

BM, BMhp

Booster Modules
50/60 Hz



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1. BM applications

The Grundfos BM booster module is suitable for industrial and water supply applications requiring increased system pressure.

The BM booster module is the optimum solution for applications requiring the following:

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

Typical applications

BM booster modules are suitable for the following typical applications:

- water treatment 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.

Pumped liquids

These pumps are suitable for pumping thin, non-explosive liquids not containing abrasive particles or fibers. The liquid must not attack the pump materials chemically or mechanically.

2. BM product introduction

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.

Standard pumps

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

- SP 3A, SP 5A and SP 8A in 4" sleeve
- SP 17, 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.

Note: The BM booster modules are supplied without non-return valves.

Construction

Modified standard submersible pumps are used for the BM booster modules. Pump and motor are centered in the stainless-steel sleeve.

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

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

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

BM 4" modules are also available with 90 ° bends at the suction and discharge ends.

Motor

Asynchronous submersible squirrel-cage motor of the canned type with water-lubricated bearings.

Voltages

- 3 x 440-480 V +6 % / -10 %, 60 Hz
- 3 x 575 V +6 % / -10 %, 60 Hz (upon request)
- 3 x 380-415 V +6 % / -10 %, 50 Hz.

Enclosure class

- IP58 (MMS 8000)
- IP68 (MS4000, MS 6000).

Insulation class

MMS 8000 wet-wound with PE/PA winding wires.

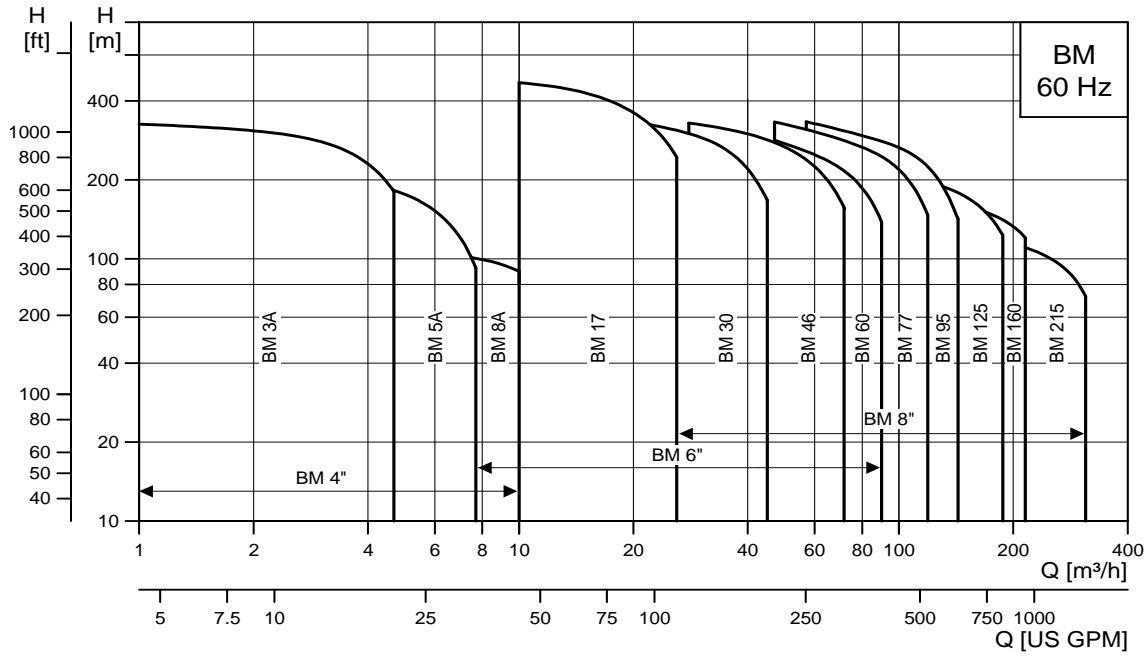
MS4000 + MS6000 - Class F insulation.

Special versions

Other voltages available on request.

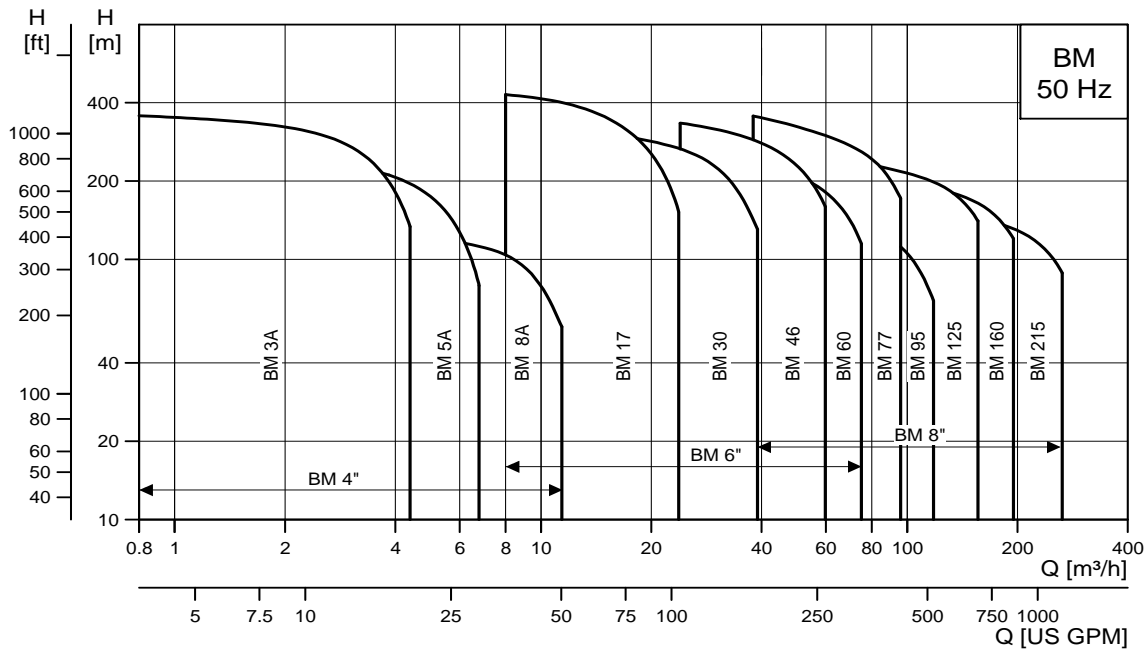
3. BM, BMhp performance ranges

BM, 60 Hz



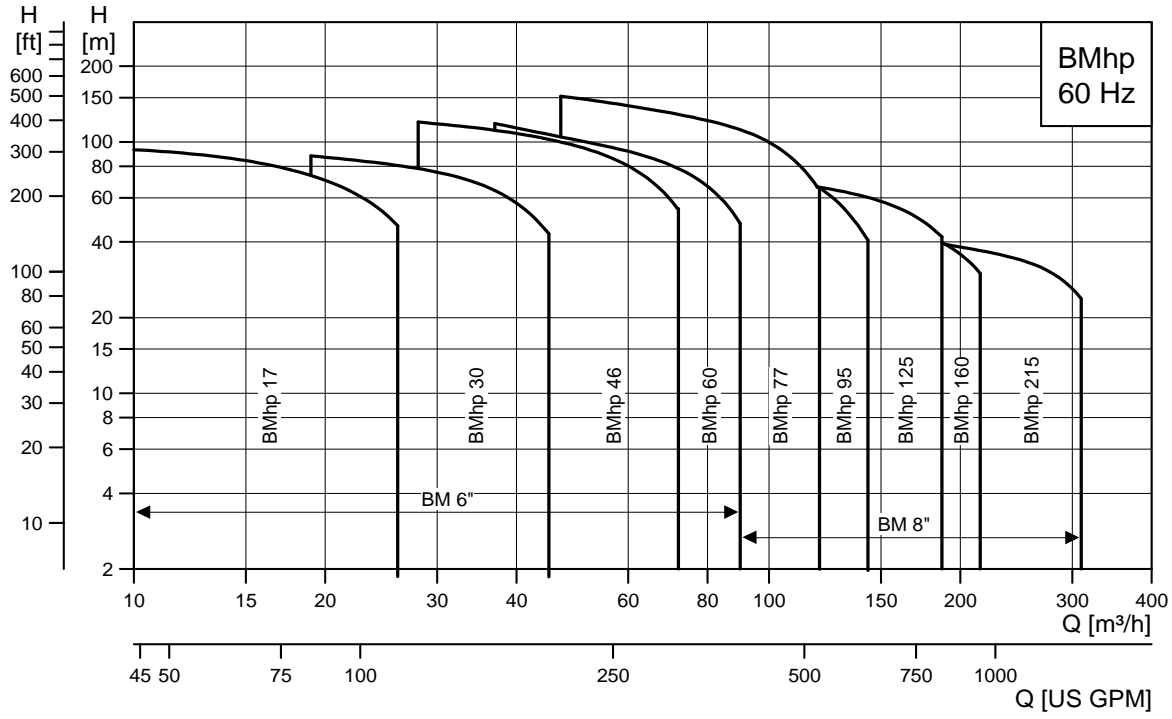
TM01 1232 2510

BM, 50 Hz



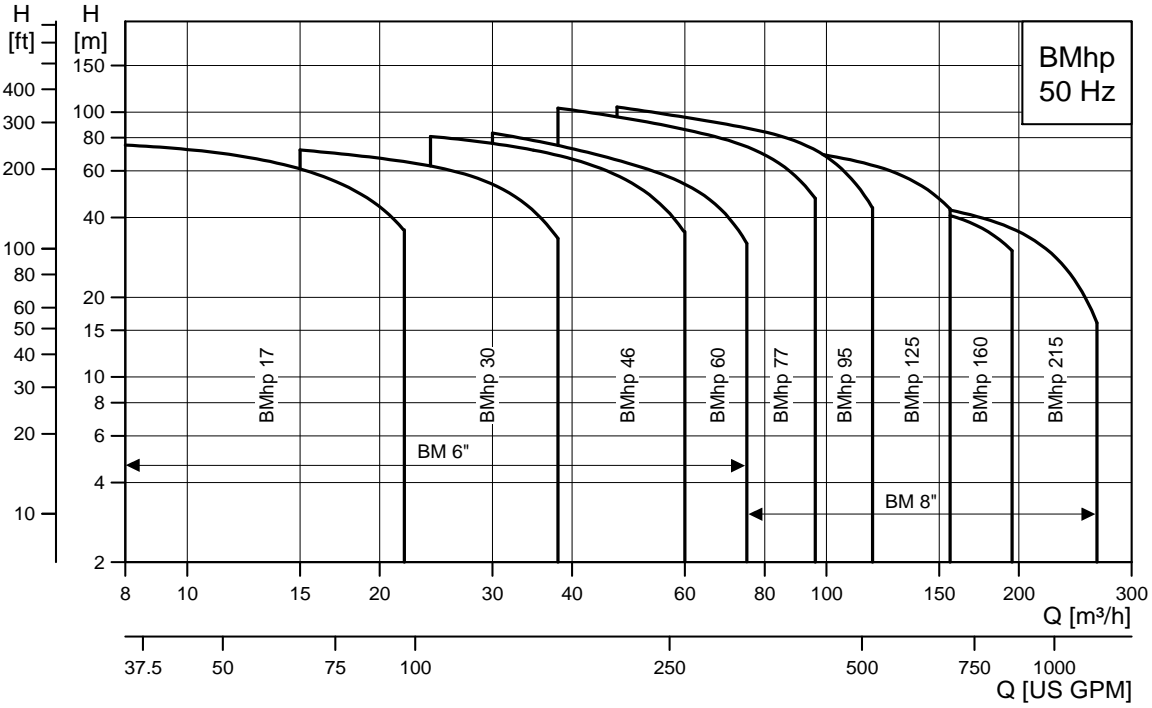
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BMhp, 60 Hz



TM04 7974 2510

BMhp, 50 Hz

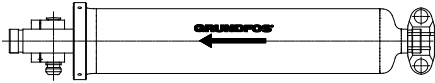


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4. BM product range

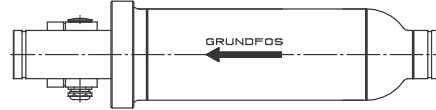
Types and versions

BM 4" (with straight pipe)



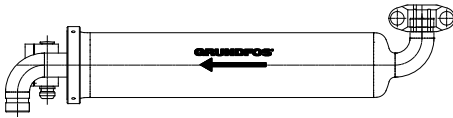
TM00 3793 3598

BM 6"



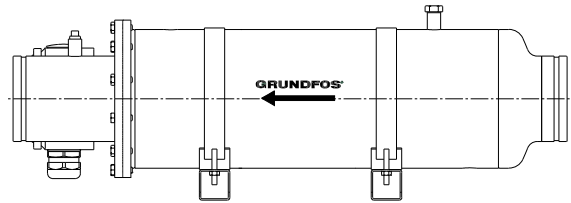
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BM 4" (with elbow)



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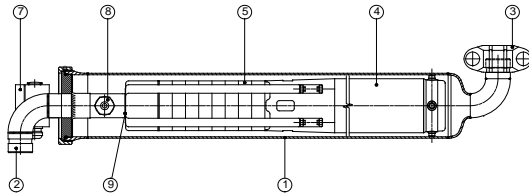
BM 8"



TM01 1420 1912

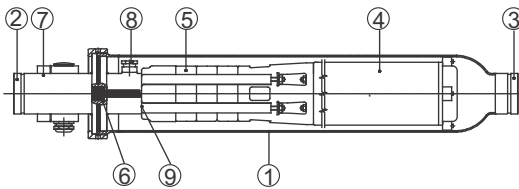
Sectional drawings

BM 4"



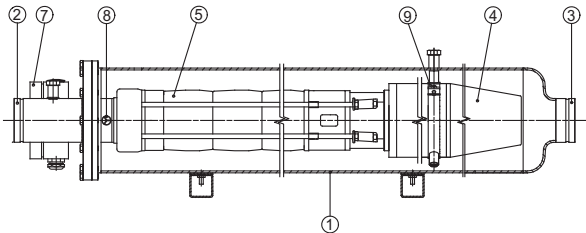
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BM 6"



TM00 3796 2410

BM 8"



TM01 1419 1912

1. Sleeve
2. Discharge connection
3. Suction 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.

5. BM identification

Type key

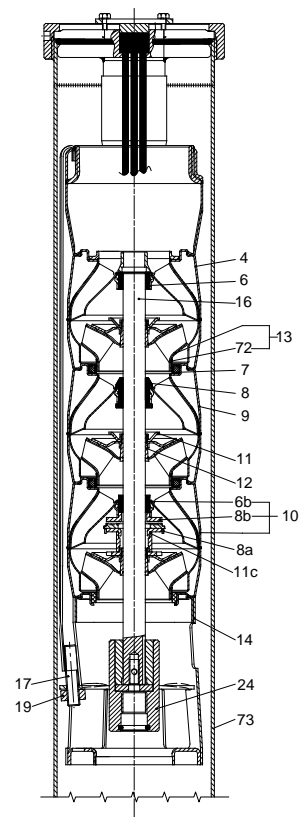
| Example | BM | 3 | (A) | 24 | A | N | E | R |
|--|-----------------|-------------|--------------|----|---|---|---|---|
| Booster module | | | | | | | | |
| Rated pump flow rate [m ³ /h] | | | | | | | | |
| Generation | | | | | | | | |
| Number of stages | | | | | | | | |
| Reduced impeller | | | | | | | | |
| Materials | | | | | | | | |
| BM 4" | Sleeve | Pump | Motor | | | | | |
| 1.4301 | 1.4301/304 | 1.4301/304 | 1.4301/304 | | | | | |
| N | 1.4401/316 | 1.4401/316 | 1.4539/904L | | | | | |
| NE | 1.4401/316 | 1.4401/316 | 1.4539/904L | | | | | |
| R | 1.4539/904L | 1.4539/904L | 1.4539/904L | | | | | |
| BM 6" | | | | | | | | |
| 1.4301 | 1.4301/304 | 1.4301/304 | 1.4301/304 | | | | | |
| N | 1.4401/316 | 1.4401/316 | 1.4539/904L | | | | | |
| NE | 1.4401/316 | 1.4401/316 | 1.4539/904L | | | | | |
| R | 1.4462/SAF 2205 | 1.4539/904L | 1.4539/904L | | | | | |
| BM 8" | | | | | | | | |
| 1.4301 | 1.4301/304 | 1.4301/304 | 1.4301/304 | | | | | |
| N | 1.4401/316 | 1.4401/316 | 1.4401/316 | | | | | |
| NE | 1.4401/316 | 1.4401/316 | 1.4539/904L | | | | | |
| R | 1.4462/SAF 2205 | 1.4539/904L | 1.4539/904L | | | | | |

NE = Pump rubber parts in FKM.

6. BM construction

Material specification

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



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Fig. 1 Example, BM 46

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

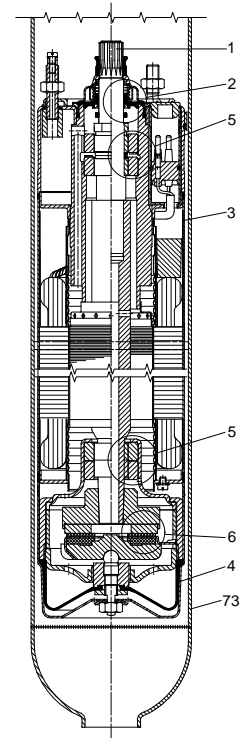


Fig. 2 Example, MS 4000

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7. BM operating conditions

Flow

- 60 Hz: Max. 1364 US gpm (310 m³/h)
- 50 Hz: Max. 1166 US gpm (265 m³/h).

Head

- 60 Hz: Max. 1580 ft (479 m)
- 50 Hz: Max. 1411 ft (430 m).

Higher performance is possible by connection in series or in parallel.

Temperature

Max. +104 °F (+40 °C).
Contact Grundfos in case of higher temperature.

Outlet pressure

Max. 1160 psi (80 bar) (BM 4" and BM 6").

Recommended inlet pressure at +77 °F (+25 °C)

| BM | Min. | | Max. | |
|----|-------|-------|-------|-------|
| | [psi] | [bar] | [psi] | [bar] |
| 4" | 7.25 | 0.5 | 870 | 60 |
| 6" | 7.25 | 0.5 | 725* | 50* |
| 8" | 14.5 | 1 | 362* | 25* |

* 870 psi (60 bar) on request.

Rated speed

- 60 Hz: 3450 rpm
- 50 Hz: 2870 rpm.









Sound pressure level

- The sound pressure level of BM 4" and 6" booster modules is below 70 dB(A).
- The sound pressure level of BM 8" booster modules is below 80 dB(A).

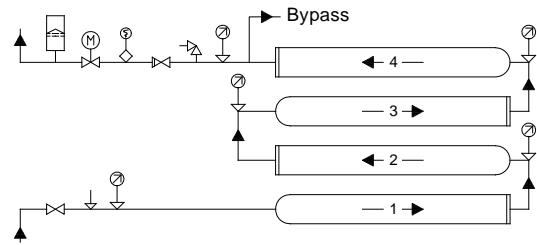
Installation

Modules connected in series and in parallel

Symbols used in figures 1 to 4.

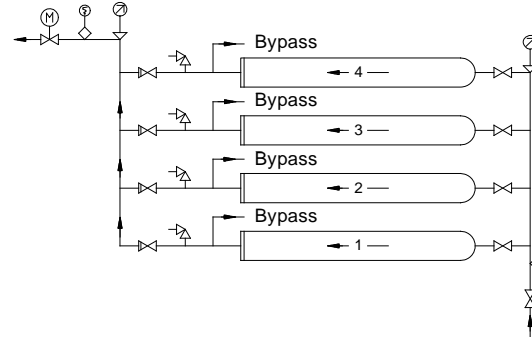
-  Air escape valve
-  Closing valve
-  Non-return valve
-  Pressure switch
-  Flow switch
-  Pressure gauge
-  Motor-operated valve
-  Diaphragm

TM00 3764 1094



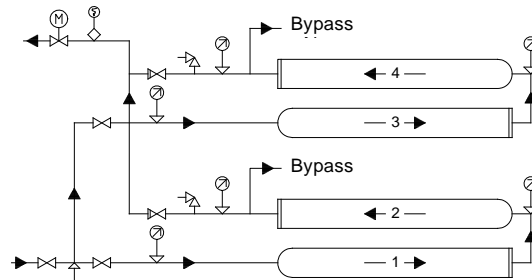
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Fig. 1 Booster unit with four modules connected in series, mounted above each other



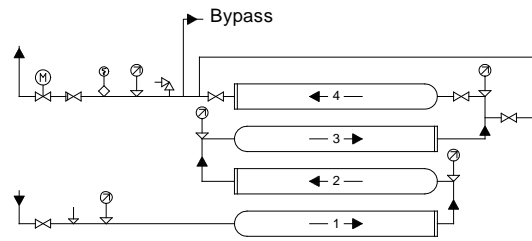
TM00 3761 1094

Fig. 2 Booster unit with four modules connected in parallel, mounted above each other



TM00 3762 1094

Fig. 3 Booster unit with two modules connected in series and in parallel, mounted above each other



TM00 3763 1094

Fig. 4 Booster unit with four modules connected in series with bypass, mounted above each other

Connections

| Size | Type | Victaulic coupling, style 77 |
|-------|-----------------|------------------------------|
| BM 4" | BM 3A - BM 8A | 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 |

Limitations to operation

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

| Recommended flow at +77 °F (+25 °C) | | | | |
|-------------------------------------|------------|------------|-------------------|-----------|
| Type | US gpm | | m ³ /h | |
| | 60 Hz | 50 Hz | 60 Hz | 50 Hz |
| BM 3A | 4.4 - 21 | 3.5 - 20 | 1.0 - 4.7 | 0.8 - 4.4 |
| BM 5A | 13 - 34 | 11 - 30 | 3.0 - 7.7 | 2.5 - 6.8 |
| BM 8A | 21 - 44 | 17 - 44 | 4.8 - 10 | 4.0 - 10 |
| BM 17 | 31 - 117 | 35 - 176 | 7 - 26.5 | 8 - 22 |
| BM 30 | 84 - 198 | 66 - 167 | 19 - 45 | 15 - 38 |
| BM 46 | 123 - 317 | 106 - 264 | 28 - 72 | 24 - 60 |
| BM 60 | 163 - 396 | 132 - 330 | 37 - 90 | 30 - 75 |
| BM 77 | 207 - 528 | 167 - 422 | 47 - 120 | 38 - 96 |
| BM 95 | 251 - 629 | 207 - 520 | 57 - 143 | 47 - 118 |
| BM 125 | 330 - 823 | 273 - 686 | 75 - 187 | 62 - 156 |
| BM 160 | 396 - 946 | 343 - 858 | 90 - 215 | 78 - 195 |
| BM 215 | 506 - 1364 | 431 - 1166 | 115 - 310 | 98 - 265 |

| Recommended pressure | | | | | | |
|----------------------|----------------|-------|-------|-------|-----------------|-------|
| Type | Inlet pressure | | | | Outlet pressure | |
| | Min. | | Max.* | | Max.* | |
| | [psi] | [bar] | [psi] | [bar] | [psi] | [bar] |
| BM 4" | 7.25 | 0.5 | 870 | 60 | 1160 | 80 |
| BM 6" | 7.25 | 0.5 | 725 | 50 | 1160 | 80 |
| BM 8" | 14.5 | 1 | 362 | 25 | 1015 | 70 |
| BMhp 6" | 7.25 | 0.5 | 1160 | 80 | 1160 | 80 |
| BMhp 8" | 14.5 | 1 | 1160 | 80 | 1160 | 80 |

* **Note:** If the maximum inlet/outlet pressure is exceeded, a safety valve should be installed.

| Max. permissible liquid temperature | | | | | | |
|-------------------------------------|-------------------------|----|-----------------------------------|------|-----------|-------------------|
| Motor | Max. liquid temperature | | Min. flow velocity past the motor | | Min. flow | |
| | °F | °C | ft/sec | m/s | gpm | m ³ /h |
| Grundfos 4" | 104 | 40 | 0.5 | 0.15 | 3.5 | 0.8 |
| Grundfos 6" | 86 | 40 | 0.5 | 0.15 | 24.2 | 5.5 |
| Grundfos 8" | 104 | 40 | 0.5 | 0.15 | 81.5 | 18.5 |

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 suction side is sized in accordance with the estimated inlet pressure. At a pressure lower than 7.25 psi (0.5 bar) for BM 4" and BM 6", and 14.5 psi (1 bar) for BM 8", an alarm is given and shortly after the pumps will stop (max. 15 sec.).

All discharge connections to the system should 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.

Checking of operation

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

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

Performance data

Curve conditions

The guidelines below apply to the curves on the following pages.

- 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 Annex A.
If a minimum performance is required, individual measurements must be carried out.
The curves apply to a kinematic viscosity of $1 \text{ mm}^2/\text{s}$ (1 cSt).
The power curve P_2/hp shows pump power input per stage.
The efficiency curve η shows pump efficiency, i.e. pump without motor.
The performance tests have been made at a water temperature of $68 \text{ }^\circ\text{F}$ ($20 \text{ }^\circ\text{C}$).
Test liquid: airless water.
- The conversion between head H (m) and pressure p (kPa) has been made for water with a density of $\rho = 62.4 \text{ lb/ft}^3$ (1000 kg/m^3). If the density differs from this value, the created pressure will be proportional to the density.

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 will be the same as for one pump.

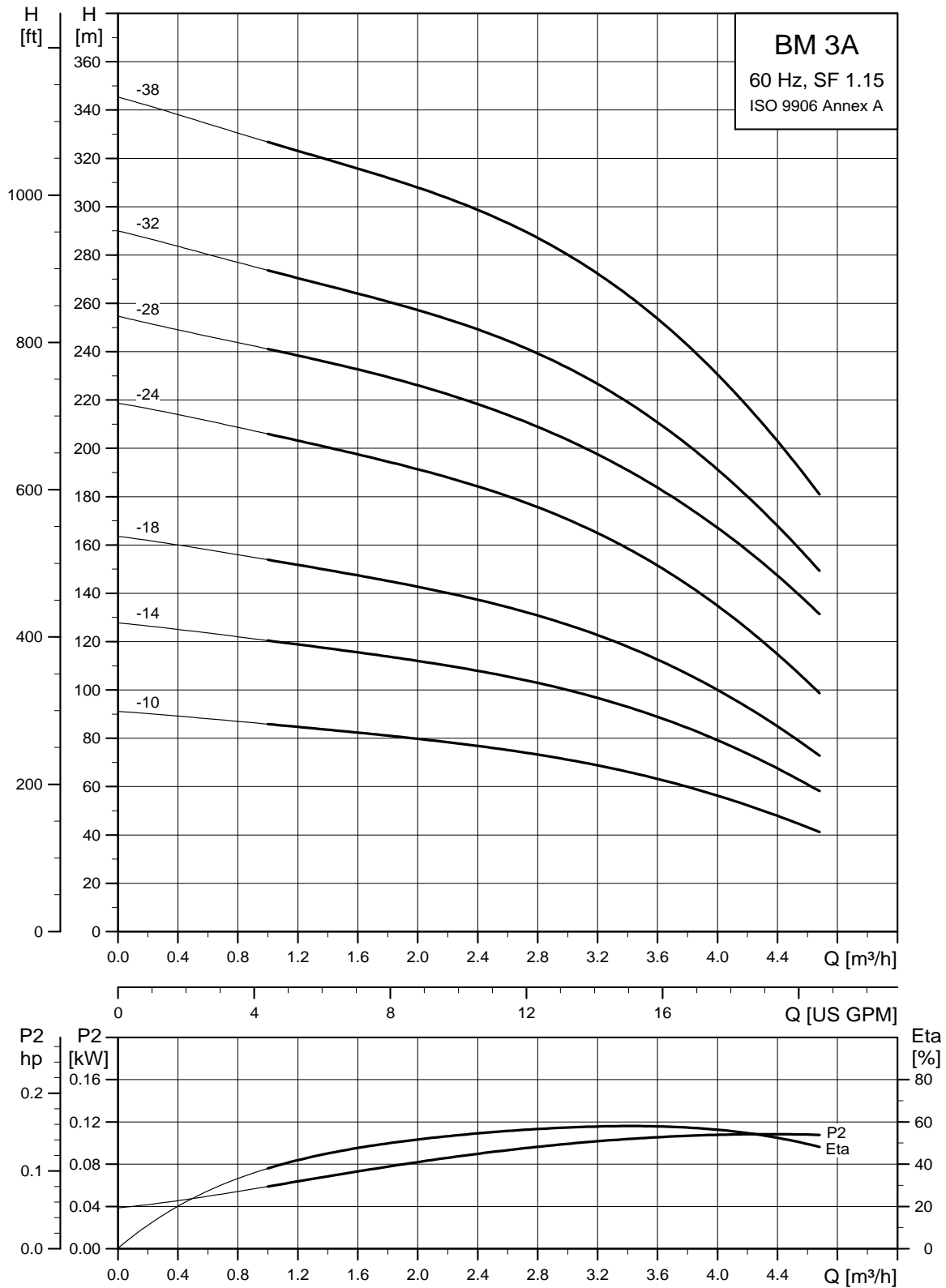
Note: Make sure that the maximum inlet pressure is not exceeded. See section [4. BM product range](#), page [7](#).

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.

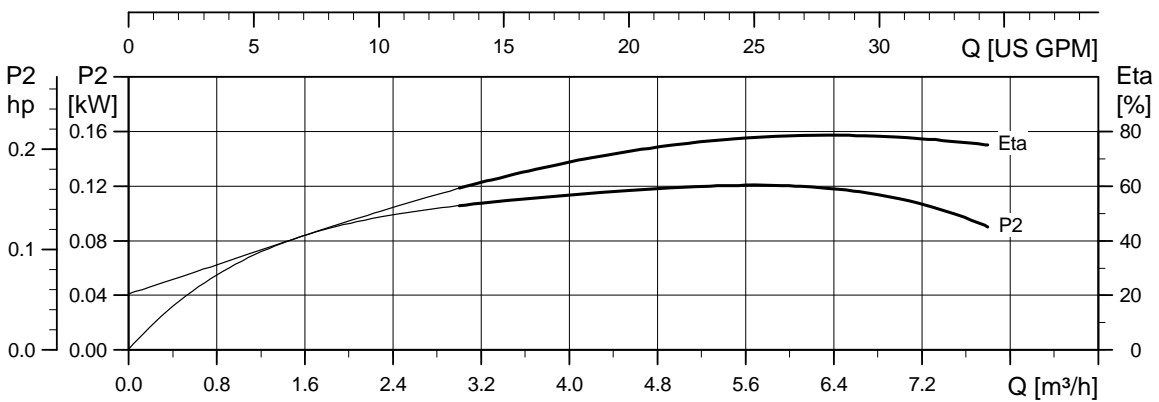
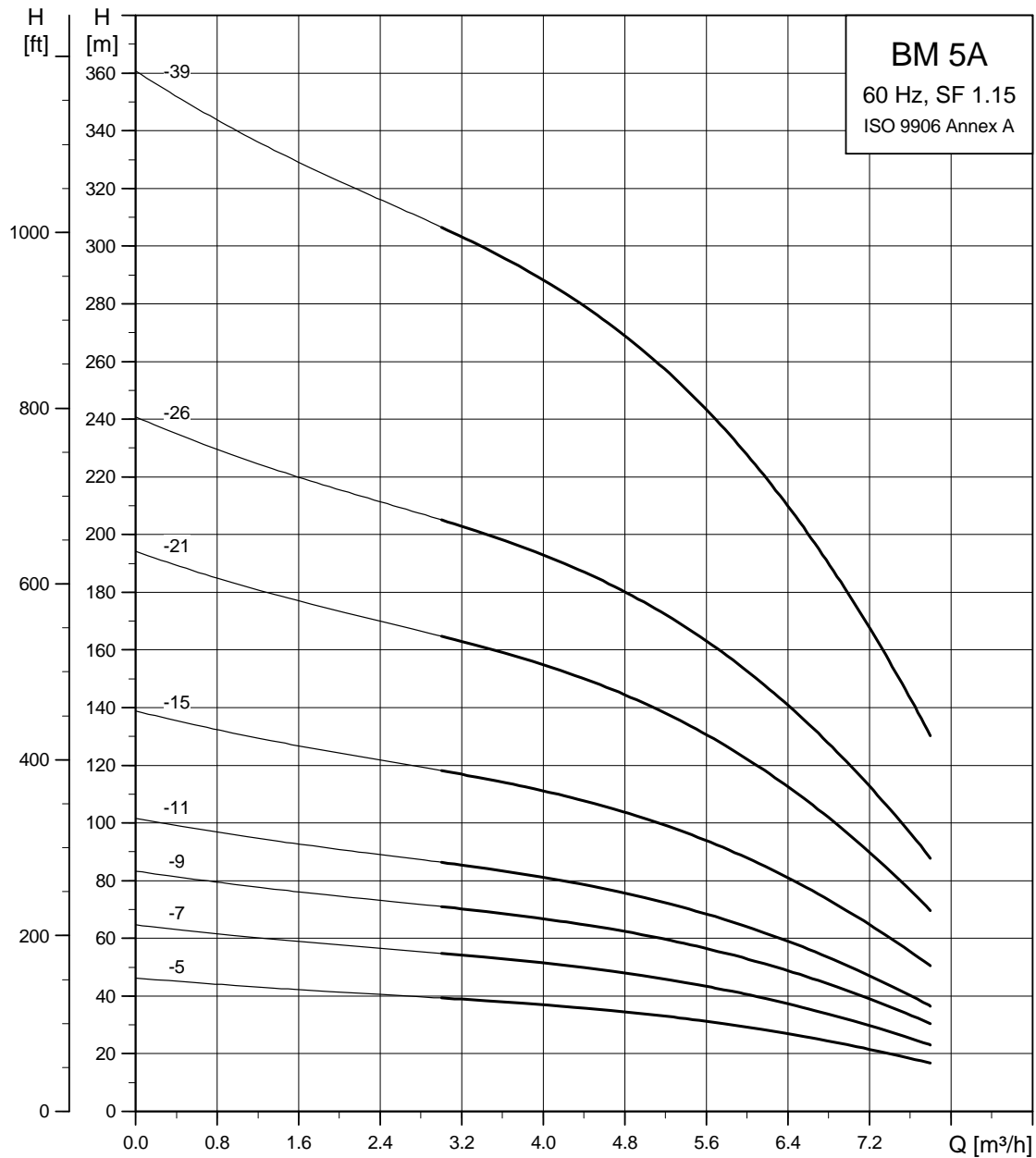
8. BM performance curves, 60 Hz

BM 3A



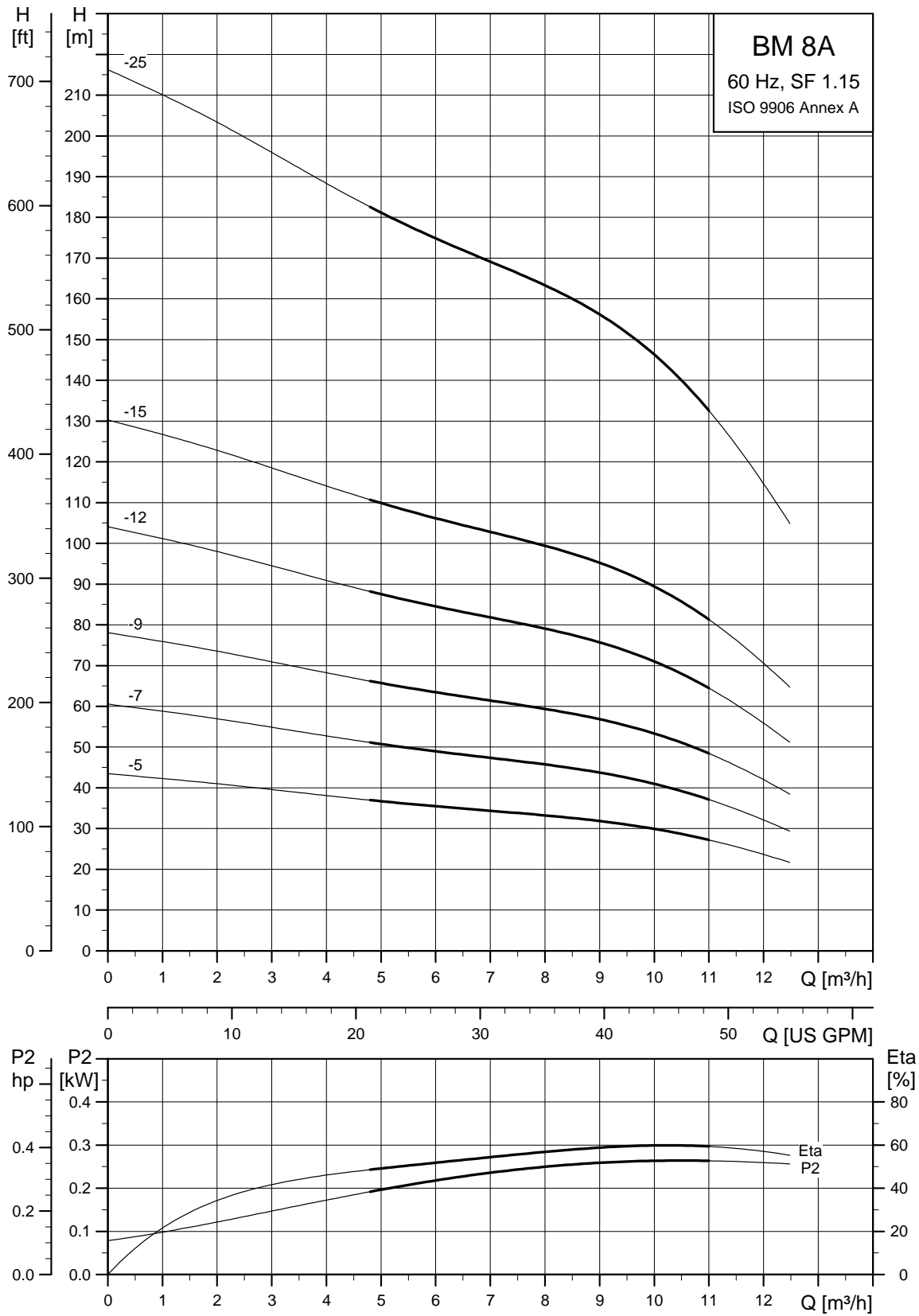
TM01 1220 3400

BM 5A



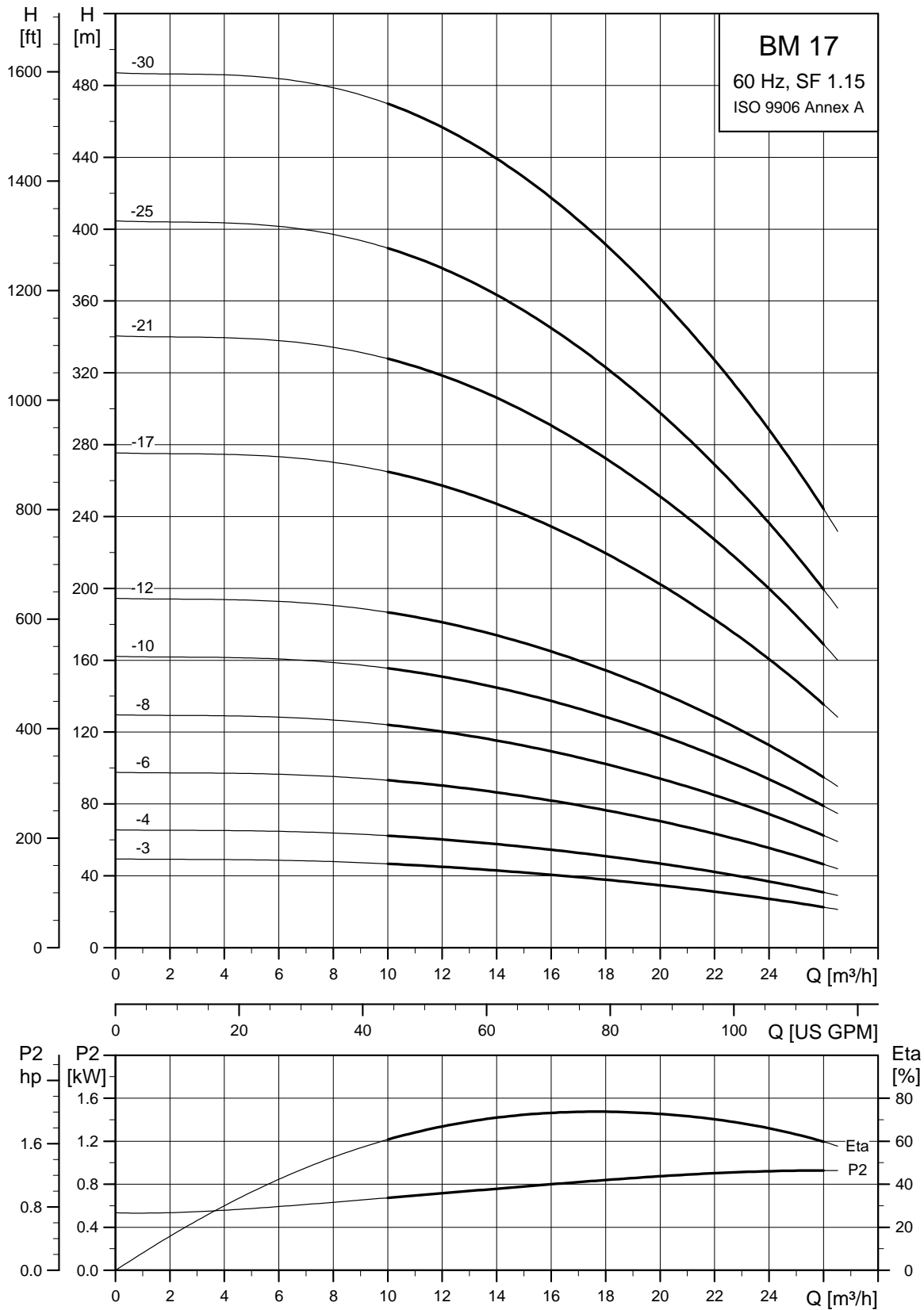
TM01 1221 3400

BM 8A



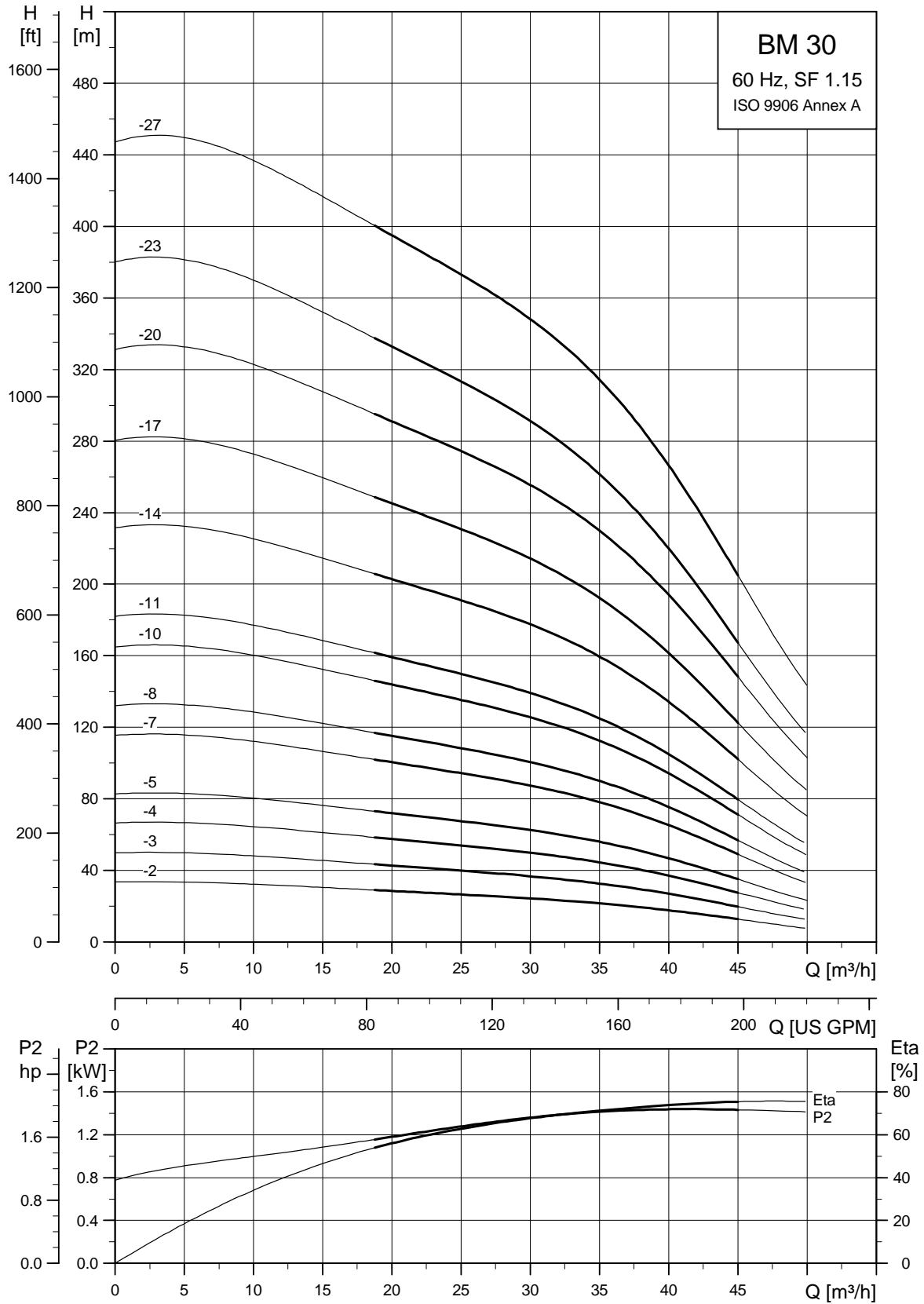
TM01 1222 3400

BM 17



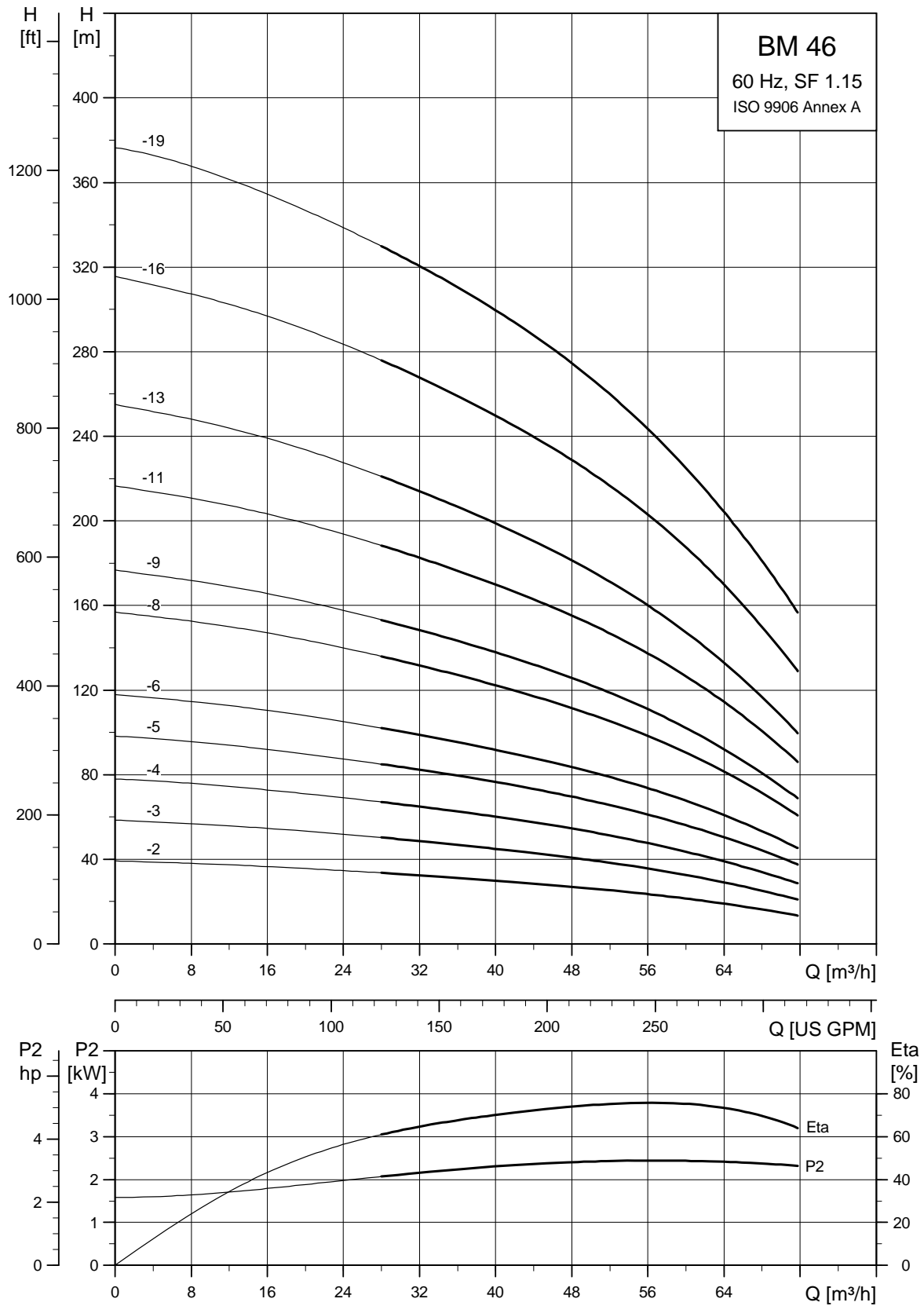
TM00 4164 3400

BM 30



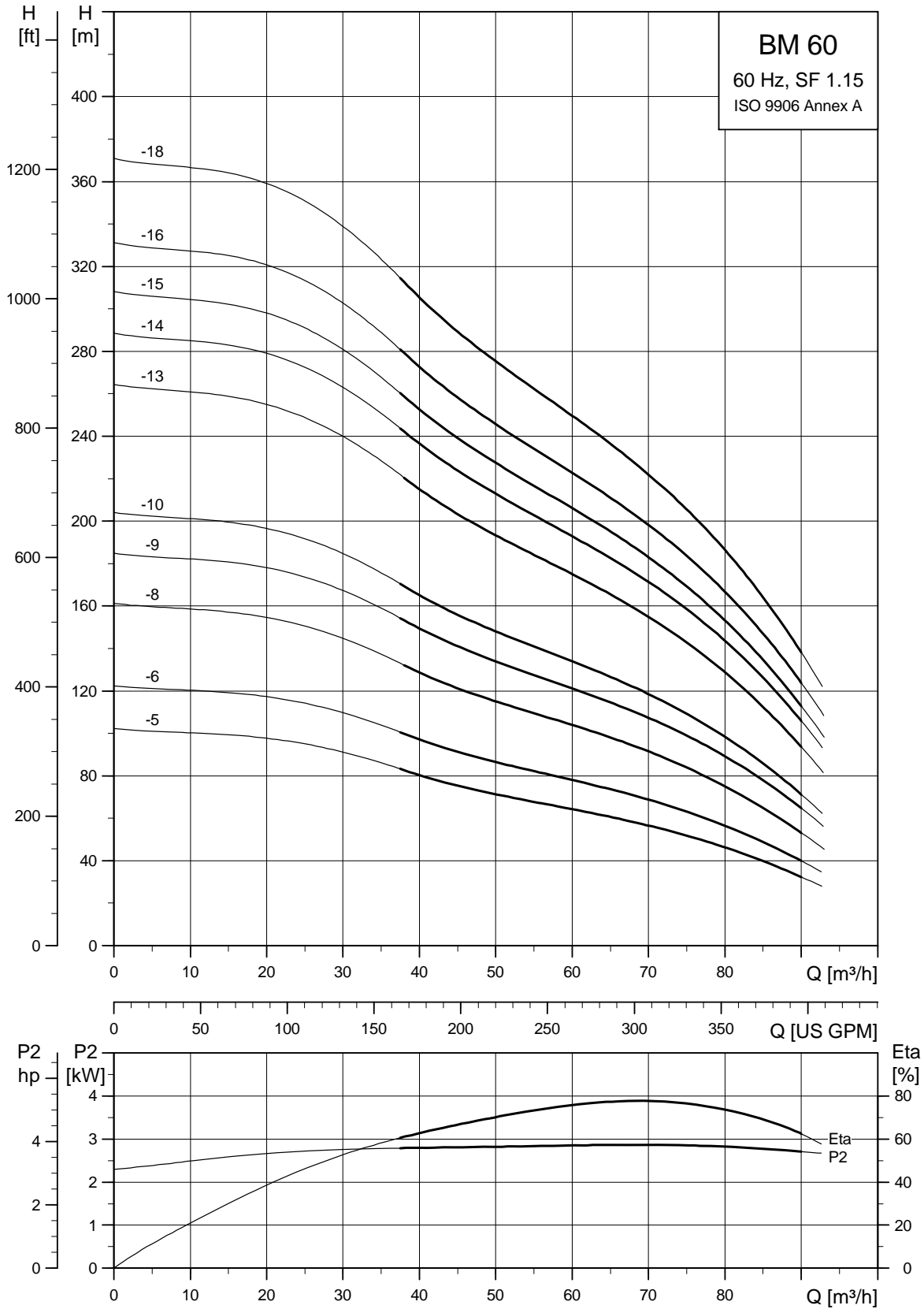
TM01 2078 3400

BM 46



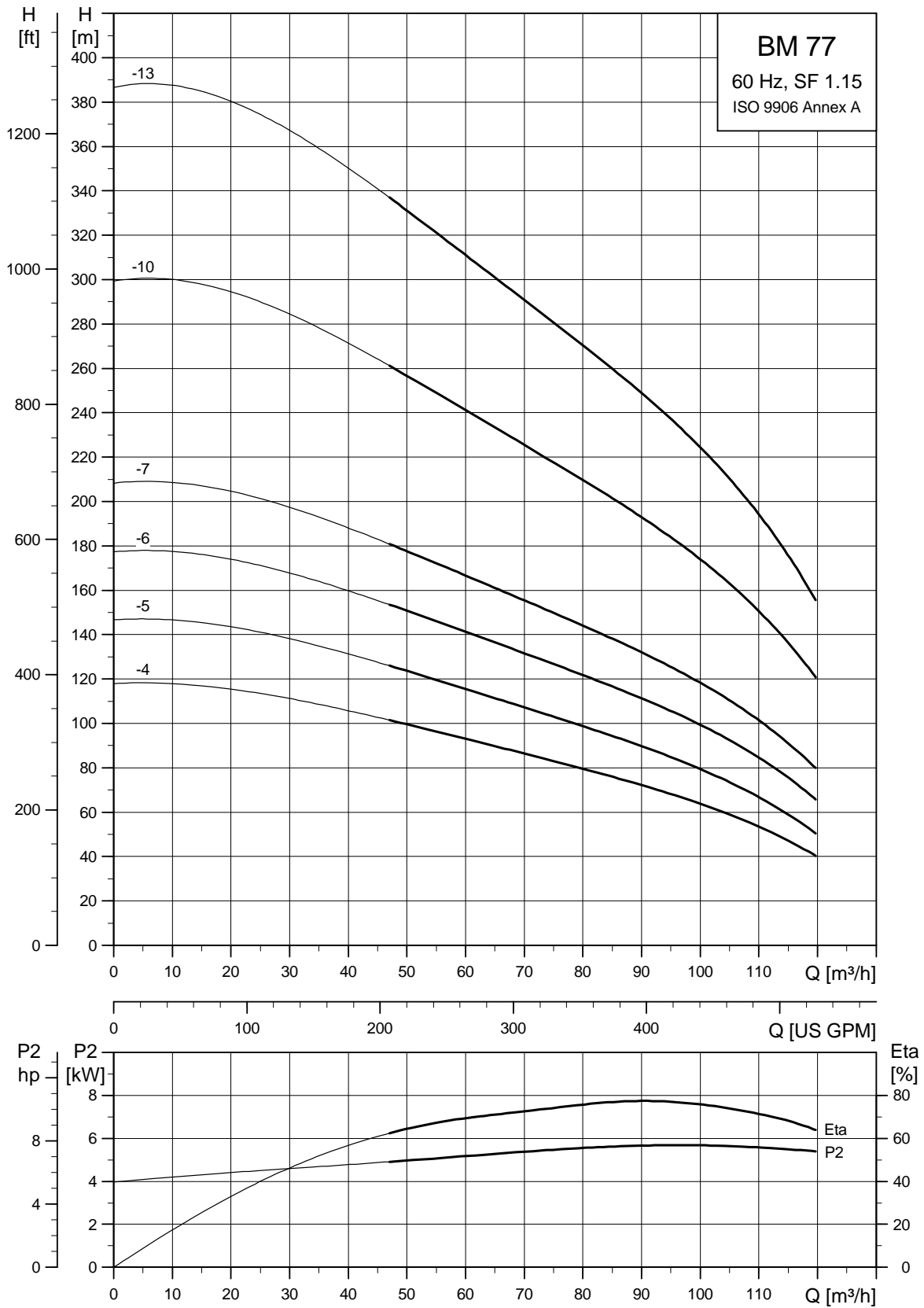
TM01 1225 3400

BM 60



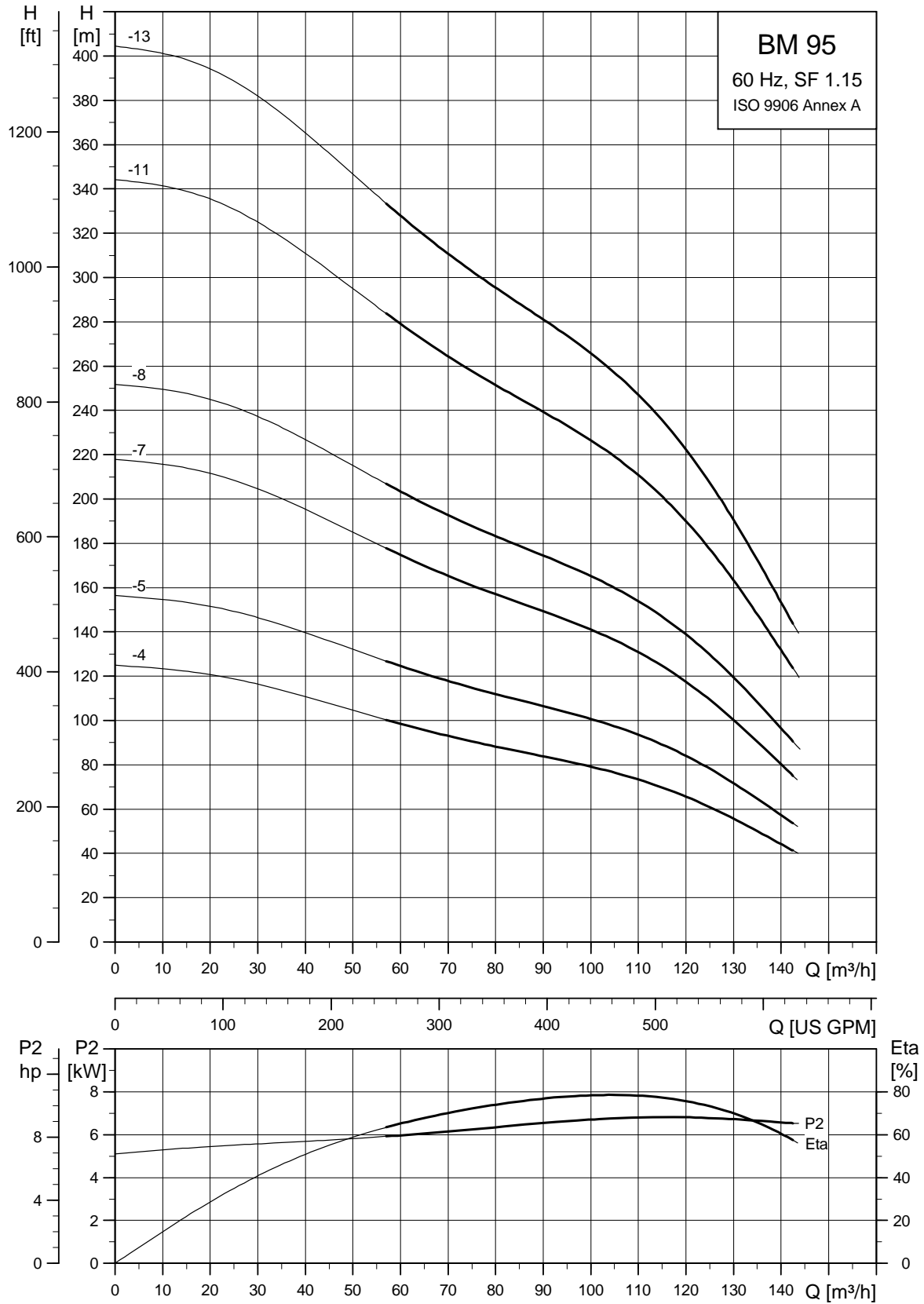
TM01 1226 3400

BM 77



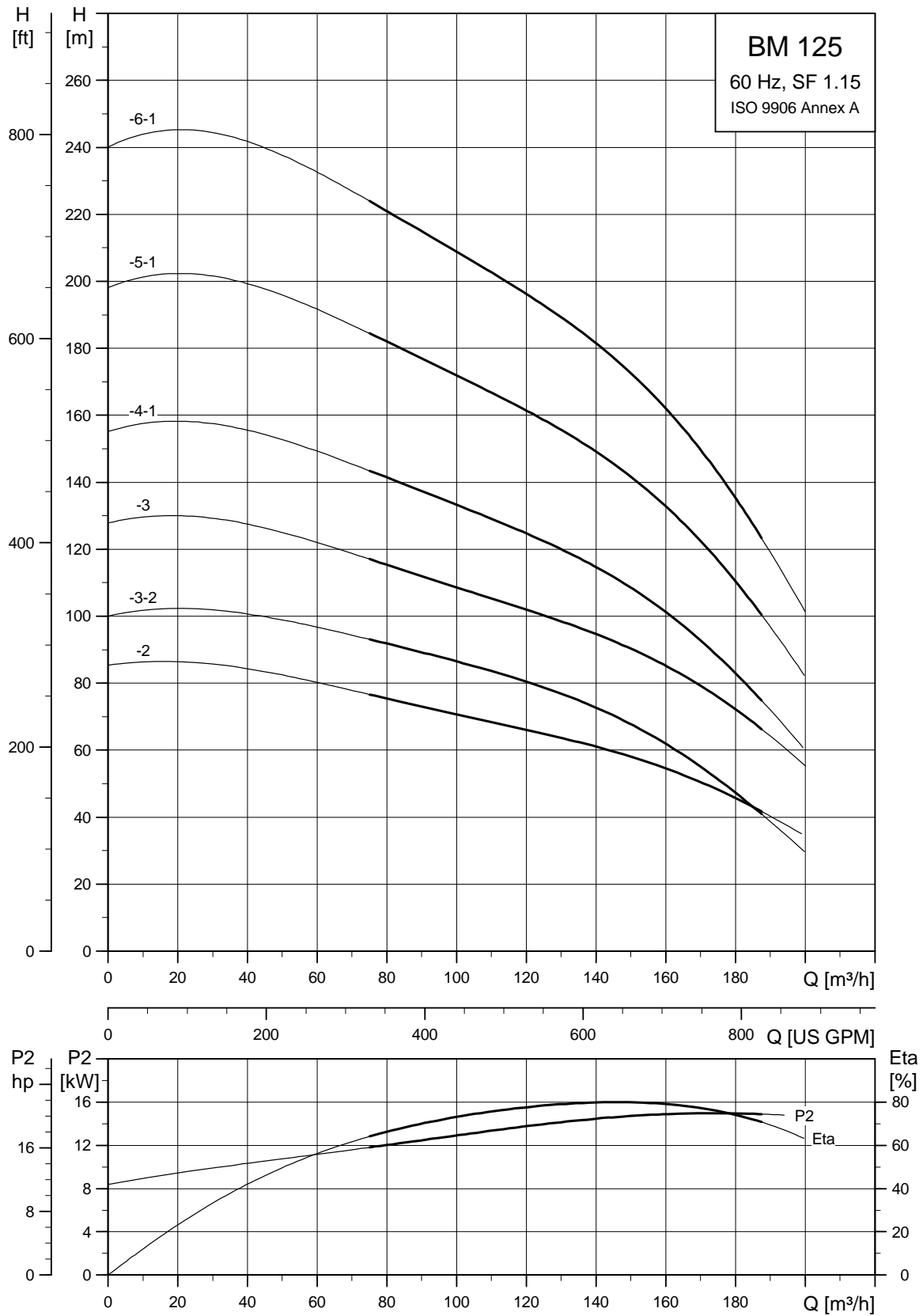
TM01 1227 3400

BM 95



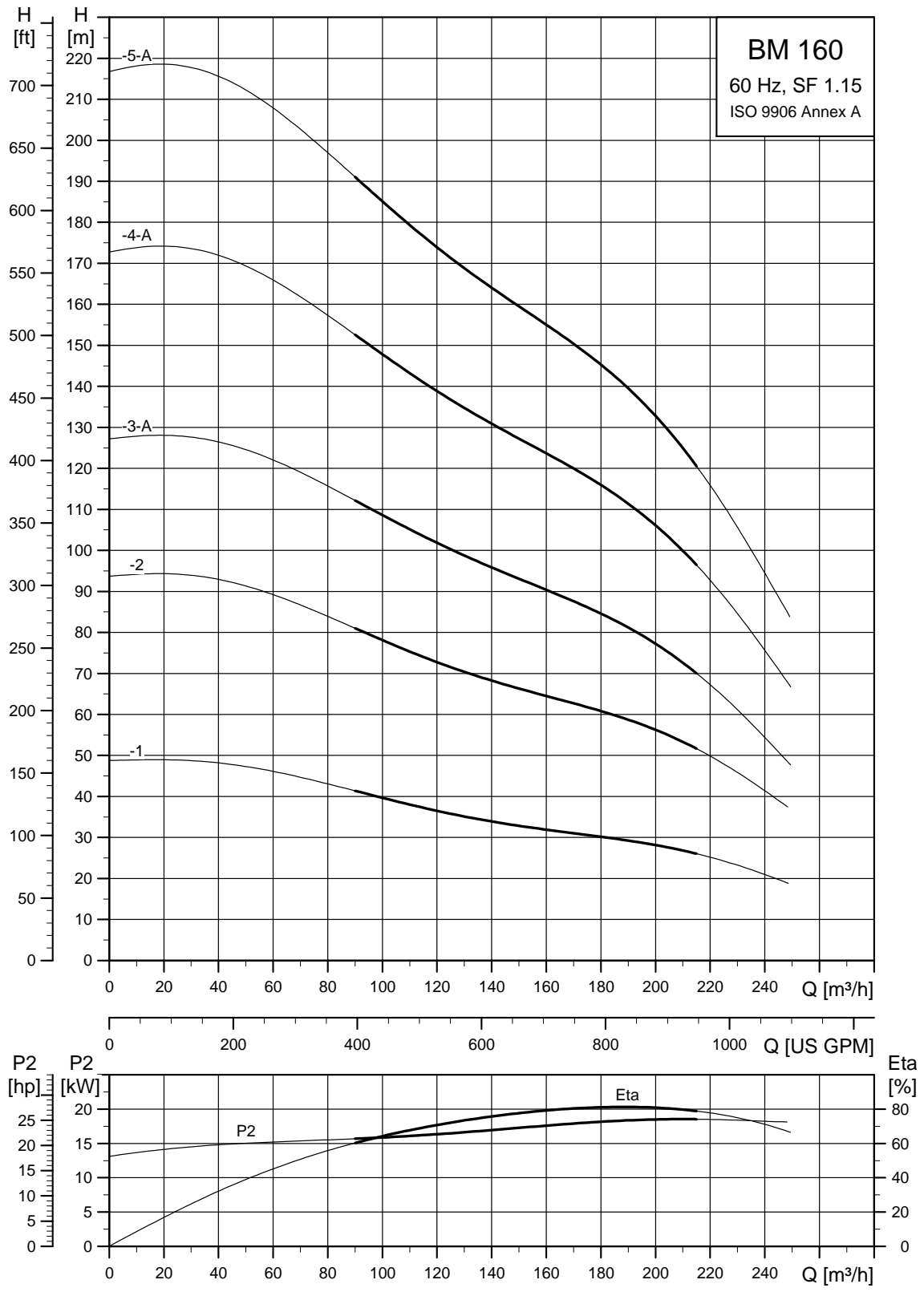
TM01 2079 3400

BM 125



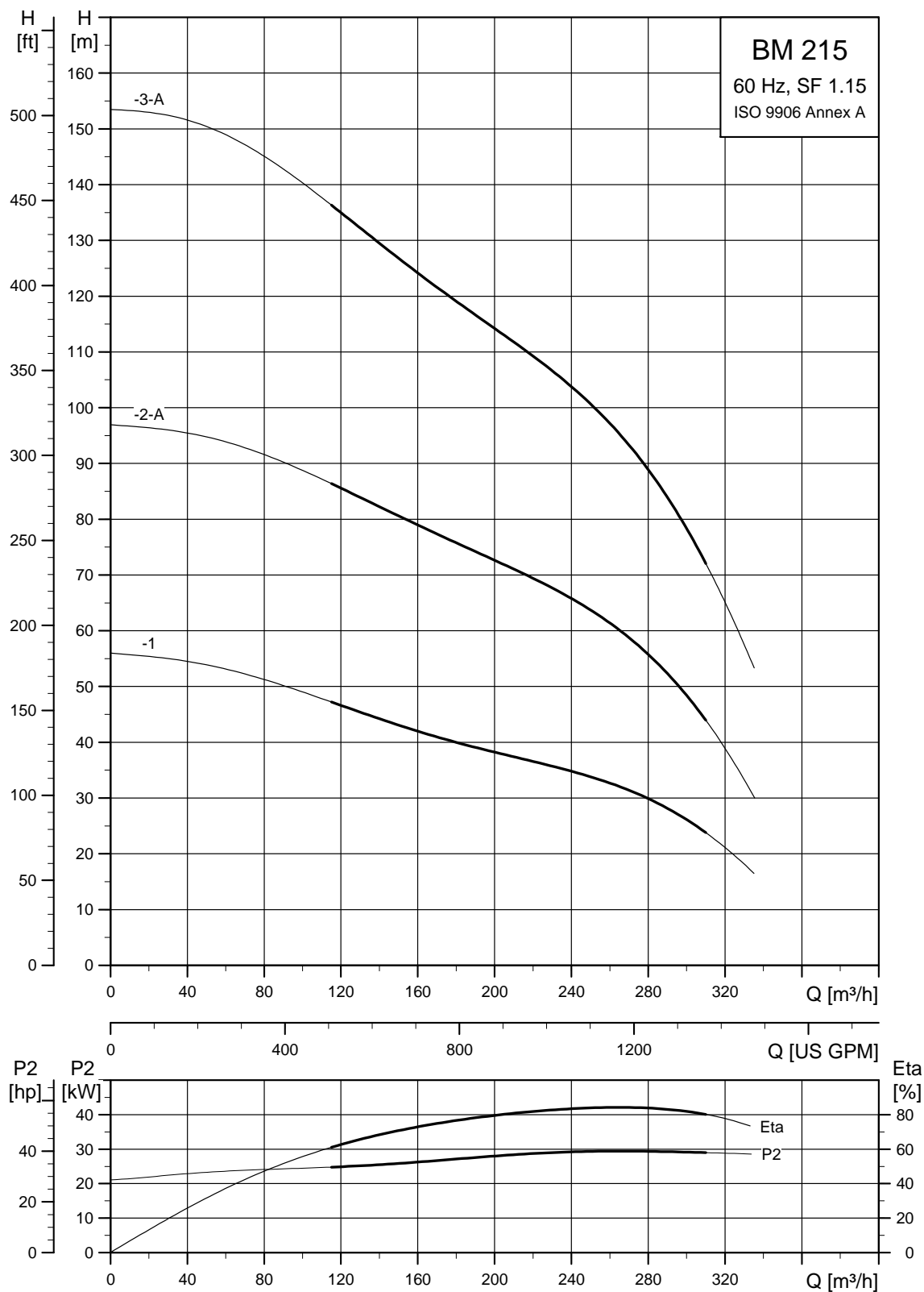
TM01 2080 3400

BM 160



TM04 7952 3712

BM 215



TM04 7954 3712

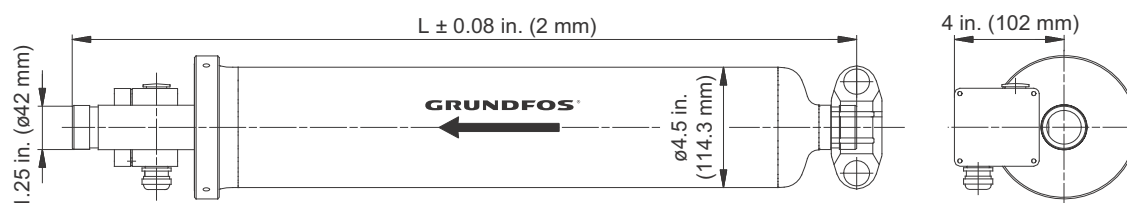
9. BM technical data, 60 Hz

BM 4" (with straight pipe) (3/60/460 V)

| Type | Motor output [P ₂] | | Rated current I _N [A] | Length [L] | | Product number | | | | Approx. ship. wt. | | Approx. ship. vol. |
|----------|--------------------------------|------|----------------------------------|------------|------|----------------|-----------|------------|-----------|-------------------|------|--------------------|
| | [hp] | [kW] | | [in] | [mm] | 1.4301 | N version | NE version | R version | [lbs] | [kg] | [ft ³] |
| BM 3A-10 | 1.0 | 0.75 | 2.30 - 2.10 | 48.1 | 1222 | 10783610 | 10733610 | 10743610 | - | 83.6 | 38.0 | 3.4 |
| BM 3A-14 | 1.5 | 1.1 | 3.05 - 2.95 | 53.9 | 1222 | 10783614 | 10733614 | 10743614 | - | 90.2 | 41.0 | 3.6 |
| BM 3A-18 | 2.0 | 1.5 | 4.10 - 4.15 | 53.9 | 1369 | 10783618 | 10733618 | 10743618 | - | 94.6 | 43.0 | 3.6 |
| BM 3A-24 | 3.0 | 2.2 | 5.65 - 6.05 | 64.6 | 1640 | 10783624 | 10733624 | 10743624 | - | 107.8 | 49.0 | 4.3 |
| BM 3A-28 | 4.0 | 3.0 | 7.40 - 7.75 | 64.6 | 1640 | 10783628 | 10733628 | 10743628 | - | 112.2 | 51.0 | 4.3 |
| BM 3A-32 | 5.5 | 4.0 | 9.45 - 9.45 | 78.2 | 1986 | 10783632 | 10733632 | 10743632 | - | 121.0 | 55.0 | 5.1 |
| BM 3A-38 | 5.5 | 4.0 | 9.45 - 9.45 | 83.1 | 2112 | 10783638 | 10733638 | 10743638 | - | 138.6 | 63.0 | 5.3 |
| BM 5A-5 | 1.0 | 0.75 | 2.30 - 2.10 | 48.1 | 1222 | 05783605 | 05733605 | 05743605 | 05773605 | 79.2 | 36.0 | 3.4 |
| BM 5A-7 | 1.0 | 0.75 | 2.30 - 2.10 | 48.1 | 1222 | 05783607 | 05733607 | 05743607 | 05773607 | 81.4 | 37.0 | 3.4 |
| BM 5A-9 | 1.5 | 1.1 | 3.05 - 2.95 | 48.1 | 1222 | 05783609 | 05733609 | 05743609 | 05773609 | 83.6 | 38.0 | 3.4 |
| BM 5A-11 | 2.0 | 1.5 | 4.10 - 4.15 | 48.1 | 1222 | 05783611 | 05733611 | 05743611 | 05773611 | 85.8 | 39.0 | 3.4 |
| BM 5A-15 | 3.0 | 2.2 | 5.65 - 6.05 | 53.9 | 1369 | 05783615 | 05733615 | 05743615 | 05773615 | 96.8 | 44.0 | 3.6 |
| BM 5A-21 | 4.0 | 3.0 | 7.40 - 7.75 | 64.6 | 1640 | 05783621 | 05733621 | 05743621 | 05773621 | 105.6 | 48.0 | 4.3 |
| BM 5A-26 | 5.5 | 4.0 | 9.45 - 9.45 | 69.2 | 1758 | 05783626 | 05733626 | 05743626 | 05773626 | 121.0 | 55.0 | 4.5 |
| BM 5A-39 | 7.5 | 5.5 | 12.8 - 12.8 | 83.1 | 2112 | 05783639 | 05733639 | 05743639 | 05773639 | 147.4 | 67.0 | 5.3 |
| BM 8A-5 | 1.5 | 1.1 | 3.05 - 2.95 | 48.1 | 1222 | 11783605 | 11733605 | 11743605 | 11773605 | 85.8 | 39.0 | 3.4 |
| BM 8A-7 | 2.0 | 1.5 | 4.10 - 4.15 | 53.9 | 1369 | 11783607 | 11733607 | 11743607 | 11773607 | 90.2 | 41.0 | 3.6 |
| BM 8A-9 | 3.0 | 2.2 | 5.65 - 6.05 | 58.0 | 1472 | 11783609 | 11733609 | 11743609 | 11773609 | 99.0 | 45.0 | 3.8 |
| BM 8A-12 | 4.0 | 3.0 | 7.40 - 7.75 | 69.2 | 1758 | 11783612 | 11733612 | 11743612 | 11773612 | 107.8 | 49.0 | 4.5 |
| BM 8A-15 | 5.5 | 4.0 | 9.45 - 9.45 | 78.2 | 1986 | 11783615 | 11733615 | 11743615 | 11773615 | 123.2 | 56.0 | 5.1 |
| BM 8A-25 | 7.5 | 5.5 | 12.8 - 12.8 | 92.4 | 2346 | 11783625 | 11733625 | 11743625 | 11773625 | 154.0 | 70.0 | 6.1 |

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

Dimensional sketch



TM05 5928 4212

Note: One set of connecting fittings is required for each system. See section [20. Accessories](#), page 73.

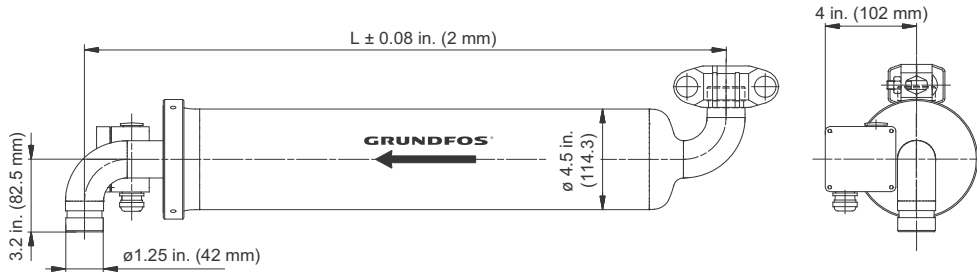
BM 4" (with elbow) (3/60/460 V)

| Type | Motor output [P ₂] | | Rated current I _N [A] | Length [L] | | Product number | | | | Approx. ship. wt. | | Approx. ship. vol. [ft ³] |
|----------|--------------------------------|------|----------------------------------|------------|------|----------------|-----------|------------|-----------|-------------------|------|---------------------------------------|
| | [hp] | [kW] | | [in] | [mm] | 1.4301 | N version | NE version | R version | [lbs] | [kg] | |
| BM 3A-10 | 1.0 | 0.75 | 2.30 - 2.10 | 45.0 | 1144 | 10793610 | 10753610 | 10763610 | - | 83.6 | 38.0 | 3.6 |
| BM 3A-14 | 1.5 | 1.1 | 3.05 - 2.95 | 50.8 | 1291 | 10793614 | 10753614 | 10763614 | - | 90.2 | 41.0 | 3.6 |
| BM 3A-18 | 2.0 | 1.5 | 4.10 - 4.15 | 50.8 | 1291 | 10793618 | 10753618 | 10763618 | - | 94.6 | 43.0 | 4.3 |
| BM 3A-24 | 3.0 | 2.2 | 5.65 - 6.05 | 61.5 | 1562 | 10793624 | 10753624 | 10763624 | - | 107.8 | 49.0 | 5.1 |
| BM 3A-28 | 4.0 | 3.0 | 7.40 - 7.75 | 61.5 | 1562 | 10793628 | 10753628 | 10763628 | - | 112.2 | 51.0 | 5.1 |
| BM 3A-32 | 4.0 | 3.0 | 7.40 - 7.75 | 75.1 | 1908 | 10793632 | 10753632 | 10763632 | - | 121.0 | 55.0 | 5.3 |
| BM 3A-38 | 5.5 | 4.0 | 9.45 - 9.45 | 80.1 | 2034 | 10793638 | 10753638 | 10763638 | - | 138.6 | 63.0 | 3.4 |
| BM 5A-5 | 1.0 | 0.75 | 2.30 - 2.10 | 45.0 | 1144 | 05793605 | 05753605 | 05763605 | 05723605 | 79.2 | 36.0 | 3.4 |
| BM 5A-7 | 1.0 | 0.75 | 2.30 - 2.10 | 45.0 | 1144 | 05793607 | 05753607 | 05763607 | 05723607 | 81.4 | 37.0 | 3.4 |
| BM 5A-9 | 1.5 | 1.1 | 3.05 - 2.95 | 45.0 | 1144 | 05793609 | 05753609 | 05763609 | 05723609 | 83.6 | 38.0 | 3.4 |
| BM 5A-11 | 2.0 | 1.5 | 4.10 - 4.15 | 45.0 | 1144 | 05793611 | 05753611 | 05763611 | 05723611 | 85.8 | 39.0 | 3.6 |
| BM 5A-15 | 3.0 | 2.2 | 5.65 - 6.05 | 50.8 | 1291 | 05793615 | 05753615 | 05763615 | 05723615 | 96.8 | 44.0 | 4.3 |
| BM 5A-21 | 4.0 | 3.0 | 7.40 - 7.75 | 61.5 | 1562 | 05793621 | 05753621 | 05763621 | 05723621 | 105.6 | 48.0 | 4.5 |
| BM 5A-26 | 5.5 | 4.0 | 9.45 - 9.45 | 66.1 | 1680 | 05793626 | 05753626 | 05763626 | 05723626 | 121.0 | 55.0 | 5.3 |
| BM 5A-39 | 7.5 | 5.5 | 12.8 - 12.8 | 80.1 | 2034 | 05793639 | 05753639 | 05763639 | 05723639 | 147.4 | 67.0 | 3.4 |
| BM 8A-5 | 1.5 | 1.1 | 3.05 - 2.95 | 45.0 | 1144 | 11793605 | 11753605 | 11763605 | 11723605 | 85.8 | 39.0 | 3.6 |
| BM 8A-7 | 2.0 | 1.5 | 4.10 - 4.15 | 50.8 | 1291 | 11793607 | 11753607 | 11763607 | 11723607 | 90.2 | 41.0 | 3.8 |
| BM 8A-9 | 3.0 | 2.2 | 5.65 - 6.05 | 54.9 | 1394 | 11793609 | 11753609 | 11763609 | 11723609 | 99.0 | 45.0 | 4.5 |
| BM 8A-12 | 4.0 | 3.0 | 7.40 - 7.75 | 66.1 | 1680 | 11793612 | 11753612 | 11763612 | 11723612 | 107.8 | 49.0 | 5.1 |
| BM 8A-15 | 5.5 | 4.0 | 9.45 - 9.45 | 75.1 | 1908 | 11793615 | 11753615 | 11763615 | 11723615 | 123.2 | 56.0 | 6.1 |
| BM 8A-25 | 7.5 | 5.5 | 12.8 - 12.8 | 89.3 | 2268 | 11793625 | 11753625 | 11763625 | 11723625 | 154.0 | 70.0 | 3.6 |

On request, the BM is available

- in other voltages
- with all stages indicated in the standard SP pump range
- in R version.

Dimensional sketch



Note: One set of connecting fittings is required for each system. See section [20. Accessories](#), page [73](#).

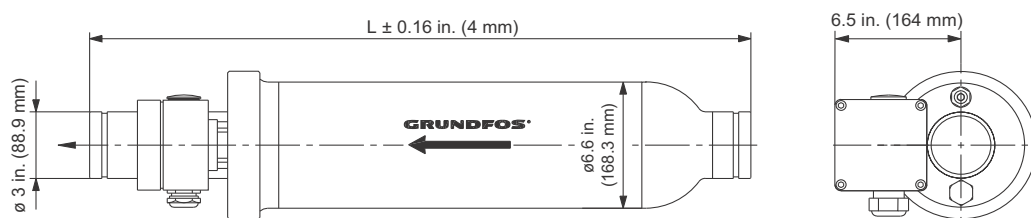
TM05 5929 4212

BM 6" (with straight pipe) (3/60/460 V)

| Type | Motor output [P ₂] | | Rated current I _N [A] | Length [L] | | Product number | | | | Approx. ship. wt. | | Approx. ship. vol. [ft ³] |
|----------|--------------------------------|------|-------------------------------------|------------|------|----------------|-------------|-------------|-------------|-------------------|-------|--|
| | [hp] | [kW] | | [in] | [mm] | 1.4301 | N version | NE version | R version | [lbs] | [kg] | |
| BM 17-3 | 4.0 | 3.0 | 7.40 - 7.75 | 61.0 | 1550 | 12DO3603 | 12 DJ 36 03 | 12 DH 36 03 | 12 DU 36 03 | 151.8 | 69.0 | 9.7 |
| BM 17-4 | 5.5 | 4.0 | 9.45 - 9.45 | 61.0 | 1550 | 12DO3604 | 12DJ3604 | 12DH3604 | 12DU3604 | 167.2 | 76.0 | 9.7 |
| BM 17-6 | 7.5 | 5.5 | 12.8 - 12.8 | 72.8 | 1850 | 12DO3606 | 12DJ3606 | 12DH3606 | 12DU3606 | 198.0 | 90.0 | 11.3 |
| BM 17-8 | 10.0 | 7.5 | 17.0 - 17.4 | 72.8 | 1850 | 12DO3608 | 12DJ3608 | 12DH3608 | 12DU3608 | 248.6 | 113.0 | 11.3 |
| BM 17-10 | 12.5 | 9.2 | 21.0 - 21.8 | 82.7 | 2100 | 12DO3610 | 12DJ3610 | 12DH3610 | 12DU3610 | 283.8 | 129.0 | 12.6 |
| BM 17-12 | 15.0 | 11.0 | 24.0 - 25.5 | 86.6 | 2200 | 12DO3612 | 12DJ3612 | 12DH3612 | 12DU3612 | 303.6 | 138.0 | 13.3 |
| BM 17-15 | 17.5 | 13.0 | 28.5 - 29.5 | 98.4 | 2500 | 12DO3615 | 12DJ3615 | 12DH3615 | 12DU3615 | 341.0 | 155.0 | 14.9 |
| BM 17-17 | 20.0 | 15.0 | 32.5 - 33.5 | 98.4 | 2500 | 12DO3617 | 12DJ3617 | 12DH3617 | 12DU3617 | 358.6 | 163.0 | 14.9 |
| BM 17-21 | 25.0 | 18.5 | 41.0 - 42.0 | 112.2 | 2850 | 12DO3621 | 12DJ3621 | 12DH3621 | 12DU3621 | 407.0 | 185.0 | 16.9 |
| BM 17-25 | 30.0 | 22.0 | 46.5 - 48.0 | 126.0 | 3200 | 12DO3625 | 12DJ3625 | 12DH3625 | 12DU3625 | 457.6 | 208.0 | 18.8 |
| BM 17-30 | 35.0 | 26.0 | 54.5 - 57.5 | 149.6 | 3800 | 12DO3630 | 12DJ3630 | 12DH3630 | 12DU3630 | 519.2 | 236.0 | 22.1 |
| BM 30-2 | 4.0 | 3.0 | 7.40 - 7.75 | 61.0 | 1550 | 13DO3602 | 13DJ3602 | 13DH3602 | 13DU3602 | 149.6 | 68.0 | 9.7 |
| BM 30-3 | 5.5 | 4.0 | 9.45 - 9.45 | 65.0 | 1650 | 13DO3603 | 13DJ3603 | 13DH3603 | 13DU3603 | 171.6 | 78.0 | 10.3 |
| BM 30-4 | 7.5 | 5.5 | 12.8 - 12.8 | 72.8 | 1850 | 13DO3604 | 13DJ3604 | 13DH3604 | 13DU3604 | 202.4 | 92.0 | 11.3 |
| BM 30-5 | 10.0 | 7.5 | 17.0 - 17.4 | 72.8 | 1850 | 13DO3605 | 13DJ3605 | 13DH3605 | 13DU3605 | 244.2 | 111.0 | 11.3 |
| BM 30-7 | 12.5 | 9.2 | 21.0 - 21.8 | 82.7 | 2100 | 13DO3607 | 13DJ3607 | 13DH3607 | 13DU3607 | 283.8 | 129.0 | 12.6 |
| BM 30-8 | 15.0 | 11.0 | 24.0 - 25.5 | 86.6 | 2200 | 13DO3608 | 13DJ3608 | 13DH3608 | 13DU3608 | 299.2 | 136.0 | 13.3 |
| BM 30-10 | 17.5 | 13.0 | 28.5 - 29.5 | 98.4 | 2500 | 13DO3610 | 13DJ3610 | 13DH3610 | 13DU3610 | 336.6 | 153.0 | 14.9 |
| BM 30-11 | 20.0 | 15.0 | 32.5 - 33.5 | 98.4 | 2500 | 13DO3611 | 13DJ3611 | 13DH3611 | 13DU3611 | 352.0 | 160.0 | 14.9 |
| BM 30-14 | 25.0 | 18.5 | 41.0 - 42.0 | 112.2 | 2850 | 13DO3614 | 13DJ3614 | 13DH3614 | 13DU3614 | 402.6 | 183.0 | 16.9 |
| BM 30-17 | 30.0 | 22.0 | 46.5 - 48.0 | 126.0 | 3200 | 13DO3617 | 13DJ3617 | 13DH3617 | 13DU3617 | 451.0 | 205.0 | 18.8 |
| BM 30-20 | 35.0 | 26.0 | 54.5 - 57.5 | 149.6 | 3800 | 13DO3620 | 13DJ3620 | 13DH3620 | 13DU3620 | 512.6 | 233.0 | 22.1 |
| BM 30-23 | 40.0 | 30.0 | 63.0 - 66.5 | 167.3 | 4250 | 13DO3623 | 13DJ3623 | 13DH3623 | 13DU3623 | 574.2 | 261.0 | 24.5 |
| BM 46-2 | 7.5 | 5.5 | 12.8 - 12.8 | 65.0 | 1650 | 15DO3602 | 15E03602 | 15E13602 | 15E63602 | 187.0 | 85.0 | 10.3 |
| BM 46-3 | 10.0 | 7.5 | 17.0 - 17.4 | 68.9 | 1750 | 15DO3603 | 15E03603 | 15E13603 | 15E63603 | 235.4 | 107.0 | 10.8 |
| BM 46-4 | 12.5 | 9.2 | 21.0 - 21.8 | 72.8 | 1850 | 15DO3604 | 15E03604 | 15E13604 | 15E63604 | 266.2 | 121.0 | 11.3 |
| BM 46-5 | 17.5 | 13.0 | 28.5 - 29.5 | 82.7 | 2100 | 15DO3605 | 15E03605 | 15E13605 | 15E63605 | 305.8 | 139.0 | 12.6 |
| BM 46-6 | 20.0 | 15.0 | 32.5 - 33.5 | 86.6 | 2200 | 15DO3606 | 15E03606 | 15E13606 | 15E63606 | 327.8 | 149.0 | 13.3 |
| BM 46-8 | 25.0 | 18.5 | 41.0 - 42.0 | 98.4 | 2500 | 15DO3608 | 15E03608 | 15E13608 | 15E63608 | 376.2 | 171.0 | 14.9 |
| BM 46-9 | 30.0 | 22.0 | 46.5 - 48.0 | 106.3 | 2700 | 15DO3609 | 15E03609 | 15E13609 | 15E63609 | 411.4 | 187.0 | 16.0 |
| BM 46-11 | 35.0 | 26.0 | 54.5 - 57.5 | 120.0 | 3050 | 15DO3611 | 15E03611 | 15E13611 | 15E63611 | 459.8 | 209.0 | 17.9 |
| BM 46-13 | 40.0 | 30.0 | 63.0 - 66.5 | 126.0 | 3200 | 15DO3613 | 15E03613 | 15E13613 | 15E63613 | 506.0 | 230.0 | 18.8 |
| BM 60-5 | 20.0 | 15.0 | 32.5 - 33.5 | 82.7 | 2100 | 14DO3605 | 14DE3605 | 14DJ3605 | 14E63605 | 319.0 | 145.0 | 12.6 |
| BM 60-6 | 25.0 | 18.5 | 41.0 - 42.0 | 86.6 | 2200 | 14DO3606 | 14DE3606 | 14DJ3606 | 14E63606 | 345.4 | 157.0 | 13.3 |
| BM 60-8 | 30.0 | 22.0 | 46.5 - 48.0 | 98.4 | 2500 | 14DO3608 | 14DE3608 | 14DJ3608 | 14E63608 | 396.0 | 180.0 | 14.9 |
| BM 60-9 | 35.0 | 26.0 | 54.5 - 57.5 | 106.3 | 2700 | 14DO3609 | 14DE3609 | 14DJ3609 | 14E63609 | 429.0 | 195.0 | 16.0 |
| BM 60-10 | 40.0 | 30.0 | 63.0 - 66.5 | 112.2 | 2850 | 14DO3610 | 14DE3610 | 14DJ3610 | 14E63610 | 466.4 | 212.0 | 16.9 |

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

Dimensional sketch



Note: One set of connecting fittings is required for each system. See section [20. Accessories](#), page 73.

TM05 5930 4212

BM 8" (with straight pipe) (3/60/460 V)

| Type | Motor output [P ₂] | | Rated current I _N [A] | Length [L] | | Product number | | | | Approx. ship. wt. | | Approx. ship. vol. [ft ³] |
|--------------|--------------------------------|------|----------------------------------|------------|------|----------------|-----------|------------|-----------|-------------------|-------|---------------------------------------|
| | [hp] | [kW] | | [in] | [mm] | 1.4301 | N version | NE version | R version | [lbs] | [kg] | |
| BM 30-27* | 50.0 | 37.0 | 78.0 | 175.2 | 4450 | 13DS3627 | 13DK3627 | 13DW3627 | 13CU3627 | 924.0 | 420.0 | 58.3 |
| BM 46-16* | 50.0 | 37.0 | 78.0 | 149.6 | 3800 | 15DS3616 | 15DK3616 | 15DW3616 | 15CU3616 | 860.2 | 391.0 | 50.2 |
| BM 46-19* | 60.0 | 45.0 | 92.5 | 163.4 | 4150 | 15DS3619 | 15DK3619 | 15DW3619 | 15CU3619 | 952.6 | 433.0 | 54.4 |
| BM 60-13* | 50.0 | 37.0 | 78.0 | 135.8 | 3450 | 14DS3613 | 14DK3613 | 14DW3613 | 14CU3613 | 807.4 | 367.0 | 45.6 |
| BM 60-14* | 60.0 | 45.0 | 92.5 | 149.6 | 3800 | 14DS3614 | 14DK3614 | 14DW3614 | 14CU3614 | 895.4 | 407.0 | 50.2 |
| BM 60-15* | 60.0 | 45.0 | 92.5 | 149.6 | 3800 | 14DS3615 | 14DK3615 | 14DW3615 | 14CU3615 | 897.6 | 408.0 | 50.2 |
| BM 60-16* | 75.0 | 55.0 | 112 | 163.4 | 4150 | 14DS3616 | 14DK3616 | 14DW3616 | 14CU3616 | 965.8 | 439.0 | 54.4 |
| BM 60-18* | 75.0 | 55.0 | 112 | 163.4 | 4150 | 14DS3618 | 14DK3618 | 14DW3618 | 14CU3618 | 976.8 | 444.0 | 54.4 |
| BM 77-4 | 30.0 | 22.0 | 46.5 - 48.0 | 94.5 | 2400 | 16DS3604 | 16DE3604 | 16DJ3604 | 16CU3604 | 490.6 | 223.0 | 32.2 |
| BM 77-5 | 40.0 | 30.0 | 63.0 - 66.5 | 108.3 | 2750 | 16DS3605 | 16DE3605 | 16DJ3605 | 16CU3605 | 558.8 | 254.0 | 36.8 |
| BM 77-6* | 50.0 | 37.0 | 78.0 | 126.0 | 3200 | 16DS3606 | 16DK3606 | 16DW3606 | 16CU3606 | 565.4 | 257.0 | 42.4 |
| BM 77-7* | 60.0 | 45.0 | 92.5 | 126.0 | 3200 | 16DS3607 | 16DK3607 | 16DW3607 | 16CU3607 | 838.2 | 381.0 | 42.4 |
| BM 77-10* | 75.0 | 55.0 | 112 | 149.6 | 3800 | 16DS3610 | 16DK3610 | 16DW3610 | 16CU3610 | 954.8 | 434.0 | 50.2 |
| BM 77-13* | 100.0 | 75.0 | 150 | 163.4 | 4150 | 16DS3613 | 16DK3613 | 16DW3613 | 16CU3613 | 1111.0 | 505.0 | 54.4 |
| BM 95-4 | 35.0 | 26.0 | 54.5 - 57.5 | 94.5 | 2400 | 19DS3604 | 19893604 | 19903604 | 19913604 | 501.6 | 228.0 | 32.2 |
| BM 95-5* | 50.0 | 37.0 | 78.0 | 108.3 | 2750 | 19DS3605 | 19913605 | 19923604 | 19933605 | 732.6 | 333.0 | 36.8 |
| BM 95-7* | 60.0 | 45.0 | 92.5 | 126.0 | 3200 | 19DS3607 | 19913607 | 19923607 | 19933607 | 838.2 | 381.0 | 42.4 |
| BM 95-8* | 75.0 | 55.0 | 112 | 126.0 | 3450 | 19DS3608 | 19913608 | 19923608 | 19933608 | 902.0 | 410.0 | 42.4 |
| BM 95-11* | 100.0 | 75.0 | 150 | 163.4 | 4150 | 19DS3611 | 19913611 | 19923611 | 19933611 | 1093.4 | 497.0 | 54.4 |
| BM 95-13* | 123.0 | 92.0 | 184 | 175.2 | 4450 | 19DS3613 | 19913613 | 19923613 | 19933613 | 1238.6 | 563.0 | 58.3 |
| BM 125-2 | 40.0 | 30.0 | 63.0 - 66.5 | 94.5 | 2400 | 17DS3602 | 17DR3602 | 17DT3602 | 17CU3602 | 539.0 | 245.0 | 32.2 |
| BM 125-3-AA* | 50.0 | 37.0 | 78.0 | 108.3 | 2750 | 17DS36B3 | 17DU36B3 | 17DW36B3 | 17CU36B3 | 754.6 | 343.0 | 37.1 |
| BM 125-3* | 50.0 | 45.0 | 92.5 | 108.3 | 2750 | 17DS3603 | 17DU3603 | 17DW3603 | 17CU3603 | 807.4 | 367.0 | 36.8 |
| BM 125-4-A* | 75.0 | 55.0 | 112 | 126.0 | 3200 | 17DS36A4 | 17DU36A4 | 17DW36A4 | 17CU36A4 | 895.4 | 407.0 | 42.4 |
| BM 125-5-A* | 100.0 | 75.0 | 150 | 149.6 | 3800 | 17DS36A5 | 17DU36A5 | 17DW36A5 | 17CU36A5 | 1060.4 | 482.0 | 50.2 |
| BM 125-6-A* | 123.0 | 92.0 | 184 | 149.6 | 3800 | 17DS36A6 | 17DU36A6 | 17DW36A6 | 17CU36A6 | 1177.0 | 535.0 | 50.2 |
| BM 160-1 | 30 | 22 | 46.5 - 48.0 | 94.5 | 2400 | 20DS3601 | 20DK3601 | 20DW3601 | 20CU3601 | 495.0 | 225.0 | 32.2 |
| BM 160-2* | 50 | 37 | 78 | 108.3 | 2750 | 20DS3602 | 20DK3602 | 20DW3602 | 20CU3602 | 743.6 | 338.0 | 36.8 |
| BM 160-3-A* | 75 | 55 | 112 | 126.0 | 3200 | 20DS36A3 | 20DK36A3 | 20DW36A3 | 20CU36A3 | 882.2 | 401.0 | 42.4 |
| BM 160-4-A* | 100 | 75 | 150 | 126.0 | 3200 | 20DS36A4 | 20DK36A4 | 20DW36A4 | 20CU36A4 | 990.0 | 450.0 | 42.4 |
| BM 160-5-A* | 125 | 92 | 184 | 149.6 | 3800 | 20DS36A5 | 20DK36A5 | 20DW36A5 | 20CU36A5 | 1163.8 | 529.0 | 50.2 |
| BM 215-1 | 40 | 30 | 63 - 66.5 | 94.5 | 2400 | 18DS3601 | 18DK3601 | 18DW3601 | 18CU3601 | 541.2 | 246.0 | 32.2 |
| BM 215-2-A* | 75 | 55 | 112 | 126.0 | 3200 | 18DS36A2 | 18DK36A2 | 18DW36A2 | 18CU36A2 | 893.2 | 406.0 | 42.4 |
| BM 215-3-A* | 125 | 92 | 184 | 149.6 | 3800 | 18DS36A3 | 18DK36A3 | 18DW36A3 | 18CU36A3 | 1174.8 | 534.0 | 50.2 |

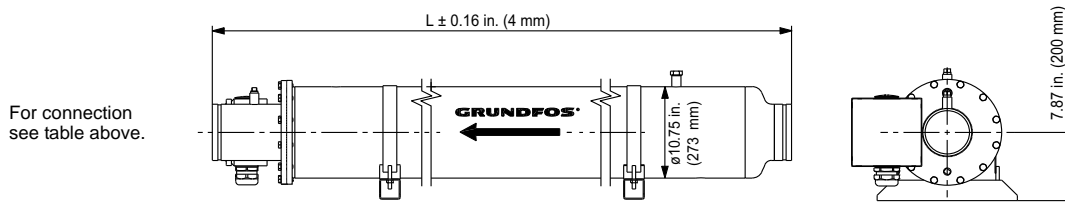
On request, the BM is available in other voltages and with all stages indicated in the standard SP pump range.

* Full load current I_{LF} applies to 3 x 460 V.

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 |

Dimensional sketch

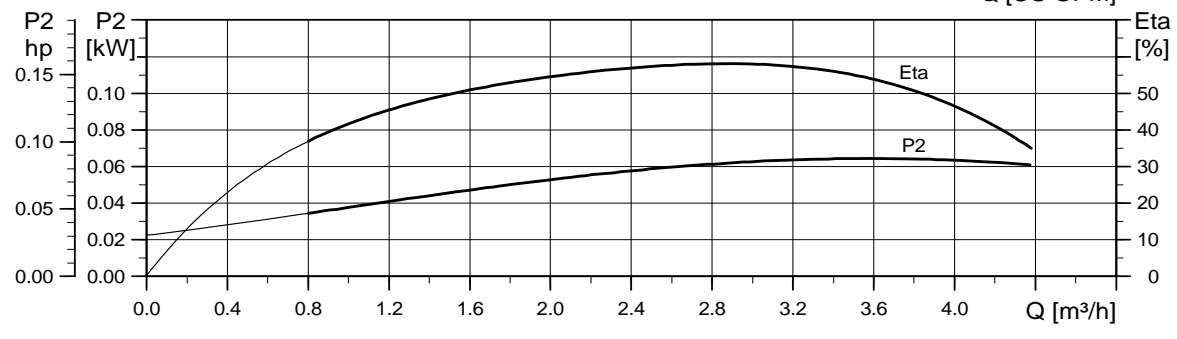
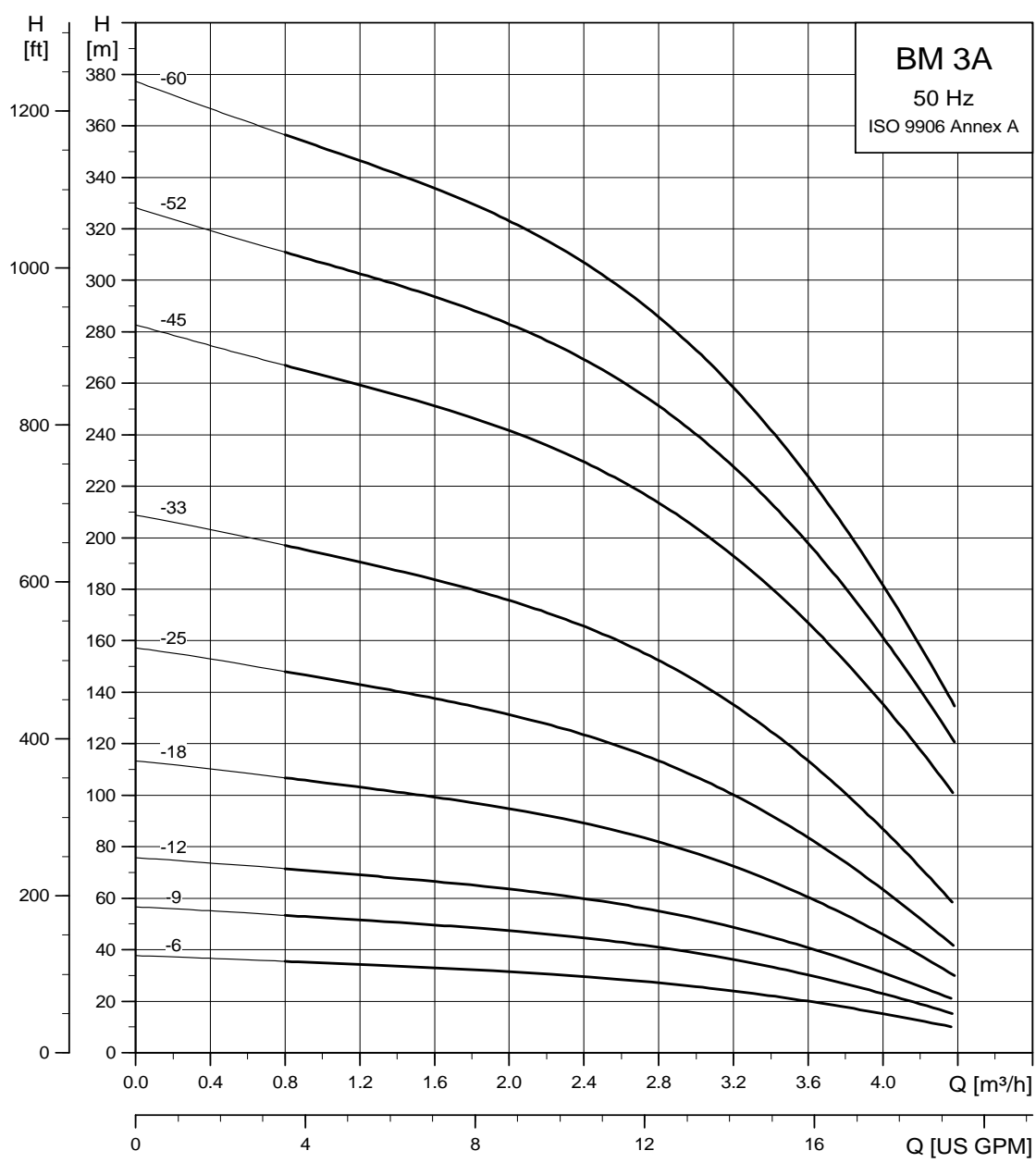


TM05 5931 4212

Note: One set of connecting fittings is required for each system. See section 20. Accessories, page 73.

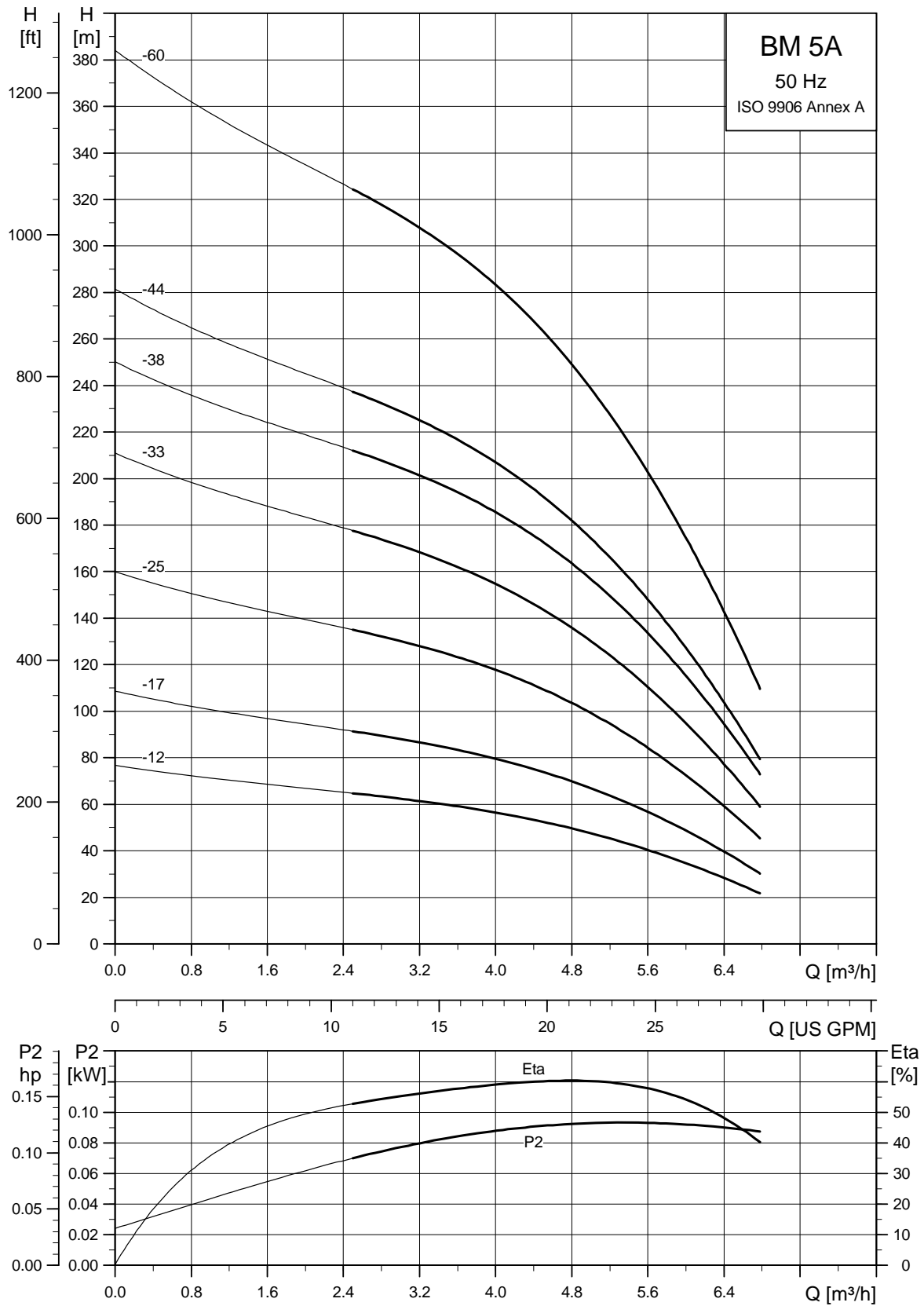
10. BM performance curves, 50 Hz

BM 3A



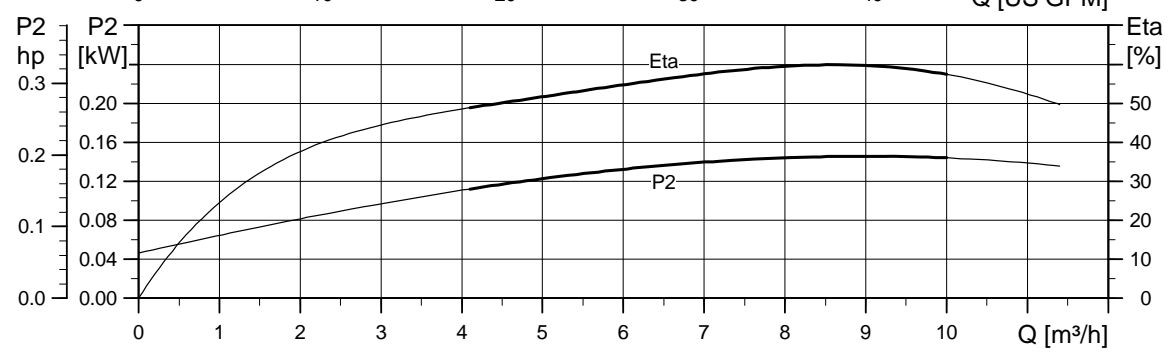
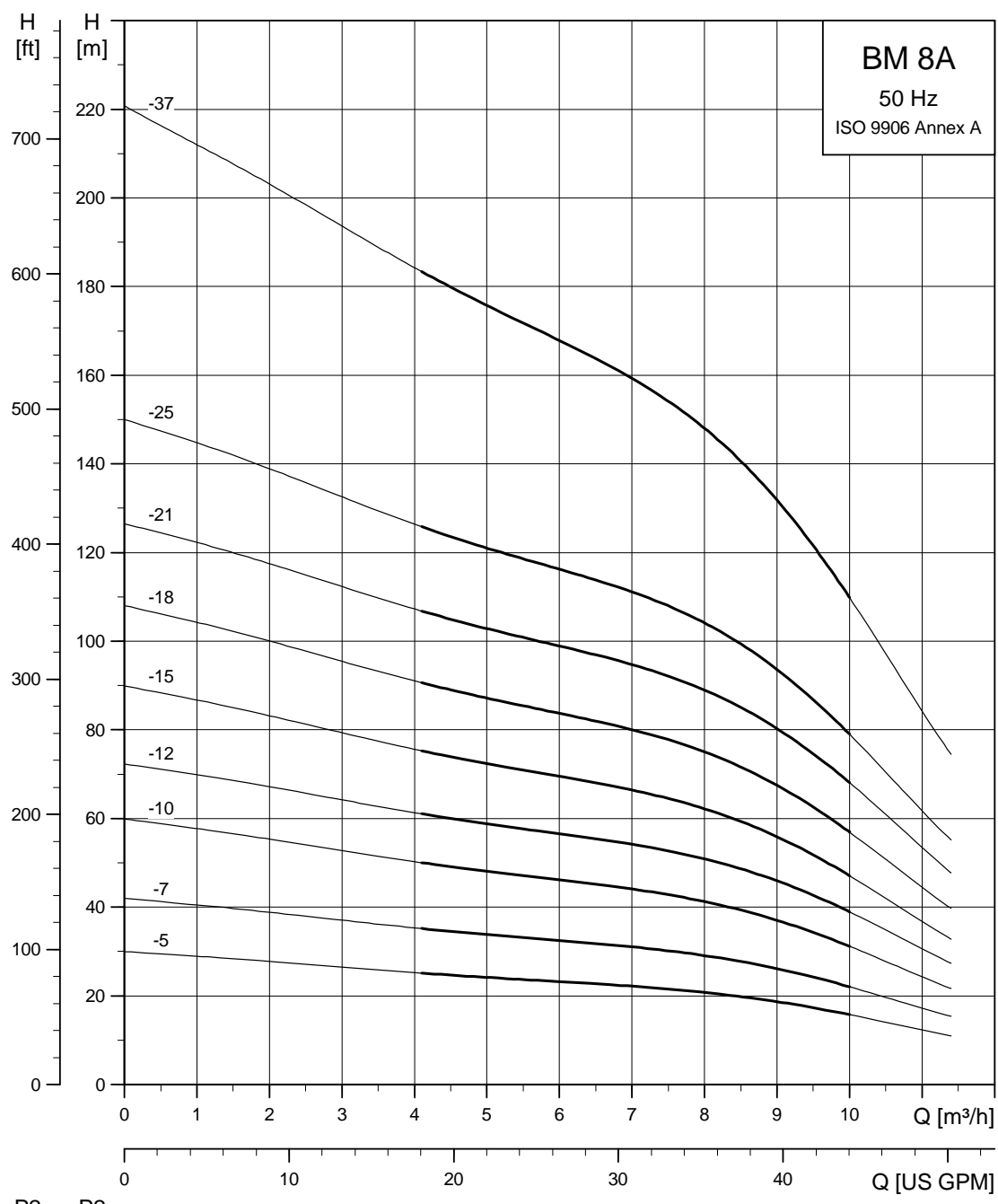
TM01 1212 3400

BM 5A



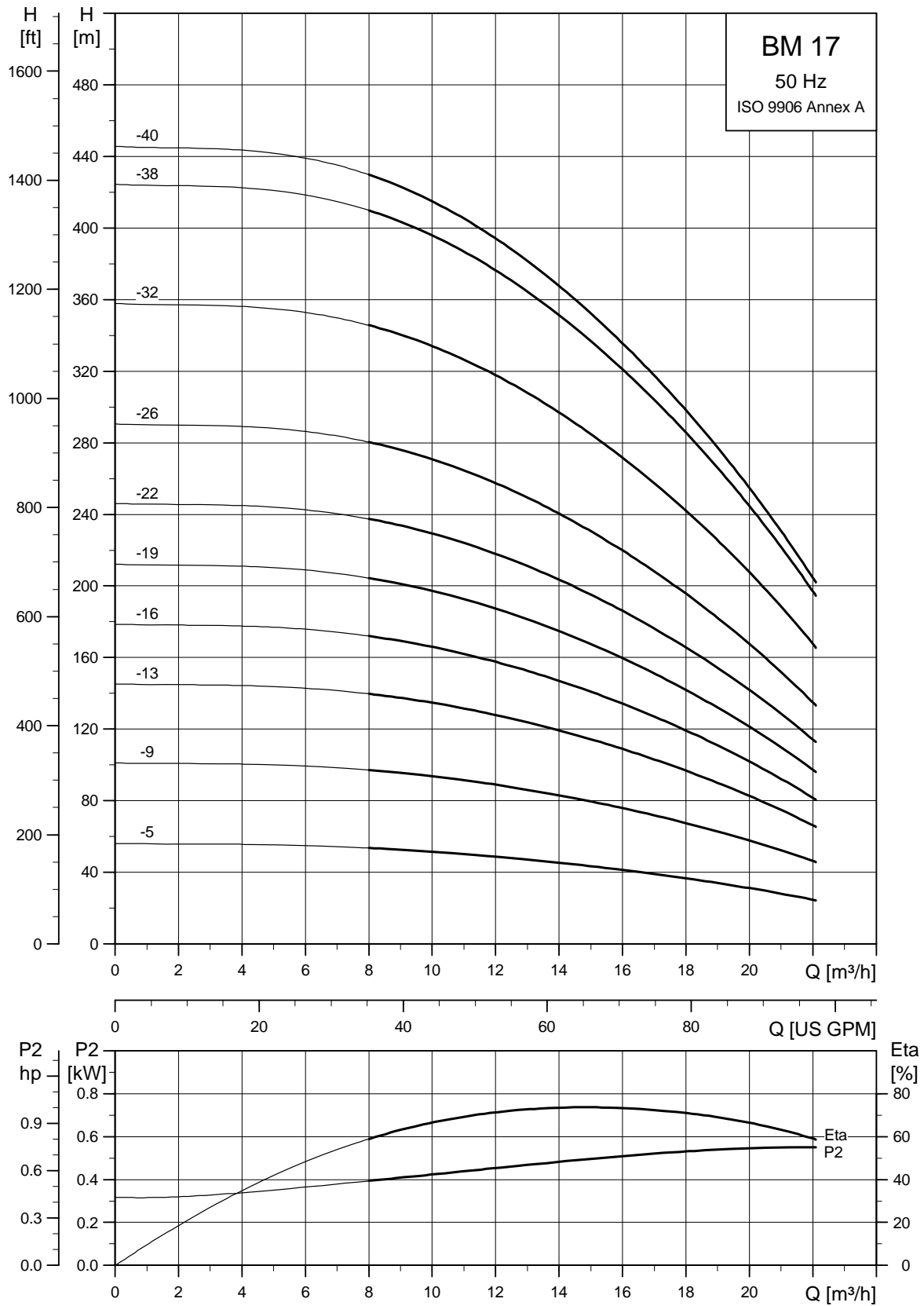
TM01 1213 3400

BM 8A



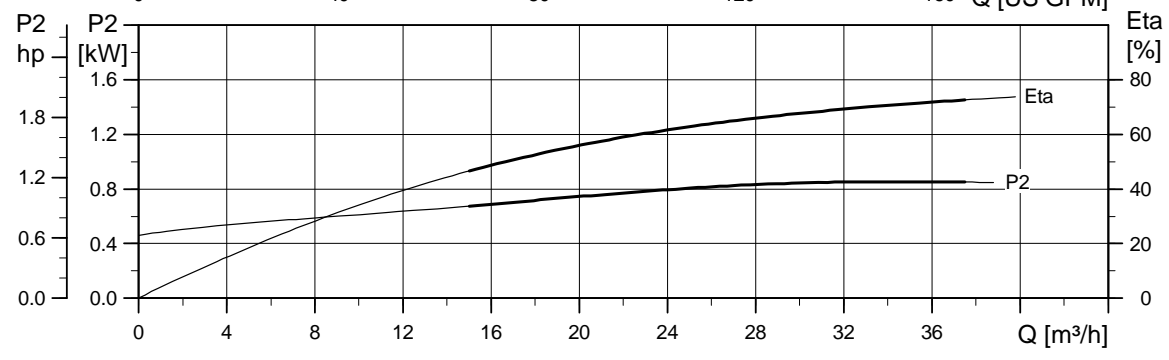
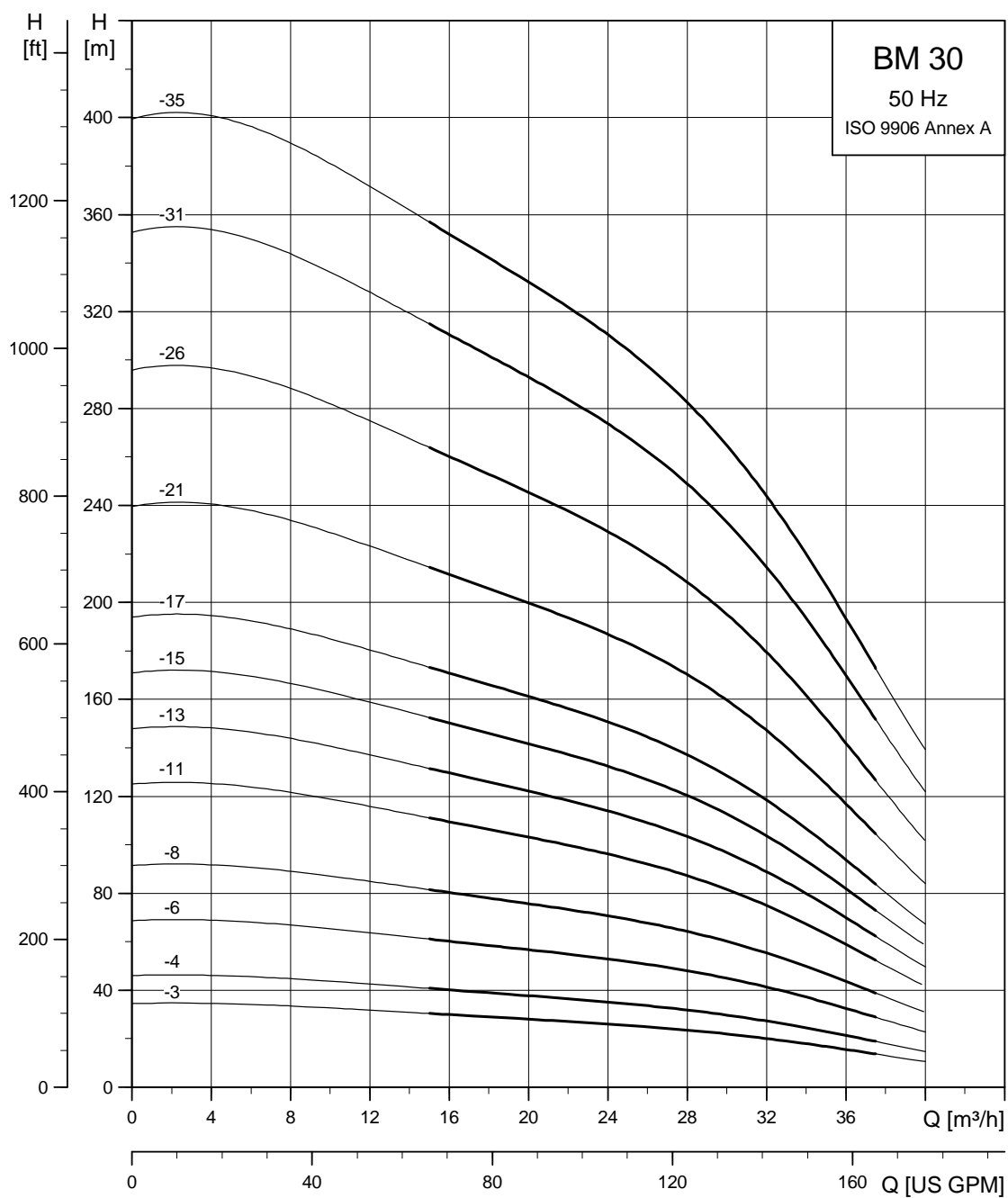
TM01 1214 3400

BM 17



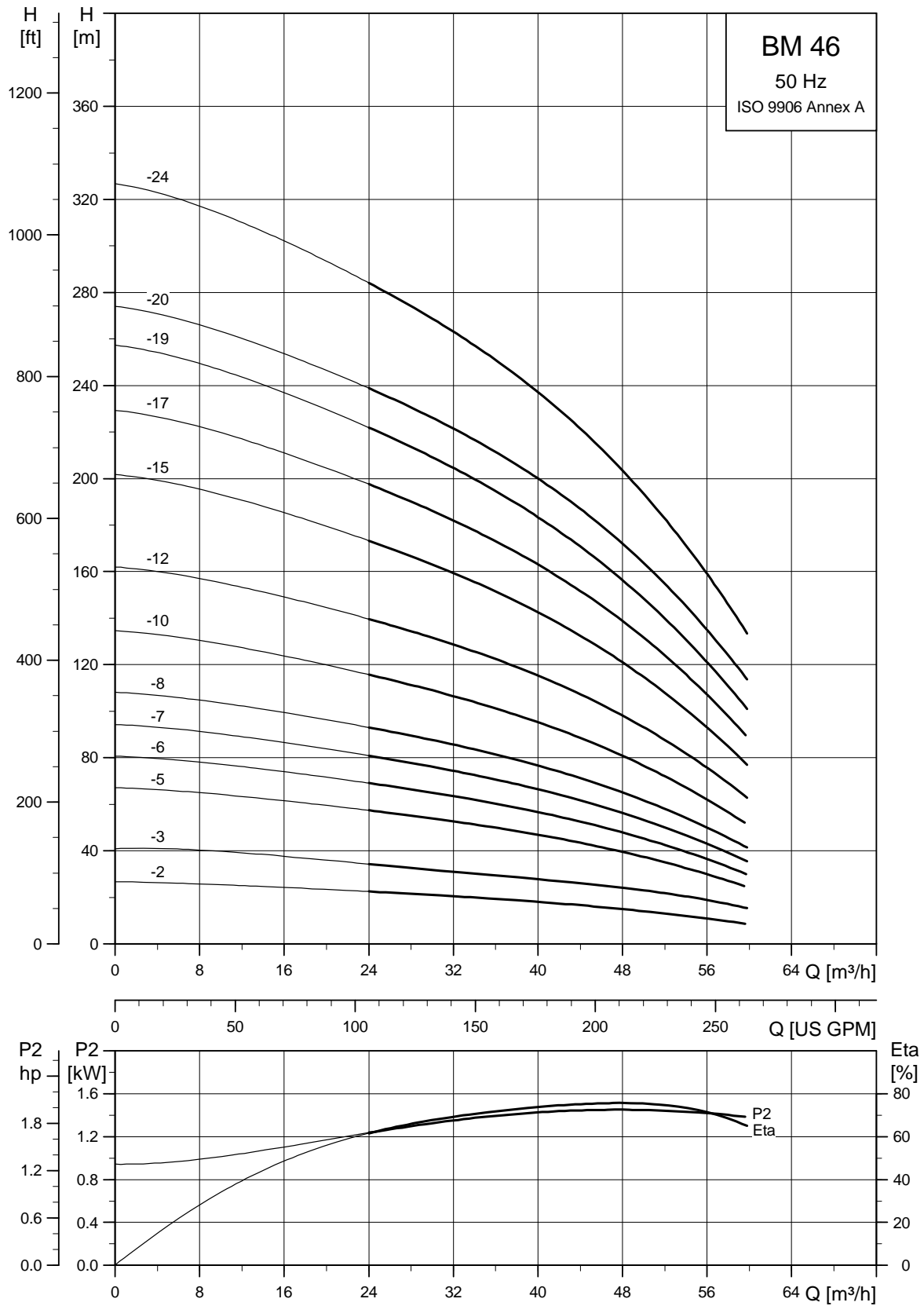
TM00 3699 3400

BM 30



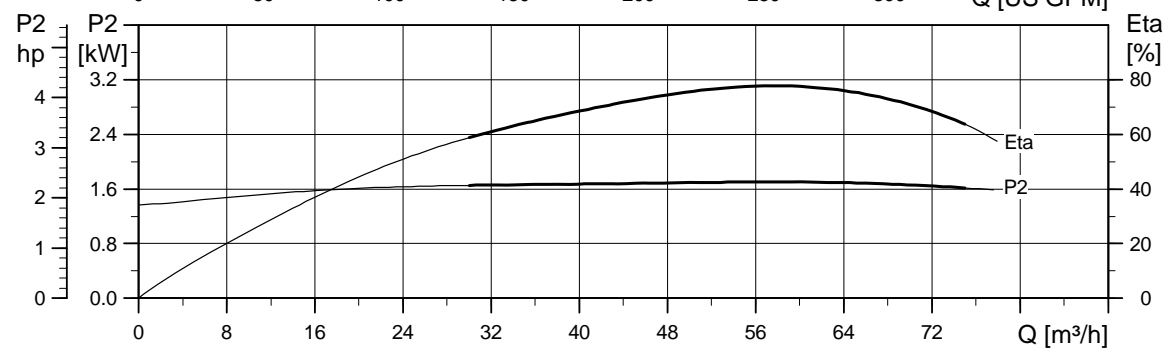
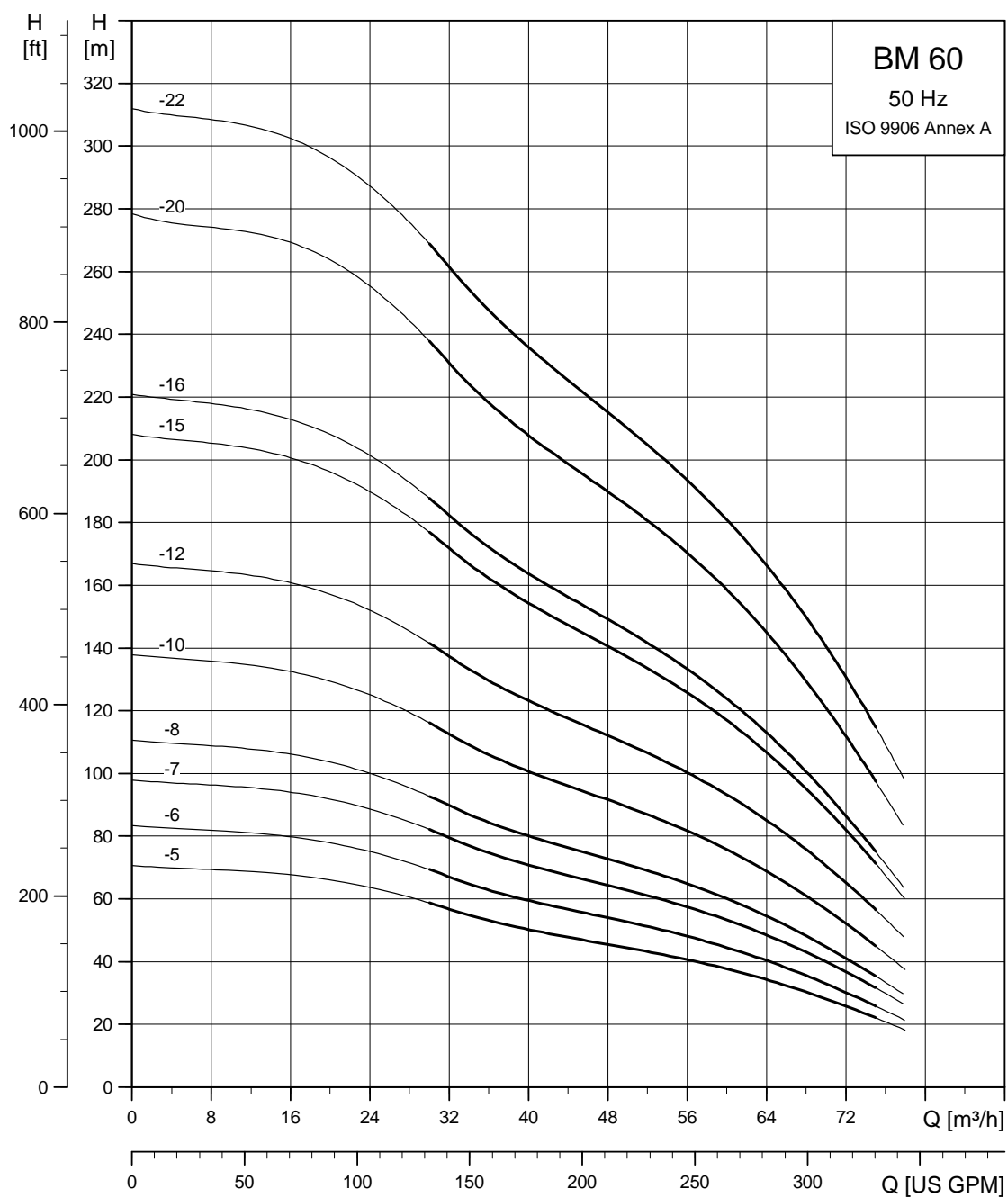
TM01 2074 3400

BM 46



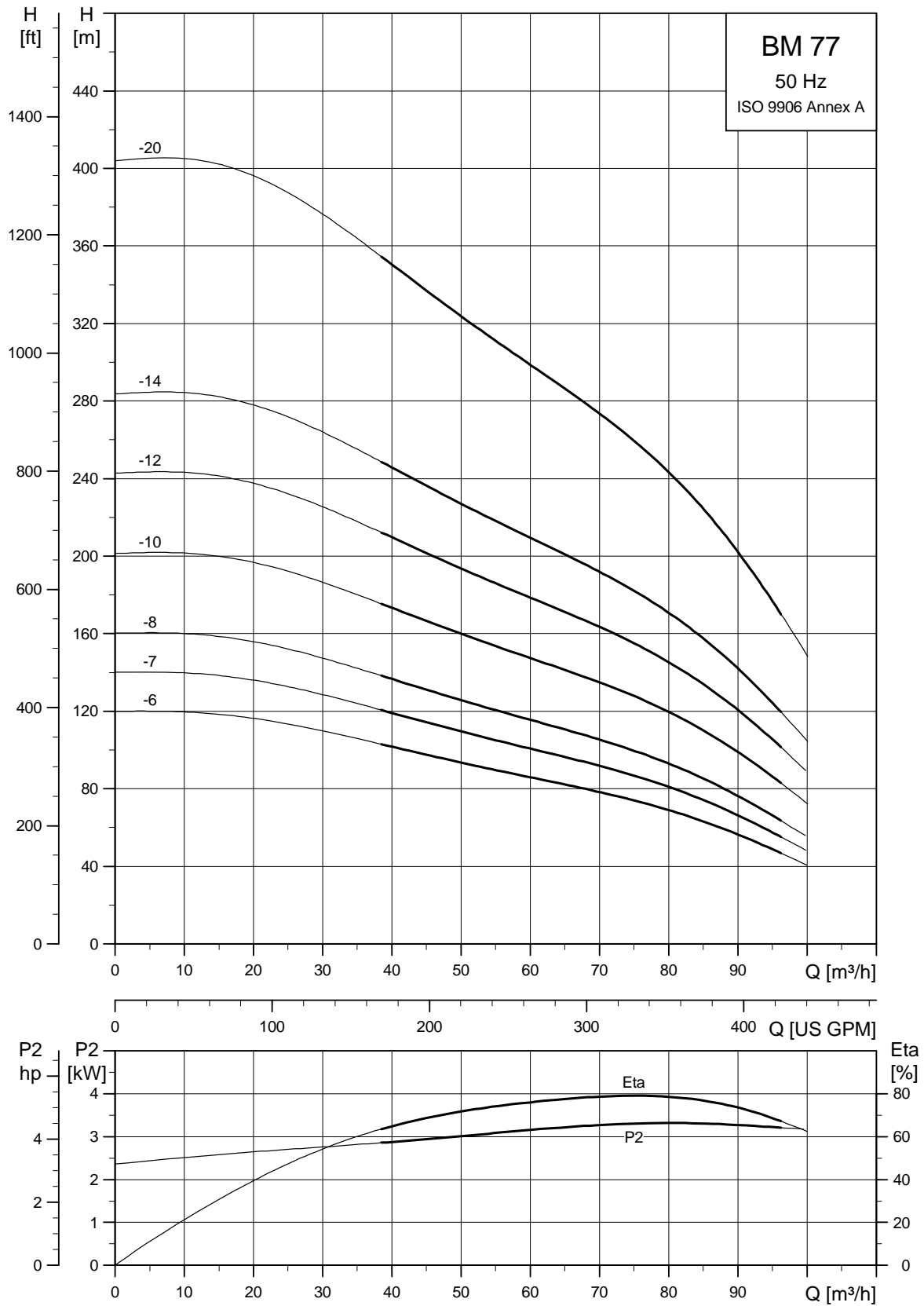
TM01 1217 3400

BM 60



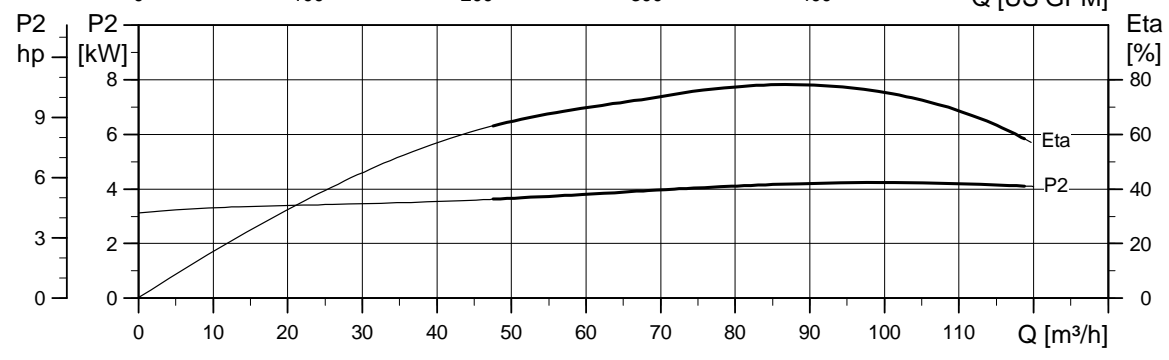
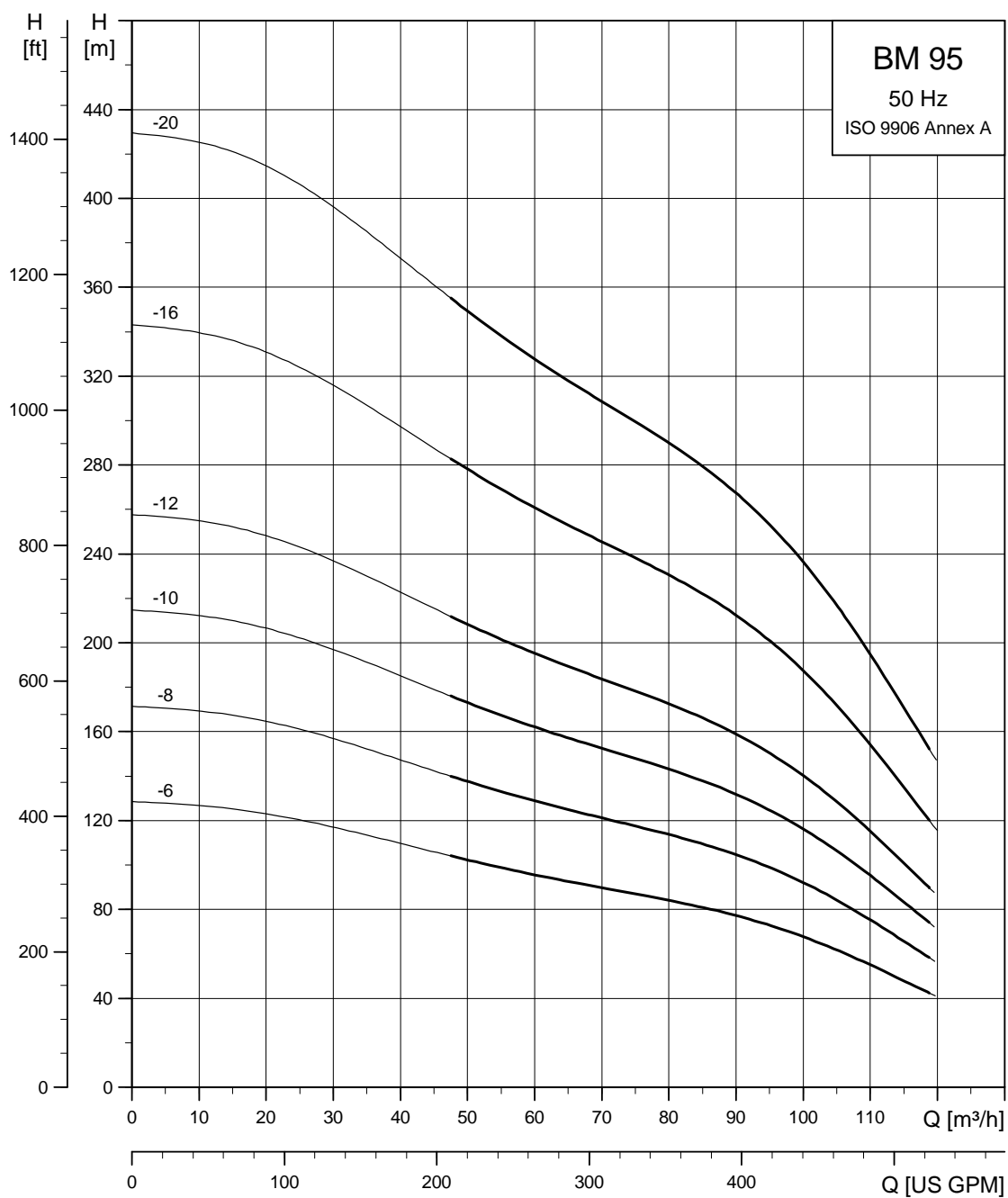
TM01 1218 3400

BM 77



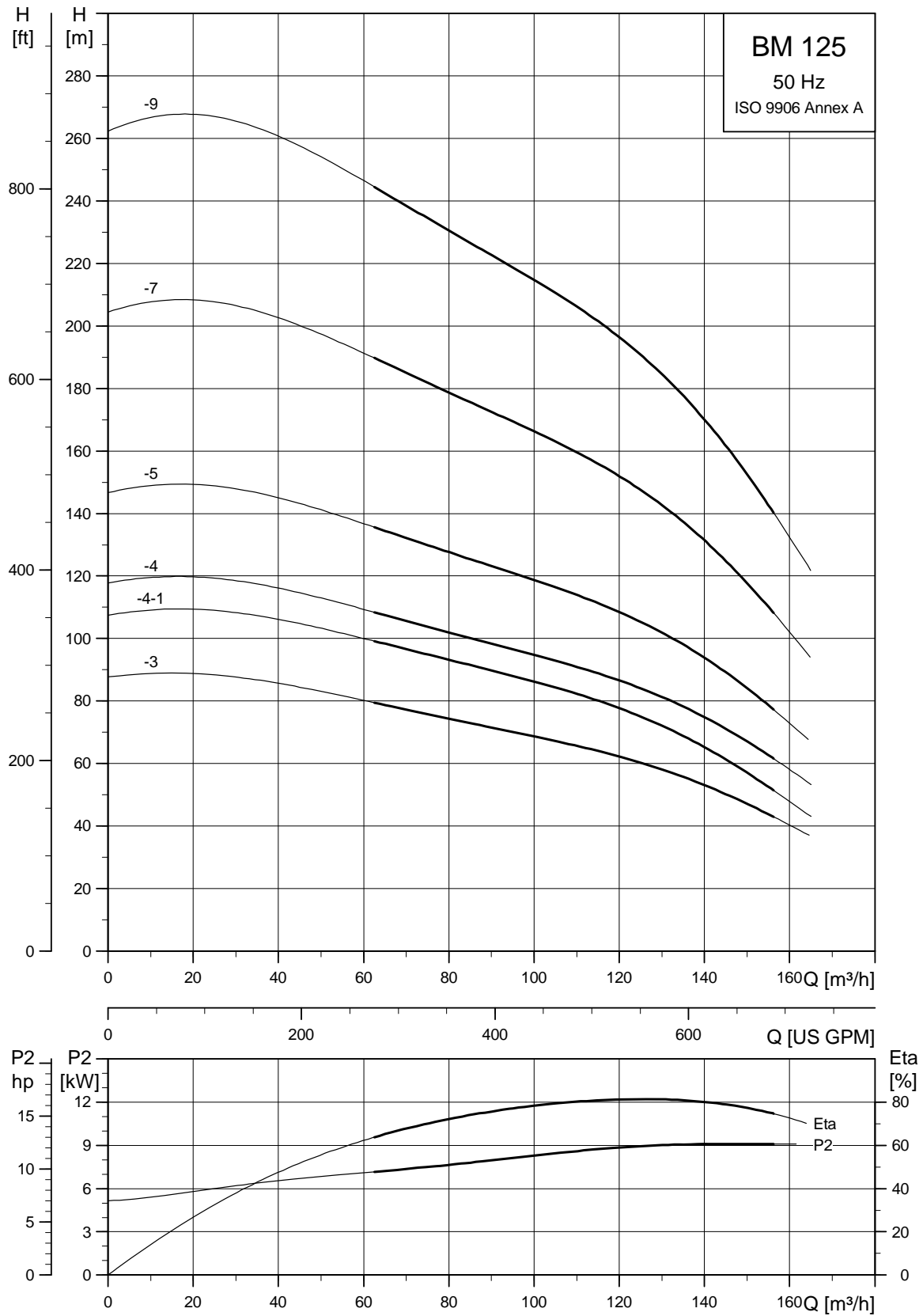
TM01 1219 3400

BM 95



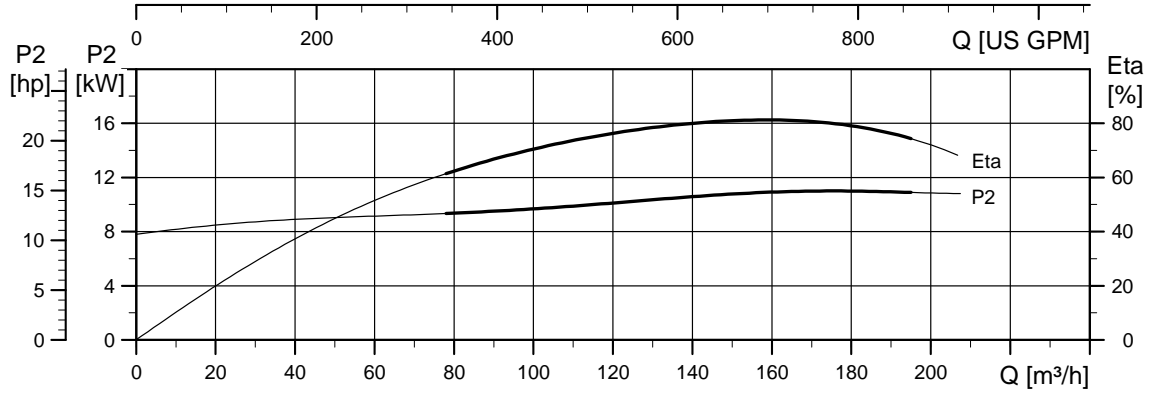
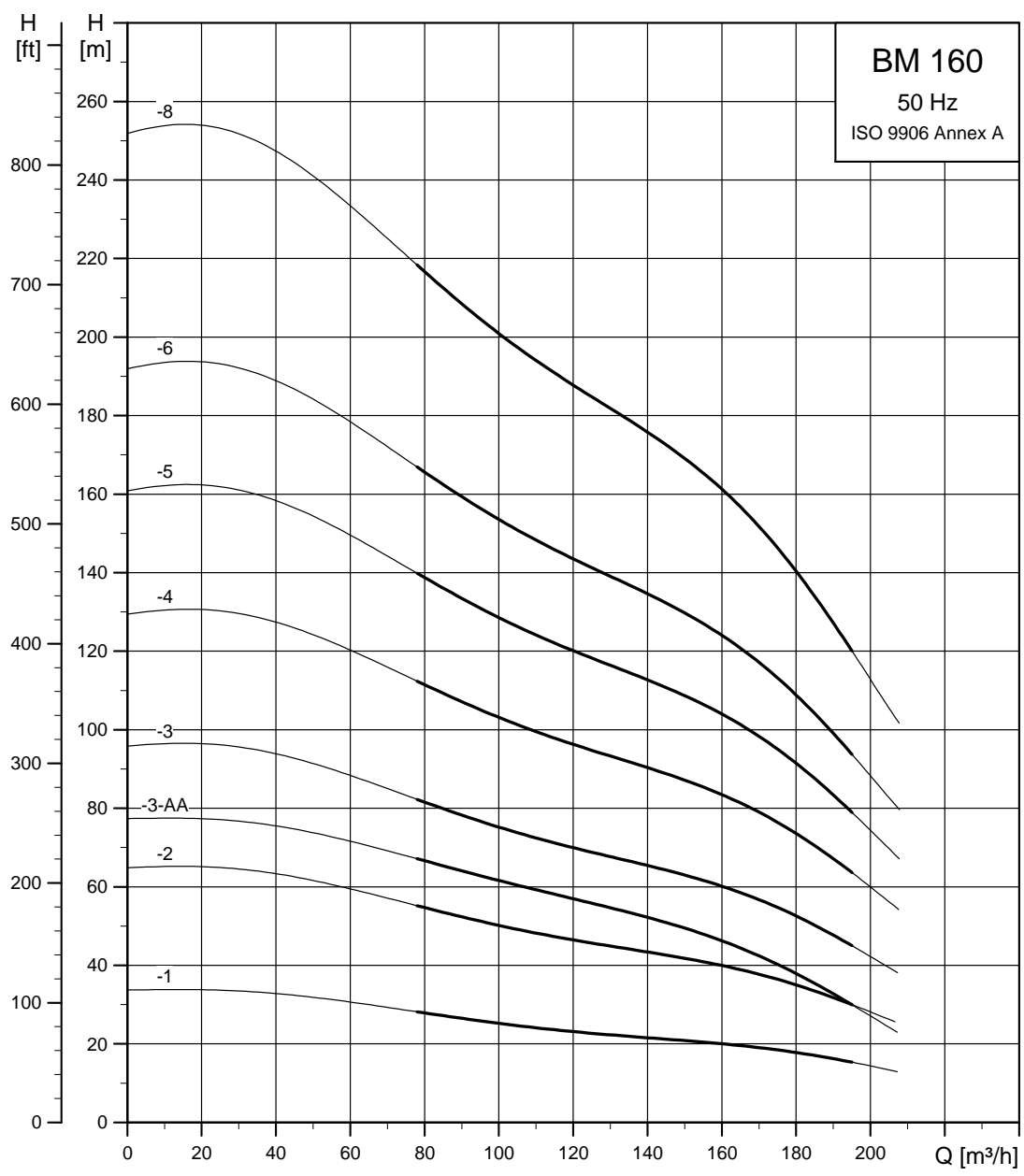
TM01 2075 3400

BM 125



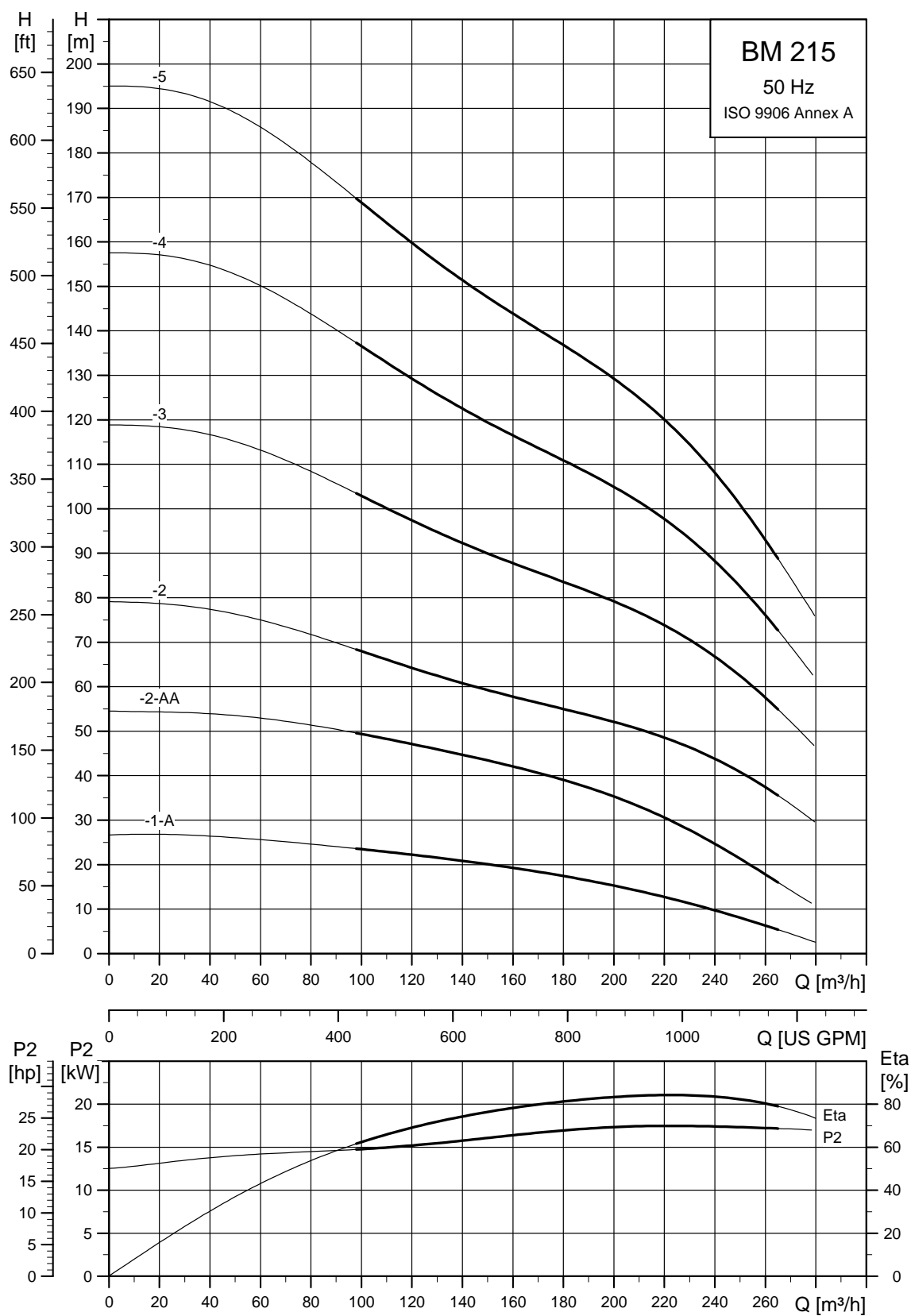
TM01 2076 3400

BM 160



TM04 7951 2510

BM 215



TM04 7953 2510

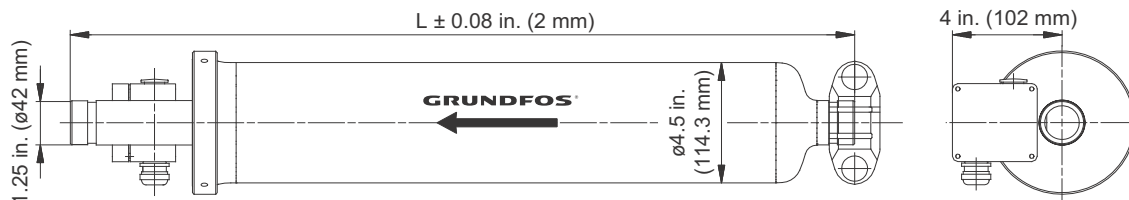
11. BM technical data, 50 Hz

BM 4" (with straight pipe) (3/50/400 V)

| Type | Motor output [P ₂] | | Rated current I _N [A] | Length [L] | | Product number | | | | Approx. ship. wt. | | Approx. ship. vol. [ft ³] |
|----------|--------------------------------|------|----------------------------------|------------|------|----------------|-----------|------------|-----------|-------------------|------|---------------------------------------|
| | [hp] | [kW] | | [in] | [mm] | 1.4301 | N version | NE version | R version | [lbs] | [kg] | |
| BM 3A-6 | 1.0 | 0.75 | 1.92 - 1.84 | 45.0 | 1222 | 10781906 | 10731906 | 10741906 | - | 81.4 | 37.0 | 3.4 |
| BM 3A-9 | 1.0 | 0.75 | 1.92 - 1.84 | 45.0 | 1222 | 10781909 | 10731909 | 10741909 | - | 83.6 | 38.0 | 3.4 |
| BM 3A-12 | 1.0 | 0.75 | 1.92 - 1.84 | 45.0 | 1222 | 10781912 | 10731912 | 10741912 | - | 85.8 | 39.0 | 3.4 |
| BM 3A-18 | 1.5 | 1.1 | 2.80 - 2.75 | 50.8 | 1369 | 10781918 | 10731918 | 10741918 | - | 94.6 | 43.0 | 3.6 |
| BM 3A-25 | 2.0 | 1.5 | 3.95 - 4.10 | 61.5 | 1640 | 10781925 | 10731925 | 10741925 | - | 103.4 | 47.0 | 4.3 |
| BM 3A-33 | 3.0 | 2.2 | 5.85 - 6.45 | 66.1 | 1758 | 10781933 | 10731933 | 10741933 | - | 114.4 | 52.0 | 4.5 |
| BM 3A-45 | 4.0 | 3.0 | 8.35 - 8.10 | 75.1 | 1986 | 10781945 | 10731945 | 10741945 | - | 129.8 | 59.0 | 5.1 |
| BM 3A-52 | 5.5 | 4.0 | 9.75 - 9.80 | 89.3 | 2346 | 10781952 | 10731952 | 10741952 | - | 151.8 | 69.0 | 6.1 |
| BM 3A-60 | 5.5 | 4.0 | 9.75 - 9.80 | 95.0 | 2490 | 10781960 | 10731960 | 10741960 | - | 158.4 | 72.0 | 6.2 |
| BM 5A-12 | 1.5 | 1.1 | 2.80 - 2.75 | 45.0 | 1222 | 05781912 | 05731912 | 05741912 | 05771912 | 88.0 | 40.0 | 3.4 |
| BM 5A-17 | 2.0 | 1.5 | 3.95 - 4.10 | 50.8 | 1369 | 05781917 | 05731917 | 05741917 | 05771917 | 92.4 | 42.0 | 3.6 |
| BM 5A-25 | 3.0 | 2.2 | 5.85 - 6.45 | 61.5 | 1640 | 05781925 | 05731925 | 05741925 | 05771925 | 107.8 | 49.0 | 4.3 |
| BM 5A-33 | 4.0 | 3.0 | 8.35 - 8.10 | 75.1 | 1986 | 05781933 | 05731933 | 05741933 | 05771933 | 121.0 | 55.0 | 5.1 |
| BM 5A-38 | 5.5 | 4.0 | 9.75 - 9.80 | 75.1 | 1986 | 05781938 | 05731938 | 05741938 | 05771938 | 132.0 | 60.0 | 5.1 |
| BM 5A-44 | 5.5 | 4.0 | 9.75 - 9.80 | 80.1 | 2112 | 05781944 | 05731944 | 05741944 | 05771944 | 140.8 | 64.0 | 5.3 |
| BM 5A-60 | 7.5 | 5.5 | 13.0 - 13.4 | 98.0 | 2490 | 05781960 | 05731960 | 05741960 | 05771960 | 169.4 | 77.0 | 6.2 |
| BM 8A-5 | 1.0 | 0.75 | 1.92 - 1.84 | 45.0 | 1222 | 11781905 | 11731905 | 11741905 | 11771905 | 83.6 | 38.0 | 3.4 |
| BM 8A-7 | 1.5 | 1.1 | 2.80 - 2.75 | 50.8 | 1369 | 11781907 | 11731907 | 11741907 | 11771907 | 90.2 | 41.0 | 3.6 |
| BM 8A-10 | 2.0 | 1.5 | 3.95 - 4.10 | 54.9 | 1472 | 11781910 | 11731910 | 11741910 | 11771910 | 94.6 | 43.0 | 3.8 |
| BM 8A-12 | 3.0 | 2.2 | 5.85 - 6.45 | 61.5 | 1640 | 11781912 | 11731912 | 11741912 | 11771912 | 103.4 | 47.0 | 4.3 |
| BM 8A-15 | 3.0 | 2.2 | 5.85 - 6.45 | 66.1 | 1758 | 11781915 | 11731915 | 11741915 | 11771915 | 110.0 | 50.0 | 4.5 |
| BM 8A-18 | 4.0 | 3.0 | 8.35 - 8.10 | 75.1 | 1986 | 11781918 | 11731918 | 11741918 | 11771918 | 118.8 | 54.0 | 5.1 |
| BM 8A-21 | 5.5 | 4.0 | 9.75 - 9.80 | 80.1 | 2112 | 11781921 | 11731921 | 11741921 | 11771921 | 134.2 | 61.0 | 5.3 |
| BM 8A-25 | 5.5 | 4.0 | 9.75 - 9.80 | 89.3 | 2346 | 11781925 | 11731925 | 11741925 | 11771925 | 140.8 | 64.0 | 6.1 |
| BM 8A-37 | 7.5 | 5.5 | 13.0 - 13.4 | 107.8 | 2737 | 11781937 | 11731937 | 11741937 | 11771937 | 178.2 | 81.0 | 6.8 |

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

Dimensional sketch



TM05 6928 4212

One set of connecting fittings is required for each system. See section [20. Accessories](#), page 73.

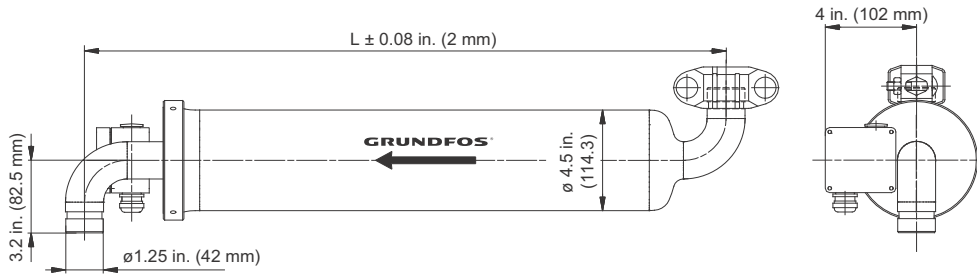
BM 4" (with elbow) (3/50/400 V)

| Type | Motor output [P ₂] | | Rated current I _N [A] | Length [L] | | Product number | | | | Approx. ship. wt. | | Approx. ship. vol. [ft ³] |
|----------|--------------------------------|------|----------------------------------|------------|------|----------------|-----------|------------|-----------|-------------------|-------|---------------------------------------|
| | [hp] | [kW] | | [in] | [mm] | 1.4301 | N version | NE version | R version | [lbs] | [kg] | |
| BM 3A-6 | 1.0 | 0.75 | 1.92 - 1.84 | 45.0 | 1144 | 10791906 | 10751906 | 10761906 | - | 37.0 | 81.4 | 3.4 |
| BM 3A-9 | 1.0 | 0.75 | 1.92 - 1.84 | 45.0 | 1144 | 10791909 | 10751909 | 10761909 | - | 38.0 | 83.6 | 3.4 |
| BM 3A-12 | 1.0 | 0.75 | 1.92 - 1.84 | 45.0 | 1144 | 10791912 | 10751912 | 10761912 | - | 39.0 | 85.8 | 3.4 |
| BM 3A-18 | 1.5 | 1.1 | 2.80 - 2.75 | 50.8 | 1291 | 10791918 | 10751918 | 10761918 | - | 43.0 | 94.6 | 3.6 |
| BM 3A-25 | 2.0 | 1.5 | 3.95 - 4.10 | 61.5 | 1562 | 10791925 | 10751925 | 10761925 | - | 47.0 | 103.4 | 4.3 |
| BM 3A-33 | 3.0 | 2.2 | 5.85 - 6.45 | 66.1 | 1680 | 10791933 | 10751933 | 10761933 | - | 52.0 | 114.4 | 4.5 |
| BM 3A-45 | 4.0 | 3.0 | 8.35 - 8.10 | 75.1 | 1908 | 10791945 | 10751945 | 10761945 | - | 59.0 | 129.8 | 5.1 |
| BM 3A-52 | 5.5 | 4.0 | 9.75 - 9.80 | 89.3 | 2268 | 10791952 | 10751952 | 10761952 | - | 69.0 | 151.8 | 6.1 |
| BM 3A-60 | 5.5 | 4.0 | 9.75 - 9.80 | 95.0 | 2412 | 10791960 | 10751960 | 10761960 | - | 72.0 | 158.4 | 6.2 |
| BM 5A-12 | 1.5 | 1.1 | 2.80 - 2.75 | 45.0 | 1144 | 05791912 | 05751912 | 05761912 | 05721912 | 40.0 | 88.0 | 3.4 |
| BM 5A-17 | 2.0 | 1.5 | 3.95 - 4.10 | 50.8 | 1291 | 05791917 | 05751917 | 05761917 | 05721917 | 42.0 | 92.4 | 3.6 |
| BM 5A-25 | 3.0 | 2.2 | 5.85 - 6.45 | 61.5 | 1562 | 05791925 | 05751925 | 05761925 | 05721925 | 49.0 | 107.8 | 4.3 |
| BM 5A-33 | 4.0 | 3.0 | 8.35 - 8.10 | 75.1 | 1908 | 05791933 | 05751933 | 05761933 | 05721933 | 55.0 | 121.0 | 5.1 |
| BM 5A-38 | 5.5 | 4.0 | 9.75 - 9.80 | 75.1 | 1908 | 05791938 | 05751938 | 05761938 | 05721938 | 60.0 | 132.0 | 5.1 |
| BM 5A-44 | 5.5 | 4.0 | 9.75 - 9.80 | 80.1 | 2034 | 05791944 | 05751944 | 05761944 | 05721944 | 64.0 | 140.8 | 5.3 |
| BM 5A-60 | 7.5 | 5.5 | 13.0 - 13.4 | 95.0 | 2412 | 05791960 | 05751960 | 05761960 | 05721960 | 77.0 | 169.4 | 6.2 |
| BM 8A-5 | 1.0 | 0.75 | 1.92 - 1.84 | 45.0 | 1144 | 11791905 | 11751905 | 11761905 | 11721905 | 38.0 | 83.6 | 3.4 |
| BM 8A-7 | 1.5 | 1.1 | 2.80 - 2.75 | 50.8 | 1291 | 11791907 | 11751907 | 11761907 | 11721907 | 41.0 | 90.2 | 3.6 |
| BM 8A-10 | 2.0 | 1.5 | 3.95 - 4.10 | 54.9 | 1394 | 11791910 | 11751910 | 11761910 | 11721910 | 43.0 | 94.6 | 3.8 |
| BM 8A-12 | 3.0 | 2.2 | 5.85 - 6.45 | 61.5 | 1562 | 11791912 | 11751912 | 11761912 | 11721912 | 47.0 | 103.4 | 4.3 |
| BM 8A-15 | 3.0 | 2.2 | 5.85 - 6.45 | 66.1 | 1680 | 11791915 | 11751915 | 11761915 | 11721915 | 50.0 | 110.0 | 4.5 |
| BM 8A-18 | 4.0 | 3.0 | 8.35 - 8.10 | 75.1 | 1908 | 11791918 | 11751918 | 11761918 | 11721918 | 54.0 | 118.8 | 5.1 |
| BM 8A-21 | 5.5 | 4.0 | 9.75 - 9.80 | 80.1 | 2034 | 11791921 | 11751921 | 11761921 | 11721921 | 61.0 | 134.2 | 5.3 |
| BM 8A-25 | 5.5 | 4.0 | 9.75 - 9.80 | 89.3 | 2268 | 11791925 | 11751925 | 11761925 | 11721925 | 64.0 | 140.8 | 6.1 |
| BM 8A-37 | 7.5 | 5.5 | 13.0 - 13.4 | 106.6 | 2707 | 11791937 | 11751937 | 11761937 | 11721937 | 81.0 | 178.2 | 6.8 |

On request, the BM is available

- in other voltages
- with all stages indicated in the standard SP pump range
- in R version.

Dimensional sketch



TM05 5929 4212

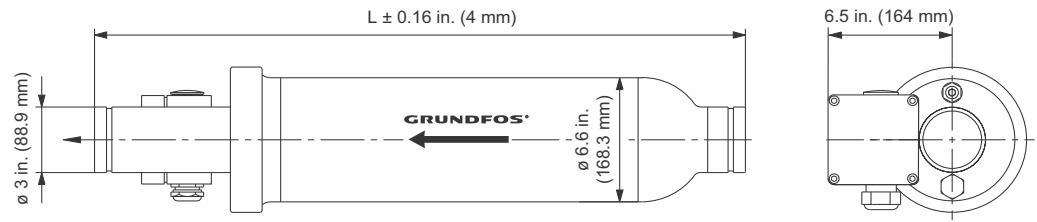
One set of connecting fittings is required for each system. See section [20. Accessories](#), page [73](#).

BM 6" (with straight pipe) (3/50/400 V)

| Type | Motor output [P ₂] | | Rated current I _N [A] | Length [L] | | Product number | | | | Approx. ship. wt. | | Approx. ship. vol. [ft ³] |
|----------|--------------------------------|------|----------------------------------|------------|------|----------------|-----------|------------|-----------|-------------------|-------|---------------------------------------|
| | [hp] | [kW] | | [in] | [mm] | 1.4301 | N version | NE version | R version | [lbs] | [kg] | |
| BM 17-5 | 4.0 | 3.0 | 8.10 - 8.35 | 61.0 | 1550 | 12CO1905 | 12CE1905 | 12CF1905 | 12CU1905 | 156.2 | 71.0 | 342.5 |
| BM 17-7 | 5.5 | 4.0 | 9.75 - 9.80 | 68.9 | 1750 | 12CO1907 | 12CE1907 | 12CF1907 | 12CU1907 | 187.0 | 85.0 | 381.3 |
| BM 17-9 | 7.5 | 5.5 | 13.0 - 13.4 | 76.8 | 1950 | 12CO1909 | 12CE1909 | 12CF1909 | 12CU1909 | 217.8 | 99.0 | 420.1 |
| BM 17-13 | 10.0 | 7.5 | 17.6 - 17.8 | 86.6 | 2200 | 12CO1913 | 12CE1913 | 12CF1913 | 12CU1913 | 281.6 | 128.0 | 427.2 |
| BM 17-16 | 12.5 | 9.2 | 21.8 - 21.8 | 98.4 | 2500 | 12CO1916 | 12CE1916 | 12CF1916 | 12CU1916 | 325.6 | 148.0 | 526.0 |
| BM 17-19 | 15.0 | 11.0 | 25.5 - 25.8 | 106.3 | 2700 | 12CO1919 | 12CE1919 | 12CF1919 | 12CU1919 | 356.4 | 162.0 | 564.8 |
| BM 17-22 | 17.5 | 13.0 | 30.5 - 31.0 | 112.2 | 2850 | 12CO1922 | 12CE1922 | 12CF1922 | 12CU1922 | 380.6 | 173.0 | 596.6 |
| BM 17-26 | 20.0 | 15.0 | 34.0 - 34.5 | 120.1 | 3050 | 12CO1926 | 12CE1926 | 12CF1926 | 12CU1926 | 418.0 | 190.0 | 631.9 |
| BM 17-32 | 25.0 | 18.5 | 42.0 - 42.5 | 149.6 | 3800 | 12CO1932 | 12CE1932 | 12CF1932 | 12CU1932 | 490.6 | 223.0 | 780.2 |
| BM 17-38 | 30.0 | 22.0 | 47.5 - 50.0 | 167.3 | 4250 | 12CO1938 | 12CE1938 | 12CF1938 | 12CU1938 | 552.2 | 251.0 | 864.9 |
| BM 17-40 | 30.0 | 22.0 | 47.5 - 50.0 | 167.3 | 4250 | 12CO1940 | 12CE1940 | 12CF1940 | 12CU1940 | 561.0 | 255.0 | 864.9 |
| BM 30-3 | 4.0 | 3.0 | 8.10 - 8.35 | 61.0 | 1550 | 13CO1903 | 13CE1903 | 13CF1903 | 13CU1903 | 151.8 | 69.0 | 342.5 |
| BM 30-4 | 5.5 | 4.0 | 9.75 - 9.80 | 68.9 | 1750 | 13CO1904 | 13CE1904 | 13CF1904 | 13CU1904 | 176.0 | 80.0 | 381.3 |
| BM 30-6 | 7.5 | 5.5 | 13.0 - 13.4 | 82.7 | 2100 | 13CO1906 | 13CE1906 | 13CF1906 | 13CU1906 | 211.2 | 96.0 | 420.1 |
| BM 30-8 | 10.0 | 7.5 | 17.6 - 17.8 | 82.7 | 2100 | 13CO1908 | 13CE1908 | 13CF1908 | 13CU1908 | 272.8 | 124.0 | 444.8 |
| BM 30-11 | 12.5 | 9.2 | 21.8 - 21.8 | 98.4 | 2500 | 13CO1911 | 13CE1911 | 13CF1911 | 13CU1911 | 321.2 | 146.0 | 526.0 |
| BM 30-13 | 15.0 | 11.0 | 25.5 - 25.8 | 106.3 | 2700 | 13CO1913 | 13CE1913 | 13CF1913 | 13CU1913 | 352.0 | 160.0 | 564.8 |
| BM 30-15 | 17.5 | 13.0 | 30.5 - 31.0 | 112.2 | 2850 | 13CO1915 | 13CE1915 | 13CF1915 | 13CU1915 | 376.2 | 171.0 | 596.6 |
| BM 30-17 | 20.0 | 15.0 | 34.0 - 34.5 | 126.0 | 3200 | 13CO1917 | 13CE1917 | 13CF1917 | 13CU1917 | 407.0 | 185.0 | 663.7 |
| BM 30-21 | 25.0 | 18.5 | 42.0 - 42.5 | 149.6 | 3800 | 13CO1921 | 13CE1921 | 13CF1921 | 13CU1921 | 481.8 | 219.0 | 780.2 |
| BM 30-26 | 30.0 | 22.0 | 47.5 - 50.0 | 167.3 | 4250 | 13CO1926 | 13CE1926 | 13CF1926 | 13CU1926 | 545.6 | 248.0 | 864.9 |
| BM 30-31 | 35.0 | 26.0 | 57.0 - 59.0 | 194.9 | 4950 | 13CO1931 | 13CE1931 | 13CF1931 | 13CU1931 | 605.0 | 275.0 | 889.6 |
| BM 30-35 | 40.0 | 30.0 | 66.5 - 68.5 | 200.8 | 5100 | 13CO1935 | 13CE1935 | 13CF1935 | 13CU1935 | 668.8 | 304.0 | 917.8 |
| BM 46-2 | 4.0 | 3.0 | 8.10 - 8.35 | 61.0 | 1550 | 15CO1902 | 15C81902 | 15C91902 | 15C71902 | 145.2 | 66.0 | 342.5 |
| BM 46-3 | 7.5 | 5.5 | 13.0 - 13.4 | 68.9 | 1750 | 15CO1903 | 15C81903 | 15C91903 | 15C71903 | 198.0 | 90.0 | 381.3 |
| BM 46-5 | 10.0 | 7.5 | 17.6 - 17.8 | 76.8 | 1950 | 15CO1905 | 15C81905 | 15C91905 | 15C71905 | 257.4 | 117.0 | 420.1 |
| BM 46-6 | 12.5 | 9.2 | 21.8 - 21.8 | 82.7 | 2100 | 15CO1906 | 15C81906 | 15C91906 | 15C71906 | 294.8 | 134.0 | 444.8 |
| BM 46-7 | 15.0 | 11.0 | 25.5 - 25.8 | 86.6 | 2200 | 15CO1907 | 15C81907 | 15C91907 | 15C71907 | 314.6 | 143.0 | 469.5 |
| BM 46-8 | 17.5 | 13.0 | 30.5 - 31.0 | 98.4 | 2500 | 15CO1908 | 15C81908 | 15C91908 | 15C71908 | 336.6 | 153.0 | 526.0 |
| BM 46-10 | 20.0 | 15.0 | 34.0 - 34.5 | 106.3 | 2700 | 15CO1910 | 15C81910 | 15C91910 | 15C71910 | 382.8 | 174.0 | 564.8 |
| BM 46-12 | 25.0 | 18.5 | 42.0 - 42.5 | 120.1 | 3050 | 15CO1912 | 15C81912 | 15C91912 | 15C71912 | 422.4 | 192.0 | 631.9 |
| BM 46-15 | 30.0 | 22.0 | 47.5 - 50.0 | 133.9 | 3400 | 15CO1915 | 15C81915 | 15C91915 | 15C71915 | 488.4 | 222.0 | 702.5 |
| BM 46-17 | 35.0 | 26.0 | 57.0 - 59.0 | 149.6 | 3800 | 15CO1917 | 15C81917 | 15C91917 | 15C71917 | 541.2 | 246.0 | 780.2 |
| BM 46-19 | 40.0 | 30.0 | 66.5 - 68.5 | 167.3 | 4250 | 15CO1919 | 15C81919 | 15C91919 | 15C71919 | 580.8 | 264.0 | 864.9 |
| BM 60-5 | 12.5 | 9.2 | 21.8 - 21.8 | 76.8 | 1950 | 14CO1905 | 14CE1905 | 14CF1905 | 14C71905 | 279.4 | 127.0 | 420.1 |
| BM 60-6 | 15.0 | 11.0 | 25.5 - 25.8 | 82.7 | 2100 | 14CO1906 | 14CE1906 | 14CF1906 | 14C71906 | 305.8 | 139.0 | 444.8 |
| BM 60-7 | 17.5 | 13.0 | 30.5 - 31.0 | 86.6 | 2200 | 14CO1907 | 14CE1907 | 14CF1907 | 14C71907 | 325.6 | 148.0 | 487.2 |
| BM 60-8 | 20.0 | 15.0 | 34.0 - 34.5 | 98.4 | 2500 | 14CO1908 | 14CE1908 | 14CF1908 | 14C71908 | 360.8 | 164.0 | 526.0 |
| BM 60-10 | 25.0 | 18.5 | 42.0 - 42.5 | 106.3 | 2700 | 14CO1910 | 14CE1910 | 14CF1910 | 14C71910 | 402.6 | 183.0 | 564.8 |
| BM 60-12 | 30.0 | 22.0 | 47.5 - 50.0 | 120.1 | 3050 | 14CO1912 | 14CE1912 | 14CF1912 | 14C71912 | 451.0 | 205.0 | 631.9 |
| BM 60-15 | 35.0 | 26.0 | 57.0 - 59.0 | 133.9 | 3400 | 14CO1915 | 14CE1915 | 14CF1915 | 14C71915 | 506.0 | 230.0 | 702.5 |
| BM 60-16 | 40.0 | 30.0 | 66.5 - 68.5 | 149.6 | 3800 | 14CO1916 | 14CE1916 | 14CF1916 | 14C71916 | 558.8 | 254.0 | 780.2 |

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

Dimensional sketch



TM05 6000 4312

One set of connecting fittings is required for each system. See section 20. Accessories, page 73.

BM 8" (with straight pipe) (3/50/400 V)

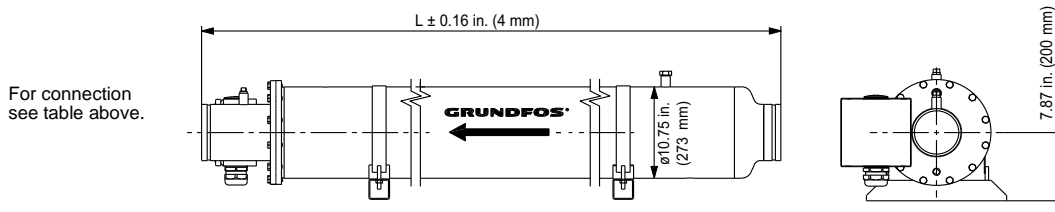
| Type | Motor output [P ₂] | | Rated current I _N [A] | Length [L] | | Product number | | | | Approx. ship. wt. | | Approx. ship. vol. [ft ³] |
|-------------|--------------------------------|------|----------------------------------|------------|------|----------------|-----------|------------|-----------|-------------------|--------|---------------------------------------|
| | [hp] | [kW] | | [in] | [mm] | 1.4301 | N version | NE version | R version | [lbs] | [kg] | |
| BM 46-20 | 50.0 | 37.0 | 77.0 - 81.5 | 175.2 | 4150 | 15CS1920 | 15CR1920 | 15CT1920 | 15CU1920 | 156.2 | 418.00 | 58.3 |
| BM 46-24 | 50.0 | 37.0 | 77.0 - 81.5 | 194.9 | 4950 | 15CS1924 | 15CR1924 | 15CT1924 | 15CU1924 | 187.0 | 442.00 | 64.6 |
| BM 60-20 | 50.0 | 37.0 | 77.0 - 81.5 | 163.4 | 4150 | 14CS1920 | 14CR1920 | 14CT1920 | 14CU1920 | 217.8 | 422.00 | 54.4 |
| BM 60-22 | 60.0 | 45.0 | 95.5 - 96.5 | 175.2 | 4450 | 14CS1922 | 14CR1922 | 14CT1922 | 14CU1922 | 281.6 | 453.00 | 58.3 |
| BM 77-6 | 30.0 | 22.0 | 47.5 - 50.0 | 108.3 | 2750 | 16CS1906 | 16CE1906 | 16CF1906 | 16CU1906 | 325.6 | 246.00 | 36.8 |
| BM 77-7 | 35.0 | 26.0 | 57.0 - 59.0 | 108.3 | 2750 | 16CS1907 | 16CE1907 | 16CF1907 | 16CU1907 | 356.4 | 255.00 | 36.8 |
| BM 77-8 | 40.0 | 30.0 | 66.5 - 68.5 | 126.0 | 3200 | 16CS1908 | 16CE1908 | 16CF1908 | 16CU1908 | 919.6 | 286.00 | 42.4 |
| BM 77-10 | 50.0 | 37.0 | 77.0 - 81.5 | 135.8 | 3450 | 16CS1910 | 16CR1910 | 16CT1910 | 16CU1910 | 972.4 | 383.00 | 45.6 |
| BM 77-12 | 60.0 | 45.0 | 95.5 - 96.5 | 149.6 | 3800 | 16CS1912 | 16CR1912 | 16CT1912 | 16CU1912 | 928.4 | 427.00 | 50.2 |
| BM 77-14 | 75.0 | 55.0 | 112 - 116 | 163.4 | 4150 | 16CS1914 | 16CR1914 | 16CT1914 | 16CU1914 | 996.6 | 464.00 | 54.4 |
| BM 77-20 | 100.0 | 75.0 | 152 - 156 | 222.4 | 5650 | 16CS1920 | 16CR1920 | 16CT1920 | 16CU1920 | 541.2 | 603.00 | 72.8 |
| BM 95-6 | 35.0 | 26.0 | 57.0 - 59.0 | 108.3 | 2750 | 19CS1906 | 19S81906 | 19S91906 | 19601906 | 561.0 | 250.00 | 36.8 |
| BM 95-8 | 50.0 | 37.0 | 77.0 - 81.5 | 126.0 | 3200 | 19CS1908 | 19651908 | 19661908 | 19671908 | 629.2 | 364.00 | 42.4 |
| BM 95-10 | 60.0 | 45.0 | 95.5 - 96.5 | 135.8 | 3450 | 19CS1910 | 19651910 | 19661910 | 19671910 | 842.6 | 403.00 | 45.6 |
| BM 95-12 | 75.0 | 55.0 | 112 - 116 | 149.6 | 3800 | 19CS1912 | 19651912 | 19661912 | 19671912 | 939.4 | 441.00 | 50.2 |
| BM 95-16 | 100.0 | 75.0 | 152 - 156 | 194.9 | 4950 | 19CS1916 | 19651916 | 19661916 | 19671916 | 1020.8 | 550.00 | 64.3 |
| BM 95-20 | 123.0 | 92.0 | 186 - 194 | 222.4 | 5650 | 19CS1920 | 19651920 | 19661920 | 19671920 | 1326.6 | 649.00 | 72.8 |
| BM 125-3 | 40.0 | 30.0 | 66.5 - 68.5 | 94.5 | 2400 | 17CS1903 | 17CE1903 | 17CF1903 | 17CU1903 | 550.0 | 249.00 | 32.2 |
| BM 125-4-A | 50.0 | 37.0 | 77.0 - 81.5 | 108.3 | 2750 | 17CS19A4 | 17CR19A4 | 17CT19A4 | 17CU19A4 | 800.8 | 348.00 | 36.8 |
| BM 125-4 | 60.0 | 45.0 | 95.5 - 96.5 | 126.0 | 3200 | 17CS1904 | 17CR1904 | 17CT1904 | 17CU1904 | 886.6 | 367.00 | 42.4 |
| BM 125-5 | 75.0 | 55.0 | 112 - 116 | 126.0 | 3200 | 17CS1905 | 17CR1905 | 17CT1905 | 17CU1905 | 970.2 | 415.00 | 42.4 |
| BM 125-7 | 100.0 | 75.0 | 152 - 156 | 149.6 | 3800 | 17CS1907 | 17CR1907 | 17CT1907 | 17CU1907 | 1210.0 | 498.00 | 50.2 |
| BM 125-9 | 123.0 | 92.0 | 186 - 194 | 163.4 | 4150 | 17CS1909 | 17CR1909 | 17CT1909 | 17CU1909 | 1427.8 | 567.00 | 54.4 |
| BM 160-1 | 17 | 13 | 30 - 30.5 | 94.5 | 2400 | 20CS1901 | 20CR1901 | 20CT1901 | 20CU1901 | 547.8 | 208.00 | 32.2 |
| BM 160-2 | 35 | 26 | 57 - 59 | 94.5 | 2400 | 20CS1902 | 20CR1902 | 20CT1902 | 20CU1902 | 765.6 | 235.00 | 32.2 |
| BM 160-3-AA | 40 | 30 | 66.5 - 68.5 | 94.5 | 2400 | 20CS19B3 | 20CR19B3 | 20CT19B3 | 20CU19B3 | 807.4 | 249.00 | 32.2 |
| BM 160-3 | 50 | 37 | 77 - 81.5 | 108.3 | 2750 | 20CS1903 | 20CR1903 | 20CT1903 | 20CU1903 | 913.0 | 342.00 | 36.8 |
| BM 160-4 | 74 | 55 | 112 - 116 | 126.0 | 3200 | 20CS1904 | 20CR1904 | 20CT1904 | 20CU1904 | 1095.6 | 405.00 | 42.4 |
| BM 160-5 | 85 | 63 | 130 - 132 | 126.0 | 3200 | 20CS1905 | 20CR1905 | 20CT1905 | 20CU1905 | 1247.4 | 437.00 | 42.4 |
| BM 160-6 | 101 | 75 | 152 - 156 | 149.6 | 3800 | 20CS1906 | 20CR1906 | 20CT1906 | 20CU1906 | 457.6 | 489.00 | 50.2 |
| BM 160-8 | 123 | 92 | 186 - 194 | 163.4 | 4150 | 20CS1908 | 20CR1908 | 20CT1908 | 20CU1908 | 517.0 | 561.00 | 54.4 |
| BM 215-1-A | 20 | 15 | 34 - 34.5 | 94.5 | 2400 | 18CS19A1 | 18CR19A1 | 18CT19A1 | 18CU19A1 | 547.8 | 218.00 | 32.2 |
| BM 215-2-AA | 40 | 30 | 66.5 - 68.5 | 94.5 | 2400 | 18CS19B2 | 18CR19B2 | 18CT19B2 | 18CU19B2 | 752.4 | 253.00 | 32.2 |
| BM 215-2 | 60 | 45 | 95.5 - 96 | 108.3 | 2750 | 18CS1902 | 18CR1902 | 18CT1902 | 18CU1902 | 891.0 | 369.00 | 36.8 |
| BM 215-3 | 85 | 63 | 130 - 132 | 126.0 | 3200 | 18CS1903 | 18CR1903 | 18CT1903 | 18CU1903 | 961.4 | 439.00 | 42.4 |
| BM 215-4 | 101 | 75 | 152 - 156 | 149.6 | 3800 | 18CS1904 | 18CR1904 | 18CT1904 | 18CU1904 | 1075.8 | 495.00 | 50.2 |
| BM 215-5 | 123 | 92 | 186 - 194 | 163.4 | 4150 | 18CS1905 | 18CR1905 | 18CT1905 | 18CU1905 | 1234.2 | 565.00 | 54.4 |

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 |

Dimensional sketch



TM05 6931 4212

One set of connecting fittings is required for each system. See section 20. Accessories, page 73.

12. BMhp applications

The Grundfos BMhp booster module is suitable for industrial and water supply applications where the inlet pressure is high, i.e. 870 to 1160 psi (60 to 80 bar).

BMhp booster modules are used to increase the system pressure up to 1160 psi (80 bar).

The BMhp booster module is the optimum solution for applications requiring the following:

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

Typical applications

BMhp 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.

Pumped liquids

These pumps are suitable for pumping thin, non-explosive liquids not containing abrasive particles or fibers. The liquid must not attack the pump materials chemically or mechanically.

- 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.

13. BMhp product introduction

Features

BMhp booster modules need no flushing during continuous operation due to an internal by-pass.

Standard pumps

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

- SP 17, SP 30, SP 46 and SP 60 in 6" sleeve
- SP 77, SP 95, SP 125, SP 160 and SP 215 in 8" sleeve.

Note: The BMhp booster modules are supplied without non-return valves.

Construction

Modified standard submersible pumps are used for the BMhp booster modules. Pump and motor are centered in the stainless-steel (Duplex) sleeve.

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

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

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

Motor

Asynchronous submersible squirrel-cage motor of the canned type with water-lubricated bearings.

Voltages

- 3 x 440-480 V +6 % / -10 %, 60 Hz
- 3 x 380-415 V +6 % / -10 %, 50 Hz.

Enclosure class

- IP68 (MS 6000)
- IP58 (MMS 8000)

Insulation class

MS6000 class F insulation

MMS 8000 wet-wound with PE/PA winding wires.

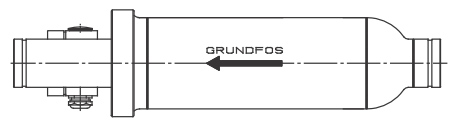
Special versions

Other voltages available on request.

14. BMhp product range

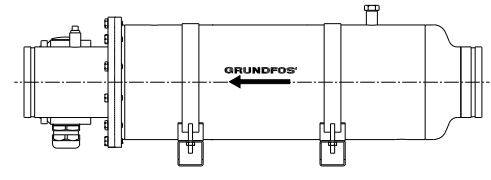
Types and versions

BMhp 6"



TM00 4019 2410

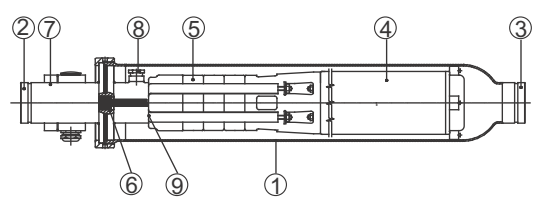
BMhp 8"



TM01 1420 1912

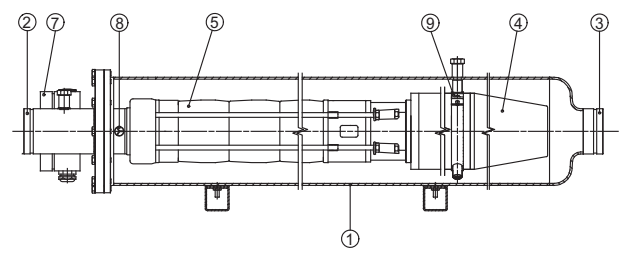
Sectional drawings

BMhp 6"



TM00 3796 2410

BMhp 8"



TM01 1419 1912

- 1. Sleeve
- 2. Discharge connection
- 3. Suction 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.

15. BMhp operating conditions

Flow

- 60 Hz: Max. 1364 US gpm (310 m³/h)
- 50 Hz: Max. 1166 US gpm (265 m³/h).

Temperature

Max. +104 °F (+40 °C).

Contact Grundfos in case of higher temperature.

Outlet pressure

Max. 1160 psi (80 bar).

Recommended inlet pressure at +77 °F (+25 °C)

| BMhp | Min. | | Max. | |
|------|-------|-------|-------|-------|
| | [psi] | [bar] | [psi] | [bar] |
| 6" | 7.25 | 0.5 | 1160 | 80 |
| 8" | 14.5 | 1 | 1160 | 80 |

Rated speed

- 60 Hz: 3450 rpm
- 50 Hz: 2870 rpm

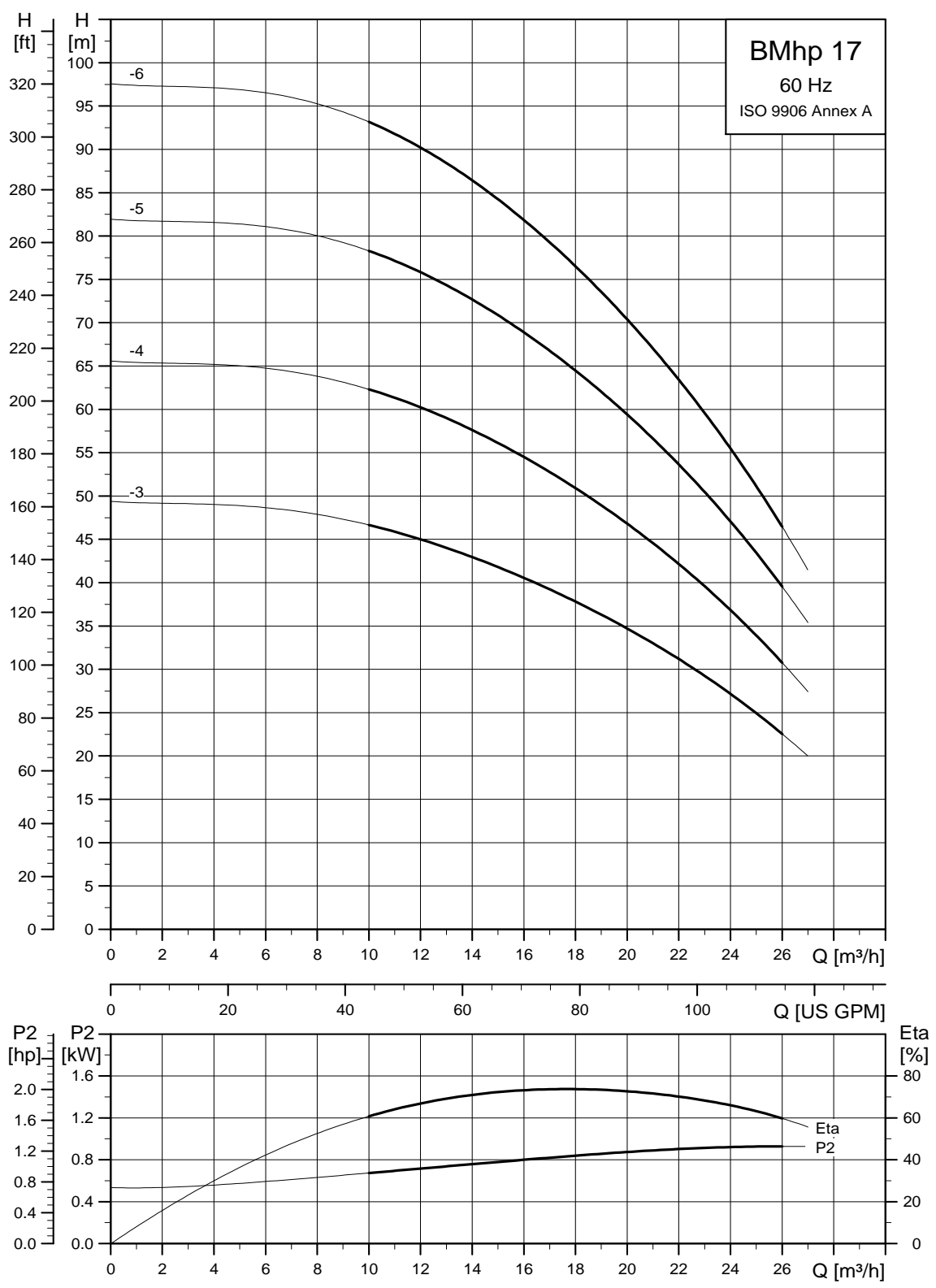
Sound pressure level

- The sound pressure level of BMhp 6" booster modules is below 70 dB(A).
- The sound pressure level of BMhp 8" booster modules is below 80 dB(A).

See also section [Limitations to operation](#), page 12.

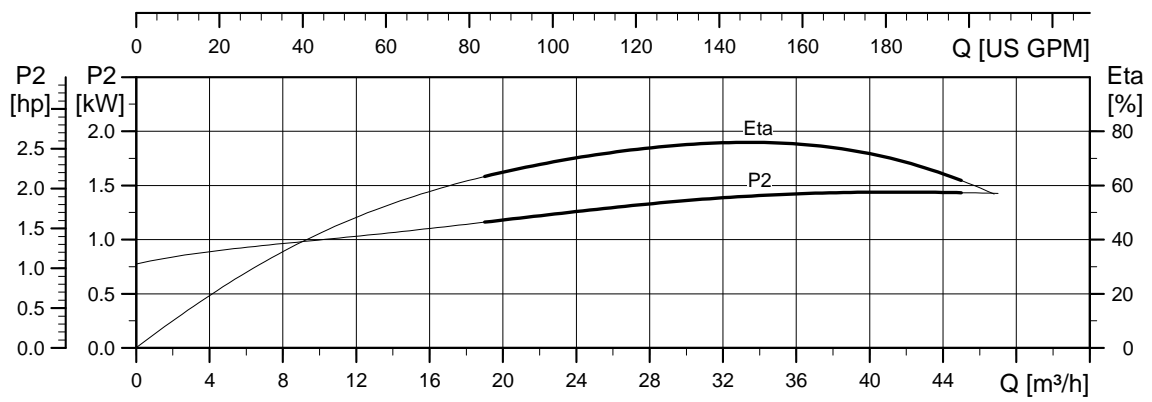
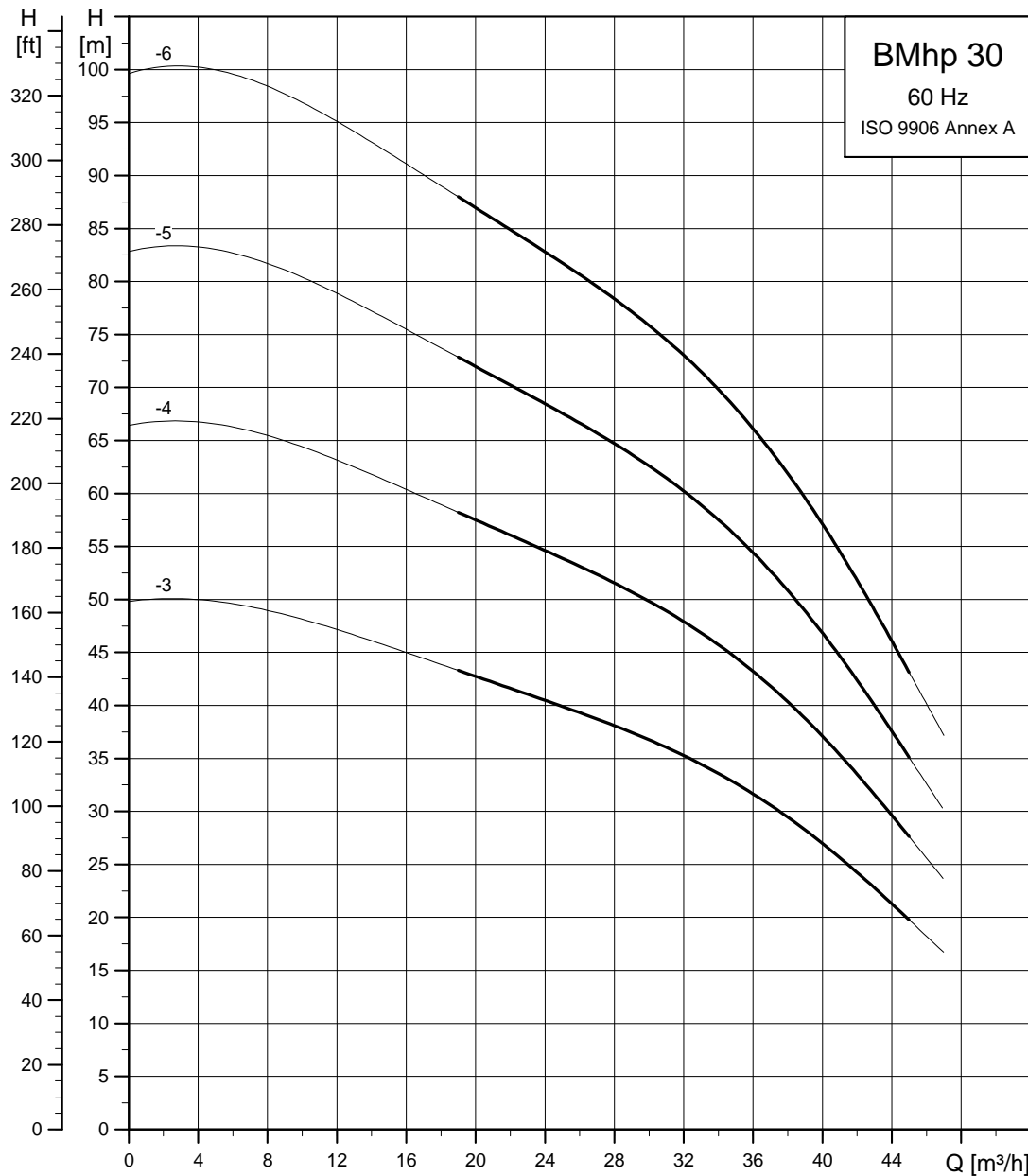
16. BMhp performance curves, 60 Hz

BMhp 17



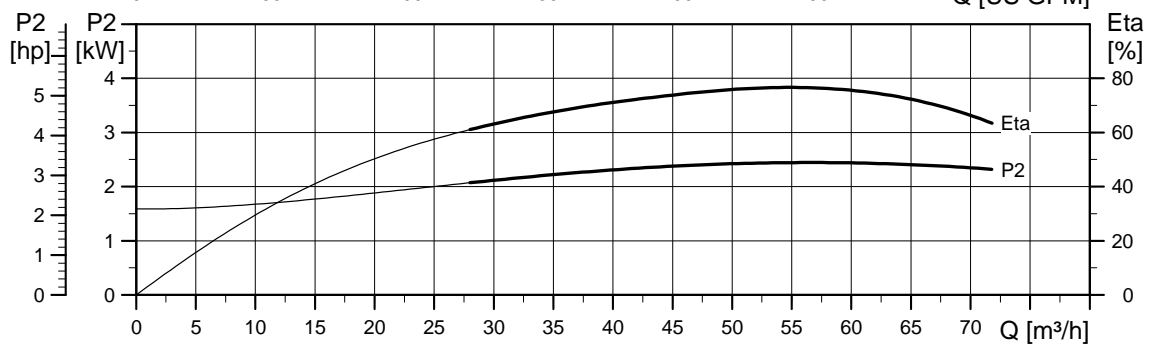
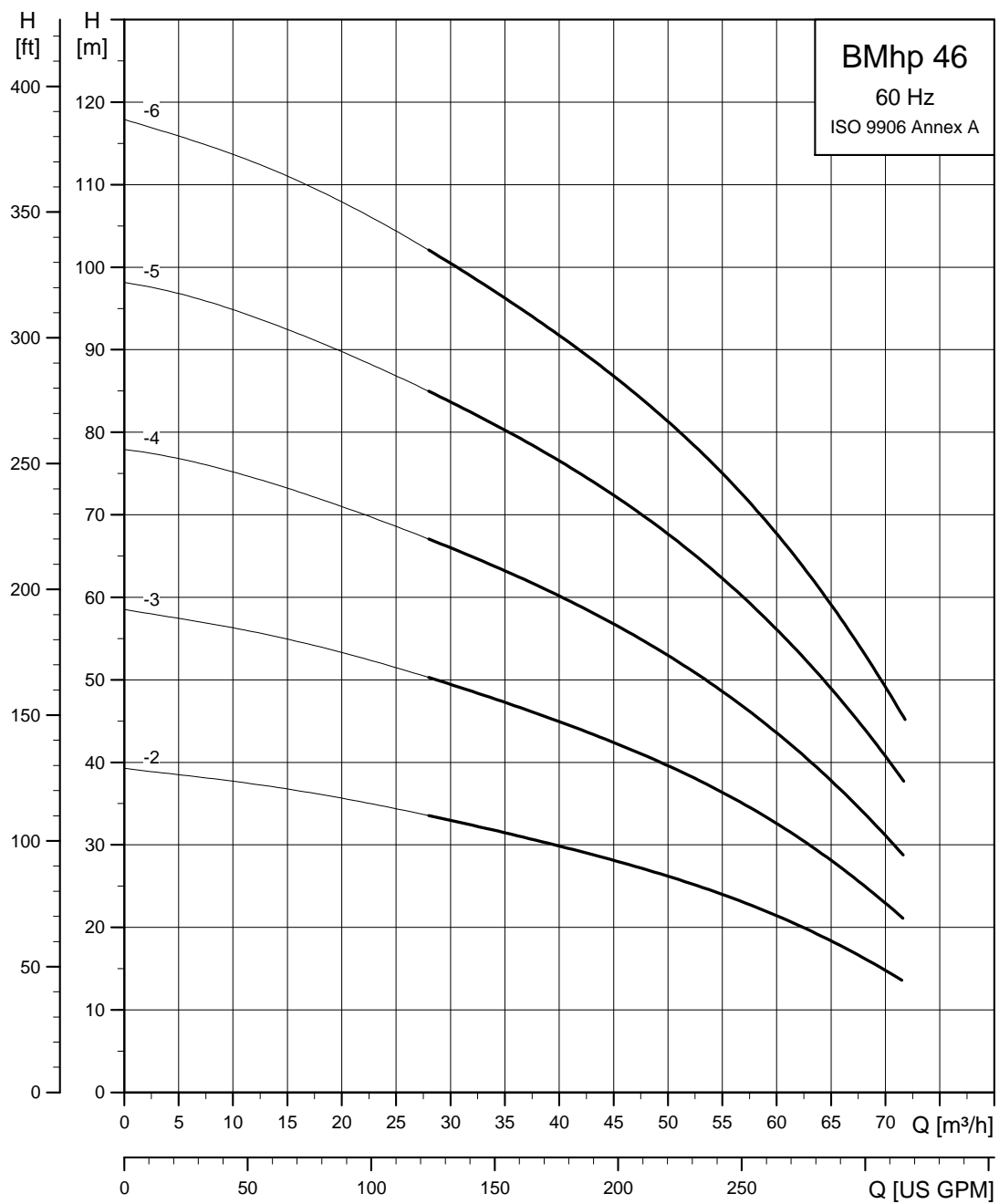
TM04 7964 3712

BMhp 30



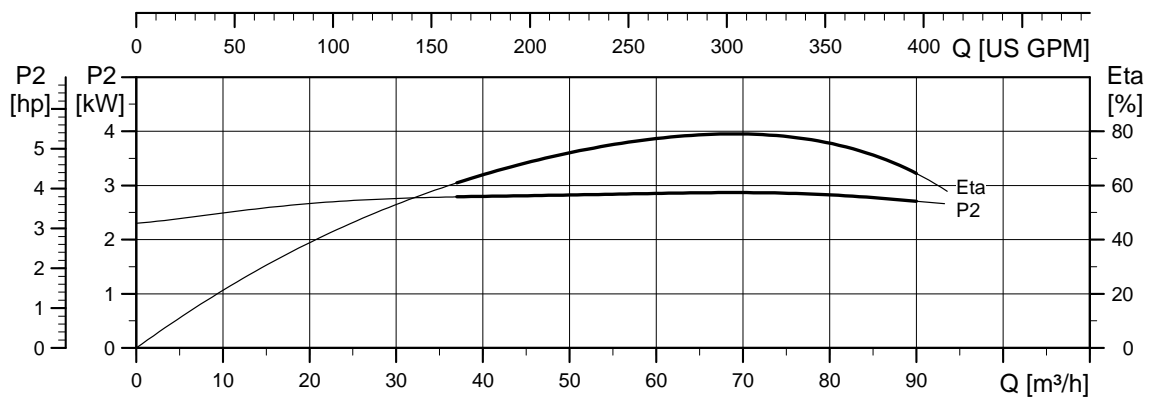
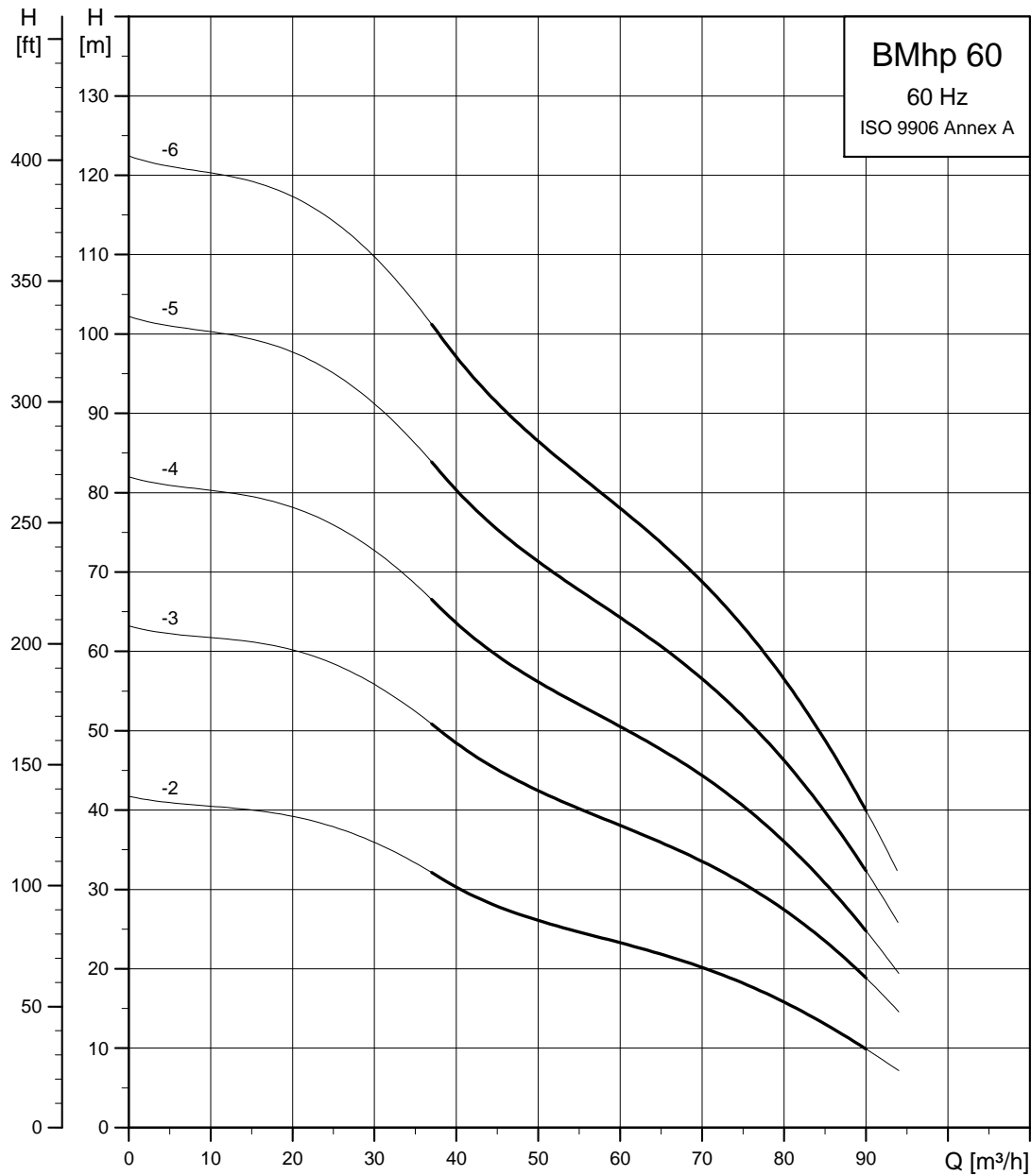
TM04 7965 3712

BMhp 46



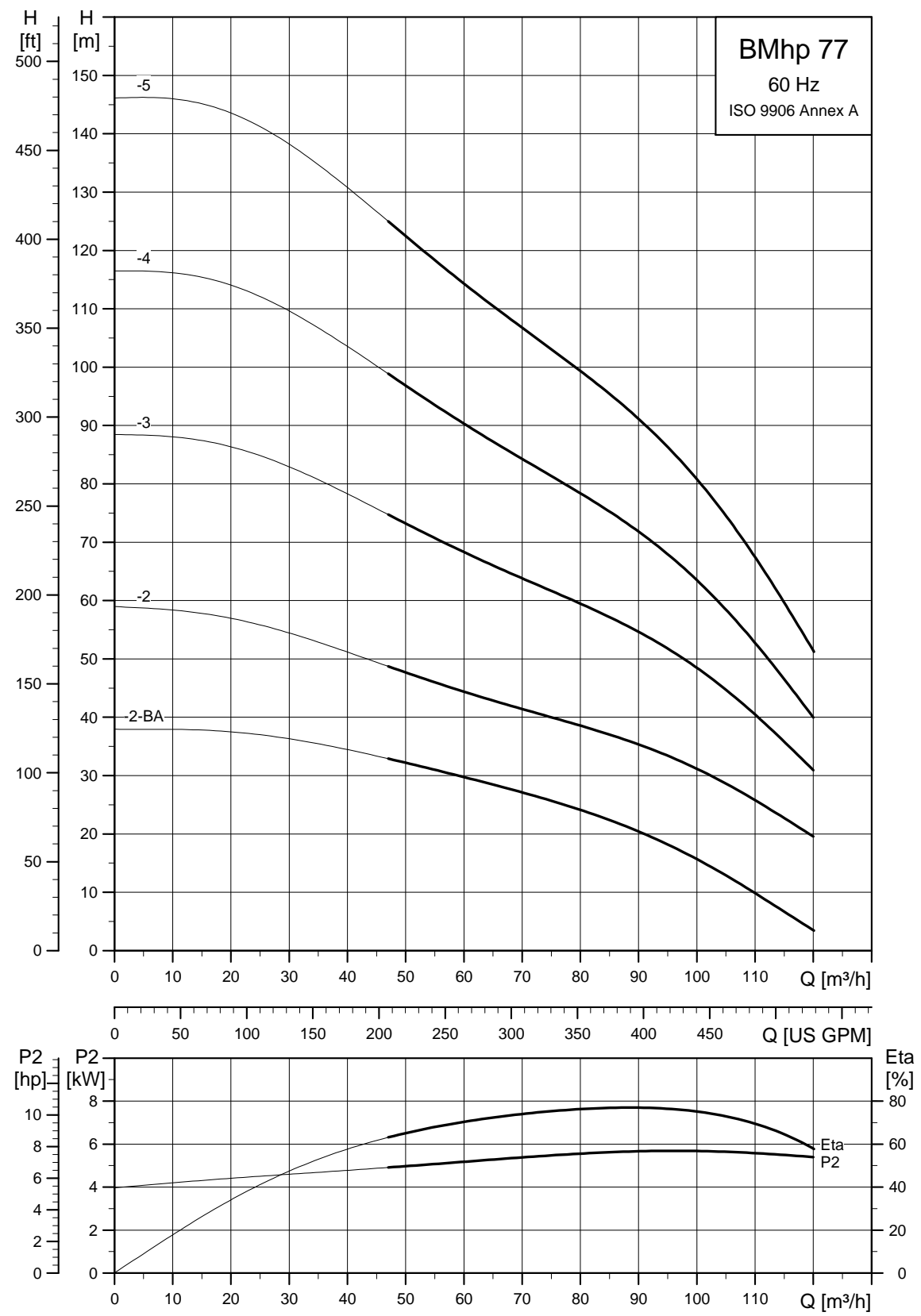
TM04 7966 3712

BMhp 60



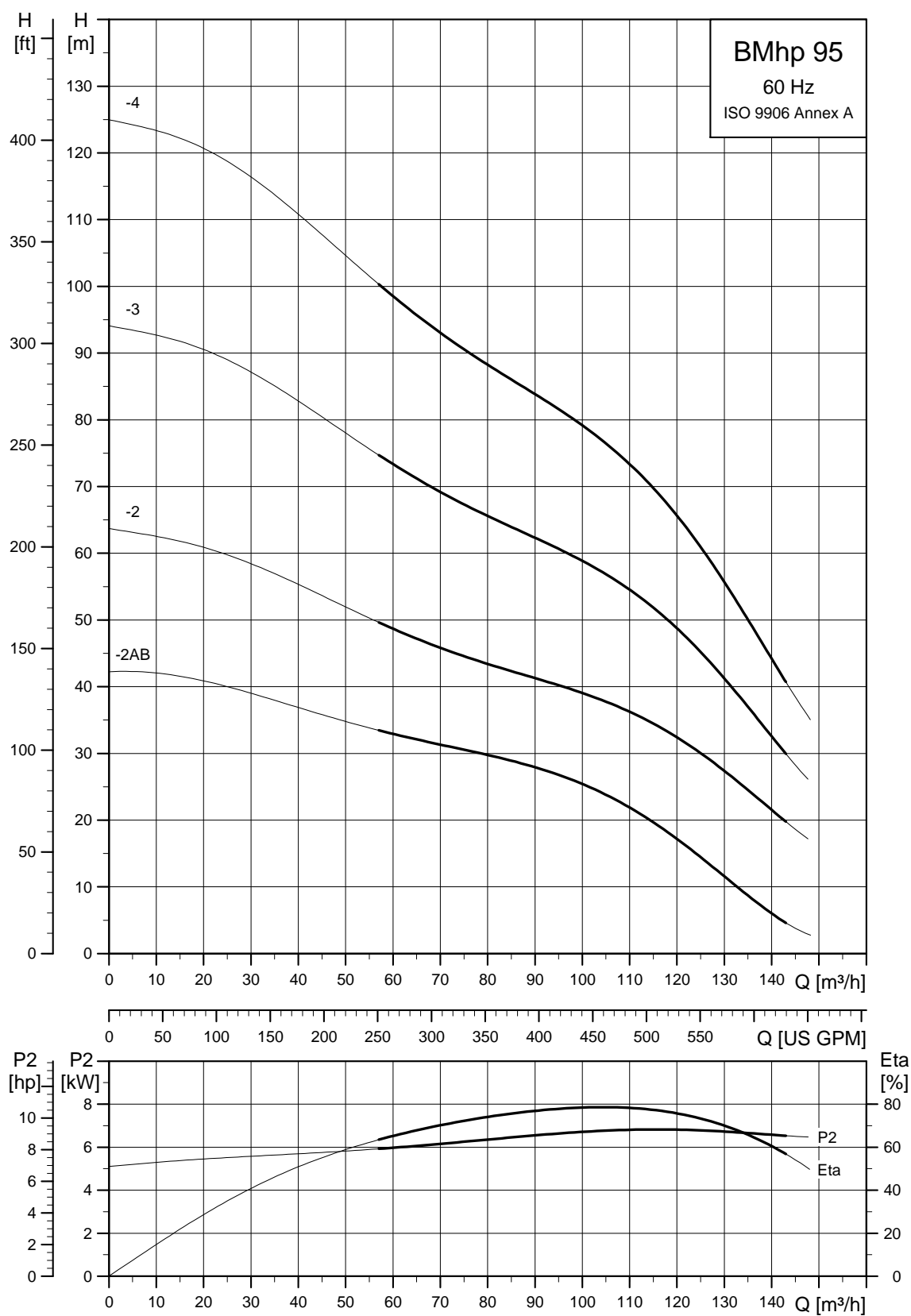
TM04 7967 3712

BMhp 77



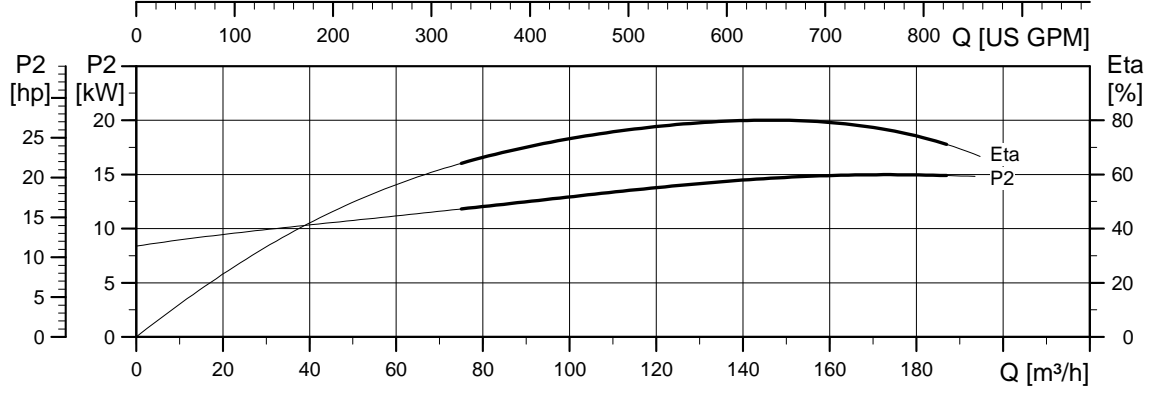
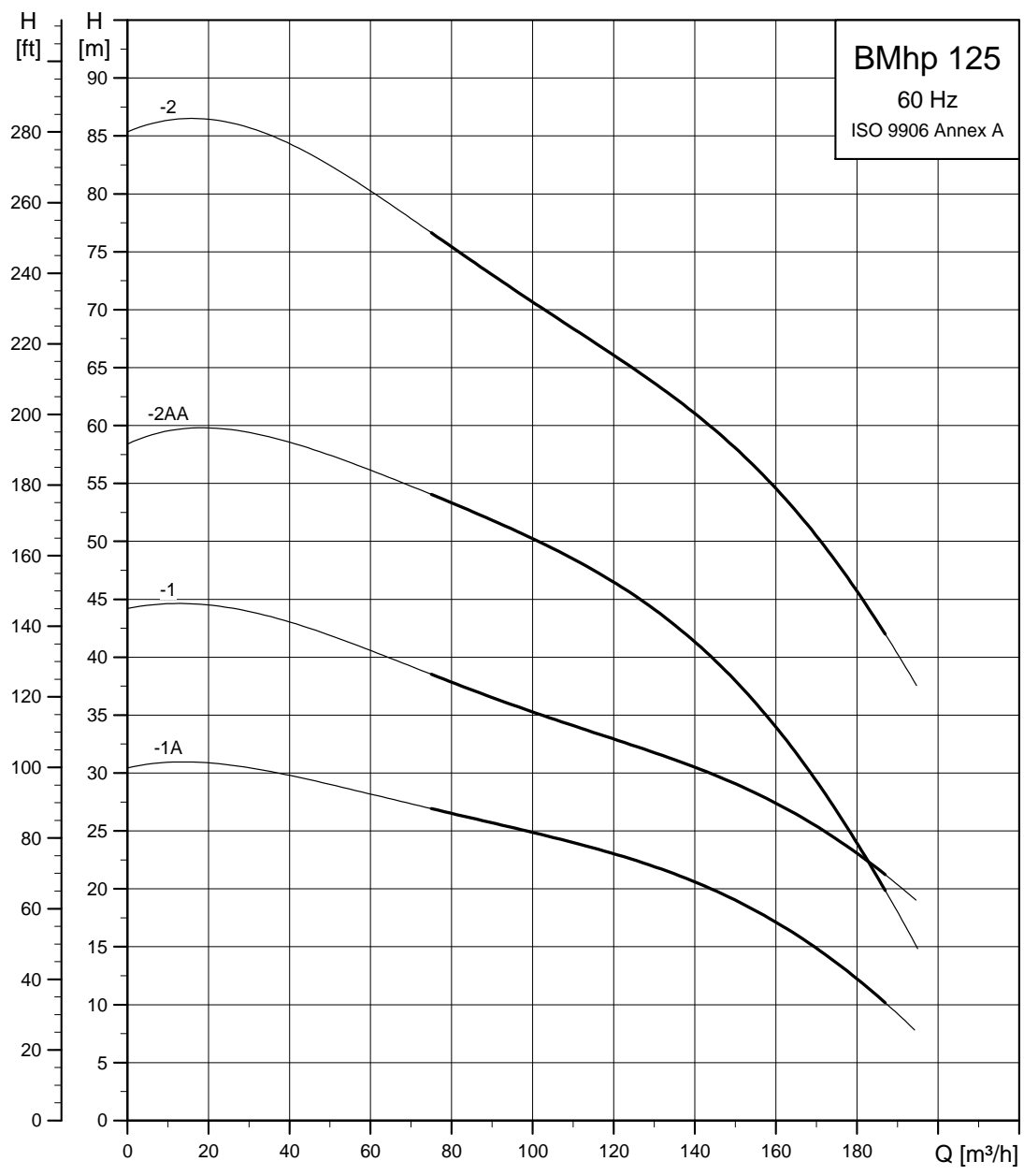
TM04 7968 3712

BMhp 95



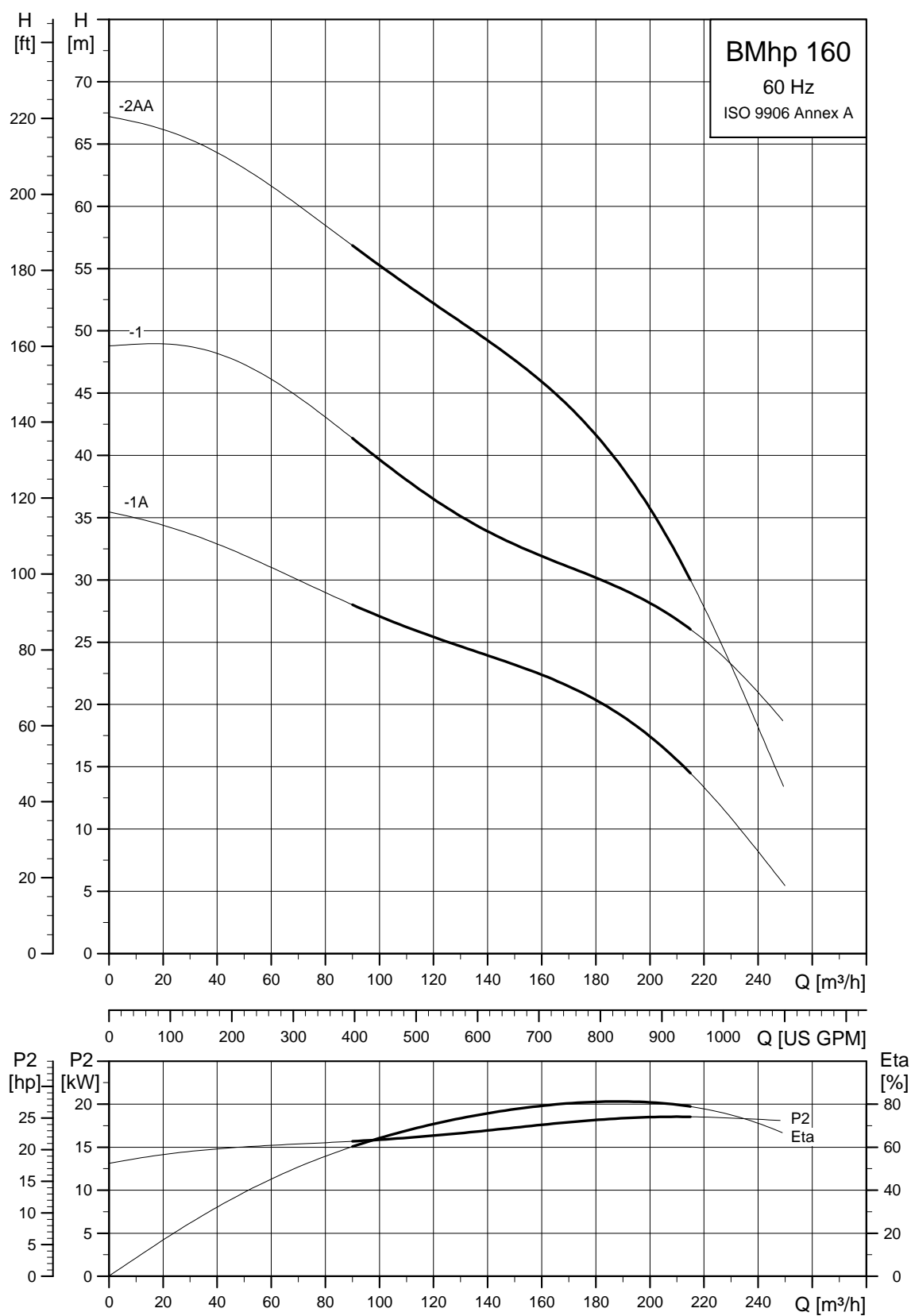
TM04 7969 3712

BMhp 125



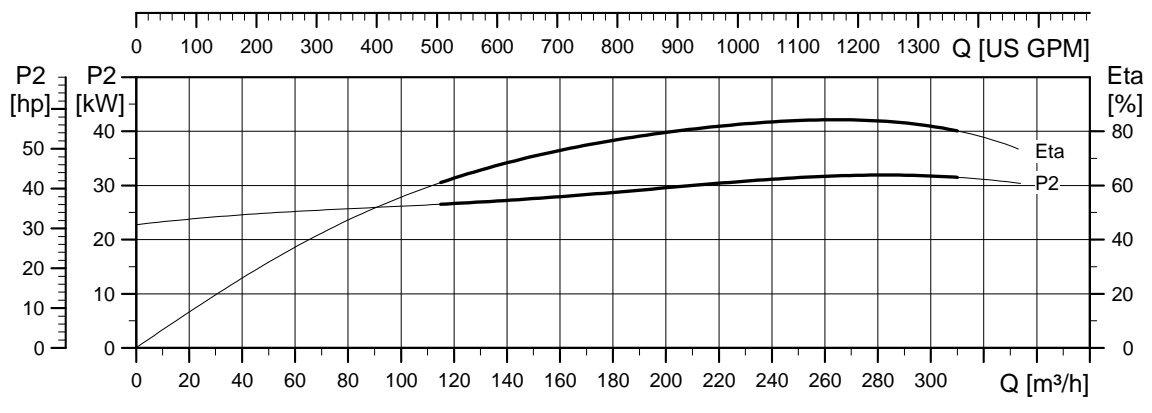
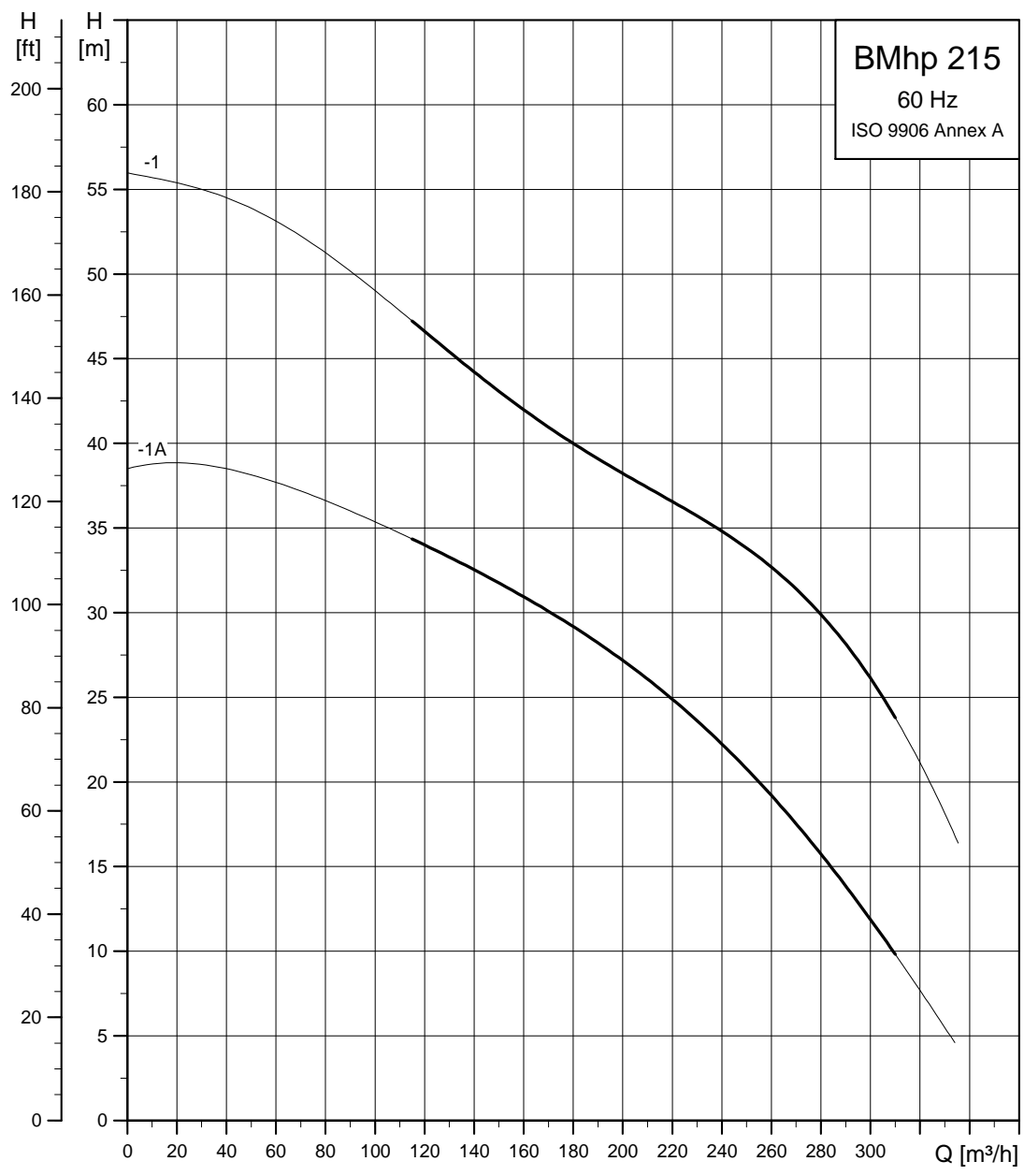
TM04 7970 3712

BMhp 160



TM04 7971 3712

BMhp 215



TM04 7972 3712

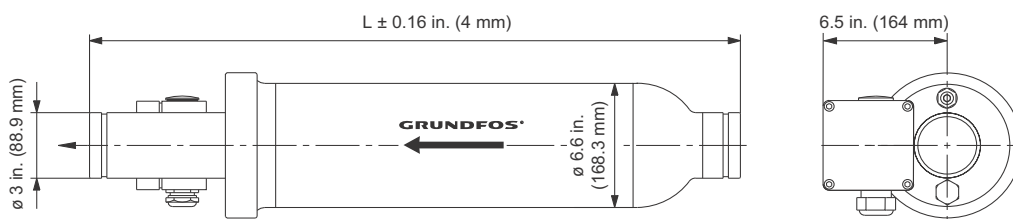
17. BMhp technical data, 60 Hz

BMhp 6" (with straight pipe) (3/60/460 V)

| Type | Motor output [P ₂] | | Rated current I _N [A] | Length [L] | | Product number | Approx. ship. wt. | | Approx. ship. vol. [ft ³] |
|-----------|--------------------------------|------|----------------------------------|------------|------|----------------|-------------------|-------|---------------------------------------|
| | [hp] | [kW] | | [in] | [mm] | | [lbs] | [kg] | |
| BMhp 17-3 | 7.5 | 5.5 | 13.2 - 13.2 | 82.7 | 2100 | 95908989 | 104.5 | 229.9 | 14.1 |
| BMhp 17-4 | 7.5 | 5.5 | 13.2 - 13.2 | 82.7 | 2100 | 96293277 | 106.0 | 233.2 | 14.1 |
| BMhp 17-5 | 7.5 | 5.5 | 13.2 - 13.2 | 82.7 | 2100 | 96293278 | 107.5 | 236.5 | 14.1 |
| BMhp 17-6 | 7.5 | 5.5 | 13.2 - 13.2 | 82.7 | 2100 | 96293279 | 109.0 | 239.8 | 14.1 |
| BMhp 30-3 | 7.5 | 5.5 | 13.2 - 13.2 | 82.7 | 2100 | 95908990 | 107.0 | 235.4 | 14.1 |
| BMhp 30-4 | 7.5 | 5.5 | 13.2 - 13.2 | 82.7 | 2100 | 96293280 | 109.0 | 239.8 | 14.1 |
| BMhp 30-5 | 10.0 | 7.5 | 17.0 - 17.4 | 82.7 | 2100 | 96293281 | 114.5 | 251.9 | 14.1 |
| BMhp 30-6 | 12.5 | 9.2 | 21.0 - 21.8 | 82.7 | 2100 | 96768215 | 122.0 | 268.4 | 14.1 |
| BMhp 46-2 | 7.5 | 5.5 | 13.2 - 13.2 | 82.7 | 2100 | 95908991 | 110.0 | 242.0 | 14.1 |
| BMhp 46-3 | 10.0 | 7.5 | 17.0 - 17.4 | 82.7 | 2100 | 95908992 | 115.5 | 254.1 | 14.1 |
| BMhp 46-4 | 12.5 | 9.2 | 21.0 - 21.8 | 82.7 | 2100 | 96293283 | 123.0 | 270.6 | 14.1 |
| BMhp 46-5 | 17.5 | 13.0 | 28.5 - 29.5 | 82.7 | 2100 | 96293284 | 131.0 | 288.2 | 14.1 |
| BMhp 46-6 | 20.0 | 15.0 | 32.5 - 33.5 | 106.3 | 2700 | 96293285 | 170.0 | 374.0 | 17.7 |
| BMhp 60-2 | 7.5 | 5.5 | 13.2 - 13.2 | 82.7 | 2100 | 95908993 | 110.0 | 242.0 | 14.1 |
| BMhp 60-3 | 12.5 | 9.2 | 21.0 - 21.8 | 82.7 | 2100 | 95908994 | 121.0 | 266.2 | 14.1 |
| BMhp 60-4 | 15.0 | 11.0 | 24.0 - 25.5 | 82.7 | 2100 | 96293286 | 126.0 | 277.2 | 14.1 |
| BMhp 60-5 | 20.0 | 15.0 | 32.5 - 33.5 | 82.7 | 2100 | 96293287 | 135.0 | 297.0 | 14.1 |
| BMhp 60-6 | 25.0 | 18.5 | 41.0 - 42.0 | 106.3 | 2700 | 96293288 | 175.5 | 386.1 | 17.7 |

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

Dimensional sketch



TM05 6000 4312

One set of connecting fittings is required for each system. See section [20. Accessories](#), page 73.

BMhp 8" (with straight pipe) (3/60/460 V)

| Type | Motor output [P ₂] | | Rated current | Length [L] | | Product number | Approx. ship. wt. | | Approx. ship. vol. |
|--------------|--------------------------------|------|--------------------|------------|------|----------------|-------------------|-------|--------------------|
| | [hp] | [kW] | I _N [A] | [in] | [mm] | R version | [lbs] | [kg] | [ft ³] |
| BMhp 77-2A | 10.0 | 7.5 | 17.0 - 17.4 | 94.5 | 2400 | 95908995 | 407.0 | 185.0 | 32.5 |
| BMhp 77-2 | 15.0 | 11.0 | 24.0 - 25.5 | 94.5 | 2400 | 96293303 | 427.9 | 194.5 | 32.5 |
| BMhp 77-3 | 25.0 | 18.5 | 41.0 - 42.0 | 94.5 | 2400 | 96293304 | 463.1 | 210.5 | 32.5 |
| BMhp 77-4 | 30.0 | 22.0 | 46.5 - 48.0 | 94.5 | 2400 | 96293305 | 484.0 | 220.0 | 32.5 |
| BMhp 77-5 | 40.0 | 30.0 | 63.0 - 66.5 | 108.3 | 2750 | 96293306 | 553.3 | 251.5 | 36.8 |
| BMhp 95-2AB | 12.5 | 9.2 | 21.0 - 21.8 | 82.7 | 2100 | 95908996 | 385.0 | 175.0 | 28.8 |
| BMhp 95-2 | 17.5 | 13.0 | 28.5 - 29.5 | 82.7 | 2100 | 96293307 | 407.0 | 185.0 | 28.8 |
| BMhp 95-3 | 30.0 | 22.0 | 46.5 - 48.0 | 94.5 | 2400 | 96293308 | 476.3 | 216.5 | 32.5 |
| BMhp 95-4 | 40.0 | 30.0 | 63.0 - 66.5 | 94.5 | 2400 | 96293309 | 513.7 | 233.5 | 32.5 |
| BMhp 125-1A | 15.0 | 11.0 | 24.0 - 25.5 | 82.7 | 2100 | 95908997 | 413.6 | 188.0 | 28.8 |
| BMhp 125-1 | 25.0 | 18.5 | 41.0 - 42.0 | 94.5 | 2400 | 96293310 | 469.7 | 213.5 | 32.5 |
| BMhp 125-2AA | 30.0 | 22.0 | 46.5 - 48.0 | 94.5 | 2400 | 95908998 | 496.1 | 225.5 | 32.5 |
| BMhp 125-2 | 40.0 | 30.0 | 63.0 - 66.5 | 94.5 | 2400 | 96293311 | 525.8 | 239.0 | 32.5 |
| BMhp 160-1A | 20.0 | 15.0 | 32.5 - 33.5 | 82.7 | 2100 | 95908999 | 429.0 | 195.0 | 28.8 |
| BMhp 160-1 | 30.0 | 22.0 | 46.5 - 48.0 | 94.5 | 2400 | 96293312 | 482.9 | 219.5 | 32.5 |
| BMhp 160-2AA | 35.0 | 26.0 | 54.5 - 57.5 | 94.5 | 2400 | 96293313 | 507.1 | 230.5 | 32.5 |
| BMhp 215-1A | 30.0 | 22.0 | 46.5 - 48.0 | 94.5 | 2400 | 95909000 | 497.2 | 226.0 | 32.5 |
| BMhp 215-1 | 40.0 | 30.0 | 63.0 - 66.5 | 94.5 | 2400 | 96293314 | 525.8 | 239.0 | 32.5 |

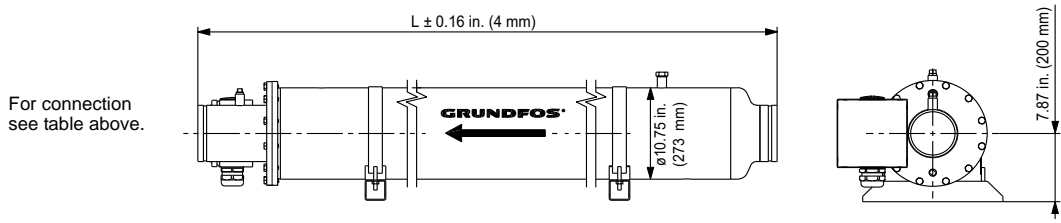
On request, the BMhp is available in other voltages and with all stages indicated in the standard SP pump range.

* Full load current I_{SF} applies to 3 x 460 V.

Connections

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

Dimensional sketch

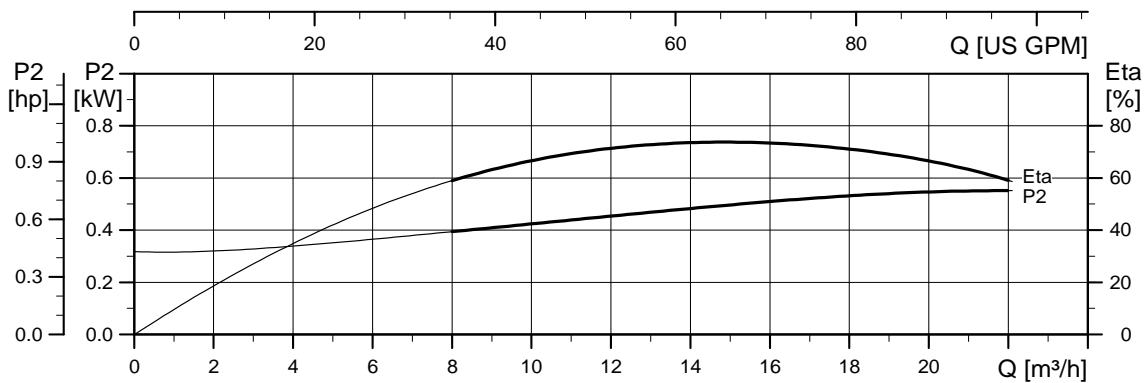
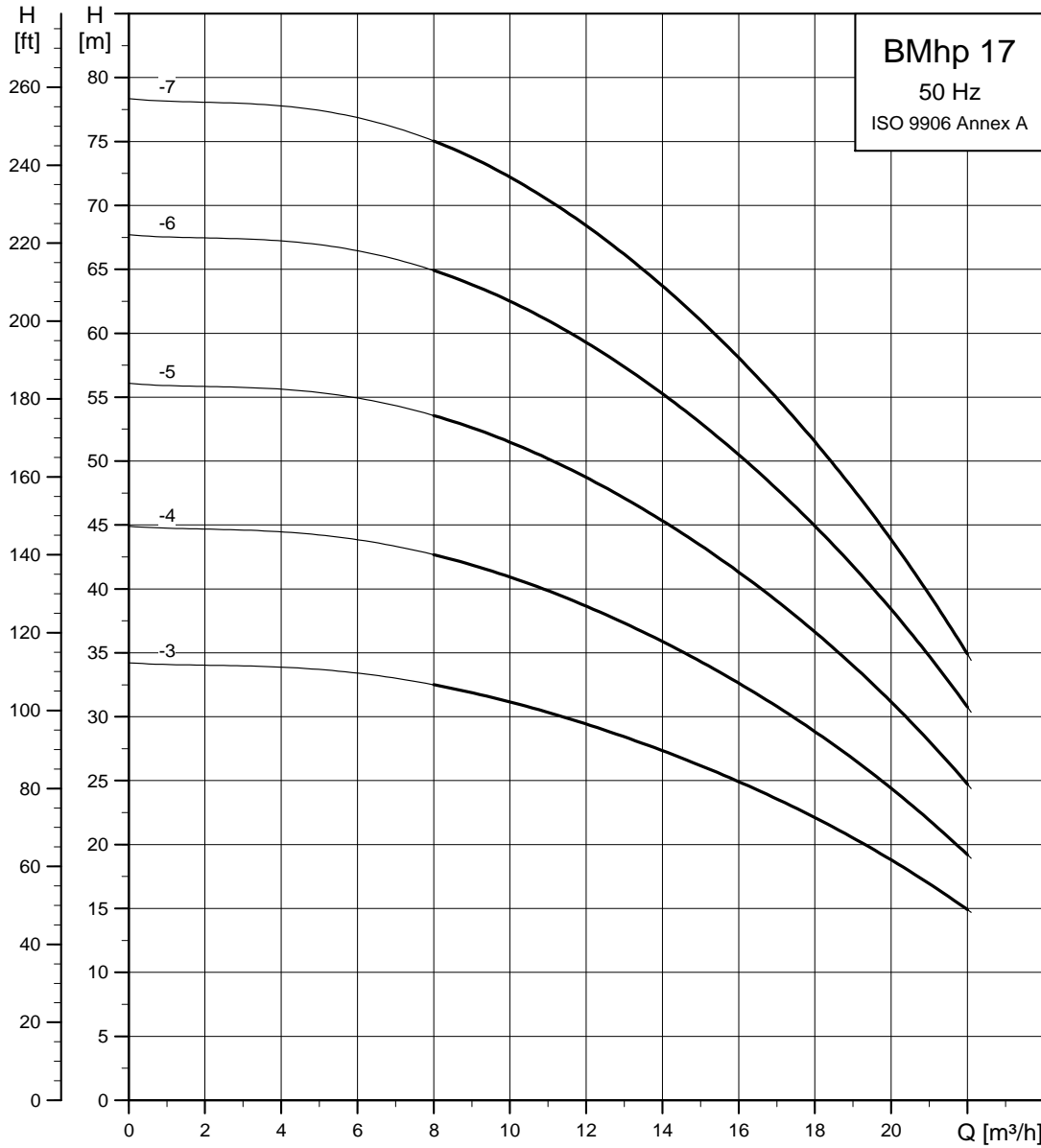


One set of connecting fittings is required for each system. See section 20. Accessories, page 73.

TM05 5931 4212

18. BMhp performance curves, 50 Hz

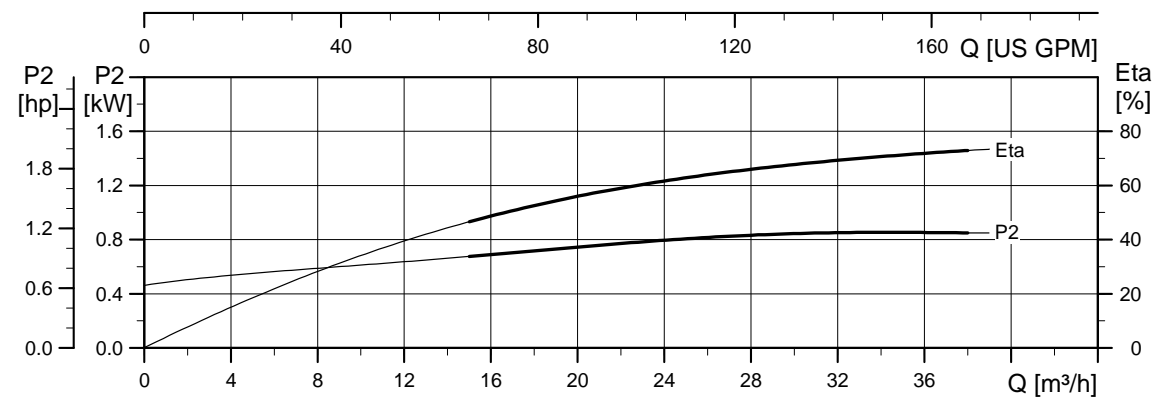
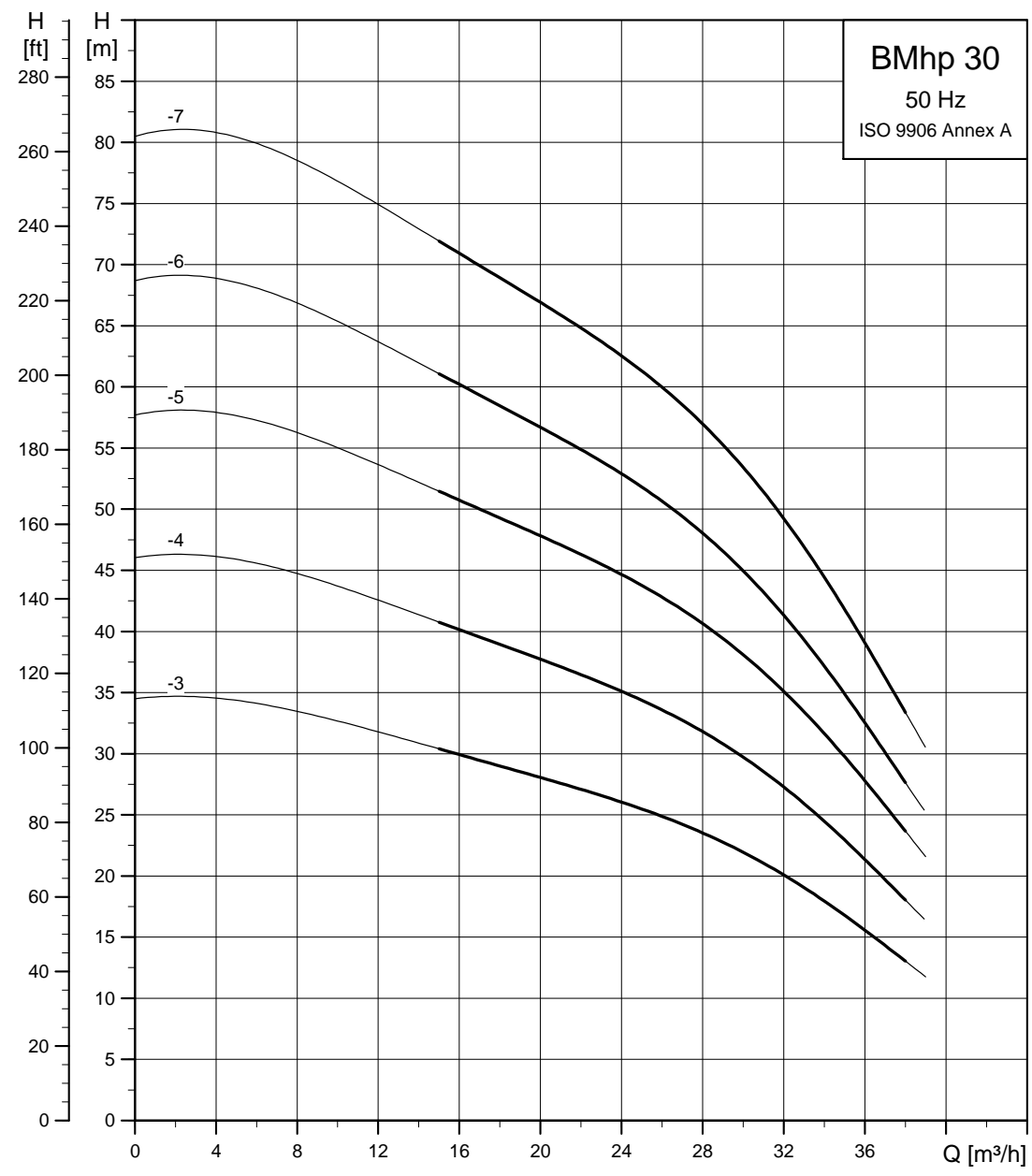
BMhp 17



TM04 7955 3712

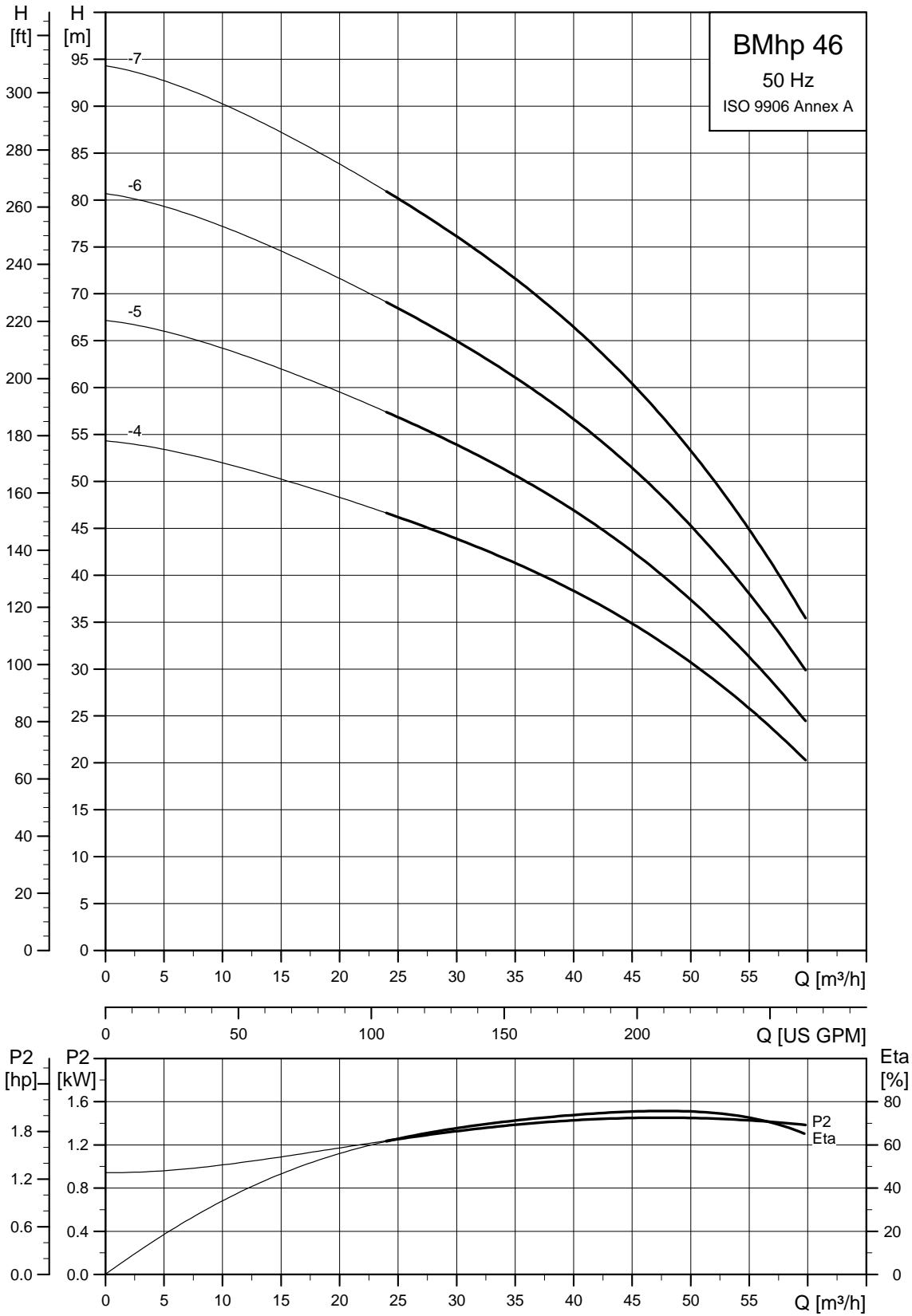
BMhp performance curves, 50 Hz

BMhp 30



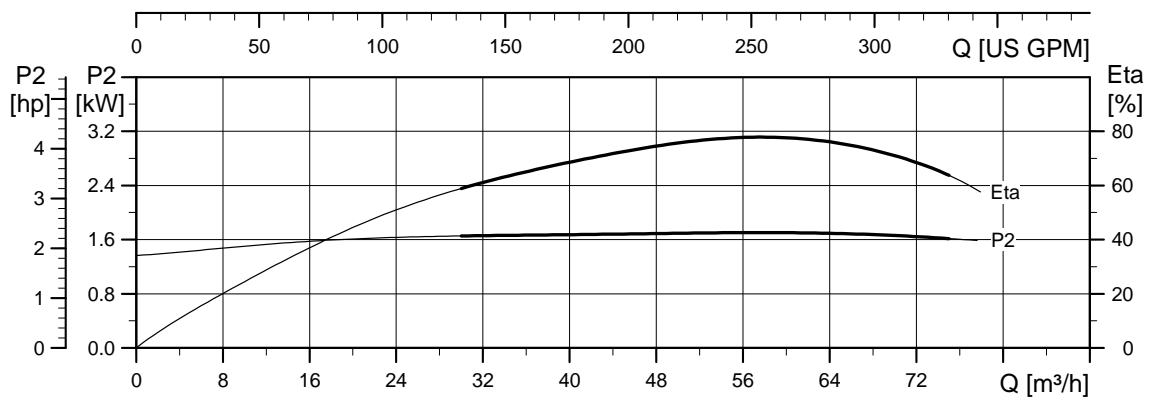
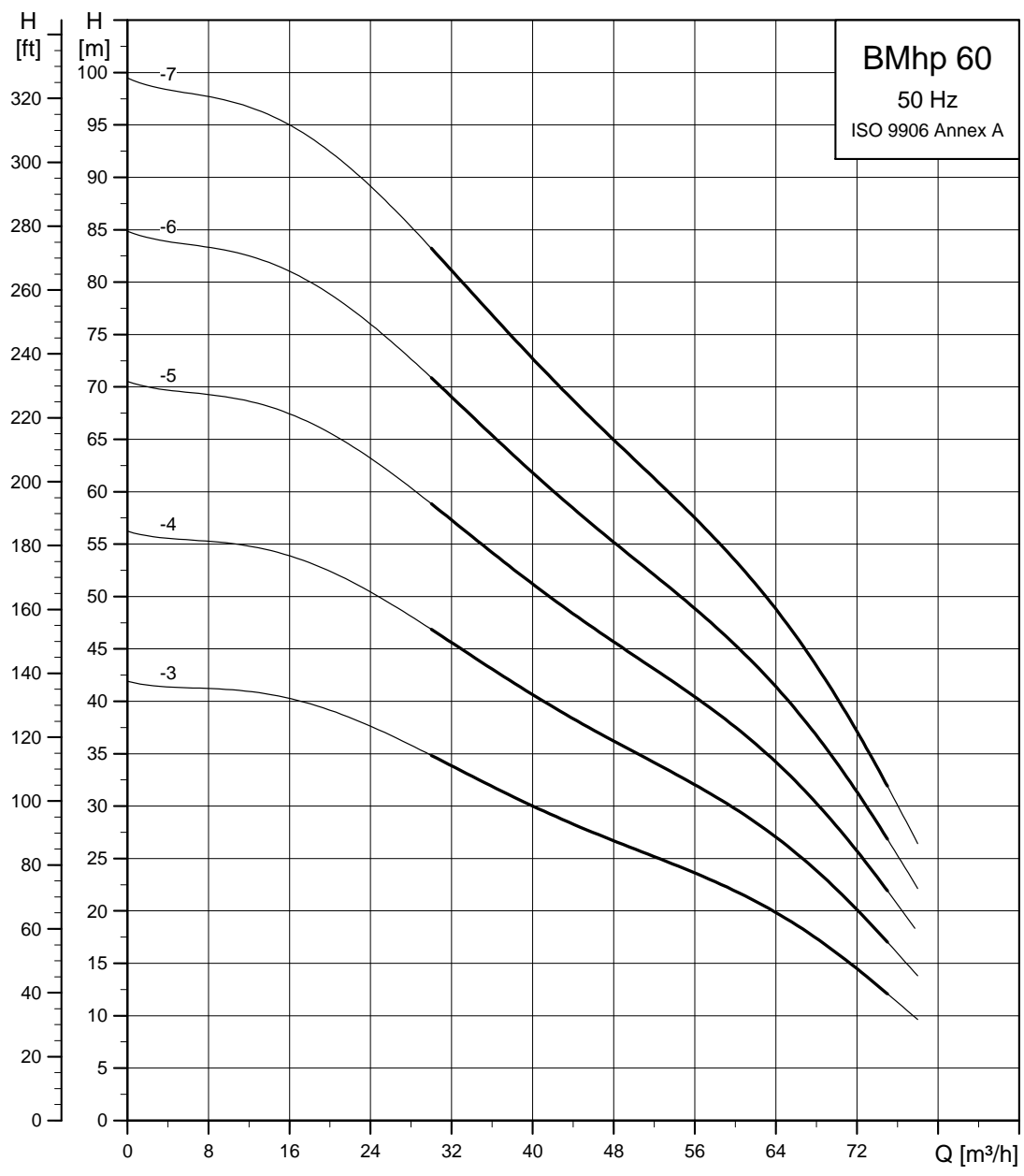
TM04 7956 3712

BMhp 46



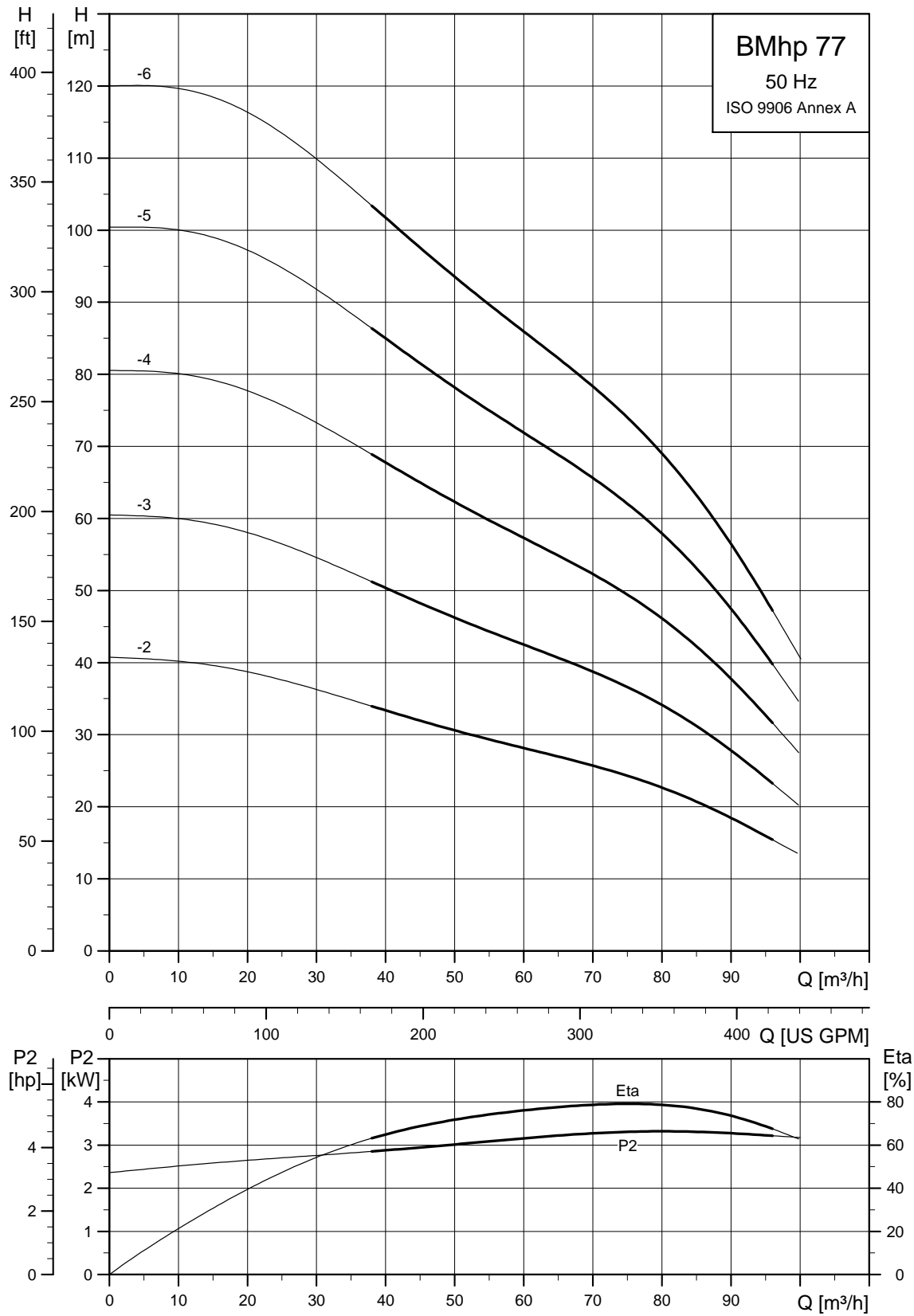
TM04 7957 3712

BMhp 60



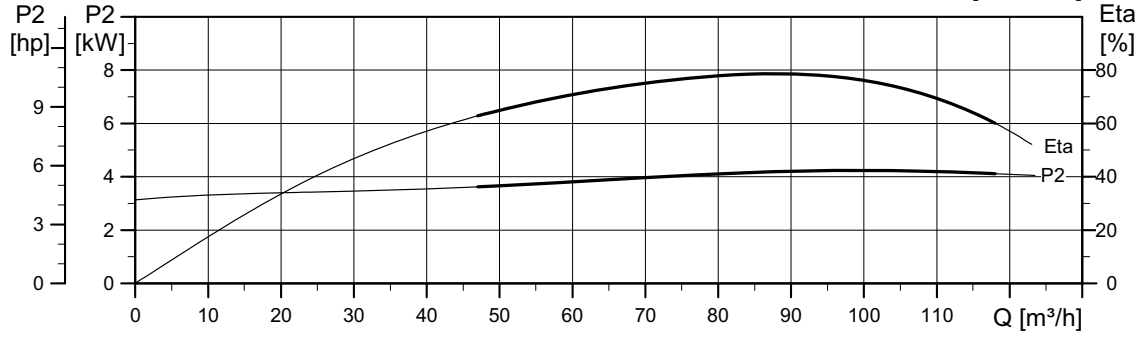
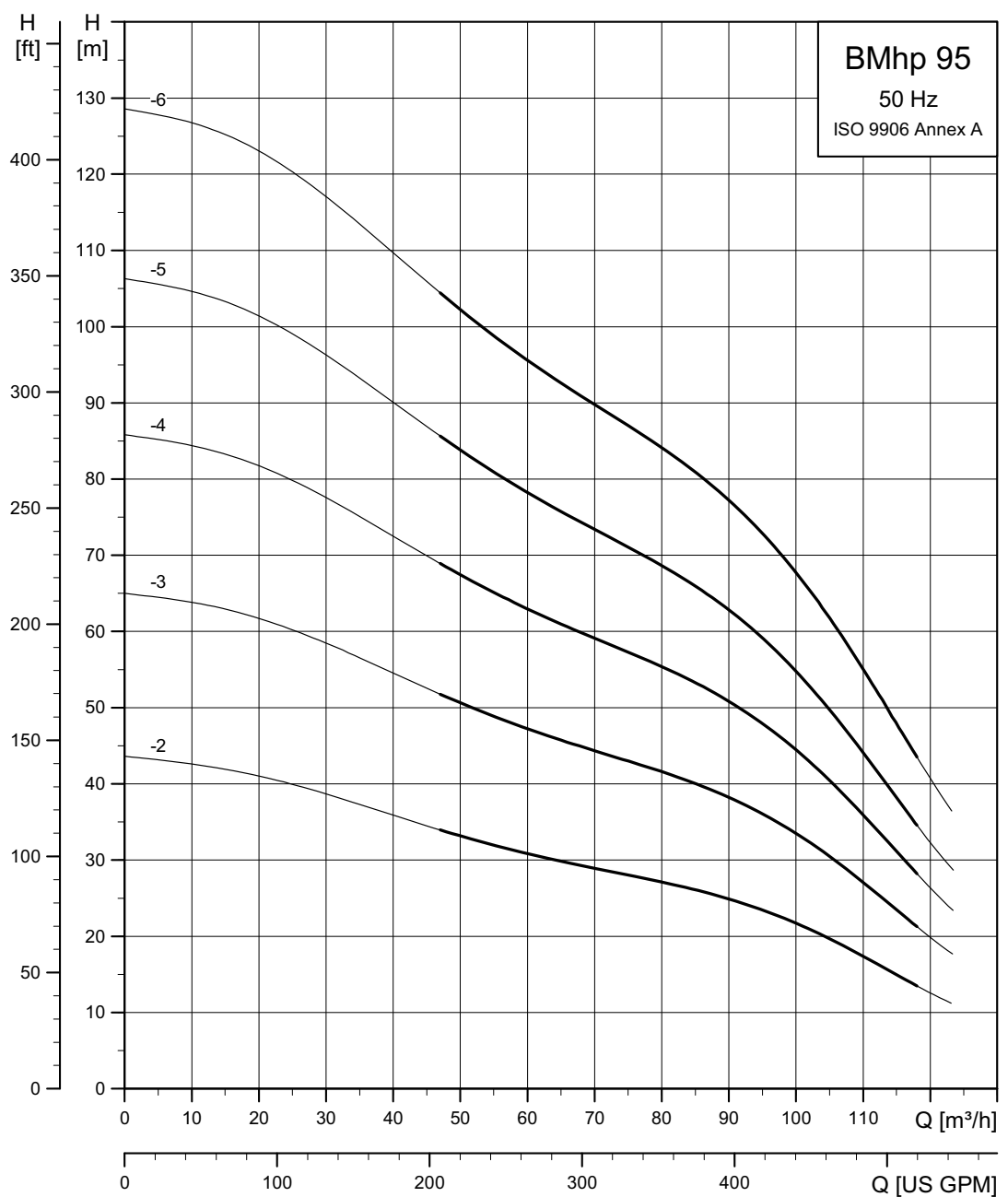
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BMhp 77



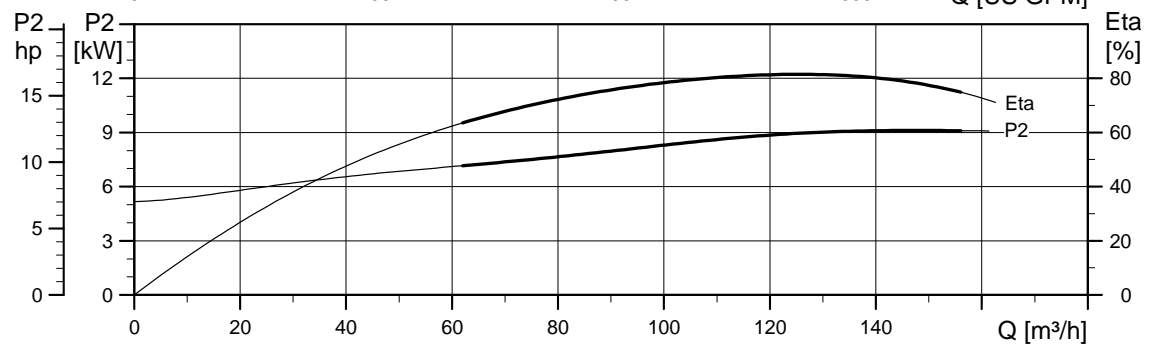
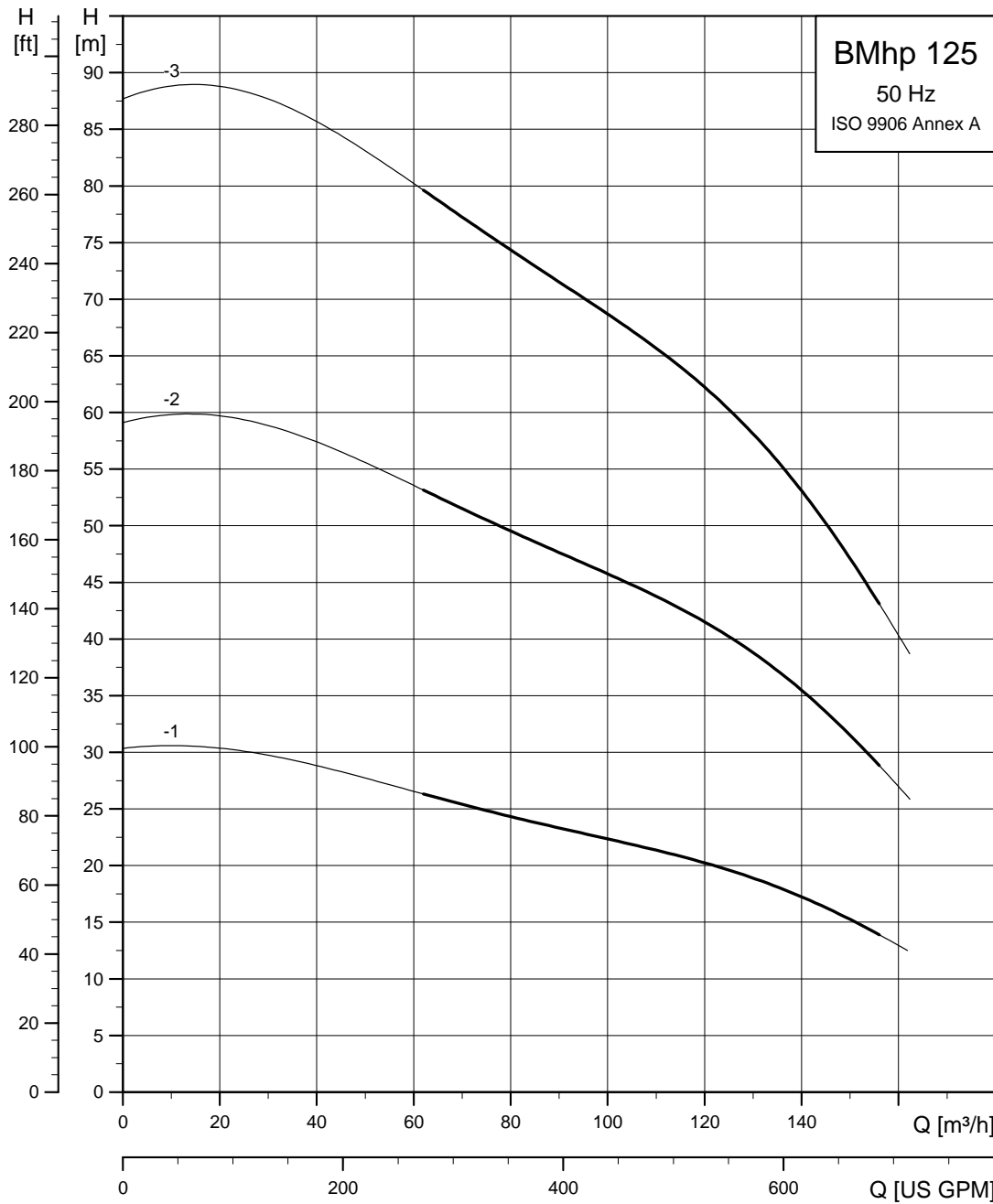
TM04 7959 3712

BMhp 95



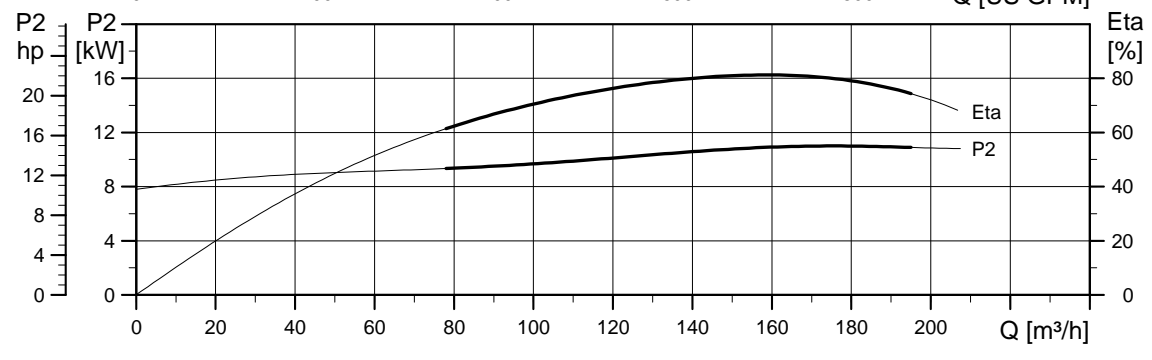
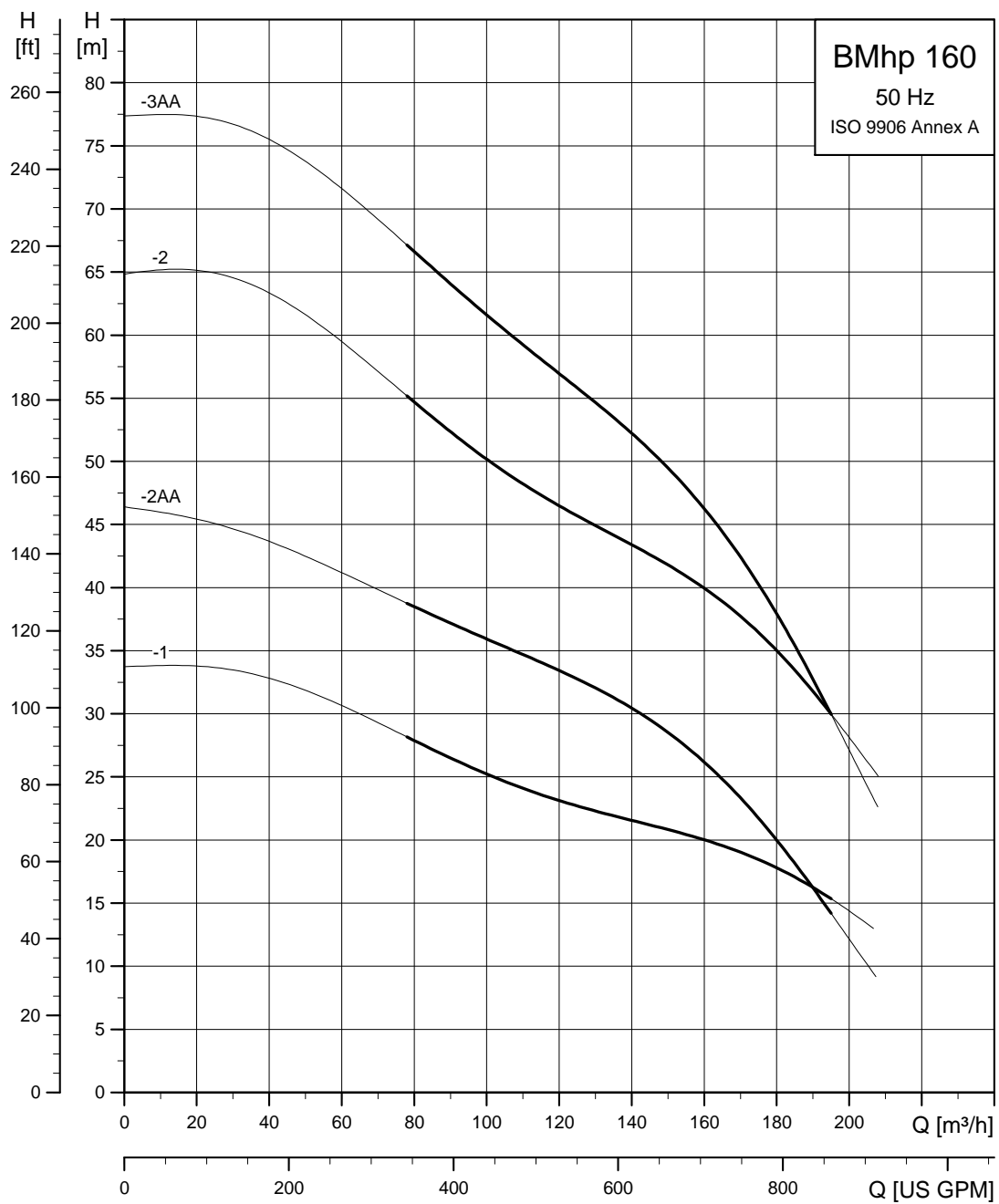
TM04 7960 1513

BMhp 125



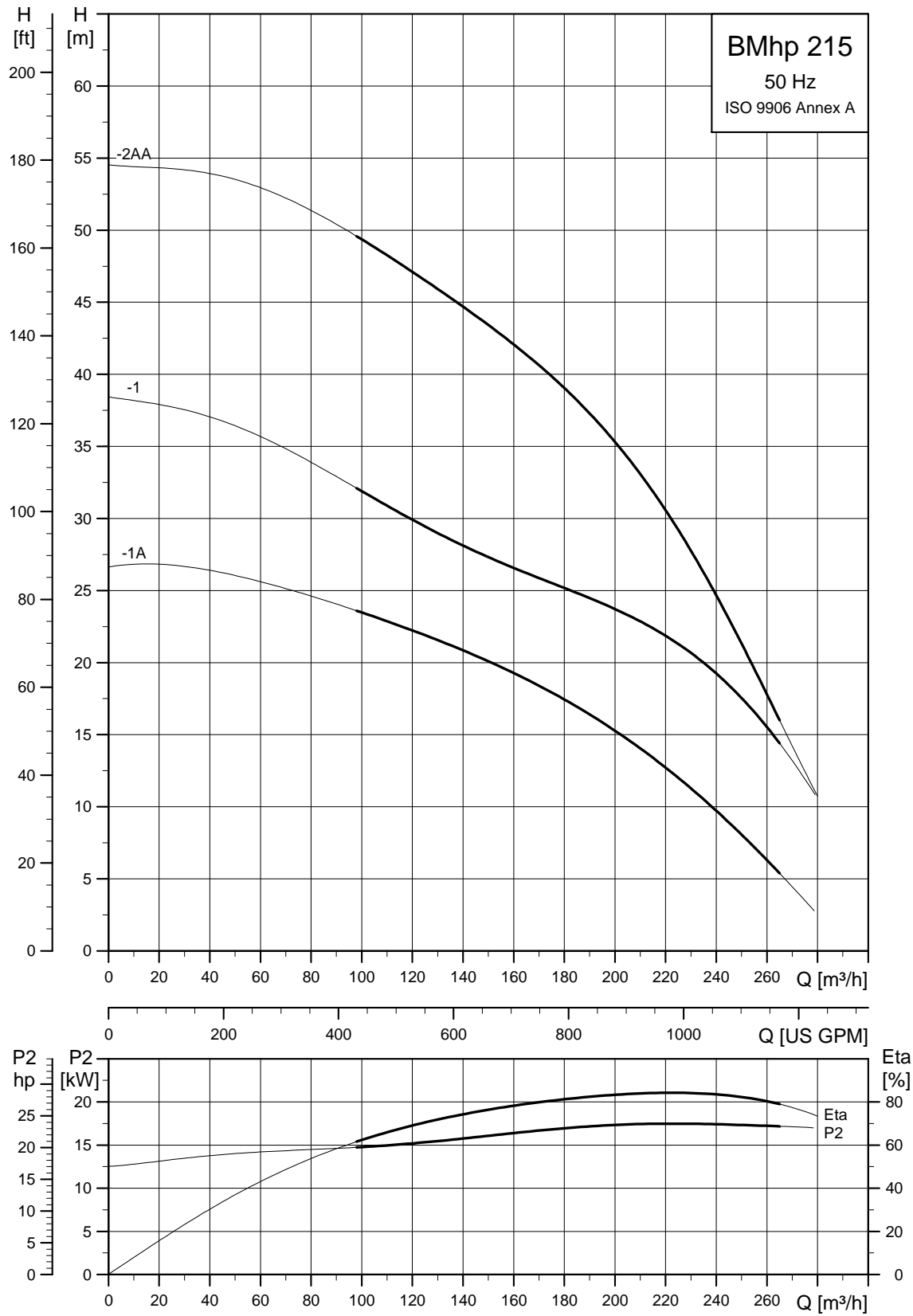
TM04 7961 3712

BMhp 160



TM04 7962 3712

BMhp 215



TM04 7963 3712

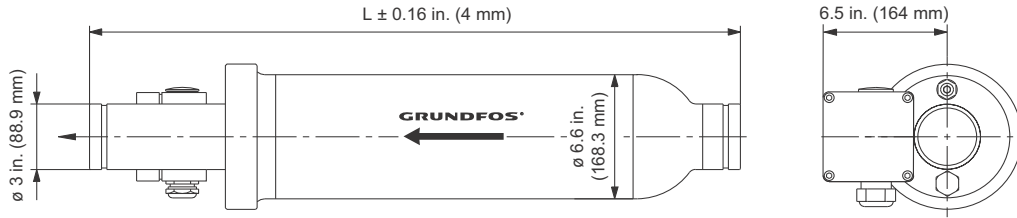
19. BMhp technical data, 50 Hz

BMhp 6" (with straight pipe) (3/50/400 V)

| Type | Motor output [P ₂] | | Rated current I _N [A] | Length [L] | | Product number | Approx. ship wt. | | Approx. ship. vol. [ft ³] |
|-----------|--------------------------------|------|----------------------------------|------------|------|----------------|------------------|-------|---------------------------------------|
| | [hp] | [kW] | | [in] | [mm] | | [lbs] | [kg] | |
| BMhp 17-3 | 7.5 | 5.5 | 13.6 - 13.8 | 82.7 | 2100 | 95908982 | 229.9 | 104.5 | 14.1 |
| BMhp 17-4 | 7.5 | 5.5 | 13.6 - 13.8 | 82.7 | 2100 | 96293261 | 233.2 | 106.0 | 14.1 |
| BMhp 17-5 | 7.5 | 5.5 | 13.6 - 13.8 | 82.7 | 2100 | 96293262 | 236.5 | 107.5 | 14.1 |
| BMhp 17-6 | 7.5 | 5.5 | 13.6 - 13.8 | 82.7 | 2100 | 96293263 | 239.8 | 109.0 | 14.1 |
| BMhp 17-7 | 7.5 | 5.5 | 13.6 - 13.8 | 82.7 | 2100 | 96293264 | 243.1 | 110.5 | 14.1 |
| BMhp 30-3 | 7.5 | 5.5 | 13.6 - 13.8 | 82.7 | 2100 | 95908983 | 235.4 | 107.0 | 14.1 |
| BMhp 30-4 | 7.5 | 5.5 | 13.6 - 13.8 | 82.7 | 2100 | 96293265 | 239.8 | 109.0 | 14.1 |
| BMhp 30-5 | 7.5 | 5.5 | 13.6 - 13.8 | 82.7 | 2100 | 96293266 | 244.2 | 111.0 | 14.1 |
| BMhp 30-6 | 7.5 | 5.5 | 13.6 - 13.8 | 82.7 | 2100 | 96293267 | 248.6 | 113.0 | 14.1 |
| BMhp 30-7 | 10.0 | 7.5 | 17.6 - 17.8 | 82.7 | 2100 | 96293268 | 257.4 | 117.0 | 14.1 |
| BMhp 46-4 | 10.0 | 7.5 | 17.6 - 17.8 | 82.7 | 2100 | 96293269 | 258.5 | 117.5 | 14.1 |
| BMhp 46-5 | 10.0 | 7.5 | 17.6 - 17.8 | 82.7 | 2100 | 96293270 | 262.9 | 119.5 | 14.1 |
| BMhp 46-6 | 12.5 | 9.2 | 21.8 - 21.8 | 106.3 | 2700 | 96293271 | 352.0 | 160.0 | 17.7 |
| BMhp 46-7 | 15.0 | 11.0 | 24.8 - 25.5 | 106.3 | 2700 | 96293272 | 363.0 | 165.0 | 17.7 |
| BMhp 60-3 | 7.5 | 5.5 | 13.6 - 13.8 | 82.7 | 2100 | 95908984 | 246.4 | 112.0 | 14.1 |
| BMhp 60-4 | 10.0 | 7.5 | 17.6 - 17.8 | 82.7 | 2100 | 96293273 | 258.5 | 117.5 | 14.1 |
| BMhp 60-5 | 12.5 | 9.2 | 21.8 - 21.8 | 82.7 | 2100 | 96293274 | 275.0 | 125.0 | 14.1 |
| BMhp 60-6 | 15.0 | 11.0 | 24.8 - 25.5 | 106.3 | 2700 | 96293275 | 359.7 | 163.5 | 17.7 |
| BMhp 60-7 | 17.5 | 13.0 | 30.0 - 30.5 | 106.3 | 2700 | 96293276 | 370.7 | 168.5 | 17.7 |

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

Dimensional sketch



TM05 6000 4312

One set of connecting fittings is required for each system. See section [20. Accessories](#), page 73.

BMhp 8" (with straight pipe) (3/50/400 V)

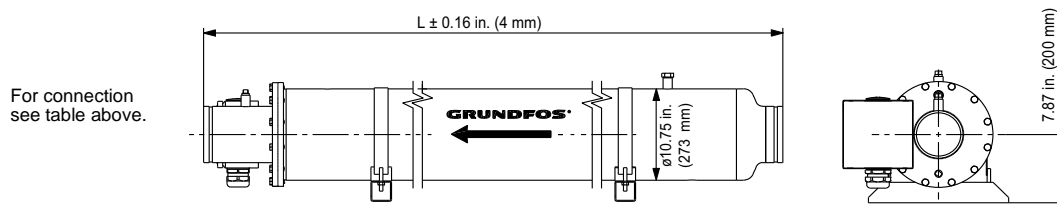
| Type | Motor output [P ₂] | | Rated current | Length [L] | | Product number | Approx. ship. wt. | | Approx. ship. vol. |
|--------------|--------------------------------|------|--------------------|------------|------|----------------|-------------------|-------|--------------------|
| | [hp] | [kW] | I _N [A] | [in] | [mm] | R version | [lbs] | [kg] | [ft ³] |
| BMhp 77-2 | 10.0 | 7.5 | 17.6 - 17.8 | 94.5 | 2400 | 95908985 | 409.2 | 186.0 | 32.5 |
| BMhp 77-3 | 15.0 | 11.0 | 24.8 - 25.5 | 94.5 | 2400 | 96293289 | 435.6 | 198.0 | 32.5 |
| BMhp 77-4 | 20.0 | 15.0 | 34.0 - 34.5 | 94.5 | 2400 | 96293290 | 458.7 | 208.5 | 32.5 |
| BMhp 77-5 | 25.0 | 18.5 | 42.0 - 42.5 | 108.3 | 2750 | 96293291 | 510.4 | 232.0 | 36.8 |
| BMhp 77-6 | 30.0 | 22.0 | 47.5 - 50.0 | 108.3 | 2750 | 96293292 | 531.3 | 241.5 | 36.8 |
| BMhp 95-2 | 12.5 | 9.2 | 21.8 - 21.8 | 82.7 | 2100 | 95908986 | 393.8 | 179.0 | 28.8 |
| BMhp 95-3 | 17.5 | 13.0 | 30.0 - 30.5 | 94.5 | 2400 | 96293293 | 442.2 | 201.0 | 32.5 |
| BMhp 95-4 | 25.0 | 18.5 | 42.0 - 42.5 | 94.5 | 2400 | 96293294 | 470.8 | 214.0 | 32.5 |
| BMhp 95-5 | 30.0 | 22.0 | 47.5 - 50.0 | 108.3 | 2750 | 96293295 | 523.6 | 238.0 | 36.8 |
| BMhp 95-6 | 35.0 | 26.0 | 57.0 - 59.0 | 108.3 | 2750 | 96293296 | 543.4 | 247.0 | 36.8 |
| BMhp 125-1 | 15.0 | 11.0 | 24.8 - 25.5 | 82.7 | 2100 | 96293297 | 413.6 | 188.0 | 28.8 |
| BMhp 125-2 | 30.0 | 22.0 | 47.5 - 50.0 | 94.5 | 2400 | 96293298 | 496.1 | 225.5 | 32.5 |
| BMhp 125-3 | 40.0 | 30.0 | 66.5 - 68.5 | 94.5 | 2400 | 96293299 | 539.0 | 245.0 | 32.5 |
| BMhp 160-1 | 17.5 | 13.0 | 30.0 - 30.5 | 82.7 | 2100 | 96293300 | 420.2 | 191.0 | 28.8 |
| BMhp 160-2AA | 25.0 | 18.5 | 42.0 - 42.5 | 94.5 | 2400 | 95908987 | 481.8 | 219.0 | 32.5 |
| BMhp 160-2 | 35.0 | 26.0 | 57.0 - 59.0 | 94.5 | 2400 | 96293301 | 508.2 | 231.0 | 32.5 |
| BMhp 160-3AA | 40.0 | 30.0 | 66.5 - 68.5 | 94.5 | 2400 | 96293302 | 539.0 | 245.0 | 32.5 |
| BMhp 215-1A | 20.0 | 15.0 | 34.0 - 34.5 | 94.5 | 2400 | 96902422 | 470.8 | 214.0 | 32.5 |
| BMhp 215-1 | 25.0 | 18.5 | 42.0 - 42.5 | 94.5 | 2400 | 96293315 | 481.8 | 219.0 | 32.5 |
| BMhp 215-2AA | 40.0 | 30.0 | 66.5 - 68.5 | 94.5 | 2400 | 96293316 | 547.8 | 249.0 | 32.5 |

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

Connections

| Size | BMhp type | Victaulic coupling |
|---------|---------------------|----------------------|
| BMhp 8" | BMhp 77 - BMhp 95 | 5" / Ø139, style 489 |
| BMhp 8" | BMhp 125 - BMhp 215 | 6" / Ø168, style 77S |

Dimensional sketch



TM05 6931 4212

One set of connecting fittings is required for each system. See section [20. Accessories](#), page [73](#).

Motor data

| Hp | Motor diameter [inches] | Service factor | Voltage [V] | Insulation class | KVA code | Service factor current [amps] | Locked rotor current (%) | Power factor | Speed [rpm] | Temperature transmitter | Motor type |
|-----|-------------------------|----------------|-------------|------------------|----------|-------------------------------|--------------------------|--------------|-------------|-------------------------|------------|
| 1 | 3.74 | 1.40 | 3/60/460 | F | K | 2.2 | - | 0.87 | 3420 | Y | MS4000 |
| 1.5 | 3.74 | 1.30 | 3/60/460 | F | K | 3.0 | - | 0.85 | 3440 | Y | MS4000 |
| 2 | 3.74 | 1.25 | 3/60/460 | F | J | 4.1 | - | 0.82 | 3440 | Y | MS4000 |
| 3 | 3.74 | 1.15 | 3/60/460 | F | K | 5.8 | - | 0.78 | 3460 | Y | MS4000 |
| 4 | 3.74 | 1.15 | 3/60/460 | F | K | 7.5 | - | 0.78 | 3460 | Y | MS4000 |
| 5.5 | 3.74 | 1.15 | 3/60/460 | F | K | 9.5 | - | 0.82 | 3460 | Y | MS4000 |
| 7.5 | 3.74 | 1.15 | 3/60/460 | F | J | 12.6 | - | 0.82 | 3460 | Y | MS4000 |
| 10 | 5.43 | 1.15 | 3/60/460 | F | H | 17.0 | 460 | 0.82 | 3450 | Y | MS6000 |
| 12 | 5.43 | 1.15 | 3/60/460 | F | J | 21.4 | 470 | 0.82 | 3460 | Y | MS6000 |
| 15 | 5.43 | 1.15 | 3/60/460 | F | H | 24.5 | 470 | 0.84 | 3460 | Y | MS6000 |
| 18 | 5.43 | 1.15 | 3/60/460 | F | H | 29.0 | 480 | 0.83 | 3460 | Y | MS6000 |
| 20 | 5.43 | 1.15 | 3/60/460 | F | J | 33.0 | 520 | 0.84 | 3460 | Y | MS6000 |
| 25 | 5.43 | 1.15 | 3/60/460 | F | J | 41.0 | 530 | 0.83 | 3470 | Y | MS6000 |
| 30 | 5.43 | 1.15 | 3/60/460 | F | H | 46.5 | 510 | 0.85 | 3460 | Y | MS6000 |
| 35 | 5.43 | 1.15 | 3/60/460 | F | H | 55.5 | 500 | 0.85 | 3460 | Y | MS6000 |
| 40 | 5.43 | 1.15 | 3/60/460 | F | H | 64.0 | 500 | 0.85 | 3450 | Y | MS6000 |
| 50 | 7.56 | 1.15 | 3/60/460 | PE2/PA Windings | J | 78.0 | 550 | 0.86 | 3480 | NO | MMS8000 |
| 60 | 7.56 | 1.15 | 3/60/460 | PE2/PA Windings | K | 92.5 | 640 | 0.87 | 3500 | NO | MMS8000 |
| 75 | 7.56 | 1.15 | 3/60/460 | PE2/PA Windings | J | 112 | 580 | 0.87 | 3500 | NO | MMS8000 |
| 100 | 7.56 | 1.15 | 3/60/460 | PE2/PA Windings | J | 150 | 570 | 0.88 | 3500 | NO | MMS8000 |
| 125 | 7.56 | 1.15 | 3/60/460 | PE2/PA Windings | J | 184 | 600 | 0.88 | 3480 | NO | MMS8000 |

Notes:

Method of starting: DOL

Motor rubber type: NBR

Motor liquid: Glycol

20. Accessories

CUE variable frequency drive

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

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

The CUE offers quick and easy set-up and commissioning compared to a standard variable frequency drive because of the start-up guide. Simply key in application-specific variables such as motor data, pump family, control function (e.g. constant pressure), sensor type, and setpoint, and the CUE will automatically set all necessary parameters.

The 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] | | | | | | |
|--------------------|------------------|------|-----|-----|----|----|-----|
| | 0.55 | 0.75 | 1.1 | 7.5 | 11 | 45 | 250 |
| 3 x 525-690 | | | | | | | |
| 3 x 525-600 | | | | | | | |
| 3 x 380-500 | | | | | | | |
| 3 x 200-240 | | | | | | | |
| 1 x 200-240 | | | | | | | |

The CUE is available in two enclosure classes:

- IP20/21
- IP54/55.

RFI filters

To meet the EMC requirements, the 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 x 200-240 | 1.1 - 7.5 | C1 | Domestic |
| 3 x 200-240 | 0.75 - 45 | C1 | |
| 3 x 380-500 | 0.55 - 90 | C1 | Domestic/ industry |
| | 110 - 250 | C2 | |
| 3 x 525-600 | 0.75 - 7.5 | C3 | Industry |
| 3 x 525-690 | 11 - 25 | C3 | |



GRA4404

Fig. 5 The CUE range

Functions

The CUE has a wide range of pump-specific functions, such as

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

CUE features

- **Start-up guide**
The CUE incorporates an innovative start-up guide for the general setting of the CUE including the setting of the correct direction of rotation. The start-up guide is started the first time when the 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

The CUE incorporates various inputs and outputs:

- 1 RS-485 GENIbus connection
- 1 analog input, 0-10 V, 0/4-20 mA
 - external setpoint
- 1 analog input, 0/4-20 mA
 - sensor input, feedback sensor
- 1 analog output, 0-20 mA
- 4 digital inputs
 - start/stop and three programmable inputs
- 2 signal relays (C/NO/NC)
 - programmable.

Accessories for the CUE

Grundfos offers various accessories for the CUE.

MCB 114 sensor input module

The MCB 114 offers additional analog inputs for the CUE:

- 1 analog input, 0/4-20 mA
- 2 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, output filters can also be used to reduce acoustic noise from the motor.

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

- dU/dt filters
- sine-wave filters.

Floor-mounting option

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

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

IP21/NEMA1 option

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

Sensors

The following sensors can be used in connection with the 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

The 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 alarms, etc.

Control MPC

Control MPC, a multi-pump control system for the control of parallel-connected CUE pump solutions.

Use of output filters

The table below shows in which cases an output filter is required. From the table, it can be seen if a filter is required, and which type to use.

The selection depends on these factors:

- pump type
- motor cable length
- the required reduction of acoustic noise from the motor.

| Pump type | Typical shaft power P ₂ | dU/dt filter | Sine-wave filter |
|----------------------------|------------------------------------|-------------------|--------------------------|
| SP with 380 V motor and up | Up to 7.5 kW | - | 0 - 984 ft (0-300 m) |
| | 11 kW and up | 0 - 492 (0-150 m) | 492 - 984 ft (150-300 m) |

The lengths stated apply to the motor cable.

Cables used in CUE installations

Note: When the CUE is installed in connection with SP pumps, we distinguish between two types of installation:

- installation in EMC-insensitive sites. See fig. 6.
- installation in EMC-sensitive sites. See fig. 7.

The two types of installation are different when it comes to the use of screened cable.

Note: Drop cables are always unshielded.

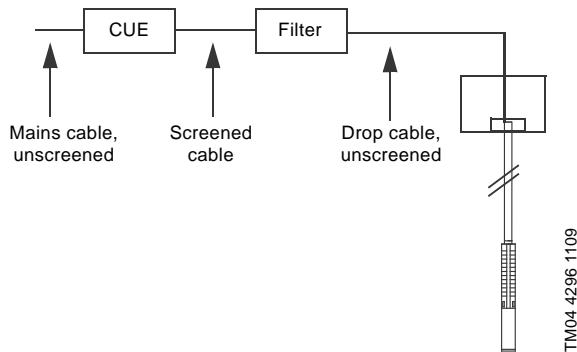


Fig. 6 Example of installation in EMC-insensitive sites

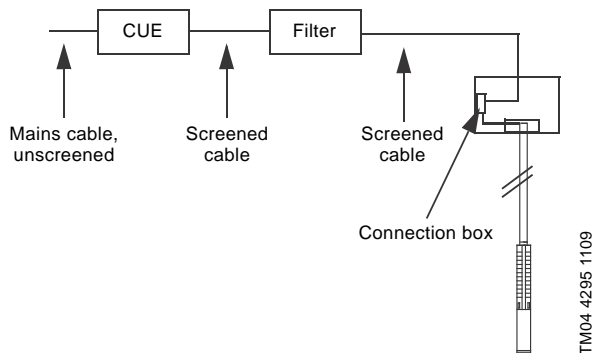


Fig. 7 Example of installation in EMC-sensitive sites

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

The CUE is the right choice of variable frequency drive in SP installations as it meets all basic issues. The CUE has a pre-installed start-up guide which takes the installer through all the necessary settings.

The table below shows the different issues to be considered when using variable frequency drives in SP installations.

| Issues to be considered | Explanation |
|---|--|
| Ramp (up and down): Maximum 3 seconds. | The journal bearings must be lubricated in order to limit wear and overheating of windings. |
| Use temperature monitoring by Pt sensor. | Overheating of the motor => low insulation resistance => sensitive to voltage peaks. |
| Reduce peak voltages (max. 800 V peaks). | Never exceed peak voltages of 850 V at motor leads. |
| For MS and MMS, we recommend to use motors with 10 % extra in given duty point. For MMS, always use motors (PE2 - PA wound). | Grundfos CUE with output filter is a safe solution. |
| Remember output filter. | Cables act as an amplifier => measure peaks at the motor. |
| Rise time (dU/dt) shall be limited to a maximum of 1000 V/μs. Determined by the equipment in the CUE. | Time between switches is an expression of losses, so in the future, we might have to exceed the limit of 1000 V/μs. The solution is not higher insulation of the motor, but filter in the output from the CUE. |
| Min. 30 Hz. Use a 60 Hz motor for larger range. | Too low speed => no lubrication of journal bearings. |
| Size the CUE in respect of the current, not the power output. | Can end up with a too small CUE. |
| Size cooling provision for stator tube at duty point with lowest flow rate. | Flow min. m/s along the stator housing must be considered. |
| Ensure that the pump is used within the range of the pump curve. | Focus on discharge pressure and sufficient NPSH, as vibrations will "kill" the motor. |

MP 204 motor protector

The MP 204 is an electronic motor protector, designed for the protection of an asynchronous motor or a pump.

The MP 204 cannot be used in installations where a variable frequency drive is installed.

If one or more of the warning limits are exceeded, the motor continues to run, but the warnings will appear in the MP 204 display.

Some values only have a warning limit.

The warning can also be read out with the Grundfos R100 remote control.

If one of the trip limits is exceeded, the trip relay will stop the motor. At the same time, the signal relay is operating to indicate that the limit has been exceeded.

Applications

The MP 204 can be used as a stand-alone motor protector.

The MP 204 can be monitored via a Grundfos GENibus.

The MP 204 protects the motor primarily by measuring the motor current by means of a true RMS measurement.

The MP 204 is designed for single- and three-phase motors. In single-phase motors, the starting and run capacitors are also measured. $\cos \varphi$ is measured in both single- and three-phase systems.

Benefits

The MP 204 offers these benefits:

- suitable for both single- and three-phase motors
- dry-running protection
- overload protection
- very high accuracy
- made for submersible pumps.

The MP 204, many monitoring options

The MP 204 monitors the following parameters:

- insulation resistance before start-up
- temperature (Tempcon, Pt sensor and PTC/thermal switch)
- overload/underload
- overvoltage/undervoltage
- phase sequence
- phase failure
- power factor
- power consumption
- harmonic distortion
- operating hours and number of starts.



Fig. 8 MP 204

Five sizes of single-turn transformers, 120-999 A.
Note: Monitoring of motor temperature is not possible when single-turn transformers are used.



Fig. 9 Single-turn transformers

Product numbers

| Product | Product number |
|---------|----------------|
| MP 204 | 96079927 |
| R100 | 96615297 |

TM03 1471 2205

TM03 2033 3505

Functions

- Phase-sequence monitoring
- indication of current or temperature (user selection)
- indication of temperature in °C or °F (user selection)
- 4-digit, 7-segment display
- setting and status reading with the R100
- setting and status reading via the GENIbus.

Tripping conditions

- Overload
- underload (dry running)
- temperature (Tempcon sensor, PTC/thermal switch and Pt sensor)
- phase failure
- phase sequence
- overvoltage
- undervoltage
- power factor ($\cos \varphi$)
- current unbalance.

Warnings

- Overload
- underload
- temperature (Tempcon and Pt sensor)
- overvoltage
- undervoltage
- power factor ($\cos \varphi$)
Note: In connection with single- and three-phase connection.
- run capacitor (single-phase operation)
- starting capacitor (single-phase operation)
- loss of communication in network
- harmonic distortion.

Learning function

- Phase sequence (three-phase operation)
- run capacitor (single-phase operation)
- starting capacitor (single-phase operation)
- identification and measurement of Pt100/Pt1000 sensor circuit.


External current transformers

When fitted with external current transformers, the MP 204 can handle currents from 120 to 999 A. Grundfos can supply approved current transformers from stock (200/5A, 300/5A, 500/5A, 750/5A, 1000/5A).









Technical data, MP 204

| | |
|-----------------------------|-------------------------------------|
| Enclosure class | IP20 |
| Ambient temperature | -4 °F to +140 °F (-20 °C to +60 °C) |
| Relative air humidity | 99 % |
| Voltage range | 100-480 VAC |
| Current range | 3-999 A |
| Frequency | 50 to 60 Hz |
| IEC trip class | 1-45 |
| Special Grundfos trip class | 0.1 to 30 s |
| Voltage variation | -25 % / +15 % of rated voltage |
| Approvals | EN 60947, EN 60335, UL/CSA 508 |
| Marking | CE, cUL, C-tick |
| Consumption | Max. 5 W |
| Plastic type | Black PC / ABS |








| | Measuring range | Accuracy [%] | Resolution |
|---|---------------------------|--------------|------------|
| Current without external current transformers | 3-120 A | ± 1 | 0.1 A |
| Current with external current transformers | 120-999 A | ± 1 | 1 A |
| Phase-to-phase voltage | 80-610 VAC | ± 1 | 1 V |
| Frequency | 47-63 Hz | ± 1 | 0.5 Hz |
| Power | 0-1 MW | ± 2 | 1 W |
| Power factor | 0 - 0.99 | ± 2 | 0.01 |
| Energy consumption | 0-4 x 10 ⁹ kWh | ± 5 | 1 kWh |

| IO 112 | Description | Product number |
|--|--|----------------|
|  | <p>The IO 112 is a measuring module and a single-channel protection unit for use in connection with the MP 204 motor protector. The module can be used for protection of the pump against other factors than the electrical conditions, for instance dry running. It can also be used as a stand-alone protection module.</p> | 96651601 |
| | <p>The IO 112 interface has three inputs for measured values, one potentiometer for setting of limits and indicator lights indicating the following:</p> <ul style="list-style-type: none"> • measured value of the input • value of the limit set • alarm source • pump status. <p>Electrical data</p> <ul style="list-style-type: none"> • Supply voltage: 24 VAC ± 10 %, 50/60 Hz or 24 VDC ± 10 %. • Supply current: Min. 2.4 A, max. 8 A. • Power consumption: Max. 5 W. • Ambient temperature: -13 °F to 149 °F (-25 °C to +65 °C). • Enclosure class: IP20. | |




BM 4"

| Parts | Description | Specification | Product number |
|---|--|---------------|--|
|  | TM00 3702 0894 Victaulic coupling liner for welding Ø42 x 30 mm | N version | 00100517 |
| | | R version | 00100971 |
|  | TM00 3703 0894 Victaulic coupling liner with external thread R 1 1/4 x 100 mm/BSPT | N version | 00100534 |
| | | R version | 00100965 |
|  | TM00 3705 0894 Victaulic style 77 coupling Ø42 x 1 1/4" | NBR seal | 00ID6786 |
| | | FKM seal | 00ID6742 |
|  | TM00 3706 0894 Hook spanner for 4" sleeve | | 00105029 |
|  | TM00 3707 0894 Connecting kit for welding, straight | NBR seal | N version R version 00105563 00105982 |
| | | FKM seal | N version R version 00105565 00105981 |
|  | TM00 3708 0894 Connecting kit R 1 1/4" | NBR seal | N version R version 00105564 00105980 |
| | | FKM seal | N version R version 00105566 00105979 |
|  | TM00 3711 0894 180 ° bend for victaulic coupling Ø42 / 1 1/4" Center distance: 6.5 inch (165 mm) Total height: 5.0 inch (127 mm) | R version | 00155926 |
|  | TM01 9907 3400 Bracket, 4" | | 96449565 |



BM 6"

| Parts | Description | Specification | Product number |
|---|---|--------------------|----------------|
|  | TM00 3709 0894 Victaulic coupling liner for welding Ø89 x 50 mm/3" x 2" | N version | 00150574 |
| | | R version | 00140968 |
|  | TM00 3711 0894 180 ° bend for victaulic coupling Ø89 / 3" Center distance: 300 mm/11.8 inch Total height: 210 mm/8.3 inch | N version | 00155544 |
| | | R version | 00155971 |
|  | TM00 3712 0894 Victaulic style 77 coupling Ø89 x 3" | NBR seal | 00ID7664 |
|  | TM00 3713 0894 Hook spanner for 6" sleeve | | 00ID7669 |
|  | TM00 3714 0894 Connecting kit for welding, straight | NBR seal N version | 00155542 |
| | | NBR seal R version | 00155973 |
|  | TM00 3715 0894 Connecting kit, 180 ° | NBR seal N version | 00155543 |
| | | NBR seal R version | 00155972 |
|  | TM01 9907 3400 Bracket, 6" | | 96449184 |

BM 8"

| Parts | Description | Specification | Product number |
|---|--|---------------|----------------|
|  | TM00 3712 0894 Victaulic style 77 coupling 3": Ø89 4": Ø114 5": Ø139 6": Ø168 | NBR seal 3" | 00ID7664 |
| | | NBR seal 4" | 96415463 |
| | | NBR seal 5" | 96416739 |
| | | NBR seal 6" | 00ID2279 |
|  | TM00 3709 0894 Victaulic coupling liner for welding | N version 3" | 00150574 |
| | | N version 4" | 96416743 |
| | | N version 5" | 96416744 |
| | | N version 6" | 96416745 |
|  | TM01 9907 3400 Bracket, 8" | | 96416762 |

BMhp

| Parts | Description | Specification | Product number |
|---|---|------------------------|----------------|
|  | TM00 3712 0894 Victaulic coupling 3": Ø89 4": Ø114 5": Ø139 6": Ø168 | NBR seal 3", style 77S | 97758517 |
| | | NBR seal 5", style 489 | 97758342 |
| | | NBR seal 6", style 77S | 97758320 |
|  | TM00 3709 0894 Victaulic coupling liner for welding | R version 3" | 00140968 |
| | | R version 5" | 96785838 |
| | | R version 6" | 96230662 |

21. Customizing your pump

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.

Below is listed a range of options for customizing the BM pumps to meet the customers' demands.

Contact Grundfos for further information or other requests than the ones mentioned below.

Available on request

Flange adapters

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

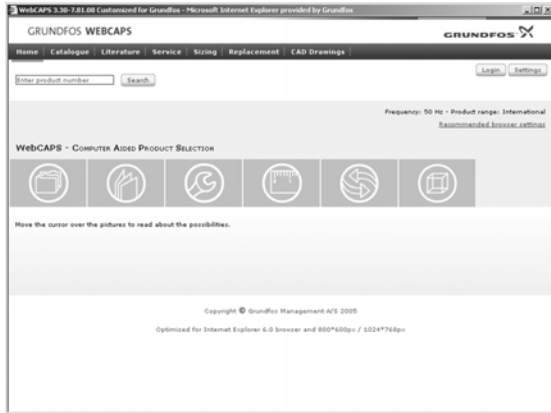
Motors

Other motors than the ones of the standard range are available on request:

- rewindable motors
- Industrial motors
- 6" motors for liquid temperatures up to +194 °F (+90 °C)
- 8" motors for liquid temperatures up to +167 °F (+75 °C).

22. Further product documentation

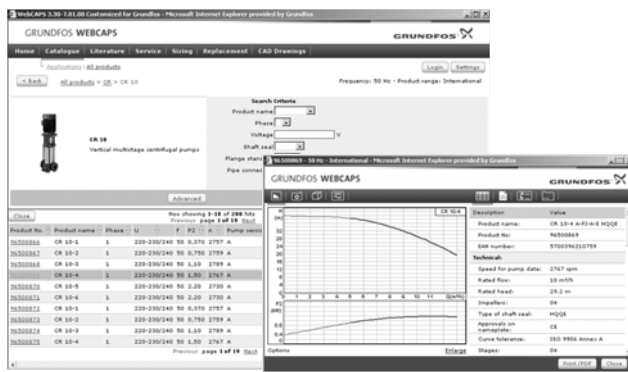
WebCAPS



WebCAPS is a **Web-based Computer Aided Product Selection** program available on www.grundfos.com. WebCAPS contains detailed information on more than 220,000 Grundfos products in more than 30 languages.

Information in WebCAPS is divided into six sections:

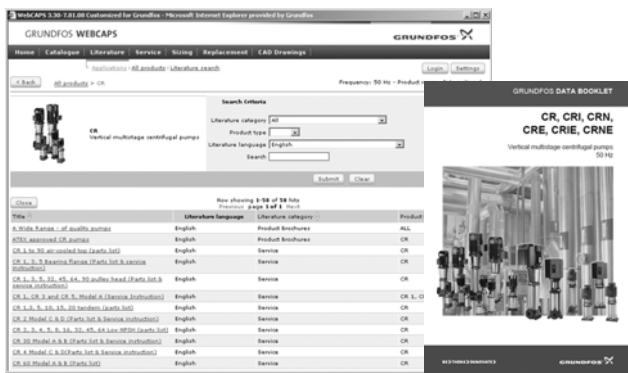
- Catalog
- Literature
- Service
- Sizing
- Replacement
- CAD drawings.



Catalogue

Based on fields of application and pump types, this section contains the following:

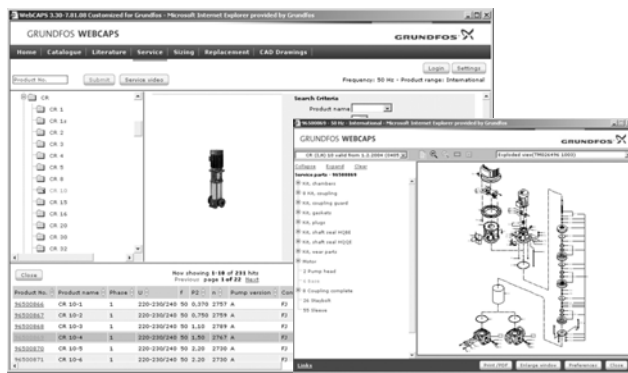
- technical data
- curves (QH, Eta, P1, P2, etc.) which can be adapted to the density and viscosity of the pumped liquid and show the number of pumps in operation
- product photos
- dimensional drawings
- wiring diagrams
- quotation texts, etc.



Literature

This section contains all the latest documents of a given pump, such as

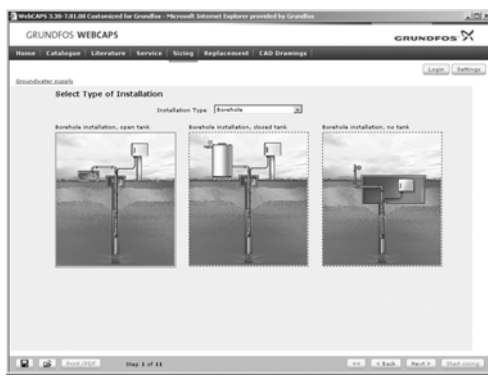
- data booklets
- installation and operating instructions
- service documentation, such as Service kit catalog and Service kit instructions
- quick guides
- product brochures.



Service

This section contains an easy-to-use interactive service catalogue. Here you can find and identify service parts of both existing and discontinued Grundfos pumps.

Furthermore, the section contains service videos showing you how to replace service parts.



Sizing

This section is based on different fields of application and installation examples and gives easy step-by-step instructions in how to size a product:

- Select the most suitable and efficient pump for your installation
- Carry out advanced calculations based on energy consumption, payback periods, load profiles, life cycle costs, etc.
- Analyze your selected pump via the built-in life cycle cost tool
- Determine the flow velocity in wastewater applications, etc.



Replacement

In this section you find a guide to selecting and comparing replacement data of an installed pump in order to replace the pump with a more efficient Grundfos pump. The section contains replacement data of a wide range of pumps produced by other manufacturers than Grundfos.

Based on an easy step-by-step guide, you can compare Grundfos pumps with the one you have installed on your site. When you have specified the installed pump, the guide will suggest a number of Grundfos pumps which can improve both comfort and efficiency.



CAD drawings

In this section, it is possible to download 2-dimensional (2D) and 3-dimensional (3D) CAD drawings of most Grundfos pumps.

These formats are available in WebCAPS:

- 2-dimensional drawings:
- .dxf, wireframe drawings
 - .dwg, wireframe drawings.
- 3-dimensional drawings:
- .dwg, wireframe drawings (without surfaces)
 - .stp, solid drawings (with surfaces)
 - .eprt, E-drawings.

WinCAPS



Fig. 10 WinCAPS CD-ROM

WinCAPS is a **Windows-based Computer Aided Product Selection** program containing detailed information on more than 220,000 Grundfos products in more than 30 languages.

The program contains the same features and functions as WebCAPS, but is an ideal solution if no internet connection is available.

WinCAPS is available on CD-ROM and updated once a year.

Subject to alterations.

23. Submittal data

| | |
|----------------------|-----------------|
| Company name: | Date: |
| Prepared by: | Page 1 of _____ |
| Phone number: () | Quote number: |
| Fax number: () | |

Client Information

| | |
|-------------------|-----------------------------|
| Project title: | Client name: |
| Reference number: | Client number: |
| Client contact: | Client phone number: () |

Location Information

| | |
|----------|-------------------|
| For: | Unit: |
| Site: | Service: |
| Address: | City: State: Zip: |

Application Information

| Operating Conditions | | | | Pumped Fluid | | |
|--|------|-------|------|---------------------------|--------------------------|-------|
| | | | | Fluid type: | | |
| | Max. | Norm. | Min. | Rated | Max. | Norm. |
| Capacity (gpm) | | | | Fluid Temperature (°F) | | |
| Suction Pressure (psig) | | | | at designated temperature | | |
| Discharge Pressure (psig) | | | | Specific Gravity | | |
| Differential Head (ft) | | | | Vapor Pressure (psia) | | |
| Hydraulic Power (hp) at designated capacity | | | | Viscosity (cp) | | |
| NPSH Available (ft) | | | | Fluid ph: | Chlorides (ppm): | |
| Service | | | | Hazardous: | Corrosion/Erosion | |
| Continuous | | | | Flammable: | caused by: | |
| Intermittent (starts/day): | | | | Other: | | |
| | | | | % Solids: | Max. particle size (in): | |

Pump Information

| | |
|--|------------------------------|
| Model Information from Type Key and Codes: | ----> (Example: BM 3A-10N) |
| Quantity required: | |
| Minimum required flow: | NPSH required at duty point: |

Product Guide additional information pages

| | |
|-----------------------------|--------------------------------|
| Materials page number: | Performance curve page number: |
| Technical data page number: | Motor data page number: |

Motor Information

| | | | |
|-----|--------|----------|-----------------|
| Hp: | Phase: | Voltage: | Enclosure: TEFC |
|-----|--------|----------|-----------------|

Custom-built pump information (optional):

Additional Information

24. Quotation text

BM, BMhp

High pressure booster modules are used for boosting, liquid transfer and circulation in systems under a high static pressure.

SP submersible pump with motor built into a stainless steel sleeve in a totally sealed construction.

Modules of different sizes can be combined and connected either in series or in parallel to meet exact Q/H requirements.

The motor is a 3-phase AC motor.

The pump has the following characteristics:

Technical

Rated flow: _____ gpm

Rated head: _____ ft

Minimum liquid temperature: _____ °F

Maximum liquid temperature: _____ °F

Materials

Material, pump _____ AISI Stainless Steel

Material, motor: _____ AISI Stainless Steel

Material, sleeve: _____ AISI Stainless Steel

Material, elastomer: _____

Installation

Min. ambient temperature: _____ °F

Max. ambient temperature: _____ °F

Max. inlet pressure _____ psi/°F

Max. discharge pressure: _____ psi/°F

Max. operating pressure _____ psi/°F

Electrical data

Rated power (P2): _____ Hp

Frequency: _____ Hz

Rated voltage: _____ V

Rated current: _____ A

Service factor: _____

Rated speed: _____ rpm

Insulation class: _____

Additional

Gross weight: _____ lbs.

Shipping volume: _____ ft³

Quotation text

L-BM-PG-002

| |
|----------------------|
| 98431009 0313 |
|----------------------|

| |
|--------|
| ECM: - |
|--------|

GRUNDFOS Pumps Corporation

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Telefax: +1-913-227-3500

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Bombas GRUNDFOS de Mexico S.A. de C.V.

Boulevard TLC No. 15
Parque Industrial Stiva Aeropuerto
Apodaca, N.L. Mexico 66600
Phone: +52-81-8144 4000
Telefax: +52-81-8144 4010

GRUNDFOS 