

Series 200

UPS, UPSD circulator pumps
50/60 Hz



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1. Product description

Applications

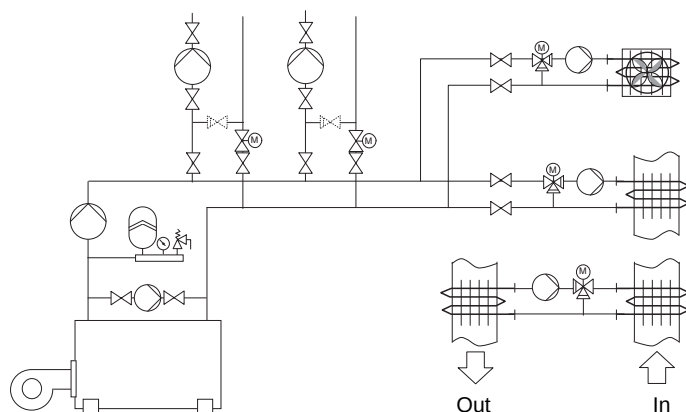
Grundfos circulator pump types UPS and UPSD are designed for the circulation of liquids in heating and air-conditioning systems. Pumps with bronze pump housings are suitable for circulation in domestic hot water systems.

UPS, UPSD are a complete line of circulator pumps with three speeds.

UPS, UPSD pumps are available as single-head or twin-head pumps.

Below you'll find general examples of systems for which UPS, UPSD pumps are suitable.

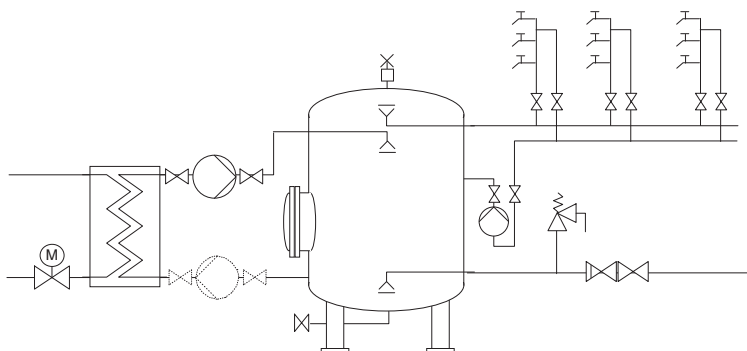
Heating systems



- One- and two-pipe heating systems
- Main pumps
- Zone pumps
- Boiler shunt pumps
- Pumps for heating surfaces
- Calorifiers
- Underfloor heating systems
- Solar heating systems
- Geothermal heating systems
- Heat recovery systems.

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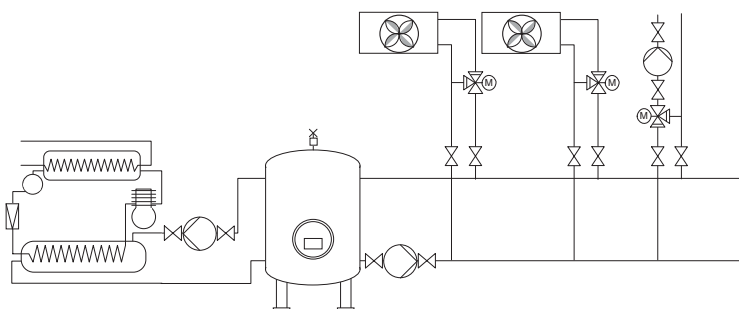
Domestic hot water systems



- Domestic hot water systems.

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Cooling and air-conditioning systems



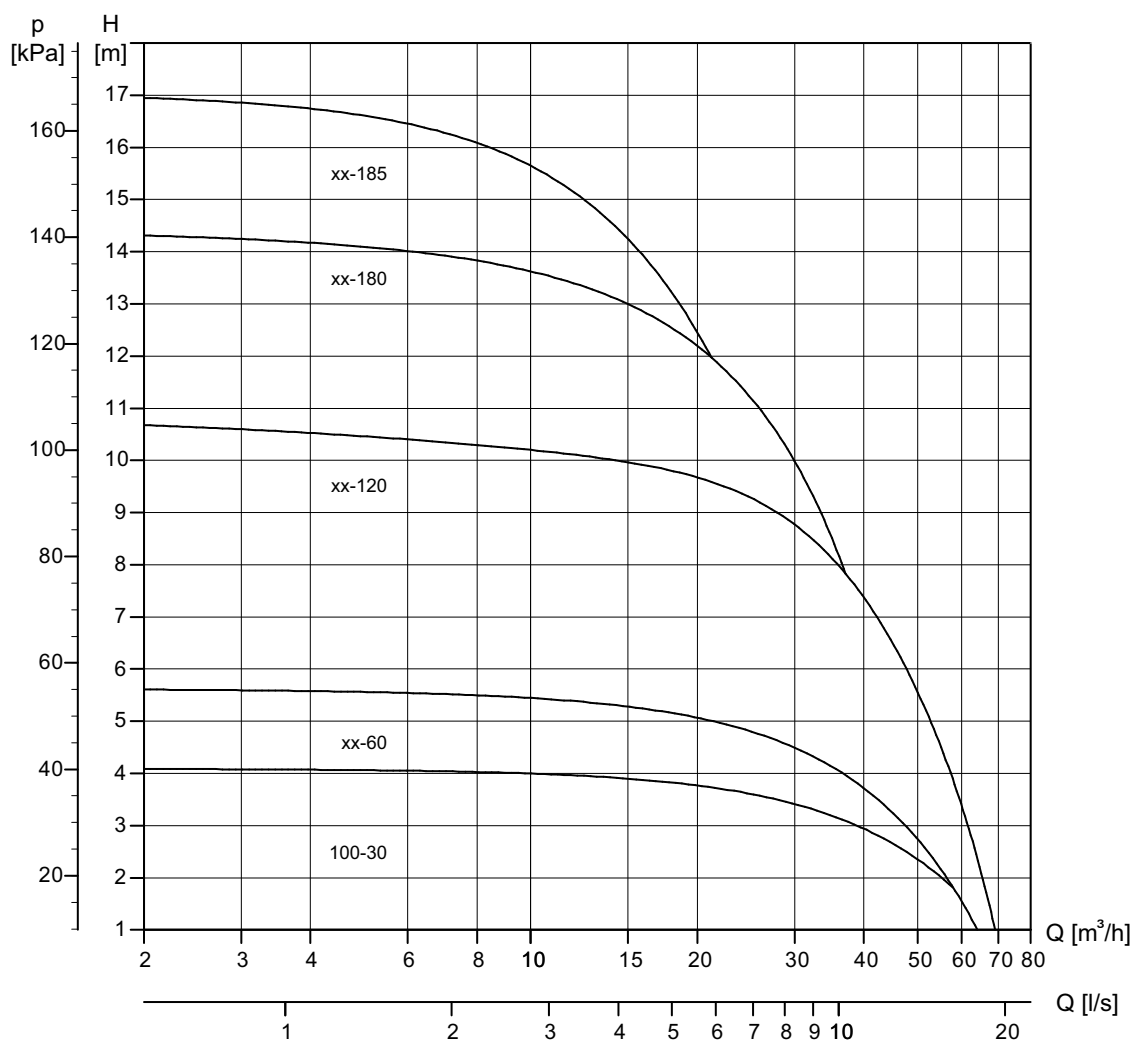
- Two-pipe air-conditioning systems
- Main pumps
- Zone pumps
- Pumps for refrigeration units
- Heat pump systems
- Geothermal heating systems
- Heat recovery systems.

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Type key

Example	UPS	(D)	65	-60	(/2)	F(-)	280
Type range							
Twin-head pump							
Nominal flange diameter [mm]							
Max. head [dm]							
Number of motor poles (stated if available both as 2- and 4-pole motor)							
F - Pump with flanges B - Pump with bronze housing (EuP, this circulator pump is suitable for drinking water only.)							
Port-to-port length [mm]							

Performance range



TM06 4623 2615

2. Product range

Pump selection

Single-head pumps

Pump type	Pressure stage						Voltage [V]		Poles	
	PN 6 / PN 10	PN 6	PN 10	PN 6 / PN 10 bronze	PN 6 bronze	PN 10 bronze	1 x 230-240	3 x 400-415	2	4
UPS 32-60 F 220	•			• *			•	•	•	
UPS 32-120 F 220	•			• *			•	•	•	
UPS 40-60/2 F 250	•			• *			•	•	•	
UPS 40-120 F 250	•			• *			•	•	•	
UPS 40-180 F 250	•			• *			•	•	•	
UPS 40-185 F 250	•						•	•	•	
UPS 50-60/2 F 280	•			• *			•	•	•	
UPS 50-120 F 280	•			• *			•	•	•	
UPS 50-180 F 280	•			• *			•	•	•	
UPS 50-185 F 280	•						•	•	•	
UPS 65-60/2 F 340	•			• *			•	•	•	
UPS 65-120 F 340	•			• *			•	•	•	
UPS 65-180 F 340	•			• *				•	•	
UPS 65-185 F 340	•							•	•	
UPS 80-60 F 360		•	•		• *	• *		•		•
UPS 80-120 F 360		•	•		• *	• *		•	•	
UPS 100-30 F 450		•	•		• *	• *		•		•

* Not covered by the EuP requirements from 2013.

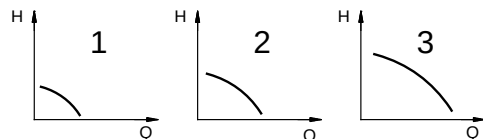
Twin-head pumps

Pump type	Pressure stage						Voltage [V]		Poles	
	PN 6 / PN 10	PN 6	PN 10	PN 6 / PN 10 bronze	PN 6 bronze	PN 10 bronze	1 x 230-240	3 x 400-415	2	4
UPSD 32-60 F 220	•						•	•	•	
UPSD 32-120 F 220	•						•	•	•	
UPSD 40-60 F 250	•						•	•	•	
UPSD 40-120 F 250	•						•	•	•	
UPSD 50-60/2 F 280	•						•	•	•	
UPSD 50-120 F 280	•						•	•	•	
UPSD 50-180 F 280	•						•	•	•	
UPSD 65-60/2 F 340	•						•	•	•	
UPSD 65-120 F 340	•						•	•	•	
UPSD 65-180 F 340	•							•	•	
UPSD 80-60 F 360		•	•					•		•
UPSD 80-120 F 360		•	•					•	•	
UPSD 100-30 F 360		•	•					•		•

3. Functions

Speed switch

The pump offers three speeds for adjustment of pump performance to the system in question.



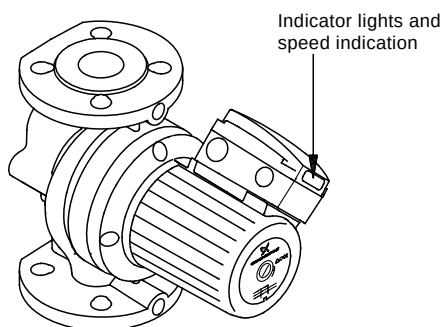
TM00 9247 4595

Fig. 1 Pump performance at the three speeds

The speeds of the various speed switch positions are shown in the table below:

Switch position	Speed in % of maximum speed	
	Single-phase pumps	Three-phase pumps
1	approx. 60 %	approx. 70 %
2	approx. 80 %	approx. 85 %
3	100 %	100 %

Change to a lower speed enables reduction in energy consumption and less noise in the system.



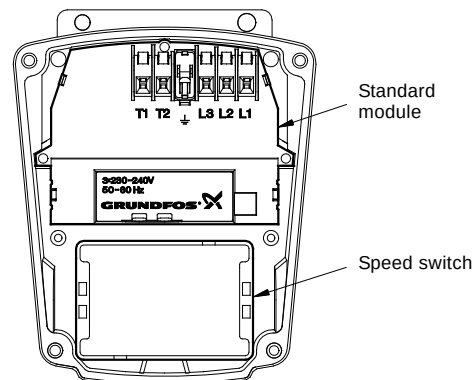
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Fig. 2 Indicator lights on terminal box

Standard module

The module is standard in single-head pumps and is also available for twin-head pumps.

Connect the pump to the mains via an external contactor. Connect the contactor to the pump's built-in thermal overload switch to protect the pump against overload at all three speeds.



TM00 9237 0602

Fig. 3 Standard module

Standard module indicator lights

The function of the indicator lights on the terminal box is as shown in the following tables.

Single-phase pumps

Single-phase pumps incorporate a green indicator light only:

Indicator light	Description
On	The power supply has been switched on.
Off	The power supply has been switched off.

Three-phase pumps

Three-phase pumps incorporate a green and a red indicator light:

Indicator lights		Description
Green	Red	
Off	Off	The power supply has been switched off.
On	Off	The power supply has been switched on.
On	On	The power supply has been switched on. The direction of rotation is wrong.

Protection module

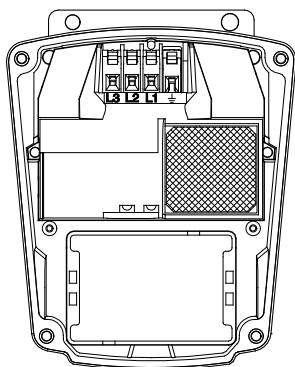


Fig. 4 Protection module

The protection module is supplied as an accessory for single-head and twin-head pumps.

When fitted with a protection module, the pump can be connected to an external switch directly, as the built-in protection against overheating protects the pump at all three speeds. Furthermore, the module has two indicator lights.

Protection module indicator lights

The function of the indicator lights is shown in the table below.

Indicator lights		Description
Green	Red	
Off	Off	The pump has been stopped.
On	Off	The power supply has been switched off, thermally cut out or a phase is failing.
On	On	Three-phase pumps only: The pump is operating, but the direction of rotation is not correct.
Off	On	The pump has been cut out by the thermal switch.

Note: Pumps with protection module must not be connected to a frequency converter.

Relay module

The relay module is standard in twin-head pumps and an optional extra for single-head pumps.

The module enables direct connection of the pump to an external mains switch and an external operating or fault indication device. The signal output for an external signal device can be set to activation during operation or fault by means of the selector switch.

As standard, the signal outputs of relay modules in twin-head pumps are interconnected so that the pumps are operating alternately as duty pump and standby pump.

The pump is connected directly to the mains as the pump incorporates overload protection at all three speeds. If the pump has been cut out by the thermal overload switch, it will restart automatically when it has cooled to normal temperature, provided the external on/ off contact is closed.

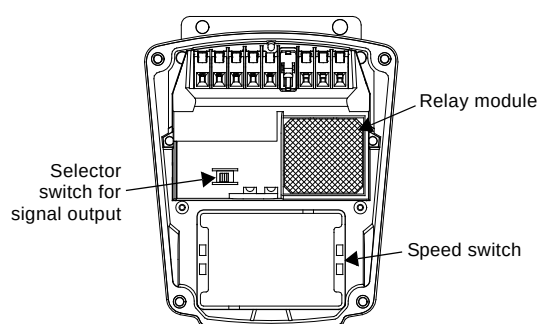


Fig. 5 Relay module

Relay module indicator lights

The indicator lights on pumps with relay module have more detailed operating and fault indications.

All pumps with relay module have a green and a red indicator light. Their functions are as shown in the table below.

Signal output

The relay module has a signal output for external operating or fault indication.

By means of the selector switch, the output can be used as:

- Operation signal output between terminals 2 and 3 or
- Fault signal output between terminals 1 and 3.

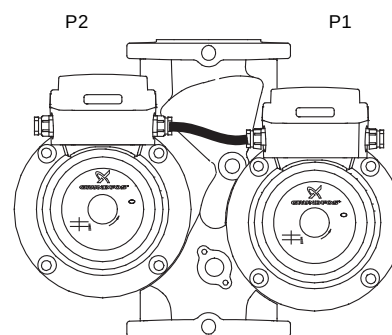
Functions of indicator lights and signal output

Indicator lights		Signal output		Description
Green	Red	Operation	Fault	
Off	Off			The pump has been stopped. The power supply has been switched off or a phase is failing.
Permanently on	Off			The pump is running.
Permanently on	Permanently on			Only three-phase pumps: The pump is running, but with wrong direction of rotation.
Off	Permanently on			The pump has been cut out by the thermal overload switch.
Flashes	Off			The pump has been stopped by an external on/off switch.
Flashes	Permanently on			The pump is or has been cut out by the thermal overload switch and it has been stopped by an external on/off switch.

Note: Pumps with relay module must not be connected to a frequency converter.

Operating modes of twin-head pumps

Twin-head pumps have a relay module in both terminal boxes, which are interconnected by a 4-core cable.



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Fig. 6 Twin-head pump

In addition to the signal functions, the signal output of the relay module for twin-head pumps can be used for controlling the operating mode of pump 1 and 2.

It is possible to choose between three operating modes:

- **Alternating operation (factory setting)**
The pumps operate alternately as duty and standby pump, respectively. Changeover takes place every 24 hours. If the duty pump is cut out due to a fault, the standby pump will automatically start. During changeover both pumps will be running for a short period to ensure a low-noise changeover.
- **Standby operation**
The pumps operate continuously as duty and standby pump, respectively. If the duty pump is cut out due to a fault, the standby pump will automatically start at a signal from the output of the duty pump. The sequence can be changed to make the standby pump operate as duty pump.
- **Single-pump operation**
The pumps run independently without communicating with each other.

4. Operating conditions

Pumped liquids

Thin, clean, non-aggressive and non-explosive liquids, not containing any solid particles, fibres or mineral oil. In domestic hot water systems, it is advisable to use bronze pumps only for water with a degree of hardness lower than approx. 14 °dH. For water with a higher degree of hardness, use a close-coupled pump type TP.

If the pump is installed in a heating system, the water should meet the requirements of accepted standards on water quality in heating systems, e.g. the German standard VDI 2035.

The pumps **must not** be used for the transfer of inflammable liquids such as diesel oil and petrol.

UPS and UPSD pumps can be used for pumping water/glycol mixtures up to 50 %. The maximum viscosity of a 50 % glycol mixture at -10 °C is approx. 32 cSt.

Note: When pumping glycol mixtures, the pump performance will be reduced.

To prevent the glycol mixture from degrading, avoid temperatures exceeding the rated liquid temperature and minimise the operating time at high temperatures. It is important to clean and flush the system before the glycol mixture is added.

To prevent corrosion or precipitation, the glycol mixture should be checked and maintained regularly. If further dilution of the supplied glycol is required, follow the glycol supplier's instructions.

Temperature limits

- Ambient temperature: 0 °C to 40 °C
- Liquid temperature
 - for short periods: +140 °C
 - continuously: -10 °C to +120 °C
 - domestic hot water: up to +60 °C
- Storage temperature: -30 °C to +55 °C.

Depending on the cast-iron version and the pump application, the maximum liquid temperature may be limited by local regulations and laws.

System and inlet pressures

Relative humidity: Max. 95 %.

Sound-pressure level: The sound-pressure level of the pump is lower than 41 dB(A) (reference: 20 mPa).

Test pressure:

- PN 6: 10 bar ~ 1.0 MPa
- PN 10: 15 bar ~ 1.5 MPa
- PN 6/10: 15 bar ~ 1.5 MPa.

Test liquid: +20 °C water containing corrosion inhibitor.

Inlet pressure

To avoid cavitation noise, the following minimum pressures are required at the pump suction flange:

Pump type	Liquid temperature		
	75 °C	90 °C	120 °C
UPS, UPSD	[bar]/[MPa]	[bar]/[MPa]	[bar]/[MPa]
32-60 F 220	0.05/0.5	0.20/2.0	1.50/15.0
32-120 F 220	0.40/4.0	0.70/7.0	1.95/19.5
40-60/2 F 250	0.15/1.5	0.45/4.5	1.75/17.5
40-120 F 250	0.10/1.0	0.40/4.0	1.70/17.0
40-180 F 250	0.40/4.0	0.70/7.0	1.95/19.5
40-185 F 250	0.55/5.5	0.90/9.0	1.80/18.0
50-60/2 F 280	0.05/0.5	0.35/3.5	1.65/16.5
50-120 F 280	0.40/4.0	0.70/7.0	1.95/19.5
50-180 F 280	0.35/3.5	0.65/6.5	1.90/19.0
50-185 F 280	0.85/8.5	1.00/10.0	2.15/21.5
65-60/2 F 340	0.45/4.5	0.75/7.5	2.00/20.0
65-120 F 340	0.90/9.0	1.20/12.0	2.45/24.5
65-180 F 340	0.70/7.0	1.00/10.0	2.25/22.5
65-185 F 340	0.90/9.0	1.30/13.0	2.35/23.5
80-60 F 360	1.20/12.0	1.50/15.0	2.75/27.5
80-120 F 360	1.60/16.0	1.90/19.0	3.15/31.5
100-30 F 450	1.05/10.5	1.35/13.5	2.60/26.0

Electrical data

Supply voltage and frequency:	1 x 230-240 V, 50 Hz 3 x 400-415 V, 50 Hz
Motor protection:	The pump requires no external motor protection, if the motor is fitted with a protection module.
Back-up fuse:	Max. 10 A
Enclosure class:	IPX4D
Insulation class:	F, H
Screwed cable entries:	1 x M20 for mains connection. 1 x M20 for signal output (blanked-off if pump with standard module). 1 x M16 for capacitor connection (only single-phase pumps).
EMC (electromagnetic compatibility):	EN 61 000-6-2 EN 61 000-6-3

Thermal overload switch

Voltage	250 V AC
Current	$\cos \varphi = 1.0$: 2.5 A $\cos \varphi = 0.6$: 1.6 A

Relay module

Start/stop input

External potential-free contact

- Maximum load: 250 V, 1.5 mA
- Minimum load: 100 V, 0.5 mA

Operating/fault signal output

Internal potential-free changeover contact

- Maximum load: 250 V, 2 A, AC
- Minimum load: 5 V, 100 mA, DC

5. Construction

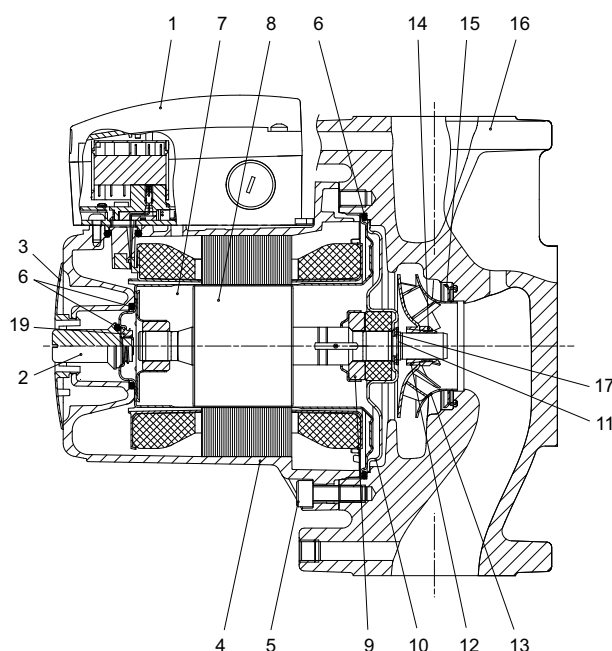
The UPS, UPSD pumps are of the canned rotor type, i.e. pump and motor form an integral unit without shaft seal and with only two gaskets for sealing. The bearings are lubricated by the pumped liquid.

Attention has been focused on using as few materials as possible, and the use of materials that might cause problems in connection with disposal have been omitted.

The pump offers these features:

- three-speed motor
- ceramic radial bearings
- carbon thrust bearing
- stainless-steel rotor can, bearing plate and rotor cladding
- aluminium-alloy stator housing
- cast iron or bronze pump housing
- stator with built-in thermal overload switch.

Sectional drawing



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Fig. 7 Sectional drawing

Material specification

Pos.	Description	Material	DIN/EN
1	Terminal box	PA66/PC	
2	Inspection screw	Brass with nickel	
3	Nameplate	PA66	
4	Stator housing	AlSi 10Cu2	
4	Stator windings	Copper wire	
	Stator caps	PET 30 % glass	
5	Cheese-head screw	Steel 8.8	
6	O-rings	EPDM or FKM rubber	
7	Outer bearing ring	Aluminium oxide / SiC	
	Rotor can	Stainless steel	1.4301
	Shaft (cast iron pumps)	Stainless steel	1.4305
8	Shaft (bronze pumps)	Stainless steel	1.4404
	Rotor cladding	Stainless steel	1.4301
9	Thrust bearing	CY103	
	Bearing plate	Stainless steel	1.4301
10	Inner bearing ring	Aluminium oxide/SiC	
11	Stop ring	Stainless steel	1.4435
12	Split cone	Stainless steel	1.4305
13	Impeller	Stainless steel	1.4301
14	Nut	Stainless steel	1.4305
15	Neck ring	Stainless steel / PTFE	1.4301

Pos.	Description	Material	DIN/EN
16	Pump housing	Cast iron	EN-JL-1040 EN-GJL-250
		Bronze CuSn10Pb	2.1050.01 DIN 1705
17	Anti-friction ring	PTFE	
	Nonreturn flap (Twin-head pumps)	EPDM rubber	
19	Splash protector	Stainless steel	1.4305

6. Installation

The pump must be installed with horizontal motor shaft.

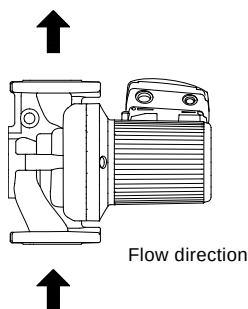


Fig. 8 Flow direction

Note: Twin-head pumps in vertical pipes with downward liquid flow or in horizontal pipes must always run at maximum speed.

Twin-head pump mounted in horizontal pipes must be fitted with an automatic air vent in the upper part of the pump housing.

Terminal box positions

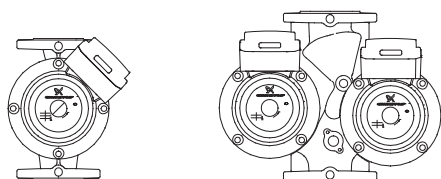


Fig. 9 Standard terminal box positions

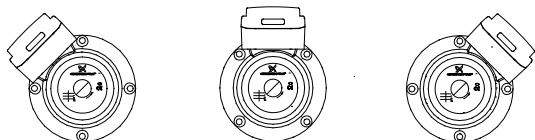


Fig. 10 Permissible terminal box positions of single-head pumps

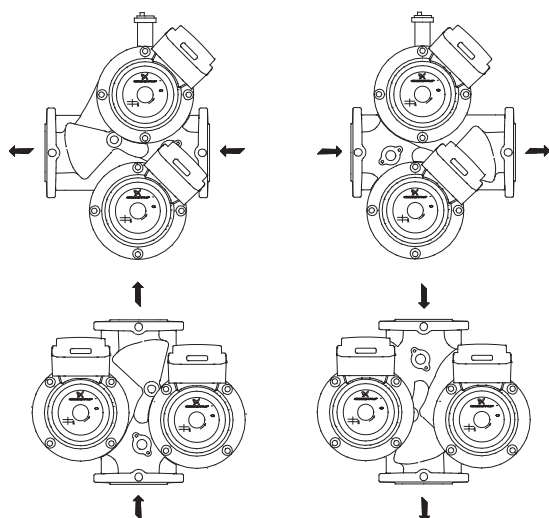


Fig. 11 Permissible terminal box positions and flow direction of twin-head pumps

Electrical connection

The electrical connection and protection should be carried out in accordance with local regulations.

Earthing or neutralization can be used for protection against indirect contact. A current- or voltage-operated earth-leakage circuit breaker can be used as extra protection.

Never make any connections in the pump terminal box unless the power supply has been switched off.

The pump must be earthed and connected to an external mains switch.

The operating voltage and frequency are marked on the pump nameplate. Make sure that the motor is suitable for the power supply on which it will be used.

Pumps with standard module

The pump must be connected to the mains via an external contactor. The contactor is to be connected to the pump's built-in thermal overload switch at terminals T1 and T2 to protect the pump against overheating at all three speeds.

Note: If the pump is also protected by means of a motor starter, the starter must be set to the current consumption of the pump at the chosen speed. The motor starter setting must be changed every time the pump speed is changed. The current consumption at the various speeds is stated on the pump nameplate.

External impulse switches

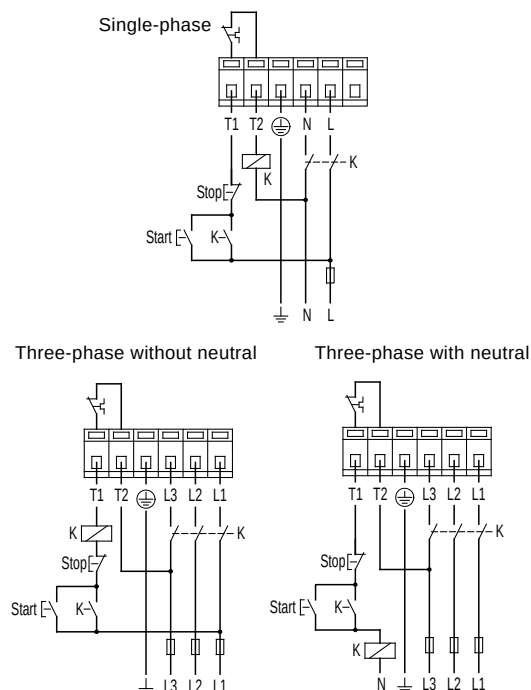


Fig. 12 External impulse switches

External changeover switch

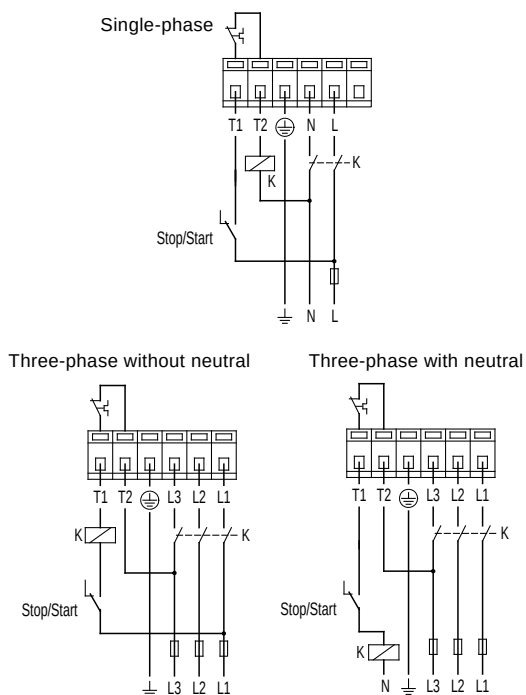


Fig. 13 External changeover switch

Single-head pumps with protection module

The pump can be connected directly to the mains as the pump features built-in protection against overheating at all three speeds.

The figure below shows the electrical connection of single-phase and three-phase pumps.

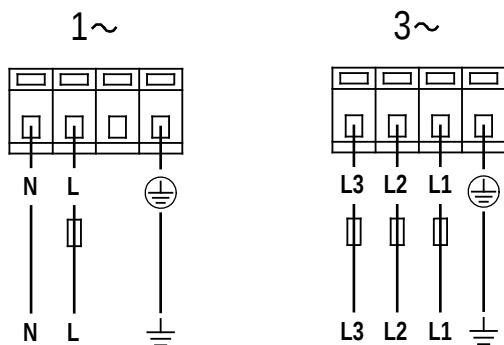
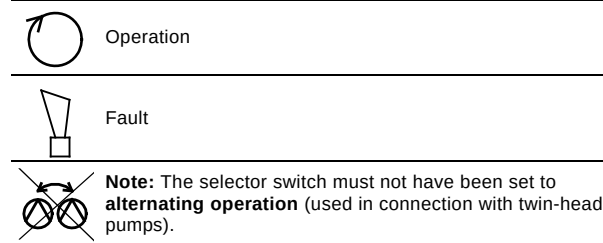


Fig. 14 Electrical connections, protection module

Single-head pumps with relay module

The pump can be connected directly to the mains as it incorporates protection against overheating at all three speeds.

The relay module has a signal output for an external operating or fault signal device. By means of the selector switch the signal output can be used as operation or fault signal output:



Operating indication

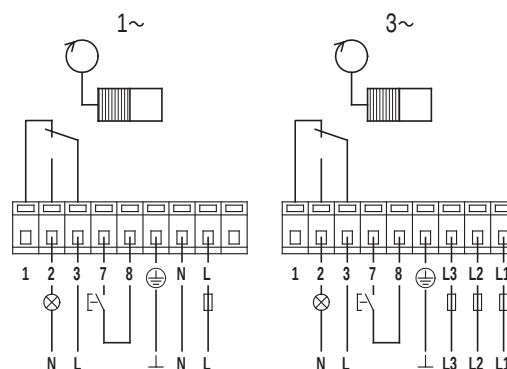


Fig. 15 Operating indication

Fault indication

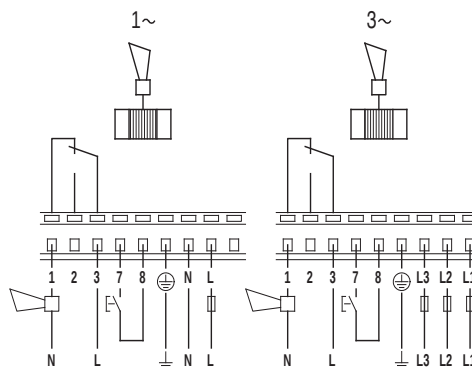


Fig. 16 Fault indication

Twin-head pumps with relay module

The pumps are interconnected by a 4-core cable and factory-set to operating alternately as duty and standby pump. Changeover takes place every 24 hours. The following figures shows the electrical connections and the selector switch setting for the various operating modes.

Alternating operation (factory setting)

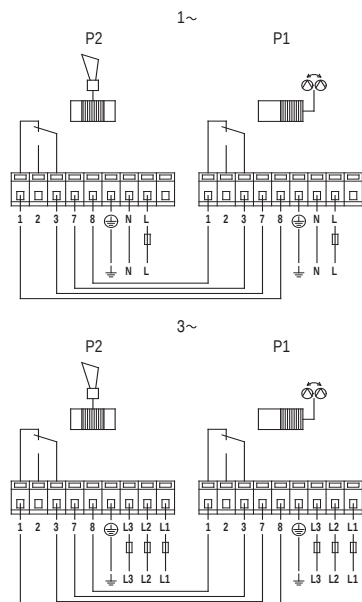


Fig. 17 Alternating operation

Standby operation

Standby operation with pump 1 as duty pump and pump 2 as standby pump.

Note: In this operating mode the selector switch of pump 2 must not have been set to alternating operation.

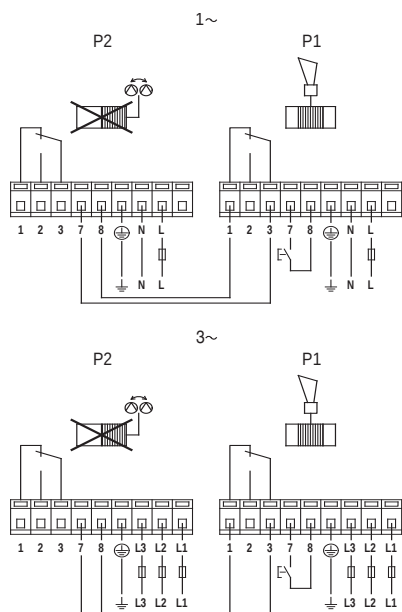


Fig. 18 Standby operation

Standby operation with pump 2 as duty pump and pump 1 as standby pump.

Note: In this operating mode the selector switch of pump 1 must not have been set to alternating operation.

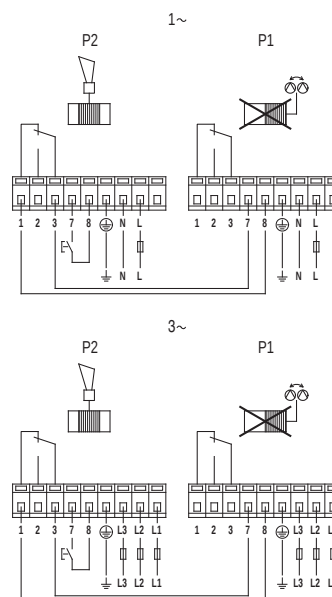


Fig. 19 Standby operation

In the case of single-pump operation the cable between the pumps must be removed. The pumps must be set individually and connected separately to mains, see page 13 *Single-head pumps with relay module*.

Signal output of twin-head pumps

The signal output of twin-head pumps can be used directly, provided it is not already being used for communication between the pumps.

If an output that is used for communication between the pumps is to be used as signal output, an intermediate relay is required. See example below.

The example shows a single-phase pump in alternating operation with external fault indication in case of fault on pump 2 or both pumps.

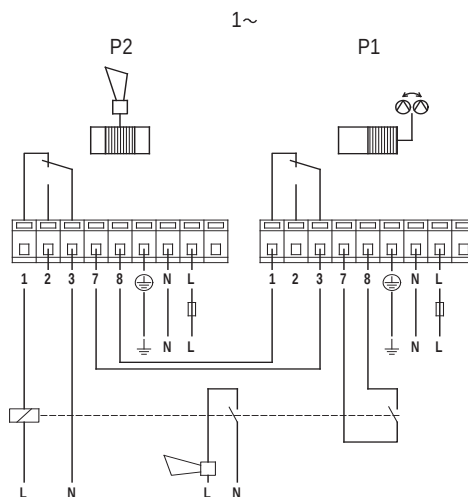


Fig. 20 Alternating operation with external fault indication

7. Performance curves and technical data

Curve conditions

The guidelines below apply to the performance curves in the following data sheets:

- Due to the danger of overheating the pumps must not be used at a flow below $0.1 \times Q$ at best efficiency point.
- The bold parts of the curves show the recommended performance range.
- Test liquid: Airless water.
- The curves apply to a liquid temperature of 20 °C.
- All curves show average values and should not be used as guarantee curves. If a stated minimum performance is required, individual measurements must be made.

- The conversion between head H [m] and pressure p [kPa] has been made for water with a density of $\rho = 1000 \text{ kg/m}^3$. For liquids with other densities, e.g. hot water, the discharge pressure is proportional with the density.

Power curves, efficiency curves and electrical data for twin-head pumps apply to single-pump operation.

Speed

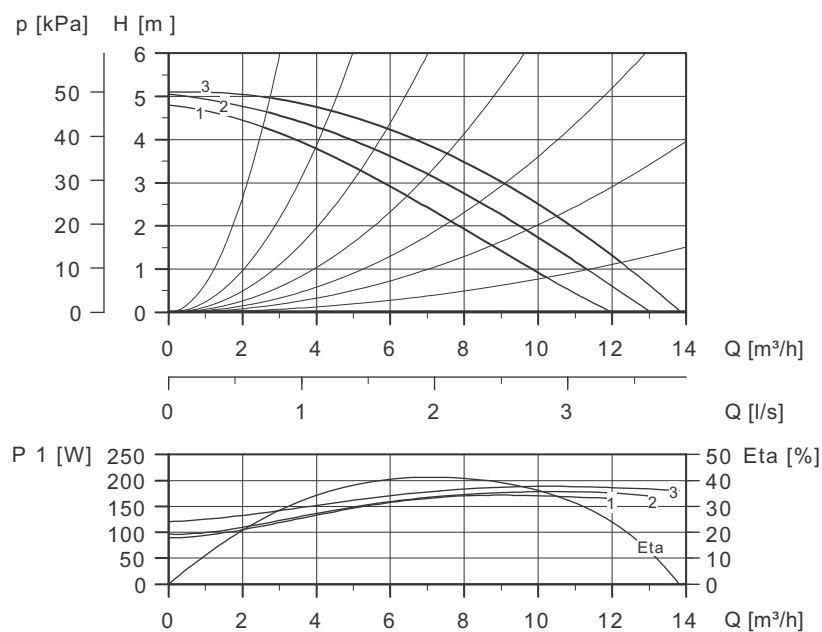
The table below shows the speed range of the various pump types and speed switch positions.

Pump type	Speed [min^{-1}]											
	Test voltage, 1 x 230 V						Test voltage, 3 x 400 V					
	Voltage range, 1 x 230-240 V						Voltage range, 3 x 400-415 V					
	Speed 1		Speed 2		Speed 3		Speed 1		Speed 2		Speed 3	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
32-60 F 220	2340	2780	2600	2850	2800	2910	2240	2630	2410	2720	2790	2900
32-120 F 220	2040	2770	2390	2840	2730	2920	2090	2660	2280	2740	2700	2910
40-60/2 F 250	2080	2630	2470	2760	2760	2870	2030	2350	2210	2500	2700	2820
40-120 F 250	2200	2770	2510	2840	2790	2920	2200	2590	2370	2690	2770	2890
40-180 F 250	2050	2750	2400	2840	2670	2890	2040	2660	2260	2750	2750	2910
40-185 F 250*	1920	2370	2300	2590	2530	2730	2130	2500	2300	2610	2750	2870
50-60/2 F 280	2180	2520	2510	2690	2790	2850	2230	2380	2400	2520	2790	2830
50-120 F 280	2050	2700	2460	2800	2690	2870	2020	2540	2240	2660	2720	2880
50-180 F 280	2200	2730	2490	2820	2690	2880	2450	2780	2590	2830	2860	2940
50-185 F 280*	2110	2620	2490	2750	2670	2860	2280	2540	2430	2650	2800	2860
65-60/2 F 340	2340	2520	2590	2690	2810	2840	2390	2440	2520	2570	2800	2830
65-120 F 340	2010	2590	2410	2750	2700	2850	2380	2730	2540	2790	2840	2930
65-180 F 340	-	-	-	-	-	-	2330	2750	2490	2810	2830	2930
65-185 F 340*	-	-	-	-	-	-	2400	2630	2530	2720	2830	2900
80-60 F 360	-	-	-	-	-	-	900	1190	1010	1270	1320	1420
80-120 F 360	-	-	-	-	-	-	2310	2530	2460	2640	2820	2880
100-30 F 450	-	-	-	-	-	-	1050	1360	1100	1140	1360	1370

* Only available as single-head pump (UPS)

8. Data sheets

UPS 32-60 F 220, UPS 32-60 F B 220



TM00 9420 0197

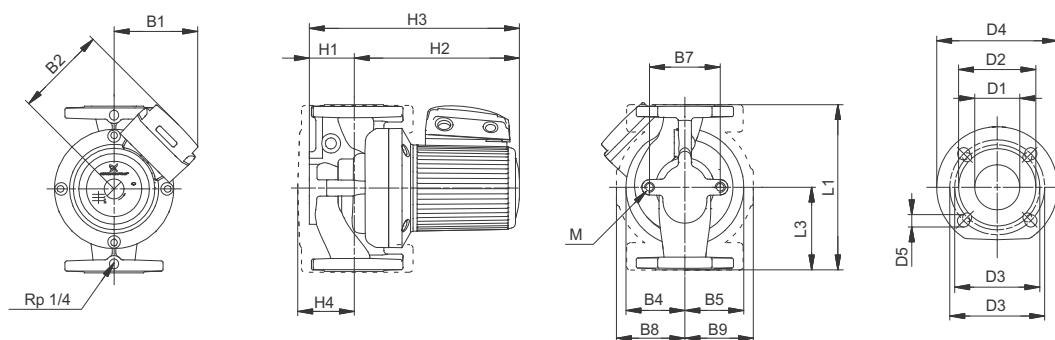
Electrical data

		$P_{\max}$ [W]	$P_{\min}$ [W]	$I_{1/1}$ [A]	$\cos \varphi$	C [μF]
1 x 230-240 V	Speed 1	170	90	0.84	0.88	6
	Speed 2	180	95	0.86	0.91	6
	Speed 3	190	120	0.88	0.94	6

Weights and volume

	PN 6 / PN 10	PN 6 / PN 10 bronze
Net weight [kg]	16.1	18.0
Gross weight [kg]	17.5	19.5
Shipping volume [m³]	0.026	0.026

Dimensional sketch

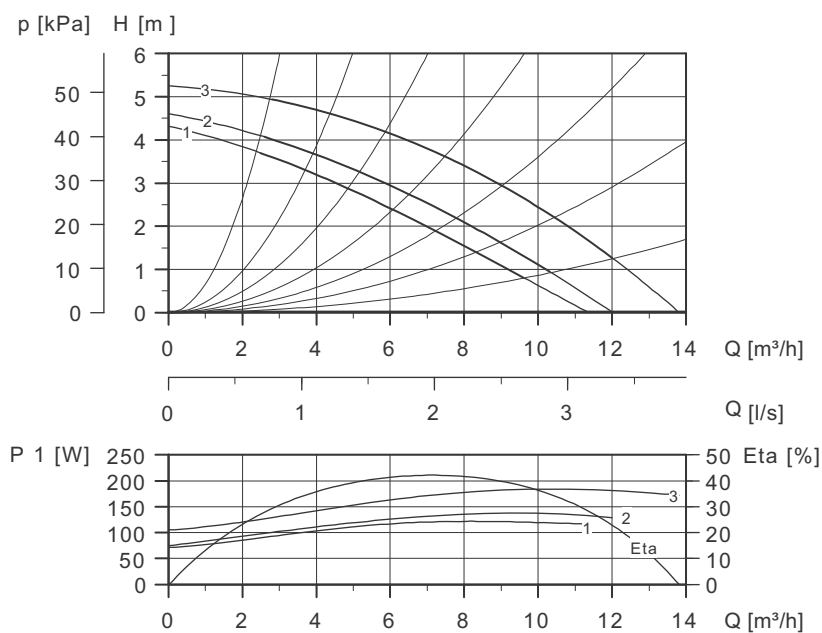


TM02 0701 3601

Dimensions [mm]

	L1	L2	L3	B1	B2	B4	B5	B7	B8	B9	H1	H2	H3	H4	D1	D2	D3	D4	D5	M
PN 6 / PN 10 (bronze)	220		110	135	141	75	75	80	110	110	68	242	310	103	32	76	90/100	140	14/19	M12

UPS 32-60 F 220, UPS 32-60 F B 220



TM00 9421 0197

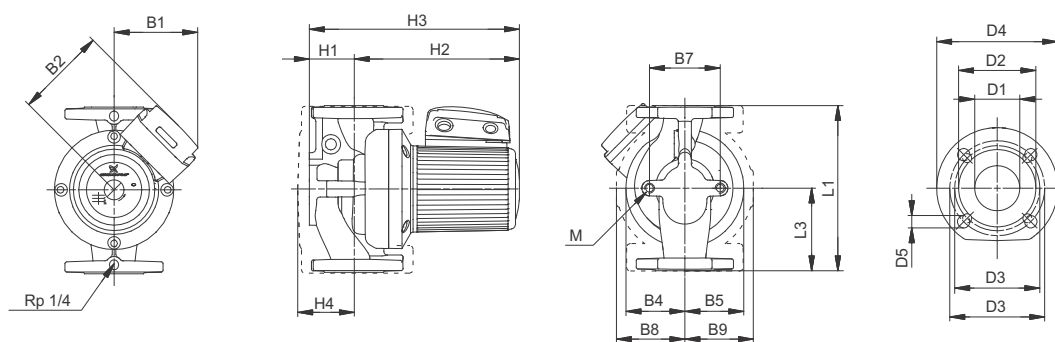
Electrical data

		P_{max} [W]	P_{min} [W]	$I_{1/1}$ [A]	$\cos \varphi$
3 x 400-415 V	Speed 1	120	70	0.21	0.82
	Speed 2	140	75	0.23	0.88
	Speed 3	185	105	0.39	0.68

Weights and volume

	PN 6 / PN 10	PN 6 / PN 10 bronze
Net weight [kg]	16.1	17.5
Gross weight [kg]	17.5	19.0
Shipping volume [m³]	0.026	0.026

Dimensional sketch

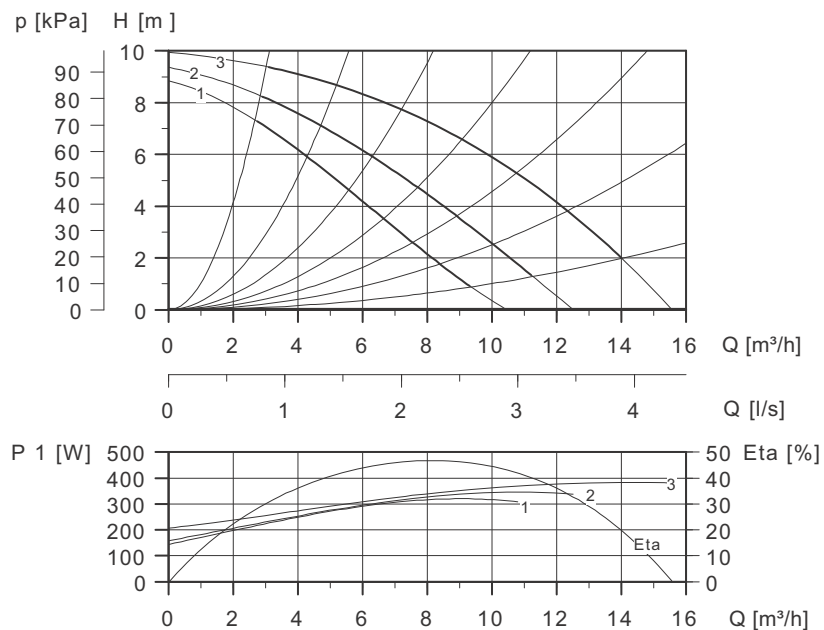


TM02 0701 3601

Dimensions [mm]

	L1	L2	L3	B1	B2	B4	B5	B7	B8	B9	H1	H2	H3	H4	D1	D2	D3	D4	D5	M
PN 6 / PN 10 (bronze)	220		110	135	141	75	75	80	110	110	68	242	310	103	32	76	90/100	140	14/19	M12

UPS 32-120 F 220, UPS 32-120 F B 220



TM00 9422 0197

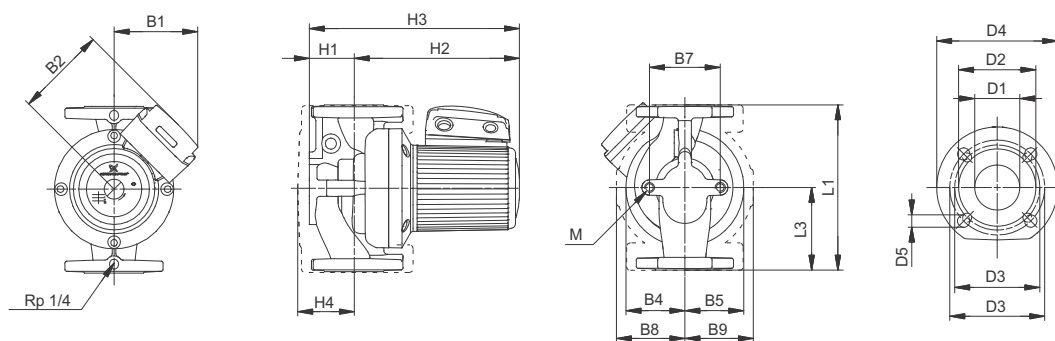
Electrical data

		$P_{\max}$ [W]	$P_{\min}$ [W]	$I_{1/1}$ [A]	$\cos \varphi$	C [μF]
1 x 230-240 V	Speed 1	320	145	1.55	0.90	10
	Speed 2	340	160	1.65	0.90	10
	Speed 3	380	210	1.75	0.94	10

Weights and volume

	PN 6 / PN 10	PN 6 / PN 10 bronze
Net weight [kg]	16.3	17.7
Gross weight [kg]	17.6	19.0
Shipping volume [m³]	0.026	0.026

Dimensional sketch

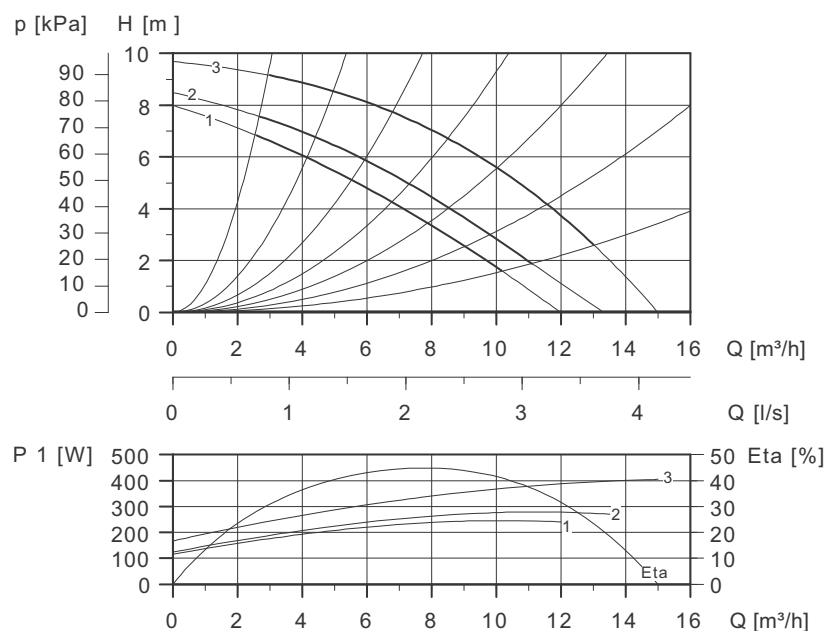


TM02 0701 3601

Dimensions [mm]

	L1	L2	L3	B1	B2	B4	B5	B7	B8	B9	H1	H2	H3	H4	D1	D2	D3	D4	D5	M
PN 6 / PN 10 (bronze)	220		110	135	141	75	75	80	110	110	68	242	310	103	32	76	90/100	140	14/19	M12

UPS 32-120 F 220, UPS 32-120 F B 220



TM00 9423 0197

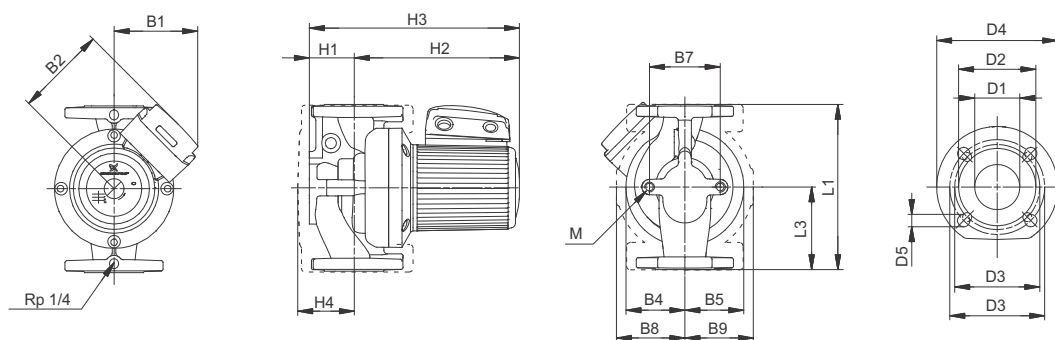
Electrical data

		P_{max} [W]	P_{min} [W]	$I_{1/1}$ [A]	$\cos \varphi$
3 x 400-415 V	Speed 1	245	120	0.42	0.84
	Speed 2	280	130	0.47	0.86
	Speed 3	400	170	0.78	0.74

Weights and volume

	PN 6 / PN 10	PN 6 / PN 10 bronze
Net weight [kg]	16.3	17.7
Gross weight [kg]	17.6	19.0
Shipping volume [m³]	0.026	0.026

Dimensional sketch

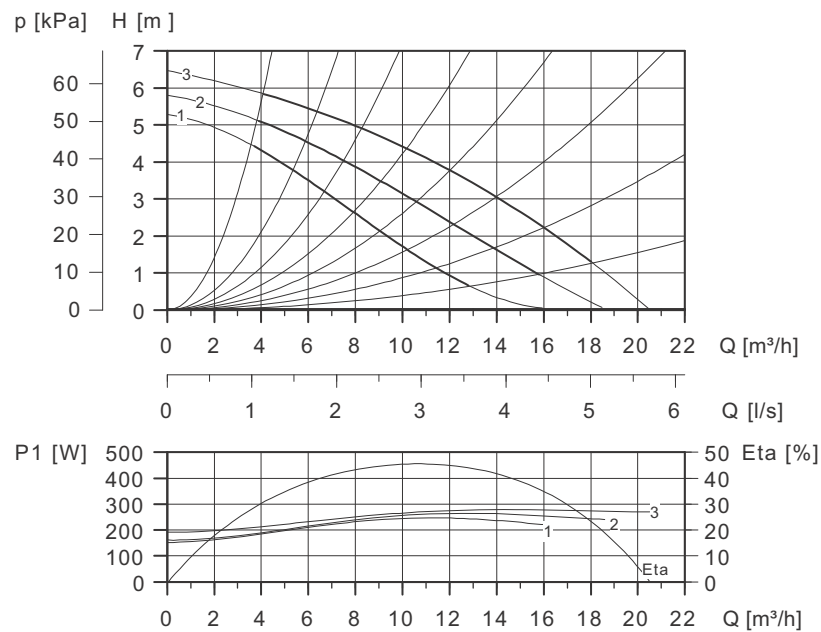


TM02 0701 3601

Dimensions [mm]

	L1	L2	L3	B1	B2	B4	B5	B7	B8	B9	H1	H2	H3	H4	D1	D2	D3	D4	D5	M
PN 6 / PN 10 (bronze)	220		110	135	141	75	75	80	110	110	68	242	310	103	32	76	90/100	140	14/19	M12

UPS 40-60/2 F 250, UPS 40-60/2 F B 250



TM00 9428 0197

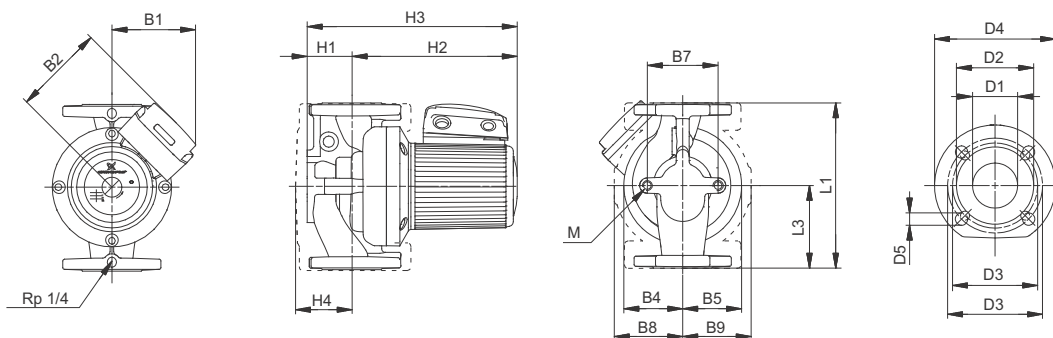
Electrical data

		$P_{\max}$ [W]	$P_{\min}$ [W]	$I_{1/1}$ [A]	$\cos \phi$	C [μF]
1 x 230-240 V	Speed 1	250	150	1.25	0.87	8
	Speed 2	260	160	1.25	0.90	8
	Speed 3	280	190	1.30	0.94	8

Weights and volume

	PN 6 / PN 10	PN 6 / PN 10 bronze
Net weight [kg]	16.6	18.6
Gross weight [kg]	17.9	19.90
Shipping volume [m³]	0.026	0.026

Dimensional sketch

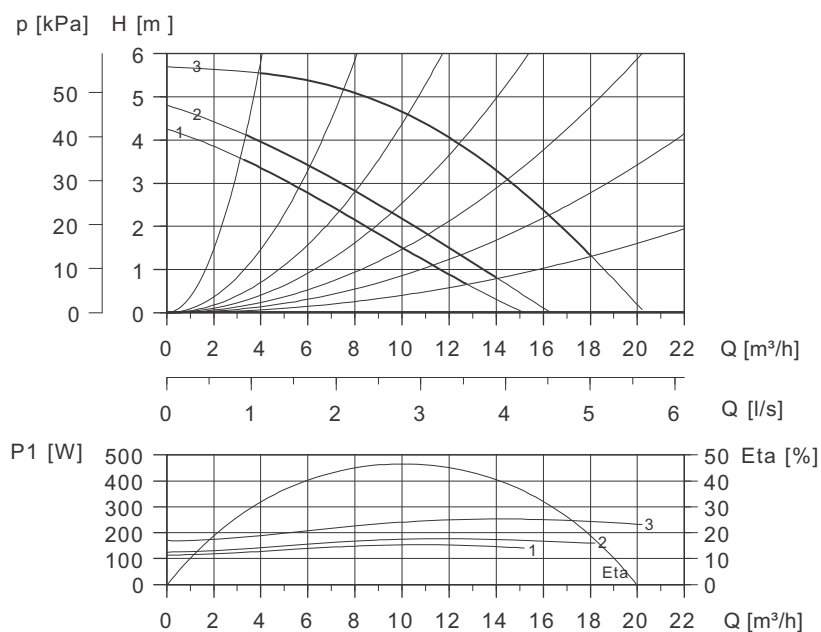


TM02 0701 3601

Dimensions [mm]

	L1	L2	L3	B1	B2	B4	B5	B7	B8	B9	H1	H2	H3	H4	D1	D2	D3	D4	D5	M
PN 6 / PN 10 (bronze)	250		125	135	141	75	75	80	110	110	68	248	316	103	40	84	100/110	150	14/19	M12

UPS 40-60/2 F 250, UPS 40-60/2 F B 250



TM00 9429 0197

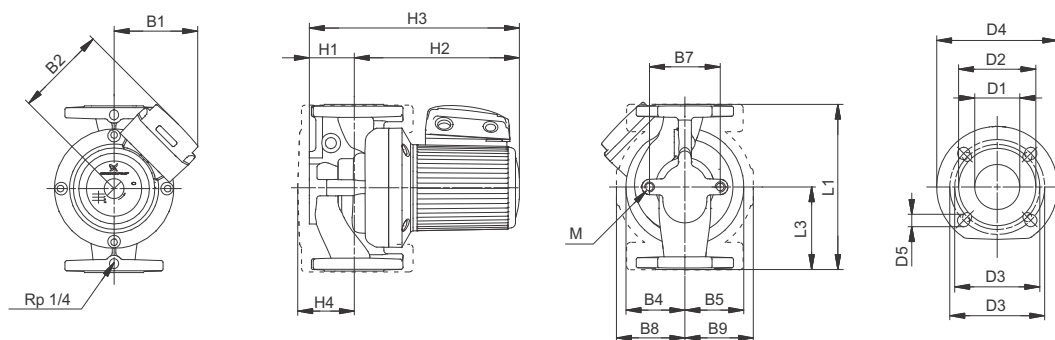
Electrical data

		P_{max} [W]	P_{min} [W]	$I_{1/1}$ [A]	$\cos \varphi$
3 x 400-415 V	Speed 1	155	115	0.25	0.89
	Speed 2	175	125	0.29	0.87
	Speed 3	250	170	0.46	0.78

Weights and volume

	PN 6 / PN 10	PN 6 / PN 10 bronze
Net weight [kg]	16.6	18.6
Gross weight [kg]	17.9	19.8
Shipping volume [m³]	0.026	0.026

Dimensional sketch

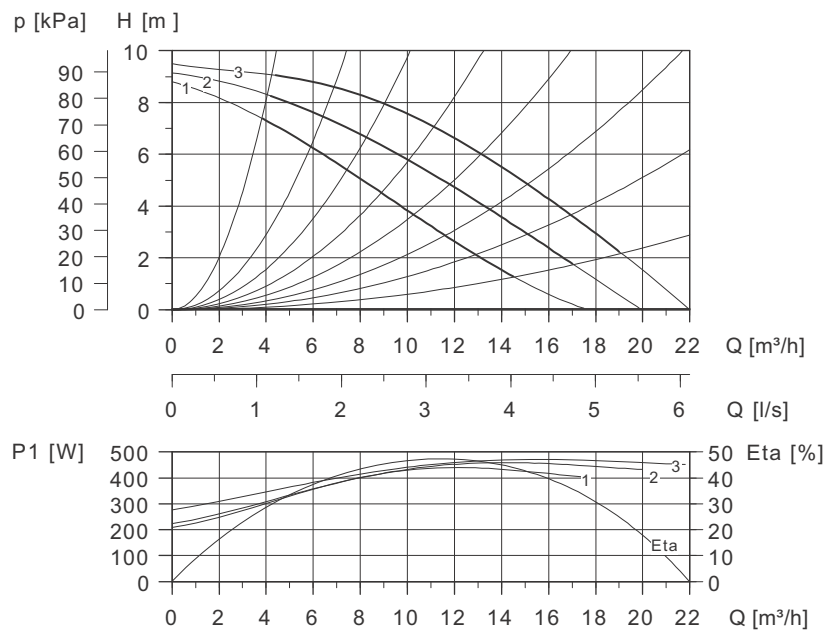


TM02 0701 3601

Dimensions [mm]

	L1	L2	L3	B1	B2	B4	B5	B7	B8	B9	H1	H2	H3	H4	D1	D2	D3	D4	D5	M
PN 6 / PN 10 (bronze)	250		125	135	141	75	75	80	110	110	68	248	316	103	40	84	100/110	150	14/19	M12

UPS 40-120 F 250, UPS 40-120 F B 250



TM00 9430 0197

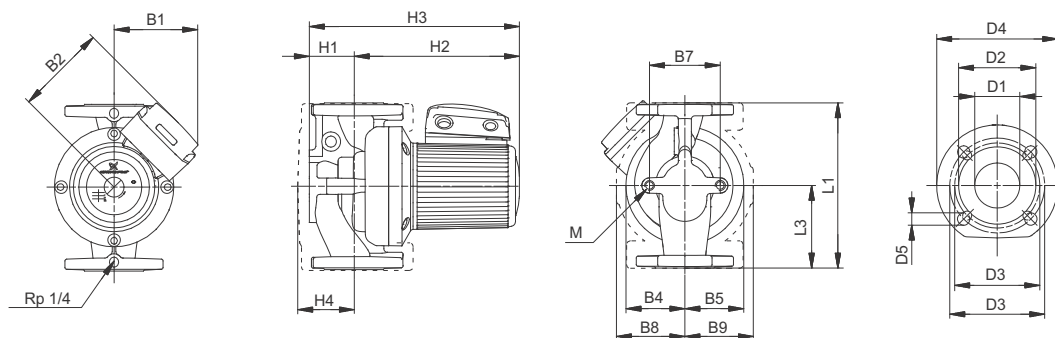
Electrical data

		P_{max} [W]	P_{min} [W]	$I_{1/1}$ [A]	$\cos \varphi$	C [μF]
1 x 230-240 V	Speed 1	440	210	2.20	0.87	12
	Speed 2	460	225	2.30	0.87	12
	Speed 3	470	280	2.20	0.93	12

Weights and volume

	PN 6 / PN 10	PN 6 / PN 10 bronze
Net weight [kg]	18.3	20.2
Gross weight [kg]	19.6	21.5
Shipping volume [m³]	0.026	0.026

Dimensional sketch

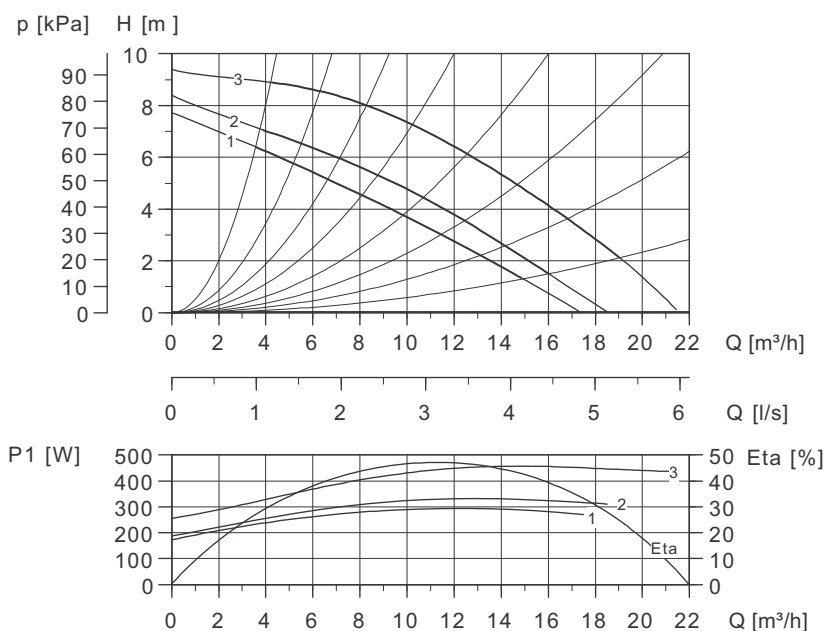


TM02 0701 3601

Dimensions [mm]

	L1	L2	L3	B1	B2	B4	B5	B7	B8	B9	H1	H2	H3	H4	D1	D2	D3	D4	D5	M
PN 6 / PN 10 (bronze) 250			125	135	141	75	75	80	110	110	81	246	314	103	40	84	100/110	150	14/19	M12

UPS 40-120 F 250, UPS 40-120 F B 250



TM00 9431 0197

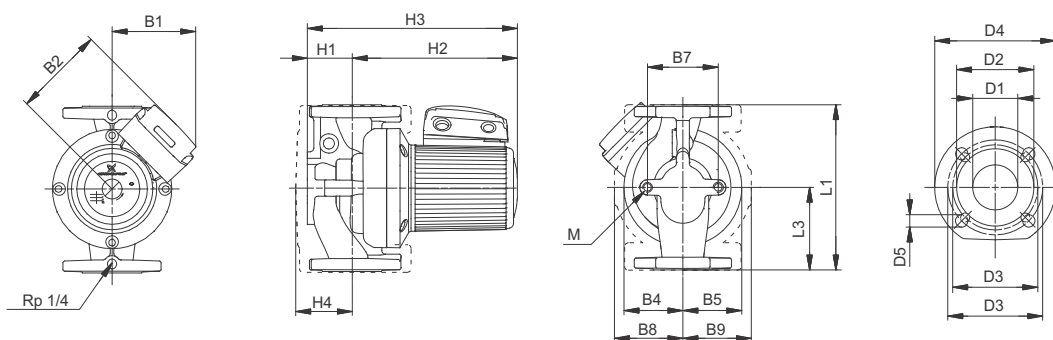
Electrical data

		P_{max} [W]	P_{min} [W]	$I_{1/1}$ [A]	$\cos \varphi$
3 x 400-415 V	Speed 1	290	175	0.49	0.85
	Speed 2	330	190	0.56	0.85
	Speed 3	460	260	0.92	0.72

Weights and volume

	PN 6 / PN 10	PN 6 / PN 10 bronze
Net weight [kg]	17.7	20.0
Gross weight [kg]	19.2	21.5
Shipping volume [m³]	0.026	0.026

Dimensional sketch

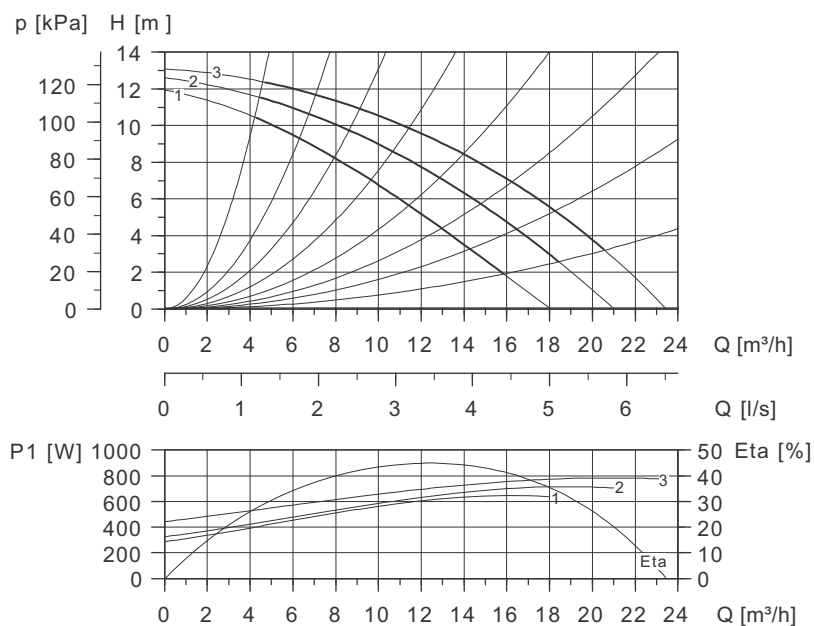


TM02 0701 3601

Dimensions [mm]

	L1	L2	L3	B1	B2	B4	B5	B7	B8	B9	H1	H2	H3	H4	D1	D2	D3	D4	D5	M
PN 6 / PN 10 (bronze)	250		125	135	141	75	75	80	110	110	81	246	314	103	40	84	100/110	150	14/19	M12

UPS 40-180 F 250, UPS 40-180 F B 250



TM00 9432 0197

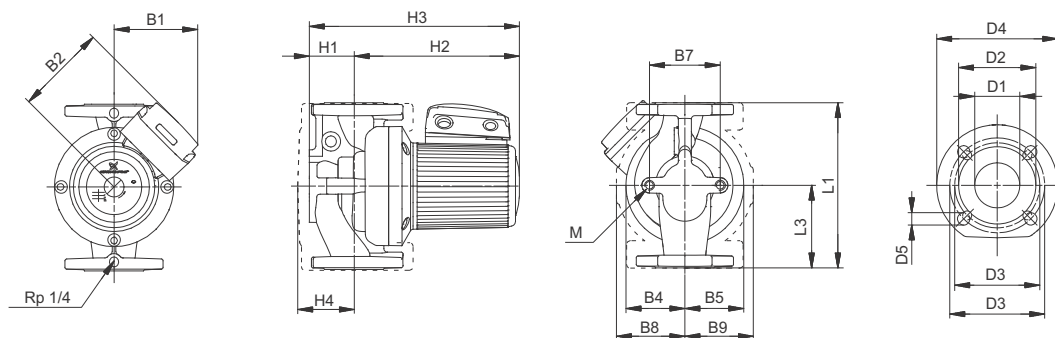
Electrical data

		P_{max} [W]	P_{min} [W]	$I_{1/1}$ [A]	$\cos \varphi$	C [μF]
1 x 230-240 V	Speed 1	650	290	3.15	0.90	25
	Speed 2	730	330	3.50	0.91	25
	Speed 3	790	450	3.65	0.94	25

Weights and volume

	PN 6 / PN 10	PN 6 / PN 10 bronze
Net weight [kg]	23.7	26.5
Gross weight [kg]	25.3	28.0
Shipping volume [m³]	0.043	0.043

Dimensional sketch

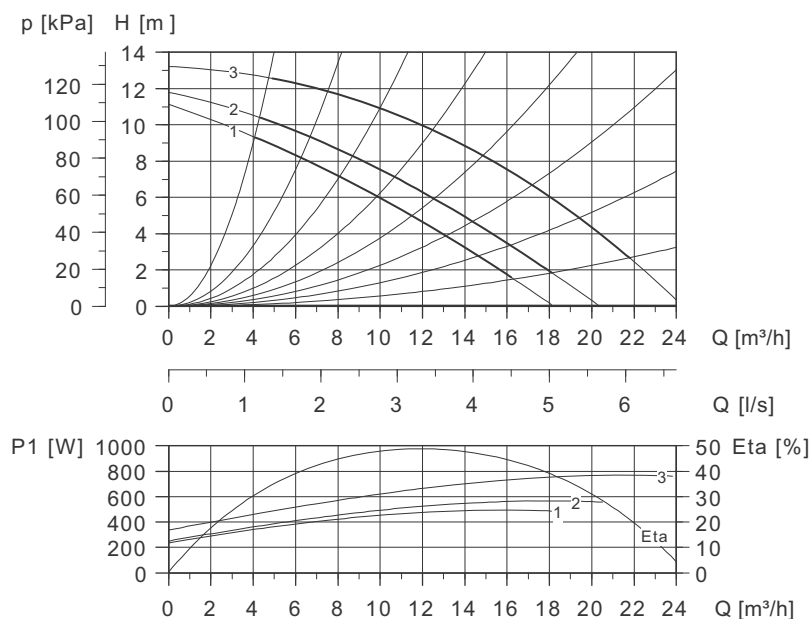


TM02 0701 3601

Dimensions [mm]

	L1	L2	L3	B1	B2	B4	B5	B7	B8	B9	H1	H2	H3	H4	D1	D2	D3	D4	D5	M
PN 6 / PN 10 (bronze)	250		125	145	156	100	100	80	134	134	68	240	352	106	40	84	100/110	150	14/19	M12

UPS 40-180 F 250, UPS 40-180 F B 250



TM00 9433 0197

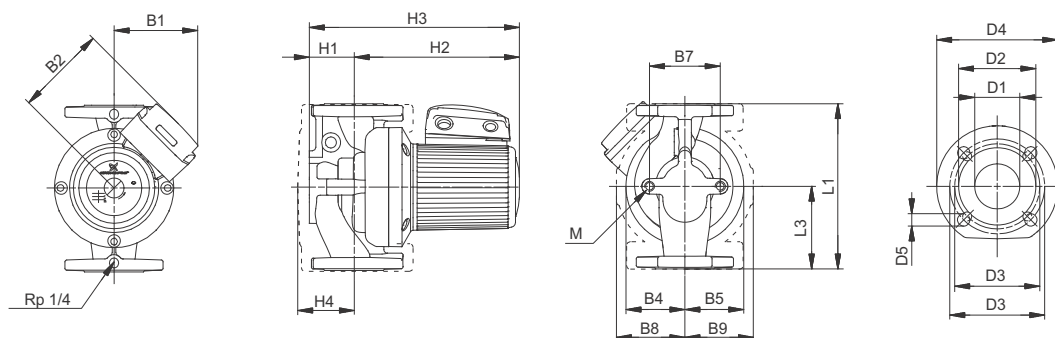
Electrical data

		P_{max} [W]	P_{min} [W]	$I_{1/1}$ [A]	$\cos \varphi$
3 x 400-415 V	Speed 1	490	235	0.82	0.86
	Speed 2	570	250	0.94	0.86
	Speed 3	770	350	1.30	0.85

Weights and volume

	PN 6 / PN 10	PN 6 / PN 10 bronze
Net weight [kg]	21.4	24.5
Gross weight [kg]	22.8	26.0
Shipping volume [m³]	0.034	0.034

Dimensional sketch

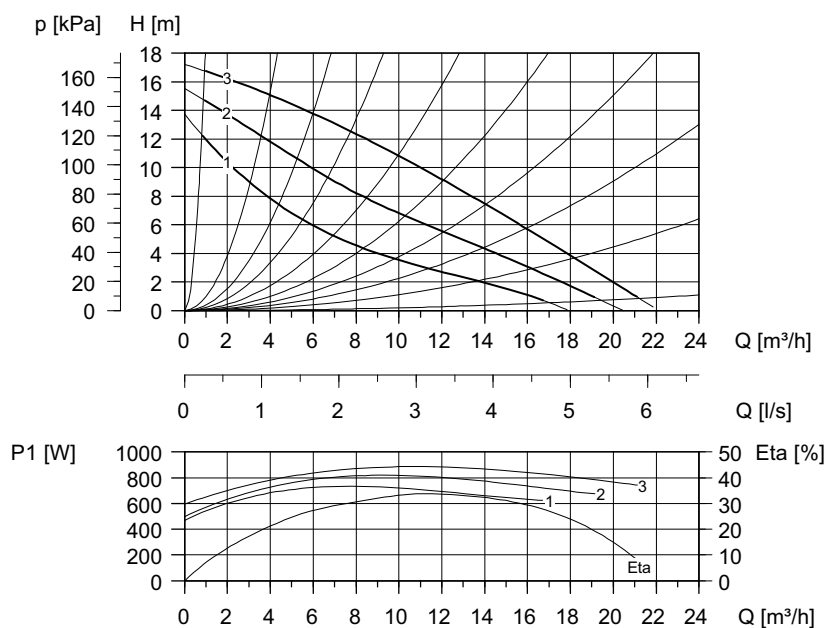


TM02 0701 3601

Dimensions [mm]

	L1	L2	L3	B1	B2	B4	B5	B7	B8	B9	H1	H2	H3	H4	D1	D2	D3	D4	D5	M
PN 6 / PN 10 (bronze)	250		125	145	155	100	100	80	134	134	68	240	308	106	40	84	100 / 110	150	14 / 19	M12

UPS 40-185 F 250



TM01 4940 0899

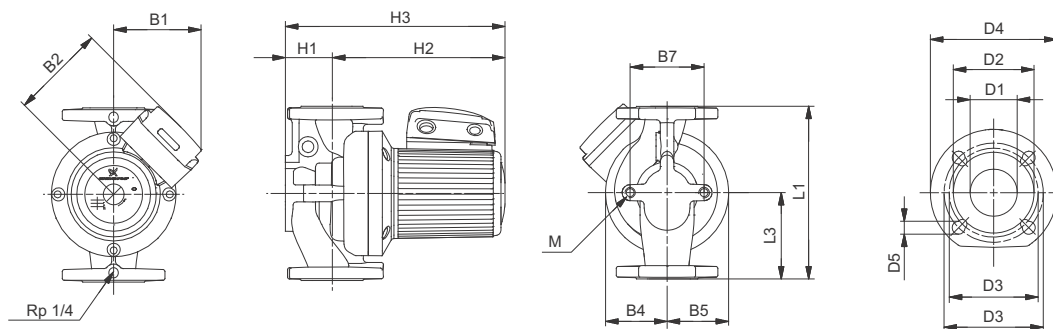
Electrical data

		$P_{\max}$ [W]	$P_{\min}$ [W]	$I_{1/1}$ [A]	$\cos \varphi$	C [μF]
1 x 230-240 V	Speed 1	735	470	3.55	0.90	25
	Speed 2	825	490	3.90	0.92	25
	Speed 3	890	590	4.10	0.94	25

Weights and volume

	PN 6 / PN 10
Net weight [kg]	21.1
Gross weight [kg]	22.6
Shipping volume [m³]	0.034

Dimensional sketch

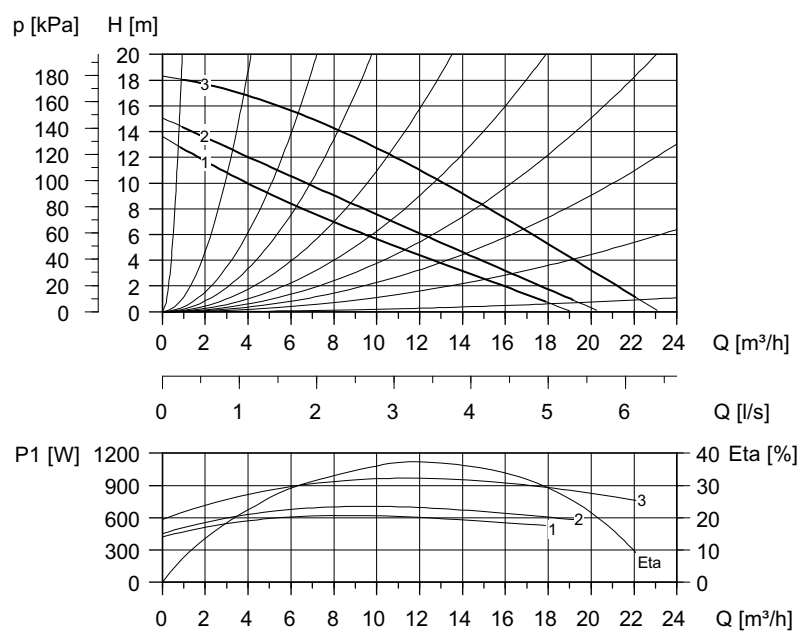


TM03 2075 3605

Dimensions [mm]

	L1	L2	L3	B1	B2	B4	B5	B7	B8	B9	H1	H2	H3	H4	D1	D2	D3	D4	D5	M
PN 6 / PN 10	250		125	145	155	102	100	96			67	243	296		40	88	100 / 110	150	14 / 19	M12

UPS 40-185 F 250



TM01 4941 0611

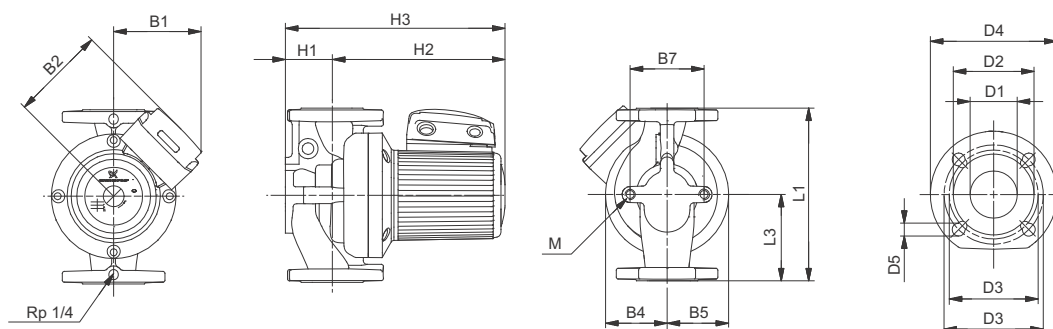
Electrical data

		$P_{\max}$ [W]	$P_{\min}$ [W]	$I_{1/1}$ [A]	$\cos \phi$
3 x 400-415 V	Speed 1	620	415	1.04	0.86
	Speed 2	705	450	1.18	0.86
	Speed 3	975	580	1.80	0.78

Weights and volume

	PN 6 / PN 10
Net weight [kg]	19.7
Gross weight [kg]	21.4
Shipping volume [m³]	0.034

Dimensional sketch

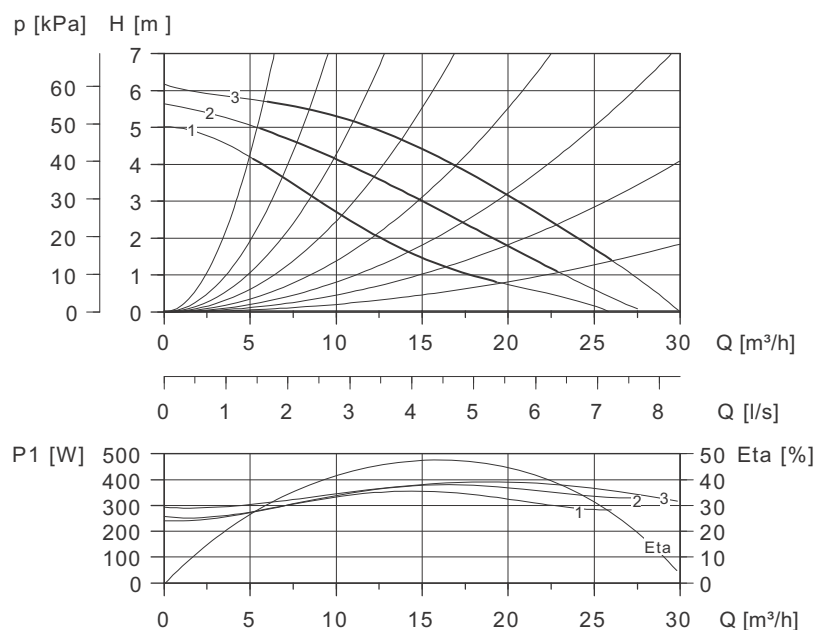


TM03 2075 3605

Dimensions [mm]

	L1	L2	L3	B1	B2	B4	B5	B7	B8	B9	H1	H2	H3	H4	D1	D2	D3	D4	D5	M
PN 6 / PN 10	250		125	145	155	102	100	96			67	243	296		40	88	100 / 110	150	14 / 19	M12

UPS 50-60/2 F 280, UPS 50-60/2 F B 280



TM00 9436 0197

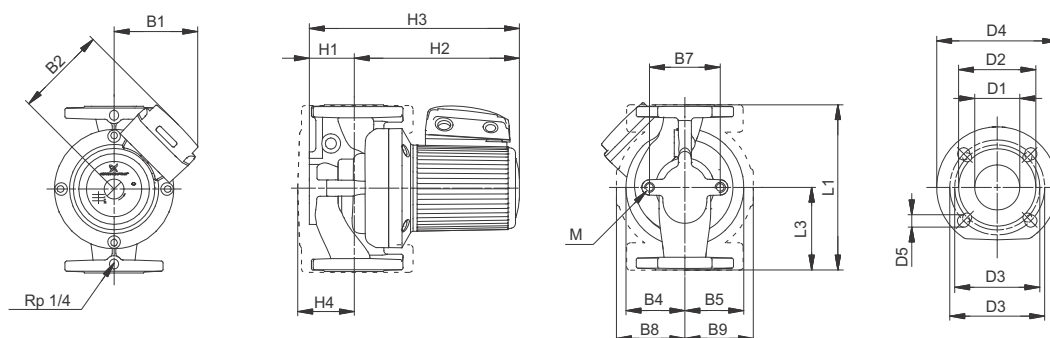
Electrical data

		P_{max} [W]	P_{min} [W]	$I_{1/1}$ [A]	$\cos \phi$	C [μF]
1 x 230-240 V	Speed 1	350	240	1.75	0.87	10
	Speed 2	380	250	1.85	0.89	10
	Speed 3	390	290	1.80	0.94	10

Weights and volume

	PN 6 / PN 10	PN 6 / PN 10 bronze
Net weight [kg]	20.9	24.0
Gross weight [kg]	22.0	25.5
Shipping volume [m³]	0.034	0.034

Dimensional sketch

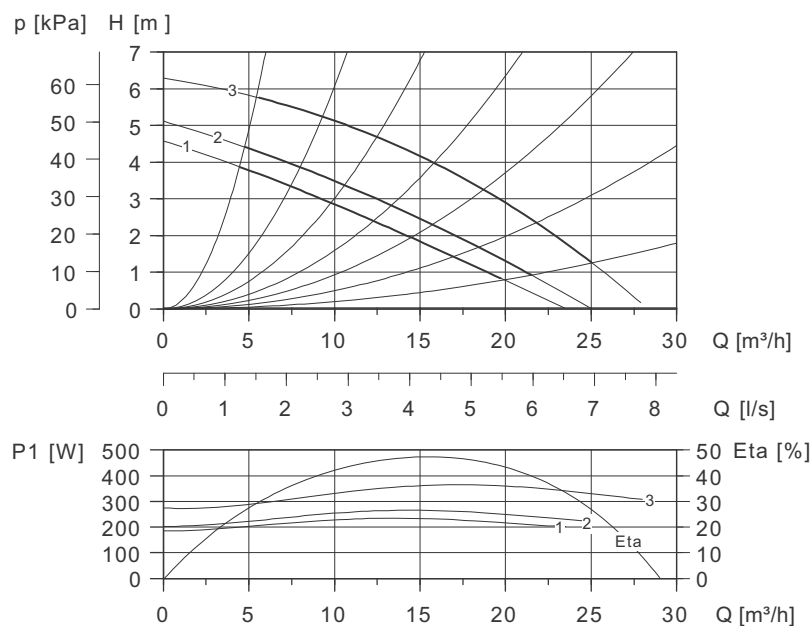


TM02 0701 3601

Dimensions [mm]

	L1	L2	L3	B1	B2	B4	B5	B7	B8	B9	H1	H2	H3	H4	D1	D2	D3	D4	D5	M
PN 6 / PN 10 (bronze)	280		140	135	141	90	75	120	122	111	75	253	328	123	50	99	110/125	165	14/19	M12

UPS 50-60/2 F 280, UPS 50-60/2 F B 280



TM00 9437 0197

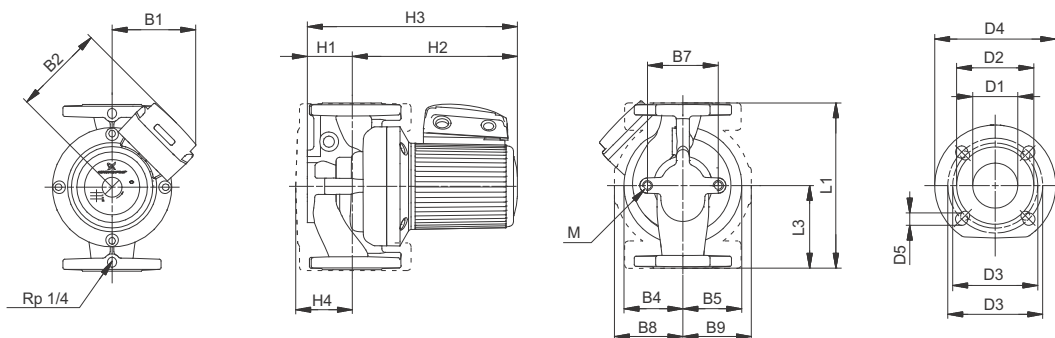
Electrical data

		P_{max} [W]	P_{min} [W]	$I_{1/1}$ [A]	$\cos \varphi$
3 x 400-415 V	Speed 1	235	185	0.39	0.87
	Speed 2	270	205	0.45	0.87
	Speed 3	360	270	0.74	0.70

Weights and volume

	PN 6 / PN 10	PN 6 / PN 10 bronze
Net weight [kg]	27.7	24.0
Gross weight [kg]	29.3	25.5
Shipping volume [m³]	0.043	0.034

Dimensional sketch

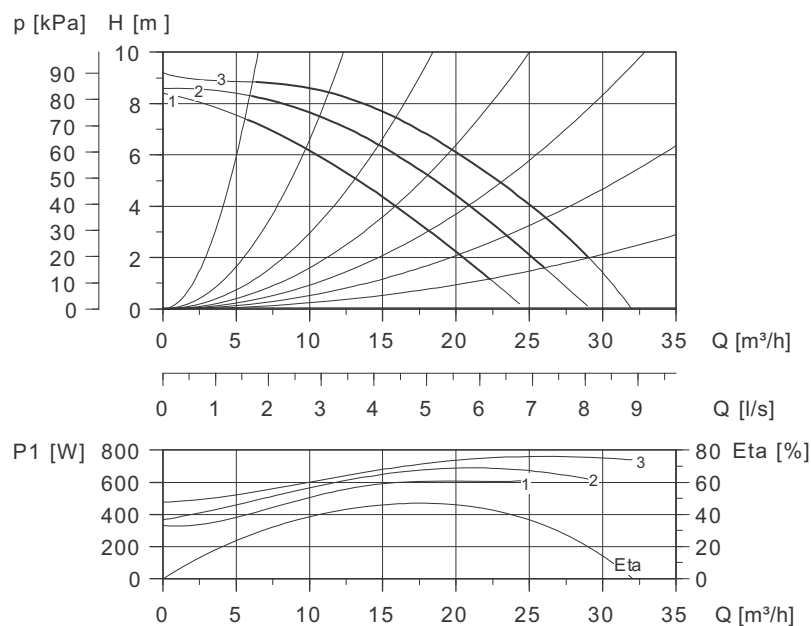


TM02 0701 3601

Dimensions [mm]

	L1	L2	L3	B1	B2	B4	B5	B7	B8	B9	H1	H2	H3	H4	D1	D2	D3	D4	D5	M
PN 6 / PN 10 (bronze)	280		140	135	141	90	75	120	122	111	75	253	328	123	50	99	110/125	165	14/19	M12

UPS 50-120 F 280, UPS 50-120 F B 280



TM00 9438 0197

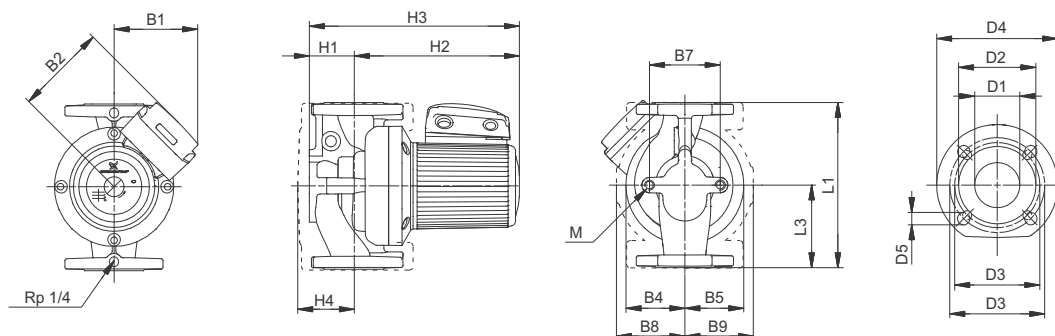
Electrical data

		P_{max} [W]	P_{min} [W]	$I_{1/1}$ [A]	$\cos \varphi$	C [μF]
1 x 230-240 V	Speed 1	620	330	3.05	0.88	25
	Speed 2	700	360	3.35	0.91	25
	Speed 3	760	480	3.60	0.92	25

Weights and volume

	PN 6 / PN 10	PN 6 / PN 10 bronze
Net weight [kg]	26.5	29.0
Gross weight [kg]	28.0	30.5
Shipping volume [m³]	0.043	0.043

Dimensional sketch

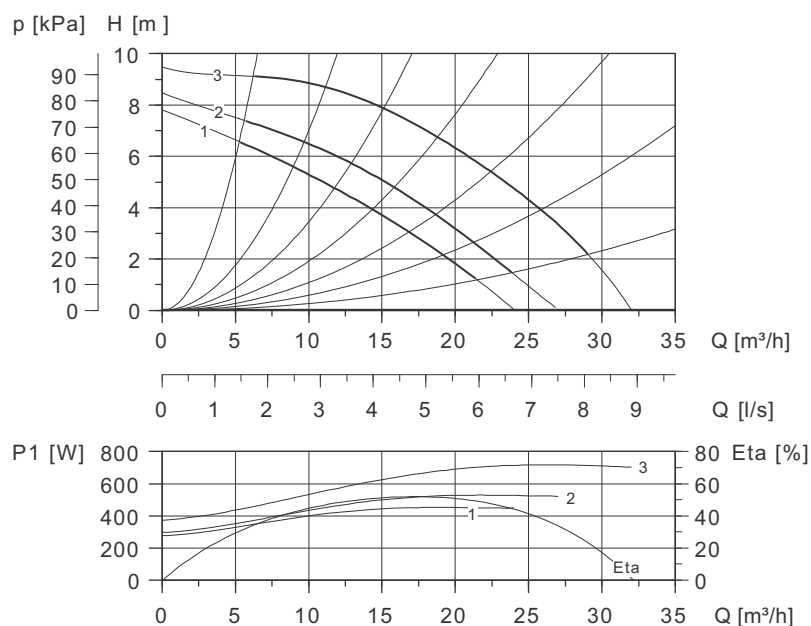


TM02 0701 3601

Dimensions [mm]

	L1	L2	L3	B1	B2	B4	B5	B7	B8	B9	H1	H2	H3	H4	D1	D2	D3	D4	D5	M
PN 6 / PN 10 (bronze)	280		140	145	155	100	100	120	135	135	75	276	351	116	50	99	110/125	165	14/19	M12

UPS 50-120 F 280, UPS 50-120 F B 280



TM00 9439 0197

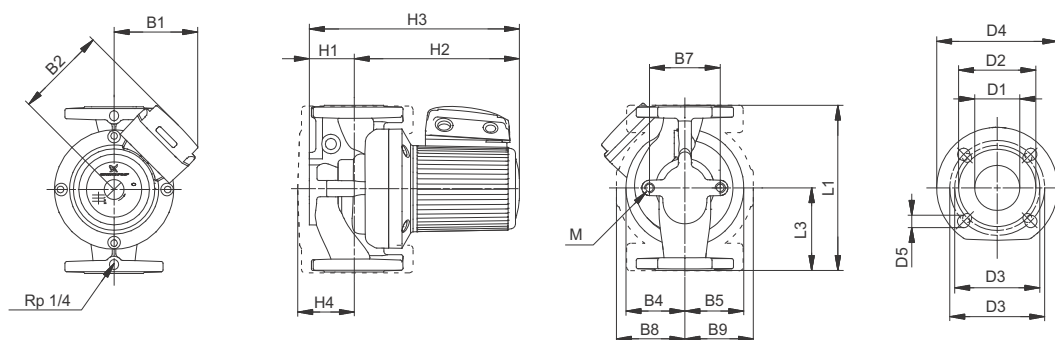
Electrical data

		P_{max} [W]	P_{min} [W]	$I_{1/1}$ [A]	$\cos \varphi$
3 x 400-415 V	Speed 1	450	280	0.82	0.79
	Speed 2	530	300	0.94	0.81
	Speed 3	720	380	1.30	0.80

Weights and volume

	PN 6 / PN 10	PN 6 / PN 10 bronze
Net weight [kg]	24.3	25.4
Gross weight [kg]	25.8	27.3
Shipping volume [m³]	0.034	0.043

Dimensional sketch

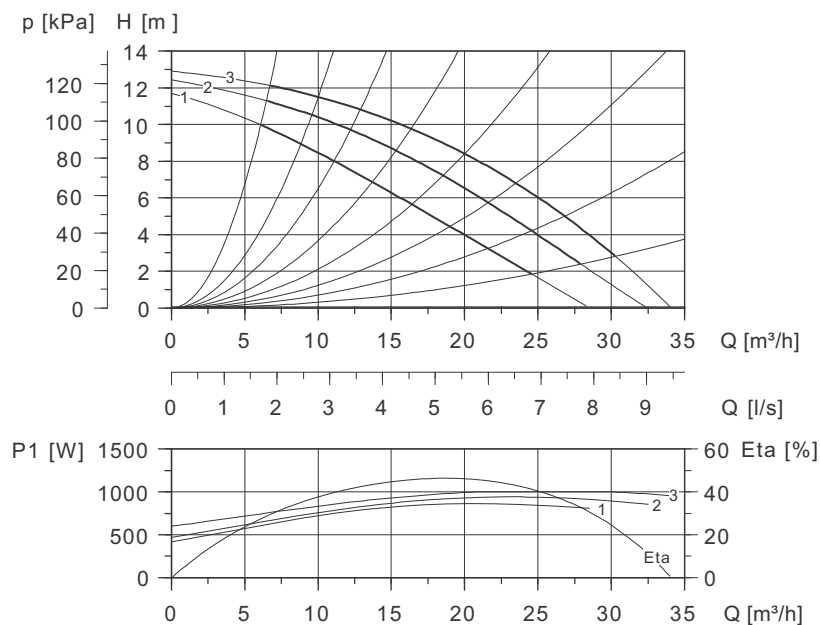


TM02 0701 3601

Dimensions [mm]

	L1	L2	L3	B1	B2	B4	B5	B7	B8	B9	H1	H2	H3	H4	D1	D2	D3	D4	D5	M
PN 6 / PN 10 (bronze)	280		140	145	155	100	100	120	135	135	75	232	307	116	50	99	110/125	165	14/19	M12

UPS 50-180 F 280, UPS 50-180 F B 280



TM00 9440 0197

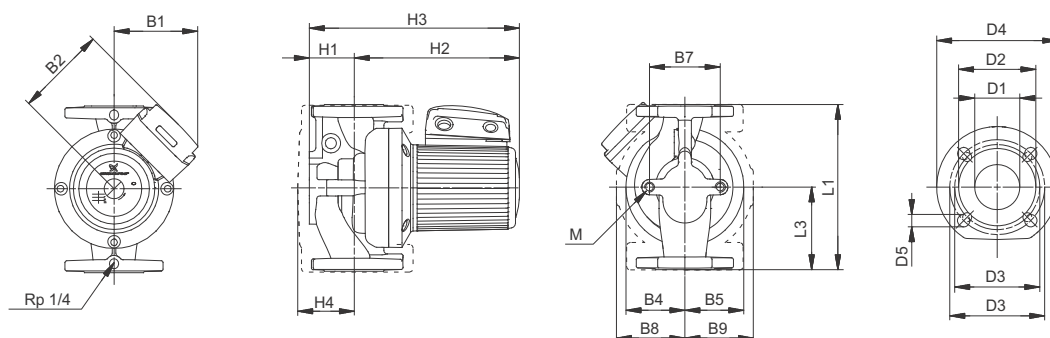
Electrical data

		P_{max} [W]	P_{min} [W]	$I_{1/1}$ [A]	$\cos \phi$	C [μF]
1 x 230-240 V	Speed 1	860	420	4.15	0.90	30
	Speed 2	940	470	4.40	0.93	30
	Speed 3	1000	600	4.65	0.94	30

Weights and volume

	PN 6 / PN 10	PN 6 / PN 10 bronze
Net weight [kg]	29.0	32.4
Gross weight [kg]	30.5	33.9
Shipping volume [m³]	0.043	0.043

Dimensional sketch

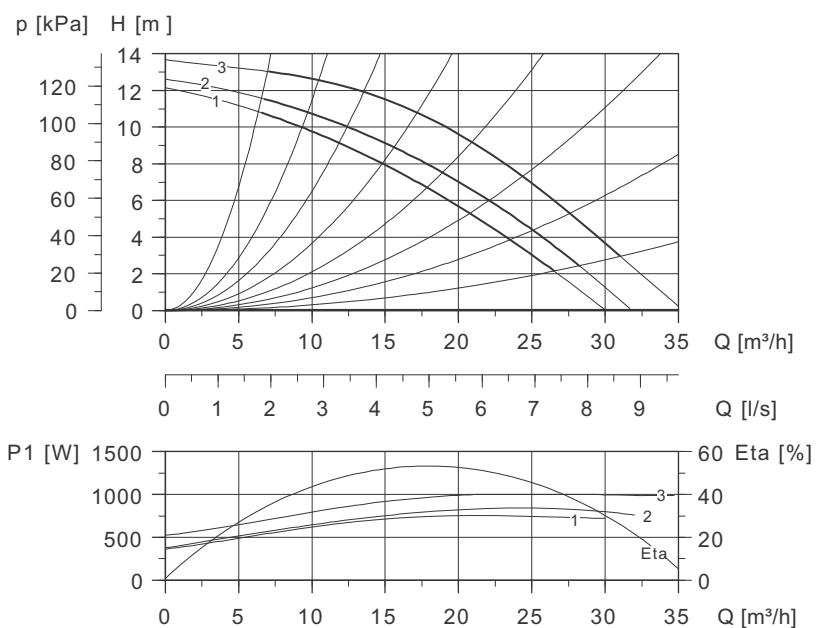


TM02 0701 3601

Dimensions [mm]

	L1	L2	L3	B1	B2	B4	B5	B7	B8	B9	H1	H2	H3	H4	D1	D2	D3	D4	D5	M
PN 6 / PN 10 (bronze)	280		140	155	169	100	100	120	135	135	75	276	351	116	50	99	110/100	165	14/19	M12

UPS 50-180 F 280, UPS 50-180 F B 280



TM00 9441 0197

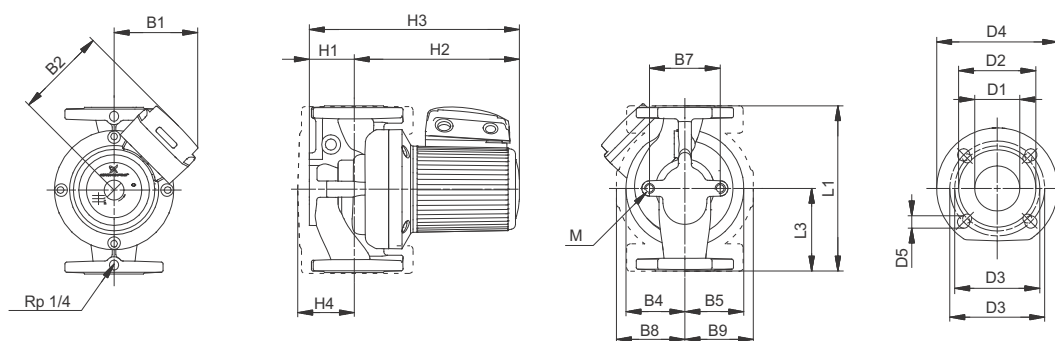
Electrical data

		$P_{\max}$ [W]	$P_{\min}$ [W]	$I_{1/1}$ [A]	$\cos \varphi$
3 x 400-415 V	Speed 1	760	360	1.25	0.88
	Speed 2	850	380	1.40	0.88
	Speed 3	1000	520	2.00	0.72

Weights and volume

	PN 6 / PN 10	PN 6 / PN 10 bronze
Net weight [kg]	25.6	28.5
Gross weight [kg]	26.9	30.5
Shipping volume [m³]	0.043	0.043

Dimensional sketch

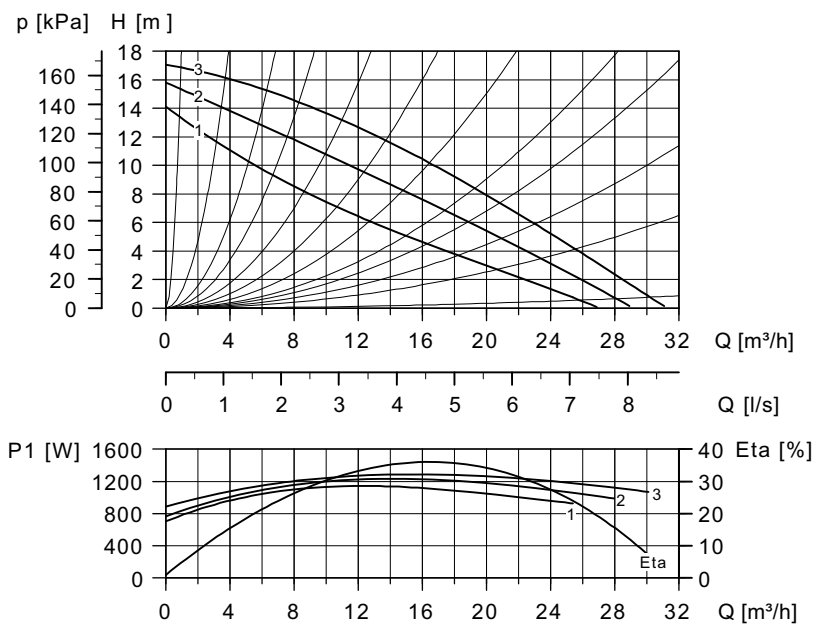


TM02 0701 3601

Dimensions [mm]

	L1	L2	L3	B1	B2	B4	B5	B7	B8	B9	H1	H2	H3	H4	D1	D2	D3	D4	D5	M
PN 6 / PN 10 (bronze)	280		140	145	155	100	100	120	135	135	75	276	351	116	50	99	110/100	165	14/19	M12

UPS 50-185 F 280



TM01 4942 1199

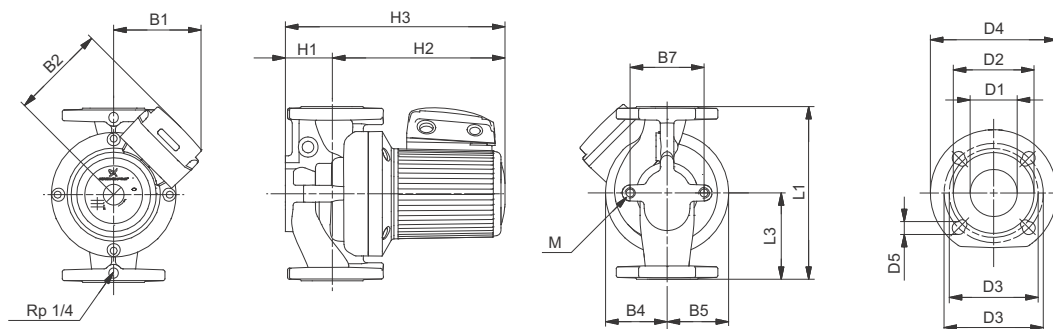
Electrical data

		$P_{\max}$ [W]	$P_{\min}$ [W]	$I_{1/1}$ [A]	$\cos \varphi$	C [μF]
1 x 230-240 V	Speed 1	1150	710	5.60	0.89	30
	Speed 2	1240	770	6.05	0.89	30
	Speed 3	1290	810	6.00	0.93	30

Weights and volume

	PN 6 / PN 10
Net weight [kg]	27.4
Gross weight [kg]	29.1
Shipping volume [m³]	0.043

Dimensional sketch

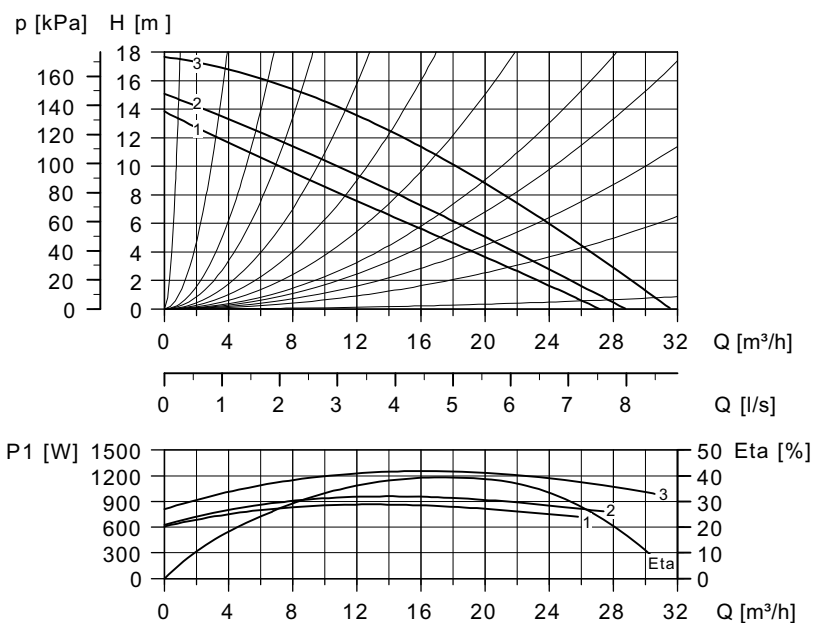


TM03 2075 3605

Dimensions [mm]

	L1	L2	L3	B1	B2	B4	B5	B7	B8	B9	H1	H2	H3	H4	D1	D2	D3	D4	D5	M
PN 6 / PN 10	280		140	145	155	104	100	96			75	274	349		50	99	110/125	165	14/19	M12

UPS 50-185 F 280



TM01 4943 1199

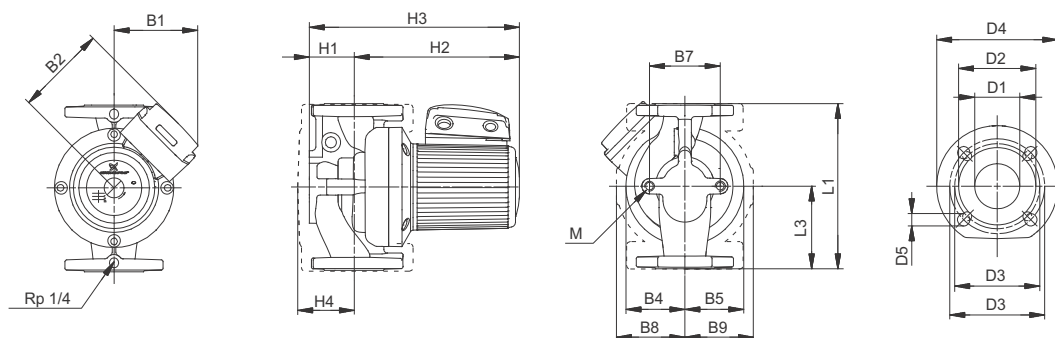
Electrical data

		$P_{\max}$ [W]	$P_{\min}$ [W]	$I_{1/1}$ [A]	$\cos \varphi$	C [μF]
3 x 400-415 V	Speed 1	1150	710	5.60	0.89	30
	Speed 2	1240	770	6.05	0.89	30
	Speed 3	1290	810	6.00	0.93	30

Weights and volume

	PN 6 / PN 10
Net weight [kg]	24.8
Gross weight [kg]	26.5
Shipping volume [m³]	0.043

Dimensional sketch

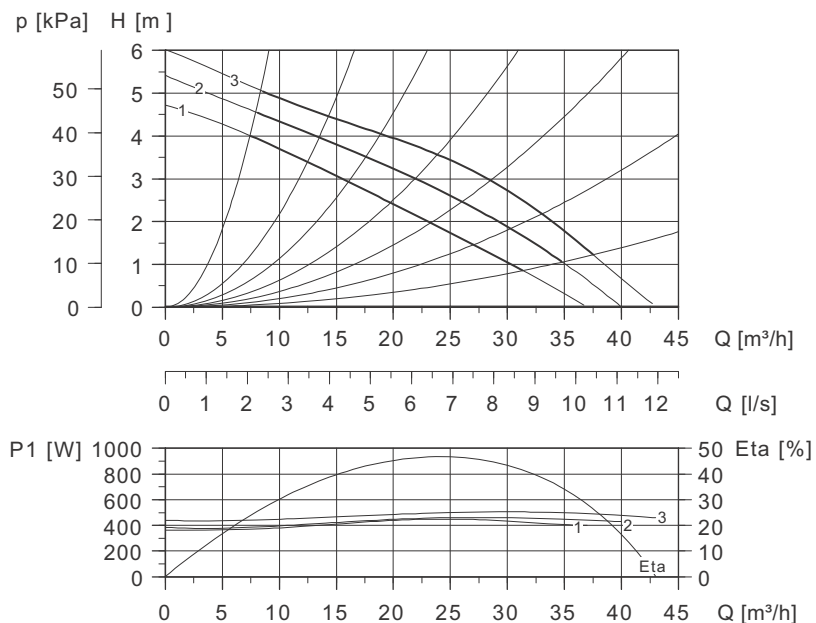


TM02 0701 3601

Dimensions [mm]

	L1	L2	L3	B1	B2	B4	B5	B7	B8	B9	H1	H2	H3	H4	D1	D2	D3	D4	D5	M
PN 6 / PN 10	280		140	145	155	104	100	96			75	274	349		50	102	110/125	165	14/19	M12

UPS 65-60/2 F 340, UPS 65-60/2 F B 340



TM00 9446 0197

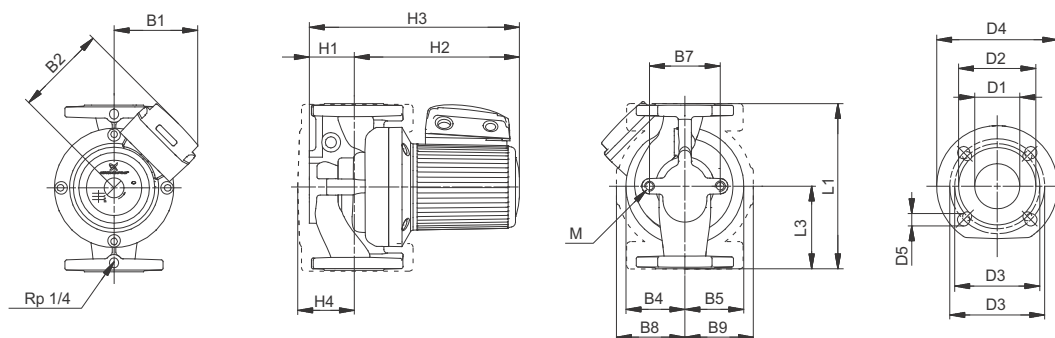
Electrical data

		$P_{\max}$ [W]	$P_{\min}$ [W]	$I_{1/1}$ [A]	$\cos \varphi$	C [μF]
1 x 230-240 V	Speed 1	450	360	2.15	0.91	16
	Speed 2	470	380	2.20	0.93	16
	Speed 3	510	440	2.40	0.92	16

Weights and volume

	PN 6 / PN 10	PN 6 / PN 10 bronze
Net weight [kg]	24.5	29.0
Gross weight [kg]	26.3	30.8
Shipping volume [m³]	0.043	0.043

Dimensional sketch

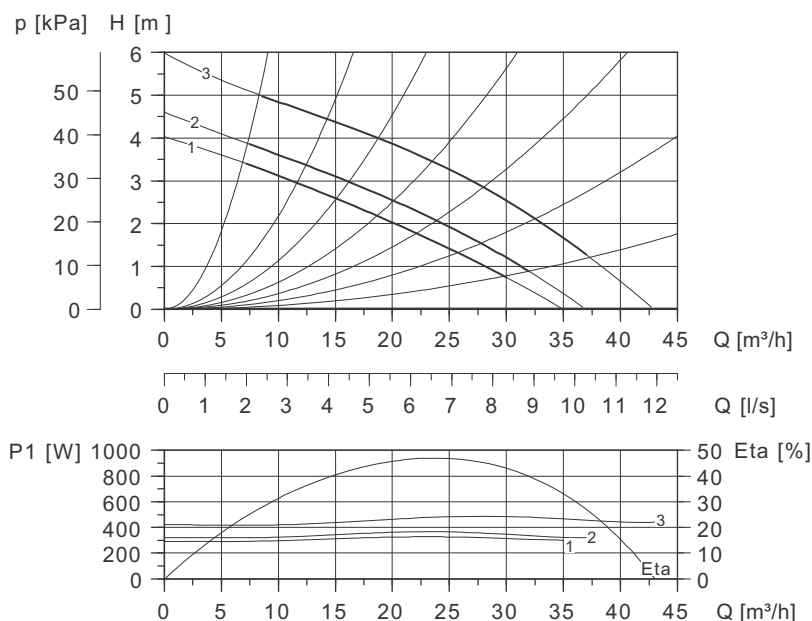


TM02 0701 3601

Dimensions [mm]

	L1	L2	L3	B1	B2	B4	B5	B7	B8	B9	H1	H2	H3	H4	D1	D2	D3	D4	D5	M
PN 6 / PN 10 (bronze)	340		170	135	141	95	75	120	126	126	82	262	344	128	65	118	130/145	185	14/19	M12

UPS 65-60/2 F 340, UPS 65-60/2 F B 340



TM00 9447 0197

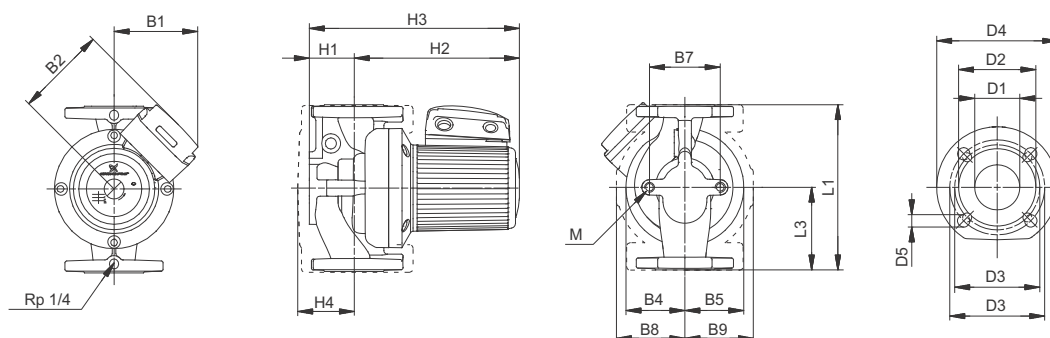
Electrical data

		P_{max} [W]	P_{min} [W]	$I_{1/1}$ [A]	$\cos \varphi$
3 x 400-415 V	Speed 1	330	290	0.56	0.85
	Speed 2	370	320	0.64	0.83
	Speed 3	490	420	1.05	0.67

Weights and volume

	PN 6 / PN 10	PN 6 / PN 10 bronze
Net weight [kg]	24.3	28.8
Gross weight [kg]	26.1	30.1
Shipping volume [m³]	0.043	0.043

Dimensional sketch

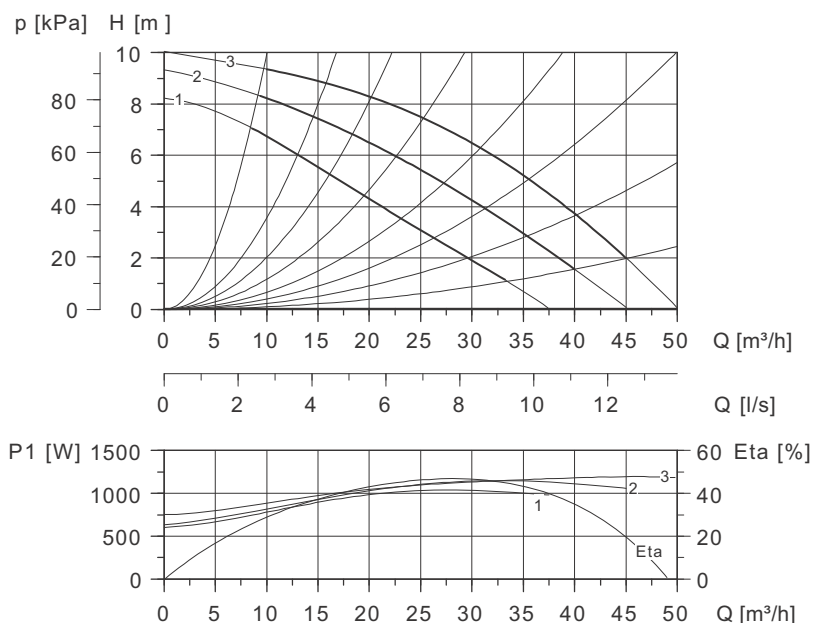


TM02 0701 3601

Dimensions [mm]

	L1	L2	L3	B1	B2	B4	B5	B7	B8	B9	H1	H2	H3	H4	D1	D2	D3	D4	D5	M
PN 6 / PN 10 (bronze)	340		170	135	141	95	75	120	126	126	82	262	344	128	65	118	130/145	185	14/19	M12

UPS 65-120 F 340, UPS 65-120 F B 340



TM00 9448 0197

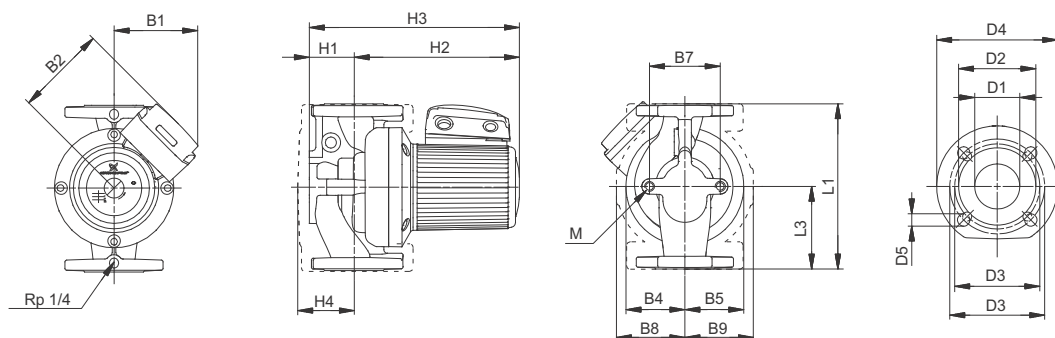
Electrical data

		P_{max} [W]	P_{min} [W]	$I_{1/1}$ [A]	$\cos \varphi$	C [μF]
1 x 230-240 V	Speed 1	1050	600	5.10	0.90	30
	Speed 2	1150	630	5.60	0.89	30
	Speed 3	1200	750	5.50	0.95	30

Weights and volume

	PN 6 / PN 10	PN 6 / PN 10 bronze
Net weight [kg]	29.7	33.5
Gross weight [kg]	31.5	35.3
Shipping volume [m³]	0.043	0.043

Dimensional sketch

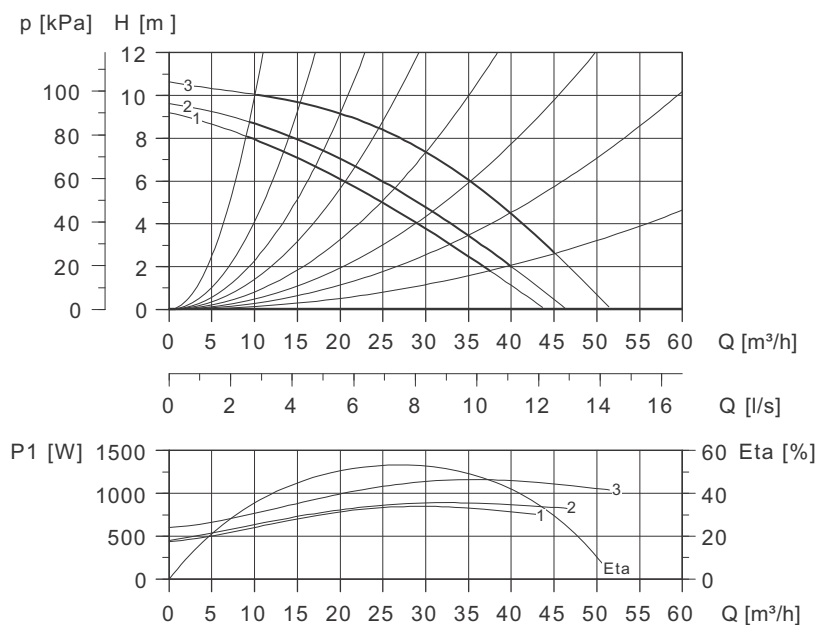


TM02 0701 3601

Dimensions [mm]

	L1	L2	L3	B1	B2	B4	B5	B7	B8	B9	H1	H2	H3	H4	D1	D2	D3	D4	D5	M
PN 6 / PN 10 (bronze)	340		170	145	155	100	100	120	140	140	82	285	367	127	65	118	130/145	185	14/19	M12

UPS 65-120 F 340, UPS 65-120 F B 340



TM00 9449 0197

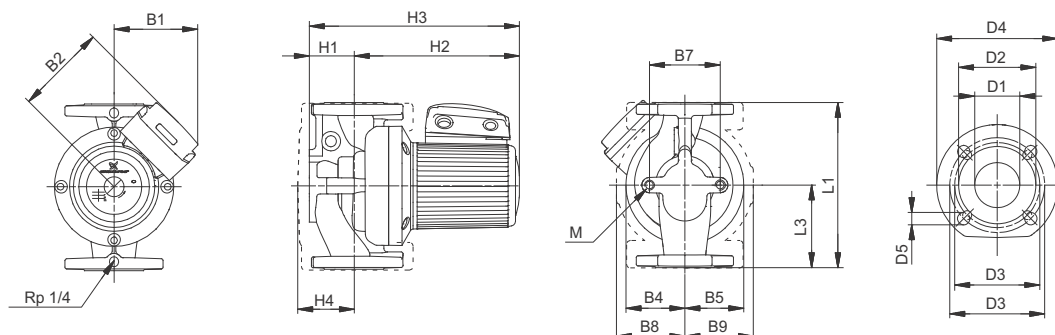
Electrical data

		$P_{\max}$ [W]	$P_{\min}$ [W]	$I_{1/1}$ [A]	$\cos \varphi$
3 x 400-415 V	Speed 1	850	440	1.35	0.91
	Speed 2	900	460	1.45	0.90
	Speed 3	1150	600	2.15	0.77

Weights and volume

	PN 6 / PN 10	PN 6 / PN 10 bronze
Net weight [kg]	27.4	32.5
Gross weight [kg]	28.8	34.0
Shipping volume [m³]	0.043	0.043

Dimensional sketch

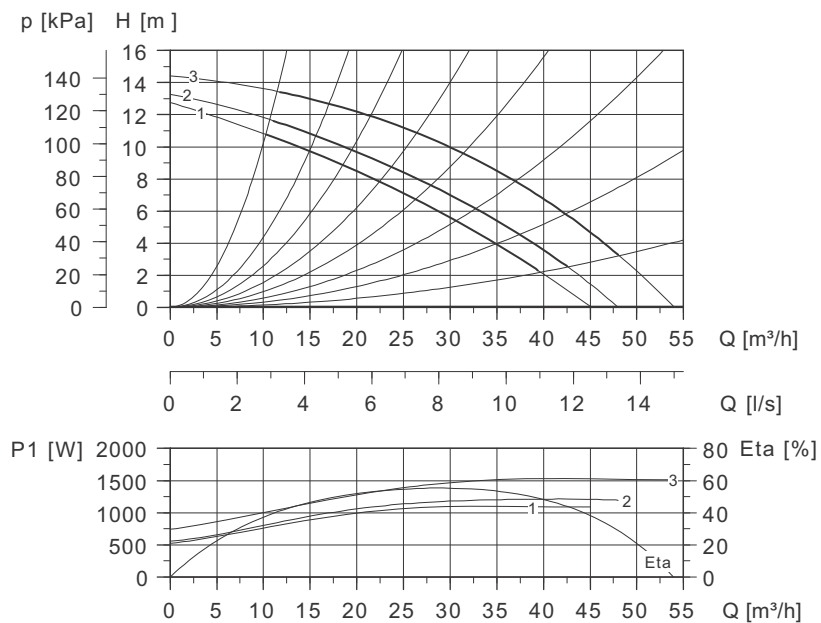


TM02 0701 3601

Dimensions [mm]

	L1	L2	L3	B1	B2	B4	B5	B7	B8	B9	H1	H2	H3	H4	D1	D2	D3	D4	D5	M
PN 6 / PN 10 (bronze)	340		170	145	155	100	100	120	140	140	82	285	367	127	65	118	130/145	185	14/19	M12

UPS 65-180 F 340, UPS 65-180 F B 340



TM00 9450 0197

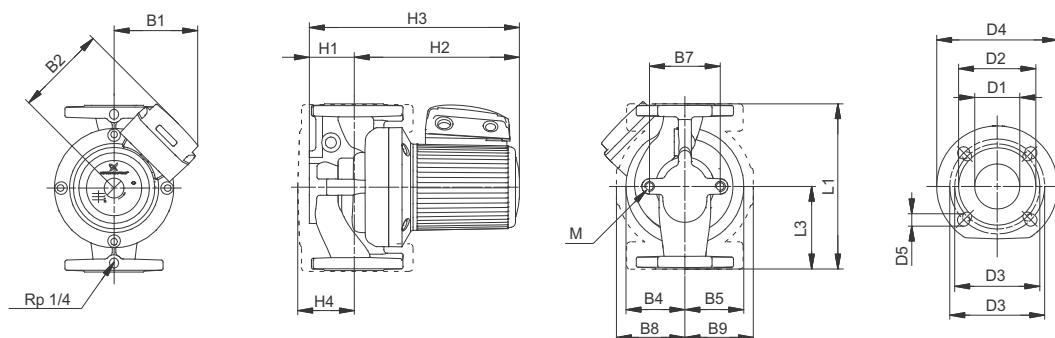
Electrical data

		$P_{\max}$ [W]	$P_{\min}$ [W]	$I_{1/1}$ [A]	$\cos \phi$
3 x 400-415 V	Speed 1	1100	520	1.85	0.86
	Speed 2	1200	560	2.00	0.87
	Speed 3	1550	740	2.90	0.77

Weights and volume

	PN 6 / PN 10	PN 6 / PN 10 bronze
Net weight [kg]	29.3	35.0
Gross weight [kg]	33.1	36.5
Shipping volume [m³]	0.043	0.043

Dimensional sketch

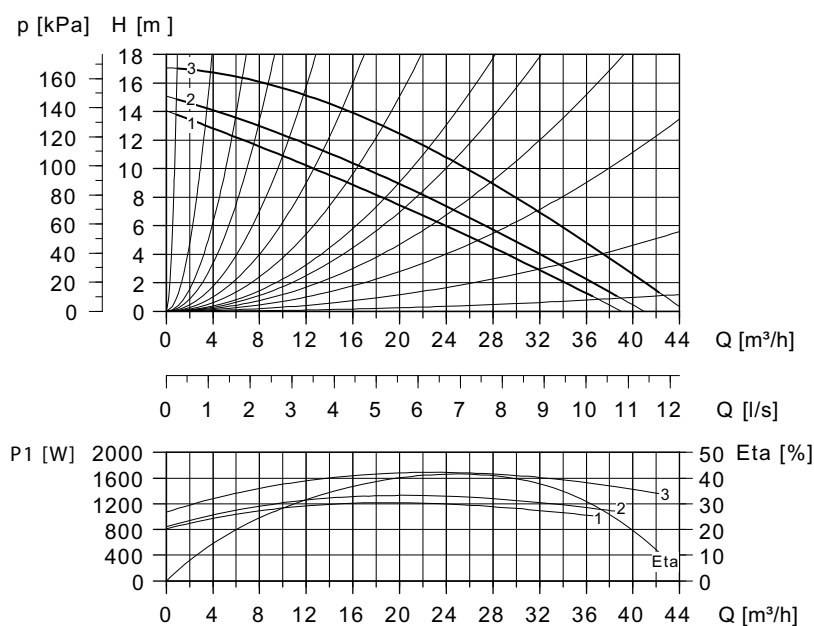


TM02 0701 3601

Dimensions [mm]

	L1	L2	L3	B1	B2	B4	B5	B7	B8	B9	H1	H2	H3	H4	D1	D2	D3	D4	D5	M
PN 6 / PN 10 (bronze)	340		170	145	155	100	100	120	140	140	116	285	367	127	65	118	130/145	185	14/19	M12

UPS 65-185 F 340



TM01 4944 1199

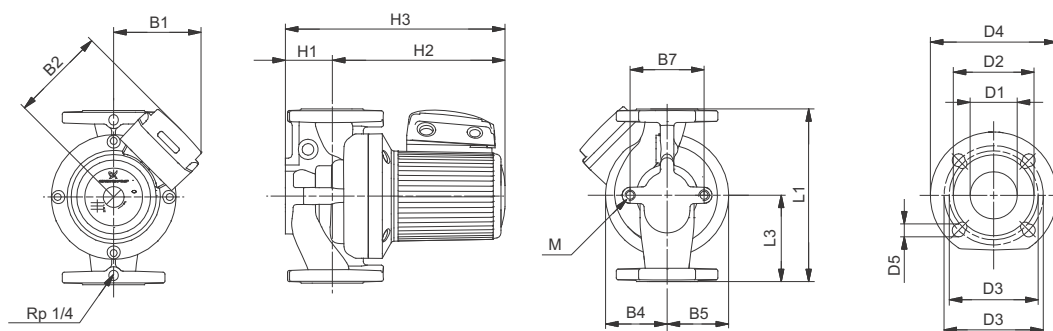
Electrical data

		$P_{\max}$ [W]	$P_{\min}$ [W]	$I_{1/1}$ [A]	$\cos \phi$
3 x 400-415 V	Speed 1	1220	825	2.00	0.88
	Speed 2	1340	860	2.20	0.88
	Speed 3	1710	1100	3.25	0.76

Weights and volume

	PN 6 / PN 10
Net weight [kg]	31.8
Gross weight [kg]	33.7
Shipping volume [m³]	0.055

Dimensional sketch

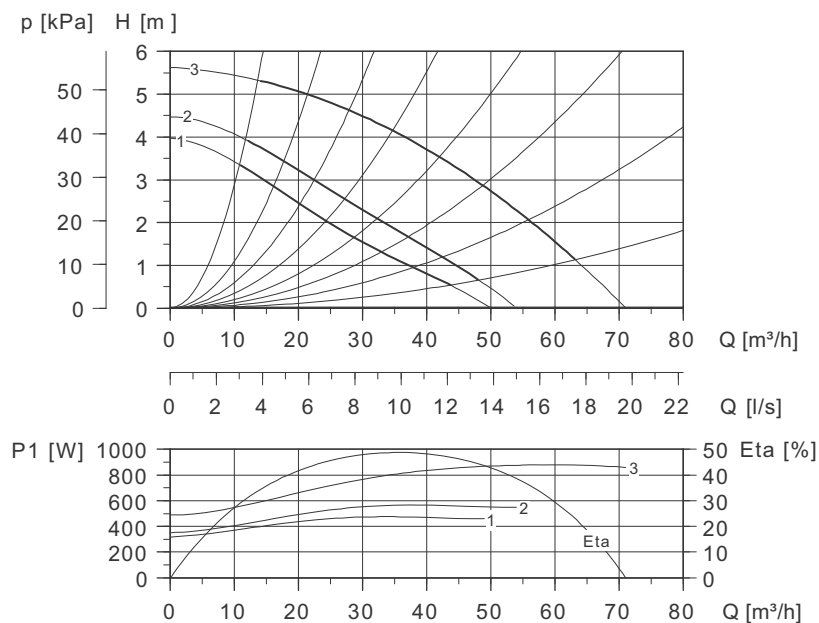


TM03 2075 3605

Dimensions [mm]

	L1	L2	L3	B1	B2	B4	B5	B7	B8	B9	H1	H2	H3	H4	D1	D2	D3	D4	D5	M
PN 6 / PN 10	340		170	145	155	128	100	96			116	282	364	65	118	130/145	185		14/19	M12

UPS 80-60 F 360, UPS 80-60 F B 360



TM00 9452 0197

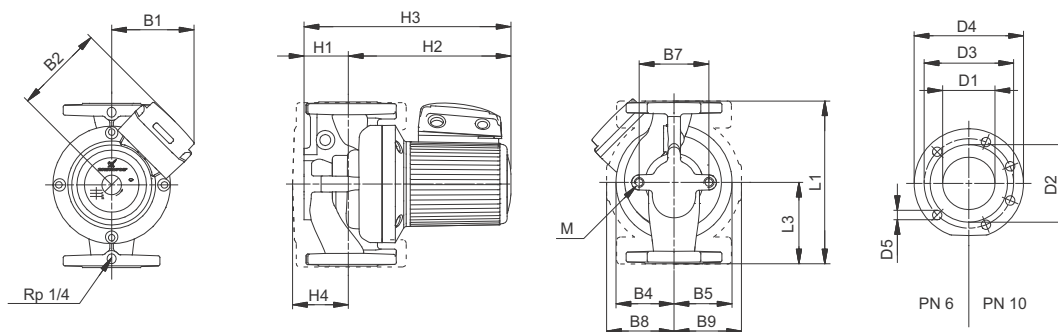
Electrical data

		P_{max} [W]	P_{min} [W]	$I_{1/1}$ [A]	$\cos \varphi$
3 x 400-415 V	Speed 1	470	320	0.84	0.81
	Speed 2	570	350	1.00	0.82
	Speed 3	880	490	1.80	0.71

Weights and volume

	PN 6	PN 10	PN 6 bronze	PN 10 bronze
Net weight [kg]	37.3	37.0	43.0	42.4
Gross weight [kg]	39.2	39.0	44.9	44.3
Shipping volume [m³]	0.055	0.055	0.055	0.055

Dimensional sketch

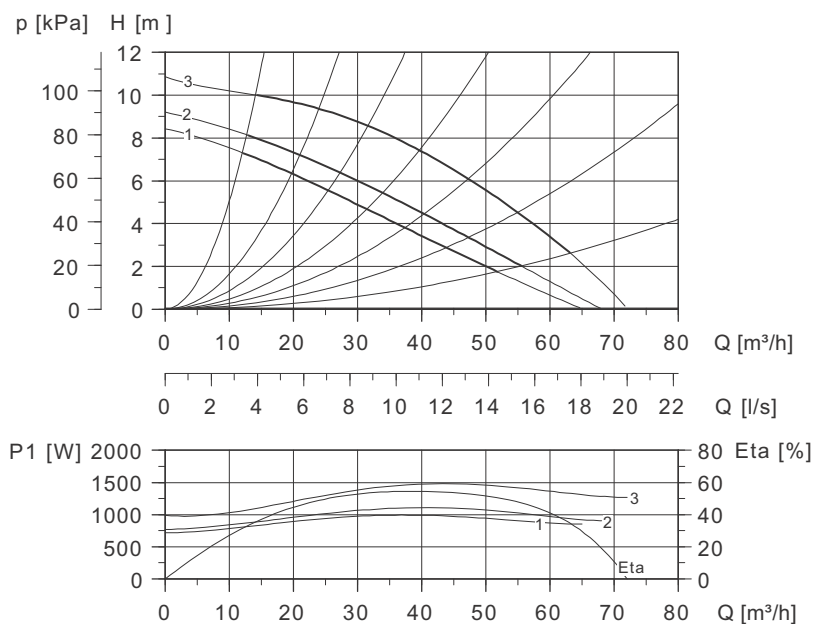


TM02 0733 5100

Dimensions [mm]

	L1	L2	L3	B1	B2	B4	B5	B7	B8	B9	H1	H2	H3	H4	D1	D2	D3	D4	D5	M
PN 6 (bronze)	360		180	145	155	135	100	160	165	145	107	295	402	160	80	132	150	200	4x19	M12
PN 10 (bronze)	360		180	145	155	135	100	160	165	145	107	295	402	160	80	132	160	200	8x19	M12

UPS 80-120 F 360, UPS 80-120 F B 360



TM00 9453 0197

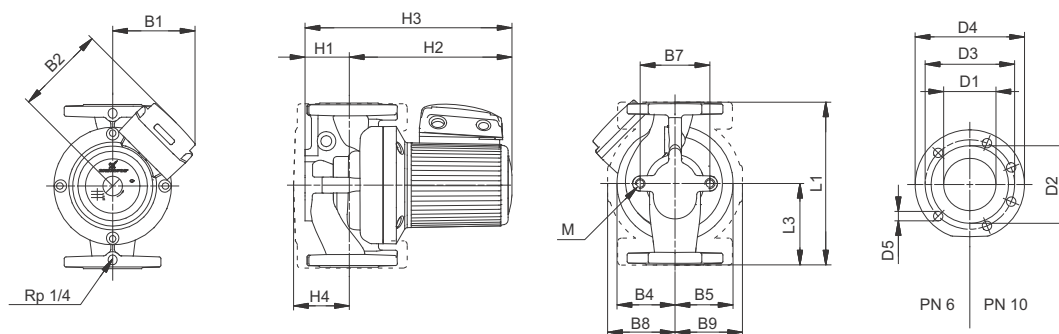
Electrical data

		$P_{\max}$ [W]	$P_{\min}$ [W]	$I_{1/1}$ [A]	$\cos \varphi$
3 x 400-415 V	Speed 1	1000	710	1.65	0.87
	Speed 2	1100	760	1.80	0.88
	Speed 3	1500	960	2.75	0.79

Weights and volume

	PN 6	PN 10	PN 6 bronze	PN 10 bronze
Net weight [kg]	36.7	36.7	43.0	43.0
Gross weight [kg]	38.6	38.6	45.0	45.0
Shipping volume [m³]	0.055	0.055	0.055	0.055

Dimensional sketch

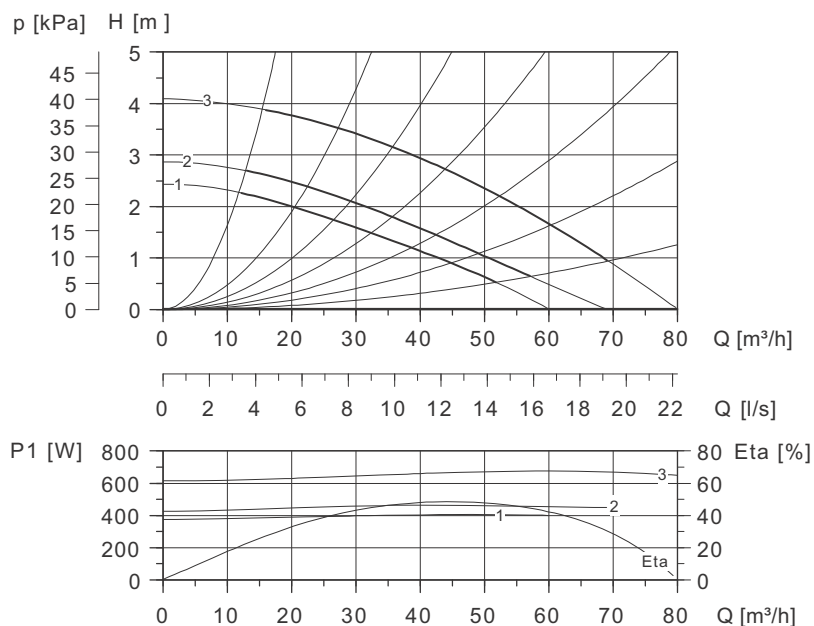


TM02 0733 5100

Dimensions [mm]

	L1	L2	L3	B1	B2	B4	B5	B7	B8	B9	H1	H2	H3	H4	D1	D2	D3	D4	D5	M
PN 6 (bronze)	360		180	145	155	125	100	160	165	145	97	297	394	160	80	132	150	200	4x19	M12
PN 10 (bronze)	360		180	145	155	125	100	160	165	145	97	297	394	160	80	132	160	200	8x19	M12

UPS 100-30 F 450, UPS 100-30 F B 450



TM00 9454 0197

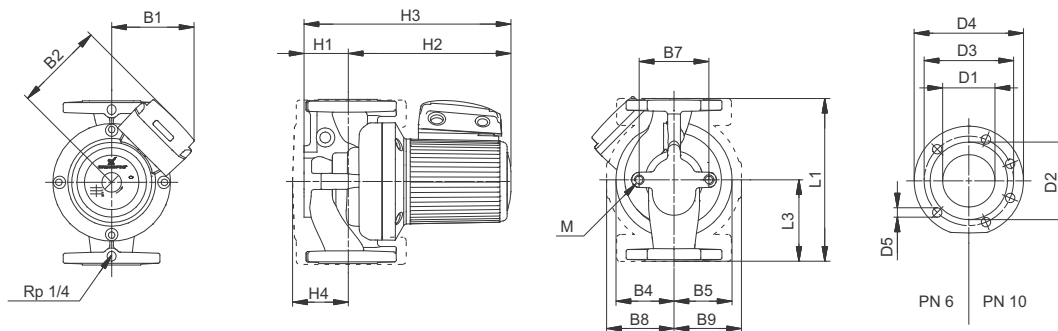
Electrical data

		P_{max} [W]	P_{min} [W]	$I_{1/1}$ [A]	$\cos \varphi$
3 x 400-415 V	Speed 1	410	380	0.72	0.82
	Speed 2	460	430	0.84	0.79
	Speed 3	670	610	1.55	0.62

Weights and volume

	PN 6	PN 10	PN 6 bronze	PN 10 bronze
Net weight [kg]	46.5	46.5	53.1	55.6
Gross weight [kg]	49.0	49.0	55.6	56.2
Shipping volume [m³]	0.087	0.087	0.087	0.087

Dimensional sketch

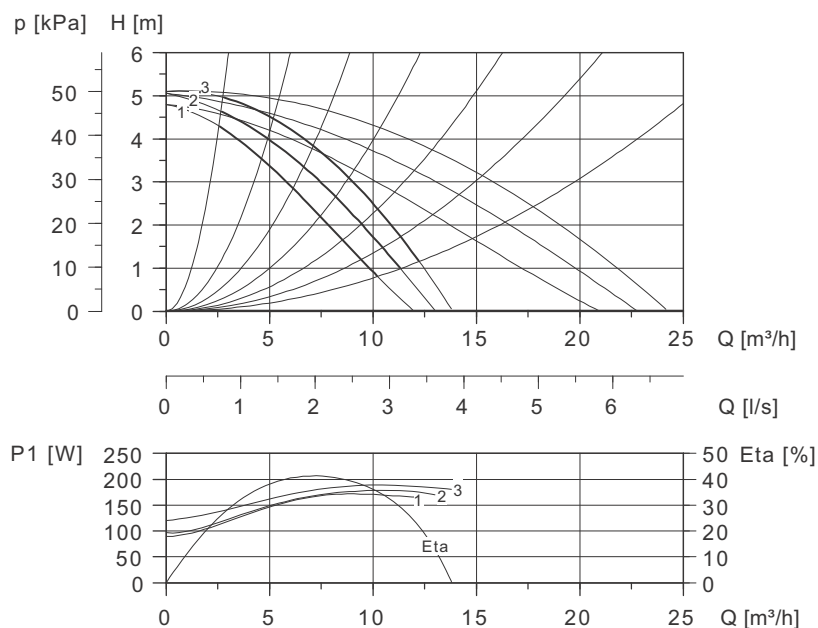


TM02 0733 5100

Dimensions [mm]

	L1	L2	L3	B1	B2	B4	B5	B7	B8	B9	H1	H2	H3	H4	D1	D2	D3	D4	D5	M
PN 6 (bronze)	450		225	145	155	175	120	200	226	174	122	316	438	186	100	156	170	220	4x19	M12
PN 10 (bronze)	450		225	145	155	175	120	200	226	174	122	316	438	186	100	156	180	220	8x19	M12

UPSD 32-60 F 220

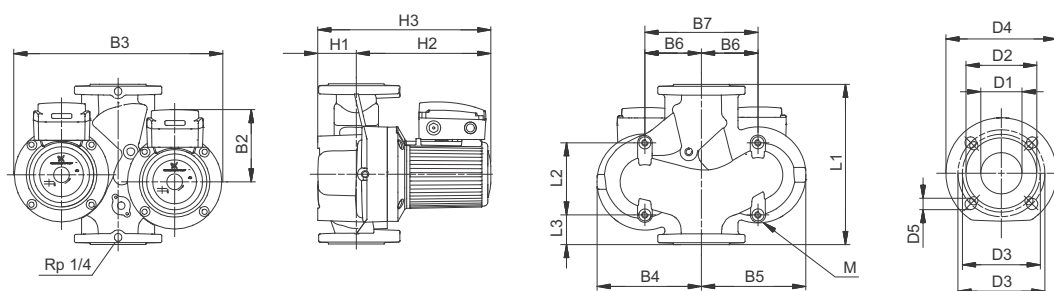


TM00 9459 0197

Electrical data

		P_{max} [W]	P_{min} [W]	$I_{1/1}$ [A]	$\cos \phi$	C [μF]
1 x 230-240 V	Speed 1	170	90	0.84	0.88	6
	Speed 2	180	95	0.86	0.91	6
	Speed 3	190	120	0.88	0.94	6

Dimensional sketch

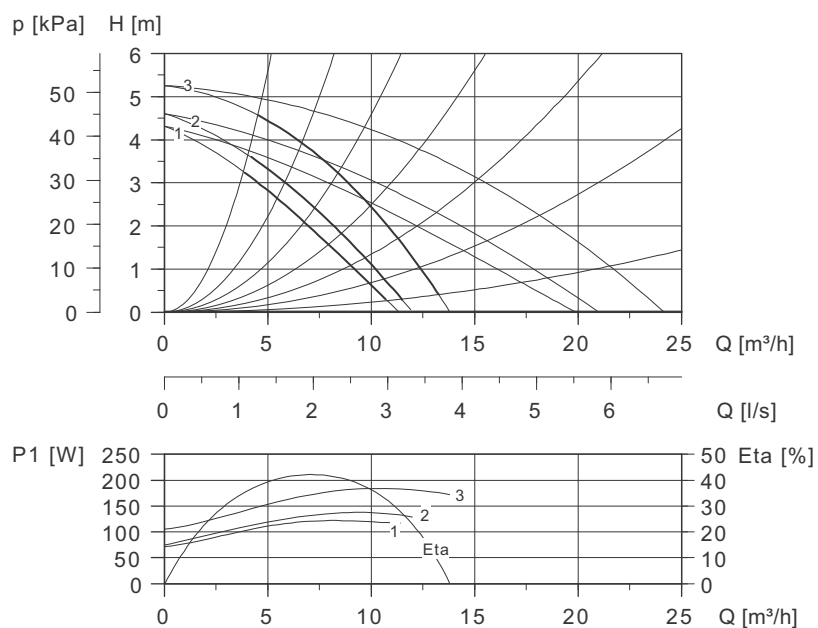


TM02 0703 3601

Dimensions [mm]

	L1	L2	L3	B2	B3	B4	B5	B6	B7	H1	H2	H3	D1	D2	D3	D4	D5	M
PN 6 / PN 10	220	103	52	141	360	180	180	100	200	68	242	310	32	76	90/100	140	14/19	M12

UPSD 32-60 F 220



TM00 9460 0197

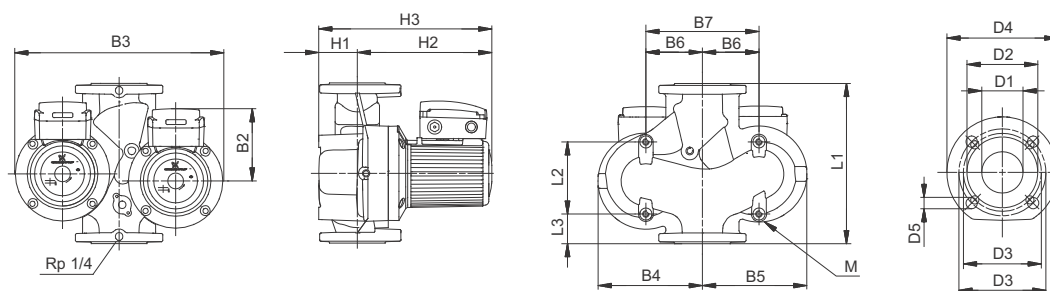
Electrical data

		P_{max} [W]	P_{min} [W]	$I_{1/1}$ [A]	$\cos \varphi$
3 x 400-415 V	Speed 1	120	70	0.21	0.82
	Speed 2	140	75	0.23	0.88
	Speed 3	185	105	0.39	0.68

Weights and volume

	PN 6 / PN 10
Net weight [kg]	31.6
Gross weight [kg]	33.3
Shipping volume [m³]	0.044

Dimensional sketch

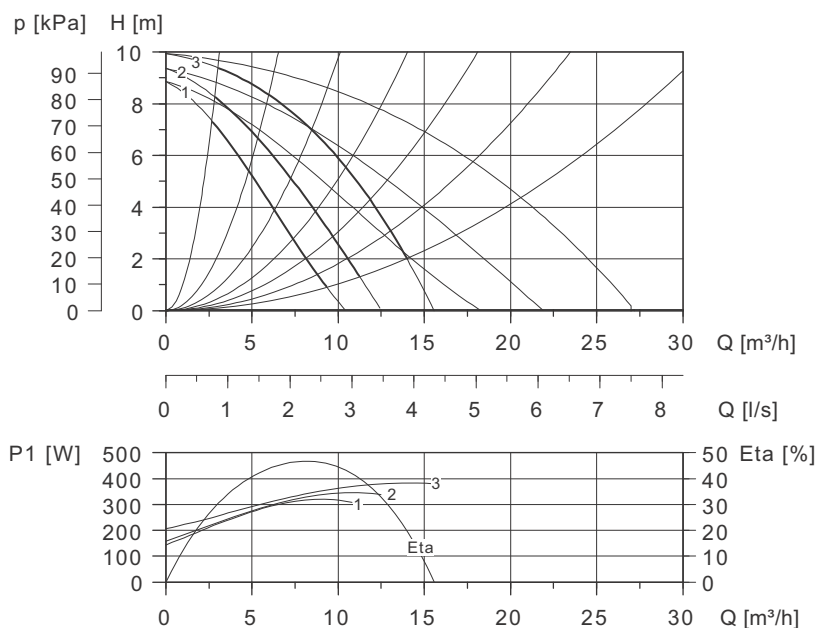


TM02 0703 3601

Dimensions [mm]

	L1	L2	L3	B2	B3	B4	B5	B6	B7	H1	H2	H3	D1	D2	D3	D4	D5	M
PN 6 / PN 10	220	103	52	141	360	180	180	100	200	68	242	310	32	76	90/100	140	14/19	M12

UPSD 32-120 F 220



TM00 9461 0197

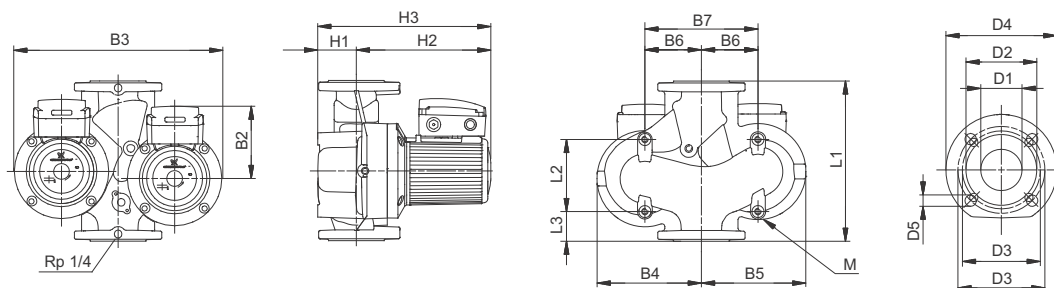
Electrical data

		P_{max} [W]	P_{min} [W]	$I_{1/1}$ [A]	$\cos \varphi$	C [μF]
1 x 230-240 V	Speed 1	320	145	1.55	0.90	10
	Speed 2	340	160	1.65	0.90	10
	Speed 3	380	210	1.75	0.94	10

Weights and volume

	PN 6 / PN 10
Net weight [kg]	32.9
Gross weight [kg]	34.8
Shipping volume [m³]	0.044

Dimensional sketch

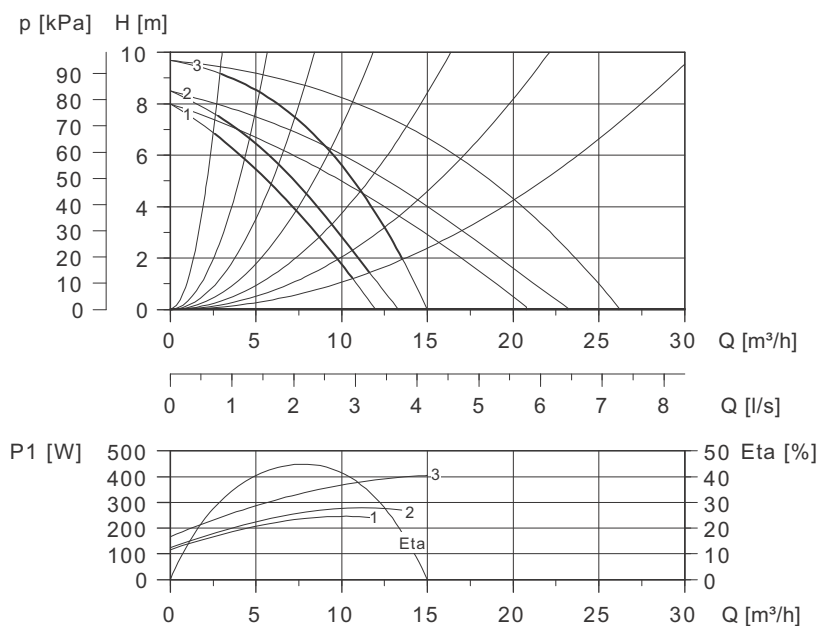


TM02 0703 3601

Dimensions [mm]

	L1	L2	L3	B2	B3	B4	B5	B6	B7	H1	H2	H3	D1	D2	D3	D4	D5	M
PN 6 / PN 10	220	103	52	141	360	180	180	100	200	68	243	311	32	76	90/100	140	14/19	M12

UPSD 32-120 F 220



TM00 9462 0197

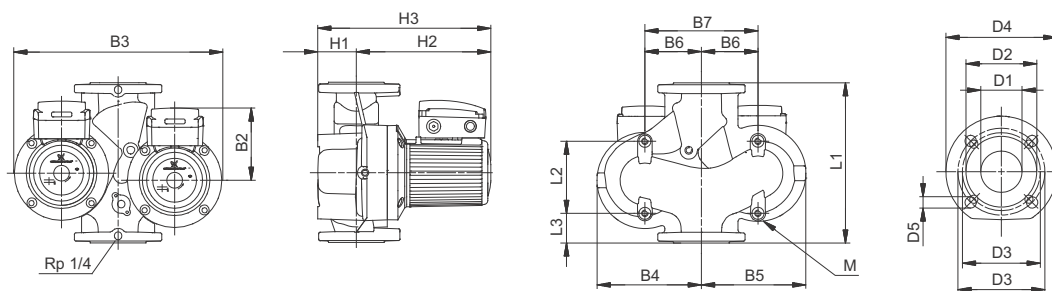
Electrical data

		P_{max} [W]	P_{min} [W]	$I_{1/1}$ [A]	$\cos \varphi$
3 x 400-415 V	Speed 1	245	120	0.42	0.84
	Speed 2	280	130	0.47	0.86
	Speed 3	400	170	0.78	0.74

Weights and volume

	PN 6 / PN 10
Net weight [kg]	33.0
Gross weight [kg]	34.5
Shipping volume [m³]	0.045

Dimensional sketch

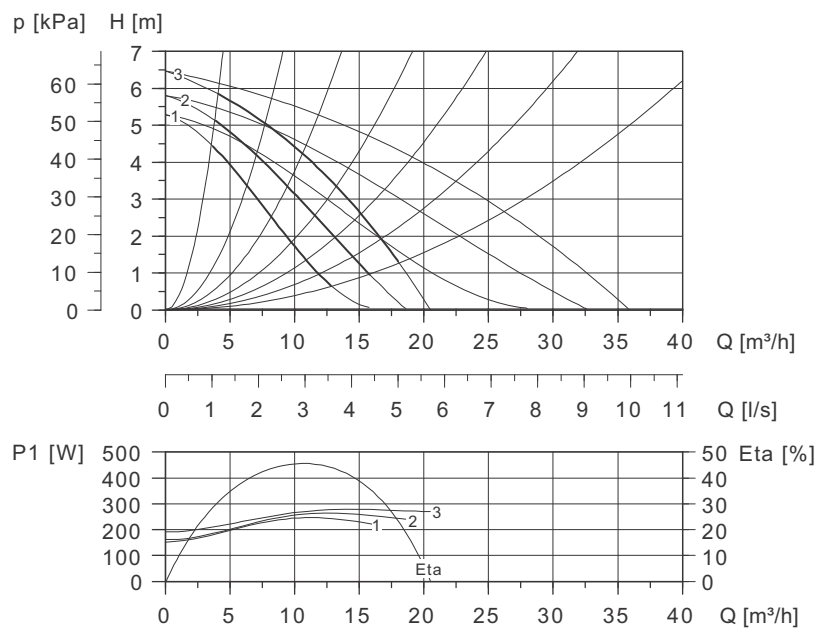


TM02 0703 3601

Dimensions [mm]

	L1	L2	L3	B2	B3	B4	B5	B6	B7	H1	H2	H3	D1	D2	D3	D4	D5	M
PN 6 / PN 10	220	103	52	141	360	180	180	100	200	68	243	311	32	76	90/100	140	14/19	M12

UPSD 40-60 F 250



TM00 9465 0197

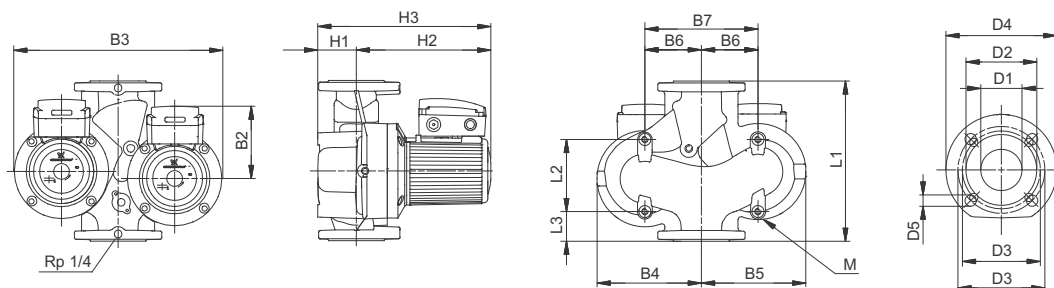
Electrical data

		P_{max} [W]	P_{min} [W]	$I_{1/1}$ [A]	$\cos \varphi$	C [μF]
1 x 230-240 V	Speed 1	250	150	1.25	0.87	8
	Speed 2	260	160	1.25	0.90	8
	Speed 3	280	190	1.30	0.94	8

Weights and volume

	PN 6 / PN 10
Net weight [kg]	33.3
Gross weight [kg]	36.2
Shipping volume [m³]	0.044

Dimensional sketch

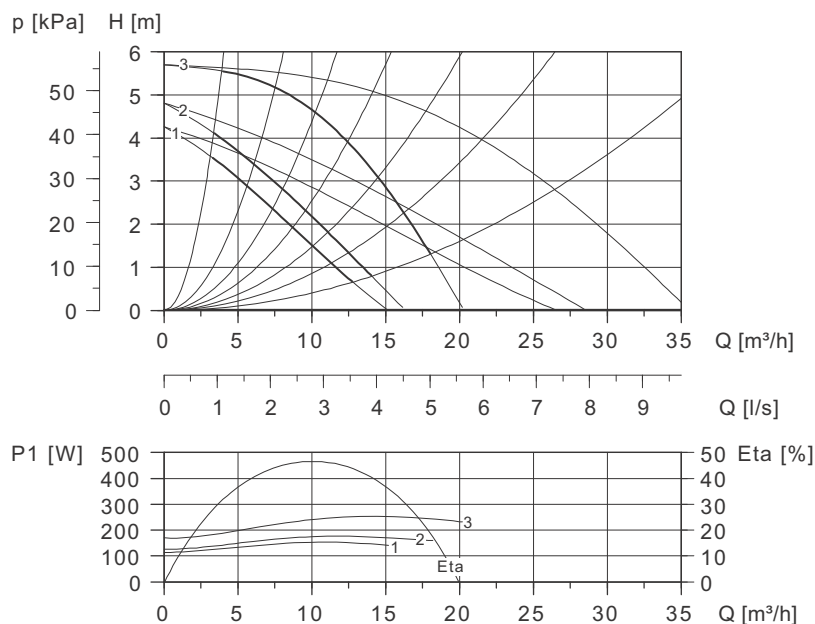


TM02 0703 3601

Dimensions [mm]

	L1	L2	L3	B2	B3	B4	B5	B6	B7	H1	H2	H3	D1	D2	D3	D4	D5	M
PN 6 / PN 10	250	125	45	141	360	180	180	100	200	68	246	314	40	84	100/110	150	14/19	M12

UPSD 40-60 F 250



TM00 9466 0197

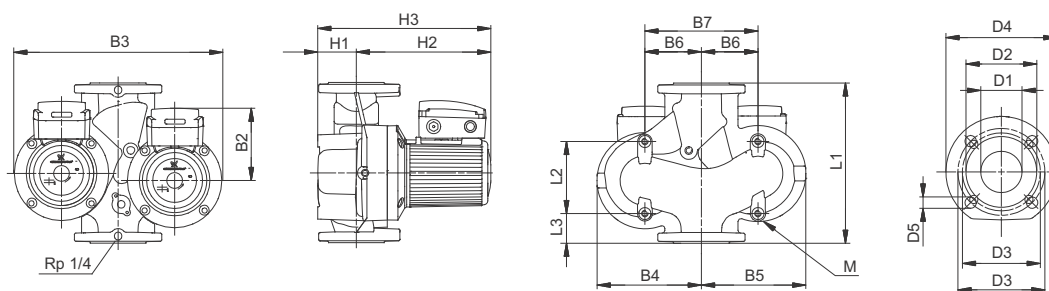
Electrical data

		P_{max} [W]	P_{min} [W]	$I_{1/1}$ [A]	$\cos \varphi$
3 x 400-415 V	Speed 1	155	115	0.25	0.89
	Speed 2	175	125	0.29	0.87
	Speed 3	250	170	0.46	0.78

Weights and volume

	PN 6 / PN 10
Net weight [kg]	32.6
Gross weight [kg]	35.6
Shipping volume [m³]	0.044

Dimensional sketch

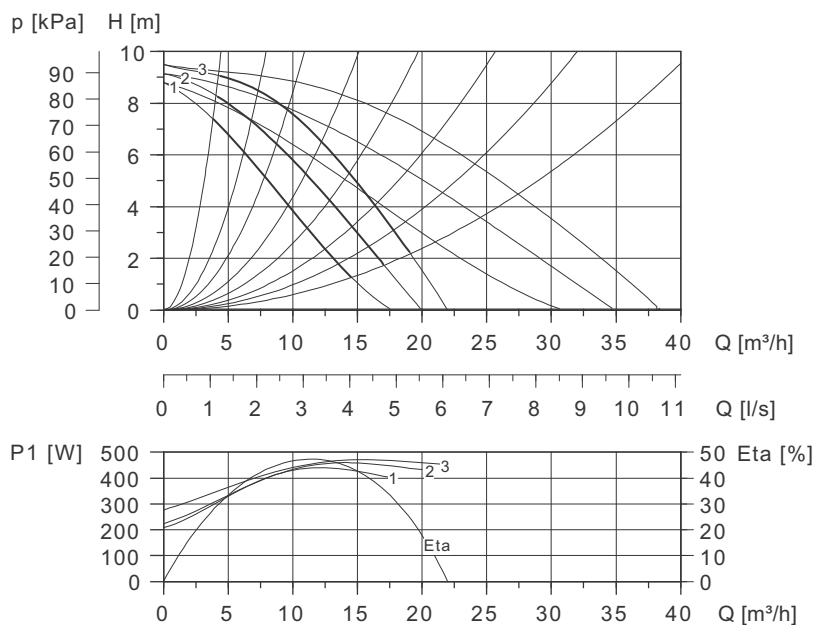


TM02 0703 3601

Dimensions [mm]

	L1	L2	L3	B2	B3	B4	B5	B6	B7	H1	H2	H3	D1	D2	D3	D4	D5	M
PN 6 / PN 10	250	125	45	141	360	180	180	100	200	68	246	314	40	84	100/110	150	14/19	M12

UPSD 40-120 F 250

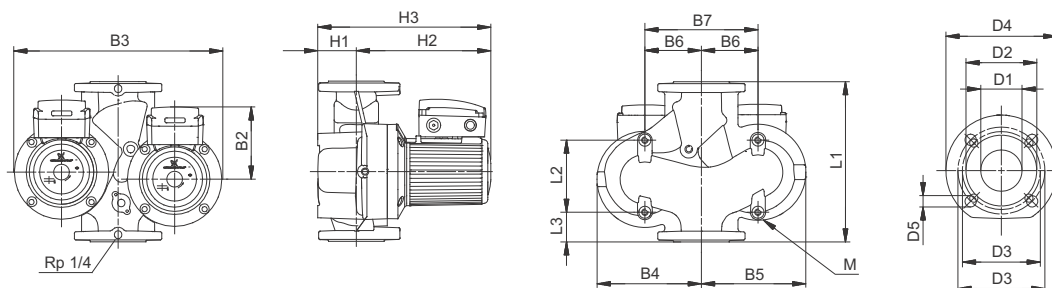


TM00 9467 0197

Electrical data

		P_{max} [W]	P_{min} [W]	$I_{1/1}$ [A]	$\cos \varphi$	C [μF]
1 x 230-240 V	Speed 1	440	210	2.20	0.87	12
	Speed 2	460	225	2.30	0.87	12
	Speed 3	470	280	2.20	0.93	12

Dimensional sketch



TM02 0703 3601

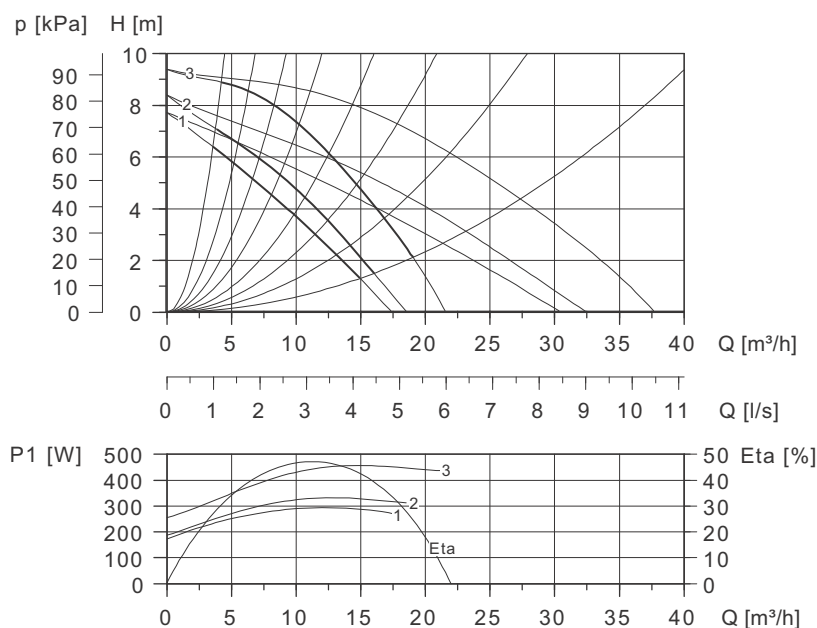
Dimensions [mm]

	L1	L2	L3	B2	B3	B4	B5	B6	B7	H1	H2	H3	D1	D2	D3	D4	D5	M
PN 6 / PN 10	250	125	45	141	360	180	180	100	200	68	248	316	40	84	100/110	150	14/19	M12

Weights and volume

	PN 6 / PN 10
Net weight [kg]	36.5
Gross weight [kg]	38.5
Shipping volume [m³]	0.044

UPSD 40-120 F 250



TM00 9468 0197

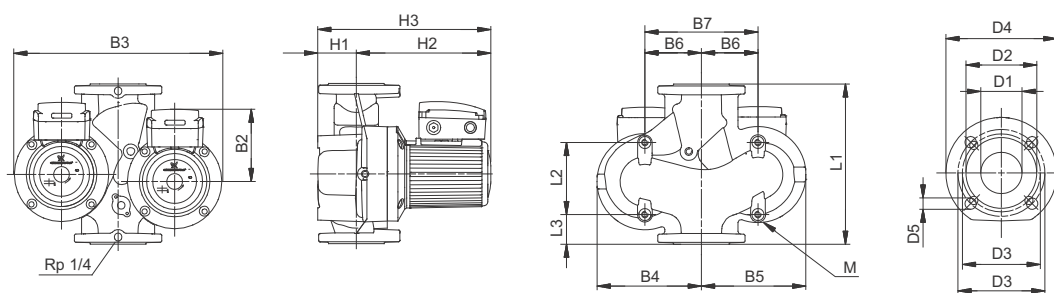
Electrical data

		P_{max} [W]	P_{min} [W]	$I_{1/1}$ [A]	$\cos \varphi$
3 x 400-415 V	Speed 1	290	175	0.49	0.85
	Speed 2	330	190	0.56	0.85
	Speed 3	460	260	0.92	0.72

Weights and volume

	PN 6 / PN 10
Net weight [kg]	33.0
Gross weight [kg]	37.7
Shipping volume [m³]	0.044

Dimensional sketch

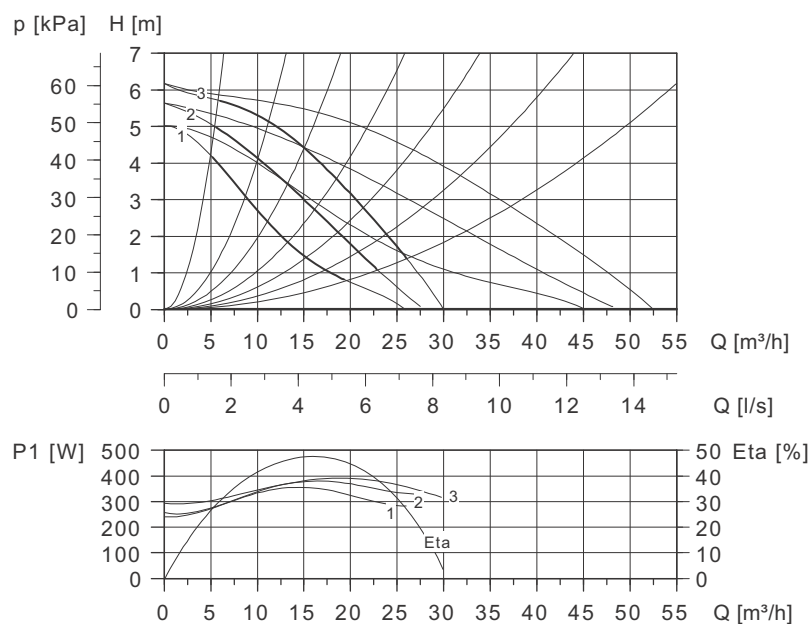


TM02 0703 3601

Dimensions [mm]

	L1	L2	L3	B2	B3	B4	B5	B6	B7	H1	H2	H3	D1	D2	D3	D4	D5	M
PN 6 / PN 10	250	125	45	141	360	180	180	100	200	68	245	313	40	84	100/110	150	14/19	M12

UPSD 50-60/2 F 280



TM00 9473 0197

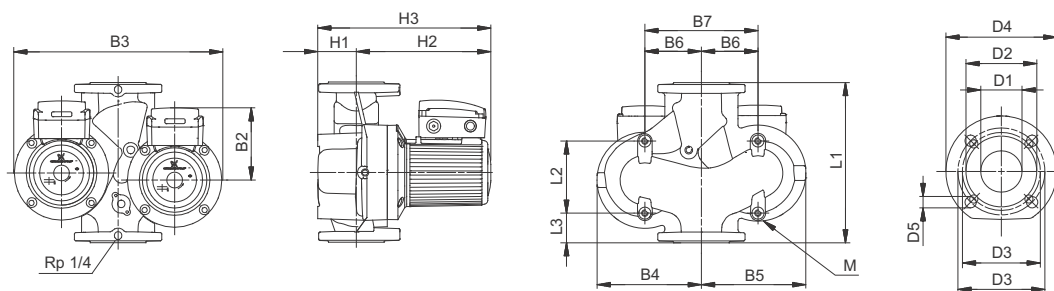
Electrical data

		P_{max} [W]	P_{min} [W]	$I_{1/1}$ [A]	$\cos \varphi$	C [μF]
1 x 230-240 V	Speed 1	350	240	1.75	0.87	10
	Speed 2	380	250	1.85	0.89	10
	Speed 3	390	290	1.80	0.94	10

Weights and volume

	PN 6 / PN 10
Net weight [kg]	39.0
Gross weight [kg]	42.0
Shipping volume [m³]	0.061

Dimensional sketch

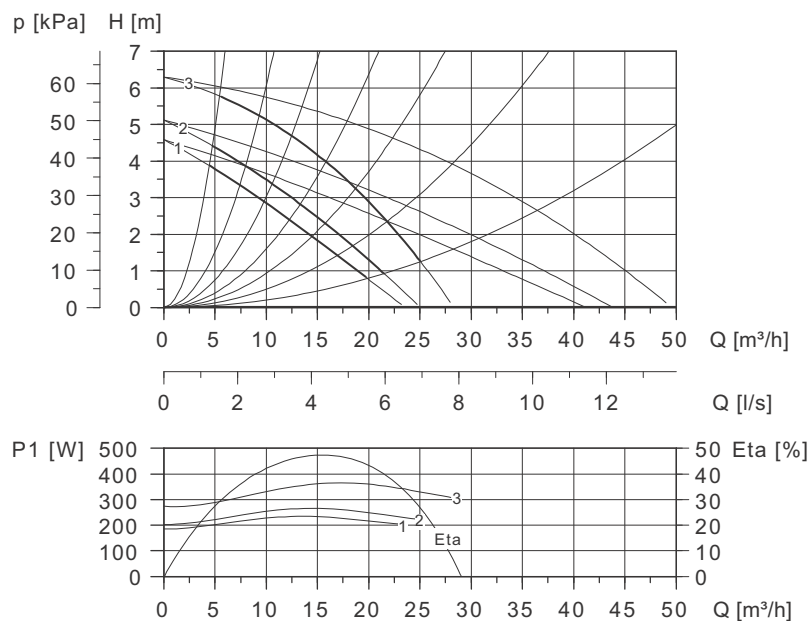


TM02 0703 3601

Dimensions [mm]

	L1	L2	L3	B2	B3	B4	B5	B6	B7	H1	H2	H3	D1	D2	D3	D4	D5	M
PN 6 / PN 10	280	125	60	141	370	190	180	100	200	75	254	329	50	99	110/125	165	14/19	M12

UPSD 50-60/2 F 280



TM00 9474 0197

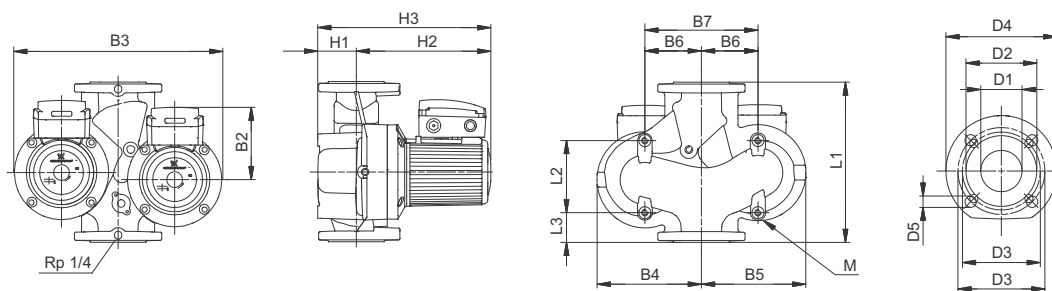
Electrical data

		P_{max} [W]	P_{min} [W]	$I_{1/1}$ [A]	$\cos \phi$
3 x 400-415 V	Speed 1	235	185	0.39	0.87
	Speed 2	270	205	0.45	0.87
	Speed 3	360	270	0.74	0.70

Weights and volume

	PN 6 / PN 10
Net weight [kg]	38.7
Gross weight [kg]	41.1
Shipping volume [m³]	0.061

Dimensional sketch

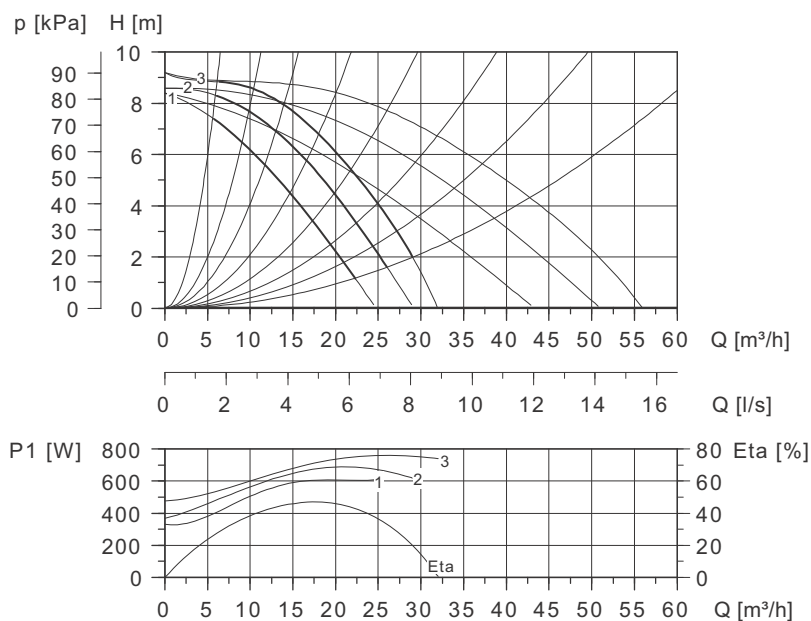


TM02 0703 3601

Dimensions [mm]

	L1	L2	L3	B2	B3	B4	B5	B6	B7	H1	H2	H3	D1	D2	D3	D4	D5	M
PN 6 / PN 10	280	125	60	141	370	190	180	100	200	75	254	329	50	99	110/125	165	14/19	M12

UPSD 50-120 F 280



TM00 9475 0197

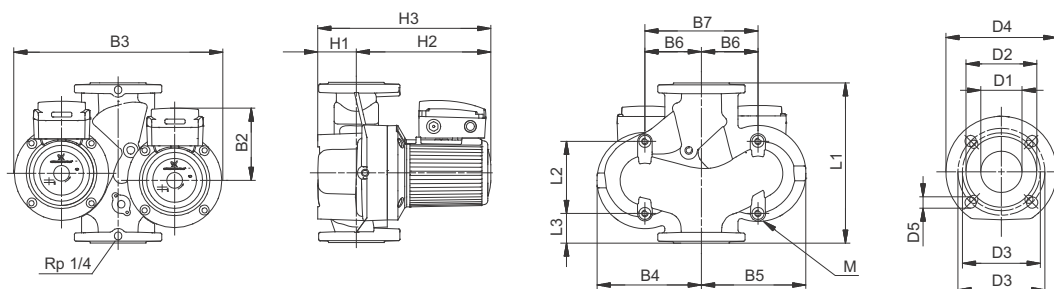
Electrical data

		P_{max} [W]	P_{min} [W]	$I_{1/1}$ [A]	$\cos \varphi$	C [μF]
1 x 230-240 V	Speed 1	620	330	3.05	0.88	25
	Speed 2	700	360	3.35	0.91	25
	Speed 3	760	480	3.60	0.92	25

Weights and volume

	PN 6 / PN 10
Net weight [kg]	56.0
Gross weight [kg]	62.9
Shipping volume [m³]	0.125

Dimensional sketch

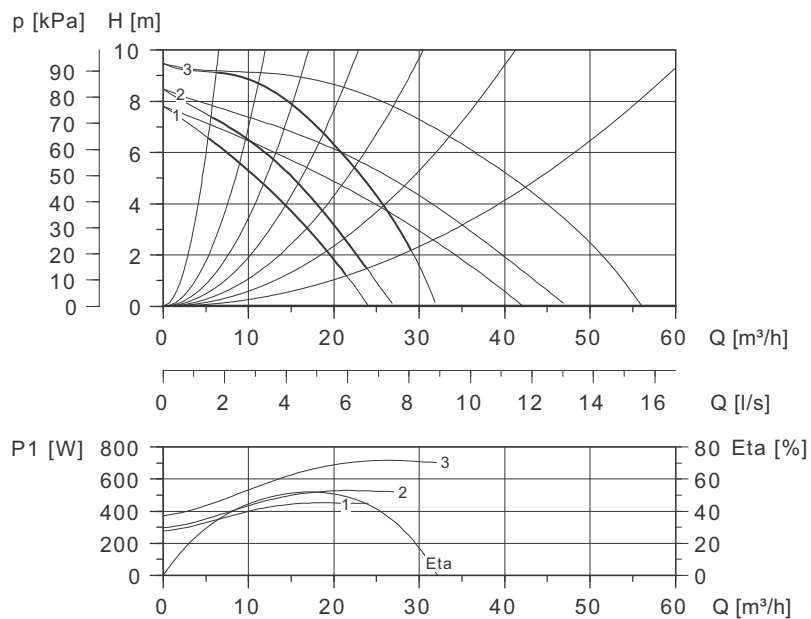


TM02 0703 3601

Dimensions [mm]

	L1	L2	L3	B2	B3	B4	B5	B6	B7	H1	H2	H3	D1	D2	D3	D4	D5	M
PN 6 / PN 10	280	126	60	169	450	225	225	120	240	75	276	351	50	99	110/125	165	14/19	M12

UPSD 50-120 F 280



TM00 9476 0197

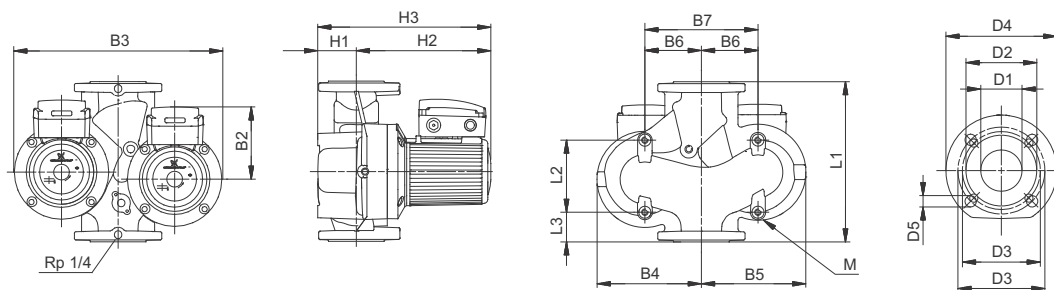
Electrical data

		$P_{\max}$ [W]	$P_{\min}$ [W]	$I_{1/1}$ [A]	$\cos \varphi$
3 x 400-415 V	Speed 1	450	280	0.82	0.79
	Speed 2	530	300	0.94	0.81
	Speed 3	720	380	1.30	0.80

Weights and volume

	PN 6 / PN 10
Net weight [kg]	46.1
Gross weight [kg]	48.1
Shipping volume [m^3]	0.061

Dimensional sketch

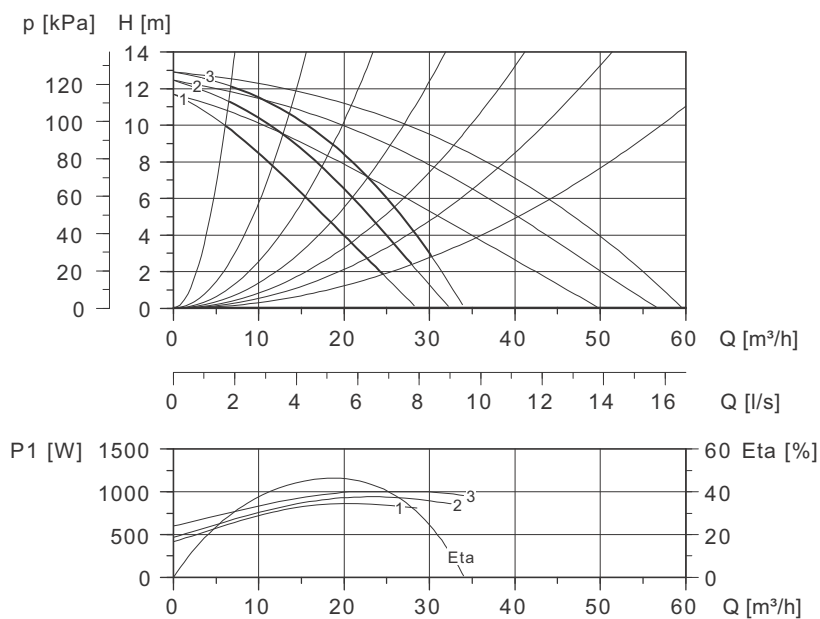


TM02 0703 3601

Dimensions [mm]

	L1	L2	L3	B2	B3	B4	B5	B6	B7	H1	H2	H3	D1	D2	D3	D4	D5	M
PN 6 / PN 10	280	126	60	169	450	225	225	120	240	75	231	306	50	99	110/125	165	14/19	M12

UPSD 50-180 F 280



TM00 9477 0197

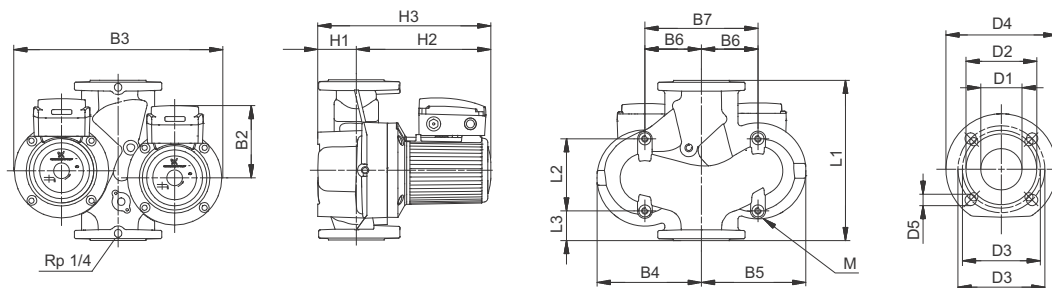
Electrical data

		$P_{\max}$ [W]	$P_{\min}$ [W]	$I_{1/1}$ [A]	$\cos \phi$	C [μF]
1 x 230-240 V	Speed 1	860	420	4.15	0.90	30
	Speed 2	940	470	4.40	0.93	30
	Speed 3	1000	600	4.65	0.94	30

Weights and volume

	PN 6 / PN 10
Net weight [kg]	52.0
Gross weight [kg]	58.9
Shipping volume [m³]	0.125

Dimensional sketch

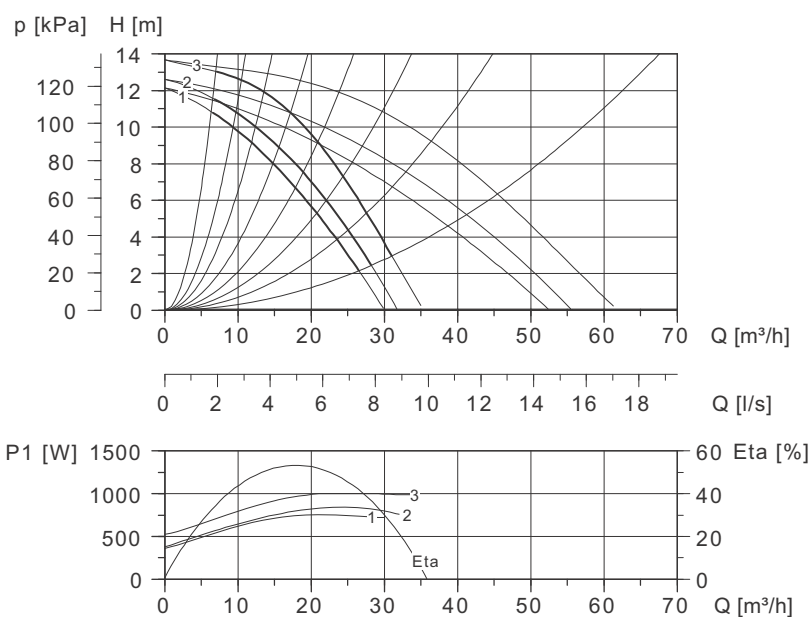


TM02 0703 3601

Dimensions [mm]

	L1	L2	L3	B2	B3	B4	B5	B6	B7	H1	H2	H3	D1	D2	D3	D4	D5	M
PN 6 / PN 10	280	126	60	169	450	225	225	120	240	75	276	351	50	99	110/125	165	14/19	M12

UPSD 50-180 F 280



TM00 9478 0197

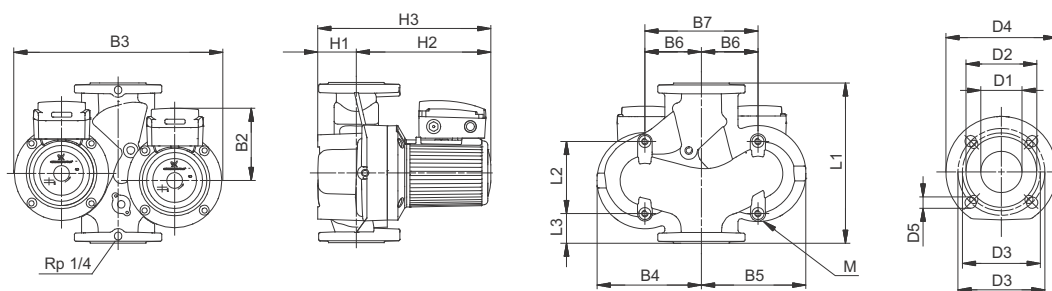
Electrical data

		$P_{\max}$ [W]	$P_{\min}$ [W]	$I_{1/1}$ [A]	$\cos \phi$
3 x 400-415 V	Speed 1	760	360	1.25	0.88
	Speed 2	850	380	1.40	0.88
	Speed 3	1000	520	2.00	0.72

Weights and volume

	PN 6 / PN 10
Net weight [kg]	51.5
Gross weight [kg]	58.4
Shipping volume [m³]	0.125

Dimensional sketch

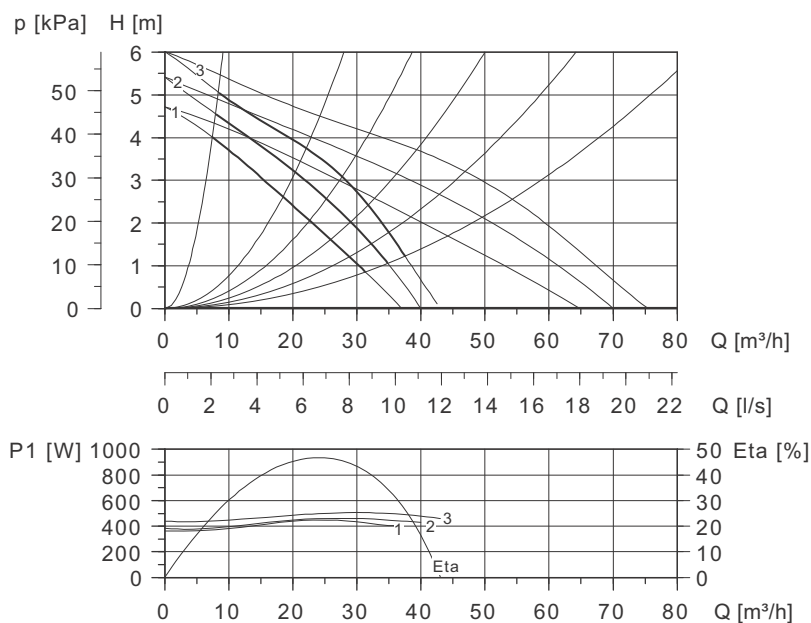


TM02 0703 3601

Dimensions [mm]

	L1	L2	L3	B2	B3	B4	B5	B6	B7	H1	H2	H3	D1	D2	D3	D4	D5	M
PN 6 / PN 10	280	126	60	169	450	225	225	120	240	75	276	351	50	99	110/125	165	14/19	M12

UPSD 65-60/2 F 340



TM00 9483 0197

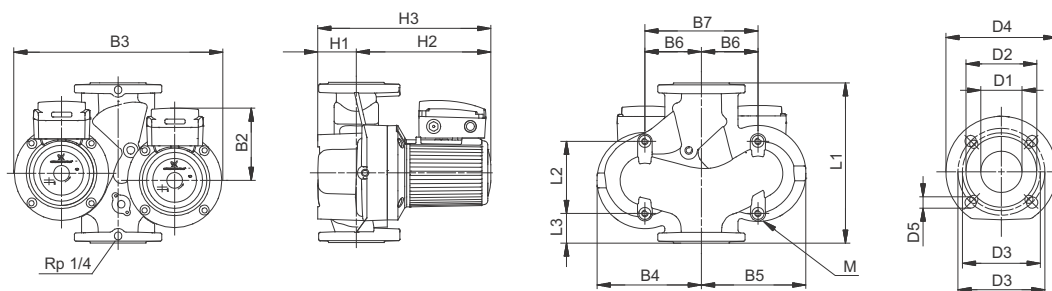
Electrical data

		$P_{\max}$ [W]	$P_{\min}$ [W]	$I_{1/1}$ [A]	$\cos \varphi$	C [μF]
1 x 230-240 V	Speed 1	450	360	2.15	0.91	16
	Speed 2	470	380	2.20	0.93	16
	Speed 3	510	440	2.40	0.92	16

Weights and volume

	PN 6 / PN 10
Net weight [kg]	50.0
Gross weight [kg]	56.9
Shipping volume [m³]	0.125

Dimensional sketch

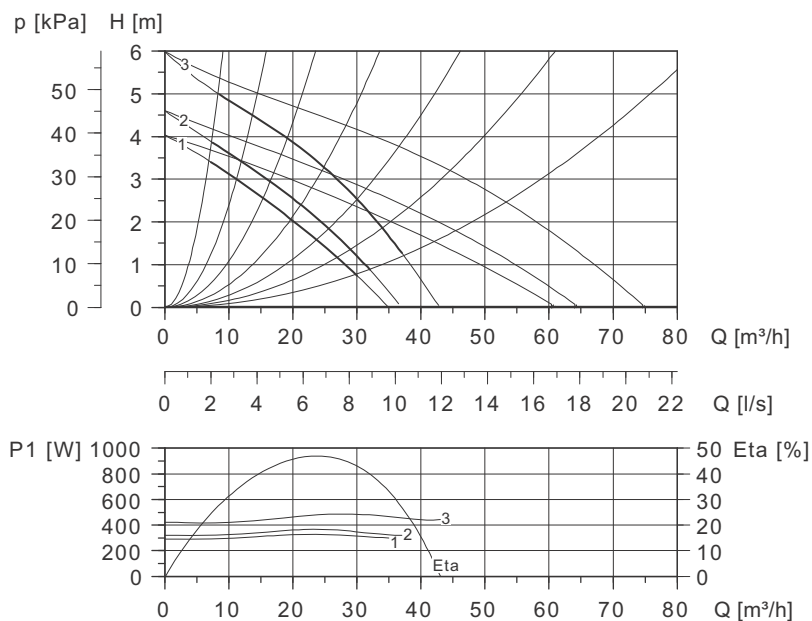


TM02 0703 3601

Dimensions [mm]

	L1	L2	L3	B2	B3	B4	B5	B6	B7	H1	H2	H3	D1	D2	D3	D4	D5	M
PN 6 / PN 10	340	153	63	141	405	210	195	120	240	82	262	344	65	118	130/145	185	14/19	M12

UPSD 65-60/2 F 340



TM00 9484 0197

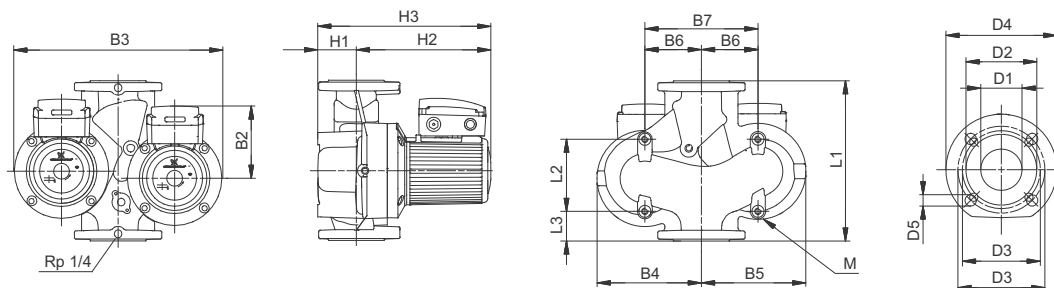
Electrical data

		P_{max} [W]	P_{min} [W]	$I_{1/1}$ [A]	$\cos \varphi$
3 x 400-415 V	Speed 1	330	290	0.56	0.85
	Speed 2	370	320	0.64	0.83
	Speed 3	490	420	1.05	0.67

Weights and volume

	PN 6 / PN 10
Net weight [kg]	49.0
Gross weight [kg]	56.9
Shipping volume [m³]	0.125

Dimensional sketch

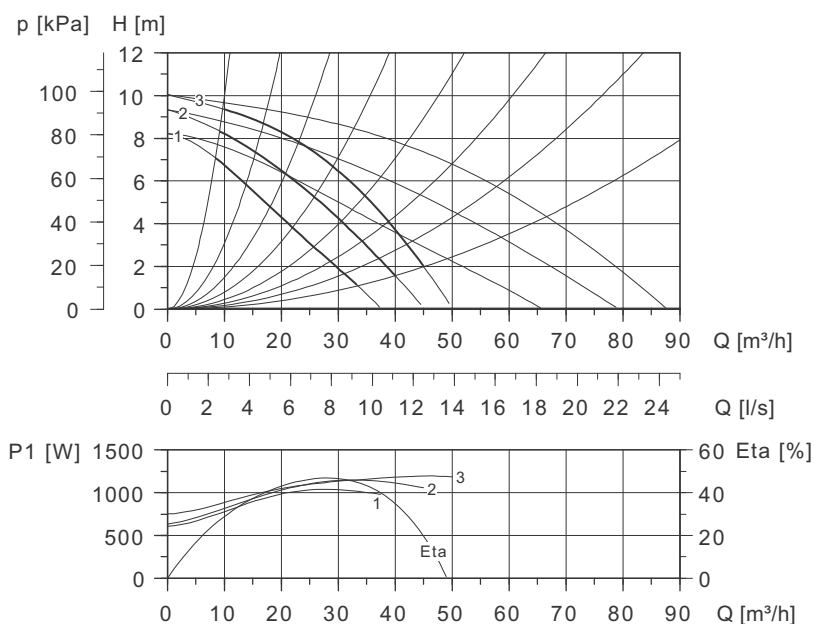


TM02 0703 3601

Dimensions [mm]

	L1	L2	L3	B2	B3	B4	B5	B6	B7	H1	H2	H3	D1	D2	D3	D4	D5	M
PN 6 / PN 10	340	153	63	141	405	210	195	120	240	82	262	344	65	118	130/145	185	14/19	M12

UPSD 65-120 F 340



TM00 9485 0197

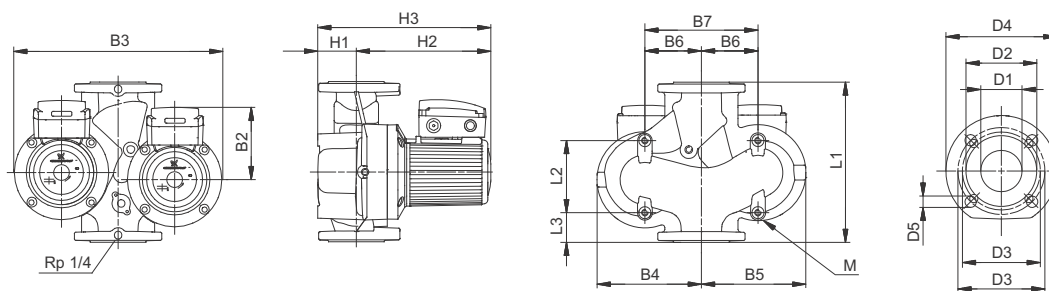
Electrical data

		P_{max} [W]	P_{min} [W]	$I_{1/1}$ [A]	$\cos \phi$	C [μF]
1 x 230-240 V	Speed 1	1050	600	5.10	0.90	30
	Speed 2	1150	630	5.60	0.89	30
	Speed 3	1200	750	5.50	0.95	30

Weights and volume

	PN 6 / PN 10
Net weight [kg]	66.0
Gross weight [kg]	72.9
Shipping volume [m³]	0.125

Dimensional sketch

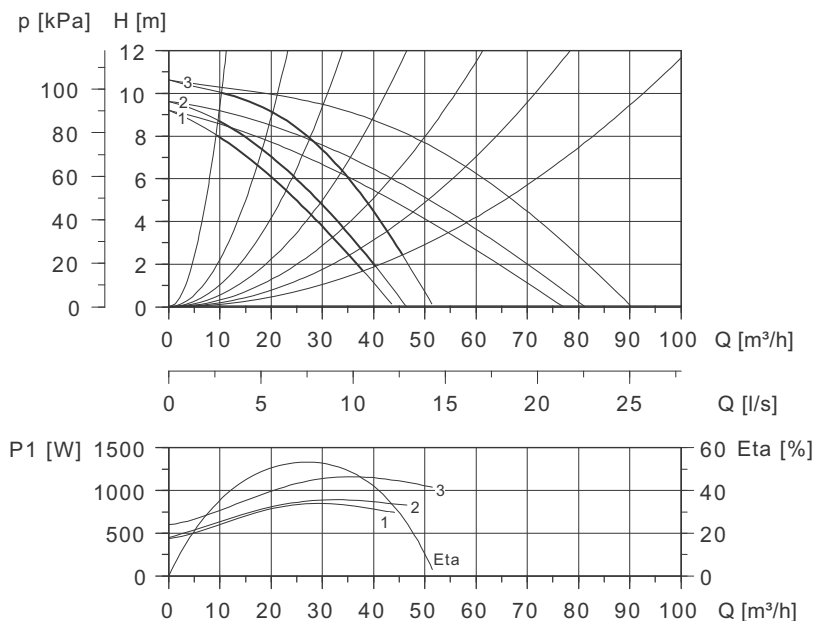


TM02 0703 3601

Dimensions [mm]

	L1	L2	L3	B2	B3	B4	B5	B6	B7	H1	H2	H3	D1	D2	D3	D4	D5	M
PN 6 / PN 10	340	153	63	169	450	225	225	120	240	82	286	368	65	118	130/145	185	14/19	M12

UPSD 65-120 F 340



TM00 9486 0197

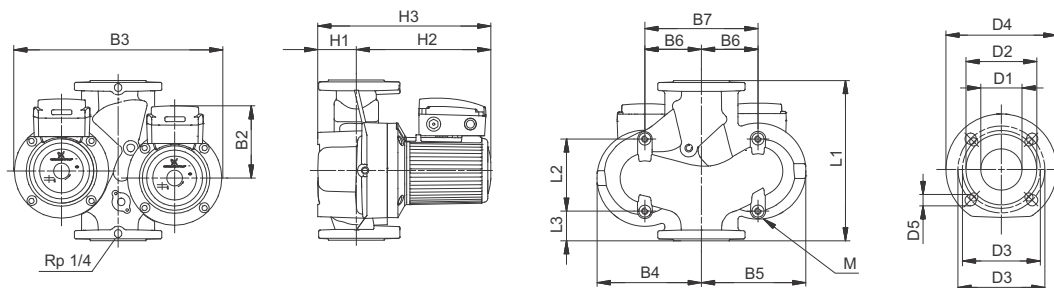
Electrical data

		$P_{\max}$ [W]	$P_{\min}$ [W]	$I_{1/1}$ [A]	$\cos \varphi$
3 x 400-415 V	Speed 1	850	440	1.35	0.91
	Speed 2	900	460	1.45	0.90
	Speed 3	1150	600	2.15	0.77

Weights and volume

	PN 6 / PN 10
Net weight [kg]	53.0
Gross weight [kg]	60.0
Shipping volume [m³]	0.125

Dimensional sketch

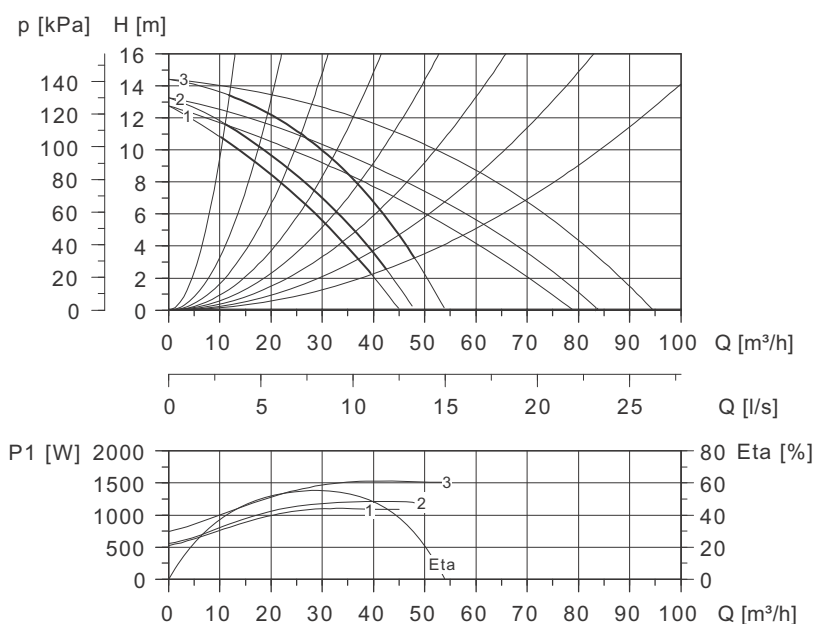


TM02 0703 3601

Dimensions [mm]

	L1	L2	L3	B2	B3	B4	B5	B6	B7	H1	H2	H3	D1	D2	D3	D4	D5	M
PN 6 / PN 10	340	153	63	169	450	225	225	120	240	82	286	368	65	118	130/145	185	14/19	M12

UPSD 65-180 F 340



TM00 9487 0197

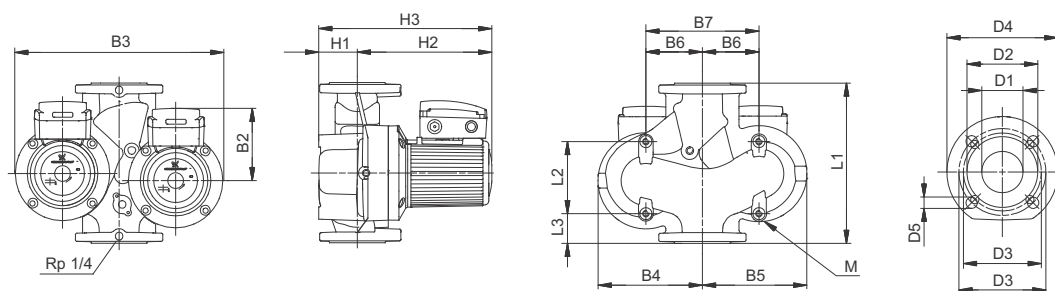
Electrical data

		$P_{\max}$ [W]	$P_{\min}$ [W]	$I_{1/1}$ [A]	$\cos \varphi$
3 x 400-415 V	Speed 1	1100	520	1.85	0.86
	Speed 2	1200	560	2.00	0.87
	Speed 3	1550	740	2.90	0.77

Weights and volume

	PN 6 / PN 10
Net weight [kg]	70.0
Gross weight [kg]	76.9
Shipping volume [m³]	0.125

Dimensional sketch

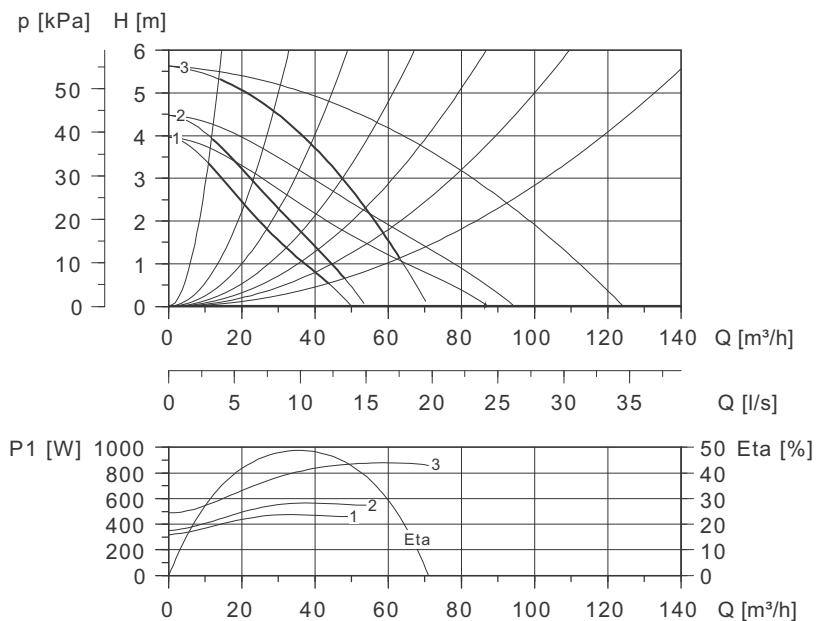


TM02 0703 3601

Dimensions [mm]

	L1	L2	L3	B2	B3	B4	B5	B6	B7	H1	H2	H3	D1	D2	D3	D4	D5	M
PN 6 / PN 10	340	153	63	169	450	225	225	120	240	82	286	368	65	118	130/145	185	14/19	M12

UPSD 80-60 F 360

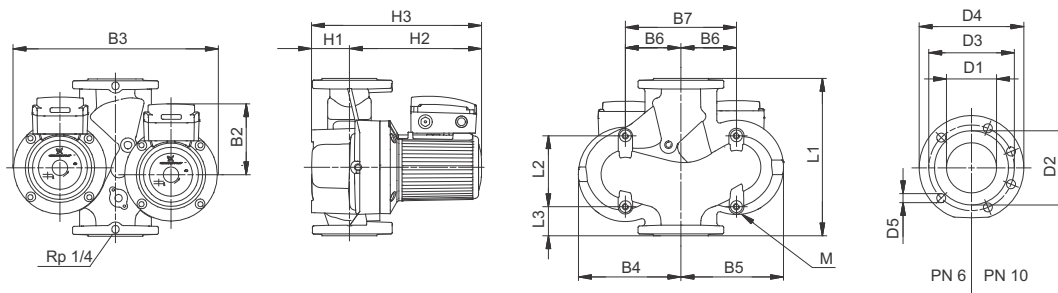


TM00 9489 0197

Electrical data

		$P_{\max}$ [W]	$P_{\min}$ [W]	$I_{1/1}$ [A]	$\cos \varphi$
3 x 400-415 V	Speed 1	470	320	0.84	0.81
	Speed 2	570	350	1.00	0.82
	Speed 3	880	490	1.80	0.71

Dimensional sketch

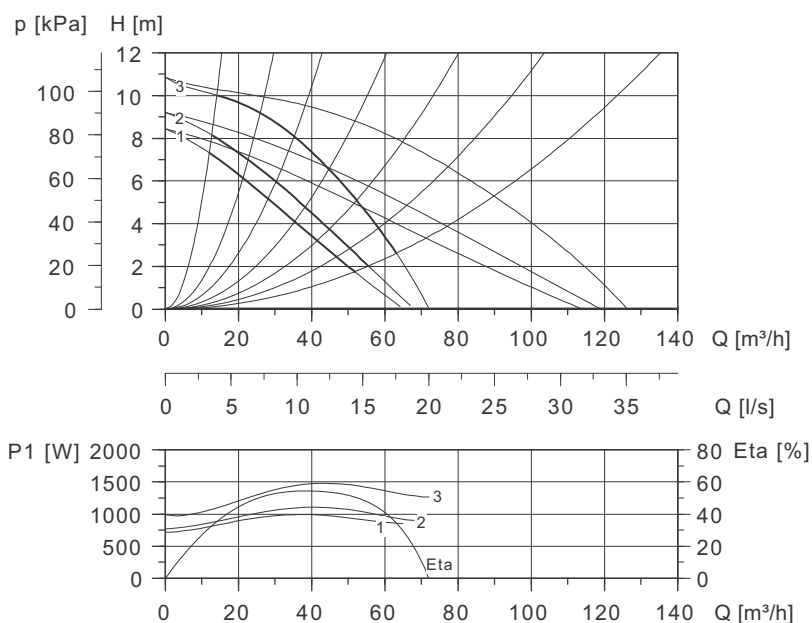


TM02 0815 3601

Dimensions [mm]

	L1	L2	L3	B2	B3	B4	B5	B6	B7	H1	H2	H3	D1	D2	D3	D4	D5	M
PN 6	360	173	53	169	490	250	240	120	240	107	294	401	80	132	150	200	4x19	M12
PN 10	360	173	53	169	490	250	240	120	240	107	294	401	80	132	160	200	8x19	M12

UPSD 80-120 F 360



TM00 9490 0197

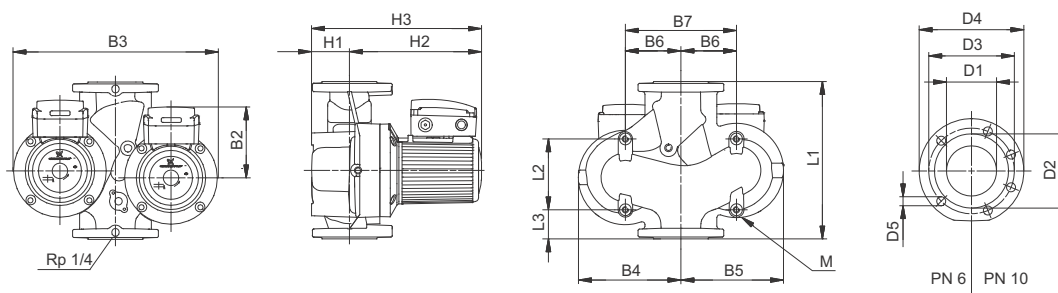
Electrical data

		$P_{\max}$ [W]	$P_{\min}$ [W]	$I_{1/1}$ [A]	$\cos \varphi$
3 x 400-415 V	Speed 1	1000	710	1.65	0.87
	Speed 2	1100	760	1.80	0.88
	Speed 3	1500	960	2.75	0.79

Weights and volume

	PN 6 / PN 10
Net weight [kg]	75.5
Gross weight [kg]	83.2
Shipping volume [m³]	0.200

Dimensional sketch

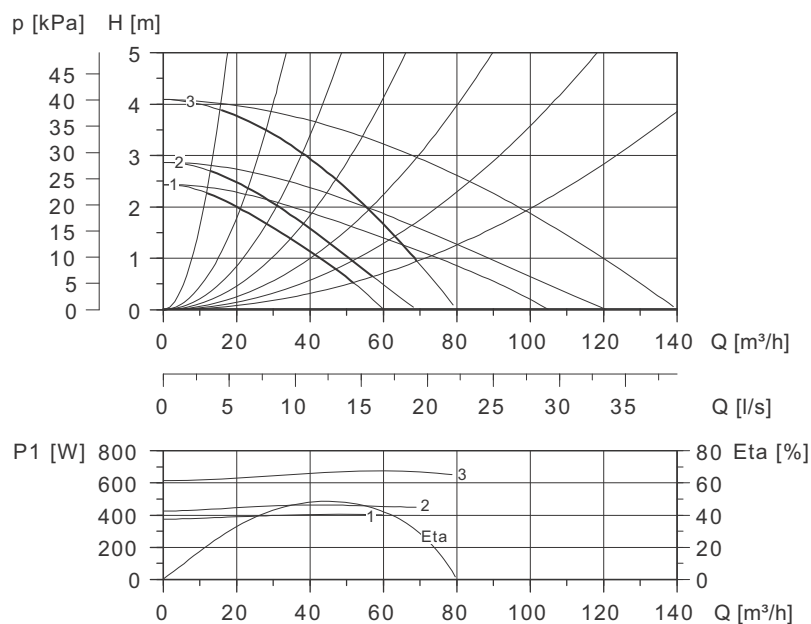


TM02 0815 3601

Dimensions [mm]

	L1	L2	L3	B2	B3	B4	B5	B6	B7	H1	H2	H3	D1	D2	D3	D4	D5	M
PN 6	360	173	53	169	460	235	225	120	240	97	294	391	80	132	150	200	4x19	M12
PN 10	360	173	53	169	460	235	225	120	240	97	294	391	80	132	160	200	8x19	M12

UPSD 100-30 F 450



TM00 9491 0197

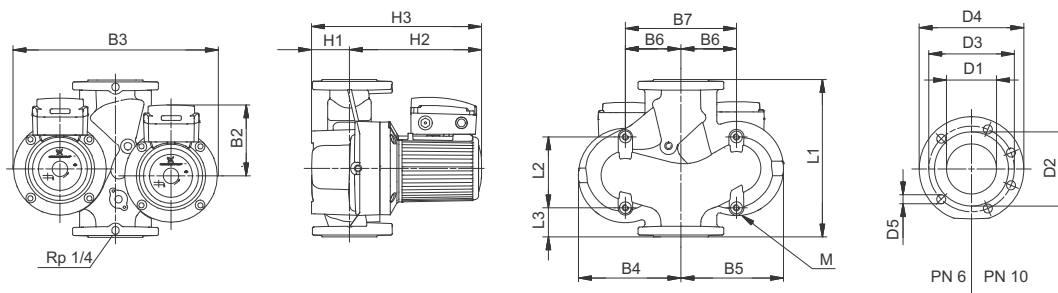
Electrical data

		P_{max} [W]	P_{min} [W]	$I_{1/1}$ [A]	$\cos \varphi$
3 x 400-415 V	Speed 1	410	380	0.72	0.82
	Speed 2	460	430	0.84	0.79
	Speed 3	670	610	1.55	0.62

Weights and volume

	PN 6	PN 10
Net weight [kg]	97.4	97.4
Gross weight [kg]	105.1	105.1
Shipping volume [m³]	0.200	0.200

Dimensional sketch



TM02 0815 3601

Dimensions [mm]

	L1	L2	L3	B2	B3	B4	B5	B6	B7	H1	H2	H3	D1	D2	D3	D4	D5	M
PN 6	450	221	83	169	595	315	280	140	280	122	316	438	100	156	170	220	4x19	M16
PN 10	450	221	83	169	595	315	280	140	280	122	316	438	100	156	180	220	8x19	M16

9. Product numbers

UPS, UPSD 32 Connection: 32 mm (1 1/4")										
Terminal box module	Material	Pressure stage	Voltage [V]	Pump type	Product number	Data sheet Page				
				Single-head pumps						
Standard module	Cast iron	PN 6 / PN 10	1 x 230-240	UPS 32-60 F 220	96401771	16				
				UPS 32-120 F 220	96401837	18				
			3 x 400-415	UPS 32-60 F 220	96401777	17				
				UPS 32-120 F 220	96401839	19				
	Bronze	PN 6 / PN 10	1 x 230-240	UPS 32-60 F B 220	96401797	16				
				UPS 32-120 F B 220	96401844	18				
			3 x 400-415	UPS 32-60 F B 220	96401808	17				
				UPS 32-120 F B 220	96401846	19				
				Twin-head pumps						
Standard module	Cast iron	PN 6 / PN 10	1 x 230-240	UPSD 32-60 F 220	96408898	45				
				UPSD 32-120 F 220	96408893	47				
			3 x 400-415	UPSD 32-60 F 220	96408900	46				
				UPSD 32-120 F 220	96408961	48				
Relay module	Cast iron	PN 6 / PN 10	1 x 230-240	UPSD 32-60 F 220	96401783	45				
				UPSD 32-120 F 220	96401841	47				
			3 x 400-415	UPSD 32-60 F 220	96401792	46				
				UPSD 32-120 F 220	96401843	48				
UPS, UPSD 40 Connection: 40 mm (1 1/2")										
Terminal box module	Material	Pressure stage	Voltage [V]	Pump type	Product number	Data sheet Page				
				Single-head pumps						
Standard module	Cast iron	PN 6 / PN 10	1 x 230-240	UPS 40-60/2 F 250	96401915	20				
				UPS 40-120 F 250	96401942	22				
				UPS 40-180 F 250	96401977	24				
				UPS 40-185 F 250	96430299	26				
			3 x 400-415	UPS 40-60/2 F 250	96401917	21				
				UPS 40-120 F 250	96401944	23				
				UPS 40-180 F 250	96401979	25				
				UPS 40-185 F 250	96430296	27				
	Bronze	PN 6 / PN 10	1 x 230-240	UPS 40-60/2 F B 250	96401921	20				
				UPS 40-120 F B 250	96401949	22				
				UPS 40-180 F B 250	96401983	24				
				UPS 40-60/2 F B 250	96401923	21				
			3 x 400-415	UPS 40-120 F B 250	96401951	23				
				UPS 40-180 F B 250	96401985	25				
								Twin-head pumps		
				Standard module	Cast iron	PN 6 / PN 10	1 x 230-240	UPSD 40-60 F 250	96408907	49
UPSD 40-120 F 250	96408901	51								
3 x 400-415	UPSD 40-60 F 250	96408909	50							
	UPSD 40-120 F 250	96408903	52							
Relay module	Cast iron	PN 6 / PN 10	1 x 230-240	UPSD 40-60 F 250	96401918	49				
				UPSD 40-120 F 250	96401946	51				
			3 x 400-415	UPSD 40-60 F 250	96401920	50				
				UPSD 40-120 F 250	96401948	52				

UPS 50 Connection: 50 mm (2")						
Terminal box module	Material	Pressure stage	Voltage [V]	Pump type	Product number	Data sheet Page
				Single-head pumps		
Standard module	Cast iron	PN 6 / PN 10	1 x 230-240	UPS 50-60/2 F 280	96402053	28
				UPS 50-120 F 280	96402101	30
				UPS 50-180 F 280	96402134	32
			3 x 400-415	UPS 50-185 F 280	96430300	34
				UPS 50-60/2 F 280	96402055	29
				UPS 50-120 F 280	96402103	31
	Bronze	PN 6 / PN 10	1 x 230-240	UPS 50-180 F 280	96402136	33
				UPS 50-185 F 280	96430297	35
				UPS 50-60/2 F B 280	96402064	28
			3 x 400-415	UPS 50-120 F B 280	96402108	30
				UPS 50-180 F B 280	96402140	32
				UPS 50-60/2 F B 280	96402072	29
				Twin-head pumps		
Standard module	Cast iron	PN 6 / PN 10	1 x 230-240	UPSD 50-60/2 F 280	96408919	53
				UPSD 50-120 F 280	96408910	55
				UPSD 50-180 F 280	96408913	57
			3 x 400-415	UPSD 50-60/2 F 280	96408921	54
				UPSD 50-120 F 280	96408912	56
				UPSD 50-180 F 280	96408915	58
Relay module	Cast iron	PN 6 / PN 10	1 x 230-240	UPSD 50-60/2 F 280	96402057	53
				UPSD 50-120 F 280	96402105	55
				UPSD 50-180 F 280	96402137	57
			3 x 400-415	UPSD 50-60/2 F 280	96402060	54
				UPSD 50-120 F 280	96402107	56
				UPSD 50-180 F 280	96402139	58

UPSD 65 Connection: 65 mm (2 1/2")						
Terminal box module	Material	Pressure stage	Voltage [V]	Pump type	Product number	Data sheet Page
				Single-head pumps		
Standard module	Cast iron	PN 6 / PN 10	1 x 230-240	UPS 65-60/2 F 340	96402258	36
				UPS 65-120 F 340	96402278	38
				UPS 65-60/2 F 340	96402260	37
			3 x 400-415	UPS 65-120 F 340	96402280	39
				UPS 65-180 F 340	96402316	40
				UPS 65-185 F 340	96430298	41
	Bronze	PN 6 / PN 10	1 x 230-240	UPS 65-60/2 F B 340	96402262	36
				UPS 65-120 F B 340	96402285	38
				UPS 65-60/2 F B 340	96402264	37
			3 x 400-415	UPS 65-120 F B 340	96402287	39
				UPS 65-180 F B 340	96402320	40
Standard module	Cast iron	PN 6 / PN 10	1 x 230-240	UPSD 65-60/2 F 340	96408933	59
				UPSD 65-120 F 340	96408925	61
				UPSD 65-60/2 F 340	96408935	60
			3 x 400-415	UPSD 65-120 F 340	96408927	62
				UPSD 65-180 F 340	96408929	63
				UPSD 65-180 F 340	96408929	63
Relay module	Cast iron	PN 6 / PN 10	1 x 230-240	UPSD 65-60/2 F 340	96404981	59
				UPSD 65-120 F 340	96402282	61
				UPSD 65-60/2 F 340	96404983	60
			3 x 400-415	UPSD 65-120 F 340	96402284	62
				UPSD 65-180 F 340	96402318	63
				UPSD 65-180 F 340	96402318	63

UPS, UPSD 80 Connection: 80 mm (3")						
Terminal box module	Material	Pressure stage	Voltage [V]	Pump type	Product number	Data sheet Page
				Single-head pumps		
Standard module	Cast iron	PN 6	3 x 400-415	UPS 80-60 F 360	96402391	42
				UPS 80-120 F 360	96402440	43
	Cast iron	PN 10	3 x 400-415	UPS 80-60 F 360	96402392	42
				UPS 80-120 F 360	96402441	43
	Bronze	PN 6	3 x 400-415	UPS 80-60 F B 360	96404916	42
				UPS 80-120 F B 360	96404924	43
	Bronze	PN 10	3 x 400-415	UPS 80-60 F B 360	96402401	42
				UPS 80-120 F B 360	96402445	43
				Twin-head pumps		
Standard module	Cast iron	PN 6	3 x 400-415	UPSD 80-60 F 360	96408952	64
				UPSD 80-120 F 360	96408944	65
	Cast iron	PN 10	3 x 400-415	UPSD 80-60 F 360	96408951	64
				UPSD 80-120 F 360	96408943	65
Relay module	Cast iron	PN 6	3 x 400-415	UPSD 80-60 F 360	96402397	64
				UPSD 80-120 F 360	96403131	65
	Cast iron	PN 10	3 x 400-415	UPSD 80-60 F 360	96402398	64
				UPSD 80-120 F 360	96403132	65
UPS, UPSD 100 Connection: 100 mm (4")						
Terminal box module	Material	Pressure stage	Voltage [V]	Pump type	Product number	Data sheet Page
				Single-head pumps		
Standard module	Cast iron	PN 6	3 x 400-415	UPS 100-30 F 450	96402503	44
	Cast iron	PN 10	3 x 400-415	UPS 100-30 F 450	96402508	44
	Bronze	PN 6	3 x 400-415	UPS 100-30 F B 450	96404933	44
	Bronze	PN 10	3 x 400-415	UPS 100-30 F B 450	96402527	44
				Twin-head pumps		
Standard module	Cast iron	PN 6	3 x 400-415	UPSD 100-30 F 450	96408892	66
	Cast iron	PN 10	3 x 400-415	UPSD 100-30 F 450	96408891	66
Relay module	Cast iron	PN 6	3 x 400-415	UPSD 100-30 F 450	96402523	66
	Cast iron	PN 10	3 x 400-415	UPSD 100-30 F 450	96402524	66

10. Accessories

The following accessories are available for UPS, UPSD pumps:

- protection module
- relay module for single-head pumps
- relay module kit for twin-head pumps
- counter flanges (standard on pumps for the UK)
- insulation kit (only single-head pumps)
- base plate (only single-head pumps)
- blanking flanges (only twin-head pumps).

Counter flanges

A counter flange kit includes these parts:

- two flanges with internal thread (ISO seal thread) or two flanges for welding/soldering
- two gaskets
- bolts.

Pumps with cast iron pump housing			
Pump type	Pressure stage	Size	Product number
UPS/UPSD 32	PN 10	Rp 1 1/4	539703
		32 mm	539704
UPS/UPSD 40	PN 10	Rp 1 1/2	539701
		40 mm	539702
UPS/UPSD 50	PN 10	Rp 2	549801
		50 mm	549802
UPS/UPSD 65	PN 10	Rp 2 1/2	559801
		65 mm	559802
UPS/UPSD 80	PN 6	Rp 3	569902
		80 mm	569901
	PN 10	Rp 3	569802
		80 mm	569801
UPS/UPSD 100	PN 6	Rp 4	579901
		100 mm	579902
	PN 10	Rp 4	579801
		100 mm	579802
Pumps with bronze pump housing			
Pump type	Pressure stage	Size	Product number
UPS 32	PN 10	Rp 1 1/4	96427029
		32 mm	96427030
UPS 40	PN 10	Rp 1 1/2	539711
		40 mm	539712
UPS 50	PN 10	Rp 2	549811
		50 mm	549812
UPS 65	PN 10	Rp 2 1/2	559811
		65 mm	559812
UPS 80	PN 6	Rp 3	96405735
		80 mm	569911
	PN 10	Rp 3	569812
		80 mm	569811
UPS 100	PN 6	Rp 4	96405737
	PN 10	Rp 4	96405738

Rp: Flange with internal thread (ISO seal thread).

mm: Flange for welding/soldering.

Protection modules

Voltage [V]	Product number
1 x 230-240	96422219
3 x 400-415	96422221

Relay module

Relay modules for single-head pumps.

Voltage [V]	Product number
1 x 230-240	96406611
3 x 400-415	96406609

A relay module kit for twin-head pumps includes these parts:

- two relay modules with screws and screwdriver
- two screwed cable entries
- one intermediate cable
- two wiring diagrams for terminal box covers.

Voltage [V]	Product number
1 x 230-240	96409231
3 x 400-415	96409229

Insulation kits

Single-head pumps can be fitted with an insulation covering made of expanded polypropylene, EPP.

The insulation kit, which is tailored to the individual pump type, has an insulating thickness corresponding to the nominal diameter of the pump.

The thermal conductivity of EPP is very low (0.04 W/m °C), i.e. the insulating property is very good.

The insulation kit encloses the entire pump housing. It consists of two or three parts which are easily fitted around the pump.

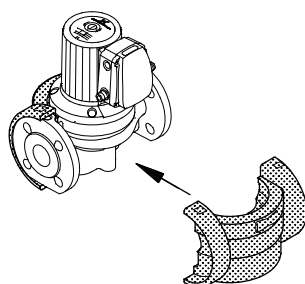


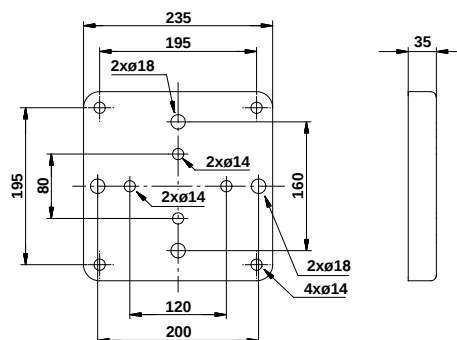
Fig. 21 Insulation kit

Pump type	Product number
UPS 32-60 F 220	96405873
UPS 32-120 F 220	96405873
UPS 40-60/2 F 250	96405877
UPS 40-120 F 250	96405877
UPS 40-180 F 250	96405878
UPS 50-60/2 F 280	96405881
UPS 50-120 F 280	96405882
UPS 50-180 F 280	96405883
UPS 65-60/2 F 340	96405886
UPS 65-120 F 340	96405887
UPS 65-180 F 340	96405888
UPS 80-60 F 360	96405890
UPS 80-120 F 360	96405891
UPS 100-30 F 450	96405892

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Base plate

Base plates are available for single-head pumps only. Each base plate includes two bolts.



TM00 9835 0197

Fig. 22 Base plate

Pump type	Product number
UPS 32-60, -120	
UPS 40-60/2, -120, -180	96405915
UPS 50-60/2, -120, -180	
UPS 65-60/2, -120, -180	
UPS 80-30, -60, -120	96405914
UPS 100-30	
UPS 40-185	
UPS 50-185	495035
UPS 65-185	

Blanking flanges

For twin-head pumps a blanking flange with pump housing seal is available as an optional extra. The blanking flange is used when servicing one of the power heads to enable uninterrupted operation of the other.

Pump type	Product number
UPSD 32-60 F 220	
UPSD 32-120 F 220	
UPSD 40-60 F 250	
UPSD 40-60/2 F 250	545048
UPSD 40-120 F 250	
UPSD 50-60/2 F 280	
UPSD 50-120 F 280	
UPSD 50-180 F 280	565055
UPSD 65-60/2 F 340	545048
UPSD 65-120 F 340	
UPSD 65-180 F 340	
UPSD 80-60 F 360	565055
UPSD 80-120 F 360	
UPSD 100-30 F 450	

11. Grundfos Product Center

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

<http://product-selection.grundfos.com>



SIZING enables you to size a pump based on entered data and selection choices.

REPLACEMENT enables you to find a replacement product. Search results will include information on

- the lowest purchase price
- the lowest energy consumption
- the lowest total life cycle cost.

The screenshot shows the Grundfos Product Center website. At the top, there's a navigation bar with 'HOME', 'FIND PRODUCT', 'COMPARE', 'YOUR PROJECTS', 'SAVED ITEMS', and 'HELP'. Below this is a search bar with a 'SEARCH' button. The main content area has four large buttons: 'SIZING' (with a subtext 'Enter pump sizing'), 'CATALOGUE' (with a subtext 'Products and services'), 'REPLACEMENT' (with a subtext 'Replace an old pump with a new'), and 'LIQUIDS' (with a subtext 'Find pump by liquid'). Below these buttons is a 'QUICK SIZING' section with input fields for 'Flow (Q)*' and 'Head (H)*', and a 'Select what to size by' section with radio buttons for 'Size by application', 'Size by pump design', and 'Size by pump family'. A 'START SIZING' button is also present. At the bottom, there's an 'ADVANCED SIZING' section with checkboxes for 'Advanced sizing by application' and 'Guided selection'.

CATALOGUE gives you access to the Grundfos product catalogue.

LIQUIDS enables you to find pumps designed for aggressive, flammable or other special liquids.

All the information you need in one place

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

Downloads

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

Subject to alterations.

