



Delta Limited
989B (990 MBH Input - 2 Stage Fire)

Tag: RAYWH3989BNGBRZCNP8
 Project: P8 Delta Stock
 Quantity: 1

Unit Information

Model Series: **Delta Limited**
 Size: **989B (990 MBH Input - 2 Stage Fire)**
 Fuel:
 Location: **Outdoor**
 Altitude: **0** ft

Heating Performance

Input Temp: **55** F
 Output Temp: **140** F
 Design Capacity: **0** MBTUH
 Input Capacity: **990** MBTUH
 Output Capacity: **823** MBTUH
 Thermal Efficiency: **83.1** %



Water Flow

Design Flow: gpm
 Max Flow: **43** gpm
 Min Flow: **132** gpm
 Pressure Drop: ft. wg

General Unit Data

Unit Weight: **900** lbs.
 Unit Length: **32** in.
 Unit Width: **57** in.
 Unit Height: **41** in.

Delta Limited



Product Data: Type WH Water Heater

Qty

1

Description

Type WH Water Heater

Tag(s): RAYWH3989BNGBRZCNP8

Selected Options

- Application : Domestic Water Heater
- Location : Outdoor
- Model Size / Input : 989B (990 MBH Input - 2 Stage Fire)
- Fuel Type : Natural Gas
- Efficiency : 83.1 %
- Water Quality / Pump Selection Criteria : Hard (16 to 25 GPG) / P8 (P11 non-ferrous)
- Pump Type : Mounted Pumps
- Pump Material : Bronze \ Stainless Steel
- Header Material : Bronze
- Heat Exchanger Material : A-3 Cupronickel Heat Exchanger
- Pressure Relief Valves : A-15 125 PSIG (Standard for Water Heater)
- Ignition Module : Standard 3-Try Ignition - Auto Reset
- Low Water Cut Off : None
- Codes : G-12 California
- 4 inch Supply Gas Pressure Configuration (G-20) : None
- High Limit - Manual Reset : None
- High Limit - Combination : I-12 Adjustable Auto Limit / Adjustable Manual Limit - 200/200 F
- Low Gas Pressure Switch : S-1 Low Gas Pressure Safety Switch - Manual Reset
- High Gas Pressure Switch : None
- Low Water Pressure Switch : None
- Surerack - Unit Stacking Kit : None
- Mounting Location : Front-Mounted
- Mounted Pumps : P-8 Bronze Mounted Pump (Hard 16 to 25 GPG)
- Cold Water Start Systems : None
- Cold Water Run Pumps : None
- Injector Pump : None
- Flanges : None
- Control / Valve : None
- Controller (Not Included, See Accessories Section) : None
- Elevation : Below 2000 ft (0 – 1999 ft)

Selected Accessories

Delta Limited WH Large Standard Features

Qty: 5 Tags: RAYWH3989BNGBRZCNP8, RAYWH81259BNGBRZCNP8, RAYWH91529BNGBRZCNP8, RAYWH91799BNGBRZCNP8, RAYWH91999BNGBRZCNP8

Standard Features

Heat Exchanger

- HLW Stamp
- ASME Inspected and Stamped
160 PSIG Working Pressure
- National Board Approved
- ASME Steel Tube Sheet
- Silicone High Temp O-Rings
- Temperature and Pressure Gauge

Control

- 120V, 60Hz, 1 Phase Power Supply
- 120/24V 60 Hz transformer
- 100% Shut-Off/Lockout
- Hot Surface Ignition
- Remote flame sensor
- High limit control, manual reset
- On/Off Power Switch
- Manual shut-off, front-mounted switch
- Flow Switch
- Blocked Vent Pressure Switch
- Combustion Air Proving Switch
- Pump Time Delay Relay
- Status Display Lights

Burner

- Ultra-Low NOx: Less than 20 PPM

Gas Train

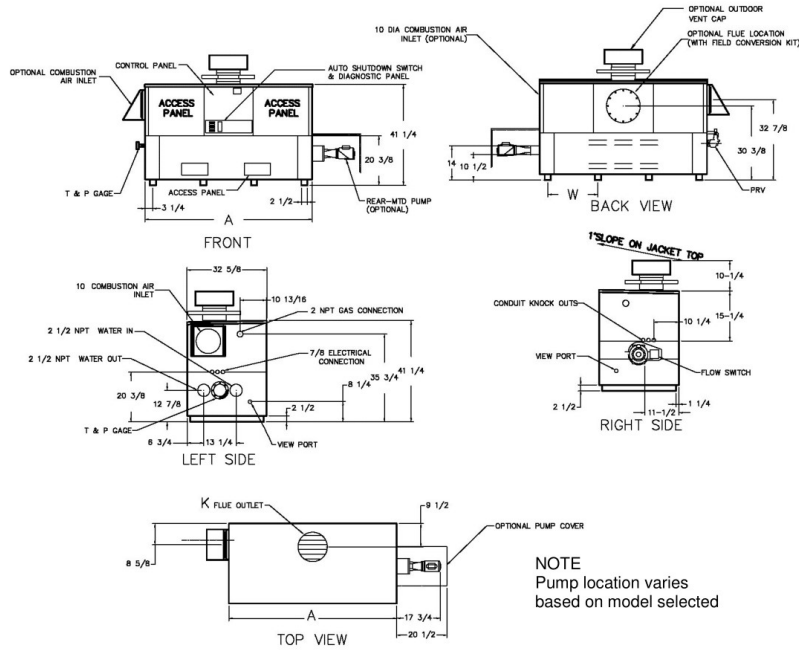
- Manual Gas Shut-off Valve(s)
- Combination Valves
- Low Gas Pressure Switch, Manual
- Design Certified – ANSI Z21.10.3/CSA 4.3

Construction

- Indoor/outdoor construction
- Enclosed front controls
- AB-1953 Verified
- CSA Low Lead Certified \leq .25%
- 100% Factory Fire Tested
- Thermal Shock Proof Heat Exchanger
- Limited Twenty-Year Thermal Shock Warranty
- Limited Ten-Year Cupro-Nickel Heat Exchanger Warranty
- Limited Five-Year Copper Heat Exchanger Warranty
- PolyTuf Powder Coated Cabinet
- Combustible Floor Shield Required
- Fan-Assisted
- Patented Burner Security Blanket
- Proudly Assembled in the USA

Delta Limited WH Dimensions 989B

Qty: 1 Tags: RAYWH3989BNGBRZCNP8



NOTE
Pump location varies
based on model selected

SPECIFICATIONS										
Model	MBTUH			Firing Stages	A Width	K	T	W	Amp. Draw*	Approx. Shipping Wt. (Lbs.)
	Input	Output 85%	Output 83.1%							
989B	990	842	823	3	57-1/8	10	10	16-13/16	<12	900

1. Rates shown are for natural or propane gas and elevations up to 4,500 feet. For installations above 4,500 feet, please contact manufacturer.
2. Recommended natural gas supply pressure is 7.0 – 10.5 in. WC. Recommended propane gas supply pressure is 11.0 – 13.0 in. WC.
3. Amp draw is heater only less pump

Model	83.1% System Flow and Head Loss															
	3-4 Grains Per Gallon						5-15 Grains Per Gallon				16-25** Grains Per Gallon					
	ΔT (°F)	GPM	ΔP (FT WC)	MTS (IN)	SHL (FT WC)	SHL (FT WC)	ΔT (°F)	GPM	ΔP (FT WC)	MTS (IN)	SHL (FT WC)	SHL (FT WC)	ΔT (°F)	GPM	ΔP (FT WC)	MTS (IN)
989B	28	60	2.7	2 1/2	5.2	17	98	7.3	2 1/2	13.3	13	132	132	13.1	2 1/2	23.6

Model	85% System Flow and Head Loss															
	3-4 Grains Per Gallon						5-15 Grains Per Gallon				16-25** Grains Per Gallon					
	ΔT (°F)	GPM	ΔP (FT WC)	MTS (IN)	SHL (FT WC)	SHL (FT WC)	ΔT (°F)	GPM	ΔP (FT WC)	MTS (IN)	SHL (FT WC)	SHL (FT WC)	ΔT (°F)	GPM	ΔP (FT WC)	MTS (IN)
989B	28	60	2.7	2 1/2	5.2	17	98	7.3	2 1/2	13.3	13	132	132	13.1	2 1/2	23.6

SHL includes 50 ft of tubing each way (100 total)
 ** Must use optional cupro-nickel tubes. For hardness exceeding 25 GPG, must use water softener
 Basis for minimum flow is 55 GPM or 30°F ΔT, 132 GPM for maximum flow

Model	83.1% RECOVERY RATES (GPH)									
	Temperature Rise (°F)									
	20°	30°	40°	50°	60°	70°	80°	90°	100°	
989B	4986	3324	2493	1994	1662	1425	1247	1108	997	

Model	85% RECOVERY RATES (GPH)									
	Temperature Rise (°F)									
	20°	30°	40°	50°	60°	70°	80°	90°	100°	
989B	5100	3400	2550	2040	1700	1457	1275	1133	1020	