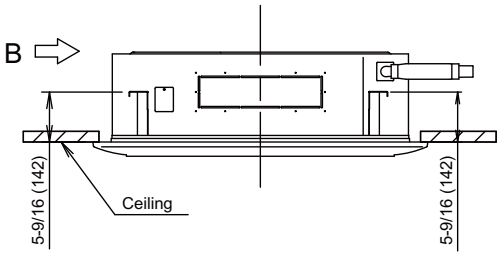
3-3. CASSETTE TYPE

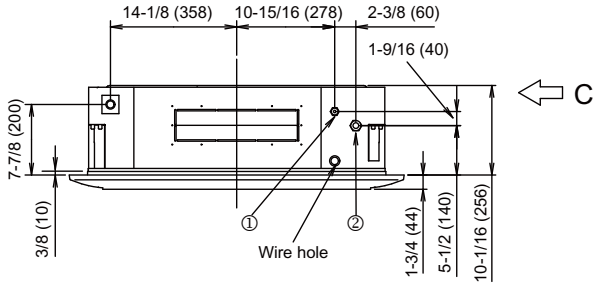
■ MODELS : AUUB18TLAV, AUUB24TLAV

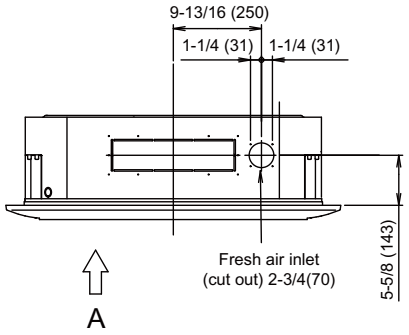
Unit : in. (mm)



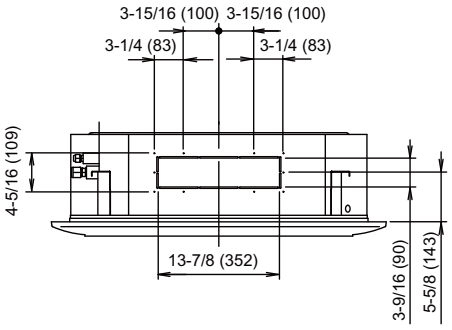








View B



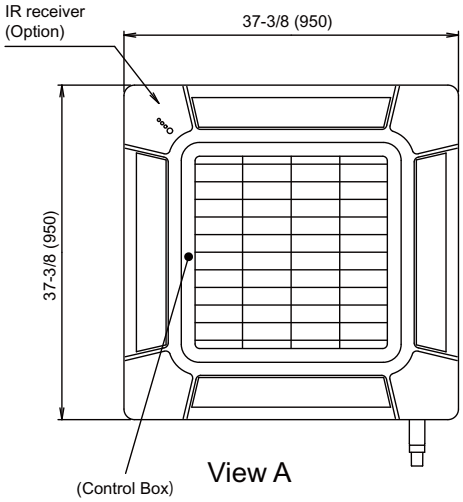
View C

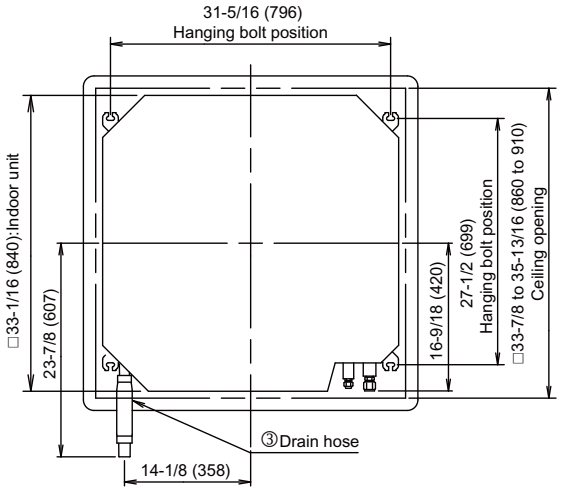
			AUUB18, AUUB24
①	Refrigerant pipe flare connection	Liquid	ø 3/8 (9.52)
②		Gas	ø 5/8 (15.88)
③	Drain hose		ø 3/4 (I.D.), ø 1-1/16 (O.D.)

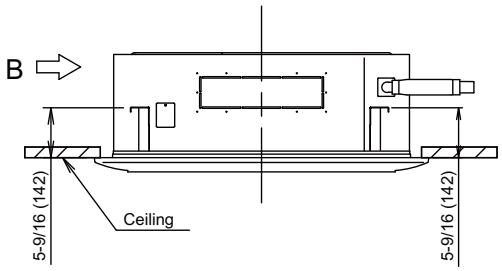
INDOOR UNITS

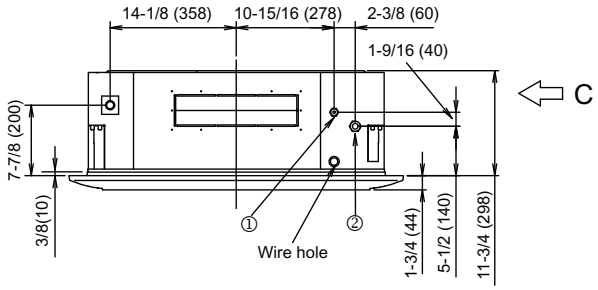
■ MODELS : AUUB30TLAV, AUUB36TLAV

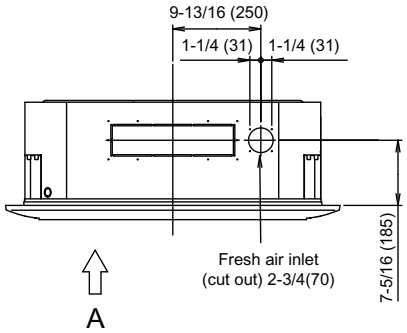
Unit : in. (mm)



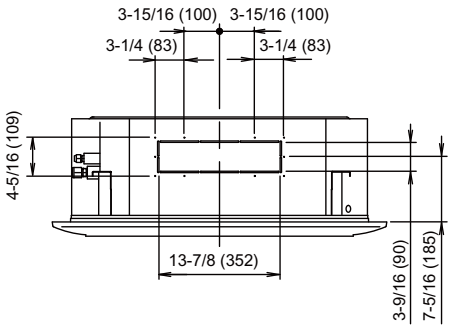








View B

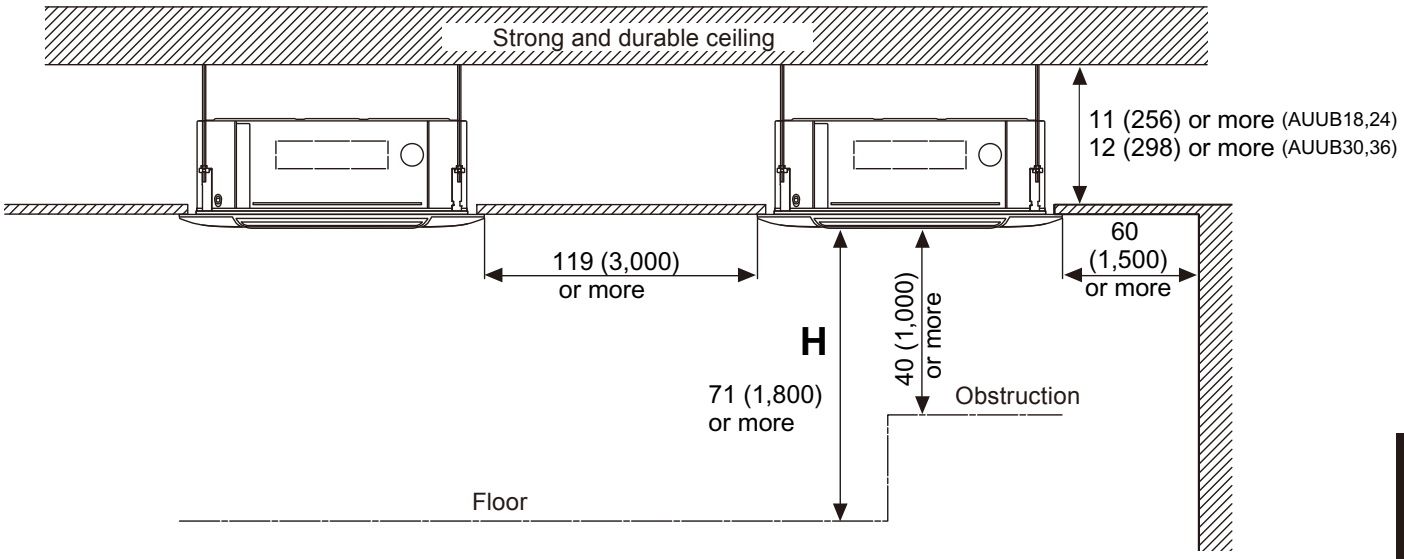


View C

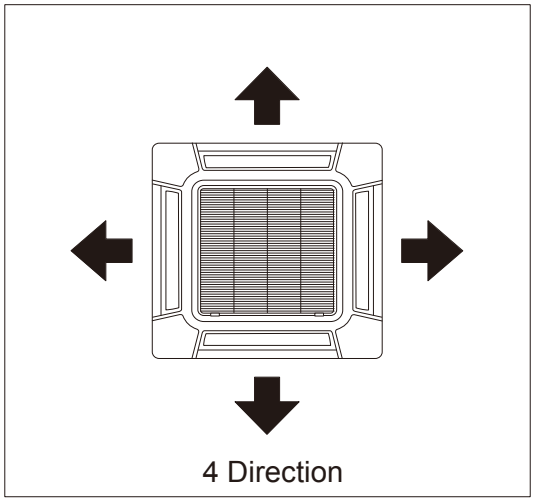
			AUUB30	AUUB36
①	Refrigerant pipe flare connection	Liquid	ø 3/8 (9.52)	
②		Gas	ø 5/8 (15.88)	ø 3/4 (19.05)
③	Drain hose		ø 3/4 (I.D.), ø 1-1/16 (O.D.)	

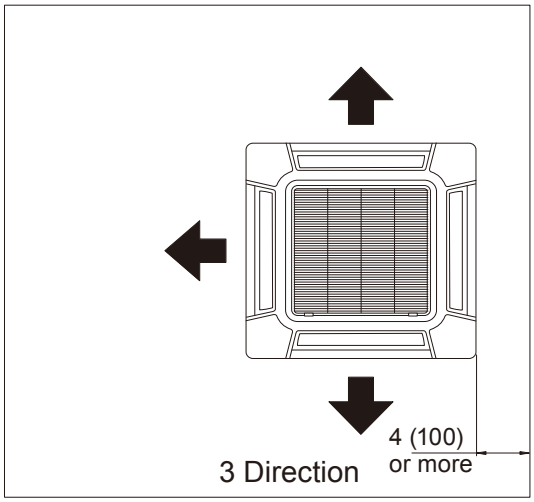
Unit : in. (mm)

■ INSTALLATION LOCATION



	H (The maximum height from floor to ceiling)			
Model name	AUUB18	AUUB24	AUUB30	AUUB36
Standard mode	118 (3,000)	118 (3,000)	125 (3,200)	125 (3,200)
High Ceiling mode	137 (3,500)	137 (3,500)	141 (3,600)	165 (4,200)





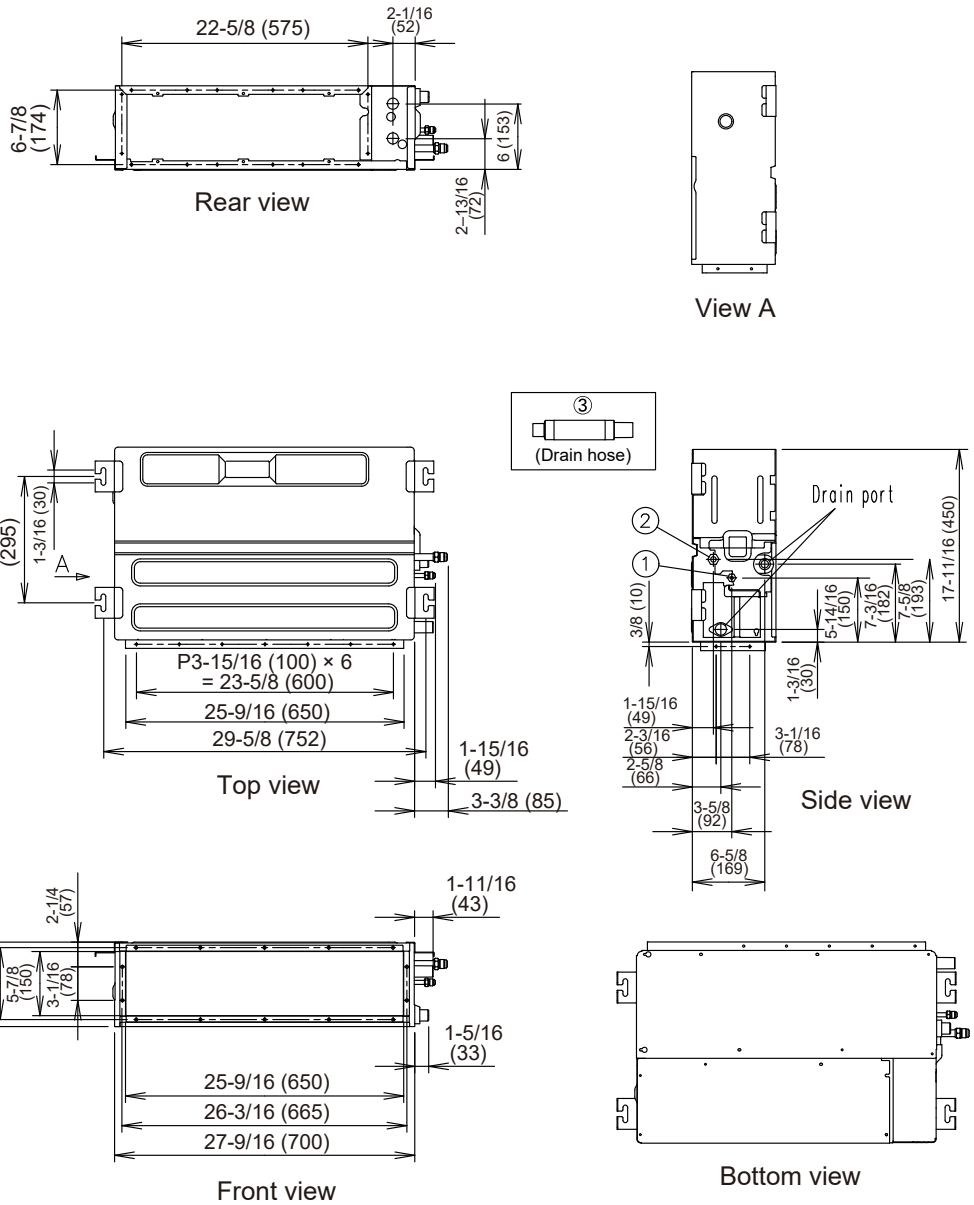
NOTE: Use the “Insulation kit for high humidity” (option), when the condition under the roof is over 80% in humidity and over 30°C in temperature. Otherwise, there is a risk of condensation on the ceiling.

INDOOR UNITS

3-4. MINI DUCT TYPE

■ MODEL: ARUL4TLAV1

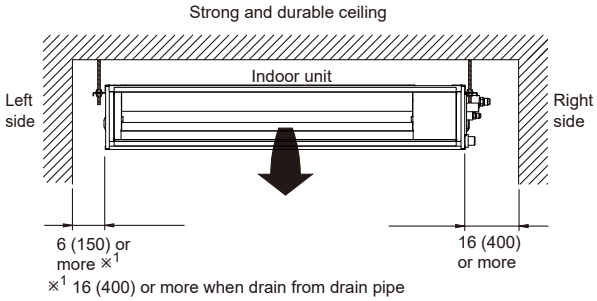
Unit : in. (mm)



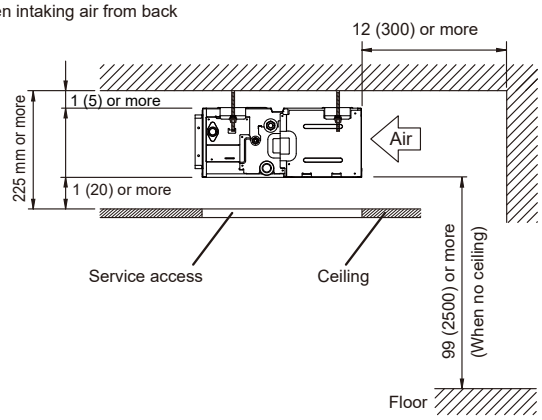
			ARUL4
①	Refrigerant pipe flare connection	Liquid	ø 1/4 (6.35)
②		Gas	ø 3/8 (9.52)
③	Drain hose connection	Drain hose	ø 3/4 (I.D.), ø 1-1/16 (O.D.)

Unit : in. (mm)

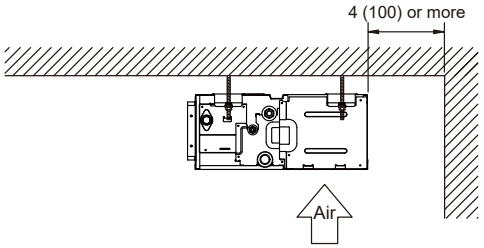
■ INSTALLATION PLACE



• When intaking air from back

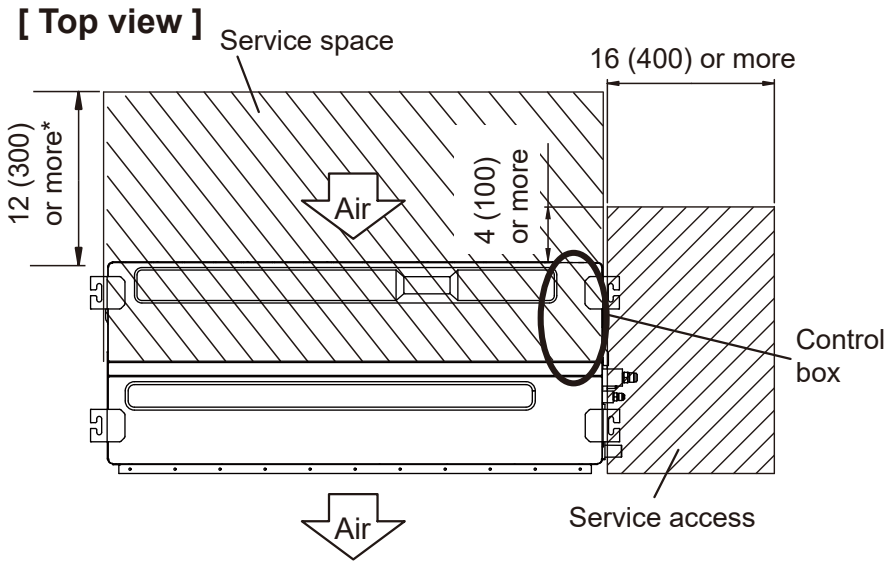


• When intaking air from bottom



■ MAINTENANCE SPACE

Provide a service access for inspection purposes as shown below.
Do not place any wiring or illumination in the service space, as they will impede service.



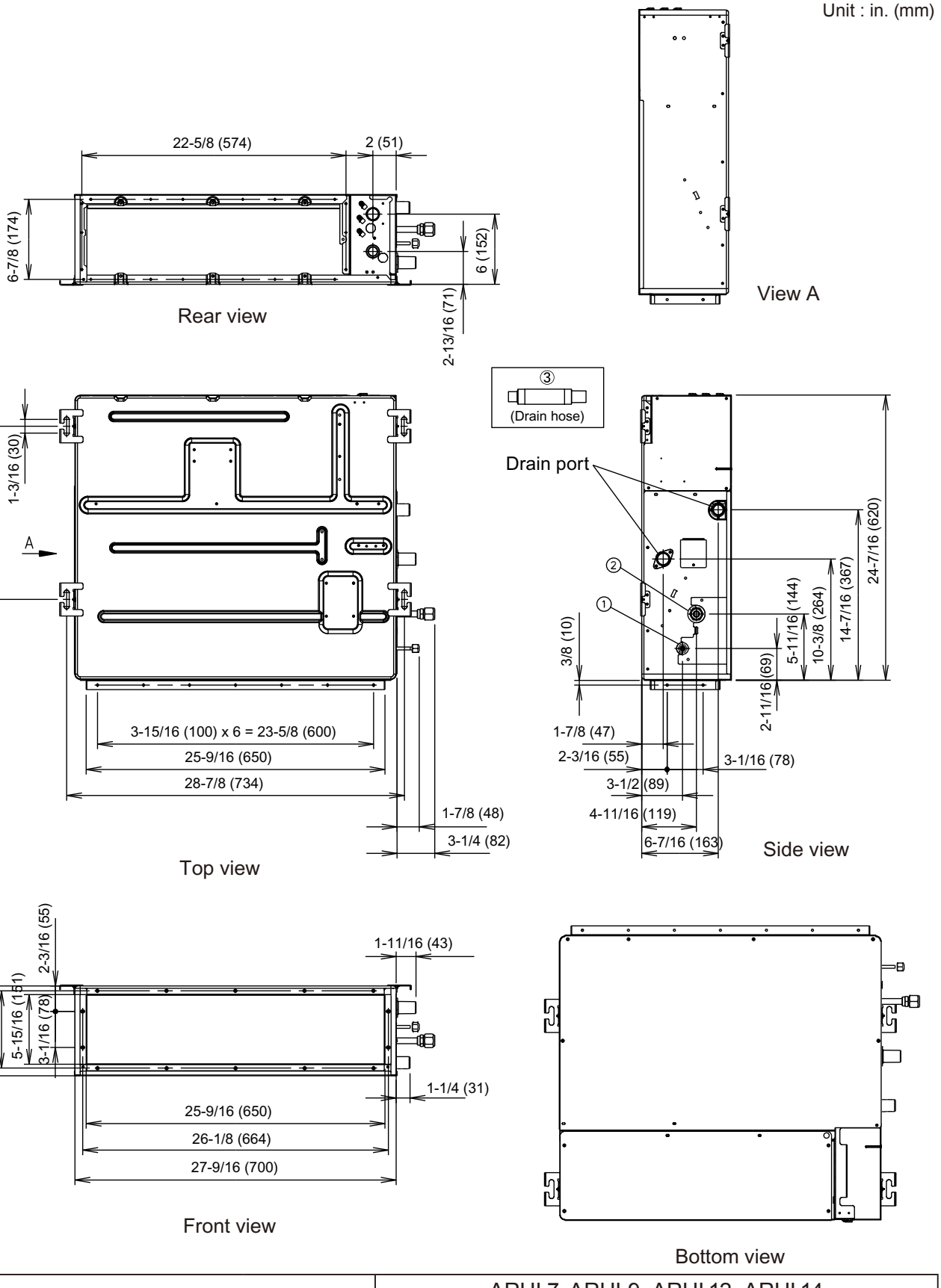
*: Above 4 (100) when intaking air from bottom

INDOOR UNITS

3-5. SLIM DUCT / SLIM CONCEALED FLOOR TYPE

■ MODELS : ARUL7TLAV, ARUL9TLAV, ARUL12TLAV, ARUL14TLAV

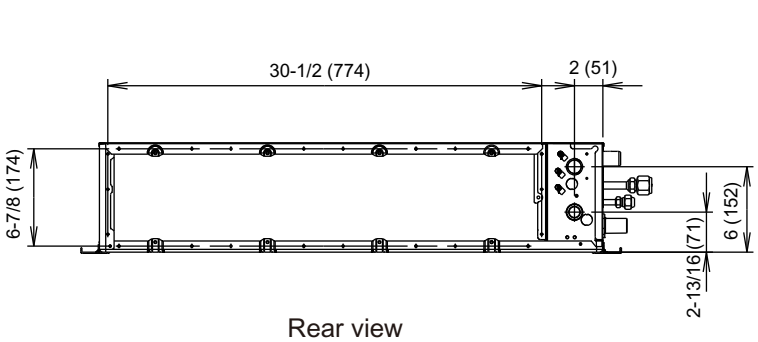
Unit : in. (mm)



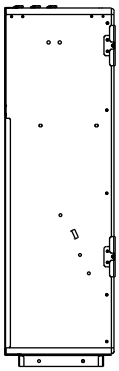
			ARUL7, ARUL9, ARUL12, ARUL14
①	Refrigerant pipe flare connection	Liquid	ø 1/4 (6.35)
②		Gas	ø 1/2 (12.70)
③	Drain hose	-	ø 3/4 (I.D.), ø 1-1/16 (O.D.)

■ MODEL : ARUL18TLAV

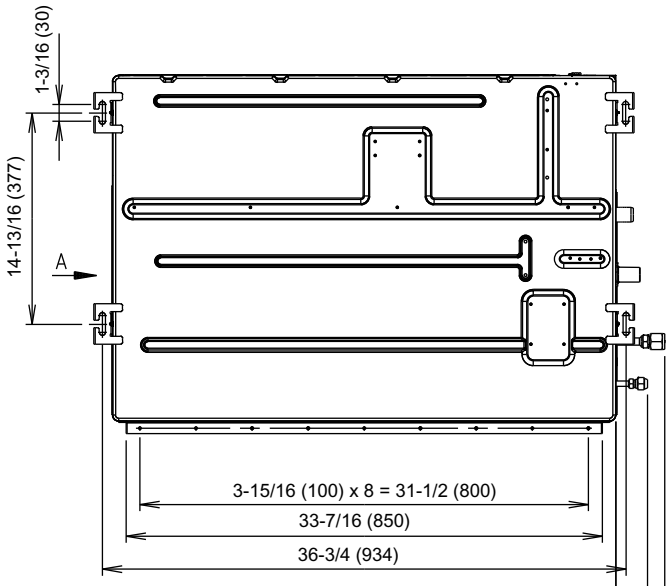
Unit : in. (mm)



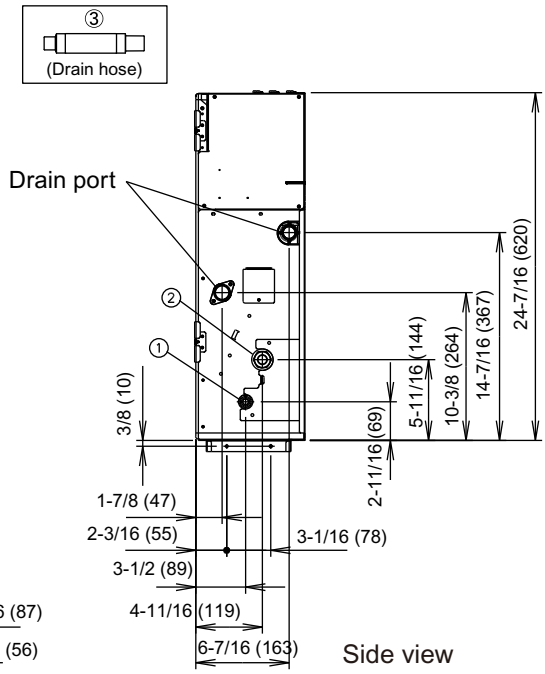
Rear view



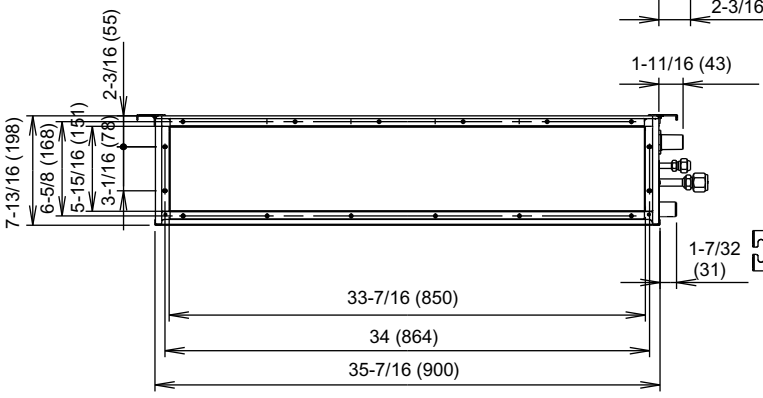
View A



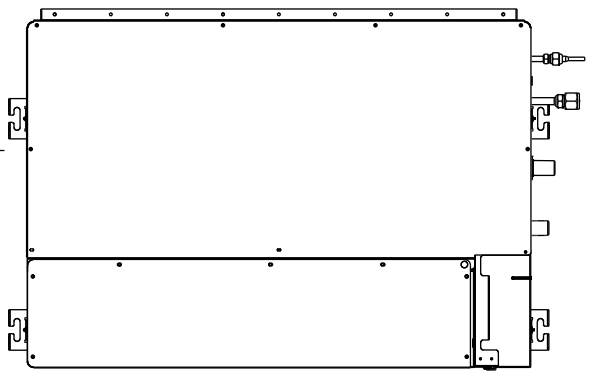
Top view



Side view



Front view

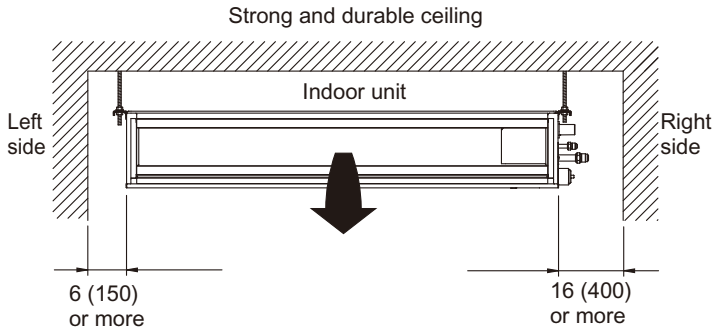


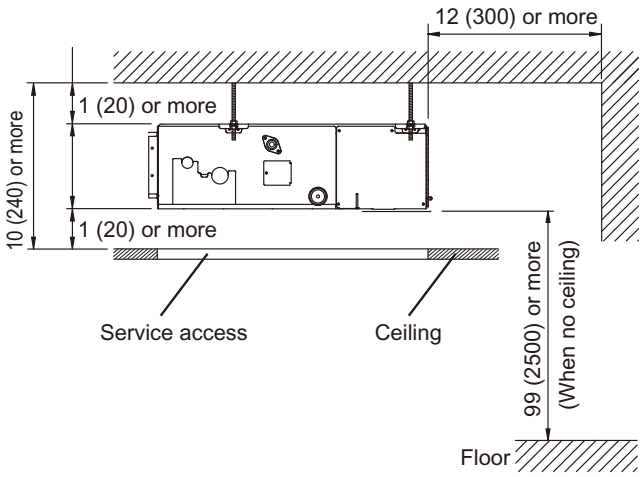
Bottom view

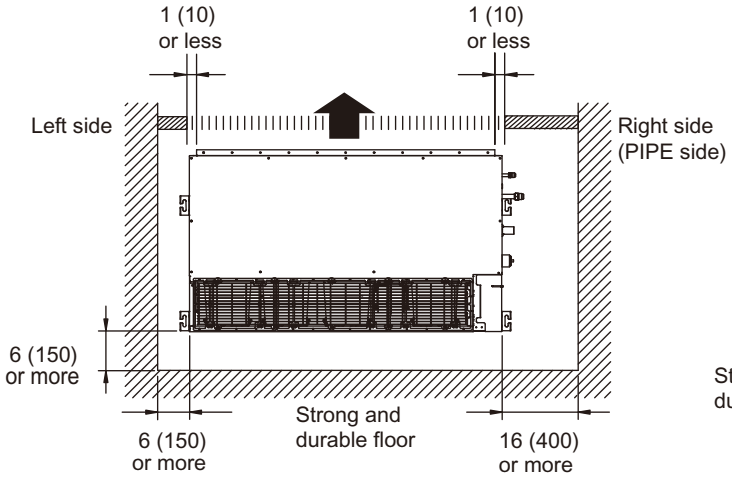
			ARUL18
①	Refrigerant pipe flare connection	Liquid	ø 3/8 (9.52)
②		Gas	ø 5/8 (15.88)
③	Drain hose	-	ø 3/4 (I.D.), ø 1-1/16 (O.D.)

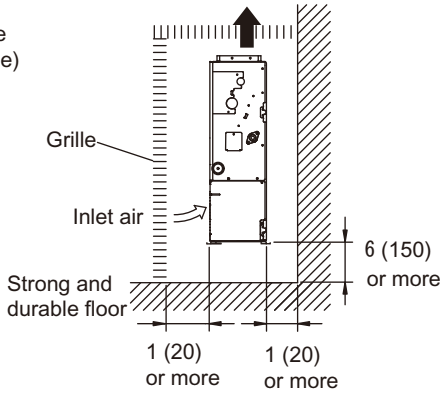
■ INSTALLATION LOCATION

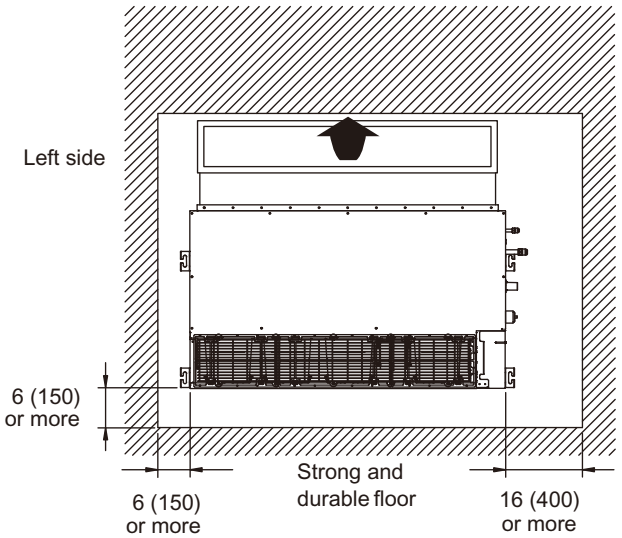
Unit : in. (mm)

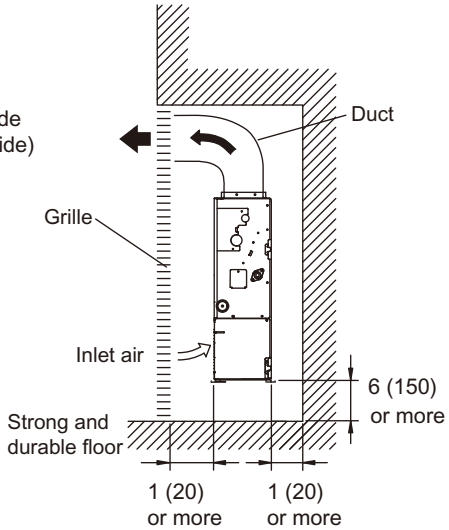












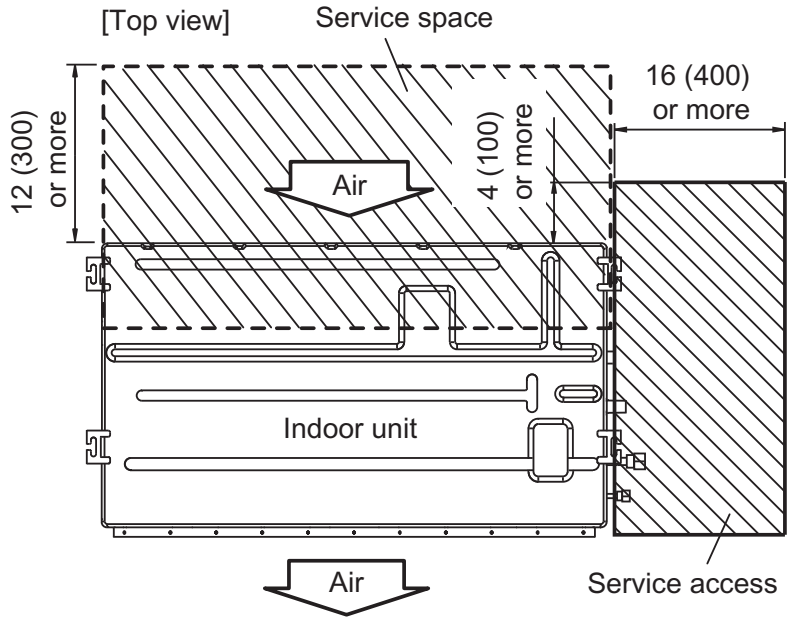
INDOOR UNITS

■ MAINTENANCE SPACE

Unit : in. (mm)

Provide a service access for inspection purposes as shown below.

Do not place any wiring or illumination in the service space, as they will impede service

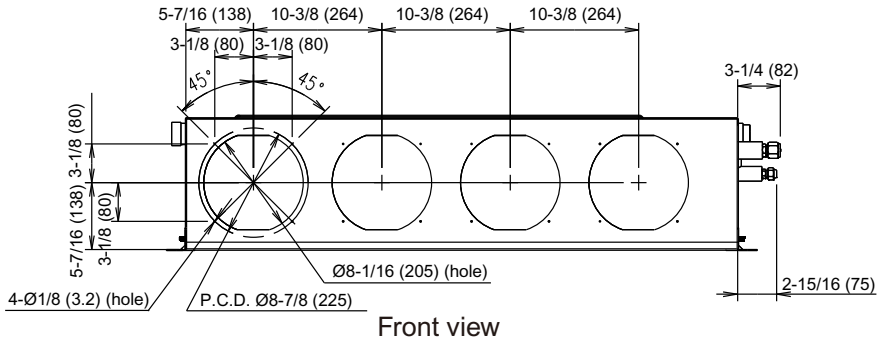


INDOOR UNITS

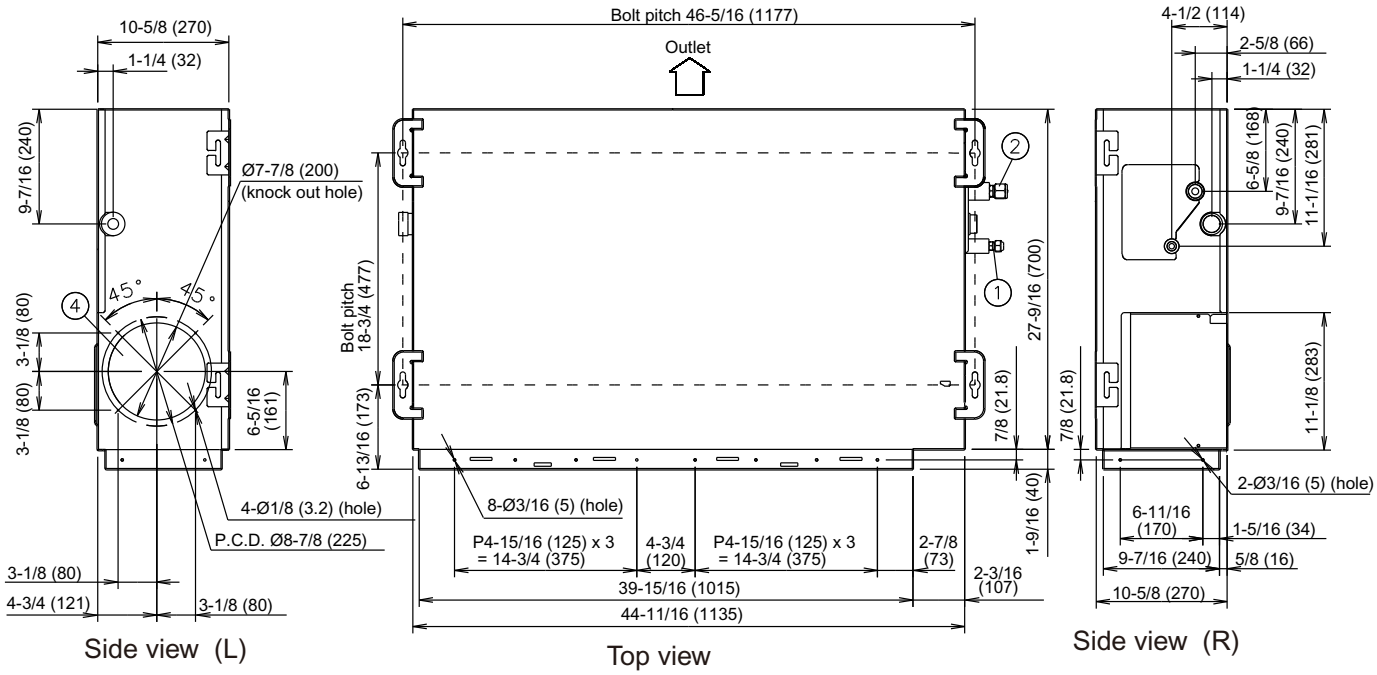
3-6. MEDIUM STATIC PRESSURE DUCT TYPE

■ MODELS : ARUM24TLAV, ARUM30TLAV, ARUM36TLAV

Unit : in. (mm)



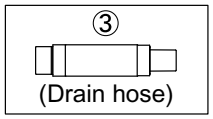
Front view

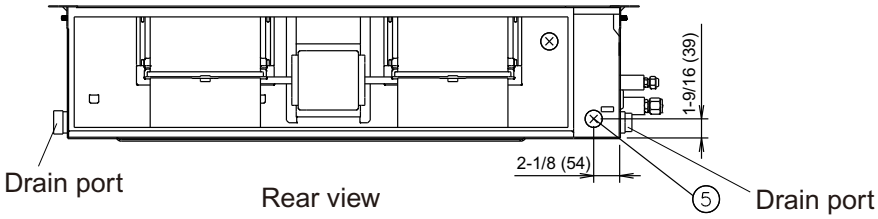


Side view (L)

Top view

Side view (R)

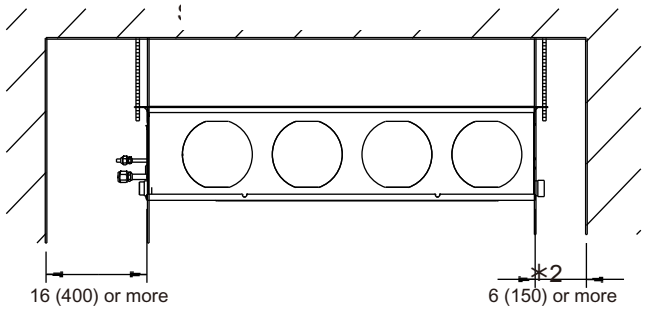




			ARUM24, ARUM30	ARUM36
①	Refrigerant pipe flare connection	Liquid	ø 3/8 (9.52)	ø 3/8 (9.52)
②		Gas	ø 5/8 (15.88)	ø 3/4 (19.05)
③	Drain hose	-	ø 3/4 (I.D.), ø 1-1/16 (O.D.)	
④	Knock out hole (fresh air)	-	7-7/8 (200)	
⑤	Hole for power cable	-	7/8 (23)	

Unit : in. (mm)

■ INSTALLATION LOCATION *1

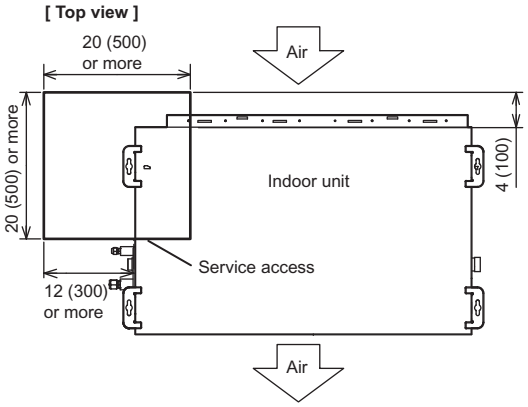


*1 When drain pump is used, leave the space required for service and maintenance (Refer to chapter 10. 9-1. DRAIN PUMP UNIT)

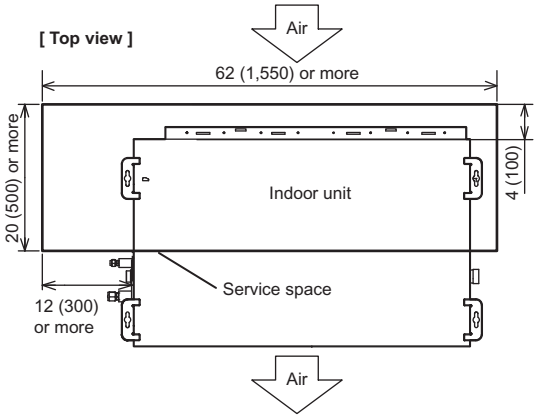
*2 When drain hose is connected, the required dimension is 16 (400) or more.

■ MAINTENANCE SPACE

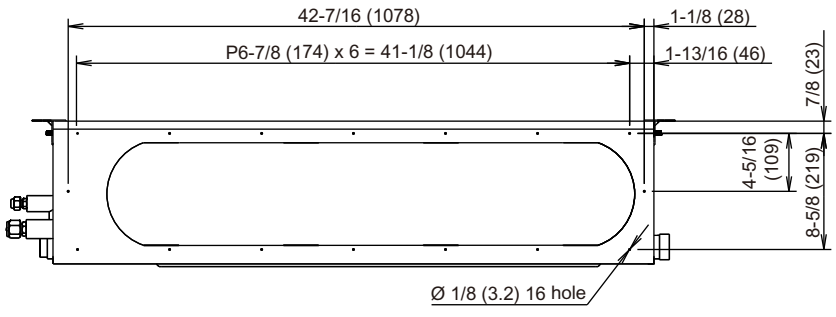
It shall be possible to install and remove the control box.



It shall be possible to install and remove the control box, fan units and filter.



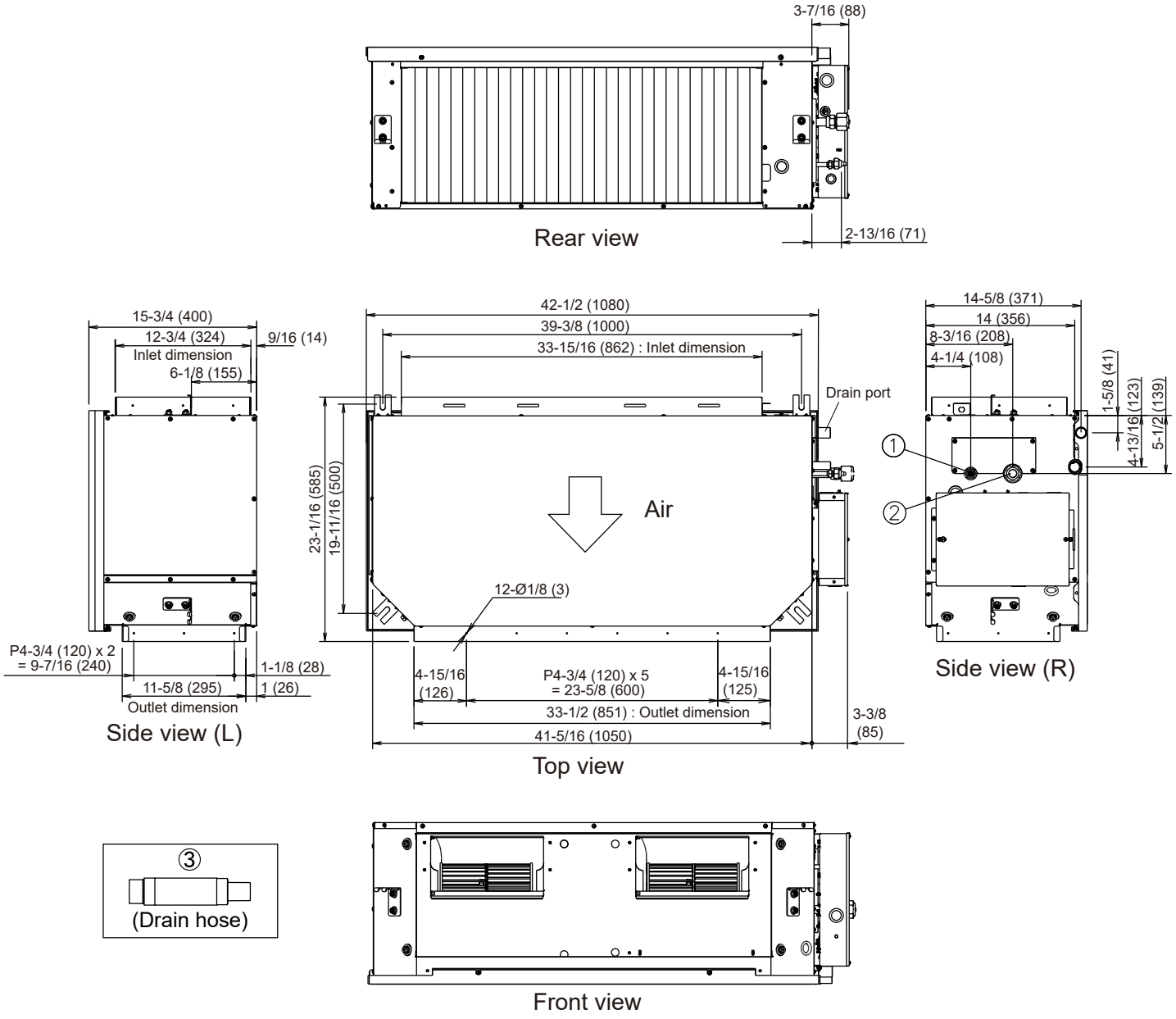
■ WHEN USING A SQUARE DUCT



3-7. HIGH STATIC PRESSURE DUCT TYPE

■ MODELS : ARUH36TLAV, ARUH48TLAV, ARUH60TLAV

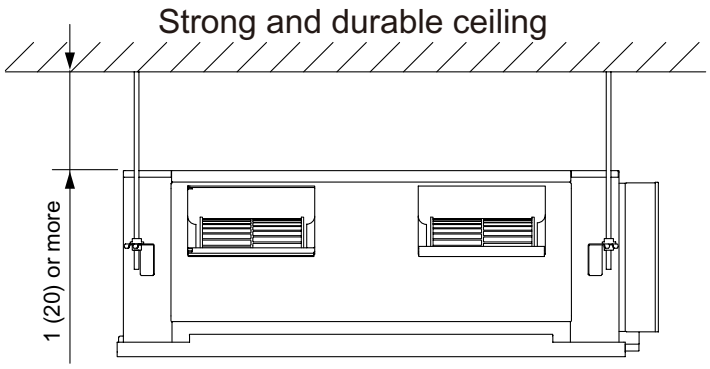
Unit : in. (mm)



			ARUH36, ARUH48, ARUH60
①	Refrigerant pipe flare connection	Liquid	ø 3/8 (9.52)
②		Gas	ø 3/4 (19.05)
③	Drain hose	-	ø 3/4 (I.D.), ø 1-1/16 (O.D.)

■ INSTALLATION LOCATION

Unit : in. (mm)

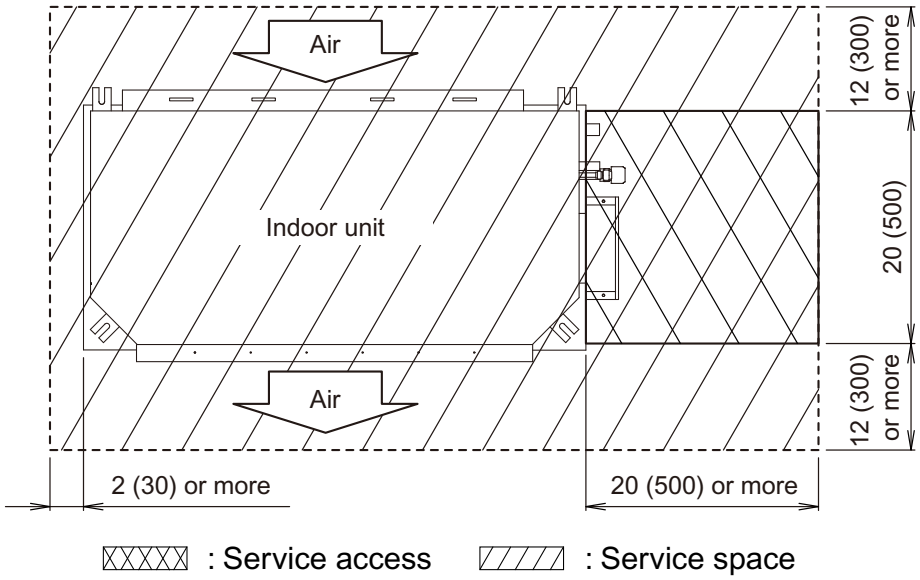


INDOOR UNITS

■ MAINTENANCE SPACE

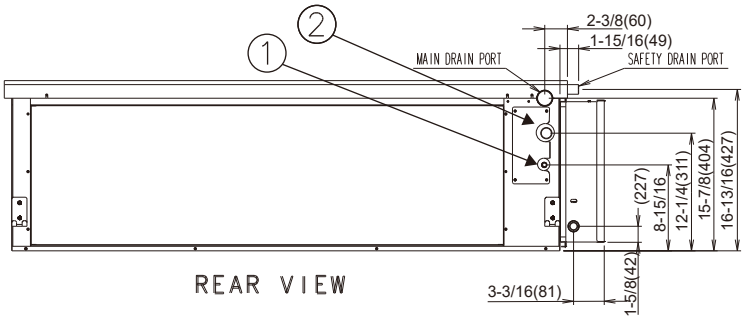
Provide a service access for inspection purposes as shown below.
Do not place any wiring or illumination in the service space, as they will impede service.

[Top view]

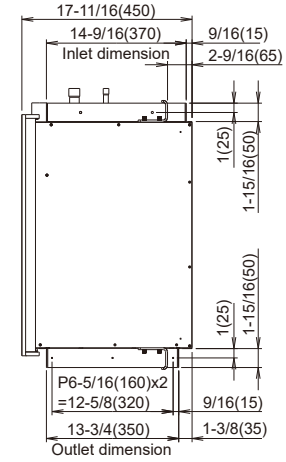


■ MODEL : ARUH72TLAV1

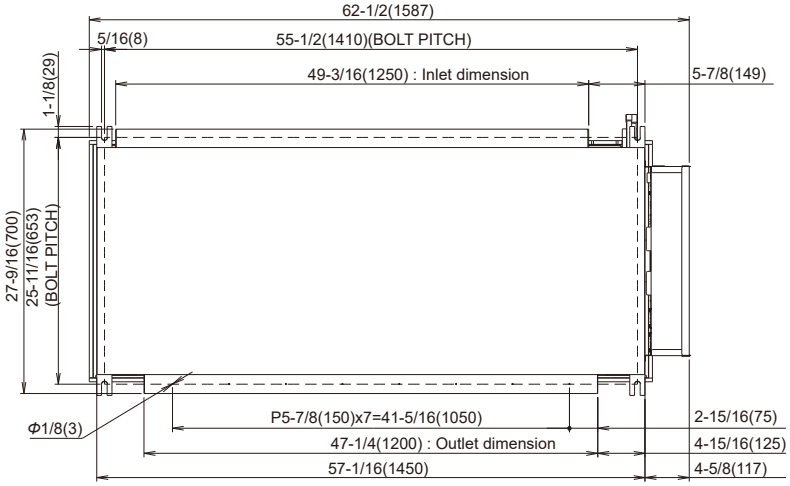
Unit : in. (mm)

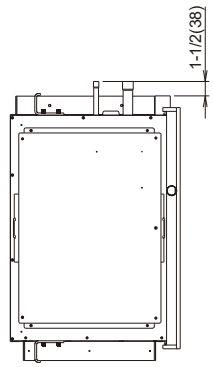


REAR VIEW



SIDE VIEW (L)

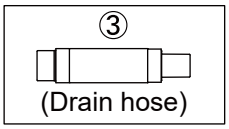


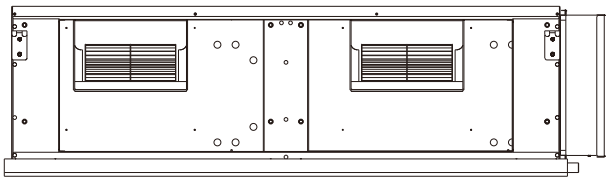


SIDE VIEW (R)

AIR FLOW

TOP VIEW



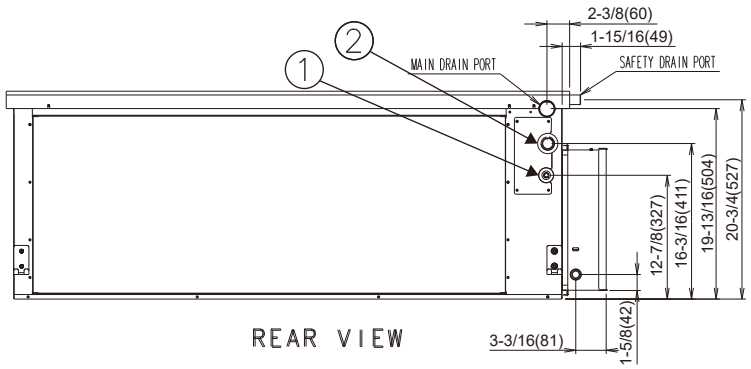


FRONT VIEW

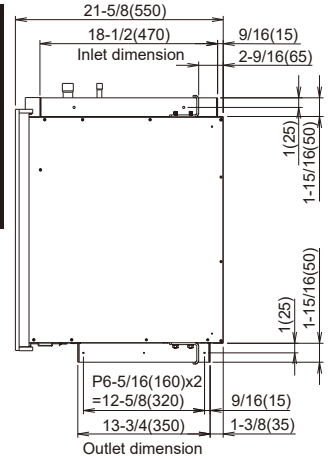
①	Refrigerant pipe brazing connection	Liquid	ø 1/2 (12.70)
②		Gas	ø 7/8 (22.22)
③	Drain hose	-	ø 3/4 (I.D.), ø 1-1/16 (O.D.)

■ MODEL : ARUH96TLAV

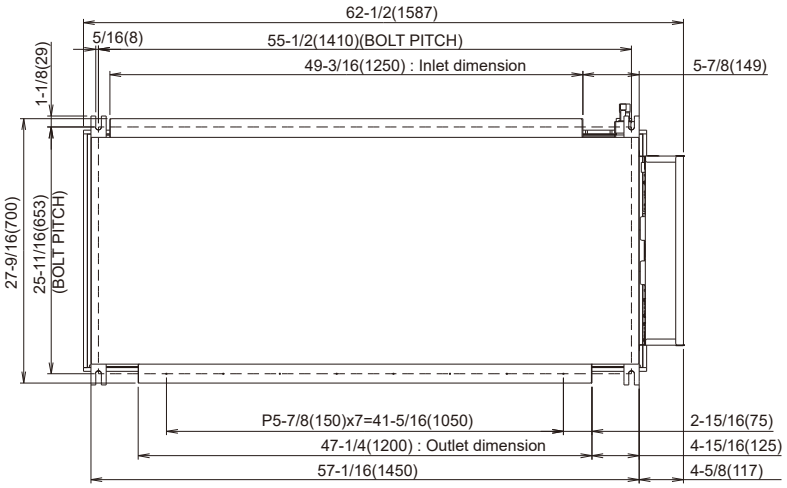
Unit : in. (mm)

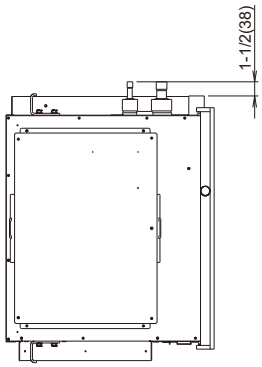


REAR VIEW



SIDE VIEW (L)

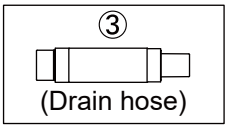


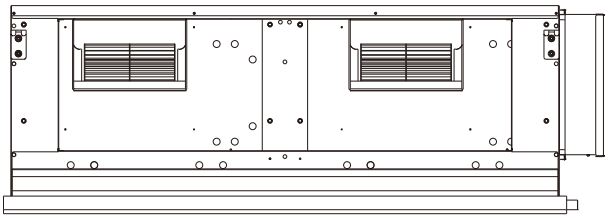


SIDE VIEW (R)

AIR FLOW

TOP VIEW





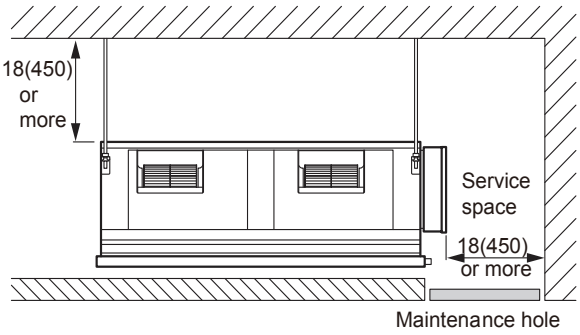
FRONT VIEW

①	Refrigerant pipe brazing connection	Liquid	ø 1/2 (12.70)
②		Gas	ø 7/8 (22.22)
③	Drain hose	-	ø 3/4 (I.D.), ø 1-1/16 (O.D.)

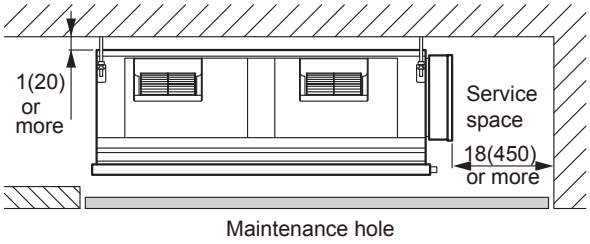
■ INSTALLATION LOCATION

Unit : in. (mm)

(a) When service access will be carried out above the indoor unit a recommended installation space of 18in.(450mm) is required.



(b) Installation by which service is carried out from the bottom of the unit

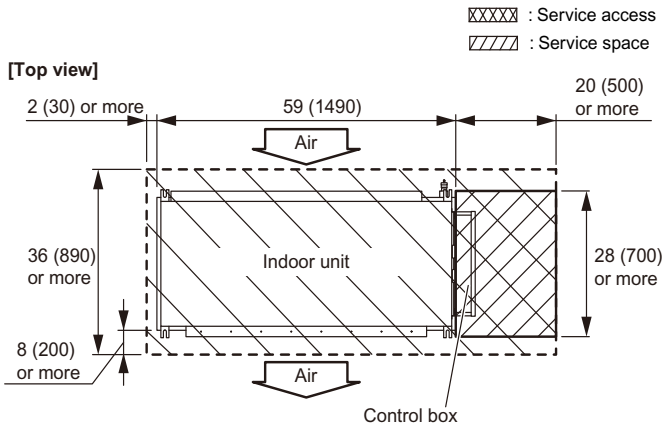


■ MAINTENANCE SPACE

Unit : in. (mm)

Provide a maintenance space for inspection purposes as show below.

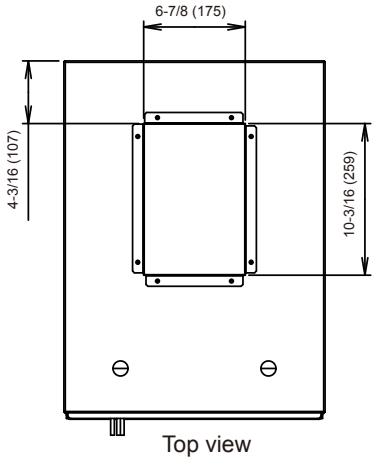
Do not place any wiring or illumination in the service space, as they will impede service.



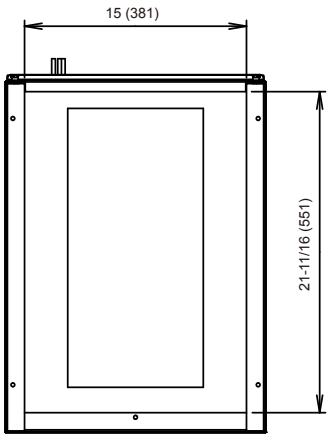
3-8. VERTICAL AIR HANDLER TYPE

■ MODEL: ARUV12TLAV

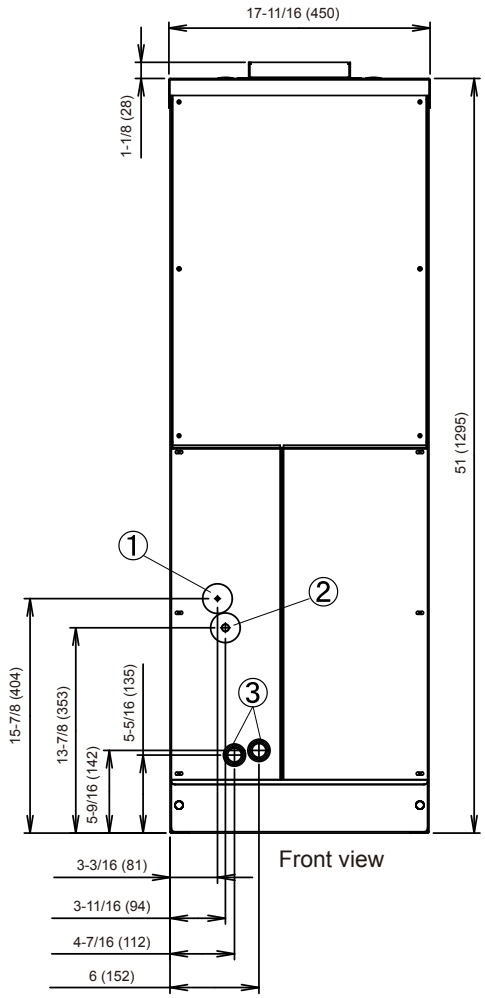
Unit : in. (mm)



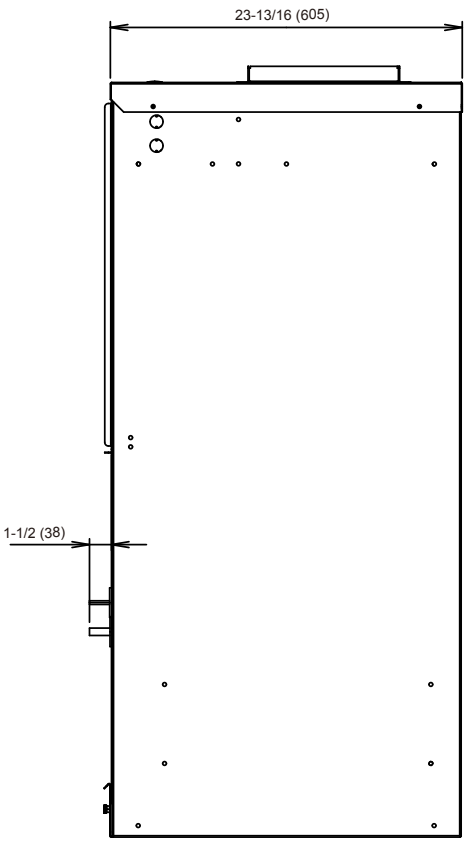
Top view



Bottom view



Front view

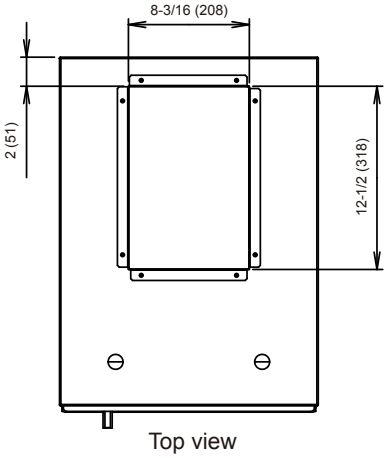


Side view

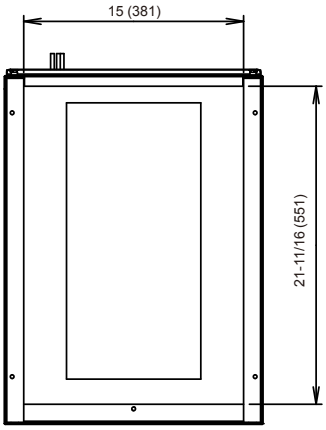
			ARUV12
①	Refrigerant pipe flare connection	Liquid	ø 1/4 (6.35)
②		Gas	ø 1/2 (12.70)
③	Drain port	-	ø 3/4 (I.D.)

■ MODELS: ARUV18TLAV, ARUV24TLAV

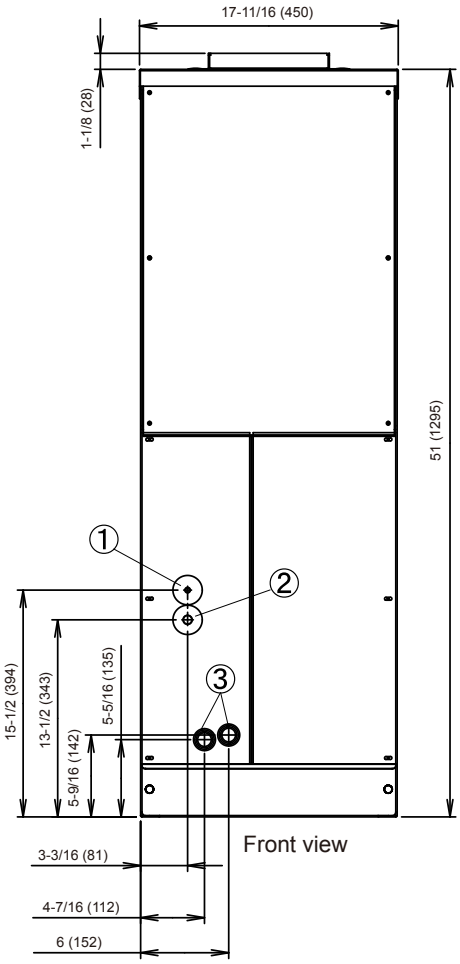
Unit : in. (mm)



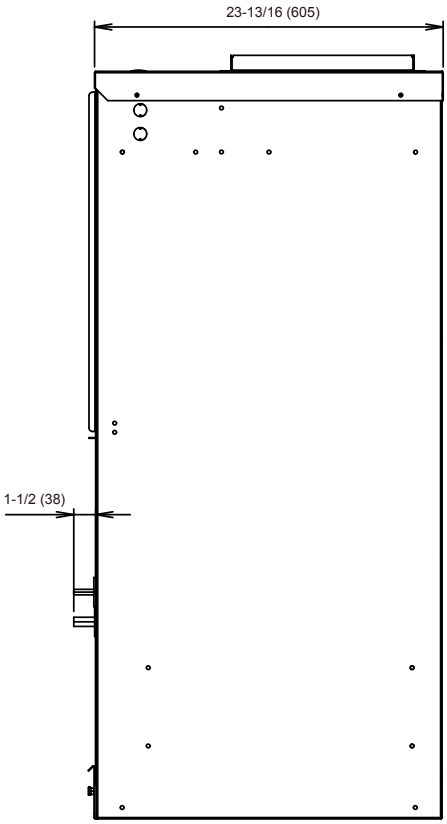
Top view



Bottom view



Front view

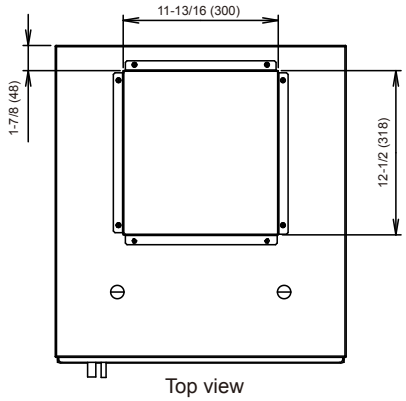


Side view

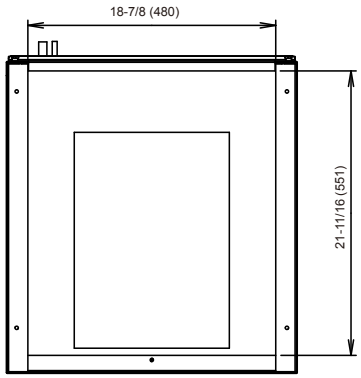
			ARUV18, ARUV24
①	Refrigerant pipe flare connection	Liquid	ø 3/8 (9.52)
②		Gas	ø 5/8 (15.88)
③	Drain port	-	ø 3/4 (I.D.)

■ MODEL: ARUV30TLAV

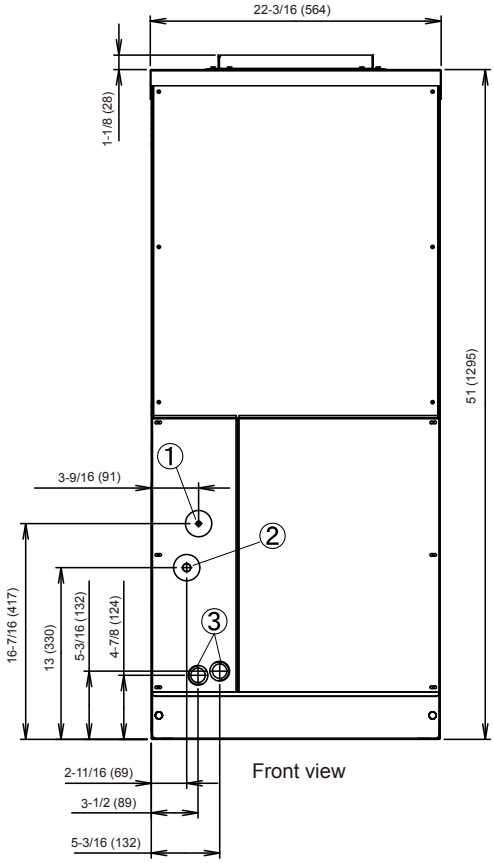
Unit : in. (mm)



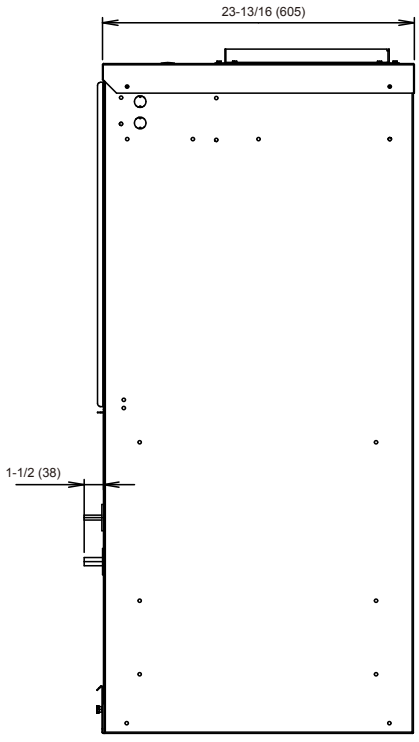
Top view



Bottom view



Front view

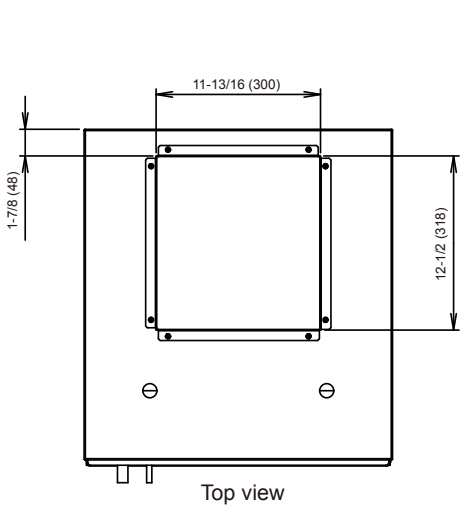


Side view

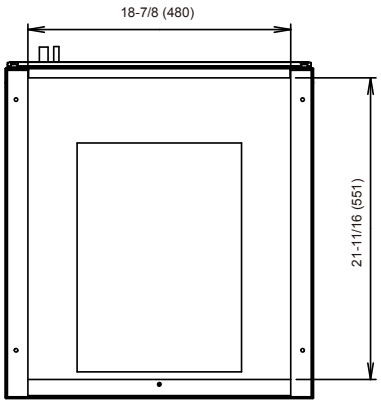
			ARUV30
①	Refrigerant pipe flare connection	Liquid	ø 3/8 (9.52)
②		Gas	ø 5/8 (15.88)
③	Drain port	-	ø 3/4 (I.D.)

■ MODEL: ARUV36TLAV

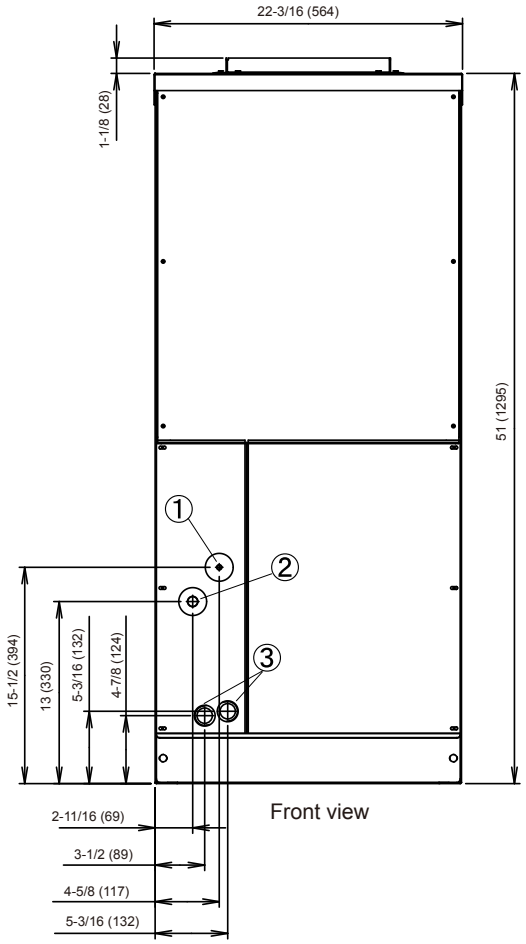
Unit : in. (mm)



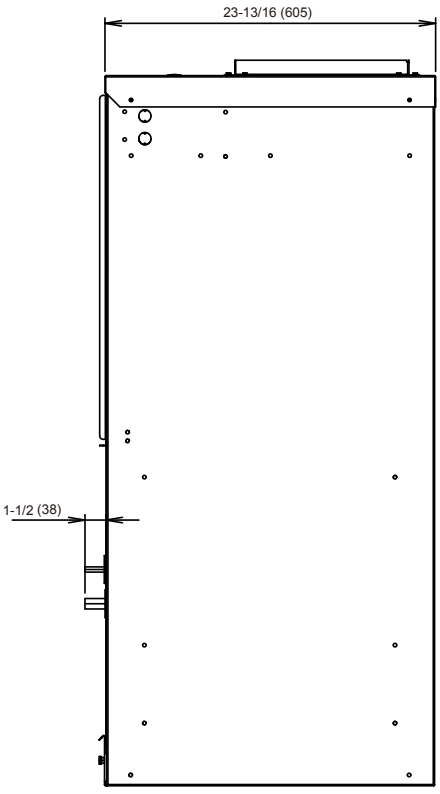
Top view



Bottom view



Front view

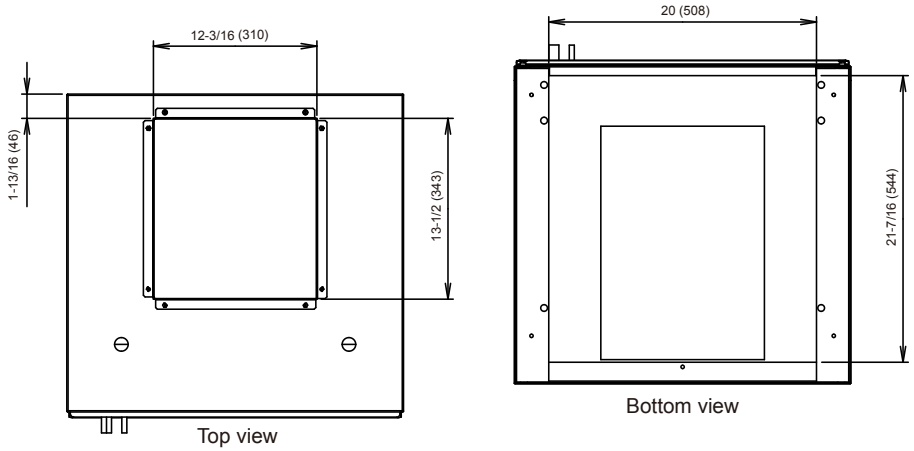


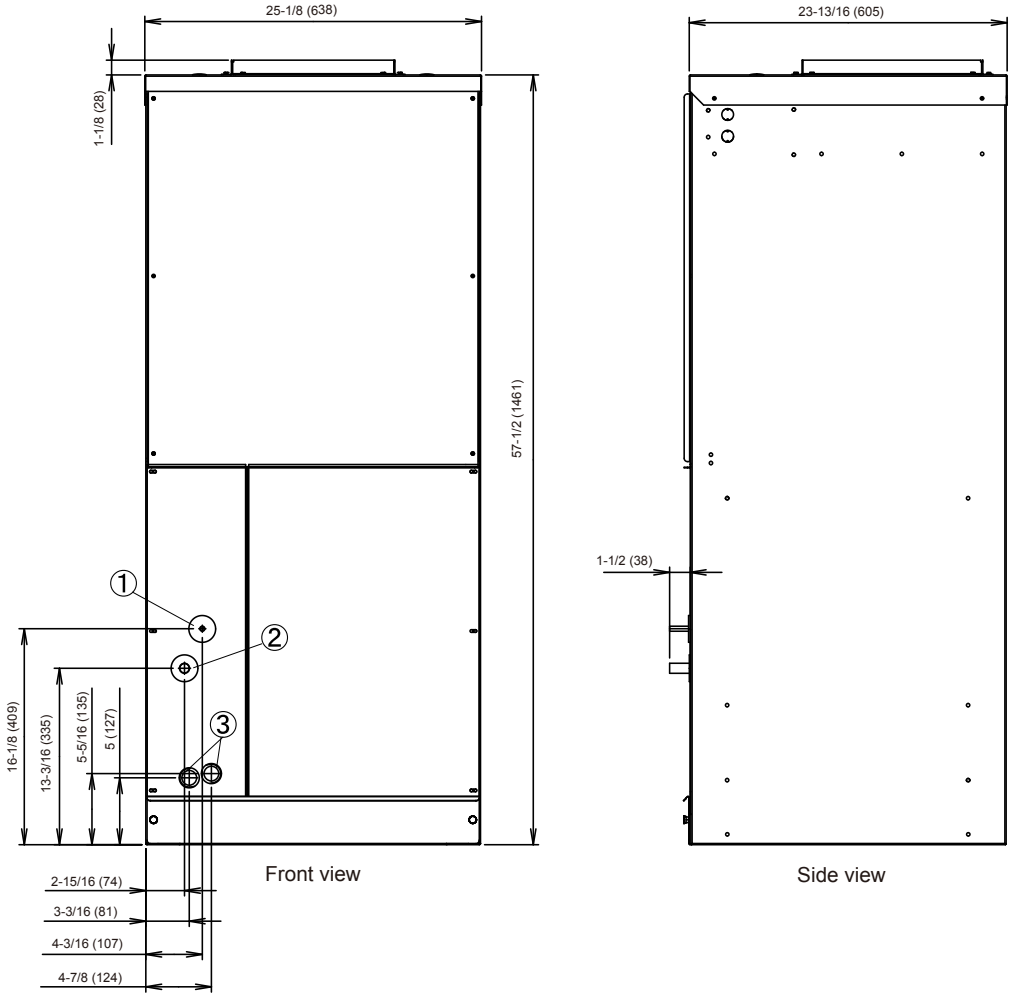
Side view

			ARUV36
①	Refrigerant pipe flare connection	Liquid	ø 3/8 (9.52)
②		Gas	ø 3/4 (19.05)
③	Drain port	-	ø 3/4 (I.D.)

■ MODELS: ARUV48TLAV, ARUV60TLAV

Unit : in. (mm)

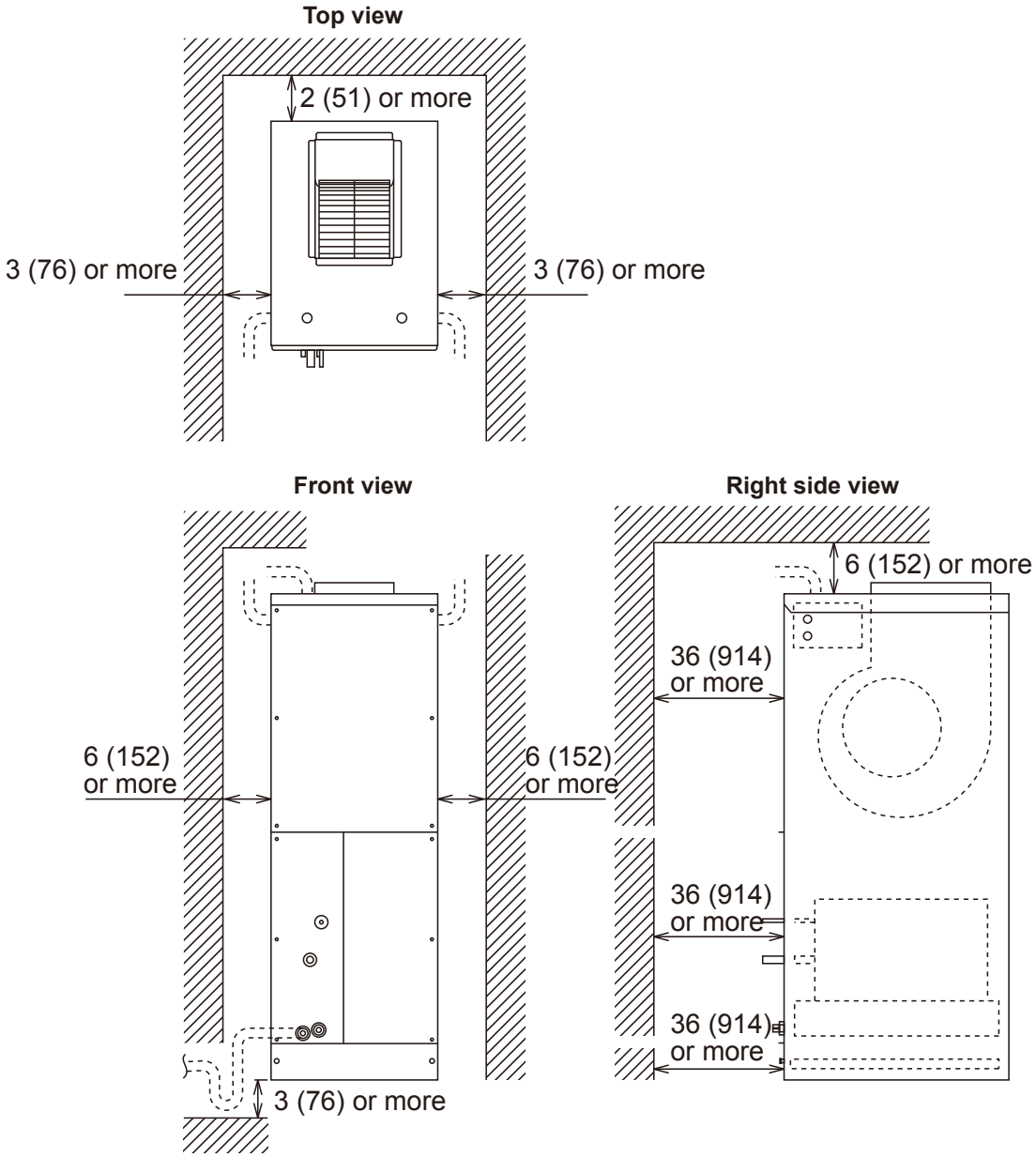




			ARUV48, ARUV60
①	Refrigerant pipe flare connection	Liquid	ø 3/8 (9.52)
②		Gas	ø 3/4 (19.05)
③	Drain port	-	ø 3/4 (I.D.)

■ INSTALLATION LOCATION

Unit : in. (mm)

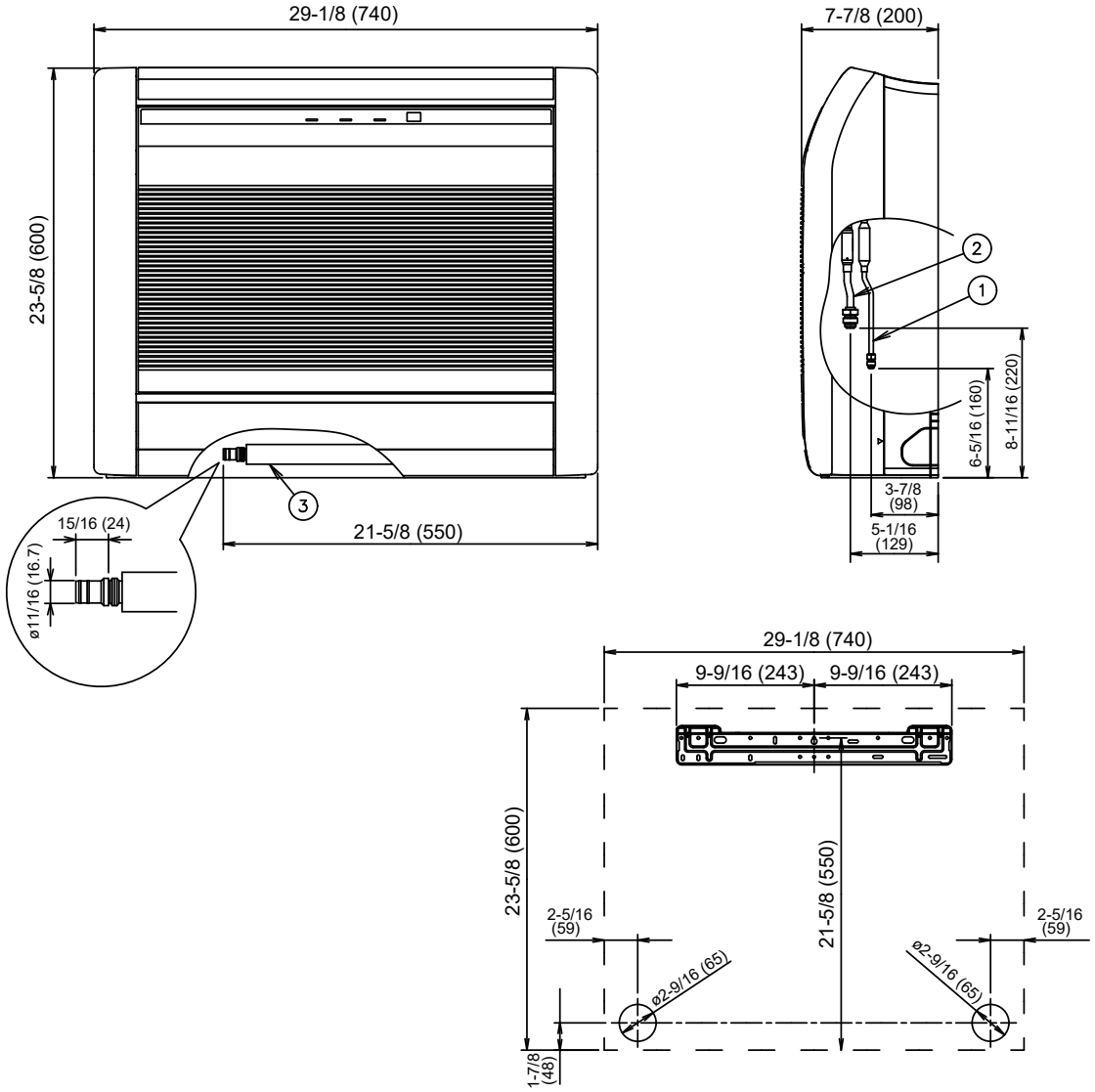


INDOOR UNITS

3-9. COMPACT FLOOR TYPE

■ MODELS: AGUA4TLAV1, AGUA7TLAV1, AGUA9TLAV1, AGUA12TLAV1, AGUA14TLAV1

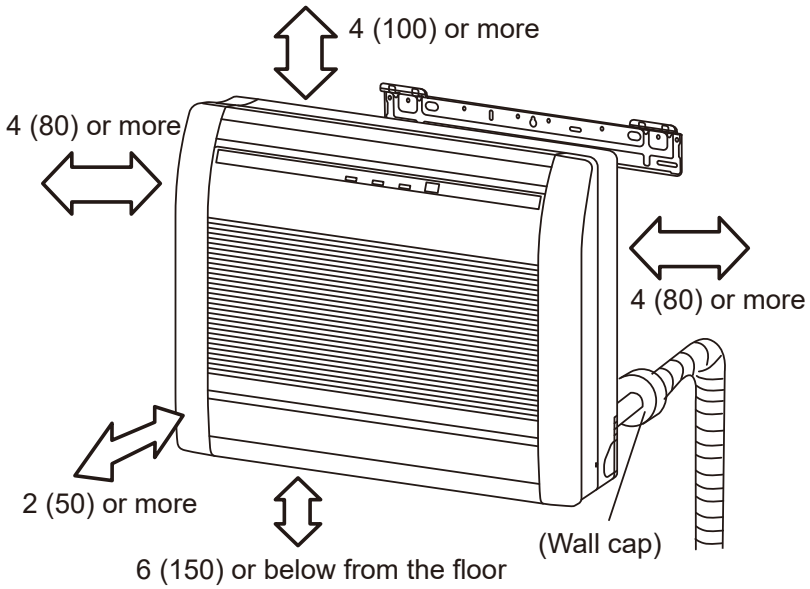
Unit : in. (mm)

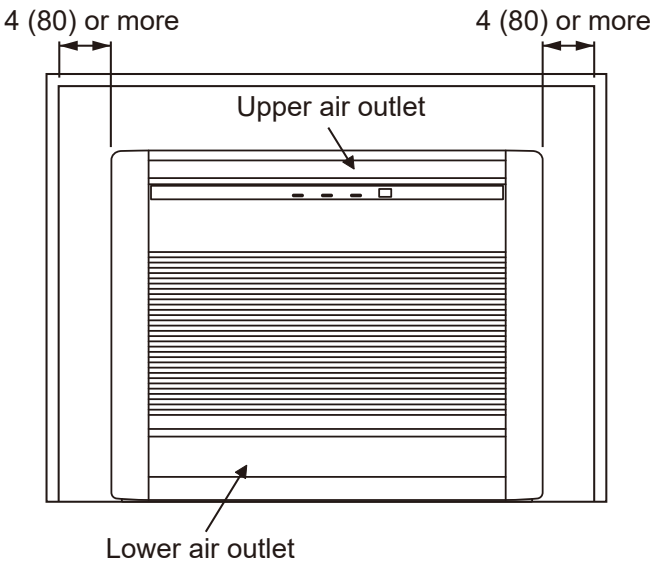


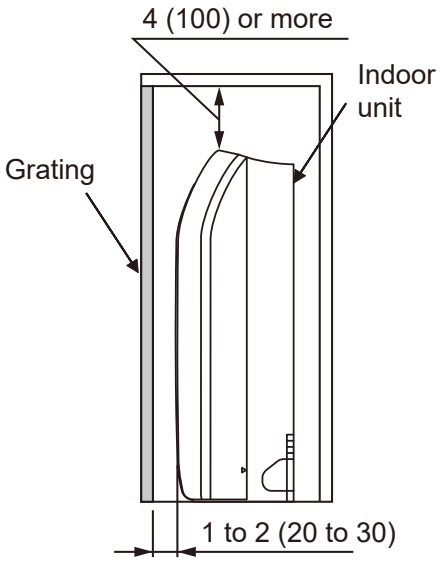
			AGUA4, AGUA7, AGUA9	AGUA12, AGUA14
①	Refrigerant pipe flare connection	Liquid	ø 1/4 (6.35)	ø 1/4 (6.35)
②		Gas	ø 3/8 (9.52)	ø 1/2 (12.7)
③	Drain hose		I.D. 9/16 (13.8) , O.D. 5/8 (15.8) to 11/16 (16.7) Drain hose : L=23-5/8 (600)	

■ INSTALLATION PLACE

Unit : in. (mm)



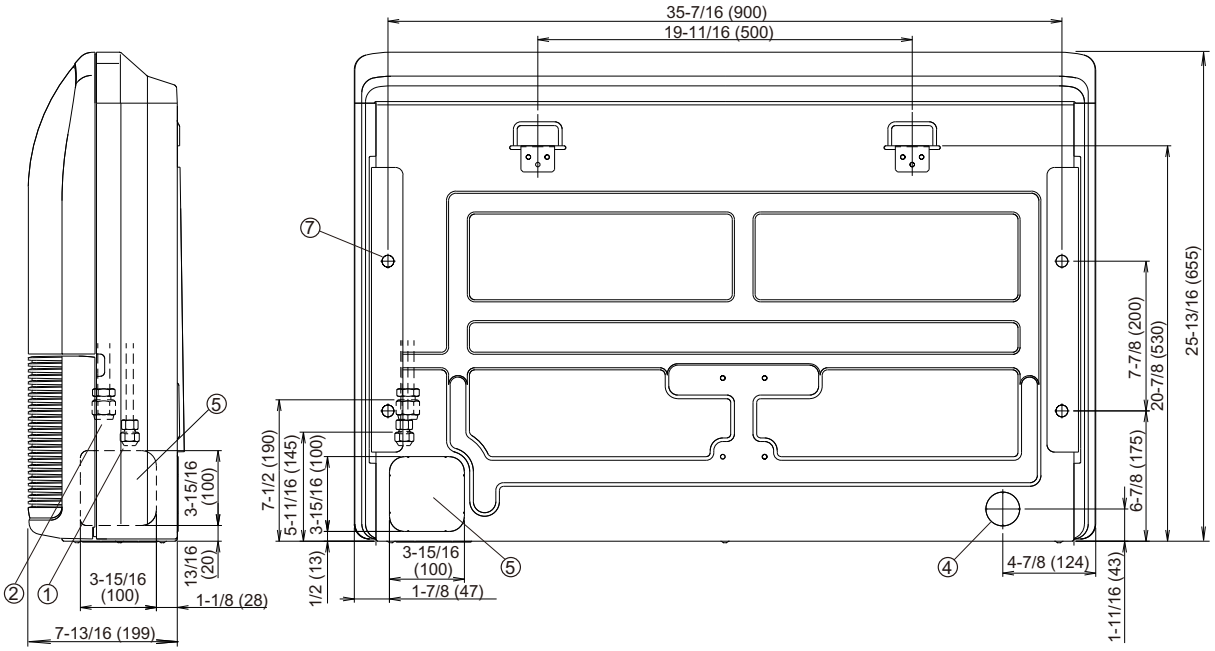


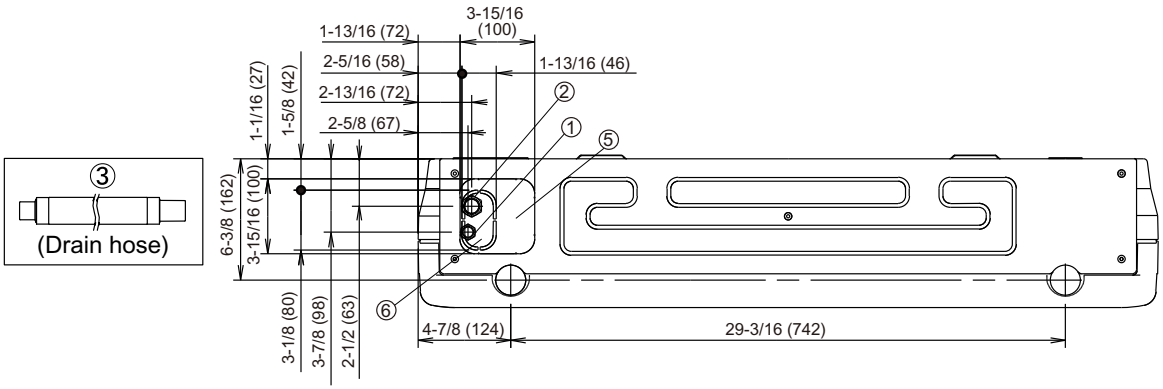


3-10. FLOOR / CEILING TYPE

■ MODELS : ABUA12TLAV, ABUA14TLAV, ABUA18TLAV, ABUA24TLAV

Unit : in. (mm)

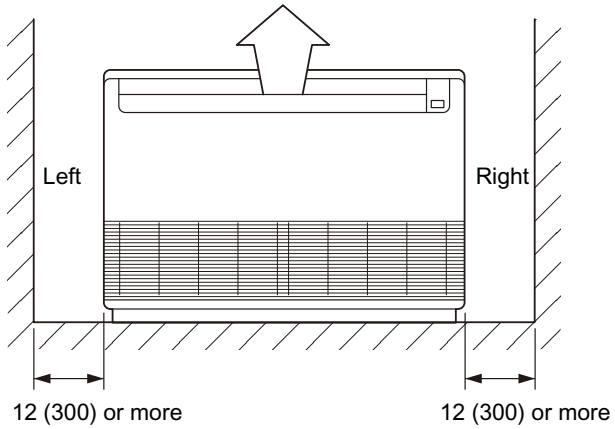


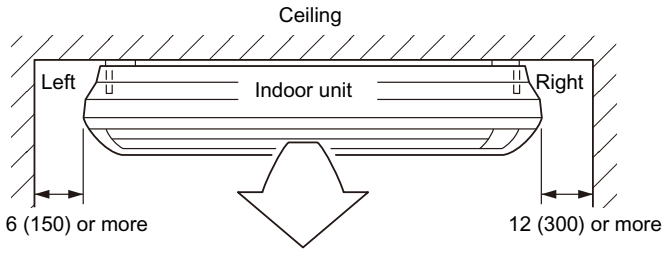


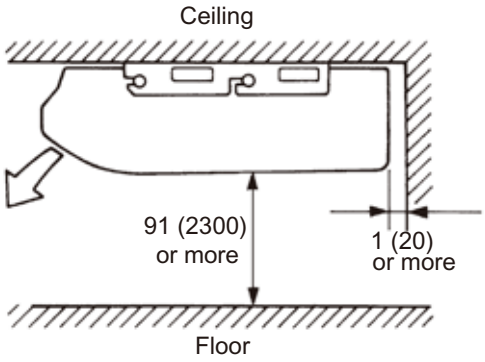
			ABUA12, ABUA14	ABUA18, ABUA24
①	Refrigerant pipe flare connection	Liquid	ø 1/4 (6.35)	ø 3/8 (9.52)
②		Gas	ø 1/2 (12.70)	ø 5/8 (15.88)
③	Drain hose	-	ø 3/4 (I.D.), ø 1-1/16 (O.D.)	
④	Knock out hole	Drain outlet	ø 1-3/4 (45)	
⑤⑥		-	-	
⑦	Hole for lifting bolt	-	Use M10 screw bolt	

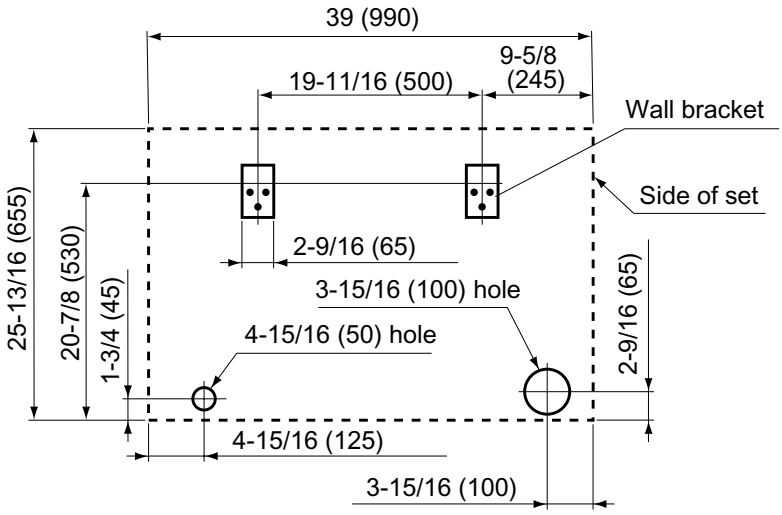
■ INSTALLATION LOCATION

Unit : in. (mm)







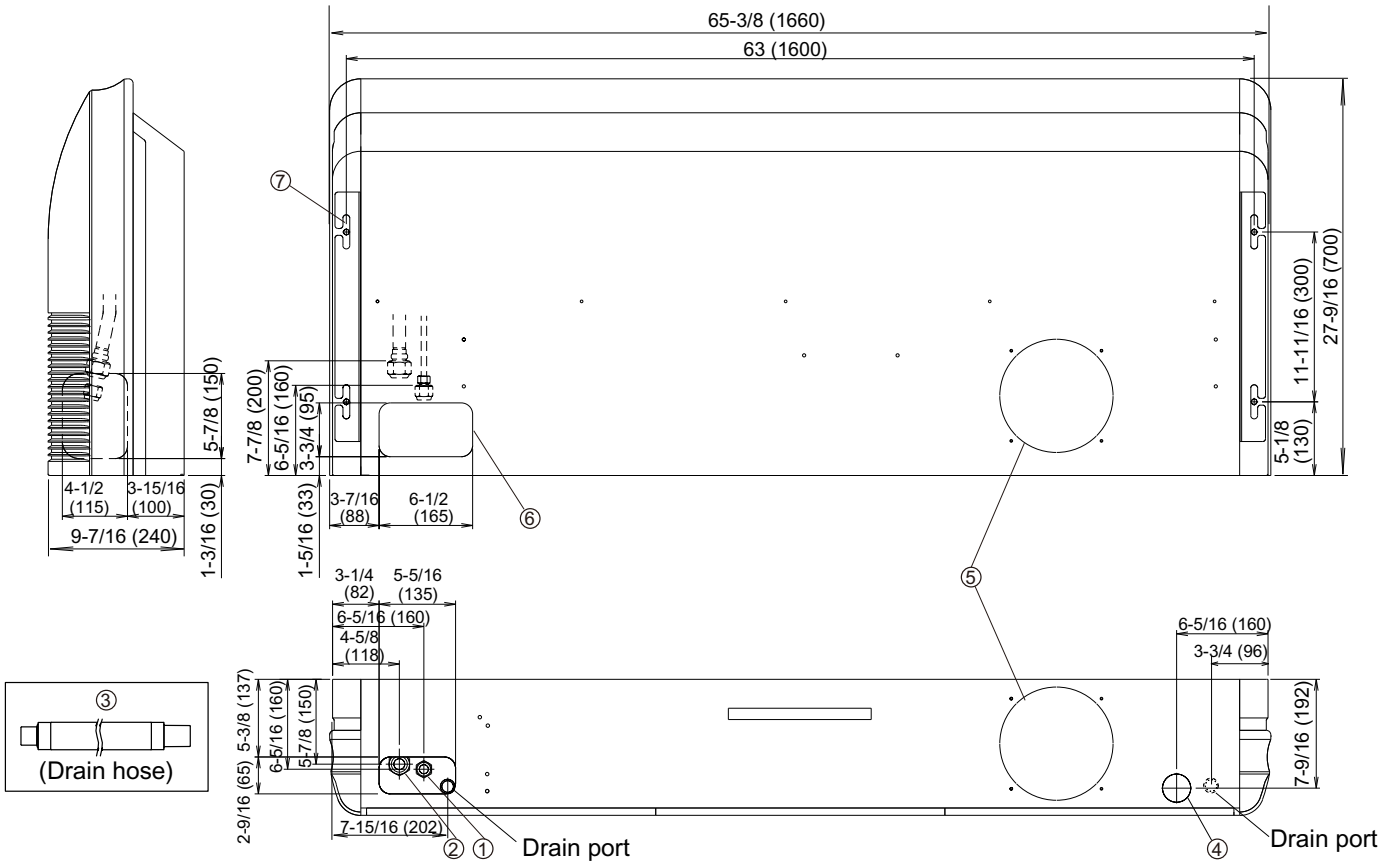


INDOOR UNITS

3-11. CEILING TYPE

■ MODELS : ABUA30TLAV, ABUA36TLAV

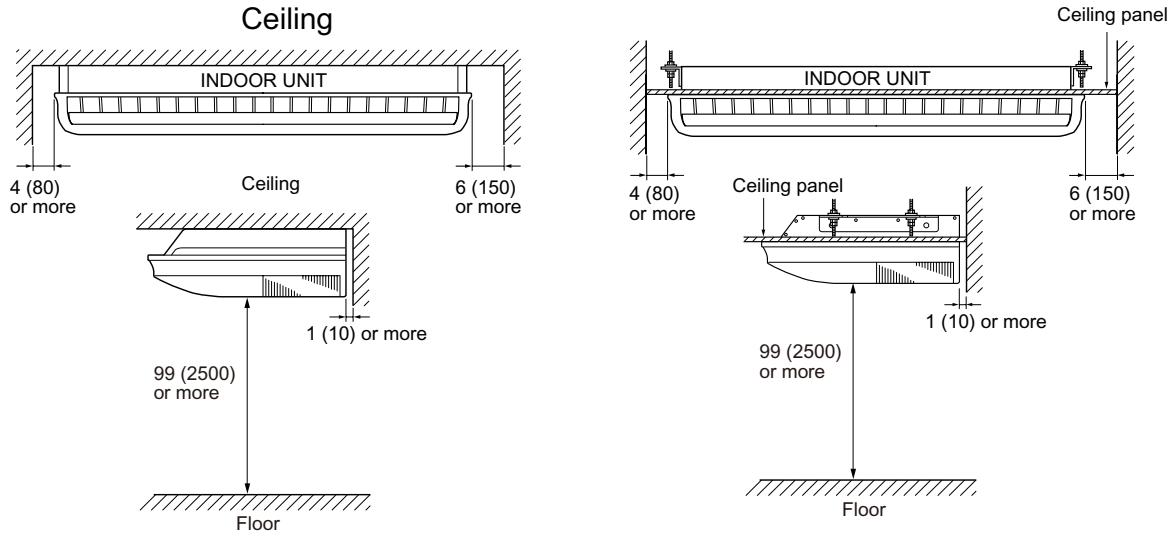
Unit : in. (mm)

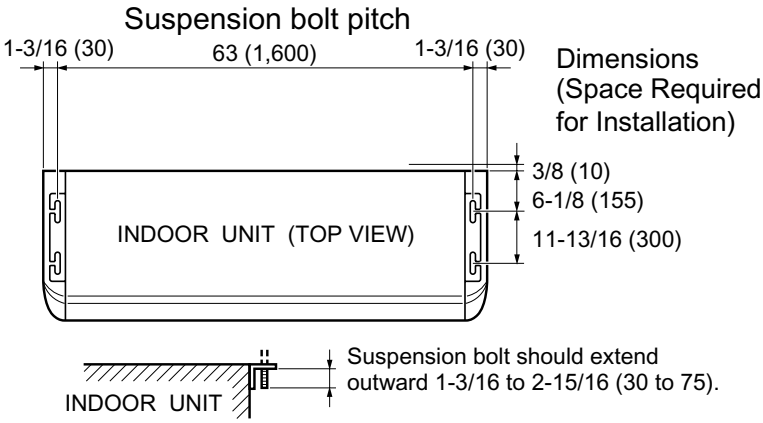


			ABUA30	ABUA36
①	Refrigerant pipe flare connection	Liquid	ø 3/8 (9.52)	
②		Gas	ø 5/8 (15.88)	ø 3/4 (19.05)
③	Drain hose	-	ø 3/4 (I.D.), ø 1-1/16 (O.D.)	
④	Knock out hole	Drain outlet	ø 1-15/16 (50)	
⑤		Fresh air	ø 7-7/8 (200)	
⑥		Refrigerant pipe	-	
⑦	Hole for lifting bolt	-	Use M10 screw bolt	

■ INSTALLATION LOCATION

Unit : in. (mm)



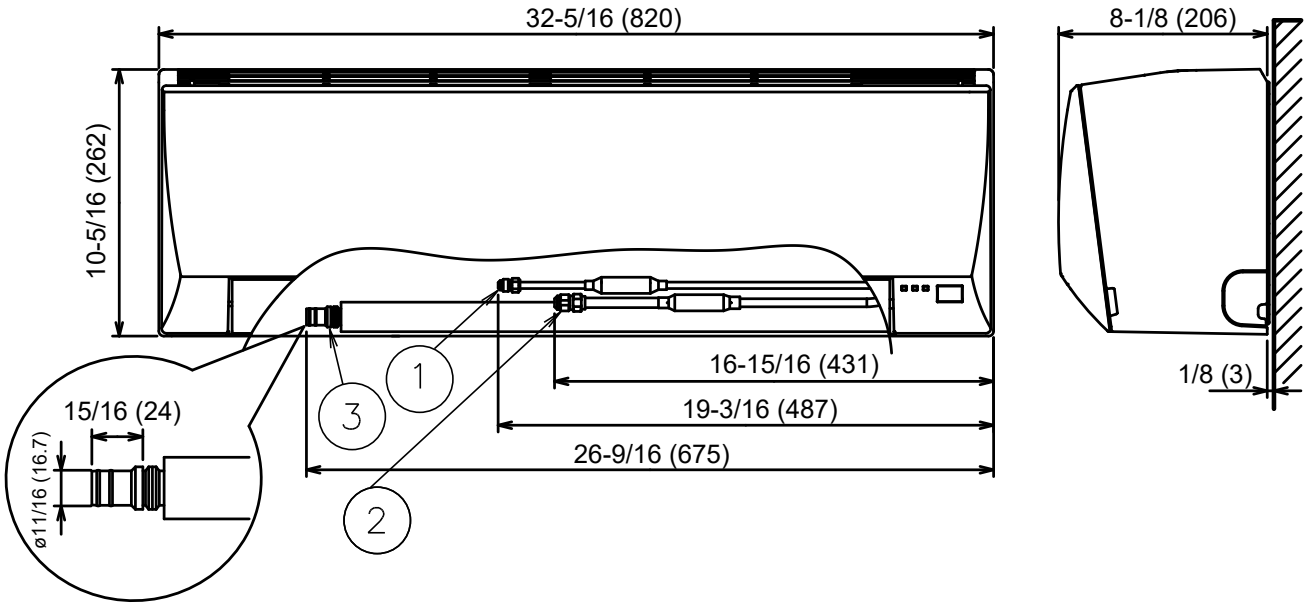


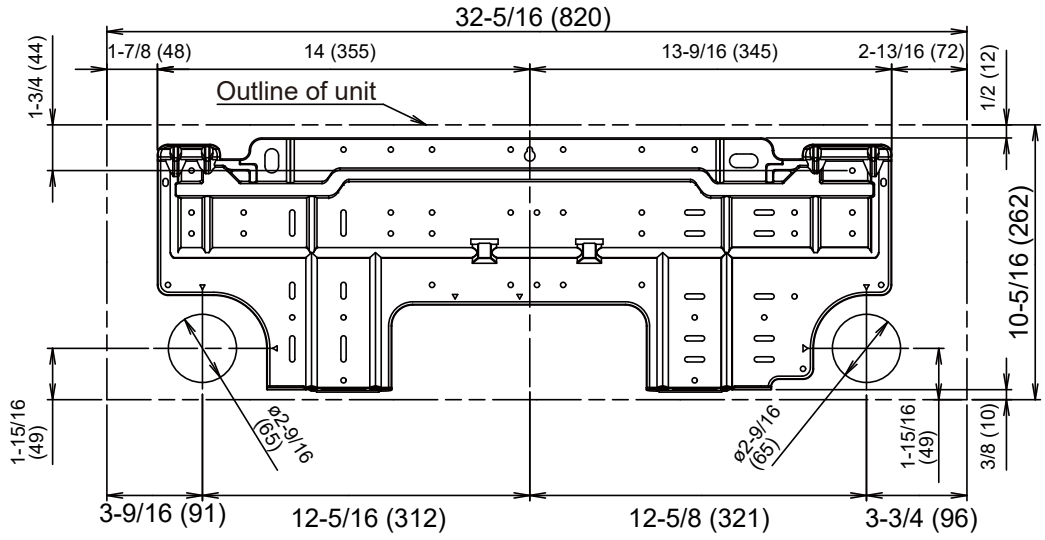
INDOOR UNITS

3-12. WALL MOUNTED TYPE

■ MODELS: ASUA4TLAV1, ASUA7TLAV1, ASUA9TLAV1

Unit : in. (mm)

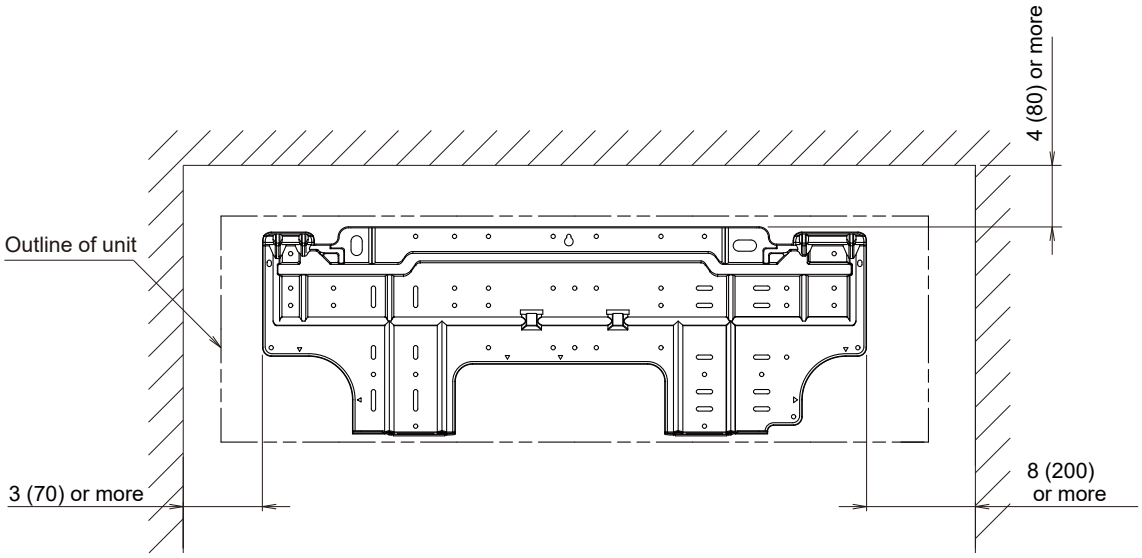


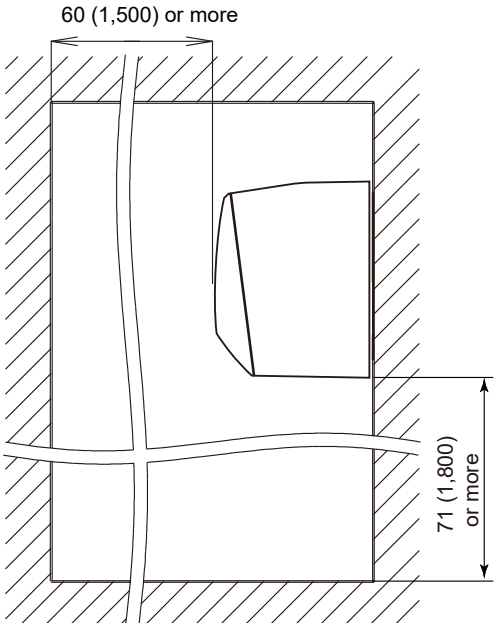


			ASUA4, ASUA7, ASUA9
①	Refrigerant pipe flare connection	Liquid	ø 1/4 (6.35)
②		Gas	ø 3/8 (9.52)
③	Drain hose		I.D. 9/16 (13.8) , O.D. 5/8 to 11/16 (15.8 to 16.7) Drain hose : L=23-5/8 (600)

■ INSTALLATION PLACE

Unit : in. (mm)

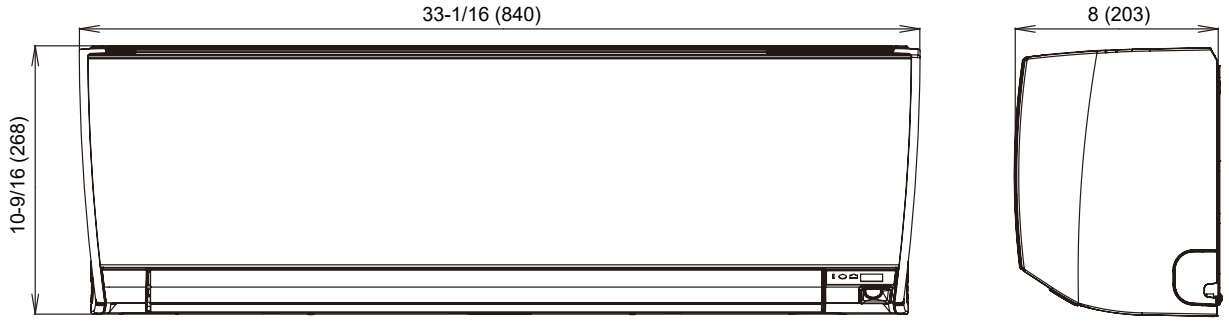


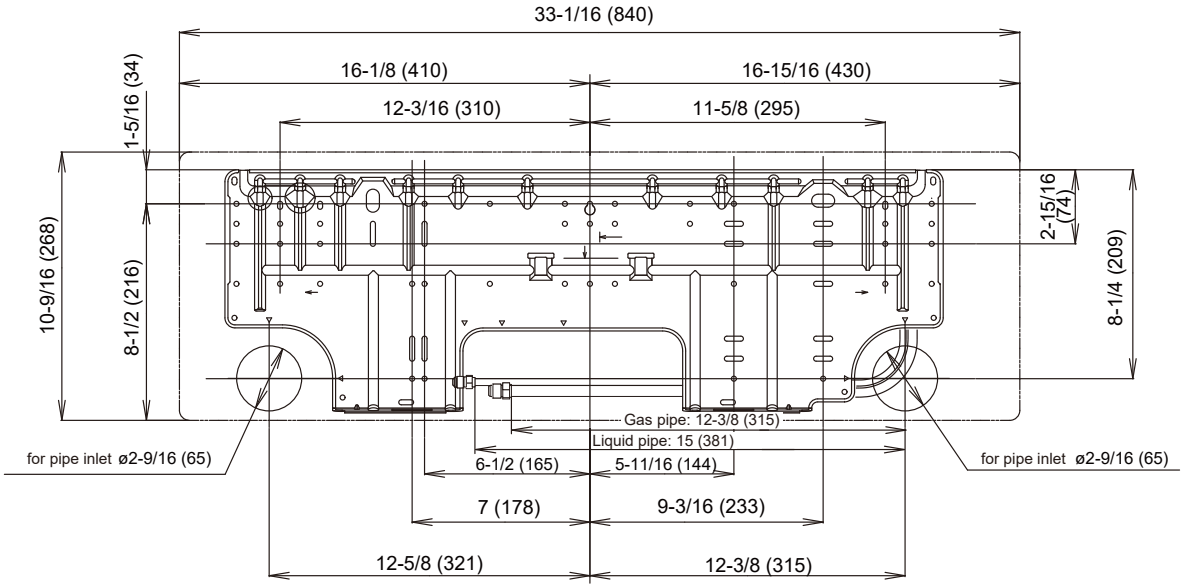


INDOOR UNITS

■ MODELS: ASUA12TLAV1, ASUA14TLAV1

Unit : in. (mm)

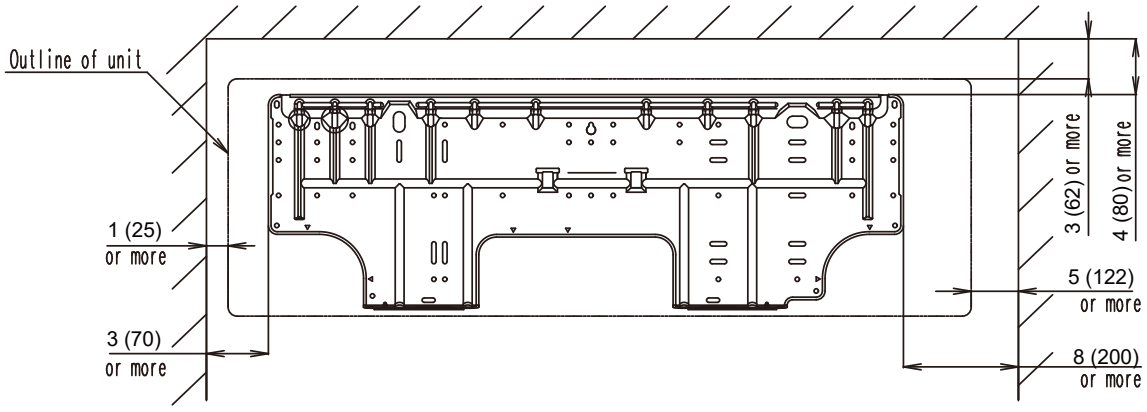


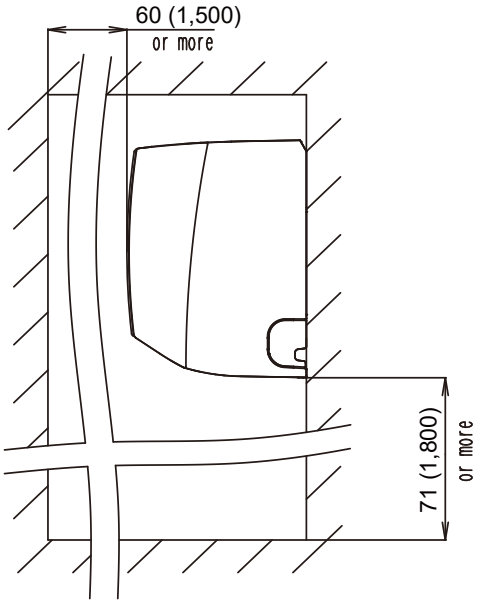


			ASUA12, ASUA14
①	Refrigerant pipe flare connection	Liquid	ø 1/4 (6.35)
②		Gas	ø 1/2 (12.70)
③	Drain hose		I.D. 9/16 (13.8) , O.D. 5/8 to 11/16 (15.8 to 16.7) Drain hose : L=23-5/8 (600)

■ INSTALLATION PLACE

Unit : in. (mm)

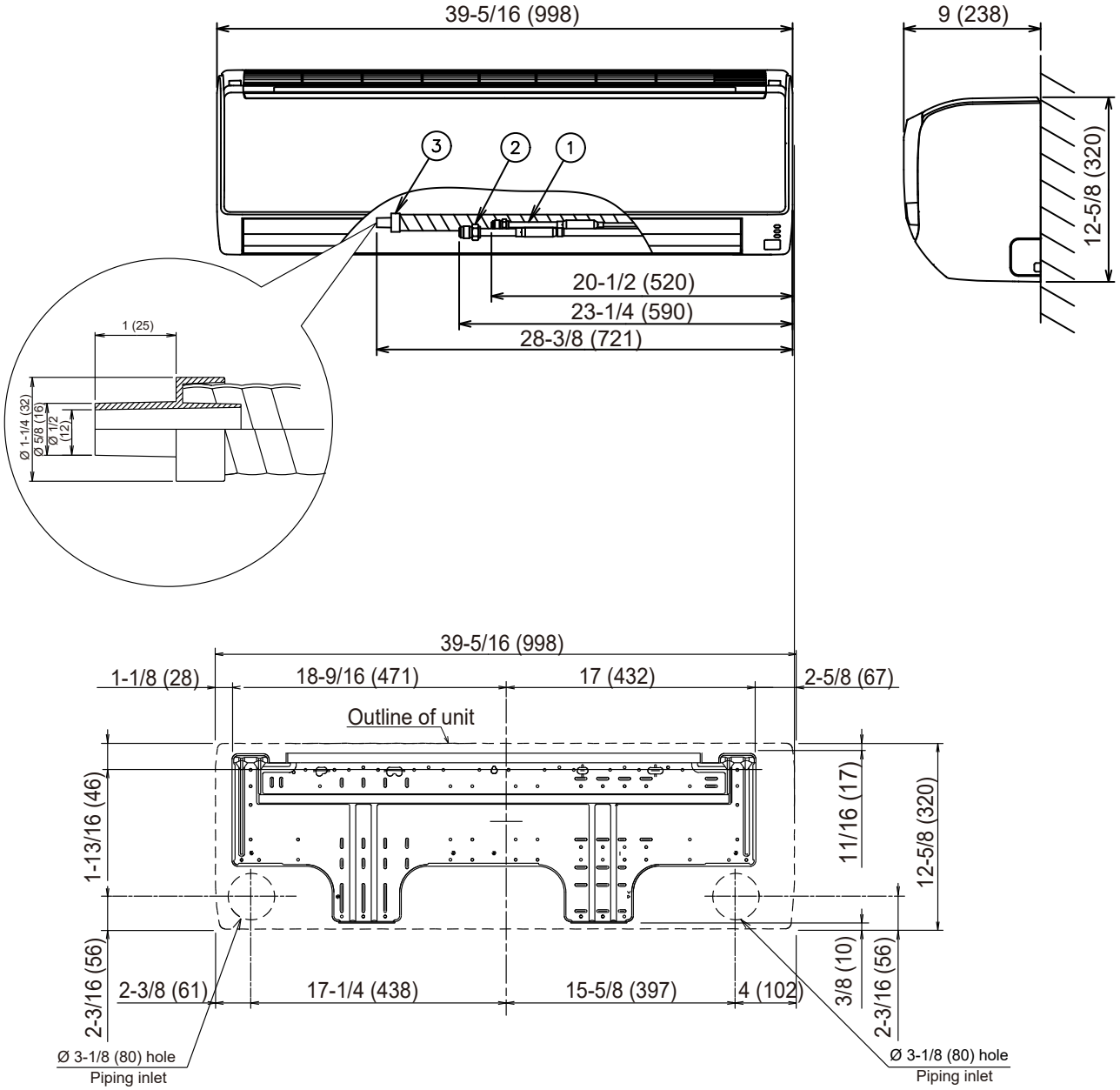




INDOOR UNITS

■ MODELS: ASUB18TLAV1, ASUB24TLAV1

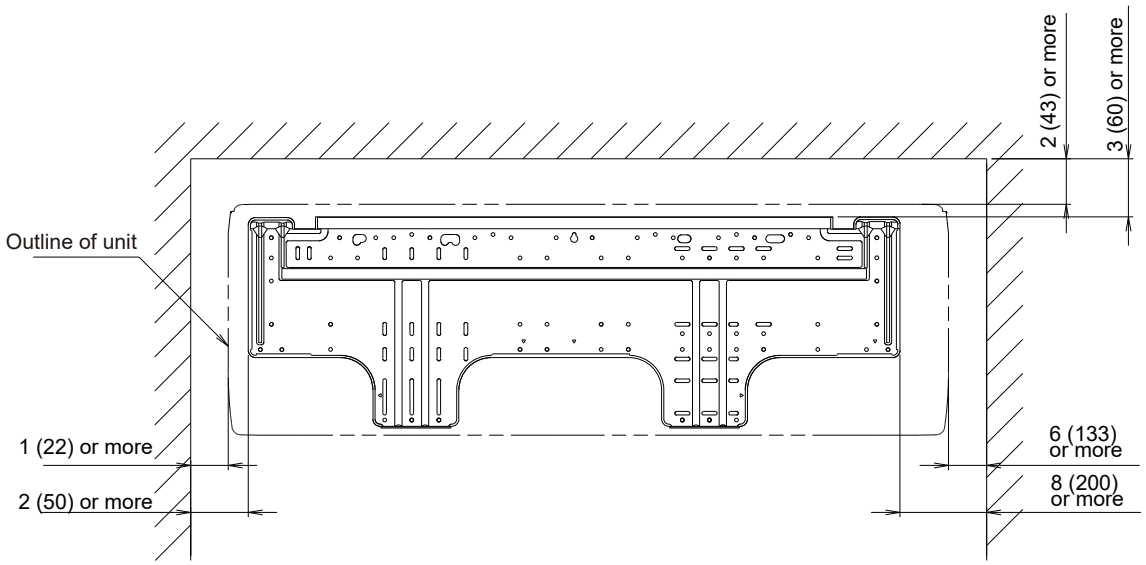
Unit : in. (mm)

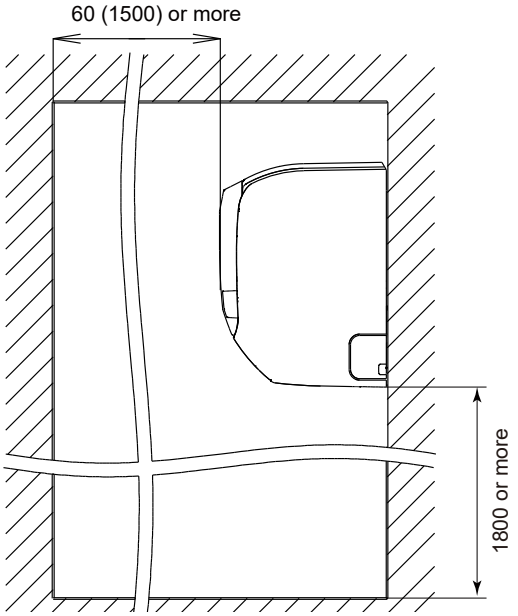


			ASUB18	ASUB24
①	Refrigerant pipe flare connection	Liquid	ø 1/4 (6.35)	ø 3/8 (9.52)
②		Gas	ø 1/2 (12.70)	ø 5/8 (15.88)
③	Drain hose		I.D. 1/2 (12) , O.D. 5/8 (16) Drain hose : L=26-3/8 (670)	

■ INSTALLATION PLACE

Unit : in. (mm)

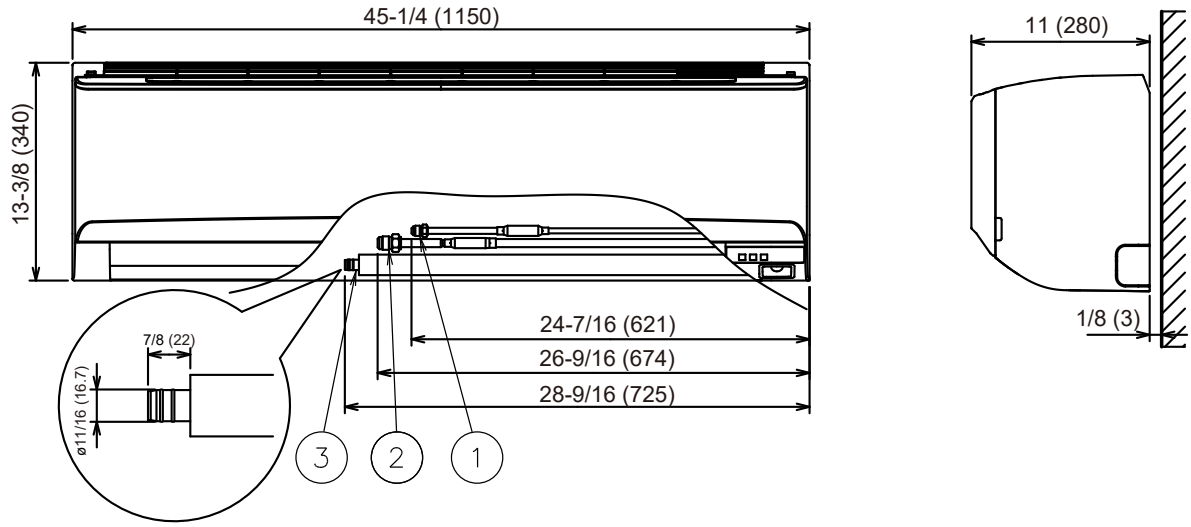


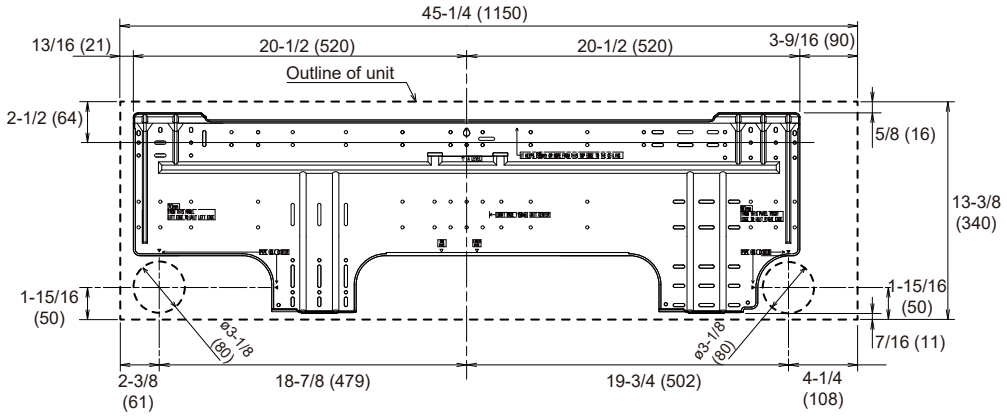


INDOOR UNITS

■ MODELS: ASUB30TLAV1, ASUB36TLAV1

Unit : in. (mm)

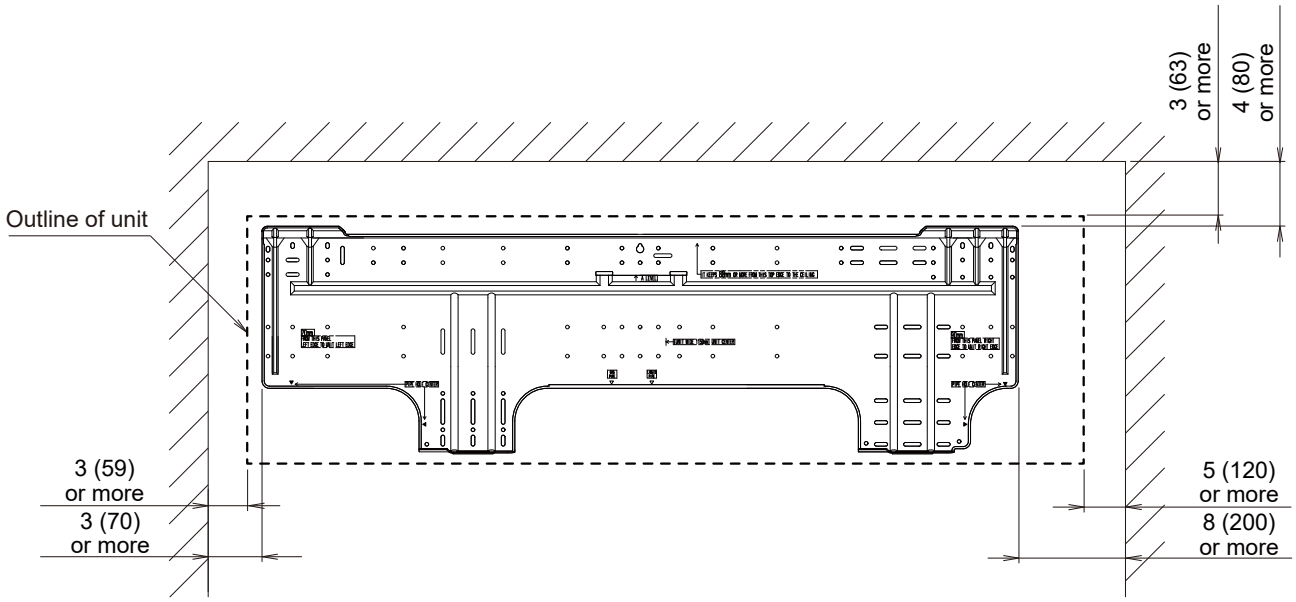


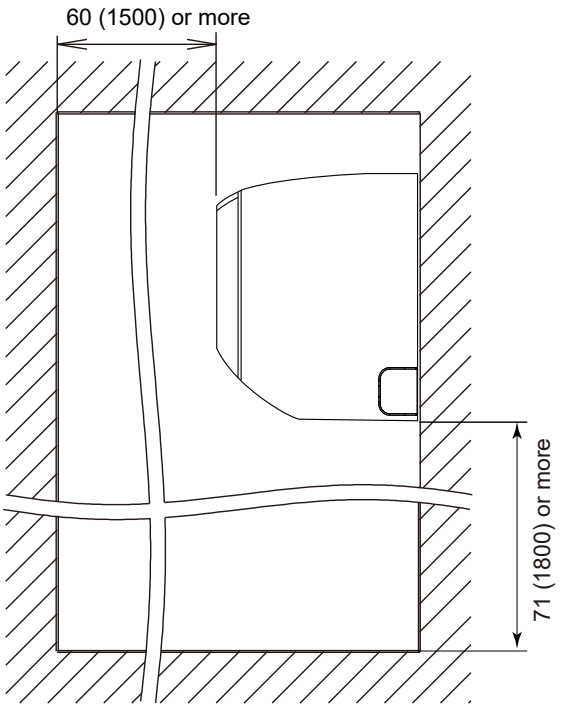


			ASUB30, ASUB36
①	Refrigerant pipe flare connection	Liquid	ø 3/8 (9.52)
②		Gas	ø 5/8 (15.88)
③	Drain hose		I.D. 9/16 (13.8) , O.D. 5/8 to 11/16 (15.8 to 16.7) Drain hose : L=23-5/8 (600)

■ INSTALLATION PLACE

Unit : in. (mm)

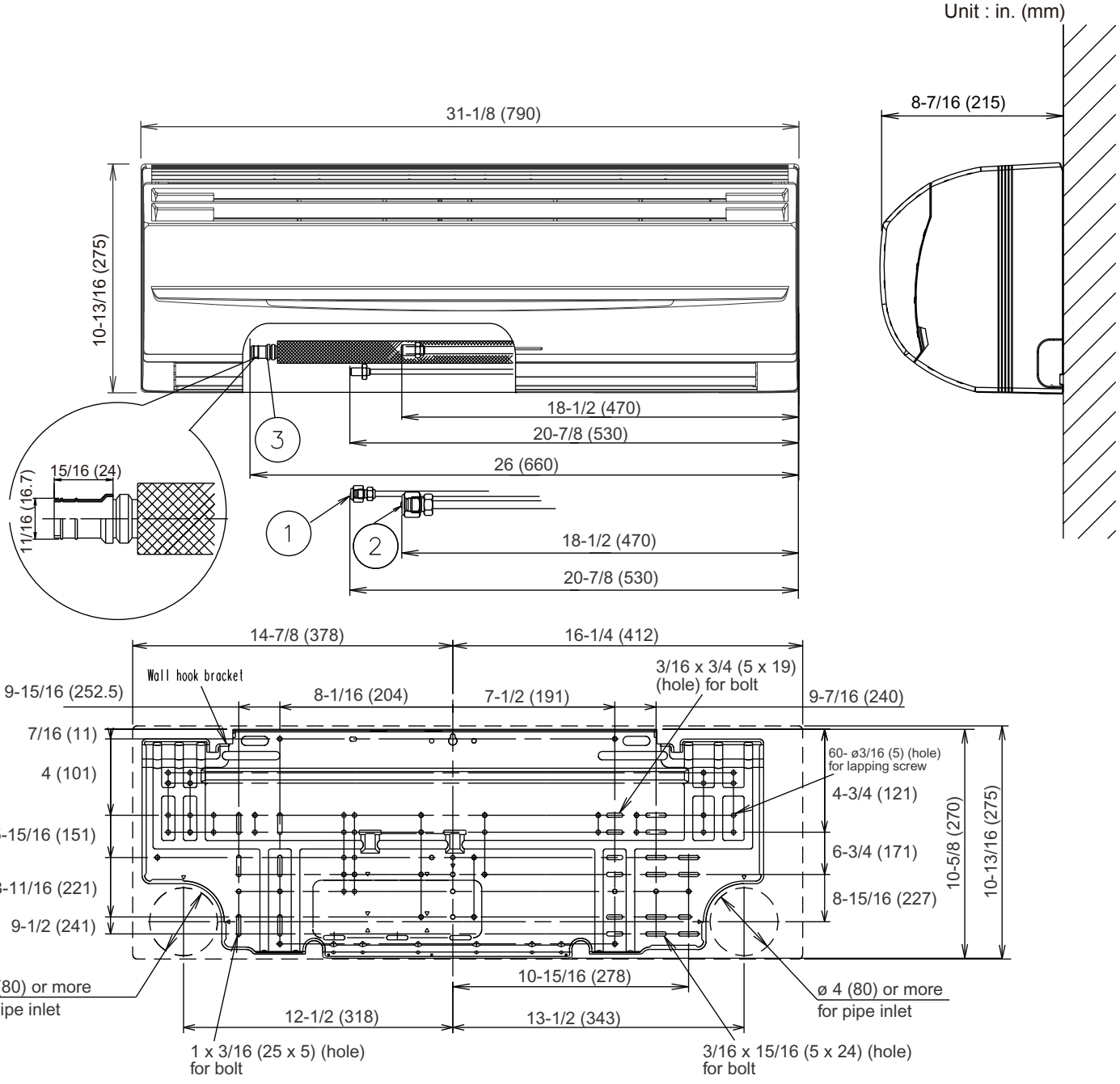




INDOOR UNITS

■ MODELS : ASUA7TLAV, ASUA9TLAV, ASUA12TLAV, ASUA14TLAV

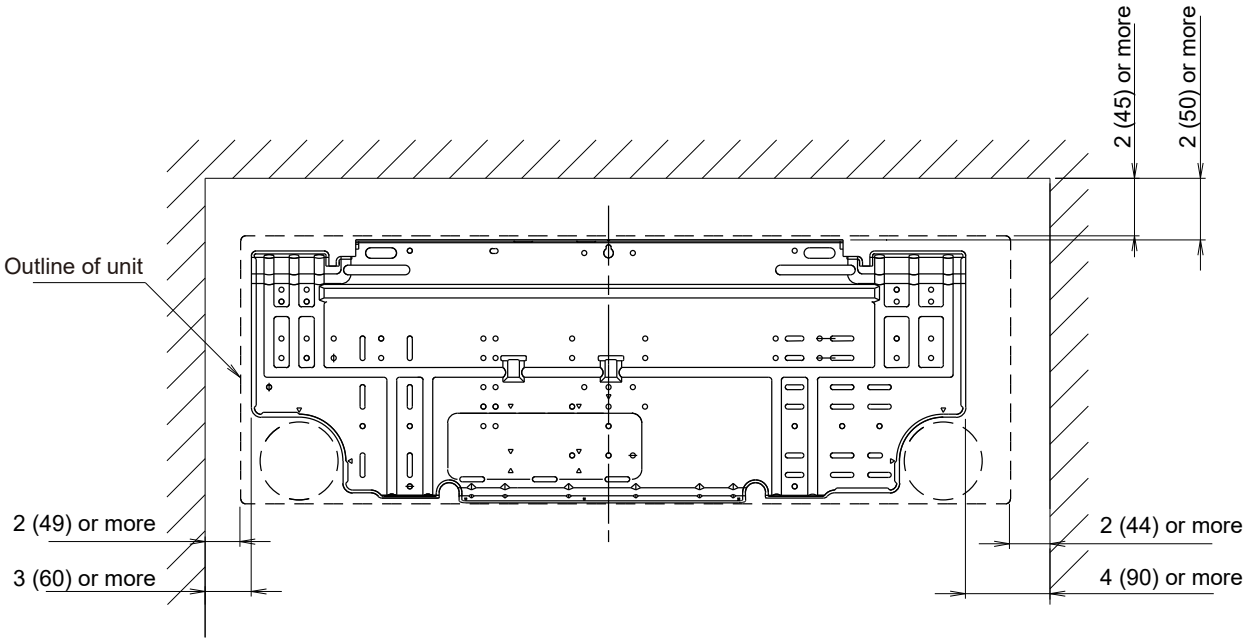
Unit : in. (mm)

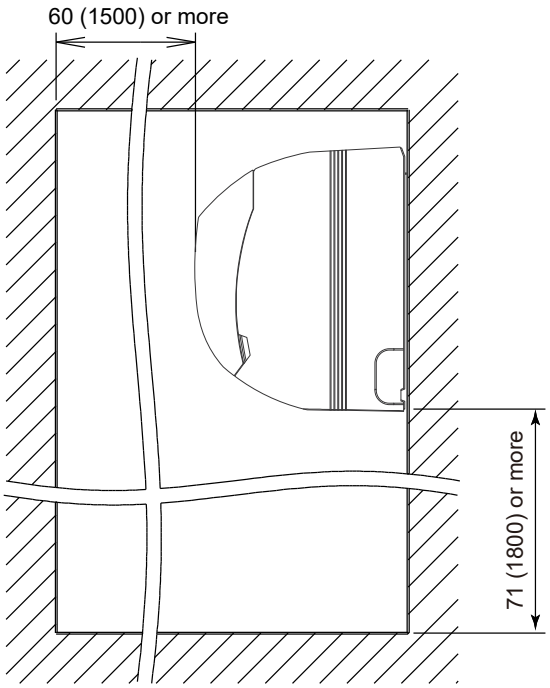


			ASUA7, ASUA9, ASUA12, ASUA14
①	Refrigerant pipe flare connection	Liquid	ø 1/4 (6.35)
②		Gas	ø 1/2 (12.70)
③	Drain hose	-	ø 9/16 (I.D.), ø 5/8 to 11/16 (O.D.) [ø 13.8 (I.D.), ø 15.8 to 16.7 (O.D.)] Total length : 23-5/8 (600)

■ INSTALLATION LOCATION

Unit : in. (mm)

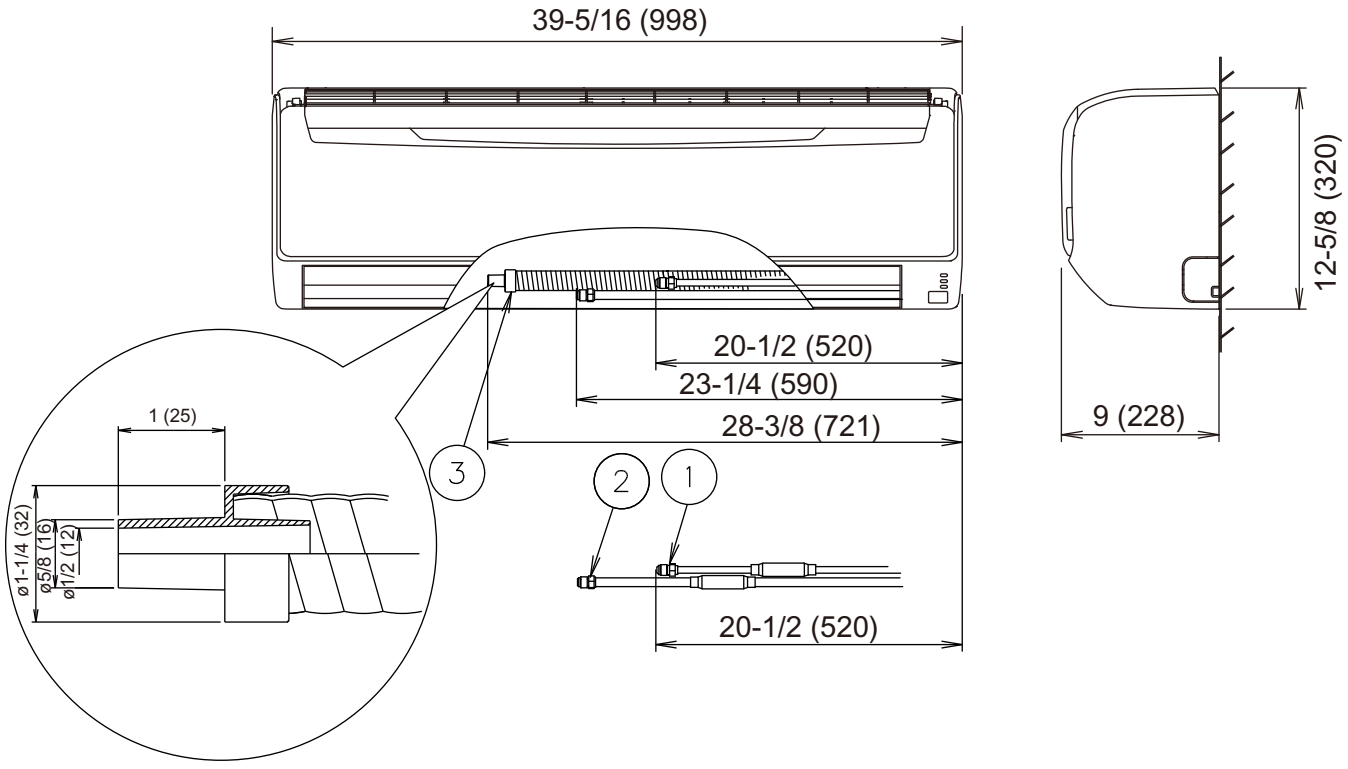


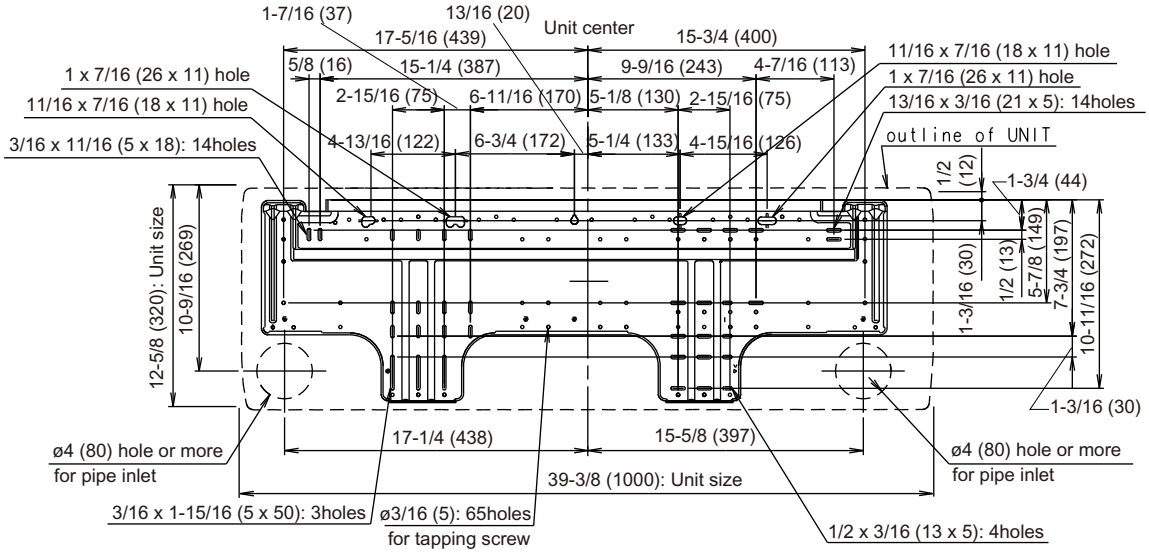


INDOOR UNITS

■ MODELS : ASUB18TLAV, ASUB24TLAV

Unit : in. (mm)

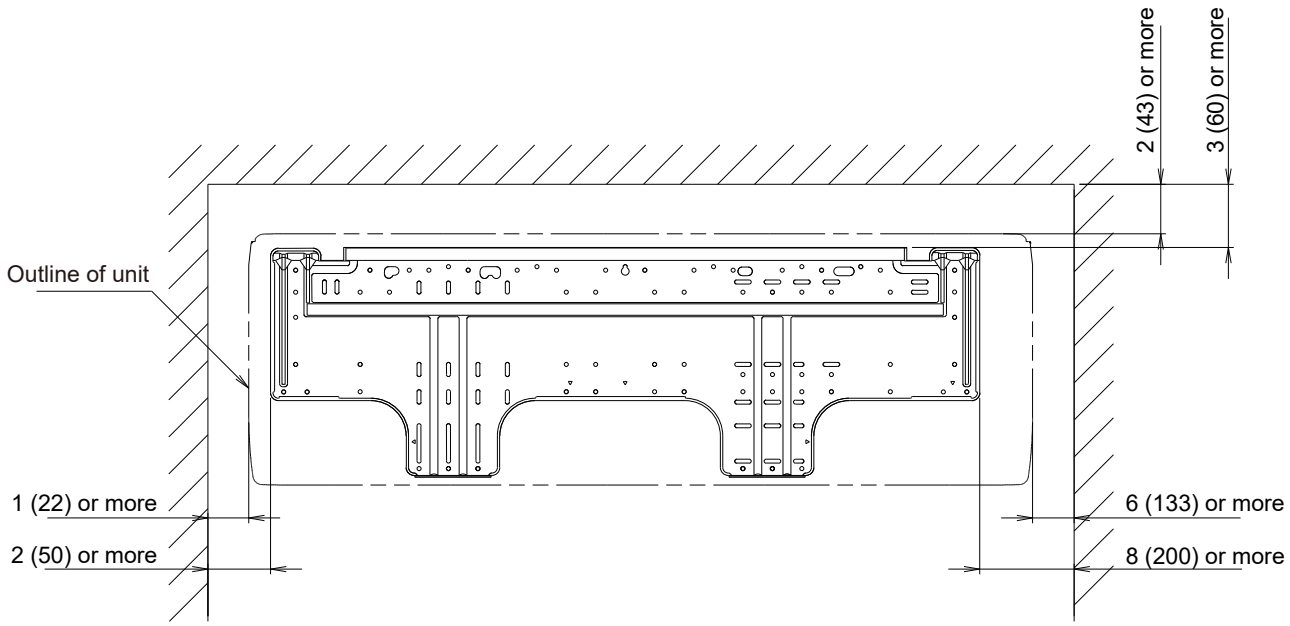


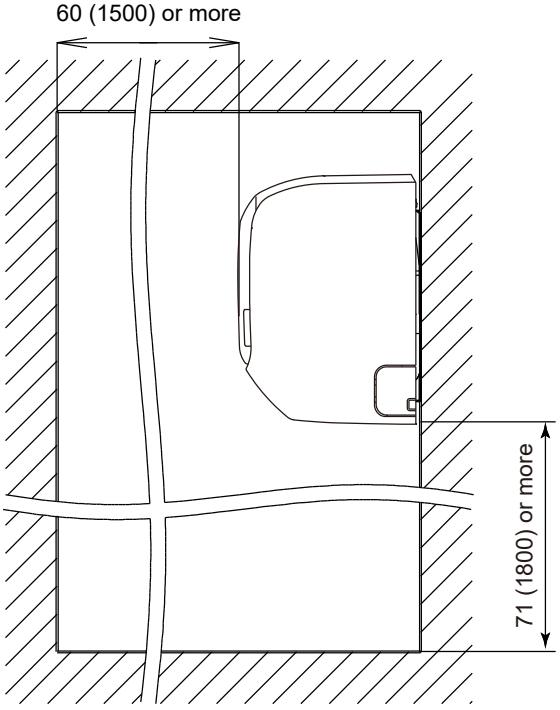


			ASUB18, ASUB24
①	Refrigerant pipe flare connection	Liquid	ø 3/8 (9.52)
②		Gas	ø 5/8 (15.88)
③	Drain hose	-	ø 1/2 (I.D.) , ø 5/8 (O.D.) [ø 12 (I.D.) , ø 16 (O.D.)] Total length : 26-3/8 (670)

■ INSTALLATION PLACE

Unit : in. (mm)

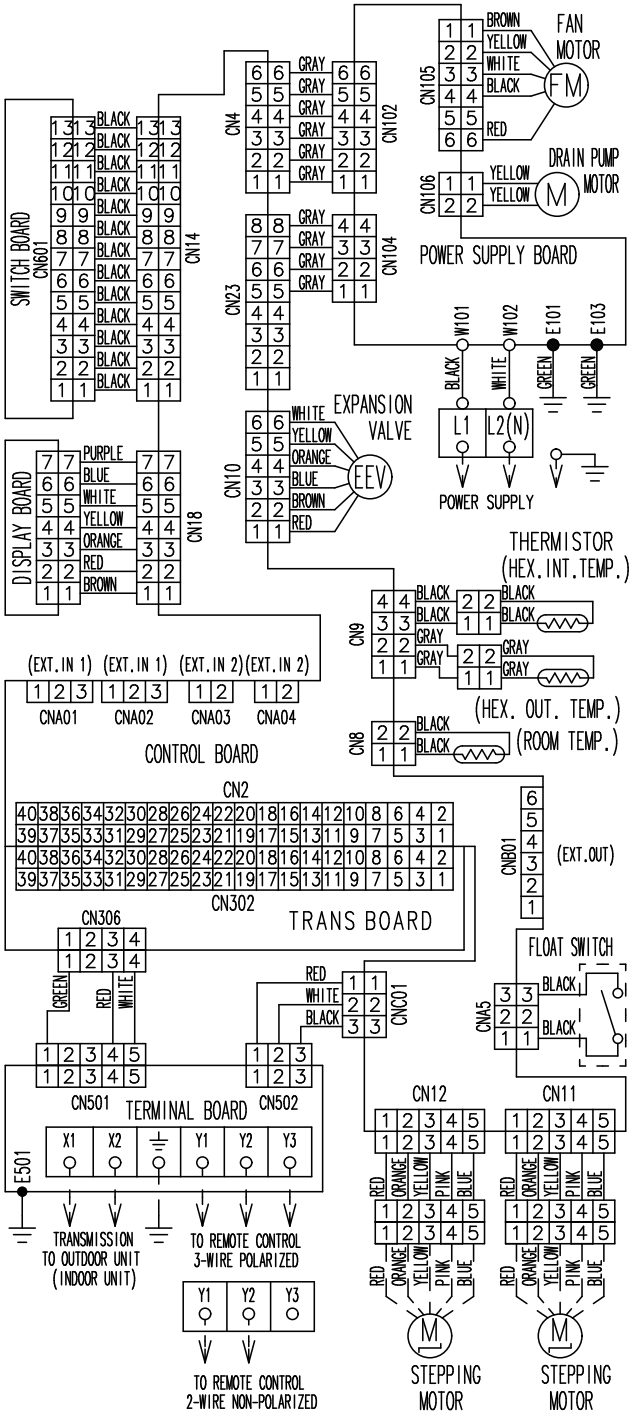




4. WIRING DIAGRAMS

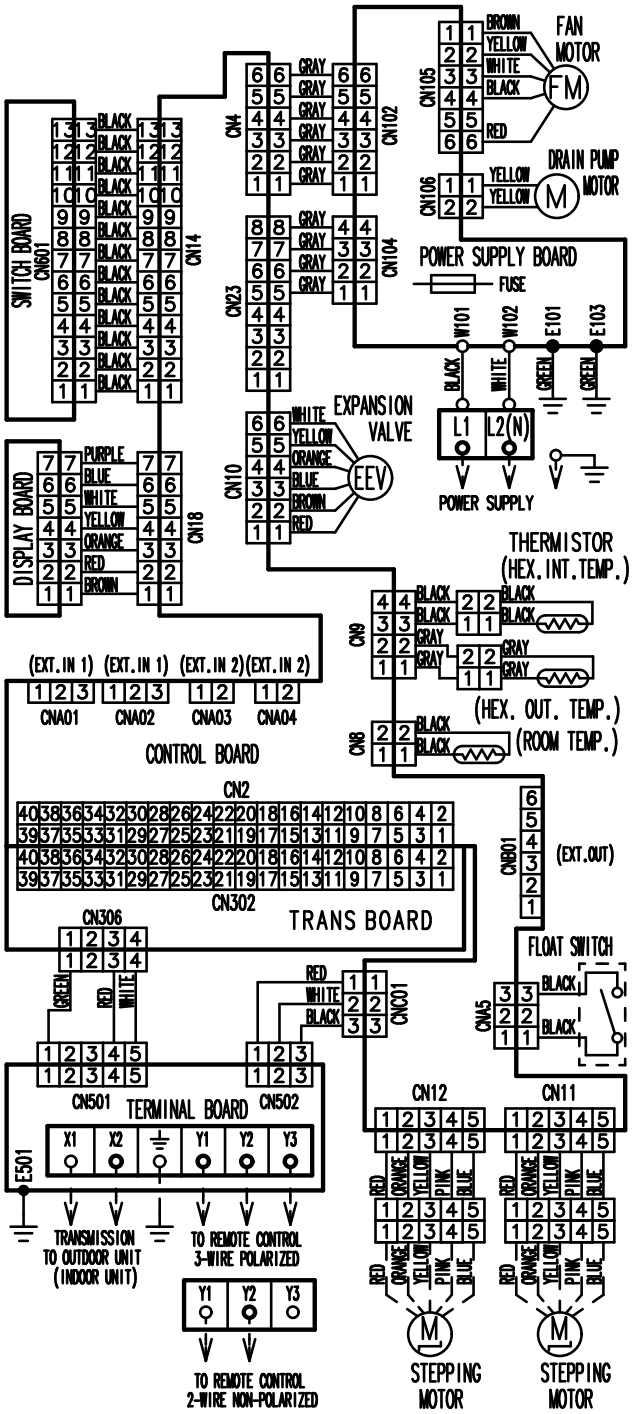
4-1. COMPACT CASSETTE TYPE

■ MODEL : AUUA4TLAV1



INDOOR UNITS

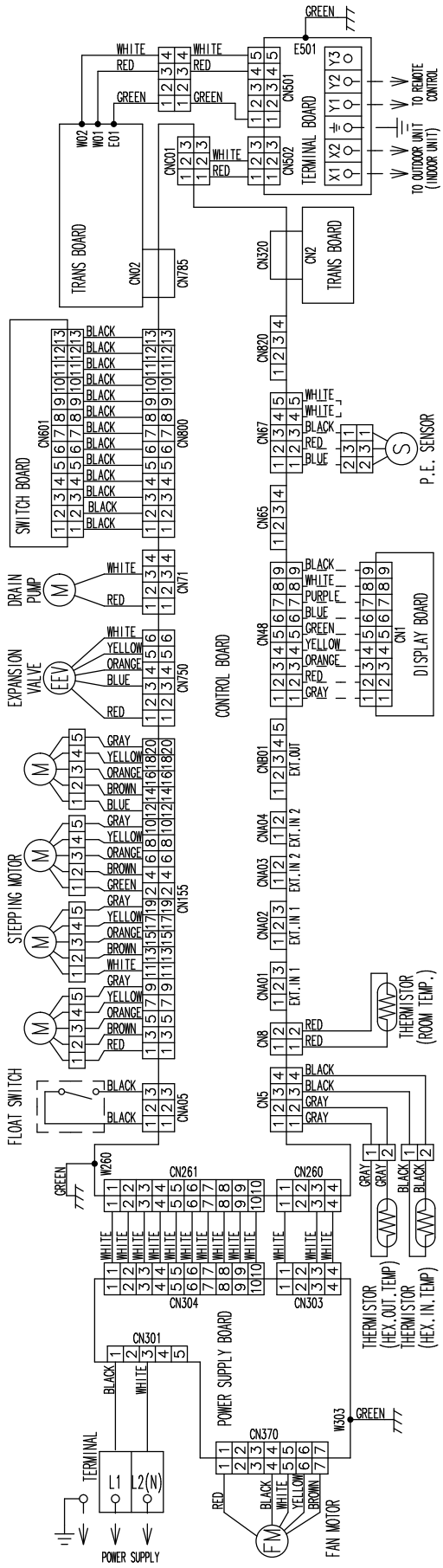
■ MODELS : AUUA7TLAV, AUUA9TLAV, AUUA12TLAV, AUUA14TLAV, AUUA18TLAV, AUUA24TLAV



INDOOR UNITS

4-2. CIRCULAR FLOW CASSETTE TYPE

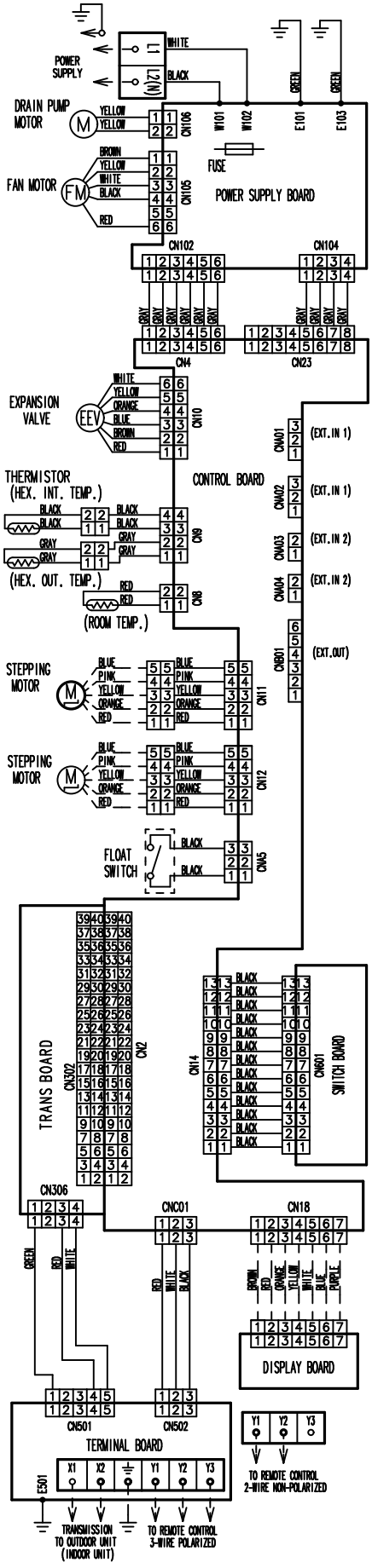
■ MODELS : AUUB18TLAV1, AUUB24TLAV1, AUUB30TLAV1, AUUB36TLAV1, AUUB48TLAV1



INDOOR UNITS

4-3. CASSETTE TYPE

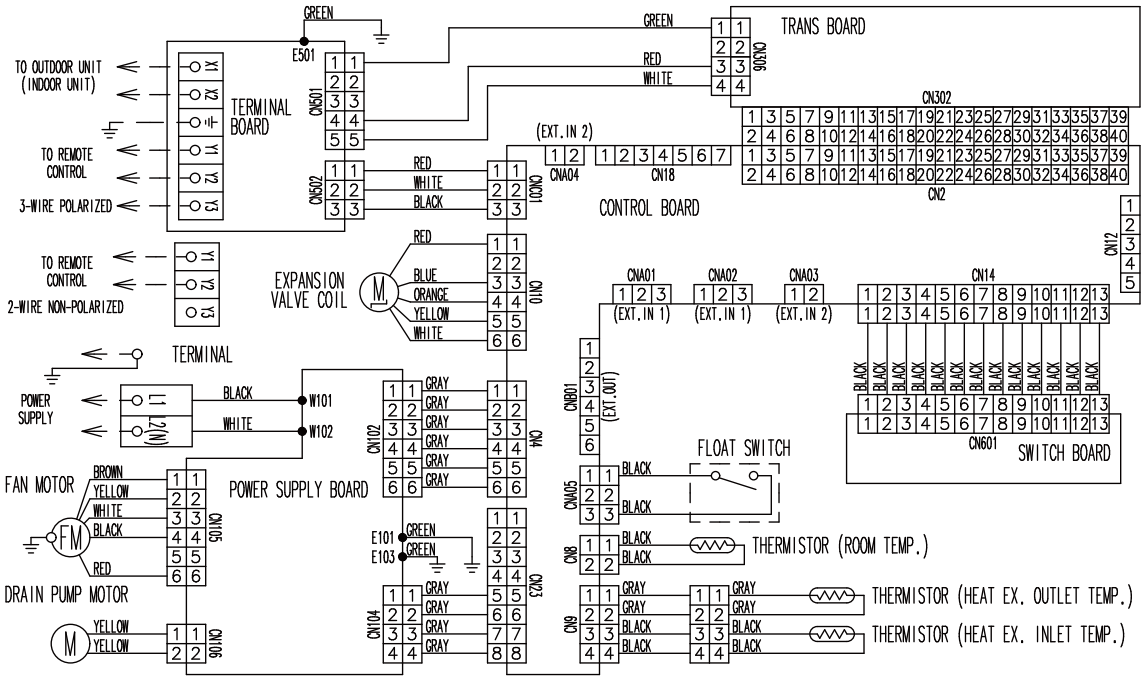
■ MODELS : AUUB18TLAV, AUUB24TLAV, AUUB30TLAV, AUUB36TLAV



INDOOR UNITS

4-4. MINI DUCT TYPE

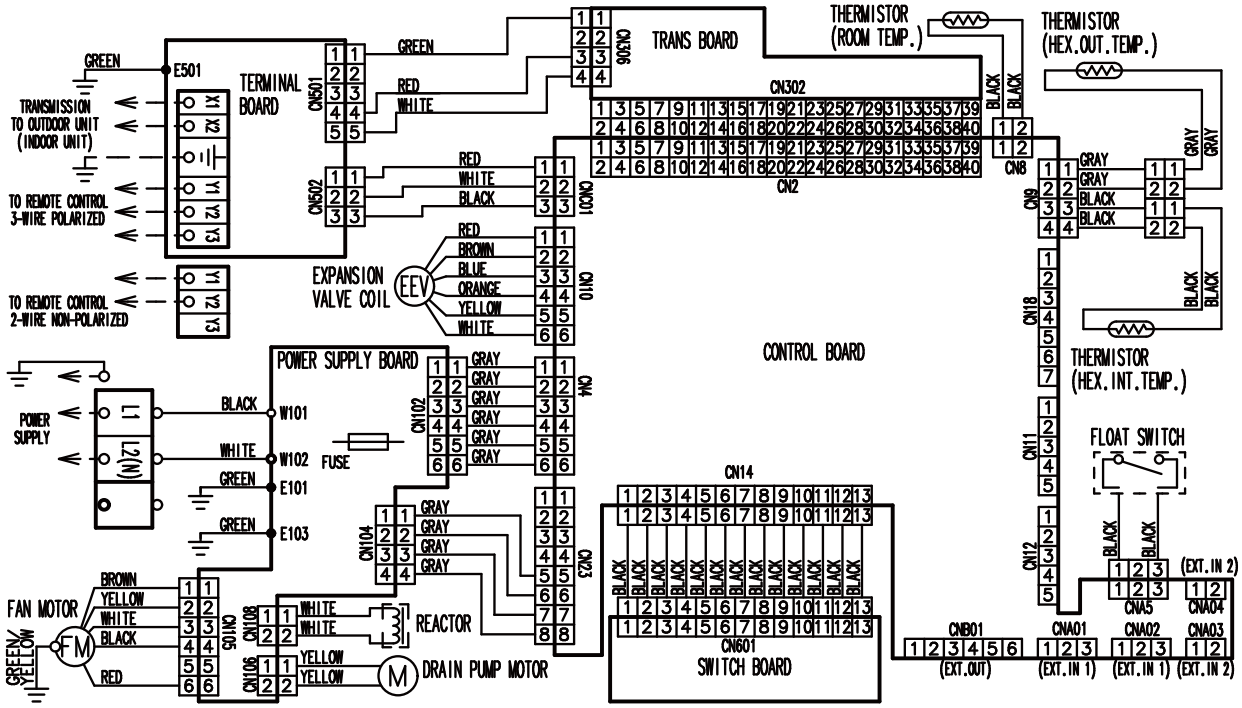
■ MODEL: ARUL4TLAV1



INDOOR UNITS

4-5. SLIM DUCT / SLIM CONCEALED FLOOR TYPE

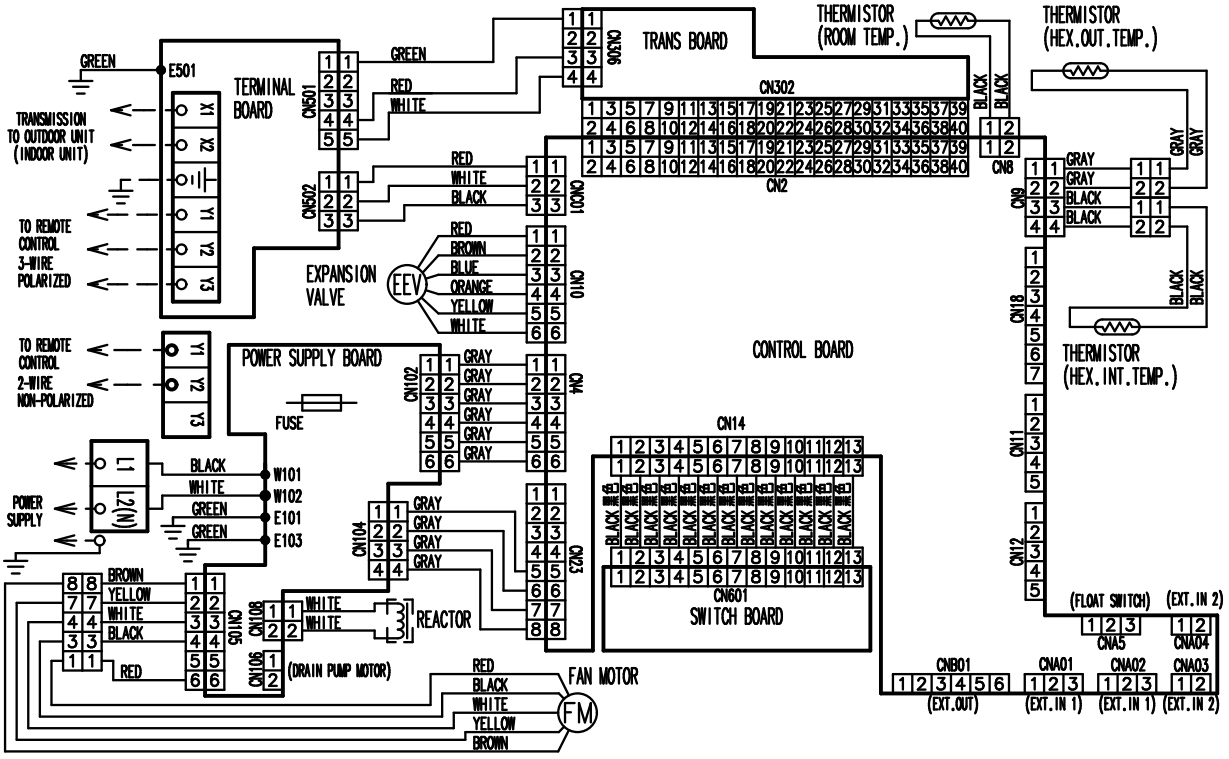
■ MODELS : ARUL7TLAV, ARUL9TLAV, ARUL12TLAV, ARUL14TLAV, ARUL18TLAV



INDOOR UNITS

4-6. MEDIUM STATIC PRESSURE DUCT TYPE

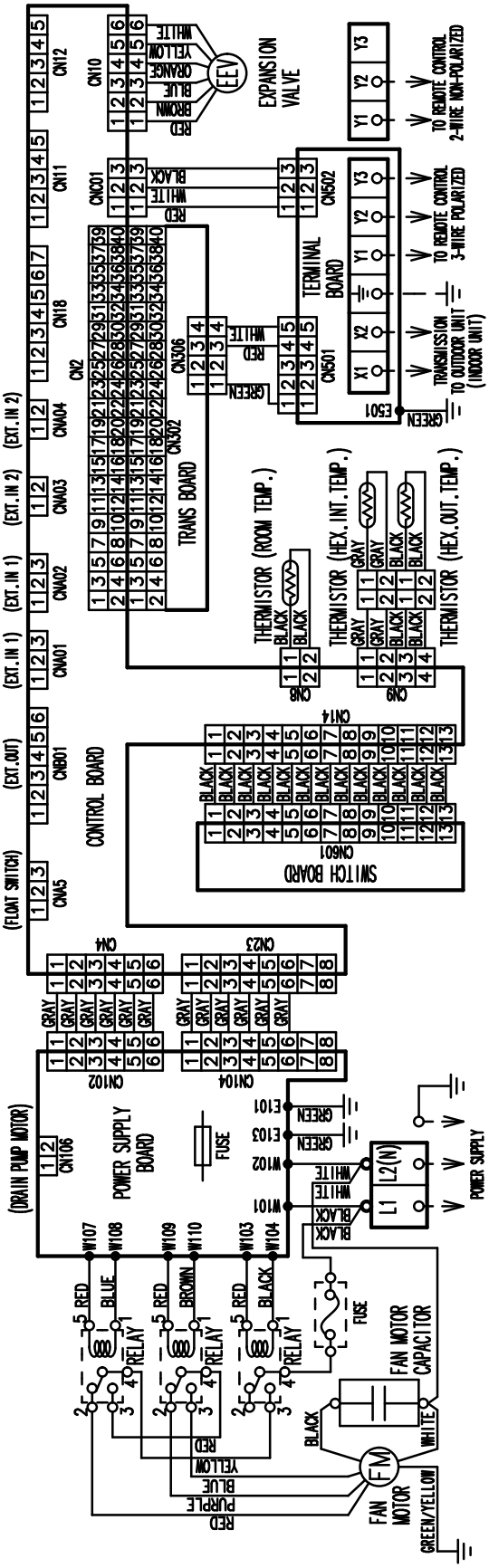
■ MODELS : ARUM24TLAV, ARUM30TLAV, ARUM36TLAV



INDOOR UNITS

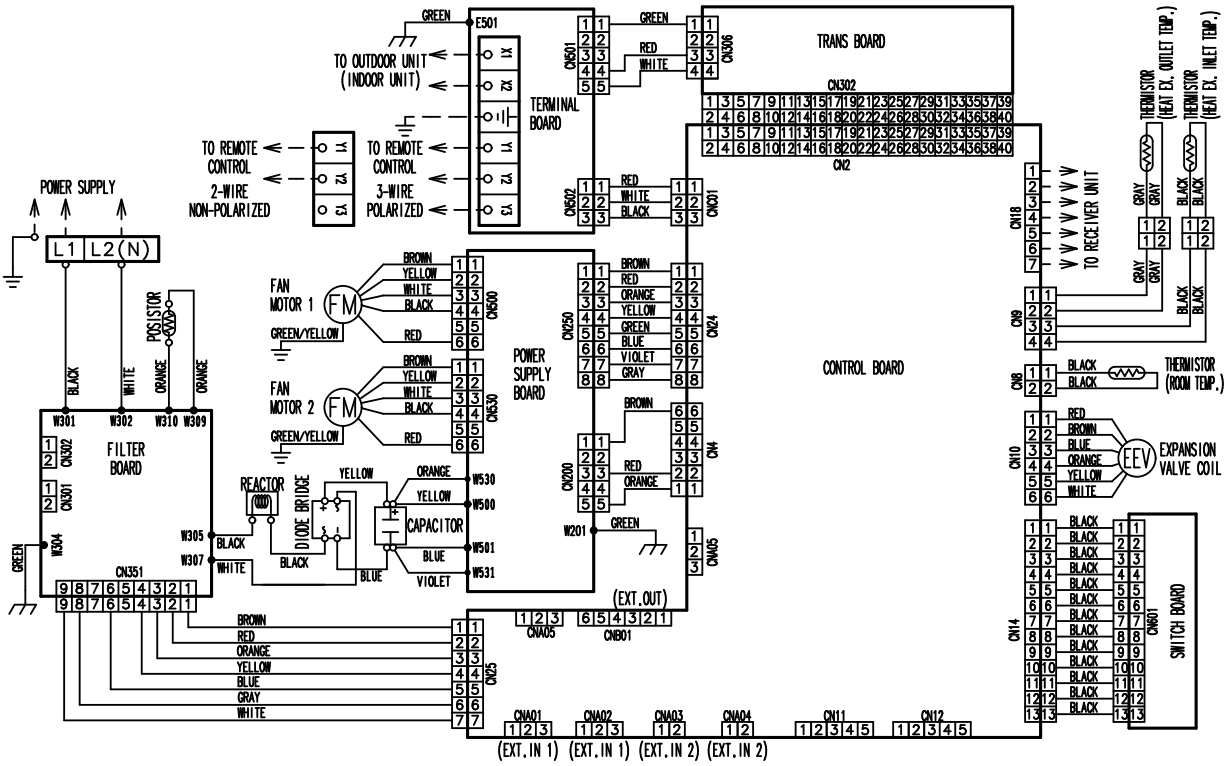
4-7. HIGH STATIC PRESSURE DUCT TYPE

■ MODELS : ARUH36TLAV, ARUH48TLAV, ARUH60TLAV



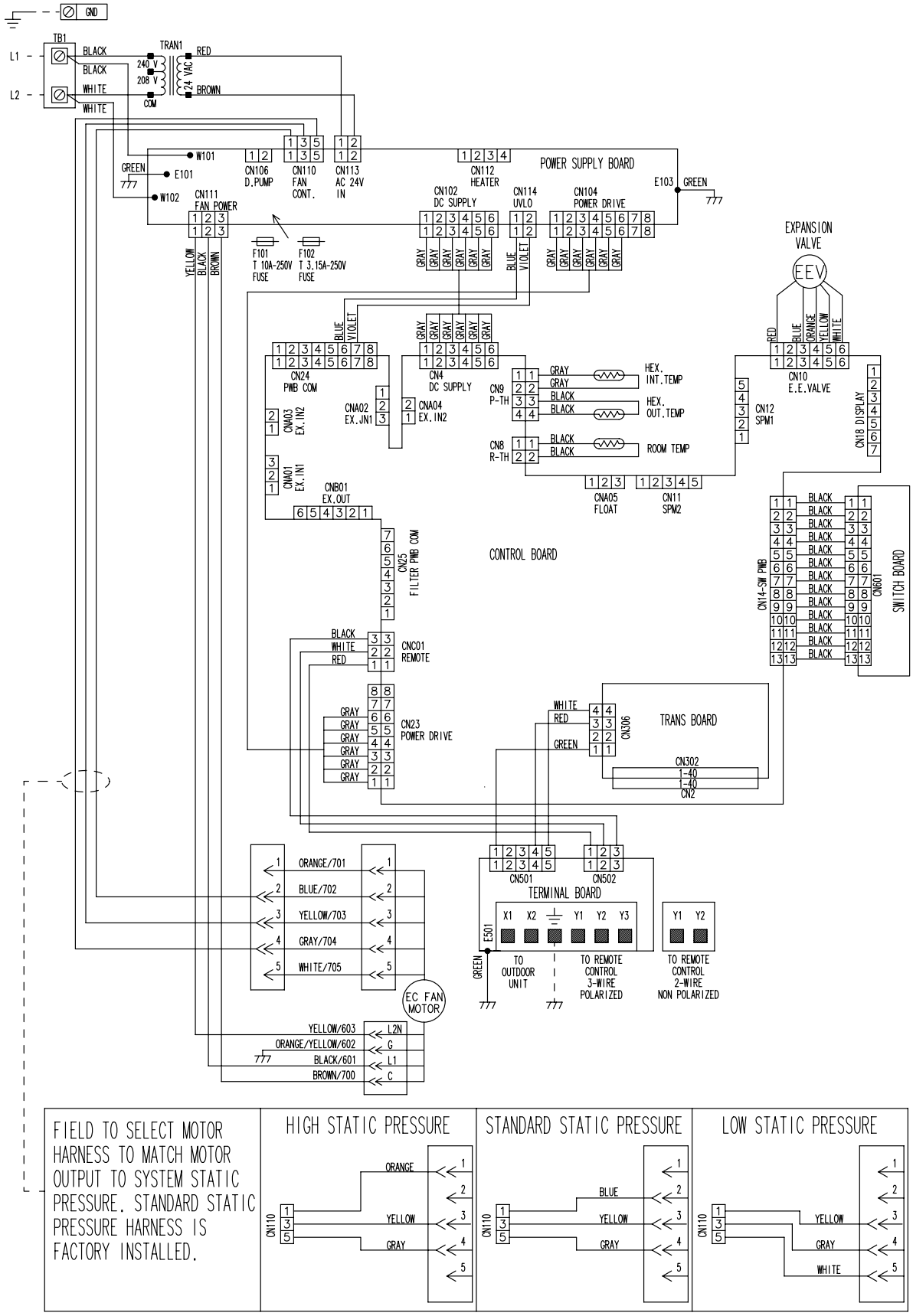
INDOOR UNITS

■ MODELS : ARUH72TLAV1, ARUH96TLAV



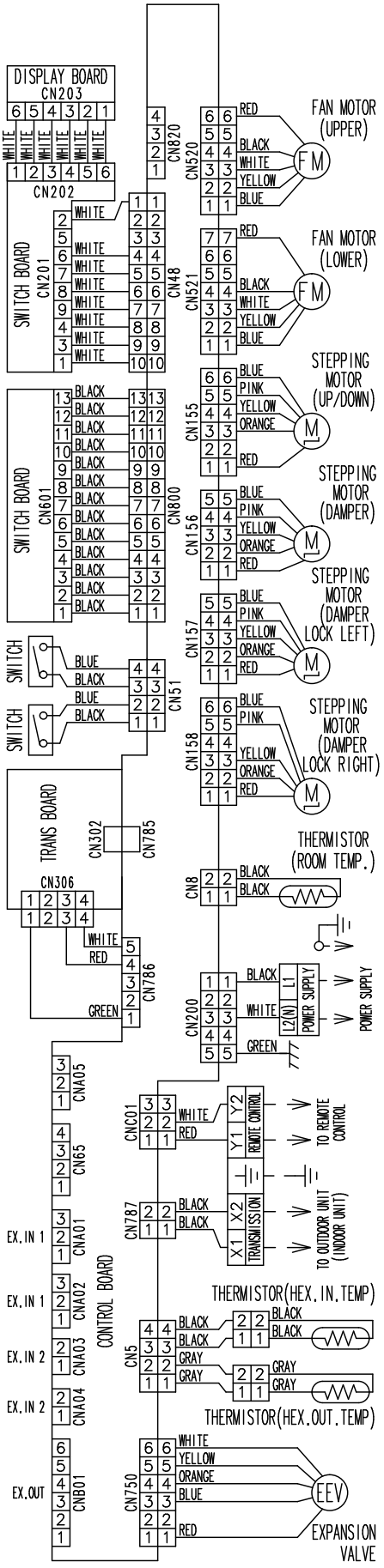
4-8. VERTICAL AIR HANDLER TYPE

■ MODELS: ARUV12TLAV, ARUV18TLAV, ARUV24TLAV, ARUV30TLAV, ARUV36TLAV, ARUV48TLAV, ARUV60TLAV



4-9. COMPACT FLOOR TYPE

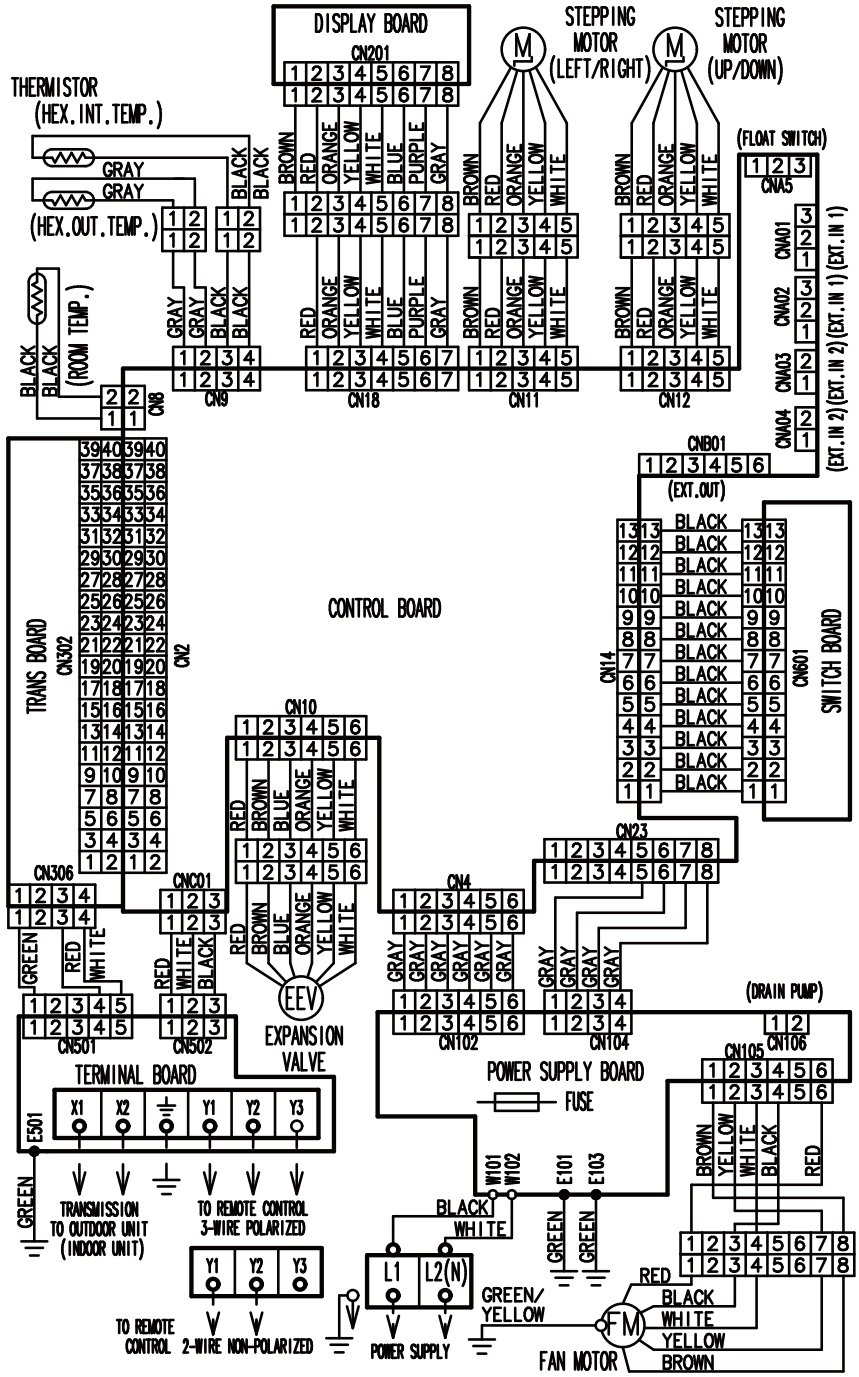
■ MODELS: AGUA4TLAV1, AGUA7TLAV1, AGUA9TLAV1, AGUA12TLAV1, AGUA14TLAV1



INDOOR UNITS

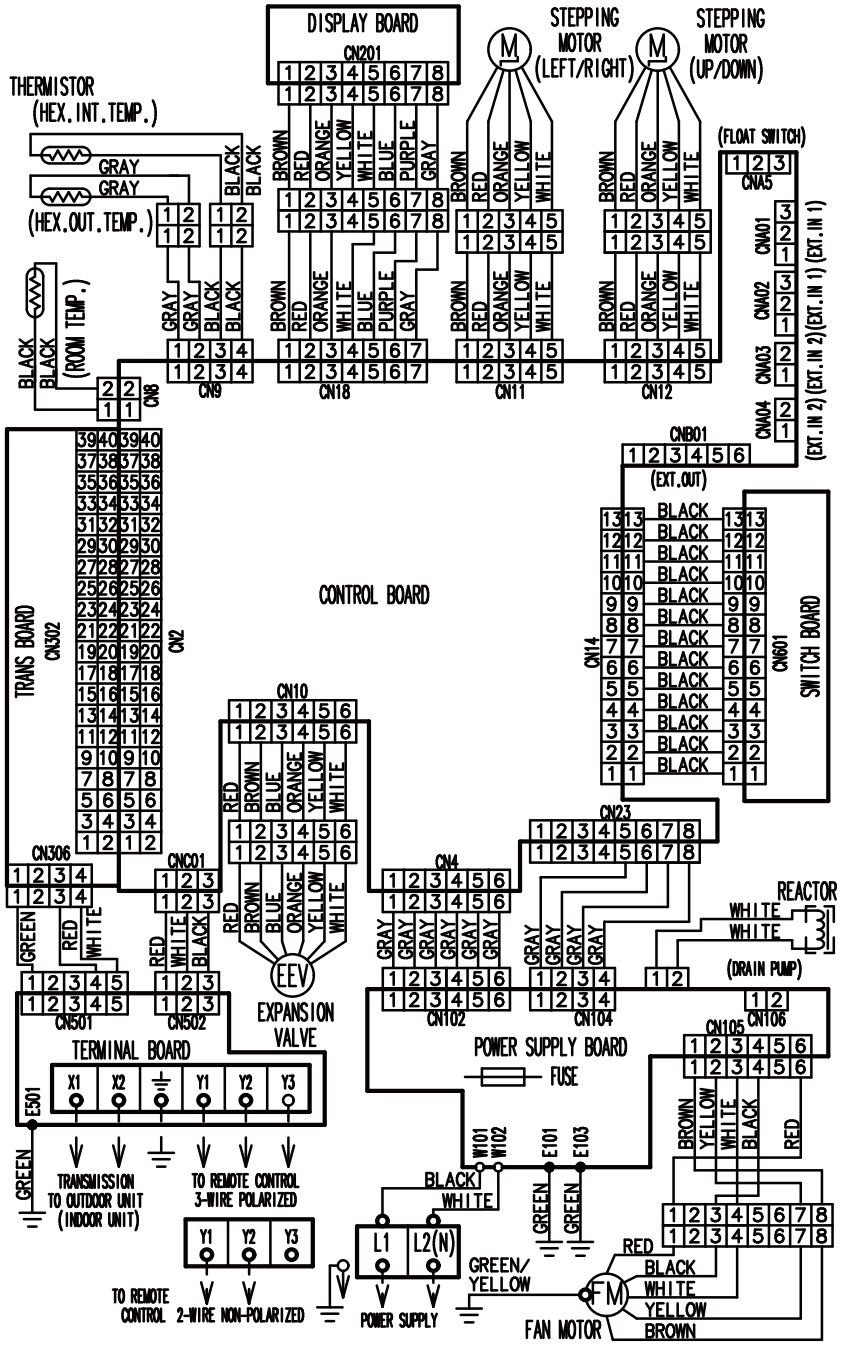
4-10. FLOOR / CEILING TYPE

■ MODELS : ABUA12TLAV, ABUA14TLAV, ABUA18TLAV, ABUA24TLAV



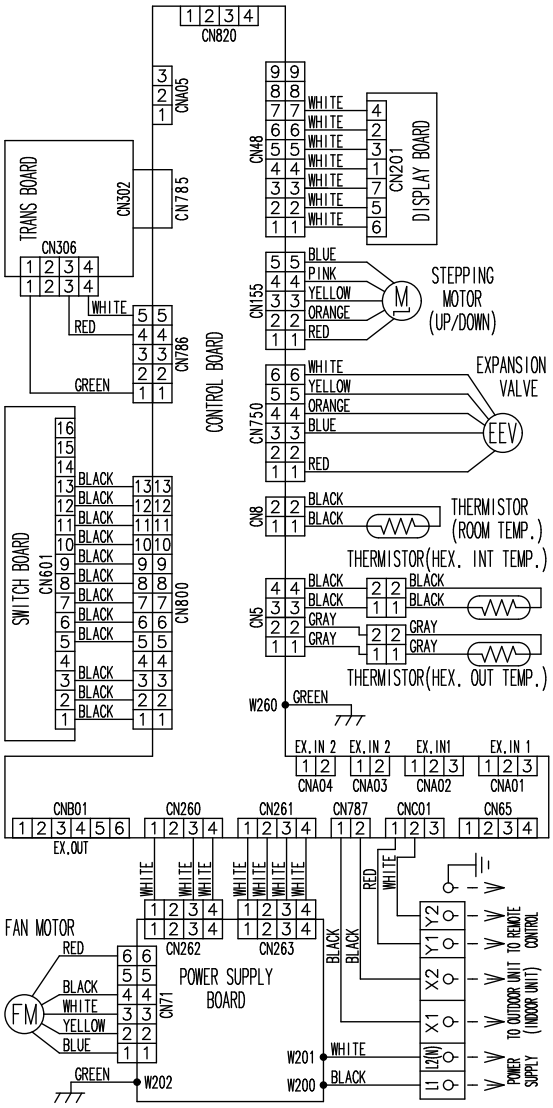
4-11. CEILING TYPE

■ MODELS : ABUA30TLAV, ABUA36TLAV



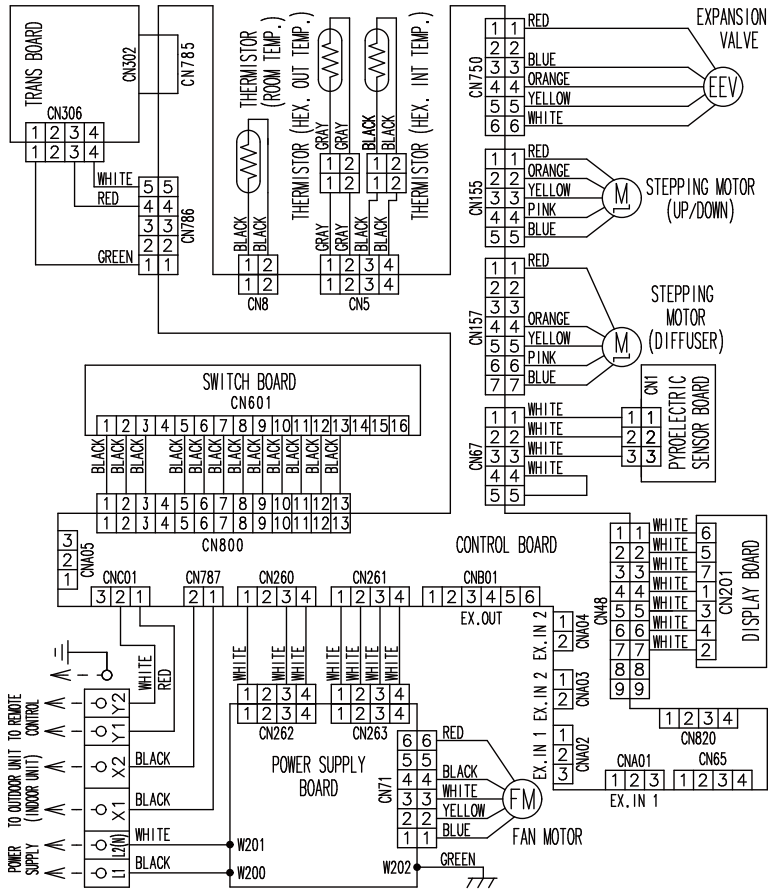
4-12. WALL MOUNTED TYPE

■ MODELS: ASUA4TLAV1, ASUA7TLAV1, ASUA9TLAV1



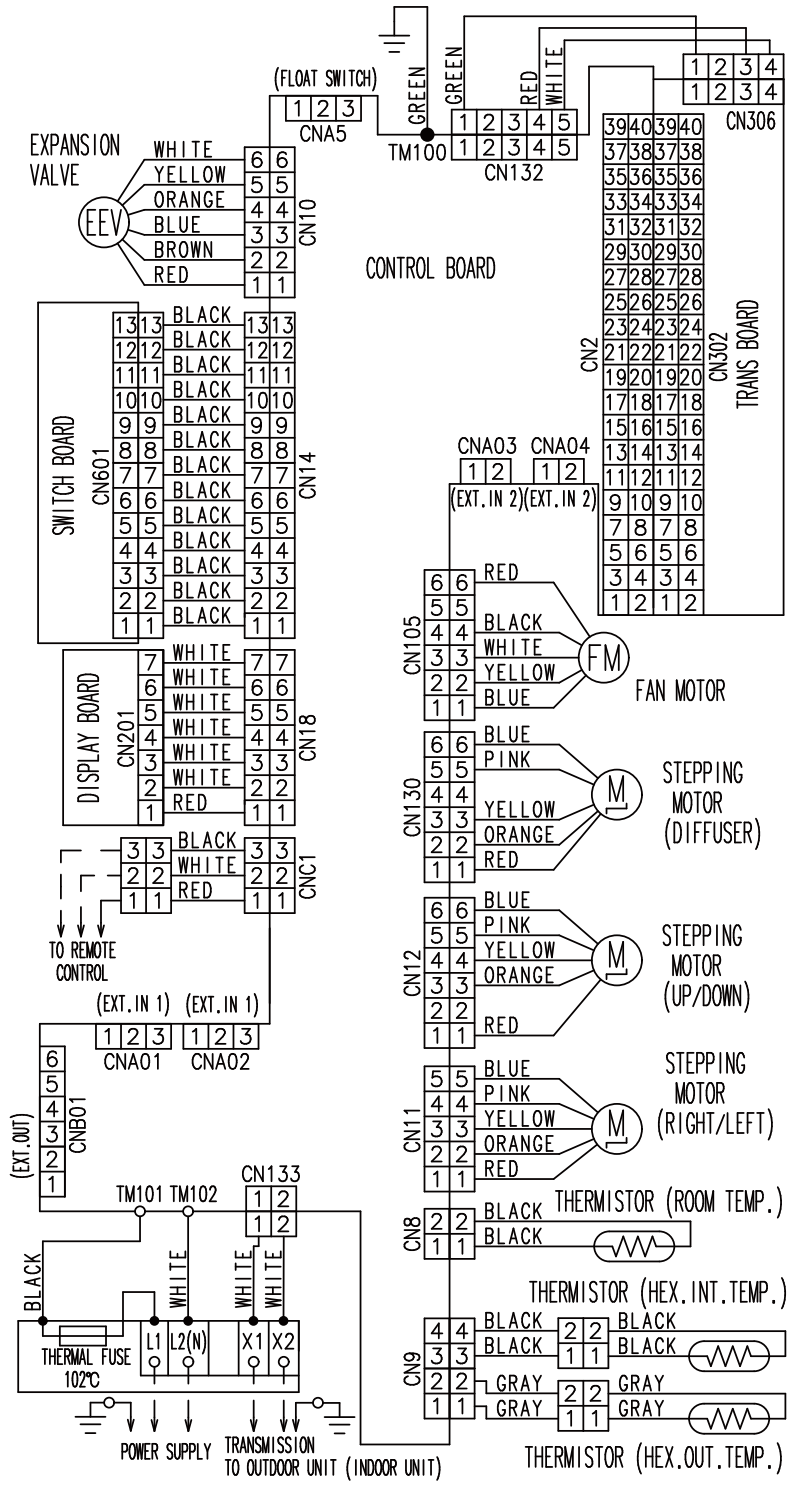
INDOOR UNITS

■ MODELS: ASUA12TLAV1, ASUA14TLAV1

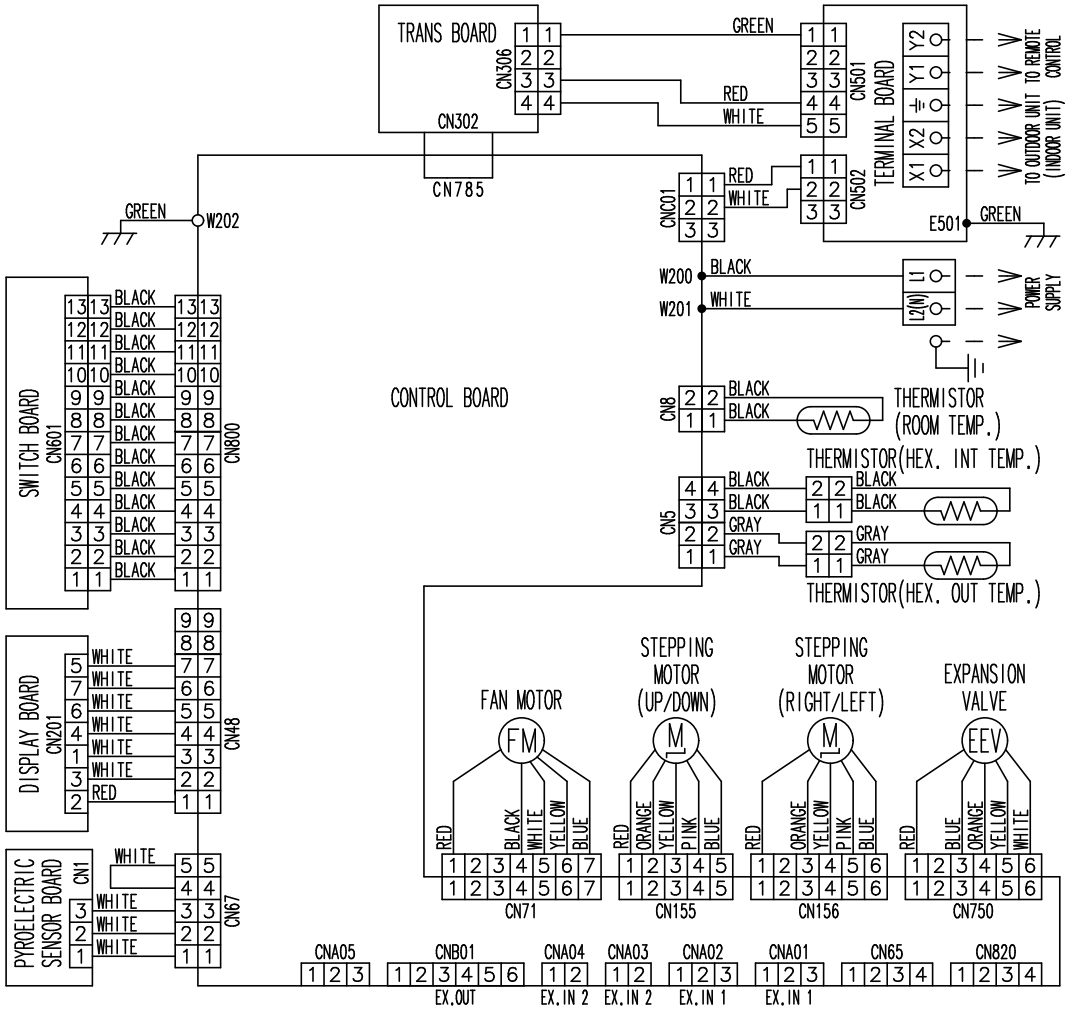


INDOOR UNITS

■ MODELS: ASUB18TLAV1, ASUB24TLAV1

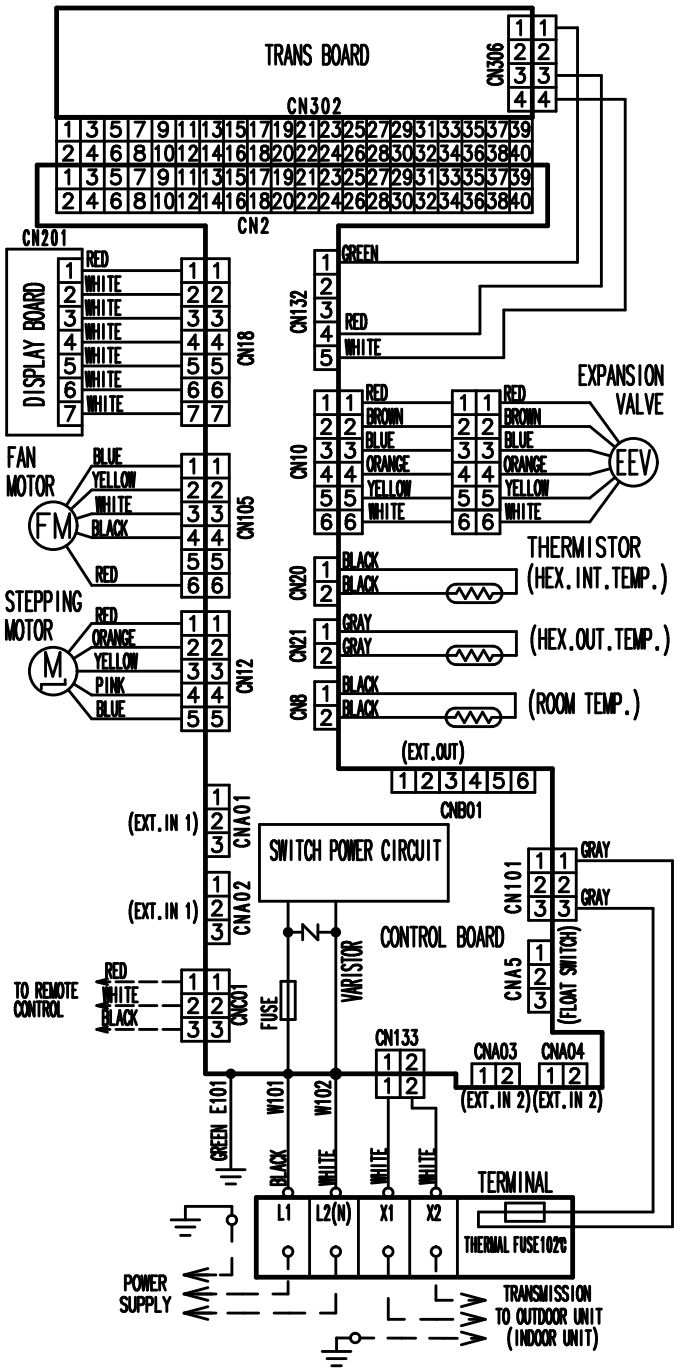


■ MODELS: ASUB30TLAV1, ASUB36TLAV1



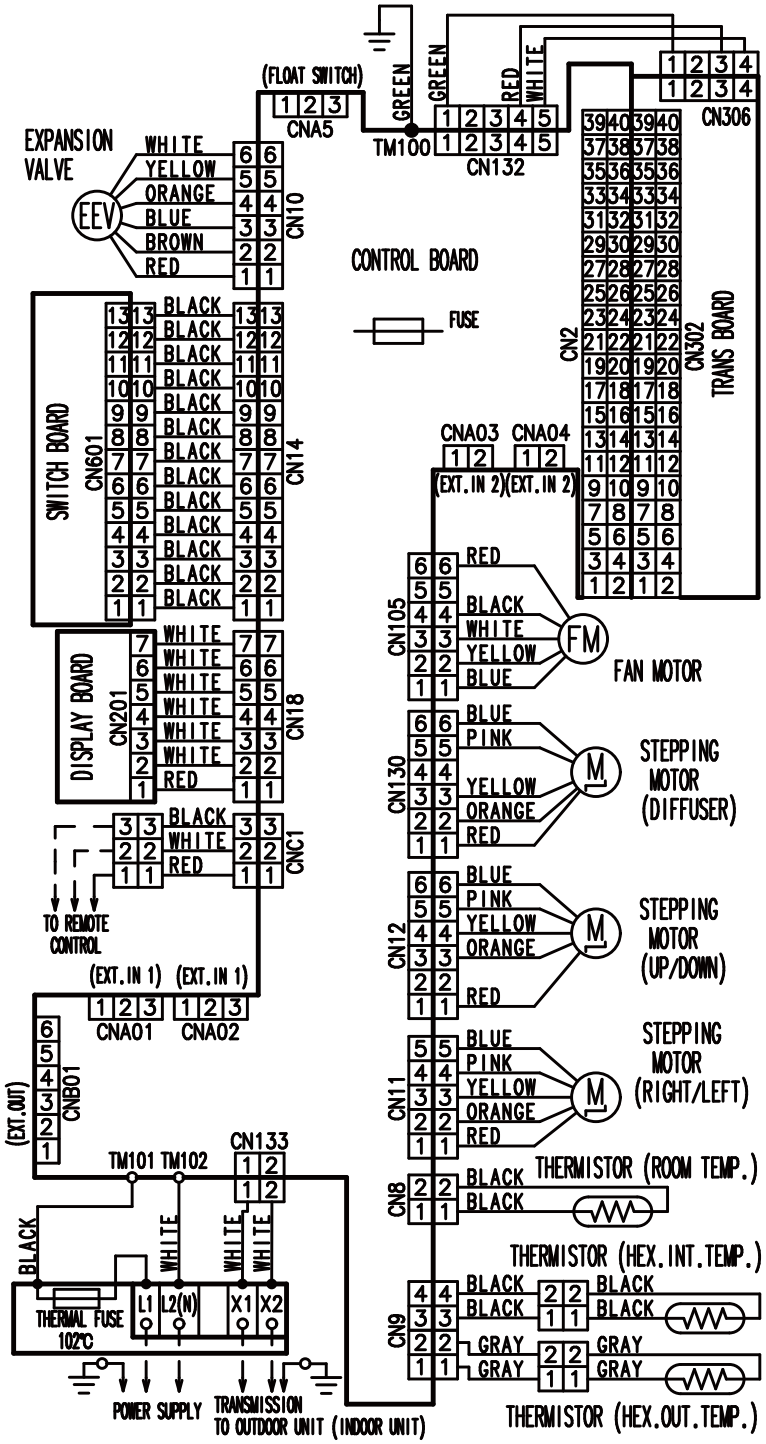
INDOOR UNITS

■ MODELS : ASUA7TLAV, ASUA9TLAV, ASUA12TLAV, ASUA14TLAV



INDOOR UNITS

■ MODELS : ASUB18TLAV, ASUB24TLAV



5. AIR VELOCITY AND TEMPERATURE DISTRIBUTIONS

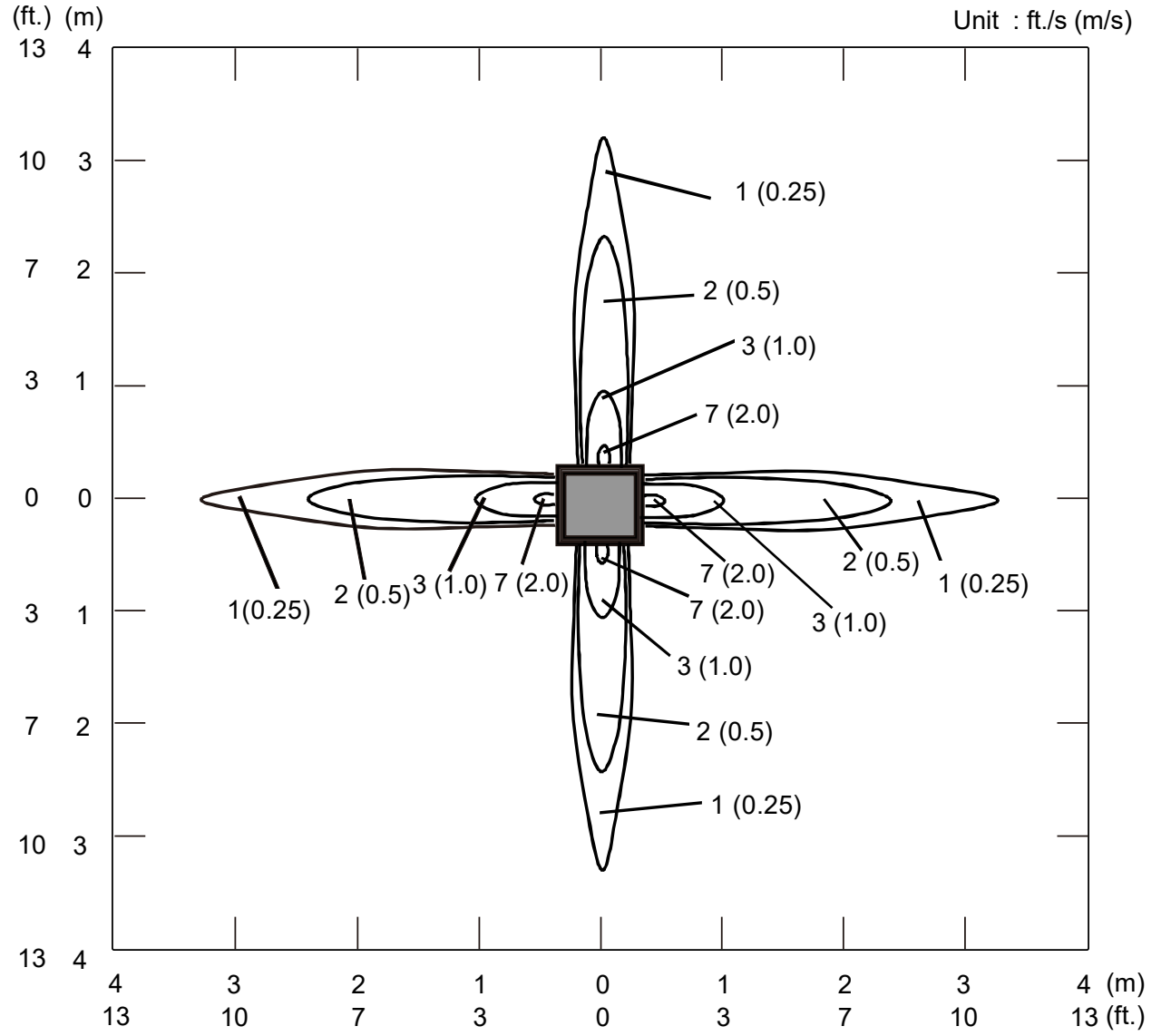
5-1. COMPACT CASSETTE TYPE

■ MODEL: AUUA4TLAV1

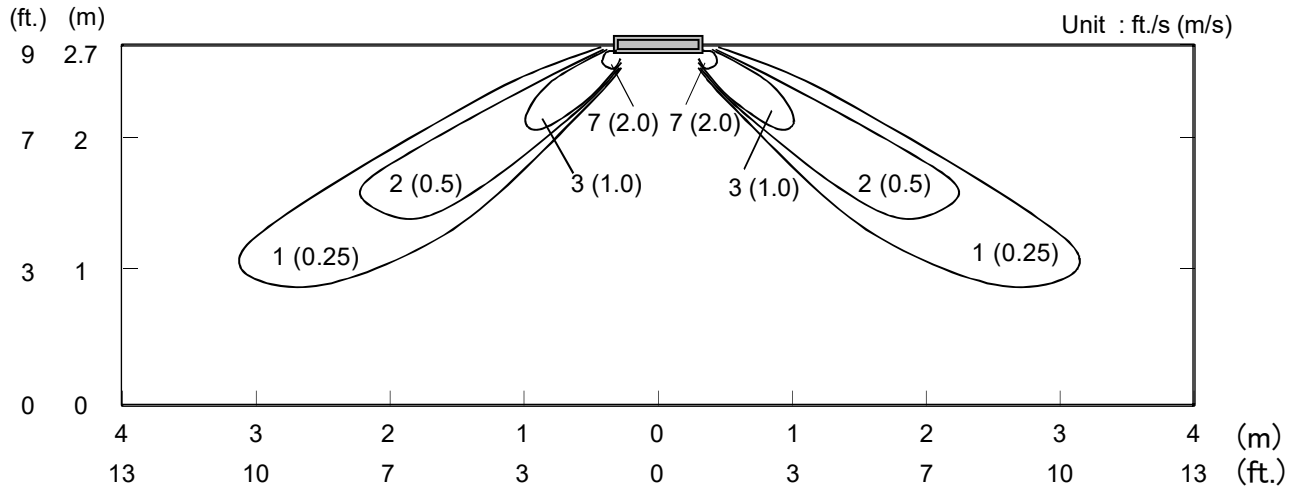
Conditions
Fan speed : High
Operation mode : Fan
Voltage : 230V

● Air velocity distribution

Top view
Vertical airflow direction louver : Up



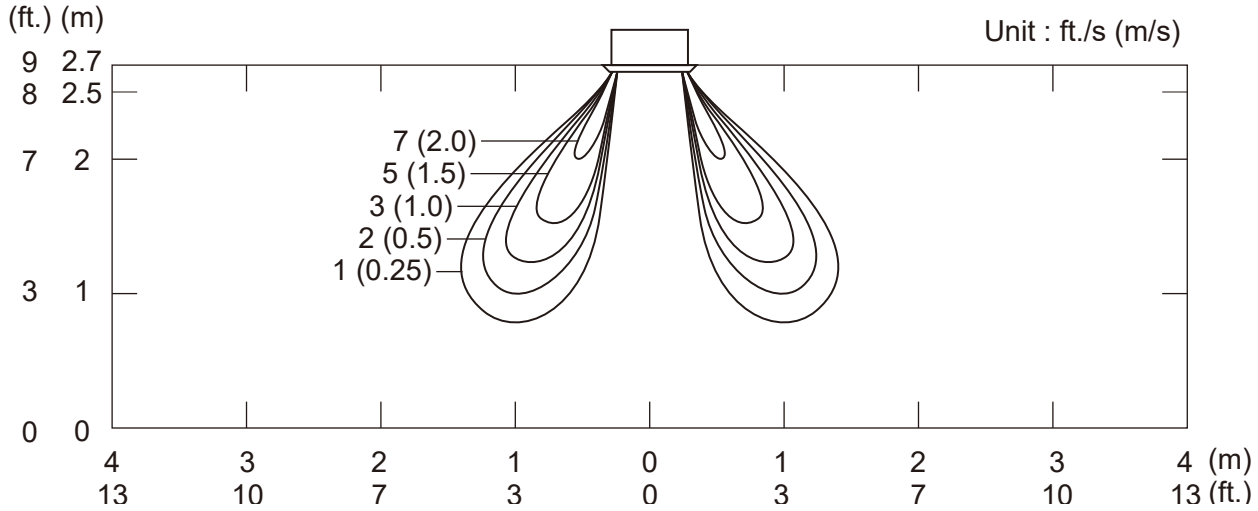
Side view
Vertical airflow direction louver : Up



Conditions
Fan speed : High
Operation mode : Heat
Voltage : 230V
Reference Data

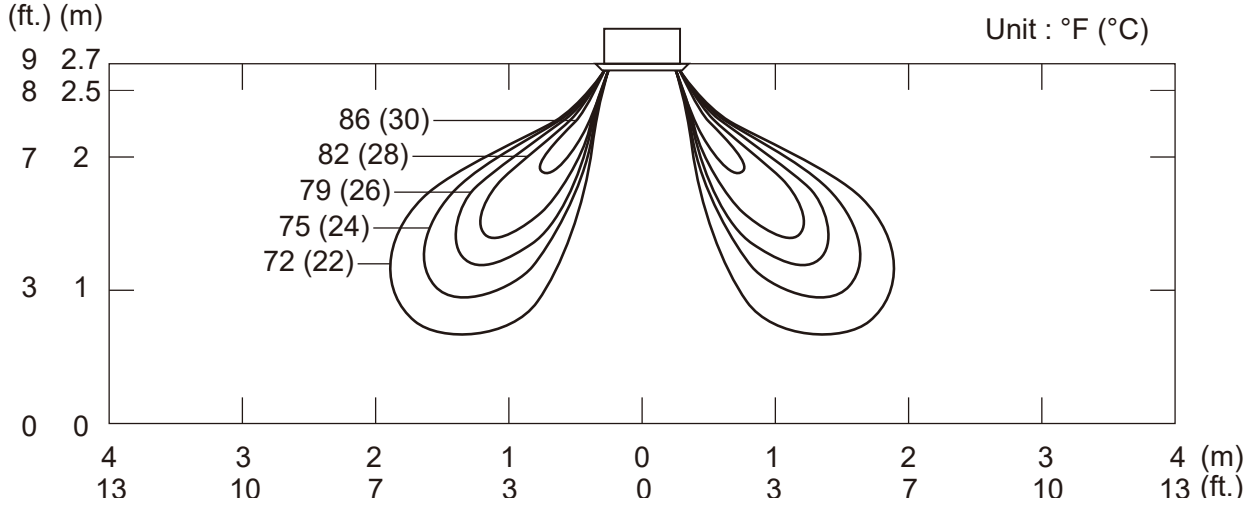
● Air velocity distribution

Side view
Vertical airflow direction louver : Down



● Air temperature distribution

Side view
Vertical airflow direction louver : Down



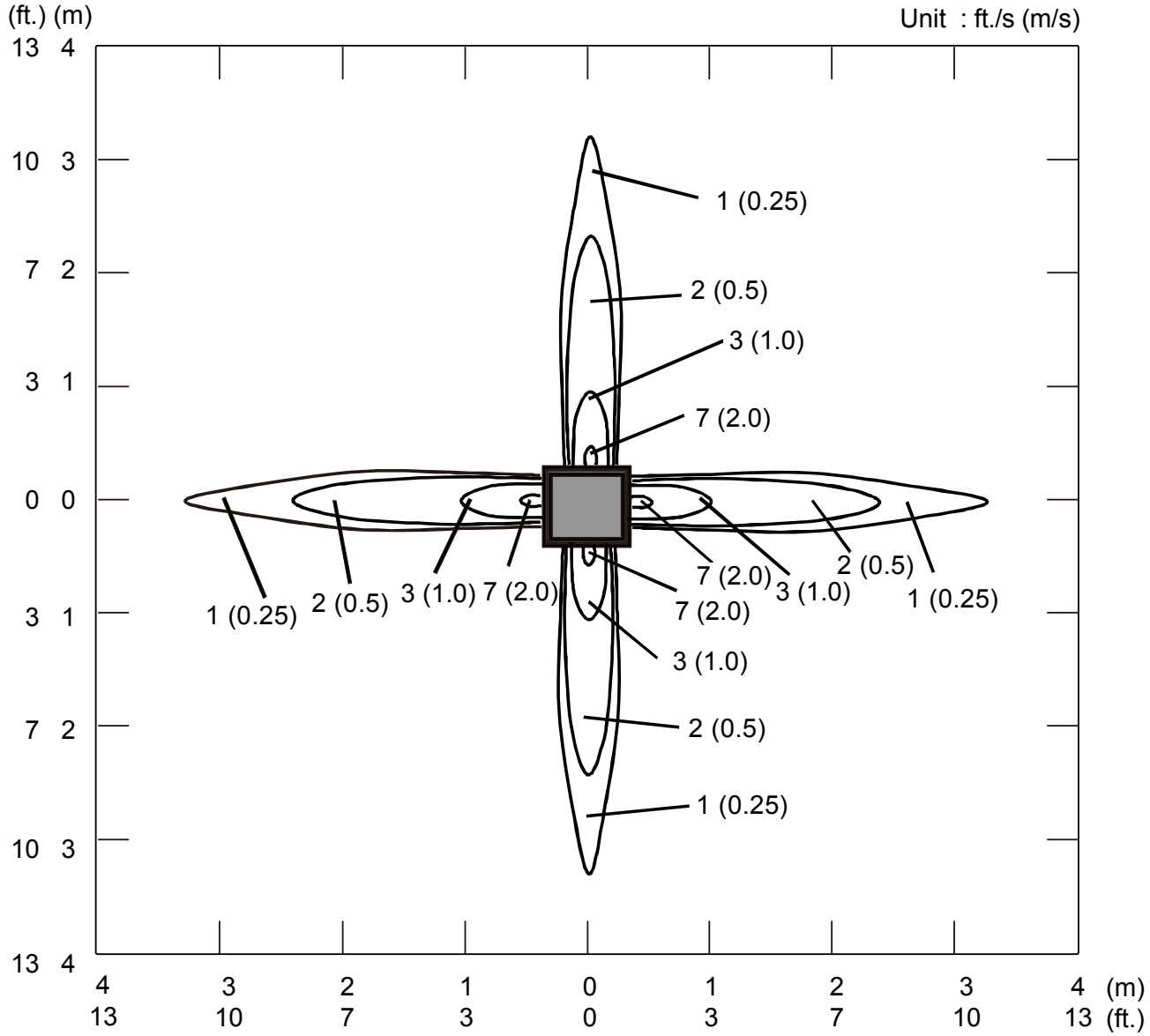
INDOOR UNITS

INDOOR UNITS

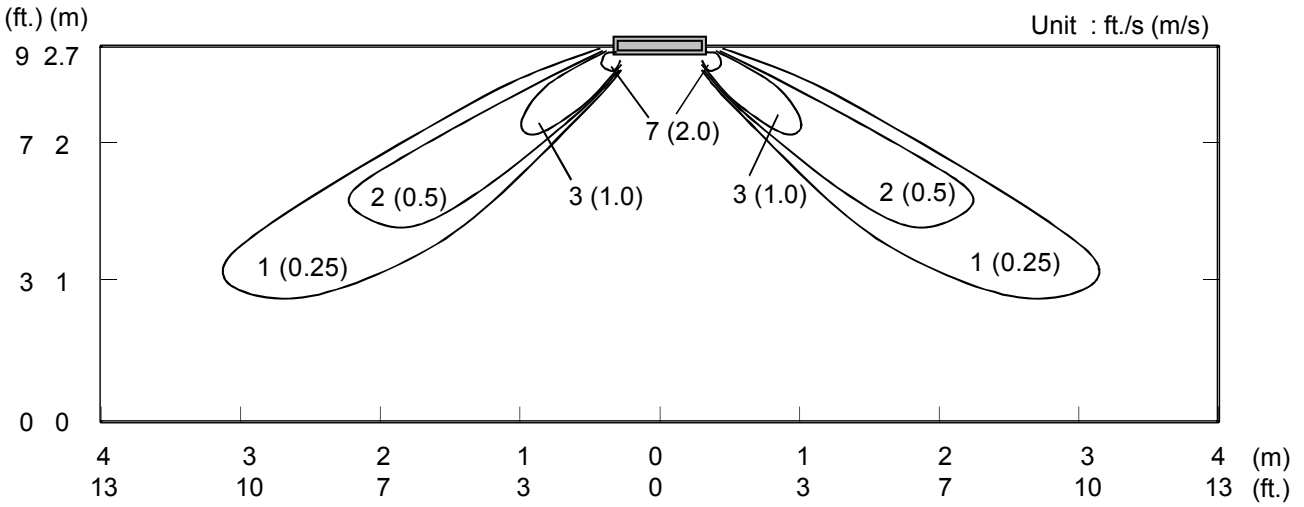
■ MODEL : AUUA7TLAV

● Air velocity distribution

Conditions
Fan speed : High
Operation mode : Fan

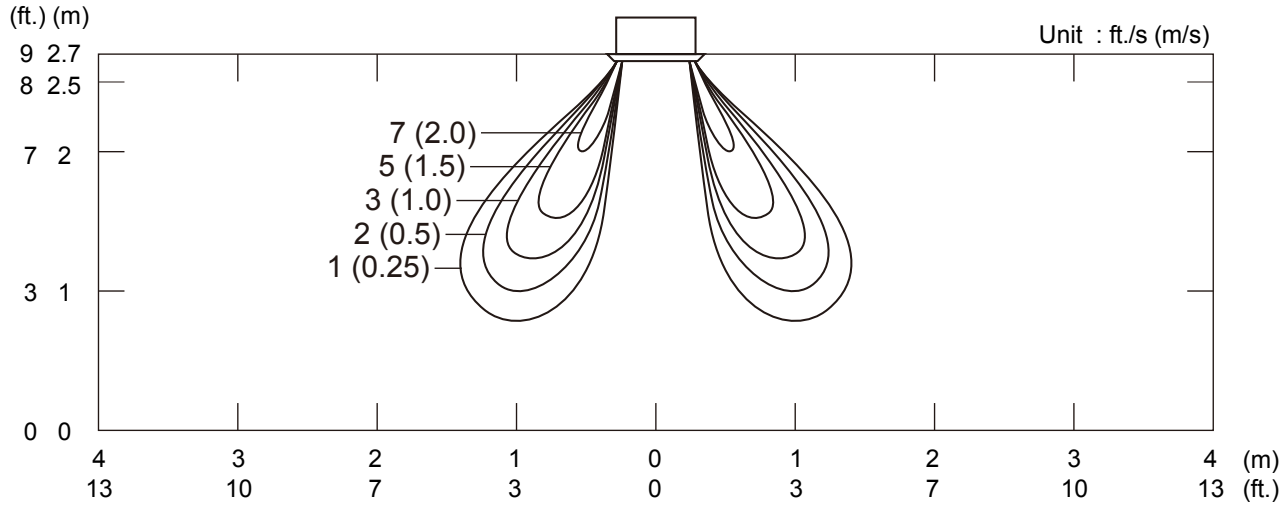


Side view
Vertical airflow direction louver : Upward

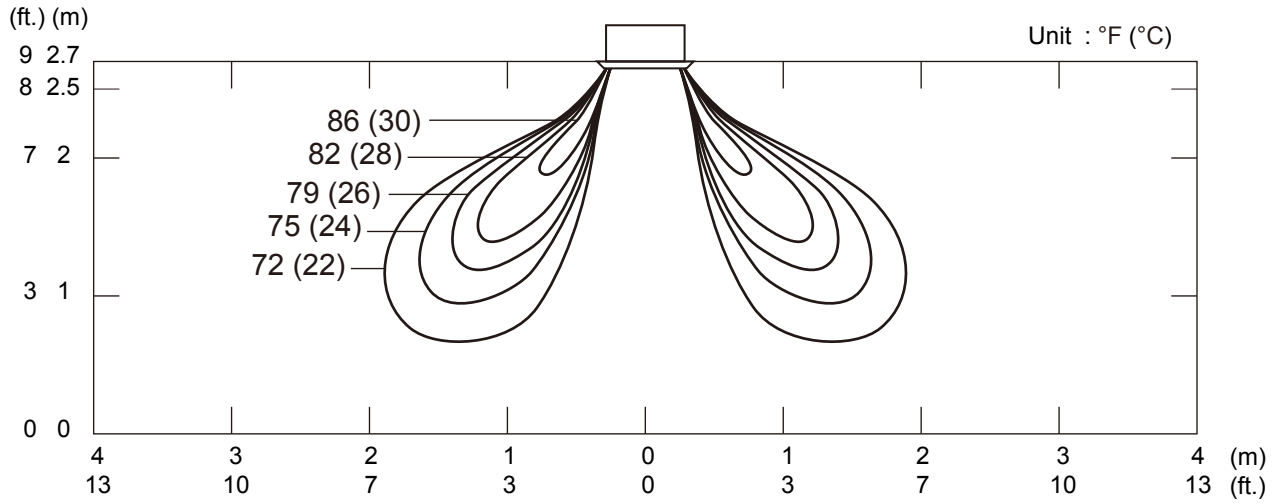


Conditions
Fan speed : High
Operation mode : Heat
Reference Data

● Air velocity distribution



● Air temperature distribution



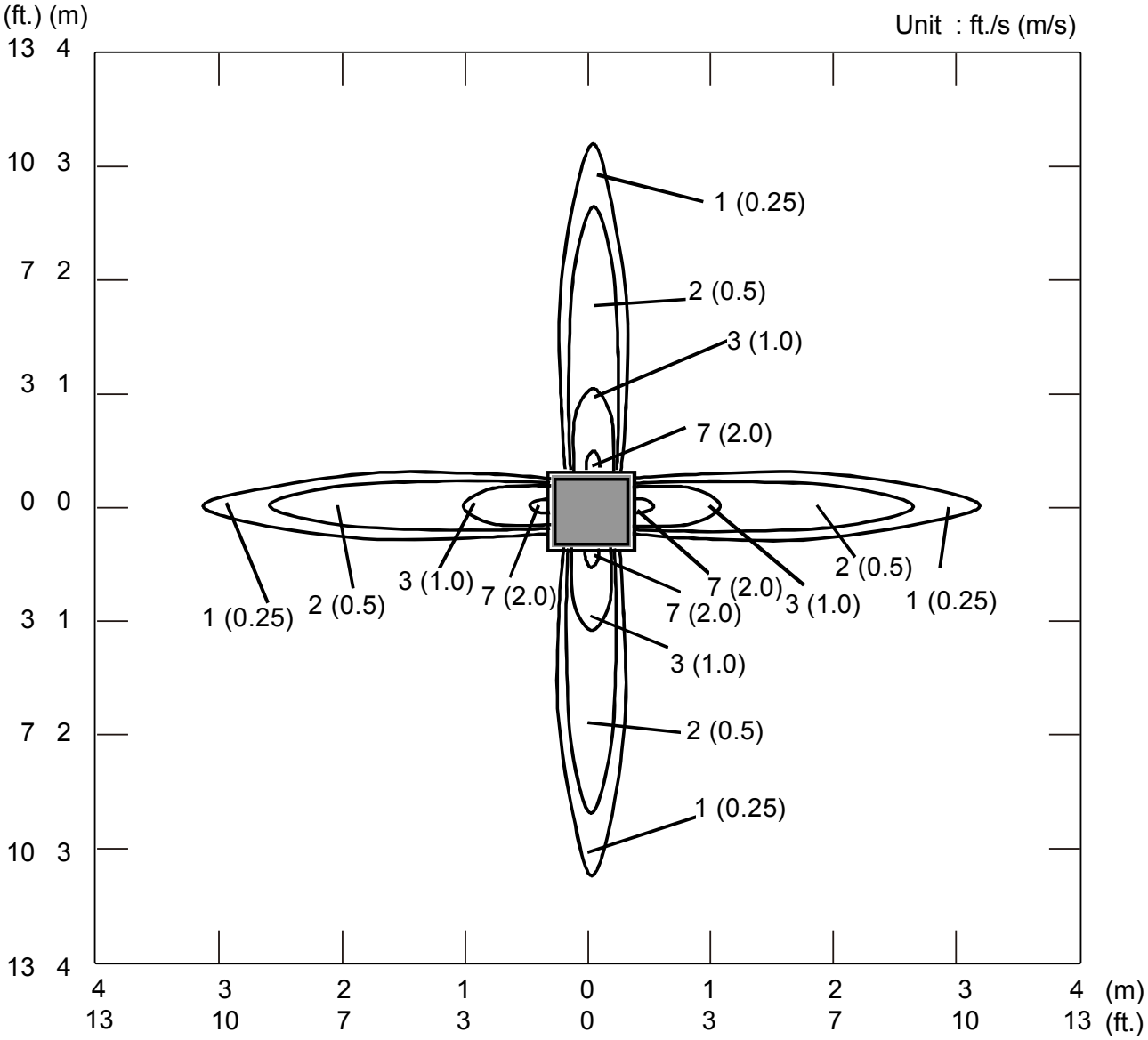
INDOOR UNITS

INDOOR UNITS

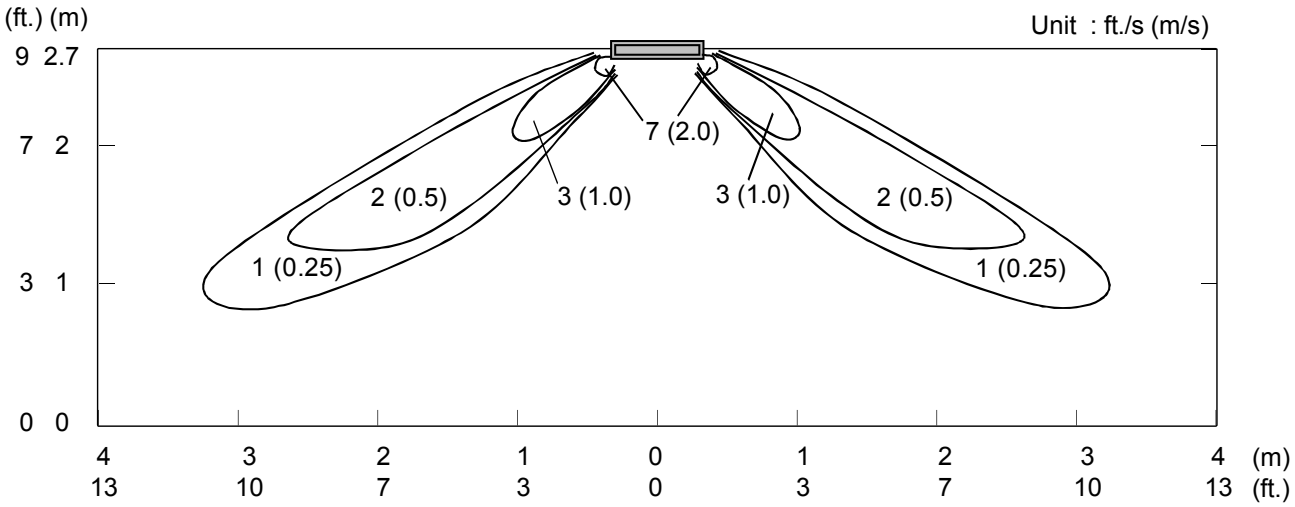
Conditions
Fan speed : High
Operation mode : Fan

■ MODEL : AUUA9TLAV

● Air velocity distribution

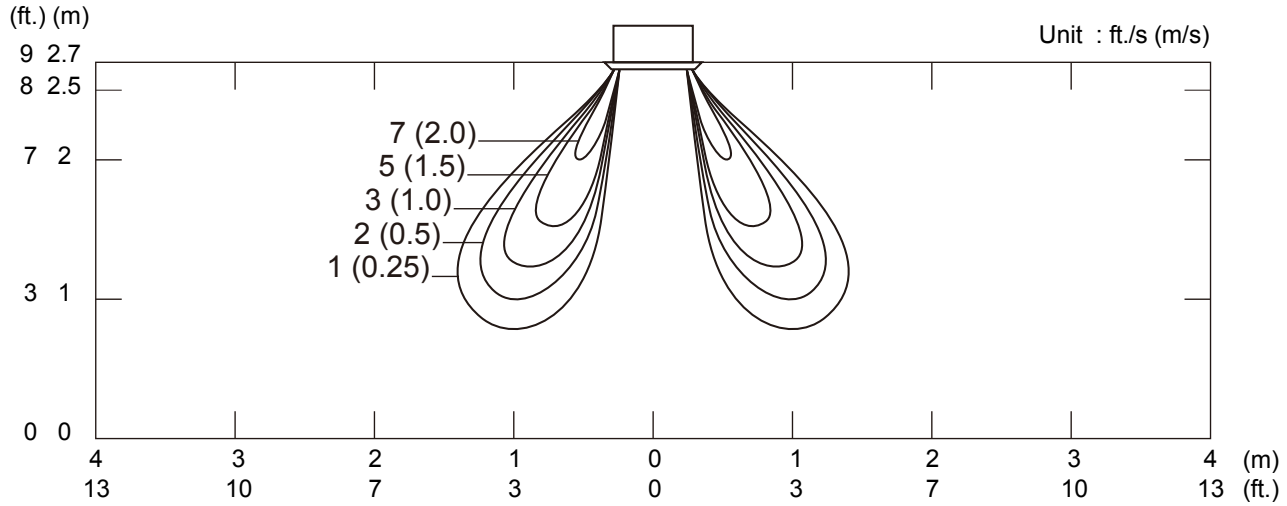


Side view
Vertical airflow direction louver : Upward

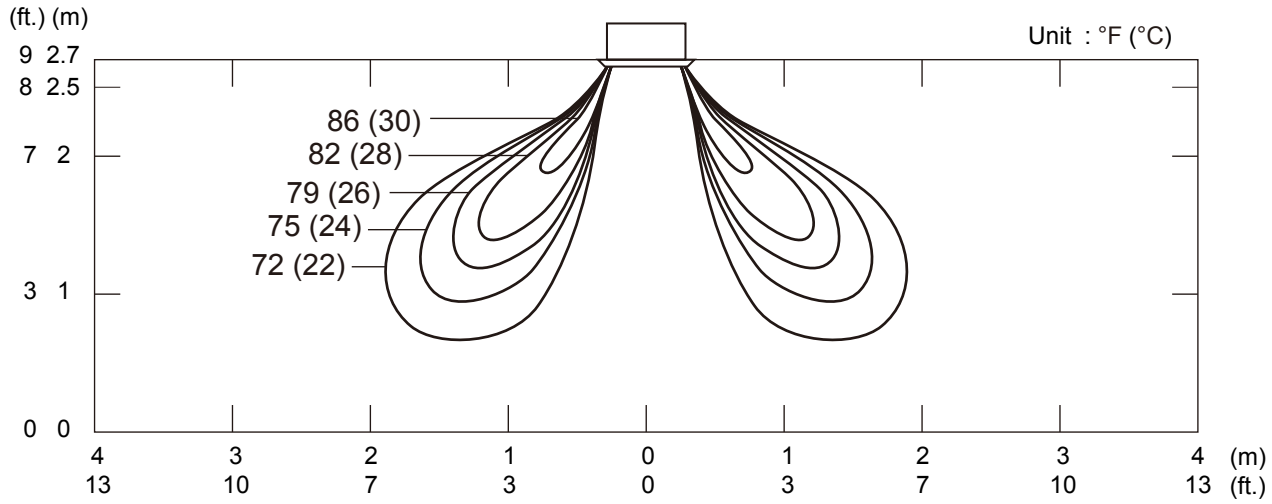


Conditions
Fan speed : High
Operation mode : Heat
Reference Data

● Air velocity distribution



● Air temperature distribution



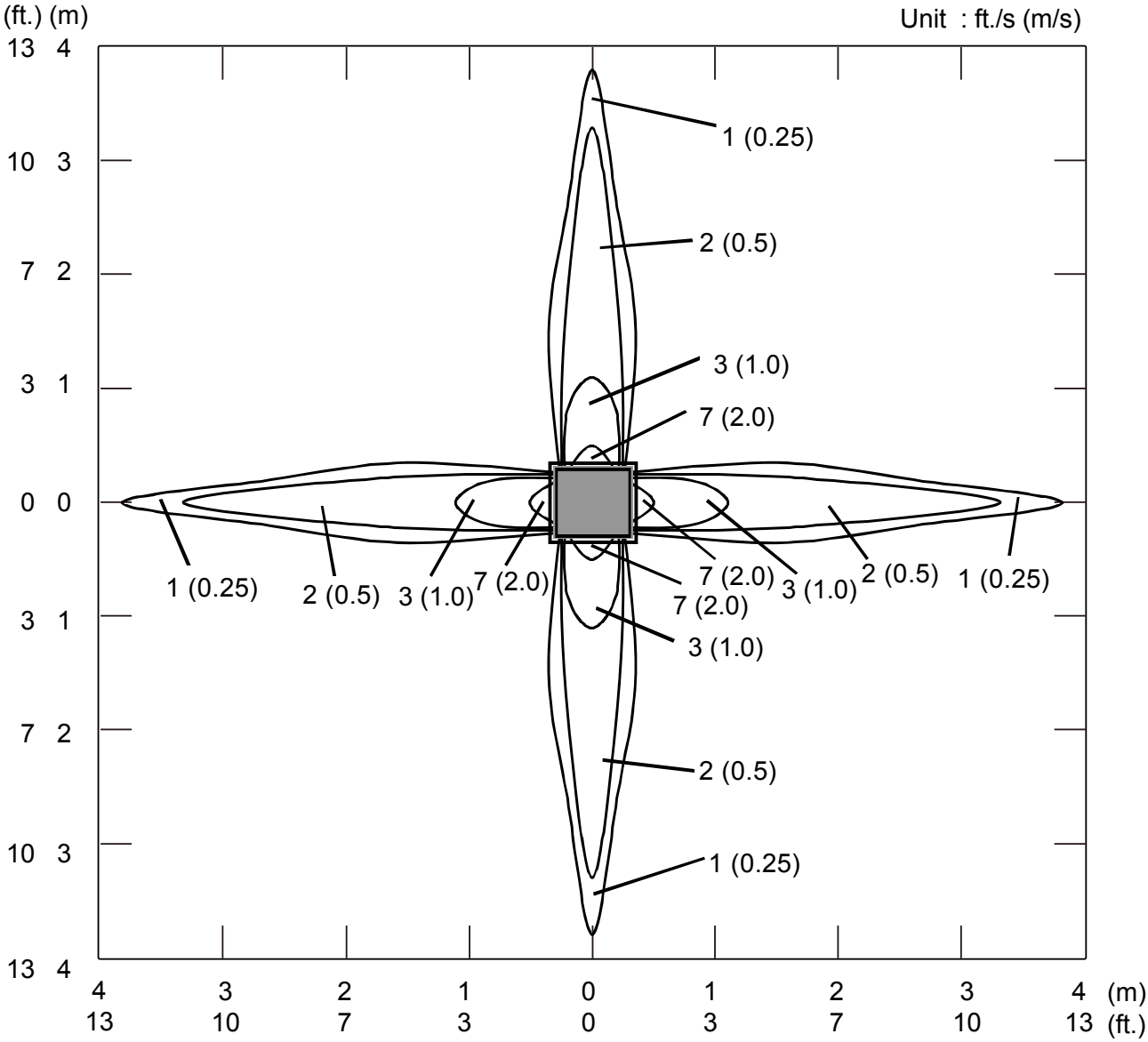
INDOOR UNITS

INDOOR UNITS

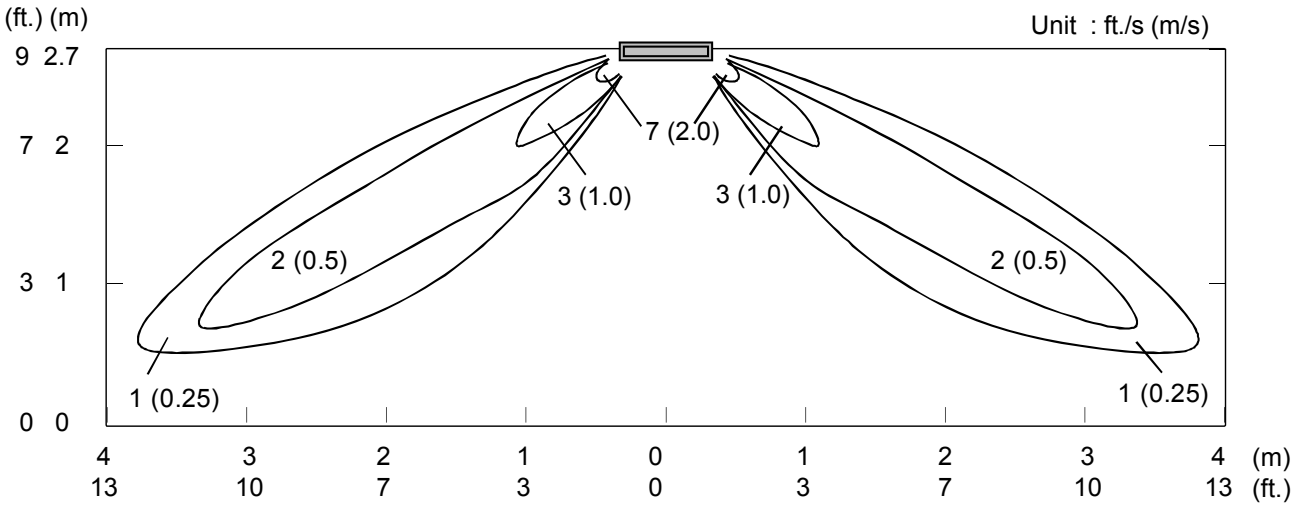
Conditions
Fan speed : High
Operation mode : Fan

■ MODEL : AUUA12TLAV

● Air velocity distribution

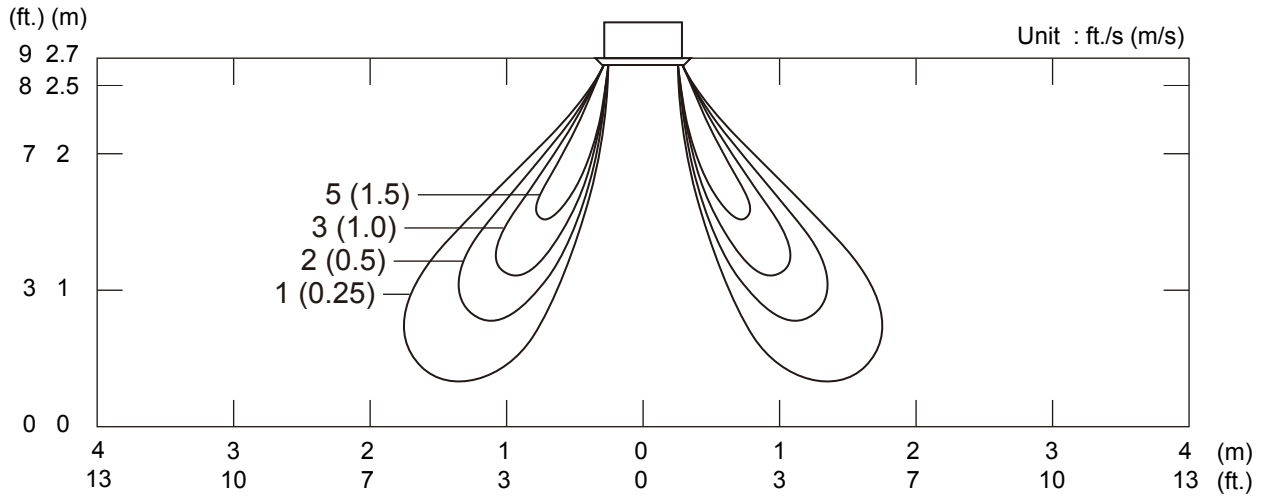


Side view
Vertical airflow direction louver : Upward

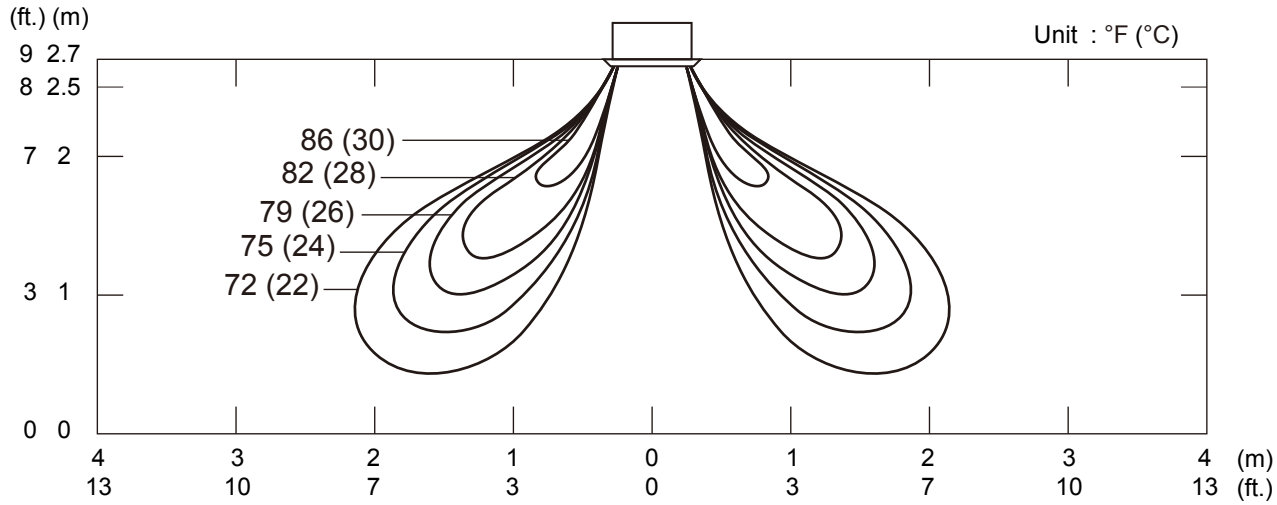


Conditions
Fan speed : High
Operation mode : Heat
Reference Data

● Air velocity distribution



● Air temperature distribution



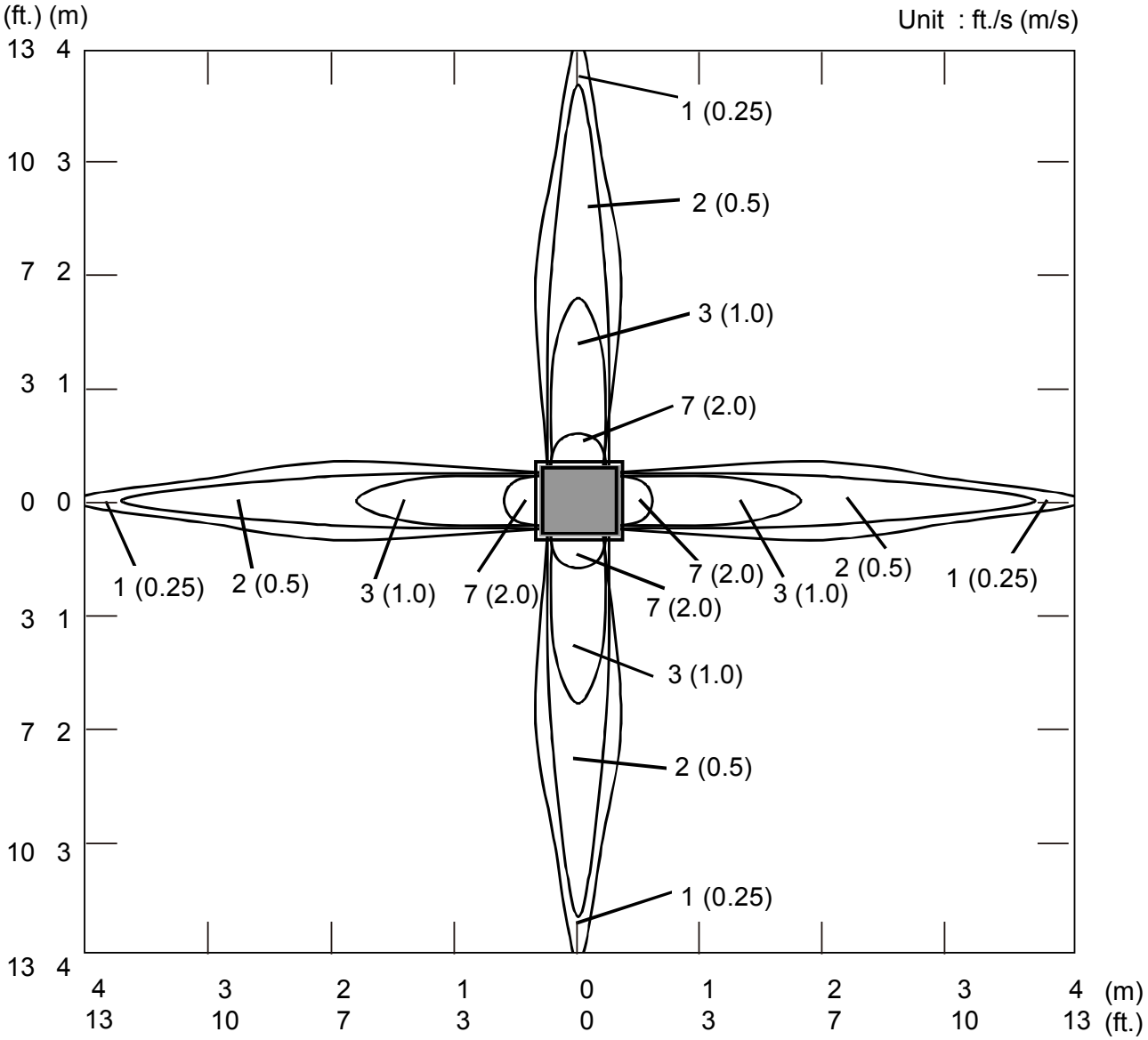
INDOOR UNITS

INDOOR UNITS

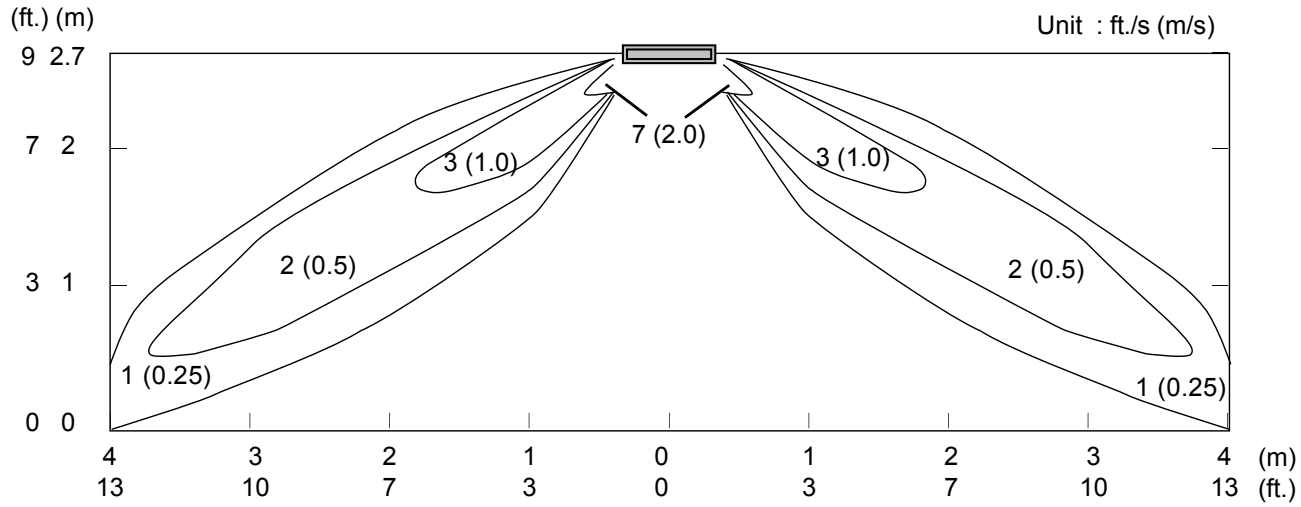
Conditions
Fan speed : High
Operation mode : Fan

■ MODEL : AUUA14TLAV

● Air velocity distribution

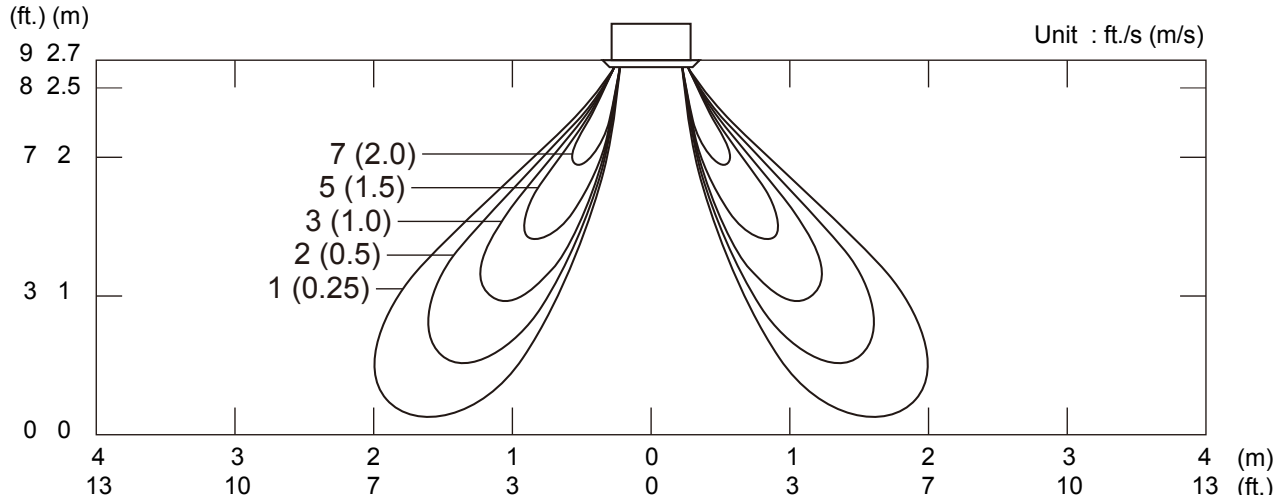


Side view
Vertical airflow direction louver : Upward

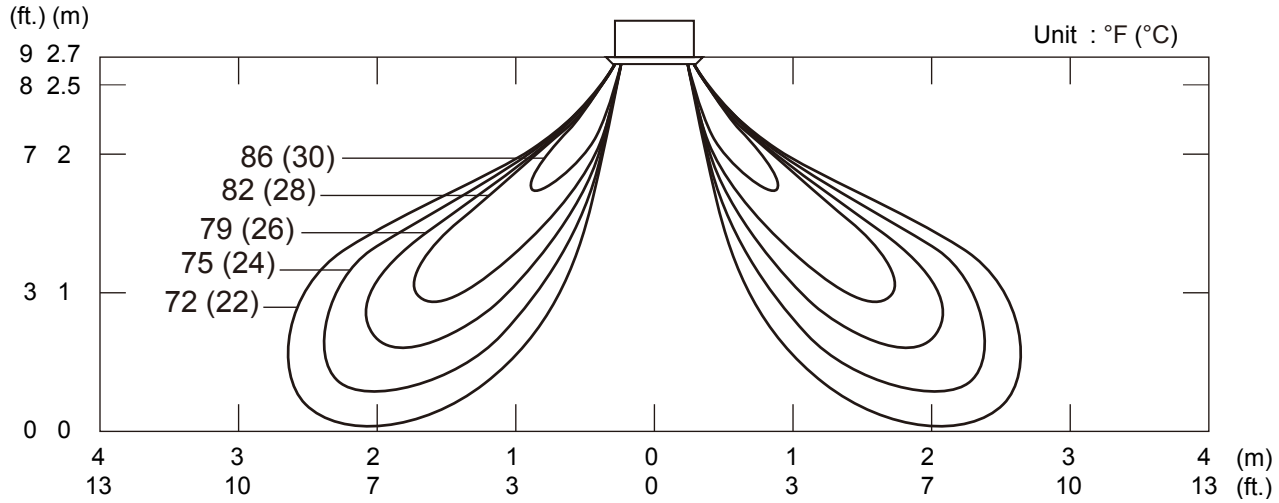


Conditions
Fan speed : High
Operation mode : Heat
Reference Data

● Air velocity distribution



● Air temperature distribution



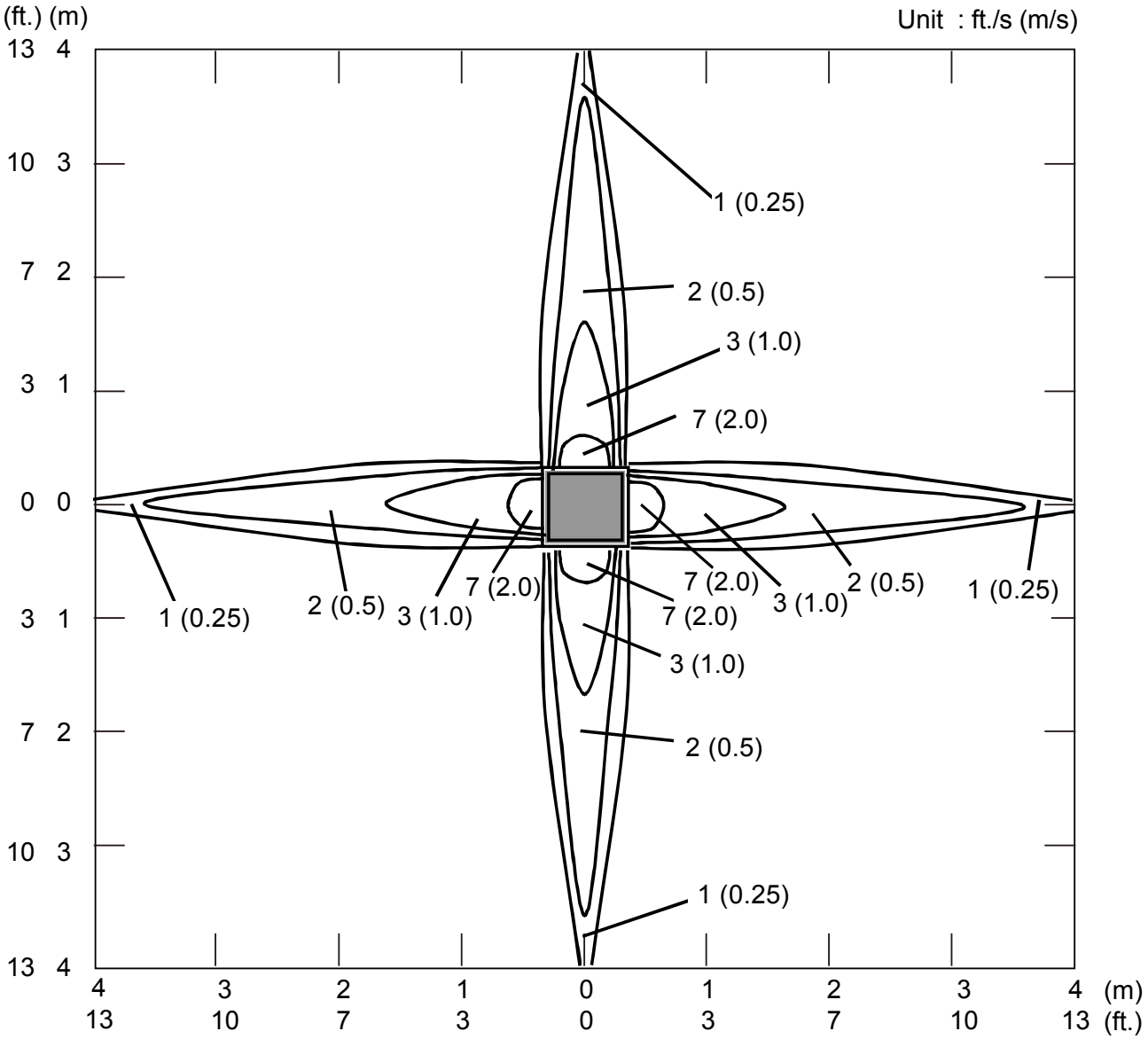
INDOOR UNITS

INDOOR UNITS

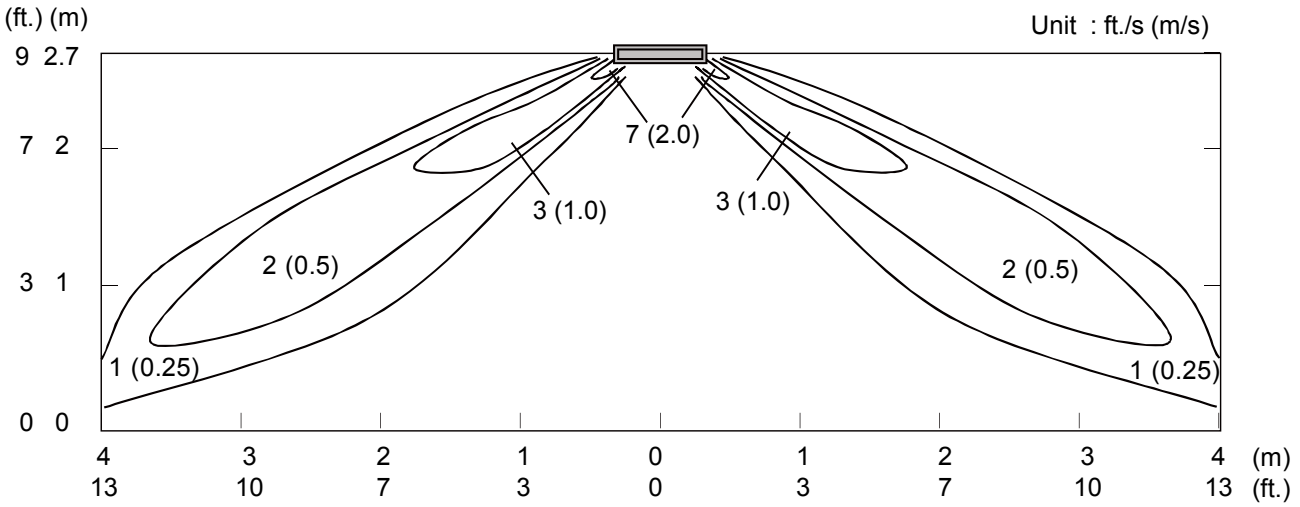
Conditions
Fan speed : High
Operation mode : Fan

■ MODEL : AUUA18TLAV

● Air velocity distribution

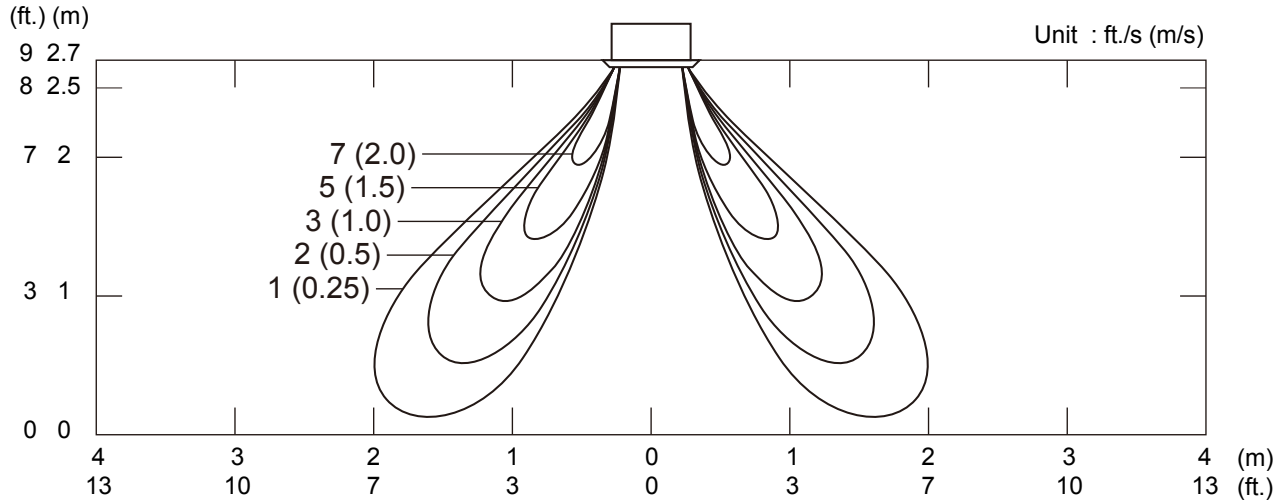


Side view
Vertical airflow direction louver : Upward

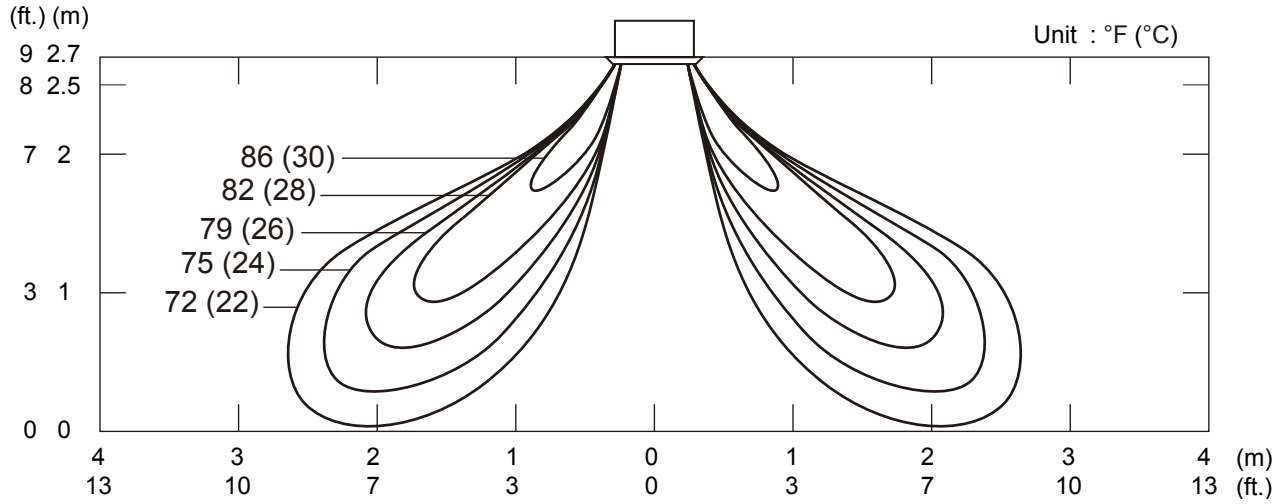


Conditions
Fan speed : High
Operation mode : Heat
Reference Data

● Air velocity distribution



● Air temperature distribution



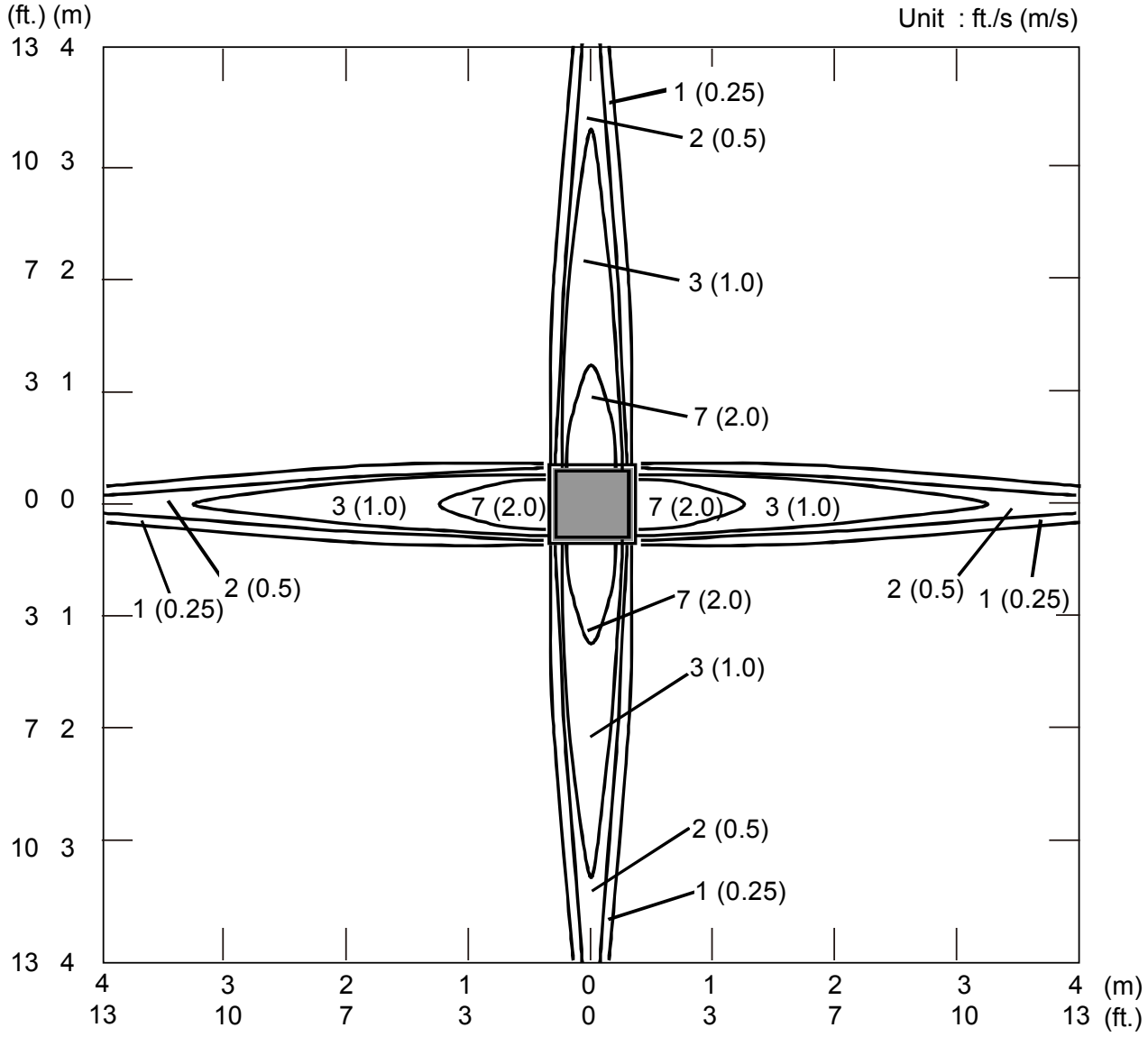
INDOOR UNITS

INDOOR UNITS

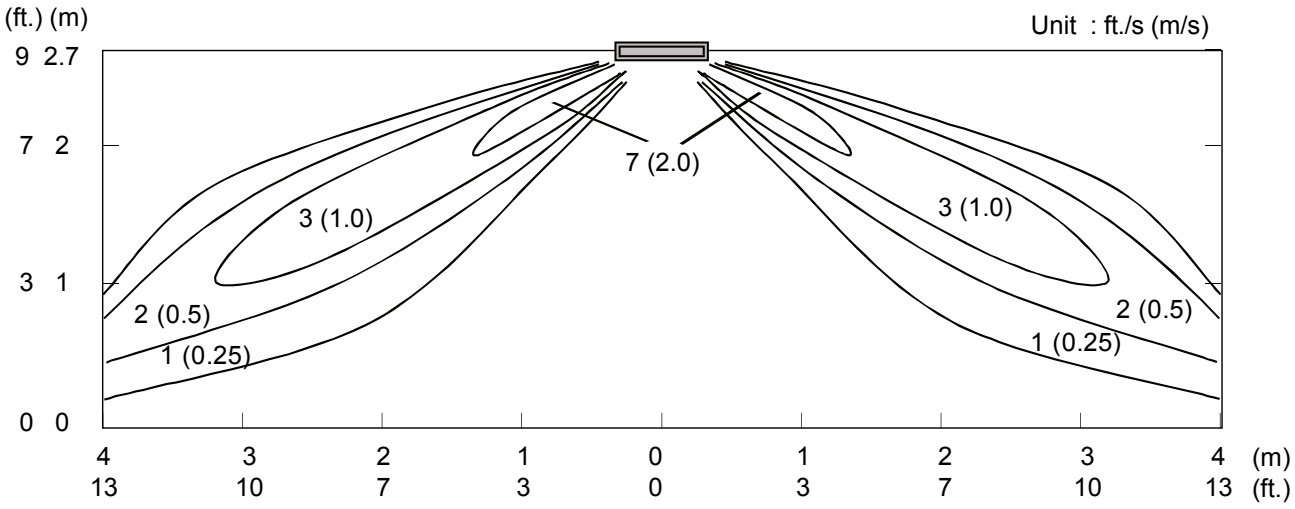
Conditions
Fan speed : High
Operation mode : Fan

■ MODEL : AUUA24TLAV

● Air velocity distribution

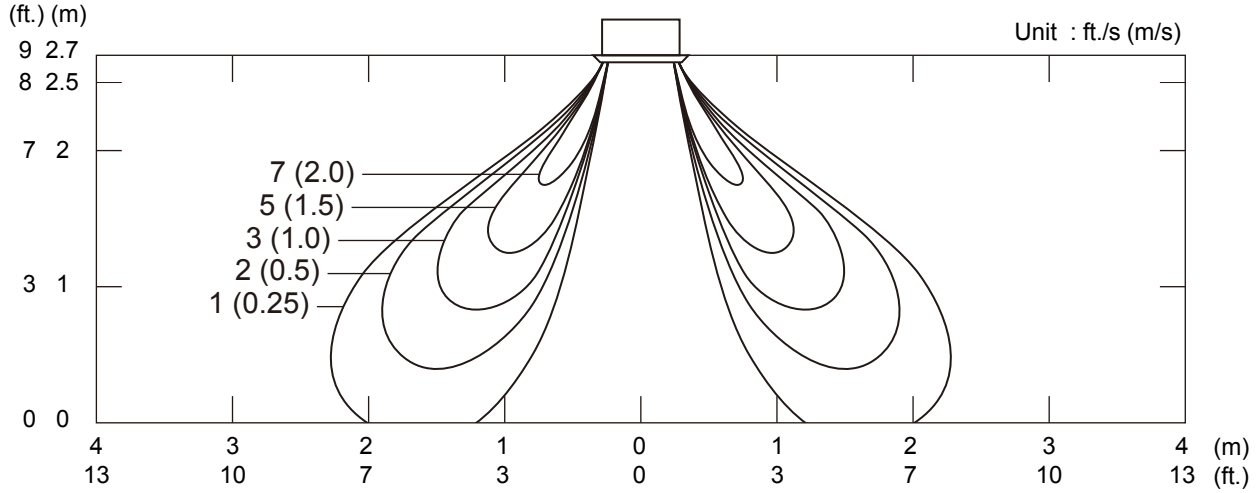


Side view
Vertical airflow direction louver : Upward

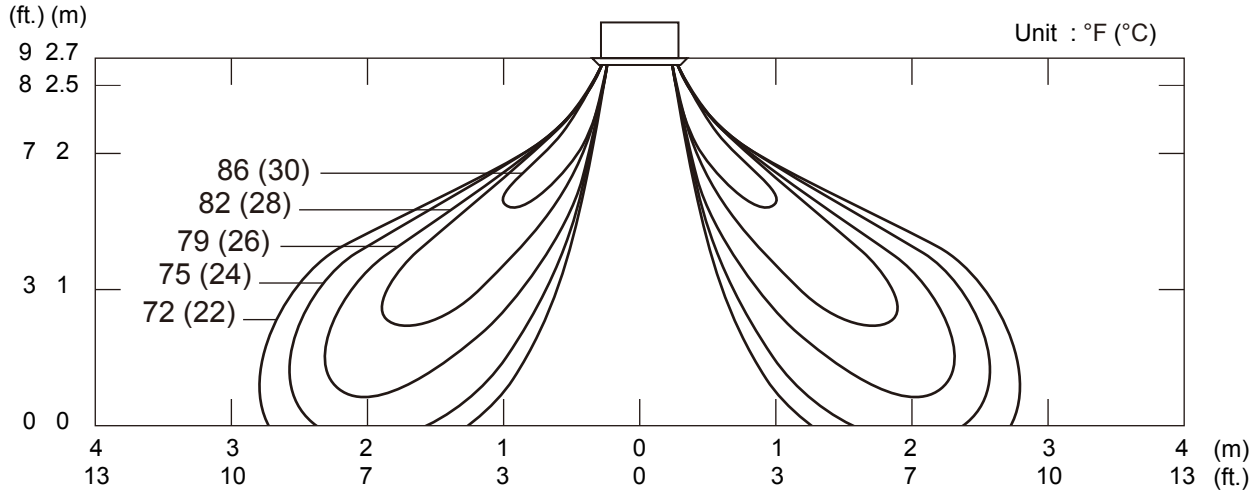


Conditions
Fan speed : High
Operation mode : Heat
Reference Data

● Air velocity distribution



● Air temperature distribution



INDOOR UNITS

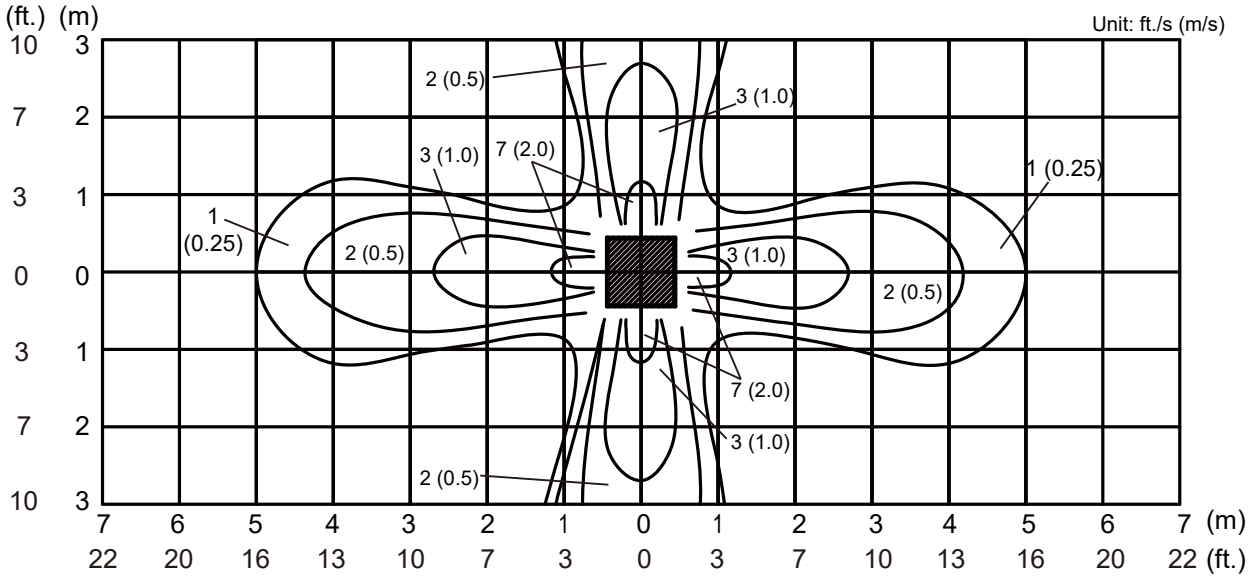
5-2. CIRCULAR FLOW CASSETTE TYPE

Conditions
Fan speed : High
Operation mode : Fan

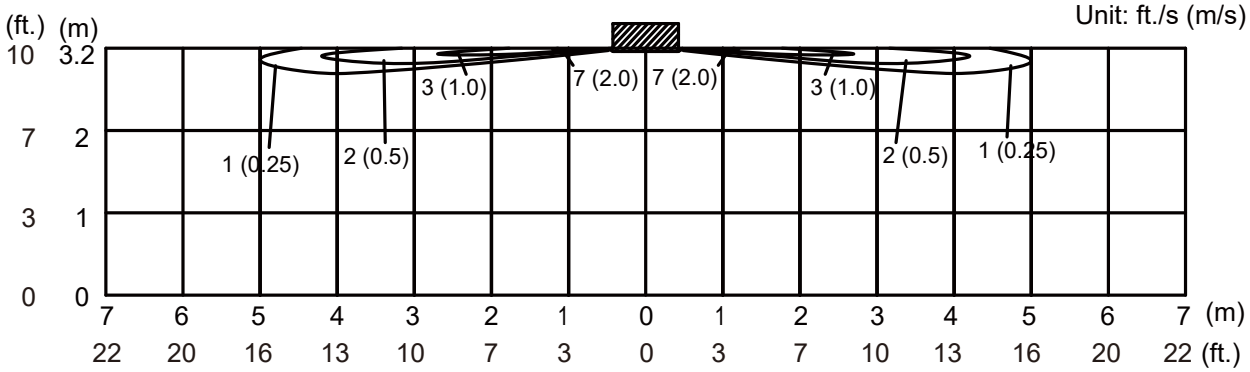
■ MODEL: AUUB018TLAV1

● Air velocity distribution

Top view
Vertical airflow direction louver : Up



Side view
Vertical airflow direction louver : Up

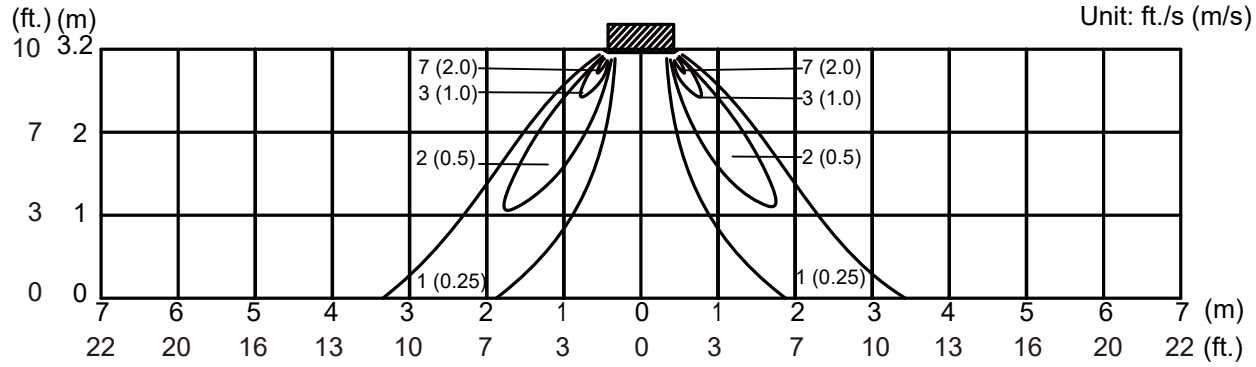


INDOOR UNITS

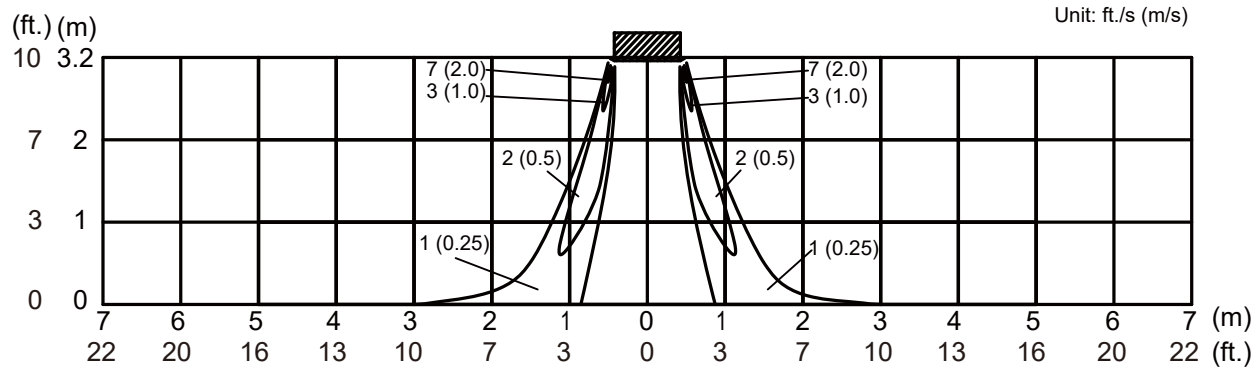
Conditions
Fan speed : High
Operation mode : Heat
Reference Data

● Air velocity distribution

Side view
Vertical airflow direction louver : Down



Side view
Vertical airflow direction louver : Down



INDOOR UNITS

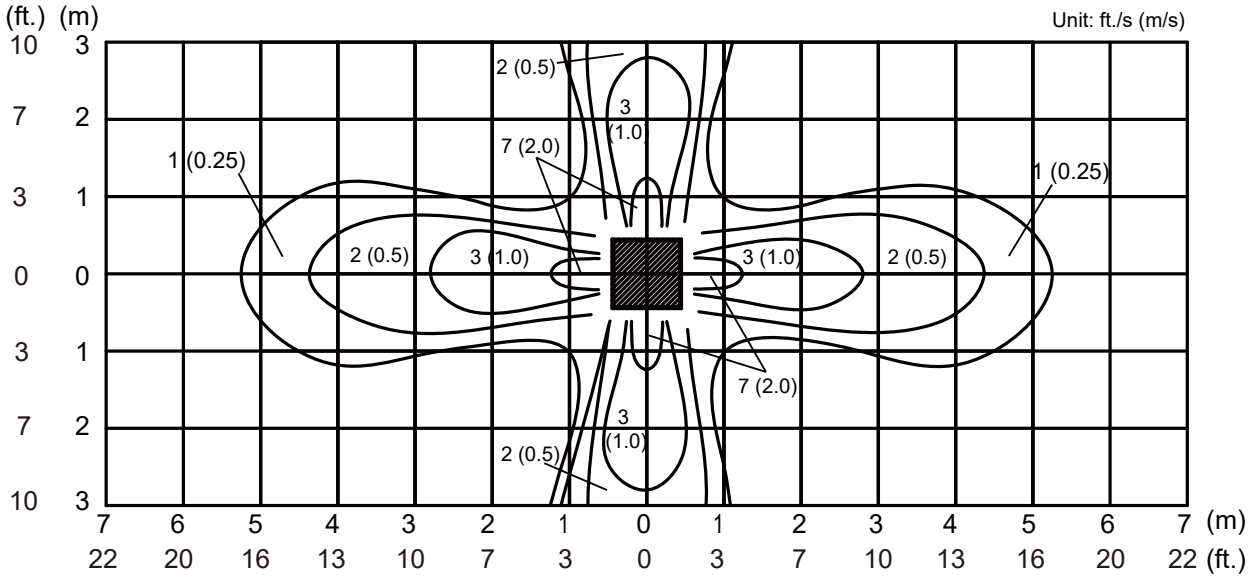
INDOOR UNITS

Conditions
Fan speed : High
Operation mode : Fan

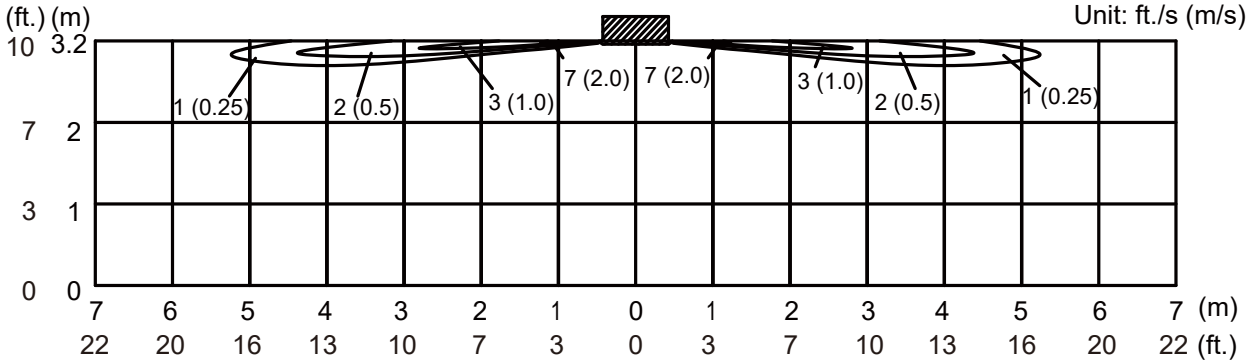
■ MODEL: AUUB24TLAV1

● Air velocity distribution

Top view
Vertical airflow direction louver : Up



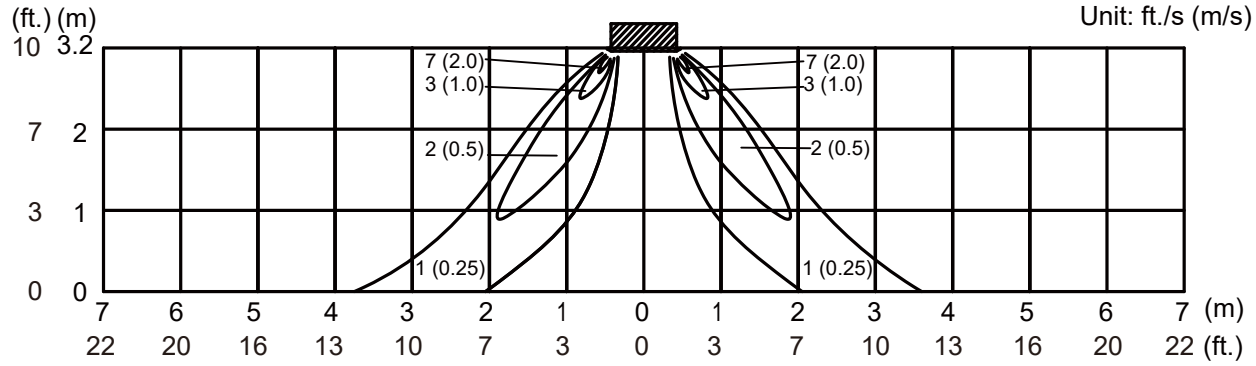
Side view
Vertical airflow direction louver : Up



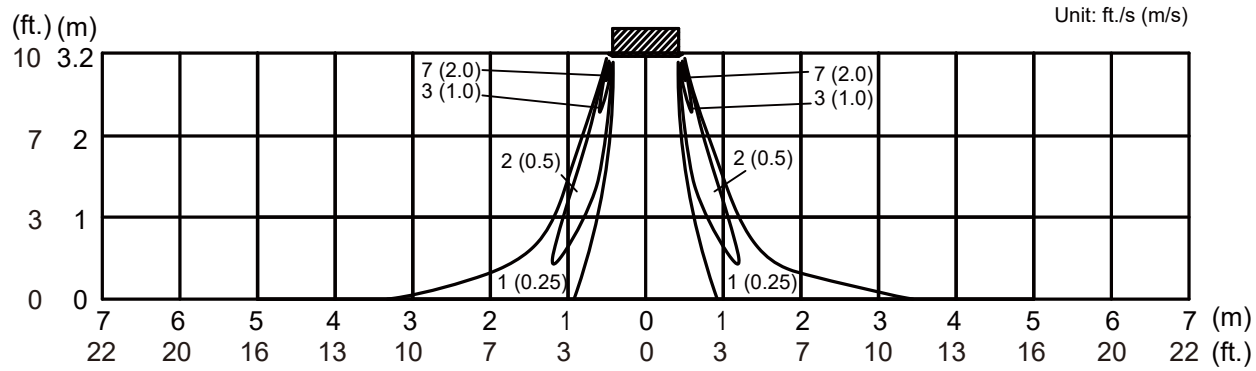
Conditions
Fan speed : High
Operation mode : Heat
Reference Data

● Air velocity distribution

Side view
Vertical airflow direction louver : Down



Side view
Vertical airflow direction louver : Down



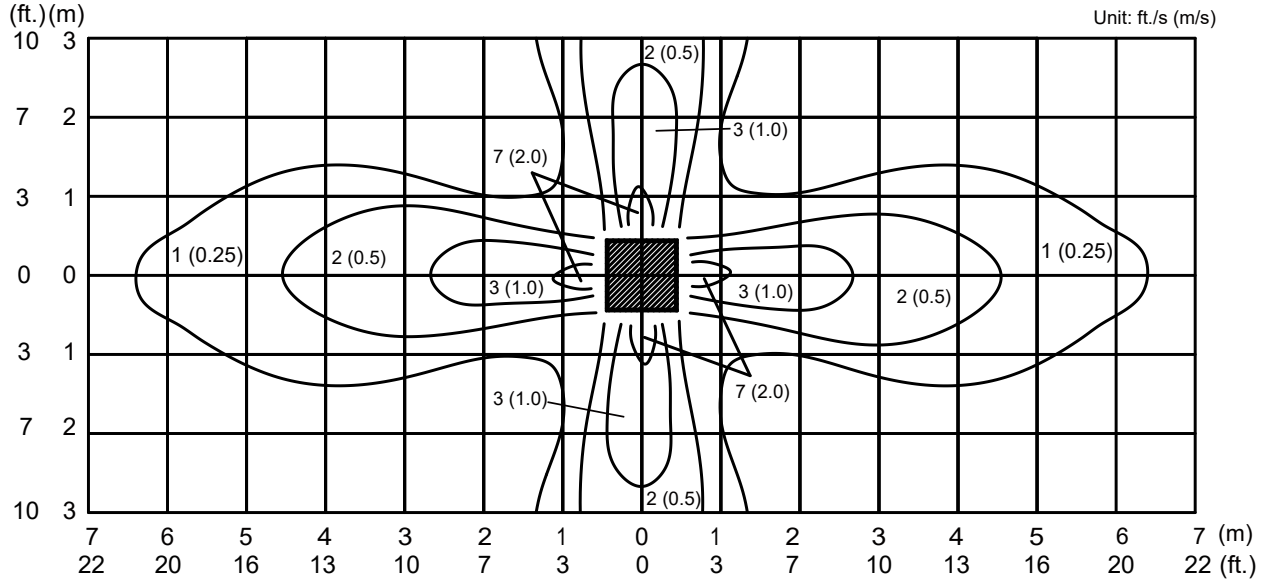
INDOOR UNITS

Conditions
Fan speed : High
Operation mode : Fan

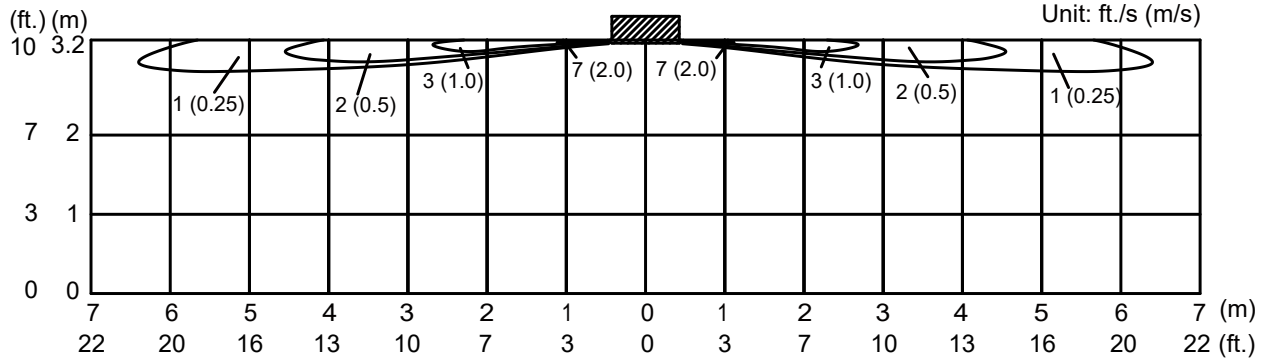
■ MODEL: AUUB30TLAV1

● Air velocity distribution

Top view
Vertical airflow direction louver : Up



Side view
Vertical airflow direction louver : Up

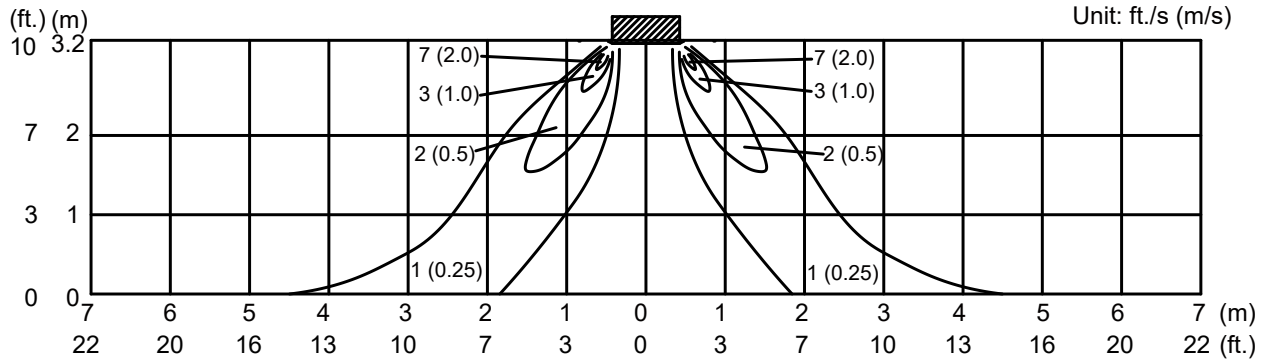


INDOOR UNITS

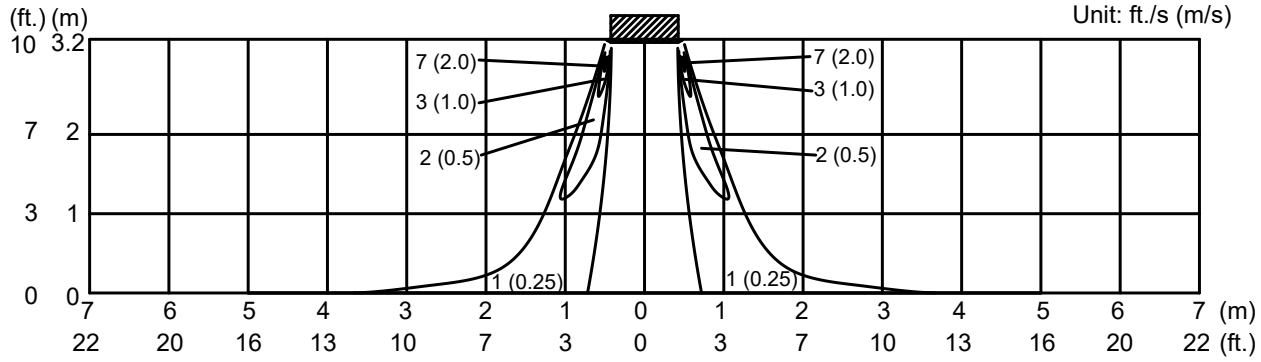
Conditions
Fan speed : High
Operation mode : Heat
Reference Data

● Air velocity distribution

Side view
Vertical airflow direction louver : Down



Side view
Vertical airflow direction louver : Down



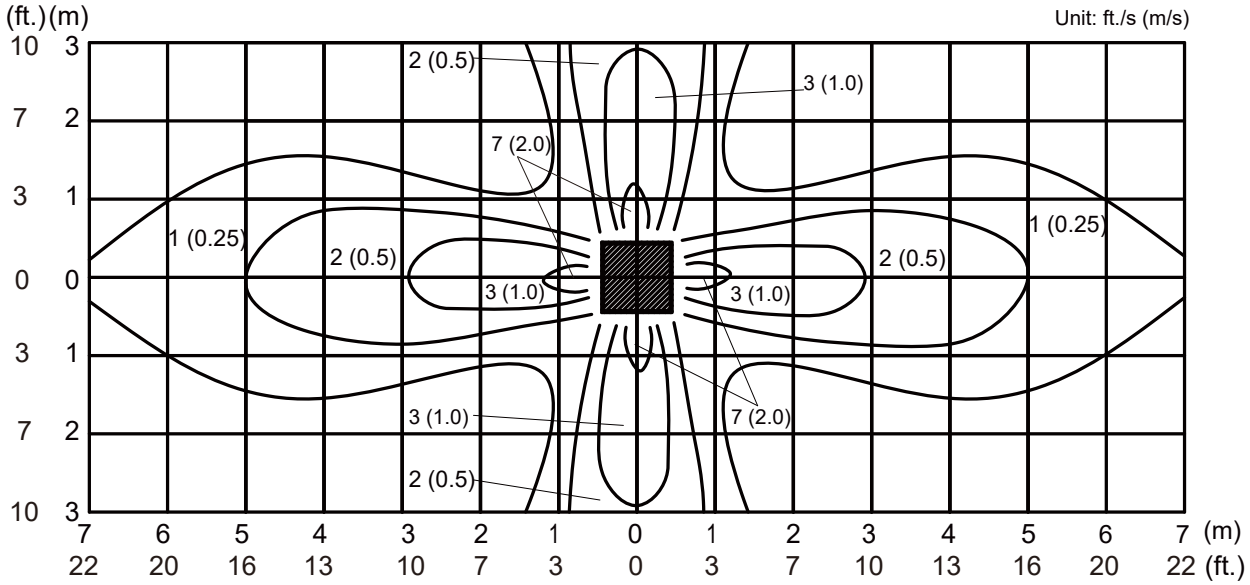
INDOOR UNITS

Conditions
Fan speed : High
Operation mode : Fan

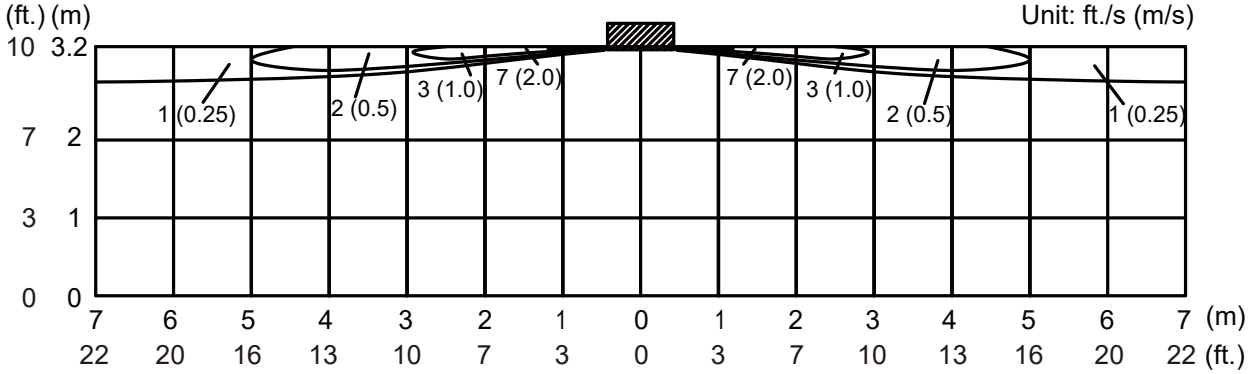
■ MODEL: AUUB36TLAV1

● Air velocity distribution

Top view
Vertical airflow direction louver : Up



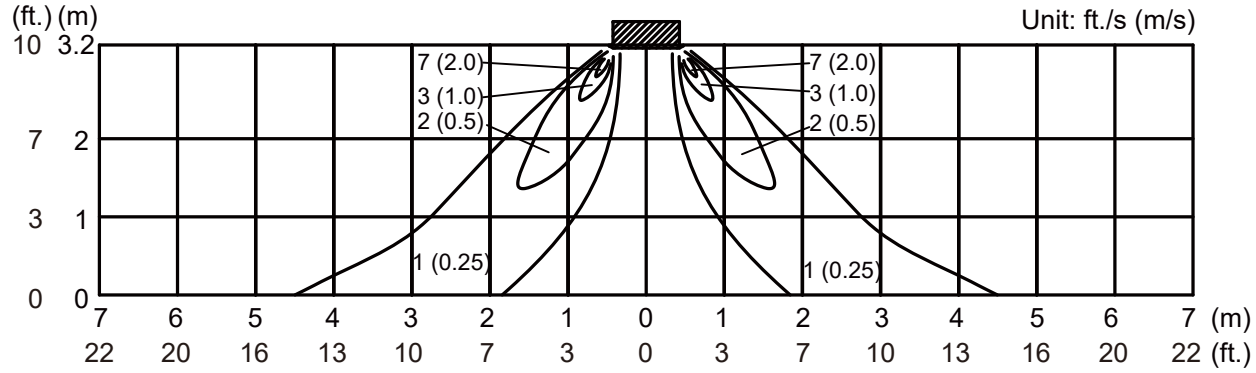
Side view
Vertical airflow direction louver : Up



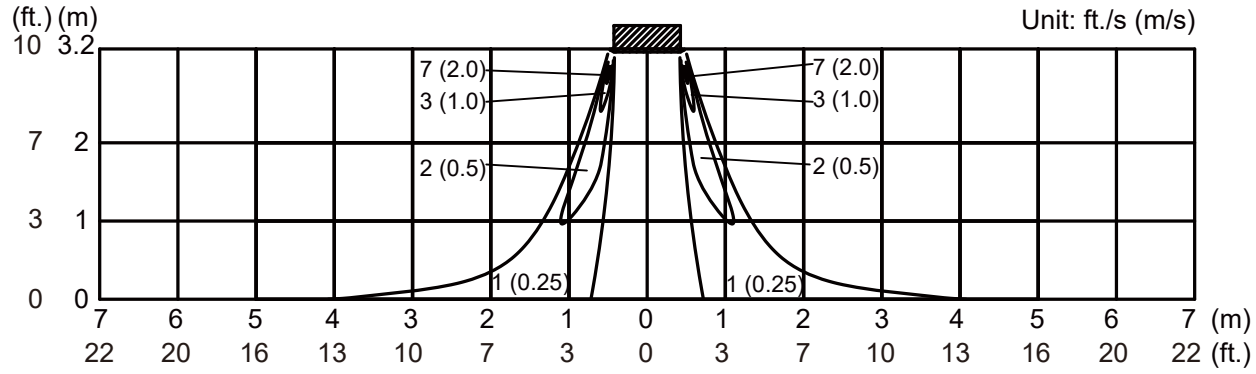
Conditions
Fan speed : High
Operation mode : Heat
Reference Data

● Air velocity distribution

Side view
Vertical airflow direction louver : Down



Side view
Vertical airflow direction louver : Down



INDOOR UNITS

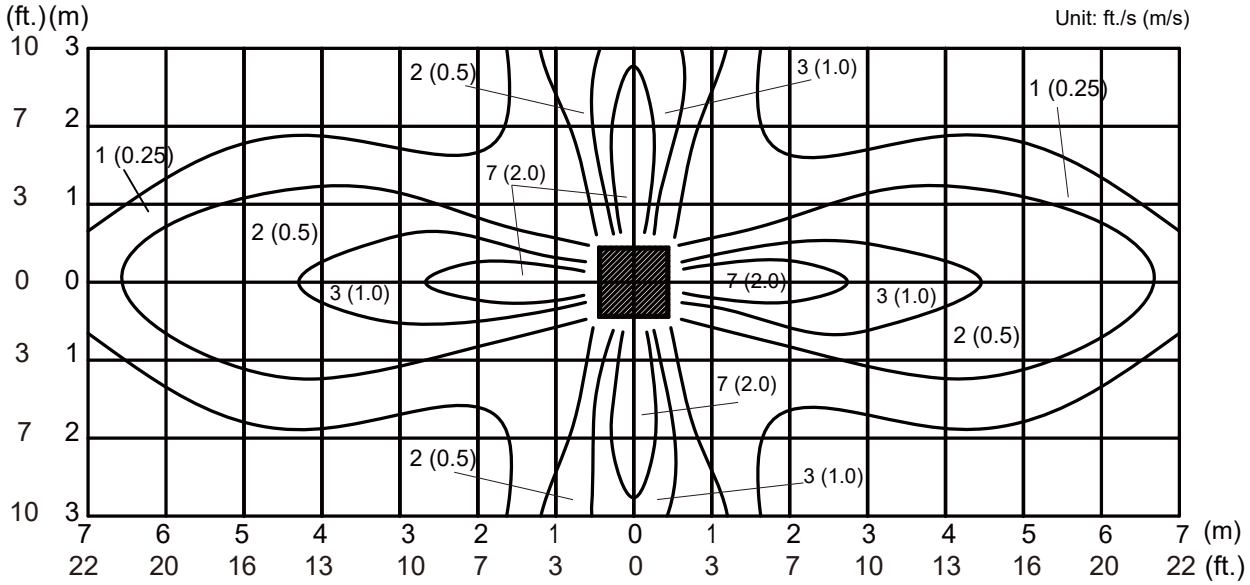
INDOOR UNITS

Conditions
Fan speed : High
Operation mode : Fan

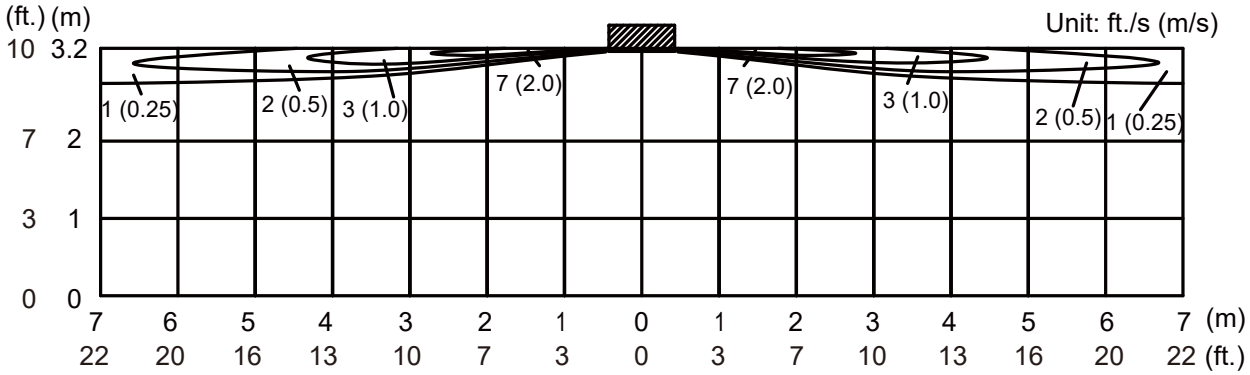
■ MODEL: AUUB48TLAV1

● Air velocity distribution

Top view
Vertical airflow direction louver : Up



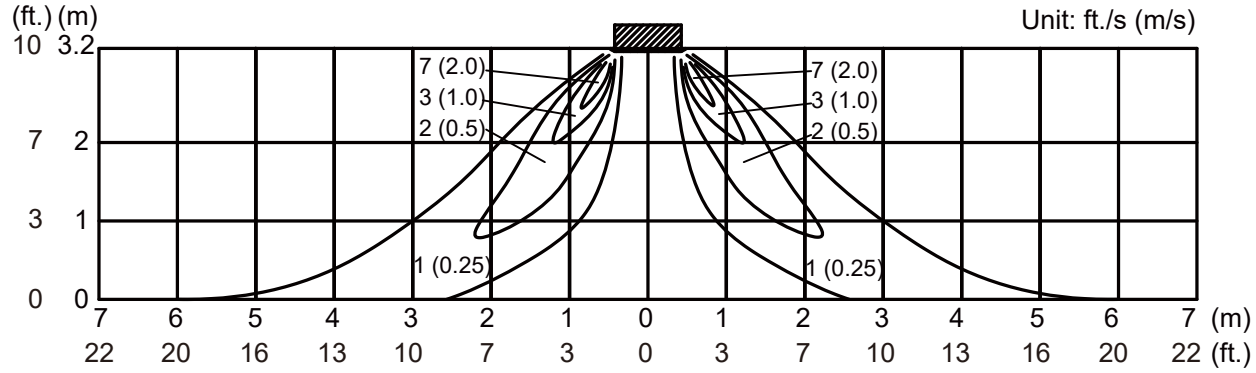
Side view
Vertical airflow direction louver : Up



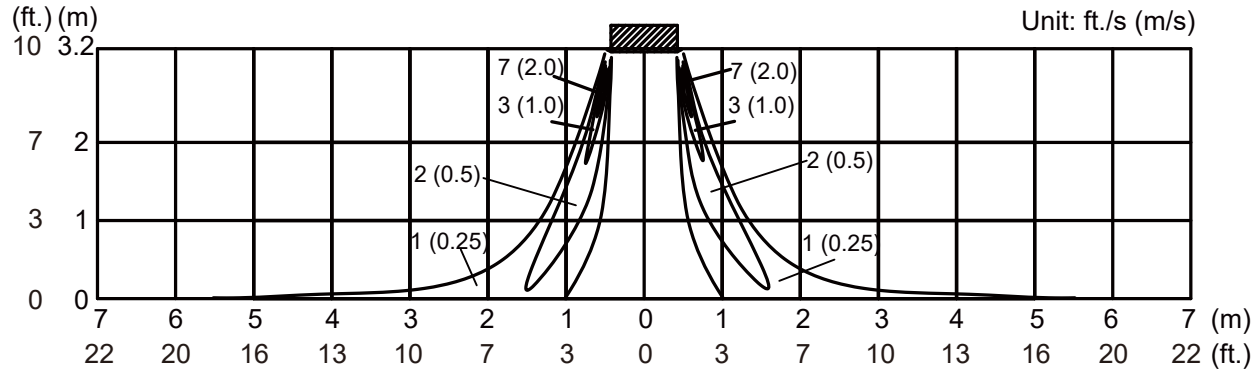
Conditions
Fan speed : High
Operation mode : Heat
Reference Data

● Air velocity distribution

Side view
Vertical airflow direction louver : Down



Side view
Vertical airflow direction louver : Down



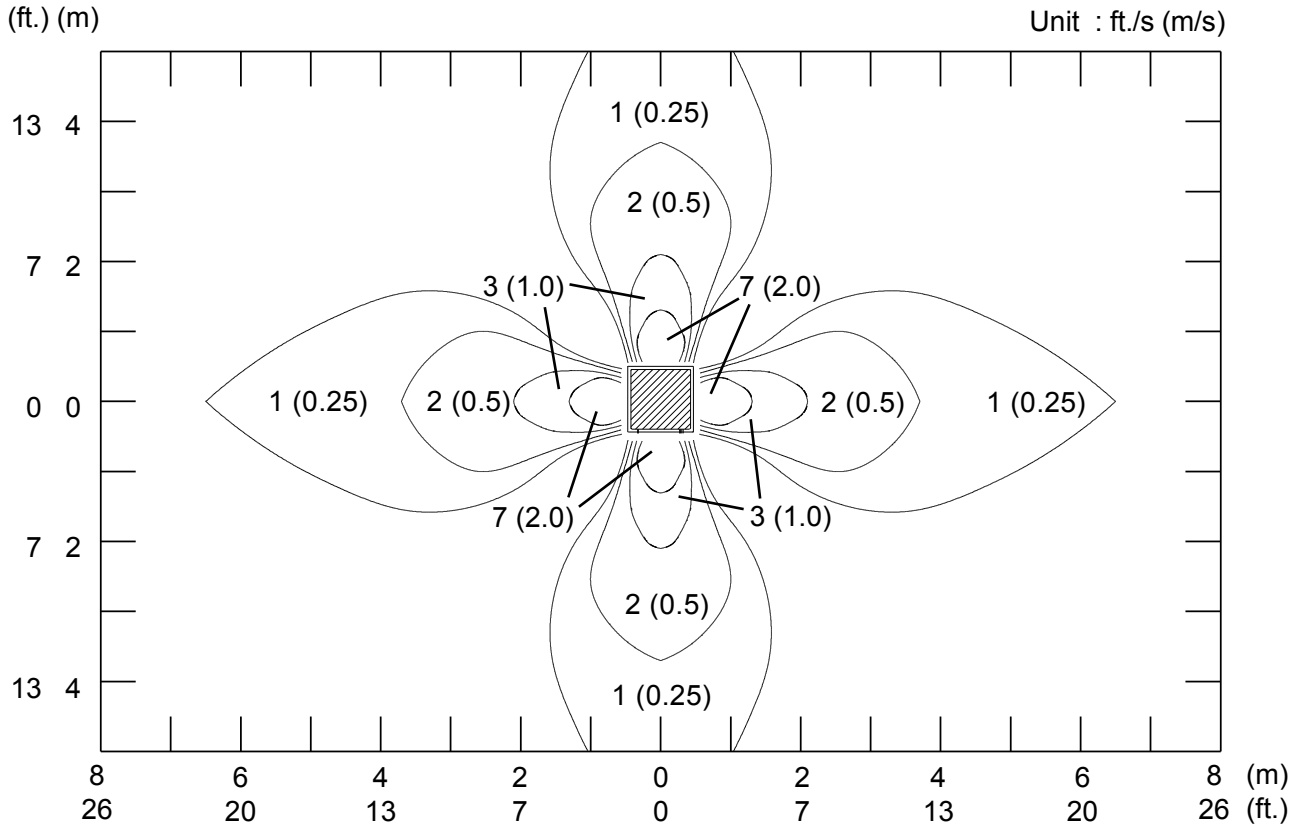
INDOOR UNITS

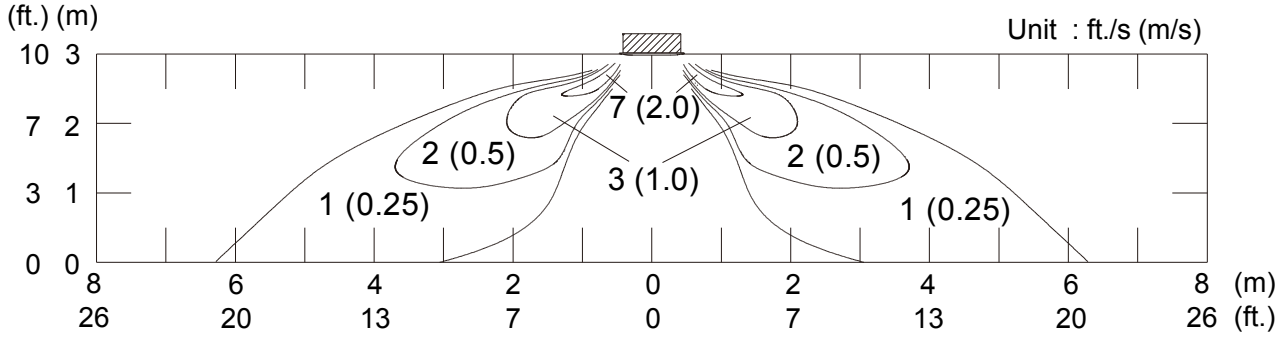
5-3. CASSETTE TYPE

■ MODEL : AUUB18TLAV

● Air velocity distribution

Conditions
Fan speed : High
Operation mode : Fan

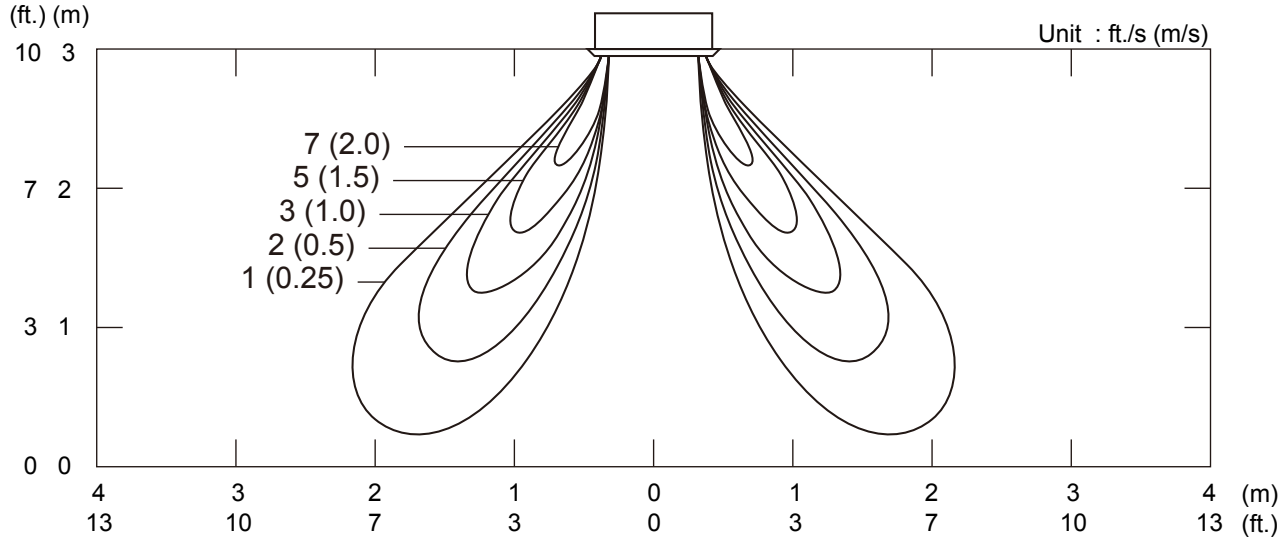




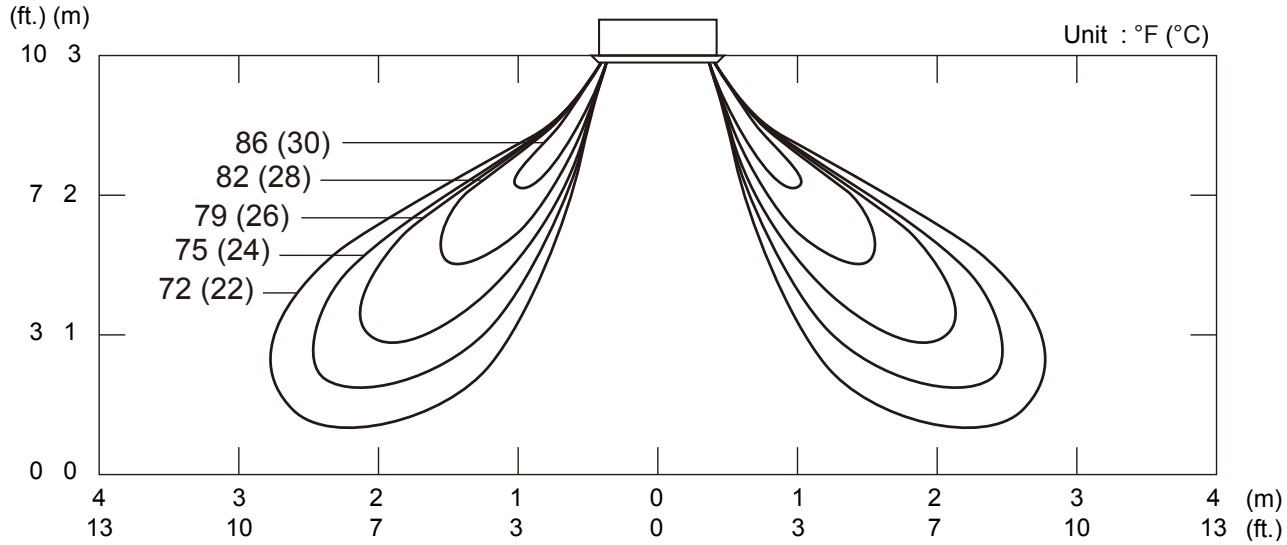
INDOOR UNITS

Conditions
Fan speed : High
Operation mode : Heat
Reference Data

● Air velocity distribution



● Air temperature distribution

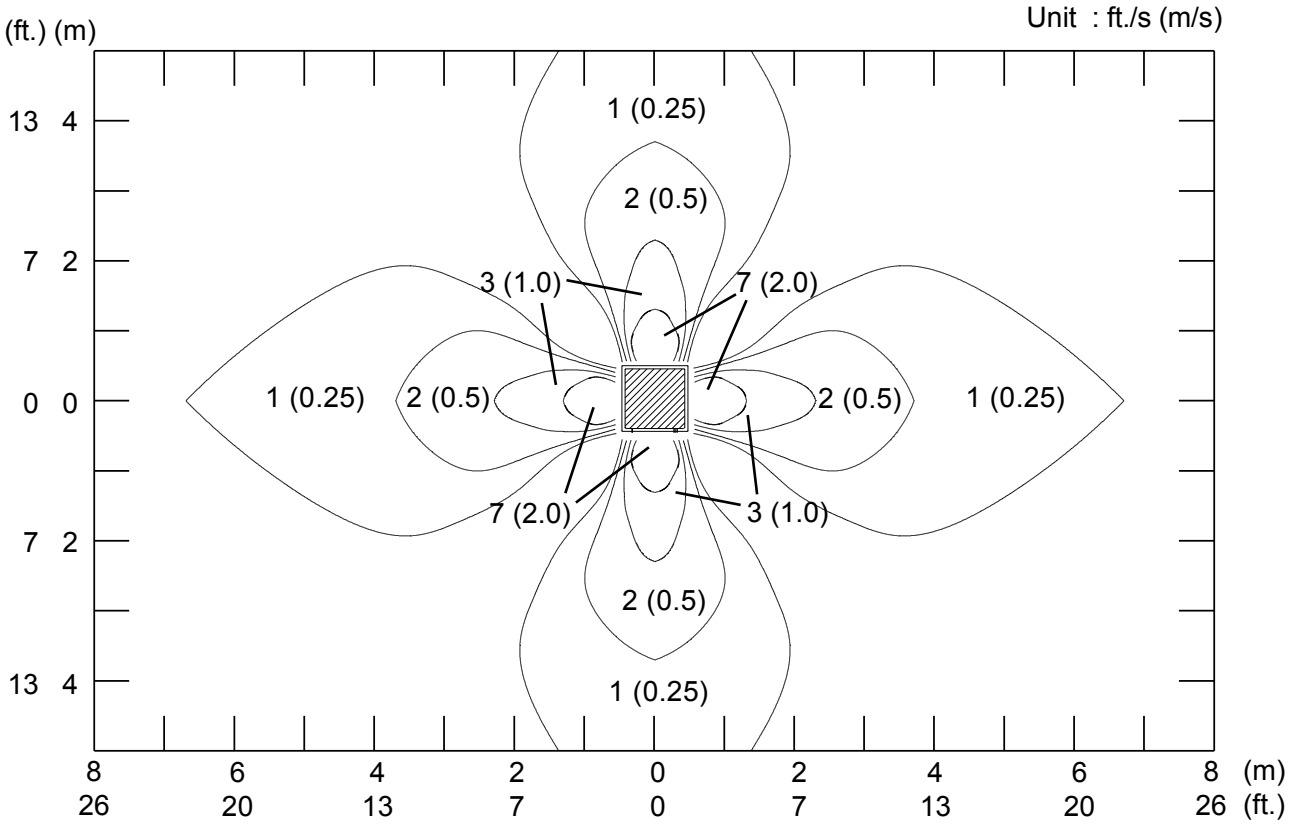


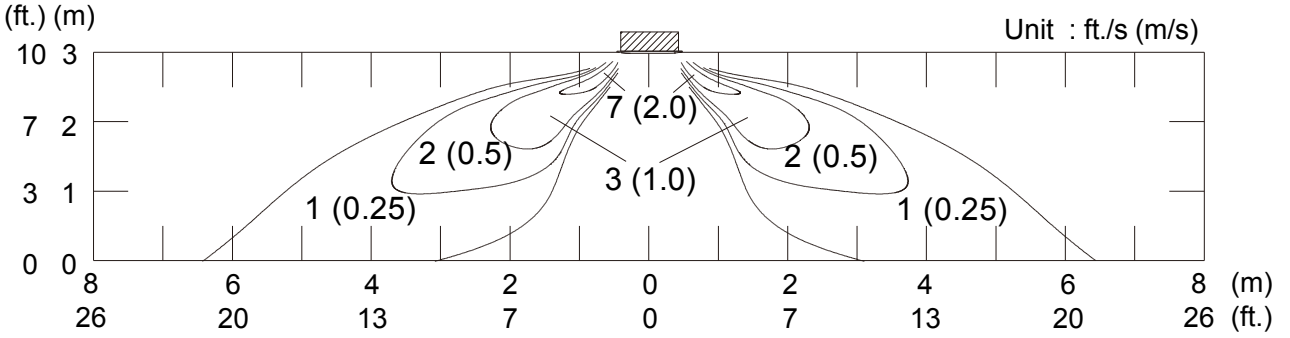
INDOOR UNITS

Conditions
Fan speed : High
Operation mode : Fan

■ MODEL : AUUB24TLAV

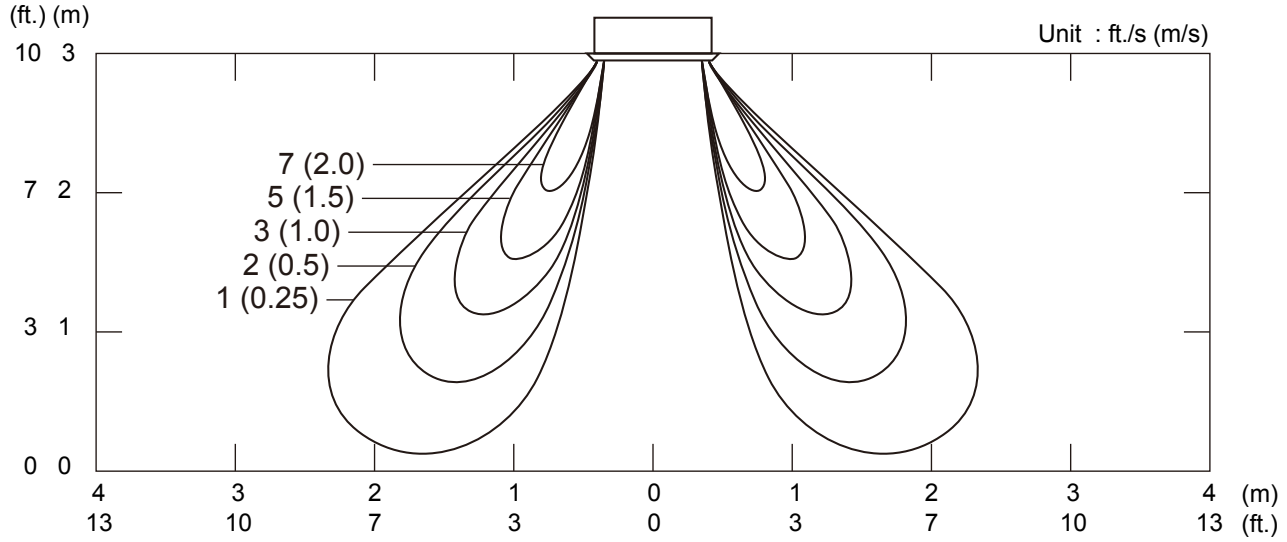
● Air velocity distribution



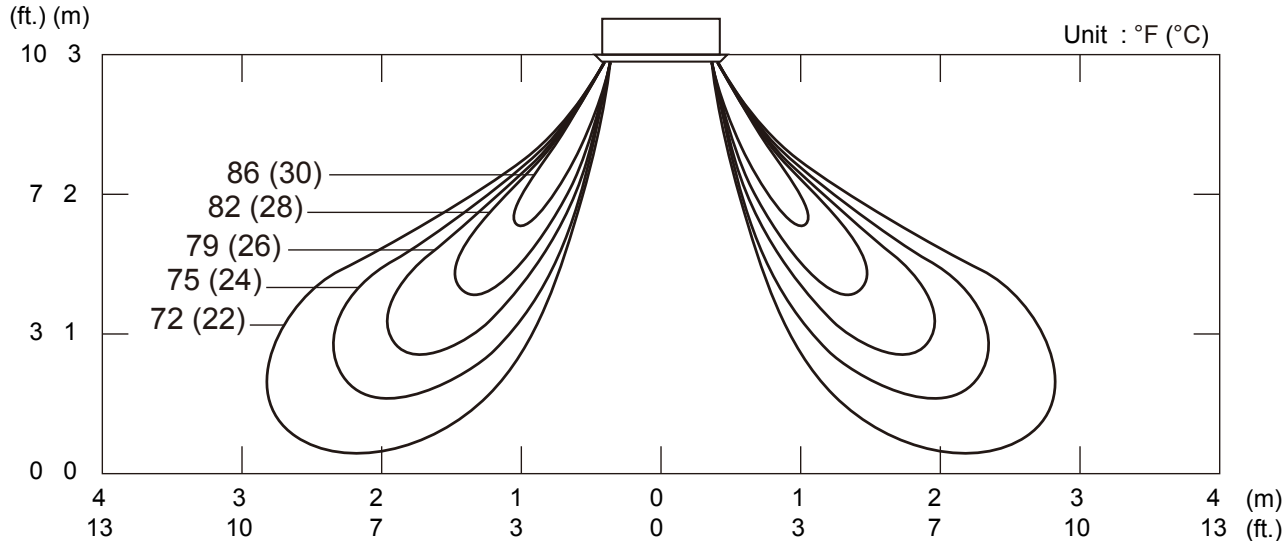


Conditions
Fan speed : High
Operation mode : Heat
Reference Data

● Air velocity distribution



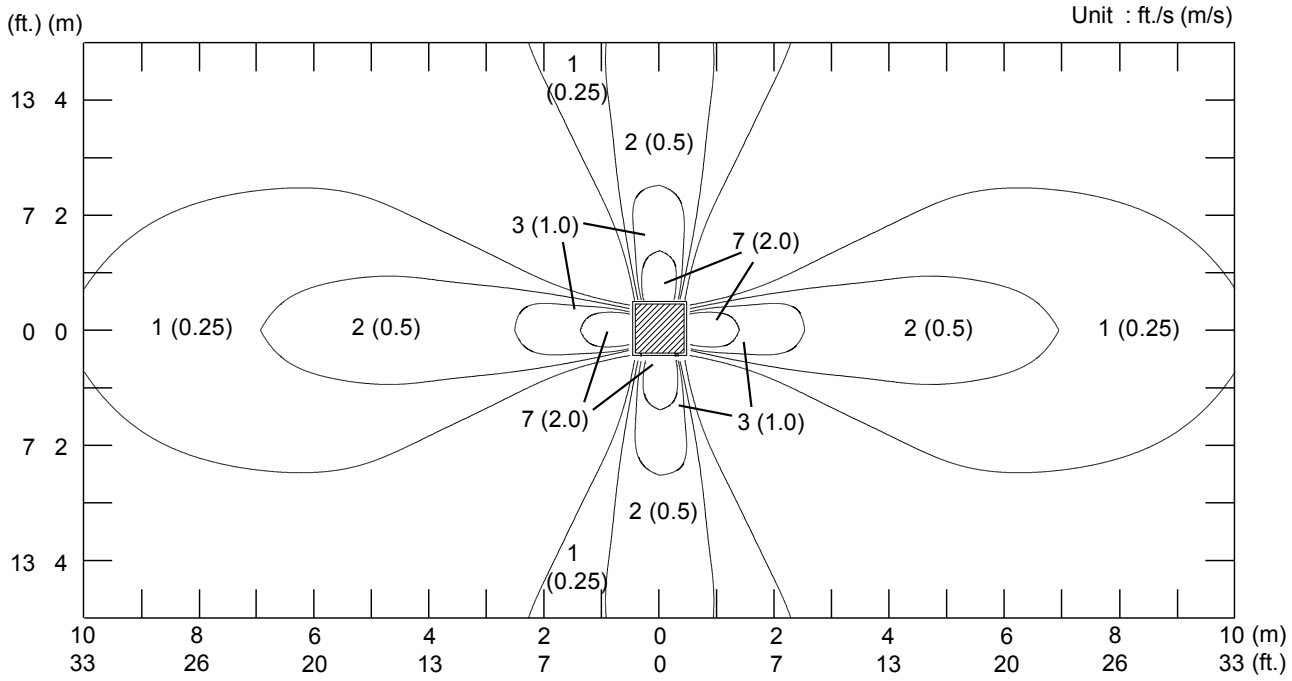
● Air temperature distribution

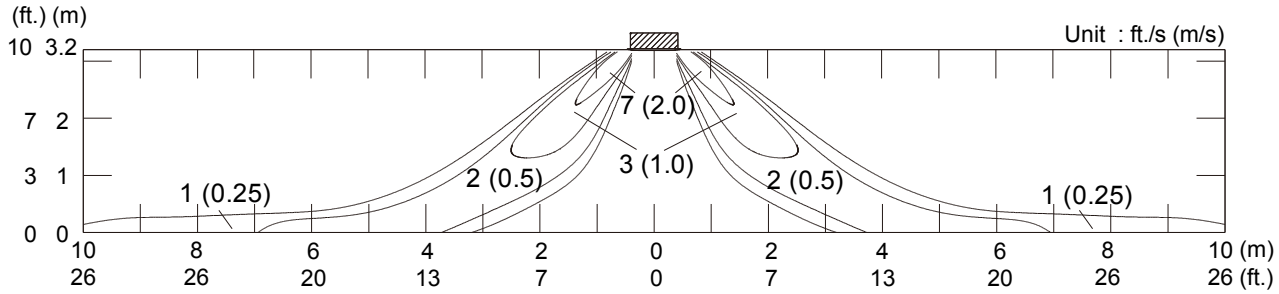


Conditions
Fan speed : High
Operation mode : Fan

■ MODEL : AUUB30TLAV

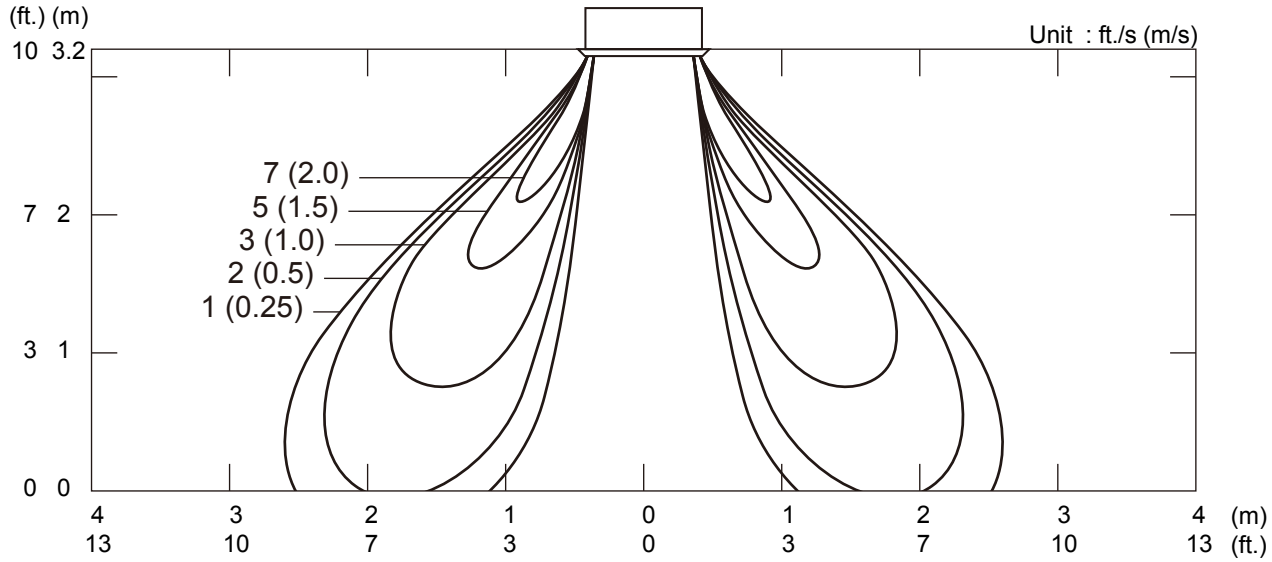
● Air velocity distribution



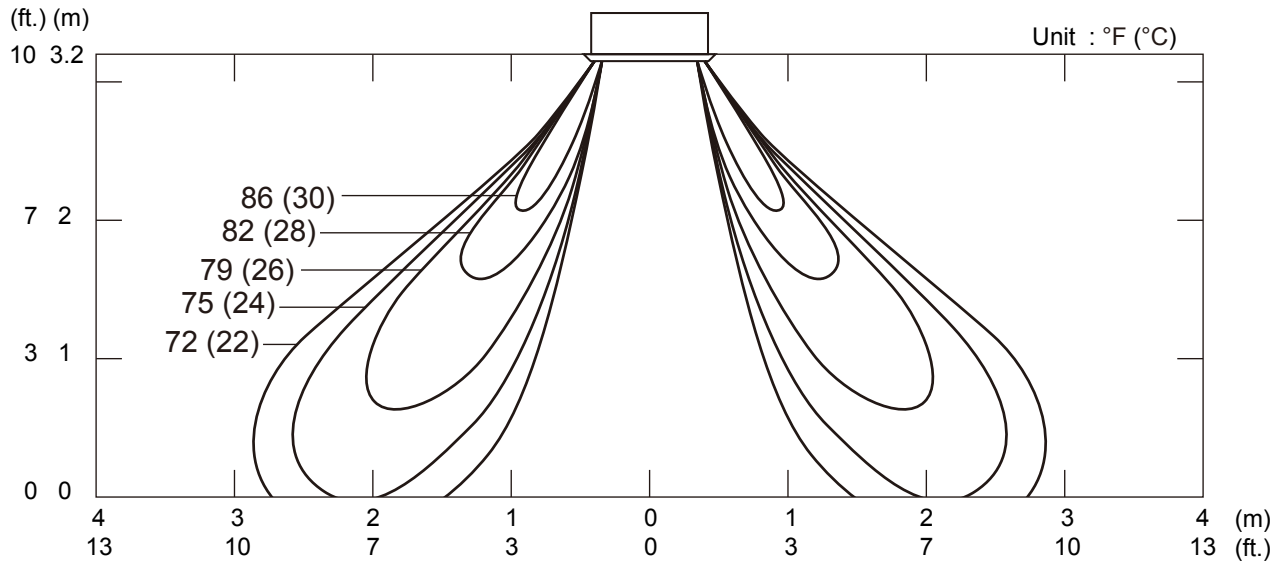


Conditions
Fan speed : High
Operation mode : Heat
Reference Data

● Air velocity distribution



● Air temperature distribution



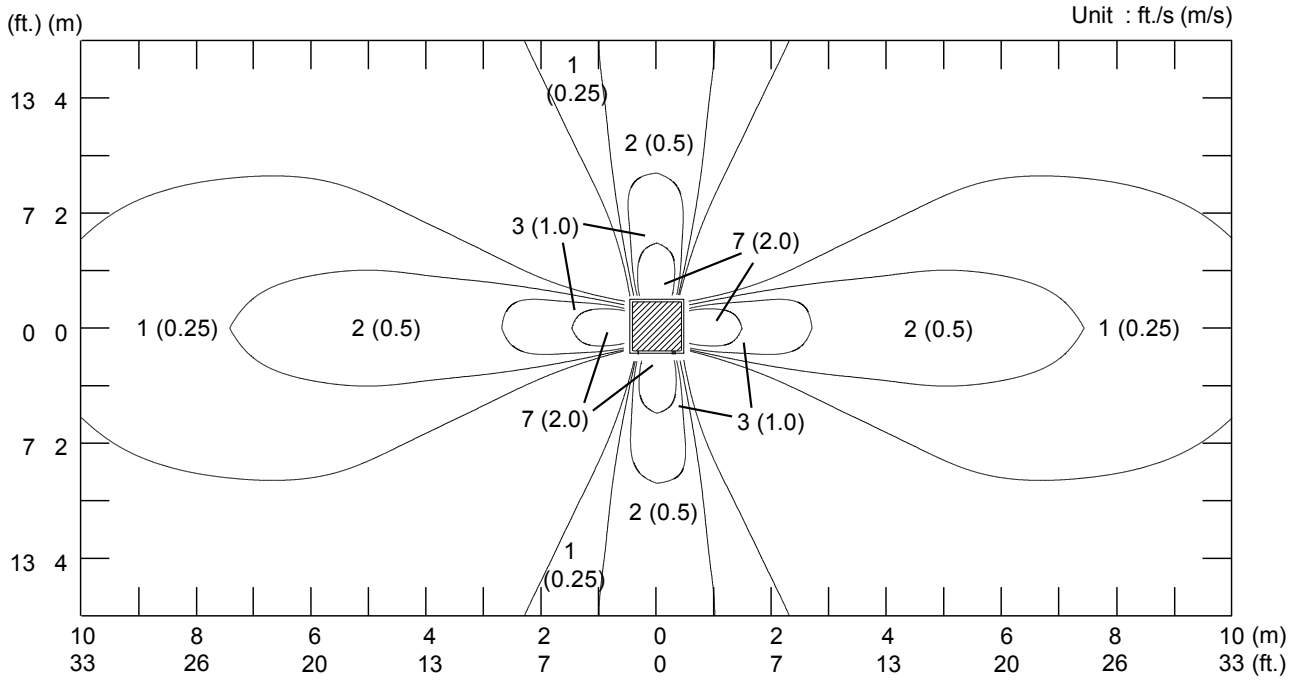
INDOOR UNITS

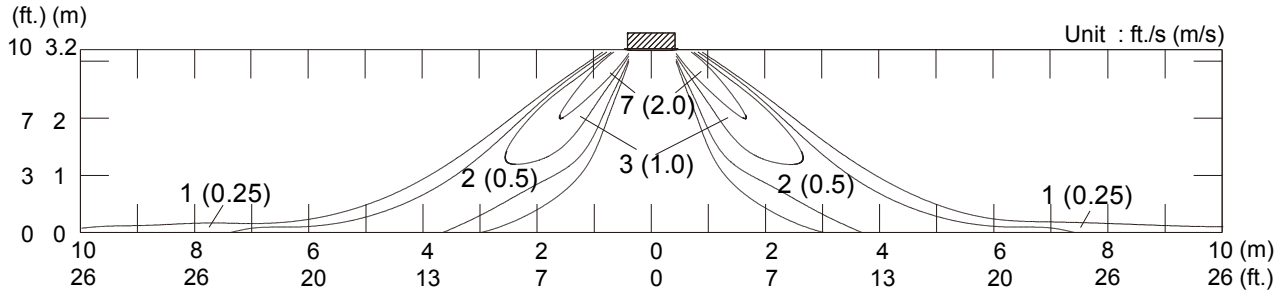
INDOOR UNITS

Conditions
Fan speed : High
Operation mode : Fan

■ MODEL : AUUB36TLAV

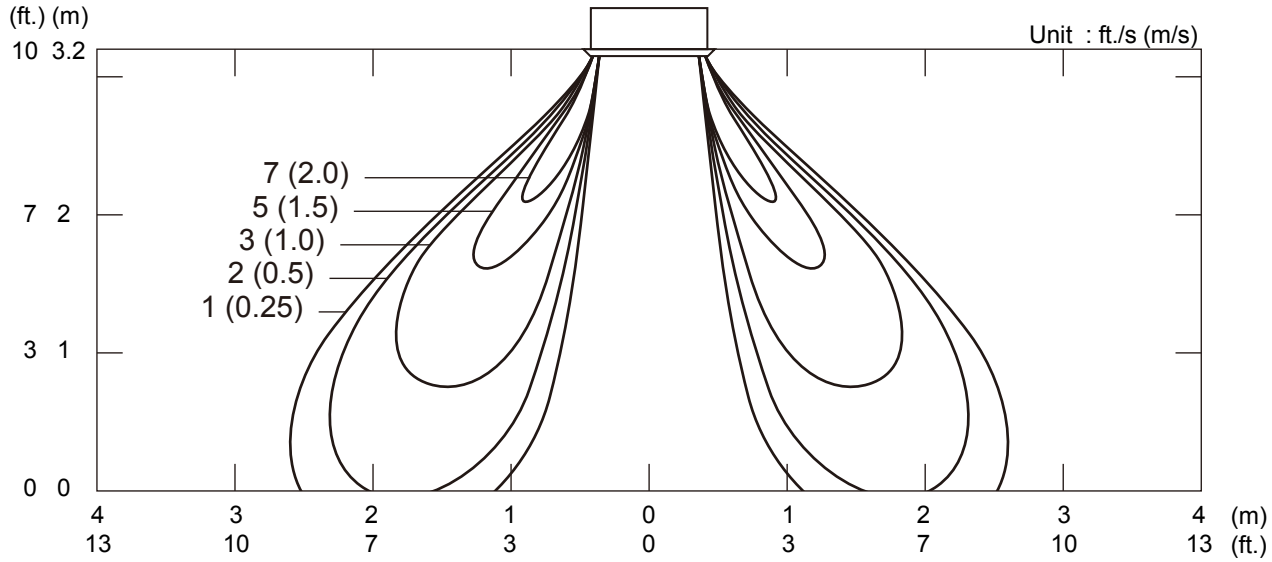
● Air velocity distribution



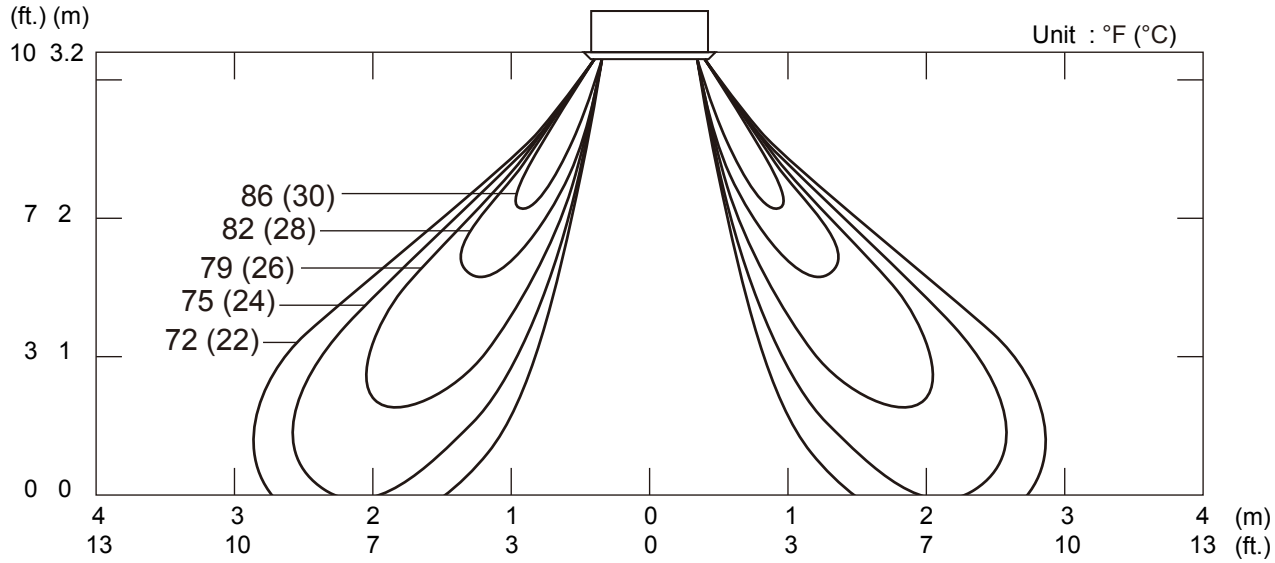


Conditions
Fan speed : High
Operation mode : Heat
Reference Data

● Air velocity distribution



● Air temperature distribution



INDOOR UNITS

5-4. MINI DUCT TYPE with Auto louver grille kit

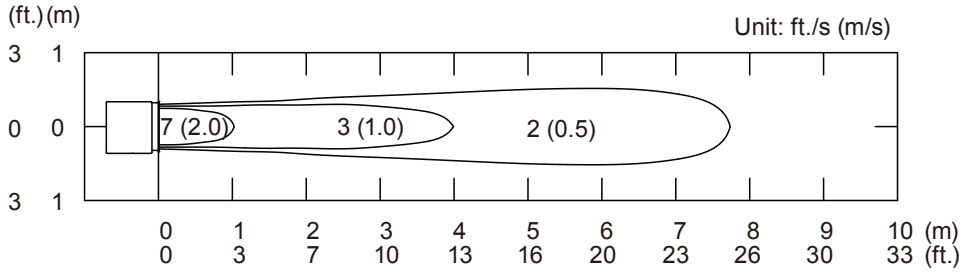
■ MODEL: ARUL4TLAV1 (UTD-GXTA-W)

Note: This data is measured with the Auto louver grille kit(option) installed.

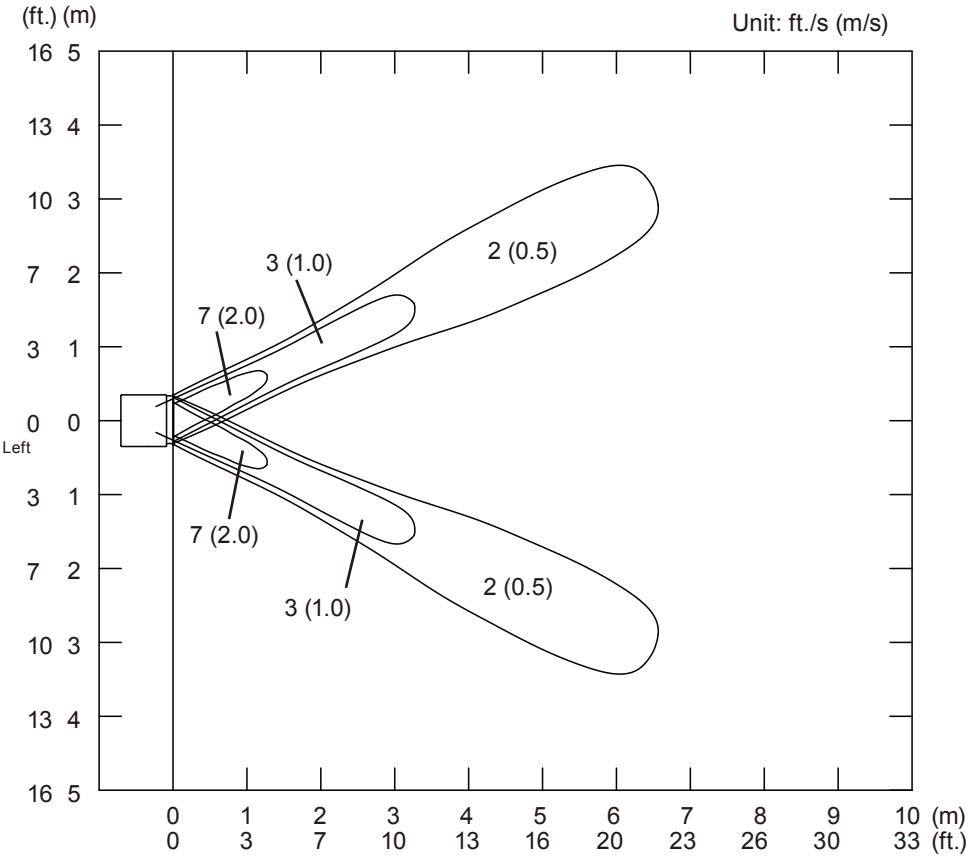
● Air velocity distribution

Conditions
Fan speed : High
Operation mode : Fan

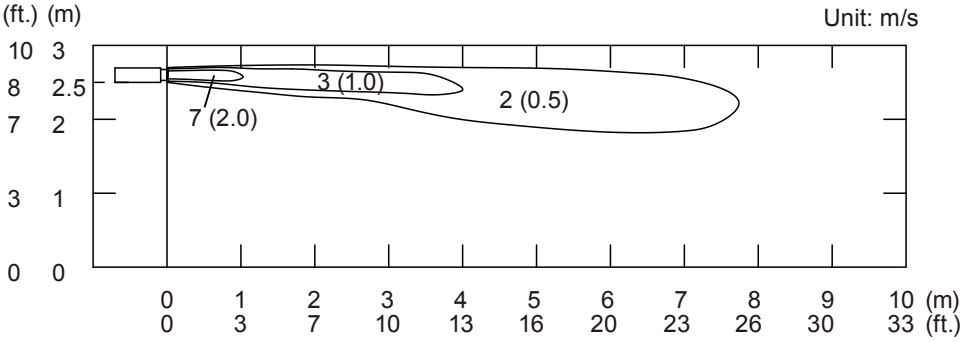
Top view
Vertical airflow direction louver: Up
Horizontal airflow direction louver: Center



Top view
Vertical airflow direction louver: Up
Horizontal airflow direction louver: Right & Left



Side view
Vertical airflow direction louver: Up
Horizontal airflow direction louver: Center

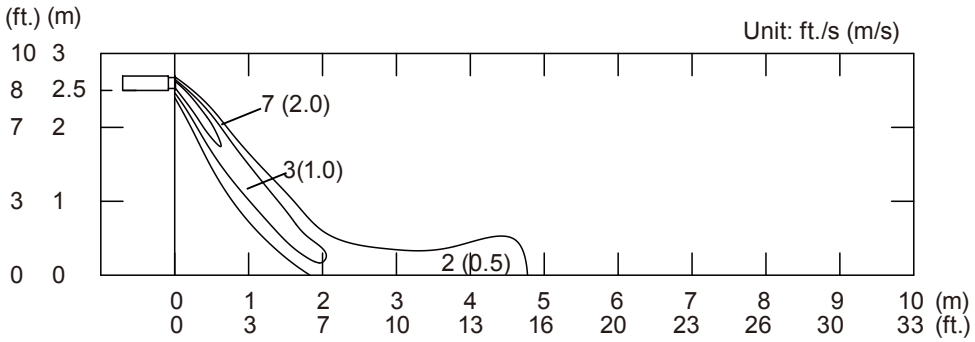


INDOOR UNITS

Conditions
Fan speed : High
Operation mode : Heat
Reference Data

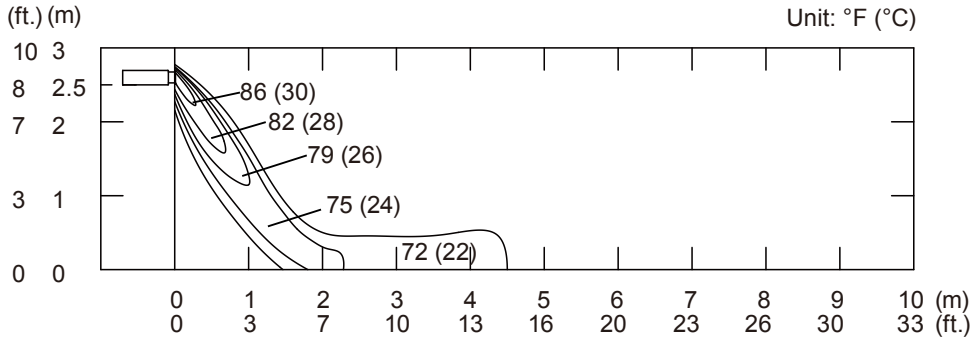
● Air velocity distribution

Side view
Vertical airflow direction louver: Down
Horizontal airflow direction louver: Center



● Air temperature distribution

Side view
Vertical airflow direction louver: Down
Horizontal airflow direction louver: Center



INDOOR UNITS

5-5. SLIM DUCT TYPE with Auto louver grille kit

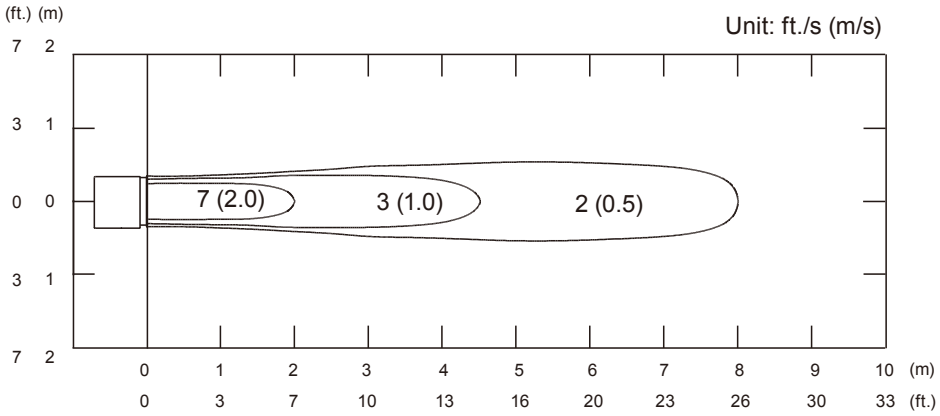
Conditions
Fan speed : High
Operation mode : Fan

■ MODEL : ARUL7TLAV (UTD-GXSA-W)

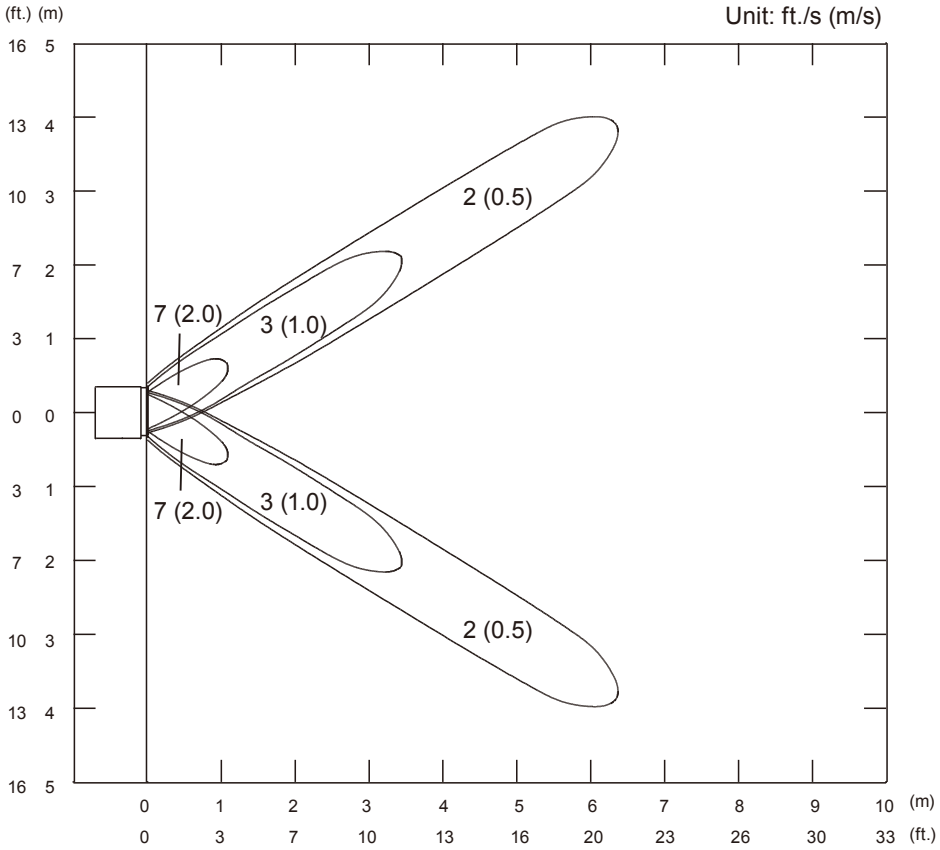
Note: Velocity distribution data based on measurements with Auto louver grille kit installed.

● Air velocity distribution

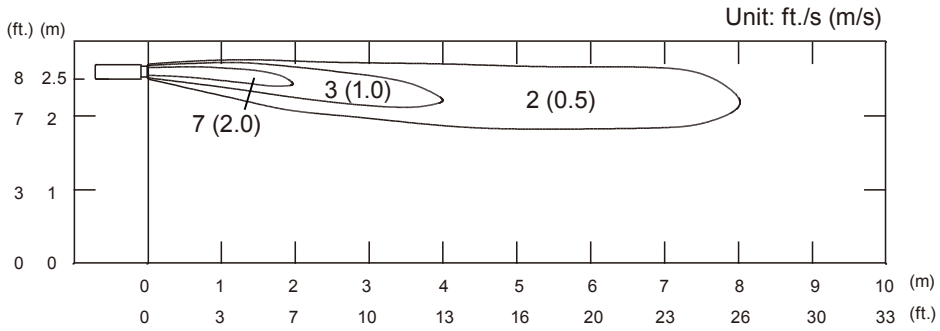
Top view
Vertical airflow direction louver : Up
Horizontal airflow direction louver : Center



Top view
Vertical airflow direction louver : Up
Horizontal airflow direction louver : Right & Left



Side view
Vertical airflow direction louver : Up
Horizontal airflow direction louver : Center



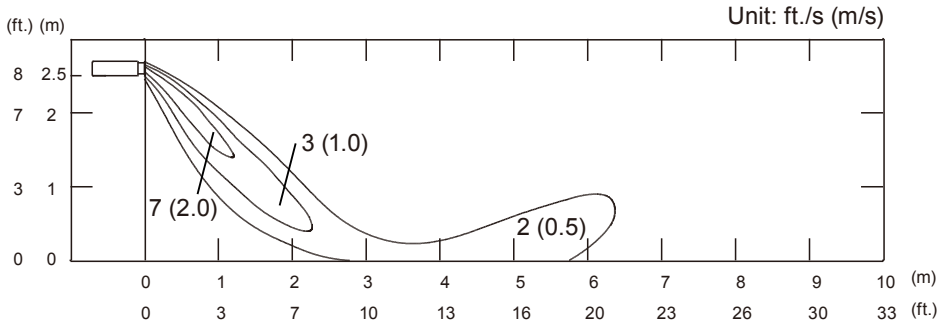
INDOOR UNITS

Note: Velocity distribution data based on measurements with Auto louver grille kit installed.

Conditions
Fan speed : High
Operation mode : Heat
Reference Data

● Air velocity distribution

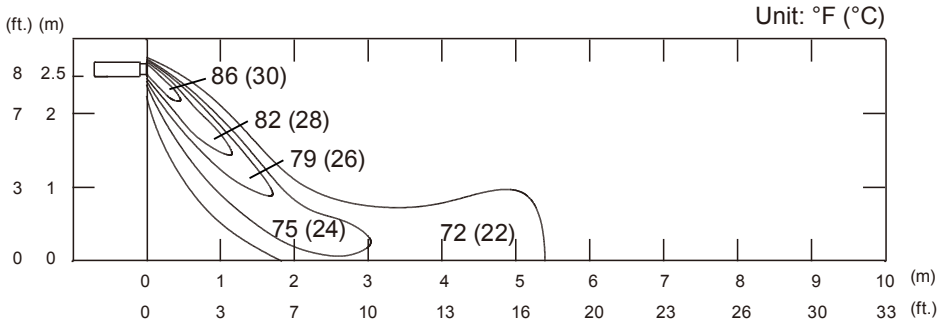
Side view
Vertical airflow direction louver : Down
Horizontal airflow direction louver : Center



INDOOR UNITS

● Air temperature distribution

Side view
Vertical airflow direction louver : Down
Horizontal airflow direction louver : Center



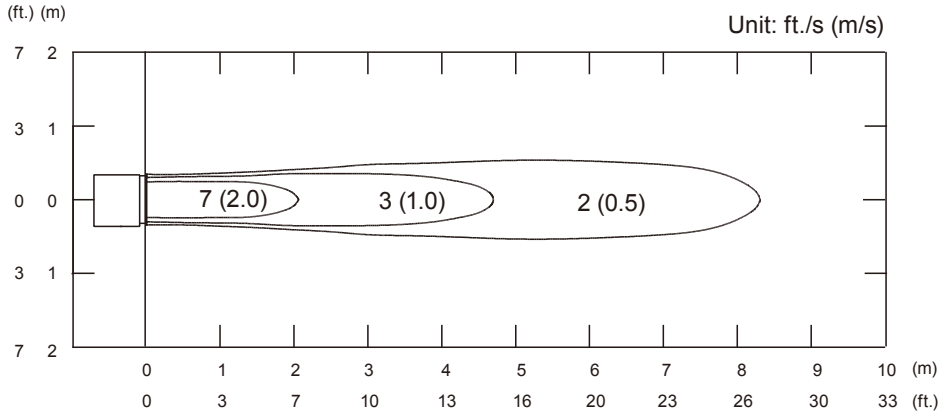
Conditions
Fan speed : High
Operation mode : Fan

■ MODEL : ARUL9TLAV (UTD-GXSA-W)

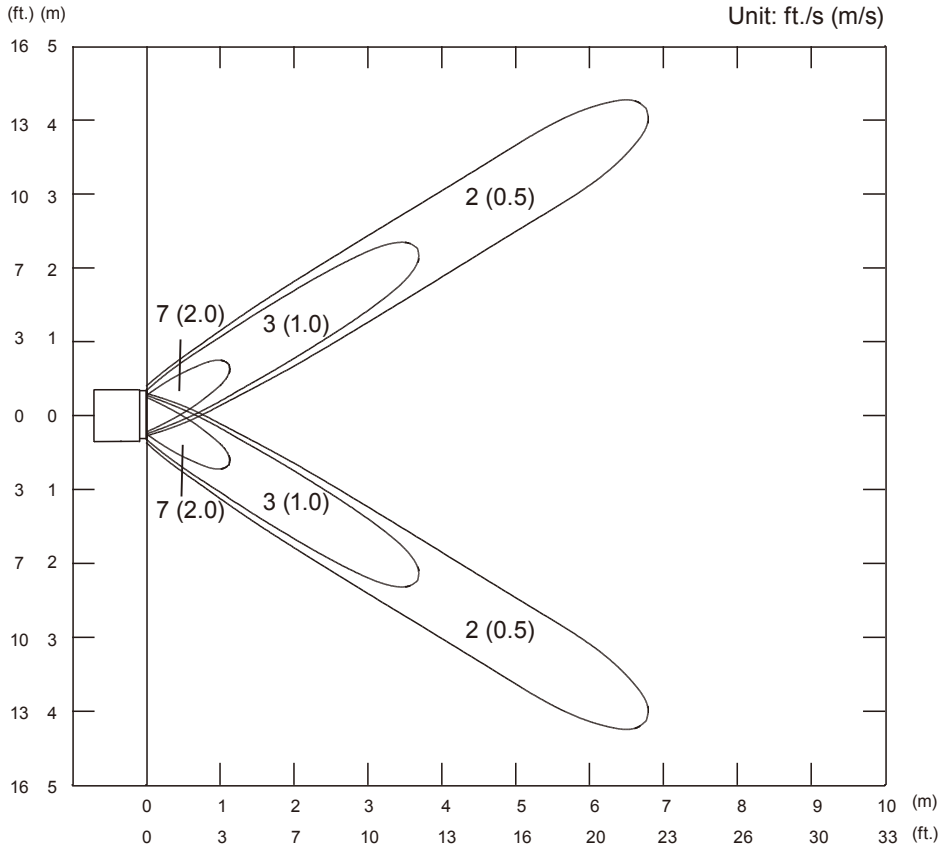
Note: Velocity distribution data based on measurements with Auto louver grille kit installed.

● Air velocity distribution

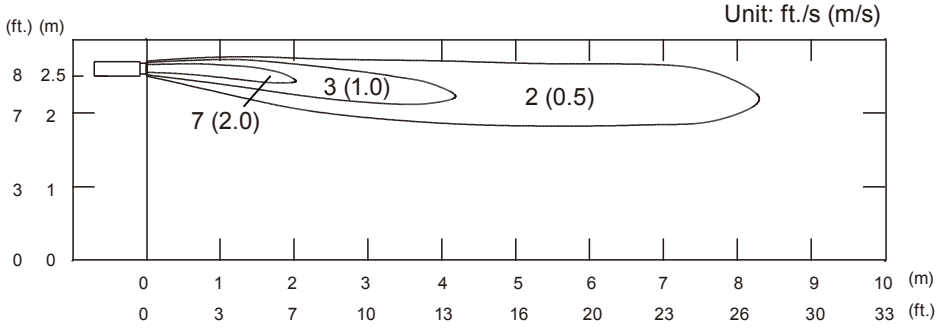
Top view
Vertical airflow direction louver : Up
Horizontal airflow direction louver : Center



Top view
Vertical airflow direction louver : Up
Horizontal airflow direction louver : Right & Left



Side view
Vertical airflow direction louver : Up
Horizontal airflow direction louver : Center



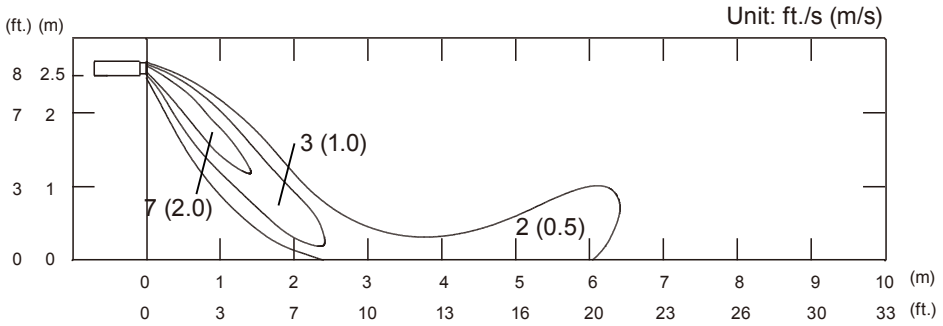
INDOOR UNITS

Note: Velocity distribution data based on measurements with Auto louver grille kit installed.

Conditions	
Fan speed	: High
Operation mode	: Heat
Reference Data	

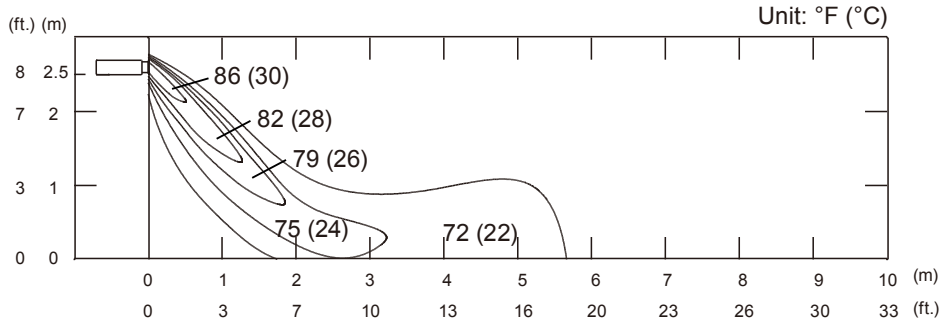
● Air velocity distribution

Side view
Vertical airflow direction
louver : Down
Horizontal airflow direction
louver : Center



● Air temperature distribution

Side view
Vertical airflow direction
louver : Down
Horizontal airflow direction
louver : Center



INDOOR UNITS

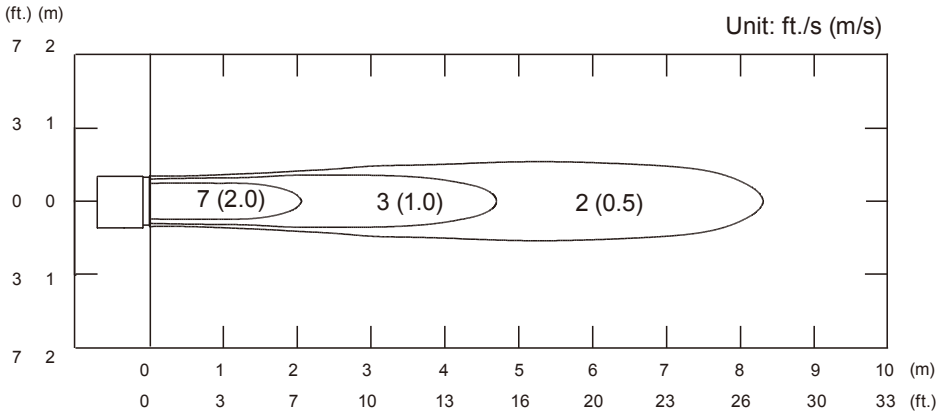
Conditions
Fan speed : High
Operation mode : Fan

■ MODEL : ARUL12TLAV (UTD-GXSA-W)

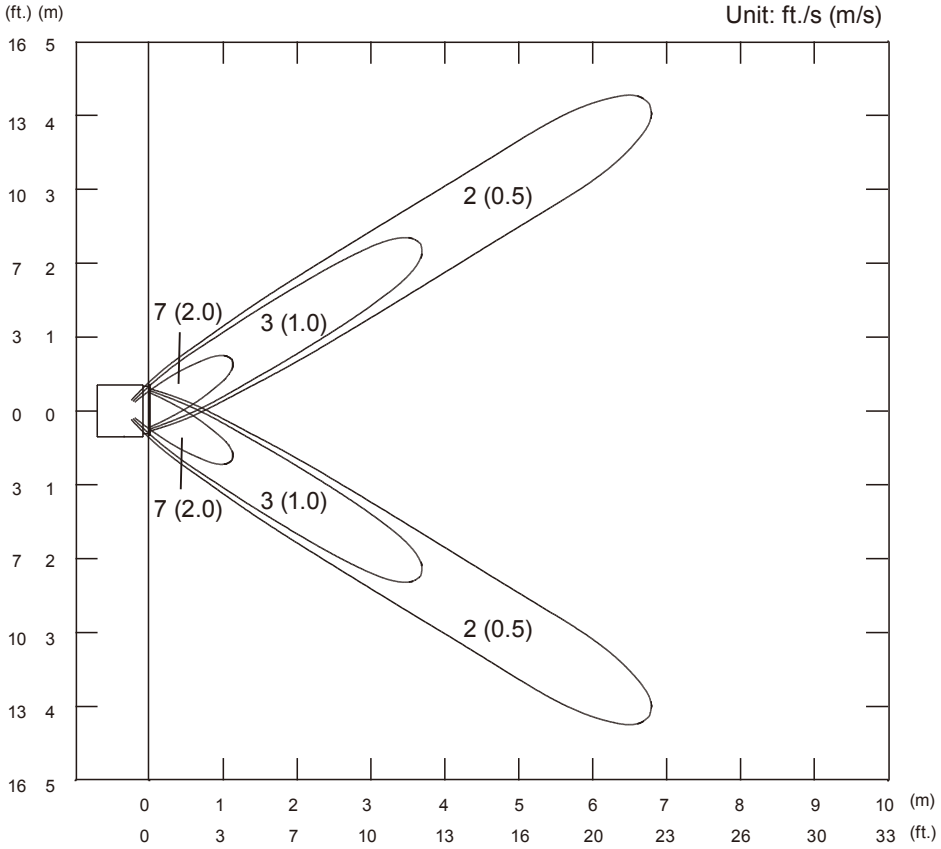
Note: Velocity distribution data based on measurements with Auto louver grille kit installed.

● Air velocity distribution

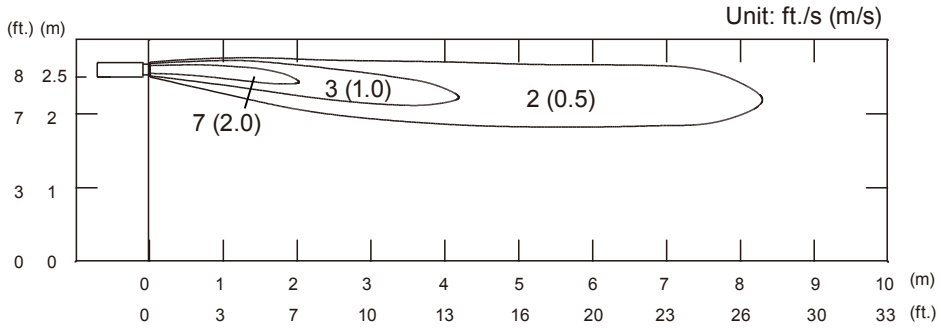
Top view
Vertical airflow direction louver : Up
Horizontal airflow direction louver : Center



Top view
Vertical airflow direction louver : Up
Horizontal airflow direction louver : Right & Left



Side view
Vertical airflow direction louver : Up
Horizontal airflow direction louver : Center



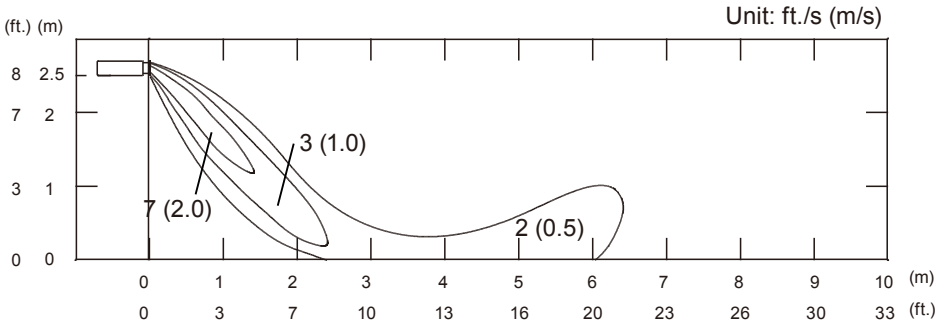
INDOOR UNITS

Note: Velocity distribution data based on measurements with Auto louver grille kit installed.

Conditions	
Fan speed	: High
Operation mode	: Heat
Reference Data	

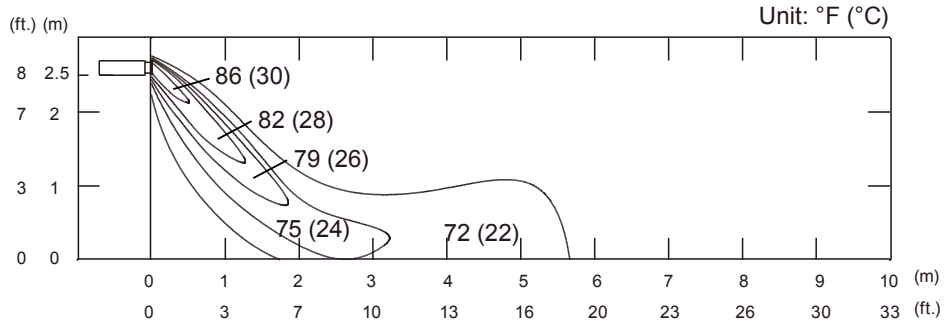
● Air velocity distribution

Side view
Vertical airflow direction
louver : Down
Horizontal airflow direction
louver : Center



● Air temperature distribution

Side view
Vertical airflow direction
louver : Down
Horizontal airflow direction
louver : Center



INDOOR UNITS

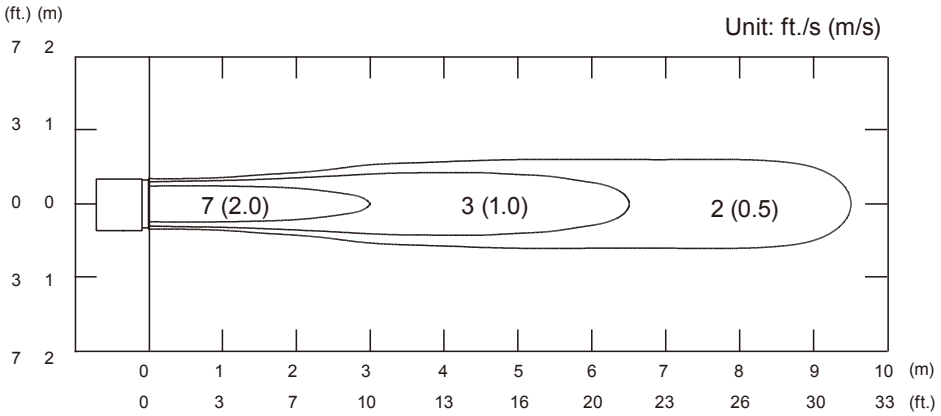
Conditions
Fan speed : High
Operation mode : Fan

■ MODEL : ARUL14TLAV (UTD-GXSA-W)

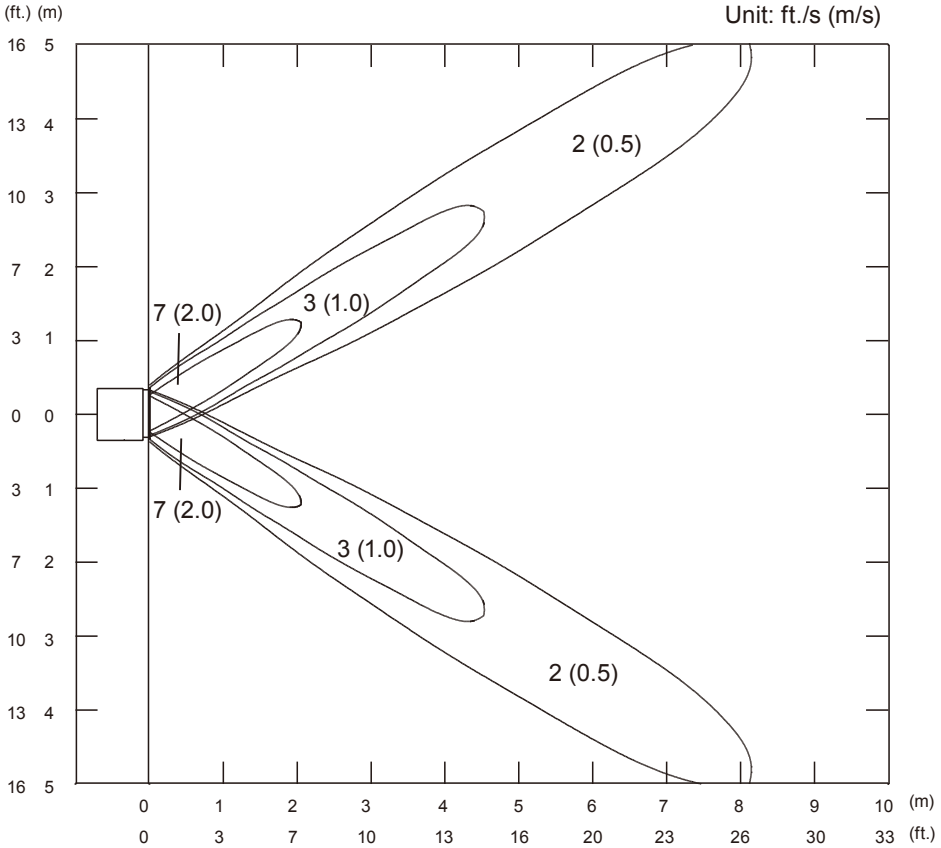
Note: Velocity distribution data based on measurements with Auto louver grille kit installed.

Air velocity distribution

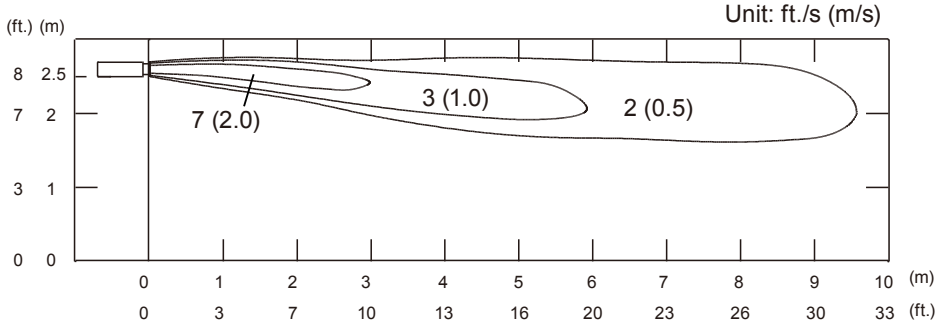
Top view
Vertical airflow direction louver : Up
Horizontal airflow direction louver : Center



Top view
Vertical airflow direction louver : Up
Horizontal airflow direction louver : Right & Left



Side view
Vertical airflow direction louver : Up
Horizontal airflow direction louver : Center



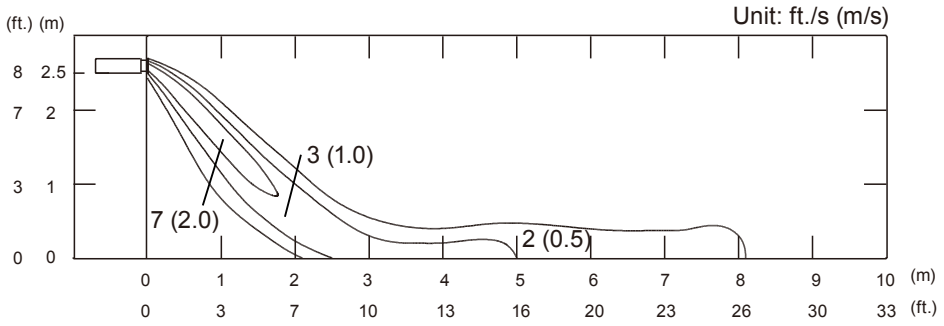
INDOOR UNITS

Note: Velocity distribution data based on measurements with Auto louver grille kit installed.

Conditions
Fan speed : High
Operation mode : Heat
Reference Data

● Air velocity distribution

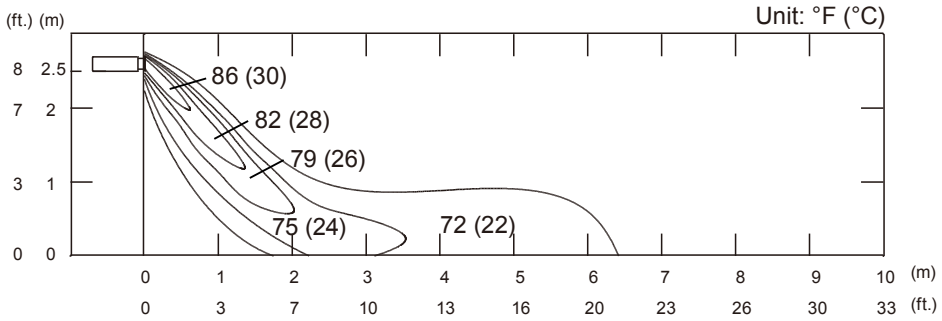
Side view
Vertical airflow direction louver : Down
Horizontal airflow direction louver : Center



INDOOR UNITS

● Air temperature distribution

Side view
Vertical airflow direction louver : Down
Horizontal airflow direction louver : Center

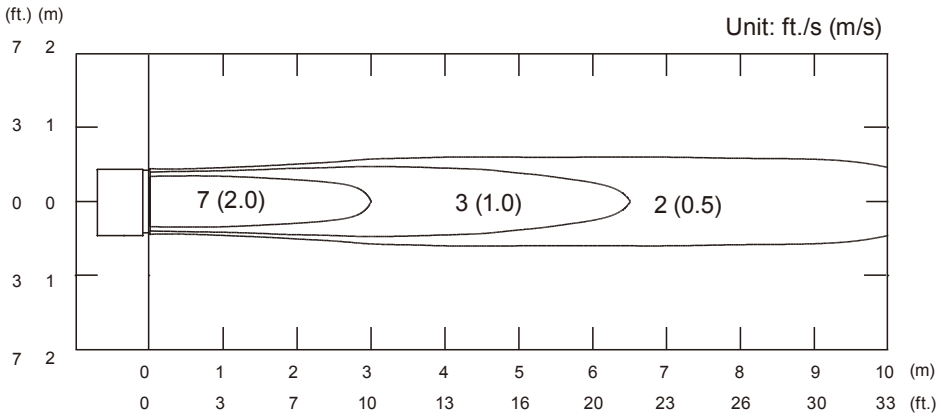


Conditions
Fan speed : High
Operation mode : Fan

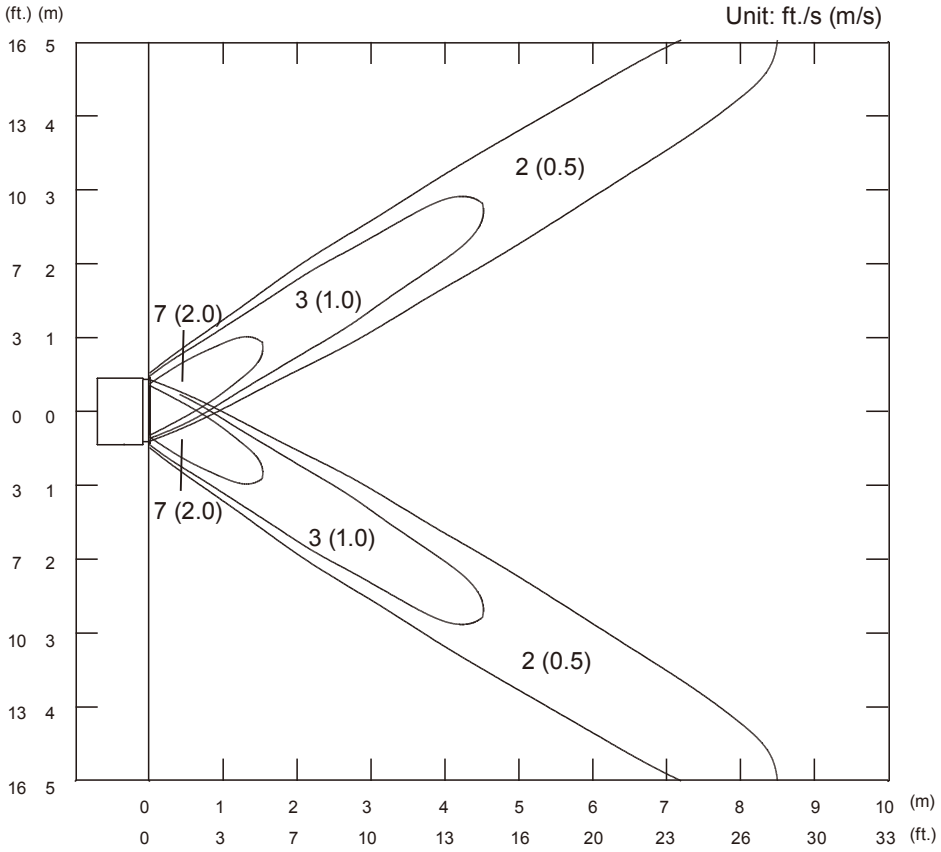
■ MODEL : ARUL18TLAV (UTD-GXSB-W)

Note: Velocity distribution data based on measurements with Auto louver grille kit installed.

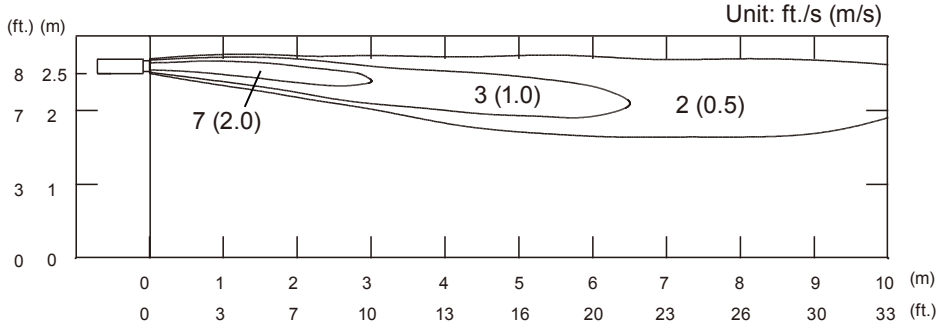
Top view
Vertical airflow direction louver : Up
Horizontal airflow direction louver : Center



Top view
Vertical airflow direction louver : Up
Horizontal airflow direction louver : Right & Left



Side view
Vertical airflow direction louver : Up
Horizontal airflow direction louver : Center



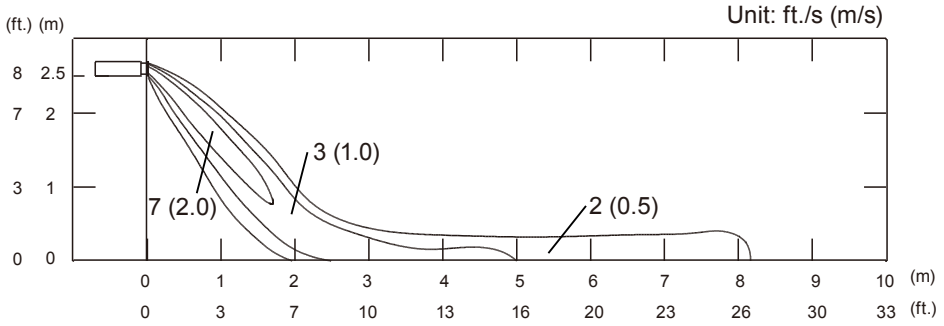
INDOOR UNITS

Conditions
Fan speed : High
Operation mode : Heat
Reference Data

Note: Velocity distribution data based on measurements with Auto louver grille kit installed.

Air velocity distribution

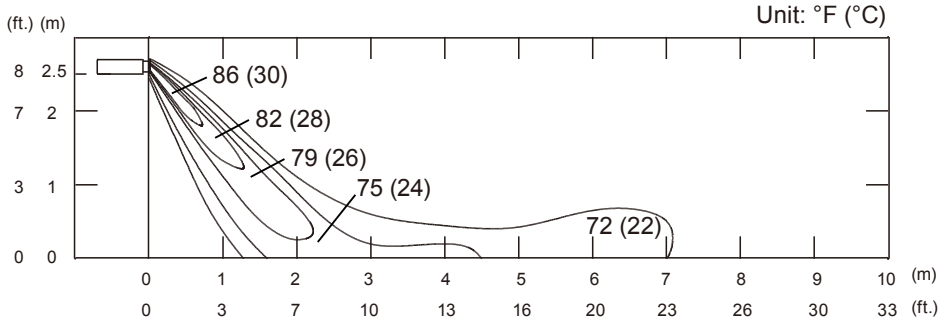
Side view
Vertical airflow direction louver : Down
Horizontal airflow direction louver : Center



INDOOR UNITS

● Air temperature distribution

Side view
Vertical airflow direction louver : Down
Horizontal airflow direction louver : Center

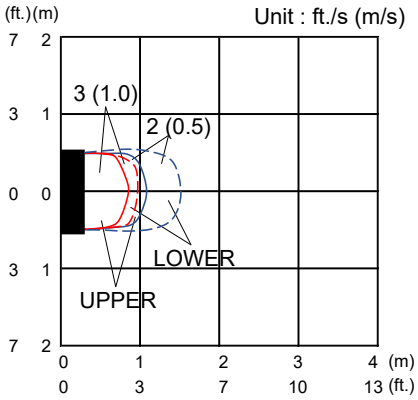


5-6. COMPACT FLOOR TYPE

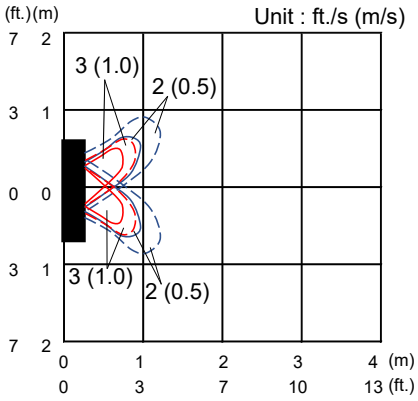
■ MODEL: AGUA4TLAV1

Conditions:
Fan speed : HI
Operation mode : FAN
Fan select : UPPER&LOWER
——— : UPPER FAN
- - - - - - : LOWER FAN

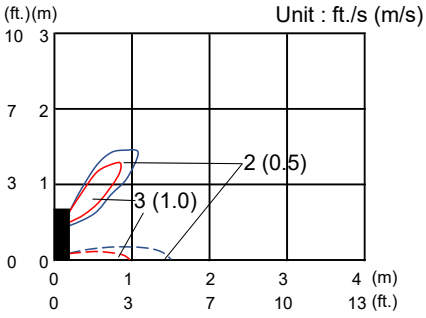
Top view
Vertical airflow direction louver: Up
Horizontal airflow direction louver: Center



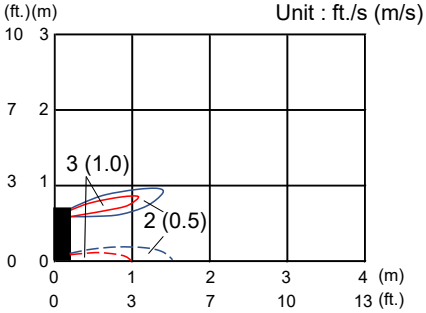
Top view
Vertical airflow direction louver: Up
Horizontal airflow direction louver: Right & Left



Side view
Vertical airflow direction louver: Up
Horizontal airflow direction louver: Center



Side view
Vertical airflow direction louver: Center
Horizontal airflow direction louver: Center

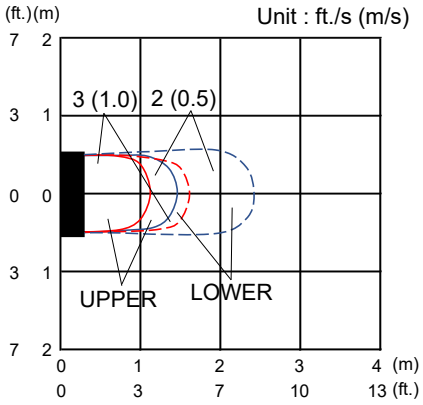


INDOOR UNITS

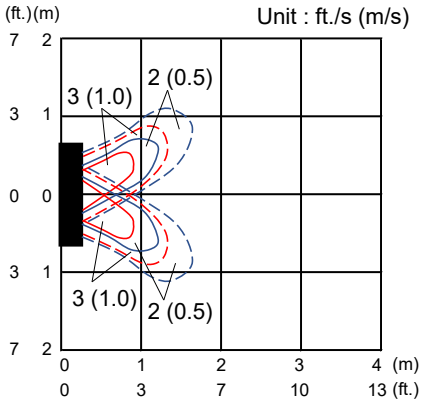
■ MODELS: AGUA7TLAV1 and AGUA9TLAV1

Conditions:
- Fan speed : HI
- Operation mode : FAN
- Fan select : UPPER&LOWER
- ——— : UPPER FAN
- - - - - - : LOWER FAN

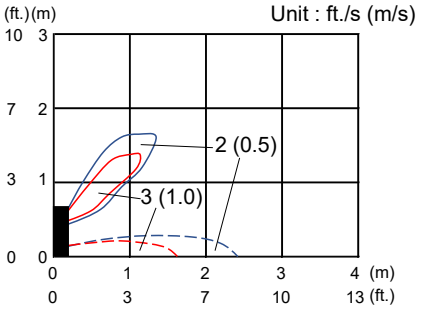
Top view
Vertical airflow direction louver: Up
Horizontal airflow direction louver: Center



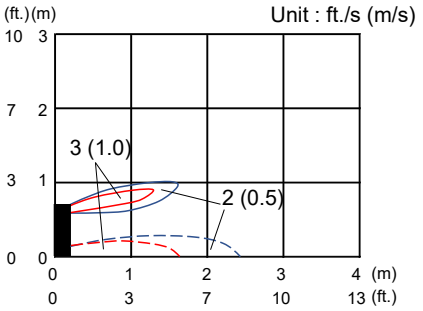
Top view
Vertical airflow direction louver: Up
Horizontal airflow direction louver: Right & Left



Side view
Vertical airflow direction louver: Up
Horizontal airflow direction louver: Center



Side view
Vertical airflow direction louver: Center
Horizontal airflow direction louver: Center

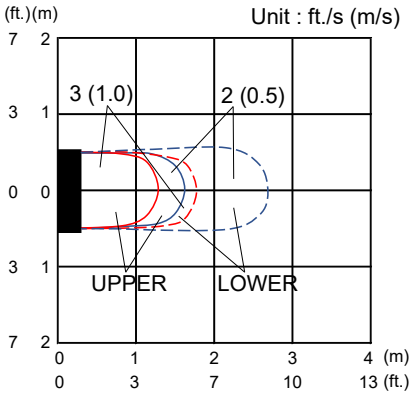


INDOOR UNITS

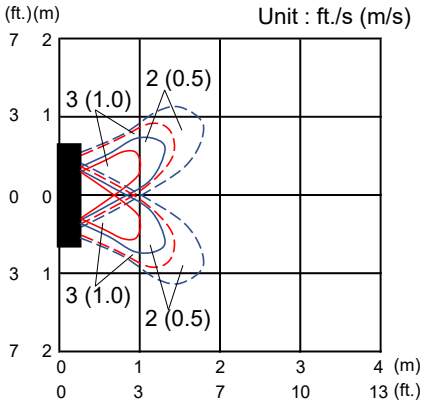
■ MODEL: AGUA12TLAV1

Conditions:
Fan speed : HI
Operation mode : FAN
Fan select : UPPER&LOWER
——— : UPPER FAN
- - - - - - : LOWER FAN

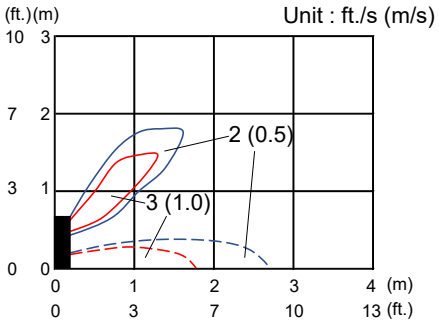
Top view
Vertical airflow direction louver: Up
Horizontal airflow direction louver: Center



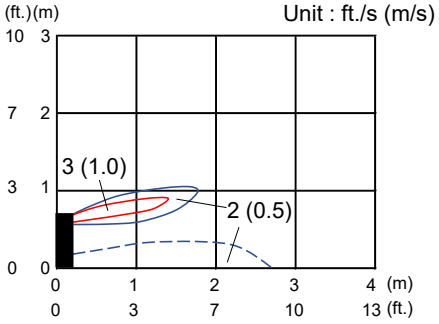
Top view
Vertical airflow direction louver: Up
Horizontal airflow direction louver: Right & Left



Side view
Vertical airflow direction louver: Up
Horizontal airflow direction louver: Center



Side view
Vertical airflow direction louver: Center
Horizontal airflow direction louver: Center

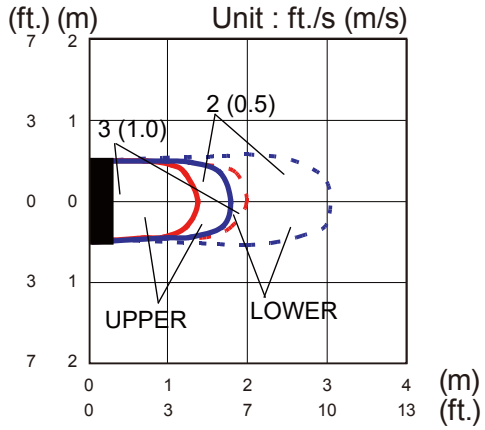


INDOOR UNITS

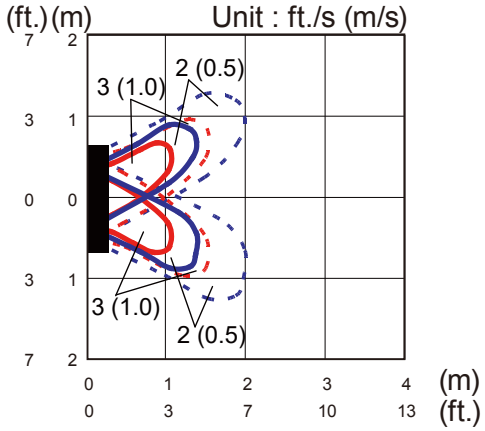
■ MODEL: AGUA14TLAV1

Conditions:
- Fan speed : HI
- Operation mode : FAN
- Fan select : UPPER&LOWER
- ——— : UPPER FAN
- - - - - - : LOWER FAN

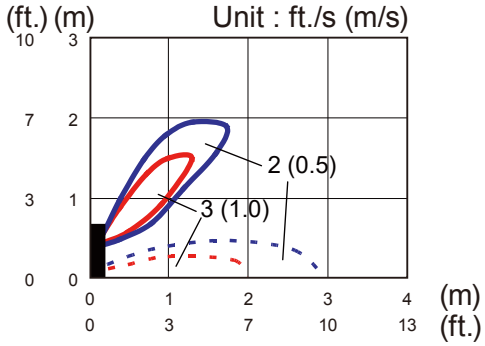
Top view
Vertical airflow direction louver: Up
Horizontal airflow direction louver: Center



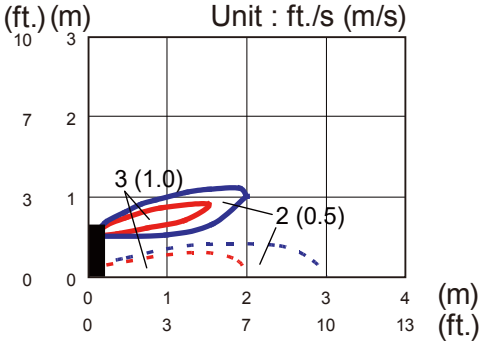
Top view
Vertical airflow direction louver: Up
Horizontal airflow direction louver: Right & Left



Side view
Vertical airflow direction louver: Up
Horizontal airflow direction louver: Center



Side view
Vertical airflow direction louver: Center
Horizontal airflow direction louver: Center



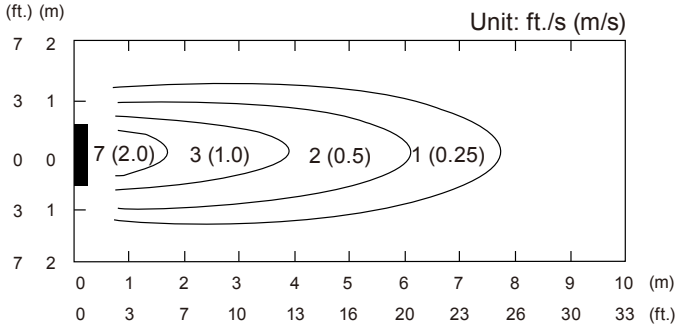
INDOOR UNITS

5-7. FLOOR / CEILING TYPE

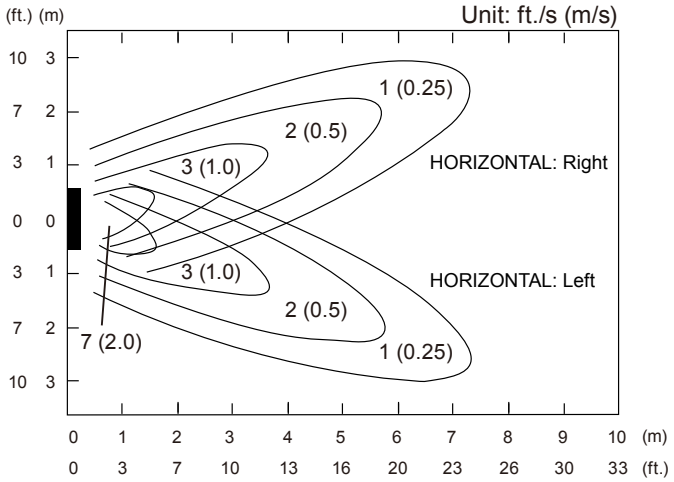
■ MODELS : ABUA12TLAV, ABUA14TLAV (FLOOR CONSOLE)

Conditions
Fan speed : High
Operation mode : Fan

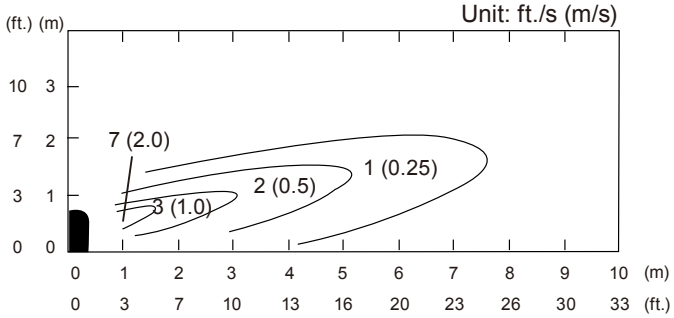
Top view
Vertical airflow direction louver : Down
Horizontal airflow direction louver : Center

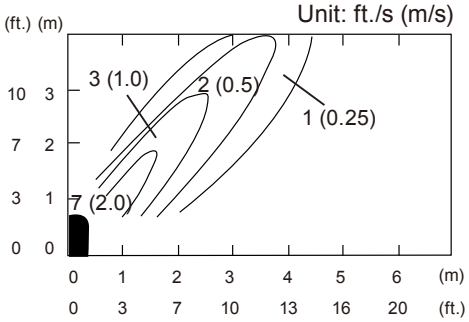


Top view
Vertical airflow direction louver : Down
Horizontal airflow direction louver : Right & Left

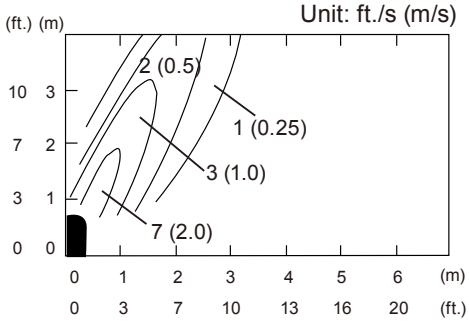


Side view
Vertical airflow direction louver : Down
Horizontal airflow direction louver : Center





Side view
Vertical airflow direction louver : Center
Horizontal airflow direction louver : Center

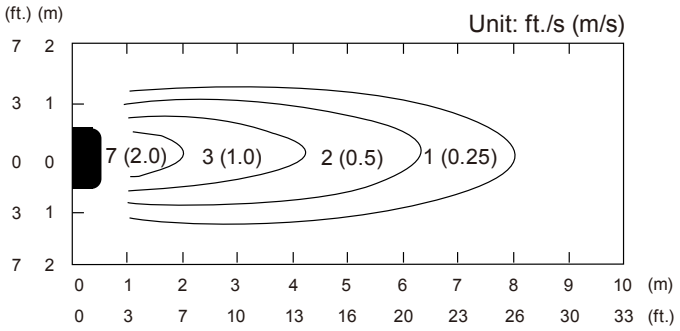


Side view
Vertical airflow direction louver : Up
Horizontal airflow direction louver : Center

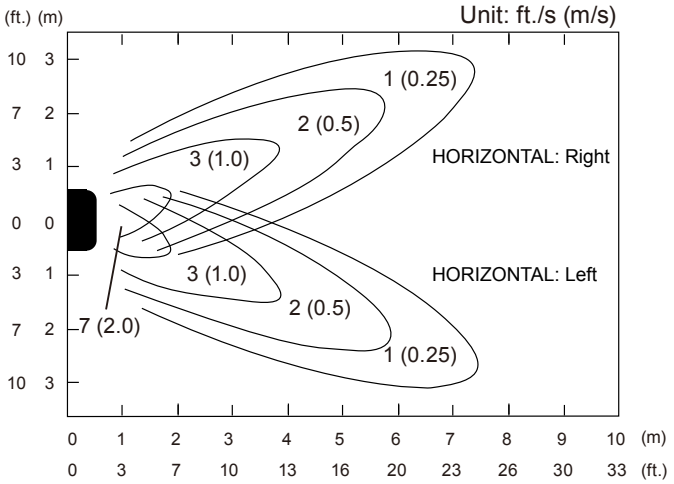
■ MODELS : ABUA12TLAV, ABUA14TLAV (UNDER CEILING)

Conditions
Fan speed : High
Operation mode : Fan

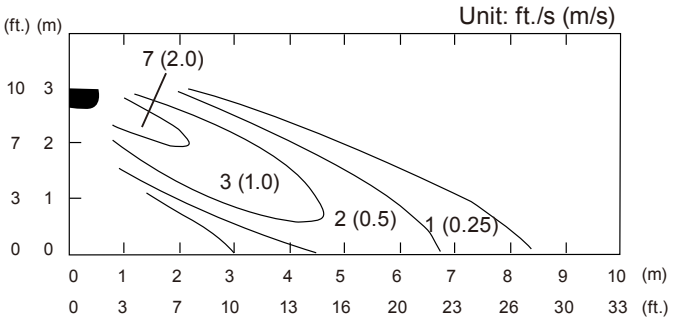
Top view
Vertical airflow direction louver : UP
Horizontal airflow direction louver : Center

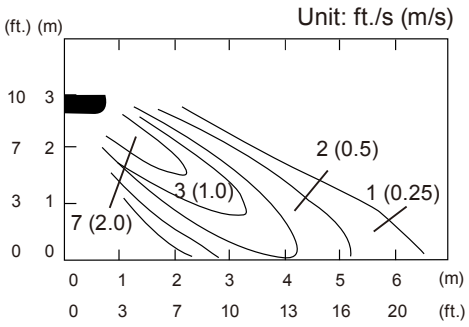


Top view
Vertical airflow direction louver : UP
Horizontal airflow direction louver : Right & Left

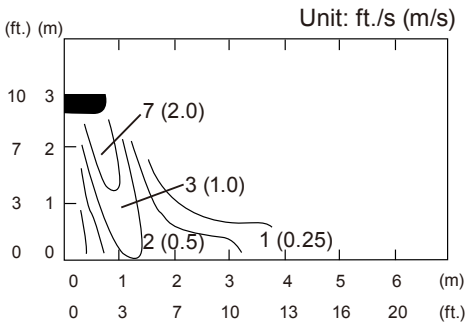


Side view
Vertical airflow direction louver : UP
Horizontal airflow direction louver : Center





Side view
Vertical airflow direction louver : Center
Horizontal airflow direction louver : Center

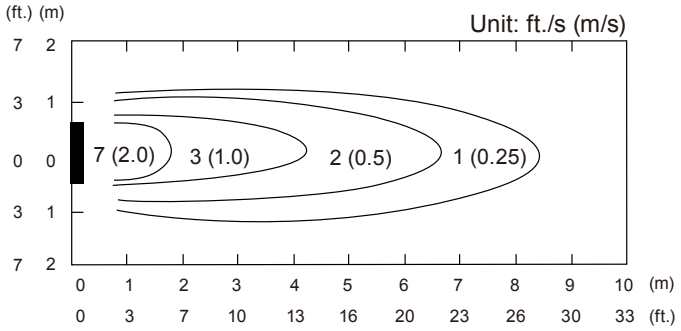


Side view
Vertical airflow direction louver : Down
Horizontal airflow direction louver : Center

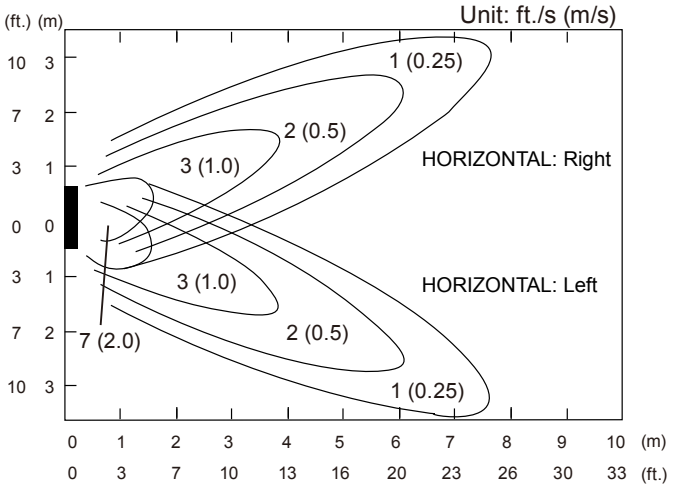
■ MODEL : ABUA18TLAV (FLOOR CONSOLE)

Conditions
Fan speed : High
Operation mode : Fan

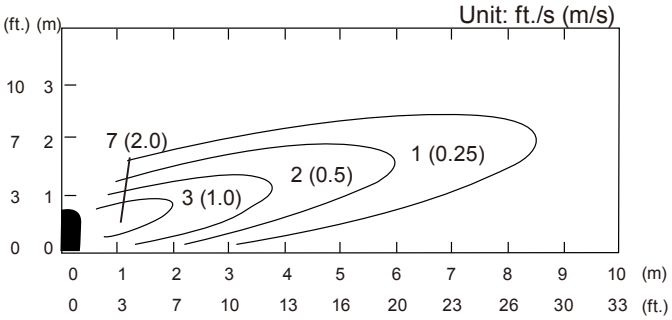
Top view
Vertical airflow direction louver : Down
Horizontal airflow direction louver : Center

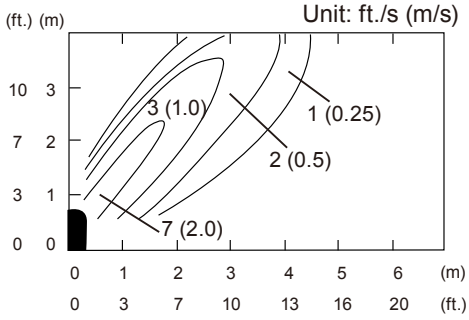


Top view
Vertical airflow direction louver : Down
Horizontal airflow direction louver : Right & Left

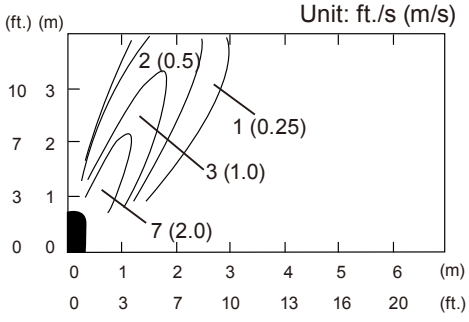


Side view
Vertical airflow direction louver : Down
Horizontal airflow direction louver : Center





Side view
Vertical airflow direction louver : Center
Horizontal airflow direction louver : Center

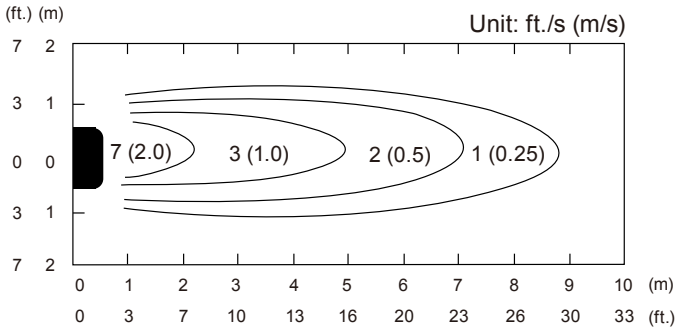


Side view
Vertical airflow direction louver : Up
Horizontal airflow direction louver : Center

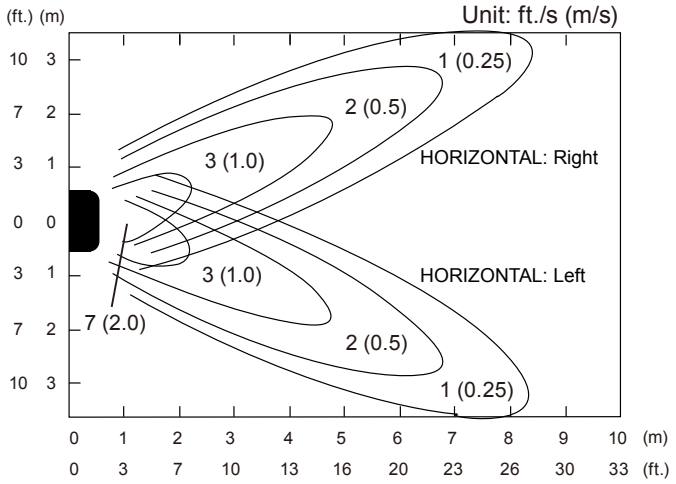
■ MODEL : ABUA18TLAV (UNDER CEILING)

Conditions
Fan speed : High
Operation mode : Fan

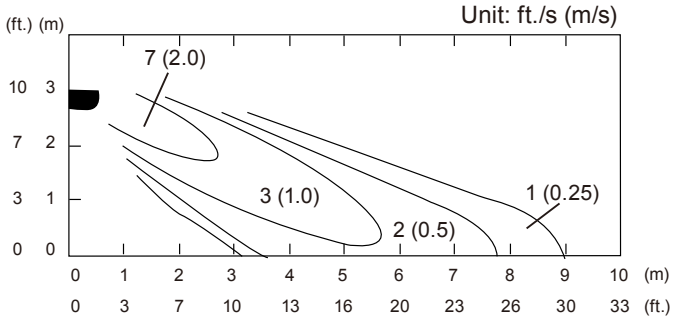
Top view
Vertical airflow direction louver : UP
Horizontal airflow direction louver : Center

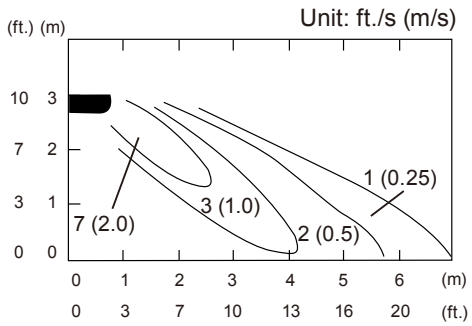


Top view
Vertical airflow direction louver : UP
Horizontal airflow direction louver : Right & Left

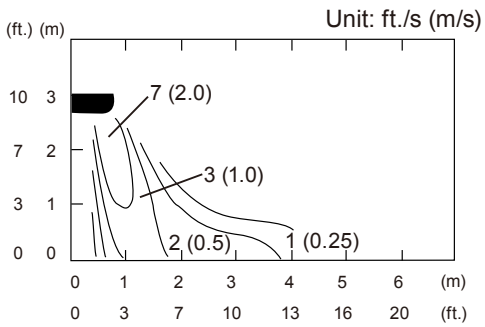


Side view
Vertical airflow direction louver : UP
Horizontal airflow direction louver : Center





Side view
Vertical airflow direction louver : Center
Horizontal airflow direction louver : Center

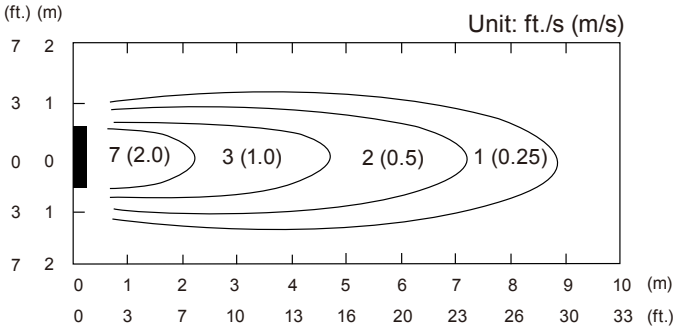


Side view
Vertical airflow direction louver : Down
Horizontal airflow direction louver : Center

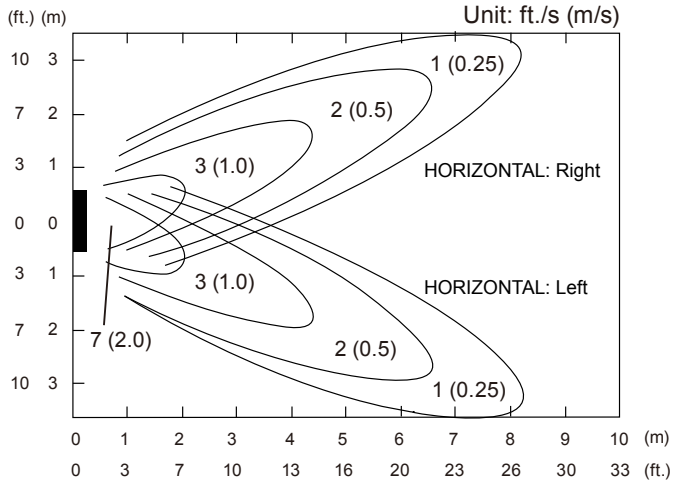
■ MODEL : ABUA24TLAV (FLOOR CONSOLE)

Conditions
Fan speed : High
Operation mode : Fan

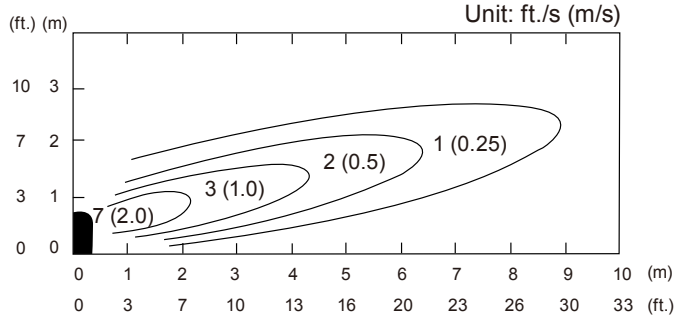
Top view
Vertical airflow direction louver : Down
Horizontal airflow direction louver : Center

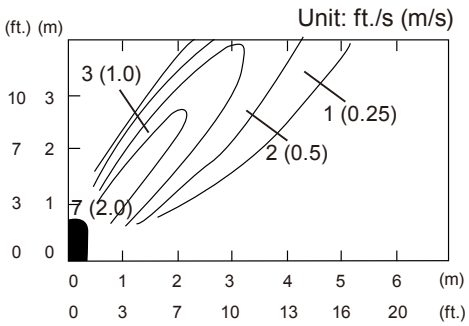


Top view
Vertical airflow direction louver : Down
Horizontal airflow direction louver : Right & Left

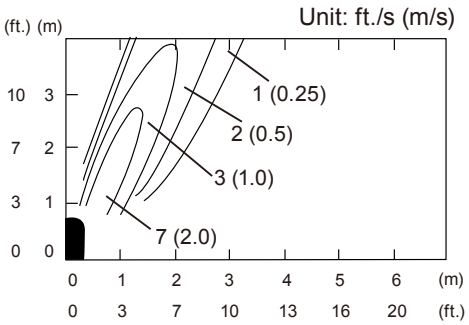


Side view
Vertical airflow direction louver : Down
Horizontal airflow direction louver : Center





Side view
Vertical airflow direction louver : Center
Horizontal airflow direction louver : Center



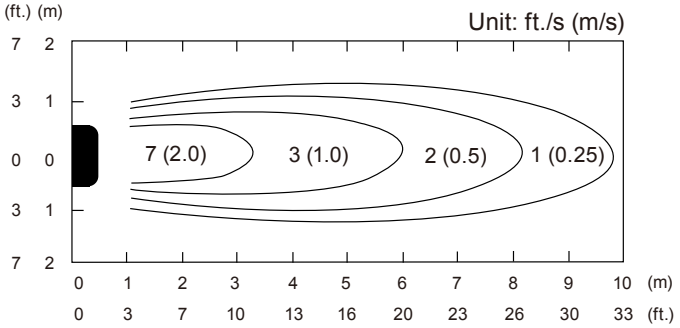
Side view
Vertical airflow direction louver : Up
Horizontal airflow direction louver : Center

INDOOR UNITS

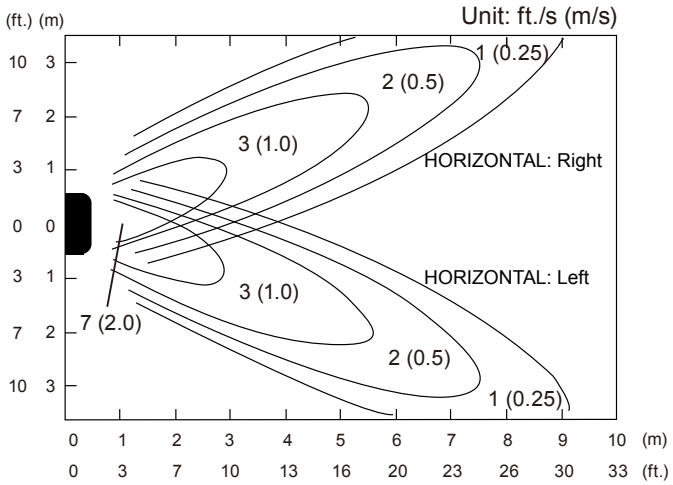
■ MODEL : ABUA24TLAV (UNDER CEILING)

Conditions
Fan speed : High
Operation mode : Fan

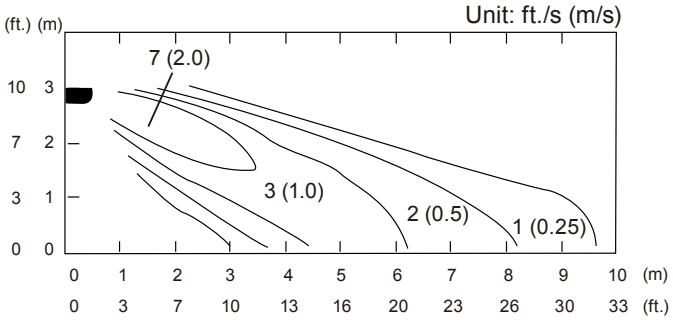
Top view
Vertical airflow direction louver : UP
Horizontal airflow direction louver : Center

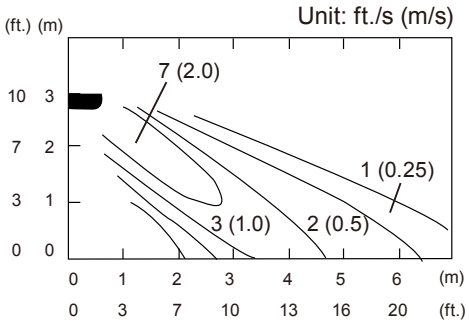


Top view
Vertical airflow direction louver : UP
Horizontal airflow direction louver : Right & Left

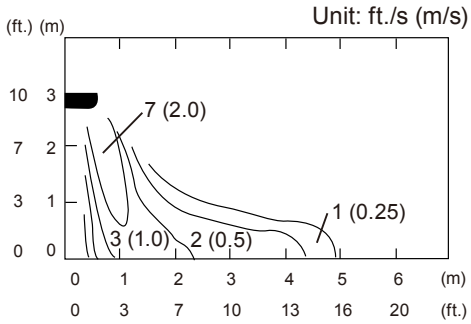


Side view
Vertical airflow direction louver : UP
Horizontal airflow direction louver : Center





Side view
Vertical airflow direction louver : Center
Horizontal airflow direction louver : Center



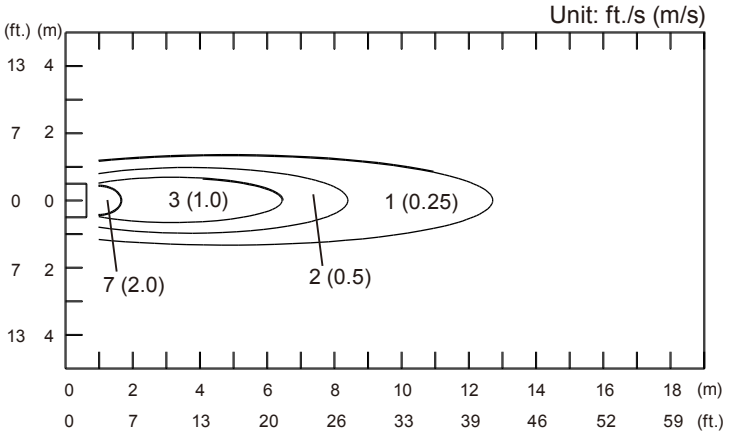
Side view
Vertical airflow direction louver : Down
Horizontal airflow direction louver : Center

5-8. CEILING TYPE

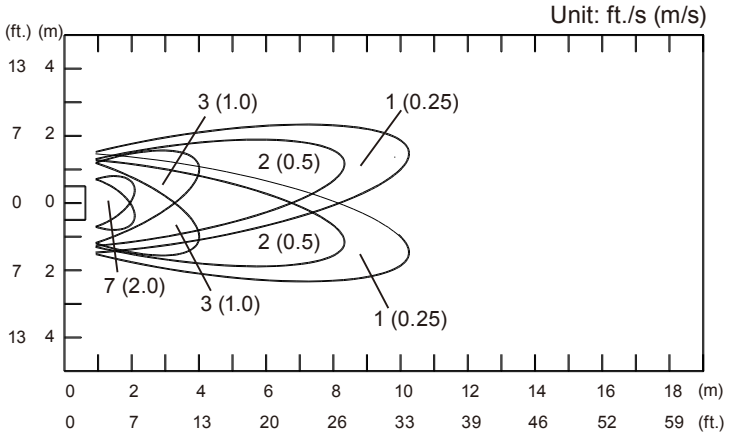
■ MODEL : ABUA30TLAV

Conditions
Fan speed : High
Operation mode : Fan

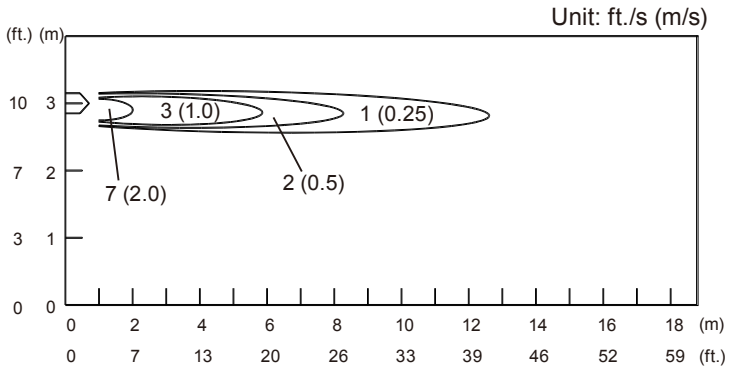
Top view
Vertical airflow direction louver : Up
Horizontal airflow direction louver : Center

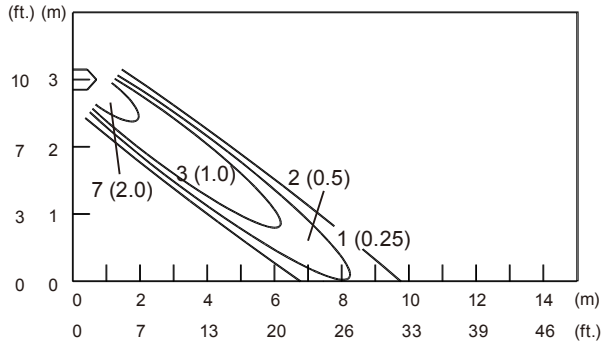


Top view
Vertical airflow direction louver : Up
Horizontal airflow direction louver : Right & Left

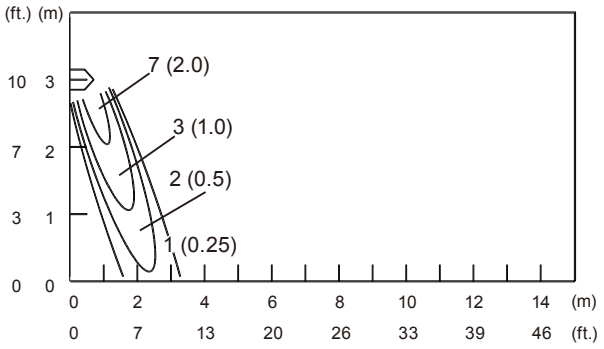


Side view
VVertical airflow direction louver : Up
Horizontal airflow direction louver : Center





Side view
Vertical airflow direction louver : Center
Horizontal airflow direction louver : Center



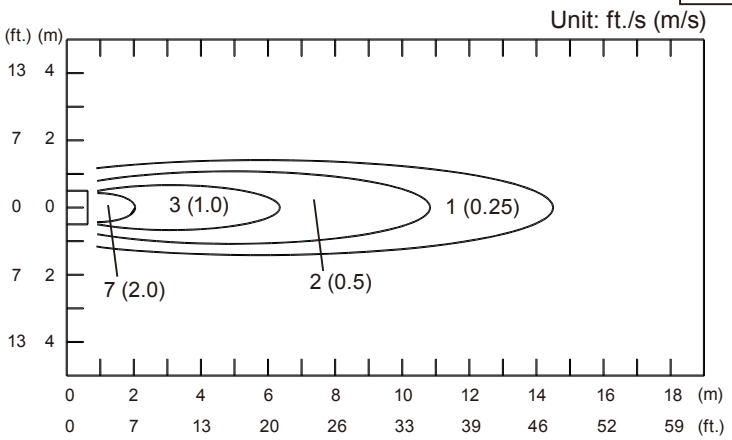
Side view
Vertical airflow direction louver : Down
Horizontal airflow direction louver : Center

INDOOR UNITS

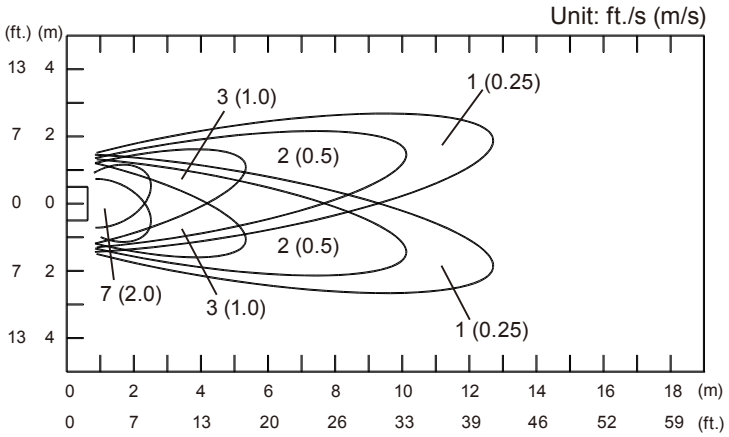
■ MODEL : ABUA36TLAV

Conditions
Fan speed : High
Operation mode : Fan

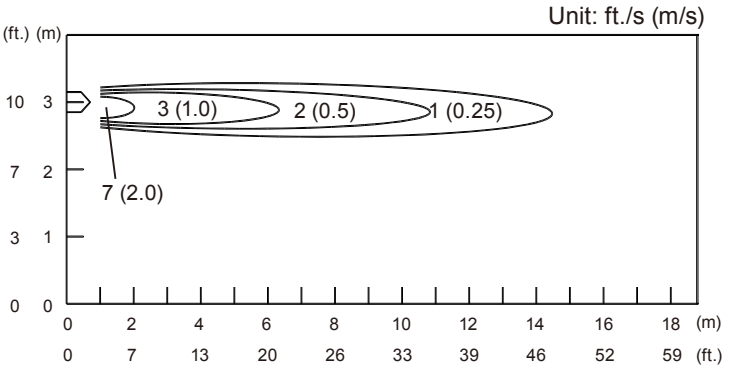
Top view
Vertical airflow direction louver : Up
Horizontal airflow direction louver : Center

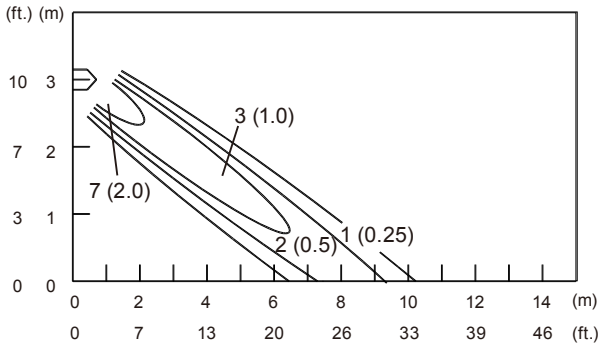


Top view
Vertical airflow direction louver : Up
Horizontal airflow direction louver : Right & Left

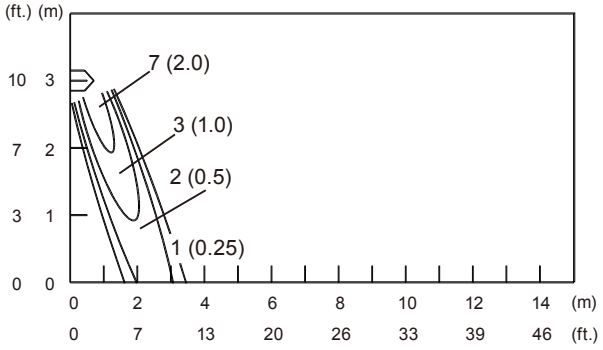


Side view
VVertical airflow direction louver : Up
Horizontal airflow direction louver : Center





Side view
Vertical airflow direction louver : Center
Horizontal airflow direction louver : Center



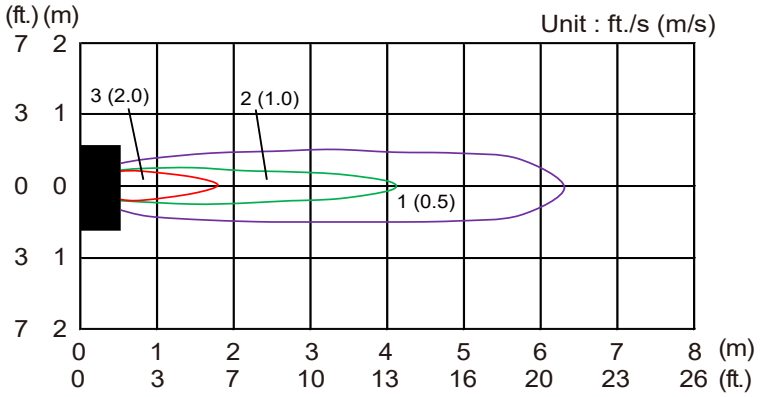
Side view
Vertical airflow direction louver : Down
Horizontal airflow direction louver : Center

5-9. WALL MOUNTED TYPE

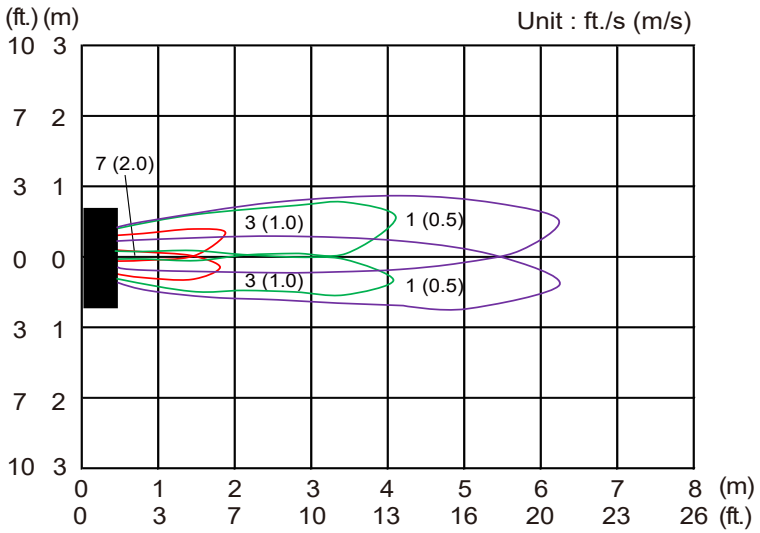
■ MODEL: ASUA4TLAV1

Conditions
Fan speed : High
Operation mode : Fan
Voltage : 230V

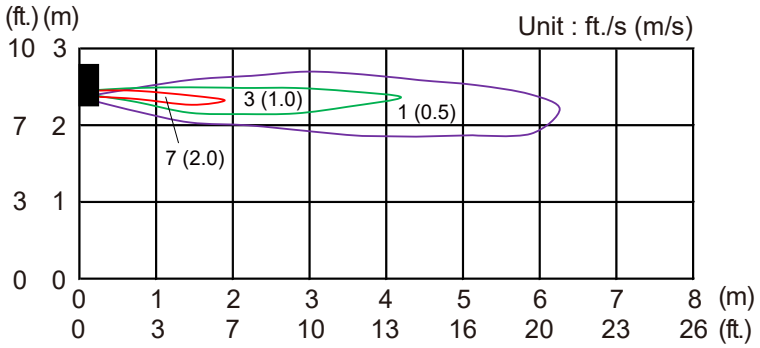
Top view
Vertical airflow direction louver: Up
Horizontal airflow direction louver: Center



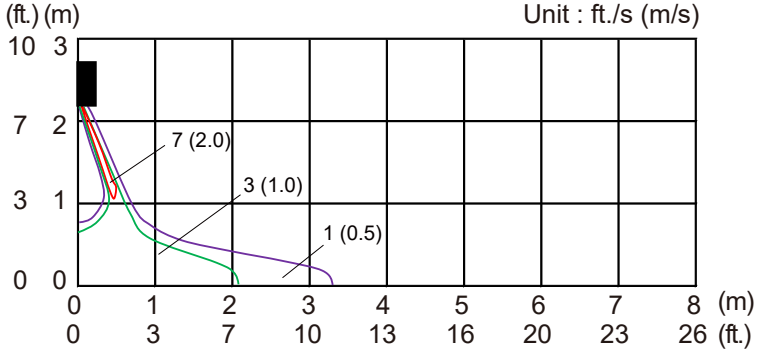
Top view
Vertical airflow direction louver: Up
Horizontal airflow direction louver: Right & Left



Side view
Vertical airflow direction louver: Up
Horizontal airflow direction louver: Center



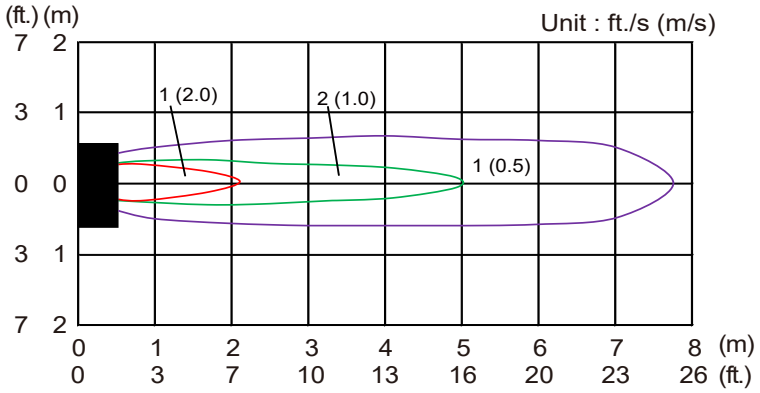
Side view
Vertical airflow direction louver: Down
Horizontal airflow direction louver: Center



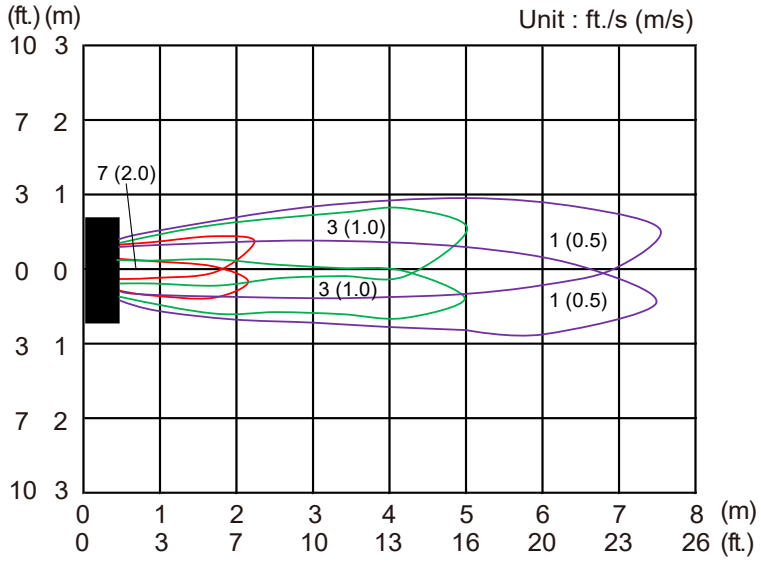
■ MODEL: ASUA7TLAV1

Conditions
Fan speed : High
Operation mode : Fan
Voltage : 230V

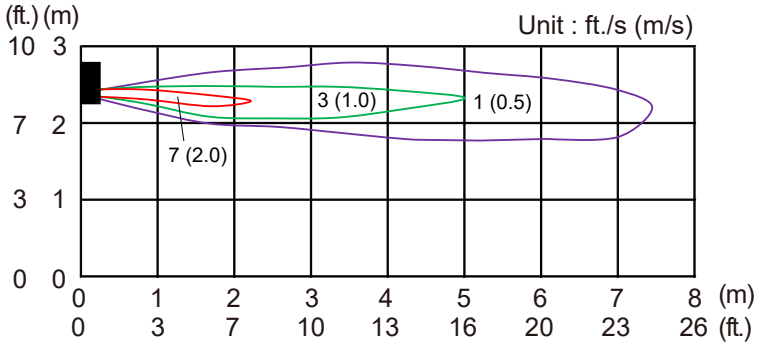
Top view
Vertical airflow direction louver: Up
Horizontal airflow direction louver: Center



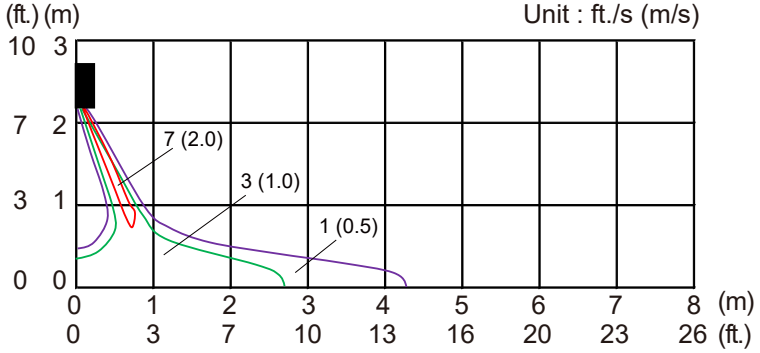
Top view
Vertical airflow direction louver: Up
Horizontal airflow direction louver: Right & Left



Side view
Vertical airflow direction louver: Up
Horizontal airflow direction louver: Center



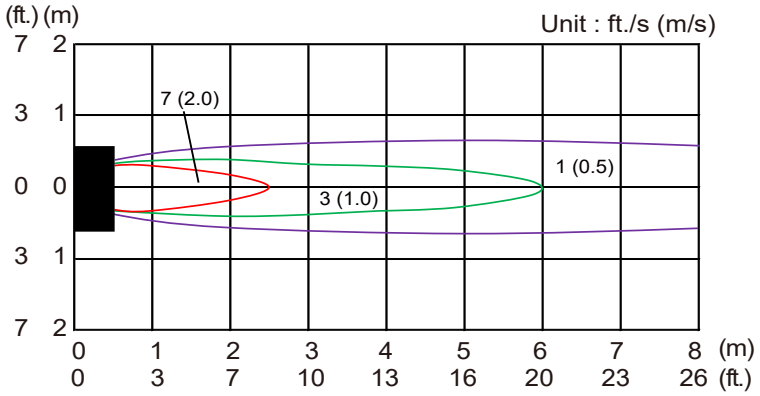
Side view
Vertical airflow direction louver: Down
Horizontal airflow direction louver: Center



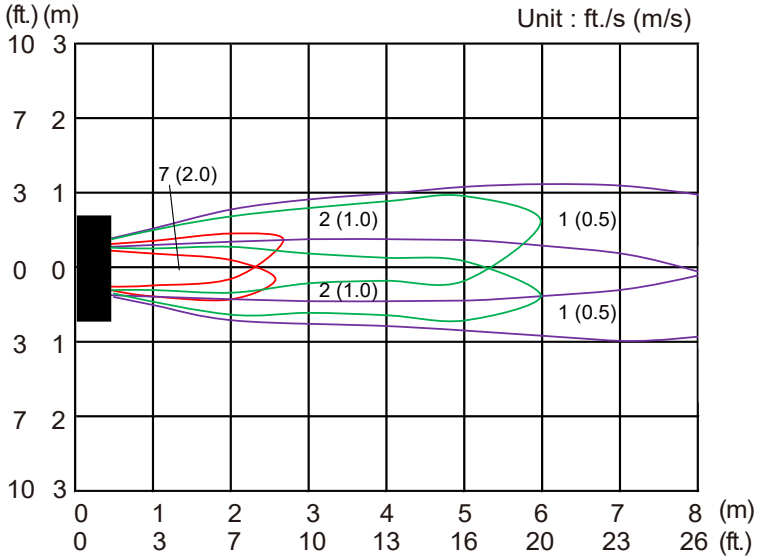
■ MODEL: ASUA9TLAV1

Conditions
Fan speed : High
Operation mode : Fan
Voltage : 230V

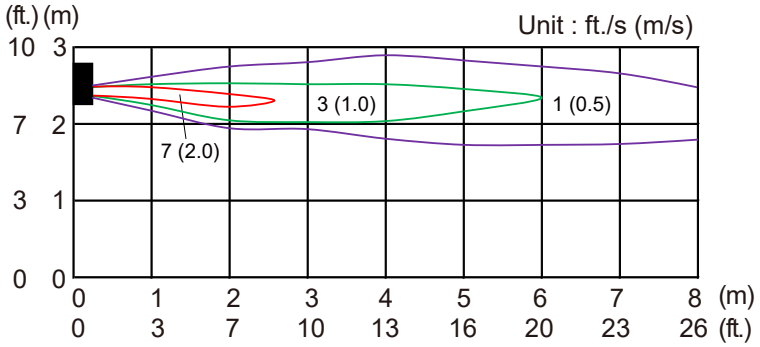
Top view
Vertical airflow direction louver: Up
Horizontal airflow direction louver: Center



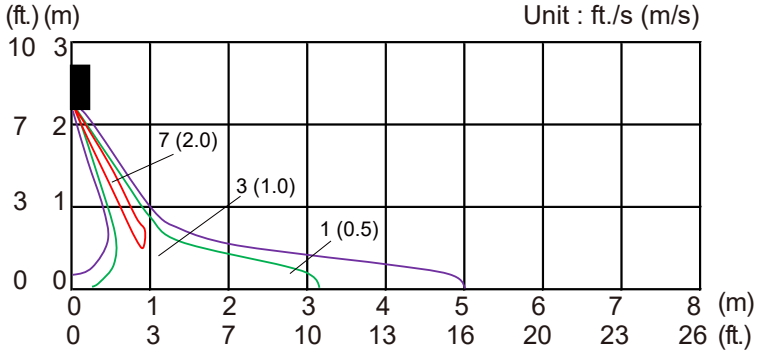
Top view
Vertical airflow direction louver: Up
Horizontal airflow direction louver: Right & Left



Side view
Vertical airflow direction louver: Up
Horizontal airflow direction louver: Center



Side view
Vertical airflow direction louver: Down
Horizontal airflow direction louver: Center

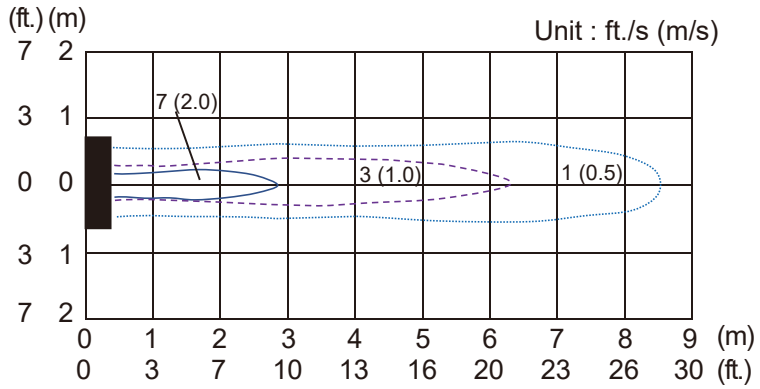


INDOOR UNITS

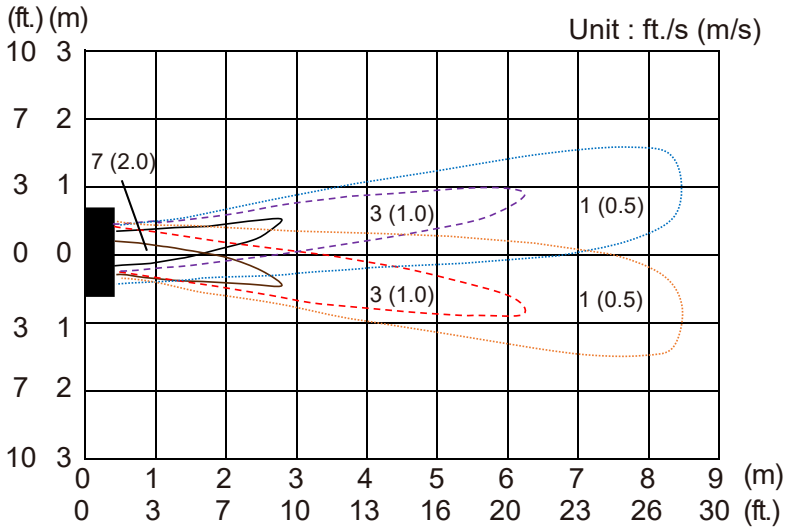
Conditions
Fan speed : High
Operation mode : Fan
Voltage : 230V

■ MODEL: ASUA12TLAV1

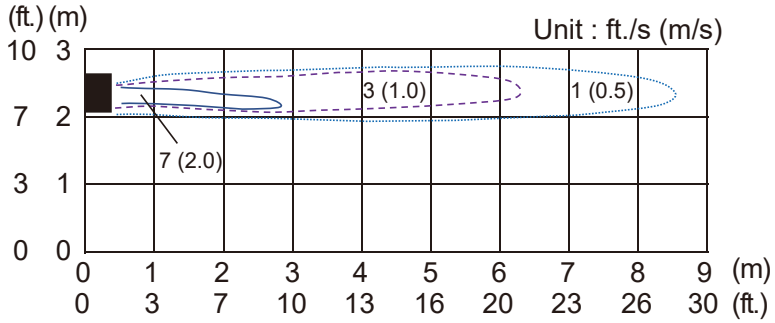
Top view
Vertical airflow direction louver: Up
Horizontal airflow direction louver: Center



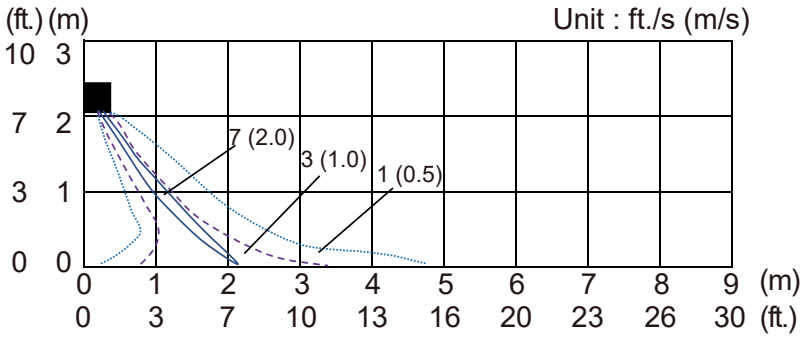
Top view
Vertical airflow direction louver: Up
Horizontal airflow direction louver: Right & Left



Side view
Vertical airflow direction louver: Up
Horizontal airflow direction louver: Center



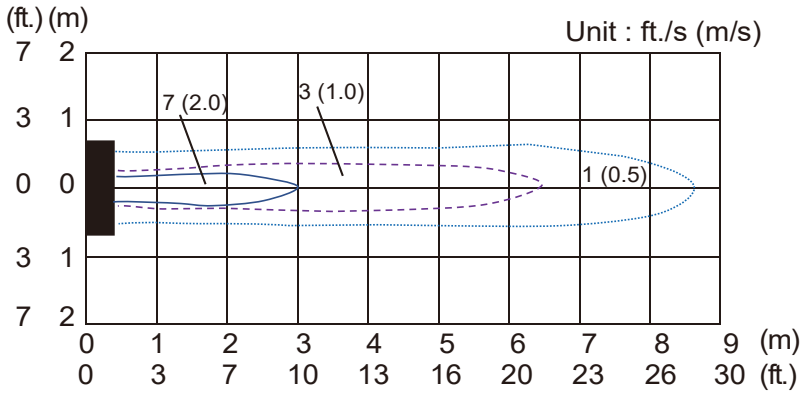
Side view
Vertical airflow direction louver: Down
Horizontal airflow direction louver: Center



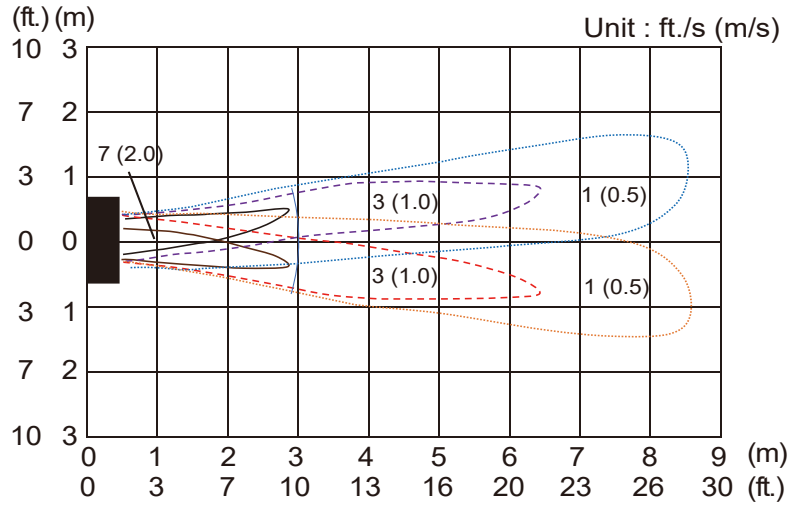
■ MODEL: ASUA14TLAV1

Conditions
Fan speed : High
Operation mode : Fan
Voltage : 230V

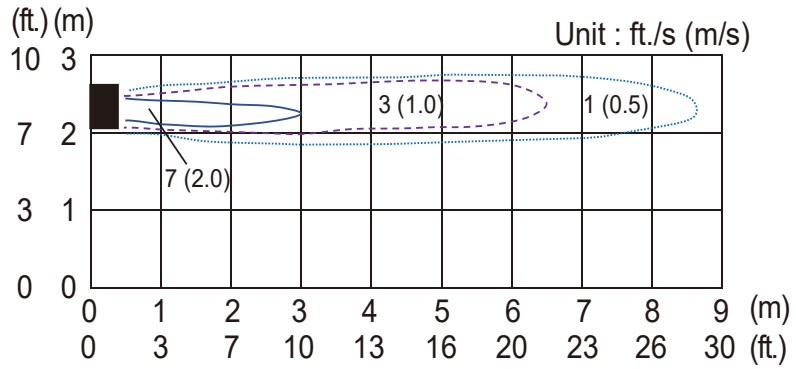
Top view
Vertical airflow direction louver: Up
Horizontal airflow direction louver: Center



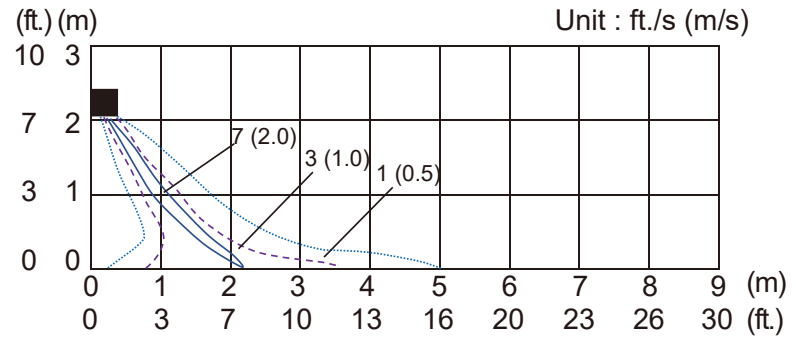
Top view
Vertical airflow direction louver: Up
Horizontal airflow direction louver: Right & Left



Side view
Vertical airflow direction louver: Up
Horizontal airflow direction louver: Center



Side view
Vertical airflow direction louver: Down
Horizontal airflow direction louver: Center

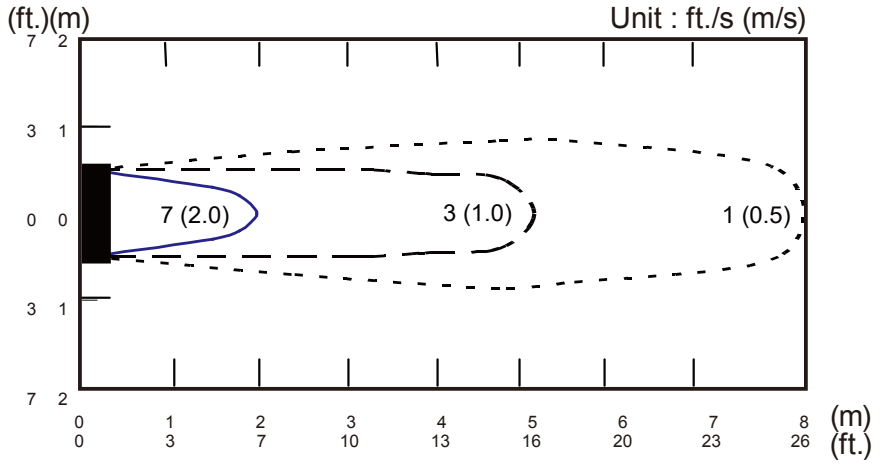


INDOOR UNITS

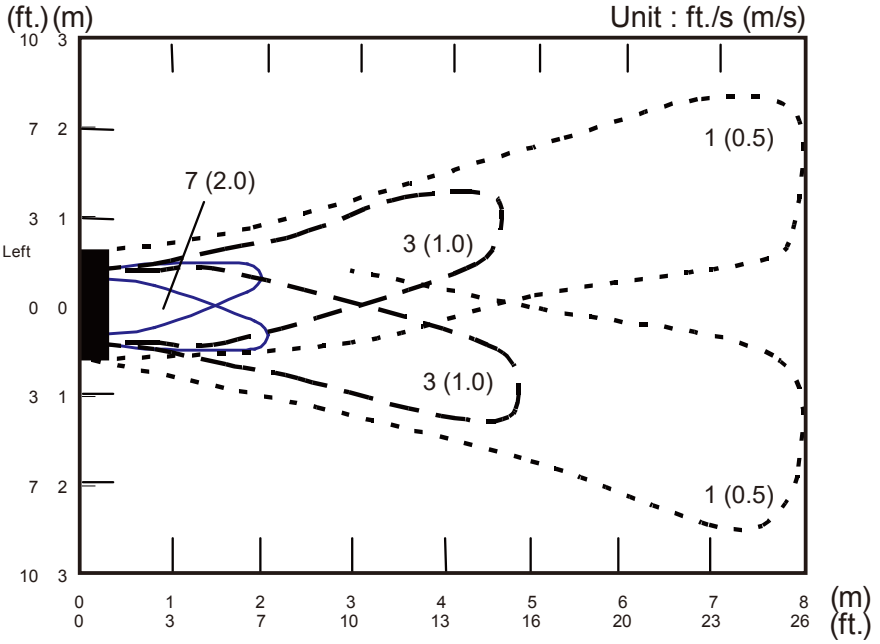
■ MODEL: ASUB18TLAV1

Conditions
Fan speed : High
Operation mode : Fan
Voltage : 230V

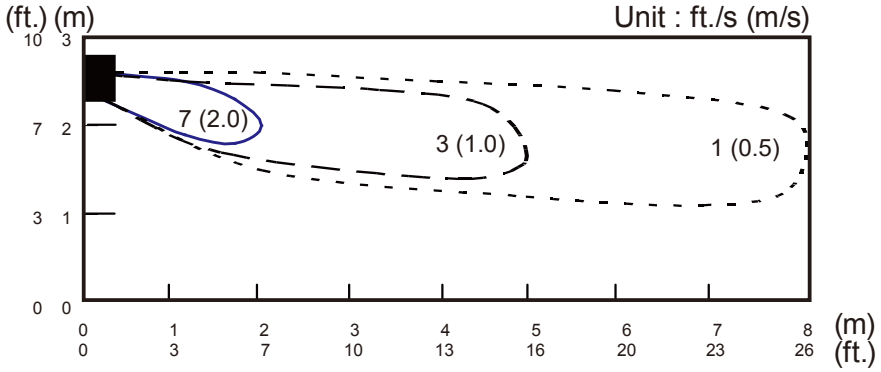
Top view
Vertical airflow direction louver: Up
Horizontal airflow direction louver: Center



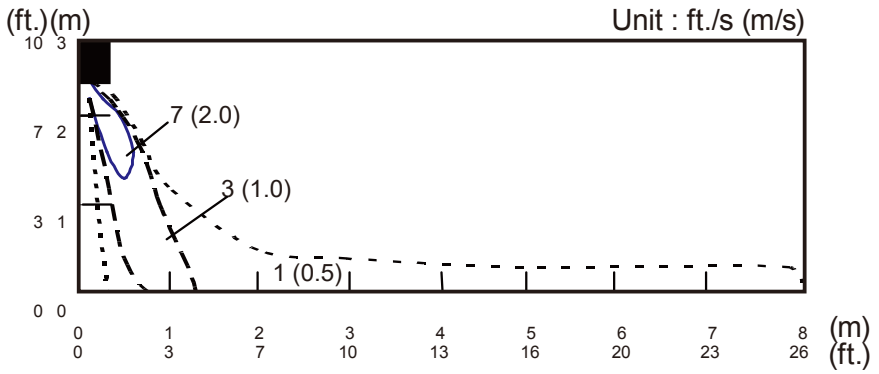
Top view
Vertical airflow direction louver: Up
Horizontal airflow direction louver: Right & Left



Side view
Vertical airflow direction louver: Up
Horizontal airflow direction louver: Center



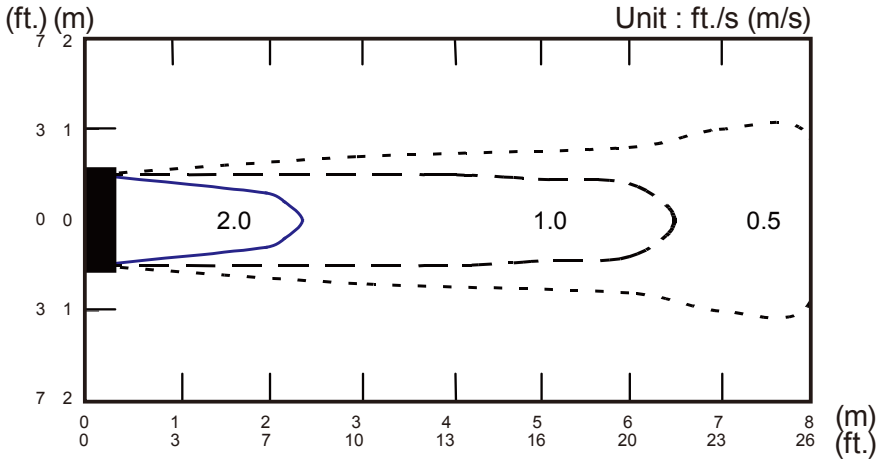
Side view
Vertical airflow direction louver: Down
Horizontal airflow direction louver: Center



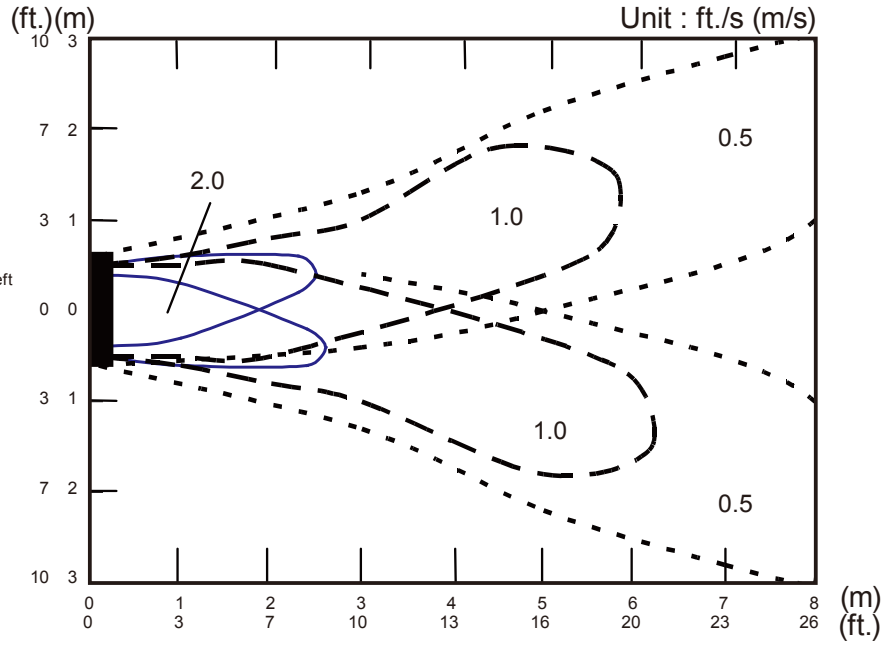
■ MODEL: ASUB24TLAV1

Conditions
Fan speed : High
Operation mode : Fan
Voltage : 230V

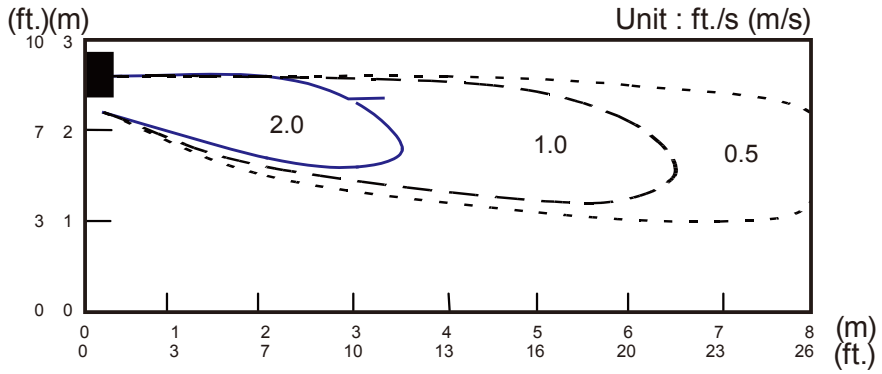
Top view
Vertical airflow direction louver: Up
Horizontal airflow direction louver: Center



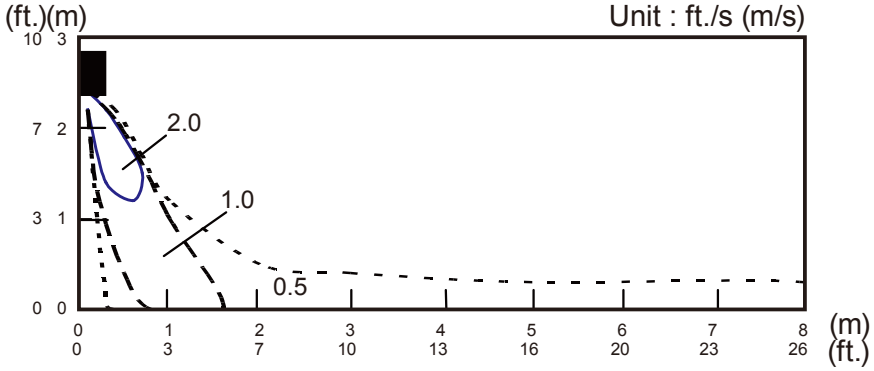
Top view
Vertical airflow direction louver: Up
Horizontal airflow direction louver: Right & Left



Side view
Vertical airflow direction louver: Up
Horizontal airflow direction louver: Center



Side view
Vertical airflow direction louver: Down
Horizontal airflow direction louver: Center

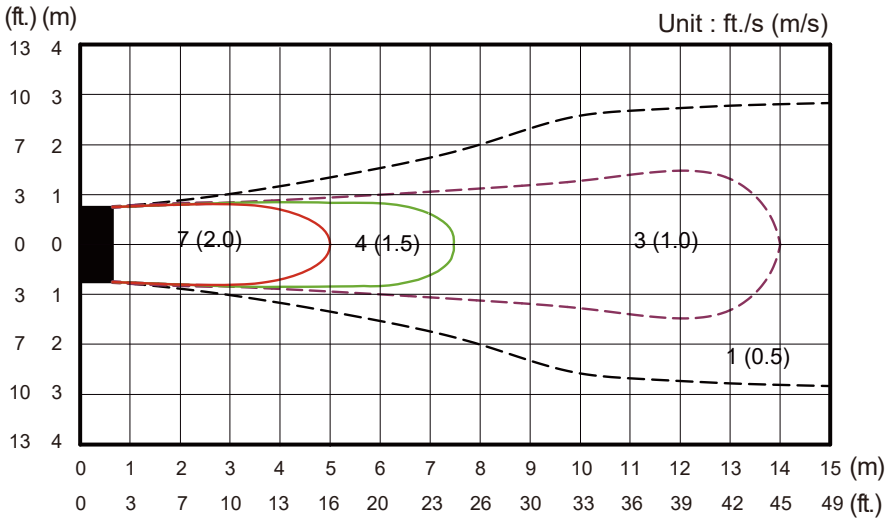


INDOOR UNITS

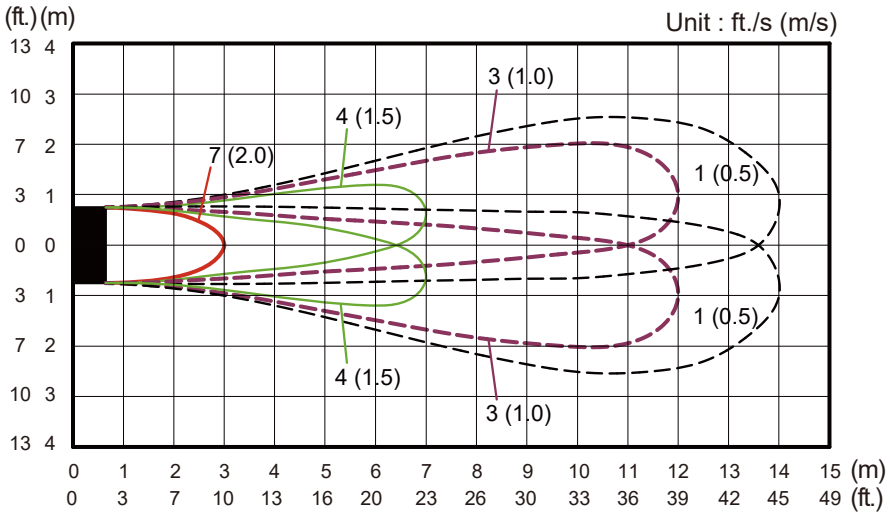
■ MODEL: ASUB30TLAV1

Conditions
Fan speed : High
Operation mode : Fan
Voltage : 230V

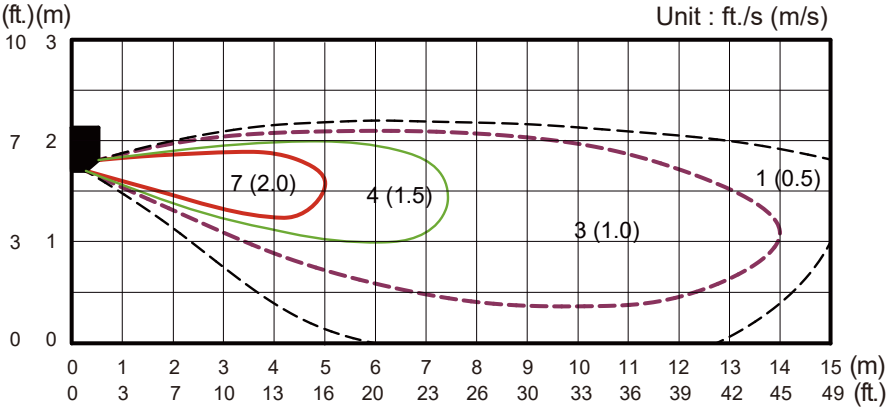
Top view
Vertical airflow direction louver: Up
Horizontal airflow direction louver: Center



Top view
Vertical airflow direction louver: Up
Horizontal airflow direction louver: Right & Left



Side view
Vertical airflow direction louver: Up
Horizontal airflow direction louver: Center

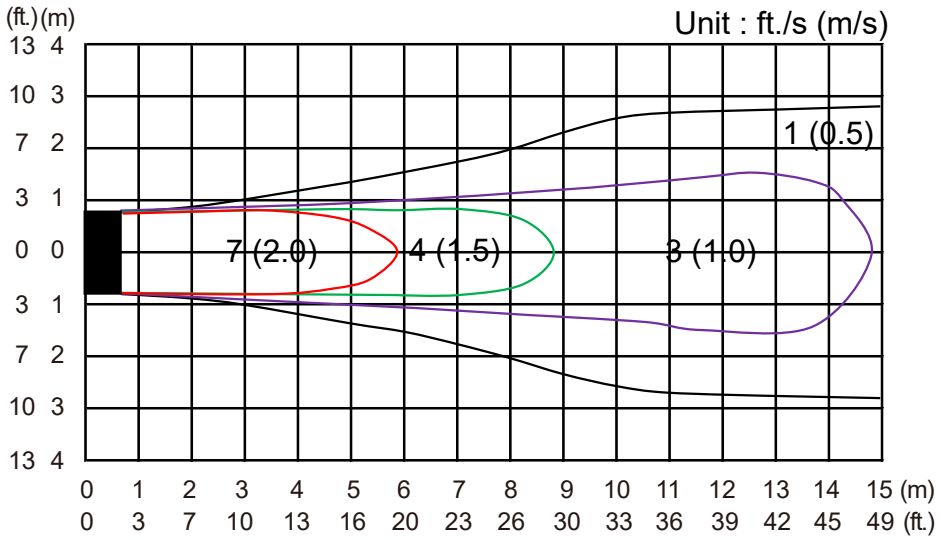


INDOOR UNITS

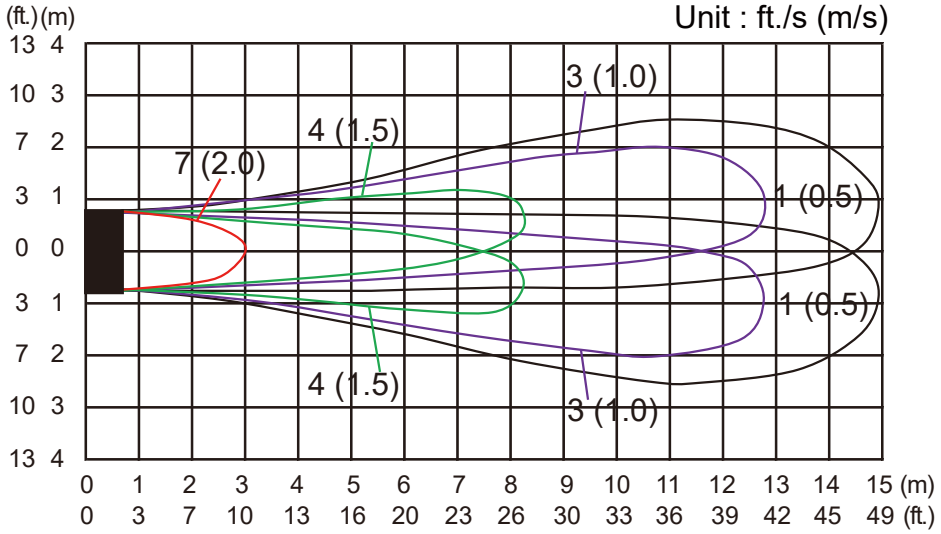
■ MODEL: ASUB36TLAV1

Conditions
Fan speed : High
Operation mode : Fan
Voltage : 230V

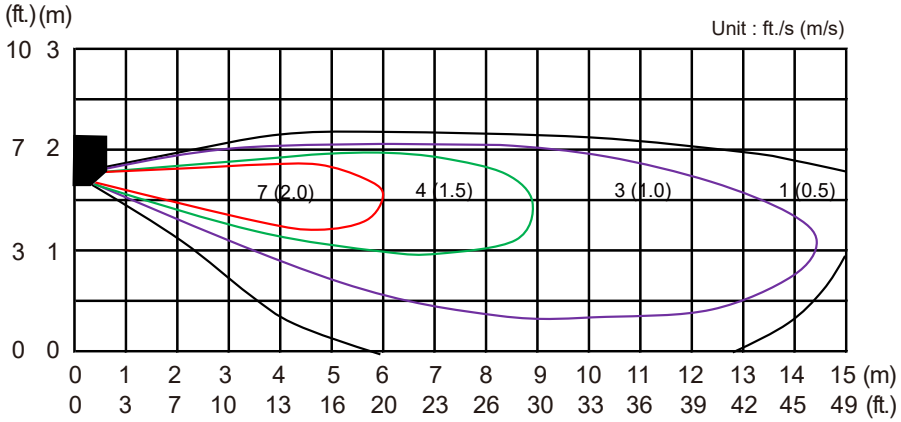
Top view
Vertical airflow direction louver: Up
Horizontal airflow direction louver: Center



Top view
Vertical airflow direction louver: Up
Horizontal airflow direction louver: Right & Left



Side view
Vertical airflow direction louver: Up
Horizontal airflow direction louver: Center

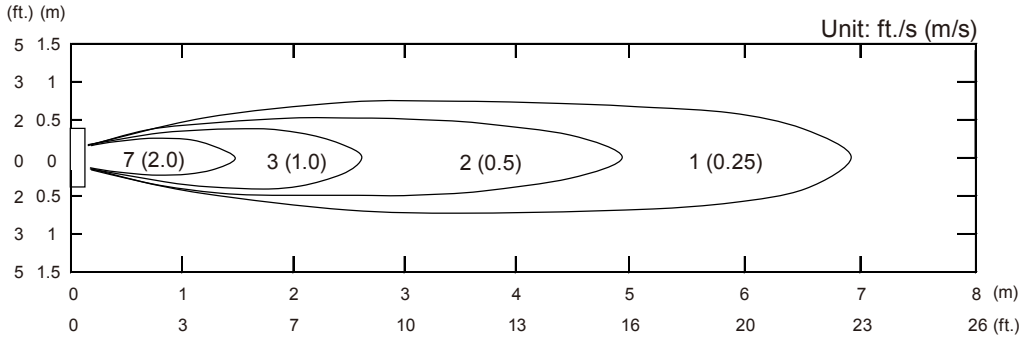


INDOOR UNITS

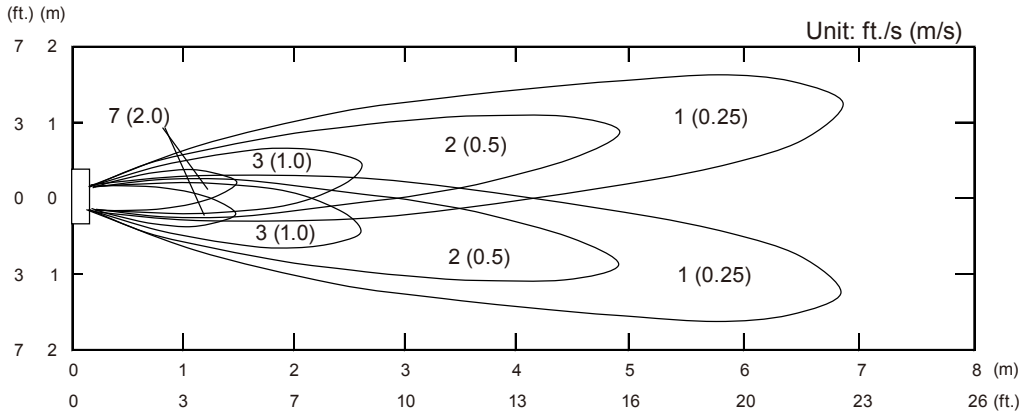
■ MODELS : ASUA7TLAV, ASUA9TLAV

Conditions
Fan speed : High
Operation mode : Fan

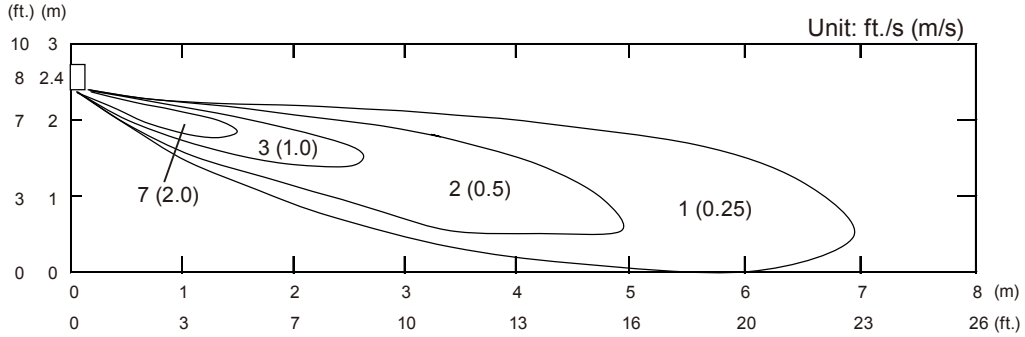
Top view
Vertical airflow direction louver : Up
Horizontal airflow direction louver : Center



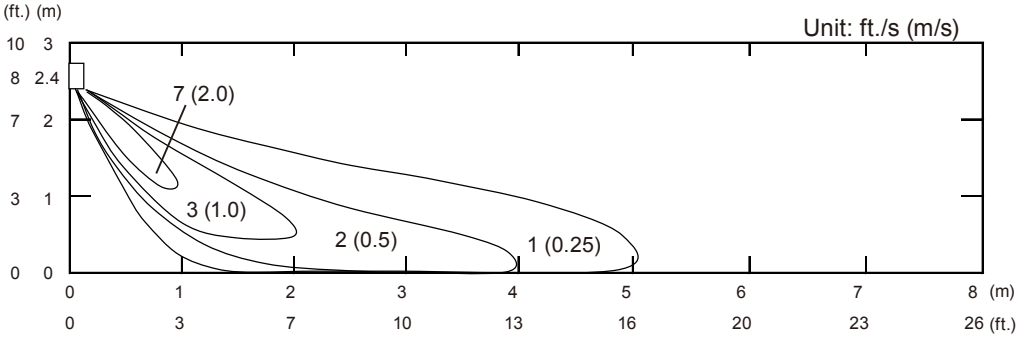
Top view
Vertical airflow direction louver : Up
Horizontal airflow direction louver : Right & Left



Side view
Vertical airflow direction louver : Up
Horizontal airflow direction louver : Center



Side view
Vertical airflow direction louver : Down
Horizontal airflow direction louver : Center

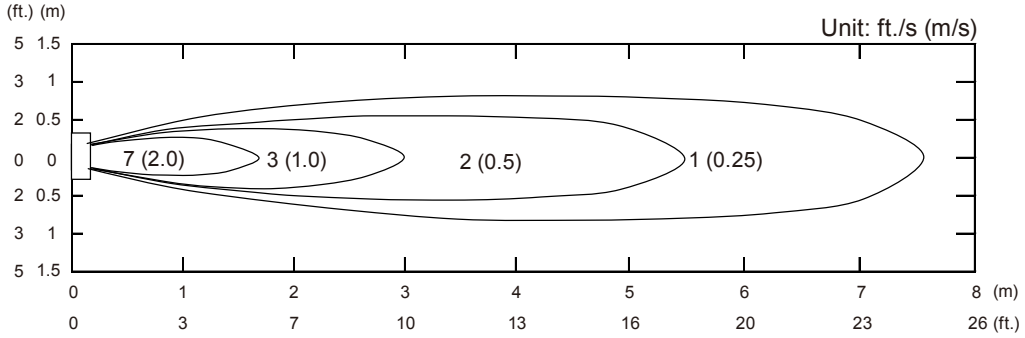


INDOOR UNITS

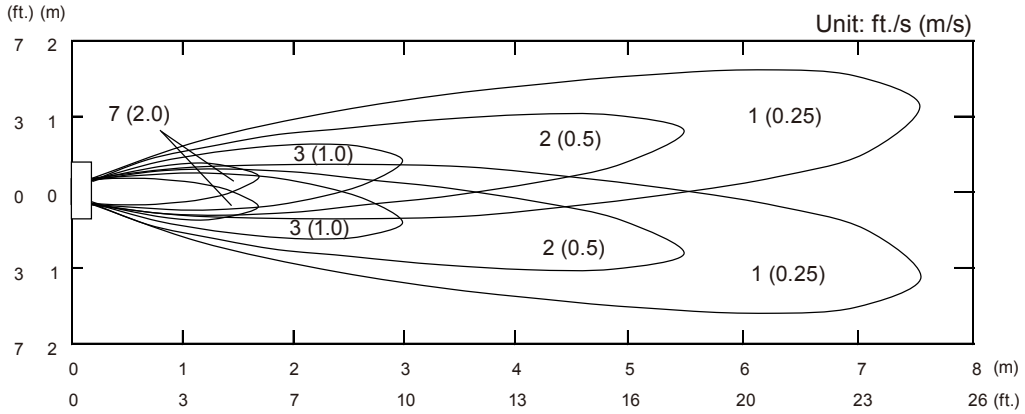
■ MODEL : ASUA12TLAV

Conditions
Fan speed : High
Operation mode : Fan

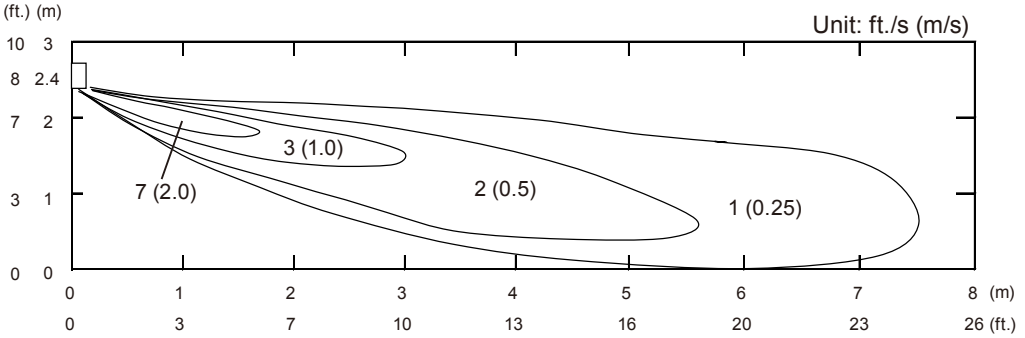
Top view
Vertical airflow direction louver : Up
Horizontal airflow direction louver : Center



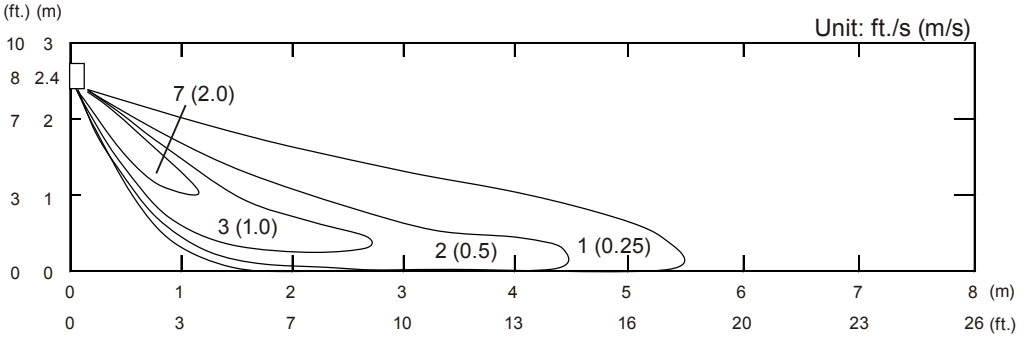
Top view
Vertical airflow direction louver : Up
Horizontal airflow direction louver : Right & Left



Side view
Vertical airflow direction louver : Up
Horizontal airflow direction louver : Center



Side view
Vertical airflow direction louver : Down
Horizontal airflow direction louver : Center

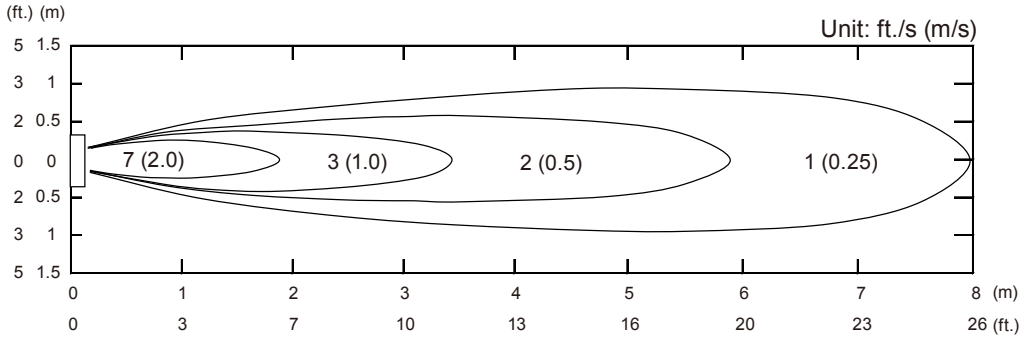


INDOOR UNITS

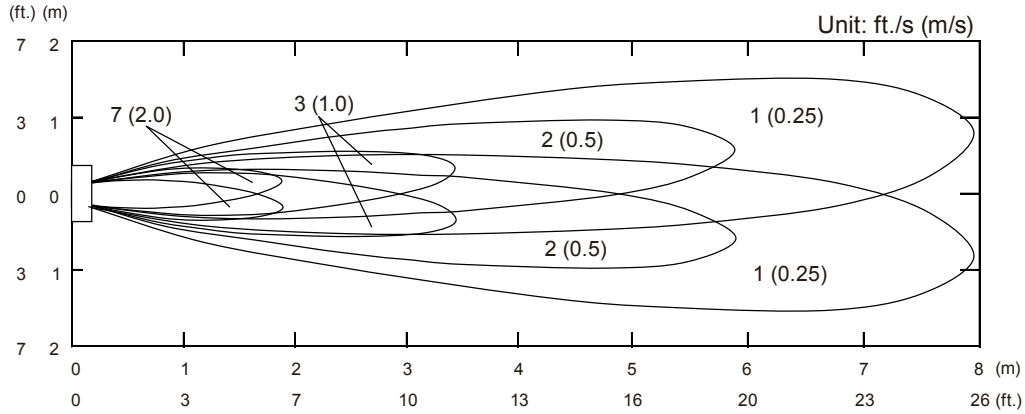
■ MODEL : ASUA14TLAV

Conditions
Fan speed : High
Operation mode : Fan

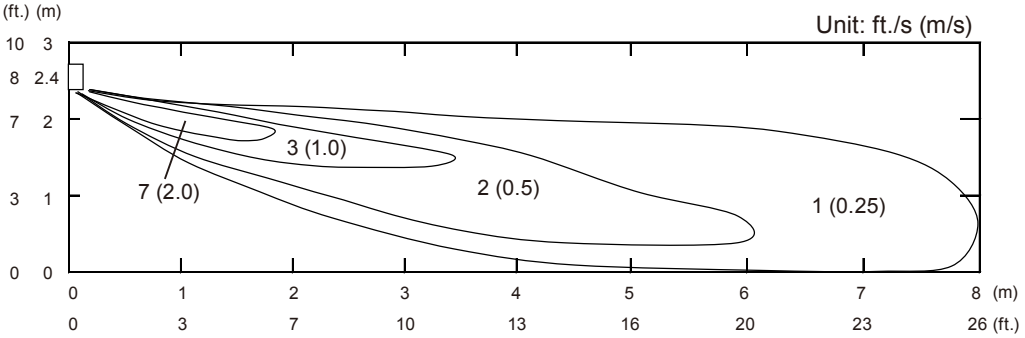
Top view
Vertical airflow direction louver : Up
Horizontal airflow direction louver : Center



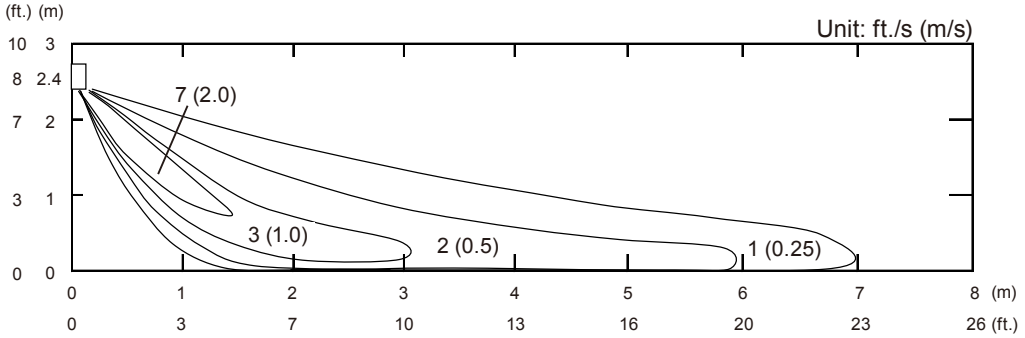
Top view
Vertical airflow direction louver : Up
Horizontal airflow direction louver : Right & Left



Side view
Vertical airflow direction louver : Up
Horizontal airflow direction louver : Center



Side view
Vertical airflow direction louver : Down
Horizontal airflow direction louver : Center

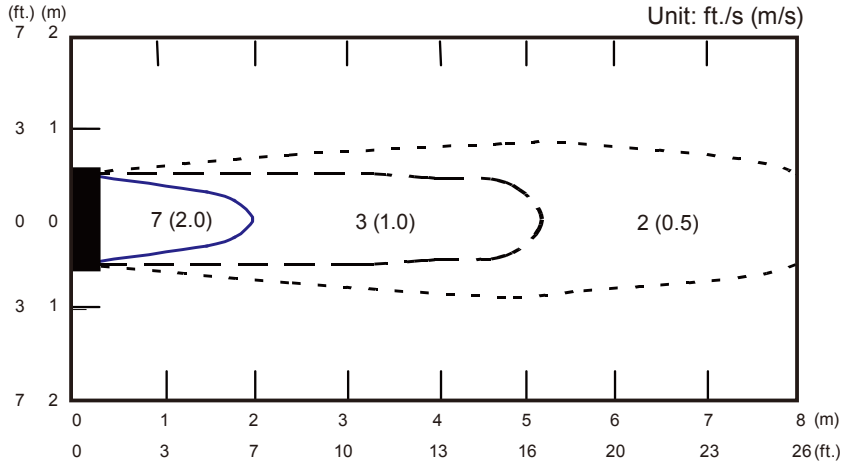


INDOOR UNITS

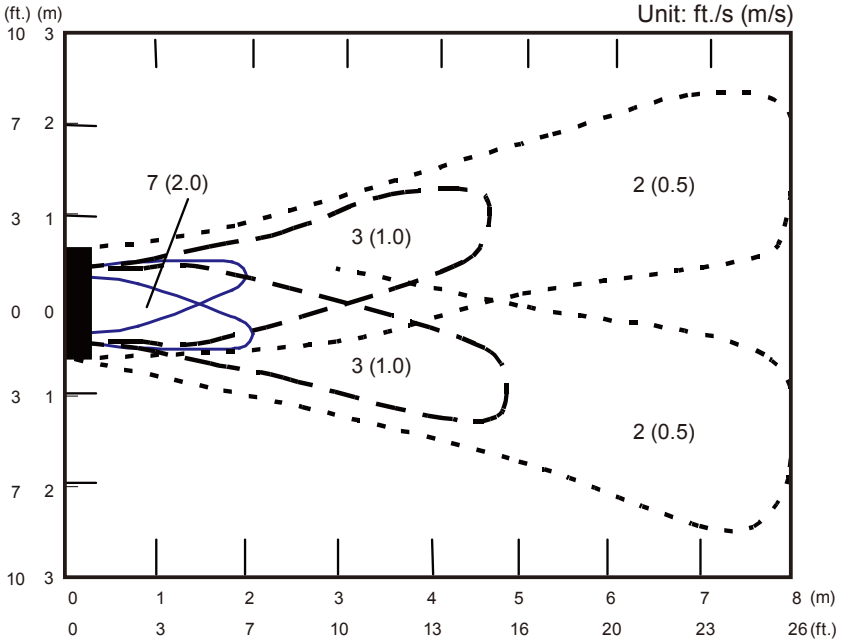
■ MODEL : ASUB18TLAV

Conditions
Fan speed : High
Operation mode : Fan

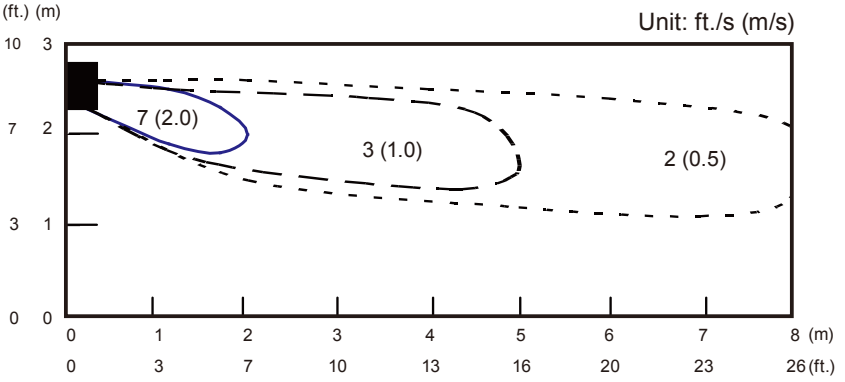
Top view
Vertical airflow direction louver : Up
Horizontal airflow direction louver : Center



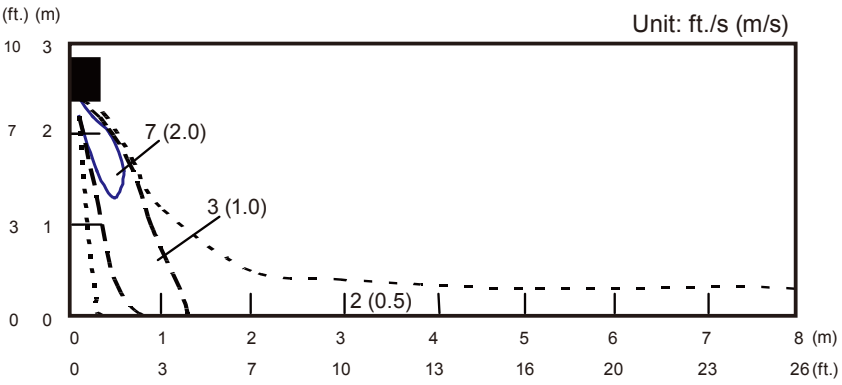
Top view
Vertical airflow direction louver : Up
Horizontal airflow direction louver : Right & Left



Side view
Vertical airflow direction louver : Up
Horizontal airflow direction louver : Center



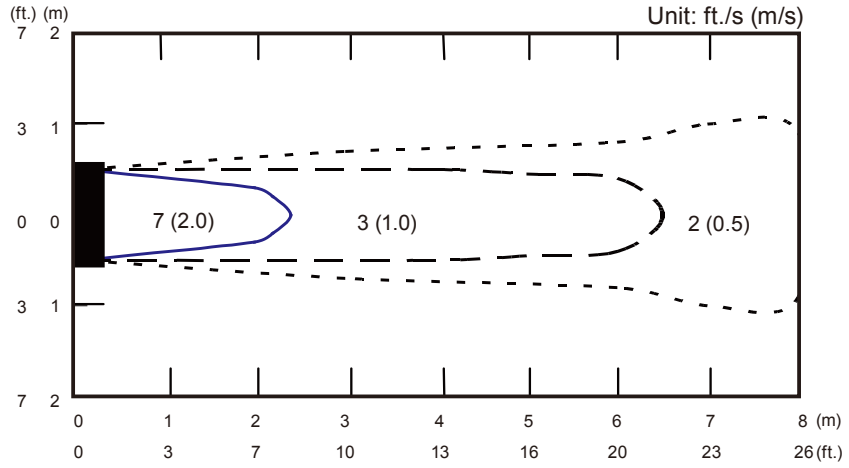
Side view
Vertical airflow direction louver : Down
Horizontal airflow direction louver : Center



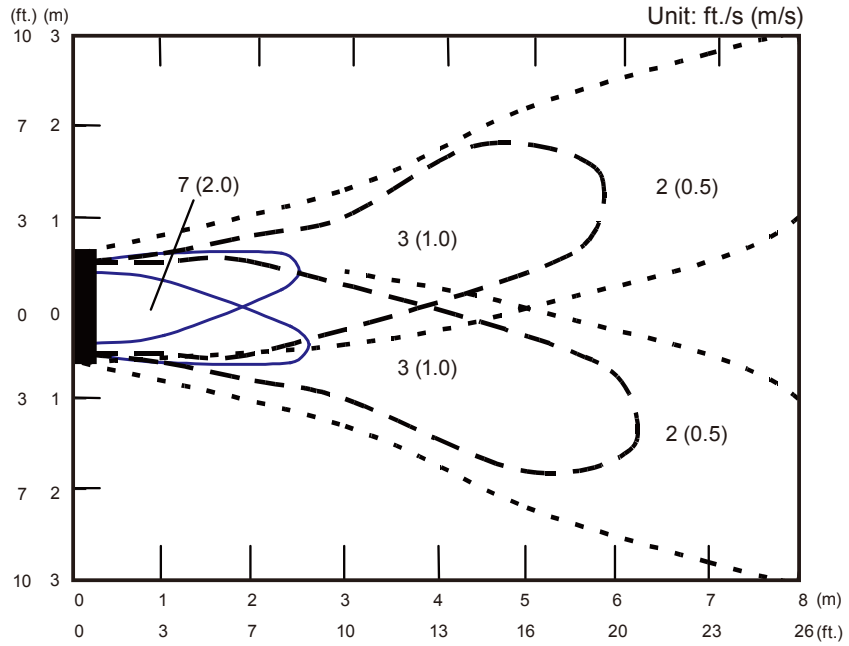
■ MODEL : ASUB24TLAV

Conditions
Fan speed : High
Operation mode : Fan

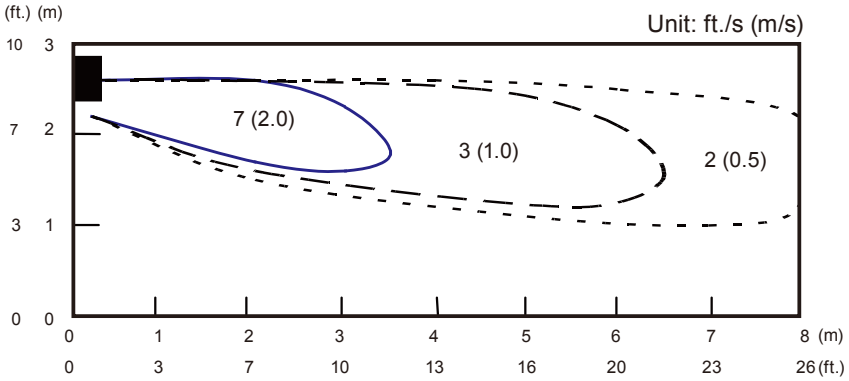
Top view
Vertical airflow direction louver : Up
Horizontal airflow direction louver : Center



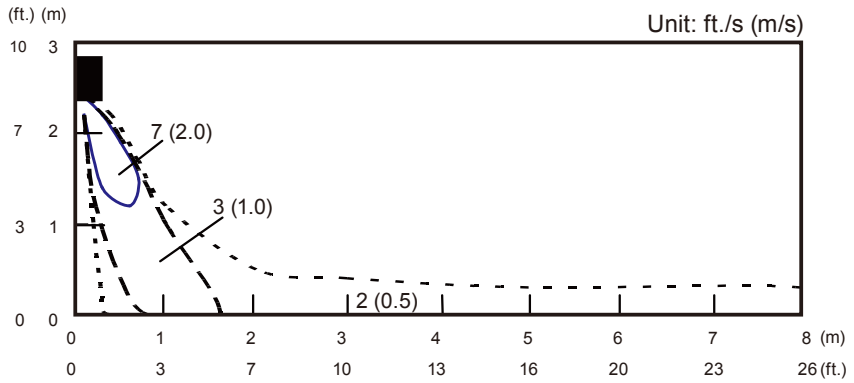
Top view
Vertical airflow direction louver : Up
Horizontal airflow direction louver : Right & Left



Side view
Vertical airflow direction louver : Up
Horizontal airflow direction louver : Center



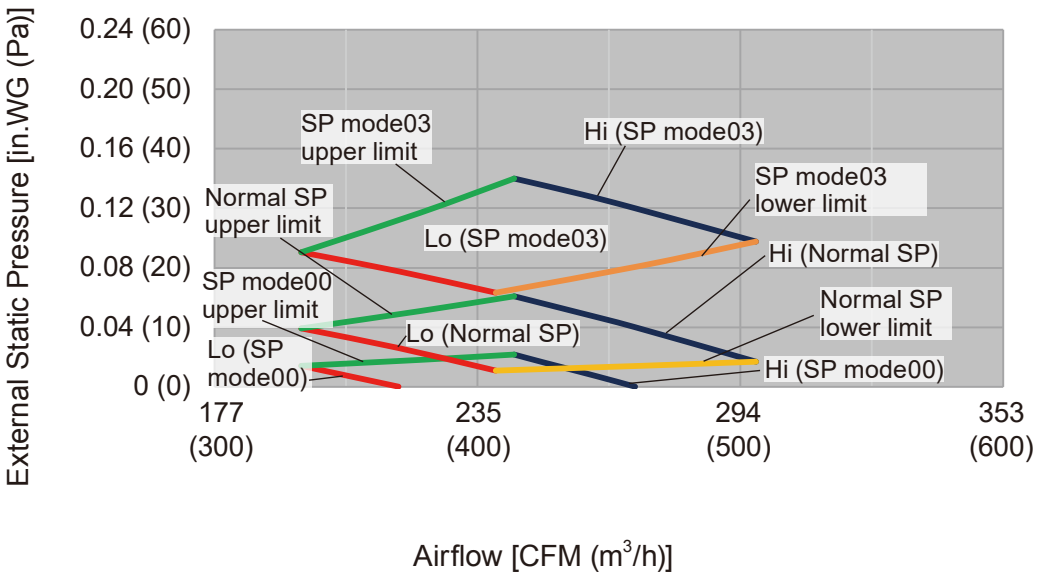
Side view
Vertical airflow direction louver : Down
Horizontal airflow direction louver : Center

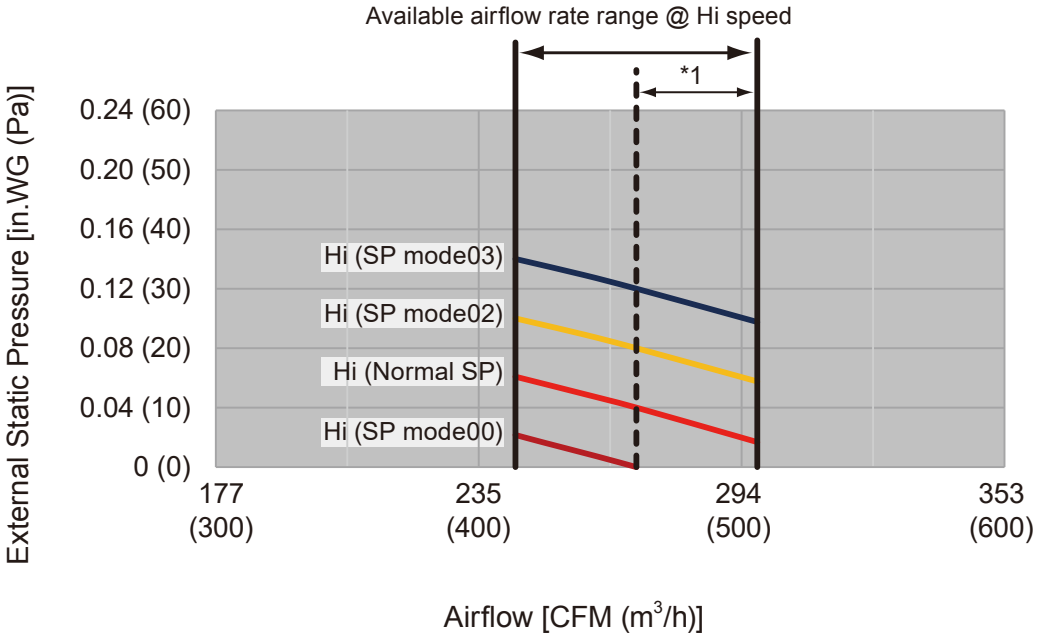


6. FAN PERFORMANCE CURVE

6-1. MINI DUCT TYPE

■ MODEL: ARUL4TLAV1

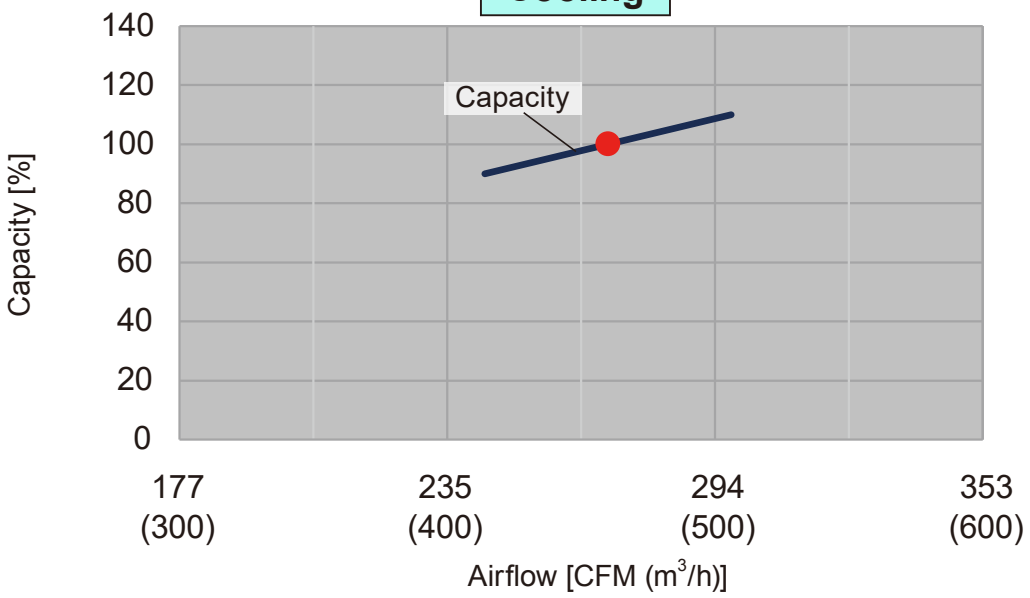




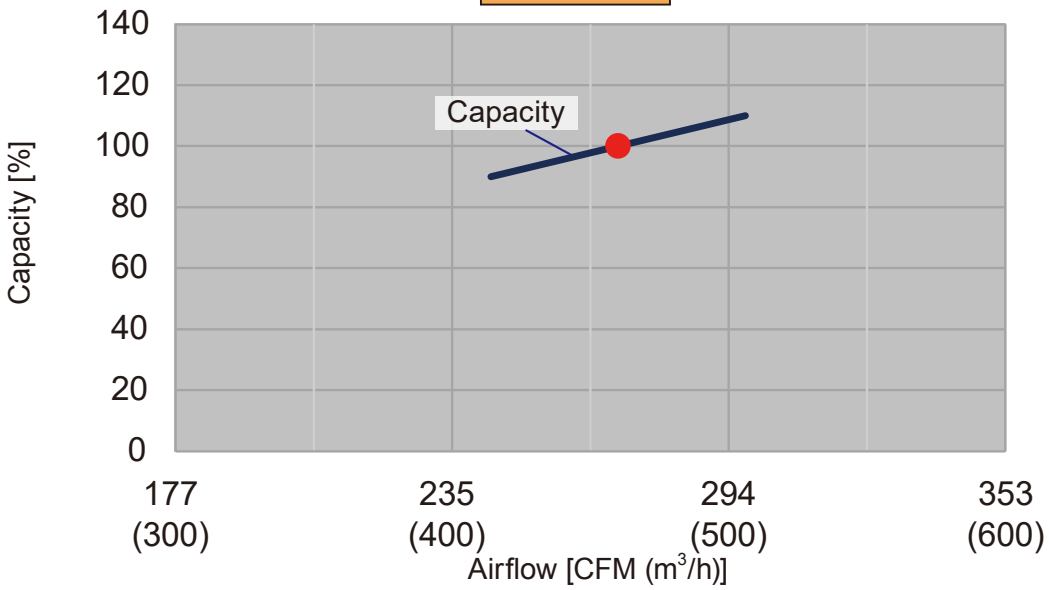
*1: Available airflow rate range when Auto louver grille (option) is installed.
Fan speed : High
Vertical flap : Up

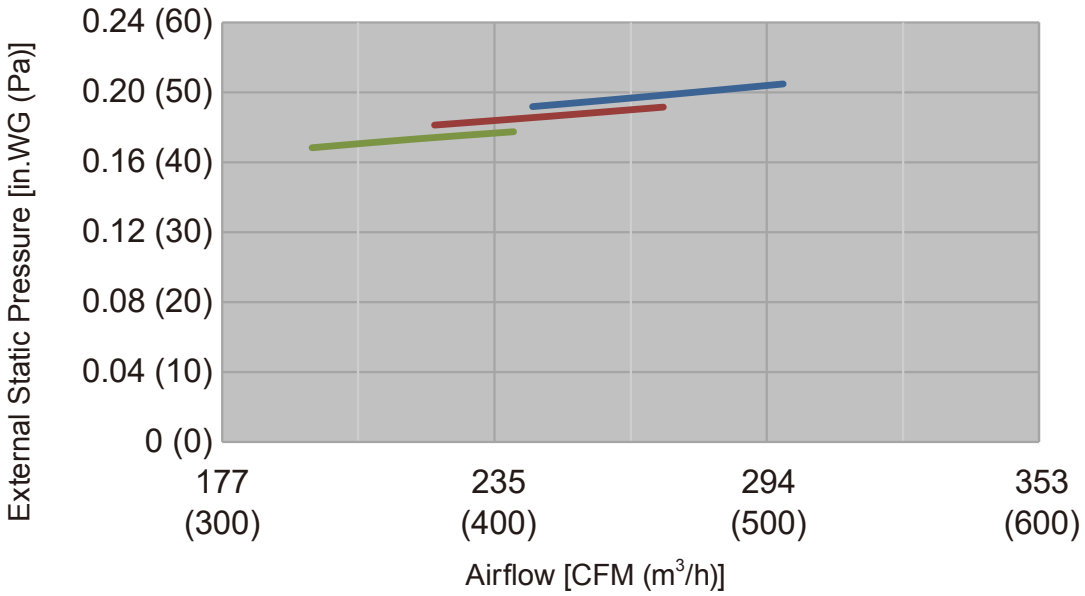
INDOOR UNITS

Cooling



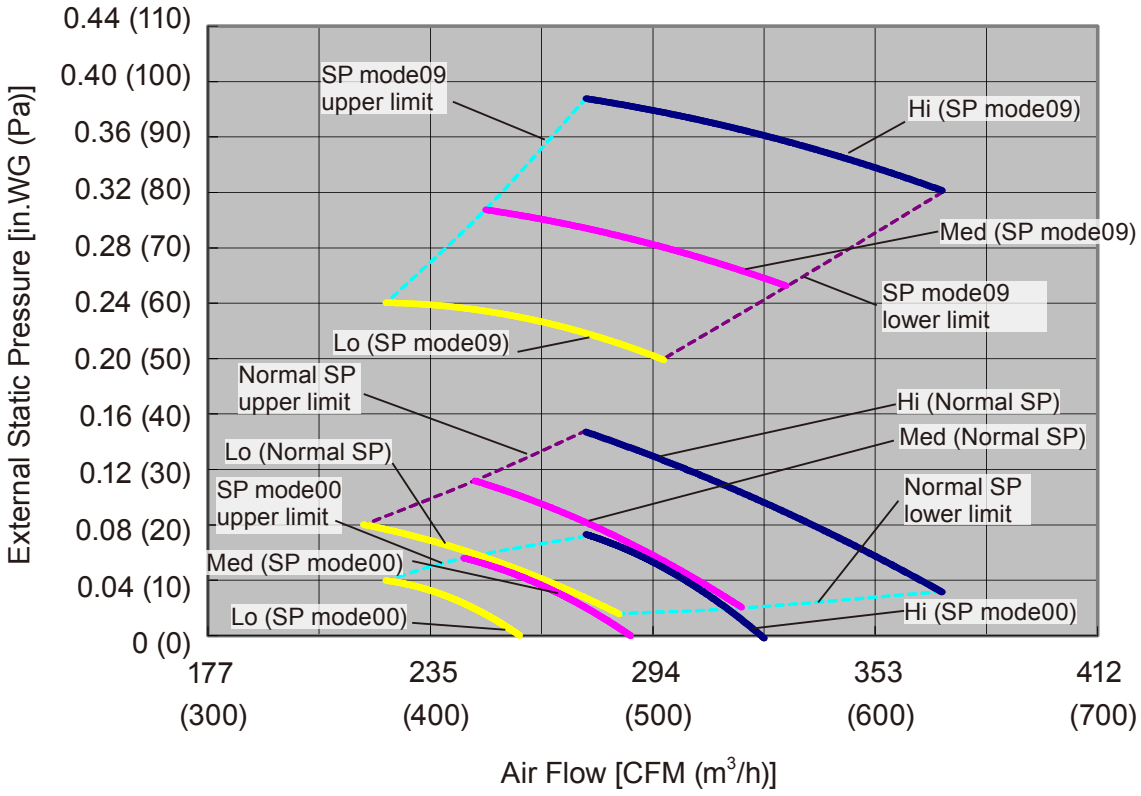
Heating

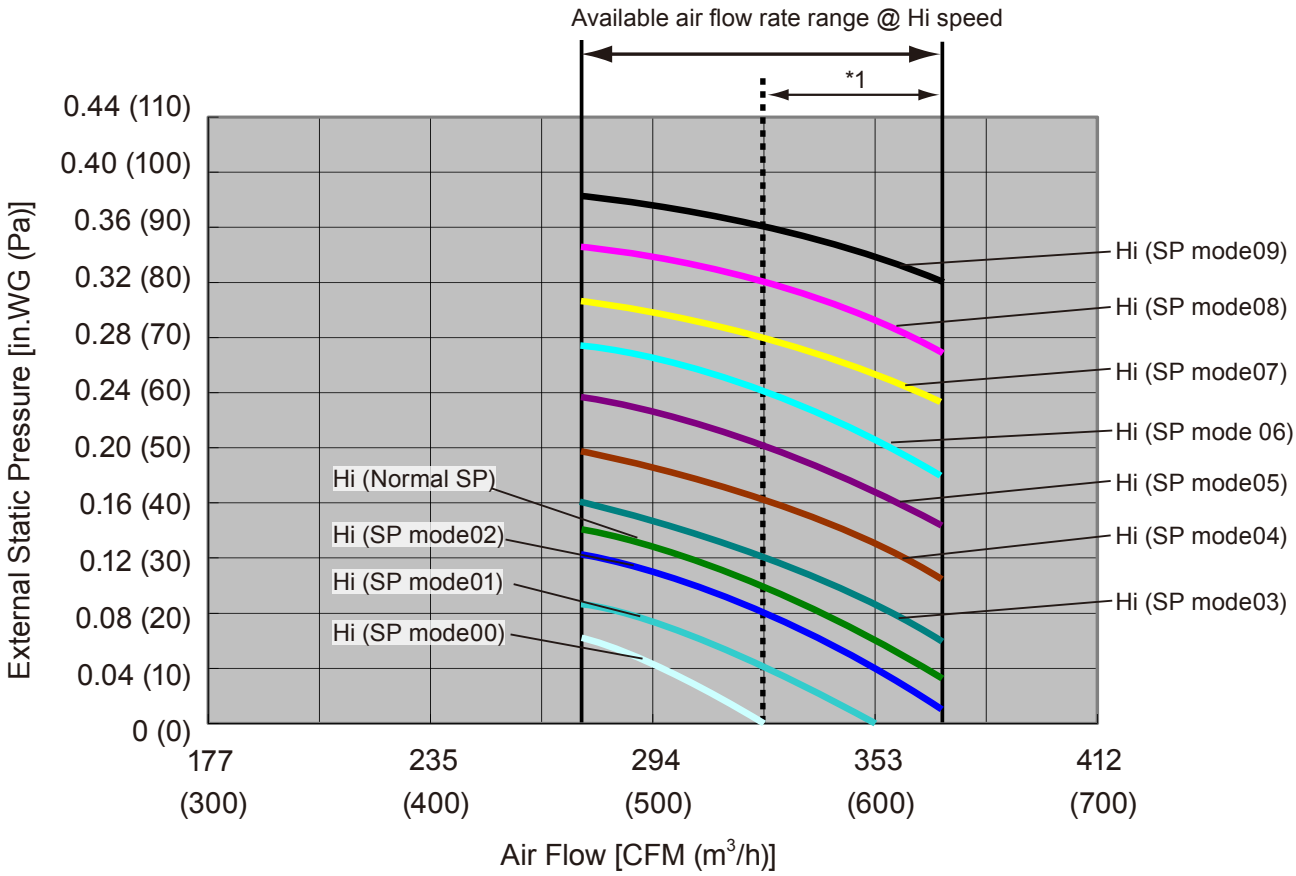




6-2. SLIM DUCT / SLIM CONCEALED FLOOR TYPE

■ MODEL : ARUL7TLAV

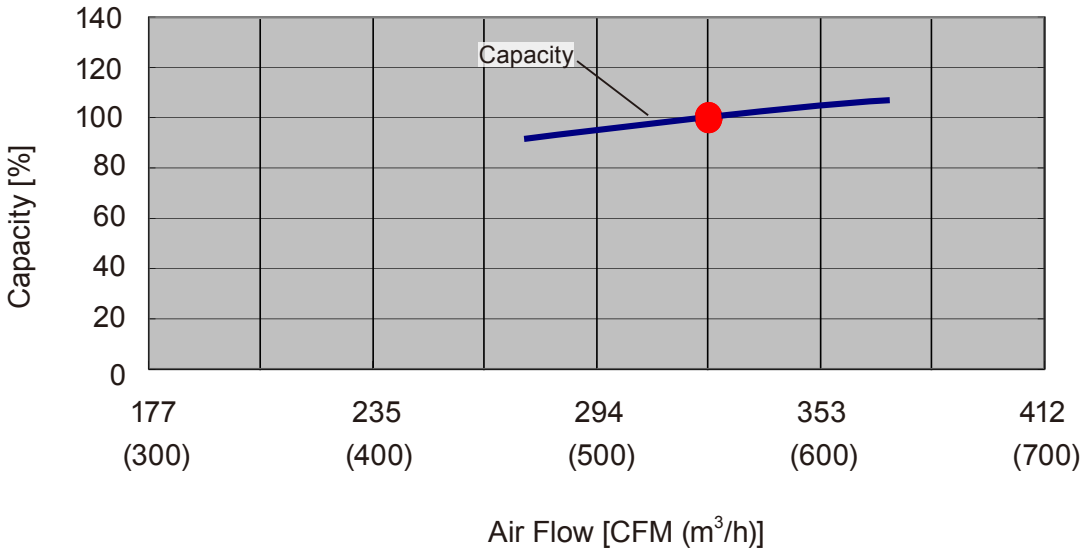




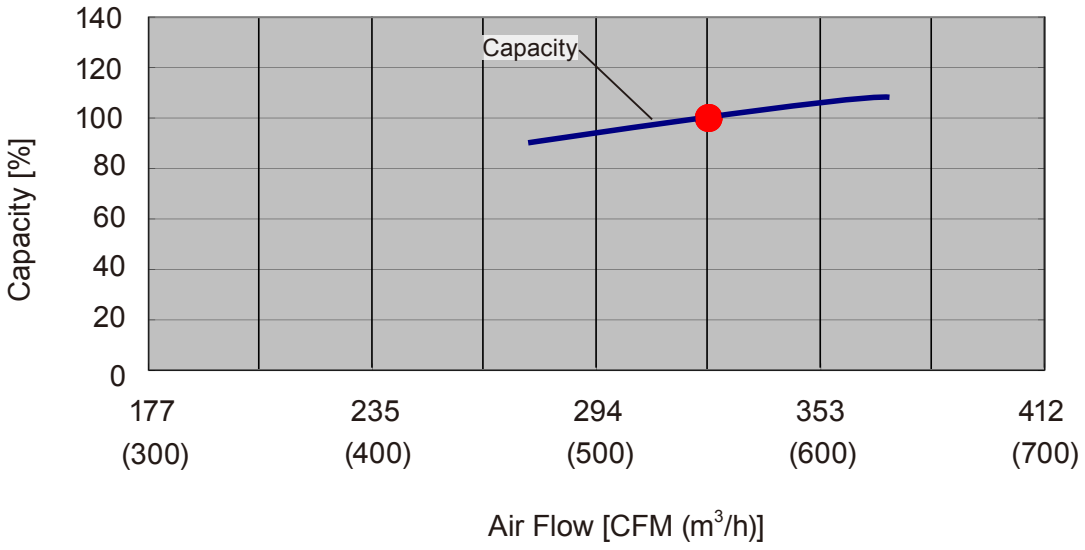
*1: Available air flow rate range when Auto louver grille (option) is installed.
Fan speed : High
Vertical airflow direction louver : Up

INDOOR UNITS

Cooling

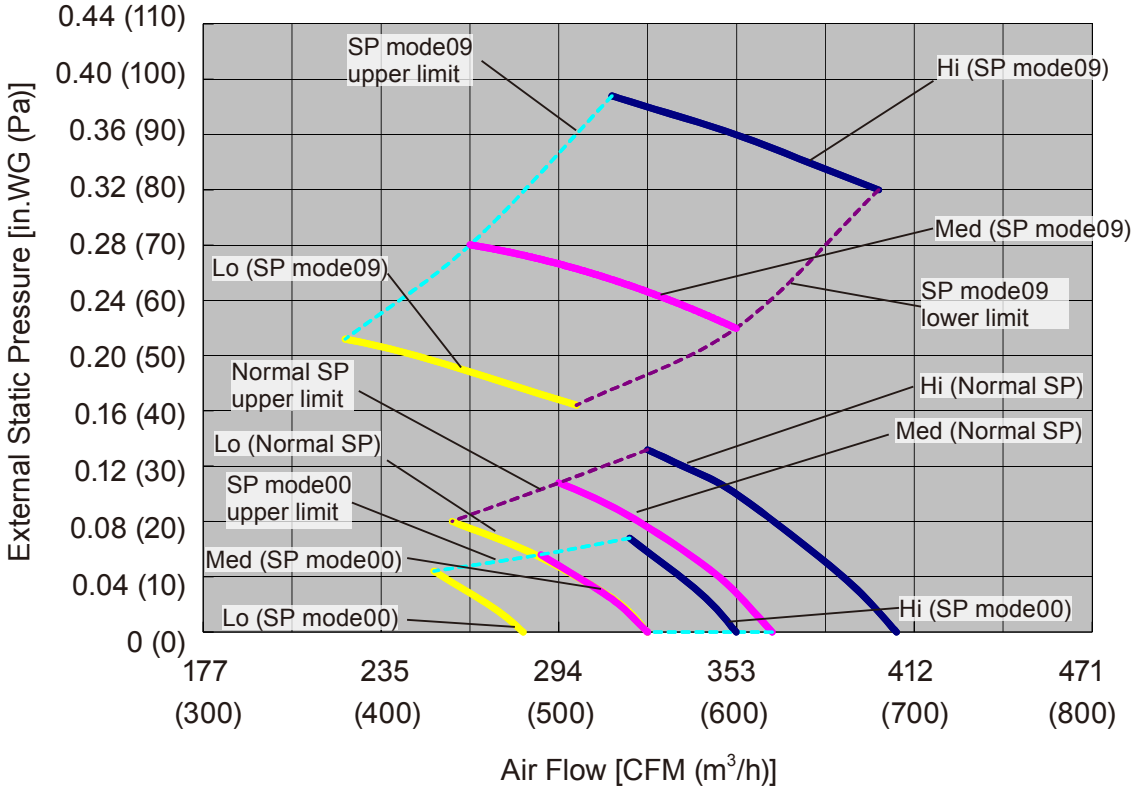


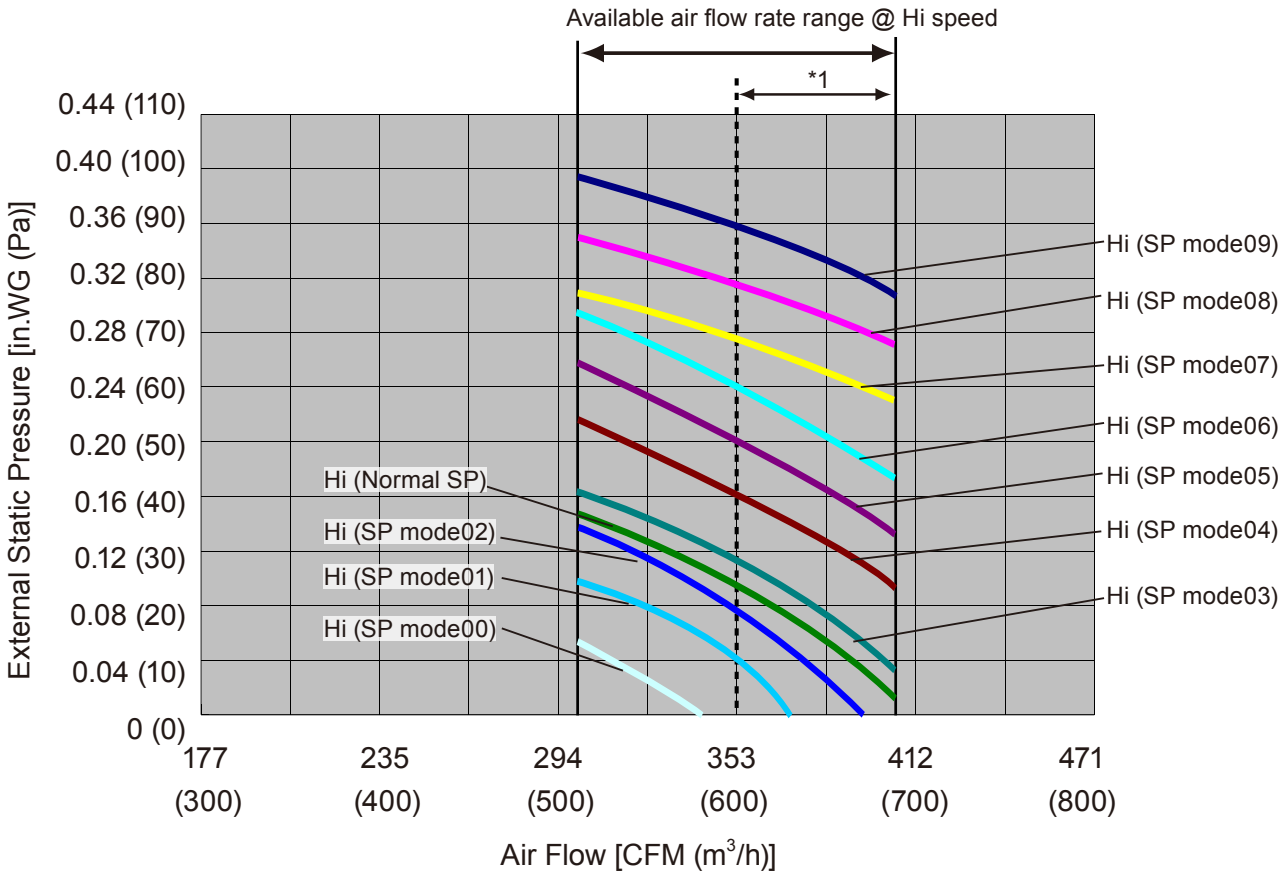
Heating



INDOOR UNITS

■ MODEL : ARUL9TLAV

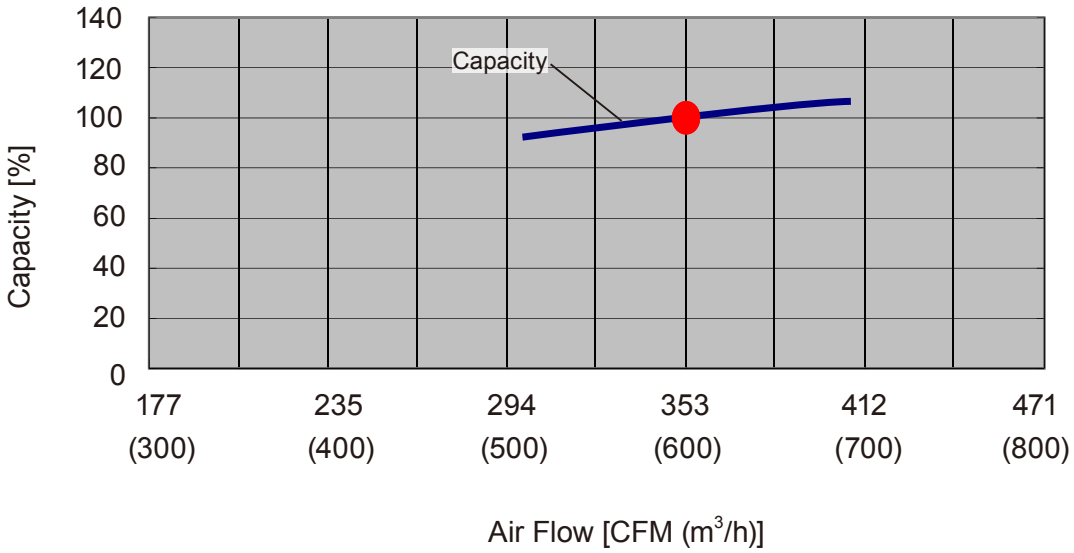




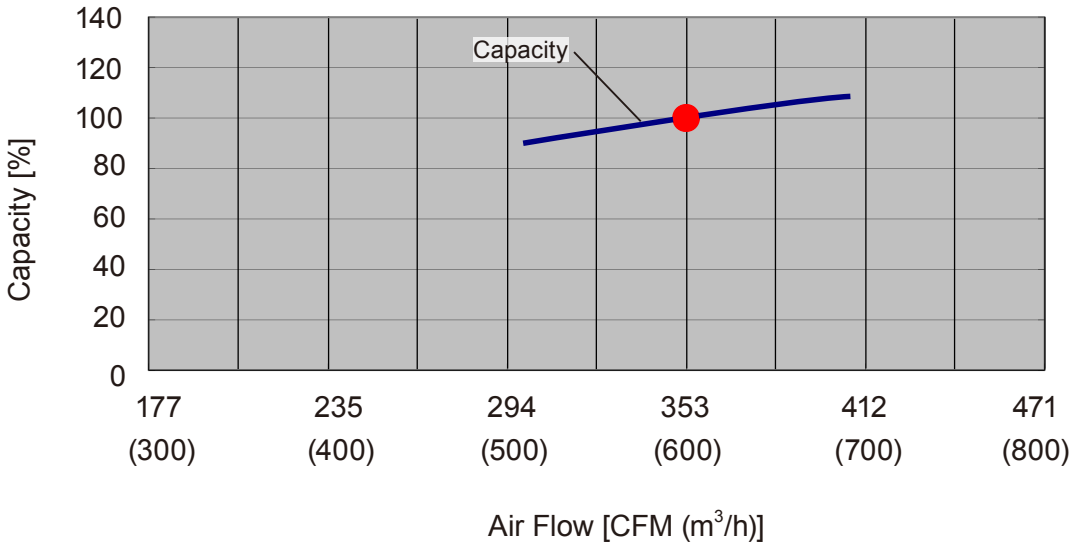
*1: Available air flow rate range when Auto louver grille (option) is installed.
Fan speed : High
Vertical airflow direction louver : Up

INDOOR UNITS

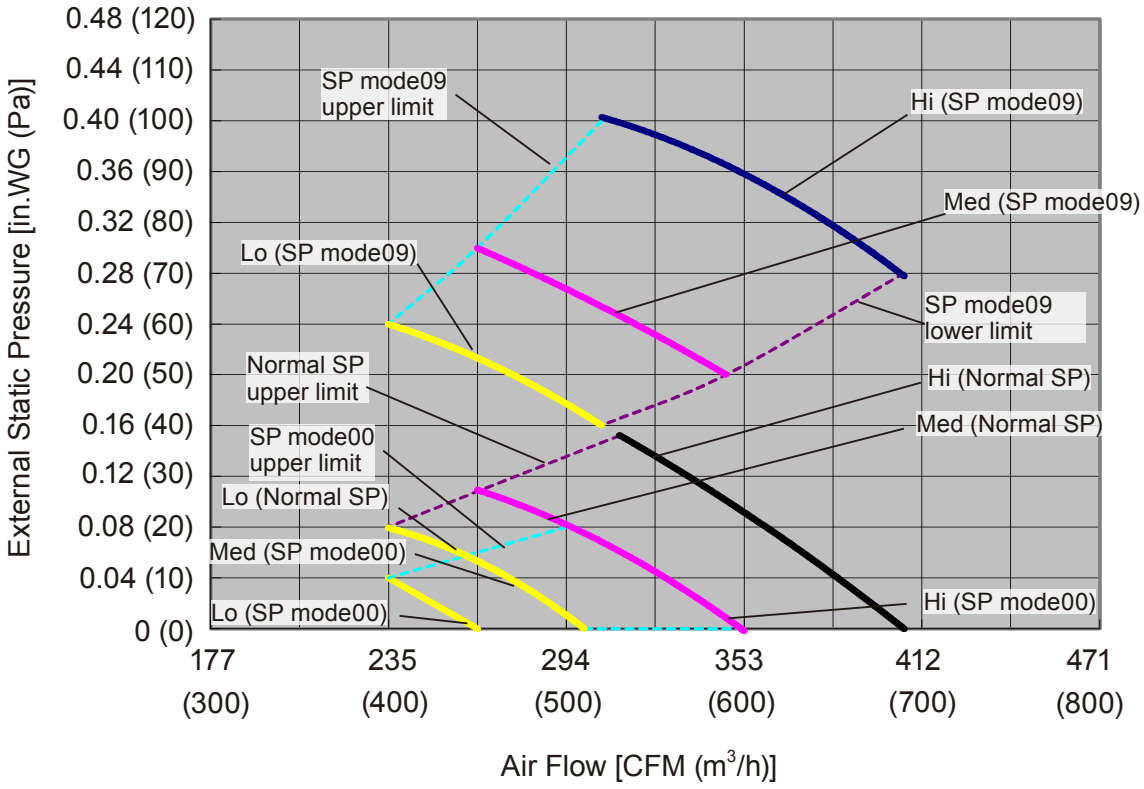
Cooling

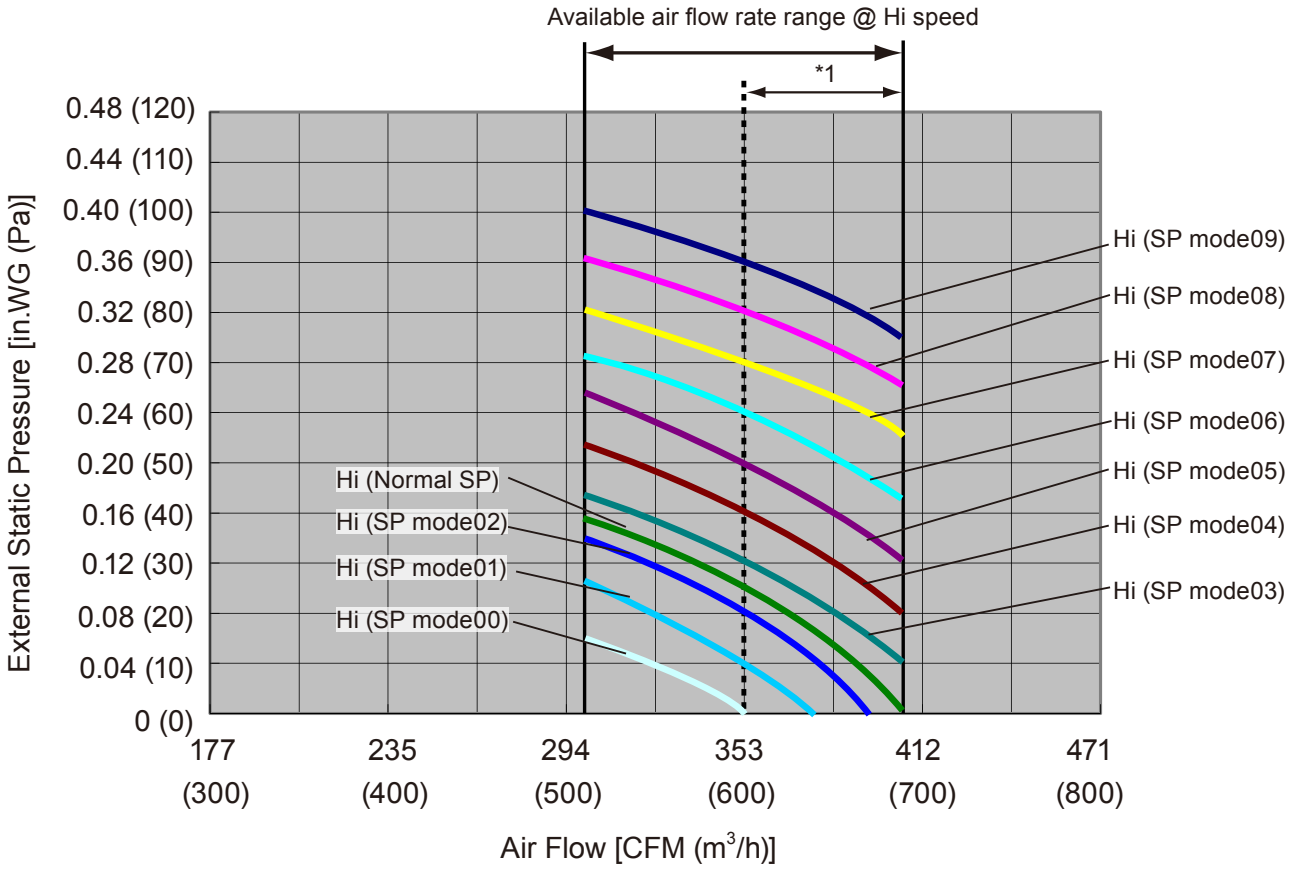


Heating



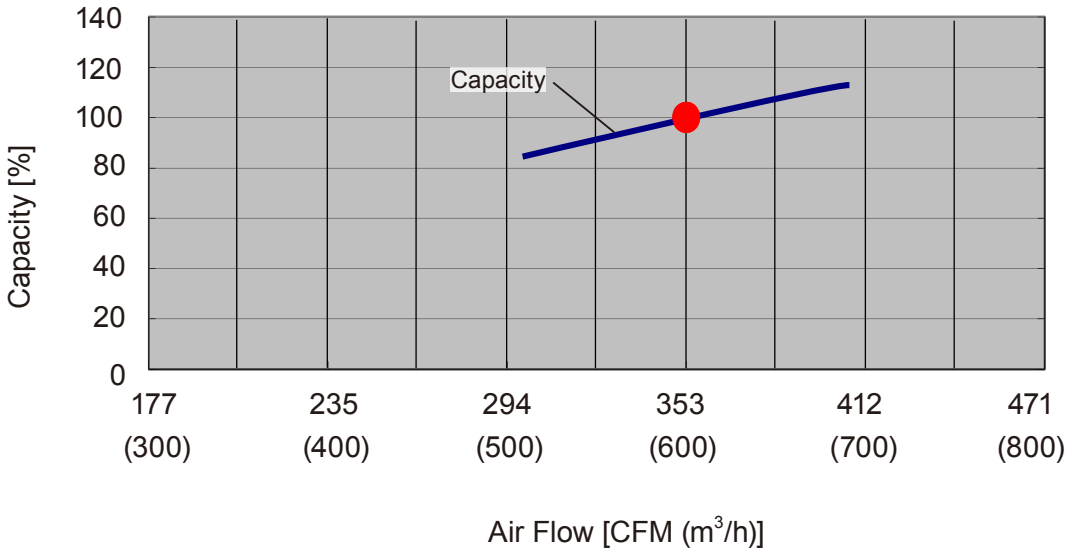
■ MODEL : ARUL12TLAV



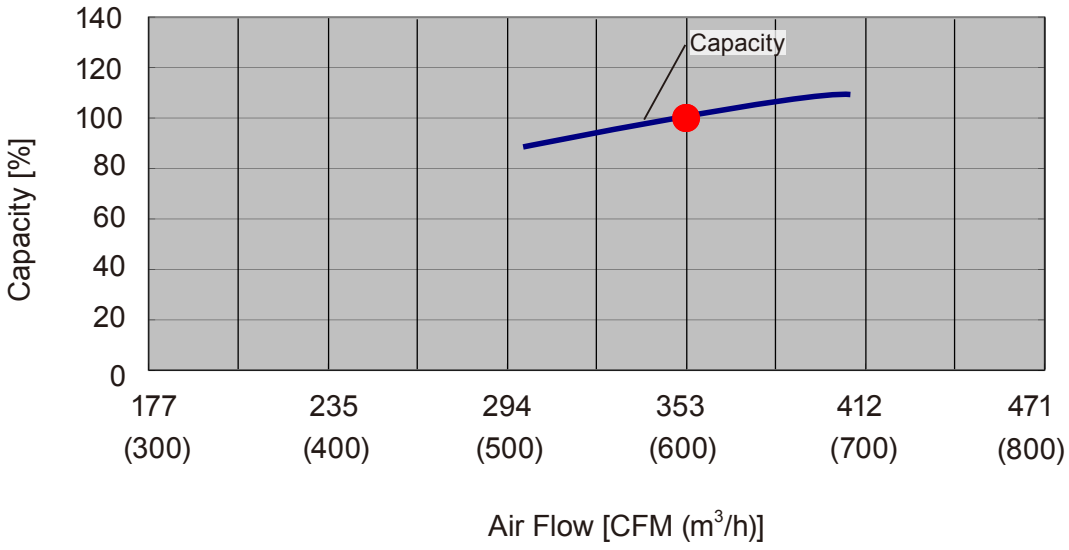


*1: Available air flow rate range when Auto louver grille (option) is installed.
Fan speed : High
Vertical airflow direction louver : Up

Cooling

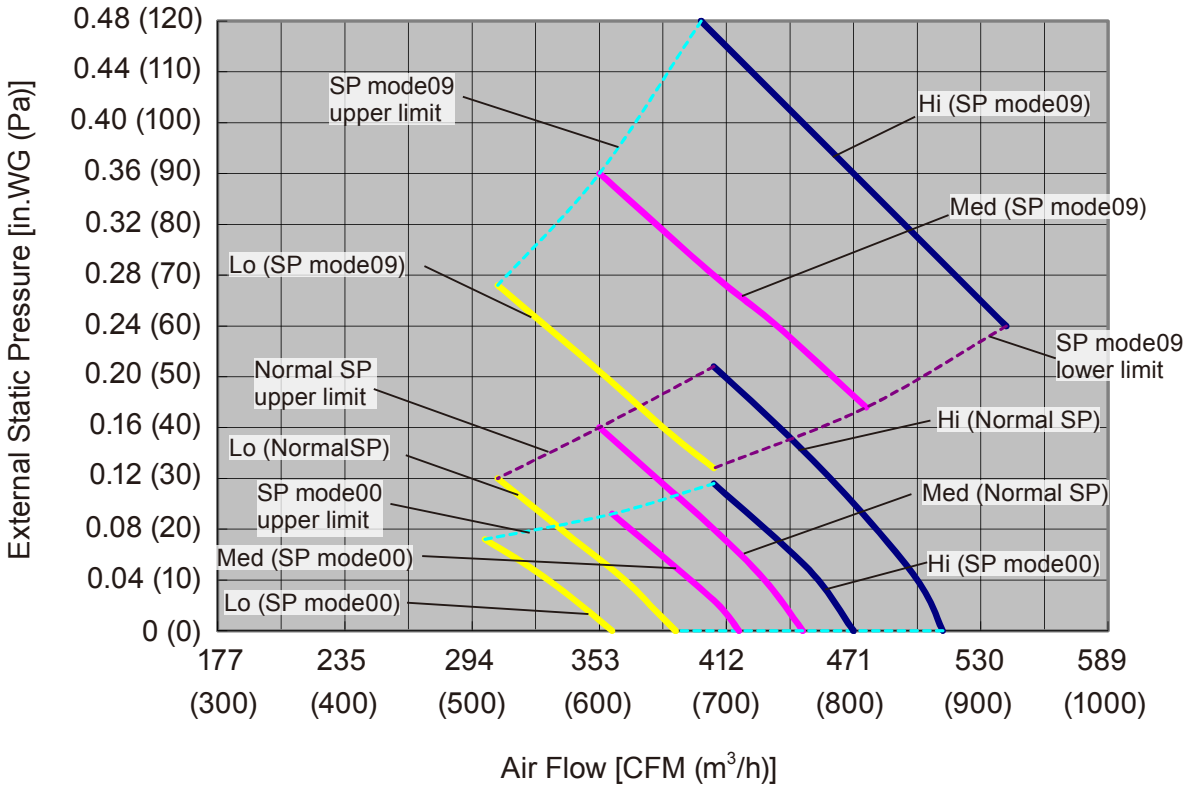


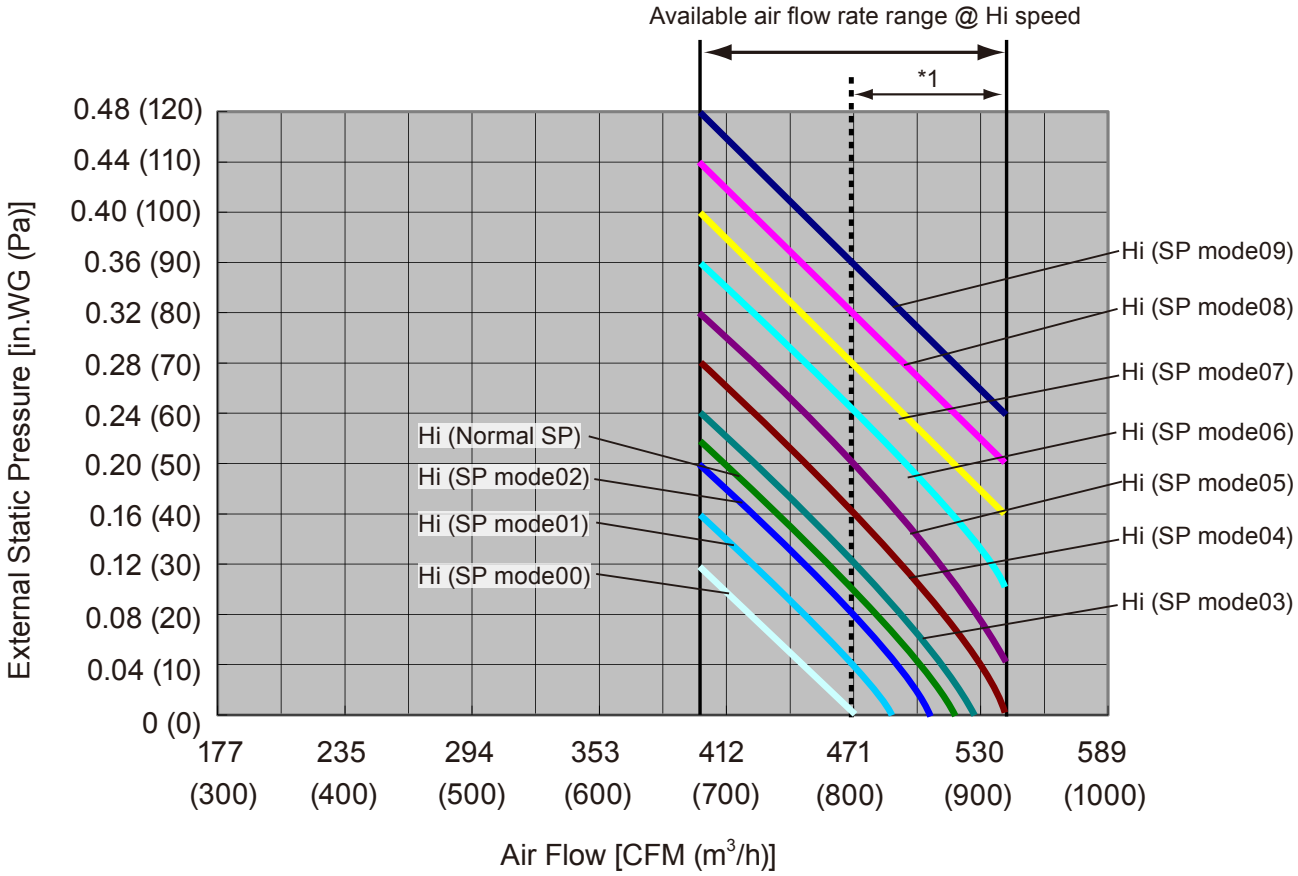
Heating



INDOOR UNITS

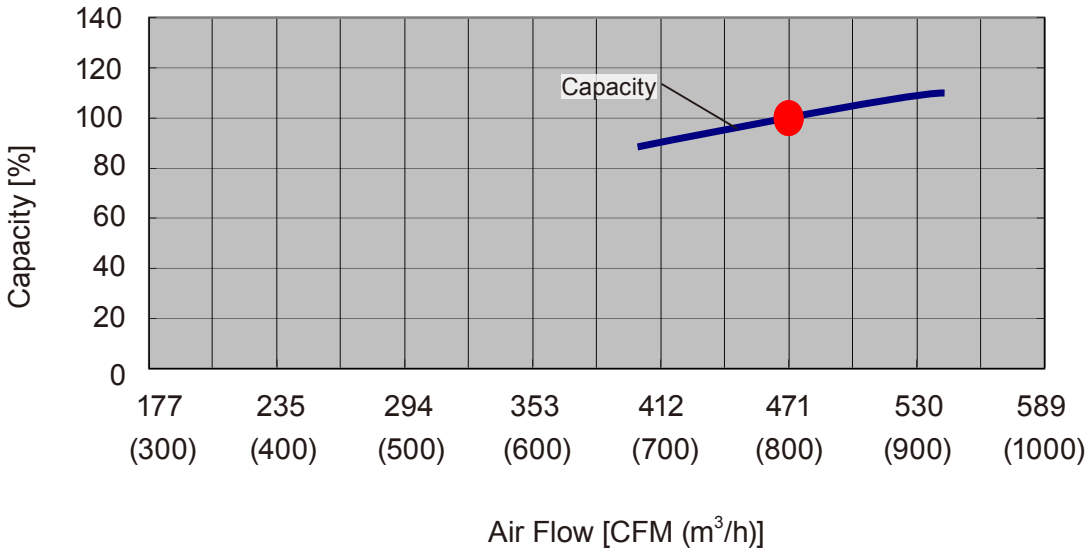
■ MODEL : ARUL14TLAV



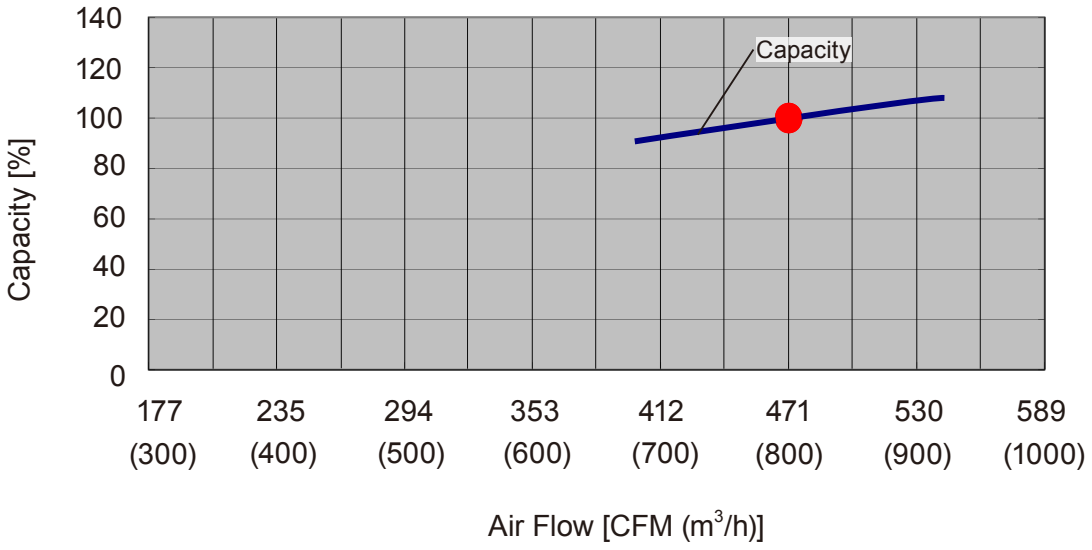


*1: Available air flow rate range when Auto louver grille (option) is installed.
Fan speed : High
Vertical airflow direction louver : Up

Cooling

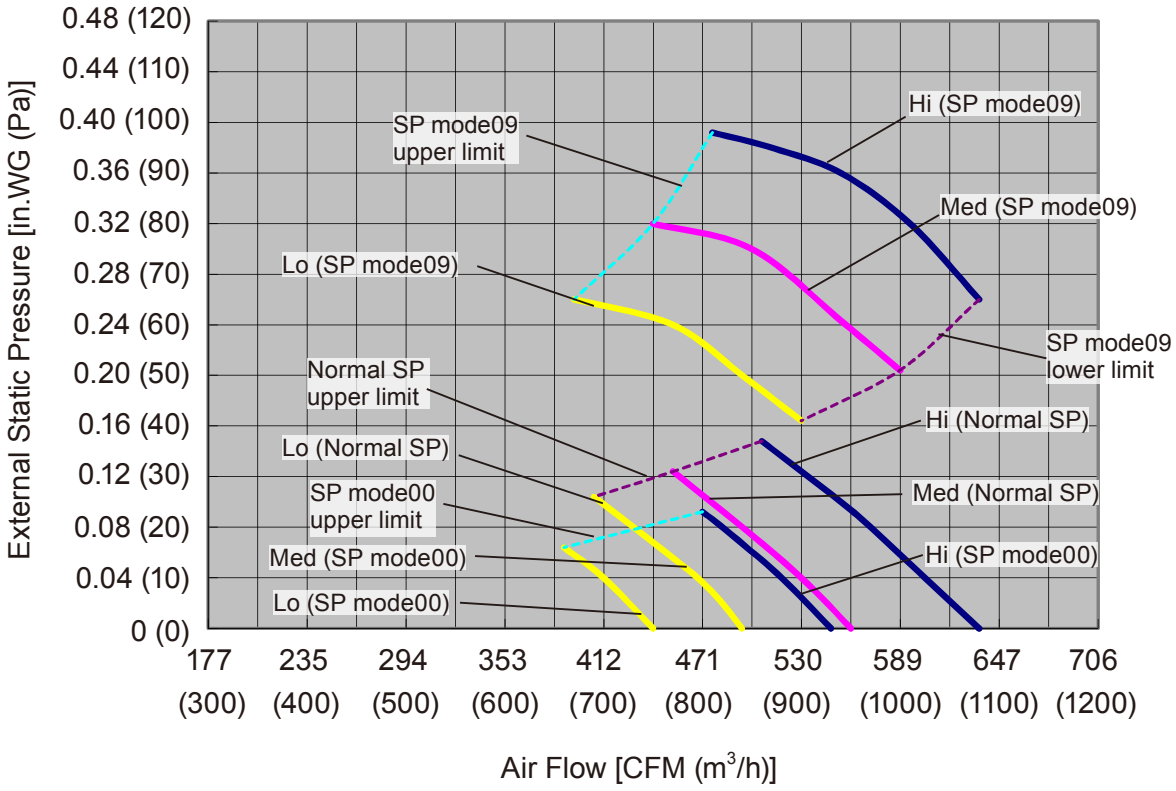


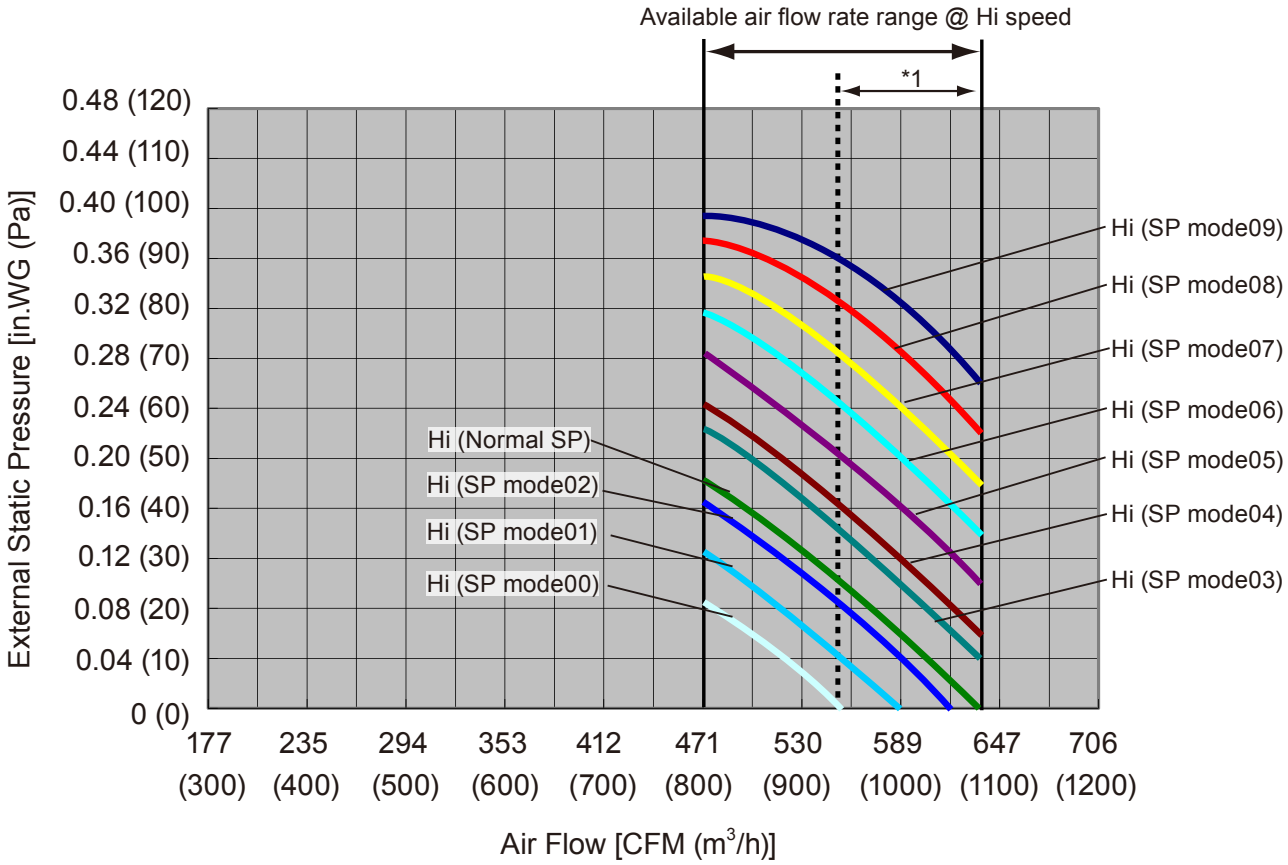
Heating



INDOOR UNITS

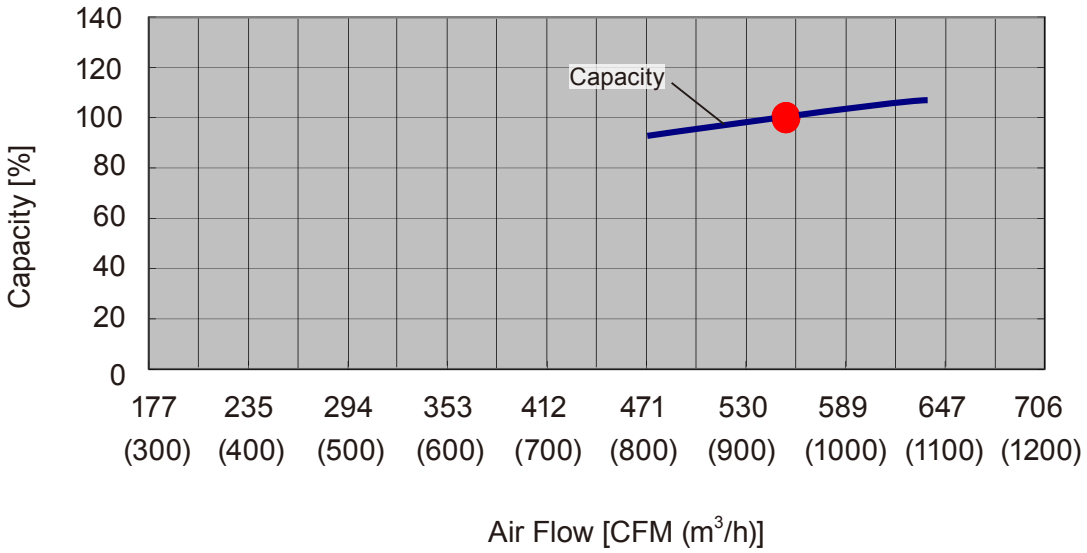
■ MODEL : ARUL18TLAV





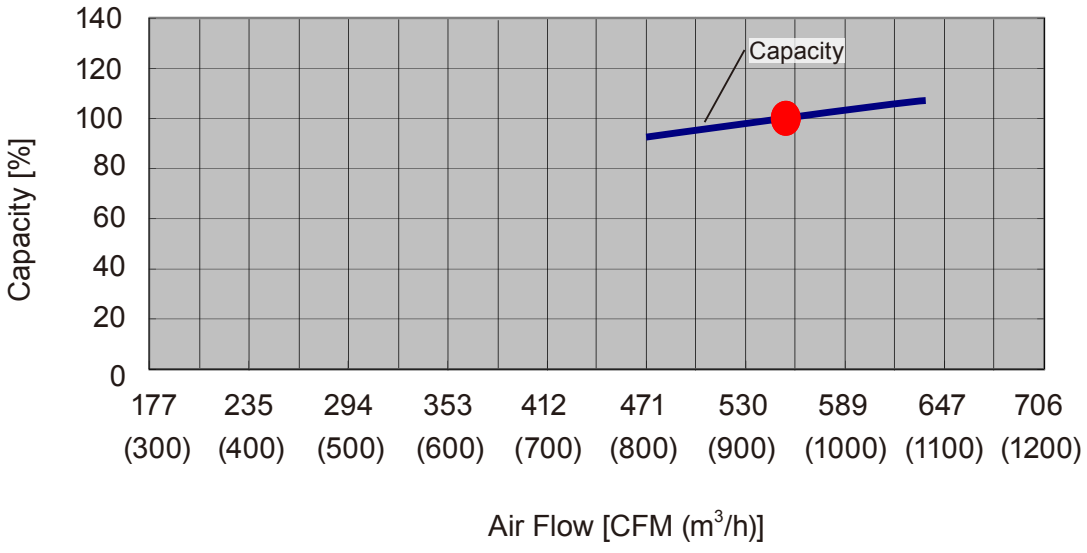
*1: Available air flow rate range when Auto louver grille (option) is installed.
Fan speed : High
Vertical airflow direction louver : Up

Cooling



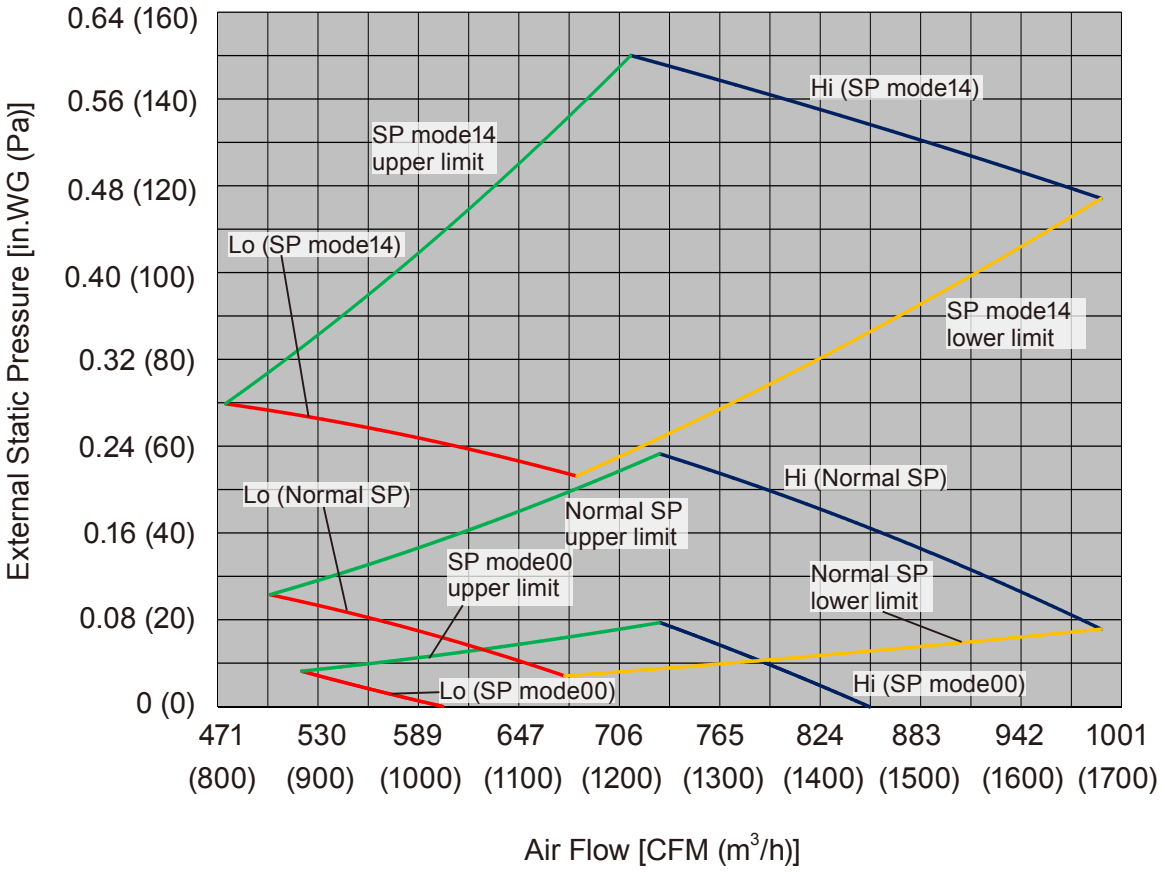
INDOOR UNITS

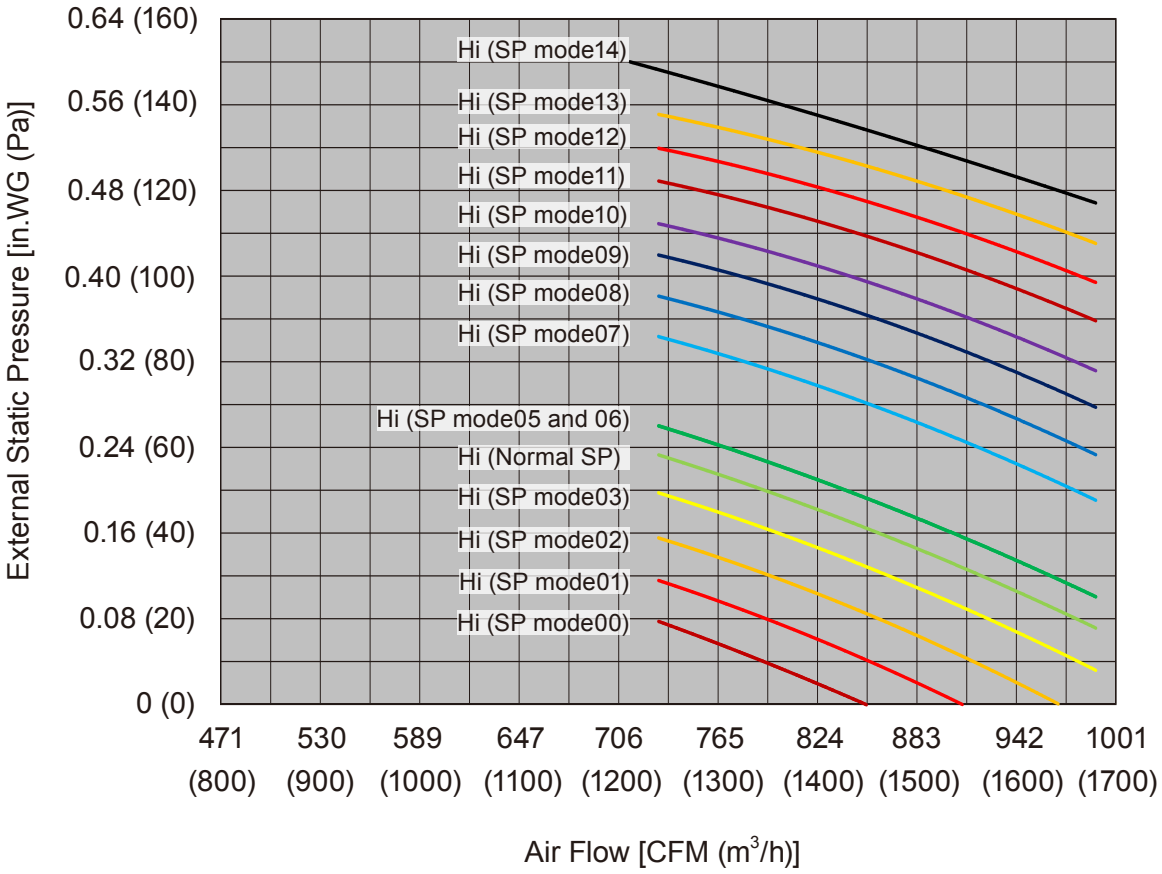
Heating



6-3. MEDIUM STATIC PRESSURE DUCT TYPE

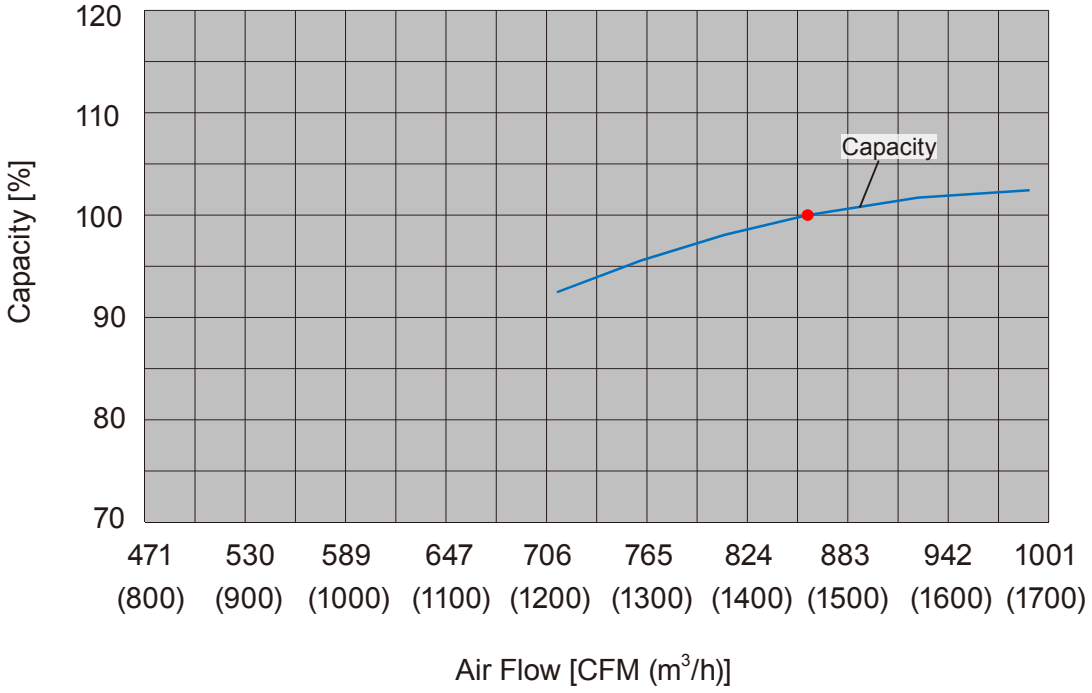
■ MODEL : ARUM24TLAV



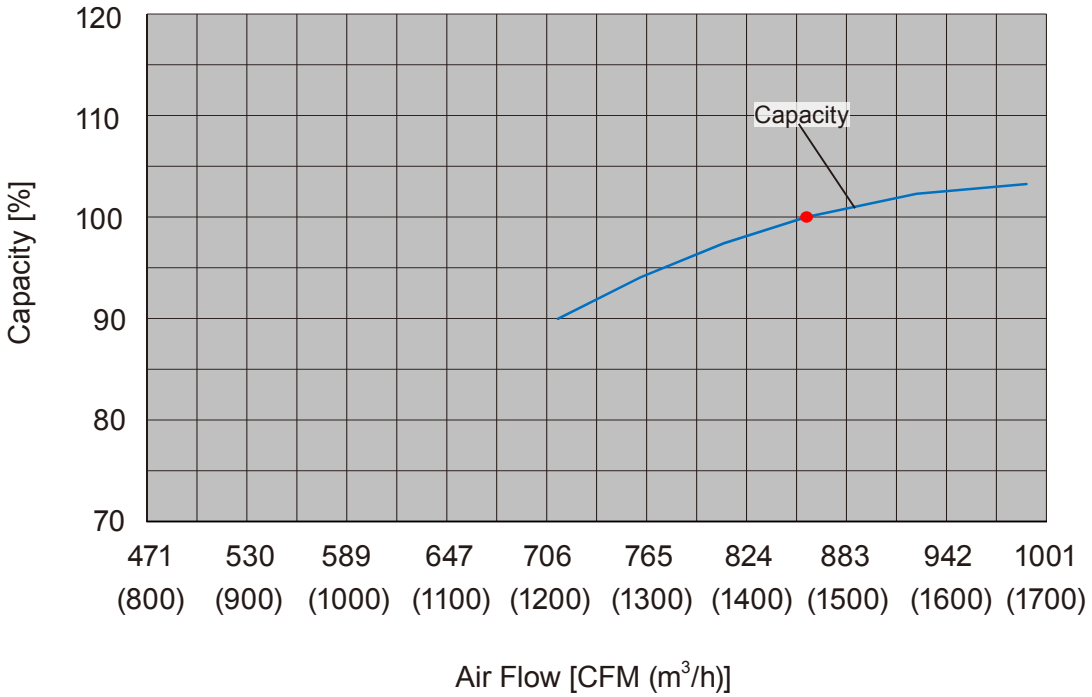


INDOOR UNITS

Cooling

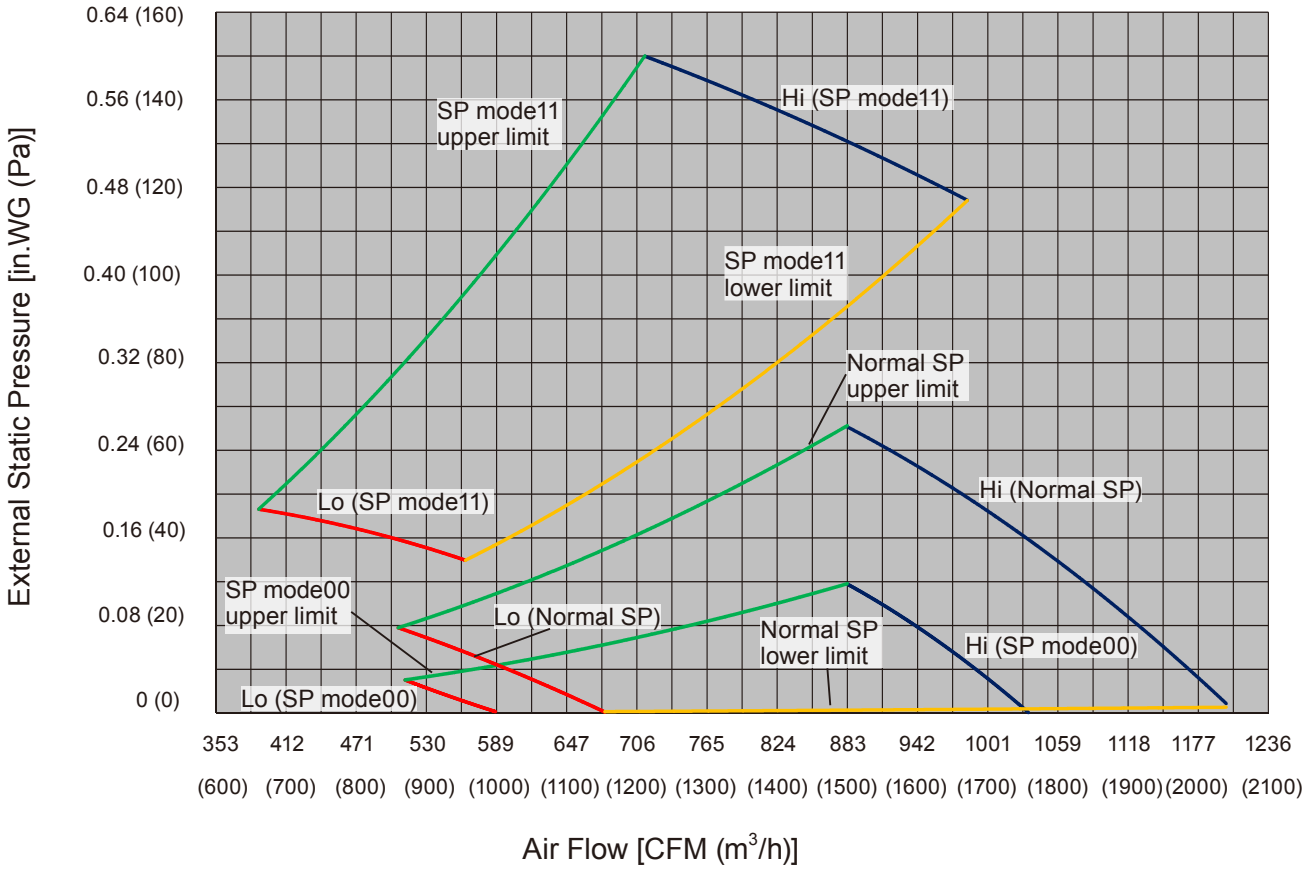


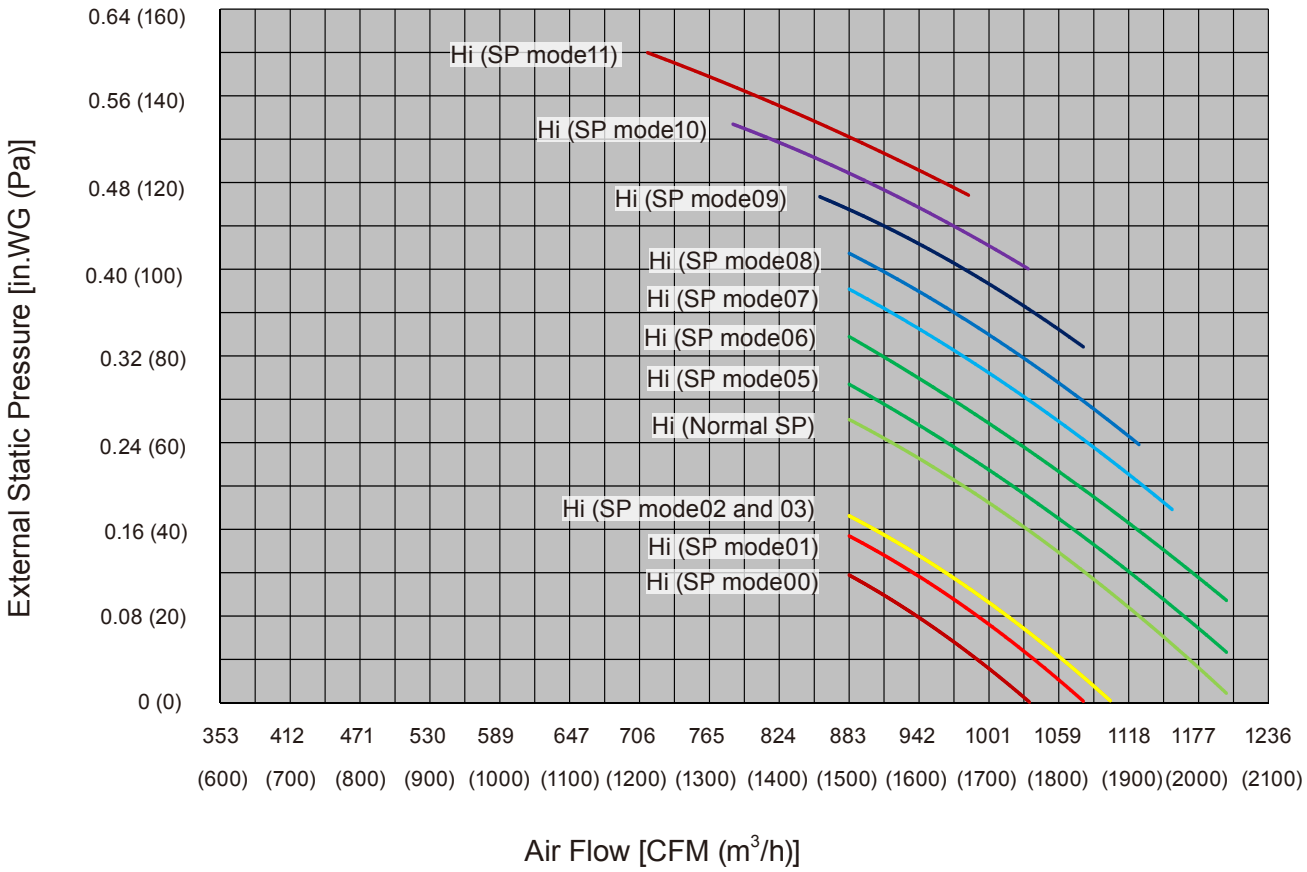
Heating



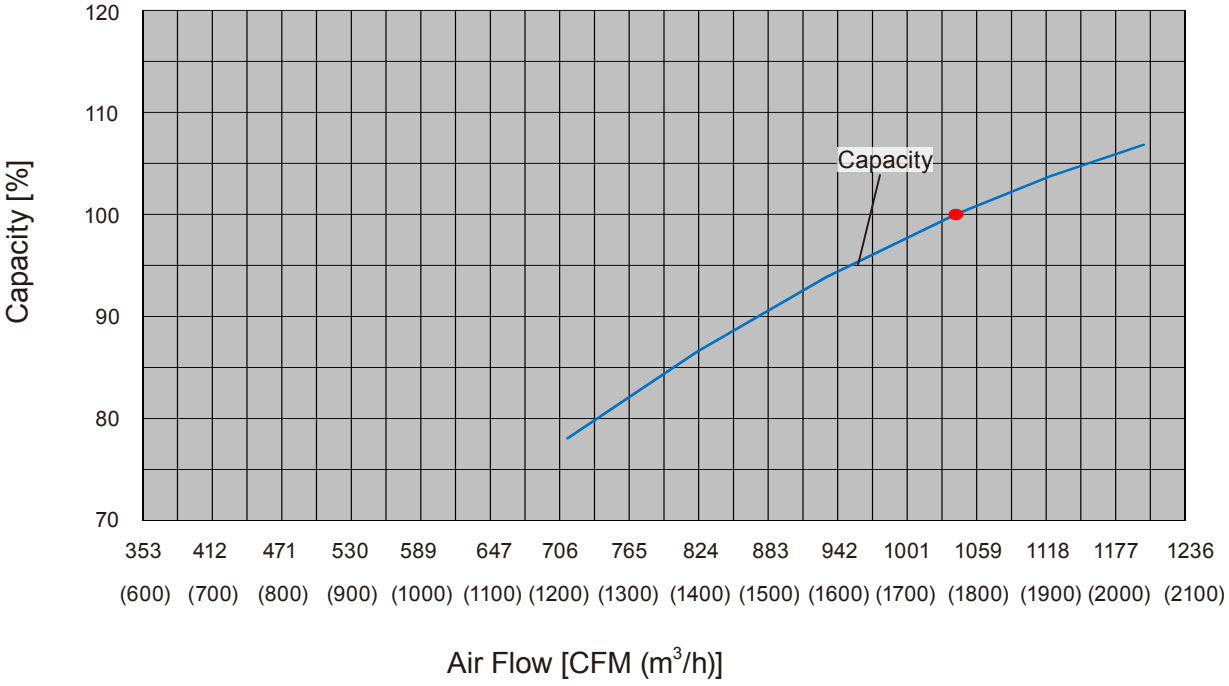
INDOOR UNITS

■ MODEL : ARUM30TLAV

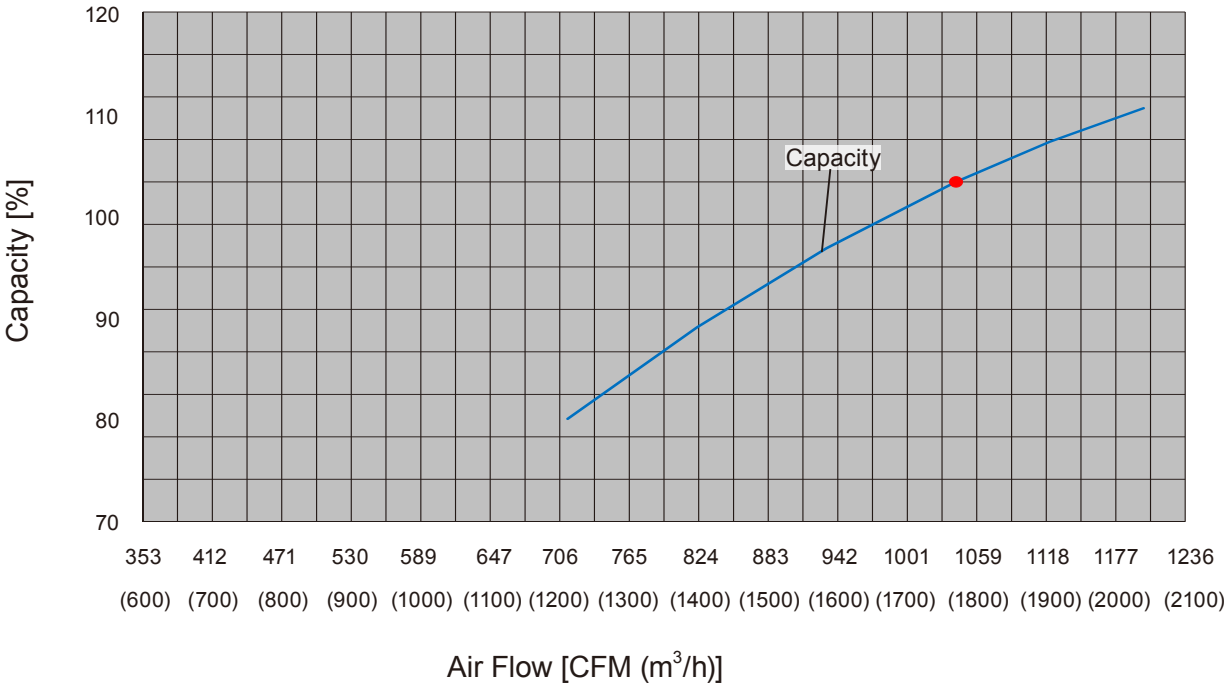




Cooling

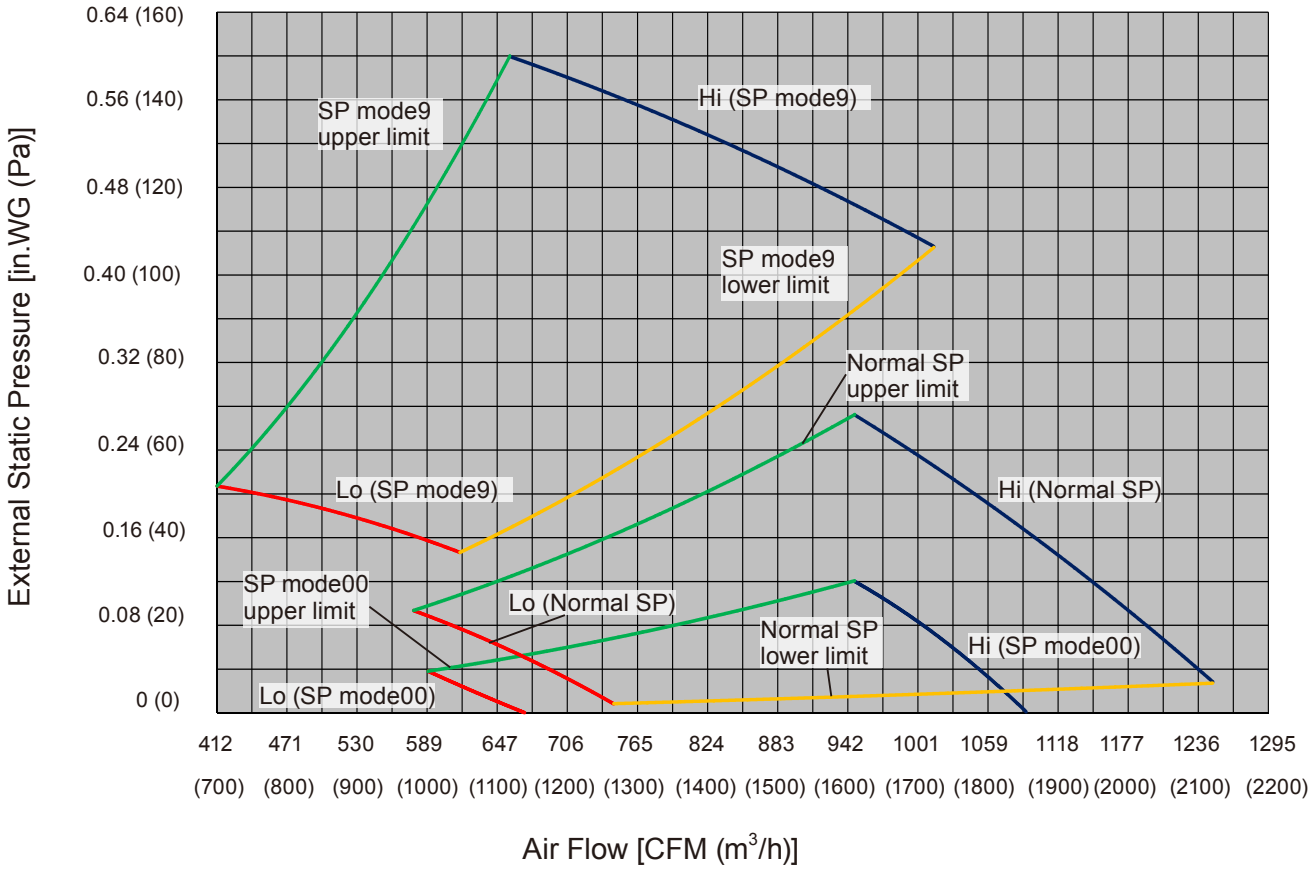


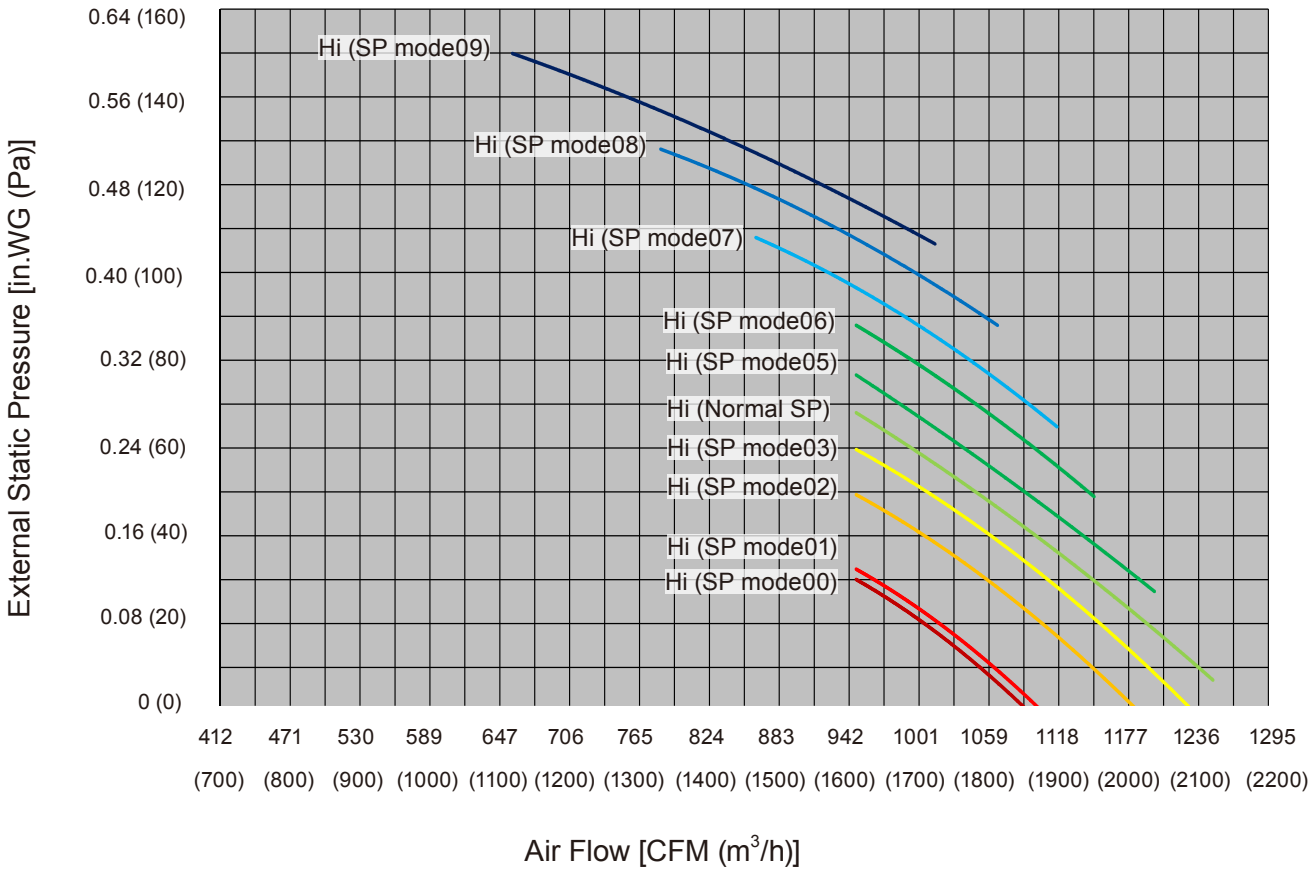
Heating



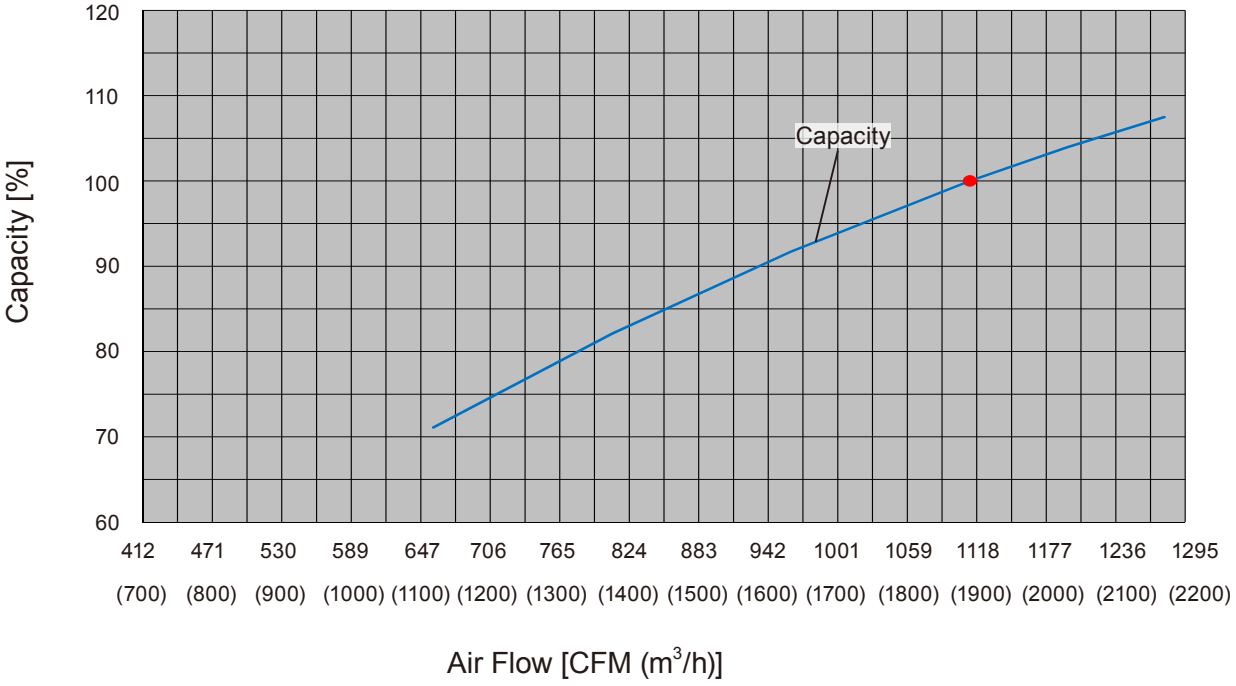
INDOOR UNITS

■ MODEL : ARUM36TLAV

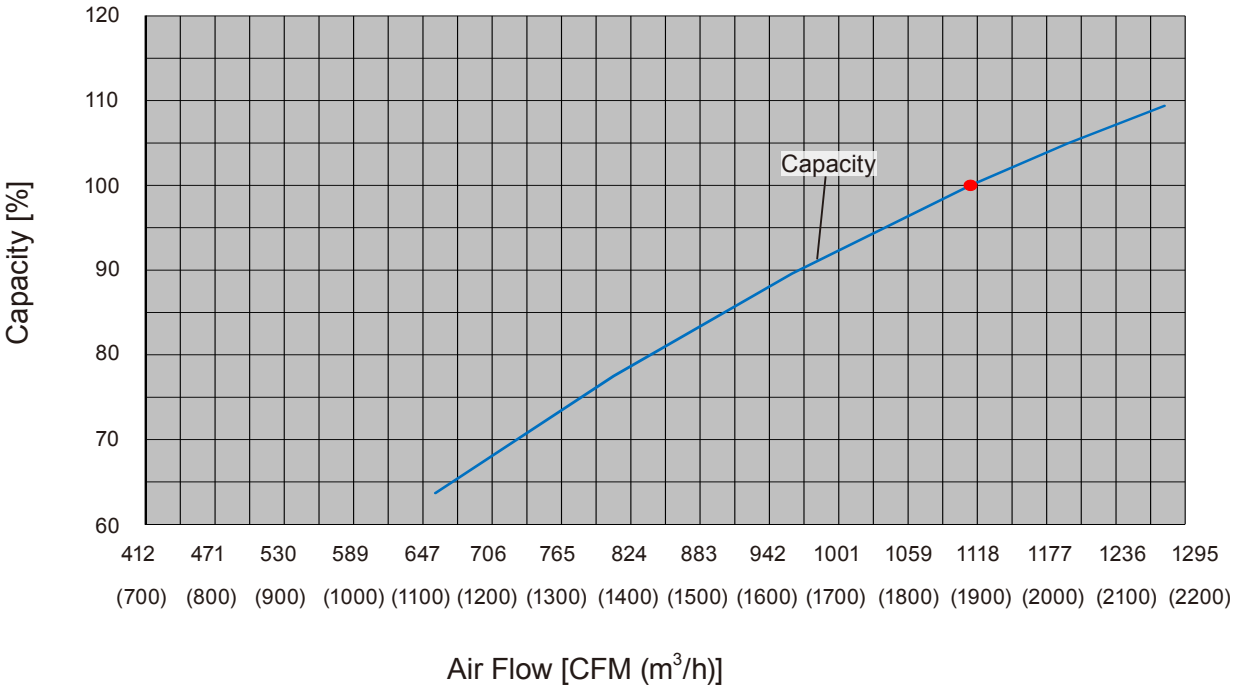




Cooling



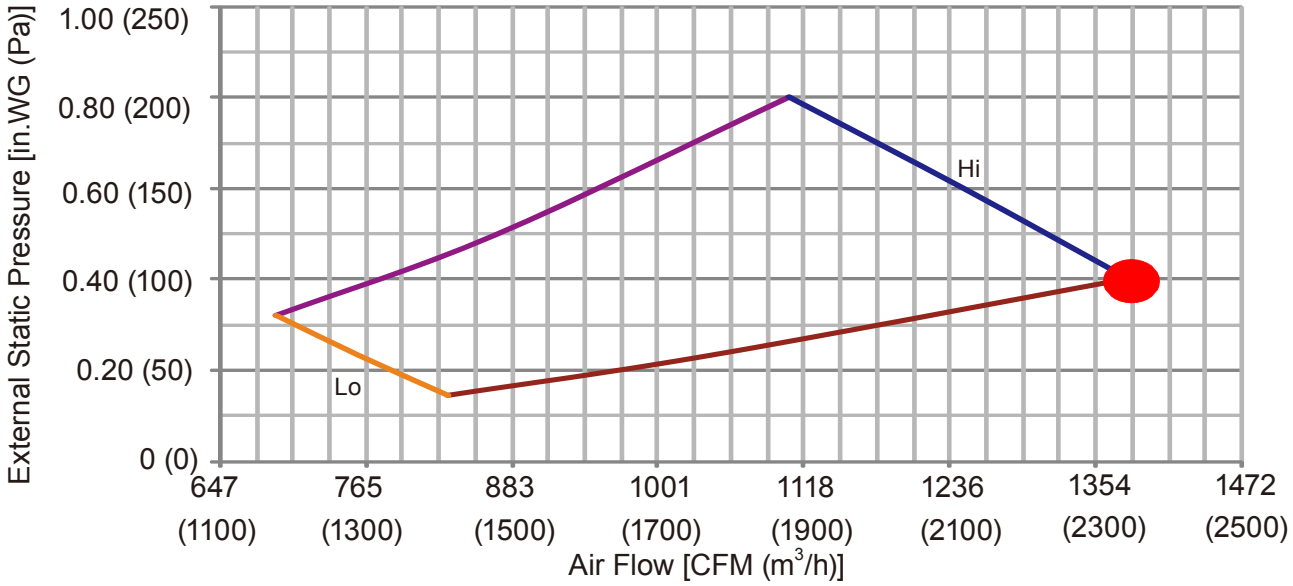
Heating



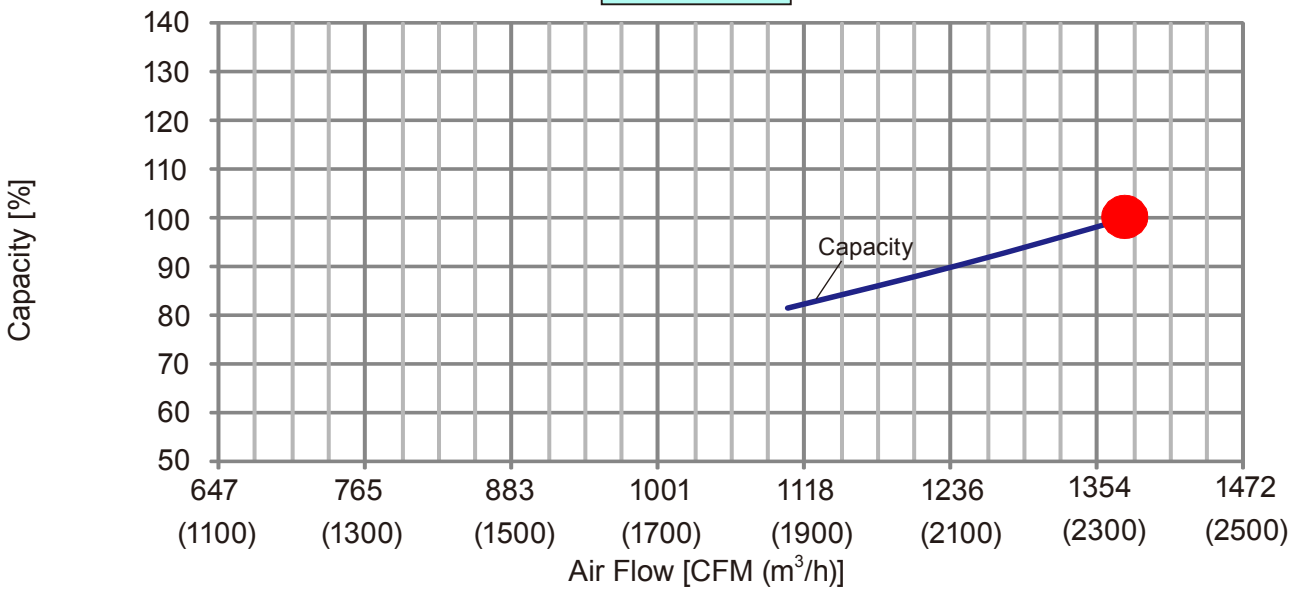
INDOOR UNITS

6-4. HIGH STATIC PRESSURE DUCT TYPE

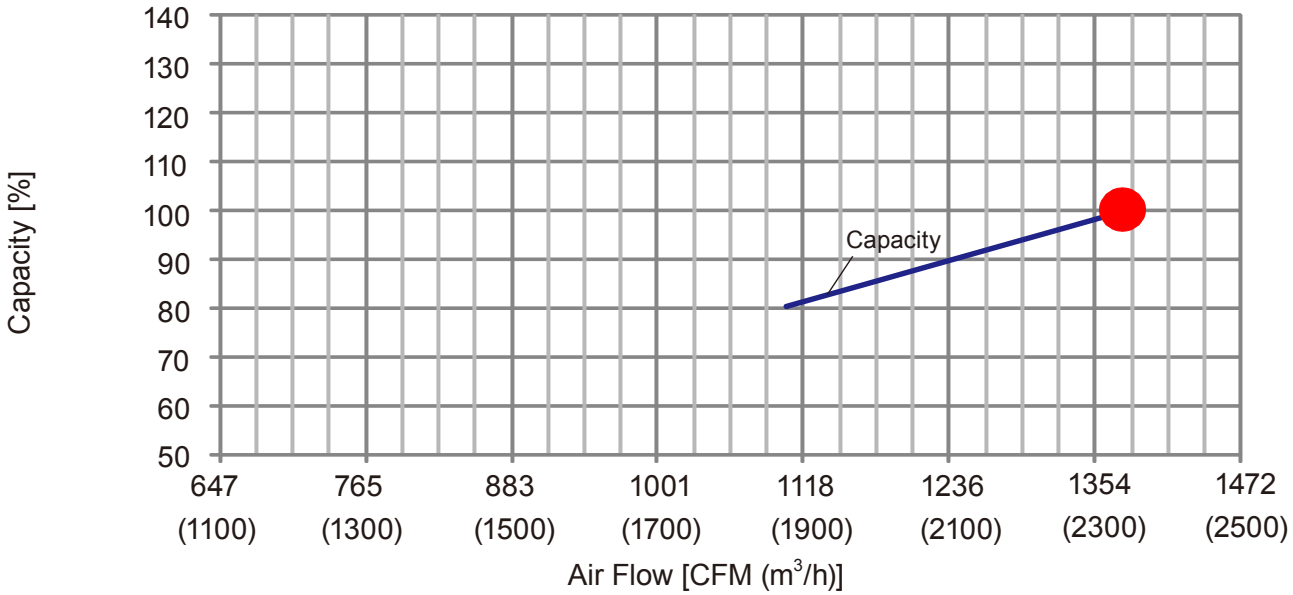
■ MODEL : ARUH36TLAV



Cooling

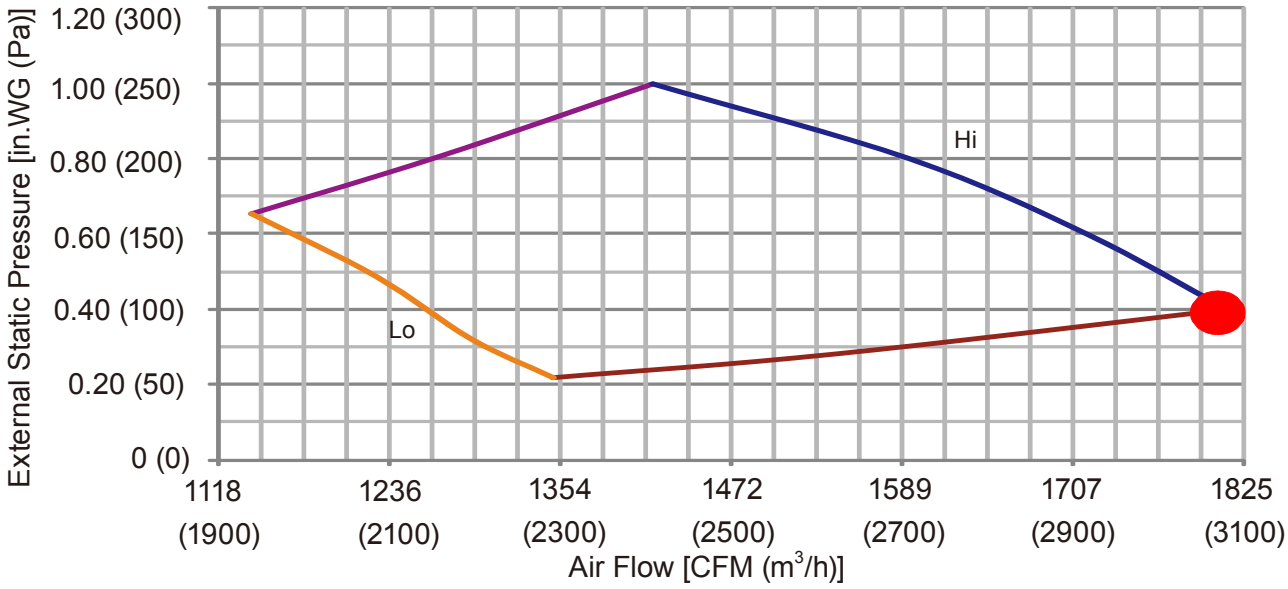


Heating

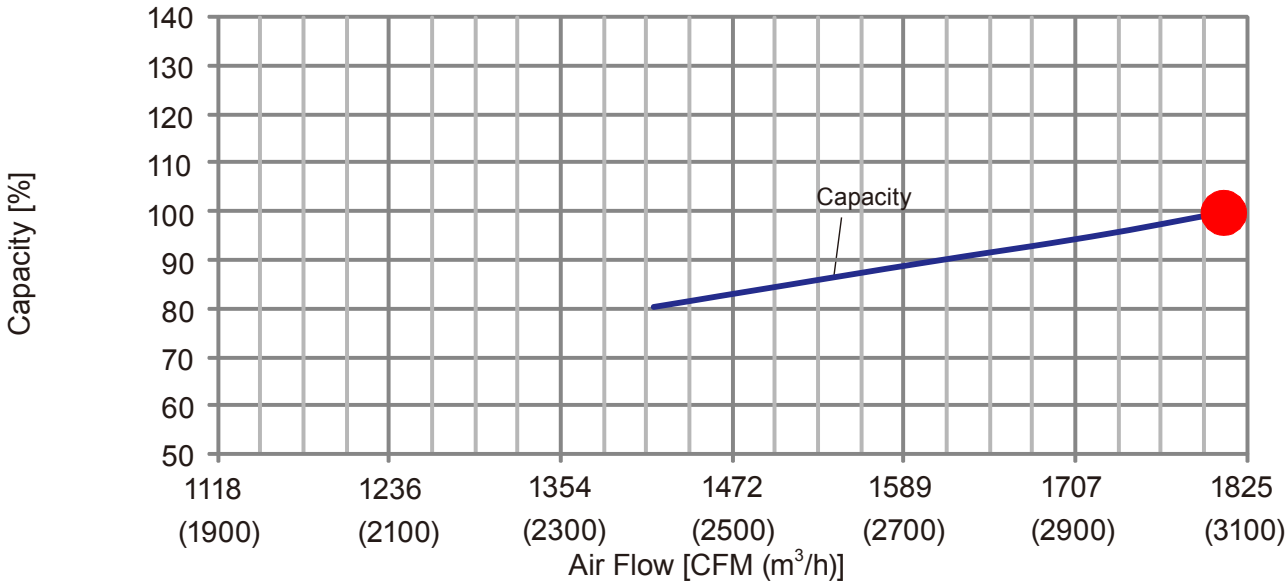


INDOOR UNITS

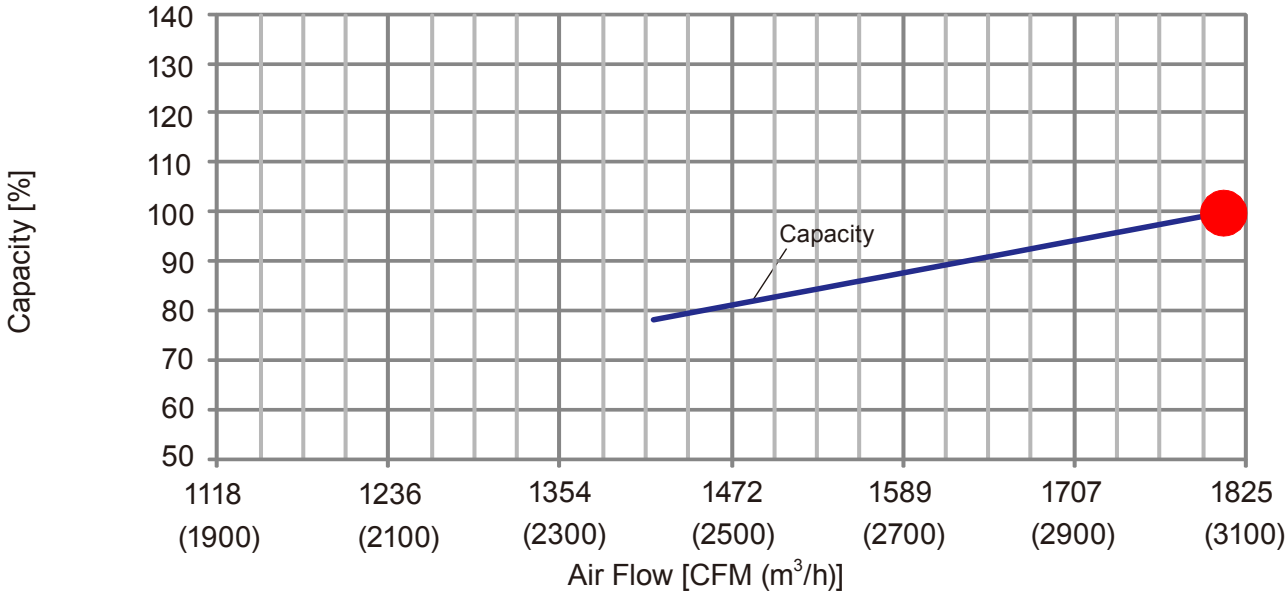
■ MODEL : ARUH48TLAV



Cooling

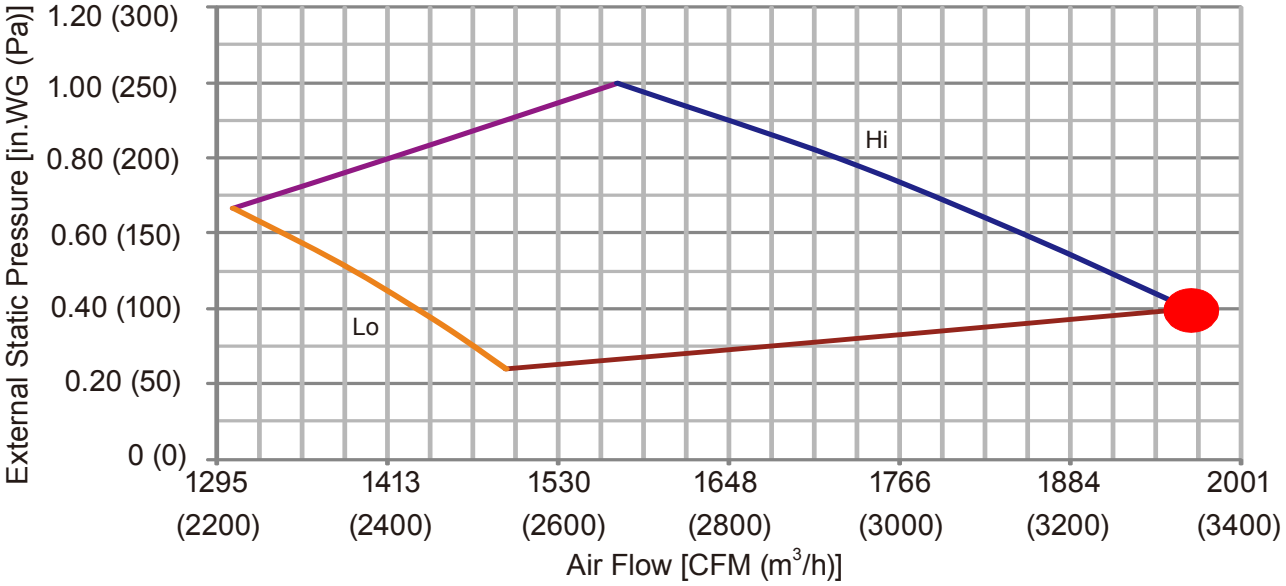


Heating

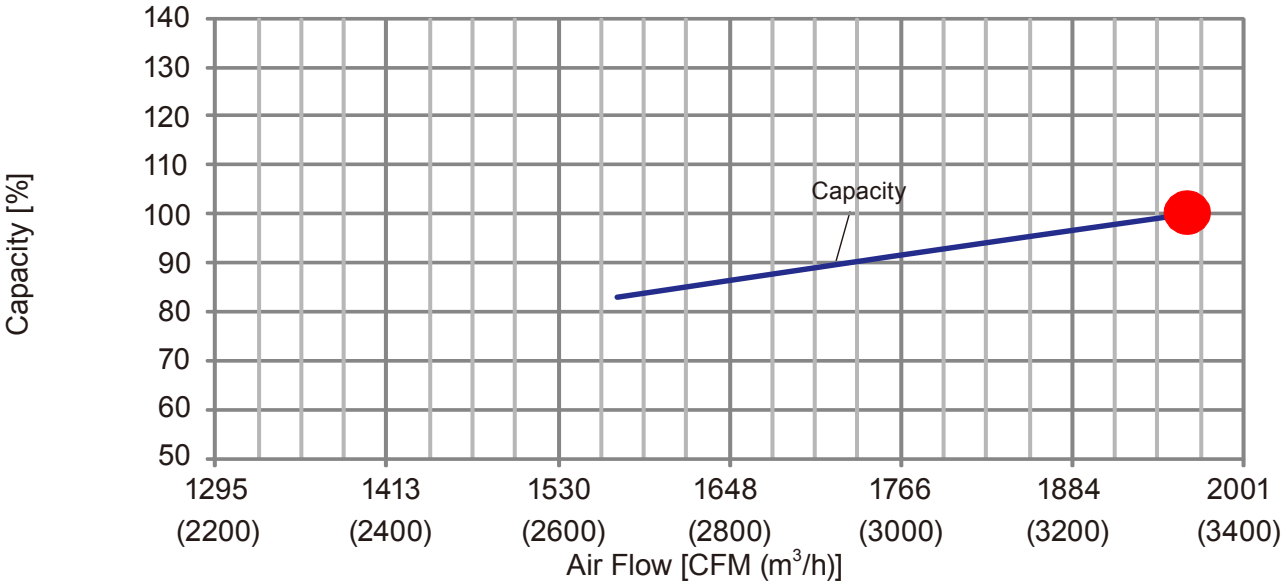


INDOOR UNITS

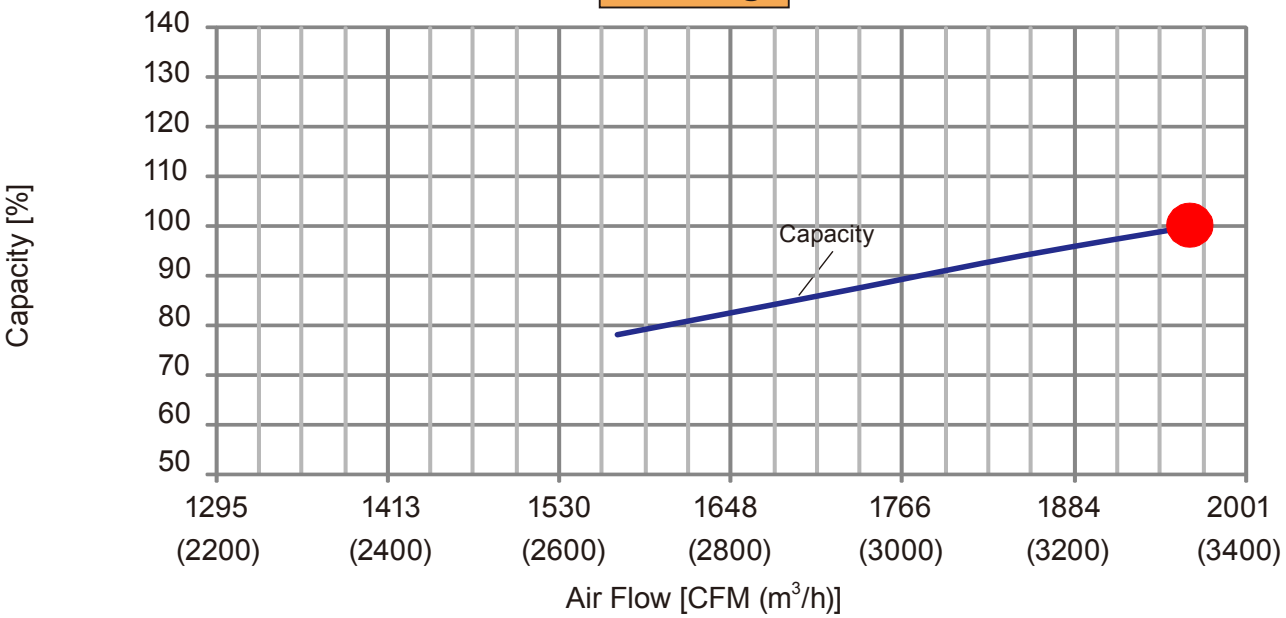
■ MODEL : ARUH60TLAV



Cooling

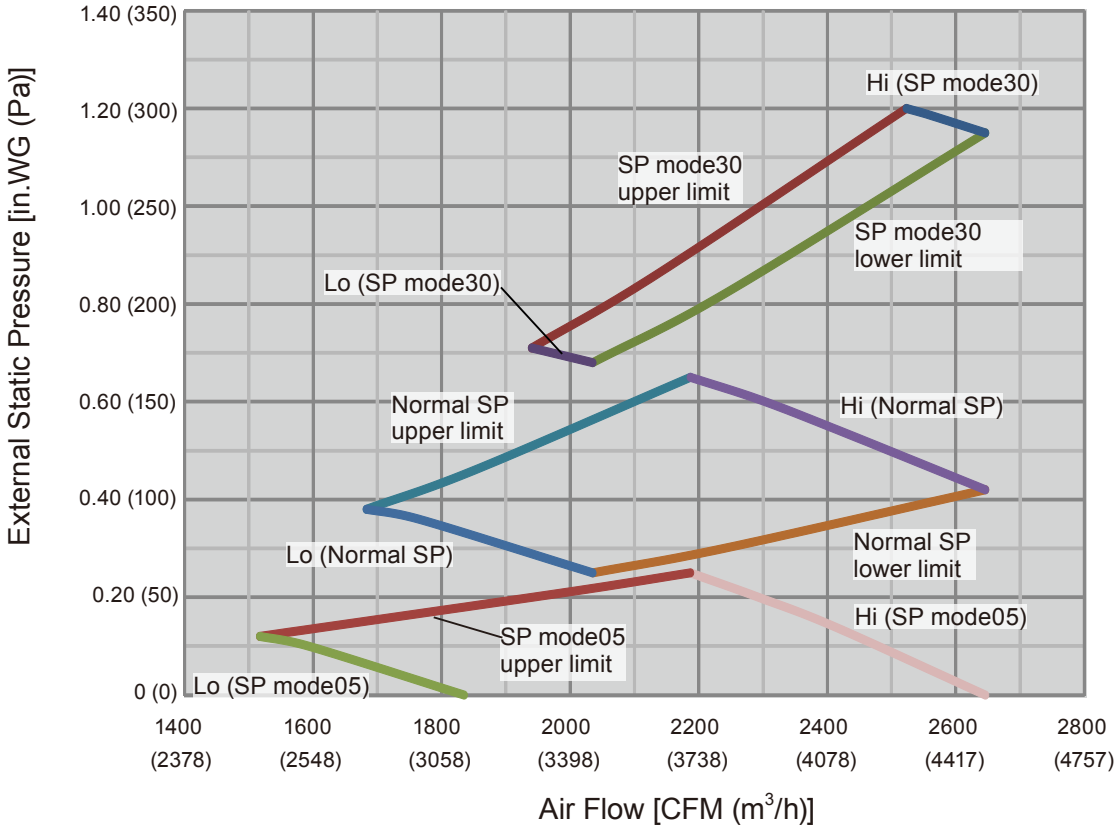


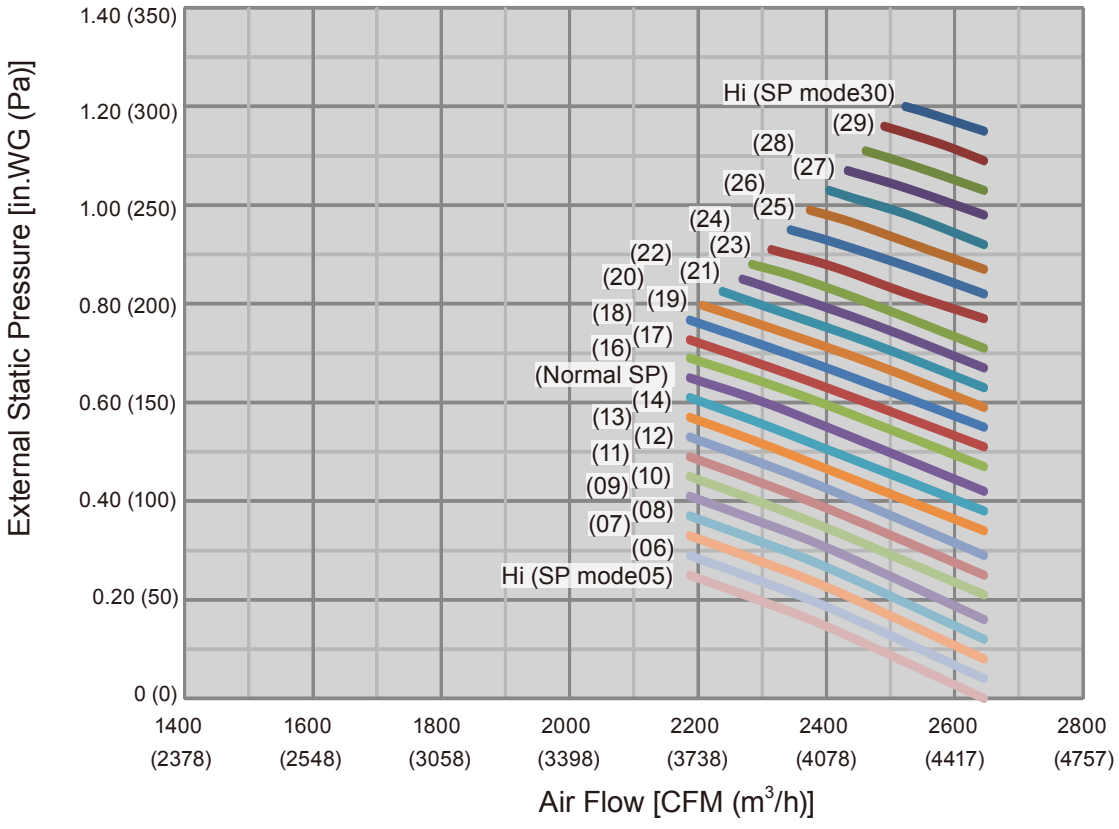
Heating



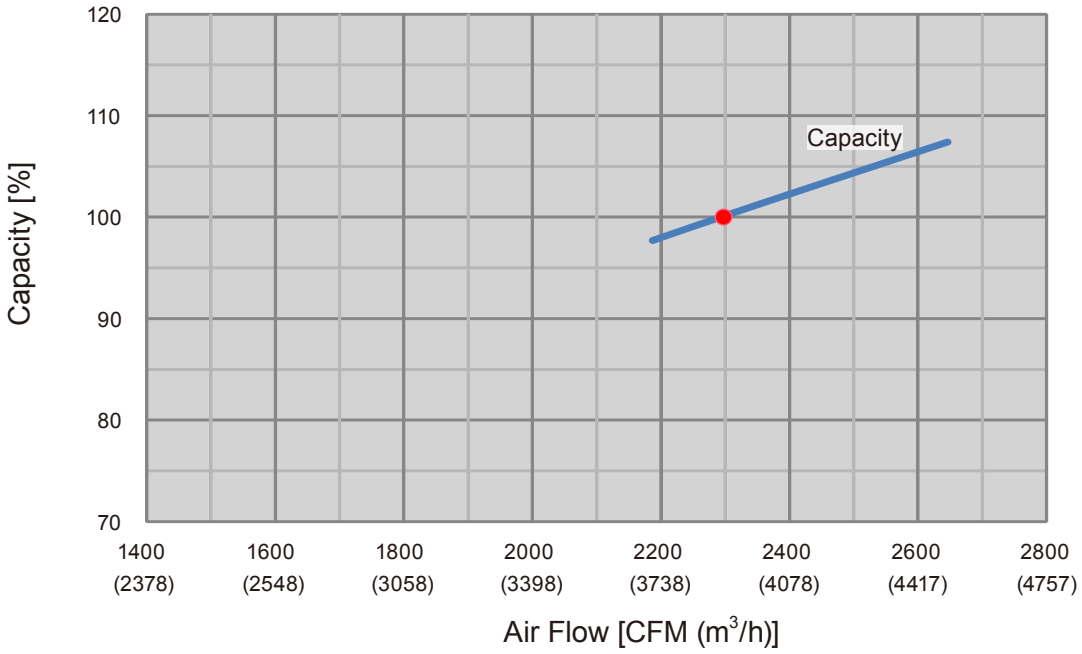
INDOOR UNITS

■ MODEL : ARUH72TLAV1

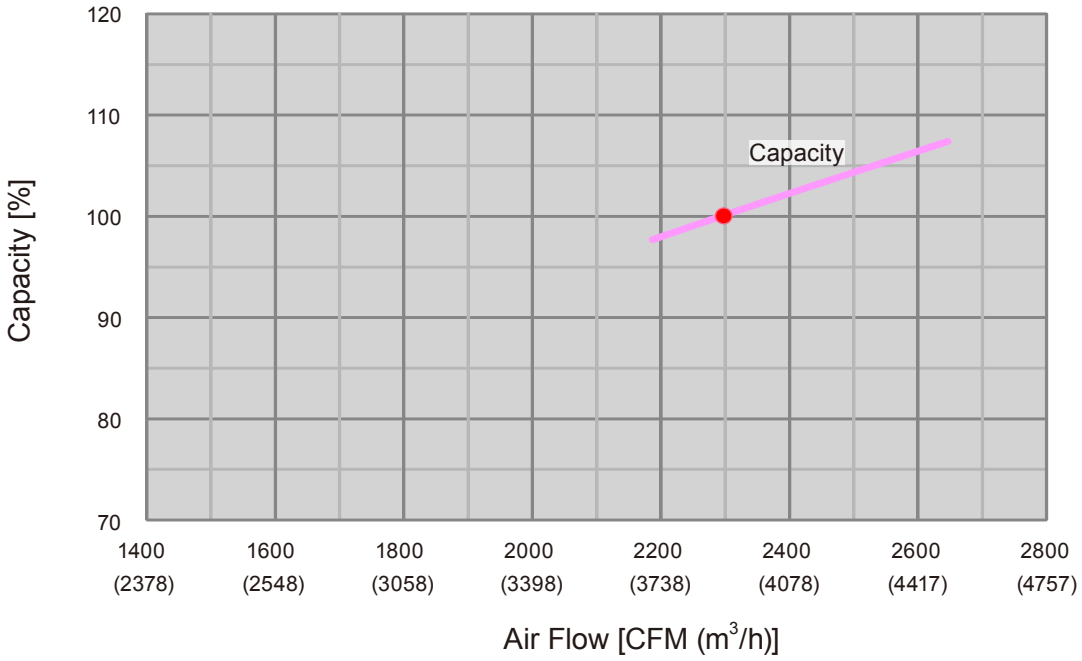




Cooling

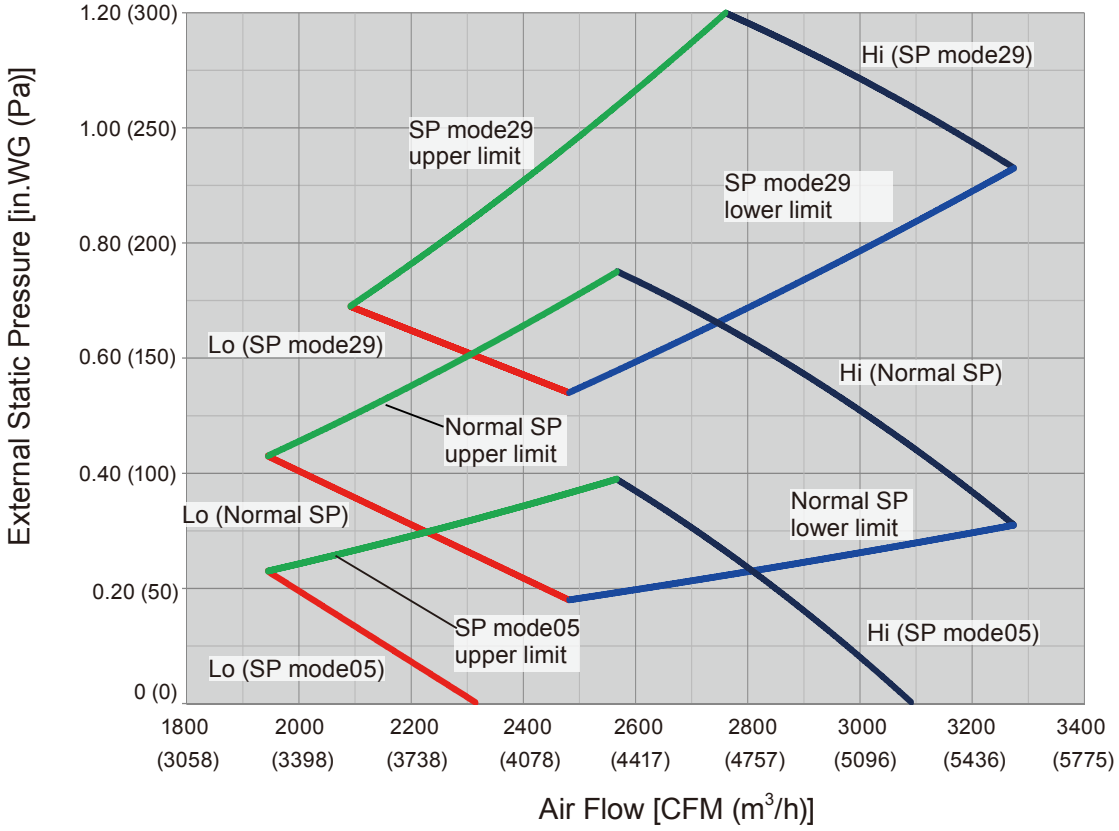


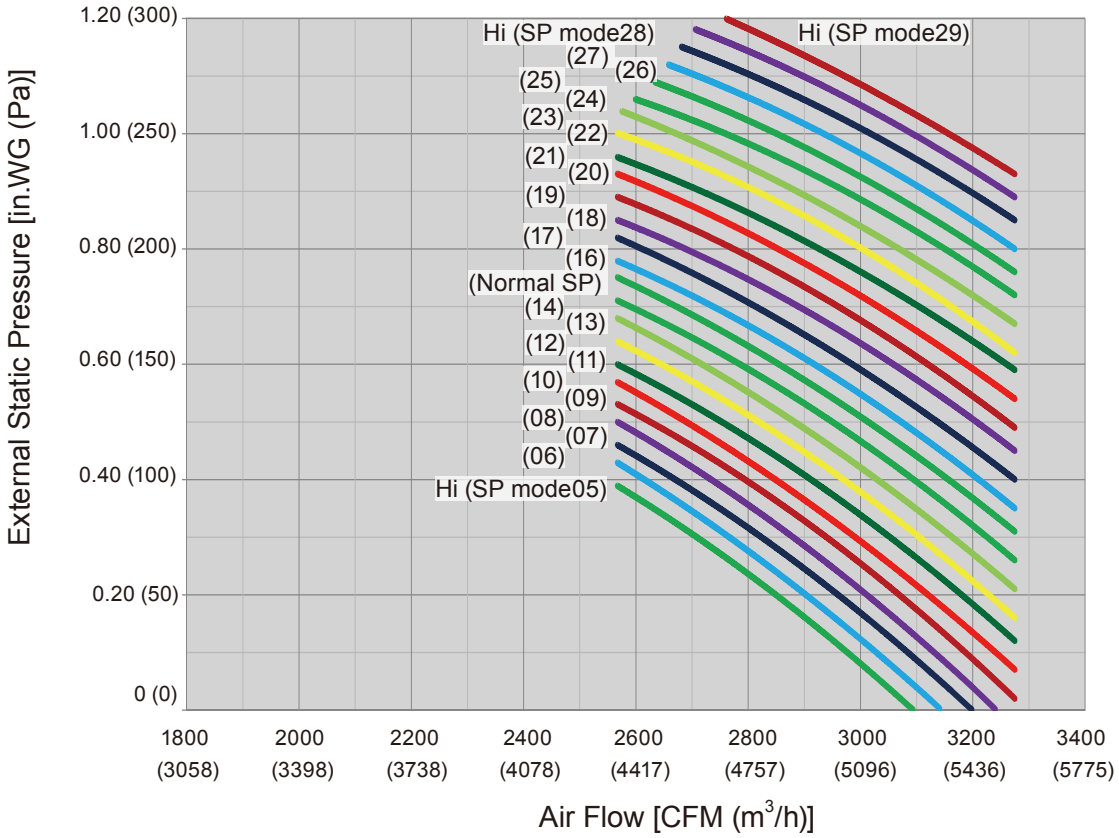
Heating



INDOOR UNITS

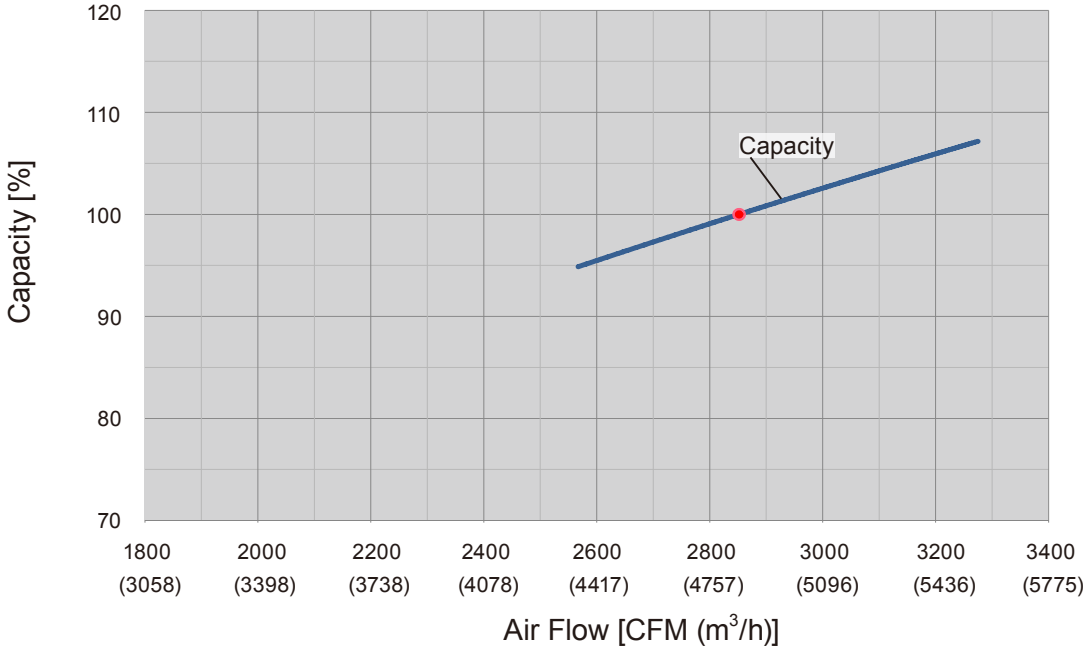
■ MODEL : ARUH96TLAV



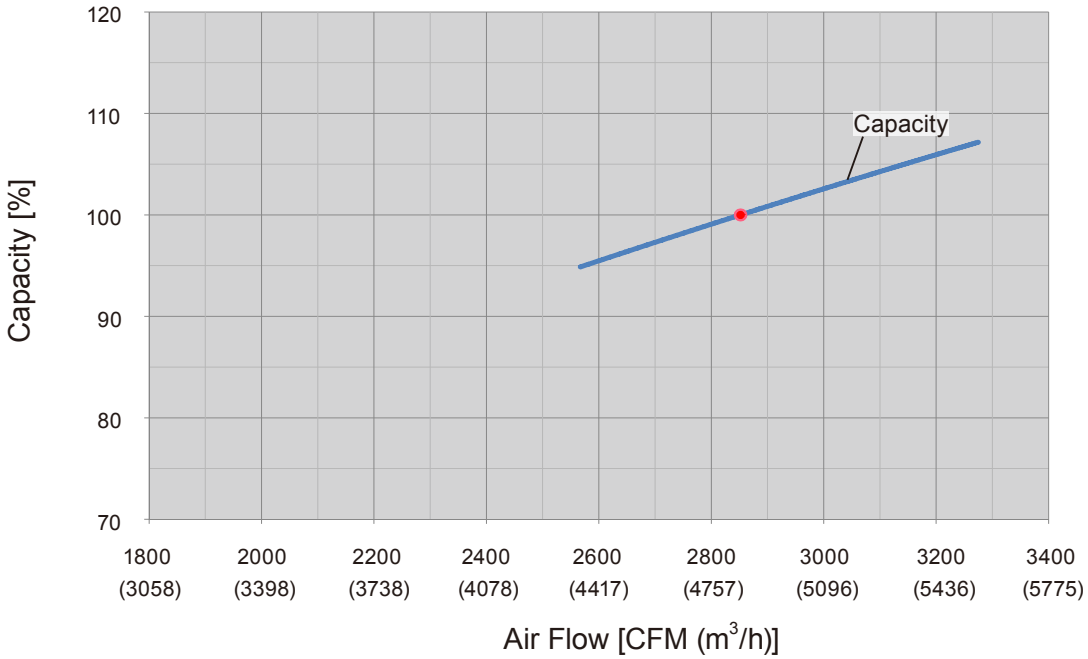


INDOOR UNITS

Cooling



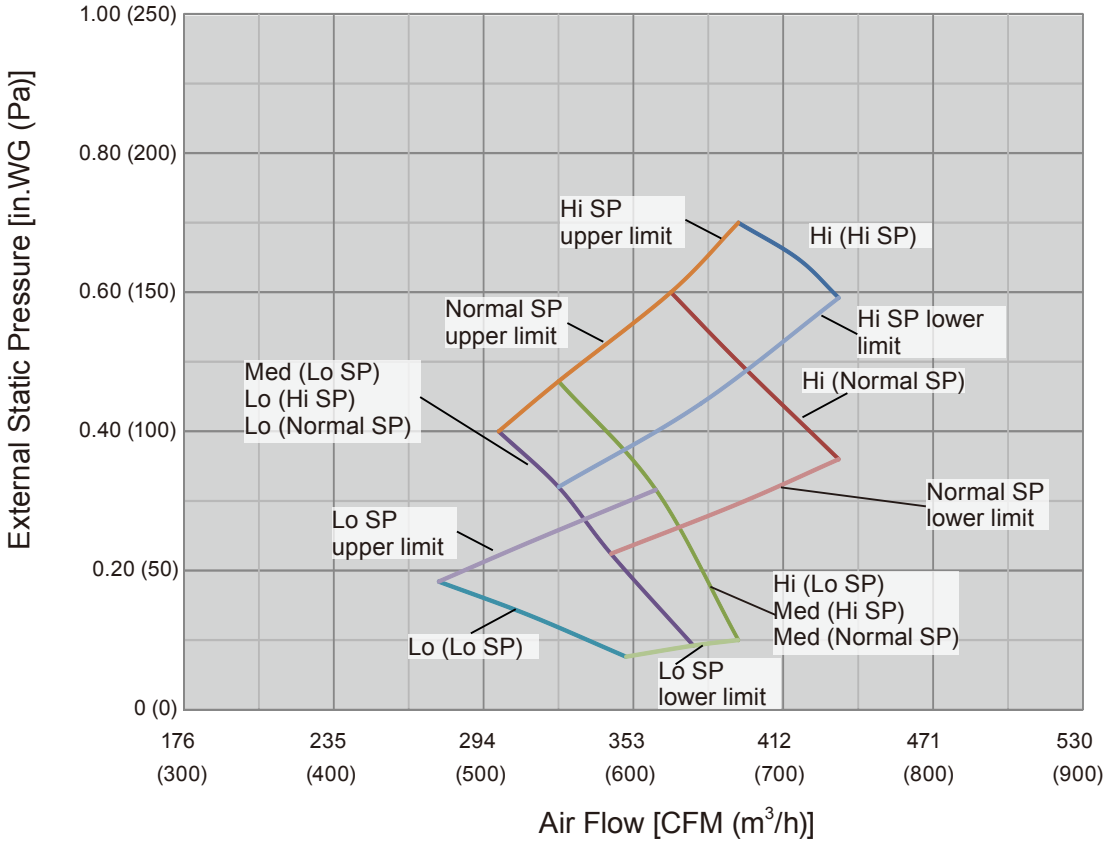
Heating



INDOOR UNITS

6-5. VERTICAL AIR HANDLER TYPE

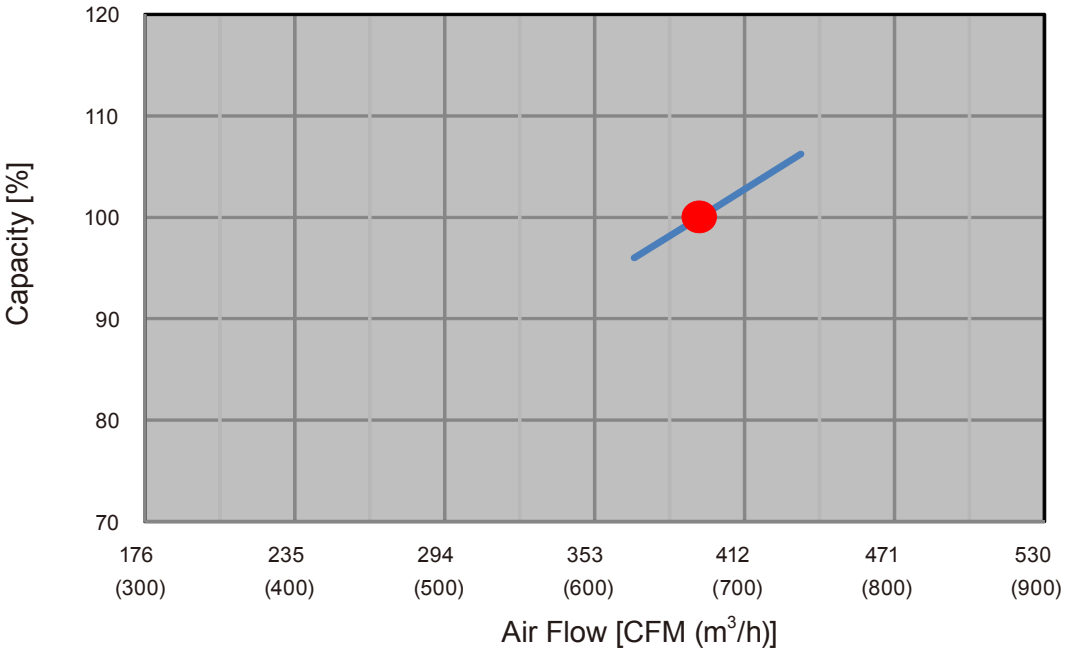
■ MODEL : ARUV12TLAV



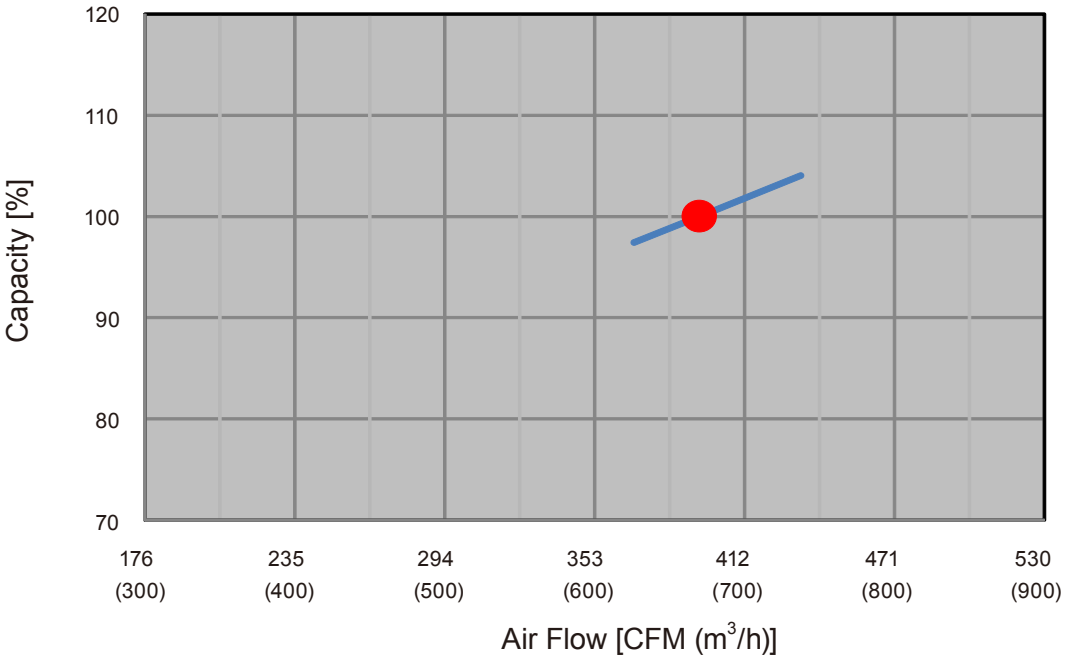
INDOOR UNITS

INDOOR UNITS

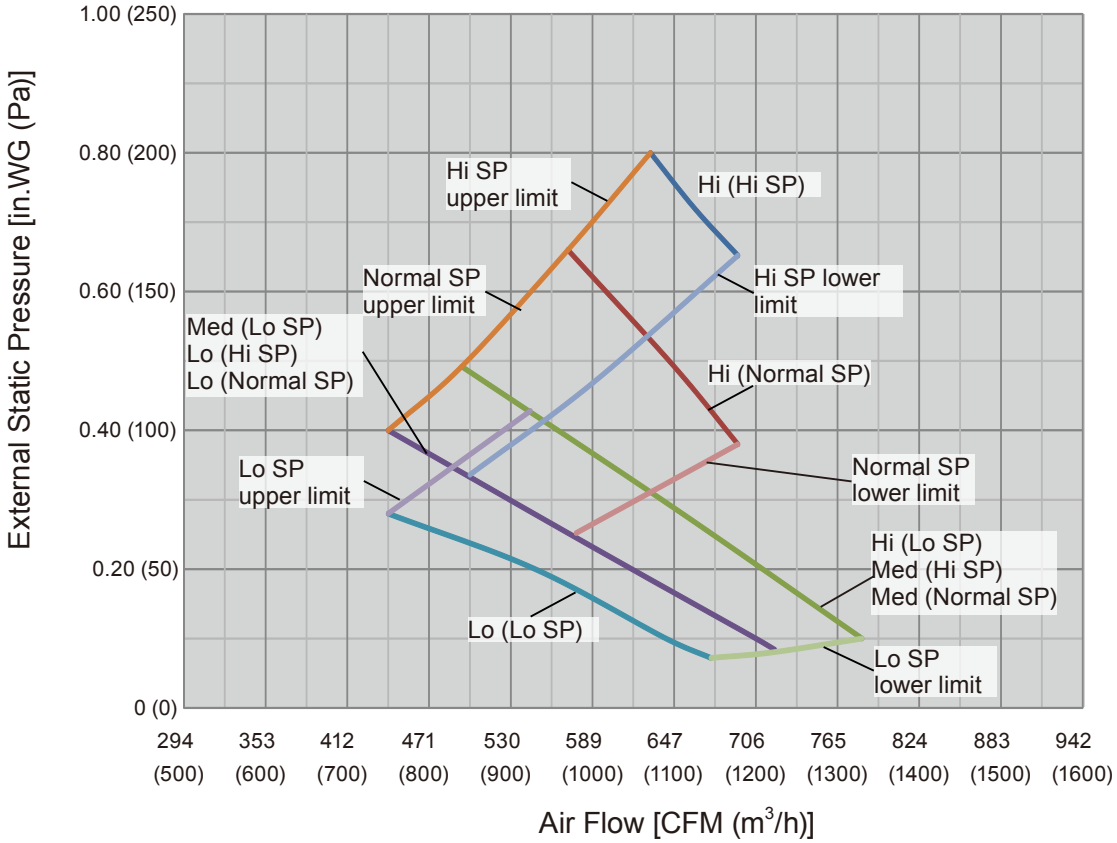
Cooling



Heating

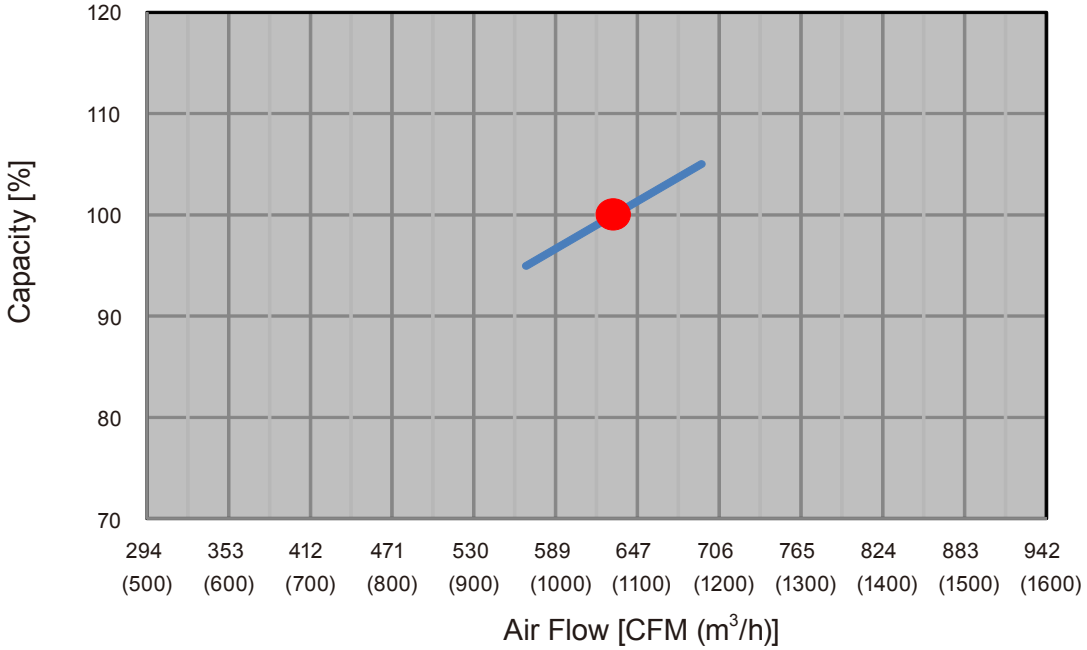


■ MODEL : ARUV18TLAV

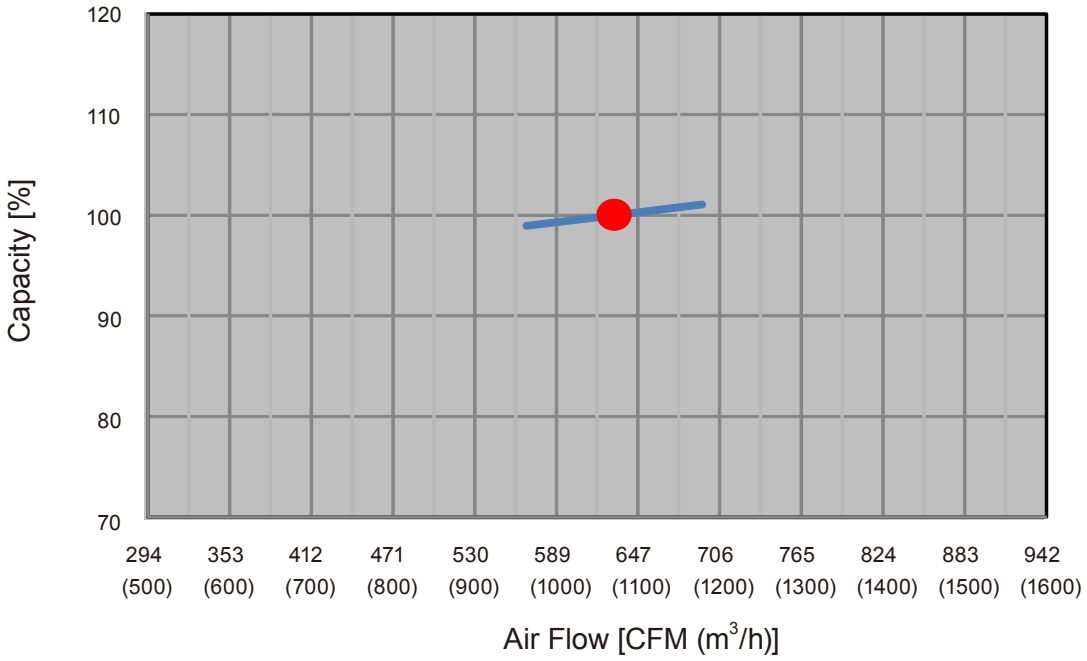


INDOOR UNITS

Cooling

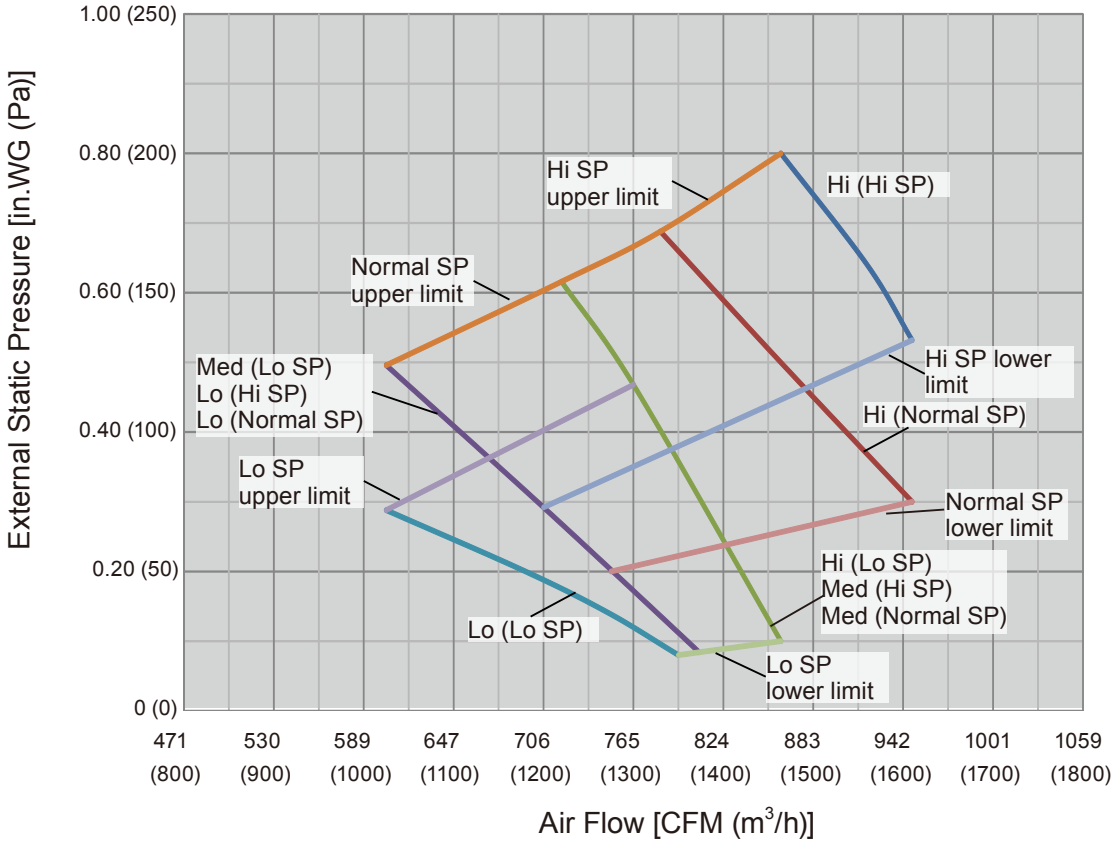


Heating



INDOOR UNITS

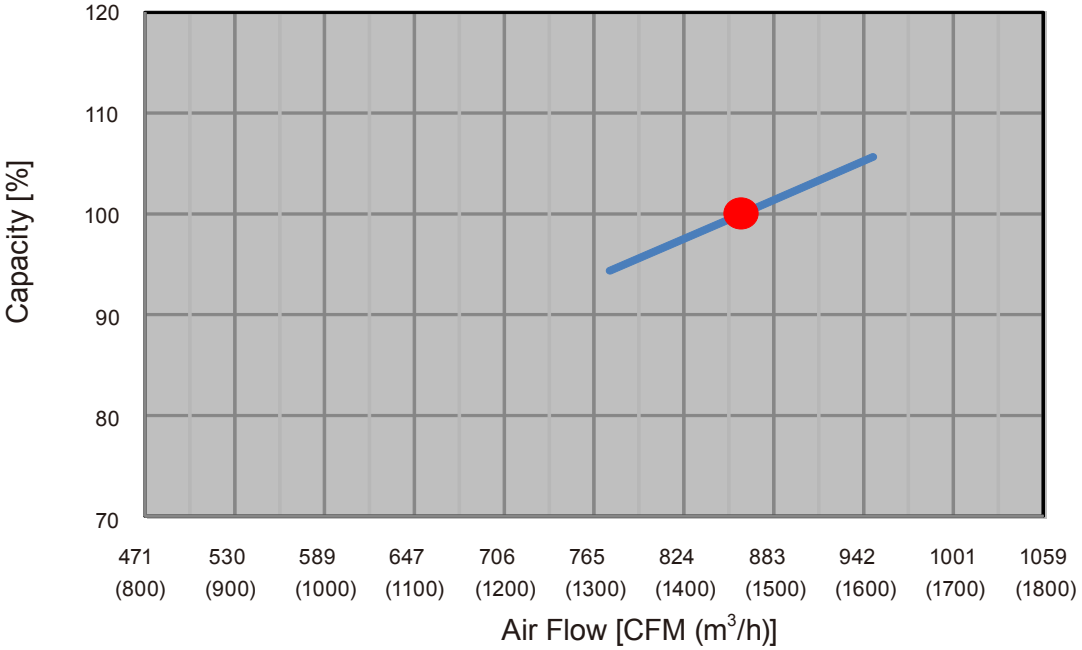
■ MODEL : ARUV24TLAV



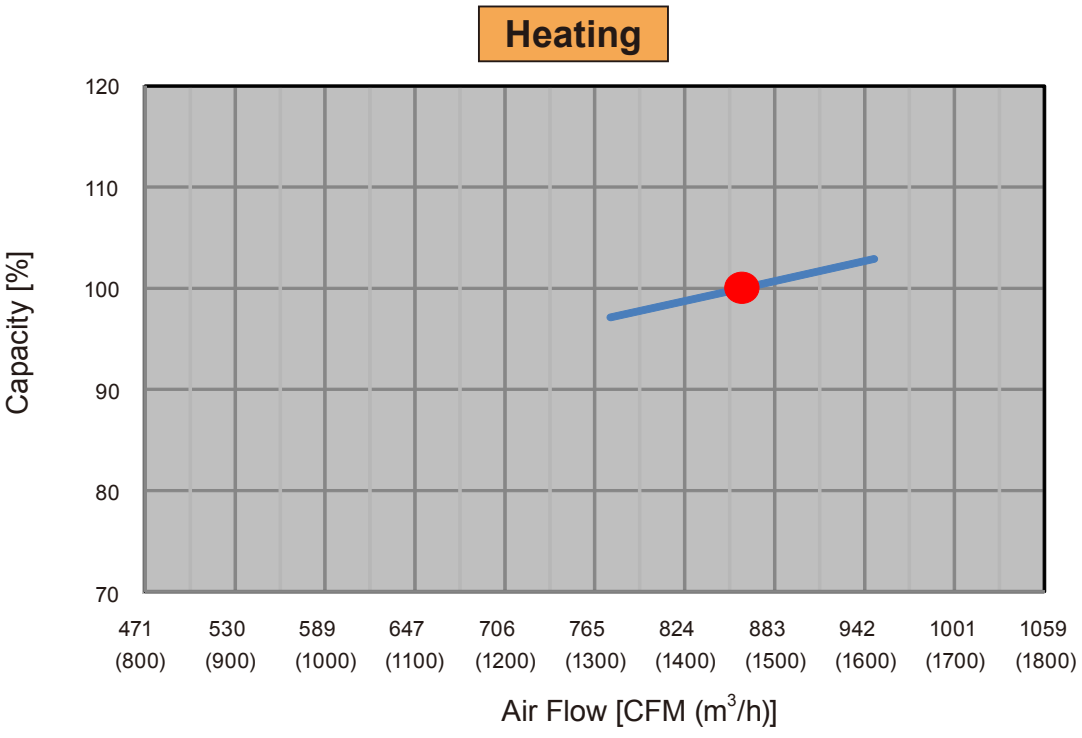
INDOOR UNITS

INDOOR UNITS

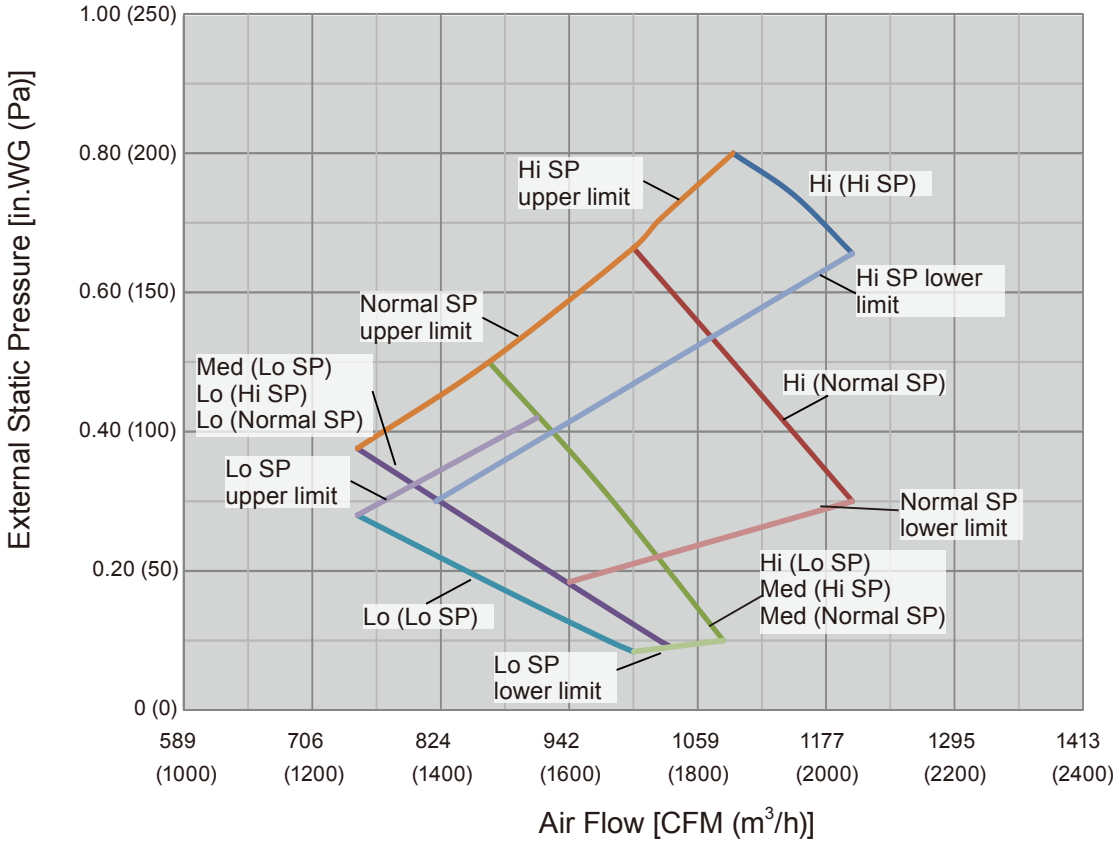
Cooling



Heating



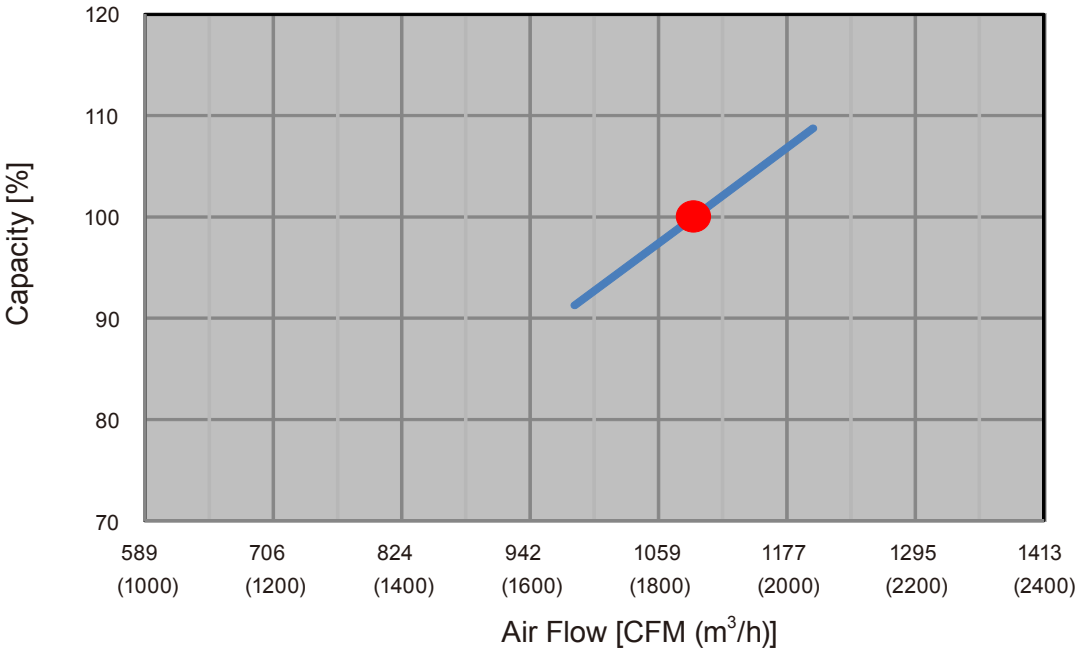
■ MODEL : ARUV30TLAV



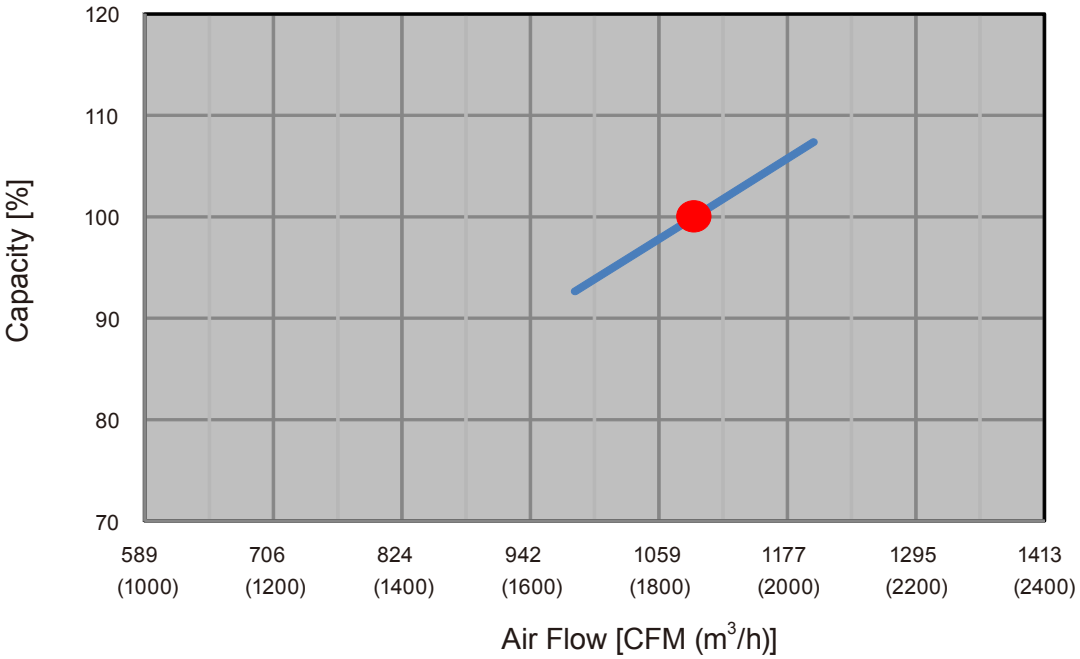
INDOOR UNITS

INDOOR UNITS

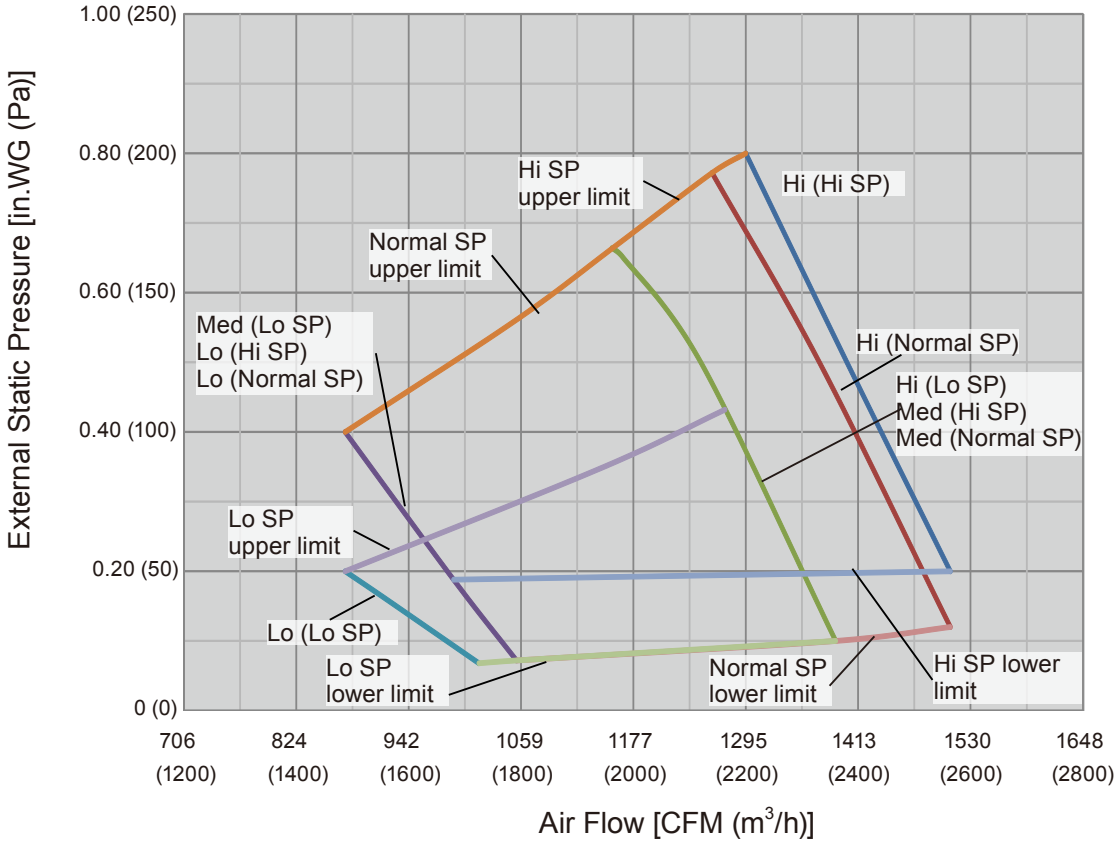
Cooling



Heating



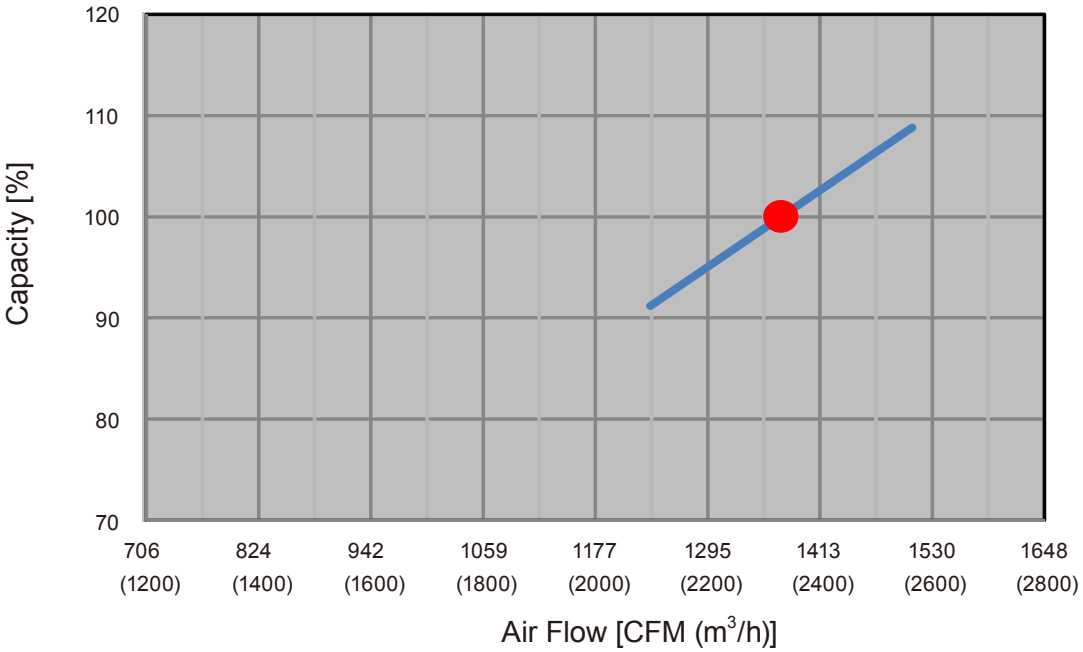
■ MODEL : ARUV36TLAV



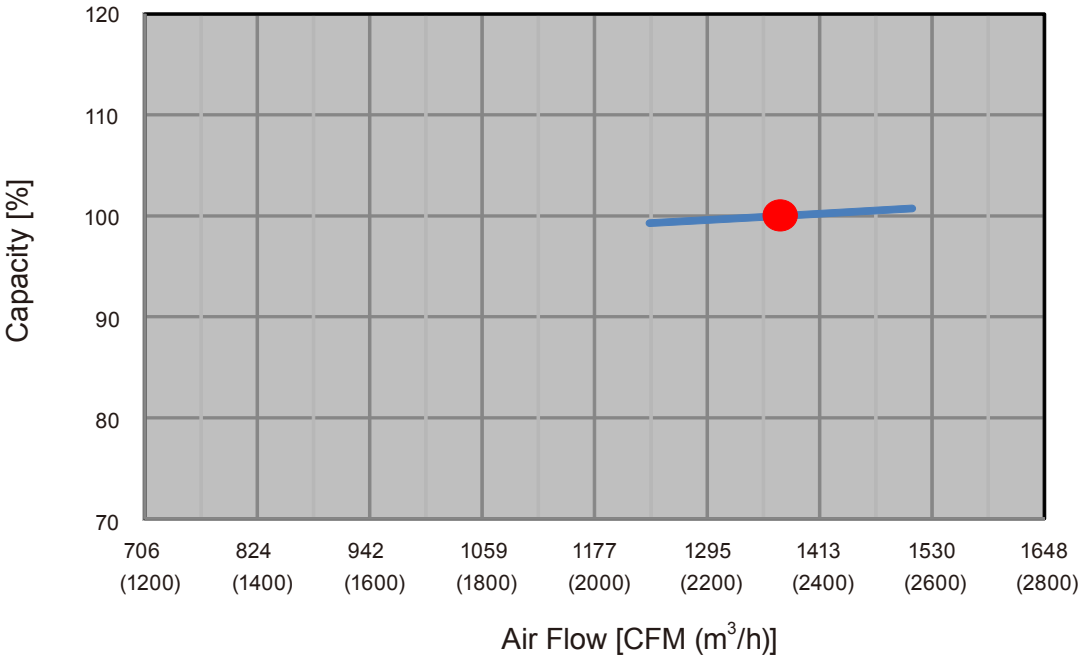
INDOOR UNITS

INDOOR UNITS

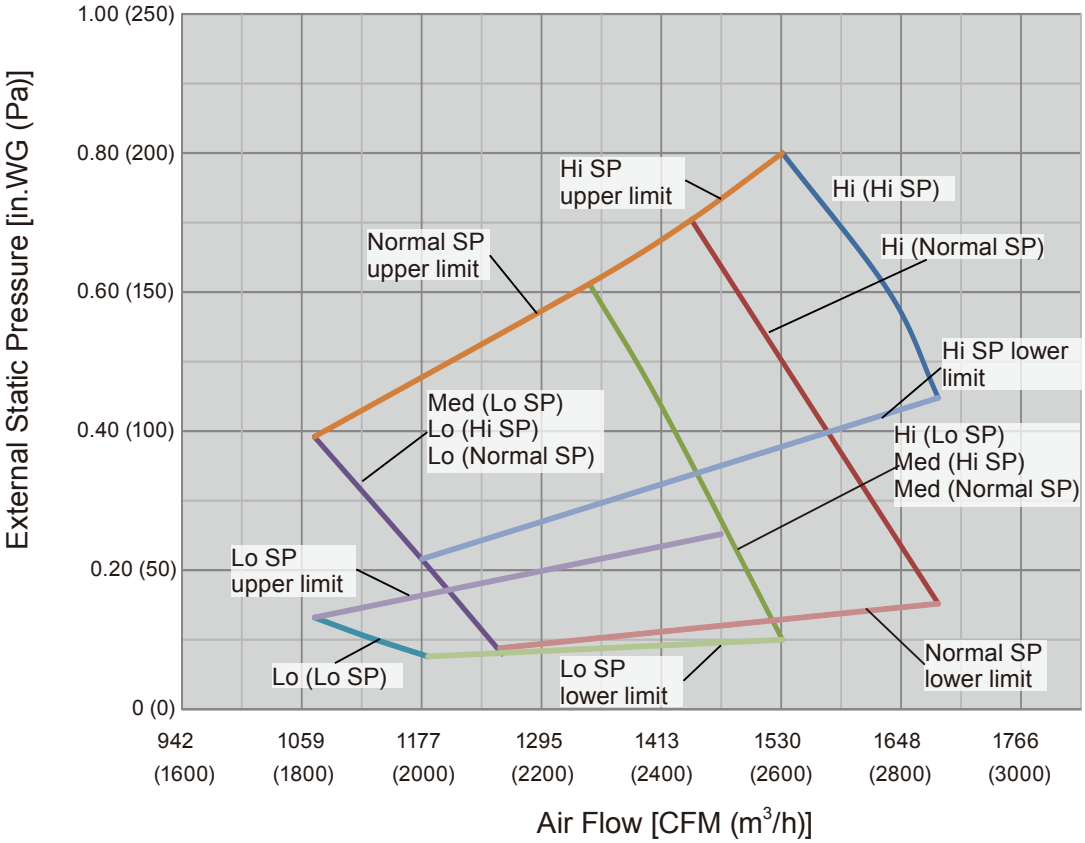
Cooling



Heating



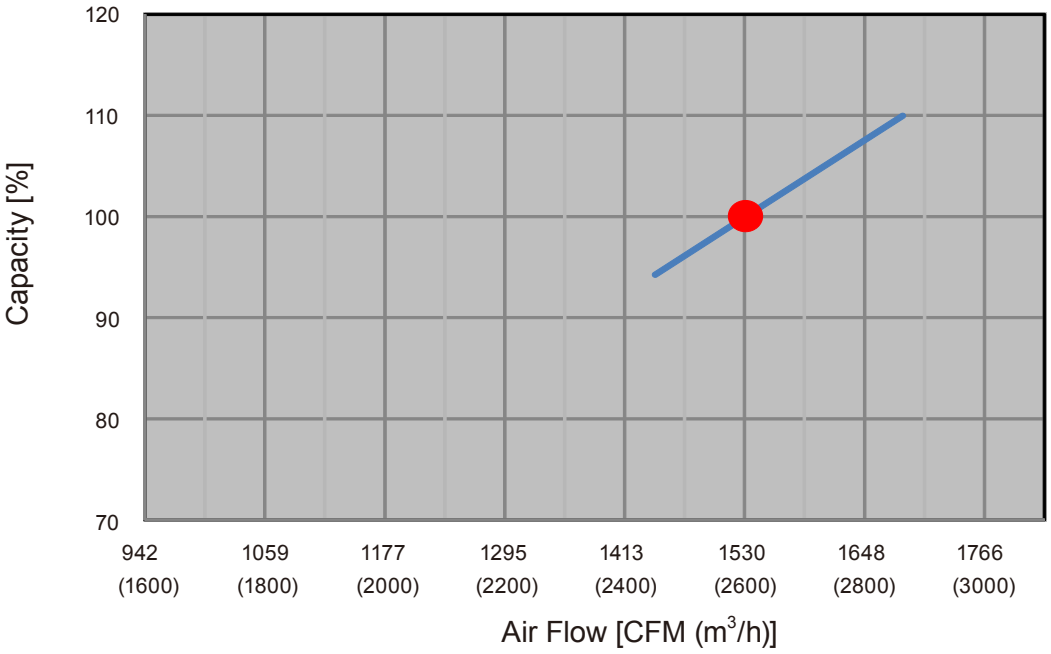
■ MODEL : ARUV48TLAV



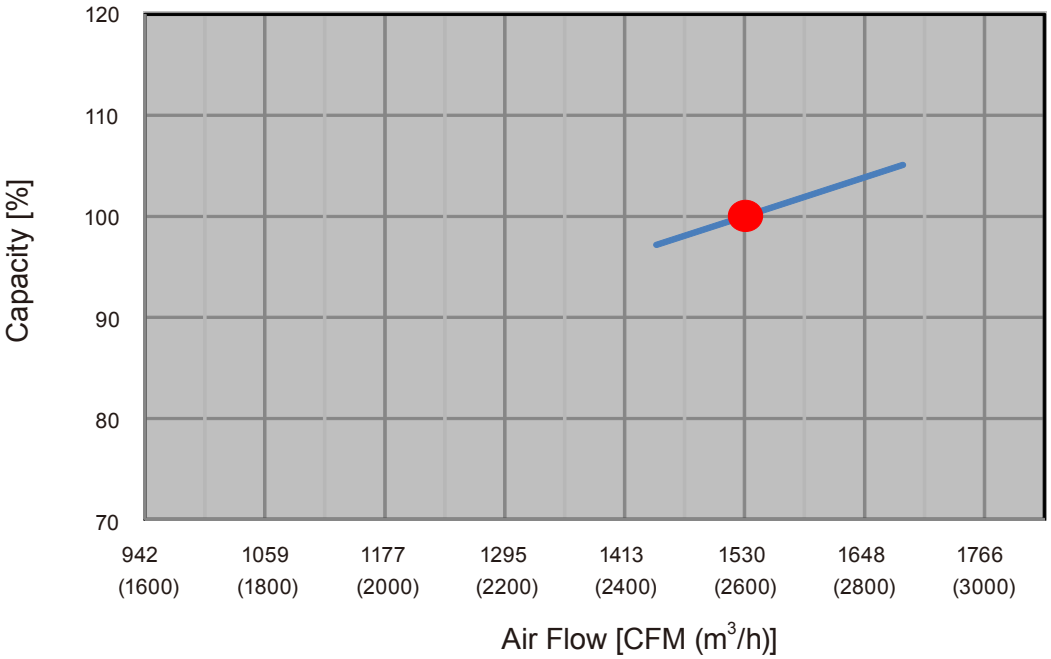
INDOOR UNITS

INDOOR UNITS

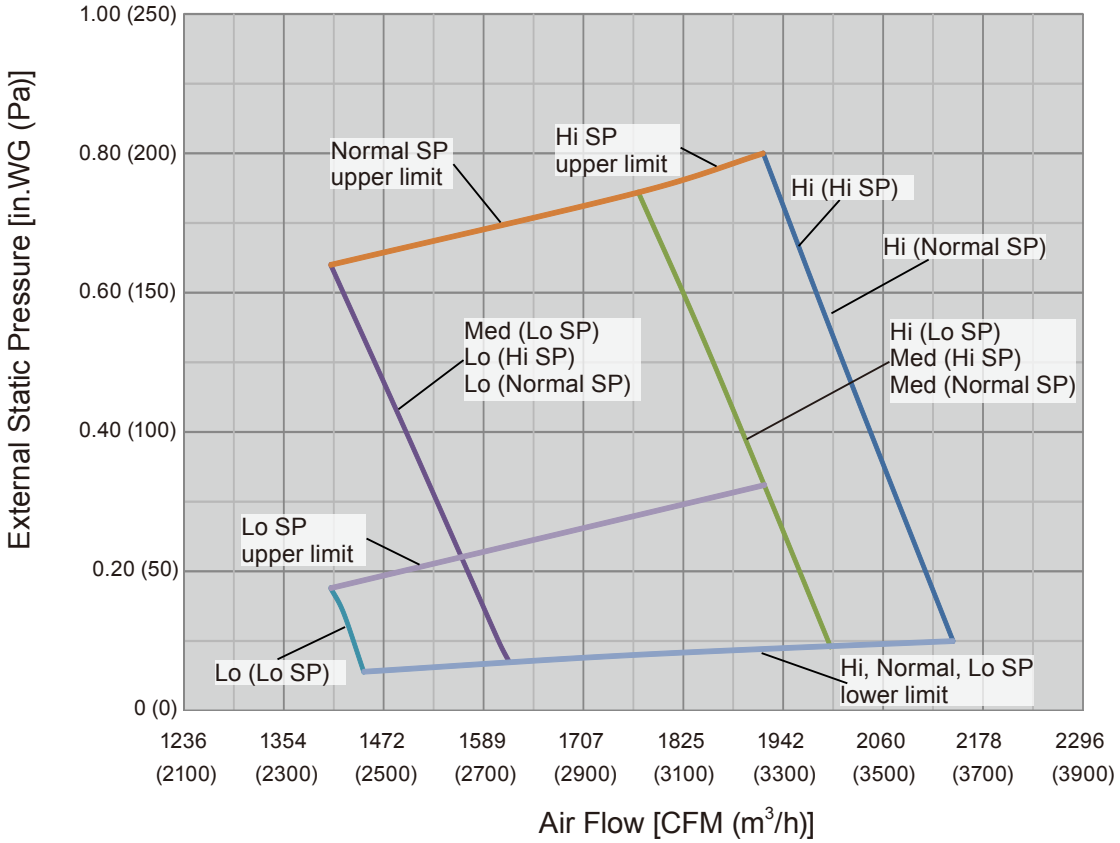
Cooling



Heating

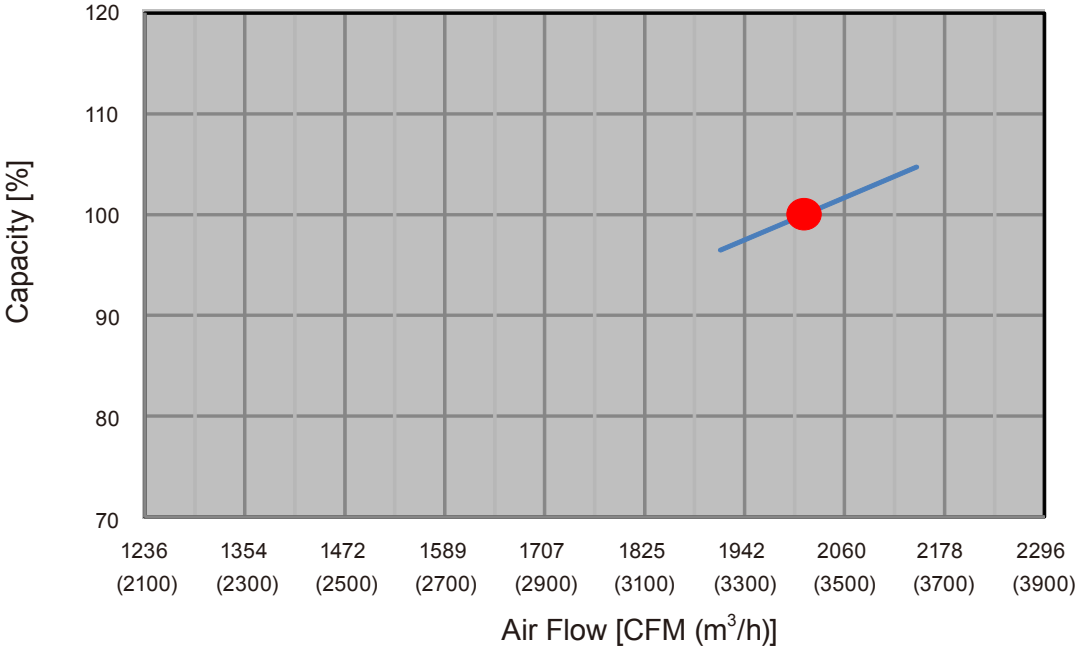


■ MODEL : ARUV60TLAV

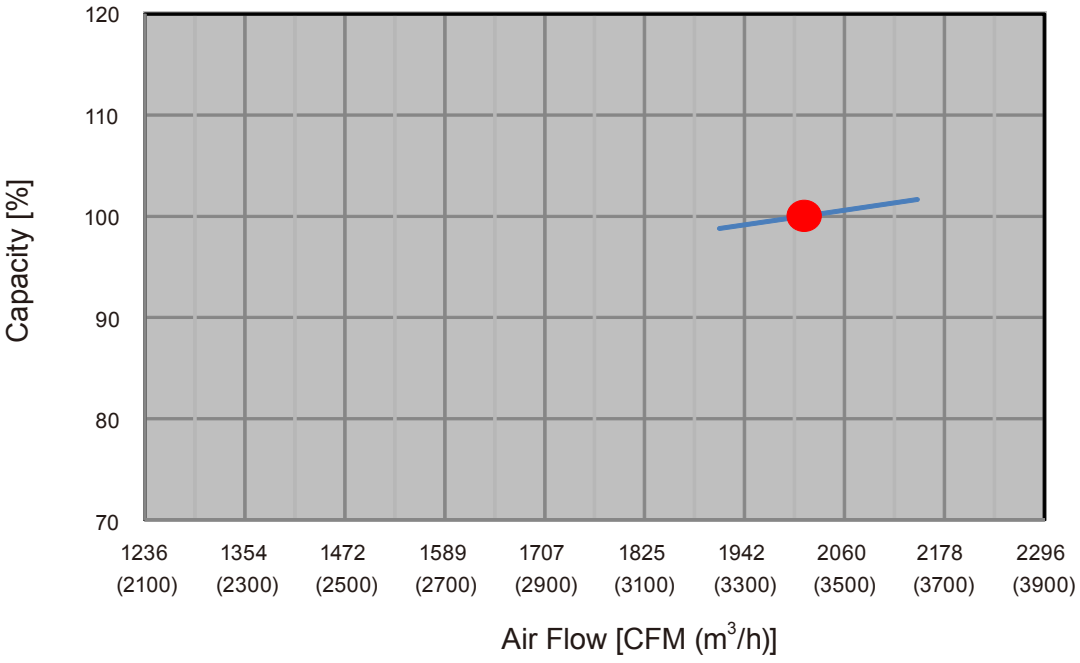


INDOOR UNITS

Cooling



Heating

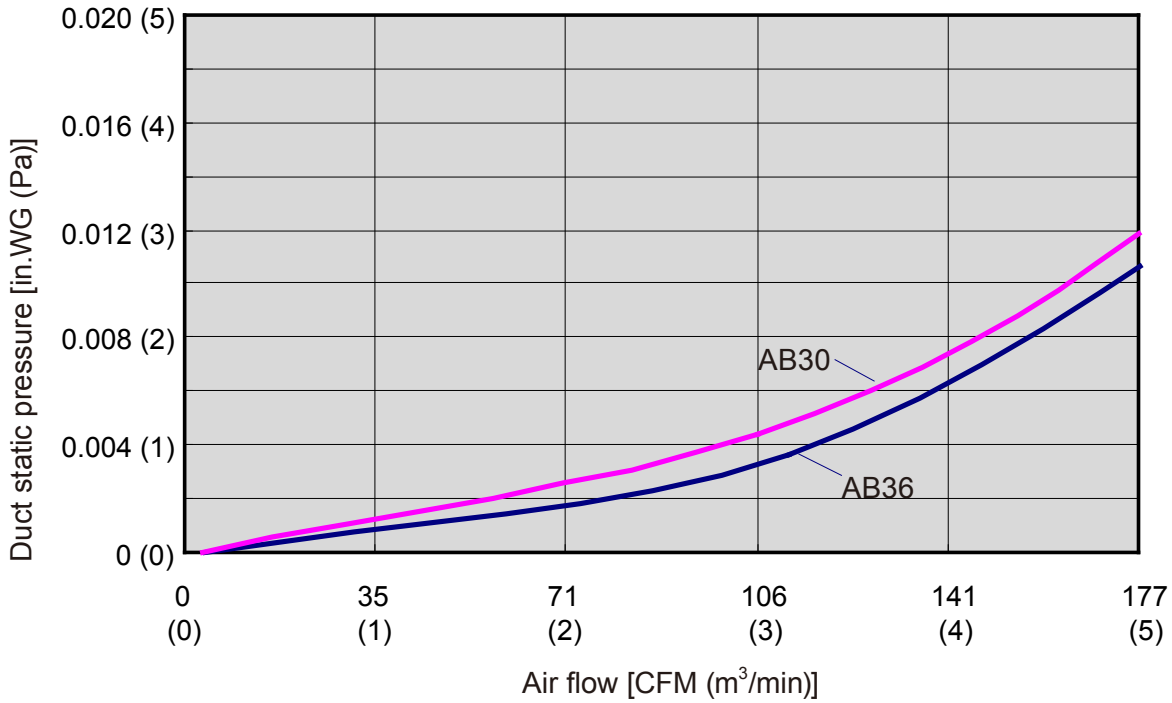


INDOOR UNITS

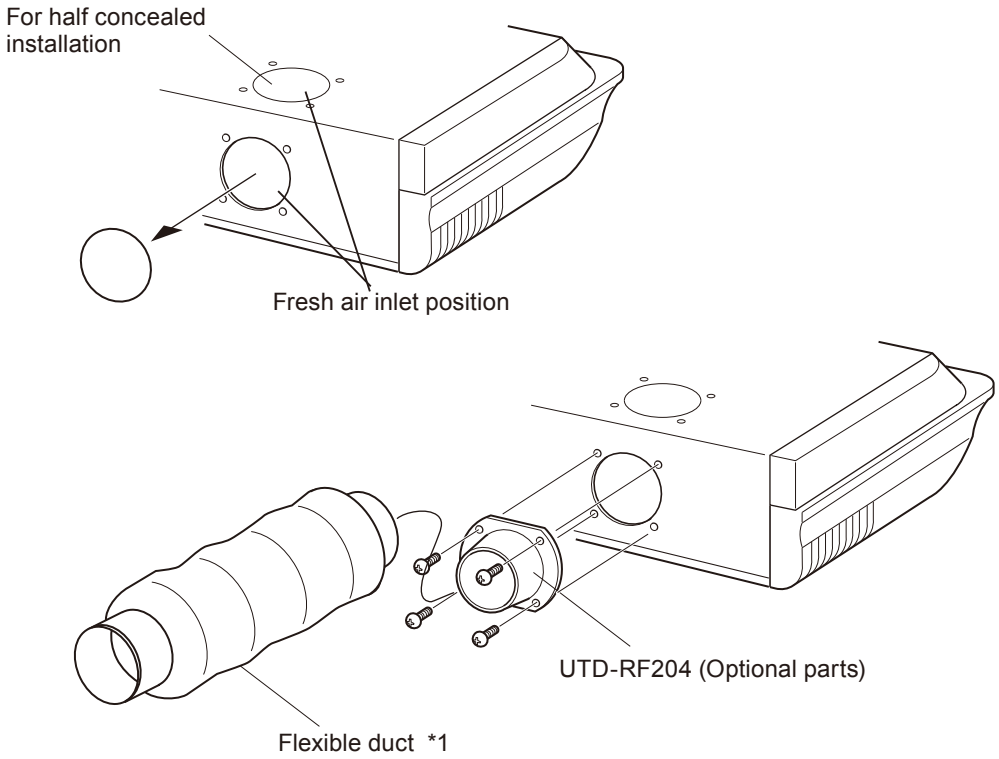
6-6. CEILING TYPE (FRESH AIR)

■ MODELS : ABUA30TLAV, ABUA36TLAV

● Air flow volume - Static pressure of Fresh air intake characteristic



● Installation



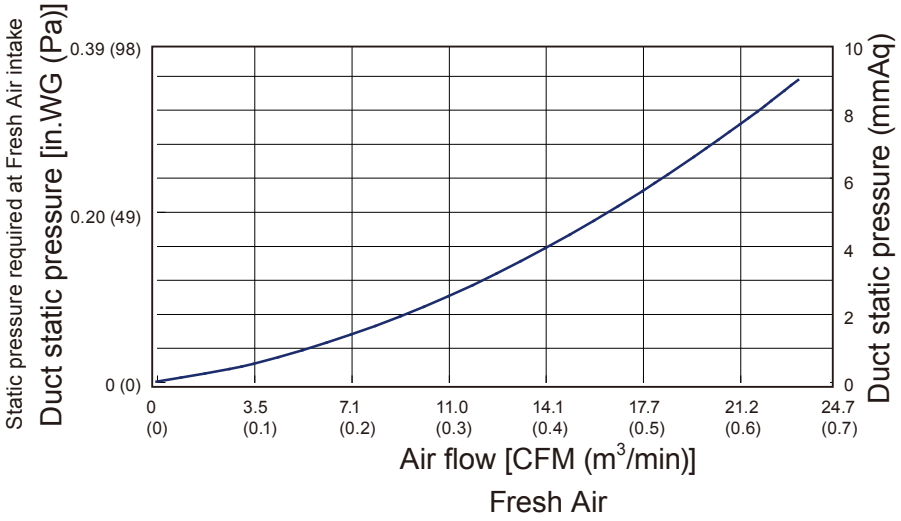
*1 : Locally purchased parts

INDOOR UNITS

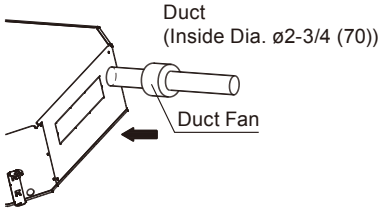
6-7. CASSETTE TYPE (FRESH AIR)

■ MODELS : AUUB18TLAV, AUUB24TLAV, AUUB30TLAV, AUUB36TLAV

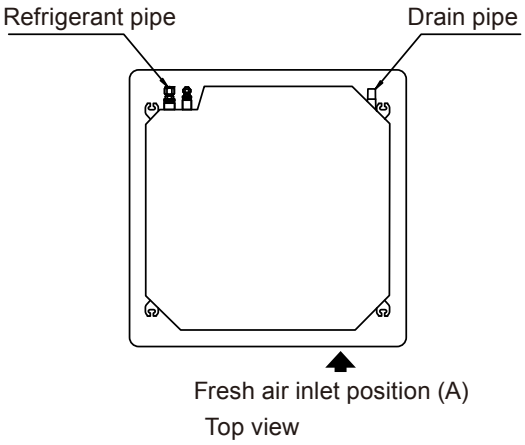
● Fresh Air volume & Static Pressure required at Fresh Air intake.

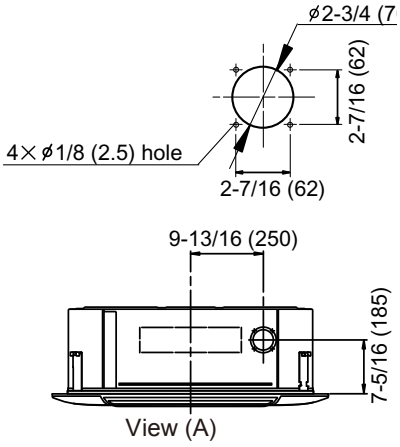


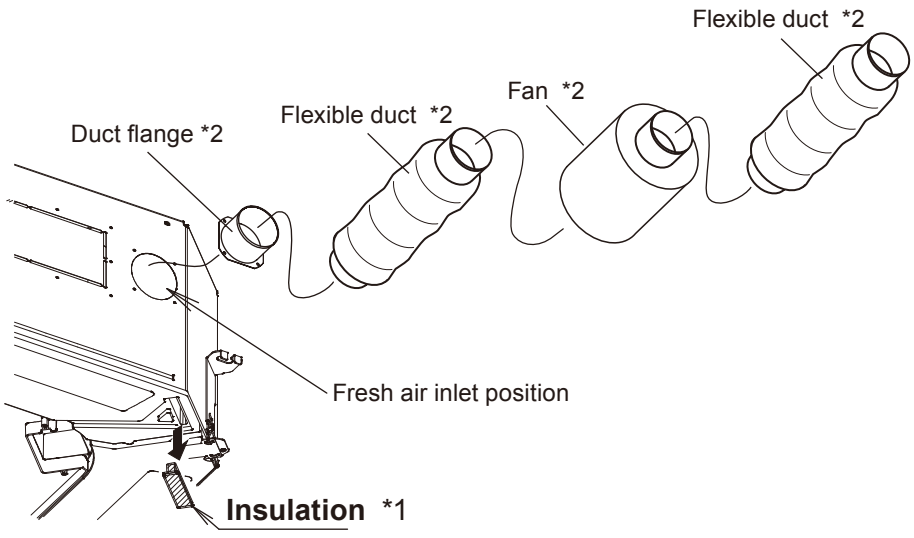
Unit : in. (mm)



● Installation







*1 : If Fresh Air intake is used, remove insulation.

*2 : Locally purchased parts

INDOOR UNITS

7. AIR FLOW

Type	Model	Airflow			
			m^3/h	l/s	CFM
Compact Cassette	AUUA4	High	530	147	312
		Med	450/420	125/117	265/247
		Low	350/300	97/83	206/177
	AUUA7	High	540	150	318
		Med	450	125	265
		Low	350	97	206
	AUUA9	High	550	153	324
		Med	450	125	265
		Low	350	97	206
	AUUA12	High	600	167	353
		Med	530	147	312
		Low	390	108	230
	AUUA14	High	680	189	400
		Med	590	164	347
		Low	390	108	230
	AUUA18	High	710	197	418
		Med	580	161	341
		Low	400	111	235
	AUUA24	High	1030	286	606
		Med	830	231	489
		Low	450	125	265
Circular flow cassette	AUUB18	High	1050	292	618
		Me-Hi	930	258	547
		Med	900	250	530
		Lo-Hi	870	242	512
		Low	810	225	477
		Qu	780	217	459
	AUUB24	High	1120	311	659
		Me-Hi	1050	292	618
		Med	930	258	547
		Lo-Hi	900	250	530
		Low	870	242	512
		Qu	780	217	559
	AUUB30	High	1470	408	865
		Me-Hi	1160	322	683
		Med	1070	297	630
		Lo-Hi	930	258	547
		Low	900	250	530
		Qu	780	217	459
	AUUB36	High	1620	450	954
		Me-Hi	1500	417	883
		Med	1400	389	824
		Lo-Hi	1340	372	789
		Low	1280	356	753
		Qu	1150	319	677
	AUUB48	High	2040	567	1201
		Me-Hi	1800	500	1059
		Med	1590	442	936
		Lo-Hi	1440	400	848
		Low	1300	361	765
		Qu	1150	319	677
Cassette	AUUB18	High	1150	319	677
		Med	940	261	553
		Low	870	242	512
	AUUB24	High	1280	356	753
		Med	1040	289	612
		Low	870	242	512
	AUUB30	High	1600	444	942
		Med	1300	361	765
		Low	1100	306	647
	AUUB36	High	1800	500	1059
		Med	1300	361	765
		Low	1100	306	647

Type	Model	Airflow			
			m^3/h	l/s	CFM
Mini duct	ARUL4	High	460	128	271
		Me-Hi	440	122	259
		Med	420	117	247
		Lo-Hi	400	111	235
		Low	370	103	218
		Qu	340	94	200
Slim Duct / Slim Concealed Floor	ARUL7	High	550	153	324
		Med	490	136	288
		Low	440	122	259
	ARUL9	High	600	167	353
		Med	550	153	324
		Low	480	133	283
	ARUL12	High	600	167	353
		Med	510	142	300
		Low	450	125	265
	ARUL14	High	800	222	471
		Med	710	197	418
		Low	610	169	359
	ARUL18	High	940	261	553
		Med	840	233	494
		Low	750	208	441
Mediun Static Pressure Duct	ARUM24	High	1460	406	859
		Med	1230	342	724
		Low	1000	278	589
	ARUM30	High	1770	492	1042
		Med	1380	383	812
		Low	1000	278	589
	ARUM36	High	1890	525	1112
		Med	1520	422	895
		Low	1150	319	677
High Static Pressure Duct	ARUH36	High	2250	625	1324
		Med	1750	486	1030
		Low	1400	389	824
	ARUH48	High	3000	833	1766
		Med	2700	750	1589
		Low	2300	639	1354
	ARUH60	High	3350	931	1972
		Med	2850	792	1678
		Low	2550	708	1501
	ARUH72	High	3,900	1083	2296
		Med	3,300	917	1942
		Low	3,000	833	1766
	ARUH96	High	4,850	1347	2855
		Med	4,250	1181	2502
		Low	3,600	1000	2119
Vertical air handler	ARUV12	High	670	186	394
		Med	590	164	347
		Low	520	144	306
	ARUV18	High	1071	298	630
		Med	930	258	547
		Low	860	239	506
	ARUV24	High	1464	407	862
		Med	1360	378	800
		Low	1170	325	689
	ARUV30	High	1855	515	1092
		Med	1600	444	942
		Low	1390	386	818
	ARUV36	High	2331	648	1372
		Med	2160	600	1271
		Low	1620	450	954
	ARUV48	High	2602	723	1531
		Med	2390	664	1407
		Low	1920	533	1130
	ARUV60	High	3420	950	2013
		Med	3200	889	1883
		Low	2620	728	1542

Conversion Factor
1 m^3/h = 0.2778 l/s = 0.5886 CFM
3.6 m^3/h = 1 l/s
1.699 m^3/h = 1 CFM

INDOOR UNITS

Type	Model	Airflow			
			m^3/h	l/s	CFM
Compact floor	AGUA4	High	380/430	106/119	224/253
		Me-Hi	350	97	206
		Med	320	89	188
		Lo-Hi	310	86	182
		Low	280	78	165
		Qu	210	58	124
	AGUA7	High	470	131	277
		Me-Hi	420	117	247
		Med	390	108	230
		Lo-Hi	360	100	212
		Low	330	92	194
		Qu	270	75	159
	AGUA9	High	500	139	294
		Me-Hi	450	125	265
		Med	400	111	235
		Lo-Hi	360	100	212
		Low	330	92	194
		Qu	270	75	159
	AGUA12	High	590	164	347
		Me-Hi	520	144	306
		Med	470	131	277
		Lo-Hi	420	117	247
		Low	390	108	230
		Qu	340	94	200
	AGUA14	High	670	186	394
		Me-Hi	590	164	347
		Med	520	144	306
		Lo-Hi	450	125	265
		Low	390	108	230
		Qu	340	94	200
Floor/ Ceiling	ABUA12	High	660	183	389
		Med	570	158	336
		Low	490	136	289
	ABUA14	High	780	216	459
		Med	640	177	377
		Low	550	152	324
	ABUA18	High	1000	277	589
		Med	720	199	424
		Low	580	161	342
	ABUA24	High	1000	277	589
		Med	820	227	483
		Low	680	188	401
Ceiling	ABUA30	High	1630	453	959
		Med	1370	379	807
		Low	1140	316	671
	ABUA36	High	1690	469	995
		Med	1400	389	824
		Low	1170	325	689

Type	Model	Airflow			
			m^3/h	l/s	CFM
Wall Mounted	ASUA4 TLAV1	High	430	119	253
		Me-Hi	420	117	247
		Med	390	108	230
		Lo-Hi	380	106	224
		Low	360	100	212
		Qu	330	92	194
	ASUA7 TLAV1	High	550	153	324
		Me-Hi	460	128	271
		Med	420	117	247
		Lo-Hi	390	108	230
		Low	360	100	212
		Qu	330	92	194
	ASUA9 TLAV1	High	720	200	424
		Me-Hi	570	158	336
		Med	500	139	294
		Lo-Hi	410	114	241
		Low	360	100	212
		Qu	330	92	194
	ASUA12 TLAV1	High	690	191	406
		Me-Hi	610	169	359
		Med	560	156	330
		Lo-Hi	530	147	312
		Low	470	131	277
		Qu	330	92	194
	ASUA14 TLAV1	High	800	222	471
		Me-Hi	740	206	436
		Med	680	188	401
		Lo-Hi	610	169	359
		Low	550	153	324
		Qu	330	92	194
	ASUA18 TLAV1	High	840	233	495
		Med	770	214	454
		Low	690	192	406
	ASUA24 TLAV1	High	1100	306	648
		Med	910	253	536
		Low	730	203	430
	ASUA30 TLAV1	High	1440	400	848
		Me-Hi	1200	333	706
		Med	1050	292	618
		Lo-Hi	940	261	553
		Low	890	247	524
		Qu	700	194	412
	ASUA36 TLAV1	High	1620/1520	450/422	954/895
		Me-Hi	1300	361	765
		Med	1120	311	659
		Lo-Hi	980	272	577
		Low	890	247	524
		Qu	700	194	412
	ASUA7 TLAV	High	490	136	288
		Med	450	125	265
		Low *1	420/370	117/103	247/218
	ASUA9 TLAV	High	500	139	294
		Med	450	125	265
		Low *1	420/370	117/103	247/218
	ASUA12 TLAV	High	560	156	330
		Med	480	133	283
		Low	420	117	247
	ASUA14 TLAV	High	670	186	394
		Med	490	136	288
		Low	420	117	247
	ASUB18 TLAV	High	840	233	495
		Med	770	213	454
		Low	690	191	406
	ASUB24 TLAV	High	1100	305	648
		Med	910	252	536
		Low	730	202	430

*1: This value is "cooling operation / heating operation".

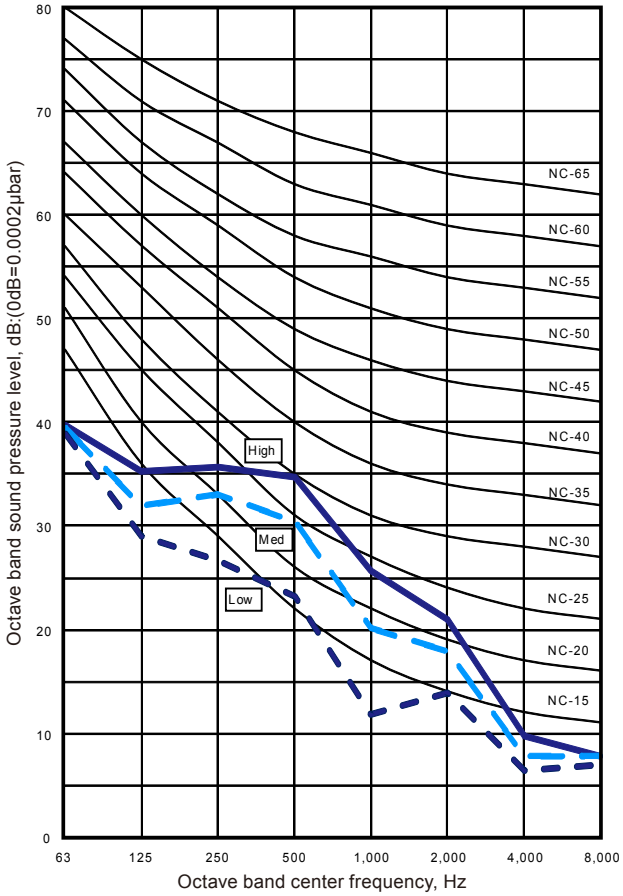
Conversion Factor
1 m^3/h = 0.2778 l/s = 0.5886 CFM
3.6 m^3/h = 1 l/s
1.699 m^3/h = 1 CFM

8. NOISE LEVEL CURVE

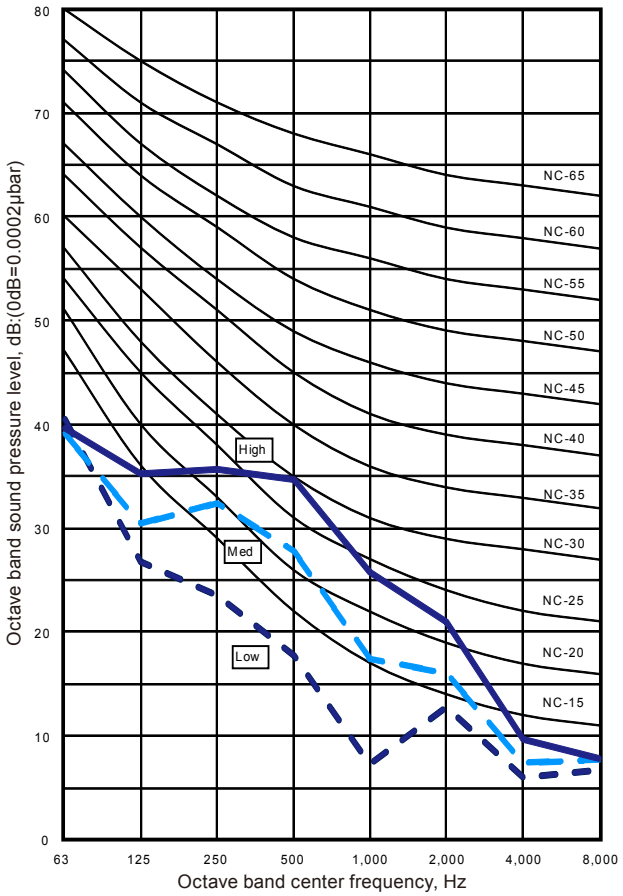
8-1. COMPACT CASSETTE TYPE

■ MODEL : AUUA4TLAV1

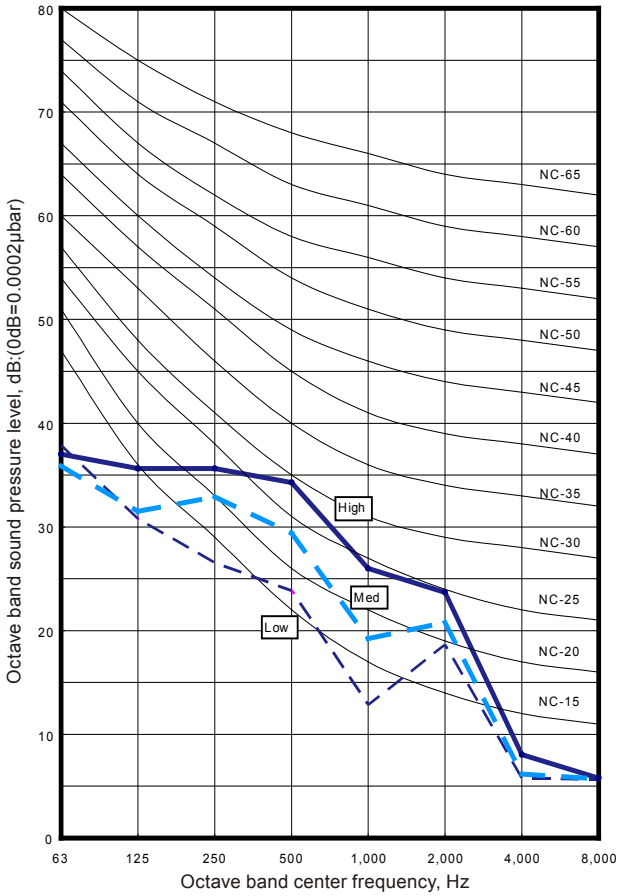
● COOLING



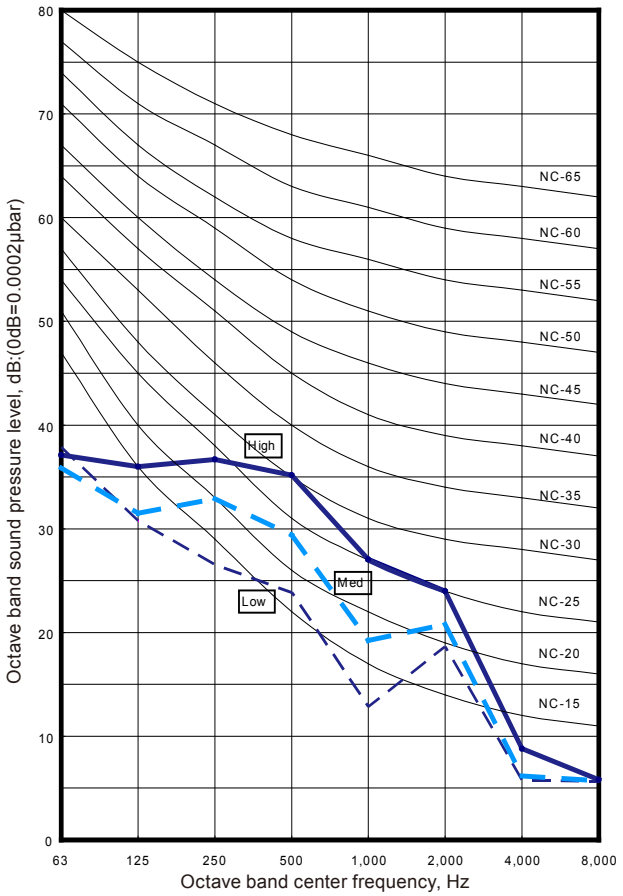
● HEATING



■ MODEL : AUUA7TLAV

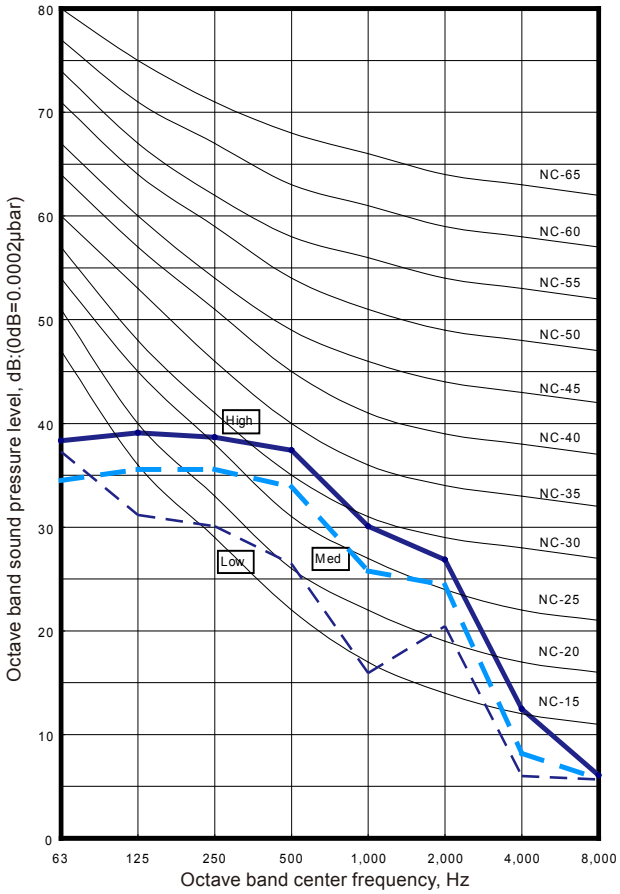


■ MODEL : AUUA9TLAV

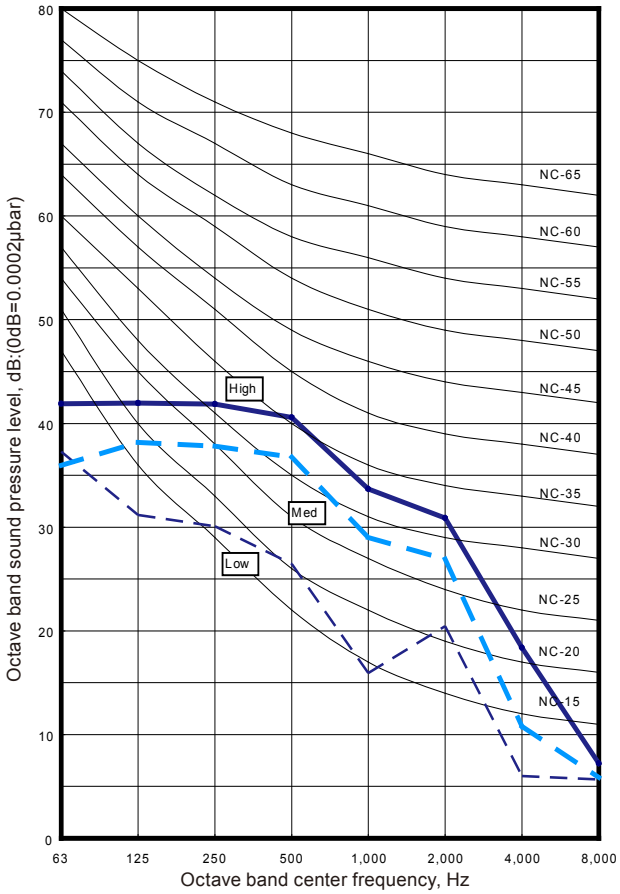


INDOOR UNITS

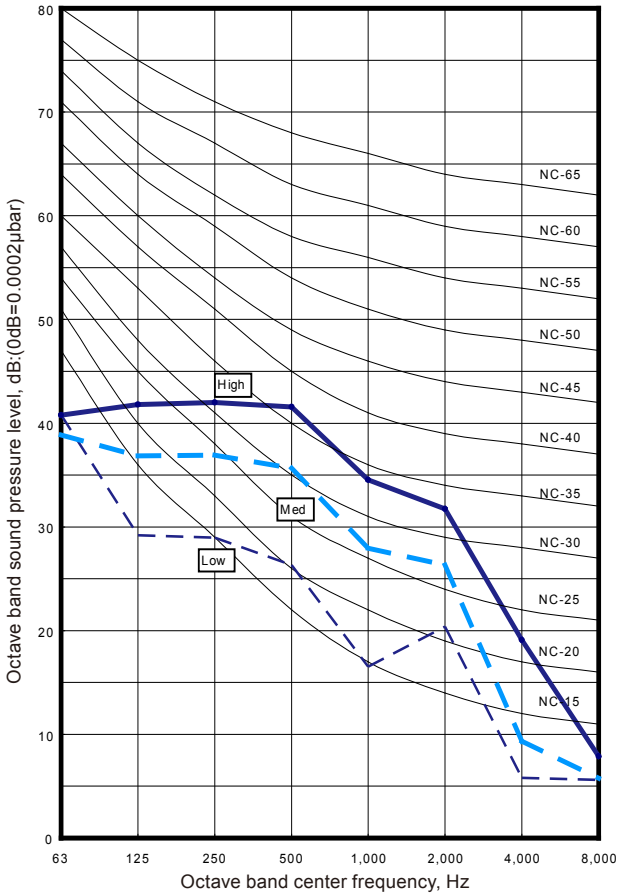
■ MODEL : AUUA12TLAV



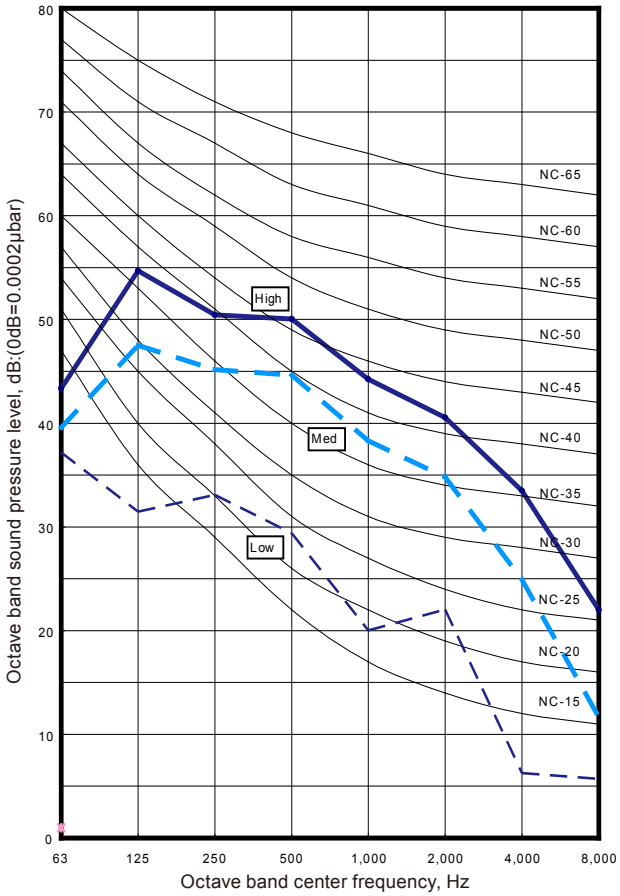
■ MODEL : AUUA14TLAV



■ MODEL : AUUA18TLAV



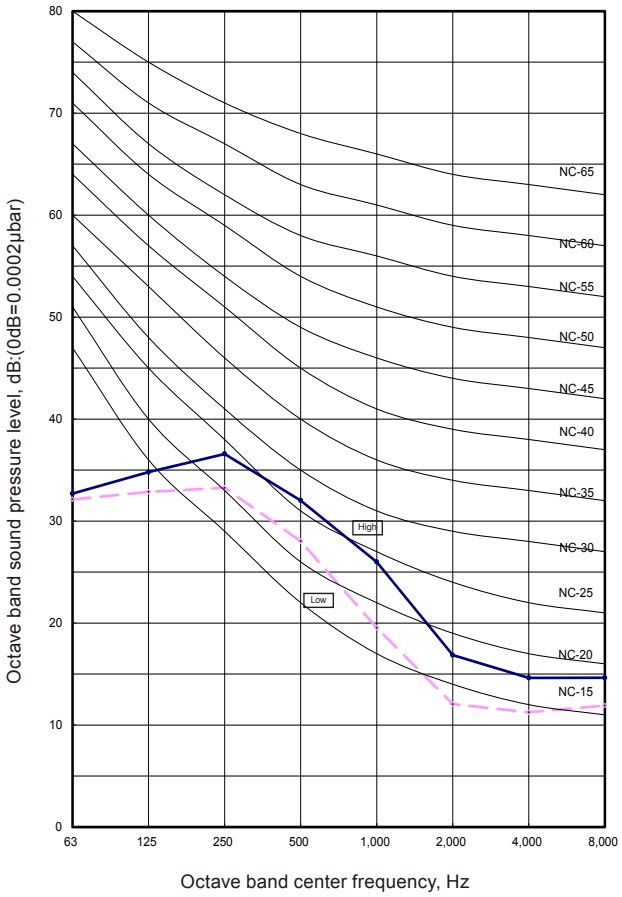
■ MODEL : AUUA24TLAV



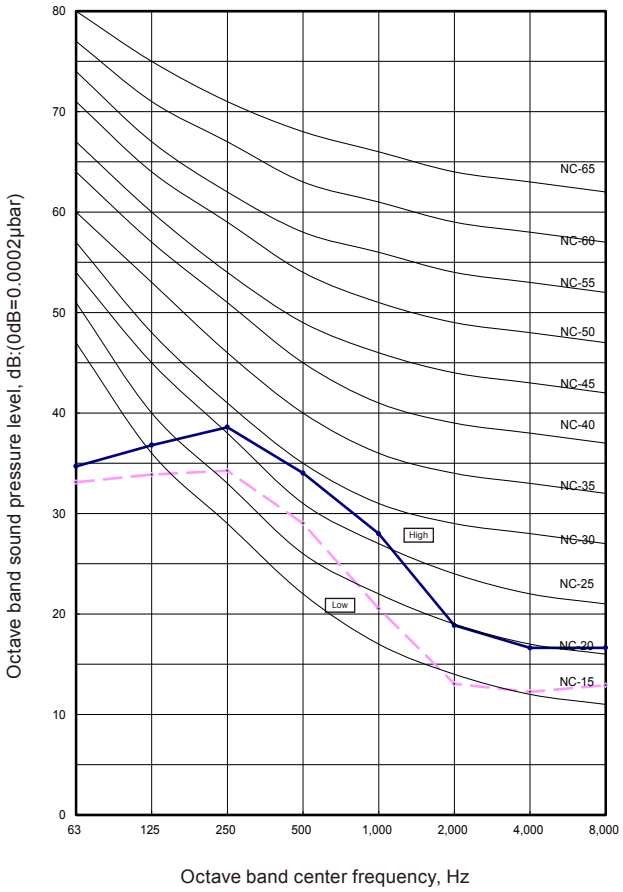
INDOOR UNITS

8-2. CIRCULAR FLOW CASSETTE TYPE

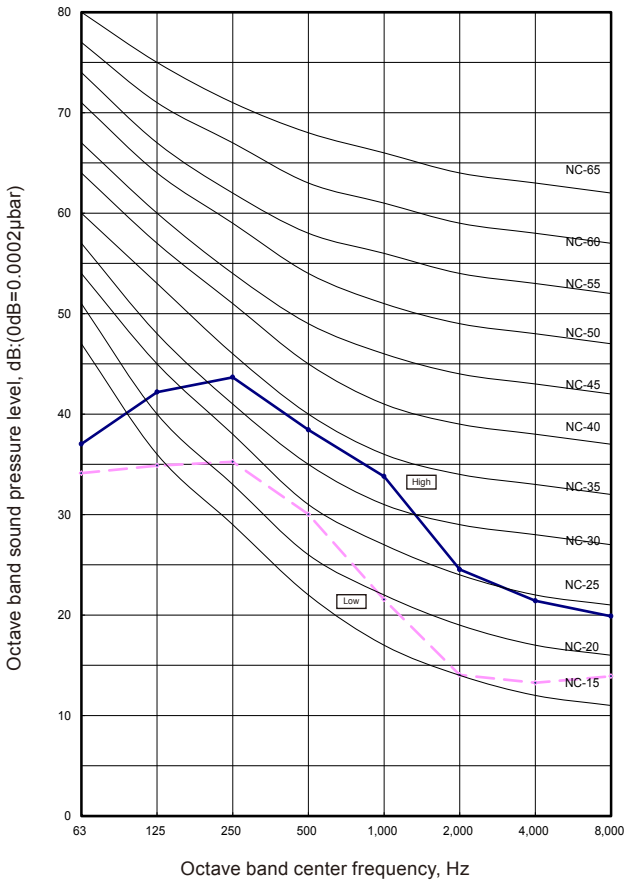
■ MODEL: AUUB18TLAV1



■ MODEL: AUUB24TLAV1

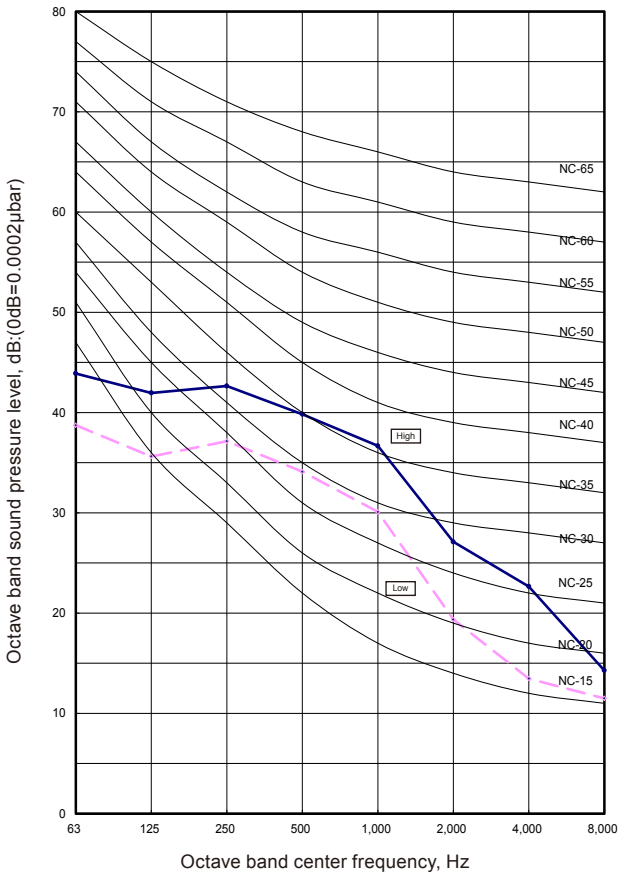


■ MODEL: AUUB30TLAV1

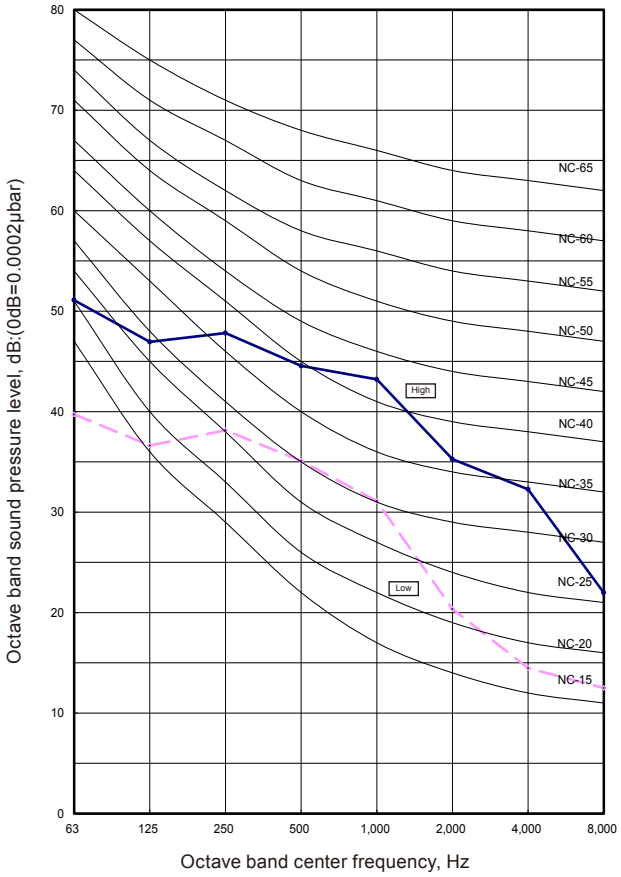


INDOOR UNITS

■ MODEL: AUUB36TLAV1



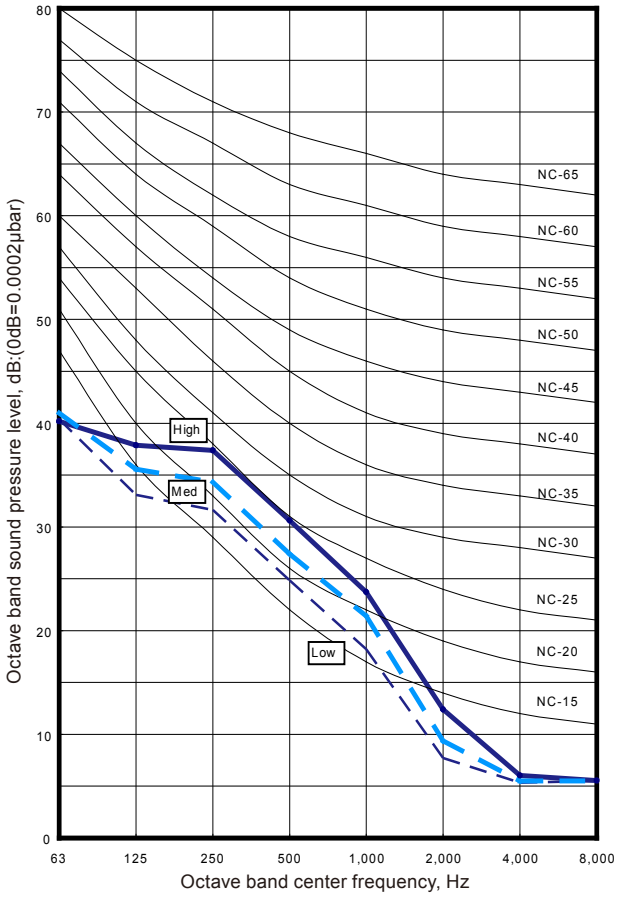
■ MODEL: AUUB48TLAV1



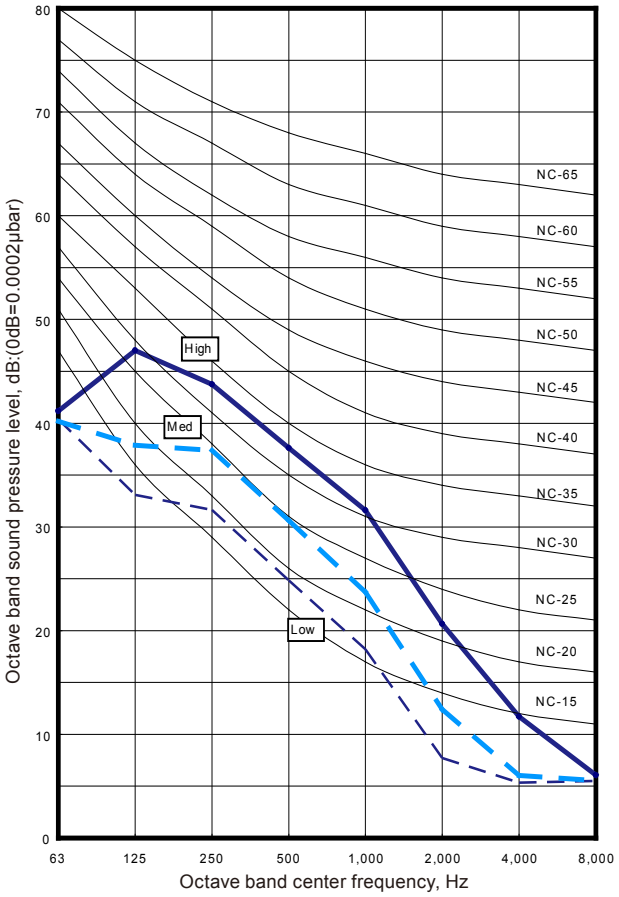
INDOOR UNITS

8-3. CASSETTE TYPE

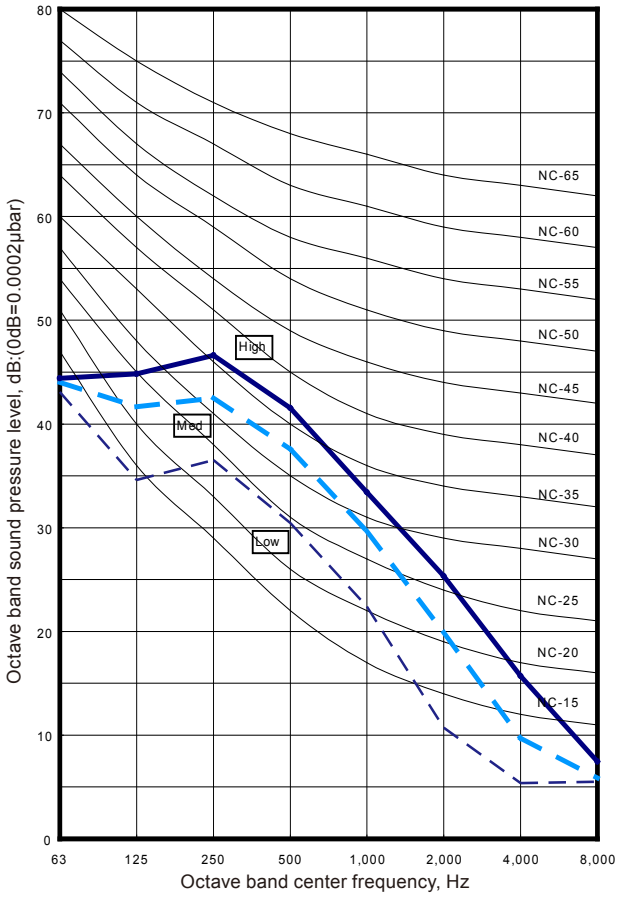
■ MODEL : AUUB18TLAV



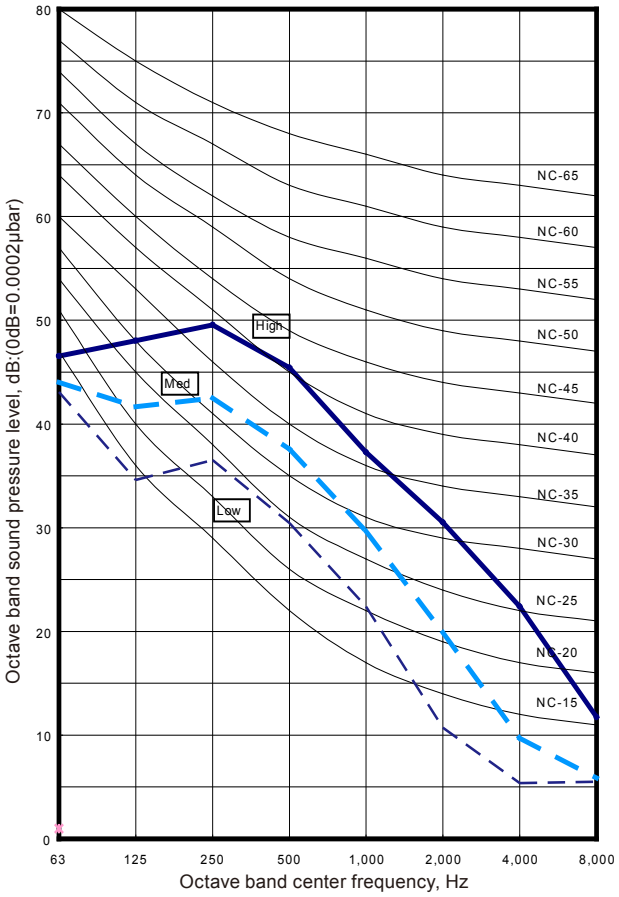
■ MODEL : AUUB24TLAV



■ MODEL : AUUB30TLAV

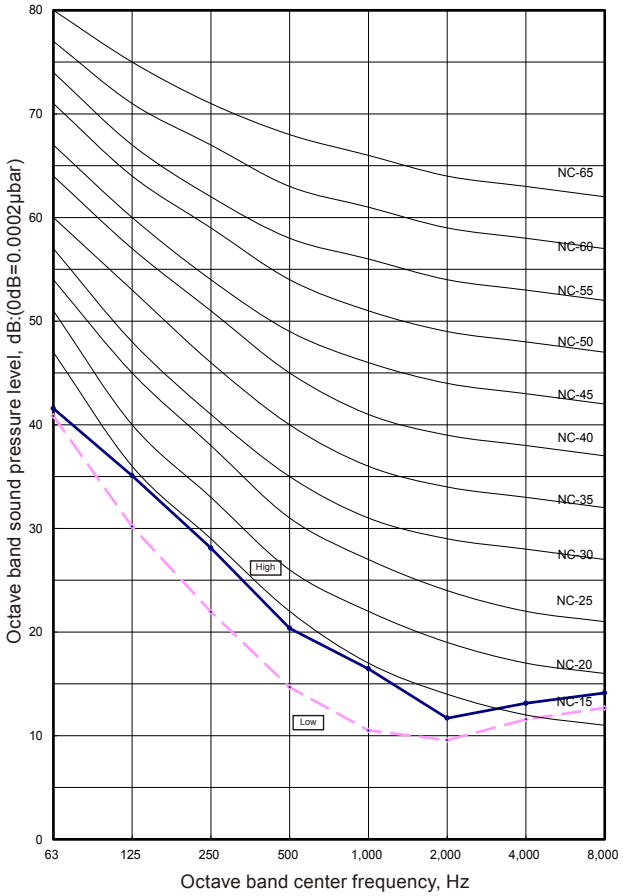


■ MODEL : AUUB36TLAV



8-4. MINI DUCT TYPE

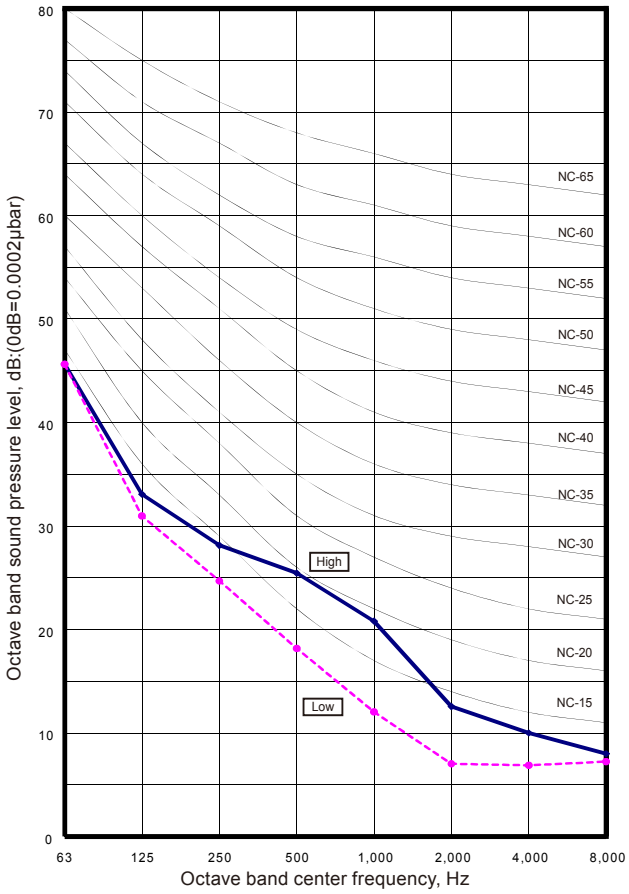
■ MODEL: ARUL4TLAV1



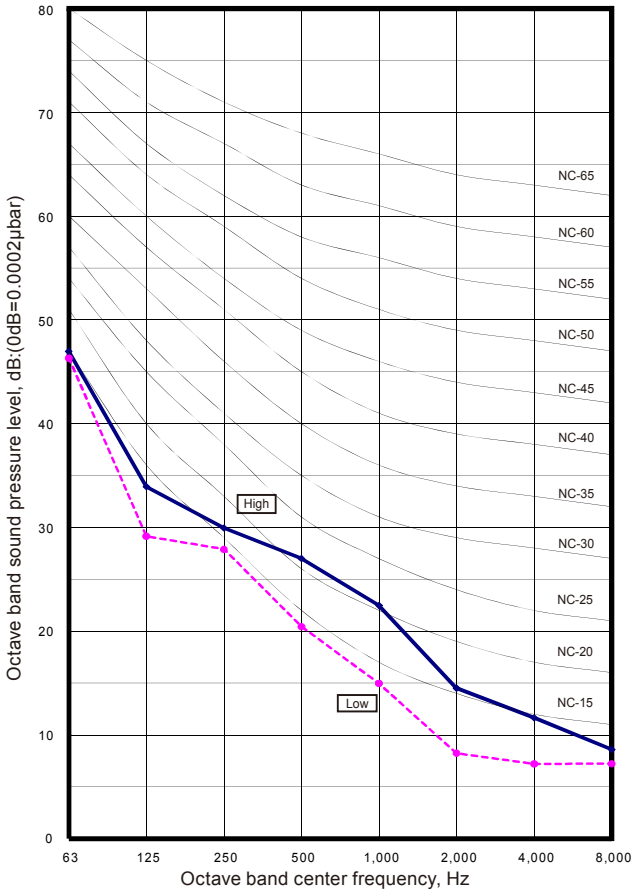
INDOOR UNITS

8-5. SLIM DUCT / SLIM CONCEALED FLOOR TYPE

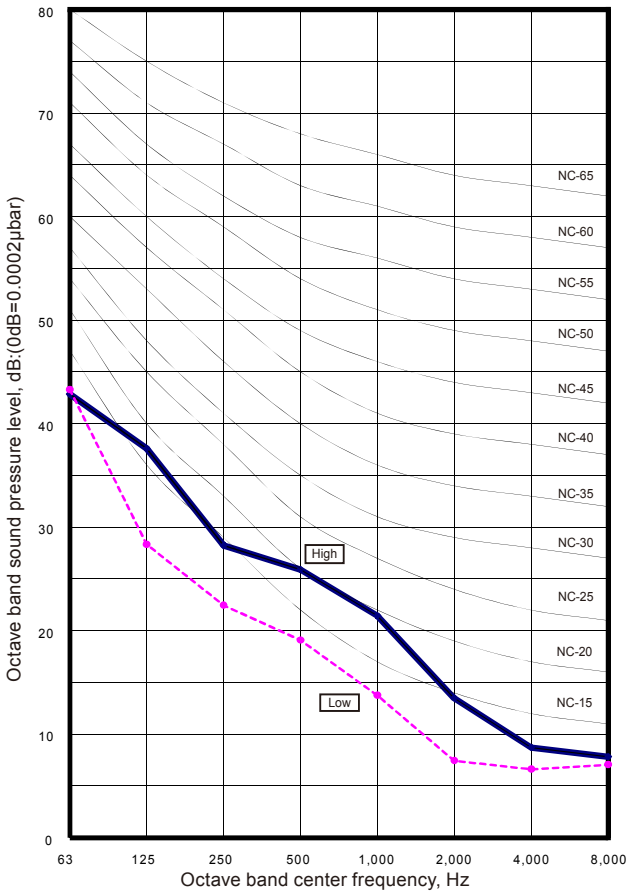
■ MODEL : ARUL7TLAV



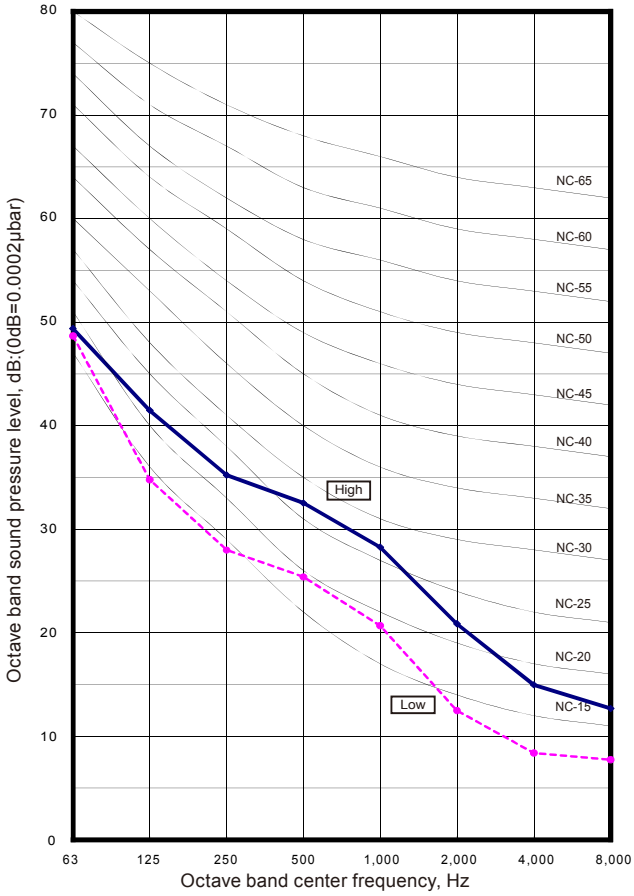
■ MODEL : ARUL9TLAV



■ MODEL : ARUL12TLAV

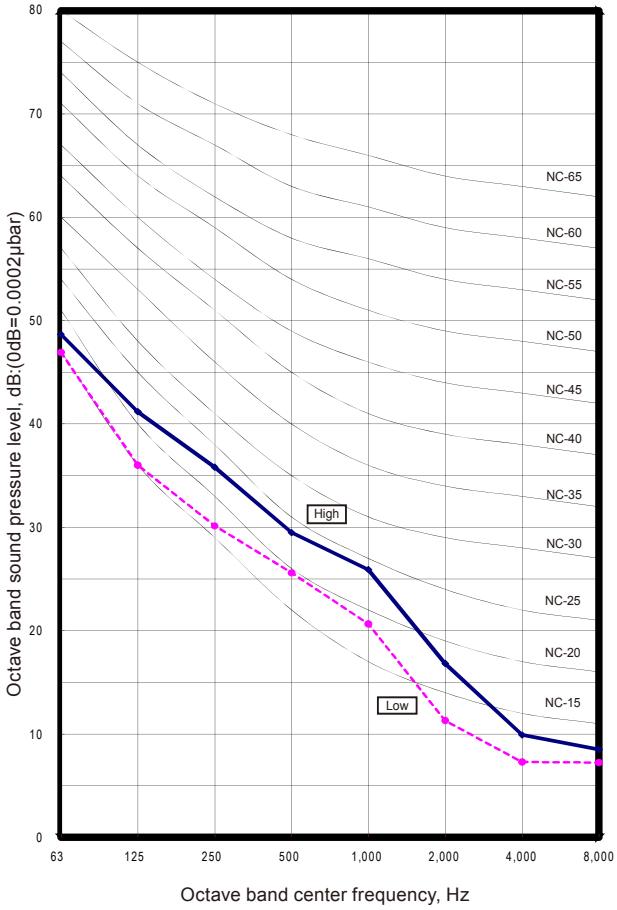


■ MODEL : ARUL14TLAV



INDOOR UNITS

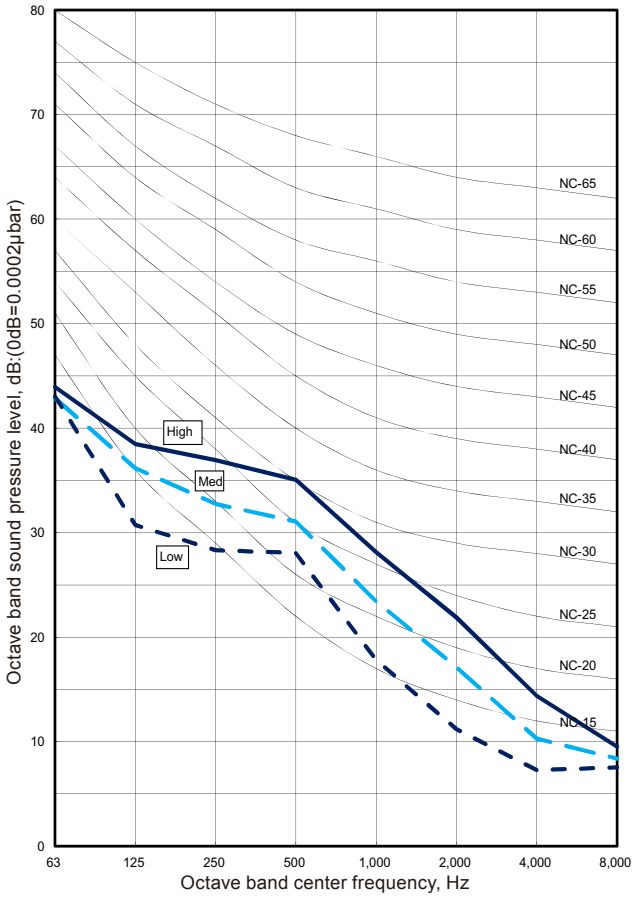
■ MODEL : ARUL18TLAV



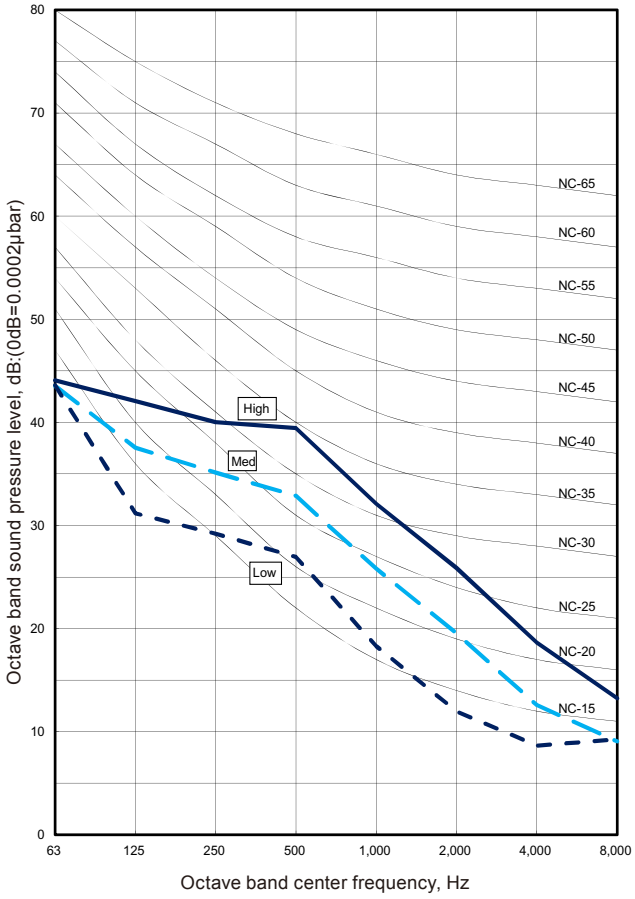
INDOOR UNITS

8-6. MEDIUM STATIC PRESSURE DUCT TYPE

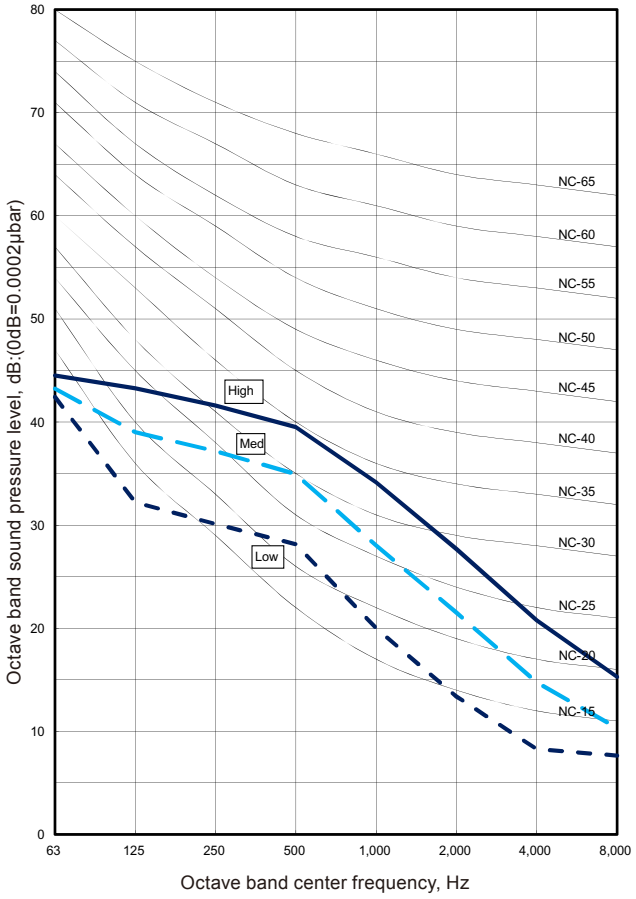
■ MODEL : ARUM24TLAV



■ MODEL : ARUM30TLAV



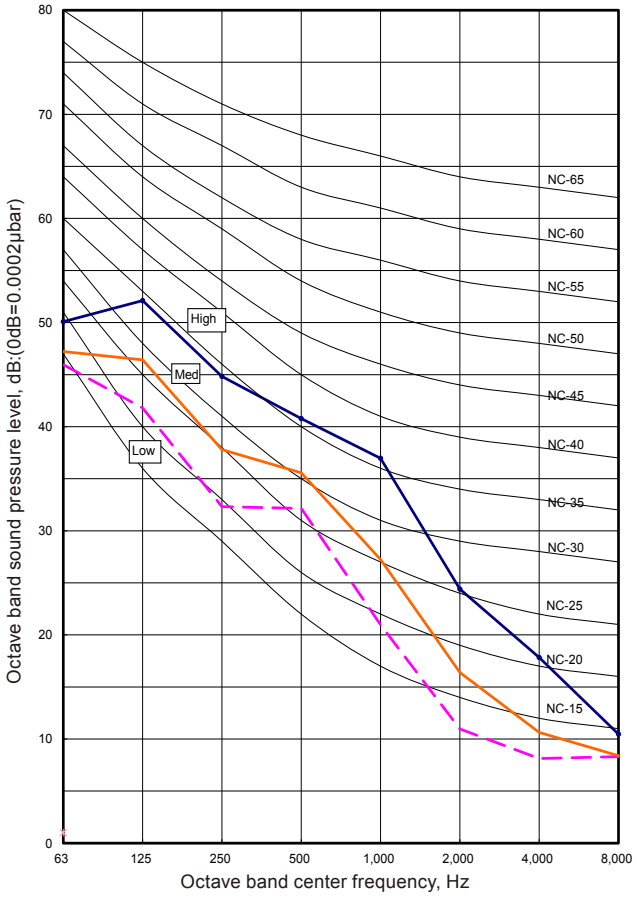
■ MODEL : ARUM36TLAV



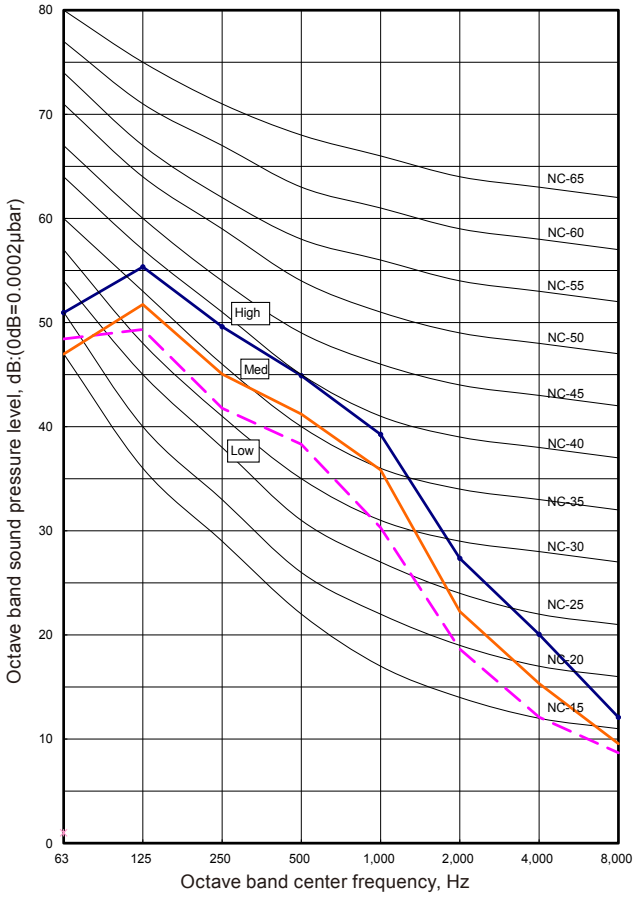
INDOOR UNITS

8-7. HIGH STATIC PRESSURE DUCT TYPE

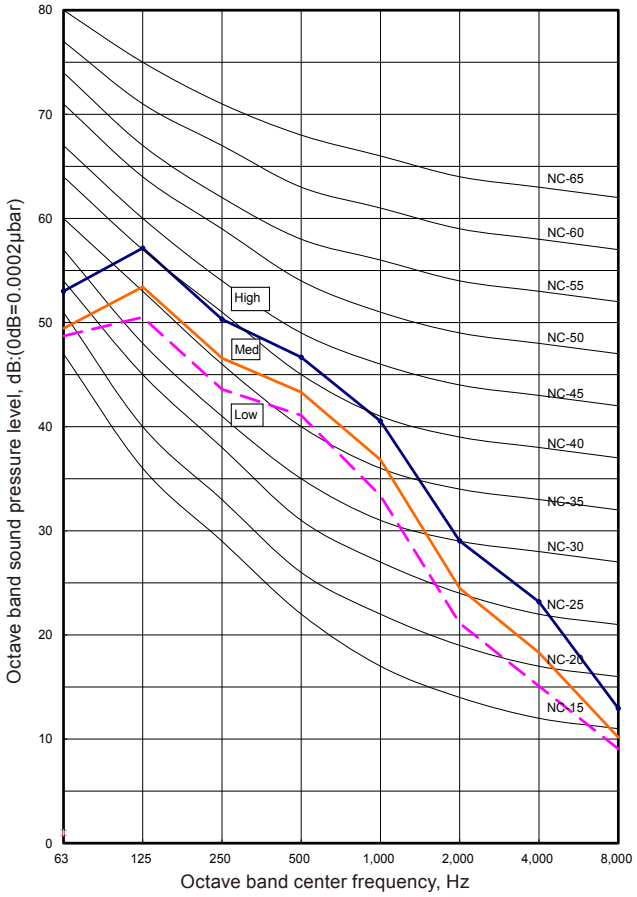
■ MODEL : ARUH36TLAV



■ MODEL : ARUH48TLAV

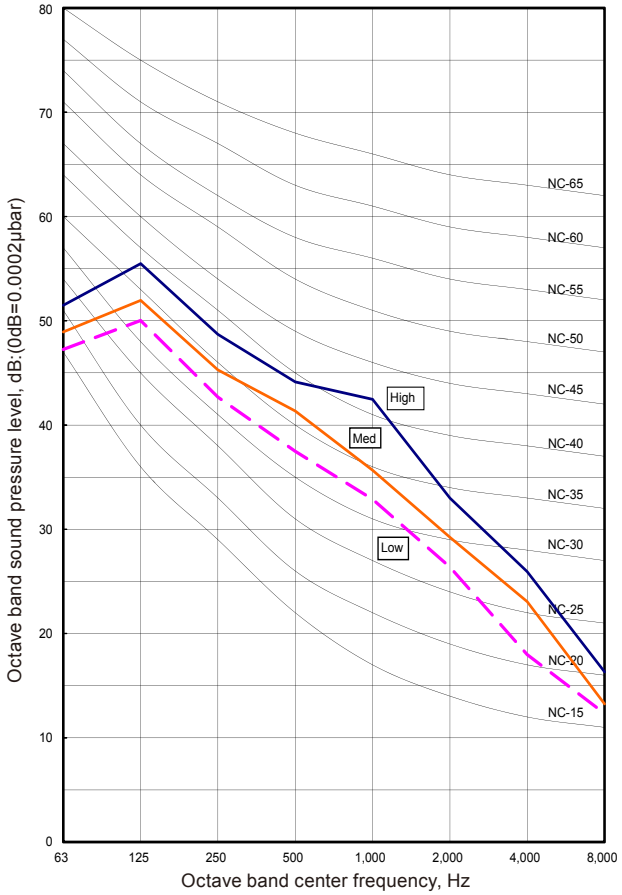


■ MODEL : ARUH60TLAV

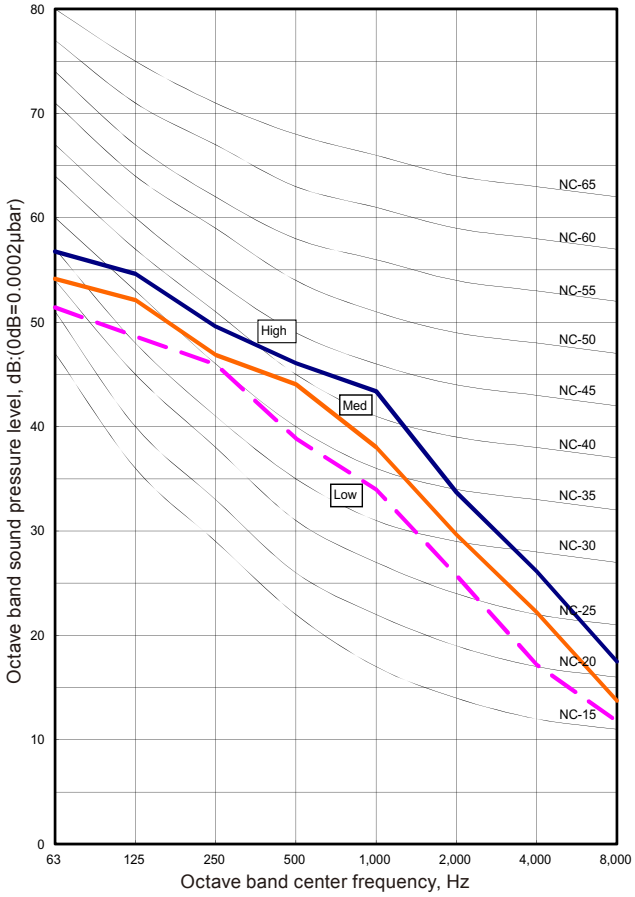


INDOOR UNITS

■ MODEL : ARUH72TLAV1



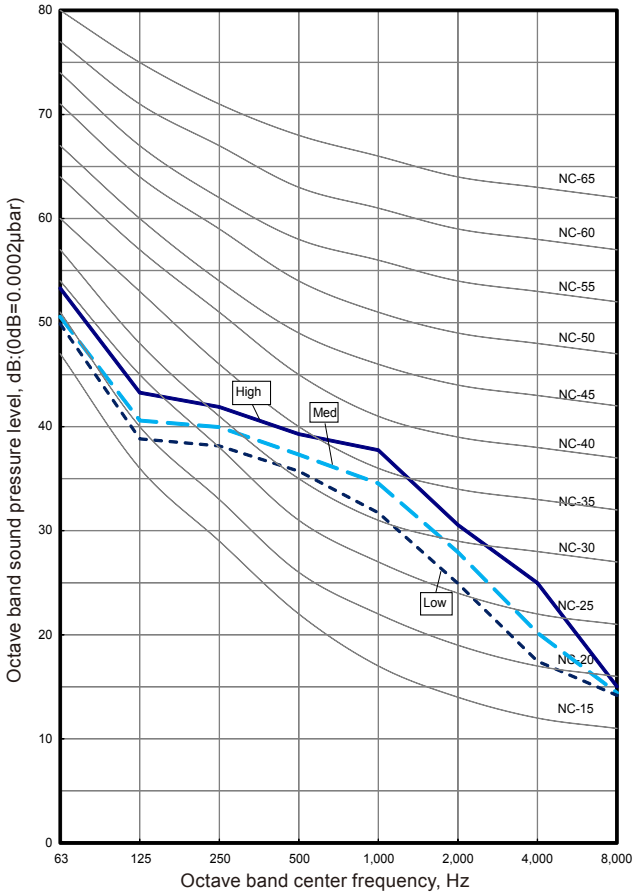
■ MODEL : ARUH96TLAV



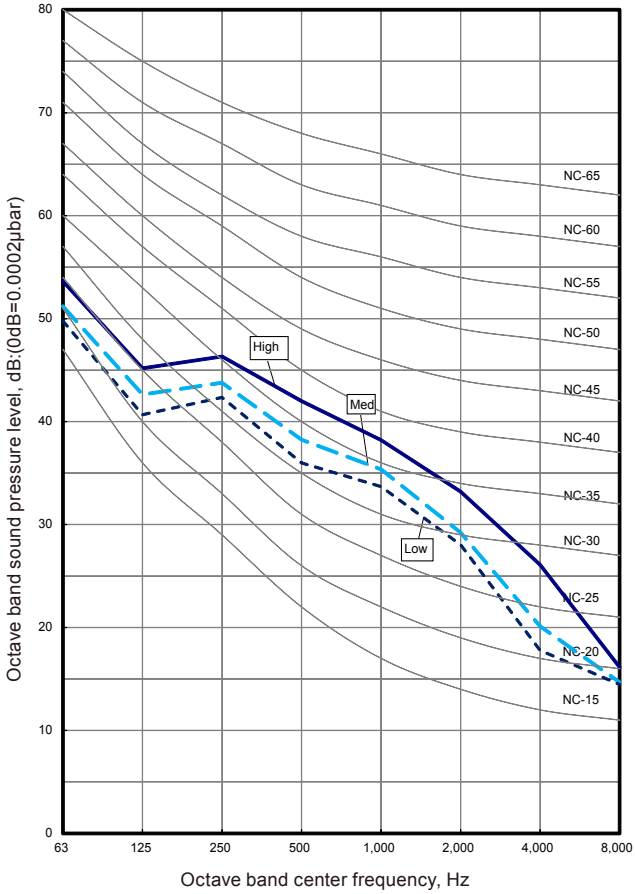
INDOOR UNITS

8-8. VERTICAL AIR HANDLER TYPE

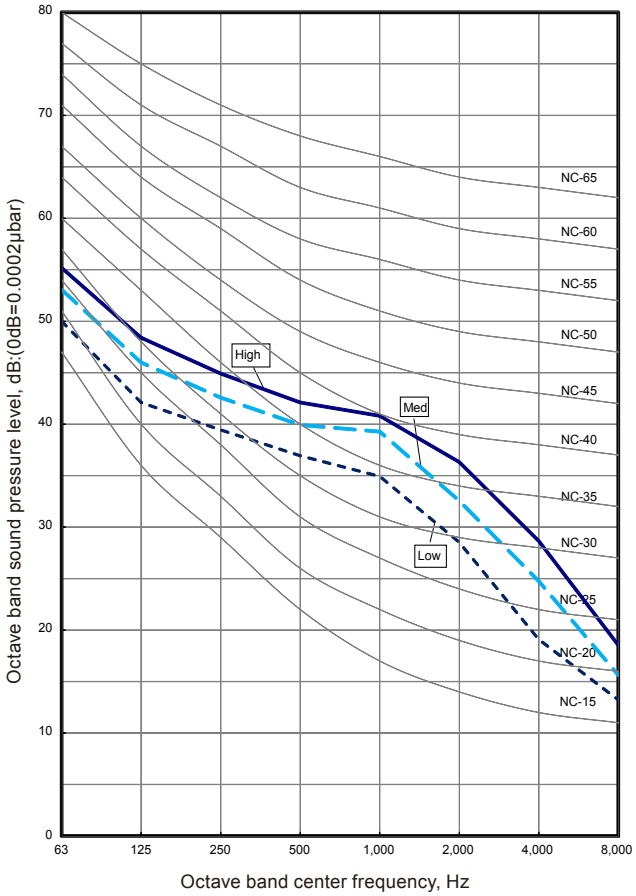
■ MODEL : ARUV12TLAV



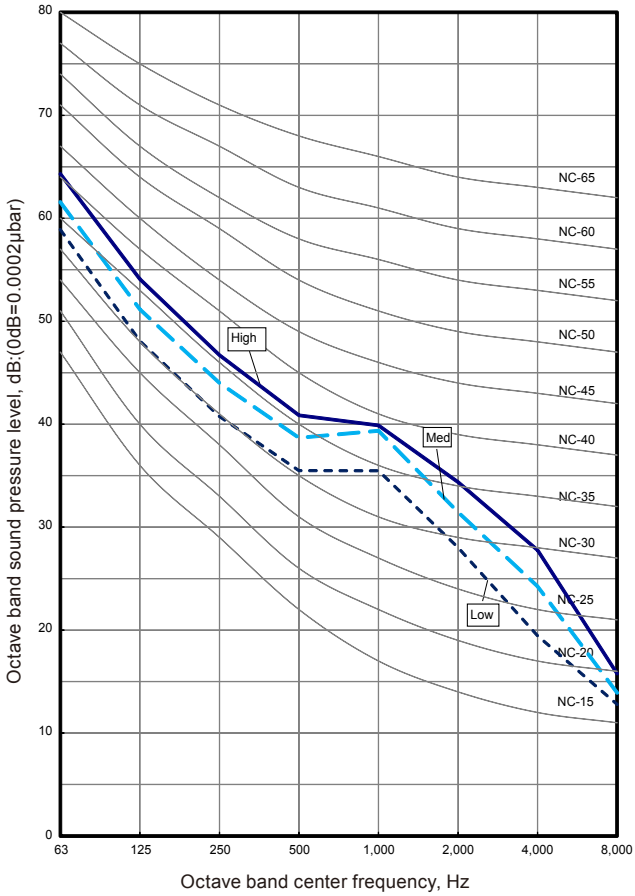
■ MODEL : ARUV18TLAV



■ MODEL : ARUV24TLAV

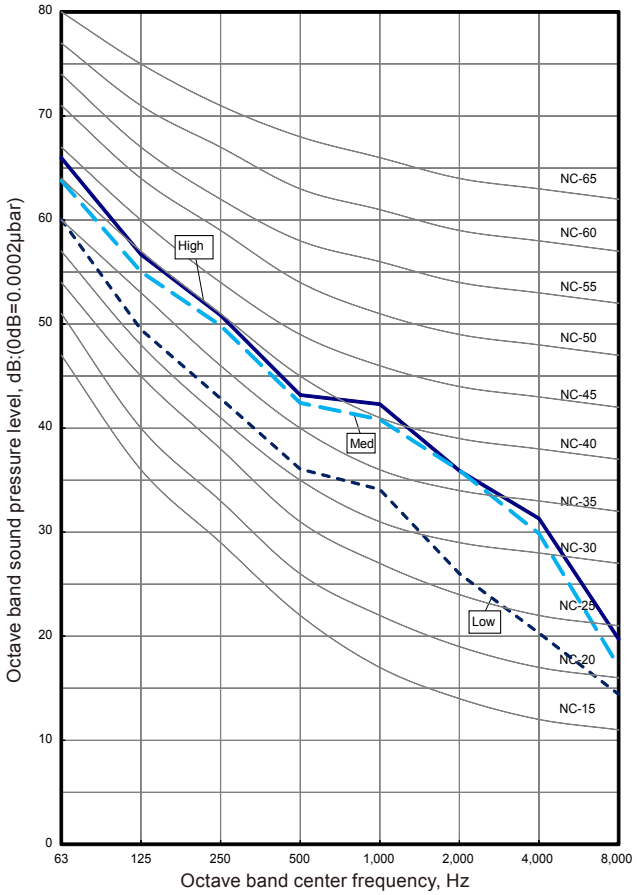


■ MODEL : ARUV30TLAV

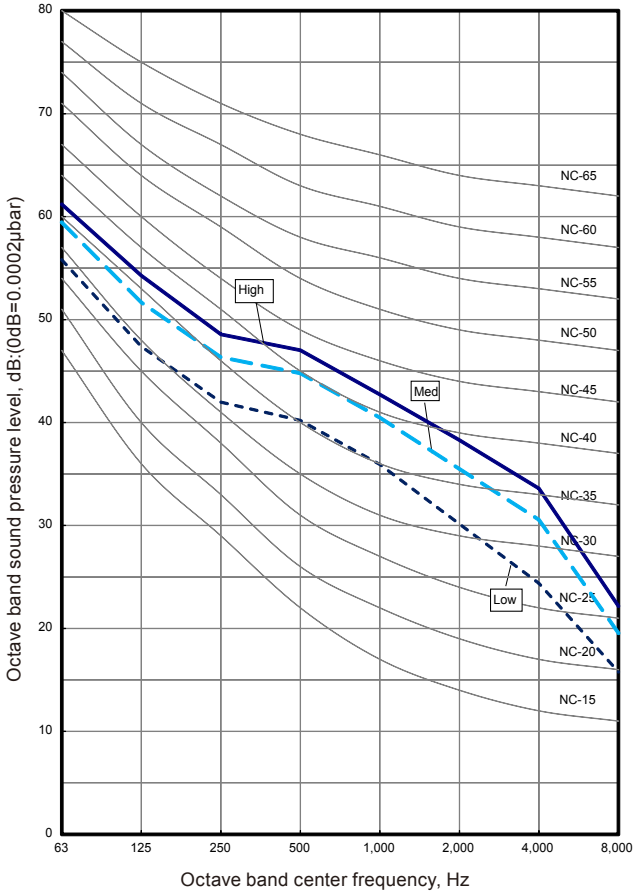


INDOOR UNITS

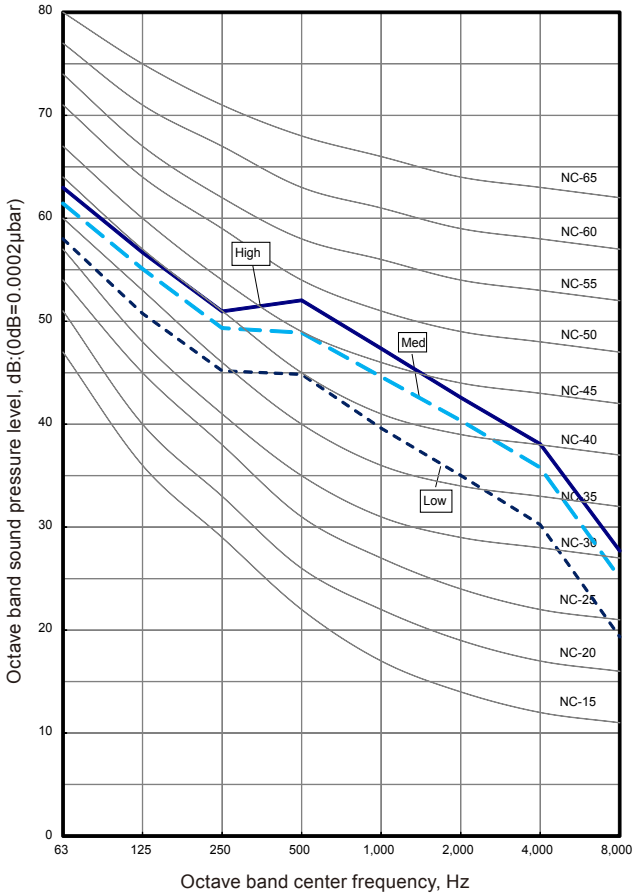
■ MODEL : ARUV36TLAV



■ MODEL : ARUV48TLAV



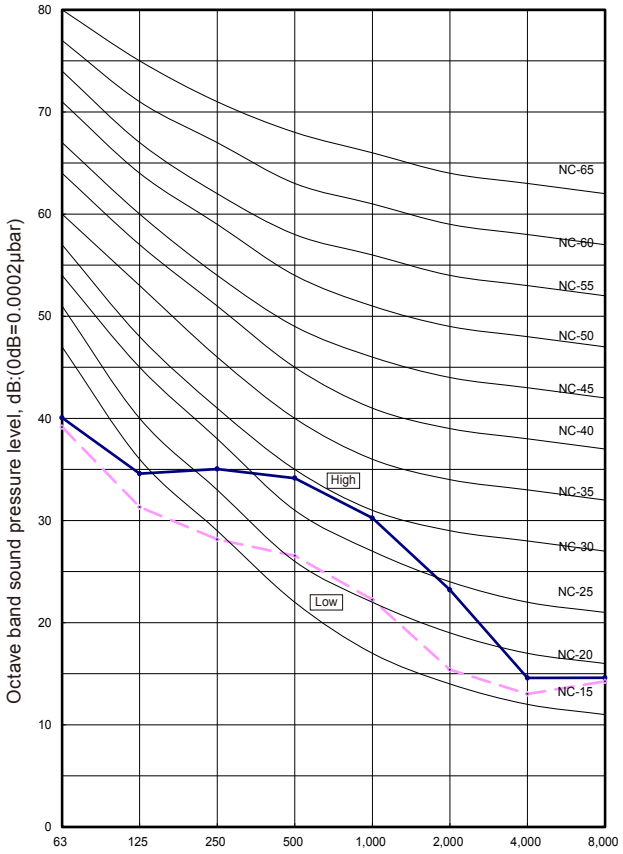
■ MODEL : ARUV60TLAV



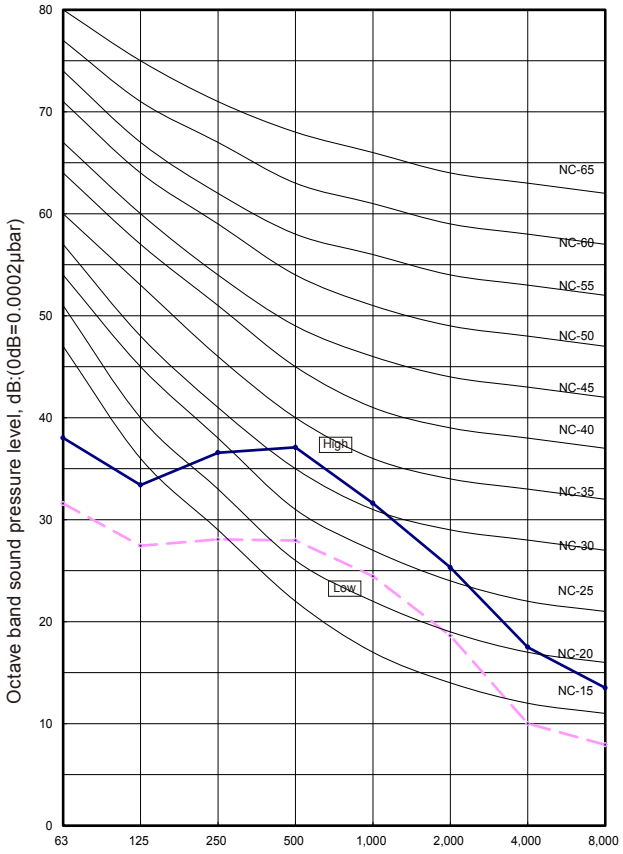
INDOOR UNITS

8-9. COMPACT FLOOR TYPE

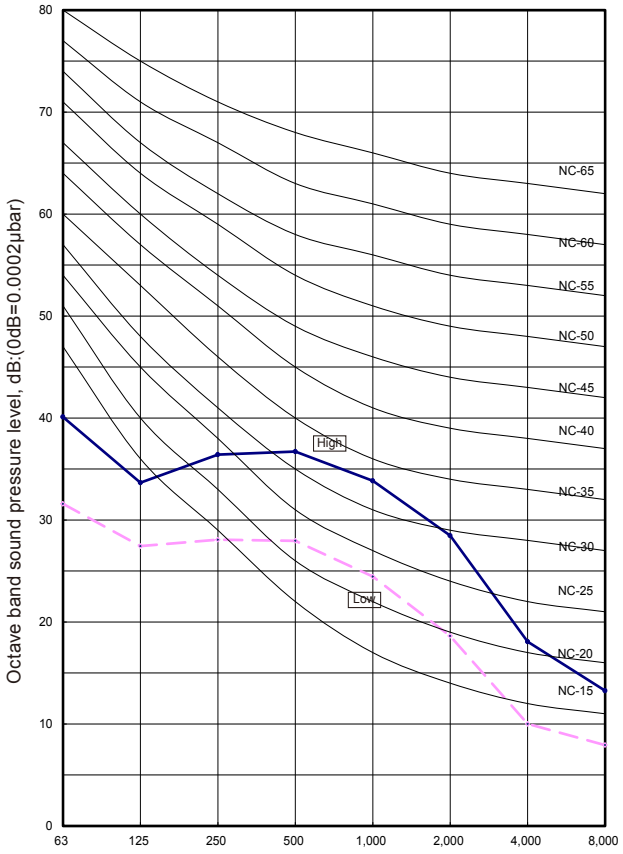
■ MODEL: AGUA4TLAV1



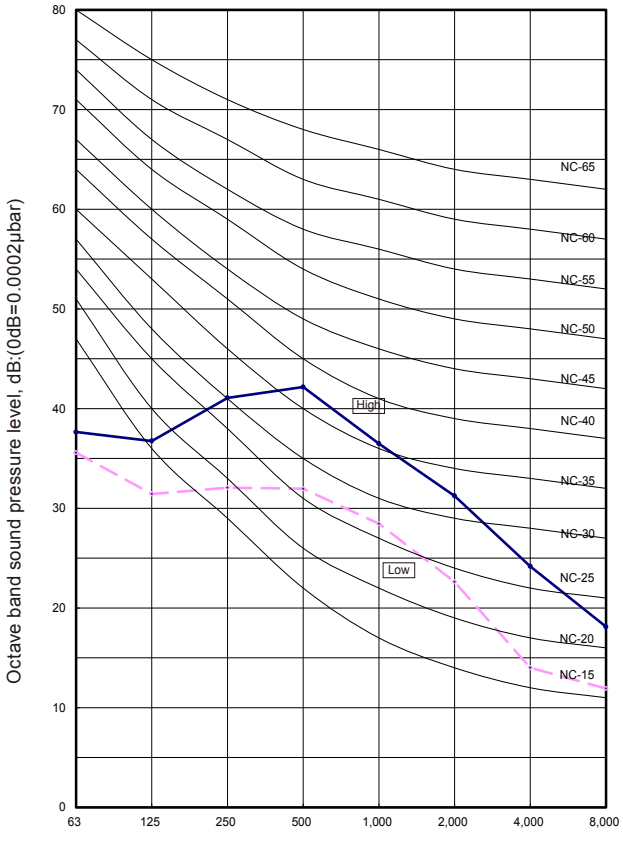
■ MODEL: AGUA7TLAV1



■ MODEL: AGUA9TLAV1

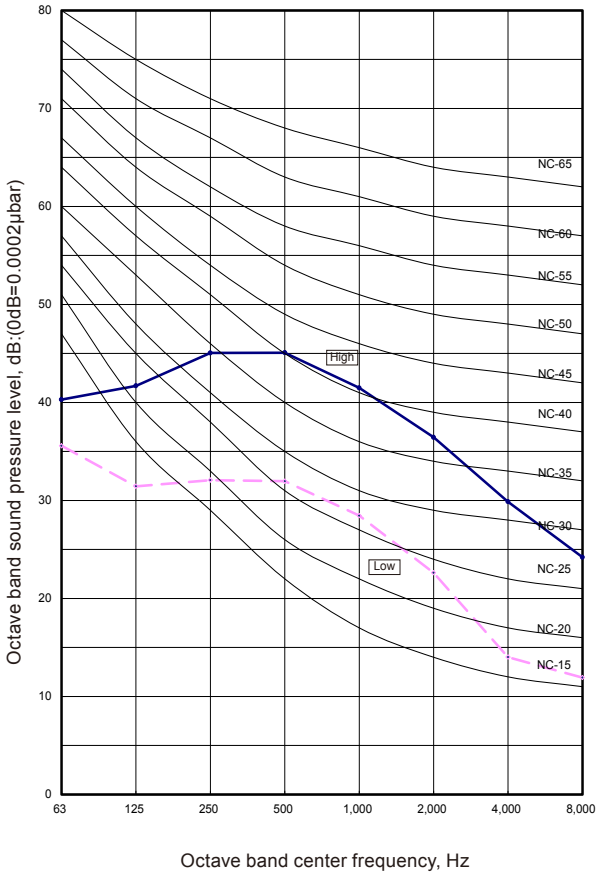


■ MODEL: AGUA12TLAV1



INDOOR UNITS

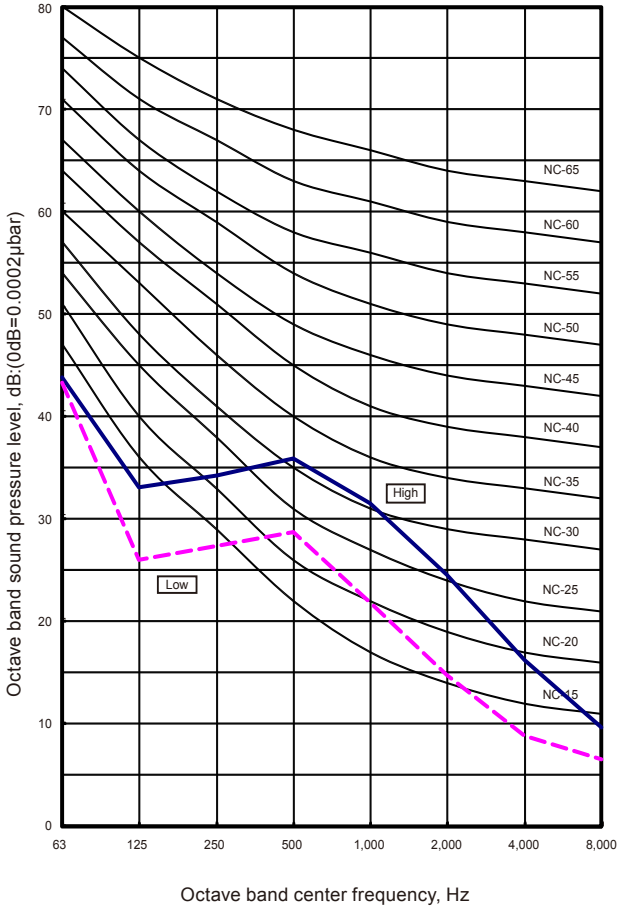
■ MODEL: AGUA14TLAV1



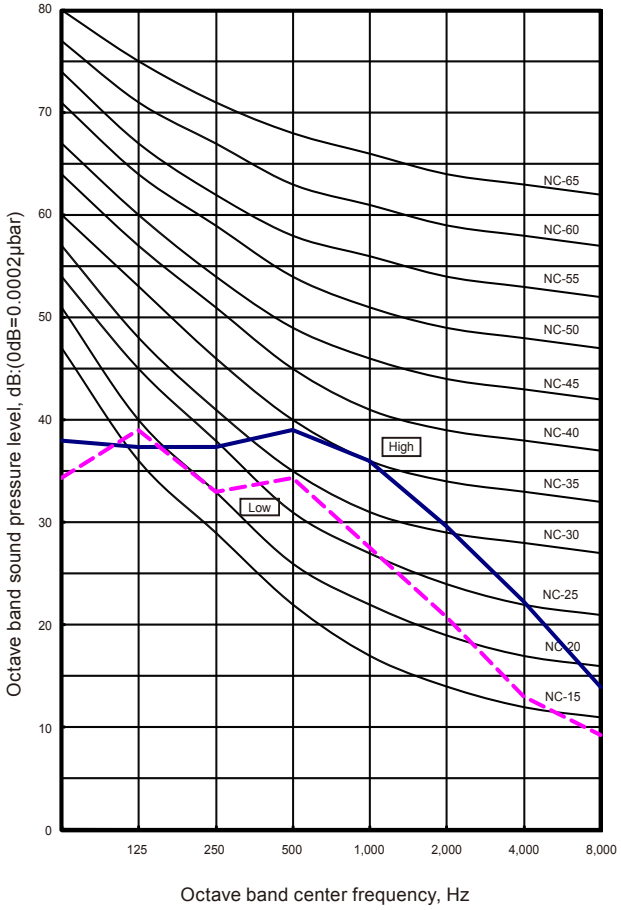
INDOOR UNITS

8-10. FLOOR / CEILING TYPE

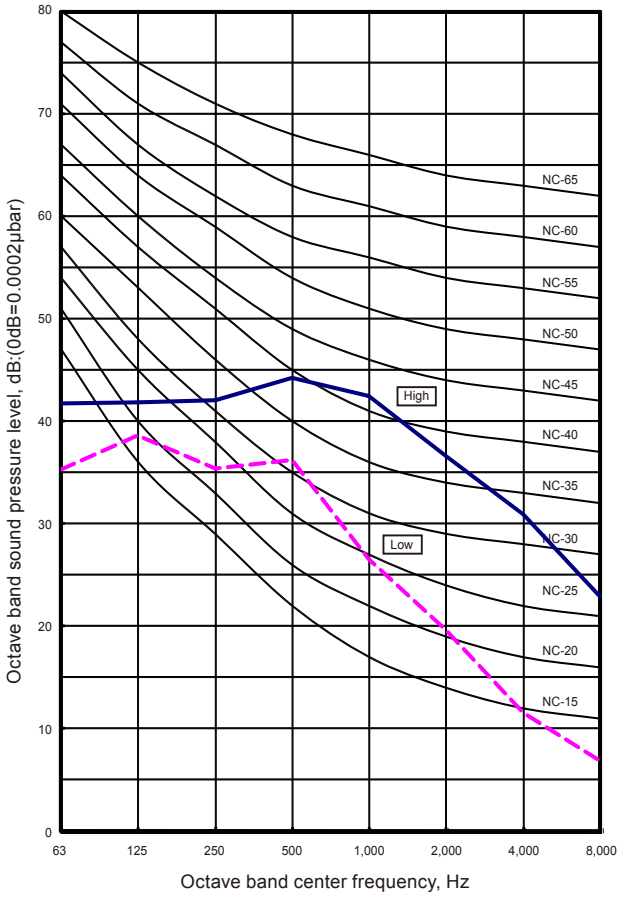
■ MODEL : ABUA12TLAV



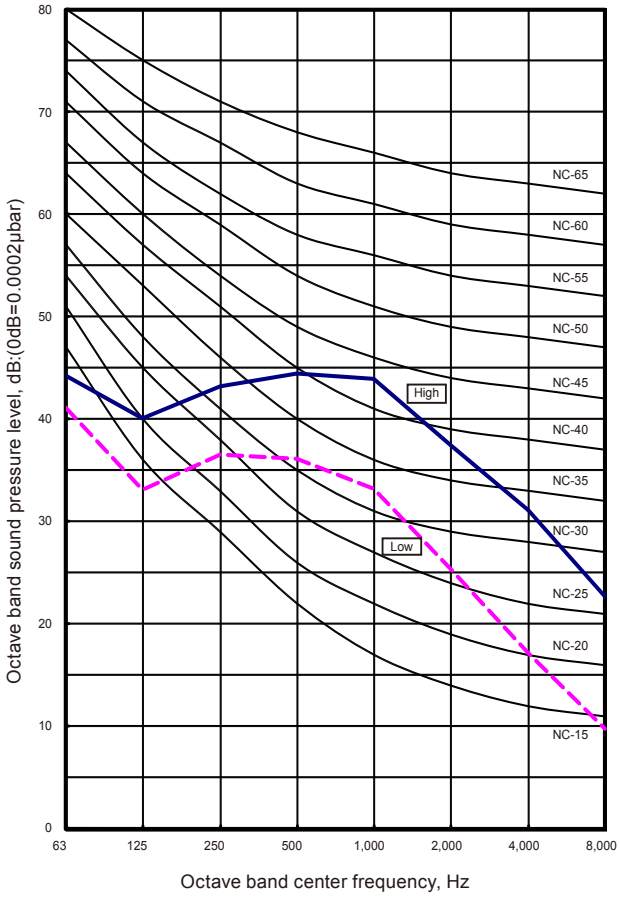
■ MODEL : ABUA14TLAV



■ MODEL : ABUA18TLAV



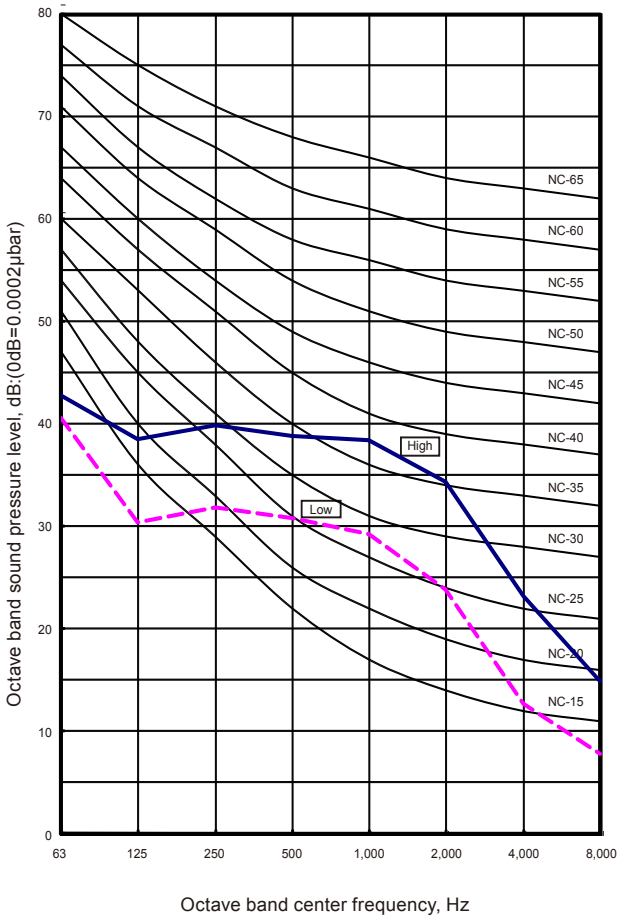
■ MODEL : ABUA24TLAV



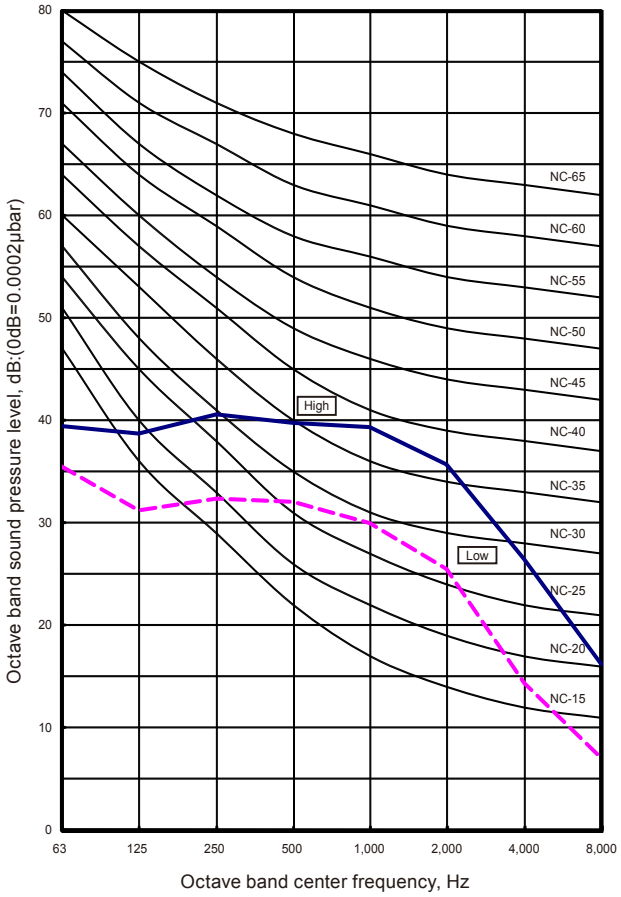
INDOOR UNITS

8-11. CEILING TYPE

■ MODEL : ABUA30TLAV



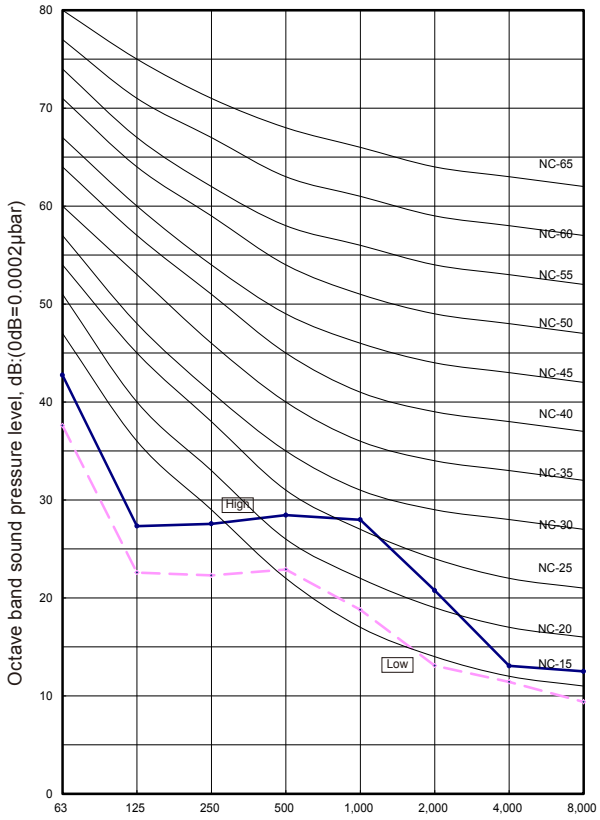
■ MODEL : ABUA36TLAV



INDOOR UNITS

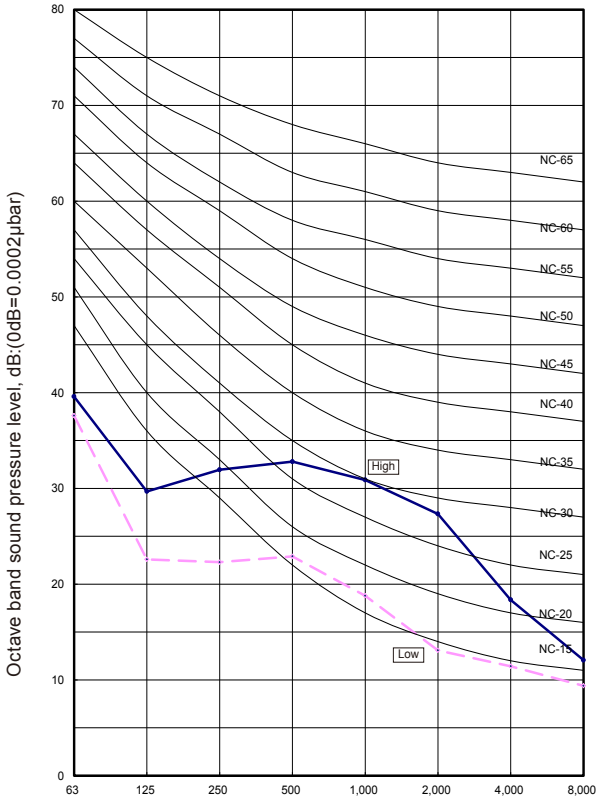
8-12. WALL MOUNTED TYPE

■ MODEL: ASUA4TLAV1



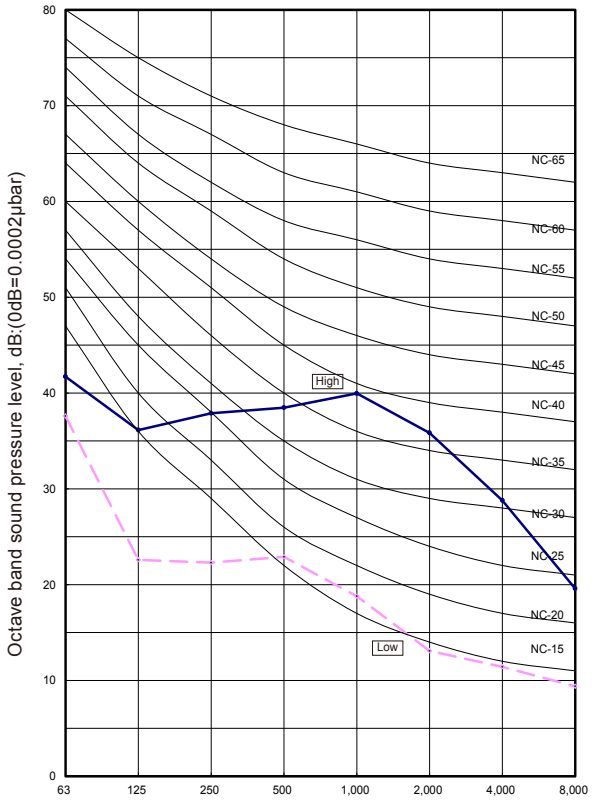
Octave band center frequency, Hz

■ MODEL: ASUA7TLAV1



Octave band center frequency, Hz

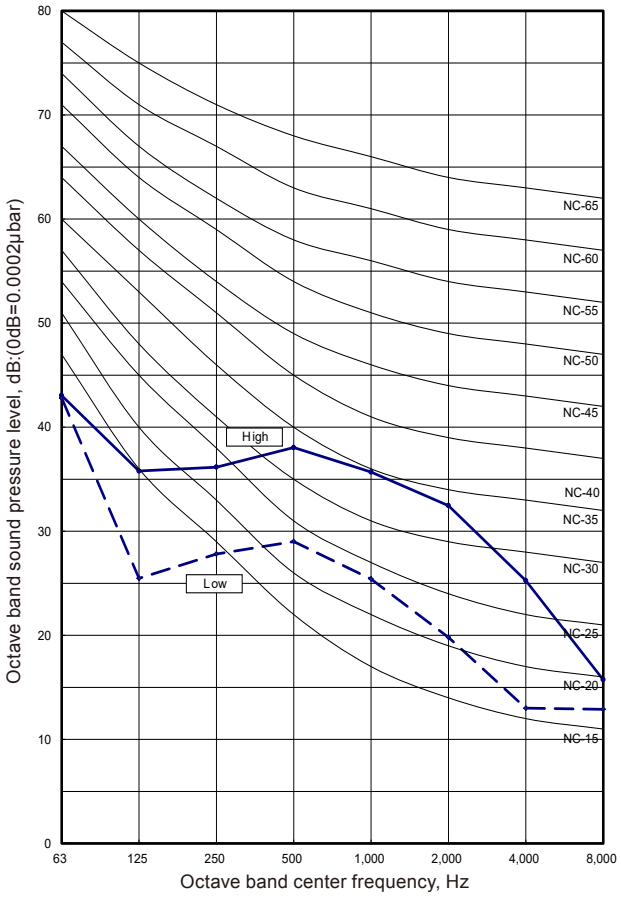
■ MODEL: ASUA9TLAV1



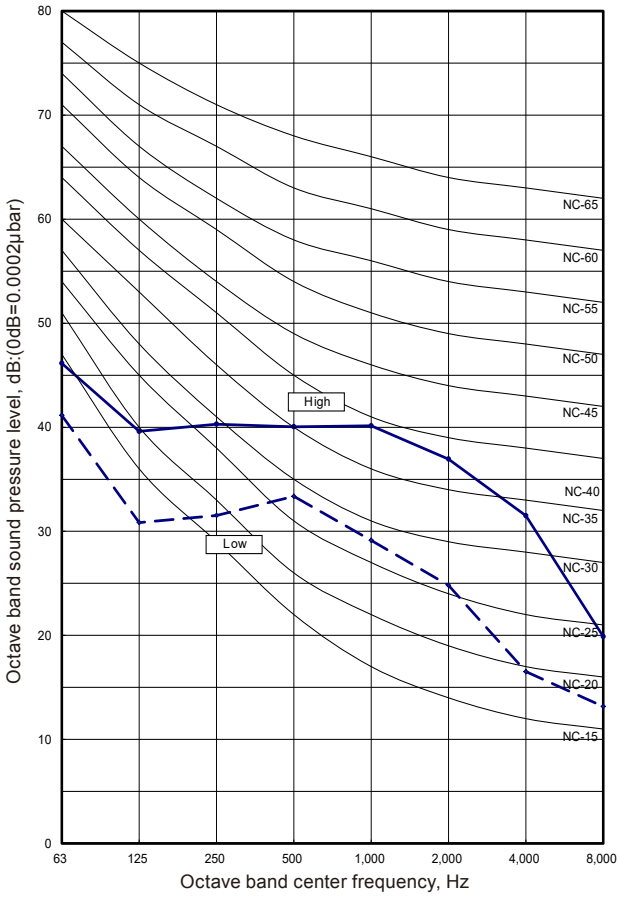
Octave band center frequency, Hz

INDOOR UNITS

■ MODEL: ASUA12TLAV1

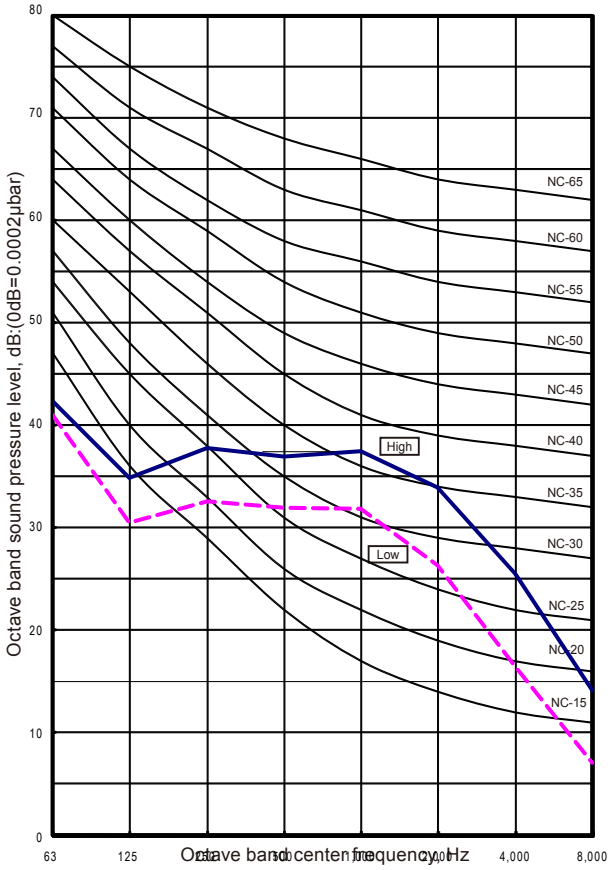


■ MODEL: ASUA14TLAV1

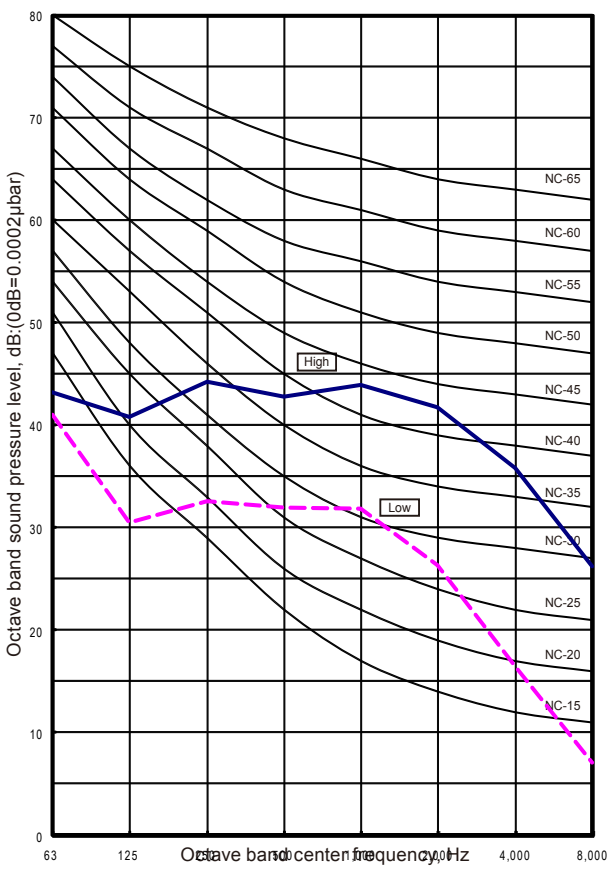


INDOOR UNITS

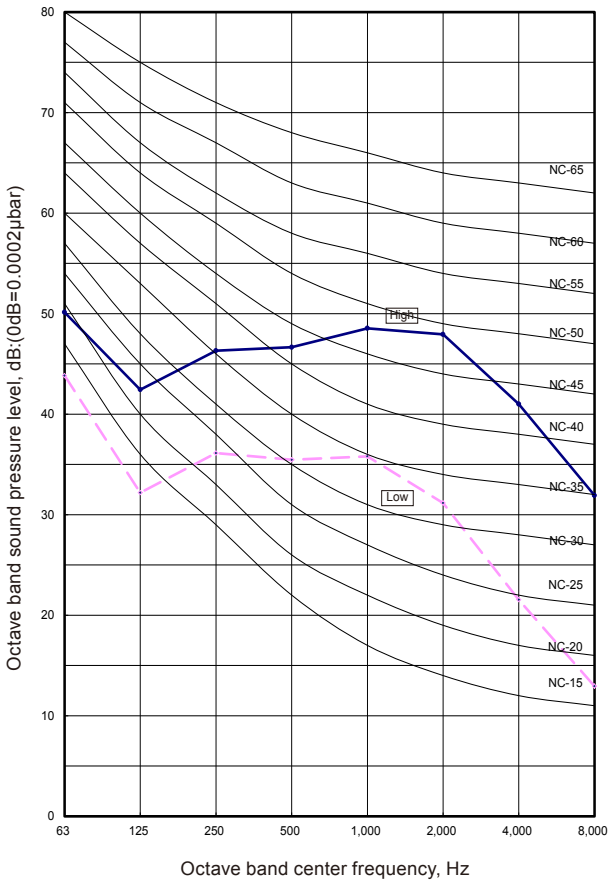
■ MODEL: ASUB18TLAV1



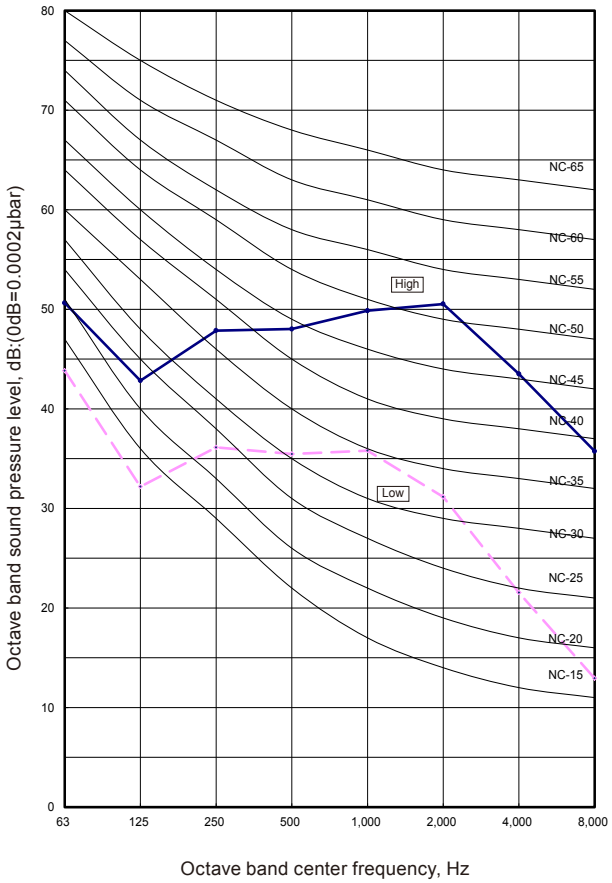
■ MODEL: ASUB24TLAV1



■ MODEL: ASUB30TLAV1

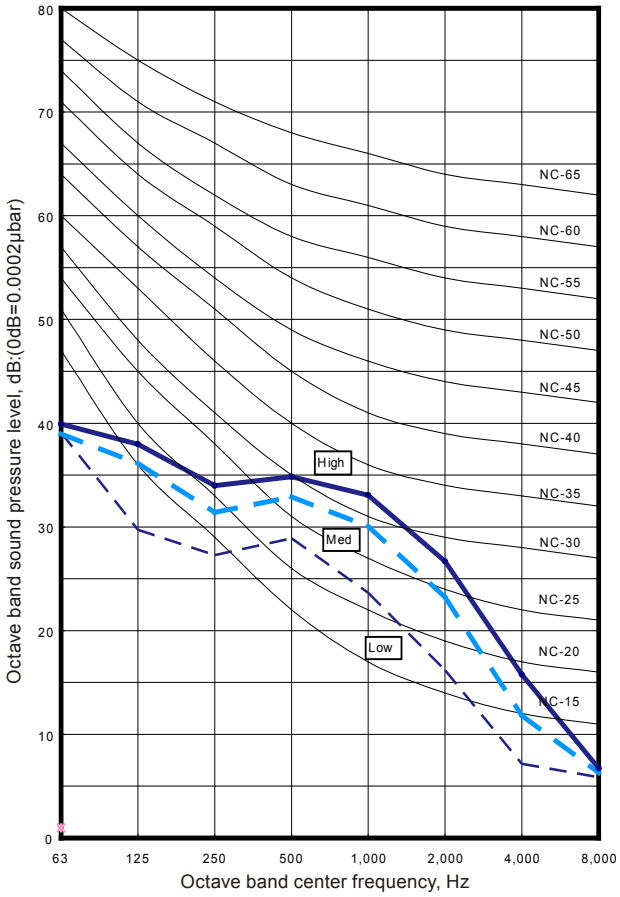


■ MODEL: ASUB36TLAV1

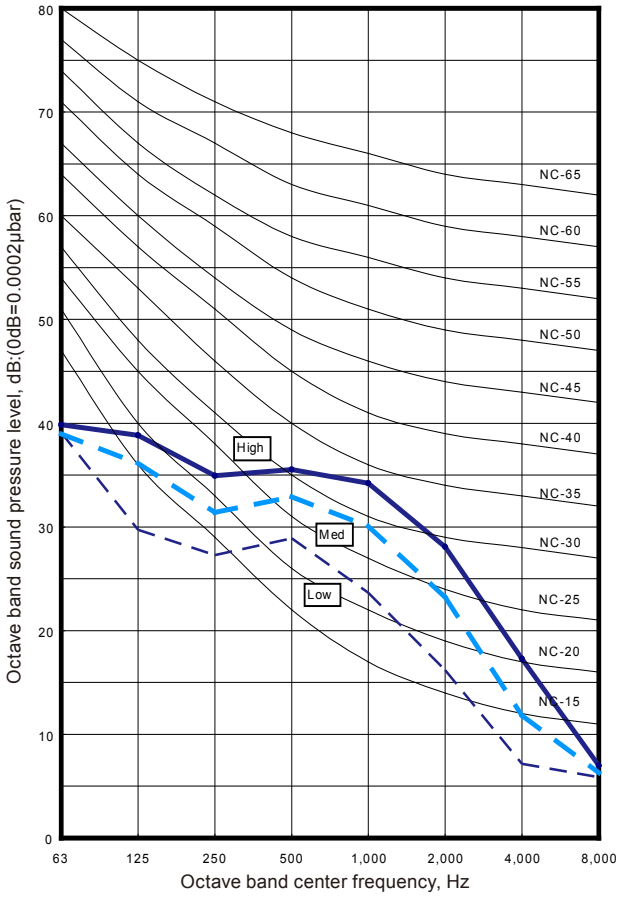


INDOOR UNITS

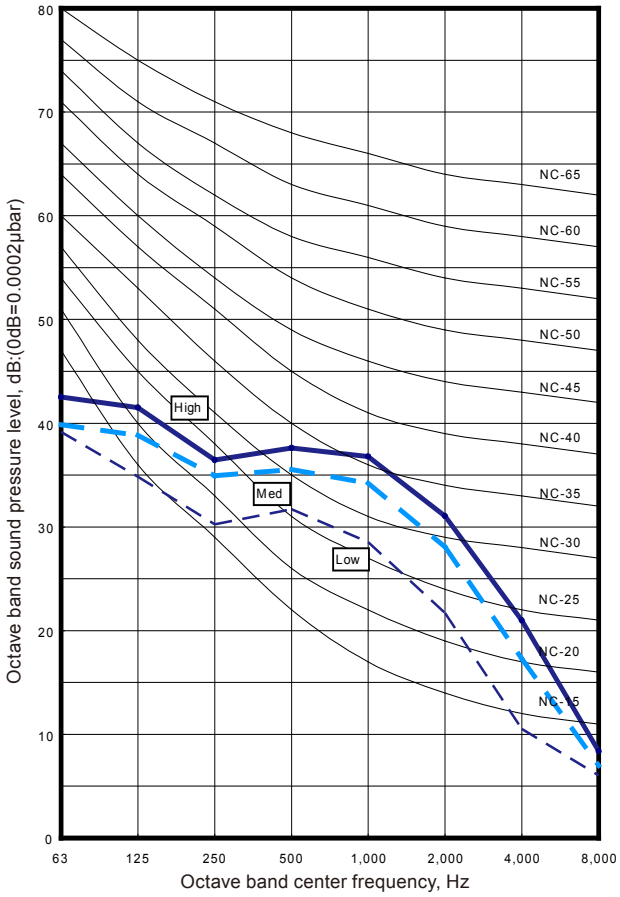
■ MODEL : ASUA7TLAV



■ MODEL : ASUA9TLAV



■ MODEL : ASUA12TLAV



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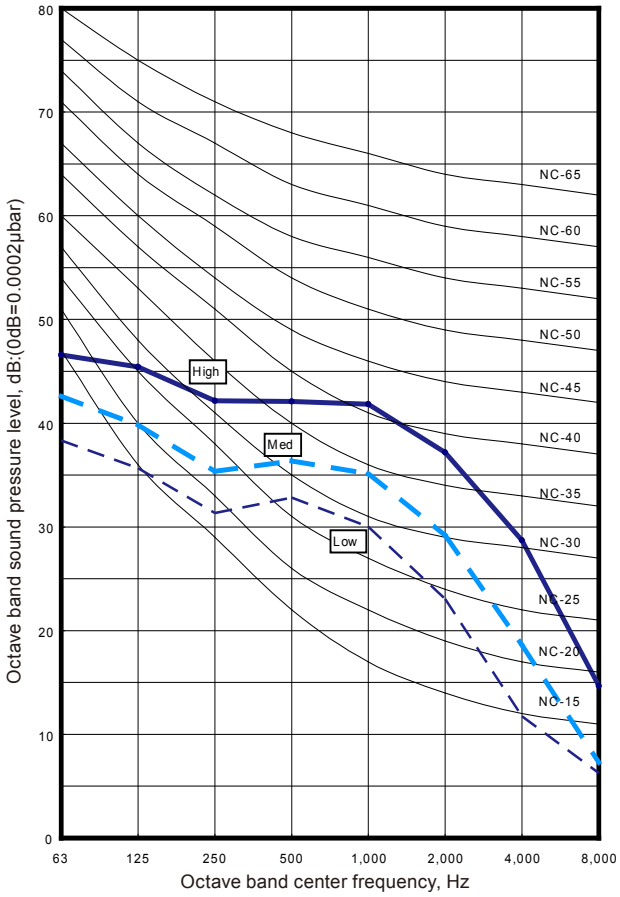
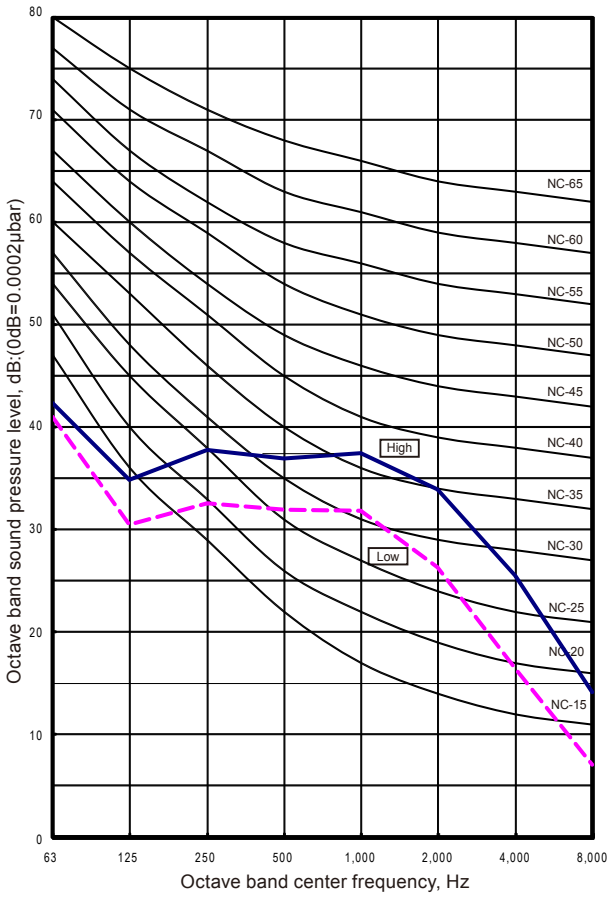
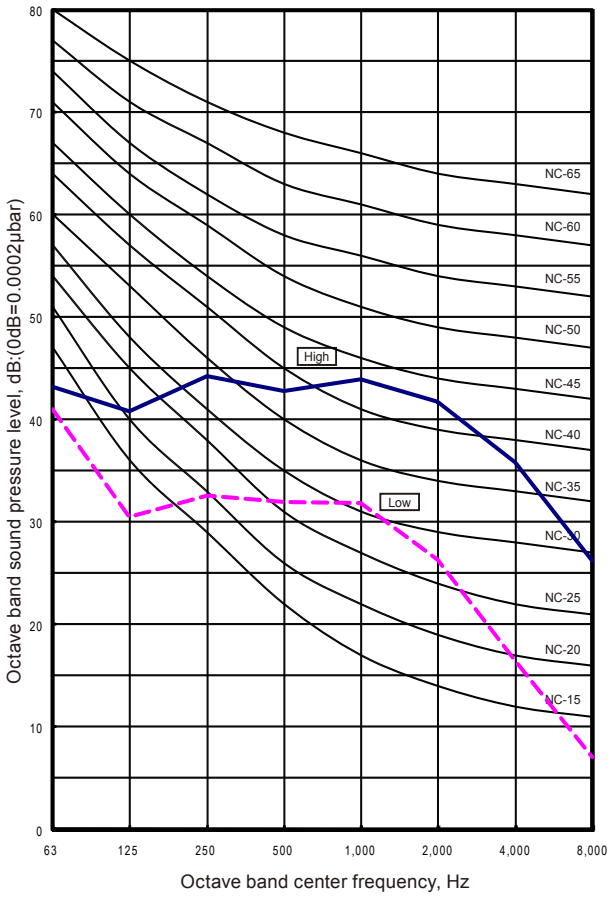


INDOOR UNITS

■ MODEL : ASUB18TLAV



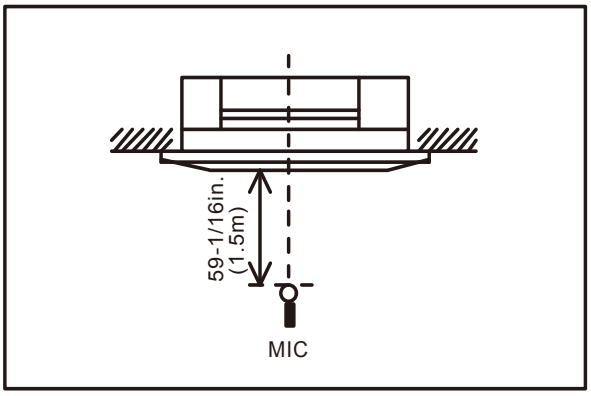
■ MODEL : ASUB24TLAV



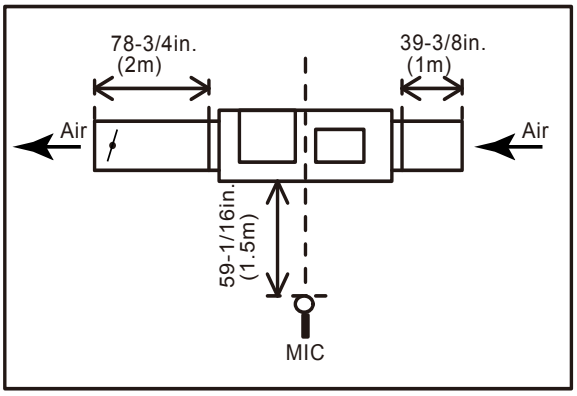
INDOOR UNITS

■ SOUND LEVEL CHECK POINT

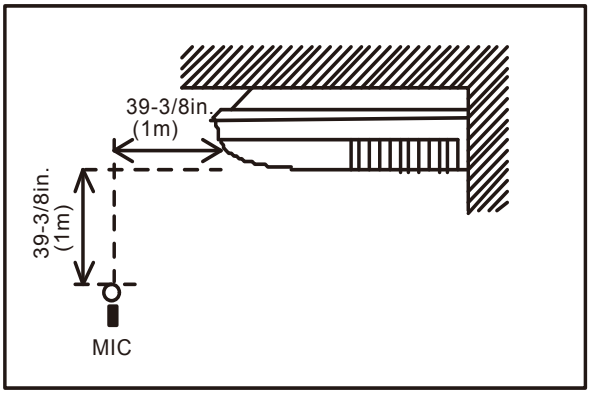
● All cassette type



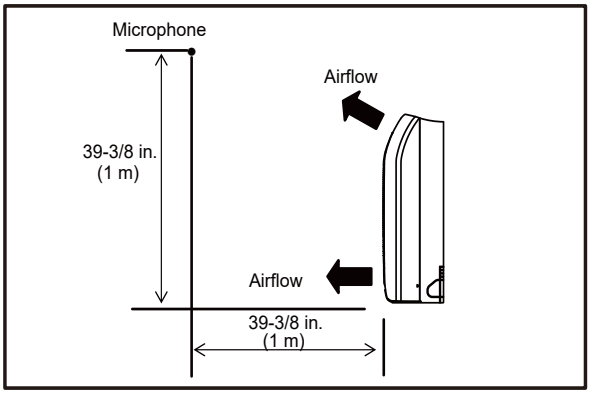
● All duct type



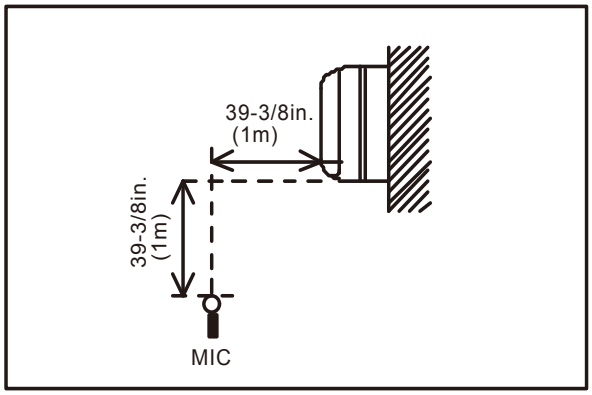
● Floor / Ceiling type
● Ceiling type



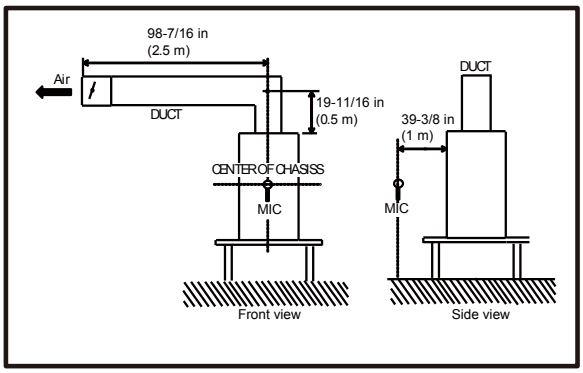
● Compact floor type



● Wall mounted type



● Vertical air handler type



INDOOR UNITS

9. SAFETY DEVICES

Model and type		Fuse	Fan motor thermal protector	Terminal thermal fuse	Float switch
Compact cassette	AUUA4TLAV1	250V 3.15A	Activate at 280.4±27°F (138±15°C): Fan motor stop Reset at 221±36°F (105±20°C): Fan motor restart	—	○
	AUUA7TLAV				
	AUUA9TLAV				
	AUUA12TLAV				
	AUUA14TLAV				
	AUUA18TLAV				
	AUUA24TLAV				
Circular flow cassette	AUUB18TLAV1	250V 3.15A	Activate at 257±18°F (125±10°C): Fan motor stop Reset at 248±18°F (120±10°C) Fan motor restart	—	○
	AUUB24TLAV1				
	AUUB30TLAV1				
	AUUB36TLAV1				
	AUUB48TLAV1				
Cassette (Slim type)	AUUB18TLAV	250V 3.15A	Activate at 230^{+27}_{-18}°F (110^{+15}_{-10}°C): Fan motor stop Reset at 221^{+27}_{-18}°F ($105+^{15}_{-10}$°C): Fan motor restart	—	○
	AUUB24TLAV				
Cassette	AUUB30TLAV				
	AUUB36TLAV				
Mini duct	ARUL4TLAV1	250V 3.15A	Activate at 275±27°F (135±15°C): Fan motor stop Reset at 239±27°F (115±15°C): Fan motor restart	—	○
Slim duct / slim concealed floor	ARUL7TLAV	250V 5A	Activate at 275±27°F (135±15°C): Fan motor stop Reset at 239±27°F (115±15°C): Fan motor restart	—	○
	ARUL9TLAV				
	ARUL12TLAV				
	ARUL14TLAV				
	ARUL18TLAV				
Medium static pressure duct	ARUM24TLAV	250V 5A	Activate at 275±27°F (135±15°C): Fan motor stop Reset at 239±27°F (115±15°C) Fan motor restart	—	△*2
	ARUM30TLAV		Activate at 239±27°F (115±15°C): Fan motor stop Reset at 158°F or less (70°C or less): Fan motor restart		
	ARUM36TLAV				

*1: Fuse for fan motor.

*2: Including in the Drain Pump Unit (Optional parts)

INDOOR UNITS

INDOOR UNITS

Model and type		Fuse	Fan motor thermal protector	Terminal thermal fuse	Float switch
High static pressure duct	ARUH36TLAV	250V 3.15A 250V 10A *1	Activate at 293 ± 9°F (145 ± 5°C): Fan motor stop	—	—
	ARUH48TLAV				
	ARUH60TLAV				
	ARUH72TLAV1	250V 3.15A 250V 20A *1	Activate at 212^{+27}_{-18}°F (100^{+15}_{-10}°C): Fan motor stop Reset at 203^{+27}_{-18}°F ($95+^{15}_{-10}$°C) Fan motor restart	—	—
	ARUH96TLAV				
Vertical air handler	ARUV12TLAV	250V 3.15A 250V 10A *1	—	—	—
	ARUV18TLAV				
	ARUV24TLAV				
	ARUV30TLAV				
	ARUV36TLAV				
	ARUV48TLAV				
	ARUV60TLAV				
Compact floor	AGUA4TLAV1	250V 3.15A	Activate at 302±27°F (150±15°C): Fan motor stop Reset at 248±27°F (120±15°C): Fan motor restart	—	○
	AGUA7TLAV1				
	AGUA9TLAV1				
	AGUA12TLAV1				
	AGUA14TLAV1				
Floor / ceiling	ABUA12TLAV	250V 3.15A	Activate at 275±27°F (135±15°C): Fan motor stop Reset at 239±27°F (115±15°C): Fan motor restart	—	—
	ABUA14TLAV				
	ABUA18TLAV				
	ABUA24TLAV				
Ceiling	ABUA30TLAV	250V 5A	Activate at 275±27°F (135±15°C): Fan motor stop Reset at 239±27°F (115±15°C): Fan motor restart	—	△ *2
	ABUA36TLAV				

*1: Fuse for fan motor.

*2: Including in the Drain Pump Unit (Optional parts)

Model and type		Fuse	Fan motor thermal protector	Terminal thermal fuse	Float switch
Wall mounted	ASUA4TLAV1	250V 3.15A	Activate at 221±18°F (105±10°C): Fan motor stop Reset at 194±18°F (90±10°C): Fan motor restart	—	—
	ASUA7TLAV1				
	ASUA9TLAV1				
	ASUA12TLAV1				
	ASUA14TLAV1				
	ASUB18TLAV1		Activate at 302±27°F (150±15°C): Fan motor stop Reset at 248±27°F (120±15°C): Fan motor restart	Activate at 215.6°F (102°C)	—
	ASUB24TLAV1				
	ASUB30TLAV1		Activate at 302±27°F (150±15°C): Fan motor stop Reset less than 275°F (135°C): Fan motor restart	—	—
	ASUB36TLAV1				
	ASUA7TLAV	250V 3.15A	Activate at 212±27°F (100±15°C): Fan motor stop Reset at 185±18°F (85±10°C): Fan motor restart	Activate at 215.6°F (102°C)	—
	ASUA9TLAV				
	ASUA12TLAV				
	ASUA14TLAV				
	ASUB18TLAV	250V 3.15A	Activate at 302±27°F (150±15°C): Fan motor stop Reset at 248±27°F (120±15°C): Fan motor restart	Activate at 215.6°F (102°C)	—
	ASUB24TLAV				

INDOOR UNITS

Refrigerant R410A INVERTER

AIRSTAGE™
Variable Refrigerant Flow System

5. CONTROL SYSTEM

DTV_VR2U025E_14--CHAPTER05
2018.03.16

CONTENTS

5. CONTROL SYSTEM

1. CONTROL SYSTEM ..... 05 - 01
1-1. LINE UP OF CONTROLLERS ..... 05 - 01
1-2. CONTROL SYSTEM DESIGN ..... 05 - 03
1-3. SYSTEM CONFIGURATION EXAMPLES ..... 05 - 04
1-4. CONTROL SYSTEM FEATURES ..... 05 - 10
1-5. WIRING SYSTEM ..... 05 - 11
1-6. CONTROL EQUIPMENT DESIGN LIMITATION ..... 05 - 12

2. CONTROL UNITS ..... 05 - 13
2-1. SYSTEM CONTROLLER ..... 05 - 14
2-1-1. MODEL: UTY-APGXZ1
(Option: UTY-PEGXZ1, UTY-PPGXP2) ..... 05 - 14
2-1-2. MODEL: UTY-APGX (Option: UTY-PEGX) ..... 05 - 19
2-2. SYSTEM CONTROLLER LITE ..... 05 - 23
2-2-1. MODEL: UTY-ALGXZ1
(Option: UTY-PLGXA2, UTY-PLGXR2, UTY-PLGXE2,
UTY-PLGXP2, UTY-PLGXX2) ..... 05 - 23
2-2-2. MODEL: UTY-ALGX
(Option: UTY-PLGXA1, UTY-PLGXR1, UTY-PLGXE1) ..... 05 - 29
2-3. TOUCH PANEL CONTROLLER ..... 05 - 34
2-4. CENTRAL REMOTE CONTROLLER ..... 05 - 49
2-5. WIRED REMOTE CONTROLLER (Touch panel) ..... 05 - 57
2-6. WIRED REMOTE CONTROLLER ..... 05 - 64
2-7. SIMPLE REMOTE CONTROLLER (With Operation mode) ..... 05 - 69
2-7-1. MODEL: UTY-RSRY ..... 05 - 69
2-7-2. MODEL: UTY-RSKU ..... 05 - 74
2-8. SIMPLE REMOTE CONTROLLER (Without Operation mode) ..... 05 - 78
2-8-1. MODEL: UTY-RHRY ..... 05 - 78
2-8-2. MODEL: UTY-RHKU ..... 05 - 83
2-9. WIRELESS REMOTE CONTROLLER ..... 05 - 87
2-10. IR RECEIVER UNIT (for ALL DUCT TYPE) ..... 05 - 91
2-11. IR RECEIVER UNIT (for CASSETTE TYPE) ..... 05 - 94
2-12. IR RECEIVER UNIT (for CIRCULAR FLOW CASSETTE TYPE) ..... 05 - 96
2-13. HUMAN SENSOR KIT (for CIRCULAR FLOW CASSETTE TYPE) ..... 05 - 98
2-14. REMOTE SENSOR UNIT ..... 05 - 100

CONTENTS

5. CONTROL SYSTEM

2-15. PRESSURE SENSOR KIT ..... 05 - 102
2-16. GROUP CONTROL METHOD ..... 05 - 112
2-17. COMPARISON TABLE OF CONTROLLERS ..... 05 - 114

3. ADAPTOR / CONVERTOR UNITS ..... 05 - 116
3-1. NETWORK CONVERTOR ..... 05 - 117
3-2. NETWORK CONVERTOR ..... 05 - 122
3-3. MODBUS® CONVERTOR FOR VRF ..... 05 - 126
3-4. NETWORK CONVERTOR FOR LONWORKS® ..... 05 - 135
3-5. THERMOSTAT CONVERTOR ..... 05 - 146
3-6. BACnet® GATEWAY (HARDWARE) ..... 05 - 152
3-7. BACnet® GATEWAY (SOFTWAER) ..... 05 - 161
3-7-1. MODEL: UTY-ABGXZ1 ..... 05 - 161
3-7-2. MODEL: UTY-ABGX ..... 05 - 166
3-8. SIGNAL AMPLIFIER ..... 05 - 171
3-9. EXTERNAL SWITCH CONTROLLER ..... 05 - 175
3-9-1. MODEL: UTY-TERX ..... 05 - 175
3-9-2. MODEL: UTY-TEKX ..... 05 - 181

4. SERVICE & WEB MONITORING TOOL ..... 05 - 185
4-1. SERVICE TOOL ..... 05 - 185
4-1-1. MODEL: UTY - ASGXZ1 ..... 05 - 185
4-1-2. MODEL: UTY - ASGX ..... 05 - 190
4-2. WEB MONITORING TOOL ..... 05 - 194
4-2-1. MODEL: UTY-AMGXZ1 ..... 05 - 194
4-2-2. MODEL: UTY-AMGX ..... 05 - 197

1. CONTROL SYSTEM

1-1. LINE UP OF CONTROLLERS

■ FEATURES OF CONTROL SYSTEM

Reduced Installation Time

Simplified wiring, using a standard 22ga LON communication cable, reduces installation cost.

Expandable System Configuration

Various controls combinations meet most applications and allow for future expansion.

Easy Operation

Advanced control functions can be set using easy-to-use menu-driven setting operations.

Flexible System Configuration

Up to 400 indoor units can be connected to a single system. System can adapt to both large and small applications.

CONTROL SYSTEM

Air Conditioning Central Control

System Controller, System Controller Lite, Touch Panel Controller and Central Remote Controller specially designed for centralized control.

System Controller

UTY-APGXZ1, UTY-APGX

High performance and optimum control system for all building applications

A high degree of building air conditioning management is possible including electricity charge apportionment and numerous data management functions as well as standard equipment monitoring and control.

System Controller Lite

UTY-ALGXZ1, UTY-ALGX

Optimum control system for small or medium building applications.

System Controller Lite has the subset functions of System Controller. Some functions such as electricity charge apportionment, remote monitoring, and energy saving can be supported by additional options in order to meet your demands.

Touch Panel Controller

UTY-DTGYZ1, UTY-DTGY

Functionality in a compact housing with built-in schedule timer

Allows operation and monitoring to be achieved from the central control room, at each floor, by each tenant, or in the plant room.

Central Remote Controller

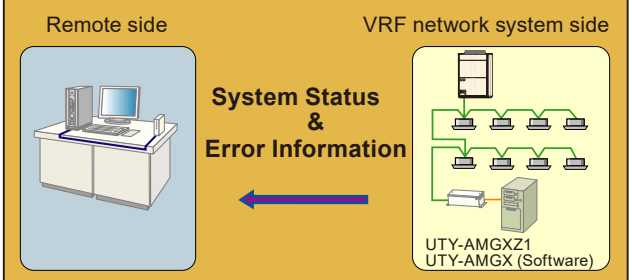
UTY-DCGY

Central control of small- and medium-sized buildings and tenants.

The operation status of all connected indoor units can be viewed at a glance on a large LCD monitor to simplify individual control to batched control.

Web Monitoring Tool

Trouble-shooting is performed by monitoring each air conditioning unit remotely during periodical system checks.



Error notification can be automatically transmitted to several locations using the internet*.
Requires either a dedicated internet connection* or public telephone line.

*Fixed global IP address is required.

Air Conditioning Individual Control

A range of Remote Controllers suitable for a wide range of individual control situations, using various built-in timers

Wired Remote Controller (Touch panel)

UTY-RNRUZ∗, UTY-RNRU

Wired remote controller with the largest LCD touch panel in the industry

Wired Remote Controller

UTY-RNKU

The room temperature can be controlled by detecting the temperature accurately with the built-in thermo sensor.

Simple Remote Controller (With Operation mode)

UTY-RSRY, UTY-RSKU

Compact remote controller concentrates on the basic functions such as Start/Stop, Fan Control, Temperature Setting and Operation mode.

Simple Remote Controller (Without Operation mode)

UTY-RHRY, UTY-RHKU

Compact remote controller concentrates on the basic functions such as Start/Stop, Fan Control and Temperature Setting.

Wireless Remote Controller

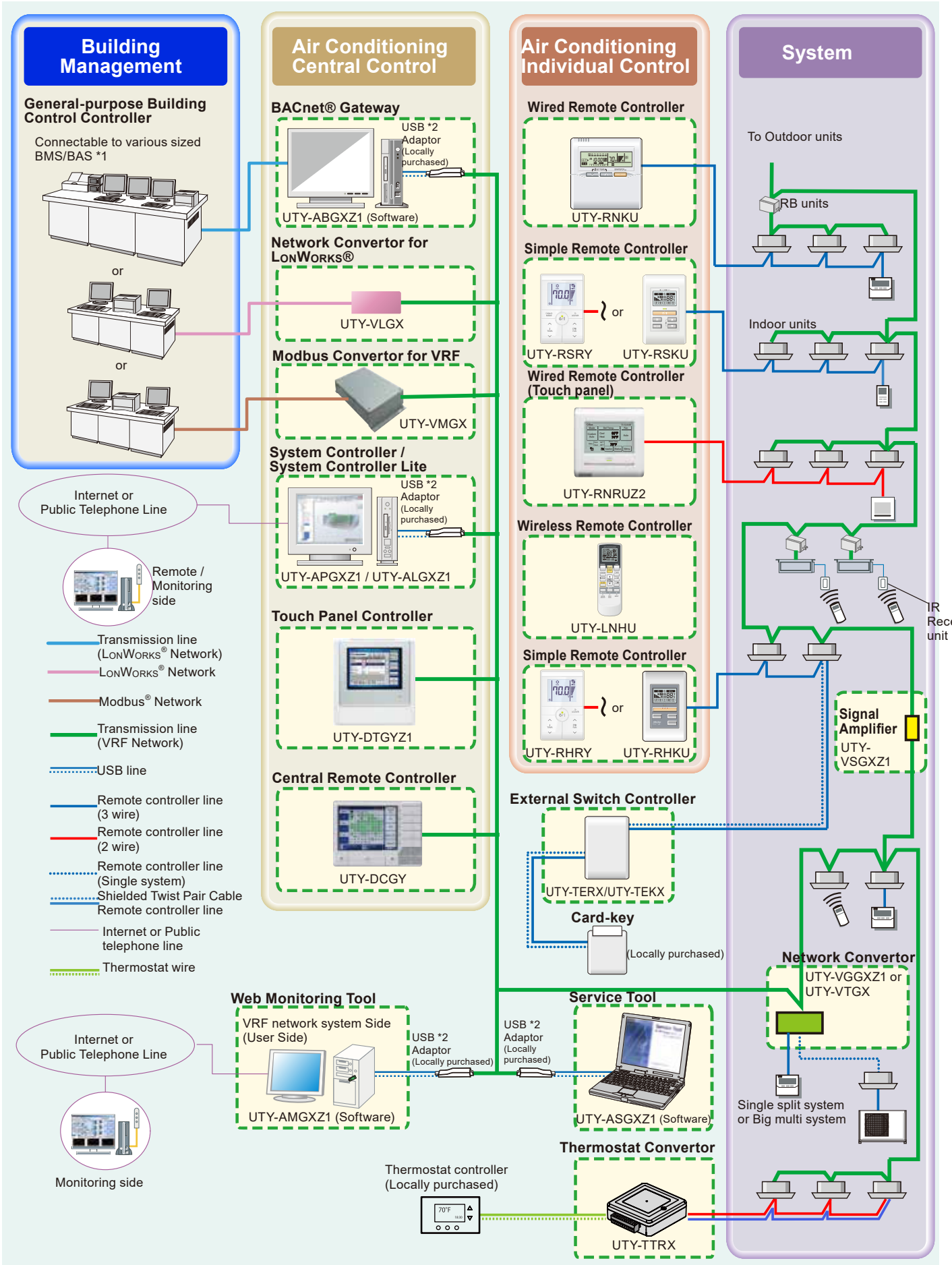
UTY-LNHU

Simple and sophisticated operation with a choice of 4 daily timers

CONTROL SYSTEM

1-2. CONTROL SYSTEM DESIGN

■ ADVANCED INTEGRATED CONTROL SYSTEM



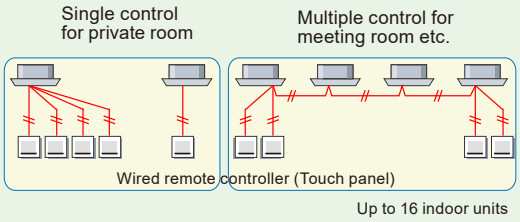
*1: BMS/BAS : Building Management System / Building Automation System.
*2: U10 USB Network Interface - TP/FT-10 (Echelon® Corporation)

1-3. SYSTEM CONFIGURATION EXAMPLES

■ INDIVIDUAL CONTROL

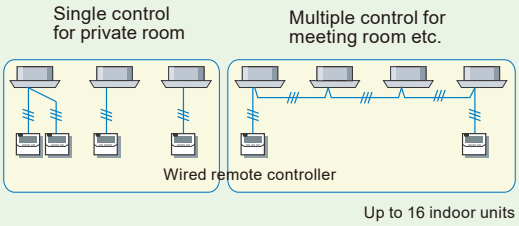
Wired Remote Controller (Touch panel)

- Up to 16 indoor units can be controlled with one wired remote controller.
- Wired (Touch panel) and wireless remote controllers can be used jointly.
- Four remote controllers can be connected with single indoor unit.



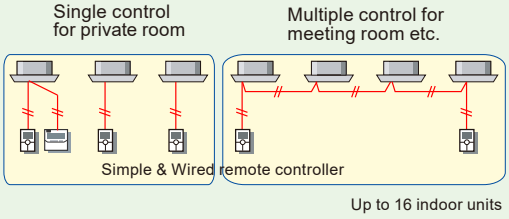
Wired Remote Controller

- Up to 16 indoor units can be controlled with one wired remote controller.
- Wired, simple, and wireless remote controllers can be used jointly.
- Two remote controllers can be connected with single indoor unit.



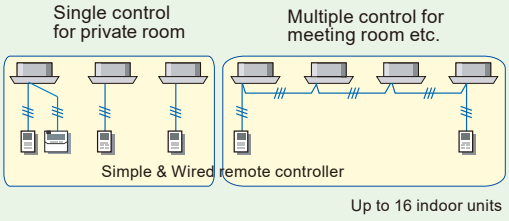
Simple Remote Controller (2-wire)

- Up to 16 indoor units can be controlled with one simple remote controller.
- Enables easy control of basic functions by the hotel or office guest.
- Wired, simple, and wireless remote controllers can be used jointly.
- 4 remote controllers can be connected with single indoor unit.



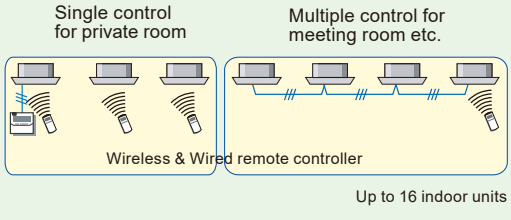
Simple Remote Controller

- Up to 16 indoor units can be controlled with one simple remote controller.
- Enables easy control of basic functions by the hotel or office guest.
- Wired, simple, and wireless remote controllers can be used jointly.
- Two remote controllers can be connected with single indoor unit.



Wireless Remote Controller

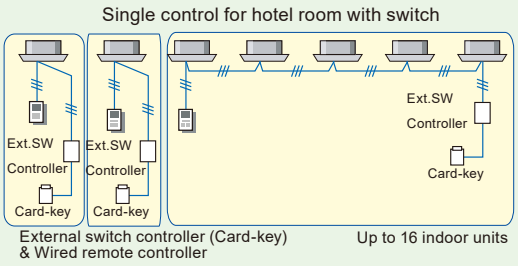
- Up to 16 indoor units can be controlled with one wireless remote controller.
- Wired, simple, and wireless remote controllers can be used jointly.



CONTROL SYSTEM

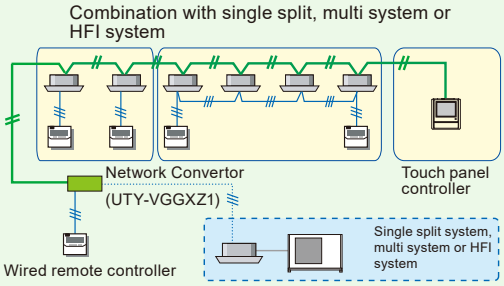
External Switch Controller

- Up to 16 indoor units can be controlled with one external switch controller.
- In combination with a locally purchased card-key switch or other sensor, External switch controller allows control of basic functions by the hotel or office guest.



Single Split, Multi System or HFI System Connectability

- Single spilit system, multi system or HFI system can be connected to the VRF network system and can be controlled from Touch panel controller or System controller.

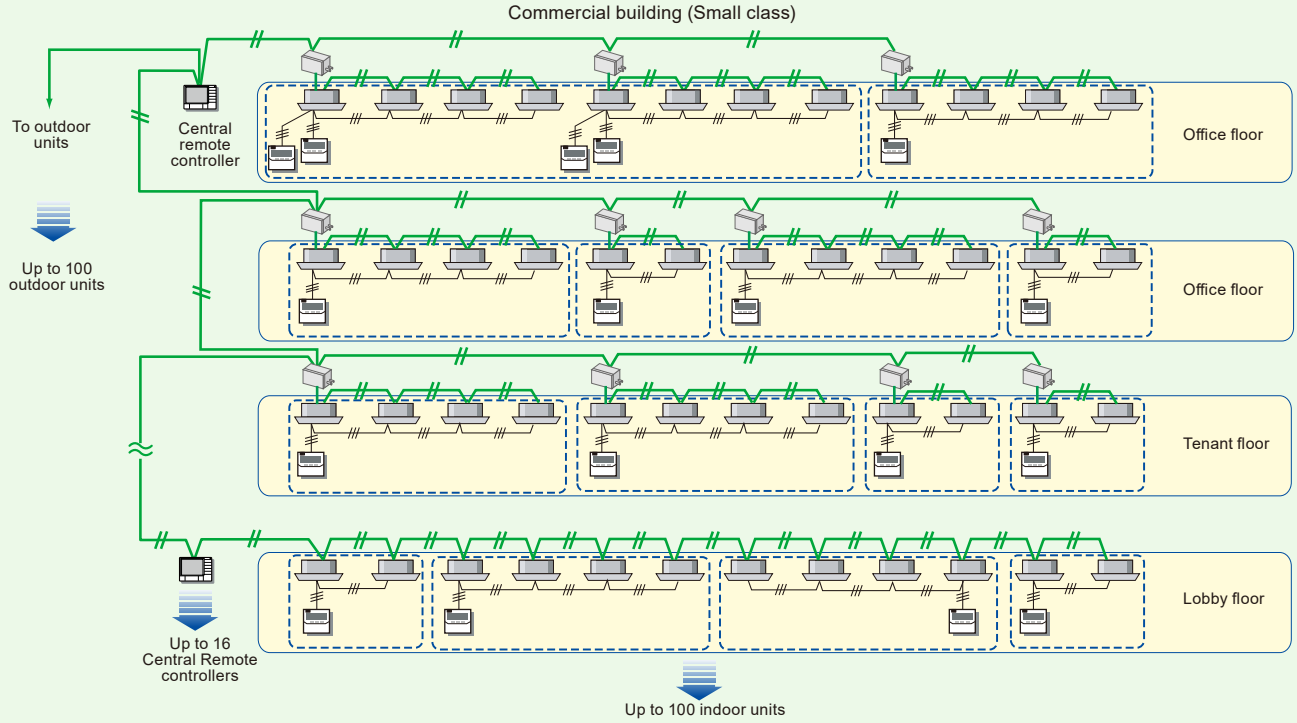


CONTROL SYSTEM

■ CENTRAL CONTROL

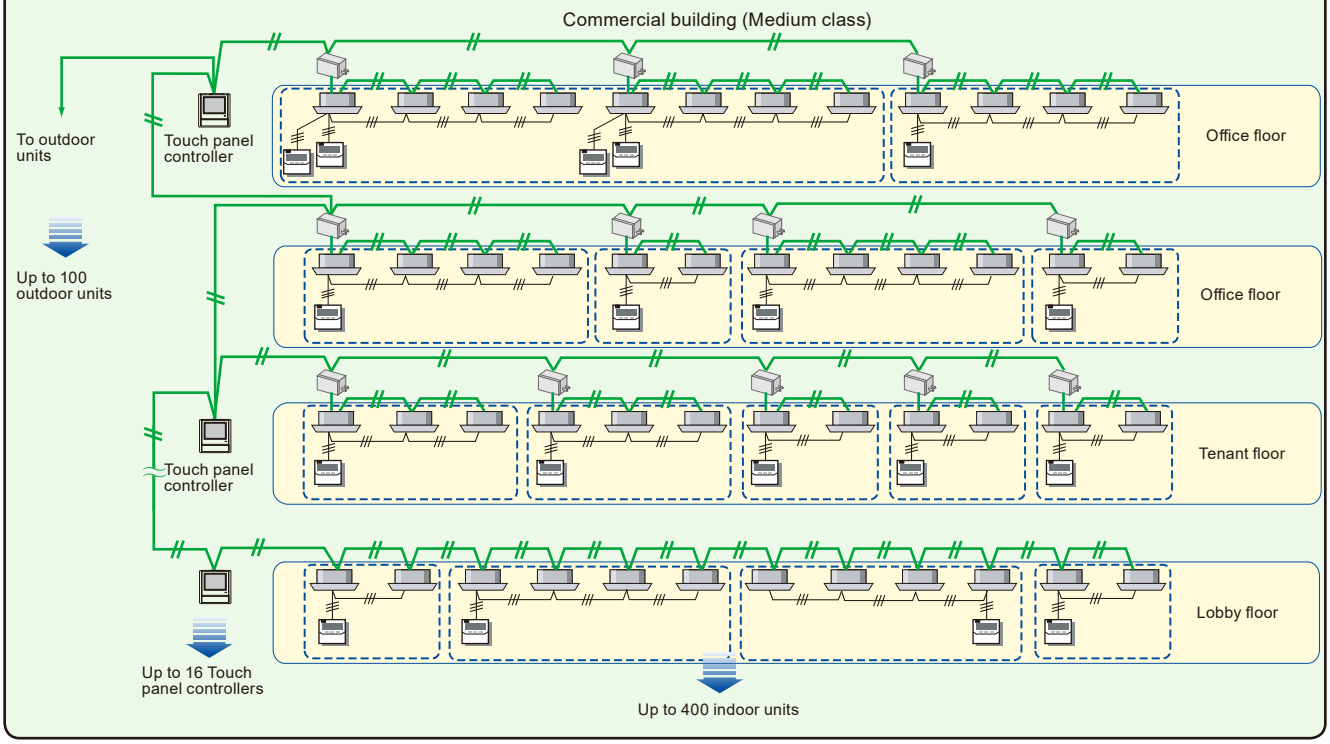
Central Remote Controller

- Up to 100 indoor units / 16 groups can be controlled with one central remote controller.
- The sum total of the Touch panel controller, Central remote controller, Modbus® convertor, and Network convertor for LONWORKS® is a maximum of 16.



Touch Panel Controller

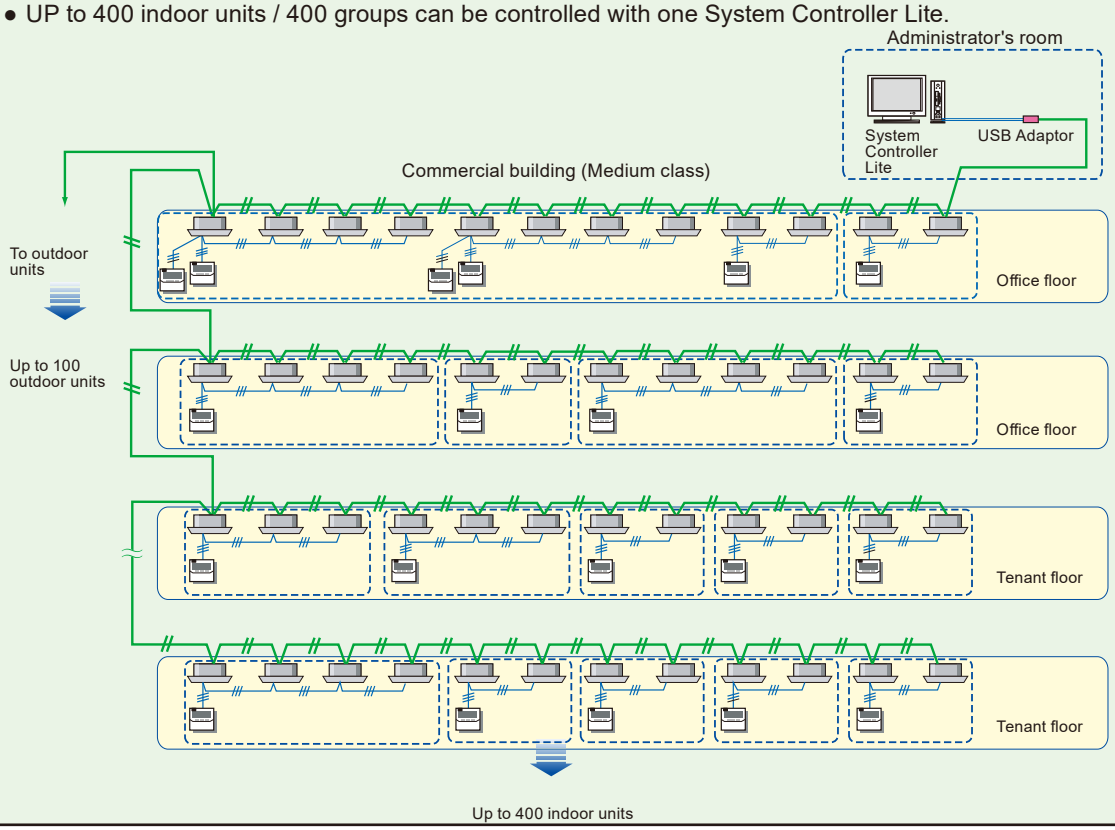
- Up to 400 indoor units / 400 groups can be controlled with one touch panel controller.
- The sum total of the Touch panel controller, Central remote controller, and Network convertor for LONWORKS® is a maximum of 16.



CONTROL SYSTEM

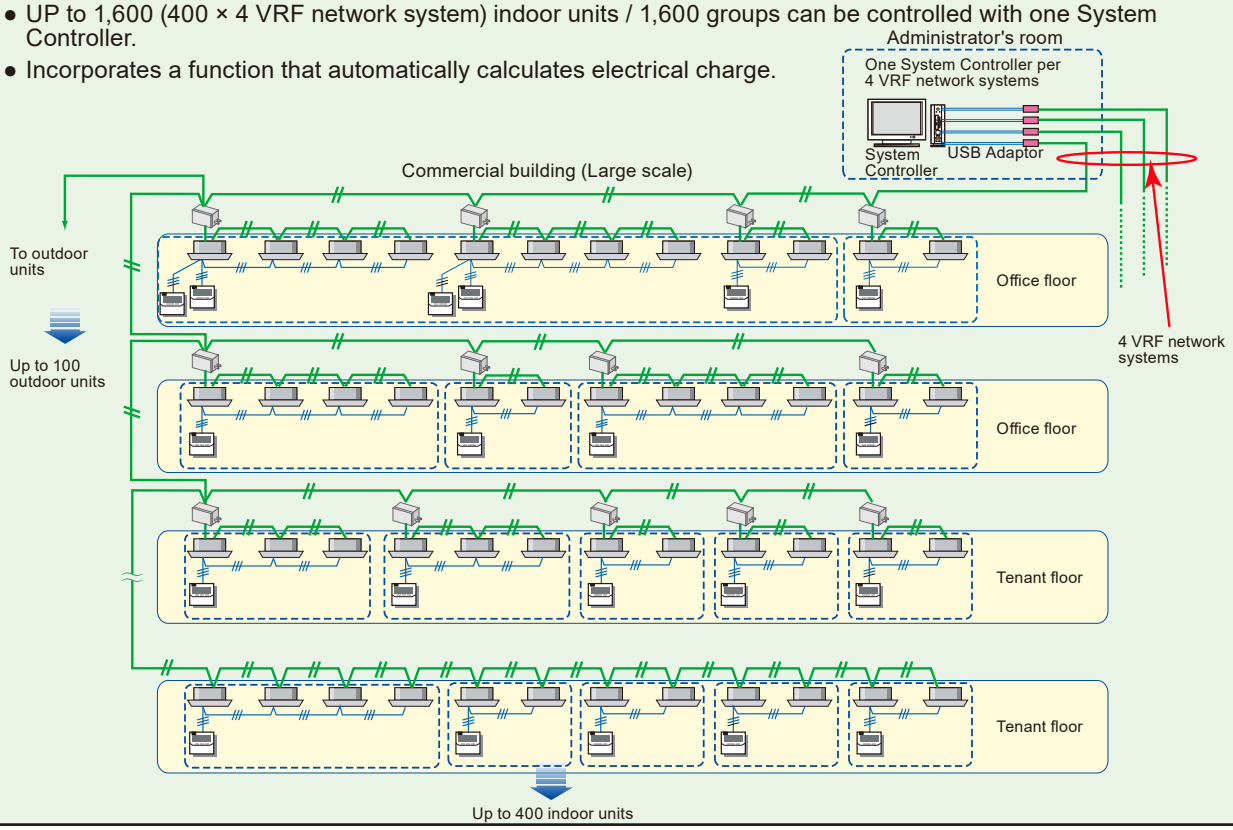
System Controller Lite

- UP to 400 indoor units / 400 groups can be controlled with one System Controller Lite.



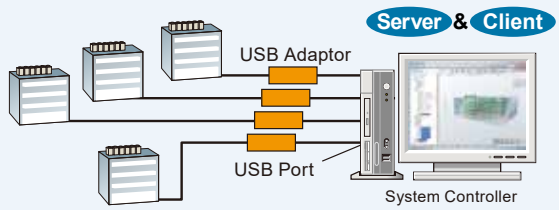
System Controller

- UP to 1,600 (400 × 4 VRF network system) indoor units / 1,600 groups can be controlled with one System Controller.
- Incorporates a function that automatically calculates electrical charge.



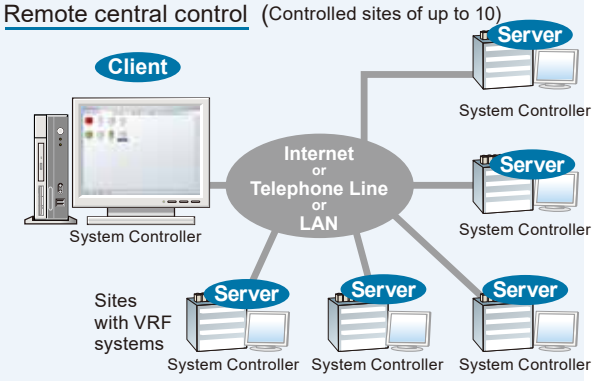
System Controller can perform as an on-site central control or as a remote central control.

On site central control (Max. 4 VRF network systems)

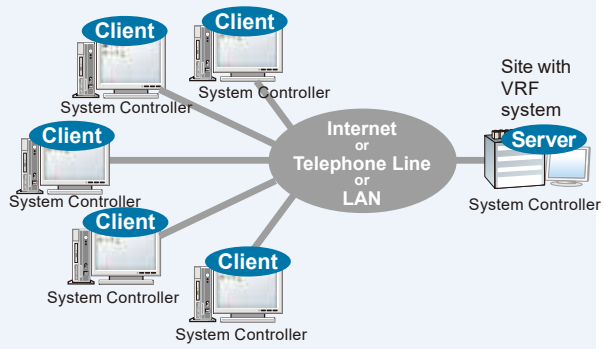


1 VRF network system	Max. controllable		Max. transmission line length
	400 Indoor units	100 Outdor units	11,811ft. (3,600m)

Remote central control (Controlled sites of up to 10)

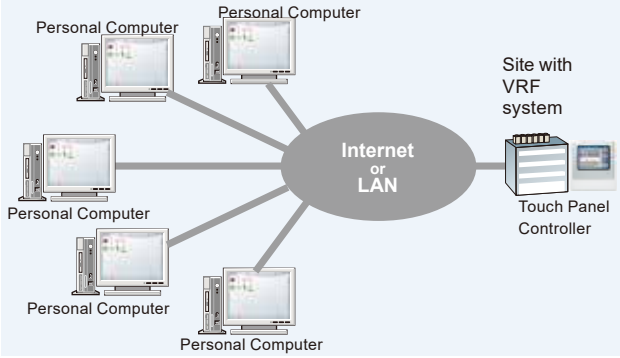


Remote central control (Monitored from up to 5 Clients)



Touch Panel Controller can perform as a remote central control.

Remote central control (Monitored from up to 100 users *1)



*1: Up to 4 administrators and 10 general users can log in simultaneously.

CONTROL SYSTEM

■ INDOOR UNITS AND COMPATIBLE CONTROLLERS

	Wired Remote Controller (Touch panel)	Wired Remote Controller	Simple Remote Controller	Wireless Remote Controller	External Switch Controller
	UTY-RNRUZ2 UTY-RNRUZ1 UTY-RNRU	UTY-RNKU	UTY-RSRY UTY-RHRY UTY-RSKU UTY-RHKU	UTY-LNHU	UTY-TERX UTY-TEKX
Compact Cassette	○	○	○	○	○
Cassette	○	○	○	△ *1	○
Circular Flow Cassette	○	—	○ *4	○ *5	○ *4
Mini Duct	○	○	○	△ *2	○
Slim Duct / Slim Concealed Floor	○	○	○	△ *2	○
Medium Static Pressure Duct	○	○	○	△ *2	○
High Static Pressure Duct	○	○	○	△ *2	○
Compact Floor	○	—	○ *4	○	○ *4
Vertical Air Handler	○	○	○	△ *2	○
Floor / Ceiling	○	○	○	○	○
Ceiling	○	○	○	○	○
Wall Mounted	○	○ *3	○ *4	○	○ *4

*1: IR Receiver Unit (Optional part: UTY-LRHYB1) is necessary.

*2: IR Receiver Unit (Optional part: UTB-YWC) is necessary.

*3: It is not connectable with ASUA4/7/9/12/14TLAV1 and ASUB30/36TLAV1 in Wall Mounted type.

*4: Polar 3-wire type controller cannot be conneceted to following indoor units:
- Circular Flow Cassette type
- ASUA4/7/9/12/14TLAV1 and ASUB30/36TLAV1 in Wall Mounted type
- Compact Floor type

*5: IR Receiver Unit (Optional part: UTY-LBHXD) is necessary.

■ CONVERTORS AND RELATED EQUIPMENT

		Within VRF network system							VRF network system ↔ Other System	Single Split system ↔ Other System	
		System Controller	System Controller Lite	Touch Panel Controller	Central Remote Controller	Web Monitoring Tool	Service Tool	BACnet® Gateway	Single Split System / Multi System / HFI System	BMS/BAS	
		UTY-APGXZ1 UTY-APGX	UTY-ALGXZ1 UTY-ALGX	UTY-DTGYZ1 UTY-DTGY	UTY-DCGY	UTY-AMGXZ1 UTY-AMGX	UTY-ASGXZ1 UTY-ASGX	UTY-ABGXZ1 UTY-ABGX			
Network Convertor	UTY-VTGX	—	—	—	—	—	—	—	○	—	—
	UTY-VGGXZ1	—	—	—	—	—	—	—	○	—	—
USB adaptor *6	Locally purchased	○	○	—	—	○	○	○	—	—	—
Network Convertor for LonWorks®	UTY-VLGX	—	—	—	—	—	—	—	—	○	—
BACnet® Gateway	UTY-ABGXZ1 UTY-ABGX UTY-VBGX	—	—	—	—	—	—	—	—	○	—
Modbus® Convertor	UTY-VMGX	—	—	—	—	—	—	—	—	○	—
Thrmostat Convertor	UTY-TTRX	—	—	—	—	—	—	—	○	○	○

*6: Echelon® U10 USB Network Interface — TP/FT-10 Channel (Model number: 75010R)

U10 USB Network Interface TP/FT-10 is a product of Echelon® Corporation.

1-4. CONTROL SYSTEM FEATURES

■ SIMPLE WIRING SYSTEM

- A single transmission line can connect equipment across multiple refrigerant circuits.
- Non polar 2-conductor transmission cable.
- Central control equipment can be connected anywhere on the transmission line, it is not necessary to connect the indoor units to each outdoor unit.

  -Simplifies network installation and start-up

  -Reduces the total wiring required

  -Helps prevent improper wiring

  -Reduces total installation time

■ LARGE BUILDING APPLICATIONS

- A single VRF network can control an entire building using:

  -Total transmission wiring length can be extended up to 11,811 ft. (3,600 m). (with signal amplifier unit.)

  -Up to 400 indoor units per group

  -Up to 100 outdoor units per group

  -Touch Panel Controller can be used for primary central control.

  -Multiple Touch Panel Controllers may be sued to provide convenient control for multiple convertor (Refer to 3-1.)

  -Can control Fujitsu mini-split and HFI models using a Network Convertor (Refer to 3-1.)

- System Controller allows to control up to 4 VRF network systems (Max.1,600 indoor units), suitable for huge scale application.

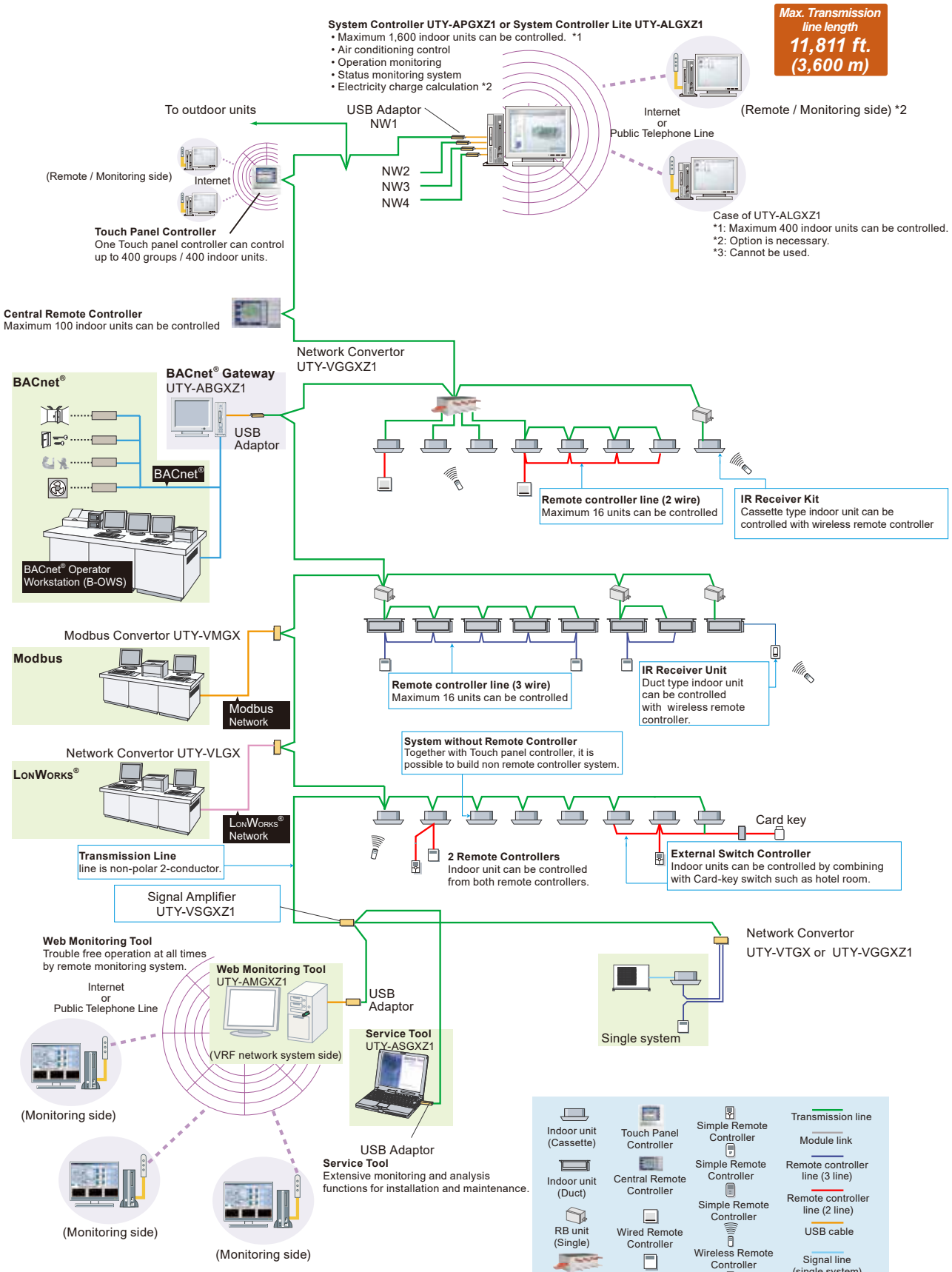
CONTROL SYSTEM

■ RELIABILITY AND EASE OF MAINTENANCE

- Stand-alone transmission NETWORK allows for each unit to operate separately; therefore, an error at one unit does not effect the performance of the remaining units.
- When a failure occurs, the error code is displayed on the individual controller and central controller. (except Wireless Remote Controller)
- Error history is stored in each individual controller and in the central controller (except wireless controller).
- System Controller and Web Monitoring Tool allow to monitor operation status in real time via INTERNET, allowing for a quick evaluation of VRF systems.
- Service tool can connect anywhere on the transmission line, allowing building owner to quickly evaluate the performance of the VRF system.

1-5. WIRING SYSTEM

- Wiring configulation of the control system is made of power source wiring, transmission wiring and remote controller wiring.
- Total wiring length (total length of transmission line) can be extended up to 11,811 ft. (3,600 m) (by using signal amplifiers).



Combination of individual remote controller

Wired, simple and wireless remote controllers can be used jointly.

CONTROL SYSTEM

1-6. CONTROL EQUIPMENT DESIGN LIMITATION

			Model	Necessary equipment	Connectable number per system	Manageable indoor unit number	Connectable outdoor unit number
Controller	Central Controller	System Controller	UTY-APGXZ1 UTY-APGX	USB Adaptor	1 / system	1,600 (4 VRF Networks)	400 (4 VRF Networks)
		System Controller Lite	UTY-ALGXZ1 UTY-ALGX	USB Adaptor	1 / system	400 (1 VRF Network)	100 (1 VRF Network)
		Touch Panel Controller	UTY-DTGYZ1 UTY-DTGY	—	16 / system	400	100
		Central Remote Controller	UTY-DCGY	—		100	
Adaptor / Convertor		Network Convertor	UTY-VTGX UTY-VGGXZ1	—	100 / system *1	—	—
		Network Convertor for LonWorks® *3	UTY-VLGX	—	1 / system	128 *2	100
		BACnet® Gateway	UTY-ABGXZ1 UTY-ABGX	USB Adaptor	1 / system	1,600 (4 VRF Network)	400 (4 VRF Network)
			UTY-VBGX	—	4 / system	128 *2	100
		Modbus® Convertor	UTY-VMGX	—	9 / system	128 *2	100
		Thermostat Convertor	UTY-TTRX	—	—	16 *4	—
		Signal Amplifier	UTY-VSGX	—	8 / system	—	—
Service and Maintenance		Service Tool	UTY-ASGXZ1 UTY-ASGX	USB Adaptor	1 / system	400	100
		Web Monitoring Tool	UTY-AMGXZ1 UTY-AMGX	USB Adaptor		1,600 (4 VRF Network)	400 (4 VRF Network)

*1: Maximum 100 Refrigerant system.

*2: Maximum connectable indoor unit number per one Network Convertor.
(Check the System Diagram (Item:3-2) for proper configuration)

*3: A maximum of 4 Network Convertors for LonWorks® can be connected to 1 BMS.

*4: Maximum connectable indoor unit number per one remote controller group.

			Model	The number that can be connected
Controller	Individual Controller	Wireless Remote Controller	UTY-LNHU	
		Wired Remote Controller (Touch panel)	UTY-RNRUZ2 UTY-RNRUZ1 UTY-RNRU	4 / Remote control group
		Simple Remote Controller (with operation mode)	UTY-RSRY	
		Simple Remote Controller (without operation mode)	UTY-RHRY	
		Wired Remote Controller	UTY-RNKU	2 / Remote control group
		Simple Remote Controller (with operation mode)	UTY-RSKU	
		Simple Remote Controller (without operation mode)	UTY-RHKU	
Adaptor / Convertor		External Switch Controller	UTY-TERX UTY-TEKX	
		IR Receiver unit		1 / Indoor unit

CONTROL SYSTEM

2. CONTROL UNITS

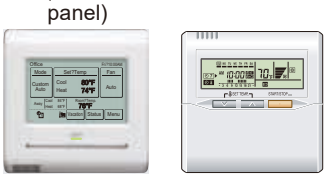
The following types of controllers are available with the FUJITSU GENERAL LIMITED VRF System :

- **System Controller**
- **System Controller Lite**
- **Touch Panel Controller**
- **Central Remote Controller**
- **Wired Remote Controller**
- **Simple Remote Controller**
  (With operation mode)
  (Without operation mode)
- **Wireless Remote Controller**
- **IR Receiver Unit**

Central Control

System Controller / System Controller Lite	Touch Panel Controller	Central Remote Controller

Individual Control

Wired Remote Controller	Simple Remote Controller	Wireless Remote Controller	IR Receiver Unit
(Touch panel) 	(With operation mode) (Without operation mode) 		

2-1. SYSTEM CONTROLLER

2-1-1. MODEL: UTY-APGXZ1 (Option: UTY-PEGXZ1, UTY-PPGXP2)

This system realizes the advanced general monitoring & control of VRF system from small scale buildings to large scale buildings.

- Maximum of 4 network systems, 1600 indoor units can be controlled.
- In addition to air conditioning precision control function, central remote control, electricity charge calculation, schedule management, and energy saving functions are strengthened and building manager and owner needs are met.
- Corresponds to 7 different languages. (English, Chinese, French, German, Spanish, Russian, and Polish)
- Connection between VRF network system to personal computer is possible via small U10 USB interface. However, both U10 USB interface and personal computer are locally purchased items.
- Extended feature* supported by use of options.

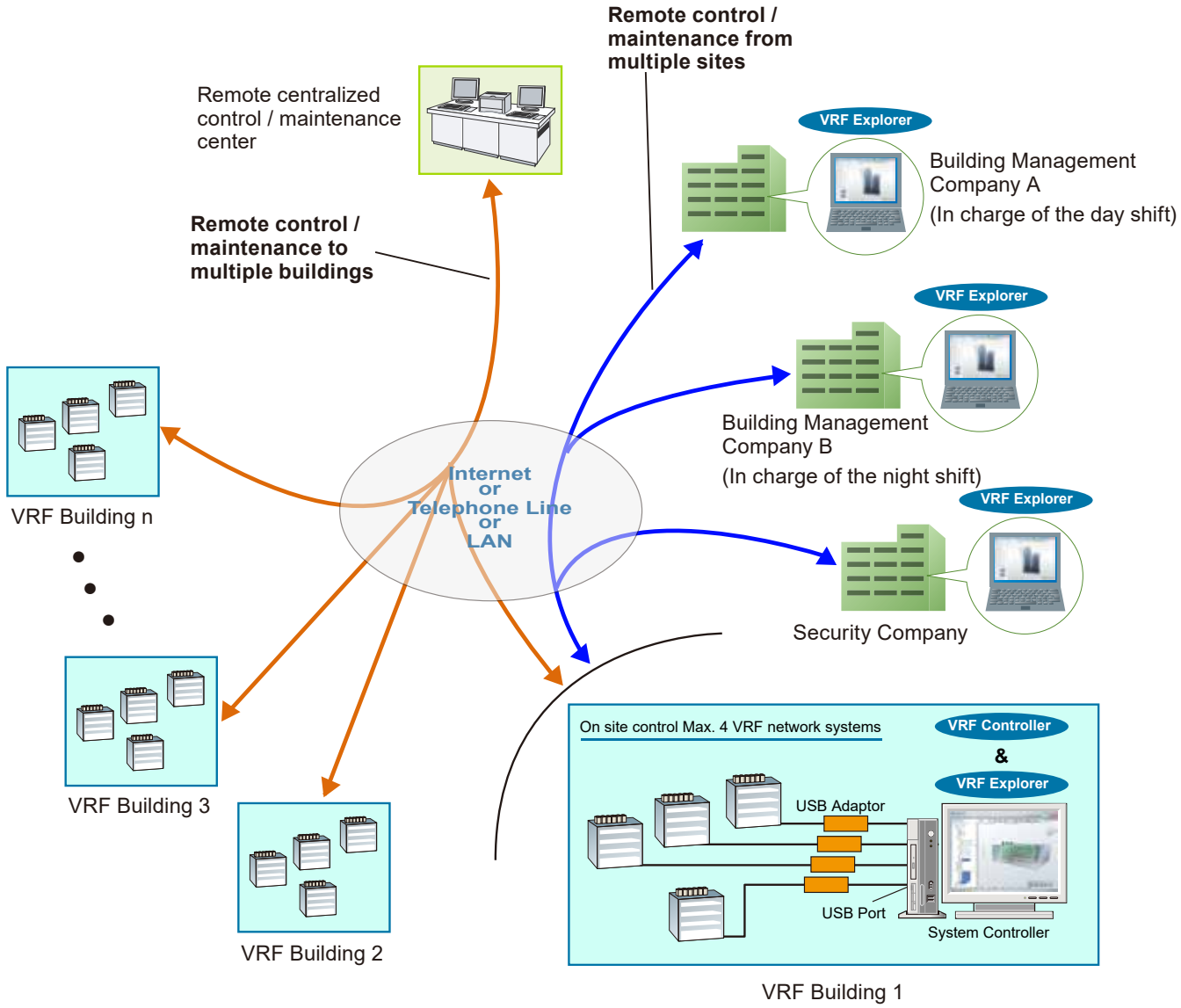
*: Electricity charge apportionment using electricity meter, energy saving control (without V and S Series)

NOTE: Different VRF series may be connected for each of the 4 VRF networks supported by the System Controller, but different series may not coexist within the same network.

CONTROL SYSTEM

■ SYSTEM DIAGRAM

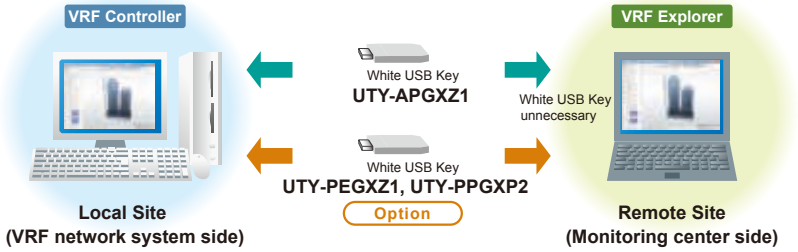
- System controller may be used on site or remotely over various networks for remote central control.
- System controller consists of VRF Controller software and VRF Explorer software, both software are working together.
- VRF Controller software runs in the background and communicate with VRF System.
- VRF Explorer software provides user interface and communicate with the VRF Controller.
- VRF Controller and VRF Explorer software may run in a single PC or in different PCs separated by network.
- VRF Explorer software does not require WibuKey (Software protection key).



■ PACKING LIST

Name and shape	Quantity	Application
WHITE-USB-KEY (software protection key with software)	1	Software protection key to be connected to an USB port on the PC that the System Controller is installed. System Controller runs only on a PC with this WHITE-USB-KEY. However, this WibuKey is not required for remote VRF Explorer software.

■ SOFTWARE CONFIGURATION



Any number can be installed in remote site personal computers

System Controller UTY-APGXZ1 can be installed in the local site PCs (VRF Controller) connected to the VRF network system, and multiple remote site PCs (VRF Explorer) can be connected to VRF Controller via Internet or LAN. Just this single product creates the control, management, and monitoring environment for the customer's properties including remote operation.

*The WHITE-USB-KEY is not required for PCs on the remote site side. Some functions, such as equipment registration, and input/output, are invalid on the remote site side.

■ OTHER REQUIRED DEVICES (Locally purchased)

- Personal computer that satisfies the following system requirements
- Echelon® U10 USB Network Interface – TP/FT-10 Channel (Model number: 75010R) (Required for each VRF Network.)

■ PERSONAL COMPUTER SYSTEM REQUIREMENTS

Operating system	• Microsoft® Windows® 7 Home Premium (32-bit or 64-bit) SP1 • Microsoft® Windows® 7 Professional (32-bit or 64-bit) SP1 • Microsoft® Windows® 8.1 (32-bit or 64-bit) • Microsoft® Windows® 8.1 Pro (32-bit or 64-bit) • Microsoft® Windows® 10 Home (32-bit or 64-bit) • Microsoft® Windows® 10 Pro (32-bit or 64-bit) [Supported languages] English, Chinese, French, German, Russian, Spanish, and Polish
CPU	Intel® Core™ i3 2 GHz or higher
Memory	• 2 GB or more (for Windows® 7 [32-bit]) • 4 GB or more (for Windows® 7 [64-bit], Windows® 8.1, and Windows® 10)
HDD	40 GB or more of free space
Display	1,024 × 768 or higher resolution
Interface	• Ethernet port (for getting access to the Internet using LAN) or Modem (for getting access to the Internet using Public Telephone Line) • USB ports (Maximum of 5 ports) (Required only for the Server PC that works as VRF Controller) - Maximum of 1 USB ports are required for White USB Key connection - Maximum of 4 USB ports are required for Echelon® U10 USB Network Interface * Maximum number of required USB port depends on the applicable system configuration.
Graphic accelerator	Microsoft® DirectX® 9.0c compatible
Software	Adobe® Reader® 9.0 or later

■ AVAILABLE OPTION

Energy Manager	UTY-PEGXZ1	Additional support for energy saving function and electricity charge apportionment using electricity meter.
Prepaid air conditioning	UTY-PPGXP2	The prepaid management of VRF air conditioner is performed and the collection of charge for air conditioning is supported for building administrator.

CONTROL SYSTEM

■ SPECIFICATION SUMMARY

Type	Function	UTY-APGXZ1	UTY-PEGXZ1 Option	UTY-PPGXP2 Option	Remark
System specification	Max. System Controller per VRF Network	1	—	—	
	Max. VRF networks supported	4	—	—	Site with up to 4 VRF networks may be administered with 1 System Controller
	Max. indoor units / remote controller groups per VRF network	400	—	—	
	Max. indoor units / remote controller groups per System Controller	1,600	—	—	4 VRF networks
Site supervision	Multiple sites display	10	—	—	
	2D/3D graphical layout view	●	—	—	2D: Site, floor, 3D: Building Quick control from display available.
	List display	●	—	—	Quick control from display available.
	Tree display	●	—	—	Quick control from display available.
Operation control	Start/Stop, Operation mode, Room temperature	●	—	—	
	Fan speed, Airflow direction	●	—	—	
	Economy mode	●	—	—	
	Antifreeze	●	—	—	
	Remote control prohibition setting	●	—	—	
	Temperature upper and lower limit setting	●	—	—	
	Filter sign reset	●	—	—	
	Human sensing	●	—	—	
	Annual schedule	●	—	—	Week of year, day of month, day of week setting. Holiday special day settings.
	Low noise mode weekly schedule	●	—	—	Outdoor unit control only.
	Number of groups	1,600	—	—	
	Group in group	3 Levels	—	—	Lv.1 – 2 – 3.
	Max. overlap definitions	1,600	—	—	1 unit may belong to up to 1,600 groups.
	Auto generation	●	—	—	By site, building and floor.
	Memory operation	●	—	—	Operation pattern memorized and reused.
	Pattern operation	●	—	—	Reuse operation pattern once used.
Operation status monitoring	Controlled status	●	—	—	See items controlled by operation.
	Special operation	●	—	—	Defrost, Oil Recovery.
Room Temp.	Room temperature	●	—	—	*1
Error management	Error notification	●	—	—	
	Audible alarm	●	—	—	
	Error e-mail notification	●	—	—	
History management	Error history	1 year	—	—	
	Operation control & status history	1 year	—	—	
Energy saving management	Indoor unit rotation	—	●		
	Outdoor unit capacity save	—	●		
	Peak cut control	—	1 month		
	Power consumption monitor	—	●		
	Electricity meters supported	—	200		Outdoor unit required per connection
	Power consumption information	—	3 years		
Electricity charge apportionment	Apportionment charge calculation	●	—		
	Apportionment charge bill creation	●	—		
	Tenant (block) setting	1600	—		
	Common facilities apportionment setting	●	—		
	Rated power consumption allotment setting	●	—		
	Electricity meters supported	—	200		Same meters used for energy saving.
	Electricity charge apportionment period	2 years	—		
	Prepaid air conditioning	—	—	●	
	Cooling and Heating information	●	—	—	
Remote control	Internet, telephone line support	●	—		
	Max. client connection per server	5	—		
	Max. host connection from client	10	—		
	Data encryption	●	—		SSL used.

CONTROL SYSTEM

Type	Function	UTY-APGXZ1	UTY-PEGXZ1 Option	UTY-PPGXP2 Option	Remark
Others	External device control function	●	—	—	
	WEB Operation	●	—	—	
	User control	●	—	—	Authorization level setting.
	Database import / export (manual)	●	—	—	
	Periodical backup	●	—	—	
	The refrigerant systems of non-operation status function	●	—	—	
	Auto Start Setting	●	—	—	
	Multiple language display	●	●	—	English, Chinese, French, German, Spanish, Russian, Polish.
	Floor layout editor	●	—	—	
	Floor layout import/export	●	—	—	

NOTE: In S and V series, there are some functions that cannot be used, such as energy saving function and electricity meter use.

- The electricity charge apportionment function of VRF system can only be performed from one equipment simultaneously.

*1: To display the room temperature on the monitor, connect the wired remote controller to the indoor unit, and perform the function setting for detecting the temperature using the mounted sensor.

CONTROL SYSTEM

2-1-2. MODEL: UTY-APGX (Option: UTY-PEGX)

This advanced system has the capability for monitoring and control of small and large buildings.

- Up to a maximum of 4 network systems, 1,600 indoor units can be controlled.
- Provides energy saving functions along with precision temperature control, central remote control, electricity charge calculation and schedule management.
- Programmable in 7 different languages: English, Chinese, French, German, Spanish, Russian, and Polish.
- Connection between VRF network system and personal computer is possible using the U10 USB interface. Personal computer is locally purchased.
- Extended feature* supported by use of options.

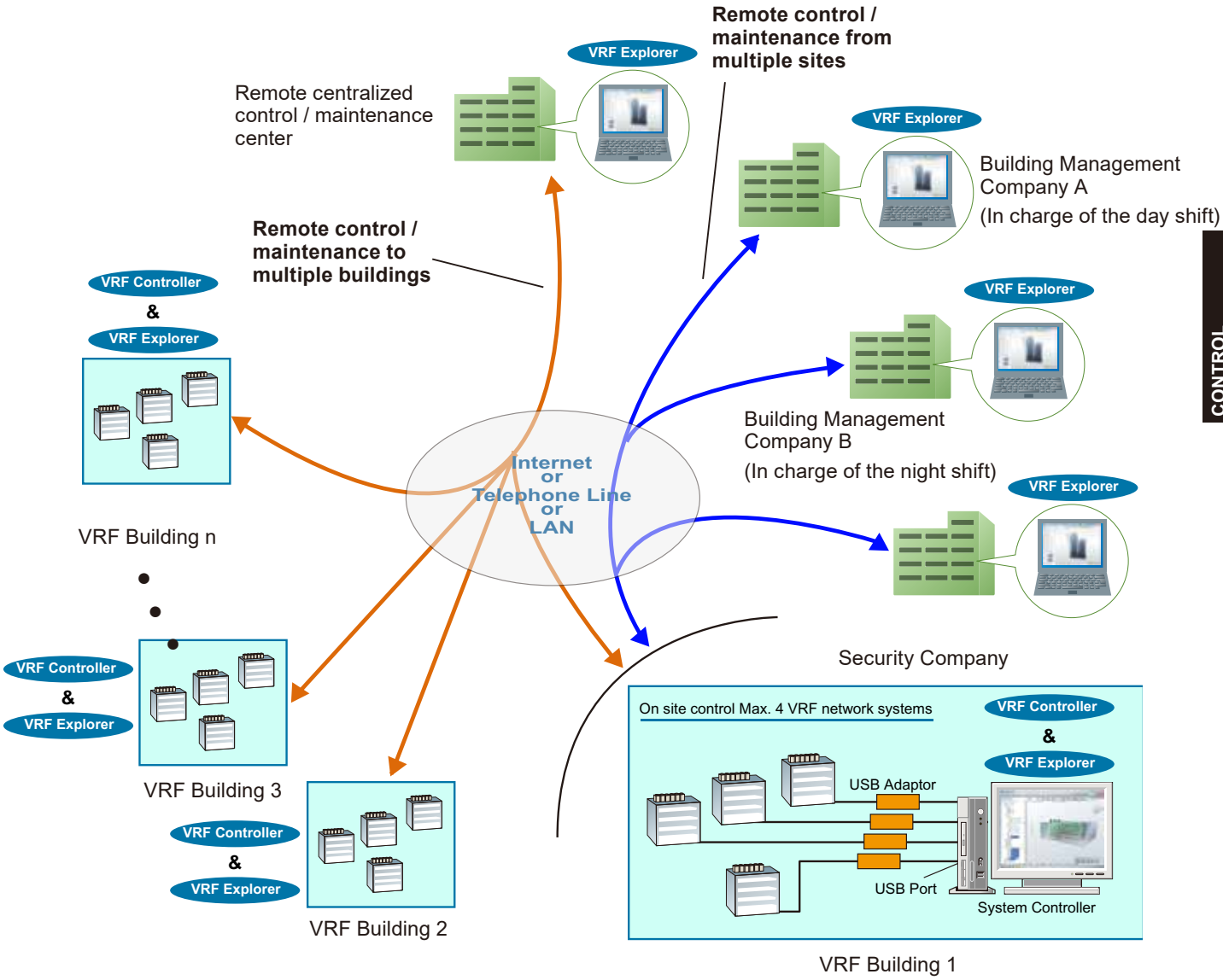
*: Electricity charge apportionment using electricity meter, energy saving control (without V and S Series)

NOTE: Different VRF series may be connected for each of the 4 VRF networks supported by the System Controller, but different series may not coexist within the same network.

CONTROL SYSTEM

■ SYSTEM DIAGRAM

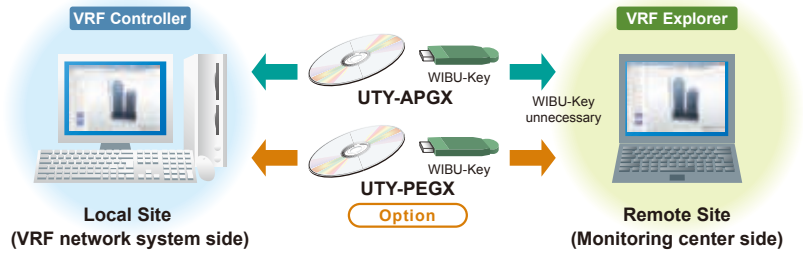
- System controller may be used on site or remotely over various networks for remote central control.
- System controller consists of VRF Controller software and VRF Explorer software running simultaneously.
- VRF Controller software runs in the background and communicate with VRF System.
- VRF Explorer software provides user interface and communicate with the VRF Controller.
- VRF Controller and VRF Explorer software may run in a single PC or in different PCs separated by network.
- VRF Explorer software does not require Wibu key.



■ PACKING LIST

Name and shape	Quantity	Application
DVD-ROM	1	Includes the software and manuals for System Controller. Both VRF Controller and VRF Explorer software are included.
Wibu Key (Software protection key)	1	Software protection key to be inserted in a USB slot running System Controller. System Controller may only run on a PC with Wibu Key. However, Wibu key is not required for remote VRF Explorer software.

■ SOFTWARE CONFIGURATION



Any number can be installed in remote site personal computers.

System Controller UTY-APGX can be installed in the local site PCs (VRF Controller) connected to the VRF network system and the multiple remote site PCs (VRF Explorer) connected to those computers via the Internet or LAN. Just this single product creates the control, management, and monitoring environment for the customer's properties including remote operation.

*The WIBU-Key is not required for PCs on the remote site side. Some functions, such as equipment registration, and input/output, are not possible on the remote site side.

Optional software to strengthen the energy saving function

Installing the optional UTY-PEGX will strengthen the energy saving management function.

■ OTHER REQUIRED DEVICES (LOCALLY PURCHASED)

- Personal computer that satisfies the following system requirements
- Echelon® U10 USB Network Interface – TP/FT-10 Channel (Model number: 75010R) (Required for each VRF Network.)

■ PERSONAL COMPUTER SYSTEM REQUIREMENTS

Operating system	• Microsoft® Windows® 7 Home Premium (32-bit or 64-bit) SP1 • Microsoft® Windows® 7 Professional (32-bit or 64-bit) SP1 • Microsoft® Windows® 8.1 (32-bit or 64-bit) • Microsoft® Windows® 8.1 Pro (32-bit or 64-bit) • Microsoft® Windows® 10 Home (32-bit or 64-bit) • Microsoft® Windows® 10 Pro (32-bit or 64-bit) [Supported languages] English, Chinese, French, German, Russian, Spanish, and Polish
CPU	Intel® Core™ i3 2GHz or higher
Memory	• 2 GB or more (for Windows Vista® and Windows® 7 [32-bit]) • 4 GB or more (for Windows® 7 [64-bit], Windows® 8.1, and Windows® 10)
HDD	40 GB or more of free space
Display	1,024 × 768 or higher resolution
Interface	• Ethernet port (for getting access to the Internet using LAN) or Modem (for getting access to the Internet using Public Telephone Line) • USB ports (Maximum of 6 ports) (Required only for the Server PC that works as VRF Controller) - Maximum of 2 USB ports are required for WibuKey connection - Maximum of 4 USB ports are required for Echelon® U10 USB Network Interface * Maximum number of required USB port depends on the applicable system configuration.
Graphic accelerator	Requires the internal graphics accelerator be compatible with Microsoft® DirectX® 9.0
Software	Adobe® Reader® 9.0 or later
Optical drive	DVD-ROM Drive

■ AVAILABLE OPTION

Energy Manager	UTY-PEGX *1	Additional support for energy saving function and Electricity Charge Apportionment using electricity meter.

CONTROL SYSTEM

■ SPECIFICATION SUMMARY

Type		Function	UTY-APGX	UTY-PEGX *1 Option	Remark
System specification		Max. System Controller per VRF Network	1	—	
		Max. VRF networks supported	4	—	Site with up to 4 VRF networks may be administered with 1 System Controller
		Max. indoor units / remote controller groups per VRF network	400	—	
		Max. indoor units / remote controller groups per System Controller	1,600	—	4 VRF networks
Site supervision		Multiple sites display	10	—	
		2D/3D graphical layout view	●	—	2D: Site, floor, 3D: Building Quick control from display available.
		List display	●	—	Quick control from display available.
		Tree display	●	—	Quick control from display available.
Operation control	Individual	Start/Stop, Operation mode, Room temperature	●	—	
		Fan speed, Airflow direction	●	—	
		Economy mode	●	—	
		Antifreeze	●	—	
		Remote control prohibition setting	●	—	
		Temperature upper and lower limit setting	●	—	
		Filter sign reset	●	—	
	Schedule	Annual schedule	●	—	Week of year, day of month, day of week setting. Holiday special day settings.
		Low noise mode weekly schedule	●	—	Outdoor unit control only.
	Group management	Number of groups	1,600	—	
		Group in group	3 Levels	—	Lv.1 – 2 – 3.
		Max. overlap definitions	1,600	—	1 unit may belong to up to 1,600 groups.
		Auto generation	●	—	By site, building and floor.
	Others	Memory operation	●	—	Operation pattern memorized and reused.
		Pattern operation	●	—	Reuse operation pattern once used.
Operation status monitoring		Controlled status	●	—	See items controlled by operation.
		Special operation	●	—	Defrost, Oil Recovery.
Error management		Error notification	●	—	
		Audible alarm	●	—	
		Error e-mail notification	●	—	
History management		Error history	1 year	—	
		Operation control & status history	1 year	—	
Energy saving management		Indoor unit rotation	—	●	
		Outdoor unit capacity save	—	●	
		Peak cut control	—	1 month	
		Input power monitor	—	●	
		Electricity meters supported	—	200	Outdoor unit required per connection
		Input power information	—	3 years	
Electricity charge apportionment		Apportionment charge calculation	●	—	
		Apportionment charge bill creation	●	—	
		Tenant (block) setting	1,600	—	
		Common facilities apportionment setting	●	—	
		Rated input power allotment setting	●	—	
		Electricity meters supported	—	200	Same meters used for energy saving.
		Electricity charge apportionment period	2 years	—	
Remote control		Internet, telephone line support	●	—	
		Max. client connection per server	5	—	
		Max. host connection from client	10	—	
		Data encryption	●	—	SSL used.
Others		User control	●	—	Authorization level setting.
		Database import / export	●	—	
		Multiple language display	●	●	English, Chinese, French, German, Spanish, Russian, Polish.
		Floor layout editor	●	—	
		Floor layout import/export	●	—	

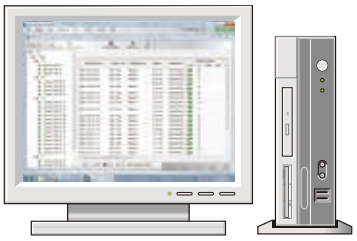
∗The electricity charge apportionment function of VRF system can only be performed from one equipment simultaneously.

CONTROL SYSTEM

2-2. SYSTEM CONTROLLER LITE

2-2-1. MODEL: UTY-ALGXZ1

(Option: UTY-PLGXA2, UTY-PLGXR2, UTY-PLGXE2, UTY-PLGXP2, UTY-PLGXX2)



System Controller Lite is advanced software of central controller for small and medium buildings. It can be supported by additional options, electricity charge apportionment, remote monitoring, and energy saving in order to meet your demands.

- Supports up to 1 VRF network system and Max. controllable 400 indoor units.
- Various high level functions from individual control to yearly schedule management, operation history and error history management.
- Corresponds to 7 different languages. (English, Chinese, French, German, Spanish, Russian, and Polish)
- Connection between VRF network system to personal computer is possible via small U10 USB interface. However, both U10 USB interface and personal computer are locally purchased items.
- The status of units can be monitored and operated for each site, group, or unit. *

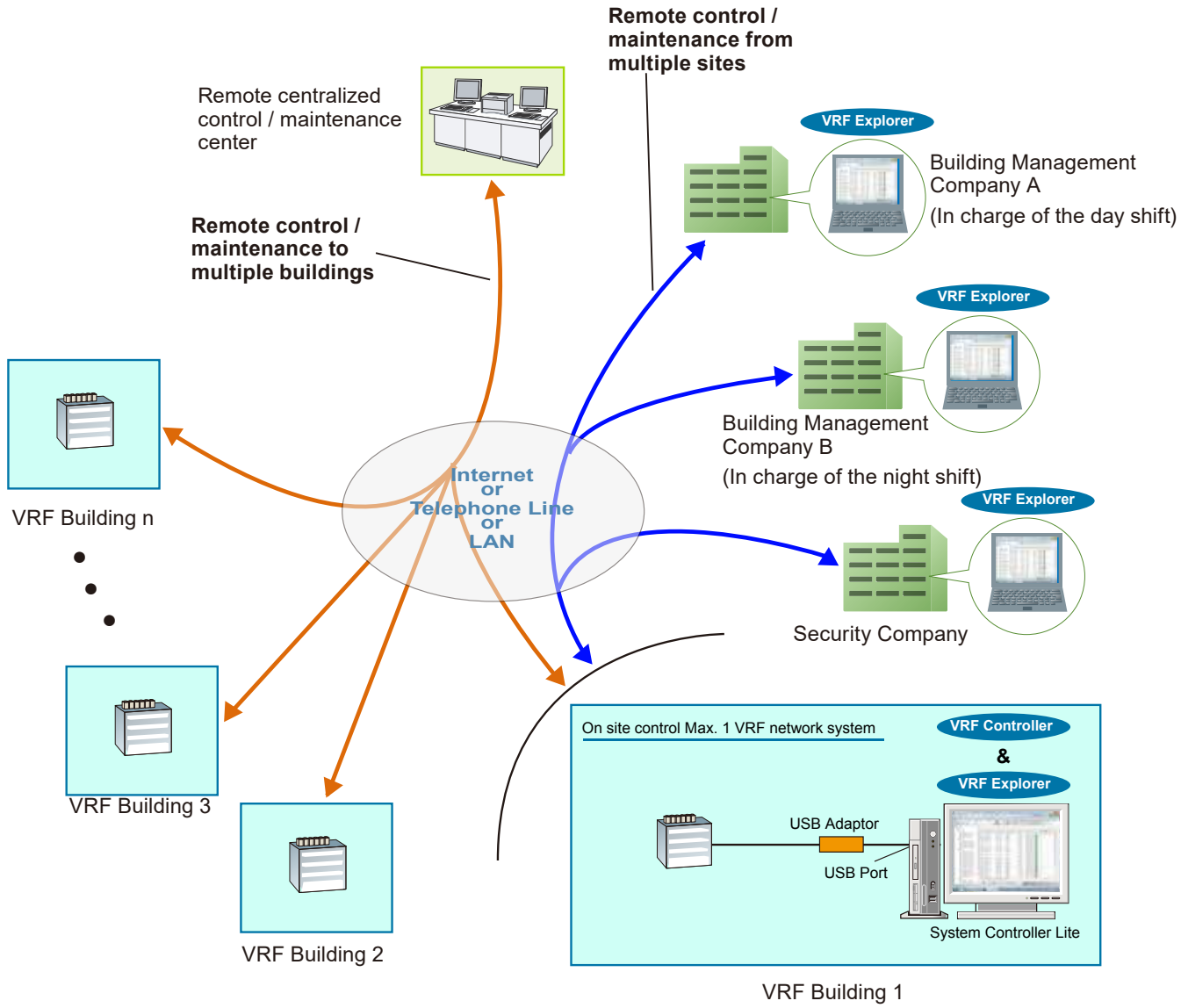
*: 2D floor layout / 3D building display are not available. Use System Controller (UTY-APGXZ1), if you want to use these functions.

CONTROL SYSTEM

■ SYSTEM DIAGRAM

- System controller may be used on site or remotely over various networks for remote central control. *1
- System controller consists of VRF Controller software and VRF Explorer software, both software are working together.
- VRF Controller software runs in the background and communicate with VRF System.
- VRF Explorer software provides user interface and communicate with the VRF Controller.
- VRF Controller and VRF Explorer software may run in a single PC or in different PCs separated by network. *1
- VRF Explorer software does not require WibuKey (software protection key).

*1: UTY-PLGXR2 option is necessary.

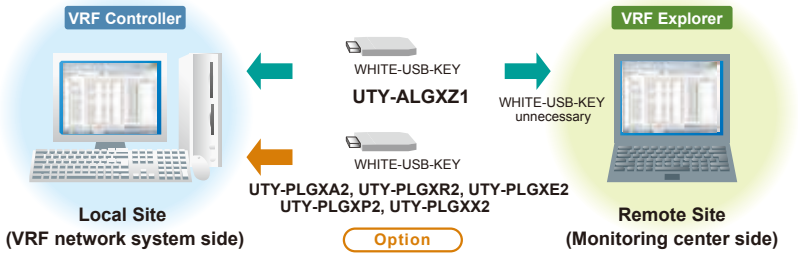


CONTROL SYSTEM

■ PACKING LIST

Name and shape	Quantity	Application
WHITE-USB-KEY (software protection key with software)	1	Software protection key to be connected to an USB port on the PC that the System Controller is installed. System Controller runs only on a PC with this WHITE-USB-KEY. However, this WibuKey is not required for remote VRF Explorer software.

■ SOFTWARE CONFIGURATION



Any number can be installed in remote site personal computers

System Controller Lite UTY-ALGXZ1 can be installed in the local site PCs (VRF Controller) connected to the VRF network system, and multiple remote site PCs (VRF Explorer) can be connected to VRF Controller via Internet or LAN. Just this single product creates the control, management, and monitoring environment for the customer's properties including remote operation.

*The WHITE-USB-KEY is not required for PCs on the remote site side. Some functions, such as equipment registration, and input/output, are invalid on the remote site side.

■ OTHER REQUIRED DEVICES (Locally purchased)

- Personal computer that satisfies the following system requirements
- Echelon® U10 USB Network Interface – TP/FT-10 Channel (Model number: 75010R) (Required for each VRF Network.)

CONTROL SYSTEM

■ PERSONAL COMPUTER SYSTEM REQUIREMENTS

Operating system	• Microsoft® Windows® 7 Home Premium (32-bit or 64-bit) SP1 • Microsoft® Windows® 7 Professional (32-bit or 64-bit) SP1 • Microsoft® Windows® 8.1 (32-bit or 64-bit) • Microsoft® Windows® 8.1 Pro (32-bit or 64-bit) • Microsoft® Windows® 10 Home (32-bit or 64-bit) • Microsoft® Windows® 10 Pro (32-bit or 64-bit) [Supported languages] English, Chinese, French, German, Russian, Spanish, and Polish
CPU	Intel® Core™ i3 2 GHz or higher
Memory	• 2 GB or more (for Windows® 7 [32-bit]) • 4 GB or more (for Windows® 7 [64-bit], Windows® 8.1, and Windows® 10)
HDD	40 GB or more of free space
Display	1,024 × 768 or higher resolution
Interface	• Ethernet port (for getting access to the Internet using LAN) or Modem (for getting access to the Internet using Public Telephone Line) • USB ports (Maximum of 2 ports) (Required only for the Server PC that works as VRF Controller) - Maximum of 1 USB ports are required for White USB Key connection - 1 USB port is required for Echelon® U10 USB Network Interface * The maximum number of required USB port depends on the applicable system configuration.
Graphic accelerator	Microsoft® DirectX® 9.0c compatible
Software	Adobe® Reader® 9.0 or later

CONTROL SYSTEM

■ AVAILABLE OPTION

Electricity charge apportionment option	UTY-PLGXA2	Apportions the power used by indoor and outdoor units, and automatically calculates the electricity charge such as for hotels or muli-tenant buildings. Computation linked with an electric meter is also possible.
Remote access option	UTY-PLGXR2	VRF system can be monitored remotely from multiple PCs. Multiple VRF systems can be controlled or monitored from 1 PC.
Energy saving option	UTY-PLGXE2	A variety of energy saving operations can be set and managed depending on the season, weather, and time period.
Prepaid air conditioning	UTY-PLGXP2	The prepaid management of VRF air conditioner is performed and the collection of charge for air conditioning is supported for building administrator.
External device control	UTY-PLGXX2	By enabling central control of third-party external devices, burden on maintenance and administration of the devices by the building administrator is reduced.

■ SPECIFICATION SUMMARY

Type		Function	UTY-ALGXZ1	UTY-PLGXA2 Option	UTY-PLGXR2 Option	UTY-PLGXE2 Option	UTY-PLGXP2 Option	UTY-PLGXX2 Option	Remark
System specification		Max. System Controller Lite per VRF Network	1	—	—	—	—	—	
		Max. VRF networks supported	1	—	—	—	—	—	
		Max. indoor units / remote controller groups per VRF network	400	—	—	—	—	—	
		Max. indoor units / remote controller groups per System Controller Lite	400	—	—	—	—	—	
Site supervision		Multiple sites display	10	—	—	—	—	—	
		2D/3D graphical layout view	—	—	—	—	—	—	.
		List display	●	—	—	—	—	—	Quick control from display available.
		Tree display	●	—	—	—	—	—	Quick control from display available.
Operation control	Individual	Start/Stop, Operation mode, Room temperature	●	—	—	—	—	—	
		Fan speed, Airflow direction	●	—	—	—	—	—	
		Economy mode	●	—	—	—	—	—	
		Antifreeze	●	—	—	—	—	—	
		Remote control prohibition setting	●	—	—	—	—	—	
		Temperature upper and lower limit setting	●	—	—	—	—	—	
		Filter sign reset	●	—	—	—	—	—	
		Human sensing	●	—	—		—	—	
	Schedule	Annual schedule	●	—	—	—	—	—	Week of year, day of month, day of week setting. Holiday special day settings.
		Low noise mode weekly schedule	●	—	—	—	—	—	Outdoor unit control only.
	Group management	Number of groups	400	—	—	—	—	—	
		Group in group	3 Levels	—	—	—	—	—	Lv.1 – 2 – 3.
		Max. overlap definitions	400	—	—	—	—	—	1 unit may belong to up to 400 groups.
		Auto generation	●	—	—	—	—	—	By site, building and floor.
	Others	Memory operation	●	—	—	—	—	—	Operation pattern memorized and reused.
		Pattern operation	●	—	—	—	—	—	Reuse operation pattern once used.
Operation status monitoring		Controlled status	●	—	—	—	—	—	See items controlled by operation.
		Special operation	●	—	—	—	—	—	Defrost, Oil Recovery.
Room Temp.		Room temperature	●	—	—		—	—	*1
Error management		Error notification	●	—	—	—	—	—	
		Audible alarm	●	—	—	—	—	—	
		Error e-mail notification	●	—	—	—	—	—	
History management		Error history	1 year	—	—	—	—	—	
		Operation control & status history	1 year	—	—	—	—	—	
Energy saving management		Indoor unit rotation	—	—	—	●	—	—	
		Outdoor unit capacity save	—	—	—	●	—	—	
		Peak cut control	—	—	—	1 month	—	—	
		Power consumption monitor	—	—	—	●	—	—	
		Electricity meters supported	—	—	—	200	—	—	Outdoor unit required per connection
		Power consumption information	—	—	—	3 years	—	—	
Electricity charge apportionment		Apportionment charge calculation	—	●	—	—	—	—	
		Apportionment charge bill creation	—	●	—	—	—	—	
		Tenant (block) setting	—	1600	—	—	—	—	
		Common facilities apportionment setting	—	●	—	—	—	—	
		Rated power consumption allotment setting	—	●	—	—	—	—	
		Electricity meters supported	—	200	—	—	—	—	Same meters used for energy saving.
		Electricity charge apportionment period	—	2 years	—	—	—	—	
		Prepaid air conditioning	—	—	—	—	●	—	
		Cooling and Heating information	—	●	—		—	—	
Remote control		Internet, telephone line support	—	—	●	—	—	—	
		Max. client connection per server	—	—	5	—	—	—	
		Max. host connection from client	—	—	10	—	—	—	
		Data encryption	—	—	●	—	—	—	SSL used.

CONTROL SYSTEM

Type	Function	UTY-ALGXZ1	UTY-PLGXA2 Option	UTY-PLGXR2 Option	UTY-PLGXE2 Option	UTY-PLGXP2 Option	UTY-PLGXX2 Option	Remark
Others	External device control function	—	—	—	—	—	●	
	WEB Operation	●	—	—	—	—	—	
	User control	●	—	—	—	—	—	Authorization level setting.
	Database import / export	●	—	—	—	—	—	
	Periodical backup	●	—	—	—	—	—	
	The refrigerant systems of non-operation status function	●	—	—	—	—	—	
	Auto Start Setting	●	—	—	—	—	—	
	Multiple language display	●	●	●	●	—	—	English, Simplified Chinese, French, German, Spanish, Russian, Polish.
	Floor layout editor	●	—	—	—	—	—	
	Floor layout import/export	●	—	—	—	—	—	

NOTE: In S and V series, there are some functions that cannot be used, such as energy saving function and electricity meter use.

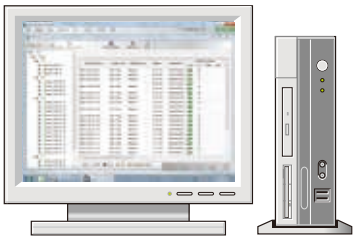
- The electricity charge apportionment function of VRF system can only be performed from one equipment simultaneously.

*1: To display the room temperature on the monitor, connect the wired remote controller to the indoor unit, and perform the function setting for detecting the temperature using the mounted sensor.

CONTROL SYSTEM

2-2-2. MODEL: UTY-ALGX

(Option: UTY-PLGXA1, UTY-PLGXR1, UTY-PLGXE1)



System Controller Lite is advanced software of central controller for small and medium buildings. It can be supported by additional options, electricity charge apportionment, remote monitoring, and energy saving in order to meet your demands.

- Supports up to 1 VRF network system and Max. controllable 400 indoor units.
- Various high level functions from individual control to yearly schedule management, operation history and error history management.
- Corresponds to 7 different language namely, English, Chinese, French, German, Spanish, Russian, and Polish.
- Connection between VRF network system to personal computer is possible via small U10 USB interface. However, both U10 USB interface & personal computer are locally purchased items.
- The status of units can be monitored and operated for each site, group, or unit. *

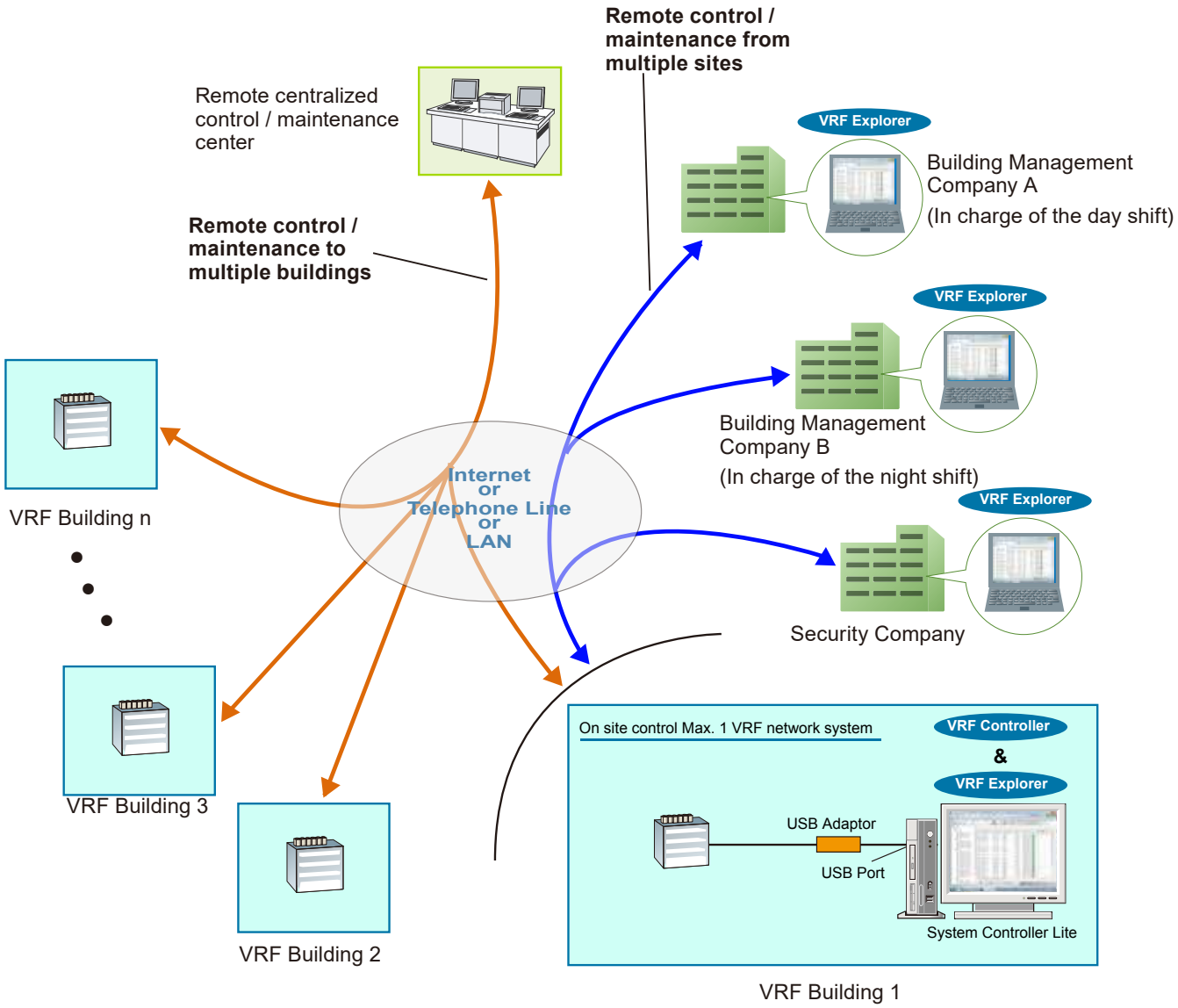
*: 2D floor layout / 3D building display are not available. Use System Controller (UTY-APGX), If you want to use these function.

CONTROL SYSTEM

■ SYSTEM DIAGRAM

- System controller may be used on site or remotely over various networks for remote central control. *1
- System controller consists of VRF Controller software and VRF Explorer software, both software are working together.
- VRF Controller software runs in the background and communicate with VRF System.
- VRF Explorer software provides user interface and communicate with the VRF Controller.
- VRF Controller and VRF Explorer software may run in a single PC or in different PCs separated by network. *1
- VRF Explorer software does not require Wibu key.

*1: UTY-PLGXR1 option is necessary.



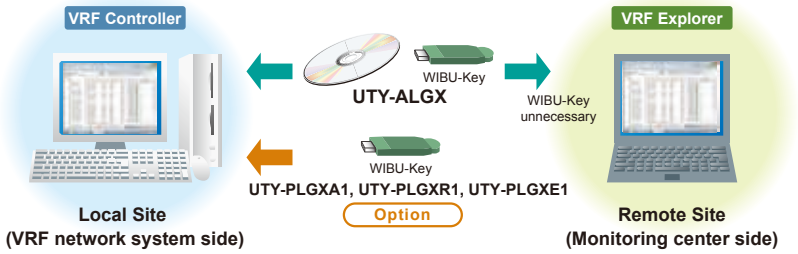
CONTROL SYSTEM

■ PACKING LIST

Name and shape	Quantity	Application
DVD-ROM *1	1	Includes the software and manuals for System Controller Lite. Both VRF Controller and VRF Explorer software are included.
Wibu Key (Software protection key)	1	Software protection key to be inserted in a USB slot running System Controller. System Controller may only run on a PC with Wibu Key. However, Wibu key is not required for remote VRF Explorer software.

*1: DVD-ROM is not attached to OPTION (UTY-PLGXA1, UTY-PLGXR1, UTY-PLGXE1).

■ SOFTWARE CONFIGURATION



Any number can be installed in remote site personal computers.

System Controller Lite UTY-ALGX can be installed in the local site PCs (VRF Controller) connected to the VRF network system and the multiple remote site PCs (VRF Explorer) connected to those computers via the Internet or LAN. Just this single product creates the control, management, and monitoring environment for the customer's properties including remote operation.

*The WIBU-Key is not required for PCs on the remote site side. Some functions, such as equipment registration, and input/output, are not possible on the remote site side.

Optional software to strengthen the various function

- Electricity charge apportionment function can be added by installing optional UTY-PLGXA1.
- Remote centralized control function can be added by installing optional UTY-PLGXR1.
- Energy saving management function can be added by installing optional UTY-PLGXE1.

■ OTHER REQUIRED DEVICES (LOCALLY PURCHASED)

- Personal computer that satisfies the following system requirements
- Echelon® U10 USB Network Interface – TP/FT-10 Channel (Model number: 75010R) (Required for each VRF Network.)

CONTROL SYSTEM

■ PERSONAL COMPUTER SYSTEM REQUIREMENTS

Operating system	• Microsoft® Windows® 7 Home Premium (32-bit or 64-bit) SP1 • Microsoft® Windows® 7 Professional (32-bit or 64-bit) SP1 • Microsoft® Windows® 8.1 (32-bit or 64-bit) • Microsoft® Windows® 8.1 Pro (32-bit or 64-bit) • Microsoft® Windows® 10 Home (32-bit or 64-bit) • Microsoft® Windows® 10 Pro (32-bit or 64-bit) [Supported languages] English, Chinese, French, German, Russian, Spanish, and Polish
CPU	Intel® Core™ i3 2-GHz or higher
Memory	• 2 GB or more (for Windows Vista® and Windows® 7 [32-bit]) • 4 GB or more (for Windows® 7 [64-bit], Windows® 8.1, and Windows® 10)
HDD	40 GB or more of free space
Display	1,024 × 768 or higher resolution
Interface	• Ethernet port (for getting access to the Internet using LAN) or Modem (for getting access to the Internet using Public Telephone Line) • USB ports (Maximum of 5 ports) (Required only for the Server PC that works as VRF Controller) - Maximum of 4 USB ports are required for WibuKey connection - 1 USB port is required for Echelon® U10 USB Network Interface * The maximum number of required USB port depends on the applicable system configuration
Graphic accelerator	Microsoft® DirectX® 9.0c compatible
Software	Adobe® Reader® 9.0 or later
Optical drive	DVD-ROM drive

■ AVAILABLE OPTION

Electricity Charge Apportionment option	UTY-PLGXA1	Apportions the power used by indoor and outdoor units and automatically calculates the electricity charge such as for hotels, tenant buildings, etc., computation linked with an electric meter is also possible.
Remote Access option	UTY-PLGXR1	VRF system can be monitored remotely from multiple PCs. Multiple VRF systems can be controlled or monitored from 1 PC.
Energy Saving option	UTY-PLGXE1	A variety of energy saving operations can be set and managed depending on the season, weather, and time period.

CONTROL SYSTEM

■ SPECIFICATION SUMMARY

Type		Function	UTY-ALGX	UTY-PLGXA1 Option	UTY-PLGXR1 Option	UTY-PLGXE1 Option	Remark
System specification		Max. System Controller Lite per VRF Network	1	—	—	—	
		Max. VRF networks supported	1	—	—	—	
		Max. indoor units / remote controller groups per VRF network	400	—	—	—	
		Max. indoor units / remote controller groups per System Controller Lite	400	—	—	—	
Site supervision		Multiple sites display	10	—	—	—	
		2D/3D graphical layout view	—	—	—	—	.
		List display	●	—	—	—	Quick control from display available.
		Tree display	●	—	—	—	Quick control from display available.
Operation control	Individual	Start/Stop, Operation mode, Room temperature	●	—	—	—	
		Fan speed, Airflow direction	●	—	—	—	
		Economy mode	●	—	—	—	
		Antifreeze	●	—	—	—	
		Remote control prohibition setting	●	—	—	—	
		Temperature upper and lower limit setting	●	—	—	—	
		Filter sign reset	●	—	—	—	
	Schedule	Annual schedule	●	—	—	—	Week of year, day of month, day of week setting. Holiday special day settings.
		Low noise mode weekly schedule	●	—	—	—	Outdoor unit control only.
	Group management	Number of groups	400	—	—	—	
		Group in group	3 Levels	—	—	—	Lv.1 – 2 – 3.
		Max. overlap definitions	400	—	—	—	1 unit may belong to up to 400 groups.
		Auto generation	●	—	—	—	By site, building and floor.
	Others	Memory operation	●	—	—	—	Operation pattern memorized and reused.
		Pattern operation	●	—	—	—	Reuse operation pattern once used.
Operation status monitoring		Controlled status	●	—	—	—	See items controlled by operation.
		Special operation	●	—	—	—	Defrost, Oil Recovery.
Error management		Error notification	●	—	—	—	
		Audible alarm	●	—	—	—	
		Error e-mail notification	●	—	—	—	
History management		Error history	1 year	—	—	—	
		Operation control & status history	1 year	—	—	—	
Energy saving management		Indoor unit rotation	—	—	—	●	
		Outdoor unit capacity save	—	—	—	●	
		Peak cut control	—	—	—	1 month	
		Input power monitor	—	—	—	●	
		Electricity meters supported	—	—	—	200	Outdoor unit required per connection
		Input power information	—	—	—	3 years	
Electricity charge apportionment		Apportionment charge calculation	—	●	—	—	
		Apportionment charge bill creation	—	●	—	—	
		Tenant (block) setting	—	1,600	—	—	
		Common facilities apportionment setting	—	●	—	—	
		Rated Input power allotment setting	—	●	—	—	
		Electricity meters supported	—	200	—	—	Same meters used for energy saving.
		Electricity charge apportionment period	—	2 years	—	—	
Remote control		Internet, telephone line support	—	—	●	—	
		Max. client connection per server	—	—	5	—	
		Max. host connection from client	—	—	10	—	
		Data encryption	—	—	●	—	SSL used.
Others		User control	●	—	—	—	Authorization level setting.
		Database import / export	●	—	—	—	
		Multiple language display	●	●	●	●	English, Chinese, French, German, Spanish, Russian, Polish.
		Floor layout editor	●	—	—	—	
		Floor layout import/export	●	—	—	—	

∗The electricity charge apportionment function of VRF system can only be performed from one equipment simultaneously.

CONTROL SYSTEM

2-3. TOUCH PANEL CONTROLLER

■ MODEL: UTY-DTGYZ1 (Option: UTY-PTGXA)

■ MODEL: UTY-DTGY

- Large 7.5-inch TFT color display
- LCD touch panel operation
- Stylish shape and design to suit all application
- No additional component is required for installation
- Up to 400 indoor units can be controlled
- Selectable 2 display types (Icon / List) in monitoring mode
- Programmable in 7 different languages: English, Chinese, French, German, Spanish, Russian, and Polish

CONTROL SYSTEM

■ FUNCTIONS

● MODEL: UTY-DTGYZ1

Item		Main unit	PC / Tablet	Description
Installation	Indoor unit registration	●	—	Indoor unit registration. Max. 400 units. (Set data can be written to and read from USB flash drive)
	Functions setting	●	—	Temperature set point limitation, external input, central operation on/off setting.
Monitor	Display switching	●	●	Icon display, list display
	Display units	●	●	ALL, group, individual (remote control group)
	Monitor contents (icon display)	●	●	Group name, operation, operation mode, set temperature, time, errors, timer setting, filter sign, room temp., human sensor, set temp. range
	Monitor contents (list display)	●	●	Group name, operation, operation mode, set temperature, airflow, air direction, special operation, anti-freeze, time, errors, timer setting, filter sign
	Error list	●	●	Group name, remote control group name, address, error code
	Special state	●	●	Display during special operation
Control	Control units	●	●	ALL, group, individual (remote control group)
	Control contents	●	●	Operation, operation mode, set temperature, airflow, RC Prohibition, filter sign reset
	Detailed control contents	●	●	Air direction, energy saving, anti-freeze, test run
	Individual setting reset of airflow direction	—	●	Sets the position of indoor unit's airflow direction louver individually.
	Human sensor	—	●	Sets the human sensor on the indoor unit.
	Setting temperature limitation of room	●	●	Adjusts the upper and lower limits of temperature for the indoor unit.
Setting	Language setting	●	●	Design considering multi-language correspondence. *1
	Date and time	●	●	Time display switching, year/month/day display switching, system clock setting, summer time, internet time adjustment setting
	Time zone	●	●	Set the time zone of the area where this unit is used
	Panel cleaning and correction	●	—	Select display area for panel cleaning. User can select black screen on display.
	Group	●	●	Stages: Max. 3 stages Settable up to 400 groups. (Set data can be written to and read from USB flash drive)
	Background light and beep sound	●	—	Backlighting off time and brightness setting, BEEP sound operation setting
	Password	●	—	Management level: 3 kinds
	Schedule timer	●	●	Max. 30 items settable
	Temperature range	●	—	Celsius/Fahrenheit switching, cooling, heating, and AUTO each settable.
	Network	●	●	function of Email notification for malfunction, or electricity charge apportionment option is used via LAN
	Low noise operation	●	●	"Low noise operation" is set to all the outdoor units registered by this controller.
	Electricity charge apportionment *2	●	●	Start/stop of ECA, importing/exporting of ECA setting, and exporting ECA data.
	Remote language additional registration	—	●	Additional language can be integrated on remote device by creating language database. Additional language is displayed on only the remote device and touch panel controller cannot be added other language.
	Auto OFF timer	—	●	Function to stop the operation automatically when a preset time lapses after turning on the operation.
	Set temperature auto return	—	●	Function to restore the temperature to the original set temperature when a preset time lapses after changing the set temperature.
	Display item setting	—	●	Sets the items to be displayed on the monitor.
	Failure notification Email	—	●	Failure notification Email: Sends a notification Email to the preset Email address in the event of failure.
	Remote connection setting	—	●	Create users: Max. 15 users, type, permissions, unit setting, automatic logout time
Maintenance	Error history	●	●	Recording of Max. 10 errors each for touch panel controller and each unit (indoor unit, outdoor unit)
	Status history	●	●	Recording of Max. 100 operations each for each indoor unit. Writable to USB flash drive.
	Operation history	●	●	Recording of Max. 10000 operations. Writable to USB flash drive.
	Version display	●	●	Version display, TPC MAC address, software version, writing the TPC information

CONTROL SYSTEM

Item		Main unit	PC / Tablet	Description
Others	External input/output	●	—	Input: Batch operation/stop, emergency stop, electricity meter Output: Operation monitoring, error

- When Start/Stop, operation mode setting, room temp. setting, fan speed setting, airflow direction setting, swing setting, economy mode, and anti freeze setting are changed frequently by using the central controller like System Controller, Touch Panel Controller, etc. or from Building Management System (BMS) via BACnet® Gateway or via Network Convertor, the number of operations for each indoor unit must not exceed 7,500 times/year.

  If the number of setting change exceeds the above specified number, the rewriting count limit of the non-volatile memory (memory built into the air conditioner and used for recording settings) will be exceeded, and may cause breakdown.

*1 : Product specifications are subject to change without notice.

*2 : Option

CONTROL SYSTEM

● MODEL: UTY-DTGY

No.	Item		Description
1	Installation	Language setting	Design considering multi-language correspondence. *1
		Indoor unit registration	Indoor unit registration. Max. 400 units. (Set data can be written to and read from USB flash drive)
		Functions setting	Temperature set point limitation, external input, central operation on/off setting.
2	Monitor	Display switching	Icon display, list display
		Display units	ALL, group, individual (remote control group)
		Monitor contents (icon display)	Group name, operation, operation mode, set temperature, time, errors, timer setting, filter sign
		Monitor contents (list display)	Group name, operation, operation mode, set temperature, airflow, air direction, special operation, anti-freeze, time, errors, timer setting, filter sign
		Error list	Group name, remote control group name, address, error code
		Special state	Display during special operation
3	Control	Control units	ALL, group, individual (remote control group)
		Control contents	Operation, operation mode, set temperature, airflow, RC Prohibition, filter sign reset
		Detailed control contents	Air direction, energy saving, anti-freeze, test run
4	Setting	Date and time	Time display switching, year/month/day display switching, system clock setting, summer time
		Panel cleaning and correction	Select display area for panel cleaning. User can select black screen on display.
		Group	Stages: Max. 3 stages Settable up to 400 groups. (Set data can be written to and read from USB flash drive)
		Background light and beep sound	Backlighting off time and brightness setting, BEEP sound operation setting
		Password	Management level: 3 kinds
		Schedule timer	Max. 30 items settable
		Temperature range	Celsius/Fahrenheit switching, cooling, heating, and AUTO each settable.
		Network	function of Email notification for malfunction, or electricity charge apportionment option is used via LAN
		Low noise operation	"Low noise operation" is set to all the outdoor units registered by this controller.
		Time zone	Set the time zone of the area where this unit is used
		Electricity charge apportionment	Start/stop of ECA, importing/exporting of ECA setting, and exporting ECA data.
5	Remote connection	User setting (Admin:5, User:100)	Register the user or administrator who is permitted to use remote connection operation.
		Automatic logout	Can be set Automatic logout.
		Permission	Can be select the functions.
		Unit setting	Can be select the units.
		Mail setting	When an error is generated at the touch panel controller or a registered outdoor unit or indoor unit, an Email can be sent to a pre-registered address.
6	Maintenance	Error history	Recording of Max. 10 errors each for touch panel controller and each unit (indoor unit, outdoor unit)
		Status history	Recording of Max. 100 operations each for each indoor unit. Writable to USB flash drive.
		Operation history	Recording of Max. 100 operations. Writable to USB flash drive.
		TPC information	Version display, TPC MAC Address, Software version, Writing the TPC information
7	Others	External input/output	Input: Batch operation/stop, emergency stop, electricity meter Output: Operation monitoring, error

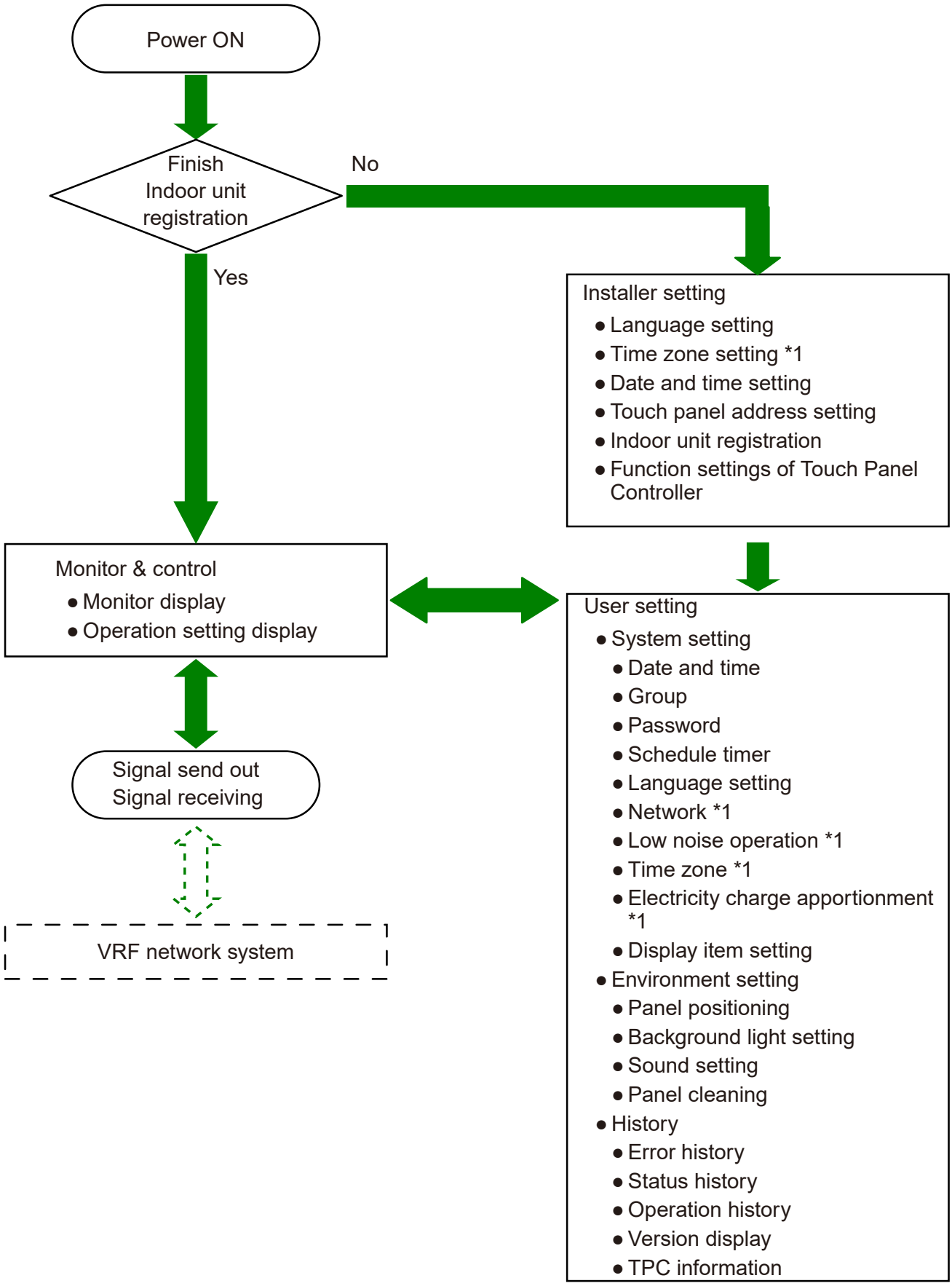
- When Start/Stop, operation mode setting, room temp. setting, fan speed setting, airflow direction setting, swing setting, economy mode, and anti freeze setting are changed frequently by using the central controller like System Controller, Touch Panel Controller, etc. or from Building Management System (BMS) via BACnet® Gateway or via Network Convertor, the number of operations for each indoor unit must not exceed 7,500 times/year.

  If the number of setting change exceeds the above specified number, the rewriting count limit of the non-volatile memory (memory built into the air conditioner and used for recording settings) will be exceeded, and may cause breakdown.

*1 : Product specifications are subject to change without notice.

CONTROL SYSTEM

■ STATE TRANSITION DIAGRAM



*1: Only for UTY-DTGYZ1

CONTROL SYSTEM

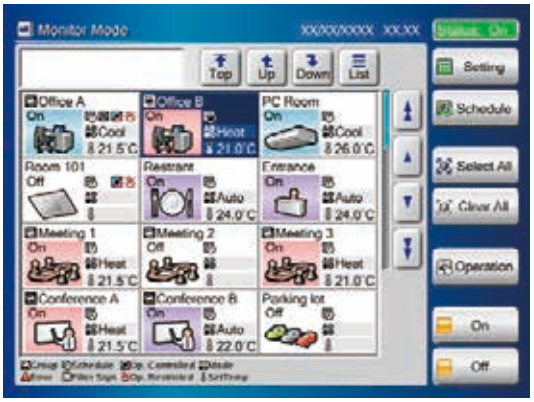
■ MAIN FUNCTIONS AND SCREEN EXAMPLES

● Monitor display example

An easy-to-use display mode can be selected.

Easy-to-understand GUI of adopted icon.

Icon display



List display example

● Operation setting example

Large button is designed for easy to access.

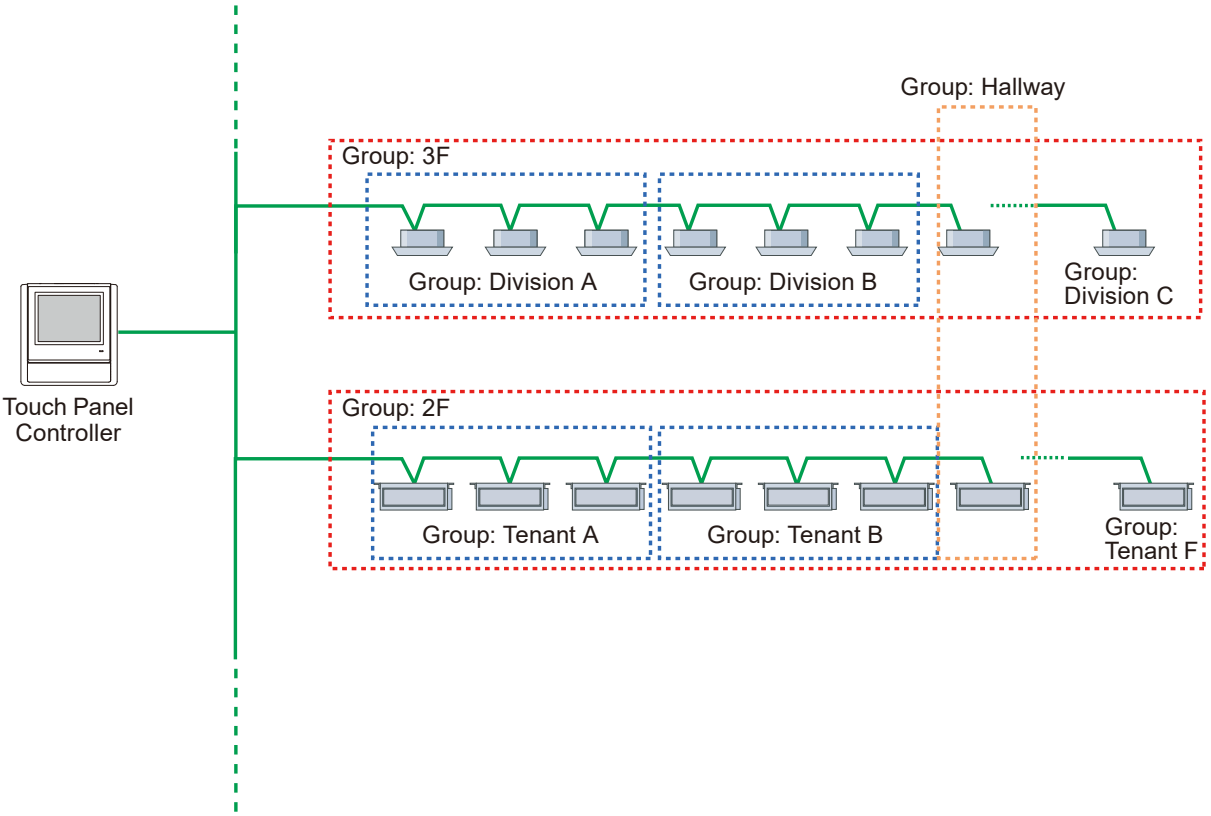
Operation setting display

Optional setting display

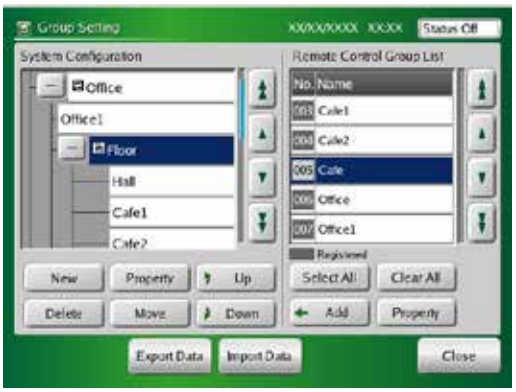
CONTROL SYSTEM

● Group setting

Groups can be arbitrarily set in easy to manage units as shown in the figure.
Control and monitoring are performed in these group units.



Group setting screen



CONTROL SYSTEM

● System schedule timer

Annual schedule can be set of a maximum 30 items.

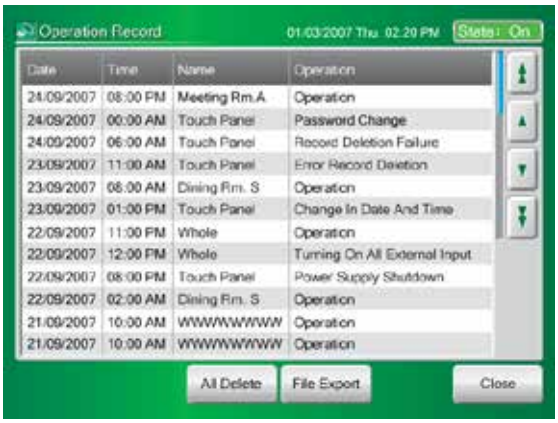
Schedule setting screen

● History recording and display

Error, status and operation histories can be recorded. Each recording can be also written to USB memory.

- Error history: Max. 10 items each recorded for touch panel controller and each unit (indoor unit, outdoor unit)
- Status history: Max. 100 operations each recorded for indoor unit of each room
- Operation history: Operation of max. 100 operations recorded

Optional history screen



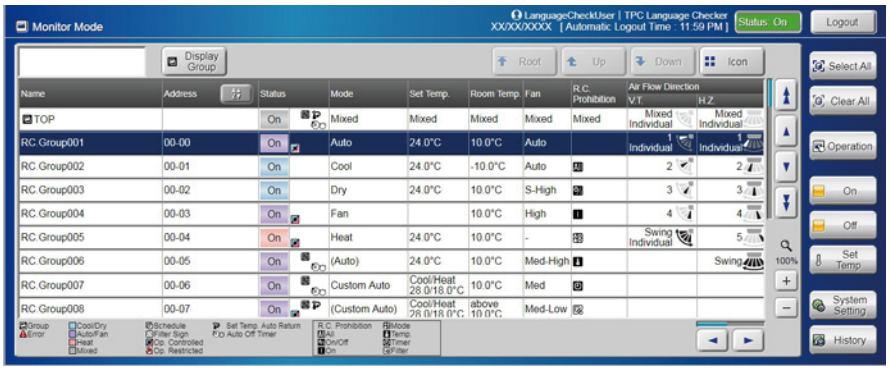
CONTROL SYSTEM

■ SCREEN EXAMPLES (For Remote monitoring)

● Main screens of Monitor Mode example

Icon display

List display



● Main screens of Control example

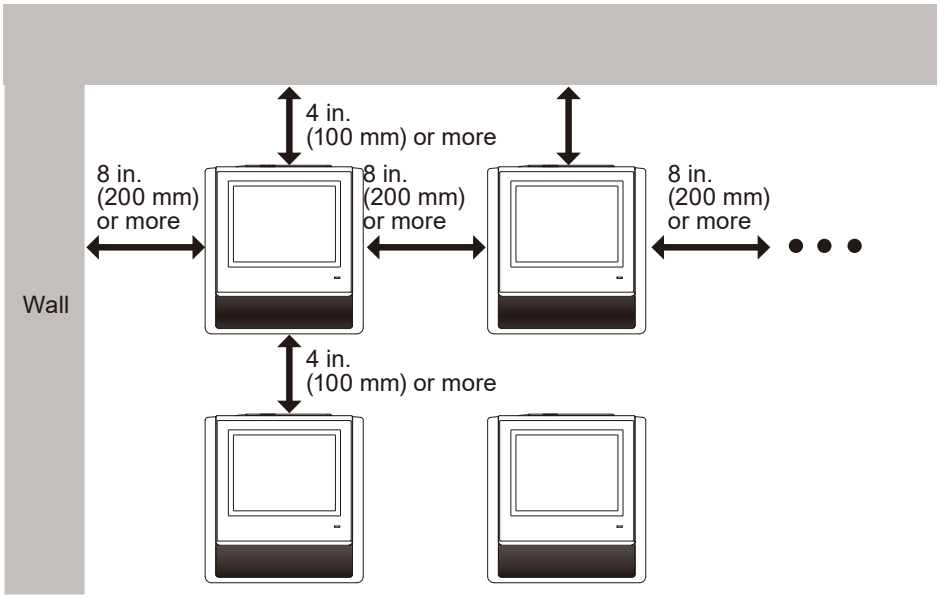
Operation setting display

CONTROL SYSTEM

■ INSTALLATION

● Installation space

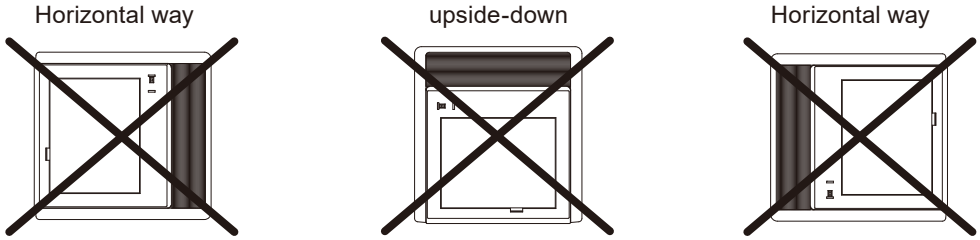
When installing multiple Touch Panel Controllers, the following clearances must be maintained.



NOTE: The switchbox that Touch Panel Controller is to be mounted to should be installed horizontally in advance.

● Caution

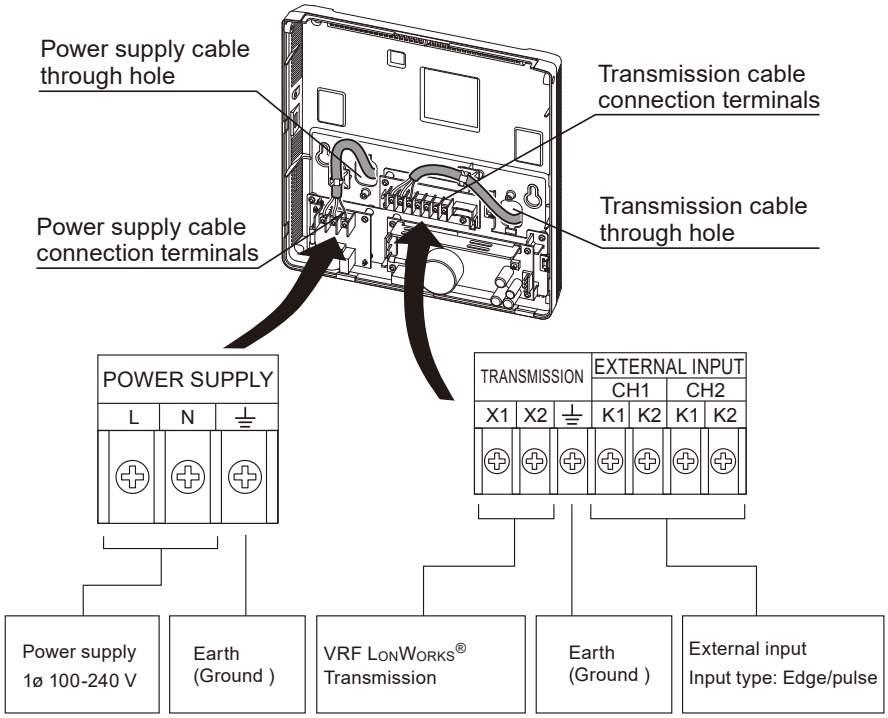
Follow installation way is prohibited.



CONTROL SYSTEM

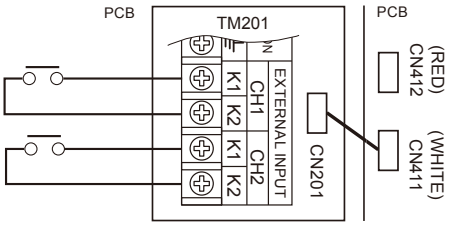
● Terminal names

Names of connection terminals inside rear cover.

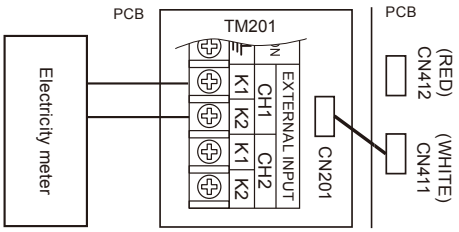


● External input terminals

Case 1: Batch start / stop and Emergency stop commands.



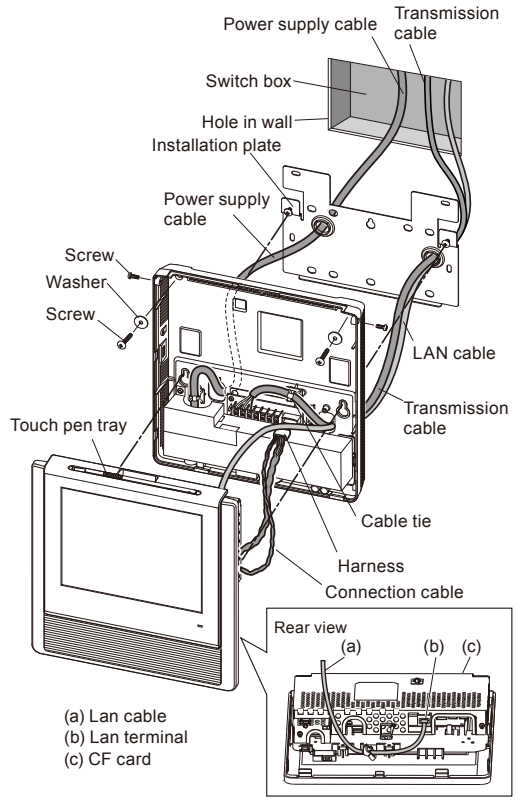
Case 2: The electricity meter is connected. (Only for UTY-DTGYZ1)



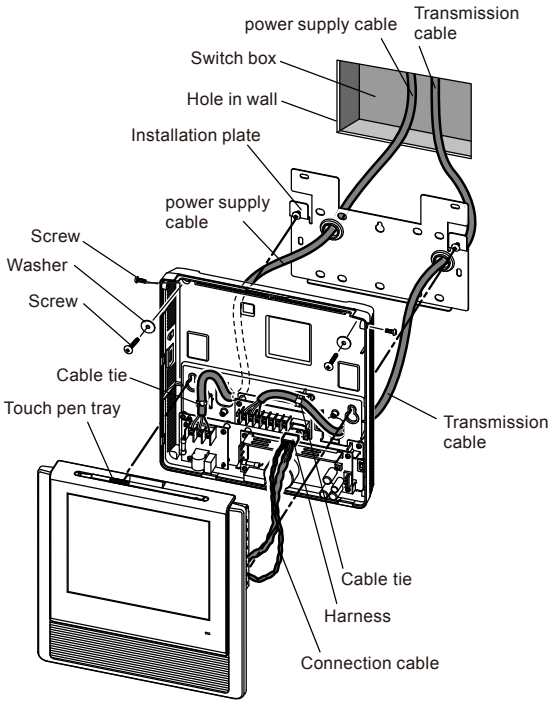
CONTROL SYSTEM

● Installation method

Refer to an installation manual for the details.



Case of UTY-DTGYZ1

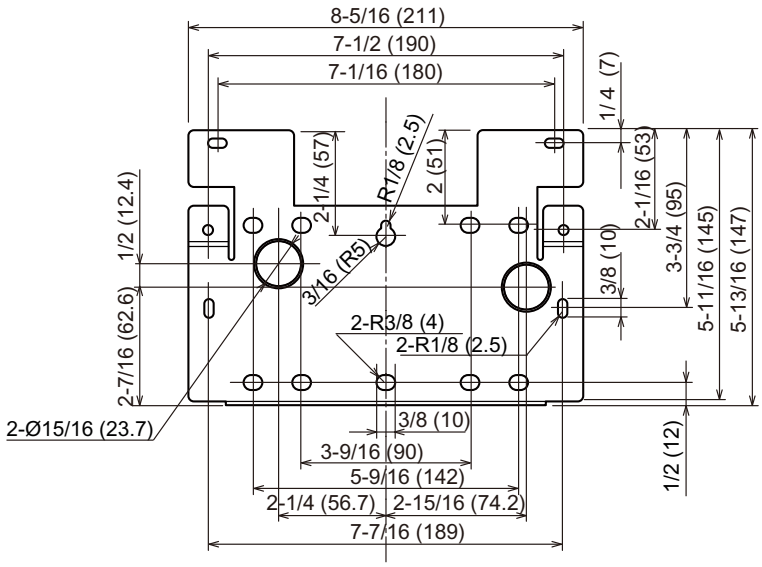


Case of UTY-DTGY

CAUTION: In advance install a switchbox to the wall where the touch panel controller is to be installed.

● The diagram of the mounting plate screw hole positions

Unit : in. (mm)

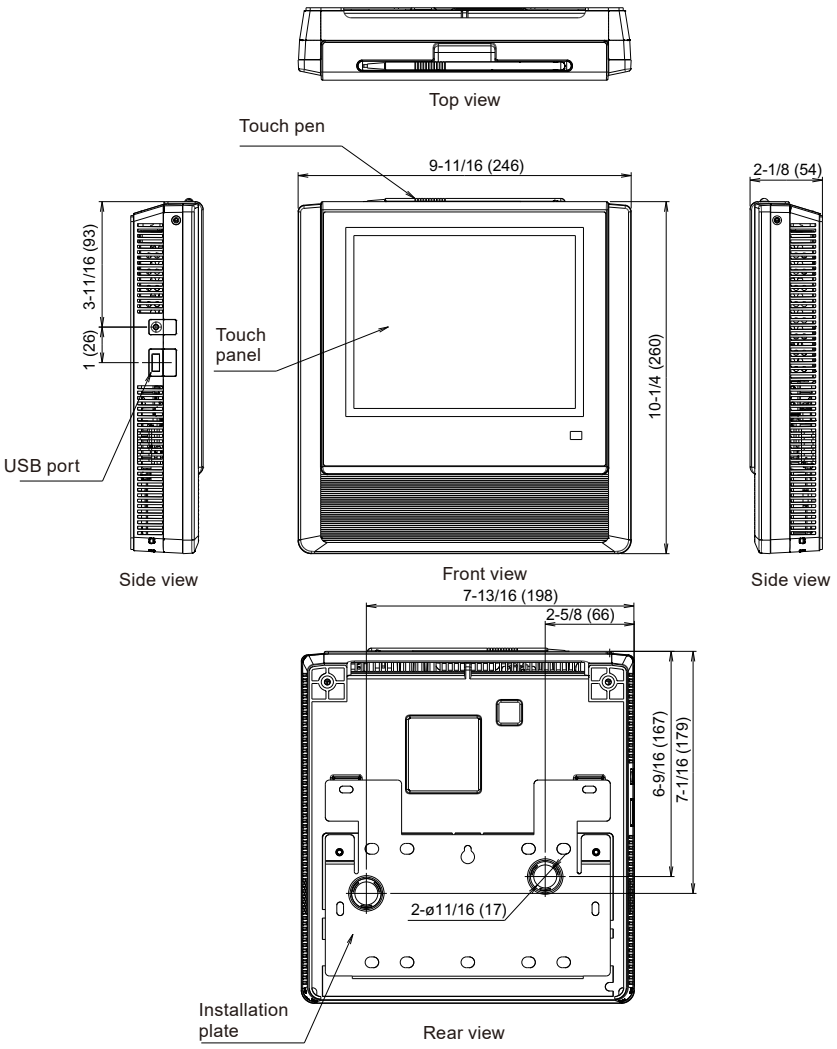


CAUTION: Refer to the mounting screw hole positions of the switchbox that is to be installed in advance and check the compatibility.

CONTROL SYSTEM

■ DIMENSIONS

Unit : in.(mm)



■ PACKING LIST

Name and shape	Quantity	Application
Installation plate	1	For Touch Panel Controller installation (It is attached to the back of the Touch Panel Controller)
Screw	8	Screw for Touch Panel Controller installation (M4 × 20 mm)
Washer	8	Washer for Touch Panel Controller installation
Touch pen	1	Pen for Touch Panel Controller operation
Cable Tie	4	Prevents dropping off of the cable
CD-R	1	Include the operating manual and file making sheet of this controller
Installation manual	1	
Operation manual	1	

CONTROL SYSTEM

■ WIRING SPECIFICATIONS

Use	Size		Wire type	Remarks
Power supply cable	Maximum	16 AWG (1.25 mm^2)	245 IEC 57 or equivalent	1 ø AC100 - 240 V 50/60 Hz, 2 Wire + ground (Always ground the unit)
	Minimum	20 AWG (0.5 mm^2)		
Transmission cable	22AWG (0.33 mm^2)		LEVEL4 (NEMA) non-polar 2 core, twisted pair solid core Shielded	LonWorks® compatible cable
External input / output cable	22AWG (0.33 mm^2)		Polar 2core, Twisted pair	Use cable in accordance with local rules for cable.
Fuse capacity	5 A			

■ SPECIFICATIONS

Power source voltage (V)	1 ø AC 100 - 240
Power source frequency (Hz)	50 / 60
Input Power (W)	22
Display	7.5-inch TFT color LCD display (640 × 480 pixels), with Touch panel
LED indicator	Power LED (Green)
External interface	USB 2.0
	Transmission line
	Ethernet port *1 (Ethernet port is required for remote connection using internet.)
	EXT IN: (Either emergency stop or batch operation/stop, Electricity meter *1) (Either Dry contact or Apply voltage can be selected)
	EXT OUT: (Operation state, error state)
	Reset SW
Usage temperature range: °F (°C)	32 to 104 (0 to 40)
Usage humidity range (%)	0 to 85 (no condensation)
Storage temperature range: °F (°C)	-4 to 158 (-20 to 70)
Storage humidity range (%)	0 to 85 (no condensation)
Dimensions [H × W × D]: in. (mm)	10-1/4 × 9-11/16 × 2-1/8 (260 × 246 × 54)
Weight: lbs. (g)	5 (2,150)

*1: Only for UTY-DTGYZ1

CONTROL SYSTEM

■ PERSONAL COMPUTER SYSTEM REQUIREMENTS

When using for touch panel controller, the following personal computer system requirement is necessary.

CPU	2 GHz or higher
Memory	2 GB or more
HDD	10 GB or more of free space
Display	1,366 × 768 or higher resolution
Interface	• USB port • Ethernet port (Ethernet port is required for remote connection using internet.)
Software	• Microsoft® Office® Excel® (2007, 2010, 2013, 2016) • Microsoft® Excel® (2007, 2010, 2013) • Adobe® Reader® 10.0 or later • Internet Explorer 11

■ AVAILABLE OPTION

Electricity Charge Apportionment option	UTY-PTGXA	Apportions the power used by indoor and outdoor units, and automatically calculates the electricity charge such as for hotels or muli-tenant buildings. Computation linked with an electric meter is also possible.

CONTROL SYSTEM

● Specifications

Number of sites	Max. 20
Number of contracts	Max. 400 (per site)
Number of blocks	Max. 1,600 (per site)
Data storage period	Max. 2 years

● Personal computer system requirements

(ELECTRICITY CHRGRE APPORTIONMENT TOOL)

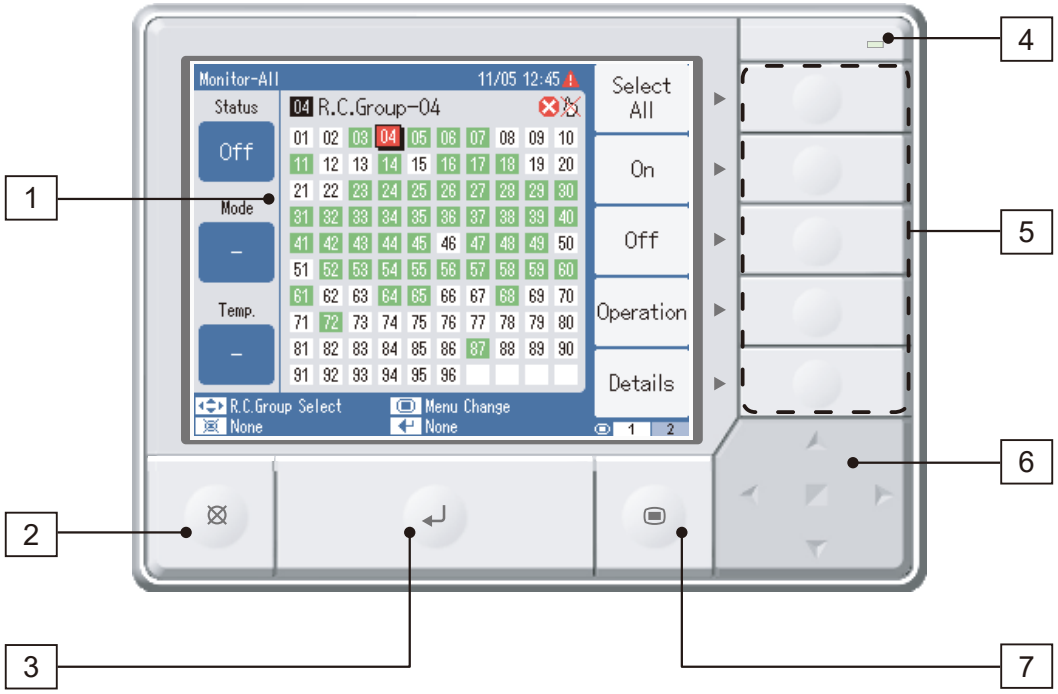
Operating system	• Microsoft® Windows® 7 Home Premium (32-bit or 64-bit) SP1 • Microsoft® Windows® 7 Professional (32-bit or 64-bit) SP1 • Microsoft® Windows® 8 (32-bit or 64-bit) • Microsoft® Windows® 8 Pro (32-bit or 64-bit) • Microsoft® Windows® 8.1 (32-bit or 64-bit) • Microsoft® Windows® 8.1 Pro (32-bit or 64-bit) • Microsoft® Windows® 10 Home (32-bit or 64-bit) • Microsoft® Windows® 10 Pro (32-bit or 64-bit) [Supported languages] English, Chinese, French, German, Russian, Spanish, and Polish
CPU	Intel® Core™ i3 2 GHz or higher
Memory	• 2 GB or more (for Windows® 7 [32-bit]) • 4 GB or more (for Windows® 7 [64-bit], Windows® 8, Windows® 8.1 and Windows® 10)
HDD	40 GB or more of free space
Display	1,024 × 768 or higher resolution
Interface	• USB port • Ethernet Port (to communicate with TPC via LAN)
Software	Adobe® Reader® 9.0 or later

2-4. CENTRAL REMOTE CONTROLLER

■ MODEL: UTY-DCGY

- Individual control and monitor of 100 indoor units.
- 5 inch TFT color screen.
- User friendly view and easy operation.
- External input / output contact.
- Detachable power supply unit.
- Programmable in 7 different languages (English, Chinese, French, German, Spanish, Russian, and Polish)

■ FUNCTIONS



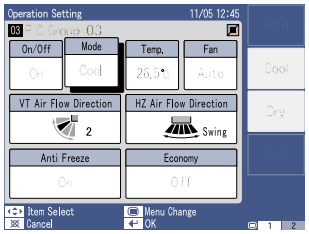
1	LCD display	4	LED lamp
2	[CANCEL] button	5	Function buttons
3	[OK] button	6	[Arrow] button
		7	[MENU] button

CONTROL SYSTEM

■ MAIN FUNCTIONS AND SCREEN EXAMPLES

● Individual control

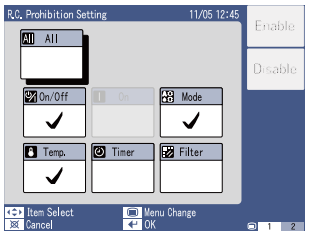
(On / Off, Mode, Set Temp, Fan Speed, Airflow Direction, Anti Freeze, Economy)



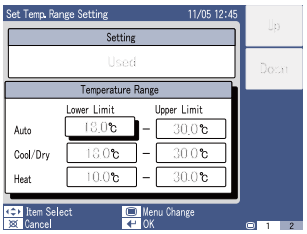
● Remote controller prohibition

(All, On / Off, Mode, Temp, Timer, Filter):

R.C prohibition setting prohibits individual remote control operation from this controller

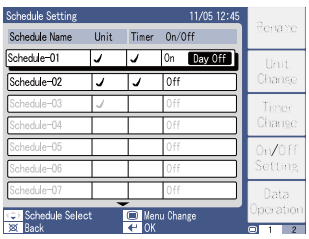


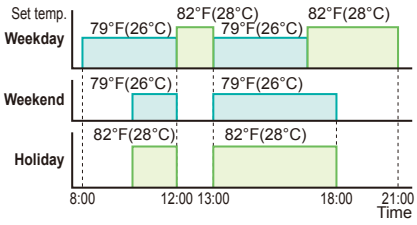
● Room temperature set point upper and lower limitation



● Weekly timer

Weekly timer can be set for custom combinations.



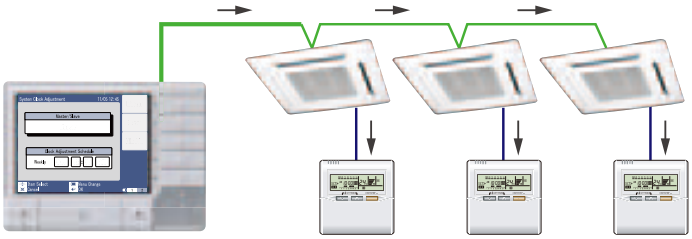


CONTROL SYSTEM

CONTROL SYSTEM

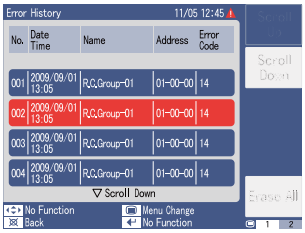
● Automatic clock adjustment

The time setting can be adjusted for all indoor units in one batch function.



● Error history

- Last 200 errors are stored in memory.
- Error history can be analyzed to determine proper maintenance schedule.

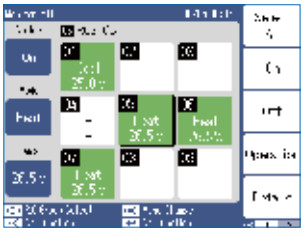


● Main screen display auto switching

Main screen adjusts based on the number of connected indoor units to best display the system status.

	1	2	3	4	5
Number of connected indoor units	1 to 9 units	10 to 20 units	21 to 40 units	41 to 80 units	81 to 100 units
Display pattern	9 units display	20 units display	40 units display	80 units display	100 units display

● 9 / 20 units display pattern

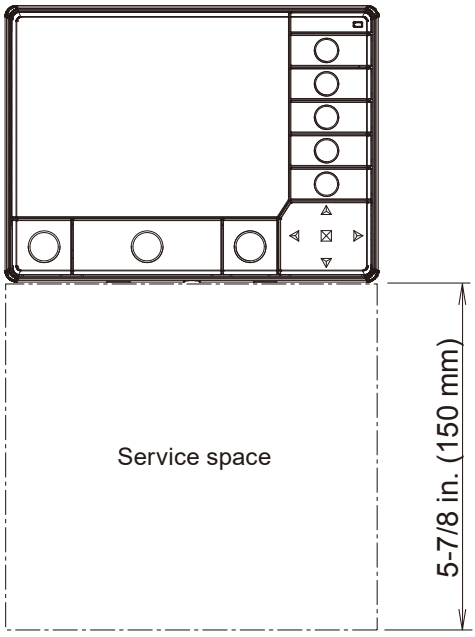


● 40 / 80 / 100 units display pattern

■ INSTALLATION

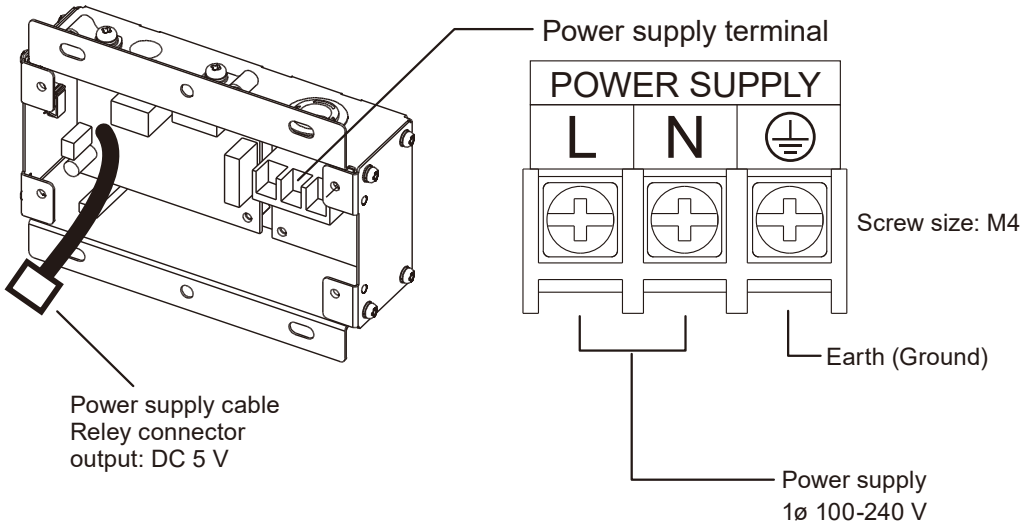
● Installation space

When installing controller, provide a service space as shown.

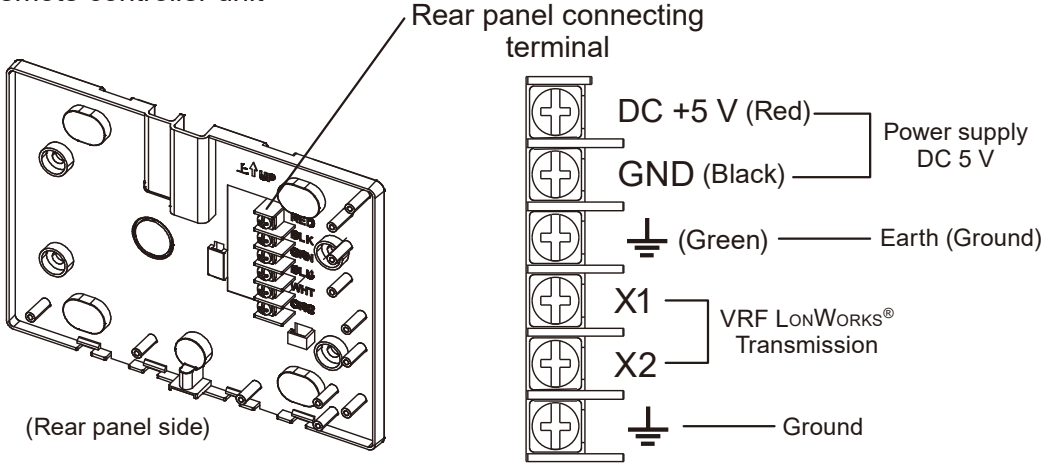


● Terminal names

● Power supply unit



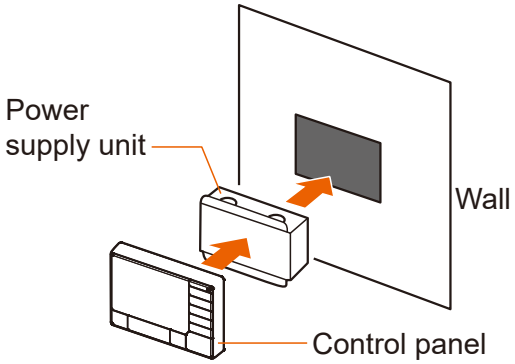
● Remote controller unit



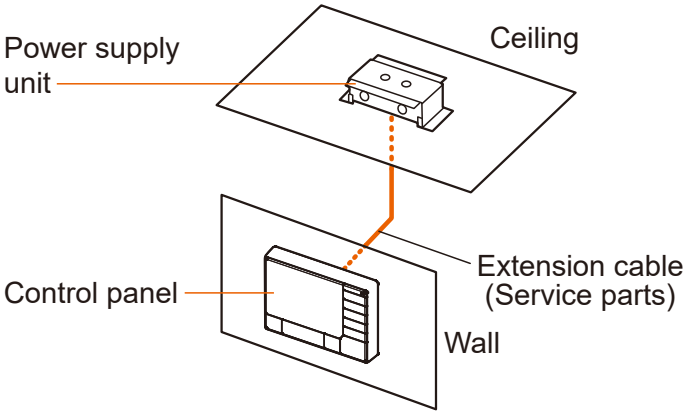
CONTROL SYSTEM

● Installation method

Setting pattern 1: Integrated type

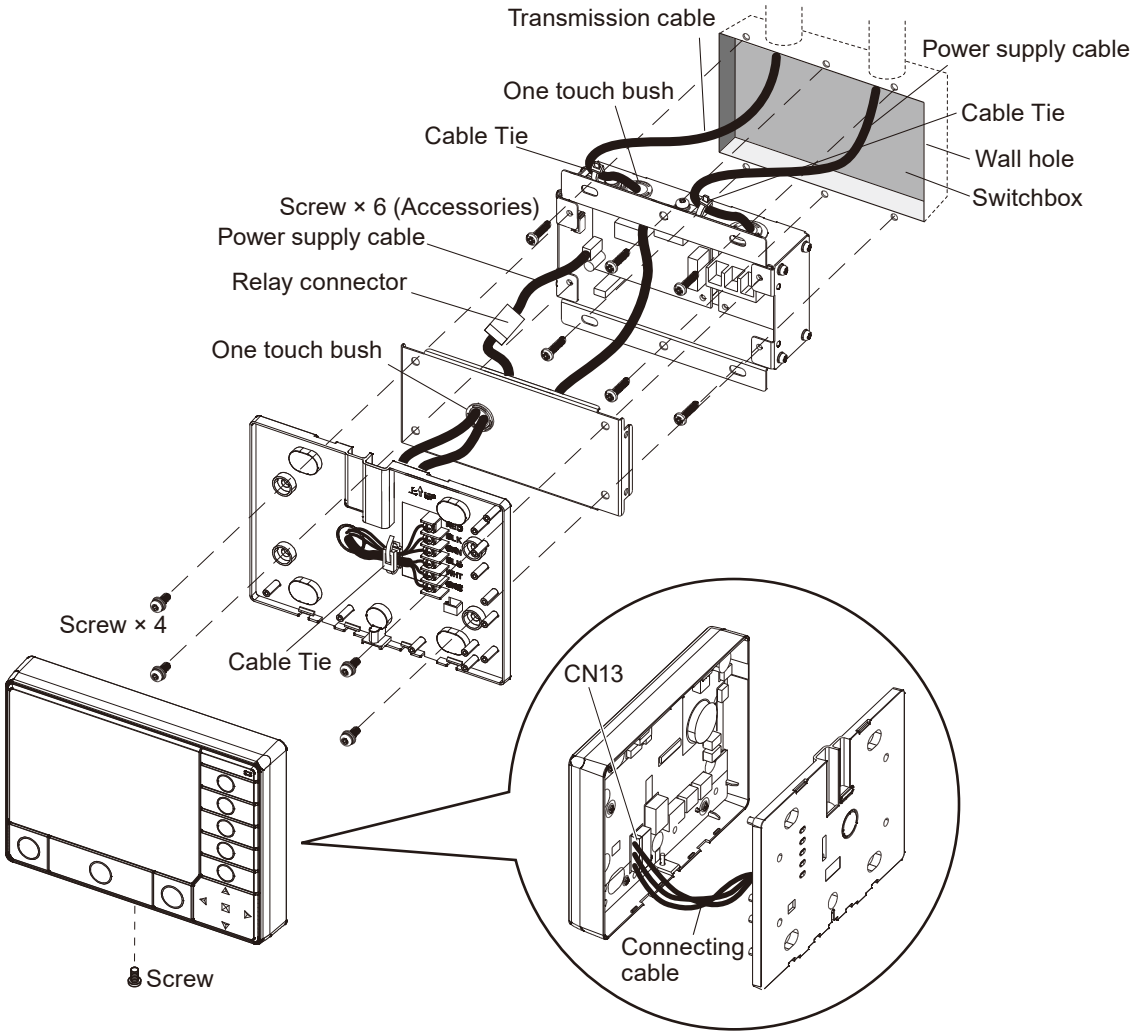


Setting pattern 2: Separate type



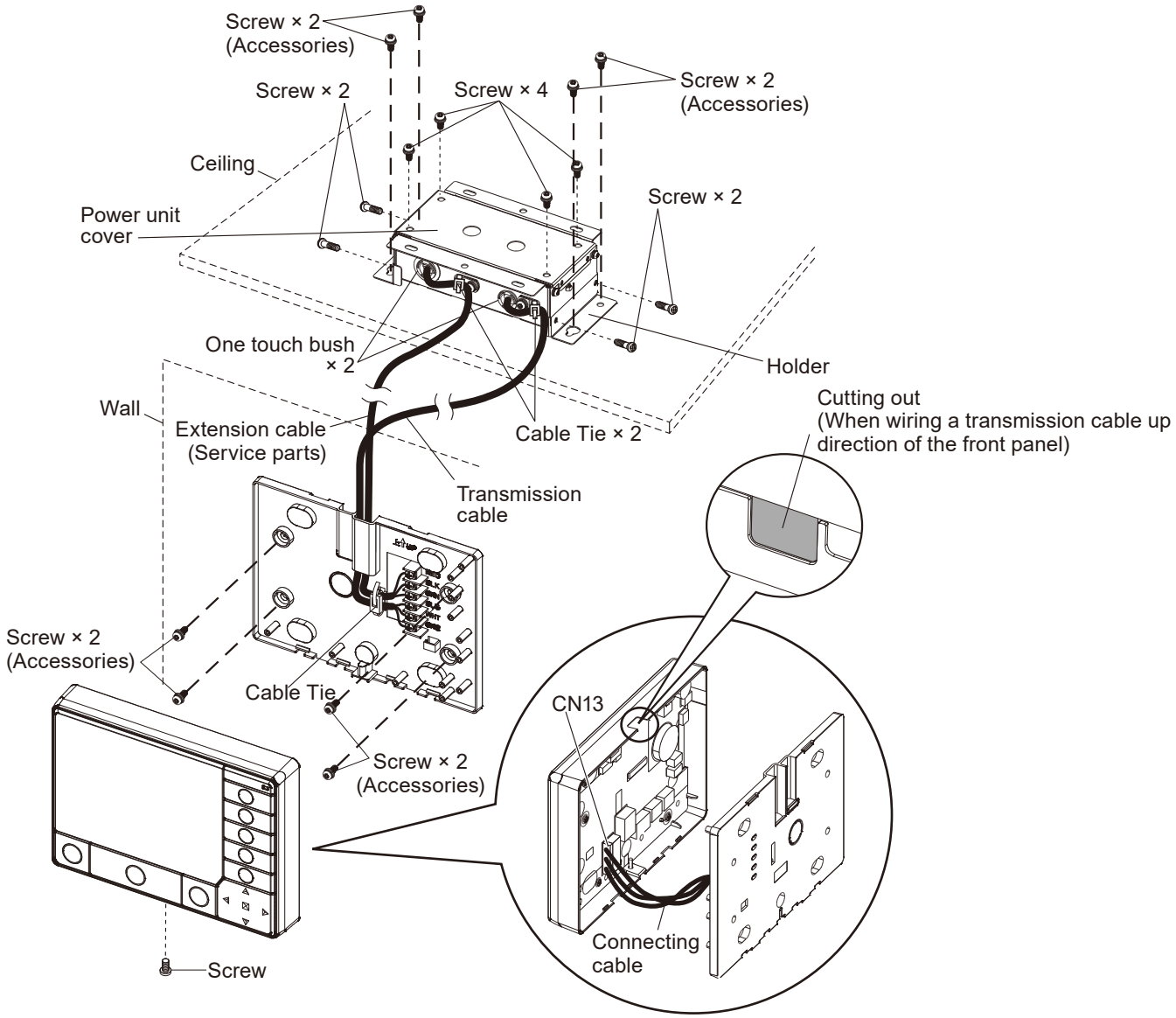
● **Integrated type**

Refer to an installation manual for the details.



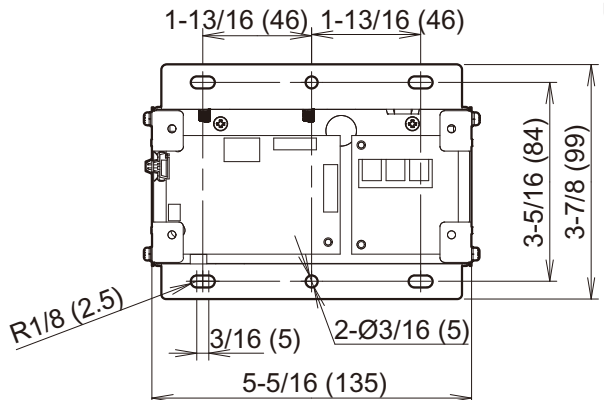
CONTROL SYSTEM

● **Separate type**



● The diagram of the mounting plate screw hole positions

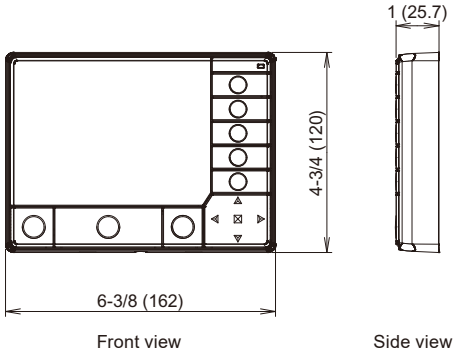
Unit: in. (mm)

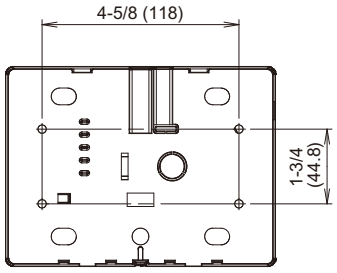


■ DIMENSIONS

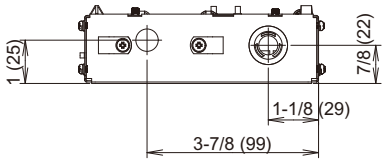
Unit : in. (mm)

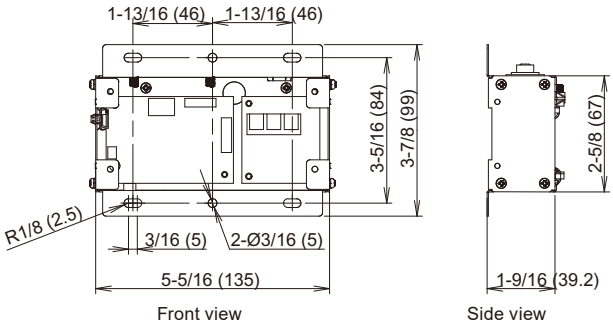
● Control unit



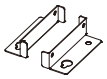
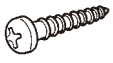
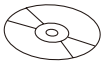


● Power supply unit





■ PACKING LIST

Name and shape	Quantity	Application
Controller unit	1	
Power supply unit	1	
Holder 	1 (Set)	For power supply unit installation (Used for separate type)
One-touch bush	2	For protection of power supply unit cable
Screw 	8	Screw for Central Remote Controller installation (M4 × 20 mm)
Connecting cable	1	For power supply unit connection
Cable Tie	4	Prevents dropping off of the cable
CD-R 	1	Include the operating manual for Central remote controller
Installation manual	1	
Operation manual	1	Instruction book for operation

CONTROL SYSTEM

■ WIRING SPECIFICATIONS

Use	Size		Wire type	Remarks
Power supply cable	Maximum	16 AWG (1.25 mm^2)	245 IEC 57 or equivalent	1 ø AC100 - 240 V 50/60 Hz, 2 Wire + ground (Always ground the unit)
	Minimum	20 AWG (0.5 mm^2)		
Transmission cable	22AWG (0.33 mm^2)		LEVEL4 (NEMA) non-polar 2 core, twisted pair solid core Shielded	LonWorks® compatible cable
External input / output cable	22AWG (0.33 mm^2)		Polar 2core, Twisted pair	Use cable in accordance with local rules for cable.
Fuse capacity	5 A			

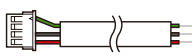
■ SPECIFICATIONS

Model name		UTY-DCGY
Power source voltage (V)		1 ø AC 100 - 240
Power source frequency (Hz)		50 / 60
Input Power (W)		3
Display		5.0-inch TFT color LCD display (QVGA)
External interface		Transmission line
		EXT IN: (Either emergency stop or batch operation / stop) (Either Dry contact or Apply voltage can be selected)
		EXT OUT: (Operation state, error state)
Usage temperature range: °F (°C)		32 to 104 (0 to 40)
Usage humidity range (%)		0 to 85 (no condensation)
Storage temperature range: °F (°C)		-4 to 158 (-20 to 70)
Storage humidity range (%)		0 to 85 (no condensation)
Dimensions [H × W × D]: in. (mm)	Control unit	4-3/4 × 6-3/8 × 1 (120 × 162 × 25.7)
	Power supply unit	3-7/8 × 5-5/16 × 1-9/16 (99 × 135 × 39.2)
Weight: oz. (g)	Control unit	11 (308)
	Power supply unit	13 (355)

■ OPTIONAL SERVICE PARTS

Use the parts number shown below to order the cable from your sales representative.

Use the shielded type conncetion cable in accordance with the standard of the country.

Name and shape	Type	Parts No.
Extension cable (16ft. (5m)) 	Shielded	9708798011

CONTROL SYSTEM

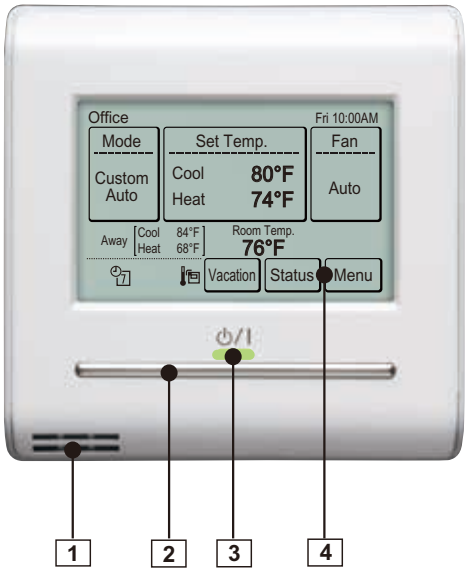
2-5. WIRED REMOTE CONTROLLER (Touch panel)

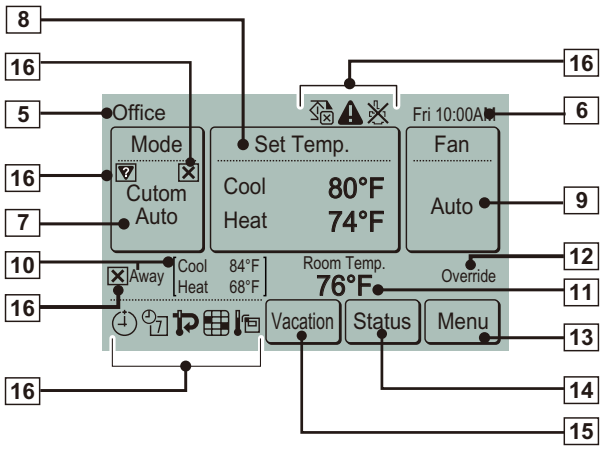
■ MODEL: UTY-RNRUZ∗, UTY-RNRU

- Easy finger touch operation with LCD panel
- Built-in weekly/Daily timer(ON/OFF,Temp.,Mode)
- Backlight enables easy operation in a darkened room
- Room temperature display
- Control up to 16 indoor units
- Corresponds to 12 different languages (English, Chinese, French, German, Spanish, Russian, Polish, Italian, Portuguese, Greek, Turkish, and Dutch)

CONTROL SYSTEM

■ FUNCTIONS





1 Room temperature sensor (inside)

2 On/Off button:

It is possible to operate only while displaying the Monitor Mode screen.

3 LED lamp (Operation indicator)

4 Touch panel display

5 R.C. group name:

Name of the remote controller group to which this unit is connected.

6 Clock

7 Mode:

When this is touched, the display switches to the "Mode" screen.

8 Set temp.:

When this is touched, the display switches to the temperature setting screen.

9 Fan:

When this is touched, the display switches the fan speed setting screen.

10 Away:

When “Away” is enabled, the start temperature of “Away” operation is displayed when unoccupied. When “Away” is operating, “Away Operation” is displayed.

11 Room Temp.:

This unit ambient temperature sensed by this unit is displayed.

12 Override:

Displayed while the following functions are operating:

- Auto Off Timer
- Set Temp. Auto Return

13 Menu:

When this is touched, the display switches to the "Menu” screen.

14 Status:

When this is touched, the display switches to the “Status” screen.

15 Vacation:

When this is touched, the schedule is disabled and the indoor unit remains unoccupied.

16 Status icons:

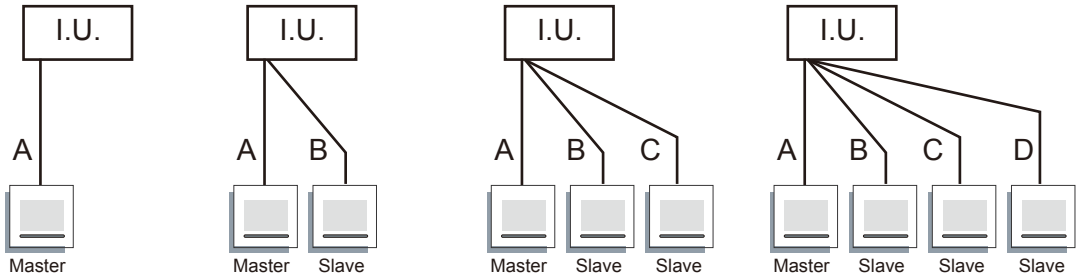
- It is maintenance stop.
- The error occurred.
- Operation from this unit is prohibited by the Central Controller.
- Mode mismatch. The mode which cannot operate simultaneously is selected.
- “Custom Auto Mode” or “Away” is disabled.
- The Auto Off Timer is set.
- The weekly timer is set.
- The set temperature automatic return setting is set.
- It shows that it is time to clean the filter.
- The temperature sensor of this unit is used.

CONTROL SYSTEM

■ SYSTEM DIAGRAM

● Multiple remote control

Up to 4 remote controllers can be used to operate the indoor units.

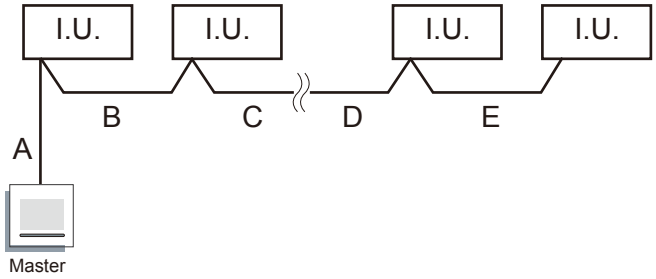


A, B, C, D : Remote controller cable. (Refer to Chapter6. 4-4 for detail specifications)
A≤1,640 ft. (500 m), A+B≤1,640 ft. (500 m), A+B+C≤1,640 ft. (500 m), A+B+C+D≤1,640 ft. (500 m).

NOTE: Multiple installation method described above is prohibited to combine with UTY-RNKU (3 Wired type) or UTY-RSKU (3 Wired type) or UTY-RHKU (3 Wired type) and UTY-RNRUZ1 (2 Wired Type)

● Group control

With a single remote controller, up to 16 units can be simultaneously operated.

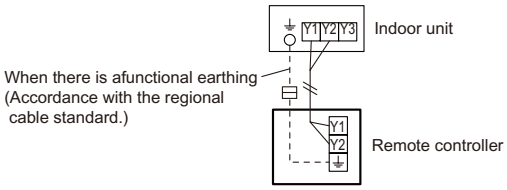


A, B, C, D, E : Remote controller cable. (Refer to Chapter6. 4-4 for detail specifications)
A+B+C+D+E≤1,640 ft. (500 m).

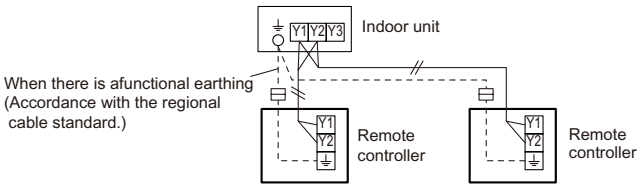
CONTROL SYSTEM

■ ELECTRICAL WIRING

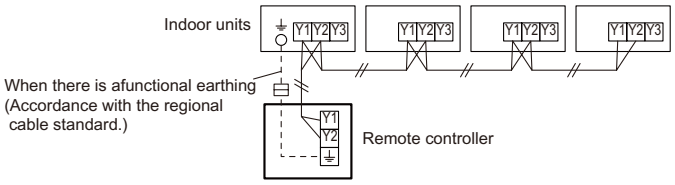
● Single control



● Multiple remote control



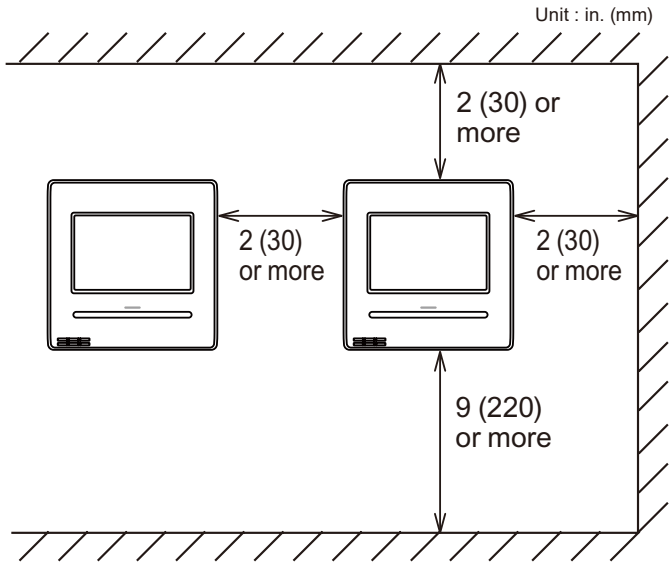
● Group control



■ INSTALLATION

● Installation space

- This product cannot be installed in wall.
- Recommendation installation height of the remote controller is 55 in. (1.4 m) (from the floor surface to the bottom of the remote controller).
- Even when you install a remote controller to one of a switch box and the surface of a wall, secure the space shown in following figure. If spaces run short, it will become difficult to remove a remote controller.



*Secure enough space where a flat-blade screwdriver to take off a case can be inserted.

CONTROL SYSTEM

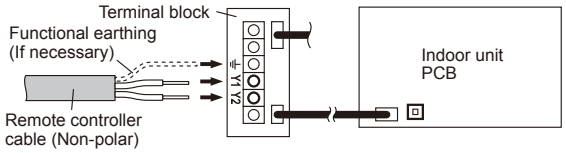
● Connection Pattern

NOTE: Connection pattern is different according to type of Indoor unit.

Indoor unit types	Connection Pattern
All Cassette type	Pattern A
All Duct type	
All Ceiling type	
Wall Mounted type	Pattern B

● Pattern A

Connect the end of remote controller cable directly to the exclusive terminal block.

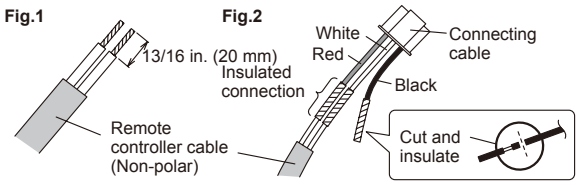


* Layout of terminal block and PCB is varies, depending on the type of indoor unit.

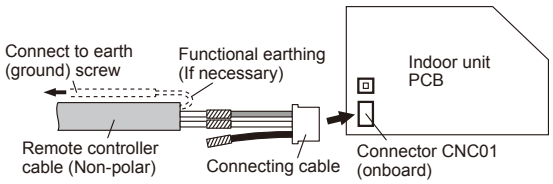
NOTE: Operation may fail if it is connected to the outdoor unit or the terminal block for power supply.

● Pattern B

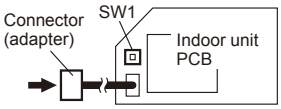
1) Use a tool to cut off the terminal on the end of the remote controller cable, and then remove the insulation from the cut end of the cable as shown in Fig. 1. Connect the remote controller cable and connecting cable as shown in Fig. 2. Be sure to insulate the connection between the cables.



2) Connect the remote controller cable to the connecting cable, and insert it to the connector.



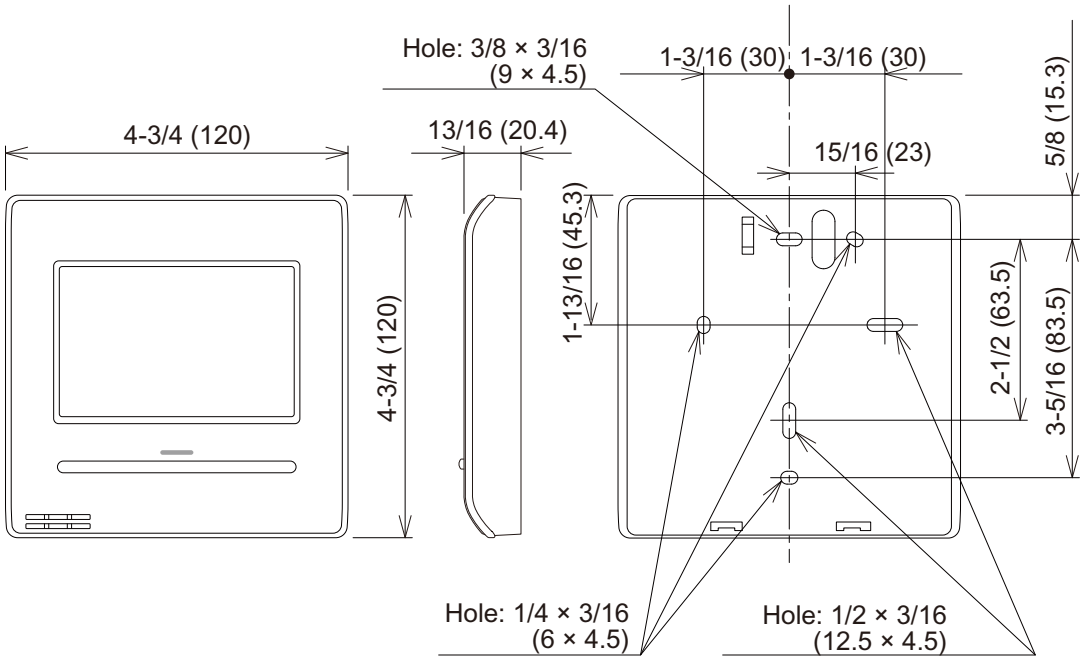
* Layout of Connector and PCB varies, depending on the type of indoor unit.



CONTROL SYSTEM

■ DIMENSIONS

Unit : in. (mm)



CONTROL SYSTEM

■ PACKING LIST

Name and shape	Quantity	Application
CD-ROM	1	
Screw (M4 × 16 mm)	2	For installing the remote controller
Cable tie	1	For remote controller and remote controller cable binding
Installation manual	1	
Operating manual	1	

■ WIRING SPECIFICATIONS

Use	Cable size	Wire type	Model name	Remarks
Remote controller cable	22AWG to 16AWG (0.33 to 1.25 mm^2)	Non polar 2 core	UTY-RNRYZ∗ UTY-RNRU	Use sheathed twisted pair cable
	18AWG	Thermostat cable 2 core		Use sheathed non twisted pair cable

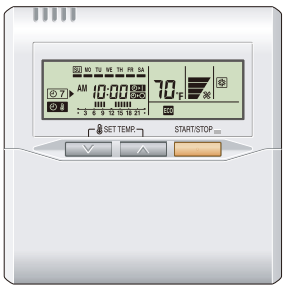
■ SPECIFICATIONS

Model name	UTY-RNRYZ∗, UTY-RNRU
Input voltage (V)	DC 12
Input power (W)	Max. 0.3
Display	3.8 inch FSTN LCD (255 × 160 dots) with Touch panel
Usage temperature range: °F (°C)	32 to 104 (0 to 40)
Usage humidity range (%)	20 to 90 (no condensation)
Storage temperature range: °F (°C)	14 to 140 (-10 to 60)
Storage humidity range (%)	20 to 90 (no condensation)
Dimensions [H × W × D]: in. (mm)	4-3/4 × 4-3/4 × 11/16 (120 × 120 × 20.4)
Weight: oz. (g)	8 (220)

CONTROL SYSTEM

2-6. WIRED REMOTE CONTROLLER

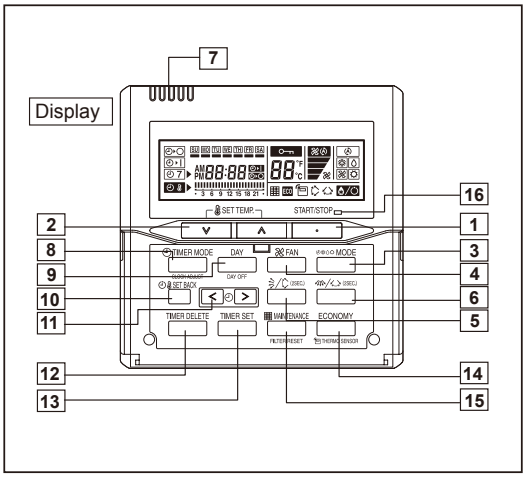
■ MODEL: UTY-RNKU



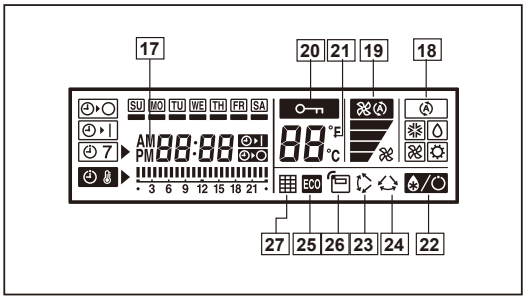
- Various timer setup options (ON / OFF / WEEKLY) are possible.
- Weekly timer as standard function. (Start / Stop function twice per day for a week)
- When setting up a timer, start/stop and a temperature setup can be changed.
- When a failure occurs,the error code is displayed.
- Error history.(Last 16 error codes can be accessed.)
- Up to 16 indoor units can be simultaneously controlled.
- Room temperature can be accurately controlled using the built-in thermo sensor.

CONTROL SYSTEM

■ FUNCTIONS



Display panel



1 START/STOP button
Pressed to start and stop operation.

2 Set Temperature button
Selects the setting temperature.

3 Operation mode button ∗2
Selects the operating mode (AUTO Ⓐ∗1, COOL ❄, DRY◊ , FAN ∗3, HEAT ☼∗4).

4 Fan control button
Selects the fan speed (AUTO, LOW, MED, HIGH).

5 Vertical airflow direction and swing button
Press for two seconds to change the swing mode

6 Horizontal airflow direction and swing button
Press for two seconds to change the swing mode.

7 Built-in thermo sensor
Detect room temperature.

8 Timer mode (CLOCK ADJUST) button
Selects the timer mode (OFF TIMER, ON TIMER, WEEKLY TIMER)
Set the current time.

9 Day (DAY OFF) button
Temporarily cancels of one day timer.

10 Set back button
Pressed select the set back timer.

11 Set time button
Pressed to select the set back timer.

12 Timer delete button
The schedule of a weekly timer is deleted.

13 Timer set button
Sets the date, hour, minute and on-off time.

14 Economy button / Thermo sensor button

15 Maintenance button / Filter reset button

16 Operation lamp
Lights during operation and when the timer is on.

17 Timer and clock display

18 Operation mode display

19 Fan speed display

20 Operation lock display

21 Temperature display
Displayed temperature is set temperature.

22 Defrost display
Indicates during the oil recovery and defrosting operation.

23 Vertical swing display

24 Horizontal swing display

25 Economy display

26 Thermo sensor display

27 Filter display

∗1 : "AUTOⒶ" is not available for a heat pump model unless it is set up administrative indoor unit.

∗2 : Indoor unit can be set to administrative indoor unit by pressing "MODE" button for five seconds or more. (Refer to chapter 6. 6-14.)

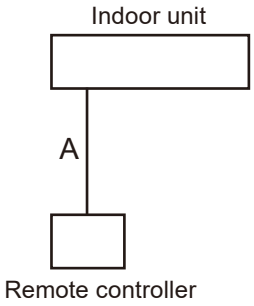
∗3 : "FAN∗" is not available for a heat pump model.

∗4 : "HEAT☼" is not available for a cooling only model.

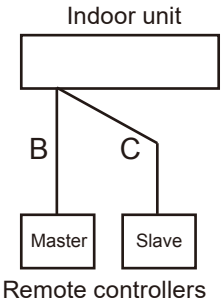
CONTROL SYSTEM

■ SYSTEM DIAGRAM

● 1 remote controller



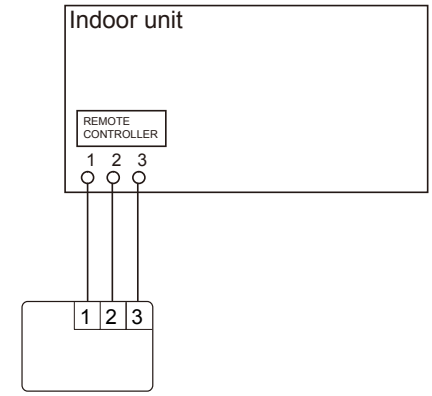
● 2 remote controllers



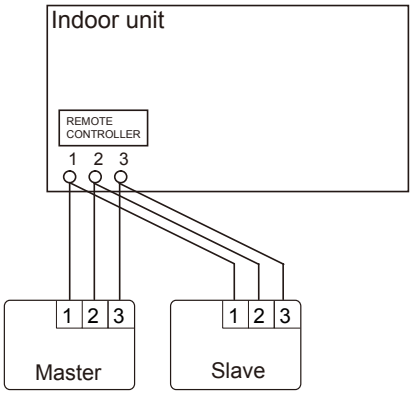
A , B , C : Remote controller cable.
Refer to chapter 6. 4-4 for detail specifications.
A ≤ 1,640 ft. (500 m) ; B+C≤ 1,640 ft. (500 m)

■ ELECTRICAL WIRING

● 1 remote controller



● 2 remote controllers

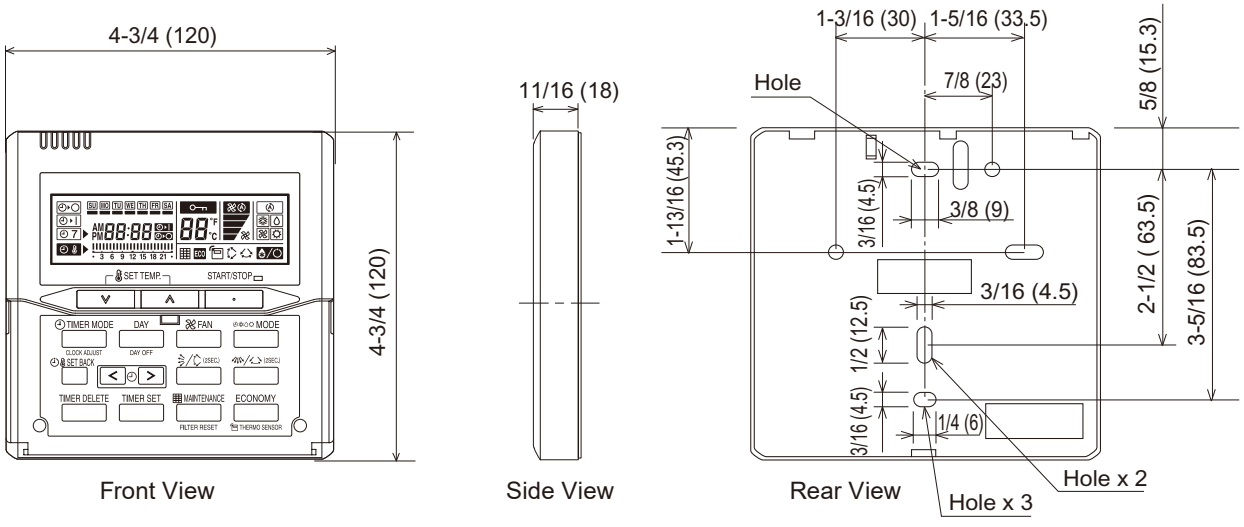


1 (RED) : 12 V
2 (WHITE) : Signal
3 (BLACK) : COM

CONTROL SYSTEM

■ DIMENSIONS

Unit : in. (mm)



■ INSTALLATION

● Connection Pattern

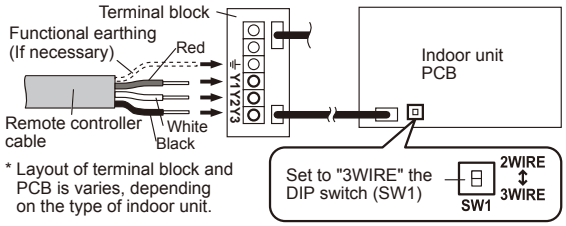
NOTE: Connection pattern is different according to type of Indoor unit.

Indoor unit types	Connection Pattern
All Cassette type	Pattern A
All Duct type	
All Ceiling type	
Wall Mounted type	Pattern B

● Pattern A

Connect the end of remote controller cable directly to the exclusive terminal block.

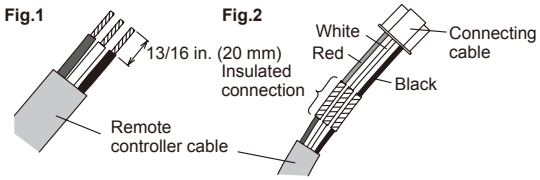
Set the DIP switch (SW1) to "3WIRE" on the PCB of the indoor unit.



NOTE: The equipment may fail if it is connected to the outdoor unit or the power supply terminal block.

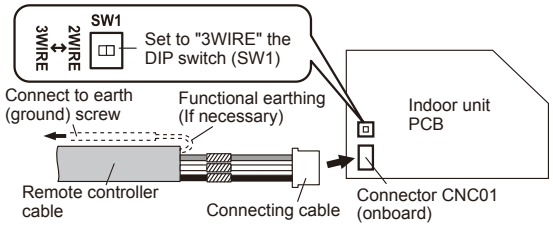
● Pattern B

1) Use a tool to cut off the terminal on the end of the remote controller cable, and then remove the insulation from the cut end of the cable as shown in Fig. 1. Connect the remote controller cable and connecting cable as shown in Fig. 2. Be sure to insulate the connection between the cables.

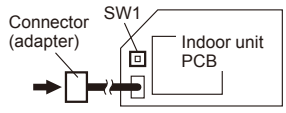


2) Connect the remote controller cable to the connecting cable, and insert it to the connector.

Set the DIP switch (SW1) to "3WIRE" on the PCB of the indoor unit.

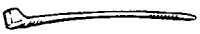


* Layout of Connector and PCB varies, depending on the type of indoor unit



CONTROL SYSTEM

■ PACKING LIST

Name and shape	Quantity	Application
Screw (M4 × 16 mm)	2	For installing the remote controller
Cable Tie 	1	For securing controller cable
Installation manual	1	
Operating manual	1	

■ WIRING SPECIFICATIONS

Use	Cable size	Wire type	Remarks
Remote controller cable	22AWG ($0.33\ mm^2$)	Polar 3 core	Use sheathed PVC cable.

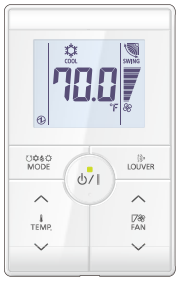
■ SPECIFICATIONS

Model name	UTY - RNK∗
Dimensions [H × W × D]: in. (mm)	4-3/4 × 4-3/4 × 11/16 (120 × 120 × 18)
Weight: oz. (g)	6 (160)

CONTROL SYSTEM

2-7. SIMPLE REMOTE CONTROLLER (With Operation mode)

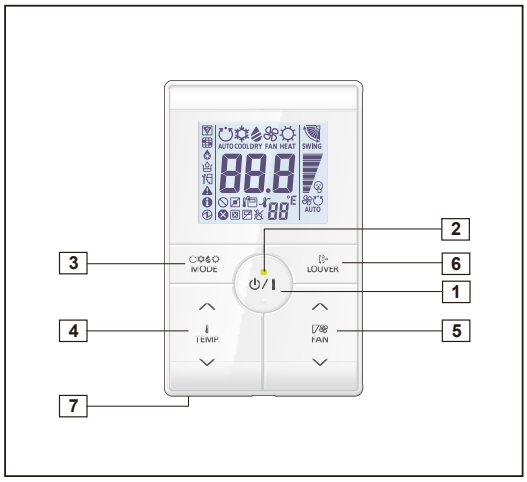
2-7-1. MODEL: UTY-RSRY



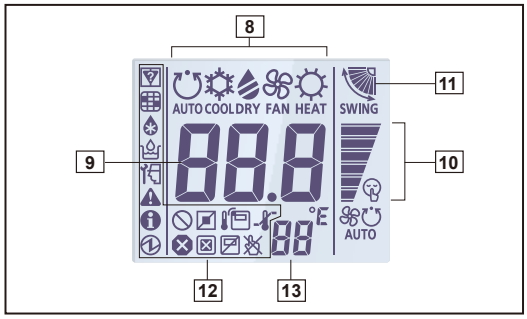
- Easy operation.
- Stylish design
- Large LCD screen & simple operation buttons
- Built-in background light function.
- Easy installation with a slim shape with no bulge in the back.
- Up to 16 indoor units can be simultaneously controlled.
- Can be installed onto SW-BOX. (applies to European and other country's standard)

CONTROL SYSTEM

■ FUNCTIONS



Display panel



1 START/STOP button
Pressed to start and stop operation.

2 LED lamp
Lights during operation.

3 Operation mode button
Selects the operating mode

4 Set temperature button
Selects the setting temperature.(18-30°C[COOL], 10-30°C[HEAT])

5 Fan control button
Selects the fan speed

6 Louver button
Set the airflow direction.

7 Room temperature sensor(inside)

8 Operating mode indicator (AUTO *1, COOL, DRY, FAN *2, HEAT *3).

9 Set temperature
Indicates Indoor unit address. *4

10 Fan speed indicator (AUTO, HIGH, MED, LOW, QUIET).

11 Airflow direction indicator

12 Status icons
- Mode mismatch
- Filter sign *5
- Defrost operation
- Oil recovery operation
- Under maintenance
- Error
- Special state
- Conducting electricity
- Emergency stop
- Operation controlled
- Forced stop
- Remote controller sensor is enabled *5
- Central controlled
- Setting temperature range is enabled
- Operation prohibited

13 Indicates the remote controller address. *4

*1 : "AUTO" is not available for a heat pump model unless it is set up as an administrative indoor unit.

*2 : "FAN" is not available for a heat pump model.

*3 : "HEAT" is not available for a cooling only model.

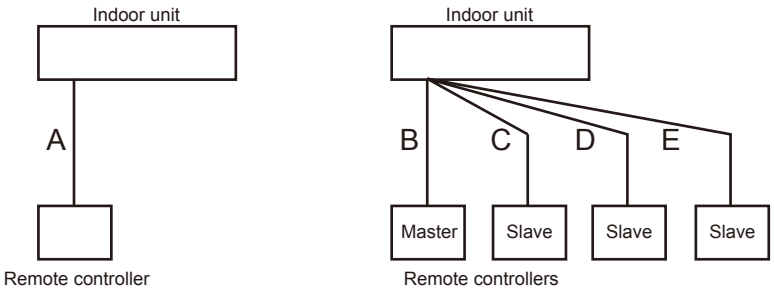
*4 : During address display mode.

*5 : For single split system, to use this function, set the Function setting of the indoor unit accordingly.

CONTROL SYSTEM

■ SYSTEM DIAGRAM

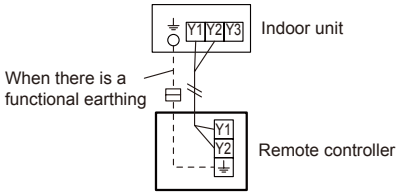
● 1 remote controller ● 4 remote controllers



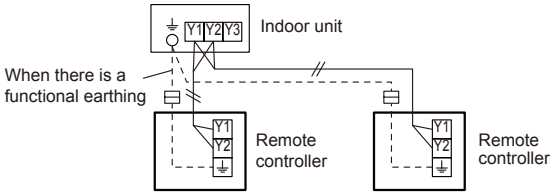
A , B , C , D , E : Remote controller cable.
Refer to 6-4-4 for detail specifications.
A ≦ 500 m ; B+C+D+E ≦ 500 m

■ ELECTRICAL WIRING

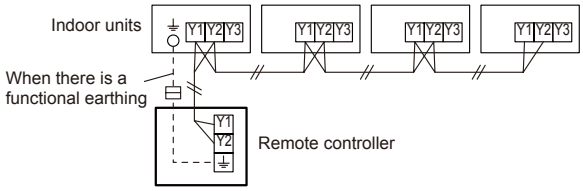
● Single control



● Multiple remote control

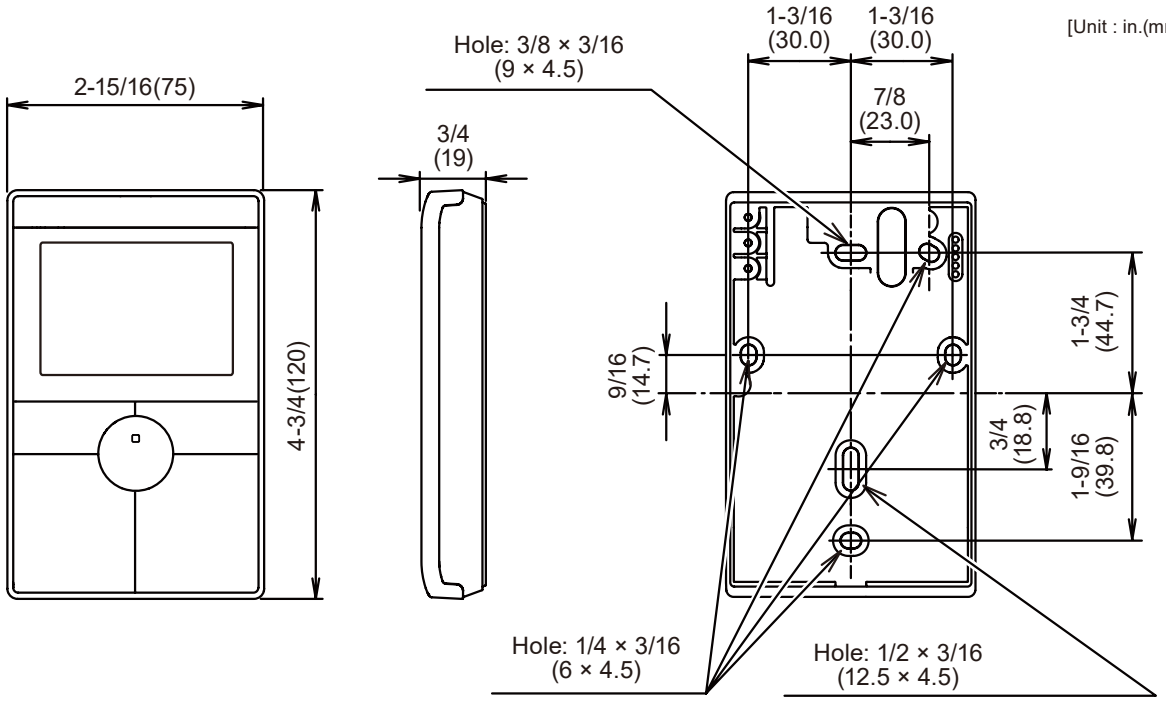


● Group control



■ DIMENSIONS

[Unit : in.(mm)]



Front View Side View Rear View

■ INSTALLATION

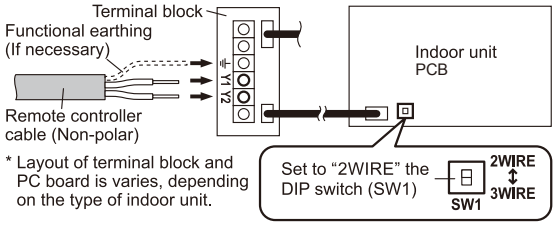
● Connection Pattern

NOTE: Connection pattern is different according to type of Indoor unit.

Indoor unit types	Connection Pattern
All Cassette type	Pattern A
All Duct type	
All Ceiling type	
All Compact Floor type	
Wall Mounted type	Pattern B

● Pattern A

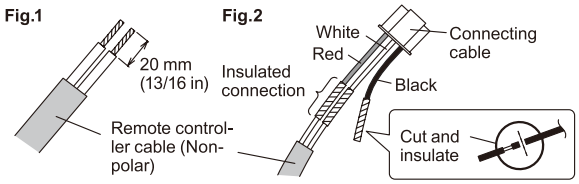
Connect the end of remote controller cable directly to the exclusive terminal block. Set to “2WIRE” the DIP switch (SW1) on the PC board (printed circuit board) of the indoor unit.



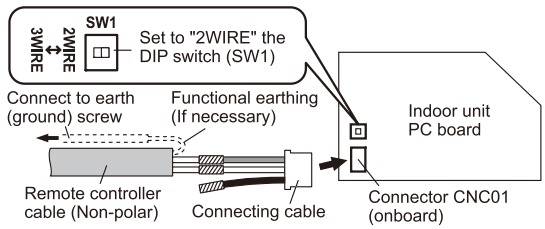
NOTE: The equipment may fail if it is connected to the outdoor unit or the power supply terminal block.

● Pattern B

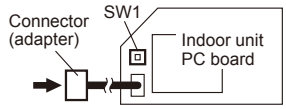
1) Use a tool to cut off the terminal on the end of the remote controller cable, and then remove the insulation from the cut end of the cable as shown in Fig. 1. Connect the remote controller cable and connecting cable as shown in Fig. 2. Be sure to insulate the connection between the cables.



2) Insert connecting cable to the connector. Set to “2WIRE” the DIP switch (SW1) on the PC board of the indoor unit.

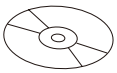


* Layout of Connector and PC board varies, depending on the type of indoor unit



CONTROL SYSTEM

■ PACKING LIST

Name and shape	Quantity	Application
Wired remote controller	1	
Installation manual	1	
Operating manual	1	
CD-ROM 	1	
Screw (M4 × 16 mm)	2	For installing the remote controller
Cable tie	1	For binding remote controller and remote controller cable

■ WIRING SPECIFICATIONS

Cable type	Size	Remarks
Sheathed cable	22 to 16 AWG (0.33 to 1.25 mm²)	Non polar 2 core, Twisted pair
Shielded cable*		

* Use shielded cable in accordance with local rules for remote controller cable.

■ SPECIFICATIONS

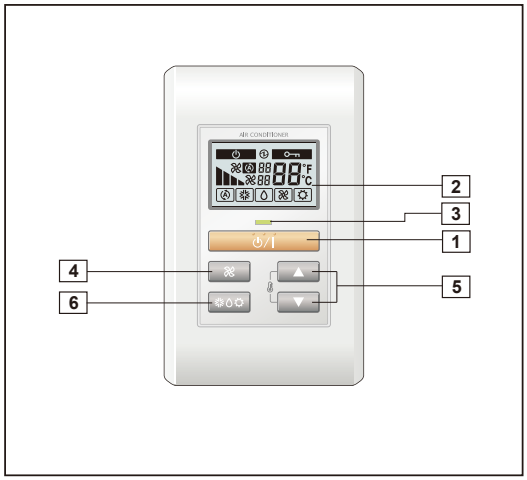
Model name	UTY - RSRU
Dimensions [H × W × D]: in. (mm)	4-3/4 × 2-15/16 × 3/4 (120 × 75 ×19)
Weight: oz. (g)	4 (120)

CONTROL SYSTEM

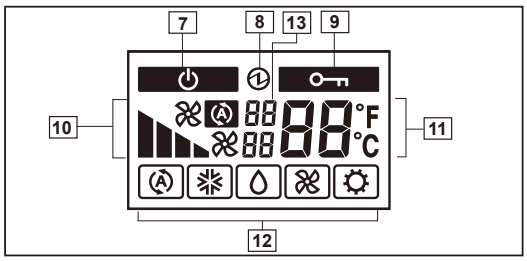
2-7-2. MODEL: UTY-RSKU

- Easy operation.
- Built-in background light function.
- Easy installation with a slim shape with no bulge in the back.
- Error history. (Last 16 error codes can be accessed.)
- Up to 16 indoor units can be simultaneously controlled.
- Can be installed onto SW-BOX. (applies to European and other country's standard)

■ FUNCTIONS



Display panel



1 START/STOP button
Pressed to start and stop operation.

2 Display with backlight
Lights during operation.

3 Operation lamp
Lights during operation.

4 Fan control button
Selects the fan speed

5 Set temperature button
Selects the setting temperature.

6 Operation mode button
Selects the operating mode

7 Standby display
Indicates during the oil recovery and defrosting operation.

8 Power source display
Indicates the main power ON.

9 Central control display
Indicates when function is locked from Touch Panel Controller or System Controller.

10 Fan speed display (AUTO, HIGH, MED, LOW).

11 Set temperature
Indicates Error history number. *4
Indicates Indoor unit address. *5

12 Operating mode display (AUTO Ⓐ *1, COOL ❄, DRY, FAN *2, HEAT ☼ *3).

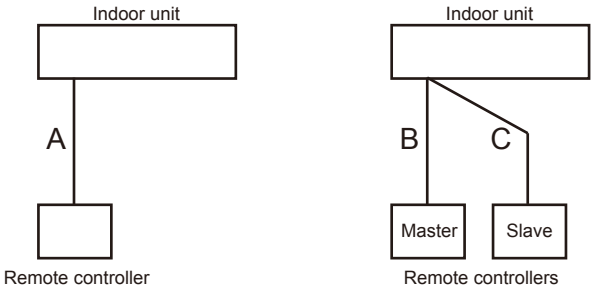
13 (Upper) Indicates the error code *4 *6 / the refrigerant system address. *5
(Lower) Indicates the remote controller address. *4 *5 *6

*1 : "AUTOⒶ" is not available for a heat pump model unless it is set up master indoor unit.
*2 : "FAN" is not available for a heat pump model
*3 : "HEAT☼" is not available for a cooling only model
*4 : during Error code history display mode.
*5 : during address display mode.
*6 : during self Diagnosis mode.

CONTROL SYSTEM

■ SYSTEM DIAGRAM

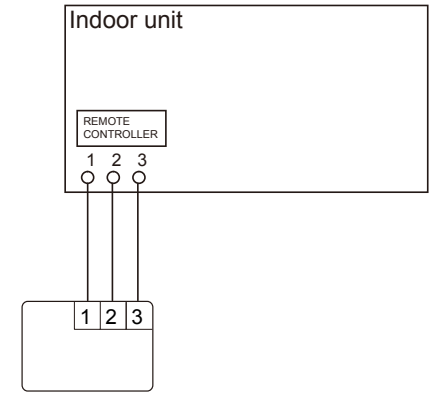
● 1 remote controller ● 2 remote controllers



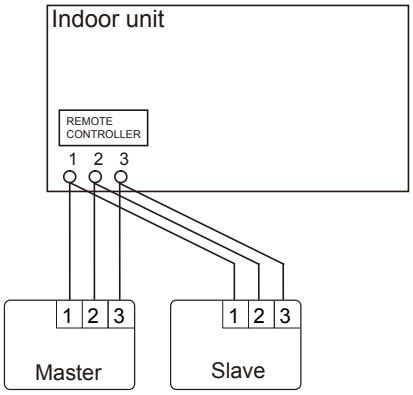
A , B , C : Remote controller cable.
Refer to chapter 6. 4-4 for detail specifications.
A ≤ 1,640 ft. (500 m) ; B+C≤ 1,640 ft. (500 m)

■ ELECTRICAL WIRING

● 1 remote controller



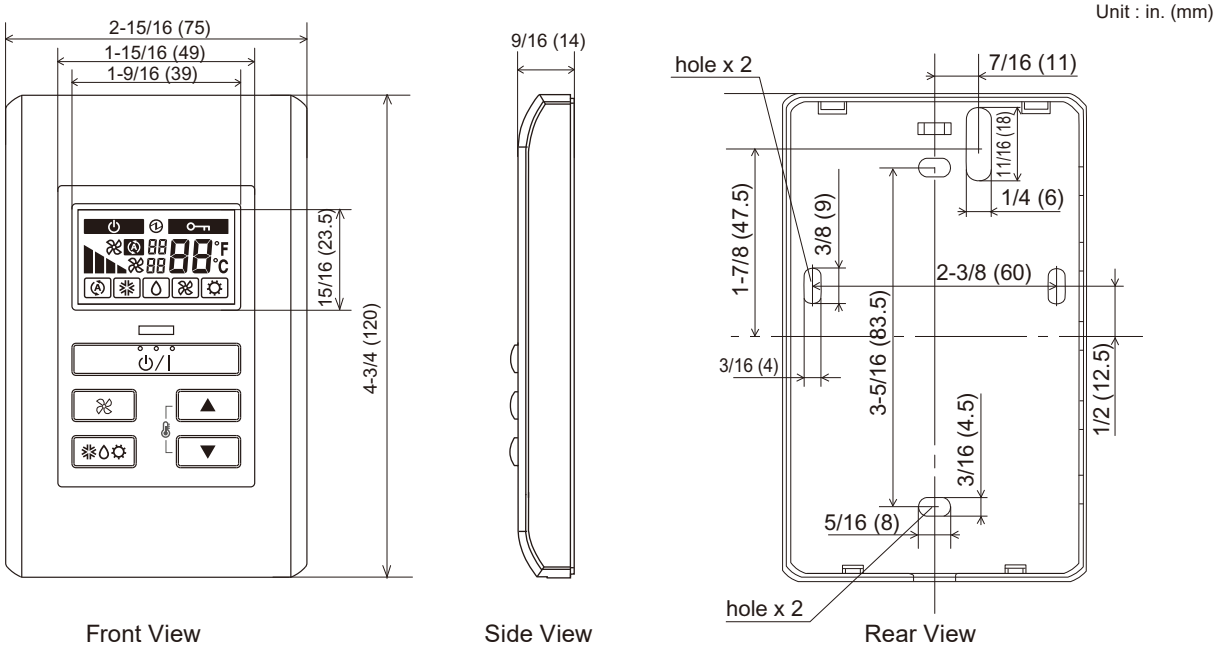
● 2 remote controllers



1 (RED) : 12 V
2 (WHITE) : Signal
3 (BLACK) : COM

■ DIMENSIONS

Unit : in. (mm)



■ INSTALLATION

● Connection Pattern

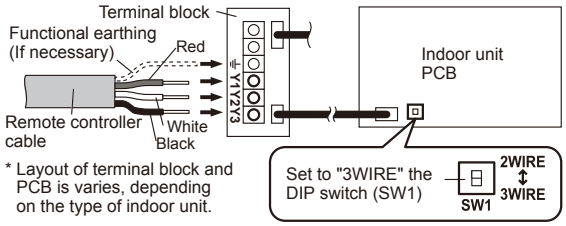
NOTE: Connection pattern is different according to type of Indoor unit.

Indoor unit types	Connection Pattern
All Cassette type	Pattern A
All Duct type	
All Ceiling type	
Wall Mounted type	Pattern B

● Pattern A

Connect the end of remote controller cable directly to the exclusive terminal block.

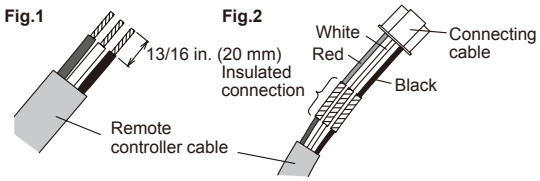
Set the DIP switch (SW1) to "3WIRE" on the PCB of the indoor unit.



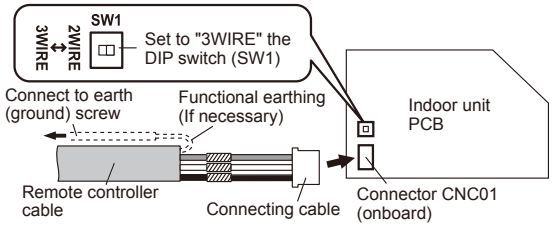
NOTE: The equipment may fail if it is connected to the outdoor unit or the power supply terminal block.

● Pattern B

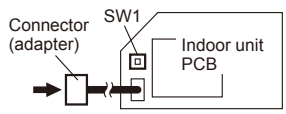
1) Use a tool to cut off the terminal on the end of the remote controller cable, and then remove the insulation from the cut end of the cable as shown in Fig. 1. Connect the remote controller cable and connecting cable as shown in Fig. 2. Be sure to insulate the connection between the cables.



2) Connect the remote controller cable to the connecting cable, and insert it to the connector. Set the DIP switch (SW1) to "3WIRE" on the PCB of the indoor unit.

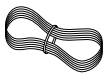
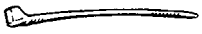


* Layout of Connector and PCB varies, depending on the type of indoor unit



CONTROL SYSTEM

■ PACKING LIST

Name and shape	Quantity	Application
Remote controller cable [33 ft. (10 m)] 	1	For connecting the remote controller
Screw (M4 × 16 mm)	2	For installing the remote controller
Cable Tie 	1	For securing controller cable
Installation manual	1	
Operating manual	1	

■ WIRING SPECIFICATIONS

Use	Size	Wire type	Remarks
Remote controller cable	22AWG ($0.33\ mm^2$)	Polar 3 core	Use sheathed PVC cable.

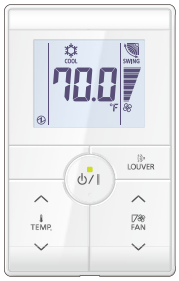
■ SPECIFICATIONS

Model name	UTY - RSK∗
Dimensions [H × W × D]: in. (mm)	4-3/4 × 2-15/16 × 9/16 (120 × 75 × 14)
Weight: oz. (g)	3 (90)

CONTROL SYSTEM

2-8. SIMPLE REMOTE CONTROLLER (Without Operation mode)

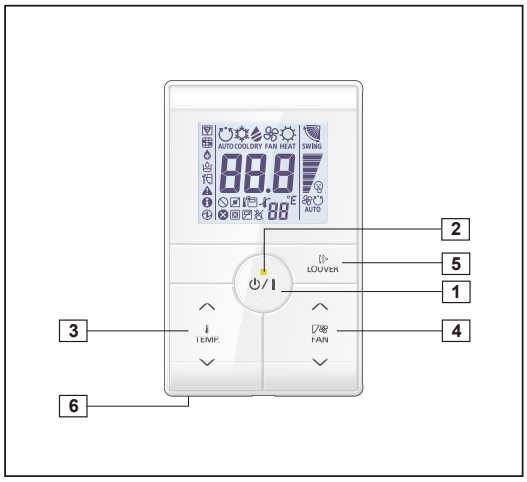
2-8-1. MODEL: UTY-RHRY



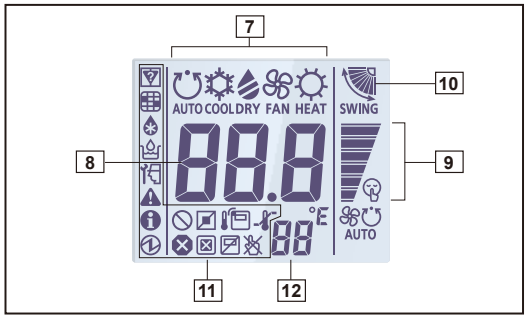
- Easy operation.
- Stylish design
- Large LCD screen & simple operation buttons
- Built-in background light function.
- Easy installation with a slim shape with no bulge in the back.
- Up to 16 indoor units can be simultaneously controlled.
- Can be installed onto SW-BOX. (applies to European and other country's standard)

CONTROL SYSTEM

■ FUNCTIONS



Display panel



1 START/STOP button
Pressed to start and stop operation.

2 LED lamp
Lights during operation.

3 Set temperature button
Selects the setting temperature.(18-30°C[COOL], 10-30°C[HEAT])

4 Fan control button
Selects the fan speed

5 Louver button
Set the airflow direction.

6 Room temperature sensor(inside)

7 Operating mode indicator (AUTO *1, COOL, DRY, FAN *2, HEAT *3).

8 Set temperature
Indicates Indoor unit address. *4

9 Fan speed indicator

10 Airflow direction indicator (AUTO, HIGH, MED, LOW, QUIET).

11 Status icons
- Mode mismatch
- Filter sign *5
- Defrost operation
- Oil recovery operation
- Under maintenance
- Error
- Special state
- Conducting electricity
- Emergency stop
- Operation controlled
- Forced stop
- Remote controller sensor is enabled *5
- Central controlled
- Setting temperature range is enabled
- Operation prohibited

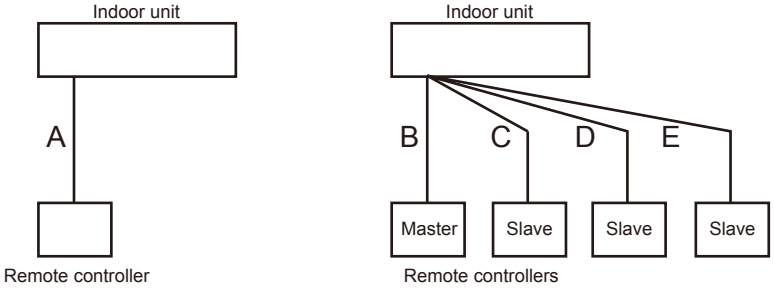
12 Indicates the remote controller address. *4

*1 : "AUTO" is not available for a heat pump model unless it is set up as an administrative indoor unit.
*2 : "FAN" is not available for a heat pump model.
*3 : "HEAT" is not available for a cooling only model.
*4 : During address display mode.
*5 : For single split system, to use this function, set the Function setting of the indoor unit accordingly.

CONTROL SYSTEM

■ SYSTEM DIAGRAM

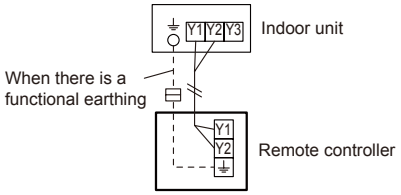
● 1 remote controller ● 4 remote controllers



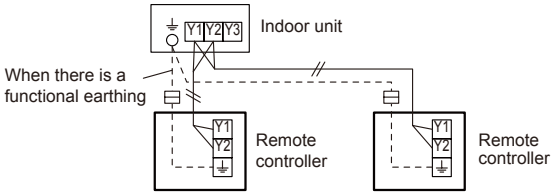
A , B , C , D , E : Remote controller cable.
Refer to 6-4-4 for detail specifications.
A ≦ 500 m ; B+C+D+E ≦ 500 m

■ ELECTRICAL WIRING

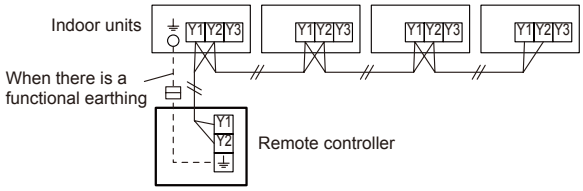
● Single control



● Multiple remote control

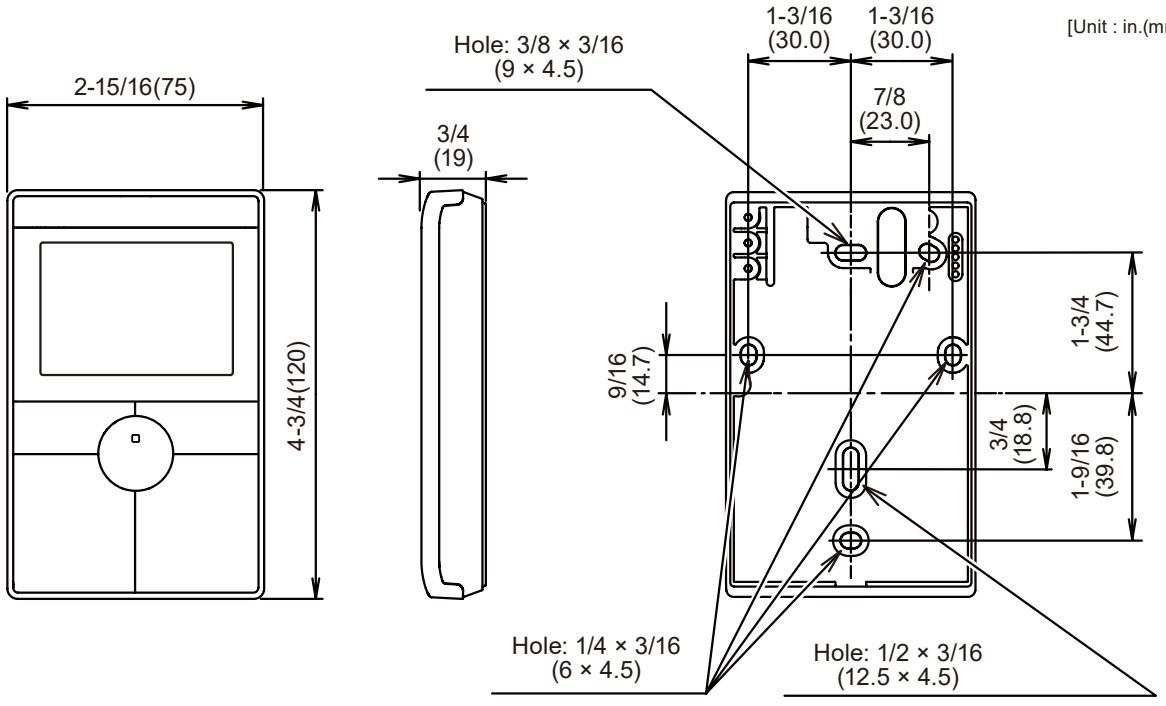


● Group control



■ DIMENSIONS

[Unit : in.(mm)]



Front View Side View Rear View

■ INSTALLATION

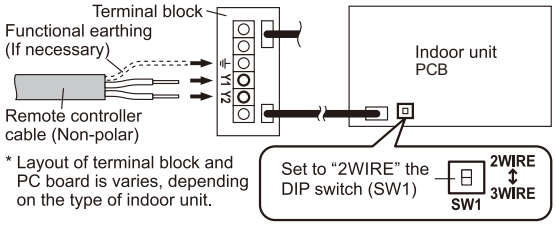
● Connection Pattern

NOTE: Connection pattern is different according to type of Indoor unit.

Indoor unit types	Connection Pattern
All Cassette type	Pattern A
All Duct type	
All Ceiling type	
All Compact Floor type	
Wall Mounted type	Pattern B

● Pattern A

Connect the end of remote controller cable directly to the exclusive terminal block. Set to “2WIRE” the DIP switch (SW1) on the PC board (printed circuit board) of the indoor unit.



NOTE: The equipment may fail if it is connected to the outdoor unit or the power supply terminal block.

● Pattern B

1) Use a tool to cut off the terminal on the end of the remote controller cable, and then remove the insulation from the cut end of the cable as shown in Fig. 1. Connect the remote controller cable and connecting cable as shown in Fig. 2. Be sure to insulate the connection between the cables.

Fig.1

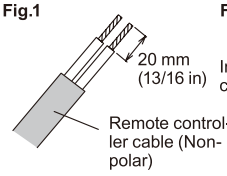
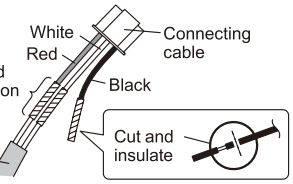
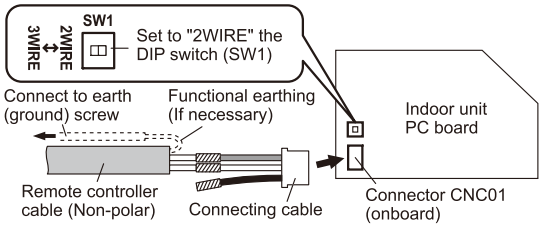


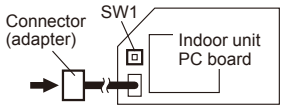
Fig.2



2) Insert connecting cable to the connector. Set to “2WIRE” the DIP switch (SW1) on the PC board of the indoor unit.

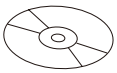


* Layout of Connector and PC board varies, depending on the type of indoor unit



CONTROL SYSTEM

■ PACKING LIST

Name and shape	Quantity	Application
Wired remote controller	1	
Installation manual	1	
Operating manual	1	
CD-ROM 	1	
Screw (M4 × 16 mm)	2	For installing the remote controller
Cable tie	1	For binding remote controller and remote controller cable

■ WIRING SPECIFICATIONS

Cable type	Size	Remarks
Sheathed cable	22 to 16 AWG (0.33 to 1.25 mm²)	Non polar 2 core, Twisted pair
Shielded cable*		

* Use shielded cable in accordance with local rules for remote controller cable.

■ SPECIFICATIONS

Model name	UTY-RHRU
Dimensions [H × W × D]: in. (mm)	4-3/4 × 2-15/16 × 3/4 (120 × 75 × 19)
Weight: oz. (g)	4 (120)

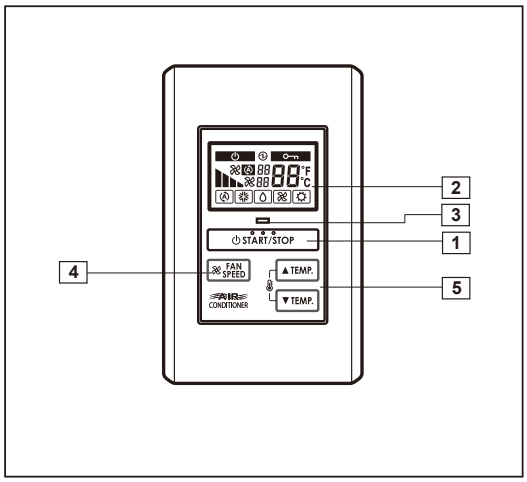
CONTROL SYSTEM

2-8-2. MODEL: UTY-RHKU

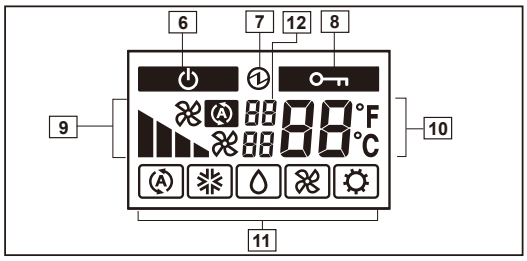
This controller cannot select mode. An additional controller is required for the user to select heating or cooling mode.

- Easy operation.
- Built-in Backgroud Light function.
- Easy installation with a slim shape with no bulge in the back.
- Error history. (Last 16 error codes can be accessed.)
- Up to 16 indoor units can be simultaneously controlled.
- Can be installed onto SW-BOX. (applies to European and other country's standard)
- Concentrates on the basic operations such as Start/Stop, Fan Control, and Temperature Setting.

■ FUNCTIONS



Display panel



1 START/STOP button
Pressed to start and stop operation.

2 Display with backlight
Lights during operation.

3 Operation lamp
Lights during operation.

4 Fan control button
Selects the fan speed

5 Set temperature button
Selects the setting temperature.

6 Standby display
Indicates during the oil recovery and defrosting operation.

7 Power source display
Indicates the main power ON.

8 Central control display
Indicates when function is locked from Display with backlight Touch Panel Controller or System Controller.

9 Fan speed display (AUTO, HIGH, MED, LOW).

10 Set temperature
Indicates Error history number. *1
Indicates Indoor unit address. *2

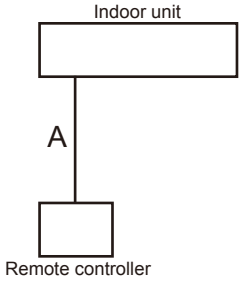
11 Operating mode display (AUTO *1, COOL, DRY, FAN *2, HEAT *3).

12 (Upper) Indicates the error code *1, *3 / the refrigerant system address. *2
(Lower) Indicates the remote controller address. *1, *2, *3

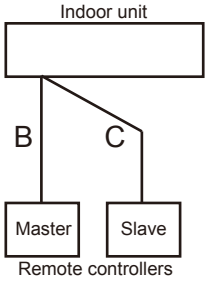
*1 : "AUTO" is not available for a heat pump model unless it is set up master indoor unit.
*2 : "FAN" is not available for a heat pump model
*3 : "HEAT" is not available for a cooling only model
*4 : during Error code history display mode.
*5 : during address display mode.
*6 : during self Diagnosis mode.

■ SYSTEM DIAGRAM

● 1 remote controllers



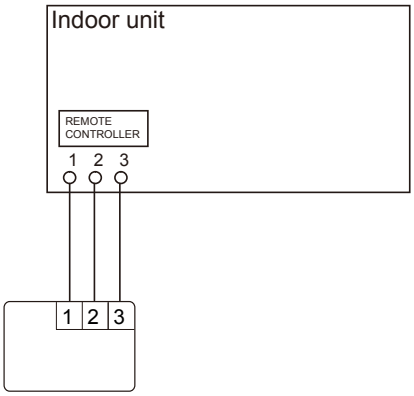
● 2 remote controllers



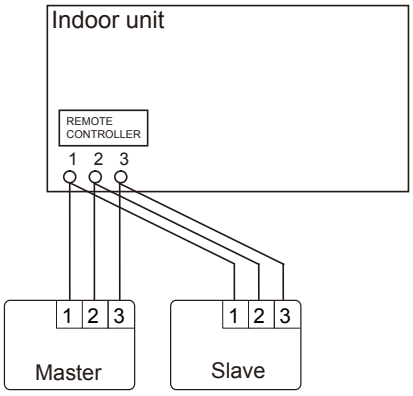
A , B , C : Remote controller cable.
Refer to chapter 6. 4-4 for detail specifications.
A ≤ 1,640 ft. (500 m) ; B+C≤ 1,640 ft. (500 m)

■ ELECTRICAL WIRING

● 1 remote controller



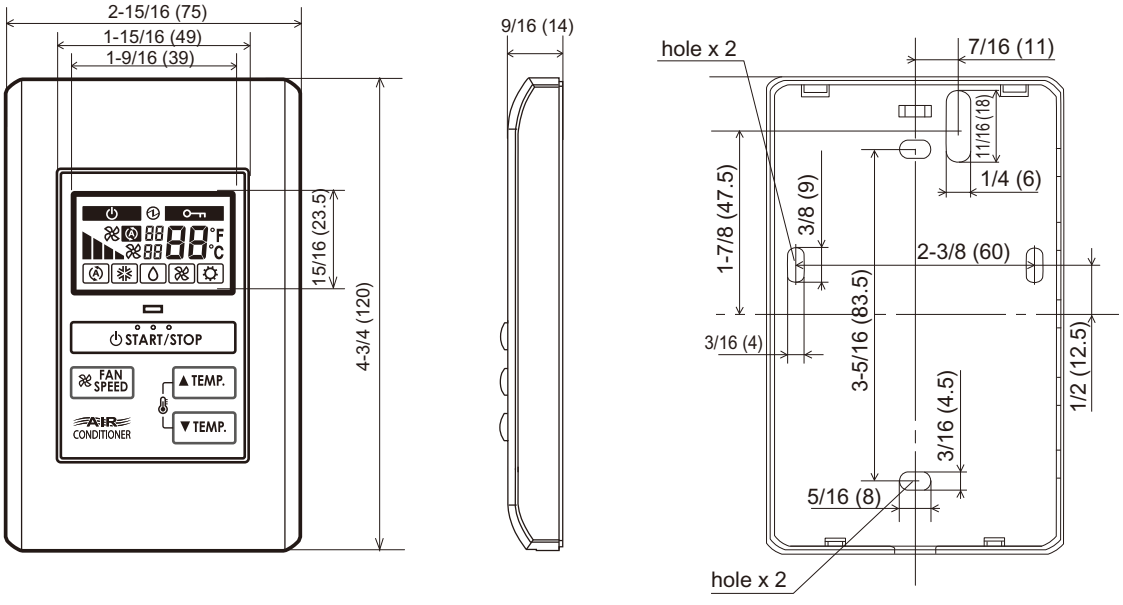
● 2 remote controllers



1 (RED) : 12 V
2 (WHITE) : Signal
3 (BLACK) : COM

■ DIMENSIONS

Unit : in. (mm)



Front View Side View Rear View

■ INSTALLATION

● Connection Pattern

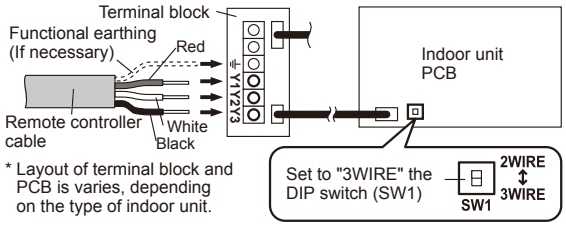
NOTE: Connection pattern is different according to type of Indoor unit.

Indoor unit types	Connection Pattern
All Cassette type	Pattern A
All Duct type	
All Ceiling type	
Wall Mounted type	Pattern B

● Pattern A

Connect the end of remote controller cable directly to the exclusive terminal block.

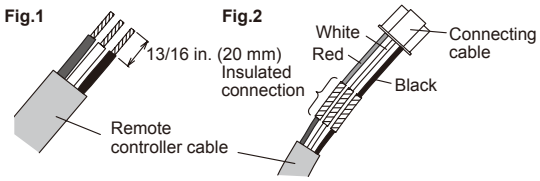
Set the DIP switch (SW1) to "3WIRE" on the PCB of the indoor unit.



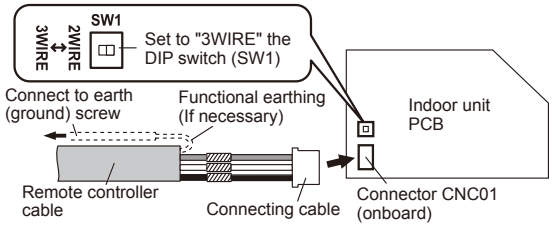
NOTE: The equipment may fail if it is connected to the outdoor unit or the power supply terminal block.

● Pattern B

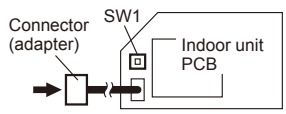
1) Use a tool to cut off the terminal on the end of the remote controller cable, and then remove the insulation from the cut end of the cable as shown in Fig. 1. Connect the remote controller cable and connecting cable as shown in Fig. 2. Be sure to insulate the connection between the cables.



2) Connect the remote controller cable to the connecting cable, and insert it to the connector. Set the DIP switch (SW1) to "3WIRE" on the PCB of the indoor unit.

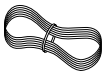
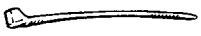


* Layout of Connector and PCB varies, depending on the type of indoor unit



CONTROL SYSTEM

■ PACKING LIST

Name and shape	Quantity	Application
Remote controller cable [33 ft. (10 m)] 	1	For connecting the remote controller
Screw (M4 × 16 mm)	2	For installing the remote controller
Cable Tie 	1	For securing controller cable
Installation manual	1	
Operating manual	1	

■ WIRING SPECIFICATIONS

Use	Size	Wire type	Remarks
Remote controller cable	22AWG ($0.33\ mm^2$)	Polar 3 core	Use sheathed PVC cable.

■ SPECIFICATIONS

Model name	UTY - RHK∗
Dimensions [H × W × D]: in. (mm)	4-3/4 × 2-15/16 × 9/16 (120 × 75 × 14)
Weight: oz. (g)	3 (90)

CONTROL SYSTEM

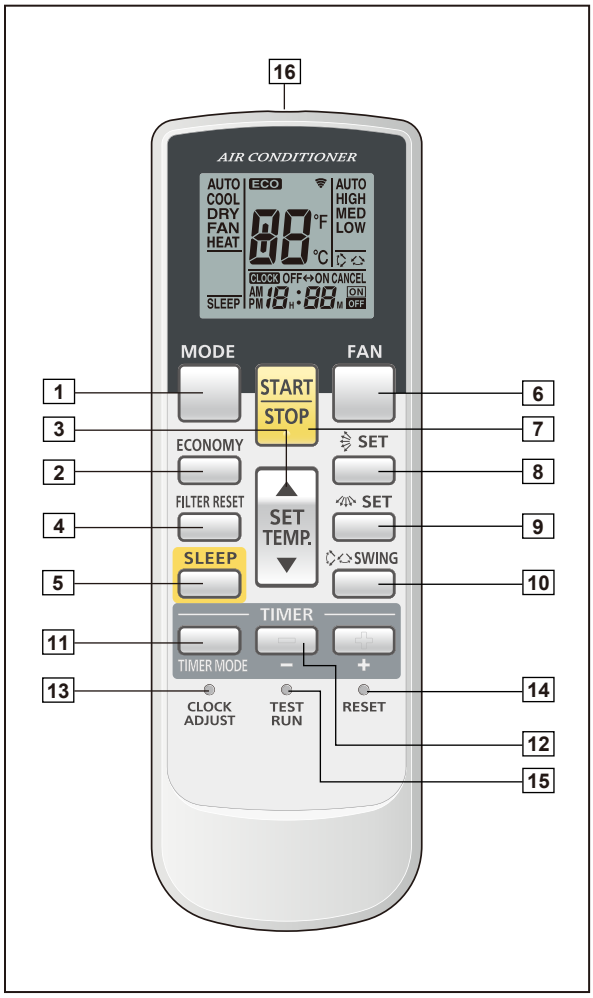
2-9. WIRELESS REMOTE CONTROLLER

■ MODEL: UTY-LNHU

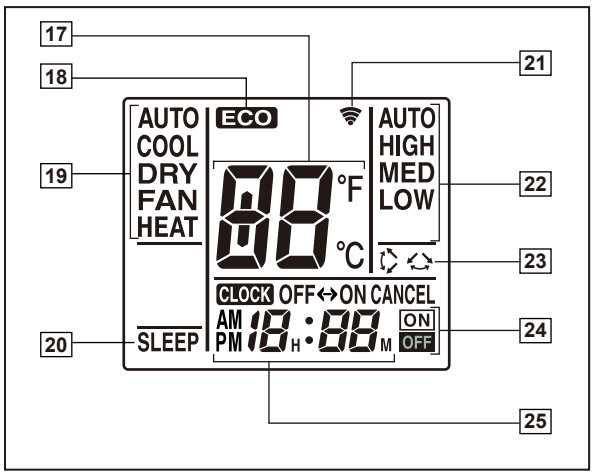
- Four kinds of timer setup (ON / OFF / PROGRAM / SLEEP) are possible.
- Up to 16 indoor units connected within the remote controller group can be simultaneously controlled.
- Can be used jointly with wired remote controllers .
- Easy to change custom code (4 patterns).

CONTROL SYSTEM

■ FUNCTIONS



Display panel



1 OPERATION MODE button
Selects the operating mode (AUTO, COOL, DRY, FAN, HEAT).
/Start / end R.C. custom code change. (Max 4 types)

2 Economy button

3 Set temp. button (▲ / ▼)
Set remote controller custom code buttons
Sets the indoor temp./ Sets R.C. custom code.

4 Filter reset button

5 Sleep button
Pressed to select sleep timer.

6 Fan button
Selects the fan speed (AUTO, HIGH, MED, LOW).

7 START/STOP button
Pressed to start and stop operation.

8 Set button (Vertical airflow)
Airflow direction vertical set button.

9 Set button (Horizontal airflow)
Airflow direction horizontal set button.

10 Swing button
Airflow direction swing button.

11 Timer mode button
Pressed to select the timer mode. (OFF TIMER, ON TIMER, PROGRAM TIMER, TIMER RESET)

12 Timer set (+ / -) button
Sets the current time and on-off time.

13 Clock adjust button
Sets the current time.

14 Reset button
Used when replacing batteries.

15 Test run button
Used when testing the air conditioner after installation.

16 Signal transmitter

17 Temperature set display

18 Economy display

19 Operating mode display

20 Sleep display

21 Transmit indicator

22 Fan speed display

23 Swing display

24 Timer mode display

25 Clock display

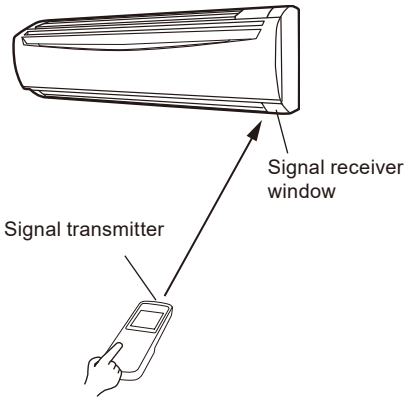
*1 : "AUTO" is not available for a heat pump model unless it is set up master indoor unit.

*2 : "FAN" is not available for a heat pump model

*3 : "HEAT" is not available for a cooling only model

CONTROL SYSTEM

■ SYSTEM DIAGRAM

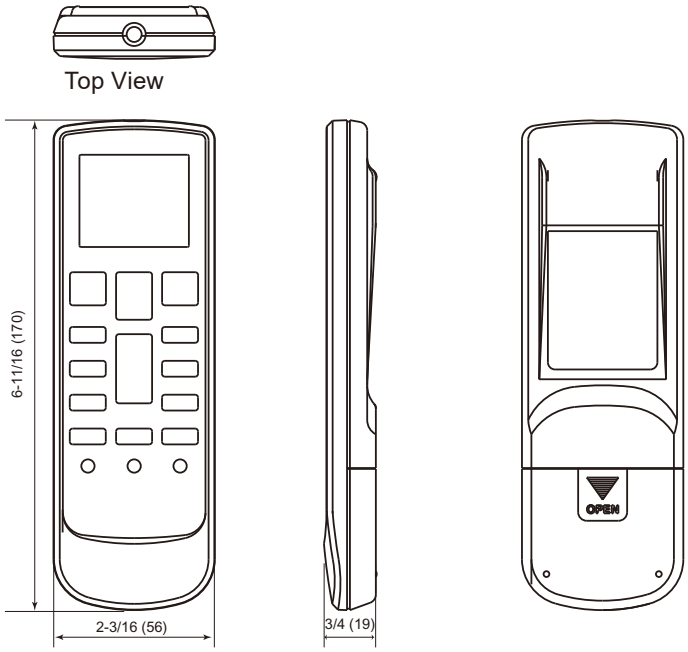


- Control signal might not be recognized in following cases:
  (i) A curtain or a wall, etc. exists between transmitter and receiver.
  (ii) There is an instant-start type (inverter type, etc.) fluorescent lamp in the room.
- Air conditioner might not work correctly when strong light hits the signal receiver window. Shut off the direct sunlight and also make illuminator far away from the receiver window.

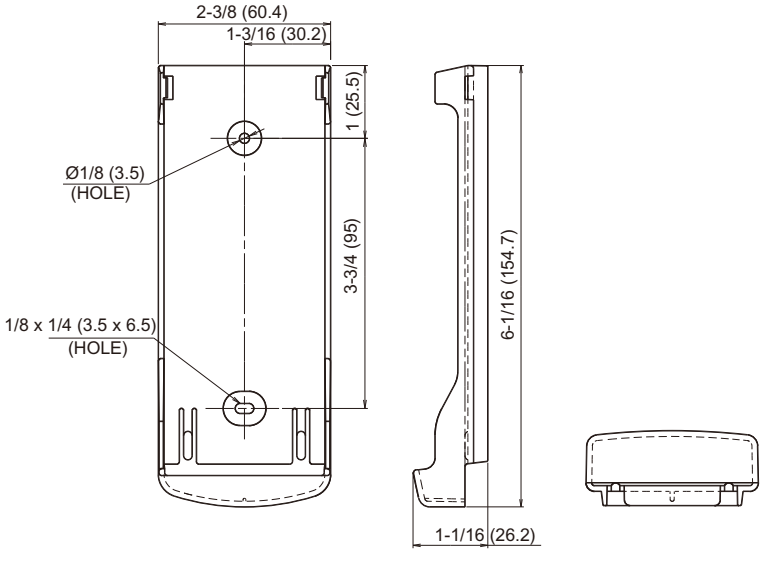
■ DIMENSIONS

● Controller

Unit : in. (mm)

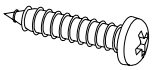


● Holder



CONTROL SYSTEM

■ PACKING LIST

Name and shape	Quantity	Application
Installation manual	1	
Operating manual	1	
Remote controller holder	1	Use as remote controller holder
Screw (M3 × 12 mm) 	2	For remote controller holder installation
Battery [1.5V (R03 / AAA)]	2	For remote controller

■ SPECIFICATIONS

Model name	UTY - LNH∗
Dimensions [H × W × D]: in. (mm)	6-11/16 × 2-3/16 × 3/4 (120 × 75 × 14)
Weight (w/o batteries): oz. (g)	3 (85)

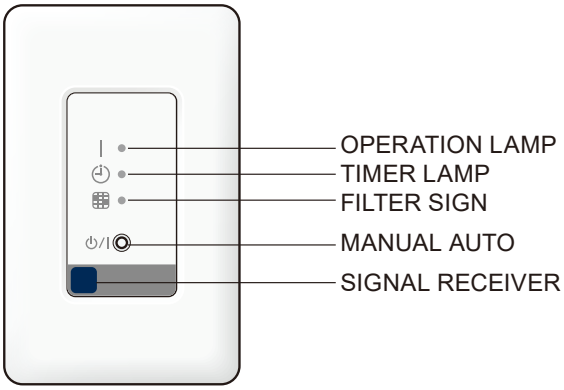
CONTROL SYSTEM

2-10. IR RECEIVER UNIT (for ALL DUCT TYPE)

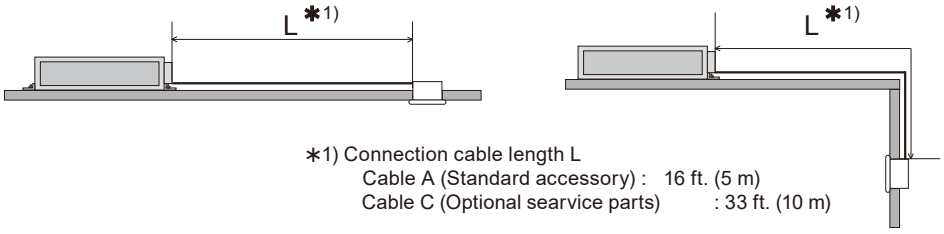
■ MODEL: UTB-YWC

Duct type indoor unit can be controlled with wireless remote controller if the IR receiver unit is used.

■ FUNCTIONS



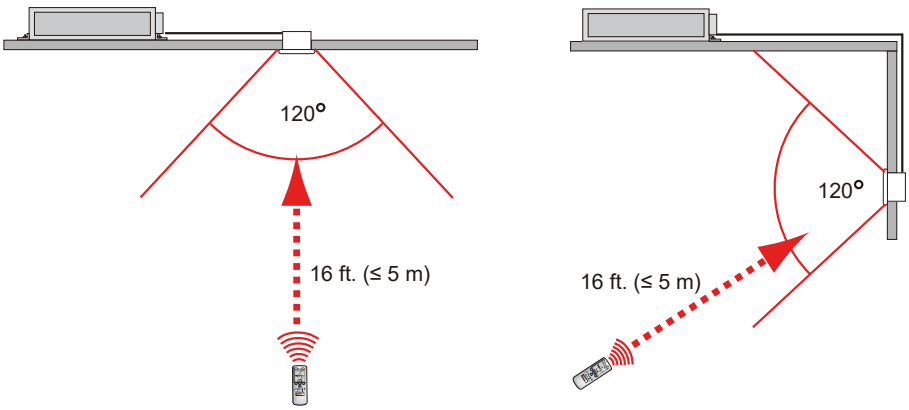
■ SYSTEM DIAGRAM



✱1) Connection cable length L
Cable A (Standard accessory) : 16 ft. (5 m)
Cable C (Optional searvice parts) : 33 ft. (10 m)

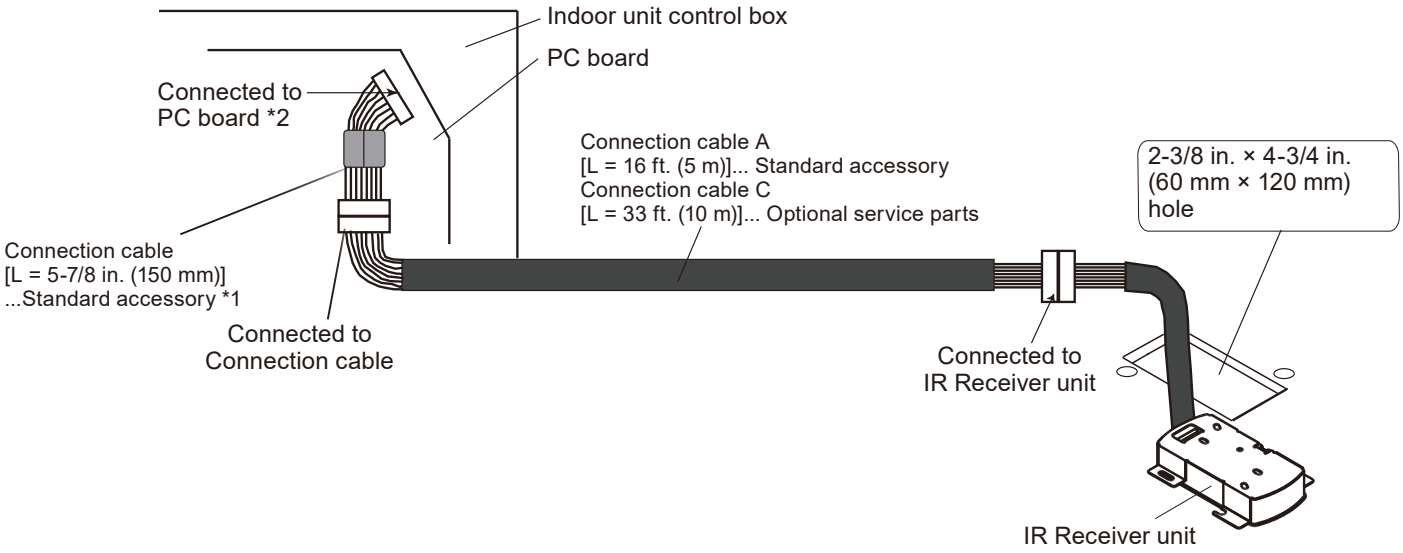
● ATTACHMENT RANGE

● SIGNAL ANGLE



CONTROL SYSTEM

■ ELECTRICAL WIRING

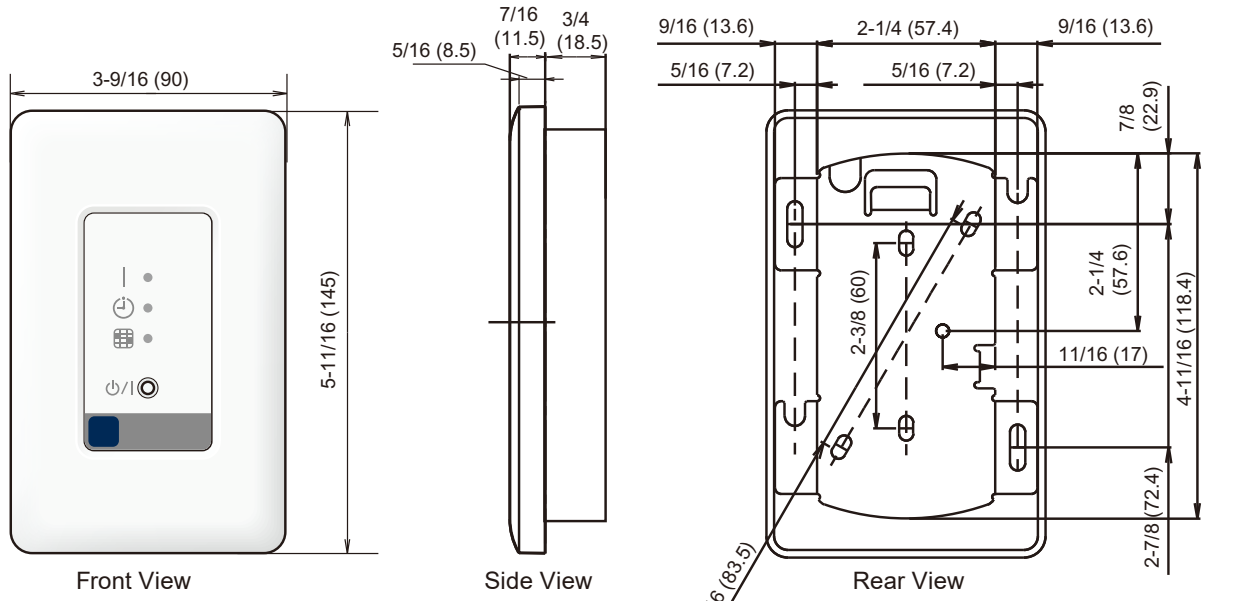


*1 Connection cable	Connection cable D
*2 Connected to PC board	CN18

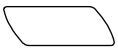
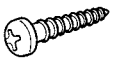
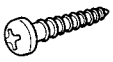
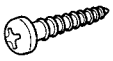
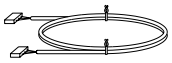
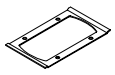
CONTROL SYSTEM

■ DIMENSIONS

Unit: in. (mm)



■ PACKING LIST

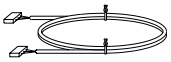
Name and shape	Quantity	Application
Installation manual	1	
Cover	1	For receiver unit
Insulation 	1	For receiver unit
Cable Tie	Small:1 Medium:1	For receiver unit
Screw (M4 × 20 mm) 	2	For installing receiver unit to wall, etc.
Screw (M4 × 12 mm) 	1	For attaching the hook metal to the holder cover
Screw (M4 × 10 mm) 	2	For attaching the hook metal to the indoor unit
Connection cable A (16 ft. [5 m]) 	1	For connecting PCB of indoor unit to receiver unit
Connection cable B (5-7/8 in. [0.15 m])	1	For Compact Duct, Low Static Pressure Duct, Duct, and High Static Pressure Duct type
Connection cable D (5-7/8 in. [0.15 m])	1	For Slim Duct type
Hook metal	1	For installing receiver unit to indoor unit
Bracket (cover) 	1	For receiver unit

■ SPECIFICATIONS

Model name	UTB - YWC
Dimensions [H × W × D]: in. (mm)	5-11/16 × 3-9/16 × 1-3/16 (145 × 90 × 30)
Weight: oz. (g)	5 (150)

■ OPTIONAL SERVICE PARTS

Use the parts number shown below to order the cable from your sales representative.
Select shielded type conncetion cable in accordance with regional cable standard.

Name and shape	Type	Parts No.
Connection cable C (33 ft. [10 m]) 	Non-shielded	9378143012
	Shielded	9378143036

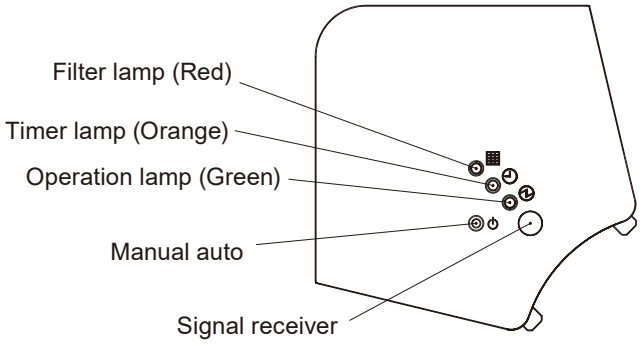
CONTROL SYSTEM

2-11. IR RECEIVER UNIT (for CASSETTE TYPE)

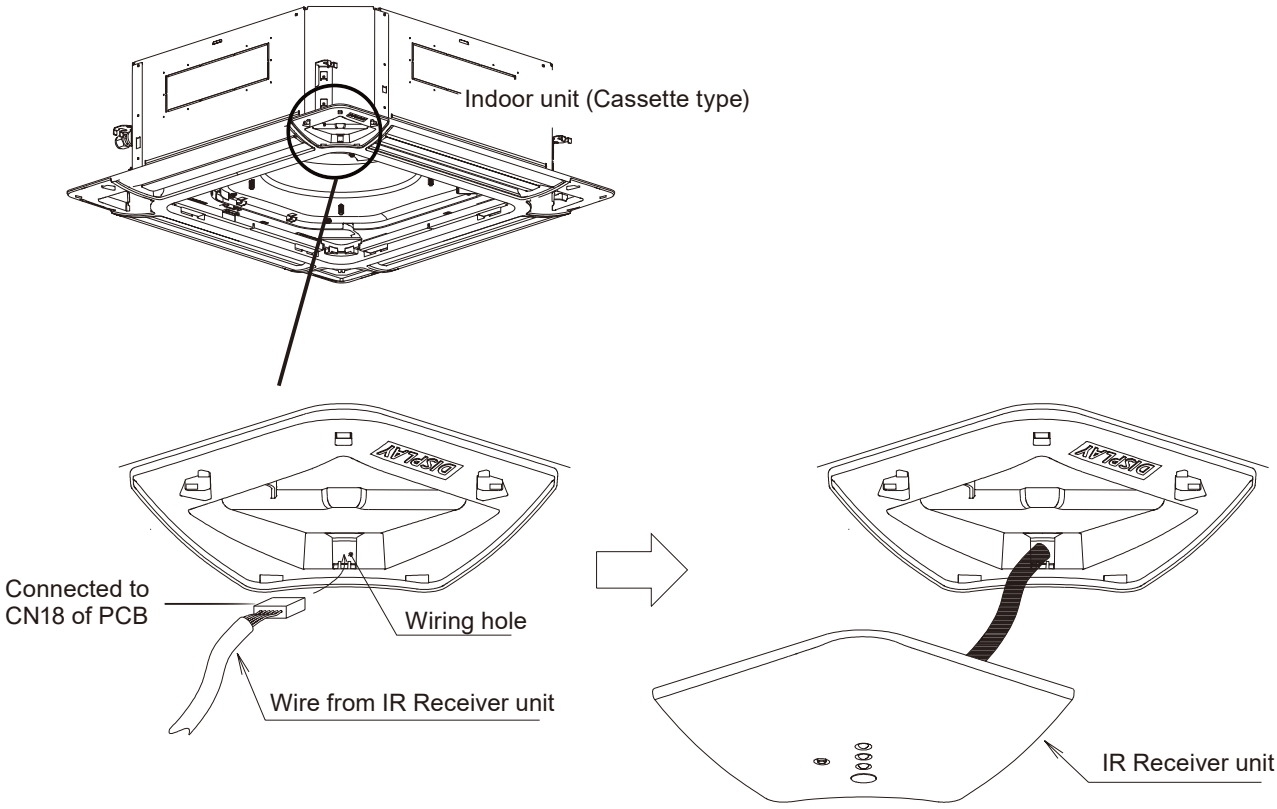
■ MODEL: UTY-LRHYB1

Cassette type indoor unit can be controlled with wireless remote controller if the IR receiver unit is used.

■ FUNCTIONS



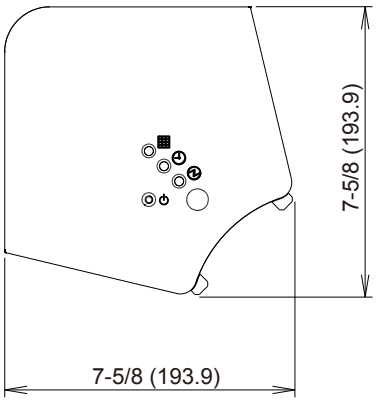
■ ELECTRICAL WIRING



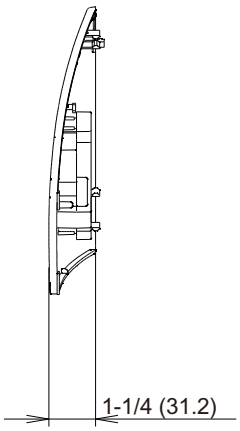
CONTROL SYSTEM

■ DIMENSIONS

Unit : in. (mm)



Front View



Side View

■ PACKING LIST

Name and shape	Quantity	Application
Installation manual	1	
Strap	1	Prevent receiver kit from falling down

■ SPECIFICATIONS

Model name	UTY-LRHYB1
Dimensions [H × W × D]: in. (mm)	7-5/8 × 7-5/8 × 1-1/4 (193.9 × 193.9 × 31.2)
Weight: oz. (g)	5 (140)

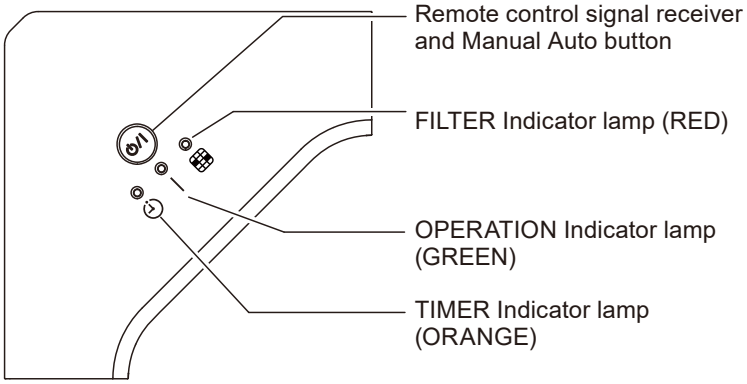
CONTROL SYSTEM

2-12. IR RECEIVER UNIT (for CIRCULAR FLOW CASSETTE TYPE)

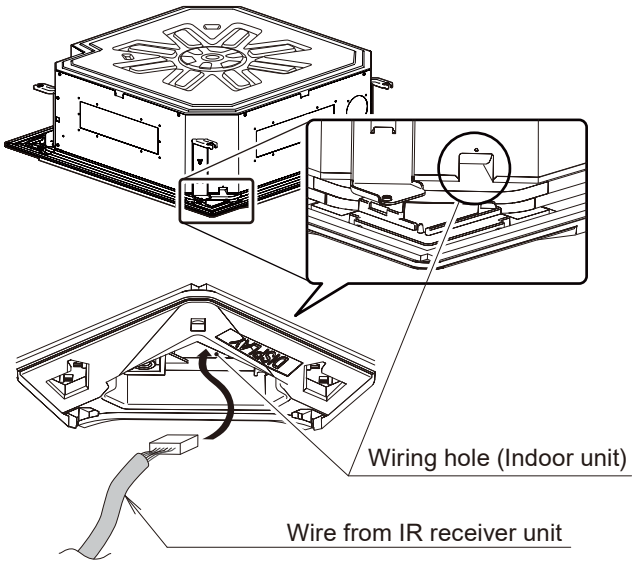
■ MODELS: UTY-LBHXD

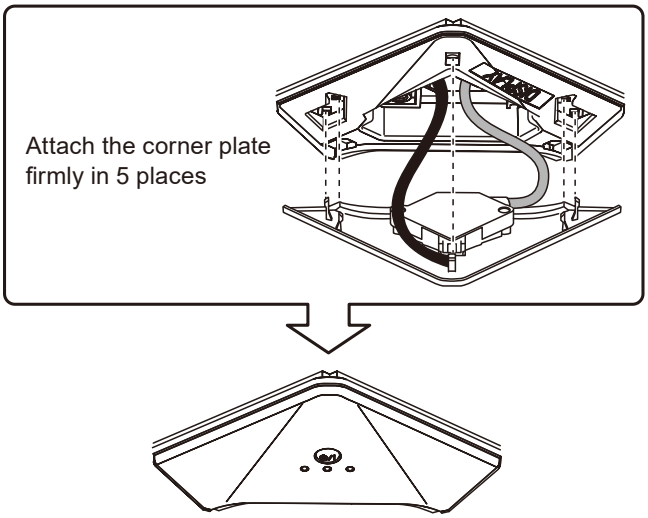
Cassette type indoor unit can be controlled with wireless remote controller if the IR receiver unit is used.

■ FUNCTIONS



■ ELECTRICAL WIRING

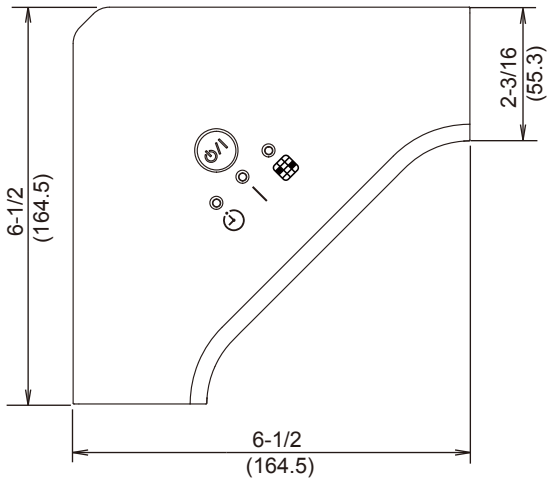




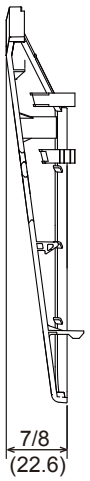
CONTROL SYSTEM

■ DIMENSIONS

Unit: in. (mm)



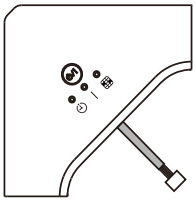
Front View



Side View

CONTROL SYSTEM

■ PACKING LIST

Name and shape	Quantity	Application
IR receiver unit 	1	For receiving the signal from the remote control unit
Strap	1	Prevent IR receiver unit from falling down
Cable tie	2	For electrical wiring

■ SPECIFICATIONS

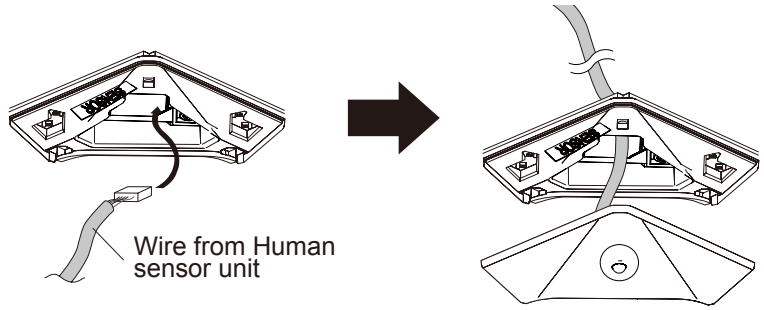
Model name	UTY - LBHXD
Dimensions [H × W × D]: in. (mm)	6-1/2 × 6-1/2 × 7/8 (164.5 × 164.5 × 22.6)
Weight: oz. (g)	4 (110)

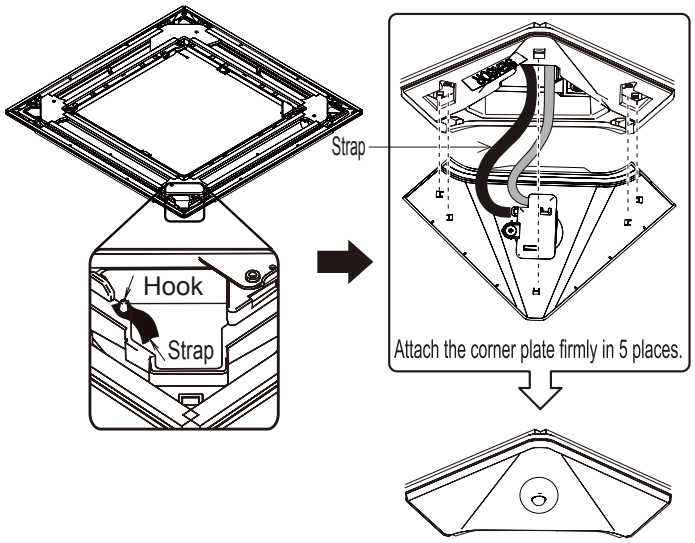
2-13. HUMAN SENSOR KIT (for CIRCULAR FLOW CASSETTE TYPE)

■ MODEL: UTY-SHZXC

Motion sensor save operation catches the movements of people for wide area and operation stop is also judged automatically.

■ ELECTRICAL WIRING

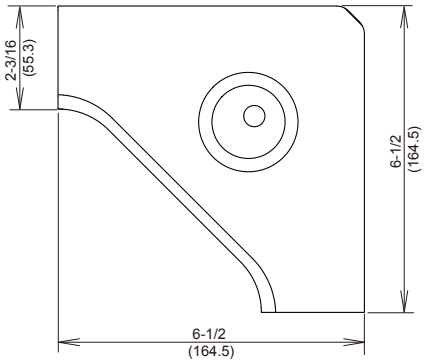




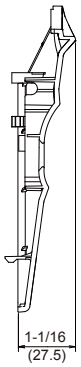
CONTROL SYSTEM

■ DIMENSIONS

Unit: in. (mm)

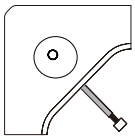
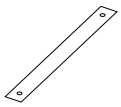


Front View



Side View

■ PACKING LIST

Name and shape	Quantity	Application
Human sensor unit 	1	For detection of movement
Cable tie	3	For binding wires
Strap 	1	To prevent Human sensor unit from falling
Insulation	3	To fasten the Human sensor wire

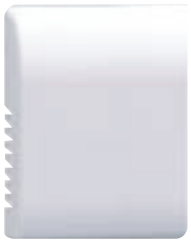
■ SPECIFICATIONS

Model name	UTY-SHZXC
Dimensions [H × W × D]: in. (mm)	6-1/2 × 6-1/2 × 1-1/16 (164.5 × 164.5 × 27.5)
Weight: oz. (g)	4 (110)

CONTROL SYSTEM

2-14. REMOTE SENSOR UNIT

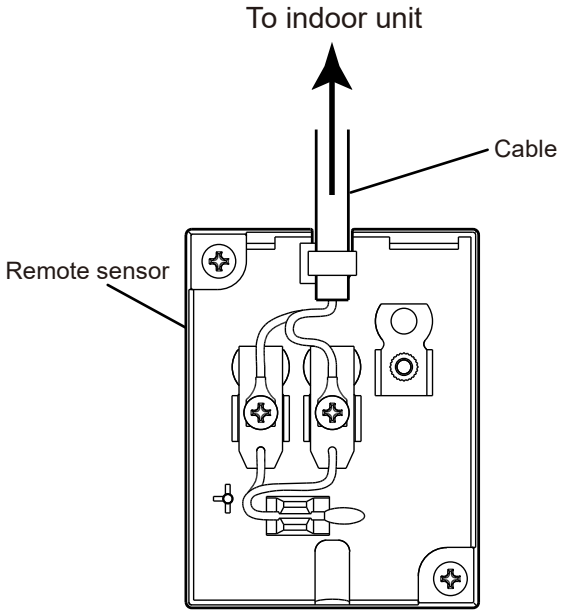
■ MODEL: UTD-XSZX



The remote sensor unit allows for flexible temperature sensing for optimum temperature control.

■ ELECTRICAL WIRING

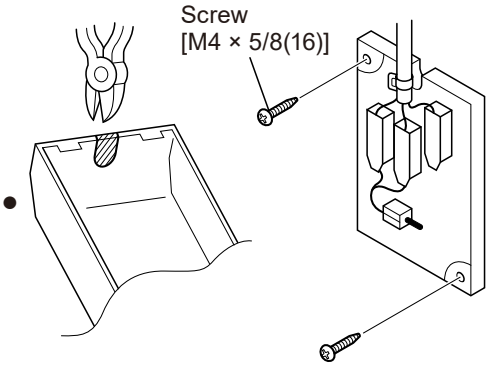
- Remove the screws from the remote sensor, and remove the cover.
- Connect the cable to the remote sensor as shown below.
- Ensure that the wires do not contact each other.

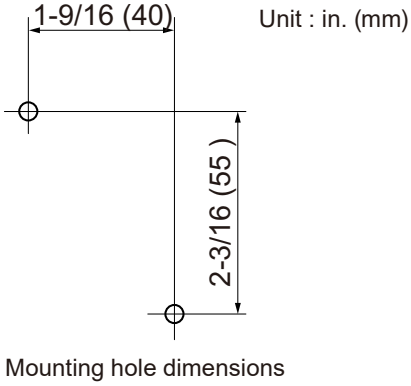


■ INSTALLATION

● When the cable is attached to the wall

- Remove the material covering the wiring penetration (thin material) in the cover of the sensor unit with a pair of cutters. The cable passes through this hole.
- Now the remote sensor on the wall using the screws.

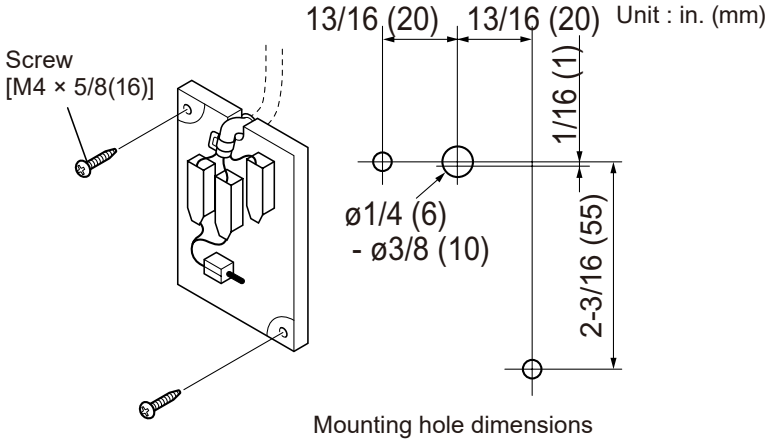




Mounting hole dimensions

● When the cable is buried in the wall

- Remove the material (thinner than the surrounding material) in the wiring hole in the remote sensor using a pair of cutters.
- Drill a hole in the wall for the cable.
- Seal the area around the cable penetration with putty.



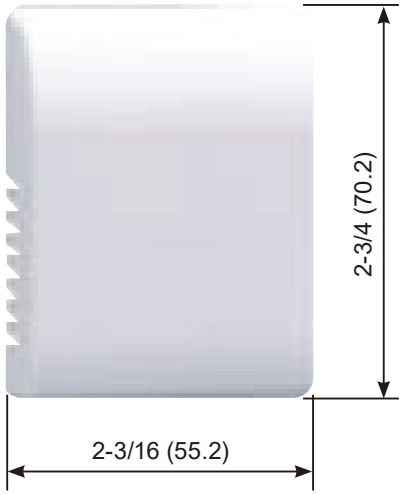
Mounting hole dimensions

Finish

- Fit the cover on the remote sensor and screw it in place.

CONTROL SYSTEM

■ DIMENSIONS



■ PACKING LIST

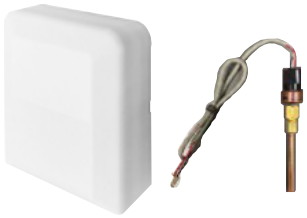
Name and shape	Quantity	Application
Installation manual	1	
Cable [33 ft. (10 m)]	1	
Screw (M4 × 16 mm)	2	
Screw (M4 × 10 mm)	2	
Cord clamp	1	

■ SPECIFICATIONS

Model name	UTY-XSZX
Dimensions [H × W × D]: in. (mm)	2-3/4 × 2-3/16 × 11/16 (70.2 × 55.2 × 18)

2-15. PRESSURE SENSOR KIT

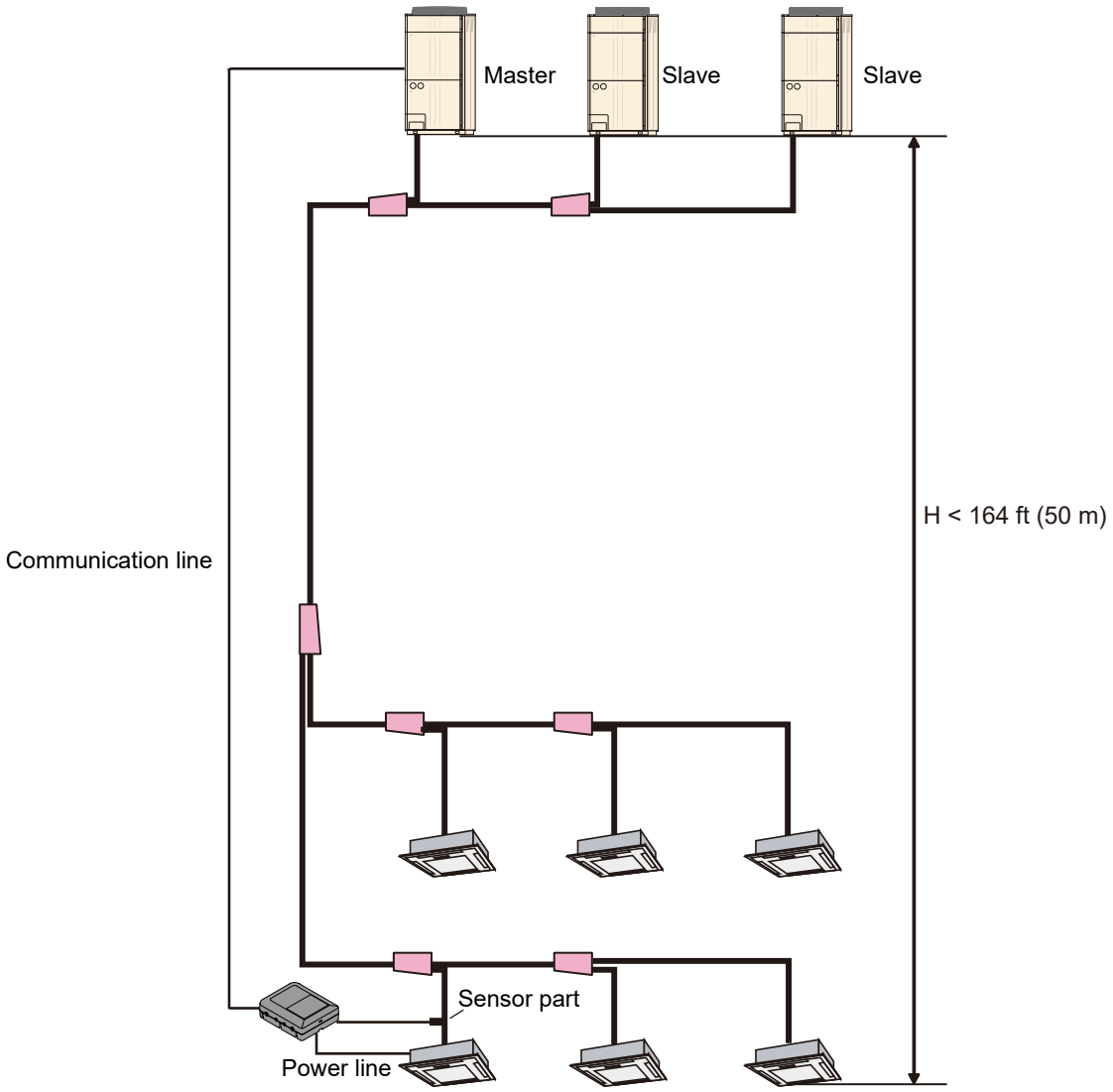
■ MODEL: UTY-SPWX



- Only for V-II series system
- It is used when the outdoor unit is installed higher than the indoor unit and
  the height difference exceeds 164ft (50m).
- Attach the sensor part to the liquid pipe near the indoor unit.
- The communication line between the control unit and the outdoor unit is connected to the master outdoor unit (the maximum length is 250 m).

■ SYSTEM DIAGRAM

● Proper system diagram



CONTROL SYSTEM

■ SPECIFICATIONS

● Control unit

Power supply (V)		DC 12
Current (A)		0.10
Power consumption (W)		1.2
Temperature [°F (°C)]	Operating	32 to 114 (0–46)
	Packaged	14 to 140 (-10–60)
Humidity (%)	Packaged	0–95 (RH) No condensation
Dimensions [H × W × D] [in (mm)]		1-11/16 × 4-5/8 × 5-1/2 (43 × 117 × 140)
Weight [g (oz)]		7 (200)
Network	The electrical characteristics	RS485
	Maximum cable length (m)	250

● Refrigerant pressure sensor

Power supply (V)		DC 5 ± 0.25
Current (mA)		10 or less
Pressure range (MPa)		0 to 5.0
Output voltage (V)		DC 0.5 to 4.5
Accuracy (%FS) at 1013hPa, at 5V Include thermal error		± 2.0 at -4 to 176 (-20 to 80°C)
Temperature [°F (°C)]	Ambient	-22 to 176 (-30–80)
	Fluid	-40 to 248 (-40–120)
Airtight pressure (MPa)		5.5
Test pressure (MPa)		7.5
Burst pressure (MPa)		25 or more

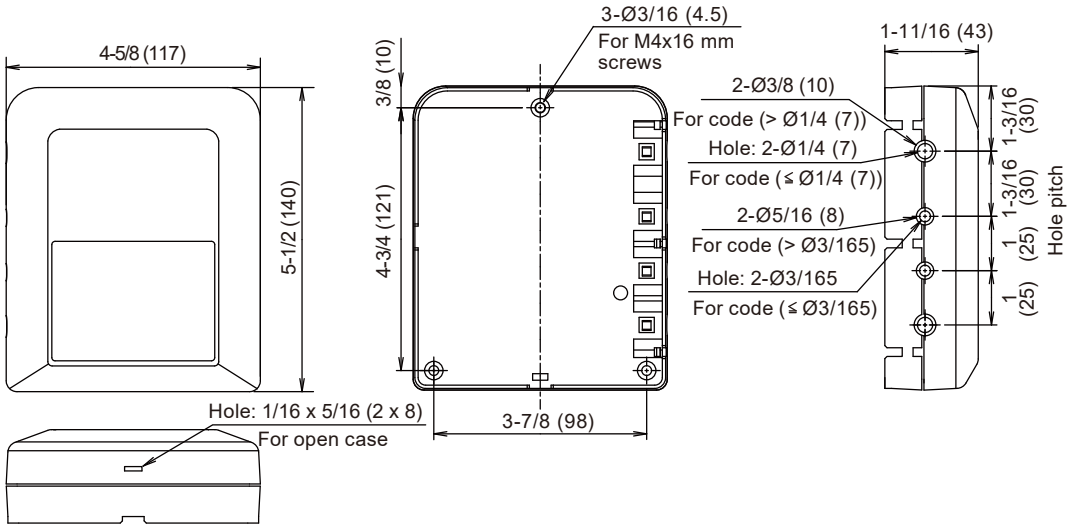
● Joint pipe

Applicable rifregrant	R410A
Airtight proof (MPa) The leakage rate shall be less than 1×10^{-5}mmHgl/s.	Add mixgass (N_2+R410A) pressure to 4.15
Airtight pressure (MPa)	4.15
Proof pressure (MPa)	6.23
Burst pressure (MPa)	12.6
Dimensions of pipe [L × D] [in (mm)]	2-12/16 × 1/4 (70 × Φ6.35)

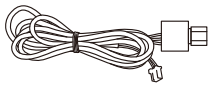
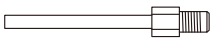
CONTROL SYSTEM

■ DIMENSIONS

Unit: in (mm)



■ PACKING LIST

Name and shape	Quantity	Application
Installation manual	1	
Cable tie	4	For fixing the cables inside the control unit.
Screw	3	For mounting the control unit.
Connector	1	For connecting the cable and attaching the board connector.
Refrigerant pressure sensor 	1	For refrigerant pressure measurement. The cable length is 5ft (1.6m).
Joint pipe 	1	For attaching the refrigerant pressure sensor to the refrigerant pipe.

CONTROL SYSTEM

■ WIRING SPECIFICATIONS

Use	Size	Cable type	Remarks
Power cable (using remote control cable)	16 to 22 AWG (0.33 to 1.25 mm²)	Non-polar 2 core, twisted pair sheathed PVC cable *	Maximum cable length: 32ft (10m)
Transmission cable	22 AWG (0.33 mm²)	22AWG LEVEL 4 (NEMA) non-polar 2core, twisted pair solid core diameter 0.65mm	LONWORKS® compatible cable

* : Use shielded cable in accordance with local rules for remote controller cable.

NOTE: Select a flexible cable that can be bound using cable ties from over the cable sheath inside this product.

● Maximum connectable number of remote controllers by cable size and length:

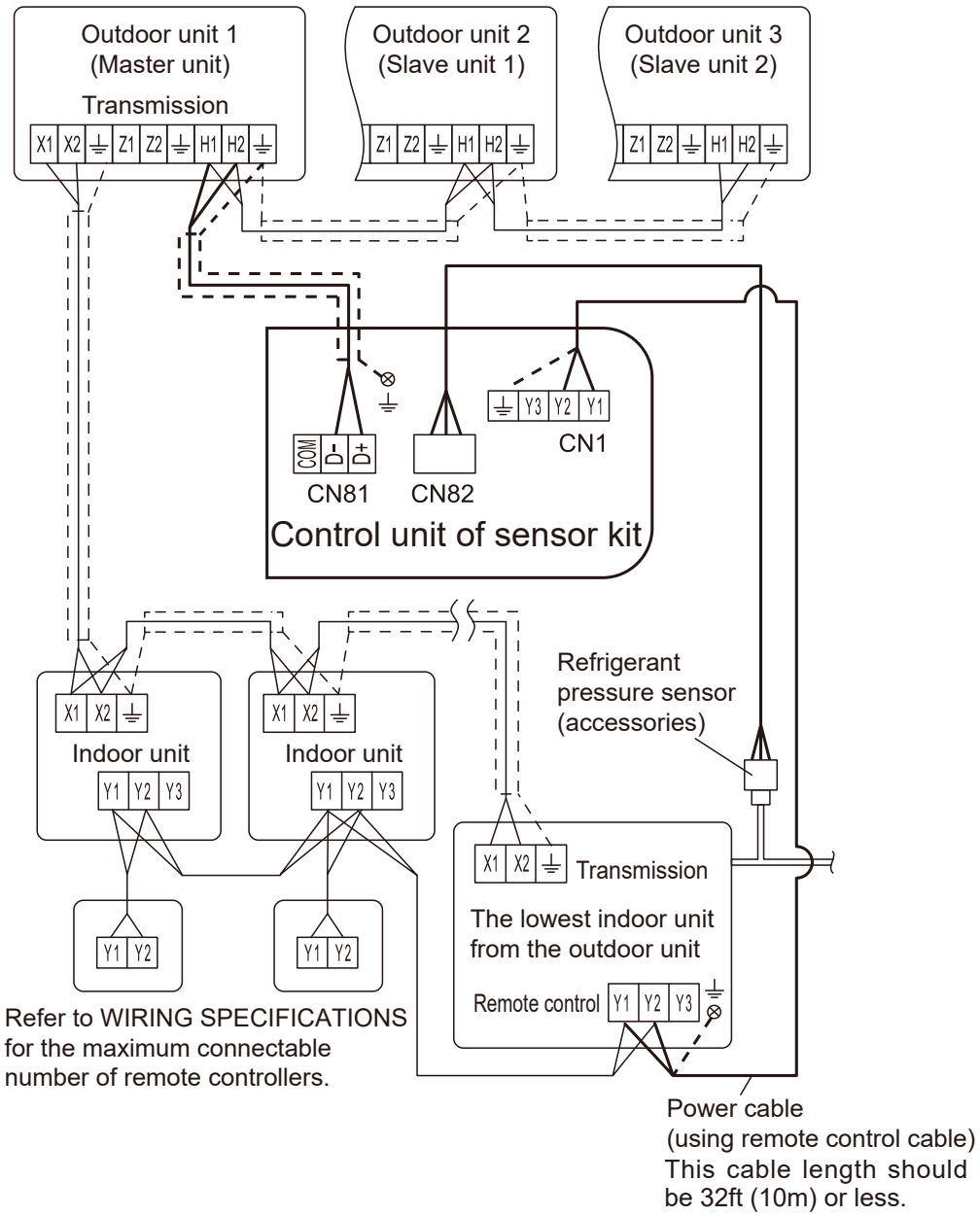
Cable size		Maximum connectable number of remote controllers		
AWG	mm²	L* ≤ 100 m	100 m < L* ≤ 250 m	250 m < L* ≤ 500 m
16	1.25	2	2	2
18	0.75 (1.25 > S* ≥ 0.75)	2	2	
20	0.5 (0.75 > S* ≥ 0.5)	2	Prohibited	
22	0.3 (0.5 > S* ≥ 0.3)	2		

NOTE: Cable size and length conditions within the remote controller group this product is connected:
Size and length of the cable connected to this product should be included.

CONTROL SYSTEM

■ WIRING DIAGRAM

Only one pressure sensor kit is installed in each refrigerant system.

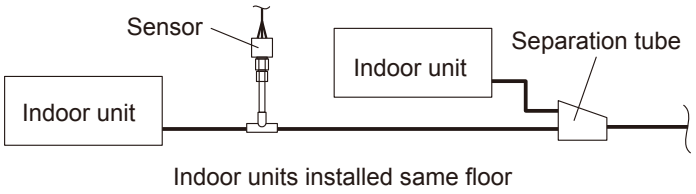


CONTROL SYSTEM

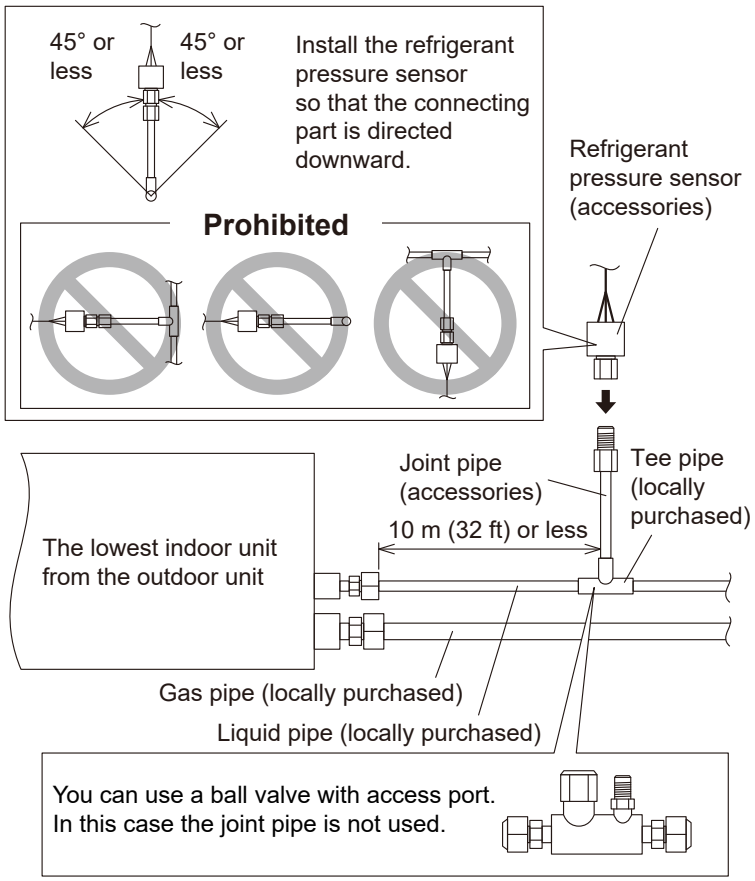
■ INSTALLING THE SENSOR

● Installing the refrigerant pressure sensor

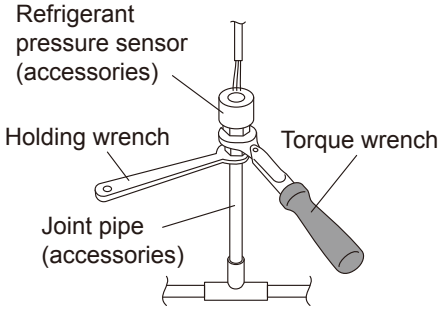
Installing the sensor between the indoor unit and the separation tube (or outdoor unit).



Indoor units installed same floor

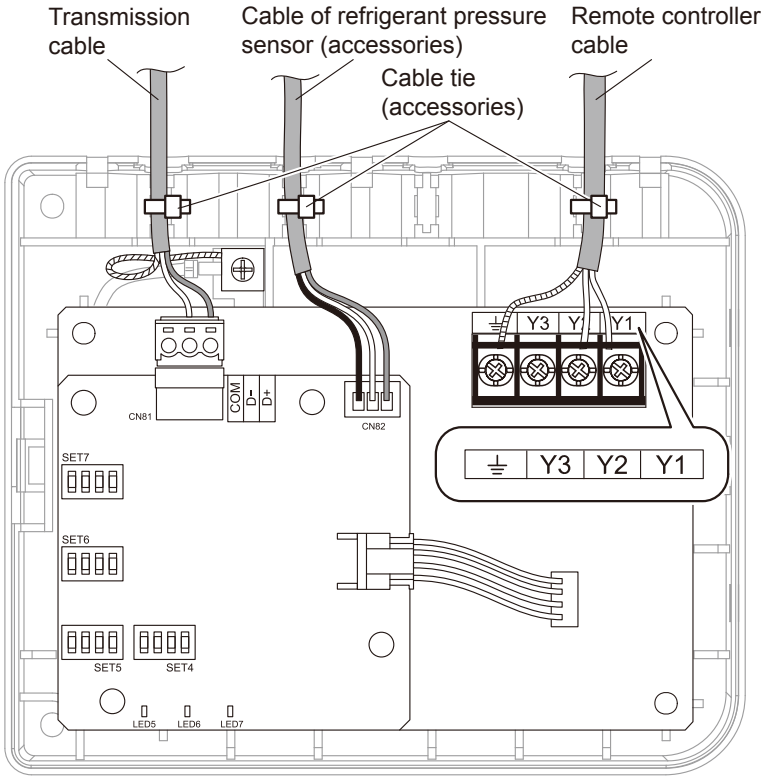


Tighten the refrigerant pressure sensor with a torque wrench and a holding wrench.

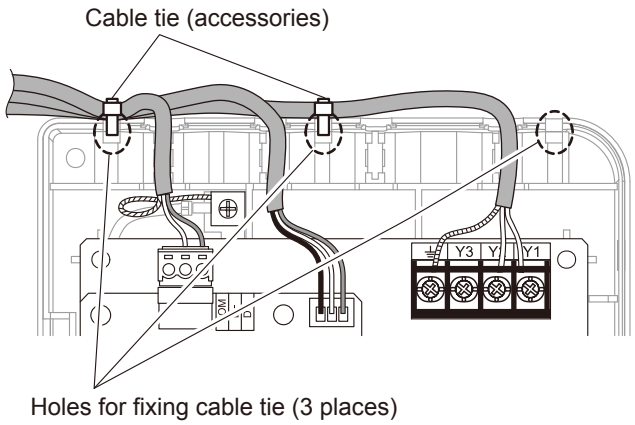


Tightening torque
11 ±1.1 lbf·ft (15 ±1.5 N·m)

■ INSTALLING THE CONTROLLER UNIT



Fix the cable with cable tie using 3 fixing holes.
Fix the connection cable even outside this product as necessary.



CONTROL SYSTEM

■ INSTALLATION

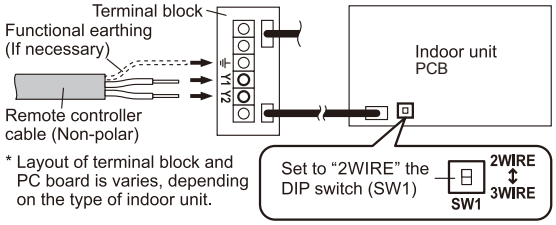
● Connection Pattern

NOTE: Connection pattern is different according to type of Indoor unit.

Indoor unit types	Connection Pattern
All Cassette type	Pattern A
All Duct type	
All Ceiling type	
All Compact Floor type	
Compact Floor type	
Wall Mounted type	Pattern B

● Pattern A

Connect the end of remote controller cable directly to the exclusive terminal block. Set to “2WIRE” the DIP switch (SW1) on the PCB of the indoor unit.



NOTE: The equipment may fail if it is connected to the outdoor unit or the power supply terminal block.

● Pattern B

1) Use a tool to cut off the terminal on the end of the remote controller cable, and then remove the insulation from the cut end of the cable as shown in Fig. 1. Connect the remote controller cable and connecting cable as shown in Fig. 2. Be sure to insulate the connection between the cables.

Fig.1

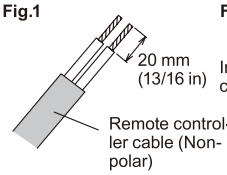
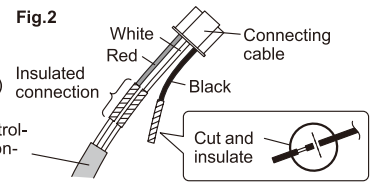
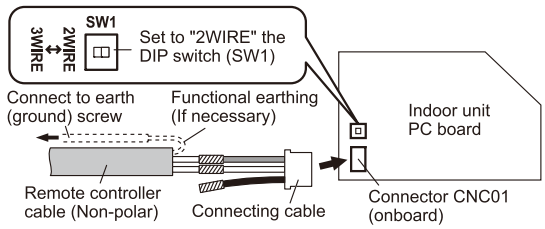


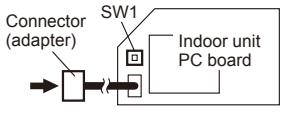
Fig.2



2) Insert connecting cable to the connector. Set to “2WIRE” the DIP switch (SW1) on the PC board of the indoor unit.



* Layout of Connector and PCB varies, depending on the type of indoor unit

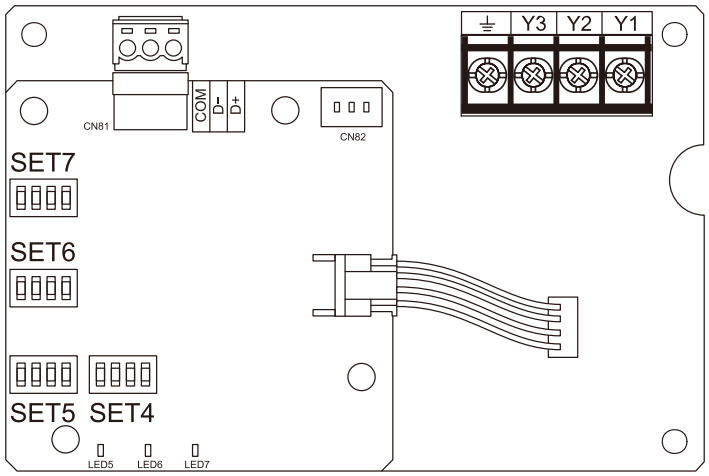


CONTROL SYSTEM

■ DIP SWITCH SETTING

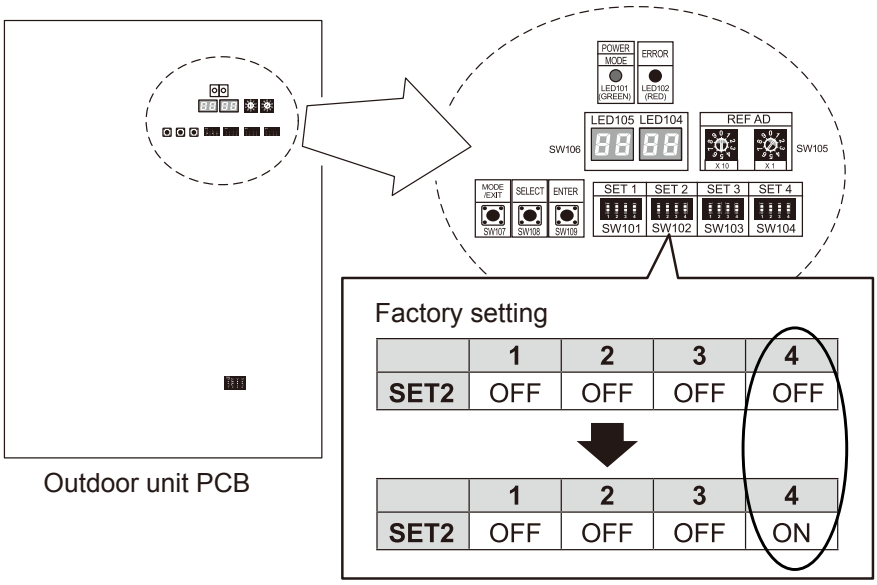
● Controller unit

Setting of DIP switch is unnecessary.



● Outdoor unit (Master unit only)

Change setting the DIP switch of the outdoor unit as shown below.



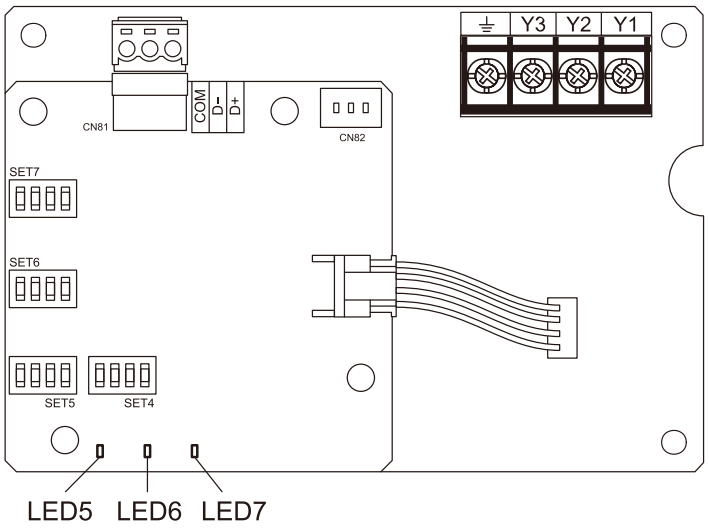
	1	2	3	4
SET2	OFF	OFF	OFF	OFF

	1	2	3	4
SET2	OFF	OFF	OFF	ON

CONTROL SYSTEM

■ LED DISPLAY

● Positions



● Normal code

Flashng	Flashng	Off	During initialization sequence
On	Off	Off	Normally operating

● Error code

● (1)	● (3)	○	Communication error between outdoor units
● (8)	● (6)	○	Outdoor unit pressure sensor error

● : 0.5s ON / 0.5s OFF
○ : 0.1s ON / 0.1s OFF
(N) : Number of flashing [Flashing N times (or once) per cycle]

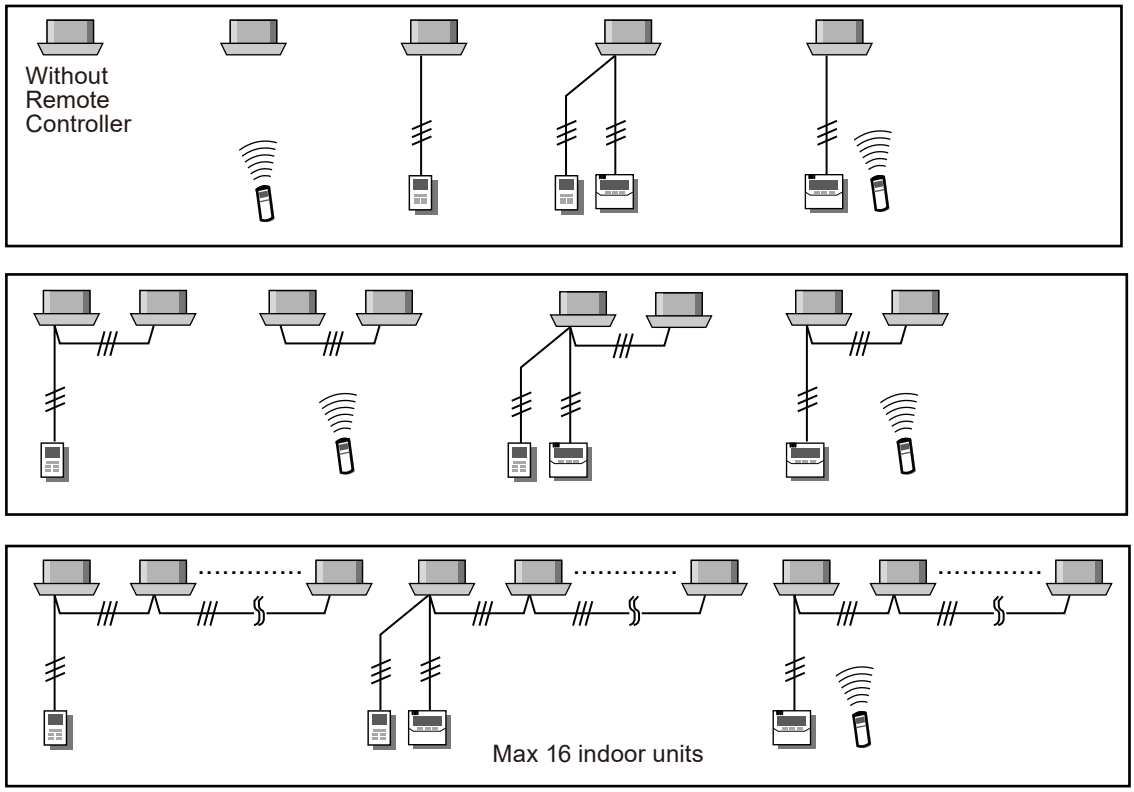
CONTROL SYSTEM

2-16. GROUP CONTROL METHOD

■ REMOTE CONTROLLER GROUP

Wired, Simple and Wireless Remote Controllers can be used simultaneously in the following combinations.

Example of combination for "Remote controller group"



Connectable indoor unit : 1-16
Connectable remote controller : 0 - 2

● Notes

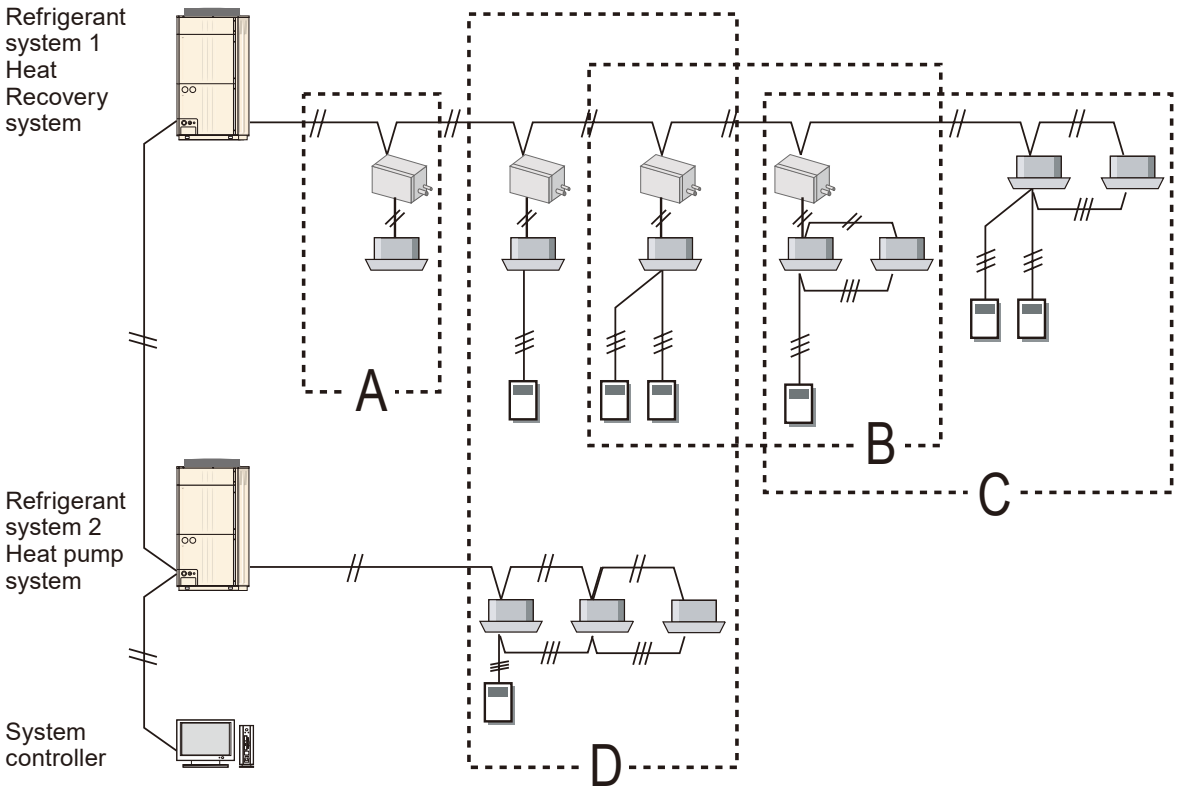
1. Indoor units in same remote controller group will be same operation.
2. "Remote controller group" spanning the refrigerant system is not allowed.
3. When using 2 remote controller.
   - Last command is priority. (operation mode might be fixed by system operation.)
   - Timer setting function become disable from slave remote controller or Wireless Remote Controller.

CONTROL SYSTEM

■ GROUP

This function is used when operating a multiple number of remote controller group at a time from the System Controller or Touch Panel Controller or Central Remote Controller.

● Example



Group A: "Group" is possible with only one indoor unit
Group B:"Group" is possible with spanning the RB groups.
Group C:"Group" is possible with spanning the RB group and indoor unit of cooling only type.
Group D:"Group" is possible with spanning the refrigerant systems.

- The contents of a setting may not be reflected by operational status. (B, C, D group)

CONTROL SYSTEM

2-17. COMPARISON TABLE OF CONTROLLERS

■ LIST OF CONTROLLER FUNCTION

Item		System Controller	System Controller Lite	Touch Panel Controller	Central Remote Controller	Wired Remote Controller (Touch panel)	Wired Remote Controller	Simple Remote Controller	Simple *1 Remote Controller	Wireless Remote Controller
Model		UTY-APGXZ1 UTY-APGX	UTY-ALGXZ1 UTY-ALGX	UTY-DTGYZ1 UTY-DTGY	UTY-DCGY	UTY-RNRUZ* UTY-RNRU	UTY-RNKU	UTY-RSRY (UTY-RSKU)	UTY-RHRY (UTY-RHKU)	UTY-LNHU
Max. controllable remote controller groups		1,600	400	400	100	1	1	1	1	1
Max. controllable indoor units		1,600	400	400	100	16	16	16	16	16
Max. controllable groups		1,600	400	400	16	—	—	—	—	—
Air conditioning control function	On / Off	●	●	●	●	●*2	●	●	●	●
	Operation mode setting	●	●	●	●	●	●	●	—	●
	Fan speed setting	●	●	●	●	●	●	●	●	●
	Room temp. setting	●	●	●	●	●	●	●	●	●
	Room temp. set point limitation	●	●	●	●	●	—	● (-)	● (-)	—
	Test operation	—	—	●	●	●	●	●	● (-)	●
	Up / down air direction flap setting	●	●	●	●	●	●	● (-)	● (-)	●
	Right / left air direction flap setting	●	●	●	●	●	●	—	—	●
	Group setting	●	●	●	●	—	—	—	—	—
	RC prohibition	●	●	●	●	—	—	—	—	—
	Anti freeze setting	●	●	●	●	●	—	—	—	—
	Away	—	—	—	—	●	—	—	—	—
	Economy mode setting	●	●	●	●	●	●	—	—	●
Display	Failure	●	●	●	●	●	●	●	●	—
	Defrosting	●	●	●	●	●	●	●	●	—
	Current time	●	●	●	●	●	●	—	—	●
	Day of week	●	●	●	—	●	●	—	—	—
	R.C. prohibition	●	●	●	●	●	●	●	●	—
	Cooling / heating priority	●	●	●	●	●	●	●	●	—
	Address display	●	●	●	●	●	●	●	●	—
	Room temp	—	—	—	—	●	—	● (-)	● (-)	—
	Multi language	●	●	●	●	●	—	—	—	—
	Summer time	●	●	●	●	●	—	—	—	—
	Name registration	●	●	●	●	●	—	—	—	—
	Backlight	—	—	●	●	●	—	●	●	—

*1: "Operation mode" setting is not available for this model.
*2: On/off setting of the economizer can be performed simultaneously.
●: Supported, ○: Supported soon, —: Not supported yet

CONTROL SYSTEM

Item			System Controller	System Controller Lite	Touch Panel Controller	Central Remote Controller	Wired Remote Controller (Touch panel)	Wired Remote Controller	Simple Remote Controller	Simple *1 Remote Controller	Wireless Remote Controller
Model			UTY-APGXZ1 UTY-APGX	UTY-ALGXZ1 UTY-ALGX	UTY-DTGYZ1 UTY-DTGY	UTY-DCGY	UTY-RNRUZ* UTY-RNRU	UTY-RNKU	UTY-RSRY (UTY-RSKU)	UTY-RHRY (UTY-RHKU)	UTY-LNHU
Timer	Schedule timer	Period	Year	Year	Year	Week	Week	Week	—	—	—
		On/Off, Temp, mode, times per day	144	144	20	20	8	4	—	—	—
	On / Off timer		—	—	—	—	●	●	—	—	●
	Sleep timer		—	—	—	—	—	—	—	—	●
	Program timer		—	—	—	—	—	—	—	—	●
	Auto off timer		—	—	—	—	●	—	—	—	—
	Day off		●	●	●	●	●	●	—	—	—
	Min. unit of timer setting (Minutes)		10	10	10	10	10 - 30	30	—	—	5
Control	Status monitoring system		●	●	●	●	—	—	—	—	—
	Electricity charge calculation		●	●	—	—	—	—	—	—	—
	Error history		●	●	●	●	●	●	—	—	—
	Emergency stop		—	—	●*3	●*3	—	—	—	—	—
	Control via internet		●	●	—	—	—	—	—	—	—
	E-mail notiffication for malfunction		●	●	—	—	—	—	—	—	—
	Key lock		● Password setting	● Password setting	● Password setting	● Password setting	● Child lock	—	—	—	—

*1: "Operation mode" setting is not available for this model.
*3: This function is available only through external input control.
●: Supported, ○: Supported soon, —: Not supported yet

CONTROL SYSTEM

3. ADAPTOR / CONVERTOR UNITS

The following types of convertors and adaptors are available.

- **Network Convertor (UTY-VTGX)**

  For connecting single split type system.

- **Network Convertor (UTY-VGGXZ1)**

  For connecting single split type system.
  (A change of DIP switch setting is necessary)

- **Modbus® Convertor for VRF (UTY-VMGX)**

  For connection between VRF network system and a Modbus® open network.

- **Network Convertor for LonWorks® (UTY-VLGX)**

  For connection between VRF network system and a LonWorks® open network for management of small to medium-sized BMS.

- **Thermostat Convertor (UTY-TTRX)**

  For control Fujitsu General products using a third-party thermostat controller.

- **BACnet® Gateway (UTY-VBGX : Hardware)**

  For connection between VRF network system to the BMS system using BACnet® protocol.

- **BACnet® Gateway (UTY-ABGXZ1, UTY-ABGX : Software)**

  The central control of maximum 1,600 indoor units can be realized by connecting the VRF network system to the BACnet®, a global standard for open networks.

- **Signal Amplifier (UTY-VSGXZ1)**

  When the total length of transmission line exceeds 1640ft. (500m) or the number of units exceeds 64, Signal amplifier will be necessary.

- **External Switch Controller (UTY-TERX, UTY-TEKX)**

  Air conditioner switching can be controlled by connecting other sensor switches.

CONTROL SYSTEM

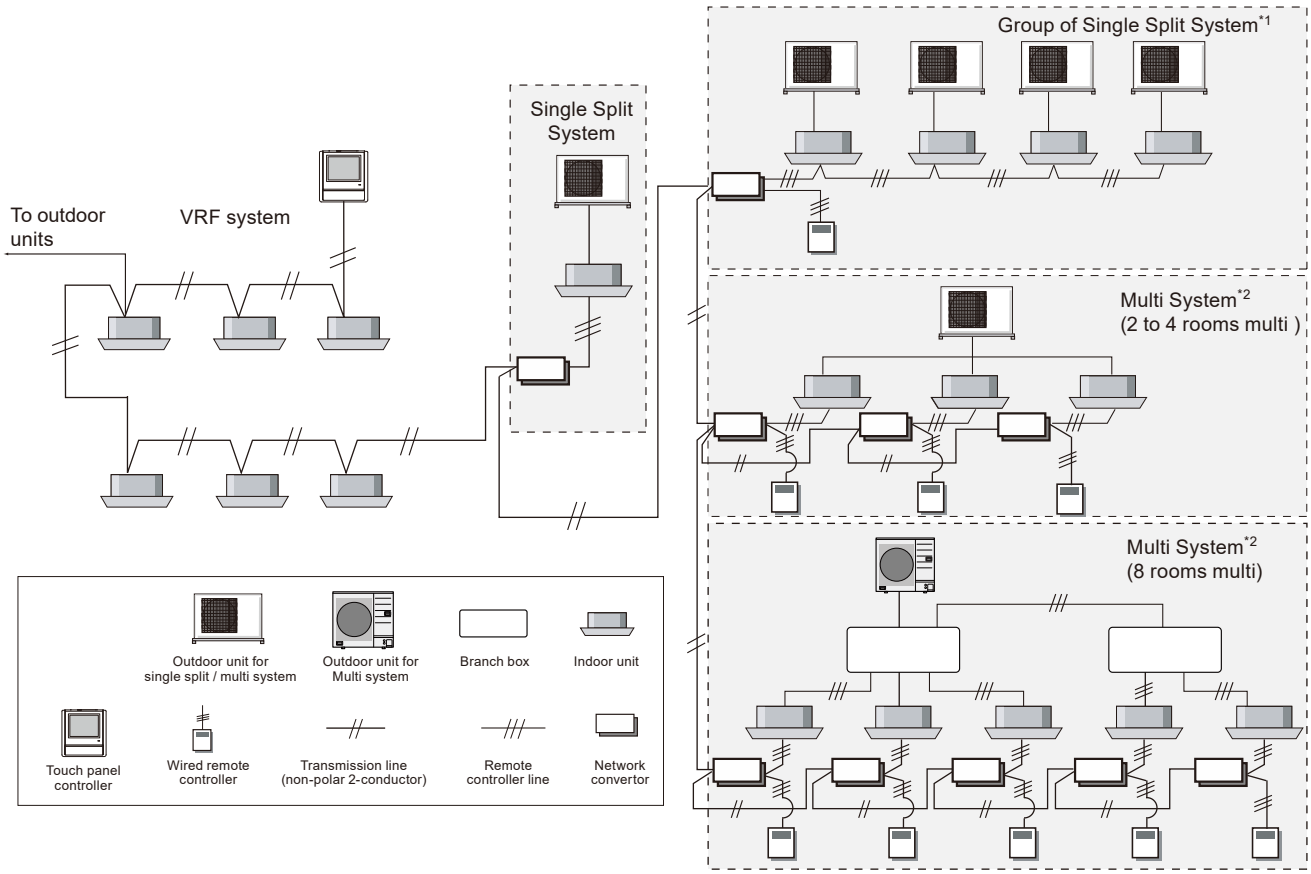
3-1. NETWORK CONVERTOR

■ MODEL: UTY-VTGX

- With this network convertor, single split type and multi system air conditioners can be controlled by Central remote controller, Touch panel controller, System controller in VRF network system or by wired remote controller that is connected to the Network convertor.
- Start/Stop, operation mode, temperature setting, fan speed, etc. can be done with these controllers.
- One Network convertor can be connected and controlled up to 16 indoor units.
- 1 wired remote controller is possible for one network convertor by UTY-VTGX.
- Up to 100 network convertors can be connected in one VRF network system. (One Network convertor is regarded as one refrigerant system. The total refrigerant systems in one VRF network system must be within 100.)

CONTROL SYSTEM

■ SYSTEM DIAGRAM



*1 : All indoor units connected to a network convertor are operating under same status.

*2 : Network convertor is necessary for each indoor unit to control indoor unit individually.

■ APPLICABLE MODELS

● Connectable remote controllers

3 types of wired remote controller shown in the table below can be connected to this unit.

The indoor unit that can be connected is the indoor unit that can connect to following remote controller.

Model name	RC number	Type
UTY-RNRU	AR-WEA＊＊ AR-WEB＊＊ AR-WEC＊＊	Non-polar 2 wire
UTY-RNNUM / UTY-RNNYM	AR-WAE＊＊	Polar 3 wire
UTB-YUD	AR-6TC＊＊	

(＊ arbitrary character)

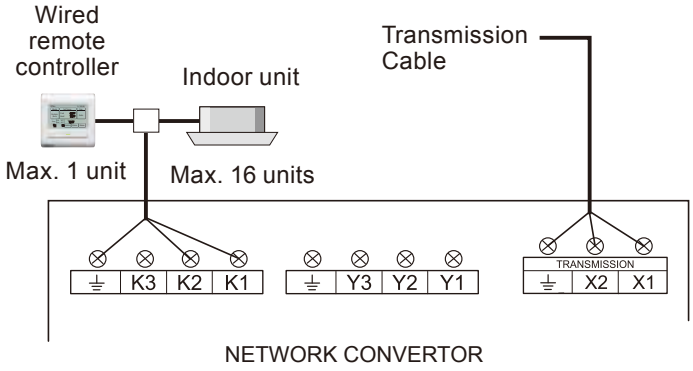
■ FUNCTIONS

Operation	Non-polar 2 wire	Polar 3 wire
Operation of louver from VRF	○	×
Operation of louver from wired remote controller	○	○
Restriction of wireless remote controller from central	○	×
Restriction of wired remote controller from central	○	○
Antifreeze	×	×
Setting high and low temperature limit	○	×
Indoor unit rotation	×	×
Turning off indoor unit external thermostat	×	×
Outdoor unit forced stop	×	×
Outdoor unit capacity save	×	×
Outdoor unit low noise	×	×
Electricity distribution	×	×
Display model name	×	×
System time	○	×
Remote setting	×	×
Local setting by the wired remote controller	○	×

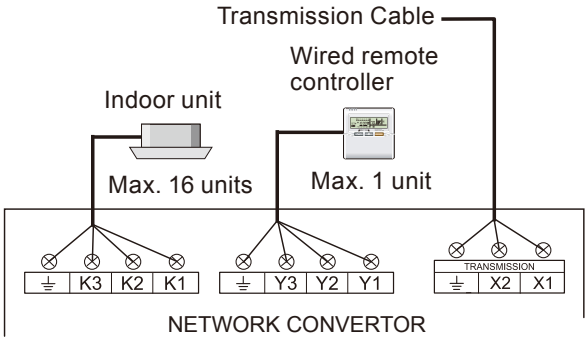
CONTROL SYSTEM

■ ELECTRICAL WIRING

● For non-polar 2 wire



● For polar 3 wire



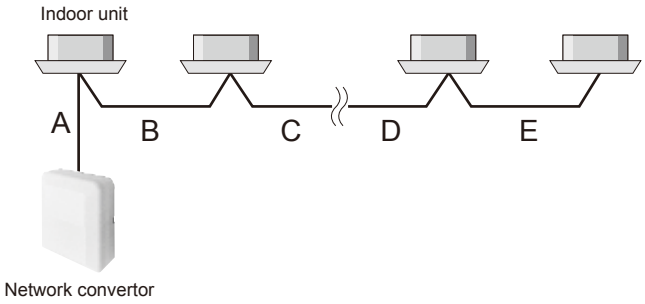
NOTES:

- Do not bind the power cable and remote controller cable to avoid an erroneous operation.
- Use shield cable for transmission cable in accordance with the regional cable standard.
- Use sheathed PVC cable or shielded cable for remote controller cable in accordance with the regional cable standard.
- Use ground wire to ground the network convertor.

CONTROL SYSTEM

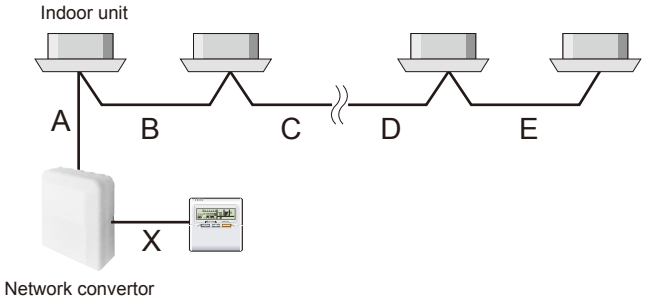
■ LIMITED WIRING LENGTH

● For non-polar 2 wire



A, B, C, D, E : Remote controller cable. (Refer to Chapter6. 4-4 for detail specifications.)
A ≤ 6 ft. (2 m) and A+B+C+D+E ≤ 1,640 ft. (500 m).

● For polar 3 wire

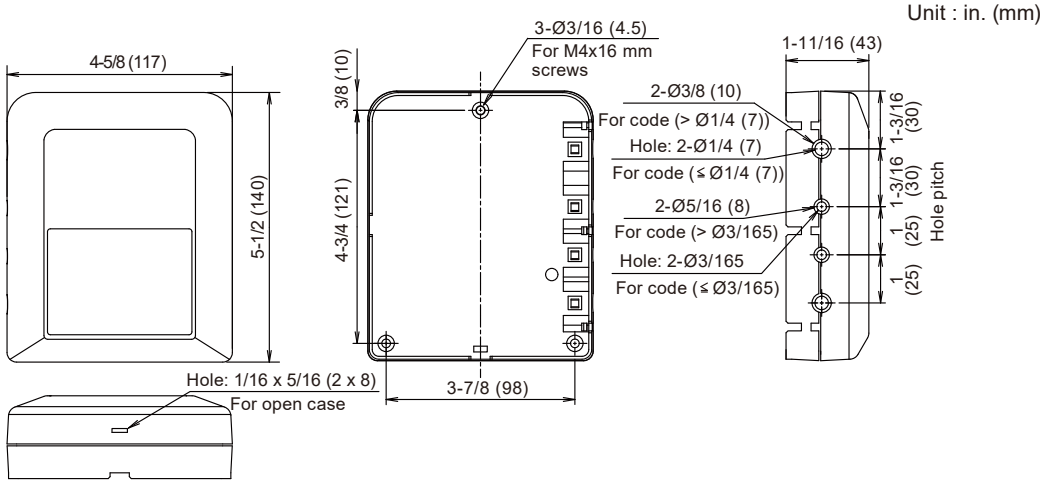


A, B, C, D, E, X : Remote controller cable. (Refer to Chapter6. 4-4 for detail specifications.)
A ≤ 6 ft. (2 m), A+B+C+D+E ≤ 328 ft. (100 m) and X ≤ 328 ft. (100 m).

CONTROL SYSTEM

■ DIMENSIONS

Unit : in. (mm)



■ PACKING LIST

The following installation parts are supplied. Use them as required.

Name and shape	Quantity	Application
Installation manual	1	
Cable tie	4	For mounting the remote controller cable and transmission cable.
Screw (M4 × 16 mm)	3	For mounting the network convertor.

■ WIRING SPECIFICATIONS

Use	Size	Wire type	Remarks
Transmission cable	22AWG (0.33 mm^2)	LEVEL4 (NEMA) non-polar 2 core, twisted pair solid core Shielded	LONWORKS® compatible cable
Remote controller cable (2-wire type)	22 to 16AWG (0.33 to 1.25 mm^2)	Non-polar 2core	Use sheathed PVC cable or shielded cable in accordance with the regional cable standard.
Remote controller cable (3-wire type)	22AWG (0.33 mm^2)	Polar 3 core	

■ SPECIFICATIONS

Input Power (W)		2
Temperature: °F(°C)	Operating	32 to 114.8 (0 to 46)
	Packaged	14 to 140 (-10 to 60)
Humidity (%)	Packaged	0 to 95 (RH) ; No condensation
Dimensions [H × W × D]: in. (mm)		5-1/2 × 4-5/8 × 1-11/16 (140 × 117 × 43)
Weight: oz. (g)		9 (250)

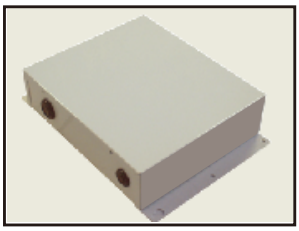
CONTROL SYSTEM

3-2. NETWORK CONVERTOR

■ MODEL: UTY-VGGXZ1

For connecting single split type system

[A change of DIP switch setting is necessary]



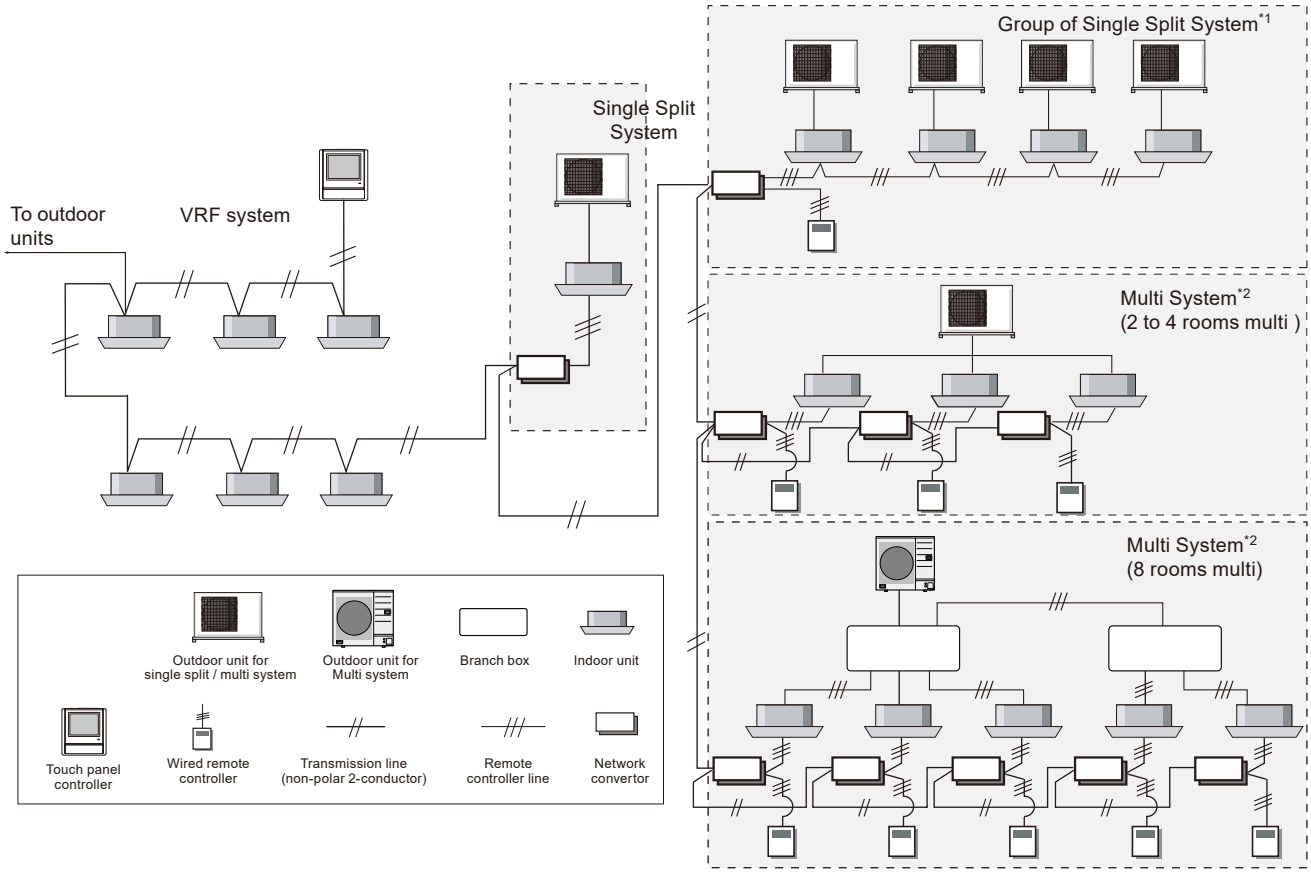
- With this network convertor, single split type, multi system and HFI system air conditioners can be controlled by Touch panel controller, System controller in VRF network system or by wired remote controller that is connected to the Network convertor.
- Start/Stop, operation mode, temperature setting, fan speed, etc. can be done with these controllers.
- One Network convertor can be connected and controlled up to 16 indoor units.
- 2 wired remote controllers are possible for one network convertor.
- Up to 100 network convertors can be connected in one VRF network system. (One Network convertor is regarded as one refrigerant system. The total refrigerant systems in one VRF network system must be within 100.)

■ FUNCTIONS

●Start/Stop ●Temperature control ●Operation mode ●Timer setting

●Fan control ●Central control (Lock the remote controller functions)

■ SYSTEM DIAGRAM

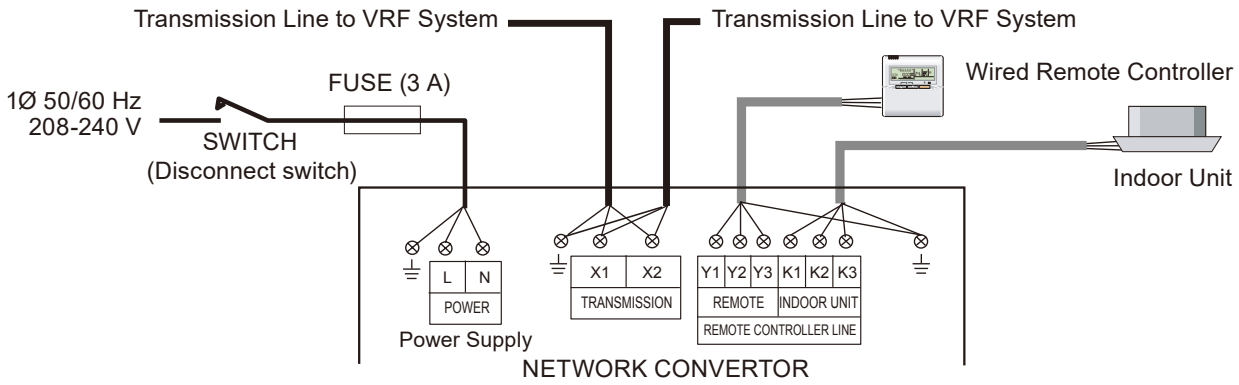


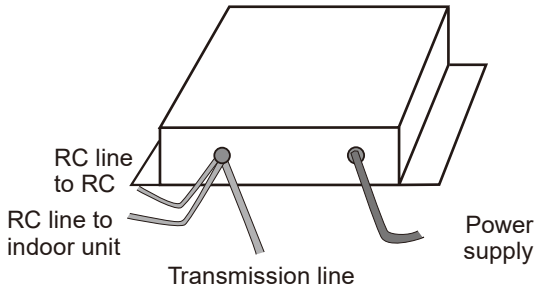
*1 : All indoor units connected to a network convertor are operating under same status.

*2 : Network convertor is necessary for each indoor unit to control indoor unit individually.

CONTROL SYSTEM

■ ELECTRICAL WIRING





NOTES:

- Do not tie the power cable with the controller cable; this will cause communication failure.
- Use shield cable for transmission line and remote controller line. The shield metal should be grounded.
- Use ground wire to ground the network convertor.

CONTROL SYSTEM

■ APPLICABLE MODELS

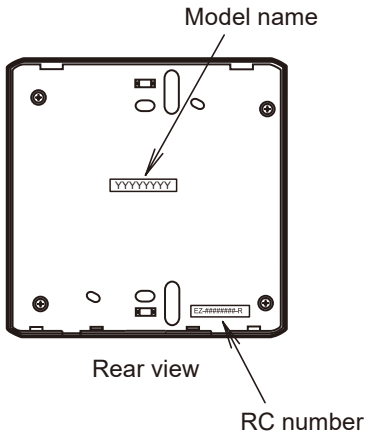
Single Split type		○
	Wired Remote Controller model	○
	Wireless Remote Controller model	×

● Connectable remote controllers

3 types of wired remote controller shown in the table below can be connected to this unit.

Model name	RC number
UTB-UUB / UTB-YUB *1	AR-3TA＊＊
UTY-RNBYU / UTB-YUD *1	AR-6TC＊＊
UTY-RNNUM / UTY-RNNYM *1	AR-WAE＊＊

(＊ arbitrary character)



● Connectable indoor units

Indoor units that accept following wired remote controllers (accessories or optional parts) are connectable with this unit.

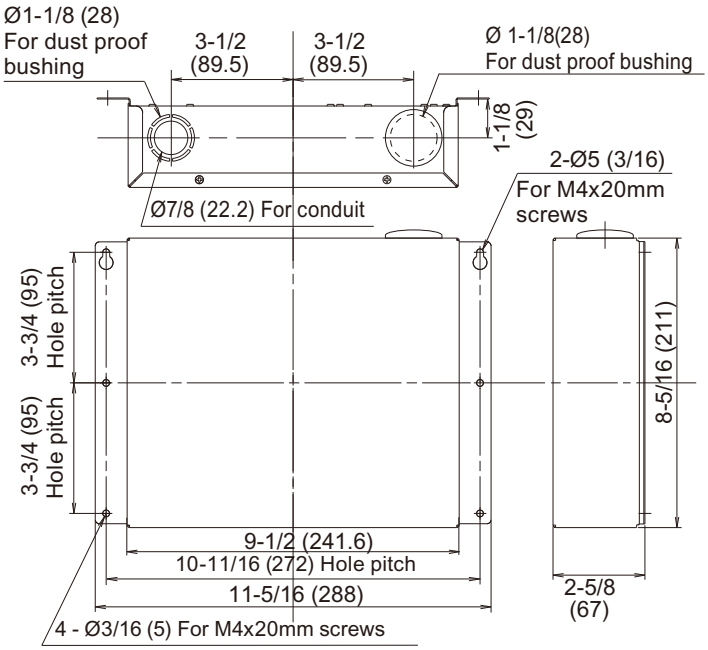
RC number
AR-3TA＊＊, AR-6TC＊＊, AR-WAE＊＊
EZ-099DHSE-R, EZ-000DHSE-R, EZ-0001HSE-R, EZ-000GHSE-R, EZ-00004HSE-R, EZ-00005HSE-R, EZ-0015HSE-R, EZ-0019HSE-R, EZ-099DHSEFR, EZ-0001HSEFR, EZ-000DHSEFR, EZ-000GHSEFR, EZ-0015HSEFR EZ-0994HSE-R, EZ-000EHSE-R, EZ-0994HSEFR EZ-099CWSE-R, EZ-000AWSE-R, EZ-0001WSE-R, EZ-000FWSE-R, EZ-0012WSE-R, EZ-099CWSEFR, EZ-0001WSEFR, EZ-000AWSEFR EZ-09906WSE-R, EZ-000BWSE-R, EZ-09906WSEFR

EZ type remote controllers cannot control indoor units via this unit. When you want to operate indoor units directly by remote controller, the optional remote controller (*1) must be purchased.

CONTROL SYSTEM

■ DIMENSIONS

Unit : in. (mm)



■ PACKING LIST

The following installation parts are supplied. Use them as required.

Name and shape	Quantity	Application
Installation manual	1	
Cable Tie	4	For securing controller cable.
Screw (M4 × 20 mm)	4	For mounting the network convertor.
Dust proof brushing	1	For connecting the power supply cable. (Except in U.S.A. and Canada)

■ WIRING SPECIFICATIONS

Use	Size		Wire type	Remarks
Power supply cable	Maximum	16 AWG (1.25 mm^2)	60245 IEC 57 or equivalent	1 ø AC 208 - 240 V 50/60Hz, 2 Wire + ground (Always ground the unit)
	Minimum	20 AWG (0.5 mm^2)		
Transmission cable	22AWG (0.33 mm^2)		LEVEL4 (NEMA) non-polar 2 core, twisted pair solid core Shielded	LONWORKS® compatible cable
Remote controller cable	22AWG (0.33 mm^2)		Polar 3 core	Use sheathed PVC cable or shielded cable in accordance with the regional cable standard.
External input / output cable	0.33 mm^2 (22AWG)		Polar 2core, Twisted pair	Use shielded cable in accordance with the regional cable standard.
Fuse capacity	3 A			

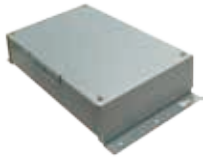
■ SPECIFICATIONS

Power supply		1ø AC 208 - 240 V 50/60 Hz
Input Power (W)		6.5
Temperature: °F (°C)	Operating	32 to 114.8 (0 to 46)
	Packaged	14 to 140 (-10 to 60)
Humidity (%)	Packaged	0 to 95 (RH) ; No condensation
Dimensions [H × W × D]: in. (mm)		2-5/8 × 11-5/16 × 8-5/16 (67 × 288 × 211)
Weight: lbs. oz. (g)		3 lbs. (1,500)

CONTROL SYSTEM

3-3. MODBUS® CONVERTOR FOR VRF

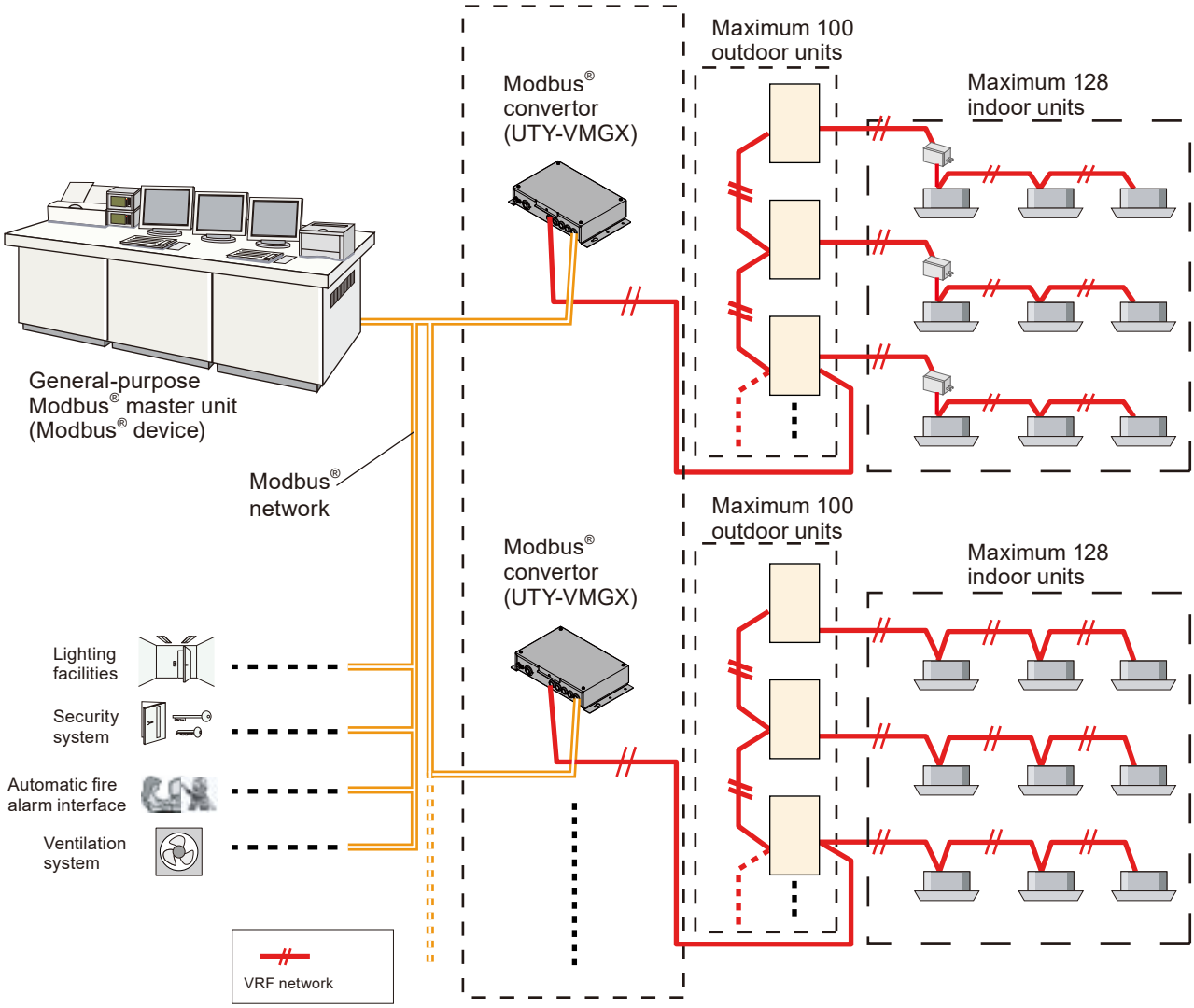
■ MODEL: UTY-VMGX



- The convertor for connecting VRF network system to the BMS system built by Modbus® open network, for manage small to medium sized BMS and VRF network system.

■ SYSTEM DIAGRAM

● Proper system diagram



● Connected unit

Maximum controllable indoor unit number per 1 Modbus® Convertor		128
Maximum controllable outdoor unit number per 1 Modbus® Convertor		100
Maximum connectable Modbus® Convertor number per 1 VRF network system		9
Maximum number of connected Modbus® Convertor units to one Modbus® master unit	Without repeater	31
	With repeater	247

CONTROL SYSTEM

■ FUNCTIONS

● Indoor unit control

● Individual control

Commands from Modbus® Network are sent to the respective indoor units. (Modbus® Network → respective indoor units of VRF Network)

● Batch control

Commands from Modbus® Network are sent to all indoor units connected to VRF Network. (Modbus® Network → All indoor units of VRF Network)

● Indoor unit status monitoring

Indoor unit status is communicated to the Modbus® Network in the form of LON® Network variables. (Modbus® Network ← All indoor units of VRF Network)

CONTROL SYSTEM

■ CONTROL AND MONITORING ITEMS

NOTE: For detailed information, check the Interface Specification.

Item	Function	Description
Indoor Unit Control (Individual / Batch)	ON/OFF Command	Start / Stop operation
	Operation Mode Setting	Cooling / Heating / Auto / Fan / Dry
	Temperature Setting	Set room temperature
	Airflow Mode Setting	Set airflow
	Set Point Temperature Limit Setting	Set room temperature lower limit & room temperature upper limit
	Thermostat Off setting	Thermostat off (Only one controller in VRF Network System can do this)
	Centrally Control (Filter Reset)	Prohibition of filter sign reset of remote controller
	Centrally Control (All Mode)	Prohibition of all mode of remote controller
	Centrally Control (Timer Mode)	Prohibition of timer mode of remote controller
	Centrally Control (Set Temperature Mode)	Prohibition of set temperature mode of remote controller
	Centrally Control (ON/OFF Mode)	Prohibition of ON/OFF mode of remote controller
	Centrally Control (ON Mode)	Prohibition of ON mode of remote controller
	Centrally Control (Operation Mode)	Prohibition of operation mode of remote controller
Indoor Unit Control (Individual)	Filter Sign Reset	Set filter sign reset command
	Antifreeze Setting	Set antifreeze command
	Energy Save Mode Setting	Set energy save command
	Vertical/Horizontal Airflow Direction Louver Setting	Set Vertical/Horizontal airflow direction louver
Indoor Unit Control (Batch)	Time Setting	Set time setting command (The controllers those are connected in VRF Network System are an object)
	Emergency STOP Setting	Set Emergency STOP command
Outdoor Unit Control (Individual)	Outdoor Unit Low Noise	Outdoor unit low noise level setting
	Outdoor Unit Capacity Save	Outdoor unit capacity save setting
Indoor Unit Monitoring (Individual)	ON/OFF Status	ON / OFF status
	Operation Mode Setting Status	Heating / Cooling / Auto / Fan / Dry mode status
	Temperature Setting Status	Room set temperature status
	Airflow Mode Setting Status	Airflow mode status
	Set Point Temperature Limit Status	Room set temperature limit status
	Thermostat Off Setting Status	Thermostat off set value status
	Centrally Control (Filter Reset) Status	Remote controller filter reset prohibition status
	Centrally Control (All Mode) Status	Remote controller all mode prohibition status
	Centrally Control (Timer Mode) Status	Remote controller timer mode prohibition status
	Centrally Control (Set Temperature) Status	Remote controller set temp. prohibition status
	Centrally Control (ON/OFF) Status	Remote controller ON / OFF prohibition status
	Centrally Control (ON) Status	Remote controller ON prohibition status
	Centrally Control (Operation) Status	Remote controller operation prohibition status
	Antifreeze Setting Status	Antifreeze set status
	Energy Save Mode Setting Status	Energy save mode set status
	Filter Sign Reset Status	Filter sign reset status
	Room Temperature Status	Room temperature status
	Error Code Status	Error Code status can be monitored
	Vertical/Horizontal Airflow Direction Louver Status	Vertical/Horizontal Airflow Direction Louver Status
	Indoor Unit Status	Defrost / oil recovery / pumpdown can be monitored

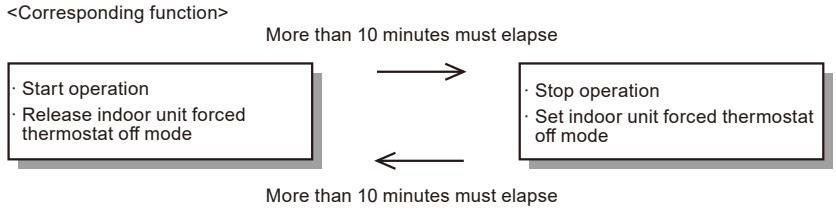
CONTROL SYSTEM

Item	Function	Description
Indoor Unit Monitoring (Batch)	Maintenance Mode Status	Maintenance status
	Emergency STOP Setting Status	Emergency STOP setting status
	ON / OFF Status	The indoor unit which is now operating can be monitored in all indoor units
	Error Status	The indoor unit which is now error can be monitored in all indoor units
Outdoor Unit Monitoring (Individual)	Outdoor Unit Low Noise	Outdoor unit low noise level can be monitored
	Outdoor Unit Capacity Save	Outdoor unit capacity save can be monitored
Convertor Unit Monitoring (Individual)	Error Code Status	Error code status
	Modbus® Communication Setting Information	Baud rate / slave address can be monitored
	Model Name	Convertor model name can be confirmed
	Software Version	Convertor software version can be confirmed

CONTROL SYSTEM

∗ To protect the compressor of the outdoor unit, carefully read and understand the following cautions that may affect the operation of the compressor before executing the setting.

・When performing periodical settings like schedule settings for the following functions, perform the setting to all the indoor units in the same refrigerant system simultaneously, conforming to the timing restriction described below.



∗ Forced thermostat OFF instruction

・Only one equipment can send these instructions for each refrigerant system.

・When these instructions are sent by multiple equipment, the system may not respond as instructed or may malfunction.

■ SPECIFICATIONS

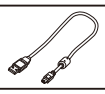
Power supply		1ø AC 208-240 V 50/60 Hz
Input Power (W)		2.0
Temperature: °F (°C)	Operating	32 to 114.8 (0 to 46)
	Packaged	14 to 140 (-10 to 60)
Humidity (%)	Packaged	0 to 95 (RH) ; No condensation
Dimensions [H × W × D]: in. (mm)		2-1/8 × 10-1/4 × 5-7/8 (54 × 260 × 150)
Weight: lbs. (g)		2 (1,100)

CONTROL SYSTEM

● Transmission specifications

Transfer mode	RTU mode
Communication method	Half-duplex operation, Master/slave method
Communication speed	9,600bps / 19,200bps
Synchronous system	Asynchronous communication method
Data bit	8 bit
Parity	even/odd/none
Stop bit	2 bit (no parity) / 1 bit
Network	3 wire RS485
Maximum cable length	3,280 ft. (1,000 m)

■ PACKING LIST

Name and shape	Quantity	Application
Installation manual	1	Use during installation.
Cable tie	7	For mounting the power supply cable and transmission cable.
Screw (M4 × 16 mm)	4	For mounting the network convertor.
DVD	1	For initial setting.
Modbus® connector	1	For connecting the cable and attaching the board connector.
USB cable 	1	For initial setting tool.

■ PERSONAL COMPUTER SYSTEM REQUIREMENTS

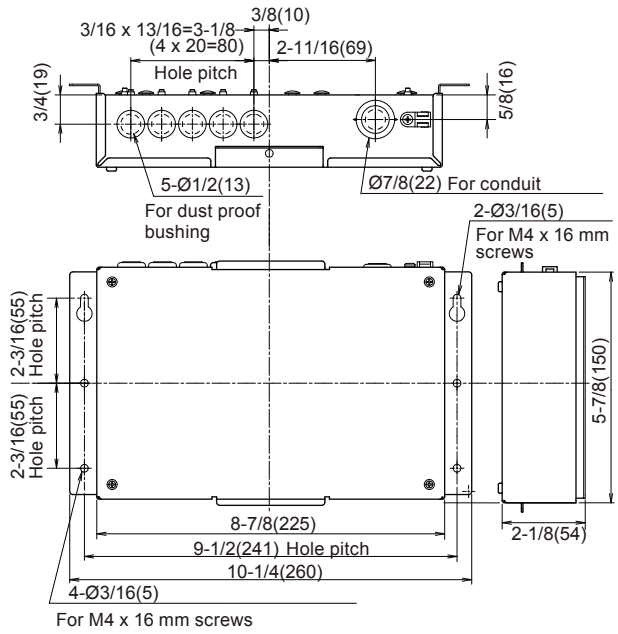
To install Tool for Convertor (UTY-VMGX), applicable PC needs to satisfy the following system requirements.

Operating System	• Microsoft® Windows® 7 Home Premium (32-bit or 64-bit) SP1 • Microsoft® Windows® 7 Professional (32-bit or 64-bit) SP1 • Microsoft® Windows® 8 (32-bit or 64-bit) • Microsoft® Windows® 8.1 (32-bit or 64-bit) • Microsoft® Windows® 10 Home (32-bit or 64-bit) • Microsoft® Windows® 10 Pro (32-bit or 64-bit) [Supported languages] English, Chinese, French, German, Russian, Spanish, and Polish
Memory	1 GB or more
Display	1,366 × 768 dots or higher resolution
Interface	USB port (×1)
Software	Adobe® Reader 11.0 or later
Optical drive	DVD drive

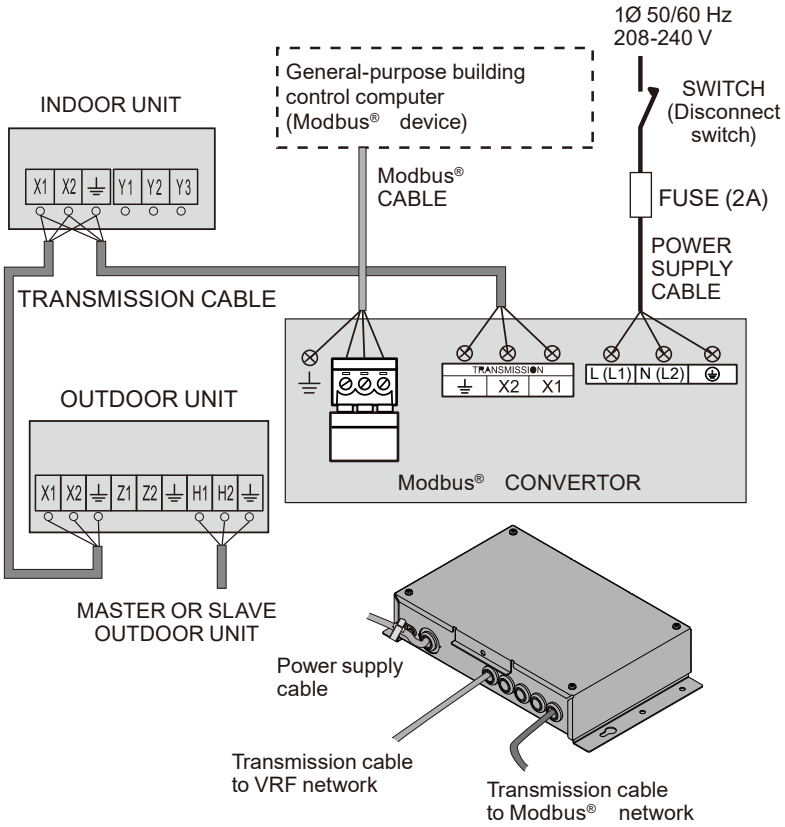
CONTROL SYSTEM

■ DIMENSIONS

Unit : in.(mm)



■ ELECTRICAL WIRING

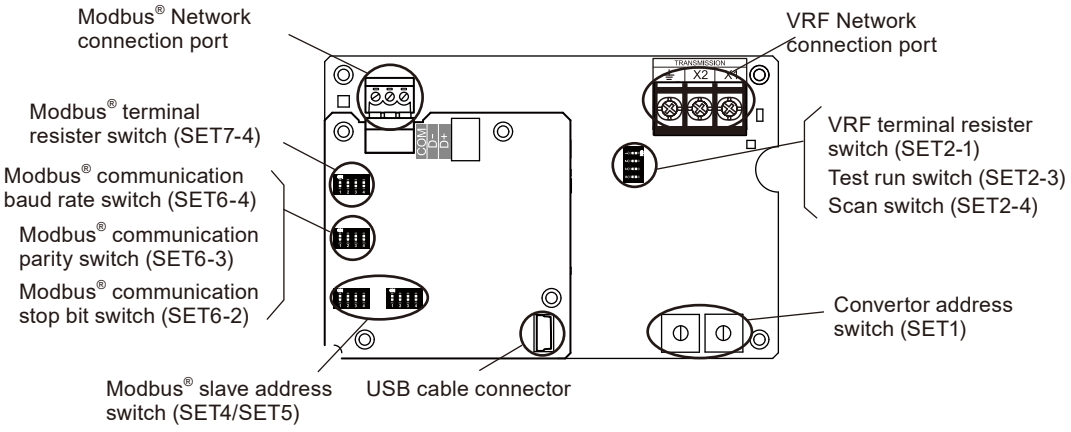


CONTROL SYSTEM

■ WIRING SPECIFICATIONS

Use	Size		Wire type	Remarks
Power supply cable	Maximum	16AWG (1.25 mm^2)	60245 IEC 57 or equivalent	1 ø AC208-240 V 50/60 Hz, 2-Wire + ground (Always ground the unit)
	Minimum	20AWG (0.5 mm^2)		
Transmission cable	22AWG (0.33 mm^2)		LEVEL4 (NEMA) non-polar 2 core, twisted pair solid core Shielded	LONWORKS® compatible cable
Modbus® cable	Maximum	16AWG (1.25 mm^2)	AWG16-26 3Wire+ Sheathed PVC cable	
	Minimum	26AWG (0.128 mm^2)		
Fuse capacity	2 A			

■ PCB FOR MODBUS® CONVERTOR (UTY-VMGX)



CONTROL SYSTEM

■ PROCEDURE IN BRIEF REGISTER DATA TO MODBUS® CONVERTOR FOR VRF (UTY-VMGX)

Address initial settings are 3 methods as follows.

(1) Default addresses of indoor unit and outdoor unit are used. (Initial setting is not necessary)

Default address value ([RefNo.—NodeNo.])

Indoor unit: [00—00] [00—01] ••• [00—63]
[01—00] [01—01] ••• [01—63]

Outdoor unitt: [00—00] [00—01] ••• [00—03]
[01—00] [01—01] ••• [01—03]

(2) Scan

Scan procedure is as follows.

STEP 1: Turn on the switch of scan setting.

STEP 2: “Scan display” by LED (address is registering inside the convertor.)

STEP 3: “Number of connected indoor unit display” by LED (Scan is complete)

STEP 4: Turn off the switch of scan setting

STEP 5: “Address update display” by LED

STEP 6: Turn on the main power again.

STEP 7: “Address rewriting display” by LED (Addresses are synchronized among boards)

* When scan error is generated, performing the scan again is necessary.

(3) Setting from PC

NOTE: For detailed information, check the Application Manual which is included inside packaged DVD.

STEP 1: Install Tool for Convertor (software) for UTY-VMGX in PC.
Tool for Convertor is the accessory item of UTY-VMGX.

STEP 2 Connect the PC and Modbus® convertor for VRF (UTY-VMGX) .
Connection will be done by the connector cable provided as an accessory item of UTY-VMGX.

STEP 3: Set Modbus® Convertor (UTY-VMGX) to USB Mode.

STEP 4: Initial setting of Indoor Unit & Outdoor Unit Addresses by using the Tool for Convertor.

STEP 5: Register the initial setting data to UTY-VMGX. Click ‘Register’ dialog.
In this stage, Modbus® Convertor (UTY-VMGX) is ready for binding and commissioning.

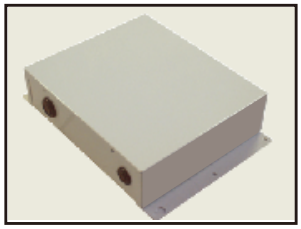
Important: Modbus® Convertor will not operate if,

- VRF network system address (Outdoor and Indoor units address) allocation information are not registered to Modbus® Convertor.

CONTROL SYSTEM

3-4. NETWORK CONVERTOR FOR LONWORKS®

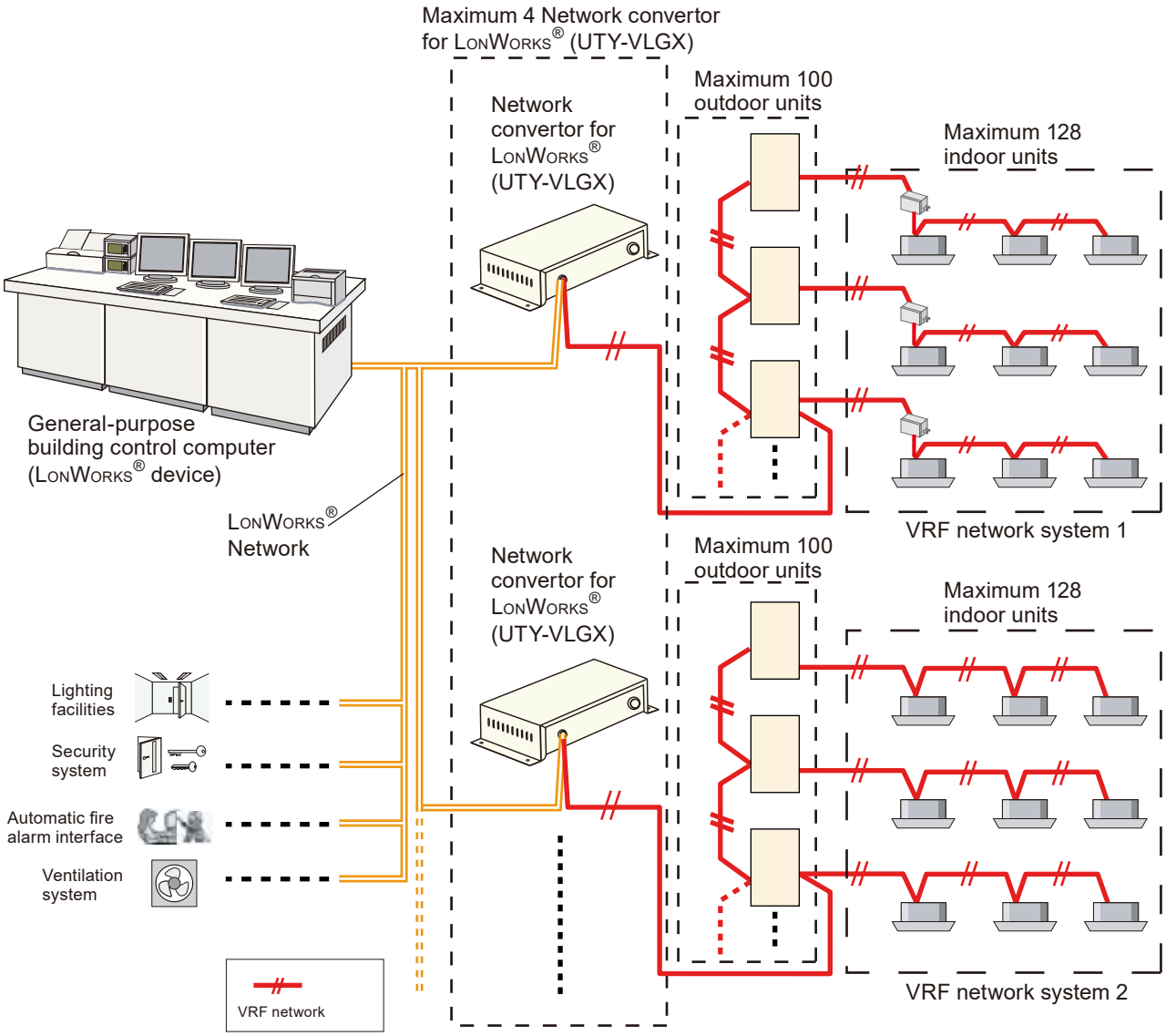
■ MODEL: UTY-VLGX



- The convertor for connecting VRF network system to the BMS system built by LONWORKS® open network, for manage small to medium sized BMS and VRF network system.
- A maximum of 128 indoor units can be connected to one Network Convertor for LONWORKS®.
- VRF system can be centrally controlled or monitored from BMS via UTY-VLGX.
- A maximum of 4 Network Convertor for LONWORKS® can be connected to one BMS.

■ SYSTEM DIAGRAM

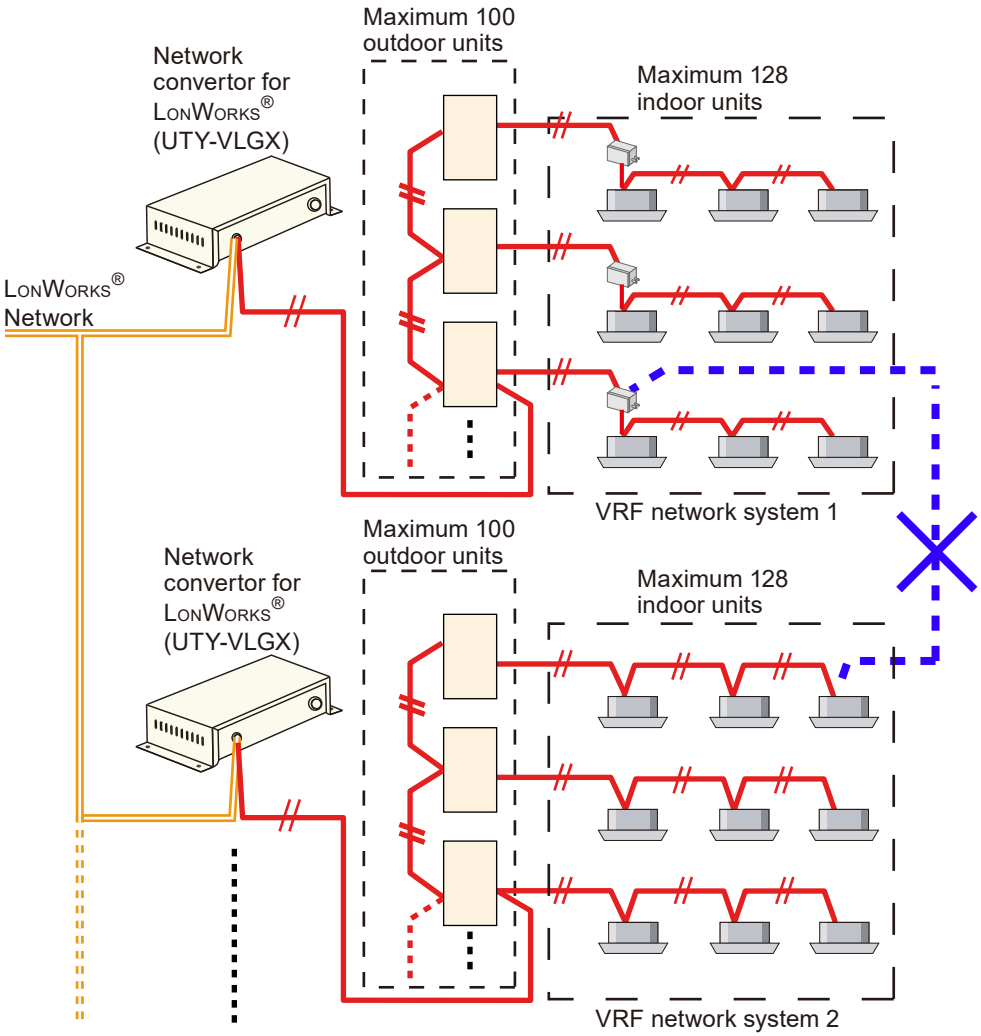
● Proper system diagram



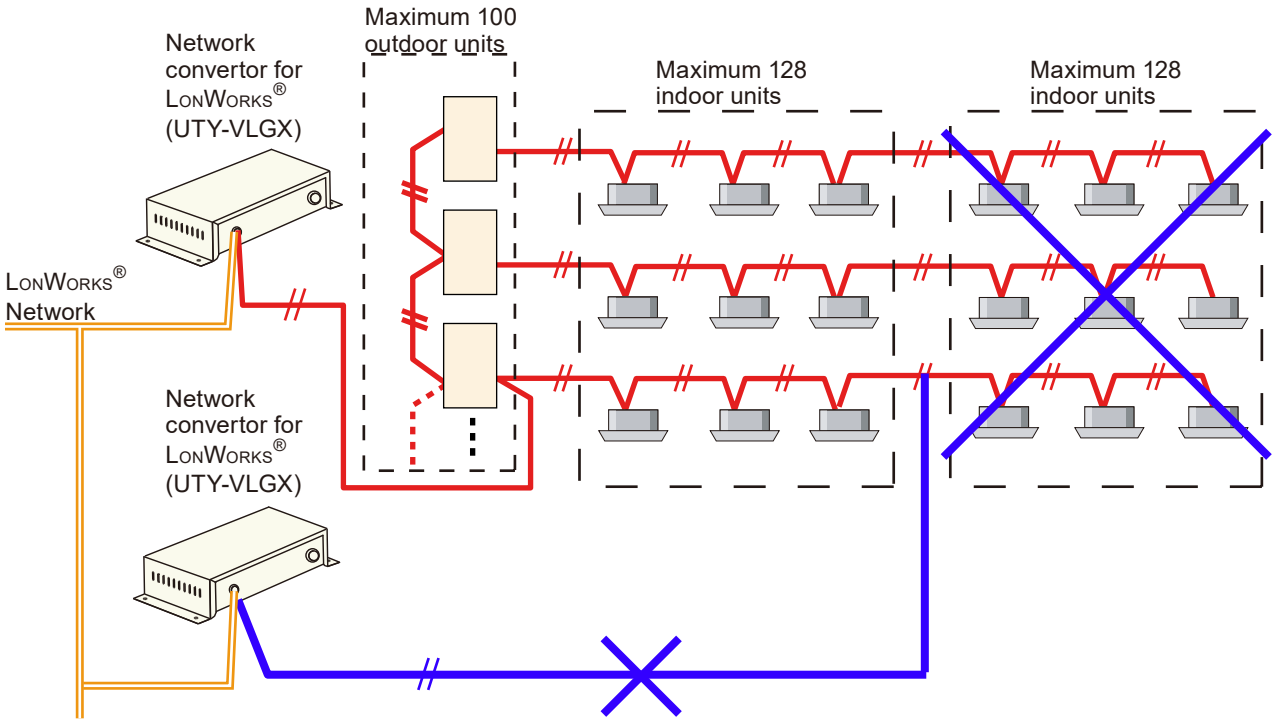
CONTROL SYSTEM

● Improper system diagram

• Example 1 (Prohibited)



• Example 2 (Prohibited)



CONTROL SYSTEM

■ FUNCTIONS

● Indoor unit control

● Individual control

Commands from LonWorks® Network are sent to the respective indoor units. (LonWorks® Network → respective indoor units of VRF Network)

● Batch control

Commands from LonWorks® Network are sent to all indoor units connected to VRF Network. (LonWorks® Network → All indoor units of VRF Network)

● Indoor unit status monitoring

Indoor unit status is communicated to the LonWorks® Network in the form of Lon® Network variables. (LonWorks® Network ← All indoor units of VRF Network)

CONTROL SYSTEM

■ CONTROL AND MONITORING ITEMS

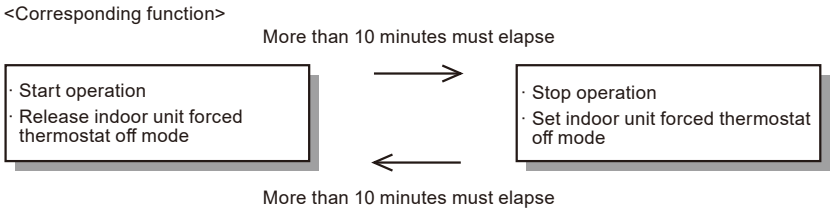
NOTE: For detail information, check the Interface Specification.

Item	Function	Description
Indoor Unit Control (Individual / Batch)	ON/OFF Command	Start / Stop operation
	Operation Mode Setting	Cooling / Heating / Auto / Fan / Dry
	Temperature Setting	Set room temperature
	Airflow Mode Setting	Set airflow
	Set Point Temperature Limit Setting	Set room temperature lower limit (for cooling mode) & room temperature upper limit (for heating mode)
	Thermostat Off setting	Thermostat off (Only one controller in VRF Network System can do this)
	Centrally Control (Filter Reset)	Prohibition of filter sign reset of remote controller
	Centrally Control (All Mode)	Prohibition of all mode of remote controller
	Centrally Control (Timer Mode)	Prohibition of timer mode of remote controller
	Centrally Control (Set Temperature Mode)	Prohibition of set temperature mode of remote controller
	Centrally Control (ON/OFF Mode)	Prohibition of ON/OFF mode of remote controller
	Centrally Control (ON Mode)	Prohibition of ON mode of remote controller
	Centrally Control (Operation Mode)	Prohibition of operation mode of remote controller
Indoor Unit Control (Individual)	Filter Sign Reset	Set filter sign reset command
	Antifreeze Setting	Set antifreeze command
	Energy Save Mode Setting	Set energy save command
Indoor Unit Control (Batch)	Emergency STOP Setting	Set Emergency STOP command
	Time Setting	Set time setting command (The controllers those are connected in VRF Network System are an object)
Indoor Unit Monitoring (Individual)	ON/OFF Status	ON / OFF status
	Operation Mode Setting Status	Heating / Cooling / Auto / Fan / Dry mode status
	Temperature Setting Status	Room set temperature status
	Airflow Mode Setting Status	Airflow mode status
	Set Point Temperature Limit Status	Room set temperature limit status
	Thermostat Off Setting Status	Thermostat off set value status
	Centrally Control (Filter Reset) Status	Remote controller filter reset prohibition status
	Centrally Control (All Mode) Status	Remote controller all mode prohibition status
	Centrally Control (Timer Mode) Status	Remote controller timer mode prohibition status
	Centrally Control (Set Temperature) Status	Remote controller set temp. prohibition status
	Centrally Control (ON/OFF) Status	Remote controller ON / OFF prohibition status
	Centrally Control (ON) Status	Remote controller ON prohibition status
	Centrally Control (Operation) Status	Remote controller operation prohibition status
	Antifreeze Setting Status	Antifreeze set status
	Energy Save Mode Setting Status	Energy save mode set status
	Filter Sign Reset Status	Filter sign reset status
	Room Temperature Status	Room temperature status
	Error Code Status	Only one Error Code status can be monitored
	Operation Mode restriction Status	Restriction item (*1) can be monitored
Indoor Unit Monitoring (Batch)	Maintenance Mode Status	Maintenance status
	Emergency STOP Setting Status	Emergency STOP setting status
Outdoor Unit Monitoring (Individual)	Error Code Status	Error code status
Convertor Unit Monitoring (Individual)	Error Code Status	Error code status

*1: All operation setting, Timer setting, Room temperature setting, Operation mode setting, ON/OFF operation, Filter reset operation, On operation setting.

CONTROL SYSTEM

∗ To protect the compressor of the outdoor unit, the following precautions must be followed prior to setting the system. ・When making changes to system settings, such as the schedule, it is necessary to change the settings of all indoor units on the same refrigerant circuit at the same time.



∗ Forced thermostat OFF instruction

・Only one BMS adapter can send this instruction to the refrigerant circuit. If this instruction is sent by more than one BMS adapter, the system will malfunction.

CONTROL SYSTEM

■ SPECIFICATIONS

● Environmental specifications

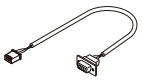
Power supply		1ø AC 208 - 240 V 50/60 Hz
Input Power (W)		4.5
Temperature: °F (°C)	Operating	32 to 114.8 (0 to 46)
	Packaged	14 to 140 (-10 to 60)
Humidity (%)	Packaged	0 to 95 (RH) ; No condensation
Dimensions [H × W × D]: in. (mm)		2-5/8 × 11-5/16 × 8-5/16 (67 × 288 × 211)
Weight: lbs. oz. (g)		3 lbs. (1,500)

● Transmission specifications

LonWorks® network	
Transmission speed	78 kbps
Transceiver	FT-X1 (Echelon® Corporation)
Transmission way form	Free topology
Cable	Twisted pair cable (shield)
	22AWG Equivalent
Network connector	One terminal
Terminal resistor	None attachment (It attaches at the terminal of a network)

CONTROL SYSTEM

■ PACKING LIST

Name and shape	Quantity	Application
Installation manual	1	Use during installation.
Cable Tie	3	For securing controller cable.
Screw (M4 × 20 mm)	4	For mounting the network convertor.
CD-ROM	1	Includes the software and manuals of Tool for network convertor.
Connector cable 	1	For initial setting.
Dust proof bushing	1	For connecting the power supply cable. (Except in U.S.A. and Canada)

■ PERSONAL COMPUTER SYSTEM REQUIREMENTS

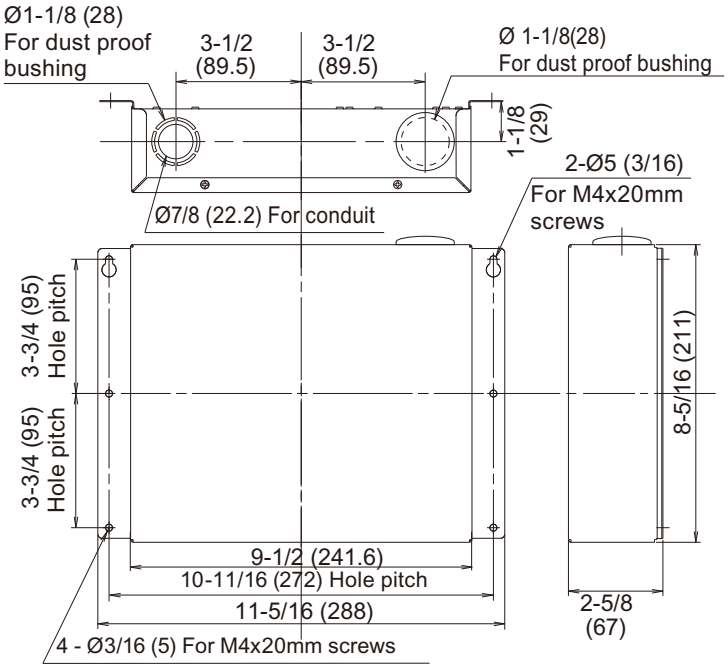
To install Tool for Network Convertor (UTY-VLGX), applicable PC needs to satisfy the following system requirements.

Operating System	• Microsoft® Windows® 7 Professional (32-bit) • Microsoft® Windows® 8.1 Pro (32-bit) • Microsoft® Windows® 10 Home (32-bit or 64-bit) • Microsoft® Windows® 10 Pro (32-bit or 64-bit) [Supported languages] English and Chinese
Memory	1 GB or more
Display	1,024 × 768 or higher resolution, 16-bit or higher color
Interface	RS232C serial port × 1 *Use "COM1" port
Software	Adobe® Reader 9.0 or later
Optical drive	CD-ROM driver

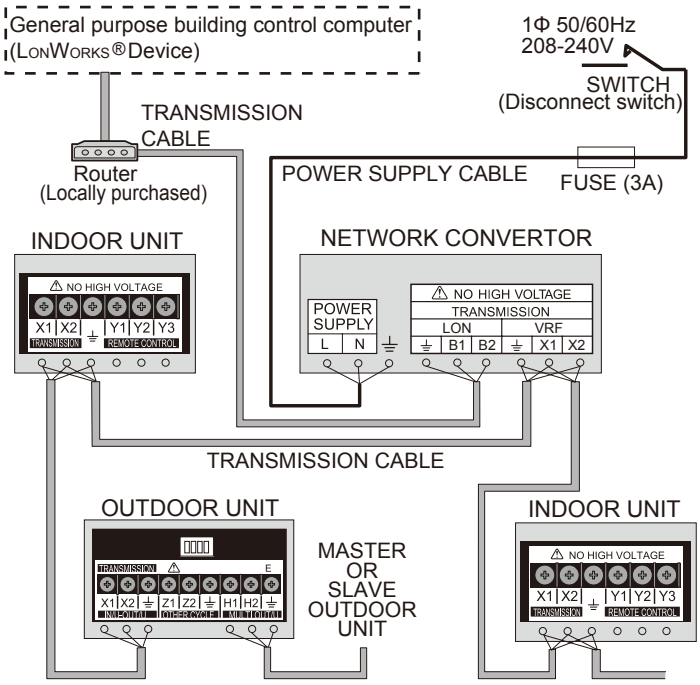
CONTROL SYSTEM

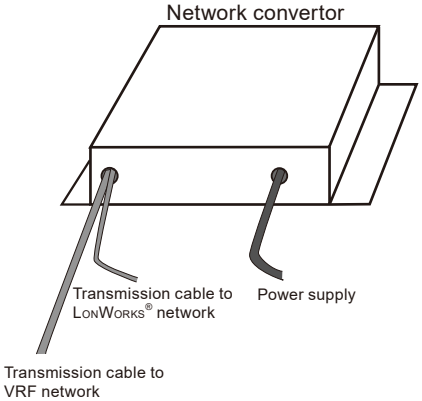
■ DIMENSIONS

Unit : in. (mm)



■ ELECTRICAL WIRING





NOTES:

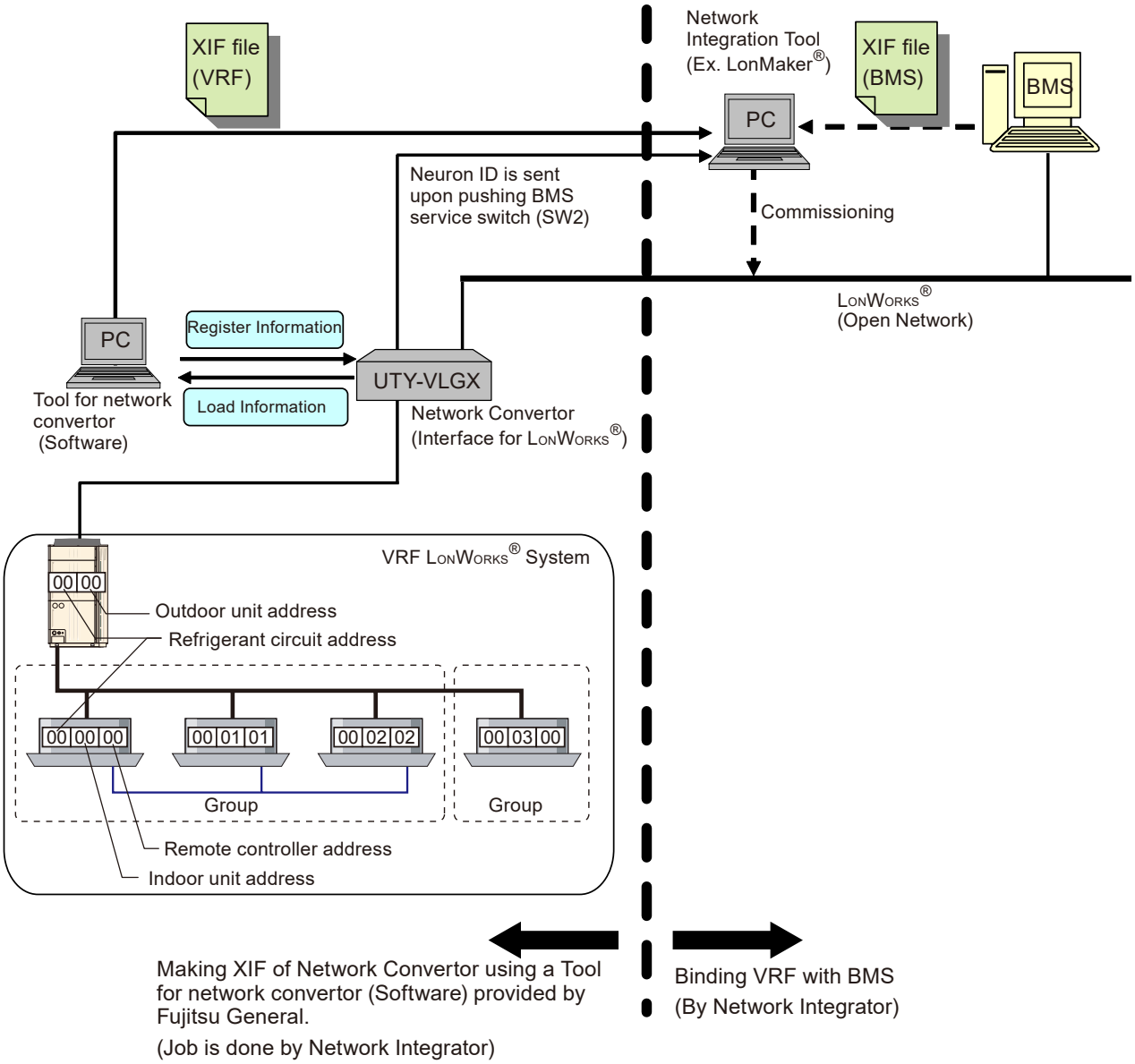
- Do not run power cable and transmission cable together, electrical interference will cause communication errors.
- Use shield cable for transmission cable. The shield metal should be grounded.
- Do not forget to ground the Network Convertor.

■ WIRING SPECIFICATIONS

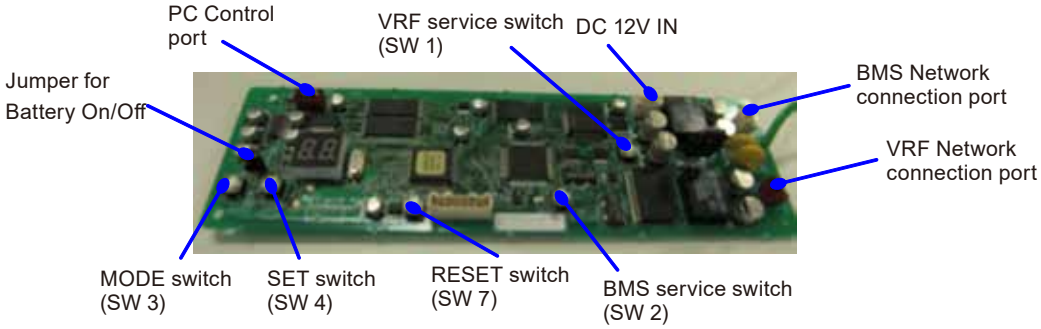
Use	Size		Wire type	Remarks
Power supply cable	Maximum	16 AWG (1.25 mm^2)	60245 IEC 57 or equivalent	1 ø AC 208 - 240 V 50/60 Hz, 2 Wire + ground (Always ground the unit)
	Minimum	20 AWG (0.5 mm^2)		
Transmission cable	22AWG (0.33 mm^2)		LEVEL4 (NEMA) non-polar 2 core, twisted pair solid core Shielded	LONWORKS® compatible cable
Fuse capacity	3 A			

*Always ground the unit

■ TOTAL SYSTEM CONFIGURATION LAYOUT



■ PCB FOR NETWORK CONVERTOR (UTY-VLGX)



■ SIMPLE PROCEDURE FOR CREATING XIF AND REGISTER DATA FOR NETWORK CONVERTOR (UTY-VLGX)

NOTE: For detail information, check the Application Manual which is included inside packaged CD-ROM.

The following is the on-line procedure. It is also possible to create XIF & Register Data off-line.

STEP 1: Connect the PC and Network Convertor (UTY-VLGX) .

Connection will be done by the connector cable provided as an accessory item of UTY-VLGX.

STEP 2: Install Tool for Network Convertor (software) for UTY-VLGX in PC.

Tool for Network Convertor is the accessory item of UTY-VLGX.

STEP 3: Set Network Convertor (UTY-VLGX) to Installation Mode.

STEP 4: Setting ID number of UTY-VLGX on PC screen of Tool for Network Convertor.
(ID number is required to identify UTY-VLGX from BMS. A maximum of four Network Convertors can be connected to one BMS, and ID number allocation is like 00, 01, and so on.)

STEP 5: Initial setting of Indoor Unit & Outdoor Unit Addresses by using the Tool for Network Convertor.

STEP 6: Register the initial setting data to UTY-VLGX. Click 'Register' dialog.

STEP 7: Set Configuration Properties.

To set the communication properties of UTY-VLGX, select the following communication properties and types; otherwise, the default values will be used.

Select Communication items

-Event Driven communication or Cyclic communication.

(Default: Cyclic 3minutes)

-Communication Interval Time during turning ON all together.

(Default: 3 minutes)

● Select Communication type (to communicate data with BMS)

-Communicate only when changing network variable or communicate all network variable. (Default: Only when changing network variable)

-Communicate only when changing room temperature value.

(Default: Room temperature changed value 1.8°F (1°C))

STEP 8: Register the Configuration Properties data to UTY-VLGX. Click 'Register' dialog.

STEP 9: Making / Modifying XIF, and transfer XIF data by USB memory or floppy disk for binding.

STEP 10: Reset Network Convertor (UTY-VLGX) to press 'Reset SW7'.

STEP 11: Turn OFF the power. After that, remove the connection of PC & Network Convertor (UTR-VLGX) respectively.

In this stage, Network Convertor (UTY-VLGX) is ready for binding & commissioning.

CONTROL SYSTEM

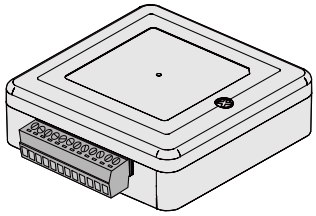
Important: Network Convertor will not operate if,

- VRF network system address (Outdoor & Indoor units address) allocation information are not registered to Network Convertor.
- XIF data information and VRF network system address allocation information must not be same.
- Binding & Commissioning is not executed. (During binding, read out the Network Convertor Neuron ID by pushing BMS service switch (SW 2) on the main PCB of Network Convertor)
- If the ID number registered to the Network Convertor is not same as the ID number which is included in the XIF of Network Convertor.

CONTROL SYSTEM

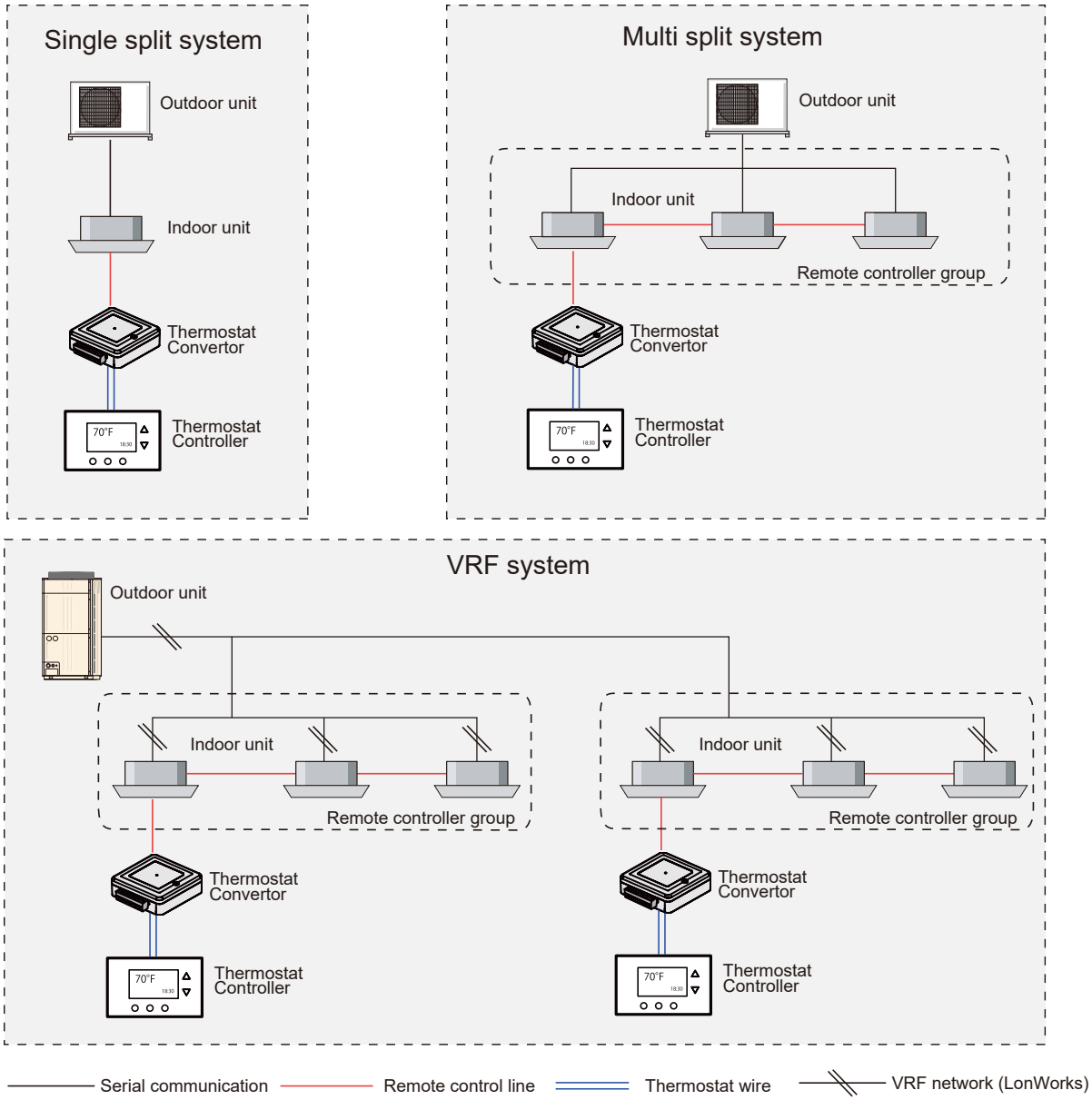
3-5. THERMOSTAT CONVERTOR

■ MODEL: UTY-TTRX



- Thermostat convertor can control Fujitsu General products using a third-party thermostat controller.
- Up to 16 indoor units can be connected with one thermostat convertor.

■ SYSTEM DIAGRAM



CONTROL SYSTEM

■ FUNCTIONS

Function		Remarks
Air conditioning control function	Operation mode setting	Cooling, Heating, Fan
	Fan speed setting	High, Med, Low, Auto
	Temperature setting	Stage 1 (Cooling), Stage 1 (Heating) Stage 2 (Cooling), Stage 2 (Heating)
Maintenance function	Indoor unit error monitoring	Communication error detection Control target error indication
	Convertor error monitoring	
Others	Two-stage cooling and heating thermostat operation	
	Delay off	

■ LIMITATIONS

● Automatic prohibition of remote controller operation

Thermostat operates the indoor units according to the setting temperature by bulit-in temperature sensor. Since setting temperature of the remote contoller may be different from the setteing temperature of the thermostat, remote contoller operation prohibition is automatically enabled.

● Air direction adjustment by thermostat

● No fan mode available in heat pump system.

Do not connect between fan signal terminals (G, G1, G2, or G3) on the convertor and the thermostat by using wire.

● Error code will be displayed on the built-in LED display.

For indoor units without error code indicator, confirm the LED display inside the thermostat convertor.

For details of indoor unit error, refer to ERROR STATUS OUTPUT in Chapter 8. EXTERNAL INPUT AND OUTPUT.

● For following items, use remote controllers.

- Filter sign cancellation
- Indoor unit function settings
- Test run

After all settings are completed, disconnect the remote controller, and connect the thermostat convertor.

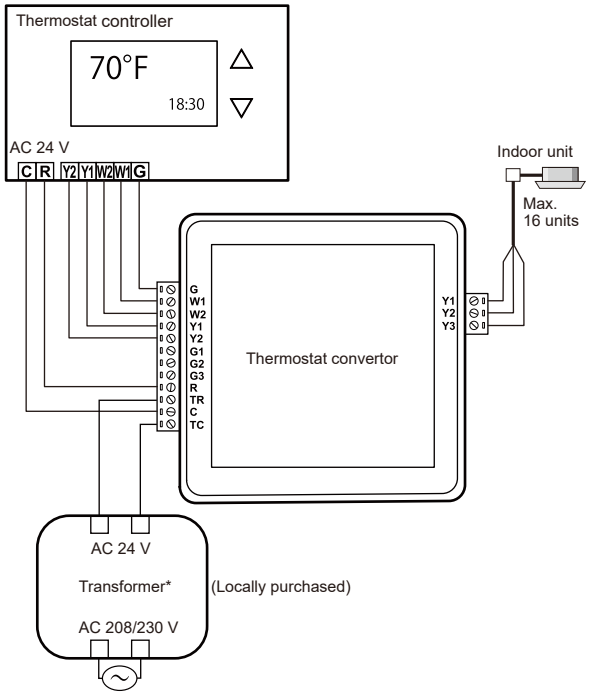
CONTROL SYSTEM

■ ELECTRICAL WIRING

Connection method differs by the type of thermostat controller.

● Two-stage Cooling and Heating

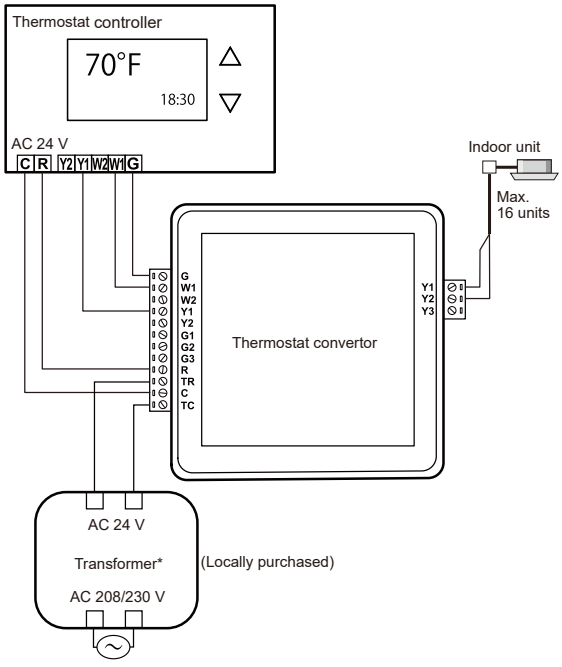
Example: Remote controller for 3-wire type



*Install the transformer, as necessary, per building code and manufacturer's installation instructions. Maximum Power: 5.0 VA

● Single-stage Cooling and Heating

Example: Remote controller for 2-wire type

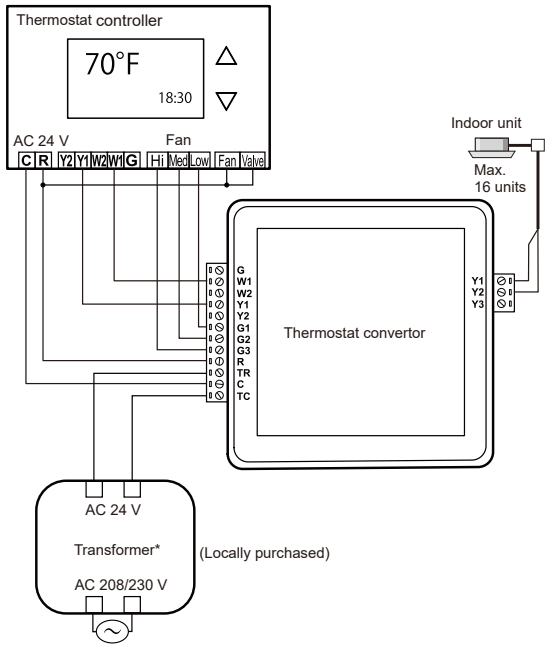


*Install the transformer, as necessary, per building code and manufacturer's installation instructions. Maximum Power: 5.0 VA

CONTROL SYSTEM

● Single-stage Cooling and Heating with Dedicated Fan speed Relays

Example: Remote controller for 2-wire type



*Install the transformer, as necessary, per building code and manufacturer's installation instructions. Maximum Power: 5.0 VA

Terminal name	Application
TC	Common (In) from transformer
C	Common to the thermostat controller
TR	Power supply from transformer
R	Power supply to thermostat controller
G3	Airflow High
G2	Airflow Medium
G1	Airflow Low
Y2	Cooling stage 2
Y1	Cooling stage 1
W2	Heating stage 2
W1	Heating stage 1
G	Fan

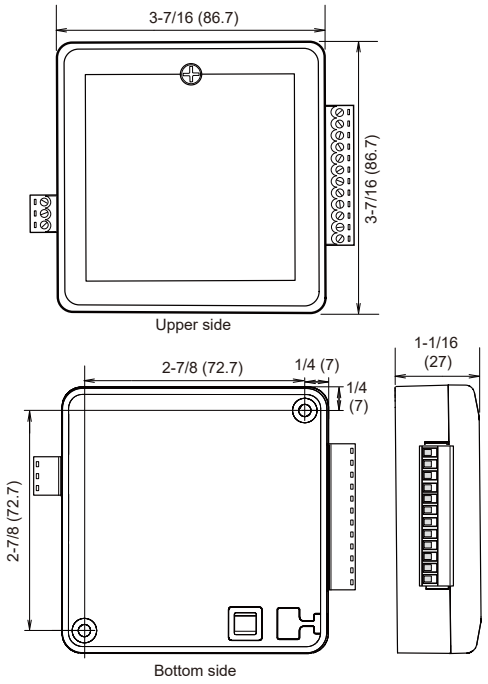
NOTES:

- For remote controller cable, 2-wire type and 3-wire type are available depending on the device to be connected.
- All wiring shown should be performed with 18 AWG thermostat wire.
- Terminals to thermostat controller on Thermostat convertor support AC 20 to 30 V.
- HIGH/MEDIUM/LOW fan signals are optional, and may not be available on all thermostat controllers.
- Signals for stage 2 are optional. W2 and Y2 terminals may not be used in single-stage thermostats. To use the stage 2 signals, turn on the DIP switch SET3-1 on each convertor.
- Up to 16 indoor units be controlled with a single thermostat controller. Multiple indoor units connected to one thermostat convertor are operable by the same operating setting.
- Two or more types of VRF system, single model, or multi systems cannot be mixed together.

CONTROL SYSTEM

■ DIMENSIONS

Unit : in (mm)



■ SPECIFICATIONS

Max. connectable indoor unit number		16
Input Power (W)		0.6
Temperature: °F (°C)	Operating	32 to 114 (0 to 46)
	Packaged	14 to 140 (-10 to 60)
Humidity (%)	Packaged	0 to 95 (RH); No condensation
Dimensions [H × W × D]: in. (mm)		1-1/16 × 3-7/16 × 3-7/16 (27 × 86.7 × 86.7)
Weight: lbs. oz. (g)		4 (100)

■ WIRING SPECIFICATIONS

Use	Size	Cable type	Remarks
Remote controller cable (2-wire type)	16 to 22 AWG (0.33 to 1.25 mm^2)	Sheathed PVC cable*	Non-polar 2 core, twisted pair Maximum cable length: 1640 ft (500 m)
Remote controller cable (3-wire type)	22 AWG (0.33 mm^2)	Sheathed PVC cable*	Polar 3 core Maximum cable length: 82 ft (25 m)
Thermostat wires	18 AWG (0.82 mm^2)	Sheathed PVC cable*	Maximum cable length: 164 ft (50 m)

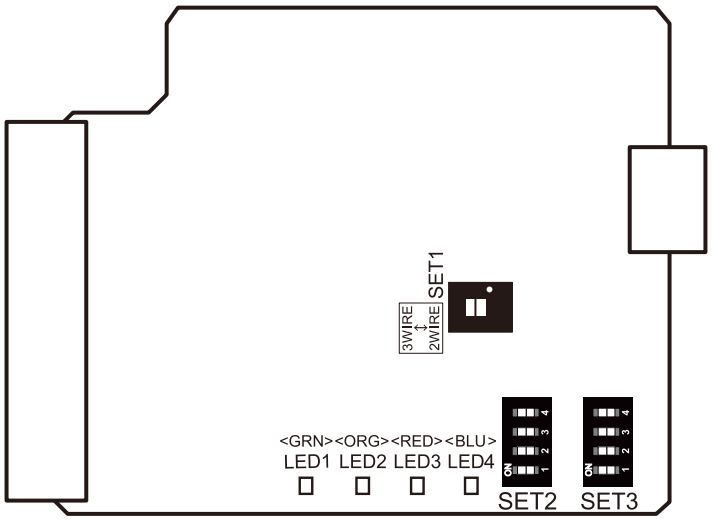
*: Use shielded cable in accordance with local rules for remote contoller cable.

■ PACKING LIST

Name and shape	Quantity	Application
Installation manual	1	Use during installation.
Screw (M4 × 16 mm)	2	For mounting the thermostat convertor

■ LED DISPLAY

● Positions



● Normal code

LED1 (Green)	LED2 (Orange)	LED3 (Red)	LED4 (Blue)	Contents
●	●	OFF	OFF	During initialization sequence
ON	OFF	OFF	OFF	Normally operating

● : 1 s ON / 1 s OFF

● Error code

LED1 (Green)	LED2 (Orange)	LED3 (Red)	LED4 (Blue)	Contents
● (N)	● (N)	○	OFF	Thermostat convertor error
● (N)	● (N)	○	ON	Indoor unit error

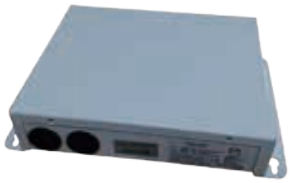
● : 0.5 s ON / 0.5 s OFF
○ : 0.1 s ON / 0.1 s OFF
(N) : Number of flashing

For flashing number of each error code and the details, refer to ERROR CODES in the installation manuals of indoor units.

CONTROL SYSTEM

3-6. BACnet® GATEWAY (HARDWARE)

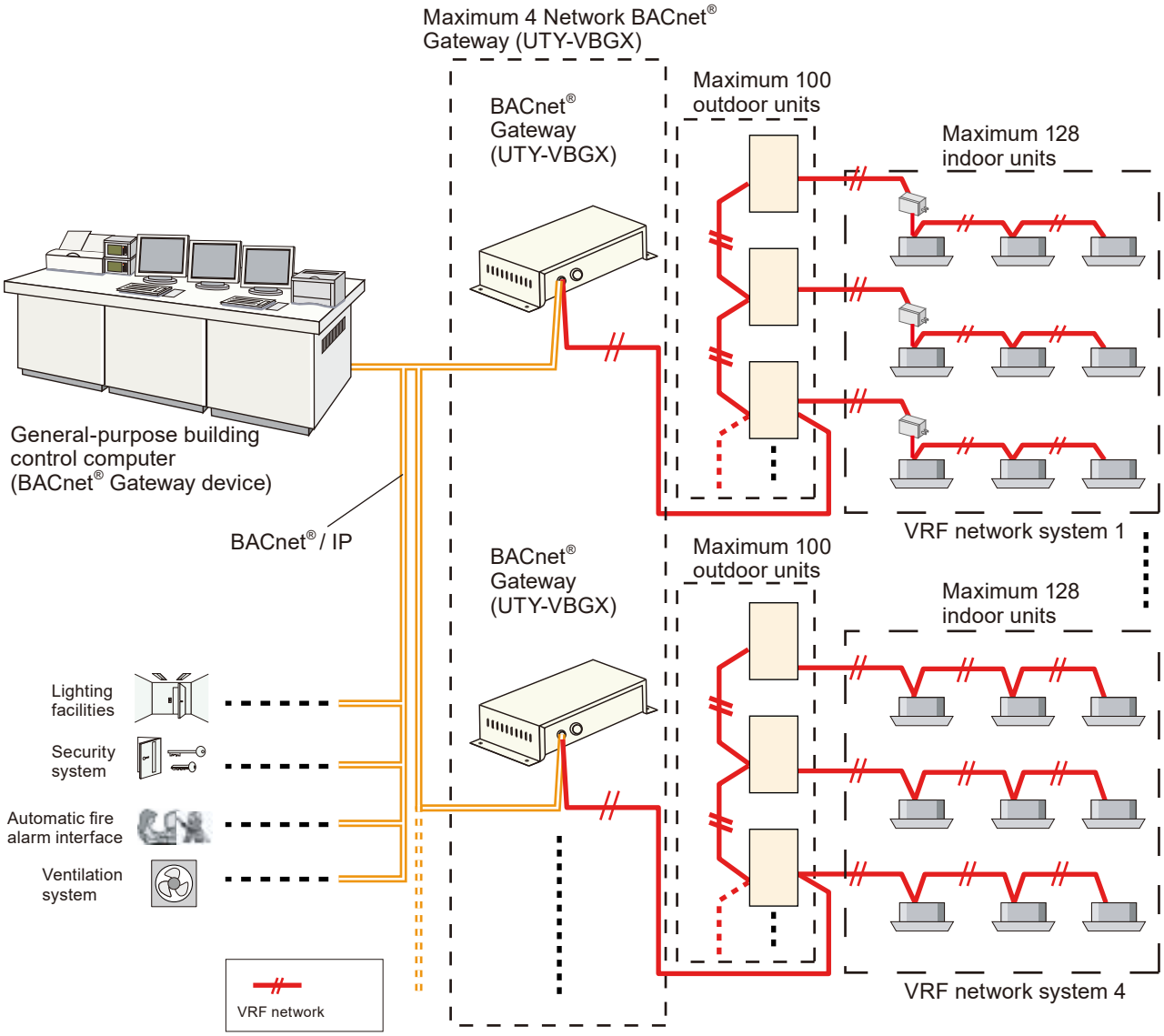
■ MODEL: UTY-VBGX



- The convertor for connecting VRF network system to the BMS system using BACnet® protocol.
- Maximum of 128 indoor units can be connected to one BACnet® Gateway.
- VRF system can be centrally controlled or monitored from BMS via UTY-VBGX.
- Maximum of 4 BACnet® Gateway can be connected to one BMS.

■ SYSTEM DIAGRAM

● System diagram



NOTE : UTY-VBGX and UTY-ABGX(Z1) can't co-exist within a VRF system.

CONTROL SYSTEM

■ FUNCTIONS

● Indoor unit control

● Individual control

Commands from BACnet® Network are sent to the respective indoor units. (BACnet® Network → respective indoor units of VRF Network)

● Batch control

Commands from BACnet® Network are sent to all indoor units connected to VRF Network. (BACnet® Network → All indoor units of VRF Network)

● Indoor unit status monitoring

Indoor unit status is communicated to the BACnet® Network in the form of BACnet® objects. (BACnet® Network ← All indoor units of VRF Network)

CONTROL SYSTEM

■ CONTROL AND MONITORING ITEMS WITH OBJECT TYPES

NOTE: For detailed information, check the Instruction Manual.

Function Name	Category			Bacnet Object Type[1]	Remark
	Target	Monitor	Control		
Operation Setting	Bat	-	○	BO	
Operation Mode	Bat	-	○	MO	
Temperature Setting	Bat	-	○	AO	
Fan Speed	Bat	-	○	MO	
R/C Prohibition	Bat	-	○	MO	
Gateway	GW	○	-	D	No monitor/control difference
Representative Error	GW	○	-	BI	Gateway, Lon communication
Error Code	GW	○	-	MI	Gateway, Lon communication. Error Codes to signal gateway status will be agreed with FGL during development.
Energy Saving Status / Setting	GW	○	○	BI / BO	
Existence Check	In	○	-	BI	
Temperature Status / Setting	In	○	○	AI / AO	
Operation Status / Setting	In	○	○	BI / BO	
Operation Mode Status / Setting	In	○	○	MI / MO	
Fan Speed Status / Setting	In	○	○	MI / MO	
Suction/Room Temperature	In	○	-	AI	
Representative Error	In	○	-	BI	
Error Code	In	○	-	MI	
Temperature H/L Limit Status / Setting	In	○	○	AI / AO	H/L limit per 3 operation Mode: HEAT, COOL-DRY and AUTO
Temperature Limit Validity Status / Setting	In	○	○	BI / BO	
Filter Sign Status / Reset	In	○	○	BI / BO	Only reset for control
Forced Thermo Off Status / Setting	In	○	○	BI / BO	
Emergency Stop	In	○	-	BI	
R/C Prohibition Status / Setting	In	○	○	MI / MO	
Vertical Fan Status / Setting	In	○	○	MI / MO	
Horizontal Fan Status / Setting	In	○	○	MI / MO	
Outdoor Unit Save Status / Setting	Out	○	○	MI / MO	
Low Noise Operation Status / Setting	Out	○	○	MI / MO	Monitor not supported by all
Representative Error	Out	○	-	BI	
Error Code	Out	○	-	MI	
Forced Off Status / Setting	Out	○	○	BI / BO	

*: Bacnet Object Type

BI: OBJECT_BINARY_INPUT

BO: OBJECT_BINARY_OUTPUT

MI: OBJECT_MULTISTATE_INPUT

MO: OBJECT_MULTISTATE_OUTPUT

AI: OBJECT_ANALOG_INPUT

AO: OBJECT_ANALOG_OUTPUT

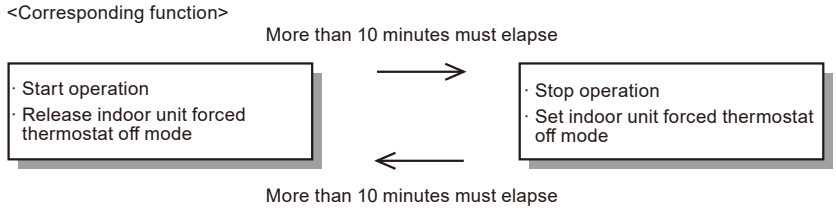
D: OBJECT_DEVICE

Notification object shall be required to support intrinsic reporting.

CONTROL SYSTEM

∗ To protect the compressor of the outdoor unit, carefully read and understand the following cautions that may affect the operation of the compressor before executing the setting.

・When performing periodical settings like schedule settings for the following functions, perform the setting to all the indoor units in the same refrigerant system simultaneously, conforming to the timing restriction described below.



∗ Forced thermostat OFF instruction

・Only one equipment can send these instructions for each refrigerant system.

・When these instructions are sent by multiple equipment, the system may not respond as instructed or may malfunction.

■ SPECIFICATIONS

Power supply	1ø AC 208-240 V 50/60 Hz
Input Power (W)	4.6
Dimensions [H × W × D]: in. (mm)	2-3/8 × 10-5/8 × 6-15/16 (60 × 270 × 176)
Weight: lb. (g)	3 (1,200)

● Recommended operating environment

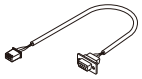
Temperature: °F (°C)	Operating	32 to 114.8 (0 to 46)
	Packaged	14 to 140 (-10 to 60)
Humidity (%)	Packaged	0 to 95 (RH) ; No condensation

● Transmission specifications

BACnet® / IP (ASHRAE 135 Annex J)	
Transmission speed	10 / 100 Mbps
Cable	Ethernet category 5 or higher STP 22AWG equivalent
Network connector	RJ45

CONTROL SYSTEM

■ PACKING LIST

Name and shape	Quantity	Application
USB memory	1	Includes the software and manuals of Tool for BACnet® Gateway.
Connector cable 	1	For initial setting.
Dust proof bushing	2	For connecting the power supply cable.

■ PERSONAL COMPUTER SYSTEM REQUIREMENTS

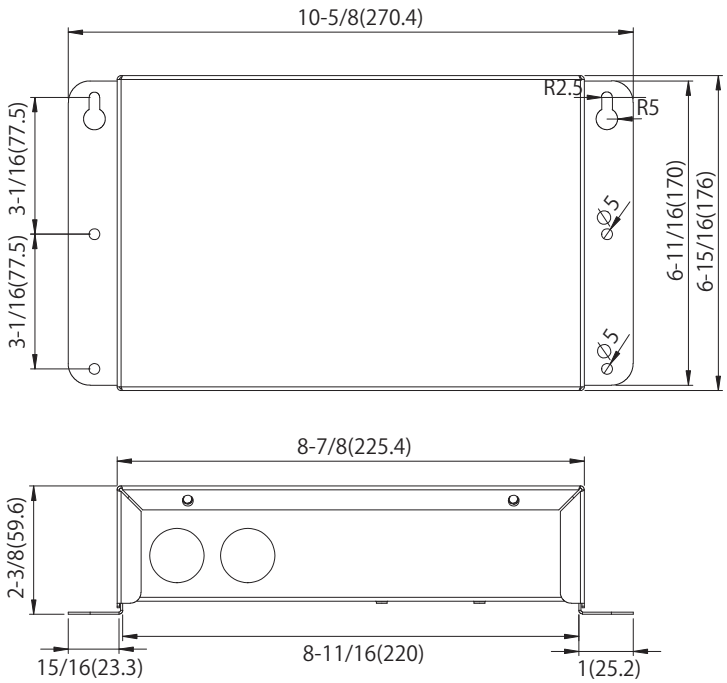
To install Tool for BACnet® Gateway, applicable PC needs to satisfy the following system requirements.

Operating System	• Microsoft® Windows® 7 Professional (32-bit) • Microsoft® Windows® 8.1 (32-bit) • Microsoft® Windows® 10 Home (32-bit or 64-bit) • Microsoft® Windows® 10 Pro (32-bit or 64-bit)
Memory	1 GB or more
Display	1,024 × 768 or higher resolution, 16-bit or higher color
Interface	USB port × 1
Software	Adobe® Reader 9.0 or later

CONTROL SYSTEM

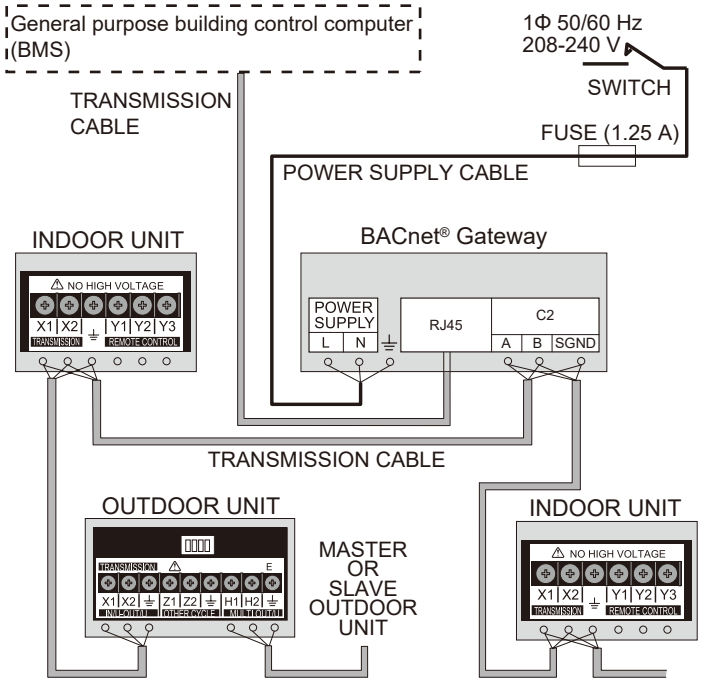
■ DIMENSIONS

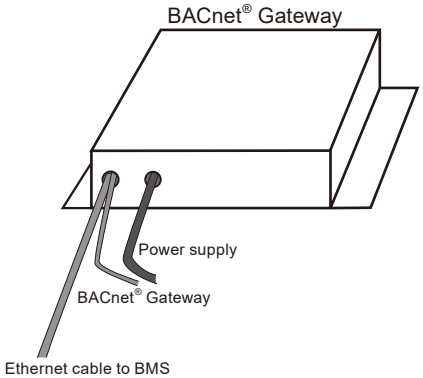
Unit : in.(mm)



CONTROL SYSTEM

■ ELECTRICAL WIRING





NOTES:

- Do not bind the power cable and transmission cable to avoid an erroneous operation.
- Use shield cable for transmission cable. The shield metal should be grounded.
- Do not forget to ground the BACnet® Gateway.

■ WIRING SPECIFICATIONS

Use	Size		Wire type	Remarks
Power supply cable	Maximum	16 AWG (1.25 mm^2)	60245 IEC 57 or equivalent	1 ø AC208-240 V 50/60 Hz, 2-Wire + ground (Always ground the unit)
	Minimum	20 AWG (0.5 mm^2)		
Transmission cable	Ethernet category 5 or higher STP LAN cable with RJ45			Straight cable
Fuse capacity	1.25 A			

∗Always ground the unit

■ CONFIGURATION PROCEDURES

The following procedures presume that all VRF indoor/outdoor units are commissioned and operational, and that BACnet® network toward the BMS workstation is operational.

1. Power device

The first step to perform is to power up the device. To do so, a power supply working with any of the voltage range allowed is needed. Once connected the LED_PWR will turn on.

2. Connect to BACnet® interface

Connect the communication cable coming from the network hub or switch to the Ethernet port (Figure above) of the gateway. The cable to be used is a straight Ethernet STP CAT5 or higher cable.

In case there is no response from the BACnet® devices to the frames sent by gateway, check that they are operational and reachable from the network connection used by the gateway. Check the gateway Ethernet interface sending Pings to its IP address using a PC connected to the same Ethernet IP network. If the problem persists communicating through the LAN of the building, contact the network administrator.

The BACnet Gateway for VRF System comes with DHCP functionality enabled by default.

3. Connect to VRF network

Use the LON connector in the left bottom corner of the gateway in order to connect the VRF network to the UTY-VBGX.

UTY-VBGX(LON terminal block)	C2	VRF network connection through LON		VRF network
Cable(Three wires)				Cable(Three wires)
A	-	←	-	X1
B	+	→	+	X2
SGND		← →		SGND

4. Connect to PC (Configuration tool)

This action allows the user to have access to configuration and monitoring of the device. Two methods to connect to the PC can be used:

- USB cable: To connect the device to the PC the USB cable supplied should be plugged to the USB Console port.This method is recommended.
- Ethernet: Using the ETH port of the gateway.
- Install the configuration tool to the PC before connecting to the Gateway.

CONTROL SYSTEM

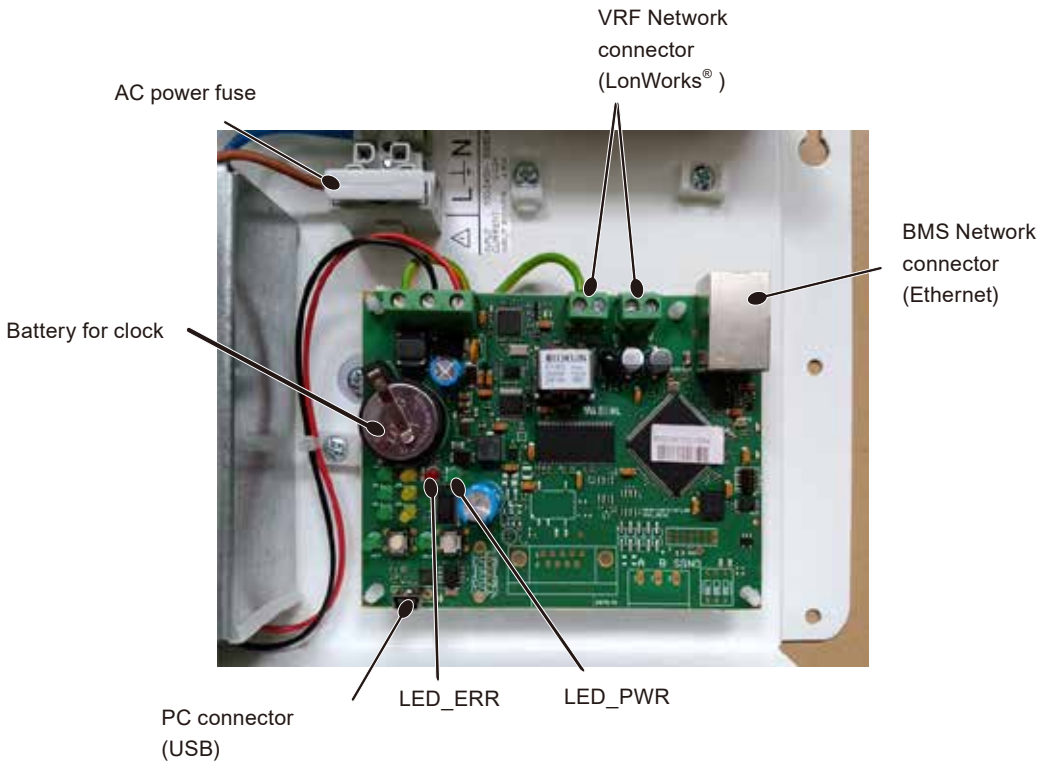
5. Execute the Configuration Tool from the PC and perform necessary settings. For detail,refer to the Instruction Manual,

6. Perform scan from the Configuration Tool, and check that all VRF indoor/outdoor units are detected and available.

7. Remove the USB cable from the Gateway, and close the case.
   At this point, BACnet® Gateway should be accessible from the BMS workstation.
   Integration of BACnet® system is ready to be performed.

CONTROL SYSTEM

■ SWITCH AND CONNECTOR ETC. LOCATION ON PCB



CONTROL SYSTEM

NOTE: Ensure proper space for all connectors when mounted.

CAUTION: Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.

IMPORTANT: Tight the Power Supply and the LON cables to one of the 4 cable tie holes fixed to the casing with the plastic ties inside the BACnet® Gateway for VRF System. Do not use 2 holes to tie one cable.

Power Supply

Connect mains to the power supply connector as:

1.- Brown: Line (L)

2.- Yellow: Earth / Ground (E)

3.- Blue: Neutral (N)

Ethernet / BACnet IP (UDP) / Console (UDP & TCP)

Connect the cable coming from the IP network to the connector ETH of the gateway. Use an Ethernet CAT5 or higher cable.

VRF Network

Connect the LON bus to connectors A (-), B (+) and (SGND) of gateway's PCB. Respect the polarity.

Console Port

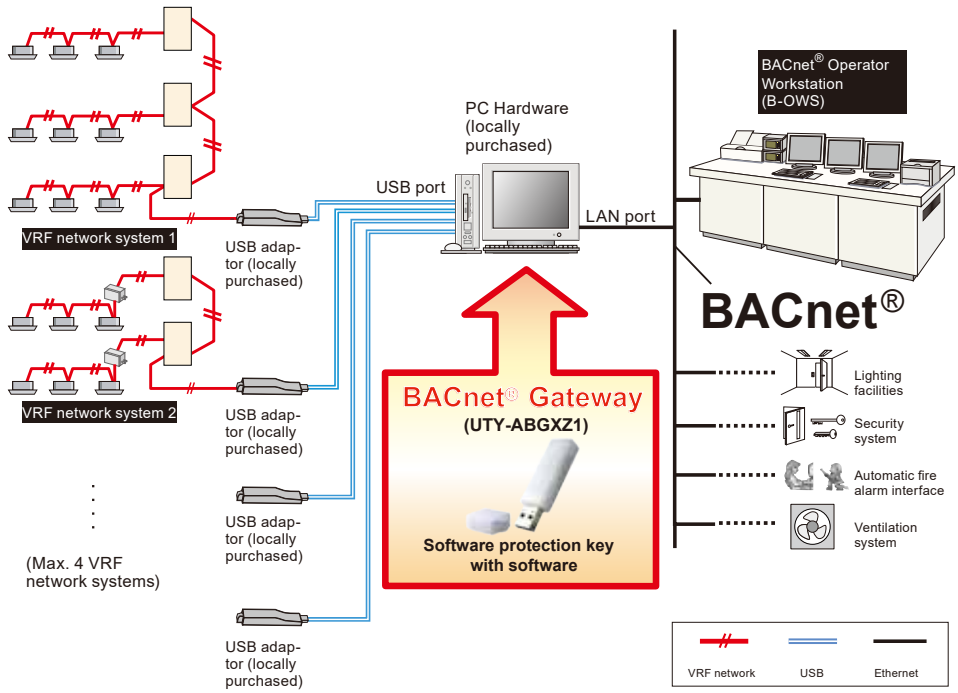
Connect a mini-type B USB cable from your computer to the gateway to allow communication between the Configuration Software and the gateway. Ethernet connection is also allowed for configuration.

3-7. BACnet® GATEWAY (SOFTWAER)

3-7-1. MODEL: UTY-ABGXZ1

- It is possible to connect medium to large sized BMS to VRF network system via BACnet®, a global standard for open networks.
- A maximum of 1600 indoor units with 4 VRF network systems (a maximum of 400 indoor units & 100 outdoor units for one network system) can be connected to one BACnet® Gateway.
- It is possible to control or monitor VRF network system from BMS via BACnet® Gateway.
- Compatible with BACnet® (ANSI / ASHRAE-135-2012) application specific controller (B-ASC).
- Compatible with BACnet®/IP over Ethernet.
- Scheduling function, alarm & event functions, electricity charge apportionment function as well as energy saving function are provided in BACnet® Gateway.
- Connection between VRF network system to personal computer is possible via small U10 USB interface. However, both U10 USB interface & personal computer are locally purchased items.

■ SYSTEM DIAGRAM



■ FUNCTIONS

● Indoor unit control (Output Object)

Commands from BMS are sent to the respective indoor units via BACnet® Gateway. (BMS → BACnet® Gateway → respective indoor units of VRF Network system)

● Indoor unit status monitoring (Input Object)

Indoor unit status is communicated to the BMS via BACnet® Gateway. (BMS ← BACnet® Gateway ← respective indoor units of VRF Network system)

● Outdoor unit control (Output Object)

Commands from BMS are sent to the respective outdoor units via BACnet® Gateway. (BMS → BACnet® Gateway → respective outdoor units of VRF Network system)

● Outdoor unit status monitoring (Input Object)

Outdoor unit status is communicated to the BMS via BACnet® Gateway. (BMS ← BACnet® Gateway ← respective outdoor units of VRF Network system)

CONTROL SYSTEM

■ BACnet® OBJECT LIST

● Type : Indoor

Object name	Code (II)	Function	Unit						
			Inactive	Active					
			Text-1	Text-2	Text-3	Text-4	Text-5	Text-6	Text-7
AI	10	Set temp. status	Degree						
	11	Space temp.	Degree						
	12	Auto temp. (Low limit status)	Degree						
	13	Auto temp. (High limit status)	Degree						
	14	Cool/Dry temp. (Low limit status)	Degree						
	15	Cool/Dry temp. (High limit status)	Degree						
	16	Heat temp. (Low limit status)	Degree						
	17	Heat temp. (High limit status)	Degree						
AO	10	Temp. setting	Degree						
	11	Auto temp. (Low limit setting)	Degree						
	12	Auto temp. (High limit setting s)	Degree						
	13	Cool/Dry temp. (Low limit setting)	Degree						
	14	Cool/Dry temp. (High limit setting)	Degree						
	15	Heat temp. (Low limit setting)	Degree						
	16	Heat temp. (High limit setting)	Degree						
AV	10	ECA *1 operation data							
BI	10	Operation status	OFF	ON					
	14	Filter sign status	Unsigned	Signed					
	15	Indoor unit error status	Normal	Fault					
	16	Antifreeze operation status	Reset	Set					
	17	SAVE operation status	Normal	SAVE					
	18	Forced thermostat off status	Reset	Set					
	19	Emergency stop status	Normal	Stop					
	20	Mode mismatch status	Normal	Mismatch					
	21	Protect antifreeze status	Reset	Set					
	22	Temp. limit valid status	Invalid	Valid					
BO	10	Operation setting	OFF	ON					
	14	Filter sign resetting	Reset	Not reset					
	15	Antifreeze operation setting	Reset	Set					
	16	SAVE operation setting	Reset	Set					
	17	Forced thermostat OFF setting	Reset	Set					
	18	Emergency stop setting	Reset	Set					
	19	Temp. limit valid setting	Invalid	Valid					
MI	10	Operation mode status	Cool	Heat	Fan	Dry	Auto		
	11	Fan speed status	Low	High	Med	Auto	Quiet	Med-Low	Med-High
	12	Indoor unit error code	Refer to FGL original error code						
	13	R.C. prohibition status	Refer to R.C. prohibition setting chart						
	14	Vertical airflow direction status	1	2	3	4	Swing		
	15	Horizontal airflow direction status	1	2	3	4	5	Swing	
	16	Special driving status	Normal	Defrost	Oil Recovery				
	17	Managed mode	None	Master	Slave	External			
MO	10	Operation mode setting	Cool	Heat	Fan	Dry	Auto		
	11	Fan speed setting	Low	High	Med	Auto	Quiet	Med-Low	Med-High
	12	R.C. prohibition setting	Refer to R.C. prohibition setting chart						
	13	Vertical airflow direction setting	1	2	3	4	Swing		
	14	Horizontal airflow direction setting	1	2	3	4	5	Swing	
TL	10	ECA *1 operation data log							

*1) ECA: Electricity Charge Apportionment.

CONTROL SYSTEM

● Type : Outdoor

Object name	Code (II)	Function	Unit							
			Inactive	Active						
			Text-1	Text-2	Text-3	Text-4	Text-5	Text-6	Text-7	Text-8
BI	30	Outdoor unit error status	Normal	Fault						
	31	Forced OFF status	Reset	Set						
BO	30	Forced OFF setting	Reset	Set						
MI	30	Outdoor unit priority operation status *1	Cool	Heat	Neutral	None				
	31	Outdoor unit error code	Refer to FGL original error code							
	32	Capacity Save Status	Not Set	100%	90%	80%	70%	60%	50%	40%
	33	Outdoor low noise operation setting *2								
MO	30	Outdoor low noise operation setting *3	Stop	Level-1 Quiet	Level-1 Ability	Level-2 Quiet	Level-2 Ability	Level-3 Quiet	Level-3 Ability	
	32	Capacity Save Setting	Not Set	100%	90%	80%	70%	60%	50%	40%

*1) Priority operation status is for Heat Pump type VRF
In other types of systems, this status is not necessary.

*2) Refer to the "Outdoor unit low noise operation value table" for the texts used with the "Outdoor low noise operation status"

*3) Outdoor unit firmware may need to be updated for this function to work.
Contact your local sales company for detail.

● Type : Gateway

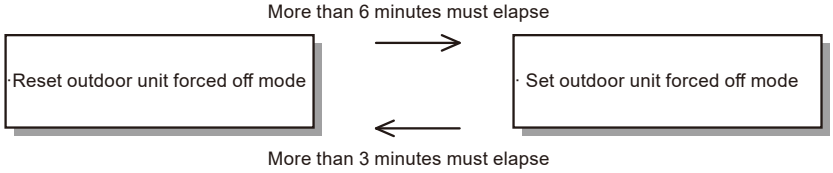
Object name	Code (II)	Function	Unit					
			Inactive	Active				
			Text-1	Text-2	Text-3	Text-4	Text-5	Text-6
Device	-	Device information						
BI	00	LON® Network Adaptor error status	Normal	Abnormal				
	01	Gateway error status	Normal	Abnormal				
	02	ES Status	Not Used	Energy Saving				
BO	02	ES Setting	Not Used	Energy Saving				
MI	00	LON® Network Adaptor unit error code	Refer to FGL original error code					
	01	Gateway error code	Refer to FGL original error code					
	02	ECA *1 status	Invalid	Invalid (Stop)	Include Indoor Unit Only	Exclude Indoor And RB Unit	Include Indoor And RB Unit	Include RB Unit Only
MO	01	ECA *1 setting	Stop	Include Indoor Unit Only	Exclude Indoor And RB Unit	Include Indoor And RB Unit	Include RB Unit Only	
Notification	00-99	Notification class						
CAL	00	Calendar “Holiday-1”						
	01	Calendar “Holiday-2”						
	02-31	Calendar “Special day-1” - ”Special day-30”						
Schedule	00-99	Schedule timer						

*1) ECA: Electricity Charge Apportionment.

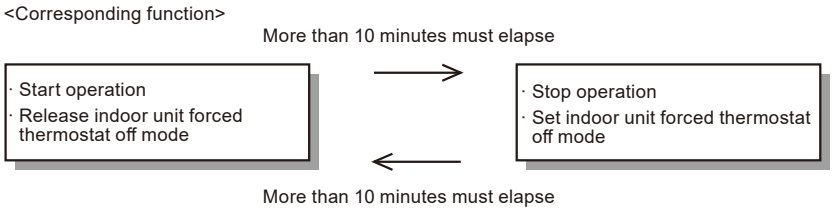
∗ To protect the compressor of the outdoor unit, carefully read and understand the following cautions that may affect the operation of the compressor before executing the setting.

• When regularly making the following settings to the same outdoor unit by using schedule function etc., leave the following interval.

<Corresponding function>



・When performing periodical settings like schedule settings for the following functions, perform the setting to all the indoor units in the same refrigerant system simultaneously, conforming to the timing restriction described below.



* Forced thermostat OFF instruction, outdoor unit forced off instruction and capacity save setting.
  ・Only one equipment can send these instructions for each refrigerant system.
  ・When these instructions are sent by multiple equipment (eg.from System Controller & BACnet® Gateway at the same time), the system may not respond as instructed or may malfunction.
* The electricity charge apportionment function of VRF system can only be performed from one equipment simultaneously. Therefore, ECA setting, required to be set before performing electricity charge apportionment, can only be sent from one equipment simultaneously.
* The energy saving function of VRF system can only be performed from one equipment simultaneously. Therefore, ES setting, required to be set before performing energy saving, can only be sent from one equipment simultaneously.

■ PACKING LIST

Name and shape	Quantity	Application
WHITE-USB-KEY (software protection key with software)	1	Includes the software and manuals for Web Monitoring Tool. Additionally, it works as the software protection key. Software protection key to be connected to an USB port on the PC that the Web Monitoring Tool is installed. Web Monitoring Tool runs only on a PC with this WHITE-USB-KEY.

■ OTHER REQUIRED DEVICES (Locally purchased)

- Personal computer that satisfies the following system requirements
- Echelon® U10 USB Network Interface – TP/FT-10 Channel (Model number: 75010R) (Required for each VRF Network.)

■ PERSONAL COMPUTER SYSTEM REQUIREMENTS

Operating system	• Microsoft® Windows® 7 Home Premium (32-bit or 64-bit) SP1 • Microsoft® Windows® 7 Professional (32-bit or 64-bit) SP1 • Microsoft® Windows® 8.1 (32-bit or 64-bit) • Microsoft® Windows® 8.1 Pro (32-bit or 64-bit) • Microsoft® Windows® 10 Home (32-bit or 64-bit) • Microsoft® Windows® 10 Pro (32-bit or 64-bit) [Supported languages] English, Chinese, French, German, Russian, Spanish, and Polish
CPU	Intel® Core™ i3 2 GHz or higher
Memory	• 2 GB or more (for Windows® 7 [32-bit]) • 4 GB or more (for Windows® 7 [64-bit], Windows® 8.1, and Windows® 10)
HDD	40 GB or more of free space
Display	1,024 × 768 or higher resolution
Interface	• Ethernet port (for getting access to the Internet using LAN) • USB ports (Maximum of 5 ports) - 1 USB port is required for WHITE USB-Key connection - Maximum of 4 USB ports are required for Echelon® U10 USB Network Interface * Maximum number of required USB ports depends on the applicable system configurations.
Software	Adobe® Reader® 9.0 or later

CONTROL SYSTEM

■ INSTALLATION PROCEDURE

Before installation, connect between the VRF Network System and the USB Adaptor.

Brief installation steps are as follows:
(For detail, check the Instruction Manual.)

Step1: Install an appropriate driver for the USB Adaptor to the PC.
*In this step, do not connect the USB Adaptor to the PC.

Step2: Install the BACnet® Gateway (Application Software) to the PC.

Step3: Restart the PC.

Step4: After restarting the PC, make sure that the USB Adaptor, WHITE-USB-KEY, and Ethernet cable for the BACnet® Gateway are connected to the PC.

Step5: Start the application.

Step6: Configure necessary settings for startup operation as follows:

1. Perform all necessary initial settings such as IP address, etc. Then, click the OK button.
   Adaptor Setting window appears automatically.
2. Select the connected adaptor, and click OK button. Then, Unit Registration window appears and starts scanning all connected units automatically.
3. After finishing the scanning, click OK button.
   Gateway execution window appears on the display when the startup operation is completed.

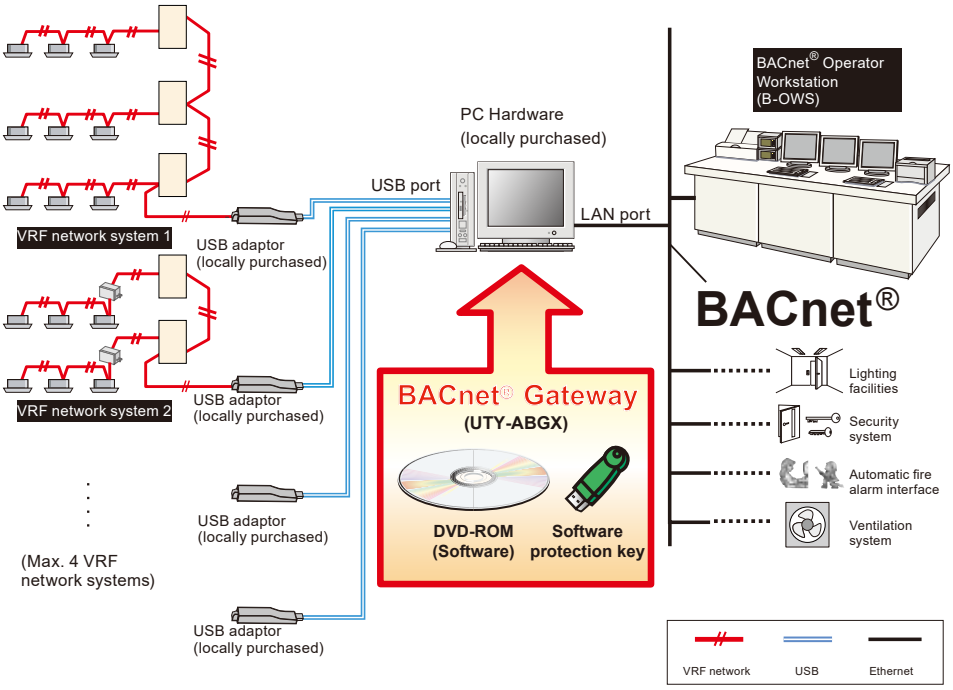
Step7: Arrange the information between BMS and BACnet® Gateway using the Read Property Service, etc.

CONTROL SYSTEM

3-7-2. MODEL: UTY-ABGX

- It is possible to connect medium to large sized BMS to VRF network system via BACnet®, a global standard for open networks.
- A maximum of 1,600 indoor units with 4 VRF network systems (a maximum of 400 indoor units & 100 outdoor units for one network system) can be connected to one BACnet® Gateway.
- It is possible to control or monitor VRF network system from BMS via BACnet® Gateway.
- Compatible with BACnet® (ANSI / ASHRAE-135-2004) application specific controller (B-ASC).
- Compatible with BACnet®/IP over Ethernet.
- Scheduling function, alarm & event functions, electricity charge apportionment function as well as energy saving function are provided in BACnet® Gateway.
- Connection between VRF network system to personal computer is possible via small U10 USB interface. However, both U10 USB interface & personal computer are locally purchased items.

■ SYSTEM DIAGRAM



■ FUNCTIONS

● Indoor unit control (Output Object)

Commands from BMS are sent to the respective indoor units via BACnet® Gateway. (BMS → BACnet® Gateway → respective indoor units of VRF Network system)

● Indoor unit status monitoring (Input Object)

Indoor unit status is communicated to the BMS via BACnet® Gateway. (BMS ← BACnet® Gateway ← respective indoor units of VRF Network system)

● Outdoor unit control (Output Object)

Commands from BMS are sent to the respective outdoor units via BACnet® Gateway. (BMS → BACnet® Gateway → respective outdoor units of VRF Network system)

● Outdoor unit status monitoring (Input Object)

Outdoor unit status is communicated to the BMS via BACnet® Gateway. (BMS ← BACnet® Gateway ← respective outdoor units of VRF Network system)

■ BACnet® OBJECT LIST

● Type : Indoor

Object name	Code (II)	Function	Unit					
			Inactive	Active				
			Text-1	Text-2	Text-3	Text-4	Text-5	Text-6
AI	10	Set temp. status	°F					
	11	Space temp.	°F					
	12	Auto temp. (Low limit status)	°F					
	13	Auto temp. (High limit status)	°F					
	14	Cool/Dry temp. (Low limit status)	°F					
	15	Cool/Dry temp. (High limit status)	°F					
	16	Heat temp. (Low limit status)	°F					
	17	Heat temp. (High limit status)	°F					
AO	10	Temp. setting	°F					
	11	Auto temp. (Low limit setting)	°F					
	12	Auto temp. (High limit setting s)	°F					
	13	Cool/Dry temp. (Low limit setting)	°F					
	14	Cool/Dry temp. (High limit setting)	°F					
	15	Heat temp. (Low limit setting)	°F					
	16	Heat temp. (High limit setting)	°F					
AV	10	ECA *1 operation data						
BI	10	Operation status	OFF	ON				
	14	Filter sign status	Unsigned	Signed				
	15	Indoor unit error status	Normal	Fault				
	16	Antifreeze operation status	Reset	Set				
	17	SAVE operation status	Normal	SAVE				
	18	Forced thermostat off status	Reset	Set				
	19	Emergency stop status	Normal	Stop				
	20	Mode mismatch status	Normal	Mismatch				
	21	Protect antifreeze status	Reset	Set				
	22	Temp. limit enable status	Disable	Enable				
BO	10	Operation setting	OFF	ON				
	14	Filter sign resetting	Reset	Not reset				
	15	Antifreeze operation setting	Reset	Set				
	16	SAVE operation setting	Reset	Set				
	17	Forced thermostat OFF setting	Reset	Set				
	18	Emergency stop setting	Reset	Set				
	19	Temp. limit enable setting	Disable	Enable				
MI	10	Operation mode status	Cool	Heat	Fan	Dry	Auto	
	11	Fan speed status	Low	High	Med	Auto		
	12	Indoor unit error code	Refer to FGL original error code					
	13	R.C. prohibition status	Refer to R.C. prohibition setting chart					
	14	Vertical airflow direction status	1	2	3	4	Swing	
	15	Horizontal airflow direction status	1	2	3	4	5	Swing
	16	Special driving status	Normal	Defrost	Oil Recovery			
	17	Managed mode	None	Master	Slave	Outer		
MO	10	Operation mode setting	Cool	Heat	Fan	Dry	Auto	
	11	Fan speed setting	Low	High	Med	Auto		
	12	R.C. prohibition setting	Refer to R.C. prohibition setting chart					
	13	Vertical airflow direction setting	1	2	3	4	Swing	
	14	Horizontal airflow direction setting	1	2	3	4	5	Swing
TL	10	ECA *1 operation data log						

*1) ECA: Electricity Charge Apportionment

CONTROL SYSTEM

● Type : Outdoor

Object name	Code (II)	Function	Unit							
			Inactive	Active						
			Text-1	Text-2	Text-3	Text-4	Text-5	Text-6	Text-7	Text-8
BI	30	Outdoor unit error status	Normal	Fault						
	31	Forced OFF status	Reset	Set						
BO	30	Forced OFF setting	Reset	Set						
MI	30	Outdoor unit priority operation status *1	Cool	Heat	Neutral	None				
	31	Outdoor unit error code	Refer to FGL original error code							
	32	Capacity Save Status	Not Set	100%	90%	80%	70%	60%	50%	40%
	33	Outdoor low noise operation status *2								
MO	30	Outdoor low noise operation setting*3	Stop	Level-1 Quiet	Level-1 Ability	Level-2 Quiet	Level-2 Ability			
	32	Capacity Save Setting	Not Set	100%	90%	80%	70%	60%	50%	40%

*1) Priority operation status is for Heat Pump type VRF
In other types of systems, this status is not necessary.

*2) Refer to the "Outdoor unit low noise operation value table" for the texts used with the "Outdoor low noise operation status"

*3) Outdoor unit firmware may need to be updated for this function to work.
Contact your local sales company for detail.

● Type : Gateway

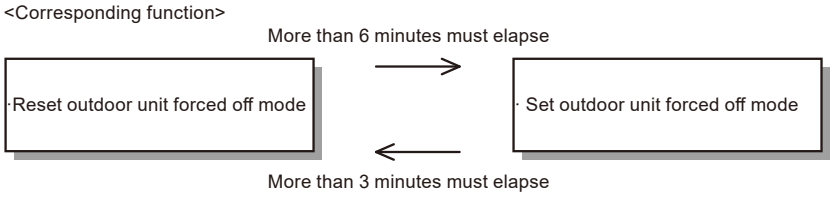
Object name	Code (II)	Function	Unit					
			Inactive	Active				
			Text-1	Text-2	Text-3	Text-4	Text-5	Text-6
Device	-	Device information						
BI	00	LON Network Adaptor error status	Normal	Abnormal				
	01	Gateway error status	Normal	Abnormal				
	02	ES Status	Not Used	Energy Saving				
BO	02	ES Setting	Not Used	Energy Saving				
MI	00	LON Network Adaptor unit error code	Refer to FGL original error code					
	01	Gateway error code	Refer to FGL original error code					
	02	ECA *4 status	Disable	Disable (Stop)	Include Indoor Unit Only	Exclude Indoor And RB Unit	Include Indoor And RB Unit	Include RB Unit Only
MO	01	ECA *4 setting	Stop	Include Indoor Unit Only	Exclude Indoor And RB Unit	Include Indoor And RB Unit	Include RB Unit Only	
Notification	00-99	Notification class						
CAL	00	Calendar “Holiday-1”						
	01	Calendar “Holiday-2”						
	02-31	Calendar “Special day-1” - ”Special day-30”						
Schedule	00-99	Schedule timer						

*4) ECA: Electricity Charge Apportionment

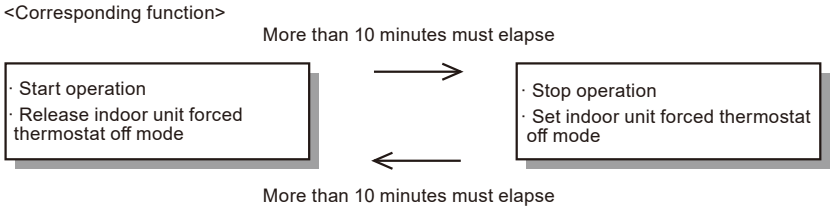
∗ To protect the compressor of the outdoor unit, carefully read and understand the following cautions that may affect the operation of the compressor before executing the setting.

CONTROL SYSTEM

• When regularly making the following settings to the same outdoor unit by using schedule function etc., leave the following interval.



• When performing periodical settings like schedule settings for the following functions, perform the setting to all the indoor units in the same refrigerant system simultaneously, conforming to the timing restriction described below.



* Forced thermostat OFF instruction, outdoor unit forced off instruction and capacity save setting.
  - Only one equipment can send these instructions for each refrigerant system.
  - When these instructions are sent by multiple equipment (eg.from System Controller & BACnet Gateway at the same time), the system may not respond as instructed or may malfunction.

* The electricity charge apportionment function of VRF system can only be performed from one equipment simultaneously. Therefore, ECA setting, required to be set before performing electricity charge apportionment, can only be sent from one equipment simultaneously.

* The energy saving function of VRF system can only be performed from one equipment simultaneously. Therefore, ES setting, required to be set before performing energy saving, can only be sent from one equipment simultaneously.

CONTROL SYSTEM

■ PACKING LIST

Name and shape	Quantity	Application
DVD-ROM	1	Includes the software and manuals for BACnet® Gateway.
Wibu key (Software protection key)	1	Software protection key to be inserted in a USB slot running BACnet® Gateway. BACnet® Gateway may only run on a PC with Wibu Key.

■ OTHER REQUIRED DEVICES (LOCALLY PURCHASED)

- Personal computer that satisfies the following system requirements
- Echelon® U10 USB Network Interface – TP/FT-10 Channel (Model number: 75010R) (Required for each VRF Network.)

■ PERSONAL COMPUTER SYSTEM REQUIREMENTS

Operating system	• Microsoft® Windows® 7 Home Premium (32-bit or 64-bit) SP1 • Microsoft® Windows® 7 Professional (32-bit or 64-bit) SP1 • Microsoft® Windows® 8.1 (32-bit or 64-bit) • Microsoft® Windows® 8.1 Pro (32-bit or 64-bit) • Microsoft® Windows® 10 Home (32-bit or 64-bit) • Microsoft® Windows® 10 Pro (32-bit or 64-bit) [Supported languages] English, Chinese, French, German, Russian, Spanish, and Polish
CPU	Intel® Core™ i3 2-GHz or higher
Memory	• 2 GB or more (for Windows Vista® and Windows® 7 [32-bit]) • 4 GB or more (for Windows® 7 [64-bit], Windows® 8.1, and Windows® 10)
HDD	40 GB or more of free space
Display	1,024 × 768 or higher resolution
Interface	• Ethernet port (for getting access to the Internet using LAN) • USB ports (Maximum of 5 ports) - 1 USB port is required for WibuKey connection - Maximum of 4 USB ports are required for Echelon® U10 USB Network Interface * Maximum number of required USB ports depends on the applicable system configurations
Software	Adobe® Reader® 9.0 or later
Optical drive	DVD-ROM Drive

■ INSTALLATION PROCEDURE

Before beginning installation, connect to the VRF Network System using the USB adapter.

Installation steps in brief are as follows:
(For detail, check the Installation Manual and the Operation Manual)

Step1: Install the driver for USB Adaptor to PC
*in this stage, do not connect the USB Adaptor to PC

Step2: Install the BACnet® Gateway (Application Software) to PC

Step3: Restart PC.

Step4: After PC restart, make sure that the USB Adaptor, WIBU-KEY and Ethernet cable for the BACnet® Gateway are connected to PC

Step5: Startup the application.

Step6: Input all necessary initial setting items like, IP Address, and others. After that, click the OK button. USB Adaptor setting screen pops up automatically, select the connected adaptor and click OK button. After that, unit register screen appears automatically, scanning all connected units and click OK button. Complete the startup operation if Gateway execution screen appears on PC screen.

Step7: Arrange the information between BMS and BACnet® Gateway using the Read Property Service and so on.

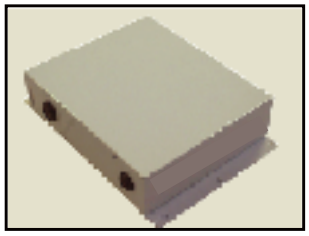
3-8. SIGNAL AMPLIFIER

■ MODEL: UTY-VSGXZ1

If the total length of transmission line exceeds 1,640ft. (500m), or the number of units exceeds 64 units, A signal amplifier will be required.

- Transmission line length can be extended up to 11,811 ft. (3,600m) with multiple signal amplifier.
- Up to 8 Signal Amplifier(Filter mode is OFF) can be installed in 1 VRF network system.
- Up to 32 Signal Amplifier(Filter mode is ON) can be installed in 1 VRF network system.
- When indoor unit is installed 321 or more, install one Signal amplifier (Filter mode is ON) for every 64 units. (However, only when VR-II Series is installed.)

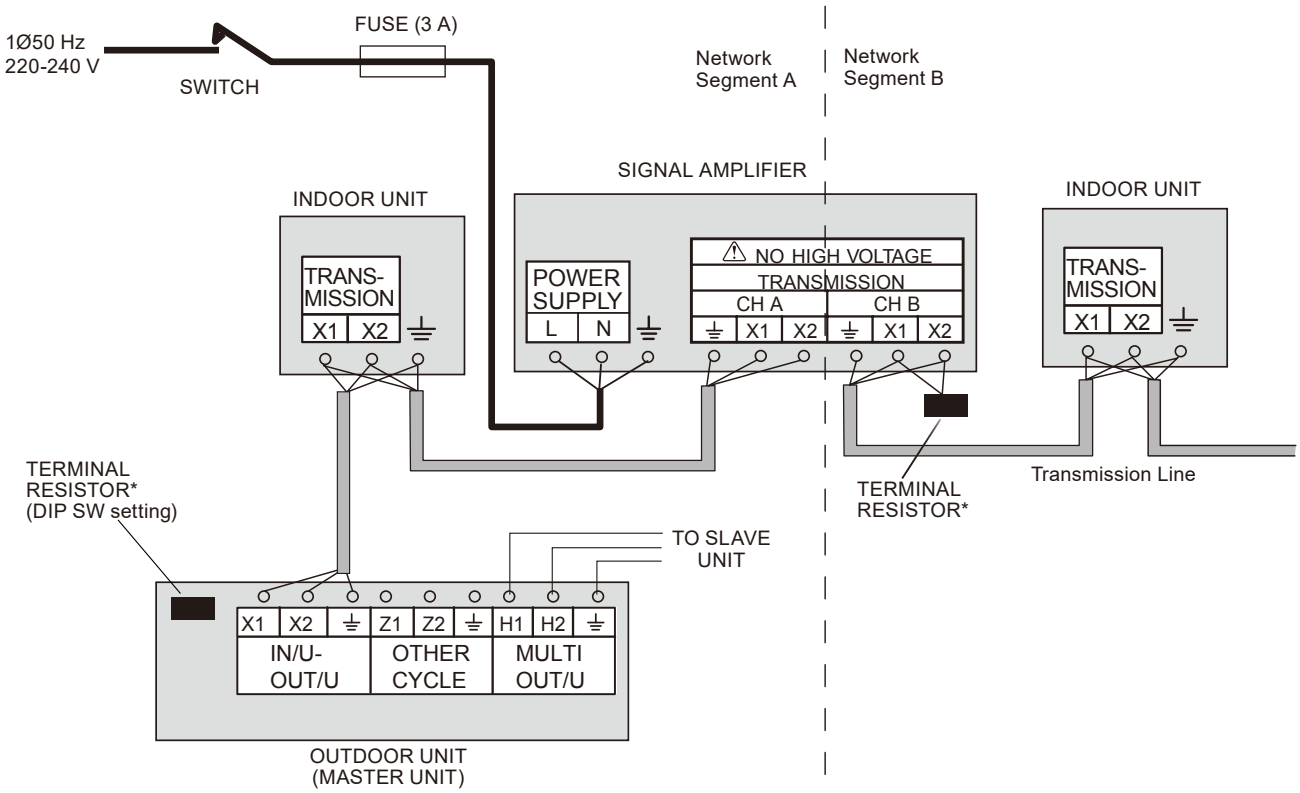
To prevent the drop of signal level by taking distance of length or quantity of unit in VRF network with installing signal amplifier, signal level can be recovered.



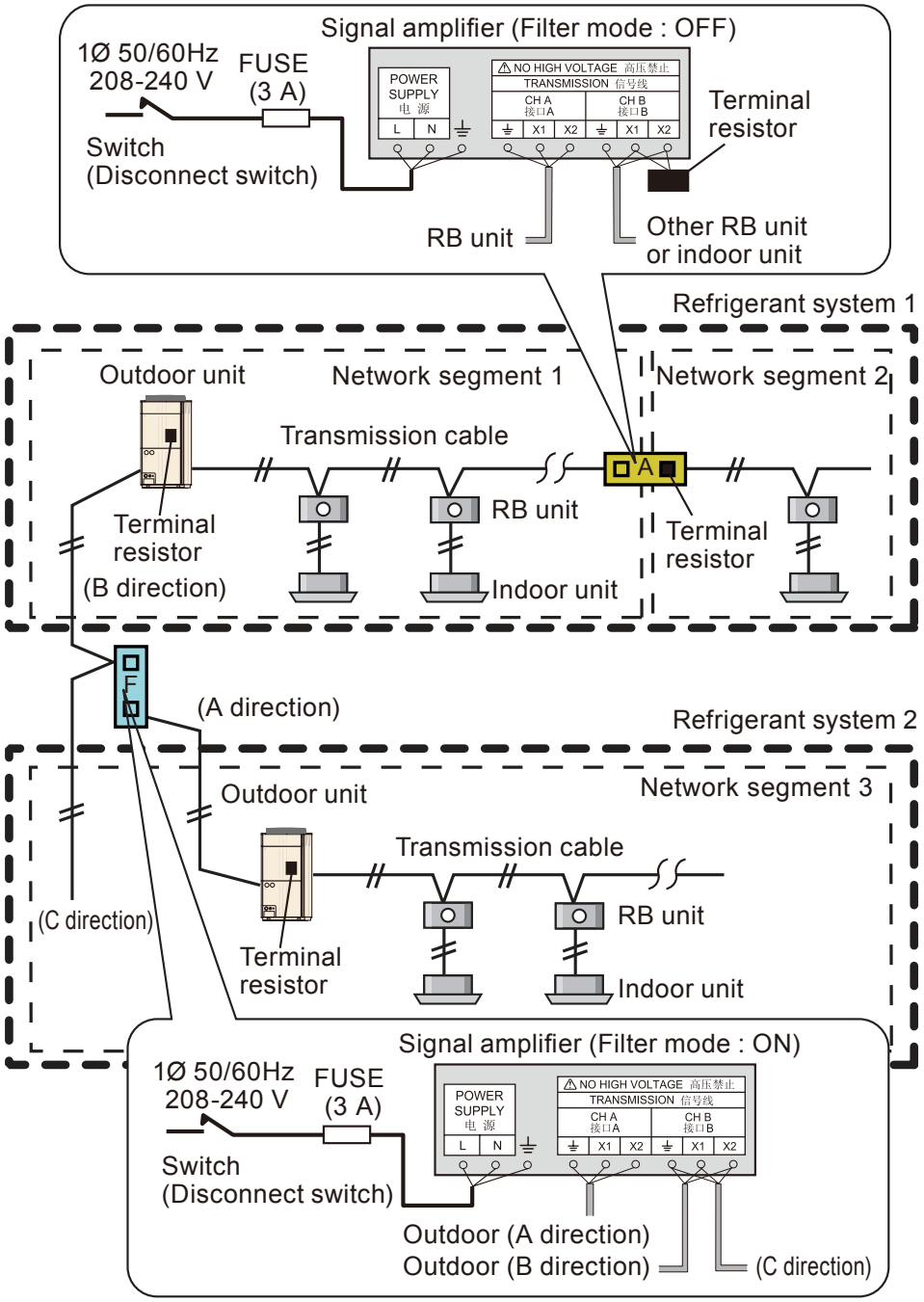
CONTROL SYSTEM

■ ELECTRICAL WIRING

● **Except in the case of V and S Series** (Indoor unit is installed 320 units or less)



● **Case of VR-II** (321 or more indoor units are installed)



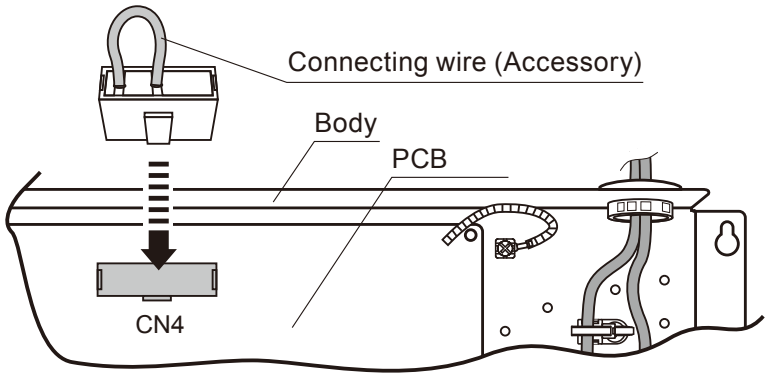
* Make sure to install 1 piece of terminal resistor to each network segment.
Terminal resister is provided for each outdoor unit, but confirm that there is only one terminal resistor in the same network segment.

CONTROL SYSTEM

● Filter mode setting

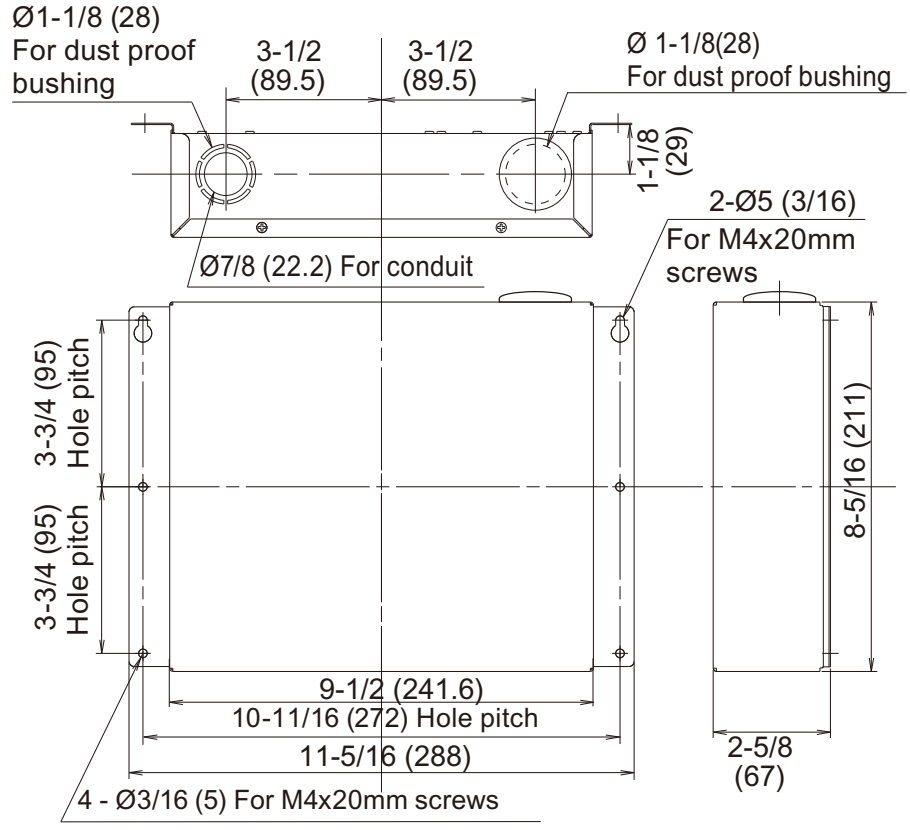
Set the Filter mode to suppress an increase of the amount of communication information in the VR-II system.

- Filter mode is turned on by inserting the accessory connecting wire at the CN4 connector on the PCB.
- When the Filter mode setting is changed, turn the power off once. Otherwise, the setting will not be recognized.



■ DIMENSIONS

Unit: in. (mm)



CONTROL SYSTEM

■ PACKING LIST

The following installation parts are supplied. Use them as required.

Name and shape	Quantity	Application
Installation manual	1	
Cable Tie	4	For securing controller cable.
Screw (M4 × 20 mm)	4	For mounting the signal amplifier.
Terminal resistor	1	
Dust proof bushing	1	For connecting the power supply cable. (Except in U.S.A. and Canada)
Connecting wire	1	For setting the filter mode

■ WIRING SPECIFICATIONS

Use	Size		Wire type	Remarks
Power supply cable	Maximum	16 AWG (1.25 mm^2)	60245 IEC 57 or equivalent	1 ø AC 208 - 240 V 50/60 Hz, 2 Wire + ground (Always ground the unit)
	Minimum	20 AWG (0.5 mm^2)		
Transmission cable	22AWG (0.33 mm^2)		LEVEL4 (NEMA) non-polar 2 core, twisted pair solid core Shielded	LONWORKS® compatible cable
Fuse capacity	3 A			

■ SPECIFICATIONS

● Main specification

Power supply		1ø AC 208 - 240 V 50/60 Hz
Input Power (W)		4.5
Temperature: °F (°C)	Operating	32 to 114.8 (0 to 46)
	Packaged	14 to 140 (-10 to 60)
Humidity (%)	Packaged	0 to 95 (RH) ; No condensation
Dimensions [H × W × D]: in. (mm)		2-5/8 × 11-5/16 × 8-5/16 (67 × 288 × 211)
Weight: lbs. oz. (g)		3 lbs. (1,500)

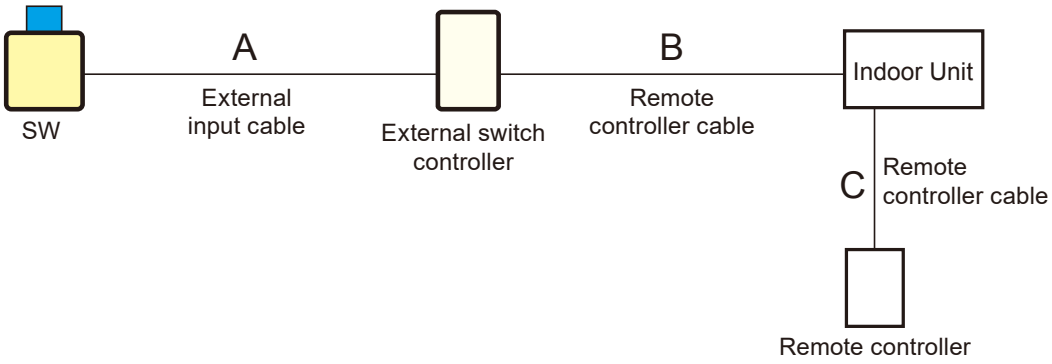
CONTROL SYSTEM

3-9. EXTERNAL SWITCH CONTROLLER

3-9-1. MODEL: UTY-TERX

- Switching of air conditioner settings can be performed using an external switch controller and a third-party device.
- ON/OFF, Temperature, Fan Speed, Operating and Remote controller prohibition Mode can be switched using external devices, such as a room card-key.
- Card-key or other sensor switches are available as a locally purchased parts.

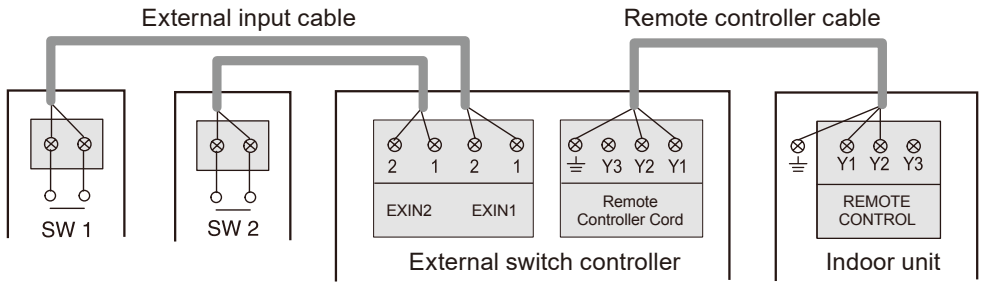
■ SYSTEM DIAGRAM



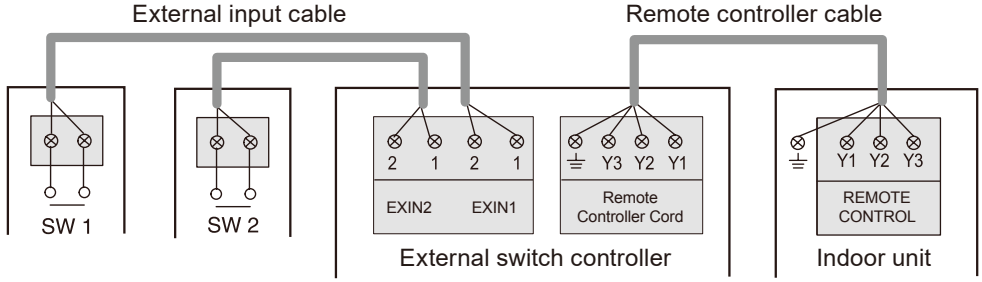
Use	A	B	B + C
2-wire type	164 ft. (50 m) or less	-	1,640 ft. (500 m) or less
3-wire type	164 ft. (50 m) or less	82 ft. (25 m) or less	1,640 ft. (500 m) or less

■ ELECTRICAL WIRING

● For non-polar 2 wire

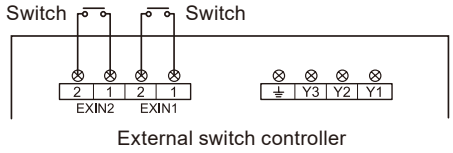


● For polar 3 wire



CONTROL SYSTEM

Connection to external contacts

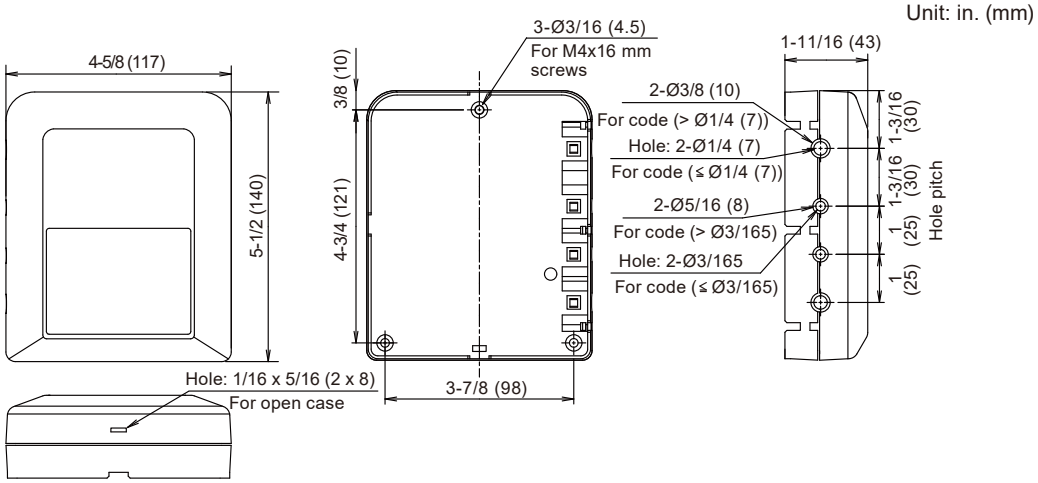


Select low current use contacts (usable at DC 5 V, 2 mA or less).

Short circuit detection resistance (R ON): ≤ 500 (Ω).
Open circuit detection resistance (R OFF): ≥ 100 (kΩ).
A twister pair cable 16 to 22AWG (0.33 to 1.25 mm²) should be use.
Maximum length of cable is 164 ft. (50 m).

■ DIMENSIONS

Unit: in. (mm)



■ INSTALLATION

● (1) When connecting to the connector

Case 1: For non-polar 2 wire

Use a tool to cut off the terminal on the end of the remote controller cable, and then remove the insulation from the cut end of the cable as shown in Fig. 1. Connect the remote controller cable and connecting cable as shown in Fig. 2. Be sure to insulate the connection between the cables.

Fig.1

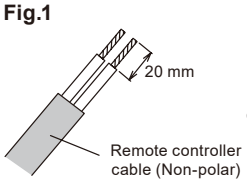
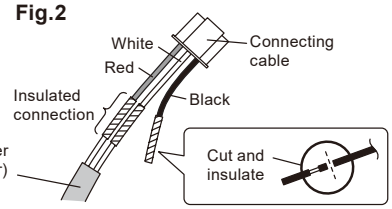
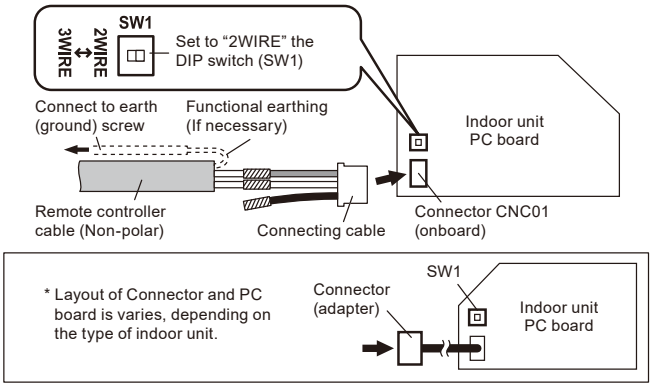


Fig.2



Connect the remote controller cable to the connecting cable, and insert it to the connector. Set to “2WIRE” the DIP switch (SW1) on the PC board of the indoor unit.

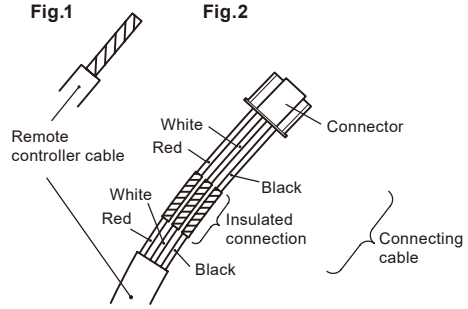


CONTROL SYSTEM

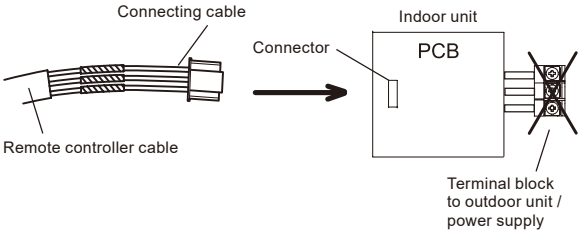
Case 2: For polar 3 wire

Modify the cable as per below methods.
Use a tool to cut off the terminal on the end of the remote controller cable, and then remove the insulation from the cut end of the cable as shown in Fig. 1.
Connect the remote controller cable and connecting cable as shown in Fig. 2.
Be sure to insulate the connection between the cables.

Fig.1 Fig.2



Connect the remote controller cable to the connecting cable, and insert it to the connector.



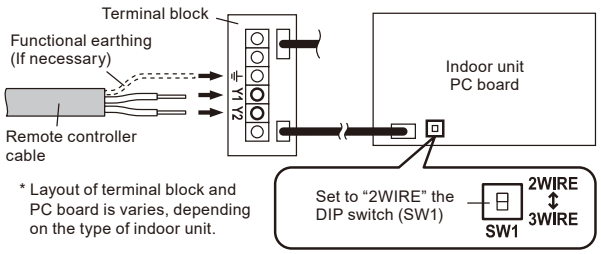
When the board has the 2WIRE/3WIRE DIP switch on it, set it to 3WIRE.
For how to set, see “Case 1: For non-polar 2 wire”.

● (2) When connecting to the exclusive terminal block

Connect the end of remote controller cable directly to the exclusive terminal block.

If there is the 2WIRE/3WIRE switch on the PC board of the indoor unit, set it to match the connection method of the connected remote controller cable.

Example) Connection of non-polar 2 wire



* Layout of terminal block and PC board is varies, depending on the type of indoor unit.

CONTROL SYSTEM

■ PACKING LIST

Name and shape	Quantity	Application
Installation manual	1	
Screw (M4 × 16 mm)	3	For installing the external switch controller
Cable Tie	4	For securing controller cable.

■ WIRING SPECIFICATIONS

Use	Size	Cable type	Remarks
Remote controller cable (2-wire type)	16 to 22AWG (0.33 to 1.25 mm^2)	Sheathed PVC cable*	Non-polar 2 core, twisted pair (Maximum cable length: 1,640 ft. [500 m])
Remote controller cable (3-wire type)	22AWG (0.33 mm^2)	Sheathed PVC cable*	Polar 3core, twisted pair (Maximum cable length: 82 ft. [25 m])
External input cable	16 to 22AWG (0.33 to 1.25 mm^2)	Sheathed PVC cable*	2 core, twisted pair (Maximum cable length: 164 ft. [50 m])

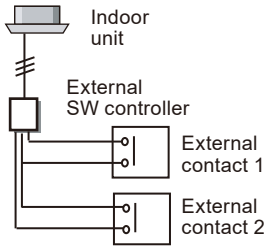
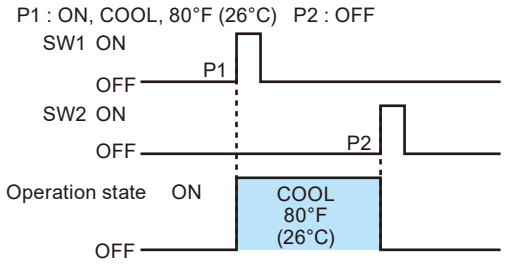
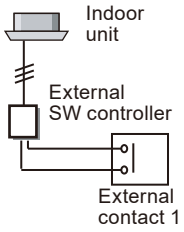
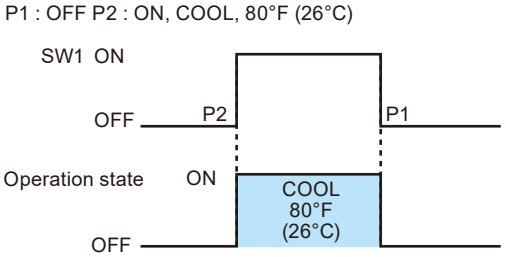
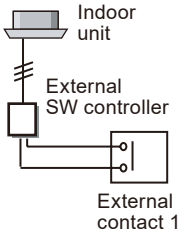
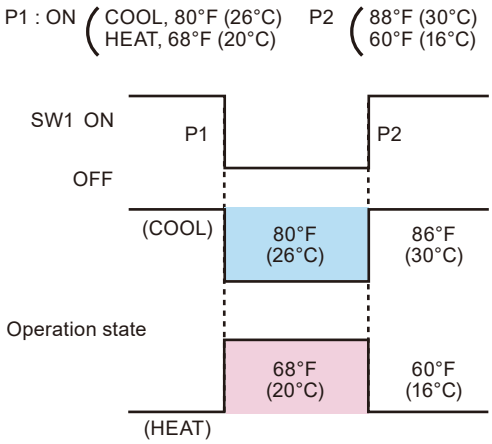
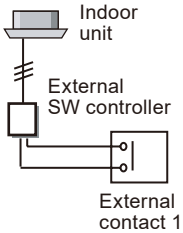
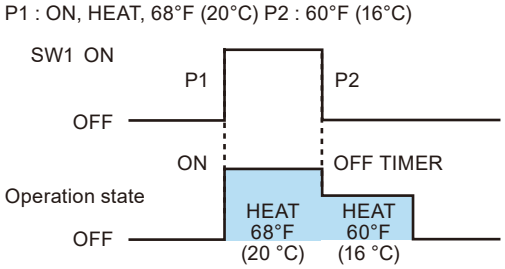
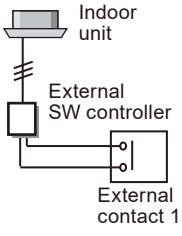
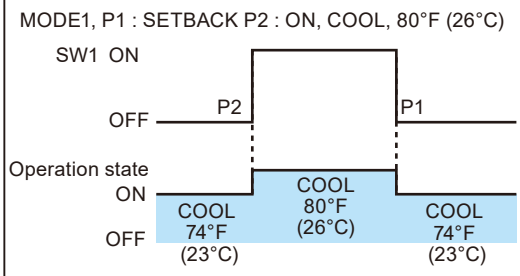
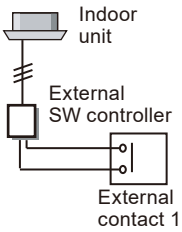
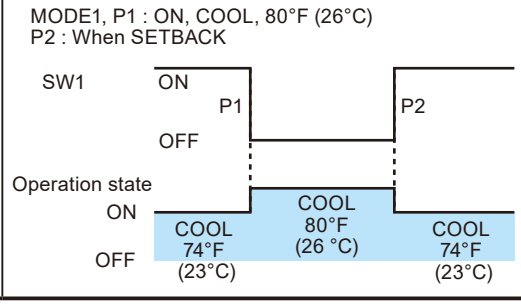
*: Use shielded cable in accordance with local rules for remote controller cable.

■ SPECIFICATIONS

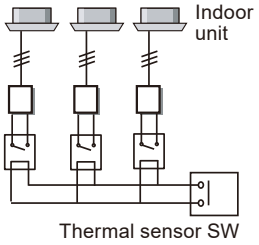
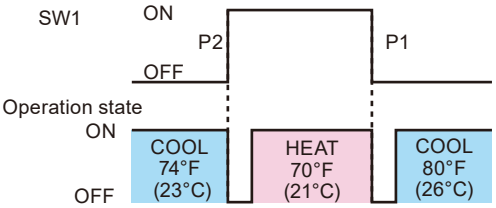
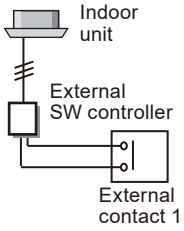
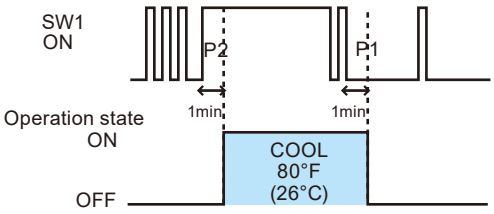
Power consumption (W)		0.6
Temperature: °F (°C)	Operating	32 to 114.8 (0 to 46)
	Packaged	14 to 140 (-10 to 60)
Humidity (%)	Packaged	0–95 (RH); No condensation
Dimensions [H × W × D]: in. (mm)		1-11/16 × 4-5/8 × 5-1/2 (43 × 117 × 140)
Weight: oz. (g)		9 (250)

CONTROL SYSTEM

■ EXAMPLE

Application	Setting	Wiring	Operation example
When controlling the individual operation states with two external contact	MODE0 P1: Arbitrary operation state Contact OFF→ON P2: Arbitrary operation state Contact OFF→ON Others setting are arbitrary.		
When controlling operation by ON or OFF of an external contact switch	MODE1 P1 : Arbitrary operation state P2 : Arbitrary operation state Others setting are arbitrary.		
	MODE1 P1 : Arbitrary operation state P2 : Arbitrary operation state Others setting are arbitrary.		
	MODE1 P1 : Arbitrary operation state P2 : OFF TIMER (1, 3, 6, 12, 24hr) Others setting are arbitrary.		
When operating in the state set when an external contact switch was set to ON and returning to the original operation state when the switch was set to OFF	MODE1 or 0 P1 : SETBACK P2 : Arbitrary operation state Others setting are arbitrary.		
When operated in the state when an external contact switch was set to OFF and returned to original operation state when the switch was set to OFF	MODE1 or 0 P1 : Arbitrary operation state P2 : SETBACK Others setting are arbitrary.		

CONTROL SYSTEM

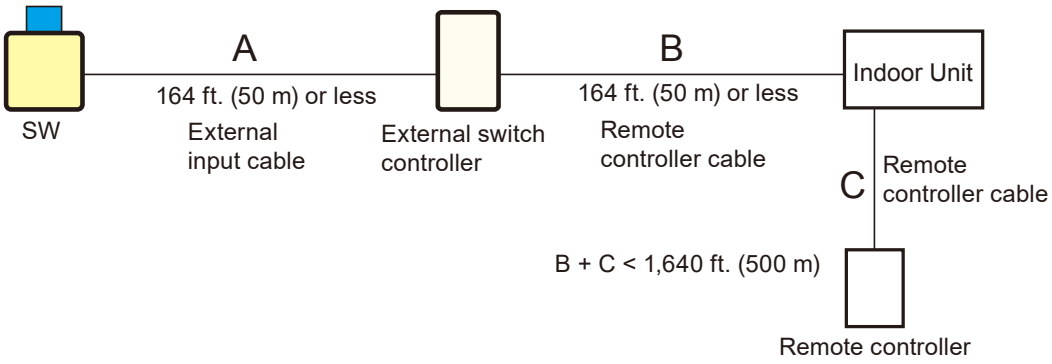
Application	Setting	Wiring	Operation example
When a temperature sensor switch is connected and cooling and heating switching is performed.	MODE1 OFF output: Enabled P1 : ON, COOL or HEAT P2 : ON, COOL or HEAT Operation conditions: Unit operationg only Others setting are arbitrary.	 An external switch controller is connected to all the indoor units of the same refrigerant system and cooling and heating are switched by one temperature sensor.	P1 : ON, COOL, 80°F (26°C) P2 : ON,HEAT, 70°F (21°C) 
When preventing chattering noise within 1 minute of the external contact switch.	MODE1 Delay-time setting: Delay P1 : Arbitrary operation state P2 : Arbitrary operation state Others setting are arbitrary.		P1 : OFF P2 : ON, COOL, 80°F (26°C) 

CONTROL SYSTEM

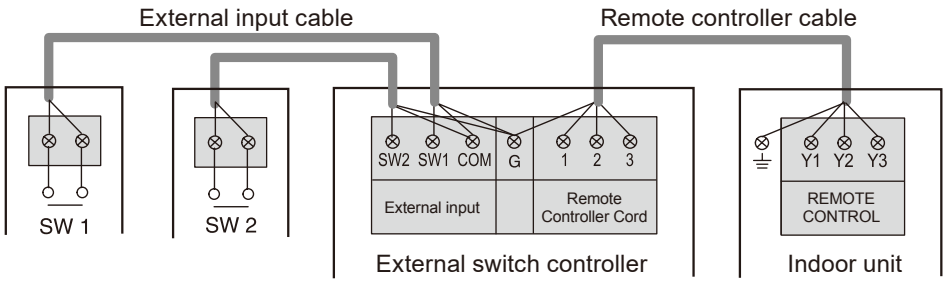
3-9-2. MODEL: UTY-TEKX

- Switching of air conditioner settings can be performed using an external switch controller and a third-party device.
- ON/OFF, Temperature, Fan Speed and Operating Mode can be switched using external devices, such as a room card-key.
- Card-key or other sensor switches are available as a locally purchased parts.

■ SYSTEM DIAGRAM

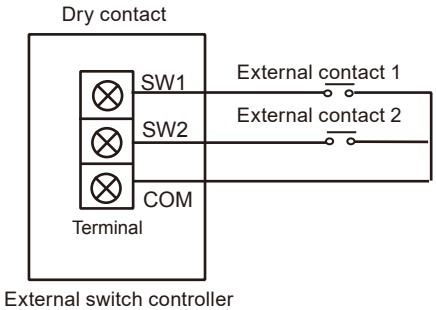


■ ELECTRICAL WIRING



*Connect SW2 only when it is used.

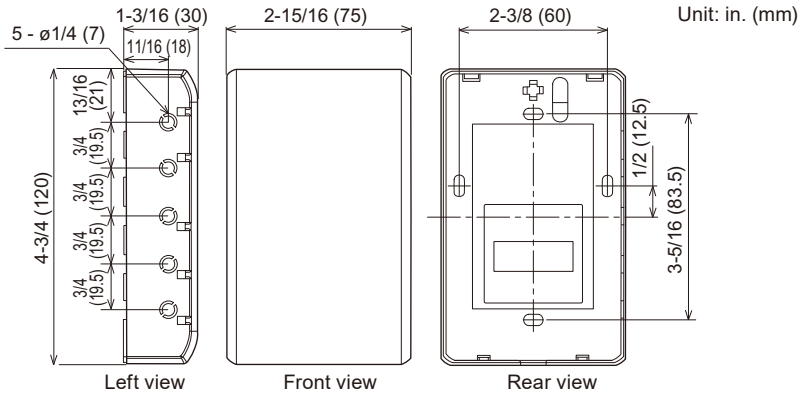
Connection to external contacts



Open circuit voltage : 12 (V) ± 2 (V).
Short circuit current : ≦2 (mA).
Short circuit detection resistance (R_{ON}) : ≦1 (kilo-ohm).
Open circuit detection resistance (R_{OFF}) : ≧50 (kilo-ohm).

CONTROL SYSTEM

■ DIMENSIONS



■ INSTALLATION

● Connection Pattern

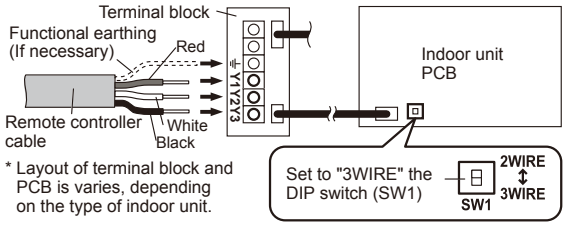
NOTE: Connection pattern is different for different indoor unit types.

Indoor unit types	Connection Pattern
All Cassette type	Pattern A
All Duct type	
All Ceiling type	
Wall Mounted type	Pattern B

● Pattern A

Connect the end of remote controller cable directly to the exclusive terminal block.

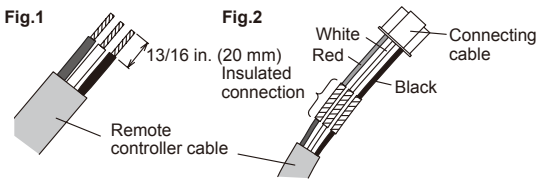
Set the DIP switch (SW1) to "3WIRE" on the PCB of the indoor unit.



NOTE: The equipment may fail if it is connected to the outdoor unit or the power supply terminal block.

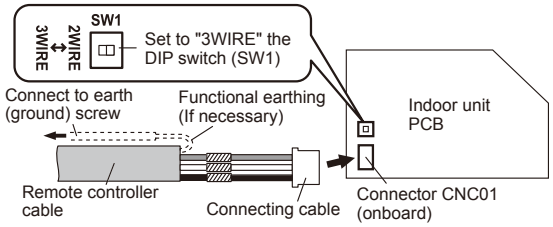
● Pattern B

1) Use a tool to cut off the terminal on the end of the remote controller cable, and then remove the insulation from the cut end of the cable as shown in Fig. 1. Connect the remote controller cable and connecting cable as shown in Fig. 2. Be sure to insulate the connection between the cables.

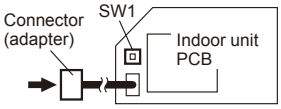


CONTROL SYSTEM

2) Connect the remote controller cable to the connecting cable, and insert it to the connector.
Set the DIP switch (SW1) to "3WIRE" on the PCB of the indoor unit.



* Layout of Connector and PCB varies, depending on the type of indoor unit



■ PACKING LIST

Name and shape	Quantity	Application
Installation manual	1	
Screw (M4 × 16 mm)	2	For installing the external switch controller
Cable Tie	5	For securing controller cable.

■ WIRING SPECIFICATIONS

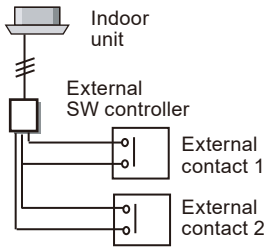
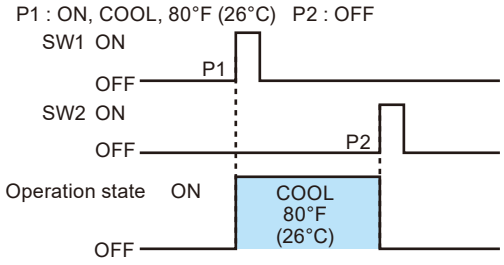
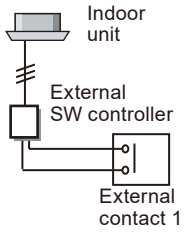
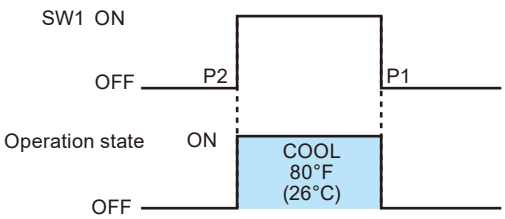
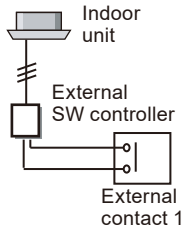
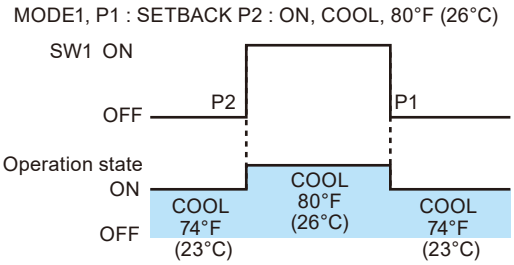
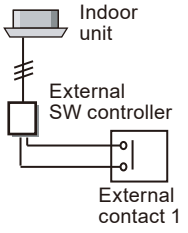
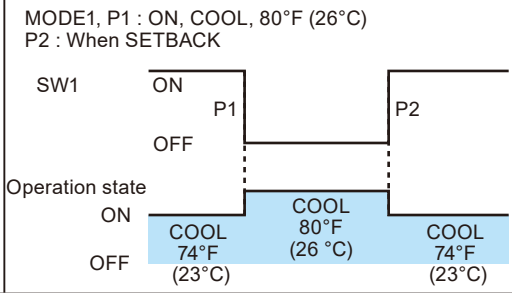
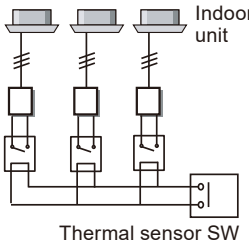
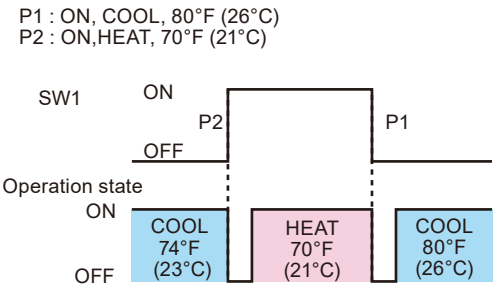
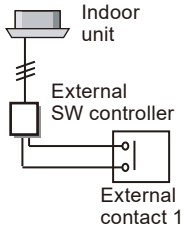
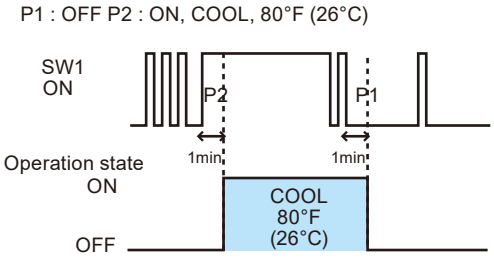
Use	Size	Wire type	Remarks
Remote controller cable	22AWG ($0.33\ mm^2$)	Polar 3core	Use sheathed PVC cable or shielded cable in accordance with the regional cable standard.
External input / output cable	22AWG ($0.33\ mm^2$)	Polar 2core, Twisted pair	Use shielded cable in accordance with the regional cable standard.

■ SPECIFICATIONS

Power supply	DC 12 V
Dimensions [H × W × D]: in. (mm)	4-3/4 × 2-15/16 × 1-3/16 (120 × 75 × 30)
Weight: lbs. oz. (g)	4 oz. (100)

CONTROL SYSTEM

■ EXAMPLE

Application	Setting	Wiring	Operation example
When controlling the individual operation states with two external contact	MODE0 P1: Arbitrary operation state Contact OFF→ON P2: Arbitrary operation state Contact OFF→ON Others setting are arbitrary.		
When controlling operation by ON or OFF of an external contact switch	MODE1 P1 : Arbitrary operation state P2 : Arbitrary operation state Others setting are arbitrary.		
When operating in the state set when an external contact switch was set to ON and returning to the original operation state when the switch was set to OFF	MODE1 or 0 P1 : SETBACK P2 : Arbitrary operation state Others setting are arbitrary.		
When operated in the state when an external contact switch was set to OFF and returned to original operation state	MODE1 or 0 P1 : Arbitrary operation state P2 : SETBACK Others setting are arbitrary.		
When a temperature sensor switch is connected and cooling and heating switching is performed.	MODE2 P1 : ON, COOL or HEAT P2 : ON, COOL or HEAT Operation conditions: Unit operationg only Others setting are arbitrary.	 An external switch controller is connected to all the indoor units of the same refrigerant system and cooling and heating are switched by one temperature sensor.	
When preventing chattering noise within 1 minute of the external contact switch.	MODE1 Delay-time setting: Delay P1 : Arbitrary operation state P2 : Arbitrary operation state Others setting are arbitrary.		

CONTROL SYSTEM

4. SERVICE & WEB MONITORING TOOL

4-1. SERVICE TOOL

4-1-1. MODEL: UTY - ASGXZ1

Extensive monitoring and analysis functions for installation and maintenance.

Operation status and error history can be grasped promptly and adequately.

■ FUNCTIONS

1) System List

Displays the overall operation status of all or specified units in the system in a list form.

2) Equipment Detail (Diagram)

Displays the detail information for sensor values, electrical components etc. for the specified units in schematic. The information here can be used along with the detailed information in status list form, to check the operation status of units and make detail analysis on the cause, in case an error occurs.

3) Equipment Detail (Status List)

Displays the detail information for sensor values, electrical components etc. of units in a specified refrigerant system in list form. The information here can be used along with the detailed information in diagram form, to check the operation status of units and make detail analysis on the cause, in case an error occurs.

4) Equipment Detail (Check List)

Judges whether the sensor values of outdoor unit and indoor units are appropriate, and displays the result.

By saving the result as a CSV file, it can be outputted with a report format.

5) Operation History

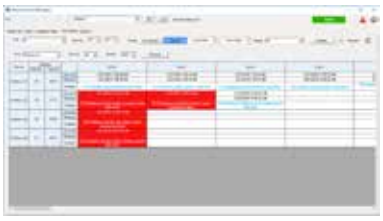
The indoor units or outdoor unit operation history can be recorded.

The displayed operation history can be printed out and saved to a CSV file.

CONTROL SYSTEM

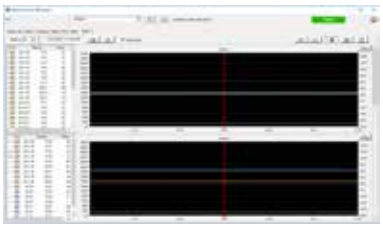
6) Error History

Displays the error information for each unit. The error information can sequentially be displayed up to 50 items as they occur starting with the latest error.



7) Graph

Displays the sensor values of outdoor unit and indoor units in more detail and more easier to see. Sensor information that the user want to check can be selected freely, and the combined information can be displayed.
Up to 6-graph screens can be displayed simultaneously.



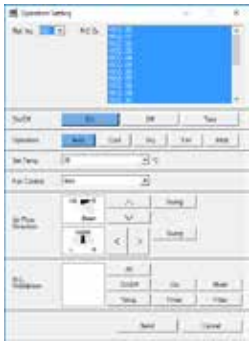
8) Data Backup

Operation and error history data can be downloaded. Only the required data may be downloaded specifying the refrigerant system, unit and time range.

CONTROL SYSTEM

9) Operation Setting

Changeable the operation status of the indoor unit individually or by group.



10) Network Topology Analyzer

A list of units connected to the VRF system network is displayed in network segments in tree form.

11) Remote Setting

Function (Field) Setting for indoor unit is realized remotely.

12) System Time Setting

An arbitrary time is set for all the remote controllers within the system.

13) Central Control Forced Release

The operation setting restriction function of the indoor units set from the controller can be forcibly released. (remote controller inhibit, temperature upper/lower limit setting)

14) Model Name Writer

An arbitrary model name can be written to the target unit.

15) Error Memory Reader

When an error occurs at an outdoor unit, the operation data records before the error are acquired over a network and saved to a CSV file.

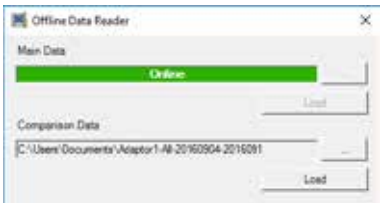
NOTE: To perform "Error Memory Reading", Service Tool and the corresponding outdoor unit must be connected directly with each other. Refer to the Operation Manual of the Service Tool for detail.

16) Time Guard Information

Reference data for judging the maintenance period of indoor and outdoor units (compressor, FAN, etc. integrated time) is output to a CSV file.

17) Offline Data Reader

Displays and compares the current data and the backup data saved in the past on dual screen.



18) Version

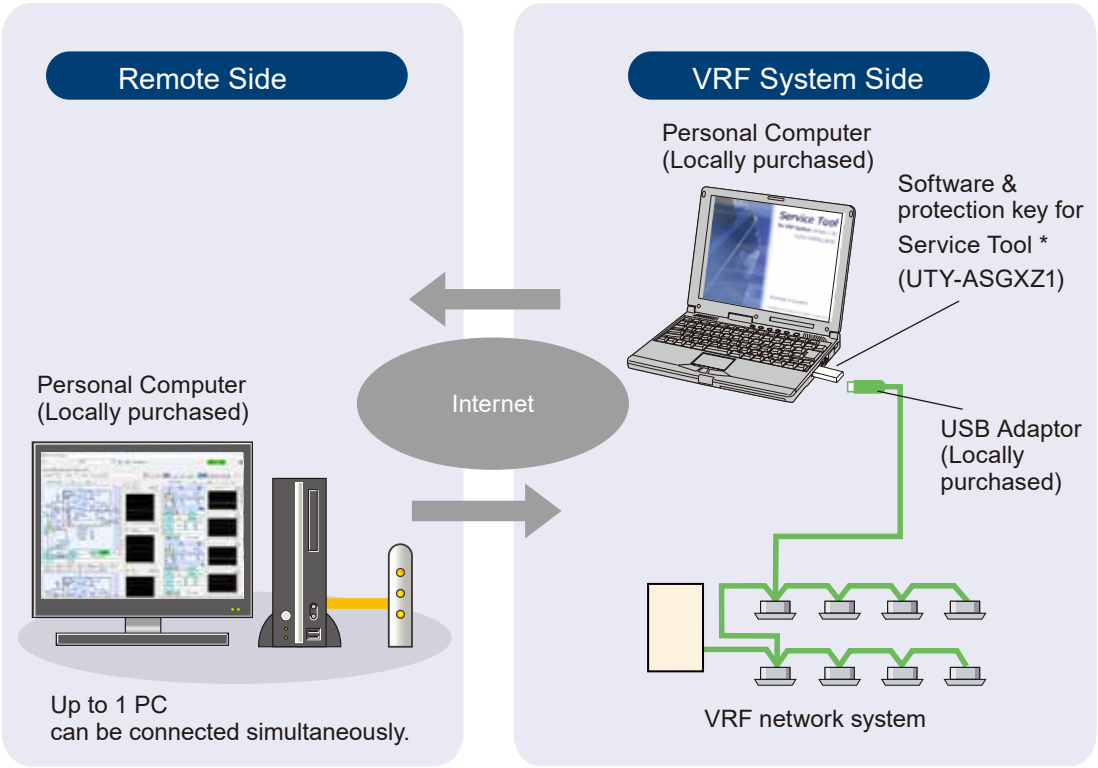
Confirm the current version of the software, and if it is not the latest, it can be updated to the latest version.

19) Remote Operation

Through the Internet, Service Tool in the PC on VRF system side can be operable in real-time from remote side PC. Chat-enabled, and the acquired data by the Service Tool can be downloaded by remote side PC.

CONTROL SYSTEM

■ SYSTEM DIAGRAM



*WibuKey of UTY-ASGX can be used.

CONTROL SYSTEM

■ PACKING LIST

Name and shape	Quantity	Application
WHITE-USB-KEY (software protection key with software)	1	Includes the software and manuals for Service Tool.Additionally, it works as the software protection key. Software protection key to be connected to an USB port on the PC that the Service Tool is installed. Service Tool runs only on a PC with this WHITE-USB-KEY.

■ OTHER REQUIRED DEVICES (Locally purchased)

- Personal computer that satisfies the following system requirements
- Echelon® U10 USB Network Interface – TP/FT-10 Channel (Model number: 75010R) (Required for each VRF Network.)

■ SYSTEM REQUIREMENTS

● For VRF System Side PC

Operating system	•Microsoft® Windows® 7 Professional (32/64-bit) SP1 •Microsoft® Windows® 8.1 Pro (32-bit or 64-bit) •Microsoft® Windows® 10 Pro (32-bit or 64-bit)
CPU	1 GHz or higher
Memory	• 1 GB or more (Windows® 7, 8.1, 10 [32-bit]) • 2 GB or more (Windows® 7, 8.1, 10 [64-bit])
HDD	40 GB or more of free space
Display	1,366 × 768 or higher resolution
Interface	2 USB ports - 1 USB port is required for software protection key connection - 1 USB port is required for Echelon® U10 USB Network Interface
Software	Adobe® Reader® 9.0 or later
Internet transmission rate (in remote access)	Internet environment capable for communication speed of 3 Mbps or more (for uploading) all the time (including when accessing to oversea website)

● For Remote Side PC

Web browser	Internet Explorer®11.0 or Microsoft Edge
Display	1,366 × 768 or higher resolution (Set the resolution before use so that the resolution of Remote Side PC monitor screen is higher than that of VRF System Side PC.)
Internet transmission rate(in remote access)	Internet environment capable for communication speed of 4 Mbps or more (for downloading) all the time (including when accessing to oversea website)

CONTROL SYSTEM

4-1-2. MODEL: UTY - ASGX

Provides extensive monitoring and analysis functions to ensure the proper installation and maintenance of VRF systems. All performance data can be saved for further review and troubleshooting. Files can be shared for further evaluation.

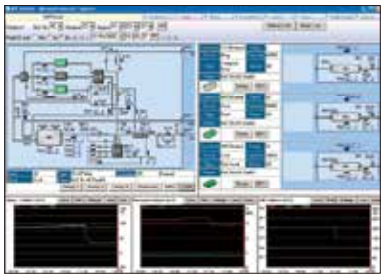
■ FUNCTIONS

1) System List

Displays the overall operation status of all or specified units in the system in a list form.

2) Equipment Detail (Diagram)

Displays the detail information for sensor values, electrical components etc. for the specified units in schematic. The information here can be used along with the detail information in list form, to check the operation status of units and make detail analysis on the cause, in case an error occurs.



3) Equipment Detail (List)

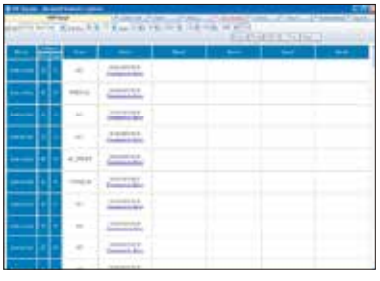
Displays the detail information for sensor values, electrical components etc. of units in a specified refrigerant system in list form. The information here can be used along with the detail information in diagram form, to check the operation status of units and make detail analysis on the cause, in case an error occurs.

4) Operation History

The indoor unit and outdoor unit operation history can be displayed and saved as a CSV file.

5) Error History

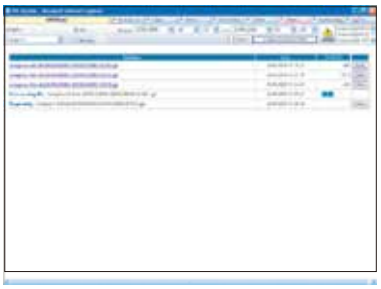
Displays the error information for each unit. The error information is retained and displays up to 50 of the most recent error messages.



CONTROL SYSTEM

6) Remote File Download

Operation and error history can be saved. Output can be customized such that only the information that is required is downloaded.



7) Commissioning Tool

Operational data from the test run can be exported in CSV file format.

8) Network Topology Analyzer *

A list of units connected to the VRF system network is displayed in network segments in tree form.

9) Remote Setting

Function setting for the indoor units can be set remotely

10) System Time Setting

The time setting for all of the controllers on the VRF system can be set or changed simultaneously from a central location.

11) Central Release

The operation restriction settings (temperature upper/lower limit, mode limit, etc.) can be forcibly released*.

* Limits are deleted from controller and will need to be reprogrammed, if desired.

12) Model Name Writer

A Fujitsu model number can be assigned to each target unit.

13) Error Memory Reader

When an error occurs at an outdoor unit, the system retains operation data for the 5 minutes preceding the error. This data can be accessed over the communication network and saved as a CSV file.

NOTE: To perform "Error Memory Reading", Service Tool and the corresponding outdoor unit must be connected directly with each other. Refer to the Operation Manual of the Service Tool for detail.

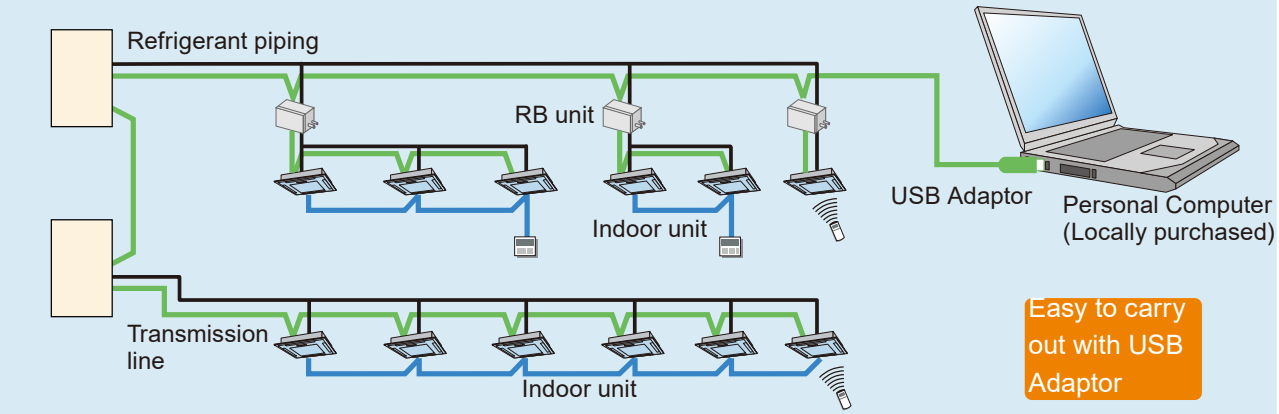
CONTROL SYSTEM

14) Time Guard Information *

Reference data for determining the maintenance schedule for indoor and outdoor units (operation time for compressor, fan, etc.) can be output into a CSV file.

*: Supported by Ver. 1.1 or later

■ SYSTEM DIAGRAM



* USB Adaptor is U10 USB Network interface of Echelon® corporation.

■ PACKING LIST

Name and shape	Quantity	Application
DVD-ROM	1	Includes the software and manuals for Service Tool.
Wibu key (Software protection key)	1	Software protection key to be inserted in a USB slot running Service Tool. Service Tool may only run on a PC with Wibu Key.

CONTROL SYSTEM

■ OTHER REQUIRED DEVICES (LOCALLY PURCHASED)

- Personal computer that satisfies the following system requirements
- Echelon® U10 USB Network Interface – TP/FT-10 Channel (Model number: 75010R) (Required for each VRF Network.)

■ PERSONAL COMPUTER SYSTEM REQUIREMENTS

Operating system	• Microsoft® Windows® 7 Professional (32-bit or 64-bit) SP1 • Microsoft® Windows® 8.1 Pro (32-bit or 64-bit) • Microsoft® Windows® 10 Pro (32-bit or 64-bit)
CPU	1GHz or higher
Memory	• 1 GB or more (for Windows Vista®, Windows® 7 [32-bit], Windows® 8.1 [32-bit] and Windows® 10 [32-bit]) • 2 GB or more (for Windows® 7 [64-bit], Windows® 8.1 [64-bit] and Windows® 10 [64-bit])
HDD	10 GB or more of free space
Display	1,024 × 768 or higher resolution
Interface	2 USB ports - 1 USB port is required for WibuKey connection - 1 USB port is required for Echelon® U10 USB Network Interface
Software	• Internet Explorer® 8.0, 9.0, 10.0 or 11.0 • Adobe® Reader® 9.0 or later
Optical drive	DVD-ROM Drive

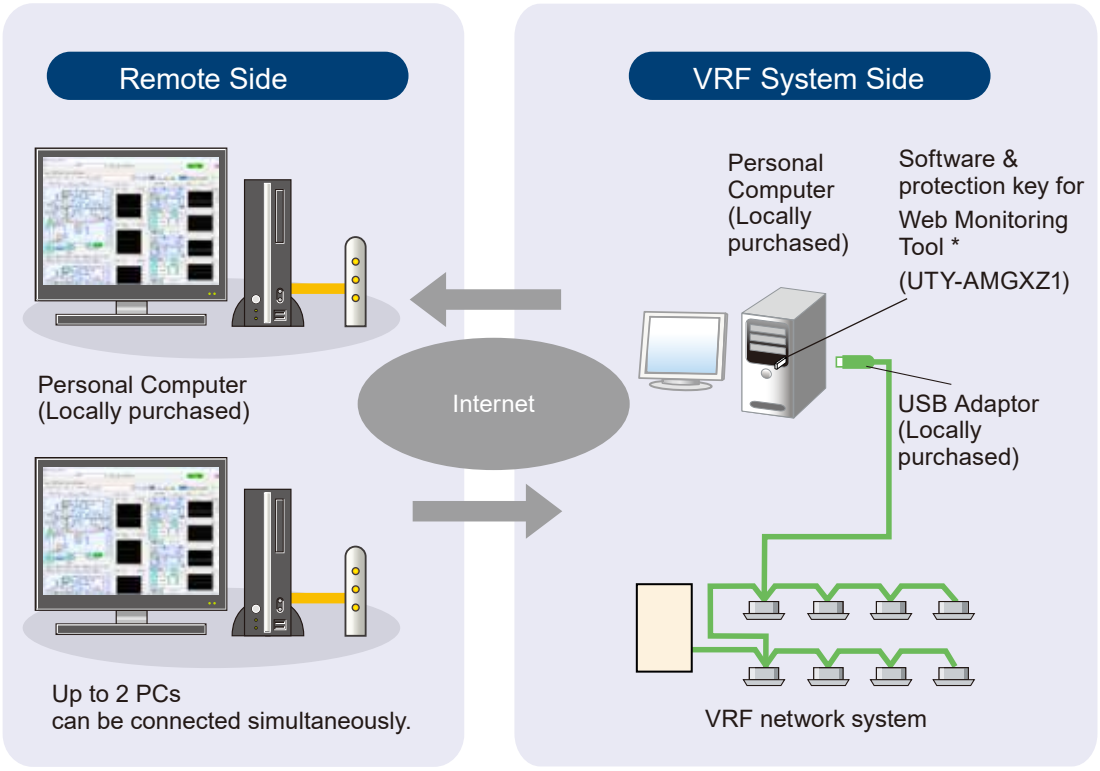
CONTROL SYSTEM

4-2. WEB MONITORING TOOL

4-2-1. MODEL: UTY-AMGXZ1

■ SYSTEM DIAGRAM

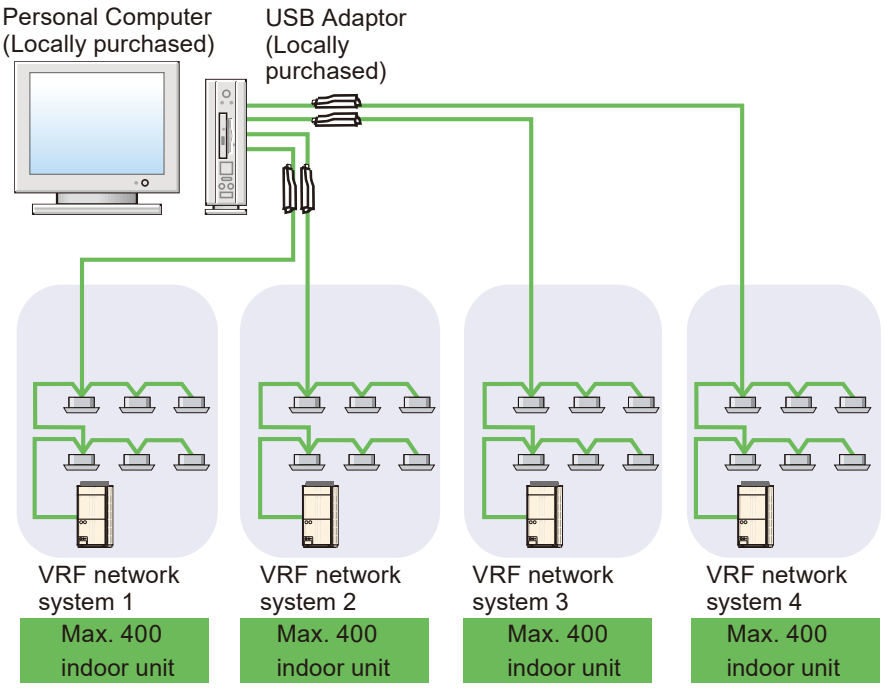
● System components



*WibuKey of UTY-AMGX can be used.

● Support 4 VRF network system

PC USB adaptors (Max. 4 adaptors per PC) permit control and monitoring of up to 1,600 units.
Suitable for large-scale buildings or hotels



CONTROL SYSTEM

■ PACKING LIST

Name and shape	Quantity	Application
WHITE-USB-KEY (software protection key with software)	1	Includes the software and manuals for Web Monitoring Tool. Additionally, it works as the software protection key. Software protection key to be connected to an USB port on the PC that the Web Monitoring Tool is installed. Web Monitoring Tool runs only on a PC with this WHITE-USB-KEY.

■ OTHER REQUIRED DEVICES (Locally purchased)

- Personal computer that satisfies the following system requirements
- Echelon® U10 USB Network Interface – TP/FT-10 Channel (Model number: 75010R) (Required for each VRF Network.)

■ SYSTEM REQUIREMENTS

● For VRF System Side PC

Operating system	•Microsoft® Windows® 7 Professional (32-bit or 64-bit) SP1 •Microsoft® Windows® 8.1 (32-bit or 64-bit) Pro •Microsoft® Windows® 10 (32-bit or 64-bit) Pro
CPU	1 GHz or higher
Memory	• 1 GB or more (Windows® 7, 8.1, 10 [32-bit]) • 2 GB or more (Windows® 7, 8.1, 10 [64-bit])
HDD	40 GB or more of free space
Display	1,366 × 768 or higher resolution
Interface	USB port (for U10 USB Network Interface Max.4, software protection key) Either of the following interface is required for remote connection: • Internet using LAN: Ethernet port is required
Software	Adobe® Reader® 9.0 or later
Internet transmission rate (in remote access)	Internet environment capable for communication speed of 3 Mbps or more (for uploading) all the time (including when accessing to oversea website)

● For Remote Side PC

Web browser	Internet Explorer®11.0 or Microsoft Edge
Display	1,366 × 768 or higher resolution (Set the resolution before use so that the resolution of Remote Side PC monitor screen is higher than that of VRF System Side PC.)
Internet transmission rate(in remote access)	Internet environment capable for communication speed of 4 Mbps or more (for downloading) all the time (including when accessing to oversea website)

CONTROL SYSTEM

■ COMPARISON TABLE

No.	Item	Service Tool UTY-ASGXZ1		Web Monitoring Tool UTY-AMGXZ1	
		VRF system Side	Remote Side	VRF system Side	Remote Side
1	System List	●	●	●	●
2	Equipment Detail (Diagram)	●	●	●	●
3	Equipment Detail (Status List)	●	●	●	●
4	Equipment Detail (Check List)	●	●	●	●
5	Operation History	●	●	●	●
6	Error History	●	●	●	●
7	Graph	●	●	●	●
8	Data Buckup	●	●	●	●
9	Operation Setting	●	●	●	●
10	E-mail automatic transmission of system malfunction	—	—	●*1	—
11	Network Topology Analyzer	●	●	●	●
12	Remote Setting	●	●	●	●
13	System Time Setting	●	●	●	●
14	Central Control Forced Release	●	●	●	●
15	Model Name Writer	●	●	—	—
16	Error Memory Reader	●	●	—	—
17	Time Guard Information	●	●	●	●
18	Offline Data Reader	●	●	—	—
19	Version	●	●	●	●
20	Software Update	●	—	●	—

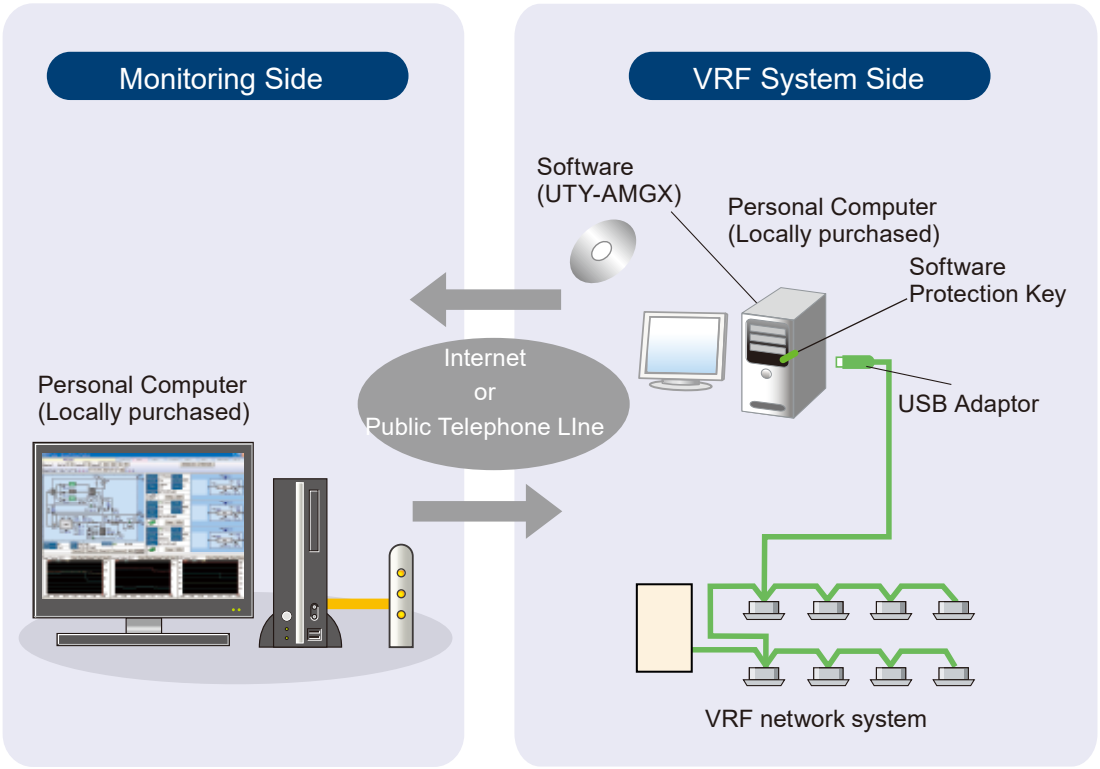
*1: Available only durring connection to the Internet.

CONTROL SYSTEM

4-2-2. MODEL: UTY-AMGX

■ SYSTEM DIAGRAM

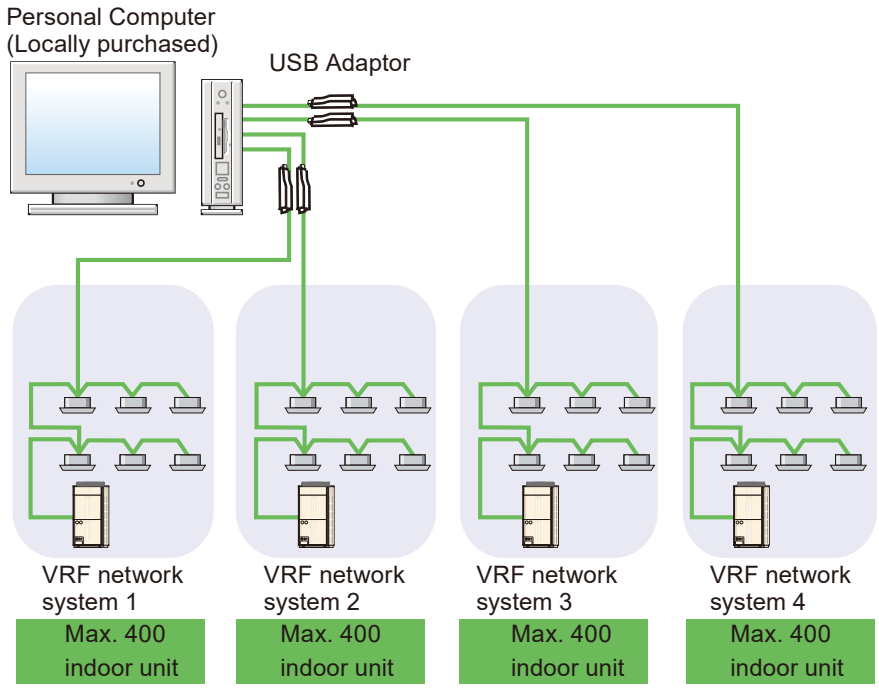
● System components



● Support 4 VRF network system

PC USB adaptor (max. 4 adaptors per PC) permit control and monitoring of up to 1,600 units.

Suitable for large-scale buildings or hotels



CONTROL SYSTEM

■ PACKING LIST

Name and shape	Quantity	Application
DVD-ROM	1	Includes the software and manuals for Web Monitoring Tool.
Wibu key (Software protection key)	1	Software protection key to be inserted in a USB slot running Web Monitoring Tool. Web Monitoring Tool may only run on a PC with Wibu Key.

■ OTHER REQUIRED DEVICES (LOCALLY PURCHASED)

- Personal computer that satisfies the following system requirements
- Echelon® U10 USB Network Interface – TP/FT-10 Channel (Model number: 75010R) (Required for each VRF Network.)

■ PERSONAL COMPUTER SYSTEM REQUIREMENTS

Operating system	• Microsoft® Windows® 7 Professional (32-bit or 64-bit) SP1 • Microsoft® Windows® 8.1 Pro (32-bit or 64-bit) • Microsoft® Windows® 10 Pro (32-bit or 64-bit)
CPU	1GHz or higher
Memory	• 1 GB or more (for Windows Vista®, Windows® 7 [32-bit], Windows® 8.1 [32-bit] and Windows® 10 [32-bit]) • 2 GB or more (for Windows® 7 [64-bit], Windows® 8.1 [64-bit] and Windows® 10 [64-bit])
HDD	40 GB or more of free space
Display	1,024 × 768 or higher resolution
Interface	• Ethernet port (for getting access to the Internet using LAN) or Modem (for getting access to the Internet using Public Telephone Line) • USB ports (Maximum of 5 ports) - 1 USB port is required for WibuKey connection - Maximum of 4 USB ports are required for Echelon® U10 USB Network Interface * Maximum number of required USB ports depends on the applicable system configurations.
Software	• Internet Explorer® 8.0, 9.0, 10.0 or 11.0 • Adobe® Reader® 9.0 or late
Optical drive	DVD-ROM Drive

CONTROL SYSTEM

■ COMPARISON TABLE

No.	Item	Service Tool UTY-ASGX	Web Monitoring Tool UTY-AMGX	
			VRF network system Side	Monitoring Side
1	Interchangeability of equipment	●	●	●
2	Indication of equipment list	●	●	●
3	Operation control	●	●	—
4	Indication of refrigerant circuit diagram	●	●	●
5	Commissioning tool	●	●	—
6	Monitoring of equipment information	●	●	●
7	Monitoring of operating condition	●	●	●
8	Monitoring of sensor data	●	●	●
9	Storage and CSV output of operating history (sensor data)	●	●	●
10	Indication of trend graph	●	●	●
11	Printing of trend graph	●	●	●
12	Monitoring and screen display of abnormalities	●	●	●
13	E-mail automatic transmission of abnormalities	—	●*1	—
14	Setting for user level	—	●	—
15	Network Topology Analyzer *	●	●	—
16	Remote Setting *	●	●	—
17	System Time Setting *	●	●	—
18	Central Release *	●	●	—
19	Model Name Writer *	●	—	—
20	Error Memory Reader *	●	—	—
21	Time Guard Information *	●	●	●

*: Supported by Ver. 1.1 or later

*1: Available only durring connection to the Internet.

CONTROL SYSTEM

Refrigerant R410A INVERTER

AIRSTAGE™
Variable Refrigerant Flow System

6. SYSTEM DESIGN

DTV_V2U048E_05--CHAPTER06
2018.11.12

CONTENTS

6. SYSTEM DESIGN

1. SYSTEM DESIGN ..... 06 - 01
   1-1. REFRIGERANT SYSTEM ..... 06 - 01
   1-2. VRF NETWORK SYSTEM ..... 06 - 08
   1-3. MOUNTING POSITION ..... 06 - 13
   1-4. TRANSPORTATION THE OUTDOOR UNIT ..... 06 - 15

2. PIPING DESIGN ..... 06 - 16
   2-1. IMPORTANT ITEMS WHEN USING REFRIGERANT R410A ..... 06 - 16
   2-2. LIMITATION ..... 06 - 18
   2-3. PIPE SIZE ..... 06 - 24
   2-4. SELECTION OF PIPE HEAT INSULATING MATERIAL ..... 06 - 30
   2-5. ADDITIONAL CHARGE CALCULATION ..... 06 - 31
   2-6. EXAMPLE OF PIPING DESIGN ..... 06 - 32

3. PIPING CONNECTION ..... 06 - 38
   3-1. PIPING PRECAUTIONS ..... 06 - 38
   3-2. PIPING TO OUTDOOR UNIT ..... 06 - 40
   3-3. SEPARATION TUBE ..... 06 - 50
   3-4. HEADER ..... 06 - 53

4. WIRING DESIGN ..... 06 - 56
   4-1. ELECTRICAL WIRING ..... 06 - 56
   4-2. POWER SUPPLY CABLE WIRING ..... 06 - 58
   4-3. TRANSMISSION LINE ..... 06 - 61
   4-4. CONTROLLER CABLE WIRING ..... 06 - 69

5. DRAIN CONNECTION ..... 06 - 71
   5-1. OUTDOOR UNIT ..... 06 - 71
   5-2. INDOOR UNIT ..... 06 - 72

6. STANDARD ACCESSORIES ..... 06 - 85
   6-1. OUTDOOR UNIT ..... 06 - 85
   6-2. INDOOR UNIT ..... 06 - 86

1. SYSTEM DESIGN

1-1. REFRIGERANT SYSTEM

■ CONNECTABLE UNIT WITHIN 1 REFRIGERANT SYSTEM

Unit	Quantity
Outdoor unit	1 to Max. 3 units
Indoor unit	2 *1 to Max. 63 units

*1 : One indoor unit connection is not allowed, except for the connection of
ARUH72TLAV1 - AOUA72RLBV1 or
ARUH96TLAV - AOUA96RLBV1.

● Table (combination)

Ton	Nominal cooling capacity (kBtu)	Outdoor unit quantity	Maximum connectable indoor unit	Connectable capacity range
6	72	1	16	50% to 150%
8	96	1	21	
10	120	1	26	
12	144	2	32	
14	168	2	37	
16	192	2	42	
18	216	2	47	
20	240	2	52	
22	264	3	58	
24	288	3	63	

● Caution

- When all indoor units are operating at maximum capacity, individual indoor unit operate at a slightly lower capacity. (When connecting more than 100%)
- Based on the capacity table in chapter 2, select the optimum combination of outdoor units.
- Do not exceed both of "connectable capacity range" and "maximum connectable indoor unit", otherwise it may hinder the return of oil to the compressor and cause a compressor breakdown.
- Minimum number of connectable indoors units is two.

SYSTEM DESIGN

■ OUTDOOR UNIT COMBINATION

- Combinations other than the followings are prohibited.

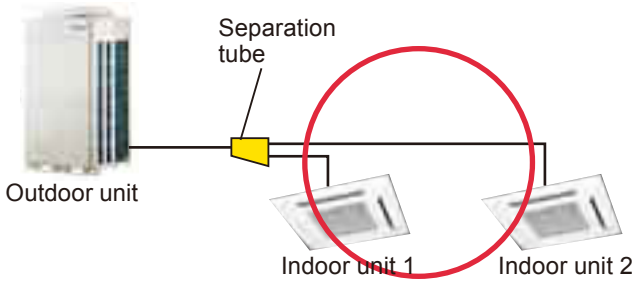
Ton	Nominal coling capacity (kBtu)	Set model name	Combination *1		
			Outdoor unit 1 (Master)	Outdoor unit 2 (Slave 1)	Outdoor unit 3 (Slave 2)
6	72	AOUA72RLBV1	AOUA72RLBV1	-	-
8	96	AOUA96RLBV1	AOUA96RLBV1	-	-
10	120	AOUA120RLBV1	AOUA120RLBV1	-	-
12	144	AOUA144RLBVG1	AOUA72RLBV1	AOUA72RLBV1	-
14	168	AOUA168RLBVG1	AOUA96RLBV1	AOUA72RLBV1	-
16	192	AOUA192RLBVG1	AOUA120RLBV1	AOUA72RLBV1	-
18	216	AOUA216RLBVG1	AOUA120RLBV1	AOUA96RLBV1	-
20	240	AOUA240RLBVG1	AOUA120RLBV1	AOUA120RLBV1	-
22	264	AOUA264RLBVG1	AOUA96RLBV1	AOUA96RLBV1	AOUA72RLBV1
24	288	AOUA288RLBVG1	AOUA96RLBV1	AOUA96RLBV1	AOUA96RLBV1

＊1 Selecting outdoor unit capacity in order of
Outdoor unit 1 ≥ Outdoor unit 2 ≥ Outdoor unit 3
(Master) (Slave 1) (Slave 2)

SYSTEM DESIGN

■ EXAMPLE OF REFRIGERANT SYSTEM

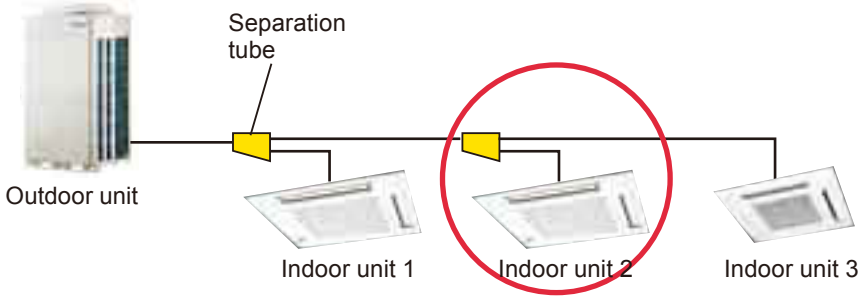
● Example 1



Capacity ratio 60%

	Model	Capacity (Btu/h)	Total capacity (Btu/h)	Connectable indoor unit capacity		Judgement
				Min.	Max.	
Outdoor unit	AOUA72R	72000	72000	② 50% 36000	③ 150% 108000	②≤ ①≤ ③ 36000 < 42000 < 108000 → OK
Indoor unit 1	AUUB24	24000	① 42000			
Indoor unit 2	AUUB18	18000				

● Example 2

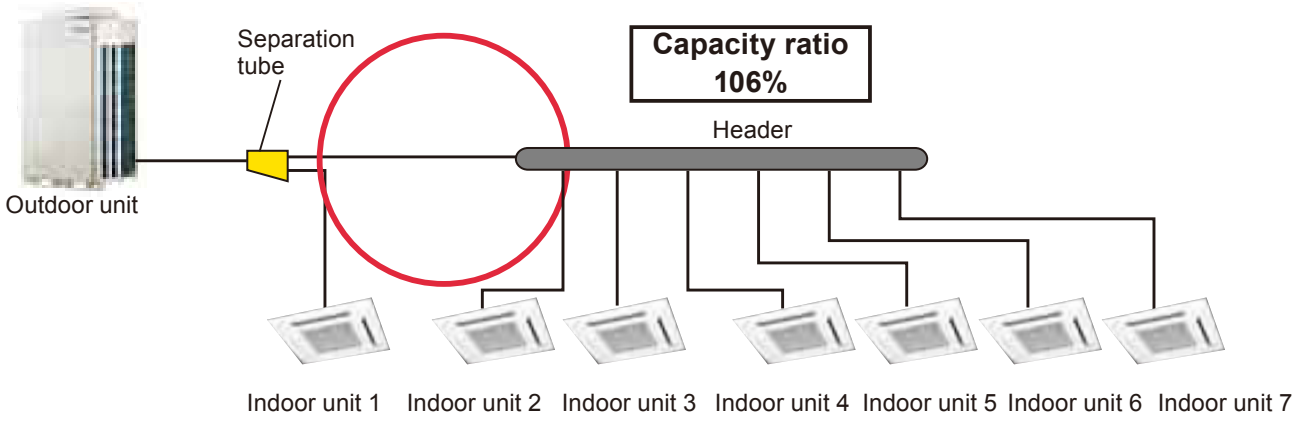


Capacity ratio 100%

	Model	Capacity (Btu/h)	Total capacity (Btu/h)	Connectable indoor unit capacity		Judgement
				Min.	Max.	
Outdoor unit	AOUA72R	72000	72000	② 50% 36000	③ 150% 108000	②≤ ①≤ ③ 36000 < 72000 < 108000 → OK
Indoor unit 1	AUUB30	30000	① 72000			
Indoor unit 2	AUUB24	24000				
Indoor unit 3	AUUB18	18000				

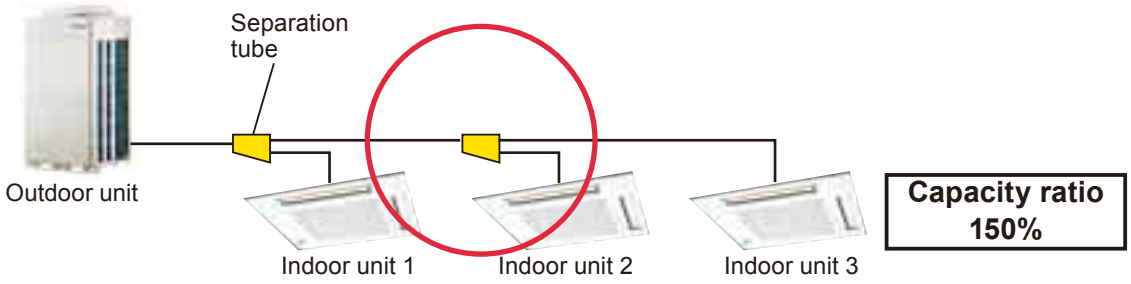
SYSTEM DESIGN

● Example 3



	Model	Capacity (Btu/h)	Total capacity (Btu/h)	Connectable indoor unit capacity		Judgement
				Min.	Max.	
Outdoor unit	AOUA96R	96000	96000	② 50% 48000	③ 150% 144000	②≤ ①≤ ③ 48000 < 102000 < 144000 → OK
Indoor unit 1	AUUA18	18000	① 102000			
Indoor unit 2	AUUA14	14000				
Indoor unit 3	AUUA14	14000				
Indoor unit 4	AUUA14	14000				
Indoor unit 5	AUUA14	14000				
Indoor unit 6	AUUA14	14000				
Indoor unit 7	AUUA14	14000				

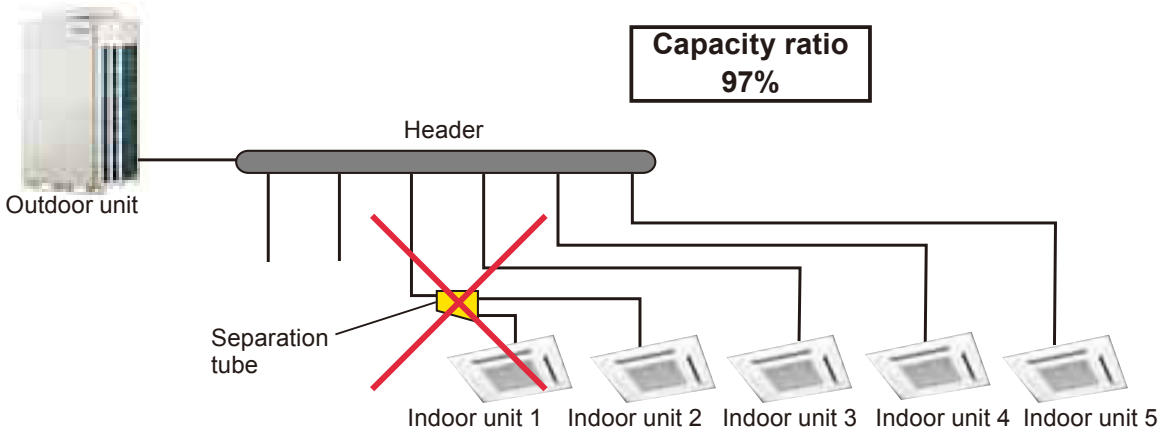
● Example 4



	Model	Capacity (Btu/h)	Total capacity (Btu/h)	Connectable indoor unit capacity		Judgement
				Min.	Max.	
Outdoor unit	AOUA72R	72000	72000	② 50% 36000	③ 150% 108000	③≤ ① 108000 = 108000 → OK
Indoor unit 1	AUUB36	36000	① 108000			
Indoor unit 2	AUUB36	36000				
Indoor unit 3	AUUB36	36000				

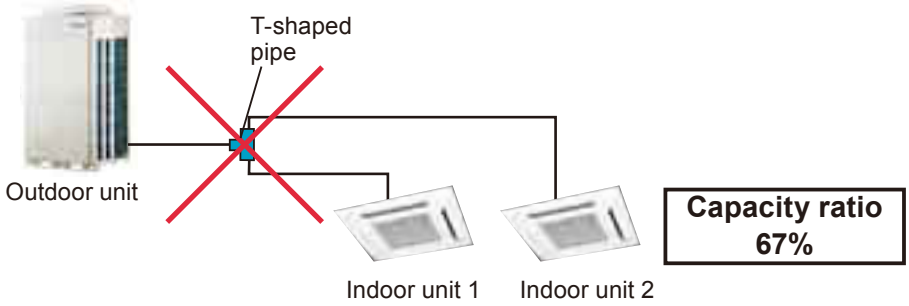
SYSTEM DESIGN

● Example 5



	Model	Capacity (Btu/h)	Total capacity (Btu/h)	Connectable indoor unit capacity		Judgement
				Min.	Max.	
Outdoor unit	AOUA72R	72000	72000	② 50% 36000	③ 150% 108000	Prohibited Because separation tube is installed in the down stream of header.
Indoor unit 1	AUUA14	14000	① 70000			
Indoor unit 2	AUUA14	14000				
Indoor unit 3	AUUA14	14000				
Indoor unit 4	AUUA14	14000				
Indoor unit 5	AUUA14	14000				

● Example 6

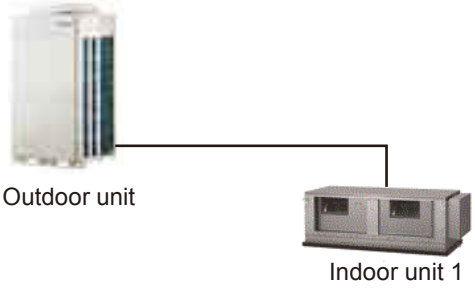


	Model	Capacity (Btu/h)	Total capacity (Btu/h)	Connectable indoor unit capacity		Judgement
				Min.	Max.	
Outdoor unit	AOUA72R	72000	72000	② 50% 36000	③ 150% 108000	Prohibited Do not use standard pipe Tees for branches. Fujitsu branch kits should be used instead.
Indoor unit 1	AUUB24	24000	① 48000			
Indoor unit 2	AUUB24	24000				

SYSTEM DESIGN

● Example 7 (OK)

<Connection of ARUH96 and AOUA96R>

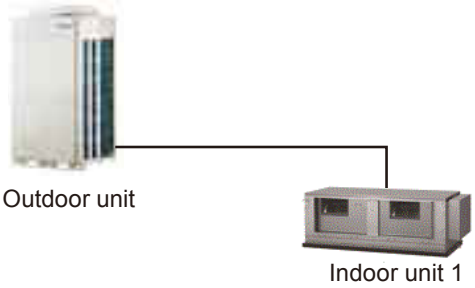


Capacity ratio 100%

	Model	Capacity (Btu/h)	Total capacity (Btu/h)	Connectable indoor unit capacity		Judgement
				Min.	Max.	
Outdoor unit	AOUA96R	96000	96000	② 50% 48000	③ 150% 144000	②≤ ①≤ ③ 48000 < 96000 < 144000 → OK
Indoor unit 1	ARUH96	96000	① 96000			

● Example 8 (OK)

<Connection of ARUH72 and AOUA72R>



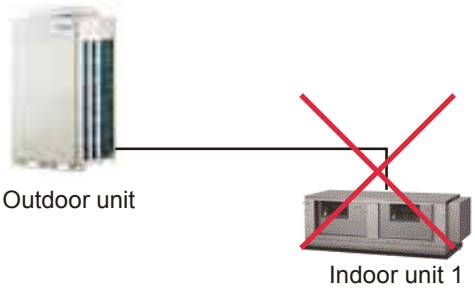
Capacity ratio 100%

	Model	Capacity (Btu/h)	Total capacity (Btu/h)	Connectable indoor unit capacity		Judgement
				Min.	Max.	
Outdoor unit	AOUA72R	72000	72000	② 50% 36000	③ 150% 108000	②≤ ①≤ ③ 36000 < 72000 < 108000 → OK
Indoor unit 1	ARUH72	72000	① 72000			

SYSTEM DESIGN

● Example 9 (Prohibited)

<Connection of ARUH72 and AOUA96R>

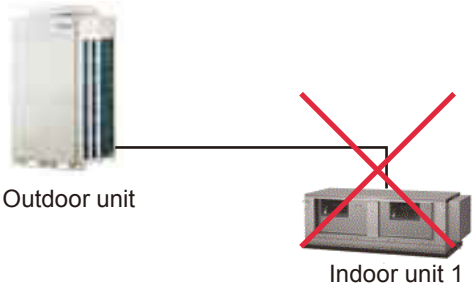


Capacity ratio 75%

	Model	Capacity (Btu/h)	Total capacity (Btu/h)	Connectable indoor unit capacity		Judgement
				Min.	Max.	
Outdoor unit	AOUA96R	96000	96000	② 50% 48000	③ 150% 144000	Prohibited This connection is not allowed.
Indoor unit 1	ARUH72	72000	① 72000			

● Example 10 (Prohibited)

<Connection of ARUH96 and AOUA72R>

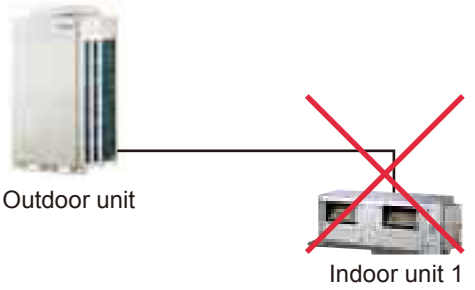


Capacity ratio 133%

	Model	Capacity (Btu/h)	Total capacity (Btu/h)	Connectable indoor unit capacity		Judgement
				Min.	Max.	
Outdoor unit	AOUA72R	72000	72000	② 50% 36000	③ 150% 108000	Prohibited This connection is not allowed.
Indoor unit 1	ARUH96	96000	① 96000			

● Example 11 (Prohibited)

<Connection of ARUH60 and AOUA72R>



Capacity ratio 83%

	Model	Capacity (Btu/h)	Total capacity (Btu/h)	Connectable indoor unit capacity		Judgement
				Min.	Max.	
Outdoor unit	AOUA72R	72000	72000	② 50% 36000	③ 150% 108000	Prohibited This connection is not allowed.
Indoor unit 1	ARUH60	60000	① 60000			

SYSTEM DESIGN

1-2. VRF NETWORK SYSTEM

■ MAXIMUM WIRING LENGTH OF VRF NETWORK SYSTEM

Transmission line	Maximum wiring length ft (m)
Total wiring length of transmission	11811 (3600)
Maximum wiring length between units	1312 (400)
Total wiring length in 1 segment *	1640 (500)

	VRF network system	segment *
Wiring length [ft (m)]	11811 (3600)	1640 (500)
Number of unit	400	64

∗ Segment: Refer to ■MAXIMUM CONNECTION OF NETWORK SEGMENT for network segment figure and explanation.

■ THE MAXIMUM CONNECTABLE UNIT

● Outdoor unit and indoor unit

	Maximum connectable units in one VRF network system
Outdoor unit	100
Indoor unit	400

SYSTEM DESIGN

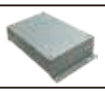
■ CONTROLLER AND CONVERTOR

				Model	Maximum connectable units in one VRF network system	Remarks	
Controller	Central Control	System Controller		UTY-APGXZ1	1	*1:Note	Max.controllable VRF network system : 4 Max.controllable remote controller groups : 1600 per 4 VRF network system Max.controllable indoor unit : 1600 per 4 VRF network system Max.controllable groups : 1600 per 4 VRF network system
		System Controller Lite		UTY-ALGXZ1	1		Max.controllable VRF network system : 1 Max.controllable remote controller groups : 400 Max.controllable indoor unit : 400 Max.controllable groups : 400
		Touch Panel Controller		UTY-DTGYZ1	16	*2:Note	Max.controllable remote controller groups : 400 Max.controllable indoor unit : 400 Max.controllable groups : 400
		Central Remote Controller		UTY-DCGY	16		Max.controllable indoor unit : 100 Max.controllable groups : 16
	Individual Control	Wired Remote Controller		UTY-RNRUZ2			Max controllable indoor units : 16
				UTY-RNKU			Max controllable indoor units : 16
		Simple Remote Controller (with master control)		UTY-RSRY UTY-RSKU			Max controllable indoor units : 16
		Simple Remote Controller (without master control)		UTY-RHRY UTY-RHKU			Max controllable indoor units : 16
		Wireless Remote Controller		UTY-LNHU			

*1 Note: Different VRF series may be connected for each of the 4 VRF networks supported by the unit, but different series may not coexist within the same network.
(VR-II Series and V-II Series can exist together on same network.)

*2 Note : For one VRF network system, total number of Touch Panel Controller, Central Remote Controller, Modbus® Convertor for VRF, BACnet® Gateway (Hardware) is 16, including one Network Convertor for LonWorks®.

SYSTEM DESIGN

			Model	Maximum connectable units in one VRF network system	Remarks	
Adaptor / Convertor	Signal Amplifier		UTY-VSGXZ1	40		The signal amplifier is required when 1640ft. (500m) or more in transmission line length or connected unit exceeds 64units.
	Network Convertor		UTY-VTGX	Used for connecting split system : 100	Total number of refrigerant system and Network convertor is maximum 100.	Max connectable Single split or Multi system : 16 units.
			UTY-VGGXZ1			Max connectable Single split or Multi system in a UTY-VGGXZ1 : 16 units.
	Network Convertor for LonWorks®		UTY-VLGX	1	*2:Note	Max controllable indoor units : 128
	Modbus® Convertor for VRF		UTY-VMGX	9		
	BACnet® Gateway (Hardware)		UTY-VBGX	4		
	BACnet® Gateway (Software)		UTY-ABGXZ1	1	*1:Note	Max.controllable VRF network system : 4 Max.controllable remote controller groups : 1600 per 4 VRF network system Max.controllable indoor unit : 1600 per 4 VRF network system Max.controllable groups : 1600 per 4 VRF network system
	External Switch Controller		UTY-TERX UTY-TEKX			Max connectable indoor units : 16
Service & Maintenance	Service Tool		UTY-ASGXZ1	1	1 Service Tool or 1 Web Monitoring Tool can be connected.	PC : Locally purchased USB adaptor is required.
	Web Monitoring Tool		UTY-AMGXZ1		*1:Note	Web Monitoring Tool: Internet explorer 6.0 or higher. PC : Locally purchased USB adaptor is required. Up to 4 VRF network system can be observed with one Web Monitoring Tool.

*1 Note: Different VRF series may be connected for each of the 4 VRF networks supported by the unit, but different series may not coexist within the same network.
(VR-II Series and V-II Series can exist together on same network.)

*2 Note: For one VRF network system, total number of Touch Panel Controller, Central Remote Controller, Modbus® Convertor for VRF, BACnet® Gateway (Hardware) is 16, including one Network Convertor for LonWorks®.

SYSTEM DESIGN

■ MAXIMUM CONNECTION OF SEGMENT

● Segment : divided network by signal amplifier

- In the following case, a signal amplifier is required.

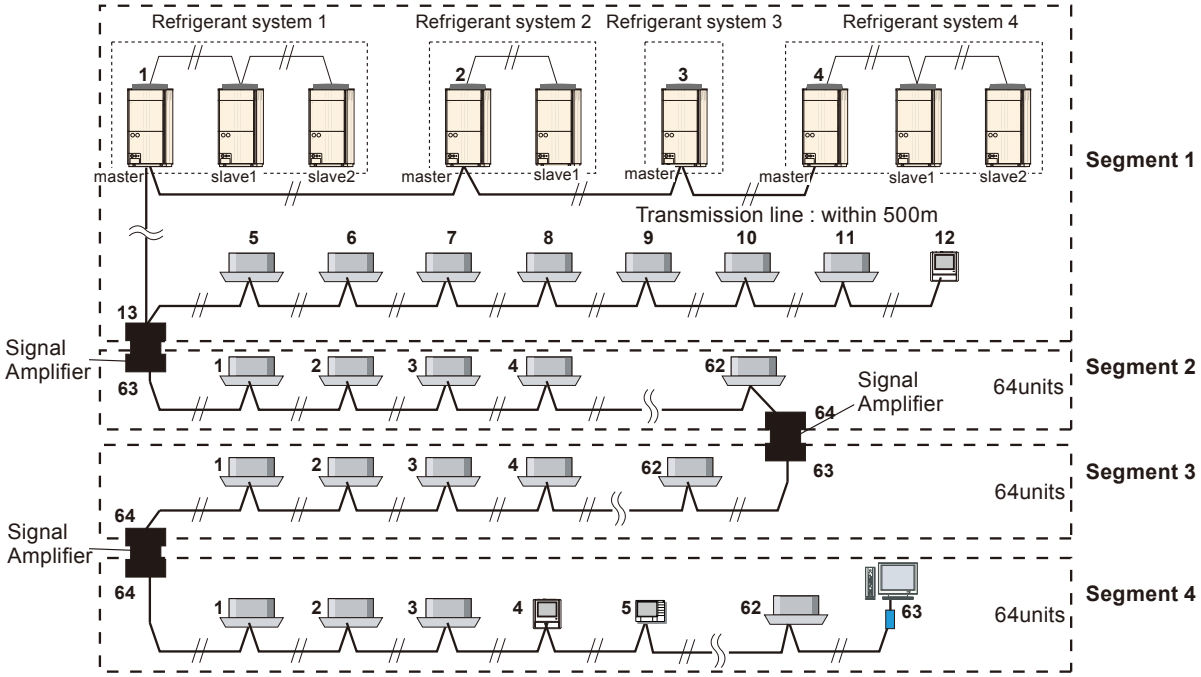
(1) When the total length of the transmission line exceeds 1640 ft. (500 m)

(2) When the number of total element[*1] exceed 64 units.

- Segments means divided block which has been connected with signal amplifier within above conditions.

In a Segment, divided by a signal amplifier, the following limitations have to be kept.

Segment inside	Limitation
Transmission line	1640ft. (500m) or less
Number of segment *1 (See the next page)	64 or less
Terminal resistor	1



● Caution

VRF network system should keep both of number of element and wiring length restrictions. When the system exceeds either the number of element or wiring length restrictions, the system should be divided.

SYSTEM DESIGN

● Meaning of “element” in a Segment

		Model name	Unit
Outdoor unit	Master	-	○
	Slave	-	×
All indoor unit		-	○
Controller	System controller	UTY-APGXZ1	○
	Touch panel controller	UTY-DTGYZ1	○
	Central Remote controller	UTY-DCGY	○
	Wired remote controller	UTY-RNRUZ2	×
	Wired remote controller	UTY-RNKU	×
	Simple remote controller (With operation mode)	UTY-RSRY, UTY-RSKU	×
	Simple remote controller (Without operation mode)	UTY-RHRY, UTY-RHKU	×
	Wireless remote controller	UTY-LNHU	×
	IR receiver unit for Duct	UTB-YWC	×
	IR receiver unit for Cassette	UTY-LRHYB1, UTY-LBHXD	×
Adaptor / Convertor	External switch controller	UTY-TERX, UTY-TEKX	×
	Network convertor	UTY-VTGX, UTY-VGGXZ1	○
	Network convertor for LonWorks®	UTY-VLGX	○
	Modbus® convertor for VRF	UTY-VMGX	○
	BACnet® Gateway (Hardware)	UTY-VBGX	○
	BACnet® Gateway (Software)	UTY-ABGXZ1	○
	Signal amplifier	UTY-VSGXZ1	○
Maintenance	Service tool	UTY-ASGXZ1	○
	Web monitoring tool	UTY-AMGXZ1	○
Option	Others optional parts	-	×

○: It should be counted
×: It should not be counted

■ THE MAXIMUM WIRING LENGTH OF UNIT

Name	Model	Maximum wiring length ft. (m)		
Network convertor	UTY-VGGXZ1 UTY-VTGX	Remote controller to Network convertor	328 (100)	Used for single split Air conditioner
		Indoor unit to Network convertor	328 (100)	
Signal amplifier	UTY-VSGXZ1	In each segment	1640 (500)	
External switch controller	UTY-TERX UTY-TEKX	External switch to UTY-TERX, UTY-TEKX	164 (50)	
		Indoor unit to UTY-TERX, UTY-TEKX	82 (25)	
Wired, Simple remote controller	UTY-RNRUZ2 UTY-RNKU UTY-RSKU UTY-RHKU UTY-RSRY UTY-RHRY	Remote controller cable	1640 (500)	Max.connectable 16 indoor units. 2 Remote controllers can be used jointly.

SYSTEM DESIGN

1-3. MOUNTING POSITION

■ OUTDOOR UNIT

For the air conditioner to operate satisfactorily, install it as outlined in the installation manual.

● Outdoor unit mounting position

- A position that satisfies the mounting space requirements described in “chapter 3.3 Installation space".
- A position where the unit can be installed level.
- A position with enough space for performing pipe work, service and maintenance.
- A position that satisfies the pipe limitations for height and length between the outdoor units to be connected.

● Outdoor unit mounting limitation

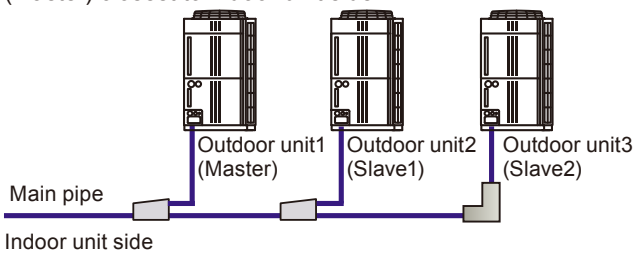
- A position that is not exposed to strong or seasonal winds.
- A position where the blown air does not accumulate.
- A position where there are no obstructions to the air near to the inlet and outlet.
- A position not exposed to radiation from other heat sources.
- A position where the discharge air will not affect animals or plants.
- A position where the noise and hot air will not disturb the neighbor.
- A position with strong installation fixings, which can sufficiently bear the product weight.
- A position that does not transmit noise or vibration.
- A position where drain water discharge is not a problem.
- A position where snow does not accumulate.
- A position not easily affected by electrical noise.
- A position out of reach of children.
- A position where there is no danger of the generation, influx or accumulation of flammable gas.
- A position that does not have a special environment such as large amounts of oil, vapor or sulfide gas.

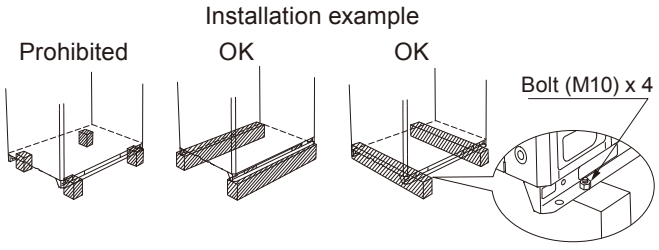
SYSTEM DESIGN

● Precaution for outdoor unit mounting position

- Mount the outdoor unit in a position where its tilt is 3 degrees or less.
- When mounting units on each floor or multiple units, secure enough outlet space to prevent a short circuit effect.
- In cold or snowy regions, make sure that the mount is high enough and install a snow protection hood.
- Drain water is discharged from the outdoor unit during operation, so make sure that this drain water is possible to flow.
- Use material such as vibration-resistant rubber to prevent the transmission of vibration to the floor.
- Securely fix the unit when it may be in a position exposed to strong winds.
- When cooling operation will be conducted at outdoor air temperature below 23°F (-5°C), the outdoor unit must be installed in a position that is higher than or equal to those of indoor units.

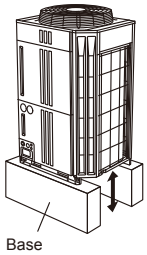
Make sure to mount the outdoor unit 1 (master) closest to indoor unit side.





*Do not use a four-corner support foundation.

- Do not install directly on the ground, this may result in equipment failure.
- Provide ample space for ice buildup from condensate between the bottom of the unit and the flat surface on which it is mounted. Otherwise, there is risk that the drainage water will freeze between the device and thesurface, disabling drainage.



⚠CAUTION

If the unit is installed in a region that is exposed to high winds, freezing conditions, freezing rain, snow fall or heavy snow accumulation, take appropriate measures to protect it from those elements.

To ensure stable operation, the outdoor unit must be installed on a raised stand or rack, at or above the anticipated snow depth for the region.

The installation of snow hoods and drift prevention fencing is recommended when blowing and drifting snow is common to the region.

■ INDOOR UNIT

For the air conditioner to operate satisfactorily, install it as outlined in installation manual.

● Indoor unit mounting position

- Decide the mounting position with the customer
- Install the unit level on a strong wall, floor, ceiling which is not subject to vibration.
- The inlet and outlet ports should not be obstructed. The air should be able to blow all over the room.
- Install the unit where the refrigerant pipes can be easily installed.
- Install the unit where the drain pipe can be easily installed.
- Take servicing, etc. into consideration and leave the necessary space.
- Install the unit in a position that satisfies the pipe length and height limitations.

● Indoor unit mounting limitation

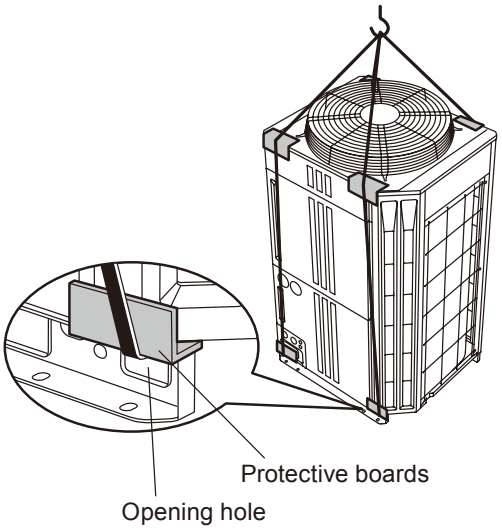
- Install at a place that can withstand the weight of the indoor unit and install securely so that the unit will not topple or fall.
- Do not install the unit where there is the danger of combustible gas leakage.
- Do not install the unit near heat sources and the location with high temperature.
- Mount with the lowest moving parts at least 7ft. (2.4m) above floor or grade level.
- Do not install the unit near a source of heat, steam, or flammable gas.
- Unit is designed for comfort cooling applications. Do not use where process type cooling equipment may be required.
- Do not allow children to interfere with the unit.
- Do not install where there is oily smoke, machine oil (i.e. factory), salty environment with direct sea breeze, and too much of dust.
- Install the unit where drainage does not cause any trouble.
- Welded parts may be damaged if the unit is installed where corrosive gases such as sulphuric acid are generated.
- Control may not operate correctly if the unit is installed near machinery which emit electromagnetic waves.
- Install the unit in a well-ventilated place avoiding rains and direct sunlight.
- Install the unit where air from the outlet and noise do not disturb the neighbor.
- Install the indoor and outdoor units, power wiring, signal wiring and remote control wiring 39-3/8in. (1 m) away from televisions and radios to avoid distorted images and noise. (However, distorted images and noise may not be avoidable even if the units and wiring mentioned above are installed 1m away from televisions and radios depending on conditions of the electromagnetic disturbance.)
- When installing an indoor unit in a small room, a care must be taken to keep refrigerant concentrations from exceeding limitations if there is a refrigerant leak.
- Ducted units should be considered for rooms that require quiet operation, such as bedrooms and hotel guest rooms.

SYSTEM DESIGN

1-4. TRANSPORTATION THE OUTDOOR UNIT

■ HOISTING METHOD

- When hanging the outdoor unit and conveying it to installation location, hang the unit with rope by passing through the 4 opening holes on bottom of front and rear side as shown in figure.
- Use 2 ropes at least 26ft. (8m) long. If a shorter length is used, it may cause damage to the unit.
- Use a rope strong enough to support the weight of the unit.
- Use protective boards, pads or tarps to protect the unit from being damaged by the lifting ropes.
- Keep the unit level while lifting.
- Lift carefully and protect the unit from any mechanical shock.



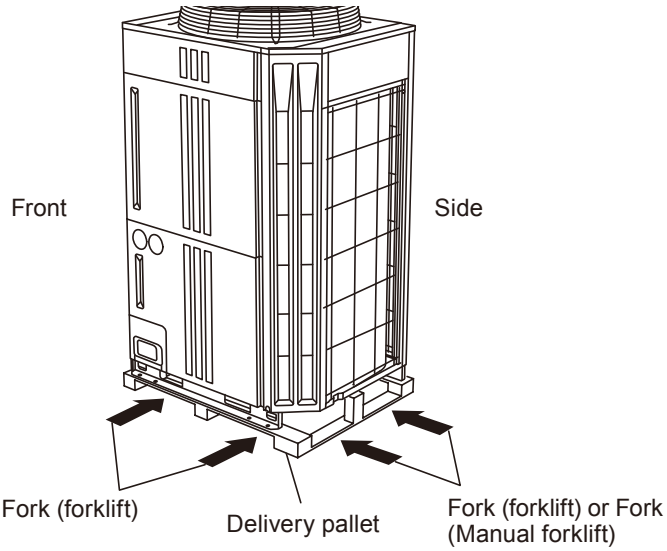
Model name	Weight lbs. (kg)
AOUA72RLBV1	564 (256)
AOUA96RLBV1	
AOUA120RLBV1	611 (277)

■ LIFTING BY FORKLIFT

- When using a forklift to move the unit, place the forks in the pallet as shown below.
  Front : Bottom of the wooden delivery pallet.
  Side : Space between pallet and cabinet. (Enable to remove the pallet from cabinet.)
- The unit is removed from the pallet from the side.
- Be careful not to damage the unit.

■ LIFTING BY FORKLIFT(Manual forklift: Pallet Jack)

- When using the manual forklift to lift the unit, pass the forks through to the opening space between pallet and cabinet from side.



SYSTEM DESIGN

2. PIPING DESIGN

2-1. IMPORTANT ITEMS WHEN USING REFRIGERANT R410A

R410A operates at higher pressure and has less solubility with mineral oil than traditional R22 refrigerant. Therefore, 410A systems use a different lubricant and have different piping requirements.

■ REFRIGERANT PIPING MATERIAL AND WALL THICKNESS

Only seamless copper tube should be used for the refrigerant piping.
Thickness of tubes are shown in table below.
Endurance pressure of the pipe must be 609 psi (4.2 MPa).

Nominal Diameter	(in.)	1/4"	3/8"	1/2"	5/8"	3/4"	7/8"	1-1/8"	1-3/8"	1-5/8"
Outside Diameter	(mm)	6.35	9.52	12.70	15.88	19.05	22.22	28.58	34.92	41.27
Material		JIS H3300 C1220T-O or equivalent *1					JIS H3300 C1220T-H or equivalent *2			
Wall Thickness *3	(mm)	0.8	0.8	0.8	1.0	1.2	1.0	1.0	1.2	1.43

*1: Allowable tensile stress ≥ 33 (N/mm^2)
*2: Allowable tensile stress ≥ 61 (N/mm^2)
*3: Endurance pressure of the pipe must be 609 psi (4.2 MPa).

Select the pipe size in accordance with the regional standard.

■ LUBRICANT

Refrigerant	R410A (Mixed refrigerant)
Lubricant	Synthetic oil

■ TOOLS

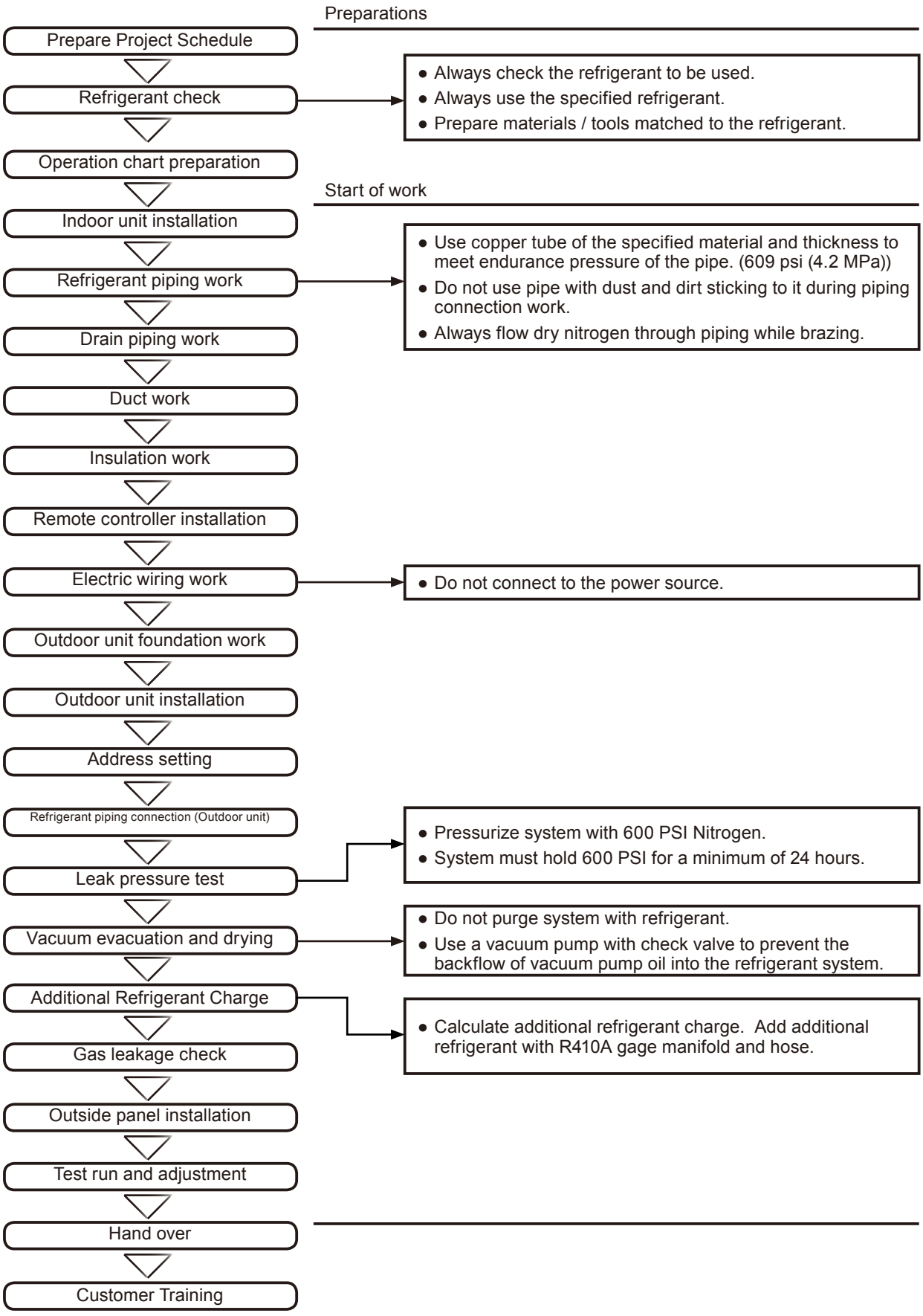
R410A work requires a number of special tools. The items below(*) are specialized for R410A use.
Make sure that R22 tools are not used on R410A systems.

Tool name	Process and application	
Pipe cutter	Pipe cutting	Refrigerant piping work
Flaring tool *	Pipe flaring work	
Torque wrench *	Flare nut connection	
Expander	Expansion at pipe connection	
Pipe bender	Pipe bending work	
Nitrogen gas	Pipe interior oxidation prevention	Pressure test
Welder	Pipe brazing	
Gauge manifold *	Vacuum evacuation and refrigerant charging Operation check	Pressure Test/Additional Refrigerant Charging
Charging hose *		
Vacuum pump (with adaptor) *		Vacuum drying
Electronic scale for refrigerant charging		Additional Refrigerant Charging
Gas leakage test4	Gas leakage test	

* : Refer to a service manual for details.

SYSTEM DESIGN

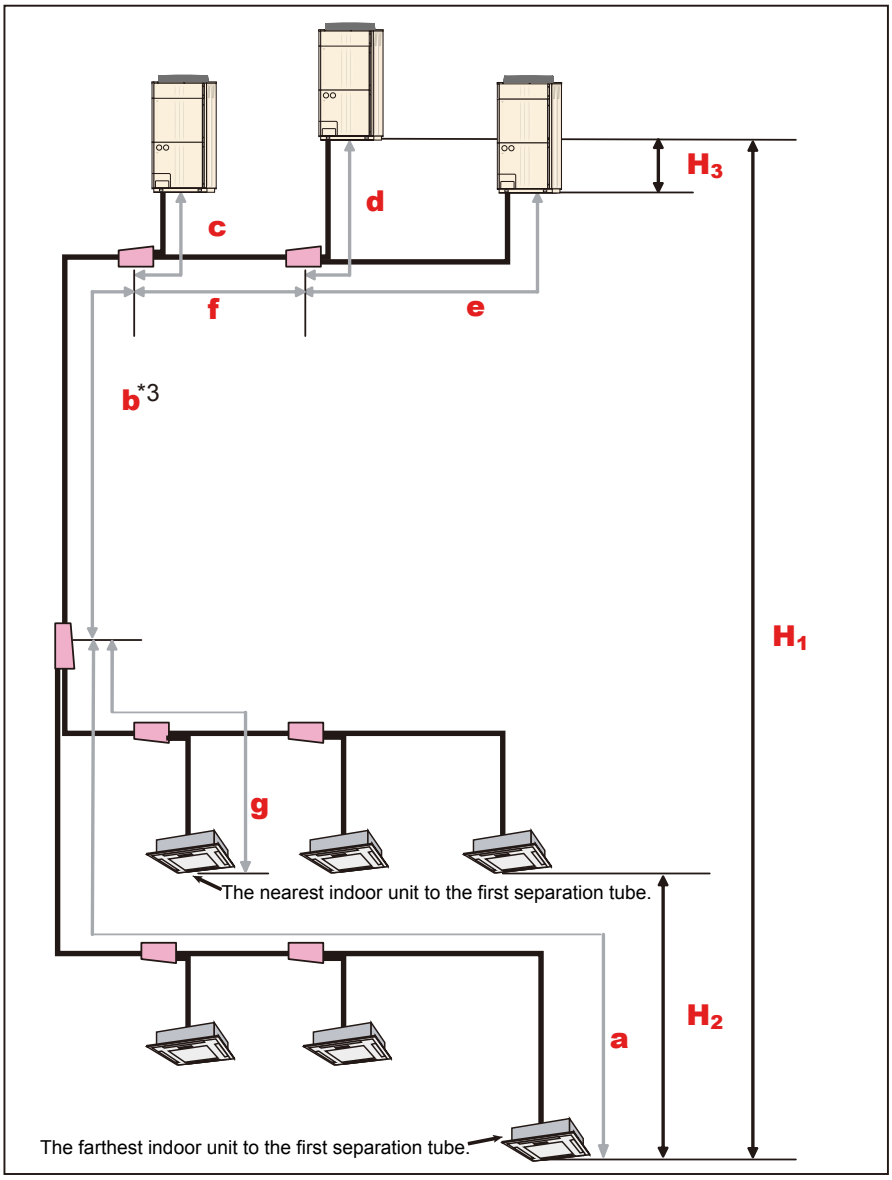
■ WORK FLOW (EXAMPLE)



SYSTEM DESIGN

2-2. LIMITATION

■ IN THE CASE OF THREE OUTDOOR UNITS CONNECTED



Limitation: ft. (m)				Diagram
Allowable pipe length (actual pipe length)	Between master outdoor unit and the farthest indoor unit		541 (165) or less	a + b + c
	Between the first separation tube and the farthest indoor unit		295 (90) or less	a
	(The farthest indoor unit to the first separation tube) - (The nearest indoor unit to the first separation tube)		196 (60) or less	a - g
	Total pipe length		3281 (1000) or less *1	Total
	Between outdoor unit and outdoor unit branch kit		9 (3) or less	c, d, e
	Between the farthest outdoor unit to the first outdoor unit branch kit		39 (12) or less	d + f, e + f
Allowable height difference	Between outdoor unit and indoor unit	Outdoor unit is higher than indoor unit	360 (110) *2 / 164 (50) or less	H1
		Outdoor unit is lower than indoor unit	131 (40) or less	
	Between indoor unit		49 (15) or less	H2
	Between outdoor unit		19 in. (0.5) or less	H3

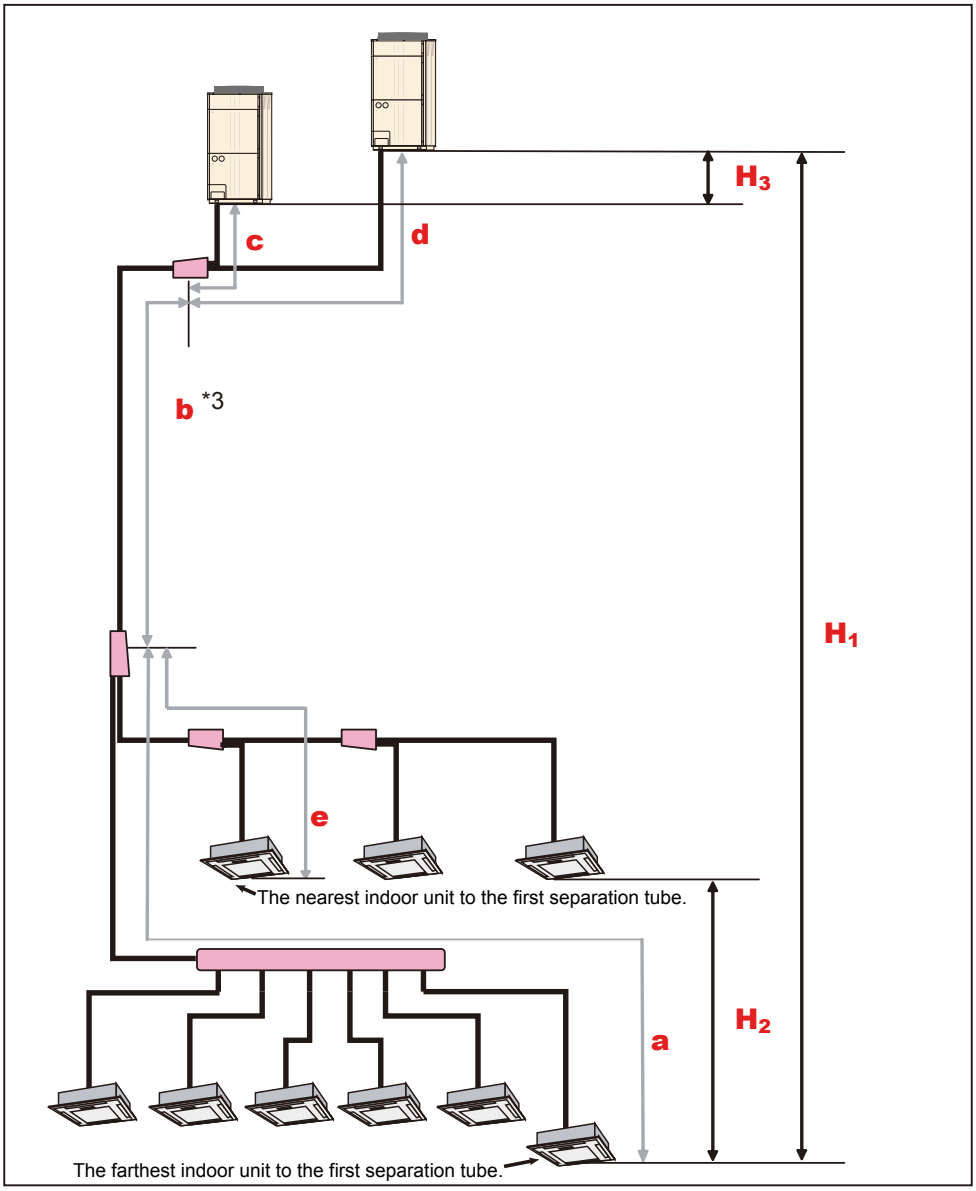
＊1 : Total piping length is limited in that the total refrigerant charge should not exceed 208 lbs. (94.5kg).

＊2: When installing the pressure sensor kit on the nearest pipe to the indoor unit with the largest difference in elevation with the outdoor unit, size of the main liquid pipe must be one size larger than the standard size.

＊3 : "b" can be any length, provide that "a+b+c" is less than 541' (165m)

＊4 : Minimum pipe length between outdoor unit and first indoor unit must be greater than 25'(7.5m).

■ IN THE CASE OF TWO OUTDOOR UNITS CONNECTED



Limitation: ft. (m)				Diagram
Allowable pipe length (actual pipe length)	Between master outdoor unit and the farthest indoor unit		541 (165) or less	a + b + c
	Between the first separation tube and the farthest indoor unit		295 (90) or less	a
	(The farthest indoor unit to the first separation tube) - (The nearest indoor unit to the first separation tube)		196 (60) or less	a - e
	Total pipe length		3280 (1000) or less *1	Total
	Between outdoor unit and outdoor unit branch kit		9 (3) or less	c, d
Allowable height difference	Between outdoor unit and indoor unit	Outdoor unit is higher than indoor unit	360 (110) *2 / 164 (50) or less	H1
		Outdoor unit is lower than indoor unit	131 (40) or less	
	Between indoor unit		49 (15) or less	H2
	Between outdoor unit		19 in. (0.5) or less	H3

＊1 : Total piping length is limited in that the total refrigerant charge should not exceed 139 lbs. (63kg).

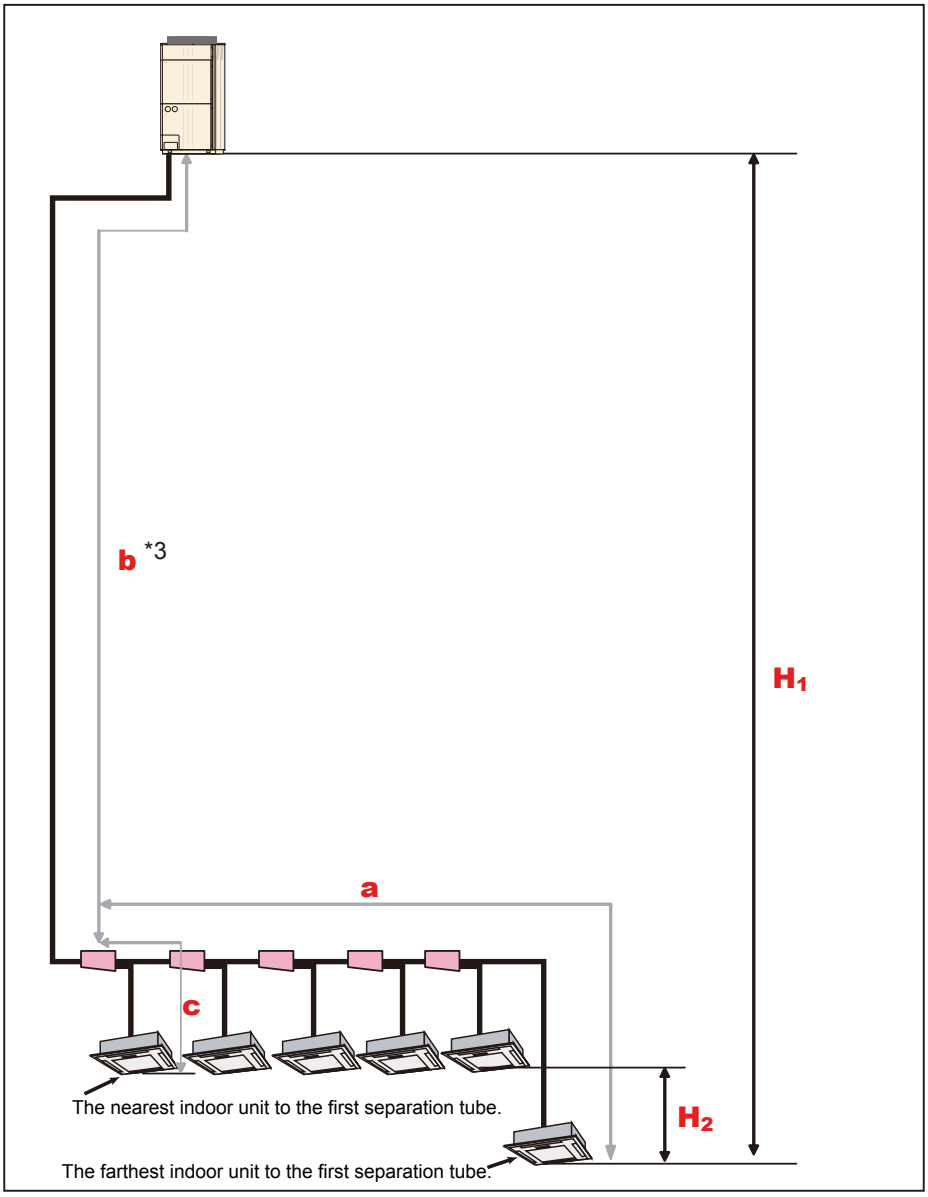
＊2: When installing the pressure sensor kit on the nearest pipe to the indoor unit with the largest difference in elevation with the outdoor unit, size of the main liquid pipe must be one size larger than the standard size.

＊3 : "b" can be any length, provide that "a+b+c" is less than 541' (165m)

＊4 : Minimum pipe length between outdoor unit and first indoor unit must be greater than 25'(7.5m).

SYSTEM DESIGN

■ IN THE CASE OF ONE OUTDOOR UNIT CONNECTED



Limitation: ft. (m)				Diagram
Allowable pipe length (actual pipe length)	Between master outdoor unit and the farthest indoor unit		541 (165) or less	a + b
	Between the first separation tube and the farthest indoor unit		295 (90) or less	a
	(The farthest indoor unit to the first separation tube) - (The nearest indoor unit to the first separation tube)		196 (60) or less	a - c
	Total pipe length		2296 (700) or less *1	Total
Allowable height difference	Between outdoor unit and indoor unit	Outdoor unit is higher than indoor unit	360 (110) *2 / 164 (50) or less	H1
		Outdoor unit is lower than indoor unit — O.T. ≥ -23°F (5°C)	131 (40) or less	
		Outdoor unit is lower than indoor unit — O.T. < -23°F (5°C)	16 (5) or less	
	Between indoor unit		49 (15) or less	H2

O.T. = Outdoor Temperature.

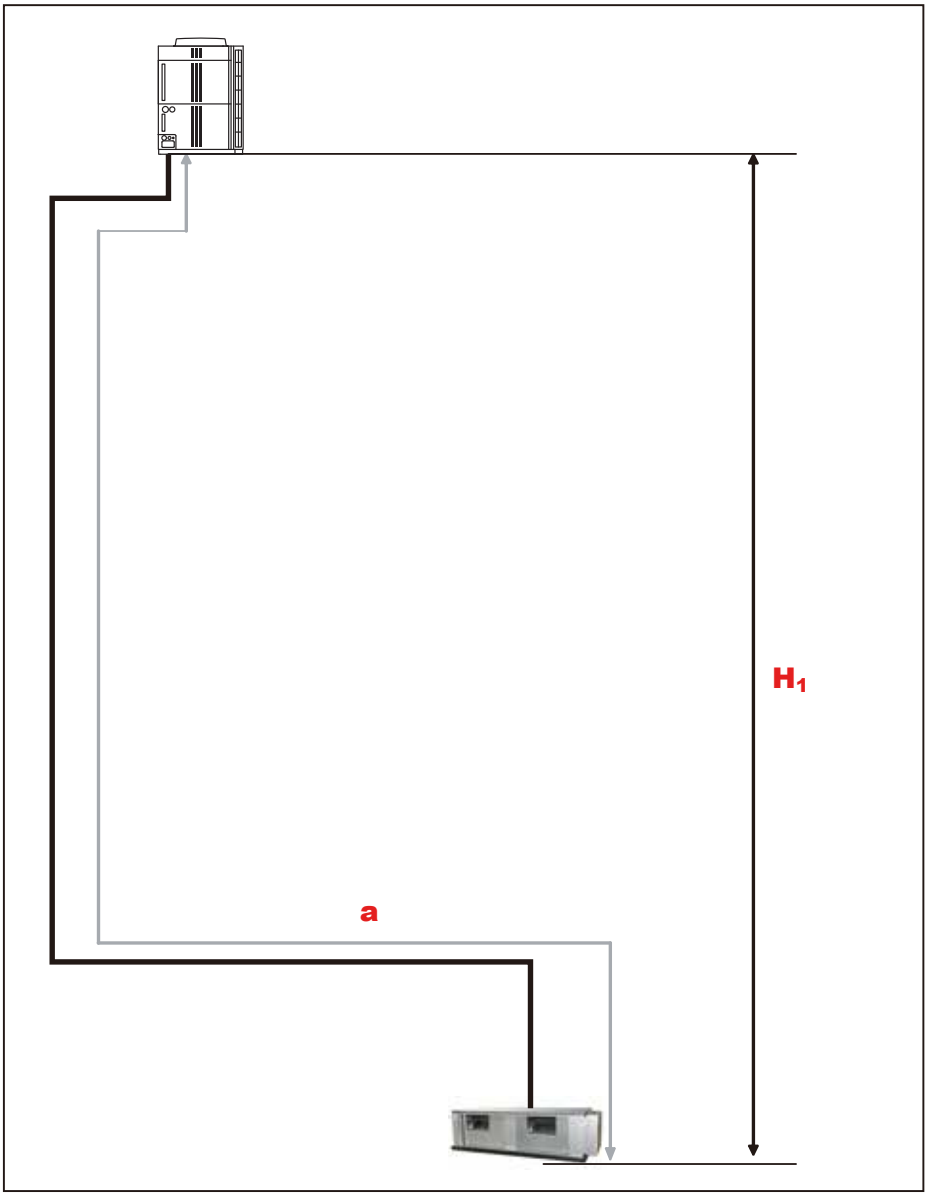
＊1 : Total piping length is limited in that the total refrigerant charge should not exceed 69 lbs. (31.5kg).

＊2: When installing the pressure sensor kit on the nearest pipe to the indoor unit with the largest difference in elevation with the outdoor unit, size of the main liquid pipe must be one size larger than the standard size.

＊3 : "b" can be any length, provide that "a+b+c" is less than 541' (165m)

＊4 : Minimum pipe length between outdoor unit and first indoor unit must be greater than 25'(7.5m).

■IN THE CASE OF ONE OUTDOOR UNIT AND ONE INDOOR UNIT CONNECTED



Limitation: ft. (m)					Diagram
Maximum allowable pipe length (actual pipe length)	Between master outdoor unit and indoor unit			541 (165) or less	a
	Total pipe length			2296 (700) or less *1	Total
	Between master outdoor unit and indoor unit			25 (7.5) or more	a
Maximum allowable height difference	Between outdoor unit and indoor unit	Outdoor unit is higher than indoor unit		360 (110) *2 / 164 (50) or less	H1
		Outdoor unit is lower than indoor unit	O.T. ≥ -23°F (5°C)	131 (40) or less	
			O.T. < -23°F (5°C)	16 (5) or less	

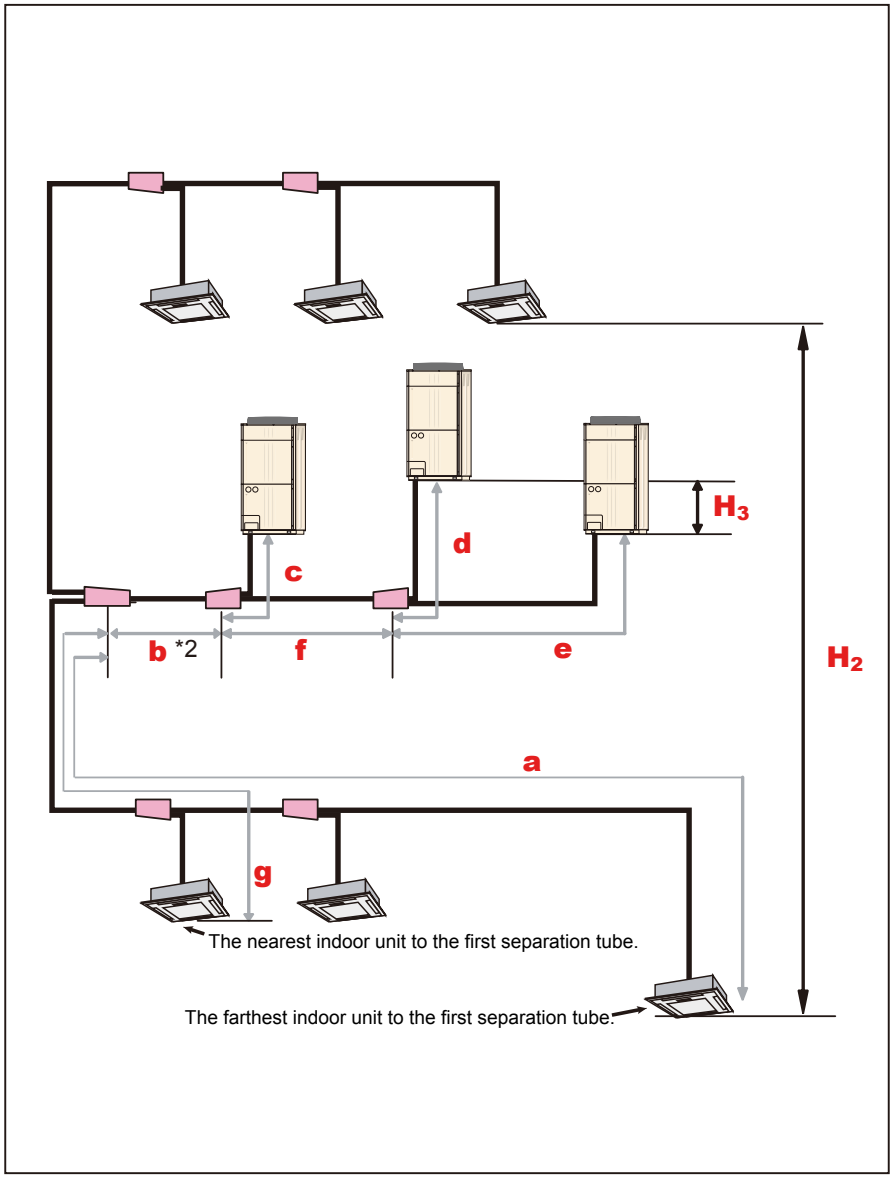
O.T. = Outdoor Temperature.

＊1: Total pipe length is limited by the condition that total refrigerant amount should not exceed 69 lbs. (31.5kg).

＊2: When installing the pressure sensor kit on the nearest pipe to the indoor unit with the largest difference in elevation with the outdoor unit, size of the main liquid pipe must be one size larger than the standard size.

SYSTEM DESIGN

■IN THE CASE OF SET UP THE INDOOR UNIT IN BOTH THE UPPER SIDE AND THE LOWER SIDE OF THE OUTDOOR UNIT



		Limitation ft. (m)	Diagram
Maximum allowable pipe length (actual pipe length)	Between master outdoor unit and the farthest indoor unit	541 (165) or less	a + b + c
	Between the first separation tube and the farthest indoor unit	295 (90) or less	a
	(The farthest indoor unit to the first separation tube) - (The nearest indoor unit to the first separation tube)	197 (60) or less	a - g
	Total pipe length	3280 (1000) or less *1	Total
	Between outdoor unit and outdoor unit branch kit	9 (3) or less	c, d, e
	Between the farthest outdoor unit to the first outdoor unit branch kit	39 (12) or less	d + f, e + f
Maximum allowable height difference	Between indoor unit	49 (15) or less	H2
	Between outdoor unit	19 in. (0.5) or less	H3

＊1 : Total piping length is limited in that the total refrigerant charge should not exceed 208 lbs. (94.5kg).

＊2 : "b" can be any length, provide that "a+b+c" is less than 541' (165m)

NOTE: Minimum pipe length between outdoor unit and first indoor unit must be greater than 25'(7.5m).

SYSTEM DESIGN

■ CAUTION

For proper operation, adhere to all “piping limitations”.

● Allowable height difference:

If the height difference between the indoor unit and outdoor unit is larger than the allowable value:

- ∗ The pressure loss will be larger → Insufficient cooling and heating
- ∗ The refrigerant in liquid pipe will flush → Refrigerant flow noise generate at indoor unit
- ∗ The refrigerant oil will not return → Insufficient refrigerant oil resulting in compressor damage

If the height difference between indoor unit is larger than the allowable value:

- ∗ The refrigerant flow balance will be poor → Insufficient cooling and heating (poor balance)
- ∗ Refrigerant oil will collect in the piping or non-operating indoor units
  → Insufficient refrigerant oil resulting in compressor damage

● Pipe length:

If the pipe length is longer than prescribed:

- ∗ The pressure loss will be larger → Insufficient cooling and heating
- ∗ Too much refrigerant will be charged → Liquid backs up resulting in compressor damage
- ∗ The refrigerant oil will not return → Insufficient refrigerant oil resulting in compressor damage

● Pipe size:

If the pipe size is larger than designated size:

- ∗ The refrigerant flow velocity will drop. Refrigerant oil will not return to the outdoor unit.
  → Insufficient refrigerant oil resulting in compressor damage
- ∗ The refrigerant in liquid pipe will flush easily → Insufficient cooling and heating

If the pipe size is smaller than designated size:

- ∗ The refrigerant circulation volume will drop → Insufficient cooling and heating
- ∗ The pressure loss will be larger → Insufficient cooling and heating

● Indoor unit connected capacity:

If the indoor unit connected capacity is larger than the system capable capacity:

- ∗ Insufficient system performance → Insufficient cooling and heating
- ∗ When heating, refrigerant will collect in non-operating indoor units resulting in an insufficient refrigerant circulation volume → Insufficient cooling and heating
- ∗ The refrigerant oil will not return → Compressor damage

If the indoor unit connected capacity is too small compared to the system capacity:

- ∗ The liquid return will be too great → Compressor damage
- ∗ The refrigerant will concentrate in the outdoor unit

  → Continuous operation will become difficult due to the outdoor unit stopping due to high head pressure. Also, excessive noise will be generated by the refrigerant flow when in heating mode.

SYSTEM DESIGN

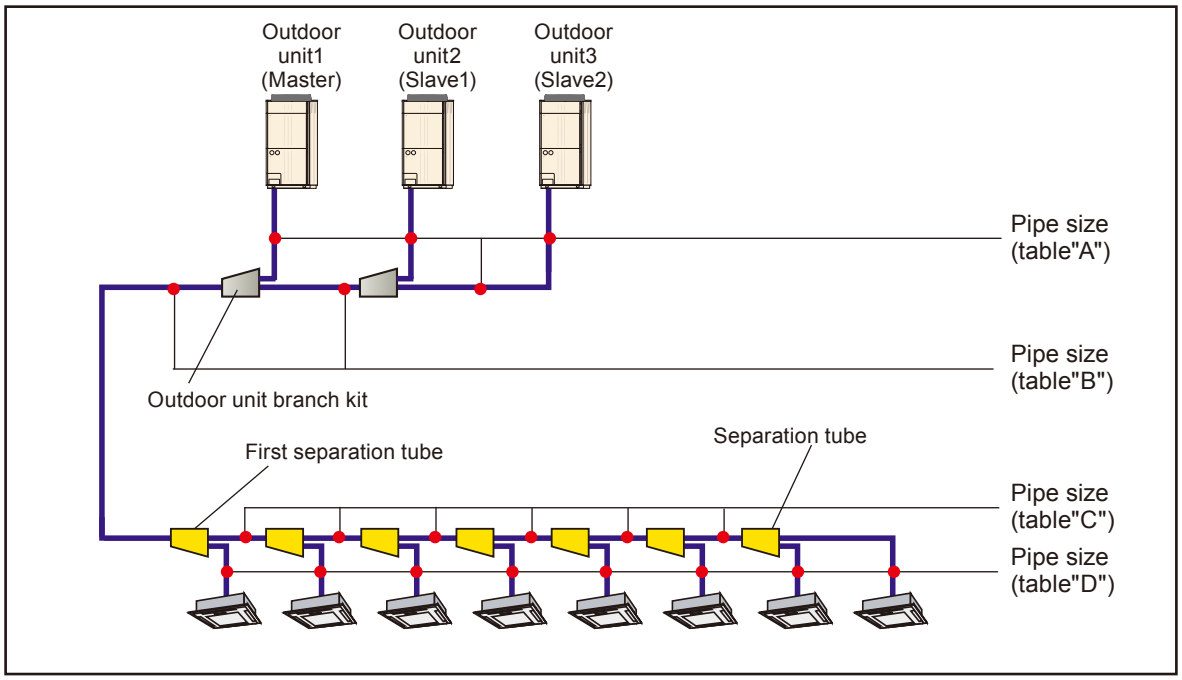
2-3. PIPE SIZE

■ PIPE DIAMETER, RECOMMENDED MATERIAL AND WALL THICKNESS

Nominal Diameter	(in.)	1/4"	3/8"	1/2"	5/8"	3/4"	7/8"	1-1/8"	1-3/8"	1-5/8"
Outside Diameter	(mm)	6.35	9.52	12.70	15.88	19.05	22.22	28.58	34.92	41.27
Material		JIS H3300 C1220T-O or equivalent *1					JIS H3300 C1220T-H or equivalent *2			
Wall Thickness *3	(in.)	0.032	0.032	0.032	0.039	0.047	0.039	0.039	0.047	0.056
	(mm)	0.8	0.8	0.8	1.0	1.2	1.0	1.0	1.2	1.43

*1: Allowable tensile stress ≥ 33 (N/mm^2)
*2: Allowable tensile stress ≥ 61 (N/mm^2)
*3: Operating pressure of the pipe must be 609psi (4.2 MPa).

Select the pipe size in accordance with the regional standard.



■ PIPE SIZE SELECTION

- **Caution**

Use the following tables to select the Refrigeration Pipe Size, Separation Tubes and Headers.

● Pipe size table "A"

(Between outdoor unit to outdoor unit branch kit)

Ton	Model code	Outdoor unit cooling capacity (Btu/h)	Outside diameter: in. (mm)	
			Liquid pipe	Gas pipe
6	72	72,000	1/2" (12.70)	7/8" (22.22)
8	96	96,000	1/2" (12.70)	7/8" (22.22)
10	120	120,000	1/2" (12.70)	1-1/8" (28.58)

SYSTEM DESIGN

● Pipe size table "B"

From outdoor branch kit(s) to first separation tube.

Nominal cooling capacity of outdoor unit (Btu/h)	Outside diameter: in. (mm)		
	Liquid pipe *1		Gas pipe
	Size 1	Size 2	
72,000	1/2" (12.70)	5/8" (15.88)	7/8" (22.22)
96,000	1/2" (12.70)	5/8" (15.88)	7/8" (22.22)
120,000	1/2" (12.70)	5/8" (15.88)	1-1/8" (28.58)
144,000	1/2" (12.70)	5/8" (15.88)	1-1/8" (28.58)
168,000	5/8" (15.88)	3/4" (19.05)	1-1/8" (28.58)
192,000	5/8" (15.88)	3/4" (19.05)	1-1/8" (28.58)
216,000	5/8" (15.88)	3/4" (19.05)	1-3/8" (34.92)
240,000	5/8" (15.88)	3/4" (19.05)	1-3/8" (34.92)
264,000	5/8" (15.88)	3/4" (19.05)	1-3/8" (34.92)
288,000	3/4" (19.05)	7/8" (22.22) *2	1-3/8" (34.92)

*1: Size of the liquid pipe differs depending on the height difference (H) between the outdoor unit and the indoor unit as follows:

Size 1: H is or less 164 ft (50 m)
Size 2: H is longer than 164 ft (50 m)

*2: Reducer (locally purchased) is necessary

● Pipe size table "C"

(Between separation tubes)

Total cooling capacity of indoor unit (x) (Btu/h)	Outside diameter: in. (mm)	
	Liquid pipe	Gas pipe
8,000 ≤ x < 36,000	3/8" (9.52)	5/8" (15.88)
36,000 ≤ x < 48,000	3/8" (9.52)	3/4" (19.05)
48,000 ≤ x < 96,500	1/2" (12.70)	7/8" (22.22)
96,500 ≤ x < 153,000	1/2" (12.70)	1-1/8" (28.58)
153,000 ≤ x < 193,000	5/8" (15.88)	1-1/8" (28.58)
193,000 ≤ x < 274,000	5/8" (15.88)	1-3/8" (34.92)
274,000 ≤ x	3/4" (19.05)	1-3/8" (34.92)

- If the selected pipe diameter between separation tubes (based on table "C") becomes larger than the pipe diameter between outdoor unit branch kit and the first separation tube (based on table "B"),select the pipe whose diameter is equal to the one between outdoor unit branch kit and the first separation tube.

  (If pipe diameter C > B, select pipe size from table B)

- "Total Cooling Capacity of Indoor Unit" is the sum of all the cooling capacities of all units

SYSTEM DESIGN

connected downstream .

● Pipe size table "D"

Cooling capacity of indoor unit (Btu/h)	Outside diameter: in. (mm)	
	Liquid pipe	Gas pipe
4,000, 7,500, 9,500, 12,000, 14,000	1/4" (6.35)	1/2" (12.70)
18,000, 24,000, 30,000, 34,000	3/8" (9.52)	5/8" (15.88)
36,000, 48,000, 60,000	3/8" (9.52)	3/4" (19.05)
72,000, 96,000	1/2" (12.70)	7/8" (22.22)

For connecting to 4/7/9/18/36/48TLAV1 models, reducer (locally purchased) is necessary.
For details of reducer diameter, refer to the table below.

Cooling capacity of indoor unit (Btu/h)	Reducer diameter: in. (mm)	
	Liquid pipe	Gas pipe
4,000, 7,500, 9,500	—	3/8" (9.52) → 1/2" (12.70)
18,000	1/4" (6.35) → 3/8" (9.52)	1/2" (12.70) → 5/8" (15.88)
34,000, 36,000, 48,000	—	5/8" (15.88) → 3/4" (19.05)

SYSTEM DESIGN

■ OUTDOOR UNIT BRANCH KIT

System	Model	Q'ty
2 outdoor units	UTP-CX567A	1
3 outdoor units		2

∗When using single outdoor unit, outdoor unit branch kit is not necessary.

■ INDOOR BRANCH KIT

● Separation tube

First separation tube: Total cooling capacity of outdoor unit (x) 2nd and the subsequent separation tube: Total cooling capacity of indoor unit (x) (Btu/h)	Separation tube
x < 96,500	UTP-AX090A
96,500 ≤ x < 193,000	UTP-AX180A
193,000 ≤ x	UTP-AX567A

● Header

Total cooling capacity of indoor unit (x) (Btu/h)	Header	
	3-6 Branches	3-8 Branches
x < 96,500	UTR-H0906L	UTR-H0908L
96,500 ≤ x < 193,000	UTR-H1806L	UTR-H1808L

∗"Total Cooling Capacity of Indoor Unit" is the sum of all the cooling capacities of all units connected downstream .

∗In pipe connections, if the pipe diameter on outdoor unit side and the pipe diameter of header are different, use a expander or reducer (locally purchased).

SYSTEM DESIGN

■ COOLING CAPACITY TABLE

● Outdoor unit

Ton	Nominal Cooling Capacity (kBtu)	Set model name	Unit1 (Model name)	Unit2 (Model name)	Unit3 (Model name)
6	72	AOUA72RLBV1	AOUA72RLBV1	-	-
8	96	AOUA96RLBV1	AOUA96RLBV1	-	-
10	120	AOUA120RLBV1	AOUA120RLBV1	-	-
12	144	AOUA144RLBVG1	AOUA72RLBV1	AOUA72RLBV1	-
14	168	AOUA168RLBVG1	AOUA96RLBV1	AOUA72RLBV1	-
16	192	AOUA192RLBVG1	AOUA120RLBV1	AOUA72RLBV1	-
18	216	AOUA216RLBVG1	AOUA120RLBV1	AOUA96RLBV1	-
20	240	AOUA240RLBVG1	AOUA120RLBV1	AOUA120RLBV1	-
22	264	AOUA264RLBVG1	AOUA96RLBV1	AOUA96RLBV1	AOUA72RLBV1
24	288	AOUA288RLBVG1	AOUA96RLBV1	AOUA96RLBV1	AOUA96RLBV1

SYSTEM DESIGN

● Indoor unit

Type	Cooling capacity (Btu/h)	Model name
Compact cassette	4,000	AUUA4TLAV1
	7,500	AUUA7TLAV
	9,500	AUUA9TLAV
	12,000	AUUA12TLAV
	14,000	AUUA14TLAV
	18,000	AUUA18TLAV
	24,000	AUUA24TLAV
Circular flow cassette	18,000	AUUB18TLAV1
	24,000	AUUB24TLAV1
	30,000	AUUB30TLAV1
	36,000	AUUB36TLAV1
	48,000	AUUB48TLAV1
Cassette	18,000	AUUB18TLAV
	24,000	AUUB24TLAV
	30,000	AUUB30TLAV
	36,000	AUUB36TLAV
Mini duct	4,000	ARUL4TLAV1
Slim duct / Slim concealed floor	7,500	ARUL7TLAV
	9,500	ARUL9TLAV
	12,000	ARUL12TLAV
	14,000	ARUL14TLAV
	18,000	ARUL18TLAV
Medium static Pressure duct	24,000	ARUM24TLAV
	30,000	ARUM30TLAV
	36,000	ARUM36TLAV
High static pressure duct	36,000	ARUH36TLAV
	48,000	ARUH48TLAV
	60,000	ARUH60TLAV
	72,000	ARUH72TLAV1
	96,000	ARUH96TLAV

Type	Cooling capacity (Btu/h)	Model name
Vertical air handler	12,000	ARUV12TLAV
	18,000	ARUV18TLAV
	24,000	ARUV24TLAV
	30,000	ARUV30TLAV
	36,000	ARUV36TLAV
	48,000	ARUV48TLAV
	60,000	ARUV60TLAV
Compact floor	4,000	AGUA4TLAV1
	7,500	AGUA7TLAV1
	9,500	AGUA9TLAV1
	12,000	AGUA12TLAV1
	14,000	AGUA14TLAV1
Floor / ceiling	12,000	ABUA12TLAV
	14,000	ABUA14TLAV
	18,000	ABUA18TLAV
	24,000	ABUA24TLAV
Ceiling	30,000	ABUA30TLAV
	36,000	ABUA36TLAV
Wall mounted	4,000	ASUA4TLAV1
	7,500	ASUA7TLAV1 ASUA7TLAV
	9,500	ASUA9TLAV1 ASUA9TLAV
	12,000	ASUA12TLAV1 ASUA12TLAV
	14,000	ASUA14TLAV1 ASUA14TLAV
	18,000	ASUB18TLAV1 ASUB18TLAV
	24,000	ASUB24TLAV1 ASUB24TLAV
	30,000	ASUB30TLAV1
	34,000	ASUB36TLAV1

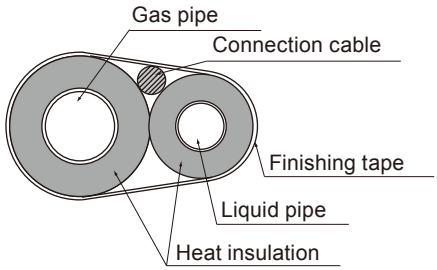
SYSTEM DESIGN

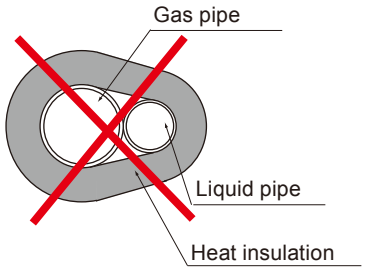
2-4. SELECTION OF PIPE HEAT INSULATING MATERIAL

- Always insulate the refrigerant pipe to prevent the formation of condensation and water droplets.
- Decide the thickness of the heat insulating material by referring to the recommended minimum thickness in Table 1. (For installation condition T=90°F DB (32°C DB), humidity≤70%, humidity≤75%, humidity≤80%, humidity≤85%)
- When the outdoor unit is installed above the indoor units, be sure to fill the building penetration with foam to prevent condensation in the outdoor unit from running down the refrigerant pipes into the building.
- Both of the refrigerant lines (liquid and gas) should be insulated according to the same specification.
- Water may leak from the refrigerant lines if the insulation is not completely sealed.
- Table1 Size of refrigerant pipe and recommended minimum thickness of heat insulating material. This is based on the insulating material having a thermal connectivity of .0040 W/(m*k).

		Recommended minimum thickness for heat insulating material [in. (mm)]			
Relative humidity		≤70%	≤75%	≤80%	≤85%
Refrigerant pipe Outside diameter [in. (mm)]	1/4" (6.35)	5/16" (8)	13/32" (10)	1/2" (13)	21/32" (17)
	3/8" (9.52)	11/32" (9)	7/16" (11)	9/16" (14)	23/32" (18)
	1/2" (12.70)	13/32" (10)	15/32" (12)	19/32" (15)	3/4" (19)
	5/8" (15.88)	13/32" (10)	15/32" (12)	5/8" (16)	25/32" (20)
	3/4" (19.05)	13/32 (10)	1/2" (13)	5/8 (16)	13/16" (21)
	7/8" (22.22)	7/16" (11)	1/2" (13)	21/32" (17)	7/8" (22)
	1-1/8" (28.58)	7/16" (11)	9/16" (14)	23/32" (18)	29/32" (23)
	1-3/8" (34.92)	7/16" (11)	9/16" (14)	23/32" (18)	15/16" (24)
	1-5/8" (41.27)	15/32" (12)	19/32" (15)	3/4" (19)	31/32" (25)

- In application where the ambient temperature and humidity exceed 90F DB (32C DB) and 95% relative humidity, increase the size of the pipe insulation. It may also be necessary to insulate the indoor unit casing. Condensation may form on the insulation in these conditions if the thickness of the insulation is not increased.
- Since the gas line gets very hot during heating operation, select a pipe insulation material rated for at least 248F (120C).





- Make sure that the pipe is completely covered with insulation. Any exposed pipe could cause condensation.
- Do not insulate both liquid and gas pipes together as shown in the figure above. This may cause condensation and a drop in system capacity.

SYSTEM DESIGN

2-5. ADDITIONAL CHARGE CALCULATION

- The outdoor unit is charged refrigerant at the factory.
- The additional refrigerant charge is calculated based on pipe length and outdoor unit model.
- The additional refrigerant charge amount is calculated according to the following formula.
- The overall refrigerant amount should not be exceed 66.1 lbs. (30kg) per outdoor unit.
- Round up the calculated result to two decimal places.

■ CALCULATION OF ADDITIONAL CHARGE REFRIGERANT

1. Calculation of additional amount for outdoor unit

Model	Ton	d Factory charged amount [lbs. (kg)]	a Additional amount for outdoor unit [lbs. (kg)]
AOUA72RLBV1	6	25.79 (11.70)	- (-)
AOUA96RLBV1	8	25.79 (11.70)	- (-)
AOUA120RLBV1	10	26.01 (11.80)	7.27 (3.30)

Diameter of liquid pipe [in. (mm)]	b Additional amount for pipe length [lbs./ft. (kg/m)]
ø1/4" (6.35)	0.014 (0.021)
ø3/8" (9.52)	0.039 (0.058)
ø1/2" (12.70)	0.077 (0.114)
ø5/8" (15.88)	0.120 (0.178)
ø3/4" (19.05)	0.180 (0.268)
ø7/8" (22.22)	0.242 (0.360)

2. Calculation of additional amount for pipe length

A= [a : Outdoor unit 1 additional amount for outdoor unit / lbs. (kg)] + [a : Outdoor unit 2 additional amount for outdoor unit / lbs. (kg)] + [a : Outdoor unit 3 additional amount for outdoor unit / lbs. (kg)] = [Total lbs. (kg)]

B= [Total length of ø7/8" (22.22mm) liquid pipe / ft. (m)] × [a : x 0.242 lbs./ft. (0.360 kg/m)] = lbs. (kg)
+ [Total length of ø3/4" (19.05mm) liquid pipe / ft. (m)] × [a : x 0.180 lbs./ft. (0.268 kg/m)] = lbs. (kg)
+ [Total length of ø5/8" (15.88mm) liquid pipe / ft. (m)] × [a : x 0.120 lbs./ft. (0.178 kg/m)] = lbs. (kg)
+ [Total length of ø1/2" (12.70mm) liquid pipe / ft. (m)] × [a : x 0.077 lbs./ft. (0.114 kg/m)] = lbs. (kg)
+ [Total length of ø3/8" (9.52mm) liquid pipe / ft. (m)] × [a : x 0.039 lbs./ft. (0.058 kg/m)] = lbs. (kg)
+ [Total length of ø1/4" (6.35mm) liquid pipe / ft. (m)] × [a : x 0.014 lbs./ft. (0.021 kg/m)] = lbs. (kg)
= [Total lbs. (kg)]

3. Calculation of additional charge refrigerant

C = A + B = [lbs. (kg)] Round up C to 2 decimal place.

4. Calculation of factory charged amount

D= [d : Outdoor unit 1 factory charged amount / lbs. (kg)] + [d : Outdoor unit 2 factory charged amount / lbs. (kg)] + [d : Outdoor unit 3 factory charged amount / lbs. (kg)] = [Total lbs. (kg)]

5. Total refrigerant amount check

E = C + D = [lbs. (kg)]

Note: Check the total refrigerant amount under the following conditions.

Condition	Computational formula
For 1 outdoor unit per refrigerant system : Total amount of refrigerant ≤ 69.4lbs. (31.5kg)	E ≤ 69.4lbs. (31.5kg)
For 2 outdoor units per refrigerant system : Total amount of refrigerant ≤ 138.8lbs. (63.0kg)	E ≤ 138.8lbs. (63.0kg)
For 3 outdoor units per refrigerant system : Total amount of refrigerant ≤ 208.2lbs. (94.5kg)	E ≤ 208.2lbs. (94.5kg)

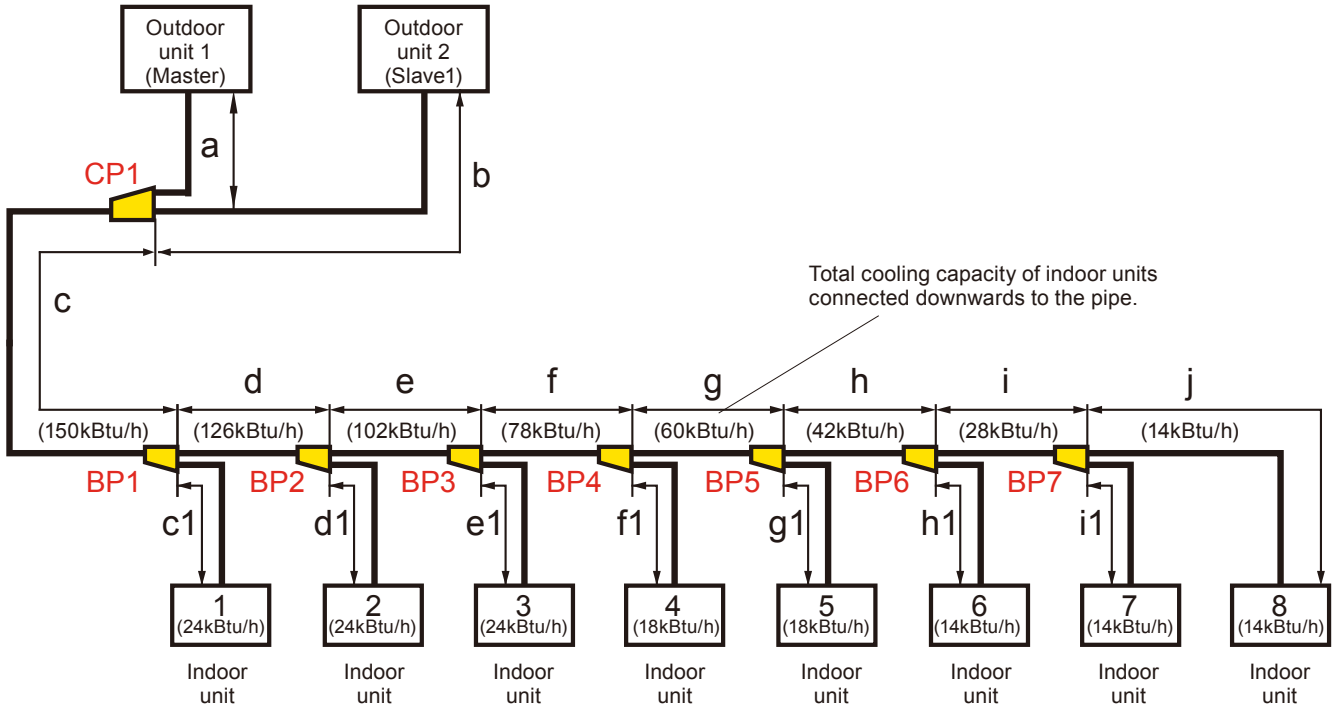
When the total refrigerant amount exceeds the limitations.

- Reduce pipe length for refrigerant system.
- Change the refrigerant system configuration.

SYSTEM DESIGN

2-6. EXAMPLE OF PIPING DESIGN

■ REFRIGERANT SYSTEM 1



● System configuration (Indoor units)

	1	2	3	4	5	6	7	8	Total Capacity (kBtu/h)
Model name	AUUA24	AUUA24	AUUA24	AUUA18	AUUA18	AUUA14	AUUA14	AUUA14	150.0
Capacity (kBtu/h)	24.0	24.0	24.0	18.0	18.0	14.0	14.0	14.0	

● System configuration (Outdoor units)

	Set model name	Outdoor unit 1 (Master)	Outdoor unit 2 (Slave1)	Total Capacity
Model name	AOUA144	AOUA72	AOUA72	12Ton 144.0 (kBtu/h)

● Capacity ratio

(Total indoor unit capacity) / (Total outdoor unit capacity)

= (150.0) / (144.0) = 104.2% (Within 50% to 150%)

● Selection of branch kit

Branch point No.	Total cooling capacity of downstream indoor units (kBtu/h)	Model
BP1	150.0	UTP-AX180A
BP2	126.0	UTP-AX180A
BP3	102.0	UTP-AX180A
BP4	78.0	UTP-AX090A
BP5	60.0	UTP-AX090A
BP6	42.0	UTP-AX090A
BP7	28.0	UTP-AX090A
CP1	-	UTP-CX567A

Model	Q'ty
UTP-AX180A	3
UTP-AX090A	4
UTP-CX567A	1

SYSTEM DESIGN

● Selection of pipe size

	a	b	c	c1	d	d1	e	e1	f	f1
Liquid pipe in. (mm)	1/2 (12.70)	1/2 (12.70)	1/2 (12.70)	3/8 (9.52)	1/2 (12.70)	3/8 (9.52)	1/2 (12.70)	3/8 (9.52)	1/2 (12.70)	3/8 (9.52)
Gas pipe in. (mm)	7/8 (22.22)	7/8 (22.22)	1-1/8 (28.58)	5/8 (15.88)	1-1/8 (28.58)	5/8 (15.88)	1-1/8 (28.58)	5/8 (15.88)	7/8 (22.22)	5/8 (15.88)
Length ft. (m)	6 (2)	6 (2)	131 (40)	33 (10)	16 (5)	33 (10)	16 (5)	33 (10)	16 (5)	33 (10)

	g	g1	h	h1	i	i1	j			
Liquid pipe in. (mm)	1/2 (12.70)	3/8 (9.52)	3/8 (9.52)	1/4 (6.35)	3/8 (9.52)	1/4 (6.35)	1/4 (6.35)			
Gas pipe in. (mm)	7/8 (22.22)	5/8 (15.88)	3/4 (19.05)	1/2 (12.70)	5/8 (15.88)	1/2 (12.70)	1/2 (12.70)			
Length ft. (m)	16 (5)	33 (10)	16 (5)	33 (10)	16 (5)	33 (10)	33 (10)			

● Calculation of additional charge refrigerant

1. Calculation of additional amount for outdoor unit

	Model	Additional amount for outdoor unit lbs.(kg)
Outdoor unit1	AOUA72	- (-)
Outdoor unit2	AOUA72	- (-)

A = 0 + 0 = 0 (lbs.)
[0 + 0 = 0 (kg)]

2.Calculation of additional amount for pipe length

Liquid pipe size in. (mm)	3/4 (19.05)	5/8 (15.88)	1/2 (12.70)	3/8 (9.52)	1/4 (6.35)
Additional refrigerant lbs./ft. (kg/m)	0.180 (0.268)	0.120 (0.178)	0.077 (0.114)	0.039 (0.058)	0.014 (0.021)
Liquid pipe length ft. (m)	0	0	207 (64)	197 (60)	99 (30)

B = (0.077 x 207) + (0.039 x 197) + (0.014 x 99) = 25.01 (lbs.)
[(0.114 x 64) + (0.058 x 60) + (0.021 x 30) = 11.41 (kg)]

3.Calculation of additional charge refrigerant

C = A + B = 0 + 25.01 = 25.01 (lbs.)
[0 + 11.41 = 11.41 (kg)]

4. Calculation of factory charged amount

	Model	Factory charged amount lbs.(kg)
Outdoor unit1	AOUA72	25.79 (11.7)
Outdoor unit2	AOUA72	25.79 (11.7)

D = 25.79 + 25.79 = 51.58 (lbs.)
[11.70 + 11.70 = 23.40 (kg)]

SYSTEM DESIGN

5. Total refrigerant amount check

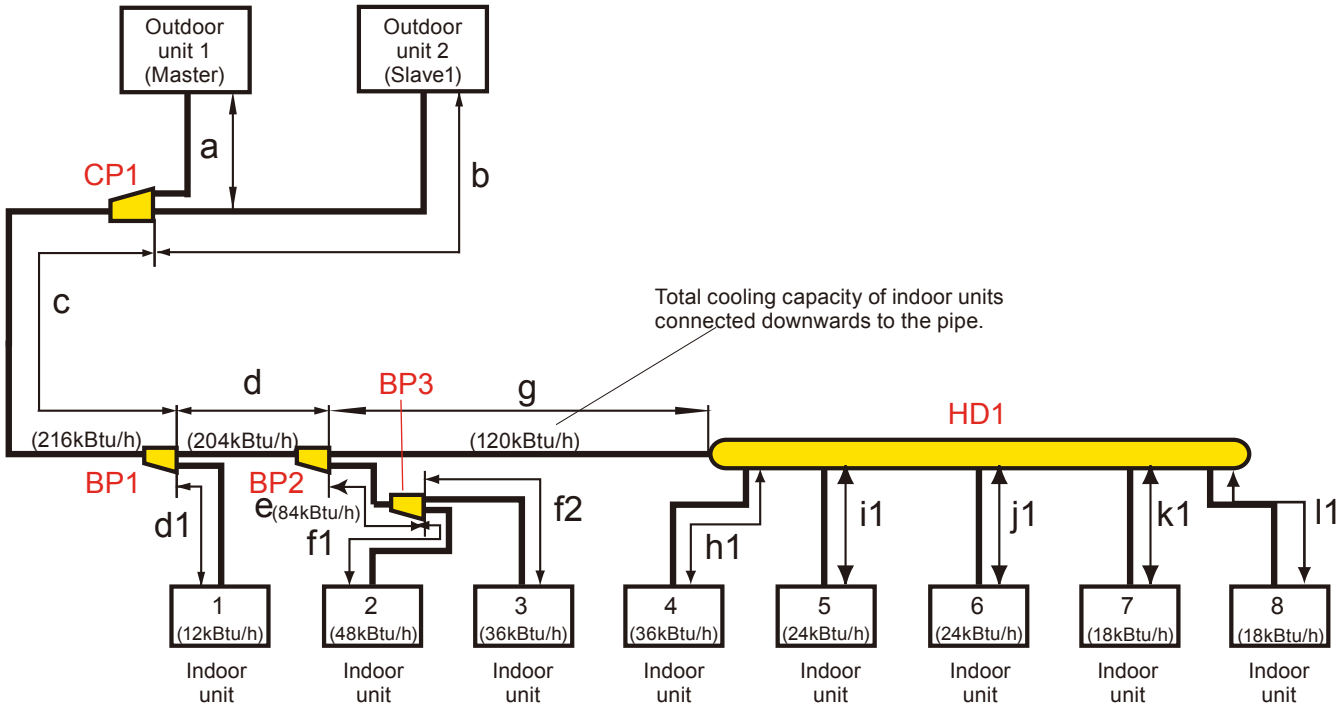
E= C + D = 25.01 + 51.58 = 76.59 (lbs.) < 138.8 (lbs.) → OK

[11.41 + 23.4 = 34.81 (kg) < 63.0 (kg) → OK]

Check pipe length and height difference between units by comparing with items shown in "2-2. LIMITATION".

SYSTEM DESIGN

■ REFRIGERANT SYSTEM 2



● System configuration (Indoor units)

	1	2	3	4	5	6	7	8	Total Capacity (kBtu/h)
Model name	ARUL12	ARUH48	ARUM36	ARUM36	ARUM24	ARUM24	ARUL18	ARUL18	216.0
Capacity (kBtu/h)	12.0	48.0	36.0	36.0	24.0	24.0	18.0	18.0	

● System configuration (Outdoor units)

	Set model name	Outdoor unit 1 (Master)	Outdoor unit 2 (Slave1)	Total Capacity
Model name	AOUA168	AOUA96	AOUA72	14Ton 168.0 (kBtu/h)

● Capacity ratio

(Total indoor unit capacity) / (Total outdoor unit capacity)

= (216.0) / (168.0) = 128.6% (Within 50% to 150%)

● Selection of branch kit

Branch point No.	Total cooling capacity of downstream indoor units (kBtu/h)	Model
BP1	216.0	UTP-AX567A
BP2	204.0	UTP-AX567A
BP3	84.0	UTP-AX090A
HD1	120.0	UTR-H1806L
CP1	-	UTP-CX567A

Model	Q'ty
UTP-AX567A	2
UTP-AX090A	1
UTR-H1806L	1
UTP-CX567A	1

SYSTEM DESIGN

● Selection of pipe size

	a	b	c	d *	d1	e	f1	f2	g	h1
Liquid pipe in. (mm)	1/2 (12.70)	1/2 (12.70)	5/8 (15.88)	5/8 (15.88)	1/4 (6.35)	1/2 (12.70)	3/8 (9.52)	3/8 (9.52)	1/2 (12.70)	3/8 (9.52)
Gas pipe in. (mm)	7/8 (22.22)	7/8 (22.22)	1-1/8 (28.58)	1-1/8 (28.58)	1/2 (12.70)	7/8 (22.22)	3/4 (19.05)	3/4 (19.05)	1-1/8 (28.58)	3/4 (19.05)
Length ft. (m)	6 (2)	6 (2)	131 (40)	33 (10)	33 (10)	16 (5)	16 (5)	33 (10)	66 (20)	33 (10)

	i1	j1	k1	l1						
Liquid pipe in. (mm)	3/8 (9.52)	3/8 (9.52)	3/8 (9.52)	3/8 (9.52)						
Gas pipe in. (mm)	5/8 (15.88)	5/8 (15.88)	5/8 (15.88)	5/8 (15.88)						
Length ft. (m)	16 (5)	33 (10)	16 (5)	33 (10)						

∗ Pipe size "d" selection : Even though this pipe size might be selected based on downstream cooling capacity (204 kBtu/h) 5/8 in. (15.88mm) / 1-3/8in. (34.92mm), This pipe size should not be larger than pipe size "c". Therefore select pipe size equal to pipe size "c" (5/8 in. (15.88mm) / 1-1/8in. (28.58mm)).

● Calculation of additional charge refrigerant

1. Calculation of additional amount for outdoor unit

	Model	Additional amount for outdoor unit lbs.(kg)
Outdoor unit1	AOUA72	- (-)
Outdoor unit2	AOUA96	- (-)

A = 0 + 0 = 0 (lbs.)
[0 + 0 = 0 (kg)]

2. Calculation of additional amount for pipe length

Liquid pipe size in. (mm)	3/4 (19.05)	5/8 (15.88)	1/2 (12.70)	3/8 (9.52)	1/4 (6.35)
Additional refrigerant lbs./ft. (kg/m)	0.180 (0.268)	0.120 (0.178)	0.077 (0.114)	0.039 (0.058)	0.014 (0.021)
Liquid pipe length ft. (m)	0	164 (50)	94 (29)	180 (55)	33 (10)

B = (0.120 x 164) + (0.077 x 94) + (0.039 x 180) + (0.014 x 33) = 34.40 (lbs.)
[(0.178 x 50) + (0.114 x 29) + (0.058 x 55) + (0.021 x 10) = 15.61 (kg)]

3. Calculation of additional charge refrigerant

C = A + B = 0 + 34.40 = 34.40 (lbs.)
[0 + 15.61 = 15.61 (kg)]

SYSTEM DESIGN

4.Calculation of factory charged amount

	Model	Factory charged amount (kg)
Outdoor unit1	AOUA72	25.79 (11.7)
Outdoor unit2	AOUA96	25.79 (11.7)

D = 25.79 + 25.79 = 51.58 (lbs.)
[11.7 + 11.7 = 23.4 (kg)]

5. Total refrigerant amount check

E = C + D = 34.40 + 51.58 = 85.98 (kg) < 138.8 (lbs.) → OK
[15.61 + 23.4 = 39.01 (kg) < 63.0 (kg) → OK]

Check pipe length and height difference between units by comparing with items shown in "2-2. LIMITATION".

SYSTEM DESIGN

3. PIPING CONNECTION

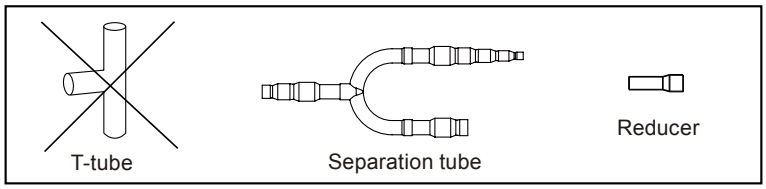
3-1. PIPING PRECAUTIONS

■ CAUTION

Stay within all piping limitations to prevent system damage or malfunction.

● Piping material

- Use the designated size (Diameter & thickness) of refrigerant pipes.
- Those pipes purchased locally may contain dust inside. Use dry nitrogen to blow out any duct.
- Do not use standard pipe Tees for branches , these can cause uneven refrigerant flow to the indoor units. Fujitsu branch kits should be used instead.



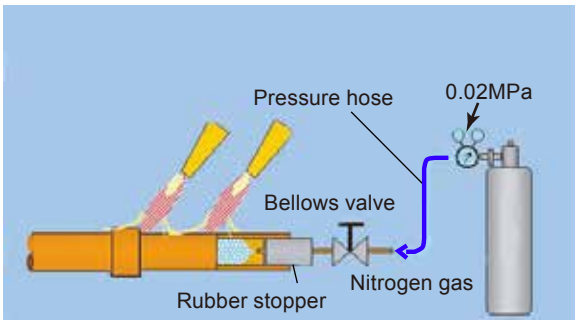
- Never reuse refrigerant pipe. Only new pipe should be used.

● Pipe Preparation and Installation

- Make sure that no dust or water enters the pipe during preparation or installation.
- When installing the pipe make as few bends as possible and make radiuses as large as possible.
- Cut the branch kit at the right size or use the reducer to match the pipe to the branch kit.

● Brazing

- While Brazing the pipes, be sure to blow dry nitrogen gas through them.
- If nitrogen gas is not blown through the pipes while they are being brazed, an oxidized layer may form on the inside of the pipes. If this occurs, the cooling efficiency may decrease and the air conditioner unit (compressor, valves, etc.) be damaged.



- When brazing the pipes, do not use flux. If the flux is chlorine-based, the pipes will corrode and when the flux contains fluorine, the refrigerant oil will deteriorate, etc. Using the flux has an adverse affect on the refrigerant piping system.
- For brazing materials, use phosphor copper solder that does not require flux.

● Piping treatment

- The pipes vibrate, expand, and contract during operation, so if loads are concentrated in one area, it could cause cracks in the pipes. Provide the pipe supports every 6ft.6-3/4in to 9ft.10-1/8in. (2 to 3m)
- Make sure to insulate both refrigerant lines separately with the appropriately sized insulation as described earlier. Make sure to overlap the ends to prevent any gaps.

SYSTEM DESIGN

■ CAUTION

● Brazing

While brazing the pipe, be sure to blow dry nitrogen gas through the pipes.

If not used, it will cause damage to the compressor and clog the strainer and electronic expansion valve.

Example) Inside of brazed pipe

Nitrogen gas used	Nitrogen gas used but not sufficient (Oxygen gas still inside the pipe)	Nitrogen gas does not used

SYSTEM DESIGN

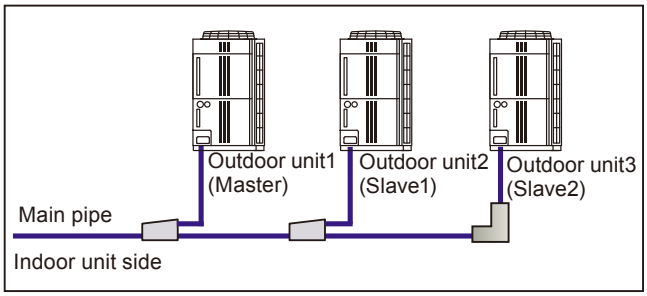
3-2. PIPING TO OUTDOOR UNIT

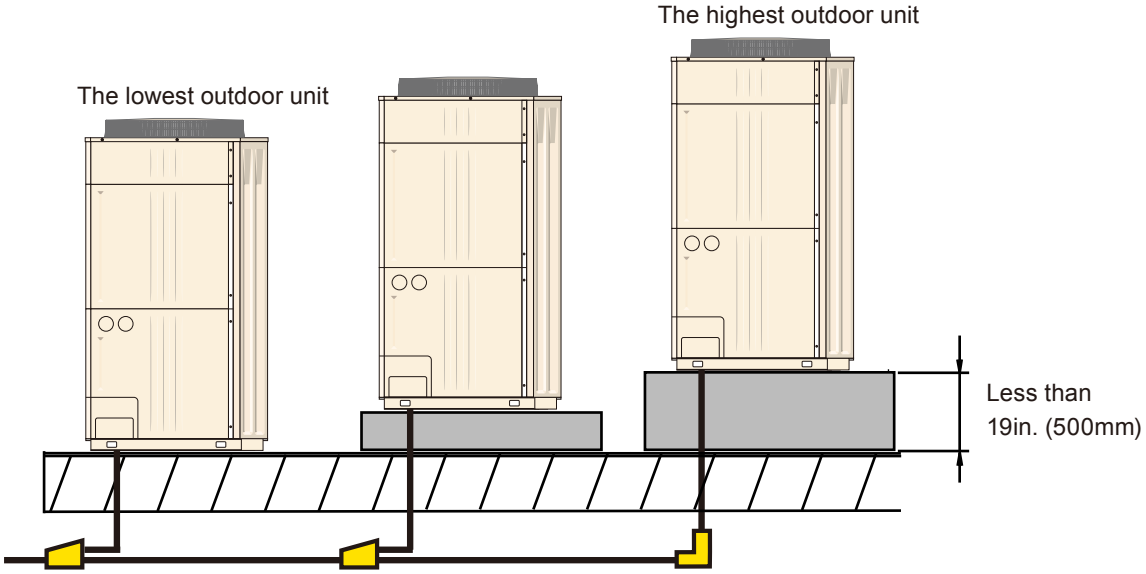
■ OUTDOOR UNIT POSITION

- When installing outdoor units, make the master unit closest to the main pipe.
- Select outdoor unit capacity in the order :

Outdoor unit1 ≥ Outdoor unit2 ≥ Outdoor unit3
(Master) (Slave 1) (Slave 2)

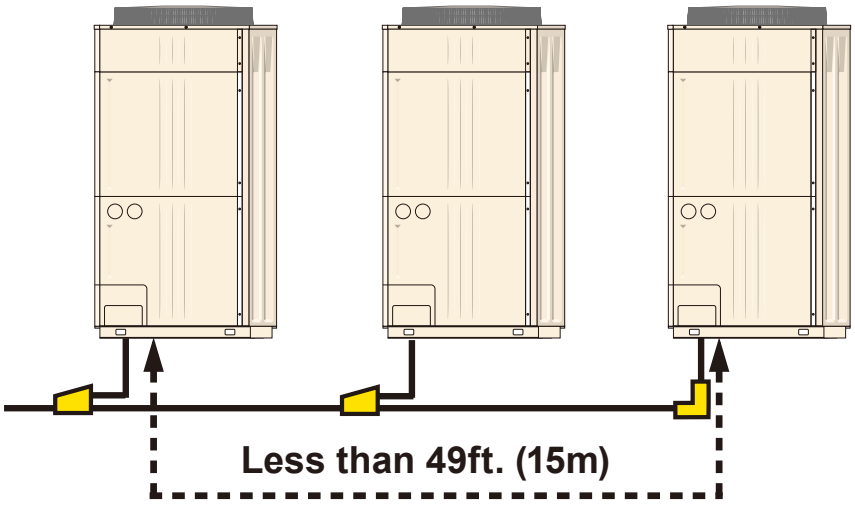
- When connecting Master unit with Slave unit(s), install them as close as possible.
- Select mounting positions of the master and slave units that stay within the piping limitations.





The height difference between the lowest and the highest outdoor unit in the same refrigerant system ≤ 19in. (500mm)

＊Install the branch kit horizontally.



The maximum pipe length between master unit and the furthest slave unit ≤ 49ft. (15m)

＊Install the branch kit horizontally.

＊Mount the outdoor unit with enough space to install the piping and service and maintain the unit.

SYSTEM DESIGN

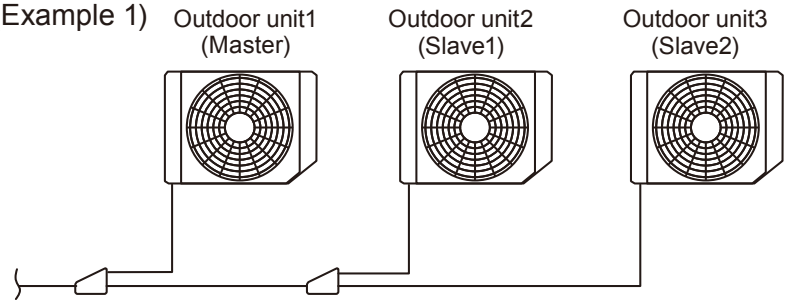
SYSTEM DESIGN

■ OUTDOOR UNIT PIPING DIRECTION

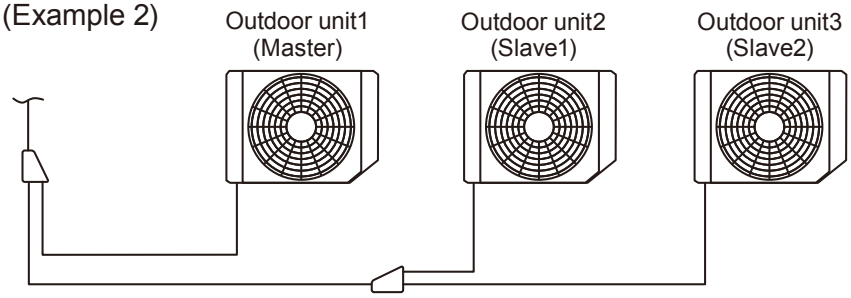
● Piping pattern

Use the optional branch kit for multiple outdoor unit connection.

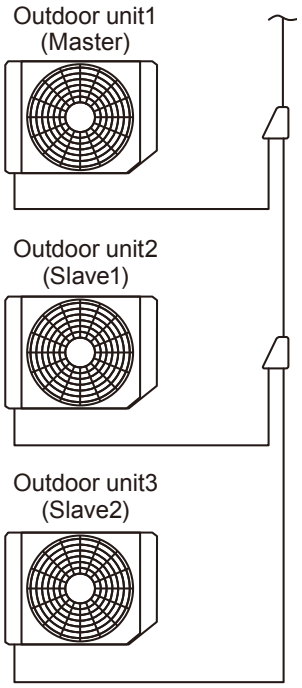
(Example 1)



(Example 2)



(Example 3)

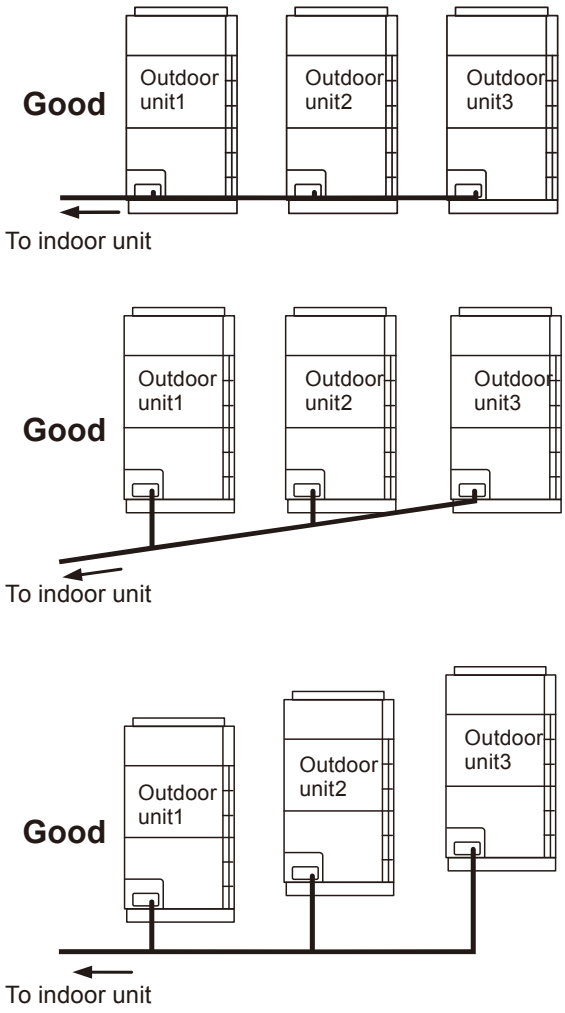


SYSTEM DESIGN

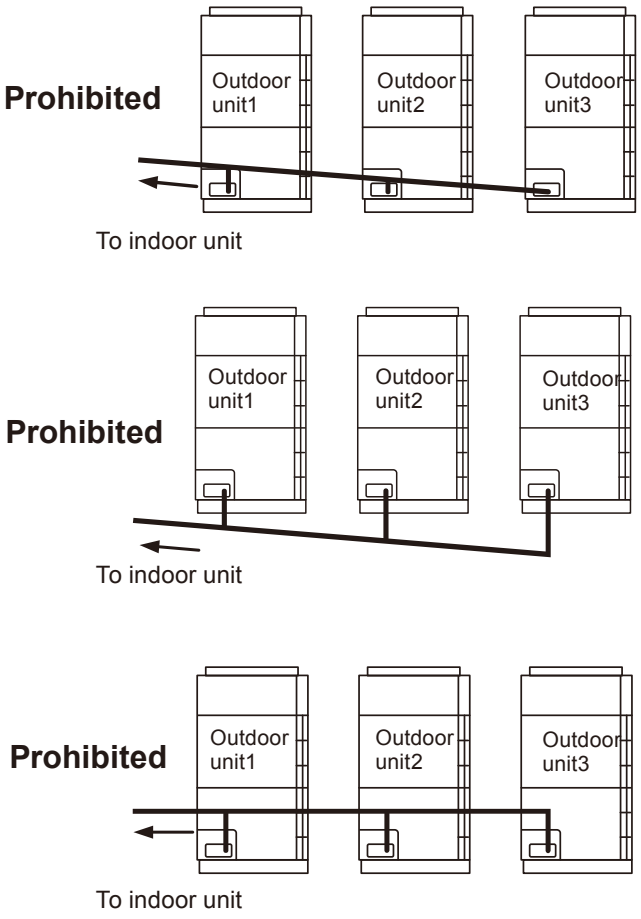
● Main pipe connection

Make sure to arrange the pipe horizontally or upward as shown in the following to prevent oil from accumulating into stopped outdoor unit.

a) Installable patterns

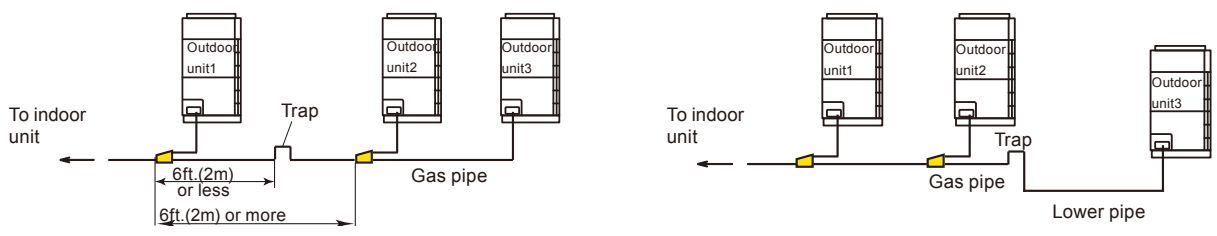


b) Non-installable patterns



∗ If the pipe length between outdoor unit branch kit and outdoor unit branch kit (or slave unit) is longer than 6ft. (2m), or a lower pipe line exists between outdoor units, traps for gas pipe should be arranged to eliminate oil from entering into and remaining in the pipe and the stopped outdoor unit. (See example below)

Example



Trap height : 7-7/8in. (200mm) or more

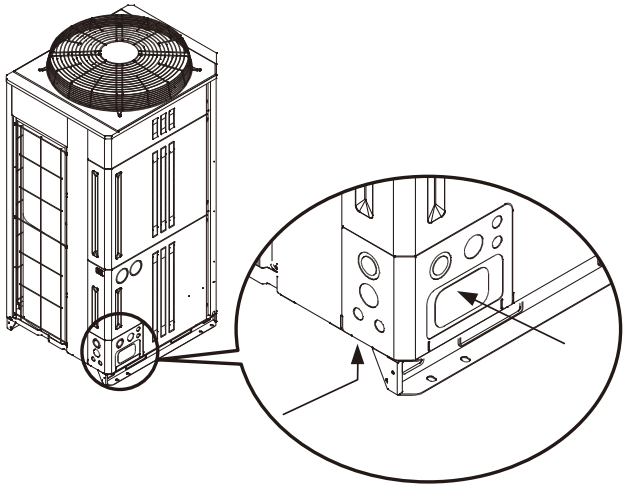
SYSTEM DESIGN

■ PIPING METHOD

● Knockout

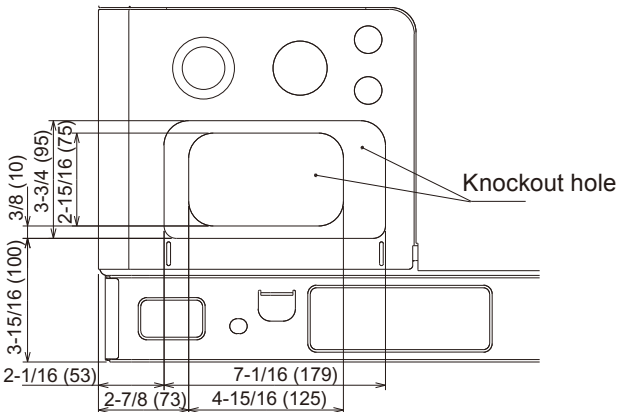
⚠CAUTION
● Be careful not to damage the panel while removing the knockout.
● Remove all burrs from whole to prevent damage to the wiring. In addition, paint the exposed metal of to prevent rusting.

- The piping can be connected from two directions; the front or the bottom. (Knockout holes are provided so that the piping can be connected from two different directions.)
- Use the front knockout hole, as required.

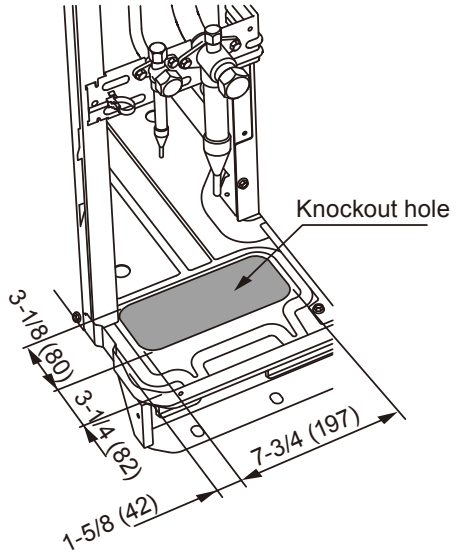


Knockout position

Unit : in. (mm)



Detail of knockout position (front)



Detail of knockout position (bottom)

SYSTEM DESIGN

● Removing the pinch pipe

⚠WARNING
● Remove the pinch pipe only when the internal gas is completely drained as shown on the below instructions. ● If gas still remains inside, the piping may crack if you melt the brazing filler metal of the junction area with a burner.

Before connecting the piping, remove the pinch pipe in accordance with the following instructions:

1) Verify that the liquid side and gas side 3-way valves are closed. (Fig. A)
2) Cut the end of the liquid side and gas side pinch pipe and vent the gas inside the pinch pipe. (Fig. B)
3) After all the gas is vented, melt the brazing filter metal on connecting part using a torch and remove the pinch pipe. (Fig. C)

Fig.A

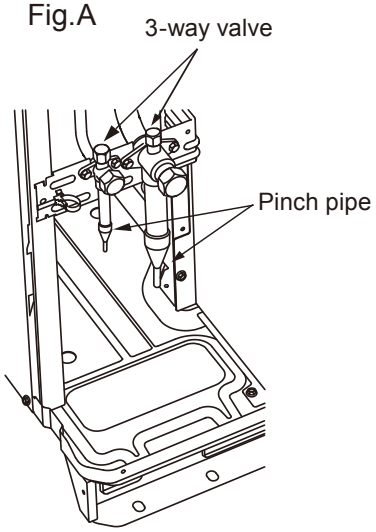


Fig.B

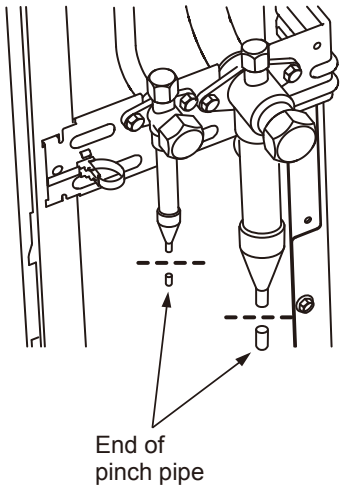
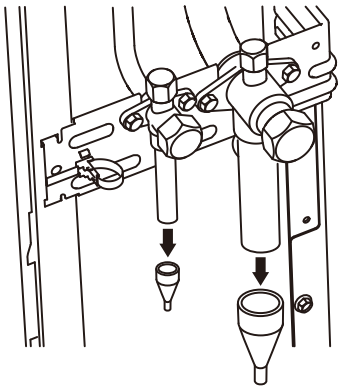


Fig.C



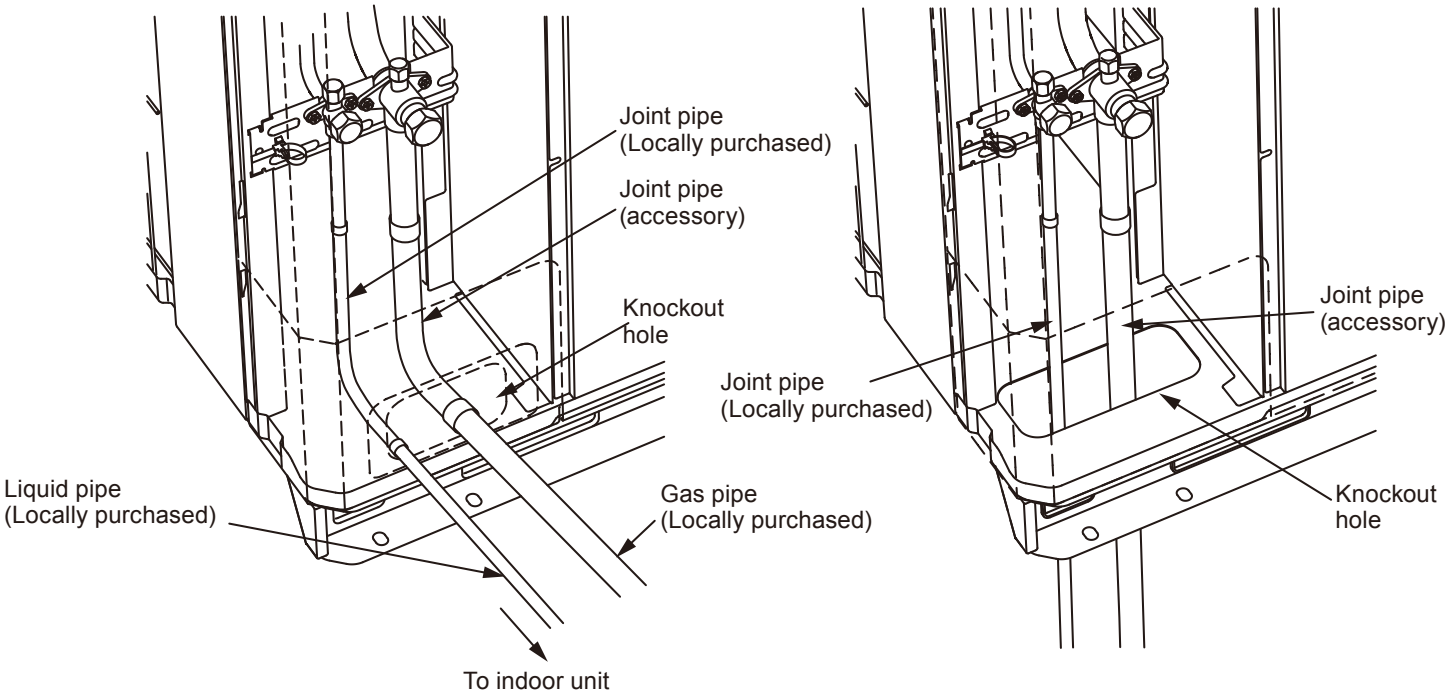
SYSTEM DESIGN

● Pipe connection

⚠CAUTION
● Seal the pipe route hole with putty (locally purchased) such that there are no gaps. Small insects or animals that are trapped in the outdoor unit may cause a short circuit in the electrical component box. ● To prevent pipe damage; do not make sharp bend. Bend the pipe at a radius of 2-3/4in. (70mm) or greater. ● Be careful not to bend a pipe multiple times. This may cause it to break. ● Do not connect flare connections on indoor units until all brazing work is complete. ● Wait until the 3-way valve is completely cooled down before removing the pinch pipe or brazing the joint pipe. Otherwise, the 3-way valve may be damaged.

● Braze the joint pipe onto the 3-way valves at the liquid and gas side.
Install the joint pipe appropriately so that it can be connected easily with the main pipe.

● Braze the joint pipe at the liquid and gas side with the main pipe.
* Be sure to supply nitrogen when brazing.



SYSTEM DESIGN

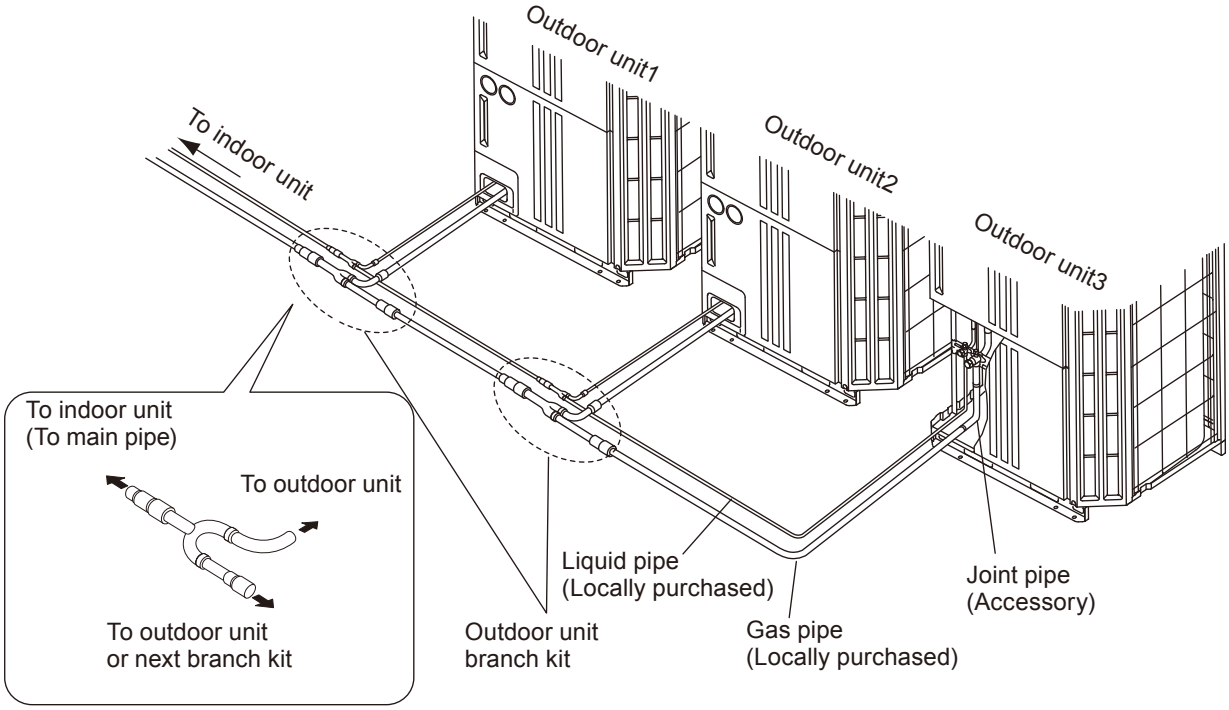
■ BRANCH KIT

Outdoor unit Branch Kit(s) is (are) required for multiple outdoor unit.

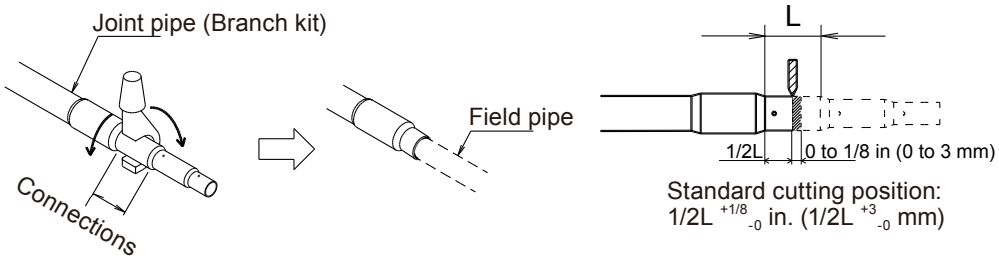
Outdoor unit	Model	Q'ty
2 outdoor units	UTP-CX567A	1
3 outdoor units		2

● Installation

Make sure to connect outdoor unit branch kit in correct direction.

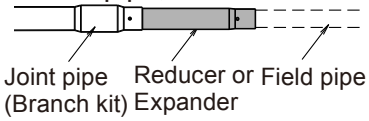


Use the pipe cutter to cut at the location which matches the piping size when the piping size is different.



NOTE: Insert the field pipe firmly until it touches the joint pipe (Branch kit).

When the pipe size of the branch kit itself does not match, or when piping sizes differ even if it cuts the pipe, use attached Reducer or attached Expander.

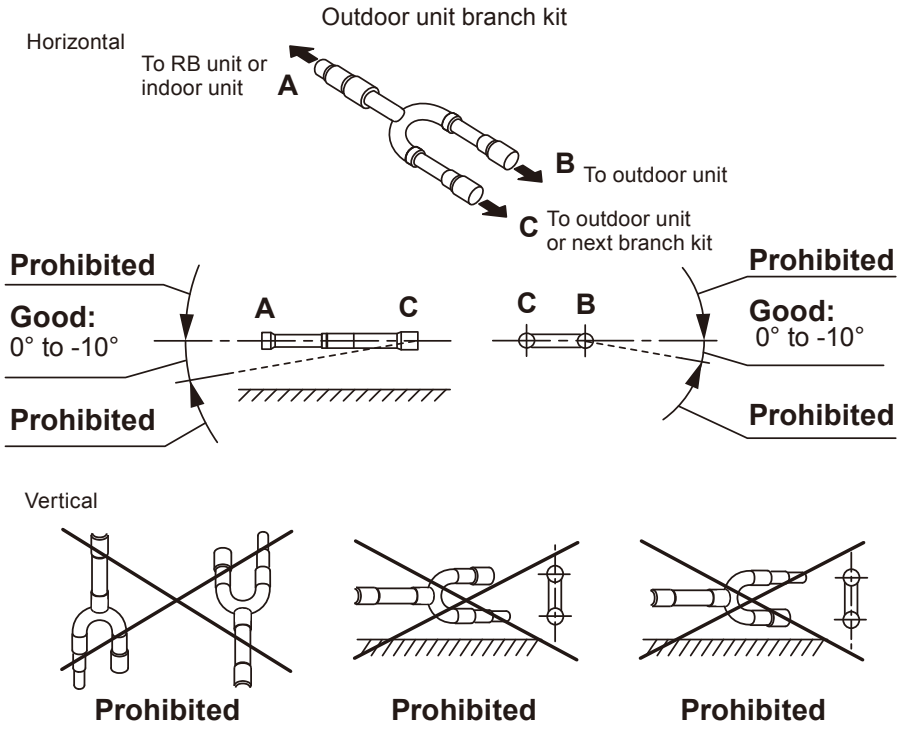


SYSTEM DESIGN

● Branch kit restriction when install

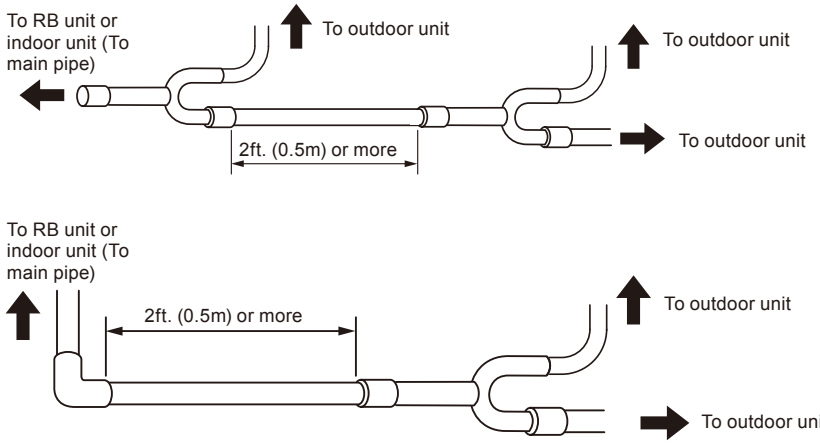
Be sure following restriction.

1) Installation angle



- Install the outdoor unit branch kit horizontally level, within 0° to -10°, so that the refrigerant separates evenly.
- Do not install the outdoor unit branch kit vertically.

2) Straight pipe length



- Leave the distance 2ft. (0.5m) or more for straight part to outdoor unit branch kit.

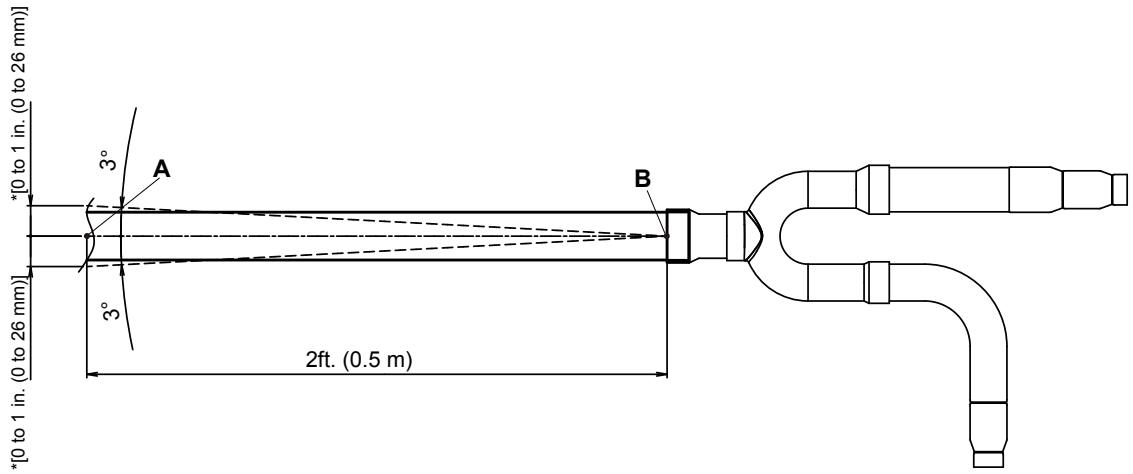
3) For details, refer to the Installation Instruction Sheet of the outdoor unit branch kit.

SYSTEM DESIGN

⚠CAUTION

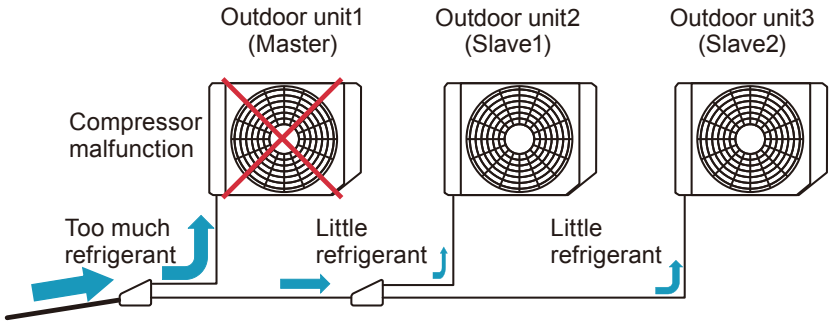
About the connecting curvature of field pipe and branch kit:

The field pipe should be connected to the branch kit so that the curved angle on each side is 3 degree or less.



*: Allowed value based on "A" (center of field pipe) at 2ft. (0.5 m) from "B" (junction of the branch kit).

If the field pipe is connected with angle larger than specified, the balance of split refrigerant flow will be lost, and the refrigerant may concentrate upon specific outdoor unit as shown in the following figure. Such unbalanced refrigerant flow may cause a compressor malfunction.

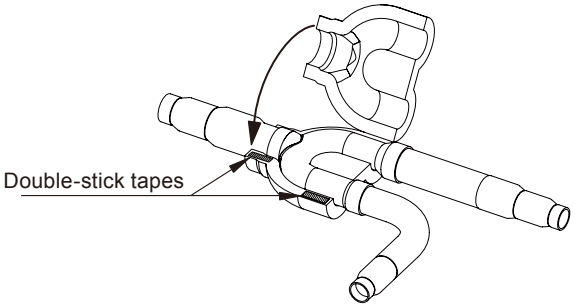


SYSTEM DESIGN

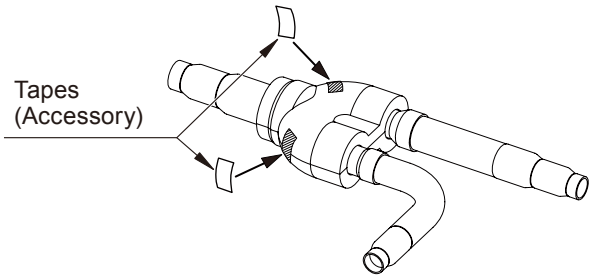
● Heat insulation installation

After brazing the pipes, and leak check use the supplied insulation to insulate them. (on liquid and gas pipes)

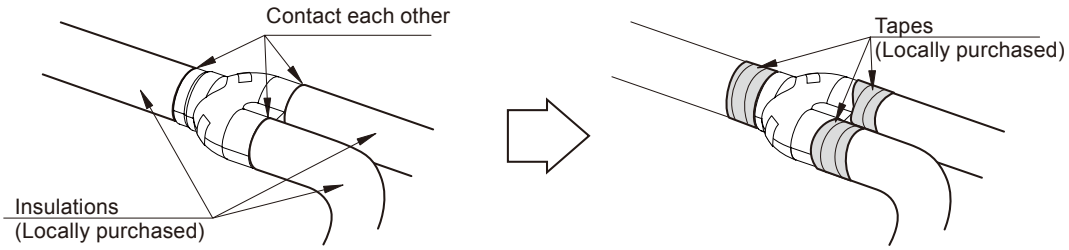
1) Remove the protective sheet from the double-stick tape that is affixed to the heat insulation.



2) Be sure to install the tape (Accessory) in each heat insulation to the 2 positions as shown in the following figure.



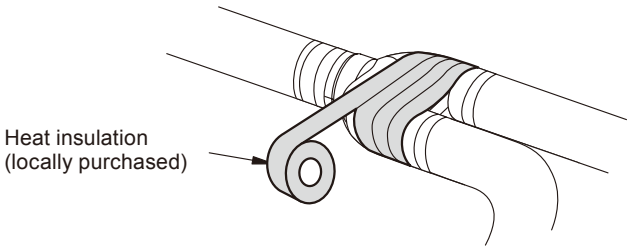
3) Use tape (Locally purchased) to seal the seam so that there will be gap at the junction between the aforementioned heat insulation and the heat insulation on the local piping.



⚠CAUTION

- Insulate the liquid and gas pipe completely. If not, it may cause the water condensation or performance reduction.
- Wrap the heat insulation with tape or pipe cover in order to extend the life time of heat insulation.
- Take proper measurement to strengthen by using another heat insulation at the following installing environment.
  (a) Environment temperature ≥ 95°F (35°C) and humidity 85%.
  (b) Environment temperature ≥ 77°F (25°C) and humidity 90%.

Installation example



SYSTEM DESIGN

3-3. SEPARATION TUBE

■ INSTALLATION

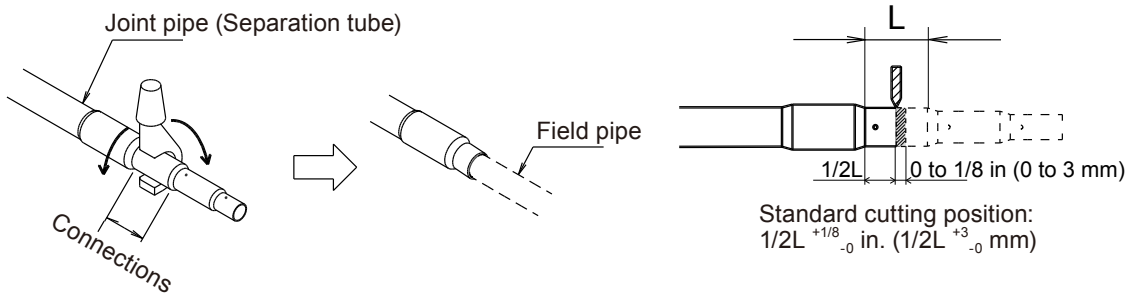
● Separation tube

Total cooling capacity of indoor units (x) (Btu/h)	Separation tube
x < 96,500	UTP-AX090A
96,500 ≤ x < 193,000	UTP-AX180A
193,000 ≤ x	UTP-AX567A

96,500 Btu/h and 193,000 Btu/h are the total values for the indoor unit cooling capacity connected downstream.

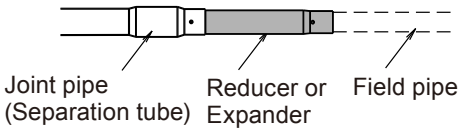
● Installation

Select the connections with the pipe diameters that match the selected pipe sizes from the separation tubes, and cut them with a pipe cutter.



NOTE: Insert the field pipe firmly until it touches the joint pipe (Separation tube).

When the pipe size of the separation tube itself does not match, or when piping sizes differ even if it cuts the pipe, use attached Reducer or attached Expander.



SYSTEM DESIGN

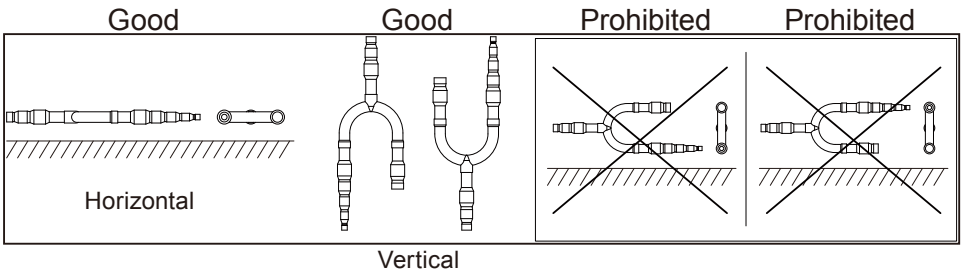
SYSTEM DESIGN

● Restriction when install

Be sure following restriction.

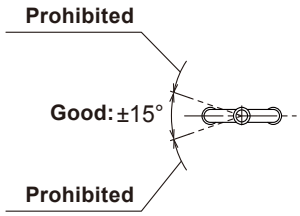
1) Installation angle

Place the separation tubes horizontally or vertically so that the refrigerant separates evenly.



⚠CAUTION

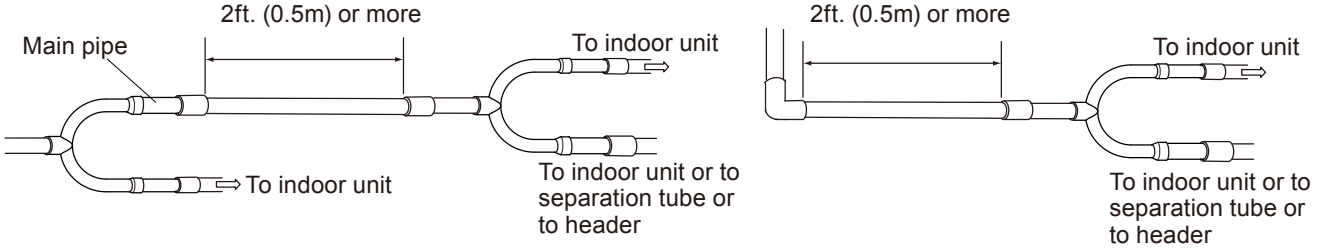
- If it is placed horizontally, keep it within ± 15°. Otherwise, it will not separate the refrigerant evenly, causing a reduction in performance.



- During piping work, apply nitrogen gas while brazing the pipes. If pipes are brazed without applying nitrogen gas, it will create a large amount of oxidation film, which will cause a critical malfunction.
- To prevent moisture or foreign matter from entering during work, do not leave the piping open.
- Refer to the Installation Manual supplied with the outdoor unit for airtightness test and evacuation procedures.

2) Straight pipe length

A straight pipe (minimum length 2ft. (0.5m)) before separation tube is necessary in order to separation the refrigerant exactly.

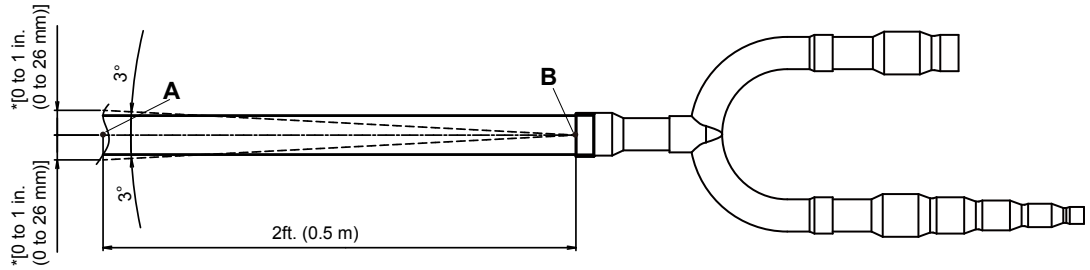


⚠CAUTION

Keep the distance 2ft. (0.5m) or more for straight part to separation tube, in order to prevent the outdoor unit mulfunction and generation of refrigerant noise

About the connecting curvature of field pipe and separation tube:

The field pipe should be connected to the branch kit so that the curved angle on each side is 3 degree or less.



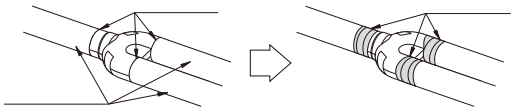
*: Allowed value based on "A" (center of field pipe) at 2ft. (0.5 m) from "B" (junction of the separation tube).

SYSTEM DESIGN

● Heat insulation installation

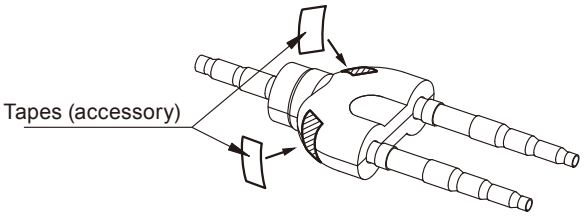
After brazing the pipes, and leak check use the supplied insulation to insulate them.

1) Remove the protective sheet from the double-stick tape that is affixed to the heat insulation.

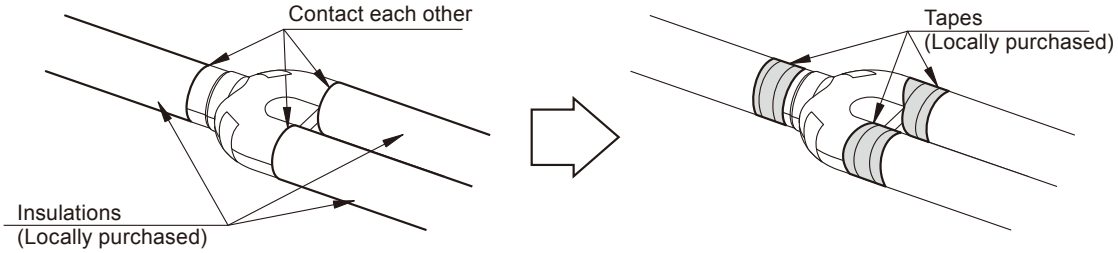


Double-stick tapes

2) Be sure to install the tape (accessory) in each heat insulation to the 2 positions as shown in the following figure.



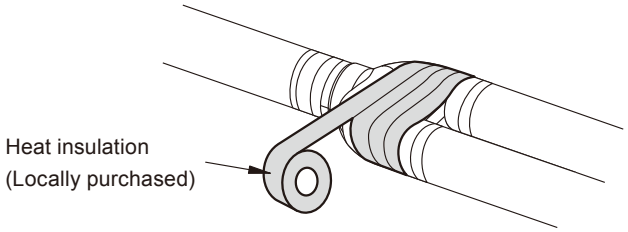
3) Use tape (Locally purchased) to seal the seam so that there will be no gap at the junction between the aforementioned heat insulation and the heat insulation on the local piping.



⚠CAUTION

- Insulate the liquid and gas pipe completely. If not, it may cause the water condensation or performance reduction.
- Wrap the heat insulation with tape or pipe cover in order to extend the life time of heat insulation.
- Take proper measurement to strengthen by using another heat insulation at the following installing environment.
  (a) Environment temperature ≥ 95°F (35°C) and humidity 85%.
  (b) Environment temperature ≥ 77°F (25°C) and humidity 90%.

Installation example



SYSTEM DESIGN

3-4. HEADER

■ HEADER INSTALLATION

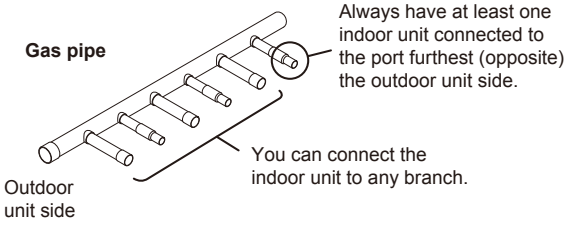
● Header selection

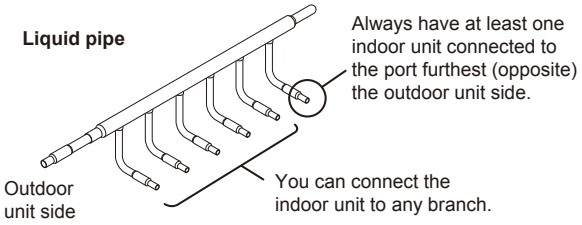
Total cooling capacity of indoor units (x) (Btu/h)	Header	
	3 - 6 Branches	3 - 8 Branches
x < 96,500	UTR-H0906L	UTR-H0908L
96,500 ≤ x < 193,000	UTR-H1806L	UTR-H1808L

When 1) Total cooling capacity exceed 193,000 Btu/h or 2) Separate into two branches, use a separaton tube instead.

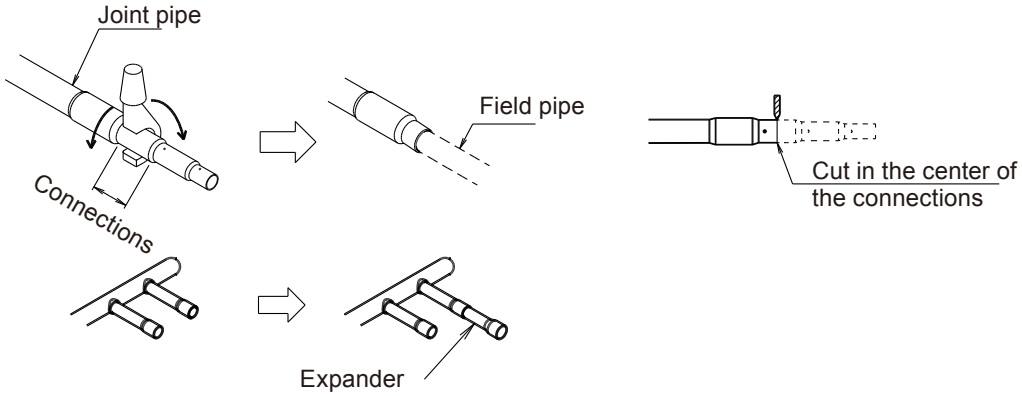
● Installation

(1) Connecting the connection pipes from the indoor units.

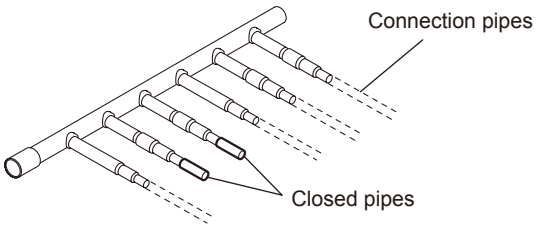




(2) Use a pipe cutter to cut at the location that matches the piping size or use expanders as necessary.

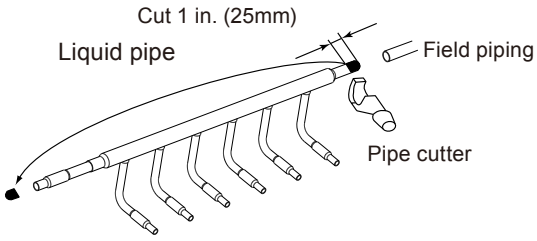


(3) Attach a plugging pipe (provided with header) if there is no piping connected at the headers.

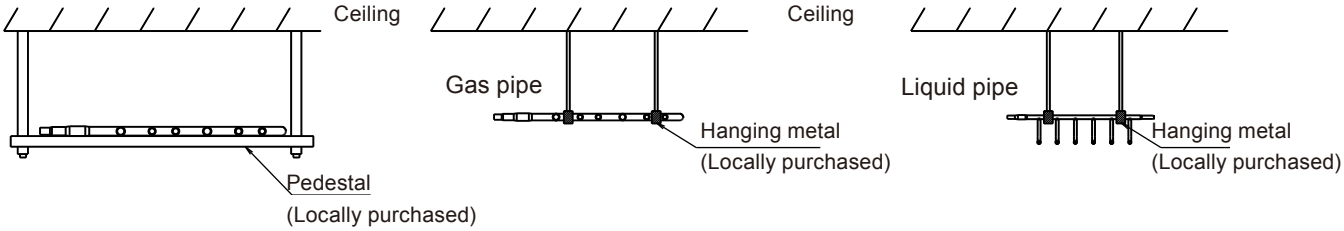


SYSTEM DESIGN

(4) Header can be piped to either side.
When piping to the closed end, remove the end cap using a pipe cutter and braze the cap to the opposite end of the header.



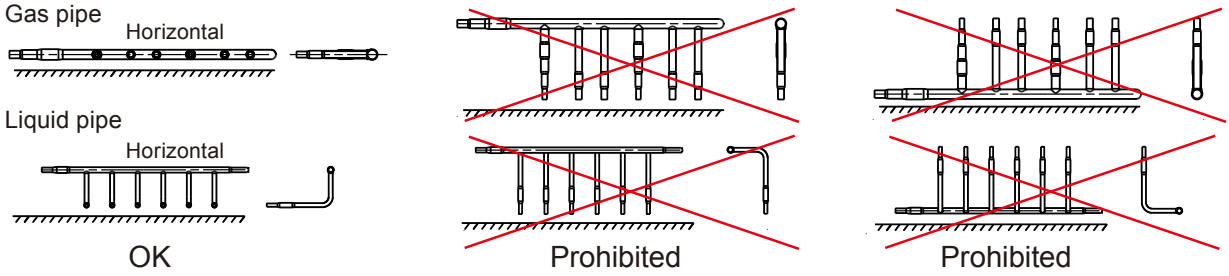
(5) Use header support as necessary.



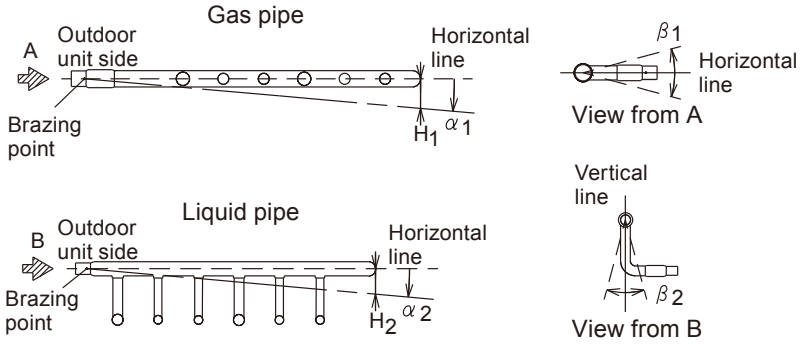
● Installation restrictions

1) Installation angle

Install the header so that it branches horizontally.



Use a level to make sure that the header is positioned as shown in following figure, and then, secure it in place.

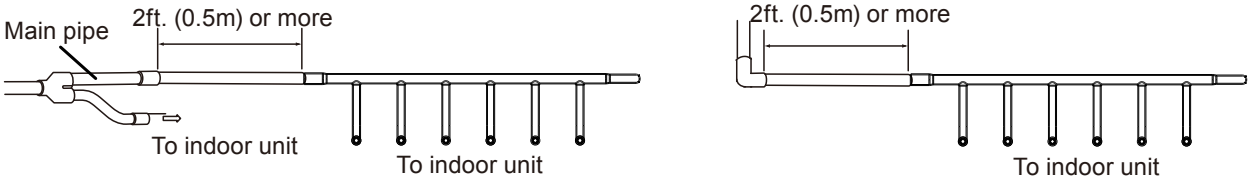


H1=0in.(0mm) to 3/8in. (10mm)
(α1 : 0° to 1°)
β1 : -10° to +10°

H2=0in.(0mm) to 3/8in. (10mm)
(α2 : 0° to 1°)
β2 : -10° to +10°

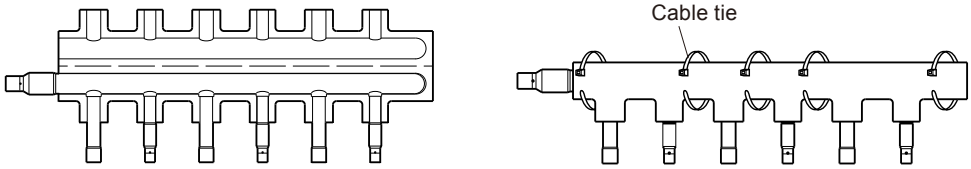
2) Straight tube length

A straight tube (minimum length 2ft. (0.5m)) is necessary before header in order to separate the refrigerant exactly.



● Heat insulation installation

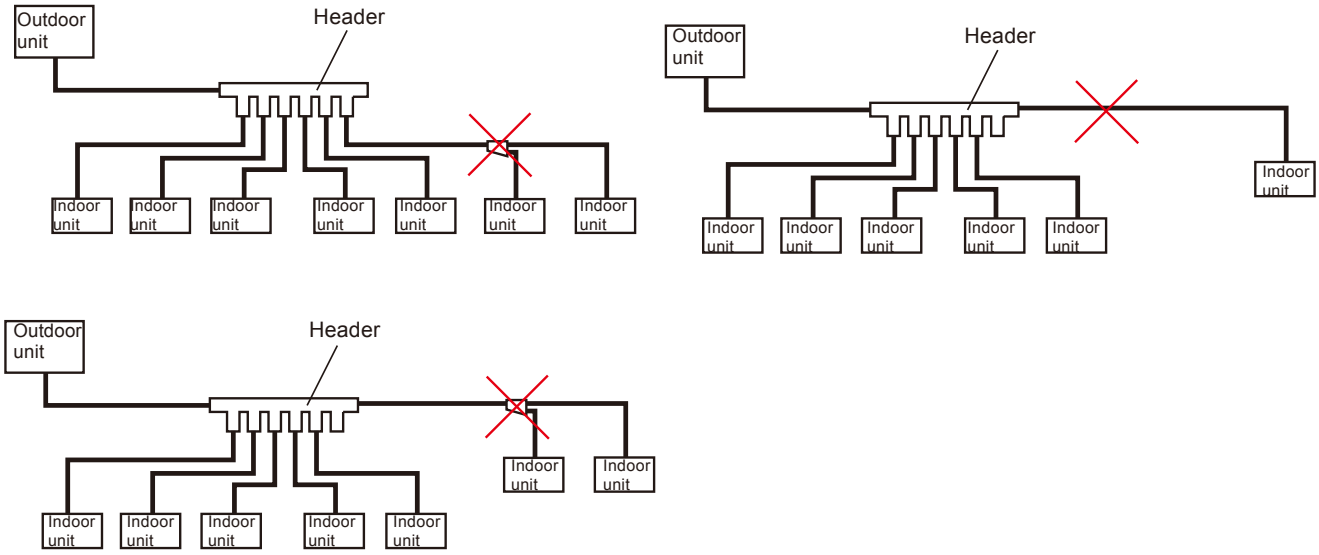
After brazing the piping, attach heat insulation.
Remove the protective paper for the tape on the heat insulation for the header and attach it.
Tighten by using cable ties at five locations.



Cover the plugging pipe with heat insulation and seal with tape.

● Caution

A separation tube cannot be installed after a header.



SYSTEM DESIGN

4. WIRING DESIGN

4-1. ELECTRICAL WIRING

■ PRECAUTION FOR ELECTRICAL WIRING

Regulations for wire diameter and selecting circuit breaker size differ from locality.
Always install in accordance with local standards.

⚠WARNING

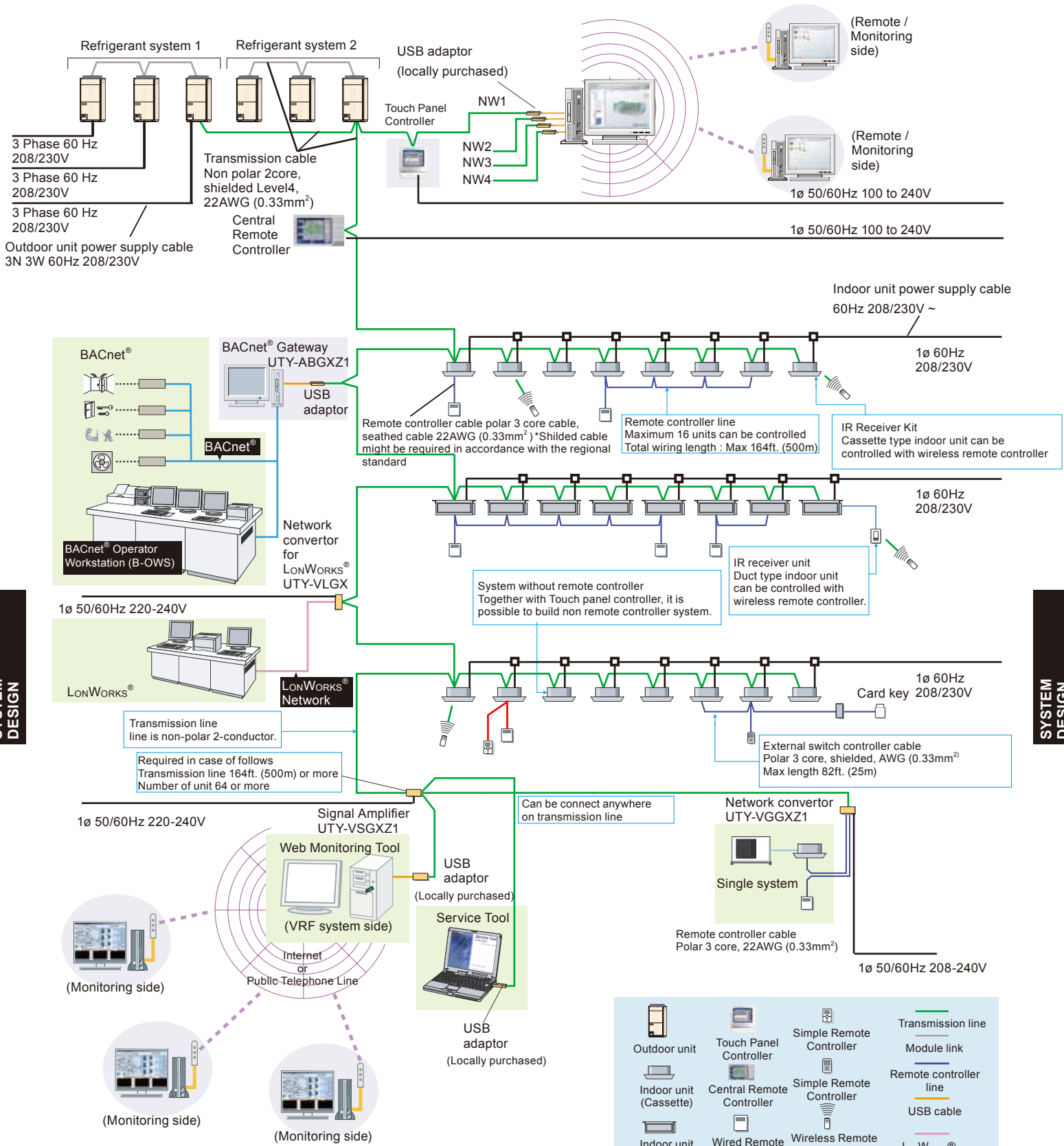
- Do not turn on the power until all installation work is complete.
- Before starting work, check that power is not being supplied to the unit.
- Connect the connection cable firmly to the terminal board. Imperfect installation may cause fire.
- Always install a circuit breaker for each power supply circuit. Failure to use a circuit breaker could result in electrical shock or fire.
- Always install a disconnect switch for each power supply circuit.
- Always connect the ground wire.
- Never install a condenser for improving the power factor. (It will not improve the power factor and the condenser will become abnormally hot.)
- When installing this system in high humidity locations, install using Ground Fault Equipment Breaker (GFEB) to reduce the risk of leaking current which may result in electric shock or potential fire.

⚠CAUTION

- When approved for use in local code, we suggest installing Ground Fault Equipment Breaker (GFEB). In that case, GFEB shall be per Fujitsu recommended capacity in order to prevent malfunction of breaker device.
- Always use a dedicated power circuit for each condensing unit (outdoor unit). Never use a power supply shared by another appliance.
- "Wire size" and "Breaker" are for reference only; always install according to local regulations.
- Make the wire length between disconnect switch and unit terminal as short as possible provided that it complies with local code.
- Installation and service of this product is only to be performed by qualified professionals.
- All field wiring and components must be provided by a licensed electrician.
- Use copper conductors only.
- Use crimp-type terminals and tighten the terminal screws to the specified torques, otherwise, abnormal overheating may be produced and possibly cause serious damage inside the unit.

SYSTEM DESIGN

■ WIRING SYSTEM OUTLINE



Disconnect switch might be required in accordance with the regional standard.

SYSTEM DESIGN

SYSTEM DESIGN

4-2. POWER SUPPLY CABLE WIRING

■ POWER SUPPLY CABLE SPECIFICATIONS

Use a separate power supply for the outdoor unit and indoor unit.

● Outdoor unit

Selection of the power supply cable and breaker when connecting single outdoor unit.

Refer to the table for the breaker specifications of each installation condition.

Model	MCA (A)	MAX.CKT.BKR (A)	GFEB
AOUA72RLBV1	41	50	100 mA 0.1 sec or less
AOUA96RLBV1			
AOUA120RLBV1	50	60	

MCA : Minimum Circuit Ampacity
MAX.CKT.BKR : Maximum Circuit Breaker
GFEB : Ground Fault Equipment Breaker

- Select the power cable type and size in accordance with local regulations.
- Select a wire length (Max. wire length) such that the voltage drop is less than 2%.
- When the wire length is long and voltage drop exceeds this value, increase the wire diameter to stay within design limits.

● Indoor unit

Refer to the table for the breaker specifications of each installation condition. Perform the power crossover wiring within the range of the same refrigerant system.When the crossover wiring is done, make a connection for "indoor units" to satisfy conditions Table A and Table B below.

Table A. Current breaker requirements

Model	MCA (A)	MAX.CKT.BKR (A)
All models	*1	15

MCA : Minimum Circuit Ampacity
MAX.CKT.BKR : Maximum Circuit Breaker
*1 : Refer chapter 4.2. ELECTRIC CHARACTERISTICS

When the power crossover wiring is done, make it so that the total of the MCA of the connected "indoor units" does not exceed the 11 A.

NOTE: With Vertical air handler type, connect only one indoor unit to a MAX.CKT.BKR. (Crossover wiring is prohibited.) Select a minimum of 7 or more multiples of rated current under the condition time in seconds 10 ms (0.01 S) or less at the current breaker trip curves (time in seconds/multiples of rated current).

Table B. Ground Fault Equipment Breaker requirements

Breaker capacity	Maximum connectable "Units"
30 mA, 0.1 sec or less	36 or less
100 mA, 0.1 sec or less	37 to 121

If the total number of units connected to the breaker exceeds 36, either add a 30mA breaker, or use breakers with a greater capacity.

SYSTEM DESIGN

● Meaning of "Units"

	Model name	"Units" Count
Indoor unit (Except High static pressure duct type (72/96 type) and Vertical air handler type)	AUUA4TLAV1 AUUA7-24TLAV AUUB18-48TLAV1 AUUB18-36TLAV ARUL4TLAV1 ARUL7-18TLAV ARUM24-36TLAV ARUH36-60TLAV AGUA4-14TLAV1 ABUA12-36TLAV ASUA4-14TLAV1 ASUB18-36TLAV1 ASUA7-14TLAV ASUB18-24TLAV	1
Indoor unit (High static puressure duct (72/96 type))	ARUH72-96TLAV	3
Indoor unit (Vertical air handler type)	ARUV12-60TLAV	4

Example 1)

Connectable indoor unit : ASUA9TLAV x 4 + AUUB18TLAV x 2 + ARUL9TLAV

Amount of "Units" : 1 x 4 + 1 x 2 + 1 x 1 = 7

Example 2)

Connectable indoor unit : ARUH72TLAV + AUUB18TLAV x 2 + ARUL9TLAV

Amount of "Units" : 3 x 1 + 1 x 2 + 1 x 1 = 6

Example 3)

Connectable indoor unit : ARUV12TLAV + AUUA9TLAV x 2 + ARUL9TLAV x 2

Amount of "Units": 4 x 1 + 1 x 2 + 1 x 2 = 8

- Select the power cable type and size in accordance with local regulations.
- Include at least one breaker and one disconnect per refrigerant system.
- Power supply circuits should only be connected to units on the same refrigerant circuit.
- Design the power supply circuit to keep the voltage drop within 2%.

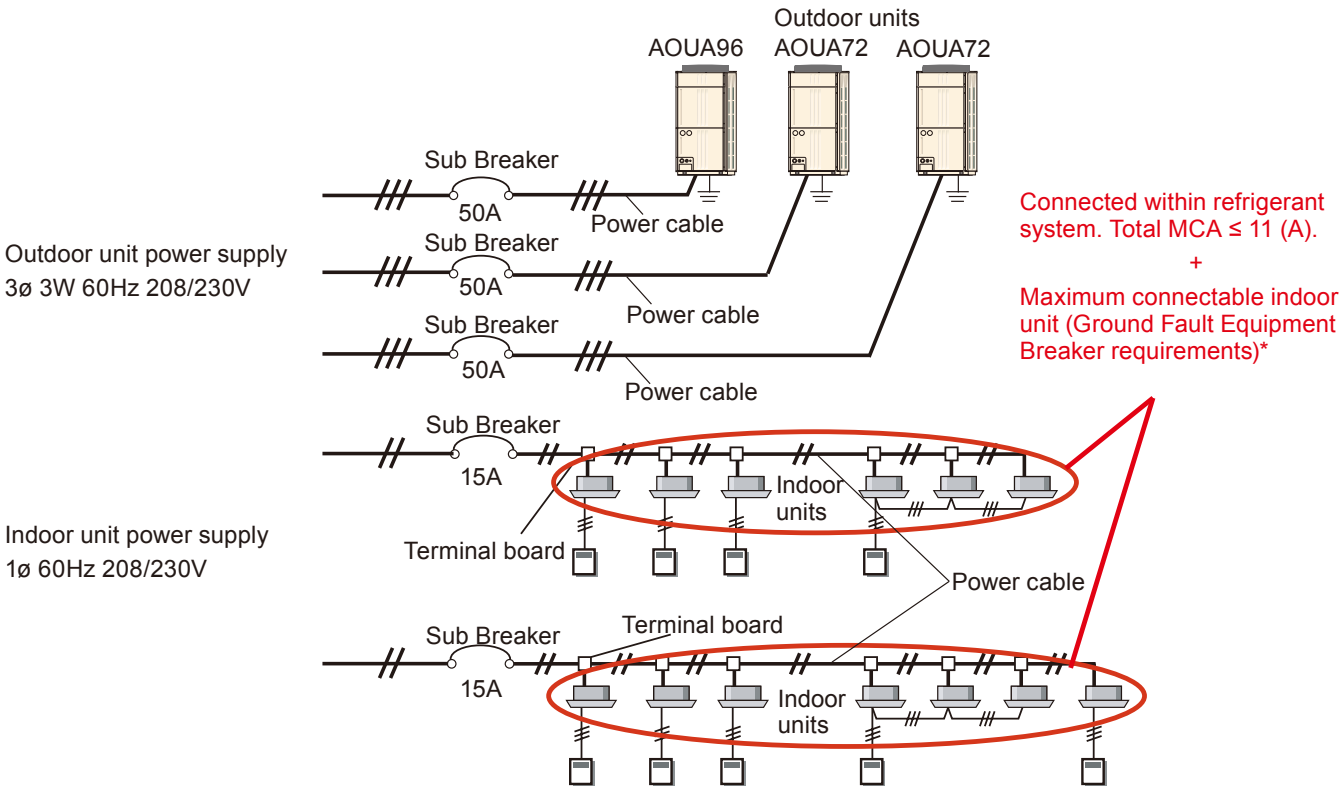
SYSTEM DESIGN

■ POWER SUPPLY CABLE WIRING

● Example : Power supply cable wiring. (Using terminal board for indoor units)

⚠CAUTION

- Except for EMERGENCY, never turn off main as well as sub breaker of the indoor units during operation. It will cause compressor failure as well as water leakage.
- First, stop the indoor unit by operating the control unit, convertor or external input device and then cut the breaker.
- Make sure to operate through the control unit, convertor or external input device.
- When the breaker is designed, locate it at a place where the users cannot start and stop in the daily work.
- Regulation of wire size and circuit breaker differs from each locality, refer in accordance with the regional standard.
- When approved for use in local code, we suggest installing Ground Fault Equipment Breaker (GFEB). In that case, GFEB shall be per Fujitsu recommended capacity in order to prevent malfunction of breaker device.



SYSTEM DESIGN

4-3. TRANSMISSION LINE

■ TRANSMISSION WIRING SPECIFICATIONS

Use	Size	Wire type	Remarks
Transmission cable	22AWG ($0.33mm^2$)	LEVEL 4 (NEMA) non-polar 2core, twisted pair solid core diameter 0.65mm	LONWORKS® compatible cable

Use the shielded wire specified and always ground it both end.

22AWG (0.65mm) Level 4 cable with shielded (National Electrical Manufacturers Association (NEMA) Differs from the Category 4 specification proposed by the Electronic Industries Association / Telecommunication Industry Association (EIA/TIA)

● Reference specifications for transmission cable

No.	Item		Unit	Specifications
1	Wire type		mm	0.65dia (22AWG) Twisted pair with shield
2	Pair (Twisted pair cable) Note 1		-	1P or 2P
3	Loop DC Resistance (68°F (20°C))		Ohm/1000feet (Ohm/305m)	Less than 18
4	DC Resistance Unbalancing (68°F (20°C))		%	Less than 5
5	Dielectric Voltage (Between conductor to conductor)		V/min	AC 350
6	Insulation Resistance (68°F (20°C)) (Between conductor to conductor)		Mohm-km	More than 500 (after charging DC500V 1min.)
7	Mutual Capacitance of a Pair		pF/foot (pF/305mm)	Less than 17
8	Pair-to-Ground Capacitance Unbalance		pF/1000feet (pF/305m)	Less than 1000
9	Characteristic Impedance	772KHz	Ohm	102+ - 15% (87 to 117)
		1MHz		100+ - 15% (85 to 115)
		4MHz		100+ - 15% (85 to 115)
		8MHz		100+ - 15% (85 to 115)
		10MHz		100+ - 15% (85 to 115)
		16MHz		100+ - 15% (85 to 115)
		20MHz		100+ - 15% (85 to 115)
10	Attenuation	772KHz	dB/1000feet (dB/305m)	Less than 4.5
		1MHz		Less than 5.5
		4MHz		Less than 11.0
		8MHz		Less than 15.0
		10MHz		Less than 17.0
		16MHz		Less than 22.0
		20MHz		Less than 24.0
11	Cross talk attenuation (Note 2)	772KHz	dB/1000feet (dB/305m)	Less than 58
		1MHz		Less than 56
		4MHz		Less than 47
		8MHz		Less than 42
		10MHz		Less than 41
		16MHz		Less than 38
		20MHz		Less than 36

Note :

1 : Number of twist is not specified. However, it shall satisfy the electrical specifications such as characteristic impedance, attenuation, etc. (Example : More than 40times/m)

2 : Cross talk attenuation is applied when the twisted cable has 2 pairs (2P)

3 : Material is not specified. However, it shall be selected by considering the operating environment (Temperature, Humidity), and the local regulation by the environmental condition (ROHS Directive, etc.)

4 : Mechanical specification is not specified. However, it shall be selected by considering the operating environment.

5 : Never bundle transmission cable with power supply cable.

SYSTEM DESIGN

■ WIRING RULES

- In the following cases, Signal Amplifier is required.

1) When the total length of the transmission line exceeded 1640 ft. (500 m)
   AB+BC+BD+DE+EF > 1640 ft. (500 m) (Fig. 1)

2) When the total number of element *1 is over 64.

- Transmission line length between each unit*1 : MAX 1312 ft. (400 m)
- Total transmission line length: MAX 11811 ft. (3600 m)

AB+BC+BD+DE+EF+EG+GH < 11811 ft. (3600 m) (Fig. 2)

Fig. 1

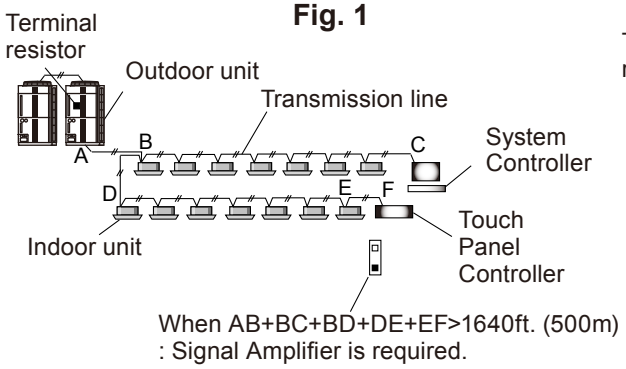
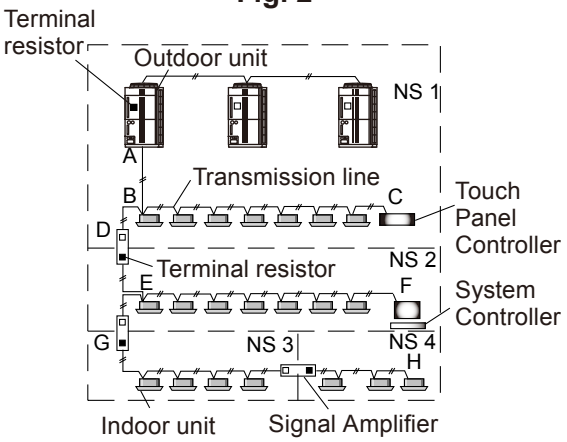


Fig. 2



*1: Refer detail Meaning of element on 1-2 VRF NETWORK SYSTEM.

SYSTEM DESIGN

■ TRANSMISSION WIRING FLOW

● Step 1 : Decide to use Automatic Address Setting (this is based on system design)

● Decide to use Automatic Address Setting or Manual Address Setting.

- Automatic Address Setting → Step 2 (1)
- Manual Address Setting → Step 2 (1) or (2)

● Step 2 : Confirm Transmission Wiring

(1) Automatic Address Setting, Manual Address Setting

Connect the transmission cable like as Fig 3-1, 3-2.

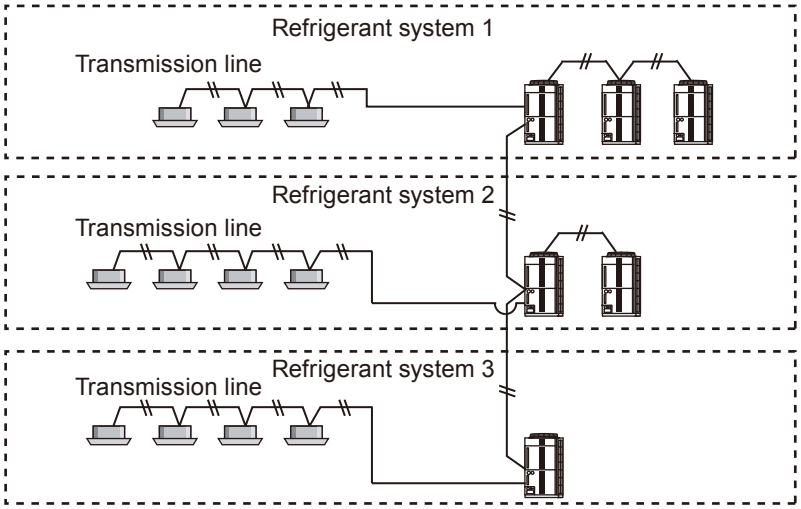


Fig. 3-1

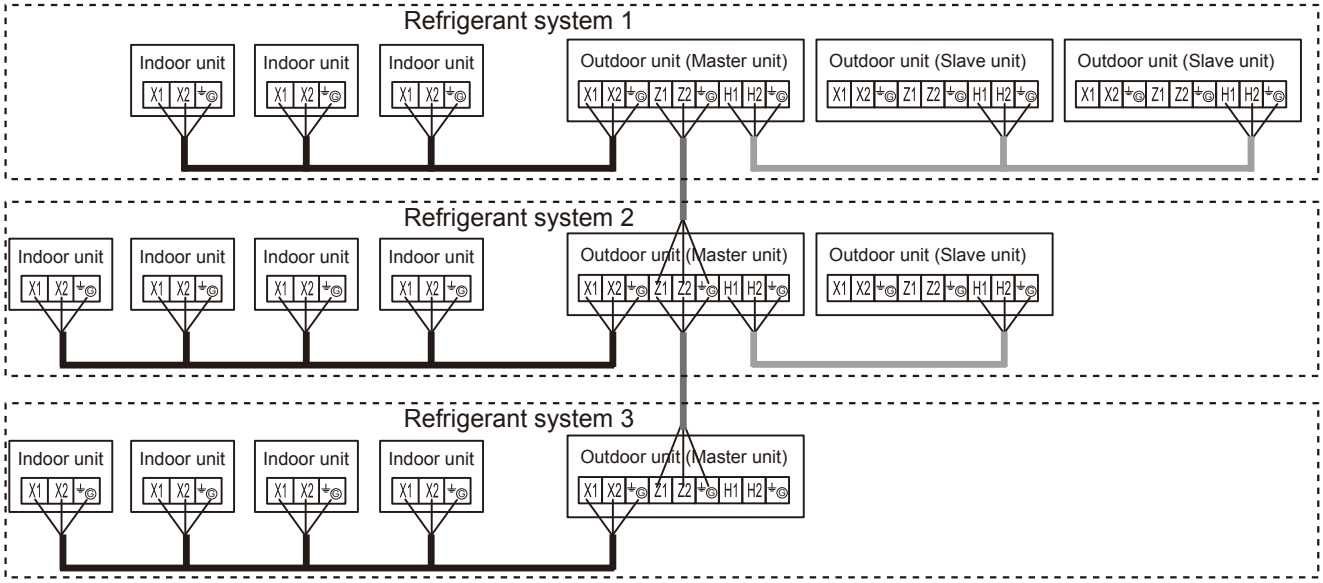


Fig. 3-2

- X1, X2 : Indoor units to outdoor unit (Master)
- Z1, Z2 : Connection for Master Outdoor Unit of Different Refrigerant Circuit
- H1, H2 : Module link connection between master and slave outdoor units
  (It is required for combination use.)

SYSTEM DESIGN

(2) Manual Address Setting

It is prohibited to use the Automatic address setting.

Connect the transmission cable like as Fig 4-1, 4-2.

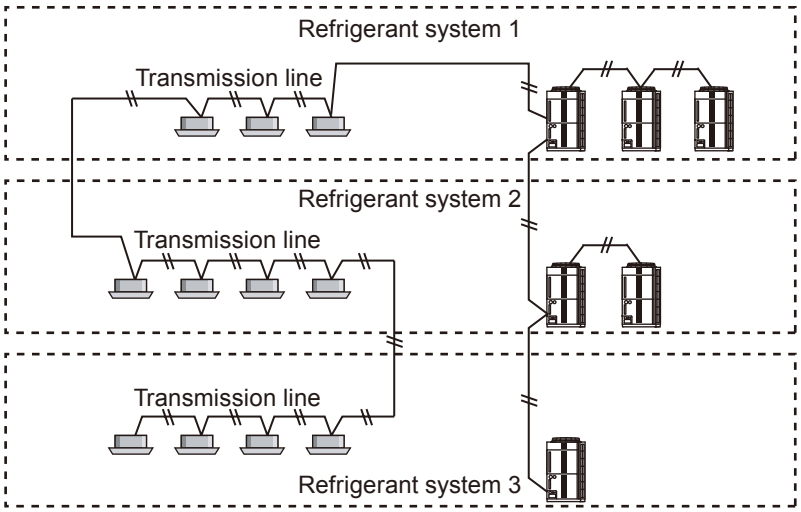


Fig. 4-1

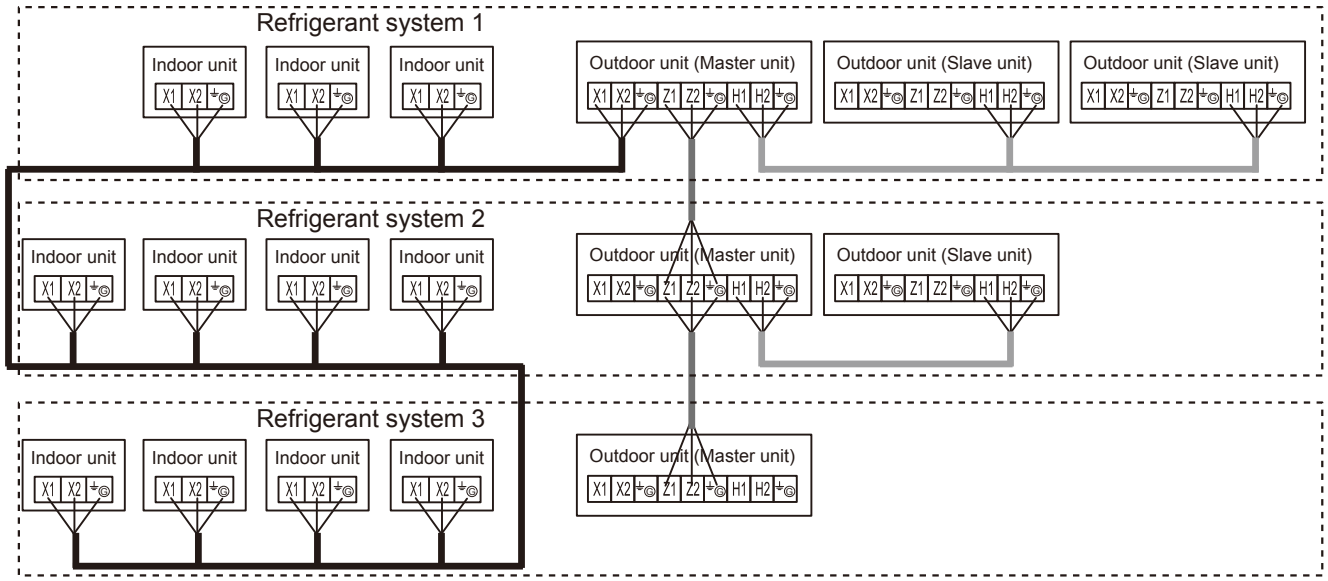


Fig. 4-2

- X1, X2 : Indoor units to outdoor unit (Master)
- Z1, Z2 : Connection for Master Outdoor Unit of Different Refrigerant Circuit
- H1, H2 : Module link connection between master and slave outdoor units
  (It is required for combination use.)

● Step 3 : Check Transmission wiring rule

Confirm transmission wiring rule above.

SYSTEM DESIGN

● Step 4 : Confirm how to install Signal Amplifier

When Signal Amplifier is installed, network is divided into two network segments.

In a network segment (NS) divided by a Signal Amplifier, it has to keep the following facts.

1)Total transmission line length: MAX 1640 ft. (500 m)

AB+BC+BD < 1640 ft. (500 m) (Fig. 2)

2)The total number of element *1 : MAX 64

3)The number of terminal resistor : 1

*1: Refer detail Meaning of element on 1-2 VRF NETWORK SYSTEM.

Fig. 1

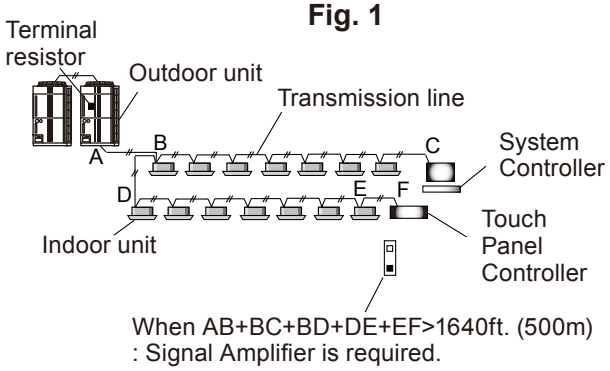
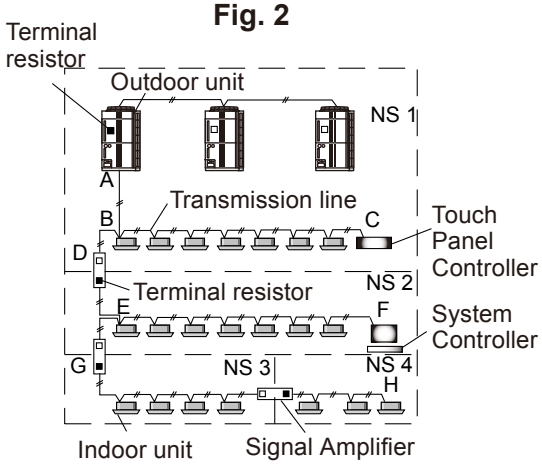


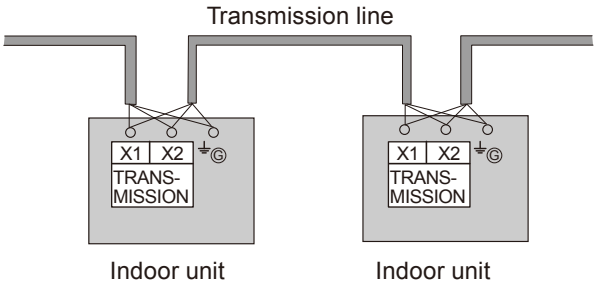
Fig. 2



● Step 5 : Confirm how to wire transmission line

Confirm how to connect transmission line between indoor units.

- Arrange so that there is one terminal resistor for each segment.
- Always ground both ends of transmission line.



● Step 6 : Confirm transmission wiring system

Check to make sure that the transmission wiring has been installed correctly.

Check list

□ Total Transmission wiring length

□ Total number of element *1

*1: Refer detail Meaning of element on 1-2 VRF NETWORK SYSTEM.

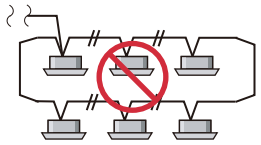
SYSTEM DESIGN

■ TRANSMISSION LINE SEPARATION RULES

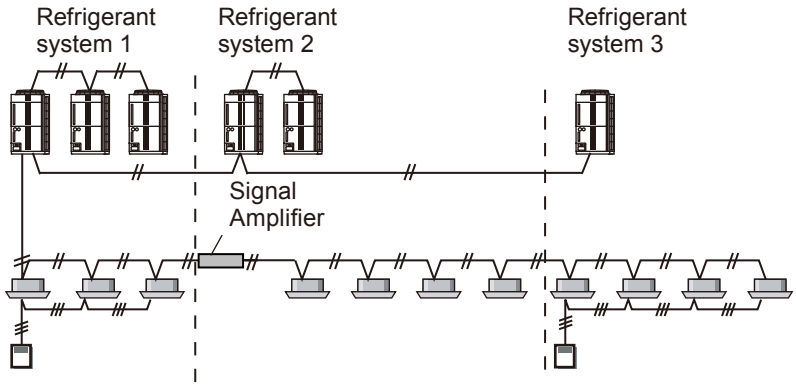
- The transmission line between indoor unit, outdoor unit and controllers can be connected by one cable.
- For transmission line separation, either use a commercially available terminal strip or the one in the indoor or outdoor unit.
- Connecting three or more lines to the same terminal may cause poor communications. In this case, use a distribution block.

Note

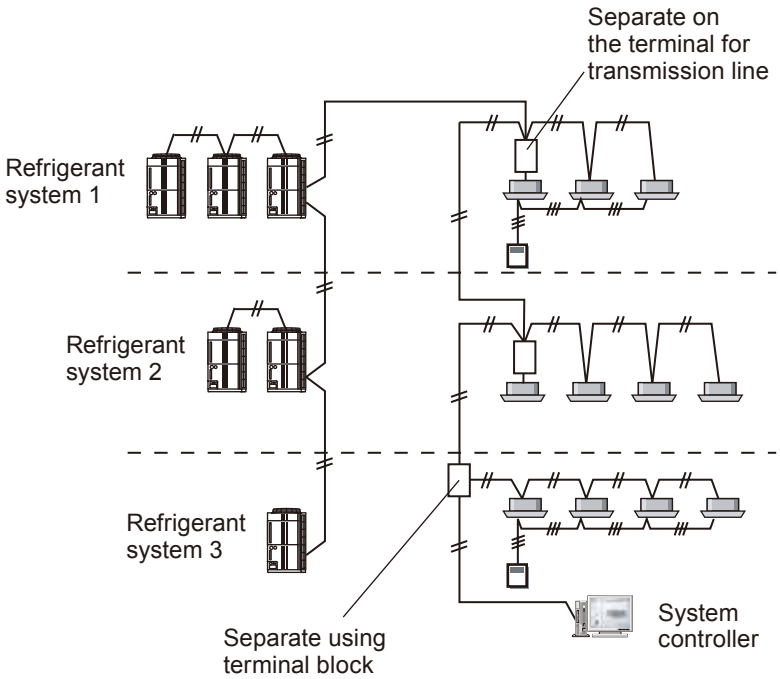
- Do not loop.



Example 1 : Connecting each outdoor and indoor unit with one connection wiring.

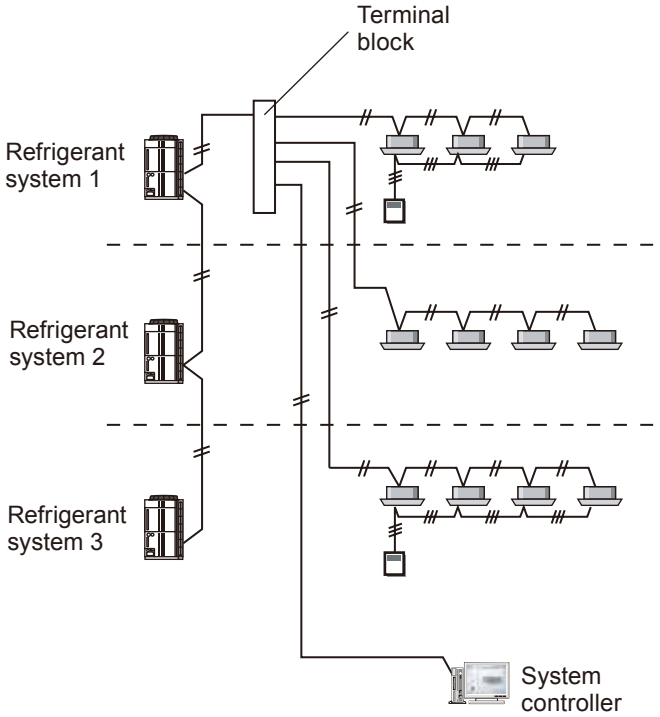


Example 2 : Separating transmission line.



SYSTEM DESIGN

Example 3 : Separation wiring from one terminal block.

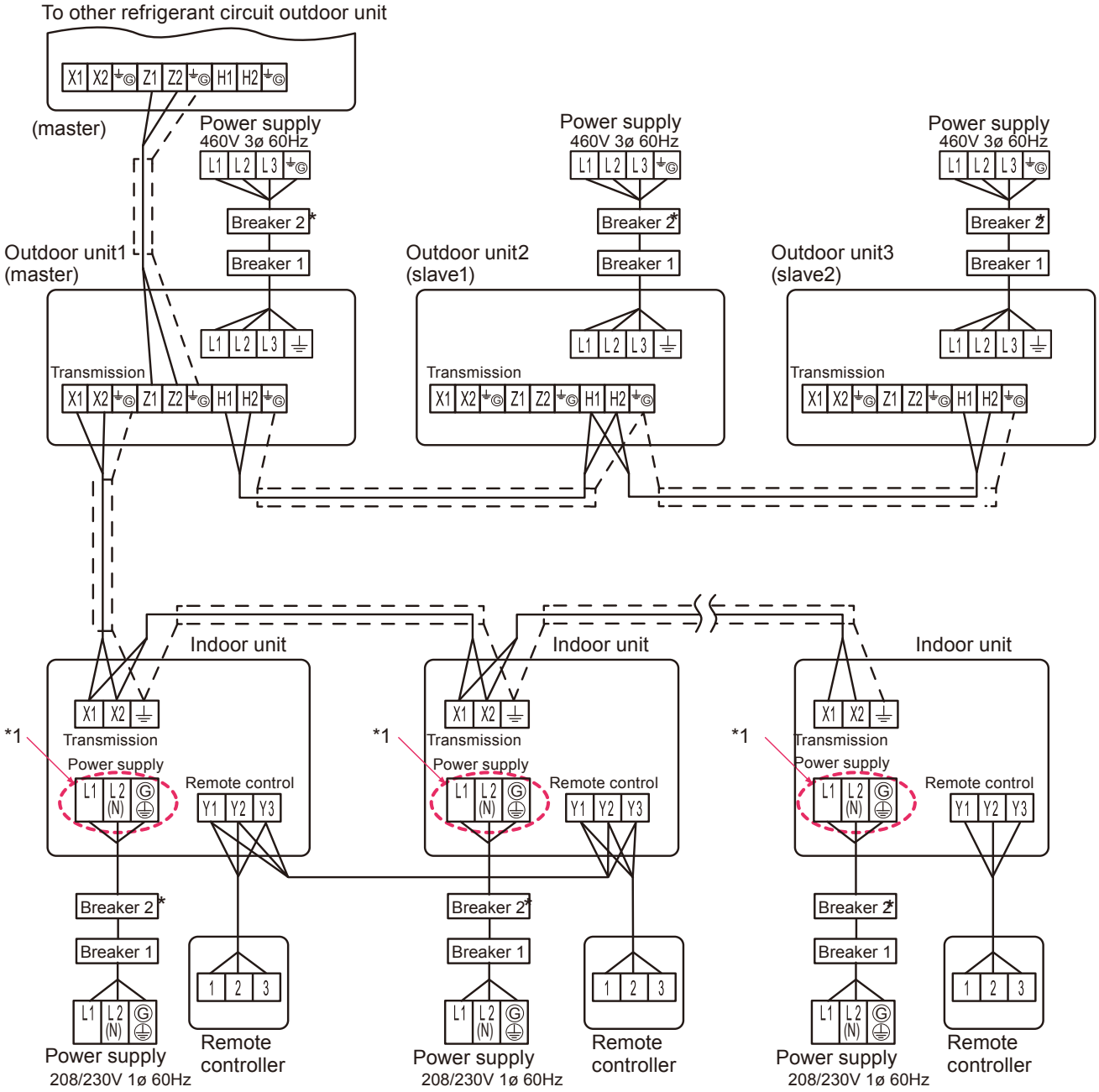


SYSTEM
DESIGN

■ WIRING METHOD

Practical transmission wiring method is shown below.

Each terminal has to be connected the following rules.



- X1, X2 : Indoor units to outdoor unit (Master)
- Z1, Z2 : Connection for different refrigerant circuit of master outdoor unit
- H1, H2 : Module link connection between master and slave outdoor units
  (It is required for combination use.)
- Breaker 1 : Ground Fault Equipment Breaker (GFEB)
- Breaker 2 : Maximum Circuit Breaker (MAX.CKT.BKR)

*1 : The number of power supply terminals is different depending on the indoor unit model.
For the wiring, refer to the indoor unit installation manual.

*Caution: When installing this system in high humidity locations, install using ground fault equipment breakers (often referred to in other countries as an ELCB earth leakage current breaker) to reduce the risk of leaking current which may result in electric shock or potential fire. We suggest installing GFEB or follow local electrical code. This system uses an inverter, which means that when used with a ground fault breaker you must use breakers that can handle higher harmonics such as a (GFEB) Ground Fault Equipment Breaker (30 mA or greater) in order to prevent malfunctioning of ground fault device

4-4. CONTROLLER CABLE WIRING

■ WIRING SPECIFICATIONS

Model type	Connection to	Wire	Size	Specification
System Controller	USB Adaptor	USB cable	-	
System Controller Lite	USB Adaptor	USB cable	-	
Touch Panel Controller	Transmission line			Refer to 4-3
Central Remote Controller	Transmission line			Refer to 4-3
Wired Remote Controller (UTY-RNRUZ2) *2	Indoor unit	Remote controller cable	22 to 16 AWG (0.33 to 1.25mm^2)	Sheathed, Non-polar 2core, Twisted pair *1
			18 AWG	Sheathed, Thermostat cable 2core, Non Twisted pair *1
Simple Remote Controller (UTY-RSRY, UTY-RHRY)	Indoor unit		22 to 16 AWG (0.33 to 1.25mm^2)	Sheathed, Non-polar 2core, Twisted pair *1
Wired Remote Controller (UTY-RNKU)	Indoor unit		22AWG (0.33mm^2)	Sheathed PVC cable Polar 3core *1
Simple Remote Controller (UTY-RSKU, UTY-RHKU)	Indoor unit			
External Switch Controller	Indoor unit	Remote controller cable	16 to 22 AWG (0.33 to 1.25mm^2)	Shielded, Non-polar 2 core
			22AWG (0.33mm^2)	Shielded, Polar 3core
	External input		22AWG (0.33mm^2)	Shielded, Polar 2core, Twisted pair
IR Receiver Unit (UTB-YWC)	Indoor unit	Connection cable	-	(16ft. (5m) cable attached)
IR Receiver Unit (UTY-LRHYB1, UTY-LBHXD)	Indoor unit	Connection cable	-	
Remote Sensor	Indoor unit	Connection cable	-	(33ft. (10m) cable attached)
Drain Pump Unit	Indoor unit	Connection cable	-	

*1 : Use shielded cable (locally purchased) in accordance with the regional cable standard.
*2 : Refer to next page

⚠CAUTION

- Install in accordance with the regional standard.
- Never bundle the power supply cable and controller cable together. Bundling these cords together will cause a malfunction.
- Always ground both ends of the shielded cable.
- For detail specification and connection, refer to "5 Control system".
- Controller might be required to connect power supply cable and transmission line. Use separate connection with other units for power suply cable.

SYSTEM DESIGN

■ WIRED REMOTE CONTROLLER (2-WIRE) WIRING SPECIFICATION

Note: UTY-RNRUZ2 only

Maximum connectable number of remote controllers by cable size and the length.

Cable size		Max.connectable number of remote controllers		
AWG	mm^2	*L ≤ 328ft. (100 m)	328ft. (100 m) < *L ≤ 820ft. (250 m)	820ft. (250 m) < *L ≤ 1640ft. (500 m)
16	1.25 (2 > *S ≥ 1.25)	4	4	4
18	0.75 (1.25 > *S ≥ 0.75)	4	4	2
20	0.5 (0.75 > *S ≥ 0.5)	4	2	2
22	0.3 (0.5 > *S ≥ 0.3)	4	1	1

*L: Total cable length, *S: Cable size

SYSTEM DESIGN

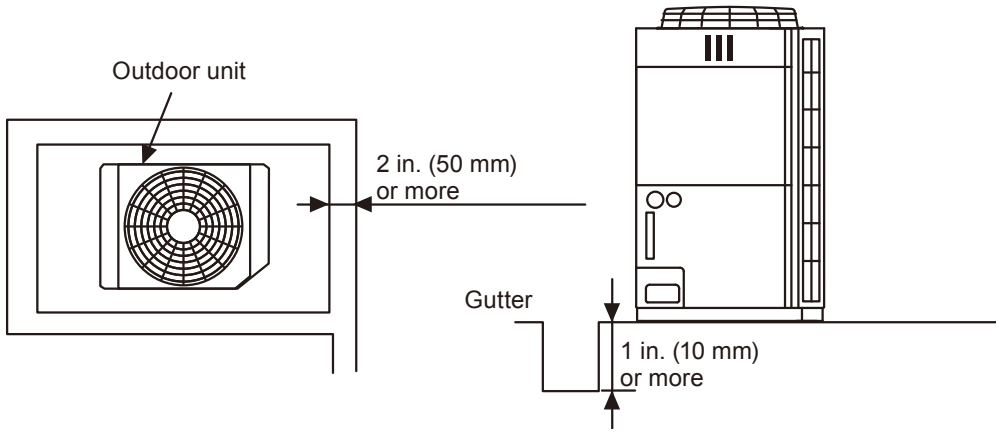
5. DRAIN CONNECTION

5-1. OUTDOOR UNIT

- During operation water is discharged from the bottom of the unit. Construct the foundation such that water drains away from the unit properly.
- When installing on a roof, make sure that the roof is properly waterproofed.

⚠ CAUTION

- Water drains from the bottom of the unit during operation.
- Install drains around unit as necessary.
- The figure below illustrates a method for controlling the water discharged from the unit.
- Provide a central drain pan, as necessary



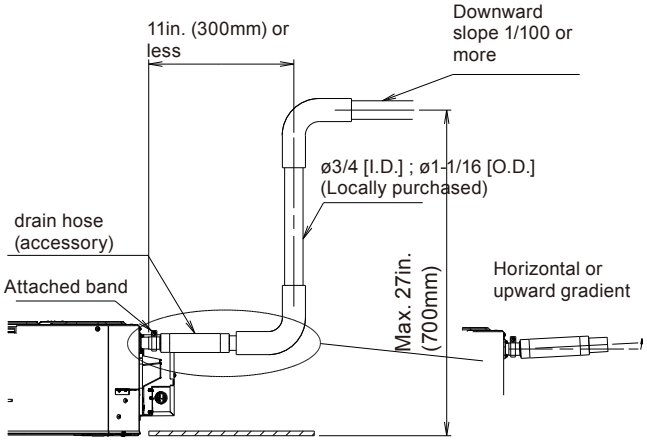
SYSTEM DESIGN

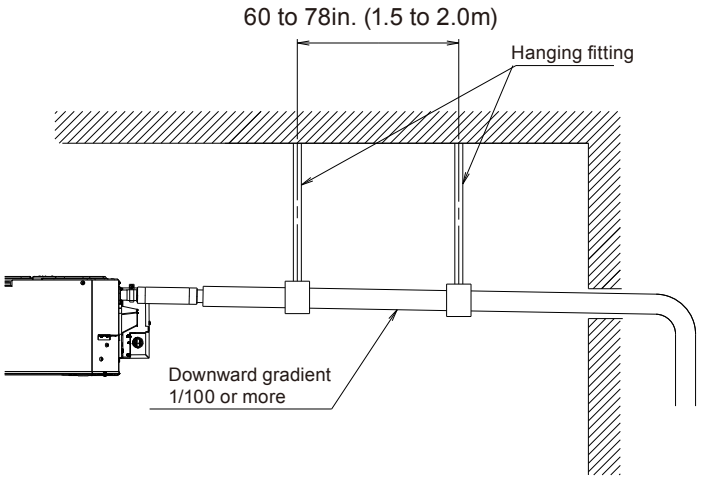
5-2. INDOOR UNIT

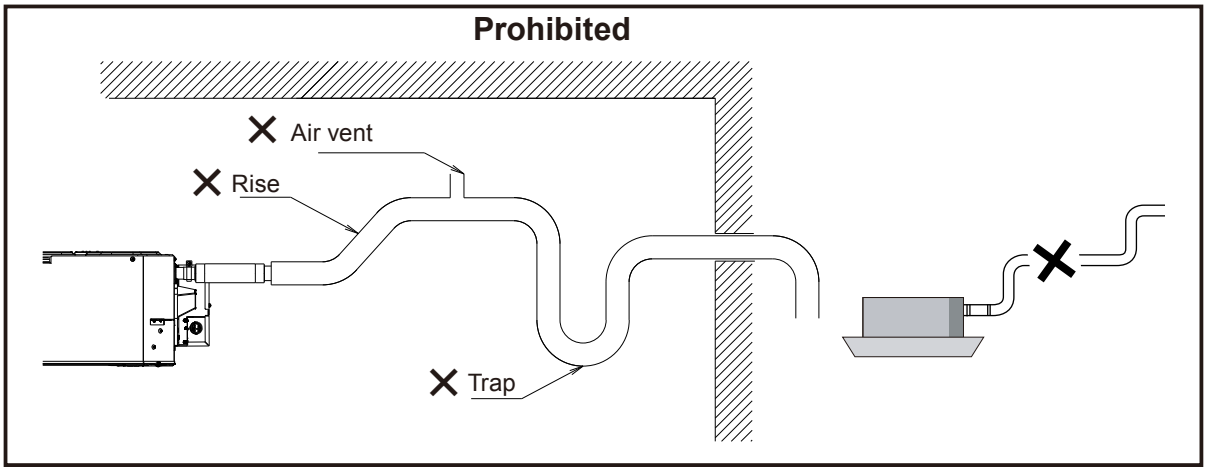
■ GENERAL RULES OF DRAIN PIPING

- Install the drain pipe with downward slope (1/100 or more) and so there are no rises in the pipe.
- Use general hard polyvinyl chloride pipe (ø3/4 [I.D.] ; ø1-1/16 [O.D.]) and connect it with adhesive (polyvinyl chloride) so that there is no leakage.
- Support the drain pipe with supports each 60 to 78in. (1.5 to 2m)
- Do not install any air vents or traps.
- Always insulate the drain pipe to prevent condensation.
- When connecting the drain hose to the indoor unit, use the accessory band. (Except compact wall mounted type and wall mounted type)

■ COMPACT CASSETTE TYPE







- Drain lift-up pipe restrictions:

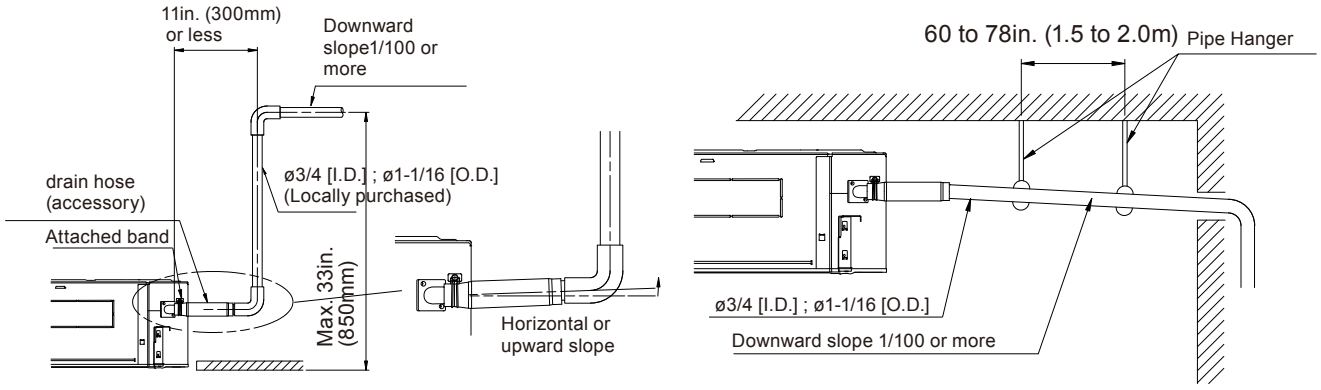
(1) Lift-up height ≤ 27in. (700mm) (from ceiling)

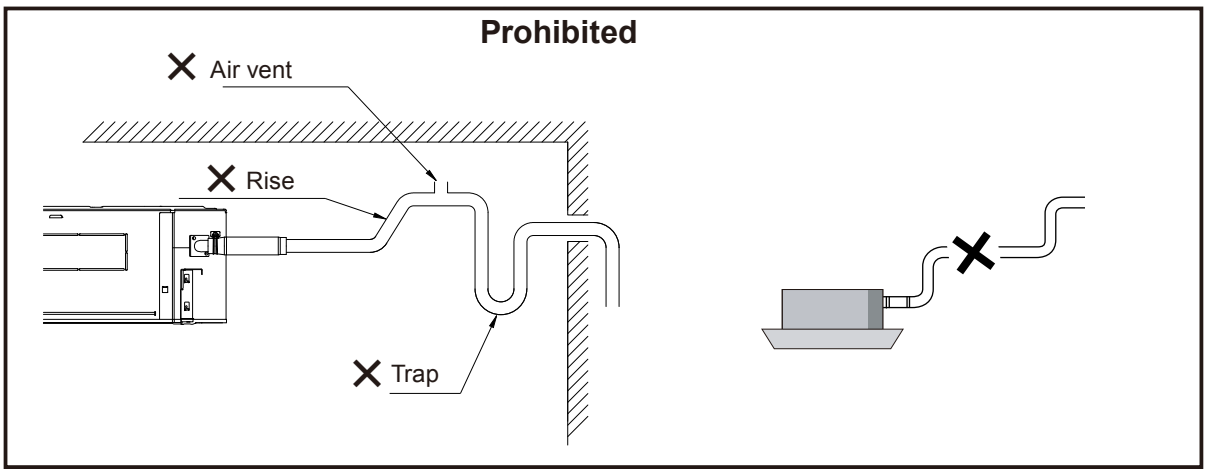
(2) Drain hose (pipe) length ≤ 11in. (300mm) (between indoor unit and lift-up pipe)

- When a dimensions exceed the above restrictions will cause water leakage.

SYSTEM DESIGN

■ CIRCULAR FLOW CASSETTE TYPE / CASSETTE TYPE





- Drain lift-up pipe restrictions:

(1) Lift-up height ≤ 33in. (850mm) (from ceiling)

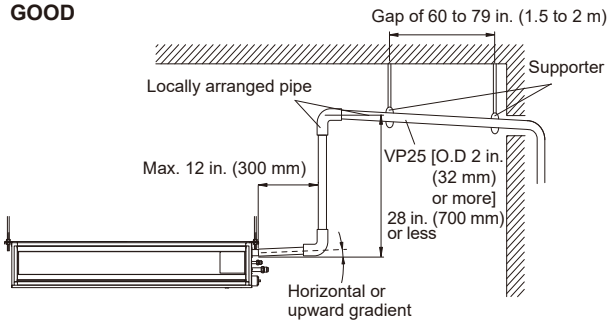
(2) Drain hose (pipe) length ≤ 11in. (300mm) (between indoor unit and lift-up pipe)

- Water leakage may result from a failure to adhere to the restrictions above.

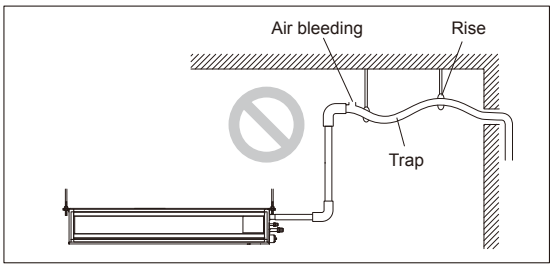
SYSTEM DESIGN

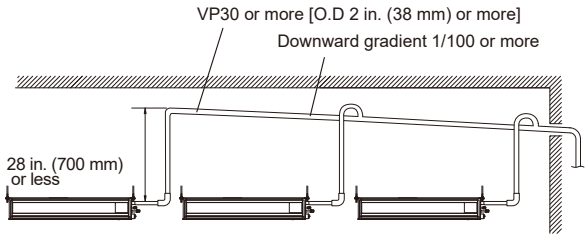
■ MINI DUCT TYPE

GOOD



PROHIBITED



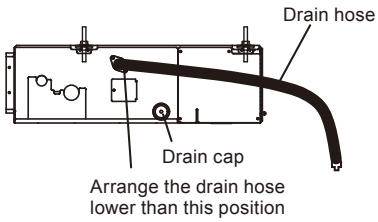


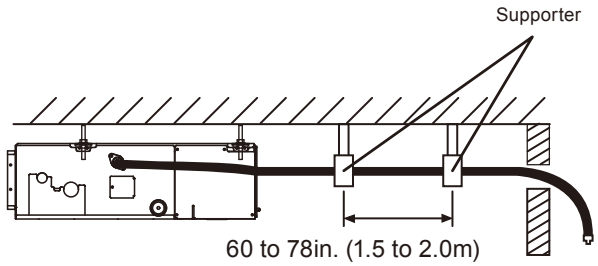
- Use general hard polyvinyl chloride pipe (VP25) [outside diameter 2 in. (32 mm)].
- Do not perform a rise, trap and air bleeding.
- Provide a downward gradient (1/100 or more).
- Provide supporters when long pipes are installed.
- Use an insulation material as needed, to prevent the pipes from freezing.
- Install the pipes in a way that allows for the removal of the control box.

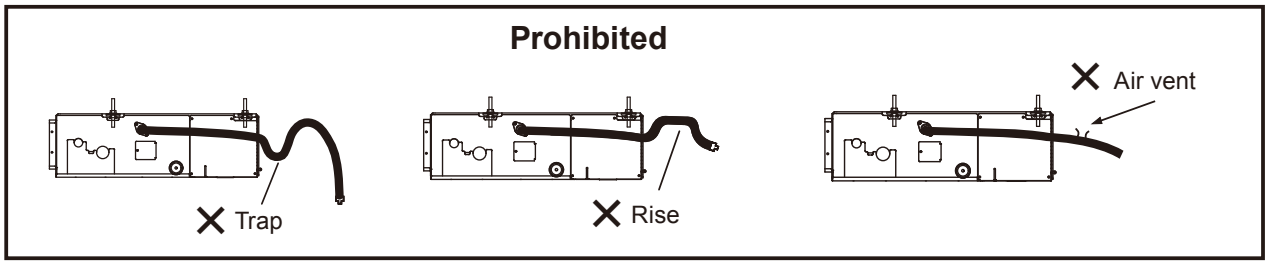
SYSTEM DESIGN

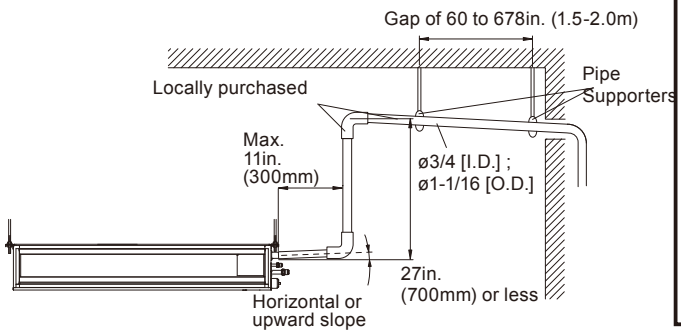
■ SLIM DUCT / SLIM CONCEALED FLOOR TYPE

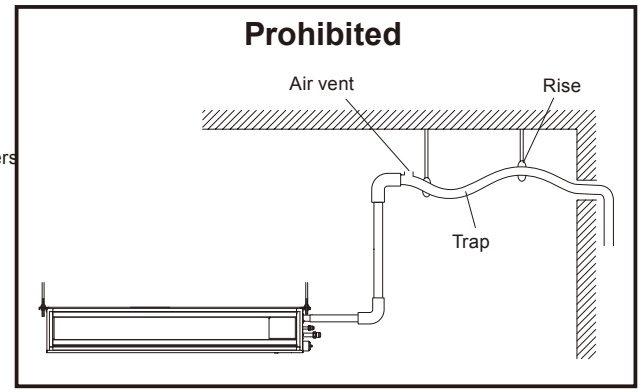
● Ceiling concealed setting



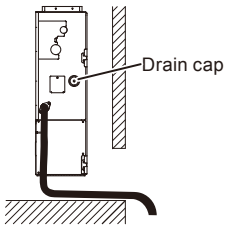


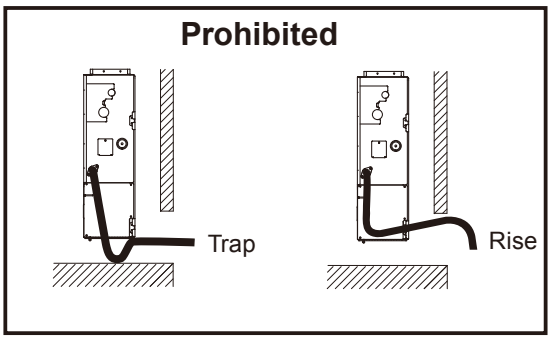






● Floor standing concealed setting

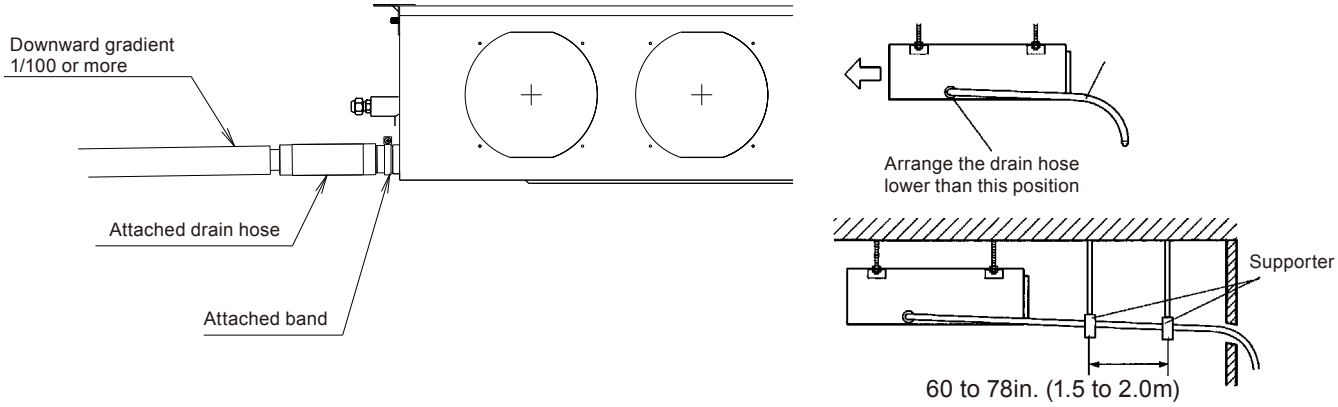


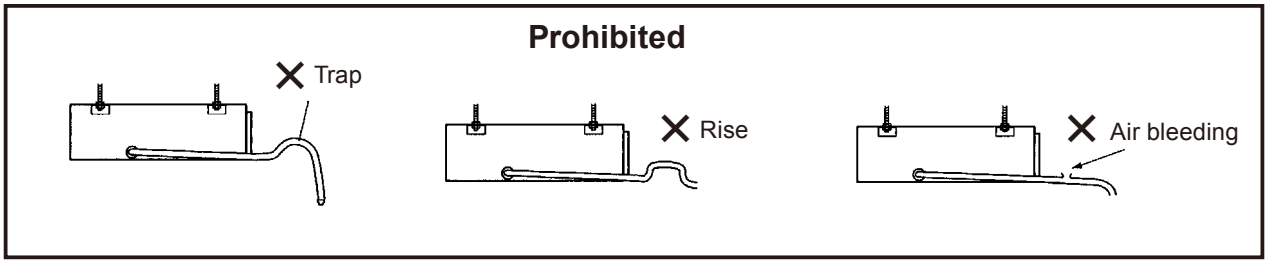


- Install the drain pipe with downward slope (1/50 to1/100) and so there are no rises or traps in the pipe.
- Use general hard polyvinyl chloride pipe (ø3/4 [I.D.] ; ø1-1/16 [O.D.]) and connect it with adhesive (polyvinyl chloride) so that there is no leakage.
- Install pipe supports on long lines.
- Do not install air vents on the drain lines.
- Always insulate the drain pipe to prevent condensation.

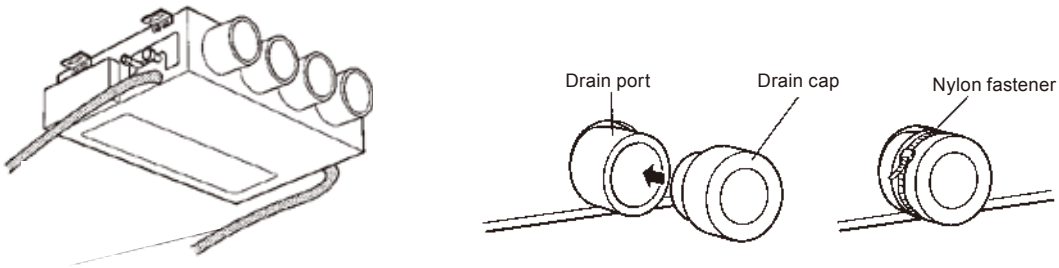
SYSTEM DESIGN

■ MEDIUM STATIC PRESSURE DUCT TYPE





There is a drain port on the left and right sides. Select the drain port to match the local conditions.



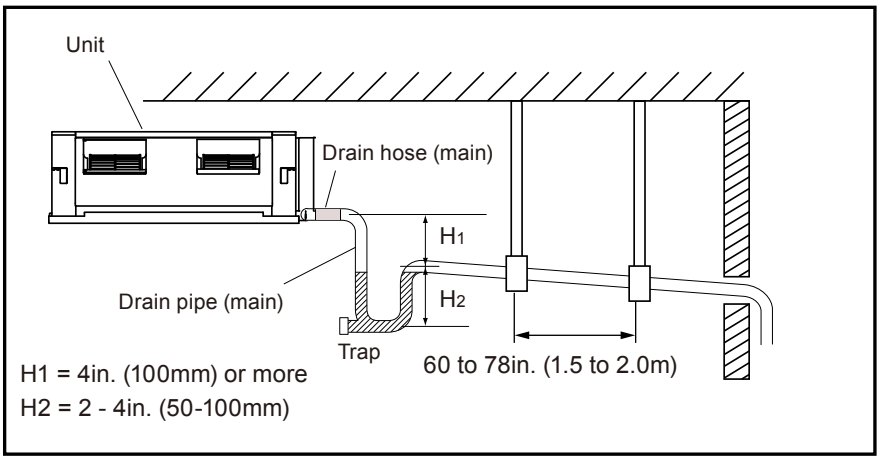
⚠ CAUTION

- Always check that the drain cap is installed to the unused drain port and is fastened with the nylon fastener.
- If the drain cap is not installed, or is not sufficiently fastened by the nylon fastener, water may drip during the cooling operation.

SYSTEM DESIGN

■ HIGH STATIC PRESSURE DUCT TYPE

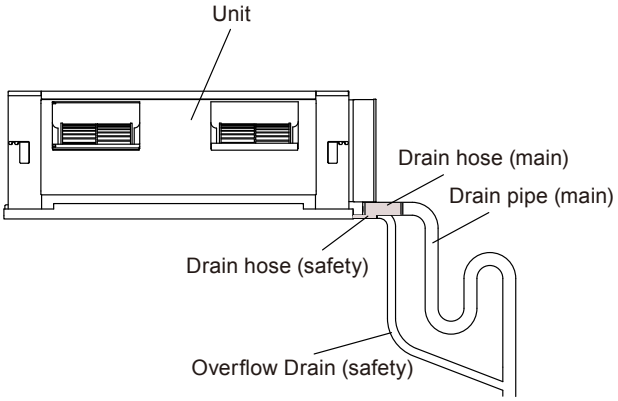
● Main drain pipe



- Be sure to provide a drain trap for each indoor units.
- The drain trap will have no effect if placed after multiple indoor units.
- The position of the installed drain hose should have a downward slope of (1/100 or more).
- Make sure that the drain hose is installed without rises.
- Make the trap near to the indoor unit, Position the trap in a location where it can be cleaned.

● Safety drain pipe

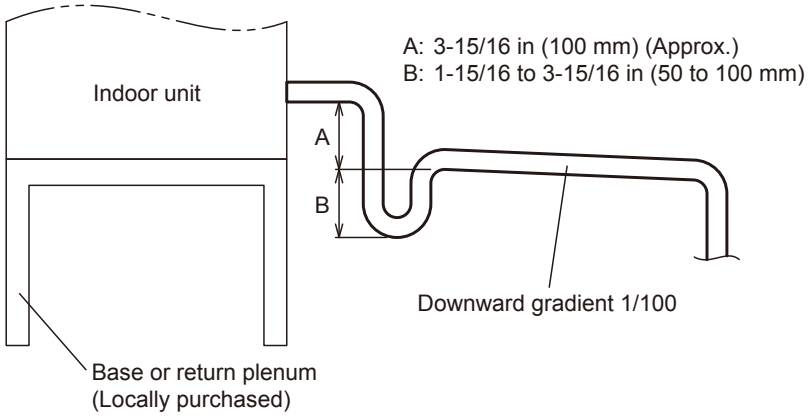
There is no need to provide a trap for the overflow drain. If the overflow drain is connected to the main drain pipe, make the connection below the trap on the main drain pipe.
Once installation is complete, check the flow of the drain water.



SYSTEM DESIGN

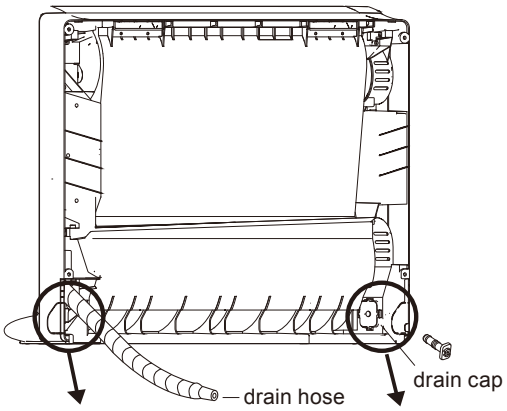
■ VERTICAL AIR HANDLER TYPE

On the main drain, provide 1 trap near the indoor unit.
This unit has a primary and a secondary drain port.

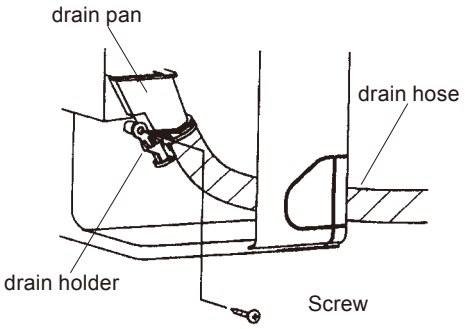


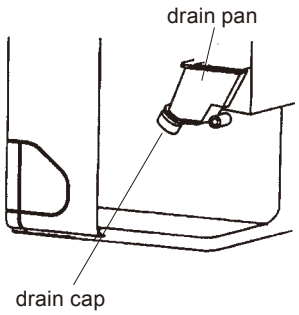
SYSTEM DESIGN

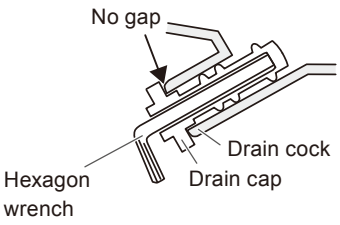
■ COMPACT FLOOR TYPE



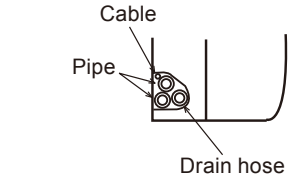
The drain hose can be connected at either side of the indoor unit.



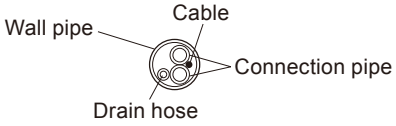


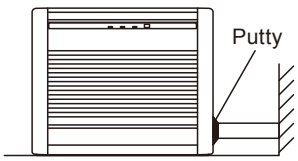


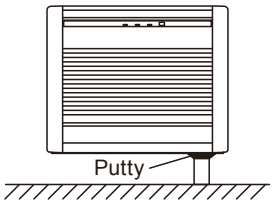
Left piping



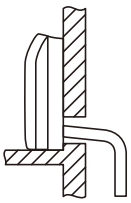
For connection from the left rear



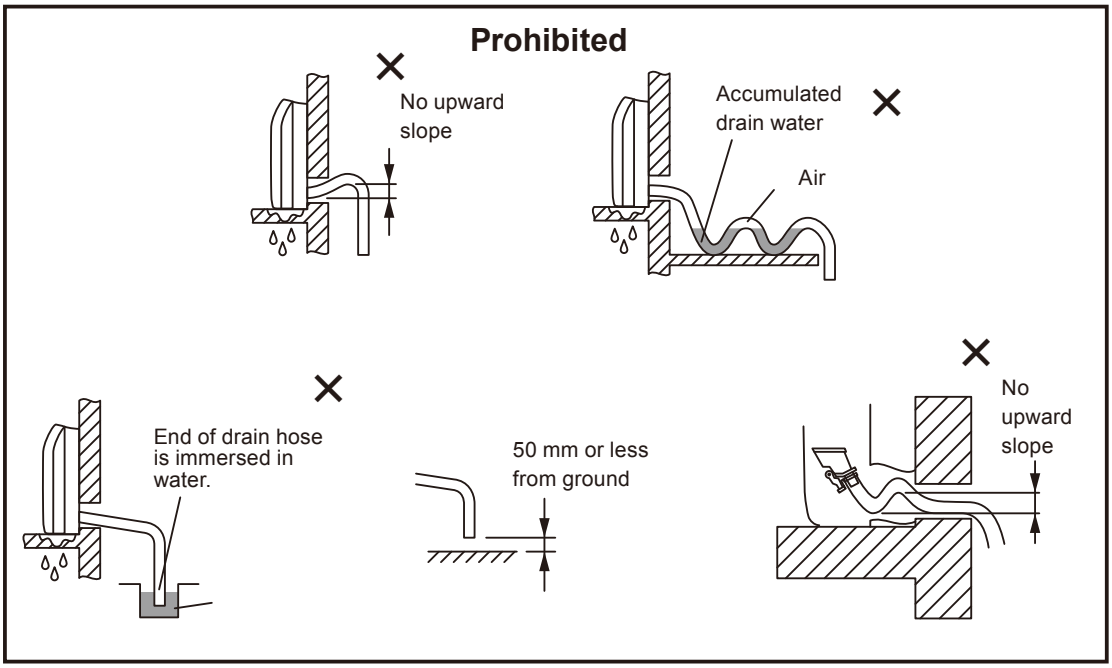




OK



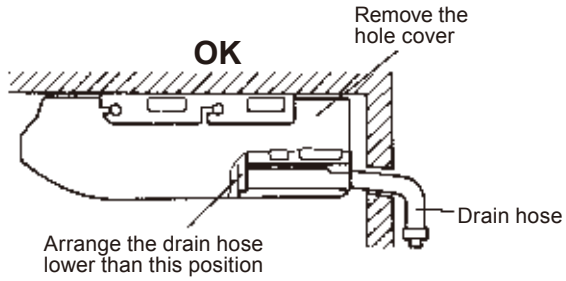
Prohibited

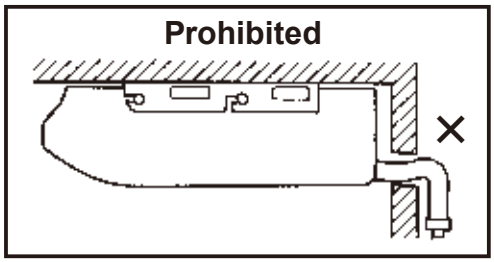


SYSTEM DESIGN

■ FLOOR / CEILING TYPE

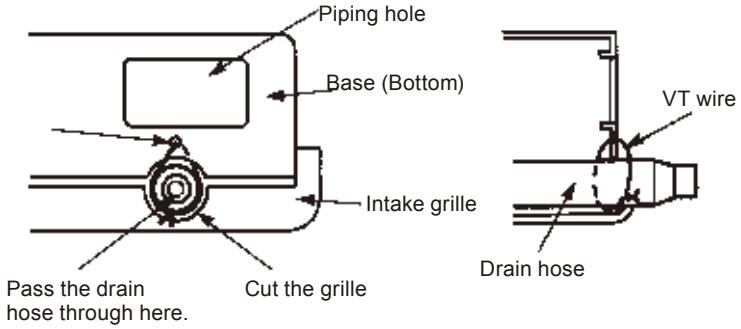
● Under ceiling setting



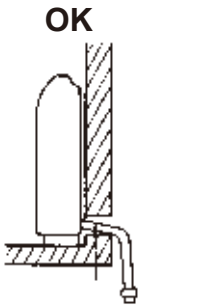


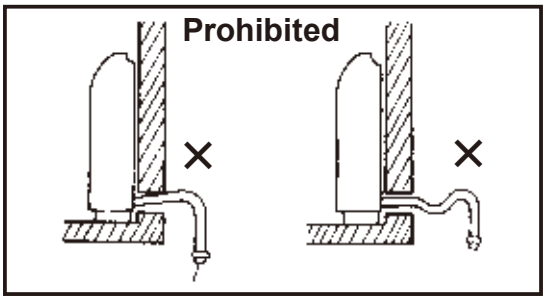
When drain hose is arranged backward.

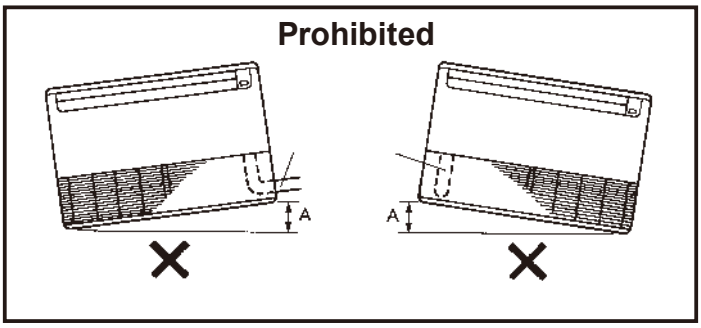
Secure the drain hose with the VT wire.



● Floor console setting



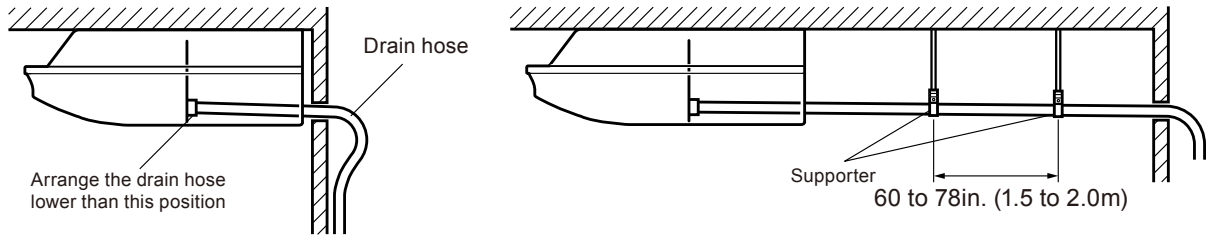


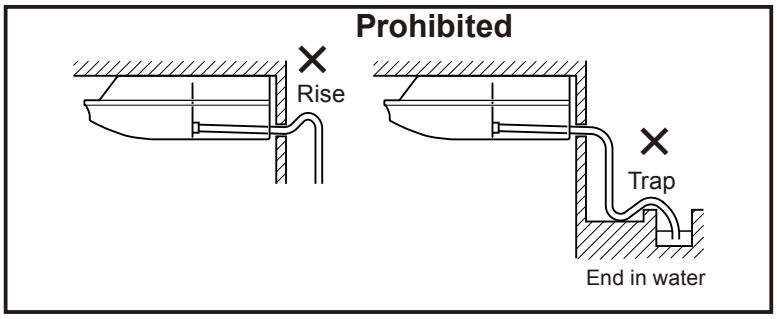


- Do not install the unit so that the drain hose side is too high.
- Height A should be less than 3/16in. (5mm)

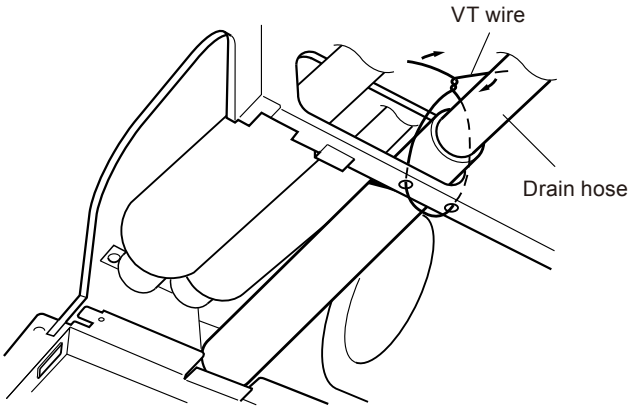
SYSTEM DESIGN

■ CEILING TYPE





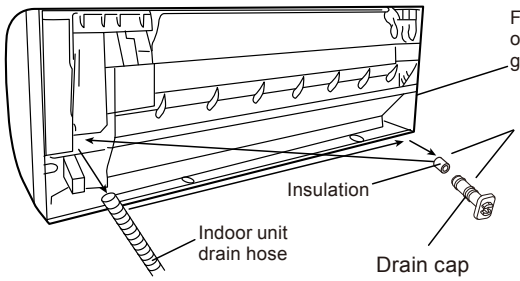
Fasten the drain pipe with VT wire so that the pipe slopes correctly within the indoor unit .

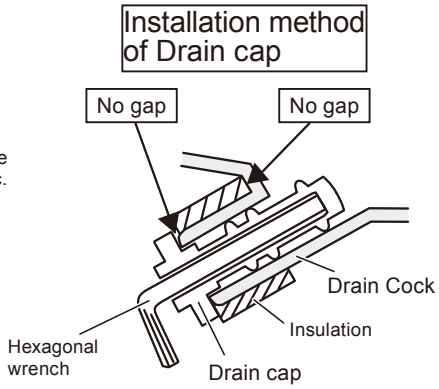


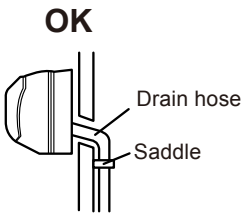
Indoor unit (rear view)

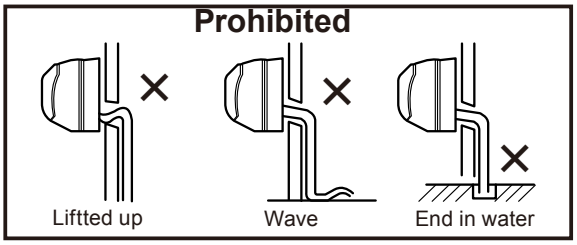
SYSTEM DESIGN

■ WALL MOUNTED TYPE (4-14 Models)

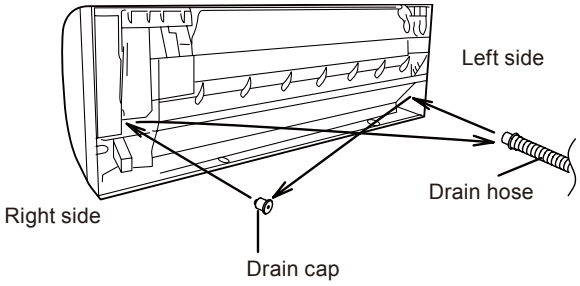


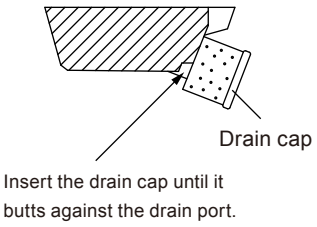


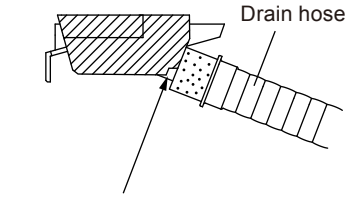


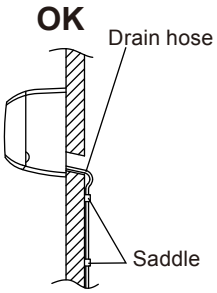


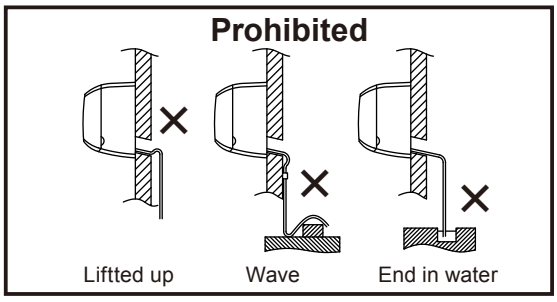
■ WALL MOUNTED TYPE (18-36 Models)









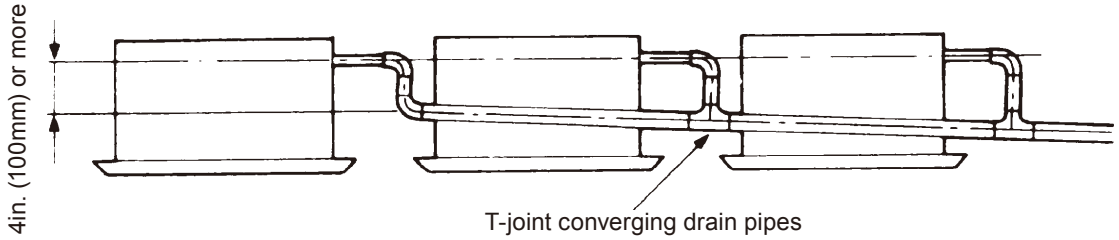


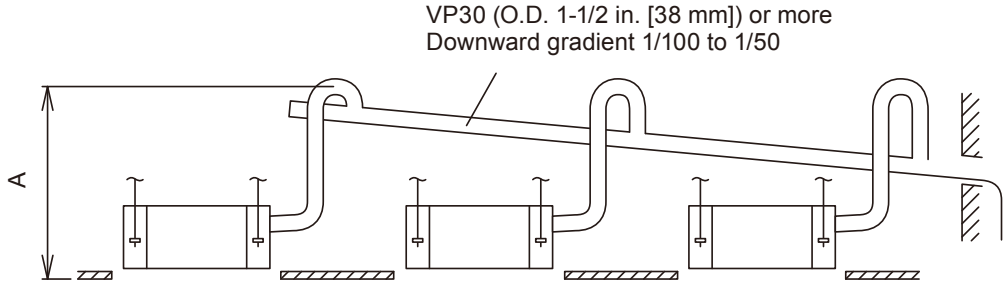
SYSTEM DESIGN

■ CENTRAL DRAIN PROCESS

When converging multiple drain pipes , install according to the procedure shown below.

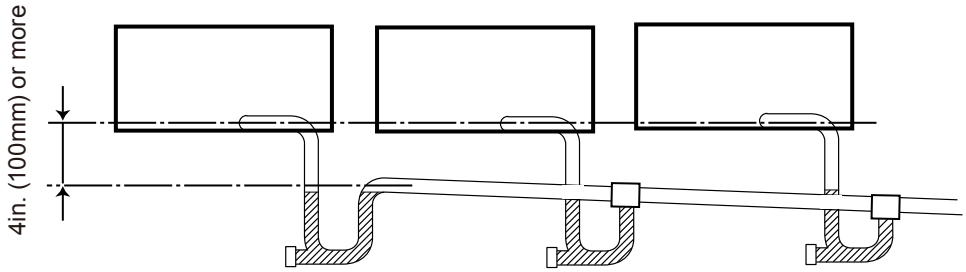
● For Compact Cassette type, Circular Flow Cassette type, Cassette type



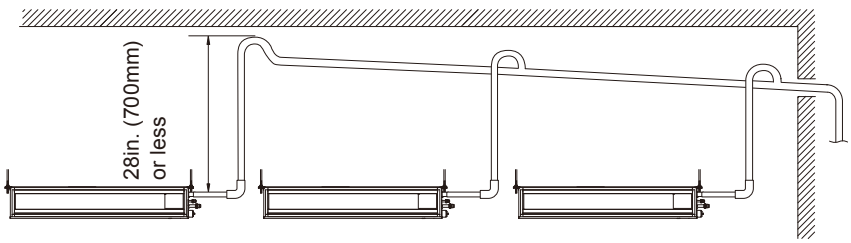


A	Compact Cassette type	28 in. (700 mm) or less
	Circular Flow Cassette type Cassette type	34 in. (850 mm) or less

● For High static pressure duct type



● For Mini duct type, Slim duct type

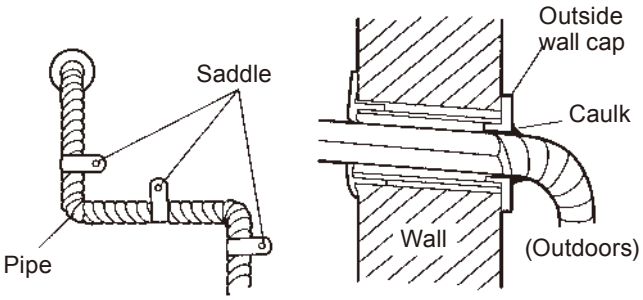


Select converging drain pipes whose diameter is suitable for the operating capacity of the unit.

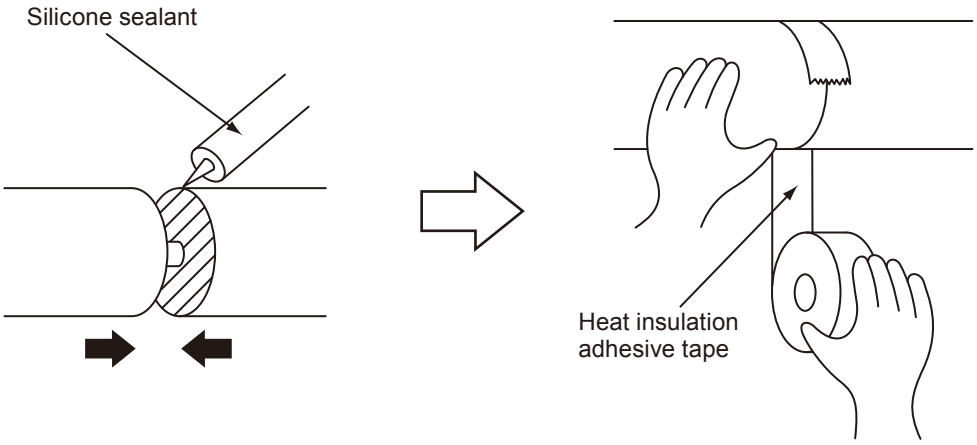
SYSTEM DESIGN

■ DRAIN INSULATION

- Confirm water flows into Drain pan of the indoor unit, and drains from the pan once the drain hose is connected.
- Check drain pipes for leaks.
- Insulate the drain to prevent condensation.
- Secure the drain pipe to the wall with a saddle.



- Seal the hole around drain pipe with caulk.



- Be sure to coat the entire end surface.

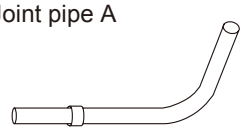
If there is a gap it could cause condensation

SYSTEM DESIGN

6. STANDARD ACCESSORIES

The following installation parts are supplied. Use them as required.
Do not discard any accessories until the installation work has been completed.

6-1. OUTDOOR UNIT

Name and shape	Q'ty	Application
Specifications manual	1	
Installation manual	1	
Joint pipe A 	1	For connecting the gas pipe (L type)
Joint pipe B	1	For connecting the gas pipe (Straight type)

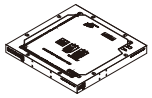
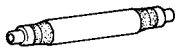
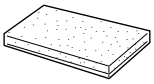
Name and shape	Q'ty	Application
Cable Tie(s)	3	For securing the power and transmission cables. Do not run power cable and transmission cable together, electrical interference will cause communication errors.

SYSTEM DESIGN

6-2. INDOOR UNIT

■ COMPACT CASSETTE TYPE

INDOOR UNIT ACCESSORIES

Name and shape	Q'ty	Application
Operating manual	1	
Installation manual	1	
Cable Tie(s) (Large)	4	For securing the refrigerant connection pipes.
Cable Tie(s) Medium)	4	For securing the power supply, transmission cable and remote control cable. Do not run power cable and transmission cable together, electrical interference will cause communication errors.
Pipe Insulation (Small)	1	For indoor piping connection
Pipe Insulation (Large)	1	For indoor piping connection
Special nut A (Large flange)	4	For installing indoor unit
Special nut B (Small flange)	4	For installing indoor unit
Template (Carton top) 	1	For cutting opening. Also used as packing
Drain hose 	1	For connecting drain hose.
Hose band	1	For installing drain hose
Drain hose insulation 	1	For installing drain hose

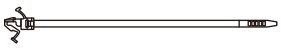
CASSETTE GRILLE ACCESSORIES

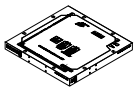
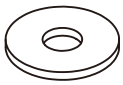
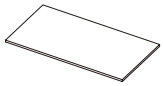
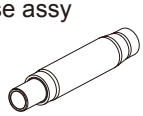
Name and shape	Q'ty	Application
Connector cover	1	For covering connector
Tapping screw (M5 × 12mm)	4	For mounting cassette grille
Tapping screw (M4 × 12mm)	1	For mounting connector cover

SYSTEM DESIGN

SYSTEM DESIGN

■ CIRCULAR FLOW CASSETTE TYPE

Name and shape	Q'ty	Application
Operating manual	1	
Installation manual	1	
Cable tie (Large)	4	For fixing the connection pipe (Large and Small)
Push mount cable tie 	1	For transmission and remote controller cable binding.
Coupler heat insulation (Small)	1	For indoor side pipe joint (Liquid pipe)
Coupler heat insulation (Large)	1	For indoor side pipe joint (Gas pipe)

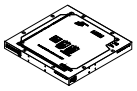
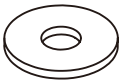
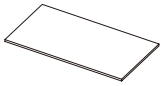
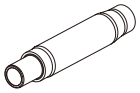
Name and shape	Q'ty	Application
Template (Carton top) 	1	For installing indoor unit.
Washer 	8	For installing indoor unit
Insulation 	1	For installing drain pipe
Drain hose assy 	1	For installing drain pipe
Hose band	1	For installing drain hose
Drain pipe insulation	1	For installing drain pipe

SYSTEM DESIGN

SYSTEM DESIGN

■ CASSETTE TYPE

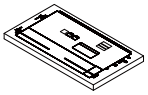
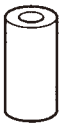
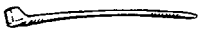
Name and shape	Q'ty	Application
Operating manual	1	
Installation manual	1	
Cable Tie(s) (Large)	4	For securing the refrigerant connection pipes. (Small and Large)
Cable Tie(s) (Medium)	4	For securing the power supply, transmission cable and remote control cable. Do not run power cable and transmission cable together, electrical interference will cause communication errors.
Pipe Insulation (Small)	1	For indoor piping connection (Liquid pipe)
Pipe Insulation (Large)	1	For indoor piping connection (Gas pipe)

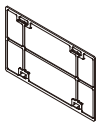
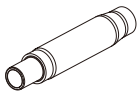
Name and shape	Q'ty	Application
Template (Carton top) 	1	For installing indoor unit.
Washer 	8	For installing indoor unit
Insulation 	1	For installing drain hose
Drain hose assy 	1	For connecting drain hose.
Hose band	1	For installing drain hose
Drain pipe insulation	1	For installing drain pipe

SYSTEM DESIGN

SYSTEM DESIGN

■ MINI DUCT TYPE

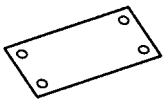
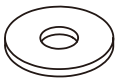
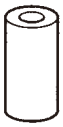
Name and shape	Q'ty	Application
Operating manual	1	
Installation manual	1	
Template (Carton top) 	1	For ceiling openings cutting Also used as packing
Washer	8	For installing indoor unit
Coupler heat insulation (Large) 	1	For indoor side pipe joint (Large pipe)
Coupler heat insulation (Small)	1	For indoor side pipe joint (Small pipe)
Cable tie 	Medium 2	For transmission and remote control cable binding.
	Large 4	For fixing the coupler heat insulation.

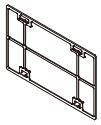
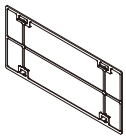
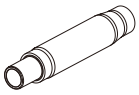
Name and shape	Q'ty	Application
Filter 	2	
Drain hose 	1	For installing drain hose
Band	1	For installing drain hose
Drain hose insulation B	1	Insulates the drain hose

SYSTEM DESIGN

SYSTEM DESIGN

■ SLIM DUCT / SLIM CONCEALED FLOOR TYPE

Name and shape	Q'ty	Application
Operating manual	1	
Installation manual	1	
Installation template 	1	For positioning the indoor unit
Washer 	8	For installing indoor unit
Pipe Insulation (Large) 	1	For indoor piping connection (Large pipe)
Pipe Insulation (Small)	1	For indoor piping connection (Small pipe)
Cable Tie(s)	Medium 4	For cutting opening.
	Large 4	For securing the power supply, transmission cable and remote control cable. Do not run power cable and transmission cable together, electrical interference will cause communication errors.

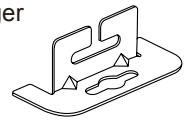
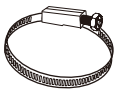
Name and shape	Q'ty	Application
Filter (Small) 	2 (AR07/09/12/14)	
Filter (Big) 	2 (AR18)	
Drain hose 	1	For securing the refrigerant connection hoses.
Band	1	For installing drain hose
Drain hose insulation B	1	Insulates the drain hose

SYSTEM DESIGN

SYSTEM DESIGN

■ MEDIUM STATIC PRESSURE DUCT TYPE

Name and shape	Q'ty	Application
Operating manual	1	
Installation manual	1	
Cable Tie(s) (Large)	5	For securing the refrigerant connection pipes.
Cable Tie(s) (Medium)	4	For securing the power supply, transmission cable and remote control cable. Do not run power cable and transmission cable together, electrical interference will cause communication errors.
Pipe Insulation (Small)	1	For indoor piping connection (Liquid pipe)
Pipe Insulation (Large)	1	For indoor piping connection (Gas pipe)

Name and shape	Q'ty	Application
Special nut A (Large flange)	4	For suspending the indoor unit from ceiling
Special nut B (Small flange)	4	
Hanger 	4	For suspending the indoor unit from ceiling
Drain hose	1	For connecting drain hose.
Hose band 	1	For installing drain hose
Drain hose insulation	2	For installing drain hose

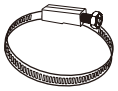
SYSTEM DESIGN

SYSTEM DESIGN

■ HIGH STATIC PRESSURE DUCT TYPE

● Models : ARUH36, ARUH48, ARUH60

Name and shape	Q'ty	Application
Operating manual	1	
Installation manual	1	
Cable Tie(s) (Large)	4	For securing the refrigerant connection pipes.
Cable Tie(s) (Medium)	3	For securing the power supply, transmission cable and remote control cable. Do not run power cable and transmission cable together, electrical interference will cause communication errors.
Pipe Insulation (Small)	1	For indoor piping connection (Liquid pipe)
Pipe Insulation (Large)	1	For indoor piping connection (Gas pipe)

Name and shape	Q'ty	Application
Special nut A (Large flange)	4	For suspending the indoor unit from ceiling
Special nut B (Small flange)	4	
Drain hose	2	For connecting drain hose.
Hose band 	2	For installing drain hose
Drain hose insulation	2	For installing drain hose

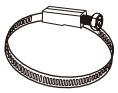
SYSTEM DESIGN

SYSTEM DESIGN

■ HIGH STATIC PRESSURE DUCT TYPE

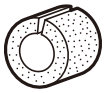
● Models : ARUH72, ARUH96

Name and shape	Q'ty	Application
Operating manual	1	
Installation manual	1	
Cable tie (Large)	4	For fixing the connection pipe (Large and Small)
Cable tie (Medium)	2	For transmission and remote controller cable binding
Coupler heat insulation (Small)	1	For indoor side pipe joint (Liquid pipe)
Coupler heat insulation (Large)	1	For indoor side pipe joint (Gas pipe)

Name and shape	Q'ty	Application
Special nut A (Large flange)	4	For suspending the indoor unit from ceiling
Special nut B (Small flange)	4	
Washer	8	
Drain hose (Large)	1	For installing drain hose (For main drain port)
Drain hose (Small)	1	For installing drain hose (For safety drain port)
Hose band (Large) 	1	For installing drain hose (Large)
Hose band (Small)	1	For installing drain hose (Small)
Drain hose insulation	2	For installing drain hose

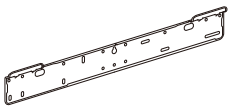
SYSTEM DESIGN

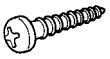
■ VERTICAL AIR HANDLER TYPE

Name and shape	Q'ty	Application
Operating manual	1	
Installation manual	1	
Cable Tie (Medium)	1	For transmission and remote controller cable binding.
Gas pipe heat insulation 	1	For gas pipe at the unit inside

SYSTEM DESIGN

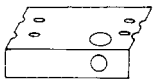
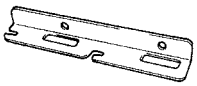
■ COMPACT FLOOR TYPE

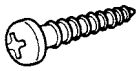
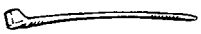
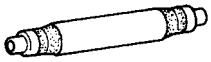
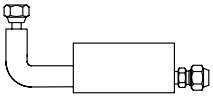
Name and shape	Q'ty	Application
Operating manual	1	
Installation manual	1	
Wall hook bracket 	1	For indoor unit installation

Name and shape	Q'ty	Application
Tapping screw 	8	For wall hook bracket installation
Cloth tape	1	For indoor unit installation
Push mount cable tie	1	For transmission and remote controller cable binding
Air cleaning filter	2	For installation, refer to the “CLEANING AND CARE” in the operating manual.

SYSTEM DESIGN

■ FLOOR / CEILING TYPE

Name and shape	Q'ty	Application
Operating manual	1	
Installation manual	1	
Cover plate (left)	1	
Cover plate (right)	1	
Tapping screw	2	
Installation template 	1	For positioning the indoor unit For under ceiling type
Bracket (left) 	1	For suspending the indoor unit from ceiling
Bracket (right)	1	
Special nut	4	
Wall bracket	2	For suspending the indoor unit on the wall

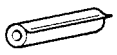
Name and shape	Q'ty	Application
Tapping screw 	6	For fixing the wall bracket
Pipe Insulation	2	For indoor piping connection
Cable Tie(s) 	Large 4	For securing the refrigerant connection pipes.
	Medium 3	For securing the power supply, transmission cable and remote control cable. Do not run power cable and transmission cable together, electrical interference will cause communication errors.
Drain hose 	1	For connecting drain hose.
Hose band	1	For installing drain hose
Drain hose insulation	1	Adhesive type 3-15/16 x 8-21/32 in. (100 x 220 mm)
VT wire	1	For fixing the drain hose L=11-1/32 in. (280 mm)
Insulation (pipe)	1	Adhesive type 6-5/16 x 4-11/32 in. (160 x 110 mm)
Silencer pipe 	1	Connect the silencer pipe to the small (Liquid) pipe

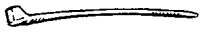
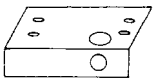
OPTIONAL PARTS

Name and shape	Part No.	Application
Auxiliary pipe	9374714025	For indoor side pipe joint (For AB18, AB24)

SYSTEM DESIGN

■ CEILING TYPE

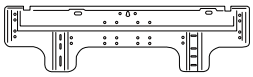
Name and shape	Q'ty	Application
Operating manual	1	
Installation manual	1	
Drain hose	1	For connecting drain hose.
Hose band	1	For installing drain hose
Drain hose insulation	1	Adhesive type 3-15/16 x 8-21/32 in. (100 x 220 mm)
VT wire	1	For fixing the drain hose 11-11/32 in. (L=280 mm)
Pipe Insulation (Large)	2	For indoor piping connection (Gas pipe)
Pipe Insulation (Small) 	1	For indoor piping connection (Liquid pipe)

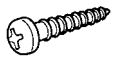
Name and shape	Q'ty	Application
Cable Tie(s) 	Extra large 4	For securing the refrigerant connection pipes.
	Large 4	
	Medium 3	For securing the power supply, transmission cable and remote control cable. Do not run power cable and transmission cable together, electrical interference will cause communication errors.
Special nut A (Large flange)	4	For installing indoor unit
Special nut B (Small flange)	4	For installing indoor unit
Installation template 	1	For positioning the indoor unit
Auxiliary pipe assembly	1	For connecting the piping

SYSTEM DESIGN

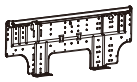
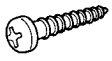
■ WALL MOUNTED TYPE

● Models : ASUA4, 7, 9TLAV1

Name and shape	Q'ty	Application
Operating manual	1	
Installation manual	1	
Wall hook bracket 	1	For indoor unit installation

Name and shape	Q'ty	Application
Tapping screw 	5	For wall hook bracket installation
Cloth tape	1	For indoor unit installation

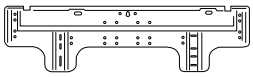
● Models : ASUA12, 14TLAV1

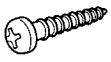
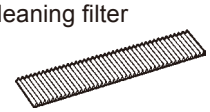
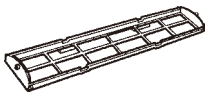
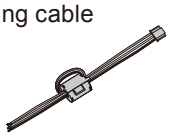
Name and shape	Q'ty	Application
Operating manual	1	
Installation manual	1	
Wall hook bracket 	1	For indoor unit installation
Tapping screw 	5	For wall hook bracket installation

Name and shape	Q'ty	Application
Cloth tape	1	For indoor unit installation
Seal A	1	It is used when the diameter of gas pipe is Ø12.70 or more It is necessary when using AS14
Air cleaning filter	2	For installation, refer to the “CLEANING AND CARE” in the operating manual
Air cleaning filter frame	2	

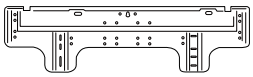
SYSTEM DESIGN

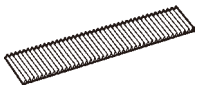
● Models : ASUB18, 24TLAV1

Name and shape	Q'ty	Application
Operating manual	1	
Installation manual	1	
Wall hook bracket 	1	For indoor unit installation
Cable tie	1	For transmission and remote controller cable binding
Cloth tape	1	For indoor unit installation

Name and shape	Q'ty	Application
Tapping screw 	8	For wall hook bracket installation
Air cleaning filter 	2	For installation, refer to the "CLEANING AND CARE" in the operating manual.
Air cleaning filter frame 	2	
Drain hose Insulation	1	For drain hose installation
Connecting cable 	1	For wired remote controller installation

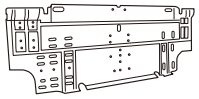
● Models : ASUB30, 36TLAV1

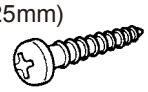
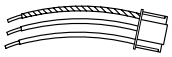
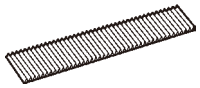
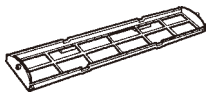
Name and shape	Q'ty	Application
Operating manual	1	
Installation manual	1	
Wall hook bracket 	1	For indoor unit installation
Tapping screw	8	For wall hook bracket installation

Name and shape	Q'ty	Application
Drain hose Insulation	1	For installing drain hose
Cloth tape	1	For indoor unit installation
Cable tie	2	For transmission and remote controller cable binding
Air cleaning filter 	2	For installation, refer to the "CLEANING AND CARE" in the operating manual.
Air cleaning filter frame	2	

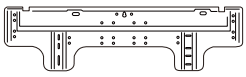
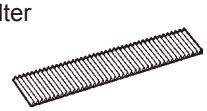
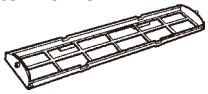
SYSTEM DESIGN

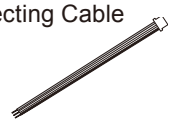
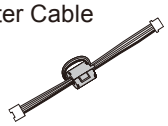
● Models : ASUA7, 9, 12, 14TLAV

Name and shape	Q'ty	Application
Operating manual	1	
Installation manual	1	
Wall hook bracket 	1	For indoor unit installation
Cable Tie	1	For remote control cable binding
Cloth tape	1	For indoor unit installation

Name and shape	Q'ty	Application
Tapping screw (M4 x 25mm) 	8	For wall hook bracket installation
Connecting Cable 	1	For wired remote control cable connection and simple remote controller cable connection.
Air Filter 	2	
Air Filter Frame 	2	
Seal A	1	For indoor unit installation

● Models : ASUA18, 24TLAV

Name and shape	Q'ty	Application
Operating manual	1	
Installation manual	1	
Wall hook bracket 	1	For indoor unit installation
Cloth tape	1	For indoor unit installation
Tapping screw (M4 x 25mm)	8	For wall hook bracket installation
Air filter 	1	
Air filter frame 	1	

Name and shape	Q'ty	Application
Drain hose Insulation	1	For installing drain hose
Connecting Cable 	2	For wired remote control cable connection and simple remote controller cable connection.
Adapter Cable 	2	
Cable Tie	2	For securing the power supply, transmission cable and remote control cable. Do not run power cable and transmission cable together, electrical interference will cause communication errors.

SYSTEM DESIGN

Refrigerant R410A INVERTER

AIRSTAGE™
Variable Refrigerant Flow System

7. FUNCTION SETTING

DTV_VR2U025E_13--CHAPTER07
2018.09.28

CONTENTS

7. FUNCTION SETTING

1. SYSTEM SETTING ..... 07 - 01
1-1. SYSTEM TYPE SETTING ..... 07 - 01
1-2. ADDRESS SETTING ..... 07 - 03
1-3. MANUAL ADDRESS SETTING METHOD ..... 07 - 07
1-4. ADDRESS SETTING BY REMOTE CONTROLLER ..... 07 - 16
1-4-1. WIRELESS REMOTE CONTROLLER ..... 07 - 16
1-4-2. WIRED REMOTE CONTROLLER (UTY-RNKU) ..... 07 - 23
1-4-3. WIRED REMOTE CONTROLLER (UTY-RNRUZ*) ..... 07 - 28
1-4-4. SIMPLE REMOTE CONTROLLER (UTY-RSRY, UTY-RHRY) ..... 07 - 33
1-4-5. SIMPLE REMOTE CONTROLLER (UTY-RSKU, UTY-RHKU) ..... 07 - 39
1-5. AUTOMATIC ADDRESS SETTING ..... 07 - 44
1-5-1. SIGNAL AMPLIFIER AUTOMATIC ADDRESS SETTING ..... 07 - 46
1-5-2. INDOOR UNIT AUTOMATIC ADDRESS SETTING ..... 07 - 48
1-5-3. RB UNIT AUTOMATIC ADDRESS SETTING ..... 07 - 50
1-5-4. EXAMPLE FLOW ..... 07 - 52
1-6. TERMINAL RESISTOR SETTING ..... 07 - 55
1-7. INDOOR UNIT CONNECTION CHECK ..... 07 - 56

2. FUNCTION SETTING ..... 07 - 58
2-1. OUTDOOR UNIT ..... 07 - 58
2-1-1. VR-II series ..... 07 - 61
2-1-2. V-II (230V) series ..... 07 - 66
2-1-3. V-II (460V) series ..... 07 - 71
2-1-4. J-II series ..... 07 - 76
2-1-5. J-IIS series ..... 07 - 81
2-2. INDOOR UNIT (setting by switch) ..... 07 - 87
2-3. INDOOR UNIT (setting by wireless remote controller) ..... 07 - 97
2-4. INDOOR UNIT (setting by wired remote controller [Touch panel]) ..... 07 - 104
2-5. INDOOR UNIT (setting by wired remote controller) ..... 07 - 108
2-6. INDOOR UNIT (setting by UTY-RSRY, UTY-RHRY) ..... 07 - 112
2-7. INDOOR UNIT (setting by UTY-RSKU, UTY-RHKU) ..... 07 - 116
2-8. FUNCTION DETAILS ..... 07 - 120

CONTENTS

7. FUNCTION SETTING

2-9. RB UNIT ..... 07 - 125
2-10. WIRED REMOTE CONTROLLER (UTY-RNKU) ..... 07 - 128
2-11. SIMPLE REMOTE CONTROLLER ..... 07 - 130
2-12. TOUCH PANEL CONTROLLER ..... 07 - 132
2-13. CENTRAL REMOTE CONTROLLER ..... 07 - 133
2-14. WIRED REMOTE CONTROLLER (Touch panel) ..... 07 - 134
2-14-1. REMOTE CONTROLLER ADDRESS SETTING ..... 07 - 134
2-14-2. REMOTE CONTROLLER MASTER/SLAVE SETTING ..... 07 - 136
2-14-3. INDOOR UNIT ADDRESS VERIFICATION ..... 07 - 137
2-15. SIMPLE REMOTE CONTROLLER (UTY-RSRY, UTY-RHRY) ..... 07 - 138
2-15-1. REMOTE CONTROLLER ADDRESS SETTING ..... 07 - 138
2-15-2. REMOTE CONTROLLER MASTER/SLAVE SETTING ..... 07 - 140
2-15-3. INDOOR UNIT ADDRESS VERIFICATION ..... 07 - 141
2-16. NETWORK CONVERTOR ..... 07 - 142
2-16-1. MODEL: UTY-VTGX ..... 07 - 142
2-16-2. MODEL: UTY-VGGXZ1 ..... 07 - 143
2-17. SIGNAL AMPLIFIER ..... 07 - 144
2-18. MODBUS® CONVERTOR FOR VRF ..... 07 - 146
2-19. NETWORK CONVERTOR FOR LONWORKS® ..... 07 - 148
2-20. THERMOSTAT CONVERTOR ..... 07 - 149
2-21. DUCT STATIC PRESSURE SETTING ..... 07 - 151
2-22. ADMINISTRATIVE INDOOR UNIT SETTING ..... 07 - 152
2-22-1. SETTING METHOD ..... 07 - 153
2-23. ENERGY SAVING SETTING (SYSTEM CONTROLLER) ..... 07 - 156
2-24. ELECTRICITY CHARGE APPORTIONMENT SETTING (SYSTEM CONTROLLER, TOUCH PANEL CONTROLLER) ..... 07 - 163

1. SYSTEM SETTING

1-1. SYSTEM TYPE SETTING

Set the DIP switch to the corresponding system type as shown in the table.

Do not change DIP switch setting not specified below.

NOTE
＊Perform the system setting and address setting , before turning on the power.
＊For the air conditioner to operate properly, perform the correct setting.

■ OUTDOOR UNIT SETTING

(◆. . . Factory Setting)

<Step 1>

Set the outdoor unit address setting

(This function is available in VR-II, V-II series.)

SETTING FOR MASTER UNIT & SLAVE UNIT.

Set the DIP SW SET3-1 & 3-2.
Master : SET3-1 OFF, SET3-2 OFF ◆
Slave 1 : SET3-1 OFF, SET3-2 ON
Slave 2 : SET3-1 ON, SET3-2 OFF

<Step 2>

Set the number of slave unit

(This function is available in VR-II, V-II series.)

SETTING FOR MASTER UNIT ONLY.

Set the DIP SW SET3-3 & 3-4.
1 : SET3-3 OFF, SET3-4 OFF : Master x 1 ◆
2 : SET3-3 OFF, SET3-4 ON : Master x 1 Slave x 1
3 : SET3-3 ON, SET3-4 OFF : Mater x 1, Slave x 2

<Step 3>

Set the number of outdoor units installed

(This function is available in VR-II, V-II series.)

SETTING FOR MASTER UNIT & SLAVE UNIT.

Set the DIP SW SET5-1 & 5-2.
1 : SET5-1 OFF, SET5-2 OFF : Number of 1 ◆
2 : SET5-1 OFF, SET5-2 ON : Number of 2
3 : SET5-1 ON, SET5-2 OFF : Number of 3

<Step 4>

Refrigerant circuit address setting

SETTING FOR MASTER UNIT & SLAVE UNIT.

Set the Rotary SW REF AD x10 & x1.
For details of switch, refer to "1-2. ADDRESS SETTING".

<Step 5>

Terminal resistor setting

SETTING FOR MASTER UNIT & SLAVE UNIT.

Set the DIP SW SET5-4.
For details of switch, refer to "1-6. TERMINAL RESISTORSETTING".

<Step 6>

Indoor unit connection check

(This function is available in J-II series.)

For details, refer to "1-7. INDOOR UNIT CONNECTION CHECK".

<Step 7>

Function setting

FUNCTION SETTING

FUNCTION SETTING

■ INDOOR UNIT SETTING

Refer to the correct SW position for 2. Function Setting.

<Step 1>

Refrigerant circuit address setting

Set the Rotary SW REF AD x10 & x1.
For details, refer to "1-2. Address setting".

<Step 2>

Indoor unit address setting

Set the Rotary SW IU AD x10 & x1.
For details, refer to "1-2. Address setting".

<Step 3>

Remote controller address setting

Set the Rotary SW RC AD.
For details, refer to "1-2. Address setting".

<Step 4>

Function setting

■ RB UNIT SETTING

Refer to the correct SW position for 2. Function Setting.

(This function is available VR-II series.)

<Step 1>

Refrigerant circuit address setting

Set the Rotary SW REF AD x10 & x1.
For details, refer to "1-2. Address setting".

<Step 2>

RB unit address setting

Set the Rotary SW RB AD x10 & x1.
For details, refer to "1-2. Address setting".

■ REMOTE CONTROLLER SETTING

(Only for Wired remote controller and Simple remote controller)

Dual remote control setting

Set the SW 2 of DIP Switch 1.
For details, refer to "2. Function setting".

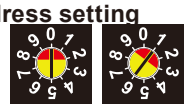
∗ Other than the unit above, refer to "2. Function setting" and the installation manual.

FUNCTION SETTING

1-2. ADDRESS SETTING

For this system, each address should be preset before operation.
Refer following table for outdoor unit, indoor unit, RB unit and each remote controller.

■ KINDS OF ADDRESS AND SETTING RANGE

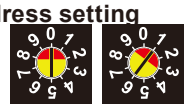
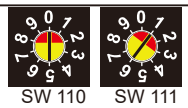
UNIT	SETTING		SETTING RANGE	TYPE OF SWITCH	REMARKS
Outdoor unit	A	Refrigerant circuit address	00 ~ 99	Setting example 01	Arbitrary numbers can be set in range of 00-99.
	B	Outdoor unit address *1	0 ~ 2	SET3	DIP SW SET3-1 DIP SW SET3-2
	C	Number of slave unit *1	0 ~ 2		DIP SW SET3-3 DIP SW SET3-4 (Master unit only)
	L	Number of outdoor units installed *1	1 ~ 3	SET5	DIP SW SET5-1 DIP SW SET5-2
		Terminal resistor	ON/OFF		DIP SW SET5-4 See the setting method 1-6.
Indoor unit	D	Refrigerant circuit address	00 ~ 99	**■ Manual address setting** Setting example 01 	Arbitrary numbers can be set in range of 00-99.
				■ Infrared address setting Set this switch to 00 at factory setting.	See the setting method 1-4-1.
				■ Wired R.C. address setting Set this switch to 00 at factory setting.	See the setting method 1-4-2.
				■ Simple R.C. address setting Set this switch to 00 at factory setting.	See the setting method 1-4-4. and 1-4-5.
				■ Wired R.C. (Touch panel) address setting Set this switch to 00 at factory setting.	See the setting method 1-4-3.
				■ Automatic address setting Set this switch to 00 at factory setting.	See the setting method 1-5-2.
	E	Indoor unit address	00 ~ 63	**■ Manual address setting** Setting example 12	Arbitrary numbers can be set in range of 00-63.
				■ Infrared address setting Set this switch to 00 at factory setting.	See the setting method 1-4-1.
				■ Wired R.C. address setting Set this switch to 00 at factory setting.	See the setting method 1-4-2.
				■ Simple R.C. address setting Set this switch to 00 at factory setting.	See the setting method 1-4-4. and 1-4-5.
				■ Wired R.C. (Touch panel) address setting Set this switch to 00 at factory setting.	See the setting method 1-4-3.
				■ Automatic address setting Set this switch to 00 at factory setting.	See the setting method 1-5-2.
	F	Remote controller address	0 ~ 15	**■ Manual address setting** Setting example 10	3-wire type R.C. can be set in range of 0-15.
				■ Automatic address setting Set this switch to 0 at factory setting.	2-wire type only

*Set up after confirming the details of each unit.

*1: This function is available VR-II and V-IIseries

FUNCTION SETTING

■ KINDS OF ADDRESS AND SETTING RANGE

UNIT	SETTING		SETTING RANGE	TYPE OF SWITCH	REMARKS
RB unit	O	Refrigerant circuit address	00 ~ 99	**■ Manual address setting** Setting example 01  REF AD x10 REF AD x1	Arbitrary numbers can be set in range of 00-99. See the setting method 2-9.
				■ Automatic address setting Set this switch to 00 at factory setting.	See the setting method 1-5-3.
	P	RB unit address	00 ~ 63	**■ Manual address setting** Setting example 12 RB AD x10 RB AD x1	Arbitrary numbers can be set in range of 00-63. See the setting method 2-9
				■ Automatic address setting Set this switch to 00 at factory setting.	See the setting method 1-5-3.
Touch panel controller	G	Controller / Convertor address	00 ~ 15 *1		See the setting method 2-14.
Network convertor	H	Controller / Convertor address	00 ~ 15 *1	Setting example 01  SW 110 (10 digit) SW 111 (1 digit)	See the setting method 2-16.
		Refrigerant circuit address	00 ~ 99		
Wired remote controller	I	Dual remote control	ON/OFF	SW 2 of DIP Switch 1	See the setting method 2-10.
Simple remote controller	I	Dual remote control	ON/OFF	SW 2 of DIP Switch 1	See the setting method 2-11. and 2-15.
Signal amplifier	K	Signal amplifier address	1 ~ 8	**■ Manual address setting**	See the setting method 2-17.
				■ Automatic address setting Set to 1 at factory setting.	See the setting method 1-5-1
Modbus® convertor	Q	Controller / Convertor address	00 ~ 15 *1		See the setting method 2-18.
Network convertor for LonWorks®	M				See the setting method 2-19.
Central remote controller	N				See the setting method 2-13.
Wired remote controller (Touch panel)	F	Remote controller address	1 ~ 32 *2	**■ Manual address setting**	See the setting method 2-14-1.
			0 ~ 15	**■ Automatic address setting**	
	J	Dual remote control	ON/OFF		See the setting method 2-14-2.

*Set up after confirming the details of each unit.

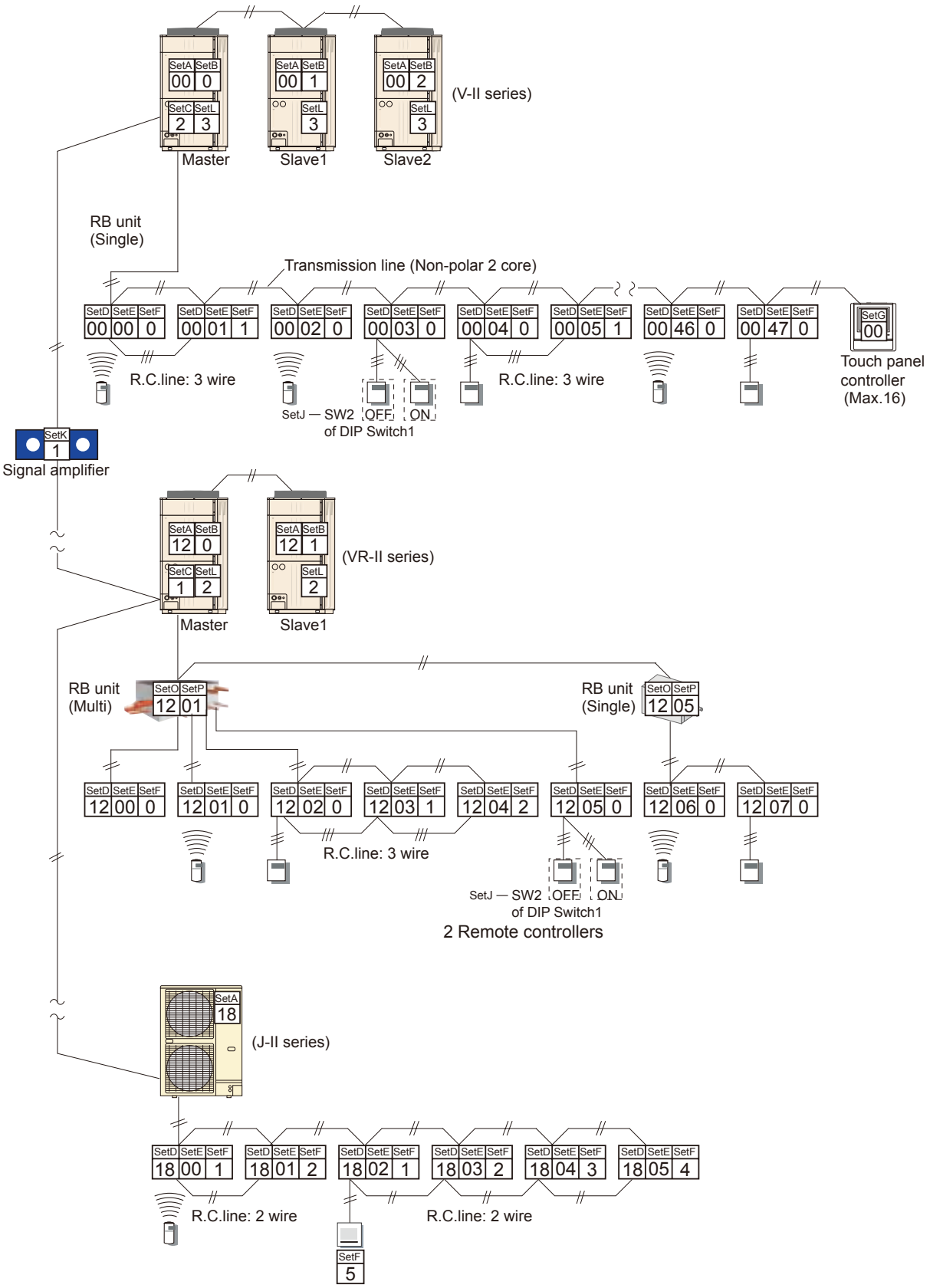
*1: The sum total of the Touch panel controller, Central remote controller and Network convertor for LonWorks® is a maximum of 16.
NOTE: Address of the Touch panel controller, Central remote controller, Modbus® convertor and Network convertor for LONWORKS® must not be same.

*2: The address can be set from 1 to 32. However, do not set the same number as that for the remote-controller address of an indoor unit connected using the same remote-control cable.
Set "Remote controller address" of Wired remote controller (Touch panel) in Manual address setting only. It is not necessary to set in Automatic address setting.

FUNCTION SETTING

FUNCTION SETTING

■ SETTING EXAMPLE

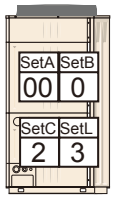


FUNCTION SETTING

FUNCTION SETTING

■ SETTING EXAMPLE

● Outdoor unit setting



SetA: Refrigerant circuit address
(Rotary SW REF AD x10, x1)
SetB: Outdoor unit address
(DIP SW SET3-1, 3-2)
SetC: Number of slave unit
(DIP SW SET3-3, 3-4)
<Master unit only>
SetL: Number of outdoor units installed
(DIP SW SET5-1, 5-2)

● Touch panel controller setting

SetG: Controller address (Max.16)

● Network convertor setting

SetH: Refrigerant circuit address
(for Single split AC:Max.100)

● Central remote controller setting

SetN: Controller address (Max.16)

● Signal amplifier setting

SetK: Signal amplifier address

● Indoor unit setting

SetD	SetE	SetF
63	06	0

SetD		SetE		SetF
Refrigerant circuit address		Indoor unit address		Remote controller address
REF AD X10	REF AD X1	IU AD X10	IU AD X1	RC AD

● RB unit setting

SetO	SetP
63	06

SetO		SetP	
Refrigerant circuit address		RB unit address	
REF AD X10	REF AD X1	RB AD X10	RB AD X1

● Wired, Simple remote controller setting

SetI: Dual remote control
(SW2 of DIP Switch1)

● Network convertor for LonWorks® setting

SetM: Convertor address

● Wired remote controller (Touch panel) setting

SetF: Remote controller address
SetI: Dual remote controi

＊Instructions for setting up the address

1. The refrigerant circuit address of the indoor units, outdoor units and RB units can be set to arbitrary numbers in the range of 0 to 99.
2. The Indoor unit address and RB unit address can be set to arbitrary numbers in the range of 0 to 63.
3. In case of 3 wire type of R.C., set the remote controller address in the order of 0,1,2, . . . ,15.(Blank is not allowed)
4. In case of 2 wire type of R.C.(Automatic address setting), set the remote controller address in the 0.
5. In case of 2 wire type of R.C.(Manual address setting), can be set to arbitrary numbers in the range of 1 to 15. Cannot be set to 0.
6. Touch panel controller address can be set to arbitrary numbers in the range of 0 to 15.

7 : The sum total of the Touch panel controller, Central remote controller and Network convertor for LonWorks® is a maximum of 16.

8. Keep Address No. of Touch Panel Controller from overlapping the controller (Central remote controller and Network convertor for LonWorks®) connected to the same VRF Network system.

FUNCTION SETTING

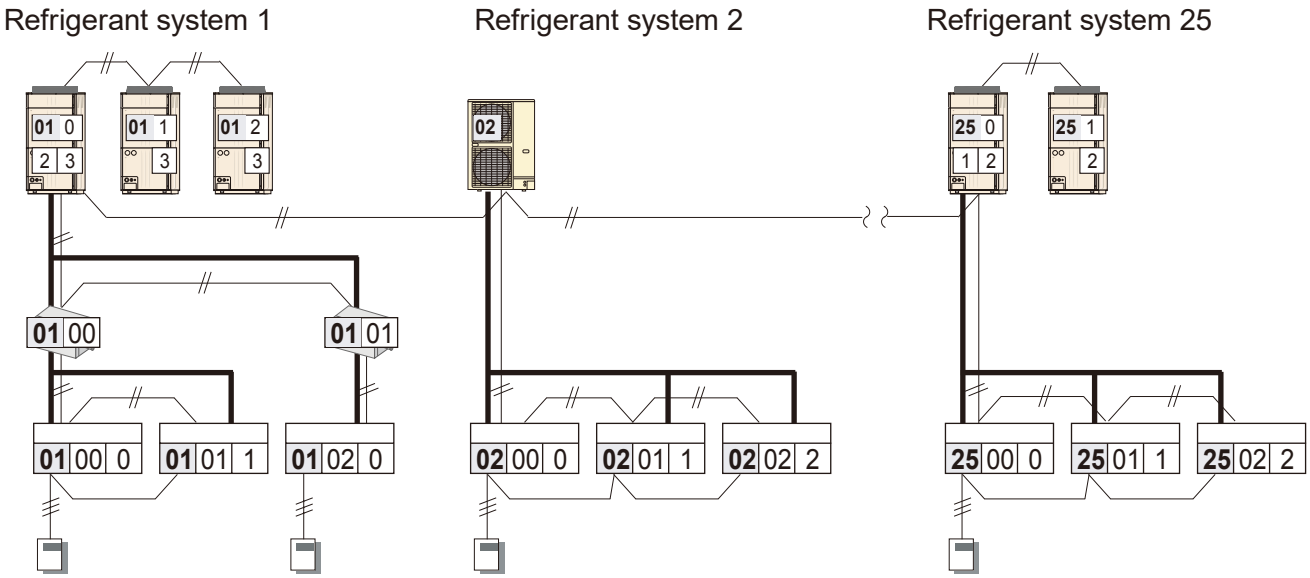
1-3. MANUAL ADDRESS SETTING METHOD

■ ADDRESS SETTING DESCRIPTION

● Refrigerant circuit address (Set A, Set D and Set O)

In case of 2 or more refrigerant system in VRF network system, each refrigerant system should be set an exclusive refrigerant circuit address.

Refrigerant system : It means same refrigerant circuit which has connected between outdoor unit and indoor unit by piping.



● Example

Outdoor unit (Set A), Indoor unit (Set D),
RB unit (Set O)

Refrigerant circuit address	Rotary SW setting	
	REF AD x10	REF AD x1
01	0	1
11	1	1
25	2	5
50	5	0

Setting range 00 - 99(Arbitrary numbers can be set)

All the indoor unit, all the RB unit and outdoor unit in same refrigerant circuit should be set same address.

FUNCTION SETTING

● Outdoor unit address (Set B)

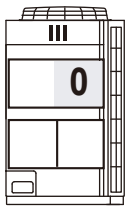
This function is available VR-II and V-II series.

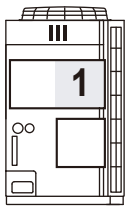
Set the outdoor unit address for each outdoor unit.

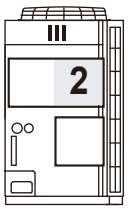
Outdoor unit is preset "0" , at factory setting.

No change to this setting needed for 1 Outdoor Unit systems.

In case of 2 or 3 outdoor units connected in same refrigerant circuit, set the slave unit which has installed farther from master unit to Slave2 setting "2".







Outdoor unit address		Master	Slave1	Slave2
		0	1	2
		SW SET3-1 OFF SW SET3-2 OFF	SW SET3-1 OFF SW SET3-2 ON	SW SET3-1 ON SW SET3-2 OFF

Outdoor unit address		0 ◆	1	2
DIP SW	SET3-1	OFF	OFF	ON
	SET3-2	OFF	ON	OFF

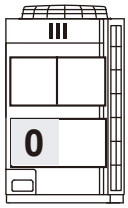
(◆. . . Factory Setting)

● Number of slave unit (Set C)

This function is available VR-II and V-II series.

(Set at Master unit PCB only)

Set the number of slave unit on Master unit PCB.

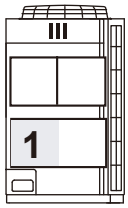


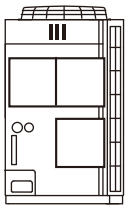
Number of slave unit

0

SW SET3-3 OFF
SW SET3-4 OFF

Master



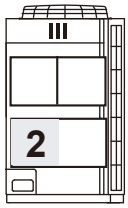


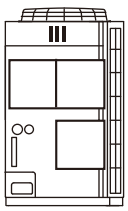
Number of slave unit

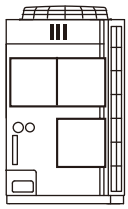
1

SW SET3-3 OFF
SW SET3-4 ON

Master **Slave 1**







Number of slave unit

2

SW SET3-3 ON
SW SET3-4 OFF

Master **Slave 1** **Slave 2**

Number of slave unit		0 ◆	1	2
DIP SW	SET3-3	OFF	OFF	ON
	SET3-4	OFF	ON	OFF

(◆. . . Factory Setting)

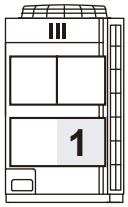
FUNCTION SETTING

● Number of outdoor units installed (Set L)

This function is available VR-II and V-II series.

The number of outdoor units installed in one refrigerant system must be set.

Set for all outdoor units.



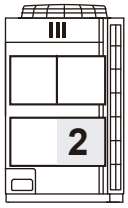
Master

Number of outdoor unit

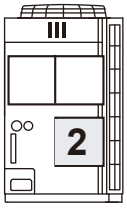
1

SW SET5-1 OFF

SW SET5-2 OFF



Master



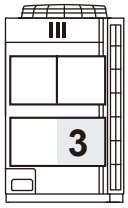
Slave 1

Number of outdoor unit

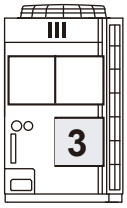
2

SW SET5-1 OFF

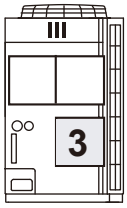
SW SET5-2 ON



Master



Slave 1



Slave 2

Number of outdoor unit

3

SW SET5-1 ON

SW SET5-2 OFF

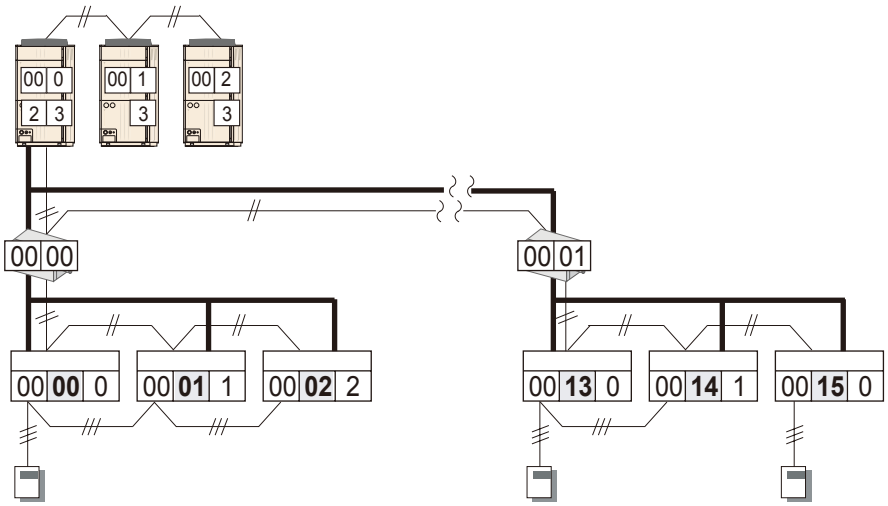
Number of outdoor unit		1 ◆	2	3
DIP SW	SET5-1	OFF	OFF	ON
	SET5-2	OFF	ON	OFF

(◆. . . Factory Setting)

FUNCTION SETTING

● Indoor unit address (Set E)

Each indoor unit on the same refrigerant system should be set to a different indoor unit address.



Indoor unit address	Rotary SW setting	
	IU AD x10	IU AD x1
03	0	3
11	1	1
30	3	0
47	4	7

*Setting range 00 - 63(Arbitrary numbers can be set)

*Do not set indoor unit address to the range of 64 from 99.

*Do not set the same address number to two or more indoor units.

FUNCTION SETTING

FUNCTION SETTING

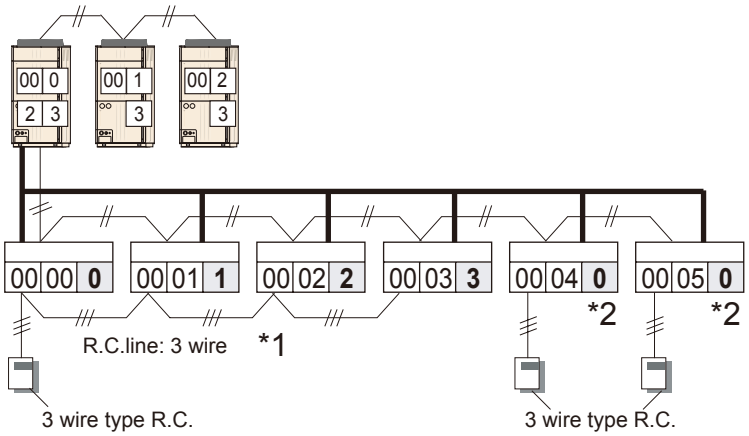
● Remote controller address (Set F)

One individual remote controller can control up to a max of 16 indoor units with a connecting cable.

All units connected to the same remote control area considered a remote control group.

i) 3 wire type

Only for manual address setting



Remote controller address	Rotary SW setting
	RC AD
0	0
1	1
11	B
15	F

Remote controller address	Rotary SW setting
	RC AD
0	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	A
11	B
12	C
13	D
14	E
15	F

*1 : Set the remote controller address in the order of 0,1,2, . . . ,15.(Blank is not allowed)

*2 : For units without a connected remote controller, make sure that the remote controller address is set to “0” (factory setting).

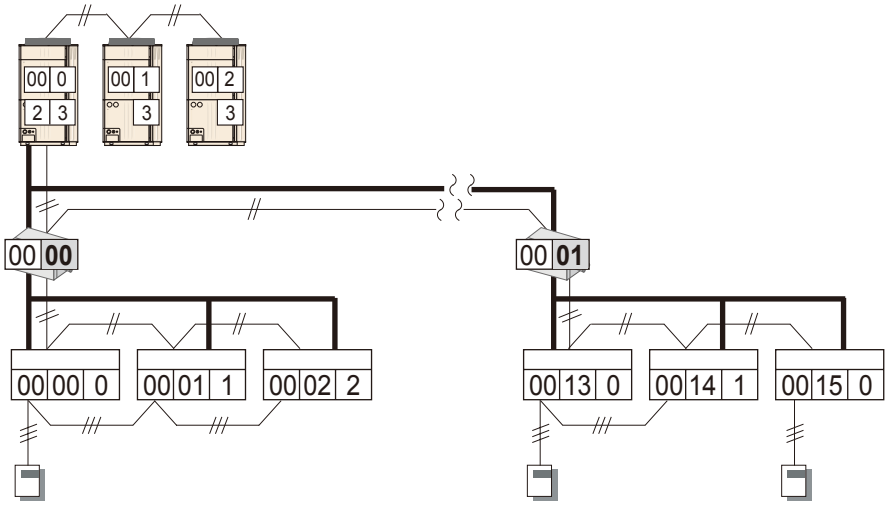
ii) 2 wire type

Addresses will be automatically set when initially starting up this unit. In such a case, do not change the remote controller address for the indoor unit, and keep it at the initial setting of 0.

FUNCTION SETTING

● RB unit address (Set P)

Each RB unit in same refrigerant system should be set an exclusive RB unit address.



RB unit address	Rotary SW setting	
	RB AD x10	RB AD x1
03	0	3
11	1	1
30	3	0
47	4	7

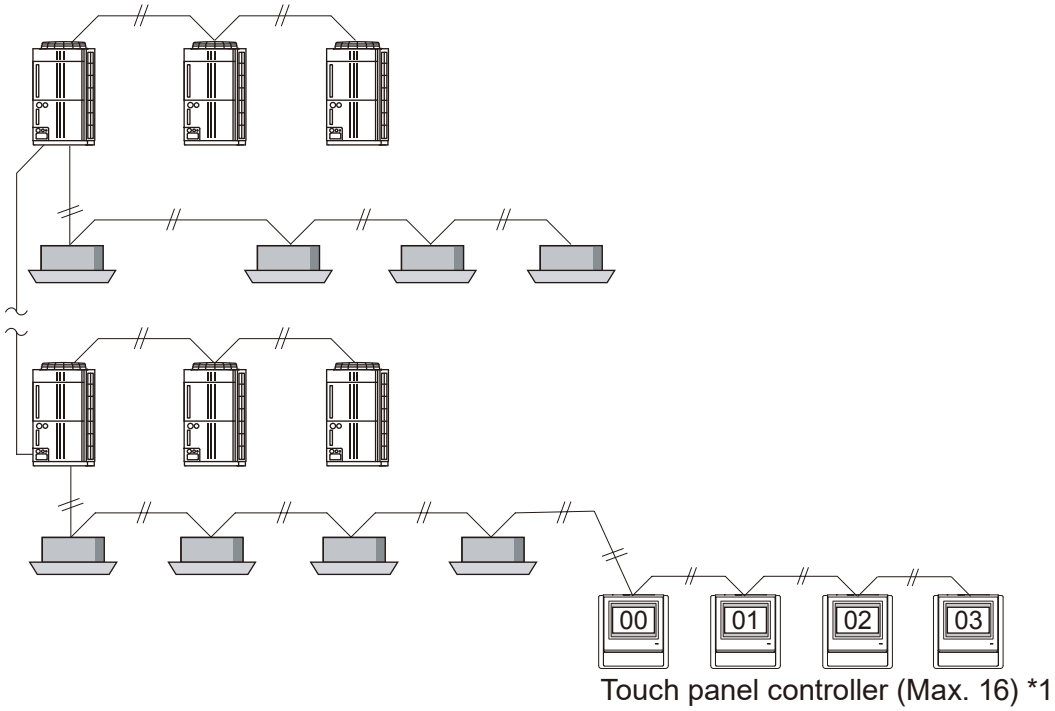
*Setting range 00 - 63(Arbitrary numbers can be set)

*Do not set RB unit address to the range of 64 from 99.

*Do not set the same address number to two or more RB units.

FUNCTION SETTING

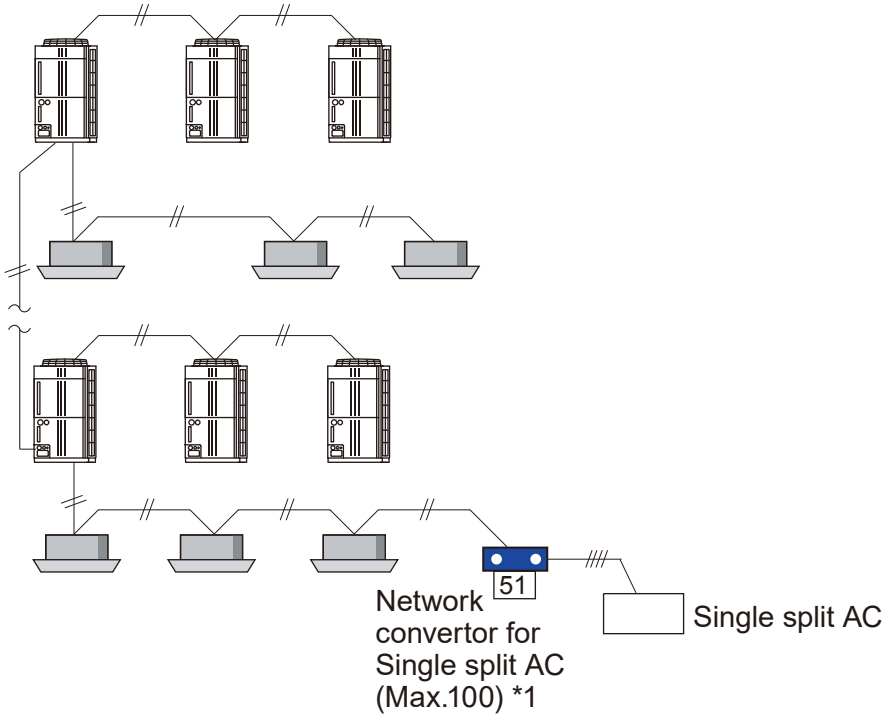
● Touch panel controller setting (Set G)



NOTE: Set Touch panel controller address first, to conduct the initial setting of it.
Refer to the "setting manual" for details.

*1 : The total of the Touch panel controller, Central remote controller and Network convertor for LONWORKS® is a maximum of 16.

● Network convertor setting (Set H)



NOTE: Set the Rotary SW 110 and SW 111 on network convertor PCB.

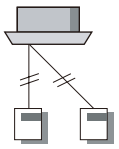
*1 : When connecting the Network convertor for Single split AC , set up the number so that the Refrigerant circuit address number of outdoor unit and indoor unit does not overlap .
And the sum total of the Refrigerant circuit address of Network convertor for Single split AC and the Refrigerant circuit address of the outdoor unit and the indoor unit is a maximum of 100.

FUNCTION SETTING

● Dual remote control switch for Wired remote controller, Simple remote controller (Set I)

When 2 wired remote controllers are connected to the remote control group, select the.

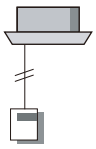
- Slave remote controller cannot be used for timer setting.
- Last command is priority.



[Master] [Slave]

SW2 OFF ON
of DIP Switch 1

Remote controller unit PCB
Setting by SW 2 of DIP Switch 1



[Master]

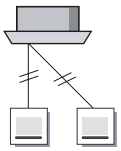
SW2 OFF
of DIP Switch 1

When only 1 remote controller will connect, this SW 2 of DIP Switch 1 must be set OFF.

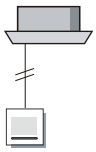
● Dual remote control switch for Wired remote controller (Touch panel) (Set J)

When 2 wired remote controllers are connected to the remote control group, select the [Master] or [Slave] on the “RC Master / Slave Setting” screen.

- Slave remote controller cannot be used for timer setting.
- Last command is priority.

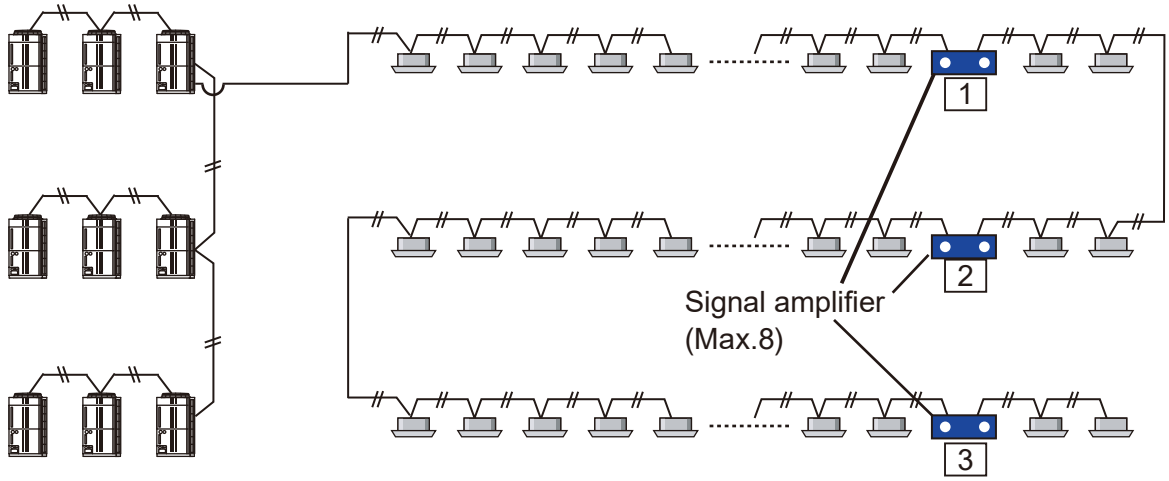


[Master] [Slave]



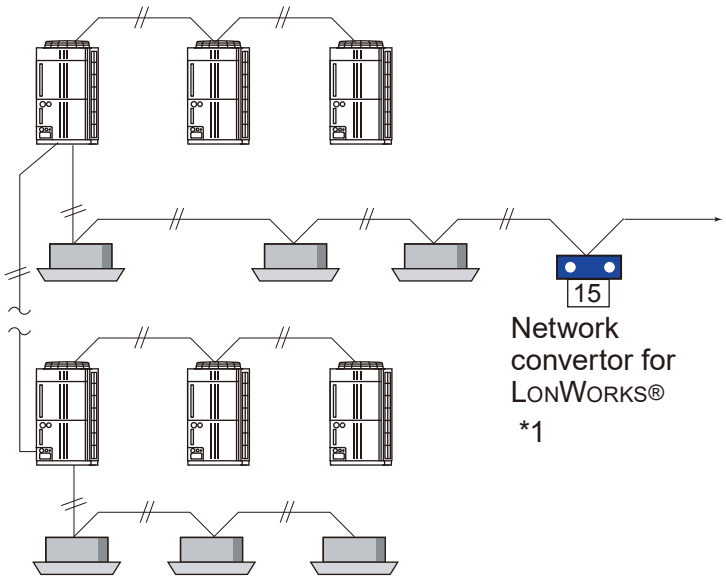
[Master]

● Signal amplifier address (Set K)



FUNCTION SETTING

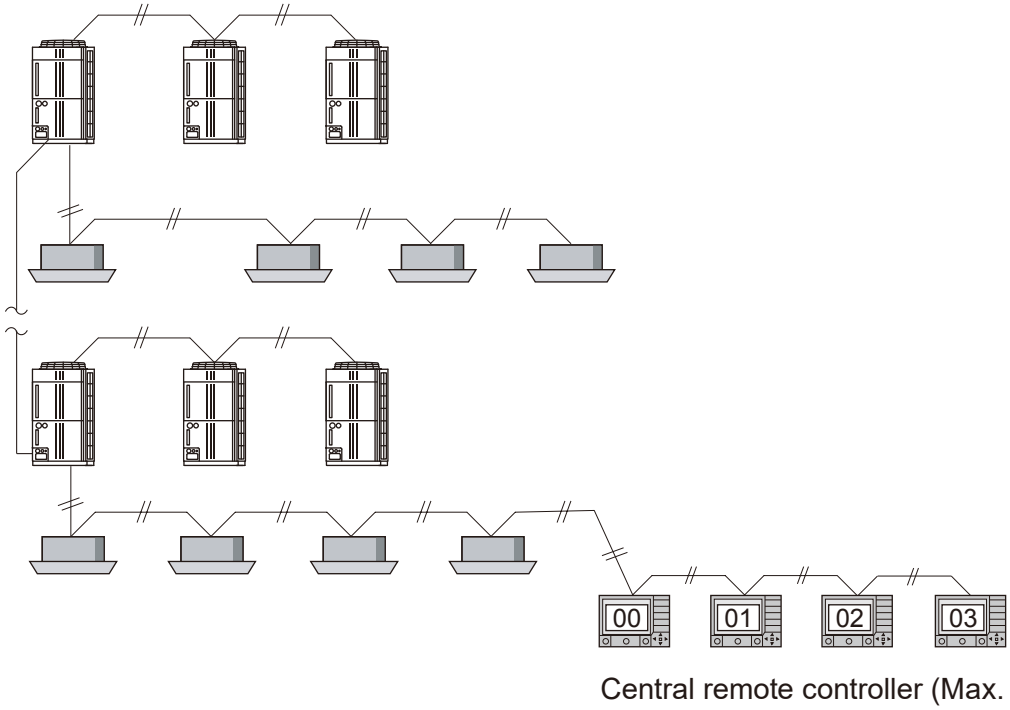
● Network convertor for LonWorks® setting (Set M)



NOTE: Setting up more than one Network Convertor in one VRF network system is prohibited.

*1 : The total of the Touch panel controller, Central remote controller and Network convertor for LonWorks® is a maximum of 16.

● Central remote controller setting (Set N)



NOTE: Set Central remote controller address first, to conduct the initial setting of it.
Refer to the "setting manual" for details.

*1 : The total of the Touch panel controller, Central remote controller and Network convertor for LonWorks® is a maximum of 16.

FUNCTION SETTING

1-4. ADDRESS SETTING BY REMOTE CONTROLLER

1-4-1. WIRELESS REMOTE CONTROLLER

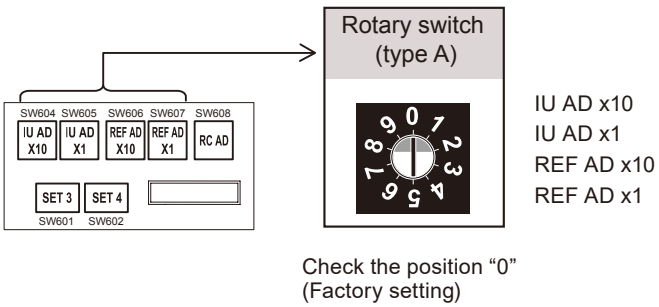
- A wireless remote controller is required to set the infrared address setting.
- This function is available in all indoor unit with infrared signal receiver.
- Infrared address setting for duct type and cassette type models can be made possible by using the optional IR receiver unit.

  NOTE: Since the beeping sound is generated by the indoor unit PCB, it may be difficult to hear on some units.
- The indoor unit's refrigerant circuit address and indoor unit address can be set performing the infrared address setting.
- When remote controller address setting is required, set by the rotary switch on the indoor unit's PCB.

■ PREPARATION

(1) Set the manual address setting switch on the indoor unit PCB to "00" (factory setting).

(This process is not needed for new units(this is the factory setting).)

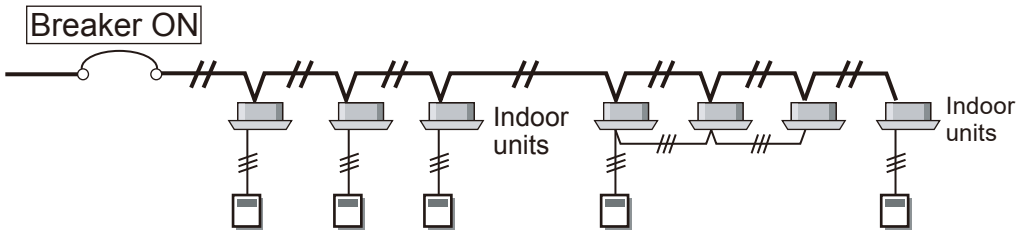


Check the position "0"
(Factory setting)

- If any of the switches is positioned at a value other than 0, this function will not activate.
- The layout of the switches differs depending on the type of the indoor unit. (Refer to 2-2.)

(2) Turn on the power to the indoor unit.

* By turning on the power indoor units initializes EEV, so make sure the pressure testing and vacuum drying have been conducted before turning on the power.
* Also check again to make sure no wiring mistakes were made before turning on the power.

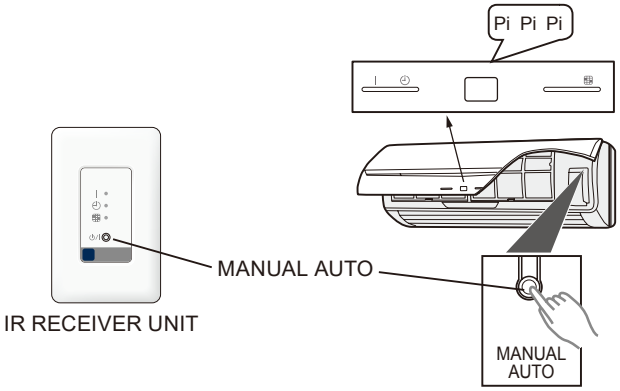


FUNCTION SETTING

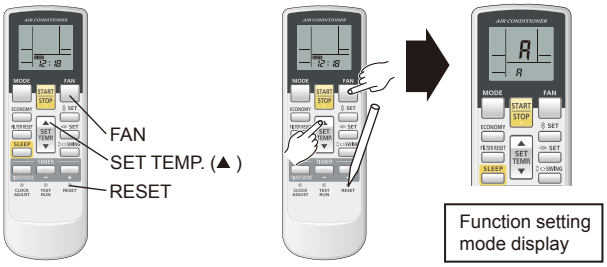
FUNCTION SETTING

■ SWITCHING SELECTION OF ADDRESS SETTING MODE

(3) Press and hold the “MANUAL/AUTO” button for 3 seconds.



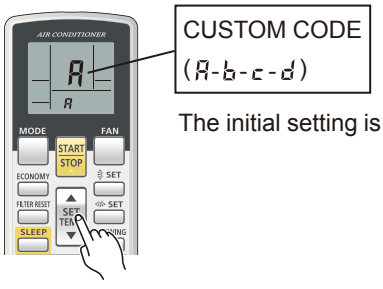
(4) Press and hold the “FAN” and the “ SET TEMP. ▲ ” buttons. While holding these 2 buttons, press the "RESET" button.



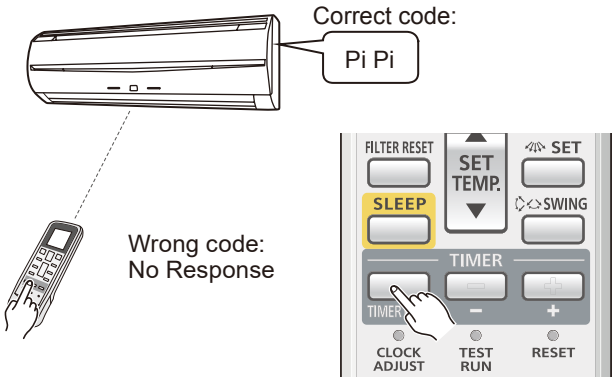
- The position of the “MANUAL/AUTO” button varies depending on the model. Refer to the operation manual for the button position on your unit.
- Indoor unit will display on "TIMER"(ORANGE) and "FILTER "(RED) light (1sec ON / 1sec OFF) by continuously pressing the "MANUAL/AUTO" for 10 sec or more. In this case release the button or turn off the power.
- An explanation of the displayed information as shown below.

■ SELECTION AND CONFIRMATION OF CUSTOM CODE

(5) Press the “ SET TEMP. ▲ ” or “ SET TEMP. ▼ ” buttons to select the custom code that matches the setting with the indoor unit.By selecting the appropriate custom code, the communication between the indoor unit and the wireless RC become possible.



(6) Press the “TIMER MODE" button to send the code to the indoor unit.

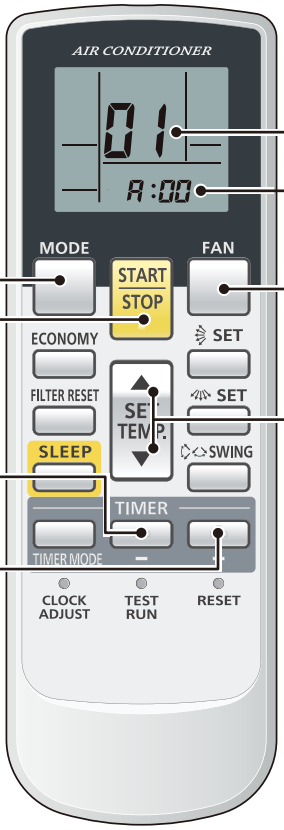


FUNCTION SETTING

FUNCTION SETTING

■ BUTTON NAME AND FUNCTION

- Refer to “1-2" for an outline of the address setting.
- It does not matter whether the refrigerant circuit address or indoor unit address is set first. (The method shown here sets the indoor unit address first.)
- During address setting mode, indoor unit will not recognize any remote controller operation commands.
- **NOTE:** Address code display is as follows (operation lamp display)



Function number

01 --- Indoor unit address

02 --- Refrigerant circuit address

MODE button

- Start the address setting mode
- Changes the address display digits

Setting number

Setting number

* Indoor unit address valid range 00-63
Refrigerant circut address valid range 00-99

START/STOP button

Transmits address setting

FAN button

Switches between the setting number (bottom line) and function number (top line)

TIMER set (-) button

Reconfirmation of address setting.

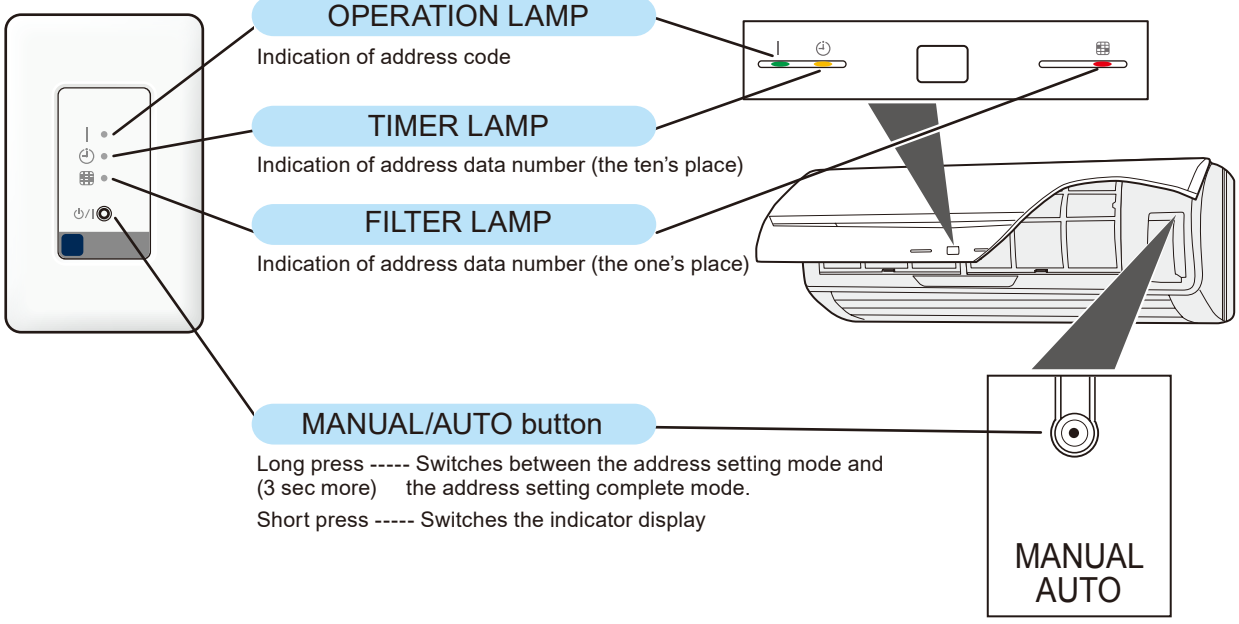
SET TEMP. " ▲ " and " ▼ " button

Increases and decreases the displayed number

TIMER set (+) button

Confirmation of address setting.

IR RECEIVER UNIT



OPERATION LAMP

Indication of address code

TIMER LAMP

Indication of address data number (the ten’s place)

FILTER LAMP

Indication of address data number (the one’s place)

MANUAL/AUTO button

Long press (3 sec more) ----- Switches between the address setting mode and the address setting complete mode.

Short press ----- Switches the indicator display

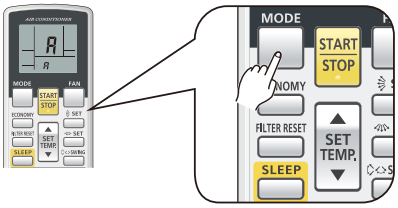
	INDOOR UNIT ADDRESS DISPLAY	REFRIGERANT CIRCUIT ADDRESS DISPLAY
OPERATION LAMP	ON / OFF (Light continuously)	ON / OFF (Light 1 sec ON / 1 sec OFF)

FUNCTION SETTING

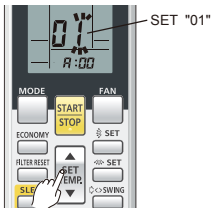
■ ADDRESS SETTING

● INDOOR UNIT ADDRESS SETTING

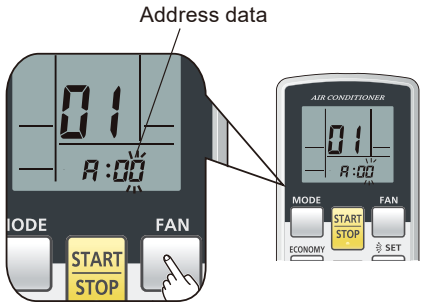
(7) Press the “MODE” button to access the address setting mode.



(8) Make sure the function number is ‘01’. If the number is other than ‘01’, press the “ ▲ ” or the “ ▼ ” buttons to alter.

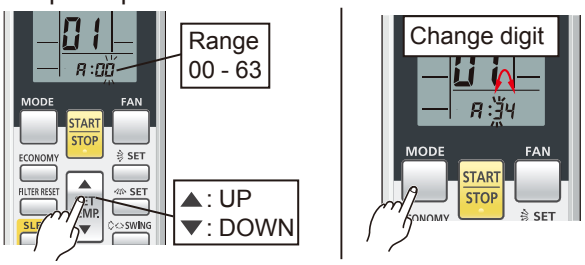


(9) Press the “FAN” button to access the address data setting mode. The address data will flash once this button is pressed.

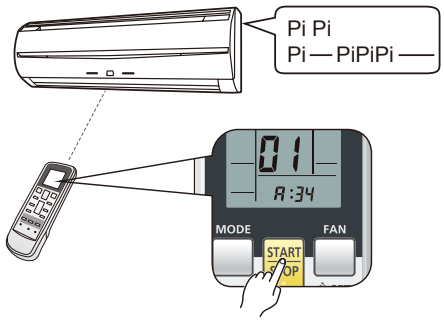


(10) Press the “ ▲ ” or the “ ▼ ” buttons to adjust the address data. The indoor unit address range is between 00 and 63.

Each time the “MODE” button is pressed, it switches between the one' place and the ten's place positions.



(11) Press the “START/STOP” button once to send the information. A beeping noise will be heard if the command is accepted.

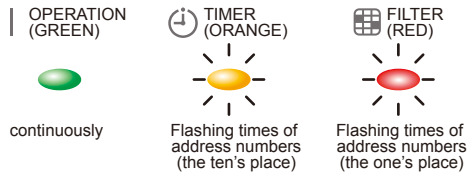


∗In the following cases the setting signal is not read and a buzzer sounds.

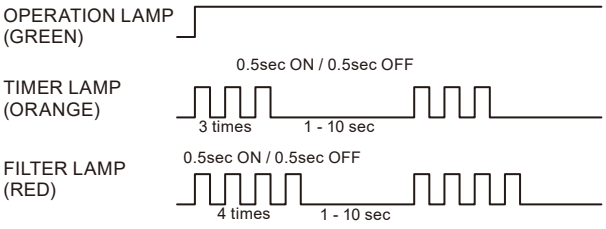
The indoor unit address No. is set out of range (64 or more) : Pi Pi Pi Pi Pi

The setting of the rotary switch on the PCB is not "00" : Pi Pi Pi Pi Pi

(12) Indoor unit will display the indoor unit address data number on "TIMER ◴ "(ORANGE) and "FILTER ▦ "(RED) light.



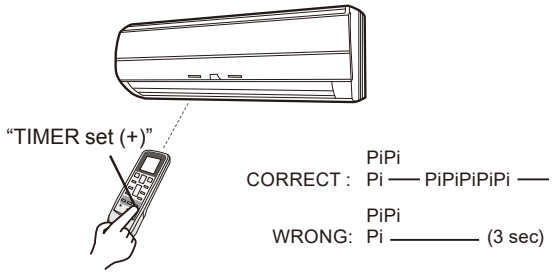
(Example) ADDRESS : 34



∗ ADDRESS 0 setting will not indicate TIMER LAMP and FILTER LAMP.

● Confirmation of address setting

(13) Press the “TIMER set (+)” button.



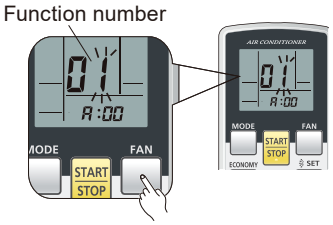
FUNCTION SETTING

FUNCTION SETTING

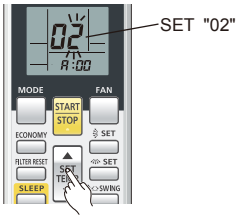
● REFRIGERANT CIRCUIT ADDRESS SETTING

NOTE: The refrigerant circuit address is displayed when the following operations are performed even while indoor unit address is displayed on LED display of indoor unit.

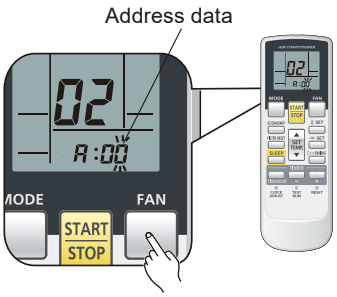
(14) Press the “FAN” button to select the function number.



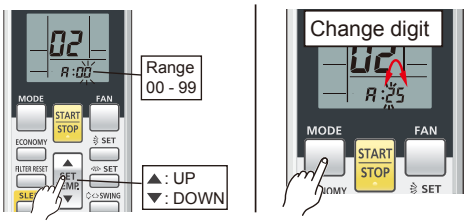
(15) Press the " ▲ " or the " ▼ " button to adjust function number 02.



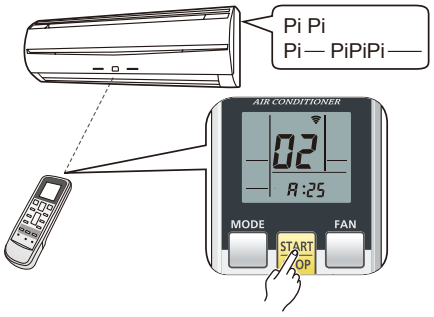
(16) Press the “FAN” button to access the address data setting mode. The address data will flash once this button is pressed.



(17) Press the " ▲ " or the " ▼ " buttons to adjust the address data. The refrigerant circuit address range is between 00 and 99. Each time the "MODE" button is pressed, it switches between the one's place and the ten's place positions.

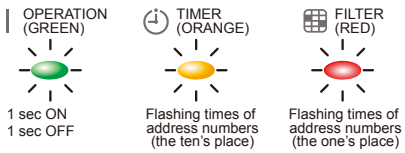


(18) Press the “START/STOP” button once to send the information. A beeping noise will be heard if the command is accepted.

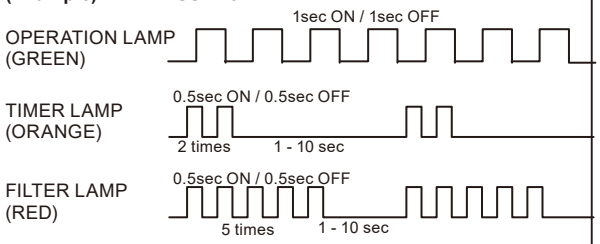


* In the following cases the setting signal is not read and a buzzer sounds.
  The setting of the rotary switch on the PCB is not "00" : Pi Pi Pi Pi Pi

(19) Indoor unit will display the refrigerant circuit address data number on "TIMER ◴ "(ORANGE) and "FILTER ▦ "(RED) light.



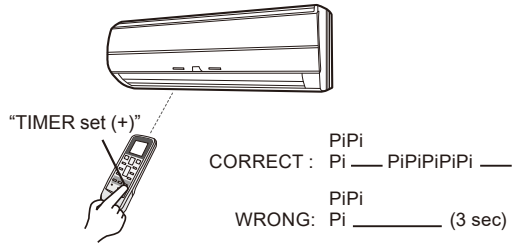
(Example) ADDRESS : 25



* ADDRESS 0 setting will not indicate TIMER LAMP and FILTER LAMP.
* ADDRESS display will automatically switched from indoor unit address to refrigerant circuit address.

● Confirmation of address setting

(20) Press the “TIMER set (+)” button.

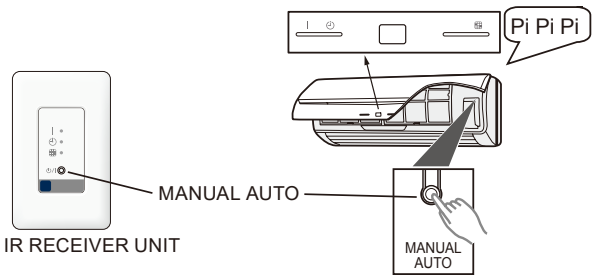


FUNCTION SETTING

FUNCTION SETTING

■ COMPLETION OF ADDRESS SETTING MODE

(21) Press and hold the “MANUAL/AUTO ｜／o ” button for 3 seconds.



＊ Each LED may be of a different brightness, but the content of the message does not change.

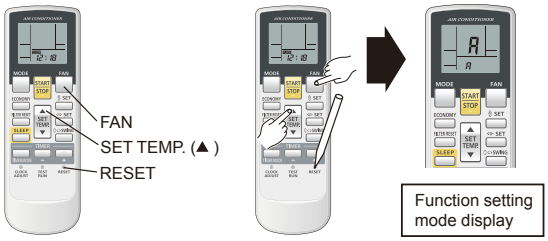
(22) Press the “RESET” button.

After pressing the RESET button, set the custom code again if b,c,d setting.

∗ The address setting signal is not received after switched address setting completion mode. (Pi Pi Pi Pi Pi)
∗ Press the "MANUAL/AUTO ｜／o " button again for 3 sec to return to if required to return to the address setting mode.

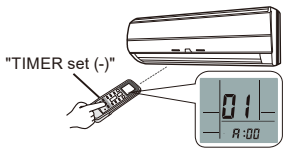
■ RECONFIRMATION OF ADDRESS SETTING

(23) Press and hold the “FAN” and the “ SET TEMP. ▲ ” buttons. While holding these 2 buttons, press the "RESET" button.

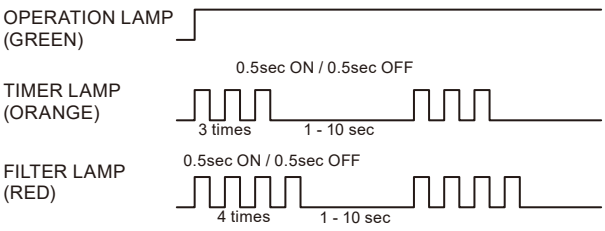


● INDOOR UNIT ADDRESS SETTING

(24) Make sure the function number is "01"
Refer to (8)
Press the “TIMER set (-)” button.

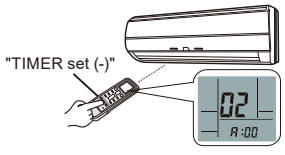


(Example) ADDRESS : 34

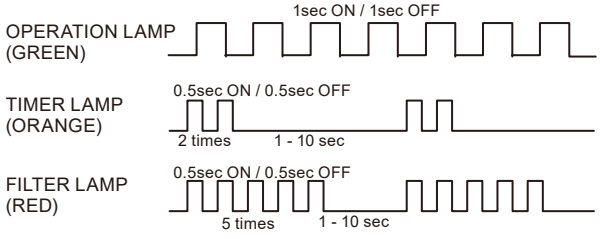


● REFRIGERANT CIRCUIT ADDRESS SETTING

(25) Make sure the function number is "02"
Refer to (15)
Press the “TIMER set (-)” button.

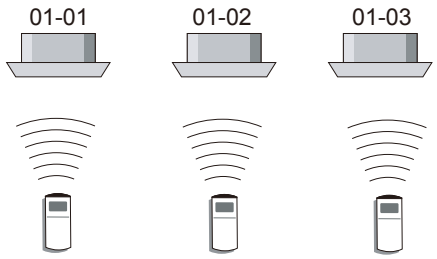


(Example) ADDRESS : 25



FUNCTION SETTING

■ SETTING UP EACH INDOOR UNIT



Repeat steps (1) through to (25). Steps (1) through to (6) and (21) to (25) only need to carried out if the custom code is different to the factory setting of “A”.

■ RESET THE POWER AFTER SETTING UP ADDRESS OF ALL INDOOR UNITS

Important

- **If the reset is not performed, address cannot be read in normal operation.**
- **After all the addresses have been set, the circuit breaker needs to be switched off for at least 2 minutes.**

After the 2 minutes has passed, power can be restored.

- **The set address is stored in the PCB and will remain in memory even when the power is turned off.**

However, the address can be reset after power reset (if needed).

Record the address set in the indoor unit on a label, etc., and affix the label to the unit so it can be used for after-sales service operations.

∗ Address 0 setting will not indicate TIMER LAMP and FILTER LAMP.

∗ Once the "RESET" button is pressed on the remote controller, the OPERATION MODE will be set in the "AUTO MODE".
Adjust the OPERATION MODE to either "COOLING" or "HEATING" before trying to operate the air conditioner.

∗ **NOTE:** If CUSTOM CODE is set to anything other than "A" ,the remote control must be set accordingly to the .

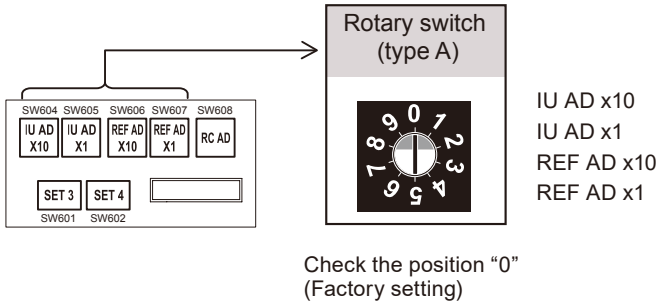
FUNCTION SETTING

1-4-2. WIRED REMOTE CONTROLLER (UTY-RNKU)

- Indoor unit addresses and refrigerant circuit addresses can be set up using wired remote controllers.
- This function allows setting the addresses of all indoor units to which a wired remote controller is being connected.
- This function cannot be used to set up remote controller addresses.
  Be sure to set them up using the rotary switches on the PCB of each indoor unit. (Refer to 1-3.)
- This function cannot be used on the slave units.

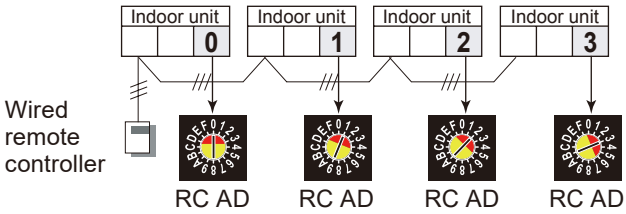
■ PREPARATION

1) Make sure that all indoor unit address switches (IU AD x10, IU AD x1) and refrigerant circuit address switches (REF AD x10, REF AD x1) on the PCB of each indoor unit are set at 0 (factory setting).



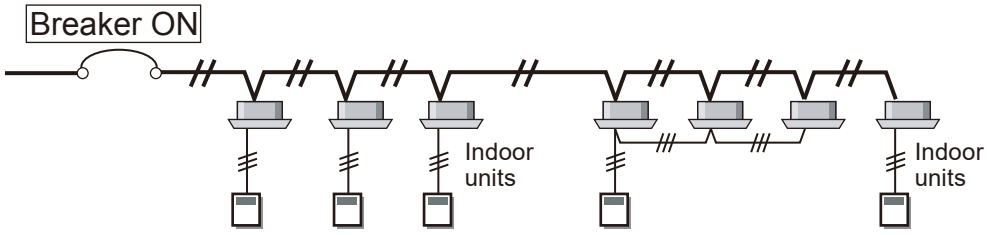
- If any of the switches is positioned at a value other than 0, this function will not activate.
- The layout of the switches differs depending on the type of the indoor unit. (Refer to 2-2.)

2) If multiple indoor units are connected to a single wired remote controller, make sure to manually set up the remote controller address (RC AD) on the PCBs of the indoor units. (Refer to 1-3.)
   Ex.) When four indoor units are connected



3) Turn on the power to the indoor unit.

- By turning on the power indoor units initializes EEV, so make sure the piping air-tight test and vacuuming have been conducted before turning on the power.
- Also check again to make sure no wiring mistakes were made before turning on the power.

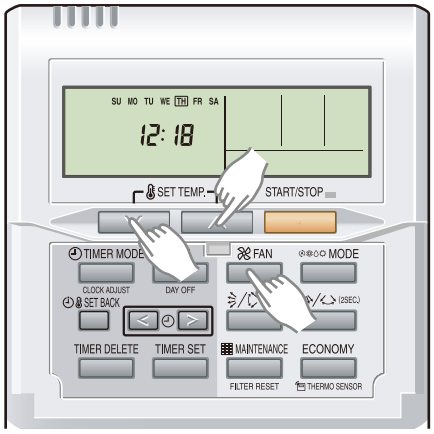


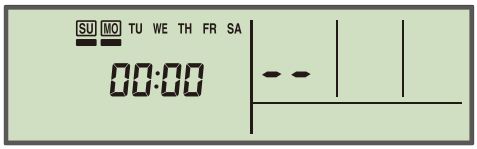
FUNCTION SETTING

FUNCTION SETTING

■ SWITCHING SELECTION OF ADDRESS SETTING MODE

4) To activate the address setting mode, hold down the three buttons of SET TEMP. V, SET TEMP. Λ and FAN at the same time for 5 seconds or longer.





Address setting mode initial display

■ BUTTON NAME AND FUNCTION

- Refer to “5-2” for an outline of the address setting.
- It does not matter whether the refrigerant circuit address or indoor unit address is set first. (The method shown here sets the indoor unit address first.)
- During address setting mode, indoor unit will not recognize any remote controller operation commands.

Function number

01---Indoor unit address
02---Refrigerant circuit address

Remote controller address

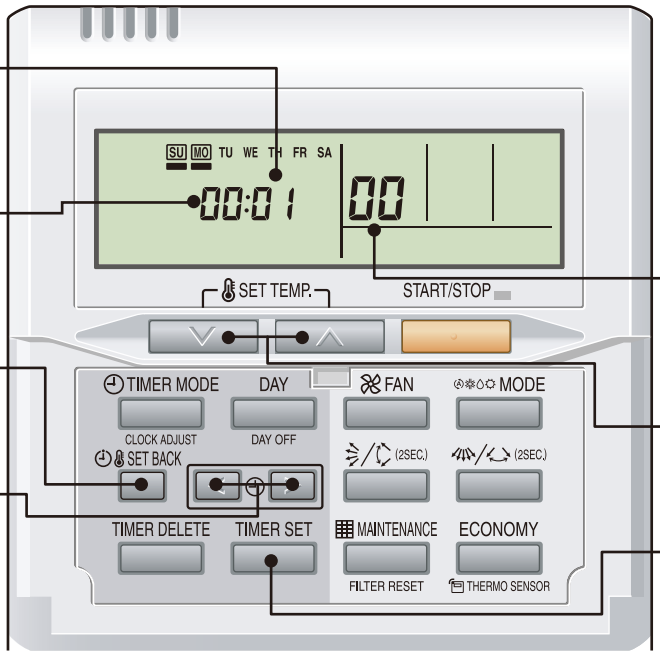
Remote controller address setting number 00-15

SET BACK button

Switches the remote controller address setting number.

SET TIME “<” and “>” button

Switches the function number.



Setting number

Setting number
- Indoor unit address valid range 00-63
- Refrigerant circuit address valid range 00-99

SET TEMP. “V” and “Λ” button

Switches the setting number.

TIMER SET button

Transmits address setting

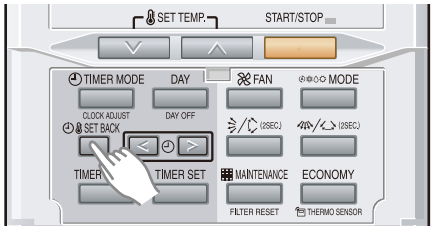
FUNCTION SETTING

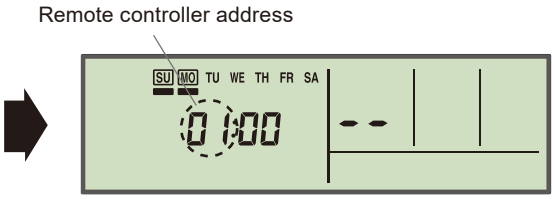
FUNCTION SETTING

■ ADDRESS SETTING

● Indoor unit address setting

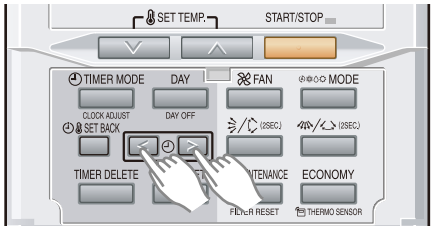
5) Pressing the SET BACK button, select a remote controller address (select the indoor unit you want to operate).

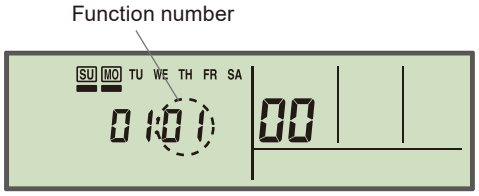




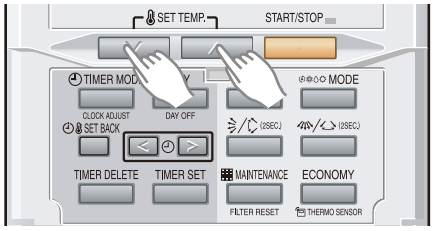
Ex.) When remote controller address “01” is selected

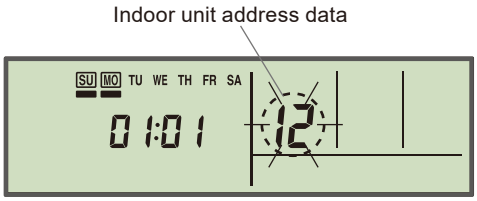
6) Pressing the SET TIME < button or the SET TIME > button, display function number 01.





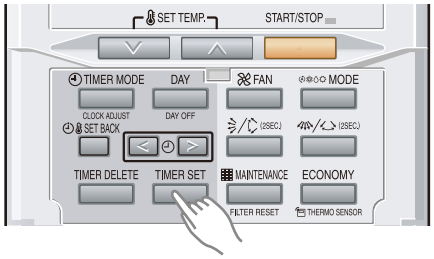
7) Pressing the SET TEMP. V button or the SET TEMP. Λ button, set up the indoor unit address. (The setting range is from 00 to 63.)

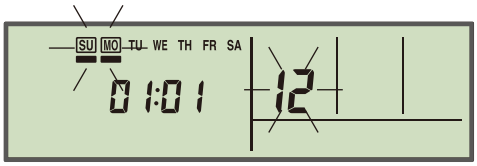




Ex.) When indoor unit address data “12” is set up

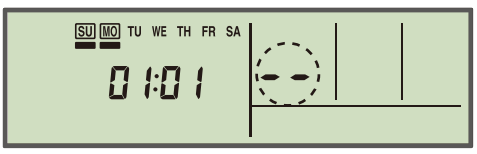
8) Pressing the TIMER SET button, confirm the selected indoor unit address data. (The data will be transferred to the indoor unit.)

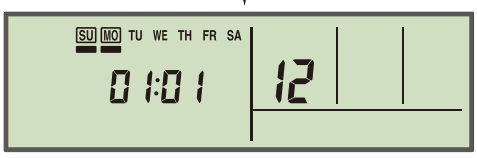




ERROR

GOOD





- When indoor unit address data was not set up on the indoor unit (-- is displayed.)
- Set up indoor unit address data again according to the procedure in step 7) above.

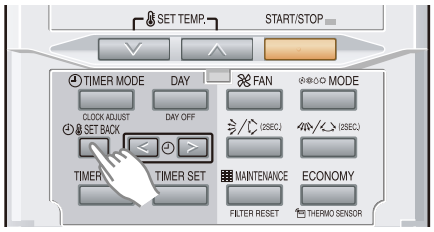
When indoor unit address data was normally set up on the indoor unit
(Flashing display changes to illuminated display.)

FUNCTION SETTING

FUNCTION SETTING

● Refrigerant circuit address setting

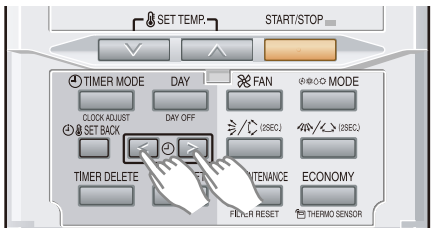
9) Pressing the SET BACK button, select a remote controller address (select the indoor unit you want to operate).



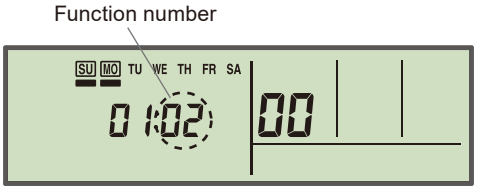
Ex.) When remote controller address “01” is selected

*If the indoor unit you want to operate has already been selected, skip step 9)

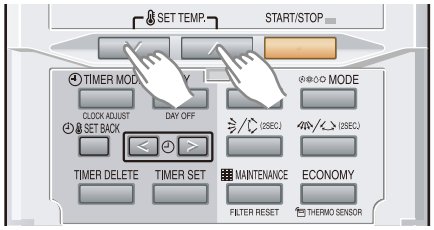
10) Pressing the SET TIME < button or the SET TIME > button, display function number 02.

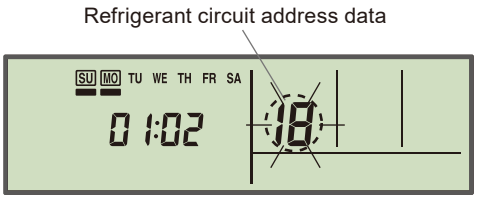


< : Down button
> : Up button



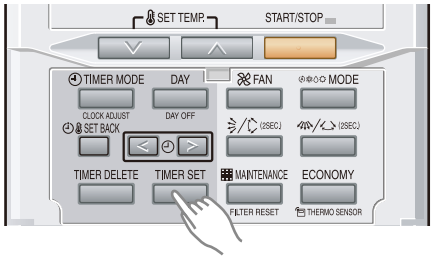
11) Pressing the SET TEMP. V button or the SET TEMP. Λ button, set up the refrigerant circuit address data. (The setting range is from 00 to 99.)

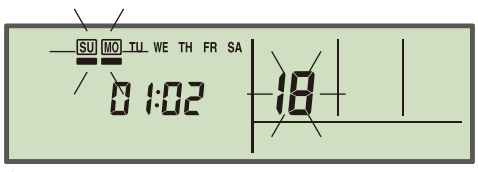




Ex.) When refrigerant circuit address data “18” is set up

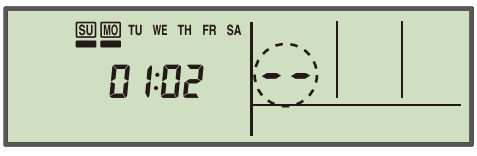
12) Pressing the TIMER SET button, confirm the selected refrigerant circuit address data. (The data will be transferred to the indoor unit.)

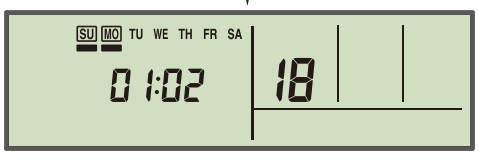




ERROR

GOOD





- When refrigerant circuit address data was not set up on the indoor unit (-- is displayed.)
- Set up refrigerant circuit address data again according to the procedure in step 11) above.

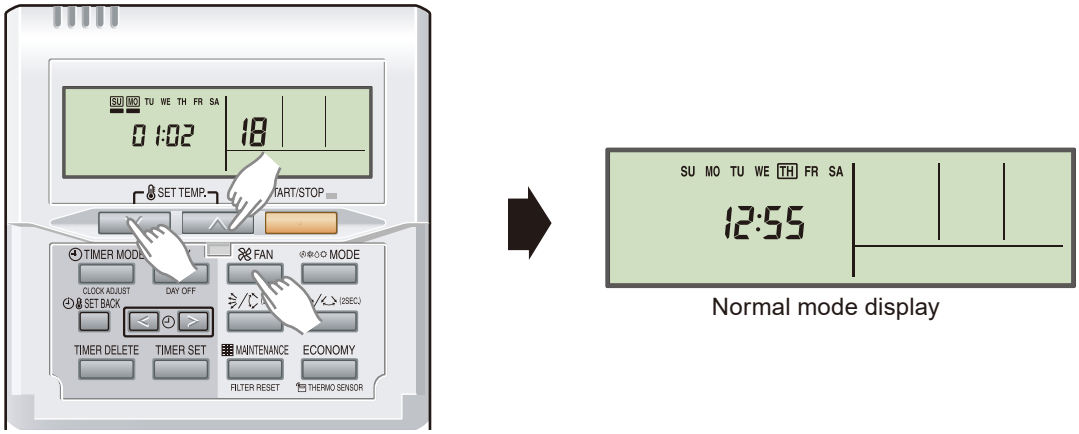
When refrigerant circuit address data was normally set up on the indoor unit (Flashing display changes to illuminated display.)

FUNCTION SETTING

FUNCTION SETTING

■ COMPLETION OF ADDRESS SETTING MODE

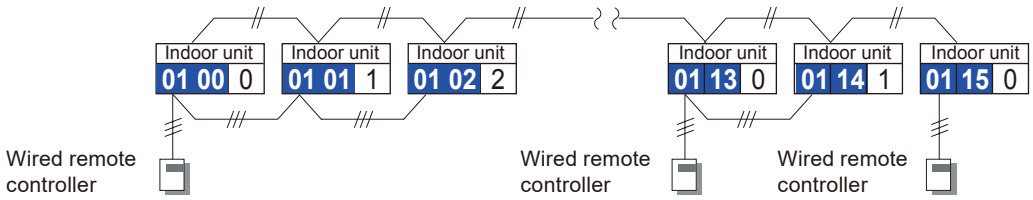
13) To clear the address setting mode and return to the regular display, hold down the three buttons of SET TEMP. V, SET TEMP. Λ and FAN at the same time.



Normal mode display

∗ If no key entry is made for 60 seconds, even though none of the above buttons is pressed, the address setting mode will automatically be cleared.
(If the address setting mode is automatically cleared while setting addresses, activate the mode again according to the procedure in step 4) above.)

■ SETTING UP EACH INDOOR UNIT



Repeat the procedures in steps 1) through 13), and set up the indoor units requiring address setting.

■ RESET THE POWER AFTER SETTING UP ADDRESS OF ALL INDOOR UNITS

Important

∗ If the reset is not performed, address cannot be read in normal operation.
∗ After all the addresses have been set, the circuit breaker needs to be switched off for at least 2 minutes.
After the 2 minutes has passed, power can be restored.
∗ The set address is stored in the PCB and will remain in memory even when the power is turned off.
However, the address can be reset after power reset (if needed).
Record the address set in the indoor unit on a label, etc., and affix the label to the unit so it can be used for after-sales service operations.

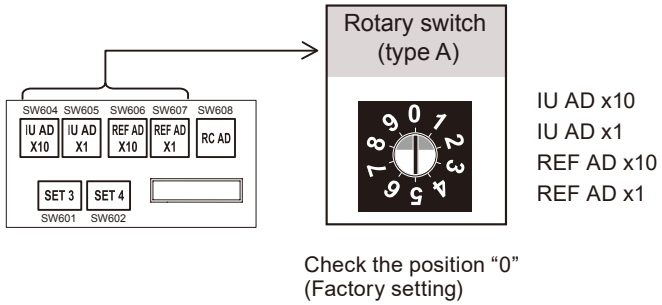
FUNCTION SETTING

1-4-3. WIRED REMOTE CONTROLLER (UTY-RNRUZ*)

- Indoor unit addresses and refrigerant circuit addresses can be set up using wired remote controllers.
- This function allows setting the addresses of all indoor units to which a wired remote controller is being connected.
- This function cannot be used to set up remote controller addresses.
  When setting of Remote controller address in "Manual address setting" , Be sure to set them up using the rotary switches on the PCB of each indoor unit. (Refer to 1-3.)
- This function cannot be used on the slave units.

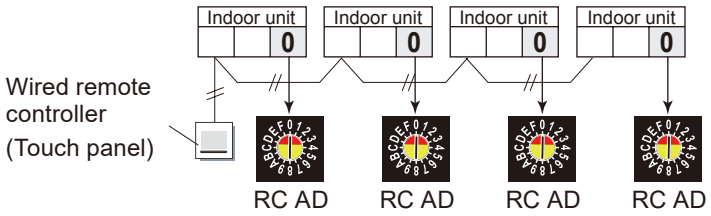
■ PREPARATION

1) Make sure that all indoor unit address switches (IU AD x10, IU AD x1) and refrigerant circuit address switches (REF AD x10, REF AD x1) on the PCB of each indoor unit are set at 0 (factory setting).



- If any of the switches is positioned at a value other than 0, this function will not activate.
- The layout of the switches differs depending on the type of the indoor unit. (Refer to 2-2.)

2) When multiple indoor units are connected to a single wired remote controller.
When setting of Remote controller address in "Automatic address setting"

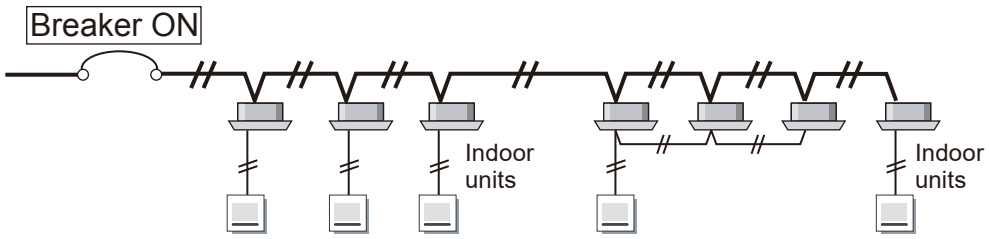


FUNCTION SETTING

■ PREPARATION

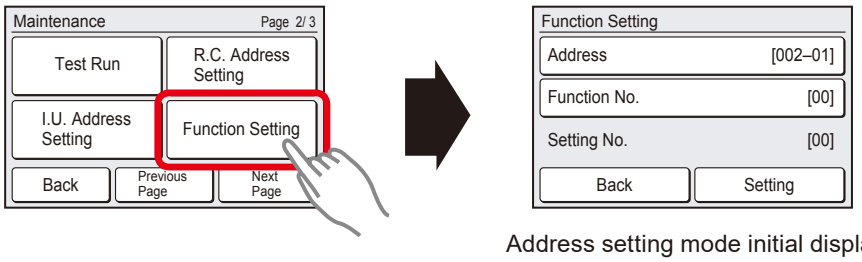
3) Turn on the power to the indoor unit.

- By turning on the power indoor units initializes EEV, so make sure the piping air-tight test and vacuuming have been conducted before turning on the power.
- Also check again to make sure no wiring mistakes were made before turning on the power.



■ SWITCHING SELECTION OF ADDRESS SETTING MODE

4) When the [Function Setting] on the “Maintenance” screen is touched, the “Installer Password Verification” screen is displayed.
Enter the Installer Password, and touch the [OK]. “Function Setting” screen is displayed.



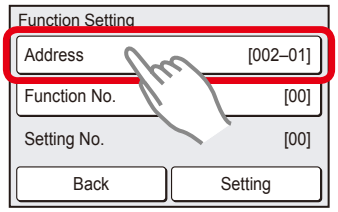
Address setting mode initial display

FUNCTION SETTING

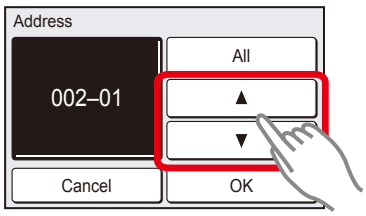
■ ADDRESS SETTING

● Indoor unit address setting

5) Touch the [Address] on the “Function Setting” screen.

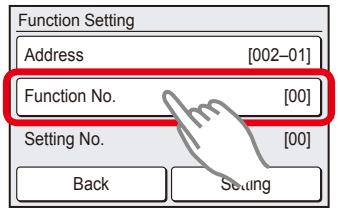


6) “Address” screen is displayed. Select the address of the indoor unit whose function number is to be set by touching [▲] or [▼].

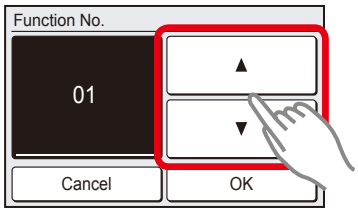


When the [OK] is touched, the display returns to the “Function Setting” screen.

7) Touch the [Function No.] on the “Function Setting” screen.

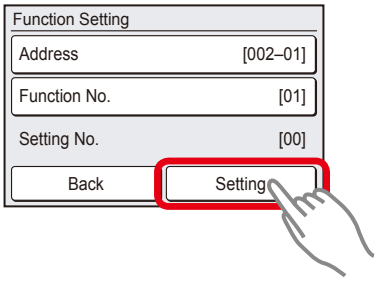


8) “Function No.” screen is displayed. Set the Function No"01". with the [▲] or [▼].

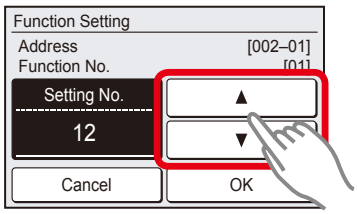


When the [OK] is touched, the display returns to the “Function Setting” screen.

9) Touch the [Setting] on the “Function Setting” screen.

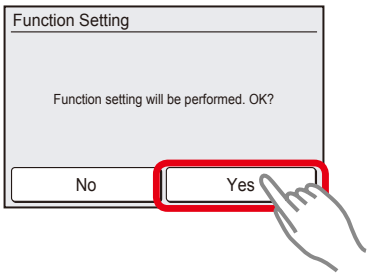


10) Setting screen of “Setting No.” is displayed. Set the Setting No. with the [▲] or [▼]. (The setting range is from 00 to 63.)



Ex.) When indoor unit address data "12" is set up
When the [OK] is touched, the “Function Setting” verification screen is displayed.

11) Touch the [YES] of the verification screen.



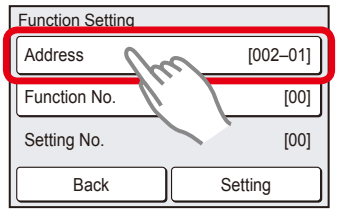
After the “Setting” screen was displayed, the display returns to the “Function Setting” screen.

FUNCTION SETTING

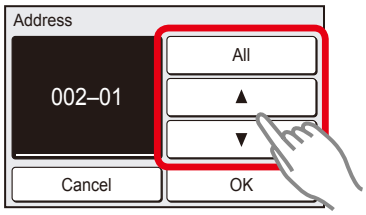
FUNCTION SETTING

● Refrigerant circuit address setting

12) Touch the [Address] on the “Function Setting” screen.

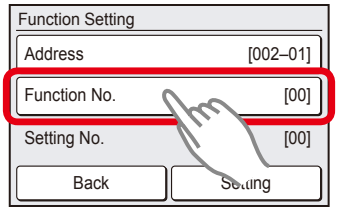


13) “Address” screen is displayed. Select the address of the indoor unit whose function number is to be set by touching [▲] or [▼]. When setting at all the indoor units, touch [All].

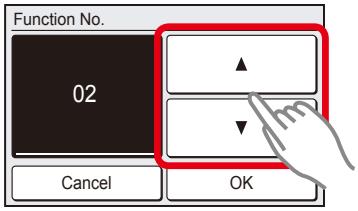


When the [OK] is touched, the display returns to the “Function Setting” screen.

14) Touch the [Function No.] on the “Function Setting” screen.

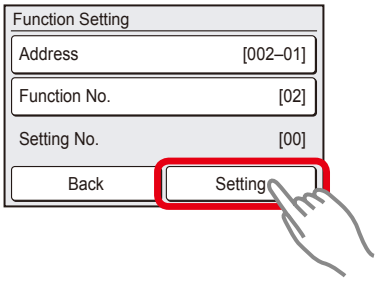


15) “Function No.” screen is displayed. Set the Function No"02". with the [▲] or [▼].

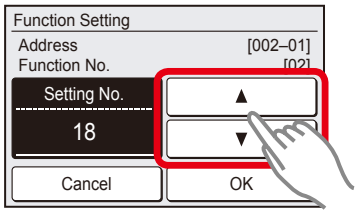


When the [OK] is touched, the display returns to the “Function Setting” screen.

16)Touch the [Setting] on the “Function Setting” screen.

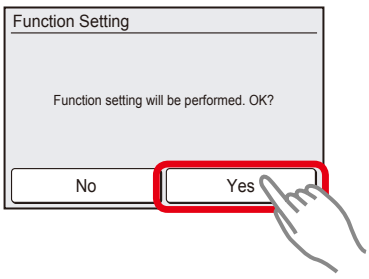


17) Setting screen of “Setting No.” is displayed. Set the Setting No. with the [▲] or [▼]. (The setting range is from 00 to 99.)



Ex.) When refrigerant circuit address data "18" is set up
When the [OK] is touched, the “Function Setting” verification screen is displayed.

18) Touch the [YES] of the verification screen.

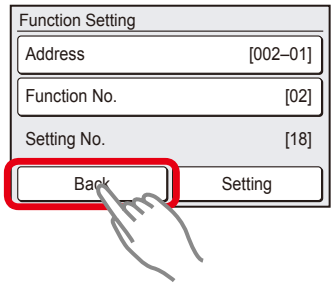


After the “Setting” screen was displayed, the display returns to the “Function Setting” screen.

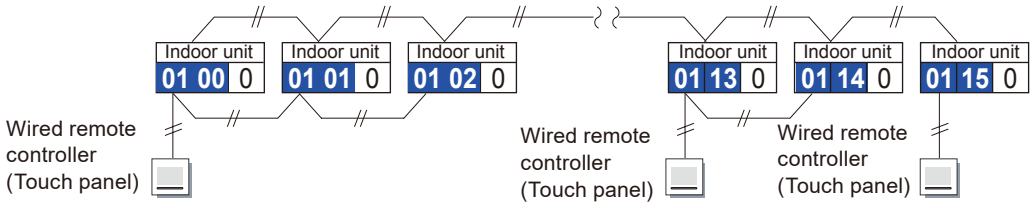
FUNCTION SETTING

■ COMPLETION OF ADDRESS SETTING MODE

19) When the [Back] on the “Function Setting” screen is touched, the display returns to the “Maintenance” screen.



■ SETTING UP EACH INDOOR UNIT



Repeat the procedures in steps 1) through 19), and set up the indoor units requiring address setting.

■ RESET THE POWER AFTER SETTING UP ADDRESS OF ALL INDOOR UNITS

Important

∗ If the reset is not performed, address cannot be read in normally.
∗ After all the addresses have been set, the circuit breaker needs to be switched off for at least 2 minutes.
After the 2 minutes has passed, power can be restored.
∗ The set address is stored in the PCB and will remain in memory even when the power is turned off.
However setting address is effective after power reset.
Record the address set in the indoor unit on a label, etc., and affix the label to the unit so it can be used for after-sales service operations.

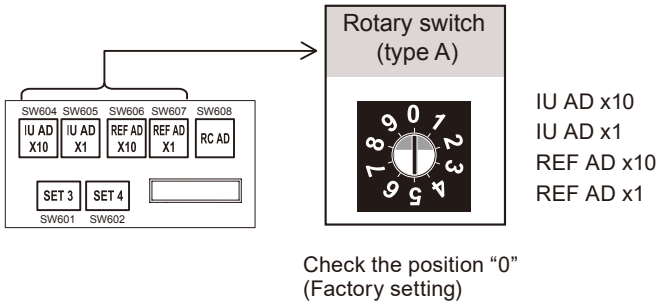
FUNCTION SETTING

1-4-4. SIMPLE REMOTE CONTROLLER (UTY-RSRY, UTY-RHRY)

- Indoor unit addresses and refrigerant circuit addresses can be set up using simple remote controllers.
- This function allows setting the addresses of all indoor units to which a simple remote controller is being connected.
- This function cannot be used to set up remote controller addresses.
  Be sure to set them up using the rotary switches on the PCB of each indoor unit. (Refer to 1-3.)
- This function can be set up on both UTY-RSK* (With operation mode) and UTY-RHK* (Without operation mode) types.
- This function cannot be used on the slave units.

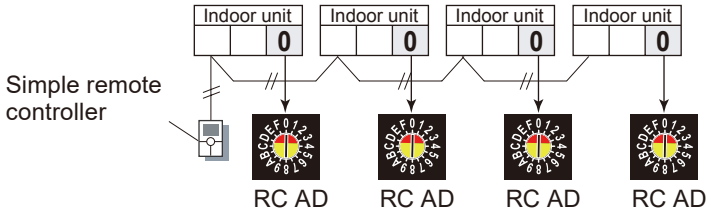
■ PREPARATION

1) Make sure that all indoor unit address switches (IU AD x10, IU AD x1) and refrigerant circuit address switches (REF AD x10, REF AD x1) on the PCB of each indoor unit are set at 0 (factory setting).



- If any of the switches is positioned at a value other than 0, this function will not activate.
- The layout of the switches differs depending on the type of the indoor unit. (Refer to 2-2.)

2) When multiple indoor units are connected to a single wired remote controller.
When setting of Remote controller address in "Automatic address setting"

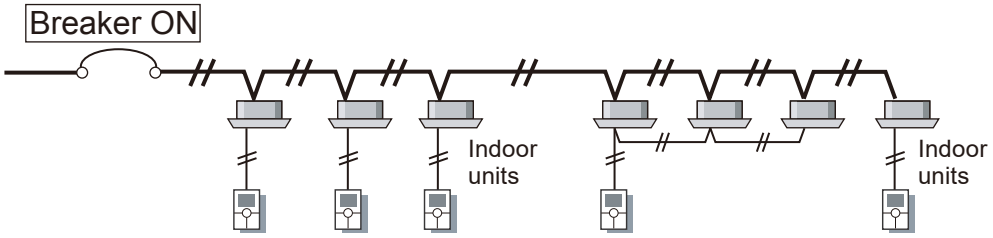


FUNCTION SETTING

FUNCTION SETTING

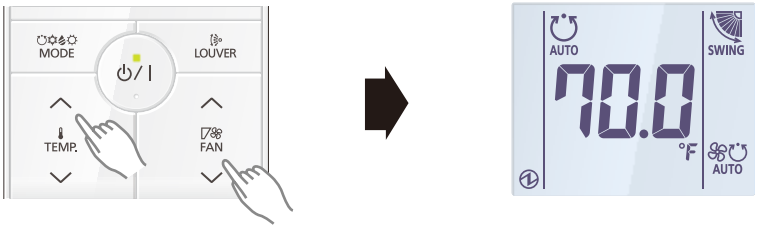
3) Turn on the power to the indoor unit.

- By turning on the power indoor units initializes EEV, so make sure the piping air-tight test and vacuuming have been conducted before turning on the power.
- Also check again to make sure no wiring mistakes were made before turning on the power.

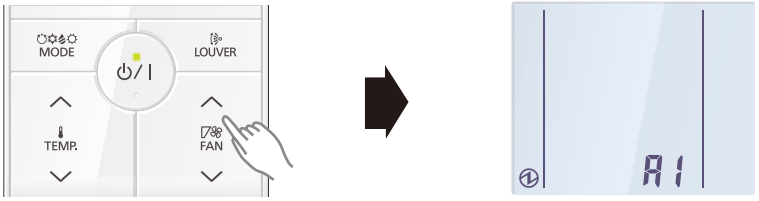


■ SWITCHING SELECTION OF ADDRESS SETTING MODE

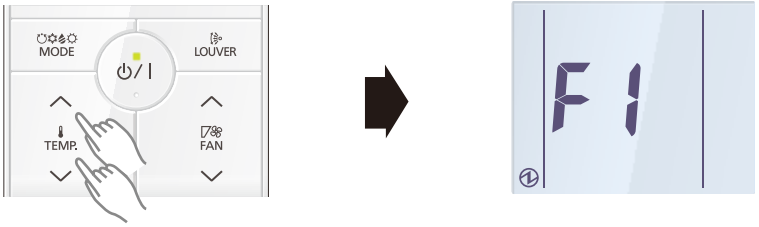
4) With “Monitor Mode” screen displayed, press and hold the SET TEMP. “∧” button and FAN “∨” button simultaneously for at least 2 seconds.



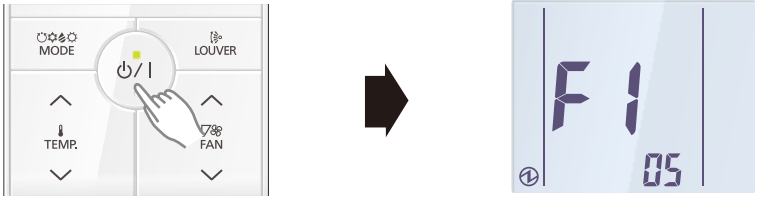
5) The Menu 1 screen is displayed. Press and hold the FAN “∧” button for at least 2 seconds. Setting mode selection screen is displayed.



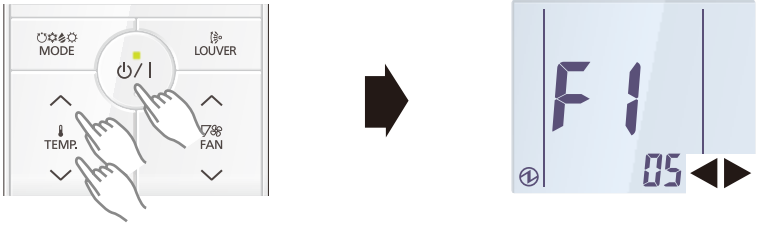
6) Press the SET TEMP. “∧” or SET TEMP. “∨” button to select F1 (Menu 2-F1) settings mode or F2 (Menu 2-F2) settings mode.
F1: Initial settings mode F2: Maintenance settings mode



7) Press the “⏻/❙” button. Setting item selection screen is displayed. (Item No. is displayed.)



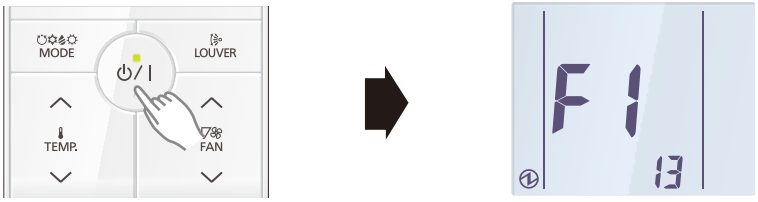
8) Select the item number to be set with the SET TEMP. “∧” or SET TEMP. “∨” button, and press the “⏻/❙” button to switch to thesetting screen.



FUNCTION SETTING

FUNCTION SETTING

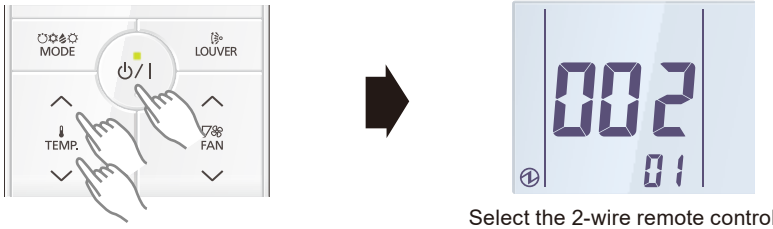
9) Select the “13” in Menu 2-F1 Settings. Then press the “⏻/❙” button.



■ ADDRESS SETTING

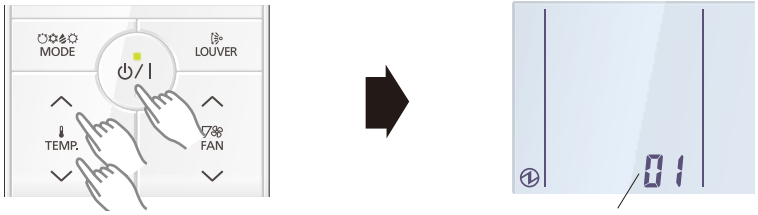
● INDOOR UNIT ADDRESS SETTING

10) Select the 2-wire remote controller address with the SET TEMP. “∧” or SET TEMP. “∨” button. Then press the “⏻/❙” button.



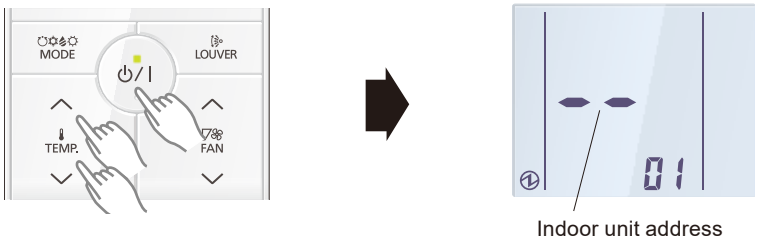
Select the 2-wire remote controller address (Ex. Select the 002-01)

11) Set the function number with the SET TEMP. “∧” or SET TEMP. “∨” button. Then press the “⏻/❙” button.



Function number

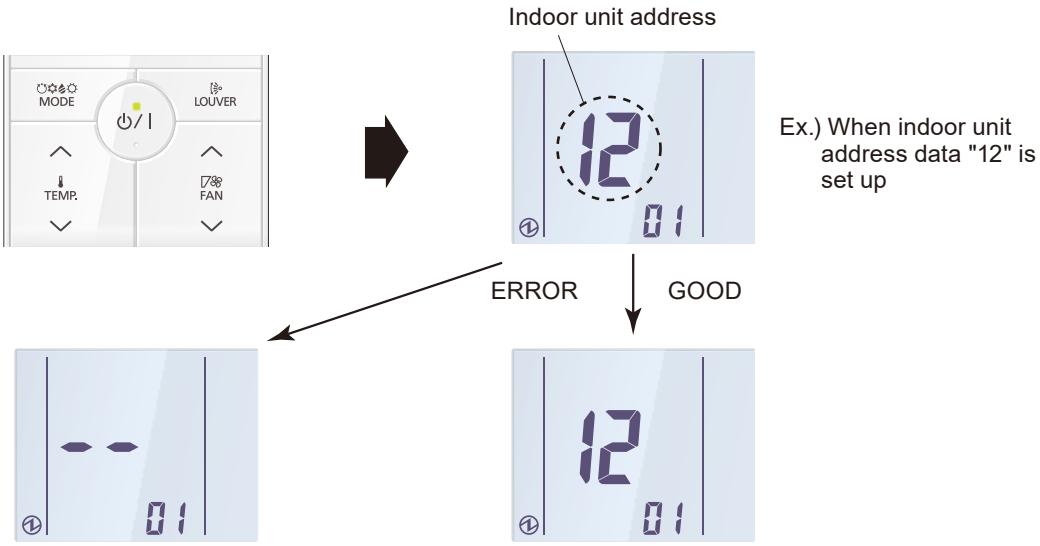
12) Set the setting number with the SET TEMP. “∧” or SET TEMP. “∨” button. Then press the “⏻/❙” button.



Indoor unit address

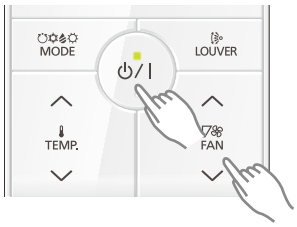
FUNCTION SETTING

13) Setting results are displayed after data transmission.



- When indoor unit address data was not set up on the indoor unit (-- is displayed.)
- Set up indoor unit address data again.
- When indoor unit address data was normally set up on the indoor unit.

14) Press the "⏻/❙" button to return to the 2-wire remote controller address selection screen of (2). If setting has been completed, press the FAN "﹀" button to return to the Menu 2-F1 item selection screen.



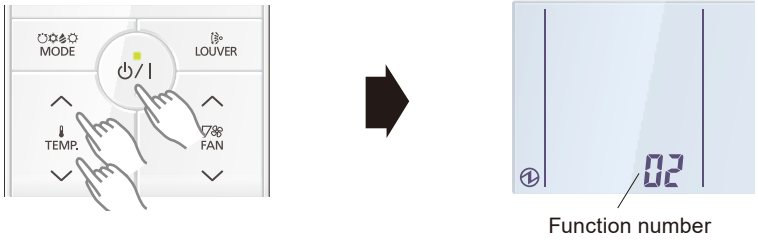
NOTE:

- **This item cannot be set from slave remote controllers.**

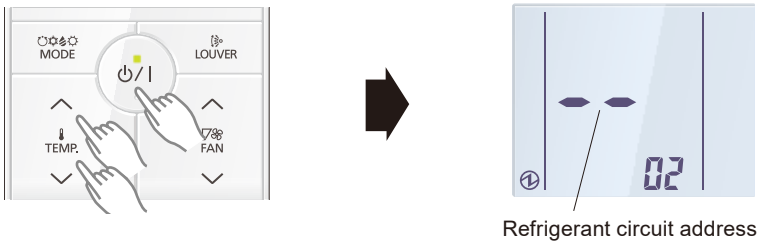
● Refrigerant circuit address setting

15) Select the 2-wire remote controller address with the SET TEMP. "﹀" or SET TEMP. "﹀" button. Then press the "⏻/❙" button.

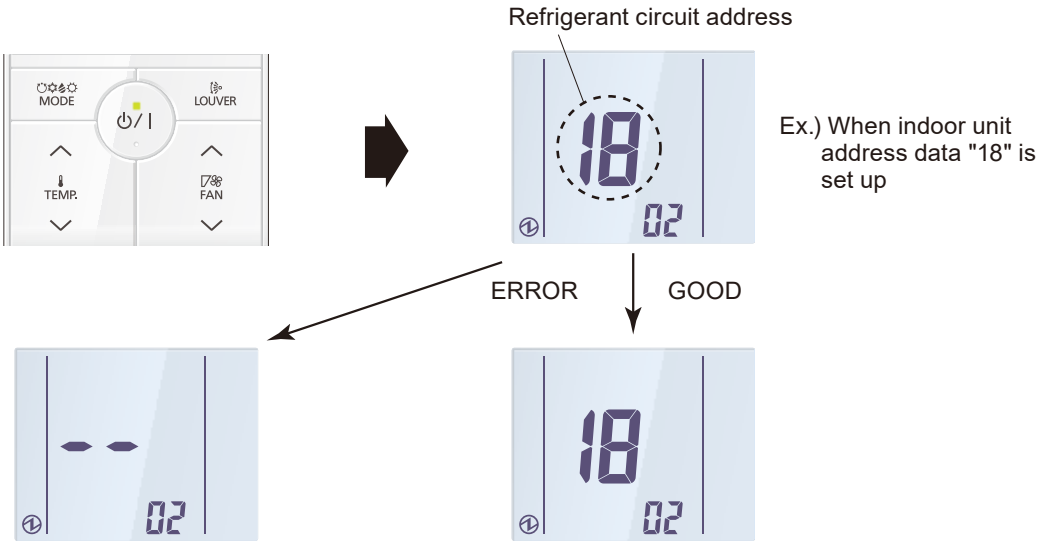
16) Set the function number with the SET TEMP. "﹀" or SET TEMP. "﹀" button. Then press the "⏻/❙" button.



17) Set the setting number with the SET TEMP. "∧" or SET TEMP. "∨" button. Then press the "⏻/❙" button.



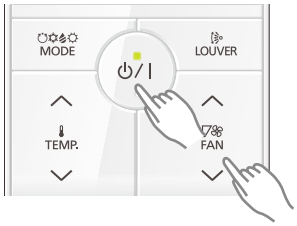
18) Setting results are displayed after data transmission.



- When refrigerant circuit address data was not set up on the indoor unit (-- is displayed.)
- Set up refrigerant circuit address data again.

- When refrigerant circuit address data was normally set up on the indoor unit.

19) Press the "⏻/❙" button to return to the 2-wire remote controller address selection screen of (2). If setting has been completed, press the FAN "∨" button to return to the Menu 2-F1 item selection screen.



NOTE:

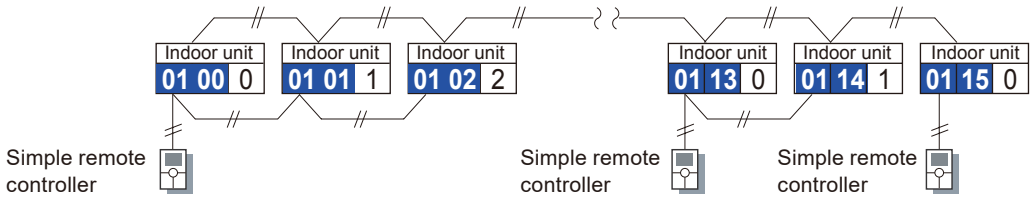
- **This item cannot be set from slave remote controllers.**

■ COMPLETION OF ADDRESS SETTING MODE

20) Press and hold the FAN "∧" button for at least 2 seconds to return to the Menu 1 item selection screen. Then, press and hold the SET TEMP. "∧" and FAN "∨" button for at least 2 seconds at the same time to return to the "Monitor Mode" screen.

FUNCTION SETTING

■ SETTING UP EACH INDOOR UNIT



Repeat the procedures in steps 1) through 13), and set up the indoor units requiring address setting.

■ RESET THE POWER AFTER SETTING UP ADDRESS OF ALL INDOOR UNITS

Important

∗ If the reset is not performed, address cannot be read in normally.
∗ After all the addresses have been set, the circuit breaker needs to be switched off for at least 2 minutes.
After the 2 minutes has passed, power can be restored.
∗ The set address is stored in the PCB and will remain in memory even when the power is turned off.
However setting address is effective after power reset.
Record the address set in the indoor unit on a label, etc., and affix the label to the unit so it can be used for after-sales service operations.

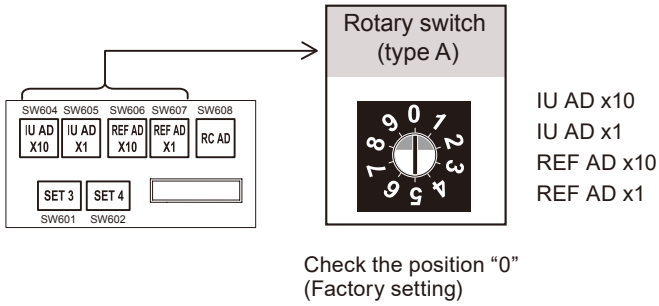
FUNCTION SETTING

1-4-5. SIMPLE REMOTE CONTROLLER (UTY-RSKU, UTY-RHKU)

- Indoor unit addresses and refrigerant circuit addresses can be set up using simple remote controllers.
- This function allows setting the addresses of all indoor units to which a simple remote controller is being connected.
- This function cannot be used to set up remote controller addresses.
  Be sure to set them up using the rotary switches on the PCB of each indoor unit. (Refer to 1-3.)
- This function can be set up on both UTY-RSKU (With operation mode) and UTY-RHKU (Without operation mode) types.
- This function cannot be used on the slave units.

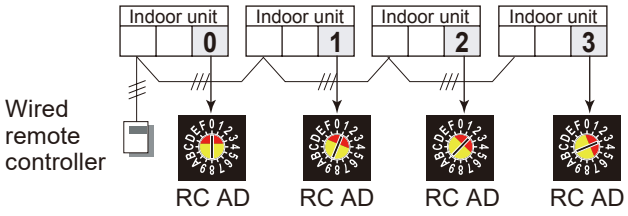
■ PREPARATION

1) Make sure that all indoor unit address switches (IU AD x10, IU AD x1) and refrigerant circuit address switches (REF AD x10, REF AD x1) on the PCB of each indoor unit are set at 0 (factory setting).



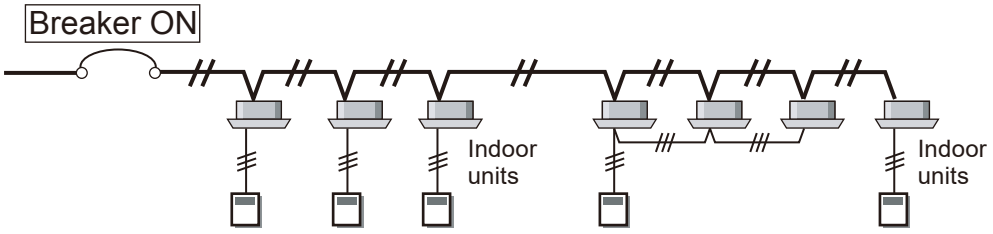
- If any of the switches is positioned at a value other than 0, this function will not activate.
- The layout of the switches differs depending on the type of the indoor unit. (Refer to 2-2.)

2) If multiple indoor units are connected to a single simple remote controller, make sure to manually set up the remote controller address (RC AD) on the PCBs of the indoor units. (Refer to 1-3.)
   Ex.) When four indoor units are connected



3) Turn on the power to the indoor unit.

- By turning on the power indoor units initializes EEV, so make sure the piping air-tight test and vacuuming have been conducted before turning on the power.
- Also check again to make sure no wiring mistakes were made before turning on the power.

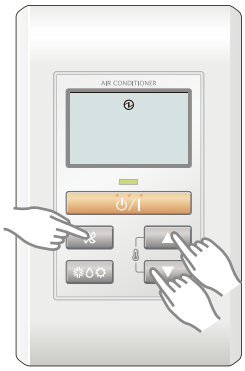


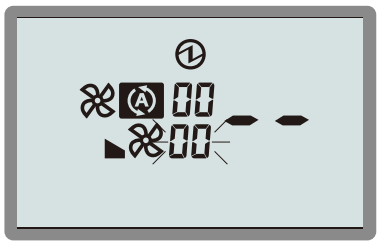
FUNCTION SETTING

FUNCTION SETTING

■ SWITCHING SELECTION OF ADDRESS SETTING MODE

4) To activate the address setting mode, hold down the three buttons of SET TEMP. ▼, SET TEMP. ▲ and FAN at the same time for 5 seconds or longer.





Address setting mode initial display

■ BUTTON NAME AND FUNCTION

- Refer to “5-2” for an outline of the address setting.
- It does not matter whether the refrigerant circuit address or indoor unit address is set first. (The method shown here sets the indoor unit address first.)
- During address setting mode, indoor unit reject the any operation command from remote controller.

Function number

01---Indoor unit address

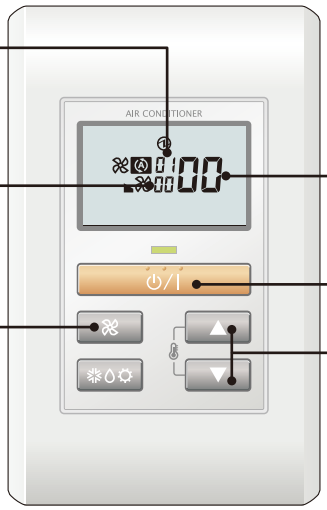
02---Refrigerant circuit address

Remote controller address

Remote controller address setting number 00-15

FAN button

Each time this button is pressed, the fan setting changes among “Remote controller address,” “Function number” and “Setting number.”



Setting number

Setting number

- Indoor unit address valid range 00-63
- Refrigerant circuit address valid range 00-99

START/STOP button

Transmits address setting

SET TEMP. “▲” and “▼” button

Switches the various numbers.

UTY-RSKU (With operation mode)

Function number

01---Indoor unit address

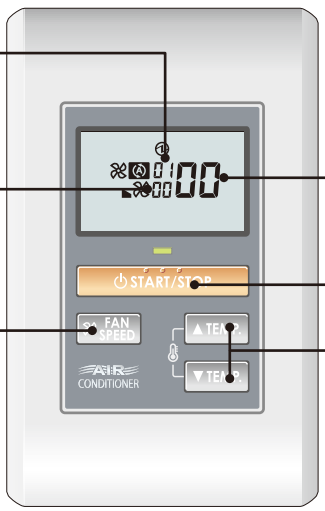
02---Refrigerant circuit address

Remote controller address

Remote controller address setting number 00-15

FAN button

Each time this button is pressed, the fan setting changes among “Remote controller address,” “Function number” and “Setting number.”



Setting number

Setting number

- Indoor unit address valid range 00-63
- Refrigerant circuit address valid range 00-99

START/STOP button

Transmits address setting

SET TEMP. “▲” and “▼” button

Switches the various numbers.

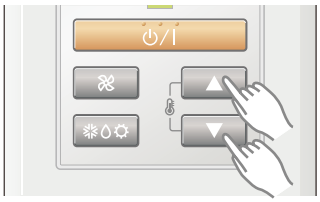
UTY-RHKU (Without operation mode)

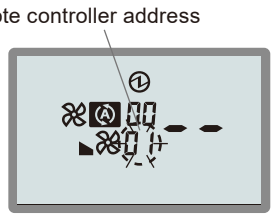
FUNCTION SETTING

■ ADDRESS SETTING

● Indoor unit address setting

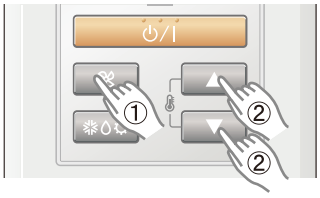
5) Pressing the SET TEMP. ▲ button or SET TEMP. ▼ button, select a remote controller address (select the indoor unit you want to operate).

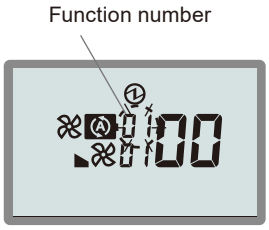




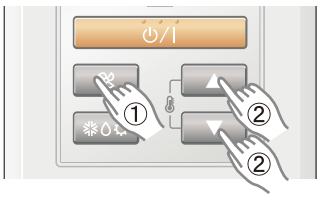
Ex.) When remote controller address “01” is selected

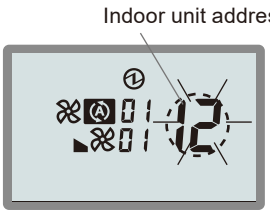
6) Press the FAN button so that the “Function number” display flashes. Then, press either the SET TEMP. ▲ button or the SET TEMP. ▼ button to display function number “01.”





7) Press the FAN button so that the “Setting number” display flashes. Then, press either the SET TEMP. p button or the SET TEMP. q button to set up the indoor unit address data. (The setting range is from 00 to 63.)



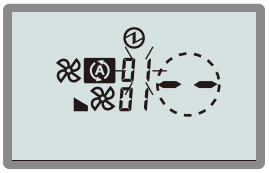


Ex.) When indoor unit address data “12” is set up

8) Pressing the START/STOP button, confirm the selected indoor unit address data. (The data will be transferred to the indoor unit.)

ERROR

GOOD



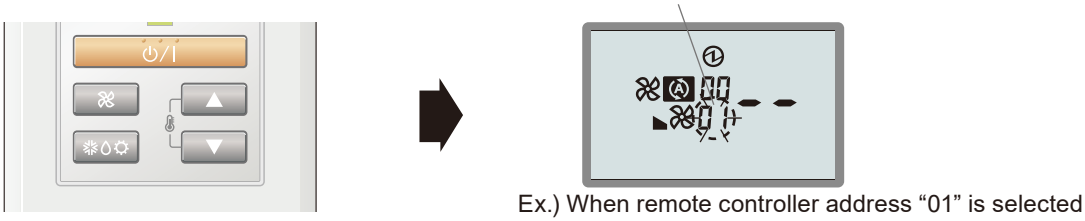
- When indoor unit address data was not set up on the indoor unit (-- is displayed.)
- Set up indoor unit address data again according to the procedure in step 7) above.

When indoor unit address data was normally set up on the indoor unit.

FUNCTION SETTING

● Refrigerant circuit address setting

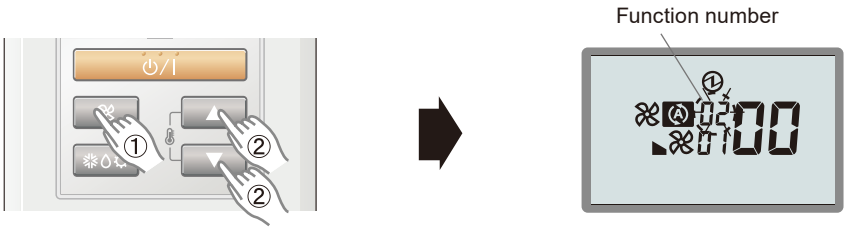
9) Pressing the SET TEMP. ▲ button or SET TEMP. ▼ button, select a remote controller address (select the indoor unit you want to operate).



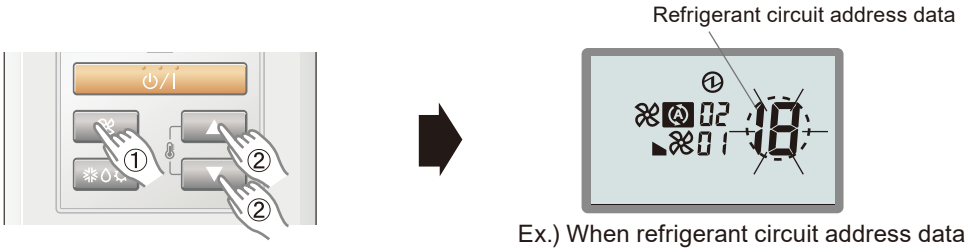
Ex.) When remote controller address “01” is selected

*If the indoor unit you want to operate has already been selected, skip step 9).

10) Press the FAN button so that the “Function number” display flashes. Then, press either the SET TEMP. ▲ button or the SET TEMP. ▼ button to display function number “02.”

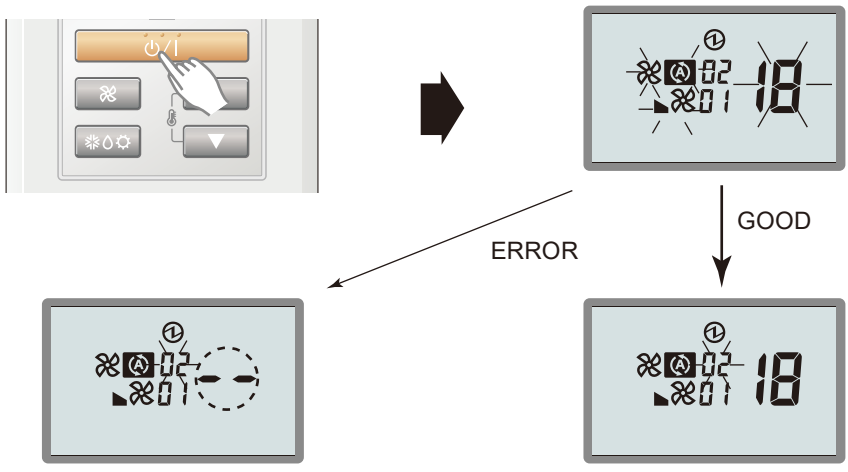


11) Press the FAN button so that the “Setting number” display flashes. Then, press either the SET TEMP. ▲ button or the SET TEMP. ▼ button to set up the refrigerant circuit address data. (The setting range is from 00 to 99.)



Ex.) When refrigerant circuit address data “18” is set up

12) Pressing the START/STOP button, confirm the selected refrigerant circuit address data. (The data will be transferred to the indoor unit.)



- When refrigerant circuit address data was not set up on the indoor unit (-- is displayed.)
- Set up refrigerant circuit address data again according to the procedure in step 11) above.

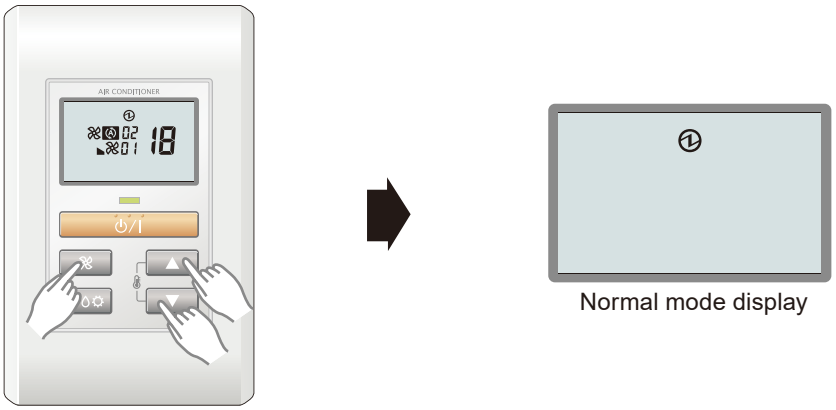
When refrigerant circuit address data was normally set up on the indoor unit.

FUNCTION SETTING

FUNCTION SETTING

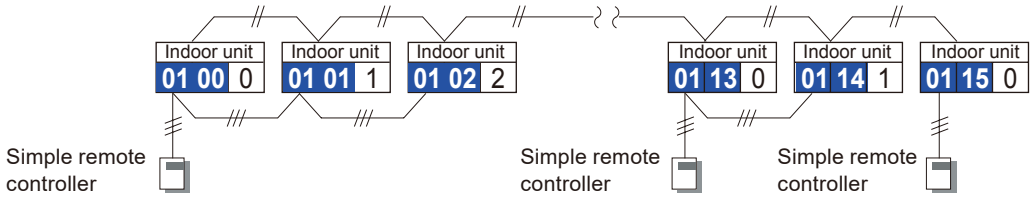
■ COMPLETION OF ADDRESS SETTING MODE

13) Press the three buttons of SET TEMP. ▲, SET TEMP. ▼ and FAN at the same time for 5 seconds or longer. The address setting mode will be cleared and the regular display will be restored.



∗ If no key entry is made for 60 seconds, even though none of the above buttons is pressed, the address setting mode will automatically be cleared.
(If the address setting mode is automatically cleared while setting addresses, activate the mode again according to the procedure in step 4) above.)

■ SETTING UP EACH INDOOR UNIT



Repeat the procedures in steps 1) through 13), and set up the indoor units requiring address setting.

■ RESET THE POWER AFTER SETTING UP ADDRESS OF ALL INDOOR UNITS

Important

∗ If the reset is not performed, address cannot be read in normal operation.
∗ After all the addresses have been set, the circuit breaker needs to be switched off for at least 2 minutes.
After the 2 minutes has passed, power can be restored.
∗ The set address is stored in the PCB and will remain in memory even when the power is turned off.
However, the address can be reset after power reset (if needed).
Record the address set in the indoor unit on a label, etc., and affix the label to the unit so it can be used for after-sales service operations.

FUNCTION SETTING

1-5. AUTOMATIC ADDRESS SETTING

The addresses of signal amplifiers, indoor units and RB units can be set automatically.

⚠Caution
Following are cautions when performing AUTOMATIC ADDRESS SETTING. 1. The Controller cannot be used. 2. AUTOMATIC ADDRESS SETTING may take about 30 minutes. 3. Emergency stop signal is not accepted. Refer to Chapter 8. EXTERNAL INPUT & OUTPUT for design related to emergency stop.
When setting addresses of signal amplifiers, indoor units and RB units automatically, be sure to always set the addresses of signal amplifiers first, set the addresses of indoor units second, set the addresses of RB units last.

■ AUTOMATIC ADDRESS SETTING METHOD

<Step 1>

Manual setting of Outdoor unit

Set up 1-3 (Set A, Set B, Set C, Set L) and 1-8 (terminal resister setting).

<Step 2>

Turn Power ON of all units

<Step 3>

Automatic address setting of Signal Amplifier (1-5-1)

<Step 4>

Automatic address setting of Indoor unit (1-5-2)

<Step 5>

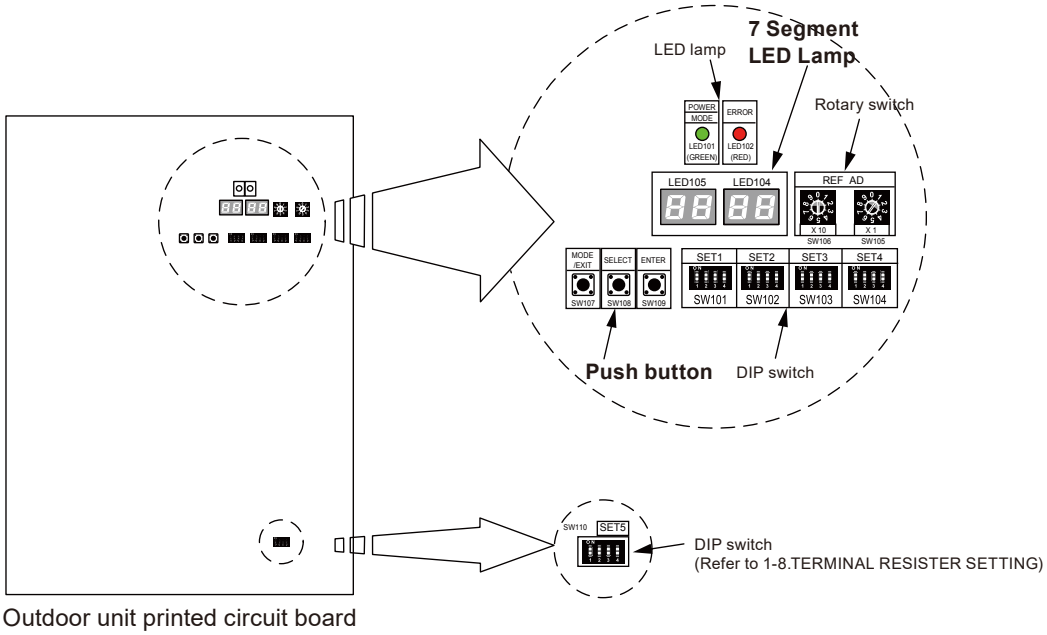
Automatic address setting of RB unit (1-5-3)

This function is available VR-II series.

NOTE: Do not change an order of step 1 to step 5.

FUNCTION SETTING

■ SWITCH POSITION

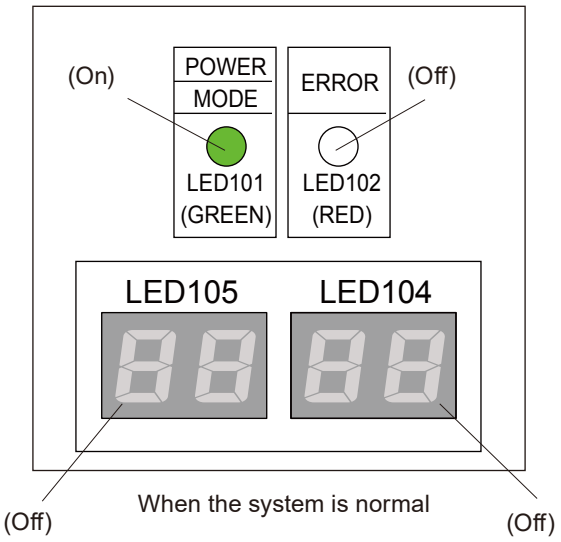


Switch position differs depending on outdoor unit.

- Set the functions of an outdoor unit with the push buttons (SW107, SW108 and SW109) while observing the 7-segment LED lamps (LED105 and LED104) on the printed circuit board.

■ PREPARATION

1) Be sure to check that the operation of the outdoor unit has stopped (be sure to stop the operation if it is still running), and turn off the power.
2) Remove the front panel of the outdoor unit, and remove the lid of the electrical component box in order to expose the printed circuit board.
3) Turn on the power of the outdoor unit.



- As shown in the above figure, make sure that the POWER/MODE indicator lamp (LED101) is on and the ERROR indicator lamp (LED102) is off.
- If the ERROR indicator lamp (LED102) flashes, it indicates that an error has occurred. Check wiring and power supply. After making sure that the ERROR indicator lamp (LED102) has turned off, proceed to the next step.

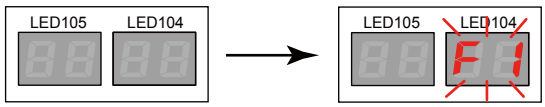
FUNCTION SETTING

1-5-1. SIGNAL AMPLIFIER AUTOMATIC ADDRESS SETTING

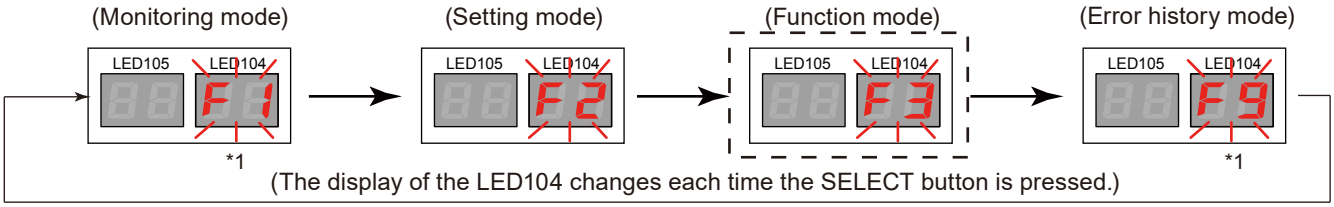
⚠ CAUTION

- The Signal Amplifier Automatic Address Setting function can be used for a maximum of 40 signal amplifiers installed within the same network.
- Perform the automatic address setting of signal amplifiers on only one outdoor unit (master unit) within the same network. (Do not set them again from other outdoor unit.)
- When setting the address of a signal amplifier automatically, be sure to always set the address on the printed circuit board of the Signal amplifier to “1”(factory setting).
- Perform automatic address setting after checking that filter mode setting of Signal amplifier is completed.

1) After verifying that the system is normally, press the MODE/EXIT button (SW107) once.

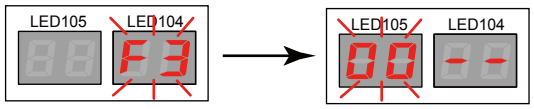


2) Press the SELECT button (SW108) to display “F3” on the LED104.



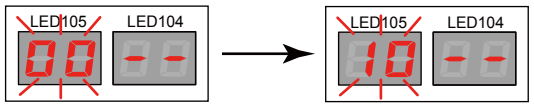
*1 : The “F1” and “F9” modes are used for maintenance, so do not set them in regular

3) When “F3” appears on the LED104, press the ENTER button (SW109).

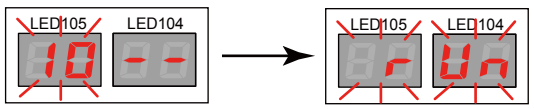


A flashing display appears on the LED105.

4) Press the SELECT button (SW108) to display “10” on the LED105.



5) When “10” appears on the LED105, hold down the ENTER button (SW109) for at least 3 seconds. (Unless it is held down for at least 3 seconds, the selection will not be confirmed.)



When the Automatic Address Setting function is activated, the display changes to “run.”

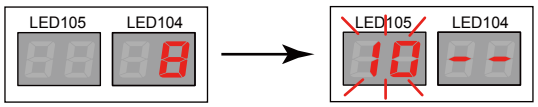
FUNCTION SETTING

FUNCTION SETTING

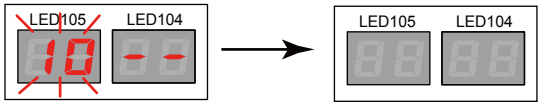
6) When automatic address setting is completed, the number of signal amplifier is displayed on the LED104. Verify that the count matches the number of signal amplifiers being installed.

Ex.) When eight signal amplifiers are being connected

7) To exit automatic address setting, press the ENTER button (SW109) in the setting completed status shown in step 6) above.



Next, press the MODE/EXIT button (SW107) to exit the Function mode.



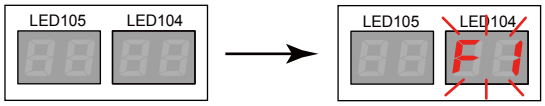
FUNCTION SETTING

1-5-2. INDOOR UNIT AUTOMATIC ADDRESS SETTING

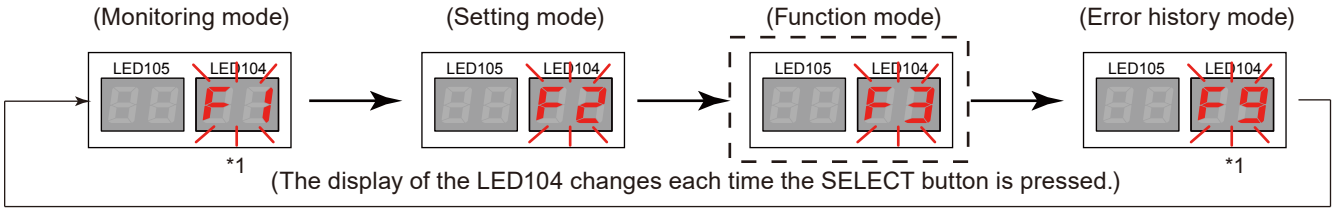
⚠Caution

- The Indoor Unit Automatic Address Setting function can be used for a maximum of 64 indoor units installed within the same refrigerant system. However, a maximum of 45 indoor units can be installed within the same refrigerant system.
- The Indoor Unit Automatic Address Setting function cannot be used for indoor units being connected to other refrigerant systems via the network.
  (Refer to “4-3. TRANSMISSION LINE" in Chapter 6. "SYSTEM DESIGN".)
- When setting addresses automatically for indoor units, be sure to position “IU AD x10” (SW6), “IU AD x1” (SW7), “REF AD x10” (SW8) and “REF AD x1” (SW9) at 0 (Factory setting).
- When an indoor unit address is set up, a refrigerant circuit address is also set up at the same time. (The refrigerant circuit address of an outdoor unit being connected within the same refrigerant system is set up.)

1) After verifying that the system is operating normally, press the MODE/EXIT button (SW107) once.

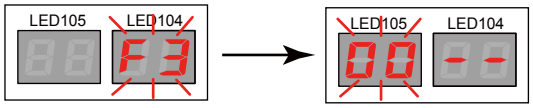


2) Press the SELECT button (SW108) to display “F3” on the LED104.



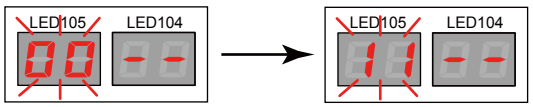
*1 : The “F1” and “F9” modes are used for maintenance, so do not set them in regular

3) When “F3” appears on the LED104, press the ENTER button (SW109).



A flashing display appears on the LED105.

4) Press the SELECT button (SW108) to display “11” on the LED105.



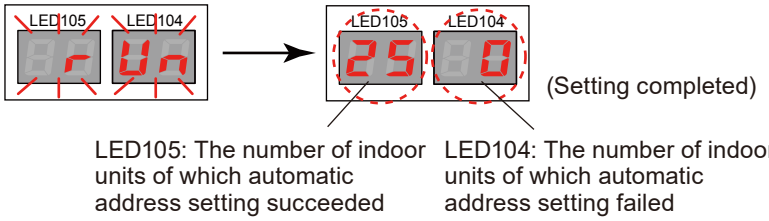
FUNCTION SETTING

FUNCTION SETTING

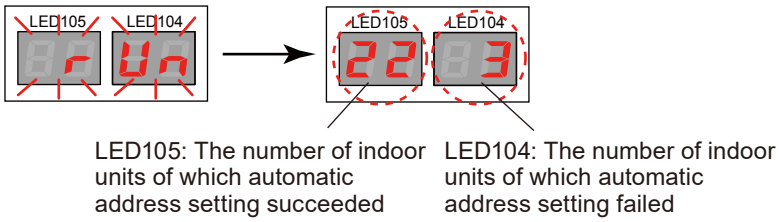
5) When “11” appears on the LED105, hold down the ENTER button (SW109) for at least 3 seconds.(Unless it is held down for at least 3 seconds, the selection will not be confirmed.)

When the Automatic Address Setting function is activated, the display changes to “run.”

6) When automatic address setting is completed, the number of indoor units of which automatic address setting succeeded is displayed on the LED105, and the number of indoor units of which automatic address setting failed is displayed on the LED104.
Ex.) When 25 indoor units are connected, and the automatic setting of the addresses of all indoor units ended normally

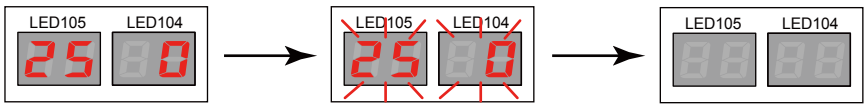


Ex.) When 25 indoor units are connected, and the automatic setting of the addresses of 3 indoor units failed



If automatic address setting failed, make sure that all of the rotary switches SW6 to SW9 on the PCBs of the failed indoor units are positioned at 0 and that wiring and power supply are correct, and then perform automatic address setting again.

7) When the ENTER button (SW109) is pressed, it takes about 30 seconds to complete the setting process. During that time, the LED display flashes.
Setting is complete when the LED display goes off.



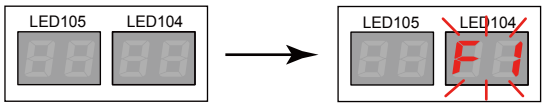
FUNCTION SETTING

1-5-3. RB UNIT AUTOMATIC ADDRESS SETTING

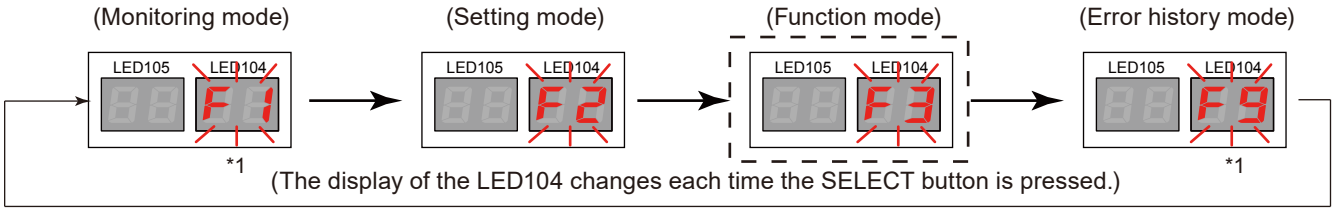
This function is available VR-II series.

⚠Caution
● Be sure to finish address setting of outdoor unit and indoor unit before performing the automatic address setting of RB unit. ● The RB Unit Automatic Address Setting function can be used for a maximum of 64 RB units installed within the same refrigerant system. ● When setting addresses automatically, be sure to position “RB AD x10” (SW11), “RB AD x1” (SW14), “REF AD x10” (SW13) and “REF AD x1” (SW12) at 0 (Factory setting). ● When a RB unit address is set up, a refrigerant circuit address is also set up at the same time. (The refrigerant circuit address of an outdoor unit being connected within the same refrigerant system is set up.)

1) After verifying that the system is operating normally, press the MODE/EXIT button (SW107) once.

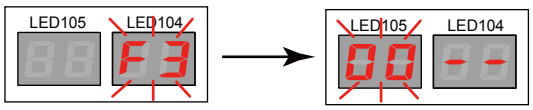


2) Press the SELECT button (SW108) to display “F3” on the LED104.



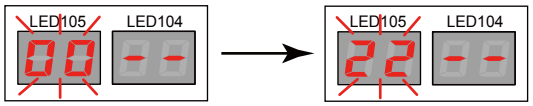
*1 : The “F1” and “F9” modes are used for maintenance, so do not set them in regular

3) When “F3” appears on the LED104, press the ENTER button (SW109).



A flashing display appears on the LED105.

4) Press the SELECT button (SW108) to display “22” on the LED105.

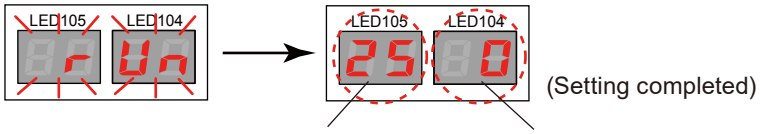


FUNCTION SETTING

5) When “22” appears on the LED105, hold down the ENTER button (SW109) for at least 3 seconds.(Unless it is held down for at least 3 seconds, the selection will not be confirmed.)

When the Automatic Address Setting function is activated, the display changes to “run.”

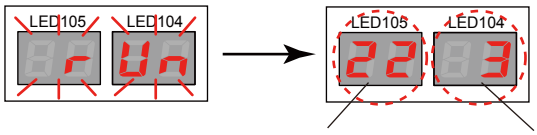
6) When automatic address setting is completed, the number of RB units of which automatic address setting succeeded is displayed on the LED105, and the number of RB units of which automatic address setting failed is displayed on the LED104.
Ex.) When 25 RB units are connected, and the automatic setting of the addresses of all RB units ended normally



LED105: The number of RB units of which automatic address setting succeeded

LED104: The number of RB units of which automatic address setting failed

Ex.) When 25 RB units are connected, and the automatic setting of the addresses of three RB units failed

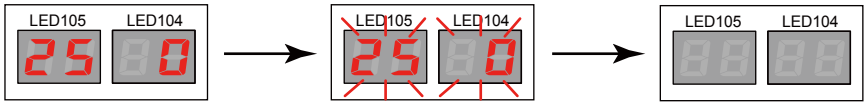


LED105: The number of RB units of which automatic address setting succeeded

LED104: The number of RB units of which automatic address setting failed

If automatic address setting failed, make sure that all of the rotary switches SW11 to SW14 on the PCBs of the failed RB units are positioned at 0 and that wiring and power supply are correct, and then perform automatic address setting again.

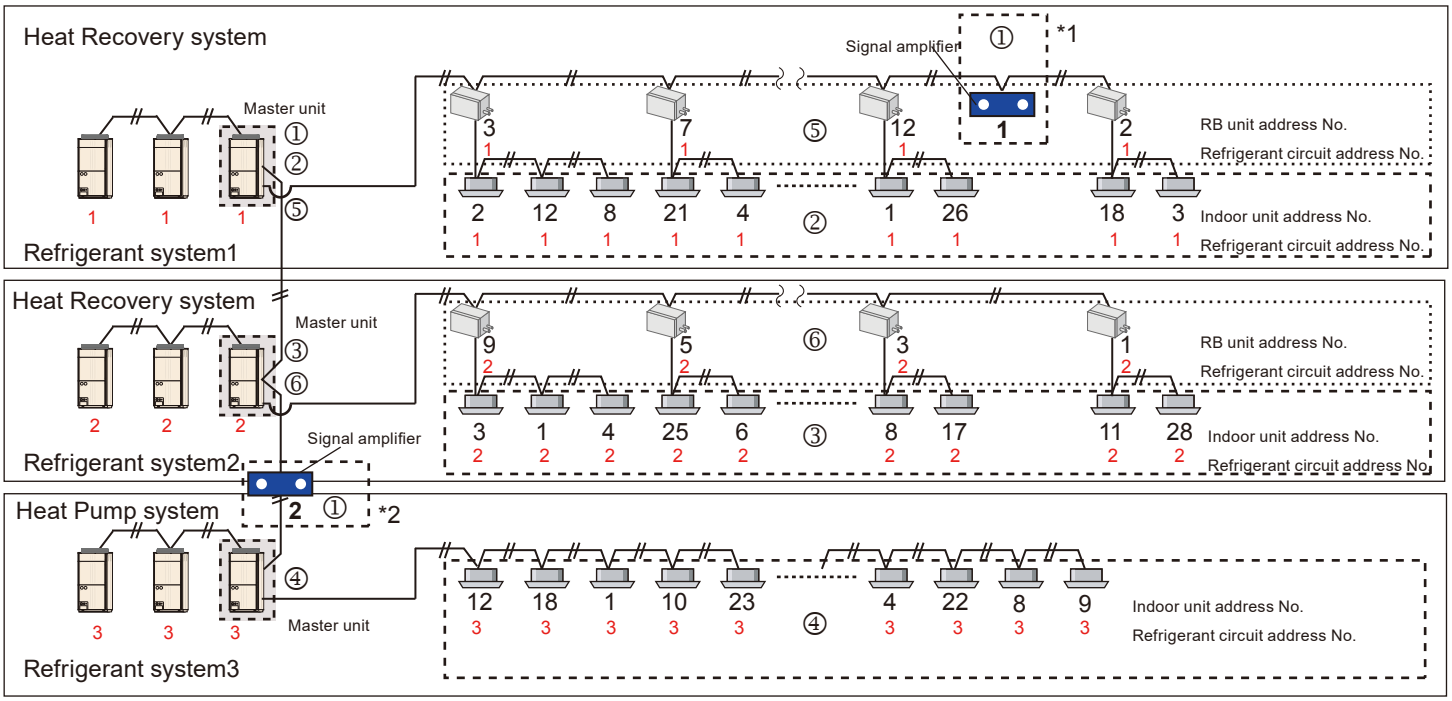
7) When the ENTER button (SW109) is pressed, it takes about 30 seconds for end processing. During that time, the LED display blinks.
Setting is complete when the LED display goes off.



FUNCTION SETTING

1-5-4. EXAMPLE FLOW

● Example 1 : To automatically set the addresses of signal amplifiers, indoor units and RB units Follow the step below



Step 1: ① Activate the Signal Amplifier Automatic Address Setting function on the master unit of Refrigerant System 1.

→An address is automatically assigned to all signal amplifiers on the network. (Because an address is also assigned to the signal amplifiers being connected in Refrigerant Systems 2 and 3, it is not necessary to perform the automatic address setting of these signal amplifiers again on the master units of Refrigerant Systems 2 and 3.)

Step 2: ② Activate the Indoor Unit Automatic Address Setting function on the master unit of Refrigerant System 1.

→An indoor unit address and a refrigerant circuit address are automatically set up for all indoor units being connected in Refrigerant System 1.

Step 3: ③ Activate the Indoor Unit Automatic Address Setting function on the master unit of Refrigerant System 2.

→An indoor unit address and a refrigerant circuit address are automatically set up for all indoor units being connected in Refrigerant System 2.

Step 4: ④ Activate the Indoor Unit Automatic Address Setting function on the master unit of Refrigerant System 3.

→An indoor unit address and a refrigerant circuit address are automatically set up for all indoor units being connected in Refrigerant System 3.

Step 5: ⑤ Activate the RB Unit Automatic Address Setting function on the master unit of Refrigerant System 1.

→A RB unit address and a refrigerant circuit address are automatically set up for all RB units being connected in Refrigerant System 1.

Step 6: ⑥ Activate the RB Unit Automatic Address Setting function on the master unit of Refrigerant System 2.

→A RB unit address and a refrigerant circuit address are automatically set up for all RB units being connected in Refrigerant System 2.

FUNCTION SETTING

⚠CAUTION

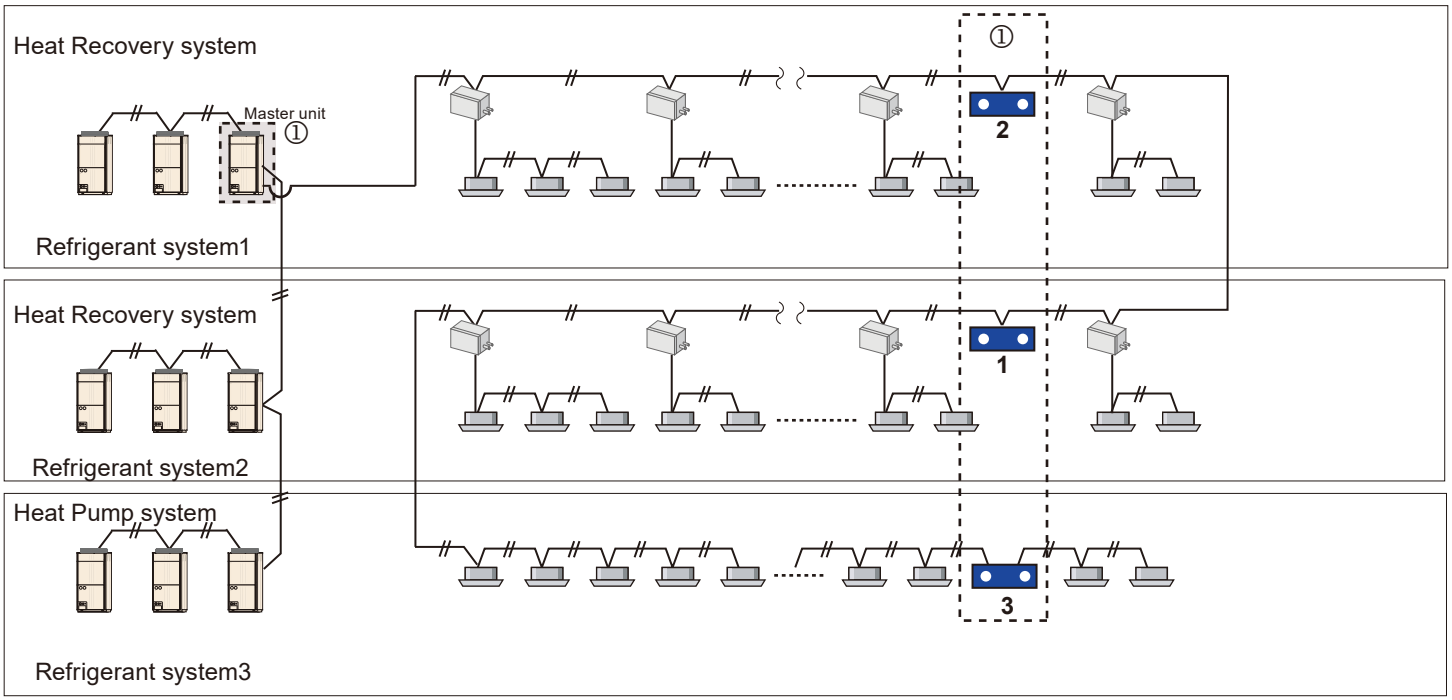
- Before activating the Automatic Address Setting function, be sure to finish setting the refrigerant circuit addresses of outdoor units.
- Setting the addresses of indoor units automatically does not necessary mean that addresses are assigned sequentially starting from the indoor unit which is located the closest to the outdoor units (instead, addresses are assigned randomly).
  With respect to the setting of refrigerant circuit addresses, the same address numbers of the refrigerant circuit addresses of the outdoor units being connected within the same refrigerant system are assigned.
- To find out what addresses have been assigned to individual indoor units, it is necessary to perform a separate address check operation.
- When setting addresses of signal amplifiers, indoor units and RB units automatically, be sure to always set the addresses of signal amplifiers first, set the addresses of indoor units second, set the addresses of RB units last.
- Be sure to finish address setting of outdoor unit and indoor unit before performing the automatic address setting of RB unit.

∗1: If the total wiring length within a segment is expected to exceed 1,640 ft. (500 m), insert a signal amplifier (Refer to Chapter 5.).

∗2: If the number of nodes (the number of units of indoor units, outdoor units, controllers and others) is expected to exceed 64 (including signal amplifiers), insert a signal amplifier (Refer to Chapter 5.).

FUNCTION SETTING

● Example 2 : To automatically set the addresses of signal amplifiers only (When the addresses of indoor units and RB units will be set manually) Follow the step below



Step 1: ① Activate the Signal Amplifier Automatic Address Setting function on the master unit of Refrigerant System 1.

→An address is automatically assigned to all signal amplifiers on the network.

⚠CAUTION

- When indoor units are being connected via different refrigerant systems, never activate the Indoor Unit Automatic Address Setting function.
- As long as master units are on the same network, any master unit can set the addresses of signal amplifiers automatically.Perform the automatic address setting of signal amplifiers on only one outdoor unit (master unit) within the same network. (Do not set them again from other outdoor unit.)

FUNCTION SETTING

1-6. TERMINAL RESISTOR SETTING

⚠CAUTION
Be sure to set the terminal resistor according to specifications. Set the terminal resistor for every network segment (NS). ● If terminal resistor is set in multiple devices, the overall communication system may be damaged. ● If terminal resistor is not set in a device, abnormal communication may occur.

- Be sure to set one terminal resistor in a network segment. You can set the terminal resistor at the outdoor unit or signal amplifier.
- When setting the terminal resistor of a signal amplifier, refer to the installation manual of the signal amplifier.
- When setting multiple terminal resistors, take note of the following items.

①How many network segments are there in a VRF system?

②Where will you set the terminal resistors in a network segment?

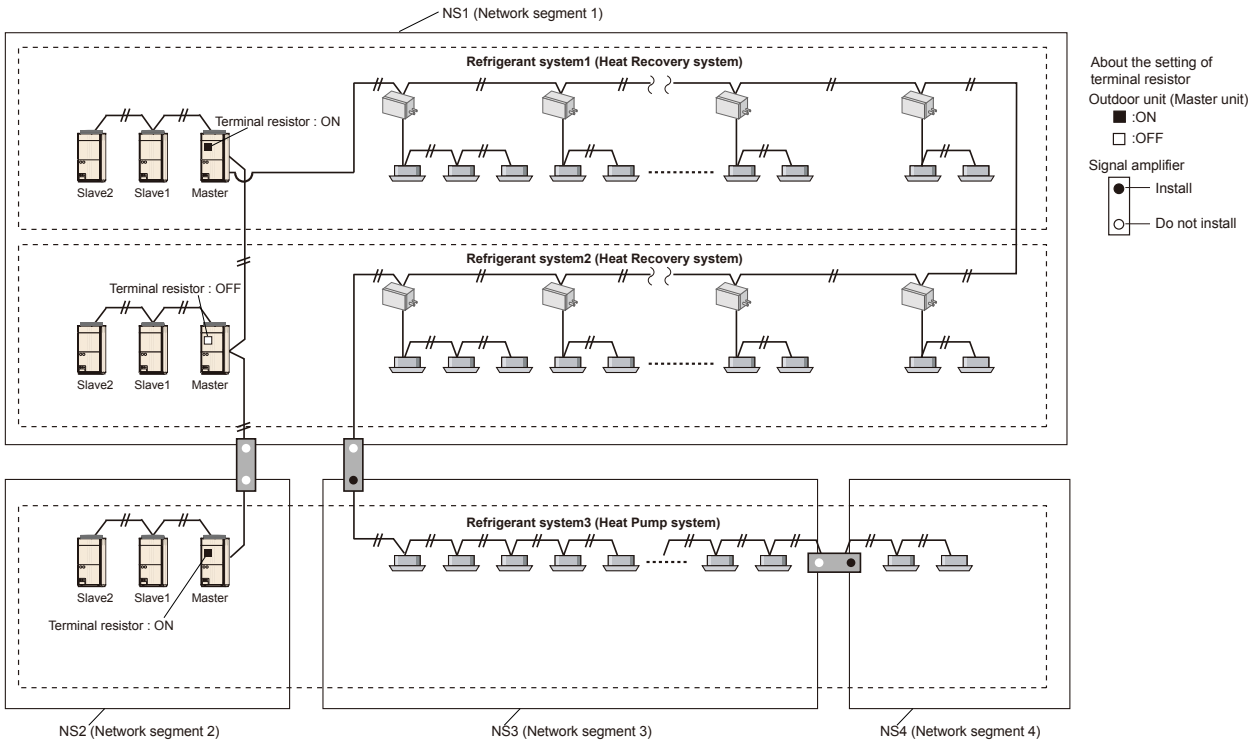
(Condition for 1 segment: Total number of outdoor and indoor units and signal amplifiers is less than 64, or the total length of the transmission line is less than 1,640 ft. (500 m))

③How many outdoor units are connected in 1 Refrigerant system?

- From conditions①-③, set outdoor unit DIP switch SET5-4 in accordance with the table below.

DIP SW SET5-4	Terminal resistor	Remarks
OFF	Disable	(Factory setting)
ON	Enable	-

■ SETTING EXAMPLE



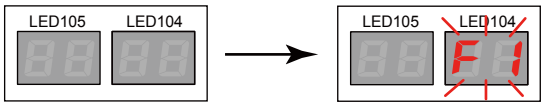
FUNCTION SETTING

1-7. INDOOR UNIT CONNECTION CHECK

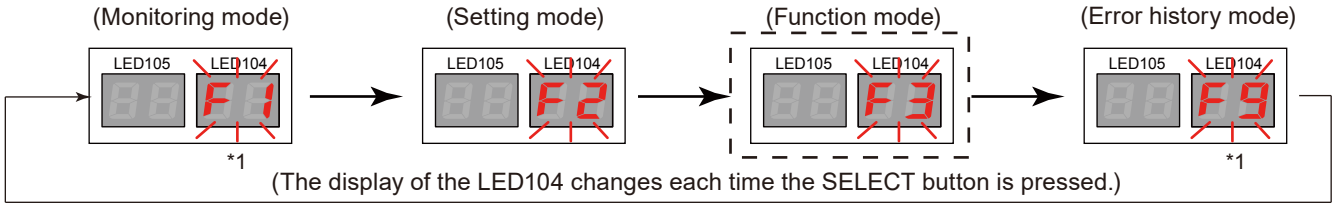
This function is available J-II series.

NOTE
• It is necessary to stop SERVICE TOOL (UTY-ASGX) and WEB MONITORING TOOL (UTY-AMGX), when you will carry out indoor unit connection check.

1) After verifying that the system is normally, press the MODE/EXIT button (SW107) once.

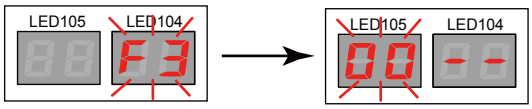


2) Press the SELECT button (SW108) to display “F3” on the LED104.



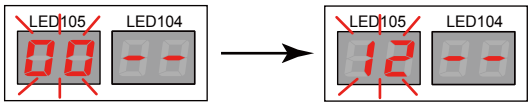
*1 : The “F1” and “F9” modes are used for maintenance, so do not set them in regular

3) When “F3” appears on the LED104, press the ENTER button (SW109).

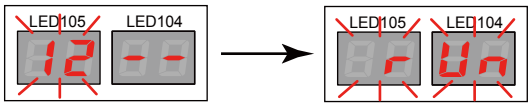


A flashing display appears on the LED105.

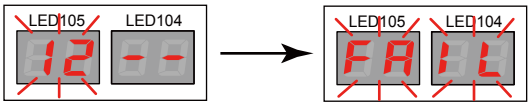
4) Press the SELECT button (SW108) to display “12” on the LED105.



5) When “12” appears on the LED105, hold down the ENTER button (SW109) for at least 3 seconds. (Unless it is held down for at least 3 seconds, the selection will not be confirmed.)
When the Indoor Unit Connection Check function is activated, the display changes to “run”.



- When the Indoor Unit Connection Check function is not activated (during maintenance), the display changes to “FAIL”.

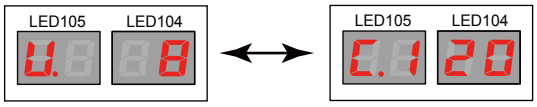


6) When Indoor Unit Connection Check is completed, the number of indoor unit is displayed on the LED104, LED105. Verify that the count matches the number of indoor units being installed.

Ex.) When eight indoor units are being connected

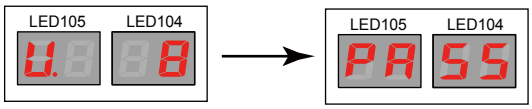
FUNCTION SETTING

7) When the number of indoor units appear on the LED104, LED105, press the SELECT button (SW108), the display changes to volume ratio of the indoor units.

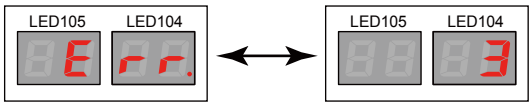


Ex.) When volume ratio of the indoor units is 120 %.

8) When “the number of indoor units” or “volume ratio of the indoor units connection” appears on the LED104, LED105, press the ENTER button (SW109). When Indoor Unit Connection Check is completed, the display changes to “PASS”.



When Indoor Unit Connection Check is error, the display changes to “Err.” or “number of error” every one second.

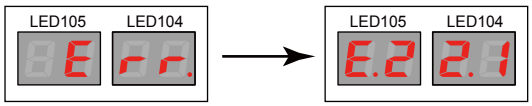


Ex.) Shown numbers of error are three.

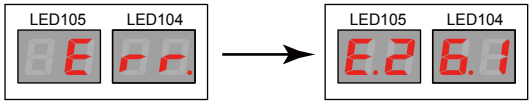
When confirm the contents of the error , push the ENTER button (SW109). When there are some errors, display change by push the SELECT button (SW108).

●Number of indoor unit connection is error (5 Ton:1~9, 4 Ton:1~8, 3 Ton:1~6).

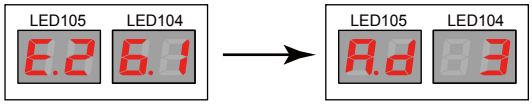
● Volume ratio of the indoor units connection is error (3, 4, 5 Ton:50~130%).



● Overlap address of the indoor unit is error.

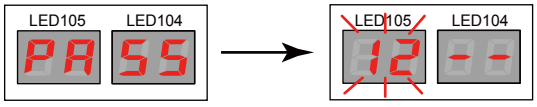


Display the address of the overlap indoor unit, hold down the ENTER button (SW109).

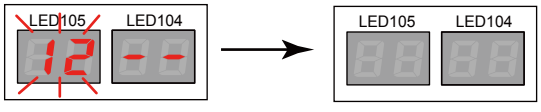


Ex.) Shown that overlap address to indoor unit address 3.

9) To exit the Indoor Unit Connection Check , press the ENTER button (SW109) in the setting completed status shown in step 8) above.



Next, press the MODE/EXIT button (SW107) to exit the Function mode.

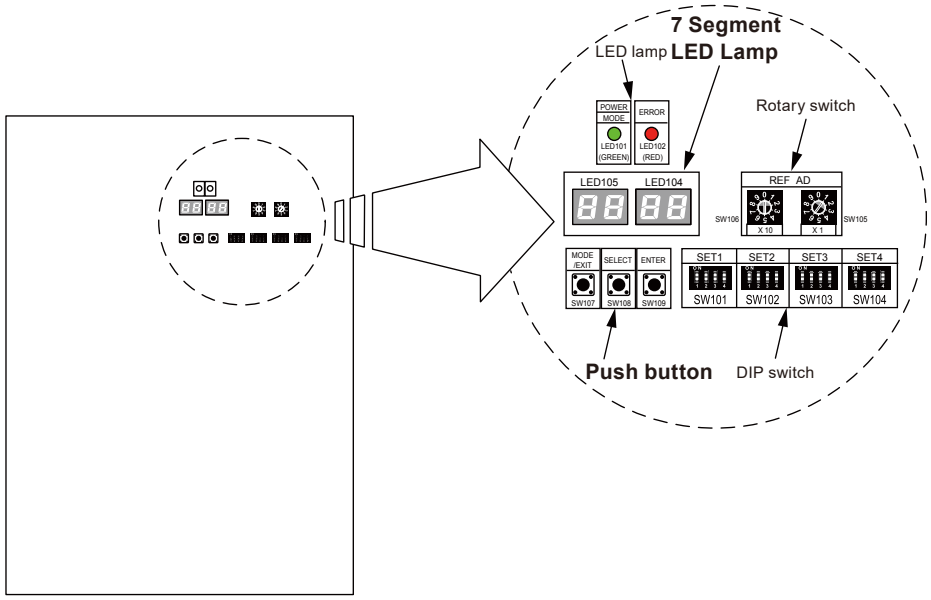


FUNCTION SETTING

2. FUNCTION SETTING

2-1. OUTDOOR UNIT

■ SWITCH POSITION

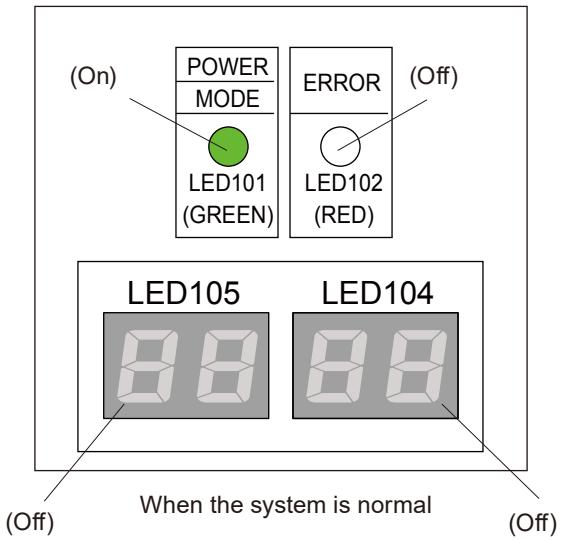


Outdoor unit printed circuit board

- Set the functions of an outdoor unit with the push buttons (SW107, SW108 and SW109) while observing the 7-segment LED lamps (LED105 and LED104) on the printed circuit board.

■ PREPARATION

1) Be sure to check that the operation of the outdoor unit has stopped (be sure to stop the operation if it is still running), and turn off the power.
2) Remove the front panel of the outdoor unit, and remove the lid of the electrical component box in order to expose the printed circuit board.
3) Turn on the power of the outdoor unit.



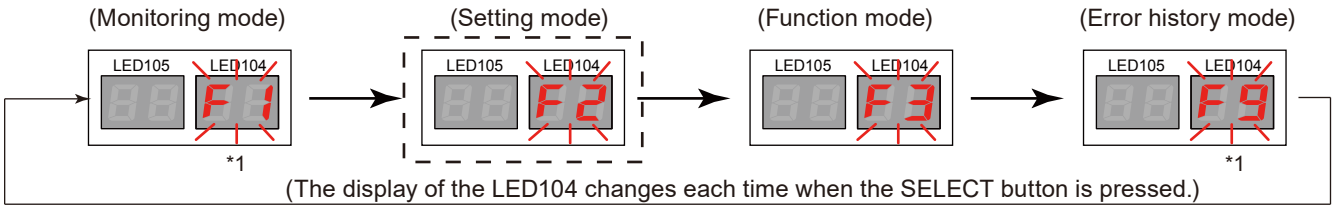
- As shown in the above figure, make sure that the POWER/MODE indicator lamp (LED101) is on and the ERROR indicator lamp (LED102) is off.
- If the ERROR indicator lamp (LED102) flashes, it indicates that an error has occurred. Check wiring and power supply. After making sure that the ERROR indicator lamp (LED102) has turned off, proceed to the next step.

FUNCTION SETTING

■ FUNCTION SETTING

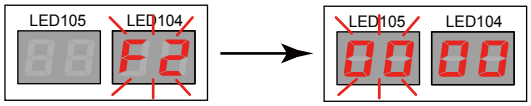
1) After verifying that the system is operating normally, press the MODE/EXIT button (SW107) once.

2) Press the SELECT button (SW108), and display “F2” on the LED104.

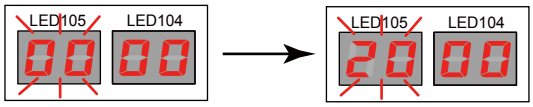


*1:The “F1”and “F9” modes are used for maintenance, so do not set them in regular operation.

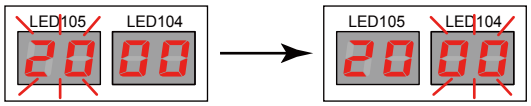
3) When “F2” appears on the LED104, press the ENTER button (SW109).
A flashing display appears on the LED105, and the flashing display of “F2” on the LED104 changes to the illuminated display of a number.



4) Referring to the Settings List shown below, press the SELECT button (SW108) and display the code number of the mode you want to set on the LED105.
Ex.) To select switching between Forced Stop and Emergency Stop



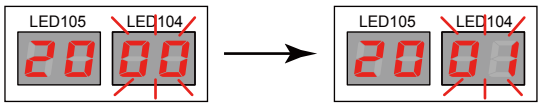
Next, press the ENTER button (SW109), and confirm the selection of the mode you want to set.



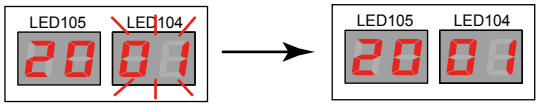
A flashing display on the LED105 changes to an illuminated display, and an illuminated display on the LED104 changes to a flashing display.

FUNCTION SETTING

5) Again, referring to the Settings List shown below, press the SELECT button (SW108), and display the code number of the function you want to set on the LED104.
Ex.) To select the Emergency Stop function

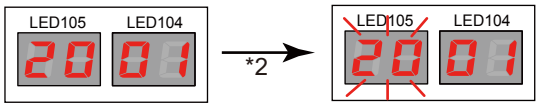


Next, press the ENTER button (SW109), and confirm the selection of the function you want to set.



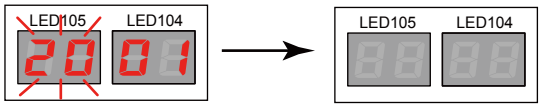
A flashing display on the LED104 changes to an illuminated display.
This completes FUNCTION SETTING.

6) To exit FUNCTION SETTING, press the ENTER button (SW109) in the setting completed status shown in step 5) above.



*2 : 5 seconds after, even if ENTER button(SW109) is not pressed , LED105 changes to a flashing display automatically.

Then, press the MODE/EXIT button (SW107) to exit FUNCTION SETTING MODE.



7) To set another function, press the ENTER button (SW109) in the setting completed status shown in step 5) above.

Repeat steps 4) and 5) above to set other functions.
When all settings are complete, perform the operation described in step 6) above to exit.

FUNCTION SETTING

2-1-1. VR-II series

■ SETTINGS LIST

LED105 CODE No.		Setting Mode	LED104 CODE No.		Setting Function	Factory setting	Outdoor unit		Remarks
							Master	Slave	
0	0	Pipe length setting	0	0	Standard (131 to 213ft.) (40 to 65m)	●	○	- *1	Pipe length means the length between master outdoor unit and the nearest indoor unit.
			0	1	Short (less than 131ft.) (less than 40m)				
			0	2	Medium (213 to 295ft.) (65 to 90m)				
			0	3	Long 1 (295 to 394ft.) (90 to 120m)				
			0	4	Long 2 (394 to 541ft.) (120 to 165m)				
1	0	Sequential start shift	0	0	Normal	●	○	- *1	The start-up timing of outdoor unit (compressor) can be set up so that it can delay several seconds. This feature is useful when multiple number of outdoor units are installed and turned on at the same time to limit the starting current.
			0	1	21sec. Delay				
			0	2	42sec. Delay				
			0	3	63sec. Delay				
1	1	Cooling capacity shift	0	0	Normal mode	●	○	- *1	
			0	1	Save energy mode 1				
			0	2	High power mode 1				
			0	3	High power mode 2				
			0	4	Prohibited				
1	2	Heating capacity shift	0	0	Normal mode	●	○	- *1	
			0	1	Save energy mode				
			0	2	High power mode 1				
			0	3	High power mode 2				
1	3	Prohibited	0	0	Prohibited	●			Setting prohibited
			0	1	Prohibited				
1	4	Prohibited	0	0	Prohibited	●			Setting prohibited
			0	1	Prohibited				
			0	2	Prohibited				
			0	3	Prohibited				
			0	4	Prohibited				
1	5	Prohibited	0	0	Prohibited	●			Setting prohibited
			0	1	Prohibited				
			0	2	Prohibited				
			0	3	Prohibited				

*1: Do not set this for outdoor units with Slave setting.

FUNCTION SETTING

LED105 CODE No.		Setting Mode	LED104 CODE No.		Setting Function	Factory setting	Outdoor unit		Remarks
							Master	Slave	
2	0	Switching between batch stop or emergency stop	0	0	Batch stop	●	○	- *1	This mode selects the pattern of the stop function to be operated by the external input terminal (CN134). •Batch stop: The stop of all indoor units connected to same refrigerant system due to input signal coming from CN134. •Emergency stop: When emergency stop is actuated, the indoor unit does not accept the operation command from the remote controller. On the other hand, when the emergency stop is released (no input from CN134), the air conditioner does not return to the original operation until operate indoor unit by the remote controller.
			0	1	Emergency stop				
2	2	Snow falling protection fan mode	0	0	Enable	●	○	- *1	This mode operates the fans of outdoor units in order to prevent the units from stopping operation when they are covered by snow.
			0	1	Disable				
2	3	Interval setting for snow falling protection fan mode	0	0	Standard (30minutes)	●	○	- *1	When the snow falling protection fan mode is set, the operation interval of the fans of outdoor units can be selected.
			0	1	Short1 (5minutes)				
			0	2	Short2 (10minutes)				
			0	3	Short3 (20minutes)				
2	4	High static pressure mode	0	0	Standard	●	○	○	When installing a duct to the discharge of an outdoor unit, set the high static pressure mode according to the static pressure of the duct to be installed. Furthermore, use this setting if the Airflow from the discharge of an outdoor unit is poor, such as when installed in a place with a low ceiling.
			0	1	High static pressure 1 (equivalent to 30Pa)				
			0	2	High static pressure 2 (equivalent to maximum)				
			0	3	Prohibited				
2	5	Prohibited	0	0	Prohibited	●			Setting prohibited
			0	1	Prohibited				
2	6	Prohibited	0	0	Prohibited	●			Setting prohibited
			0	1	Prohibited				
2	7	Prohibited	0	0	Prohibited	●			Setting prohibited
			0	1	Prohibited				
2	8	Change of unit (Temperature)	0	0	Celsius (°C)	●	○	○	
			0	1	Fahrenheit (°F)				
2	9	Change of unit (Pressure)	0	0	MPa	●	○	○	
			0	1	psi				

*1: Do not set this for outdoor units with Slave setting.

FUNCTION SETTING

LED105 CODE No.		Setting Mode	LED104 CODE No.		Setting Function	Factory setting	Outdoor unit		Remarks
							Master	Slave	
3	0	Energy saving level setting	0	0	Level 1 (stop)	●	○	- *1	The capacity limit can be selected by the external input terminal (CN133) when operating with the “Energy Saving Peak Cut function.” The lower the level, the more the effect of energy saving, but the cooling/heating performance will also drop.
			0	1	Level 2 (operated at 40% capacity)				
			0	2	Level 3 (operated at 60% capacity)				
			0	3	Level 4 (operated at 80% capacity)				
			0	4	Level 5 (operated at 100% capacity)				
3	2	Prohibited	0	0	Prohibited	●			Setting prohibited
			0	1	Prohibited				
			0	2	Prohibited				
3	3	Prohibited	0	0	Prohibited	●			Setting prohibited
			0	1	Prohibited				
3	5	Presence of heater selection control using outdoor temperature	0	0	Disable	●	○	- *1	Setting required to validate the setting of heater selection control using outdoor temperature 1 and 2 (setting value: 03 or 04) in field setting 61 (indoor unit) for heater control switching. For details, refer to Chapter 8. 1-2-2. EXTERNAL OUTPUT.
			0	1	Enable				
3	6	Outdoor temperature zone boundary temperature A	0	0	-4.0°F (-20°C)	●	○	- *1	Setting required if changing of the outdoor temperature setting for heat pump prohibition zone is required when heater selection control using outdoor temperature 1 and 2 are performed on the indoor unit. For details, refer to Chapter 8. 1-2-2. EXTERNAL OUTPUT.
			0	1	-0.4°F (-18°C)				
			0	2	3.2°F (-16°C)				
			0	3	6.8°F (-14°C)				
			0	4	10.4°F (-12°C)				
			0	5	14.0°F (-10°C)				
			0	6	17.6°F (-8°C)				
			0	7	21.2°F (-6°C)				
			0	8	24.8°F (-4°C)				
3	7	Outdoor temperature zone boundary temperature B	0	0	42.8°F (6°C)	●	○	- *1	Setting required if changing of the outdoor temperature setting for heat pump only zone is required when heater selection control using outdoor temperature 1 is performed on the indoor unit. For details, refer to Chapter 8. 1-2-2. EXTERNAL OUTPUT.
			0	1	14.0°F (-10°C)				
			0	2	17.6°F (-8°C)				
			0	3	21.2°F (-6°C)				
			0	4	24.8°F (-4°C)				
			0	5	28.4°F (-2°C)				
			0	6	32.0°F (0°C)				
			0	7	35.6°F (2°C)				
			0	8	39.2°F (4°C)				
			0	9	42.8°F (6°C)				
			1	0	46.4°F (8°C)				
			1	1	50.0°F (10°C)				
			1	2	53.6°F (12°C)				
			1	3	57.2°F (14°C)				
			1	4	60.8°F (16°C)				
			1	5	64.4°F (18°C)				

*1: Do not set this for outdoor units with Slave setting.

FUNCTION SETTING

LED105 CODE No.		Setting Mode	LED104 CODE No.		Setting Function	Factory setting	Outdoor unit		Remarks
							Master	Slave	
4	0	Capacity priority setting (in low noise mode)	0	0	Off (quiet priority)	●	○	- *1	If the cooling/heating performance becomes insufficient when the low noise mode is set, it is possible to set “capacity priority” that automatically cancels the low noise mode (once performance is restored, the mode will automatically return to the low noise mode).
			0	1	On (capacity priority)				
4	1	Low noise mode setting	0	0	Off (Normal)	●	○	- *1	
			0	1	On (Low noise mode)				
4	2	Low noise mode operation level setting	0	0	Level 1	●	○	- *1	Level1: The operating sound lowers from about 3 to 5 dB(A) more than the rated value Level2: The operating sound lowers from about 3 to 5 dB(A) more than the Level1
			0	1	Level 2				
6	0	Back up operation 1	0	0	On	●	○	- *1	
			0	1	Off				
6	1	Prohibited	0	0	On	●			Setting prohibited
			0	1	Off				
6	2	Prohibited	0	0	On	●			Setting prohibited
			0	1	Off				
6	3	Prohibited	0	0	On	●			Setting prohibited
			0	1	Off				

*1: Do not set this for outdoor units with Slave setting.

FUNCTION SETTING

LED105 CODE No.		Setting Mode	LED104 CODE No.		Setting Function	Factory setting	Outdoor unit		Remarks
							Master	Slave	
7	0	Electricity meter No. setting 1 *2	0	0	Setting number x00	●	○	○	Set the ones digit and tens digit of the No. of the electricity meter connected to CN135.
			0	1	Setting number x01				
			▪ ▪ ▪	▪ ▪ ▪	▪ ▪ ▪				
			9	8	Setting number x98				
			9	9	Setting number x99				
7	1	Electricity meter No. setting 2 *2"	0	0	Setting number 0xx	●	○	○	Set the hundreds digit of the No. of the electricity meter connected to CN135.
			0	1	Setting number 1xx				
			0	2	Setting number 2xx				
7	2	Electricity meter pulse setting 1 *3"	0	0	Setting number xx00	●	○	○	Set the ones digit and tens digit of the No. of the electricity meter pulse setting connected to CN135.
			0	1	Setting number xx01				
			▪ ▪ ▪	▪ ▪ ▪	▪ ▪ ▪				
			9	8	Setting number xx98				
			9	9	Setting number xx99				
7	3	Electricity meter pulse setting 2 *3"	0	0	Setting number 00xx	●	○	○	Set the hundreds digit and thousands digit of the electricity meter pulse setting connected to CN135.
			0	1	Setting number 01xx				
			▪ ▪ ▪	▪ ▪ ▪	▪ ▪ ▪				
			9	8	Setting number 98xx				
			9	9	Setting number 99xx				

*2: When electricity meter No. is set to “000” and “201 to 299”, the pulses input to CN135 become ineffective.
Available setting number is "001" to "200"

*3: When the electricity meter pulse setting is set to “0000”, the pulses input to CN135 become ineffective.
Available setting number is "0001" to "9999"

FUNCTION SETTING

2-1-2. V-II (230V) series

■ SETTINGS LIST

LED105 CODE No.		Setting Mode	LED104 CODE No.		Setting Function	Factory setting	Outdoor unit		Remarks
							Master	Slave	
0	0	Pipe length setting	0	0	Standard (131 to 213ft.) (40 to 65m)	●	○	- *1	Pipe length means the length between master outdoor unit and the nearest indoor unit.
			0	1	Short (less than 131ft.) (less than 40m)				
			0	2	Medium (213 to 295ft.) (65 to 90m)				
			0	3	Long 1 (295 to 394ft.) (90 to 120m)				
			0	4	Long 2 (394 to 492ft.) (120 to 150m)				
1	0	Sequential start shift	0	0	Normal	●	○	- *1	The start-up timing of outdoor unit (compressor) can be set up so that it can delay several seconds. This feature is useful when multiple number of outdoor units are installed and turned on at the same time to limit the starting current.
			0	1	21sec. Delay				
			0	2	42sec. Delay				
			0	3	63sec. Delay				
1	1	Cooling capacity shift	0	0	Normal mode	●	○	- *1	
			0	1	Save energy mode				
			0	2	High power mode 1				
			0	3	High power mode 2				
			0	4	Prohibited				
1	2	Heating capacity shift	0	0	Normal mode	●	○	- *1	
			0	1	Save energy mode				
			0	2	High power mode 1				
			0	3	High power mode 2				
1	3	Prohibited	0	0	Prohibited	●			Setting prohibited
			0	1	Prohibited				
1	7	Height difference between indoor units	0	0	Standard	●	○	- *1	If installing the indoor units (even only one set) to a lower floor than the outdoor unit, and the height difference between the indoor units is 3m or greater (i.e., if installing the indoor units on separate floors), set "02 (height difference)".
			0	1	Prohibited				
			0	2	Height difference				
			0	3	Prohibited				
			0	4	Prohibited				

*1: Do not set this for outdoor units with Slave setting.

FUNCTION SETTING

LED105 CODE No.		Setting Mode	LED104 CODE No.		Setting Function	Factory setting	Outdoor unit		Remarks
							Master	Slave	
2	0	Switching between batch stop or emergency stop	0	0	Batch stop	●	○	- *1	This mode selects the pattern of the stop function to be operated by the external input terminal (CN134). •Batch stop: The stop of all indoor units connected to same refrigerant system due to input signal coming from CN134. •Emergency stop: When emergency stop is actuated, the indoor unit does not accept the operation command from the remote controller. On the other hand, when the emergency stop is released (no input from CN134), the air conditioner does not return to the original operation until the indoor unit is turned on by the remote controller.
			0	1	Emergency stop				
2	1	Operation mode selecting method	0	0	Priority given to the first command	●	○	- *1	Select the priority setting of the operation mode. •Priority given to the first command: Priority is given to the operation mode which is set first. •Priority given to external input of outdoor unit: Priority is given to the operation mode which is set by the external input terminal (CN132). •Priority given to administrative indoor unit: Priority is given to the operation mode of the administrative indoor unit which is set by the wired remote controller.
			0	1	Priority given to external input of outdoor unit				
			0	2	Priority given to administrative indoor unit				
2	2	Snow falling protection fan mode	0	0	Normal mode	●	○	- *1	This mode operates the fans of outdoor units in order to prevent the units from stopping operation when they are covered by snow.
			0	1	Snow falling protection fan mode				
2	3	Interval setting for snow falling protection fan mode	0	0	Standard (30minutes)	●	○	- *1	When the snow falling protection fan mode is set, the operation interval of the fans of outdoor units can be selected.
			0	1	Short1 (5minutes)				
			0	2	Short2 (10minutes)				
			0	3	Short3 (20minutes)				
2	4	High static pressure mode	0	0	Standard	●	○	○	When installing a duct to the blow-off outlet of an outdoor unit, set the high static pressure mode according to the static pressure of the duct to be installed. Furthermore, use this setting if the air blow of an outdoor unit is poor, such as when installed in a place with a low ceiling.
			0	1	High static pressure 1 (equivalent to 0.12in.WG (30Pa))				
			0	2	High static pressure 2 (equivalent to maximum)				
			0	3	Prohibited				

*1: Do not set this for outdoor units with Slave setting.

FUNCTION SETTING

LED105 CODE No.		Setting Mode	LED104 CODE No.		Setting Function	Factory setting	Outdoor unit		Remarks
							Master	Slave	
2	5	Prohibited	0	0	Prohibited	●			Setting prohibited
			0	1	Prohibited				
			0	2	Prohibited				
			0	3	Prohibited				
2	6	Prohibited	0	0	Prohibited	●			Setting prohibited
			0	1	Prohibited				
2	7	Prohibited	0	0	Prohibited	●			Setting prohibited
			0	1	Prohibited				
2	8	Change of unit (Temperature)	0	0	Celsius (°C)	●	○	○	
			0	1	Fahrenheit (°F)				
2	9	Change of unit (Pressure)	0	0	MPa	●	○	○	
			0	1	psi				
3	0	Energy saving level setting	0	0	Level 1 (stop)	●	○	- *1	The capacity limit can be selected by the external input terminal (CN133) when operating with the “Energy Saving Peak Cut function.” The lower the level, the more the effect of energy saving, but the cooling/heating performance will also drop.
			0	1	Level 2 (operated at 40% capacity)				
			0	2	Level 3 (operated at 60% capacity)				
			0	3	Level 4 (operated at 80% capacity)				
			0	4	Level 5 (operated at 100% capacity)				
3	2	Prohibited	0	0	Prohibited	●			Setting prohibited
			0	1	Prohibited				
			0	2	Prohibited				
3	3	Prohibited	0	0	Prohibited	●			Setting prohibited
			0	1	Prohibited				
3	5	Presence of heater selection control using outdoor temperature	0	0	No	●	○	*1	
			0	1	Yes				
3	6	Outdoor temperature zone boundary temperature A	0	0	-4.0 °F (-20 °C)	●	○	*1	
			0	1	-0.4 °F (-18 °C)				
			0	2	3.2 °F (-16 °C)				
			0	3	6.8 °F (-14 °C)				
			0	4	10.4 °F (-12 °C)				
			0	5	14.0 °F (-10 °C)				
			0	6	17.6 °F (-8 °C)				
			0	7	21.2 °F (-6 °C)				
			0	8	24.8 °F (-4 °C)				

*1: Do not set this for outdoor units with Slave setting.

FUNCTION SETTING

LED105 CODE No.		Setting Mode	LED104 CODE No.		Setting Function	Factory setting	Outdoor unit		Remarks
							Master	Slave	
3	7	Outdoor temperature zone boundary temperature B	0	0	42.8 °F (6 °C)	●	○	*1	
			0	1	14.0 °F (-10 °C)				
			0	2	17.6 °F (-8 °C)				
			0	3	21.2 °F (-6 °C)				
			0	4	24.8 °F (-4 °C)				
			0	5	28.4 °F (-2 °C)				
			0	6	32.0 °F (0 °C)				
			0	7	35.6 °F (2 °C)				
			0	8	39.2 °F (4 °C)				
			0	9	42.8 °F (6 °C)				
			1	0	46.4 °F (8 °C)				
			1	1	50.0 °F (10 °C)				
			1	2	53.6 °F (12 °C)				
			1	3	57.2 °F (14 °C)				
			1	4	60.8 °F (16 °C)				
			1	5	64.4 °F (18 °C)				
4	0	Capacity priority setting (in low noise mode)	0	0	Off (quiet priority)	●	○	- *1	If the cooling/heating performance becomes insufficient when the low noise mode is set, it is possible to set “capacity priority” that automatically cancels the low noise mode (once performance is restored, the mode will automatically return to the low noise mode).
			0	1	On (capacity priority)				
4	1	Low noise mode setting	0	0	Off (Normal)	●	○	- *1	
			0	1	On (Low noise mode)				
4	2	Low noise mode operation level setting	0	0	Level 1 (55dB)	●	○	- *1	The noise level when operating in the low noise mode can be set.
			0	1	Level 2 (50dB)				
6	1	Prohibited	0	0	On	●			Setting prohibited
			0	1	Off				
6	2	Prohibited	0	0	On	●			Setting prohibited
			0	1	Off				
6	3	Prohibited	0	0	On	●			Setting prohibited
			0	1	Off				

*1: Do not set this for outdoor units with Slave setting.

FUNCTION SETTING

LED105 CODE No.		Setting Mode	LED104 CODE No.		Setting Function	Factory setting	Outdoor unit		Remarks
							Master	Slave	
7	0	Electricity meter No. setting 1 *2	0	0	Setting number x00	●	○	○	Set the ones digit and tens digit of the No. of the electricity meter connected to CN135.
			0	1	Setting number x01				
			▪ ▪ ▪	▪ ▪ ▪	▪ ▪ ▪				
			9	8	Setting number x98				
			9	9	Setting number x99				
7	1	Electricity meter No. setting 2 *2"	0	0	Setting number 0xx	●	○	○	Set the hundreds digit of the No. of the electricity meter connected to CN135.
			0	1	Setting number 1xx				
			0	2	Setting number 2xx				
7	2	Electricity meter pulse setting 1 *3"	0	0	Setting number xx00	●	○	○	Set the ones digit and tens digit of the No. of the electricity meter pulse setting connected to CN135.
			0	1	Setting number xx01				
			▪ ▪ ▪	▪ ▪ ▪	▪ ▪ ▪				
			9	8	Setting number xx98				
			9	9	Setting number xx99				
7	3	Electricity meter pulse setting 2 *3"	0	0	Setting number 00xx	●	○	○	Set the hundreds digit and thousands digit of the electricity meter pulse setting connected to CN135.
			0	1	Setting number 01xx				
			▪ ▪ ▪	▪ ▪ ▪	▪ ▪ ▪				
			9	8	Setting number 98xx				
			9	9	Setting number 99xx				

*2: When electricity meter No. is set to “000” and “201 to 299”, the pulses input to CN135 become ineffective.
Available setting number is "001" to "200"

*3: When the electricity meter pulse setting is set to “0000”, the pulses input to CN135 become ineffective.
Available setting number is "0001" to "9999"

FUNCTION SETTING

2-1-3. V-II (460V) series

■ SETTINGS LIST

LED105 CODE No.		Setting Mode	LED104 CODE No.		Setting Function	Factory setting	Outdoor unit		Remarks
							Master	Slave	
0	0	Pipe length setting	0	0	Standard (131 to 213ft.) (40 to 65m)	●	○	- *1	Pipe length means the length between master outdoor unit and the nearest indoor unit.
			0	1	Short (less than 131ft.) (less than 40m)				
			0	2	Medium (213 to 295ft.) (65 to 90m)				
			0	3	Long 1 (295 to 394ft.) (90 to 120m)				
			0	4	Long 2 (394 to 541ft.) (120 to 165m)				
1	0	Sequential start shift	0	0	Normal	●	○	- *1	The start-up timing of outdoor unit (compressor) can be set up so that it can delay several seconds. This feature is useful when multiple number of outdoor units are installed and turned on at the same time to limit the starting current.
			0	1	21sec. Delay				
			0	2	42sec. Delay				
			0	3	63sec. Delay				
1	1	Cooling capacity shift	0	0	Normal mode	●	○	- *1	
			0	1	Save energy mode				
			0	2	High power mode 1				
			0	3	High power mode 2				
			0	4	Prohibited				
1	2	Heating capacity shift	0	0	Normal mode	●	○	- *1	
			0	1	Save energy mode				
			0	2	High power mode 1				
			0	3	High power mode 2				
1	3	Prohibited	0	0	Prohibited	●			Setting prohibited
			0	1	Prohibited				
1	7	Height difference between indoor units	0	0	Standard	●	○	- *1	If installing the indoor units (even only one set) to a lower floor than the outdoor unit, and the height difference between the indoor units is 3m or greater (i.e., if installing the indoor units on separate floors), set "02 (height difference)".
			0	1	Prohibited				
			0	2	Height difference				
			0	3	Prohibited				
			0	4	Prohibited				

*1: Do not set this for outdoor units with Slave setting.

FUNCTION SETTING

LED105 CODE No.		Setting Mode	LED104 CODE No.		Setting Function	Factory setting	Outdoor unit		Remarks
							Master	Slave	
2	0	Switching between batch stop or emergency stop	0	0	Batch stop	●	○	- *1	This mode selects the pattern of the stop function to be operated by the external input terminal (CN134). •Batch stop: The stop of all indoor units connected to same refrigerant system due to input signal coming from CN134. •Emergency stop: When emergency stop is actuated, the indoor unit does not accept the operation command from the remote controller. On the other hand, when the emergency stop is released (no input from CN134), the air conditioner does not return to the original operation until the indoor unit is turned on by the remote controller.
			0	1	Emergency stop				
2	1	Operation mode selecting method	0	0	Priority given to the first command	●	○	- *1	Select the priority setting of the operation mode. •Priority given to the first command: Priority is given to the operation mode which is set first. •Priority given to external input of outdoor unit: Priority is given to the operation mode which is set by the external input terminal (CN132). •Priority given to administrative indoor unit: Priority is given to the operation mode of the administrative indoor unit which is set by the wired remote controller.
			0	1	Priority given to external input of outdoor unit				
			0	2	Priority given to administrative indoor unit				
2	2	Snow falling protection fan mode	0	0	Normal mode	●	○	- *1	This mode operates the fans of outdoor units in order to prevent the units from stopping operation when they are covered by snow.
			0	1	Snow falling protection fan mode				
2	3	Interval setting for snow falling protection fan mode	0	0	Standard (30minutes)	●	○	- *1	When the snow falling protection fan mode is set, the operation interval of the fans of outdoor units can be selected.
			0	1	Short1 (5minutes)				
			0	2	Short2 (10minutes)				
			0	3	Short3 (20minutes)				
2	4	High static pressure mode	0	0	Standard	●	○	○	When installing a duct to the blow-off outlet of an outdoor unit, set the high static pressure mode according to the static pressure of the duct to be installed. Furthermore, use this setting if the air blow of an outdoor unit is poor, such as when installed in a place with a low ceiling.
			0	1	High static pressure 1 (equivalent to 0.12in.WG (30Pa))				
			0	2	High static pressure 2 (equivalent to maximum)				
			0	3	Prohibited				

*1: Do not set this for outdoor units with Slave setting.

FUNCTION SETTING

LED105 CODE No.		Setting Mode	LED104 CODE No.		Setting Function	Factory setting	Outdoor unit		Remarks
							Master	Slave	
2	5	Prohibited	0	0	Prohibited	●			Setting prohibited
			0	1	Prohibited				
			0	2	Prohibited				
			0	3	Prohibited				
2	6	Prohibited	0	0	Prohibited	●			Setting prohibited
			0	1	Prohibited				
2	7	Prohibited	0	0	Prohibited	●			Setting prohibited
			0	1	Prohibited				
2	8	Change of unit (Temperature)	0	0	Celsius (°C)	●	○	○	
			0	1	Fahrenheit (°F)				
2	9	Change of unit (Pressure)	0	0	MPa	●	○	○	
			0	1	psi				
3	0	Energy saving level setting	0	0	Level 1 (stop)	●	○	- *1	The capacity limit can be selected by the external input terminal (CN133) when operating with the “Energy Saving Peak Cut function.” The lower the level, the more the effect of energy saving, but the cooling/heating performance will also drop.
			0	1	Level 2 (operated at 40% capacity)				
			0	2	Level 3 (operated at 60% capacity)				
			0	3	Level 4 (operated at 80% capacity)				
			0	4	Level 5 (operated at 100% capacity)				
3	2	Prohibited	0	0	Prohibited	●			Setting prohibited
			0	1	Prohibited				
			0	2	Prohibited				
3	3	Prohibited	0	0	Prohibited	●			Setting prohibited
			0	1	Prohibited				
3	5	Presence of heater selection control using outdoor temperature	0	0	No	●	○	*1	
			0	1	Yes				
3	6	Outdoor temperature zone boundary temperature A	0	0	-4.0 °F (-20 °C)	●	○	*1	
			0	1	-0.4 °F (-18 °C)				
			0	2	3.2 °F (-16 °C)				
			0	3	6.8 °F (-14 °C)				
			0	4	10.4 °F (-12 °C)				
			0	5	14.0 °F (-10 °C)				
			0	6	17.6 °F (-8 °C)				
			0	7	21.2 °F (-6 °C)				
			0	8	24.8 °F (-4 °C)				

*1: Do not set this for outdoor units with Slave setting.

FUNCTION SETTING

LED105 CODE No.		Setting Mode	LED104 CODE No.		Setting Function	Factory setting	Outdoor unit		Remarks
							Master	Slave	
3	7	Outdoor temperature zone boundary temperature B	0	0	42.8 °F (6 °C)	●	○	*1	
			0	1	14.0 °F (-10 °C)				
			0	2	17.6 °F (-8 °C)				
			0	3	21.2 °F (-6 °C)				
			0	4	24.8 °F (-4 °C)				
			0	5	28.4 °F (-2 °C)				
			0	6	32.0 °F (0 °C)				
			0	7	35.6 °F (2 °C)				
			0	8	39.2 °F (4 °C)				
			0	9	42.8 °F (6 °C)				
			1	0	46.4 °F (8 °C)				
			1	1	50.0 °F (10 °C)				
			1	2	53.6 °F (12 °C)				
			1	3	57.2 °F (14 °C)				
			1	4	60.8 °F (16 °C)				
			1	5	64.4 °F (18 °C)				
4	0	Capacity priority setting (in low noise mode)	0	0	Off (quiet priority)	●	○	- *1	If the cooling/heating performance becomes insufficient when the low noise mode is set, it is possible to set “capacity priority” that automatically cancels the low noise mode (once performance is restored, the mode will automatically return to the low noise mode).
			0	1	On (capacity priority)				
4	1	Low noise mode setting	0	0	Off (Normal)	●	○	- *1	
			0	1	On (Low noise mode)				
4	2	Low noise mode operation level setting	0	0	Level 1 (55dB)	●	○	- *1	The noise level when operating in the low noise mode can be set.
			0	1	Level 2 (50dB)				
6	1	Prohibited	0	0	On	●			Setting prohibited
			0	1	Off				
6	2	Prohibited	0	0	On	●			Setting prohibited
			0	1	Off				
6	3	Prohibited	0	0	On	●			Setting prohibited
			0	1	Off				

*1: Do not set this for outdoor units with Slave setting.

FUNCTION SETTING

LED105 CODE No.		Setting Mode	LED104 CODE No.		Setting Function	Factory setting	Outdoor unit		Remarks
							Master	Slave	
7	0	Electricity meter No. setting 1 *2	0	0	Setting number x00	●	○	○	Set the ones digit and tens digit of the No. of the electricity meter connected to CN135.
			0	1	Setting number x01				
			▪ ▪ ▪	▪ ▪ ▪	▪ ▪ ▪				
			9	8	Setting number x98				
			9	9	Setting number x99				
7	1	Electricity meter No. setting 2 *2"	0	0	Setting number 0xx	●	○	○	Set the hundreds digit of the No. of the electricity meter connected to CN135.
			0	1	Setting number 1xx				
			0	2	Setting number 2xx				
7	2	Electricity meter pulse setting 1 *3"	0	0	Setting number xx00	●	○	○	Set the ones digit and tens digit of the No. of the electricity meter pulse setting connected to CN135.
			0	1	Setting number xx01				
			▪ ▪ ▪	▪ ▪ ▪	▪ ▪ ▪				
			9	8	Setting number xx98				
			9	9	Setting number xx99				
7	3	Electricity meter pulse setting 2 *3"	0	0	Setting number 00xx	●	○	○	Set the hundreds digit and thousands digit of the electricity meter pulse setting connected to CN135.
			0	1	Setting number 01xx				
			▪ ▪ ▪	▪ ▪ ▪	▪ ▪ ▪				
			9	8	Setting number 98xx				
			9	9	Setting number 99xx				

*2: When electricity meter No. is set to “000” and “201 to 299”, the pulses input to CN135 become ineffective. Available setting number is "001" to "200"

*3: When the electricity meter pulse setting is set to “0000”, the pulses input to CN135 become ineffective. Available setting number is "0001" to "9999"

FUNCTION SETTING

2-1-4. J-II series

■ SETTINGS LIST

LED105 CODE No.		Setting Mode	LED104 CODE No.		Setting Function	Factory setting	Remarks
0	0	Pipe length setting	0	0	Standard (131 to 213ft.) (40 to 65m)	●	Pipe length means the length between outdoor unit and the nearest indoor unit.
			0	1	Short (less than 131ft.) (less than 40m)		
			0	2	Medium (213 to 295ft.) (65 to 90m)		
			0	3	Long 1 (295 to 394ft.) (90 to 120m)		
			0	4	Prohibited		
1	0	Prohibited	0	0	Prohibited	●	Setting prohibited
			0	1	Prohibited		
			0	2	Prohibited		
			0	3	Prohibited		
1	1	Cooling capacity shift	0	0	Normal mode	●	
			0	1	Save energy mode 1		
			0	2	High power mode 1		
			0	3	High power mode 2		
			0	4	Prohibited		
1	2	Heating capacity shift	0	0	Normal mode	●	
			0	1	Save energy mode		
			0	2	High power mode 1		
			0	3	High power mode 2		
1	3	Prohibited	0	0	Prohibited	●	Setting prohibited
			0	1	Prohibited		
1	4	Prohibited	0	0	Prohibited	●	Setting prohibited
			0	1	Prohibited		
			0	2	Prohibited		
			0	3	Prohibited		
			0	4	Prohibited		

FUNCTION SETTING

LED105 CODE No.		Setting Mode	LED104 CODE No.		Setting Function	Factory setting	Remarks
2	0	Switching between batch stop or emergency stop	0	0	Batch stop	●	This mode selects the pattern of the stop function to be operated by the external input terminal (CN134). •Batch stop: The stop of all indoor units connected to same refrigerant system due to input signal coming from CN134. •Emergency stop: When emergency stop is actuated, the indoor unit does not accept the operation command from the remote controller. On the other hand, when the emergency stop is released (no input from CN134), the air conditioner does not return to the original operation until operate indoor unit by the remote controller.
			0	1	Emergency stop		
2	1	Operation mode selecting method	0	0	Priority given to the first command	●	Select the priority setting of the operation mode. •Priority given to the first command: Priority is given to the operation mode which is set first. •Priority given to external input of outdoor unit: Priority is given to the operation mode which is set by the external input terminal (CN132). •Priority given to administrative indoor unit: Priority is given to the operation mode of the administrative indoor unit which is set by the wired remote controller.
			0	1	Priority given to external input of outdoor unit		
			0	2	Priority given to administrative indoor unit		
2	2	Prohibited	0	0	Prohibited	●	Setting prohibited
			0	1	Prohibited		
2	3	Prohibited	0	0	Prohibited	●	Setting prohibited
			0	1	Prohibited		
			0	2	Prohibited		
			0	3	Prohibited		
2	4	Prohibited	0	0	Prohibited	●	Setting prohibited
			0	1	Prohibited		
			0	2	Prohibited		
			0	3	Prohibited		
2	5	Prohibited	0	0	Prohibited	●	Setting prohibited
			0	1	Prohibited		
			0	2	Prohibited		
			0	3	Prohibited		
2	6	Prohibited	0	0	Prohibited	●	Setting prohibited
			0	1	Prohibited		
2	7	Prohibited	0	0	Prohibited	●	Setting prohibited
			0	1	Prohibited		

FUNCTION SETTING

LED105 CODE No.		Setting Mode	LED104 CODE No.		Setting Function	Factory setting	Remarks
2	8	Change of unit (Temperature)	0	0	Celsius (°C)	●	
			0	1	Fahrenheit (°F)		
2	9	Change of unit (Pressure)	0	0	MPa	●	
			0	1	psi		
3	0	Outdoor unit capacity save setting	0	0	Level 1 (stop)	●	The capacity limit can be selected by the external input terminal (CN133) when operating with the “Outdoor unit capacity save function.” The lower the level, the more the effect of energy saving, but the cooling/heating performance will also drop.
			0	1	Level 2		
			0	2	Level 3		
			0	3	Level 4		
			0	4	Level 5		
3	1	Prohibited	0	0	Prohibited	●	Setting prohibited
			0	1	Prohibited		
3	4	Prohibited	0	0	Prohibited	●	Setting prohibited
			0	1	Prohibited		
3	5	Presence of heater selection control using outdoor temperature	0	0	Disable	●	Setting required to validate the setting of heater selection control using outdoor temperature 1 and 2 (setting value: 03 or 04) in field setting 61 (indoor unit) for heater control switching. For details, refer to Chapter 8. 1-2-2. EXTERNAL OUTPUT.
			0	1	Enable		
3	6	Outdoor temperature zone boundary temperature A	0	0	-4.0°F (-20°C)	●	Setting required if changing of the outdoor temperature setting for heat pump prohibition zone is required when heater selection control using outdoor temperature 1 and 2 are performed on the indoor unit. For details, refer to Chapter 8. 1-2-2. EXTERNAL OUTPUT.
			0	1	-0.4°F (-18°C)		
			0	2	3.2°F (-16°C)		
			0	3	6.8°F (-14°C)		
			0	4	10.4°F (-12°C)		
			0	5	14.0°F (-10°C)		
			0	6	17.6°F (-8°C)		
			0	7	21.2°F (-6°C)		
			0	8	24.8°F (-4°C)		

FUNCTION SETTING

LED105 CODE No.		Setting Mode	LED104 CODE No.		Setting Function	Factory setting	Remarks
3	7	Outdoor temperature zone boundary temperature B	0	0	42.8°F (6°C)	●	Setting required if changing of the outdoor temperature setting for heat pump only zone is required when heater selection control using outdoor temperature 1 is performed on the indoor unit. For details, refer to Chapter 8. 1-2-2. EXTERNAL OUTPUT.
			0	1	14.0°F (-10°C)		
			0	2	17.6°F (-8°C)		
			0	3	21.2°F (-6°C)		
			0	4	24.8°F (-4°C)		
			0	5	28.4°F (-2°C)		
			0	6	32.0°F (0°C)		
			0	7	35.6°F (2°C)		
			0	8	39.2°F (4°C)		
			0	9	42.8°F (6°C)		
			1	0	46.4°F (8°C)		
			1	1	50.0°F (10°C)		
			1	2	53.6°F (12°C)		
			1	3	57.2°F (14°C)		
			1	4	60.8°F (16°C)		
			1	5	64.4°F (18°C)		
4	0	Capacity priority setting (in low noise mode)	0	0	Off (quiet priority)	●	If the cooling/heating performance becomes insufficient when the low noise mode is set, it is possible to set “capacity priority” that automatically cancels the low noise mode (once performance is restored, the mode will automatically return to the low noise mode).
			0	1	On (capacity priority)		
4	1	Low noise mode setting	0	0	Off (Normal)	●	
			0	1	On (Low noise mode)		
4	2	Prohibited	0	0	Prohibited	●	Setting prohibited
			0	1	Prohibited		
6	0	Prohibited	0	0	Prohibited	●	Setting prohibited
			0	1	Prohibited		
6	1	Prohibited	0	0	Prohibited	●	Setting prohibited
			0	1	Prohibited		
6	2	Prohibited	0	0	Prohibited	●	Setting prohibited
			0	1	Prohibited		

FUNCTION SETTING

LED105 CODE No.		Setting Mode	LED104 CODE No.		Setting Function	Factory setting	Remarks
7	0	Electricity meter No. setting 1 *1	0	0	Setting number x00	●	Set the ones digit and tens digit of the No. of the electricity meter connected to CN135.
			0	1	Setting number x01		
			▪ ▪ ▪	▪ ▪ ▪	▪ ▪ ▪		
			9	8	Setting number x98		
			9	9	Setting number x99		
7	1	Electricity meter No. setting 2 *1	0	0	Setting number 0xx	●	Set the hundreds digit of the No. of the electricity meter connected to CN135.
			0	1	Setting number 1xx		
			0	2	Setting number 2xx		
7	2	Electricity meter pulse setting 1 *2	0	0	Setting number xx00	●	Set the ones digit and tens digit of the No. of the electricity meter pulse setting connected to CN135.
			0	1	Setting number xx01		
			▪ ▪ ▪	▪ ▪ ▪	▪ ▪ ▪		
			9	8	Setting number xx98		
			9	9	Setting number xx99		
7	3	Electricity meter pulse setting 2 *2	0	0	Setting number 00xx	●	Set the hundreds digit and thousands digit of the electricity meter pulse setting connected to CN135.
			0	1	Setting number 01xx		
			▪ ▪ ▪	▪ ▪ ▪	▪ ▪ ▪		
			9	8	Setting number 98xx		
			9	9	Setting number 99xx		
9	0	Prohibited	0	0	Prohibited	●	Setting prohibited
			0	1	Prohibited		
			0	2	Prohibited		
			0	3	Prohibited		
			0	4	Prohibited		
			0	5	Prohibited		
			0	6	Prohibited		
			0	7	Prohibited		
			0	8	Prohibited		
			0	9	Prohibited		
			1	0	Prohibited		
			1	1	Prohibited		

*1: When electricity meter No. is set to “000” and “201 to 299”, the pulses input to CN135 become ineffective. Available setting number is "001" to "200"

*2: When the electricity meter pulse setting is set to “0000”, the pulses input to CN135 become ineffective. Available setting number is "0001" to "9999"

FUNCTION SETTING

2-1-5. J-IIS series

■ SETTINGS LIST

LED105 CODE No.		Setting Mode	LED104 CODE No.		Setting Function	Factory setting	Remarks
0	0	Prohibited	0	0	Prohibited	●	Setting prohibited
			0	1	Prohibited		
			0	2	Prohibited		
			0	3	Prohibited		
			0	4	Prohibited		
1	0	Prohibited	0	0	Prohibited	●	Setting prohibited
			0	1	Prohibited		
			0	2	Prohibited		
			0	3	Prohibited		
1	1	Cooling capacity shift	0	0	Normal mode	●	
			0	1	Save energy mode 1		
			0	2	High power mode 1		
			0	3	High power mode 2		
			0	4	Prohibited		
1	2	Heating capacity shift	0	0	Normal mode	●	
			0	1	Save energy mode		
			0	2	High power mode 1		
			0	3	High power mode 2		
1	3	Prohibited	0	0	Prohibited	●	Setting prohibited
			0	1	Prohibited		

FUNCTION SETTING

LED105 CODE No.		Setting Mode	LED104 CODE No.		Setting Function	Factory setting	Remarks
1	4	Prohibited	0	0	Prohibited	●	Setting prohibited
			0	1	Prohibited		
			0	2	Prohibited		
			0	3	Prohibited		
			0	4	Prohibited		
1	6	Prohibited	0	0	Prohibited	●	Setting prohibited
			0	1	Prohibited		
			0	2	Prohibited		
			0	3	Prohibited		
			0	4	Prohibited		
1	7	Height difference between indoor units	0	0	Standard	●	If installing the indoor units (even only one set) to a lower floor than the outdoor unit, and the height difference between the indoor units is 3m or greater (i.e., if installing the indoor units on separate floors), set "02 (height difference)".
			0	1	Prohibited		
			0	2	Height difference		
			0	3	Prohibited		
			0	4	Prohibited		

FUNCTION SETTING

LED105 CODE No.		Setting Mode	LED104 CODE No.		Setting Function	Factory setting	Remarks
2	0	Switching between batch stop or emergency stop	0	0	Batch stop	●	This mode selects the pattern of the stop function to be operated by the external input terminal (CN134). •Batch stop: The stop of all indoor units connected to same refrigerant system due to input signal coming from CN134. •Emergency stop: When emergency stop is actuated, the indoor unit does not accept the operation command from the remote controller. On the other hand, when the emergency stop is released (no input from CN134), the air conditioner does not return to the original operation until operate indoor unit by the remote controller.
			0	1	Emergency stop		
2	1	Operation mode selecting method	0	0	Priority given to the first command	●	Select the priority setting of the operation mode. •Priority given to the first command: Priority is given to the operation mode which is set first. •Priority given to external input of outdoor unit: Priority is given to the operation mode which is set by the external input terminal (CN132). •Priority given to administrative indoor unit: Priority is given to the operation mode of the administrative indoor unit which is set by the wired remote controller.
			0	1	Priority given to external input of outdoor unit		
			0	2	Priority given to administrative indoor unit		
2	2	Prohibited	0	0	Prohibited	●	Setting prohibited
			0	1	Prohibited		
2	3	Prohibited	0	0	Prohibited	●	Setting prohibited
			0	1	Prohibited		
			0	2	Prohibited		
			0	3	Prohibited		
2	4	Prohibited	0	0	Prohibited	●	Setting prohibited
			0	1	Prohibited		
			0	2	Prohibited		
			0	3	Prohibited		
2	5	Prohibited	0	0	Prohibited	●	Setting prohibited
			0	1	Prohibited		
			0	2	Prohibited		
			0	3	Prohibited		

FUNCTION SETTING

LED105 CODE No.		Setting Mode	LED104 CODE No.		Setting Function	Factory setting	Remarks
2	6	Prohibited	0	0	Prohibited	●	Setting prohibited
			0	1	Prohibited		
2	7	Prohibited	0	0	Prohibited	●	Setting prohibited
			0	1	Prohibited		
2	8	Prohibited	0	0	Prohibited	●	Setting prohibited
			0	1	Prohibited		
2	9	Prohibited	0	0	Prohibited	●	Setting prohibited
			0	1	Prohibited		
3	0	Outdoor unit capacity save setting	0	0	Level 1 (stop)	●	The capacity limit can be selected by the external input terminal (CN133) when operating with the “Outdoor unit capacity save function.” The lower the level, the more the effect of energy saving, but the cooling/heating performance will also drop.
			0	1	Level 2		
			0	2	Level 3		
			0	3	Level 4		
			0	4	Level 5		
3	1	Prohibited	0	0	Prohibited	●	Setting prohibited
			0	1	Prohibited		
3	5	Presence of heater selection control using outdoor temperature	0	0	Disable	●	Setting required to validate the setting of heater selection control using outdoor temperature 1 and 2 (setting value: 03 or 04) in field setting 61 (indoor unit) for heater control switching. For details, refer to Chapter 8. 1-2-2. EXTERNAL OUTPUT.
			0	1	Enable		
3	6	Outdoor temperature zone boundary temperature A	0	0	-4.0°F (-20°C)	●	Setting required if changing of the outdoor temperature setting for heat pump prohibition zone is required when heater selection control using outdoor temperature 1 and 2 are performed on the indoor unit. For details, refer to Chapter 8. 1-2-2. EXTERNAL OUTPUT.
			0	1	-0.4°F (-18°C)		
			0	2	3.2°F (-16°C)		
			0	3	6.8°F (-14°C)		
			0	4	10.4°F (-12°C)		
			0	5	14.0°F (-10°C)		
			0	6	17.6°F (-8°C)		
			0	7	21.2°F (-6°C)		
			0	8	24.8°F (-4°C)		

FUNCTION SETTING

LED105 CODE No.		Setting Mode	LED104 CODE No.		Setting Function	Factory setting	Remarks
3	7	Outdoor temperature zone boundary temperature B	0	0	42.8°F (6°C)	●	Setting required if changing of the outdoor temperature setting for heat pump only zone is required when heater selection control using outdoor temperature 1 is performed on the indoor unit. For details, refer to Chapter 8. 1-2-2. EXTERNAL OUTPUT.
			0	1	14.0°F (-10°C)		
			0	2	17.6°F (-8°C)		
			0	3	21.2°F (-6°C)		
			0	4	24.8°F (-4°C)		
			0	5	28.4°F (-2°C)		
			0	6	32.0°F (0°C)		
			0	7	35.6°F (2°C)		
			0	8	39.2°F (4°C)		
			0	9	42.8°F (6°C)		
			1	0	46.4°F (8°C)		
			1	1	50.0°F (10°C)		
			1	2	53.6°F (12°C)		
			1	3	57.2°F (14°C)		
			1	4	60.8°F (16°C)		
			1	5	64.4°F (18°C)		
4	0	Capacity priority setting (in low noise mode)	0	0	Off (quiet priority)	●	If the cooling/heating performance becomes insufficient when the low noise mode is set, it is possible to set “capacity priority” that automatically cancels the low noise mode (once performance is restored, the mode will automatically return to the low noise mode).
			0	1	On (capacity priority)		
4	1	Low noise mode setting	0	0	Off (Normal)	●	
			0	1	On (Low noise mode)		
4	2	Prohibited	0	0	Prohibited	●	Setting prohibited
			0	1	Prohibited		
6	0	Prohibited	0	0	Prohibited	●	Setting prohibited
			0	1	Prohibited		
6	1	Prohibited	0	0	Prohibited	●	Setting prohibited
			0	1	Prohibited		

FUNCTION SETTING

LED105 CODE No.		Setting Mode	LED104 CODE No.		Setting Function	Factory setting	Remarks
7	0	Electricity meter No. setting 1 *1	0	0	Setting number x00	●	Set the ones digit and tens digit of the No. of the electricity meter connected to CN135.
			0	1	Setting number x01		
			▪ ▪ ▪	▪ ▪ ▪	▪ ▪ ▪		
			9	8	Setting number x98		
			9	9	Setting number x99		
7	1	Electricity meter No. setting 2 *1	0	0	Setting number 0xx	●	Set the hundreds digit of the No. of the electricity meter connected to CN135.
			0	1	Setting number 1xx		
			0	2	Setting number 2xx		
7	2	Electricity meter pulse setting 1 *2	0	0	Setting number xx00	●	Set the ones digit and tens digit of the No. of the electricity meter pulse setting connected to CN135.
			0	1	Setting number xx01		
			▪ ▪ ▪	▪ ▪ ▪	▪ ▪ ▪		
			9	8	Setting number xx98		
			9	9	Setting number xx99		
7	3	Electricity meter pulse setting 2 *2	0	0	Setting number 00xx	●	Set the hundreds digit and thousands digit of the electricity meter pulse setting connected to CN135.
			0	1	Setting number 01xx		
			▪ ▪ ▪	▪ ▪ ▪	▪ ▪ ▪		
			9	8	Setting number 98xx		
			9	9	Setting number 99xx		
9	0	Prohibited	0	0	Prohibited	●	Setting prohibited
			0	1	Prohibited		
			0	2	Prohibited		
			0	3	Prohibited		
			0	4	Prohibited		
			0	5	Prohibited		
			0	6	Prohibited		
			0	7	Prohibited		
			0	8	Prohibited		
			0	9	Prohibited		
			1	0	Prohibited		
			1	1	Prohibited		

*1: When electricity meter No. is set to “000” and “201 to 299”, the pulses input to CN135 become ineffective.
Available setting number is "001" to "200"

*2: When the electricity meter pulse setting is set to “0000”, the pulses input to CN135 become ineffective.
Available setting number is "0001" to "9999"

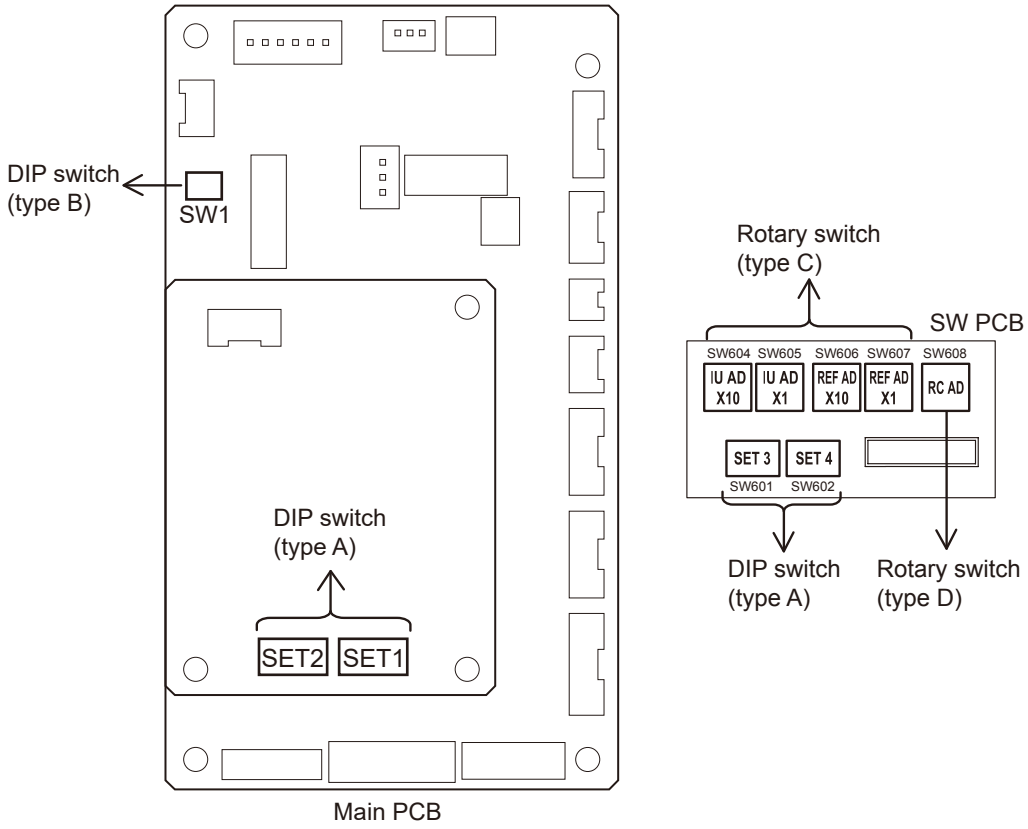
FUNCTION SETTING

2-2. INDOOR UNIT (setting by switch)

■ SWITCH POSITION

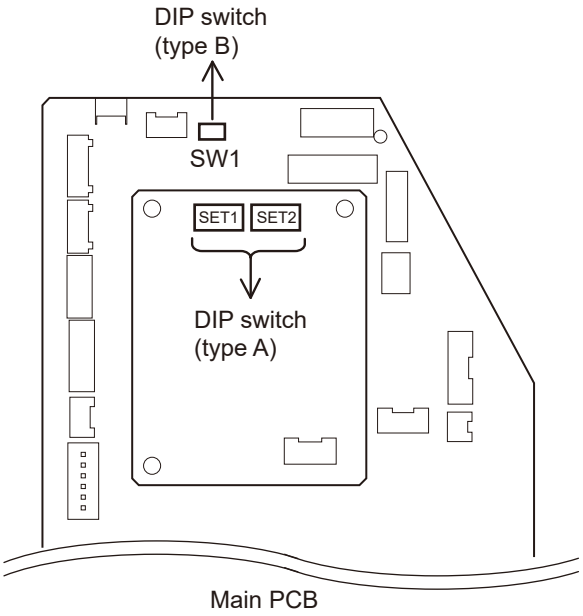
Type of PCB	Type of Indoor unit
Type 1	Compact cassette, Cassette, Mini duct, Slim duct/Slim concealed floor, Medium static pressure duct, High static pressure duct, Floor/ceiling, Ceiling, Vertical air handler
Type 2	Wall mounted (ASUB18, 24)
Type 3	Wall mounted (ASUA7, 9, 12, 14TLAV)
Type 4	Circular flow cassette
Type 5	Wall mounted (ASUA4, 7, 9, 12, 14TLAV1)
Type 6	Wall mounted (ASUB30, 36)
Type 7	Compact floor

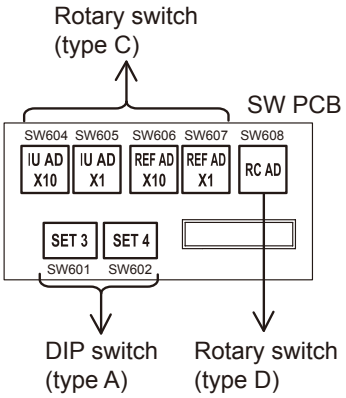
● Type 1



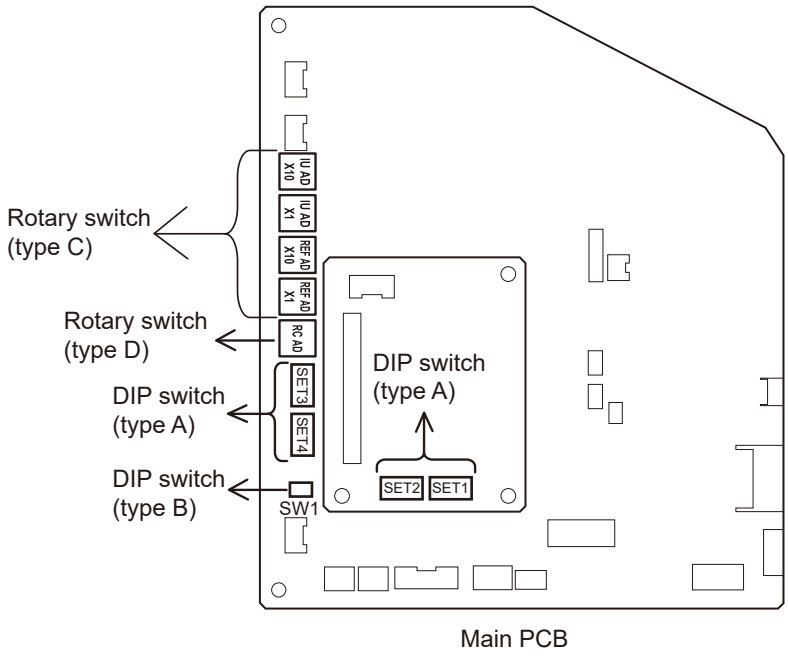
FUNCTION SETTING

● Type 2



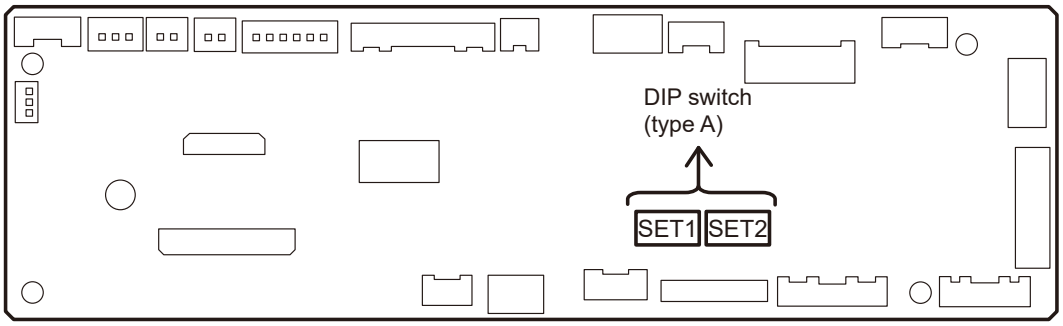


● Type 3

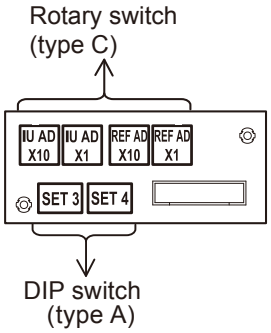


FUNCTION SETTING

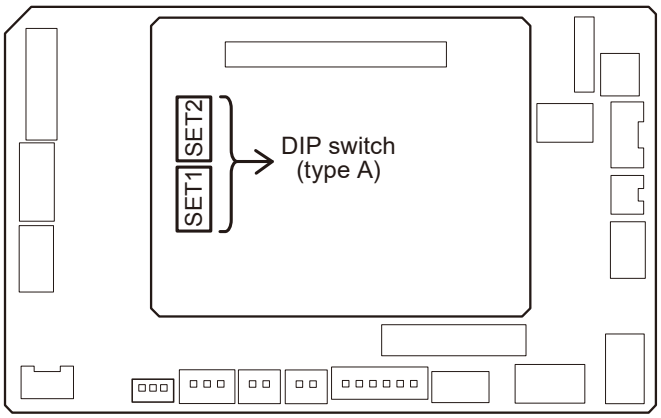
● Type 4

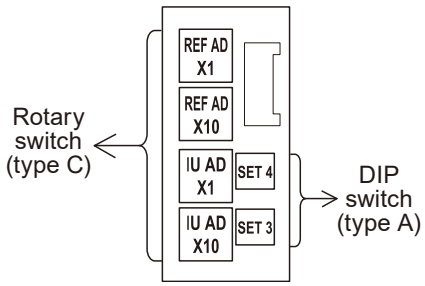


Main PCB

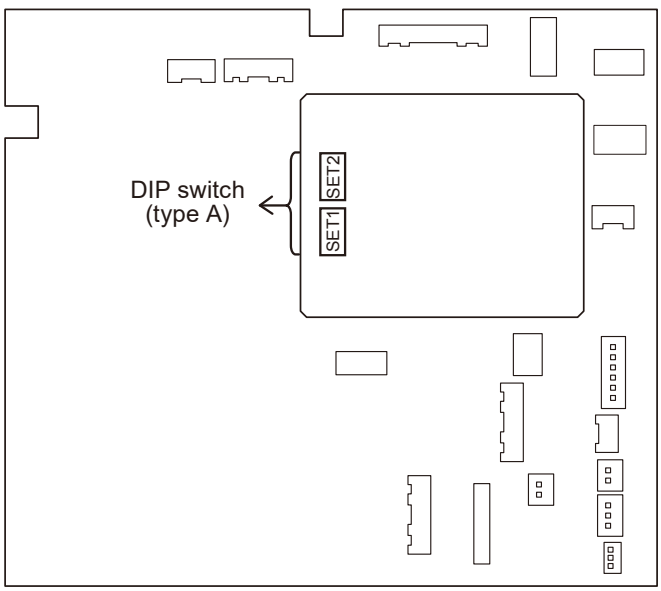


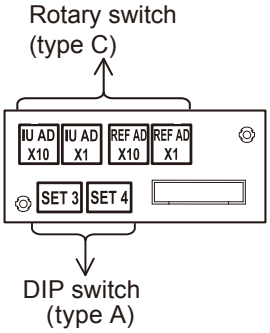
● Type 5





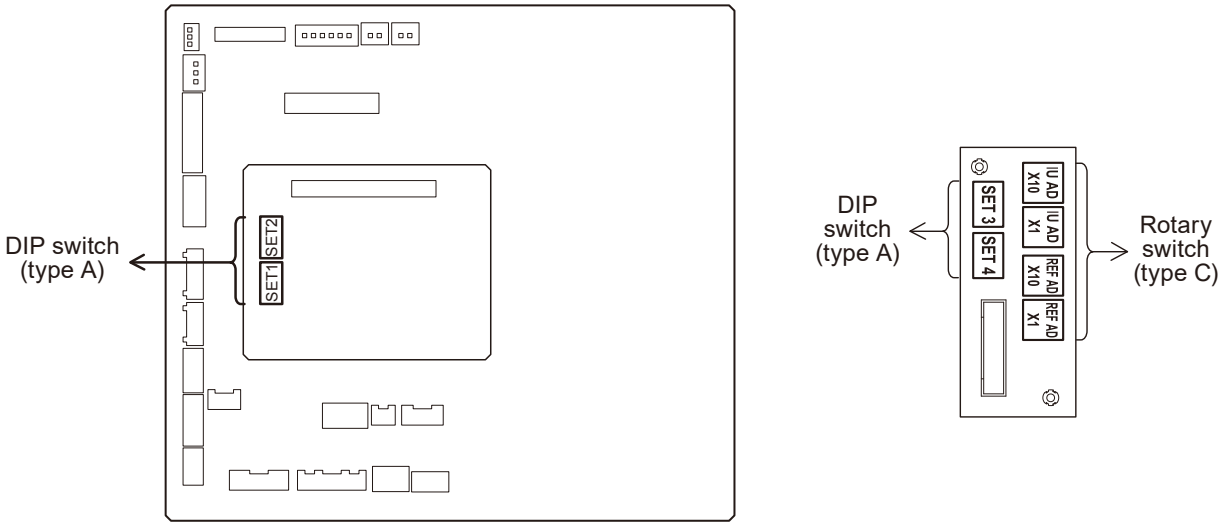
● Type 6



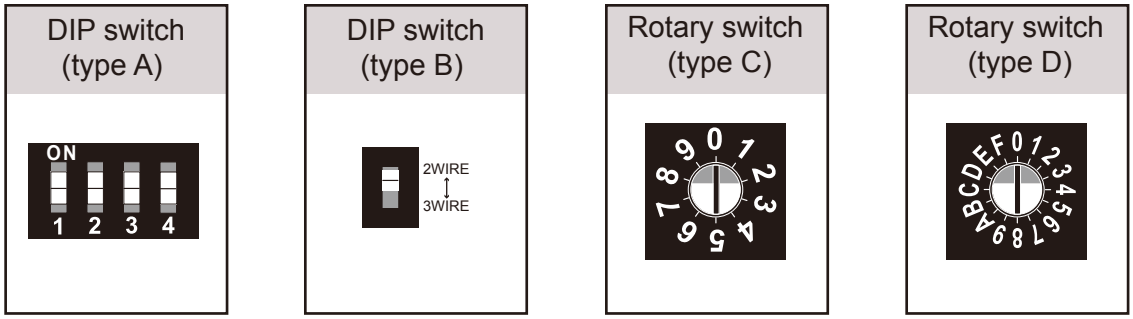


FUNCTION SETTING

● Type 7



■ SWITCH TYPE



FUNCTION SETTING

■ SWITCH TABLE

DIP-SW	type A	SET1	1	Prohibited (Indoor unit capacity setting)
			2	Prohibited (Indoor unit capacity setting)
			3	Prohibited (Indoor unit capacity setting)
			4	Prohibited (Indoor unit capacity setting)
		SET2	1	Prohibited (Indoor unit capacity setting)
			2	External input select "edge/pulse"
			3	Indoor unit fan setting for external heater
			4	Prohibited
		SET3	1	Wireless remote controller custom code switch 1
			2	Wireless remote controller custom code switch 2
			3	Prohibited
			4	Prohibited
		SET4	1	Drainage function switch (Slim Duct type only)
			2	Auto louver grille setting switch (Mini Duct and Slim Duct type only)
			3	Prohibited
			4	Prohibited
	type B	SW1		Remote controller wire type switch
Rotary SW	type C	IU AD x 1		Indoor unit address switch 1
		IU AD x 10		Indoor unit address switch 2
		REF AD x1		Refrigerant circuit address switch 1
		REF AD x10		Refrigerant circuit address switch 2
	type D	RC AD		Remote controller address switch

FUNCTION SETTING

■ DIP SWITCH SETTING

● SET2 setting

●External input select “Edge/Pulse”

(◆...Factory setting)

	SET2-2	External input select
◆	OFF	Edge
	ON	Pulse

●Indoor unit fan setting for external heater

It is a function to delay the stop of cooling fan when the air conditioner is stopped.
When external heater is connected, turn "ON" this switch.
When you connect external heater, be careful enough.

(◆...Factory setting)

	SET2-3	Fan delay
◆	OFF	Disable
	ON	Enable

When SET2-3 is set to "OFF", use room temperature sensor of wired remote controller to prevent erroneous detection of room temperature.

●SET2-4 setting prohibited

(◆...Factory setting)

	SET2-4	
◆	OFF	Fixed at OFF
	ON	Setting prohibited

FUNCTION SETTING

● SET3 setting

●Wireless remote controller custom code switch

This DIP switch sets the custom code of the wireless remote controller of an indoor unit.

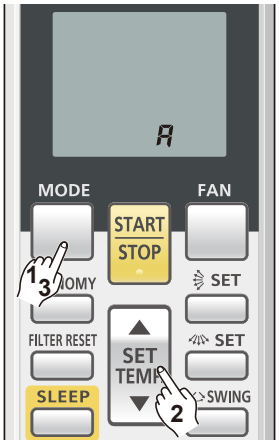
If multiple indoor units are being installed in the same room, switch the custom codes of the corresponding wireless remote controllers in order to prevent their signals from being mixed.

When switching the custom code of the wireless remote controller of an indoor unit, be sure to also switch the code setting on the paired wireless remote controller side at the same time.

(◆...Factory setting)

	SET3-1	SET3-2	Custom code
◆	OFF	OFF	Type A
	ON	OFF	Type B
	OFF	ON	Type C
	ON	ON	Type D

How to switch the code on the wireless remote controller side



1) Press the MODE button for more than five seconds to start the code change.
2) Press the SET TEMP. (▲) or (▼) button to select the desired code.
   ┌→ A → B → C → D ─┐
3) Press the MODE button again to end the code change.

●SET3-3, SET3-4 setting prohibited

(◆...Factory setting)

	SET3-3	SET3-4	
◆	OFF	OFF	Fixed at OFF
	ON	ON	Setting prohibited

FUNCTION SETTING

● SET4 setting

●Drainage function switch (Slim duct type only)

If contained drain pump is not used, set the drainage function to "Disable" in the drainage function switching.

(◆...Factory setting)

	SET4-1	Drainage function
◆	OFF	Enable
	ON	Disable

*__NOTE:__ Always confirm proper setting. Incorrect setting may cause damage from water leakage.

●Auto louver grille setting switch (Mini duct type and Slim duct type only)

When Auto louver grille kit (optional parts) is attached, set the Auto louver grille setting "Enable".

(◆...Factory setting)

	SET4-2	Auto louver grille setting
◆	OFF	Disable
	ON	Enable

●SET4-3 setting prohibited

(◆...Factory setting)

	SET4-3	
◆	OFF	Fixed at OFF
	ON	Setting prohibited

●SET4-4 setting prohibited

(◆...Factory setting)

	SET4-4	
◆	OFF	Fixed at OFF
	ON	Setting prohibited

FUNCTION SETTING

● SW1 setting

●Remote controller wire type setting switch

(◆...Factory setting)

	SW1	Remote controller wire type
◆	2WIRE	2 Wire type
	3WIRE	3 Wire type

■ ROTARY SWITCH SETTING

● IU AD setting

●Indoor unit address switch

Sets the indoor unit addresses.

Refer to "1-3. MANUAL ADDRESS SETTING METHOD" for indoor unit address conversion table.

INDOOR UNIT ADDRESS SWITCH (Factory setting IU AD x 1: 0, IU AD x 10: 0)

Rotary SW	Description	Remarks
IU AD x 1	Indoor unit address Switch 1	Indoor unit address (the first digit)
IU AD x 10	Indoor unit address Switch 2	Indoor unit address (the second digit)

● REF AD setting

●Refrigerant circuit address switch

Sets the refrigerant circuit address.

Refer to "1-3. MANUAL ADDRESS SETTING METHOD" for refrigerant circuit address conversion table.

REFRIGERANT CIRCUIT ADDRESS SWITCH (Factory setting REF AD x 1: 0, REF AD x 10: 0)

Rotary SW	Description	Remarks
REF AD x 1	Refrigerant circuit address Switch 1	Refrigerant circuit address (the first digit)
REF AD x 10	Refrigerant circuit address Switch 2	Refrigerant circuit address (the second digit)

FUNCTION SETTING

● RC AD setting

●Remote controller address switch

When the indoor unit is wired by remote controller group, to identity the indoor unit in the remote controller group, the number (remote controller address) in the remote controller group is set.

i) 3 wire type

Only for manual address setting

Set the remote controller address in the 0.1.2,~,15 order (Blank is not allowed)

REMOTE CONTROLLER ADDRESS SWITCH (Factory setting : 0)

Rotary SW	Description	Remarks
RC AD	Remote controller address	Remote controller address

ii) 2 wire type

It can choose either automatic address setting or manual address setting.

① When setting the automatic address.

Set the remote controller address in the "0" only. (Factory setting is "0")

② When setting the manual address.

Set the remote controller address in the 1.2,~,15

REMOTE CONTROLLER ADDRESS SWITCH (Factory setting : 0)

Rotary SW	Description	Remarks
RC AD	Remote controller address	Remote controller address

NOTE: When setting the manual address, cannot be set the "0".

FUNCTION SETTING

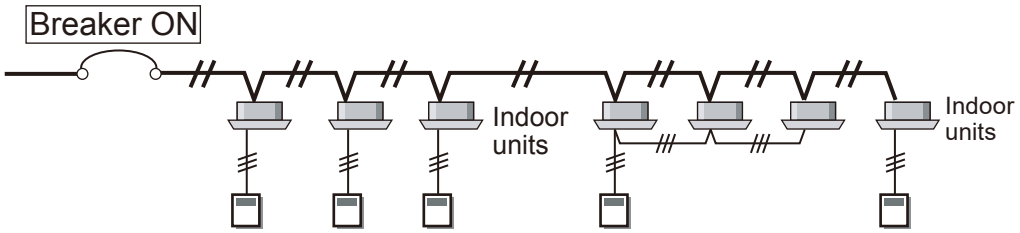
2-3. INDOOR UNIT (setting by wireless remote controller)

- This procedure changes to the function settings used to control the indoor unit according to the installation conditions. Incorrect settings can cause the indoor unit malfunction.
- After the power is turned on, perform the “FUNCTION SETTING” according to the installation conditions using the remote controller.
- The settings may be selected from the following: Function Number or Setting Number.
- Settings will not be changed if disable numbers or setting numbers are selected.

■ PREPARATION

(1) Turn on the power to the indoor unit.

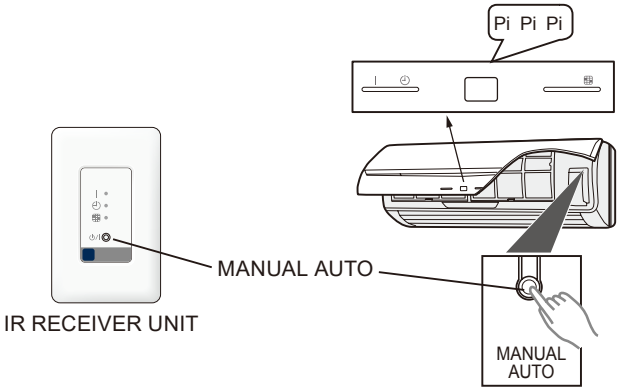
* By turning on the power indoor units initializes EEV, so make sure the pressure testing and vacuum drying have been conducted before turning on the power.
* Also check again to make sure no wiring mistakes were made before turning on the power.



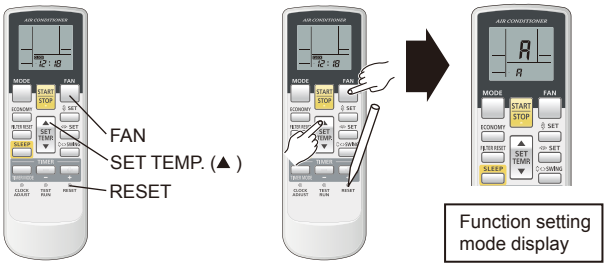
FUNCTION SETTING

■ SWITCHING SELECTION OF FUNCTION SETTING MODE

(2) Press and hold the “MANUAL/AUTO” button for 3 seconds.



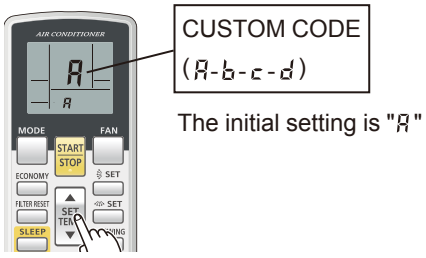
(3) Press and hold the “FAN” and the “ SET TEMP. ▲ ” buttons. While holding these 2 buttons, press the "RESET" button.



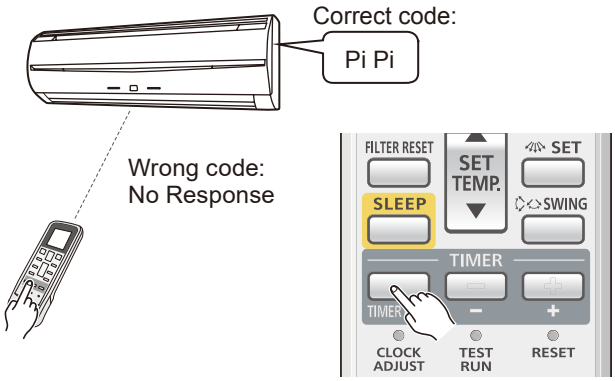
- The position of the “MANUAL/AUTO” button varies depending on the model. Refer to the operation manual for the button position on your unit.
- Indoor unit will display on "TIMER"(ORANGE) and "FILTER "(RED) light (1sec ON / 1sec OFF) by continuously pressing the "MANUAL/AUTO" for 10 sec or more. In this case release the button or turn off the power.
- An explanation of the displayed information is shown below.

■ SELECTION AND CONFIRMATION OF CUSTOM CODE

(4) Press the “ SET TEMP. ▲ ” or “ SET TEMP. ▼ ” buttons to select the custom code that matches the setting with the indoor unit.By selecting the appropriate custom code, the communication between the indoor unit and the wireless RC is enabled.



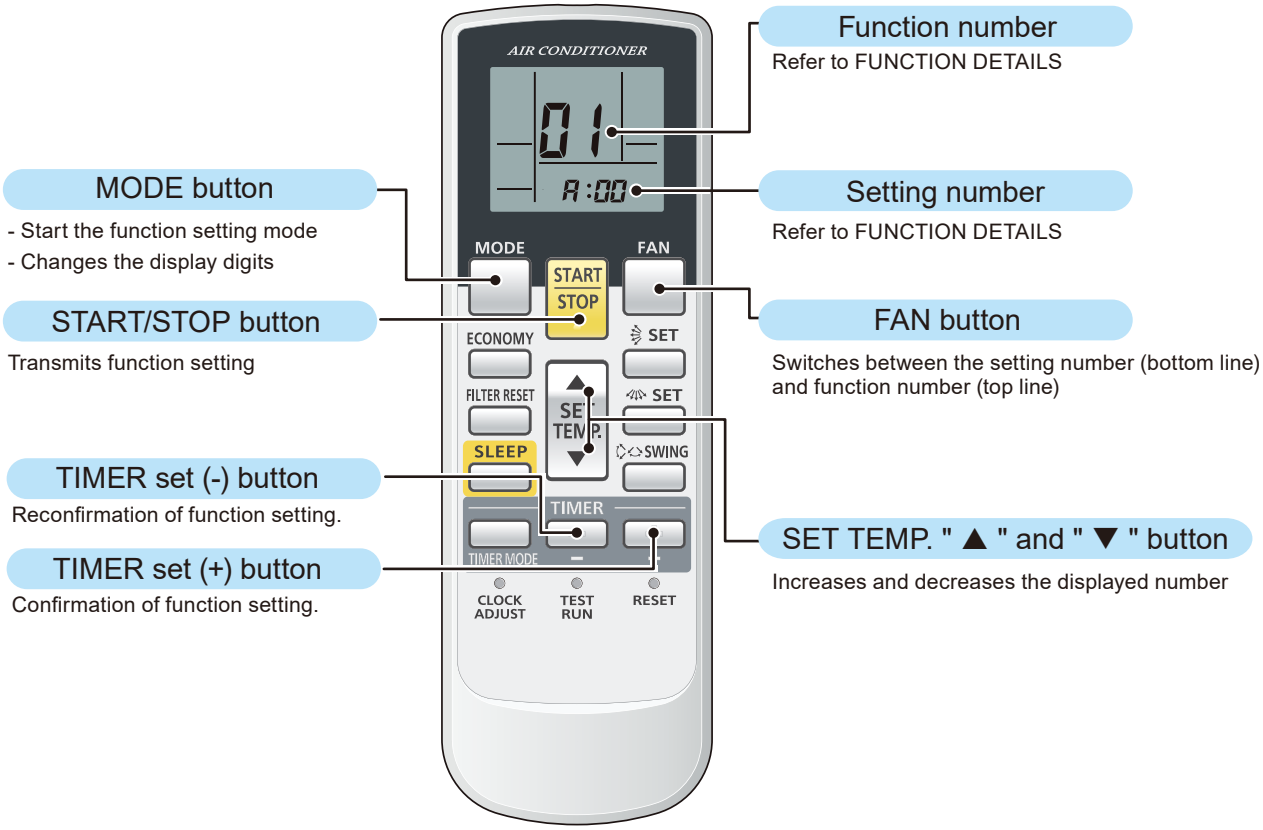
(5) Press the “TIMER MODE" button to send the code to the indoor unit.



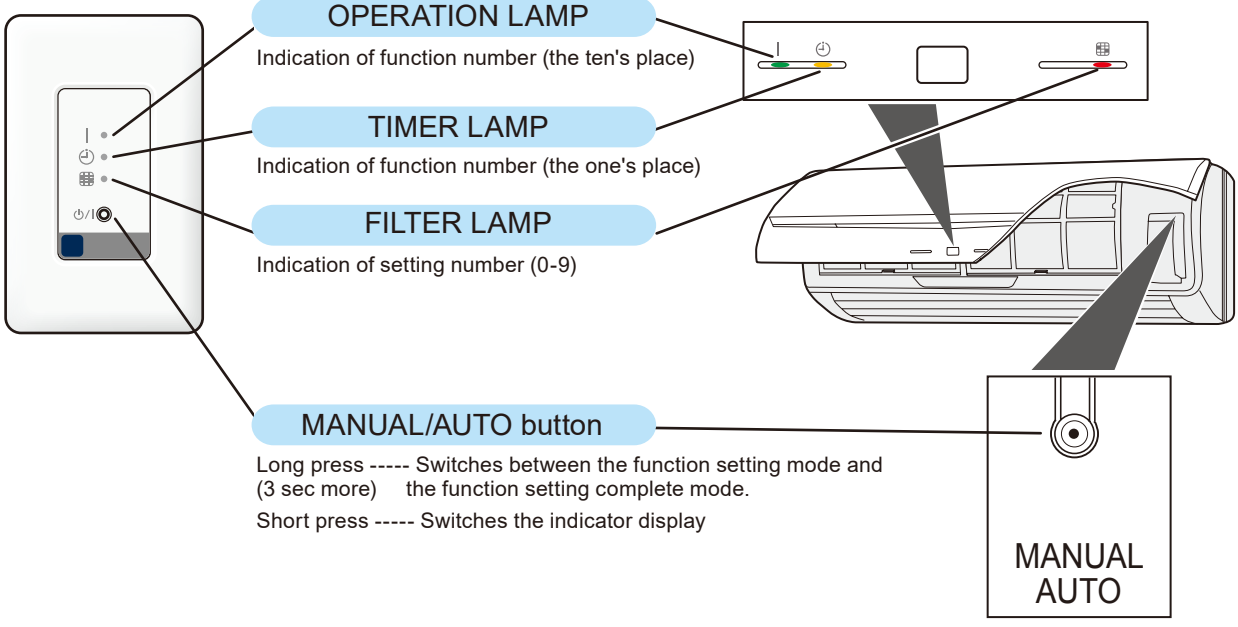
FUNCTION SETTING

■ BUTTON NAME AND FUNCTION

● During address setting mode, indoor unit reject the any operation command from remote controller.



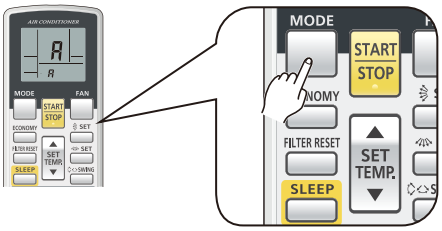
IR RECEIVER UNIT



FUNCTION SETTING

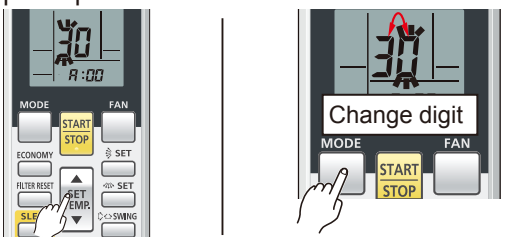
■ FUNCTION SETTING

(6) Press the “MODE” button to access the function setting mode.



(7) Press the “ ▲ ” or the “ ▼ ” buttons to select the function number.

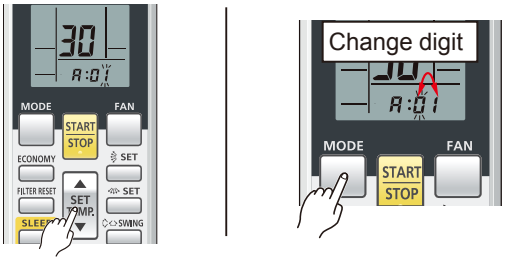
Each time the “MODE” button is pressed, it switches between the one's place and the ten's place positions.



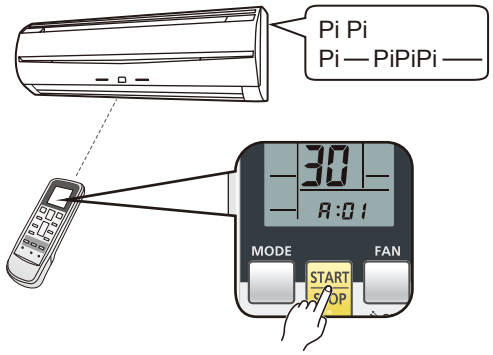
(8) Press the "FAN" button to proceed to setting the number. (Press the "FAN" button again to return to the function number selection.)

(9) Press the “ ▲ ” or the “ ▼ ” buttons to select the setting number.

Each time the “MODE” button is pressed, it switches between the one's place and the ten's place positions.



(10) Press the “START/STOP” button once to send the information. A beeping sound will be heard if the command is accepted.

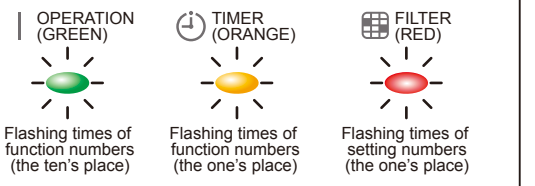


＊In the following cases the setting signal is not read and a buzzer sounds.

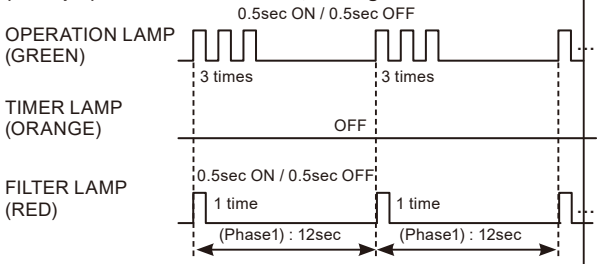
The function setting No. is set out of range
: Pi Pi Pi Pi Pi

Case1 : When setting number is one digit.

(11-1) Indoor unit will display the function setting number on "OPERATION"(GREEN), "TIMER ◷ "(ORANGE) and "FILTER ▦ "(RED) light.



(Example) Function number : 30, Setting number : 01



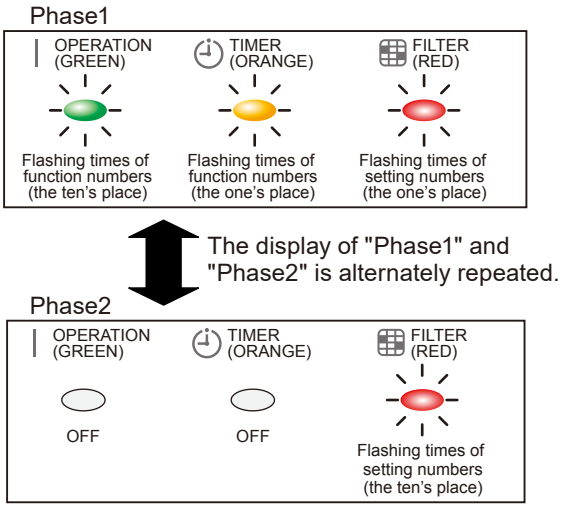
＊ Number 0 setting will not indicate TIMER LAMP and FILTER LAMP.

FUNCTION SETTING

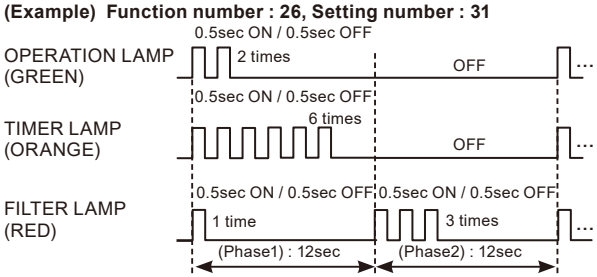
FUNCTION SETTING

Case2 : When setting number is two digits.

(11-2) Indoor unit will display the function setting number on "OPERATION"(GREEN), "TIMER" "(ORANGE) and "FILTER" "(RED) light.



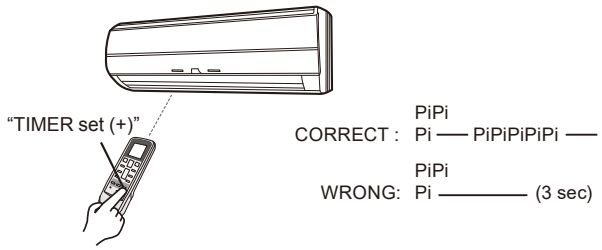
(Example) Function number : 26, Setting number : 31



∗ Number 0 setting will not indicate TIMER LAMP and FILTER LAMP.

● Confirmation of function setting

(12) Press the "TIMER set (+)" button.



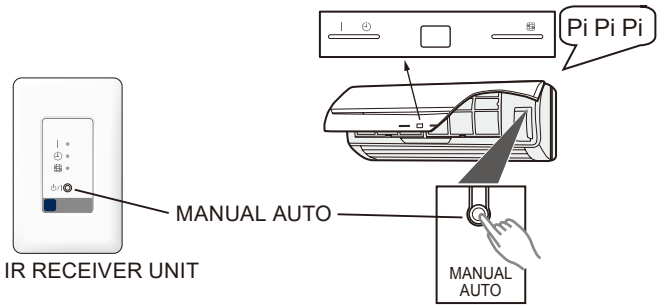
■ FUNCTION DETAILS

Refer to 2-8. FUNCTION DETAILS.

FUNCTION SETTING

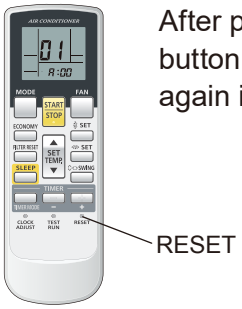
■ COMPLETION OF FUNCTION SETTING MODE

(13) Press and hold the “MANUAL/AUTO ｜／○” button for 3 seconds.



∗ Each LED may be of a different brightness, but the content of the message does not change.

(14) Press the “RESET” button.

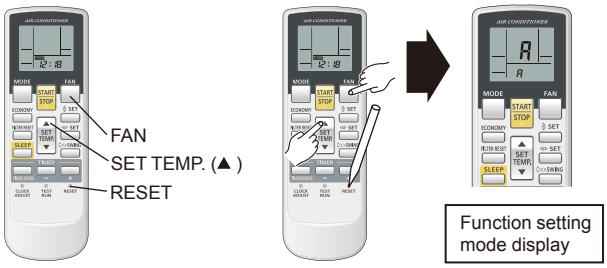


After pressing the RESET button, set the custom code again if b,c,d setting.

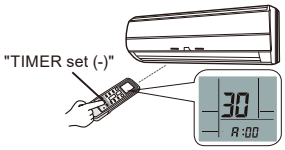
∗ The function setting signal is not received after switched function setting completion mode. (Pi Pi Pi Pi Pi)
∗ Press the "MANUAL/AUTO ｜／○" button again for 3 sec to return to if required to return the function setting mode.

■ RECONFIRMATION OF FUNCTION SETTING

(15) Press and hold the “FAN” and the “ SET TEMP. ▲ ” buttons. Whilst holding these 2 buttons, press the "RESET" button.

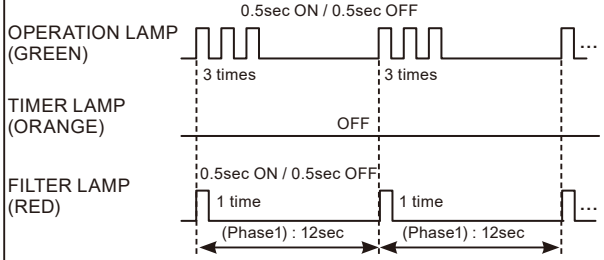


(16) Function number to be confirmed is displayed.
Refer to (7).
Press the “TIMER set (-)” button.



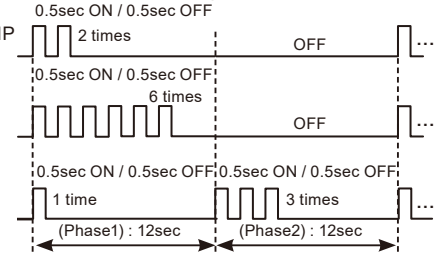
Case1 : When setting number is one digit.

(Example) Function number : 30, Setting number : 01



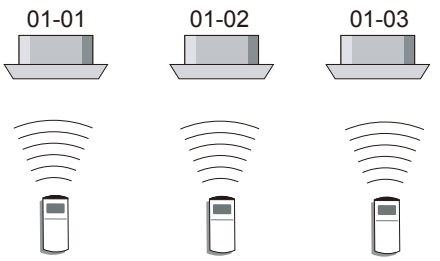
Case2 : When setting number is two digits.

(Example) Function number : 26, Setting number : 31



FUNCTION SETTING

■ SETTING UP EACH INDOOR UNIT



Repeat steps (1) through to (16). Steps (1) through to (5) and (13) to (16) only need to carried out if the custom code is different to the factory setting of “A”.

■ RESET THE POWER AFTER SETTING UP FUNCTION OF ALL INDOOR UNITS

Important

- **If the reset is not performed, function cannot be read in normally.**
- **After all the functions have been set, the circuit breaker needs to be switched off for at least 2 minutes.**
  After the 2 minutes has passed, power can be restored.
- **The set function is stored in the PCB and will remain in memory even when the power is turned off.**
  However, the address can be reset after power reset (if needed).
  Record the function set in the indoor unit on a label, etc., and affix the label to the unit so it can be used for after-sales service operations.

∗ Number 0 setting will not indicate TIMER LAMP and FILTER LAMP.

∗ Once the "RESET" button is pressed on the remote controller, the OPERATION MODE will be set in the "AUTO MODE".
Adjust the OPERATION MODE to either "COOLING" or "HEATING" before trying to operate the air conditioner.

∗ **NOTE:** If CUSTOM CODE is set to anything other than "A", the remote control must be set accordingly to the INDOOR UNIT setting.

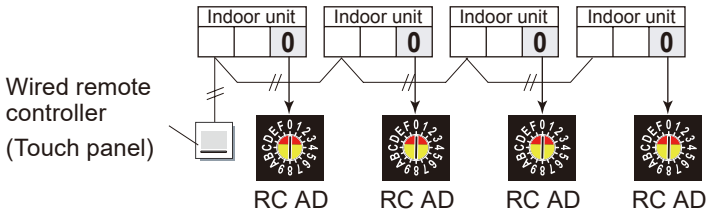
FUNCTION SETTING

2-4. INDOOR UNIT (setting by wired remote controller [Touch panel])

- This procedure changes to the function settings used to control the indoor unit according to the installation conditions. Incorrect settings can cause the indoor unit malfunction.
- After the power is turned on, perform the “FUNCTION SETTING” according to the installation conditions using the remote controller.
- The settings may be selected from the following: Function Number or Setting Number.
- Settings will not be changed if disable numbers or setting numbers are selected.
- This function cannot be used on the slave units.

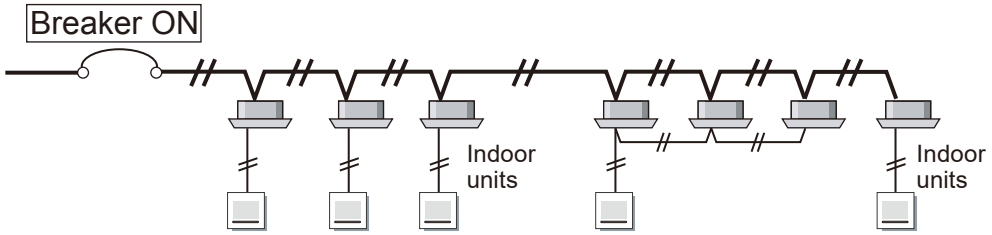
■ PREPARATION

1) When multiple indoor units are connected to a single wired remote controller.
When setting of Remote controller address in "Automatic address setting"



2) Turn on the power to the indoor unit.

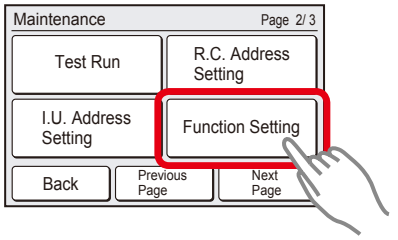
- Turning on the power initializes (closes) the EEV; make sure all piping has been pressure tested and vacuum tested.
- Also check again to make sure no wiring mistakes were made before turning on the power.

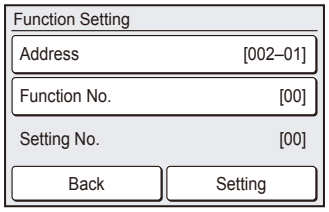


FUNCTION SETTING

■ SWITCHING SELECTION OF FUNCTION SETTING MODE

3) When the [Function Setting] on the “Maintenance” screen is touched, the “Installer Password Verification” screen is displayed.
Enter the Installer Password, and touch the [OK]. “Function Setting” screen is displayed.

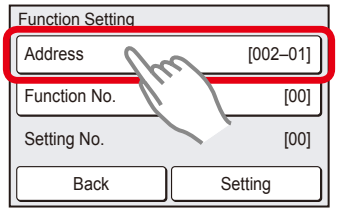




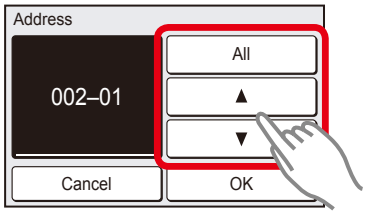
Address setting mode initial display

■ FUNCTION SETTING

4) Touch the [Address] on the “Function Setting” screen.

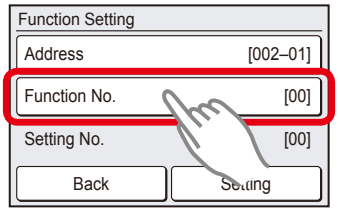


5) “Address” screen is displayed. Select the address of the indoor unit whose function number is to be set by touching [▲] or [▼]. When setting at all the indoor units, touch [All].

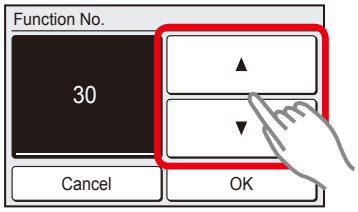


When the [OK] is touched, the display returns to the “Function Setting” screen.

6) Touch the [Function No.] on the “Function Setting” screen.



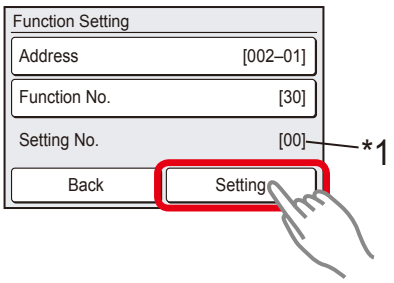
7) “Function No.” screen is displayed. Set the Function No. with the [▲] or [▼].



When the [OK] is touched, the display returns to the “Function Setting” screen.

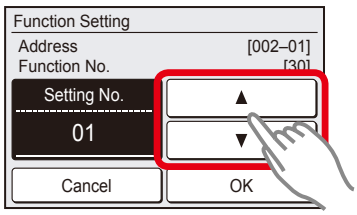
FUNCTION SETTING

8)Touch the [Setting] on the “Function Setting” screen.



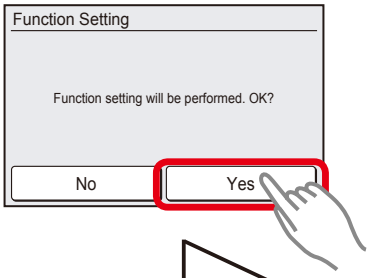
NOTE: *1 When All is chosen by 5), and different set up "Setting No." from two or more indoor units, [-] is displayed on "Setting No."

9) Setting screen of “Setting No.” is displayed. Set the Setting No. with the [▲] or [▼].

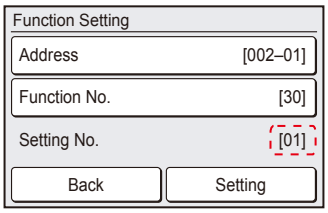


Ex.) Function number: 30, Setting number: 01
When the [OK] is touched, the “Function Setting” verification screen is displayed.

10) Touch the [YES] of the verification screen.

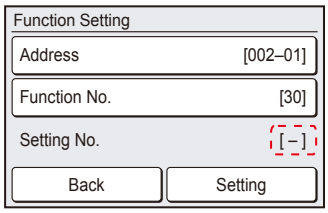


In case of OK



When the data was normally set up on the indoor unit

In case of ERROR



- When the data was not set up on the indoor unit ([-] is displayed.)
- Set up the data again according to the procedure in step 6) to 9) above

FUNCTION SETTING

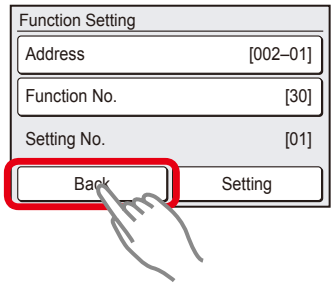
FUNCTION SETTING

■ FUNCTION DETAILS

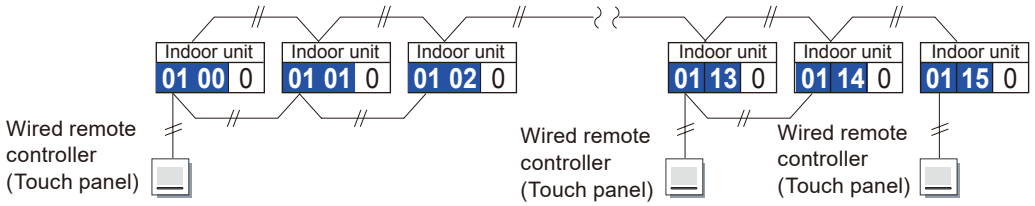
Refer to 2-8. FUNCTION DETAILS.

■ COMPLETION OF FUNCTION SETTING MODE

11) When the [Back] on the “Function Setting” screen is touched, the display returns to the “Maintenance” screen.



■ SETTING UP EACH INDOOR UNIT



Repeat the procedures in steps 1) through 11), and set up the indoor units requiring address setting.

■ RESET THE POWER AFTER SETTING UP ADDRESS OF ALL INDOOR UNITS

Important

∗ If power is not reset, address will not read correctly.

∗ After all the addresses have been set, the circuit breaker needs to be switched off for at least 2 minutes.
After the 2 minutes has passed, power can be restored.

∗ The set address is stored in the PCB and will remain in memory even when the power is turned off.
Address setting will only be effective after power has been reset.
Record the address set in the indoor unit on a label, etc., and affix the label to the unit so it can be used for after-sales service operations.

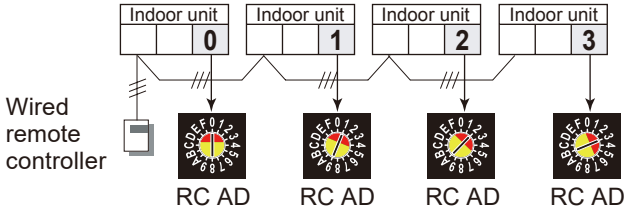
FUNCTION SETTING

2-5. INDOOR UNIT (setting by wired remote controller)

- This procedure changes to the function settings used to control the indoor unit according to the installation conditions. Incorrect settings can cause the indoor unit malfunction.
- After the power is turned on, perform the “FUNCTION SETTING” according to the installation conditions using the remote controller.
- The settings may be selected from the following: Function Number or Setting Number.
- Settings will not be changed if disable numbers or setting numbers are selected.
- This function cannot be used on the slave units.

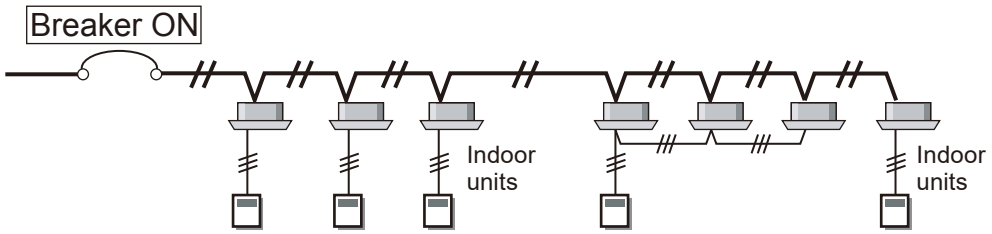
■ PREPARATION

1) If multiple indoor units are connected to a single wired remote controller, make sure to manually set up the remote controller address (RC AD) on the PCBs of the indoor units. (Refer to 5-3.)
Ex.) When four indoor units are connected



2) Turn on the power to the indoor unit.

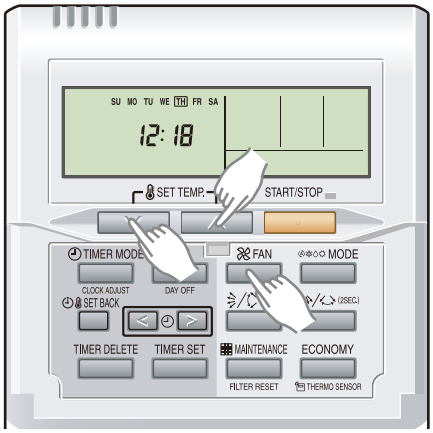
- Turning on the power initializes (closes) the EEV; make sure all piping has been pressure tested and vacuum tested.
- Also check again to make sure no wiring mistakes were made before turning on the power.

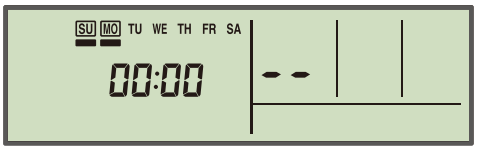


FUNCTION SETTING

■ SWITCHING SELECTION OF FUNCTION SETTING MODE

3) To activate the function setting mode, hold down the three buttons of SET TEMP. V, SET TEMP. Λ and FAN at the same time for 5 seconds or longer.





Address setting mode initial display

■ BUTTON NAME AND FUNCTION

- During address setting mode, indoor unit reject the any operation command from remote controller.

Function number

Refer to FUNCTION DETAILS

Remote controller address

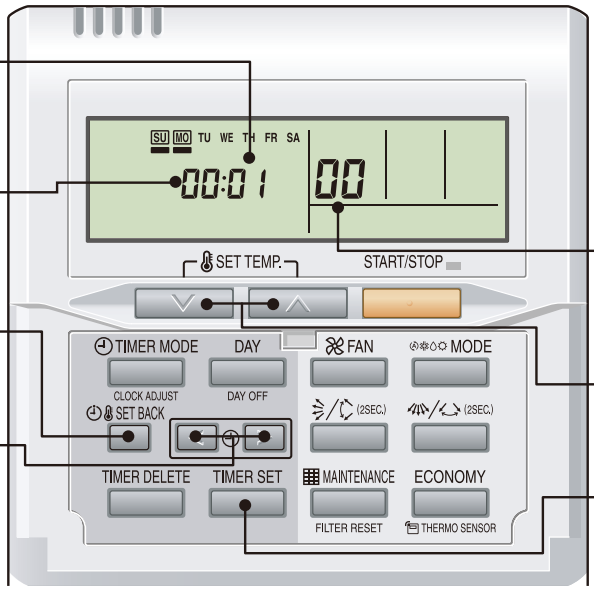
Remote controller address setting number 00-15

SET BACK button

Switches the remote controller address setting number.

SET TIME “<” and “>” button

Switches the function number.



Setting number

Refer to FUNCTION DETAILS

SET TEMP. “V” and “Λ” button

Switches the setting number.

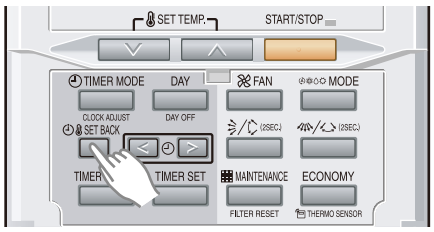
TIMER SET button

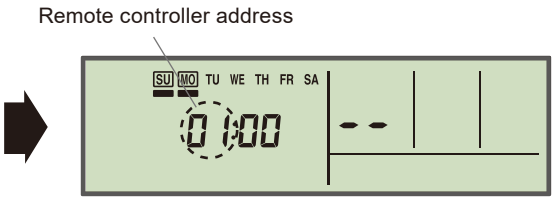
Transmits function setting

FUNCTION SETTING

■ FUNCTION SETTING

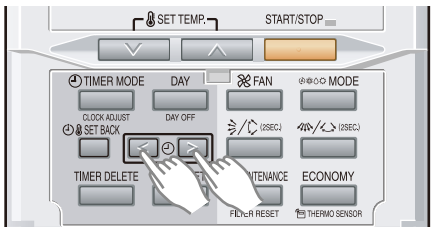
4) Pressing the SET BACK button, select a remote controller address (select the indoor unit you want to operate)

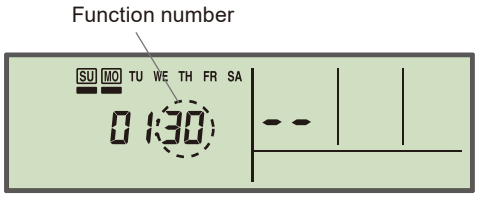




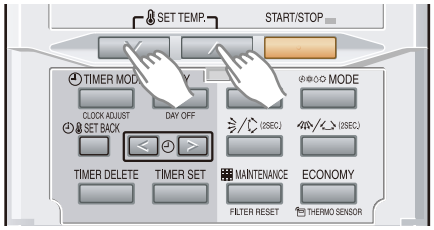
Ex.) When remote controller address “01” is selected

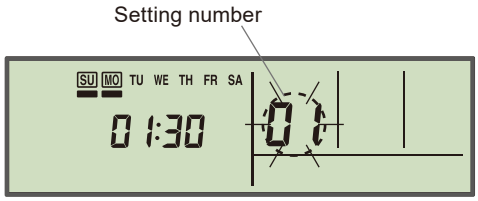
5) Pressing the SET TIME < button or the SET TIME > button, to select the function number.





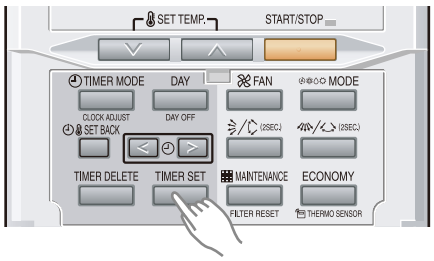
6) Pressing the SET TEMP. V button or the SET TEMP. Λ button, to select the setting number. The display flashes during setting number selection.

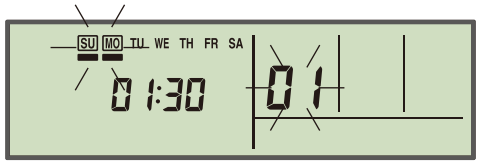




Ex.) Function number : 30, Setting number : 01

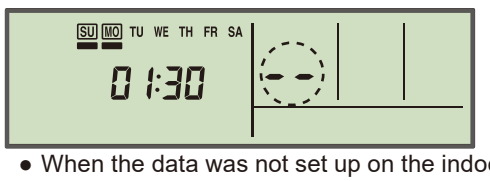
7) Pressing the TIMER SET button, confirm the setting.
(The data will be transferred to the indoor unit.)



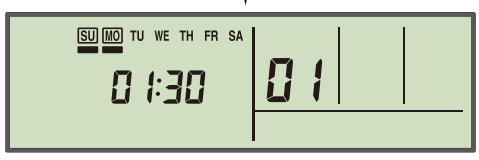


ERROR

GOOD



- When the data was not set up on the indoor unit (-- is displayed.)
- Set up the data again according to the procedure in step 5), 6) above.



When the data was normally set up on the indoor unit
(Flashing display changes to illuminated display.)

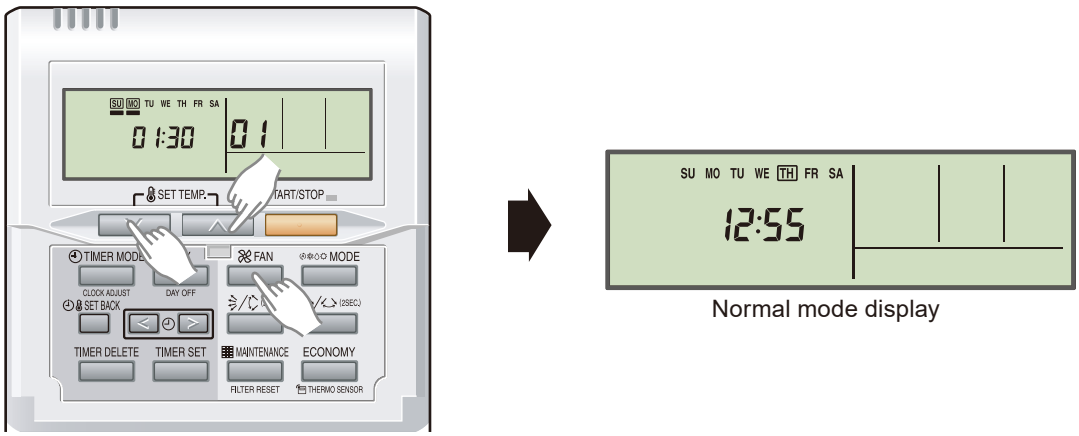
■ FUNCTION DETAILS

Refer to 2-8. FUNCTION DETAILS.

FUNCTION SETTING

■ COMPLETION OF FUNCTION SETTING MODE

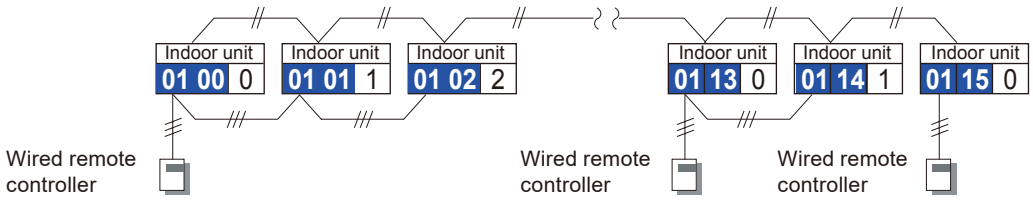
8) To clear the function setting mode and return to the regular display, hold down the three buttons of SET TEMP. V, SET TEMP. Λ and FAN at the same time.



Normal mode display

∗ If no key entry is made for 60 seconds, even though none of the above buttons is pressed, the function setting mode will automatically be cleared.
(If the function setting mode is automatically cleared while setting addresses, activate the mode again according to the procedure in step 3) above.)

■ SETTING UP EACH INDOOR UNIT



Repeat the procedures in steps 1) through 8), and set up the indoor units requiring function setting.

■ RESET THE POWER AFTER SETTING UP FUNCTION OF ALL INDOOR UNITS

Important

∗ If the reset is not performed, function cannot be read in normally.
∗ After all the functions have been set, the circuit breaker needs to be switched off for at least 2 minutes.
After the 2 minutes has passed, power can be restored.
∗ The set function is stored in the PCB and will remain in memory even when the power is turned off.
However, the address can be reset after power reset (if needed).
Record the function set in the indoor unit on a label, etc., and affix the label to the unit so it can be used for after-sales service operations.

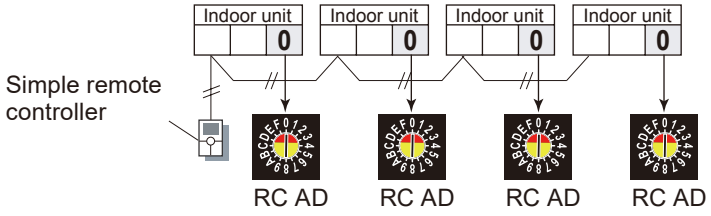
FUNCTION SETTING

2-6. INDOOR UNIT (setting by UTY-RSRY, UTY-RHRY)

- This procedure changes to the function settings used to control the indoor unit according to the installation conditions. Incorrect settings can cause the indoor unit malfunction.
- After the power is turned on, perform the “FUNCTION SETTING” according to the installation conditions using the remote controller.
- The settings may be selected between the following two: Function Number or Setting Number.
- Settings will not be changed if invalid numbers or setting numbers are selected.
- This function cannot be used on the slave units.

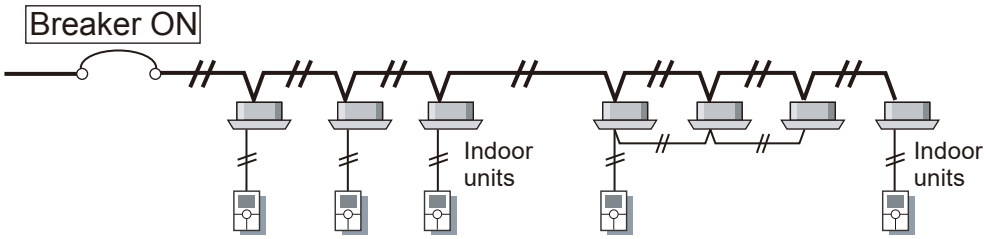
■ PREPARATION

1) When multiple indoor units are connected to a single wired remote controller.
When setting of Remote controller address in "Automatic address setting"



2) Turn on the power to the indoor unit.

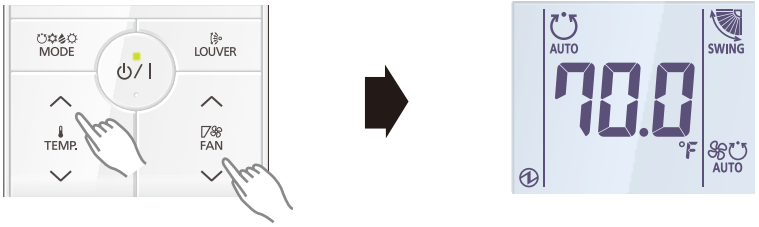
- By turning on the power indoor units initializes EEV, so make sure the piping air-tight test and vacuuming have been conducted before turning on the power.
- Also check again to make sure no wiring mistakes were made before turning on the power.



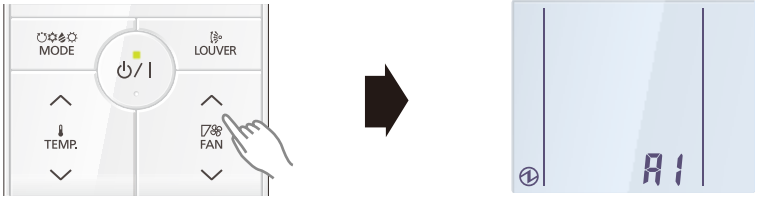
FUNCTION SETTING

■ SWITCHING SELECTION OF ADDRESS SETTING MODE

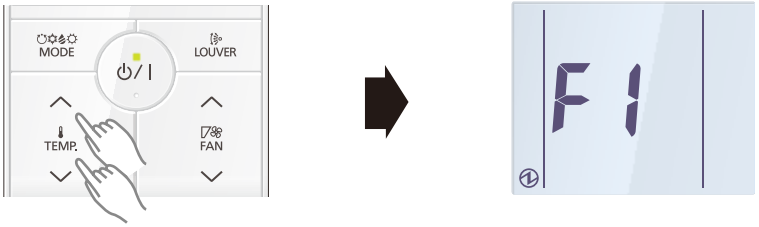
3) With “Monitor Mode” screen displayed, press and hold the SET TEMP. “∧” button and FAN “∨” button simultaneously for at least 2 seconds.



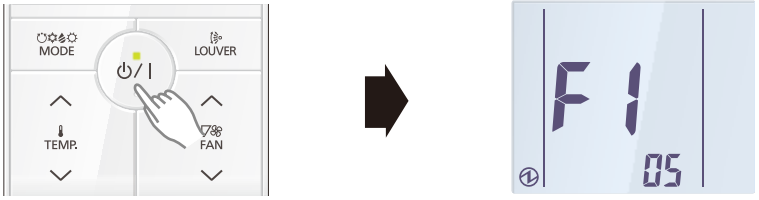
4) The Menu 1 screen is displayed. Press and hold the FAN “∧” button for at least 2 seconds. Setting mode selection screen is displayed.



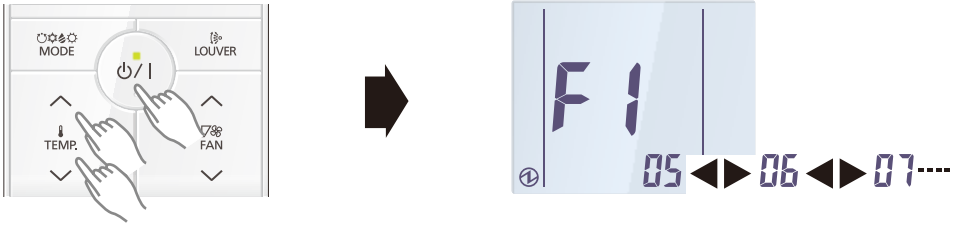
5) Press the SET TEMP. “∧” or SET TEMP. “∨” button to select F1 (Menu 2-F1) settings mode or F2 (Menu 2-F2) settings mode.
F1: Initial settings mode F2: Maintenance settings mode



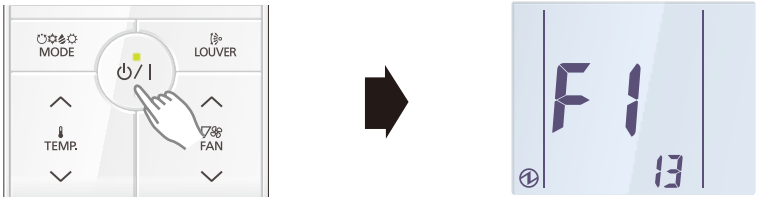
6) Press the “⏻/❙” button. Setting item selection screen is displayed. (Item No. is displayed.)



7) Select the item number to be set with the SET TEMP. “∧” or SET TEMP. “∨” button, and press the “⏻/❙” button to switch to thesetting screen.



8) Select the “13” in Menu 2-F1 Settings. Then press the “⏻/❙” button.



FUNCTION SETTING

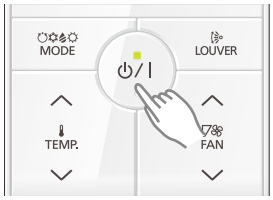
FUNCTION SETTING

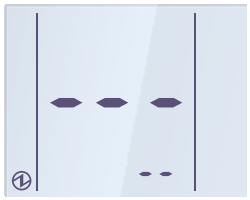
■ FUNCTION SETTING

This procedure changes the function settings used to control the indoor unit according to the installation conditions. Incorrect settings can cause the system to malfunction. Perform the “Function setting” according to the installation conditions using the remote controller.

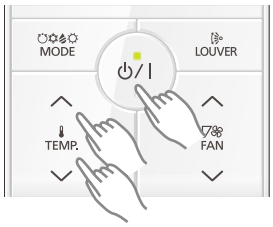
- Prepare for setting of indoor unit referring to installation manual of indoor unit before start of function setting.
- Refer to the indoor unit installation manual for details on the function numbers and setting numbers.

9) Select the 2-wire remote controller address with the SET TEMP. “∧” or SET TEMP. “∨” button. Then press the “⏻/❙” button.



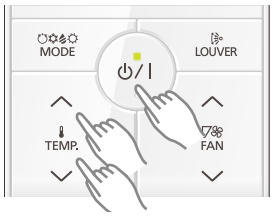


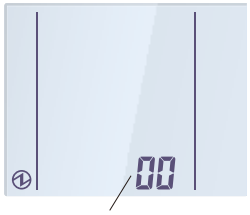
Select all



Select the 2-wire remote controller address (Ex. Select the 002-03)

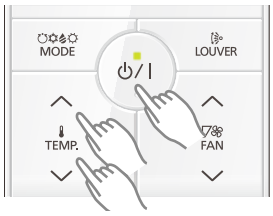
10) Set the function number with the SET TEMP. “∧” or SET TEMP. “∨” button. Then press the “⏻/❙” button.





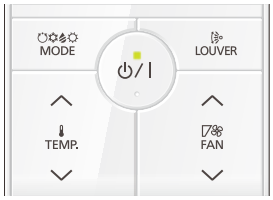
Function number

11) Set the setting number with the SET TEMP. “∧” or SET TEMP. “∨” button. Then press the “⏻/❙” button.



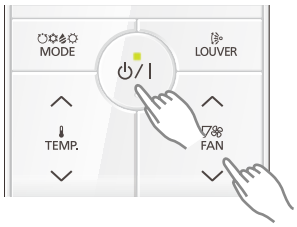
Setting number

12) Setting results are displayed after data transmission.



FUNCTION SETTING

13) Press the "⏻/I" button to return to the 2-wire remote controller address selection screen of (2). If setting has been completed, press the FAN "﹀" button to return to the Menu 2-F1 item selection screen.



NOTE:

- **This item cannot be set from slave remote controllers.**

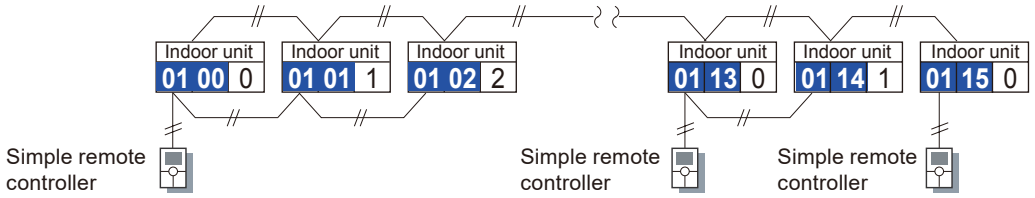
■ FUNCTION DETAILS

Refer to 2-8. FUNCTION DETAILS.

■ COMPLETION OF FUNCTION SETTING MODE

15) Press and hold the FAN "∧" button for at least 2 seconds to return to the Menu 1 item selection screen. Then, press and hold the SET TEMP. "∧" and FAN "﹀" button for at least 2 seconds at the same time to return to the "Monitor Mode" screen.

■ SETTING UP EACH INDOOR UNIT



Repeat the procedures in steps 1) through 8), and set up the indoor units requiring function setting.

■ RESET THE POWER AFTER SETTING UP FUNCTION OF ALL INDOOR UNITS

Important

∗ If the reset is not performed, function cannot be read in normally.
∗ After all the functions have been set, the circuit breaker needs to be switched off for at least 2 minutes.
After the 2 minutes has passed, power can be restored.
∗ The set function is stored in the PCB and will remain in memory even when the power is turned off.
However setting function is effective after power reset.
Record the function set in the indoor unit on a label, etc., and affix the label to the unit so it can be used for after-sales service operations.

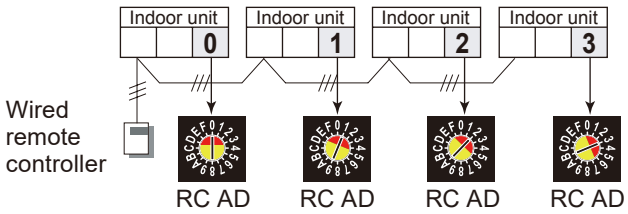
FUNCTION SETTING

2-7. INDOOR UNIT (setting by UTY-RSKU, UTY-RHKU)

- This procedure changes to the function settings used to control the indoor unit according to the installation conditions. Incorrect settings can cause the indoor unit malfunction.
- After the power is turned on, perform the “FUNCTION SETTING” according to the installation conditions using the remote controller.
- The settings may be selected from the following: Function Number or Setting Number.
- Settings will not be changed if disable numbers or setting numbers are selected.
- This function cannot be used on the slave units.

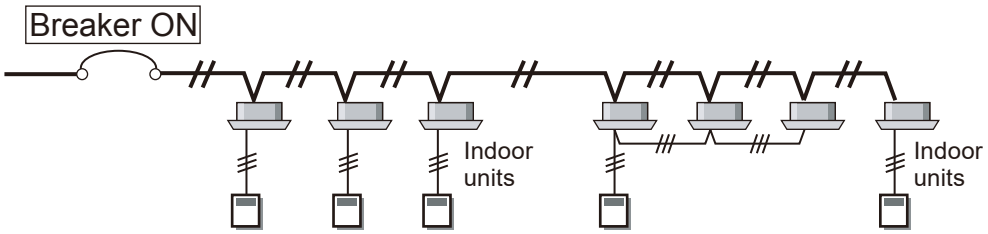
■ PREPARATION

1) If multiple indoor units are connected to a single simple remote controller, make sure to manually set up the remote controller address (RC AD) on the PCBs of the indoor units. (Refer to 5-3.)
Ex.) When four indoor units are connected



2) Turn on the power to the indoor unit.

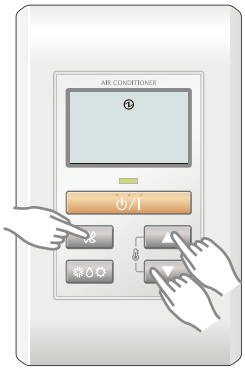
- Turning on the power initializes (closes) the EEV; make sure all piping has been pressure tested and vacuum tested.
- Also check again to make sure no wiring mistakes were made before turning on the power.

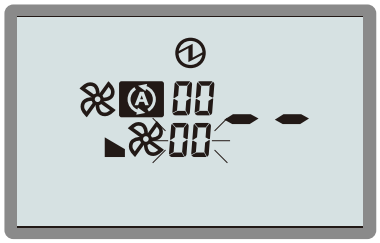


FUNCTION SETTING

■ SWITCHING SELECTION OF FUNCTION SETTING MODE

3) To activate the function setting mode, hold down the three buttons of SET TEMP. ▼, SET TEMP. ▲ and FAN at the same time for 5 seconds or longer.





Function setting mode initial display

■ BUTTON NAME AND FUNCTION

- During function setting mode, indoor unit reject the any operation command from remote controller.

Function number

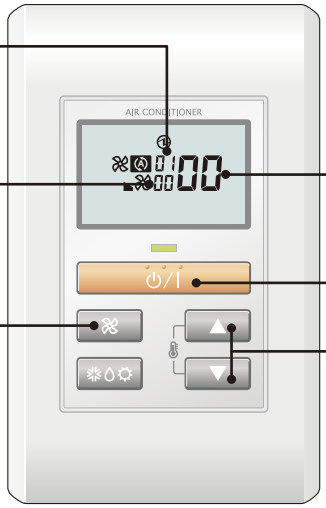
Refer to FUNCTION DETAILS

Remote controller address

Remote controller address setting number 00-15

FAN button

Each time this button is pressed, the fan setting changes among “Remote controller address,” “Function number” and “Setting number.”



Setting number

Refer to FUNCTION DETAILS

START/STOP button

Transmits function setting

SET TEMP. “▲” and “▼” button

Switches the various numbers.

UTY-RSKU (With operation mode)

Function number

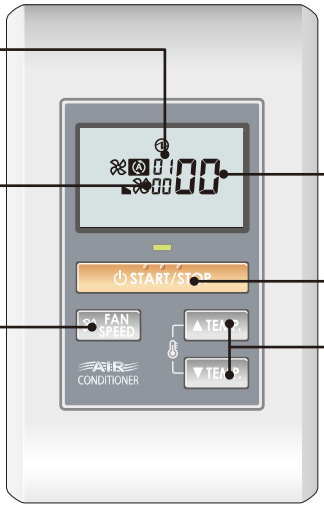
Refer to FUNCTION DETAILS

Remote controller address

Remote controller address setting number 00-15

FAN button

Each time this button is pressed, the fan setting changes among “Remote controller address,” “Function number” and “Setting number.”



Setting number

Refer to FUNCTION DETAILS

START/STOP button

Transmits function setting

SET TEMP. “▲” and “▼” button

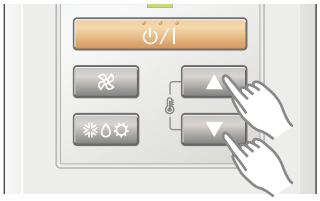
Switches the various numbers.

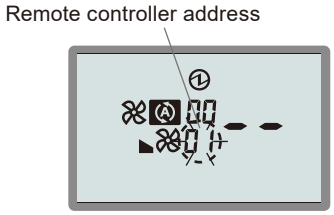
UTY-RHKU (Without operation mode)

FUNCTION SETTING

■ FUNCTION SETTING

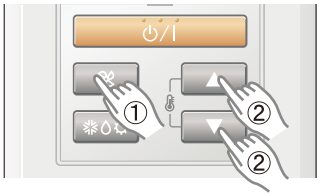
4) Pressing the SET TEMP. ▲ button or SET TEMP. ▼ button, select a remote controller address (select the indoor unit you want to operate).

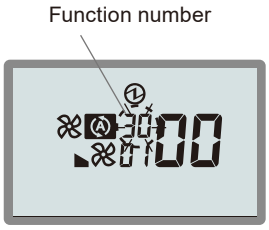




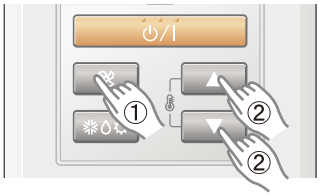
Ex.) When remote controller address “01” is selected

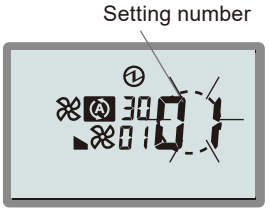
5) Press the FAN button so that the “Function number” display flashes. Then, press either the SET TEMP. ▲ button or the SET TEMP. ▼ button to set up the function number.





6) Press the FAN button so that the “Setting number” display flashes. Then, press either the SET TEMP. ▲ button or the SET TEMP. ▼ button to set up the setting number.



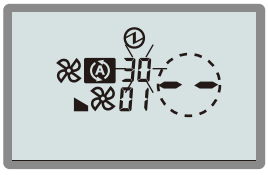


Ex.) Function number : 30, Setting number : 01

7) Pressing the START/STOP button, confirm the setting.
(The data will be transferred to the indoor unit.)

ERROR

GOOD



- When the data was not set up on the indoor unit (-- is displayed.)
- Set up the data again according to the procedure in step 5), 6) above.

When the data was normally set up on the indoor unit.

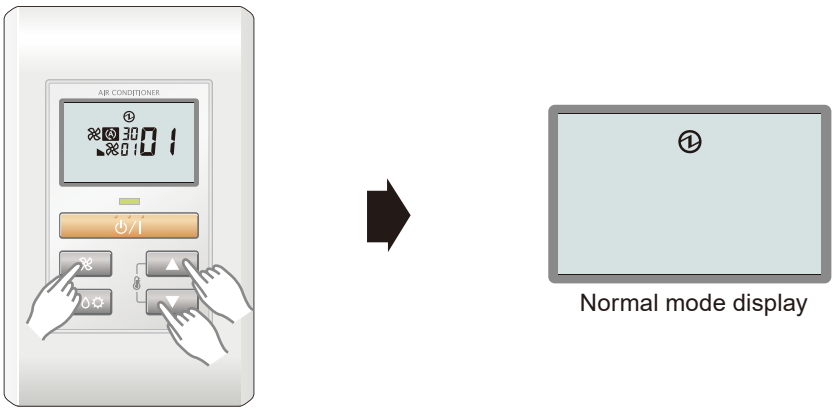
■ FUNCTION DETAILS

Refer to 2-8. FUNCTION DETAILS.

FUNCTION SETTING

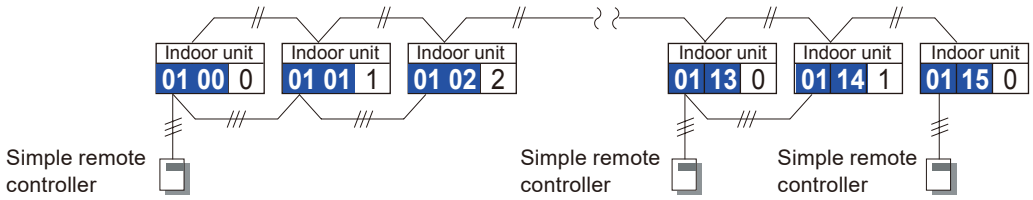
■ COMPLETION OF FUNCTION SETTING MODE

8) Press the three buttons of SET TEMP. ▲, SET TEMP. ▼ and FAN at the same time for 5 seconds or longer. The function setting mode will be cleared and the regular display will be restored.



∗ If no key entry is made for 60 seconds, even though none of the above buttons is pressed, the function setting mode will automatically be cleared.
(If the function setting mode is automatically cleared while setting addresses, activate the mode again according to the procedure in step 3) above.)

■ SETTING UP EACH INDOOR UNIT



Repeat the procedures in steps 1) through 8), and set up the indoor units requiring function setting.

■ RESET THE POWER AFTER SETTING UP FUNCTION OF ALL INDOOR UNITS

Important

∗ If the reset is not performed, function cannot be read in normally.
∗ After all the functions have been set, the circuit breaker needs to be switched off for at least 2 minutes.
After the 2 minutes has passed, power can be restored.
∗ The set function is stored in the PCB and will remain in memory even when the power is turned off.
However, the address can be reset after power reset (if needed).
Record the function set in the indoor unit on a label, etc., and affix the label to the unit so it can be used for after-sales service operations.

FUNCTION SETTING

2-8. FUNCTION DETAILS

<table>
<tr><th>Function</th><th>Function number</th><th colspan="2">Setting number</th><th>Default</th><th>Details</th></tr>
<tr><td rowspan="3">Filter indicator interval</td><td rowspan="3">11</td><td>00</td><td>Default</td><td>●</td><td rowspan="3">Adjusts the filter cleaning interval notification. If the notification is too early, change to setting 01. If the notification is too late, change to setting 02.</td></tr>
<tr><td>01</td><td>Longer</td><td></td></tr>
<tr><td>02</td><td>Shorter</td><td></td></tr>
<tr><td rowspan="3">Filter indicator action</td><td rowspan="3">13</td><td>00</td><td>Enable</td><td>●</td><td rowspan="3">Enables or disables the filter indicator. Setting 02 is for use with a central remote control.</td></tr>
<tr><td>01</td><td>Disable</td><td></td></tr>
<tr><td>02</td><td>Display only on central remote control</td><td></td></tr>
<tr><td rowspan="2">Ceiling airflow</td><td rowspan="2">20</td><td>00</td><td>Default</td><td>●</td><td rowspan="2">Regulates the airflow according to the needs of the installation location. When set to 01, the airflow will be stronger. (Cassette type only)</td></tr>
<tr><td>01</td><td>High Ceiling</td><td></td></tr>
<tr><td rowspan="2">Vertical airflow direction</td><td rowspan="2">23</td><td>00</td><td>Default</td><td>●</td><td rowspan="2">Adjusts the vertical airflow direction. All airflow direction louvers are adjusted together.
(Cassette type only)</td></tr>
<tr><td>01</td><td>Raise</td><td></td></tr>
<tr><td rowspan="3">Horizontal swing airflow direction</td><td rowspan="3">24</td><td>00</td><td>Default</td><td>●</td><td rowspan="3">Adjusts the horizontal swing airflow direction.
(For horizontal swing equipped models)</td></tr>
<tr><td>01</td><td>Left half</td><td></td></tr>
<tr><td>02</td><td>Right half</td><td></td></tr>
<tr><td rowspan="32">Static pressure</td><td rowspan="32">26</td><td>00</td><td>SP mode 00</td><td></td><td rowspan="32"><table><tr><th>Model name</th><th>Range of static pressure mode</th><th>Normal static pressure</th></tr><tr><td>ARUL4TLAV1</td><td>SP mode 00 to 03</td><td>0.04 in.WG (10 Pa)</td></tr><tr><td>ARUL7TLAV</td><td rowspan="5">SP mode 00 to 09</td><td rowspan="5">0.10 in.WG (25 Pa)</td></tr><tr><td>ARUL9TLAV</td></tr><tr><td>ARUL12TLAV</td></tr><tr><td>ARUL14TLAV</td></tr><tr><td>ARUL18TLAV</td></tr><tr><td>ARUM24TLAV</td><td>SP mode 00 to 14</td><td rowspan="3">0.16 in.WG (40 Pa)</td></tr><tr><td>ARUM30TLAV</td><td>SP mode 00 to 11</td></tr><tr><td>ARUM36TLAV</td><td>SP mode 00 to 09</td></tr><tr><td>ARUH36TLAV</td><td>SP mode 02 to 16</td><td>0.40 in.WG (100 Pa)</td></tr><tr><td>ARUH72TLAV1</td><td>SP mode 05 to 30</td><td rowspan="2">0.60 in.WG (150 Pa)</td></tr><tr><td>ARUH96TLAV</td><td>SP mode 05 to 29</td></tr></table>Refer to "7. FAN PERFORMANCE CURVE" in Chapter 4 for the characteristics of each indoor unit.</td></tr>
<tr><td>01</td><td>SP mode 01</td><td></td></tr>
<tr><td>02</td><td>SP mode 02</td><td></td></tr>
<tr><td>03</td><td>SP mode 03</td><td></td></tr>
<tr><td>04</td><td>SP mode 04</td><td></td></tr>
<tr><td>05</td><td>SP mode 05</td><td></td></tr>
<tr><td>06</td><td>SP mode 06</td><td></td></tr>
<tr><td>07</td><td>SP mode 07</td><td></td></tr>
<tr><td>08</td><td>SP mode 08</td><td></td></tr>
<tr><td>09</td><td>SP mode 09</td><td></td></tr>
<tr><td>10</td><td>SP mode 10</td><td></td></tr>
<tr><td>11</td><td>SP mode 11</td><td></td></tr>
<tr><td>12</td><td>SP mode 12</td><td></td></tr>
<tr><td>13</td><td>SP mode 13</td><td></td></tr>
<tr><td>14</td><td>SP mode 14</td><td></td></tr>
<tr><td>15</td><td>SP mode 15</td><td></td></tr>
<tr><td>16</td><td>SP mode 16</td><td></td></tr>
<tr><td>17</td><td>SP mode 17</td><td></td></tr>
<tr><td>18</td><td>SP mode 18</td><td></td></tr>
<tr><td>19</td><td>SP mode 19</td><td></td></tr>
<tr><td>20</td><td>SP mode 20</td><td></td></tr>
<tr><td>21</td><td>SP mode 21</td><td></td></tr>
<tr><td>22</td><td>SP mode 22</td><td></td></tr>
<tr><td>23</td><td>SP mode 23</td><td></td></tr>
<tr><td>24</td><td>SP mode 24</td><td></td></tr>
<tr><td>25</td><td>SP mode 25</td><td></td></tr>
<tr><td>26</td><td>SP mode 26</td><td></td></tr>
<tr><td>27</td><td>SP mode 27</td><td></td></tr>
<tr><td>28</td><td>SP mode 28</td><td></td></tr>
<tr><td>29</td><td>SP mode 29</td><td></td></tr>
<tr><td>30</td><td>SP mode 30</td><td></td></tr>
<tr><td>31</td><td>Normal SP</td><td>●</td></tr>
<tr><td rowspan="3">Cool air temperature trigger</td><td rowspan="3">30</td><td>00</td><td>Default</td><td>●</td><td rowspan="3">Adjusts the cool air trigger temperature. To lower the trigger temperature, use setting 01. To raise the trigger temperature, use setting 02.</td></tr>
<tr><td>01</td><td>Adjust (1)</td><td></td></tr>
<tr><td>02</td><td>Adjust (2)</td><td></td></tr>
<tr><td rowspan="4">Heat air temperature trigger</td><td rowspan="4">31</td><td>00</td><td>Default</td><td>●</td><td rowspan="4">Adjusts the heat air trigger temperature. To lower the trigger temperature by 6 degrees C, use setting 01. To lower the trigger temperature by 4 degrees C, use setting 02. To raise the trigger temperature, use setting 03.</td></tr>
<tr><td>01</td><td>Adjust (1)</td><td></td></tr>
<tr><td>02</td><td>Adjust (2)</td><td></td></tr>
<tr><td>03</td><td>Adjust (3)</td><td></td></tr>
</table>

FUNCTION SETTING

FUNCTION SETTING

Function	Function number	Setting number		Default	Details
*1 Auto restart	**40**	**00**	Enable		Enables or disables automatic system restart after a power outage.
		01	Disable	●	
Cool Air Prevention	**43**	**00**	Super low	●	Restrains the cold airflow with making the airflow lower when starting heating operation. To correspond to the ventilation, set to 01.
		01	Follow the setting on the remote controller		
External control	**46**	**00**	Start/Stop	●	Allows an external controller to start or stop the system, or to perform an emergency stop, or to perform a forced stop. * If an emergency stop is performed from an external controller, same refrigerant system will be disabled. *If forced stop is set,indoor unit stops by the input to the external input terminals,and Start/Stop by a remote controller is restricted.
		01	Emergency stop		
		02	Forced stop		
Error report target	**47**	**00**	All	●	Changes the target for reporting errors. Errors can either be reported in all locations, or only on the wired remote.
		01	Display only on central remote control		
Fan setting when cooling thermostat OFF	**49**	**00**	Follow the setting on the remote controller	●	When set 00, Indoor unit is continued operation based upon Central remote controller or individual controller set. Once indoor unit received signal from External controller, Indoor unit changed Fan mode forcibly. When set 01, Indoor unit is continued operation based upon Central remote controller or individual controller set. Once indoor unit received signal from External controller, Indoor unit stop forcibly. Connection of the wired remote controller (2-wire type or 3-wire type) and switching its thermistor are necessary.
		01	Stop		
*2 Switching functions for external inputs and external outputs terminals	**60**	**00**	Mode 0	●	Set this function when connected to external devices such as the VRF system ventilator, economizer, humidifier, etc. The connection terminal functions can be changed depending on the type of external device. For details of the connection terminal functions, refer to Chapter 8. 1-2. INDOOR UNIT.
		01	Mode 1		
		02	Mode 2		
		03	Mode 3		
		04	Mode 4		
		05	Mode 5		
		06	Mode 6		
		07	Mode 7		
		08	Mode 8		

*1 : Auto restart is an emergency function such as for power failure etc.
Do not start and stop the indoor unit by this function in normal operation.
Be sure to operate by the control unit, converter or external input device.

*2 : Inappropriate setting may cause an external device malfunction. Confirm whether all the settings have been performed appropriately according to the installing condition.

FUNCTION SETTING

Function	Function number	Setting number		Default	Details
Control switching of external heaters	**61**	**00**	Auxiliary heater control 1	●	Sets the control method for the external heater being used. For details of the control method, refer Chapter 8. 1-2-2. EXTERNAL OUTPUT (heater: external heater, heat pump: VRF outdoor unit).
		01	Auxiliary heater control 2		
		02	Heat pump prohibition control		
		03	Auxiliary heater control by outdoor temperature 1		
		04	Auxiliary heater control by outdoor temperature 2		
		05	Auxiliary heater control by outdoor temperature 3		
		06	Auxiliary heat pump control		
		07	Auxiliary heat pump control by outdoor temperature 1		
		08	Auxiliary heat pump control by outdoor temperature 2		
		09	Auxiliary heat pump control by outdoor temperature 3		
Operating temperature switching of external heaters	**62**	**00**	Setting 0	●	Sets the temperature conditions when the external heater is ON. For the temperature conditions, see "Temperature conditions when the external heater is ON".
		01	Setting 1		
		02	Setting 2		
		03	Setting 3		
		04	Setting 4		
		05	Setting 5		
		06	Setting 6		
		07	Setting 7		
		08	Setting 8		
		09	Setting 9		
		10	Setting 10		
		11	Setting 11		
		12	Setting 12		
		13	Setting 13		
		14	Setting 14		
		15	Setting 15		
		16	Setting 16		
		17	Setting 17		
Auto mode type*	**68**	**00**	Single setpoint auto mode (traditional)	●	Switches the setting method of auto mode to single or dual (cooling/heating). For heat pump systems, it is necessary to set the master indoor unit (by wired remote controller).
		01	Dual setpoint auto mode		

*: Function number 68 and 69 will be usable provided that the corresponding operating device is connected.

FUNCTION SETTING

Function	Function number	Setting number		Default	Details
*1 Deadband value	**69**	**00**	0°C	●	Choose the minimum temperature between cooling and heating settings (deadband) for Dual setpoint auto mode (set in No. 68).
		01	0.5°C		
		02	1.0°C		
		03	1.5°C		
		04	2.0°C		
		05	2.5°C		
		06	3.0°C		
		07	3.5°C		
		08	4.0°C		
		09	4.5°C		
Standby time for auxiliary equipment operation	**71**	**00**	Disable	●	Sets the standby time until the auxiliary equipment operation starts during primary equipment operation. For details, refer Chapter 8. 1-2-2. EXTERNAL OUTPUT.
		01	1 minute		
		02	2 minutes		
		▪	▪	▪	
		▪	▪	▪	
		▪	▪	▪	
		98	98 minutes		
		99	99 minutes		
Emergency heat	**73**	**00**	Disable	●	Enables or disable of emergency heat input
		01	Enable		
Fan delay time	**74**	**00**	1 minute	●	Sets the fan delay time when the heater is turned off.
		01	50 seconds		
		02	40 seconds		
		03	30 seconds		
*2 External heater use in defrosting	**75**	**00**	Disable	●	Enables or disables the external heater use in defrosting.
		01	Enable		

*1: Function number 68 and 69 will be usable provided that the corresponding operating device is connected.

*2: When using function number 75, inappropriate heater selection may cause cold air in defrosting.

FUNCTION SETTING

●Temperature conditions when the external heater is ON/OFF

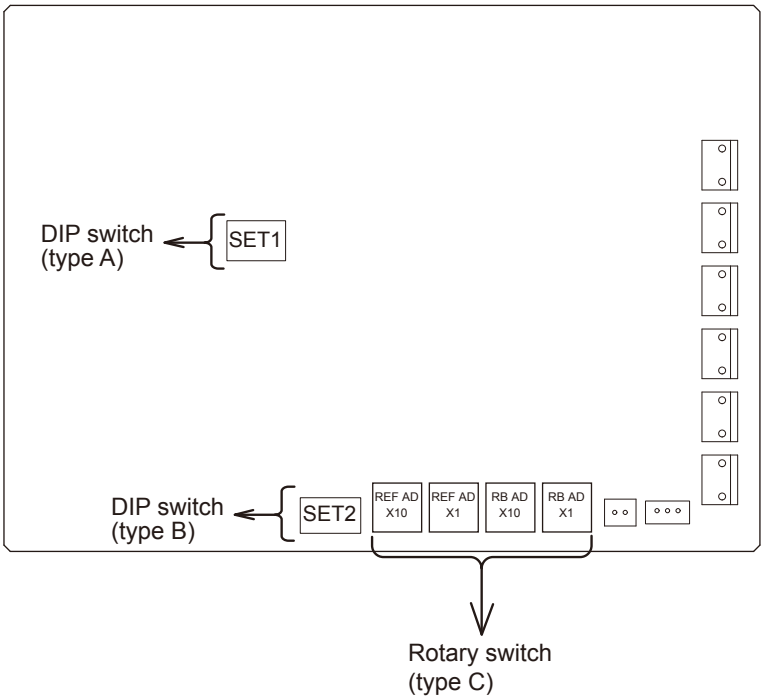
Temperature (t) = Room temperature - set temperature

		Set value of function: 61			
		00		01 to 09	
		ON	OFF	ON	OFF
Set value of function: 62	00	t < -5.4°F (-3°C)	t ≥ -1.8°F (-1°C)	t ≤ -0.9°F (-0.5°C)	t ≥ 0.9°F (+0.5°C)
	01	t < -3.6°F (-2°C)	t ≥ -1.8°F (-1°C)	t ≤ -1.8°F (-1°C)	t ≥ 0.9°F (+0.5°C)
	02	t < -3.6°F (-2°C)	t ≥ -1.8°F (-1°C)	t ≤ -3.6°F (-2°C)	t ≥ 0.9°F (+0.5°C)
	03	t < -5.4°F (-3°C)	t ≥ -1.8°F (-1°C)	t ≤ -5.4°F (-3°C)	t ≥ 0.9°F (+0.5°C)
	04	t < -7.2°F (-4°C)	t ≥ -1.8°F (-1°C)	t ≤ -7.2°F (-4°C)	t ≥ 0.9°F (+0.5°C)
	05	t < -9.0°F (-5°C)	t ≥ -1.8°F (-1°C)	t < -9.0°F (-5°C)	t ≥ 0.9°F (+0.5°C)
	06	t < -5.4°F (-3°C)	t ≥ -0.9°F (-0.5°C)	t ≤ -0.9°F (-0.5°C)	t ≥ 0°F (0°C)
	07	t < -3.6°F (-2°C)	t ≥ -0.9°F (-0.5°C)	t ≤ -1.8°F (-1°C)	t ≥ 0°F (0°C)
	08	t < -3.6°F (-2°C)	t ≥ -0.9°F (-0.5°C)	t ≤ -3.6°F (-2°C)	t ≥ 0°F (0°C)
	09	t < -5.4°F (-3°C)	t ≥ -0.9°F (-0.5°C)	t ≤ -5.4°F (-3°C)	t ≥ 0°F (0°C)
	10	t < -7.2°F (-4°C)	t ≥ -0.9°F (-0.5°C)	t ≤ -7.2°F (-4°C)	t ≥ 0°F (0°C)
	11	t < -9.0°F (-5°C)	t ≥ -0.9°F (-0.5°C)	t < -9.0°F (-5°C)	t ≥ 0°F (0°C)
	12	t < -5.4°F (-3°C)	t ≥ -0°F (-0°C)	t ≤ -0.9°F (-0.5°C)	t ≥ -0.9°F (-0.5°C)
	13	t < -3.6°F (-2°C)	t ≥ -0°F (-0°C)	t ≤ -1.8°F (-1°C)	t ≥ -0.9°F (-0.5°C)
	14	t < -3.6°F (-2°C)	t ≥ -0°F (-0°C)	t ≤ -3.6°F (-2°C)	t ≥ -0.9°F (-0.5°C)
	15	t < -5.4°F (-3°C)	t ≥ -0°F (-0°C)	t ≤ -5.4°F (-3°C)	t ≥ -0.9°F (-0.5°C)
	16	t < -7.2°F (-4°C)	t ≥ -0°F (-0°C)	t ≤ -7.2°F (-4°C)	t ≥ -0.9°F (-0.5°C)
	17	t < -9.0°F (-5°C)	t ≥ -0°F (-0°C)	t < -9.0°F (-5°C)	t ≥ -0.9°F (-0.5°C)

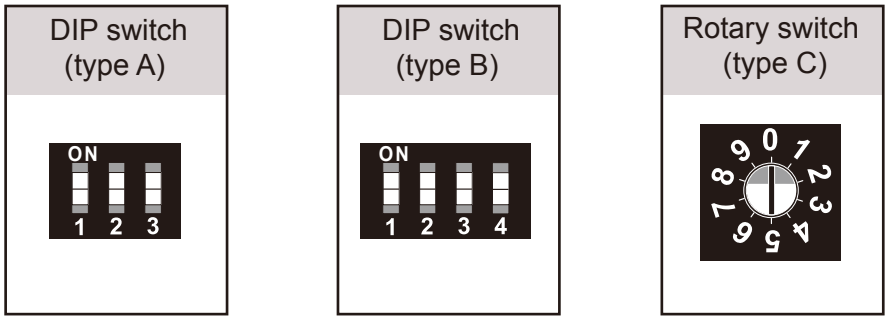
FUNCTION SETTING

2-9. RB UNIT

■ SWITCH POSITION



■ SWITCH TYPE



FUNCTION SETTING

■ SWITCH TABLE

DIP-SW	type A	SET1	1	Prohibited
			2	Prohibited
			3	Prohibited
	type B	SET2	1	Operation mode selecting switch 1
			2	Operation mode selecting switch 2
			3	Cool/heat selection control time switch 1
			4	Cool/heat selection control time switch 2
Rotary SW	type C	RB AD x 1		RB unit address switch 1
		RB AD x 10		RB unit address switch 2
		REF AD x1		Refrigerant circuit address switch 1
		REF AD x10		Refrigerant circuit address switch 2

■ DIP SWITCH SETTING

● SET1 setting

●SET1-1, SET1-2, SET1-3 setting prohibited

(◆...Factory setting)

	SET1-1	SET1-2	SET1-3	
◆	OFF	OFF	OFF	Fixed at OFF
	ON	ON	ON	Setting prohibited

● SET2 setting

●Operation mode selecting switch

(◆...Factory setting)

	SET2-1	SET2-2	Description	Remarks
◆	OFF	OFF	Priority given to the first command	Priority is given to the operation mode which is set first.
	ON	OFF	Priority given to external input of RB unit	Priority is given to the operation mode which is set by the external input terminal (CNA01 or CNA02).
	OFF	ON	Priority given to administrative indoor unit	Priority is given to the operation mode of the administrative indoor unit which is set by the wired remote controller
	ON	ON	Setting prohibited	

FUNCTION SETTING

●Cool/heat selection control time setting

Setting to reduce the time to switch between heating and cooling mode at the RB unit.

When the switching time is short, refrigerant noise may be heard when switching between modes.

Always locate the RB unit is a space that will be not be effected by refrigerant noise.

(◆...Factory setting)

	SET2-3	SET2-4	Cool/heat selection control time
◆	OFF	OFF	6 min.
	ON	OFF	3 min.
	OFF	ON	Setting prohibited
	ON	ON	Setting prohibited

■ ROTARY SWITCH SETTING

● RB AD setting

●RB unit address switch

Sets the RB unit addresses.

Refer to "1-3. MANUAL ADDRESS SETTING METHOD" for RB unit address conversion table.

RB UNIT ADDRESS SWITCH (Factory setting RB AD x 1: 0, RB AD x 10: 0)

Rotary SW	Description	Remarks
RB AD x 1	RB unit address Switch 1	RB unit address (the first digit)
RB AD x 10	RB unit address Switch 2	RB unit address (the second digit)

● REF AD setting

●Refrigerant circuit address switch

Sets the refrigerant circuit address.

Refer to "1-3. MANUAL ADDRESS SETTING METHOD" for refrigerant circuit address conversion table.

REFRIGERANT CIRCUIT ADDRESS SWITCH (Factory setting REF AD x 1: 0, REF AD x 10: 0)

Rotary SW	Description	Remarks
REF AD x 1	Refrigerant circuit address Switch 1	Refrigerant circuit address (the first digit)
REF AD x 10	Refrigerant circuit address Switch 2	Refrigerant circuit address (the second digit)

FUNCTION SETTING

2-10. WIRED REMOTE CONTROLLER (UTY-RNKU)

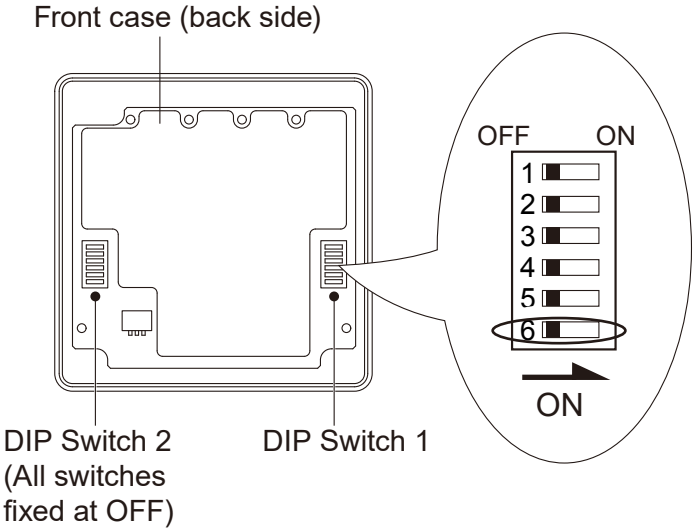
DIP Switch 1	SW1	Prohibited
	SW2	Dual remote controller setting
	SW3	Prohibited
	SW4	Fahrenheit (°F) / Celsius (°C) setting
	SW5	Prohibited
	SW6	Memory backup setting

* Do not use DIP Switch 2

■ SWITCH POSITION

● Wired remote controller

Model : UTY-RNK∗



■ DIP SWITCH 1 SETTING

● SW1 setting prohibited

(◆...Factory setting)

	SW1	
◆	OFF	Fixed at OFF
	ON	Setting prohibited

FUNCTION SETTING

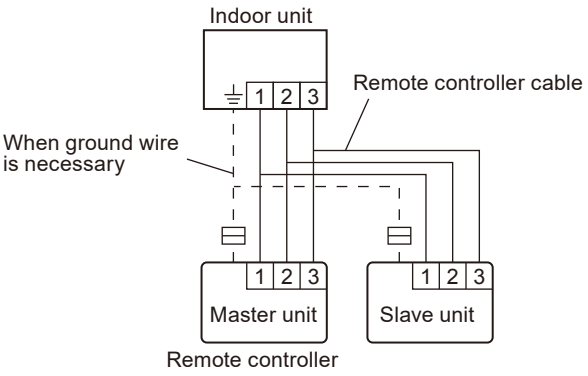
● SW2 setting

●Dual remote controller setting

Set the remote controller SW2 according to the following table.

(◆...Factory setting)

	Number of remote controller	Master unit	Slave unit
		SW2	SW2
◆	1 (Normal)	OFF	-
	2 (Dual)	OFF	ON



● SW3 setting prohibited

(◆...Factory setting)

	SW3	
◆	OFF	Fixed at OFF
	ON	Setting prohibited

● SW4 setting

●Fahrenheit (°F) / Celsius (°C) setting

	SW4	
*1	OFF	Celsius (°C)
*2	ON	Fahrenheit (°F)

*1: Factory setting at UTY-RNKY

*2: Factory setting at UTY-RNKU

● SW5 setting prohibited

(◆...Factory setting)

	SW5	
◆	OFF	Fixed at OFF
	ON	Setting prohibited

● SW6 setting

●Memory backup setting (Wired remote controller only)

Set to ON to use batteries for the memory backup.

If batteries are not used, all of settings stored in memory will be delete if there is a power failure.

(◆...Factory setting)

	SW6	Memory backup
◆	OFF	Disable
	ON	Enable

Never turn it ON in the case of simple remote controller.

FUNCTION SETTING

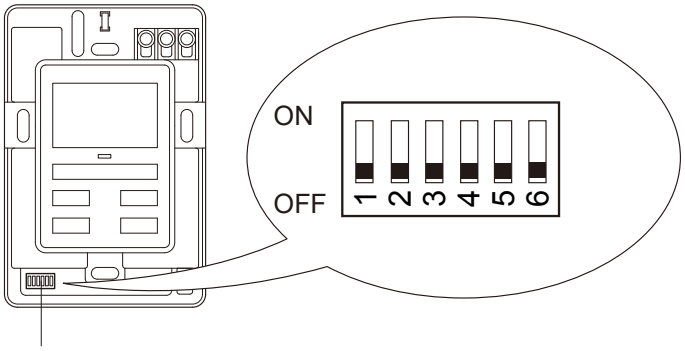
2-11. SIMPLE REMOTE CONTROLLER

DIP Switch 1	SW1	Prohibited
	SW2	Dual remote controller setting
	SW3	°F / °C setting
	SW4	Prohibited
	SW5	Prohibited
	SW6	Prohibited

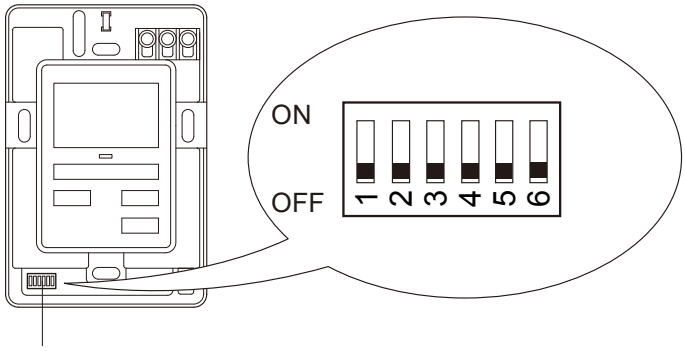
■ SWITCH POSITION

● Simple remote controller

Model : UTY-RSKU



Model : UTY-RHKU



■ DIP SWITCH 1 SETTING

● SW1 setting prohibited

(◆...Factory setting)

	SW1	
◆	OFF	Fixed at OFF
	ON	Setting prohibited

FUNCTION SETTING

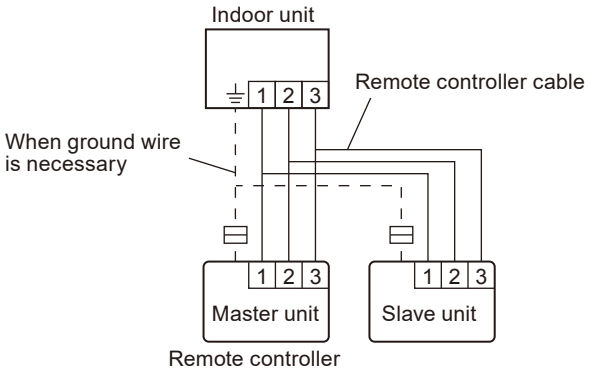
● SW2 setting

●Dual remote controller setting

Set the remote controller SW2 according to the following table.

(◆...Factory setting)

	Number of remote controller	Master unit	Slave unit
		SW2	SW2
◆	1 (Normal)	OFF	-
	2 (Dual)	OFF	ON



● SW3 setting

●°F / °C setting

	SW3	
*1	OFF	°C
*2	ON	°F

*1: Factory setting at UTY-RSKY, UTY-RHKY

*2: Factory setting at UTY-RSKU, UTY-RHKU

● SW4 setting prohibited

(◆...Factory setting)

	SW4	
◆	OFF	Fixed at OFF
	ON	Setting prohibited

● SW5 setting prohibited

(◆...Factory setting)

	SW5	
◆	OFF	Fixed at OFF
	ON	Setting prohibited

● SW6 setting prohibited

(◆...Factory setting)

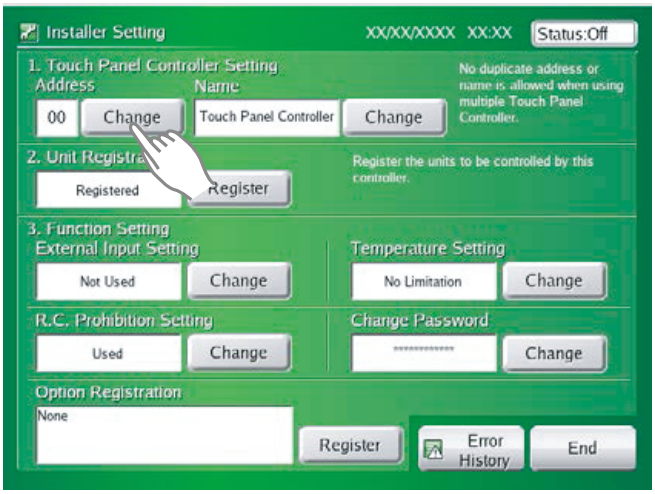
	SW6	
◆	OFF	Fixed at OFF
	ON	Setting prohibited

FUNCTION SETTING

2-12. TOUCH PANEL CONTROLLER

■ ADDRESS SETTING

- Display the Installer Setting screen and press "Change" button of "1. Touch panel controller address setting".



- Select “Address” from 00 to 15 on the screen and click the button. At the end of setting, click “OK” button.

NOTES:

- **Address No. can be set between "00" and "15". (Up to maximum 16 Touch Panel Controller can be installed to 1 system).**
- **When installing two or more Touch Panel Controller, set up so that Address No. does not overlap.**
- **Refer to the OPERATING MANUAL of Touch Panel Controller for details.**
- **Keep Address No. of Touch Panel Controller from overlapping the controller (Central remote controller, Network convertor for LonWorks® and Modbus® convertor connected to the same VRF Network system)**

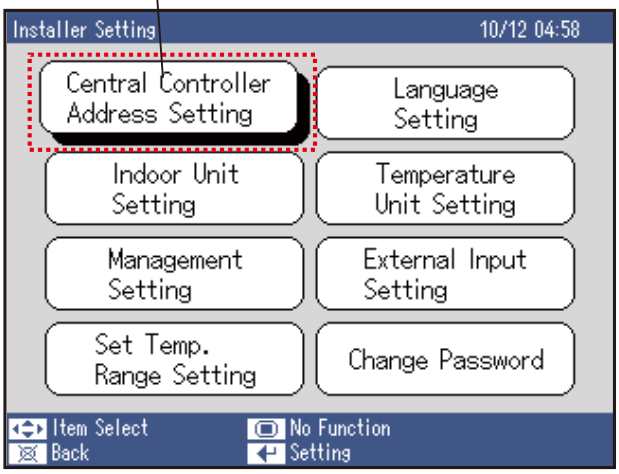
FUNCTION SETTING

2-13. CENTRAL REMOTE CONTROLLER

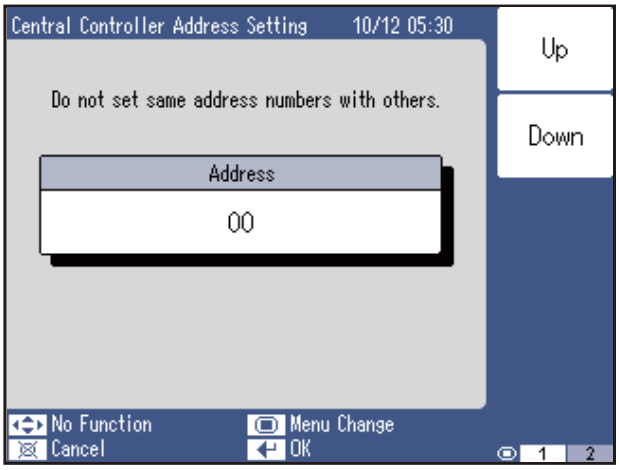
■ ADDRESS SETTING

- Display the Installer Setting screen and Press the [ ] button and move the cursor to "Central Controller Address Setting".
- Press the [ ] button.

Central remote controller address setting



- Press the [UP] button or [Down] button.
- Set the Address value.
  The Address value can be set from 00 to 15.
- When the [ ] button is pressed, setting is complete.



NOTES:

- **Address No. can be set between "00" and "15". (Up to maximum 16 Central Remote Controller can be installed to 1 system).**
- **When installing two or more Central Remote Controller, set up so that Address No. does not overlap.**
- **Refer to the OPERATING MANUAL of Central Remote Controller for details.**
- **Keep Address No. of Central Remote Controller from overlapping the controller (Touch Panel Controller and Network Convertor for LonWorks®) connected to the same VRF Network system**

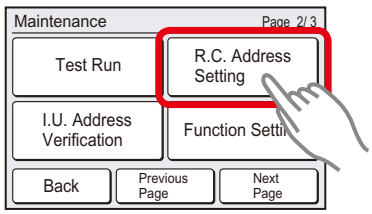
FUNCTION SETTING

2-14. WIRED REMOTE CONTROLLER (Touch panel)

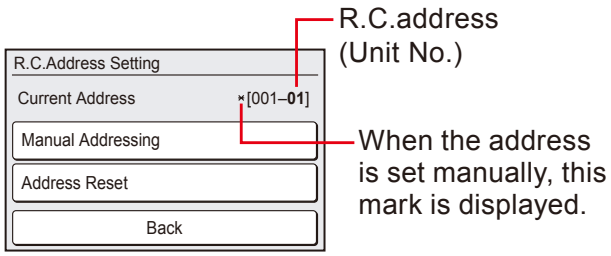
2-14-1. REMOTE CONTROLLER ADDRESS SETTING

■ CONFIRM THE REMOTE CONTROLLER ADDRESS

1) When the [RC Address Setting] on the "Maintenance" screen is touched, the "Installer Password Verification" screen is displayed.



2) Enter the Installer Password, and touch the [OK]. "R.C.Address Setting" screen is displayed. The address of this unit is displayed on the "R.C.Address Setting" screen.

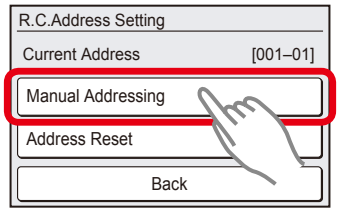


When the [Back] is touched, the display returns to the "Maintenance" screen.

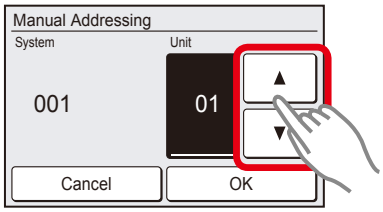
NOTE:
The address of this unit is set automatically. Do not change the indoor unit remote controller address from the factory setting "0". (Verify that the address is "0".)

■ IF MANUALLY SETTING THE REMOTE CONTROLLER ADDRESS

1) Touch the [Manual Addressing] on the "R.C.Address Setting" screen.

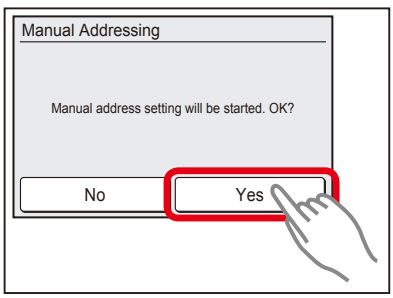


2) "Manual Addressing" screen is displayed. Set the address with [▲] or [▼].

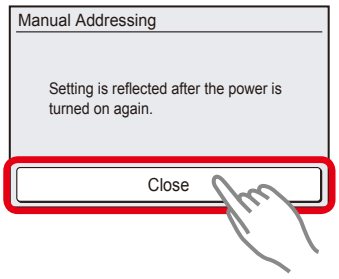


When the [OK] is touched, a verification screen is displayed.

3) When the [Yes] on the verification screen is touched, a message screen is displayed.



4) When the [Close] on the message screen is touched, the display returns to the "R.C.Address Setting" screen. Turn on the power again.

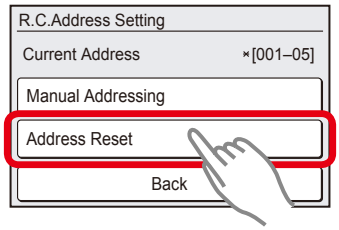


NOTES:
- Perform manual address setting only when setting the address with an arbitrary number. Indoor unit remote controller address setting is necessary. Set the remote controller address of indoor units connected by the same remote controller cable within a range of 1 to 9 and A (10) to F(15) so that there is no duplication. (Do not set to "0".)
- The address of this unit is set within a range of 1 to 32, but set it so that it does not duplicate the remote controller address of an indoor unit connected by the same remote controller cable.

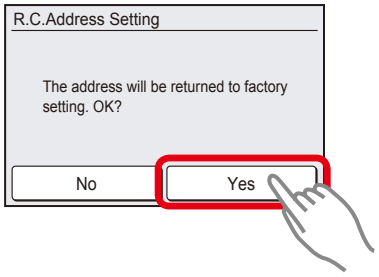
FUNCTION SETTING

■ WHEN MANUAL ADDRESS SETTING NUMBER IS RESET

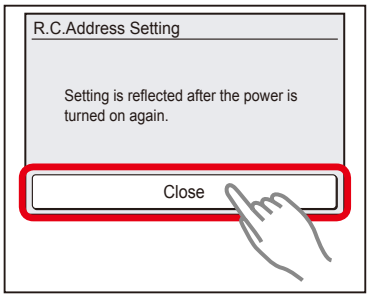
1) Touch the [Address Reset] on the "R.C.Address Setting" screen.



2) A verification screen is displayed. When the [Yes] is touched, a verification screen is displayed.

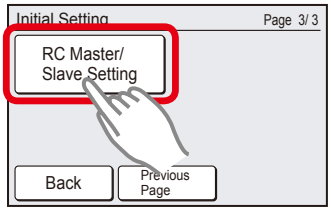


3) When the [Close] on the message screen is touched, the display returns to the "R.C.Address Setting" screen. Turn on the power again.



FUNCTION SETTING

2-14-2. REMOTE CONTROLLER MASTER/SLAVE SETTING

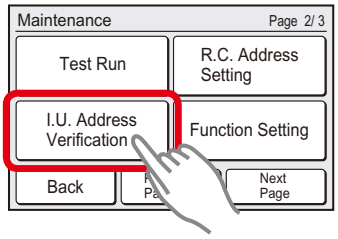
1) Touch the [RC Master/Slave Setting] on the “Initial Setting” screen.  	2) “RC Master/Slave Setting” screen is displayed. Select the [Master] or [Slave]. When the [OK] is touched, the display returns to the “Initial Setting” screen.

NOTE:
Set only one Master remote controller. Units other than Master are set to Slave automatically. Do not perform “RC Mater/Slave Setting” during setting or operating from the Master unit.

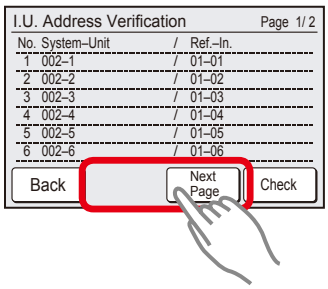
FUNCTION SETTING

2-14-3. INDOOR UNIT ADDRESS VERIFICATION

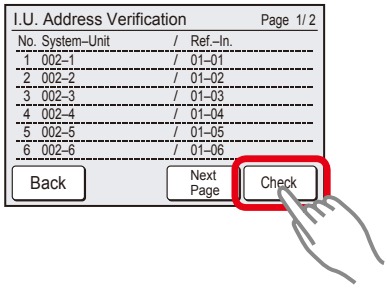
1) Touch the [I.U. Address Verification] on the "Maintenance" screen. "Installer Password Verification" screen is displayed.



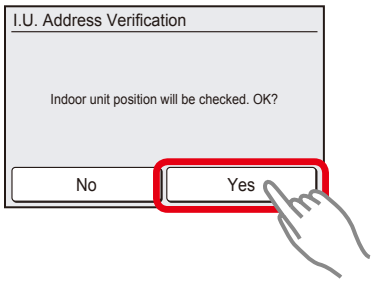
2) Enter the Installer Password and touch the [OK]. "I.U. Address Verification" screen is displayed. Enter the Installer Password and touch the [OK]. "I.U. Address Verification" screen is displayed. When the screen has multiple pages, they can be switched by touching the [Next Page] or [Previous Page].



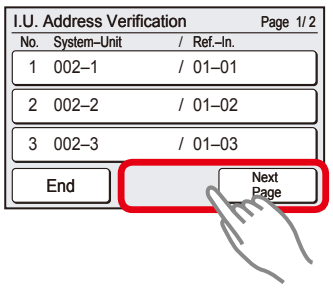
3) Touch the [Check] on the "I.U. Address Verification" screen.



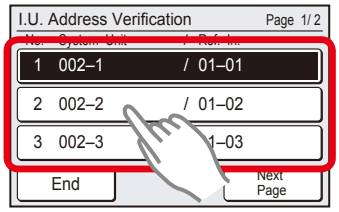
4) When the [YES] on the verification screen of indoor unit verification is touched, all indoor units will stop, verification mode starts.



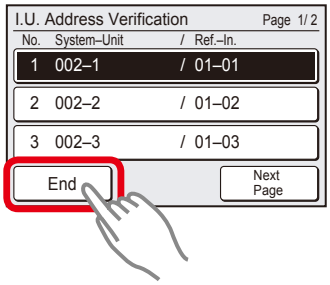
5) When indoor unit position verification ends, a screen displaying the indoor units in a list is displayed. When the screen has multiple pages, they can be switched by touching the [Next Page] or [Previous Page].



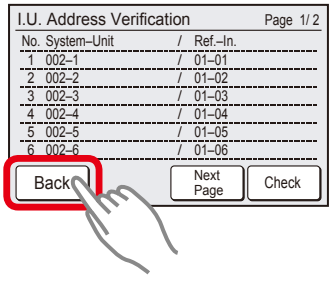
When the indoor unit address to be verified is touched, the appropriate indoor unit performs the air blow and LED lamps blink*. (*Only when the indoor unit has that function.)



6) When the [End] is touched, the display returns to the screen of (2).



When the [Back] on the screen of (2) is touched, the display returns to the "Maintenance" screen.



FUNCTION SETTING

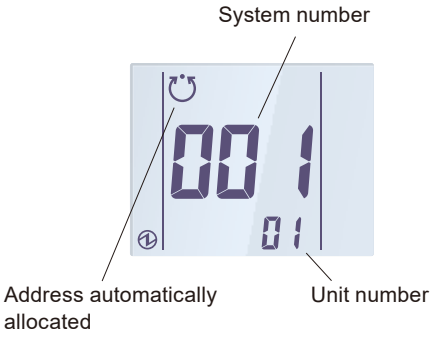
2-15. SIMPLE REMOTE CONTROLLER (UTY-RSRY, UTY-RHRY)

2-15-1. REMOTE CONTROLLER ADDRESS SETTING

■ CONFIRM THE REMOTE CONTROLLER ADDRESS

1) Select the “15” in Menu 2-F1 Settings. Then press the “⏻/❙” button.

2) You can check current allocation of 2-wire remote controller address (system number and unit number).



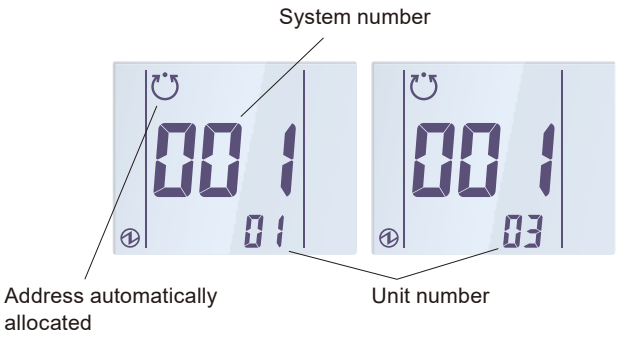
Press the “⏻/❙” button to return to the Menu 2-F1 item selection screen.

NOTE:
In the case of automatic address settings, do not change the remote controller address for the indoor unit, and keep it at the initial setting of 0. Addresses will be automatically set when initially starting up this unit.

■ IF MANUALLY SETTING THE REMOTE CONTROLLER ADDRESS

1) Select the “15” in Menu 2-F1 Settings. Then press the “⏻/❙” button.

2) You can check current allocation of 2-wire remote controller address (system number and unit number). Set the unit number with the SET TEMP. “∧” or SET TEMP. “∨” button. System number cannot be changed.



Press the “⏻/❙” button to return to the Menu 2-F1 item selection screen.

NOTES:

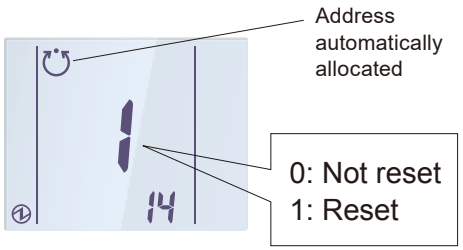
- Only set addresses manually when using different numbers for addresses. A remote controller address for the indoor unit needs to be set. Set the remote controller addresses for the indoor units which are connected using the same remote controller cable with a range from 1 to 9 and from A (10) to F(15), without any duplicates. (Do not use “0” for confi guration).) For how to confi gure the remote controller addresses for the indoor unit, refer to its installation manual.
- The address for this unit can be set from 1 to 32. However, do not set the same number as that for the remote controller address of an indoor unit, remote controller, or other unit connected using the same remote controller cable.

FUNCTION SETTING

■ WHEN MANUAL ADDRESS SETTING NUMBER IS RESET

1) Select the “14” in Menu 2-F1 Settings. Then press the “⏻/❙” button.

2) To reset the 2-wire remote controller address, select “1: Reset” with the SET TEMP. “∧” or SET TEMP. “∨” button. If not resetting, select “0:Not reset” with the SET TEMP. “∧” or SET TEMP. “∨” button.



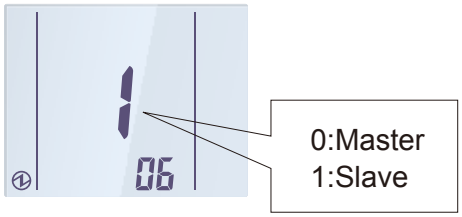
Press the “⏻/❙” button to return to the Menu 2-F1 item selection screen.

FUNCTION SETTING

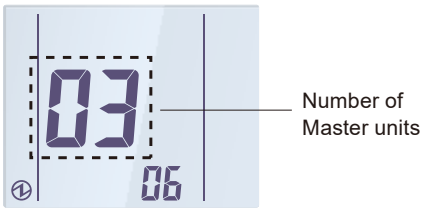
2-15-2. REMOTE CONTROLLER MASTER/SLAVE SETTING

1) Select the “06” in Menu 2-F1 Settings. Then press the “⏻/❙” button.

2) Select the “0: Master” or the “1: Slave” with the SET TEMP. “∧” or SET TEMP. “∨” button.



3) Press the “⏻/❙” button. If there is no problem, return to Menu 2-F1 items selection screen.
In the case of settings at initial booting, display “Monitor mode” screen.
If there's 0 or more than 2 “Master” units, the number will be displayed.
If “Master” is 0, press the “⏻/❙” button to return to the Menu 2-F1 item selection screen.
If “Master” is more than 2, press the “⏻/❙” button to return to the screen of (2).
To suspend the settings part way through, press the FAN “∨” button. Return to the Menu 2-F1 item selection screen.



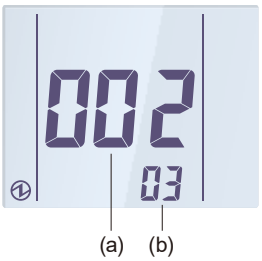
NOTE:
Set only one Master remote controller.

FUNCTION SETTING

2-15-3. INDOOR UNIT ADDRESS VERIFICATION

1) Select the “10” in Menu 2-F2 Settings. Then press the “⏻/I” button.

2-1) Display the smallest 2-wire remote controller address of indoor unit (system number and unit number) of the remote controller group. This address displayed can be switched by the SET TEMP. “∧” or SET TEMP. “∨” button.
If an indoor unit other than VRF is connected, “-” is displayed.



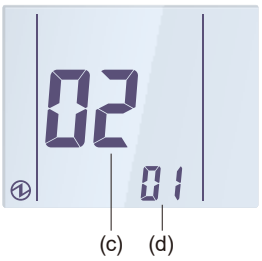
2-2) Press the “⏻/I” button to display the Refrigerant system address and Indoor unit address.

(a) System number (002: Indoor unit)

(b) Unit number (01 to 32)

(c) Refrigerant system address (00 to 99)

(d) Indoor unit address (00 to 63)



3) Press the FAN “∨” button to return to the Menu 2-F2 item selection screen.

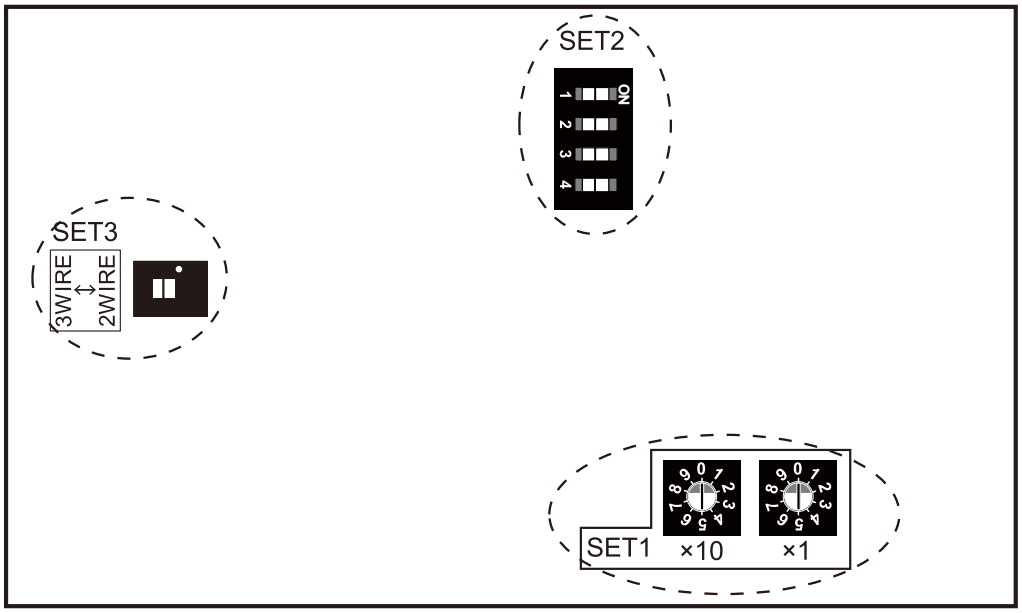
FUNCTION SETTING

2-16. NETWORK CONVERTOR

2-16-1. MODEL: UTY-VTGX

■ SWITCH POSITION

- Set network convertor rotary switch SET1, and Dip switch SET2, SET3.



■ REFRIGERANT CIRCUIT ADDRESS SETTING (SET 1)

● Example

Refrigerant circuit address	SW setting	
	SET1 (x10) (10 digit)	SET1 (x1) (1 digit)
01	0	1
99	9	9

*Setting range 00 - 99 (Arbitrary numbers can be set)

*When connecting the Network convertor for Single split AC , set up the number so that the Refrigerant circuit address number of outdoor unit and indoor unit does not overlap .

And the sum total of the Refrigerant circuit address of Network convertor for Single split AC and the Refrigerant circuit address of the outdoor unit and the indoor unit is a maximum of 100.

■ TERMINAL RESISTER SETTING (SET 2)

Set to "ON" when there is no termination resistance in the segment separated by the signal amplifier.

(Default: OFF)

■ REMOTE CONTROLLER 2WIRE/3WIRE SWITCHING (SET 3)

Match with the setting of the used indoor unit.

Set matched with the connection method of the remote controller cable to be connected.

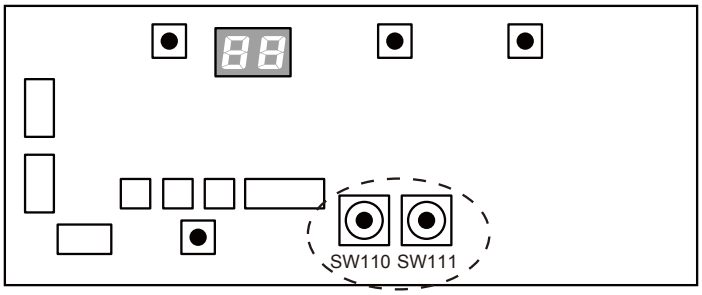
(Default: 2WIRE)

FUNCTION SETTING

2-16-2. MODEL: UTY-VGGXZ1

■ SWITCH POSITION

- Set network convertor rotary switch SW110 and SW111.



Network convertor PCB

■ REFRIGERANT CIRCUIT ADDRESS SETTING

For Split system

● Example

Refrigerant circuit address	SW setting	
	Rotary SW110 (10 digit)	Rotary SW111 (1 digit)
01	0	1
99	9	9

*Setting range 00 - 99 (Arbitrary numbers can be set)

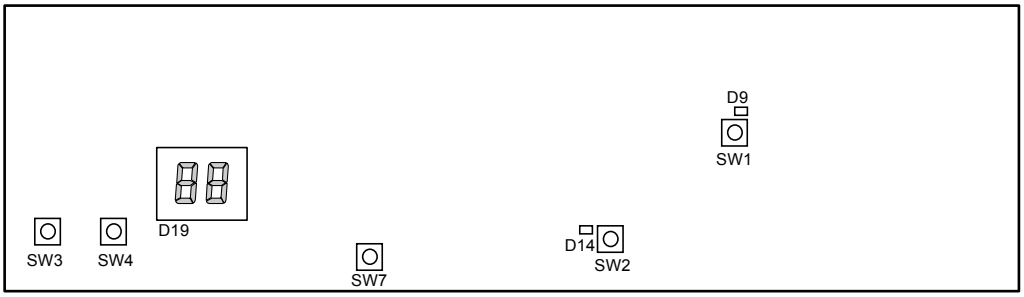
*When connecting the Network convertor for Single split AC , set up the number so that the Refrigerant circuit address number of outdoor unit and indoor unit does not overlap .

And the sum total of the Refrigerant circuit address of Network convertor for Single split AC and the Refrigerant circuit address of VRF outdoor units and the indoor unit is a maximum of 100.

FUNCTION SETTING

2-17. SIGNAL AMPLIFIER

■ SWITCH POSITION

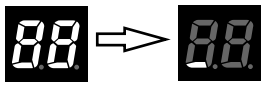


■ AUTOMATIC ADDRESS SETTING

- Refer to 1-5

■ MANUAL ADDRESS SETTING

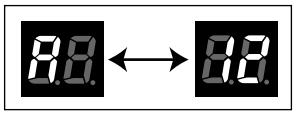
1) Turn on the power for the signal amplifier.



2) While holding down SW4 (the set button), press and release SW7 (the reset button) to enter the address setting mode. The address setting mode is activated only if the set button is held down when SW7 released.

3) Press SW4 (the set button) to display the current address.
The address is set to A1 at the factory.

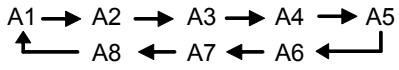
Example 1)
When A1 is set



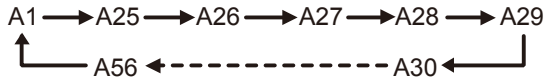
Example 2) When A12 is set

4) Press SW3 (the mode button) to select the address. The displayed address changes as follows each SW3 button is pressed. When the manual setting is selected, the indicators change as follows:

Filter mode: OFF



Filter mode: ON



Ex.) Address No.5 is selected.

- Press the SW3 when A9-A16 or A57-A88 is displayed, then A1 will be displayed.
- If connecting multiple signal amplifiers, be sure to select a different address for each amplifier.
- If the same address is used for different signal amplifiers, normal communication cannot be done.

FUNCTION SETTING

5) Press SW4 (the set button) to set the selected address.

D19

Ex.) Address No.5 is set.

6) Turn the power off and on or press SW7 (the reset button) to exit the address setting mode and return to the normal mode.
If an address setting error occurs (“26 ” is displayed on the D19-indicator), the address will not be set. Perform address setting again.

D19

Normal mode

D19

Address setting error

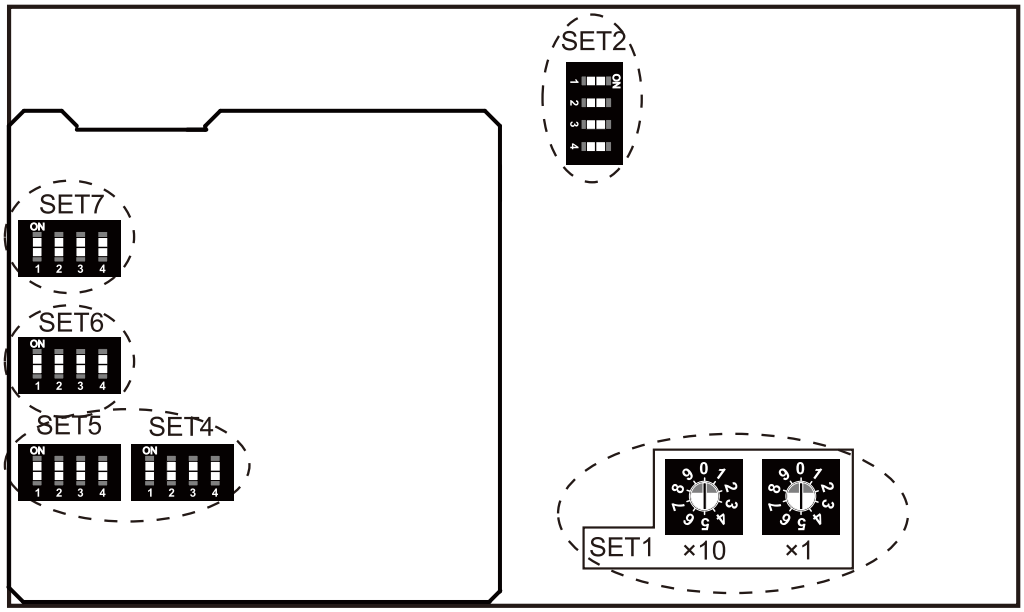
FUNCTION SETTING

2-18. MODBUS® CONVERTOR FOR VRF

■ MODEL: UTY-VMGX

■ SWITCH POSITION

- Set MODBUS® convertor rotary switch SET1 and Dip switch SET2, SET4, SET5, SET6, SET7.



■ MODBUS® CONVERTOR REMOTE CONTROLLER ADDRESS SETTING (SET 1)

● Example

Refrigerant circuit address	SW setting	
	SET1 (x10) (10 digit)	SET1 (x1) (1 digit)
01	0	1
15	1	5

Factory setting is "00"

*Setting range 00 - 15 (Arbitrary numbers can be set).

*When the Rotary switch is set to 16 or more, Modbus® convertor Remote Controller Address setting is 15.

*The sum total of the Touch panel controller, Central remote controller, Network convertor for Group remote controller ,Network convertor for LonWorks® and Modbus® convertor is a maximum of 16.

*Address of the Touch panel controller, Central remote controller, Network convertor for Group remote controller, Network convertor for LonWorks® and Modbus® convertor must not be same.

*Modbus® convertor is connectable a maximum of 9 in 1 VRF network system.

FUNCTION SETTING

■ VRF TERMINAL RESISTER SETTING (SET 2-1)

When there is no outdoor unit or signal amplifier in the VRF network segment to which the converter is connected, set to “ON.”

ON: Terminal resistance enable

OFF: Terminal resistance diable (Default)

■ TEST RUN SETTING (SET 2-3)

Test run start and reset can be set.

ON: Test run starts

OFF: Test run resets (Default)

■ SCAN SETTING (SET 2-4)

SCAN start and reset can be set.

ON: SCAN starts

OFF: SCAN resets (Default)

■ MODBUS® SLAVE ADDRESS SETTING (SET 4, SET 5)

Setting range 1 - 247 (Arbitrary numbers can be set).

Refer to "Installation Manual".

■ MODBUS® COMMUNICATION BAUD RATE SETTING (SET 6-4)

ON: 19200bps

OFF: 9600bps (Default)

■ MODBUS® COMMUNICATION PARITY SETTING (SET 6-3)

ON: odd

OFF: even (Default)

* When the STOP bit setting is “2bit,” parity is set to “None” regardless of the setting of this switch.

■ MODBUS® COMMUNICATION STOP BIT SETTING (SET 6-2)

Stop bit can be set (1 bit or 2 bit).

ON: 2bit

OFF: 1bit (Default)

■ MODBUS® TERMINAL RESISTER SETTING (SET 7-4)

Modbus® communication terminal resistance can be set (Enable or Disable).

Terminal resistance: 120 Ω

In case of circuit terminal resistance, set the terminal resistance to be enabled.

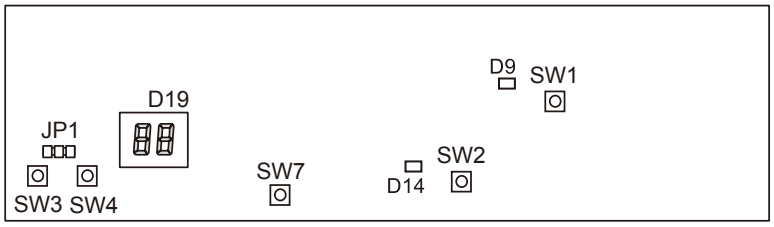
ON: Terminal resistance enable

OFF: Terminal resistance disable (Default)

FUNCTION SETTING

2-19. NETWORK CONVERTOR FOR LONWORKS®

■ SWITCH POSITION



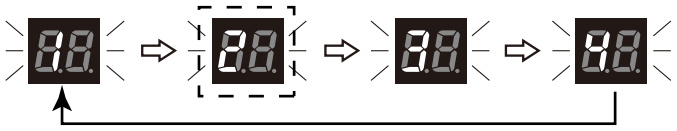
■ ADDRESS SETTING

When setting address, please be sure that the address of Network Convertor for LONWORKS® is not overlap the address of other controller like, Touch Panel Controller, Central Remote Controller & Network Convertor for Group Remote Controller.

Following steps are necessary for setting address of Network Convertor.

1) Turn on the power of network convertor.

2) Select the special mode by pressing and releasing SW7 (reset button) while holding down SW4 (set button) until special mode “1” is displayed.



Special mode changes from ‘1’ to ‘4’ as shown in the above mentioned way.

3) Press SW3 (mode button) to set special mode “2”. Special mode “2” is the address setting mode.

4) Press SW4 (set button). Present address is displayed.

Ex.) Address No. 15 is factory setting.

5) Press SW3 (mode button) to select the address. The displayed address changes as follows each time the mode button is pressed.

Ex.) Address No. 3 is selected.

6) Press SW4 (set button) to set the selected address.

Ex.) Address No. 3 is set.

7) Turn the power off and on or press SW7 (reset button) to exit from address setting mode. Anyone of the following indication will disappear:

: VRF Network address allocation is not registered by using Tool for Network Convertor

: Binding and Commissioning is not executed

: Normal Mode (Ready for operation)

: Others (Please check Installation Manual for more detail)

FUNCTION SETTING

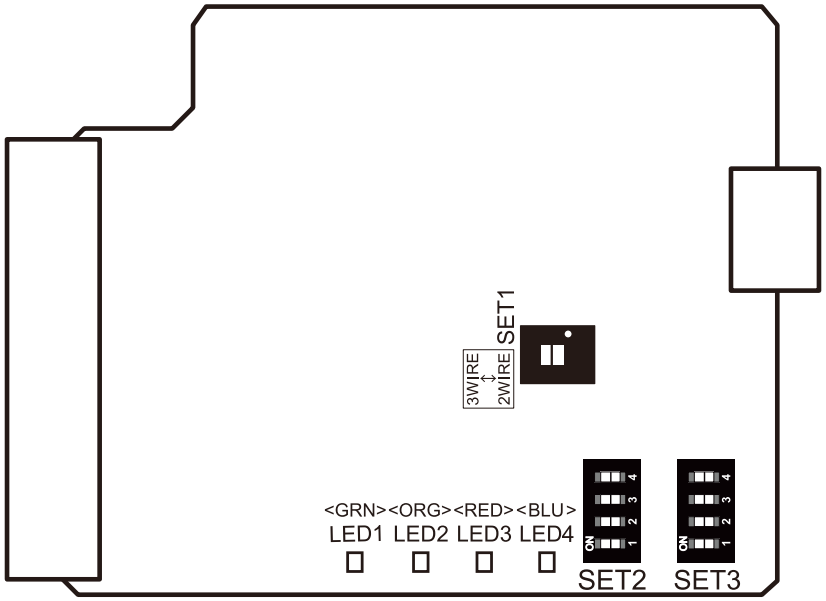
FUNCTION SETTING

2-20. THERMOSTAT CONVERTOR

■ MODEL: UTY-TTRX

■ SWITCH POSITION

Perform the initial settings using 3 DIP switches (SET 1 to 3) on the circuit board.



■ 2WIRE/3WIRE setting (SET1)

Remote controller 2WIRE/3WIRE switching SW

Factory setting: 2WIRE

Set matched with the connection method of the remote controller cable to be connected.

■ Single-stage or Two-stage setting (SET3)

(◆...Factory setting)

	SW SET3-1	Contents
◆	OFF	Temperature setting: Single-stage
	ON	Temperature setting: Two-stage

FUNCTION SETTING

■ Single-stage or Two-stage setting (SET3)

● SET3-1: Single-stage setting

Cooling setting temperature

(◆...Factory setting)

	SW SET3-2	Cooling stage 1 setting Temperature °F (°C)	Remarks
◆	OFF	64 (18)	Pattern 1
	ON	68 (20)	Pattern 2

Heating setting temperature

(◆...Factory setting)

	SW SET3-3	SW SET3-4	Cooling stage 1 setting Temperature °F (°C)	Remarks
◆	OFF	OFF	86 (30)	Pattern 1
	OFF	ON	81 (27)	Pattern 2
	ON	OFF	75 (24)	Pattern 3
	ON	ON	70 (21)	Pattern 4

● SET3-1: Two-stage setting

Cooling setting temperature

(◆...Factory setting)

	SW SET3-2	Cooling stage 1 setting Temperature °F (°C)	Cooling stage 2 setting Temperature °F (°C)	Remarks
◆	OFF	68 (20)	64 (18)	Pattern 1
	ON	72 (22)	68 (20)	Pattern 2

Heating setting temperature

(◆...Factory setting)

	SW SET3-3	SW SET3-4	Cooling stage 1 setting Temperature °F (°C)	Cooling stage 2 setting Temperature °F (°C)	Remarks
◆	OFF	OFF	81 (27)	86 (30)	Pattern 1
	OFF	ON	77 (25)	82 (28)	Pattern 2
	ON	OFF	75 (24)	79 (26)	Pattern 3
	ON	ON	70 (21)	75 (24)	Pattern 4

NOTES:

- Setting values are the limit temperature for cooling and heating.
- Energy saving performance is improved in the order from Cooling Pattern 1 to 2 and Heating pattern 1 to 4.

■ Delay OFF setting (SET2)

Delay OFF is the function to operate continuously even after reaching to the set temperature of thermostat. This function may make air conditioning efficient.

Set the Delay OFF time by SW SET2-3 and SW SET2-4.

(◆...Factory setting)

	SW SET2-3	SW SET2-4	Delay off time
◆	OFF	OFF	0 minute
	OFF	ON	5 minutes
	ON	OFF	10 minutes
	ON	ON	20 minutes

■ Fun setting (Signal on terminal G) (SET2)

(◆...Factory setting)

	SW SET2-1	SW SET2-2	Indoor unit airflow
◆	OFF	OFF	AUTO
	OFF	ON	HIGH
	ON	OFF	MED
	ON	ON	LOW

FUNCTION SETTING

2-21. DUCT STATIC PRESSURE SETTING

■ MODEL: ARUL4TLAV1

■ MODELS: ARUL7TLAV, ARUL9TLAV, ARUL12TLAV, ARUL14TLAV, ARUL18TLAV

■ MODELS: ARUM24TLAV, ARUM30TLAV, ARUM36TLAV

■ MODELS: ARUH72TLAV1, ARUH96TLAV

Change the airflow setting when the external static pressure is different than the default static pressure.

Static pressure setting can be performed using: wireless remote controller, wired remote controller, and simple remote controller.

How to set airflow (external static pressure)

- Wireless remote controller

  Airflow is set by function number 26 (static pressure).

  Refer to "BUTTON NANE AND FUNCTION", "FUNCTION SETTING" and "FUNCTION DETAILS" in 2-3. INDOOR UNIT (setting by wireless remote controller).

- Wired remote controller

  Airflow is set by function number 26 (static pressure).

  Refer to "BUTTON NANE AND FUNCTION", "FUNCTION SETTING" and "FUNCTION DETAILS" in 2-4. INDOOR UNIT (setting by wired remote controller).

- Simple remote controller

  Airflow is set by function number 26 (static pressure).

  Refer to "BUTTON NANE AND FUNCTION", "FUNCTION SETTING" and "FUNCTION DETAILS" in 2-5. INDOOR UNIT (setting by simple remote controller).

- Wired remote controller (Touch panel)

  Airflow is set by function number 26 (static pressure).

  Refer to "FUNCTION SETTING" and "FUNCTION DETAILS" in 2-6. INDOOR UNIT (setting by wired remote controller [Touch panel]).

- FAN PERFORMANCE CURVE

  Refer to "7. FAN PERFORMANCE CURVE" in Chapter 4.

NOTE
● If airflow is set incorrectly, unit may perform incorrectly; insufficient airflow or condensate carry-over (water leakage) are possible.

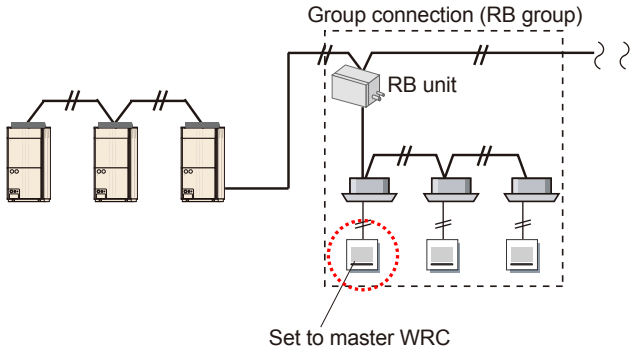
FUNCTION SETTING

2-22. ADMINISTRATIVE INDOOR UNIT SETTING

- When multiple indoor units with separate wired remote controller are connected to one branch port of RB unit (group connection), it is possible to give the cool / heat mode selection authority to one particular wired remote controller (called master wired remote controller).
- When the master wired remote controller setting is not performed, mode(cool/ heat) selection priority goes to wired remote controller which executed first.

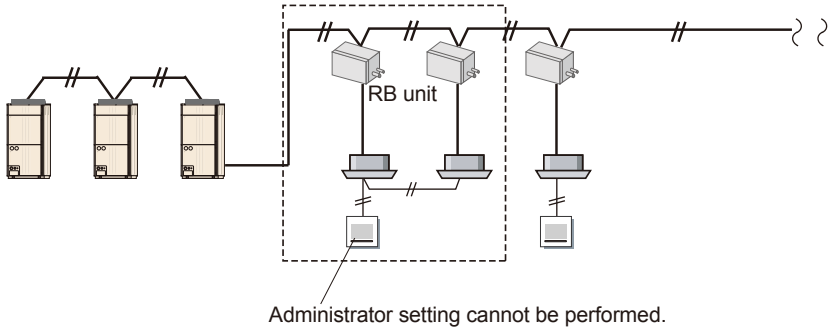
■ EXAMPLE

● Example 1 (OK)



● Example 2 (Prohibited)

When indoor units which connected to different RB units are operated by one wired remote controller, administrative indoor unit setting cannot be performed.



FUNCTION SETTING

2-22-1. SETTING METHOD

■ WIRED R.C.(Touch panel)

● Step1: RB unit function setting (Case of VR-II series)

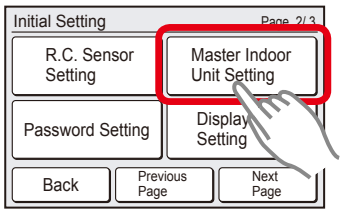
Set SET2 of DIP switch to "Priority given to administrative indoor unit" with function setting of RB unit. (SET2-1: OFF, SET2-2:ON)
→Refer to 2-9. RB UNIT.

● Step1: Outdoor unit function setting (Case of V-II series)

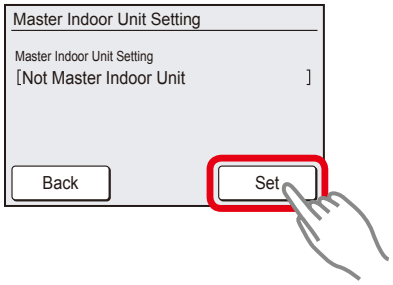
Set to "Priority given to administrative indoor unit" with function setting of outdoor unit.
→Refer to 2-1. OUTDOOR UNIT.

● Step2: Wired remote controller setting

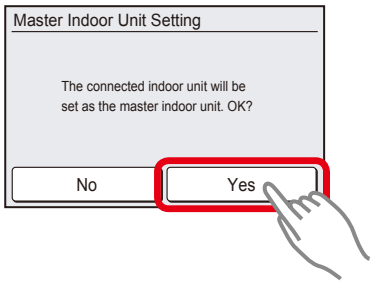
1) Touch the [Master Indoor Unit Setting] on the “Initial Setting” screen.



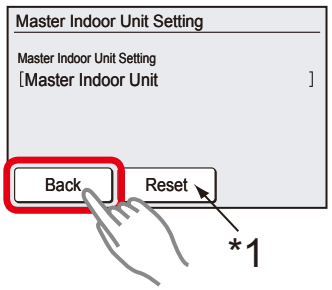
2) “Master Indoor Unit Setting” screen is displayed. When the [Set] is touched, a verification screen is displayed.



3) When the [Yes] is touched, after the data is transmitted to the indoor unit, the display returns to the “Master Indoor Unit Setting” screen.



4) When the [Back] on the “Master Indoor Unit Setting” screen is touched, the display returns to the “Initial Setting” screen.



*1: To clear a master indoor unit, touch [Reset]. (“Reset” cannot be performed while the indoor unit is operating.)

NOTE:
●When changing the Master Indoor Unit, first cancel the setting of the indoor unit currently set as the Master Indoor Unit. Otherwise, a different indoor unit cannot be registered as the Master Indoor Unit.

FUNCTION SETTING

■ WIRED R.C.

● Step1: RB unit function setting (Case of VR-II series)

Set SET2 of DIP switch to "Priority given to administrative indoor unit" with function setting of RB unit. (SET2-1:OFF, SET2-2:ON)
→Refer to 2-9. RB UNIT

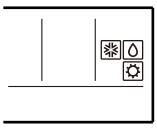
● Step1: Outdoor unit function setting (Case of V-II)

Set to "Priority given to administrative indoor unit" with function setting of outdoor unit.
→Refer to 2-1. OUTDOOR UNIT

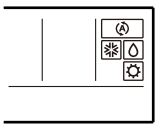
● Step2: Wired remote controller setting

(1) After the indoor unit stops operation, press the “MODE” button of wired remote controller for 5 seconds continuously.
The operating mode of the wired remote controller display lights on after 5 seconds as follows.

(1)-a) The indication not set as "Administrative indoor unit"



(1)-b) The indication set as "Administrative indoor unit"



NOTES

● “MODE ” button is locked by below reasons while the marking lights on.
In such case, “Administrative Indoor Unit” cannot be set or released.

● “Priority on Administrative Indoor Unit” is not selected in the setting of priority mode of outdoor unit.
→Set “Administrative Indoor Unit” in the wired remote controller after selecting “Priority on Administrative Indoor Unit” in setting of priority mode of outdoor unit.

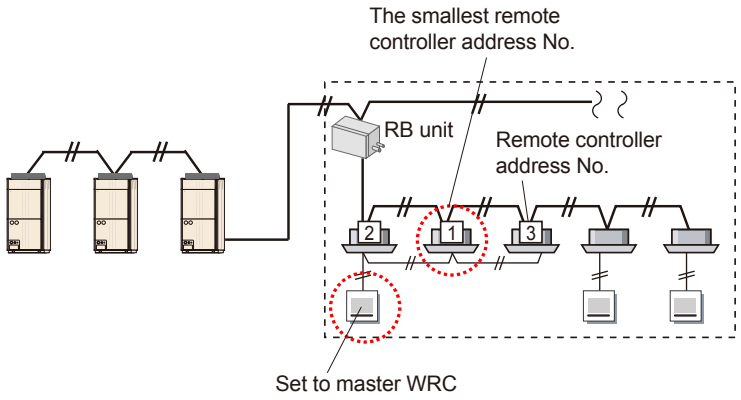
● Another indoor unit was set to “Administrative Indoor Unit” already.
→Release the setting “Administrative Indoor Unit” of another indoor unit.

(2) Press the “MODE ” button.
Display (1)-b) when setting, and display (1)-a) when releasing.
→The display blinks when the “MODE ” button is pressed, and the display of (1)-a) and (1)-b) alters whenever the “MODE ” button is pressed.
→The contents set in the wired remote controller are transferred to the indoor unit immediately after the display is selected. It may take 10 seconds depending on communication conditions. While this period, the button operation will be suspended.
→It returns to the normal display after 20 seconds automatically if the operation button is not pressed.
→When setting or releasing is completed, the indication on wired remote controller changes to the normal indication from blinking.

(3) Complete the setting or releasing of “Administrative Indoor Unit”.
Press the “MODE ” button of the wired remote controller again for 5 seconds continuously.
→The indication returns to normal display if the “MODE” button is pressed for 5 seconds continuously.
(It returns to normal indication after 20 seconds even if the “MODE ” button is not pressed.)

FUNCTION SETTING

■ NOTE



NOTE: In remote controller group, the cool/heat mode is changed over according to a detected room temperature of an indoor unit with the smallest remote controller address number.

FUNCTION SETTING

2-23. ENERGY SAVING SETTING (SYSTEM CONTROLLER)

In this section, an energy saving function which uses electricity meters is explained. System Controller (UTY-APGXZ1, UTY-PEGXZ1) or System Controller Lite (UTY-ALGXZ1, UTY-PLGXE2) is required to perform these functions.

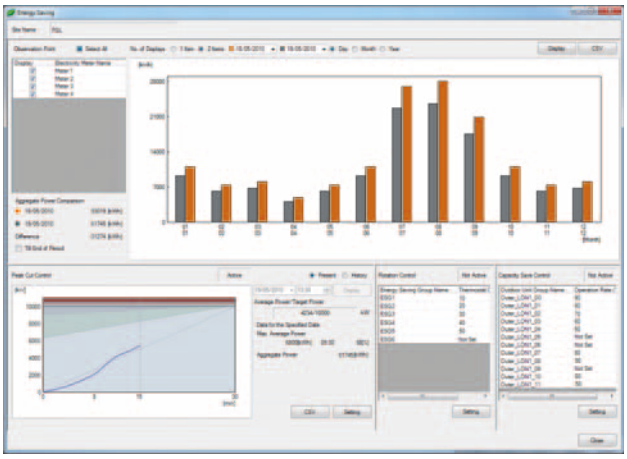
■ FEATURES OF ENERGY SAVING FUNCTION

● Input Power graph function

Displays by bar graph the Input Power measured by the electricity meter connected to the air conditioner. This graph can be used to analyze the Input Power.

The Input Power for 3 years is saved and the past history can be referenced.

In addition, the data of an arbitrary 2 periods can be displayed for comparison.



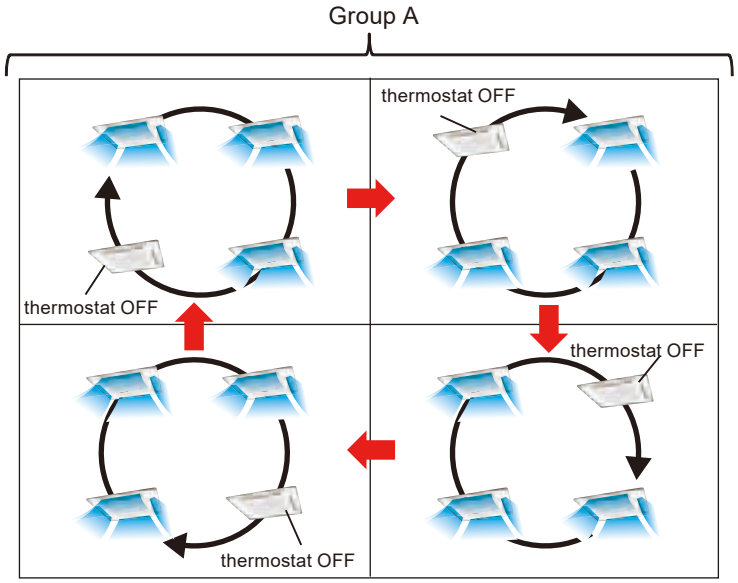
● Indoor unit rotation operation function

Reduces the Input Power by rotating the indoor units which are set to forced thermostat OFF.

Operating the the air conditioner with this function in the spring and autumn when the heat load is comparatively light may have an energy saving effect.

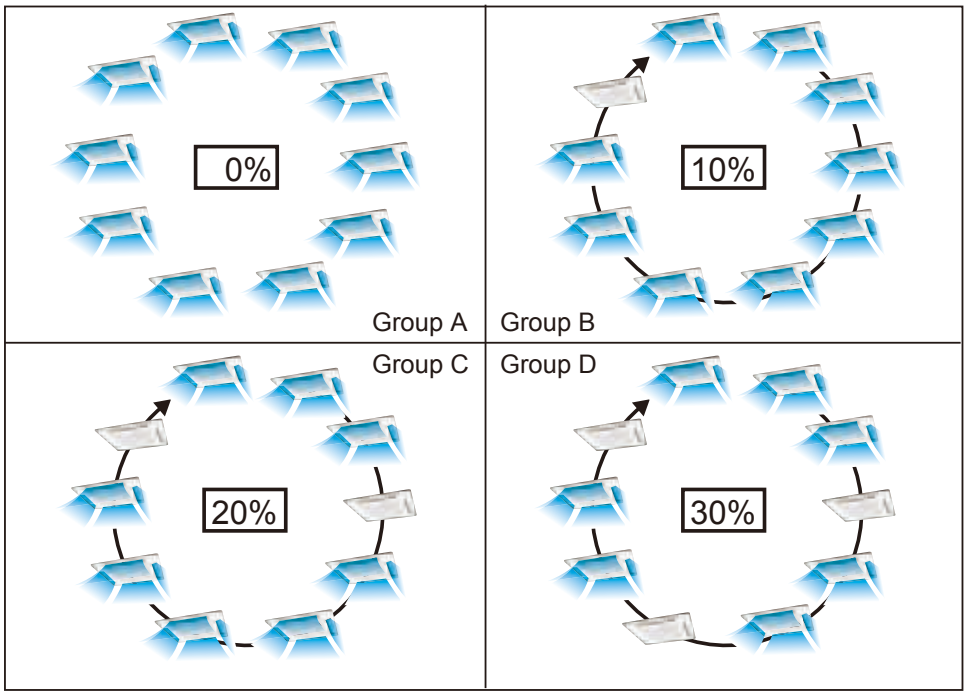
Because it is intermittent , and there is little change in the rooms temperature, the occupants may not even sense it's operation.

- The electric power consumed in the arbitrarily defined group is reduced by rotating indoor units which are set to forced thermostat OFF.

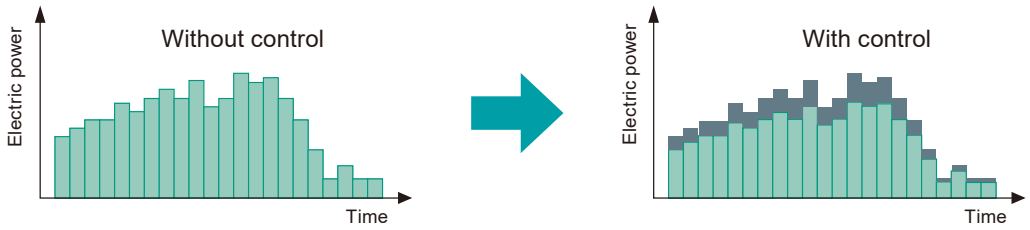


FUNCTION SETTING

- Indoor units can be rotated according to the stoppage rate set for each group.



*The indoor unit operation stoppage rate can be selected from 10% to 30%.



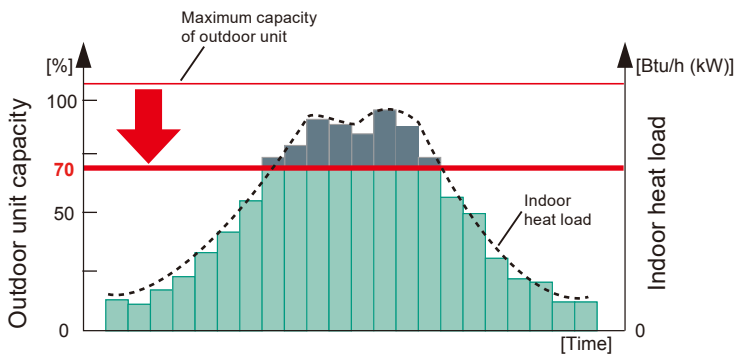
● Outdoor unit capacity save function

The Input Power is reduced by limiting the upper limit of the outdoor unit capacity for each refrigerant system.

This has an energy saving effect, especially in the summer, winter and other times when the heat load is high.

In addition, because the upper limit capacity of the outdoor unit is limited directly, it is a control which easily exhibits an energy saving effect compared to rotation control. However, because the outdoor unit does not operate above the limited capacity, there may be a loss of comfort, depending on the indoor heat load.

*The operation capacity upper limit rate [%] of the outdoor unit is specified for each refrigerant system.



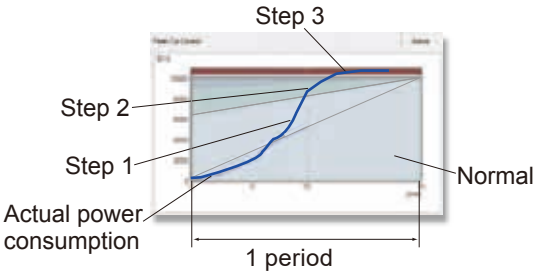
FUNCTION SETTING

● Peak cut operation function

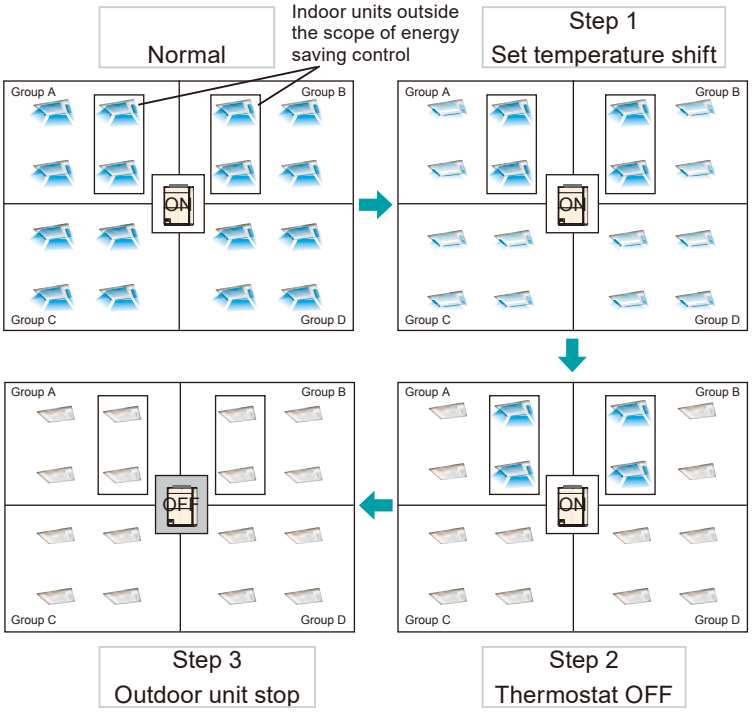
Reduces the Input Power by setting a specific target value (maximum average power [kW]) for all the air conditioners and controlling operation so that this value is not exceeded.

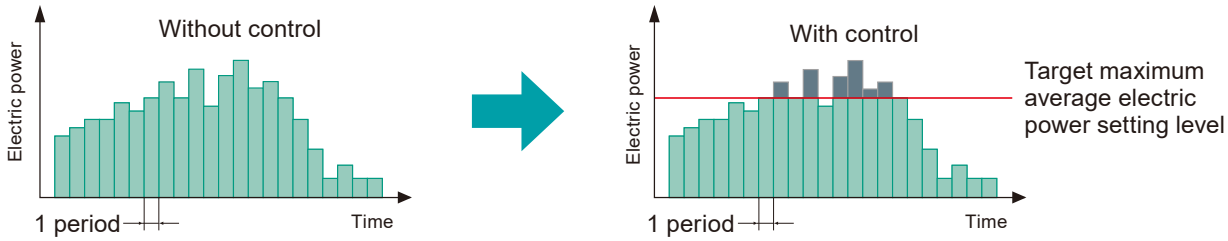
Limit control is performed in 3 steps of “Step 1: Set temperature shift” → “Step 2: Thermostat OFF” → “Step 3: Outdoor unit stop”.

To perform this control, an electricity meter must be installed.



*Specifies the maximum average electric power [kW] for the entire air conditioning system.





FUNCTION SETTING

■ GENERAL SETTING PROCESS FOR ENERGY SAVING AND ELECTRICITY CHARGE APPORTIONMENT USING ELECTRICITY METER

The general setting process for realizing an energy saving function and an electricity charge apportionment function using an electricity meter is shown as an example in the table below.

	Process	Reference item
1	Overview of the energy saving function and electricity charge apportionment function using an electricity meter and an understanding of the usage method and restrictions, etc.	■Features of Energy Saving Function ■Operation Example ■Notes on Energy Saving Function ■Installation Restriction of Energy Saving Units ■Electricity Charge Apportionment and Electricity Meter
2	Deciding the power source supply system. Deciding the electricity meter installation sites, number and the outdoor units which are connected. Deciding the appropriate VT/CT specifications.	■Electrical Wiring ■Installation Restriction of Electricity Meter ■Electricity Meter System
3	Procuring the electricity meters and related hardware and materials.	■Electrical Wiring
4	Electricity meters and related hardware and materials installation work.	■Electrical Wiring
5	Electricity meter setting.	■Setting of Outdoor Unit and System Controller
6	Outdoor unit setting.	■Setting of Outdoor Unit and System Controller Refer also to "2-1.OUTDOOR UNIT"
7	System controller setting.	■Setting of Outdoor Unit and System Controller Refer also to "System Controller Instruction Manual"

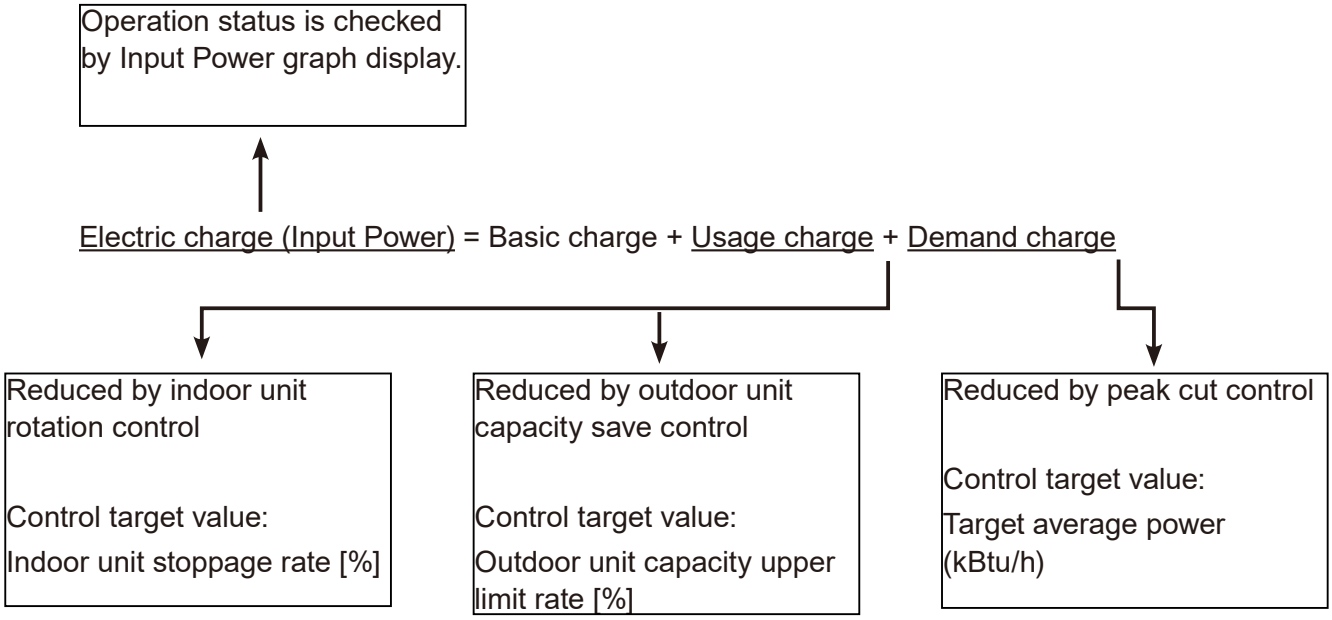
NOTE: Outdoor units and indoor units layout, remote controller group combination method, and other design shall be performed separately.

FUNCTION SETTING

■ OPERATION EXAMPLE

Electric charges usually consist of the following elements.

With the energy saving function, operation for each element is as follows.



*Basic charge: Charge billed according to contract with the electric power company. Includes meter reading cost and billing cost.

*Usage charge: Charge billed according the power consumed.

*Demand charge: Charge billed according to the scale in the contract with the electric power company.

FUNCTION SETTING

■ NOTES ON ENERGY SAVING FUNCTION

Energy saving function precautions and scope of guarantee

The effect of the energy saving function depends on the units used, usage environment, installation environment, and so forth. No guarantee is made as to the specific savings from the energy saving functions. Reading and understanding the following precautions is requested before using the function.

(1) How to use the energy saving function

Since the effect of the energy saving function depends on the units used, usage environment, installation environment, and so forth, a different effect may appear according to the building and operating period even when operated with the same settings and schedule. Try to gain an understanding of the features of each energy saving function and confirm the actual effect through operation and apply appropriate settings, etc. as required.

(2) Target electric power of peak cut function

These are values used as target values when performing peak cut control. These values do not always guarantee that the consumed power is within the target value. For example, even if forced thermostat off and outdoor unit stoppage are activated, the control becomes ineffective if the outdoor unit is performing a protective operation (oil recovery and defrosting). As a result, the electric power consumed may exceed the target electric power.

(3) Relationship between unit protection and energy saving function

For VRF, there are operations and restrictions for protecting units. The energy saving function operates within the range of these protective operations and restrictions. When the energy saving function performs control against these protective operations and restrictions, the protective operations and restrictions have priority and the energy saving function is either restricted or may not operate. The protective operations of the units are oil recovery, defrosting, etc. which are automatically performed periodically or under specified conditions.

(4) Failure, etc.

An energy saving function operates only when the related units are operating normally. When the power of the electricity meter and the outdoor units connected to an electricity meter and the SYSTEM CONTROLLER is turned off due to a failure, etc. the energy saving function will not operate normally.

(5) Explaining to the building tenants

During energy saving function operation, control from the remote controller may be overridden by the energy saving control. For this reason, it is recommended that the building tenants be informed of this beforehand.

FUNCTION SETTING

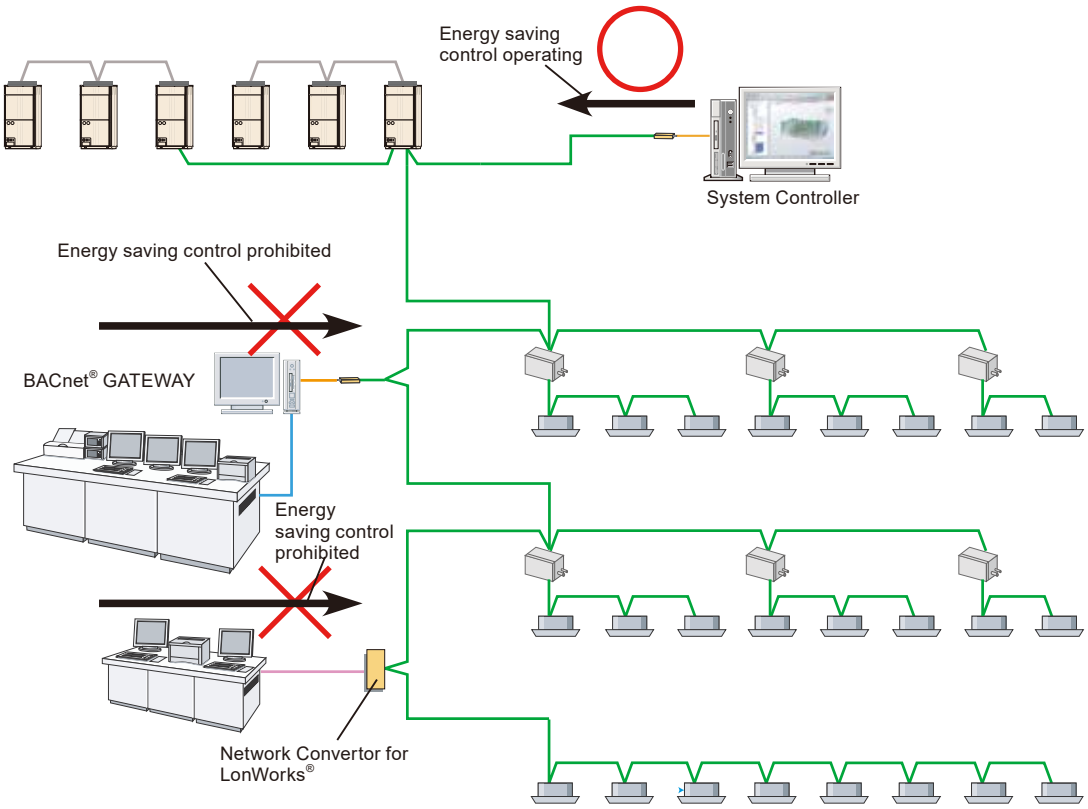
■ INSTALLATION RESTRICTION OF ENERGY SAVING UNITS

(1) Only 1 unit may perform energy saving control at a time. When energy saving control is performed by SYSTEM CONTROLLER (UTY-APGXZ1/PEGXZ1), stop energy saving control *1 from the building management system through the following units.

- BACnet® GATEWAY (UTY-ABGX)
- NETWORK CONVERTOR for LonWorks® (UTY-VLGX)

When energy saving control is performed from multiple points, trouble may occur.

*1: Forced thermostat OFF, outdoor unit forced OFF and outdoor unit capacity save.



(2) Electricity meter installation

Among energy saving control, there are functions which require installation of an electricity meter.

- Input Power graph display function
- Peak cut control

When performing these functions, refer to the installation rules and install an electricity meter in advance.

FUNCTION SETTING

2-24. ELECTRICITY CHARGE APPORTIONMENT SETTING (SYSTEM CONTROLLER, TOUCH PANEL CONTROLLER)

In this section, an electricity charge apportionment function which uses electricity meters is explained. System Controller (UTY-APGXZ1, UTY-PEGXZ1) or System Controller Lite (UTY-ALGXZ1, UTY-PLGXA2) or Touch panel controller (UTY-DTGYZ1, UTY-PTGXA) is required to perform these functions.

■ ELECTRICITY CHARGE APPORTIONMENT AND ELECTRICITY METER

When implementing the electricity charge apportionment function in a VRF System, a configuration which does not use electricity meters or a configuration which uses electricity meters can be selected. The differences between these two configurations are explained below.

The electricity charge apportionment function apportions the Input Power to each block (tenant indoor unit) defined in advance according to the usage record, after the Input Power (electricity charge) of the air conditioners is input to the System Controller. Electricity charge apportionment calculation becomes possible only after inputting the Input Power (or electricity charge).

[Electricity charge apportionment when electricity meter not used]

Only after the electricity bill is received from the electric power company and the billed amount is input into the System Controller, can electricity charge apportionment for the billed period be calculated.

[Electricity charge apportionment when electricity meter used]

Since the Input Power data is sent from the electricity meter to the System Controller at any time, electricity charge apportionment calculation can be performed at any time. Because the System Controller calculates the energy charge on a daily basis, it can be performed at any time.

FUNCTION SETTING

Example (1)

When the tenants are billed for their air conditioning electricity charge once a month and the electricity bill arrives from the electric power company each month, the electricity charge apportionment function can be used without electricity meters. Because electricity charge apportionment can be performed based on that bill. Even if there are tenants moving in and out within a month, appropriate billing can be performed after the bill was received from the electric power company. When the electricity bill is received from the electric power company once every 3 months, the building owner can only bill the building tenants for air conditioning electricity charges every 3 months. However, if electricity meters are installed, billing at an arbitrary interval, for example, once a month, is possible.

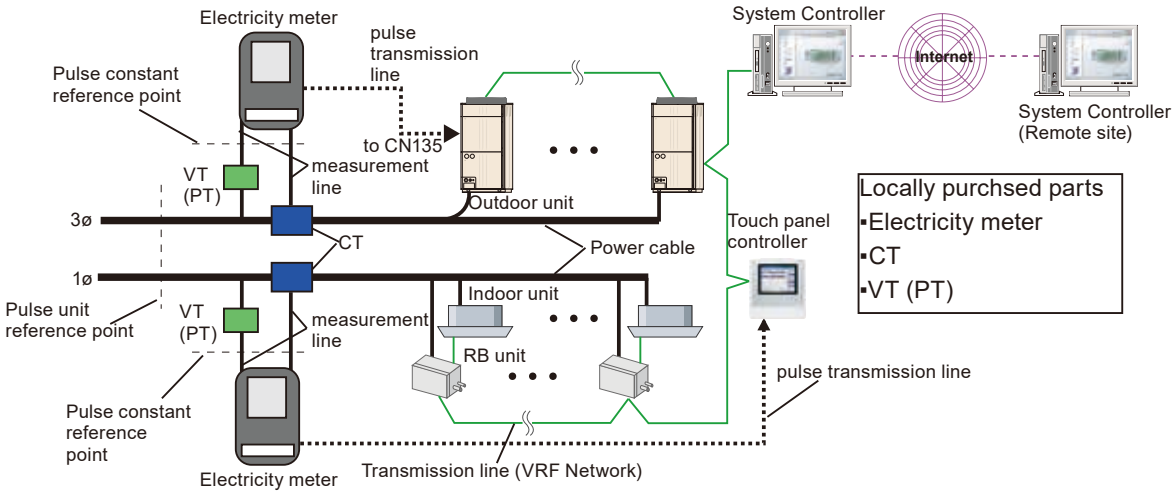
Example (2)

When air conditioning electricity charge is billed based on the electricity charge apportionment function for each room in a hotel etc., because guests leave and arrive daily, the electricity charge is calculated each time they leave. Therefore, you cannot wait for the electricity bill to arrive from the electric power company. In such cases, an electricity meter must be used to calculate electricity charge apportionment.

■ ELECTRICAL WIRING

● Electricity meter connection composition

To perform energy saving peak cut control, electricity meters with pulse transmission function measuring all the power consumed by the air conditioner are necessary. Multiple meter installations are also possible as long as the number of electricity meters is within the specified limit. A general electricity meter installation configuration is shown below.



Item	Description	Remarks
Electricity meter	Measures the voltage and current of the power cable to which measurement line is connected and finds the Input Power from these. In addition, pulses corresponding to the measured value are output to the transmission line.	
VT(PT)	Voltage Transformer (Power Transformer) Transform the power source voltage to a measurable voltage. Transformation ratio is indicated by VT (PT) ratio. Normally unnecessary for the voltage value level used by outdoor units and indoor units.	
CT	Current Transformer Transform the power line current value to a current measurable by an electricity meter. Transformation ratio is indicated by CT ratio. Some meters are connected inline with the power lines and some are clamped on the power lines.	
Pulse unit	Pulse unit indicates the relationship between electricity meter output pulse and measured power. The value specified in pulse unit indicates the power in kWh consumed on the power cable for 1 pulse. Units: [kWh/pulse] The value specified by pulse unit takes into account the VT and CT ratio used and corresponds to the actual Input Power itself.	
Pulse unit reference point	Indicates the measurement point of the Input Power specified in pulse units.	
Pulse constant	Pulse constant indicates the relationship between electricity meter measured power and output pulses. The value specified by pulse constant indicates how many pulses are equivalent to 1kWh of Input Input Power to an electricity meter. Units: [pulse/kWh] Because the ratio of VT and CT used is not taken into account in the value specified by pulse constant, to find the actual Input Power on the power cable, the pulse constant value must be multiplied by both the VT and CT ratio.	
Pulse constant reference point	Indicates the measurement point of Input Power specified by pulse constant.	

FUNCTION SETTING

● Selection of Electricity meter, CT, and VT

Select the electricity meter, CT, and VT by considering the following items.

(1) Install electricity meters for each refrigerant system, if circumstances allow.

(2) Select VT/CT with a small VT/CT ratio.

(3) When using an electricity meter which is specified in pulse units (kWh/pulse), usually select a meter with a 1kWh/pulse output.

● Outdoor unit connection interface (CN135) or touch panel controller connection interface (TM201 CH1) to electricity meter

Item		Specifications	Remarks
Interface		Dry contact “a” contacts	“a” contacts: ON when shorted *1
Pulse	Specifi-cations	Width: 50ms or more Interval: 50ms or more	
	Units	1kWh/pulse (pulse units) recommended	
	Constant	Considering the electricity meters available in some countries, use of electricity meters with 3200 pulse/kWh (pulse constant) or less pulses are possible.	
Line length restriction		492ft. (150m) or less	Between Electricity meter to Outdoor unit
Wiring specifications		Control and instrumentation cable CVV-S (Control-use Vinyl insulated Vinyl sheathed cable – Shielding) *2 2-conductor 16AWG (1.25mm^2)	
Line length restriction		25m or less	Between Electricity meter to Touch panel controller
Wiring specifications		2 core, twisted pair, 0.33mm2 (22AWG) *3	

*1: Pulse signal: normally OFF (open), ON (closed) when shorted

*2: When affected by interference by induction, select shielded CVV cable (CVV-S cable). This is because copper shielding tape is wrapped around CVV cable and induction interference from adjacent power cables is alleviated and normal communication is maintained.
In addition, when the wiring is outdoors, select weather resistance cable.

*3: Use cable in accordance with local rules for cable.

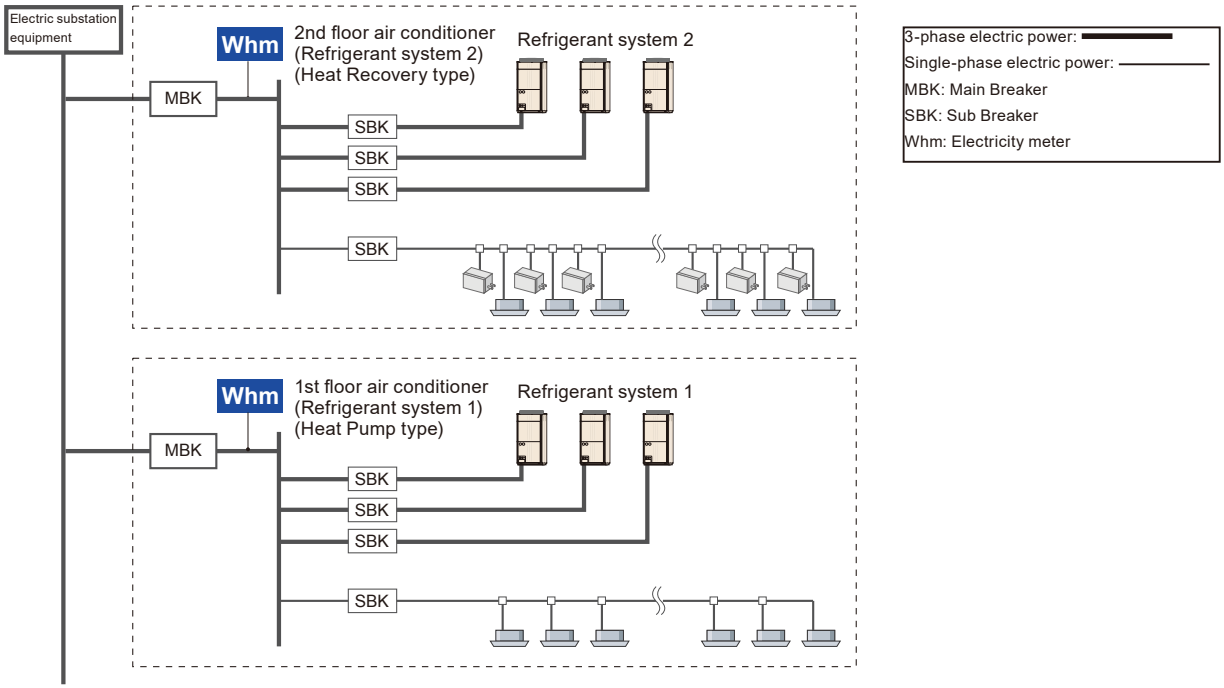
● Number of electricity meters installed and connection destination

Item	Specifications	Remarks
Number of electricity meters installed	Max.200	Per Site (include Max. 4 VRF systems)

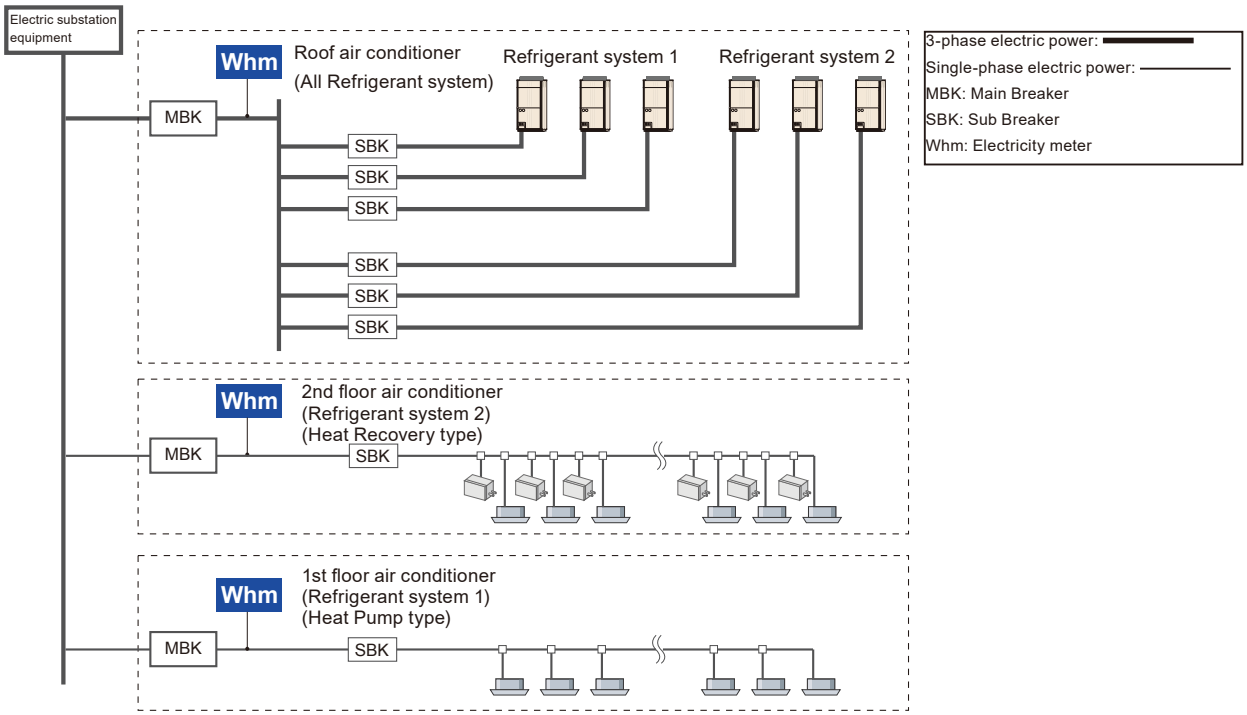
FUNCTION SETTING

● Installation example of Electricity meter

• Example of installation for each refrigerant system

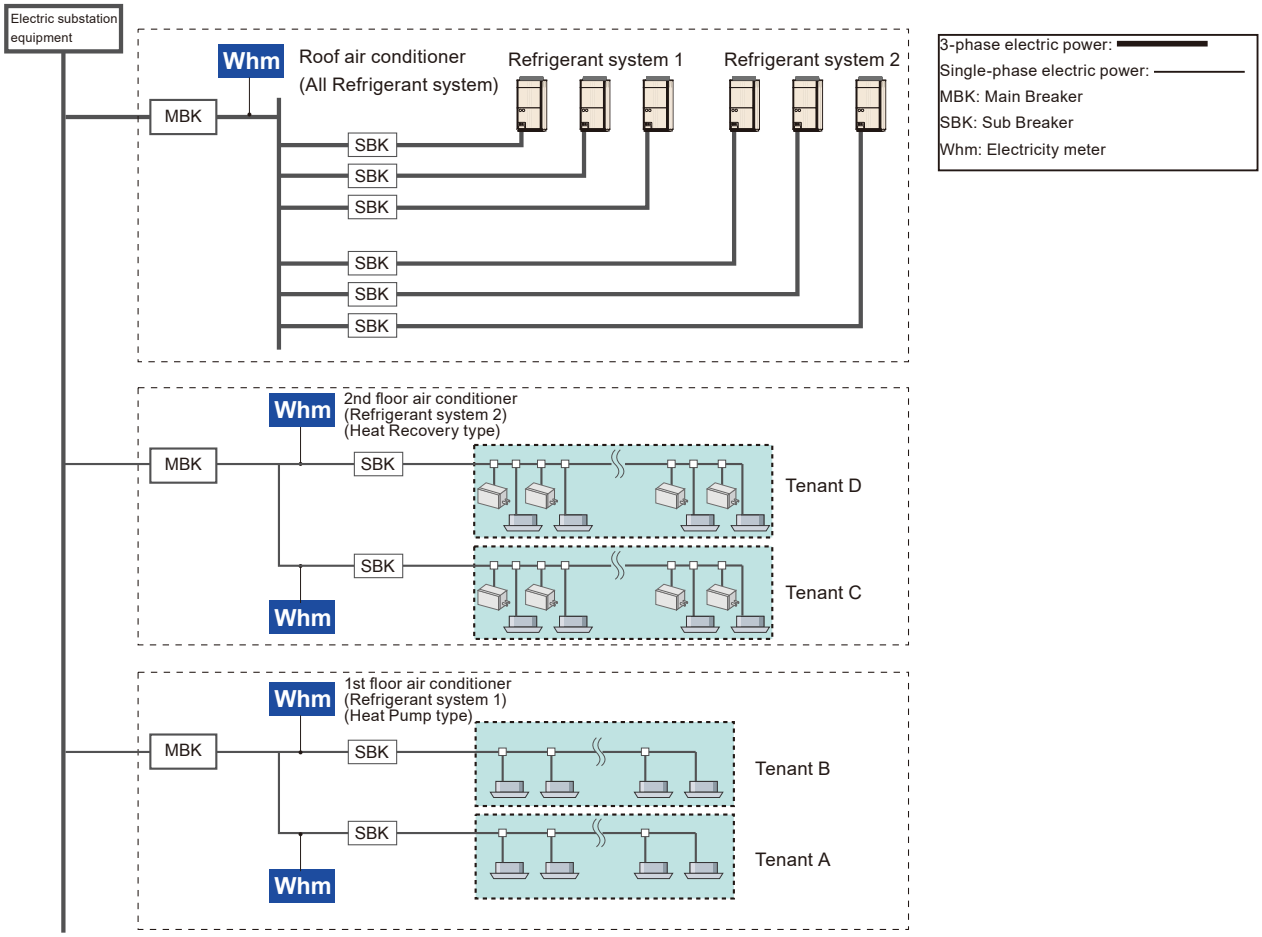


• Example of installation for indoor units and outdoor units



FUNCTION SETTING

• Example of installation for each tenant



FUNCTION SETTING

■ INSTALLATION RESTRICTION OF ELECTRICITY METER

● Functions that requires installation of electricity meter

Use an electricity meter having the following functions:

・Electricity charge apportionment function

Install for operation using an electricity meter. (Operation without an electricity meter is also possible.)

When using an electricity meter, an electricity meter must be installed for all the units which perform apportionment calculation.

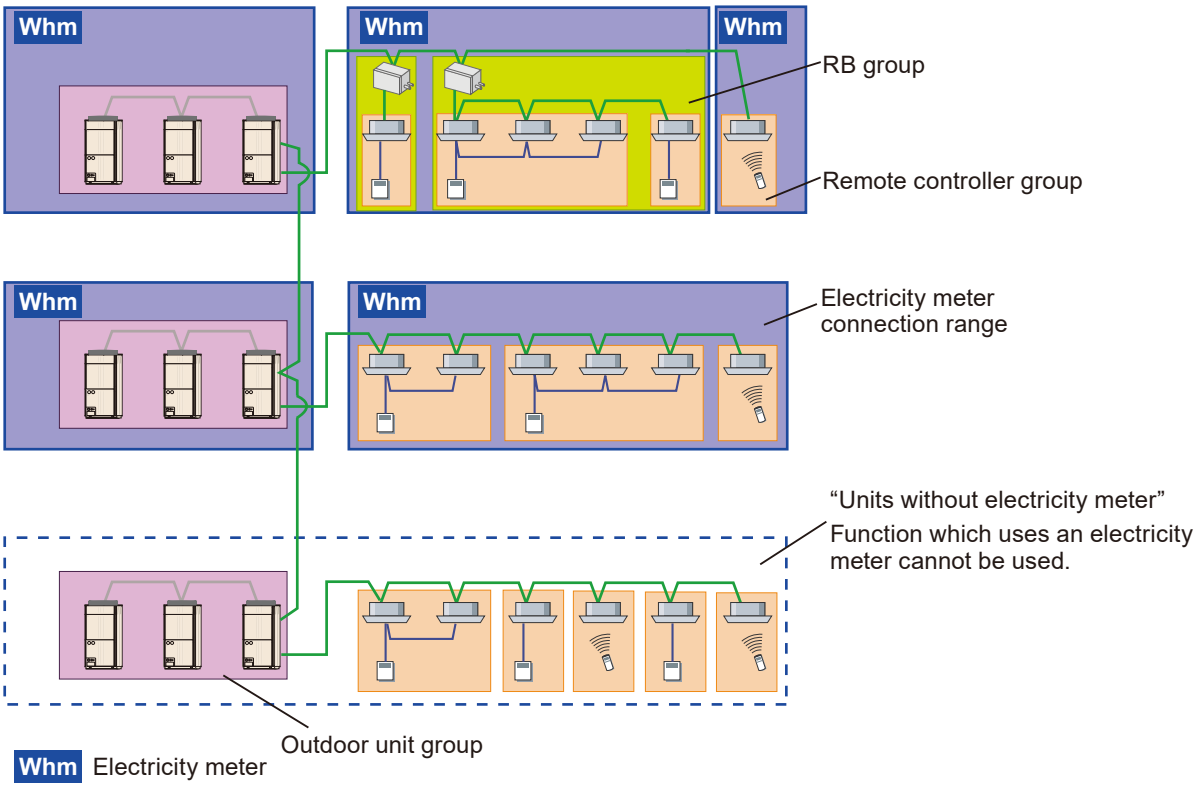
・Peak cut control function (Only for System controller)

Installation of an electricity meter is essential.

・Input Power graph display function (Only for System controller)

Installation of an electricity meter is essential.

[Installation example]



FUNCTION SETTING

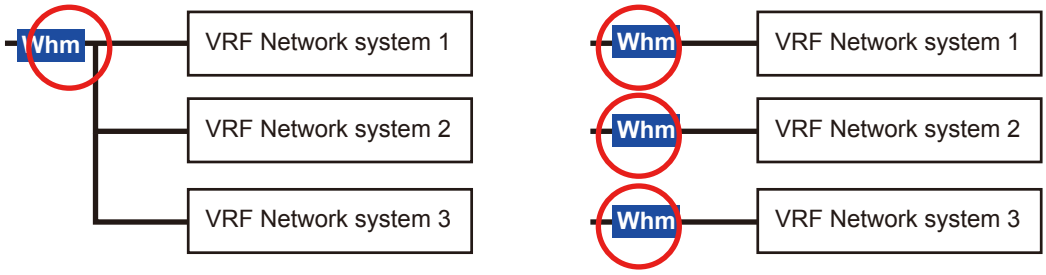
● Installation abstract

NOTE:

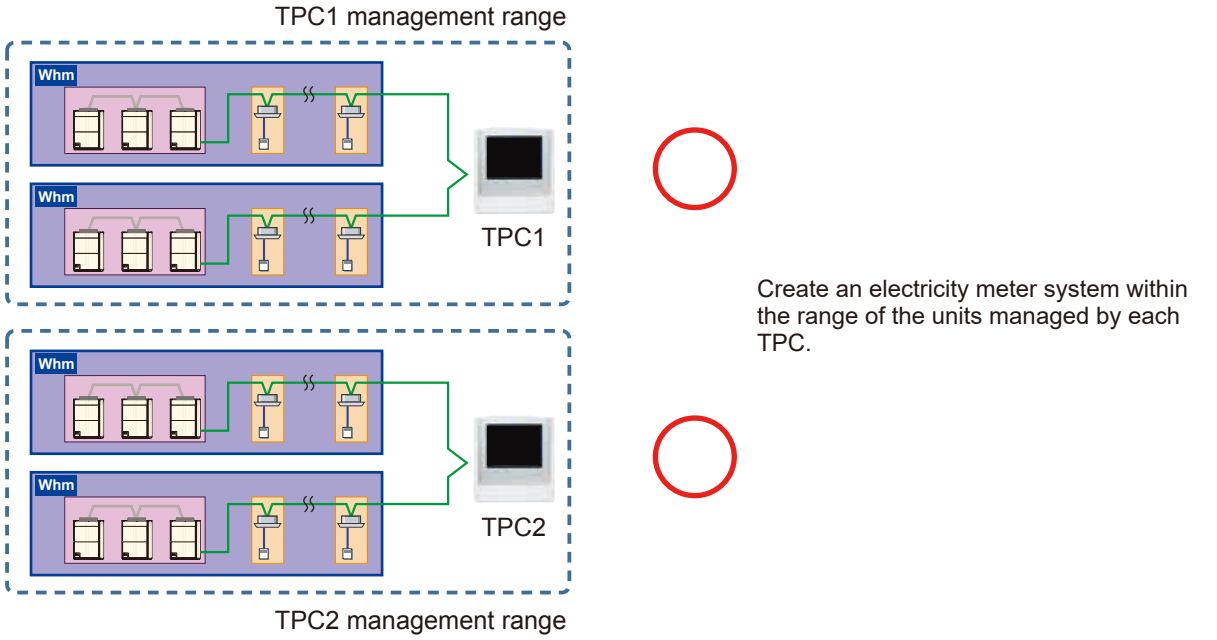
The belows are electricity meter connection methods which can be adapted by the System Controller and TPC (Touch panel controller). However, the following mentioned setting restrictions must be observed.

(1) Multiple VRF Networks can connect to 1 electricity meter. (with network crossover)

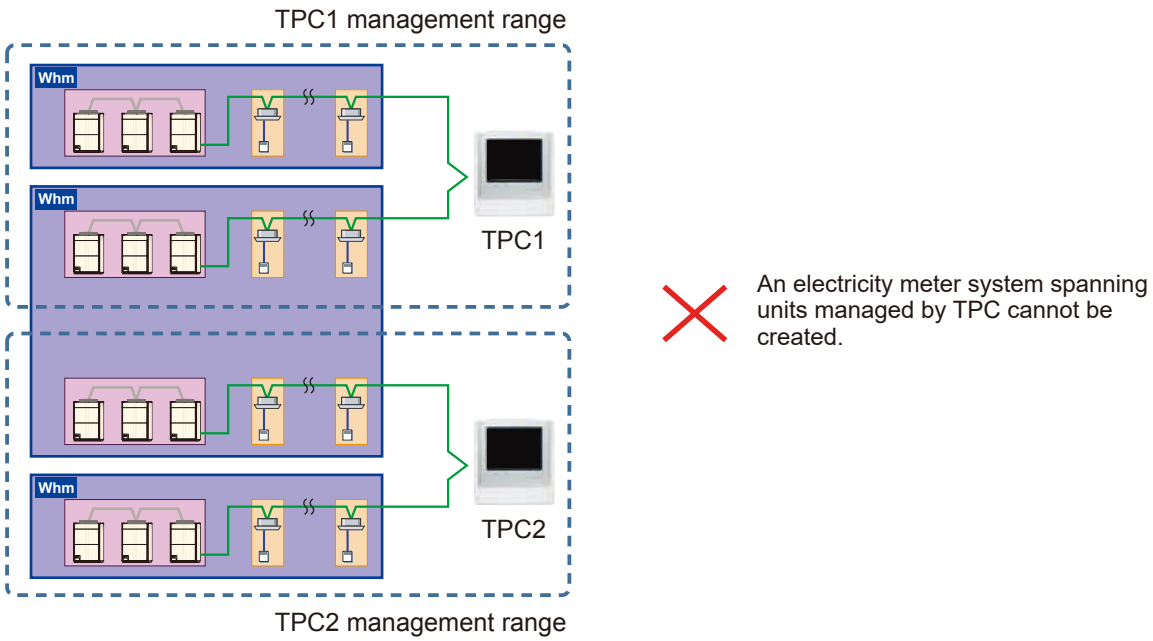
NOTE: UTY-ALGXZ1 (+UTY-PLGXE2) does not support multiple VRF Networks.



(2) With the electricity charge apportionment function, an electricity meter system cannot span TPC.

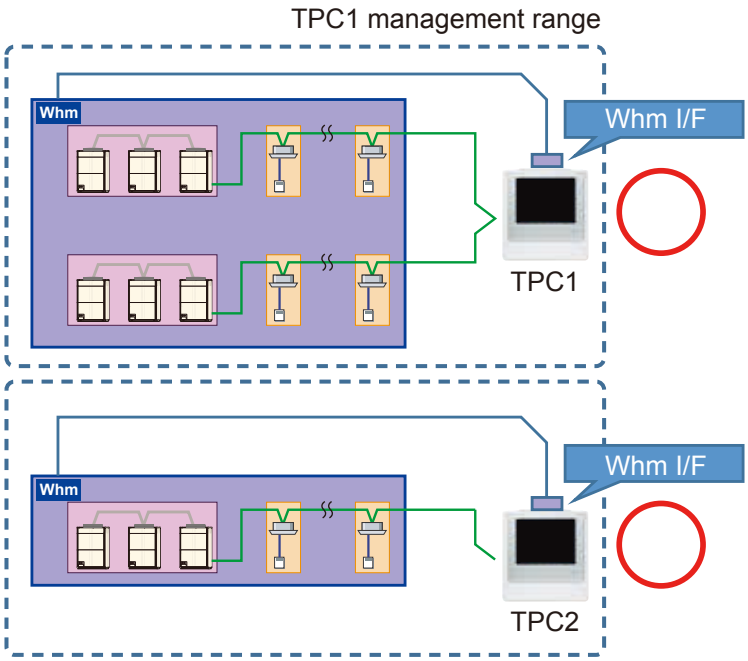


Create an electricity meter system within the range of the units managed by each TPC.

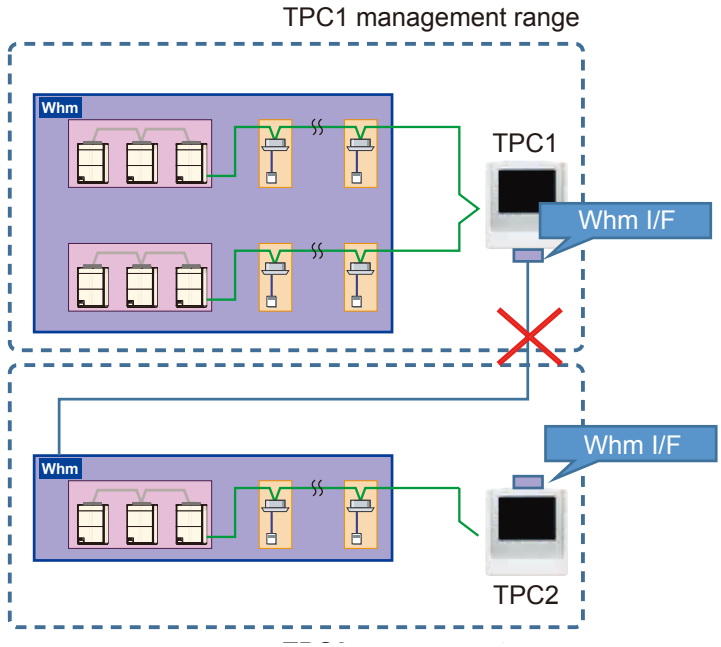


An electricity meter system spanning units managed by TPC cannot be created.

FUNCTION SETTING

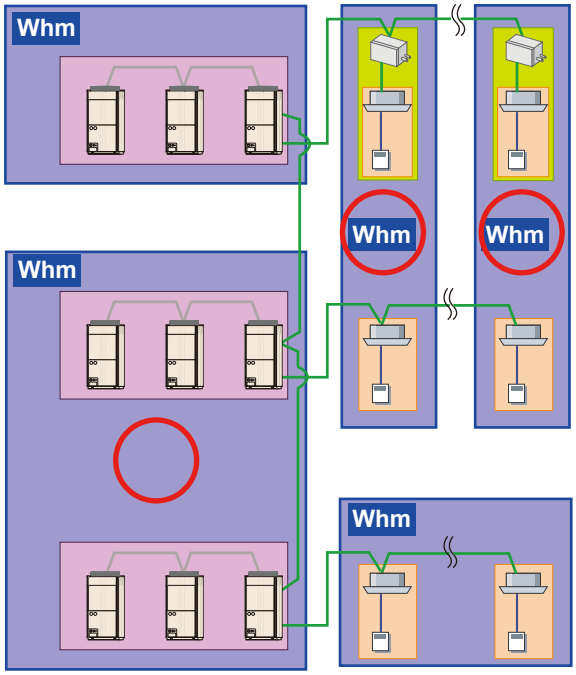


Connect the electricity meter that measures the units managed by the appropriate TPC to the electricity meter I/F belonging to the TPC main unit.

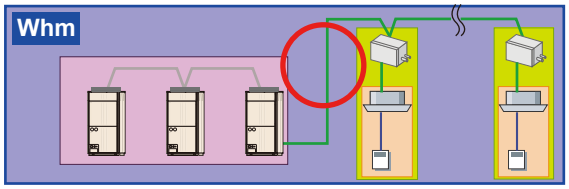


FUNCTION SETTING

(3) Installation crossing over refrigerant systems is possible.



(4) Outdoor unit/indoor unit/RB unit mixed in 1 meter is possible.



(5) There are no restrictions on outdoor units which connect an electricity meter.
An arbitrary electricity meter can be connected to an arbitrary outdoor unit.

FUNCTION SETTING

● Installation restriction

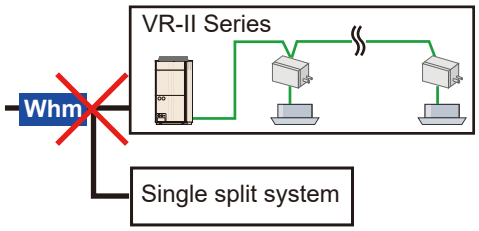
Install electricity meters in accordance with the following restrictions:

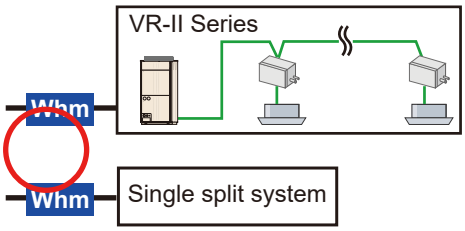
(1) Install an electricity meter only to air conditioners which are the target of the function.
When electric lights and other OA equipment are connected to the electricity meter, also their Input Powers are calculated.
Connect electricity meters to only the necessary air conditioners.

(2) An electricity meter cannot be connected to S Series and V Series units because they are not electricity meter supported.

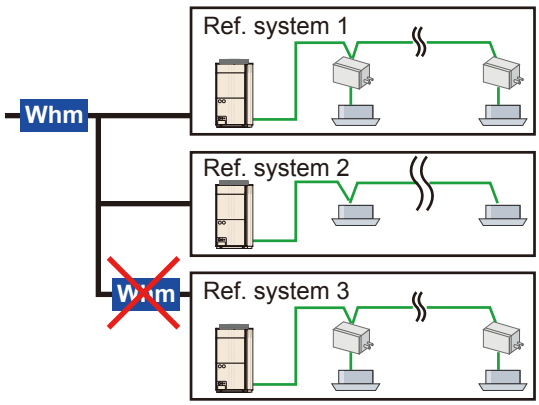
(3) Electricity meter supported/unsupported units cannot be mixed under one electricity meter. (Because the available functions are different)
When connecting single type air conditioners via network converter (UTY-VGGXZ1), separately connect the electricity meter to VRF air conditioners because there are some functions *2 that are electricity meter unsupported.

*2: [Electricity charge apportionment function]
The electricity charge apportionment function cannot be used with single types air conditioners which are connected to a network converter.
[Energy saving function]
In the peak cut control, though the power will be included in the target power, the actual control will not be performed.





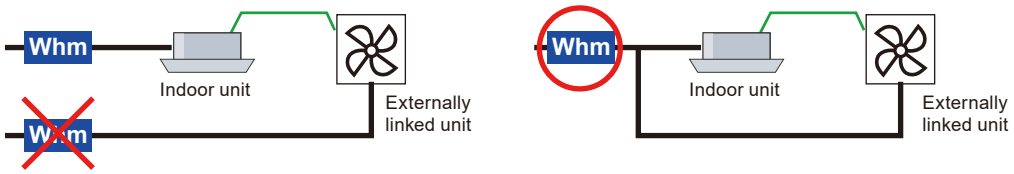
(4) Electricity power meters cannot be nested
Installation of the meters themselves is possible, but use only one electricity meter for the System Controller or Touch Panel Controller. (If both are used, the Input Power will be measured twice.)



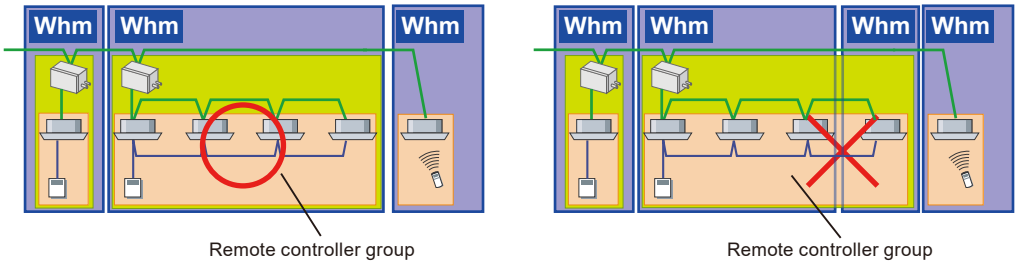
FUNCTION SETTING

(5) The externally linked units* shall be connected to the same electricity meter as the air conditioner to which they are connected.

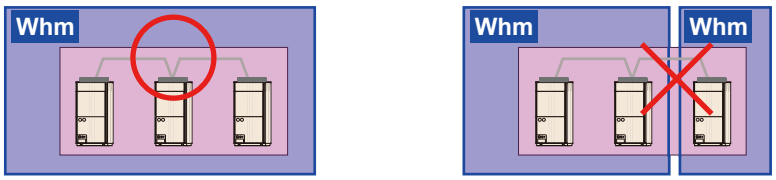
*General-purpose unit which performs calculation as an externally linked unit by electricity charge apportionment function.



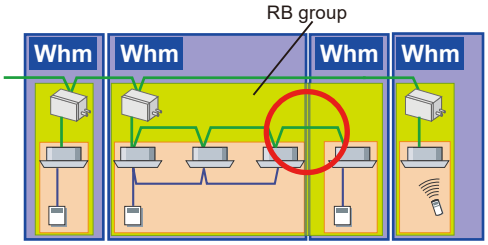
(6) Installation of electricity meter which divides remote control groups is prohibited.



(7) Installation of electricity meter which divides outdoor unit groups is prohibited.

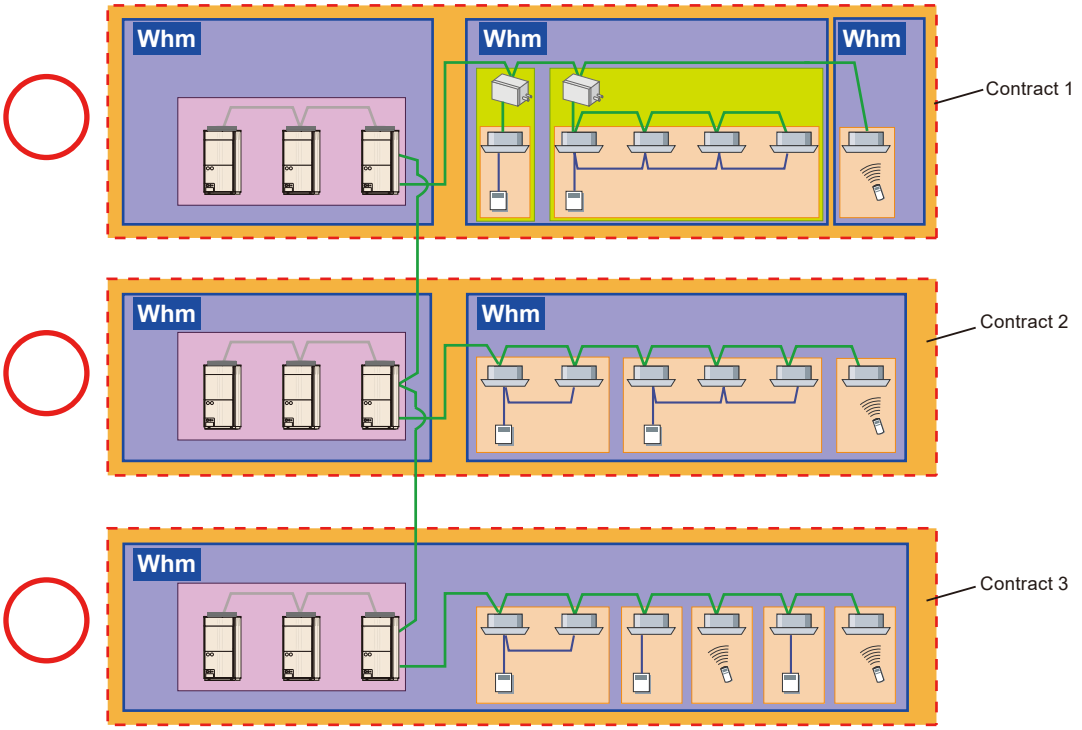


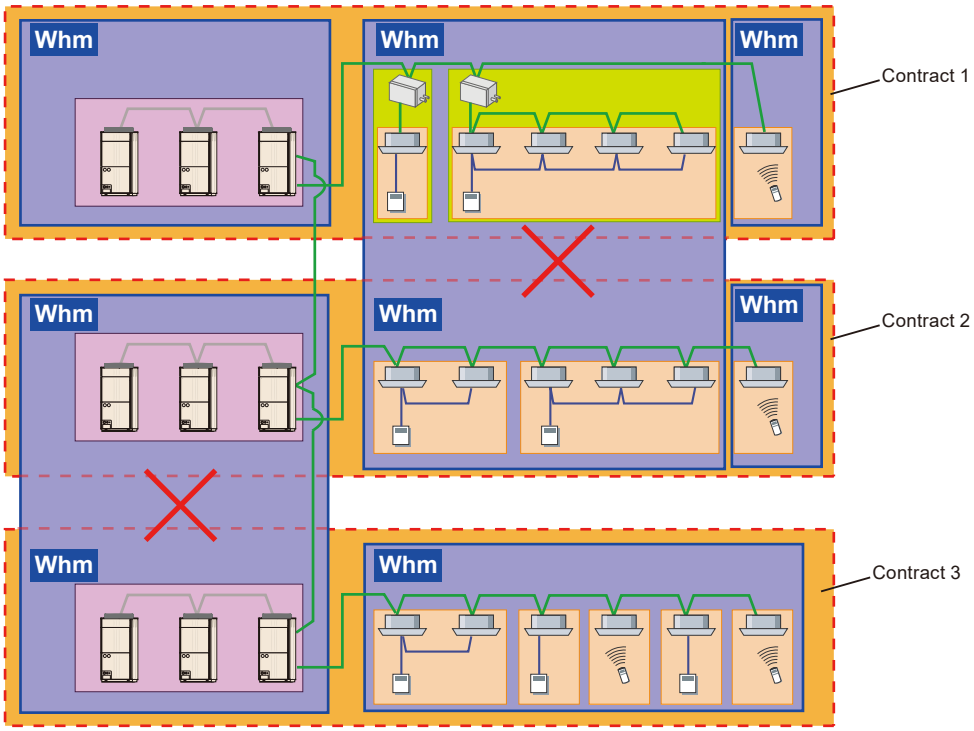
(8) Installation of electricity meter which divides RB groups is OK.



FUNCTION SETTING

(9) Installation of electricity meter which crosses the contract is prohibited.
When an electricity meter is used by electricity charge apportionment function, install the electricity meter so that it does not cross over the “contract setting” set by electricity charge apportionment.





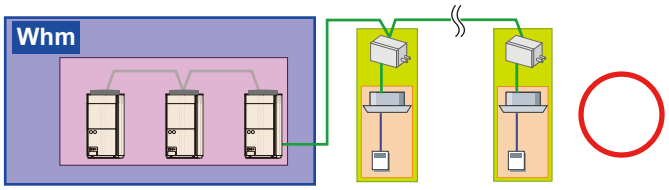
FUNCTION SETTING

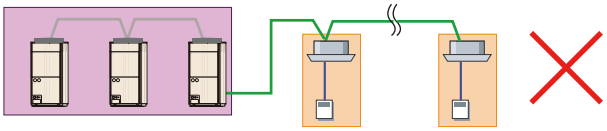
(10) When performing apportionment calculation using electricity meter

The electricity meter shall be connected to the necessary air conditioners which are the target of calculation by the electricity charge apportionment function.

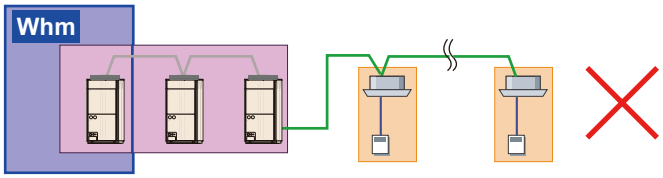
When an electricity meter is not connected, electricity charge apportionment calculation using an electricity meter may not be possible.

<<Electricity charge apportionment with outdoor unit only>> → Connect the electricity meter to the outdoor unit.



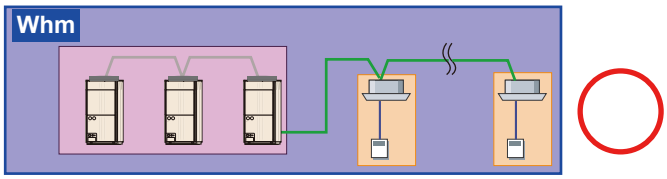


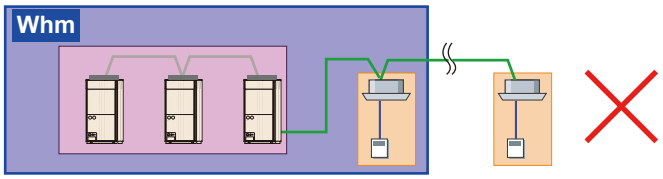
Electricity meter is not connected to outdoor unit



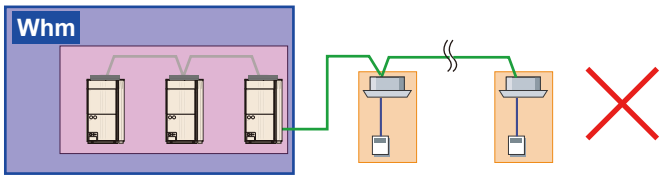
Electricity meter is not connected to only some outdoor units

<<Outdoor unit + indoor unit electricity charge apportionment>> → Connection of an electricity meter to the outdoor unit and indoor unit is necessary.





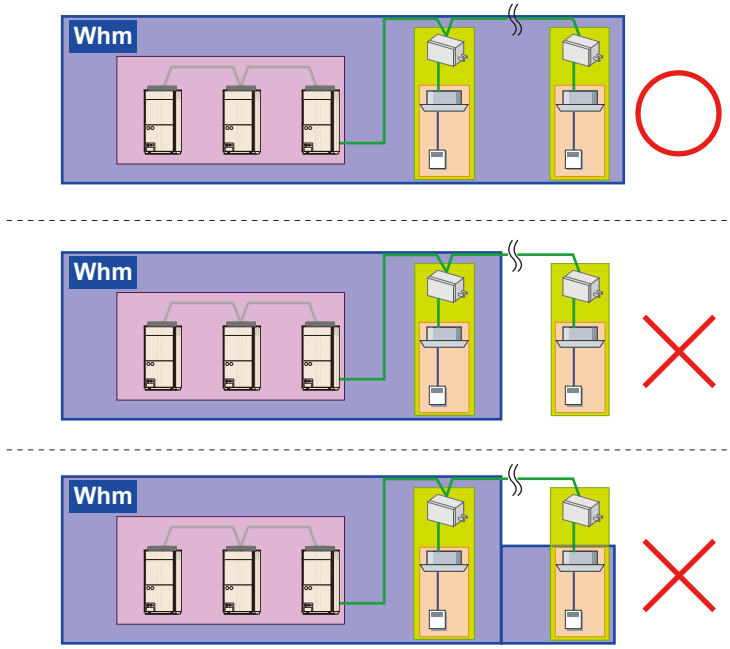
Electricity meter is not connected to some indoor units



Electricity meter is connected to outdoor unit only even though outdoor unit + indoor unit electricity charge apportionment is performed.

FUNCTION SETTING

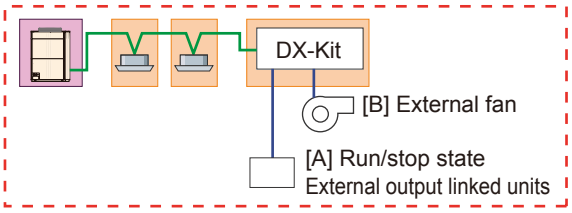
<<Outdoor unit + indoor unit + RB unit electricity charge apportionment>> → Connection of an electricity meter to the outdoor unit, indoor unit and RB unit is necessary.



(11) Electricity apportionment for DX-Kit

- When electricity meter not connected

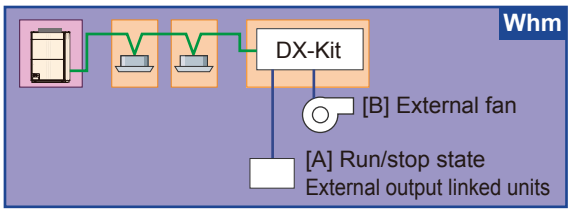
The following units can be linked to the DX-Kit, by using external output terminals.
[A]: External fan
[B]: Units linked to run/stop state external output
At electricity apportionment, the DX-Kit itself and units [A] and [B] mentioned above can be handled. Set the electricity value at ON beforehand for the units [A] and [B] from the “Parameter Setting” screen. The input value is included in the calculation as a constant value when the external output terminal is ON.



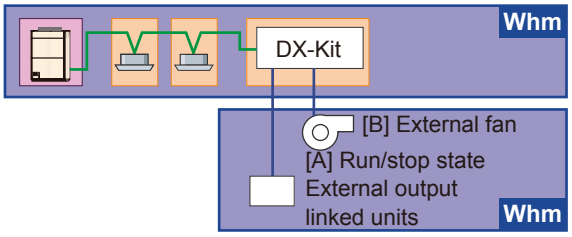
FUNCTION SETTING

- When electricity meter is connected

At electricity apportionment, the DX-Kit itself and units [A] and [B] mentioned above can be handled the same as when an electricity meter is not connected. Set the electricity value at ON beforehand for the units [A] and [B] from the “Parameter Setting” screen and install the electricity meter so that the units [A] and [B] are included. The input value in the calculation as a constant value when the external output value is ON is included.

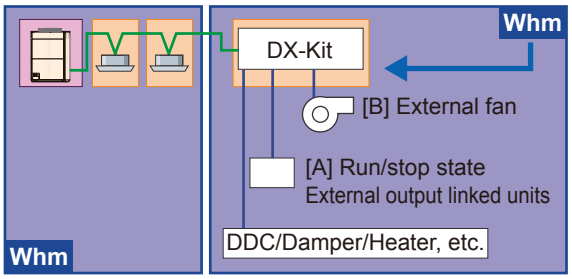


The electricity meter is installed so that the units [A] and [B] are included.



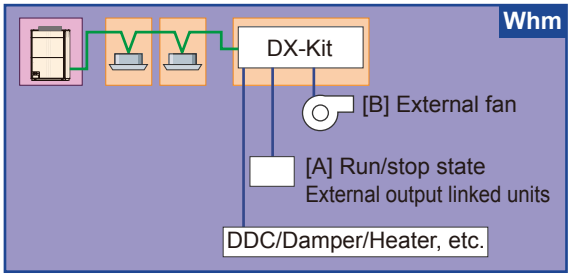
The electricity meter is installed independently from the units [A] and [B].

If there is a unit related to the DX-Kit other than [A] and [B], if the DX-Kit is connected as an independent electricity meter system and installed so that other units are included, it may be included in electricity charge apportionment. (All the value of that electricity meter is charged to the DX-Kit.)



The electricity meter is installed so that [A], [B], and other units are included.

Units other than [A] and [B] must not be connected to an electricity meter together with other indoor units. If connected, the electricity amount of DDC, damper and heater is also charged to the other indoor units.



The electricity meter is installed so that the units other than [A], [B] and indoor units are included.

FUNCTION SETTING

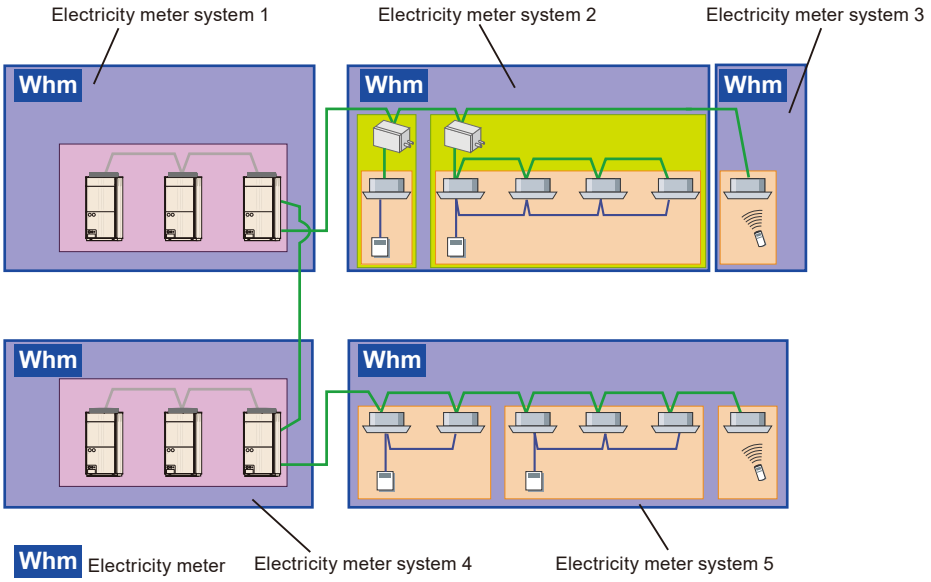
■ ELECTRICITY METER SYSTEM

Electricity meter system is the connection configuration of one electricity meter and the air conditioner units which are connected to the power line under it. This is set on the System Controller.

Set the System Controller to match the actual electricity meter installation configuration.

Since the electricity charge apportionment function/energy saving function perform control using the Input Power data from an electricity meter, it is necessary to set an electricity meter system on the System Controller.

When installing electricity meters as shown below, 5 electricity meters systems are set.



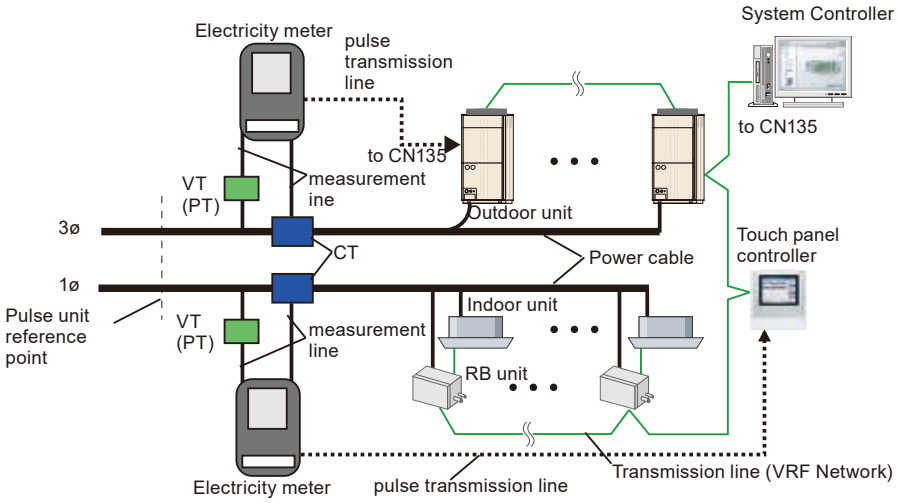
FUNCTION SETTING

■ SETTING OF OUTDOOR UNIT AND SYSTEM CONTROLLER OR TOUCH PANEL CONTROLLER

To obtain the appropriate Input Power by System Controller or Touch Panel Controller, the power value measured by an electricity meter must be properly conveyed. To do this, appropriate setting at the electricity meter, outdoor unit, and System Controller or Touch Panel Controller is necessary. The method of setting the pulse from the electricity meter received by an outdoor unit and the method of setting the pulse value set by System Controller or Touch Panel Controller are described here. When electricity meter setting is necessary, perform it in accordance with the instruction manual supplied with the electricity meter.

Below, the setting method of electricity meters specified in pulse units and that specified in pulse constant are described.

(1) When electricity meter used is specified in pulse units
The connection configuration is shown below.



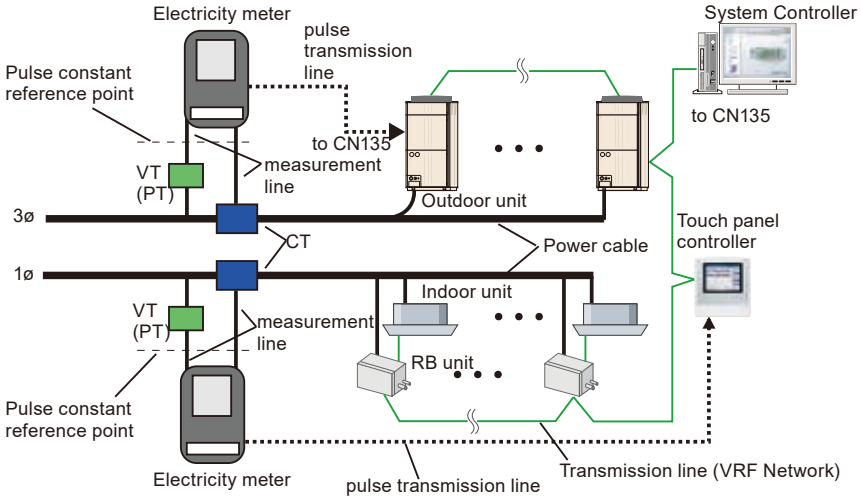
For the electricity meter specified in pulse units, the output pulses are normalized in advance (normally 1kWh/pulse) and is output. In this case, the settings are as follows:

Set point	Set item	Set value	Description	Remarks
Electricity meter	Set in accordance with the product manual.	-	When there is a product unique setting, setting is performed in accordance with the product manual. (Pulse units value, VT/CT ratio, output coefficient, etc.)	
Outdoor unit	Meter No. setting	Arbitrary	Set an unique electricity meter No. for electricity meter identification.	The information will become necessary when setting System Controller or ECA Tool later. Refer also to 2-1 OUTDOOR UNIT.
	Electricity meter pulse setting	1	Fixed to “1”. When 1 pulse comes from the electricity meter, the outdoor unit communicates “1” to the System Controller or ECA Tool.	
System Controller or ECA Tool	Electricity meter system setting	Units measured by electricity meter	Set the outdoor unit and indoor unit, measured by the electricity meter of the meter No. set at the outdoor unit.	The value set by each outdoor unit is used.
	Pulse setting	Electricity meter pulse units value (Usually either of 1, 10, or 100 [kWh/ pulse])	Set the pulse units specified by the electricity meter as they are. Set the number of kWh that corresponds to the “1” communicated from the outdoor unit.	Refer to the value set by each outdoor unit.

[Setting example]
Equipment conditions: VT ratio=1 (not used), CT ratio=50(250/5A), electricity meter=1kWh/pulse
Set value: Electricity meter pulse setting=1(fixed), pulse setting=1(corresponds to electricity meter used)

FUNCTION SETTING

(2) When electricity meter used is specified by pulse constant
The connection configuration is shown below.



For the electricity meter specified by pulse constant, the Input Power indicated by output pulse must be corrected by VT/CT ratio. In this case, the settings are as follows:

Set point	Set item	Set value	Description	Remarks
Electricity meter	Set in accordance with the product manual.	-	When there is a product unique setting, setting is performed in accordance with the product manual. (Pulse constant value, output coefficient, etc.)	
Outdoor unit	Meter No. setting	Arbitrary	Set an unique electricity meter No. for electricity meter identification.	The information will become necessary when setting System Controller or ECA Tool later. Refer also to 2-1.OUTDOOR UNIT
	Electricity meter pulse setting	The pulse constant value / (VT ratio x CT ratio). However, truncated after the decimal point	Set the approximate number of power meter pulses that are equivalent to 1kWh. When set number of pulses come from the electricity meter, the outdoor unit communicates “1” to the System Controller or ECA Tool.	
System Controller or ECA Tool	Electricity meter system setting	Unit to be measured by electricity meter	Sets the outdoor unit and indoor unit, measured by the electricity meter of the meter No. set at the outdoor unit.	The value set by each outdoor unit is used.
	Pulse setting	(Electricity meter pulse setting value) x (VT ratio x CT ratio)/pulse constant Values after the decimal point must be also input. *1	Set the standard number of kWh for the value communicated from the outdoor unit. Set the number of kWh that corresponds to the “1” communicated from the outdoor unit.	Refer to the value set by each outdoor unit.

*1: Input up to 6 decimal digits

[Setting example]

Equipment conditions: VT ratio=1 (not used), CT ratio=500(2500/5A), electricity meter=3200 pulse/kWh

Set value: Electricity meter pulse setting=6 (3200/ (1x500)),
Pulse setting=0.9375 (6x (1x500)/3200) ---Refer to the calculating formula of the table above.

NOTE: Be sure to select an electricity meter that sends more pulses per 1kWh than VT ratio x CT ratio. Otherwise, the measurement error of the power will be larger than 1kWh, thus affecting the accuracy of ECA.

FUNCTION SETTING

Refrigerant R410A INVERTER

AIRSTAGE™
Variable Refrigerant Flow System

8. EXTERNAL INPUT & OUTPUT

DTV_VR2U025E_09--CHAPTER08
2018.09.28

CONTENTS

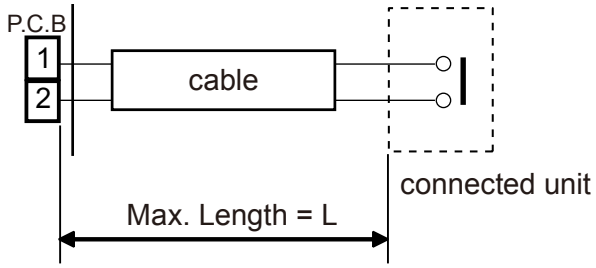
8. EXTERNAL INPUT & OUTPUT

1. EXTERNAL INPUT & OUTPUT ..... 08 - 01
1-1. OUTDOOR UNIT ..... 08 - 01
1-1-1. EXTERNAL INPUT ..... 08 - 03
1-1-2. EXTERNAL OUTPUT ..... 08 - 05
1-1-3. OPTIONAL PARTS ..... 08 - 06
1-1-4. OUTDOOR UNIT EXTERNAL INPUT / OUTPUT FUNCTION SUMMARY ..... 08 - 07
1-2. INDOOR UNIT ..... 08 - 08
1-2-1. EXTERNAL INPUT ..... 08 - 08
1-2-2. EXTERNAL OUTPUT ..... 08 - 11
1-2-3. COMBINATION OF EXTERNAL INPUT AND OUTPUT ..... 08 - 12
1-2-4. INDOOR UNIT EXTERNAL INPUT / OUTPUT FUNCTION SUMMARY ..... 08 - 13
1-2-5. OPTIONAL PARTS ..... 08 - 13
1-2-6. DETAILS OF FUNCTION ..... 08 - 14
1-3. RB UNIT ..... 08 - 55
1-3-1. EXTERNAL INPUT ..... 08 - 55
1-3-2. OPTIONAL PARTS ..... 08 - 58
1-4. TOUCH PANEL CONTROLLER ..... 08 - 59
1-4-1. EXTERNAL INPUT ..... 08 - 59
1-4-2. EXTERNAL OUTPUT ..... 08 - 63
1-4-3. PARTS ..... 08 - 63
1-5. CENTRAL REMOTE CONTROLLER ..... 08 - 64
1-5-1. EXTERNAL INPUT ..... 08 - 64
1-5-2. EXTERNAL OUTPUT ..... 08 - 67
1-5-3. PARTS ..... 08 - 67
1-5-4. CONTROLLER EXTERNAL INPUT / OUTPUT FUNCTION SUMMARY ..... 08 - 68

1. EXTERNAL INPUT & OUTPUT

Note :

The length regulations of the cable are as shown in the following figures.



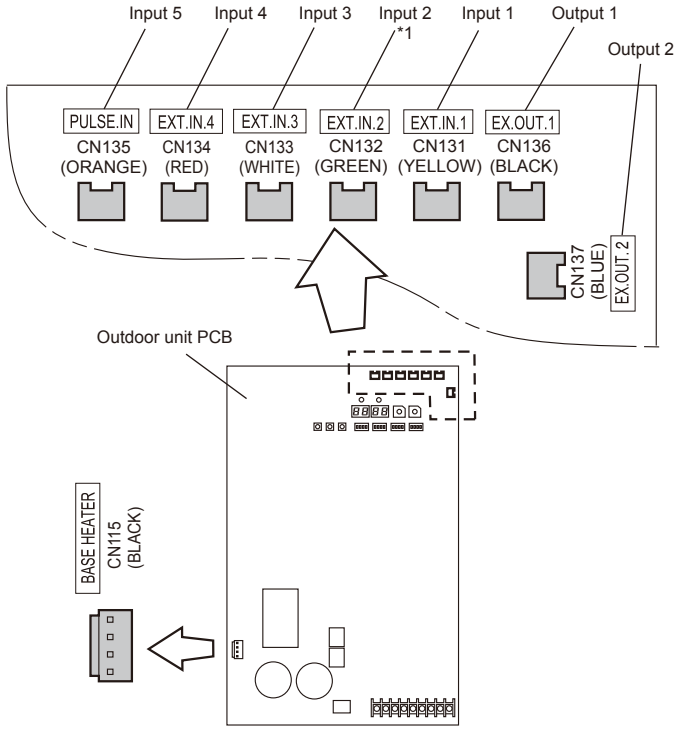
Type	L (m) [ft. (m)]
	Input / Output
Outdoor unit	492 / 492 (150 / 150)
Indoor unit	492 / 82 (150 / 25)
RB unit	150 / - (492 / -)
Touch Panel Controller	82 / 82 (25 / 25)
Central Remote Controller	

1-1. OUTDOOR UNIT

External input	External output	Connector	VR-II	V-II	J-II	External connect kit (Optional parts)
Low noise mode	-	CN131	○	○	○	UTY-XWZXZ6
Cooling/Heating priority	-	CN132	×	○	○	
Outdoor unit operation peak control	-	CN133	○	○	○	
Emergency/batch stop	-	CN134	○	○	○	
Electricity meter pulse	-	CN135	○	○	○	UTY-XWZXZF
-	Error status	CN136	○	○	○	UTY-XWZXZ6
-	Operation status	CN137	○	○	○	
-	Base heater	CN115	○	○	○	UTY-XWZXZ9

■ TERMINAL POSITION

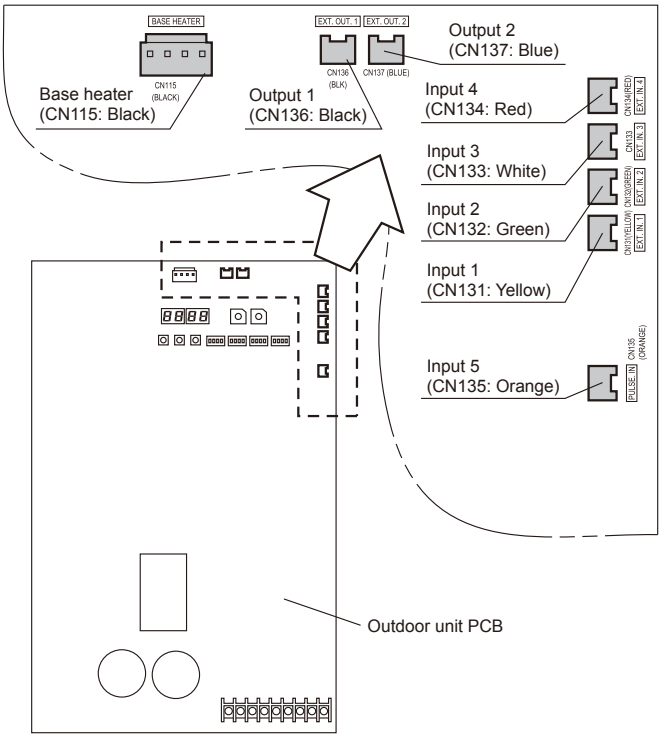
● VR-II series and V-II (460V) series



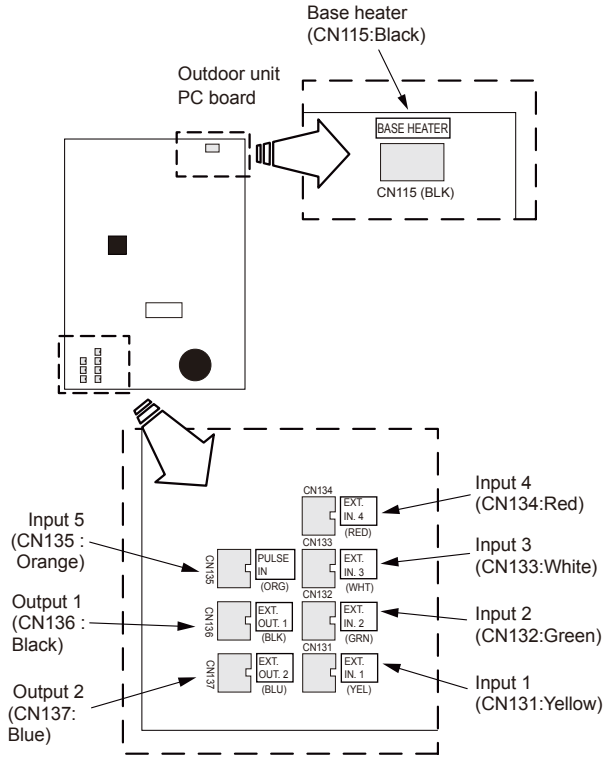
*1: Input 2 Terminal(CN132) is not in VR-II series.

EXTERNAL INPUT & OUTPUT

● V-II (230V) series



● J-II series



EXTERNAL INPUT & OUTPUT

1-1-1. EXTERNAL INPUT

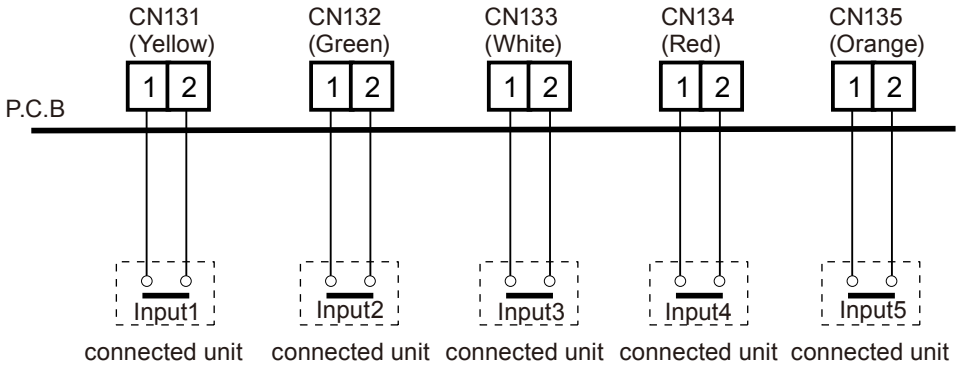
Setting to low noise mode, cooling priority/heating priority selection, outdoor unit operation peak control setting, emergency/batch stop and electricity meter pulse are possible from The electricity meter connections that are can be used by the System Controller are shown below.

■ WIRING METHOD AND SPECIFICATIONS

*A twisted pair cable (22AWG) should be used. Maximum length of cable is 492 ft. (150 m)

*Use an external input and output cable with appropriate external dimension, depending on the number of cables to be installed

*For each input, pin No.1 is of positive polarity and pin No.2 is the ground.



■ OPERATION BEHAVIOR

Connector	Input signal	Status	Outdoor unit	
			Master	Slave
CN131 (Yellow)	OFF	Normal operation	○	×
	ON	Low noise mode operation		
CN132 (Green) *1	OFF	Cooling priority	○	×
	ON	Heating priority		
CN133 (White)	OFF	Normal operation	○	×
	ON	Outdoor unit operation peak control		
CN134 (Red)	OFF	Normal operation	○	×
	ON	Batch stop or Emergency stop operation *2, *3		
CN135 (Orange) *4	No pulse	No information from electricity meter	○	○
	Pulse	Power usage information from electricity meter		

Slave unit can connect only input5 (CN135).

NOTES :

*1: The "external input priority mode" must be set by pressing push button on PCB of outdoor unit.

*2: Batch stop or Emergency stop pattern can be selected by outdoor unit PCB push button.

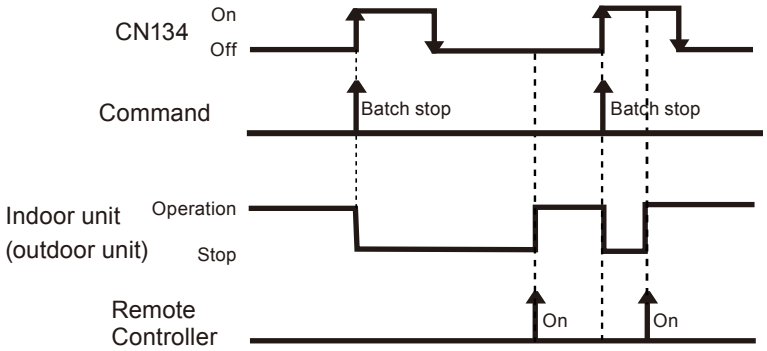
*3: The emergency stop function is not guaranteed to meet the regulations of each country. Consult local codes regarding use. Especially, since the emergency-stop may not function in the case of broken wiring to the external input terminals and communication line, communication errors due to noise, VRF external input circuit troubles, etc. In such cases, backup measures that add direct interruption of the power supply is recommended.

*4: Pulse input to CN135 must be width 50 ms or more, and must be interval 50 ms or more.

EXTERNAL INPUT & OUTPUT

● When function setting is "Batch stop" mode

Connector	Input signal	Command
CN134	OFF → ON	Batch stop
	ON → OFF	-

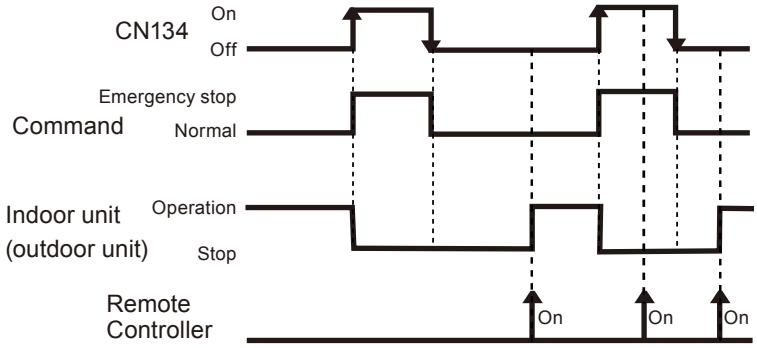


NOTES :

- All indoor units of same refrigerant system stops when Batch stop operates.
- After a batch stop, the operation by remote controller is possible.

● When function setting is "Emergency stop" mode

Connector	Input signal	Command
CN134	OFF → ON	Emergency stop
	ON → OFF	Normal



NOTES :

- All indoor units of same refrigerant system stops when Emergency stop operates.
- When the Emergency stop is triggered, indoor unit stops and Start/Stop operation by a remote controller is restricted.

EXTERNAL INPUT & OUTPUT

1-1-2. EXTERNAL OUTPUT

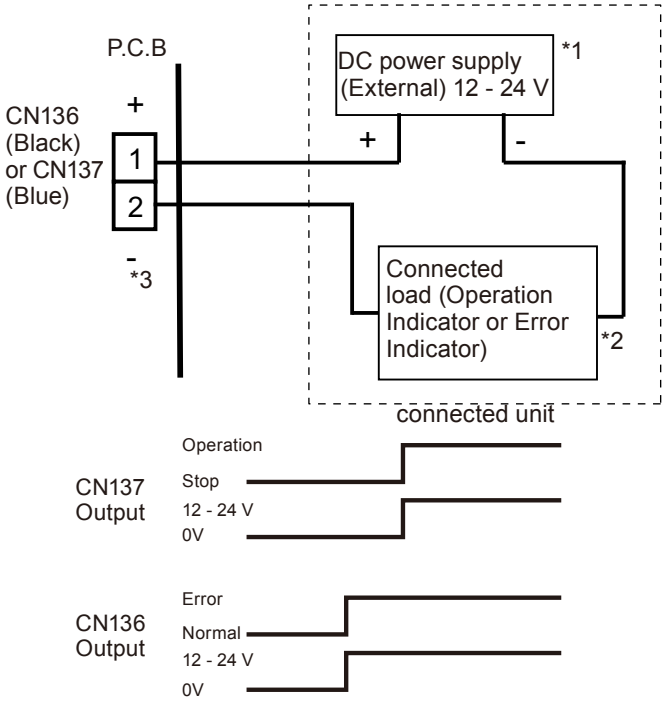
Connector	Output voltage	Status
CN136 (Black)	0 V	Normal
	DC 12-24 V *1	Error
CN137 (Blue)	0 V	Stop
	DC 12-24 V *1	Operation

■ ERROR STATUS (Master unit only)

This output indicates the outdoor unit and connected indoor unit's "Normal" or "Error" status.

■ OPERATION STATUS (Master unit only)

This output indicates the outdoor unit's "Operation" status.



*1: Provide a DC 12 to 24 V power supply. Select a power supply capacity with an ample surplus for the connected load.

*2: The allowable current is 30 mA or less. Provide a load resistance such that the current becomes 30 mA or less.

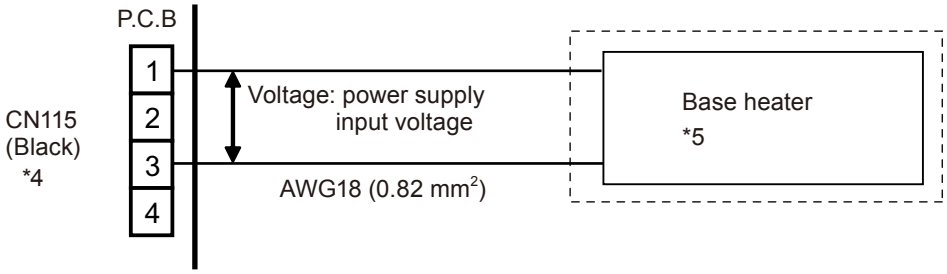
*3: Polarity is [+] for pin 1 and [-] for pin 2. Connect correctly.
Do not impress a voltage exceeding 24V across pins 1-2.

*A twisted pair cable (22AWG) should be used. Maximum length of cable is 492 ft. (150 m).

*Use an external input and output cable with appropriate external dimension, depending on the number of cables to be installed.

■ BASE HEATER

This is the output signal for base heater. Output signal ON, when the outdoor temperature goes down below 36°F (2°C), and signal OFF at the outdoor temperature 39°F (4°C).

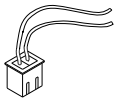
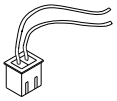
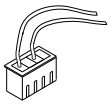


*4: Connect to pin 1 and pin 3. No connection pin 2 and pin 4.

*5: The allowable current is 1 A or less.

EXTERNAL INPUT & OUTPUT

1-1-3. OPTIONAL PARTS

Usage	Name and shapes	Q'ty	Models
For external input For external output (Error display, Operation display)	EXTERNAL CONNECT KIT 	1	UTY-XWZXZ6
For external intput (Electricity meter pulse)	EXTERNAL CONNECT KIT 	1	UTY-XWZXZF
For external output (Base heater)	EXTERNAL CONNECT KIT 	1	UTY-XWZXZ9

EXTERNAL INPUT & OUTPUT

1-1-4. OUTDOOR UNIT EXTERNAL INPUT / OUTPUT FUNCTION SUMMARY

■ OUTDOOR UNIT EXTERNAL INPUT FUNCTION

Item	Dry contact / Apply voltage	Function						Specifications	
		Emergency stop	Low noise mode operation	Cooling/ Heating priority	Outdoor unit operation peak control	Batch stop	Power usage information from electricity meter	Terminal	Signal type
Outdoor unit input function specification	Dry contact DC12[V]	-	● *2	-	-	-	-	CN 131 (PIN 1-2)	Edge
		-	-	●	-	-	-	CN 132 (PIN 1-2)	
		-	-	-	● *1	-	-	CN 133 (PIN 1-2)	
		● (20-01)	-	-	-	● (20-00)	-	CN 134 (PIN 1-2)	
	-	-	-	-	-	-	●	CN 135 (PIN 1-2)	Pulse

*1 : If you use Outdoor unit operation peak control, select energy saving level from below.
30-00 Energy saving level 1 (Stop)
30-01 Energy saving level 2 (Operated at 40% capacity)
30-02 Energy saving level 3 (Operated at 60% capacity)
30-03 Energy saving level 4 (Operated at 80% capacity)
30-03 Energy saving level 5 (Operated at 100% capacity)

*2 : If you use Low noise mode operation, select low noise level from below.
42-00 Low noise level 1 (lower than rated value)
42-01 Low noise level 2 (lower than level 1)

NOTES :
- For selecting relay, minimum permissible load must be less than 1 (mA).
- When you use Apply voltage, Take "+" polarity for PIN 1
- Number inside bracket "()" indicates function number and setting number.
- Expression "●" is equipping function.

■ OUTDOOR UNIT EXTERNAL OUTPUT FUNCTION

Item	Dry contact / Apply voltage	Function			Specifications			
		Operation status	Error status	Base heater	Terminal	Terminal output voltage	External power supply	
							Allowable voltage	Allowable current
Outdoor unit output function specification	Apply voltage	-	●	-	CN 136 (PIN 1-2)	-	DC12-24 [V]	30 mA or less
		●	-	-	CN 137 (PIN 1-2)			
	Dry contact	-	-	●	CN 115 (PIN 1-3)	AC240 [V]	-	1 A or less

NOTES :
- When you use Apply voltage, Take "+" porarity for PIN 1
- Expression "●" is equipping function.

EXTERNAL INPUT & OUTPUT

1-2. INDOOR UNIT

External input	External output	Input select	Connector	External connect kit (Optional parts)
Control input	-	Apply voltage	CNA01	UTY-XWZXZB
		Dry contact	CNA02	UTY-XWZXZD
Forced thermostat off	-	Apply voltage	CNA03	UTY-XWZXZ7
		Dry contact	CNA04	UTY-XWZXZE
-	Operation status	-	CNB01	UTY-XWZXZC
-	Error status			
-	Indoor unit status			
-	Auxiliary heater output			

1-2-1. EXTERNAL INPUT

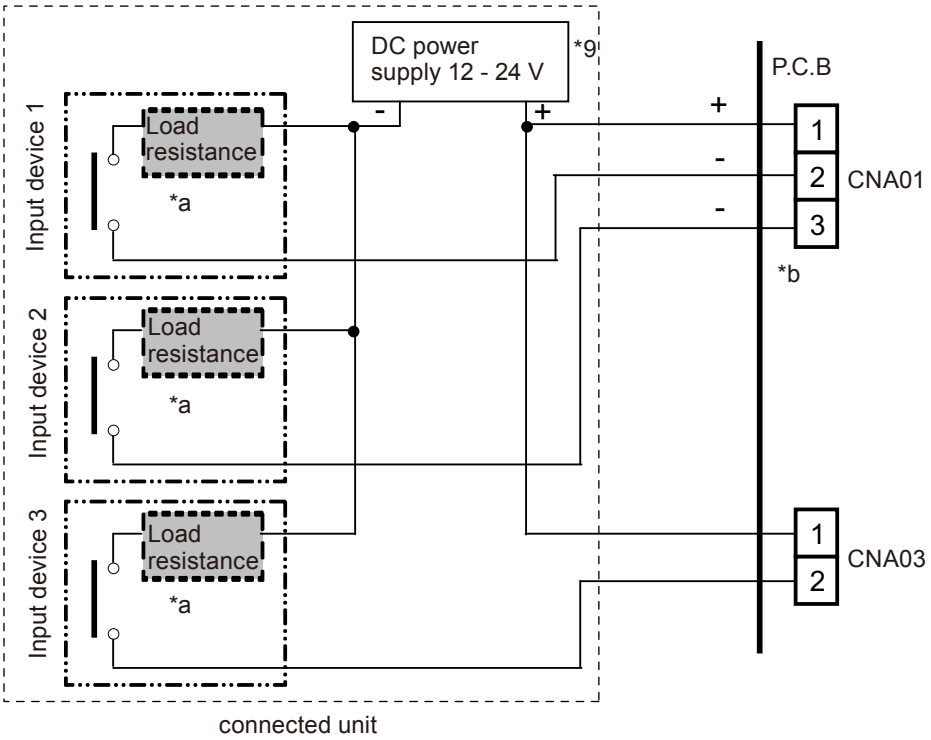
- Indoor unit can be Operation/Stop or Emergency stop or Forced stop by using indoor unit PCB CNA01 or CNA02.
- "Start/Stop" mode or "Emergency stop" mode or "Forced stop" mode can be selected with function setting of indoor unit.
- A twisted pair cable (22AWG) should be used. Maximum length of cable is 492 ft. (150 m).
- Use an external input and output cable with appropriate external dimension, depending on the number of cables to be installed.
- The wire connection should be separate from the power cable line.

■ INPUT SELECT

Use either one of these types of terminal according to the application. (Both types of terminals cannot be used simultaneously.)

● Apply voltage terminal ([CNA01], [CNA03])

When a power supply must be provided at the input device you want to connect, use the Apply voltage terminal ([CNA01], [CNA03])



*9: Make the power supply DC 12 to 24 V. Select a power supply capacity with an ample surplus for the connected load.

Do not connect a voltage exceeding 24 V across pins 1-2, and 1-3.

*a: The allowable current is DC 5 mA to 10 mA. (Recommended: DC 5 mA)

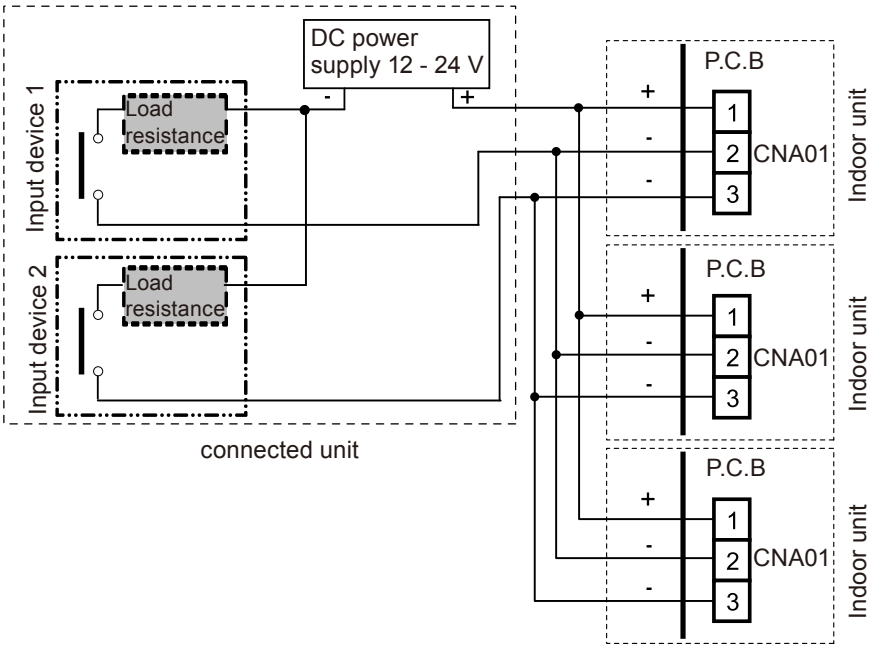
Provide a load resistance such that the current becomes DC 10 mA or less.

Select very low current use contacts (usable at DC 12 V, DC 1 mA or less).

*b: The polarity is [+] for pin 1 and [-] for pin 2 and 3. Connect correctly.

EXTERNAL INPUT & OUTPUT

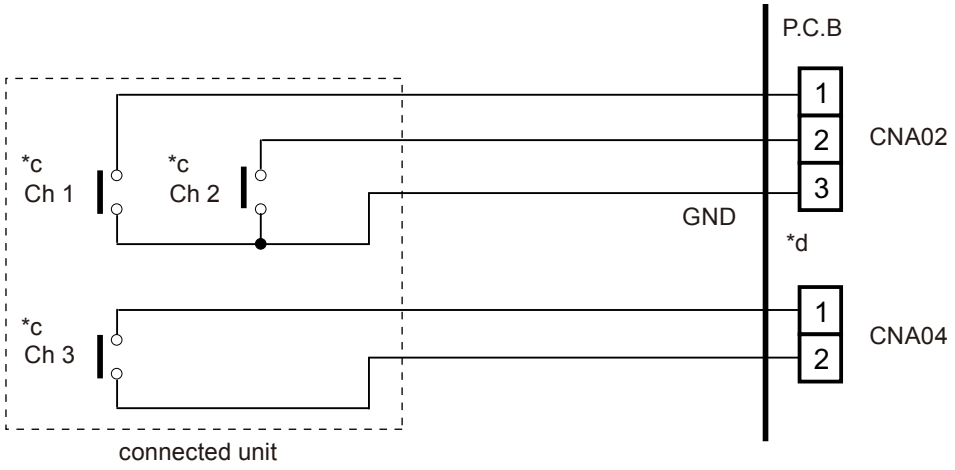
When connected to Apply voltage terminals of multiple indoor units with a connected unit, be sure to make a branch outside the indoor unit using a pull box, etc. as shown on below example.



EXTERNAL INPUT & OUTPUT

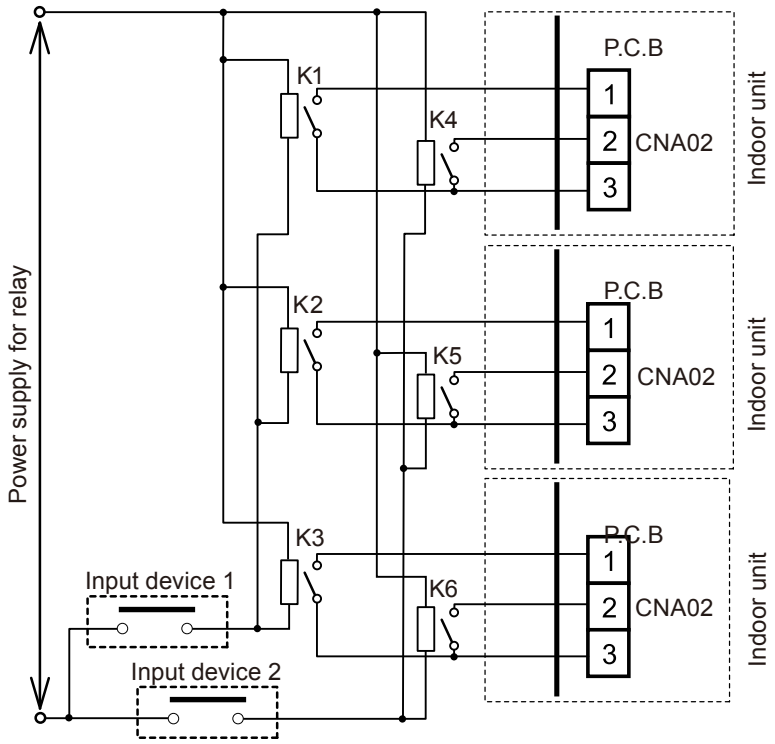
● Dry contact terminal ([CNA02], [CNA04])

When a power supply is not required, use the Dry contact terminal ([CNA02], [CNA04]).



*c: Select very low current use contacts (usable at DC 12 V, DC 1 mA or less).
*d: The wiring is different from Apply voltage terminals. Be sufficiently careful when wiring.

When connected to Dry contact terminals of multiple indoor units with a connected unit, insulate each indoor unit with relay, etc. as shown on below example.



K1 - K6 : Relay
(Device for DC Current)

NOTE :

● If power is connected to dry contact on indoor units, damage will occur.

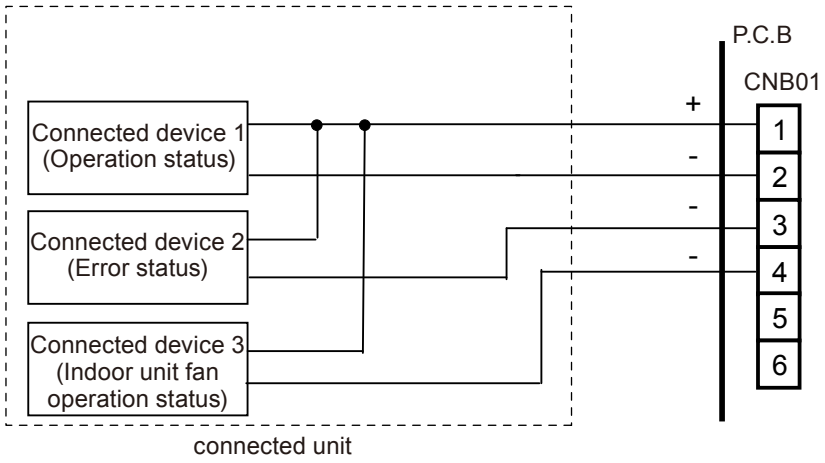
EXTERNAL INPUT & OUTPUT

1-2-2. EXTERNAL OUTPUT

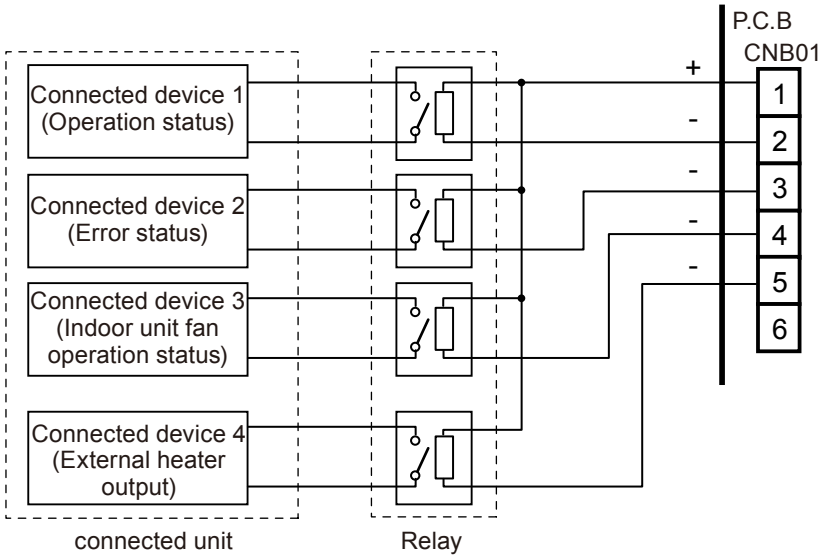
- A twisted pair cable (22AWG) should be used. Maximum length of cable is 82 ft. (25 m).
- Use an external input and output cable with appropriate external dimension, depending on the number of cables to be installed.
- Output voltage: Hi DC 12 V± 2 V, Lo 0 V.
- Permissible current: 50 mA
- If function setting "60" is set to "00" shown below. Refer to 1-2-3. for other function setting.

■ OUTPUT SELECT

● When indicator etc. are connected directly



● When connecting with unit equipped with a power supply



EXTERNAL INPUT & OUTPUT

1-2-3. COMBINATION OF EXTERNAL INPUT AND OUTPUT

Function setting	Mode	situation	External input		External output			
			CNA01 or CNA02	CNA03 or CNA04	CNB01 (EXT.OUT)			
			EXT. IN1	EXT. IN2	Output 1 Pins 1-2	Output 2 Pins 1-3	Output 3 Pins 1-4	Output 4 Pins 1-5
60-00	0	Thermostat off by External input	Operation/ Stop (46-00) or Emergency stop (46-01) or Forced stop (46-02)	Forced thermostat OFF	Operation status	Error status	Indoor unit fan operation status	External heater output
60-01	1	Fresh air conditioner (for external control module)		VRF cooling OFF	Cooling thermostat ON	Error status	Indoor unit fan operation status	External heater output
60-02	2	Economizer 1 (Cooling 1 output)		Forced thermostat OFF	Cooling thermostat ON	Error status	Remote controller output	External heater output
60-03	3	Economizer 2 (Cooling 2 output, nothing error output)		VRF cooling ON	Cooling thermostat ON	Cooling high / low output	Remote controller output	External heater output
60-04	4	Economizer 3 (Cooling 2 output, nothing heater output)		VRF cooling ON	Cooling thermostat ON	Error status	Remote controller output	Cooling high / low output
60-05	5	Humidifier 1 (Nothing operation status ouput)		Forced thermostat OFF	Heating thermostat ON	Error status	Indoor unit fan operation status	External heater output
60-06	6	Humidifier 2 (Nothing heater output)		Forced thermostat OFF	Operation status	Error status	Indoor unit fan operation status	Heating thermostat ON
60-07	7	Humidifier 3 (+ Fresh air conditioner (for external control module))		VRF cooling OFF	Cooling thermostat ON	Error status	Heating thermostat ON	External heater output
60-08	8	Humidifier 4 (+ Economizer 1)		Forced thermostat OFF	Cooling thermostat ON	Heating thermostat ON	Remote controller output	External heater output

EXTERNAL INPUT & OUTPUT

1-2-4. INDOOR UNIT EXTERNAL INPUT / OUTPUT FUNCTION SUMMARY

■ INDOOR UNIT EXTERNAL INPUT FUNCTION

Item	Dry contact/ Apply voltage	Function		Specifications				
		EXT. IN1	EXT. IN2	Terminal	Signal type	External power supply		Wire size / length
						Allowable voltage	Allowable current	
Indoor unit input function specification	Dry contact DC 12 [V]	●	-	CNA02 (PIN1-3)	Edge	-	-	AWG22 Twist / Max. Cable length 492 ft. (150 m)
				CNA02 (Ch1:PIN1-3) (Ch2:PIN2-3)	Pulse *1			
		-	●	CNA04 (PIN1-2)	Edge			
	Apply voltage	●	-	CNA01 (PIN1-2)	Edge	DC 12-24 [V]	10 [mA] or less	
				CNA01 (Ch1:PIN1-2) (Ch2:PIN1-3)	Pulse *1			
		-	●	CNA03 (PIN1-2)	Edge			

*1 : Default setting is Edge signal, if you use pulse signal, must be set Dip SW2-2 to ON position.

■ INDOOR UNIT EXTERNAL OUTPUT FUNCTION

Item	Dry contact / Apply voltage	Function				Specifications			
		Output 1	Output 2	Output 3	Output 4	Terminal	Terminal output voltage	Wire size	Maximum length of cable
Indoor unit output function specification	Dry contact	●	-	-	-	CNB01 (PIN1-2)	DC 12 [V]	AWG22 Twist	82 ft. (25 m)
		-	●	-	-	CNB01 (PIN1-3)			
		-	-	●	-	CNB01 (PIN1-4)			
		-	-	-	● *	CNB01 (PIN1-5)			

1-2-5. OPTIONAL PARTS

Usage	Name and shapes	Q'ty	Models
For output port	EXTERNAL CONNECT KIT	1	UTY-XWZXZC
For control input port (Apply voltage terminal)	EXTERNAL CONNECT KIT	1	UTY-XWZXZB
For control input port (Dry contact terminal)	EXTERNAL CONNECT KIT	1	UTY-XWZXZD
For forced thermostat off port (Apply voltage terminal)	EXTERNAL CONNECT KIT	1	UTY-XWZXZ7
For forced thermostat off port (Dry contact terminal)	EXTERNAL CONNECT KIT	1	UTY-XWZXZE

EXTERNAL INPUT & OUTPUT

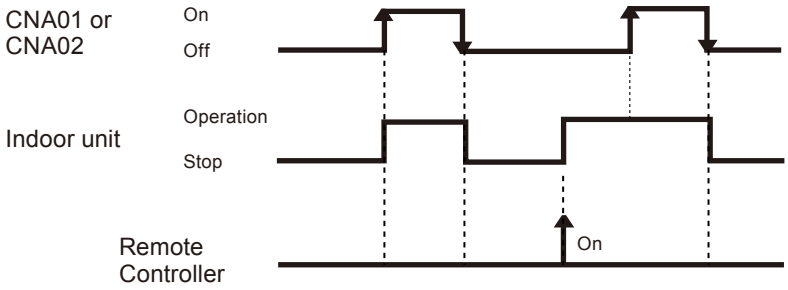
1-2-6. DETAILS OF FUNCTION

①CONTROL INPUT FUNCTION

①-1: Operation/Stop mode

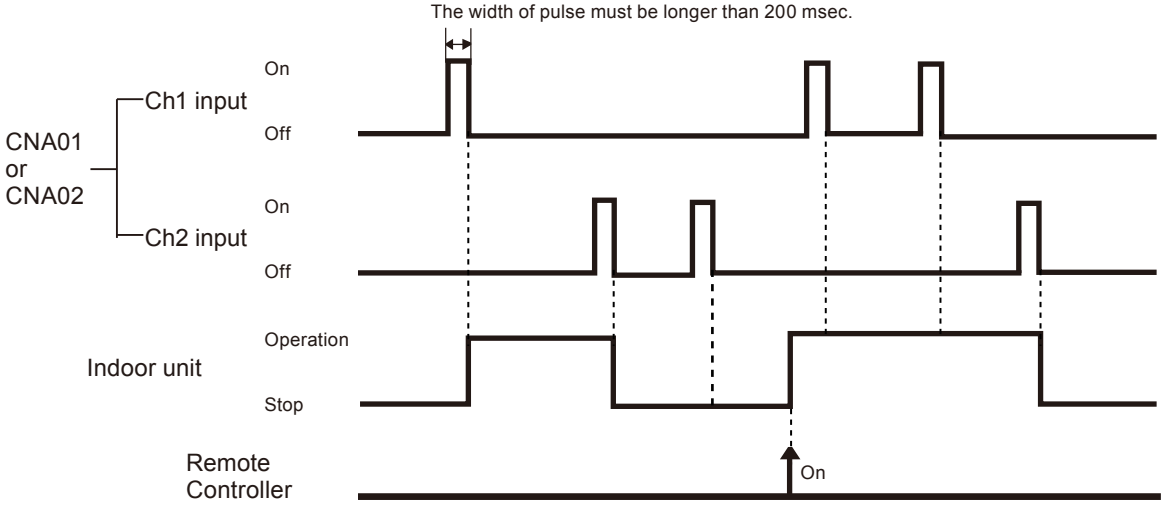
●In the case of "Edge" input

Function setting	Dip-SW	External input	Input signal	Command
46-00	SET2-2: OFF (Factory setting)	CNA01 or CNA02 (EXT.IN1)	OFF → ON	Operation
			ON → OFF	Stop



●In the case of "Pulse" input

Function setting	Dip-SW	External input		Input signal	Command
46-00	SET2-2: ON	CNA01 or CNA02 (EXT.IN1)	Ch1	OFF → ON	Operation
			Ch2	OFF → ON	Stop



NOTES :

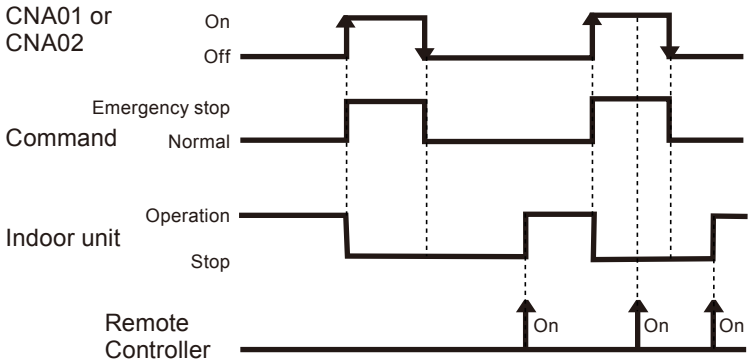
- The last command has priority.
- The indoor units within the same remote controller group operates in the same mode.

EXTERNAL INPUT & OUTPUT

①-2: Emergency stop mode

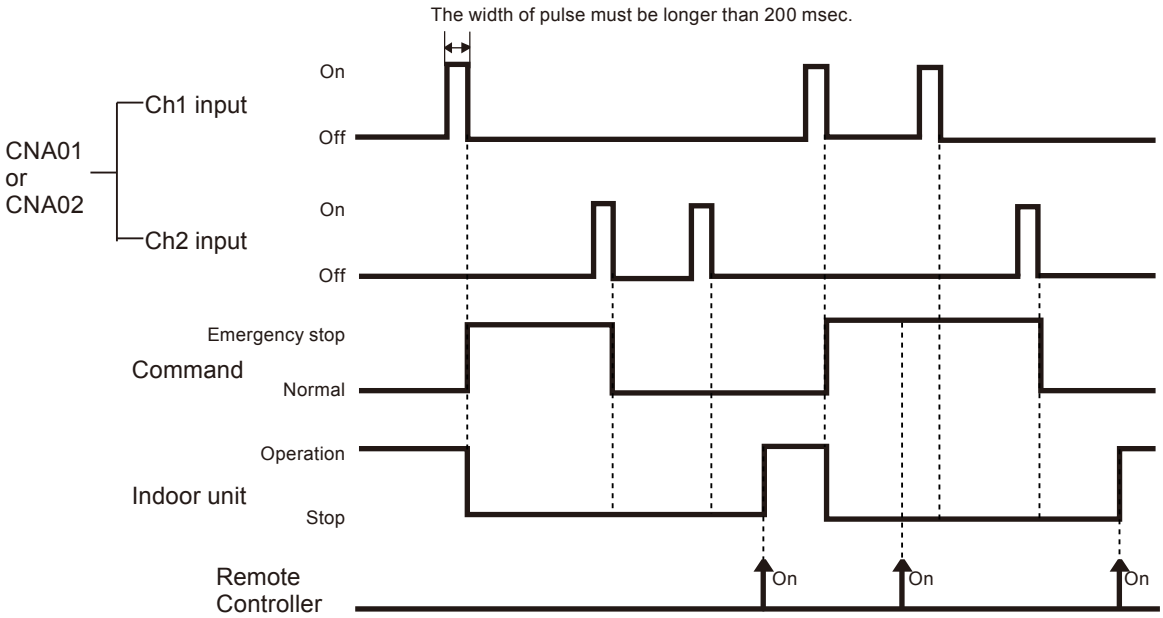
●In the case of "Edge" input

Function setting	Dip-SW	External input	Input signal	Command
46-01	SET2-2: OFF (Factory setting)	CNA01 or CNA02 (EXT.IN1)	OFF → ON	Emergency stop
			ON → OFF	Normal



●In the case of "Pulse" input

Function setting	Dip-SW	External input		Input signal	Command
46-01	SET2-2: ON	CNA01 or CNA02 (EXT.IN1)	Ch1	OFF → ON	Emergency stop
			Ch2	OFF → ON	Normal



NOTE :

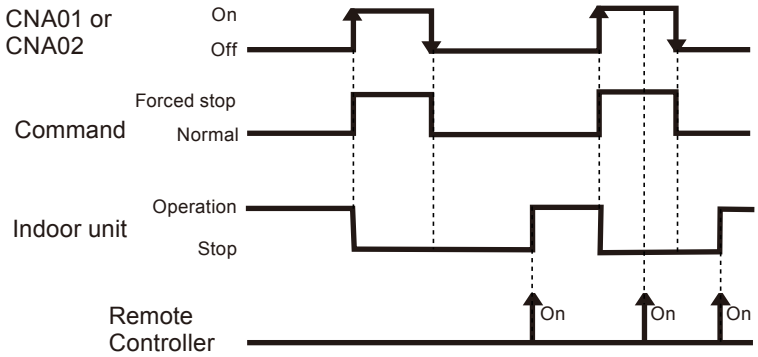
● All indoor units of same refrigerant system stop when Emergency stop operates.

EXTERNAL INPUT & OUTPUT

①-3: Forced stop" mode

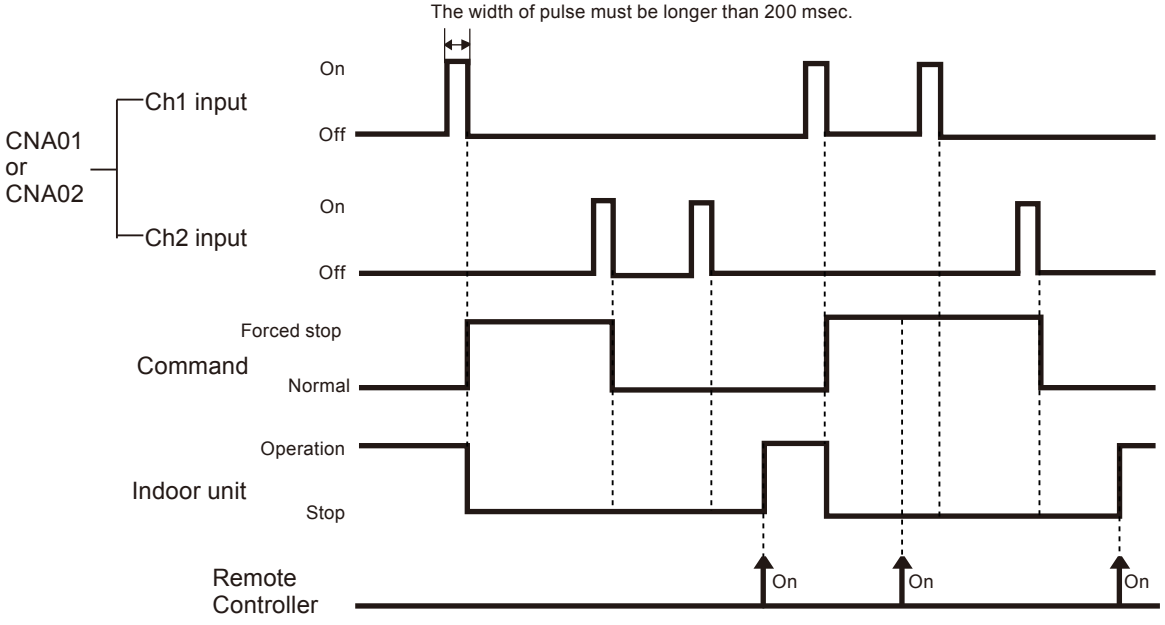
●In the case of "Edge" input

Function setting	Dip-SW	External input	Input signal	Command
46-02	SET2-2: OFF (Factory setting)	CNA01 or CNA02 (EXT.IN1)	OFF → ON	Forced stop
			ON → OFF	Normal



●In the case of "Pulse" input

Function setting	Dip-SW	External input		Input signal	Command
46-02	SET2-2: ON	CNA01 or CNA02 (EXT.IN1)	Ch1	OFF → ON	Forced stop
			Ch2	OFF → ON	Normal



NOTE :

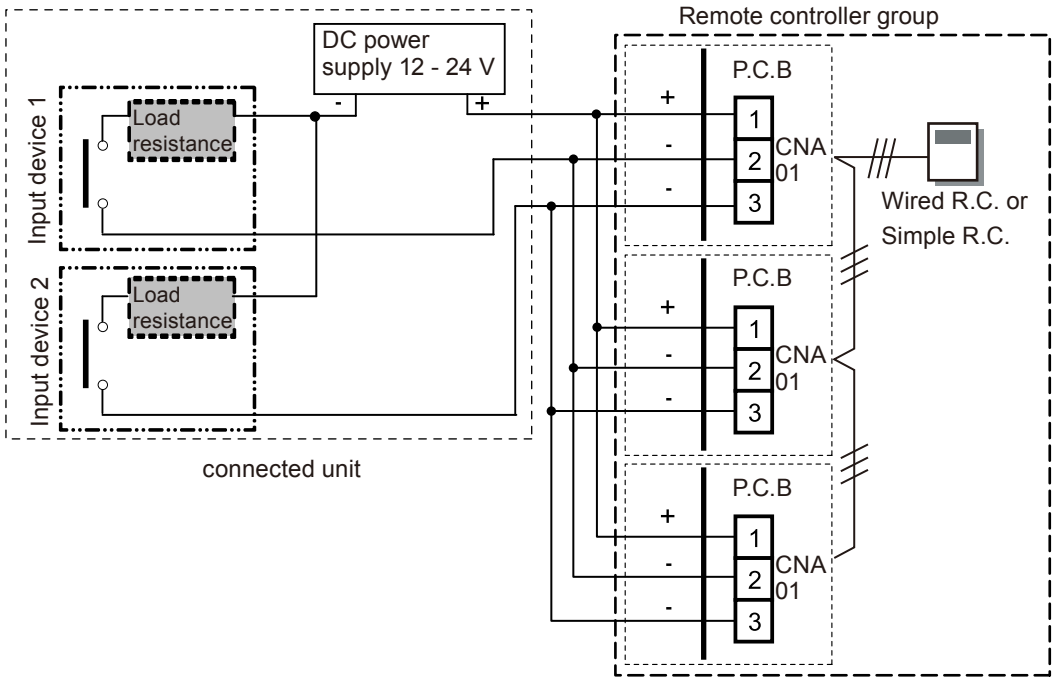
- When the forced stop is triggered, indoor unit stops and Operation/Stop operation by a remote controller is restricted.

EXTERNAL INPUT & OUTPUT

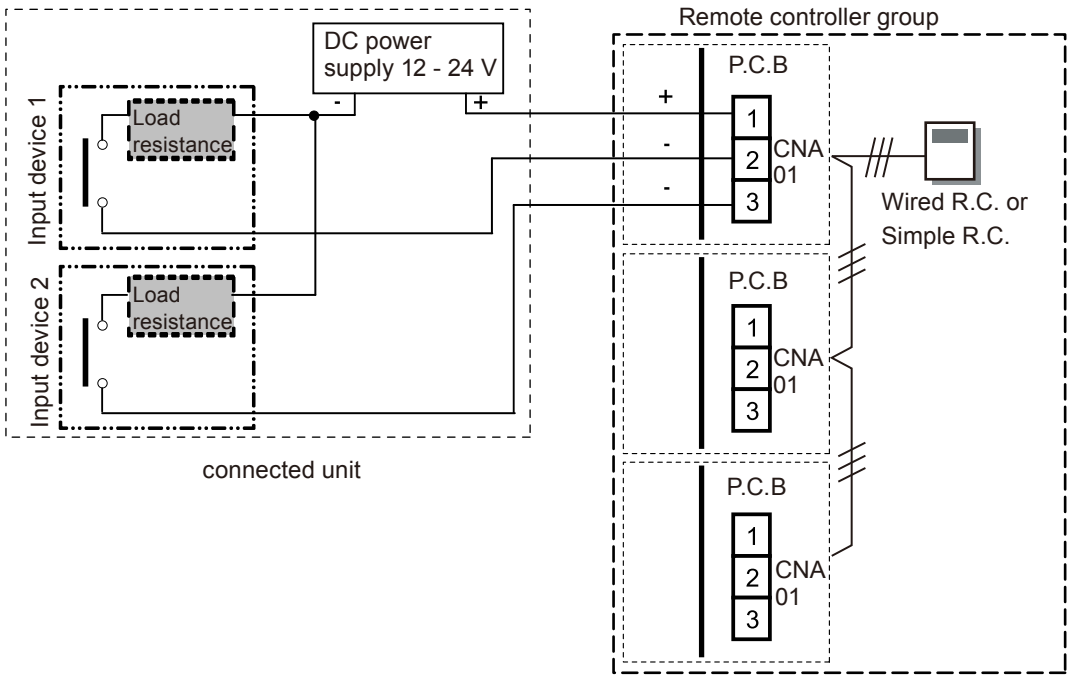
●Considerations when setting forced stop

⚠CAUTION
When forced stop function is used with forming a remote controller group, connect the same equipment to each indoor unit within the group.

Example 1 : OK



Example 2 : Prohibited



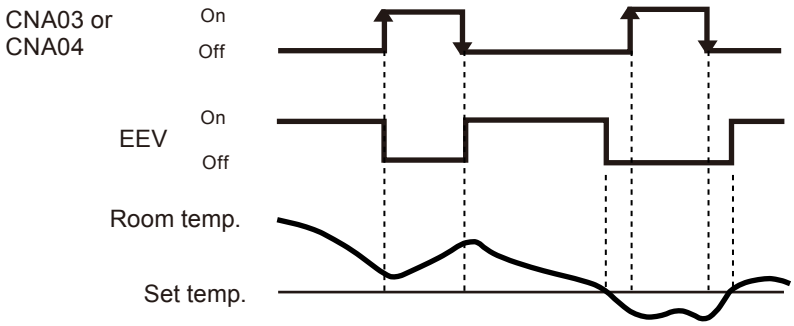
EXTERNAL INPUT & OUTPUT

②FORCED THERMOSTAT OFF FUNCTION

Function setting	Mode	External input	Input signal *	Command
60-00, 02, 05, 06, 08	0, 2, 5, 6, 8	CNA03 or CNA04 (EXT.IN2)	OFF → ON	EEV OFF
			ON → OFF	Normal operation

*Edge input only

Example of cooling mode



NOTE :

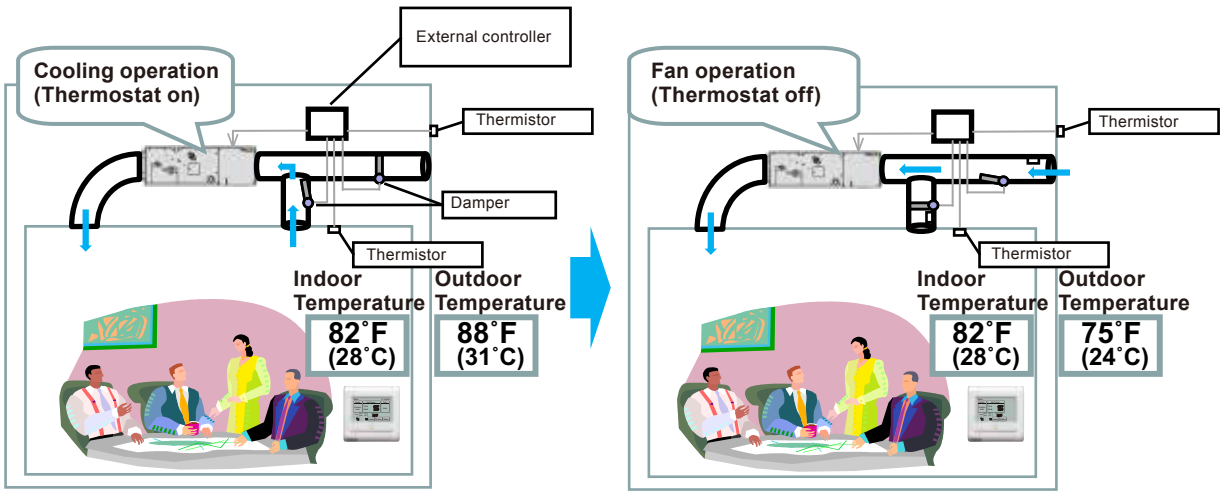
- When the signal is received from another unit on the refrigerant circuit, there may be a delay in thermostat off function at the unit.

● Example 1

- In - line connection

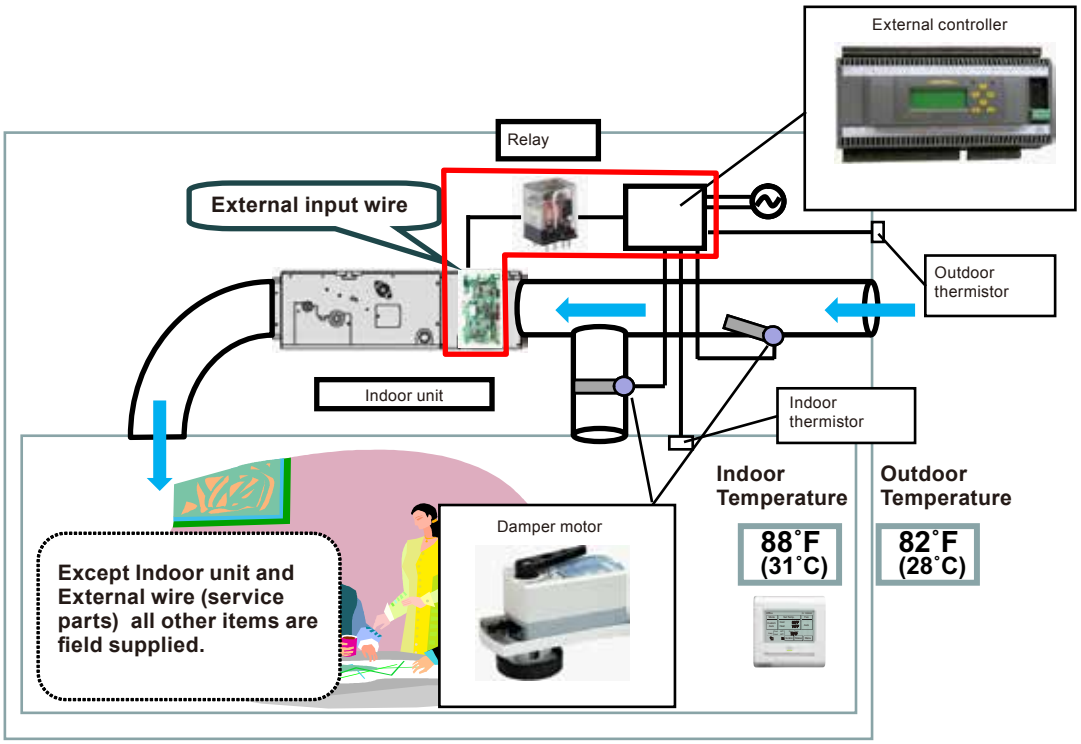
- Function setting for Fan setting when cooling thermostat OFF
Number 49-00 (Follow the setting on the remote controller)

Forced thermostat off is one of the function to save energy. For example, case of outdoor temperature is lower than Indoor temperature, Indoor unit of air conditioner worked as Fan operation based upon receiving signal from external controller. (Cooling Only)

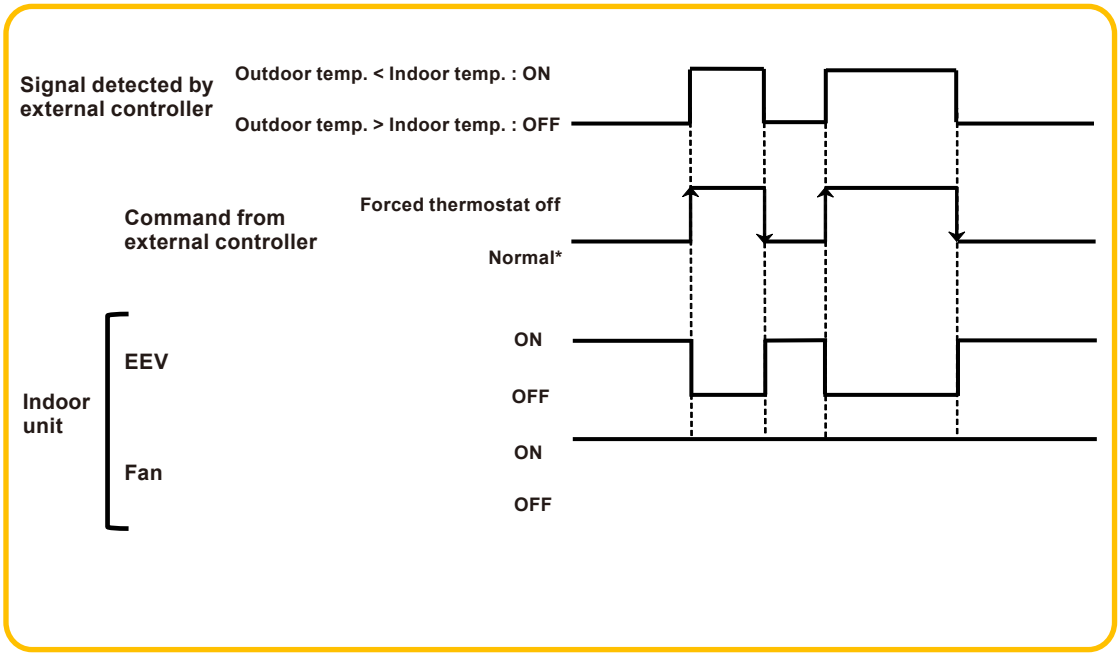


EXTERNAL INPUT & OUTPUT

●System figure example



●Operation status

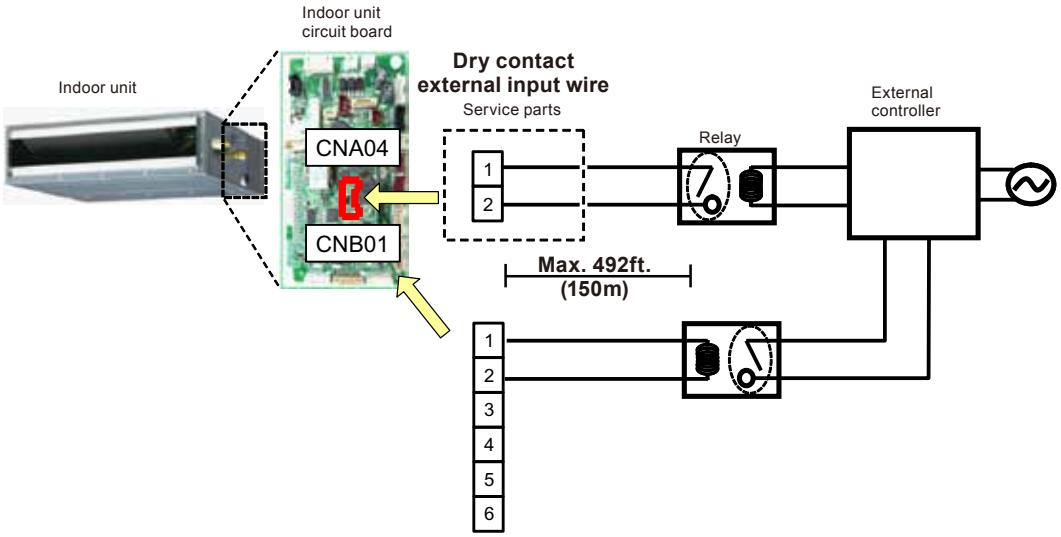


*Normal means that Indoor unit is continues to operate until [Forced thermostat off] signal received, at condition which are set by central and individual controller or detected by thermo sensors of indoor unit.

Indoor unit continues to operate until [Forced thermostat off] signal received, at condition which are set by central and individual controller or detected by thermo sensors of indoor unit. Once [Forced thermostat off] signal received, Indoor unit start operation under Fan mode.

EXTERNAL INPUT & OUTPUT

●Example of Electrical circuit



Specification of external input	
Item	Spec
Terminal	CNA04
Output voltage	DC 12 V
Wire diameter	AWG22 Twist (0.33 mm^2)
Service parts No.	9368778019

Requirement for relay switch	
Item	Spec
Min. permissible load	1 mA or less

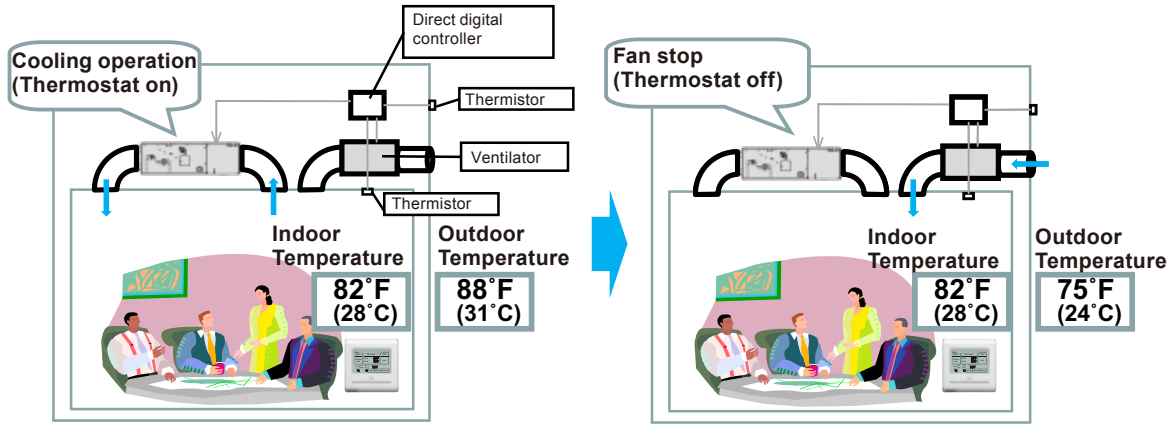
EXTERNAL INPUT & OUTPUT

● Example 2

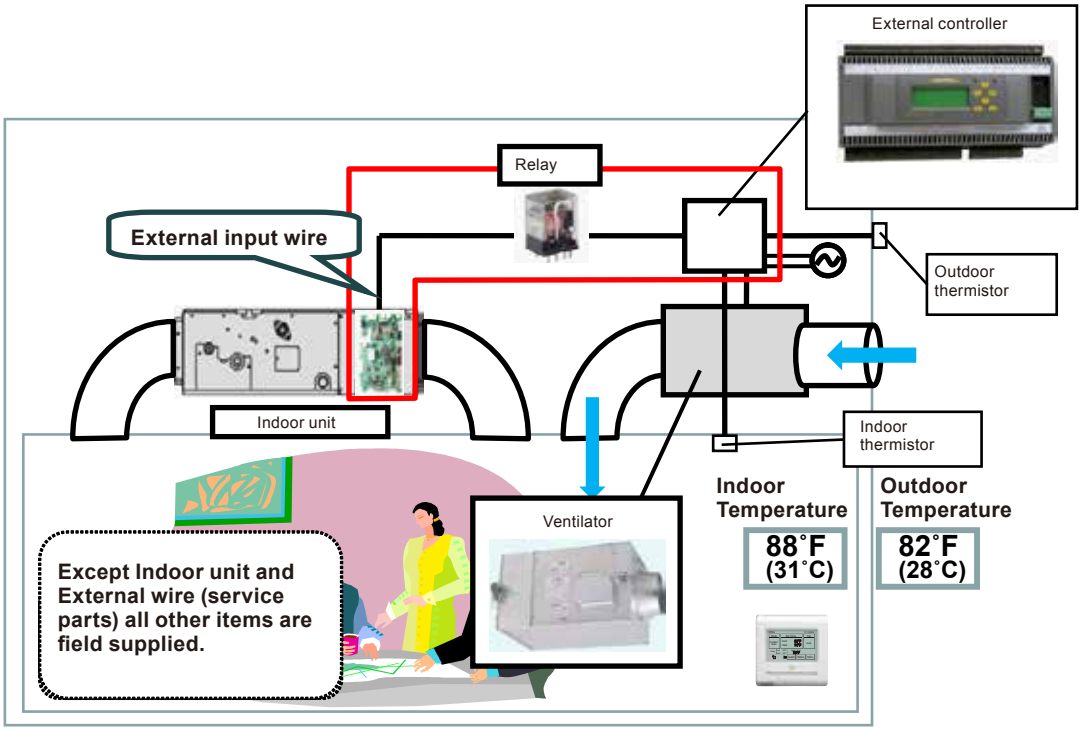
- Individual connection

- Function setting for Fan setting when cooling thermostat OFF
Number 49-01 (Stop)

Forced thermostat off is one of the function to save energy. For example, case of using ventilator at condition with outdoor temperature is lower than Indoor temperature, Indoor unit of air conditioner stop based upon receiving signal from external controller. (Cooling Only)

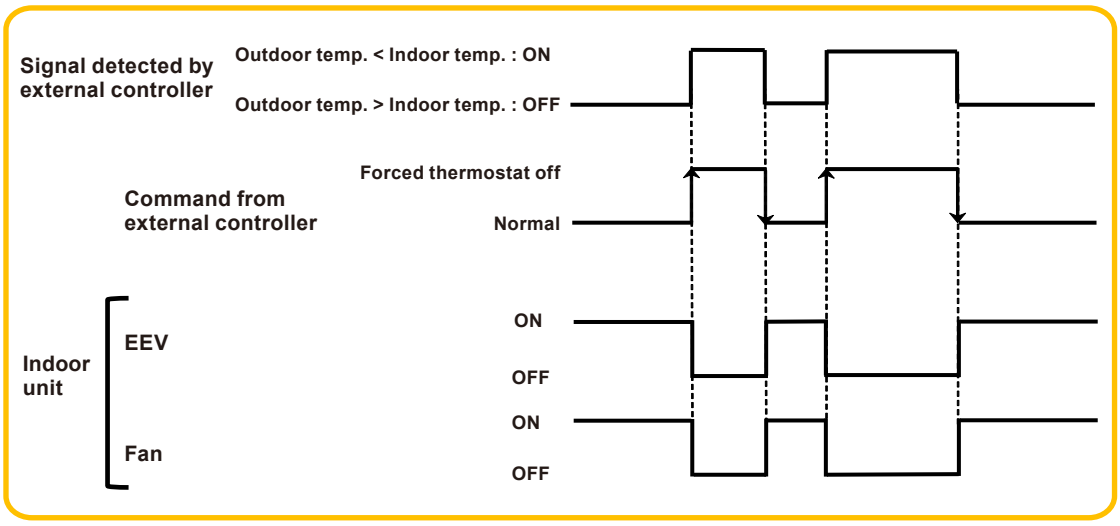


●System figure example



EXTERNAL INPUT & OUTPUT

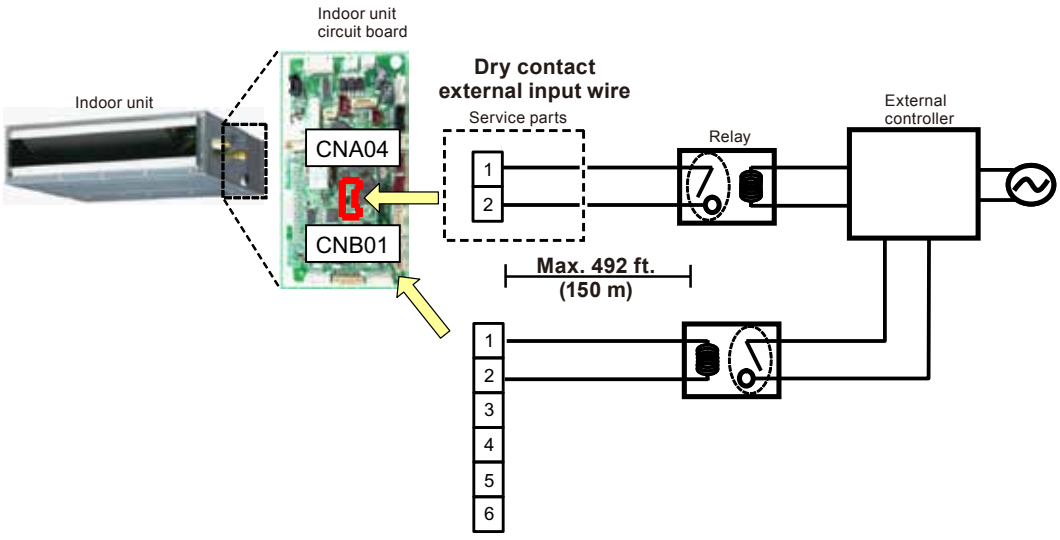
●Operation status



Normal means that Indoor unit continues to operate until [Forced thermostat off] signal received, at condition which are set by central and individual controller or detected by thermo sensors of indoor unit.

Indoor unit continues to operate until [Forced thermostat off] signal received, at condition which are set by central and individual controller or detected by thermo sensors of indoor unit. Once [Forced thermostat off] signal received, Indoor unit stop operation.

●Example of Electrical circuit



Specification of external input	
Item	Spec
Terminal	CNA04
Output voltage	DC 12 V
Wire diameter	AWG22 Twist (0.33 mm^2)
Service parts No.	9368778019

Requirement for relay switch	
Item	Spec
Min. permissible load	1 mA or less

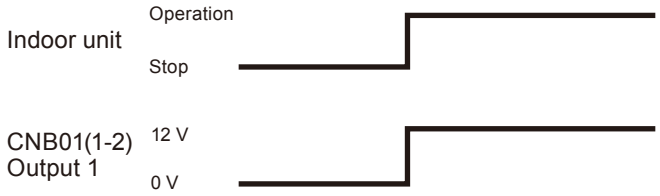
EXTERNAL INPUT & OUTPUT

③OPERATION STATUS (External output1)

Function setting	Mode	External output 1	Output signal	Command
60-00, 06	0, 6	CNB01 (PIN 1-2)	0 V → 12 V	Operation
			12 V → 0 V	Stop

The output for CNB01 (1-2) is ON when the indoor unit is operating.

The output is off when the unit is stopped.



④ERROR STATUS (External output2)

Function setting	Mode	External output 2	Output signal	Command
60-00, 01, 02, 04, 05, 06, 07	0, 1, 2, 4, 5, 6, 7	CNB01 (PIN 1-3)	0 V → 12 V	Error
			12 V → 0 V	Normal

The output for CNB01 (1-3) is ON when an error is generated for the indoor unit.

⑤INDOOR UNIT FAN OPERATION STATUS (External output3)

Function setting	Mode	External output 3	Output signal	Command
60-00, 01, 05, 06	0, 1, 5, 6	CNB01 (PIN 1-4)	0 V → 12 V	Fan run
			12 V → 0 V	Fan stopl

The output for CNB01 (1-4) is ON when the indoor unit fan is operating.

The output is off when the fan is stopped or during cold air prevention.

The output for CNB01 (1-4) is OFF during thermostat OFF when DRY mode operation.

Ex) Used for inter lock energize for exhaust fan.

EXTERNAL INPUT & OUTPUT

⑥FRESH AIR CONDITIONER (FOR EXTERNAL CONTROL MODULE*) INPUT FUNCTION (mode 1 or 7)

* Module that reduces or stops the cooling operating ratio of the air conditioner by intaking fresh air.
Example: Direct Digital Controller

Function setting	Mode	External input	External output	Input signal *	Command
60-01, 07	1, 7	CNA03 or CNA04 (EXT.IN2) [VRF cooling OFF]	CNB01 (PIN 1-2) [Cooling thermostat ON]	OFF → ON	EEV OFF (VRF cooling OFF)
				ON → OFF	Normal operation

*Edge input only

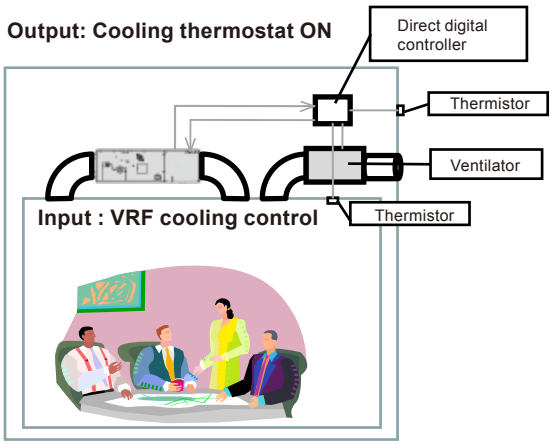
- With using Fresh air conditioner input and Cooling thermostat ON output, External control module controls the cooling operation by the VRF.
- When Fresh air conditioner ON is input during Cooling thermostat ON, Fresh air conditioning is performed with stopping the cooling operation by the air conditioner.

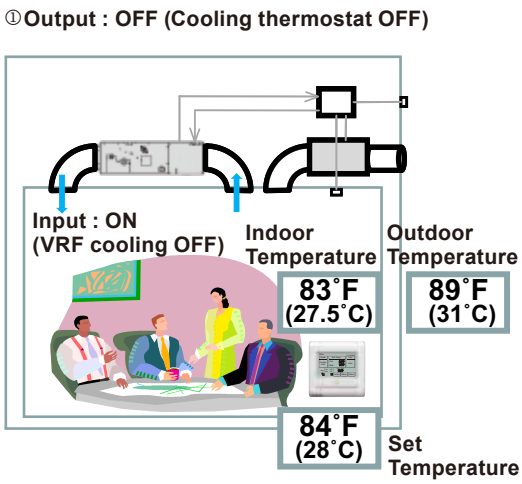
NOTE :

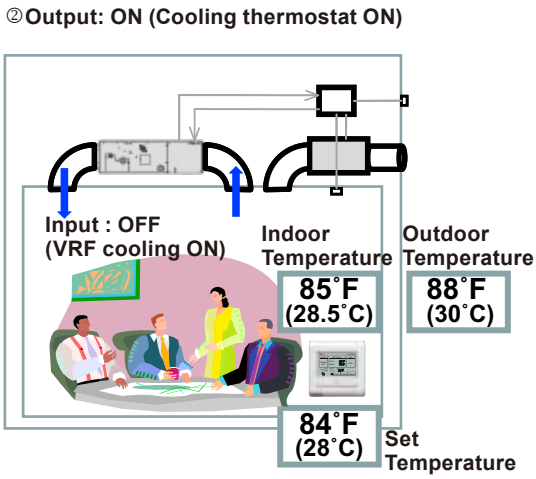
- During operations other than cooling such as heating or dry, Fresh air conditioner ON input is disable.

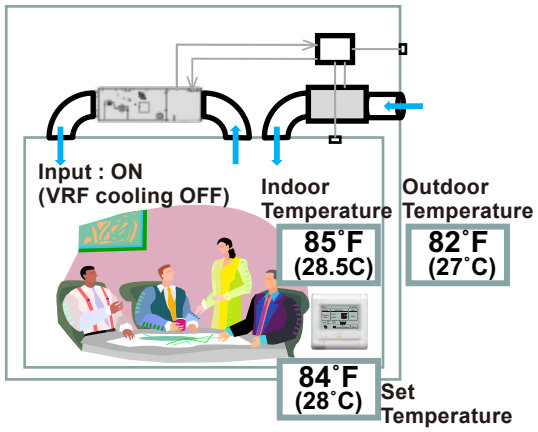
EXTERNAL INPUT & OUTPUT

● Example (Individual connection)

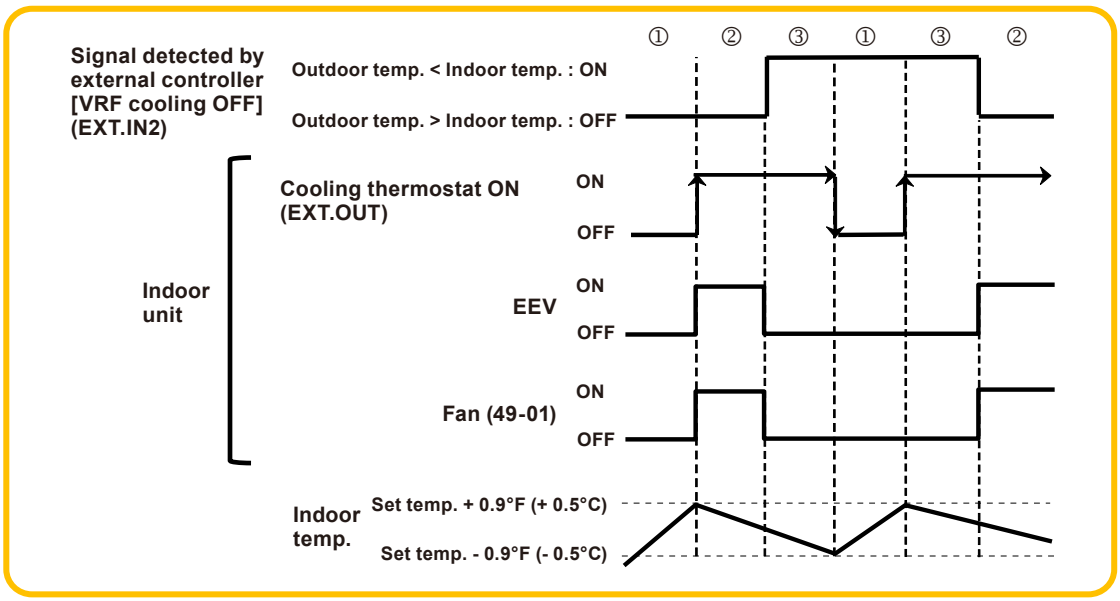






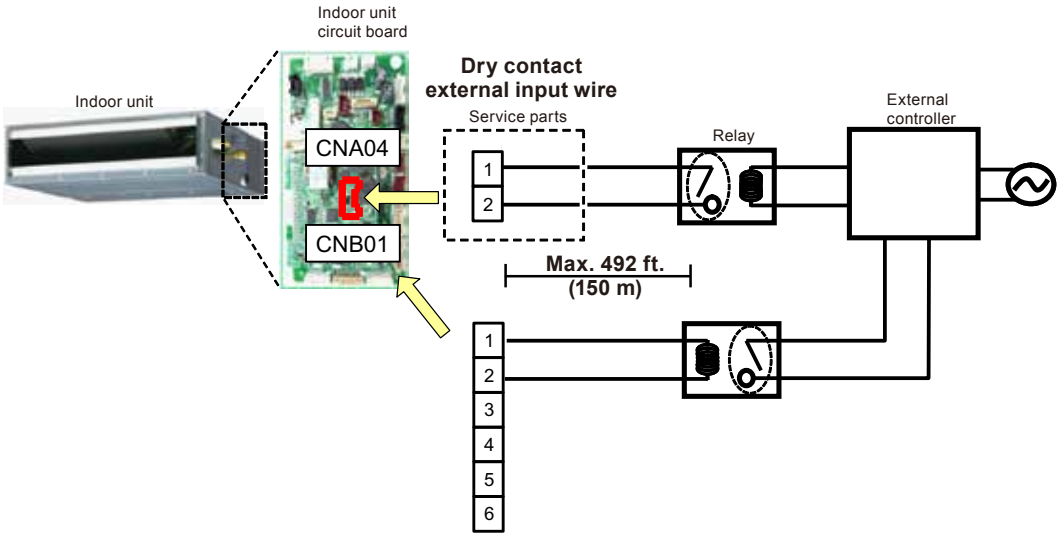


●Operation status



EXTERNAL INPUT & OUTPUT

●Example of Electrical circuit



Specification of external input	
Item	Spec
Terminal	CNA04
Output voltage	DC 12 V
Wire diameter	AWG22 Twist (0.33 mm^2)
Service parts No.	9368778019

Requirement for relay switch	
Item	Spec
Min. permissible load	1 mA or less

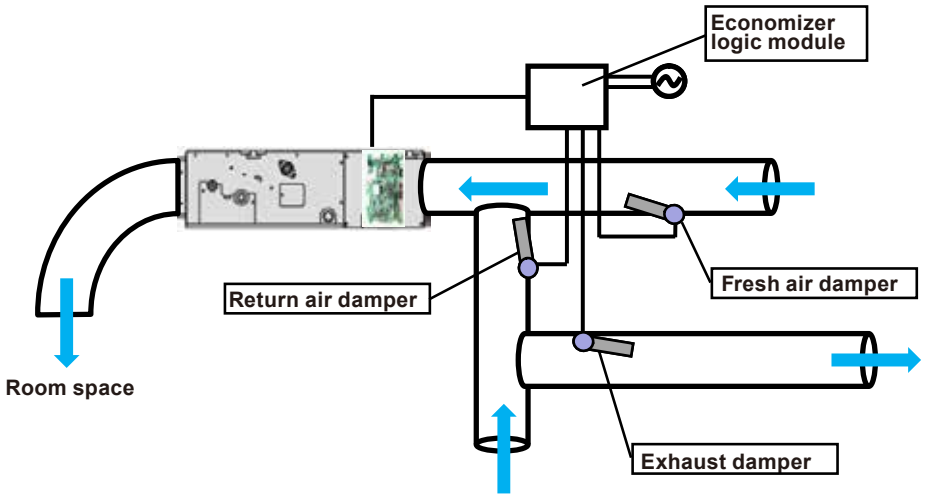
EXTERNAL INPUT & OUTPUT

⑦ECONOMIZER INPUT FUNCTION

Cooling economizer:

Consists of ducts, dampers, and automatic controlling system. In cold or warm climate, the economizer reduces or stops the VRF compressor, providing cooling using outside air.

●Example of economizer



●How to use economizer

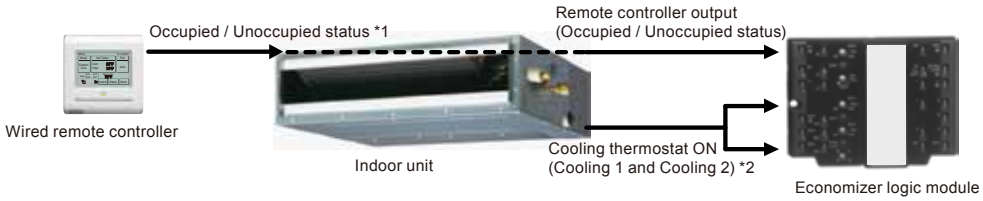
Operation mode	Environmental condition	Intaking fresh air	Air conditioner	Economizer	Remarks
Heating	Cold climate (~34°F [1°C])	Minimum*	Heating	Disable	Heating by the air conditioner
Fresh air intake cooling	Cool climate (34~55°F [1~13°C])	Optimum	Stop	Enable	Cooling by intaken fresh air only
Combined	Warm climate (55~75°F[13~24°C])	100%	Cooling	Enable	Combined cooling by intaken fresh air and the air conditioner
VRF cooling	Hot climate (75°F~ [24°C~])	Minimum*	Cooling	Disable	Cooling by the air conditioner

*Minimum fresh air requirements are specified in **ASHRAE Standard 62.1.**

EXTERNAL INPUT & OUTPUT

⑦-1: Economizer 1 (Cooling 1 output + occupied) In / Out Mode 2 or 8 (60-02 or 08)

Function setting	Mode	External output		Remote controller
60-02, 08	2, 8	CNB01 (PIN 1-2) [Cooling thermostat ON]	CNB01 (PIN 1-4) [Remote controller output]	UTY-RNRU Occupied/Unoccupied status



*1.By the Wired remote controller (Touch panel), external output indication is transferred to Economizer logic module through the indoor unit.

*2.Branches the output to Economizer logic module, and connect to Cooling 1 and Cooling 2.

- Economizer Logic module is required for Economizer operation.
- Economizer Logic module judges the amount of outdoor air intake depending on indoor unit output of operating condition, occupied status and outdoor temperature etc.

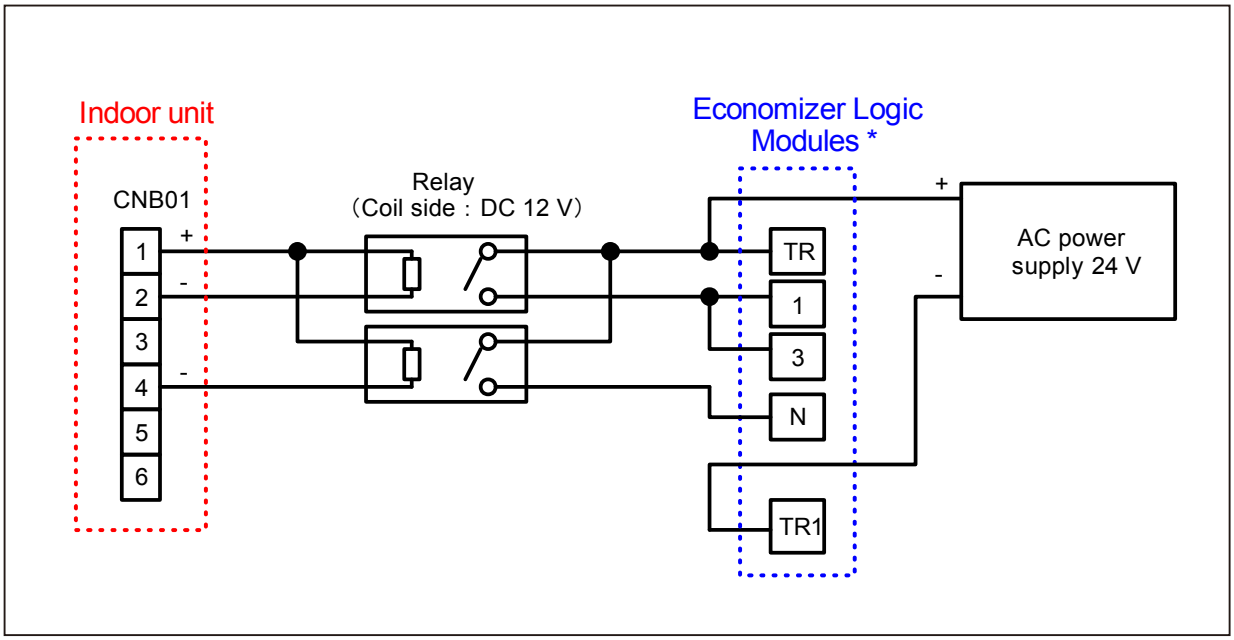
Operating Mode	Operation		Condition (Enthalpy or Temp.)		Indoor unit output			Indoor unit Input	Outdoor air intake*3
	VRF Indoor unit	Damper (Free Cooling)	Outdoor	Return	Cooling Thermostat ON	Cooling High/Low	Occ/Unocc (RC output)	VRF Cooling ON	
Mechanical Cooling	Cooling ON	OFF	High	Low	ON	-	ON(Occ)	-	Minimum
Mechanical & Free Cooling	Cooling ON	ON	Low	High	ON	-	ON(Occ)	-	Modulating (Min-Max)
Cooling Thermostat OFF or Heating	Cooling OFF	OFF	-	-	OFF	-	ON(Occ)	-	Minimum
OFF	Cooling OFF	OFF	-	-	OFF	-	OFF(Unocc)	-	None

*3.: When external output by remote controller is OFF, the amount of intaken fresh air differs as follows:

- Cooling by intaken fresh air is performed: None to Maximum amount
- Cooling by intaken fresh air is not performed: None

EXTERNAL INPUT & OUTPUT

●Wiring diagram example



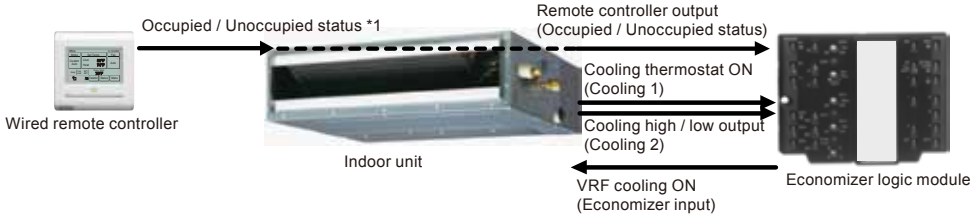
*Only the terminals connected to the indoor unit are mentioned here for description.

- As for the connected sensors or other connections to Economizer logic module, refer to the manual for the module.

EXTERNAL INPUT & OUTPUT

⑦-2: Economizer 2, 3 (Cooling 2 stage output + occupied) In / Out Mode 3 or 4 (60-03 or 04)

Function setting	Mode	External input	External output			Remote controller
60-03	3	CNA03 or CNA04 (EXT. IN2) [VRF cooling ON]	CNB01 (PIN 1-2) [Cooling thermostat ON]	CNB01 (PIN 1-3) [Cooling high / low output]	CNB01 (PIN 1-4) [Remote controller output]	UTY-RNRU Occupied/ Unoccupied status
60-04	4		CNB01 (PIN 1-2) [Cooling thermostat ON]	CNB01 (PIN 1-5) [Cooling high / low output]	CNB01 (PIN 1-4) [Remote controller output]	



*1.By the Wired remote controller (Touch panel), external output indication is transferred to Economizer logic module through the indoor unit.

- Economizer Logic module is required for Economizer operation.
- Economizer Logic module judges the amount of outdoor air intake depending on indoor unit output at operating condition, occupied status and outdoor temperature etc.
- Cooling operation by only free cooling is possible.

Operating Mode	Operation		Condition (Enthalpy or Temp.)		Indoor unit output			Indoor unit Input	Outdoor air intake*3
	VRF Indoor unit	Damper (Free Cooling)	Outdoor	Return	Cooling Thermostat ON	Cooling High/Low*2	Occ/Unocc (RC output)	VRF Cooling ON	
Mechanical Cooling Low	Cooling ON	OFF	High	Low	ON	OFF(Low)	ON(Occ)	ON	Minimum
Mechanical Cooling High	Cooling ON	OFF	High	Low	ON	ON(High)	ON(Occ)	ON	Minimum
Free Cooling only	Cooling OFF	ON	Low	High	ON	OFF(Low)	ON(Occ)	OFF	Modulating (Min-Max)
Mechanical & Free Cooling	Cooling ON	ON	Low	High	ON	ON(High)	ON(Occ)	ON	Modulating (Min-Max)
Cooling Thermostat OFF or Heating	Cooling OFF	OFF	-	-	OFF	OFF	ON(Occ)	OFF	Minimum
OFF	Cooling OFF	OFF	-	-	OFF	OFF	OFF(Unocc)	OFF	None

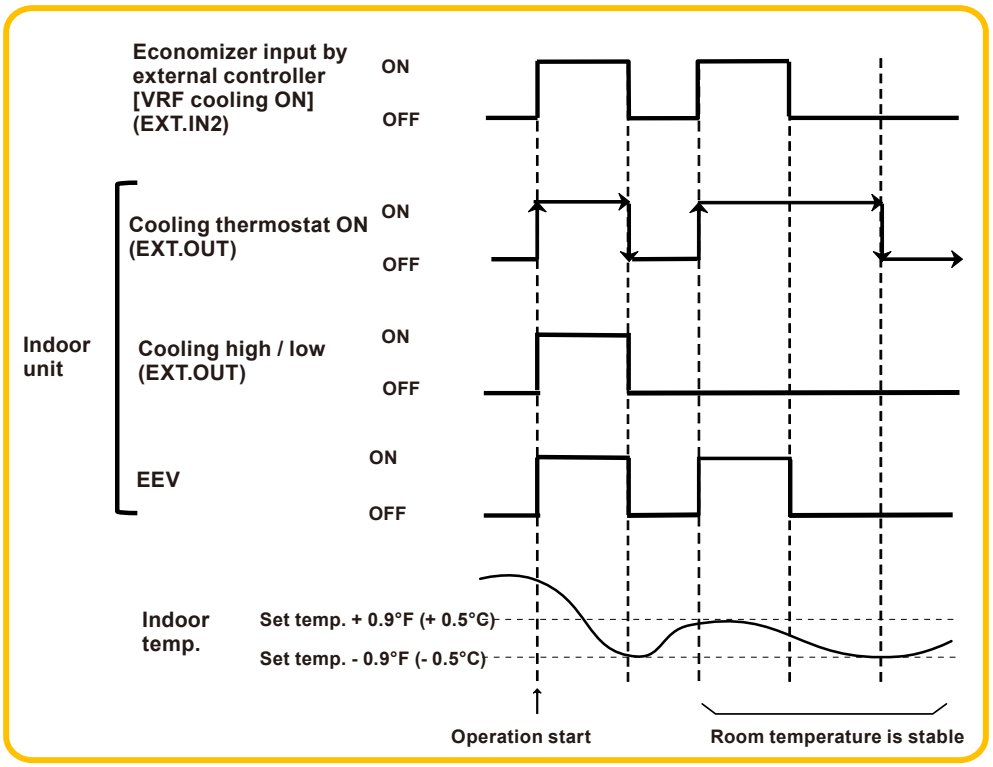
*2. Indoor unit decides the cooling high/low based on the set temperature and the indoor temperature.

*3. When external output by remote controller is OFF, the amount of intaken fresh air differs as follows:

- Cooling by intaken fresh air is performed: None to Maximum amount
- Cooling by intaken fresh air is not performed: None

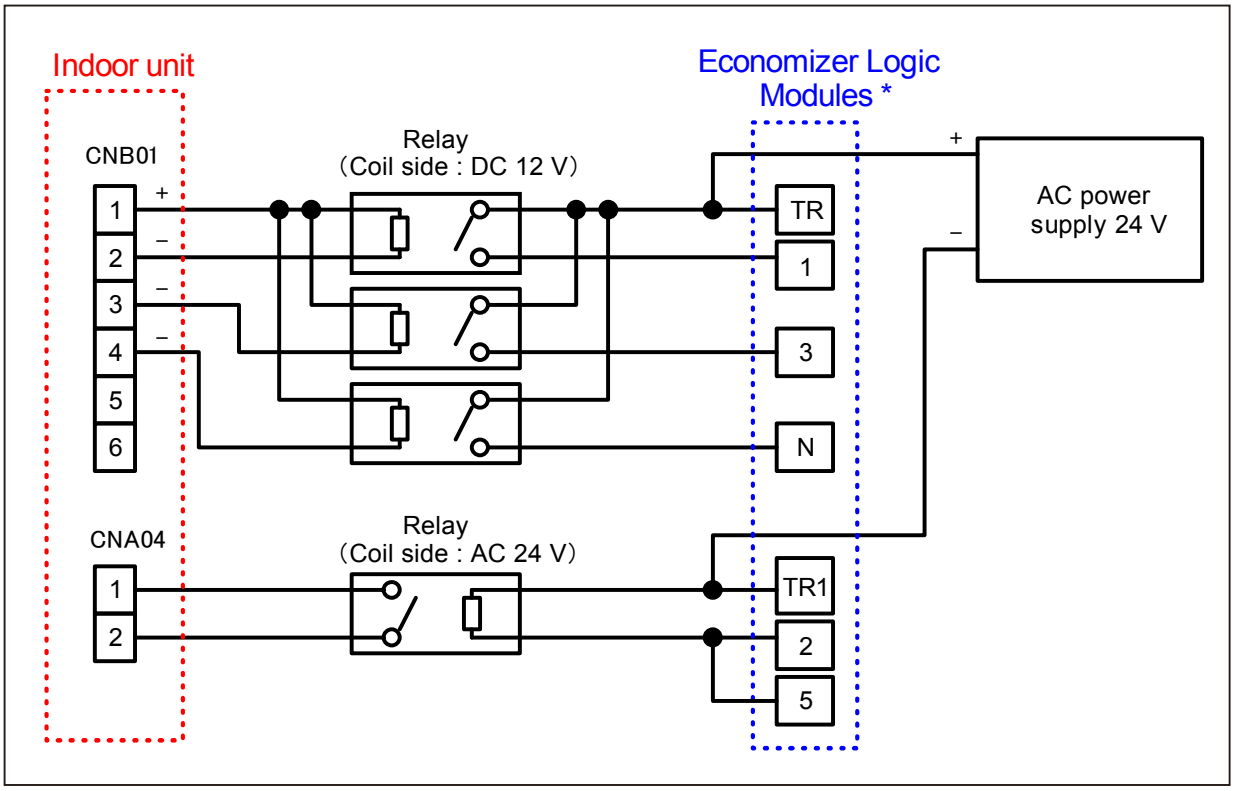
EXTERNAL INPUT & OUTPUT

●Operation status



EXTERNAL INPUT & OUTPUT

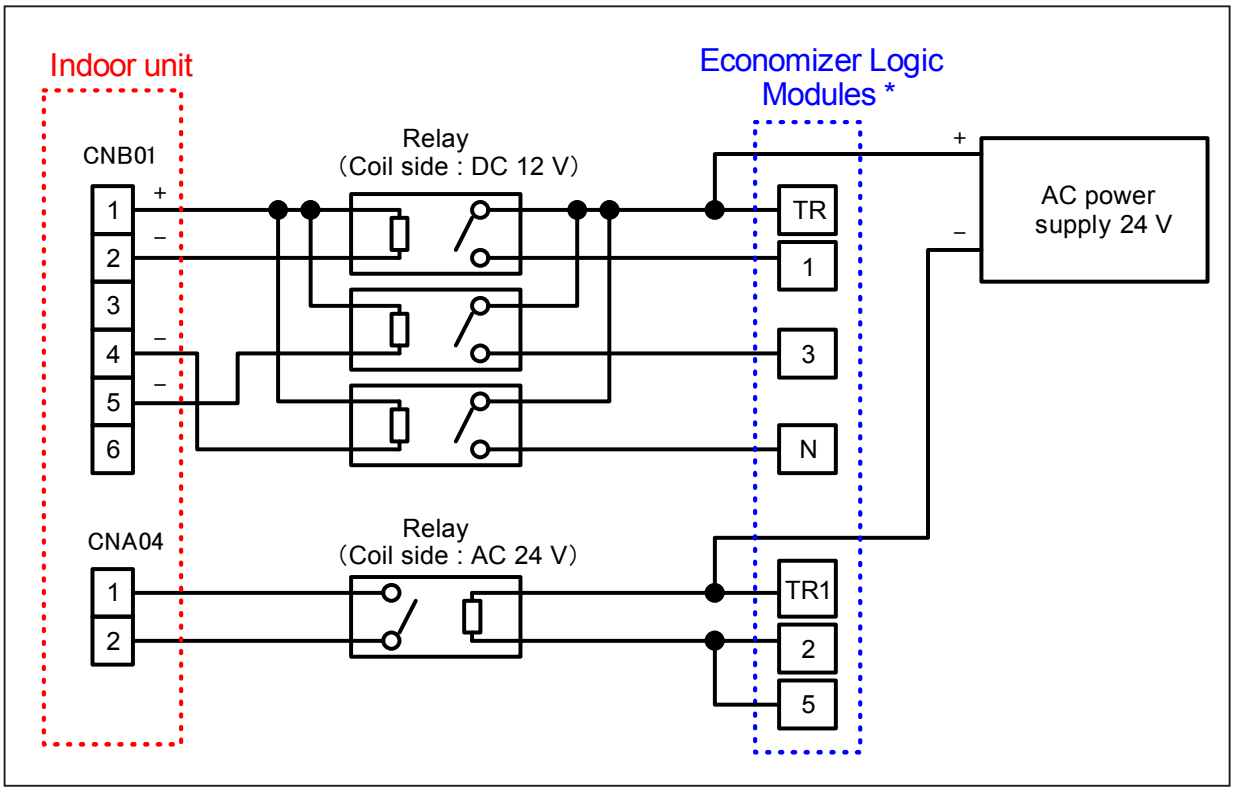
●Wiring diagram example (Economizer 2: Mode 3, Function 60-03)



*Only the terminals connected to the indoor unit are mentioned here for description.

- As for the connected sensors or other connections to Economizer logic module, refer to the manual for the module.

●Wiring diagram example (Economizer 3: Mode 4, Function 60-04)



*Only the terminals connected to the indoor unit are mentioned here for description.

- As for the connected sensors or other connections to Economizer logic module, refer to the manual for the module.

EXTERNAL INPUT & OUTPUT

⑧EXTERNAL HEATER OUTPUT (External output4)

Control	Primary heater	Auxiliary heater	Installation configration	Function Setting			
				Indoor unit		Wired R. C.	Outdoor unit
				Control switching external heaters No.61	IU fan setting for external heater DIP-SW2-3	Sensor activation (UTY-RNRU, UTY-RNRUZ*, UTY-RSRY, UTY-RHRY, or UTY-RNKU)	Presence of heater selection control using outdoor unit sensor No.35
Auxiliary heater control 1	VRF Heat Pump	External device	In-line	61-00	ON (Enable)	-	-
			Individual		OFF	-	-
Auxiliary heater control 2	VRF Heat Pump	External device	In-line	61-01	ON (Enable)	-	-
			Individual		OFF	-	-
Heat pump prohibition control	External device	None	In-line	61-02	ON (Enable)	-	-
			Individual		OFF	ON (Enable) *1	-
Auxiliary heater control by outdoor temperature 1	VRF Heat Pump	External device *2	In-line	61-03	ON (Enable)	-	35-01 (Enable)
			Individual		OFF	ON (Enable) *1	
Auxiliary heater selection control by outdoor temperature 2	VRF Heat Pump	External device	In-line	61-04	ON (Enable)	-	35-01 (Enable)
			Individual		OFF	ON (Enable) *1	
Auxiliary heater selection control by outdoor temperature 3	VRF Heat Pump	External device *2	In-line	61-05	ON (Enable)	-	35-01 (Enable)
			Individual		OFF	ON (Enable) *1	
Auxiliary heat pump control	External device	VRF Heat Pump	In-line	61-06	ON (Enable)	-	-
			Individual		OFF	ON (Enable) *1	-
Auxiliary heat pump control by outdoor temperature 1	External device	VRF Heat Pump *3	In-line	61-07	ON (Enable)	-	35-01 (Enable)
			Individual		OFF	ON (Enable) *1	

NOTES :

- Corresponding indoor units: Except wall mounted type.
- After turning off the heater, 3 minutes of standby time is required by next power-on of the heater.
- For items marked "-" in the table, any of validate or invalidate of the setting are acceptable.
- For shaded items in the table, setting change from the factory setting is required.

＊1: Indoor unit fan setting will be ON for safety reason without sensor activation of Wired R.C.

＊2: Heating operation is not performed when the outdoor temperature exceeds the boundary specified in function number 37 setting.

＊3: Heating operation is not performed when the outdoor temperature is lower than the boundary specified in function number 36 setting.

EXTERNAL INPUT & OUTPUT

Control	Primary heater	Auxiliary heater	Installation configration	Function Setting			
				Indoor unit		Wired R. C.	Outdoor unit
				Control switching external heaters No.61	IU fan setting for external heater DIP-SW2-3	Sensor activation (UTY-RNRU, UTY-RNRUZ*, UTY-RSRY, UTY-RHRY, or UTY-RNKU)	Presence of heater selection control using outdoor unit sensor No.35
Auxiliary heat pump control by outdoor temperature 2	External device	VRF Heat Pump *2	In-line	61-08	ON (Enable)	-	35-01 (Enable)
			Individual		OFF	ON (Enable) *1	
Auxiliary heat pump control by outdoor temperature 3	External device	VRF Heat Pump *2 *3	In-line	61-09	ON (Enable)	-	35-01 (Enable)
			Individual		OFF	ON (Enable) *1	

NOTES :

- Corresponding indoor units: Except wall mounted type.
- After turning off the heater, 3 minutes of standby time is required by next power-on of the heater.
- For items marked "-" in the table, any of validate or invalidate of the setting are acceptable.
- For shaded items in the table, setting change from the factory setting is required.

＊1: Indoor unit fan setting will be ON for safety reason without sensor activation of Wired R.C.

＊2: Heating operation is not performed when the outdoor temperature exceeds the boundary specified in outdoor unit function number 37 setting.

＊3: Heating operation is not performed when the outdoor temperature is lower than the boundary specified in outdoor unit function number 36 setting.

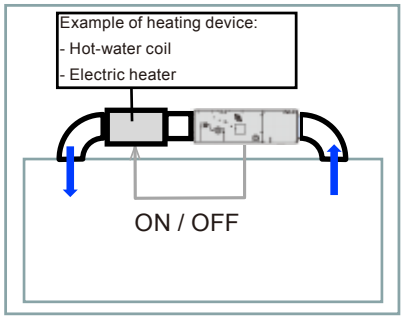
EXTERNAL INPUT & OUTPUT

■ INSTALLATION CONFIGURATION

1. In-line connection

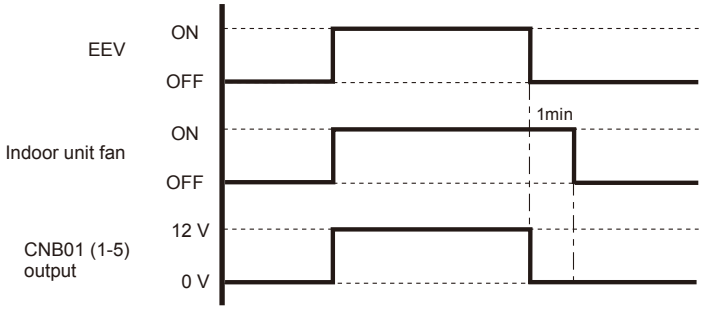
Connecting the external heating device in between the indoor unit and the outlet

External heating device uses the indoor unit fan.



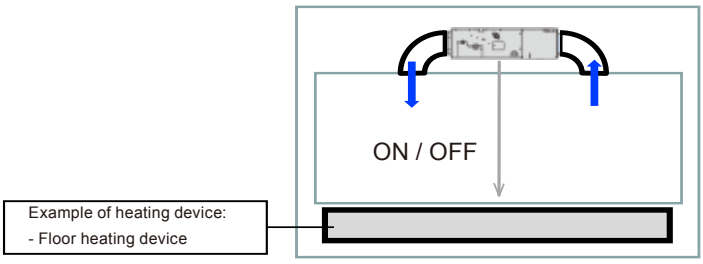
● Indoor unit fan setting for external heater (DIP-SW 2-3 : ON)

- Activate fan control for auxiliary heater.
- Indoor unit fan stop 1 minute later after the EEV is OFF.



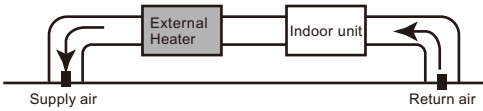
2. Individual connection

External heating device is installed individually. Not use indoor unit fan.



⚠WARNING

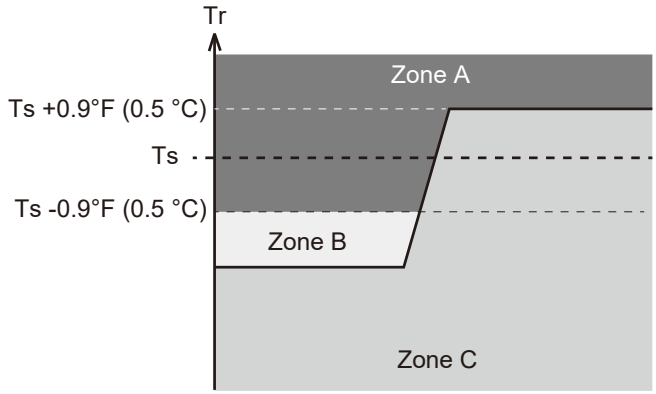
- When in-line auxiliary heater is installed, always set "indoor unit fan setting for external heater"
- Design and install external heater appropriately with considering its protection.
- Inappropriate designing and installation of external heater may cause a fire by emitted heat from the external heater.
- Fujitsu-general is not responsible for inappropriate designing or installation of external heating device.



EXTERNAL INPUT & OUTPUT

■ AUXILIARY EQUIPMENT CONTROL BY ROOM TEMPERATURE

Auxiliary equipment control is switchable by room temperature. Auxiliary equipment switching is performed for each room temperature divided to following 3 zones.



Ts: Setting temperature
Tr: Room temperature

Zone	Application	When temperature dropping		When temperature rising	
		Primary	Auxiliary	Primary	Auxiliary
A	Both of primary and auxiliary equipment is unnecessary.	OFF	OFF	OFF	OFF
B	Primary heater only. When room temperature stays in zone B for a long time, auxiliary equipment also operates.	ON	OFF*1	—	—
C	Auxiliary equipment also operates.	ON	ON*2	ON	ON*2

*1: For standby time for auxiliary equipment operation, refer to indoor unit function number 71 of "FUNCTION DETAILS" in Chapter 7. FUNCTION SETTING.

*2: When indoor unit function number 61 is set to "00", auxiliary equipment operates according to the following conditions.

Ts - Tr > 21.6 °F (-12.0 °C): Auxiliary equipment turn off.

Ts - Tr > 18.0 °F (-10.0 °C): Auxiliary equipment turn on.

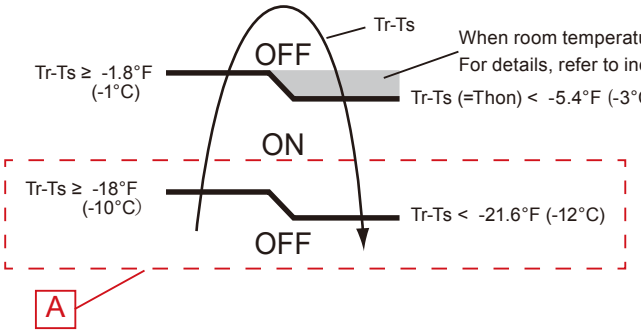
EXTERNAL INPUT & OUTPUT

■ AUXILIARY HEATER CONTROL 1

Operation	Condition
Heater ON	▪Heater ON as shown in diagram of heating temperature
Heater OFF	▪Heater OFF as shown in diagram of heating temperature ▪Other than Heating mode ▪Error occurred ▪Forced thermostat off ▪Fan stop protection

▪Temperature of heater ON (Thon) ... Adjustable by Function setting No.62 (Operating temperature switching of external heaters).

▪All control temperatures will shift by adjusting "Thon".



Tr: Room temperature
Ts: Set temperature
Thon: Heater ON temperature

Example. When Set Temperature (Ts) is 72°F (22°C) *Factory setting

▪and Room Temperature (Tr) increase above 53.6°F (12°C), signal output is on.

▪and Room Temperature (Tr) increase above 69.8°F (21°C), signal output is off.

▪and Room Temperature (Tr) decrease below 66.2°F (19°C), signal output is on.

▪and Room Temperature (Tr) decrease below 50°F (10°C), signal output is off.

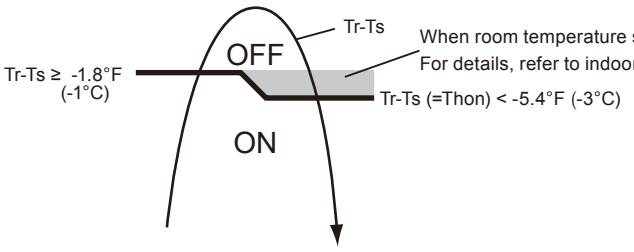
■ AUXILIARY HEATER CONTROL 2

Control that excludes "A" from Auxiliary heater control 1 mentioned above.

Operation	Condition
Heater ON	▪Heater ON as shown in diagram of heating temperature
Heater OFF	▪Heater OFF as shown in diagram of heating temperature ▪Other than Heating mode ▪Error occurred ▪Forced thermostat off ▪Fan stop protection

▪Temperature of heater ON (Thon) ... Adjustable by Function setting No.62 (Operating temperature switching of external heaters).

▪All control temperatures will shift by adjusting "Thon".



Tr: Room temperature
Ts: Set temperature
Thon: Heater ON temperature

EXTERNAL INPUT & OUTPUT

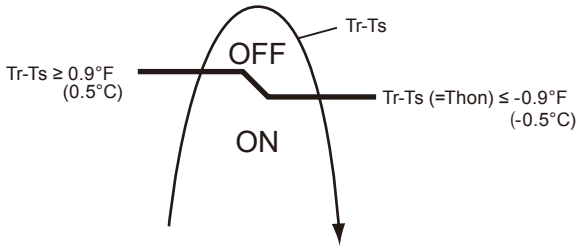
■ HEAT PUMP PROHIBITION CONTROL

Perform heating by external heater only. VRF indoor unit is Continuous thermostat OFF.

Operation		Condition
Heater ON		▪Heater ON as shown in diagram of heating temperature
Heater OFF	DIP-SW2-3 ON Indoor unit fan setting for external heater: Enable	▪Heater OFF as shown in diagram of heating temperature ▪Other than Heating mode ▪Error occurred ▪Forced thermostat off ▪Fan stop protection
	DIP-SW2-3 OFF Indoor unit fan setting for external heater: Disable	▪Heater OFF as shown in diagram of heating temperature ▪Other than Heating mode ▪Error occurred ▪Forced thermostat off

▪Temperature of heater ON (Thon) ... Adjustable by Function setting No.62 (Operating temperature switching of external heaters).

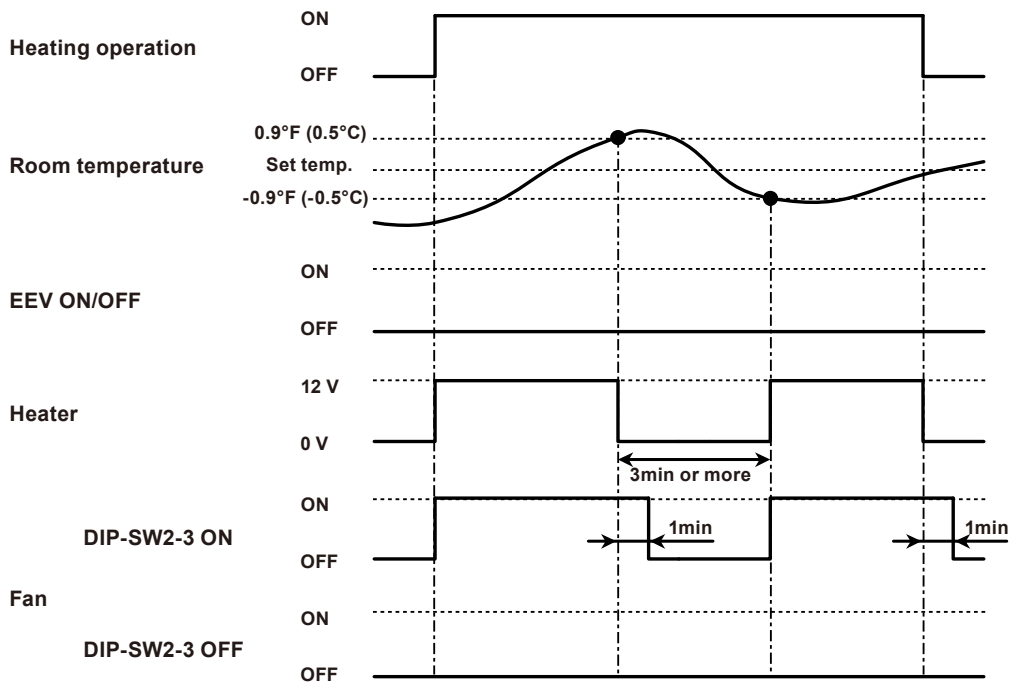
▪All control temperatures will shift by adjusting "Thon".



Tr: Room temperature
Ts: Set temperature
Thon: Heater ON temperature

EXTERNAL INPUT & OUTPUT

●Operation status



NOTE :

- In following operations, EEV will be ON.
  - Other than Heating
  - Test Run.

EXTERNAL INPUT & OUTPUT

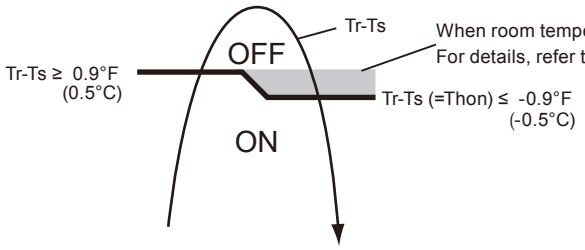
■ AUXILIARY HEATER CONTROL BY OUTDOOR TEMPERATURE 1

Selects Heat pump or External heater according to the outdoor temperature. When outdoor temperature is high, the heating is performed by using heat pump only.

Operation		Condition
Heater ON		▪Heater ON as shown in diagram of heating temperature
Heater OFF	DIP-SW2-3 ON Indoor unit fan setting for external heater: Enable	▪Heater OFF as shown in diagram of heating temperature ▪Other than Heating mode ▪Error occurred ▪Forced thermostat off ▪Heat pump only zone ▪Fan stop protection
	DIP-SW2-3 OFF Indoor unit fan setting for external heater: Disable	▪Heater OFF as shown in diagram of heating temperature ▪Other than Heating mode ▪Error occurred ▪Forced thermostat off ▪Heat pump only zone

- ▪Temperature of heater ON (Thon) ... Adjustable by Function setting No.62 (Operating temperature switching of external heaters).
- ▪All control temperatures will shift by adjusting "Thon".
- ▪Outdoor temperature zone boundary A and B ... Adjustable individually by Function setting No. 36 and 37 for outdoor unit.

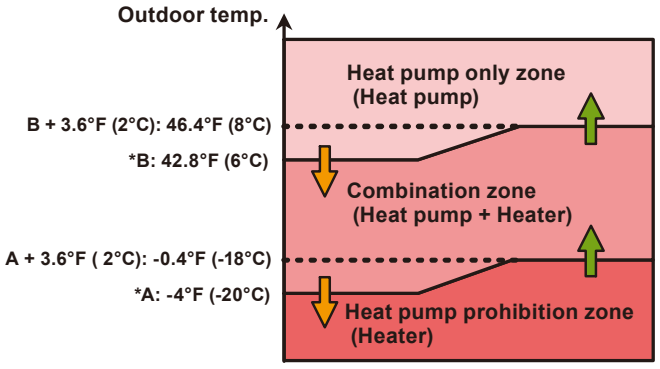
●External heater output



When room temperature stays in this zone for a specific time, auxiliary heater is turned on. For details, refer to indoor unit function number 71 in Chapter. 7 "FUNCTION SETTING".

Tr: Room temperature
Ts: Set temperature
Thon: Heater ON temperature

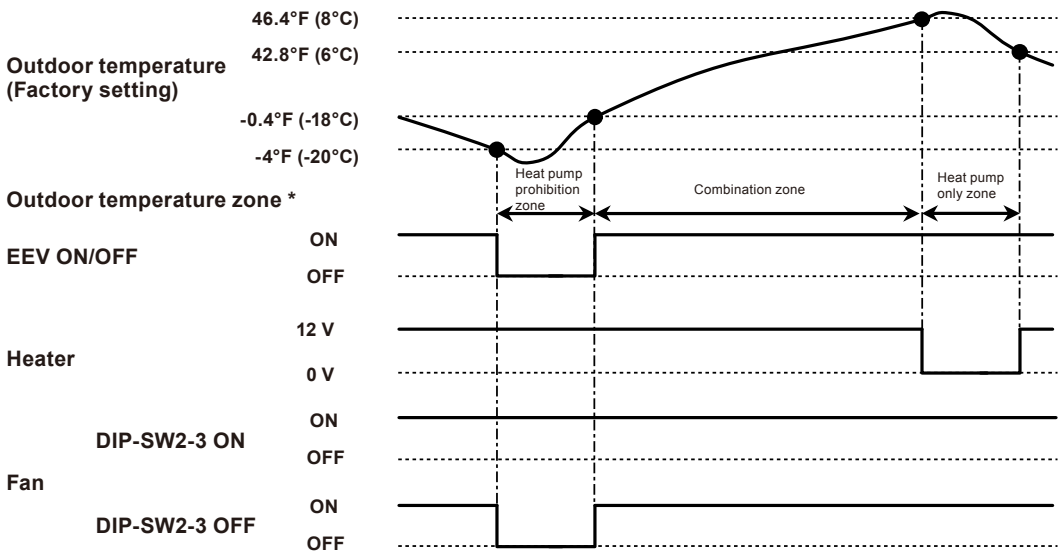
●Outdoor temperature zone



*Adjustable by Function setting

EXTERNAL INPUT & OUTPUT

●Operation status



* The Outdoor temperature zone transition from one to another will stay in that zone for minimum 30 min.

NOTES :

- In following operations, EEV will be ON in Heat pump prohibition zone.
  - Other than Heating
  - Test Run
- This control is enable when the setting code no. 35 of the outdoor unit (Presence of heater selection control by outdoor temperature) is "Enable".

EXTERNAL INPUT & OUTPUT

■ AUXILIARY HEATER CONTROL BY OUTDOOR TEMPERATURE 2

Selects Heat pump or External heater according to the outdoor temperature. Even when outdoor temperature is high, the heating is performed by using both of heat pump and external heater.

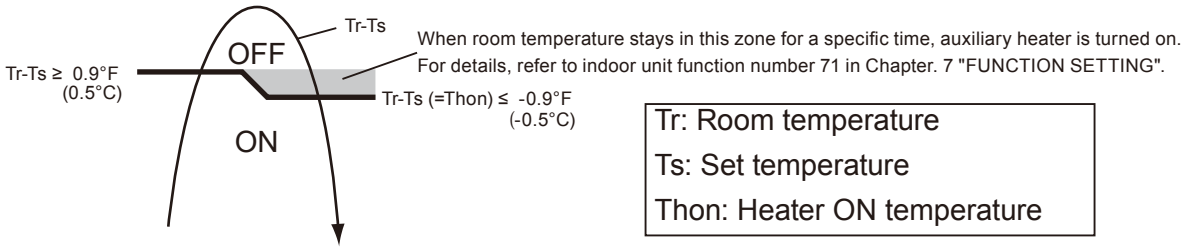
Operation		Condition
Heater ON		▪Heater ON as shown in diagram of heating temperature
Heater OFF	DIP-SW2-3 ON Indoor unit fan setting for external heater: Enable	▪Heater OFF as shown in diagram of heating temperature ▪Other than Heating mode ▪Error occurred ▪Forced thermostat off ▪Fan stop protection
	DIP-SW2-3 OFF Indoor unit fan setting for external heater: Disable	▪Heater OFF as shown in diagram of heating temperature ▪Other than Heating mode ▪Error occurred ▪Forced thermostat off

▪Temperature of heater ON (Thon) ... Adjustable by Function setting No.62 (Operating temperature switching of external heaters).

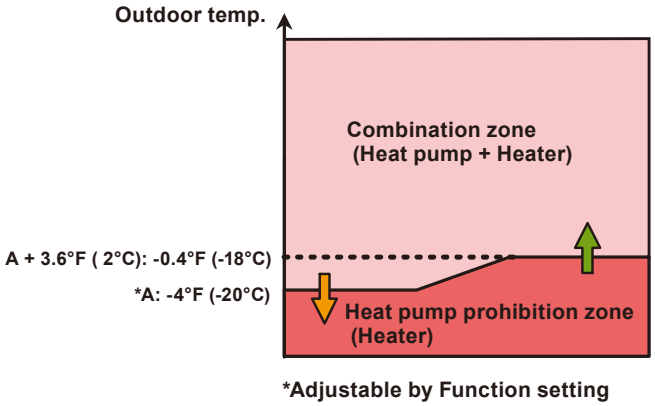
▪All control temperatures will shift by adjusting "Thon".

▪Outdoor temperature zone boundary A ... Adjustable by Function setting No. 36 for outdoor unit.

●External heater output



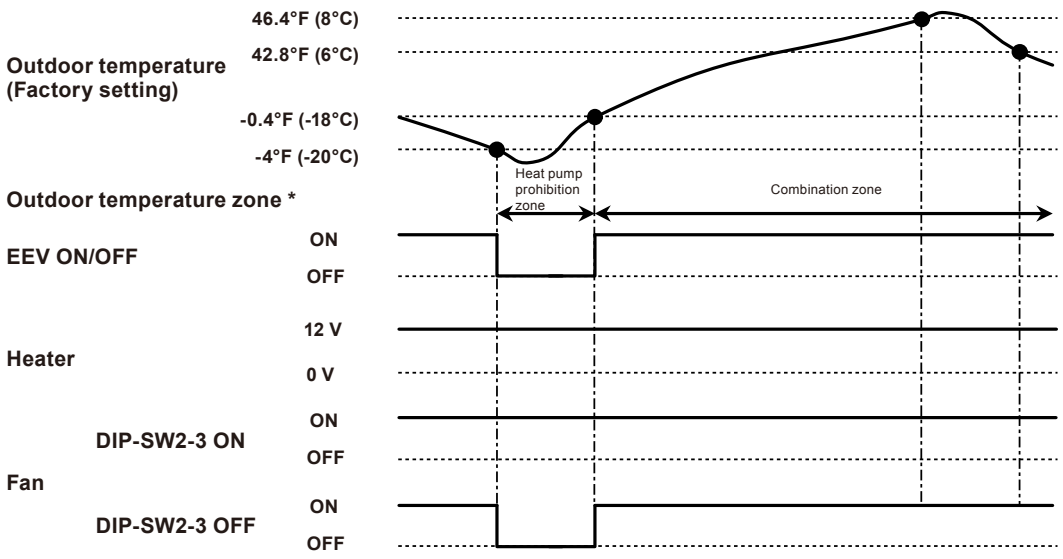
●Outdoor temperature zone



*Adjustable by Function setting

EXTERNAL INPUT & OUTPUT

●Operation status



* The Outdoor temperature zone transition from one to another will stay in that zone for minimum 30 min.

NOTES :

- In following operations, EEV will be ON in Heat pump prohibition zone.
  - Other than Heating
  - Test Run
- This control is enable when the setting code no. 35 of the outdoor unit (Presence of heater selection control by outdoor temperature) is "Enable".

EXTERNAL INPUT & OUTPUT

■ AUXILIARY HEATER CONTROL BY OUTDOOR TEMPERATURE 3

Selects Heat pump or External heater according to the outdoor temperature. Even when outdoor temperature is high, the heating is performed by using both of heat pump and external heater.

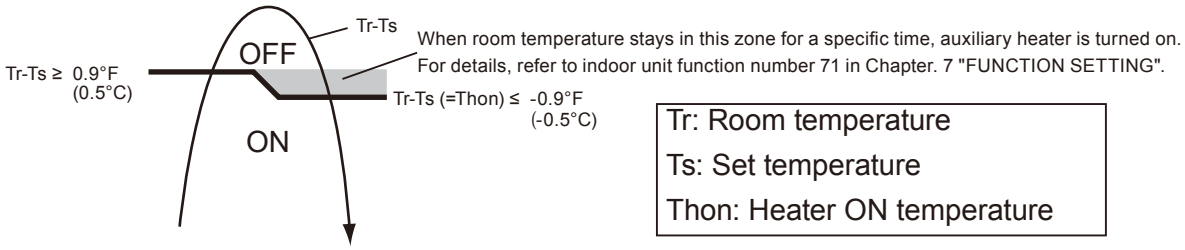
Operation		Condition
Heater ON		▪Heater ON as shown in diagram of heating temperature
Heater OFF	DIP-SW2-3 ON Indoor unit fan setting for external heater: Enable	▪Heater OFF as shown in diagram of heating temperature ▪Other than Heating mode ▪Error occurred ▪Forced thermostat off ▪Fan stop protection
	DIP-SW2-3 OFF Indoor unit fan setting for external heater: Disable	▪Heater OFF as shown in diagram of heating temperature ▪Other than Heating mode ▪Error occurred ▪Forced thermostat off

▪Temperature of heater ON (Thon) ... Adjustable by Function setting No.62 (Operating temperature switching of external heaters).

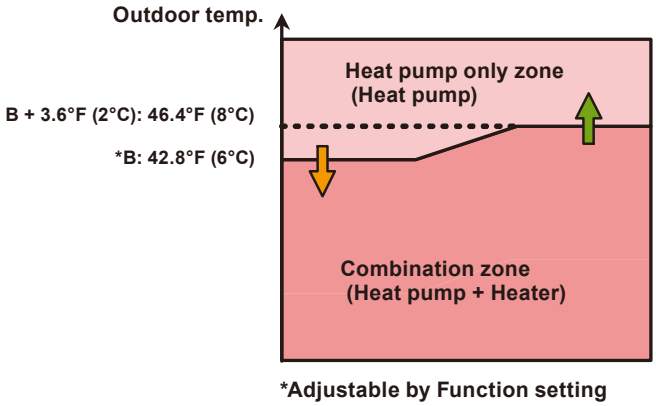
▪All control temperatures will shift by adjusting "Thon".

▪Outdoor temperature zone boundary A and B ... Adjustable individually by Function setting No. 36 and 37 for outdoor unit.

●External heater output



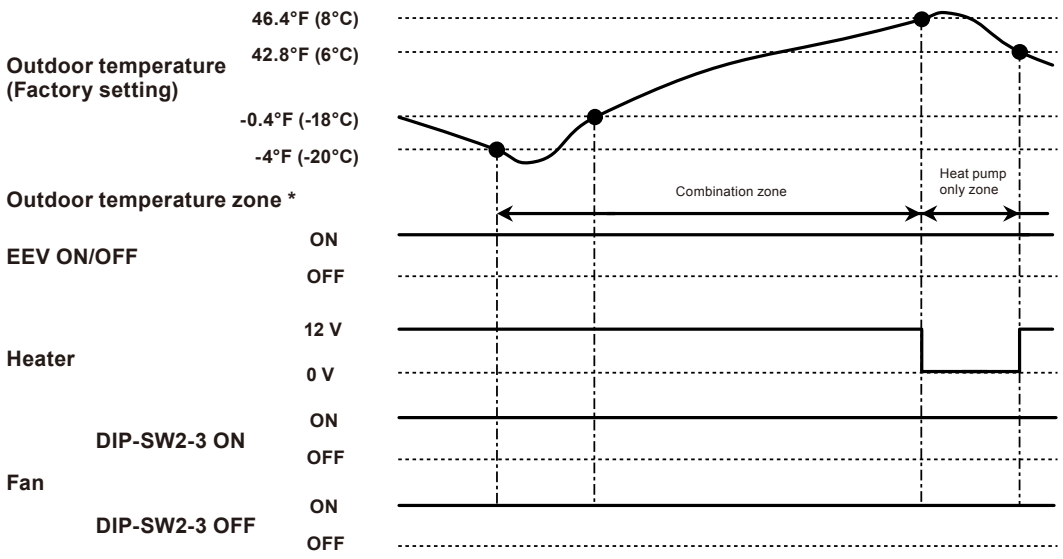
●Outdoor temperature zone



*Adjustable by Function setting

EXTERNAL INPUT & OUTPUT

●Operation status



* The Outdoor temperature zone transition from one to another will stay in that zone for minimum 30 min.

NOTES :

- In following operations, EEV will be ON in Heat pump prohibition zone.
  - Other than Heating
  - Test Run
- This control is enable when the setting code no. 35 of the outdoor unit (Presence of heater selection control by outdoor temperature) is "Enable".

EXTERNAL INPUT & OUTPUT

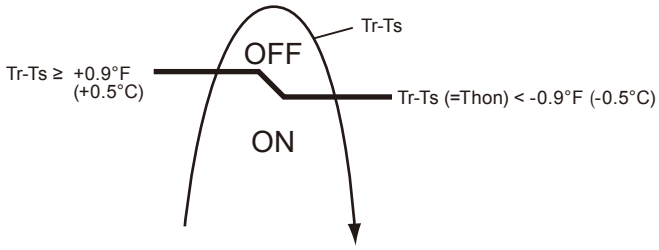
■ AUXILIARY HEAT PUMP CONTROL

●External heater output

Operation		Condition
Heater ON		▪Heater ON as shown in diagram of heating temperature
Heater OFF	DIP-SW2-3 ON Indoor unit fan setting for external heater: Enable	▪Heater OFF as shown in diagram of heating temperature ▪Other than Heating mode ▪Error occurred ▪Forced thermostat off ▪Fan stop protection
	DIP-SW2-3 OFF Indoor unit fan setting for external heater: Disable	▪Heater OFF as shown in diagram of heating temperature ▪Other than Heating mode ▪Error occurred ▪Forced thermostat off

▪Temperature of heater ON (Thon) ... Set temperature (Ts) - 0.9 °F (0.5 °C)

▪Temperature of heater OFF ... Set temperature (Ts) + 0.9 °F (0.5 °C)

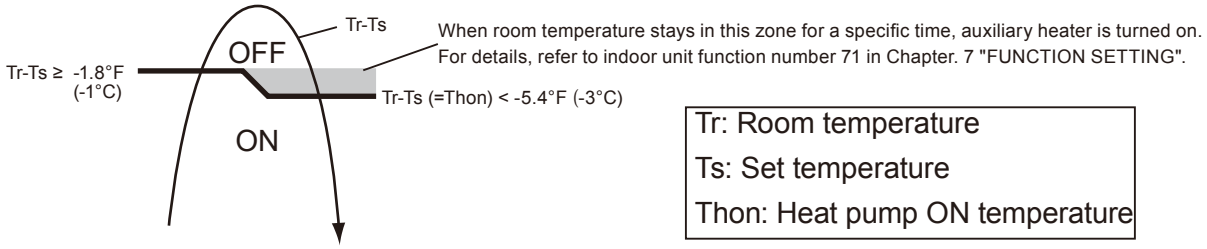


Tr: Room temperature
Ts: Set temperature
Thon: Heater ON temperature

●Auxiliary heat pump thermo ON/OFF

▪Temperature of auxiliary heat pump ON (Thon) ... Adjustable by Function setting No.62 (Operating temperature switching of heat pump).

▪All control temperatures will shift by adjusting "Thon".



Tr: Room temperature
Ts: Set temperature
Thon: Heat pump ON temperature

EXTERNAL INPUT & OUTPUT

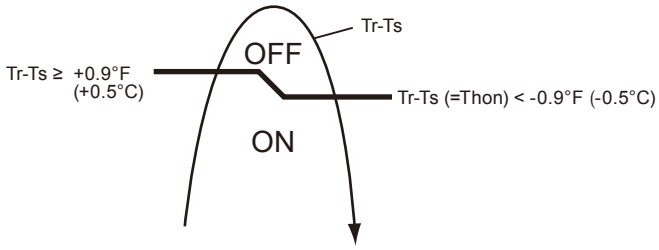
■ AUXILIARY HEAT PUMP CONTROL BY OUTDOOR TEMPERATURE 1

●External heater output

Operation		Condition
Heater ON		▪Heater ON as shown in diagram of heating temperature
Heater OFF	DIP-SW2-3 ON Indoor unit fan setting for external heater: Enable	▪Heater OFF as shown in diagram of heating temperature ▪Other than Heating mode ▪Error occurred ▪Forced thermostat off ▪Fan stop protection
	DIP-SW2-3 OFF Indoor unit fan setting for external heater: Disable	▪Heater OFF as shown in diagram of heating temperature ▪Other than Heating mode ▪Error occurred ▪Forced thermostat off

▪Temperature of heater ON (Thon) ... Set temperature (Ts) - 0.9 °F (0.5 °C)

▪Temperature of heater OFF ... Set temperature (Ts) + 0.9 °F (0.5 °C)

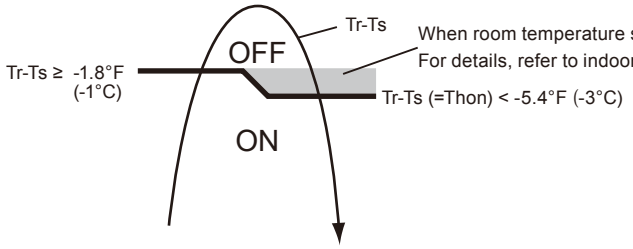


Tr: Room temperature
Ts: Set temperature
Thon: Heater ON temperature

●Auxiliary heat pump thermo ON/OFF

▪Temperature of auxiliary heat pump ON (Thon) ... Adjustable by Function setting No.62 (Operating temperature switching of heat pump).

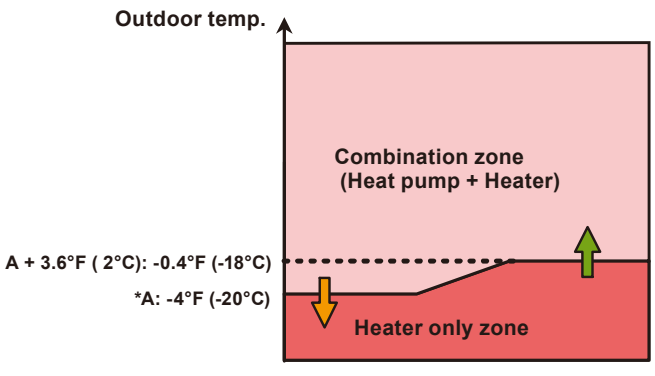
▪All control temperatures will shift by adjusting "Thon".



When room temperature stays in this zone for a specific time, auxiliary heater is turned on. For details, refer to indoor unit function number 71 in Chapter. 7 "FUNCTION SETTING".

Tr: Room temperature
Ts: Set temperature
Thon: Heat pump ON temperature

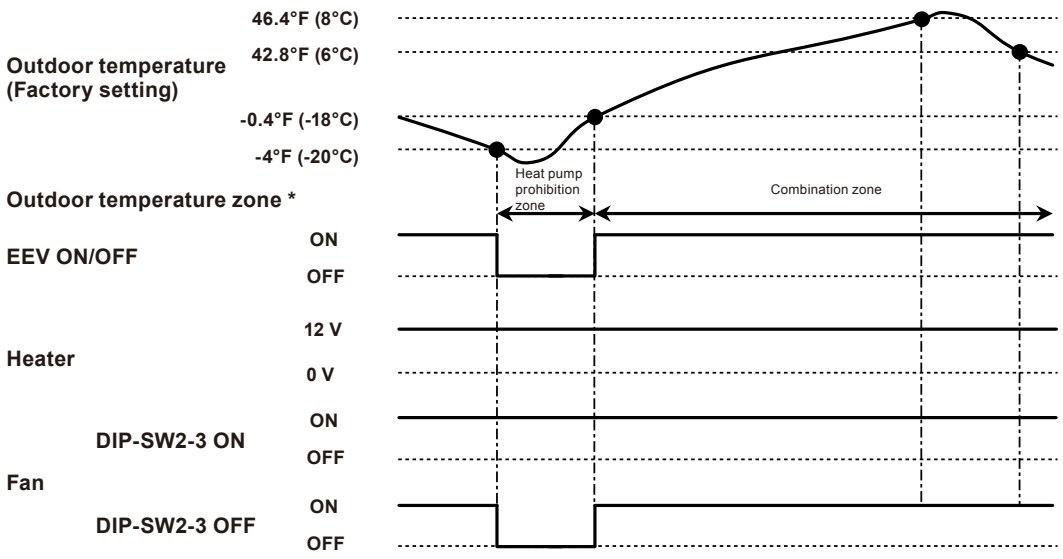
●Outdoor temperature zone



*Adjustable by Function setting

EXTERNAL INPUT & OUTPUT

●Operation status



* The Outdoor temperature zone transition from one to another will stay in that zone for minimum 30 min.

NOTES :

- In following operations, EEV will be ON in Heat pump prohibition zone.
  - Other than Heating
  - Test Run
- This control is enable when the setting code no. 35 of the outdoor unit (Presence of heater selection control by outdoor temperature) is "Enable".

EXTERNAL INPUT & OUTPUT

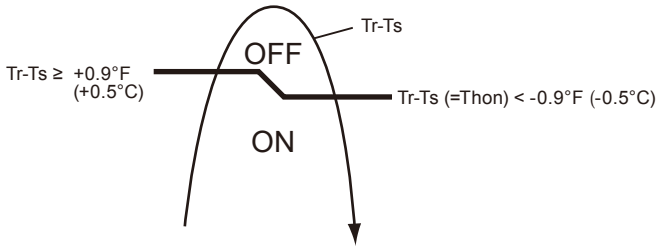
■ AUXILIARY HEAT PUMP CONTROL BY OUTDOOR TEMPERATURE 2

●External heater output

Operation		Condition
Heater ON		▪Heater ON as shown in diagram of heating temperature
Heater OFF	DIP-SW2-3 ON Indoor unit fan setting for external heater: Enable	▪Heater OFF as shown in diagram of heating temperature ▪Other than Heating mode ▪Error occurred ▪Forced thermostat off ▪Fan stop protection
	DIP-SW2-3 OFF Indoor unit fan setting for external heater: Disable	▪Heater OFF as shown in diagram of heating temperature ▪Other than Heating mode ▪Error occurred ▪Forced thermostat off

▪Temperature of heater ON (Thon) ... Set temperature (Ts) - 0.9 °F (0.5 °C)

▪Temperature of heater OFF ... Set temperature (Ts) + 0.9 °F (0.5 °C)

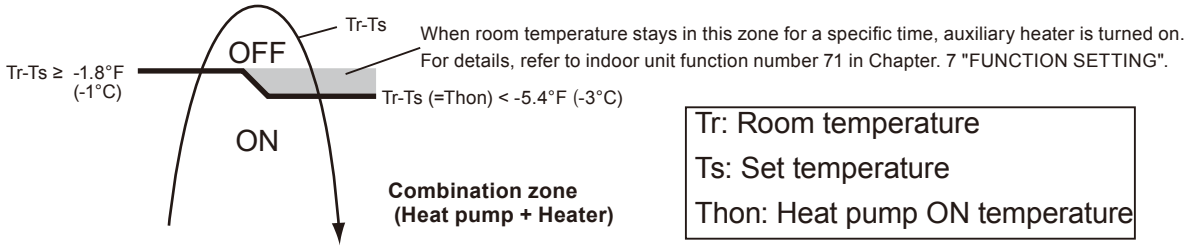


Tr: Room temperature
Ts: Set temperature
Thon: Heater ON temperature

●Auxiliary heat pump thermo ON/OFF

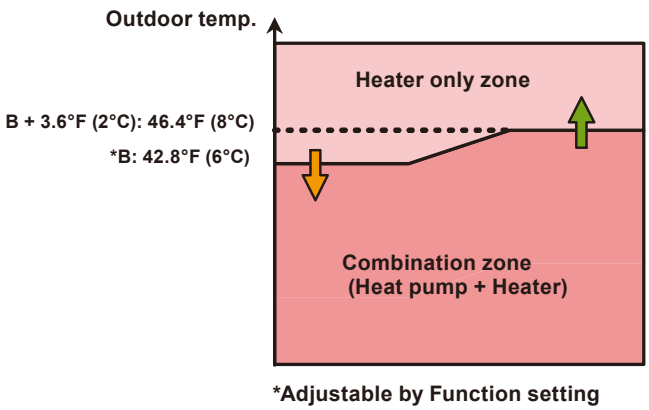
▪Temperature of auxiliary heat pump ON (Thon) ... Adjustable by Function setting No.62 (Operating temperature switching of heat pump).

▪All control temperatures will shift by adjusting "Thon".



Tr: Room temperature
Ts: Set temperature
Thon: Heat pump ON temperature

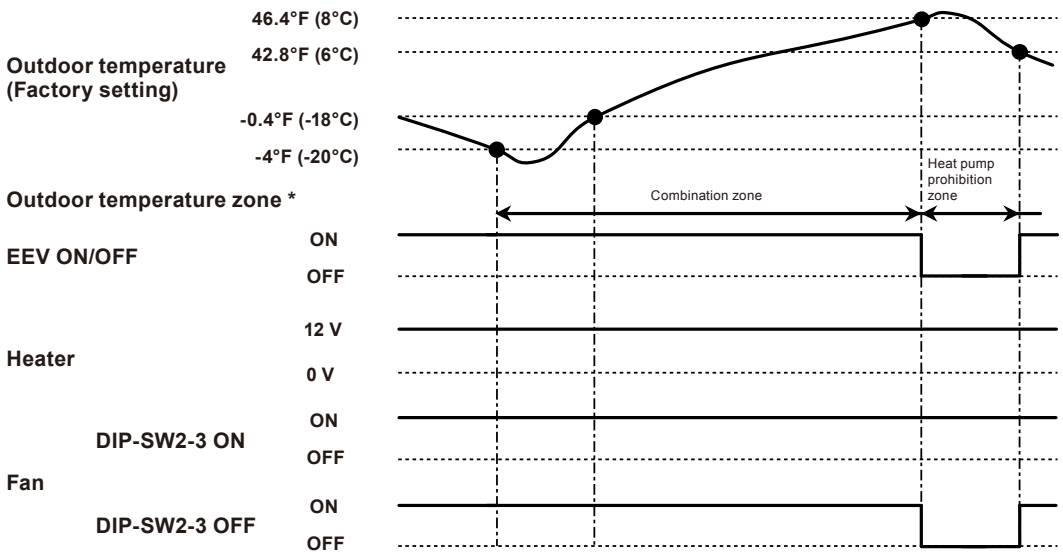
●Outdoor temperature zone



*Adjustable by Function setting

EXTERNAL INPUT & OUTPUT

●Operation status



* The Outdoor temperature zone transition from one to another will stay in that zone for minimum 30 min.

NOTES :

- In following operations, EEV will be ON in Heat pump prohibition zone.
  - Other than Heating
  - Test Run
- This control is enable when the setting code no. 35 of the outdoor unit (Presence of heater selection control by outdoor temperature) is "Enable".

EXTERNAL INPUT & OUTPUT

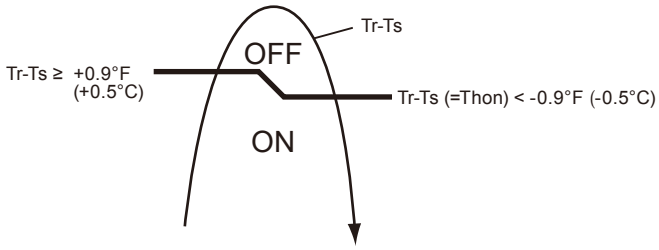
■ AUXILIARY HEAT PUMP CONTROL BY OUTDOOR TEMPERATURE 3

●External heater output

Operation		Condition
Heater ON		▪Heater ON as shown in diagram of heating temperature
Heater OFF	DIP-SW2-3 ON Indoor unit fan setting for external heater: Enable	▪Heater OFF as shown in diagram of heating temperature ▪Other than Heating mode ▪Error occurred ▪Forced thermostat off ▪Fan stop protection
	DIP-SW2-3 OFF Indoor unit fan setting for external heater: Disable	▪Heater OFF as shown in diagram of heating temperature ▪Other than Heating mode ▪Error occurred ▪Forced thermostat off

▪Temperature of heater ON (Thon) ... Set temperature (Ts) - 0.9 °F (0.5 °C)

▪Temperature of heater OFF ... Set temperature (Ts) + 0.9 °F (0.5 °C)

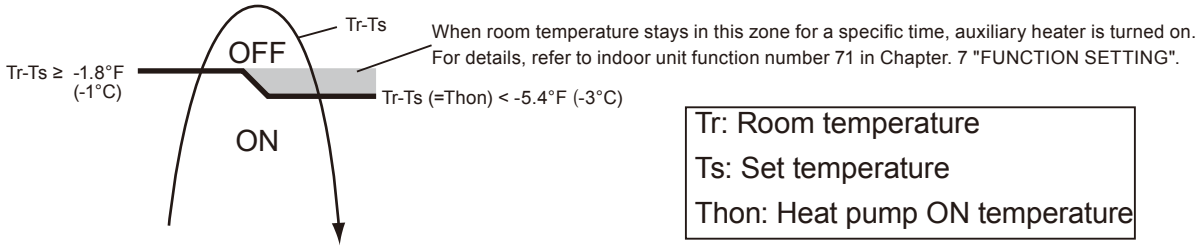


Tr: Room temperature
Ts: Set temperature
Thon: Heater ON temperature

●Auxiliary heat pump thermo ON/OFF

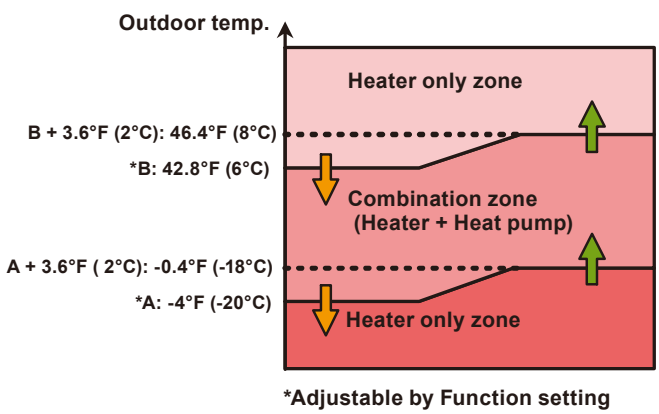
▪Temperature of auxiliary heat pump ON (Thon) ... Adjustable by Function setting No.62 (Operating temperature switching of heat pump).

▪All control temperatures will shift by adjusting "Thon".



Tr: Room temperature
Ts: Set temperature
Thon: Heat pump ON temperature

●Outdoor temperature zone

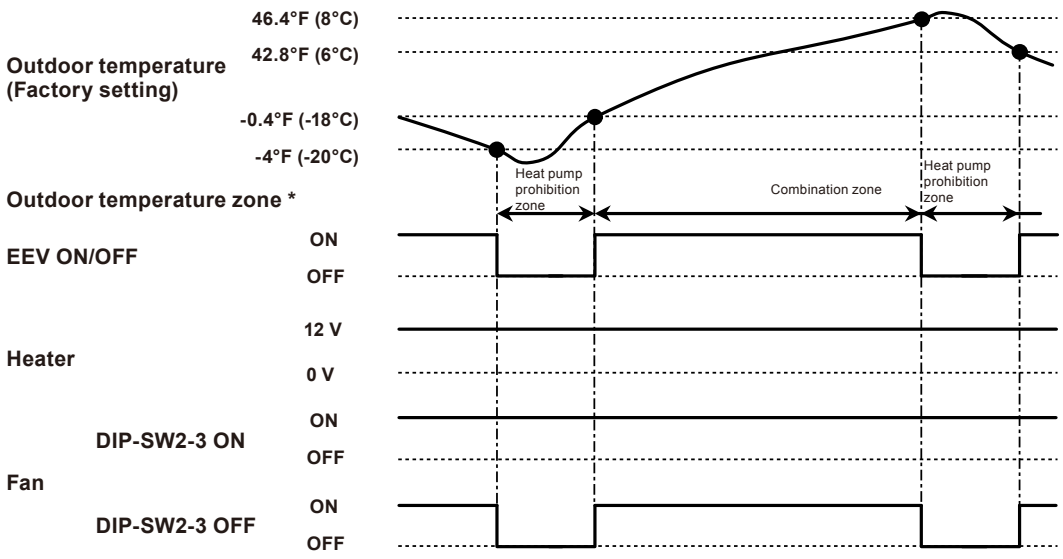


*Adjustable by Function setting

EXTERNAL INPUT & OUTPUT

EXTERNAL INPUT & OUTPUT

●Operation status



* The Outdoor temperature zone transition from one to another will stay in that zone for minimum 30 min.

NOTES :

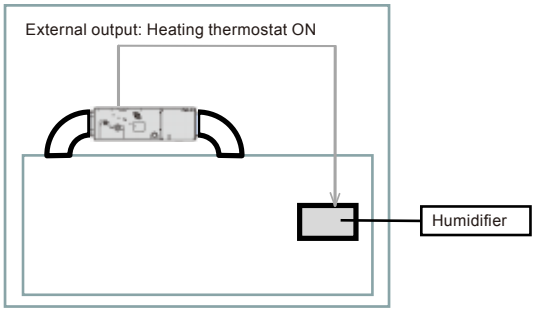
- In following operations, EEV will be ON in Heat pump prohibition zone.
  - Other than Heating
  - Test Run
- This control is enable when the setting code no. 35 of the outdoor unit (Presence of heater selection control by outdoor temperature) is "Enable".

EXTERNAL INPUT & OUTPUT

⑨HEATING THERMOSTAT ON FOR HUMIDIFIER

Situation (Example)	Installation configration	Indoor unit			
		Function Setting		External output	
		Heating thermostat ON No.60	Cool Air Prevention No.43	Heating thermostat ON	Indoor unit fan operation status
Example 1	Individual	60-05	43-00 (Enable)	CNB01 Output 1 (PIN 1-2)	Not use
		60-06		CNB01 Output 4 (PIN 1-5)	
		60-07		CNB01 Output 3 (PIN 1-4)	
		60-08		CNB01 Output 2 (PIN 1-2)	
Example 2	In-line	60-05	43-00 (Enable)	CNB01 Output 1 (PIN 1-2)	CNB01 Output 3 (PIN 1-4)
		60-06		CNB01 Output 4 (PIN 1-5)	
Example 3		60-05	43-01 (Disable)	CNB01 Output 1 (PIN 1-2)	Not use
		60-06		CNB01 Output 4 (PIN 1-5)	
		60-07		CNB01 Output 3 (PIN 1-4)	
		60-08		CNB01 Output 2 (PIN 1-2)	

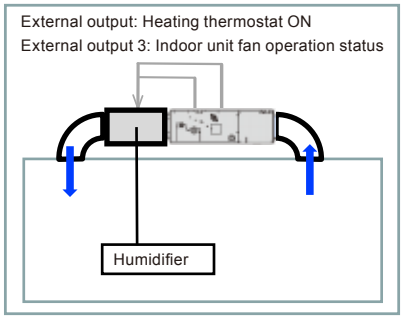
●Example 1 (Individual connection)



EXTERNAL INPUT & OUTPUT

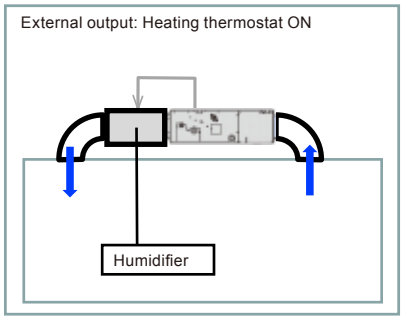
●Example 2 (In-line connection)

Indoor unit fan operation status use



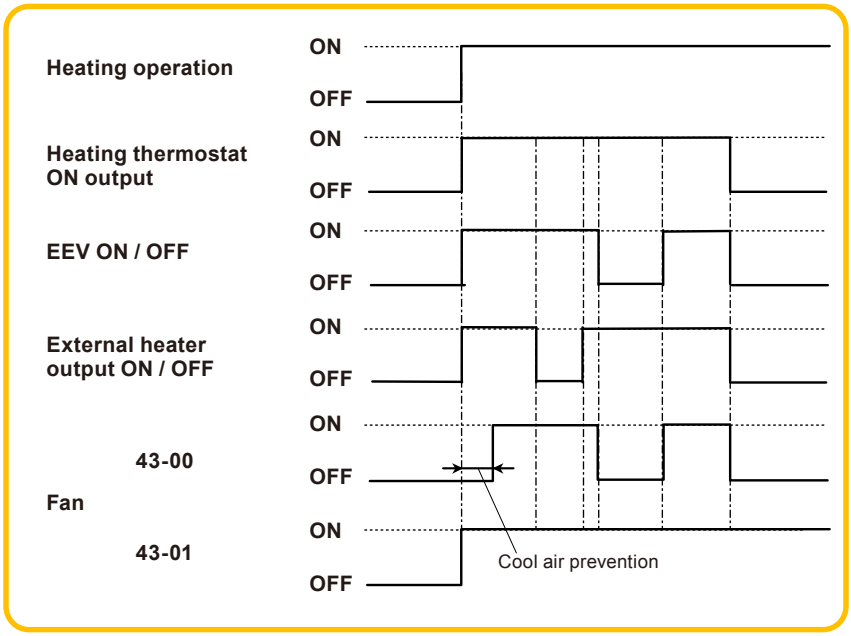
●Example 3 (In-line connection)

Disable cool air prevention function.
The indoor unit fan is operated at the set speed continuously.



The Heating thermostat output for CNB01 (1-2 or 1-3 or 1-4 or 1-5) will be ON when EEV ON or external heater ON.

The Heating thermostat output will be OFF when EEV OFF and external heater OFF.



EXTERNAL INPUT & OUTPUT

1-3. RB UNIT

External input	External output	Input select	Connector	External connect kit (Optional parts)
Cooling priority/ Heating priority	-	Dry contact	CNA01	UTY-XWZXZ6
		Apply voltage	CNA02	UTY-XWZXZB

1-3-1. EXTERNAL INPUT

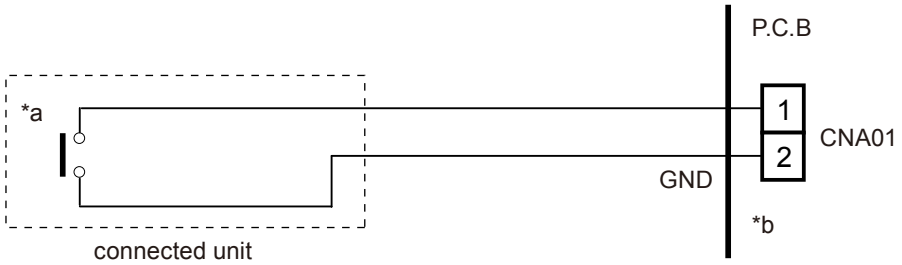
- RB unit can be cooling priority/heating priority selection by using RB unit PCB CNA01 or CNA02.
- The "external input priority mode" must be set by changing DIP SW on PCB of RB unit.
- A twisted pair cable (22AWG) should be used. Maximum length of cable is 492 ft. (150 m)
- Use an external input cable with appropriate external dimension, depending on the number of cables to be installed.
- The wire connection should be separate from the power cable line.

■ INPUT SELECT

Use either one of these types of terminal according to the application. (Both types of terminals cannot be used simultaneously.)

● Dry contact terminal ([CNA01])

When a power supply is unnecessary at the input device you want to connect, use the Dry contact terminal ([CNA01]).

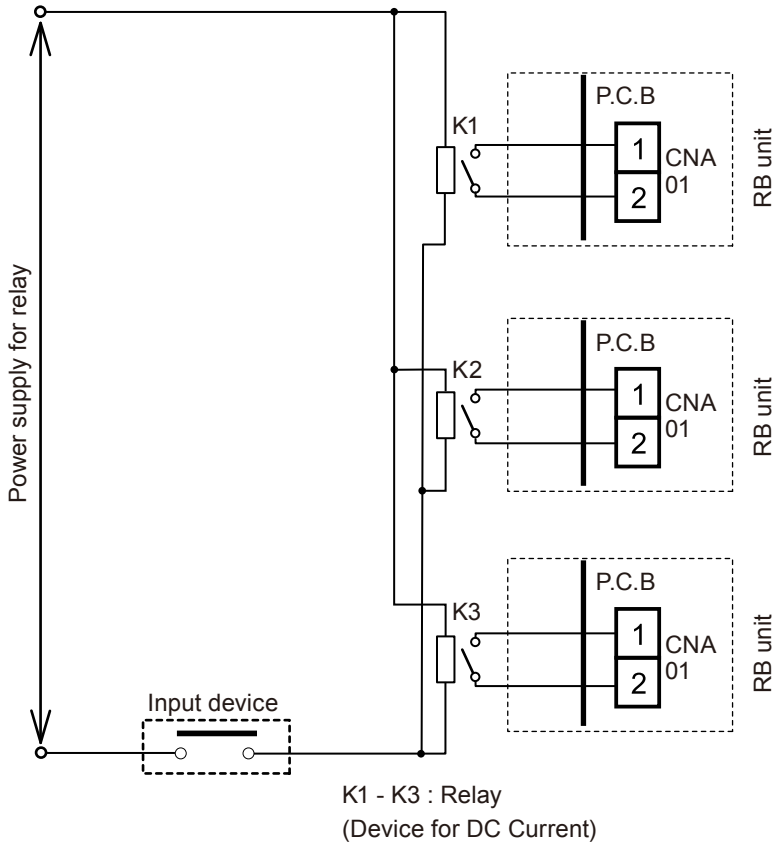


*a: Select very low current use contacts (usable at DC 12 V, DC 1 mA or less).

*b: The wiring is different from Apply voltage terminals. Be sufficiently careful when wiring.

EXTERNAL INPUT & OUTPUT

When connected to Dry contact terminals of multiple RB units with a connected unit, insulate each RB unit with relay, etc. as shown on below example.



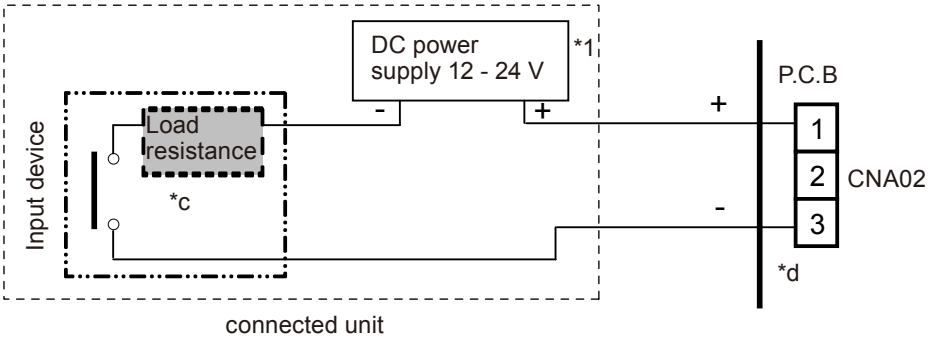
NOTE :

● If power is connected to dry contact on indoor units, damage will occur.

EXTERNAL INPUT & OUTPUT

● Apply voltage terminal ([CNA02])

When a power supply must be provided at the input device you want to connect, use the Apply voltage terminal ([CNA02])

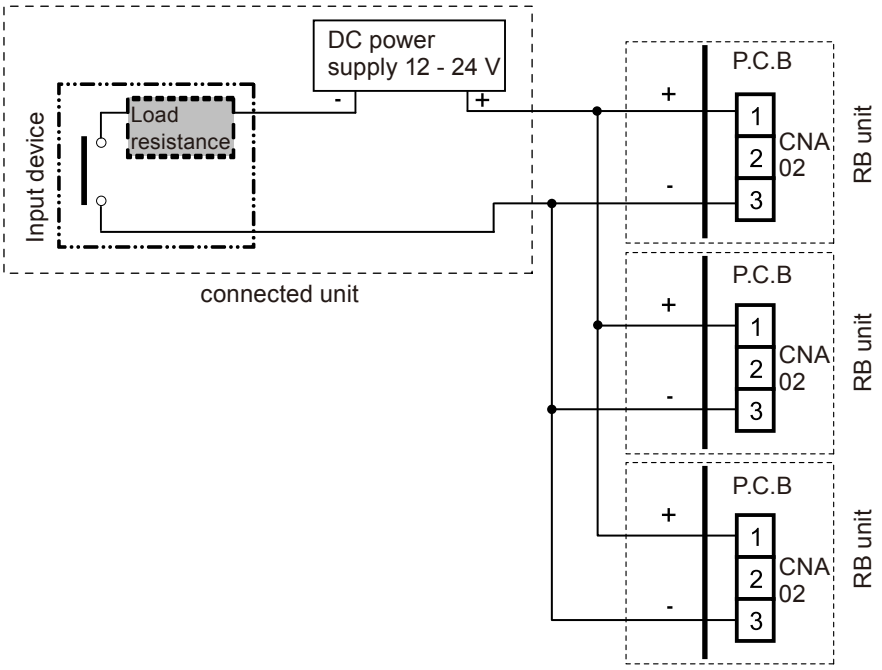


*1: Make the power supply DC 12 to 24 V. Select a power supply capacity with an ample surplus for the connected load.
Do not impress a voltage exceeding 24 V across pins 1-3.

*c: The allowable current is DC 5mA to 10mA. (Recommended: DC 5 mA)
Provide a load resistance such that the current becomes DC 10 mA or less.
Select very low current use contacts (usable at DC 12 V, DC 1 mA or less).

*d: The polarity is [+] for pin 1 and [-] for pin 3. Connect correctly.

When connected to Apply voltage terminals of multiple RB units with a connected unit, be sure to make a branch outside the RB unit using a pull box, etc. as shown on below example.

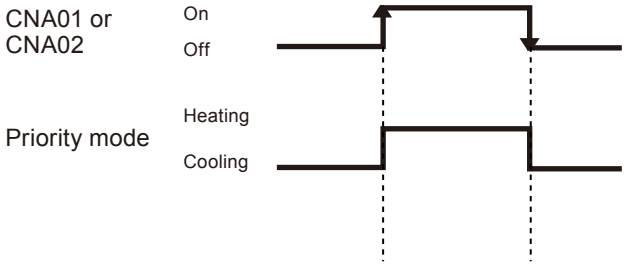


EXTERNAL INPUT & OUTPUT

■ COOLING/HEATING PRIORITY FUNCTION

●"Edge" input only

Connector	Input signal	Command
CNA01 or CNA02	OFF → ON	Heating priority
	ON → OFF	Cooling priority



1-3-2. OPTIONAL PARTS

Usage	Name and shapes	Q'ty	Models
For control input port (Dry contact terminal)	EXTERNAL CONNECT KIT	1	UTY-XWZXZ6
For control input port (Apply voltage terminal)	EXTERNAL CONNECT KIT	1	UTY-XWZXZB

EXTERNAL INPUT & OUTPUT

1-4. TOUCH PANEL CONTROLLER

External input	External output	Connector	External connect kit (Optional parts)
Control input	-	TM201 (CN411 or CN412)	-
Electricity meter	-		-
-	Operation status	CN410	UTY-XWZXZA
-	Error status		

1-4-1. EXTERNAL INPUT

- This function performs “Emergency stop” or “All On / All Off” by using the signal to be input externally at external input terminals.

■ INPUT SELECT

Use either one of these types of terminal according to the application. (Both types of terminals cannot be used simultaneously.)

For more details on the selection setting, refer to the operation manual of Touch Panel Controller.

It is possible to switch to the Dry contact terminal or the Apply voltage terminal by connecting the CN201 on the TM201 printed circuit board to the CN411 or the CN412 on the printed circuit board of the panel side.

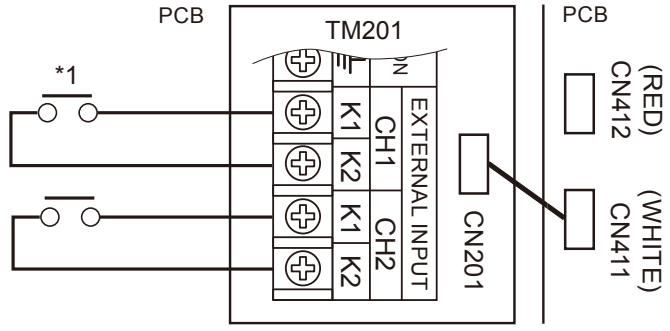
* The Dry contact terminal (connected to the CN411) is set when shipped from the factory.

TM201 - CH1, CH2	Connect with the CN201
Dry contact terminal	CN411
Apply voltage terminal	CN412

● Dry contact terminal TM201 (CN411)

When a power supply is unnecessary at the input device you want to connect, use the Dry contact terminal TM201 (CN411).

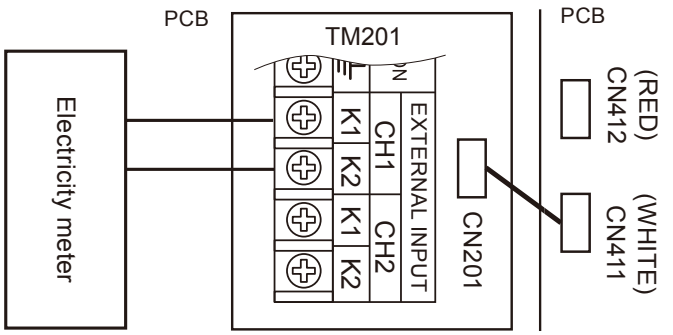
Connection example 1: When the switch is connected



*1: Short circuit detection resistance (R_{ON}) : ≤ 500 (ohm).
Open circuit detection resistance (R_{OFF}) : ≥ 100 (kilo-ohm).
A twisted pair cable(22AWG) should be used. Maximum length of cable is 82 ft. (25 m)

EXTERNAL INPUT & OUTPUT

Connection example 2: When the electricity meter is connected

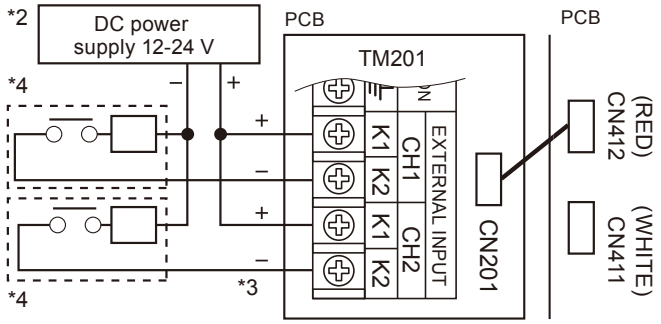


Connect the electricity meter to CH1. In this case, the use of CH2 is prohibited.

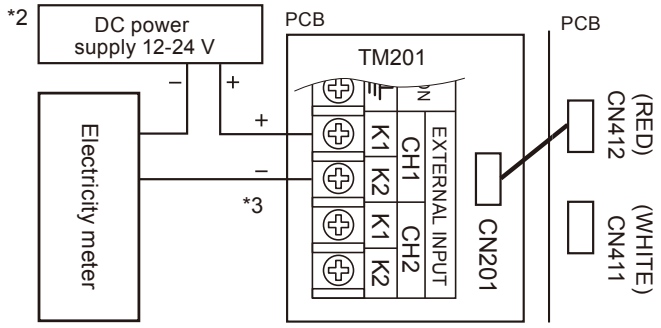
● Apply voltage terminal TM201 (CN412)

When a power supply must be provided at the input device you want to connect, use the Apply voltage terminal TM201 (CN412).

Connection example 1: When the switch is connected



Connection example 2: When the electricity meter is connected



*2: Make the power supply DC 12 to 24 V. Select a power supply capacity with an ample surplus for the connected load.

*3: Do not impress a voltage exceeding 24 V across K1-K2.

*4: The allowable current is DC 10 mA or less. (Recommended DC 5 mA) Provide a load resistance such that the current becomes DC 10 mA or less. Select very low current use contacts (usable at DC 12 V, DC 1 mA or less). A twisted pair cable 0.33 mm^2 (22AWG) should be used. Maximum length of cable is 25 m (82 ft).

EXTERNAL INPUT & OUTPUT

■ SELECTING THE FUNCTION

The function of the external input terminals is disabled at the factory.

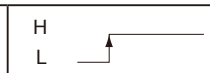
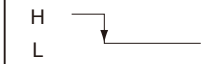
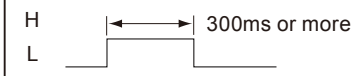
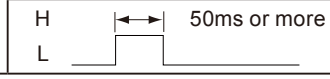
Select the function to be used (following table) by installer setting of application.

* Turn on the power and select by installer setting after starting the application.

Emergency stop	Edge / Pulse
All on / All off	
Electricity meter	Pulse

■ INPUT SIGNAL TYPE

The input signal type can be selected.

Edge		Emergency stop or All on	CH1
		Emergency stop reset or All off	
Pulse		Emergency stop or All on	CH1
		Emergency stop reset or All off	CH2
		Electricity meter signal	CH1

H: Energized state L: Shutoff state

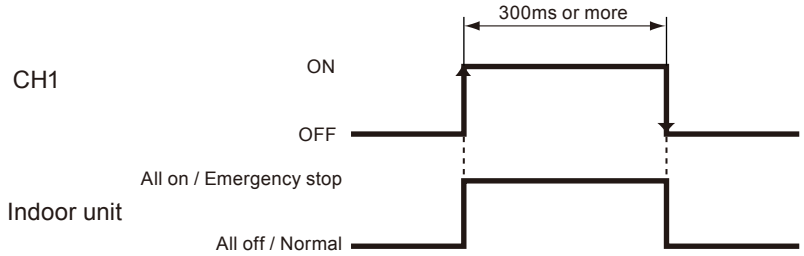
When Edge was selected, only CH1 can be used. CH2 cannot be used.

EXTERNAL INPUT & OUTPUT

■ CONTROL INPUT FUNCTION

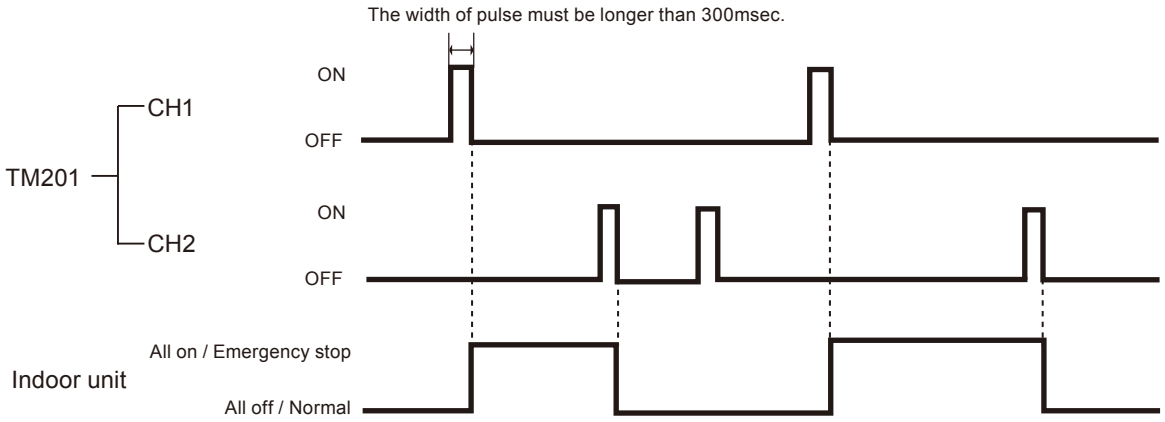
●In the case of "Edge" input

Terminal		Input signal	Command
TM201	CH1	OFF → ON	All on / Emergency stop
		ON → OFF	All off / Normal



●In the case of "Pulse" input

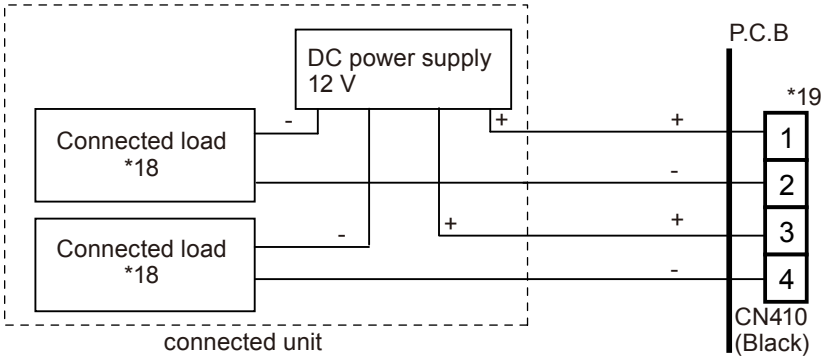
Terminal		Input signal	Command
TM201	CH1	Pulse	All on / Emergency stop
	CH2		All off / Normal



EXTERNAL INPUT & OUTPUT

1-4-2. EXTERNAL OUTPUT

Connector		Output voltage	Status
CN410 (Black)	Ch1	0 V	All of indoor units "Stop"
	Pins1-2	DC 12 V *17	At least one more indoor units "Operation"
	Ch2	0 V	Normal
	Pins3-4	DC 12 V *17	Error



*17: Provide a DC 12 V power supply. Select a power supply capacity with an ample surplus for the connected load.
Do not impress a voltage exceeding 12 V across pins 1-2, and 3-4

*18: The allowable current is DC15mA or less. Provide a load resistance such that the current becomes DC 15 mA or less.

*19: Polarity is [+] for pins 1,3 and [-] for pins 2,4.

■ OPERATION STATUS (External output1)

The output for CN410(1-2) is ON when at least one more indoor units is operating.

The output is OFF when all of indoor units is stopped.

■ ERROR STATUS (External output2)

The output for CN410(3-4) is ON when Error of at least one more indoor unit or outdoor unit or Touch panel controller is generated.

1-4-3. PARTS

Name and shapes	Q'ty	Model
EXTERNAL CONNECT KIT	1	UTY-XWZXZA

EXTERNAL INPUT & OUTPUT

1-5. CENTRAL REMOTE CONTROLLER

External input	External output	Input select	Connector	External connect kit (Optional parts)
Control input	-	Dry contact	CN6 (and CN7)	UTY-XWZXZ7
		Apply voltage	CN11 (and CN12)	UTY-XWZXZ8
-	Operation status	-	CN9	UTY-XWZXZA
-	Error status			

1-5-1. EXTERNAL INPUT

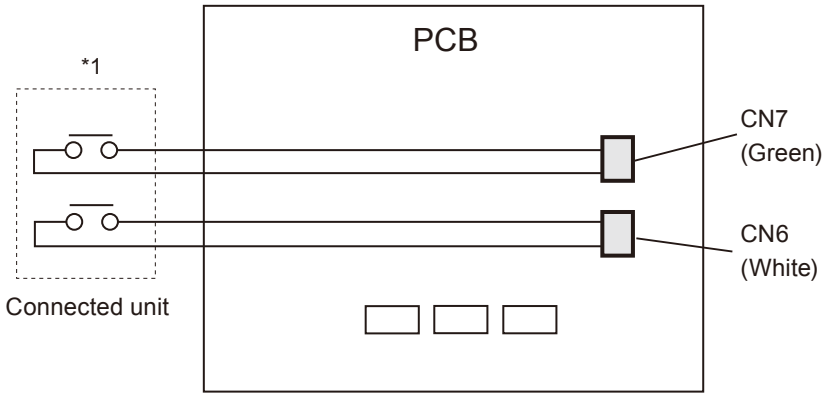
- This function performs “Emergency stop” or “All On / All Off” by using the signal to be input externally at external input terminals.

■ INPUT SELECT

There are 2 kinds of input method of External input terminal: “Dry contact” or “Apply voltage contact”.

● Dry contact

When a power supply is unnecessary at the input device you want to connect, connect to CN6 and CN7.



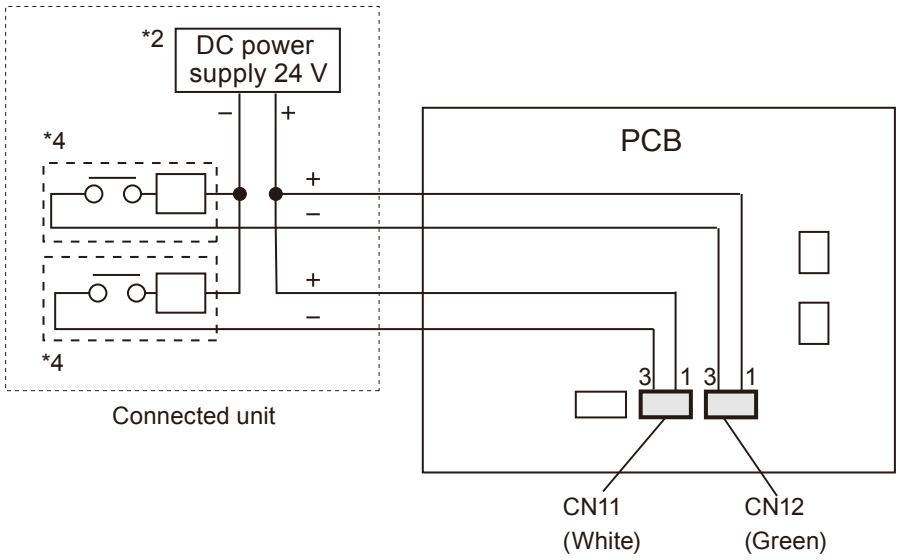
*1 : Short circuit detection resistance (R_{ON}) : ≤ 500 (ohm).
Open circuit detection resistance (R_{OFF}) : ≥ 100 (kilo-ohm).

* A twisted pair cable(22AWG) should be used. Maximum length of cable is 82 ft. (25 m)

EXTERNAL INPUT & OUTPUT

● Apply voltage contact

When a power supply must be provided at the input device, connect to CN11 and CN12.

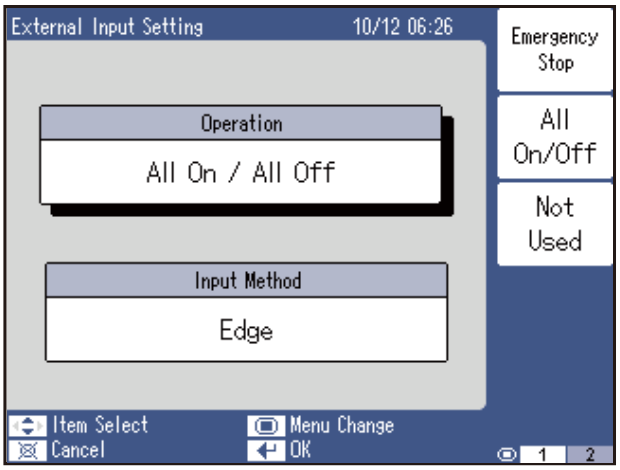


*2 : Make the power supply 24 V. Select a power supply capacity with an ample surplus for the connected load.
*3 : Do not impress a voltage exceeding 24 V across pin 1, 3.
*4 : The allowable current is DC 5 mA or less. (Recommended DC 5 mA)
Provide a load resistance such that the current becomes DC 5 mA or less.

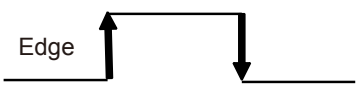
* A twisted pair cable(22AWG) should be used. Maximum length of cable is 82 ft. (25 m)

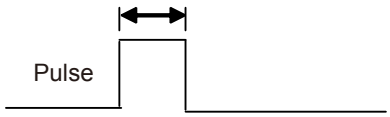
■ INPUT SIGNAL TYPE

The input signal type can be selected.



- Press the [ ] button and move the cursor to the “Operation” menu.
  [Emergency Stop] button : Enables Emergency stop by external input.
  [All On/All Off] button : Enables batch operation On/Off by external input.
  [Not Used] button : Does not receive external input signals.
- Press the [ ] button and move the cursor to the “Input Method” menu.
  [Edge] button : Detects the signal rise and fall.
  [Pulse] button : Detects the signal level.
- When the [ ] button is pressed, setting is complete.



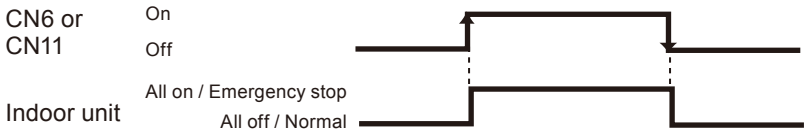


EXTERNAL INPUT & OUTPUT

■ CONTROL INPUT FUNCTION

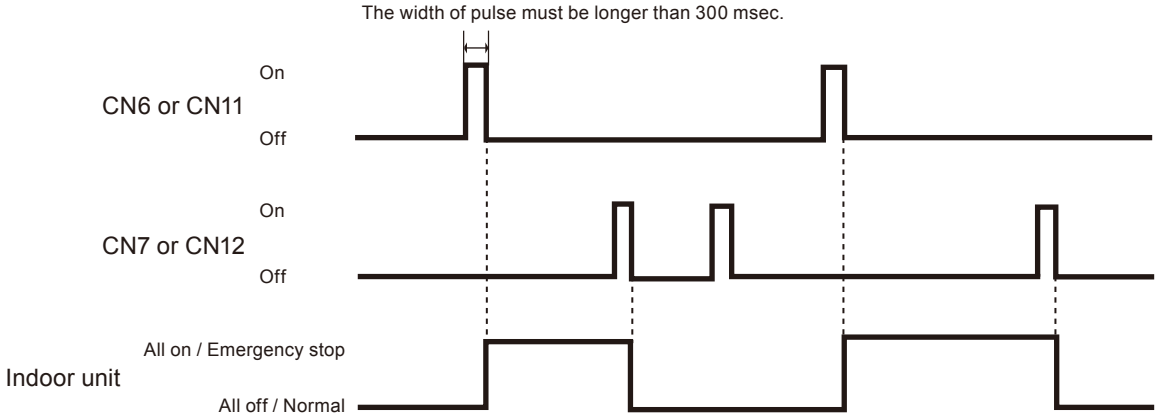
●In the case of "Edge" input

Connector	Input signal	Command
CN6 or CN11	OFF → ON	All on / Emergency stop
	ON → OFF	All off / Normal



●In the case of "Pulse" input

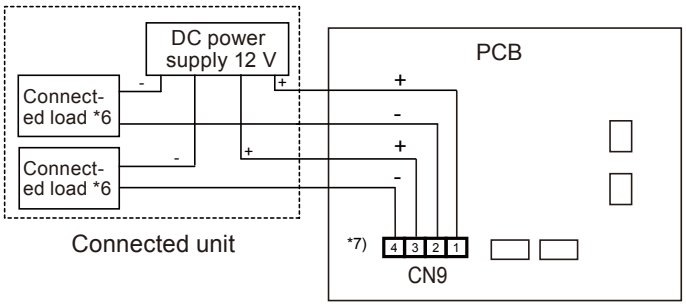
Connector	Input signal	Command
CN6 or CN11	OFF → ON	All on / Emergency stop
CN7 or CN12	OFF → ON	All off / Normal



EXTERNAL INPUT & OUTPUT

1-5-2. EXTERNAL OUTPUT

Connector		Output voltage	Status
CN9 (Black)	Ch1	0 V	All of indoor units "Stop"
	Pins3-4	DC 12 V *5	At least one more indoor units "Operation"
	Ch2	0 V	Normal
	Pins1-2	DC 12 V *5	Error



*5: Provide a DC12 V power supply. Select a power supply capacity with an ample surplus for the connected load.
Do not impress a voltage exceeding 12 V across pins 1-2, and 3-4

*6: The allowable current is DC 15 mA or less. Provide a load resistance such that the current becomes DC 15 mA or less.

*7: Polarity is [+] for pins 1,3 and [-] for pins 2,4.

■ OPERATION STATUS (External output1)

The output for CN9 (3-4) is ON when at least one more indoor units is operating.

The output is OFF when all of indoor units is stopped.

■ ERROR STATUS (External output2)

The output for CN9 (1-2) is ON when Error of at least one more indoor unit or outdoor unit or Central remote controller is generated.

1-5-3. PARTS

Usage	Name and shapes	Q'ty		Models
For control input port (Dry contact terminal)	External CONNECT KIT	Edge	Pulse	UTY-XWZXZ7
		1	2	
For control input port (Apply voltage terminal)	External CONNECT KIT	Edge	Pulse	UTY-XWZXZ8
		1	2	
For output port	External CONNECT KIT	1		UTY-XWZXZA

EXTERNAL INPUT & OUTPUT

1-5-4. CONTROLLER EXTERNAL INPUT / OUTPUT FUNCTION SUMMARY

■ CONTROLLER EXTERNAL INPUT FUNCTION

Central controller (Input function)	Dry contact / Apply voltage	Function		Specifications				
		Emergency stop	Batch on / Batch off	Terminal	Signal type	External power supply		Wire size / length
						Allowable voltage	Allowable current	
Touch Panel Controller	Dry contact	● (Screen icon)	● (Screen icon)	TM201 (CH1-K1,K2) [CN201 ↔ CN411]	Edge	-	-	AWG22 Twist / 82 ft. (25 m)
				TM201 (CH1-K1,K2) (CH2-K1,K2) [CN201 ↔ CN411]	Pulse *1			
	Apply voltage	● (Screen icon)	● (Screen icon)	TM201 (CH1-K1,K2) [CN201 ↔ CN412]	Edge	DC 12 [V]	10 mA or less	
				TM201 (CH1-K1,K2) (CH2-K1,K2) [CN201 ↔ CN412]	Pulse *1			
Central Remote Controller	Dry contact	● (Screen icon)	● (Screen icon)	CN6 (PIN1-2)	Edge	-	-	
				CN6 (Ch1:PIN1-2) CN7 (Ch2:PIN1-2)	Pulse *1			
	Apply voltage	● (Screen icon)	● (Screen icon)	CN11 (PIN1-3)	Edge	DC 24 [V]	5 mA or less	
				CN11 (Ch1:PIN1-3) CN12 (Ch2:PIN1-3)	Pulse *1			

*1 : Default setting is Edge signal, if you use pulse signal, must be set pulse signal from screen icon.

■ CONTROLLER EXTERNAL OUTPUT FUNCTION

Central Controller (Output Function)	Dry contact / Apply voltage	Function		Specifications			
		Operation status	Error status	Terminal	External power supply		Wire size/ length
					Allowable voltage	Allowable current	
Touch Panel Controller	Apply voltage	●	-	CN410 (PIN1-2)	DC 12 [V]	15 mA or less	AWG22 Twist / Max. 82 ft. (25 m)
		-	●	CN410 (PIN3-4)			
Central Remote Controller	Apply voltage	●	-	CN9 (PIN3-4)			
		-	●	CN9 (PIN1-2)			

EXTERNAL INPUT & OUTPUT

Refrigerant R410A INVERTER

AIRSTAGE™
Variable Refrigerant Flow System

9. NOTES

CONTENTS

9. NOTES

1. REFRIGERANT CONCENTRATION PRECAUTIONS 09-01
   1-1. INTRODUCTION 09-01
   1-2. CHECKING CONCENTRATION LIMIT 09-02
   1-3. REFRIGERATION CONCENTRATION COUNTERMEASURES 09-03

2. INSTALLATION PRECAUTIONS 09-04
   2-1. INDOOR UNIT INSTALLATION PRECAUTIONS 09-04
   2-2. OUTDOOR UNIT INSTALLATION PRECAUTIONS 09-07

3. COMPATIBILITY OF VRF SYSTEM 09-08

4. ABOUT CONNECTION BETWEEN SERIES 09-11
   4-1. PIPING CONNECTION 09-11
   4-2. WIRING CONNECTION 09-12

1. REFRIGERANT CONCENTRATION PRECAUTIONS

The system designer and installer are to ensure that the system adheres to all local regulations regarding refrigerant leakage.

1-1. INTRODUCTION

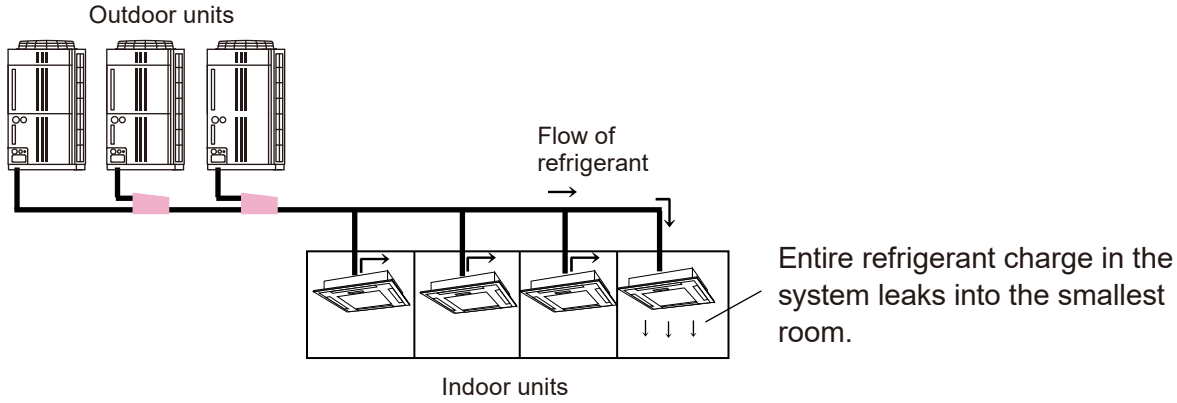
Designing VRF systems requires special attention to codes and standards relating to Refrigeration Concentration Limit (RCL). The RCL is intended to “reduce the risks of acute toxicity, asphyxiation and flammability hazards in normally occupied, enclosed spaces”.
Because R-410A in neither toxic nor flammable; the primary safety concern is asphyxiation due to oxygen deprivation.

● Concentration limit

The purpose of the concentration limit is to protect occupants in the unlikely event that the entire refrigerant system leaks into the smallest room served by the system. To calculate the potential refrigerant concentration, divide the total refrigerant in the system by the volume of the smallest space served by the system.

The Concentration Limit for R-410A : 25lbs./1,000 ft³ (0.40kg/m³)*.

*Based on ASHRAE 34-2007 and IMC-2009



NOTES

NOTES

1-2. CHECKING CONCENTRATION LIMIT

Check concentration limit following steps ①②, and take appropriate measures depending on the situation.

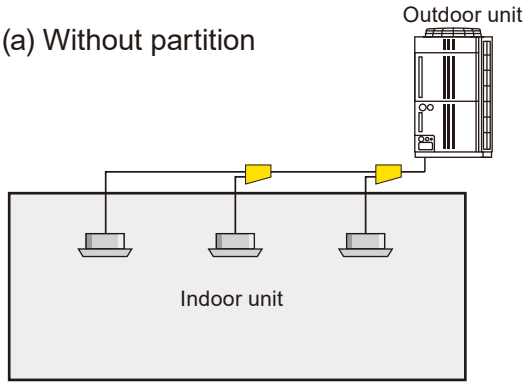
① Calculate amount of refrigerant [lbs. (kg)] per refrigerant system.

Amount of refrigerant per refrigerant system	+	Amount of additional refrigerant	=	Total amount of refrigerant in system (lbs, kg)
Amount of factory charged refrigerant		Amount of refrigerant added to system based on pipe length, pipe size and indoor units.		Note : When one refrigerant system is divided into 2 or more refrigerant systems and each system is independent, total amount of refrigerant of each system shall be adopted.

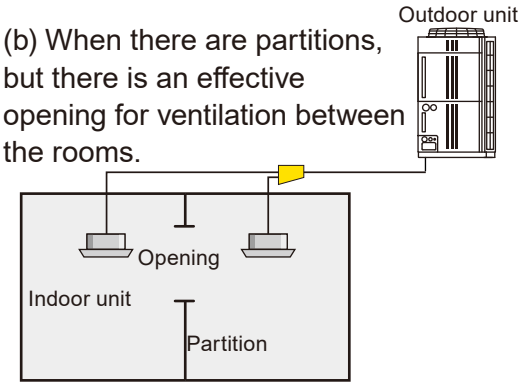
② Smallest room volume.

Calculate room volume by regarding ▭ portion as one room or the smallest room.

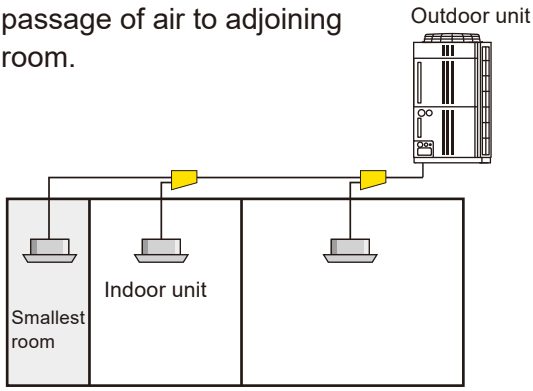
(a) Without partition



(b) When there are partitions, but there is an effective opening for ventilation between the rooms.



(c) With partition and without opening which serve as passage of air to adjoining room.



③ Calculate refrigerant concentration from the results of ① and ②

$$\frac{\text{Total amount of refrigerant in refrigerant system (lbs,kg)}}{\text{Capacity of smallest room where indoor unit is installed [cf (m}^3\text{)]}} \leq \text{Refrigerant concentration [lbs./Mcf (kg/m}^3\text{)]}$$

(R410A)

When the result of calculation exceeds the limiting concentration,perform the same calculations by shifting to the second smallest,and the third smallest rooms until the final result is below the limiting concentration.

NOTES

NOTES

1-3. REFRIGERATION CONCENTRATION COUNTERMEASURES

When the concentration limit is exceeded, the designer will need to change the original design or use one of the countermeasures below to reduce potential exposure to refrigerant. Always consult local codes to ensure proper design.

● Countermeasure 1

Provide opening for ventilation.

Provide 0.15% or more opening to floor space both above and below or provide opening without door. (0.15% floor opening based on standard ceiling height of 8.8 ft. (2.7m))

● Countermeasure 2

Reduce the total refrigerant charging amount of the refrigerant equipment

(1) Shorten the length of the refrigerant pipes

Move the location of the outdoor unit closer to the indoor unit, and reduce the total refrigerant charging amount by shortening the length of the refrigerant pipes.

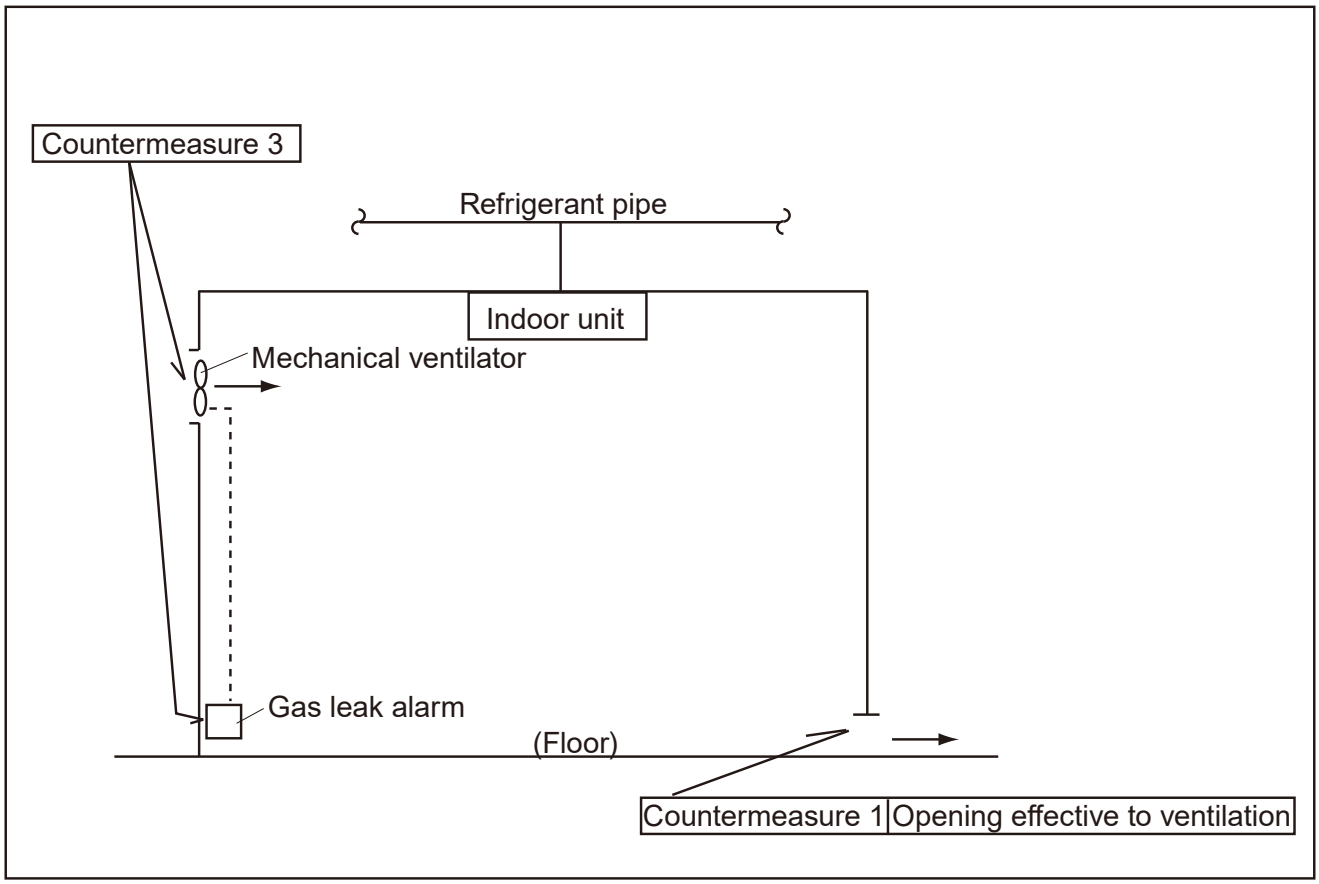
(2) Lower the capacity of the outdoor unit.

Separate the outdoor unit into multiple units to lower the outdoor unit capacity for each refrigerant system and reduce the refrigerant charging amount.

For example, by changing a 12Ton × 1 unit system to a 6Ton × 2 units system, the refrigerant amount for each refrigerant system can be reduced by about half.

● Countermeasure 3

Provide gas leak alarm linked with mechanical ventilator. If using the mechanical ventilator, The back up power supply is required.



Pay special attention to areas where refrigerant can accumulate (like a basement), since refrigerant is heavier than air.

NOTES

NOTES

2. INSTALLATION PRECAUTIONS

2-1. INDOOR UNIT INSTALLATION PRECAUTIONS

Note: The information listed below are general precautions. Some models also include items that do not apply.

■ PLACES WHERE USE PROHIBITED

- Places where there is the danger of combustible gas leakage.
- Places where sulfur gas, chlorine gas, acid, alkali, or other matter which effects equipment is generated
- Places where there is a lot of oil splash and steam (kitchen, machinery room, etc.)
- Places where machinery which generates high frequencies is used
- Ocean beaches and other areas where there is a lot of salt
- Places where carbon fibers and metal powder, powder, etc. suspended in the air
- Installation in vehicles, ships, and other conveyances
- Factory, etc. where voltage fluctuations are large

■ POINTS TO REMEMBER WHEN INSTALLING

1) Install the indoor unit in a location that can withstand the weight and vibration of the unit.

2) Leave space (or a service port) for servicing the refrigerant piping, drain piping and electrical wiring.

*Installation service space is shown on " DIMENSIONS ".

3) Be careful when installing the indoor unit in the following places.

[Installation precautions]

	Contents	Countermeasures (Reference)
When the ceiling is high	If the indoor unit is installed where the installation height given in the installation manual is exceeded, the temperature difference between the floor and ceiling of the room will be large and the heating effect will be poor. Moreover, even if the indoor unit is installed within the installation height, a similar phenomena will occur when installed in a room in which the doors are opened and closed frequently and hot air circulation is obstructed by desks, chairs, etc.	1) Switch the setting to the high ceiling mode. 2) Install a circulator. 3) Arrange the furniture in the room so that it does not obstruct the hot air.
When lower level directly contacts the outside air.	When the lower level of the shop and office is a warehouse, parking lot, etc., the surface temperature of the flooring will become low and the radiation of cold from the floor will increase. In this case, your feet will feel cold even if the room temperature is suitable.	
When the airflow distribution is poor	When an indoor unit is installed in a position where the outlet airflow will directly contact people, a draft may be felt. In addition, when there are obstructions in the path of the intake and outlet airflow, the air distribution may become extremely bad.	1) Adjust the louver fins or take other measures matched to the site. 2) Change the indoor unit outlet.

NOTES

NOTES

[Installation precautions]

	Contents	Countermeasures (Reference)
When inside the ceiling is high temperature and high humidity	When the indoor unit is installed where the inside of the ceiling is 86°F (30°C) RH80% or greater, the dew point temperature of the outer perimeter may become higher than the cabinet surface temperature and moisture will condense on the surface of the cabinet and water drops may fall inside the room. →Refer to Fig.A In addition, the humidity may vary considerably the same as when the inside of the ceiling is close to hermetically sealed and used as the outside air intake path.	1) Add heat insulating material to the outside of the indoor unit cabinet. *Regarding the cassette type, use of the “high humidity correspondence kit (option)” is recommended. 2) Strengthen the heat insulating material of the refrigerant piping and drain piping also. →Refer to Fig.B 3) When the humidity inside the ceiling changes considerably, install a ventilation port.

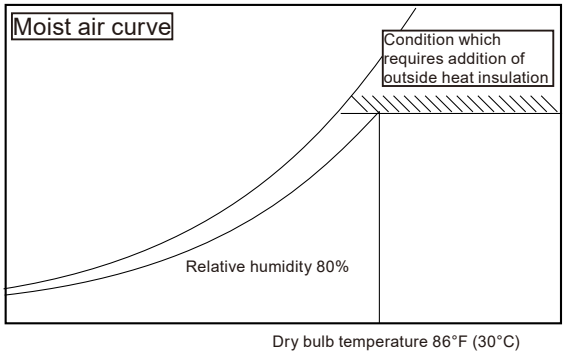


Fig.A

Work method when reinforcing the heat insulation of on-site piping

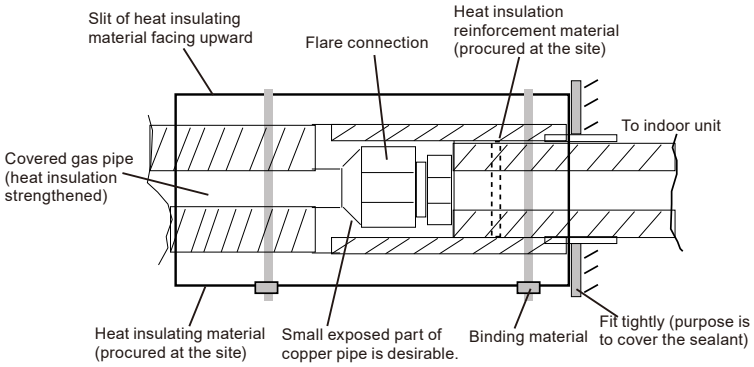


Fig.B

	Contents	Countermeasures (Reference)
When using an external duct	When using an external duct to take in new fresh air, etc., condensation may form on the surface of the duct due to the effect of the outside air temperature and the humidity inside the ceiling.	1) Always perform heat insulation processing. (Heat insulating material: Glass wool 31/32in (25mm) thick or more.)
When the remote controller installation site is bad	If the cold or warm air blown out from the air conditioner directly contacts the thermostat section of the remote controller, the outlet temperature of the air conditioner may be sensed and room temperature control will be different from the room temperature and “not cooled” or “not heated” or other trouble may occur. In addition, there is the possibility that the same kind of trouble may also occur when the remote controller is effected by direct sunlight.	1) Install the remote controller where it will not be directly exposed to the cold or hot air. 2) Install the remote controller where it will not be directly exposed to sunlight or strong lighting.

NOTES

NOTES

[Installation precautions]

	Contents	Countermeasures (Reference)
When installing duct type in an attic	In are is returned through the attic, the thermistor in the indoor unit may not correctly detect the room temperature. Heating operation: Room is not heated because the indoor unit is easily turned off by the thermostat. Cooling operation: Room is too cold because the indoor unit is difficult to turn off by the thermostat.	1) Replace the indoor unit thermistor with a Remote sensor unit (optional parts) and install the sensor where the room temperature can be correctly detected.
When the duct type outlet blows on the inlet (short circuit)	Cooling operation does not cool the room and heating operation does not heat the room because the short circuited indoor unit is not turned on by the thermostat.	1) Reconsider the ventilation port construction. 2) Replace the indoor unit thermistor with a Remote sensor unit (optional parts) and install the sensor where the room temperature can be correctly detected.
When using the wireless remote controller	Signals may not be received when using it in a room illuminated by an inverter fluorescent lamp.	1) Turn on the fluorescent lamp and check if the indoor unit receives the signals from the remote controller. If the indoor unit does not receive the signals, consult an authorized service personnel.
When installing the inverter type	It may generate noise in TV sets, stereos and PCs.	1) The inverter type should be installed at a sufficient distance from these equipment.

NOTES

NOTES

2-2. OUTDOOR UNIT INSTALLATION PRECAUTIONS

Note: The information listed below are general precautions. Some models also include items that do not apply.

■ PLACES WHERE USE PROHIBITED

- Places where there is the danger of combustible gas leakage
- Places where sulfur gas, chlorine gas, acid, alkali, or other matter which effects equipment is generated
- Places not affected by heat radiation from other heat sources
- Places where the air is not stagnant
- Places where machinery which generates high frequencies is used
- Ocean beaches and other areas where there is a lot of salt
- Installation in vehicles, ships, and other conveyances
- Factory, etc. where voltage fluctuations are large

■ POINTS TO REMEMBER WHEN INSTALLING

1) The set shall be installed at a place which can withstand the weight and vibration of the outdoor unit.

2) To allow maintenance after refrigerant piping, drain piping, and electric wiring connection and installation, provide an installation service space.

*Installation service space is shown on "INSTALLATION SPACE".

3) Be careful when installing the outdoor unit I the following places.

[Installation precautions]

	Contents	Countermeasures (Reference)
When installed near adjacent houses	Perform installation work so that operating sound does not disturb the neighbors.	1) Install a soundproof barrier. 2) Change the installation site.
When there is the possibility of strong wind	1) If the outdoor unit is exposed to strong wind, capacity may drop, frost may form during heating, and operation may be stopped by high pressure safety switch. In addition, when a very strong wind blows, the fan may be damaged. 2) When a very strong wind blows, there is the possibility of the outdoor unit being toppled over if held only by foundation bolts.	1) Do not install the unit too close to a wall or overhang. 2) Make the outlet direction and wind direction perpendicular. 3) Fasten the outdoor unit using toppling prevention hardware (procured at the site).
When snow accumulates	If the outdoor unit is covered by accumulated snow, it may not be able to operate.	1) Make the foundation as high as possible. 2) Perform snow prevention work.
When installing the inverter type	It may generate noise in TV sets, stereos and PCs.	1) The inverter type should be installed at a sufficient distance from these equipment.

NOTES

NOTES

3. COMPATIBILITY OF VRF SYSTEM

■ COMPATIBILITY OF OUTDOOR UNIT AND INDOOR UNIT

● OUTDOOR UNIT AND INDOOR UNIT

Compatibility of outdoor unit and indoor unit in refrigerant system as follows.

			Indoor unit	
			New model *1	Previous model *2
Outdoor unit	VR- II series (230V)	Heat Recovery	○ OK	× Prohibited
	VR- II series (460V)	Heat Recovery	○ OK	× Prohibited
	V- II series (230V)	Heat Pump	○ OK	○ OK
	V- II series (460V)	Heat Pump	○ OK	○ OK
	J- II series	Heat Pump	○ *3 OK	○ *3 OK

*1: New model name is "A*****TLAV" (*: arbitrary character)
*2: Previous model name is "A*****RLAV" (*: arbitrary character)
*3: Following indoor units cannot be connected. (ARUH 72 / 96)

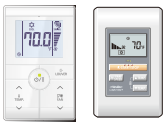
● Example cases for compatibility

	Outdoor unit	Indoor unit	Judgement
Case 1	VR- II series (230 / 460V)	ARUM24TLAV (New model)	○ OK
Case 2		ARUM24RLAV (Previous model)	× Prohibited
Case 3	V- II series (230 / 460V)	ARUM24TLAV (New model)	○ OK
Case 4		ARUM24RLAV (Previous model)	○ OK
Case 5	J- II series	ARUM24TLAV (New model)	○ OK
Case 6		ARUM24RLAV (Previous model)	○ OK

NOTES

NOTES

■ COMPATIBILITY OF CONTROLLER SYSTEM

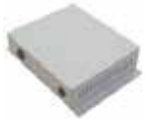
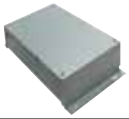
				Model	VR- II series	V- II series J- II series
Controller	Central Controller	System Controller		UTY-APGXZ1 UTY-APGX	○ *1 OK	○ *1 OK
		System Controller Lite		UTY-ALGXZ1 UTY-ALGX	○ OK	○ OK
		Touch Panel Controller		UTY-DTGYZ1 UTY-DTGY	○ OK	○ OK
		Central Remote Controller		UTY-DCGY	○ OK	○ OK
	Individual Controller	Wired Remote Controller (Touch panel)		UTY-RNRUZ* UTY-RNRU	○ OK	○ *2 OK
		Wired Remote Controller		UTY-RNKU	○ OK	○ OK
		Simple Remote Controller (with master control)		UTY-RSRY UTY-RSKU	○ OK	○ OK
		Simple Remote Controller (without master control)		UTY-RHRY UTY-RHKU	○ OK	○ OK
		Wireless Remote Controller		UTY-LNHU	○ OK	○ OK

*1: Different VRF series may be connected for each of the 4 VRF networks supported by the unit.

*2: It is not connectable with indoor unit ("A*****RLAV" (*: arbitrary character)) of the old type.

NOTES

NOTES

			Model	VR- II series	V- II series J- II series
Adaptor / Convertor	External Switch Controller		UTY-TERK UTY-TEKX	○ OK	○ OK
	IR Receiver unit (for all Duct type)		UTB-YWC	○ OK	○ OK
	IR Receiver unit (for Cassette type)		UTY-LRHYB1	○ OK	○ OK
	IR Receiver unit [for Cassette (circular flow type)]		UTY-LBHXD	○ OK	○ OK
	Human Sensor Kit [for Cassette (circular flow type)]		UTY-SHZXC	○ OK	○ OK
	Signal amplifier		UTY-VSGXZ1	○ OK	○ OK
			UTY-VSGX	○ *1 OK	○ *1 OK
	Network Convertor		UTY-VTGX	○ OK	○ OK
			UTY-VGGXZ1 UTY-VGGX	○ OK	○ OK
	Network Convertor for LonWorks®		UTY-VLGX	○ OK	○ OK
	BACnet® Gateway (Hardware)		UTY-VBGX	○ OK	○ OK
	BACnet® Gateway (Software)		UTY-ABGXZ1 UTY-ABGX	○ *2 OK	○ *2 OK
	Modbus® Convertor for VRF		UTY-VMGX	○ OK	○ OK
Service and Maintenance	Service Tool		UTY-ASGXZ1	○ OK	○ OK
	Web Monitoring Tool		UTY-AMGXZ1	○ *2 OK	○ *2 OK

*1: Since Signal filter mode is not contained, use "UTY-VSGXZ1", when use Signal filter mode.

*2: Different VRF series may be connected for each of the 4 VRF networks supported by the unit, but different series may not coexist within the same network.

NOTES

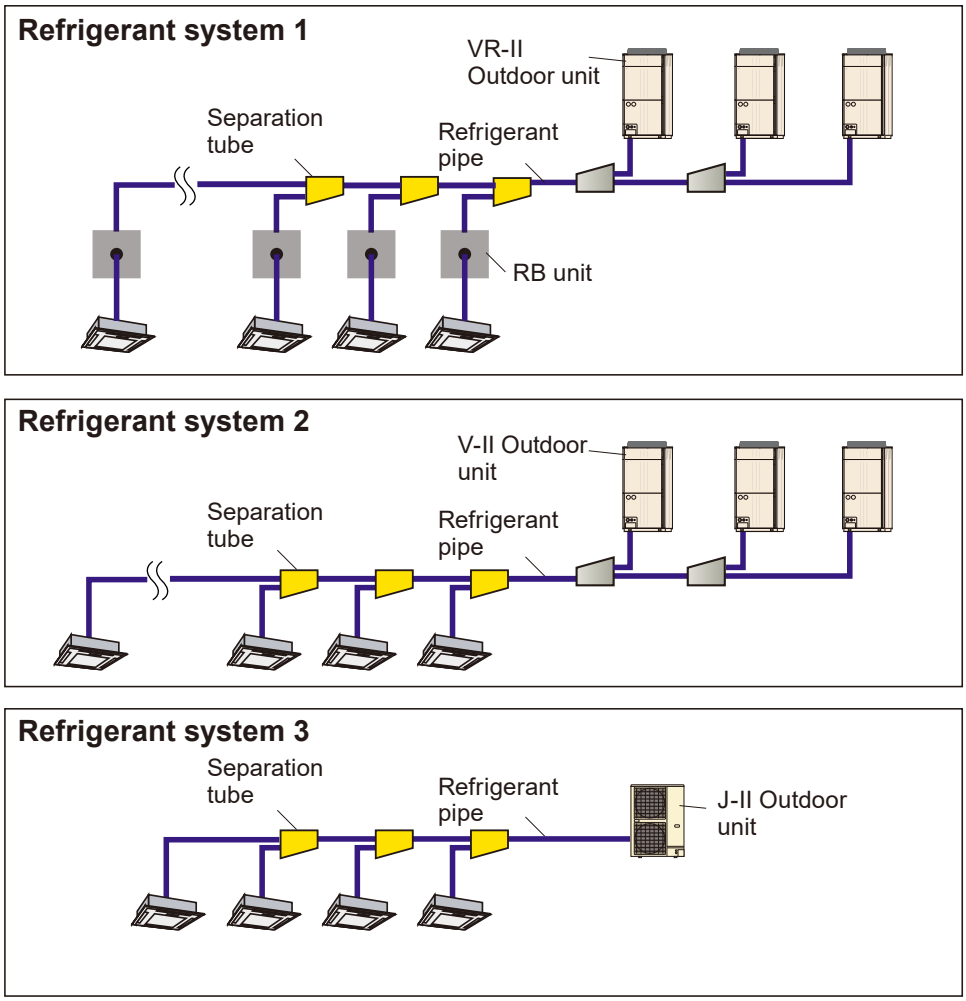
NOTES

4. ABOUT CONNECTION BETWEEN SERIES

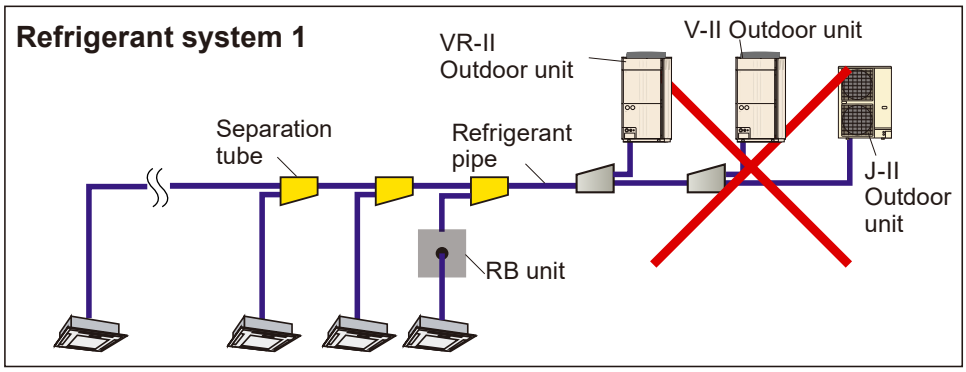
4-1. PIPING CONNECTION

Note: · Piping connection of VR-II V-II and J-II in the same refrigerant system is prohibited.
· Mixed connection of 230V model and 460V model is prohibited.

■ EXAMPLE1 (OK)



■ EXAMPLE2 (Prohibited)



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4-2. WIRING CONNECTION

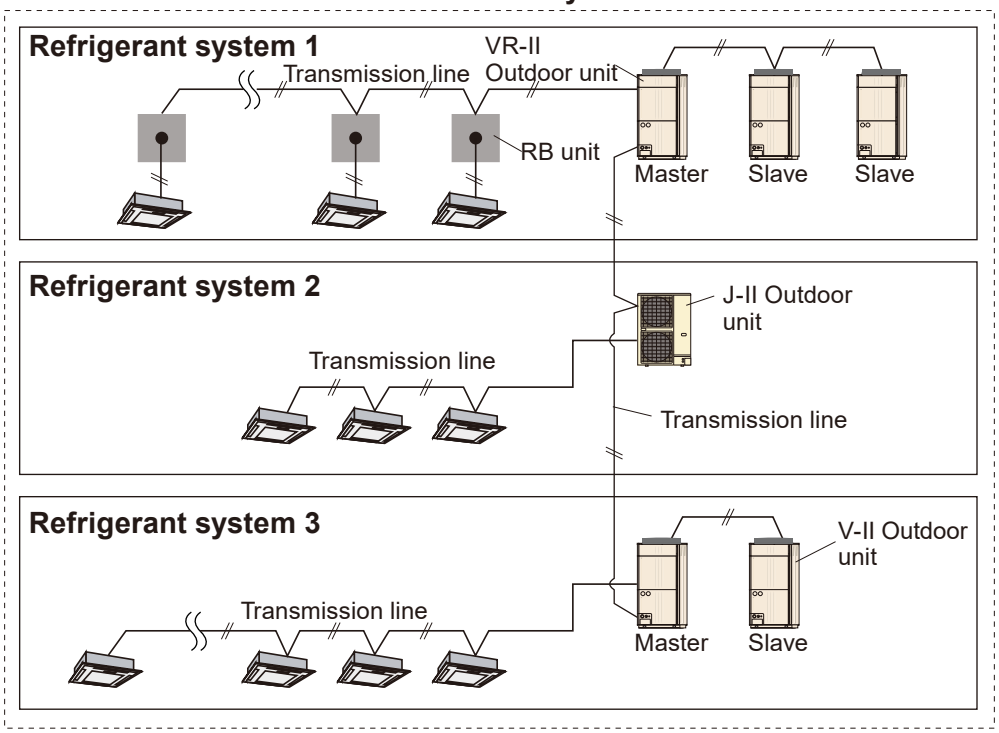
Note: · Wiring connection of VR-II V-II and J-II in the same refrigerant system is prohibited.

· Mixed connection of 230V model and 460V model is possible.

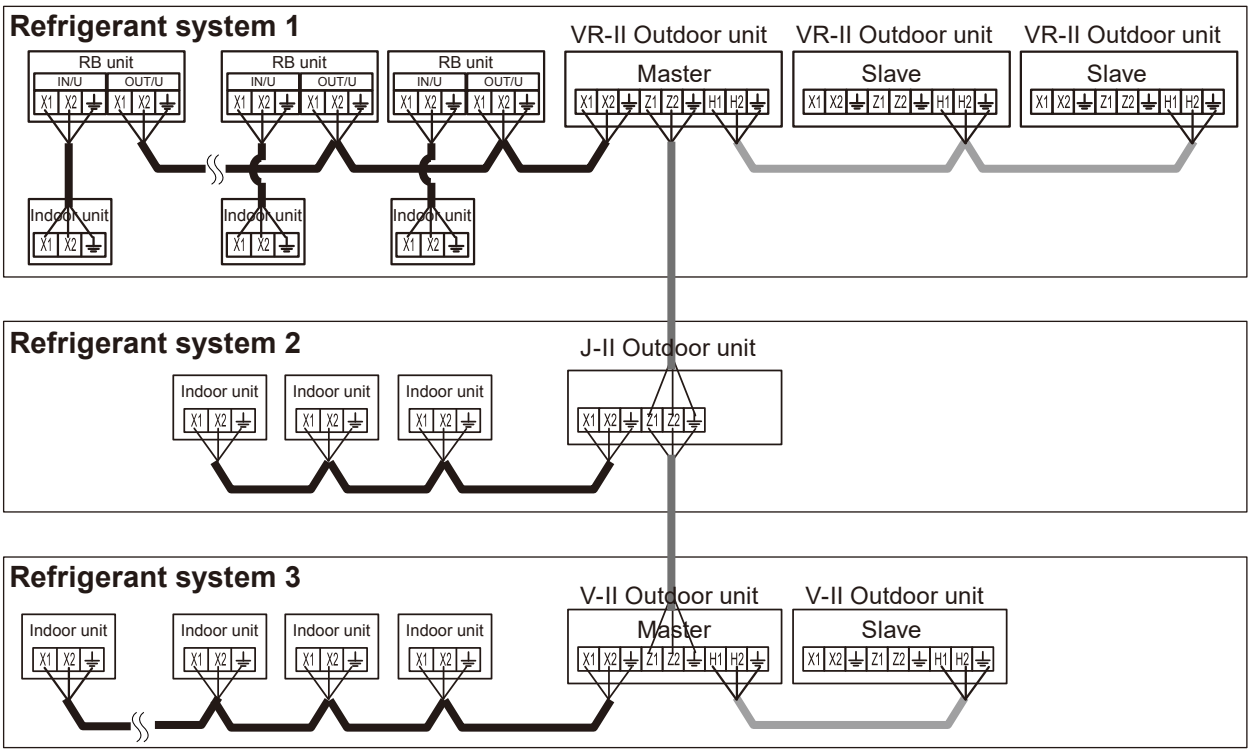
■ EXAMPLE1 (OK)

When wiring to each refrigerant system

VRF network system



● Connection method to terminal



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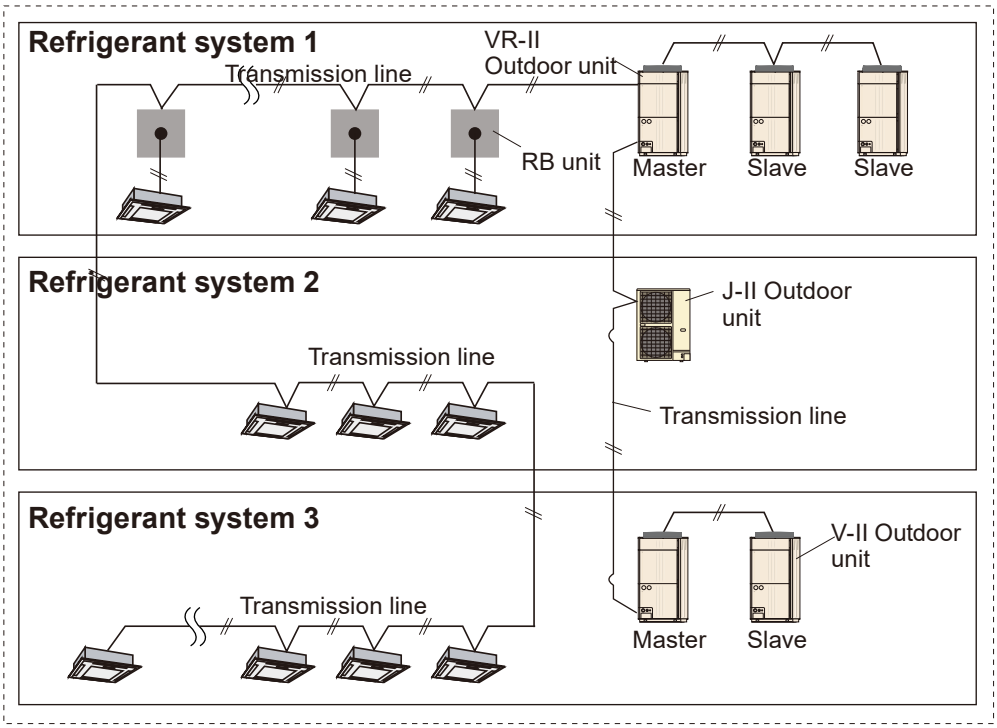
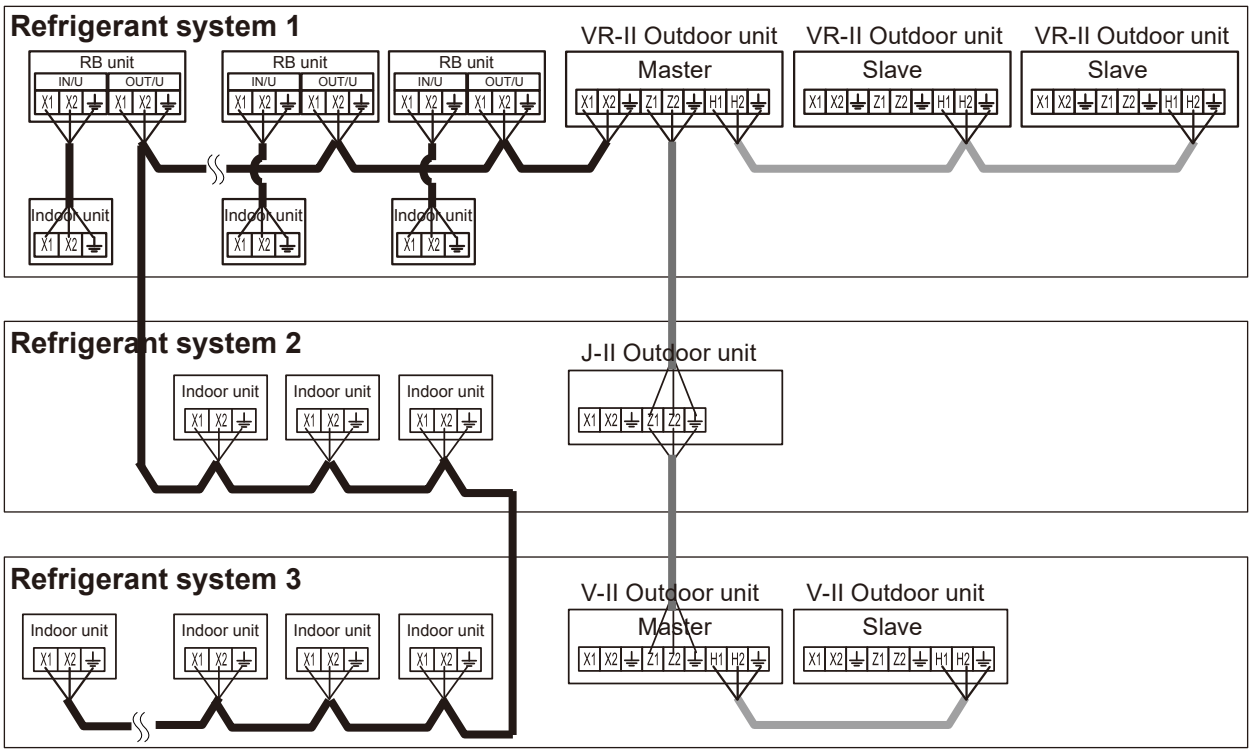
■ EXAMPLE2 (OK)

When stepping over, and wiring to the refrigerant system

VRF network system



● Connection method to terminal



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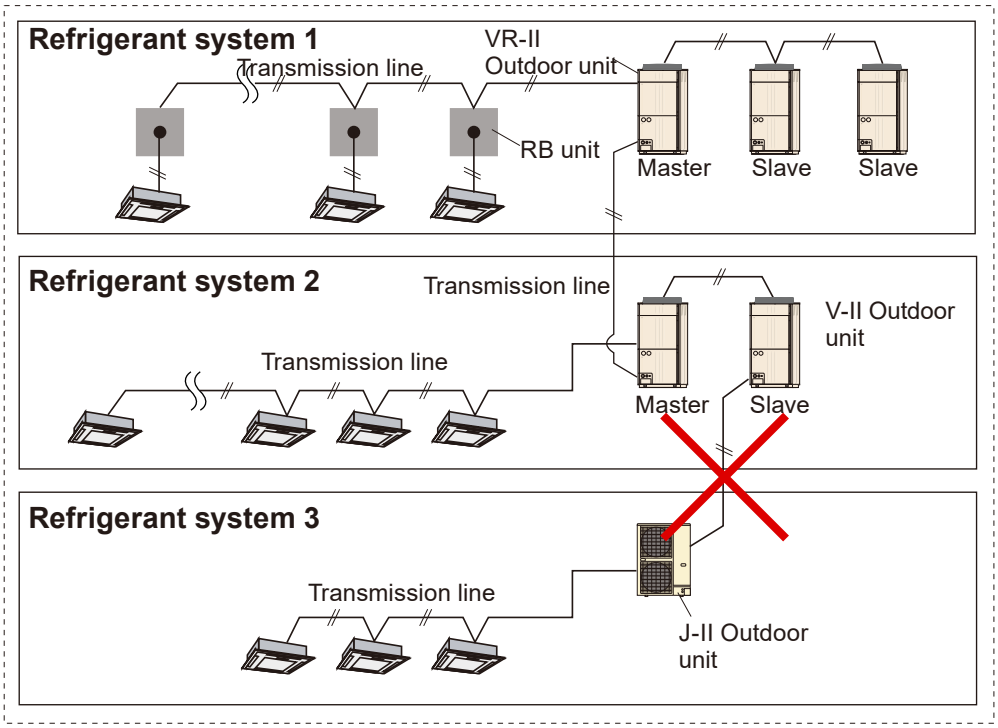
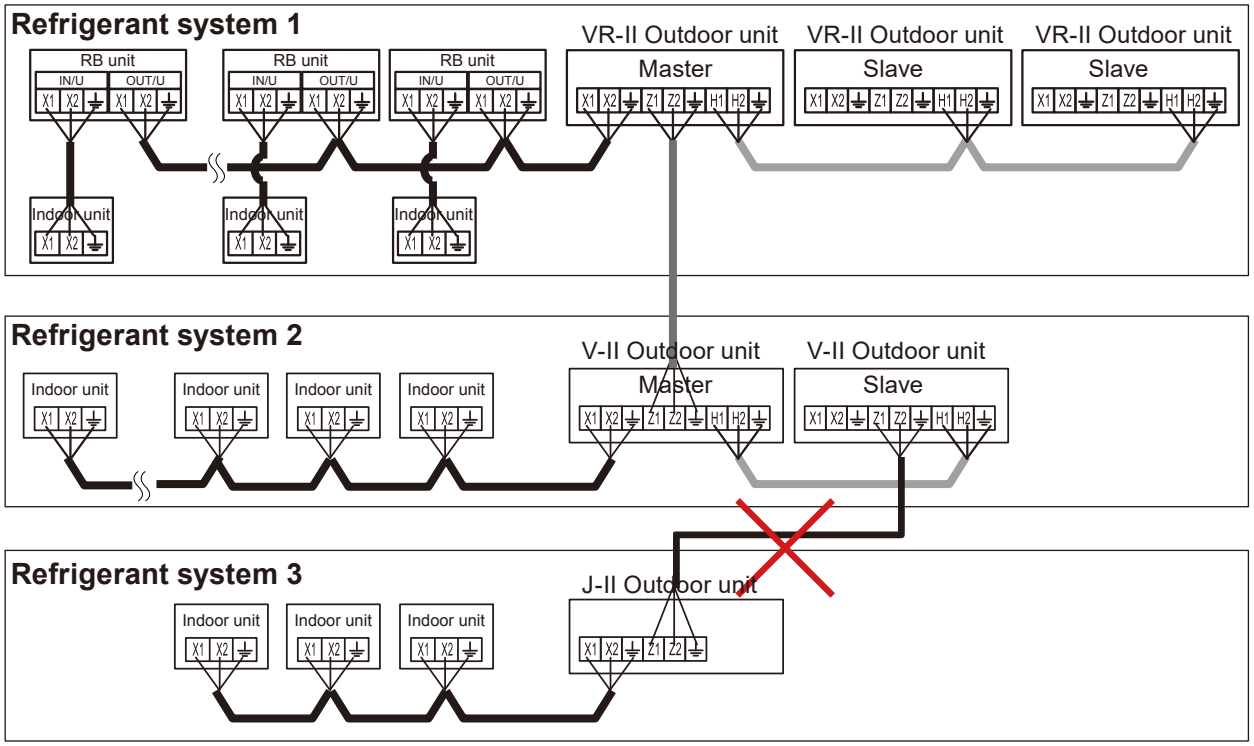
■ EXAMPLE3 (Prohibited)

Note: Slave unit of VR-II V-II and J-II cannot be connected

VRF network system



● Connection method to terminal



NOTES

NOTES

Refrigerant R410A
INVERTER

AIRSTAGE™
Variable Refrigerant Flow System

10. OPTIONAL PARTS

CONTENTS

10. OPTIONAL PARTS

1. SEPARATION TUBE ..... 10 - 01
   1-1. SEPARATION TUBE FOR 2 PIPES ..... 10 - 04
   1-2. SEPARATION TUBE FOR 3 PIPES ..... 10 - 10

2. OUTDOOR UNIT BRANCH KIT ..... 10 - 16

3. HEADER ..... 10 - 20
   3-1. HEADER FOR 2 PIPES ..... 10 - 21
   3-2. HEADER FOR 3 PIPES ..... 10 - 25

4. RB UNIT ..... 10 - 33
   4-1. SPECIFICATIONS ..... 10 - 33
   4-2. DIMENSIONS ..... 10 - 34
   4-3. INSTALLATION ..... 10 - 36
   4-4. REFRIGERANT CIRCUIT ..... 10 - 38
   4-5. WIRING DIAGRAMS ..... 10 - 40
   4-6. ELECTRIC CHARACTERISTICS ..... 10 - 43
   4-7. SAFETY DEVICES ..... 10 - 44

5. CONTROLLER ..... 10 - 45

6. ADAPTOR / CONVERTOR / MAINTENANCE TOOL ..... 10 - 46

7. CASSETTE GRILLE ..... 10 - 48

8. OTHERS ..... 10 - 49
   8-1. PARTS LIST ..... 10 - 49
      8-1-1.INDOOR UNIT ..... 10 - 49
      8-1-2.OUTDOOR UNIT ..... 10 - 54
      8-1-3.OTHERS ..... 10 - 55

9. OPTIONAL PARTS INSTALLATION ..... 10 - 62
   9-1. DRAIN PUMP UNIT ..... 10 - 62
   9-2. FRESH AIR INTAKE KIT (MODEL: UTZ-VXAA) ..... 10 - 66
   9-3. FRESH AIR INTAKE KIT (MODELS: UTZ-VXRA, UTZ-VXGA) ..... 10 - 73
   9-4. AUTO LOUVER GRILLE KIT ..... 10 - 80

1. SEPARATION TUBE

■ CONNECTION CAPACITY

Total cooling capacity of indoor units (x) (kBtu/h)	Separation tube	
	For 2 pipes	For 3 pipes
x < 96.5	UTR-BP090X or UTP-AX090A	UTP-BX090A
96.5 ≤ x < 193	UTR-BP180X or UTP-AX180A	UTP-BX180A
193 ≤ x	UTR-BP567X or UTP-AX567A	UTP-BX567A

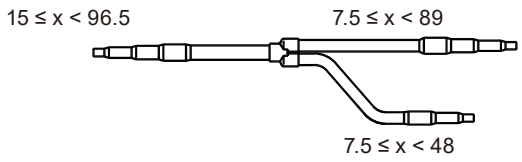
The total cooling capacity (x) is the total capacity for all indoor units downstream of the separation tube.

● For 2 pipes

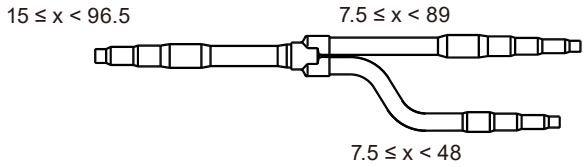
Unit: KBtu/h

UTR-BP090X

Separation Tube (liquid pipe)

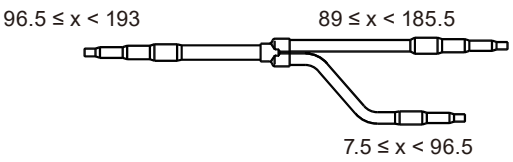


Separation Tube (gas pipe)

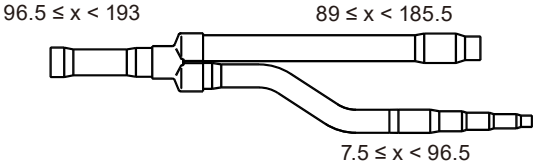


UTR-BP180X

Separation Tube (liquid pipe)

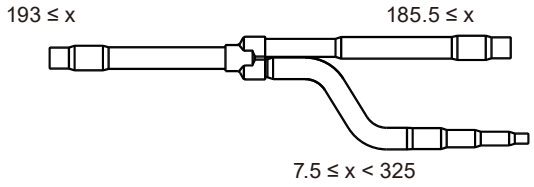


Separation Tube (gas pipe)

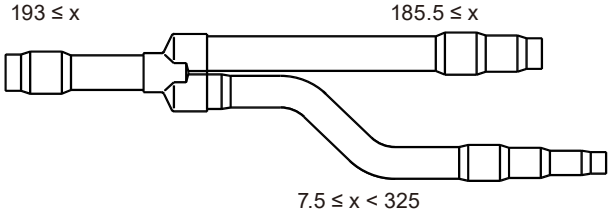


UTR-BP567X

Separation Tube (liquid pipe)

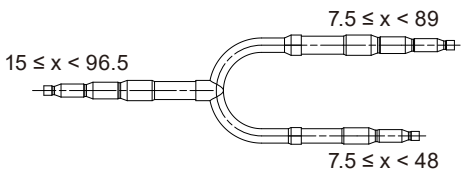
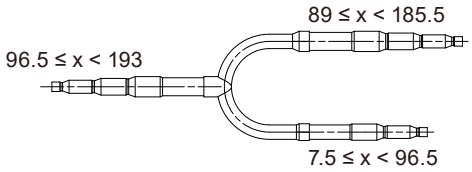
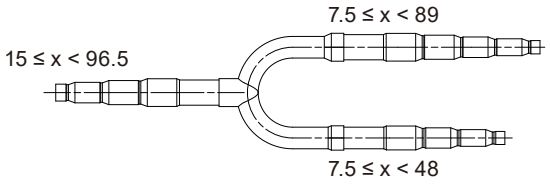
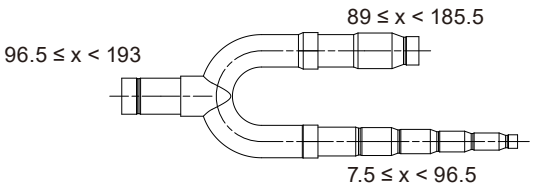


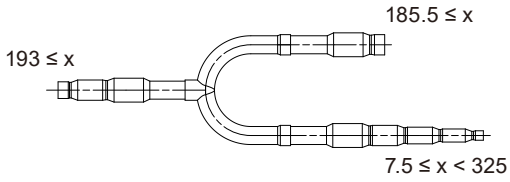
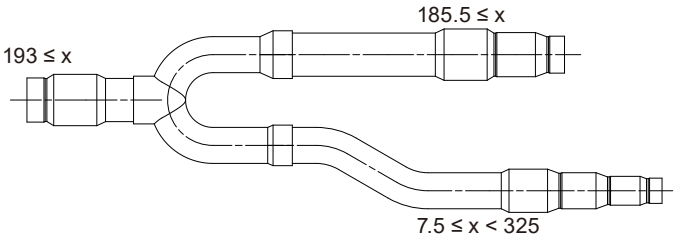
Separation Tube (gas pipe)



● For 2 pipes

Unit: KBtu/h

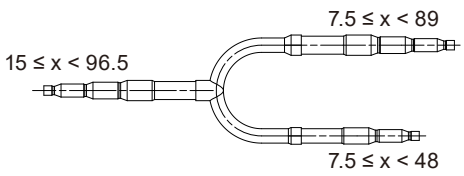
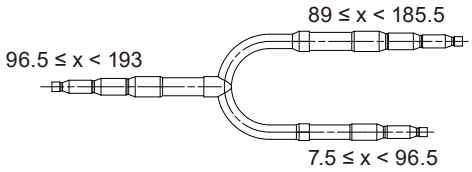
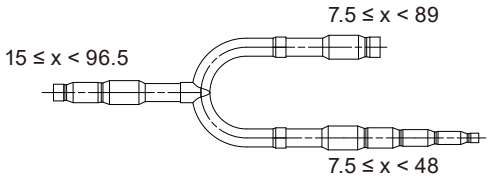
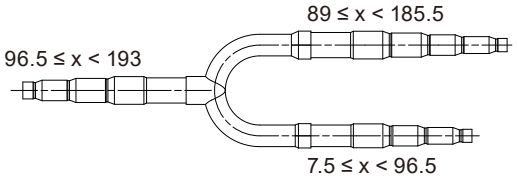
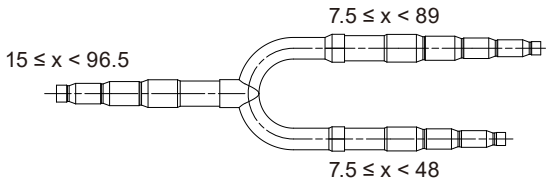
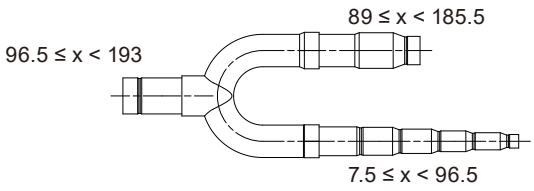
UTP-AX090A	UTP-AX180A
Liquid pipe  	Liquid pipe 
Gas pipe  	Gas pipe 

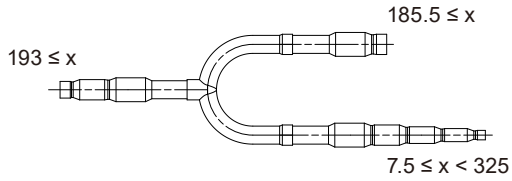
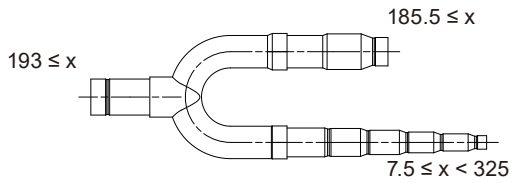
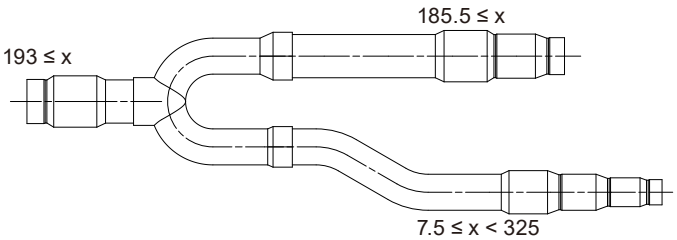
UTP-AX567A
Liquid pipe 
Gas pipe 

OPTIONAL PARTS

● For 3 pipes

Unit: KBtu/h

UTP-BX090A	UTP-BX180A
Liquid pipe  	Liquid pipe 
Discharge gas pipe  	Discharge gas pipe 
Suction gas pipe  	Suction gas pipe 

UTP-BX567A
Liquid pipe 
Discharge gas pipe 
Suction gas pipe 

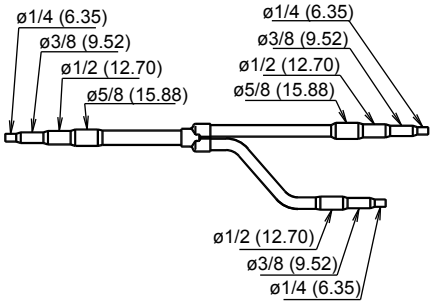
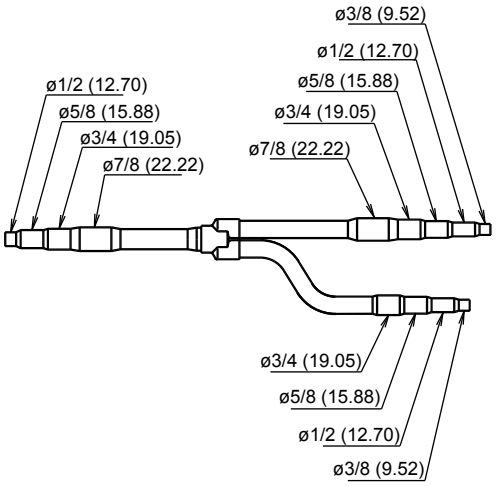
OPTIONAL PARTS

1-1. SEPARATION TUBE FOR 2 PIPES

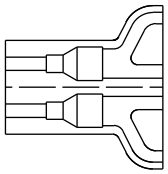
■ UTR-BP090X

● Port diameters

Unit: in. (mm)

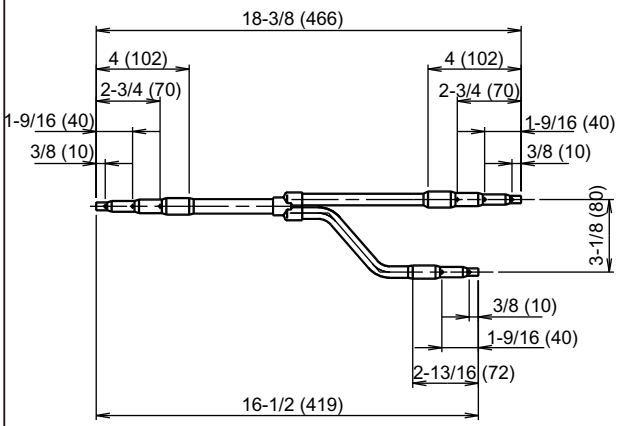
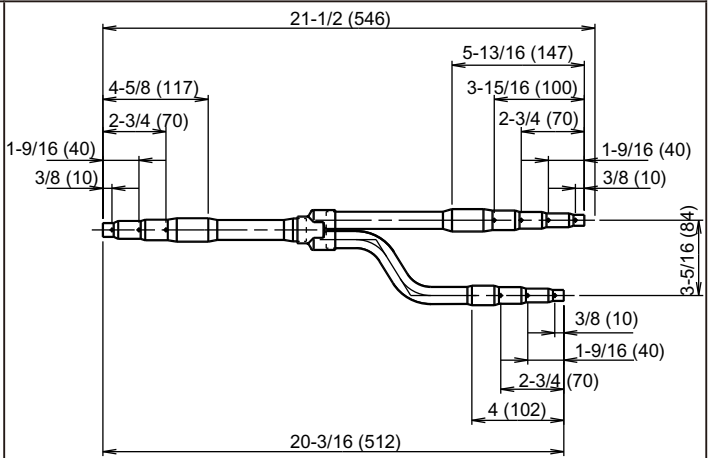
Liquid pipe	Q'ty	Gas pipe	Q'ty
	1		1

● Heat insulation

Heat insulation	Q'ty	Application
	2	Large × 1 (for gas pipe) Small × 1 (for liquid pipe)

Tape	Q'ty
	8

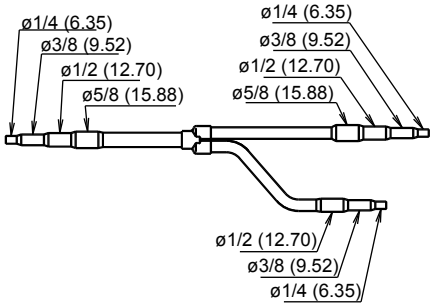
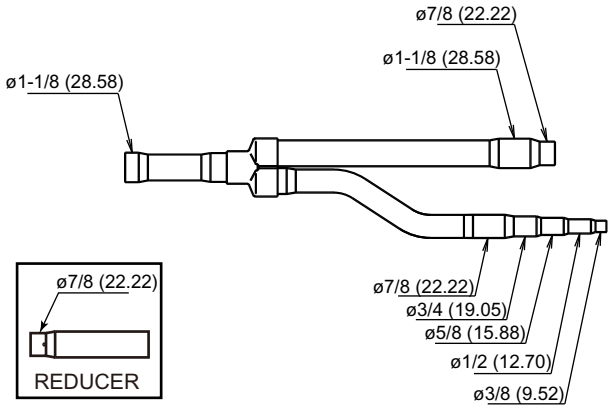
● Dimensions

Liquid pipe	Gas pipe
	

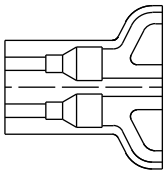
■ UTR-BP180X

● Port diameters

Unit: in. (mm)

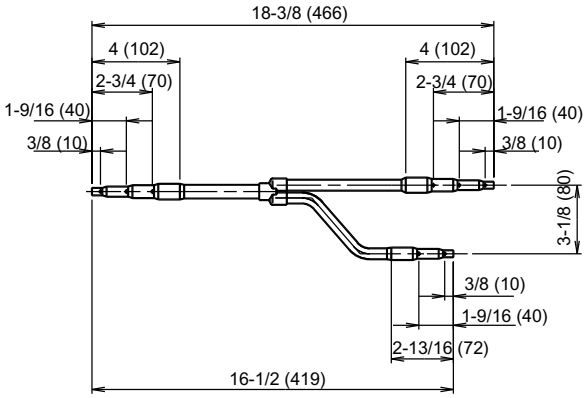
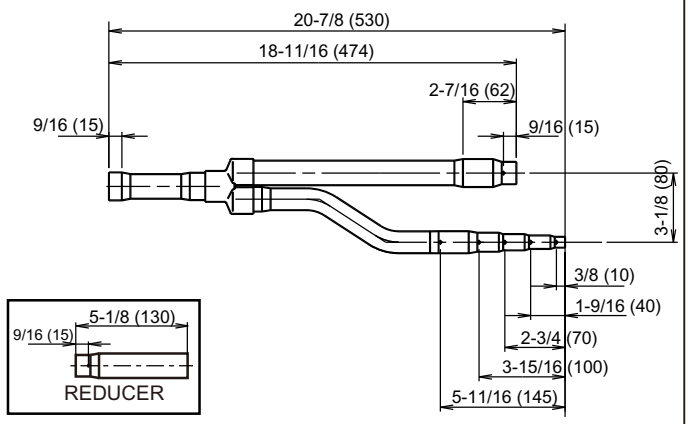
Liquid pipe	Q'ty	Gas pipe	Q'ty
	1		1

● Heat insulation

Heat insulation	Q'ty	Application
	2	Large × 1 (for gas pipe) Small × 1 (for liquid pipe)

Tape	Q'ty
	8

● Dimensions

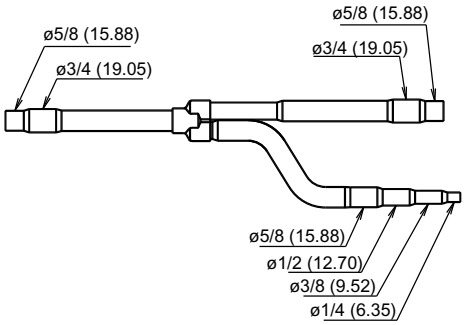
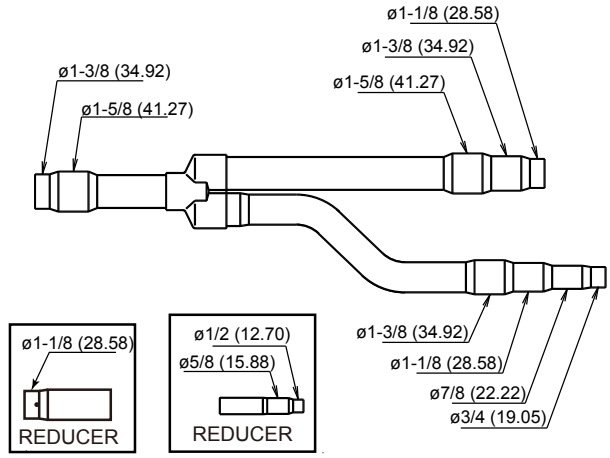
Liquid pipe	Gas pipe
	

OPTIONAL PARTS

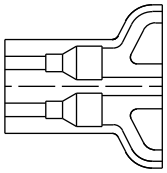
■ UTR-BP567X

● Port diameters

Unit: in. (mm)

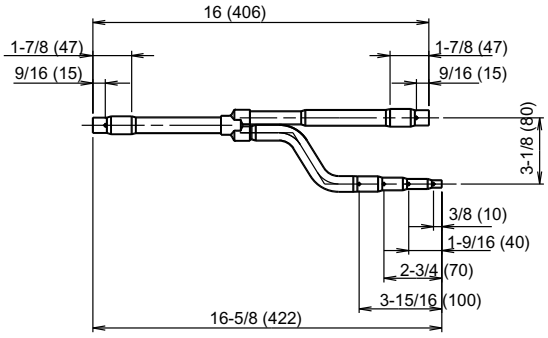
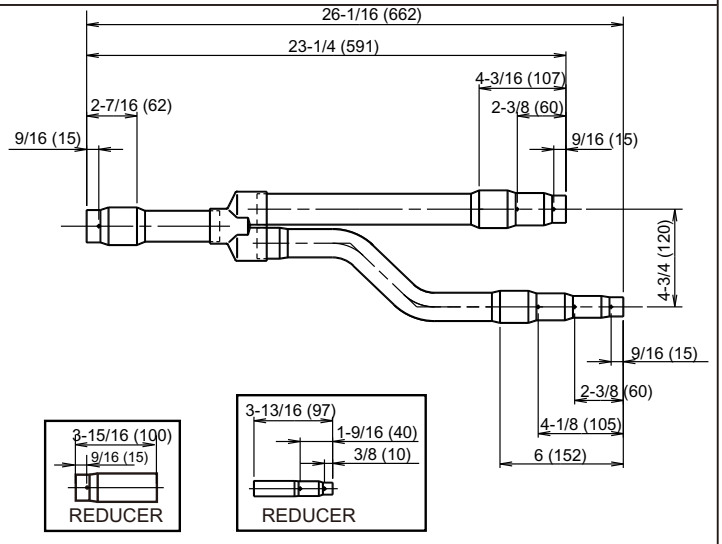
Liquid pipe	Q'ty	Gas pipe	Q'ty
	1		1

● Heat insulation

Heat insulation	Q'ty	Application
	2	Large × 1 (for gas pipe) Small × 1 (for liquid pipe)

Tape	Q'ty
	8

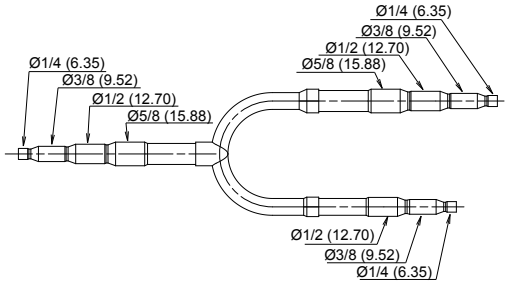
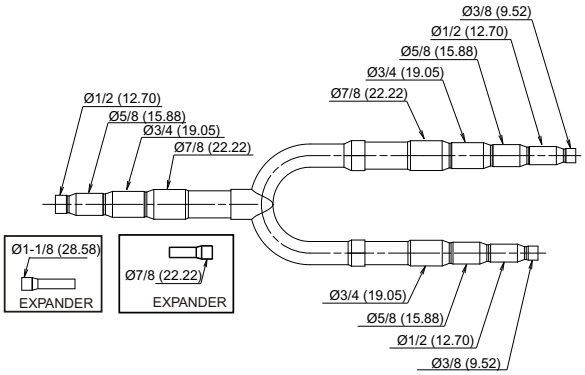
● Dimensions

Liquid pipe	Gas pipe
	

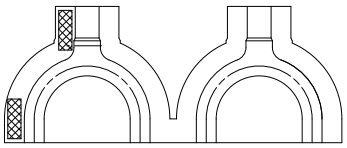
■ UTP-AX090A

● Port diameters

Unit: in. (mm)

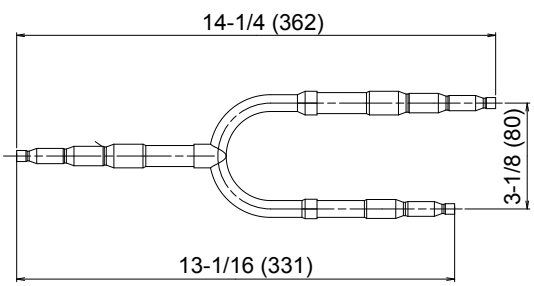
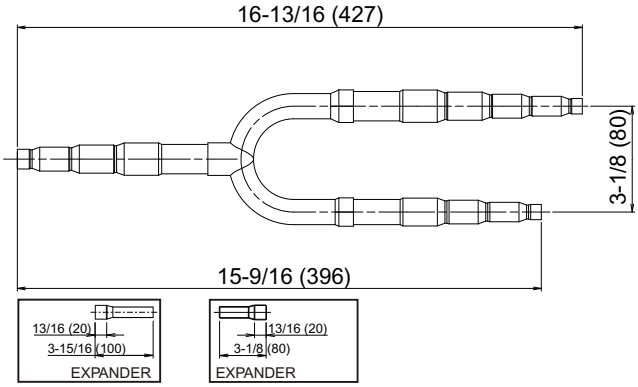
Liquid pipe	Q'ty	Gas pipe	Q'ty
	1		1

● Heat insulation

Heat insulation	Q'ty	Application
	2	for Liquid pipe ×1 for Gas pipe × 1

Tape	Q'ty
	8

● Dimensions

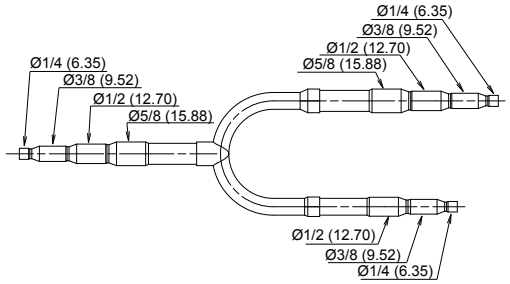
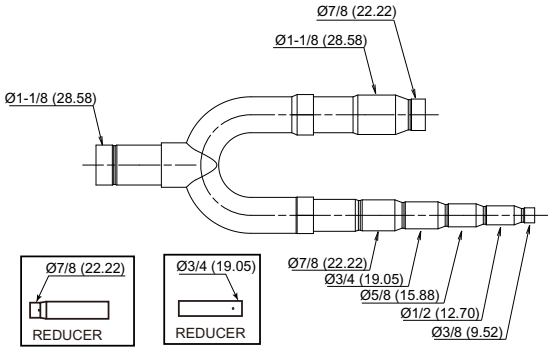
Liquid pipe	Gas pipe
	

OPTIONAL PARTS

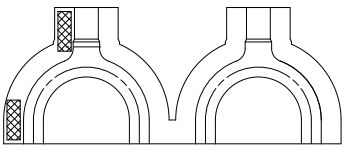
■ UTP-AX180A

● Port diameters

Unit: in. (mm)

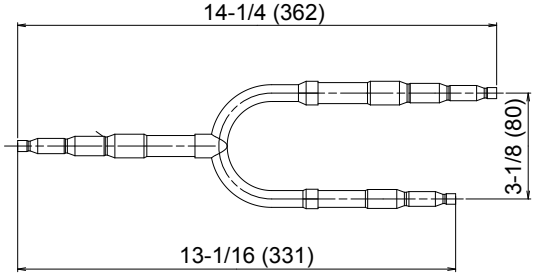
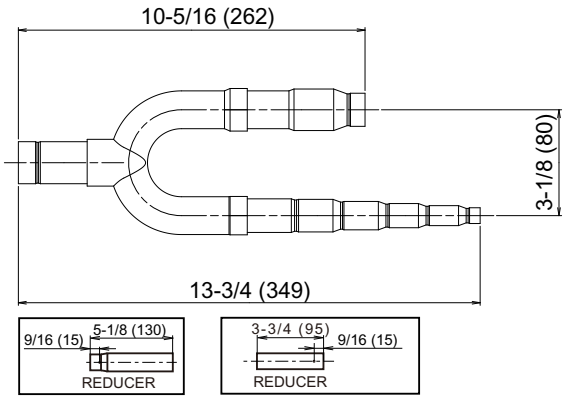
Liquid pipe	Q'ty	Gas pipe	Q'ty
	1		1

● Heat insulation

Heat insulation	Q'ty	Application
	2	for Liquid pipe × 1 for Gas pipe × 1

Tape	Q'ty
	8

● Dimensions

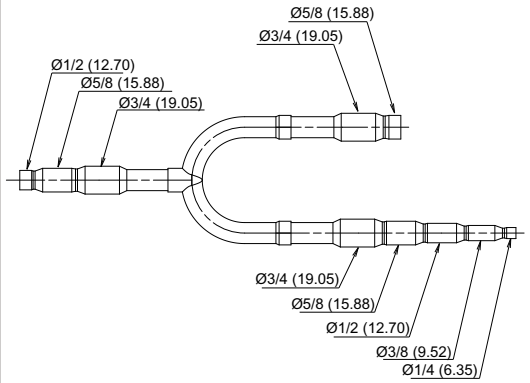
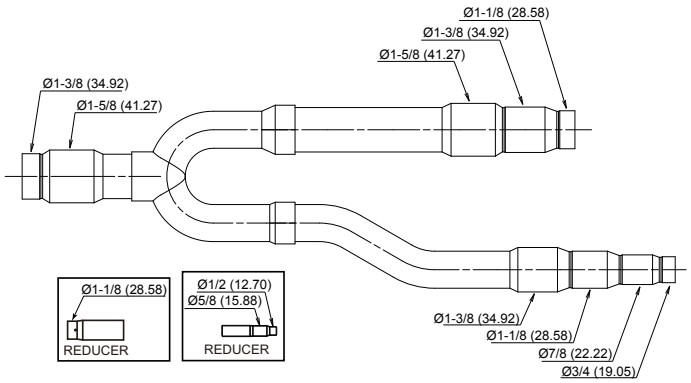
Liquid pipe	Gas pipe
	

OPTIONAL PARTS

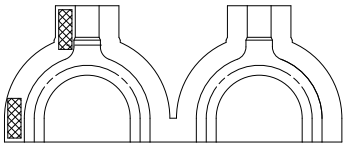
■ UTP-AX567A

● Port diameters

Unit: in. (mm)

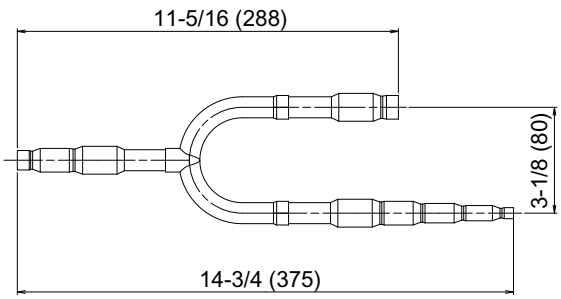
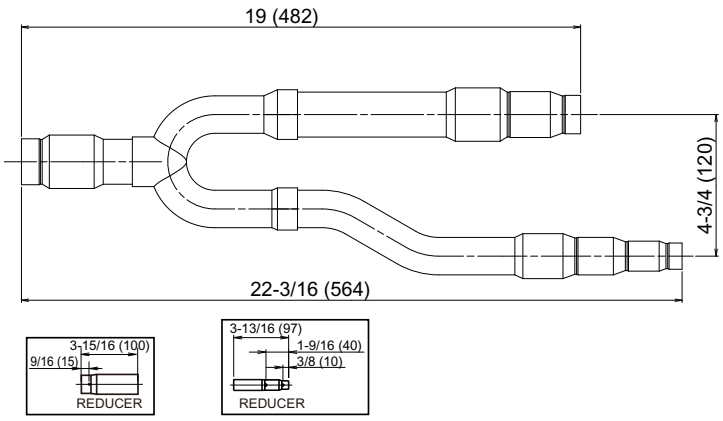
Liquid pipe	Q'ty	Gas pipe	Q'ty
	1		1

● Heat insulation

Heat insulation	Q'ty	Application
	2	for Liquid pipe × 1 for Gas pipe × 1

Tape	Q'ty
	8

● Dimensions

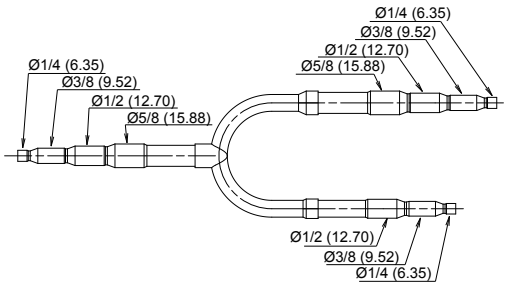
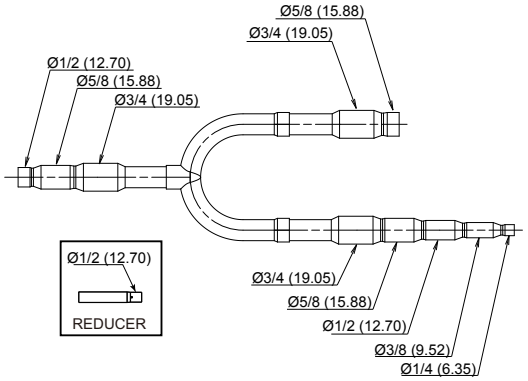
Liquid pipe	Gas pipe
	

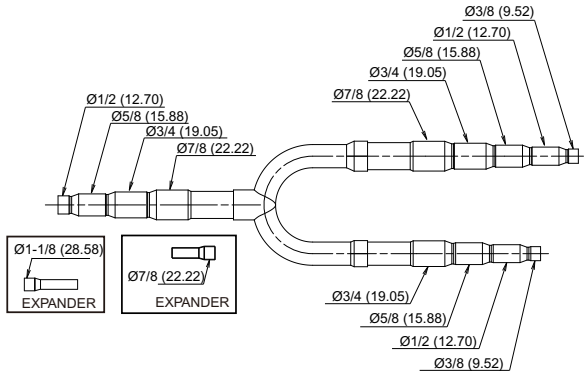
1-2. SEPARATION TUBE FOR 3 PIPES

■ UTP-BX090A

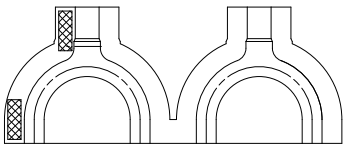
● Port diameters

Unit: in. (mm)

Liquid pipe	Q'ty	Discharge gas pipe	Q'ty
	1		1

Suction gas pipe	Q'ty
	1

● Heat insulation

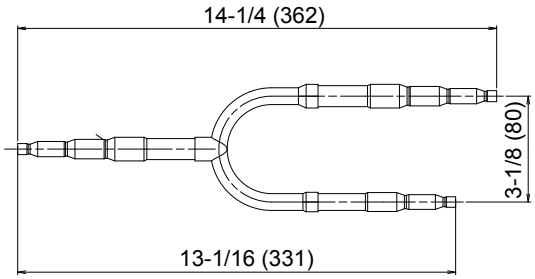
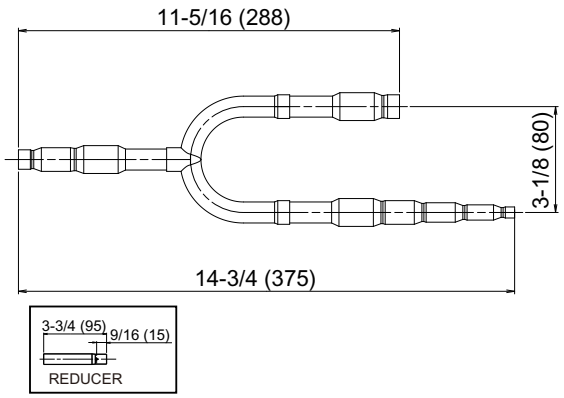
Heat insulation	Q'ty	Application
	3	for Liquid pipe × 1 for Discharge gas pipe × 1 for Suction gas pipe × 1

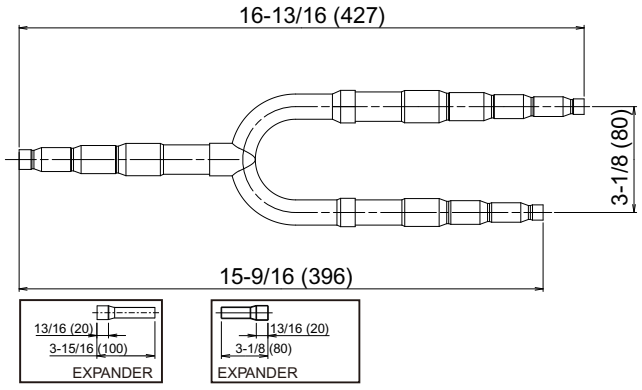
Tape	Q'ty
	8

OPTIONAL PARTS

● Dimensions

Unit: in. (mm)

Liquid pipe	Discharge gas pipe
	

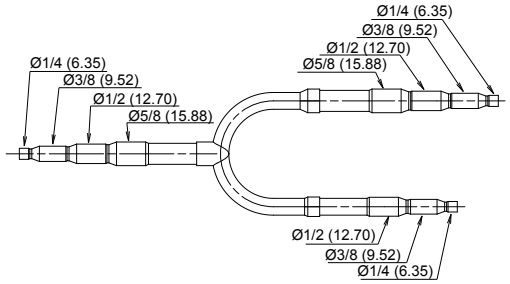
Suction gas pipe


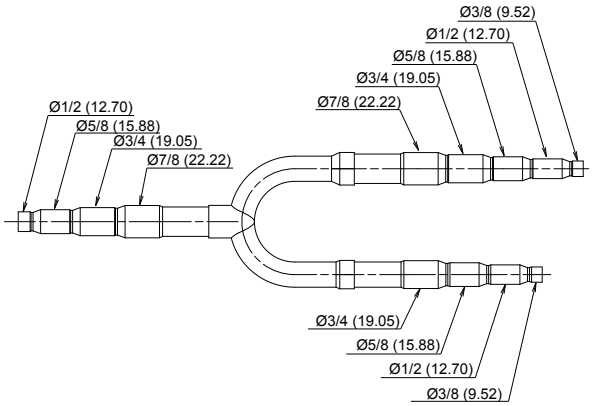
OPTIONAL PARTS

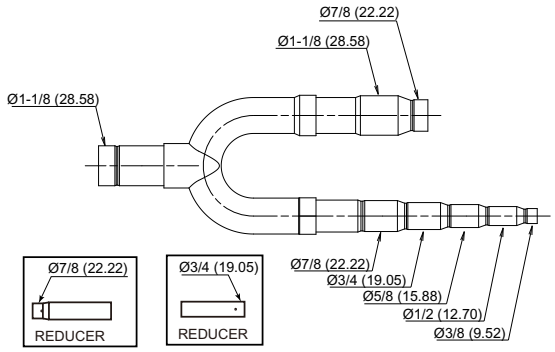
■ UTP-BX180A

● Port diameters

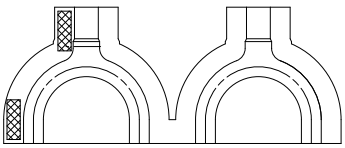
Unit: in. (mm)

Liquid pipe	Q'ty
	1

Discharge gas pipe	Q'ty
	1

Suction gas pipe	Q'ty
	1

● Heat insulation

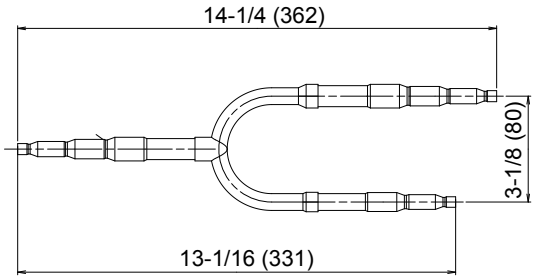
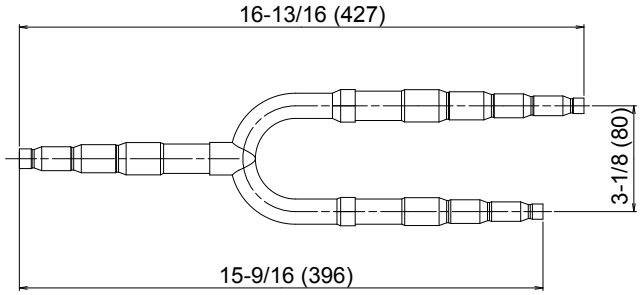
Heat insulation	Q'ty	Application
	3	for Liquid pipe × 1 for Discharge gas pipe × 1 for Suction gas pipe × 1

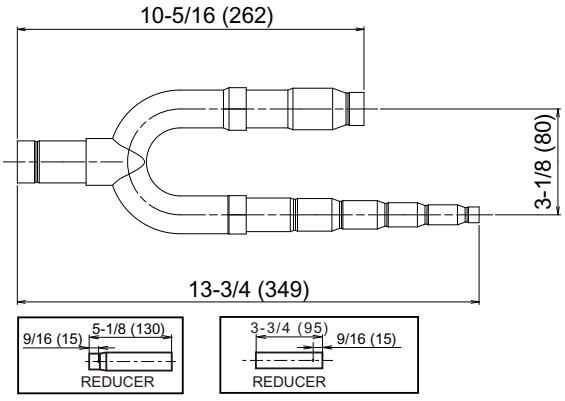
Tape	Q'ty
	8

OPTIONAL PARTS

● Dimensions

Unit: in. (mm)

Liquid pipe	Discharge gas pipe
	

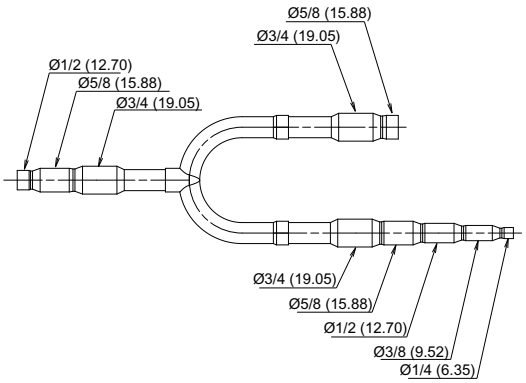
Suction gas pipe


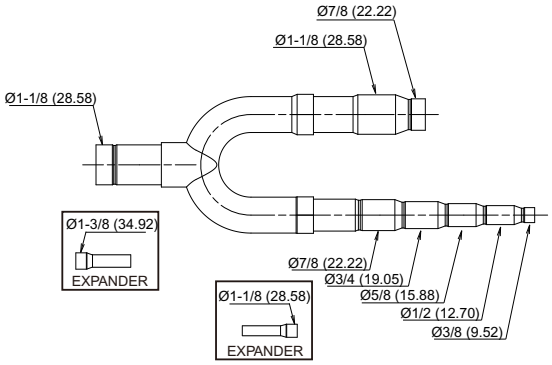
OPTIONAL PARTS

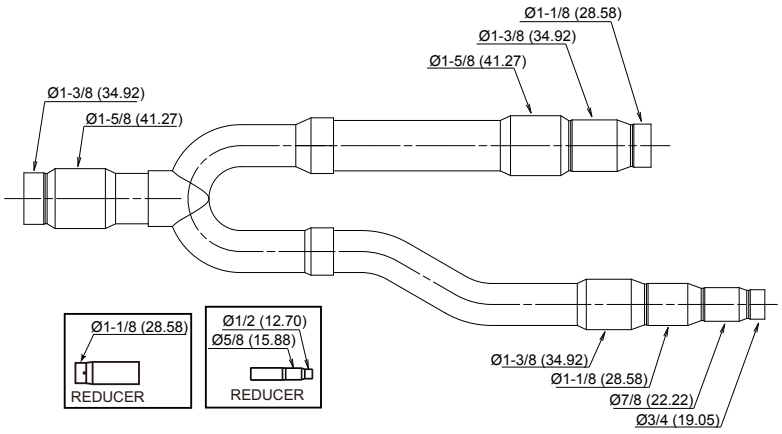
■ UTP-BX567A

● Port diameters

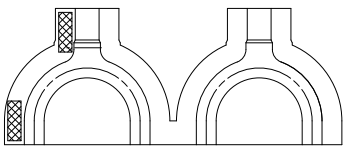
Unit: in. (mm)

Liquid pipe	Q'ty
	1

Discharge gas pipe	Q'ty
	1

Suction gas pipe	Q'ty
	1

● Heat insulation

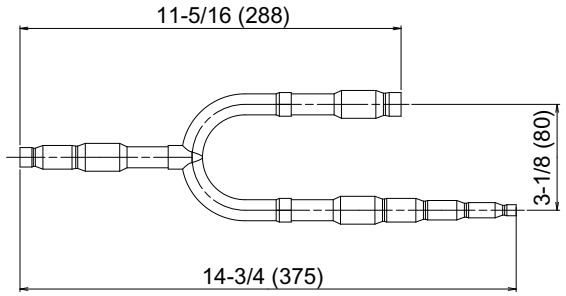
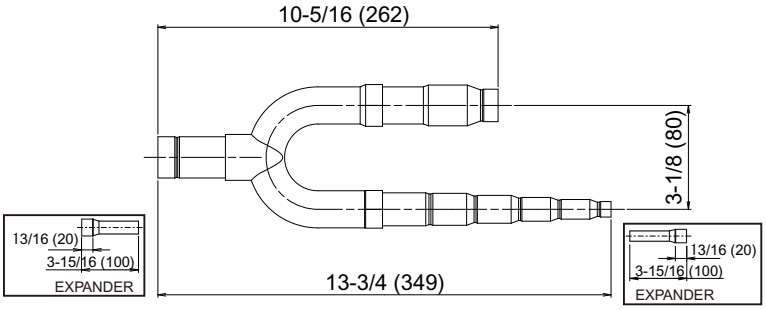
Heat insulation	Q'ty	Application
	3	for Liquid pipe × 1 for Discharge gas pipe × 1 for Suction gas pipe × 1

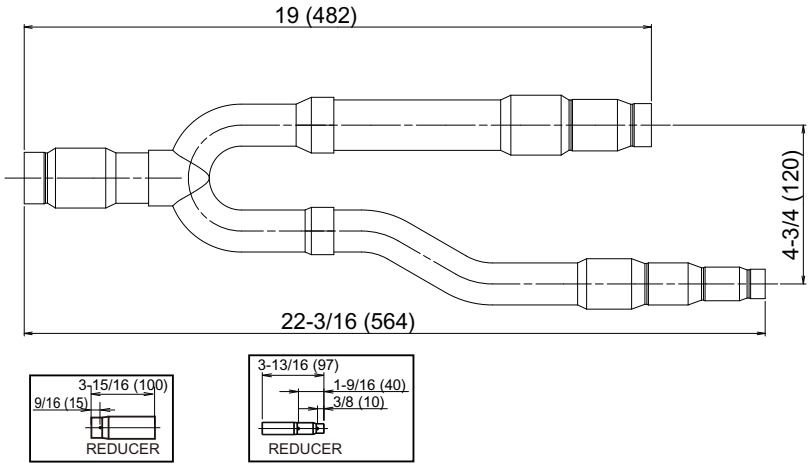
Tape	Q'ty
	8

OPTIONAL PARTS

● Dimensions

Unit: in. (mm)

Liquid pipe	Discharge gas pipe
	

Suction gas pipe


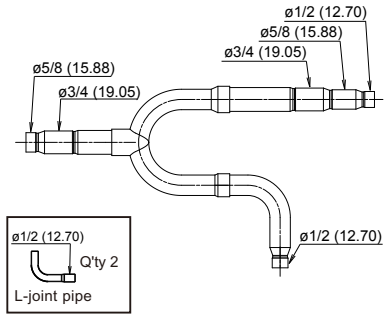
2. OUTDOOR UNIT BRANCH KIT

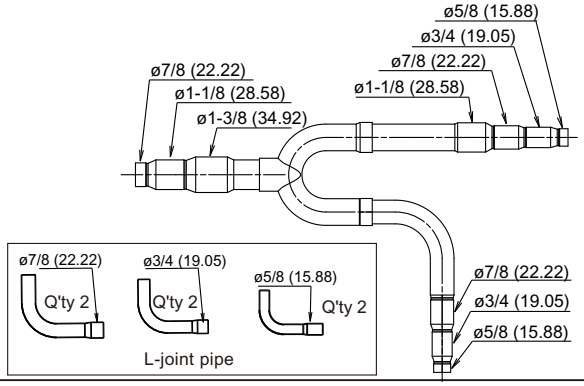
■ UTP-DX567A

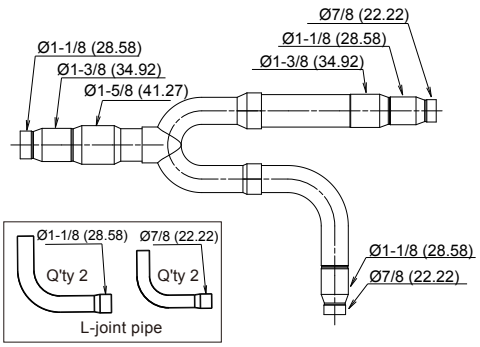
NOTE: Only for VR-II series.

● Port diameters

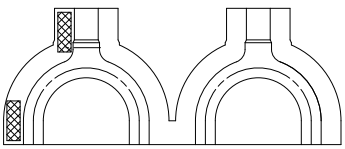
Unit: in. (mm)

Liquid pipe	Q'ty
	1

Discharge gas pipe	Q'ty
	1

Suction gas pipe	Q'ty
	1

● Heat insulation

Heat insulation	Q'ty	Application
	3	for Liquid pipe × 1 for Discharge gas pipe × 1 for Suction gas pipe × 1

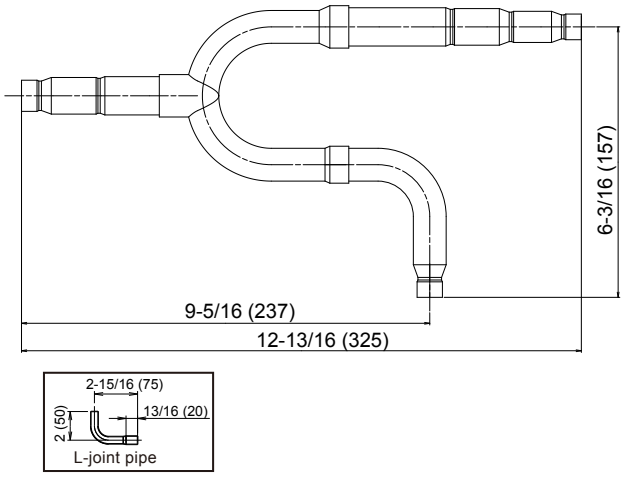
Tape	Q'ty
	8

OPTIONAL PARTS

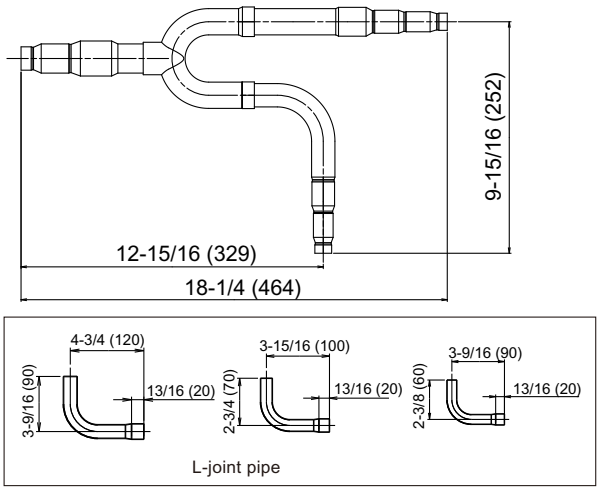
● Dimensions

Unit: in. (mm)

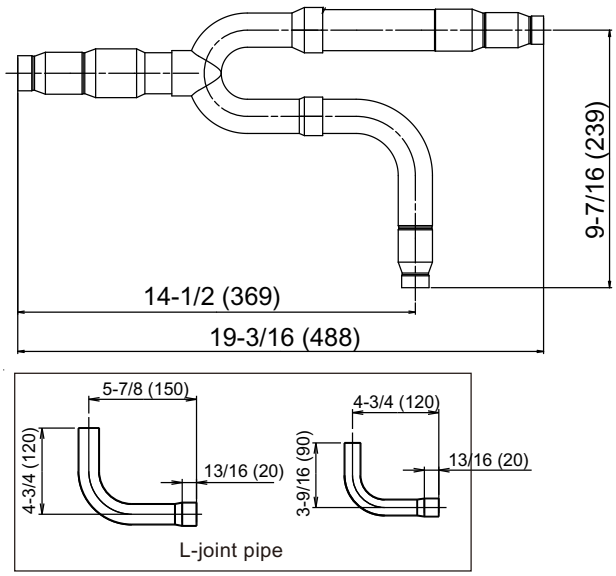
Liquid pipe



Discharge gas pipe



Suction gas pipe



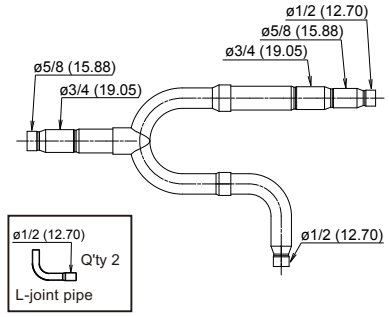
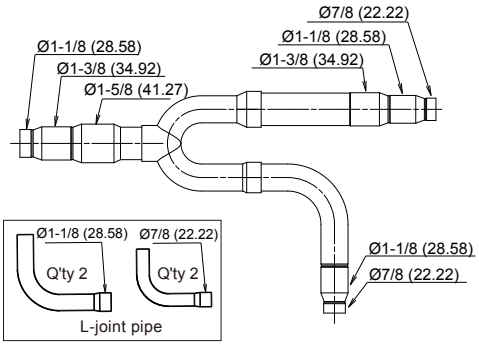
OPTIONAL PARTS

■ UTP-CX567A

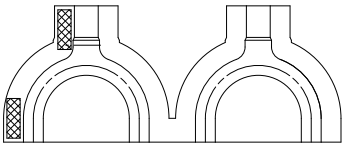
NOTE: Only for V-II series.

● Port diameters

Unit: in. (mm)

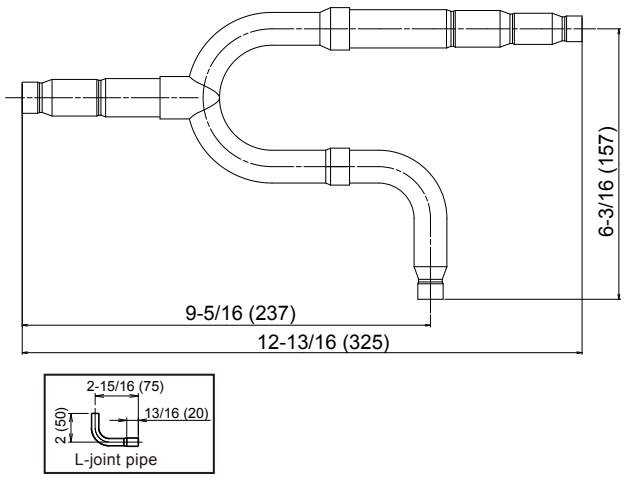
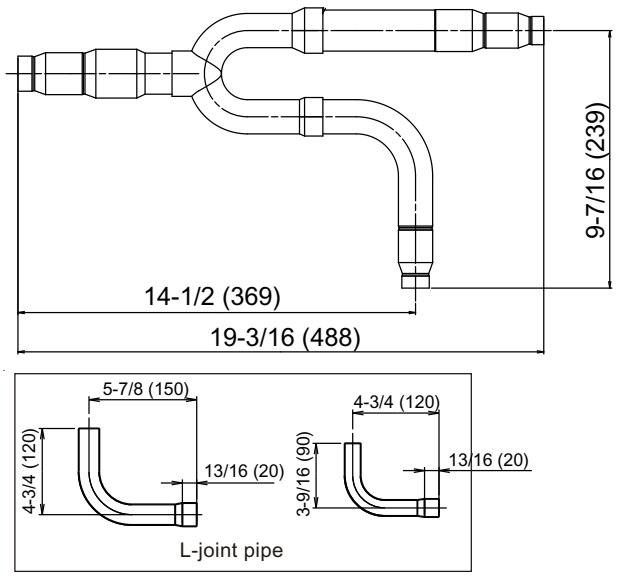
Liquid pipe	Q'ty	Gas pipe	Q'ty
	1		1

● Heat insulation

Heat insulation	Q'ty	Application
	2	for Liquid pipe × 1 for Gas pipe × 1

Tape	Q'ty
	8

● Dimensions

Liquid pipe	Gas pipe
	

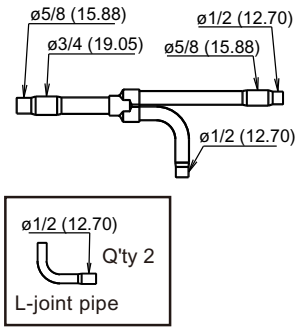
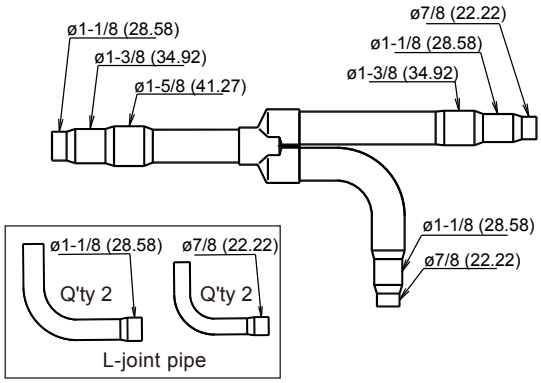
OPTIONAL PARTS

■ UTR-CP567X

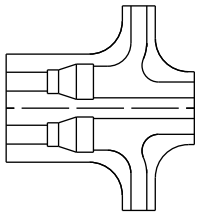
NOTE: Only for V-II series.

● Port diameters

Unit: in. (mm)

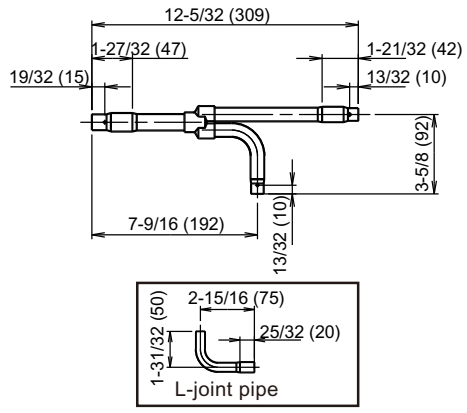
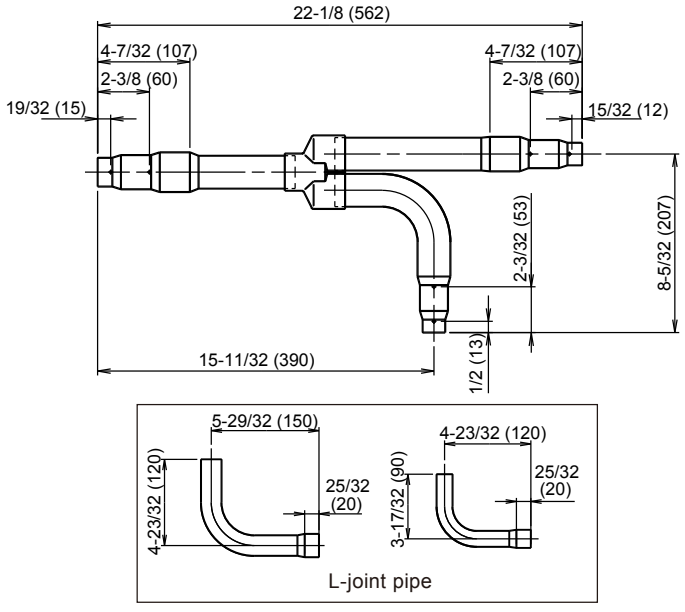
Liquid pipe	Q'ty	Gas pipe	Q'ty
	1		1

● Heat insulation

Heat insulation	Q'ty	Application
	2	Large × 1 (for gas pipe) Small × 1 (for liquid pipe)

Tape	Q'ty
 for UTR-CP567X only	8

● Dimensions

Liquid pipe	Gas pipe
	

3. HEADER

■ CONNECTING CAPACITY

Total cooling capacity of indoor units (x) (kBtu/h)	For 2 pipes		For 3 pipes	
	3 - 6 Branches	3 - 8 Branches	3 - 6 Branches	3 - 8 Branches
x < 96.5	UTR-H0906L	UTR-H0908L	UTP-J0906A	UTP-J0908A
96.5 ≤ x < 193	UTR-H1806L	UTR-H1808L	UTP-J1806A	UTP-J1808A

The total cooling capacity (x) is the total capacity for all indoor units downstream of the separation tube.

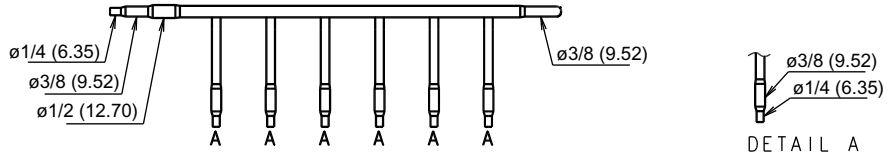
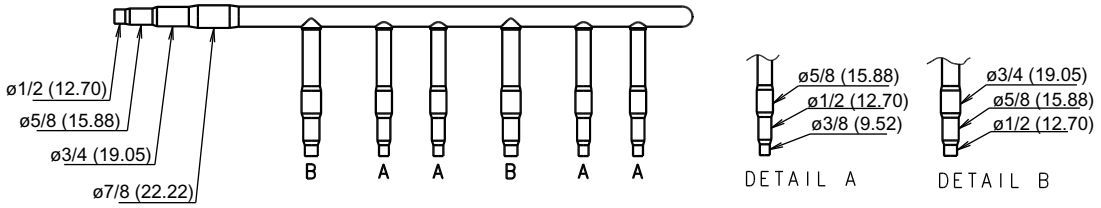
OPTIONAL PARTS

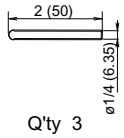
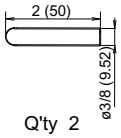
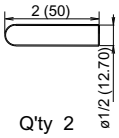
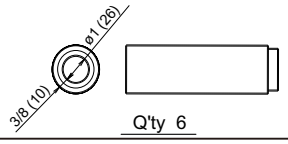
3-1. HEADER FOR 2 PIPES

■ MODEL: UTR-H0906L

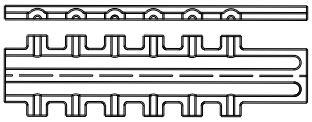
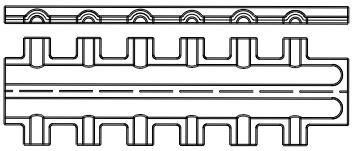
● Port diameters

Unit: in. (mm)

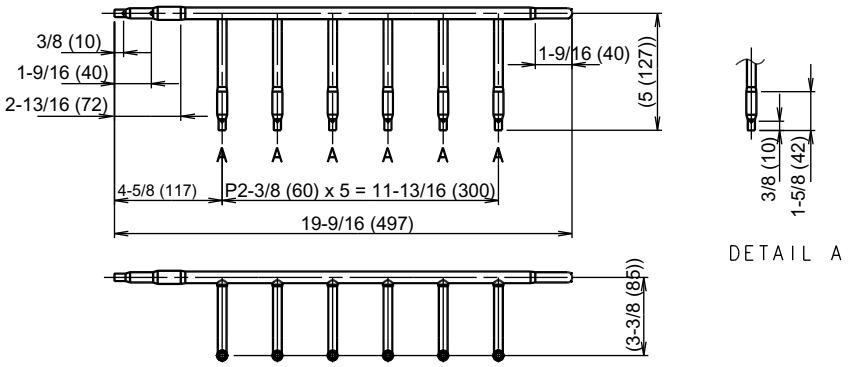
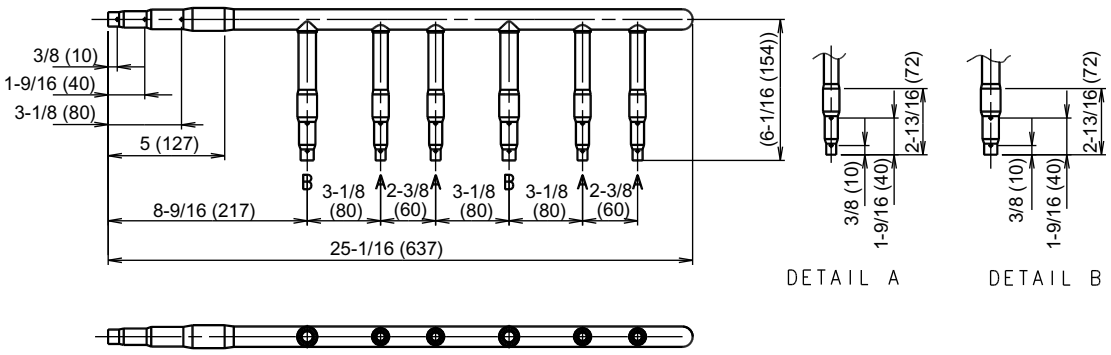
Liquid pipe	
Gas pipe	

Closed pipe A	Closed pipe B	Closed pipe C	Closed pipe insulation
 Q'ty 3	 Q'ty 2	 Q'ty 2	 Q'ty 6

● Heat insulation

Header insulation liquid	Header insulation gas
 Q'ty 1	 Q'ty 1

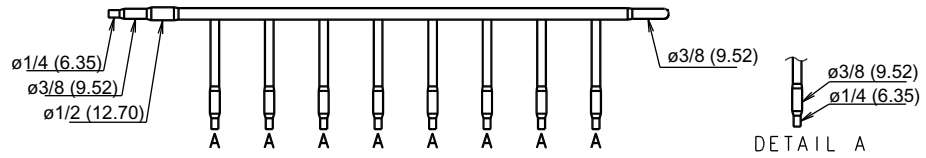
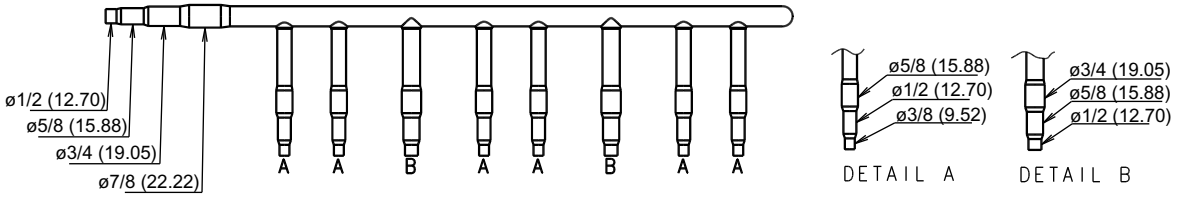
● Dimensions

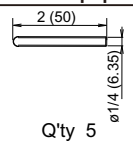
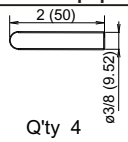
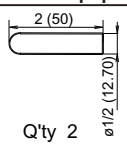
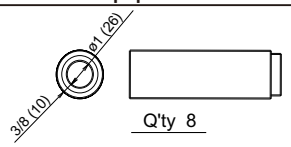
Liquid pipe	
Gas pipe	

■ MODEL: UTR-H0908L

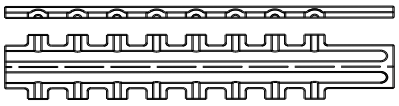
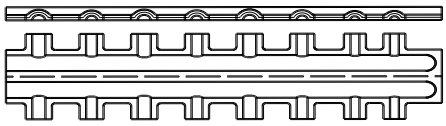
● Port diameters

Unit: in. (mm)

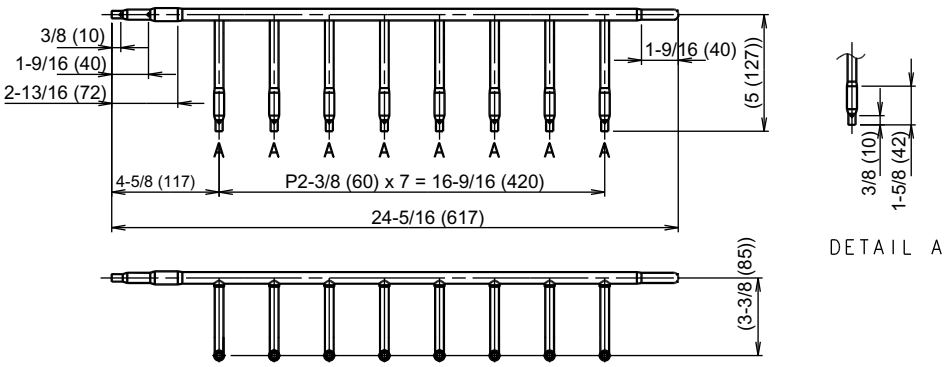
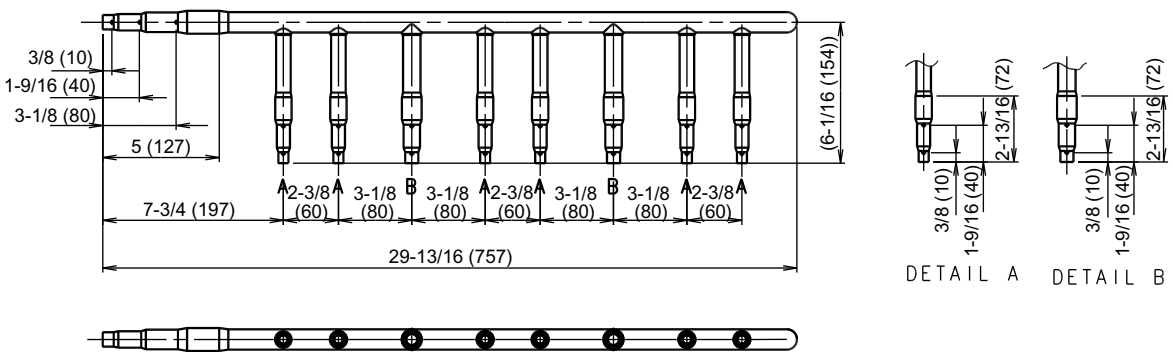
Liquid pipe	
Gas pipe	

Closed pipe A	Closed pipe B	Closed pipe C	Closed pipe insulation
 Q'ty 5	 Q'ty 4	 Q'ty 2	 Q'ty 8

● Heat insulation

Header insulation liquid	Header insulation gas
 Q'ty 1	 Q'ty 1

● Dimensions

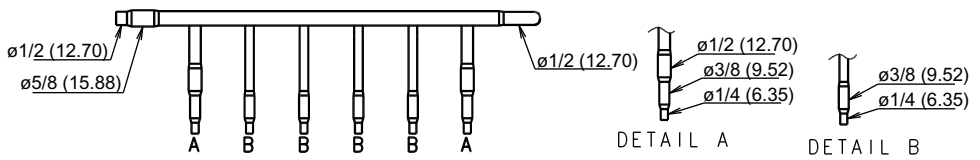
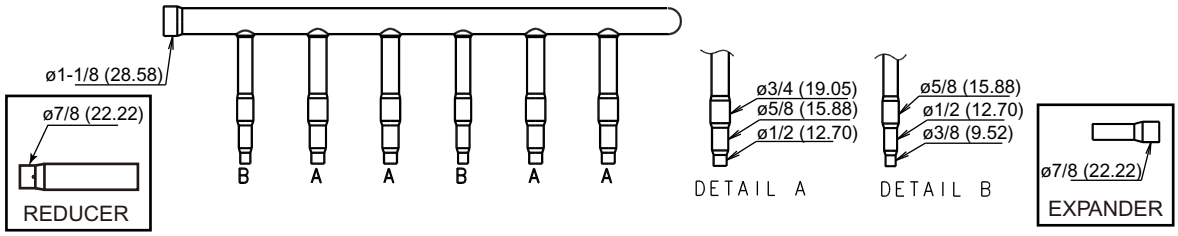
Liquid pipe	
Gas pipe	

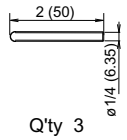
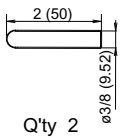
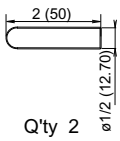
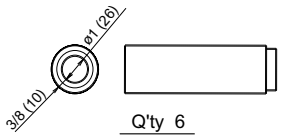
OPTIONAL PARTS

■ MODEL: UTR-H1806L

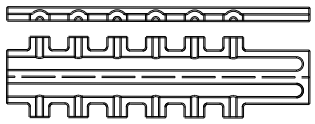
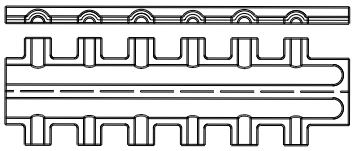
● Port diameters

Unit: in. (mm)

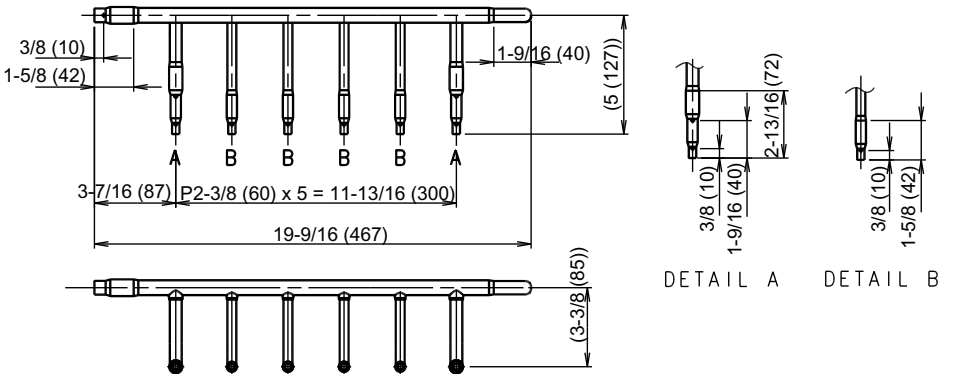
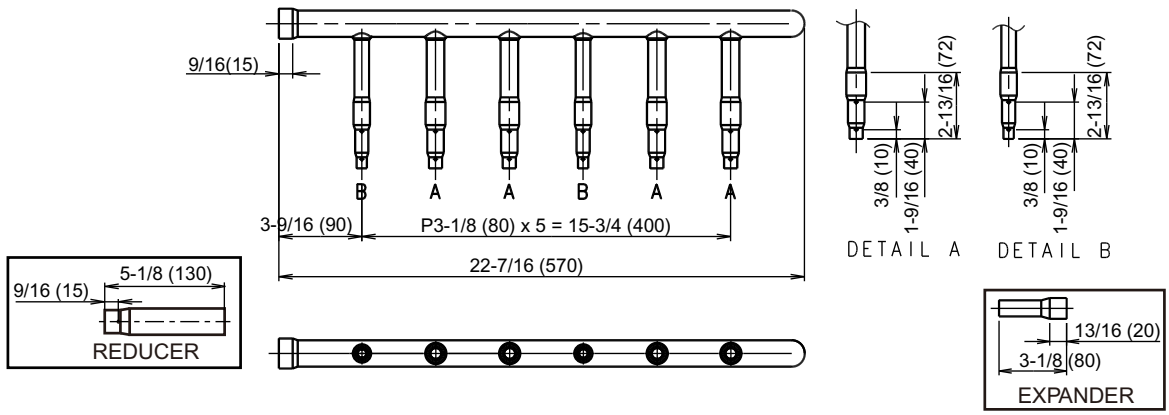
Liquid pipe	
Gas pipe	

Closed pipe A	Closed pipe B	Closed pipe C	Closed pipe insulation
 Q'ty 3	 Q'ty 2	 Q'ty 2	 Q'ty 6

● Heat insulation

Header insulation liquid	Header insulation gas
 Q'ty 1	 Q'ty 1

● Dimensions

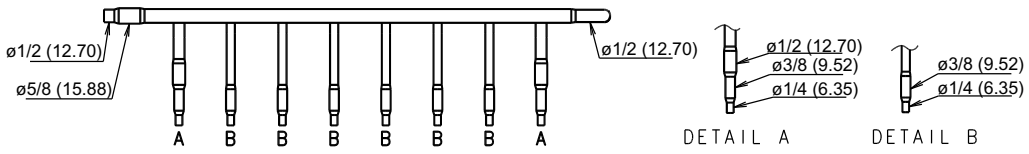
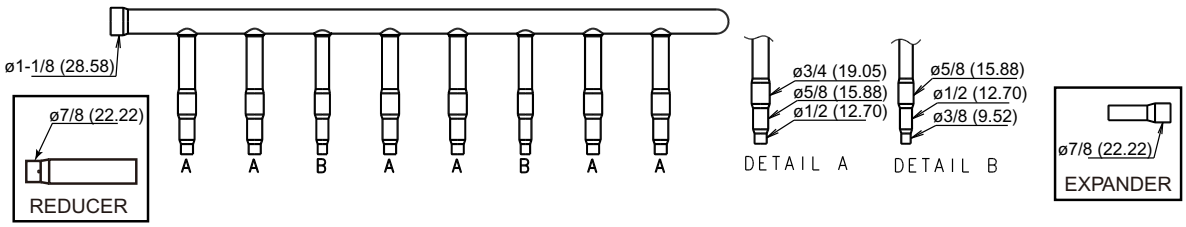
Liquid pipe	
Gas pipe	

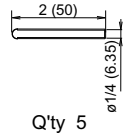
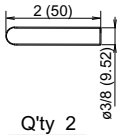
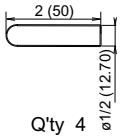
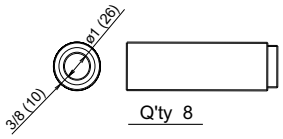
OPTIONAL PARTS

■ MODEL: UTR-H1808L

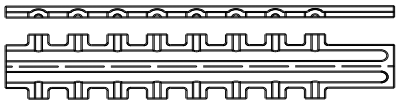
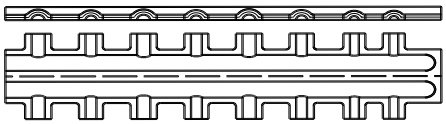
● Port diameters

Unit: in. (mm)

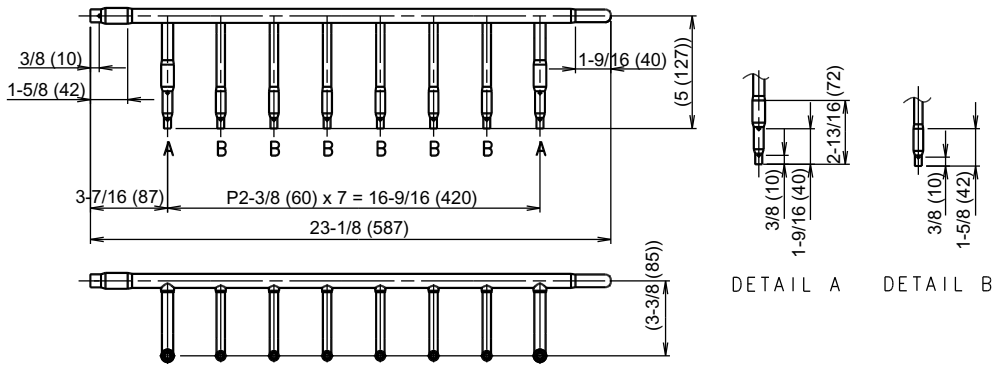
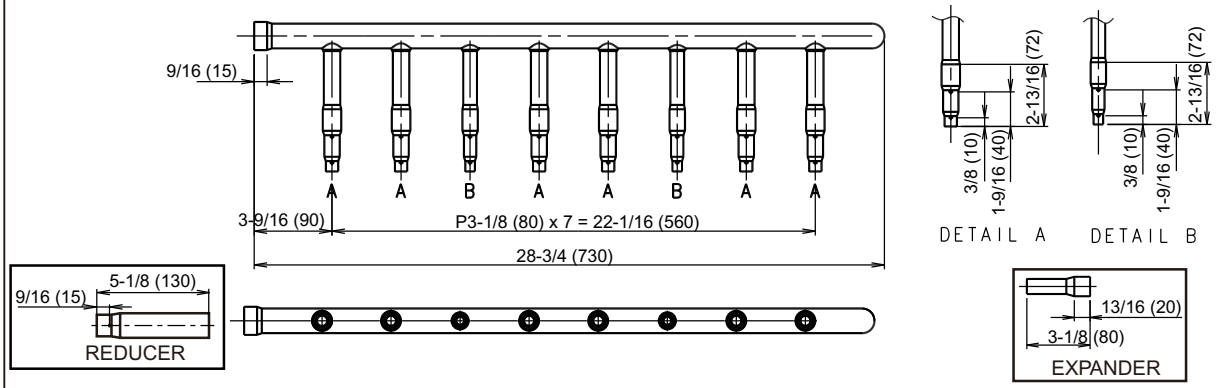
Liquid pipe	
Gas pipe	

Closed pipe A	Closed pipe B	Closed pipe C	Closed pipe insulation
 Q'ty 5	 Q'ty 2	 Q'ty 4	

● Heat insulation

Header insulation liquid	Header insulation gas
 Q'ty 1	 Q'ty 1

● Dimensions

Liquid pipe	
Gas pipe	

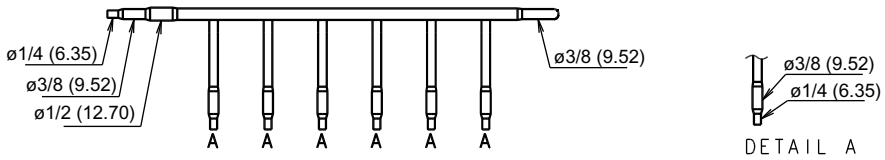
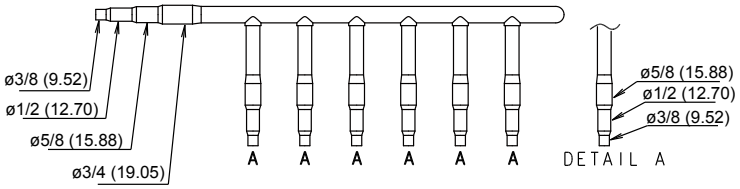
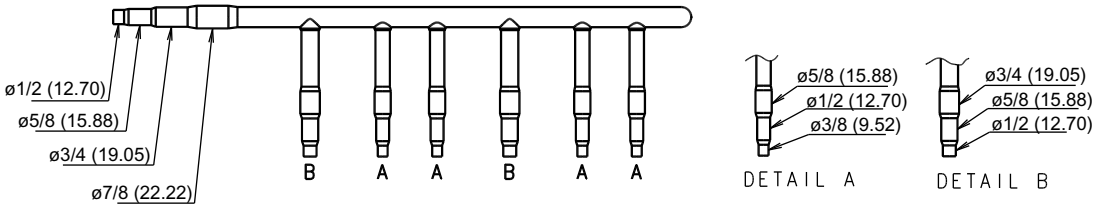
OPTIONAL PARTS

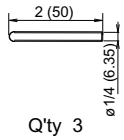
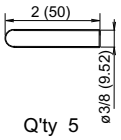
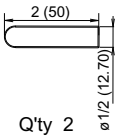
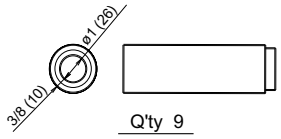
3-2. HEADER FOR 3 PIPES

■ MODEL: UTP-J0906A

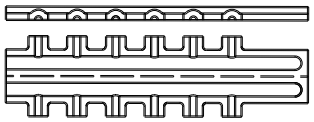
● Port diameters

Unit: in. (mm)

Liquid pipe	
Dis-charge gas pipe	
Suction gas pipe	

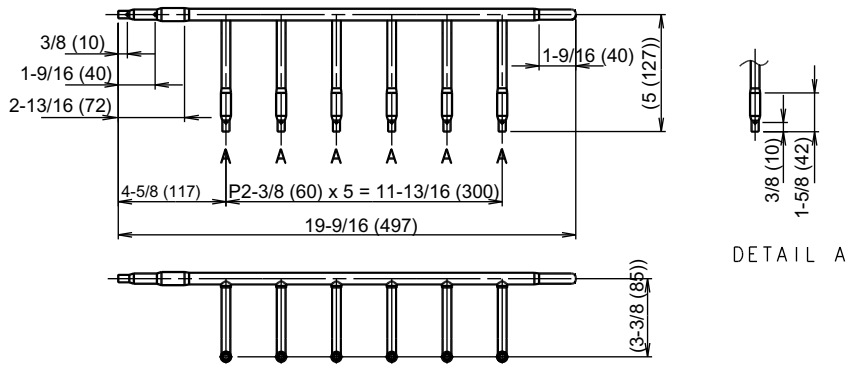
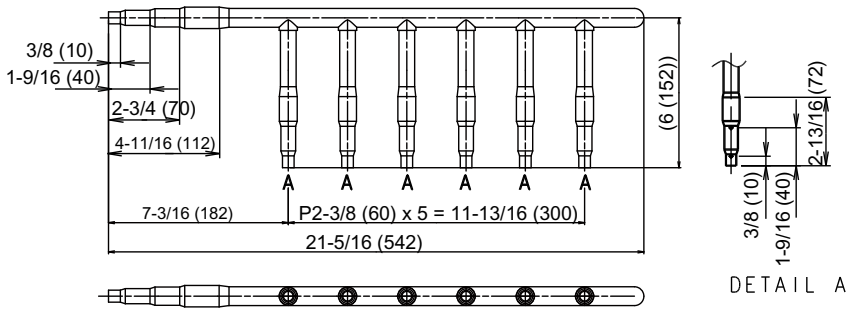
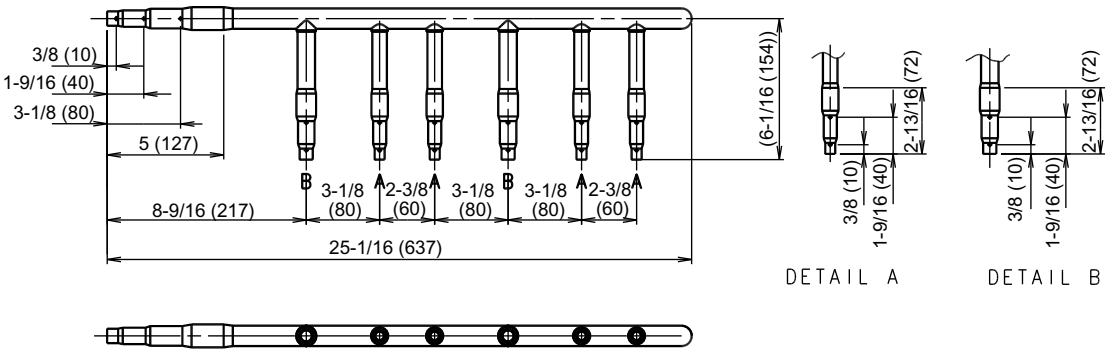
Closed pipe A	Closed pipe B	Closed pipe C	Closed pipe insulation
 Q'ty 3	 Q'ty 5	 Q'ty 2	 Q'ty 9

● Heat insulation

Heat insulation	Q'ty	Application
	3	for Liquid pipe × 1 for Discharge gas pipe × 1 for Suction gas pipe × 1

● Dimensions

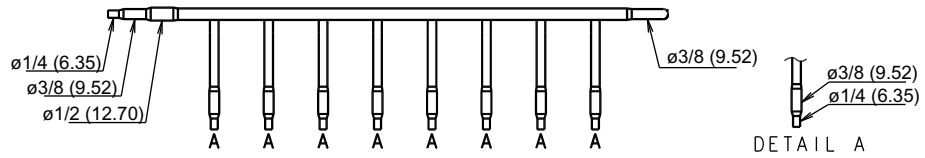
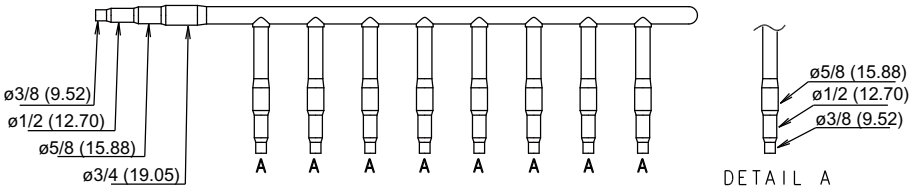
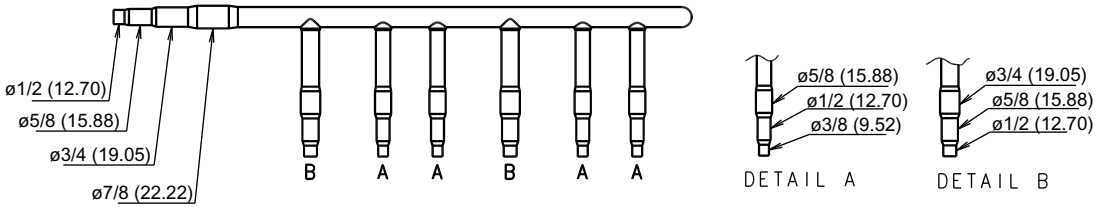
Unit: in. (mm)

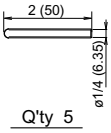
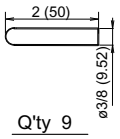
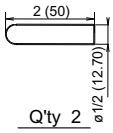
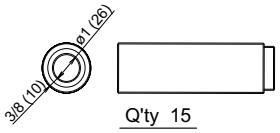
Liquid pipe	
Dis-charge gas pipe	
Suction gas pipe	

■ MODEL: UTP-J0908A

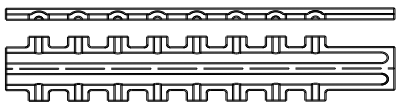
● Port diameters

Unit: in. (mm)

Liquid pipe	
Dis-charge gas pipe	
Suction gas pipe	

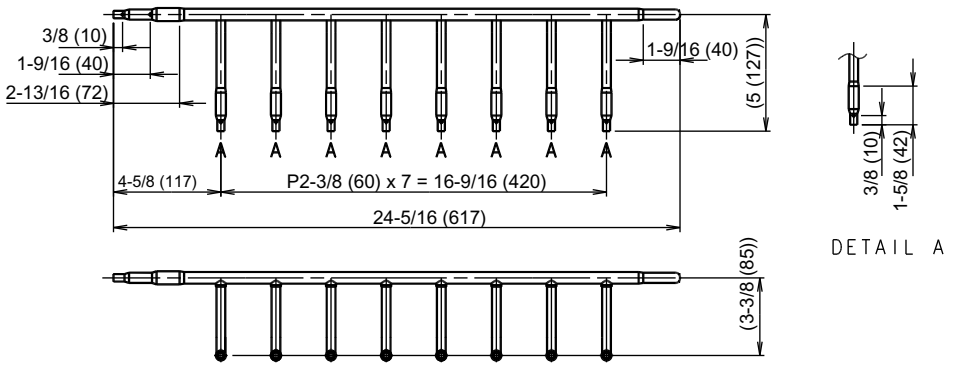
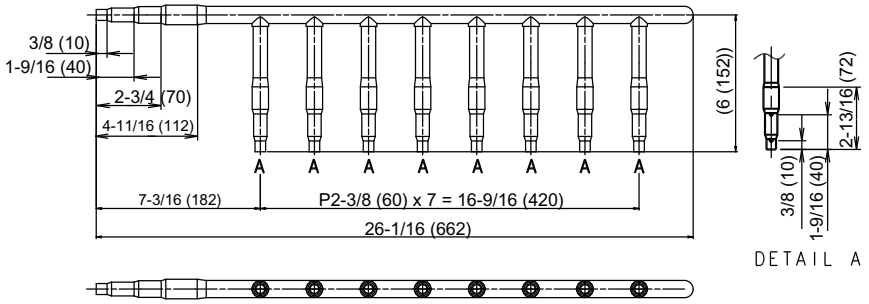
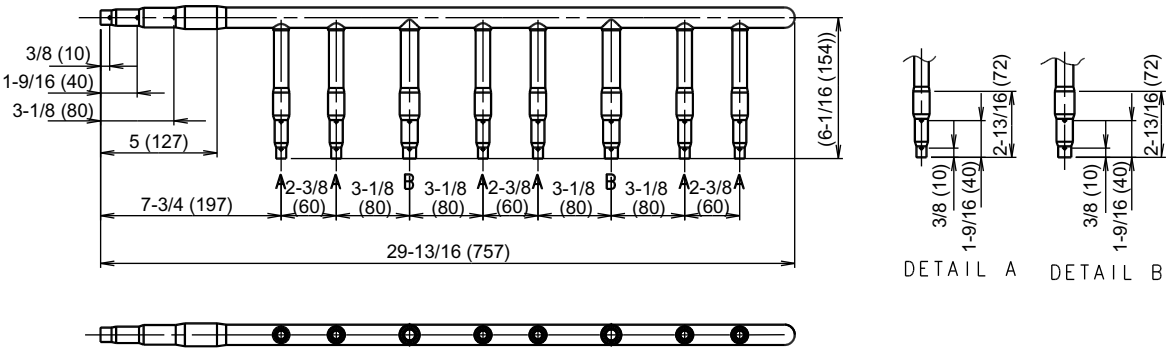
Closed pipe A	Closed pipe B	Closed pipe C	Closed pipe insulation
 Q'ty 5	 Q'ty 9	 Q'ty 2	 Q'ty 15

● Heat insulation

Heat insulation	Q'ty	Application
	3	for Liquid pipe × 1 for Discharge gas pipe × 1 for Suction gas pipe × 1

● Dimensions

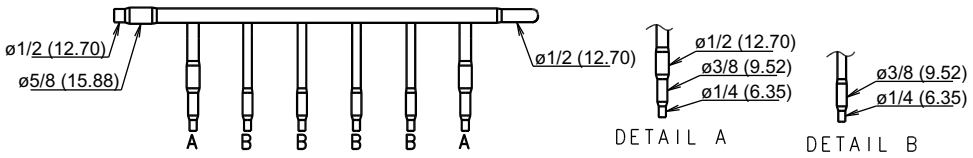
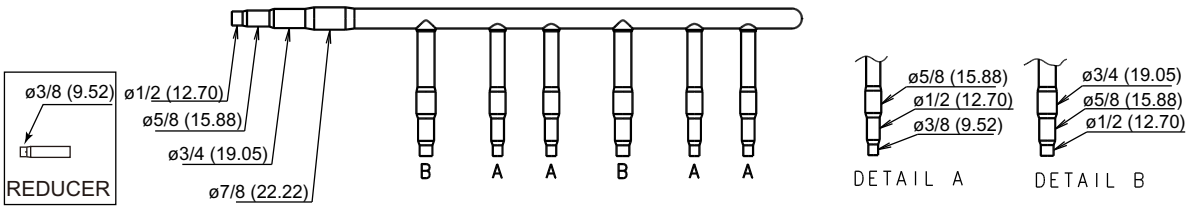
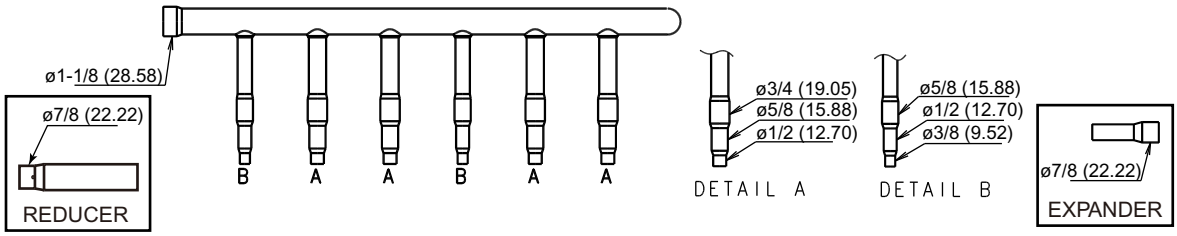
Unit: in. (mm)

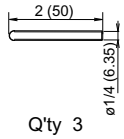
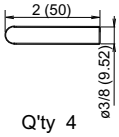
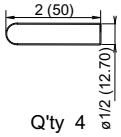
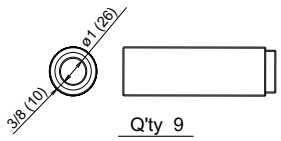
Liquid pipe	
Dis-charge gas pipe	
Suction gas pipe	

■ MODEL: UTP-J1806A

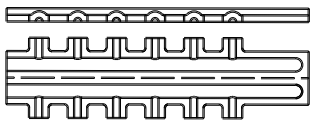
● Port diameters

Unit: in. (mm)

Liquid pipe	
Dis-charge gas pipe	
Suction gas pipe	

Closed pipe A	Closed pipe B	Closed pipe C	Closed pipe insulation
 Q'ty 3	 Q'ty 4	 Q'ty 4	 Q'ty 9

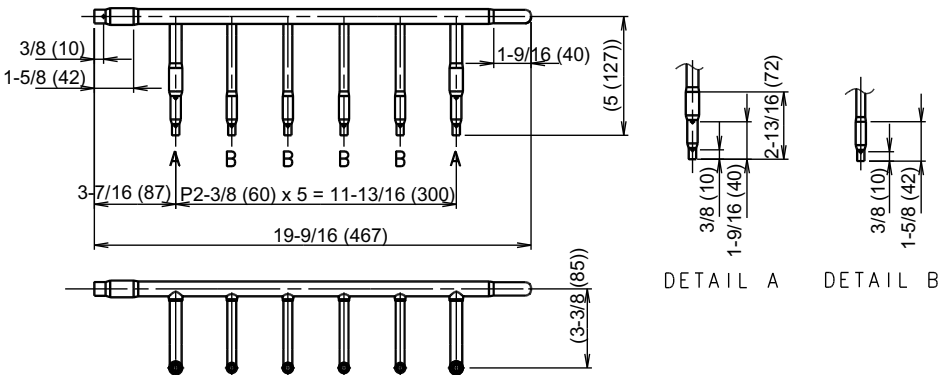
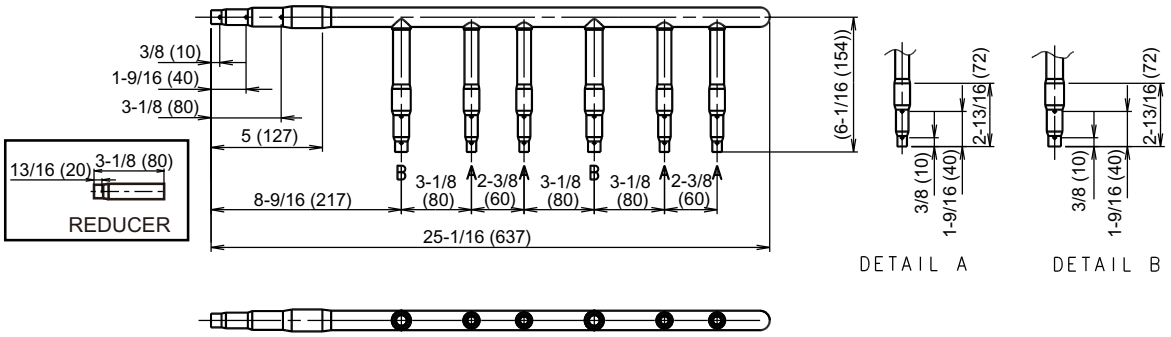
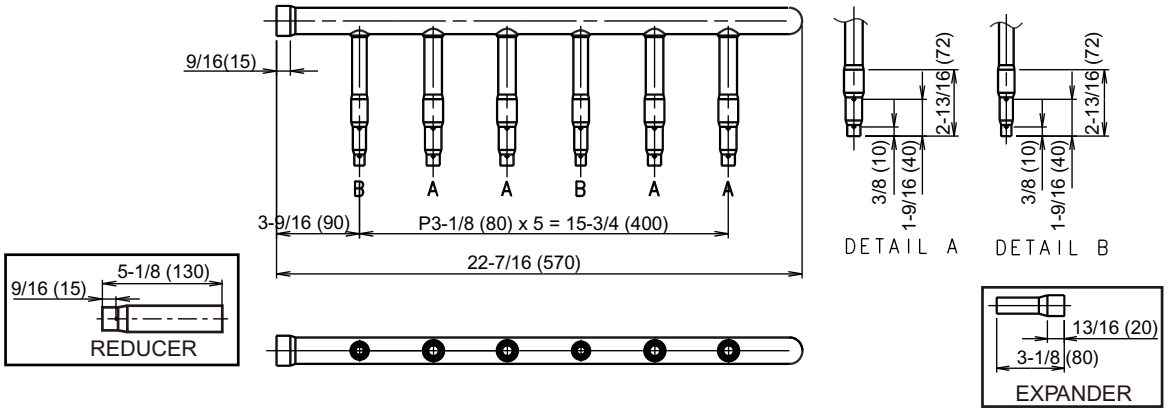
● Heat insulation

Heat insulation	Q'ty	Application
	3	for Liquid pipe × 1 for Discharge gas pipe × 1 for Suction gas pipe × 1

OPTIONAL PARTS

● Dimensions

Unit: in. (mm)

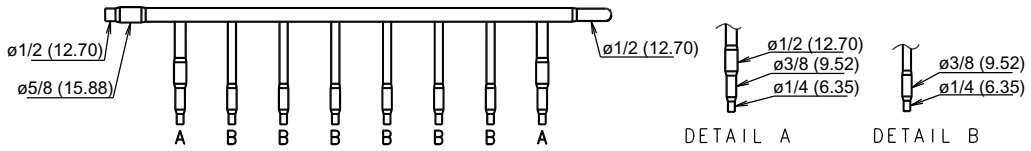
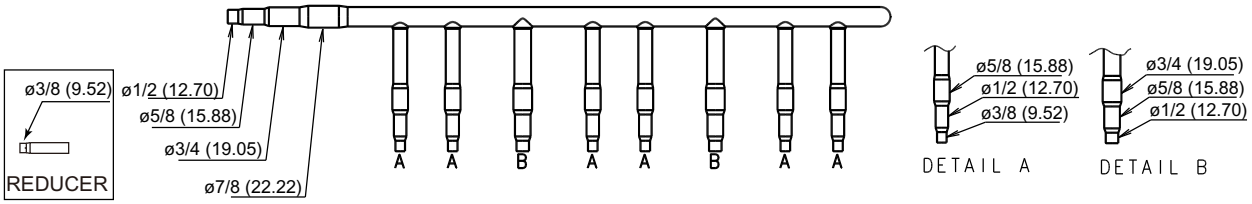
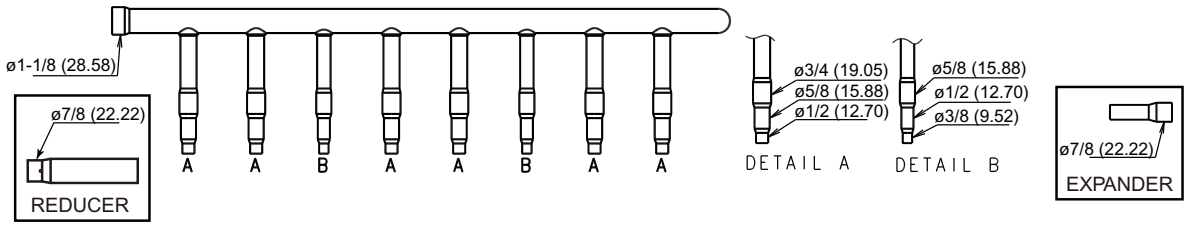
Liquid pipe	
Dis-charge gas pipe	
Suction gas pipe	

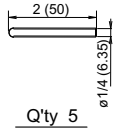
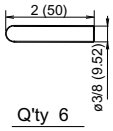
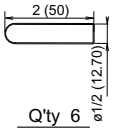
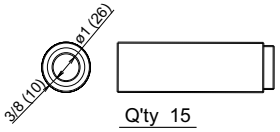
OPTIONAL PARTS

■ MODEL: UTP-J1808A

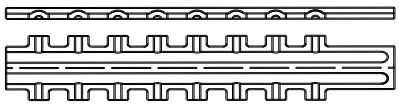
● Port diameters

Unit: in. (mm)

Liquid pipe	
Dis-charge gas pipe	
Suction gas pipe	

Closed pipe A	Closed pipe B	Closed pipe C	Closed pipe insulation
 Q'ty 5	 Q'ty 6	 Q'ty 6	 Q'ty 15

● Heat insulation

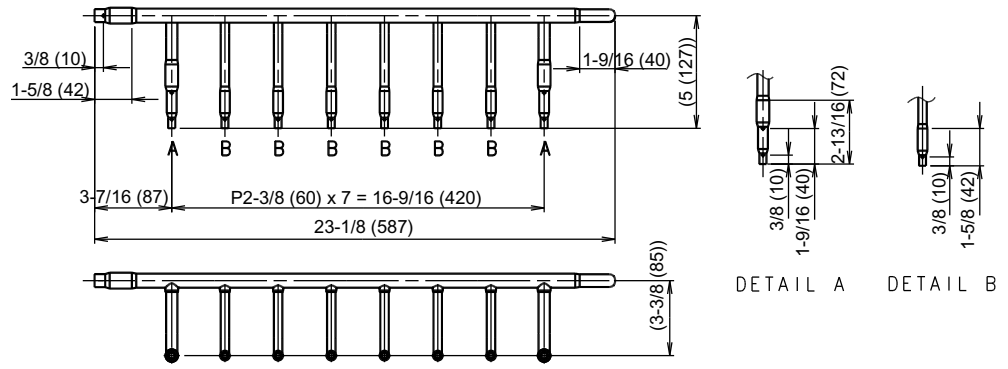
Heat insulation	Q'ty	Application
	3	for Liquid pipe × 1 for Discharge gas pipe × 1 for Suction gas pipe × 1

OPTIONAL PARTS

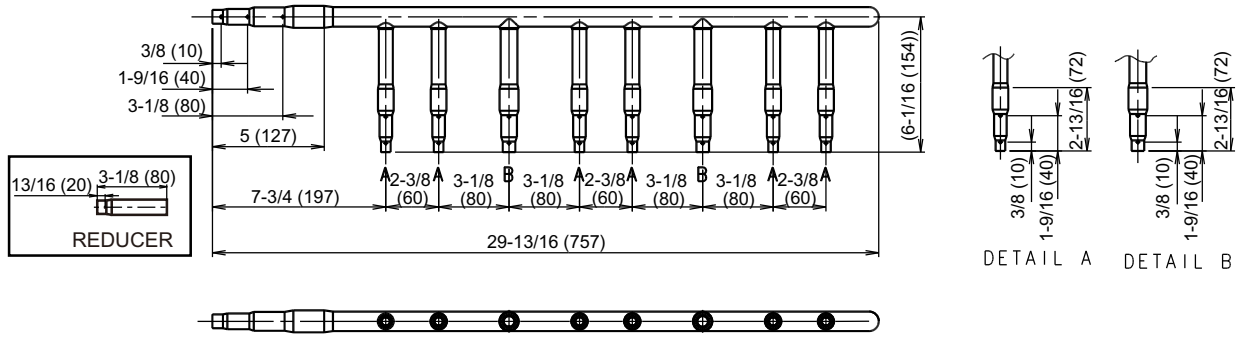
● Dimensions

Unit: in. (mm)

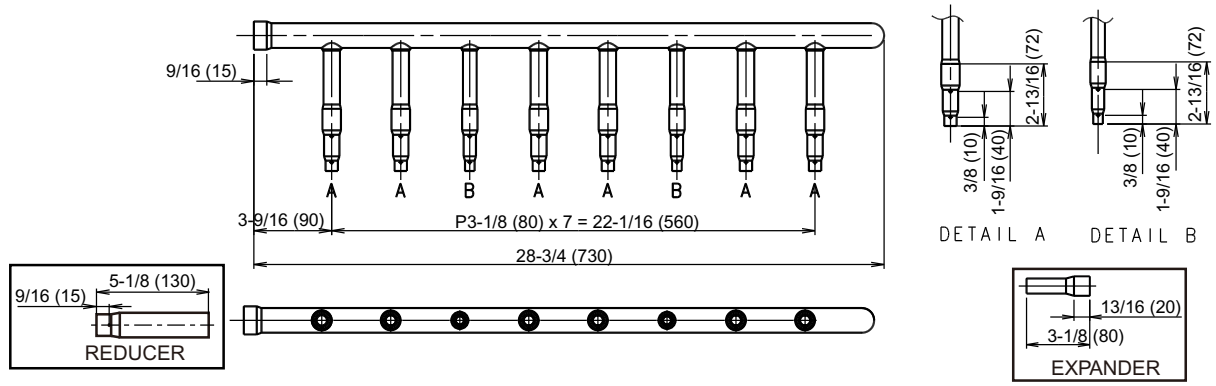
Liquid pipe



Dis-charge gas pipe



Suction gas pipe



4. RB UNIT

4-1. SPECIFICATIONS

Model name				UTP-RU01AH	UTP-RU01BH	UTP-RU01CH	UTP-RU04BH
Power source				1 Phase 208 / 230V ~ 60Hz			
Available voltage range				187 to 253V			
Number of branches				1	1	1	4
Maximum number of connectable indoor units per branch				3	8	8	8
Maximum capacity of connectable indoor units(Q)			Btu / h	Q ≤ 27,000	Q ≤ 60,000	Q ≤ 96,000	Q ≤ 191,000 *1
Maximum capacity of connectable indoor units per branch(Q)			Btu / h	Q ≤ 27,000	Q ≤ 60,000	Q ≤ 96,000	Q ≤ 60,000
Input power			W	28	28	41	110
Running current			A	0.2	0.2	0.3	0.8
Refrigerant type				R410A			
Dimensions (H × W × D)		Net	in. (mm)	7-13/16 × 11-3/4 × 10-9/16 (198 × 298 × 268)			10-1/4 × 25-7/8 × 16-7/8 (260 × 658 × 428)
		Gross	in. (mm)	10-5/16 × 32-13/16 × 14-3/4 (262 × 833 × 374)			13-11/16 × 49-3/16 × 30-1/2 (348 × 1,250 × 775)
Weight		Net	lbs (kg)	16 (7)	17 (7.5)	18 (8)	70 (31.5)
		Gross	lbs (kg)	21 (9.5)	24 (10.5)	25 (11)	88 (39.5)
Connection pipe	Outdoor unit side	Suction gas pipe	in. (mm)	ø1/2 (12.70)	ø3/4 (19.05)	ø7/8 (22.22)	ø1-1/8 (28.58)
		Discharge gas pipe	in. (mm)	ø3/8 (9.52)	ø1/2 (12.70)	ø3/4 (19.05)	ø7/8 (22.22)
		Liquid pipe	in. (mm)	None			ø5/8 (15.88)
	Indoor unit side	Gas pipe	in. (mm)	ø1/2 (12.70)	ø3/4 (19.05)	ø7/8 (22.22)	ø3/4 (19.05)
		Liquid pipe	in. (mm)	None			ø3/8 (9.52)
	Method			Brazing			
Operation range			°F (°C)	5 to 115 (-15 to 46)			
			%RH	80 or less			

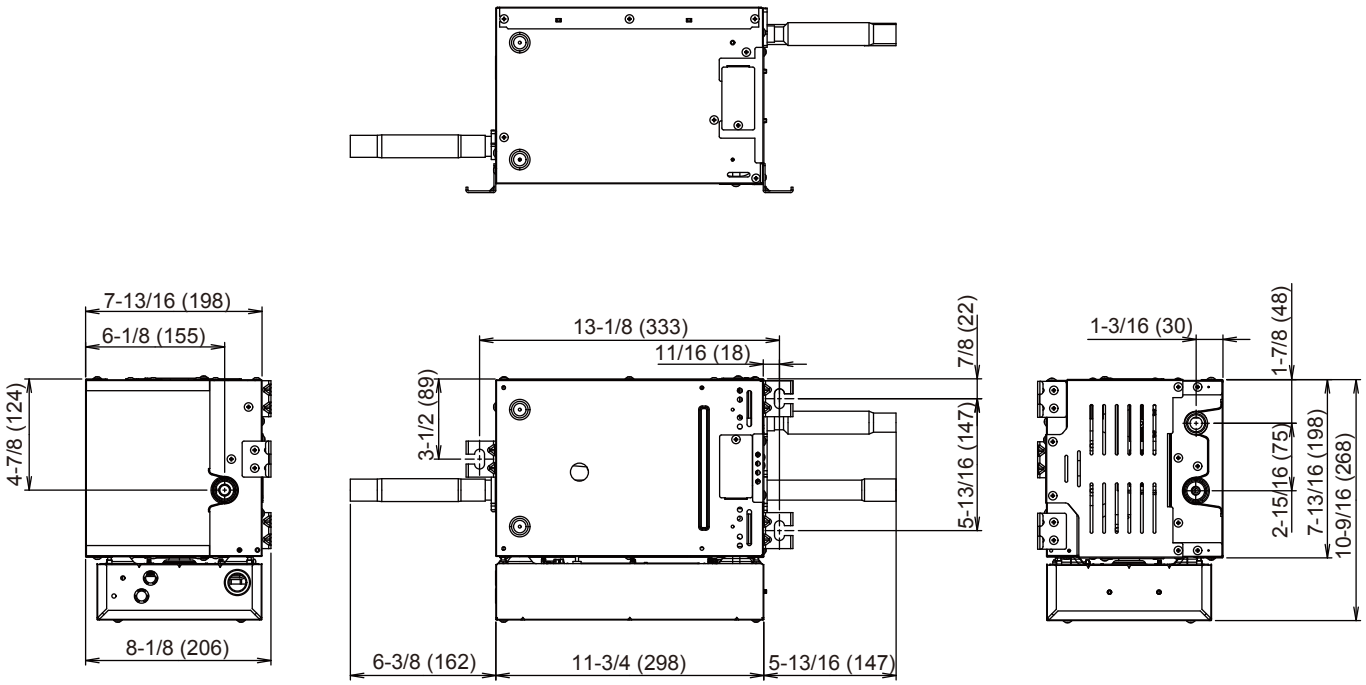
*1: In case of two RB units connected in series (total 8-branches), maximum capacity of connectable indoor units is up to 191,000 Btu/h.

OPTIONAL PARTS

4-2. DIMENSIONS

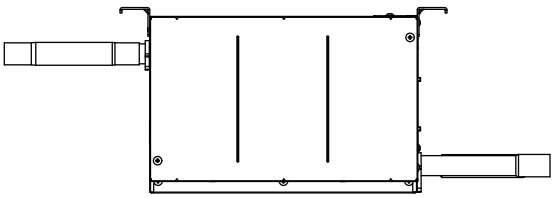
■ MODELS: UTP-RU01AH, UTP-RU01BH, UTP-RU01CH

Unit: in. (mm)

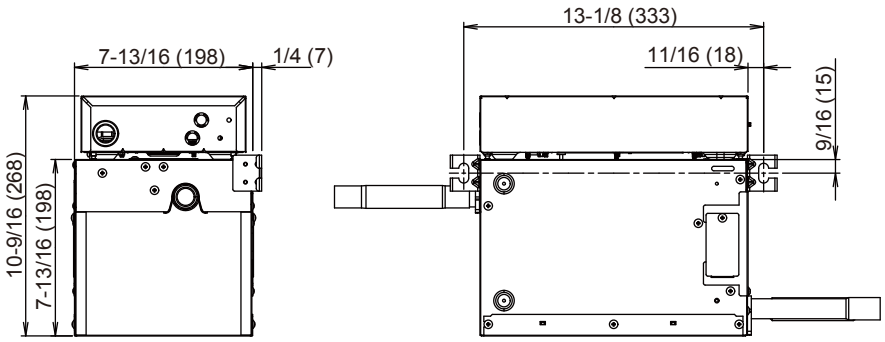


Indoor unit side

Outdoor unit side



Ceiling hanging

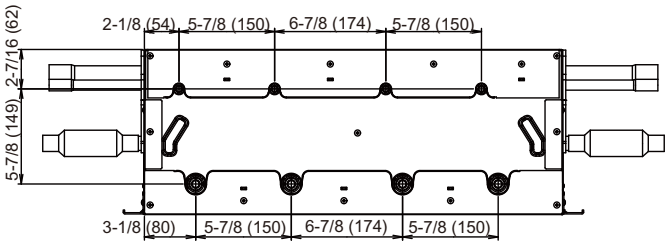


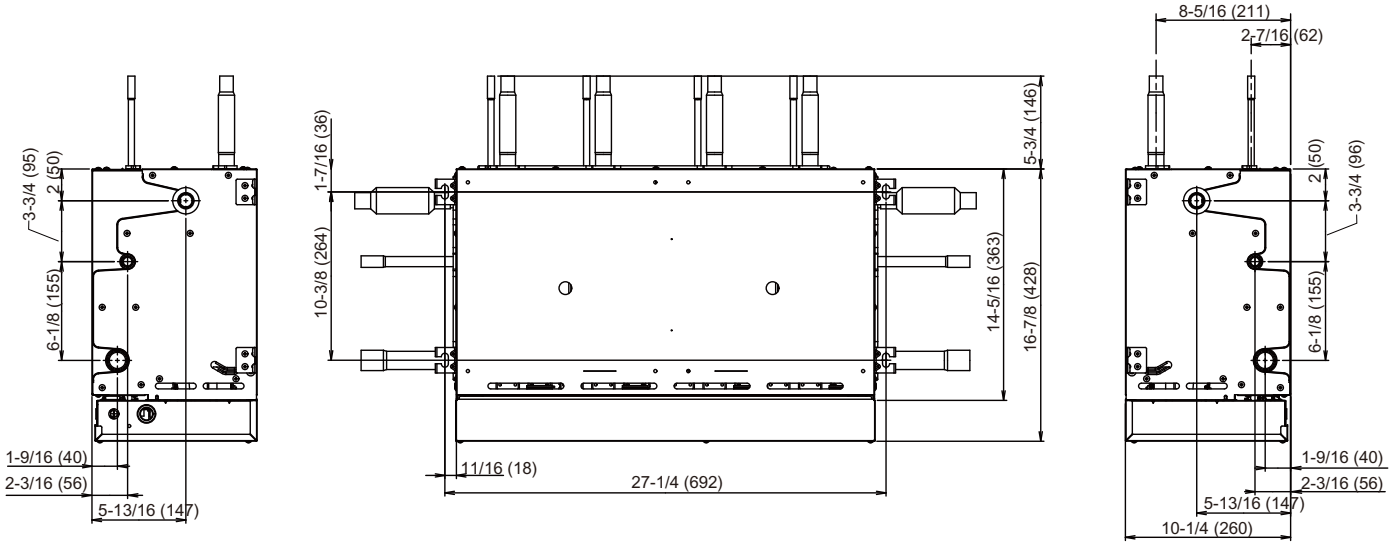
Wall hanging

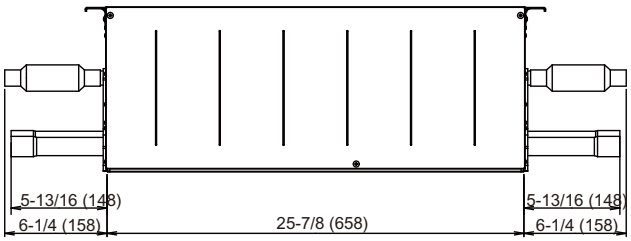
OPTIONAL PARTS

■ MODEL: UTP-RU04BH

Unit: in. (mm)







OPTIONAL PARTS

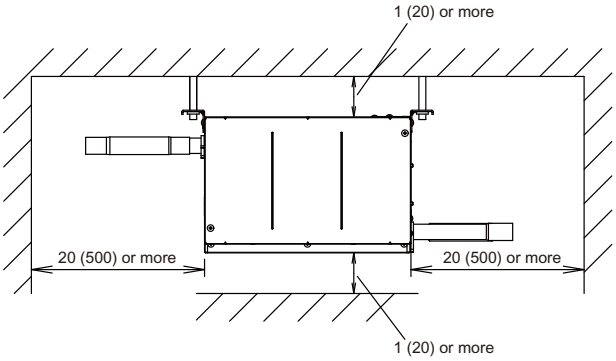
4-3. INSTALLATION

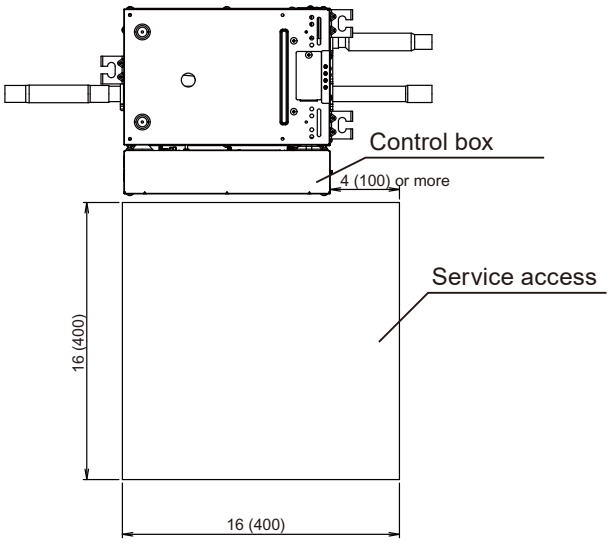
- Control box which is a part of RB units can be also changed the position depending on installation condition at each side of RB units
- Be sure to prepare Service access in control box side.
- Since the sound of refrigerant flow may be felt as an unusual sound, do not install in the underpart of the roof, such as a bedroom which sound worries.

■ MODELS: UTP-RU01AH, UTP-RU01BH, UTP-RU01CH

● Ceiling installation

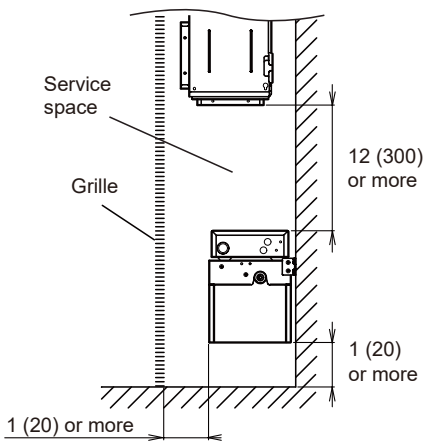
Unit: in. (mm)





● Wall installation

E.g.: If installing a duct model vertically.

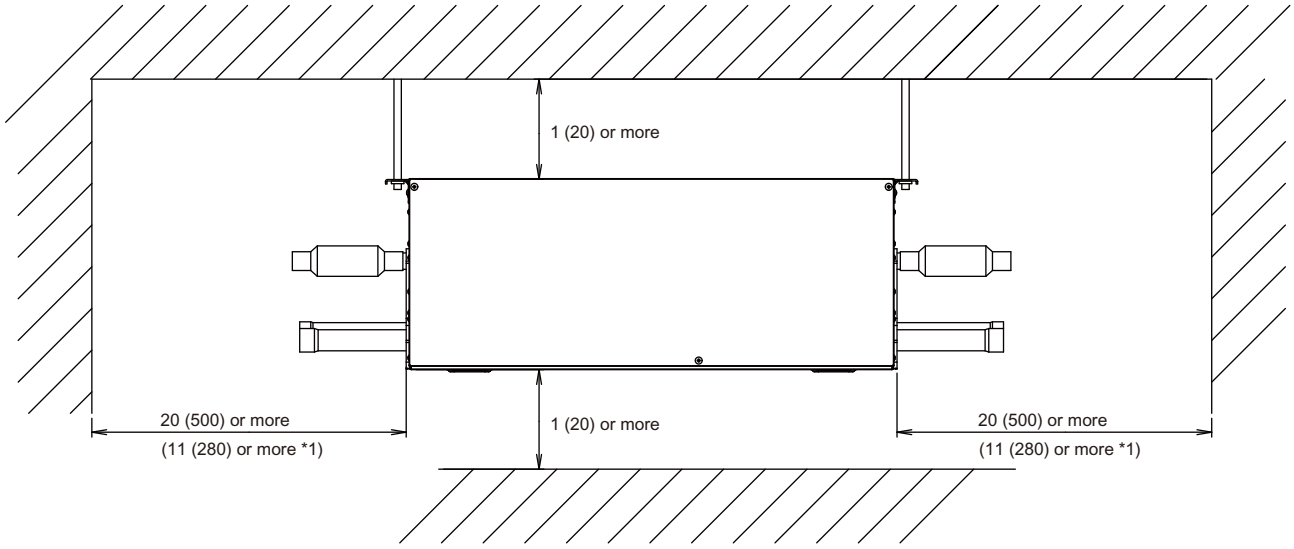


OPTIONAL PARTS

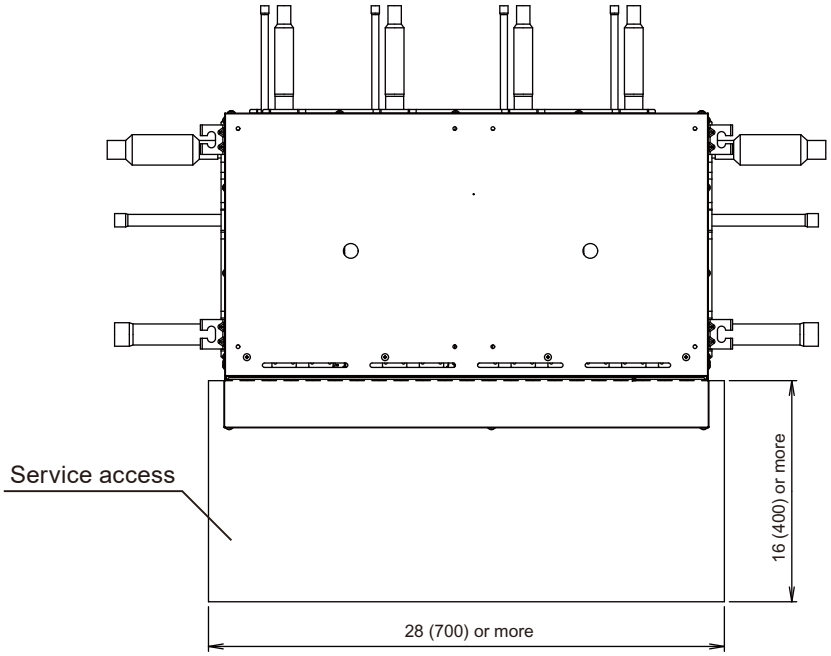
■ MODEL: UTP-RU04BH

● Ceiling installation

Unit: in. (mm)



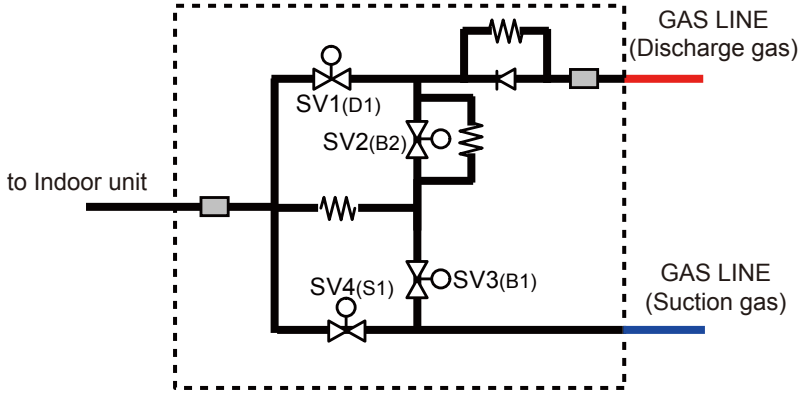
*1: When piping is not connected



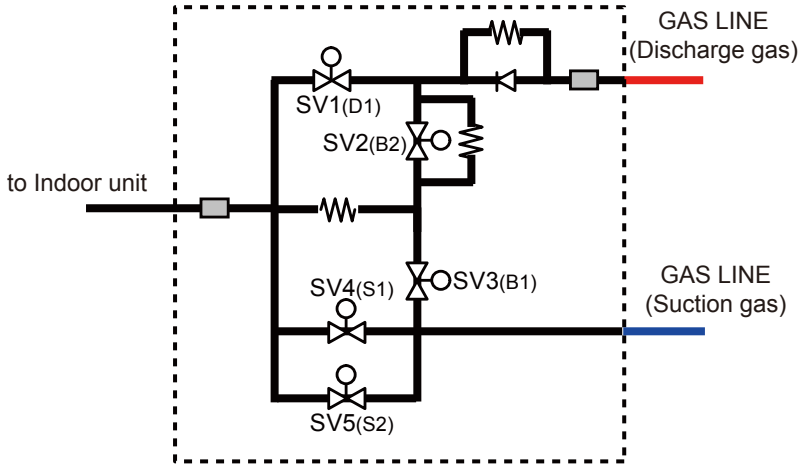
OPTIONAL PARTS

4-4. REFRIGERANT CIRCUIT

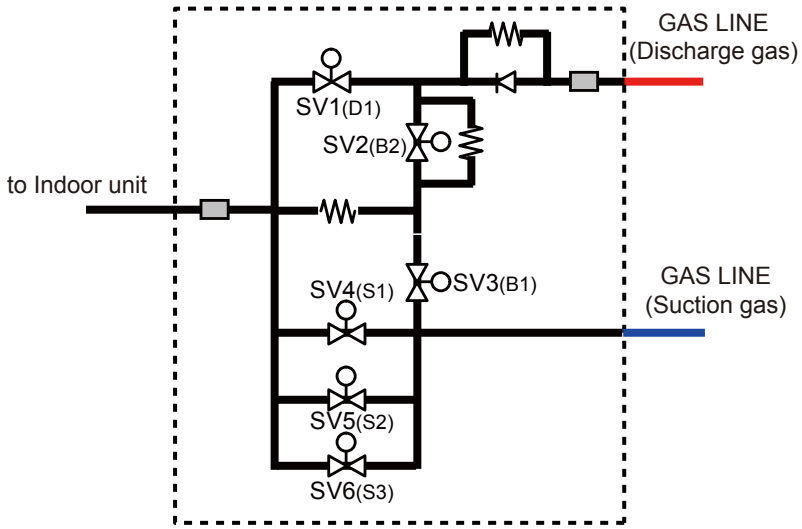
■ MODEL: UTP-RU01AH



■ MODEL: UTP-RU01BH

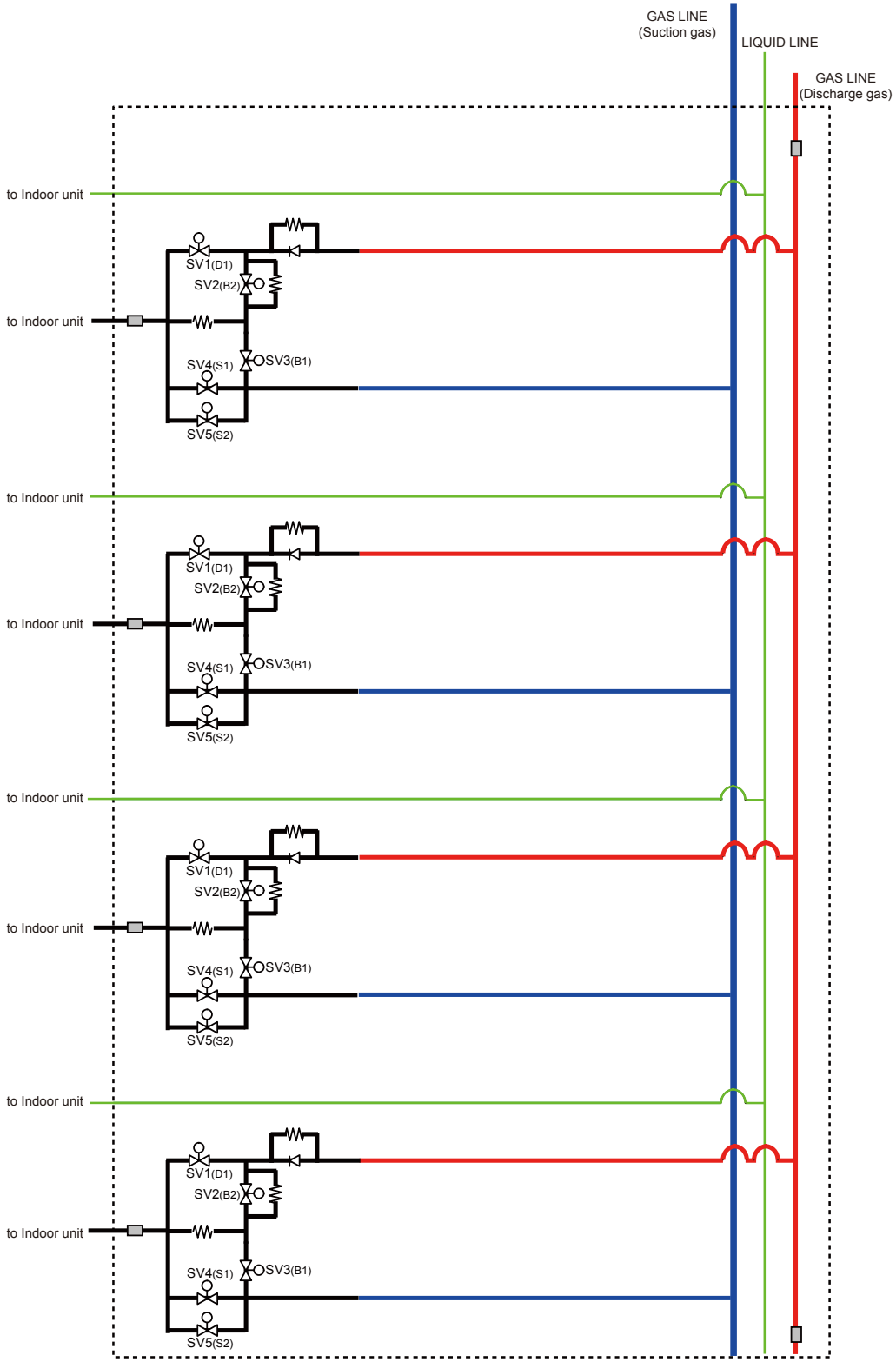


■ MODEL: UTP-RU01CH



OPTIONAL PARTS

■ MODEL: UTP-RU04BH



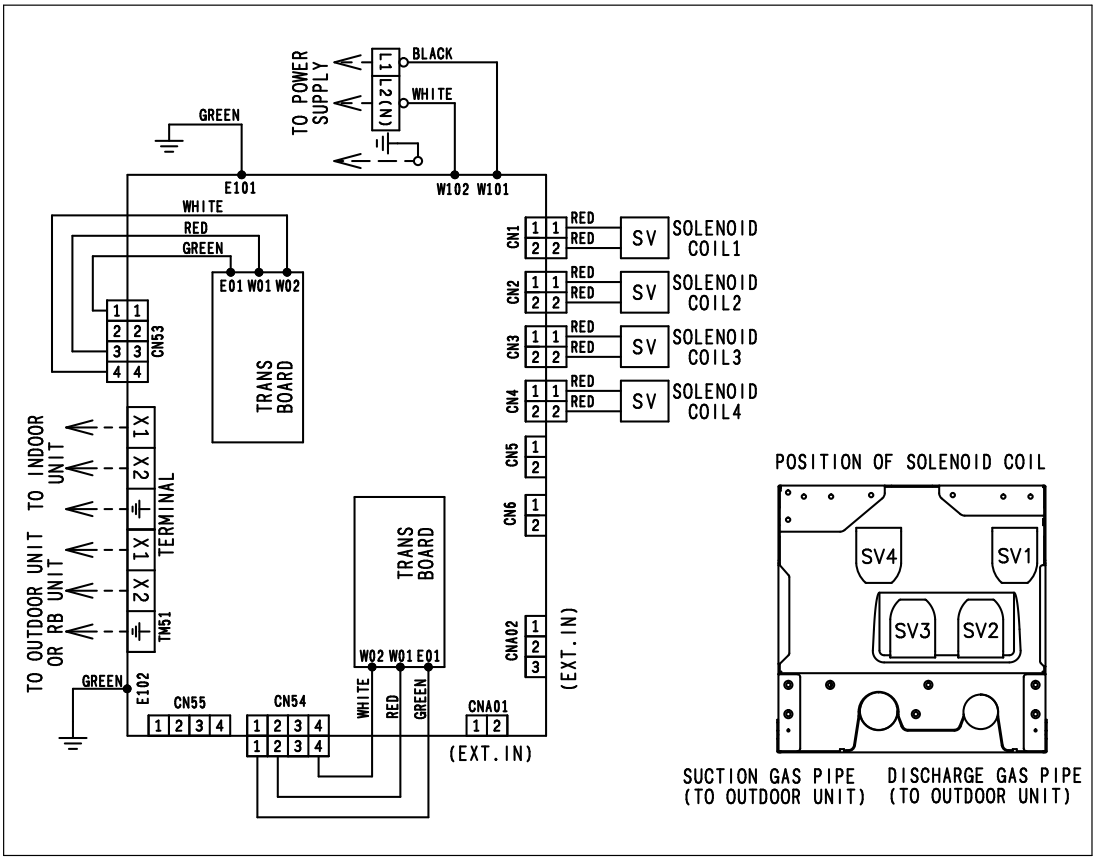
■ SYMBOL DESCRIPTION

MARK	DESCRIPTION
SV1(D1)	Solenoid valve (Discharge 1)
SV2(B2)	Solenoid valve (Bypass 2)
SV3(B1)	Solenoid valve (Bypass 1)
SV4(S1)	Solenoid valve (Suction 1)
SV5(S2)	Solenoid valve (Suction 2)
SV6(S3)	Solenoid valve (Suction 3)

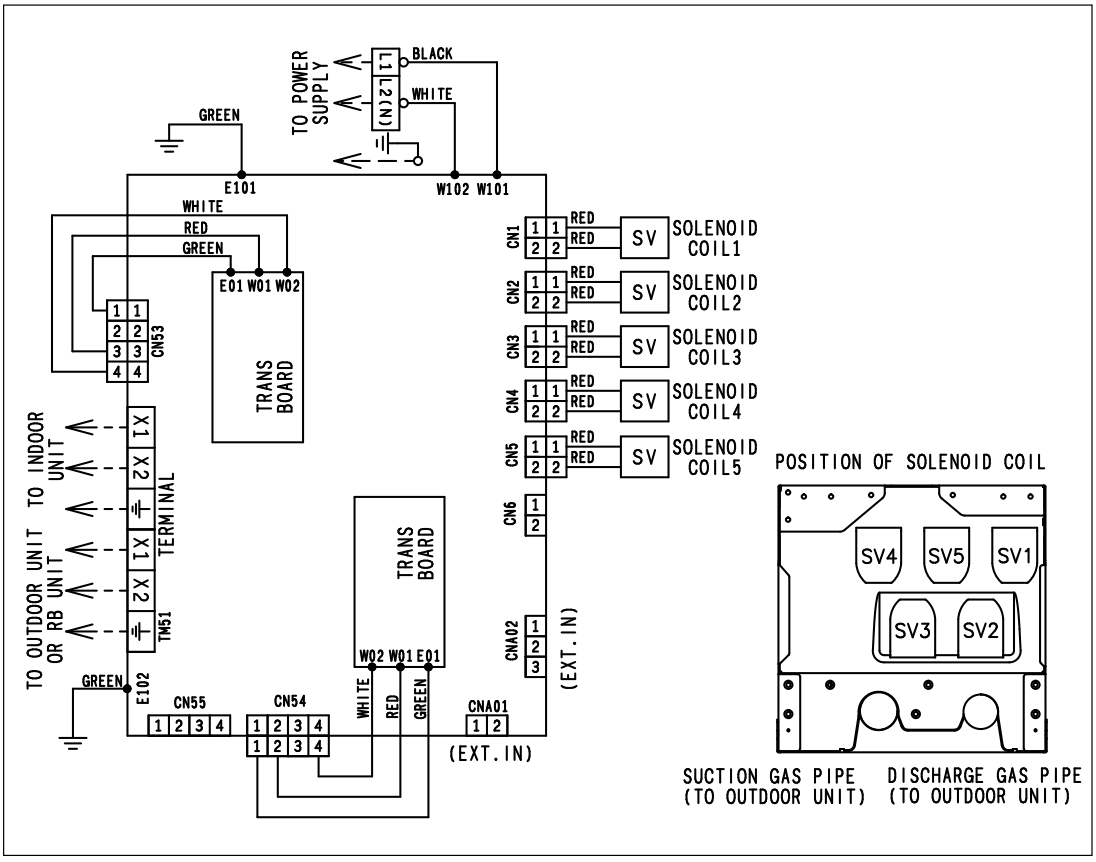
OPTIONAL PARTS

4-5. WIRING DIAGRAMS

■ MODEL: UTP-RU01AH

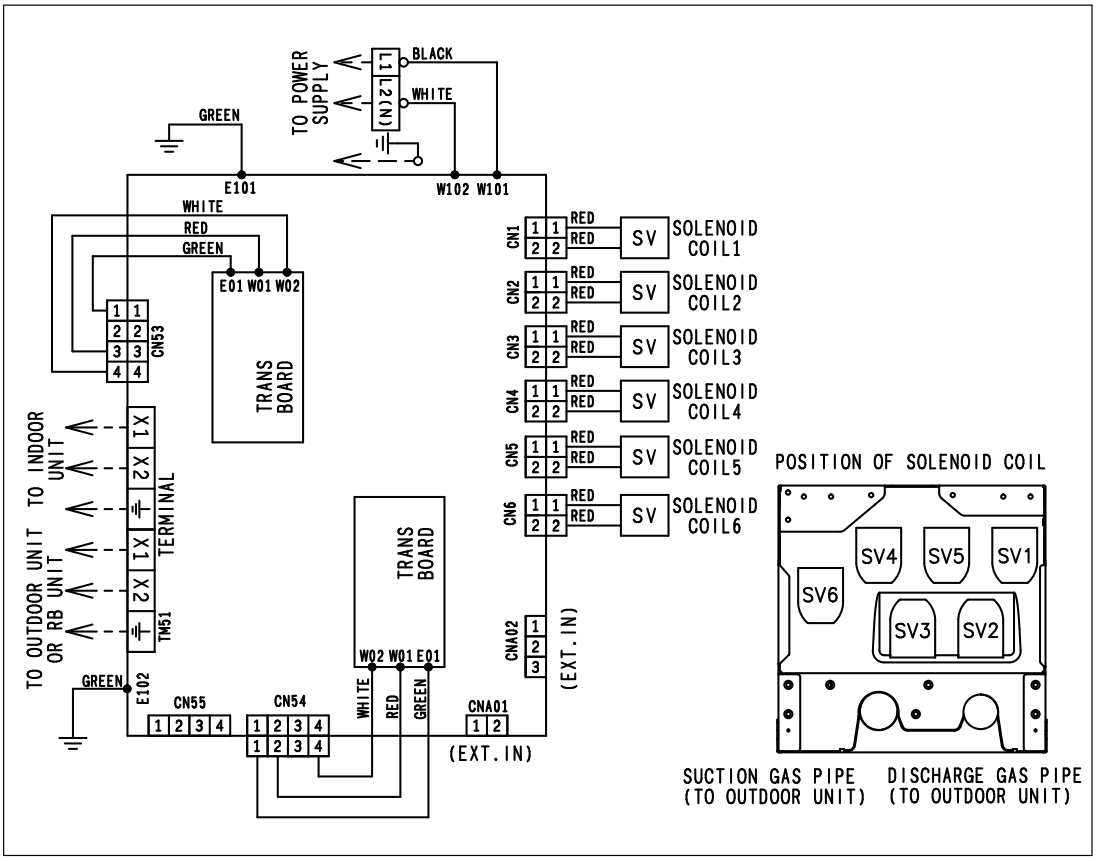


■ MODEL: UTP-RU01BH

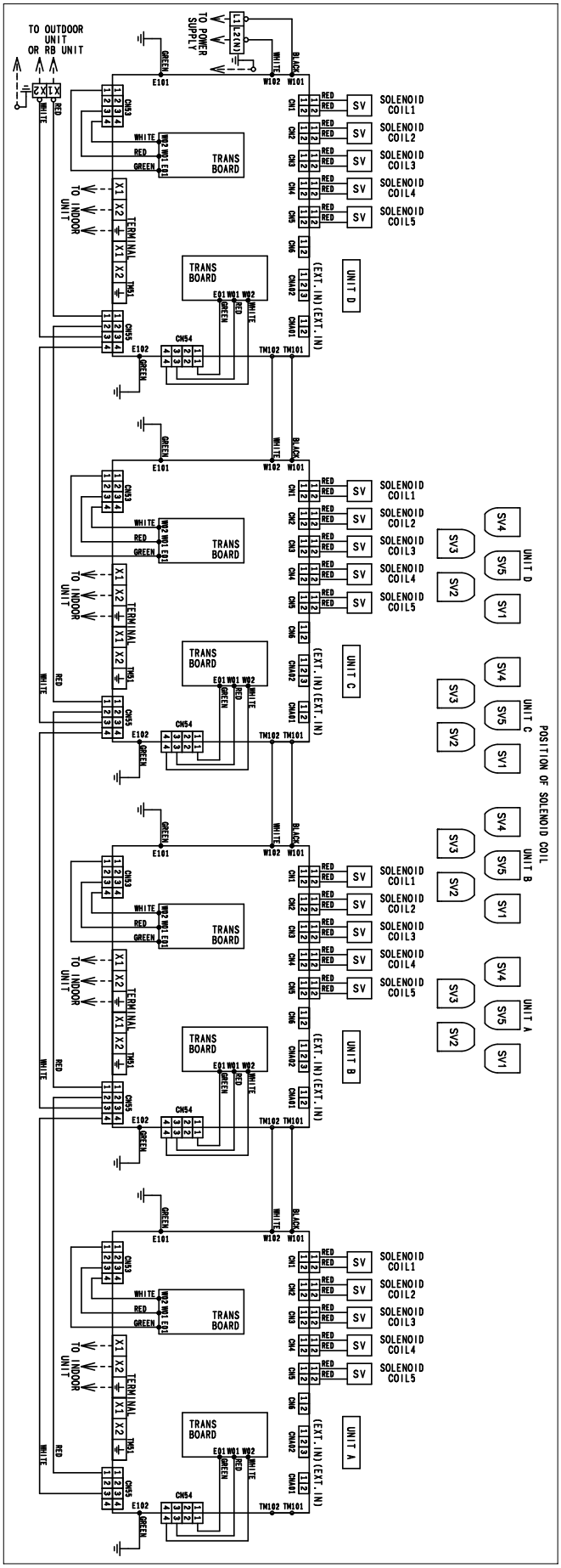


OPTIONAL PARTS

■ MODEL: UTP-RU01CH



■ MODEL: UTP-RU04BH



OPTIONAL PARTS

4-6. ELECTRIC CHARACTERISTICS

Model	Voltage (V)	Frequency (Hz)	MCA (A)	MFA (A)
UTP-RU01AH	230	60	0.25	15
UTP-RU01BH			0.25	
UTP-RU01CH			0.38	
UTP-RU04BH			1.00	

MCA: Min Circuit Amps = Max Operating Current (Full Load).

MFA: Main Fuse (Circuit breaker) Amps.

OPTIONAL PARTS

4-7. SAFETY DEVICES

Model	PCB fuse
UTP-RU01AH	250V, 3.15A × 1
UTP-RU01BH	250V, 3.15A × 1
UTP-RU01CH	250V, 3.15A × 1
UTP-RU04BH	250V, 3.15A × 4

OPTIONAL PARTS

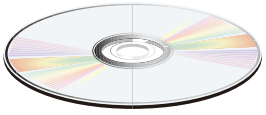
5. CONTROLLER

■ SYSTEM CONTROLLER (Software)

● UTY-APGXZ1 (Option: UTY-PEGXZ1, UTY-PPGXP2)

- Software protection key with software

● UTY-APGX (Option: UTY-PEGX)



- DVD-ROM
- Software protection key

●Maximum 1600 groups
/ 1600 indoor units can be controlled

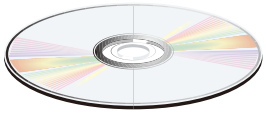
●Monitoring status of operation

■ SYSTEM CONTROLLER LITE(Software)

● UTY-ALGXZ1 (Option: UTY-PLGXA2, UTY-PLGXR2, UTY-PLGXE2, UTY-PLGXP2, UTY-PLGXX2)

- Software protection key with software

● UTY-ALGX (Option: UTY-PLGXA1, UTY-PLGXR1, UTY-PLGXE1)



- DVD-ROM
- Software protection key

●Maximum 400 groups
/ 400 indoor units can be controlled

●Monitoring status of operation

■ TOUCH PANEL CONTROLLER

● UTY-DTGYZ1
● UTY-DTGY

●Maximum 400 groups
/ 400 indoor units can be controlled

●With yearly timer

■ CENTRAL REMOTE CONTROLLER

● UTY-DCGY

●Maximum 16 groups
/ 100 indoor units can be controlled

●With weekly timer

■ WIRED REMOTE CONTROLLER (Touch panel)

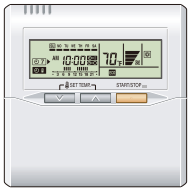
● UTY-RNRUZ*
● UTY-RNRU

●Largest LCD touch panel

●On / Off weekly timer

■ WIRED REMOTE CONTROLLER

● UTY-RNKU



●On / Off weekly timer

●Built in thermo sensor

■ SIMPLE REMOTE CONTROLLER

● UTY-RSRY
● UTY-RSKU

With Operation mode

● UTY-RHRY
● UTY-RHKU

Without Operation mode

●Background light

●Easy operation

■ WIRELESS REMOTE CONTROLLER

● UTY-LNHU

●On / Off sleep, program timer

●Easy operation

OPTIONAL PARTS

6. ADAPTOR / CONVERTOR / MAINTENANCE TOOL

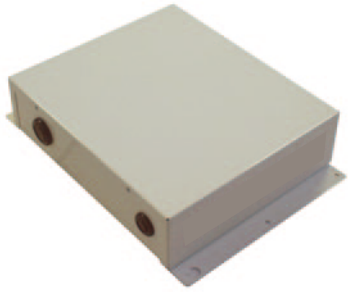
■ NETWORK CONVERTOR

- UTY-VTGX

- Split system convertor

■ NETWORK CONVERTOR

- UTY-VGGXZ1



- (Split system convertor)
- (Group remote convertor)

■ NETWORK CONVERTOR for LonWorks®

- UTY-VLGX

- LON / LON Convertor

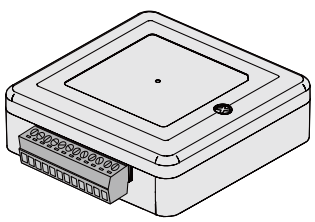
■ MODBUS® CONVERTOR for VRF

- UTY-VMGX

- Modbus® Convertor

■ THERMOSTAT CONVERTOR

- UTY-TTRX

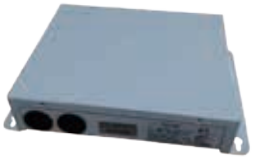


Signal convertor between the air conditioner and locally purchased thermostat controller

OPTIONAL PARTS

■ BACnet® GATEWAY (Hardware)

● UTY-VBGX



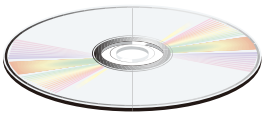
VRF network system to the BMS system using BACnet® protocol.

■ BACnet® GATEWAY (Software)

● UTY-ABGXZ1

- Software protection key with software

● UTY-ABGX



- DVD-ROM
- Software protection key

■ SIGNAL AMPLIFIER

● UTY-VSGXZ1

If the total length of transmission line exceeds 1,640 ft.(500 m), or the number of units exceeds 64 units, Signal Amplifier will be necessary to use

■ EXTERNAL SWITCH CONTROLLER

● UTY-TERX
● UTY-TEKX

UTY-TERX

UTY-TEKX

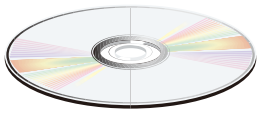
Air conditioner switching can be controlled by connecting other sensor switches

■ SERVICE TOOL

● UTY-ASGXZ1

- Software protection key with software

● UTY-ASGX



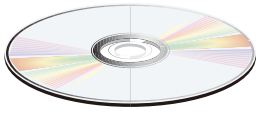
- DVD-ROM
- Software protection key

■ WEB MONITORING TOOL

● UTY-AMGXZ1

- Software protection key with software

● UTY-AMGX



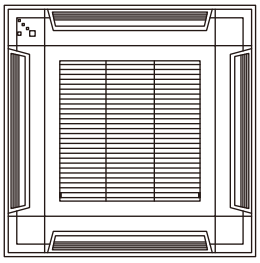
- DVD-ROM
- Software protection key

OPTIONAL PARTS

7. CASSETTE GRILLE

● UTG-CCGVG

● For Compact Cassette type

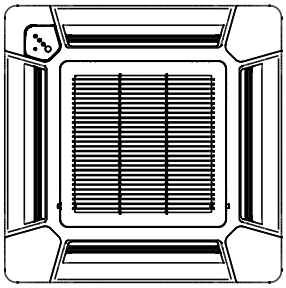


＊IR receiver attached

＊For grid ceiling

● UTG-CCGV

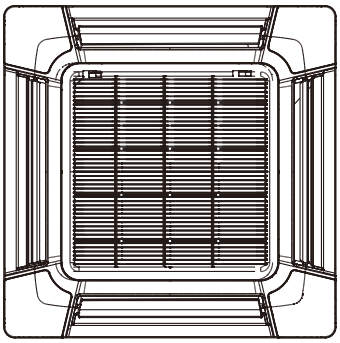
● For Compact Cassette type



＊IR receiver attached

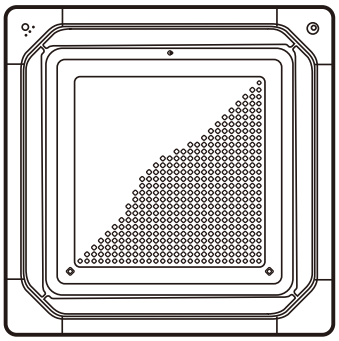
● UTG-LCGV

● For Cassette type



● UTG-LCGVCW, UTG-LCGVCB

● For Circular Flow Cassette type



OPTIONAL PARTS

8. OTHERS

8-1. PARTS LIST

8-1-1. INDOOR UNIT

		Air outlet shutter plate		Panel spacer	Wide panel	Insulation kit for high humidity		
Type	Model name	UTR-YDZB	UTR-YDZK UTR-YDZC	UTG-BKXA-W UTG-BGYA-W	UTG-AKXA-W UTG-AGYA-W	UTZ-KXRA UTZ-KXGA	UTZ-KXRA UTZ-KXGB	UTZ-KXGC
Compact cassette	AUUA4TLAV1	O						O
	AUUA7TLAV	O						O
	AUUA9TLAV	O						O
	AUUA12TLAV	O						O
	AUUA14TLAV	O						O
	AUUA18TLAV	O						O
	AUUA24TLAV	O						O
Cassette	AUUB18TLAV		O	O	O		O	
	AUUB24TLAV		O	O	O		O	
	AUUB30TLAV		O	O	O	O		
	AUUB36TLAV		O	O	O	O		
Circular flow cassette	AUUB18TLAV1		O	O	O		O	
	AUUB24TLAV1		O	O	O		O	
	AUUB30TLAV1		O	O	O		O	
	AUUB36TLAV1		O	O	O	O		
	AUUB48TLAV1		O	O	O	O		
Mini duct	ARUL4TLAV1							
Slim duct / Slim concealed cloor	ARUL7TLAV							
	ARUL9TLAV							
	ARUL12TLAV							
	ARUL14TLAV							
	ARUL18TLAV							
Medium static pressure duct	ARUM24TLAV							
	ARUM30TLAV							
	ARUM36TLAV							
High static pressure duct	ARUH36TLAV							
	ARUH48TLAV							
	ARUH60TLAV							
	ARUH72TLAV1							
	ARUH96TLAV							
Vertical air handler	ARUV12TLAV							
	ARUV18TLAV							
	ARUV24TLAV							
	ARUV30TLAV							
	ARUV36TLAV							
	ARUV48TLAV							
	ARUV60TLAV							
Compact floor	AGUA4TLAV1							
	AGUA7TLAV1							
	AGUA9TLAV1							
	AGUA12TLAV1							
	AGUA14TLAV1							
Floor / Ceiling	ABUA12TLAV							
	ABUA14TLAV							
	ABUA18TLAV							
	ABUA24TLAV							
Ceiling	ABUA30TLAV							
	ABUA36TLAV							
Wall mounted	ASUA7TLAV							
	ASUA9TLAV							
	ASUA12TLAV							
	ASUA14TLAV							
	ASUB18TLAV							
	ASUB24TLAV							
	ASUA7TLAV1							
	ASUA9TLAV1							
	ASUA12TLAV1							
	ASUA14TLAV1							
	ASUB18TLAV1							
	ASUB24TLAV1							
	ASUB30TLAV1							
	ASUB36TLAV1							

OPTIONAL PARTS

		Fresh air intake kit		IR receiver unit			Human sensor kit
Type	Model name	UTZ-VXAA	UTZ-VXRA UTZ-VXGA	UTY-LRHYB1	UTB-YWC	UTY-LBHXD	UTY-SHZXC
Compact cassette	AUUA4TLAV1						
	AUUA7TLAV	O					
	AUUA9TLAV	O					
	AUUA12TLAV	O					
	AUUA14TLAV	O					
	AUUA18TLAV	O					
	AUUA24TLAV	O					
Cassette	AUUB18TLAV		O	O			
	AUUB24TLAV		O	O			
	AUUB30TLAV		O	O			
	AUUB36TLAV		O	O			
Circular flow cassette	AUUB18TLAV1					O	O
	AUUB24TLAV1					O	O
	AUUB30TLAV1					O	O
	AUUB36TLAV1					O	O
	AUUB48TLAV1					O	O
Mini duct	ARUL4TLAV1				O		
Slim duct / Slim concealed floor	ARUL7TLAV				O		
	ARUL9TLAV				O		
	ARUL12TLAV				O		
	ARUL14TLAV				O		
	ARUL18TLAV				O		
Medium static pressure duct	ARUM24TLAV				O		
	ARUM30TLAV				O		
	ARUM36TLAV				O		
High static pressure duct	ARUH36TLAV				O		
	ARUH48TLAV				O		
	ARUH60TLAV				O		
	ARUH72TLAV1				O		
	ARUH96TLAV				O		
Vertical air handler	ARUV12TLAV				O		
	ARUV18TLAV				O		
	ARUV24TLAV				O		
	ARUV30TLAV				O		
	ARUV36TLAV				O		
	ARUV48TLAV				O		
	ARUV60TLAV				O		
Compact floor	AGUA4TLAV1						
	AGUA7TLAV1						
	AGUA9TLAV1						
	AGUA12TLAV1						
	AGUA14TLAV1						
Floor / Ceiling	ABUA12TLAV						
	ABUA14TLAV						
	ABUA18TLAV						
	ABUA24TLAV						
Ceiling	ABUA30TLAV						
	ABUA36TLAV						
Wall mounted	ASUA7TLAV						
	ASUA9TLAV						
	ASUA12TLAV						
	ASUA14TLAV						
	ASUB18TLAV						
	ASUB24TLAV						
	ASUA7TLAV1						
	ASUA9TLAV1						
	ASUA12TLAV1						
	ASUA14TLAV1						
	ASUB18TLAV1						
	ASUB24TLAV1						
	ASUB30TLAV1						
	ASUB36TLAV1						

OPTIONAL PARTS

		Auto louver grille kit				Air filter	
Type	Model name	UTD-GXSA-W	UTD-GXSB-W	UTD-GXTA-W	UTD-GXTB-W	UTD-LF25NA	UTD-LF60KA
Compact cassette	AUUA4TLAV1						
	AUUA7TLAV						
	AUUA9TLAV						
	AUUA12TLAV						
	AUUA14TLAV						
	AUUA18TLAV						
	AUUA24TLAV						
Cassette	AUUB18TLAV						
	AUUB24TLAV						
	AUUB30TLAV						
	AUUB36TLAV						
Circular flow cassette	AUUB18TLAV1						
	AUUB24TLAV1						
	AUUB30TLAV1						
	AUUB36TLAV1						
	AUUB48TLAV1						
Mini duct	ARUL4TLAV1			O			
Slim duct / Slim concealed floor	ARUL7TLAV	O		O			
	ARUL9TLAV	O		O			
	ARUL12TLAV	O		O			
	ARUL14TLAV	O		O			
	ARUL18TLAV		O		O		
Medium static pressure duct	ARUM24TLAV					O	
	ARUM30TLAV					O	
	ARUM36TLAV					O	
High static pressure duct	ARUH36TLAV						O
	ARUH48TLAV						O
	ARUH60TLAV						O
	ARUH72TLAV1						
	ARUH96TLAV						
Vertical air handler	ARUV12TLAV						
	ARUV18TLAV						
	ARUV24TLAV						
	ARUV30TLAV						
	ARUV36TLAV						
	ARUV48TLAV						
	ARUV60TLAV						
Compact floor	AGUA4TLAV1						
	AGUA7TLAV1						
	AGUA9TLAV1						
	AGUA12TLAV1						
	AGUA14TLAV1						
Floor / Ceiling	ABUA12TLAV						
	ABUA14TLAV						
	ABUA18TLAV						
	ABUA24TLAV						
Ceiling	ABUA30TLAV						
	ABUA36TLAV						
Wall mounted	ASUA7TLAV						
	ASUA9TLAV						
	ASUA12TLAV						
	ASUA14TLAV						
	ASUB18TLAV						
	ASUB24TLAV						
	ASUA7TLAV1						
	ASUA9TLAV1						
	ASUA12TLAV1						
	ASUA14TLAV1						
	ASUB18TLAV1						
	ASUB24TLAV1						
	ASUB30TLAV1						
	ASUB36TLAV1						

OPTIONAL PARTS

		Flange		Drain pump unit			Remote sensor unit
Type	Model name	UTD-SF045T	UTD-RF204	UTZ-PU1NBA	UTZ-PU1EBA	UTR-DPB24T	UTY-XSZX
Compact cassette	AUUA4TLAV1						
	AUUA7TLAV						
	AUUA9TLAV						
	AUUA12TLAV						
	AUUA14TLAV						
	AUUA18TLAV						
	AUUA24TLAV						
Cassette	AUUB18TLAV						
	AUUB24TLAV						
	AUUB30TLAV						
	AUUB36TLAV						
Circular flow cassette	AUUB18TLAV1						
	AUUB24TLAV1						
	AUUB30TLAV1						
	AUUB36TLAV1						
	AUUB48TLAV1						
Mini duct	ARUL4TLAV1						O
Slim duct / Slim concealed floor	ARUL7TLAV						O
	ARUL9TLAV						O
	ARUL12TLAV						O
	ARUL14TLAV						O
	ARUL18TLAV						O
Medium static pressure duct	ARUM24TLAV	O	O	O			O
	ARUM30TLAV	O	O	O			O
	ARUM36TLAV	O	O	O			O
High static pressure duct	ARUH36TLAV						O
	ARUH48TLAV						O
	ARUH60TLAV						O
	ARUH72TLAV1						O
	ARUH96TLAV						O
Vertical air handler	ARUV12TLAV						O
	ARUV18TLAV						O
	ARUV24TLAV						O
	ARUV30TLAV						O
	ARUV36TLAV						O
	ARUV48TLAV						O
	ARUV60TLAV						O
Compact floor	AGUA4TLAV1						
	AGUA7TLAV1						
	AGUA9TLAV1						
	AGUA12TLAV1						
	AGUA14TLAV1						
Floor / Ceiling	ABUA12TLAV						
	ABUA14TLAV						
	ABUA18TLAV						
	ABUA24TLAV						
Ceiling	ABUA30TLAV		O		O	O	
	ABUA36TLAV		O		O	O	
Wall mounted	ASUA7TLAV						
	ASUA9TLAV						
	ASUA12TLAV						
	ASUA14TLAV						
	ASUB18TLAV						
	ASUB24TLAV						
	ASUA7TLAV1						
	ASUA9TLAV1						
	ASUA12TLAV1						
	ASUA14TLAV1						
	ASUB18TLAV1						
	ASUB24TLAV1						
	ASUB30TLAV1						
	ASUB36TLAV1						

OPTIONAL PARTS

		Half concealed kit	External connect kit				
Type	Model name	UTR-STA	UTY-XWZXZ7	UTY-XWZXZB	UTY-XWZXZC	UTY-XWZXZD	UTY-XWZXZE
Compact cassette	AUUA4TLAV1		O	O	O	O	O
	AUUA7TLAV		O	O	O	O	O
	AUUA9TLAV		O	O	O	O	O
	AUUA12TLAV		O	O	O	O	O
	AUUA14TLAV		O	O	O	O	O
	AUUA18TLAV		O	O	O	O	O
	AUUA24TLAV		O	O	O	O	O
Cassette	AUUB18TLAV		O	O	O	O	O
	AUUB24TLAV		O	O	O	O	O
	AUUB30TLAV		O	O	O	O	O
	AUUB36TLAV		O	O	O	O	O
Circular flow cassette	AUUB18TLAV1		O	O	O	O	O
	AUUB24TLAV1		O	O	O	O	O
	AUUB30TLAV1		O	O	O	O	O
	AUUB36TLAV1		O	O	O	O	O
	AUUB48TLAV1		O	O	O	O	O
Mini duct	ARUL4TLAV1		O	O	O	O	O
Slim duct / Slim concealed floor	ARUL7TLAV		O	O	O	O	O
	ARUL9TLAV		O	O	O	O	O
	ARUL12TLAV		O	O	O	O	O
	ARUL14TLAV		O	O	O	O	O
	ARUL18TLAV		O	O	O	O	O
Medium static pressure duct	ARUM24TLAV		O	O	O	O	O
	ARUM30TLAV		O	O	O	O	O
	ARUM36TLAV		O	O	O	O	O
High static pressure duct	ARUH36TLAV		O	O	O	O	O
	ARUH48TLAV		O	O	O	O	O
	ARUH60TLAV		O	O	O	O	O
	ARUH72TLAV1		O	O	O	O	O
	ARUH96TLAV		O	O	O	O	O
Vertical air handler	ARUV12TLAV		O	O	O	O	O
	ARUV18TLAV		O	O	O	O	O
	ARUV24TLAV		O	O	O	O	O
	ARUV30TLAV		O	O	O	O	O
	ARUV36TLAV		O	O	O	O	O
	ARUV48TLAV		O	O	O	O	O
	ARUV60TLAV		O	O	O	O	O
Compact floor	AGUA4TLAV1	O	O	O	O	O	O
	AGUA7TLAV1	O	O	O	O	O	O
	AGUA9TLAV1	O	O	O	O	O	O
	AGUA12TLAV1	O	O	O	O	O	O
	AGUA14TLAV1	O	O	O	O	O	O
Floor / Ceiling	ABUA12TLAV		O	O	O	O	O
	ABUA14TLAV		O	O	O	O	O
	ABUA18TLAV		O	O	O	O	O
	ABUA24TLAV		O	O	O	O	O
Ceiling	ABUA30TLAV		O	O	O	O	O
	ABUA36TLAV		O	O	O	O	O
Wall mounted	ASUA7TLAV		O	O	O	O	O
	ASUA9TLAV		O	O	O	O	O
	ASUA12TLAV		O	O	O	O	O
	ASUA14TLAV		O	O	O	O	O
	ASUB18TLAV		O	O	O	O	O
	ASUB24TLAV		O	O	O	O	O
	ASUA7TLAV1		O	O	O	O	O
	ASUA9TLAV1		O	O	O	O	O
	ASUA12TLAV1		O	O	O	O	O
	ASUA14TLAV1		O	O	O	O	O
	ASUB18TLAV1		O	O	O	O	O
	ASUB24TLAV1		O	O	O	O	O
	ASUB30TLAV1		O	O	O	O	O
	ASUB36TLAV1		O	O	O	O	O

OPTIONAL PARTS

8-1-2. OUTDOOR UNIT

			Pressure sensor kit
Type		Model name	UTY-SPWX
Outdoor Unit	V-II (230 V)	AOUA72RLBV1	O
		AOUA96RLBV1	O
		AOUA120RLBV1	O
	VR-II (230 V)	AOUA72TLBV	
		AOUA96TLBV	
		AOUA120TLBV	
	V-II (460 V)	AOUA72RLCV	O
		AOUA96RLCV	O
		AOUA120RLCV	O
	VR-II (460 V)	AOUA72TLCV	
		AOUA96TLCV	
		AOUA120TLCV	
	J-IIS	AOU36RLAVS	
		AOU48RLAVS	
	J-II	AOU36RLAVM	
		AOU48RLAVM	
		AOU60RLAVM	

OPTIONAL PARTS

8-1-3. OTHERS

			External connect kit						
Type		Model name	UTY-XWZXZ6	UTY-XWZXZ7	UTY-XWZXZ8	UTY-XWZXZ9	UTY-XWZXZA	UTY-XWZXZB	UTY-XWZXZF
Outdoor Unit	V-II (230 V)	AOUA72RLBV1	O			O			O
		AOUA96RLBV1	O			O			O
		AOUA120RLBV1	O			O			O
	VR-II (230 V)	AOUA72TLBV	O			O			O
		AOUA96TLBV	O			O			O
		AOUA120TLBV	O			O			O
	V-II (460 V)	AOUA72RLCV	O			O			O
		AOUA96RLCV	O			O			O
		AOUA120RLCV	O			O			O
	VR-II (460 V)	AOUA72TLCV	O			O			O
		AOUA96TLCV	O			O			O
		AOUA120TLCV	O			O			O
	J-IIS	AOU36RLAVS	O			O			O
		AOU48RLAVS	O			O			O
	J-II	AOU36RLAVM	O			O			O
		AOU48RLAVM	O			O			O
		AOU60RLAVM	O			O			O
RB unit		UTP-RU01AH	O					O	
		UTP-RU01BH	O					O	
		UTP-RU01CH	O					O	
		UTP-RU04BH	O					O	
Touch Panel Controller		UTY-DTGY					O		
		UTY-DTGYZ1					O		
Central Remote Controller		UTY-DCGY		O	O		O		

OPTIONAL PARTS

■ AIR OUTLET SHUTTER PLATE

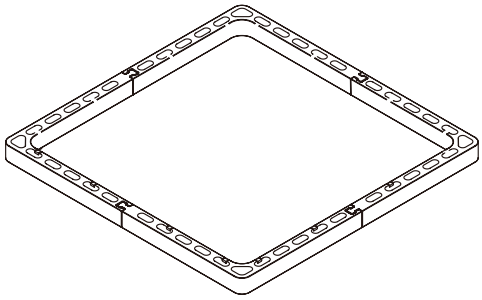
- UTR-YDZB
  - For Compact Cassette type

■ AIR OUTLET SHUTTER PLATE

- UTR-YDZC, UTR-YDZK
  - For Cassette type
  - For Cicular flow Cassette type

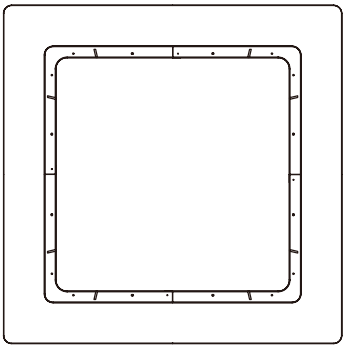
■ PANEL SPACER

- UTG-BGYA-W, UTG-BKXA-W
  - For Cassette type
  - For Cicular flow Cassette type



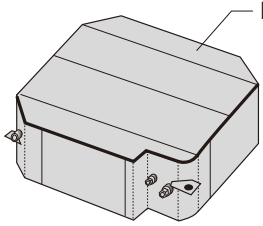
■ WIDE PANEL

- UTG-AGYA-W, UTG-AKXA-W
  - For Cassette type
  - For Cicular flow Cassette type



■ INSULATION KIT for High Humidity

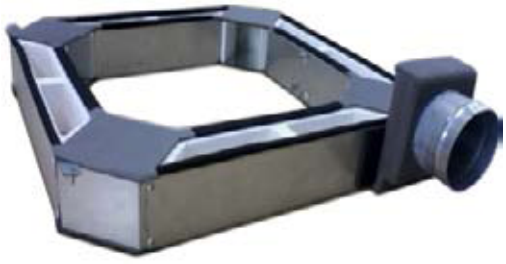
- UTZ-KXGA, UTZ-KXGB, UTZ-KXRA
  - For Cassette type
  - For Circular flow Cassette type
- UTZ-KXGC
  - For Compact Cassette type



Install when the condition under the roof is over 80% in humidity and over 86°F (30°C) in temperature.

■ FRESH AIR INTAKE KIT

- UTZ-VXAA
  - For Compact Cassette type

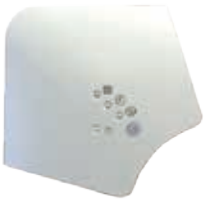


■ FRESH AIR INTAKE KIT

- UTZ-VXGA, UTZ-VXRA
  - For Cassette type

■ IR RECEIVER UNIT

- UTY-LRHYB1
  - For Cassette type



For use with wireless remote controller Model UTY-LNHU (must be purchased separately).

■ IR RECEIVER UNIT

- UTB-YWC
  - For All Duct type

For use with wireless remote controller Model UTY-LNHU (must be purchased separately).

■ IR RECEIVER UNIT

- UTY-LBHXD
  - For Circular flow cassette type

The wireless remote controller (Model: UTY-LNHU) is necessary separately

■ HUMAN SENSOR KIT

- UTY-SHZXC
  - For Circular flow cassette type

Touch Panel Wired RC (Model: UTY-RNRUZ*) is necessary.

■ AUTO LOUVER GRILLE KIT

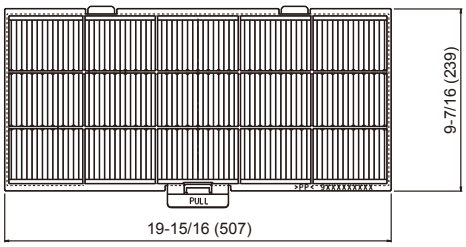
- UTD-GXSA-W, UTD-GXTA-W
  - For Mini duct
  - For Slim duct (7-14 models)
- UTD-GXSB-W, UTD-GXTB-W
  - For Slim duct (18 model)

OPTIONAL PARTS

Unit: in. (mm)

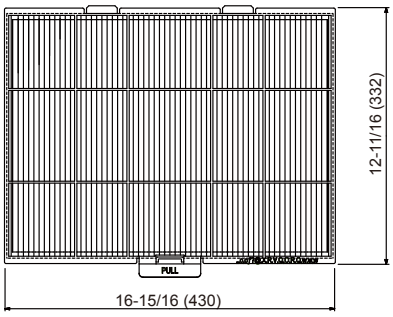
■ AIR FILTER

- UTD-LF25NA (2pcs.)
  - For Medium Static Pressure Duct type



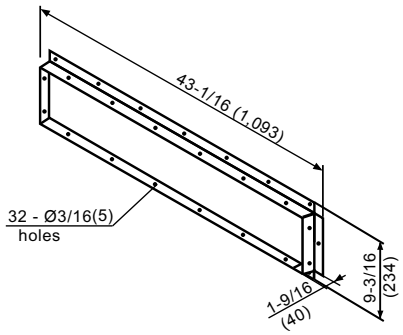
■ AIR FILTER

- UTD-LF60KA (2pcs.)
  - For High Static Pressure Duct type



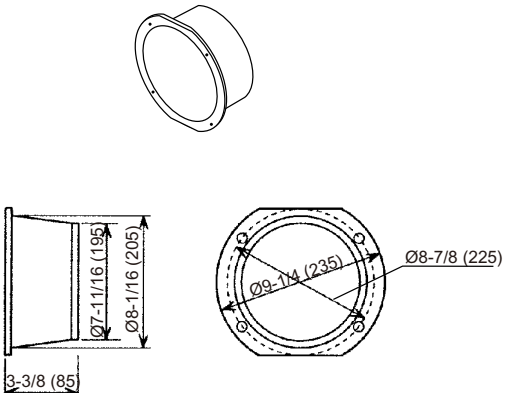
■ FLANGE (Square)

- UTD-SF045T
  - For Medium Static Pressure Duct type



■ FLANGE (Round)

- UTD-RF204 (4pcs.)
  - For Medium Static Pressure Duct type
  - For Ceilimg type

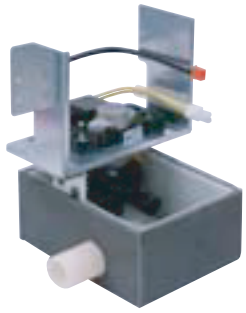


■ DRAIN PUMP UNIT

- UTZ-PU1NBA
  - For Duct type

■ DRAIN PUMP UNIT

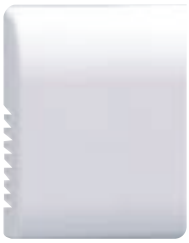
- UTR-DPB24T, UTZ-PU1EBA
  - For Ceiling type



OPTIONAL PARTS

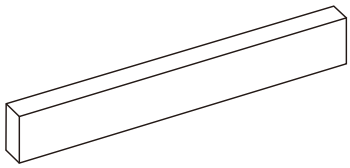
■ REMOTE SENSOR UNIT

- UTY-XSZX
  - For All Duct type



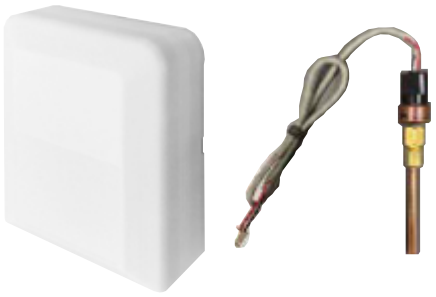
■ HALF CONCEALED KIT

- UTR-STA
  - For Compact Floor type



■ PRESSURE SENSOR KIT

- UTY-SPWX
  - For V-II series



Controller Sensor

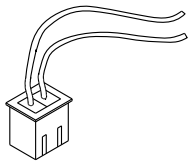
Controller: Connect to Master outdoor unit

Sensor: On the closest pipe of the indoor unit

OPTIONAL PARTS

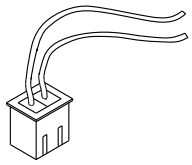
■ EXTERNAL CONNECT KIT

- UTY-XWZXZ6
  - For Outdoor unit / RB unit



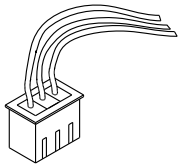
■ EXTERNAL CONNECT KIT

- UTY-XWZXZ7
  - For Indoor unit / Central remote controller



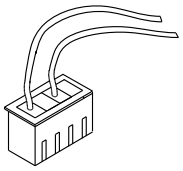
■ EXTERNAL CONNECT KIT

- UTY-XWZXZ8
  - For Central remote controller



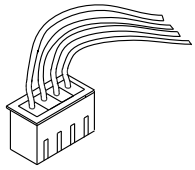
■ EXTERNAL CONNECT KIT

- UTY-XWZXZ9
  - For Outdoor unit



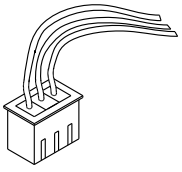
■ EXTERNAL CONNECT KIT

- UTY-XWZXZA
  - For Touch panel controller / Central remote controller



■ EXTERNAL CONNECT KIT

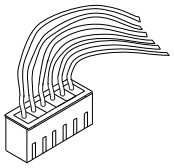
- UTY-XWZXZB
  - For Indoor unit / RB unit



OPTIONAL PARTS

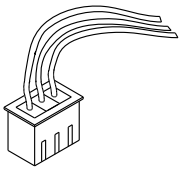
■ EXTERNAL CONNECT KIT

● UTY-XWZXZC
● For Indoor unit



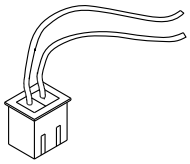
■ EXTERNAL CONNECT KIT

● UTY-XWZXZD
● For Indoor unit



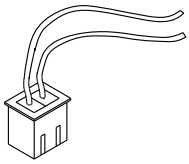
■ EXTERNAL CONNECT KIT

● UTY-XWZXZE
● For Indoor unit



■ EXTERNAL CONNECT KIT

● UTY-XWZXZF
● For Outdoor unit



OPTIONAL PARTS

9. OPTIONAL PARTS INSTALLATION

9-1. DRAIN PUMP UNIT

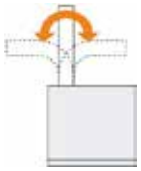
■ MODEL: UTZ-PU1NBA

● Specifications

	Unit	Specifications
Pump Lift-up	in. (mm)	Maximum 39-3/8 (1,000)
Power source	-	220-240V, 50/60Hz
Input Power (230V, 50/60Hz)	W	12 / 10.8
Current (230V, 50/60Hz)	mA	114 / 92
Dimensions (H × W × D)	in. (mm)	6-15/16 × 7 × 6-1/16 (176 × 178 × 154)
Weight	lbs. (kg)	6 (2.5)
Connection pipe diameter	in.	I.D.3/4, O.D.1-1/16
Direction of pipe connection *1	-	360°
Angle of pipe connection *2	-	0° (Horizontal)-90° (Vertical)
Control method	-	Control board of indoor unit
safety device	-	Float switch, Thermal fuse

*1: Direction of pipe connection

*2: Angle of pipe connection

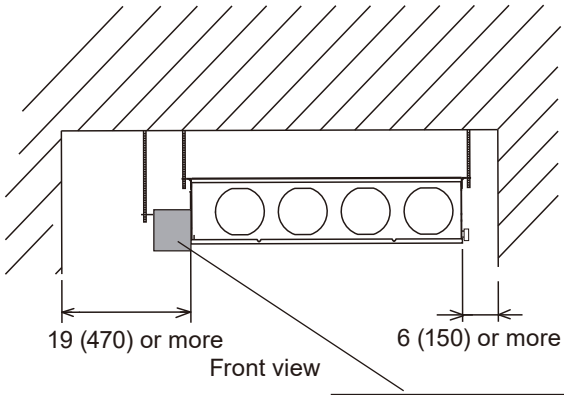


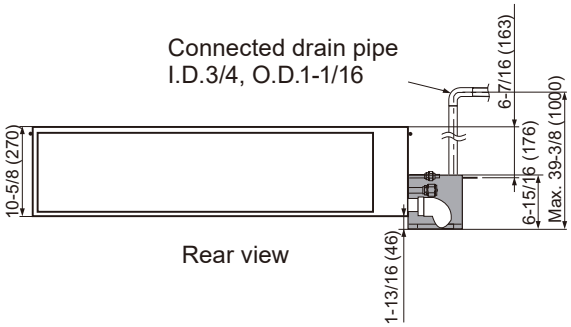
● Application indoor units

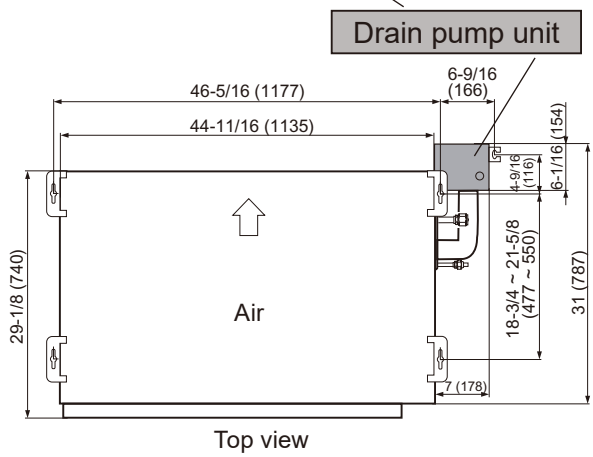
Type	Model name
Duct	ARUM24TLAV, ARUM30TLAV, ARUM36TLAV

Unit: in. (mm)

● Mounting position

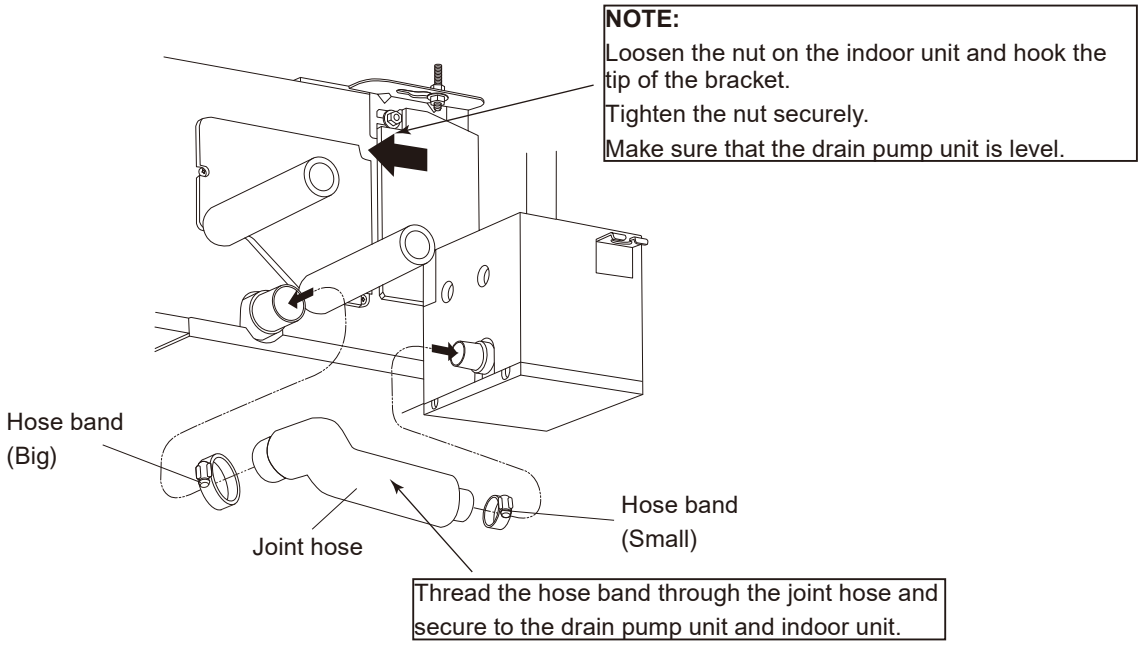


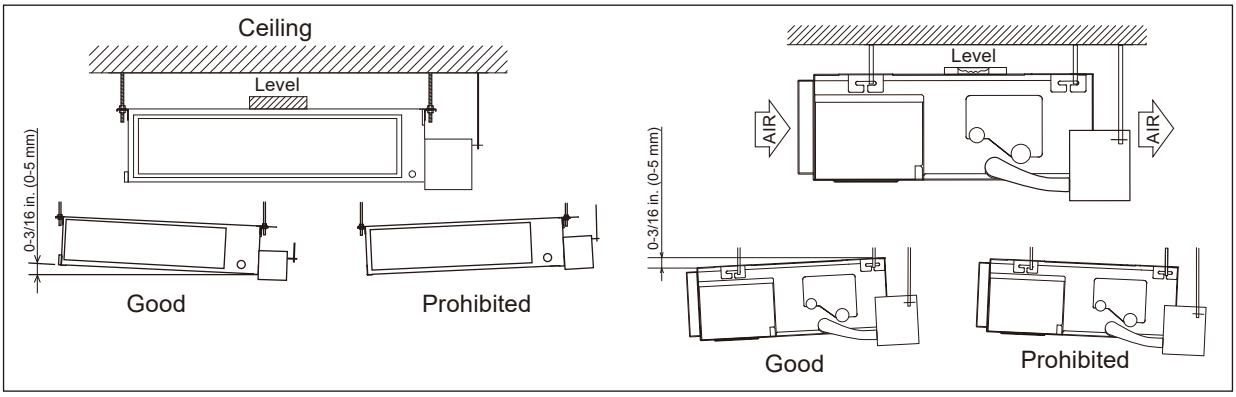




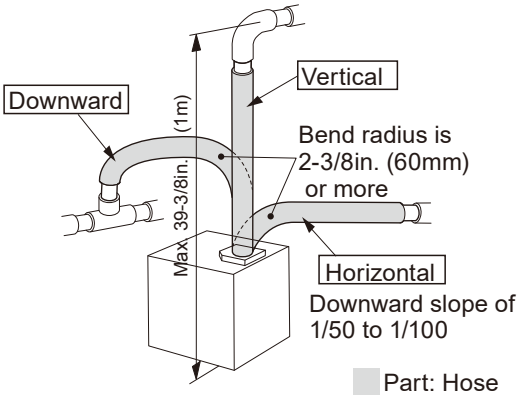
NOTE:
Leave space to service the unit. Make sure that a service access is left near the drain pump.

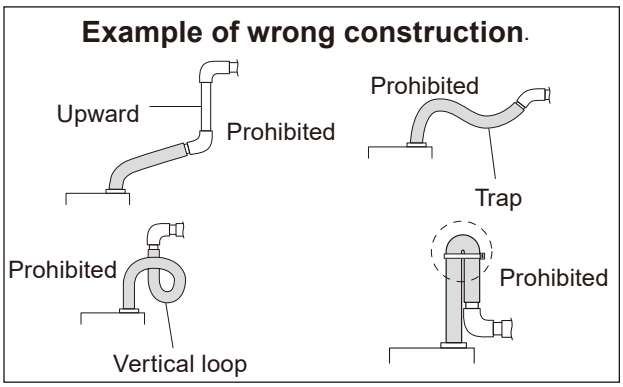
● Installing drain pump unit



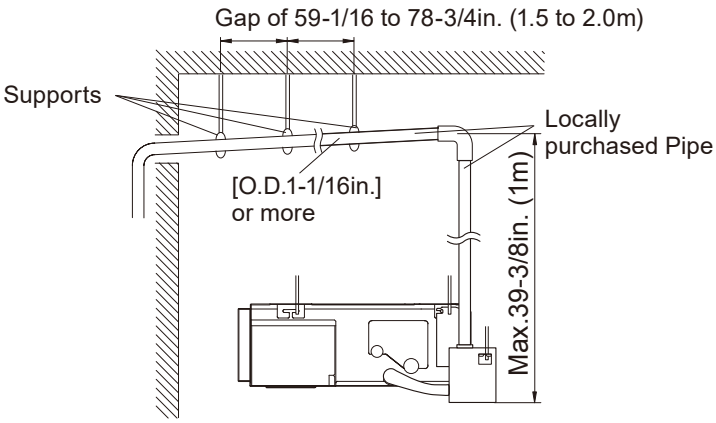


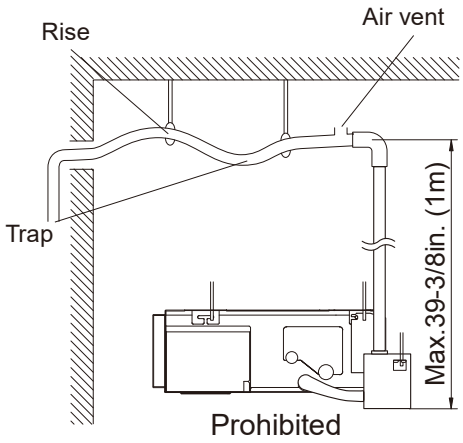
● Installing hose

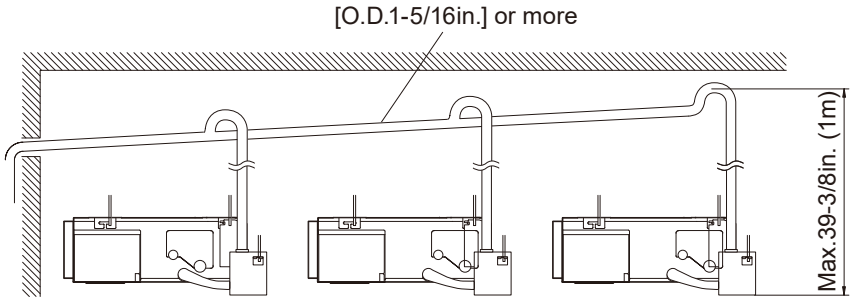




● Installing pipe

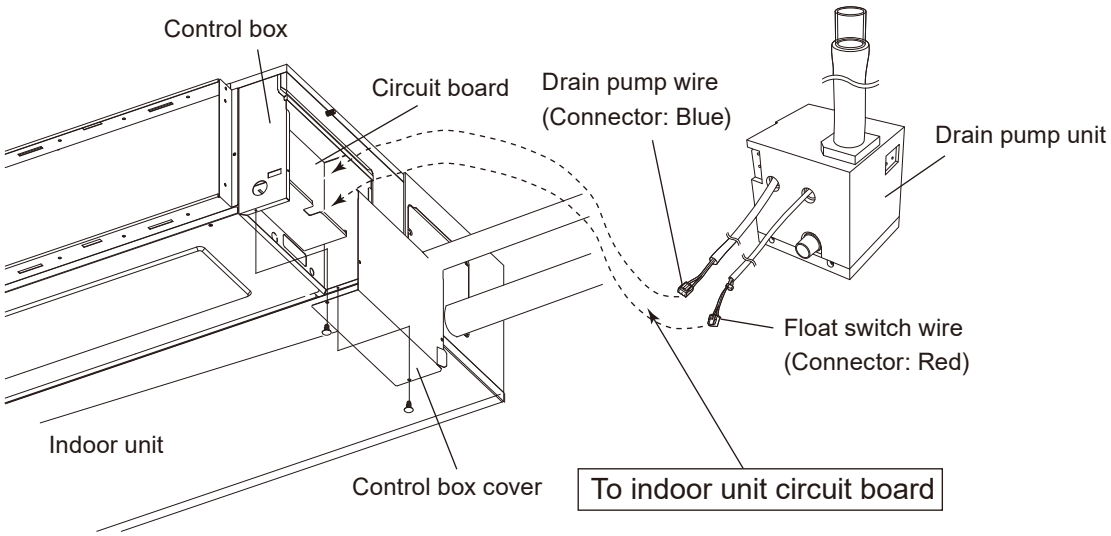






Observe the following procedures to construct centralized drain pipe fittings.

● Electrical wiring

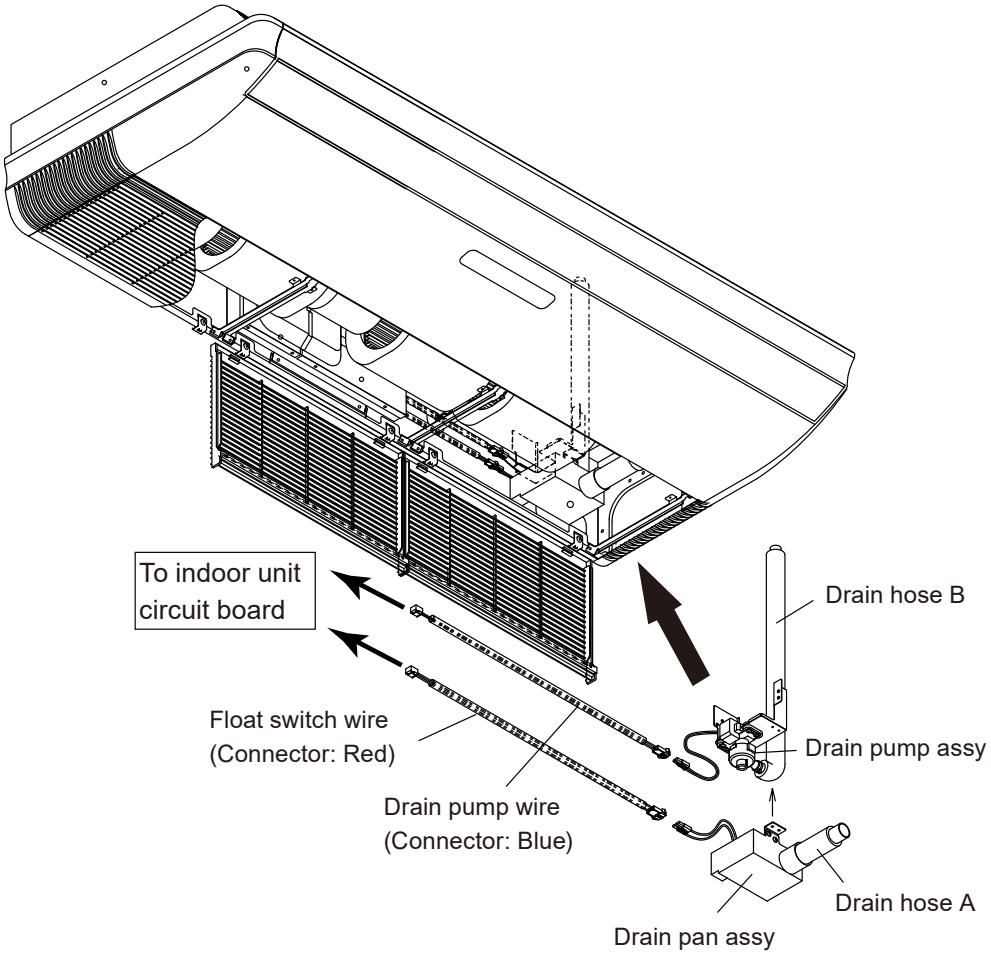


■ MODEL: UTZ-PU1EBA

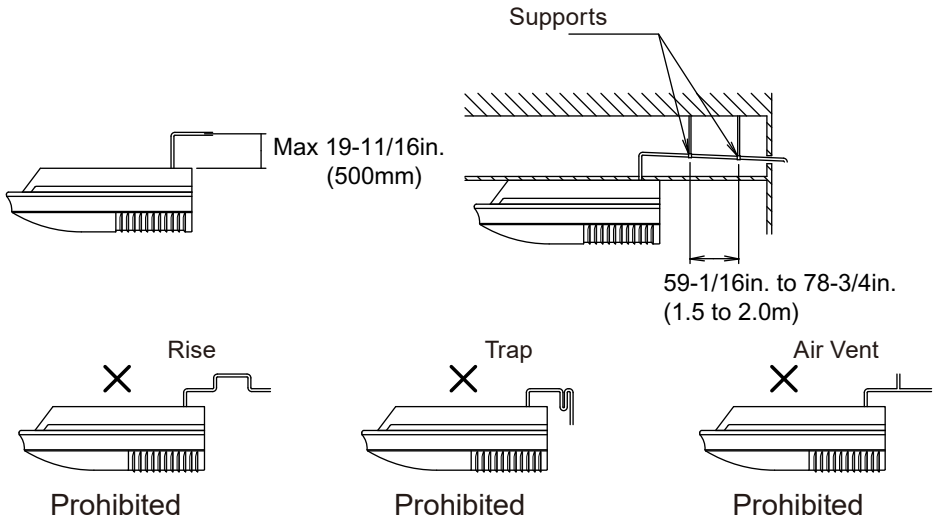
● Application indoor units

Type	Model name
Ceiling	ABUA30TLAV, ABUA36TLAV

● Installing drain pump unit & Electrical wiring



● Installing pipe

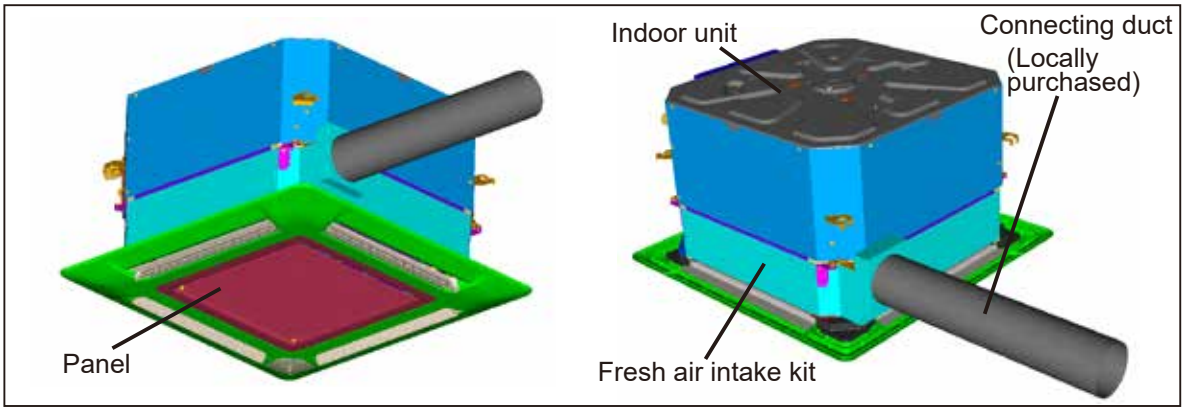


OPTIONAL PARTS

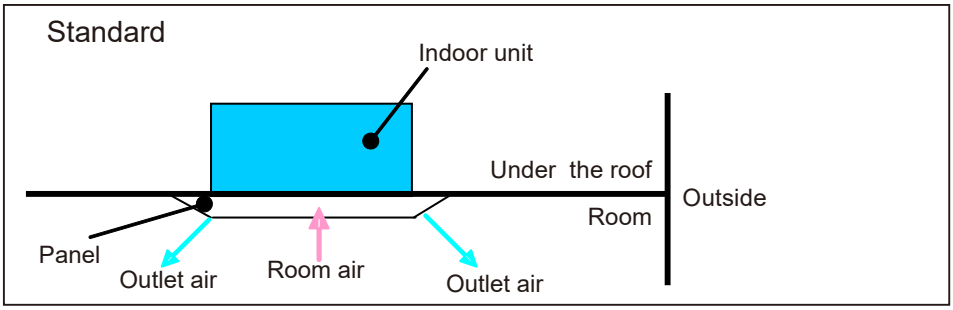
9-2. FRESH AIR INTAKE KIT (MODEL: UTZ-VXAA)

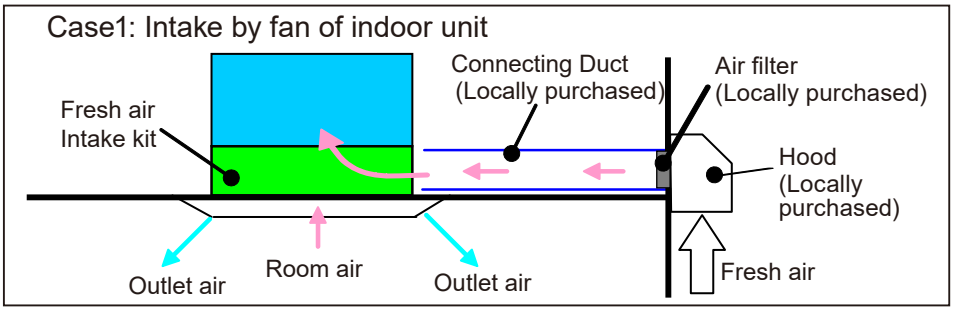
■ FEATURE

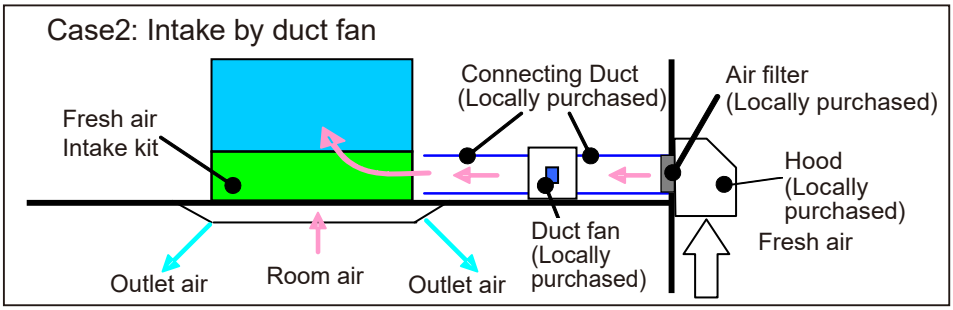
• Up to 10% of the units “high” air volume of outside air can be introduced into the “Fresh Air Intake Kit”.



■ INSTALLATION EXAMPLE







OPTIONAL PARTS

■ SPECIFICATIONS

Model name				UTZ-VXAA
Fresh air intake	Max. fresh air intake volume		%(for High)	10
Connection duct type			in. (mm)	ø 3-15/16 (100)
			Pcs	1
Dimension (H × W × D)		Net	in. (mm)	4-3/4 × 22-7/16 × 22-7/16 (120 × 570 × 570)
		Gross		6-1/2 × 23-1/16 × 23-1/16 (165 × 585 × 585)
Weight		Net	lbs. (kg)	8 (3.5)
		Gross		12 (5.5)

OPTIONAL PARTS

■ PRECAUTION

● About fresh air intake kit

- The Fresh Air Intake Kit can be installed onto cassette type air conditioners.
- The volume of ventilated air provided by the Fresh Air Intake Kit may be unable to fulfill ventilation regulations in all countries.
  On such occasions we ask that this kit be used along with Energy recovery ventilators.
- When in taking outside air, ensure correct air-conditioning design as based on air-conditioning load calculations.
  As outside air is not being processed an increase in outside air load can affect air conditioning.

● Installation location

- Areas that generate corrosive gases such as sulfuric acid, chlorine gas and alkalis that will cause copper pipes and brazed joints to corrode and could cause refrigerant leaks.
- Coastal areas with exposure to salt air. Salt air can cause corrosion leading to unit failure or condensate leaks.
- Be certain to use electric dampers and shutters to avoid infiltration of cold air, wind and fog during shutdown in areas with cold climates, strong winds, or where fogs are common.
- Ensure the product is installed a distance of at least three times the duct diameter away from exterior wall air inlets, or air exhausts for the prevention of short circuits.

● Temperature conditions

- Condensation may form on the product when outside air temperature is low, and the temperature and humidity surrounding the product are high. Do not intake the air of below 32°F (0°C) into the Fresh air intake kit.
- The unit should not be operated above the max outdoor operating temperature.

● About duct fan

- When installing the duct fan, connect the drive relay (locally purchased) and operate with the indoor unit.
- Ensure that outside air introduced into the unit is below 10% of the units “high” air volume. Exceeding this limit could cause excessive noise temperature fluctuations.

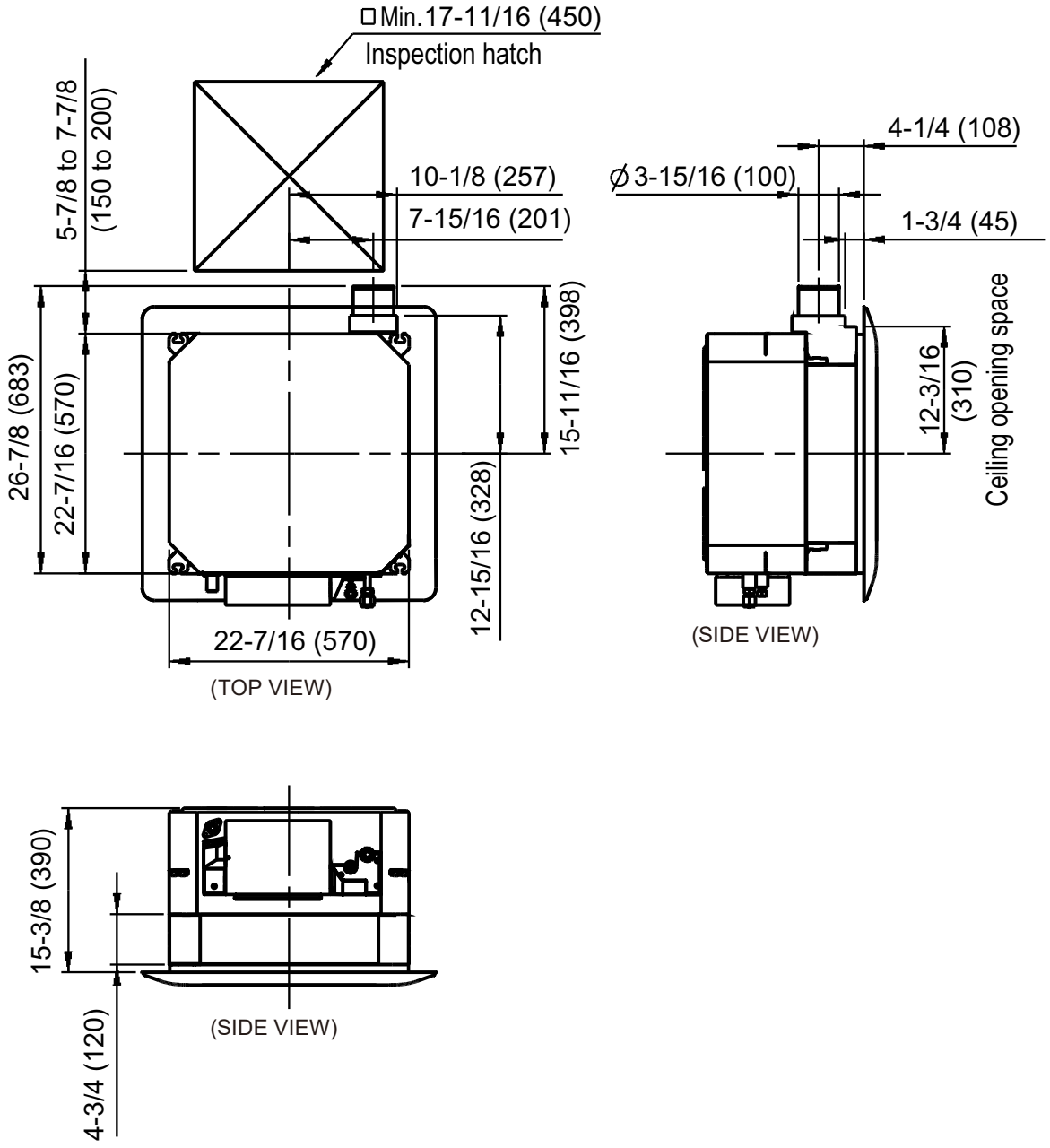
● About the duct connection

- Procure a duct with internal diameter that fits the external diameter of the duct flange.
- Note that regulations of some countries may require the use of a nonflammable duct.
- If the duct penetrates a fire-retarding division or other fire-proofing measures, the installation of fire dampers, or a construction that does not adversely affect fire control measures is a regulatory requirement of some countries.
- When using metallic ducts, ensure metals (i.e., metal lath, wire lath, stainless sheeting) are electrically insulated. (A short occurring by electrical connection can cause fire)
- Ensure to thermally insulate connected ducts to prevent condensation.
- Make certain that netting or other measures are installed in parts exposed to the outside air to prevent infiltration of small animals such as birds and insects.
- Install filters on the outside air to protect the indoor unit heat exchanger.
- Avoid the infiltration of rain water by installing outside ducts with an incline of at least 1/30, and fitting hoods on openings.

OPTIONAL PARTS

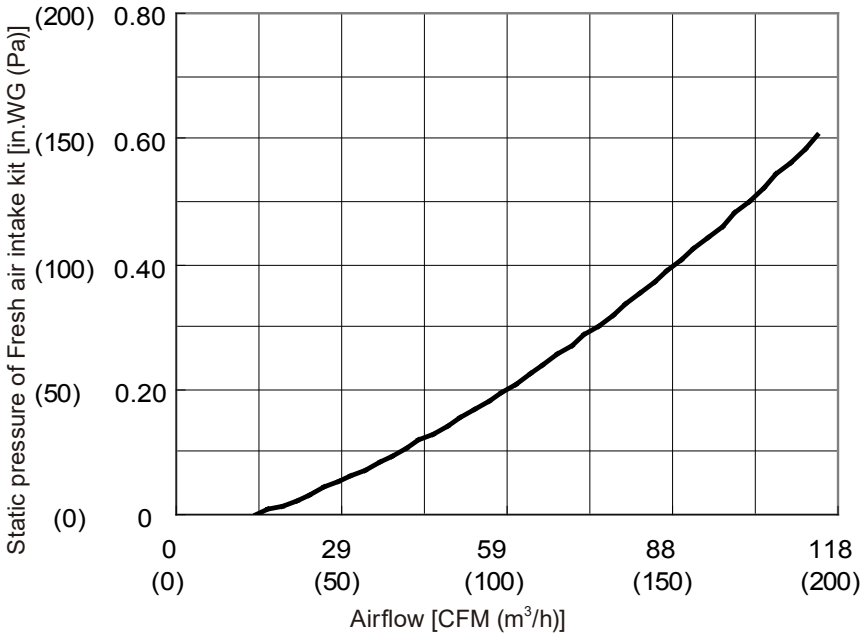
■ DIMENSIONS

Unit: in. (mm)

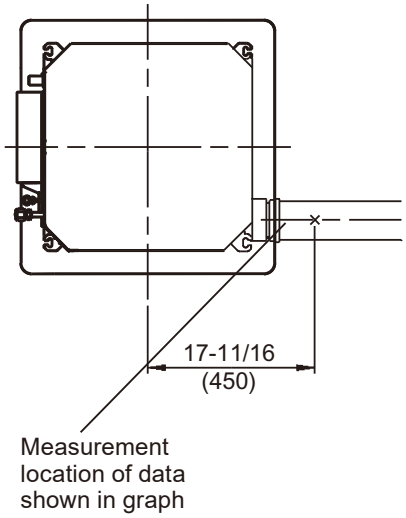


• When installing this kit, inspection hatch is necessary. (It is necessary when servicing.)

■ AIRFLOW



Unit: in. (mm)

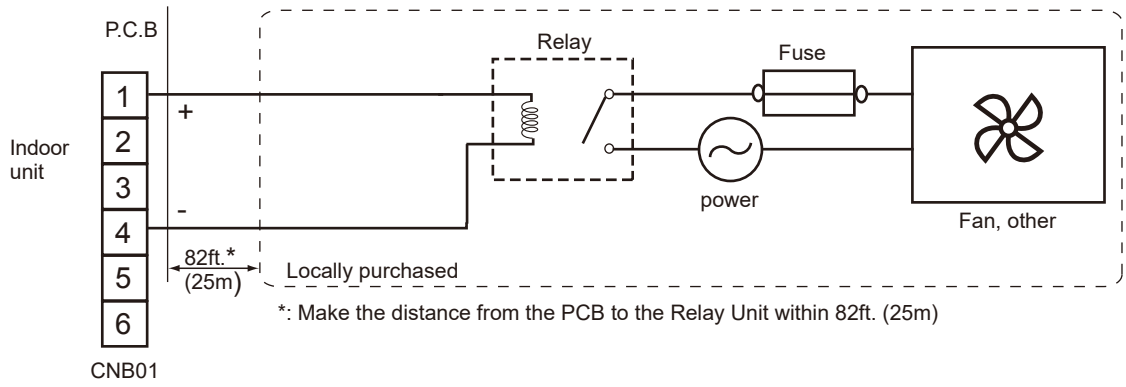


■ FRESH AIR CONTROL OUTPUT

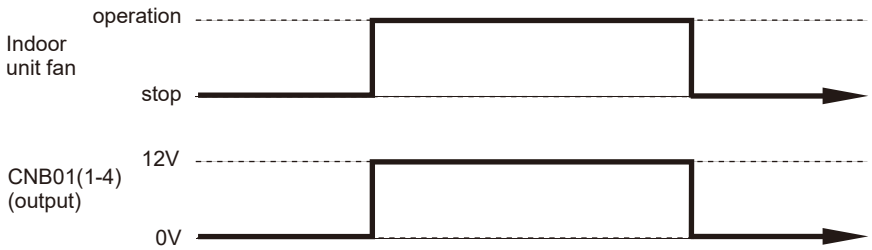
- You can control duct fan by synchronization with fan operation of indoor unit.
- Wire for fresh air control output is supplied with Fresh Air Intake Kit.
- Extended length of the wire : Max. 82ft. (25m)

● Connection diagram

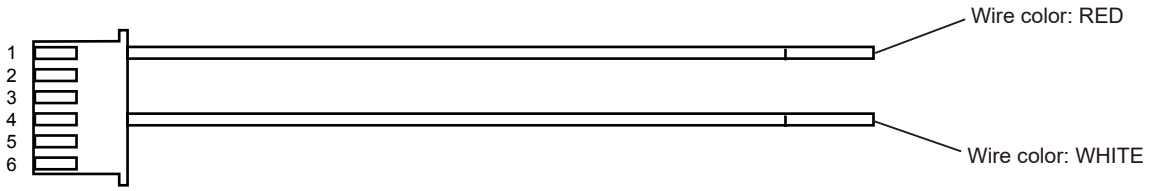
- For Relay Output voltage: DC12 ± 2V
  Permissible current: 50mA



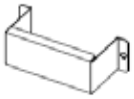
● Indoor unit status



● Wire (External output ③)



■ ACCESSORY PARTS

Name and shape	Q'ty	Application
Installation manual	1	
Chamber	1	Adaptor for connecting duct
Wire cover 	1	Cover for extension wire
Screw	4	Attaching for chamber Attaching for wire cover
Extension wire for louver	2	Extension wire for louver

Name and shape	Q'ty	Application
Extension wire for receiver kit	1	Extension wire for receiving kit
Wire (External output ①)	1	For connect indoor unit to relay of duct fan (For single or multi)
Wire (External output ②)	1	For connect indoor unit to relay of duct fan (For VRF)
Wire (External output ③)	1	For connect indoor unit to relay of duct fan (For VRF)
Bolt	4	For attaching kit to indoor unit
Cable Tie	1	For securing wire

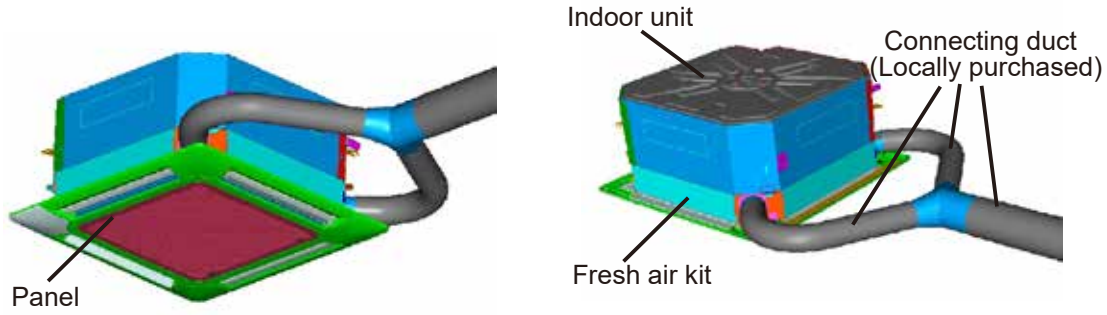
OPTIONAL PARTS

9-3. FRESH AIR INTAKE KIT (MODELS: UTZ-VXRA, UTZ-VXGA)

■ FEATURE

- Up to 10% of the units “high” air volume of outside air can be introduced into the “Fresh Air Intake Kit”.

Cassette type attached Fresh Air Intake Kit



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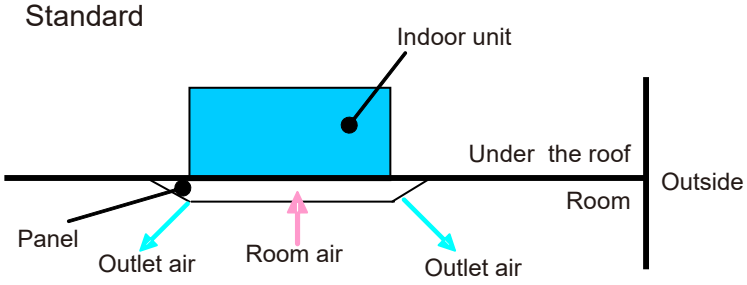
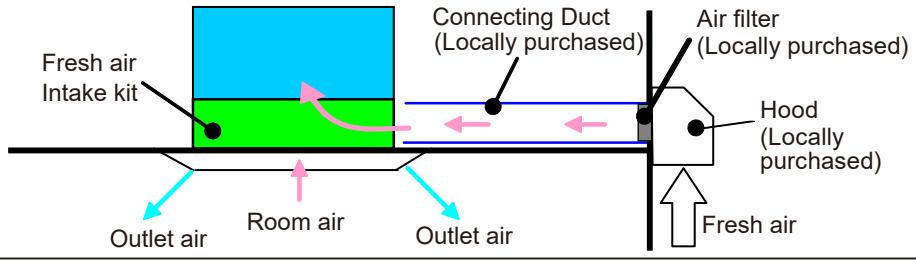
■ INSTALLATION EXAMPLE

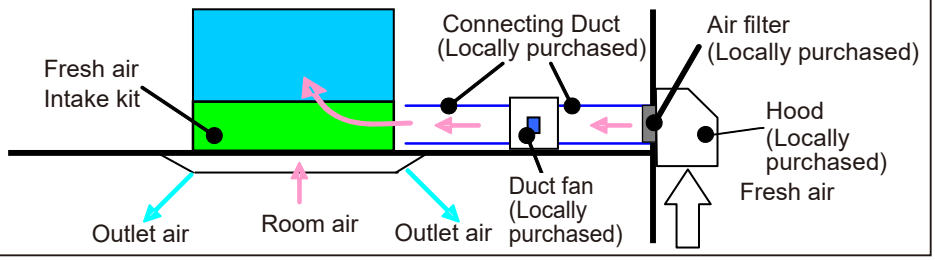
Standard



Case1: Intake by fan of indoor unit



Case2: Intake by duct fan



■ SPECIFICATIONS

Model name				UTZ-VXRA, UTZ-VXGA
Fresh air intake	Max. fresh air intake volume	% (for High)	2- way intake	10
			1- way intake	5
Connection duct type		in. (mm)		ø 3-15/16 (100)
		Pcs		2
Dimension (H × W × D)	Net	in. (mm)		4-3/4 × 33-1/16 × 33-1/16 (120 × 840 × 840)
	Gross			6-1/2 × 33-7/8 × 33-7/8 (165 × 860 × 860)
Weight	Net	lbs. (kg)		12 (5.5)
	Gross			20 (9.0)

OPTIONAL PARTS

■ PRECAUTION

● About fresh air intake kit

- The Fresh Air Intake Kit can be installed onto cassette type air conditioners.
- The volume of ventilated air provided by the Fresh Air Intake Kit may be unable to fulfill ventilation regulations in all countries.

  On such occasions we ask that this kit be used along with Energy recovery ventilators.
- When in taking outside air, ensure correct air-conditioning design as based on air-conditioning load calculations.

  As outside air is not being processed an increase in outside air load can affect air conditioning.

● Installation location

- Areas that generate corrosive gases such as sulfuric acid, chlorine gas and alkalis that will cause copper pipes and brazed joints to corrode and could cause refrigerant leaks.
- Coastal areas with exposure to salt air. Salt air can cause corrosion leading to unit failure or condensate leaks.
- Be certain to use electric dampers and shutters to avoid infiltration of cold air, wind and fog during shutdown in areas with cold climates, strong winds, or where fogs are common.
- Ensure the product is installed a distance of at least three times the duct diameter away from exterior wall air inlets, or air exhausts for the prevention of short circuits.

● Temperature conditions

- Condensation may form on the product when outside air temperature is low, and the temperature and humidity surrounding the product are high. Do not intake the air of below 32°F (0°C) into the fresh air intake kit.
- The unit should not be operated above the max outdoor operating temperature.

● About duct fan

- When installing the duct fan, connect the drive relay (locally purchased) and operate with the indoor unit.
- Ensure that outside air introduced into the unit is below 10% of the units “high” air volume. Exceeding this limit could cause excessive noise temperature fluctuations.

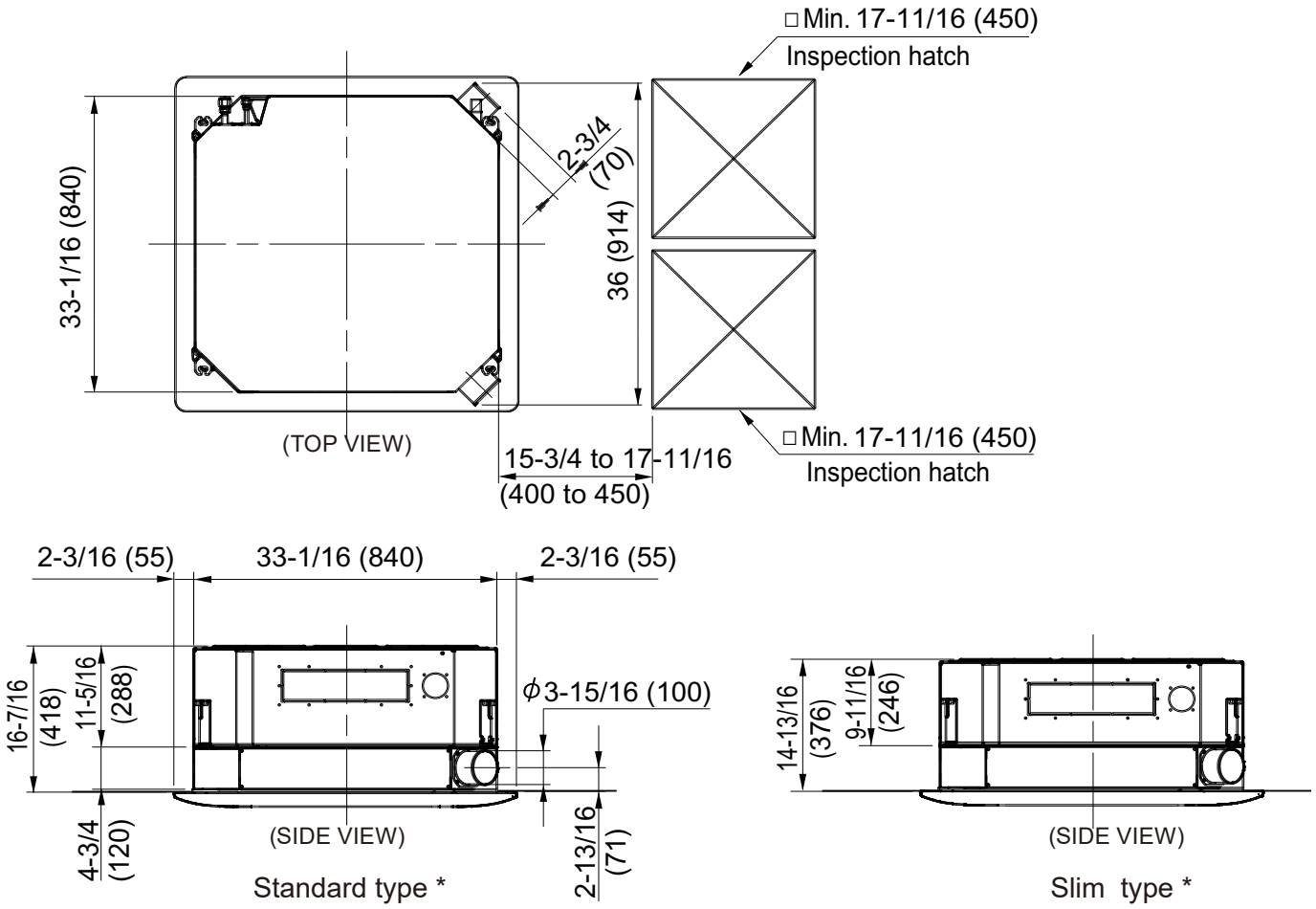
● About the duct connection

- Procure a duct with internal diameter that fits the external diameter of the duct flange.
- Note that regulations of some countries may require the use of a nonflammable duct.
- If the duct penetrates a fire-retarding division or other fire-proofing measures, the installation of fire dampers, or a construction that does not adversely affect fire control measures is a regulatory requirement of some countries.
- When using metallic ducts, ensure metals (i.e., metal lath, wire lath, stainless sheeting) are electrically insulated. (A short occurring by electrical connection can cause fire)
- Ensure to thermally insulate connected ducts to prevent condensation.
- Make certain that netting or other measures are installed in parts exposed to the outside air to prevent infiltration of small animals such as birds and insects.
- Install filters on the outside air to protect the indoor unit heat exchanger.
- Avoid the infiltration of rain water by installing outside ducts with an incline of at least 1/30, and fitting hoods on openings.

OPTIONAL PARTS

■ DIMENSIONS

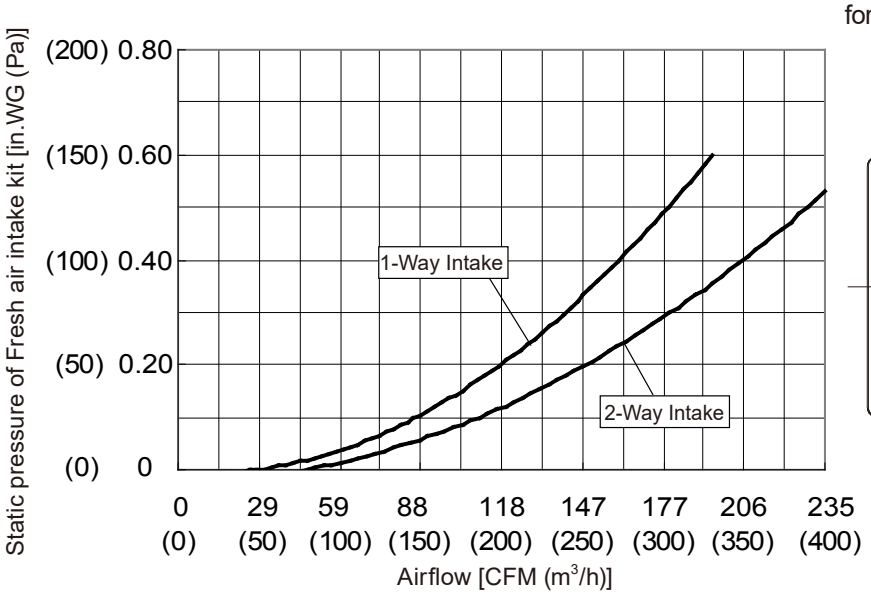
Unit: in. (mm)



*: The size is different according to indoor unit used.

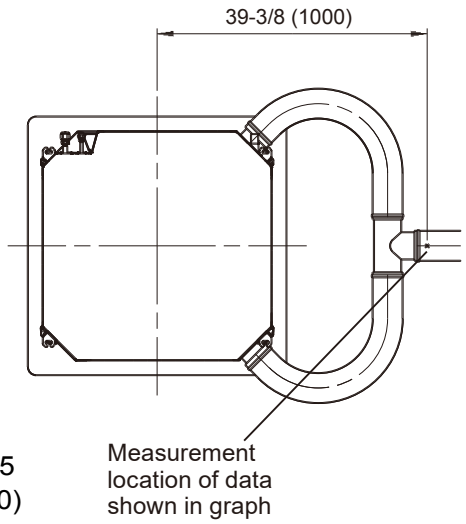
- When installing this kit, inspection hatch is necessary. (It is necessary when servicing.) Either one of inspection hatches must be installed.

■ AIRFLOW

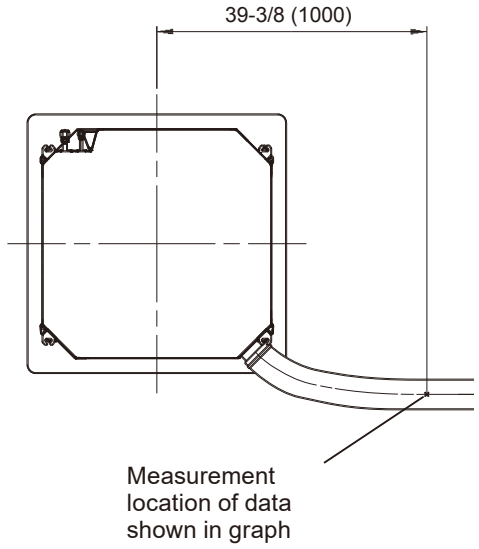


Unit: in. (mm)

for 2-Way Intake



for 1-Way Intake

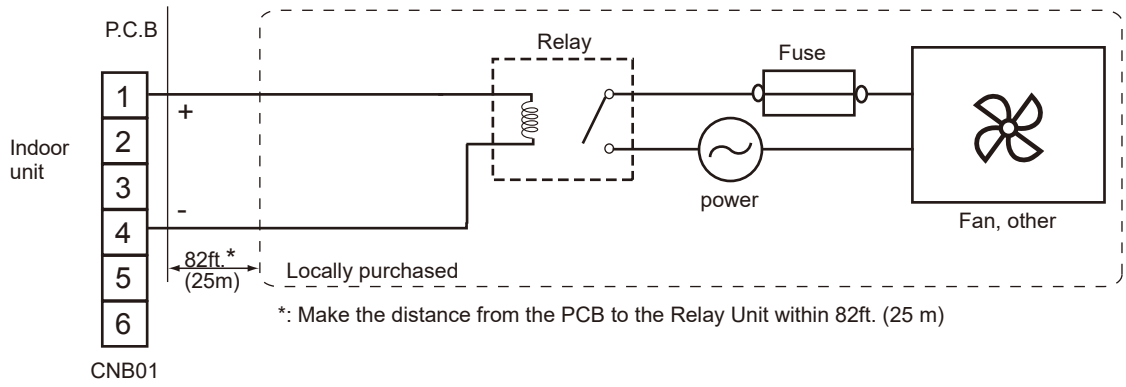


■ FRESH AIR CONTROL OUTPUT

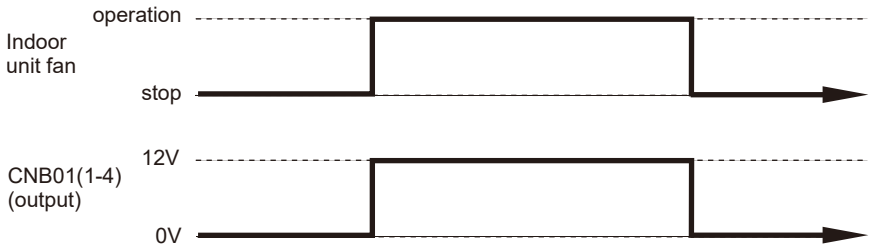
- You can control duct fan by synchronization with fan operation of indoor unit.
- Wire for fresh air control output is supplied with Fresh Air Intake Kit.
- Extended length of the wire: Max. 82ft. (25m)

● Connection diagram

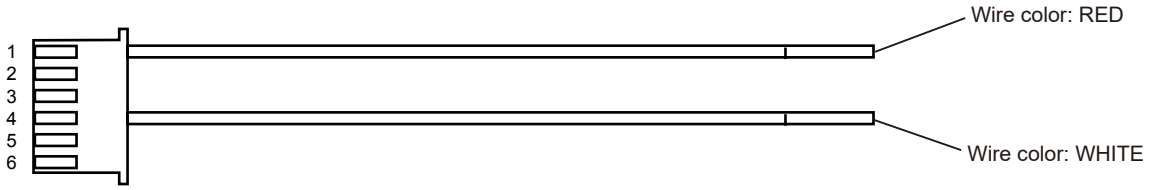
- For Relay Output voltage: DC12 ± 2V
  Permissible current: 50mA



● Indoor unit status

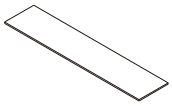


● Wire (External output ③)



■ ACCESSORY PARTS

Name and shape	Q'ty	Application
Installation manual	1	
Duct Flange	2	Adaptor for connecting duct
Cover	2	Protective cover to prevent surface condensation
Screw	16	For Attaching duct flange For Attaching Cover
Hook plate	4	Plate for attaching panel
Shutter plate	1	Shutter plate for 1-way intake
Insulation ①	2	Affixing the insulation outside of the kit
Insulation ②	1	Affixing the insulation to tube of drain pump for prevent condensation

Name and shape	Q'ty	Application
Insulation ③ 	3	Affixing the insulation outside of the kit
Insulation ④	4	Affixing the insulation outside of the cover
Cable Tie	1	Securing tube of drain pump
Extension wire for louver	2	Extension wire for louver
Extension wire for receiver kit	1	Extension wire for receiver kit
Wire (External output ①)	1	For connect indoor unit to relay of duct fan
Wire (External output ②)	1	For connect indoor unit to relay of duct fan
Wire (External output ③)	1	For connect indoor unit to relay of duct fan (For VRF)
Bolt	4	For attaching the kit to indoor unit

OPTIONAL PARTS

9-4. AUTO LOUVER GRILLE KIT

■ MODELS:

UTD-GXSA-W, UTD-GXTA-W
UTD-GXSB-W, UTD-GXTB-W

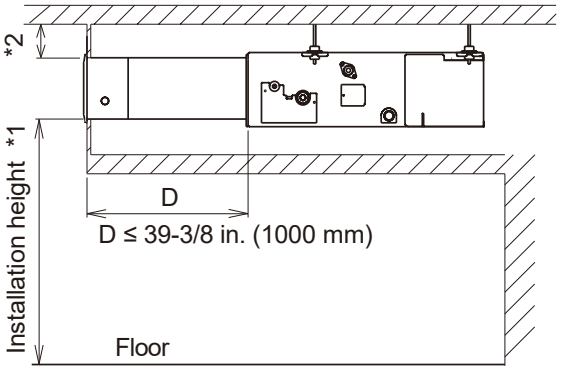
■ SPECIFICATIONS

Model name			UTD-GXSA-W UTD-GXTA-W	UTD-GXSB-W UTD-GXTB-W
Power Supply			Connecting with Control box of indoor unit	
Attachment of Auto Louver			Louver attached by screws to the flange or rectangular duct	
Extension Square Duct Limit		in. (mm)	39-3/8 (1.0) (Max. duct length between indoor unit and Grille)	
Net Dimension (H × W × D)		in. [mm]	7-1/16 × 26-7/8 × (3-5/16 + 3/8) [180 × 683 × (84 + 9)]	7-1/16 × 34-3/4 × (3-5/16 + 3/8) [180 × 883 × (84 + 9)]
Weight	Net	lbs. (kg)	4.4 (2.0)	5.6 (2.5)
	Gross		6.7 (3.0)	7.8 (3.5)
Color			White	
Louver Motor			Stepping Motor	
Material			Flame retardant ABS	
Accessories			Attachment Frame	
Operation range	Cooling	°F (°C)	64 to 90 (18 to 32)	
		% RH	80% or less	
	Heating	°F (°C)	60 to 88 (16 to 30)	

■ PRECAUTION

●Select the installation location that meets the following requirement and that is approved by the customer.

• Cold and warm air should reach the entire room.



*1) Refer to Design & Technical manual for Air velocity distribution and Air temperature distribution during heating.

*2) If the distance from the ceiling is not adequate, it may cause mildew stains on the wall or the ceiling. Install at least 5-7/8” (150 mm) away from any surface.

●Do not install the unit in the following areas

• Near an entrance to the room. This may cause condensation on the outlet.
• Near a wall surface. It may cause condensation on the wall during cooling.
• Area filled with mineral oil or containing a large amount of splashed oil or steam, such as a kitchen.
• In direct sunlight. This may cause discoloration of the unit.

●When the installation area is exposed to direct sunlight, take measures to block the light such as curtains or blinds to prevent discoloration of the unit.

●Use an appropriate Grille that is compatible with the indoor unit. If not used with the correct combination, it may cause condensation.

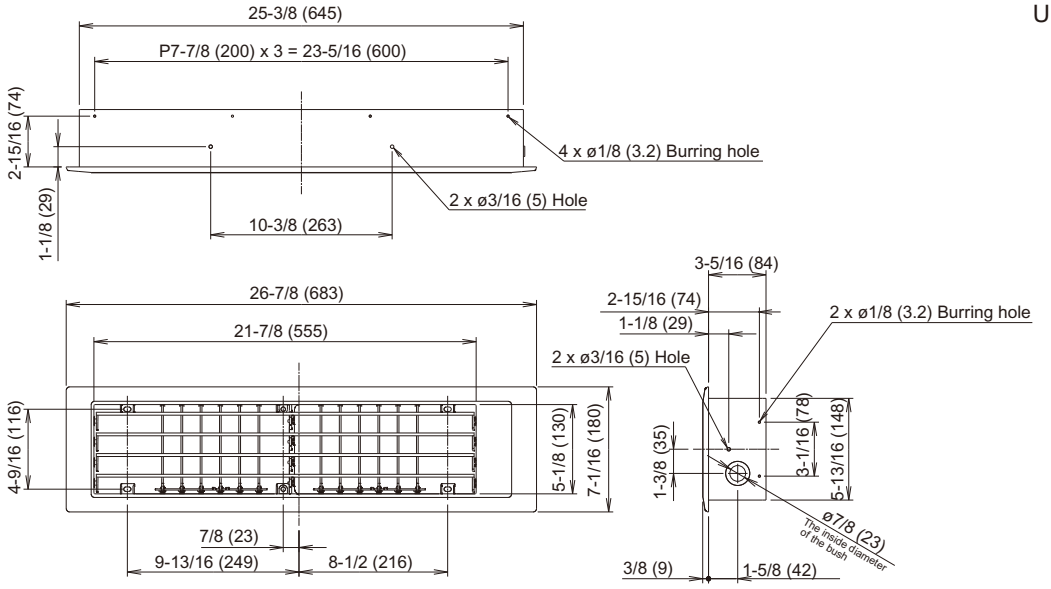
●Perform heat insulation and field setting according the Design & Technical manual of Indoor unit. Not installing as per the instructions may cause condensation.

OPTIONAL PARTS

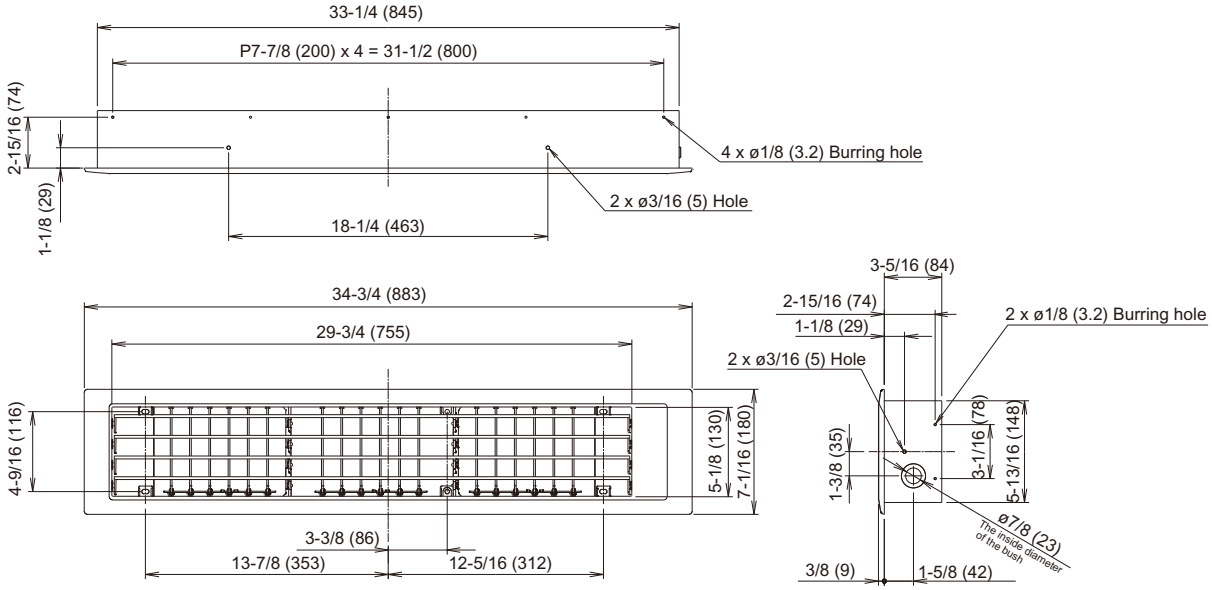
■ DIMENSIONS

● MODELS : UTD-GXSA-W, UTD-GXTA-W

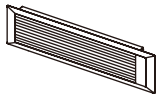
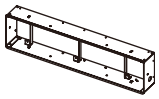
Unit : in. (mm)

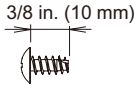
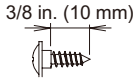


● MODELS : UTD-GXSB-W, UTD-GXSB-W



■ ACCESSORY PARTS

Name and shape	Q'ty
Installation manual	1
Operating manual	1
Grille 	1
Bracket frame 	1

Name and shape	Q'ty
Screw-A 	16
Screw-B 	6
Cable clip	2
Cable tie	3
Bushing	1

OPTIONAL PARTS

AIRSTAGE™ V-II

Variable Refrigerant Flow System

FUJITSU GENERAL LIMITED

3-3-17, Suenaga, Takatsu-ku, Kawasaki 213-8502, Japan

URL : http://www.fujitsu-general.com

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