

# BM, BM hp

50/60 Hz

Booster modules



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## 1. Introduction

BM and BM hp pumps are encapsulated pumps. Encapsulated pumps are compact, simple-to-install, stainless steel pumps with motor units that are encapsulated in a pressure sleeve, hermetically sealing and protecting the unit as well as ensuring low maintenance and low noise levels. They are suitable for a variety of applications, including domestic water supply and various filtration applications.

### General requirements

#### Automatic control devices

To protect the pumps against dry running and to ensure a minimum flow of cooling water past the motors, the system must be fitted with flow and pressure control devices.

A pressure switch on the inlet side is sized in accordance with the estimated inlet pressure. At a pressure lower than 0.5 bar (7.25 psi) for BM 4" and BM 6", and 1 bar (14.5 psi) for BM 8", an alarm goes off and shortly, after about 15 seconds, the pumps stop.

All outlet connections to the system must be fitted with flow switches which will stop the system at the set minimum flows.

The above control devices ensure a correct inlet pressure and a minimum flow of cooling water past the motor.

Flow switch cutting-in is adjusted for a minimum time delay equivalent to the maximum starting frequency of the system.

### Grundfos BM

BM booster modules use modified standard submersible pumps which are centred in a stainless-steel<sup>1)</sup> sleeve.

Both sleeve ends can be connected to the pipes by means of Victaulic couplings.

A terminal box for electrical connection is located at the end of the outlet.

The sleeve of BM 4", 6" and 8" modules is supplied with a straight pipe for inlet and outlet.

BM 4" modules are also available with 90° bends (elbow) at the inlet and outlet ends.

BM pumps can be fitted with asynchronous submersible squirrel-cage motors.

### BM AC



BM 4"



BM 6"



BM 8"

Grundfos BM booster modules are suitable for industrial and water supply applications requiring increased system pressure.

BM pumps are fitted with an asynchronous motor. The motor can be connected to a frequency converter.

A pump is supplied with the following:

- asynchronous motor
- inlet and outlet: Victaulic couplings
- BM 4": straight or 90° bent pipe for inlet and outlet
- BM 6" and 8": straight pipe for inlet and outlet.

Note that BM pumps are supplied without non-return valves.

#### Related information

[Frequency converter](#)

#### Standard pumps

The following standard pumps are available for the BM booster modules:

- SP 3A, SP 5A and SP 9 in 4" sleeve
- SP 18, SP 30, SP 46 and SP 60 in 6" sleeve
- SP 30, SP 46, SP 60, SP 77, SP 95, SP 125, SP 160 and SP 215 in 8" sleeve.

<sup>1)</sup> R version: Duplex stainless steel

## Grundfos BM hp

Modified standard submersible pumps are used for the BM hp booster modules. The pump and motor are centred in a Duplex stainless-steel sleeve.

Both sleeve ends can be connected to the pipes by means of Victaulic couplings.

A terminal box for electrical connection is located at the outlet end.

The sleeve of 6" and 8" modules is supplied with a straight pipe inlet and outlet.

### BM hp AC



BM hp 6"



BM hp 8"

Grundfos BM hp booster modules are suitable for industrial and water supply applications where the inlet pressure is high, such as 60 to 80 bar (870 to 1160 psi). BM hp booster modules are used to increase the system pressure up to 82.7 bar (1200 psi). The pumps are available with asynchronous motors. The motor can be connected to a frequency converter.

A pump is supplied with the following:

- asynchronous motor
- inlet and outlet: Victaulic couplings
- BM hp 6" and 8": straight pipe for inlet and outlet.

Note that BM hp pumps are supplied without non-return valves.

### Related information

[Frequency converter](#)

### Standard pumps

The following standard pumps are available for the BM hp booster modules:

- SP 18, SP 30, SP 46 and SP 60 in 6" sleeve
- SP 77, SP 95, SP 125, SP 160 and SP 215 in 8" sleeve.

### ErP compliant

The product is energy-optimized and complies with the ecodesign requirements for water pumps specified in the ErP Directive (Commission Regulation (EC) No 547/2012), which became effective on 1 January 2013. As from this date, all pumps are classified and graduated in the Minimum Efficiency Index (MEI).

## Efficiency and MEI index

Pump type	Efficiency [%]	MEI
BM 18	74	≥ 0.7
BM 30	75	≥ 0.5
BM 46	76	≥ 0.4
BM 60	77	≥ 0.4
BM 77	78	-
BM 95	79	-
BM 125	79	-
BM 160	80	-
BM 215	83	-

For more information about the energy directive and MEI index, please visit: [europump.eu/efficiencycharts](http://europump.eu/efficiencycharts).

## Pumped liquids

The pumps are suitable for pumping liquids which are thin, non-explosive liquids, not containing solid particles or fibres. The liquid must not chemically attack the pump materials. In case of doubt, contact Grundfos. The pumps must never operate with liquid containing substances that would remove the surface tension, for example soap. If you use this type of detergent to clean the system, lead the liquid around the pumps via a bypass.

If the density and/or viscosity of the pumped liquid is higher than that of water, it may be necessary to use motors with a higher output than the standard output stated.

## 2. Applications

### BM and BM hp

The BM and BM hp booster modules are the optimum solution for applications requiring the following:

- sealless pumps
- pumps capable of coping with high system pressures
- high heads
- quiet operation
- a minimum of maintenance.

BM and BM hp booster modules are suitable for the following typical applications:










- water treatment where energy recovery devices (ERD), like pressure exchangers, are used, such as:
  - reverse osmosis in domestic water supply systems
  - hospitals, laboratories as well as chemical, electronics and metal industries
  - ultra-filtration in chemical and galvanic industries
  - painting workshops, metal and mineral industries
- liquid transfer
- pressure boosting
- closed circulation systems with a high static pressure.

Note that BM hp booster modules need no flushing during continuous operation due to an internal bypass.

### Installation

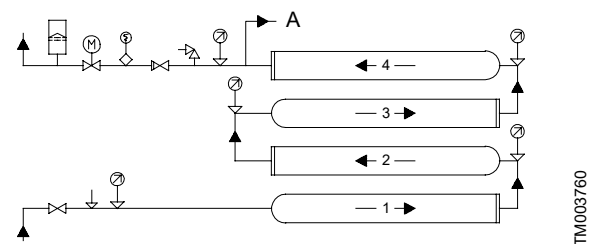
#### Booster modules connected in series and in parallel

Symbols used in the figures below:

-  Air escape valve
-  Isolating valve
-  Non-return valve
-  Pressure switch
-  Flow switch
-  Pressure gauge
-  Motor-operated valve
-  Diaphragm tank
-  A Bypass

- **Series operation (high pressure)**

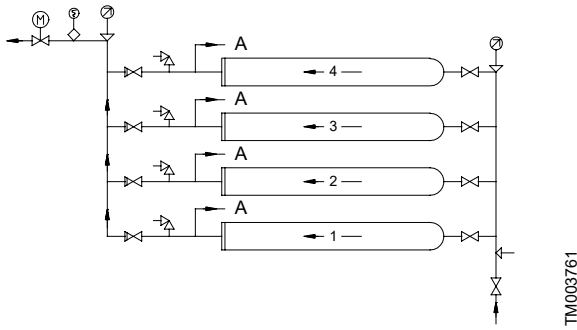
If a pressure higher than that of a single module is required, several modules are connected in series. The resulting pressure is found by adding the pressure of each individual module. The flow rate will be the same as for one pump. Make sure that the maximum inlet pressure is not exceeded. For modules connected in series, mounted above each other, we recommend to connect the pipes as shown in the figure below.



Booster system with four modules connected in series, mounted above each other

- **Parallel operation (high flow)**

If a flow higher than that of a single module is required, several modules are connected in parallel. The resulting flow is found by adding the flow of each individual module. The pressure will be the same as for one pump. For modules connected in parallel, mounted above each other, we recommend to connect the pipes as shown in the figure below. This layout ensures that the modules are filled with water before starting.



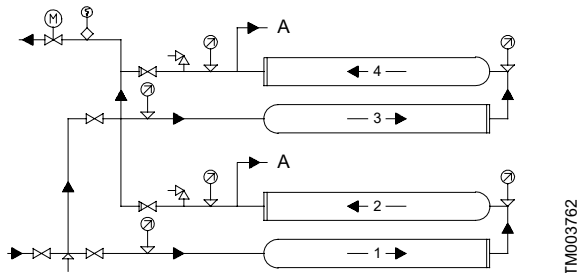
*Booster system with four modules connected in parallel, mounted above each other*

- **Parallel and series operation (high flow and pressure)**

If a higher flow and pressure than that of a single module is required, several modules can be connected in parallel and series. The resulting flow is found by adding the flow of each individual module connected in parallel, while the pressure is found by adding the pressure of each individual module connected in series.

Make sure that the maximum inlet pressure is not exceeded.

For modules connected in series and parallel, mounted above each other, we recommend to connect the pipes as shown in the figure below.



*Booster system with two modules connected in series and in parallel, mounted above each other*

## Connections

Size	Type	Victaulic coupling, style 77
BM 4"	BM 3A - BM 9	1 1/4" / Ø42
BM 6"	BM 17 - BM 60	3" / Ø89
BM 8"	BM 30 - BM 46	3" / Ø89
BM 8"	BM 60	4" / Ø114
BM 8"	BM 77 - BM 95	5" / Ø139
BM 8"	BM 125 - BM 215	6" / Ø168

## 3. Features and benefits

### Pump

The BM and BM hp booster pumps consist of a standard SP pump with a submersible motor centred in a stainless-steel (Duplex) sleeve. It is easy to find a pump that suits your needs in Grundfos Product Center.

#### Related information

[14. Grundfos Product Center](#)

### BM and BM hp

Benefits	BM	BM hp
High-pressure boosting	•	-
Various material versions	•	•
Low noise level	•	•
Simple installation	•	•
Modular design	•	•
Compact design	•	•
Leakage free	•	•
In-line	•	•
High flow	•	•
High inlet pressure	-	•
Easy maintenance and alignment	•	•

• Available.

## Motor

### Motor protection

Protect the motor on the pump with output filters. Output filters protect the motor against overvoltage and increased operating temperature. You can also use these filters to reduce acoustic noise from the motor. See the section on output filters for detailed information.

### Related information

[Output filters](#)

### Asynchronous motor for BM and BM hp

The BM and BM hp booster systems are supplied with an asynchronous submersible squirrel-cage motor of the canned type with water-lubricated bearings.



MMS motors, cast iron version

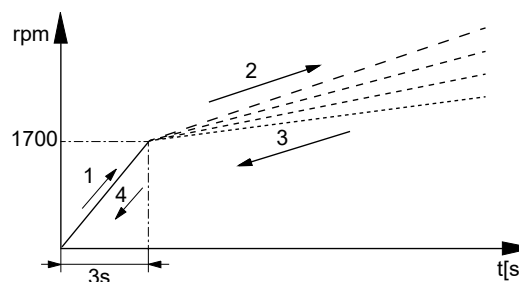
### Further information

- Enclosure class: IP68 (MS 4000, MS 6000, MMS 8000)
- Voltage: 3 × 380-415 V -10 % / +6 % or 3 × 440-480 V -10 % / +6 %.
- Power P2: 0.75 - 92 kW (1-123 hp)
- Maximum liquid temperature: 40 °C (104 °F)
- Sound pressure level: BM, BM hp 4", 6": < 70 dB(A); BM, BM hp 8": < 80 dB(A)
- Insulation class: MMS wet-wound with PE/PA winding wires
- Special versions: Voltages up to 1000 V are available on request for MMS 8000 (only applicable for BM pumps).

### Required ramp times

In the case of frequency converter operation, it must be programmed for the below guidelines.

The ramp-up and ramp-down times ensure safe operation during startup, normal operation and shutdown.



TM061079

#### Ramp-up

- Ramp-up: from 0 to 1700 rpm, maximum 3 seconds
- ramp-up: from 1700 rpm to maximum speed, to be configured by the customer
- ramp-down: from maximum speed to 1700 rpm, to be configured by the customer
- ramp-down: from 1700 to 0 rpm, maximum 3 seconds.

### Frequency converter

We recommend Grundfos CUE frequency converters.

### Related information

[CUE frequency converter](#)

### Frequency converter operation

The motor can be connected to a frequency converter. Generally, the motor must be protected against overload by adjusting the current limiter of the frequency converter to the same value as the rated current or the maximum actual current of the submersible motor. To monitor the motor temperature, Grundfos recommends installing a Pt100 or Pt1000 sensor together with a PR 5714 relay. Note that for motors that are supplied with a built-in Tempcon temperature transmitter, the fuse in the Tempcon will melt if the motor is operated by a frequency converter and the fuse cannot be replaced.

The rated frequency must not be exceeded.

Permissible frequency ranges are the following:

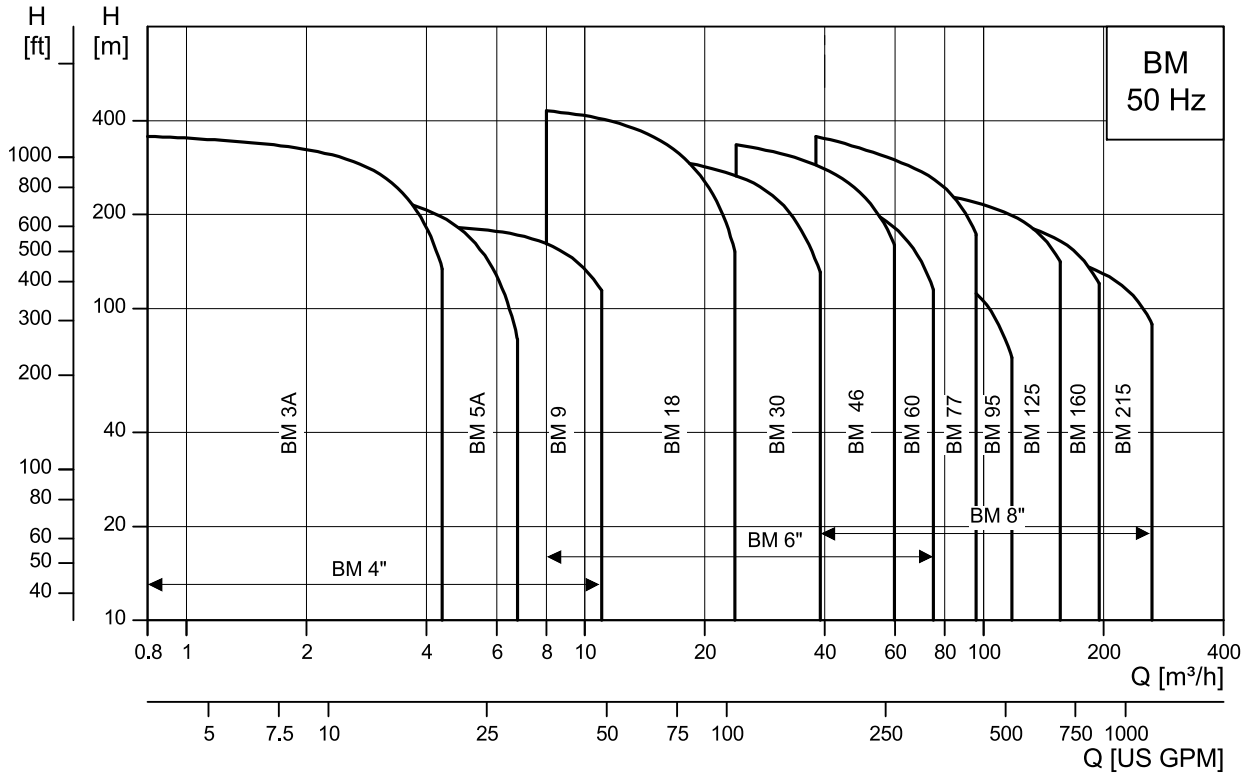
- 30-50 Hz
- 30-60 Hz.

GR-1016371



## 4. Performance ranges

### BM, 50 Hz

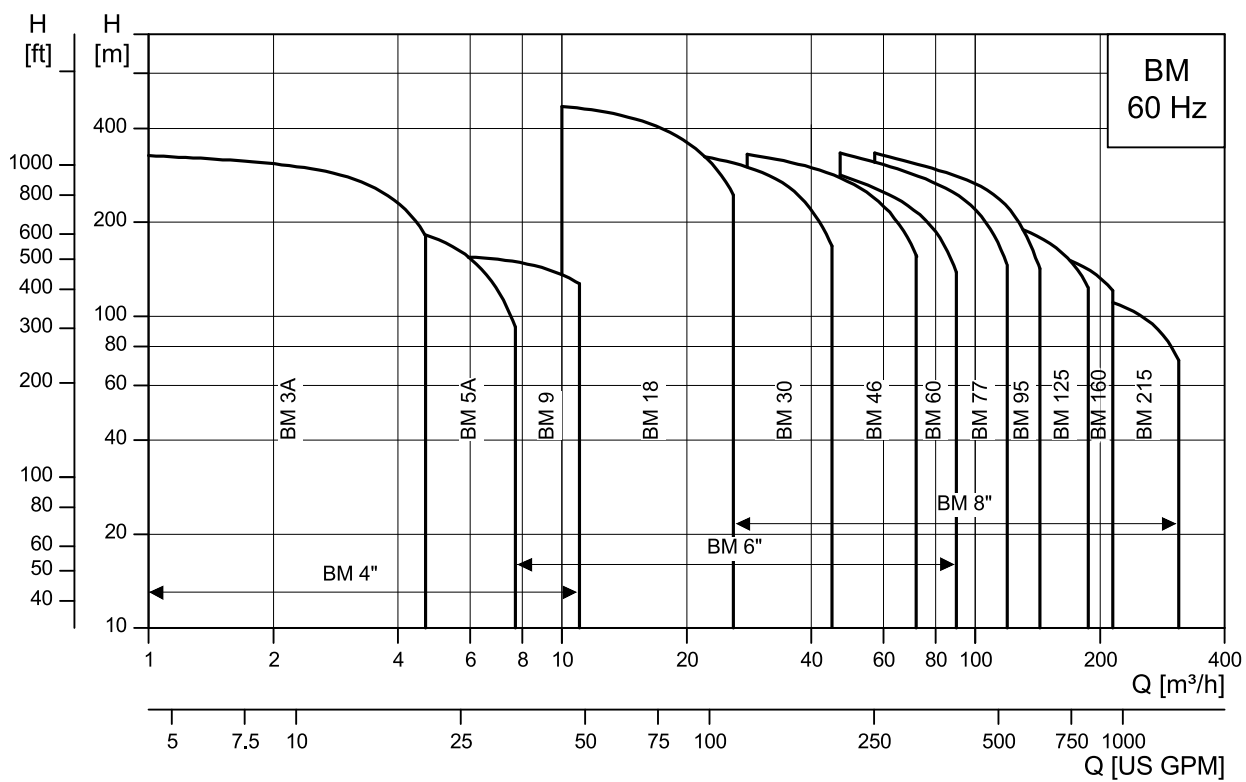


TM011230

Performance range, BM 50 Hz

Note that Grundfos offers customized variants of BM and BM hp pumps for a variety of applications. Contact Grundfos for further information.

**BM, 60 Hz**

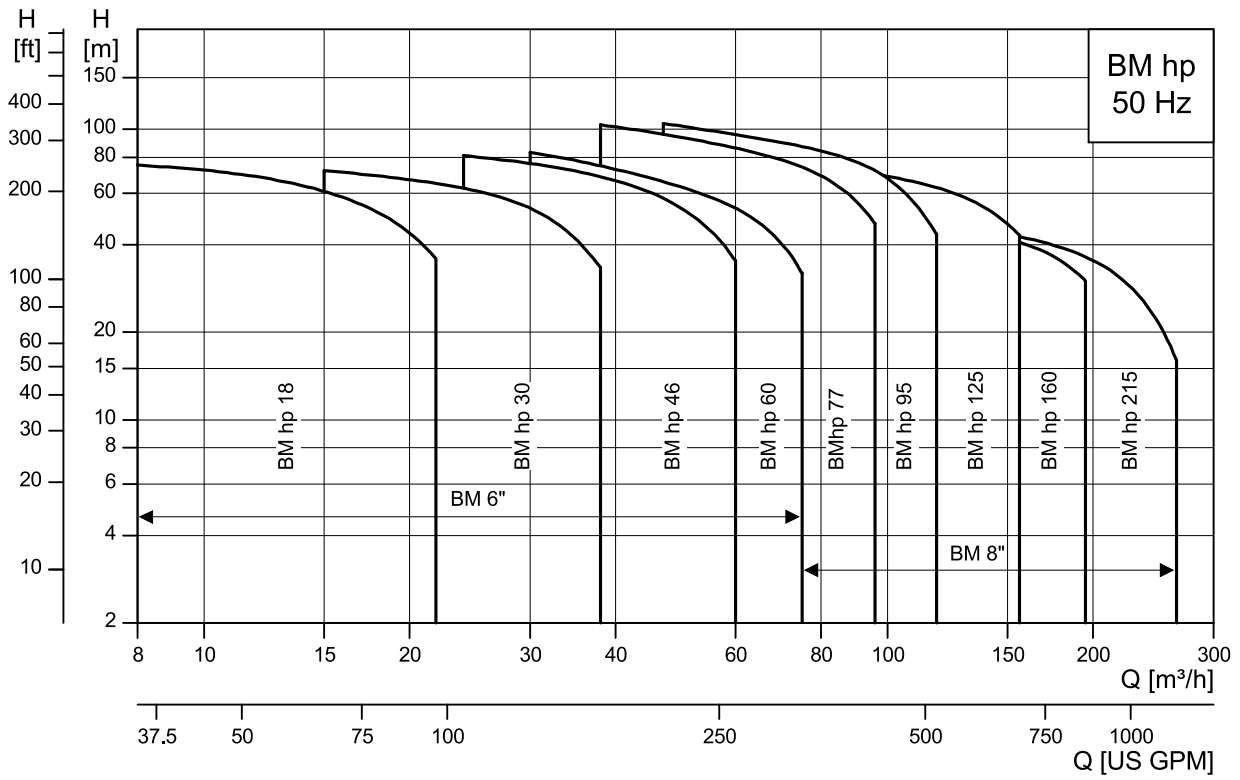


TM011232

Performance range, BM 60 Hz

Note that Grundfos offers customized variants of BM and BM hp pumps for a variety of applications. Contact Grundfos for further information.

### BM hp, 50 Hz

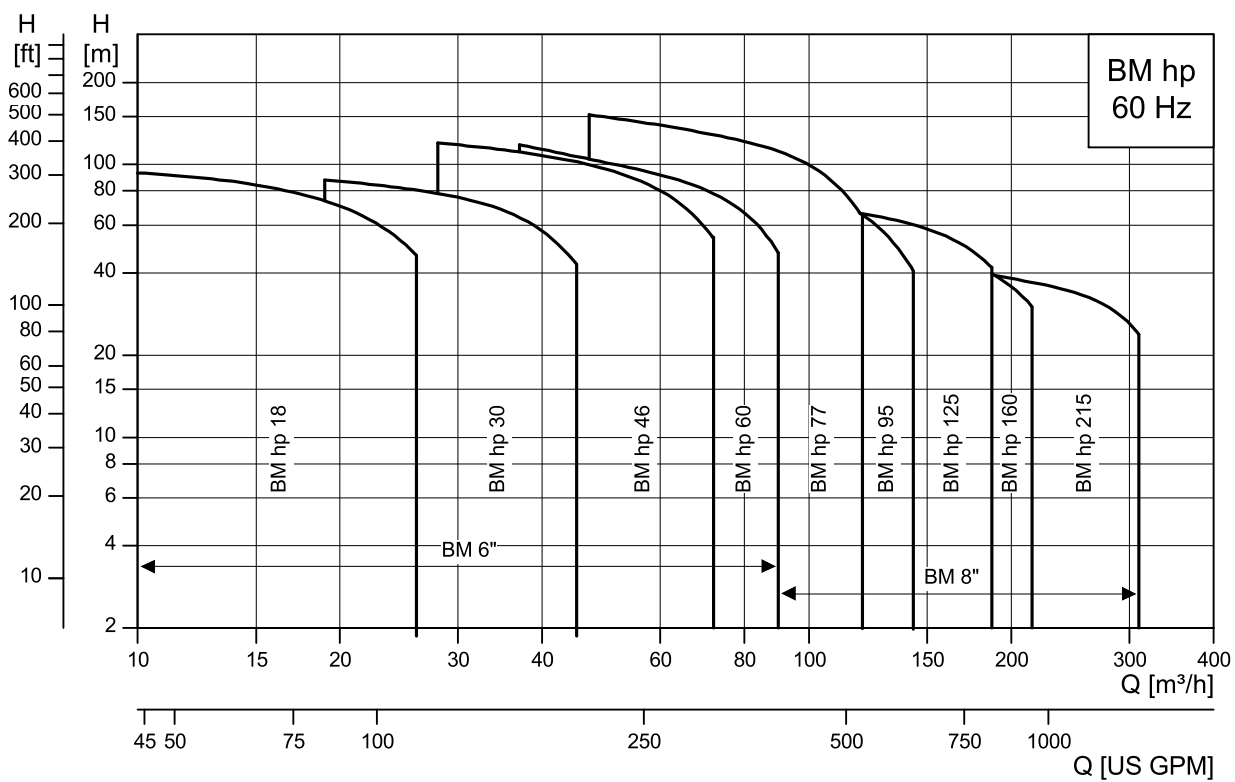


TM047973

#### Performance range, BM hp 50 Hz

Note that Grundfos offers customized variants of BM and BM hp pumps for a variety of applications. Contact Grundfos for further information.

**BM hp, 60 Hz**



TM047974

Performance range, BM hp 60 Hz

Note that Grundfos offers customized variants of BM and BM hp pumps for a variety of applications. Contact Grundfos for further information.

## 5. Product range

### BM, 50 Hz

Pump type	Motor type	Power range [kW (hp)]	Speed range [rpm]	Min. liquid temperature [°C (°F)]	Max. liquid temperature [°C (°F)]		Max. inlet pressure [bar (psi)]		Max. outlet pressure [bar (psi)]
					Corrosive <sup>2)</sup>	Non-corrosive	Standard and N version	R version	
<b>BM 4"</b>									
BM 3A	MS 4000	0.75 - 4 (1 - 5.5)	2840-2880	0 (32)	25 (77)	40 (104)	50 (725)	60 (870)	82.7 (1200)
BM 5A	MS 4000	1.1 - 5.5 (1.5 - 7.5)	2840-2880	0 (32)	25 (77)	40 (104)	50 (725)	60 (870)	82.7 (1200)
BM 9	MS 4000	1.1 - 5.5 (1.5 - 7.5)	2840-2880	0 (32)	25 (77)	40 (104)	50 (725)	60 (870)	82.7 (1200)
<b>BM 6"</b>									
BM 18-5 - BM 18-9	MS 4000	3 - 5.5 (4 - 7.5)	2850-2880	0 (32)	25 (77)	40 (104)	50 (725)	60 (870)	82.7 (1200)
BM 18-13 - BM 18-40	MS 6000	7.5 - 22 (10-30)	2850-2890	0 (32)	25 (77)	40 (104)	50 (725)	60 (870)	82.7 (1200)
BM 30-3 - BM 30-6	MS 4000	3 - 5.5 (4 - 7.5)	2850-2880	0 (32)	25 (77)	40 (104)	50 (725)	60 (870)	82.7 (1200)
BM 30-8 - BM 30-35	MS 6000	7.5 - 30 (10-40)	2850-2890	0 (32)	25 (77)	40 (104)	50 (725)	60 (870)	82.7 (1200)
BM 46-2 - BM 46-3	MS 4000	3 - 5.5 (4 - 7.5)	2850-2880	0 (32)	25 (77)	40 (104)	50 (725)	60 (870)	82.7 (1200)
BM 46-5 - BM 46-19	MS 6000	7.5 - 30 (10-40)	2850-2890	0 (32)	25 (77)	40 (104)	50 (725)	60 (870)	82.7 (1200)
BM 60-5 - BM 60-16	MS 6000	9.2 - 30 (12.5 - 40)	2850-2890	0 (32)	25 (77)	40 (104)	50 (725)	60 (870)	82.7 (1200)
<b>BM 8"</b>									
BM 46-20 - BM 46-24	MMS 8000	37 (50)	2870-2900	0 (32)	25 (77)	40 (104)	25 (362)	60 (870)	82.7 (1200)
BM 60-20 - BM 60-22	MMS 8000	37-45 (50-60)	2870-2920	0 (32)	25 (77)	40 (104)	25 (362)	60 (870)	82.7 (1200)
BM 77-6 - BM 77-8	MS 6000	22-30 (30-40)	2850-2920	0 (32)	25 (77)	40 (104)	25 (362)	60 (870)	82.7 (1200)
BM 77-10 - BM 77-20	MMS 8000	37-75 (50-100)	2870-2920	0 (32)	25 (77)	40 (104)	25 (362)	60 (870)	82.7 (1200)
BM 95-6 - BM 95-12	MS 6000	26 (35)	2850-2880	0 (32)	25 (77)	40 (104)	25 (362)	60 (870)	82.7 (1200)
BM 95-8 - BM 95-20	MMS 8000	37-92 (50-123)	2870-2900	0 (32)	25 (77)	40 (104)	25 (362)	60 (870)	82.7 (1200)
BM 125-3	MS 6000	30 (40)	2850-2920	0 (32)	25 (77)	40 (104)	25 (362)	60 (870)	82.7 (1200)
BM 125-4-A - BM 125-9	MMS 8000	37-92 (50-123)	2870-2900	0 (32)	25 (77)	40 (104)	25 (362)	60 (870)	82.7 (1200)
BM 160-1 - BM160-3-AA	MS 6000	13-30 (17.5 - 40)	2850-2880	0 (32)	25 (77)	40 (104)	25 (362)	60 (870)	82.7 (1200)
BM 160-3 - BM 160-8	MMS 8000	37-92 (50-123)	2870-2900	0 (32)	25 (77)	40 (104)	25 (362)	60 (870)	82.7 (1200)
BM 215-1-A - BM-2-AA	MS 6000	15-30 (20-40)	2850-2920	0 (32)	25 (77)	40 (104)	25 (362)	60 (870)	82.7 (1200)
BM 215-2 - BM 215-5	MMS 8000	45-92 (60-123)	2870-2920	0 (32)	25 (77)	40 (104)	25 (362)	60 (870)	82.7 (1200)

<sup>2)</sup> Use the R version when working with corrosive liquids. We do not recommend the standard version or the N version.

## BM, 60 Hz

Pump type	Motor type	Power range [kW (hp)]	Speed range [rpm]	Min. liquid temperature [°C (°F)]	Max. liquid temperature [°C (°F)]		Max. inlet pressure [bar (psi)]		Max. outlet pressure [bar (psi)]
					Corrosive <sup>3)</sup>	Non-corrosive	Standard and N version	R version	
<b>BM 4"</b>									
BM 3A	MS 4000	0.75 - 4 (1 - 5.5)	3420-3490	0 (32)	25 (77)	40 (104)	50 (725)	60 (870)	82.7 (1200)
BM 5A	MS 4000	0.75 - 5.5 (1 - 7.5)	3420-3490	0 (32)	25 (77)	40 (104)	50 (725)	60 (870)	82.7 (1200)
BM 9	MS 4000	1.1 - 5.5 (1.5 - 7.5)	3420-3490	0 (32)	25 (77)	40 (104)	50 (725)	60 (870)	82.7 (1200)
<b>BM 6"</b>									
BM 18-3 - BM 18-6	MS 4000	3 - 5.5 (4 - 7.5)	3440-3490	0 (32)	25 (77)	40 (104)	50 (725)	60 (870)	82.7 (1200)
BM 18-8 - BM 18-30	MS 6000	7.5 - 26 (10-35)	3440-3490	0 (32)	25 (77)	40 (104)	50 (725)	60 (870)	82.7 (1200)
BM 30-2 - BM 30-4	MS 4000	3 - 5.5 (4 - 7.5)	3440-3490	0 (32)	25 (77)	40 (104)	50 (725)	60 (870)	82.7 (1200)
BM 30-5 - BM 30-23	MS 6000	7.5 - 30 (10-40)	3440-3490	0 (32)	25 (77)	40 (104)	50 (725)	60 (870)	82.7 (1200)
BM 46-2	MS 4000	5.5 (7.5)	3440-3490	0 (32)	25 (77)	40 (104)	50 (725)	60 (870)	82.7 (1200)
BM 46-3 - BM 46-13	MS 6000	7.5 - 30 (10-40)	3440-3490	0 (32)	25 (77)	40 (104)	50 (725)	60 (870)	82.7 (1200)
BM 60-5 - BM 60-10	MS 6000	15-30 (20-40)	3440-3490	0 (32)	25 (77)	40 (104)	50 (725)	60 (870)	82.7 (1200)
<b>BM 8"</b>									
BM 30-27	MMS 8000	37 (50)	3480	0 (32)	25 (77)	40 (104)	25 (362)	60 (870)	82.7 (1200)
BM 46-16 - BM 46-19	MMS 8000	37-45 (50-60)	3480-3500	0 (32)	25 (77)	40 (104)	25 (362)	60 (870)	82.7 (1200)
BM 60-13 - BM 60-18	MMS 8000	37-55 (50-75)	3480-3500	0 (32)	25 (77)	40 (104)	25 (362)	60 (870)	82.7 (1200)
BM 77-4 - BM 77-5	MS 6000	22-30 (30-40)	3440-3480	0 (32)	25 (77)	40 (104)	25 (362)	60 (870)	82.7 (1200)
BM 77-6 - BM 77-13	MMS 8000	37-75 (50-100)	3480-3500	0 (32)	25 (77)	40 (104)	25 (362)	60 (870)	82.7 (1200)
BM 95-4	MS 6000	26 (35)	3440-3480	0 (32)	25 (77)	40 (104)	25 (362)	60 (870)	82.7 (1200)
BM 95-5 - BM 95-13	MMS 8000	37-92 (50-123)	3480	0 (32)	25 (77)	40 (104)	25 (362)	60 (870)	82.7 (1200)
BM 125-2	MS 6000	30 (40)	3440-3480	0 (32)	25 (77)	40 (104)	25 (362)	60 (870)	82.7 (1200)
BM 125-3-AA - BM 125-6-A	MMS 8000	37-92 (50-123)	3480-3500	0 (32)	25 (77)	40 (104)	25 (362)	60 (870)	82.7 (1200)
BM 160-1	MS 6000	22 (30)	3440-3500	0 (32)	25 (77)	40 (104)	25 (362)	60 (870)	82.7 (1200)
BM 160-2 - BM 160-5-A	MMS 8000	37-92 (50-123)	3480-3500	0 (32)	25 (77)	40 (104)	25 (362)	60 (870)	82.7 (1200)
BM 215-1	MS 6000	30 (40)	3440-3480	0 (32)	25 (77)	40 (104)	25 (362)	60 (870)	82.7 (1200)
BM 215-2-A - BM 215-3-A	MMS 8000	55-92 (75-123)	3480-3500	0 (32)	25 (77)	40 (104)	25 (362)	60 (870)	82.7 (1200)

<sup>3)</sup> Use the R version when working with corrosive liquids. We do not recommend the standard version or the N version.

**BM hp, 50 Hz**

Pump type	Motor type	Power range [kW (hp)]	Speed range [rpm]	Min. liquid temperature [°C (°F)]	Max. liquid temperature [°C (°F)]		Max. inlet pressure [bar (psi)] R version	Max. outlet pressure [bar (psi)]
					Corrosive <sup>4)</sup>	Non-corrosive		
<b>BM hp 6"</b>								
BM hp 18	MS 6000	5.5 (7.5)	2870-2890	0 (32)	25 (77)	40 (104)	80 (1160)	82.7 (1200)
BM hp 30	MS 6000	5.5 - 7.5 (7.5 - 10)	2850-2890	0 (32)	25 (77)	40 (104)	80 (1160)	82.7 (1200)
BM hp 46	MS 6000	7.5 - 11 (10-15)	2850-2880	0 (32)	25 (77)	40 (104)	80 (1160)	82.7 (1200)
BM hp 60	MS 6000	5.5 - 13 (7.5 - 17.5)	2850-2890	0 (32)	25 (77)	40 (104)	80 (1160)	82.7 (1200)
<b>BM hp 8"</b>								
BM hp 77	MS 6000	7.5 - 22 (10-30)	2850-2890	0 (32)	25 (77)	40 (104)	80 (1160)	82.7 (1200)
BM hp 95	MS 6000	9.2 - 26 (12.5 - 35)	2850-2890	0 (32)	25 (77)	40 (104)	80 (1160)	82.7 (1200)
BM hp 125	MS 6000	11-30 (15-40)	2850-2890	0 (32)	25 (77)	40 (104)	80 (1160)	82.7 (1200)
BM hp 160	MS 6000	13-30 (17.5 - 40)	2850-2890	0 (32)	25 (77)	40 (104)	80 (1160)	82.7 (1200)
BM hp 215	MS 6000	15-30 (20-40)	2850-2890	0 (32)	25 (77)	40 (104)	80 (1160)	82.7 (1200)

<sup>4)</sup> BM hp is only available in the R version.

**BM hp, 60 Hz**

Pump type	Motor type	Power range [kW (hp)]	Speed range [rpm]	Min. liquid temperature [°C (°F)]	Max. liquid temperature [°C (°F)]		Max. inlet pressure [bar (psi)] R version	Max. outlet pressure [bar (psi)]
					Corrosive <sup>5)</sup>	Non-corrosive		
<b>BM hp 6"</b>								
BM hp 18	MS 6000	5.5 (7.5)	3470-3490	0 (32)	25 (77)	40 (104)	80 (1160)	82.7 (1200)
BM hp 30	MS 6000	5.5 - 9.2 (7.5 - 12.5)	3450-3490	0 (32)	25 (77)	40 (104)	80 (1160)	82.7 (1200)
BM hp 46	MS 6000	5.5 - 15 (7.5 - 20)	3450-3490	0 (32)	25 (77)	40 (104)	80 (1160)	82.7 (1200)
BM hp 60	MS 6000	5.5 - 18.5 (7.5 - 25)	3450-3490	0 (32)	25 (77)	40 (104)	80 (1160)	82.7 (1200)
<b>BM hp 8"</b>								
BM hp 77	MS 6000	7.5 - 30 (10-40)	3440-3490	0 (32)	25 (77)	40 (104)	80 (1160)	82.7 (1200)
BM hp 95	MS 6000	9.2 - 26 (12.5 - 35)	3450-3480	0 (32)	25 (77)	40 (104)	80 (1160)	82.7 (1200)
BM hp 125	MS 6000	11-30 (15-40)	3440-3490	0 (32)	25 (77)	40 (104)	80 (1160)	82.7 (1200)
BM hp 160	MS 6000	15-26 (20-35)	3450-3480	0 (32)	25 (77)	40 (104)	80 (1160)	82.7 (1200)
BM hp 215	MS 6000	22-30 (30-40)	3440-3480	0 (32)	25 (77)	40 (104)	80 (1160)	82.7 (1200)

<sup>5)</sup> BM hp is only available in the R version.

## 6. Identification

### Type key

#### Example

#### BM 3 (A) 24 A R

Code	Explanation
BM	Booster module
3	Rated pump flow rate [m <sup>3</sup> /h]
(A)	Generation
24	Number of stages
A	Reduced impeller
-	
N	Material specification
NE	
R	

### Key to codes

Code	Description
Pump	
BM	Horizontal multistage pump
Type	
hp	Variant with high pressure inlet
Material for pump	
No letter	Standard version with pump, sleeve and motor in 1.4301
N	N version. See further information on material specification in the section on construction.
NE	NE version. See further information on material specification in the section on construction.
R	R version. See further information on material specification in the section on construction.

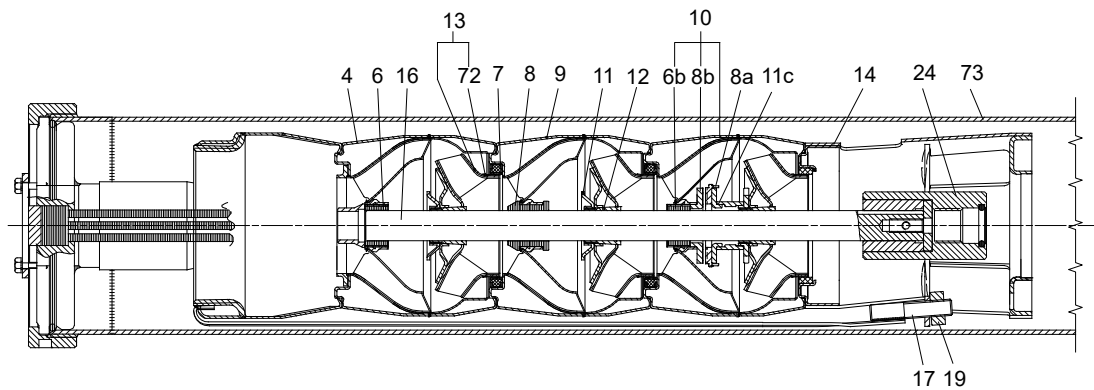
### Related information

[7. Construction](#)



# 7. Construction

## Material specifications for pump end



TM011520

### BM 46

Pos.	Component	Materials	Standard: BM		N version: BM		R version: BM and BM hp	
			DIN	AISI	DIN	AISI	DIN	AISI
3	Valve seat	Stainless steel/ NBR <sup>6)</sup>	1.4301	304	1.4401	316	1.4539	904L
4	Top chamber	Stainless steel	1.4301	304	1.4401	316	1.4539	904L
6	Top bearing	Stainless steel/ NBR <sup>7)</sup>	1.4301	304	1.4401	316	1.4539	904L
6b	Bottom bearing							
7	Neck ring	NBR/PPS <sup>8)</sup>	-	-	-	-	-	-
8	Intermediate bearing	NBR <sup>9)</sup>	-	-	-	-	-	-
8a	Spacing washer for stop ring	Carbon/graphite, PTFE	-	-	-	-	-	904L
8b	Stop ring	Stainless steel	1.4301	304	1.4401	316	1.4539	904L
9	Chamber	Stainless steel	1.4301	304	1.4401	316	1.4539	904L
10	Bottom chamber with stop ring	Stainless steel	1.4301	304	1.4401	316	1.4539	904L
11	Nut for split cone	Stainless steel	1.4301	304	1.4401	316	1.4539	904L
11c	Nut for stop ring	Stainless steel	1.4301	304	1.4401	316	1.4539	904L
12	Split cone	Stainless steel	1.4301	304	1.4401	316	1.4539	904L
13	Impeller	Stainless steel	1.4301	304	1.4401	316	1.4539	904L
14	Inlet interconnector	Stainless steel	1.4301	304	1.4401	316	1.4539	904L
15	Strainer	Stainless steel	1.4301	304	1.4401	316	1.4539	904L
16	Shaft	Stainless steel	1.4057	304	1.4462	SAF 2205	1.4462	SAF 2205
17	Strap	Stainless steel	1.4301	304	1.4401	316	1.4539	904L
19	Nut for strap	Stainless steel	1.4301	304	1.4401	316	1.4539	904L
24	Coupling	Stainless steel	1.4401	316	1.4460	329	1.4462	SAF 2205
72	Wear ring	Stainless steel	1.4301	304	1.4401	316	1.4539	904L
73	Sleeve	Stainless steel	1.4301	304	1.4401	316	1.4462	SAF 2205

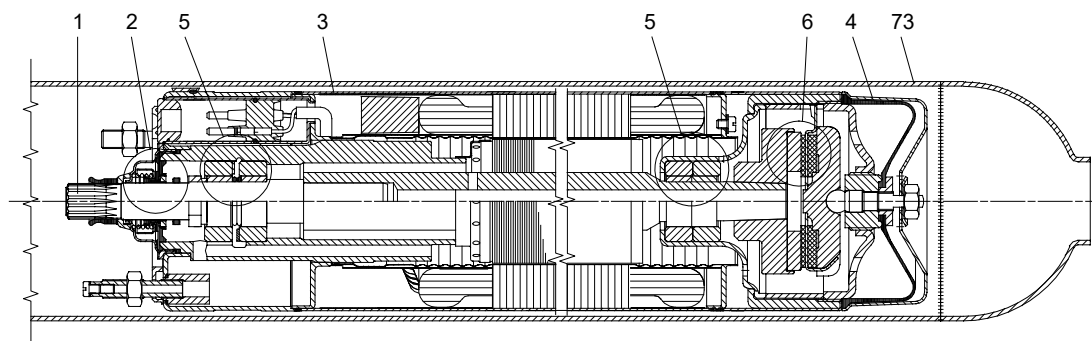
6) BM 4": FKM/TPU, BM 6", 8": NBR/FKM

7) BM 6": LSR/FKM

8) BM 4": TPU/FKM, BM 6", 8": NBR/FKM

9) BM 4", 6": LSR/FKM, BM 8": NBR/FKM

## Material specifications for motor



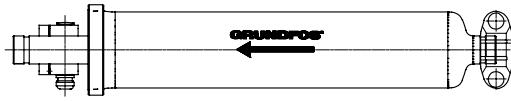
TM011522

## MS 4000

Pos.	Component	Materials	1.4301		N version		R version	
			DIN	AISI	DIN	AISI	DIN	AISI
<b>MS 4000 / MS 6000</b>								
1	Shaft	Stainless steel	1.4057	304	1.4462	SAF 2205	1.4462	SAF 2205
2	Shaft seal	Tungsten carbide/ceramic	-	-	-	-	-	-
3	Motor sleeve	Stainless steel	1.4301	304	1.4539	904L	1.4539	904L
4	Motor end shield	Stainless steel	1.4301	304	1.4539	904L	1.4539	904L
5	Radial bearing	Ceramic/tungsten carbide	-	-	-	-	-	-
6	Thrust bearing	Ceramic/carbon	-	-	-	-	-	-
	Rubber parts	NBR/Buna N	-	-	-	-	-	-
<b>MMS 8000</b>								
1	Shaft	Stainless steel	1.4460	329	1.4460	329	1.4462	SAF 2205
2	Shaft seal	Tungsten carbide/ceramic	-	-	-	-	-	-
3	Motor sleeve	Stainless steel	1.4401	316	1.4401	316	1.4539	904L
4	Motor end shield	BM: Cast iron BM-N(E): Stainless steel	EN-JL1040	-	1.4401	316	1.4539	904L
5	Radial bearing	Ceramic/tungsten carbide	-	-	-	-	-	-
6	Thrust bearing	Ceramic/carbon	-	-	-	-	-	-
	Rubber parts	NBR/Buna N	-	-	-	-	-	-

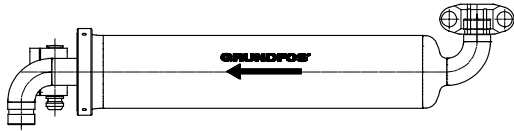
### BM types and versions

The arrow on the pump indicates the direction of the flow.



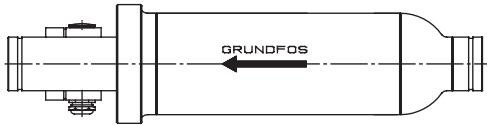
TM003793

BM 4" with straight pipe



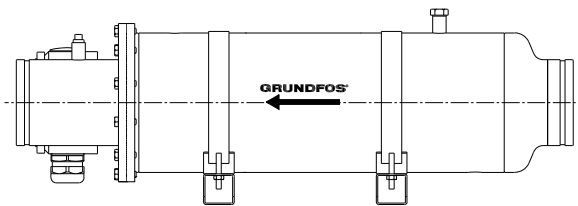
TM003794

BM 4" with elbow



TM004019

BM 6"

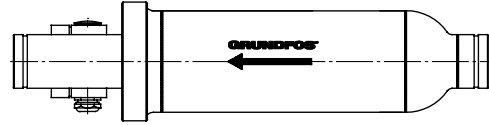


TM011420

BM 8"

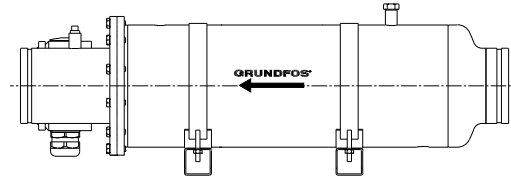
### BM hp types and versions

The arrow on the pump indicates the direction of the flow.



TM004019

BM hp 6"

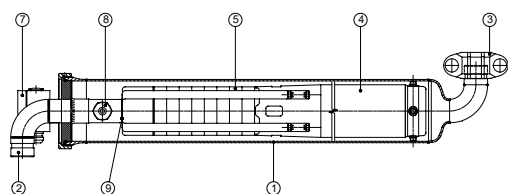


TM011420

BM hp 8"

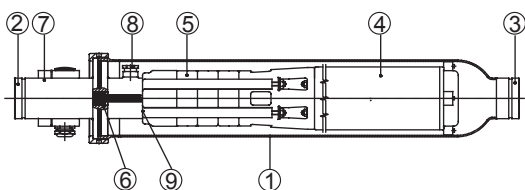
## BM sectional drawings

BM 4"



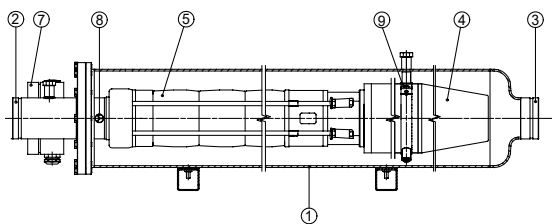
TM003795

BM 6"



TM003796

BM 8"



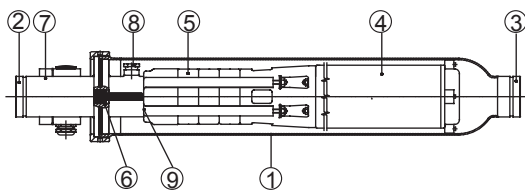
TM011419

1. Sleeve
2. Outlet connection
3. Inlet connection
4. Submersible motor
5. Submersible pump
6. Cable inlet
7. Terminal box
8. Inlet bypass valve
9. Locking system for BM 8".

BM 4" and BM 6" have a left-hand thread for locking.

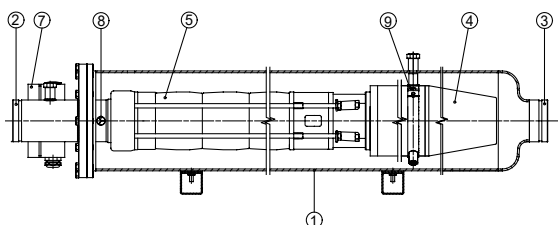
## BM hp sectional drawings

BM hp 6"



TM003796

BM hp 8"



TM011419

1. Sleeve
2. Outlet connection
3. Inlet connection
4. Submersible motor
5. Submersible pump
6. Cable inlet
7. Terminal box
8. Inlet bypass valve
9. Locking system for BMhp 8".

BMhp 6" has a left-hand thread for locking.

## 8. Operating conditions

	BM 4"	BM 6"	BM 8"	BM hp 6"	BM hp 8"
Sound pressure level	< 60 dB(A)	< 70 dB(A)	< 80 dB(A)	< 70 dB(A)	< 80 dB(A)
Flow rate	50 Hz: Max. 265 m <sup>3</sup> /h (1166 US gpm) 60 Hz: Max. 310 m <sup>3</sup> /h (1364 US gpm)				
Rated speed	50 Hz: 2870 min <sup>-1</sup> 60 Hz: 3450 min <sup>-1</sup>				

### Liquid temperature

The maximum permissible liquid temperature is 25 °C (77 °F) for corrosive liquids and 40 °C (104 °F) for non-corrosive liquids. If you have an application for higher temperatures, contact Grundfos.

### Operating limits

We recommend that you always keep the capacity of the booster systems within the recommended flow rate and pressure range of each individual pump. Note that if there is a risk of exceeding the maximum inlet or outlet pressure, we recommend that you install a safety valve.

Pump type	Material quality	Max. outlet pressure [bar (psi)]	Inlet pressure [bar (psi)]		Victaulic style	Pressure limit with Victaulic [bar (psi)]
			Min.	Max.		
BM 4"	Standard	82.7 (1200)	0.5 (7.25)	50 (725)	77DX	82.7 (1200)
	N version	82.7 (1200)	0.5 (7.25)	50 (725)	77DX	82.7 (1200)
	R version	82.7 (1200)	0.5 (7.25)	60 (870)	77DX	82.7 (1200)
BM 6"	Standard	82.7 (1200)	0.5 (7.25)	50 (725)	77DX	82.7 (1200)
	N version	82.7 (1200)	0.5 (7.25)	50 (725)	77DX	82.7 (1200)
	R version	82.7 (1200)	0.5 (7.25)	60 (870)	77DX	82.7 (1200)
BM 8"	Standard	82.7 (1200)	1 (14.5)	50 (725)	77DX	82.7 (1200)
	N version	82.7 (1200)	1 (14.5)	50 (725)	77DX	82.7 (1200)
	R version	82.7 (1200)	1 (14.5)	60 (870)	77DX	82.7 (1200)
BM hp 6"	R version	82.7 (1200)	0.5 (7.25)	80 (1160)	77DX	82.7 (1200)
BM hp 8"	R version	82.7 (1200)	1 (14.5)	80 (1160)	3", 4", 6": 77DX 5": 489	82.7 (1200)

The capacity of the modules should always be kept within the recommended flow rate and pressure range of each individual pump.

Type	Recommended flow rate at 25 °C (77 °F)			
	[m <sup>3</sup> /h]		US [gpm]	
	50 Hz	60 Hz	50 Hz	60 Hz
BM 3A	0.8 - 4.4	1.0 - 4.7	3.5 - 20	4.4 - 21
BM 5A	2.5 - 6.8	3.0 - 7.7	11-30	13-34
BM 9	4.0 - 11	4.8 - 11	17-48	21-48
BM, BM hp 17	8-22	10-26	35-176	44-115
BM, BM hp 30	15-38	19-45	66-167	84-198
BM, BM hp 46	24-60	28-72	106-264	123-317
BM, BM hp 60	30-75	37-90	132-330	163-396
BM, BM hp 77	38-96	47-120	167-422	207-528
BM, BM hp 95	47-118	57-143	207-520	251-629
BM, BM hp 125	62-156	75-187	273-686	330-823
BM, BM hp 160	78-195	90-215	343-858	396-946
BM, BM hp 215	98-265	115-310	431-1166	506-1364

Type	Recommended pressure					
	Inlet pressure			Outlet pressure		
	Min.	Max. <sup>10)</sup>		Max. <sup>10)</sup>		
	[bar]	[psi]	[bar]	[psi]	[bar]	[psi]
BM 4"	0.5	7.25	60	870	82.7	1200
BM 6"	0.5	7.25	50	725	82.7	1200
BM 8"	1	14.5	25	362	82.7	1200
BM hp 6"	0.5	7.25	80	725	82.7	1200
BM hp 8"	1	14.5	80	362	82.7	1200

<sup>10)</sup> If the maximum inlet/outlet pressure is exceeded, a safety valve must be installed.

Motor	Maximum permissible liquid temperature		
	Max. liquid temperature <sup>11)</sup>	Min. flow velocity past the motor	Min. flow rate
	[°C (°F)]	[m/s]	[m <sup>3</sup> /h (US gpm)]
Grundfos 4"	40 (104)	0.15	0.8 (3.5)
Grundfos 6"	40 (104)	0.15	5.5 (24.2)
Grundfos 8"	40 (104)	0.15	18.5 (81.4)

<sup>11)</sup> Use the R version for corrosive liquids. The maximum liquid temperature for corrosive liquids is 25 °C.

### Operational checks

Depending on the number of operating hours of the pumps, the following must be checked at suitable intervals:

- flow
- starting frequency
- control and protective devices
- liquid temperature
- minimum flow through modules during operation.

## 9. Selection of pumps

### Sizing in Grundfos Product Center

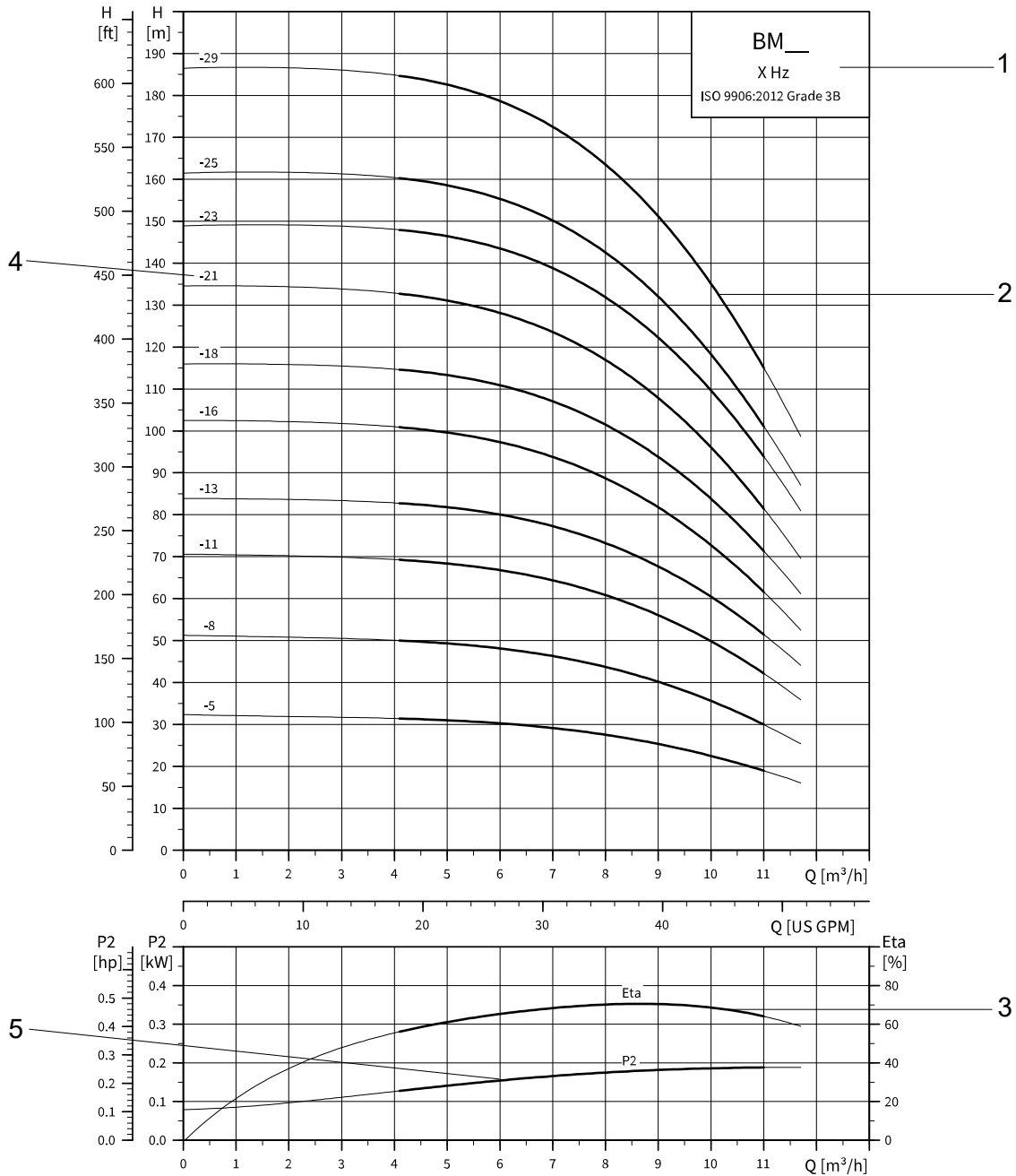
We recommend that you size your BM system in Grundfos Product Center which is a selection program offered by Grundfos. For further information, see the section on Grundfos Product Center.

#### Related information

[14. Grundfos Product Center](#)

# 10. Performance curves and technical data

## How to read the curve charts



TM085828

Pos.	Description
1	Pump type, motor type and ISO standard.
2	QH curve for the individual pump.
3	The eta curve shows the efficiency of the pump. The eta curve is an average curve of all the pump types shown in the chart.
4	Number of stages.
5	The power curves indicate the pump input power per stage.

## Curve conditions

The guidelines below apply to the performance curves:

- The curves apply to actual speeds at 50 Hz or 60 Hz. The bold curves indicate the permissible duty range. The thin curves are only intended as a guide.
- All curves are based on average values according to ISO 9906:2012 3B. If a minimum performance is required, individual measurements must be carried out.
- The curves apply to a kinematic viscosity of 1 mm<sup>2</sup>/s (1 cSt). The power curve P2/hp shows the pump power input per stage. The efficiency curve  $\eta$  shows

the pump efficiency, such as the pump without motor. The performance tests have been made at a water temperature of 20 °C. The test liquid is airless water.

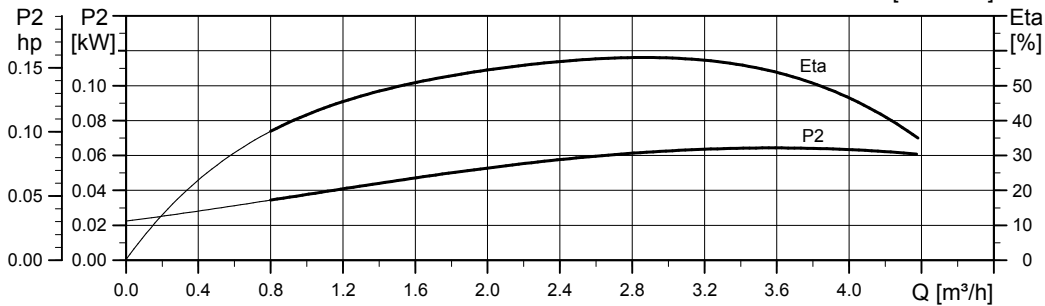
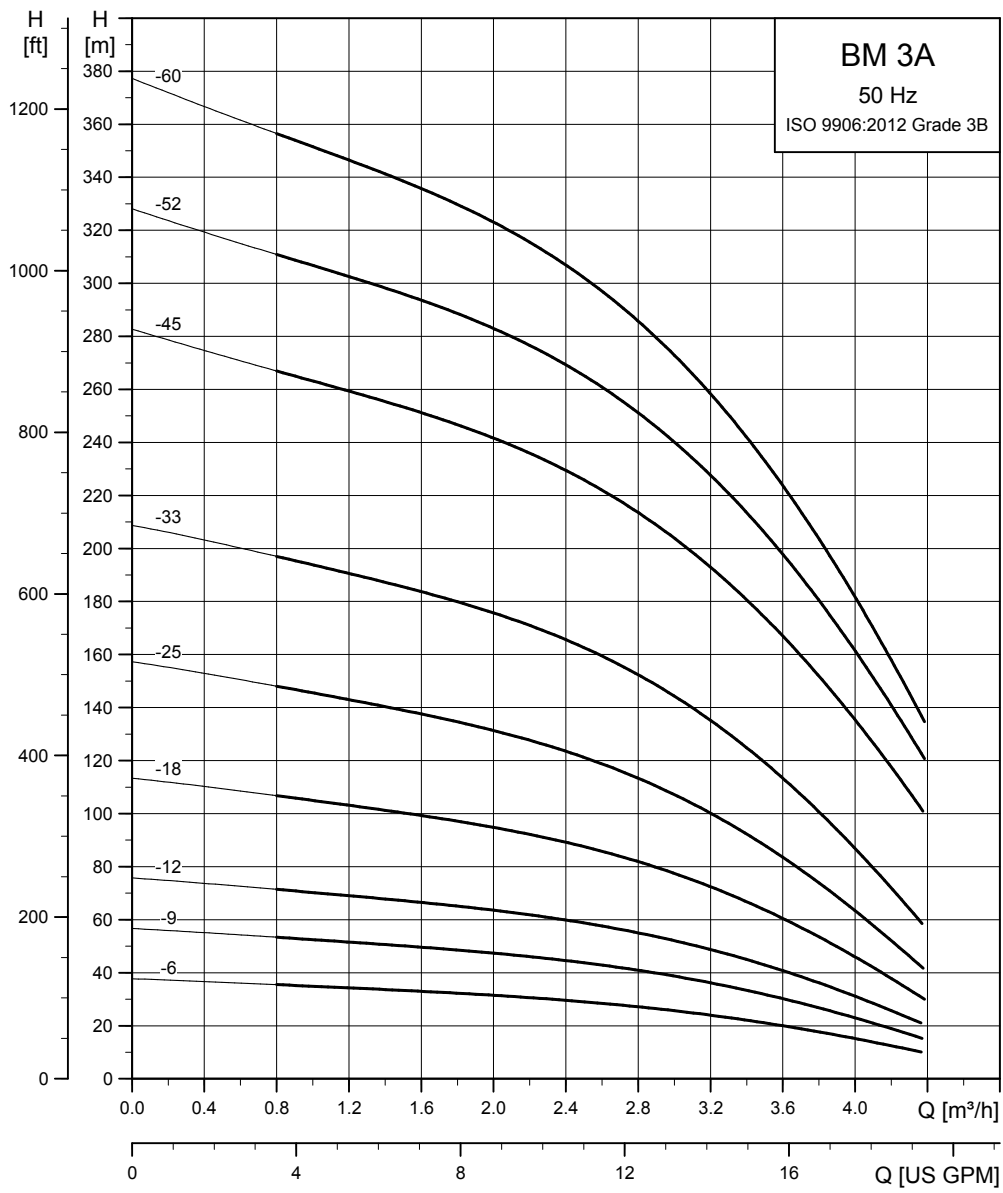
- The conversion between head H (m) and pressure p (kPa) has been made for water with a density of  $\rho = 1000 \text{ kg/m}^3$ . If the density differs from this value, the created pressure will be proportional to the density.

Note that BM and BM hp curves are shown without the slip compensation originating from the AC motor.



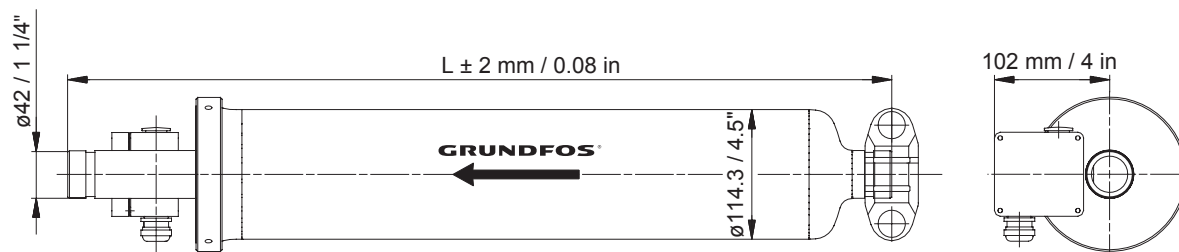
**BM, 50 Hz**

**BM 3A**



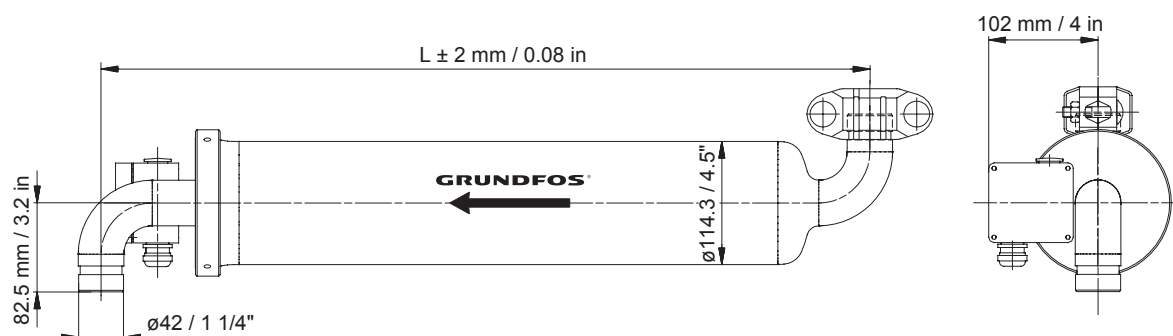
TM011212

## Dimensional sketches



TM003797

BM 4" with straight pipe



TM003798

BM 4" with elbow

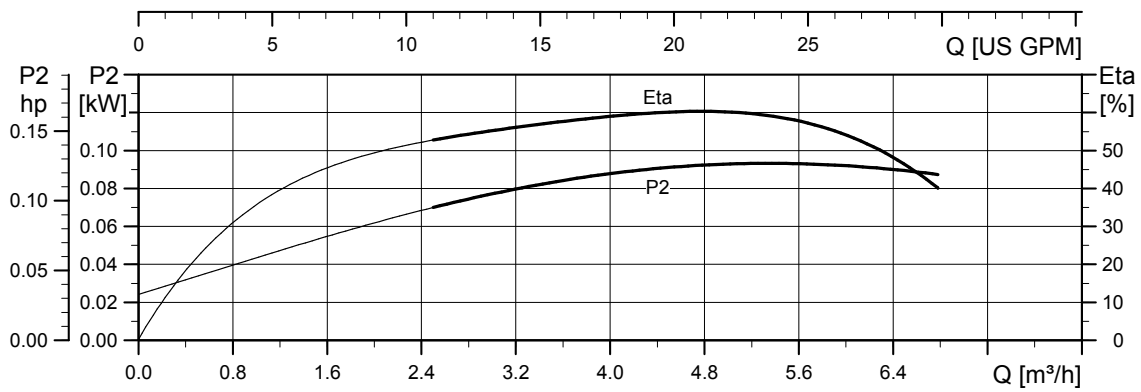
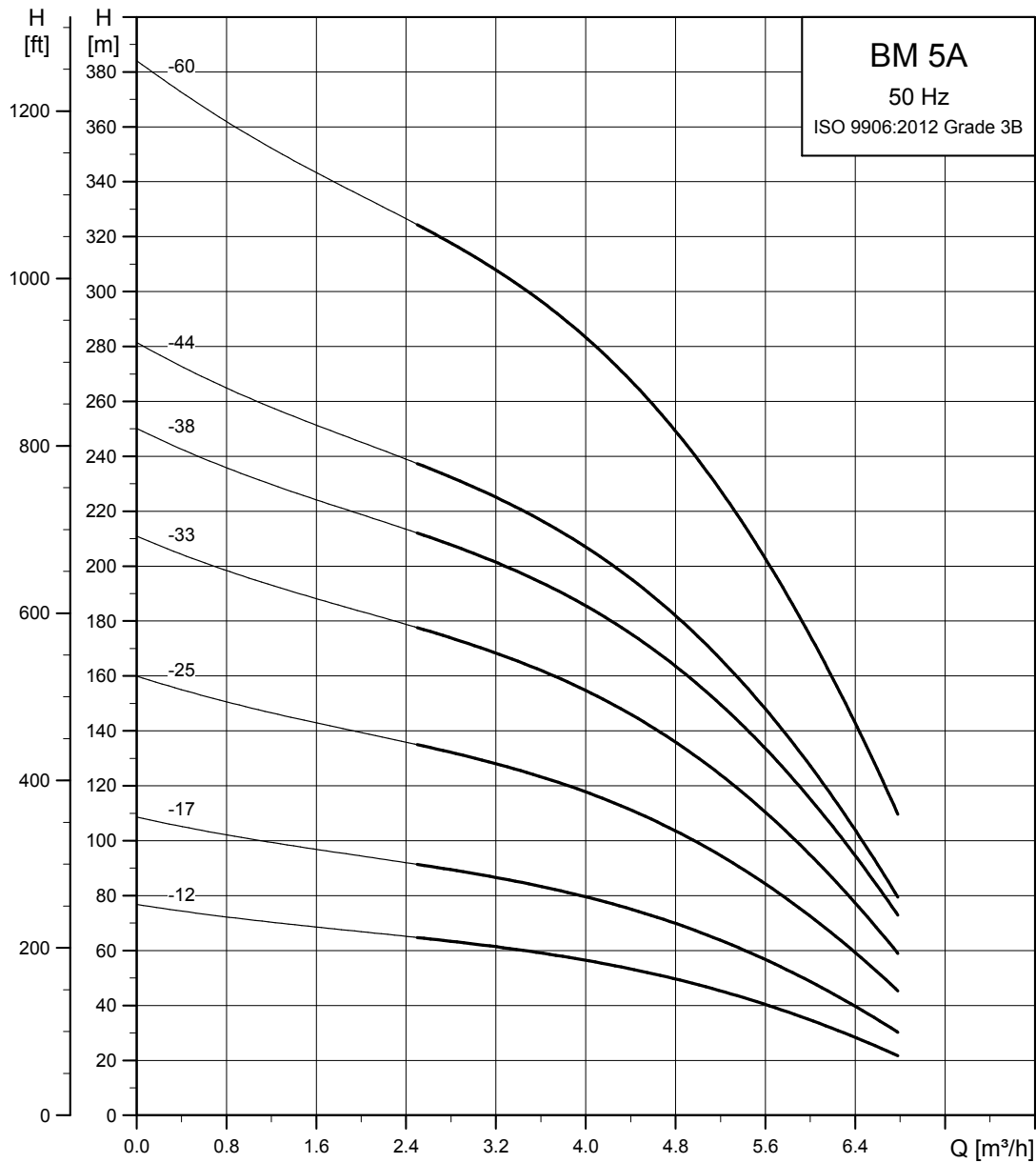
One set of connecting fittings is required for each system.

## Dimensions and weights

Pump type	Motor type	P2 [kW (hp)]	Standard voltage [V]	Rated current I <sub>N</sub> [A]	L [mm (inch)]		Weight [kg (lbs)]		Ship. vol. [m <sup>3</sup> ]	
					Straight pipe	Elbow	Net	Gross	Straight pipe	Elbow
BM 3A-6	MS 4000	0.75 (1)	3 × 380	1.92 - 1.84	1222 (48)	1144 (45)	31 (68)	37 (82)	0.123	0.115
BM 3A-9	MS 4000	0.75 (1)	3 × 380	1.92 - 1.84	1222 (48)	1144 (45)	32 (71)	38 (84)	0.123	0.115
BM 3A-12	MS 4000	0.75 (1)	3 × 380	1.92 - 1.84	1222 (48)	1144 (45)	33 (73)	39 (86)	0.123	0.115
BM 3A-18	MS 4000	1.1 (1.5)	3 × 380	2.80 - 2.75	1369 (54)	1291 (51)	37 (82)	43 (95)	0.136	0.129
BM 3A-25	MS 4000	1.5 (2)	3 × 380	3.95 - 4.10	1640 (65)	1562 (62)	41 (90)	47 (104)	0.161	0.154
BM 3A-33	MS 4000	2.2 (3)	3 × 380	5.85 - 6.45	1758 (69)	1680 (66)	46 (101)	52 (104)	0.171	0.164
BM 3A-45	MS 4000	3 (4)	3 × 380	7.7 - 8.10	1986 (78)	1908 (75)	53 (117)	59 (130)	0.192	0.185
BM 3A-52	MS 4000	4 (5.5)	3 × 380	9.75 - 9.80	2346 (92)	2268 (89)	62 (137)	69 (152)	0.225	0.218
BM 3A-60	MS 4000	4 (5.5)	3 × 380	9.75 - 9.80	2490 (98)	2412 (95)	65 (143)	72 (159)	0.238	0.231

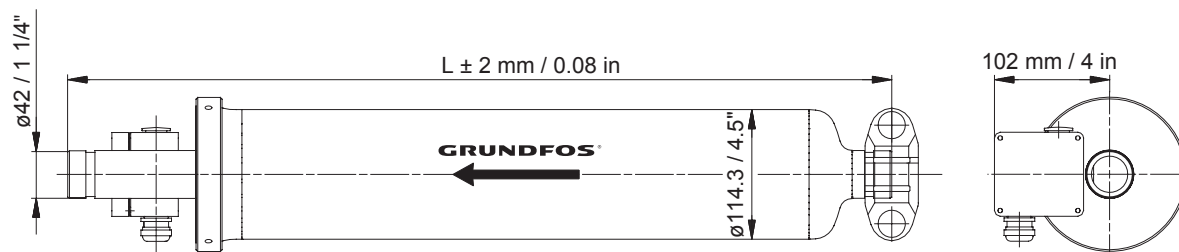
On request, the BM is available in other voltages and with all stages indicated in the standard SP pump range and in R version.

**BM 5A**



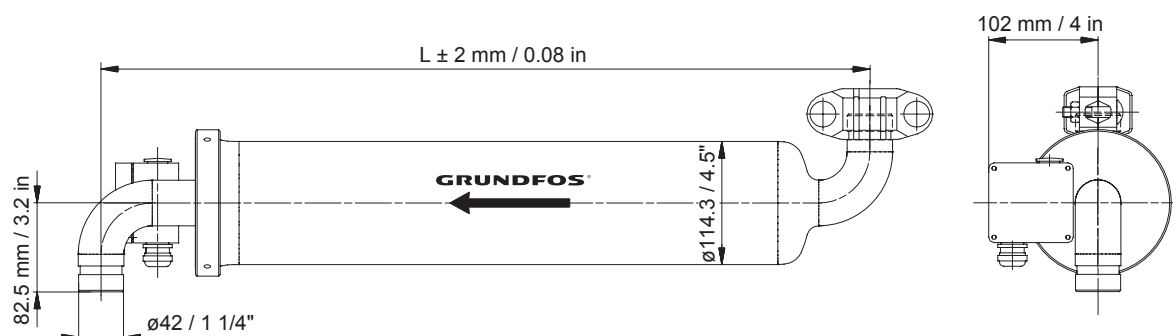
TM011213

## Dimensional sketches



TM003797

BM 4" with straight pipe



TM003798

BM 4" with elbow

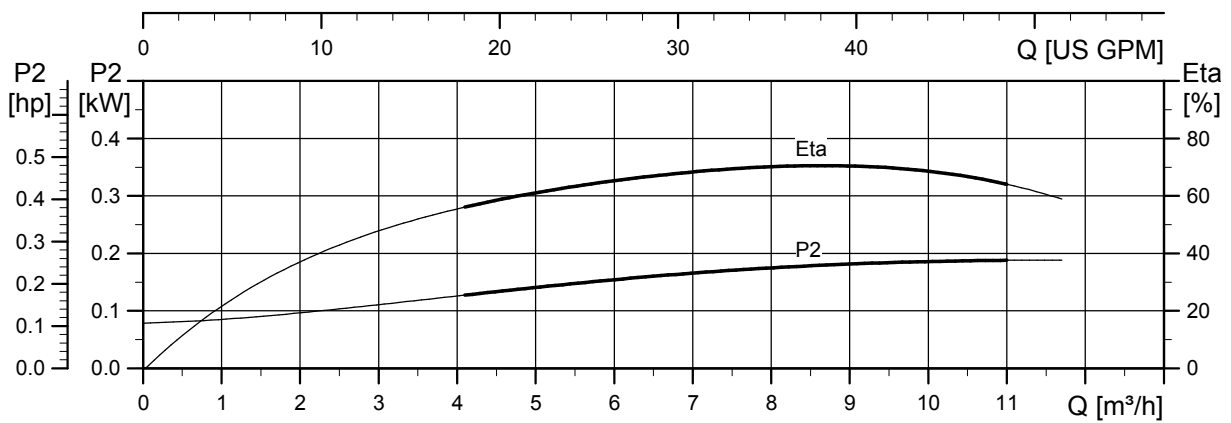
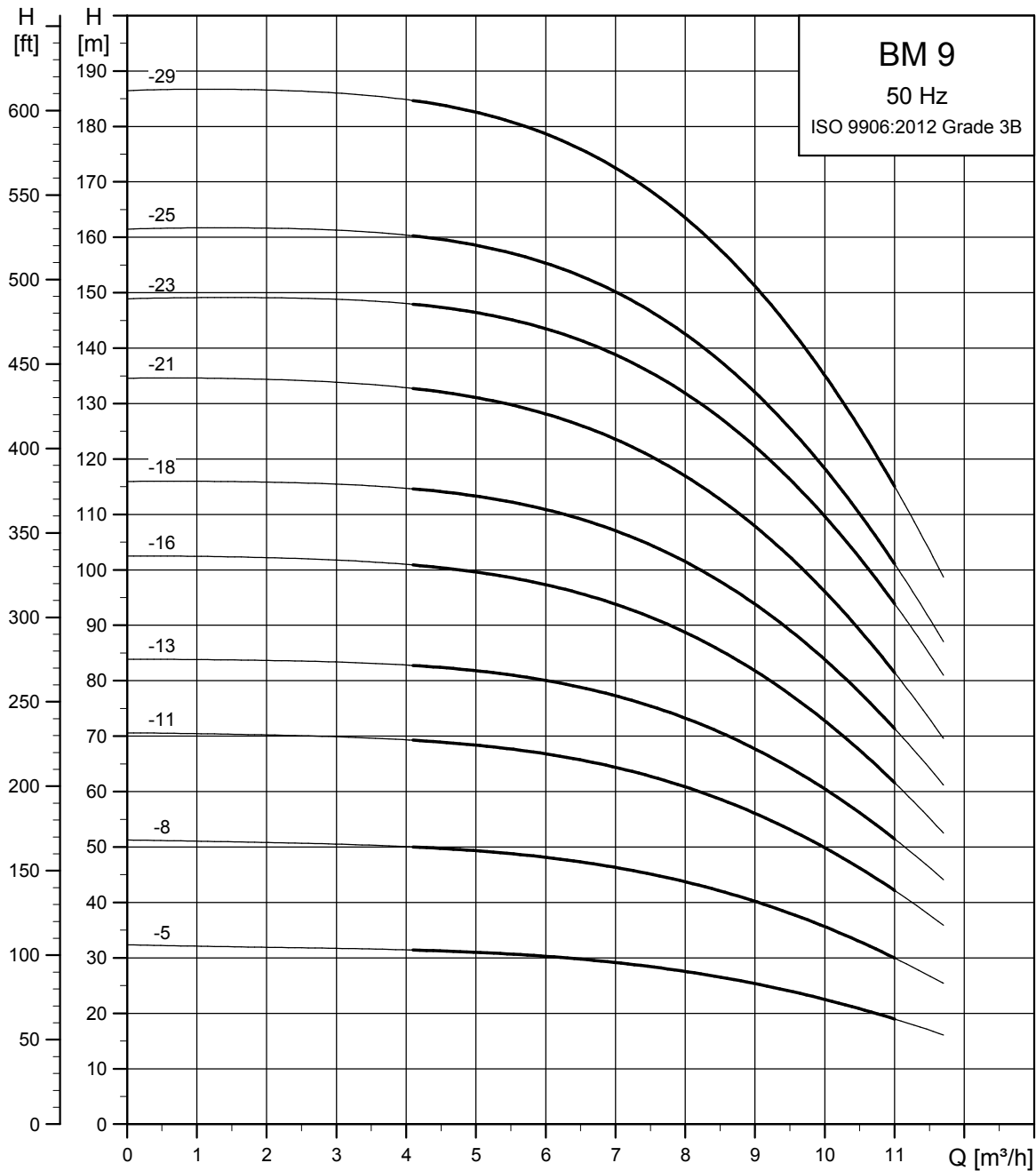
One set of connecting fittings is required for each system.

## Dimensions and weights

Pump type	Motor type	P2 [kW (hp)]	Standard voltage [V]	Rated current I <sub>N</sub> [A]	L [mm (inch)]		Weight [kg (lbs)]		Ship. vol. [m <sup>3</sup> ]	
					Straight pipe	Elbow	Net	Gross	Straight pipe	Elbow
BM 5A-12	MS 4000	1.1 (1.5)	3 × 380	2.80 - 2.75	1222 (48)	1144 (45)	34 (75)	40 (88)	0.123	0.115
BM 5A-17	MS 4000	1.5 (2)	3 × 380	3.95 - 4.10	1369 (54)	1291 (51)	36 (79)	42 (93)	0.136	0.129
BM 5A-25	MS 4000	2.2 (3)	3 × 380	5.85 - 6.45	1640 (65)	1562 (62)	43 (95)	49 (108)	0.161	0.154
BM 5A-33	MS 4000	3 (4)	3 × 380	7.7 - 8.10	1986 (78)	1908 (75)	49 (108)	55 (121)	0.192	0.185
BM 5A-38	MS 4000	4 (5.5)	3 × 380	9.75 - 9.80	1986 (78)	1908 (75)	54 (119)	60 (132)	0.192	0.185
BM 5A-44	MS 4000	4 (5.5)	3 × 380	9.75 - 9.80	2112 (83)	2034 (80)	57 (126)	64 (141)	0.204	0.196
BM 5A-60	MS 4000	5.5 (7.5)	3 × 380	13 - 13.4	2490 (98)	2412 (95)	70 (154)	77 (170)	0.238	0.231

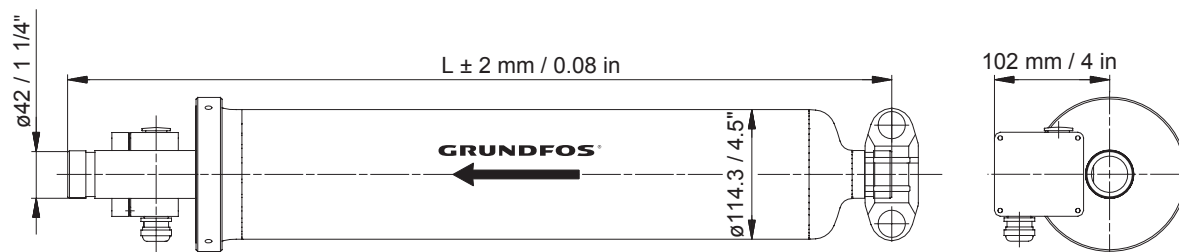
On request, the BM is available in other voltages and with all stages indicated in the standard SP pump range and in R version.

**BM 9**



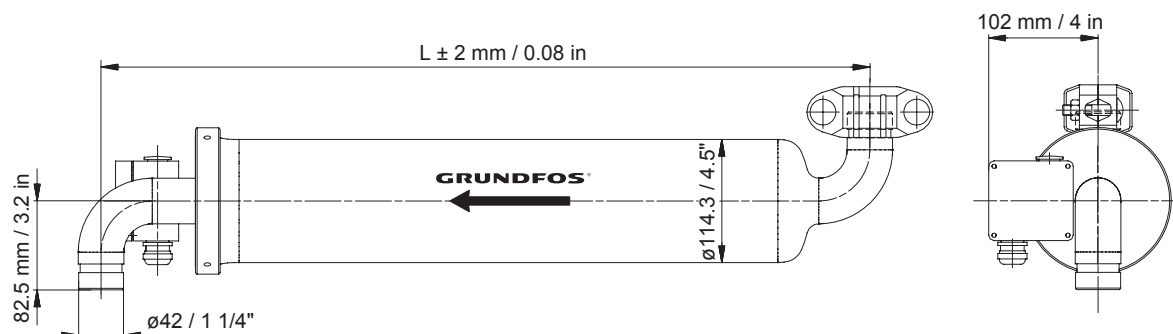
TM063363

## Dimensional sketches



TM003797

BM 4" with straight pipe



TM003798

BM 4" with elbow

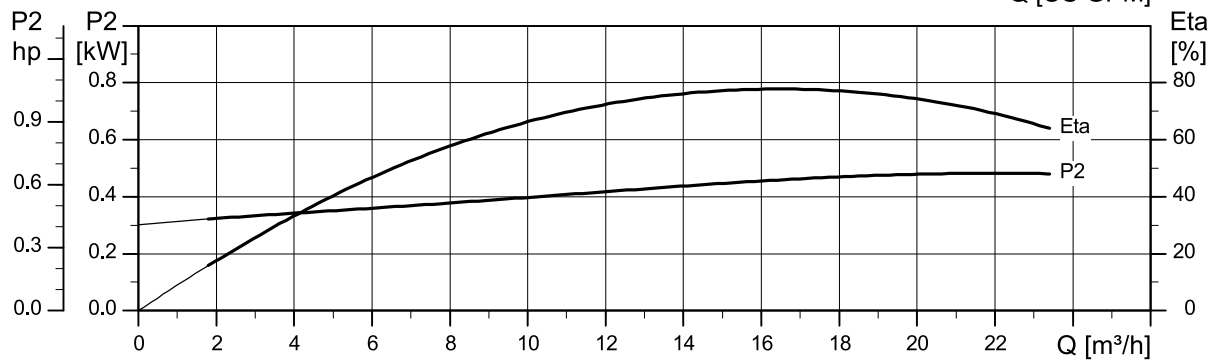
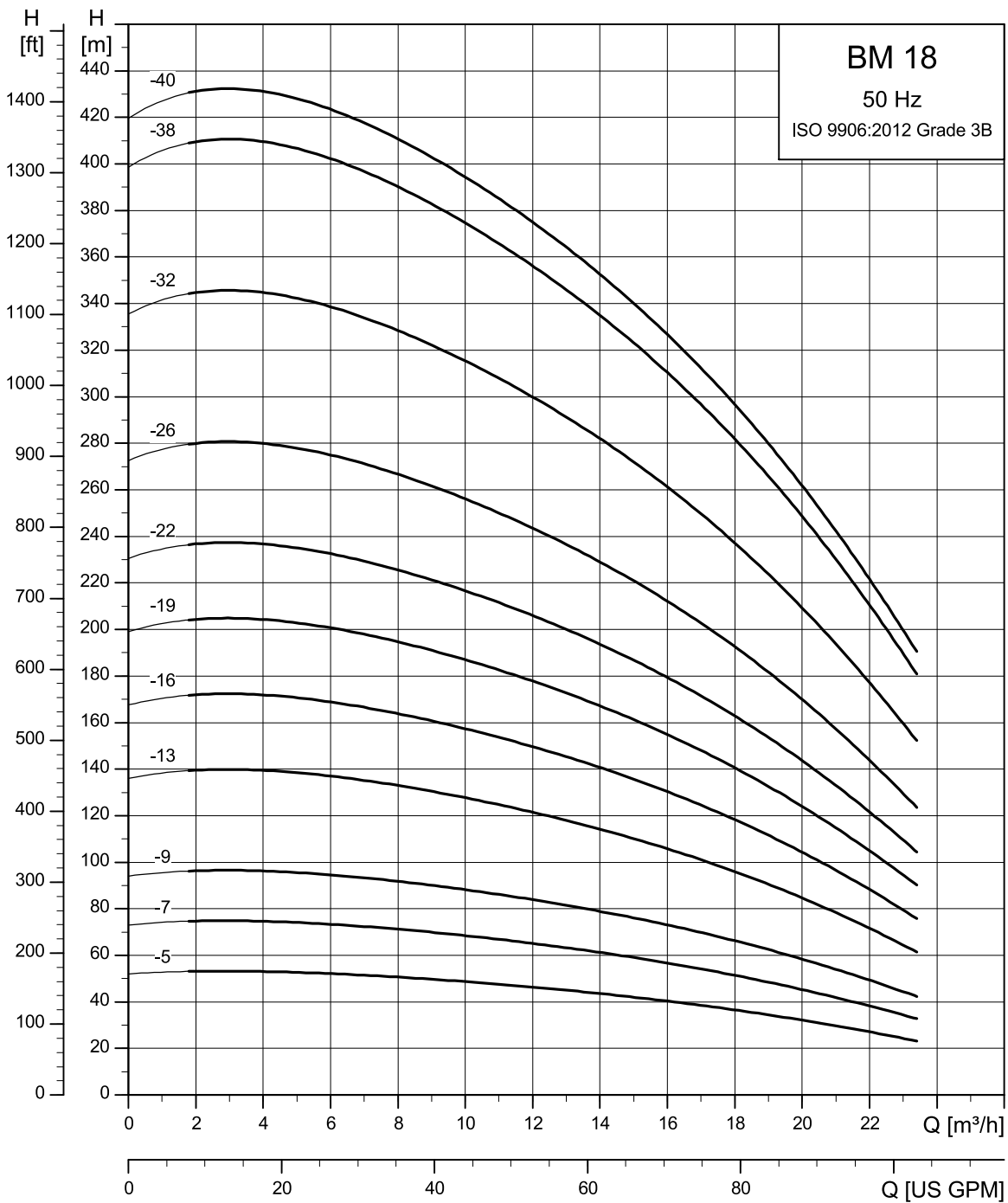
One set of connecting fittings is required for each system.

## Dimensions and weights

Pump type	Motor type	P2 [kW (hp)]	Standard voltage [V]	Rated current I <sub>N</sub> [A]	L [mm (inch)]		Weight [kg (lbs)]		Ship. vol. [m <sup>3</sup> ]	
					Straight pipe	Elbow	Net	Gross	Straight pipe	Elbow
BM 9-5	MS 4000	1.1 (1.5)	3 × 380	3.05 - 2.10	1222 (48)	1291 (51)	34 (75)	40 (88)	0.123	0.115
BM 9-8	MS 4000	1.5 (2)	3 × 380	4.10 - 4.15	1472 (58)	1349 (53)	37 (82)	43 (95)	0.145	0.138
BM 9-11	MS 4000	2.2 (3)	3 × 380	5.65 - 6.05	1640 (65)	1562 (62)	42 (93)	48 (106)	0.161	0.154
BM 9-13	MS 4000	3 (4)	3 × 380	7.40 - 7.75	1758 (69)	1680 (66)	46 (101)	52 (115)	0.171	0.164
BM 9-16	MS 4000	3 (4)	3 × 380	7.40 - 7.75	1986 (78)	1908 (75)	50 (110)	56 (123)	0.192	0.185
BM 9-18	MS 4000	4 (5.5)	3 × 380	9.45 - 9.45	2112 (83)	2034 (80)	55 (121)	61 (134)	0.204	0.196
BM 9-21	MS 4000	4 (5.5)	3 × 380	9.45 - 9.45	2346 (92)	2268 (89)	58 (128)	64 (141)	0.225	0.218
BM 9-23	MS 4000	5.5 (7.5)	3 × 380	13 - 13.4	2490 (98)	2412 (95)	72 (159)	122 (269)	0.371	0.371
BM 9-25	MS 4000	5.5 (7.5)	3 × 380	13 - 13.4	2490 (98)	2707 (107)	73 (161)	123 (271)	0.371	0.399
BM 9-29	MS 4000	5.5 (7.5)	3 × 380	12.80 - 12.80	2737 (108)	2707 (107)	77 (170)	131 (289)	0.399	0.399

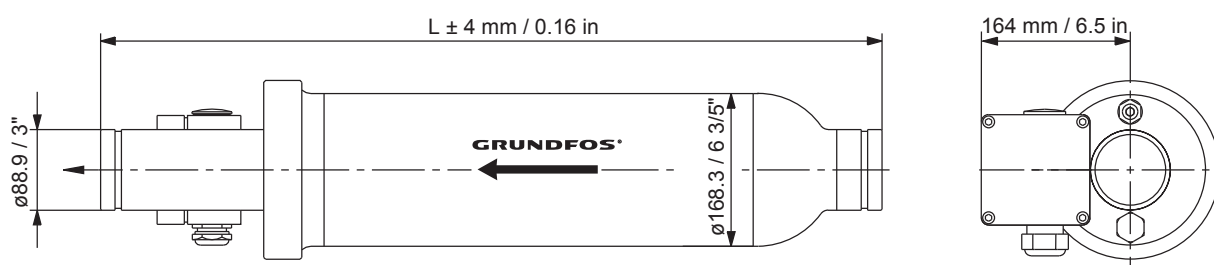
On request, the BM is available in other voltages and with all stages indicated in the standard SP pump range and in R version.

**BM 18**



TM086650

## Dimensional sketch



TM003799

## BM 6" with straight pipe

One set of connecting fittings is required for each system.

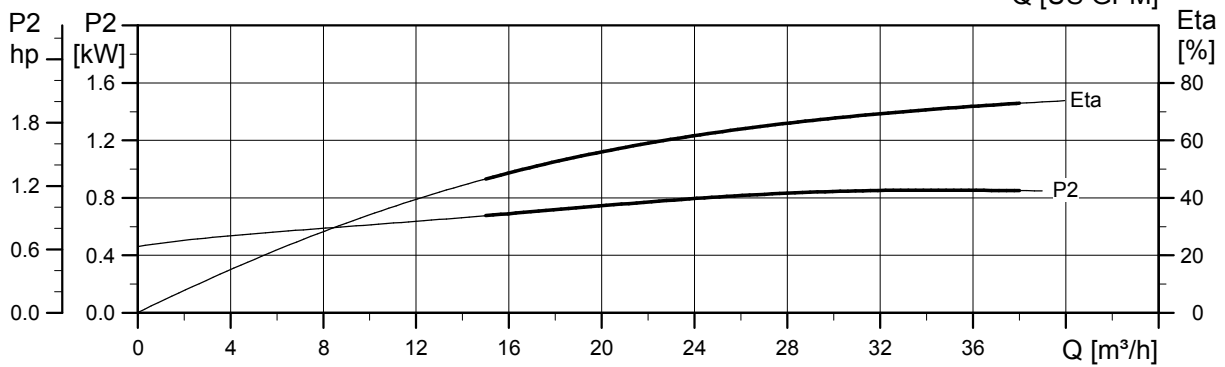
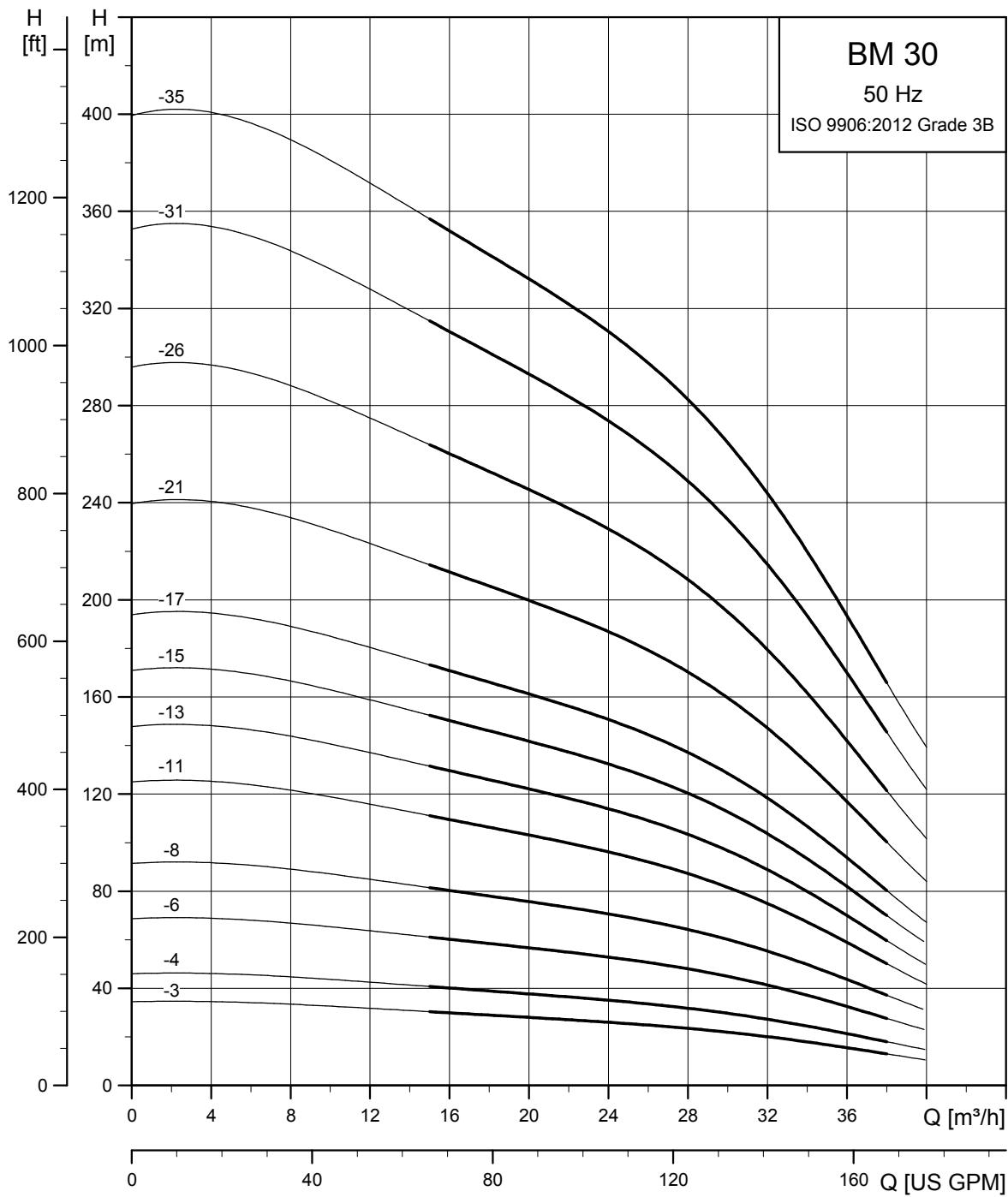
## Dimensions and weights

Pump type	Motor type	P2 [kW (hp)]	Standard voltage [V]	Rated current I <sub>N</sub> [A]	L [mm (inch)]	Weight [kg (lbs)]		Ship. vol. [m <sup>3</sup> ]
						Net	Gross	
BM 18-5	MS 4000	3 (4)	3 × 380	7.7 - 8.10	1550 (61)	49 (108)	71 (157)	0.273
BM 18-7	MS 4000	4 (5.5)	3 × 380	9.75 - 9.80	1750 (69)	59 (130)	85 (187)	0.304
BM 18-9	MS 4000	5.5 (7.5)	3 × 380	13.0 - 13.4	1950 (77)	69 (152)	99 (218)	0.335
BM 18-13	MS 6000	7.5 (10)	3 × 400	17.6 - 17.8	2200 (87)	90 (198)	128 (282)	0.340
BM 18-16	MS 6000	9.2 (12.5)	3 × 400	21.8 - 21.8	2500 (98)	104 (229)	148 (326)	0.421
BM 18-19	MS 6000	11 (15)	3 × 400	25.5 - 24.8	2700 (106)	114 (251)	162 (357)	0.452
BM 18-22	MS 6000	13 (17.5)	3 × 400	30.5 - 30.0	2850 (112)	122 (269)	173 (381)	0.476
BM 18-26	MS 6000	15 (20)	3 × 400	34.5 - 34.0	3050 (120)	134 (295)	190 (419)	0.507
BM 18-32	MS 6000	18.5 (25)	3 × 400	42 - 42.5	3800 (150)	158 (384)	223 (492)	0.624
BM 18-38	MS 6000	22 (30)	3 × 400	50 - 47.5	4250 (167)	178 (392)	251 (553)	0.694
BM 18-40	MS 6000	22 (30)	3 × 400	47.5 - 50	4250 (167)	181 (399)	255 (562)	0.694

On request, the BM is available in other voltages and with all stages indicated in the standard SP pump range.

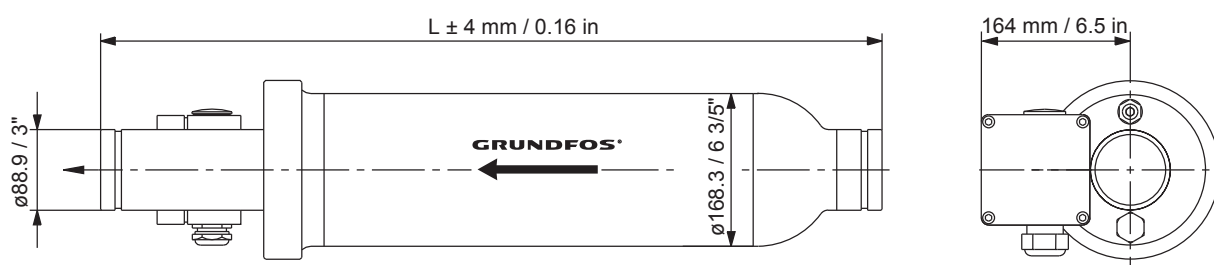


**BM 30**



TM012074

## Dimensional sketch



TM003799

## BM 6" with straight pipe

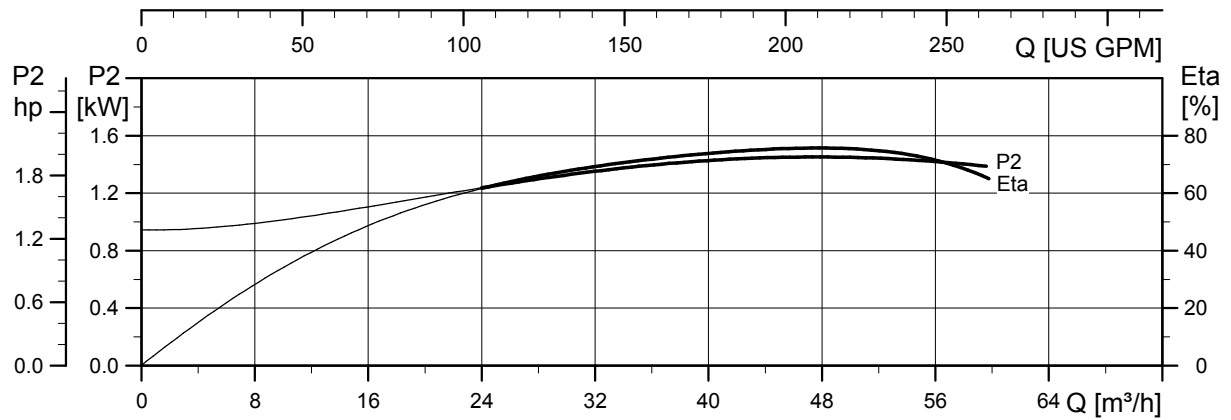
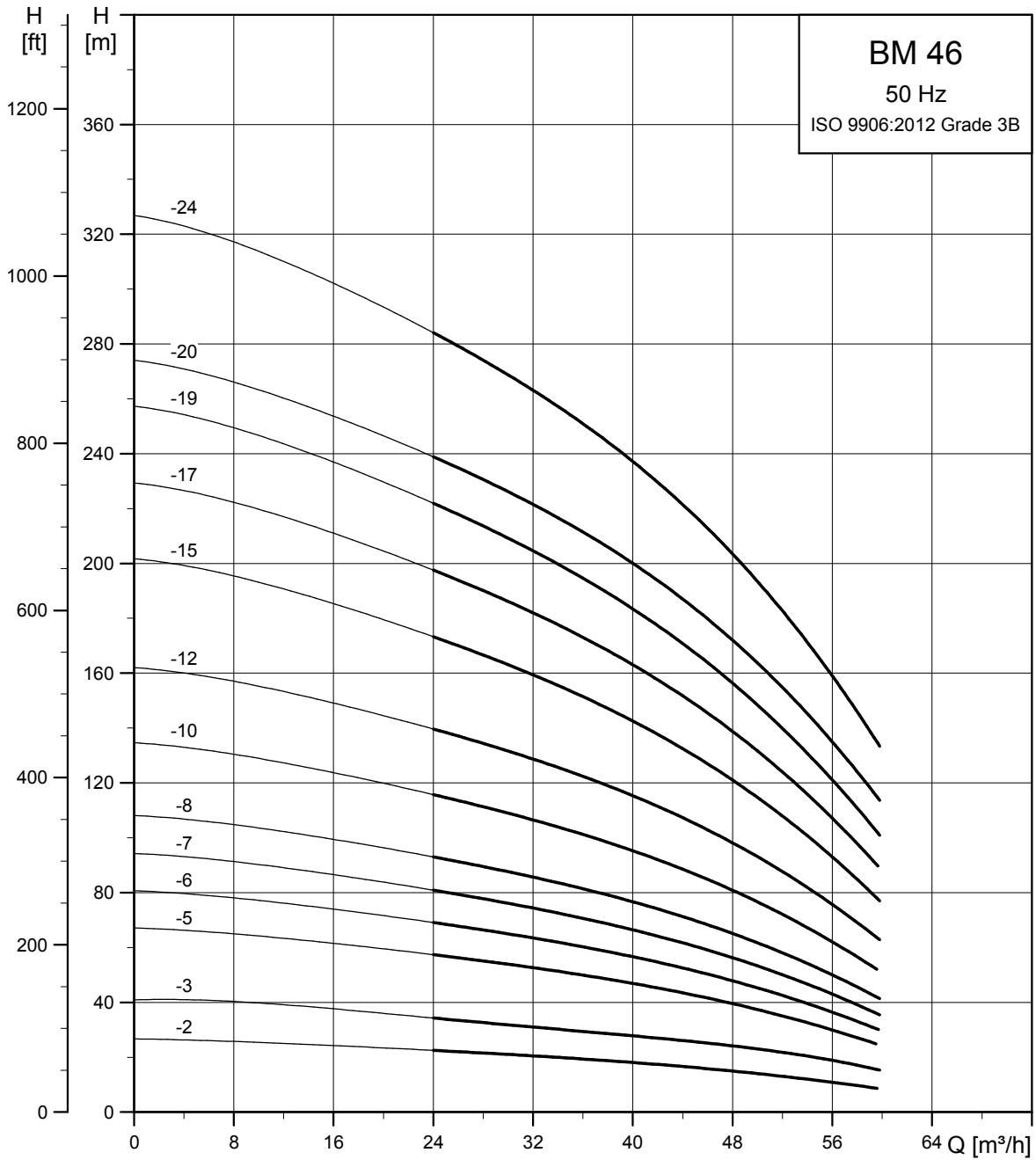
One set of connecting fittings is required for each system.

## Dimensions and weights

Pump type	Motor type	P2 [kW (hp)]	Standard voltage [V]	Rated current I <sub>N</sub> [A]	L [mm (inch)]	Weight [kg (lbs)]		Ship. vol. [m <sup>3</sup> ]
						Net	Gross	
BM 30-3	MS 4000	3 (4)	3 × 380	7.7 - 8.10	1550 (61)	48 (106)	69 (152)	0.273
BM 30-4	MS 4000	4 (5.5)	3 × 380	9.75 - 9.80	1750 (68.9)	56 (123)	80 (176)	0.304
BM 30-6	MS 4000	5.5 (7.5)	3 × 380	13 - 13.4	2100 (82.7)	67 (148)	96 (212)	0.335
BM 30-8	MS 6000	7.5 (10)	3 × 400	17.6 - 17.8	2100 (82.7)	87 (192)	124 (273)	0.356
BM 30-11	MS 6000	9.2 (12.5)	3 × 400	21.8 - 21.8	2500 (98.4)	103 (227)	146 (322)	0.421
BM 30-13	MS 6000	11 (15)	3 × 400	25.5 - 24.8	2700 (106.3)	113 (249)	160 (353)	0.452
BM 30-15	MS 6000	13 (17.5)	3 × 400	30.5 - 30	2850 (112.2)	121 (267)	171 (377)	0.476
BM 30-17	MS 6000	15 (20)	3 × 400	34.5 - 34	3200 (126)	131 (289)	185 (408)	0.530
BM 30-21	MS 6000	18.5 (25)	3 × 400	42 - 42.5	3800 (149.6)	155 (342)	219 (483)	0.624
BM 30-26	MS 6000	22 (30)	3 × 400	50 - 47.5	4250 (167.3)	176 (388)	248 (547)	0.694
BM 30-31	MS 6000	26 (35)	3 × 400	59-57	4950 (194.9)	195 (430)	275 (606)	0.713
BM 30-35	MS 6000	30 (40)	3 × 400	68.5 - 66.5	5100 (200.8)	216 (476)	304 (670)	0.735

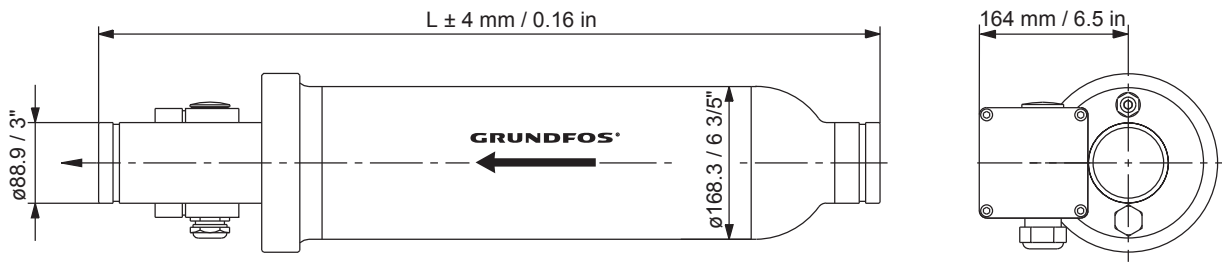
On request, the BM is available in other voltages and with all stages indicated in the standard SP pump range.

**BM 46**



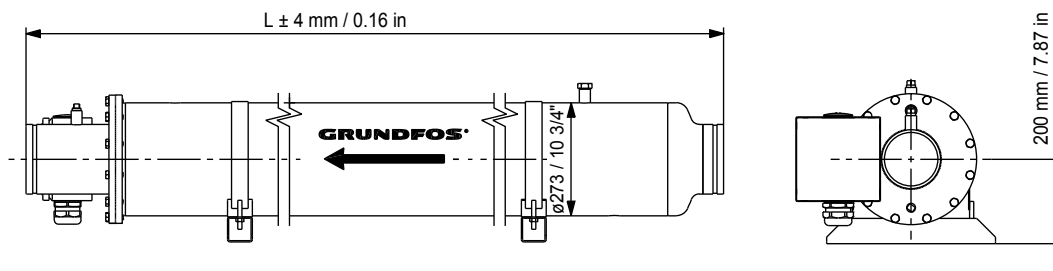
TM011217

**Dimensional sketches**



TM003799

*BM 6" with straight pipe*



TM011424

*BM 8" with straight pipe*

One set of connecting fittings is required for each system.

**Dimensions and weights**

**BM 6"**

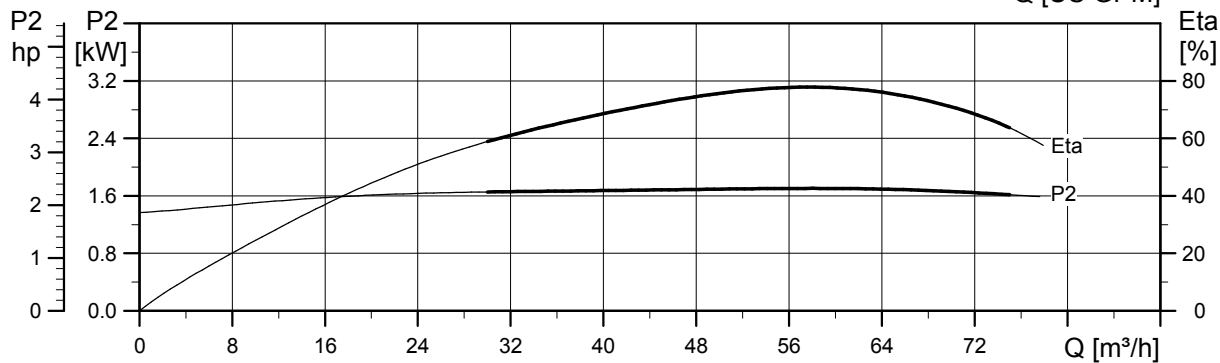
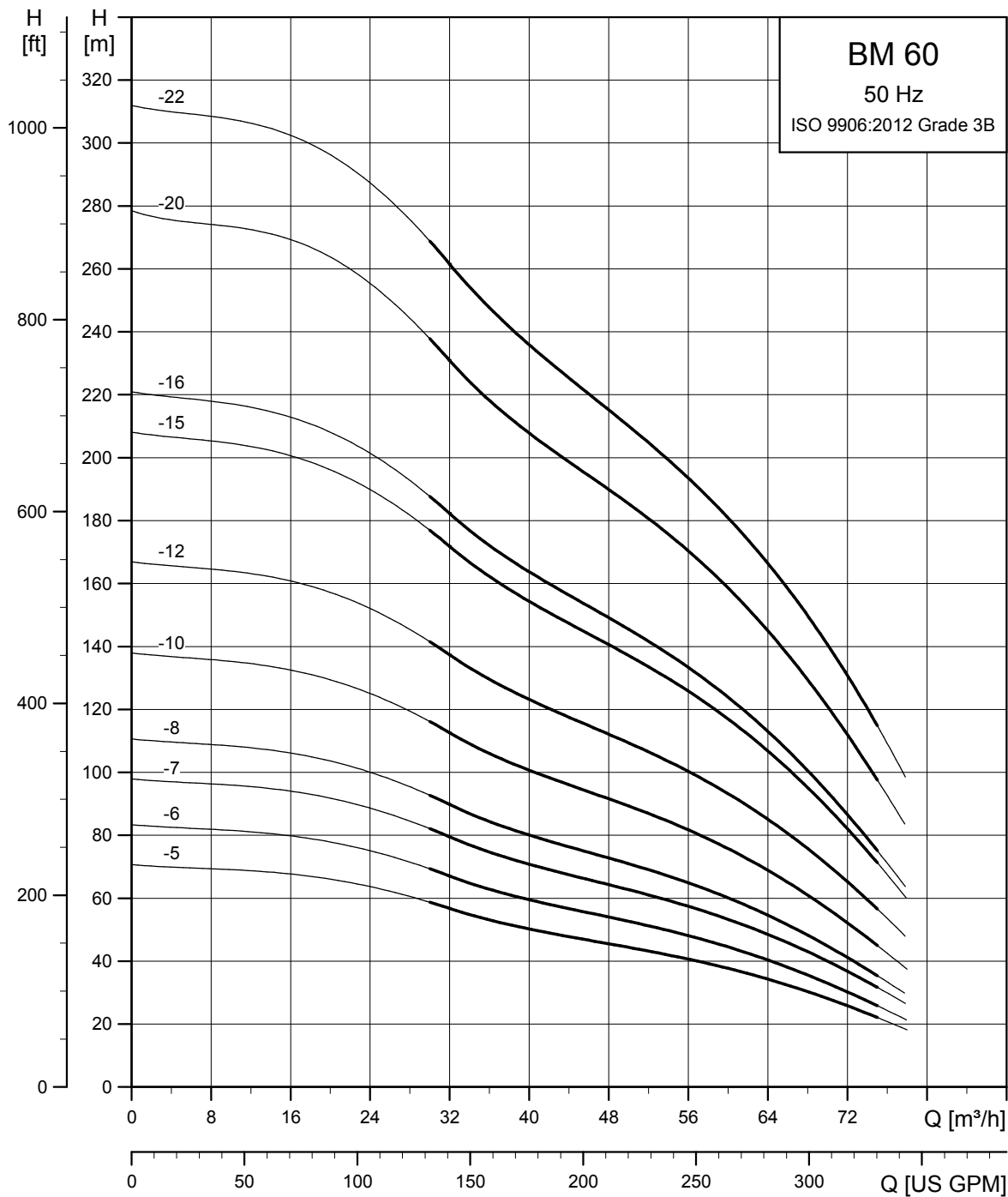
Pump type	Motor type	P2 [kW (hp)]	Standard voltage [V]	Rated current I <sub>N</sub> [A]	L [mm (inch)]	Weight [kg (lbs)]		Ship. vol. [m <sup>3</sup> ]
						Net	Gross	
BM 46-2	MS 4000	3 (4)	3 × 380	7.7 - 8.10	1550 (61)	46 (101)	66 (146)	0.273
BM 46-3	MS 4000	5.5 (7.5)	3 × 380	13 - 13.4	1750 (68.9)	63 (139)	90 (198)	0.304
BM 46-5	MS 6000	7.5 (10)	3 × 400	17.6 - 17.8	1950 (76.8)	82 (181)	117 (258)	0.335
BM 46-6	MS 6000	9.2 (12.5)	3 × 400	21.8 - 21.8	2100 (82.7)	94 (207)	134 (295)	0.356
BM 46-7	MS 6000	11 (15)	3 × 400	25.5 - 24.8	2200 (86.6)	101 (223)	143 (315)	0.374
BM 46-8	MS 6000	13 (17.5)	3 × 400	30.5 - 30	2500 (98.4)	108 (238)	153 (337)	0.421
BM 46-10	MS 6000	15 (20)	3 × 400	34.5 - 34	2700 (106.3)	123 (271)	174 (384)	0.452
BM 46-12	MS 6000	18.5 (25)	3 × 400	42 - 42.5	3050 (120.1)	136 (300)	192 (423)	0.507
BM 46-15	MS 6000	22 (30)	3 × 400	50 - 47.5	3400 (133.9)	157 (346)	222 (489)	0.562
BM 46-17	MS 6000	26 (35)	3 × 400	59-57	3800 (149.6)	174 (384)	246 (542)	0.624
BM 46-19	MS 6000	30 (40)	3 × 400	68.5 - 66.5	4250 (167.3)	187 (412)	264 (582)	0.694

**BM 8"**

Pump type	Motor type	P2 [kW (hp)]	Standard voltage [V]	Rated current I <sub>N</sub> [A]	L [mm (inch)]	Weight [kg (lbs)]		Ship. vol. [m <sup>3</sup> ]
						Net	Gross	
BM 46-20	MMS 8000	37 (50)	3 × 460	81.5 - 77.0	4150 (175.2)	320 (705)	418 (922)	1.65
BM 46-24	MMS 8000	37 (50)	3 × 460	81.5 - 77.0	4950 (194.9)	351 (774)	442 (974)	1.83

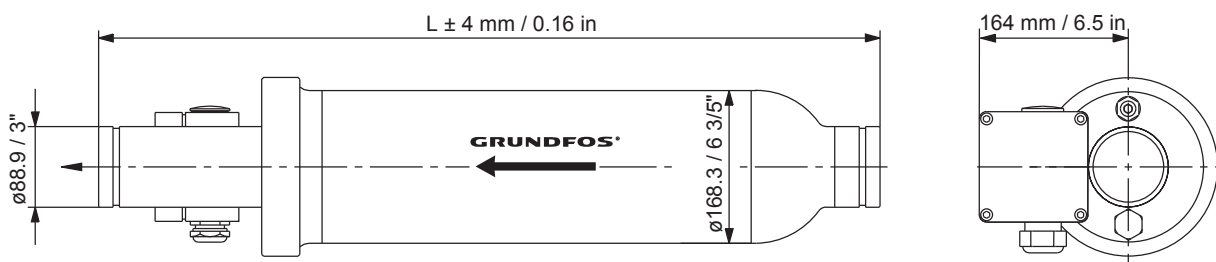
On request, the BM is available in other voltages and with all stages indicated in the standard SP pump range.

**BM 60**



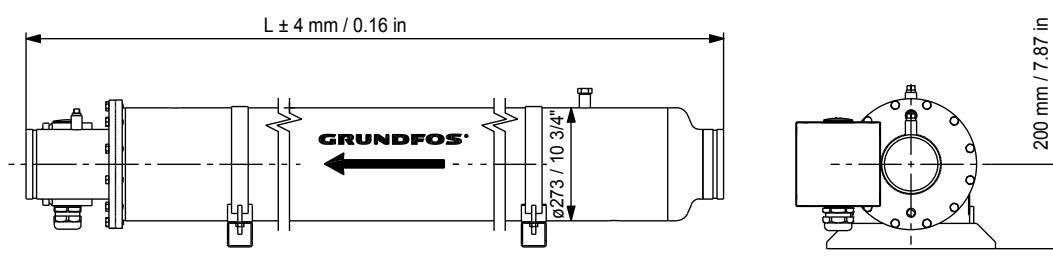
TM011218

**Dimensional sketches**



TM003799

*BM 6" with straight pipe*



TM011424

*BM 8" with straight pipe*

One set of connecting fittings is required for each system.

**Dimensions and weights**

**BM 6"**

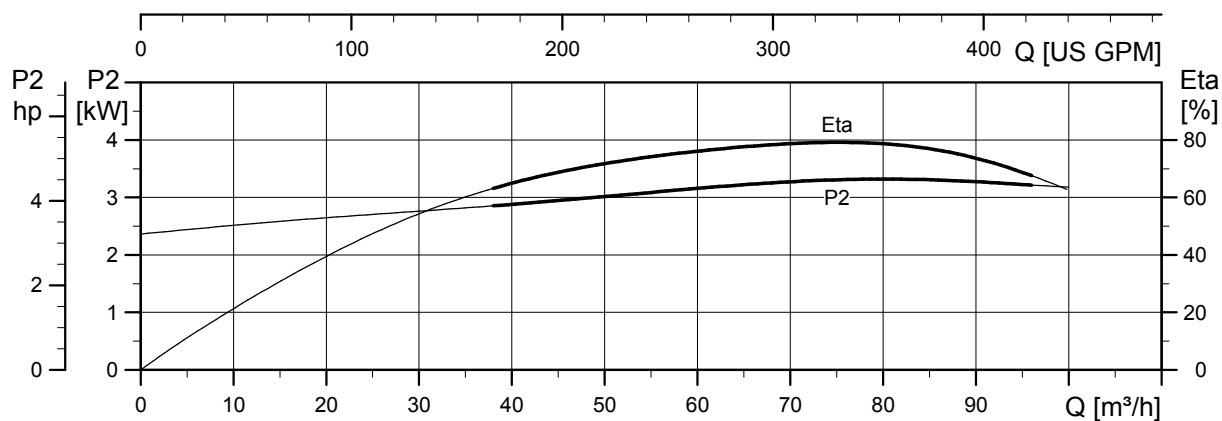
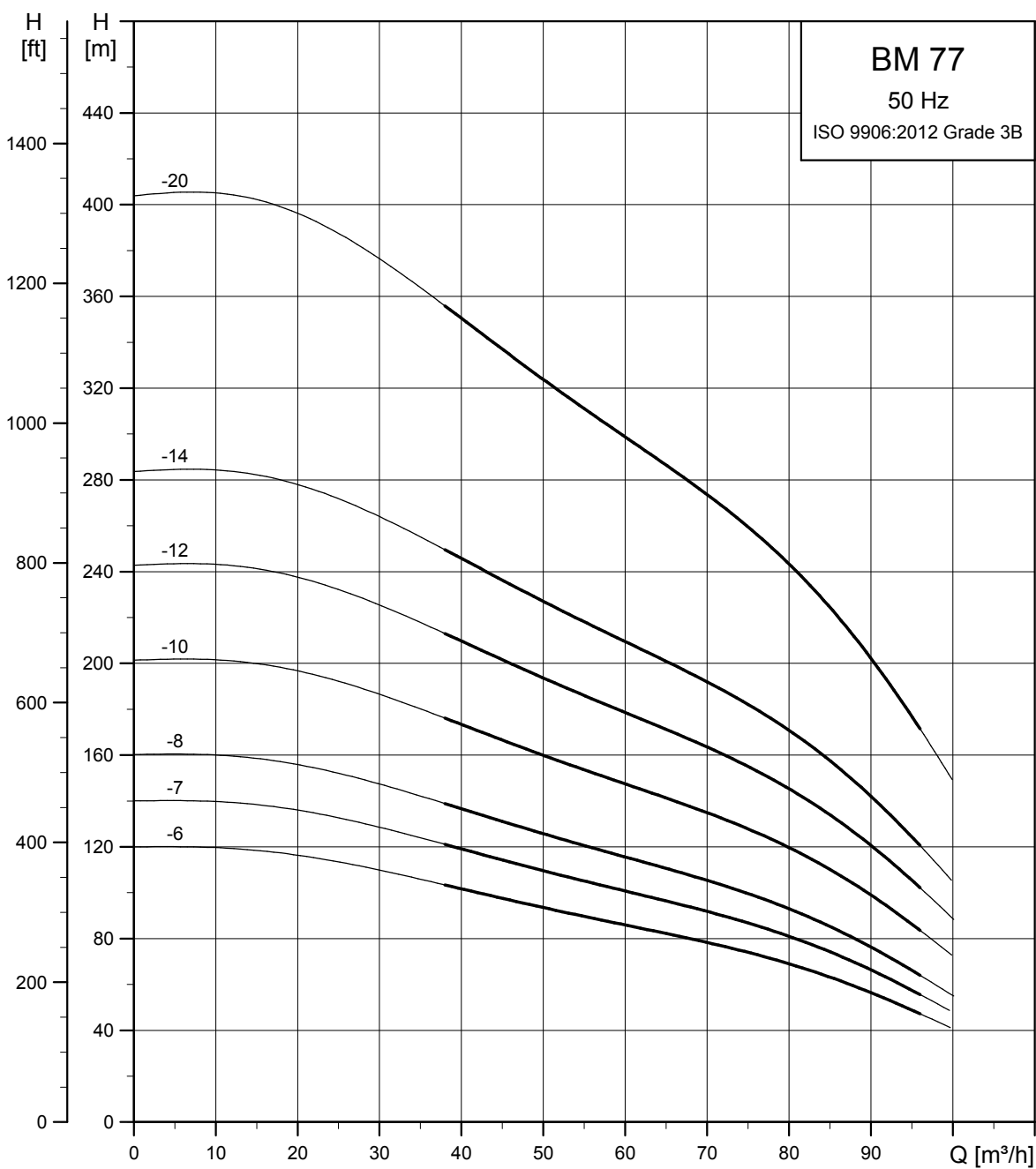
Pump type	Motor type	P2 [kW (hp)]	Standard voltage [V]	Rated current I <sub>N</sub> [A]	L [mm (inch)]	Weight [kg (lbs)]		Ship. vol. [m <sup>3</sup> ]
						Net	Gross	
BM 60-5	MS 6000	9.2 (12.5)	3 × 400	21.8 - 21.8	1950 (76.8)	89 (196)	127 (280)	0.335
BM 60-6	MS 6000	11 (15)	3 × 400	25.5 - 24.8	2100 (82.7)	98 (216)	139 (306)	0.356
BM 60-7	MS 6000	13 (17.5)	3 × 400	30.5 - 30	2200 (86.6)	104 (229)	148 (326)	0.390
BM 60-8	MS 6000	15 (20)	3 × 400	34.5 - 34	2500 (98.4)	116 (256)	164 (362)	0.421
BM 60-10	MS 6000	18.5 (25)	3 × 400	42 - 42.5	2700 (106.3)	129 (284)	183 (403)	0.452
BM 60-12	MS 6000	22 (30)	3 × 400	50 - 47.5	3050 (120.1)	145 (320)	205 (452)	0.507
BM 60-15	MS 6000	26 (35)	3 × 400	59-57	3400 (133.9)	163 (359)	230 (507)	0.562
BM 60-16	MS 6000	30 (40)	3 × 400	68.5 - 66.5	3800 (149.6)	180 (397)	254 (560)	0.624

**BM 8"**

Pump type	Motor type	P2 [kW (hp)]	Standard voltage [V]	Rated current I <sub>N</sub> [A]	L [mm (inch)]	Weight [kg (lbs)]		Ship. vol. [m <sup>3</sup> ]
						Net	Gross	
BM 60-20	MMS 8000	37 (50)	3 × 460	81.5 - 77.0	4150 (163.4)	324 (714)	422 (930)	1.54
BM 60-22	MMS 8000	45 (60)	3 × 460	96.5 - 95.5	4550 (179.1)	355 (783)	453 (999)	1.65

On request, the BM is available in other voltages and with all stages indicated in the standard SP pump range.

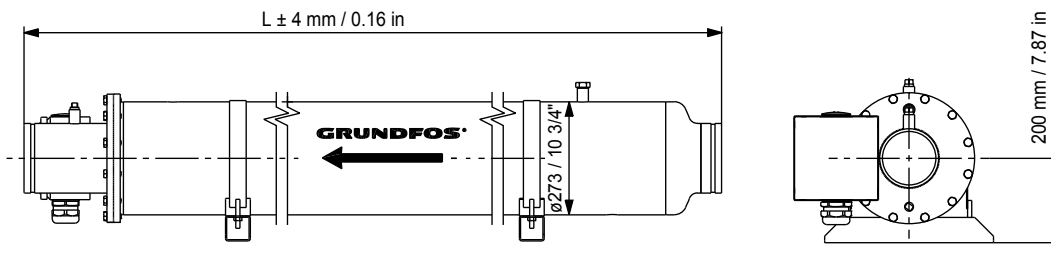
**BM 77**



TM011219



**Dimensional sketch**



TM011424

*BM 8" with straight pipe*

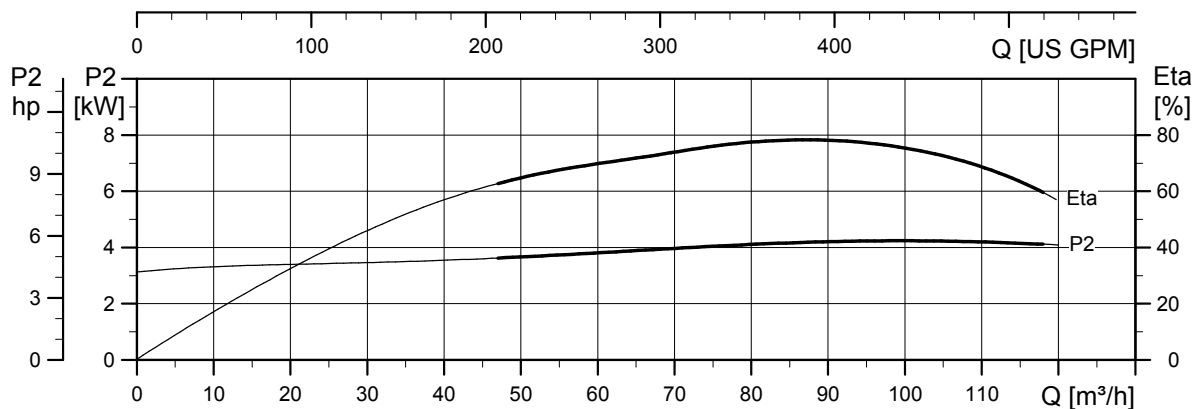
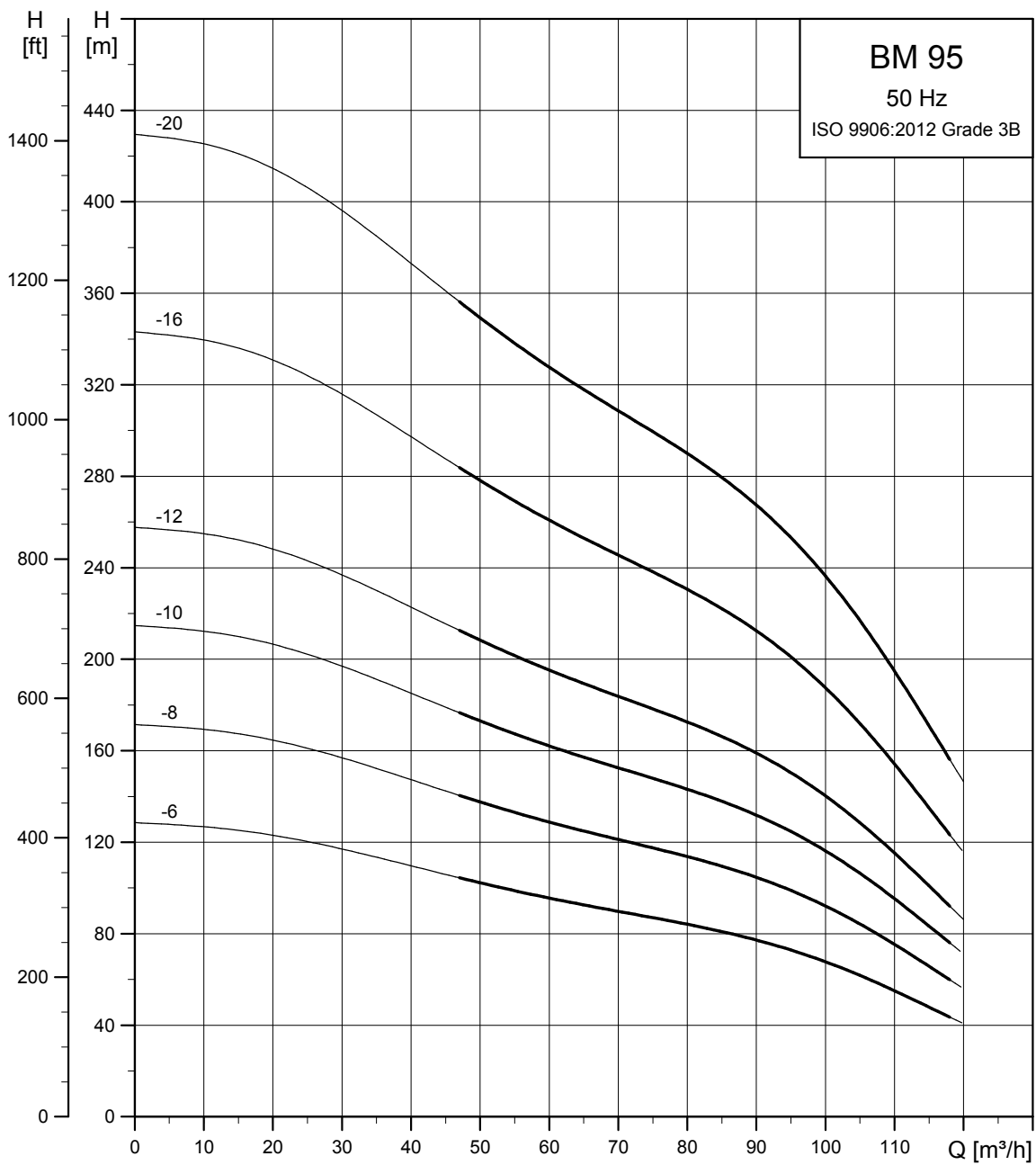
One set of connecting fittings is required for each system.

**Dimensions and weights**

Pump type	Motor type	P2 [kW (hp)]	Standard voltage [V]	Rated current I <sub>N</sub> [A]	L [mm (inch)]	Weight [kg (lbs)]		Ship. vol. [m <sup>3</sup> ]
						Net	Gross	
BM 77-6	MS 6000	22 (30)	3 × 400	50 - 47.5	2750 (108.3)	185 (408)	246 (542)	1.04
BM 77-7	MS 6000	26 (35)	3 × 400	59-57	2750 (108.3)	194 (428)	255 (562)	1.04
BM 77-8	MS 6000	30 (40)	3 × 400	68.5 - 66.5	3200 (126)	216 (476)	286 (631)	1.20
BM 77-10	MMS 8000	37 (50)	3 × 460	81.5 - 77	3450 (135.8)	307 (677)	383 (844)	1.29
BM 77-12	MMS 8000	45 (60)	3 × 460	96.5 - 95.5	3800 (149.6)	343 (756)	427 (941)	1.42
BM 77-14	MMS 8000	55 (75)	3 × 460	116-112	4150 (163.4)	373 (822)	464 (1023)	1.54
BM 77-20	MMS 8000	75 (100)	3 × 460	156-152	5400 (212.6)	479 (1056)	603 (1329)	2.06

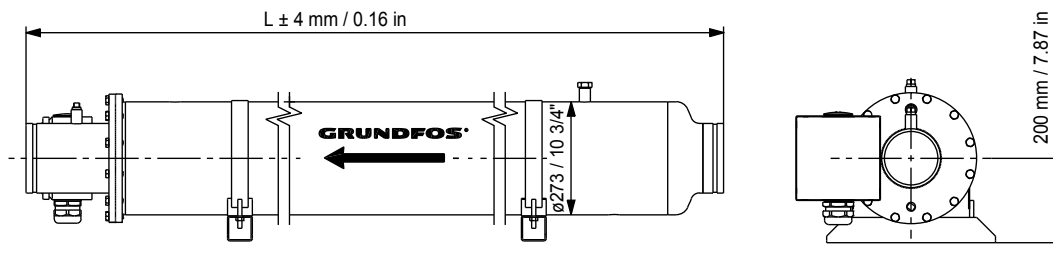
On request, the BM is available in other voltages and with all stages indicated in the standard SP pump range.

**BM 95**



TM012075

**Dimensional sketch**



TM011424

*BM 8" with straight pipe*

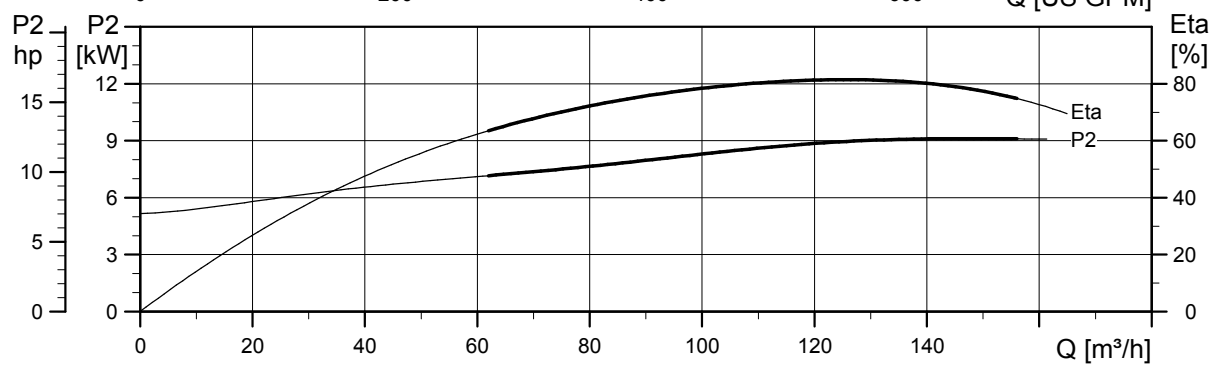
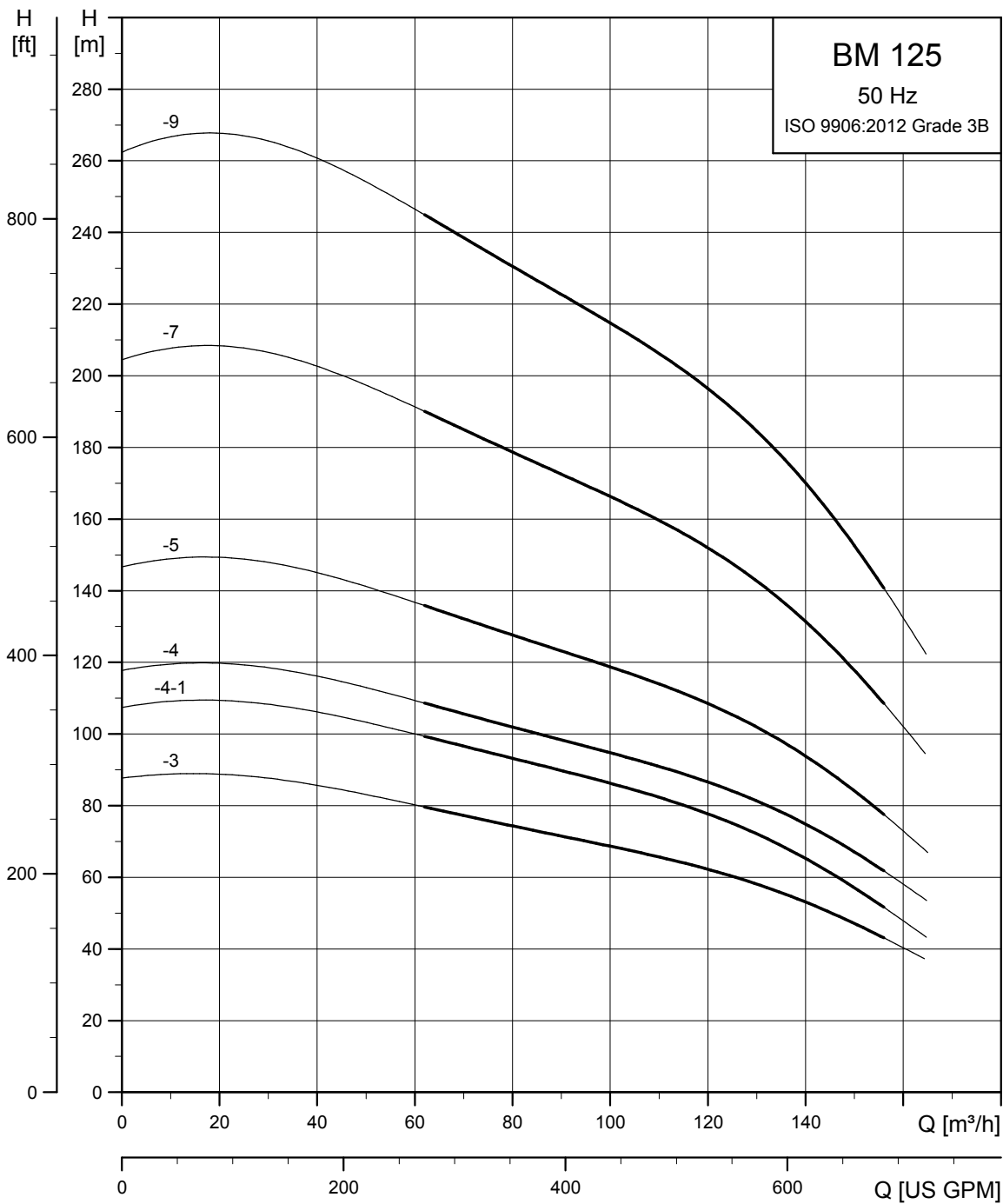
One set of connecting fittings is required for each system.

**Dimensions and weights**

Pump type	Motor type	P2 [kW (hp)]	Standard voltage [V]	Rated current I <sub>N</sub> [A]	L [mm (inch)]	Weight [kg (lbs)]		Ship. vol. [m <sup>3</sup> ]
						Net	Gross	
BM 95-6	MS 6000	26 (35)	3 × 400	59-57	2750 (108.3)	190 (419)	250 (551)	1.04
BM 95-8	MS 6000	37 (50)	3 × 400	81.5 - 77	3200 (126)	294 (648)	364 (802)	1.20
BM 95-10	MS 6000	45 (60)	3 × 400	96.5 - 95.5	3450 (135.8)	328 (723)	403 (888)	1.29
BM 95-12	MS 6000	55 (75)	3 × 400	116-112	3800 (149.6)	358 (789)	441 (972)	1.42
BM 95-16	MMS 8000	75 (100)	3 × 460	156-152	4950 (194.9)	442 (974)	550 (1213)	1.82
BM 95-20	MMS 8000	92 (123)	3 × 460	194-186	5400 (212.6)	525 (1157)	649 (1431)	2.06

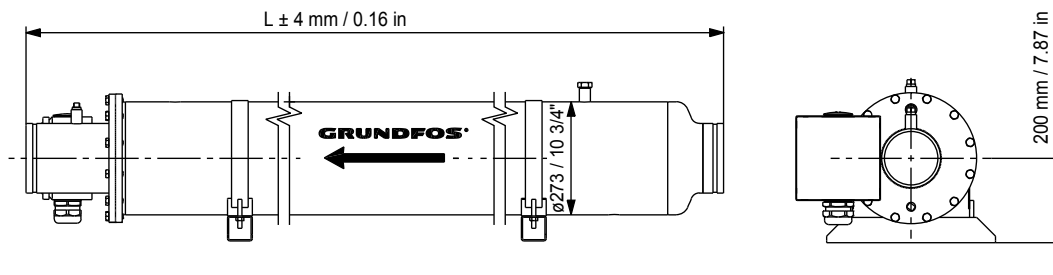
On request, the BM is available in other voltages and with all stages indicated in the standard SP pump range.

**BM 125**



TM012076

**Dimensional sketch**



TM011424

*BM 8" with straight pipe*

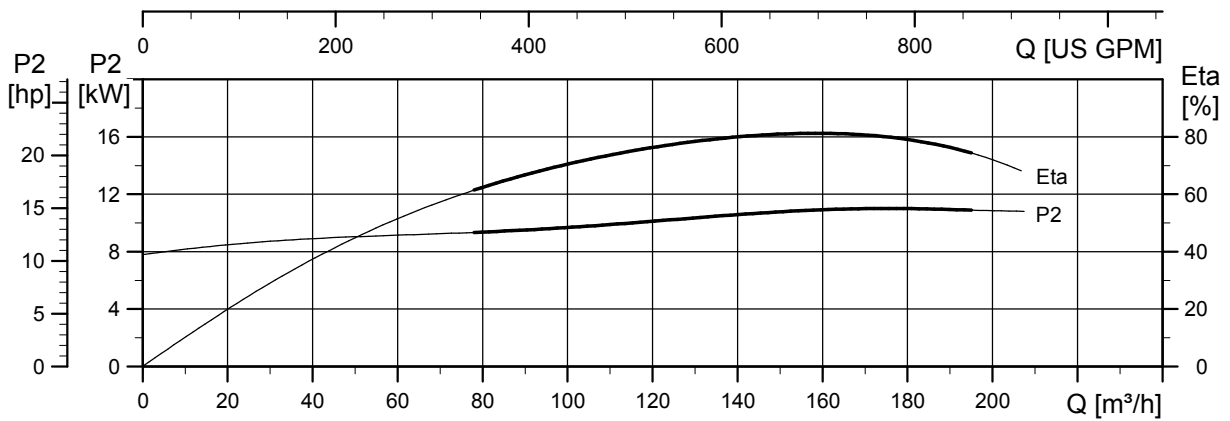
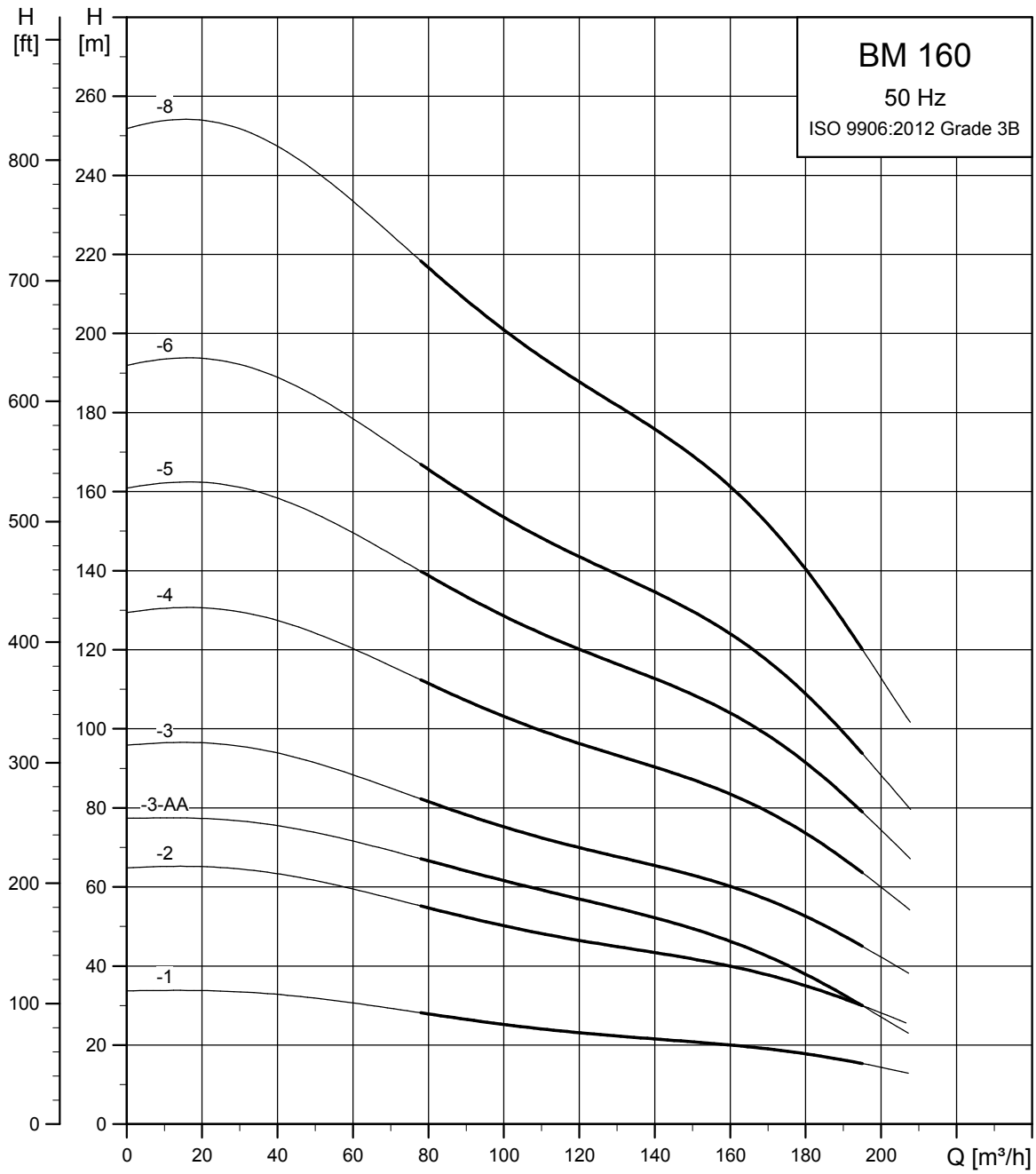
One set of connecting fittings is required for each system.

**Dimensions and weights**

Pump type	Motor type	P2 [kW (hp)]	Standard voltage [V]	Rated current I <sub>N</sub> [A]	L [mm (inch)]	Weight [kg (lbs)]		Ship. vol. [m <sup>3</sup> ]
						Net	Gross	
BM 125-3	MS 6000	30 (40)	3 × 400	68.5 - 66.5	2400 (94.5)	196 (432)	249 (549)	0.91
BM 125-4-A	MMS 8000	37 (50)	3 × 460	81.5 - 77	2750 (108.3)	287 (633)	348 (767)	1.04
BM 125-4	MMS 8000	45 (60)	3 × 460	96.5 - 95.5	3200 (126)	297 (655)	367 (809)	1.20
BM 125-5	MMS 8000	55 (75)	3 × 460	116-112	3200 (126)	341 (752)	415 (915)	1.20
BM 125-7	MMS 8000	75 (100)	3 × 460	156-152	3800 (149.6)	411 (906)	498 (1098)	1.42
BM 125-9	MMS 8000	92 (123)	3 × 460	194-186	4150 (163.4)	476 (1049)	567 (1250)	1.54

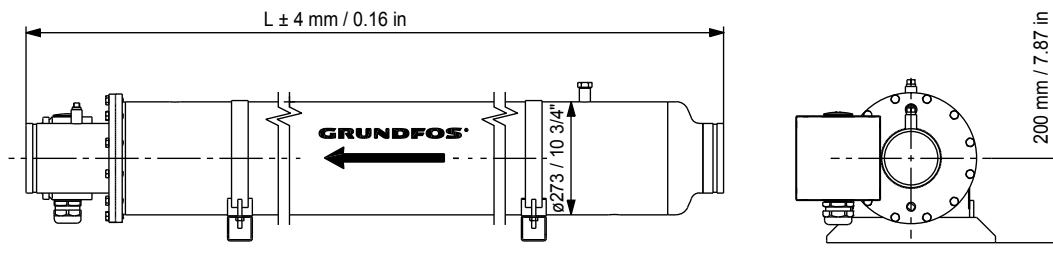
On request, the BM is available in other voltages and with all stages indicated in the standard SP pump range.

**BM 160**



TM047951

**Dimensional sketch**



TM011424

*BM 8" with straight pipe*

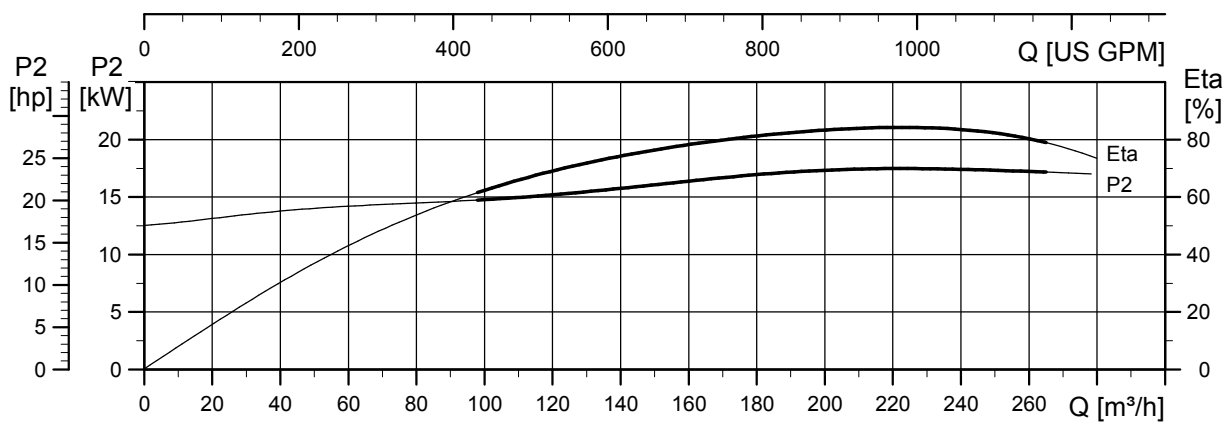
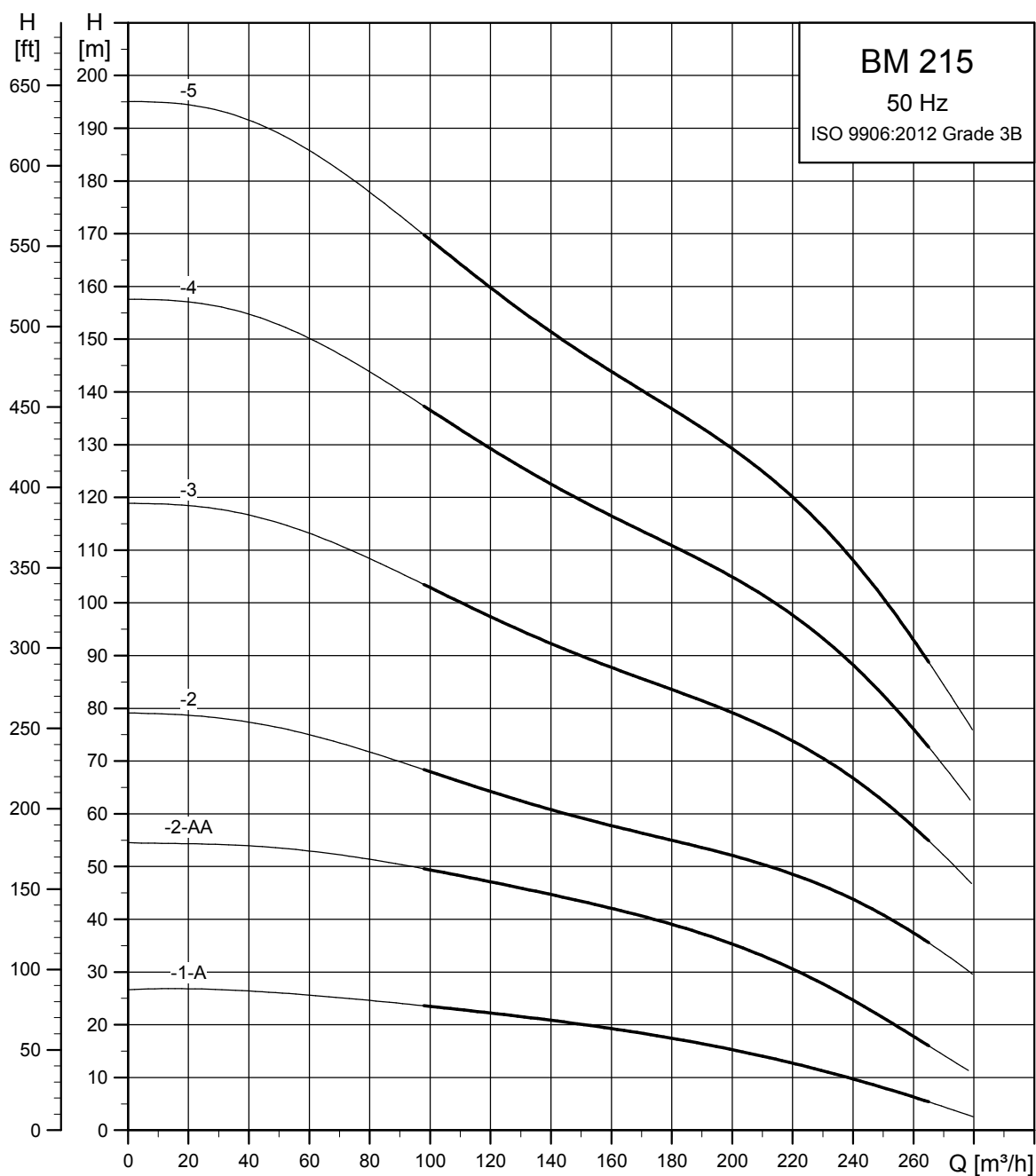
One set of connecting fittings is required for each system.

**Dimensions and weights**

Pump type	Motor type	P2 [kW (hp)]	Standard voltage [V]	Rated current I <sub>N</sub> [A]	L [mm (inch)]	Weight [kg (lbs)]		Ship. vol. [m <sup>3</sup> ]
						Net	Gross	
BM 160-1	MS 6000	13 (17)	3 × 400	30.5 - 30	2400 (94.5)	155 (342)	208 (459)	0.91
BM 160-2	MS 6000	26 (35)	3 × 400	59-57	2400 (94.5)	182 (401)	235 (518)	0.91
BM 160-3-AA	MS 6000	30 (40)	3 × 400	68.5 - 66.5	2400 (94.5)	196 (432)	249 (549)	0.91
BM 160-3	MMS 8000	37 (50)	3 × 460	81.5 - 77	2750 (108.3)	281 (619)	342 (754)	1.04
BM 160-4	MMS 8000	55 (74)	3 × 460	116-112	3200 (126)	335 (739)	405 (893)	1.20
BM 160-5	MMS 8000	63 (85)	3 × 460	132-130	3200 (126)	367 (809)	437 (963)	1.20
BM 160-6	MMS 8000	75 (101)	3 × 460	156-152	3800 (149.6)	405 (893)	489 (1078)	1.42
BM 160-8	MMS 8000	92 (123)	3 × 460	194-186	4150 (149.6)	470 (1036)	561 (1237)	1.54

On request, the BM is available in other voltages and with all stages indicated in the standard SP pump range.

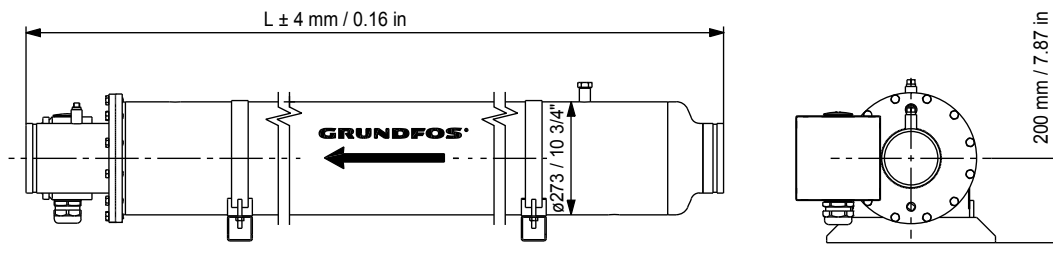
**BM 215**



TM047953



**Dimensional sketch**



TM011424

*BM 8" with straight pipe*

One set of connecting fittings is required for each system.

**Dimensions and weights**

Pump type	Motor type	P2 [kW (hp)]	Standard voltage [V]	Rated current I <sub>N</sub> [A]	L [mm (inch)]	Weight [kg (lbs)]		Ship. vol. [m <sup>3</sup> ]
						Net	Gross	
BM 215-1-A	MS 6000	15 (20)	3 × 400	34.5 - 34	2400 (94.5)	165 (364)	218 (481)	0.91
BM 215-2-AA	MS 6000	30 (40)	3 × 400	68.5 - 66.5	2400 (94.5)	200 (441)	253 (558)	0.91
BM 215-2	MMS 8000	45 (60)	3 × 460	96.5 - 95	2750 (108.3)	308 (679)	369 (814)	1.04
BM 215-3	MMS 8000	63 (85)	3 × 460	132-130	3200 (126)	369 (814)	439 (968)	1.20
BM 215-4	MMS 8000	75 (101)	3 × 460	156-152	3800 (149.6)	411 (906)	495 (1091)	1.42
BM 215-5	MMS 8000	92 (123)	3 × 460	194-186	3800 (149.6)	474 (1045)	565 (1246)	1.54

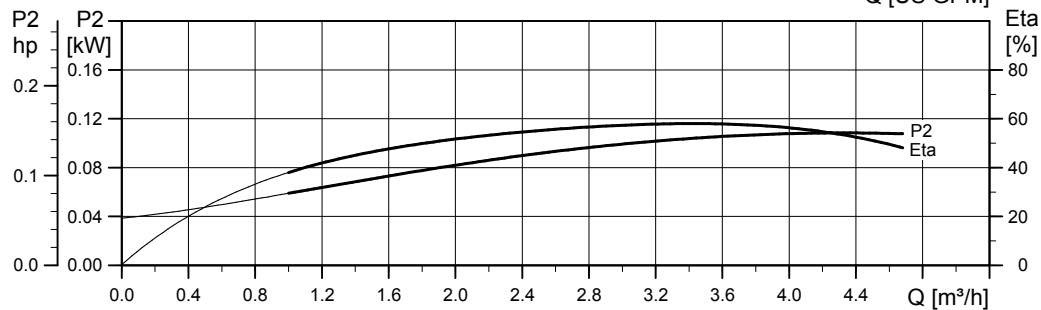
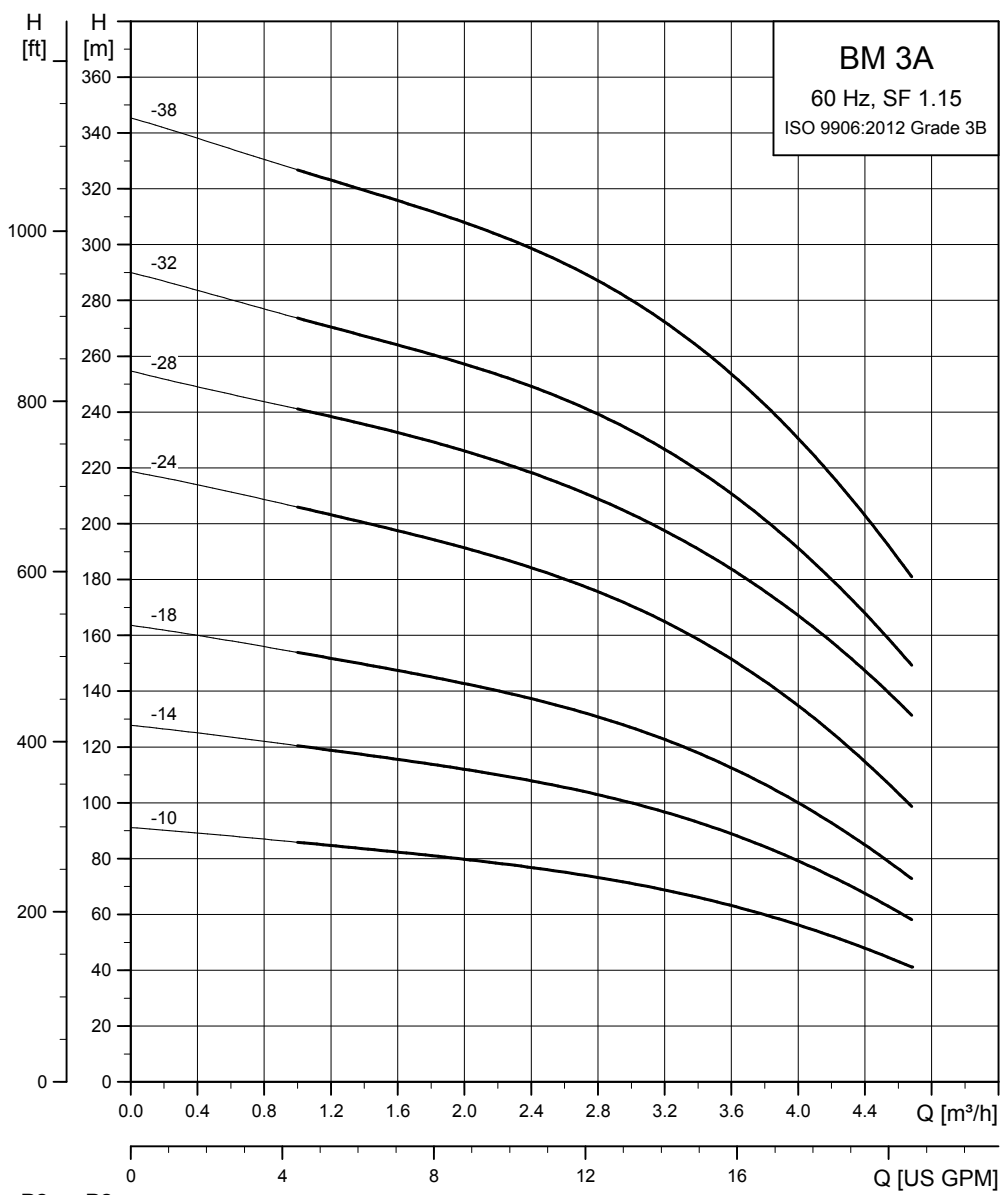
On request, the BM is available in other voltages and with all stages indicated in the standard SP pump range.

**Connections**

Size	Type	Victaulic coupling, style 77
BM 8"	BM 30 - BM 46	3" / Ø89
BM 8"	BM 60	4" / Ø114
BM 8"	BM 77 - BM 95	5" / Ø139
BM 8"	BM 125 - BM 215	6" / Ø168

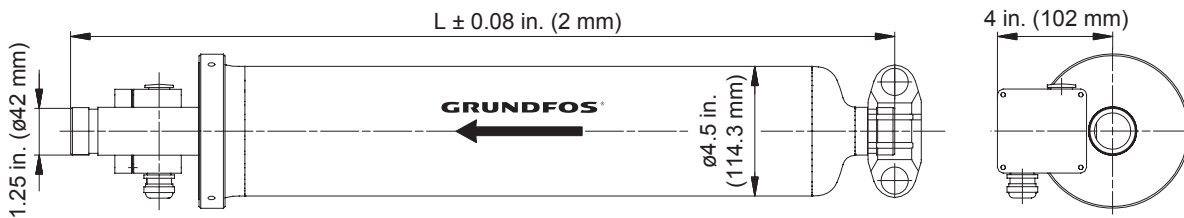
# BM, 60 Hz

## BM 3A



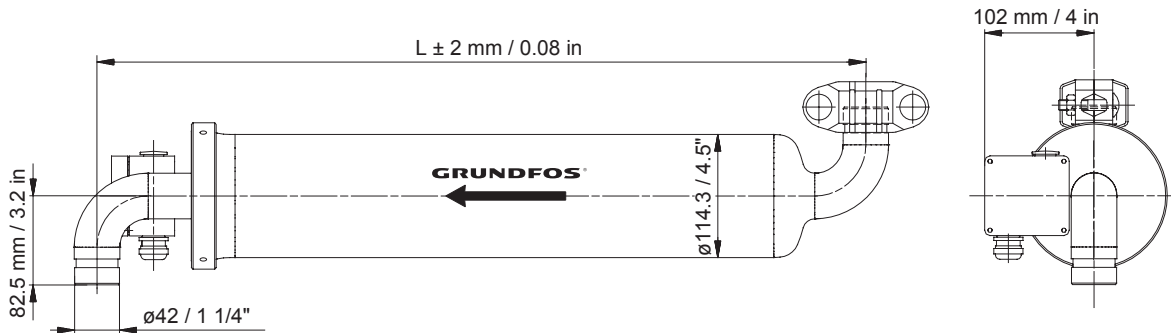
TM011220

**Dimensional sketches**



TM055928

**BM 4" with straight pipe**



TM003798

**BM 4" with elbow**

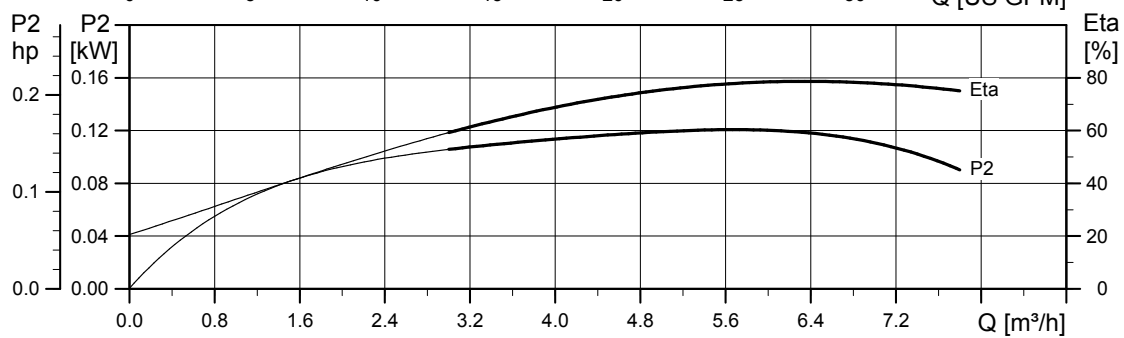
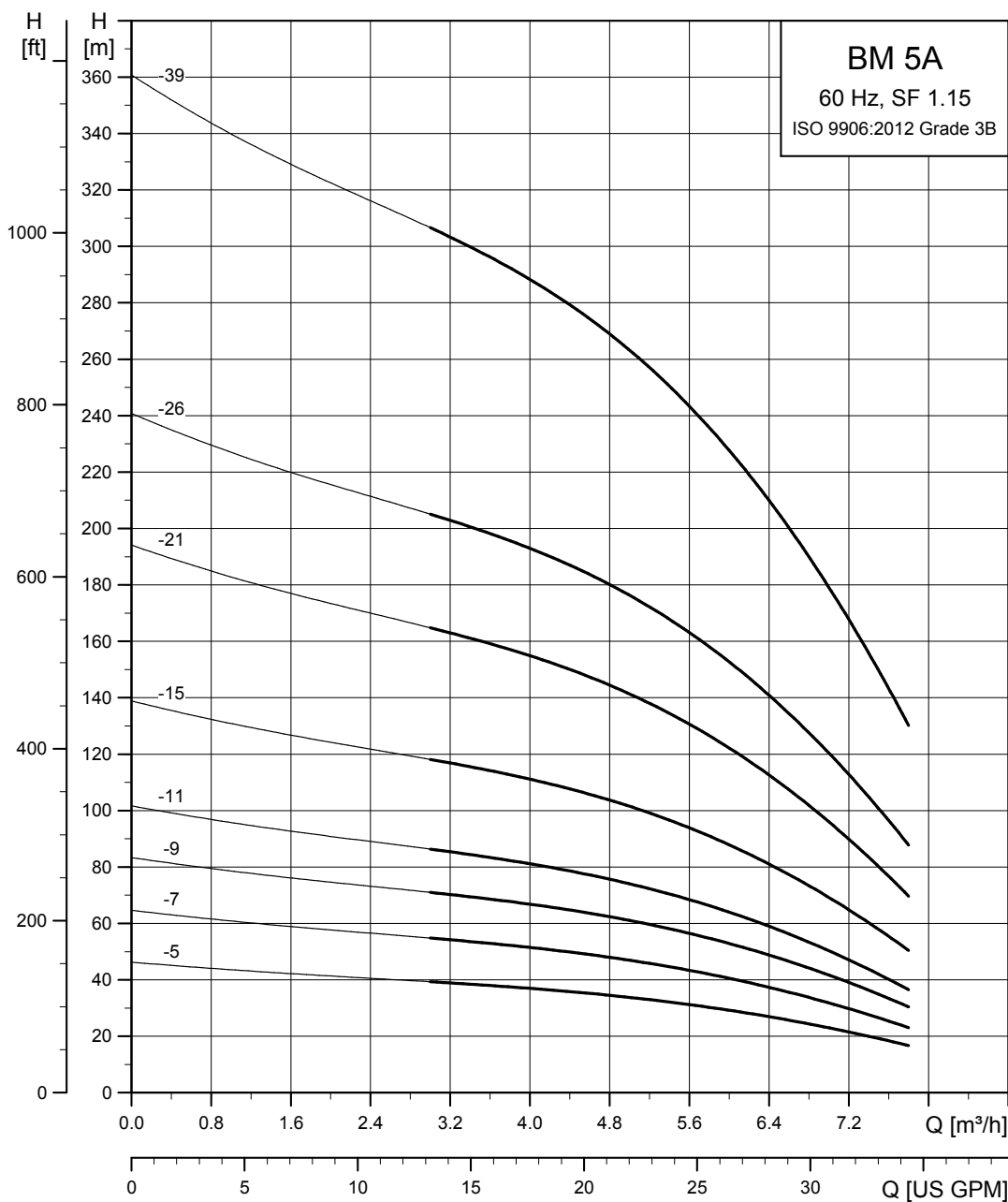
One set of connecting fittings is required for each system.

**Dimensions and weights**

Pump type	Motor type	P2 [kW (hp)]	Standard voltage [V]	Rated current I <sub>N</sub> [A]	L [mm (inch)]		Weight [kg (lbs)]		Ship. vol. [m <sup>3</sup> ]	
					Straight pipe	Elbow	Net	Gross	Straight pipe	Elbow
BM 3A-10	MS 4000	0.75 (1)	3 × 380	2.30 - 2.10	1222 (48.1)	1144 (45)	32.0 (71)	38.0 (84)	0.191	0.191
BM 3A-14	MS 4000	1.1 (1.5)	3 × 380	3.05 - 2.95	1222 (53.9)	1291 (50.8)	35.0 (77)	41.0 (90)	0.191	0.191
BM 3A-18	MS 4000	1.5 (2)	3 × 380	4.10 - 4.15	1369 (53.9)	1291 (50.8)	37.0 (82)	43.0 (95)	0.205	0.191
BM 3A-24	MS 4000	2.2 (3)	3 × 380	5.65 - 6.05	1640 (64.6)	1562 (61.5)	43.0 (95)	49.0 (108)	0.260	0.232
BM 3A-28	MS 4000	3 (4)	3 × 380	7.40 - 7.75	1640 (64.6)	1562 (61.5)	45.0 (99)	51.0 (112)	0.260	0.260
BM 3A-32	MS 4000	4 (5.5)	3 × 380	9.45 - 9.45	1986 (78.2)	1908 (75.1)	49.0 (108)	55.0 (121)	0.288	0.288
BM 3A-38	MS 4000	4 (5.5)	3 × 380	9.45 - 9.45	2112 (83.1)	2034 (80.1)	56.0 (123)	63.0 (139)	0.330	0.330

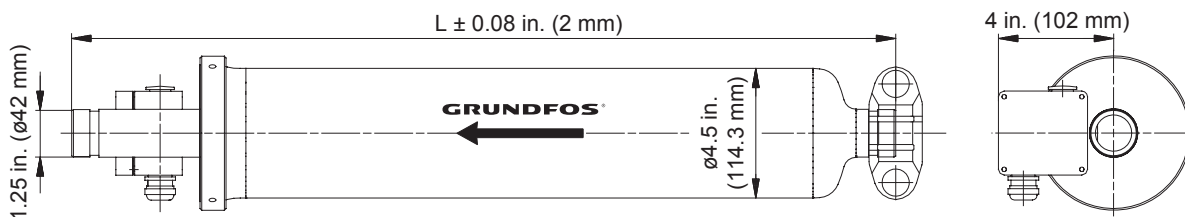
On request, the BM is available in other voltages and with all stages indicated in the standard SP pump range and in R version.

**BM 5A**



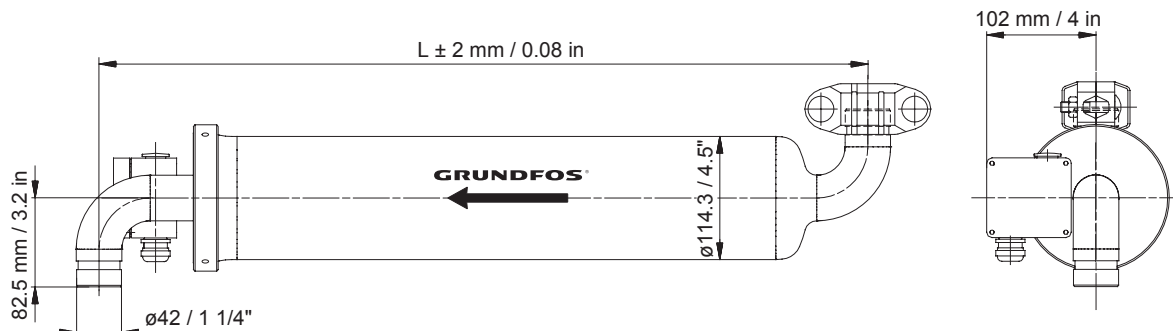
TM011221

**Dimensional sketches**



TM055928

*BM 4" with straight pipe*



TM003798

*BM 4" with elbow*

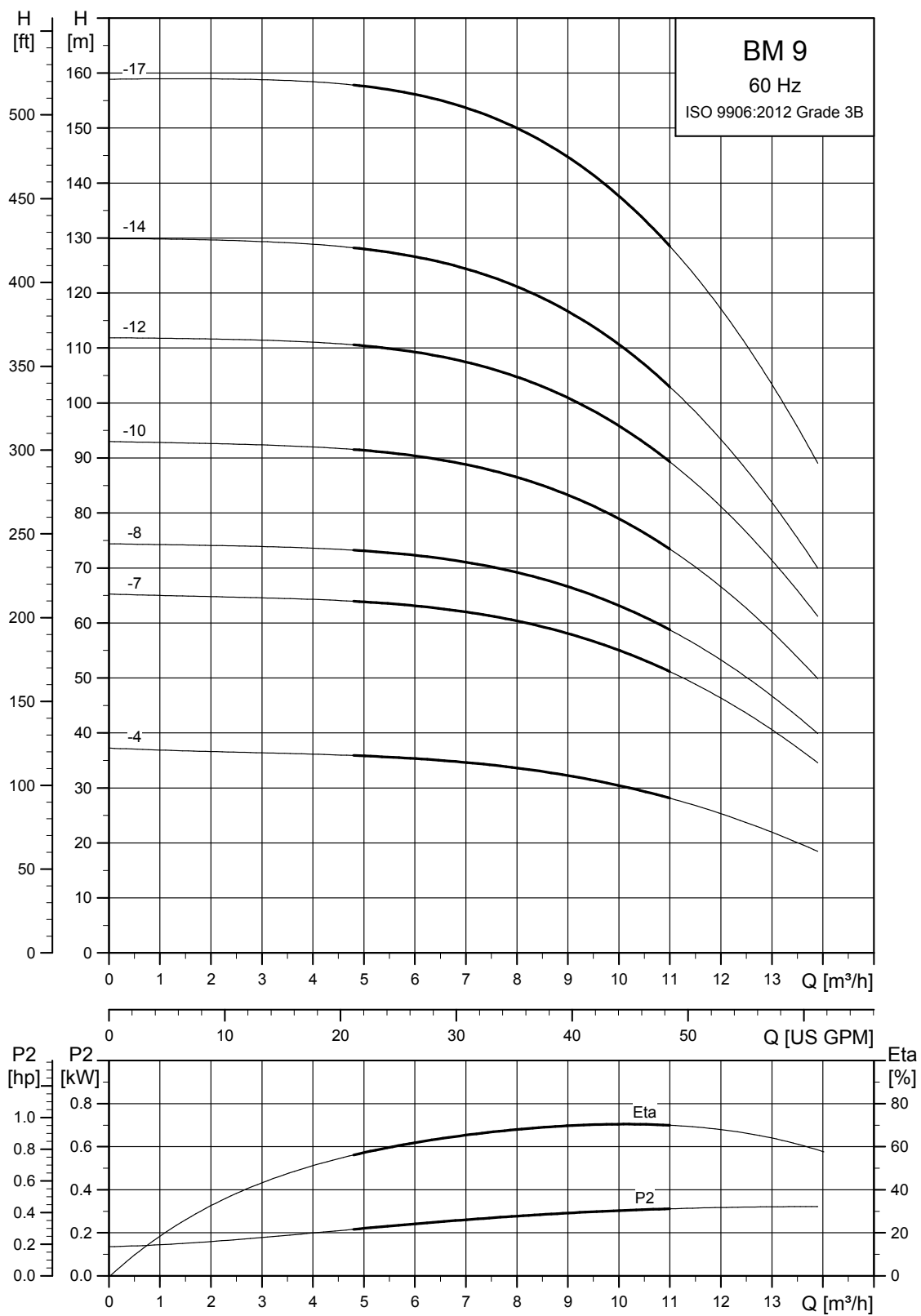
One set of connecting fittings is required for each system.

**Dimensions and weights**

Pump type	Motor type	P2 [kW (hp)]	Standard voltage [V]	Rated current I <sub>N</sub> [A]	L [mm (inch)]		Weight [kg (lbs)]		Ship. vol. [m <sup>3</sup> ]	
					Straight pipe	Elbow	Net	Gross	Straight pipe	Elbow
BM 5A-5	MS 4000	0.75 (1)	3 × 380	2.30 - 2.10	1222 (48.1)	1144 (45)	30 (66)	36 (79)	0.191	0.191
BM 5A-7	MS 4000	0.75 (1)	3 × 380	2.30 - 2.10	1222 (48.1)	1144 (45)	31 (68)	37 (82)	0.191	0.191
BM 5A-9	MS 4000	1.1 (1.5)	3 × 380	3.05 - 2.95	1222 (48.1)	1144 (45)	32 (71)	38 (84)	0.191	0.191
BM 5A-11	MS 4000	1.5 (2)	3 × 380	4.10 - 4.15	1222 (48.1)	1144 (45)	33 (73)	39 (86)	0.191	0.191
BM 5A-15	MS 4000	2.2 (3)	3 × 380	5.65 - 6.05	1369 (53.9)	1291 (50.8)	38 (84)	44 (97)	0.191	0.191
BM 5A-21	MS 4000	3 (4)	3 × 380	7.40 - 7.75	1640 (64.6)	1562 (61.5)	42 (93)	48 (106)	0.260	0.260
BM 5A-26	MS 4000	4 (5.5)	3 × 380	9.45 - 9.45	1758 (69.2)	1680 (66.1)	49 (108)	55 (121)	0.260	0.260
BM 5A-39	MS 4000	5.5 (7.5)	3 × 380	12.8 - 12.8	2112 (83.1)	2034 (80.1)	60 (132)	67 (148)	0.330	0.330

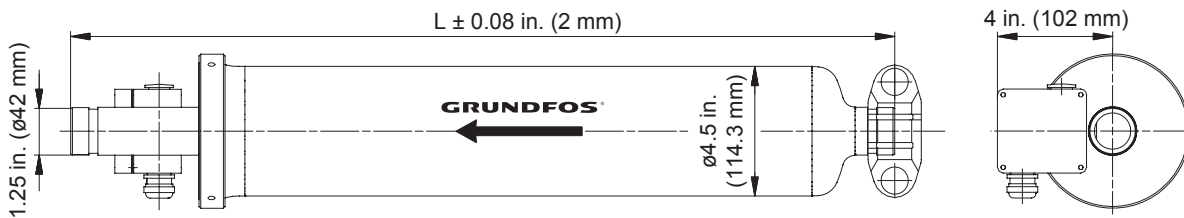
On request, the BM is available in other voltages and with all stages indicated in the standard SP pump range and in R version.

**BM 9**



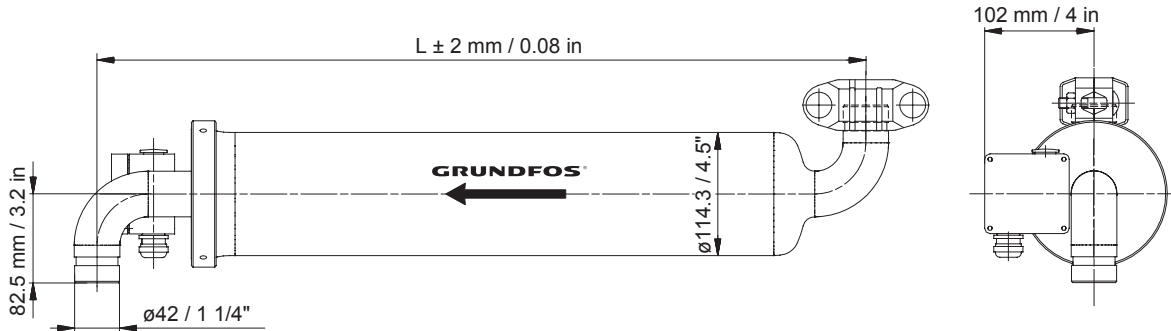
TM063384

**Dimensional sketches**



TM055928

**BM 4" with straight pipe**



TM003798

**BM 4" with elbow**

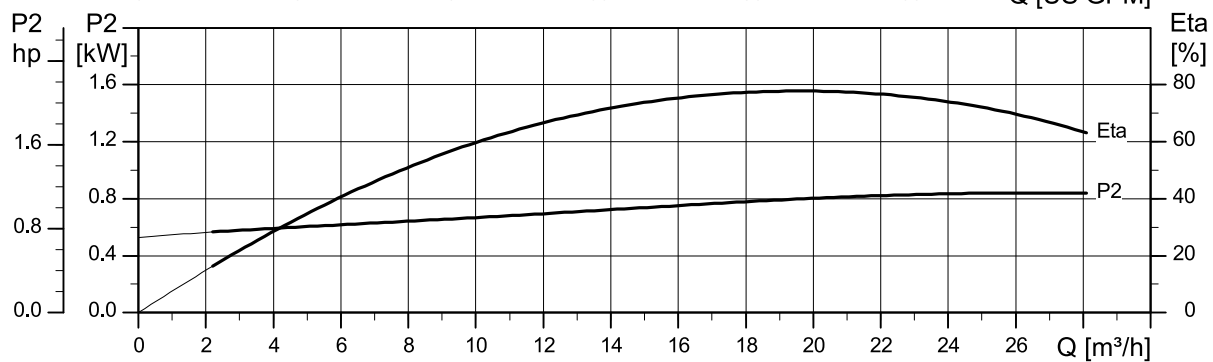
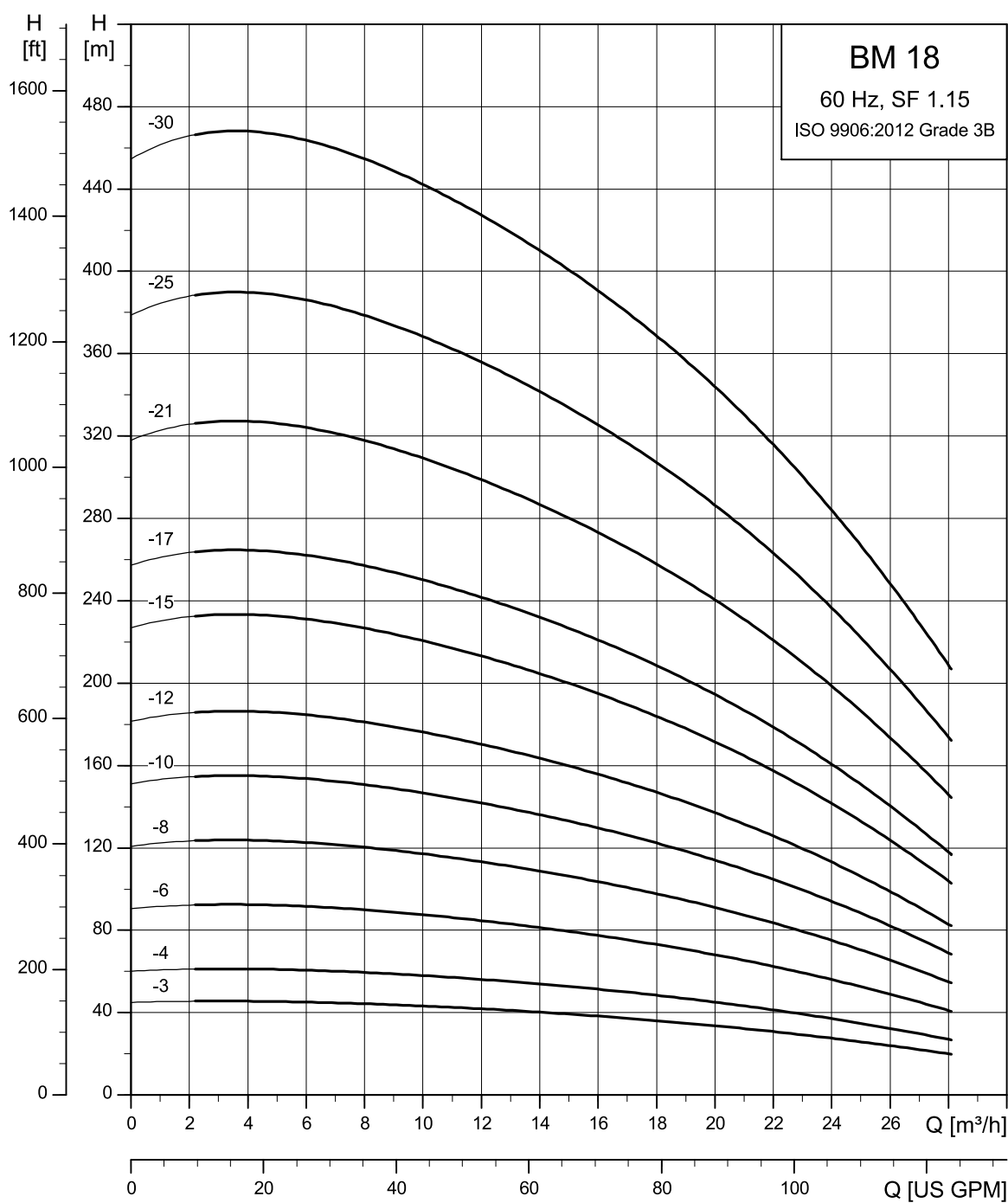
One set of connecting fittings is required for each system.

**Dimensions and weights**

Pump type	Motor type	P2 [kW (hp)]	Standard voltage [V]	Rated current I <sub>N</sub> [A]	L [mm (inch)]		Weight [kg (lbs)]		Ship. vol. [m <sup>3</sup> ]	
					Straight pipe	Elbow	Net	Gross	Straight pipe	Elbow
BM 9-4	MS 4000	1.1 (1.5)	3 × 380	3.05 - 2.10	1222 (48.1)	1144 (45)	33.0 (73)	39.0 (86)	0.191	0.191
BM 9-8	MS 4000	3 (3)	3 × 380	5.65 - 6.05	1472 (58)	1394 (54.9)	42.0 (93)	48.0 (106)	0.233	0.205
BM 9-10	MS 4000	3 (4)	3 × 380	7.40 - 7.75	1758 (69.2)	1680 (66.1)	45.0 (99)	51.0 (112)	0.260	0.260
BM 9-12	MS 4000	4 (5.5)	3 × 380	9.45 - 9.45	1986 (78.2)	1908 (75.1)	51.0 (112)	57.0 (126)	0.288	0.288
BM 9-17	MS 4000	5.5 (7.5)	3 × 380	12.8 - 12.8	2346 (92.4)	2268 (89.3)	62.0 (137)	68.0 (150)	0.371	0.329

On request, the BM is available in other voltages and with all stages indicated in the standard SP pump range and in R version.

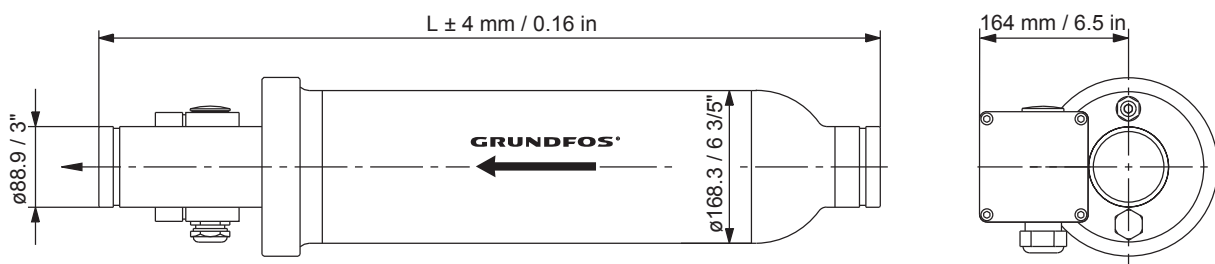
**BM 18**



TM086651



**Dimensional sketch**



TM003799

*BM 6" with straight pipe*

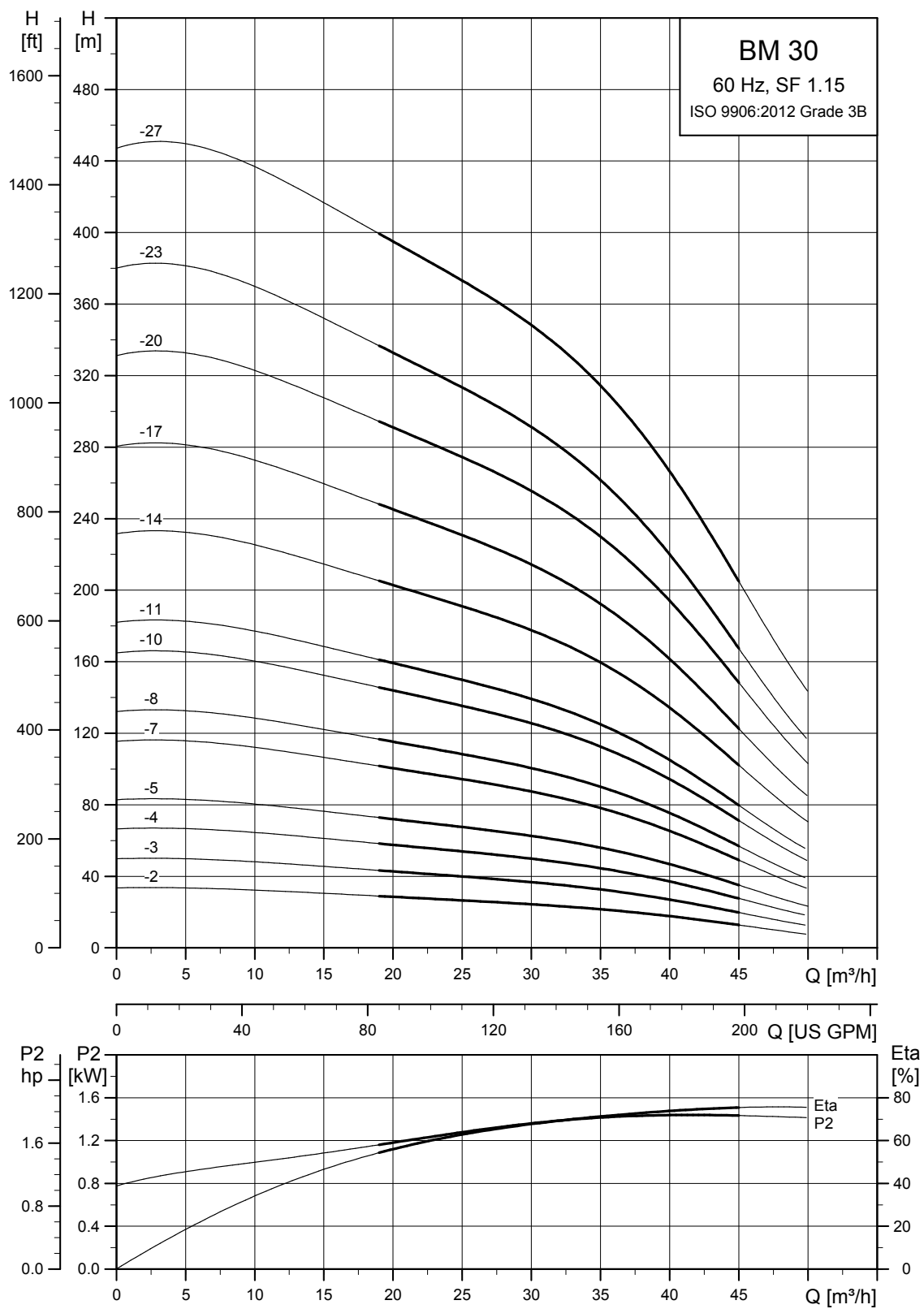
One set of connecting fittings is required for each system.

**Dimensions and weights**

Pump type	Motor type	P2 [kW (hp)]	Standard voltage [V]	Rated current I <sub>N</sub> [A]	L [mm (inch)]	Weight [kg (lbs)]		Ship. vol. [m <sup>3</sup> ]
						Net	Gross	
BM 18-3	MS 4000	3 (4)	3 × 380	7.40 - 7.75	1550 (61)	48 (106)	69 (152)	0.273
BM 18-4	MS 4000	4 (5.5)	3 × 380	9.45 - 9.45	1550 (61)	53 (117)	76 (168)	0.273
BM 18-6	MS 4000	5.5 (7.5)	3 × 380	12.8 - 12.8	1850 (72.8)	63 (139)	90 (198)	0.320
BM 18-8	MS 6000	7.5 (10)	3 × 400	17.4 - 17.0	1850 (72.8)	79 (174)	113 (249)	0.320
BM 18-10	MS 6000	9.2 (12.5)	3 × 400	21.80 - 21.0	2100 (82.7)	91 (201)	129 (284)	0.356
BM 18-12	MS 6000	11 (15)	3 × 400	25.5 - 24.0	2200 (86.6)	97 (214)	138 (304)	0.374
BM 18-15	MS 6000	13 (17.5)	3 × 400	29.5 - 28.5	2500 (98.4)	109 (240)	155 (342)	0.421
BM 18-17	MS 6000	15 (20)	3 × 400	33.5 - 32.5	2500 (98.4)	115 (254)	163 (359)	0.421
BM 18-21	MS 6000	18.5 (25)	3 × 400	42.0 - 41.0	2850 (112.2)	131 (289)	185 (408)	0.476
BM 18-25	MS 6000	22 (30)	3 × 400	48.0 - 46.5	3200 (126)	147 (324)	208 (459)	0.530
BM 18-30	MS 6000	26 (35)	3 × 400	57.5 - 54.5	3800 (149.6)	167 (368)	236 (520)	0.624

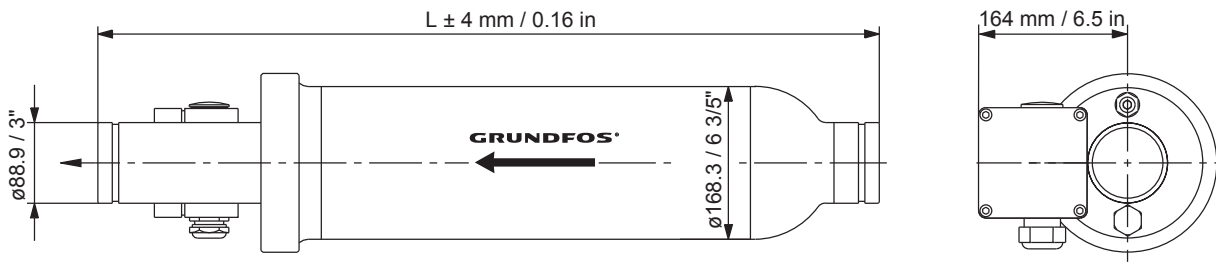
On request, the BM is available in other voltages and with all stages indicated in the standard SP pump range.

**BM 30**



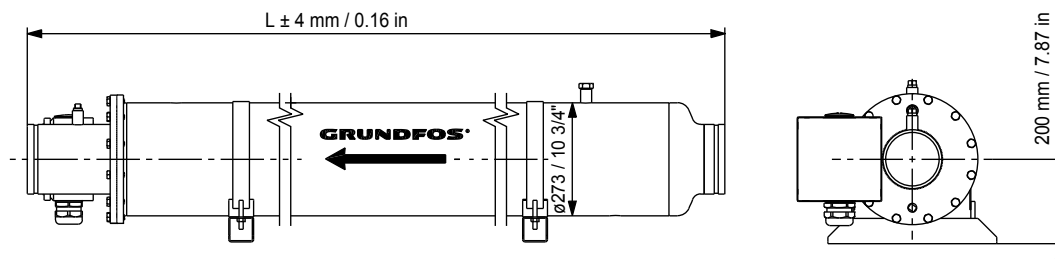
TM012078

**Dimensional sketches**



TM003799

*BM 6" with straight pipe*



TM011424

*BM 8" with straight pipe*

One set of connecting fittings is required for each system.

**Dimensions and weights**

**BM 6"**

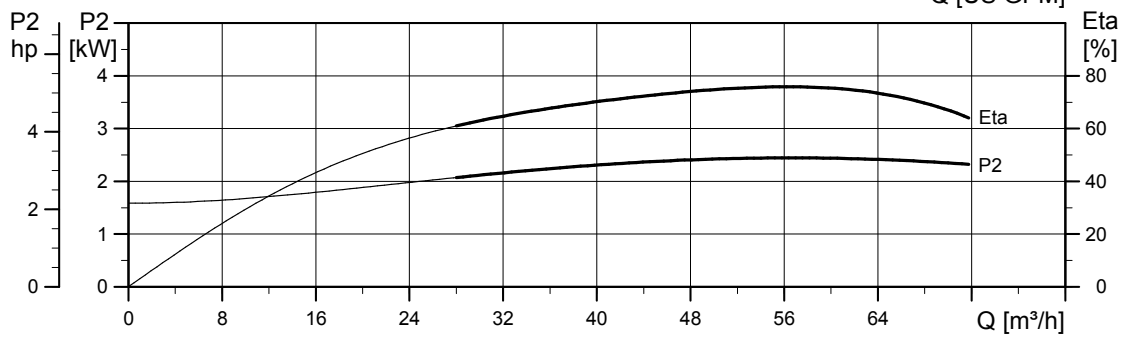
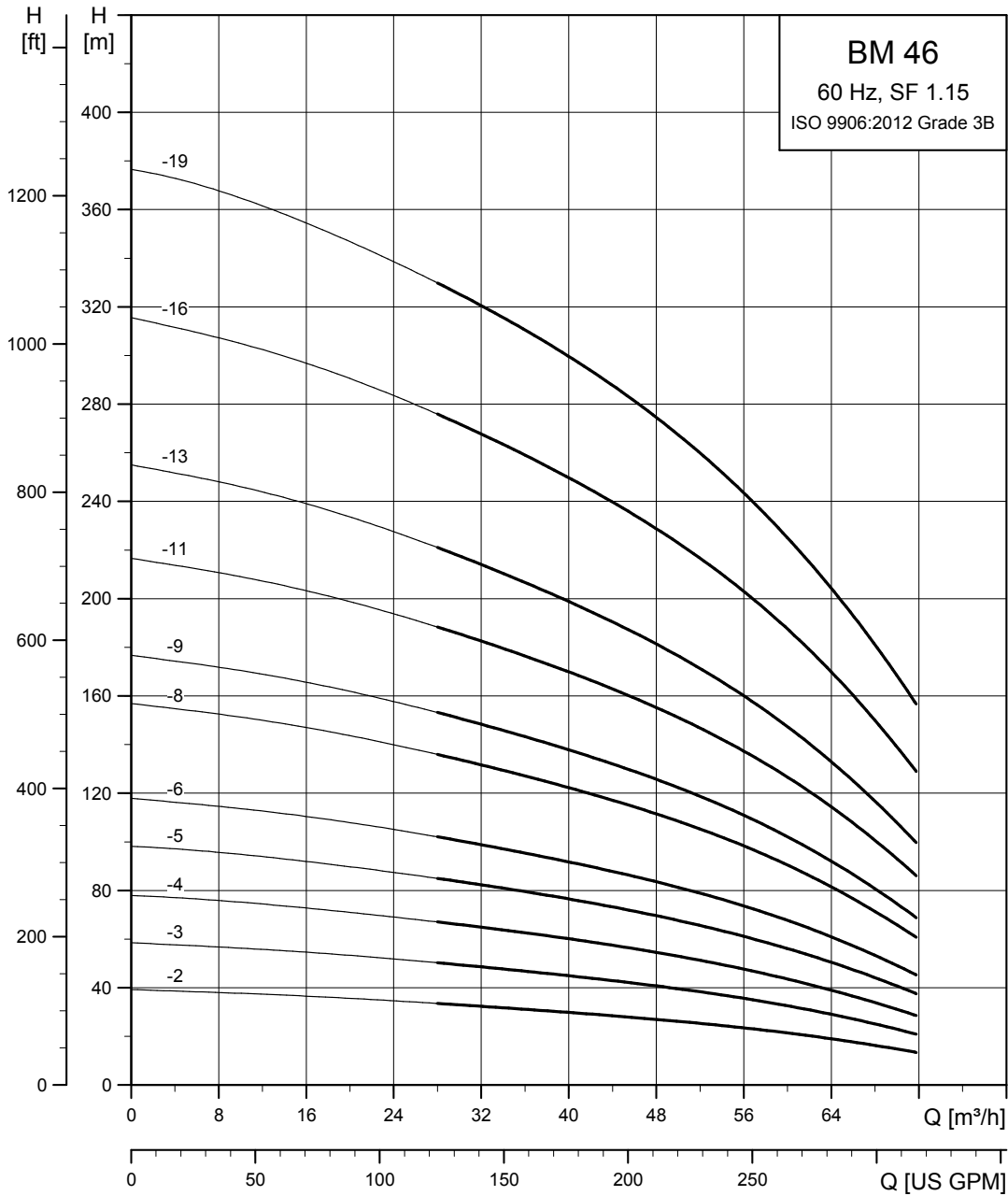
Pump type	Motor type	P2 [kW (hp)]	Standard voltage [V]	Rated current I <sub>N</sub> [A]	L [mm (inch)]	Weight [kg (lbs)]		Ship. vol. [m <sup>3</sup> ]
						Net	Gross	
BM 30-2	MS 4000	3 (4)	3 × 380	7.40 - 7.75	1550 (61)	47.0 (104)	68.0 (150)	0.273
BM 30-3	MS 4000	4 (5.5)	3 × 380	9.45 - 9.45	1650 (65)	54.0 (119)	78.0 (172)	0.289
BM 30-4	MS 4000	5.5 (7.5)	3 × 380	12.8 - 12.8	1850 (72.8)	64.0 (141)	92.0 (203)	0.320
BM 30-5	MS 6000	7.5 (10)	3 × 400	17.4 - 17	1850 (72.8)	78.0 (172)	111.0 (245)	0.320
BM 30-7	MS 6000	9.2 (12.5)	3 × 400	21.8 - 21	2100 (82.7)	91.0 (201)	129.0 (284)	0.356
BM 30-8	MS 6000	11 (15)	3 × 400	25.5 - 24	2200 (86.6)	96.0 (212)	136.0 (300)	0.374
BM 30-10	MS 6000	13 (17.5)	3 × 400	29.5 - 28.5	2500 (98.4)	108.0 (238)	153.0 (337)	0.421
BM 30-11	MS 6000	15 (20)	3 × 400	33.5 - 32.5	2500 (98.4)	113.0 (249)	160.0 (353)	0.421
BM 30-14	MS 6000	18.5 (25)	3 × 400	42-41	2850 (112.2)	129.0 (284)	183.0 (403)	0.476
BM 30-17	MS 6000	22 (30)	3 × 400	48 - 46.5	3200 (126)	145.0 (320)	205.0 (452)	0.530
BM 30-20	MS 6000	26 (35)	3 × 400	57.5 - 54.5	3800 (149.6)	165.0 (364)	233.0 (514)	0.624
BM 30-23	MS 6000	30 (40)	3 × 400	66.5 - 63	4250 (167.3)	185.0 (408)	261.0 (575)	0.694

**BM 8"**

Pump type	Motor type	P2 [kW (hp)]	Standard voltage [V]	Rated current $I_N$ [A]	L [mm (inch)]	Weight [kg (lbs)]		Ship. vol. [m <sup>3</sup> ]
						Net	Gross	
BM 30-27	MMS 8000	37 (50)	3 × 460	78	4450 (175.2)	322 (710)	420 (926)	1.65

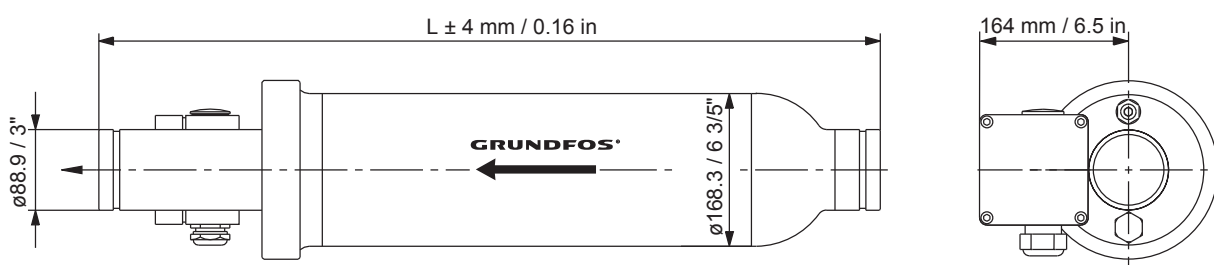
On request, the BM is available in other voltages and with all stages indicated in the standard SP pump range.

**BM 46**



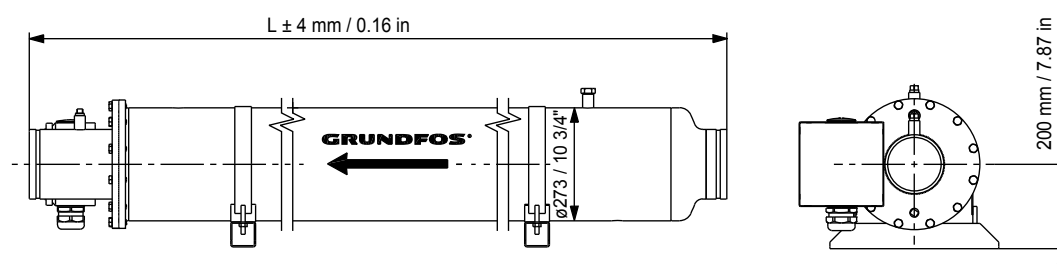
TM011225

## Dimensional sketches



TM003799

## BM 6" with straight pipe



TM011424

## BM 8" with straight pipe

One set of connecting fittings is required for each system.

## Dimensions and weights

## BM 6"

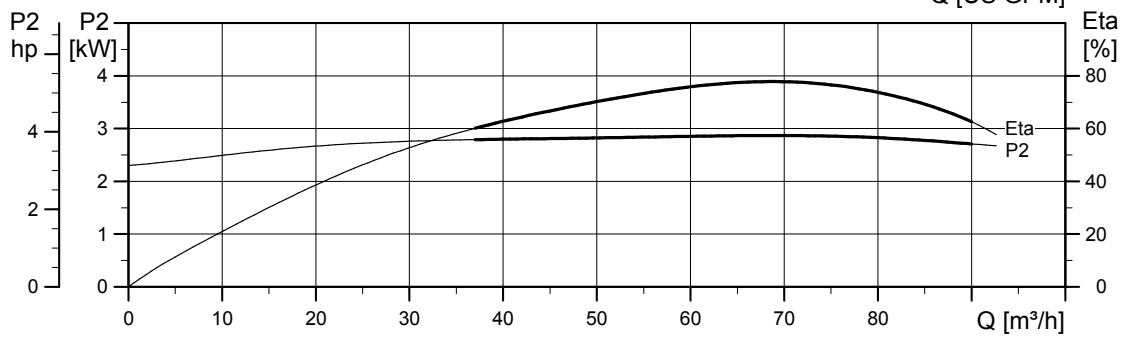
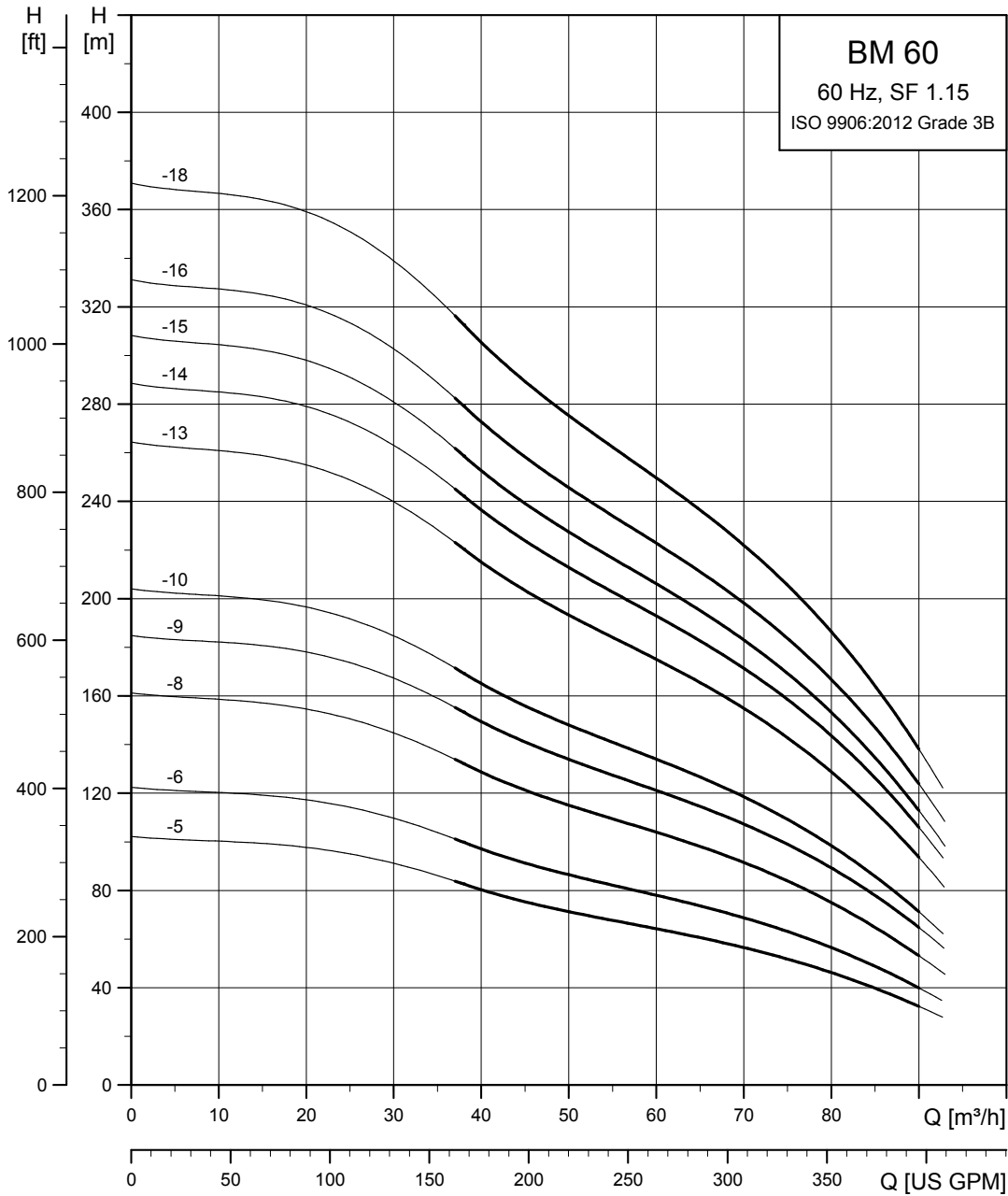
Pump type	Motor type	P2 [kW (hp)]	Standard voltage [V]	Rated current $I_N$ [A]	L [mm (inch)]	Weight [kg (lbs)]		Ship. vol. [m <sup>3</sup> ]
						Net	Gross	
BM 46-2	MS 4000	5.5 (7.5)	3 × 380	12.8 - 12.8	1650 (65)	59 (130)	85 (187)	0.289
BM 46-3	MS 6000	7.5 (10)	3 × 400	17.4 - 17	1750 (68.9)	75 (165)	107 (236)	0.304
BM 46-4	MS 6000	9.2 (12.5)	3 × 400	21.8 - 21	1850 (72.8)	85 (187)	121 (267)	0.320
BM 46-5	MS 6000	13 (17.5)	3 × 400	29.5 - 28.5	2100 (82.7)	98 (216)	139 (306)	0.356
BM 46-6	MS 6000	15 (20)	3 × 400	33.5 - 32.5	2200 (86.6)	105 (231)	149 (328)	0.374
BM 46-8	MS 6000	18.5 (25)	3 × 400	42-41	2500 (98.4)	121 (267)	171 (377)	0.421
BM 46-9	MS 6000	22 (30)	3 × 400	48 - 46.5	2700 (106.3)	132 (291)	187 (412)	0.452
BM 46-11	MS 6000	26 (35)	3 × 400	57.5 - 54.5	3050 (120)	148 (326)	209 (461)	0.507
BM 46-13	MS 6000	30 (40)	3 × 400	66.5 - 63	3200 (126)	163 (359)	230 (507)	0.530

## BM 8"

Pump type	Motor type	P2 [kW (hp)]	Standard voltage [V]	Rated current $I_N$ [A]	L [mm (inch)]	Weight [kg (lbs)]		Ship. vol. [m <sup>3</sup> ]
						Net	Gross	
BM 46-16	MMS 8000	37 (50)	3 × 460	78	3800 (149.6)	307 (677)	391 (862)	1.42
BM 46-19	MMS 8000	45 (60)	3 × 460	92.5	4150 (163.4)	341 (752)	433 (955)	1.54

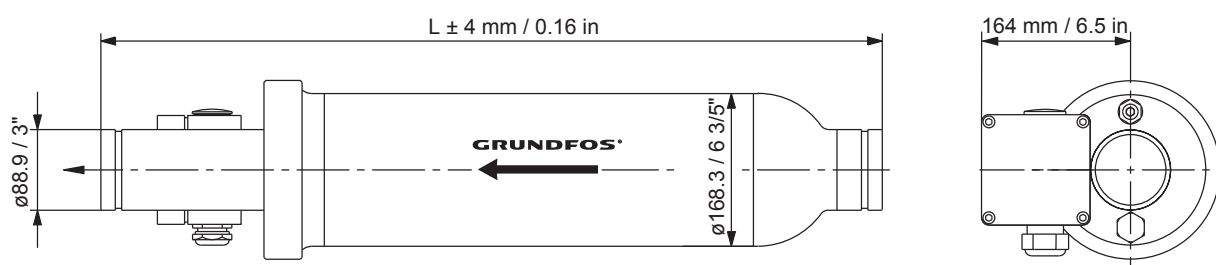
On request, the BM is available in other voltages and with all stages indicated in the standard SP pump range.

**BM 60**



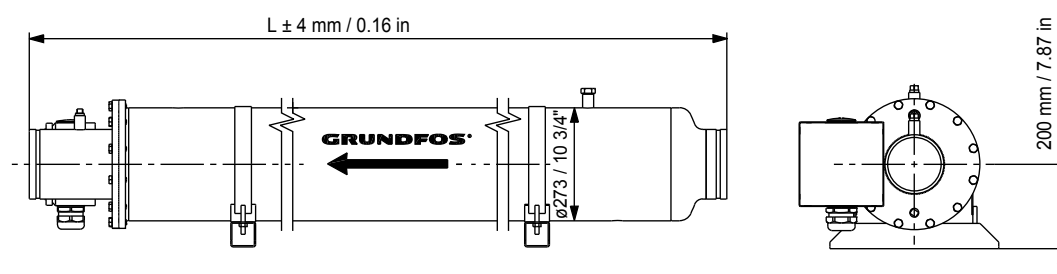
TM011226

## Dimensional sketches



TM003799

## BM 6" with straight pipe



TM011424

## BM 8" with straight pipe

One set of connecting fittings is required for each system.

## Dimensions and weights

## BM 6"

Pump type	Motor type	P2 [kW (hp)]	Standard voltage [V]	Rated current $I_N$ [A]	L [mm (inch)]	Weight [kg (lbs)]		Ship. vol. [m <sup>3</sup> ]
						Net	Gross	
BM 60-5	MS 6000	15 (20)	3 × 400	33.5 - 32.5	2100 (82.7)	102 (225)	145 (320)	0.356
BM 60-6	MS 6000	18.5 (25)	3 × 400	42-41	2200 (86.6)	111 (245)	157 (346)	0.374
BM 60-8	MS 6000	22 (30)	3 × 400	48 - 46.5	2500 (98.4)	127 (280)	180 (397)	0.421
BM 60-9	MS 6000	26 (35)	3 × 400	57.5 - 54.5	2700 (106.3)	138 (304)	195 (430)	0.452
BM 60-10	MS 6000	30 (40)	3 × 400	66.5 - 63	2850 (112.2)	150 (331)	212 (467)	0.476

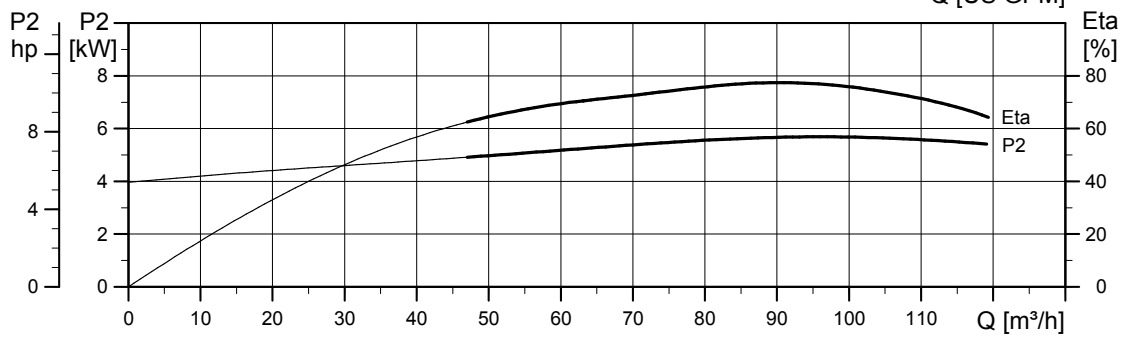
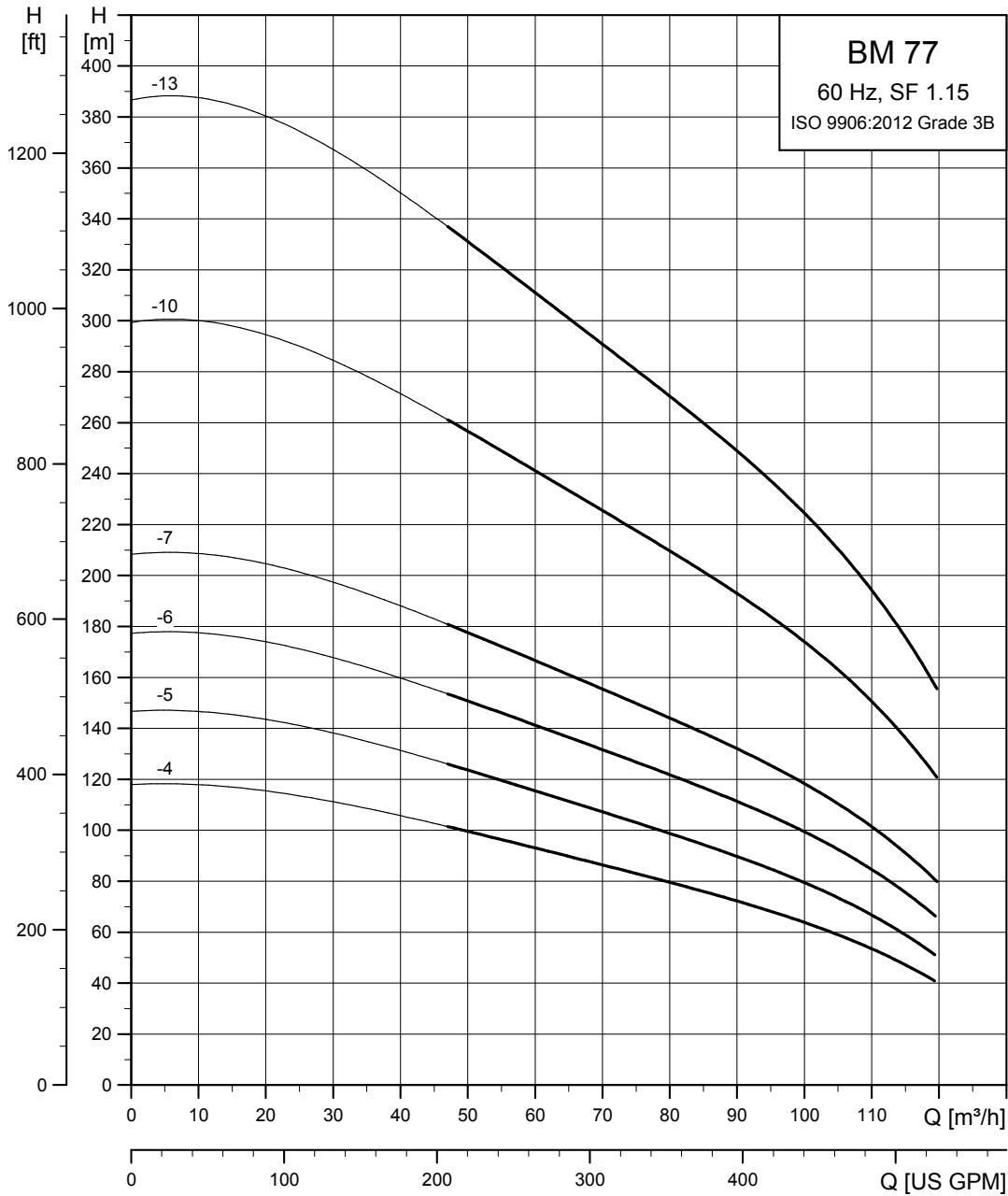
## BM 8"

Pump type	Motor type	P2 [kW (hp)]	Standard voltage [V]	Rated current $I_N$ [A]	L [mm (inch)]	Weight [kg (lbs)]		Ship. vol. [m <sup>3</sup> ]
						Net	Gross	
BM 60-13	MMS 8000	37 (50)	3 × 460	78	3450 (135.8)	291 (642)	367 (809)	1.29
BM 60-14	MMS 8000	45 (60)	3 × 460	92.5	3800 (149.6)	323 (712)	407 (897)	1.42
BM 60-15	MMS 8000	45 (60)	3 × 460	92.5	3800 (149.6)	324 (714)	408 (899)	1.42
BM 60-16	MMS 8000	55 (75)	3 × 460	112	4150 (163.4)	348 (767)	439 (968)	1.54
BM 60-18	MMS 8000	55 (75)	3 × 460	112	4150 (163.4)	353 (778)	444 (979)	1.54

On request, the BM is available in other voltages and with all stages indicated in the standard SP pump range.

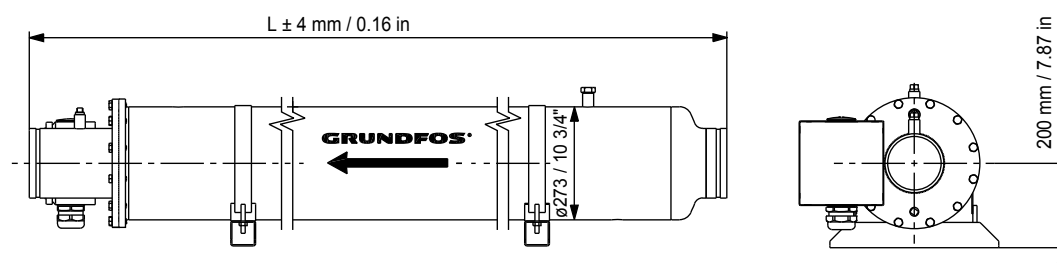


**BM 77**



TM011227

## Dimensional sketch



TM011424

*BM 8" with straight pipe*

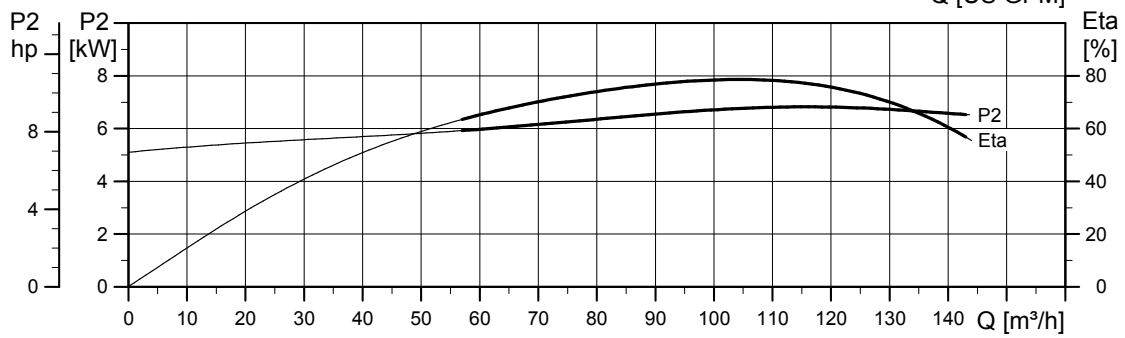
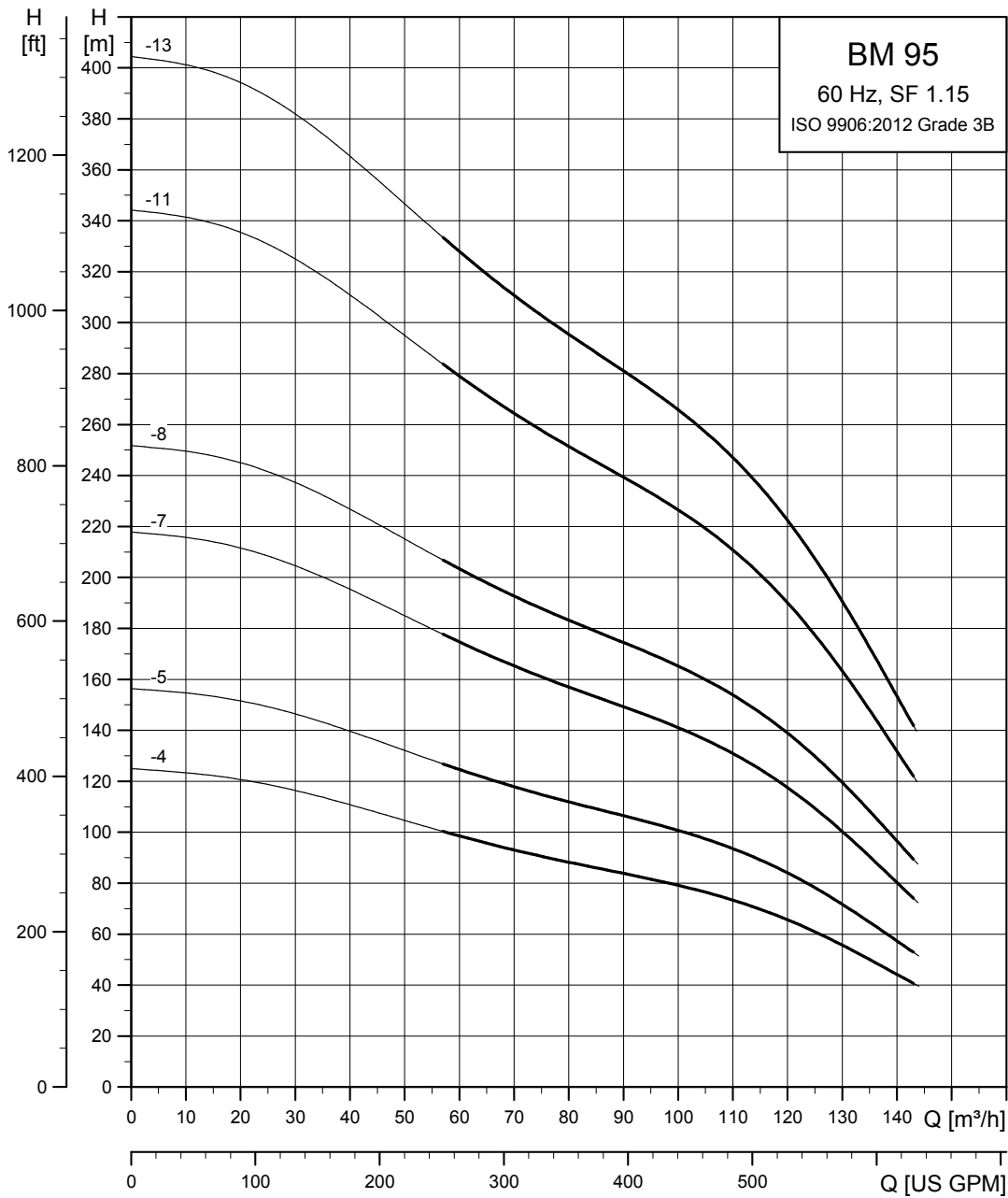
One set of connecting fittings is required for each system.

## Dimensions and weights

Pump type	Motor type	P2 [kW (hp)]	Standard voltage [V]	Rated current $I_N$ [A]	L [mm (inch)]	Weight [kg (lbs)]		Ship. vol. [m <sup>3</sup> ]
						Net	Gross	
BM 77-4	MS 6000	22 (30)	3 × 400	48 - 46.5	2400 (94.5)	170 (375)	223 (492)	0.91
BM 77-5	MS 6000	30 (40)	3 × 400	66.5 - 63	2750 (108.3)	194 (428)	254 (560)	1.04
BM 77-6	MMS 8000	37 (50)	3 × 460	78	3200 (126)	287 (633)	257 (567)	1.20
BM 77-7	MMS 8000	45 (60)	3 × 460	92.5	3200 (126)	311 (686)	381 (840)	1.20
BM 77-10	MMS 8000	55 (75)	3 × 460	112	3800 (149.6)	351 (774)	434 (957)	1.42
BM 77-13	MMS 8000	75 (100)	3 × 460	150	4450 (175.2)	414 (913)	505 (1113)	1.54

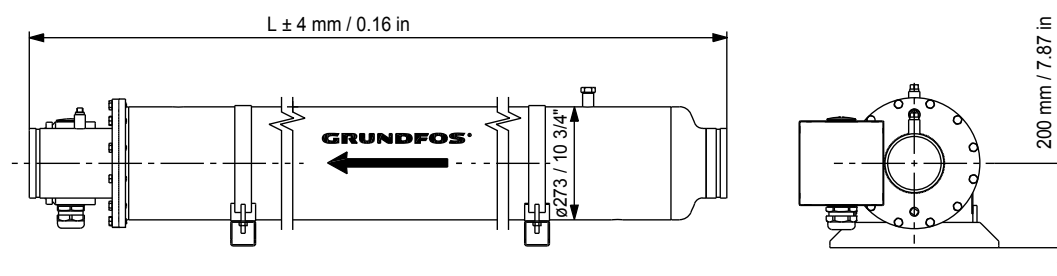
On request, the BM is available in other voltages and with all stages indicated in the standard SP pump range.

**BM 95**



TM012079

## Dimensional sketch



TM011424

*BM 8" with straight pipe*

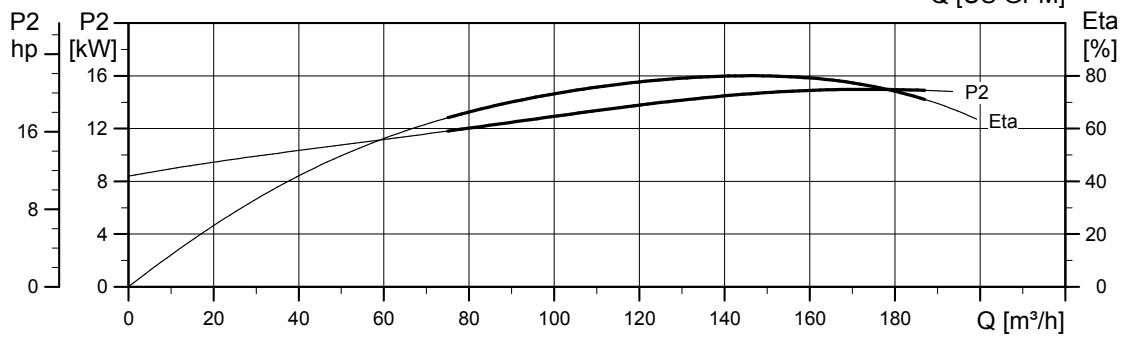
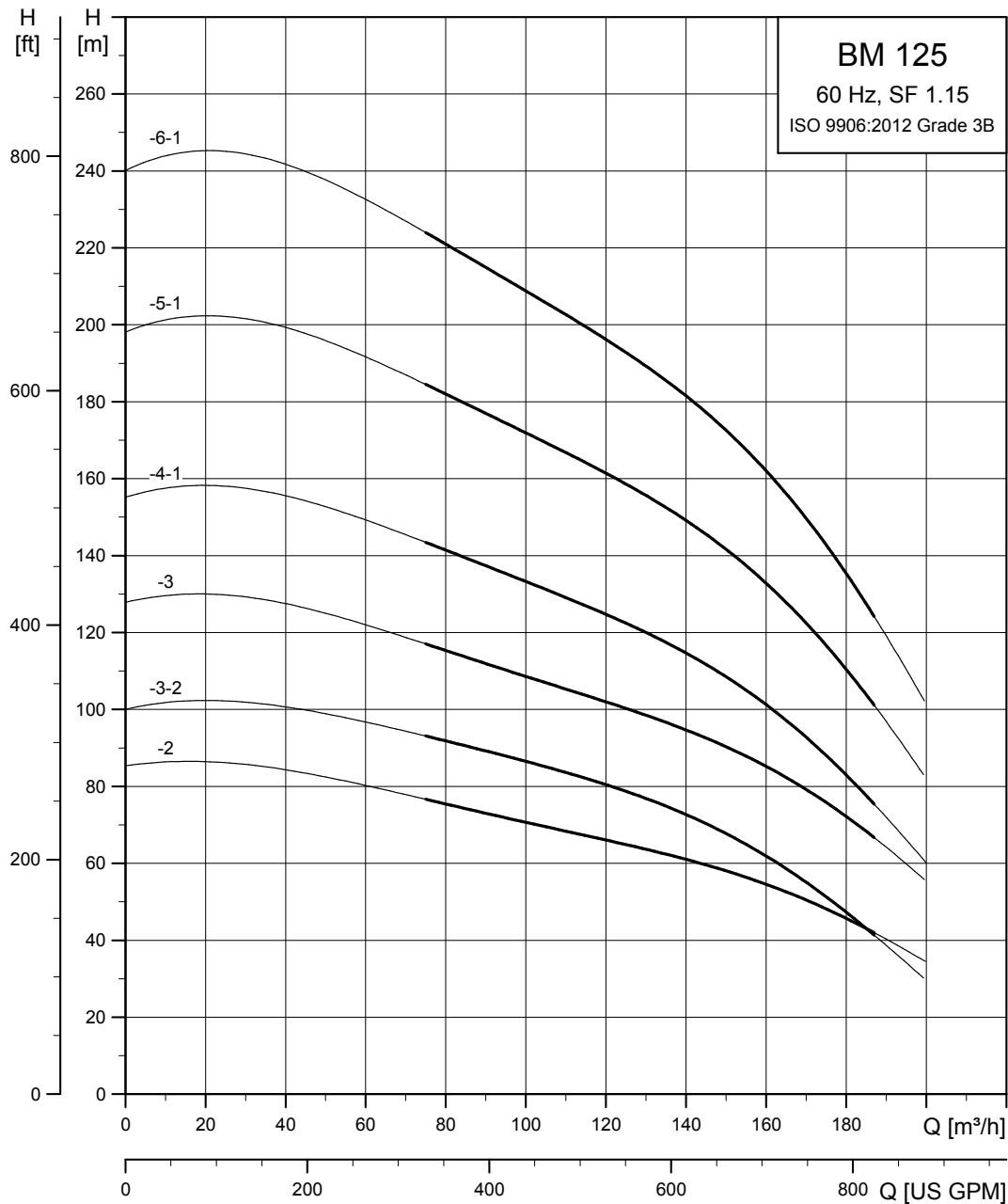
One set of connecting fittings is required for each system.

## Dimensions and weights

Pump type	Motor type	P2 [kW (hp)]	Standard voltage [V]	Rated current $I_N$ [A]	L [mm (inch)]	Weight [kg (lbs)]		Ship. vol. [m <sup>3</sup> ]
						Net	Gross	
BM 95-4	MS 6000	26 (35)	3 × 400	57.5 - 54.5	2400 (94.5)	176 (388)	228 (503)	0.91
BM 95-5	MMS 8000	37 (50)	3 × 460	78	2750 (108.3)	273 (602)	333 (734)	1.04
BM 95-7	MMS 8000	45 (60)	3 × 460	92.5	3200 (126)	311 (686)	381 (840)	1.20
BM 95-8	MMS 8000	55 (75)	3 × 460	112	3450 (126)	335 (739)	410 (904)	1.20
BM 95-11	MMS 8000	75 (100)	3 × 460	150	4150 (163.4)	406 (895)	497 (1096)	1.54
BM 95-13	MMS 8000	92 (123)	3 × 460	184	4450 (175.2)	466 (1027)	563 (1241)	1.65

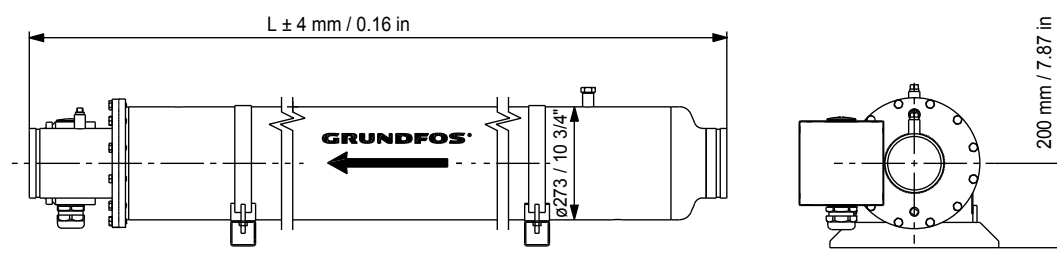
On request, the BM is available in other voltages and with all stages indicated in the standard SP pump range.

**BM 125**



TM012080

## Dimensional sketch



TM011424

## BM 8" with straight pipe

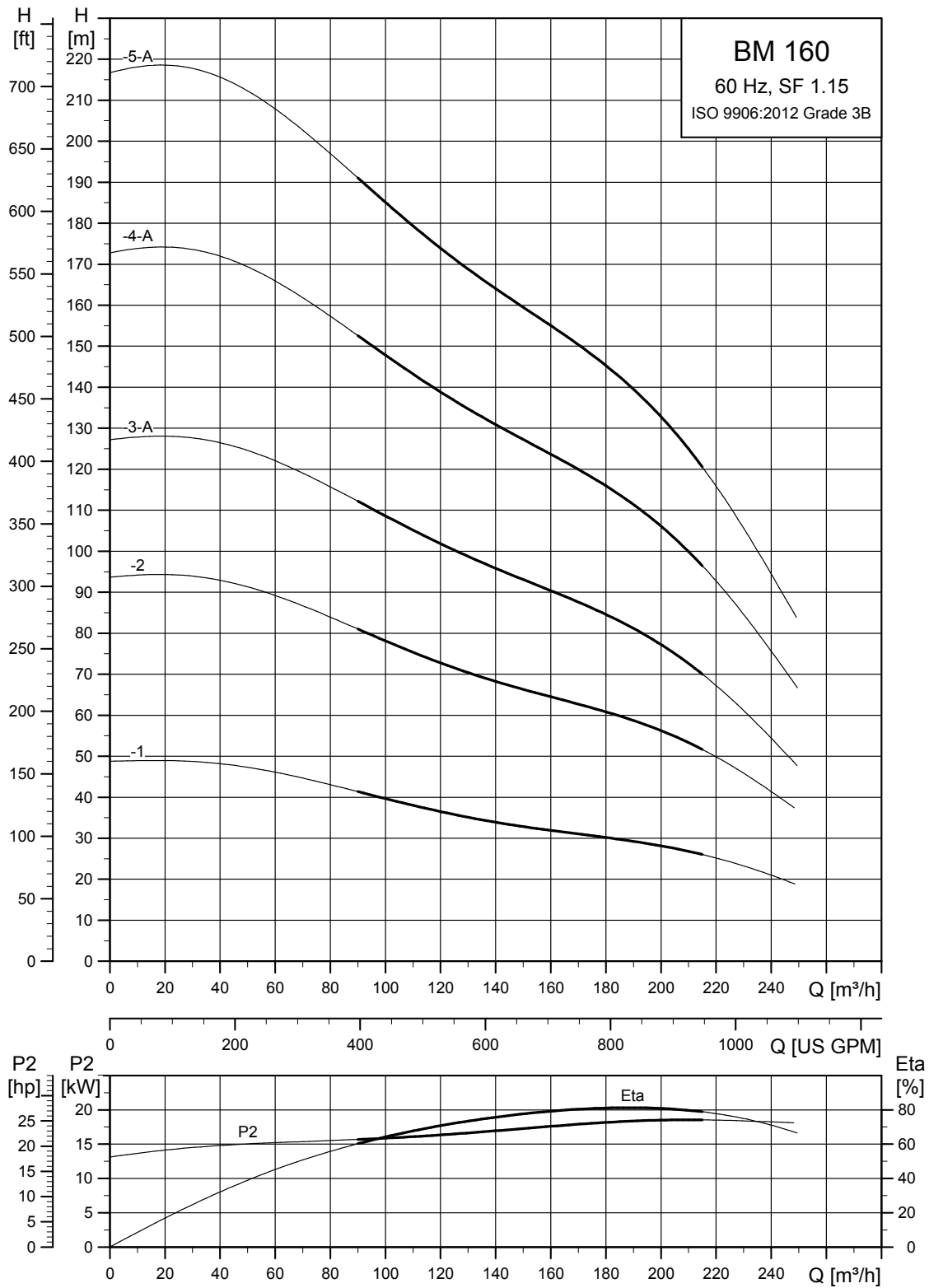
One set of connecting fittings is required for each system.

## Dimensions and weights

Pump type	Motor type	P2 [kW (hp)]	Standard voltage [V]	Rated current $I_N$ [A]	L [mm (inch)]	Weight [kg (lbs)]		Ship. vol. [m <sup>3</sup> ]
						Net	Gross	
BM 125-2	MS 6000	30 (40)	3 × 400	66.5 - 63	2400 (94.5)	192 (423)	245 (540)	0.91
BM 125-3-AA	MMS 8000	37 (50)	3 × 460	78	2750 (108.3)	283 (624)	343 (756)	1.05
BM 125-3	MMS 8000	45 (60)	3 × 460	92.5	2750 (108.3)	306 (675)	367 (809)	1.04
BM 125-4-A	MMS 8000	55 (75)	3 × 460	112	3200 (126)	337 (743)	407 (897)	1.20
BM 125-5-A	MMS 8000	75 (100)	3 × 460	150	3800 (149.6)	399 (880)	482 (1063)	1.42
BM 125-6-A	MMS 8000	92 (123)	3 × 460	184	3800 (149.6)	451 (994)	535 (1179)	1.42

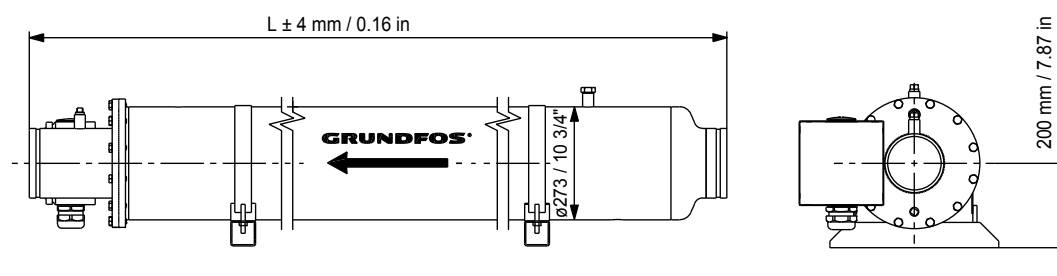
On request, the BM is available in other voltages and with all stages indicated in the standard SP pump range.

**BM 160**



TM047952

## Dimensional sketch



TM011424

*BM 8" with straight pipe*

One set of connecting fittings is required for each system.

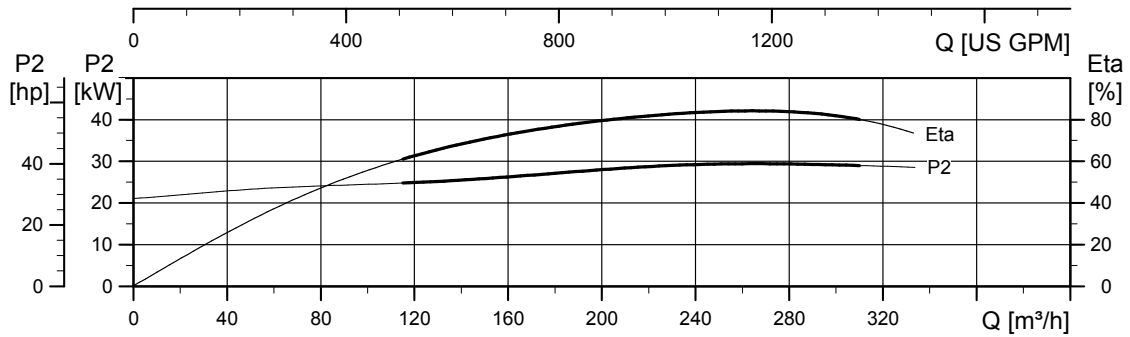
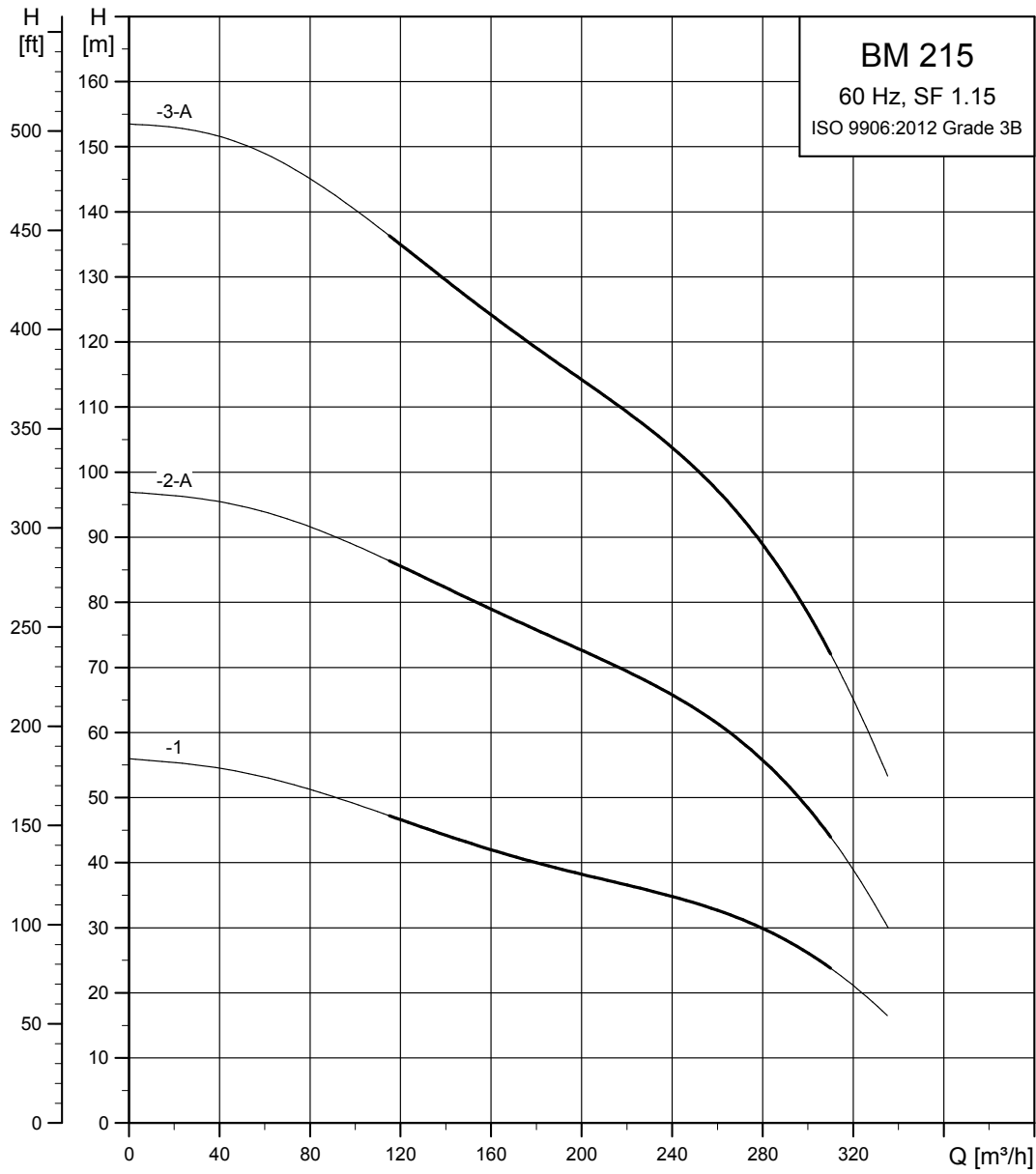
## Dimensions and weights

Pump type	Motor type	P2 [kW (hp)]	Standard voltage [V]	Rated current $I_N$ [A]	L [mm (inch)]	Weight [kg (lbs)]		Ship. vol. [m <sup>3</sup> ]
						Net	Gross	
BM 160-1	MS 6000	22 (30)	3 × 400	48 - 46.5	2400 (94.5)	172 (379)	225 (496)	0.91
BM 160-2	MMS 8000	37 (50)	3 × 460	78	2750 (108.3)	277 (611)	338 (745)	1.04
BM 160-3-A	MMS 8000	55 (75)	3 × 460	112	3200 (126)	331 (730)	401 (884)	1.20
BM 160-4-A	MMS 8000	75 (100)	3 × 460	150	3200 (126)	380 (838)	450 (992)	1.20
BM 160-5-A	MMS 8000	92 (125)	3 × 460	184	3800 (149.6)	445 (981)	529 (1166)	1.42

On request, the BM is available in other voltages and with all stages indicated in the standard SP pump range.

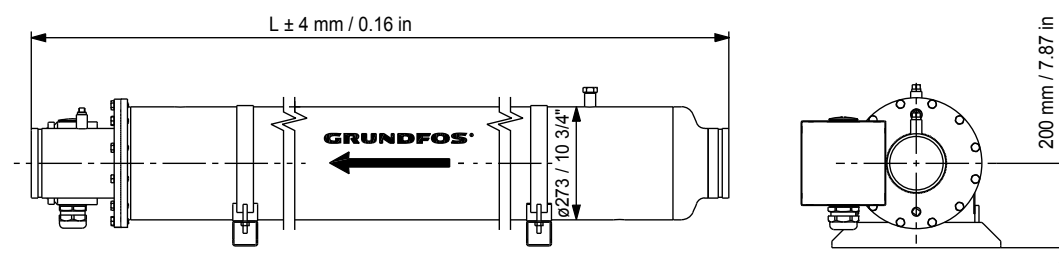


**BM 215**



TM047954

### Dimensional sketch



TM011424

BM 8" with straight pipe

One set of connecting fittings is required for each system.

### Dimensions and weights

Pump type	Motor type	P2 [kW (hp)]	Standard voltage [V]	Rated current $I_N$ [A]	L [mm (inch)]	Weight [kg (lbs)]		Ship. vol. [m <sup>3</sup> ]
						Net	Gross	
BM 215-1	MS 6000	30 (40)	3 × 400	66.5 - 63	2400 (94.5)	193 (425)	246 (542)	0.91
BM 215-2-A	MMS 8000	55 (75)	3 × 460	112	3200 (126)	336 (741)	406 (895)	1.20
BM 215-3-A	MMS 8000	92 (125)	3 × 460	184	3800 (149.6)	450 (992)	534 (1177)	1.42

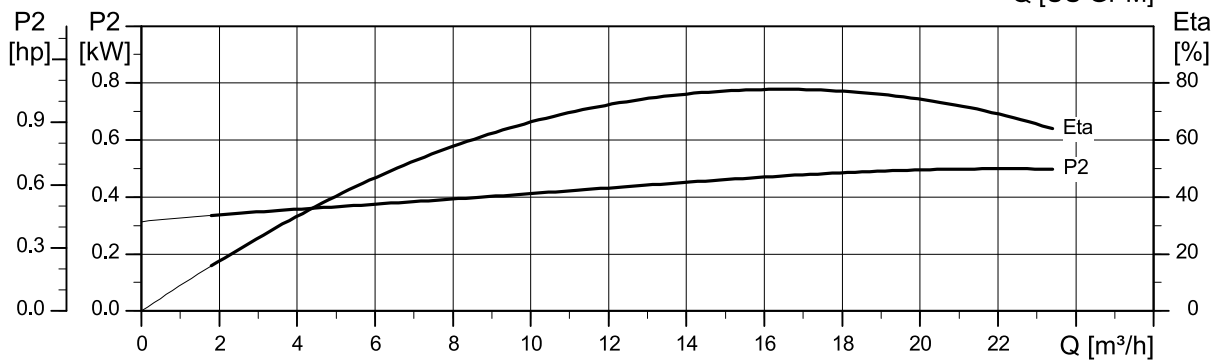
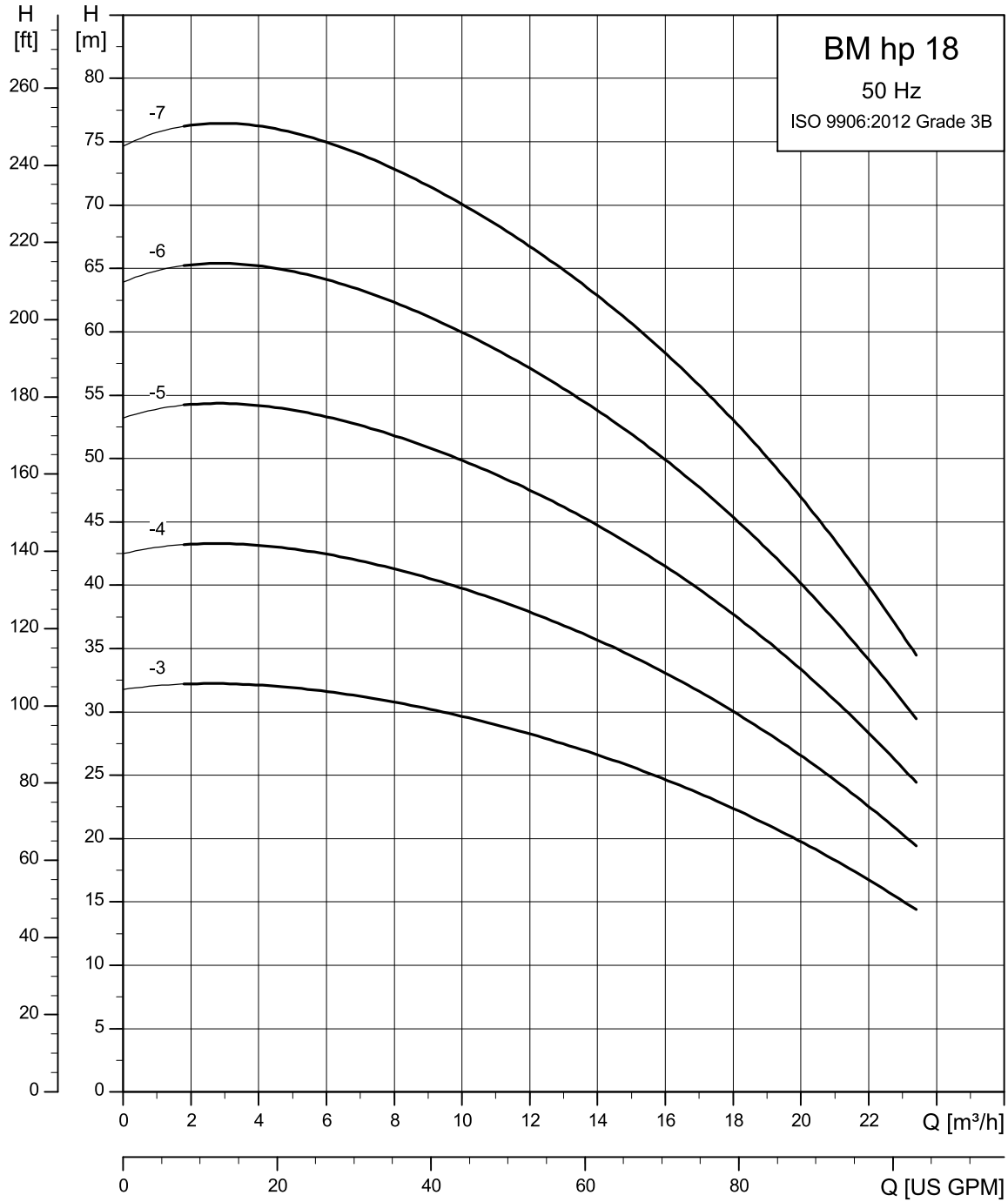
On request, the BM is available in other voltages and with all stages indicated in the standard SP pump range.

### Connections

Size	Type	Victaulic coupling, style 77
BM 8"	BM 30 - BM 46	3" / Ø89
BM 8"	BM 60	4" / Ø114
BM 8"	BM 77 - BM 95	5" / Ø139
BM 8"	BM 125 - BM 215	6" / Ø168

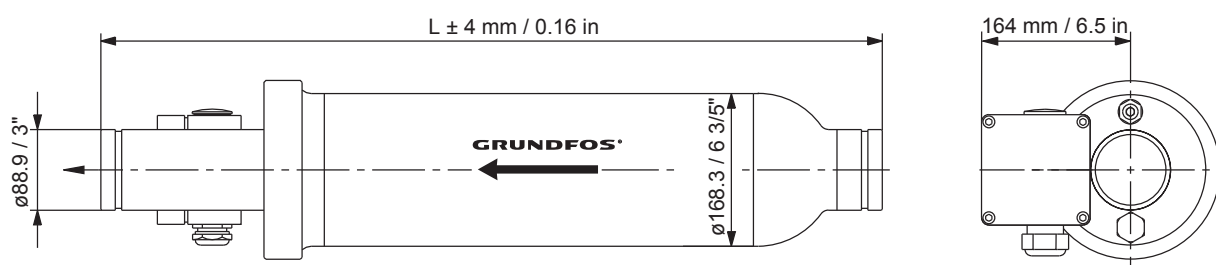
**BM hp, 50 Hz**

**BM hp 18**



TM086652

## Dimensional sketch



TM003799

*BM hp 6" with straight pipe*

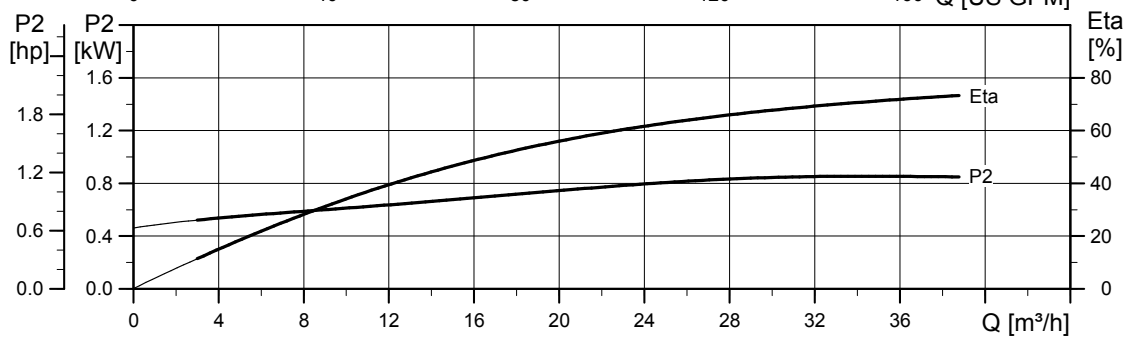
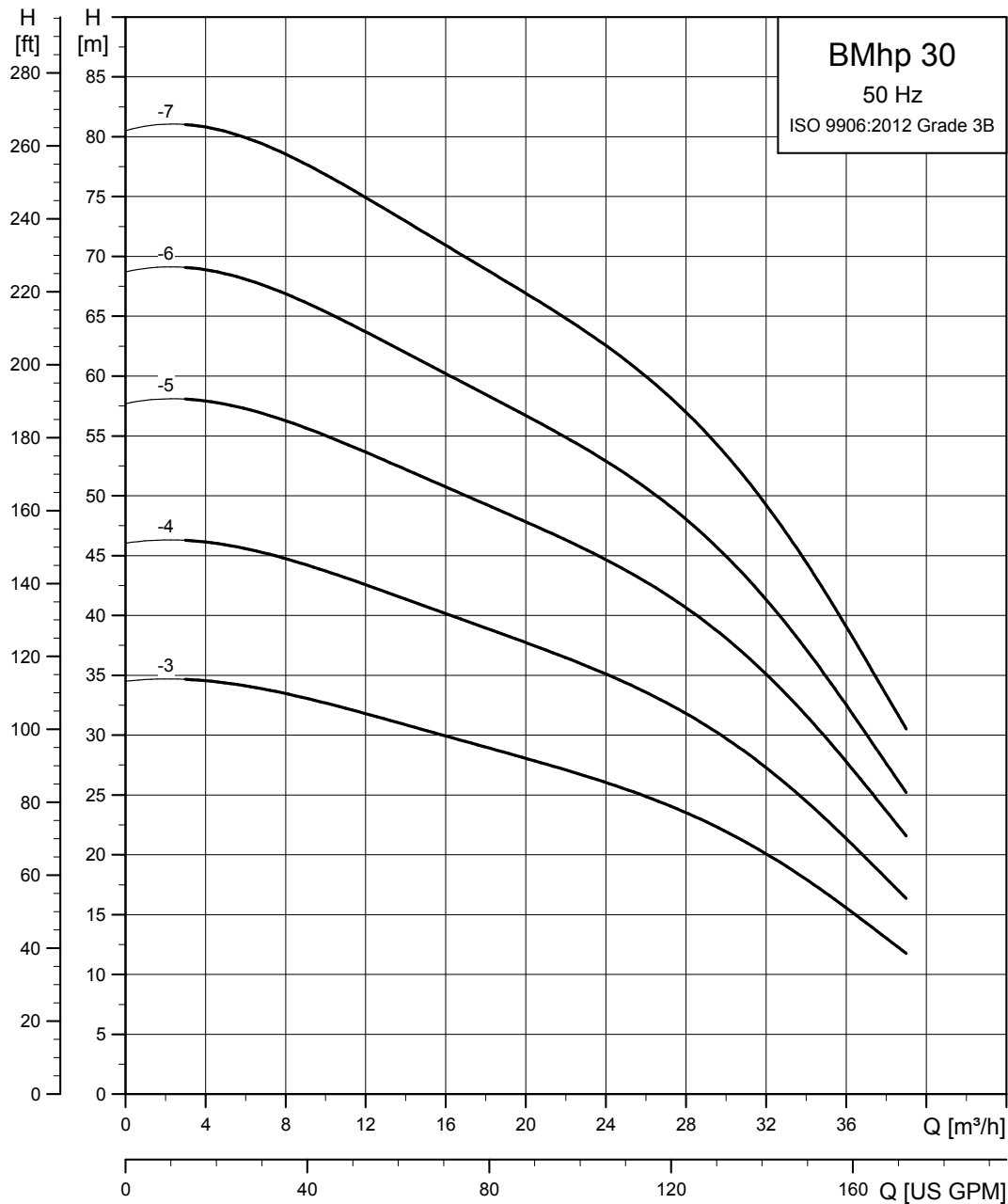
One set of connecting fittings is required for each system.

## Dimensions and weights

Pump type	Motor type	P2 [kW (hp)]	Standard voltage [V]	Rated current $I_N$ [A]	L [mm (inch)]	Weight [kg (lbs)]		Ship. vol. [m <sup>3</sup> ]
						Net	Gross	
BM hp 18-3	MS 6000	5.5 (7.5)	3 × 400	13.6 - 13.8	2100 (82.7)	73 (161)	104.5 (230)	0.399
BM hp 18-4	MS 6000	5.5 (7.5)	3 × 400	13.6 - 13.8	2100 (82.7)	74.5 (164)	106 (234)	0.399
BM hp 18-5	MS 6000	5.5 (7.5)	3 × 400	13.6 - 13.8	2100 (82.7)	76 (168)	107.5 (237)	0.399
BM hp 18-6	MS 6000	5.5 (7.5)	3 × 400	13.6 - 13.8	2100 (82.7)	77.3 (170)	109 (240)	0.399
BM hp 18-7	MS 6000	5.5 (7.5)	3 × 400	13.6 - 13.8	2100 (82.7)	79 (174)	110.5 (244)	0.399

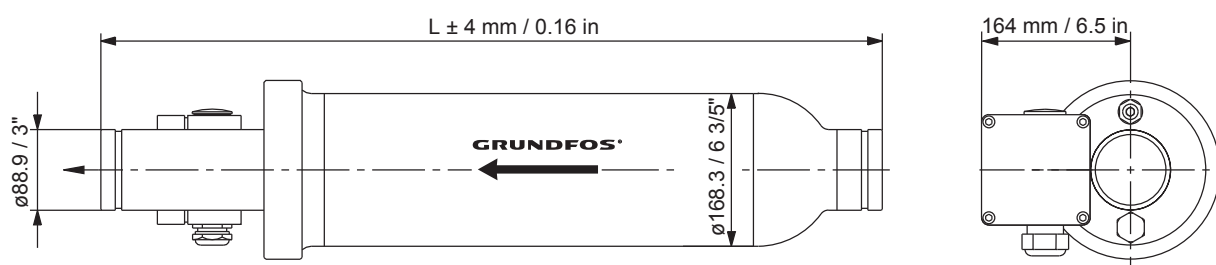
On request, the BM hp is available in other voltages and with all stages indicated in the standard SP pump range.

BM hp 30



TM047956

## Dimensional sketch



TM003799

*BM hp 6" with straight pipe*

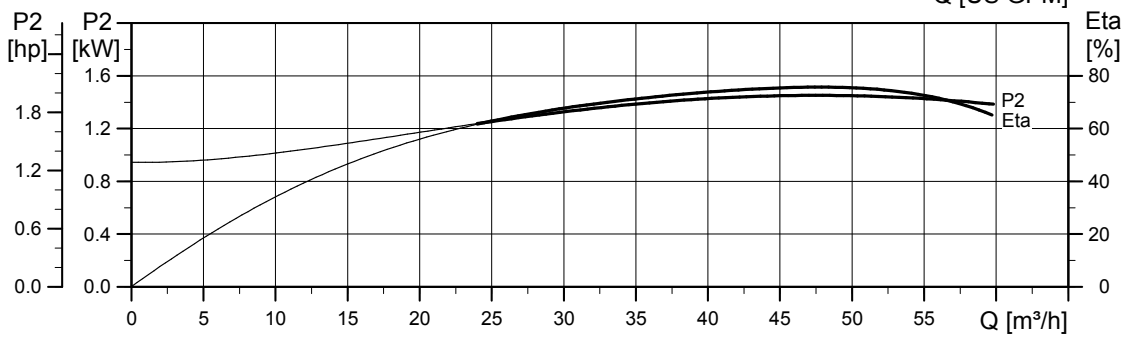
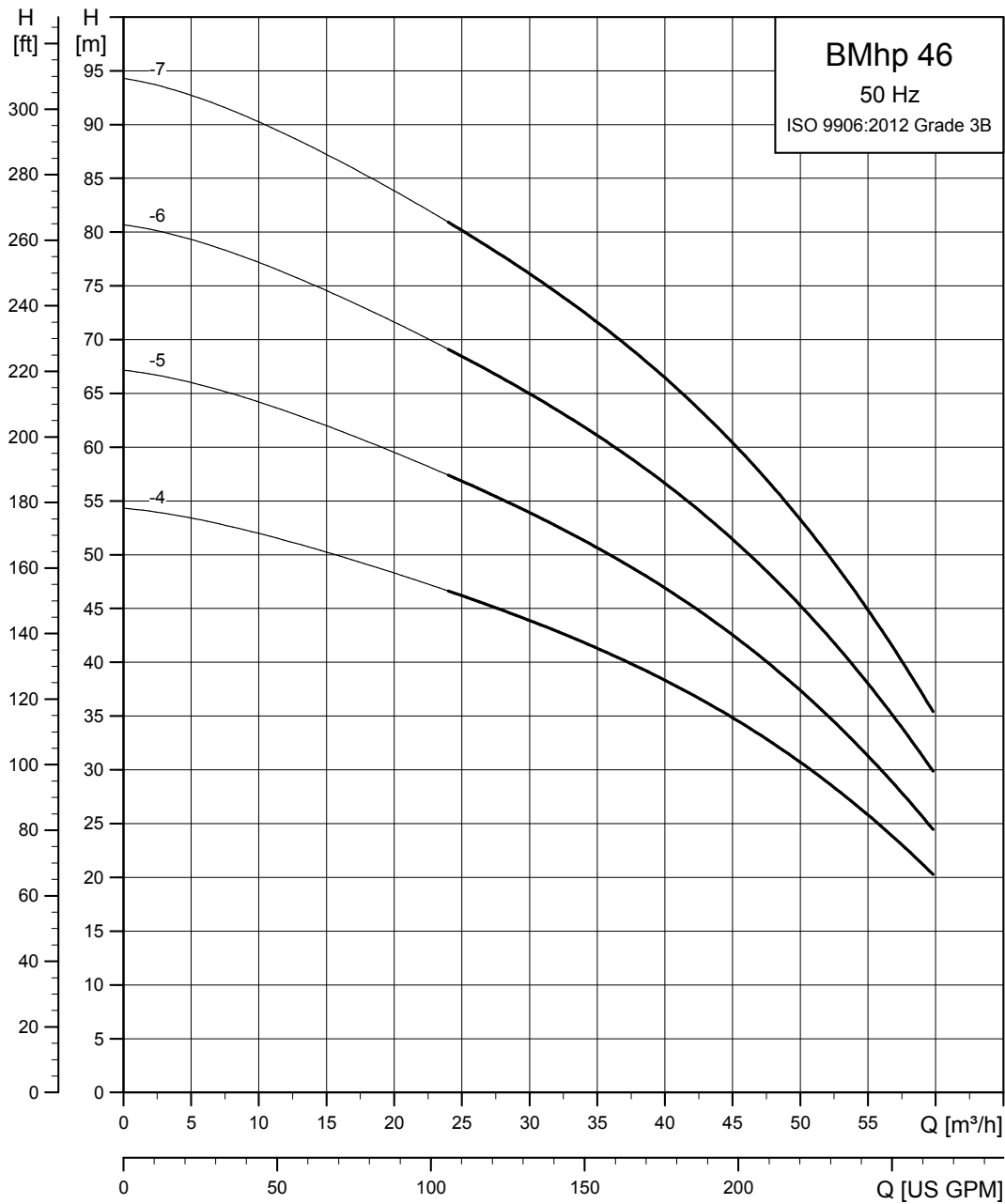
One set of connecting fittings is required for each system.

## Dimensions and weights

Pump type	Motor type	P2 [kW (hp)]	Standard voltage [V]	Rated current $I_N$ [A]	L [mm (inch)]	Weight [kg (lbs)]		Ship. vol. [m <sup>3</sup> ]
						Net	Gross	
BM hp 30-3	MS 6000	5.5 (7.5)	3 × 400	13.6 - 13.8	2100 (82.7)	75.5 (166)	107 (236)	0.399
BM hp 30-4	MS 6000	5.5 (7.5)	3 × 400	13.6 - 13.8	2100 (82.7)	77.5 (171)	109 (240)	0.399
BM hp 30-5	MS 6000	5.5 (7.5)	3 × 400	13.6 - 13.8	2100 (82.7)	79.5 (175)	111 (245)	0.399
BM hp 30-6	MS 6000	5.5 (7.5)	3 × 400	13.6 - 13.8	2100 (82.7)	81.5 (180)	113 (249)	0.399
BM hp 30-7	MS 6000	7.5 (10)	3 × 400	17.6 - 17.8	2100 (82.7)	85.5 (188)	117 (258)	0.399

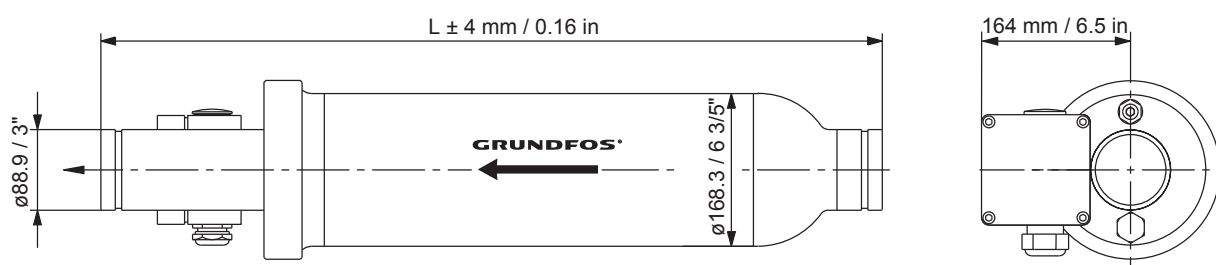
On request, the BM hp is available in other voltages and with all stages indicated in the standard SP pump range.

**BM hp 46**



TM047957

## Dimensional sketch



TM003799

*BM hp 6" with straight pipe*

One set of connecting fittings is required for each system.

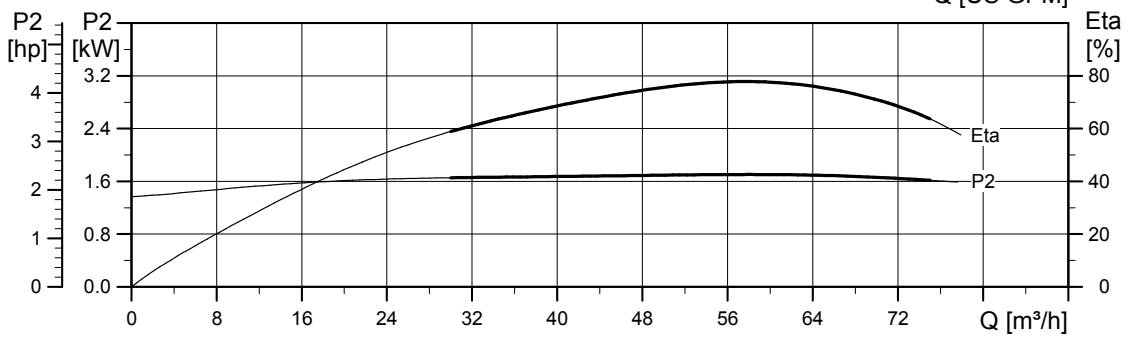
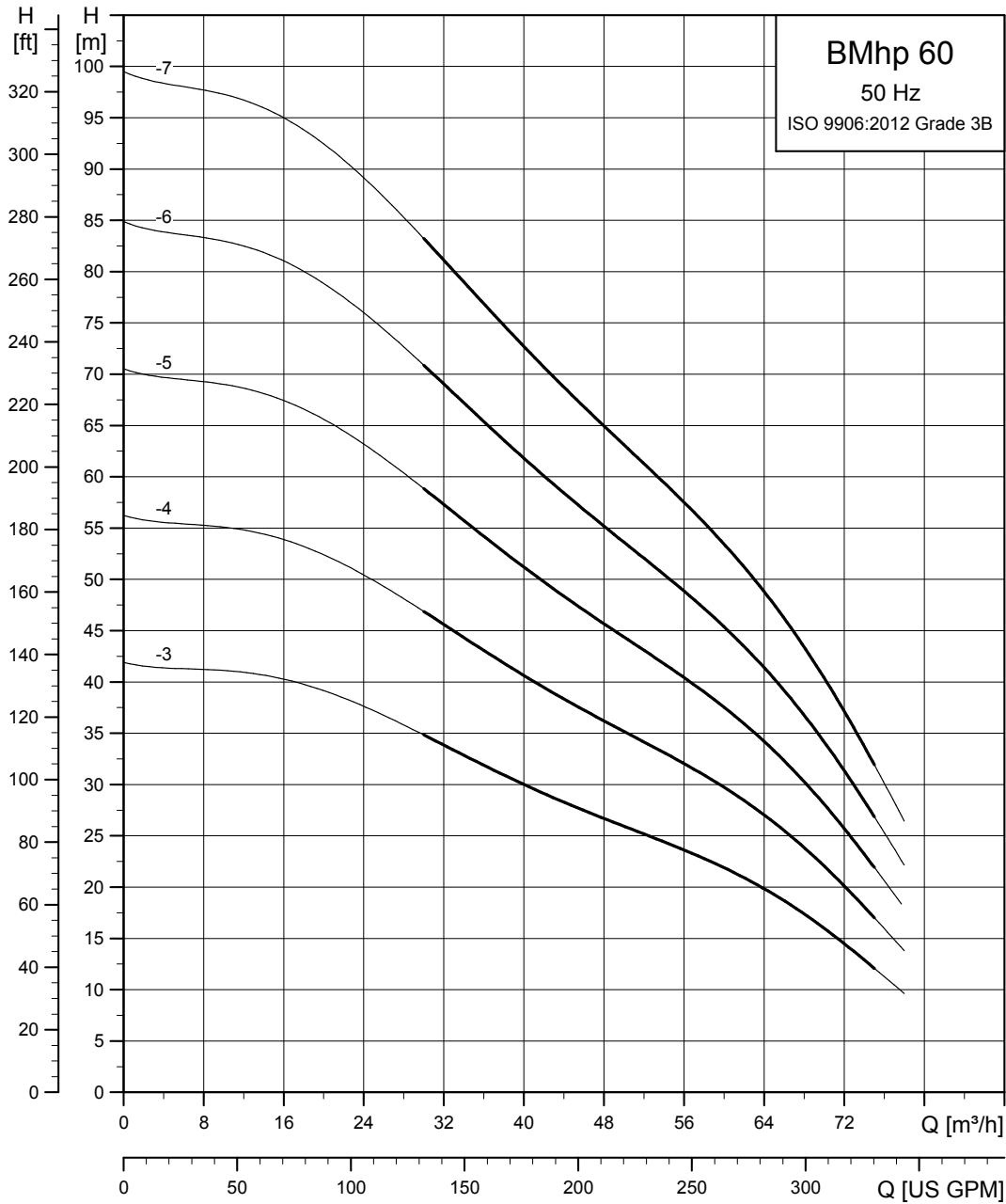
## Dimensions and weights

Pump type	Motor type	P2 [kW (hp)]	Standard voltage [V]	Rated current $I_N$ [A]	L [mm (inch)]	Weight [kg (lbs)]		Ship. vol. [m <sup>3</sup> ]
						Net	Gross	
BM hp 46-4	MS 6000	7.5 (10)	3 × 400	17.6 - 17.8	2100 (82.7)	86 (190)	117.5 (259)	0.399
BM hp 46-5	MS 6000	7.5 (10)	3 × 400	17.6 - 17.8	2100 (82.7)	88 (194)	119.5 (263)	0.399
BM hp 46-6	MS 6000	9.2 (12.5)	3 × 400	21.8 - 21.8	2700 (106.3)	100.5 (222)	160 (353)	0.500
BM hp 46-7	MS 6000	11 (15)	3 × 400	24.8 - 25.5	2700 (106.3)	105.5 (233)	165 (364)	0.500

On request, the BM hp is available in other voltages and with all stages indicated in the standard SP pump range.

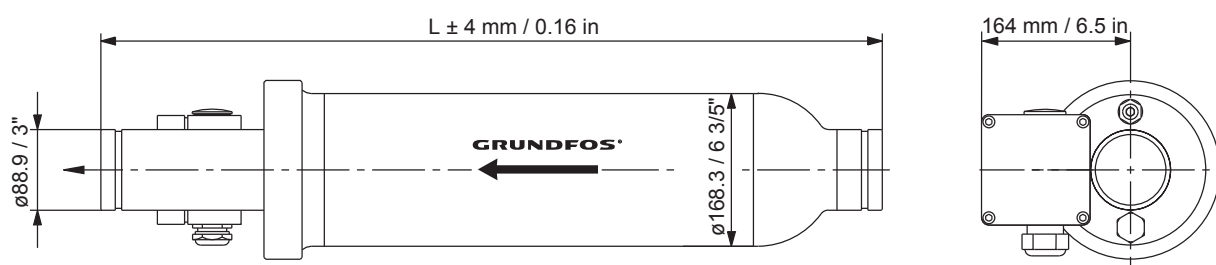


BM hp 60



TM047958

## Dimensional sketch



TM003799

## BM hp 6" with straight pipe

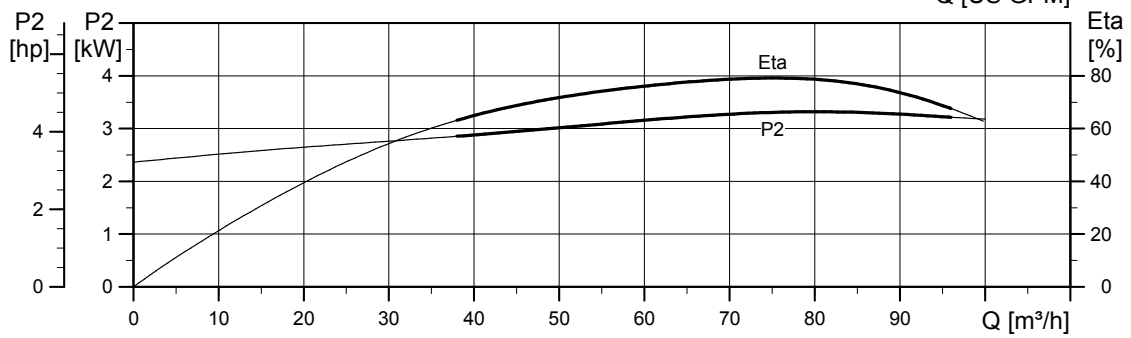
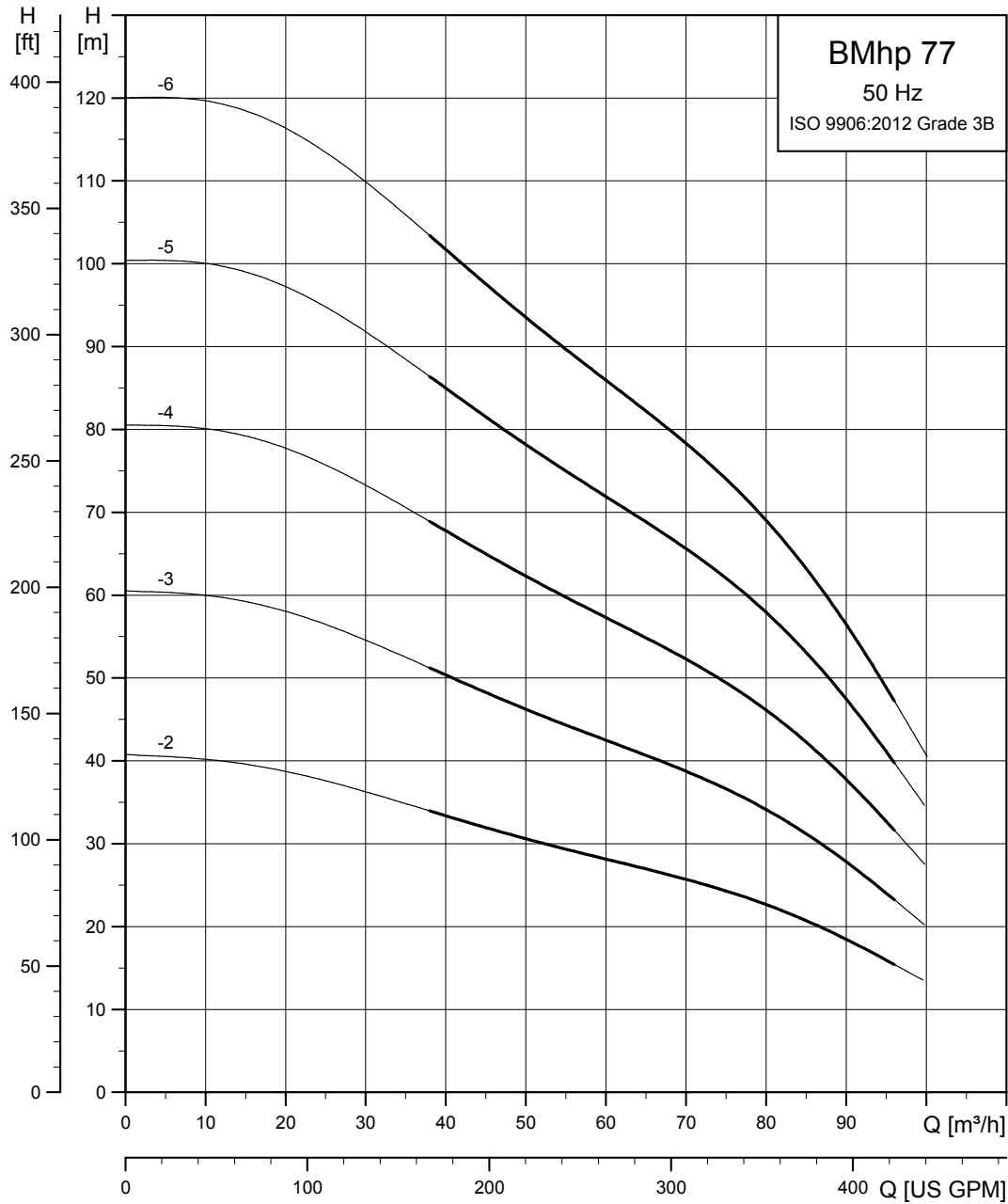
One set of connecting fittings is required for each system.

## Dimensions and weights

Pump type	Motor type	P2 [kW (hp)]	Standard voltage [V]	Rated current $I_N$ [A]	L [mm (inch)]	Weight [kg (lbs)]		Ship. vol. [m <sup>3</sup> ]
						Net	Gross	
BM hp 60-3	MS 6000	5.5 (7.5)	3 × 400	13.6 - 13.8	2100 (82.7)	80.5 (177)	112 (247)	0.399
BM hp 60-4	MS 6000	7.5 (10)	3 × 400	17.6 - 17.8	2100 (82.7)	86 (190)	117.5 (259)	0.399
BM hp 60-5	MS 6000	9.2 (12.5)	3 × 400	21.8 - 21.8	2100 (82.7)	93.5 (206)	125 (276)	0.399
BM hp 60-6	MS 6000	11 (15)	3 × 400	24.8 - 25.5	2700 (106.3)	104 (229)	163.5 (360)	0.500
BM hp 60-7	MS 6000	13 (17.5)	3 × 400	30 - 30.5	2700 (106.3)	109 (240)	168.5 (371)	0.500

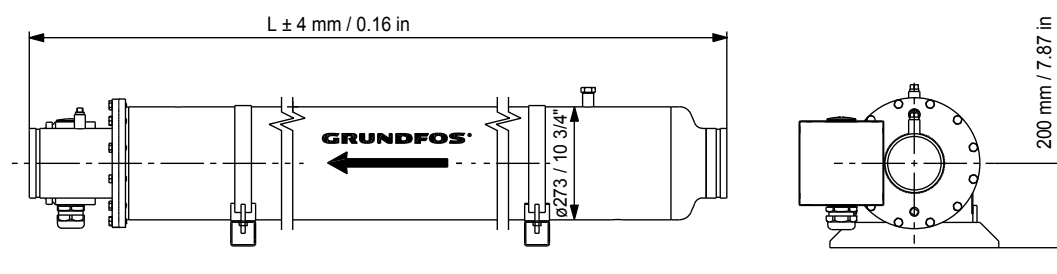
On request, the BM hp is available in other voltages and with all stages indicated in the standard SP pump range.

**BM hp 77**



TM047959

## Dimensional sketch



TM011424

*BM hp 8" with straight pipe*

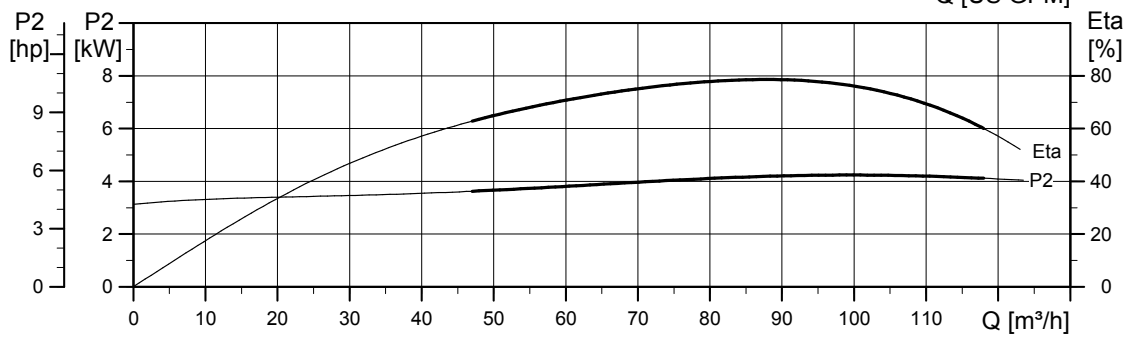
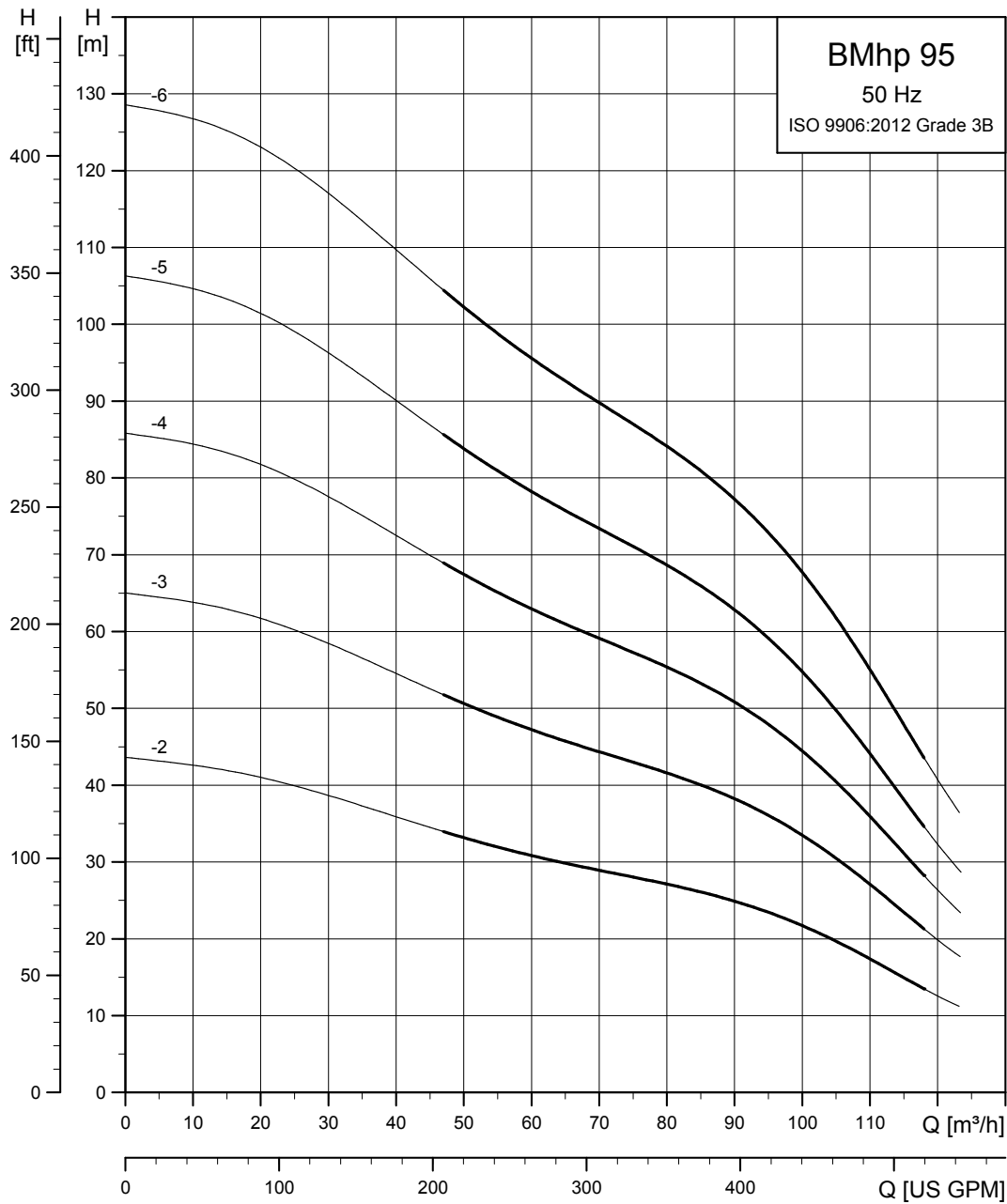
One set of connecting fittings is required for each system.

## Dimensions and weights

Pump type	Motor type	P2 [kW (hp)]	Standard voltage [V]	Rated current $I_N$ [A]	L [mm (inch)]	Weight [kg (lbs)]		Ship. vol. [m <sup>3</sup> ]
						Net	Gross	
BM hp 77-2	MS 6000	7.5 (10)	3 × 400	17.6 - 17.8	2100 (82.7)	133 (293)	186 (410)	0.919
BM hp 77-3	MS 6000	11.0 (15)	3 × 400	24.8 - 25.5	2400 (94.5)	145 (320)	198 (437)	0.919
BM hp 77-4	MS 6000	15.0 (20)	3 × 400	34 - 34.5	2400 (94.5)	155.5 (343)	208.5 (460)	0.919
BM hp 77-5	MS 6000	18.5 (25)	3 × 400	42 - 42.5	2750 (108.3)	171.5 (378)	232 (511)	1.041
BM hp 77-6	MS 6000	22.0 (30)	3 × 400	47.5 - 50	2750 (108.3)	181 (399)	241.5 (532)	1.041

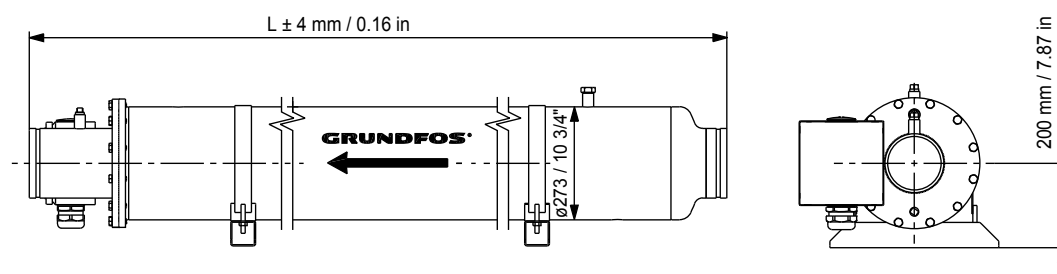
On request, the BM hp is available in other voltages and with all stages indicated in the standard SP pump range.

BM hp 95



TM047960

## Dimensional sketch



TM011424

*BM hp 8" with straight pipe*

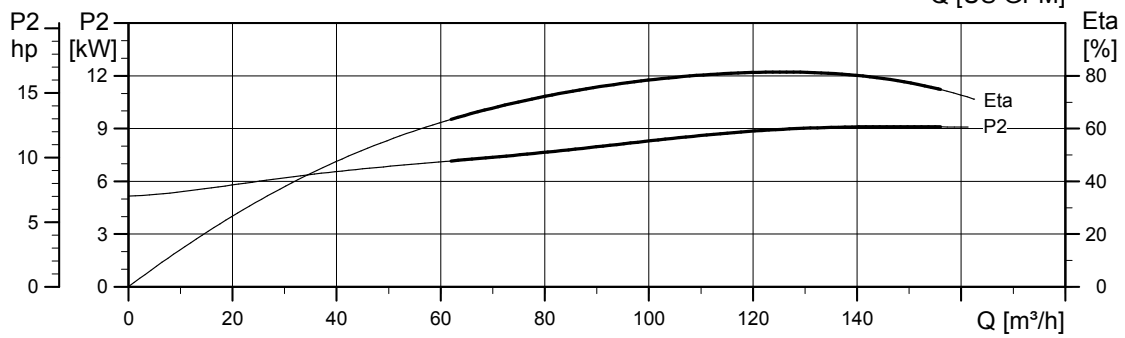
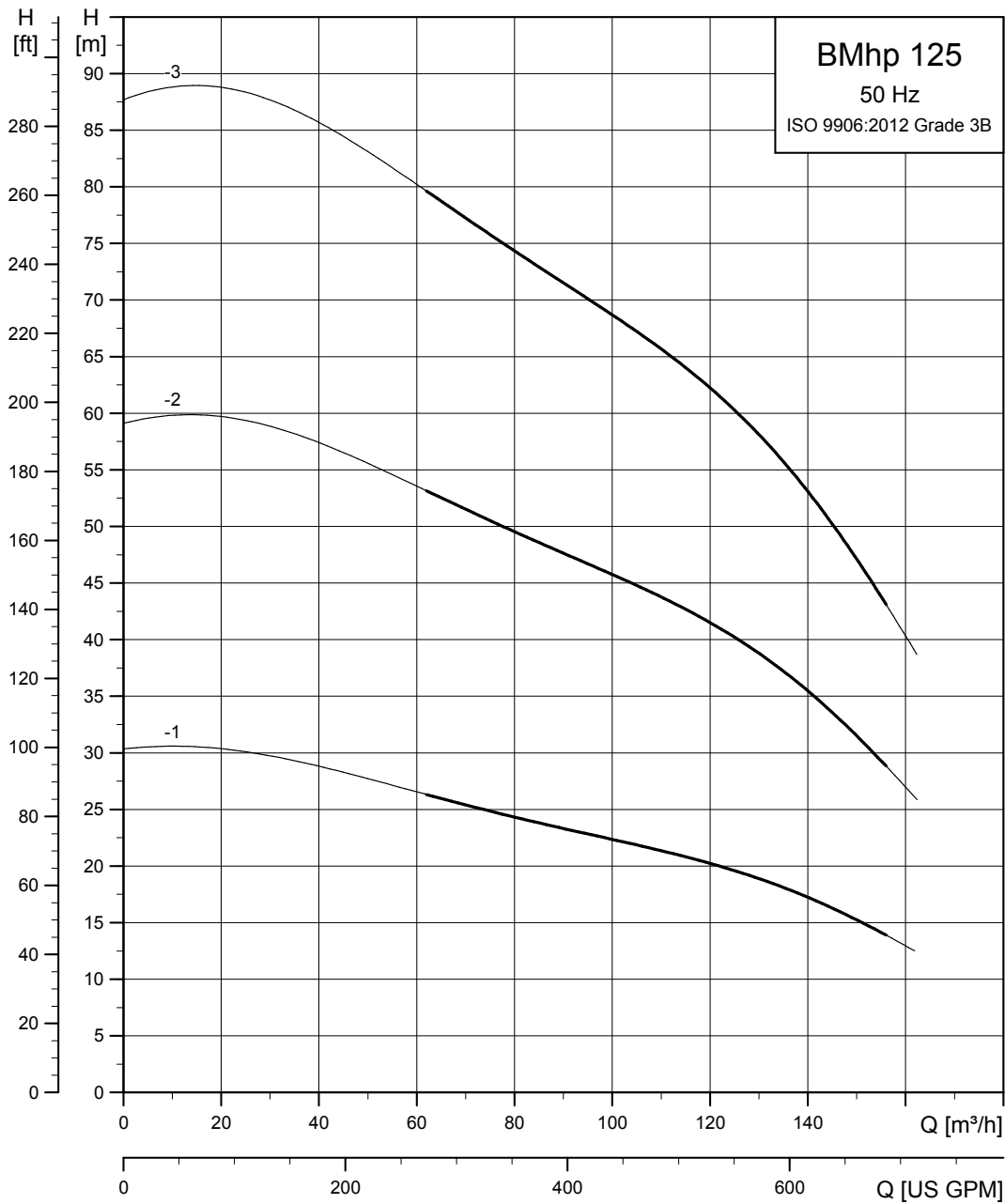
One set of connecting fittings is required for each system.

## Dimensions and weights

Pump type	Motor type	P2 [kW (hp)]	Standard voltage [V]	Rated current $I_N$ [A]	L [mm (inch)]	Weight [kg (lbs)]		Ship. vol. [m <sup>3</sup> ]
						Net	Gross	
BM hp 95-2	MS 6000	9.2 (12.5)	3 × 400	21.8 - 21.8	2100 (82.7)	132.5 (292)	179 (395)	0.815
BM hp 95-3	MS 6000	13 (17.5)	3 × 400	30 - 30.5	2400 (94.5)	148 (326)	201 (443)	0.919
BM hp 95-4	MS 6000	18.5 (25)	3 × 400	42 - 42.5	2400 (94.5)	161 (355)	214 (472)	0.919
BM hp 95-5	MS 6000	22 (30)	3 × 400	47.5 - 50	2750 (108.3)	177.5 (391)	238 (525)	1.041
BM hp 95-6	MS 6000	26 (35)	3 × 400	57-59	2750 (108.3)	186.5 (411)	247 (545)	1.041

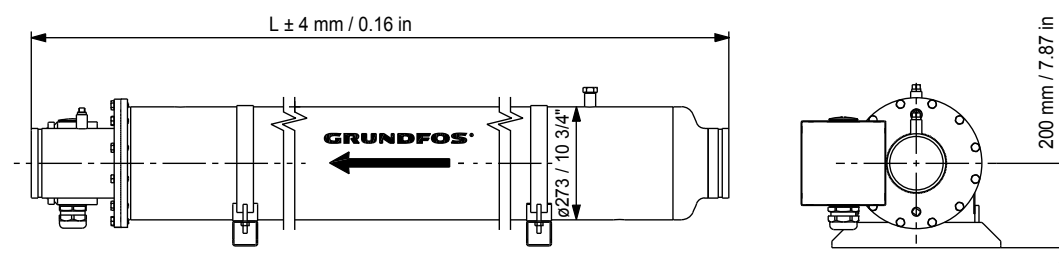
On request, the BM hp is available in other voltages and with all stages indicated in the standard SP pump range.

**BM hp 125**



TM047961

## Dimensional sketch



TM011424

*BM hp 8" with straight pipe*

One set of connecting fittings is required for each system.

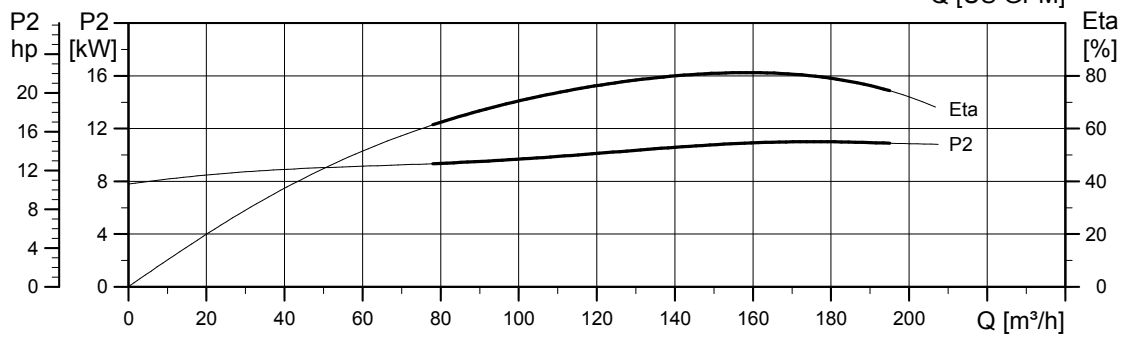
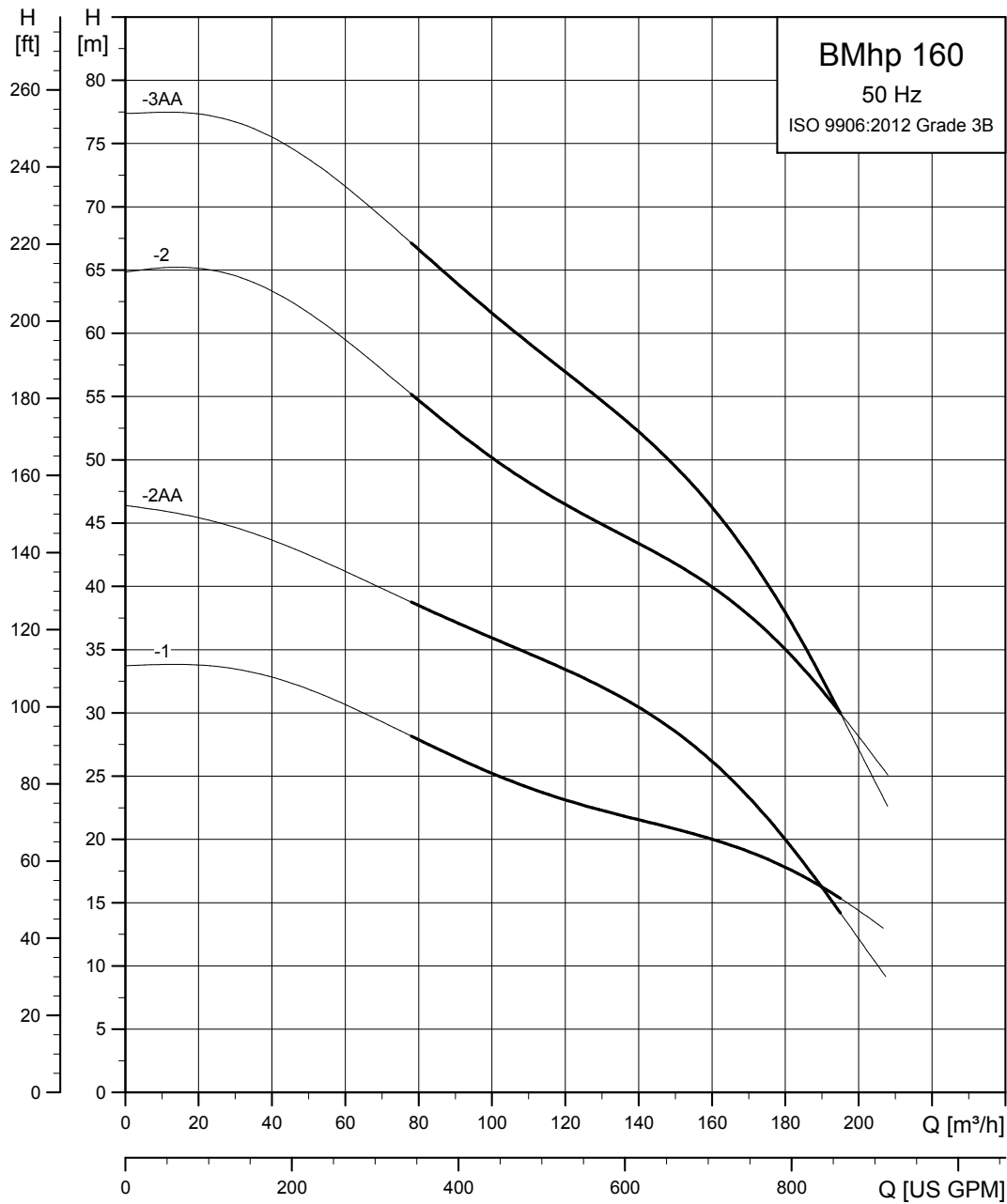
## Dimensions and weights

Pump type	Motor type	P2 [kW (hp)]	Standard voltage [V]	Rated current $I_N$ [A]	L [mm (inch)]	Weight [kg (lbs)]		Ship. vol. [m <sup>3</sup> ]
						Net	Gross	
BM hp 125-1	MS 6000	11 (15)	3 × 400	24.8 - 25.5	2100 (82.7)	142 (313)	188 (414)	0.815
BM hp 125-2	MS 6000	22 (30)	3 × 400	47.5 - 50	2400 (94.5)	172.5 (380)	225.5 (497)	0.919
BM hp 125-3	MS 6000	30 (40)	3 × 400	66.5 - 68.5	2400 (94.5)	192 (423)	245 (540)	0.919

On request, the BM hp is available in other voltages and with all stages indicated in the standard SP pump range.

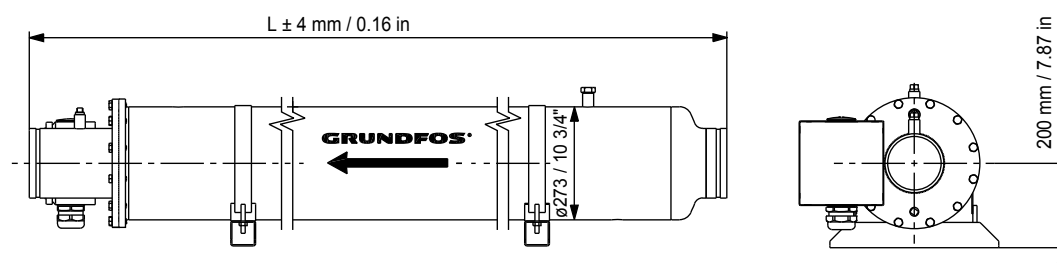


**BM hp 160**



TM047962

## Dimensional sketch



TM011424

*BM hp 8" with straight pipe*

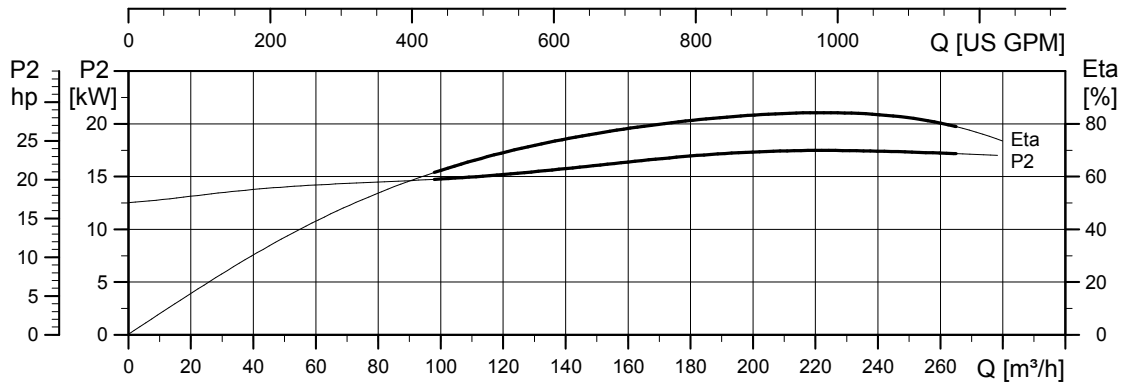
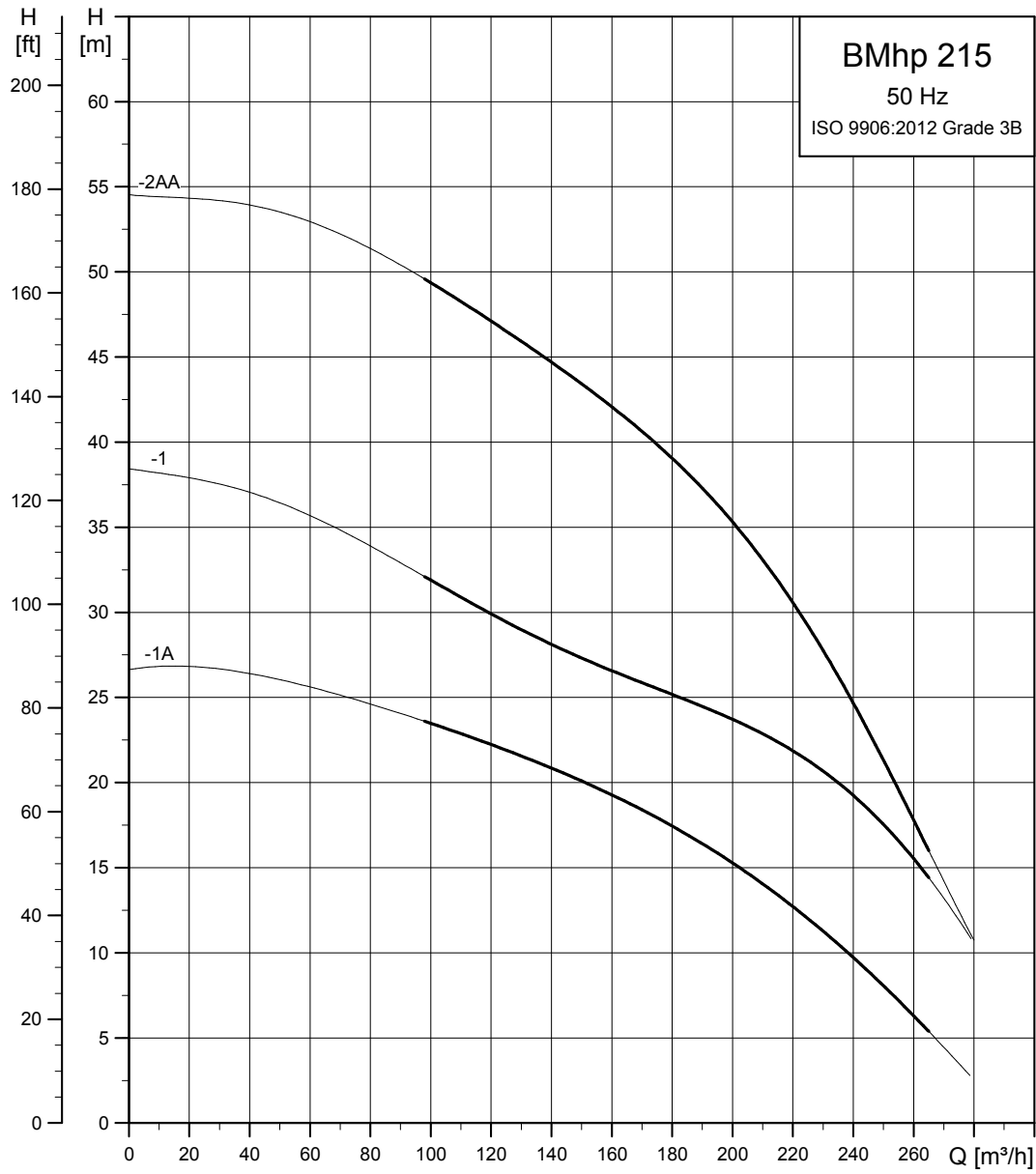
One set of connecting fittings is required for each system.

## Dimensions and weights

Pump type	Motor type	P2 [kW (hp)]	Standard voltage [V]	Rated current $I_N$ [A]	L [mm (inch)]	Weight [kg (lbs)]		Ship. vol. [m <sup>3</sup> ]
						Net	Gross	
BM hp 160-1	MS 6000	13 (17.5)	3 × 400	30 - 30.5	2100 (82.7)	145 (320)	191 (421)	0.815
BM hp 160-2AA	MS 6000	18.5 (25)	3 × 400	42 - 42.5	2400 (94.5)	166 (366)	219 (483)	0.919
BM hp 160-2	MS 6000	26 (35)	3 × 400	57-59	2400 (94.5)	178 (392)	231 (509)	0.919
BM hp 160-3AA	MS 6000	30 (40)	3 × 400	66.5 - 68.5	2400 (94.5)	192 (423)	245 (540)	0.919

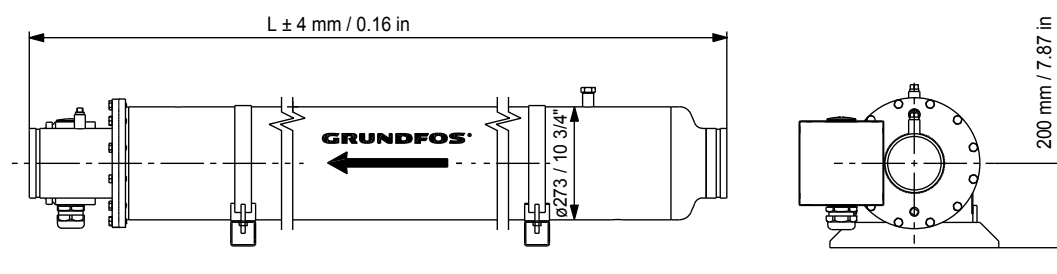
On request, the BM hp is available in other voltages and with all stages indicated in the standard SP pump range.

BM hp 215



TM047963

### Dimensional sketch



TM011424

### BM hp 8" with straight pipe

One set of connecting fittings is required for each system.

### Dimensions and weights

Pump type	Motor type	P2 [kW (hp)]	Standard voltage [V]	Rated current $I_N$ [A]	L [mm (inch)]	Weight [kg (lbs)]		Ship. vol. [m <sup>3</sup> ]
						Net	Gross	
BM hp 215-1A	MS 6000	15 (20)	3 × 400	34 - 34.5	2400 (94.5)	161 (355)	214 (472)	0.919
BM hp 215-1	MS 6000	18.5 (25)	3 × 400	42 - 42.5	2400 (94.5)	166 (366)	219 (483)	0.919
BM hp 215-2AA	MS 6000	30 (40)	3 × 400	66.5 - 68.5	2400 (94.5)	196 (432)	249 (549)	0.919

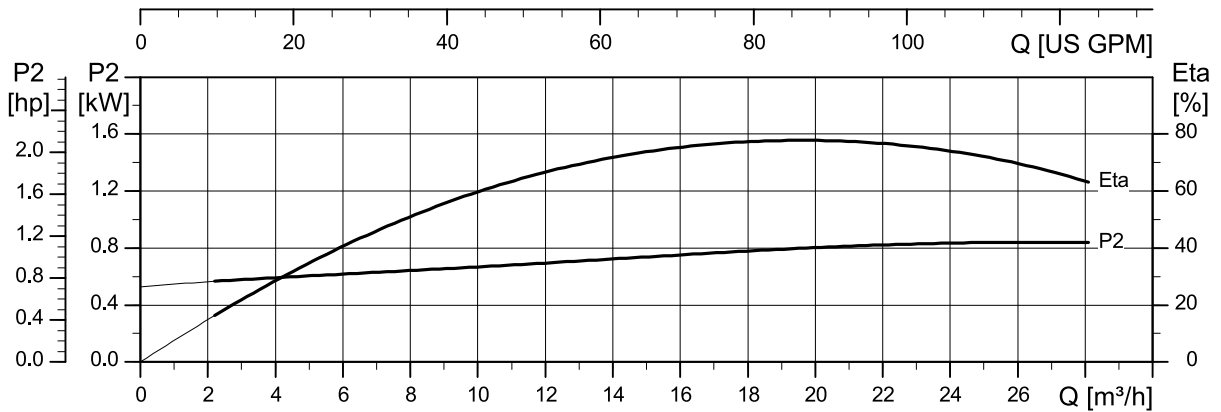
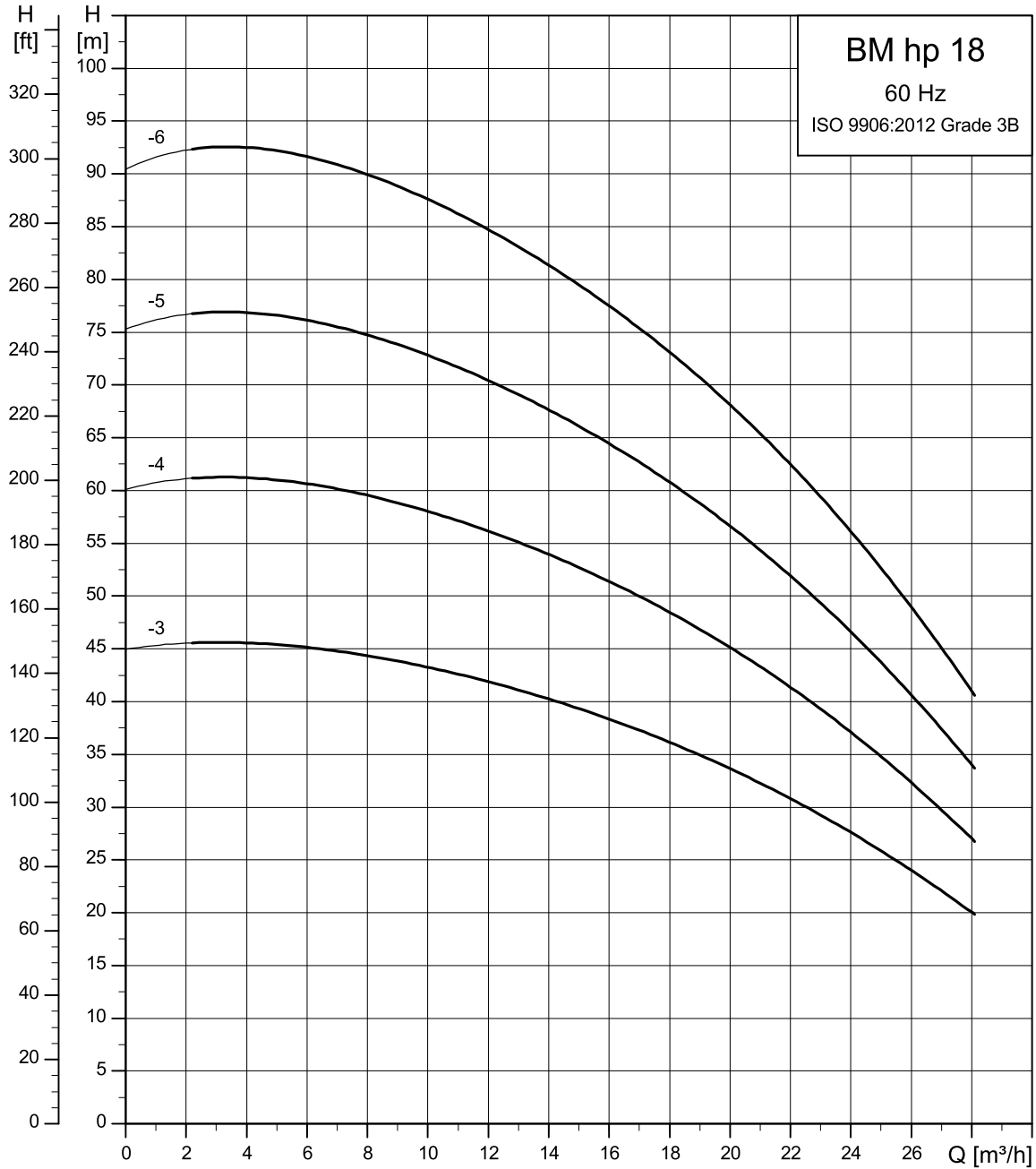
On request, the BM hp is available in other voltages and with all stages indicated in the standard SP pump range.

### Connections

Size	Type	Victaulic coupling
BM hp 8"	BM hp 77 - BM hp 95	5" / Ø139, style 489
BM hp 8"	BM hp 125 - BM hp 215	6" / Ø168, style 77S

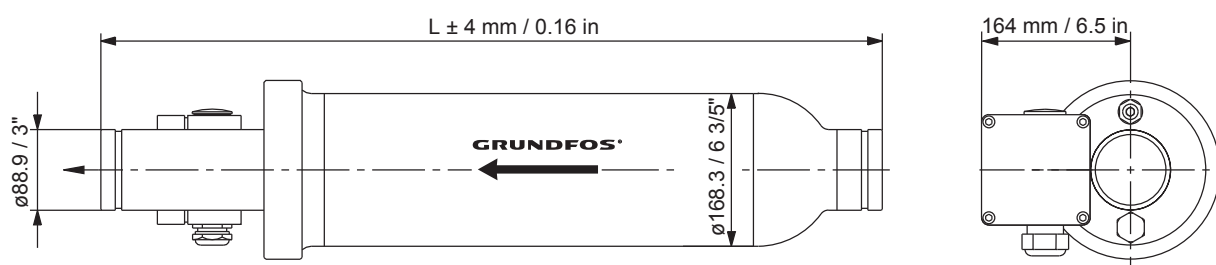
**BM hp, 60 Hz**

**BM hp 18**



TM086653

## Dimensional sketch



TM003799

*BM hp 6" with straight pipe*

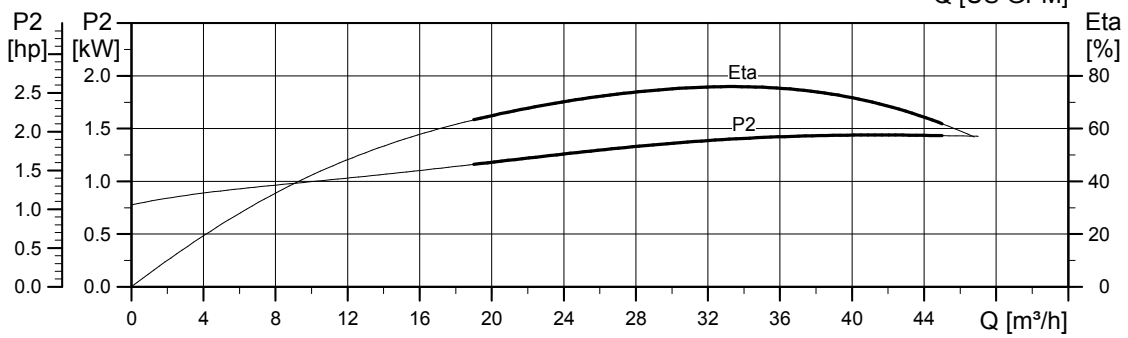
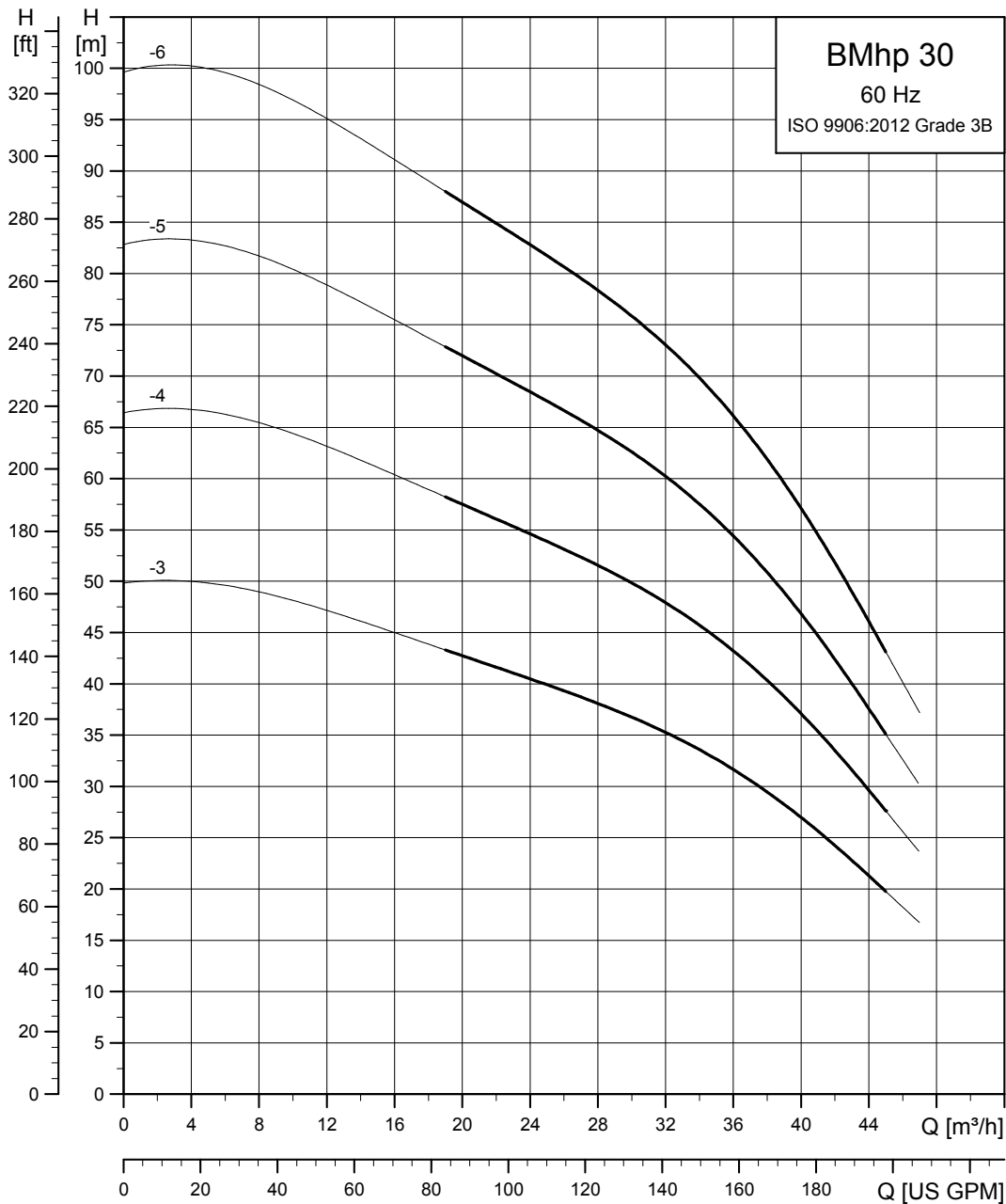
One set of connecting fittings is required for each system.

## Dimensions and weights

Pump type	Motor type	P2 [kW (hp)]	Standard voltage [V]	Rated current $I_N$ [A]	L [mm (inch)]	Weight [kg (lbs)]		Ship. vol. [m <sup>3</sup> ]
						Net	Gross	
BM hp 18-3	MS 6000	5.5 (7.5)	3 × 400	13.2 - 13.2	2100 (82.7)	73 (161)	104.5 (230)	0.399
BM hp 18-4	MS 6000	5.5 (7.5)	3 × 400	13.2 - 13.2	2100 (82.7)	74.5 (164)	106 (234)	0.399
BM hp 18-5	MS 6000	5.5 (7.5)	3 × 400	13.2 - 13.2	2100 (82.7)	76 (168)	107.5 (237)	0.399
BM hp 18-6	MS 6000	5.5 (7.5)	3 × 400	13.2 - 13.2	2100 (82.7)	77.5 (171)	109 (240)	0.399

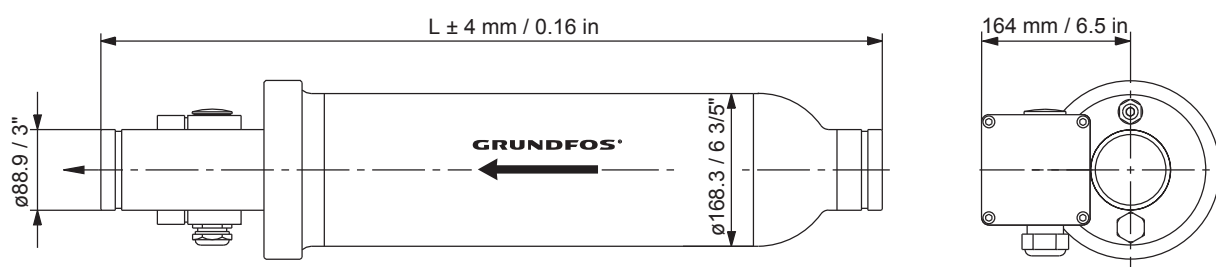
On request, the BM hp is available in other voltages and with all stages indicated in the standard SP pump range.

BM hp 30



TM047965

## Dimensional sketch



TM003799

*BM hp 6" with straight pipe*

One set of connecting fittings is required for each system.

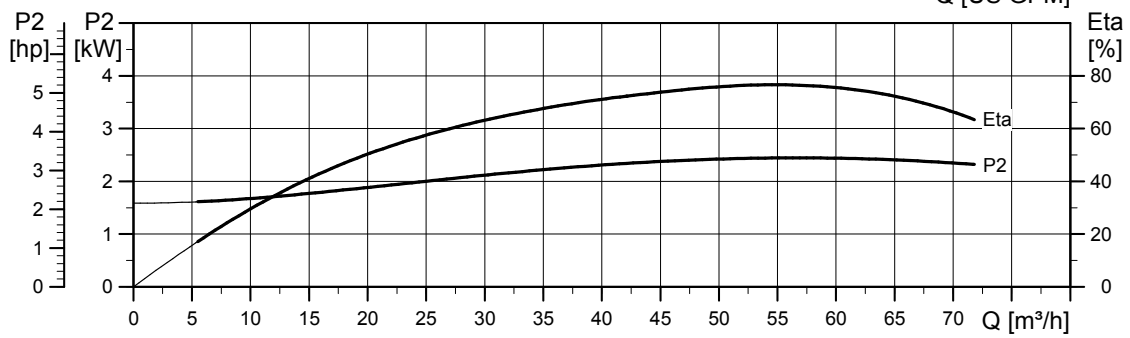
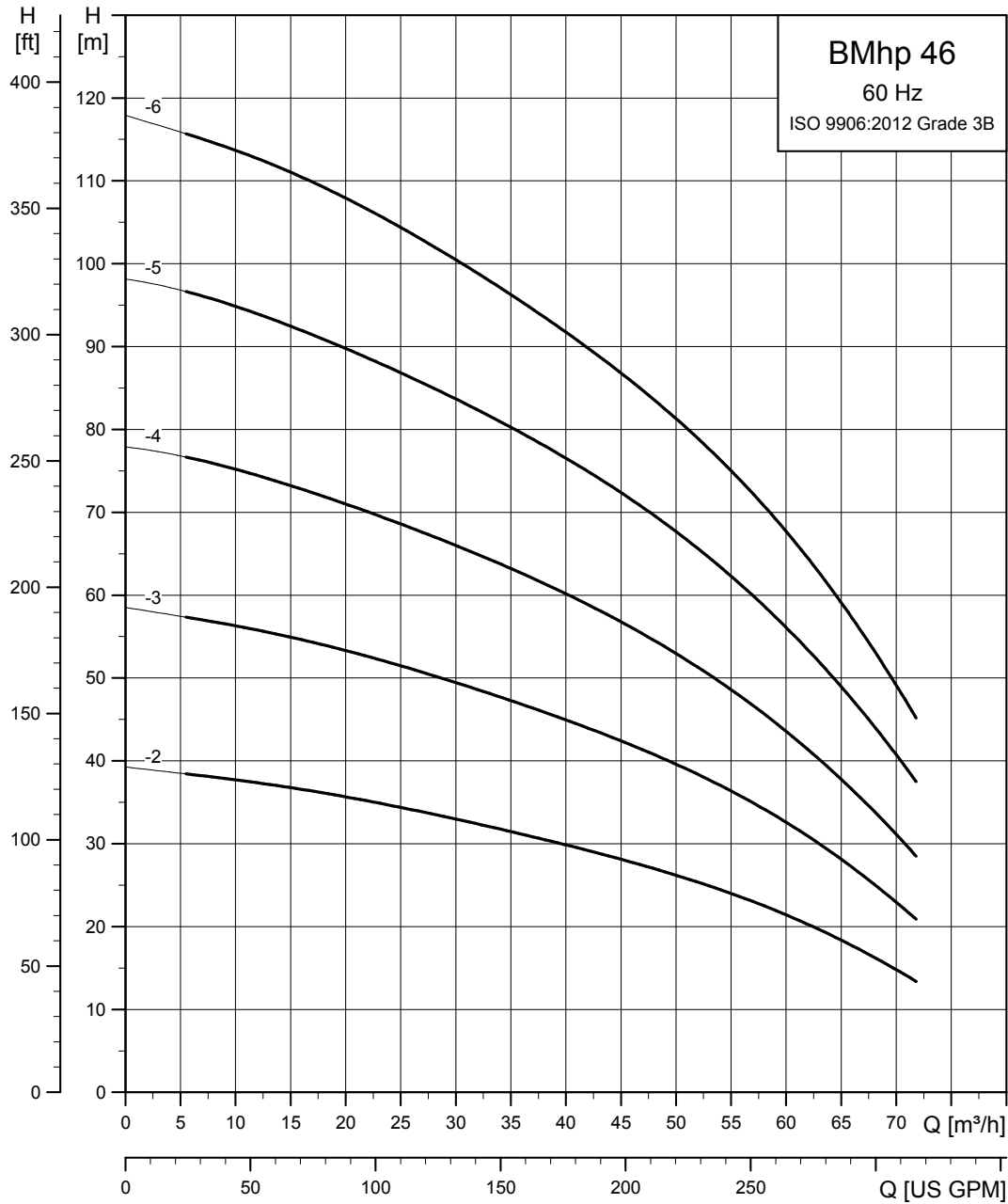
## Dimensions and weights

Pump type	Motor type	P2 [kW (hp)]	Standard voltage [V]	Rated current $I_N$ [A]	L [mm (inch)]	Weight [kg (lbs)]		Ship. vol. [m <sup>3</sup> ]
						Net	Gross	
BM hp 30-3	MS 6000	5.5 (7.5)	3 × 400	13.2 - 13.2	2100 (82.7)	75.5 (166)	107 (236)	0.399
BM hp 30-4	MS 6000	5.5 (7.5)	3 × 400	13.2 - 13.2	2100 (82.7)	77.5 (171)	109 (240)	0.399
BM hp 30-5	MS 6000	7.5 (10.0)	3 × 400	17 - 17.4	2100 (82.7)	83 (183)	114.5 (252)	0.399
BM hp 30-6	MS 6000	9.2 (12.5)	3 × 400	21 - 21.8	2100 (82.7)	90.5 (200)	122 (269)	0.399

On request, the BM hp is available in other voltages and with all stages indicated in the standard SP pump range.

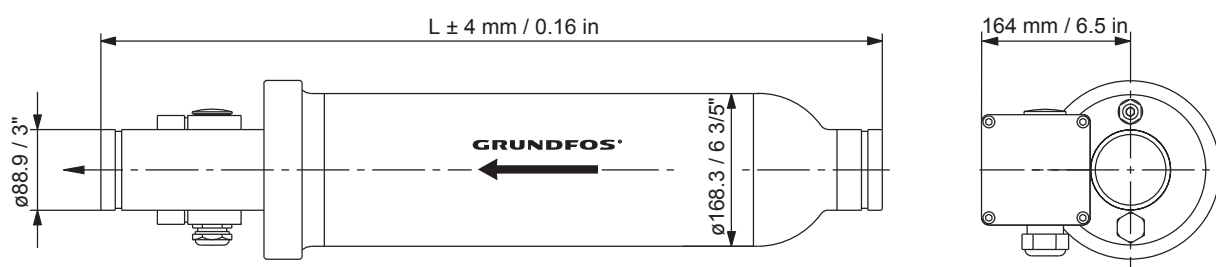


**BM hp 46**



TM047966

## Dimensional sketch



TM003799

*BM hp 6" with straight pipe*

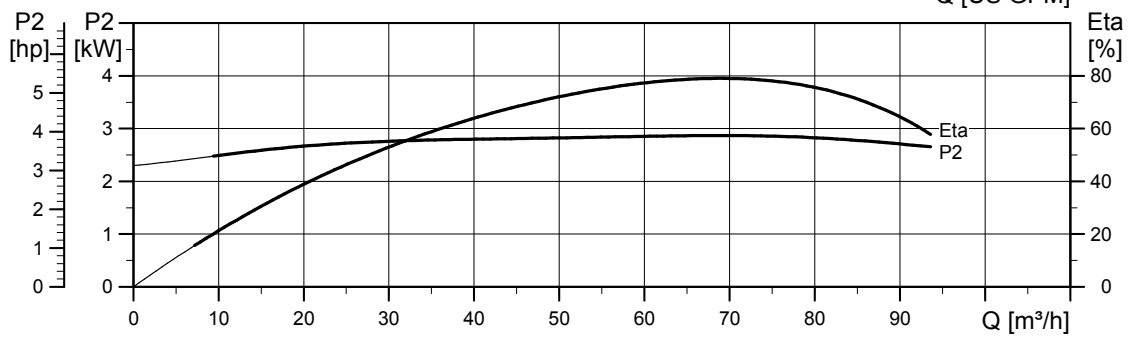
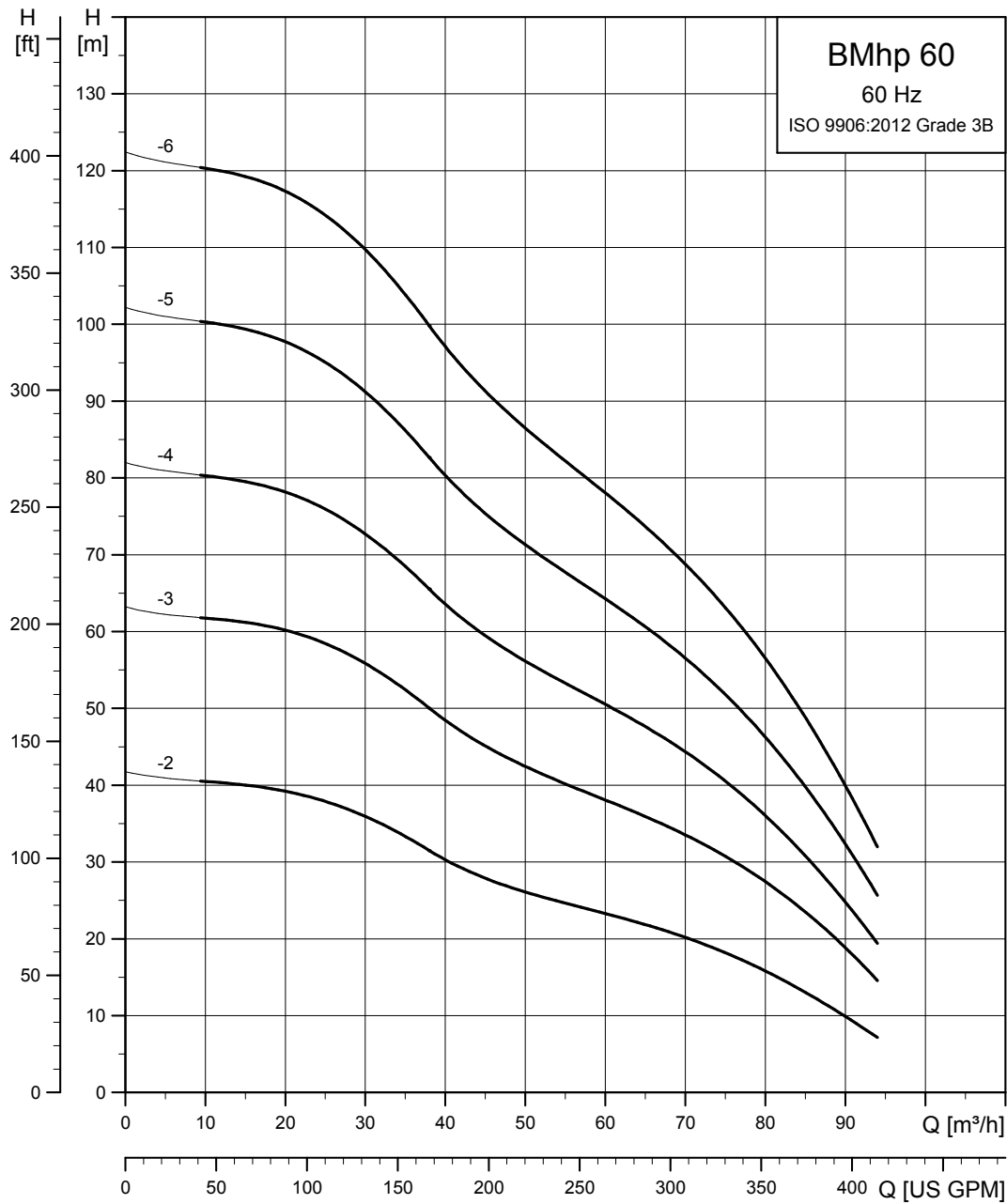
One set of connecting fittings is required for each system.

## Dimensions and weights

Pump type	Motor type	P2 [kW (hp)]	Standard voltage [V]	Rated current $I_N$ [A]	L [mm (inch)]	Weight [kg (lbs)]		Ship. vol. [m <sup>3</sup> ]
						Net	Gross	
BM hp 46-2	MS 6000	5.5 (7.5)	3 × 400	13.2 - 13.2	2100 (82.7)	78.5 (173)	110 (243)	0.399
BM hp 46-3	MS 6000	7.5 (10)	3 × 400	17 - 17.4	2100 (82.7)	84 (185)	115.5 (255)	0.399
BM hp 46-4	MS 6000	9.2 (12.5)	3 × 400	21 - 21.8	2100 (82.7)	91.5 (202)	123 (271)	0.399
BM hp 46-5	MS 6000	13 (17.5)	3 × 400	28.5 - 29.5	2100 (82.7)	99.5 (219)	131 (289)	0.399
BM hp 46-6	MS 6000	15 (20)	3 × 400	32.5 - 33.5	2700 (106.3)	110.5 (244)	170 (375)	0.500

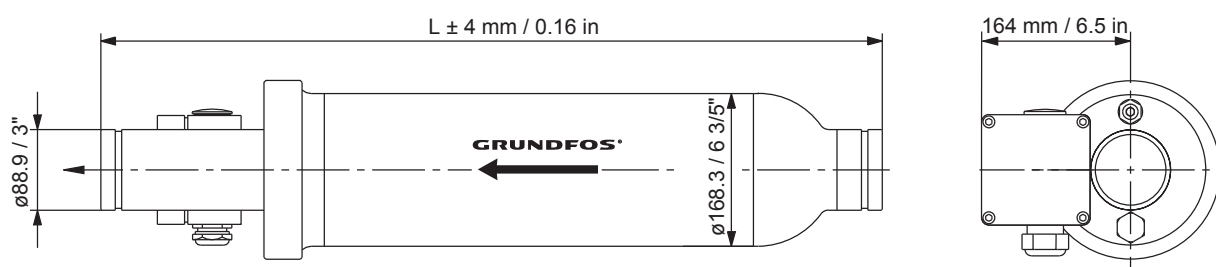
On request, the BM hp is available in other voltages and with all stages indicated in the standard SP pump range.

**BM hp 60**



TM047967

## Dimensional sketch



TM003799

*BM hp 6" with straight pipe*

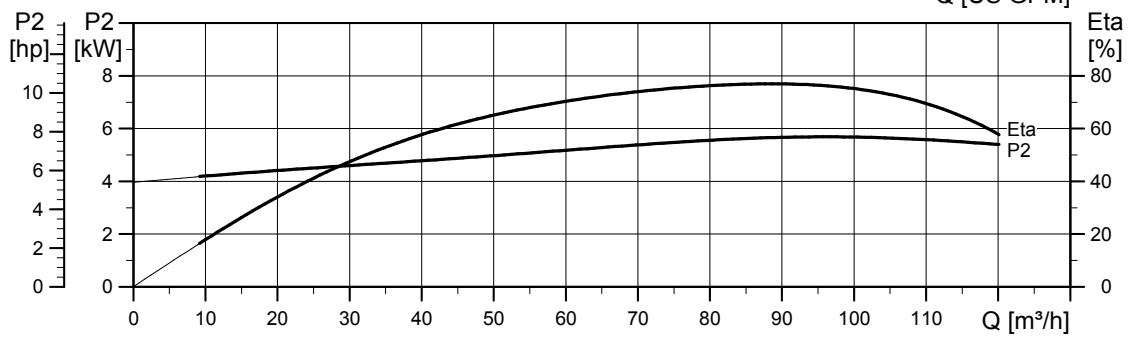
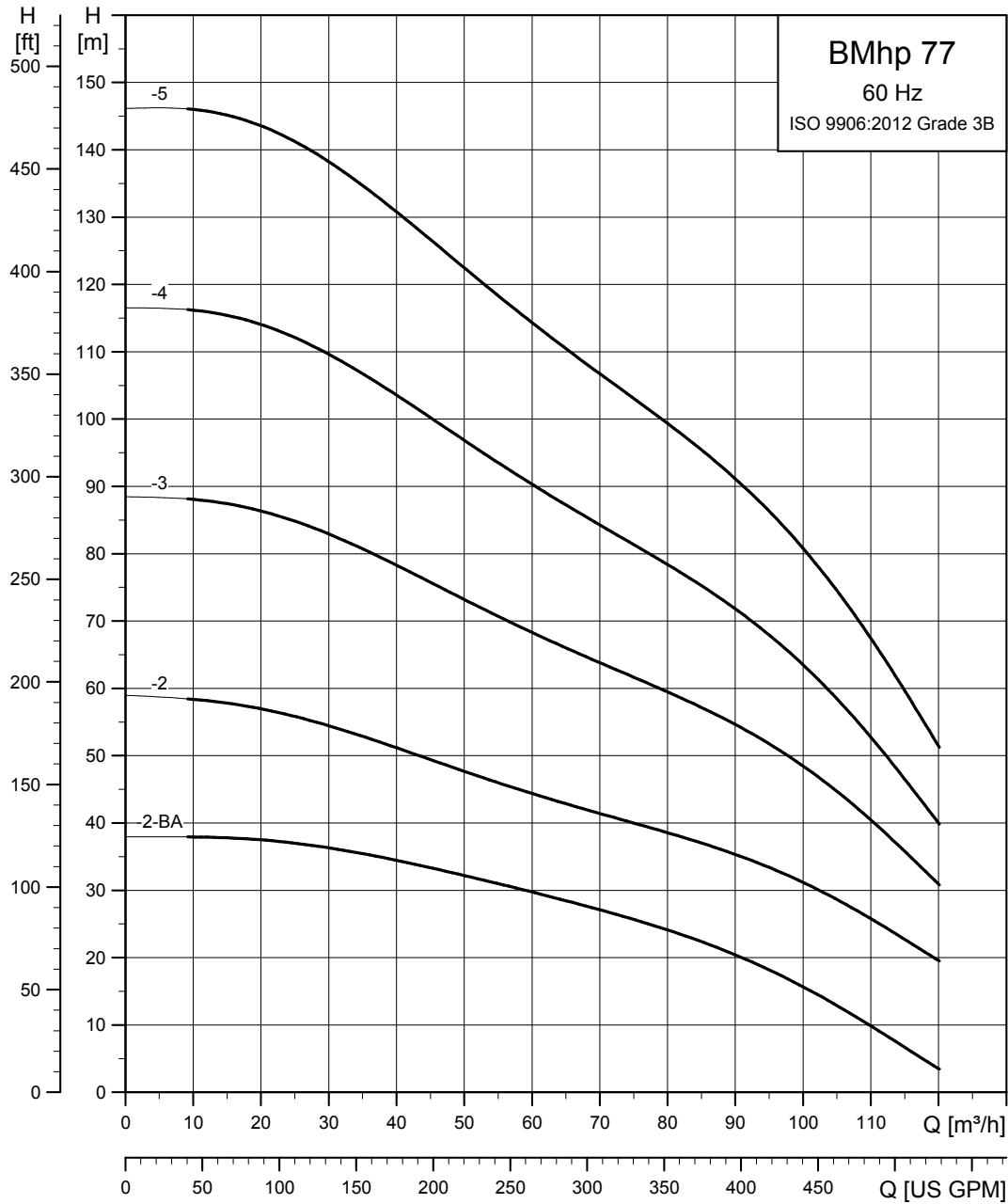
One set of connecting fittings is required for each system.

## Dimensions and weights

Pump type	Motor type	P2 [kW (hp)]	Standard voltage [V]	Rated current $I_N$ [A]	L [mm (inch)]	Weight [kg (lbs)]		Ship. vol.
						Net	Gross	[m <sup>3</sup> ]
BM hp 60-2	MS 6000	5.5 (7.5)	3 × 400	13.2 - 13.2	2100 (82.7)	78.5 (173)	110 (243)	0.399
BM hp 60-3	MS 6000	9.2 (12.5)	3 × 400	21 - 21.8	2100 (82.7)	89.5 (197)	121 (267)	0.399
BM hp 60-4	MS 6000	11 (15)	3 × 400	24 - 25.5	2100 (82.7)	94.5 (208)	126 (278)	0.399
BM hp 60-5	MS 6000	15 (20)	3 × 400	32.5 - 33.5	2100 (82.7)	103.5 (228)	135 (298)	0.399
BM hp 60-6	MS 6000	18.5 (25)	3 × 400	41-42	2700 (106.3)	116 (256)	175.5 (387)	0.500

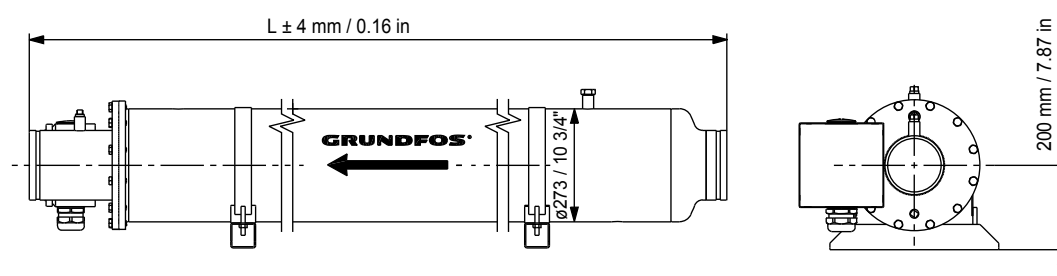
On request, the BM hp is available in other voltages and with all stages indicated in the standard SP pump range.

BM hp 77



TM047968

## Dimensional sketch



TM011424

*BM hp 8" with straight pipe*

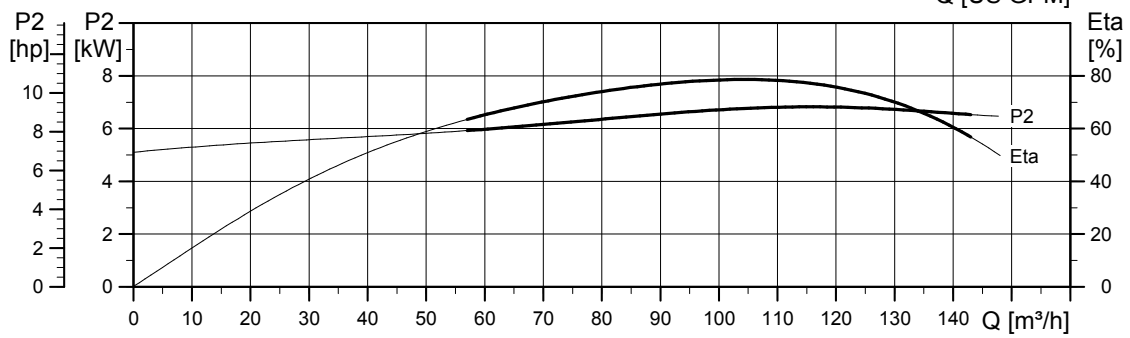
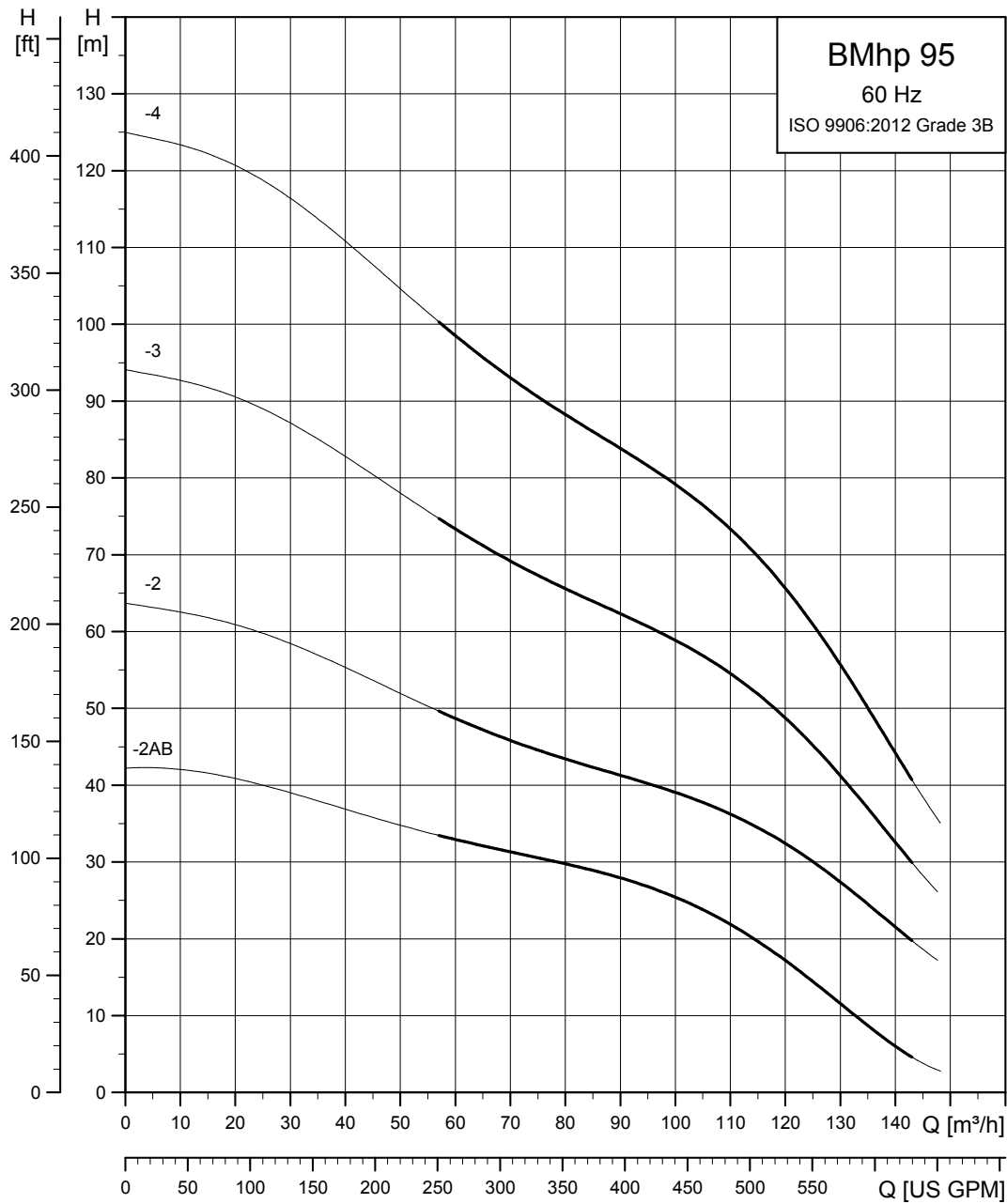
One set of connecting fittings is required for each system.

## Dimensions and weights

Pump type	Motor type	Standard voltage [V]	P2 [kW (hp)]	Rated current I <sub>N</sub> [A]	L [mm (inch)]	Weight [kg (lbs)]		Ship. vol. [m <sup>3</sup> ]
						Net	Gross	
BM hp 77-2A	MS 6000	3 × 400	7.5 (10)	17 - 17.4	2100 (82.7)	132 (291)	185 (408)	0.919
BM hp 77-2	MS 6000	3 × 400	11 (15.0)	24 - 25.5	2100 (82.7)	142 (313)	194.5 (429)	0.919
BM hp 77-3	MS 6000	3 × 400	18.5 (25)	41-42	2400 (94.5)	158 (348)	210.5 (464)	0.919
BM hp 77-4	MS 6000	3 × 400	22 (30)	46.5 - 48	2400 (94.5)	167 (368)	220 (485)	0.919
BM hp 77-5	MS 6000	3 × 400	30 (40)	63 - 66.5	2750 (108.3)	191 (421)	251.5 (554)	1.041

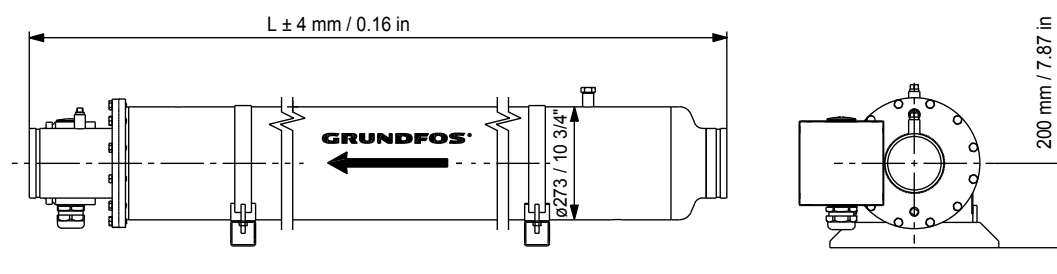
On request, the BM hp is available in other voltages and with all stages indicated in the standard SP pump range.

**BM hp 95**



TM047969

## Dimensional sketch



TM011424

*BM hp 8" with straight pipe*

One set of connecting fittings is required for each system.

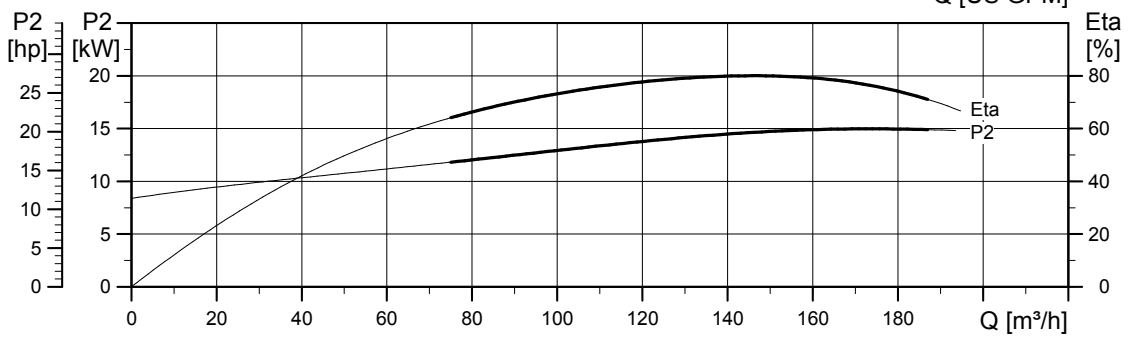
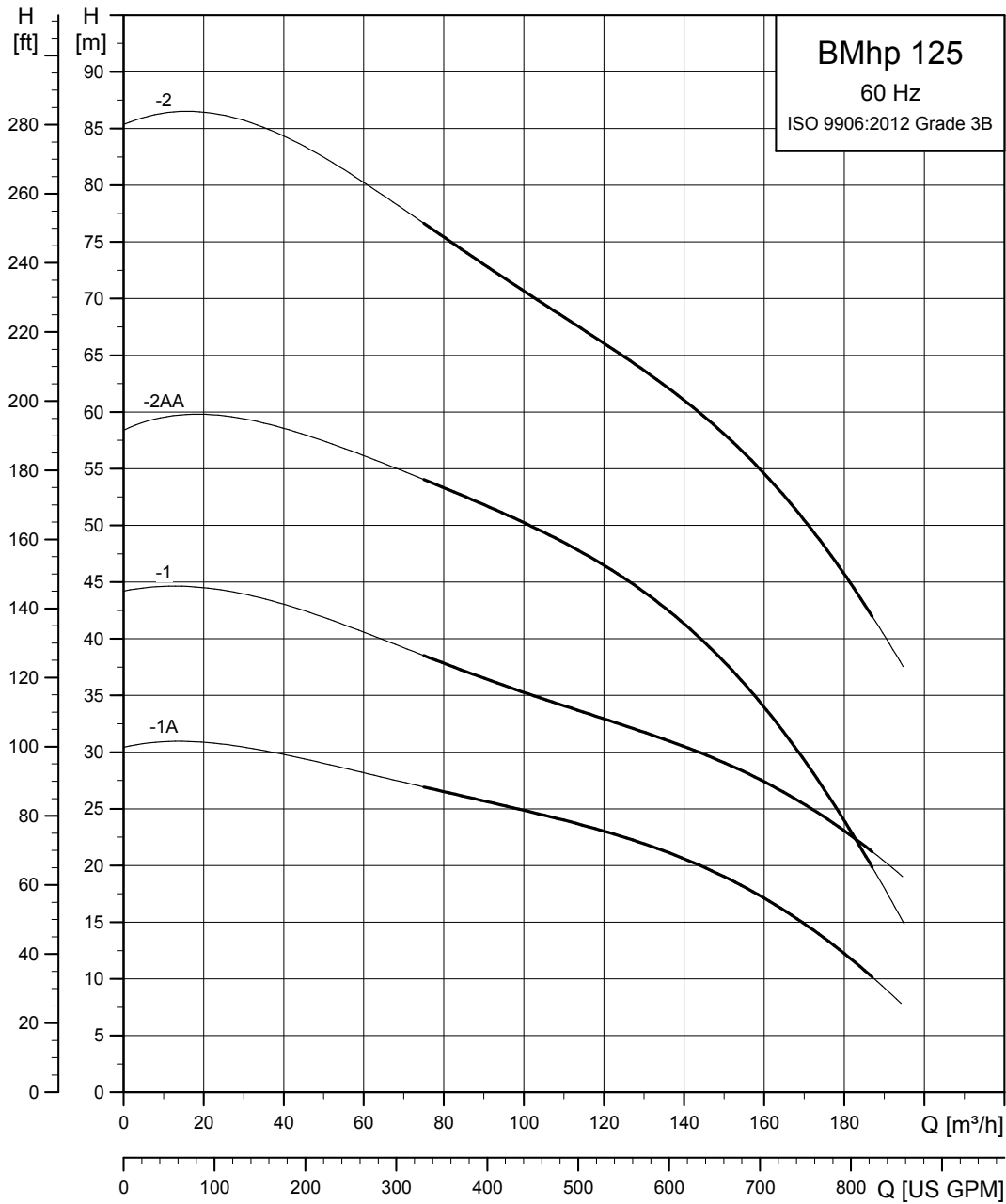
## Dimensions and weights

Pump type	Motor type	P2 [kW (hp)]	Standard voltage [V]	Rated current $I_N$ [A]	L [mm (inch)]	Weight [kg (lbs)]		Ship. vol. [m <sup>3</sup> ]
						Net	Gross	
BM hp 95-2AB	MS 6000	9.2 (12.5)	3 × 400	21 - 21.8	2100 (82.7)	135 (298)	175 (386)	0.815
BM hp 95-2	MS 6000	13 (17.5)	3 × 400	28.5 - 29.5	2100 (82.7)	145 (320)	185 (408)	0.815
BM hp 95-3	MS 6000	22 (30)	3 × 400	46.5 - 48	2400 (94.5)	164 (362)	216.5 (477)	0.919
BM hp 95-4	MS 6000	30 (40)	3 × 400	63 - 66.5	2400 (94.5)	181 (399)	233.5 (515)	0.919

On request, the BM hp is available in other voltages and with all stages indicated in the standard SP pump range.

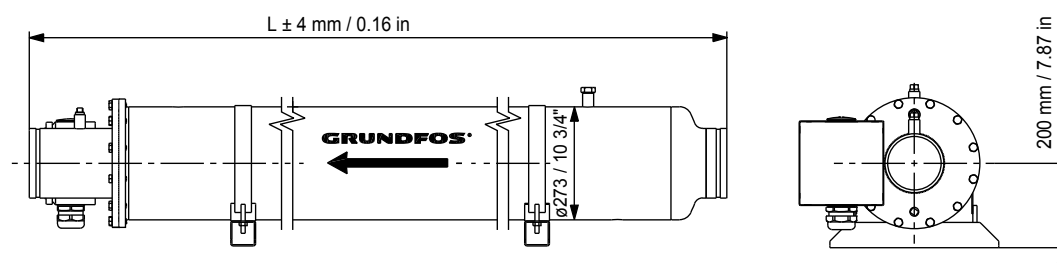


BM hp 125



TM047970

## Dimensional sketch



TM011424

BM hp 8" with straight pipe

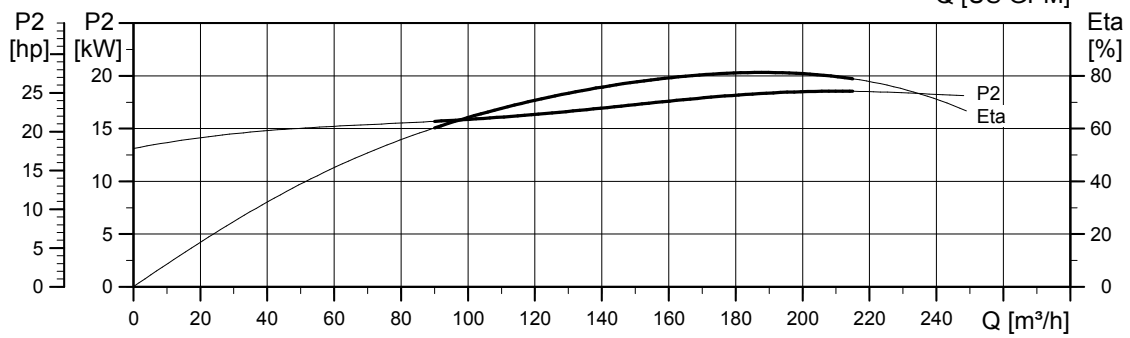
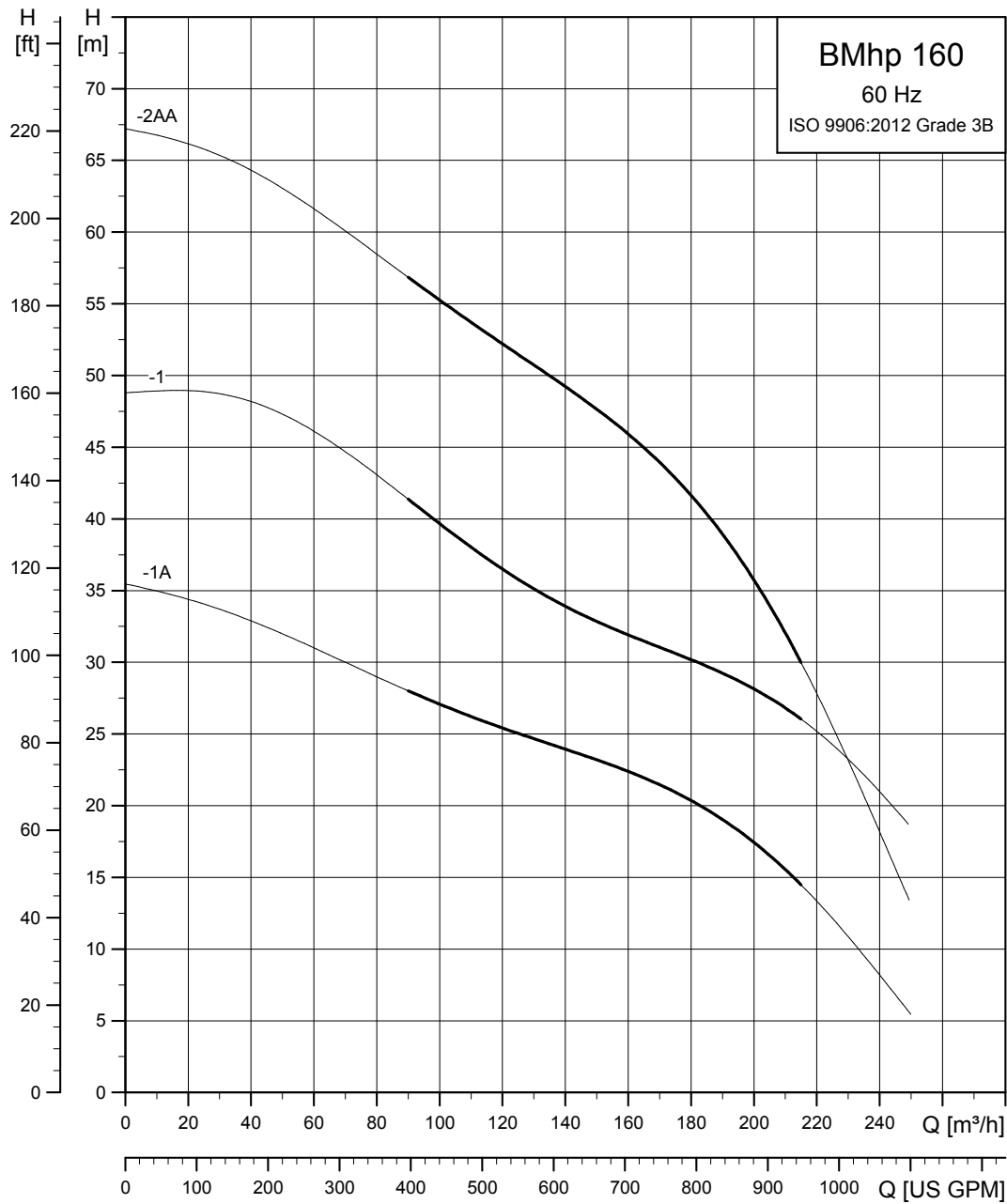
One set of connecting fittings is required for each system.

## Dimensions and weights

Pump type	Motor type	P2 [kW (hp)]	Standard voltage [V]	Rated current $I_N$ [A]	L [mm (inch)]	Weight [kg (lbs)]		Ship. vol. [m <sup>3</sup> ]
						Net	Gross	
BM hp 125-1A	MS 6000	11 (15)	3 × 400	24 - 25.5	2100 (82.7)	142 (313)	188 (414)	0.815
BM hp 125-1	MS 6000	18.5 (25)	3 × 400	41-42	2400 (94.5)	161 (355)	213.5 (471)	0.919
BM hp 125-2AA	MS 6000	22 (30)	3 × 400	46.5 - 48	2400 (94.5)	173 (381)	225.5 (497)	0.919
BM hp 125-2	MS 6000	30 (40)	3 × 400	63 - 66.5	2400 (94.5)	186 (410)	239 (527)	0.919

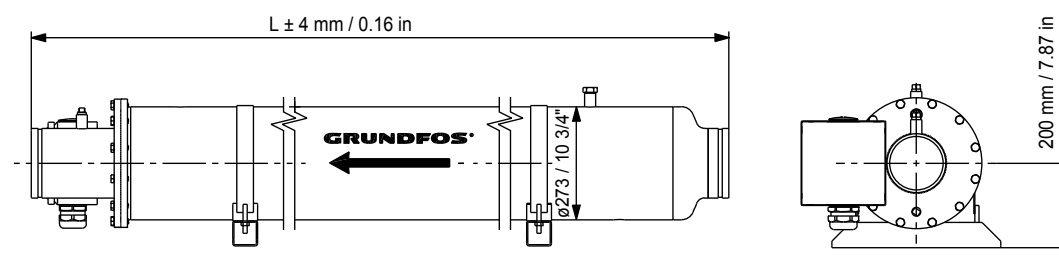
On request, the BM hp is available in other voltages and with all stages indicated in the standard SP pump range.

**BM hp 160**



TM047971

## Dimensional sketch



TM011424

*BM hp 8" with straight pipe*

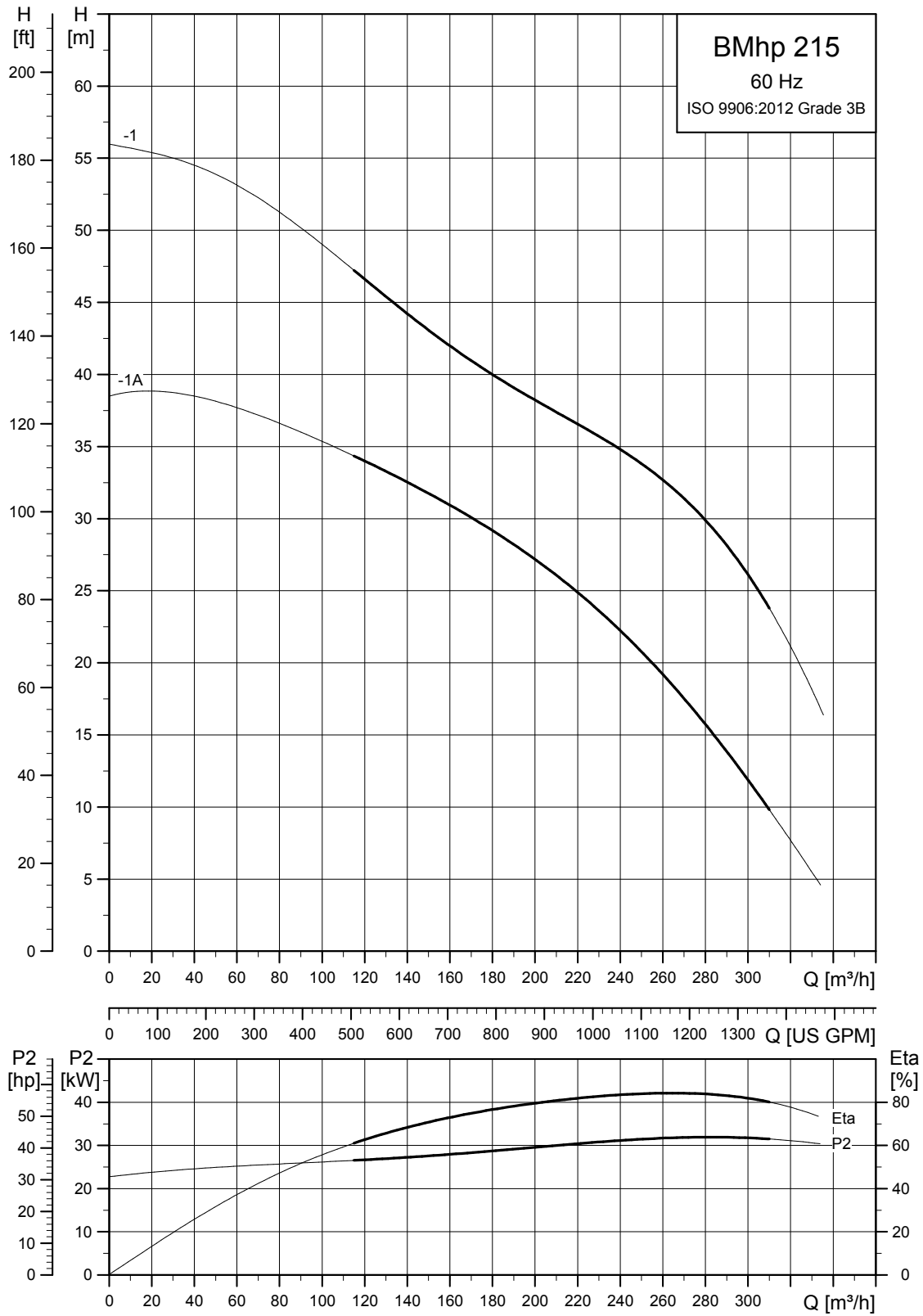
One set of connecting fittings is required for each system.

## Dimensions and weights

Pump type	Motor type	P2 [kW (hp)]	Standard voltage [V]	Rated current $I_N$ [A]	L [mm (inch)]	Weight [kg (lbs)]		Ship. vol. [m <sup>3</sup> ]
						Net	Gross	
BM hp 160-1A	MS 6000	15 (20)	3 × 400	32.5 - 33.5	2100 (82.7)	155 (342)	195 (430)	0.815
BM hp 160-1	MS 6000	22 (30)	3 × 400	46.5 - 48	2400 (94.5)	167 (368)	219.5 (484)	0.919
BM hp 160-2AA	MS 6000	26 (35)	3 × 400	54.5 - 57.5	2400 (94.5)	178 (392)	230.5 (508)	0.919

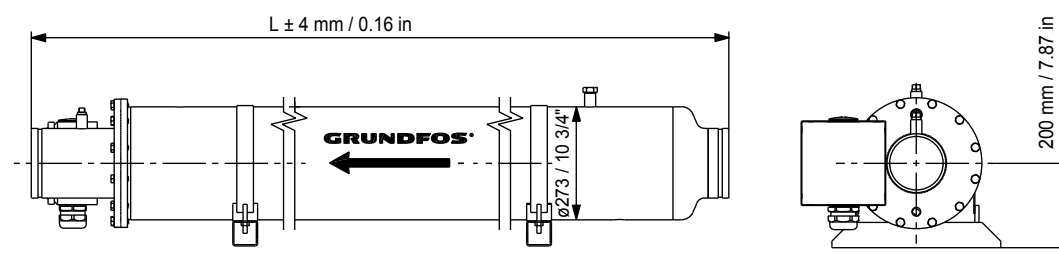
On request, the BM hp is available in other voltages and with all stages indicated in the standard SP pump range.

**BM hp 215**



TM047972

## Dimensional sketch



TM011424

*BM hp 8" with straight pipe*

One set of connecting fittings is required for each system.

## Dimensions and weights

Pump type	Motor type	P2 [kW (hp)]	Standard voltage [V]	Rated current $I_N$ [A]	L [mm (inch)]	Weight [kg (lbs)]		Ship. vol. [m <sup>3</sup> ]
						Net	Gross	
BM hp 215-1A	MS 6000	22 (30)	3 × 400	46.5 - 48	2400 (94.5)	173 (381)	226 (498)	0.919
BM hp 215-1	MS 6000	30 (40)	3 × 400	63 - 66.5	2400 (94.5)	186 (410)	239 (527)	0.919

On request, the BM hp is available in other voltages and with all stages indicated in the standard SP pump range.

## Connections

Size	Type	Victaulic coupling
BM hp 8"	BM hp 77 - BM hp 95	5" / Ø139, style 489
BM hp 8"	BM hp 125 - BM hp 215	6" / Ø168, style 77S

# 11. Motor data

## MS 4000, 50 Hz

Motor power [kW (hp)]	Standard voltage [V]	Rated current I <sub>N</sub> [A]	Motor efficiency η [%]	Service factor
0.75 (1)	3 × 380	2.1 - 1.9	72.8	1.4
1.1 (1.5)	3 × 380	2.8 - 2.8	74.9	1.3
1.5 (2)	3 × 380	4 - 4.1	73.6	1.25
2.2 (3)	3 × 380	6 - 6.3	77.1	1.15
3 (4)	3 × 380	7.7 - 8.1	79.5	1.15
4 (5.5)	3 × 380	9.8 - 9.8	79.3	1.15
5.5 (7.5)	3 × 380	13 - 13.4	79.9	1.15

## MS 4000, 60 Hz

Motor power [kW (hp)]	Standard voltage [V]	Max. load current incl. SF I <sub>N</sub> [A]	Motor efficiency η [%]	Service factor
0.75 (1)	3 × 460	2.3 - 2.1	71.3	1.4
1.1 (1.5)	3 × 460	3-3	74.8	1.3
1.5 (2)	3 × 460	4.1 - 4.2	75.3	1.25
2.2 (3)	3 × 460	5.7 - 6	73.8	1.15
3 (4)	3 × 460	7.4 - 7.8	75.9	1.15
4 (5.5)	3 × 460	9.4 - 9.4	80.2	1.15
5.5 (7.5)	3 × 460	12.8 - 12.8	81.4	1.15

## MS 6000, 50 Hz

Motor power [kW (hp)]	Standard voltage [V]	Rated current I <sub>N</sub> [A]	Motor efficiency η [%]	Service factor
5.5 (7.5)	3 × 400	13.6 - 13.6	80.2	1.15
7.5 (10)	3 × 400	17.8 - 17.2	82.8	1.15
9.2 (12)	3 × 400	21.8 - 21.2	83.2	1.15
11 (15)	3 × 400	26 - 24.8	83.3	1.15
13 (17)	3 × 400	30-29	84.2	1.15
15 (20)	3 × 400	34.5 - 33.5	84.2	1.15
18.5 (25)	3 × 400	42 - 41.5	84.3	1.15
22 (30)	3 × 400	49.5 - 46.5	84.3	1.15
26 (35)	3 × 400	58-55	83.6	1.15
30 (40)	3 × 400	66.5 - 63	83.7	1.15

## MS 6000, 60 Hz

Motor power [kW (hp)]	Standard voltage [V]	Max. load current incl. SF I <sub>N</sub> [A]	Motor efficiency η [%]	Service factor
5.5 (7.5)	3 × 460	13.2 - 13	81.8	1.15
7.5 (10)	3 × 460	17.4 - 16.6	82.6	1.15
9.2 (12)	3 × 460	21.2 - 20.4	82.7	1.15
11 (15)	3 × 460	25-24	83.1	1.15
13 (17)	3 × 460	29.5 - 28	84	1.15
15 (20)	3 × 460	33.5 - 32	84.1	1.15
18.5 (25)	3 × 460	41 - 39.5	84.5	1.15
22 (30)	3 × 460	48-45	84.6	1.15
26 (35)	3 × 460	56.5 - 53	84.6	1.15
30 (40)	3 × 460	65-61	84.7	1.15

## MMS 8000, 50 Hz








Motor power [kW (hp)]	Standard voltage [V]	Rated current I <sub>N</sub> [A]	Motor efficiency η [%]	Service factor
37 (50)	3 × 460	81.5 - 77	84	1.15
45 (60)	3 × 460	95.5 - 96	86	1.15
55 (75)	3 × 460	116-112	86	1.15
63 (85)	3 × 460	132-130	87	1.15
75 (100)	3 × 460	156-152	87	1.15
92 (125)	3 × 460	194-186	87	1.15

## MMS 8000, 60 Hz







Motor power [kW (hp)]	Standard voltage [V]	Max. load current incl. SF I <sub>N</sub> [A]	Motor efficiency η [%]	Service factor
37 (50)	3 × 460	78	84	1.15
45 (60)	3 × 460	92.5	86	1.15
55 (75)	3 × 460	112	86	1.15
63 (85)	3 × 460	126	87	1.15
75 (100)	3 × 460	150	87	1.15
92 (125)	3 × 460	184	87	1.15

## 12. Accessories

### BM 4"



Part	Description	Specification	Product number	
	TM003702 Victaulic coupling liner for welding Ø42 × 30	R version	00100971	
	TM003703 Victaulic coupling liner with external thread R 1 1/4 × 100 mm/BSPT	R version	00100965	
	TM003705 Victaulic style 77DX Ø42 × 1 1/4"	NBR seal	99611211	
		FKM seal	95009718	
	TM003706 Hook spanner for 4" sleeve		00105029	
	TM003707 Connecting kit for welding, straight	NBR seal	R version	00105982
		FKM seal	R version	00105981
	TM003708 Connecting kit R 1 1/4"	NBR seal	R version	00105980
		FKM seal	R version	00105979
	TM003711 180° bend for Victaulic coupling Ø42 / 1 1/4" Centre distance: 165 mm / 6.5 inch Total height: 127 mm / 5.0 inch	R version	00155926	

### BM 6"

Parts	Description	Specification	Product number
	TM003709 Victaulic coupling liner for welding Ø89 × 50 mm / 3" × 2"	R version	00140968
	TM003711 180° bend for Victaulic coupling Ø89 / 3" Centre distance: 300 mm / 11.8 inch Total height: 210 mm / 8.3 inch	R version	00155971
	TM003712 Victaulic style 77DX Ø89 × 3"	NBR seal	97758517
	TM003713 Hook spanner for 6" sleeve		00ID7669
	TM003714 Connecting kit for welding, straight	NBR seal R version	00155973
	TM003715 Connecting kit, 180°	NBR seal R version	00155972



## BM 8"

Parts	Description	Specification	Product number
	TM003712 Victaulic coupling 3": Ø89 4": Ø114 5": Ø139 6": Ø168	NBR seal 3", style 77DX	97758517
		NBR seal 4", style 77DX	97758346
		NBR seal 5" (DN125), style 489DX	97758342
		NBR seal 6", style 77DX	97758320
		R version 3"	00140968
	TM003709 Victaulic coupling liner for welding	R version 4"	96986570
		R version 5"	96785838
		R version 6"	96230662

## CUE frequency converter

Grundfos CUE is a series of external frequency converters designed for speed control of a wide range of Grundfos pumps.

When CUE is installed, the motor requires no further motor protection.

CUE offers a quick and easy setup and startup compared to a standard frequency converter because of the startup guide. Simply enter application-specific variables such as motor data, pump family, control function (for example constant pressure), sensor type, and setpoint, and CUE will automatically set all necessary parameters.

CUE enables gentle pumping and thereby protects the water reservoir and the rest of the distribution system as water hammer can be avoided by adjusting ramp times up and down.

### Overview of the CUE range

Supply voltage [V]	Power range [kW (hp)]						
	0.55 (0.75)	0.75 (1)	1.1 (1.5)	7.5 (10)	11 (15)	45 (60)	90 (125)
3 × 525-690					•	•	•
3 × 525-600		•	•	•			
3 × 380-500	•	•	•	•	•	•	•
3 × 200-240		•	•	•	•	•	
1 × 200-240			•	•			

CUE is available in the following enclosure classes:

- IP20/21
- IP54/55
- IP66 (US markets).

Note that the maximum CUE frequency is 590 Hz.

### RFI filters

To meet the EMC requirements, CUE comes with the following types of built-in radio-frequency interference filter (RFI).

Voltage [V]	Typical shaft power, P2 [kW]	RFI filter type	Application
1 × 200-240	1.1 - 7.5	C1	Domestic
3 × 200-240	0.75 - 45	C1	
3 × 380-500	0.55 - 90	C1	Domestic/industry
	110-250	C2	
3 × 525-600	0.75 - 7.5	C3	Industry
3 × 525-690	11-25	C3	



TM077504

The CUE range

### Functions

CUE has a wide range of pump-specific functions, such as the following:

- constant differential pressure
- constant proportional pressure
- constant level
- constant flow rate
- constant temperature
- constant curve.

### CUE features

- Startup guide.  
CUE incorporates an innovative startup guide for the general setting of CUE including the setting of the correct direction of rotation. The startup guide is started the first time when CUE is connected to the power supply.
- Check of direction of rotation.
- Duty/standby operation.
- Dry-running protection.
- Low-flow stop function.

## Inputs and outputs

CUE incorporates various inputs and outputs:

- one RS-485 GENIbus connection
- one analog input, 0-10 V, 0/4-20 mA
  - external setpoint
- one analog input, 0-10 V, 0/4-20 mA
  - sensor input, feedback sensor
- one analog output, 0/4-20 mA
  - six digital inputs
  - two inputs can be changed to digital outputs
  - all digital inputs and outputs are programmable
- two signal relays (C/NO/NC)
  - programmable.

## Accessories for CUE

Grundfos offers various accessories for CUE.

### MCB 114 sensor input module

MCB 114 offers additional analog inputs for CUE:

- one analog input, 0/4-20 mA
- two inputs for Pt100 and Pt1000 temperature sensors.

### Output filters

Output filters are used primarily to protect the motor against overvoltage and increased operating temperature. However, you can also use output filters to reduce acoustic noise from the motor.

Grundfos offers two types of output filter as accessories for CUE:

- dU/dt filters
- sine-wave filters.

An output filter must be used when the product is operated together with the CUE frequency converter.

### Floor-mounting option

CUE is as standard installed on the wall. You can also install the enclosures D1 and D2 on the floor on a pedestal designed for that purpose.

For information about enclosures, see the product-specific documentation for CUE.

### IP21/NEMA1 option

You can upgrade an IP20 enclosure to IP21/NEMA1 by using the IP21/NEMA1 option. The power terminals (mains and motor) will be covered.

### Sensors

You can use the following sensors in connection with CUE. All sensors are with 4-20 mA output signal:

- pressure sensors, up to 25 bar
- temperature sensors
- differential-pressure sensors
- differential-temperature sensors
- flowmeters
- potentiometer box for external setpoint setting.

## Gateways

CUE has a standard RS-485 GENIbus interface.

Gateways to convert to other bus standards are available as accessories.

The CIU family (CIU = Communication Interface Units) can convert from GENIbus to the most common fieldbuses in the world:

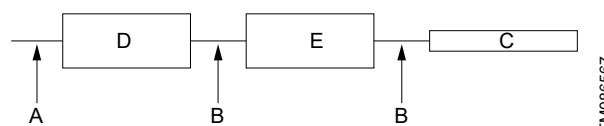
- CIU 100 converts from GENIbus to LonWorks.
- CIU 150 converts from GENIbus to Profibus DP.
- CIU 200 converts from GENIbus to Modbus RTU.
- CIU 250 is a GSM modem which can send SMS messages in case of, for example, alarms.

## Control MPC

Control MPC is a multipump control system for the control of parallel-connected CUE pump solutions.

## Cables used in CUE installations

We recommend using screened cables and output filters in EMC-sensitive sites when CUE is installed in connection with BM pumps.



Example of an installation in EMC-sensitive sites

Pos.	Description
A	Mains cable, unscreened
B	Screened cable
C	BM pump
D	CUE
E	Filter

Screened cables and output filters are required in those parts of the installation where the surroundings must be protected against EMC.

CUE is the right choice of frequency converter in BM installations as it meets all basic issues. CUE has a pre-installed startup guide that takes the installer through all the necessary settings.

Consider the following issues when using frequency converters in BM installations:

- To limit wear and overheating of windings, lubricate the journal bearings.
  - Ramp (up and down) is maximum 3 seconds.
- Use temperature monitoring by a Pt sensor.
  - If the motor overheats, there will be low insulation resistance, which results in sensitivity to voltage peaks.
- Remember to use an output filter.
  - Cables act as an amplifier, which measures peaks at the motor.
- Limit the rise time (dU/dt) to a maximum of 1000 V/μs. It is determined by the equipment in CUE.

- Time between switches is an expression of losses; therefore, exceeding the limit of 1000 V/ $\mu$ s may be required. The solution for this issue is filtering the output from CUE.
- Size the CUE in respect of the current, not the power output.
  - You can end up with a CUE that is too small in size otherwise.

## 13. Variants

### Custom-made pumps

Although the Grundfos BM product range offers a number of pumps for different applications, customers require specific pump solutions to satisfy their needs.

Contact Grundfos for further information or other requests.

#### Available on request

##### Materials

Pump range	DIN	AISI
BM 3A - BM 215	1.4301	304
BM 9 - BM 215	1.4539	904L

##### Flange adapters

Flange type	Function	Materials
DIN flange	Grundfos DIN flange adapter for connection to DIN counterflange	N versions 3", 4", 5" and 6"
JIS flange	Grundfos JIS flange adapter for connection to JIS counterflange	N versions 3", 4", 5" and 6"
---	Custom-made flange adapter for connection to counterflange	N versions 3", 4", 5" and 6"

##### Motors

Other motors than the standard range are available on request.

## 14. Grundfos Product Center

Online search and sizing tool to help you make the right choice.

From the international view, you can select your specific country to view the product range available to you.

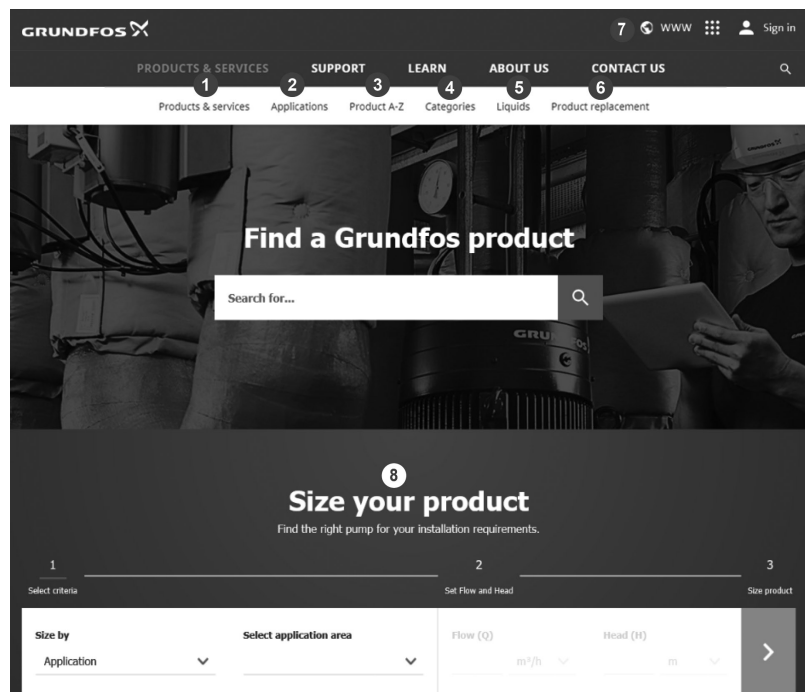
International view: <https://product-selection.grundfos.com>

### All the information you need in one place

Performance curves, technical specifications, pictures, dimensional drawings, motor curves, wiring diagrams, spare parts, service kits, 3D drawings, documents, system parts. The Product Center displays any recent and saved items - including complete projects - right on the main page.

### Downloads

On the product pages, you can download installation and operating instructions, data booklets, service instructions, etc., in PDF format.



When you select your country, you will see the menus below. Note that some menus may not be available depending on the country.

Example: <https://product-selection.grundfos.com/uk>

Pos.	Description
1	<b>Products &amp; services</b> enables you to find products and documents by typing a product number or name into the search field.
2	<b>Applications</b> enables you to choose an application to see how Grundfos can help you design and optimise your system.
3	<b>Products A-Z</b> enables you to look through a list of all the Grundfos products.
4	<b>Categories</b> enables you to look for a product category.
5	<b>Liquids</b> enables you to find pumps designed for aggressive, flammable or other special liquids.
6	<b>Product replacement</b> enables you to find a suitable replacement.
7	<b>WWW</b> enables you to select the country, which changes the language, the available product range and the structure of the website.
8	<b>Sizing</b> enables you to size a product based on your application and operating conditions.



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