

## Submittal Data

PROJECT:	UNIT TAG:	QUANTITY:	
	TYPE OF SERVICE:		
REPRESENTATIVE:	SUBMITTED BY:	DATE:	
ENGINEER:	APPROVED BY:	DATE:	
CONTRACTOR:	ORDER NO.:	DATE:	



## MQ3-45

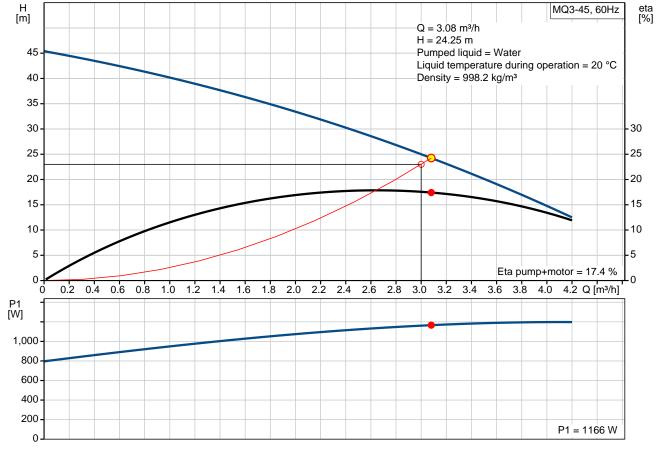
Grundfos MQ booster are an all-in-one unit, designed for pumping clean water from break tanks and shallow wells, and for general pressure-boosting in private homes, farms, and irrigation. The boosters are suitable for both indoor and outdoor use.

Note! Product picture may differ from actual product

Conditions of Service				
Flow:	3.08 m <sup>3</sup> /h			
Head:	24.25 m			
Efficiency:	17.4 %			
Liquid:	Water			
Temperature:	20 °C			
NPSH required:	m			
Viscosity:				
Specific Gravity:	1.000			

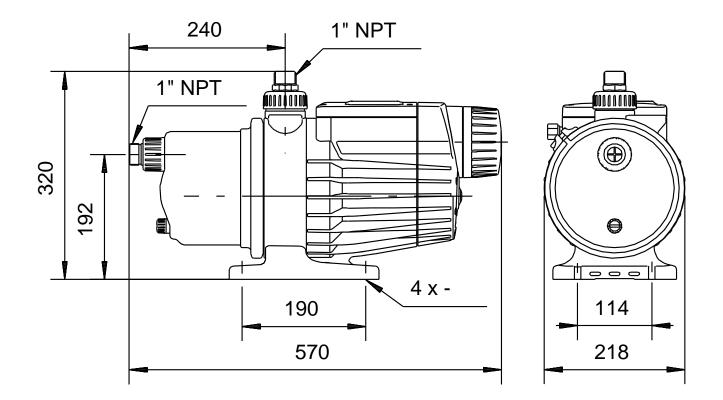
Pump Data			
Maximum operating pressure:	7.5 bar		
Liquid temperature range:	0 35 °C		
Maximum ambient temperature:	45 °C		
Approvals:	CSACUS		
Shaft seal:	BVBP		
Pipe connection:	NPT1		
Product number:	96860195		
1			

Motor Data				
Rated voltage: Mains frequency: Enclosure class: Insulation class:	110-120 V 60 Hz IP54 B			





# Submittal Data



### Materials:

Pump housing: POM + 25% glass fibre Impeller: PPO + 20% glass fibre-PTFE

Material code: A



**Date:** 21/02/2018

## **Tender Text**



Note! Product picture may differ from actual product

Product No.: 96860195 MQ3-45 A-B-A-BVBP

#### Complete system

The MQ is a complete, all-in-one unit, incorporating pump, motor, diaphragm tank, pressure and flow sensor, controller and non-return valve.

The controller ensures that the pump starts automatically when water is consumed and stops automatically when the consumption ceases. In addition, the controller protects the pump in case of faults.

#### Installation

Due to its compact design, the pump does not take up much space and is easy to install. No space around the pump is required.

#### Simple operation

The pump features a user-friendly control panel with ON/OFF button and indicator lights for indication of the operational state of the pump.

#### Self-priming pump

As it is self-priming, the MQ is able to pump water from a level below the pump. Provided it is filled with water, the pump is able to lift water from a depth of 8 m in less than 5 minutes. This facilitates installation and start-up of the pump and provides more reliable water supply in installations where there is a risk of dry running and leakages in suction hose or pipes.

#### Built-in protective functions

If exposed to dry running or excessive temperature, for example in case of seizure or overload, the pump will stop automatically, thus preventing a motor burnout.

#### Automatic reset

The pump features an automatic reset function. In case of dry running or similar alarm, the pump will stop. Restarting will be attempted every 30 minutes for a period of 24 hours. The reset function can be deactivated.

#### Low noise level

Thanks to its hydraulic design and internal cooling, the pump is extremely low-noise, which makes it suitable for indoor as well as outdoor use.

#### Pressure tank

The built-in pressure tank reduces the number of starts and stops in case of leakages in the pipe system, causing less wear on the pump.

#### Maintenance

No maintenance of the pump is required.

#### Liquid:

Pumped liquid: Water
Liquid temperature range: 0 .. 35 °C
Liquid temperature during operation: 20 °C
Density: 998.2 kg/m³



**Date:** 21/02/2018

Technical:

Actual calculated flow: 3.08 m³/h
Resulting head of the pump: 24.25 m
Primary shaft seal: BVBP
Approvals on nameplate: CSACUS

Curve tolerance: ISO9906:2012 3B

Materials:

Pump housing: POM + 25% glass fibre Impeller: PPO + 20% glass fibre-PTFE

Installation:

Range of ambient temperature: 0 .. 45 °C Maximum operating pressure: 7.5 bar Pipe connection: NPT1

**Electrical data:** 

Power input - P1: 1150 W Mains frequency: 60 Hz

Rated voltage: 1 x 110-120 V

Rated current: 10 A
Enclosure class (IEC 34-5): IP54
Insulation class (IEC 85): B
Length of cable: 2 m
Type of cable plug: NEMA

Others:

Net weight: 13 kg Gross weight: 15.5 kg Shipping volume: 0.055 m³



**Date:** 21/02/2018

Position | Qty. | Description

1 MQ3-45 A-B-A-BVBP



Note! Product picture may differ from actual product

Product No.: 96860195

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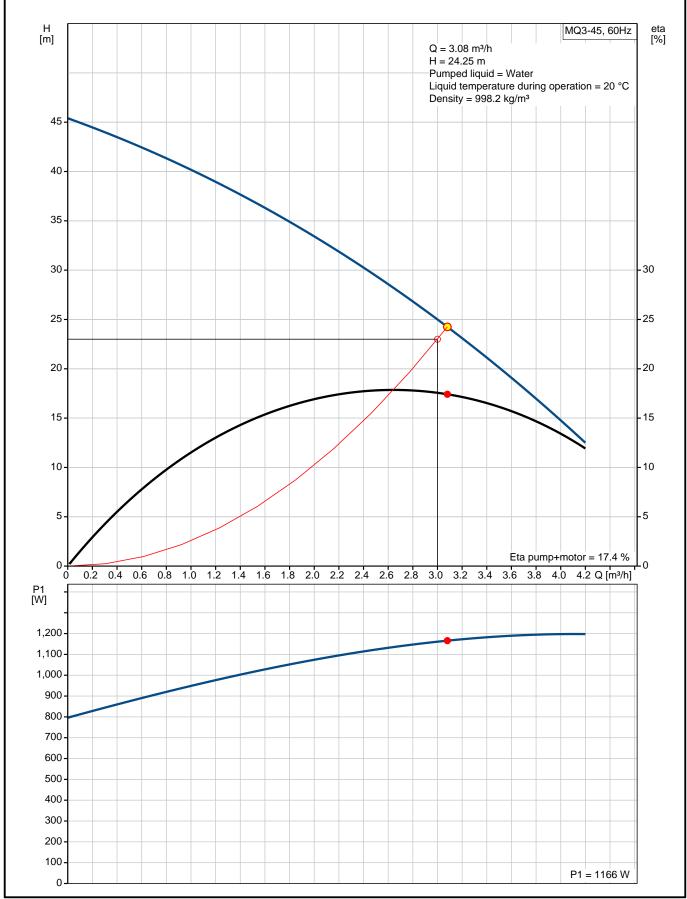
**Date:** 21/02/2018

**Position** Qty. Description Density: 998.2 kg/m<sup>3</sup> Technical: Actual calculated flow: 3.08 m<sup>3</sup>/h Resulting head of the pump: 24.25 m Primary shaft seal: **BVBP** Approvals on nameplate: **CSACUS** Curve tolerance: ISO9906:2012 3B Materials: Pump housing: POM + 25% glass fibre Impeller: PPO + 20% glass fibre-PTFE Installation: Range of ambient temperature: 0 .. 45 °C Maximum operating pressure: 7.5 bar Pipe connection: NPT1 Electrical data: Power input - P1: 1150 W Mains frequency: 60 Hz Rated voltage: 1 x 110-120 V Rated current: 10 A Enclosure class (IEC 34-5): IP54 Insulation class (IEC 85): В Length of cable: 2 m Type of cable plug: **NEMA** Others: Net weight: 13 kg Gross weight: 15.5 kg Shipping volume: 0.055 m<sup>3</sup>



**Date:** 21/02/2018

# 96860195 MQ3-45 60 Hz

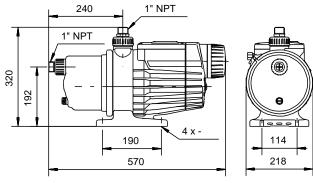


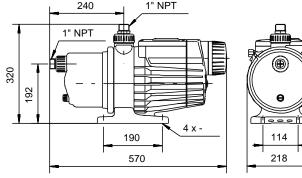


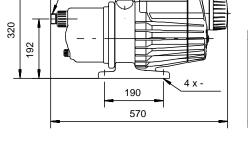
Date: 21/02/2018

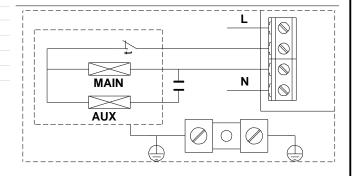
Description	Value		
General information:			
Product name:	MQ3-45 A-B-A-BVBP		
Product No:	96860195		
EAN number:	5700312084204		
Technical:			
Actual calculated flow:	3.08 m³/h		
Resulting head of the pump:	24.25 m		
Head max:	45 m		
Primary shaft seal:	BVBP		
Approvals on nameplate:	CSACUS		
Curve tolerance:	ISO9906:2012 3B		
Pump version:	A		
Model:	В		
Materials:			
Pump housing:	POM + 25% glass fibre		
Impeller:	PPO + 20% glass fibre-PTFI		
Material code:	A		
Installation:			
Range of ambient temperature:	0 45 °C		
Maximum operating pressure:	7.5 bar		
Connect code:	В		
Pipe connection:	NPT1		
Liquid:			
Pumped liquid:	Water		
Liquid temperature range:	0 35 °C		
Liquid temperature during operation:	20 °C		
	998.2 kg/m³		
Density:	996.2 kg/III°		

H [m]	Q = 3.08 m <sup>3</sup> /h	eta [%]
45 -	H = 24.25 m  Pumped liquid = Water  Liquid temperature during operation = 20 °C  Density = 998.2 kg/m³	
40 -		
35 -		
30 -		<del>-</del> 30
25 -		- 25
20 -		<b>-</b> 20
15 -		<b>-</b> 15
10 –		<b>-</b> 10
5 -	Eta pump+motor = 17.4 %	<b>-</b> 5
0-0		- 0
P1 - [W] 1,200 -		
1,000 -		
800 -		
600 -		
400 -		
200 -		
0	P1 = 1166 W	









## Controls:

Power input - P1:

Mains frequency:

Enclosure class (IEC 34-5):

Insulation class (IEC 85):

Rated voltage:

Rated current:

Length of cable:

Type of cable plug:

on/off switch included Switch:

1150 W

1 x 110-120 V

60 Hz

10 A

IP54

NEMA

В 2 m

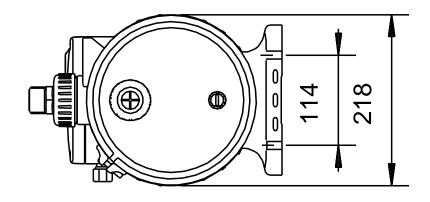
## Others:

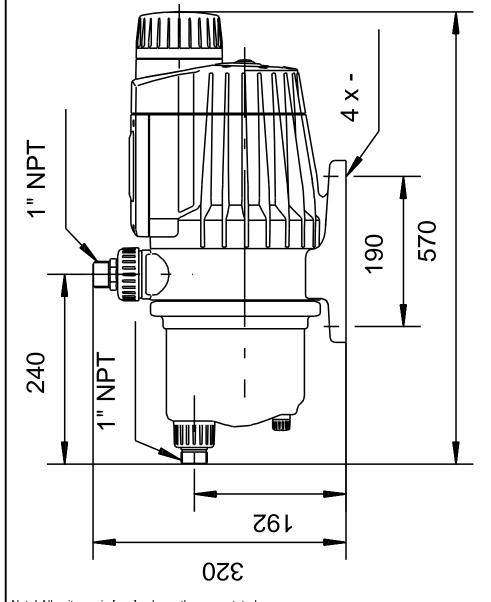
Net weight: 13 kg Gross weight: 15.5 kg 0.055 m<sup>3</sup> Shipping volume: Sales region: Namreg



**Date:** 21/02/2018

# 96860195 MQ3-45 60 Hz



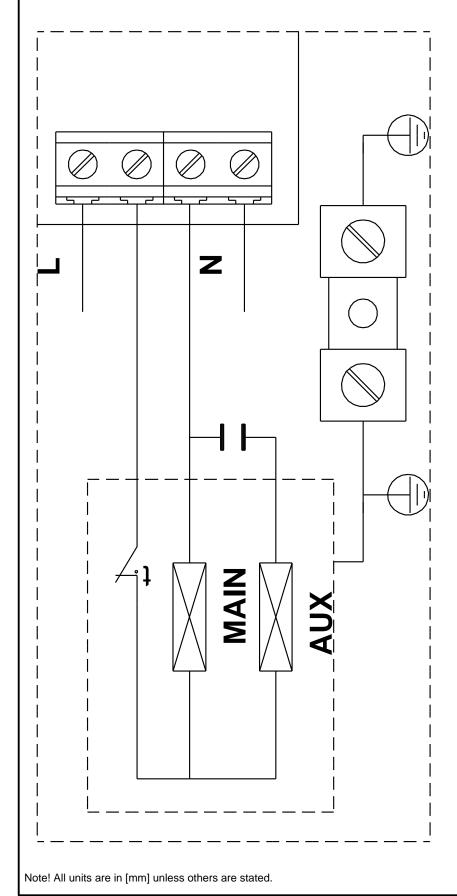


Note! All units are in [mm] unless others are stated. Disclaimer: This simplified dimensional drawing does not show all details.



**Date:** 21/02/2018

# 96860195 MQ3-45 60 Hz





**Date:** 21/02/2018

**Order Data:** 

Product name: MQ3-45 A-B-A-BVBP

Amount: 1

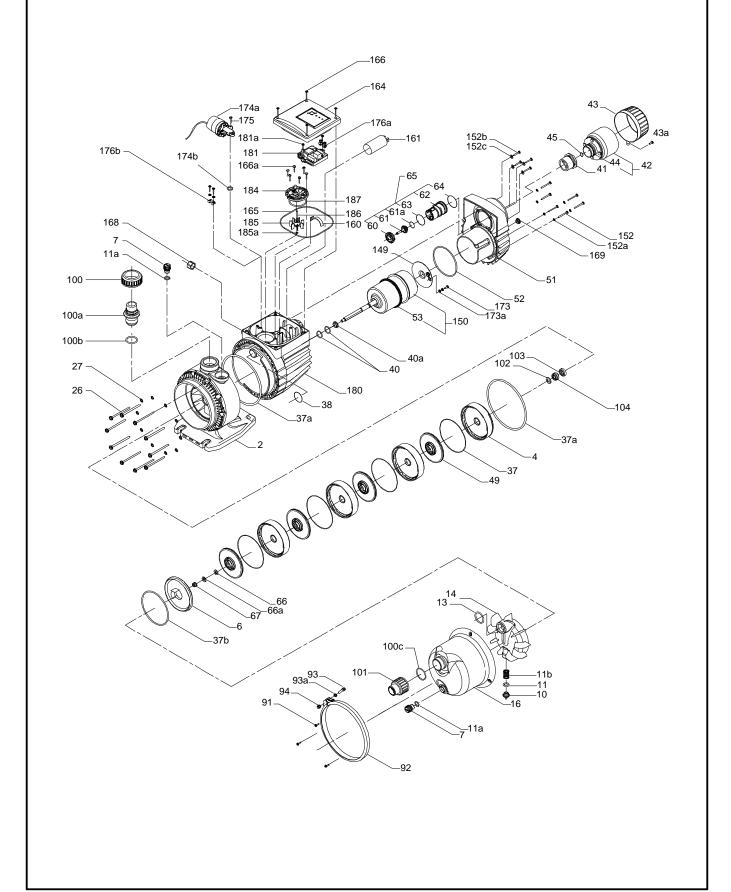
Product No: 96860195

Total: Price on request



**Date:** 21/02/2018

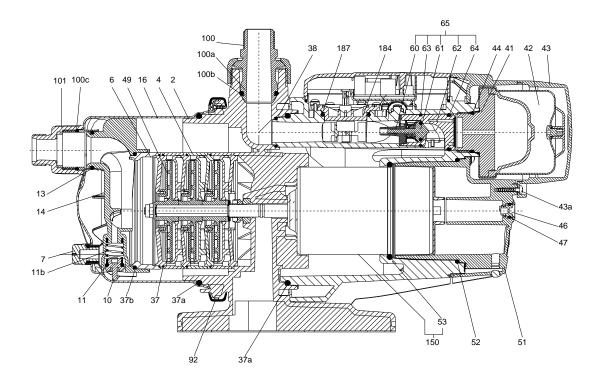
Exploded view (TM055952 for MQ)





**Date:** 21/02/2018

Sectional drawing (TM064501 for MQ)





**Date:** 21/02/2018

# Parts list MQ3-45, Product No. 96860195 Valid from 22.1.2009 (0904)

Pos	Description	Annotation	Classification Data	Part no.	Qty.	Unit
-	Kit, hydraulic parts				1	pcs
4	Chamber				3	
4a	Chamber, empty				1	
6	Inlet part				1	
10	Valve seat				1	
11	O-ring		Diameter: 12,29		1	
			Material type: NBR			
			Thickness: 3,53			
11b	Flat spring				1	
13	O-ring		Diameter: 31,34		1	
			Material type: NBR			
			Thickness: 3,53			
14	Self-priming part				1	
37	O-ring		Diameter: 105,0		5	
			Material type: NBR			
			Thickness: 1,5			
37a	O-ring		Diameter: 164,46		1	
			Material type: NBR			
			Thickness: 5,34			
37b	O-ring		Diameter: 110,7		1	
			Material type: NBR			
			Thickness: 3,53			
49	Impeller				3	
66	Washer		Internal diameter:	8,5	1	
			Outer diameter: 17,0			
66.a	Disc spring				1	
67	Nut		Thread: M8		1	