

MAGNA1

Model C
Circulator pumps
50/60 Hz



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1. Product description



TM079309

Single-head MAGNA1 pumps

The Grundfos MAGNA1 circulator pumps are designed for circulating liquids in the following systems:

- Heating systems
 - main pump
 - mixing loops
 - heating surfaces
 - air-conditioning surfaces
- air-conditioning and cooling systems
- domestic hot-water systems
- ground-source heat-pump systems
- solar-heating systems.

The pumps are designed for circulating liquids in heating systems with variable flow rates. The pumps are also suitable for domestic hot-water systems. We strongly recommend that you use stainless-steel pumps in domestic hot-water systems to avoid corrosion.

MAGNA1 is also available as twin-head pumps.



TM067222

TM066741

Twin-head MAGNA1 D pumps

Duty range

Data	MAGNA1 (N) Single-head pumps	MAGNA1 D Twin-head pumps
Maximum flow rate, Q	71 m ³ /h	110 m ³ /h
Maximum head, H	18 metres	
Maximum system pressure	1.6 MPa (16 bar)	
Liquid temperature	-10 to 110 °C	

To ensure correct operation, it is important that the sizing range of the system falls within the duty range of the pump.

Characteristic features

- Proportional-pressure control
- constant-pressure control
- constant-curve, constant-speed duty
- no external motor protection required
- insulating shells supplied with single-head pumps for heating systems
- wide temperature range due to thermal separation of the control box and pumped media.

Benefits

- Fault relay
- Digital input (start/stop)
- Wireless multipump function with time based alternation
- Simple installation
- LED indication of the control mode
- Low noise level
- No maintenance and long life
- The complete range is available for a maximum system pressure of 16 bar (PN 16).
- MAGNA1 is designed to communicate with Grundfos GO, which allows you to:
 - Adjust the setpoint of the proportional pressure curve
 - Manage the fault-relay trigger setting in twin-head pumps
 - Read warning and alarm indications



TM069081

Connecting Grundfos GO to MAGNA1

Pump heads in twin-head pumps

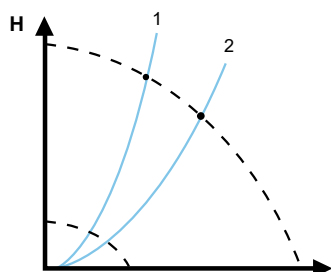
The twin-head pump housing has a flap valve on the outlet side. The flap valve seals off the port of the idle pump housing to prevent the pumped liquid from running back to the inlet side.



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Twin-head pump housing with flap valve

Due to the flap valve, there is a difference in the hydraulics between the two pump heads.



TM061566

Hydraulic difference between the pump head to the right (1) and to the left (2) of the flap valve

Type key

Example: **MAGNA1 32-80 N 180**

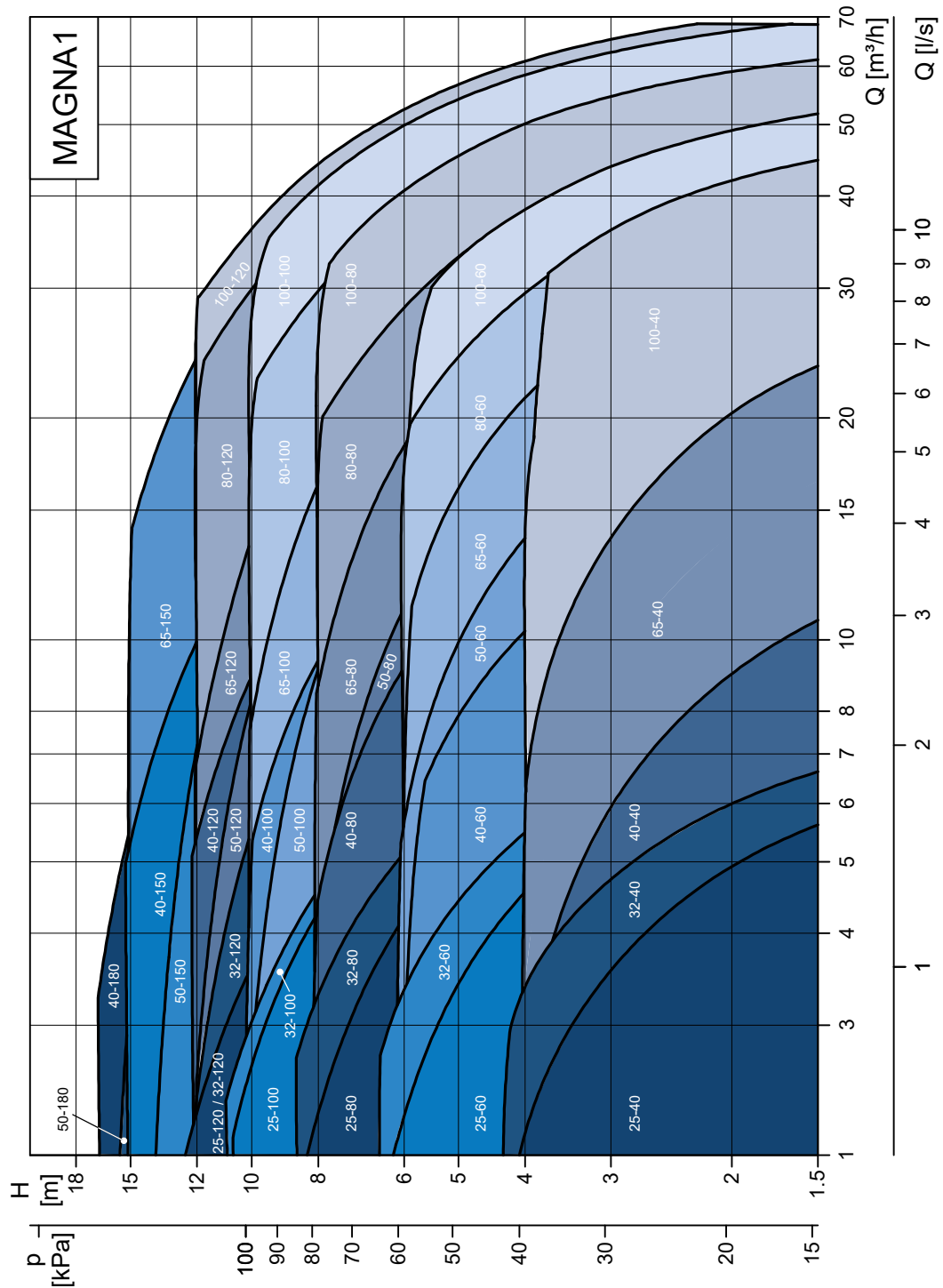
Example: **MAGNA1 D 32-80 F 220**

Code	Explanation
MAGNA1	Type range
	Single-head pump
D	Twin-head pump
32-	Nominal diameter (DN) of inlet and outlet ports [mm]
80	Maximum head [dm]
	Threaded (pipe connection type)
F	Flanged (pipe connection type)
	Cast iron (pump housing material)
N	Stainless steel (pump housing material)
180	Port-to-port length [mm]
220	

Pump version

This data booklet is valid for MAGNA1 Model C single-head and MAGNA1 D Model C twin-head pumps. Model C indicates the pump version. The pump version is stated on the nameplate.

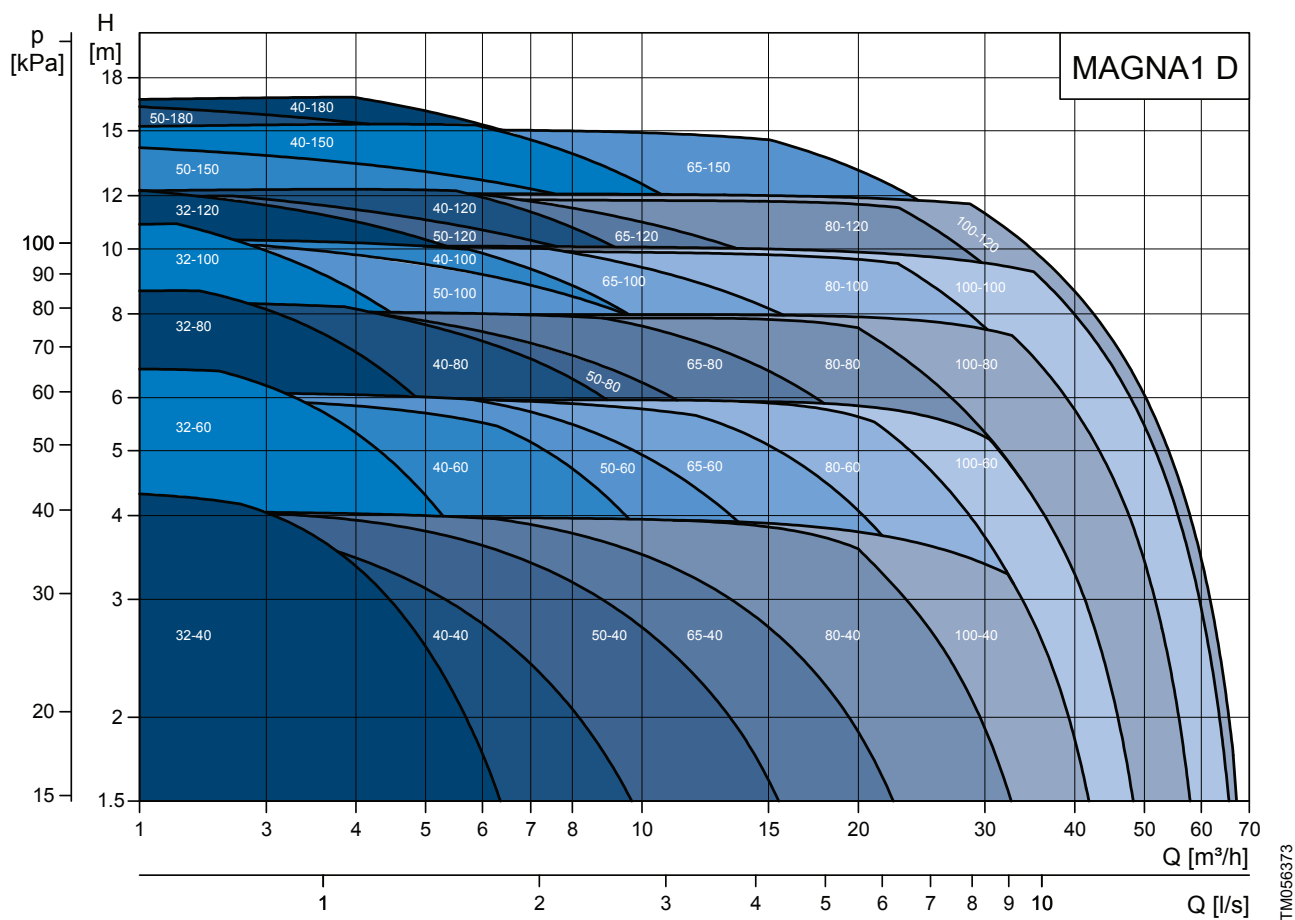
Performance range, MAGNA1



Performance range for MAGNA1 single-head pump

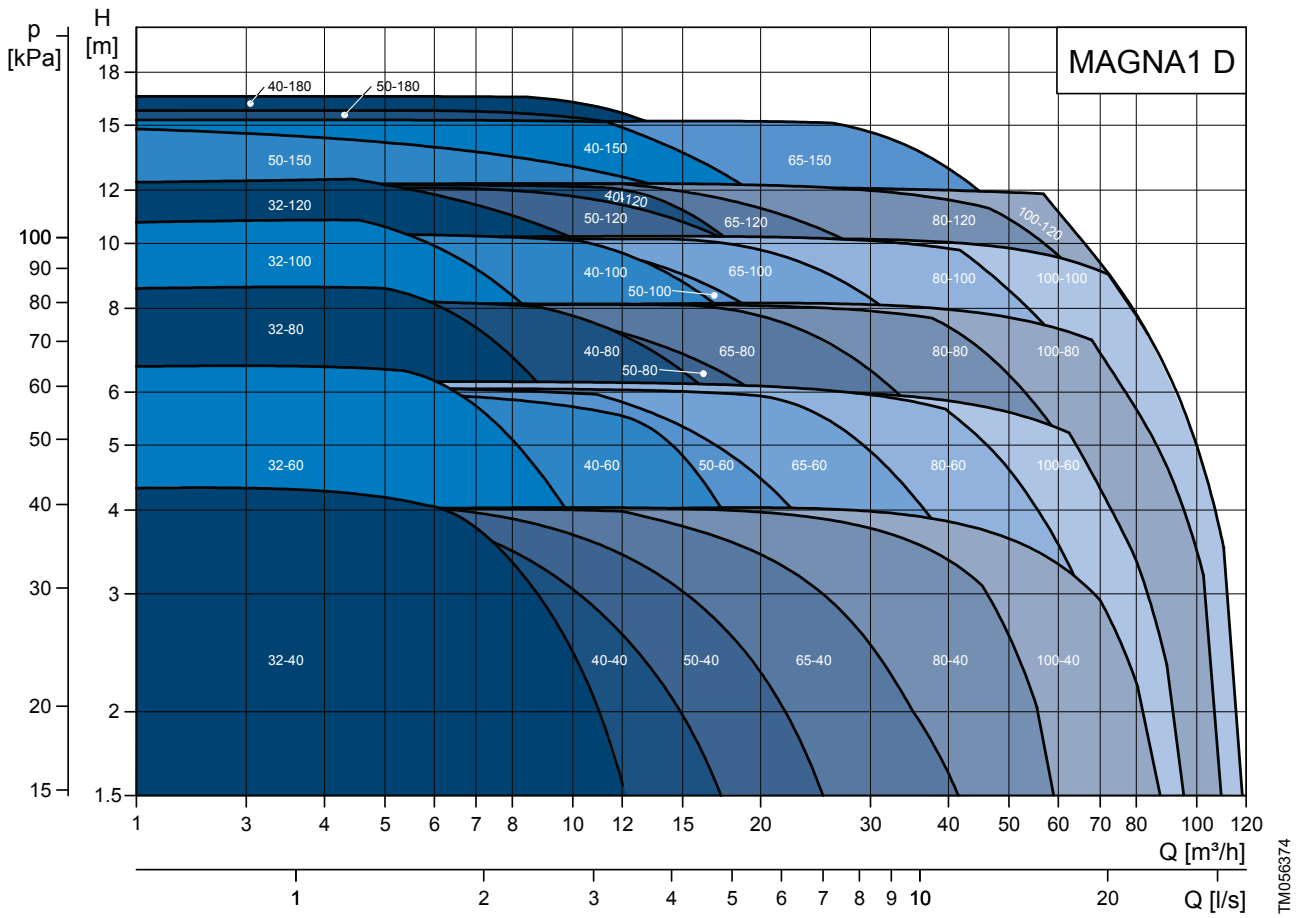
TM079316

Performance range, MAGNA1 D, single-head operation



Performance range for MAGNA1 D twin-head pump in single-head operation

Performance range, MAGNA1 D, twin-head operation (2 × III)



TM056374

Performance range for MAGNA1 D twin-head pump in twin-head operation

Product range

Single-head pumps

Pump type	Port-to-port length [mm]	Threaded pipe connection			Electrical connection	Data sheet
		Cast iron		Stainless steel		
		PN 10	PN 16	PN 10		
MAGNA1 25-40 (N)	180	•	•	•	Plug	MAGNA1 25-40 (N) PN 10
MAGNA1 25-60 (N)	180	•		•	Plug	MAGNA1 25-60 (N) PN 10
MAGNA1 25-80 (N)	180	•		•	Plug	MAGNA1 25-80 (N) PN 10
MAGNA1 25-100 (N)	180	•		•	Plug	MAGNA1 25-100 (N) PN 10
MAGNA1 25-120 (N)	180	•		•	Plug	MAGNA1 25-120 (N) PN 10
MAGNA1 32-40 (N)	180	•		•	Plug	MAGNA1 32-40 (N) PN 10
MAGNA1 32-60 (N)	180	•		•	Plug	MAGNA1 32-60 (N) PN 10
MAGNA1 32-80 (N)	180	•		•	Plug	MAGNA1 D 32-80 PN 10
MAGNA1 32-100 (N)	180	•		•	Plug	MAGNA1 32-100 (N) PN 10
MAGNA1 32-120 (N)	180	•		•	Plug	MAGNA1 32-120 (N) PN 10

Pump type	Port-to-port length [mm]	Flange connection					Electrical connection	Data sheet
		Cast iron				Stainless steel		
		PN 6	PN 10	PN16	PN 6/10	PN 6/10		
MAGNA1 32-120 F (N)	220				•	•	Terminals	MAGNA1 32-120 F (N) PN 10
MAGNA1 40-40 F (N)	220				•	•	Plug	MAGNA1 D 40-40 F
MAGNA1 40-60 F (N)	220				•	•	Plug	MAGNA1 40-60 F (N)
MAGNA1 40-80 F (N)	220				•	•	Terminals	MAGNA1 40-80 F (N) PN 10
MAGNA1 40-100 F (N)	220				•	•	Terminals	MAGNA1 40-100 F (N) PN 10
MAGNA1 40-120 F (N)	250				•	•	Terminals	MAGNA1 40-120 F (N) PN 10
MAGNA1 40-150 F (N)	250				•	•	Terminals	MAGNA1 40-150 F (N) PN 10
MAGNA1 40-180 F (N)	250				•	•	Terminals	MAGNA1 40-180 F (N) PN 10
MAGNA1 50-60 F (N)	240				•	•	Terminals	MAGNA1 50-60 F (N) PN 10
MAGNA1 50-80 F (N)	240				•	•	Terminals	MAGNA1 50-80 F (N) PN 10
MAGNA1 50-100 F (N)	280				•	•	Terminals	MAGNA1 50-100 F (N) PN 10
MAGNA1 50-120 F (N)	280				•	•	Terminals	MAGNA1 50-120 F (N) PN 10
MAGNA1 50-150 F (N)	280				•	•	Terminals	MAGNA1 50-150 F (N) PN 10
MAGNA1 50-180 F (N)	280				•	•	Terminals	MAGNA1 50-180 F (N) PN 10
MAGNA1 65-40 F (N)	340				•	•	Terminals	MAGNA1 65-40 F (N) PN 10
MAGNA1 65-60 F (N)	340				•	•	Terminals	MAGNA1 65-60 F (N) PN 10
MAGNA1 65-80 F (N)	340				•	•	Terminals	MAGNA1 65-80 F (N) PN 10
MAGNA1 65-100 F (N)	340				•	•	Terminals	MAGNA1 65-100 F (N) PN 10
MAGNA1 65-120 F (N)	340				•	•	Terminals	MAGNA1 65-120 F (N) PN 10
MAGNA1 65-150 F (N)	340				•	•	Terminals	MAGNA1 65-150 F (N) PN 10

Pump type	Port-to-port length [mm]	Flange connection					Electrical connection	Data sheet
		Cast iron				Stainless steel		
		PN 6	PN 10	PN16	PN 6/10	PN 6/10		
MAGNA1 80-60 F	360	•	•				Terminals	MAGNA1 80-60 F PN 10
MAGNA1 80-80 F	360	•	•				Terminals	MAGNA1 80-80 F PN 10
MAGNA1 80-100 F	360	•	•				Terminals	MAGNA1 80-100 F PN 10
MAGNA1 80-120 F	360	•	•				Terminals	MAGNA1 80-120 F PN 10
MAGNA1 100-40 F	450	•	•				Terminals	MAGNA1 100-40 F PN 10
MAGNA1 100-60 F	450	•	•				Terminals	MAGNA1 100-60 F PN 10
MAGNA1 100-80 F	450	•	•				Terminals	MAGNA1 100-80 F PN 10
MAGNA1 100-100 F	450	•	•				Terminals	MAGNA1 100-100 F PN 10
MAGNA1 100-120 F	450	•	•				Terminals	MAGNA1 100-120 F PN 10

Note: For further information about the product numbers of the various pump variants, see section Product numbers.

Twin-head pumps

Pump type	Port-to-port length [mm]	Threaded pipe connection		Electrical connection	Data sheet
		Cast iron			
		PN 10	PN 16		
MAGNA1 D 32-40	180	•		Plug	MAGNA1 D 32-40 PN 10
MAGNA1 D 32-60	180	•		Plug	MAGNA1 D 32-60 PN 10
MAGNA1 D 32-80	180	•		Plug	MAGNA1 D 32-80 PN 10
MAGNA1 D 32-100	180	•		Plug	MAGNA1 D 32-100 PN 10

Pump type	Port-to-port length [mm]	Flange connection				Electrical connection	Data sheet
		Cast iron					
		PN 6	PN 10	PN 16	PN 6/10		
MAGNA1 D 32-120 F	220				•	Terminals	MAGNA1 D 32-120 F PN 10
MAGNA1 D 40-40 F	220				•	Plug	MAGNA1 D 40-40 F
MAGNA1 D 40-60 F	220				•	Plug	MAGNA1 D 40-60 F
MAGNA1 D 40-80 F	220				•	Terminals	MAGNA1 D 40-80 F PN 10
MAGNA1 D 40-100 F	220				•	Terminals	MAGNA1 D 40-100 F PN 10
MAGNA1 D 40-120 F	250				•	Terminals	MAGNA1 D 40-120 F PN 10
MAGNA1 D 40-150 F	250				•	Terminals	MAGNA1 D 40-150 F PN 10
MAGNA1 D 40-180 F	250				•	Terminals	MAGNA1 D 40-180 F PN 10
MAGNA1 D 50-40 F	240				•	Terminals	MAGNA1 D 50-40 F PN 10
MAGNA1 D 50-60 F	240				•	Terminals	MAGNA1 D 50-60 F PN 10
MAGNA1 D 50-80 F	240				•	Terminals	MAGNA1 D 50-80 F PN 10
MAGNA1 D 50-100 F	280				•	Terminals	MAGNA1 D 50-100 F PN 10
MAGNA1 D 50-120 F	280				•	Terminals	MAGNA1 D 50-120 F PN 10
MAGNA1 D 50-150 F	280				•	Terminals	MAGNA1 D 50-150 F PN 10
MAGNA1 D 50-180 F	280				•	Terminals	MAGNA1 D 50-180 F PN 10
MAGNA1 D 65-40 F	340				•	Terminals	MAGNA1 D 65-40 F PN 10
MAGNA1 D 65-60 F	340				•	Terminals	MAGNA1 D 65-60 F PN 10
MAGNA1 D 65-80 F	340				•	Terminals	MAGNA1 D 65-80 F PN 10
MAGNA1 D 65-100 F	340				•	Terminals	MAGNA1 D 65-100 F PN 10
MAGNA1 D 65-120 F	340				•	Terminals	MAGNA1 D 65-120 F PN 10
MAGNA1 D 65-150 F	340				•	Terminals	MAGNA1 D 65-150 F PN 10
MAGNA1 D 80-40 F	360	•	•			Terminals	MAGNA1 D 80-40 F PN 10
MAGNA1 D 80-60 F	360	•	•			Terminals	MAGNA1 D 80-60 F PN 10
MAGNA1 D 80-80 F	360	•	•			Terminals	MAGNA1 D 80-80 F PN 10
MAGNA1 D 80-100 F	360	•	•			Terminals	MAGNA1 D 80-100 F PN 10
MAGNA1 D 80-120 F	360	•	•			Terminals	MAGNA1 D 80-120 F PN 10

Pump type	Port-to-port length [mm]	Flange connection				Electrical connection	Data sheet
		Cast iron					
		PN 6	PN 10	PN 16	PN 6/10		
MAGNA1 D 100-40 F	450	•	•			Terminals	MAGNA1 D 100-40 F PN 10
MAGNA1 D 100-60 F	450	•	•			Terminals	MAGNA1 D 100-60 F PN 10
MAGNA1 D 100-80 F	450	•	•			Terminals	MAGNA1 D 100-80 F PN 10
MAGNA1 D 100-100 F	450	•	•			Terminals	MAGNA1 D 100-100 F PN 10
MAGNA1 D 100-120 F	450	•	•			Terminals	MAGNA1 D 100-120 F PN 10

Note: For more information about the product numbers of the various pump variants, see section Product numbers.

A quick guide to pump selection

Before sizing and selecting your pump, make sure that the pump's operating conditions are fulfilled:

- liquid quality and temperature
- ambient conditions
- minimum inlet pressure
- maximum operating pressure

See section Operation.

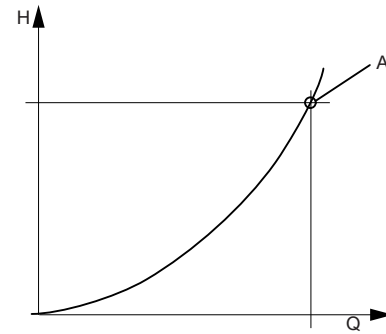
Pump size

In order to choose a pump for a heating system, it is necessary to know both the system characteristics and the pump curve. The pump is dimensioned so it can provide an adequate performance at the maximum system load.

Determining the size of your pump depends on the following:

- the required maximum flow rate (Q).
- the maximum pressure loss in the system (H).

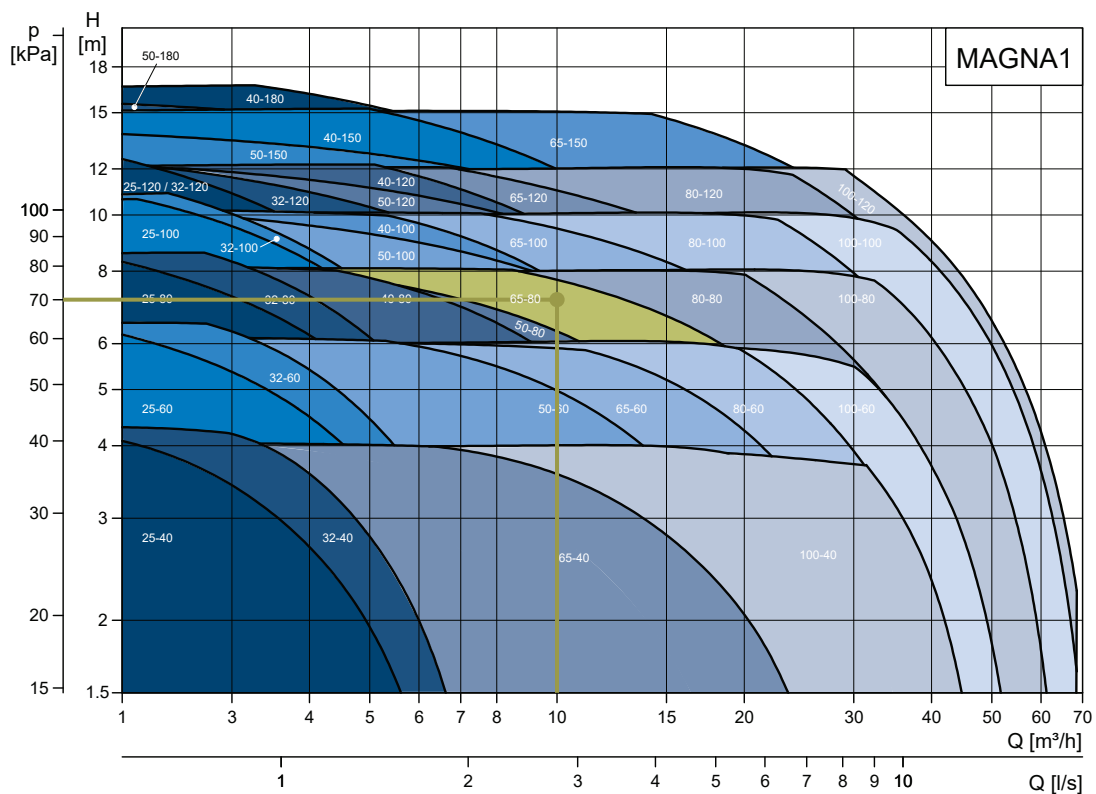
By marking the values in a curve chart, you find your duty point. The x-axis shows the flow rate (Q), while the y-axis shows the pressure (H). See fig. *System characteristic*.



System characteristic

Pos.	Description
A	Duty point

Go to *Performance range, MAGNA1*, and mark your duty point. The field in which your duty point is placed, is an indication of which pump is best suited for your application. See fig. *Pump selection*.



Pump selection

Find the specific pump data in the section on Performance curves and technical data. This will help you determine whether you have found the correct pump size or not.

Note: To ensure an efficient operation it is important not to oversize the pump. All pumps have a "best point" (η_{max}), indicating where the pump is working most efficiently. When operating at your duty point, the pump must work in the most efficient Q and H area.

Related information

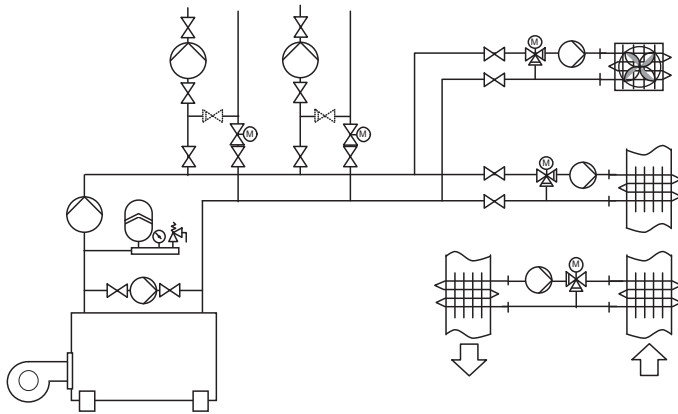
Performance range, MAGNA1

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System applications

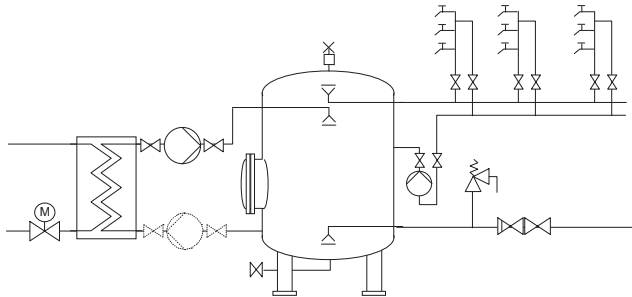
Heating systems



TM010168

- One- and two-pipe heating systems
- main pumps
- zone pumps
- mixing loops
- boiler shunt pumps
- pumps for heating surfaces
- calorifiers
- underfloor heating systems
- solar-heating systems
- ground-source heat-pump systems
- heat recovery systems.

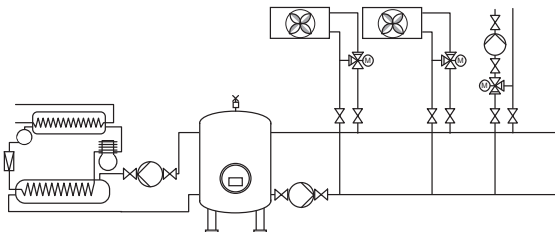
Domestic hot-water systems



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- Domestic hot-water systems.

Air-conditioning and cooling systems



TM010170

- Two-pipe air-conditioning systems
- main pumps
- zone pumps
- pumps for refrigeration units
- heat pump systems
- ground-source heat-pump systems
- heat recovery systems
- air-conditioning surfaces.

2. Construction

MAGNA1 is of the canned-rotor type, which means that 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.

The pump is characterised by the following:

- controller integrated in the control box
- operating panel on the control box
- twin-head versions
- no external motor protection required
- insulating shells supplied with single-head pumps for heating systems.

Motor and electronic controller

The pump incorporates a 4-pole synchronous, permanent-magnet motor (PM motor). This motor type is characterised by higher efficiency than a conventional asynchronous squirrel-cage motor.

The pump speed is controlled by an integrated frequency converter.

Pump connections

Threaded pipe connections according to ISO 228-1.

Flange dimensions according to EN 1092-2.

Surface treatment

The pump housing and pump head are electrocoated to improve the corrosion resistance.

Electrocoating includes:

- alkaline cleaning
- pretreatment with zinc phosphate coating
- cathodic electrocoating (epoxy)
- curing of paint film at 200-250 °C.

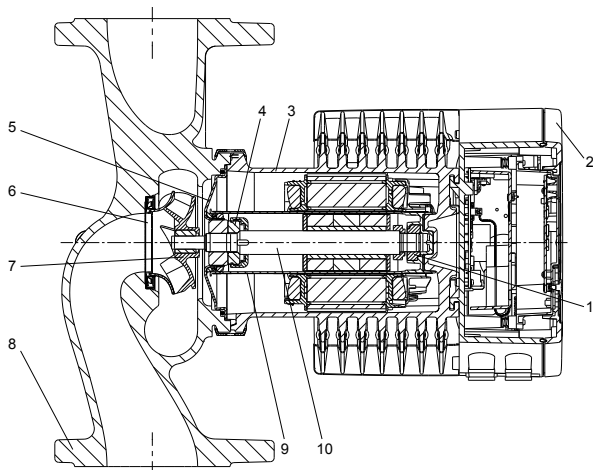
The pump housing of stainless-steel versions is not treated and painted and appears in blank steel. See fig. [Stainless-steel version](#).



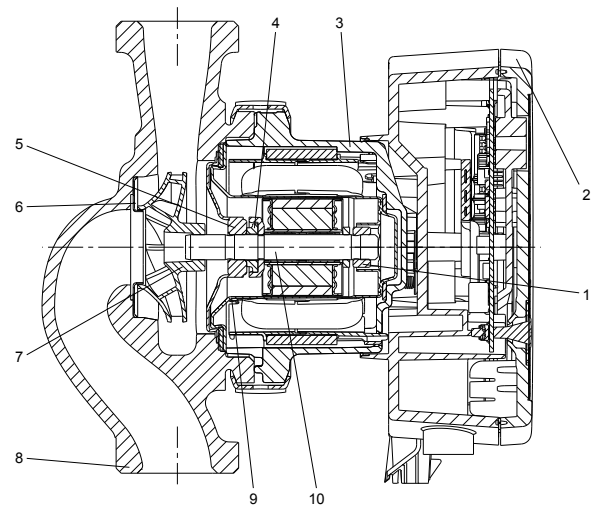
TMD059282

Stainless-steel version

Sectional drawings



Terminal-connected version with PPS composite rotor can



Plug-connected version with stainless-steel rotor can

Material specification

See figs [Terminal-connected version with PPS composite rotor can](#) and [Plug-connected version with stainless-steel rotor can](#).

Related information

[Sectional drawings](#)

Rotor can materials

Pos.	Component	Material	EN
1	Outer bearing ring	Aluminium oxide	
2	Control box	Polycarbonate	
3	Stator housing	Aluminium	
	O-rings and gaskets	EPDM	
4	Thrust bearing	Aluminium oxide or carbon	
5	Bearing plate	Stainless steel	EN 1.4301
6	Neck ring	Stainless steel	EN 1.4301
7	Impeller	PES	
8	Pump housing	Cast iron or stainless steel	EN 1561 EN-GJL-250 / EN 1.4408
9	Rotor can	PPS or stainless steel	
10	Shaft	Ceramics, plug connected versions	
10	Shaft	Stainless steel, terminal-connected versions	EN 1.4404

3. Operation

Operating conditions

General recommendations

Water in heating systems	Water quality according to local standards such as the German standard VDI 2035
Domestic hot water	Degree of hardness up to 14 °dH
Water containing glycol	Maximum viscosity = 10 cSt ~ 50 % water and 50 % glycol at -10 °C

Liquid temperature

Continuously: -10 to 110 °C.

Stainless steel pumps in domestic hot-water systems:

In domestic hot-water systems, we recommend that you keep the liquid temperature below 65 °C to eliminate the risk of lime precipitation.

Ambient conditions

Ambient conditions	
Ambient temperature during operation	-20 to +40 °C
Ambient temperature during storage and transport	-40 to +70 °C
Relative humidity	Max. 95 %

Ambient temperatures below 0 °C

When operating the pump at ambient temperatures below 0 °C, observe below requirements to reduce condensation and avoid ice buildup.

Requirements for operation below 0 °C	Media type	
	Glycol mix	Water
Media temperature at min. 5 °C	-	•
Power switched on permanently	•	•
Continuous operation	-	•
Twin-head pumps: cascade operation every 24 hours	•	•

Closed valve operation

The pump can operate at any speed against a closed valve for several days without damage to the pump. However, Grundfos recommends you to operate at the lowest possible speed curve to minimise energy losses. There are no minimum flow requirements.

Note: Do not close inlet and outlet valves simultaneously, always keep one valve open when the pump is running to avoid pressure buildup. Media and ambient temperatures must never exceed the specified temperature range.

Location

The product is designed for indoor use only.

To ensure sufficient cooling of motor and electronics, observe the following requirements:

- Position the product in such a way that sufficient cooling is ensured.
- The ambient temperature must not exceed 40 °C.
- The altitude must not exceed 2000 m above sea level.

Requirements to the installation site

Always install the product in a dry environment where it will not be exposed to drops or splashes of liquid from surrounding equipment or structures, for example condensed water.

The product is intended for indoor installation only. If you install the product in a location where the environmental conditions may vary, follow all local regulations and requirements and make sure to fulfill these requirements:

- Comply with the operating conditions and enclosure class specified for the product.
- Provide shielding from direct exposure to sunlight, rain, snow and other environmental factors.
- Do not expose the product to UV radiation.
- Keep the drain holes clear of any blockage.
- Collect and remove condensation buildup.

Aggressive environments

It is important to avoid direct installation in aggressive environments such as the following:

- indoor swimming pools, where the product is exposed to the ambient environment of the pool
- locations with direct and continuous exposure to a marine atmosphere
- locations where hydrochloric acid (HCl) can form acidic aerosols, for example when acid escapes from open tanks or from frequently opened or vented containers.

The above applications do not disqualify for installation of the product. However, it is important that the product is not installed directly in these environments.

Related information

[Pumped liquids](#)

Cooling applications

In cooling applications condensation may occur on the surface of the pump. In certain cases, it is necessary to mount a drip tray.

To protect the electronics, power on the pump must be switched on, if the cold water is forced through the pump.

Max. operating pressure

PN 6: 6 bar or 0.6 MPa.

PN 10: 10 bar or 1.0 MPa.

PN 16: 16 bar or 1.6 MPa.

Min. inlet pressure

The following relative minimum inlet pressure must be available at the pump inlet during operation to avoid cavitation noise and damage to the pump bearings.

The actual inlet pressure plus the pump pressure against a closed valve must be lower than the maximum permissible system pressure stated on the pump nameplate.

MAGNA1 Single-head operation	Liquid temperatures		
	75 °C	95 °C	110 °C
	Inlet pressure [bar / MPa]		
Pump size			
25-40/60/80/100/120	0.10 / 0.01	0.35 / 0.035	1.0 / 0.10
32-40/60/80/100/120	0.10 / 0.01	0.35 / 0.035	1.0 / 0.10
32-120 F	0.10 / 0.01	0.20 / 0.020	0.7 / 0.07
40-40/60 F	0.10 / 0.01	0.35 / 0.035	1.0 / 0.10
40-80/100/120/150/180 F	0.10 / 0.01	0.50 / 0.05	1.0 / 0.10
50-60/80 F	0.10 / 0.01	0.40 / 0.04	1.0 / 0.10
50-100/120 F	0.10 / 0.01	0.50 / 0.05	1.0 / 0.10
50-150/180 F	0.70 / 0.07	1.20 / 0.12	1.7 / 0.17
65-40/60/80/100/120/150 F	0.70 / 0.07	1.20 / 0.12	1.7 / 0.17
80-60/80/100/120 F	0.50 / 0.05	1.00 / 0.10	1.5 / 0.15
100-40/60/80/100/120 F	0.70 / 0.07	1.20 / 0.12	1.7 / 0.17

Note: The values in the above table apply to single-head pumps and twin-head pumps in single-head operation.

Inlet pressure in cascade operation: In the case of cascade operation, increase the required relative inlet pressure by 0.1 bar (0.01 MPa) compared to the stated values for single-head pumps or for twin-head pumps in single-head operation.

Inlet pressure at altitudes above 300 metres: The relative minimum inlet pressures apply to pumps installed up to 300 metres above sea level. For altitudes above 300 metres, increase the required relative inlet pressure by 0.01 bar (0.001 MPa) per 100 metres altitude. The pump is only approved for an altitude of maximum 2000 metres above sea level.

Pumped liquids

The product is suitable for pumping thin, clean, non-aggressive and non-explosive liquids, not containing solid particles or fibers or mineral oils that may attack the pump mechanically or chemically.

The product is not intended for pumping liquids such as diesel oil, petrol, acids and seawater.

Whether a pump is suitable for a particular liquid depends on a number of factors of which the most important are lime content, pH value, temperature and content of solvents and oils. Additives with a density or kinematic viscosity higher than that of water will reduce the hydraulic performance.

Liquid requirements for heating and cooling systems

In heating and cooling systems, the water must meet the requirements of accepted standards, codes, and any authority having jurisdiction (AHJ) requirements.

In heating systems, the water must meet the requirements of accepted standards on water quality in heating systems, for example the German standard VDI 2035.

You can pump water-glycol mixtures with up to 50 %glycol.

Liquid requirements for pool applications

Stainless steel variants of the MAGNA pump can be used to pump pool water with one of the following properties:

- Chloride (Cl-) ≤ 150 mg/l and free chlorine ≤ 1.5 mg/l at temperatures ≤ 30 °C
- Chloride (Cl-) ≤ 100 mg/l and free chlorine ≤ 1.5 mg/l at temperatures from 30 to 40 °C.

Liquid requirements for domestic hot-water applications

In domestic hot-water applications, Grundfos strongly recommends the following:

- stainless-steel pumps to avoid corrosion
- water hardness degree below 14 °dH and liquid temperature below 65 °C to eliminate the risk of lime precipitation.

Pumping glycol mixtures

The product is designed for pumping water-glycol mixtures with up to 50 % glycol.

Example of a water-ethylene-glycol 50/50 mixture:

- Maximum viscosity: 10 cSt ~ 50 % water and 50 % ethylene-glycol at -10 °C .

Depending on the water-glycol mixture and the liquid temperature, the density and kinematic viscosity of the mixture will affect the maximum curve and reduce the hydraulic performance of the pump. The pump is protected against overload by an integrated power-limiting function.

1. Clean and flush the system before you add the water-glycol mixture.
2. Maintain the water-glycol mixture regularly to prevent corrosion or lime precipitation.
3. If further dilution of the supplied glycol is required, follow the glycol supplier's instructions.

Sound pressure level

The sound pressure level of the pump is dependent on the power consumption. Levels are determined in accordance with ISO 3745 and ISO 11203, method Q2.

Pump size	Max. dB(A)
25-40/60/80/100/120	39
32-40/60/80/100/120	
40-40/60	
50-40	
32-120 F	45
40-80/100	
50-60/80	
65-40/60	
80-40	50
40-120/150/180	
50-100/120/150/180	
65-80/100/120	
80-60/80	55
100-40/60	
65-150	
80-100/120	
100-80/100/120	

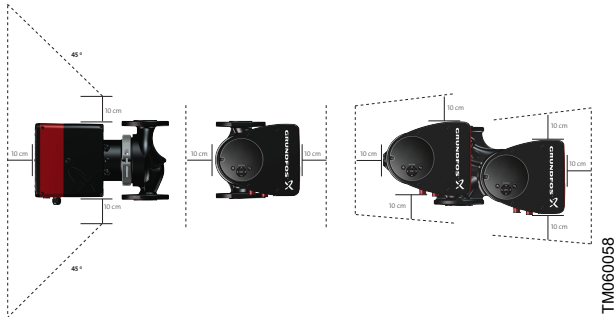
Electrical data

Pump type	MAGNA1 (D)
Enclosure class	IPX4D (EN 60529)
Insulation class	F
Supply voltage	1 × 230 V ± 10 %, 50/60 Hz, PE
Digital input	External potential-free contact. Contact load: 5 V, 10 mA. Screened cable. Loop resistance: Maximum 130 Ω.
Relay output	Internal potential-free changeover contact. Maximum load: 250 V, 2 A, AC1. Minimum load: 5 VCD, 20 mA. Screened cable, depending on signal level.
Leakage current	$I_{leakage} < 3.5 \text{ mA}$. The leakage current is measured in accordance with EN 60335-1.
EMC	EN 55014-1:2006 + A1:2009 + A2:2011, EN 55014-1:2017, EN 61000-6-2:2005, EN 61000-3-2:2014, EN 61000-3-3:2013

4. Installation

Minimum clearance

The space required for installing and operating MAGNA pumps is illustrated below.



TM060058

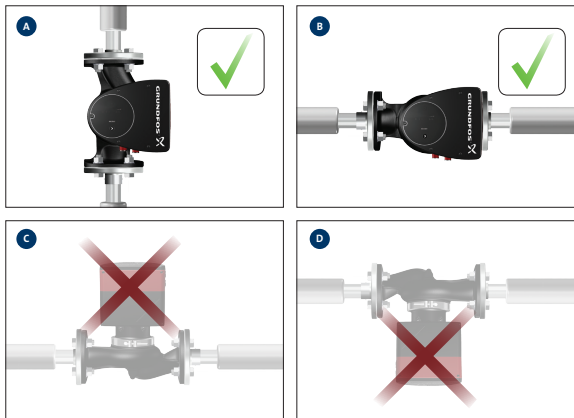
Minimum clearance required for single-head and twin-head pumps

Mechanical installation

The pump is designed for indoor installation.

The pump must be installed with horizontal motor shaft.

The pump may be installed in horizontal as well as vertical pipes.



TM055518

Installation positions

Arrows on the pump housing indicate the liquid flow direction through the pump.

The control box must be in the horizontal position with the Grundfos logo in the vertical position. See fig. [Installation positions](#).

This is described in the installation and operating instructions, which will be released together with the product launch.



QR99209952

net.grundfos.com/qr/i/99209952

The pump must be installed in such a way that it is not stressed by the pipes.

The pump may be suspended directly in the pipes, provided that the pipes can support the pump. Twin-head pumps are prepared for installation on a mounting bracket or base plate.

To ensure adequate cooling of motor and electronics, the following must be observed:

- Make sure that the control box is in horizontal position with the Grundfos logo in vertical position. The ambient temperature must not exceed 40 °C.

Insulating shells

The insulating shells supplied with single-head pumps are for heating systems and must be fitted as part of the installation.

Insulating shells for pumps for air-conditioning and cooling systems are available as an accessory.

See section [Insulating shells for applications with ice buildup](#).

Note: Insulating shells are not available for twin-head pumps.

Electrical installation

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

- The pump must be connected to an external main switch.
- The pump must always be correctly earthed.
- The pump requires no external motor protection.
- The pump incorporates thermal protection against slow overloading and blocking.
- When switched on via the power supply, the pump will start pumping after approximately 5 seconds.

Note: The number of starts and stops via the power supply must not exceed four times per hour.

The main connection of the pump must be made as shown in fig. [Example of terminal connection, 1 × 230 V ± 10 %, 50/60 Hz, PE](#) on page [Example of terminal connection, 1 × 230 V ± 10 %, 50/60 Hz, PE](#).

Related information

[Wiring diagrams](#)

Cables

All cables used must be connected in accordance with local regulations.

Additional protection

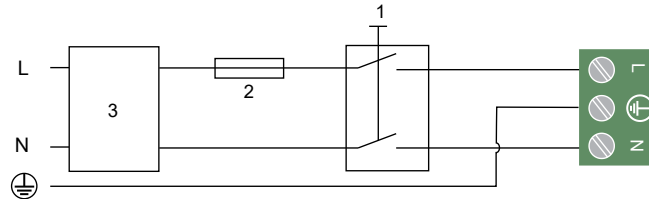
Plug-connected versions

In case of an insulation fault, the fault current may be a pulsating DC. Observe national legislation about requirements for and selection of Residual Current Device (RCD) when installing the pump.

Terminal-connected versions

For terminal-connected versions, in case of an insulation fault, the fault current may be a DC or pulsating DC. Observe national legislation about requirements for and selection of Residual Current Device (RCD) when installing the pump.

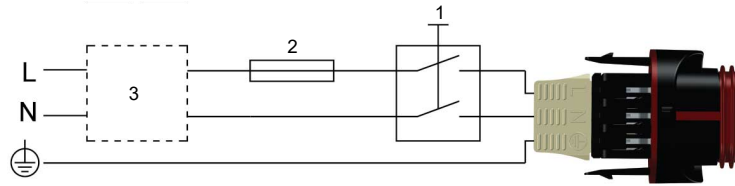
Wiring diagrams



TM032397

Example of terminal connection, 1 × 230 V ± 10 %, 50/60 Hz, PE

Pos.	Description
1	External switch
2	Fuse
3	RCD

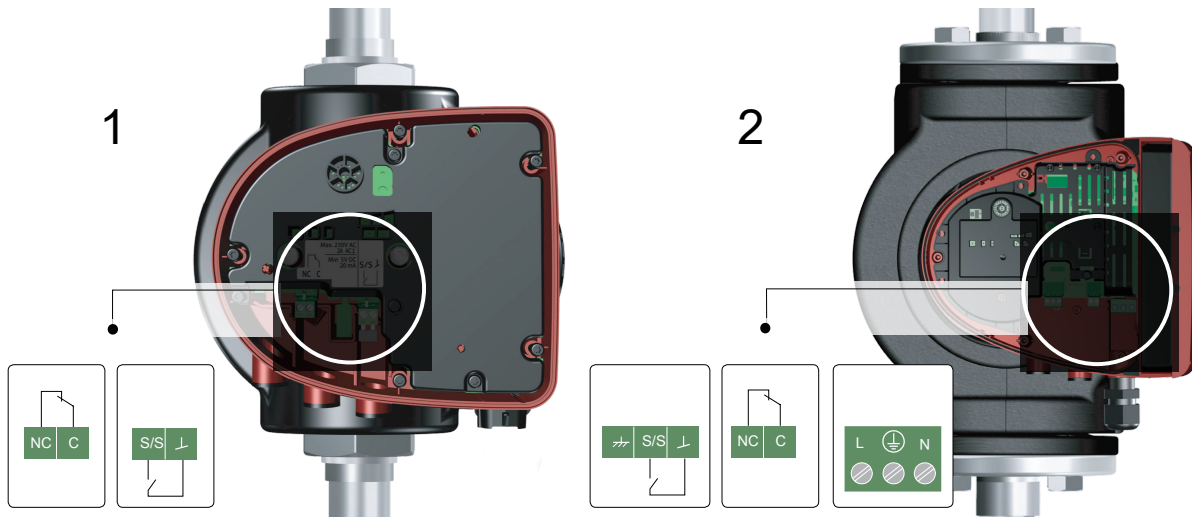


TM055277

Example of a plug-connected motor with main switch, backup fuse and additional protection

Pos.	Description
1	External switch
2	Fuse
3	RCD

Connection to external control



TM069079

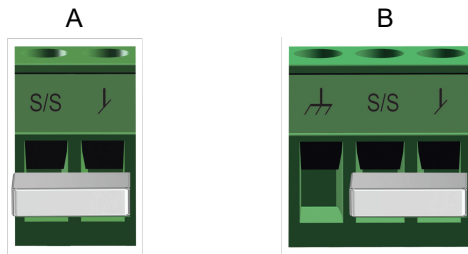
External control connections in the control box

Pos.	Description
1	Plug-connected versions
2	Terminal-connected versions

Digital input

You can use the digital input for external control of start/stop.

Note: If no external on/off switch is connected, maintain the jumper between terminals Start/Stop (S/S) and frame (⊥). This connection is the factory setting.



Digital input in the control box A: Plug-connected versions B: Terminal-connected versions

Contact symbol	Function
S/S	Start/Stop
⊥	Frame connection
⏏	Cable shield

Start/Stop		
 TM052701	 TMA05646	Normal duty
 TM052702	 TMB05646	Stop

For more information on communication, see section [External control and monitoring](#).

Related information

[External control and monitoring](#)

Relay output

The relay output is used as a fault signal.



Relay output in the control box

Contact symbol	Function
NC	Normally closed
C	Common

The functions of the signal relay are as shown in the table below:

Signal relay	Alarm signal
 TM068380	Not activated: <ul style="list-style-type: none"> The power supply has been switched off The pump has not registered a fault.
 TM068381	Activated: <ul style="list-style-type: none"> The pump has registered a fault or there is a wirebreak.

For more information on communication, see section [External control and monitoring](#).

Related information

[External control and monitoring](#)

TM079311

TM079310

5. Control and communication

	Models A and B	Model C	Section
Control modes			
Proportional pressure	•	•	Control modes
Constant pressure	•	•	
Constant curve	•	•	
Twin-head pump function			
Alternating operation		•	<i>Twin-head pump function</i>
External control and monitoring			
Digital input		•	<i>External control and monitoring</i>
Relay output		•	
Communication			
Grundfos GO Remote		•	<i>Grundfos GO Remote</i>

Related information

[Twin-head pump function](#)

[External control and monitoring](#)

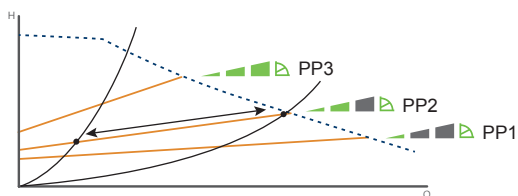
[Grundfos GO Remote](#)

Control modes

Proportional-pressure curve (PP1, PP2 or PP3)

Proportional-pressure control adjusts the pump performance to the actual flow demand in the system, but the pump performance follows the selected performance curve, PP1, PP2 or PP3. See fig. [Three proportional-pressure curves or settings](#) where PP2 has been selected.

For further information, see section Control modes.



TM05555

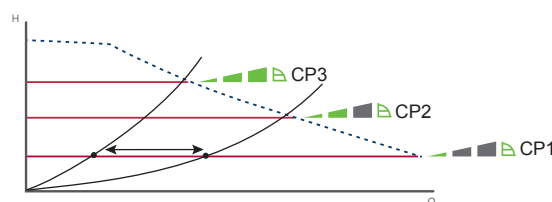
Three proportional-pressure curves or settings

The selection of the right proportional-pressure setting depends on the characteristics of the system in question and the actual flow demand.

Constant-pressure curve (CP1, CP2 or CP3)

Constant-pressure control adjusts the pump performance to the actual flow demand in the system, but the pump performance follows the selected performance curve, CP1, CP2 or CP3. See fig. [Three constant-pressure curves or settings](#) where CP1 has been selected.

For further information, see section Control modes.



TM05556

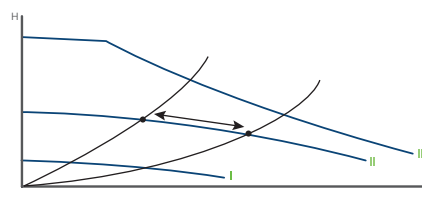
Three constant-pressure curves or settings

The selection of the right constant-pressure setting depends on the characteristics of the system in question and the actual flow demand.

Constant curve or constant speed (I, II or III)

In constant-curve or constant-speed operation, the pump runs at a constant speed, independent of the actual flow demand in the system. The pump performance follows the selected performance curve, I, II or III. See fig. [Three constant-curve or constant-speed settings](#) where II has been selected.

For further information, see section Control modes.

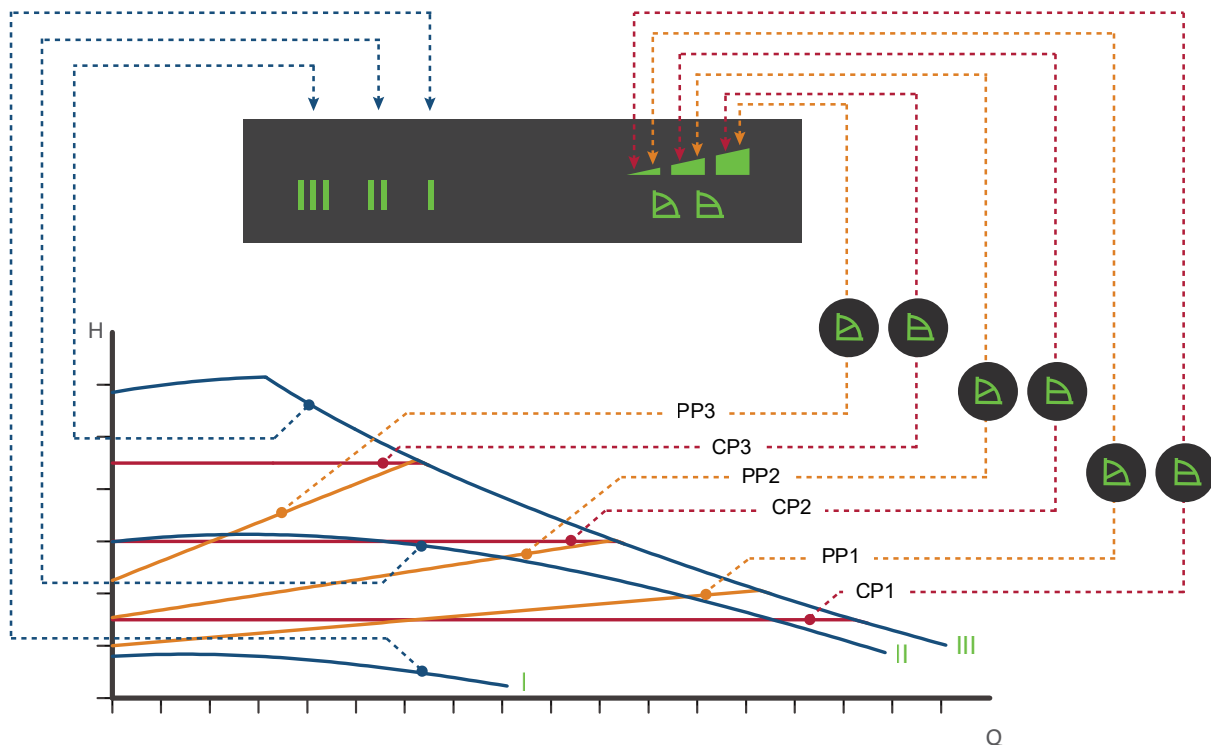


TM05557

Three constant-curve or constant-speed settings

The selection of the right constant-curve or constant-speed setting depends on the characteristics of the system in question.

Overview of the control modes

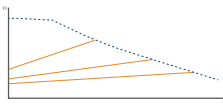
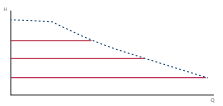
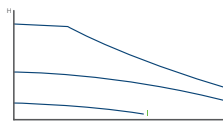


TM079312

Control mode in relation to system requirements

Setting	Pump curve	Function
PP1	Lowest proportional-pressure curve	The duty point of the pump will move up or down on the lowest proportional-pressure curve, depending on the flow demand. The head (pressure) is reduced at falling heat demand and increased at rising flow demand.
PP2	Intermediate proportional-pressure curve	The duty point of the pump will move up or down on the intermediate proportional-pressure curve, depending on the flow demand. The head (pressure) is reduced at falling flow demand and increased at rising flow demand.
PP3	Highest proportional-pressure curve	The duty point of the pump will move up or down on the highest proportional-pressure curve, depending on the flow demand. The head (pressure) is reduced at falling flow demand and increased at rising flow demand.
CP1	Lowest constant-pressure curve	The duty point of the pump will move out or in on the lowest constant-pressure curve, depending on the flow demand in the system. The head (pressure) is kept constant, irrespective of the flow demand.
CP2	Intermediate constant-pressure curve	The duty point of the pump will move out or in on the intermediate constant-pressure curve, depending on the flow demand in the system. The head (pressure) is kept constant, irrespective of the flow demand.
CP3	Highest constant-pressure curve	The duty point of the pump will move out or in on the highest constant-pressure curve, depending on the flow demand in the system. The head (pressure) is kept constant, irrespective of the flow demand.
III	Speed III	The pump runs on a constant curve which means that it runs at a constant speed. At speed III, the pump is set to run on the maximum curve under all operating conditions. Quick venting of the pump can be obtained by setting the pump to speed III for a short period.
II	Speed II	The pump runs on a constant curve which means that it runs at a constant speed. At speed II, the pump is set to run on the intermediate curve under all operating conditions.
I	Speed I	The pump runs on a constant curve which means that it runs at a constant speed. At speed I, the pump is set to run on the minimum curve under all operating conditions.

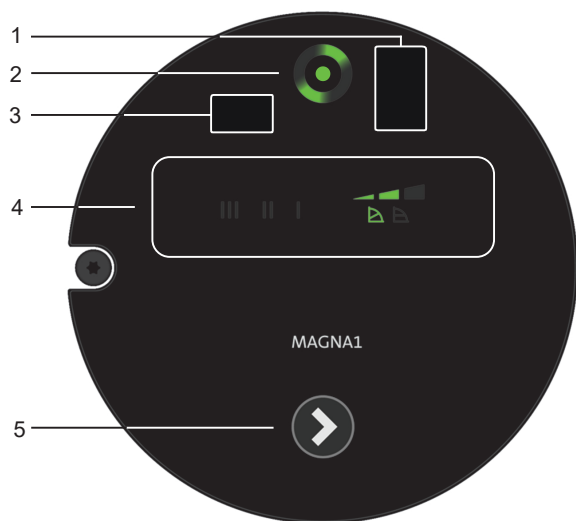
Selecting control mode

System application	Select this control mode
<p>In systems with relatively large pressure losses in the distribution pipes and in air-conditioning and cooling systems.</p> <ul style="list-style-type: none"> Two-pipe heating systems with thermostatic valves and> <ul style="list-style-type: none"> very long distribution pipes strongly throttled balancing valves differential-pressure regulators large pressure losses in those parts of the system through which the total quantity of water flows, for example a boiler, a heat exchanger and a distribution pipe up to the first branching. Primary circuit pumps in systems with large pressure losses in the primary circuit. Air-conditioning systems with <ul style="list-style-type: none"> heat exchangers (fan coils) cooling ceilings cooling surfaces. 	<p>Proportional pressure</p>  <p>PROPORTIONAL_CURVE2</p>
<p>In systems with relatively small pressure losses in the distribution pipes.</p> <ul style="list-style-type: none"> Two-pipe heating systems with thermostatic valves and> <ul style="list-style-type: none"> dimensioned for natural circulation small pressure losses in those parts of the system through which the total quantity of water flows, for example a boiler, a heat exchanger and a distribution pipe up to the first branching or modified to a high differential temperature between the flow pipe and return pipe, for example district heating. Underfloor heating systems with thermostatic valves. One-pipe heating systems with thermostatic valves or pipe balancing valves. Primary circuit pumps in systems with small pressure losses in the primary circuit. 	<p>Constant pressure</p>  <p>CONSTANT_CURVE2</p>
<p>For operation according to the maximum or minimum curve, like an uncontrolled pump:</p> <ul style="list-style-type: none"> Use the maximum curve mode in periods in which a maximum flow rate is required. This operating mode is for instance suitable for hot-water priority in domestic hot-water systems. Use the minimum curve mode in periods in which a minimum flow rate is required. 	<p>Constant curve</p>  <p>CONSTANT_CURVE3</p>

Twin-head pump function

The twin-head pump function allows you to control twin-head pumps without the use of an external controller. The pumps operate in alternating mode, meaning that only one pump runs at a time. The two pumps communicate with each other via wireless connection and change from one pump to the other every 24 hours or if one of the pumps experiences an alarm.

Operating panel



TM069078

Operating panel at first startup

The operating panel on the pump comprises the following:

Pos.	Description
1	Infrared receiver, Grundfos GO MAGNA1 25-40 - 32-120
2	Grundfos Eye operating status.
3	Infrared receiver, Grundfos GO MAGNA1 32-40 F - 100-120 F
4	LED indication of the control mode
5	Push-button for selection of a control mode.

Grundfos Eye

Grundfos Eye is on when the power supply has been switched on. See 1 in fig. [Operating panel at first startup](#).

Grundfos Eye is an indicator light providing information about the actual pump status.

The indicator light will flash in different sequences and provide information about the following:

- power on or off
- pump running or stopped
- pump alarms
- twin-head connection.

Related information

[Operating panel](#)

LEDs indicating the control mode

The pump has nine optional performance settings which you can select with the push-button. See 3 in fig.

[Operating panel at first startup](#).

The control mode is indicated by the LEDs in the display. The pump is factory set to proportional-pressure (PP2).

Button presses	Active light fields	Description
0		Intermediate proportional-pressure curve, referred to as PP2 Factory setting
1		Highest proportional-pressure curve, referred to as PP3
2		Lowest constant-pressure curve, referred to as CP1
3		Intermediate constant-pressure curve, referred to as CP2
4		Highest constant-pressure curve, referred to as CP3
5		Constant curve or constant speed III
6		Constant curve or constant speed II
7		Constant curve or constant speed I
8		Lowest proportional-pressure curve, referred to as PP1

Related information

[Operating panel](#)

Communication

Grundfos GO

MAGNA1 single-head pumps are designed for infrared communication (IR), intended for connection to Grundfos GO.

MAGNA1 D twin-head pumps have built-in radio and use a GLoWPAN signal for wireless communication with compatible MAGNA1 D pumps and with Grundfos GO.

Grundfos GO is intended for wireless connection to and remote control of Grundfos products. You can download the Grundfos GO or GO Remote app from the Apple App Store and Google Play Store.

MAGNA1 pumps require the add-on MI 301 module for infrared (IR) communication with Grundfos GO or GO Remote. See the section on Accessories.

You can use Grundfos GO Remote for the following:

- Adjusting the setpoint of the proportional-pressure curve
- Managing the fault-relay trigger setting in twin-head pumps
- Reading of warning and alarm indications.

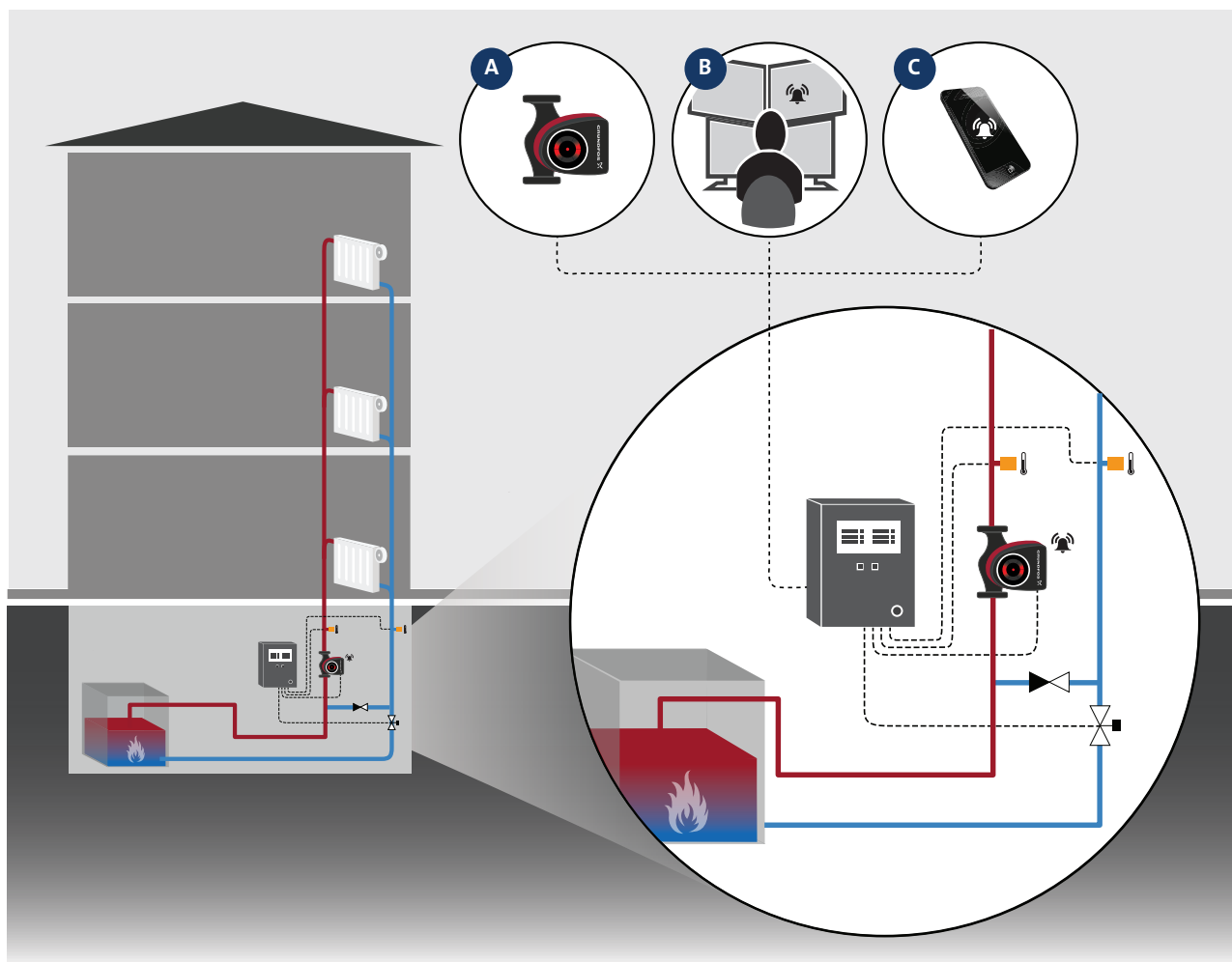
MAGNA1 also enables communication via the following:

- digital input (start/stop)
- relay output.

For further information, see the section [External control and monitoring](#).

External control and monitoring

Monitoring and controlling your system decreases the overall system downtime, and MAGNA1 model C offers several ways of meeting this demand. If the pump experiences a fault, the alarm relay sends a signal to the controller, which will subsequently trigger further events depending on your chosen strategy. See fig. [External control and monitoring](#).



TM068040

External control and monitoring

A: Local control and monitoring

The alarm relay output from the pump can be used to trigger other actions locally in the system, for example stopping a boiler. Other components in the system can use the "no fault signal" as part of an overall startup routine. If a twin-head pump experiences a fault on one of its heads, MAGNA1 will immediately shift to the other head, ensuring continuous operation.

B: Digital integration

SCADA integration ensures continuous monitoring of the entire application, including any faults on the pump. By using the digital input, the pumps can be started and stopped remotely.

C: Remote notifications

In addition to local control and monitoring, it is possible to use the alarm relay output to receive fault notifications on mobile devices, as long as your building management system allows it.

For more information, see sections [Connection to external control](#), [Digital input](#), and [Relay output](#).

Related information

[Connection to external control](#)

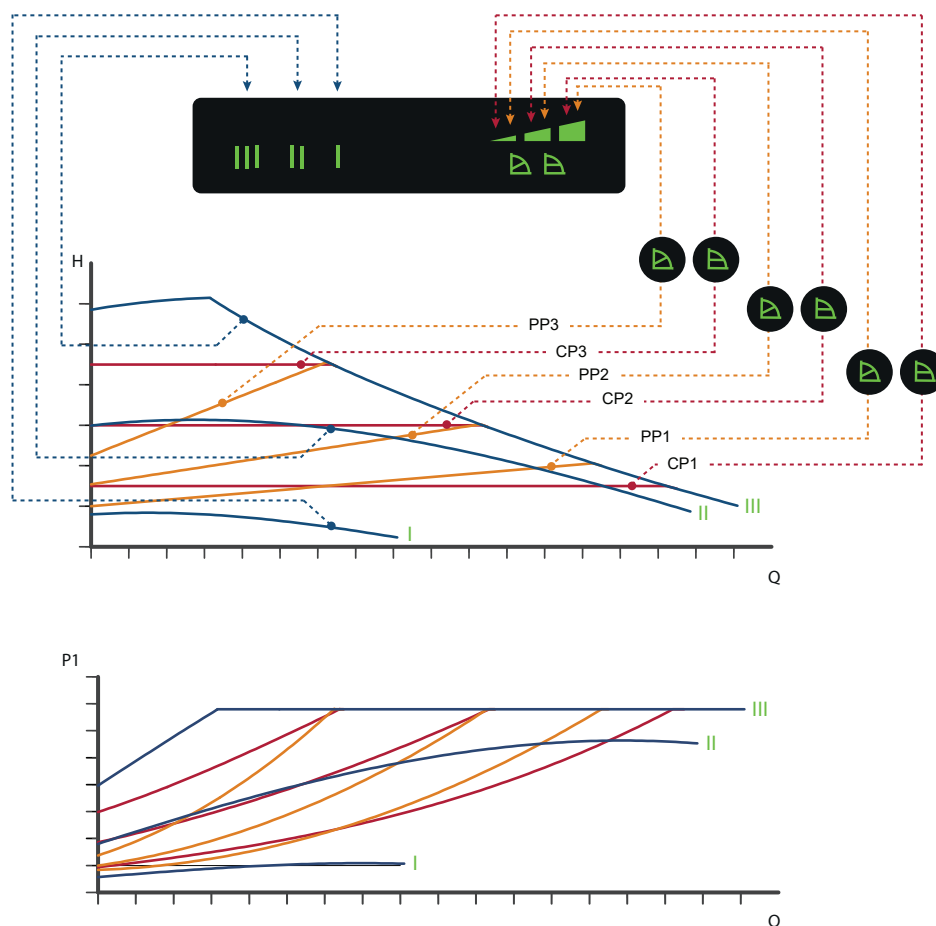
[Digital input](#)

[Relay output](#)

6. Performance curves

How to read the curve charts

Each control mode has its own performance curve, QH curve. A power curve, P1 curve, is associated with each QH curve. The power curve shows the power consumption of the pump, P1, in watt at a given QH curve.



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Performance curves in relation to control modes

Setting	Pump curve
PP1	Lowest proportional-pressure curve
PP2	Intermediate proportional-pressure curve
PP3	Highest proportional-pressure curve
CP1	Lowest constant-pressure curve
CP2	Intermediate constant-pressure curve
CP3	Highest constant-pressure curve
III	Constant-curve duty, fixed speed III
II	Constant-curve duty, fixed speed II
I	Constant-curve duty, fixed speed I

Curve conditions

The guidelines below apply to the performance curves in section Performance curves and technical data.

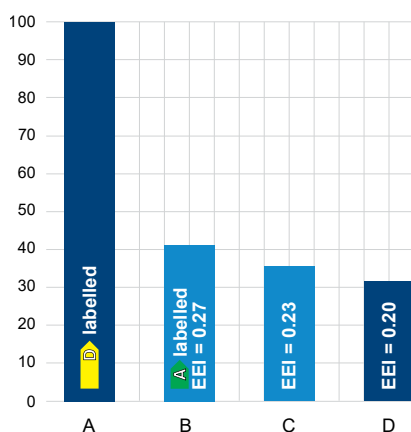
- Test liquid: airless water.
- The curves apply to a density of $\rho = 998.2 \text{ kg/m}^3$ and a liquid temperature of $20 \text{ }^\circ\text{C}$.
- All curves show average values and must not be used as guarantee curves. If a specific minimum performance is required, make individual measurements.
- The curves apply to a kinematic viscosity of $\nu = 1.004 \text{ mm}^2/\text{s}$ (1.004 cSt).
- Reference supply voltage: $1 \times 230 \text{ V}$, 50 Hz.
- Curves obtained according to EN 16297.

Symbols used on the following pages

The pump is energy-optimised and complies with the EuP Directive, Commission Regulation (EC) No 641/2009, which has been effective as from 1 January 2013.

For MAGNA1 model C single-head pumps, the energy efficiency index (EEI) is ≤ 0.20 .

Figure *Energy consumption index, single-head pumps* shows the energy consumption index for a typical circulator pump compared to the various EEI limits.



TM070028

Energy consumption index, single-head pumps

Pos.	Description
A	Typical circulator pump
B	EuP 2013
C	EuP 2015
D	MAGNA1 (average EEI value)

With an energy efficiency index (EEI) equal to the EuP 2015, you can achieve significant energy savings compared to a typical circulator pump and thus a remarkably fast return on investment.

Additional information

Use Grundfos GO Remote to scan the QR code on the pump and get the following information:

- product photo
- pump performance curves
- dimensional sketches
- wiring diagram
- quotation text
- technical data
- service parts list
- PDF files, such as data booklet and installation and operating instructions.



TM053826

QR code on the pump nameplate

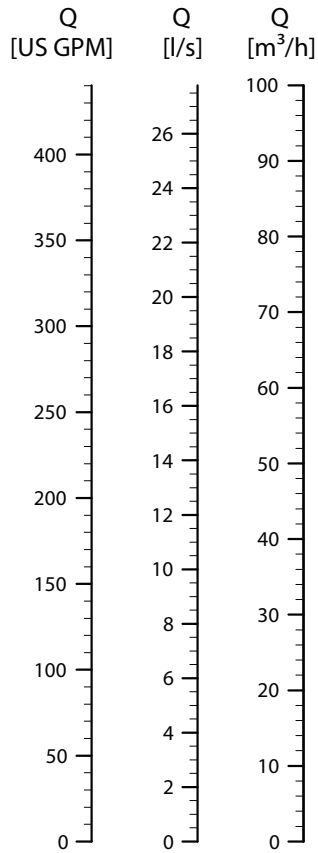
Markings and approvals

The following marks are available after positive testing of the pump:

Mark	Description
	The EC marking is based on the declaration of conformity issued by the manufacturer who certifies that the product meets all the appropriate provisions of the relevant legislation implementing certain European Directives.
	Electro-technical products including products according to the Product Safety Act (ProdSG) and medical products according to the Medical Product Act (MPG) according to German VDE/EN/IEC standards, other technical specifications as well as possible provisions of law with respect to safety and health requirements.
	Mark of Conformity in the Russia, Kazakhstan, Armenia, Kyrgyzstan and Belarus Customs Union for imports of Machinery and Industrial Equipment
	The product complies with the requirements of the United Kingdom Water Supply (Water Fittings) Regulations/Scottish Water Byelaws. Applies to the stainless-steel version only.
	The Turkish Standards Institute (TSE) certified that this product complies with the relevant directives and standards.
ACS	ACS - Attestation de Conformité Sanitaire. The suitability of this product to come into contact with water destined for human consumption has been evaluated and approved by a laboratory accredited by the French Ministry of Health.
	Crossed-out wheeled bin according to EN 50419:2006. The crossed-out wheelie bin symbol on a product means that it must be disposed of separately from household waste. When a product marked with this symbol reaches its end of life, take it to a collection point designated by the local waste disposal authorities. The separate collection and recycling of such products will help protect the environment and human health.

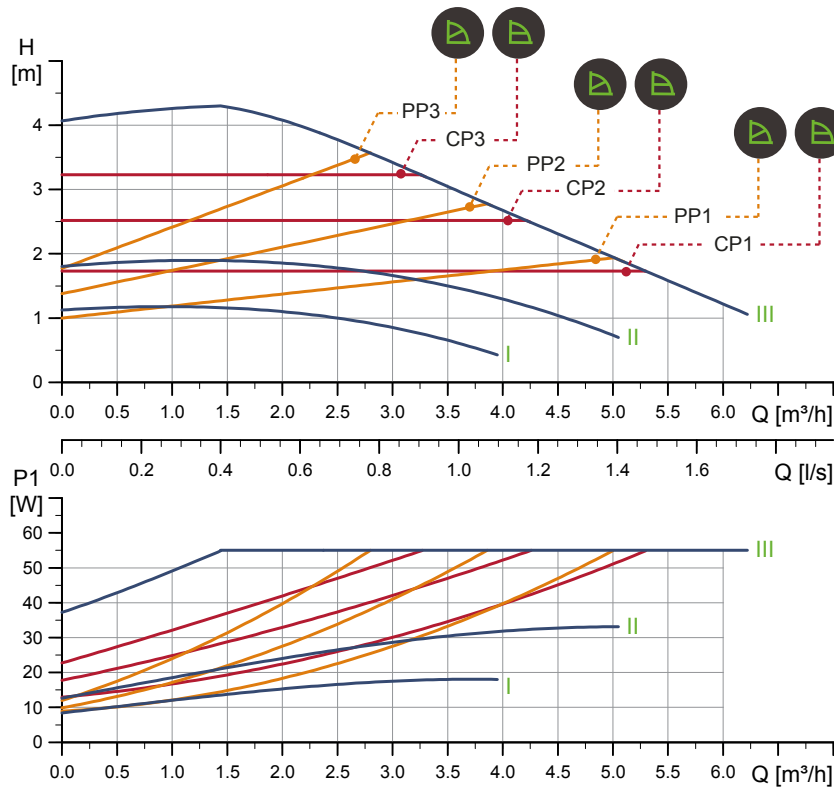
7. Performance curves and technical data

Conversion table



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■ MAGNA1 25-40 (N) PN 10
1 × 230 V, 50/60 Hz



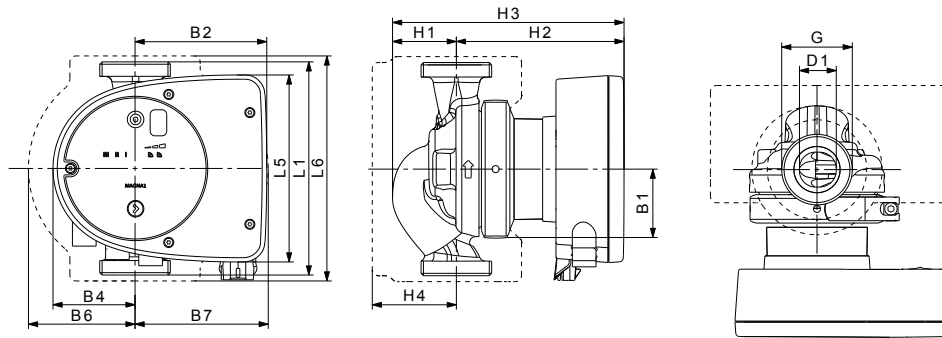
TM056316

Speed	P1 [W]	I _{1/1} [A]
Min.	9	0.09
Max.	56	0.45

The pump incorporates overload protection.

Net weight [kg]	Gross weight [kg]	Ship. vol. [m ³]
4.4	5.4	0.012

Connections:	See section 8.6 <i>Pipe connections</i> .
System pressure:	Max. 1.0 MPa (10 bar)
Liquid temperature:	-10 to 110 °C (TF 110)
Also available with:	Stainless-steel pump housing, type N
Specific EEI:	0.20

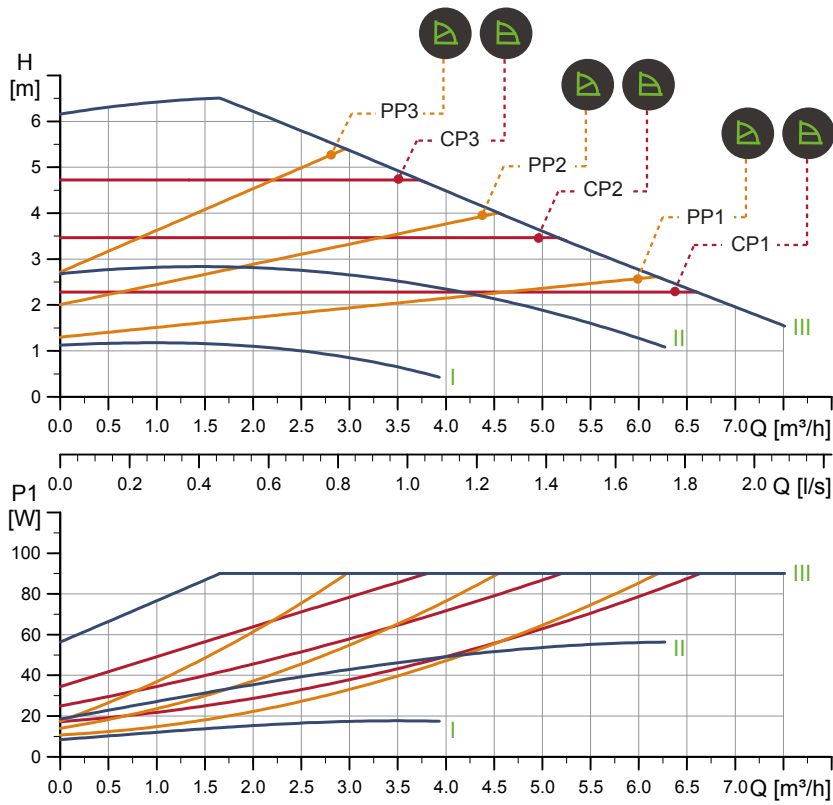


TM069948

Pump type	Dimensions [mm]												[inch]	
	L1	L5	L6	B1	B2	B4	B6	B7	H1	H2	H3	H4	D1	G
MAGNA1 25-40 (N)	180	158	190	58	111	69	90	113	54	142	196	71	25	1 1/2

For product numbers, see section Product numbers.

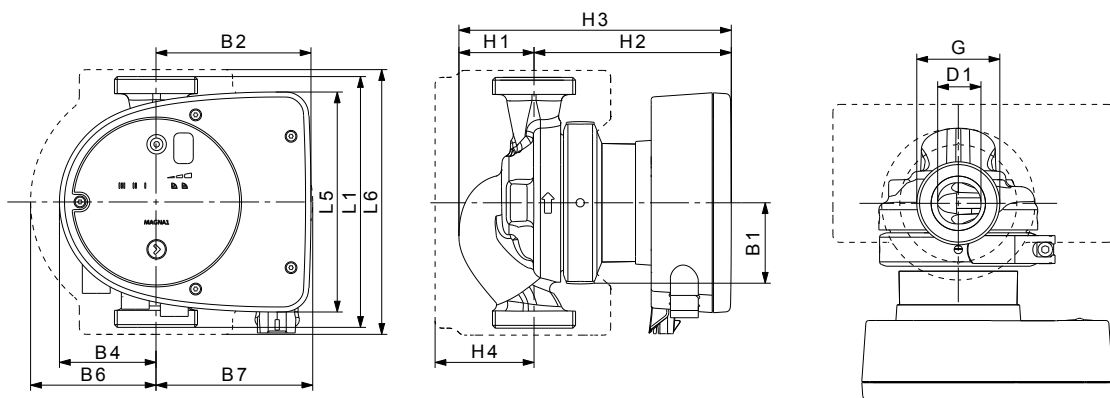
■ MAGNA1 25-60 (N) PN 10
1 × 230 V, 50/60 Hz



TM070562

Speed	P1 [W]	I_{1/1} [A]
Min.	9	0.09
Max.	92	0.74
The pump incorporates overload protection.		
Net weight [kg]	Gross weight [kg]	Ship. vol. [m³]
4.4	5.4	0.012

Connections:	See section 8.6 <i>Pipe connections</i> .
System pressure:	Max. 1.0 MPa (10 bar)
Liquid temperature:	-10 to 110 °C (TF 110)
Also available with:	Stainless-steel pump housing, type N
Specific EEI:	0.20



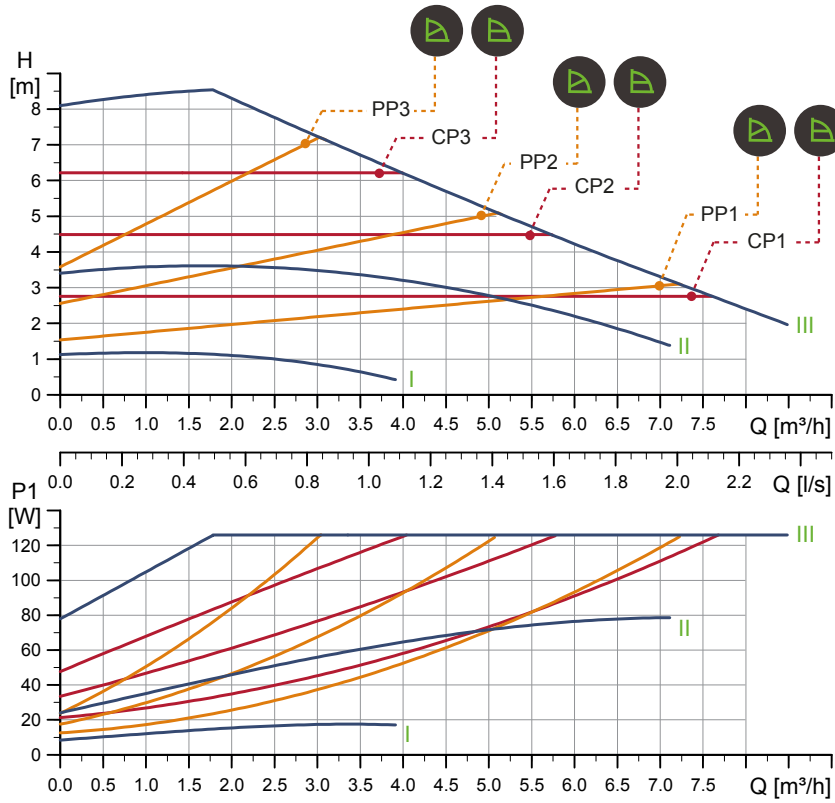
TM069948

Pump type	Dimensions [mm]													[inch]
	L1	L5	L6	B1	B2	B4	B6	B7	H1	H2	H3	H4	D1	G
MAGNA1 25-60 (N)	180	158	190	58	111	69	90	113	54	142	196	71	25	1 1/2

For product numbers, see section Product number.

■ MAGNA1 25-80 (N) PN 10

1 × 230 V, 50/60 Hz



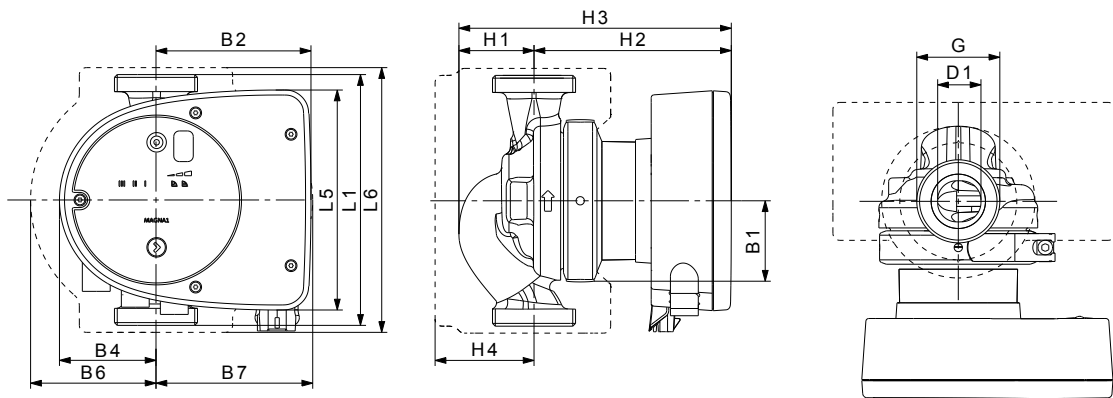
TM070563

Speed	P1 [W]	I _{1/1} [A]
Min.	9	0.09
Max.	128	1.03

The pump incorporates overload protection.

Net weight [kg]	Gross weight [kg]	Ship. vol. [m ³]
4.4	5.4	0.012

Connections:	See section 8.6 Pipe connections.
System pressure:	Max. 1.0 MPa (10 bar)
Liquid temperature:	-10 to 110 °C (TF 110)
Also available with:	Stainless-steel pump housing, type N
Specific EEI:	0.20

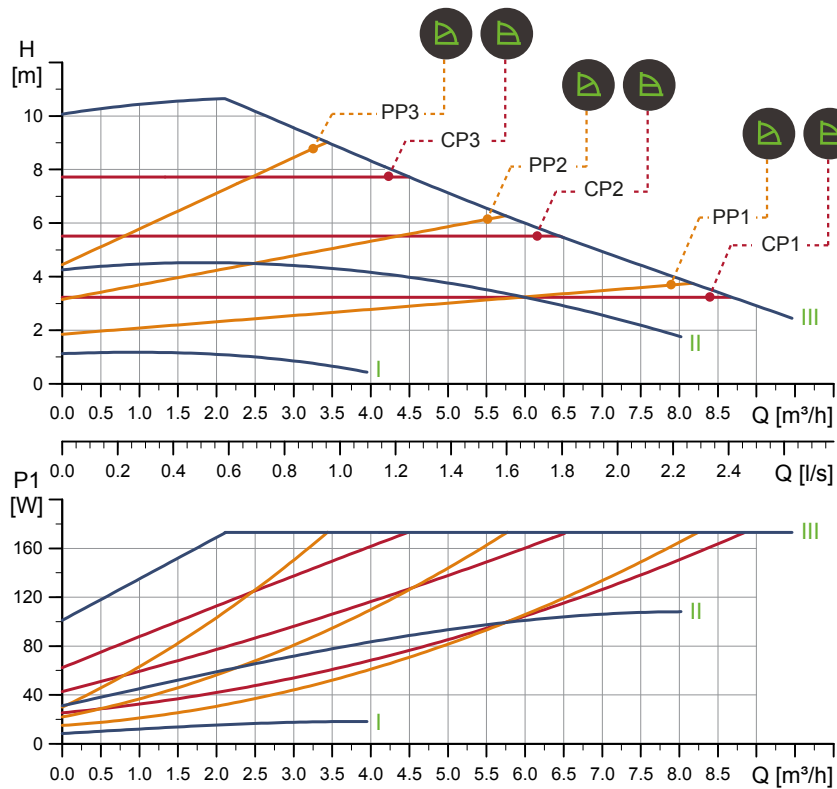


TM069948

Pump type	Dimensions [mm]													[inch]
	L1	L5	L6	B1	B2	B4	B6	B7	H1	H2	H3	H4	D1	G
MAGNA1 25-80 (N)	180	158	190	58	111	69	90	113	54	142	196	71	25	1 1/2

For product numbers, see section Product numbers.

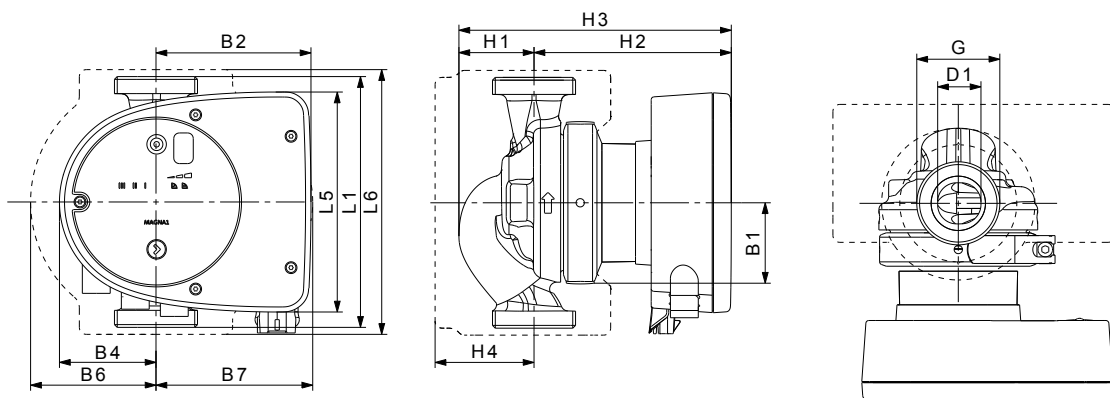
■ MAGNA1 25-100 (N) PN 10
1 × 230 V, 50/60 Hz



TM056322

Speed	P1 [W]	I_{1/1} [A]
Min.	9	0.09
Max.	176	1.42
The pump incorporates overload protection.		
Net weight [kg]	Gross weight [kg]	Ship. vol. [m³]
4.4	5.4	0.012

Connections:	See section 8.6 <i>Pipe connections</i> .
System pressure:	Max. 1.0 MPa (10 bar)
Liquid temperature:	-10 to 110 °C (TF 110)
Also available with:	Stainless-steel pump housing, type N
Specific EEI:	0.20



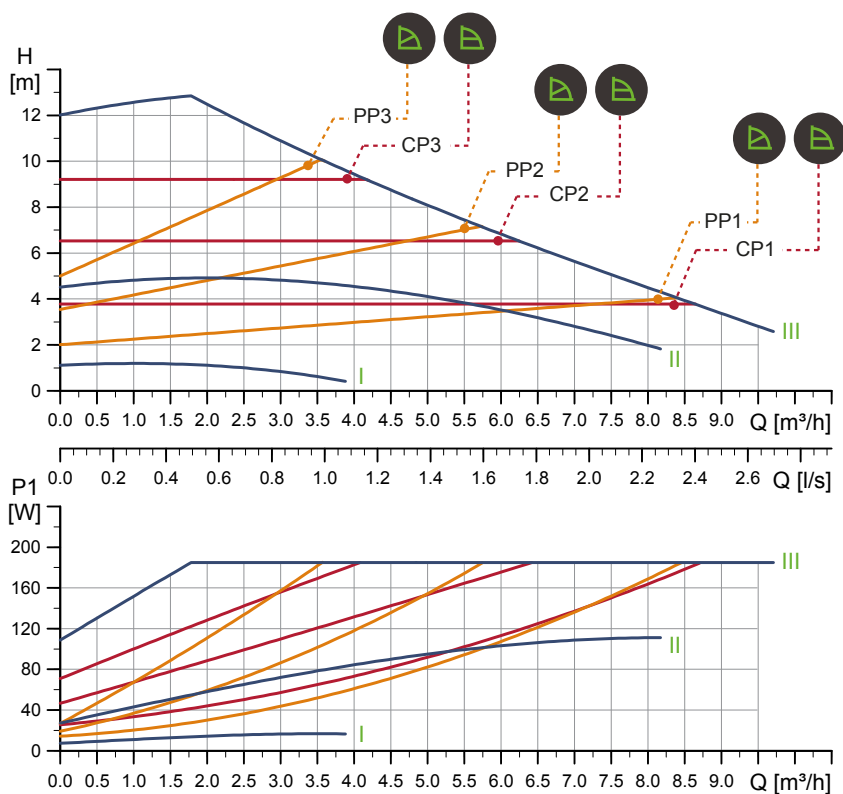
TM069948

Pump type	Dimensions [mm]													[inch]
	L1	L5	L6	B1	B2	B4	B6	B7	H1	H2	H3	H4	D1	G
MAGNA1 25-100 (N)	180	158	190	58	111	69	90	113	54	142	196	71	25	1 1/2

For product numbers, see section Product numbers.

■ MAGNA1 25-120 (N) PN 10

1 × 230 V, 50/60 Hz



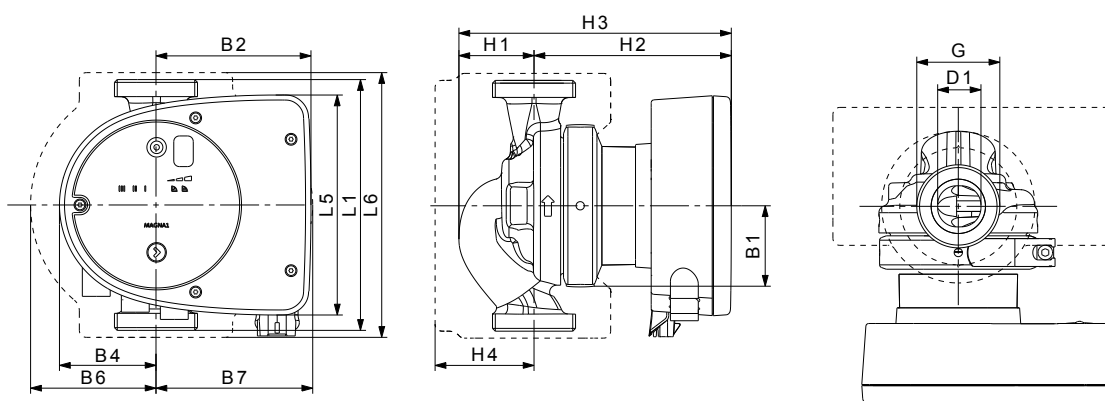
TM056324

Speed	P1 [W]	I _{1/1} [A]
Min.	8	0.08
Max.	188	1.51

The pump incorporates overload protection.

Net weight [kg]	Gross weight [kg]	Ship. vol. [m³]
4.4	5.4	0.012

Connections:	See section 8.6 Pipe connections.
System pressure:	Max. 1.0 MPa (10 bar)
Liquid temperature:	-10 to 110 °C (TF 110)
Also available with:	Stainless-steel pump housing, type N
Specific EEI:	0.20

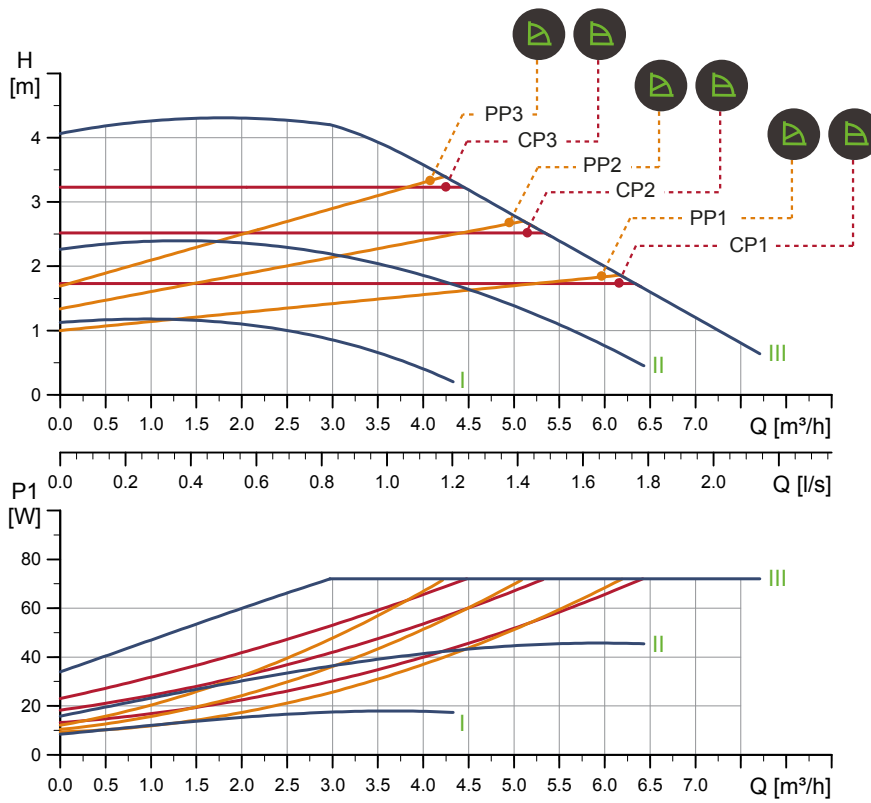


TM069948

Pump type	Dimensions [mm]													[inch]
	L1	L5	L6	B1	B2	B4	B6	B7	H1	H2	H3	H4	D1	G
MAGNA1 25-120 (N)	180	158	190	58	111	69	90	113	54	142	196	71	25	1 1/2

For product numbers, see section Product numbers.

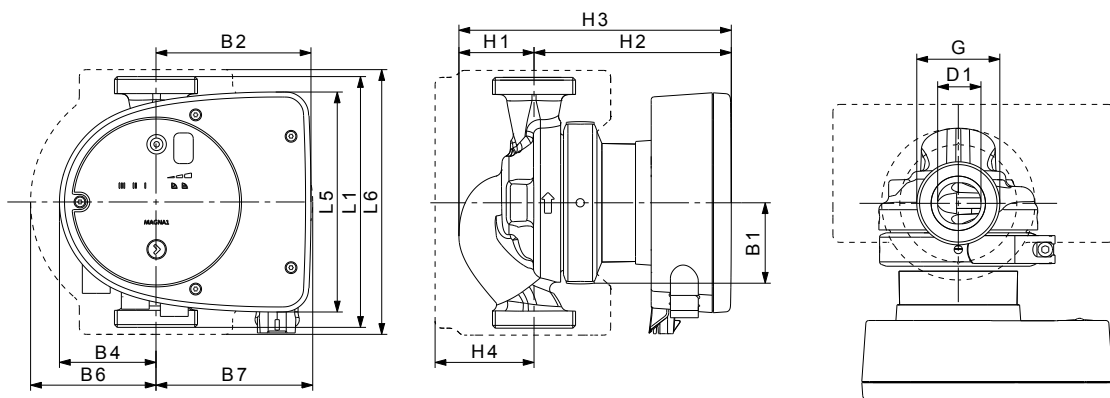
■ MAGNA1 32-40 (N) PN 10
1 × 230 V, 50/60 Hz



TM056325

Speed	P1 [W]	I_{1/1} [A]
Min.	9	0.09
Max.	73	0.59
The pump incorporates overload protection.		
Net weight [kg]	Gross weight [kg]	Ship. vol. [m³]
4.4	5.4	0.012

Connections:	See section 8.6 <i>Pipe connections</i> .
System pressure:	Max. 1.0 MPa (10 bar)
Liquid temperature:	-10 to 110 °C (TF 110)
Also available with:	Stainless-steel pump housing, type N
Specific EEI:	0.20



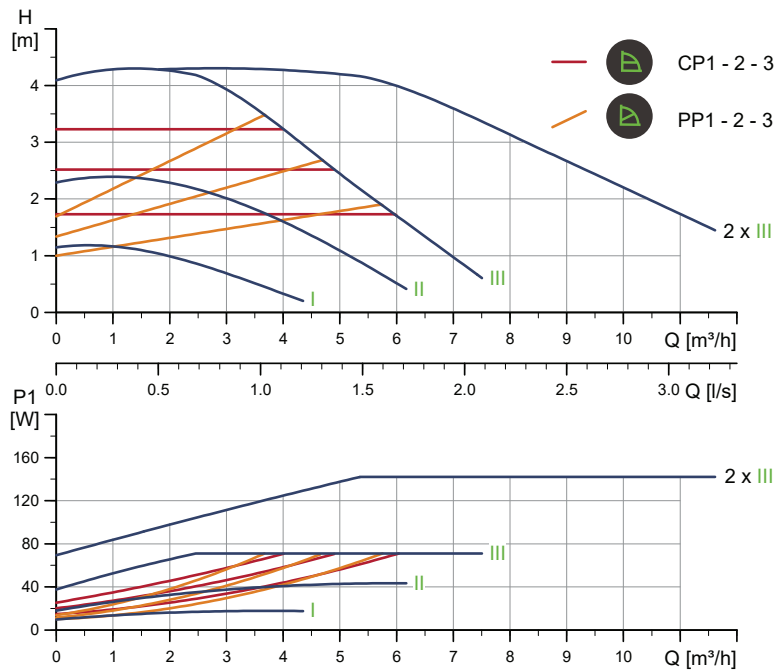
TM069948

Pump type	Dimensions [mm]													[inch]	
	L1	L5	L6	B1	B2	B4	B6	B7	H1	H2	H3	H4	D1	G	
MAGNA1 32-40 (N)	180	158	190	58	111	69	90	113	54	142	196	71	32	2	

For product numbers, see section Product numbers.

■ MAGNA1 D 32-40 PN 10

1 × 230 V, 50/60 Hz



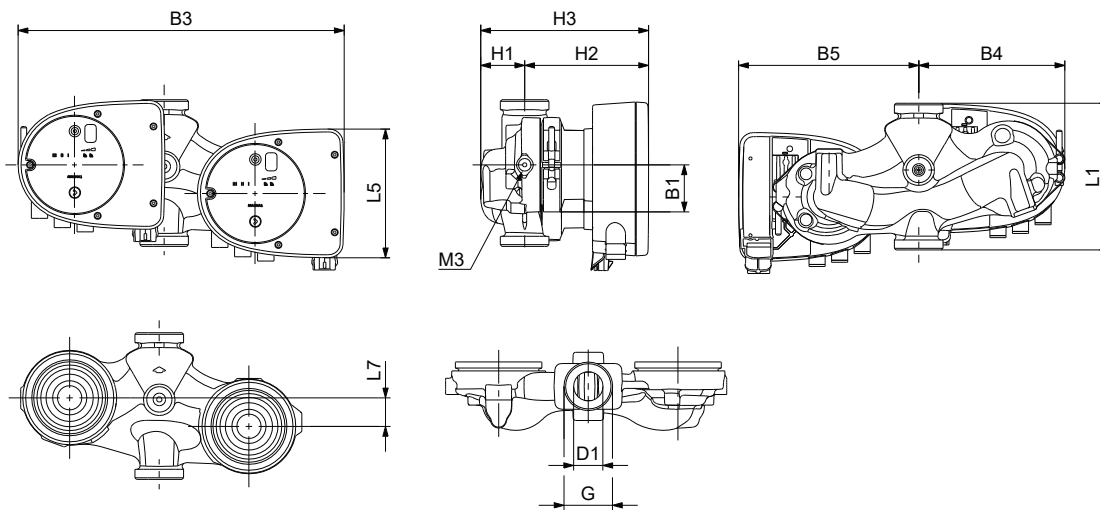
TM056363

Speed	P1 [W]	I _{1/1} [A]
Min.	9	0.09
Max.	73	0.59

Connections:	See section 8.6 Pipe connections .
System pressure:	Max. 1.0 MPa (10 bar)
Liquid temperature:	-10 to 110 °C (TF 110)
Specific EEI:	0.23

The pump incorporates overload protection.

Net weight [kg]	Gross weight [kg]	Ship. vol. [m³]
12.4	13.4	0.045

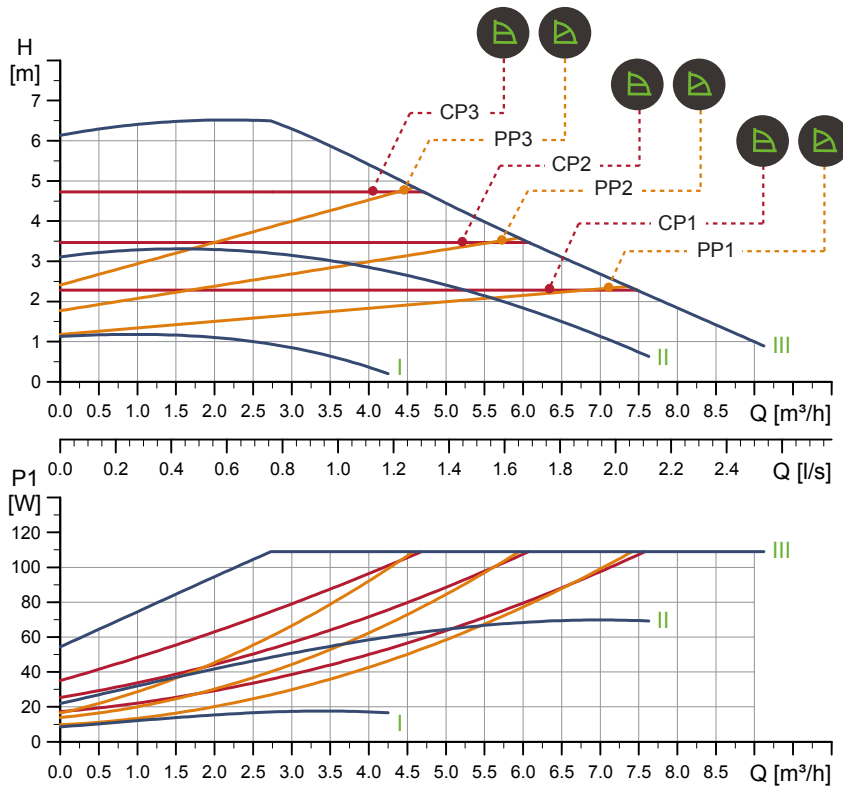


TM070068

Pump type	Dimensions [mm]											[inch]	
	L1	L5	L7	B1	B3	B4	B5	H1	H2	H3	D1	G	M3
MAGNA1 D 32-40	180	158	35	58	400	179	221	54	142	196	32	2	1/4

For product numbers, see section Product numbers.

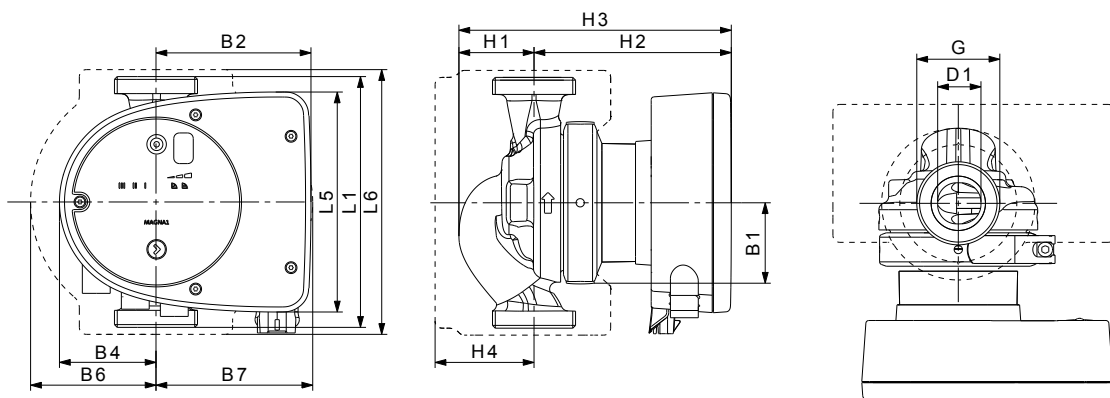
■ MAGNA1 32-60 (N) PN 10
1 × 230 V, 50/60 Hz



TM056327

Speed	P1 [W]	I_{1/1} [A]
Min.	9	0.09
Max.	111	0.9
The pump incorporates overload protection.		
Net weight [kg]	Gross weight [kg]	Ship. vol. [m³]
4.4	5.4	0.012

Connections:	See section 8.6 <i>Pipe connections</i> .
System pressure:	Max. 1.0 MPa (10 bar)
Liquid temperature:	-10 to 110 °C (TF 110)
Also available with:	Stainless-steel pump housing, type N
Specific EEI:	0.20



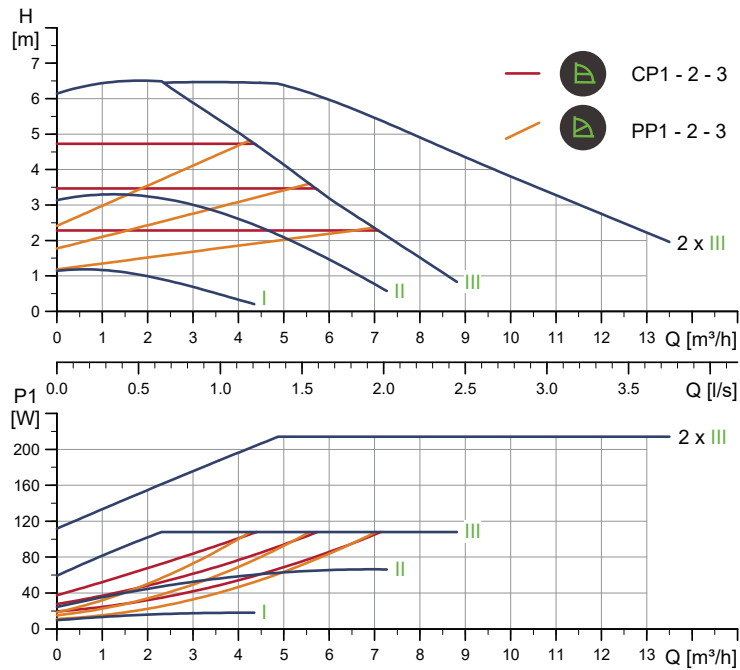
TM069948

Pump type	Dimensions [mm]													[inch]	
	L1	L5	L6	B1	B2	B4	B6	B7	H1	H2	H3	H4	D1	G	
MAGNA1 32-60 (N)	180	158	190	58	111	69	90	113	54	142	196	71	32	2	

For product numbers, see section Product numbers.

■ MAGNA1 D 32-60 PN 10

1 × 230 V, 50/60 Hz



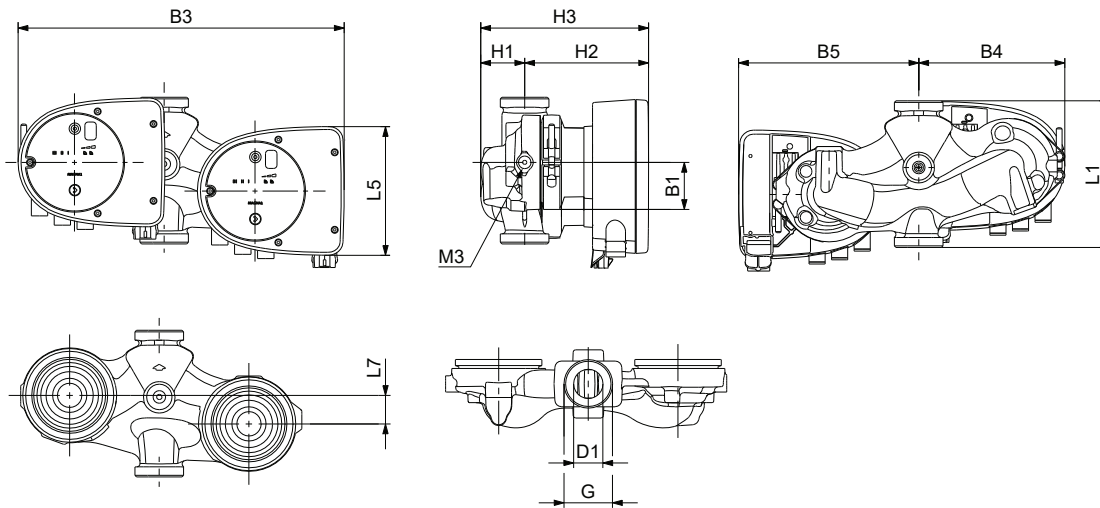
TM056365

Speed	P1 [W]	I _{1/1} [A]
Min.	9	0.09
Max.	111	0.9

The pump incorporates overload protection.

Connections:	See section 8.6 Pipe connections.
System pressure:	Max. 1.0 MPa (10 bar)
Liquid temperature:	-10 to 110 °C (TF 110)
Specific EEI:	0.23

Net weight [kg]	Gross weight [kg]	Ship. vol. [m³]
12.4	13.4	0.045

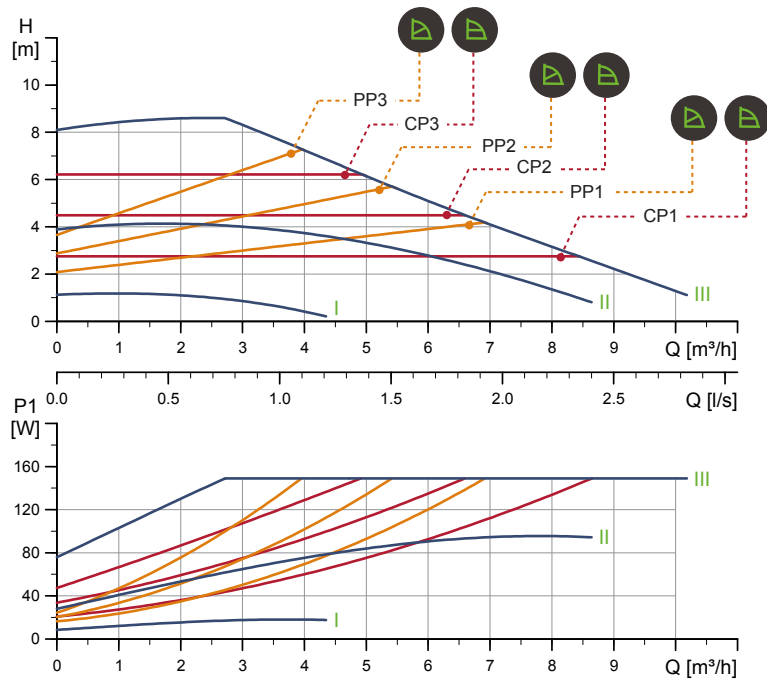


TM070068

Pump type	Dimensions [mm]											[inch]		
	L1	L5	L7	B1	B3	B4	B5	H1	H2	H3	D1	G	M3	
MAGNA1 D 32-60	180	158	35	58	400	179	221	54	142	196	32	2	1/4	

For product numbers, see section Product numbers.

■ MAGNA1 32-80 (N) PN 10
1 × 230 V, 50/60 Hz



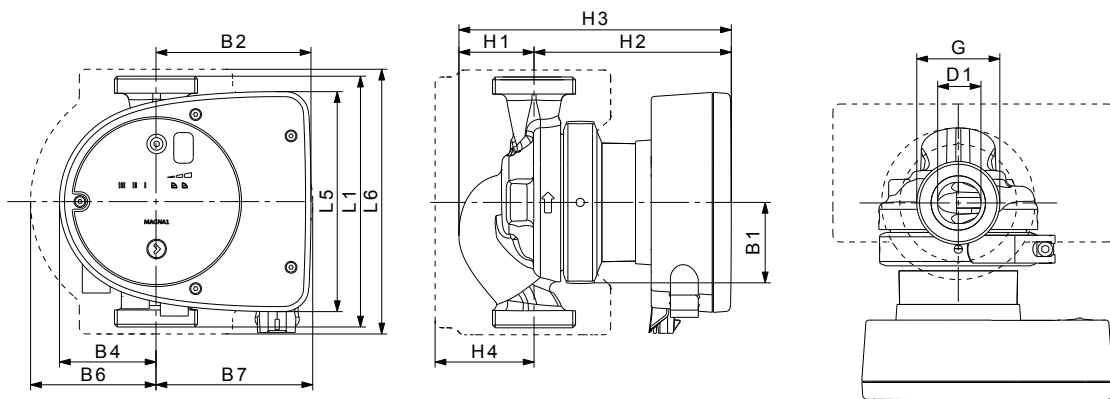
TM070564

Speed	P1 [W]	I _{1/1} [A]
Min.	9	0.09
Max.	151	1.22

The pump incorporates overload protection.

Net weight [kg]	Gross weight [kg]	Ship. vol. [m ³]
4.4	5.4	0.012

Connections:	See section 8.6 <i>Pipe connections</i> .
System pressure:	Max. 1.0 MPa (10 bar)
Liquid temperature:	-10 to 110 °C (TF 110)
Also available with:	Stainless-steel pump housing, type N
Specific EEI:	0.20



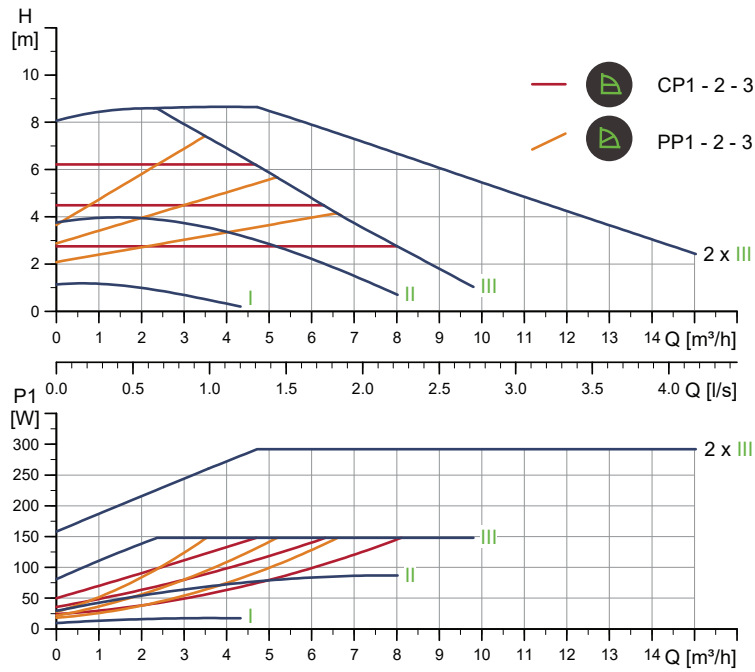
TM069948

Pump type	Dimensions [mm]													[inch]
	L1	L5	L6	B1	B2	B4	B6	B7	H1	H2	H3	H4	D1	G
MAGNA1 32-80 (N)	180	158	190	58	111	69	90	113	54	142	196	71	32	2

For product numbers, see section Product numbers.

■ MAGNA1 D 32-80 PN 10

1 × 230 V, 50/60 Hz



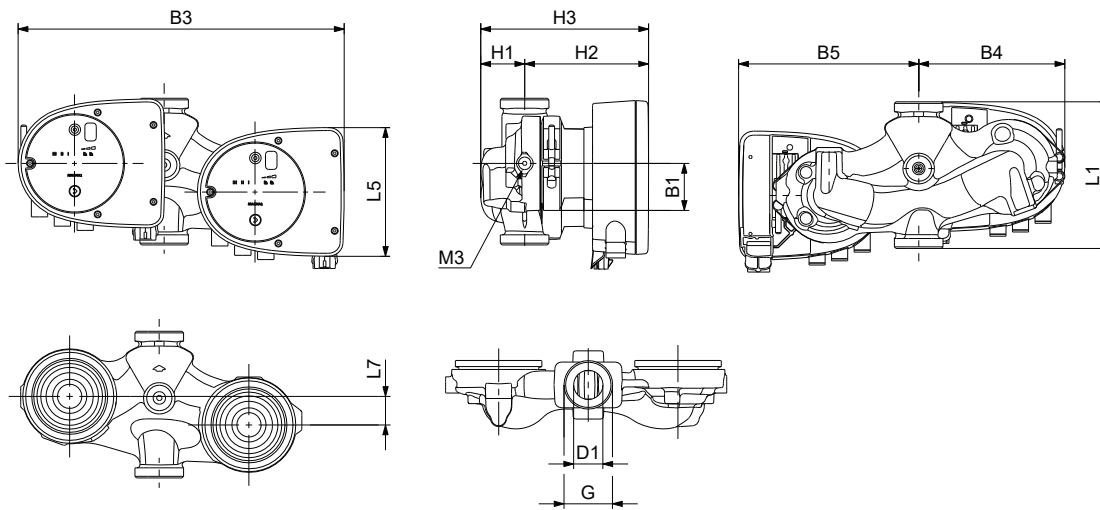
TM056367

Speed	P1 [W]	I _{1/1} [A]
Min.	9	0.09
Max.	151	1.22

The pump incorporates overload protection.

Connections:	See section 8.6 Pipe connections.
System pressure:	Max. 1.0 MPa (10 bar)
Liquid temperature:	-10 to 110 °C (TF 110)
Specific EEI:	0.23

Net weight [kg]	Gross weight [kg]	Ship. vol. [m³]
12.4	13.4	0.045

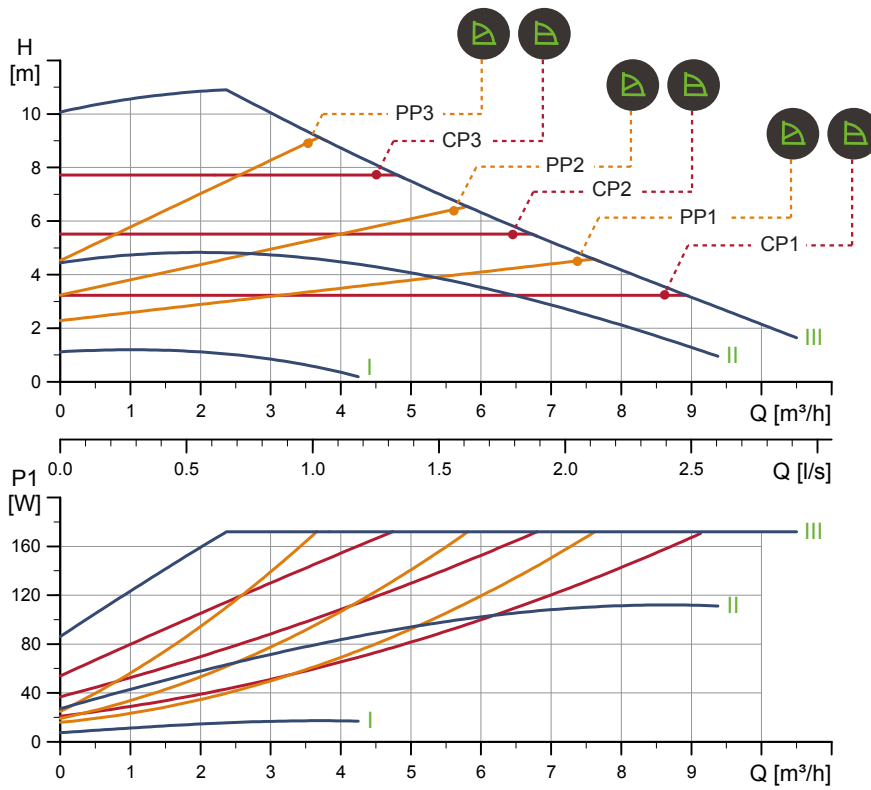


TM070068

Pump type	Dimensions [mm]											[inch]		
	L1	L5	L7	B1	B3	B4	B5	H1	H2	H3	D1	G	M3	
MAGNA1 D 32-80	180	158	35	58	400	179	221	54	142	196	32	2	1/4	

For product numbers, see section Product numbers.

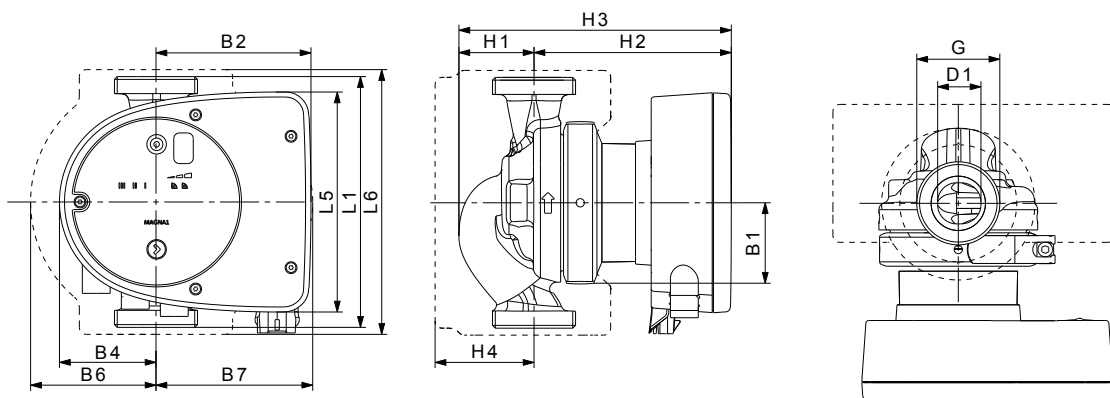
■ MAGNA1 32-100 (N) PN 10
1 × 230 V, 50/60 Hz



TM056331

Speed	P1 [W]	I_{1/1} [A]
Min.	8	0.08
Max.	175	1.41
The pump incorporates overload protection.		
Net weight [kg]	Gross weight [kg]	Ship. vol. [m³]
4.4	5.4	0.012

Connections:	See section 8.6 <i>Pipe connections</i> .
System pressure:	Max. 1.0 MPa (10 bar)
Liquid temperature:	-10 to 110 °C (TF 110)
Also available with:	Stainless-steel pump housing, type N
Specific EEI:	0.20



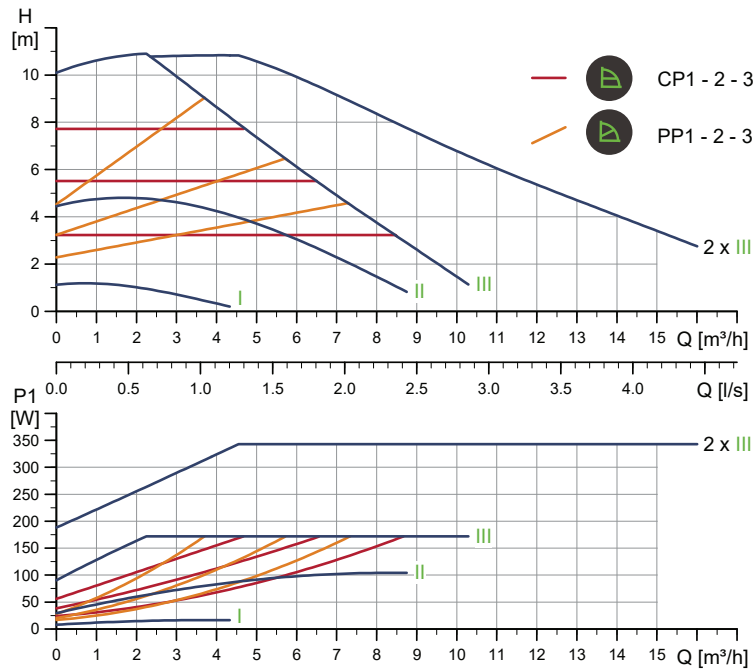
TM069948

Pump type	Dimensions [mm]													[inch]	
	L1	L5	L6	B1	B2	B4	B6	B7	H1	H2	H3	H4	D1	G	
MAGNA1 32-100 (N)	180	158	190	58	111	69	90	113	54	142	196	71	32	2	

For product numbers, see section Product numbers.

■ MAGNA1 D 32-100 PN 10

1 × 230 V, 50/60 Hz



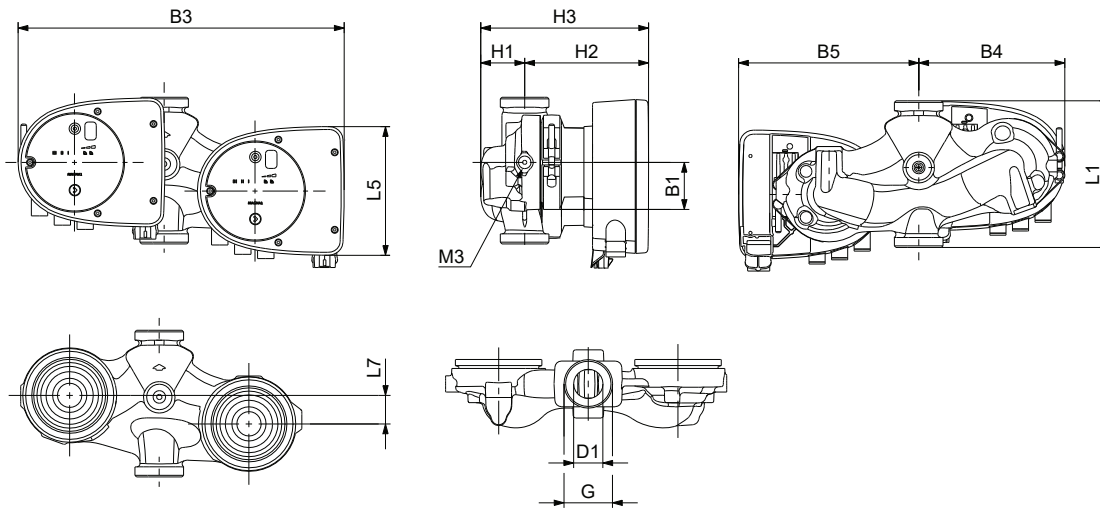
TM056369

Speed	P1 [W]	I _{1/1} [A]
Min.	8	0.08
Max.	175	1.41

The pump incorporates overload protection.

Connections:	See section 8.6 Pipe connections.
System pressure:	Max. 1.0 MPa (10 bar)
Liquid temperature:	-10 to 110 °C (TF 110)
Specific EEI:	0.22

Net weight [kg]	Gross weight [kg]	Ship. vol. [m³]
12.4	13.4	0.045



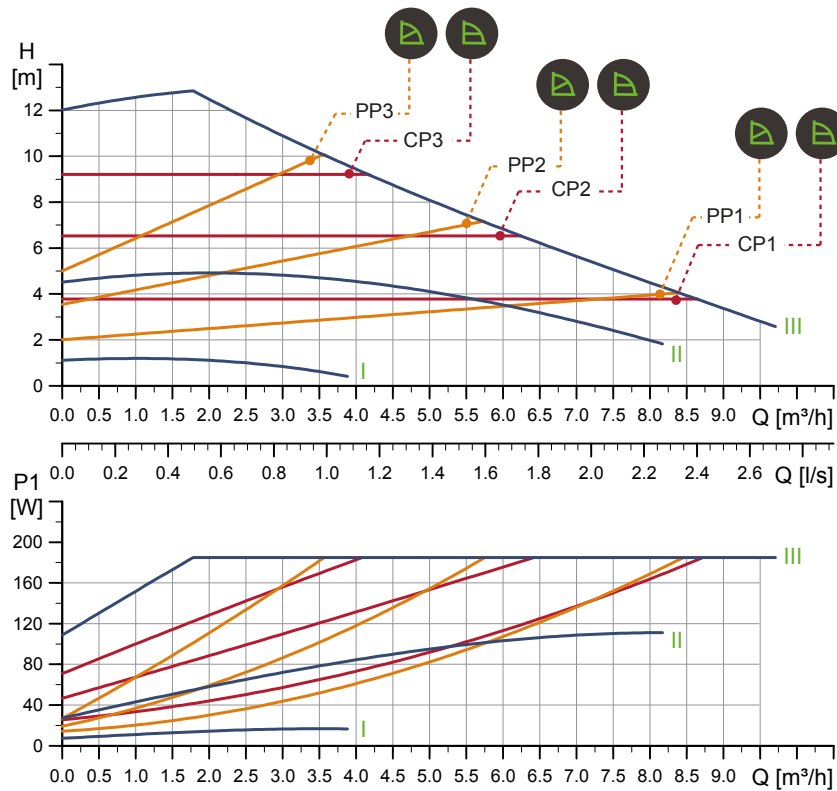
TM070068

Pump type	Dimensions [mm]											[inch]	
	L1	L5	L7	B1	B3	B4	B5	H1	H2	H3	D1	G	M3
MAGNA1 D 32-100	180	158	35	58	400	179	221	54	142	196	32	2	1/4

For product numbers, see section Product numbers.

■ MAGNA1 32-120 (N) PN 10

1 × 230 V, 50/60 Hz



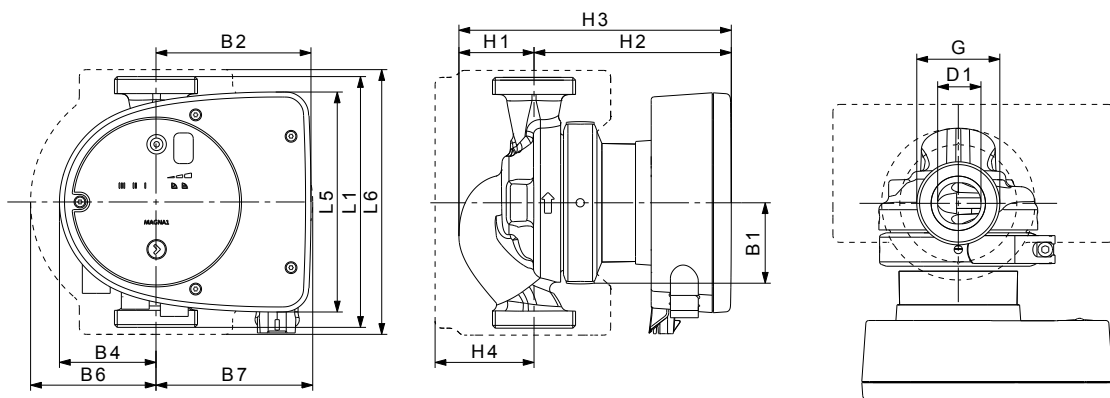
TM056324

Speed	P1 [W]	I _{1/1} [A]
Min.	8	0.08
Max.	188	1.51

The pump incorporates overload protection.

Net weight [kg]	Gross weight [kg]	Ship. vol. [m ³]
4.4	5.4	0.012

Connections:	See section 8.6 Pipe connections.
System pressure:	Max. 1.0 MPa (10 bar)
Liquid temperature:	-10 to 110 °C (TF 110)
Also available with:	Stainless-steel pump housing, type N
Specific EEI:	0.20

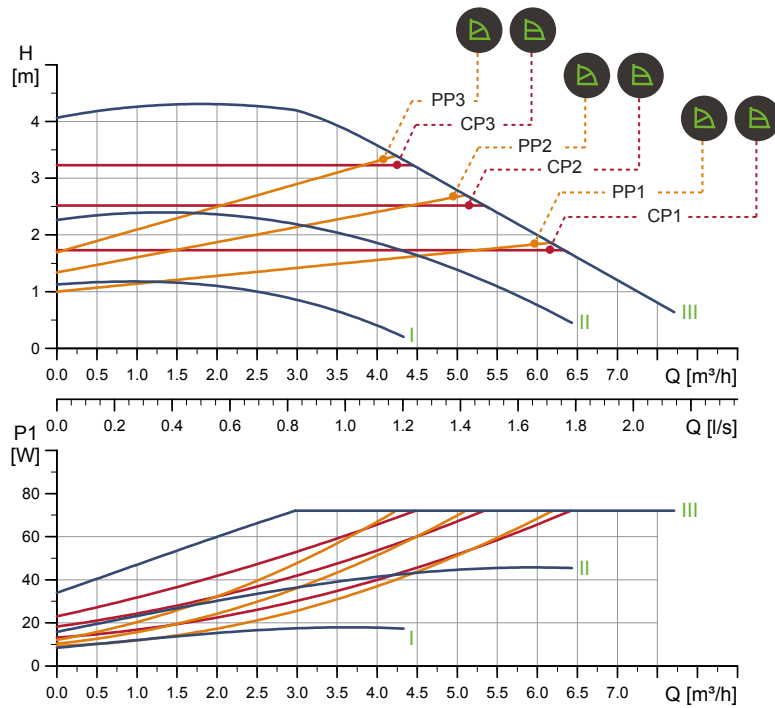


TM069948

Pump type	Dimensions [mm]													[inch]	
	L1	L5	L6	B1	B2	B4	B6	B7	H1	H2	H3	H4	D1	G	
MAGNA1 32-120 (N)	180	158	190	58	111	69	90	113	54	142	196	71	32	2	

For product numbers, see section Product numbers.

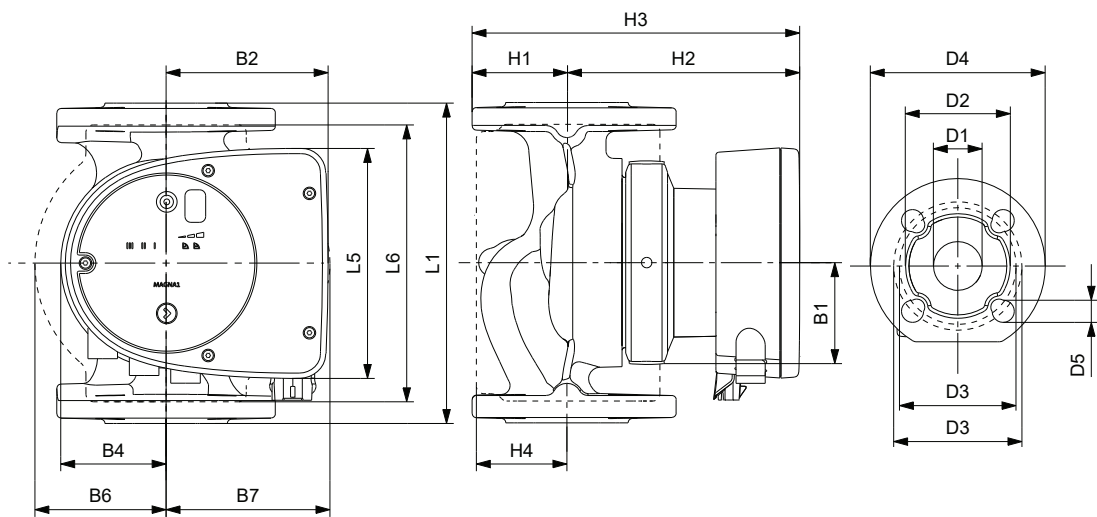
■ MAGNA1 32-40 F (N) PN 10
1 × 230 V, 50/60 Hz



TM056325

Speed	P1 [W]	I_{1/1} [A]
Min.	9	0.09
Max.	73	0.59
The pump incorporates overload protection.		
Net weight [kg]	Gross weight [kg]	Ship. vol. [m³]
7.4	8.4	0.016

Connections:	See section 8.6 <i>Pipe connections</i> .
System pressure:	Max. 1.0 MPa (10 bar)
Liquid temperature:	-10 to 110 °C (TF 110)
Also available with:	Stainless-steel pump housing, type N
Specific EEI:	0.20



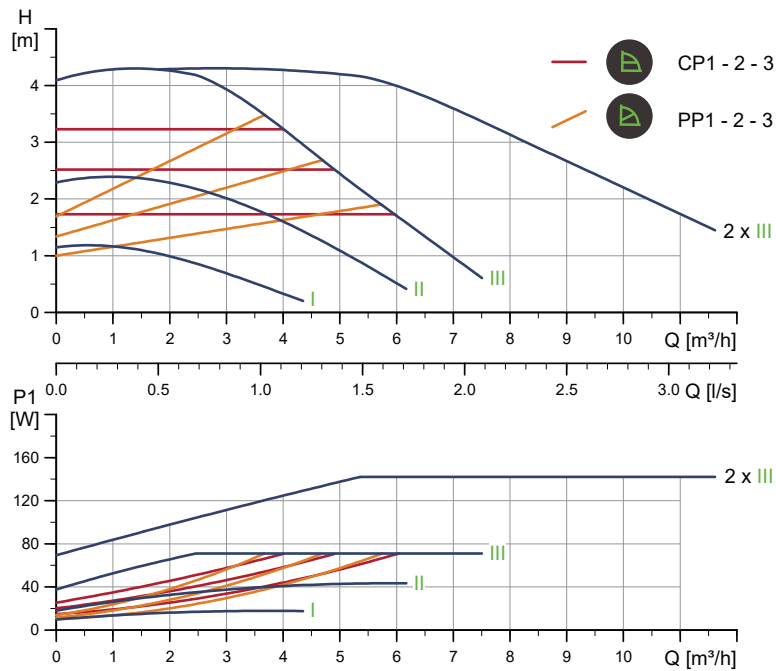
TM070067

Pump type	Dimensions [mm]																
	L1	L5	L6	B1	B2	B4	B6	B7	H1	H2	H3	H4	D1	D2	D3	D4	D5
MAGNA1 32-40 F (N)	220	158	220	58	111	69	100	110	65	142	207	82	32	76	90/100	140	14/19

For product numbers, see section Product numbers.

■ MAGNA1 D 32-40 F PN 10

1 × 230 V, 50/60 Hz



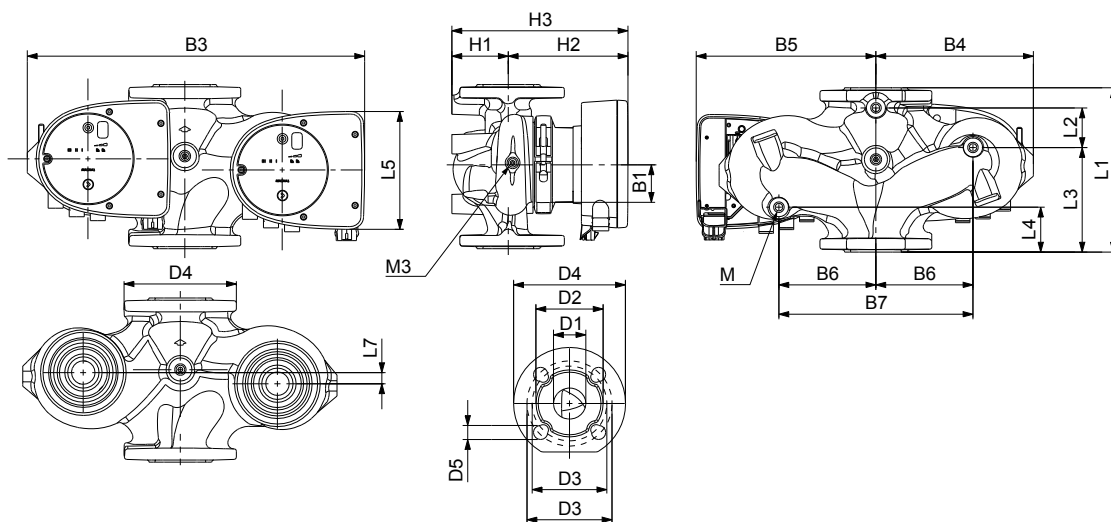
TM056363

Speed	P1 [W]	I _{1/1} [A]
Min.	9	0.09
Max.	73	0.59

The pump incorporates overload protection.

Connections:	See section 8.6 Pipe connections.
System pressure:	Max. 1.0 MPa (10 bar)
Liquid temperature:	-10 to 110 °C (TF 110)
Specific EEI:	0.23

Net weight [kg]	Gross weight [kg]	Ship. vol. [m³]
14.7	15.7	0.045

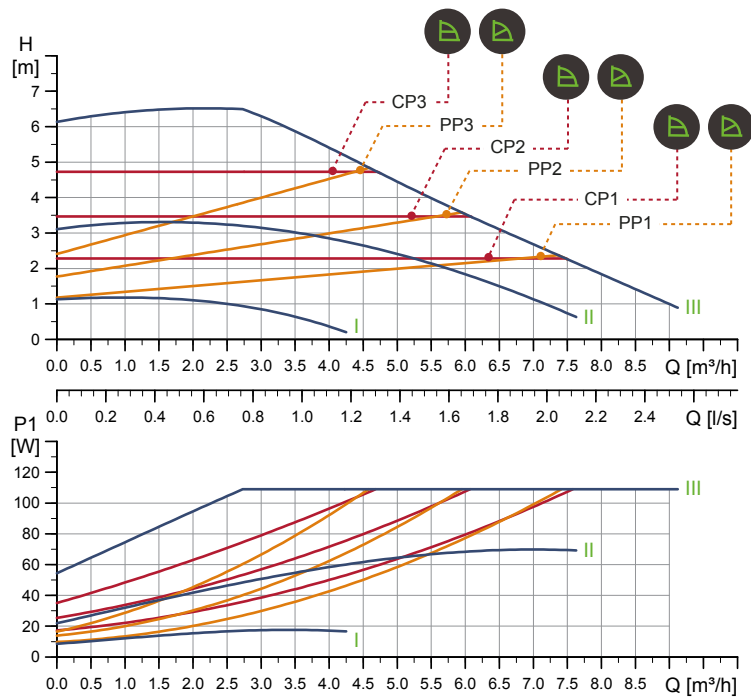


TM070069

Pump type	Dimensions [mm]																				Rp	
	L1	L2	L3	L4	L5	L7	B1	B3	B4	B5	B6	B7	H1	H2	H3	D1	D2	D3	D4	D5	M	M3
MAGNA1 D 32-40 F	220	73	120	85	158	35	58	400	179	221	130	260	69	142	211	32	76	90/100	140	14/19	12	1/4

For product numbers, see section Product numbers.

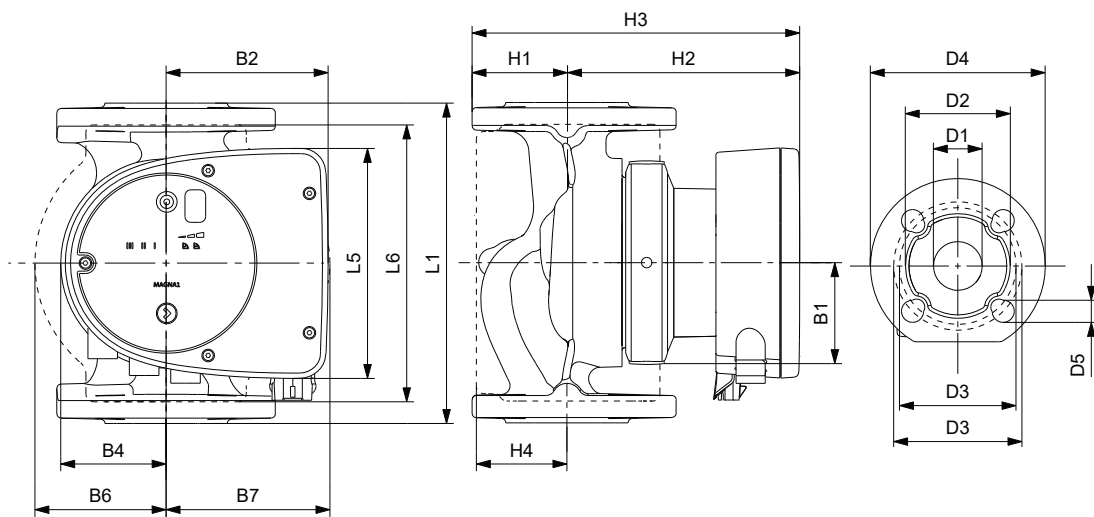
■ MAGNA1 32-60 F (N) PN 10
1 × 230 V, 50/60 Hz



TM056327

Speed	P1 [W]	I_{1/1} [A]
Min.	9	0.09
Max.	111	0.90
The pump incorporates overload protection.		
Net weight [kg]	Gross weight [kg]	Ship. vol. [m³]
7.4	8.4	0.016

Connections:	See section 8.6 Pipe connections.
System pressure:	Max. 1.0 MPa (10 bar)
Liquid temperature:	-10 to 110 °C (TF 110)
Also available with:	Stainless-steel pump housing, type N
Specific EEI:	0.20



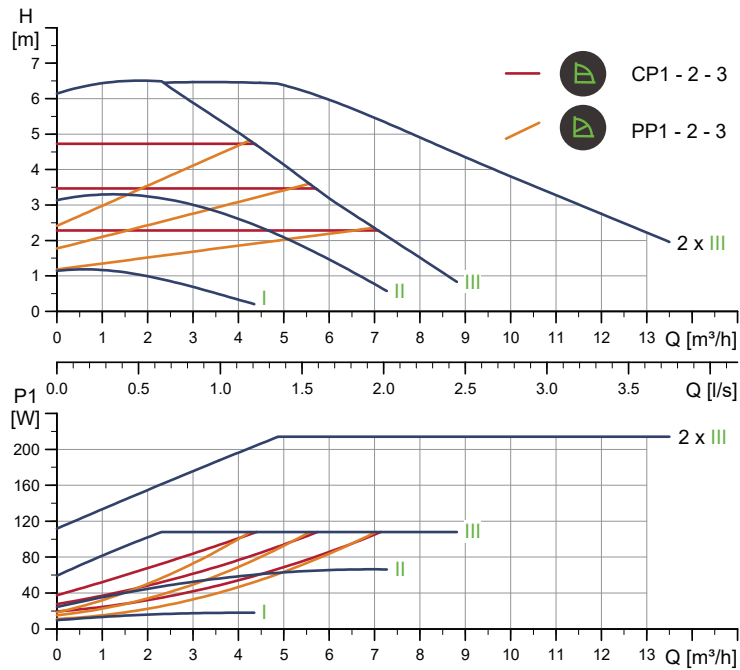
TM070067

Pump type	Dimensions [mm]																
	L1	L5	L6	B1	B2	B4	B6	B7	H1	H2	H3	H4	D1	D2	D3	D4	D5
MAGNA1 32-60 F (N)	220	158	220	58	111	69	100	110	65	142	207	82	32	76	90/100	140	14/19

For product numbers, see section Product numbers.

■ MAGNA1 D 32-60 F PN 10

1 × 230 V, 50/60 Hz



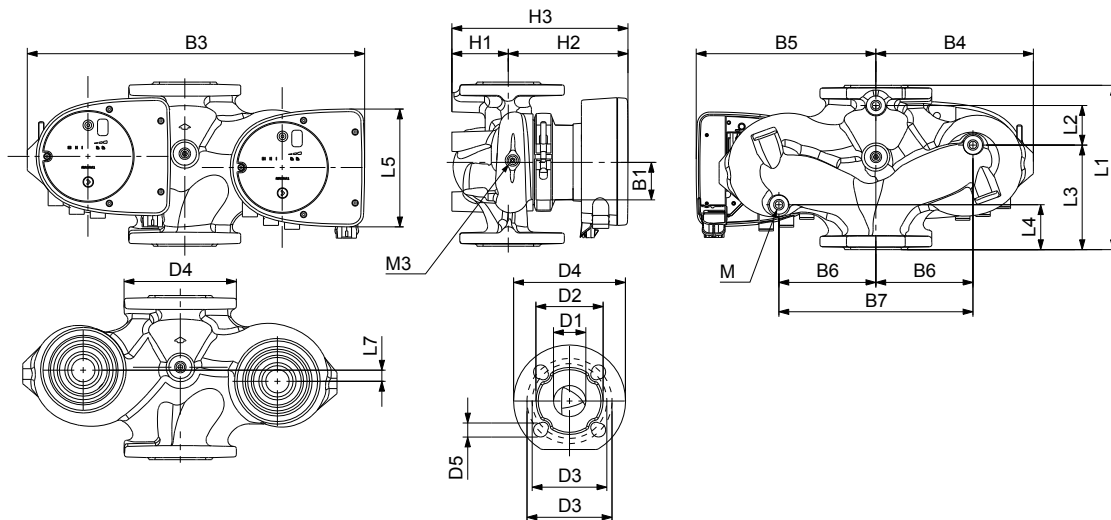
TM056365

Speed	P1 [W]	I _{1/1} [A]
Min.	9	0.09
Max.	111	0.90

The pump incorporates overload protection.

Connections:	See section 8.6 <i>Pipe connections</i> .
System pressure:	Max. 1.0 MPa (10 bar)
Liquid temperature:	-10 to 110 °C (TF 110)
Specific EEI:	0.23

Net weight [kg]	Gross weight [kg]	Ship. vol. [m³]
14.7	15.7	0.045

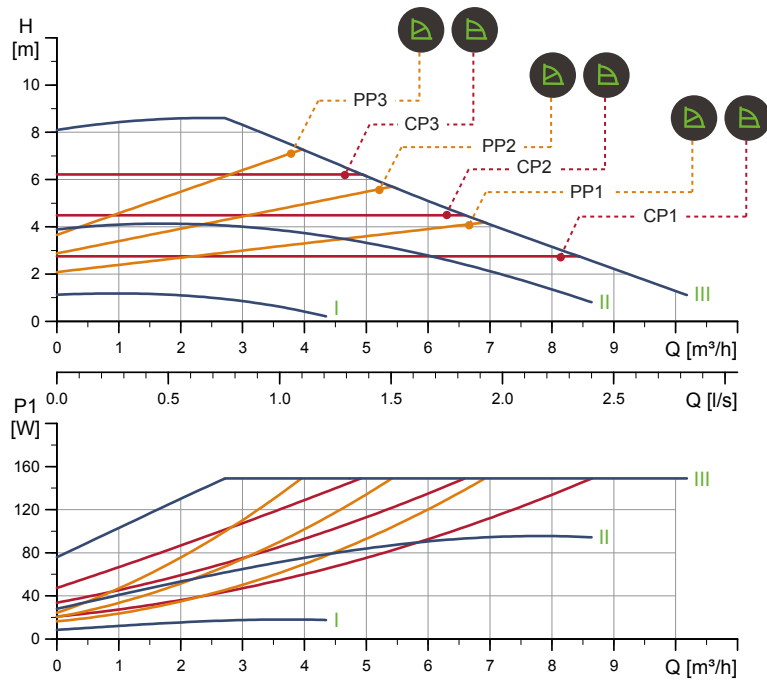


TM070069

Pump type	Dimensions [mm]																				Rp	
	L1	L2	L3	L4	L5	L7	B1	B3	B4	B5	B6	B7	H1	H2	H3	D1	D2	D3	D4	D5		M
MAGNA1 D 32-60 F	220	73	120	85	158	35	58	400	179	221	130	260	69	142	211	32	76	90/100	140	14/19	12	1/4

For product numbers, see section Product numbers.

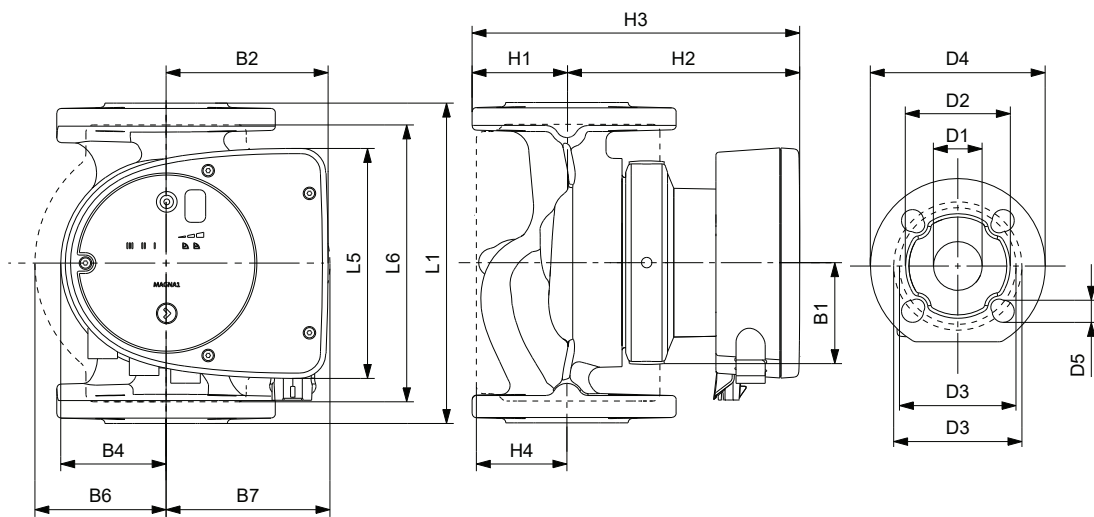
■ MAGNA1 32-80 F (N) PN 10
1 × 230 V, 50/60 Hz



TM070564

Speed	P1 [W]	I_{1/1} [A]
Min.	9	0.09
Max.	151	1.22
The pump incorporates overload protection.		
Net weight [kg]	Gross weight [kg]	Ship. vol. [m³]
7.4	8.4	0.016

Connections:	See section 8.6 Pipe connections.
System pressure:	Max. 1.0 MPa (10 bar)
Liquid temperature:	-10 to 110 °C (TF 110)
Also available with:	Stainless-steel pump housing, type N
Specific EEI:	0.20



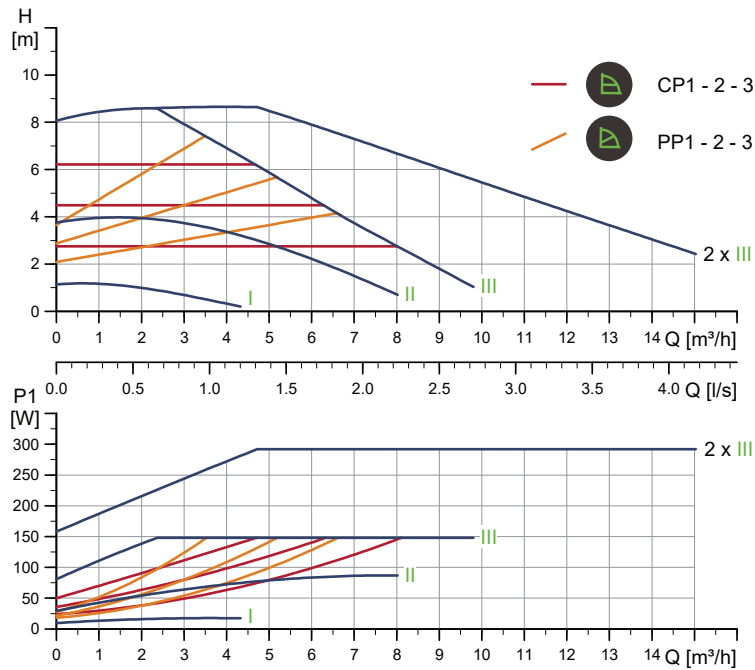
TM070067

Pump type	Dimensions [mm]																
	L1	L5	L6	B1	B2	B4	B6	B7	H1	H2	H3	H4	D1	D2	D3	D4	D5
MAGNA1 32-80 F (N)	220	158	220	58	111	69	100	110	65	142	207	82	32	76	90/100	140	14/19

For product numbers, see section Product numbers.

■ MAGNA1 D 32-80 F PN 10

1 × 230 V, 50/60 Hz



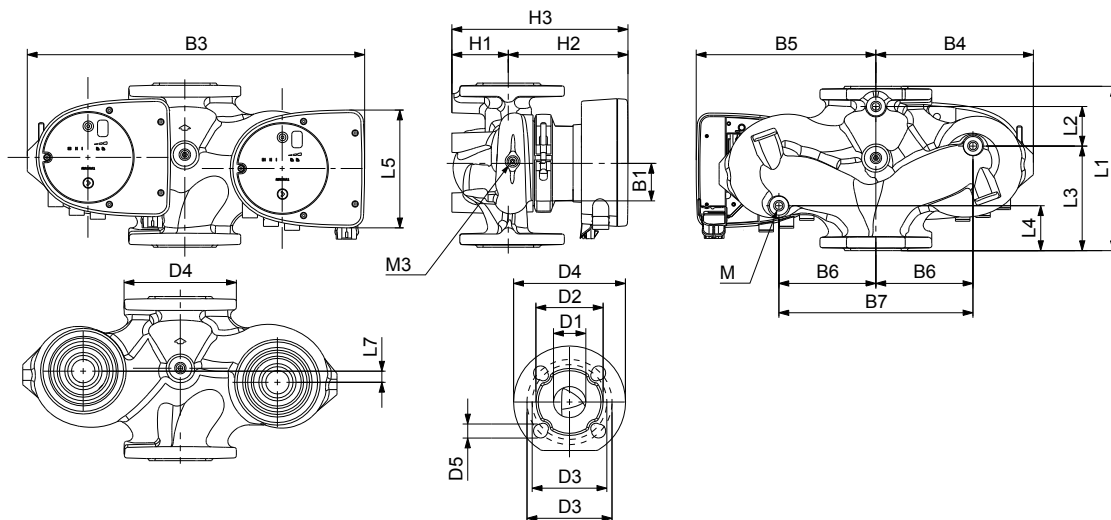
TM056367

Speed	P1 [W]	I _{1/1} [A]
Min.	9	0.09
Max.	151	1.22

The pump incorporates overload protection.

Connections:	See section 8.6 Pipe connections.
System pressure:	Max. 1.0 MPa (10 bar)
Liquid temperature:	-10 to 110 °C (TF 110)
Specific EEI:	0.23

Net weight [kg]	Gross weight [kg]	Ship. vol. [m³]
14.7	15.7	0.045

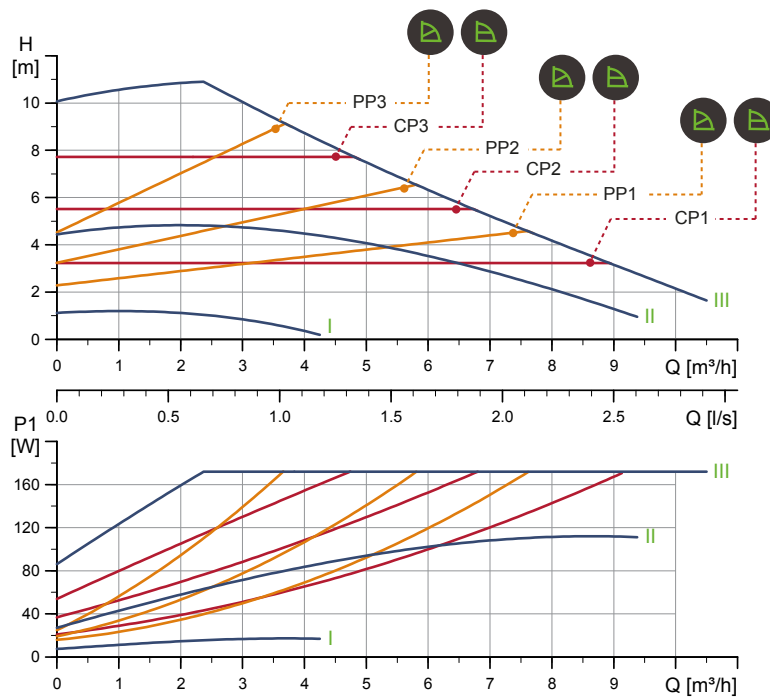


TM070069

Pump type	Dimensions [mm]																				Rp	
	L1	L2	L3	L4	L5	L7	B1	B3	B4	B5	B6	B7	H1	H2	H3	D1	D2	D3	D4	D5		M
MAGNA1 D 32-80 F	220	73	120	85	158	35	58	400	179	221	130	260	69	142	211	32	76	90/100	140	14/19	12	1/4

For product numbers, see section Product numbers.

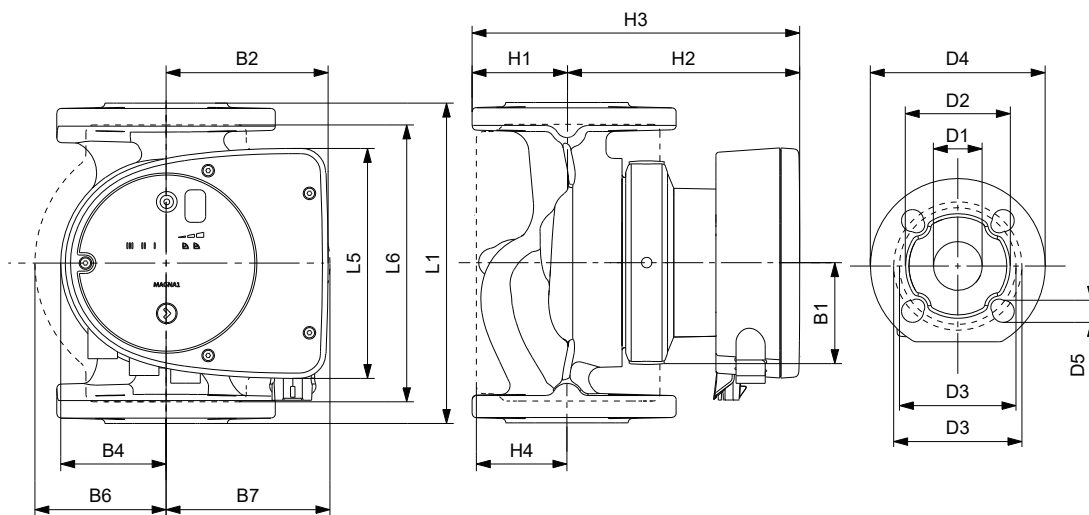
■ MAGNA1 32-100 F (N) PN 10
1 × 230 V, 50/60 Hz



TM056331

Speed	P1 [W]	I_{1/1} [A]
Min.	8	0.08
Max.	175	1.41
The pump incorporates overload protection.		
Net weight [kg]	Gross weight [kg]	Ship. vol. [m³]
7.4	8.4	0.016

Connections:	See section 8.6 <i>Pipe connections</i> .
System pressure:	Max. 1.0 MPa (10 bar)
Liquid temperature:	-10 to 110 °C (TF 110)
Also available with:	Stainless-steel pump housing, type N
Specific EEI:	0.20



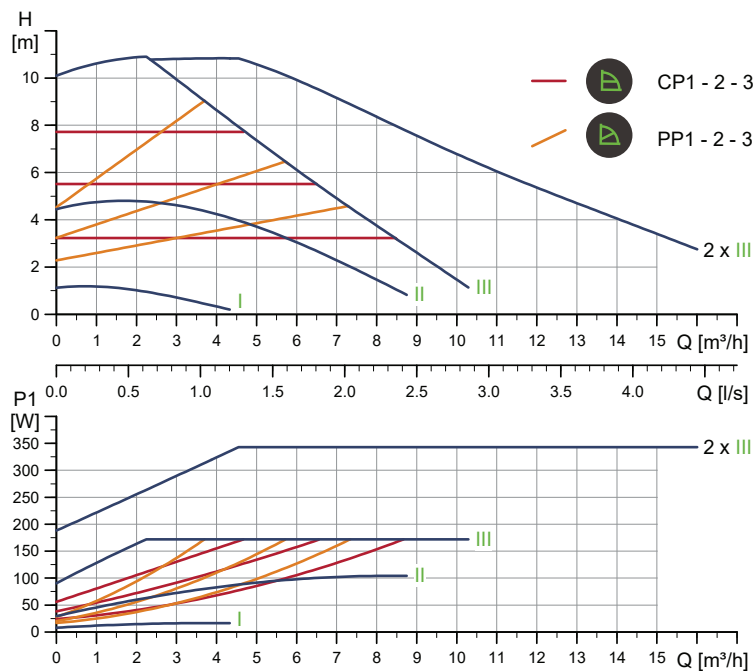
TM070067

Pump type	Dimensions [mm]																
	L1	L5	L6	B1	B2	B4	B6	B7	H1	H2	H3	H4	D1	D2	D3	D4	D5
MAGNA1 32-100 F (N)	220	158	220	58	111	69	100	110	65	142	207	82	32	76	90/100	140	14/19

For product numbers, see section Product numbers.

■ MAGNA1 D 32-100 F PN 10

1 × 230 V, 50/60 Hz



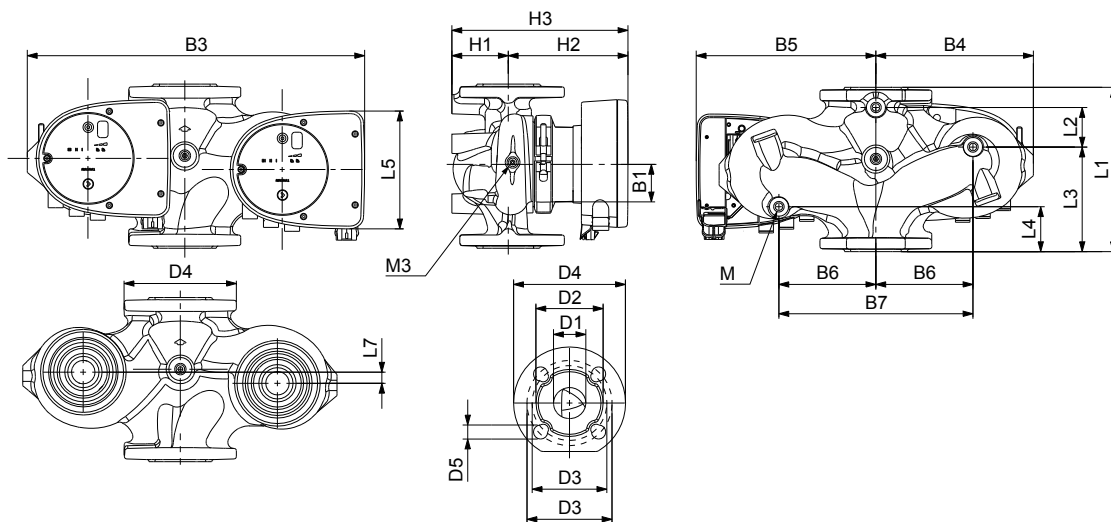
TM056369

Speed	P1 [W]	I _{1/1} [A]
Min.	8	0.08
Max.	175	1.41

The pump incorporates overload protection.

Connections:	See section 8.6 Pipe connections.
System pressure:	Max. 1.0 MPa (10 bar)
Liquid temperature:	-10 to 110 °C (TF 110)
Specific EEI:	0.22

Net weight [kg]	Gross weight [kg]	Ship. vol. [m³]
14.7	15.7	0.045

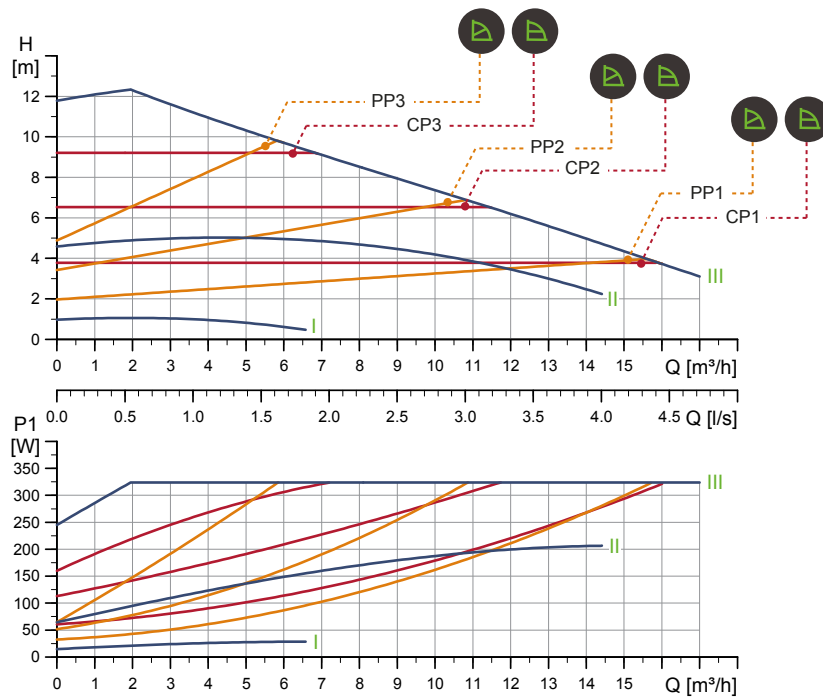


TM070069

Pump type	Dimensions [mm]																				Rp	
	L1	L2	L3	L4	L5	L7	B1	B3	B4	B5	B6	B7	H1	H2	H3	D1	D2	D3	D4	D5	M	M3
MAGNA1 D 32-100 F	220	73	120	85	158	35	58	400	179	221	130	260	69	142	211	32	76	90/100	140	14/19	12	1/4

For product numbers, see section Product numbers.

■ MAGNA1 32-120 F (N) PN 10
1 × 230 V, 50/60 Hz



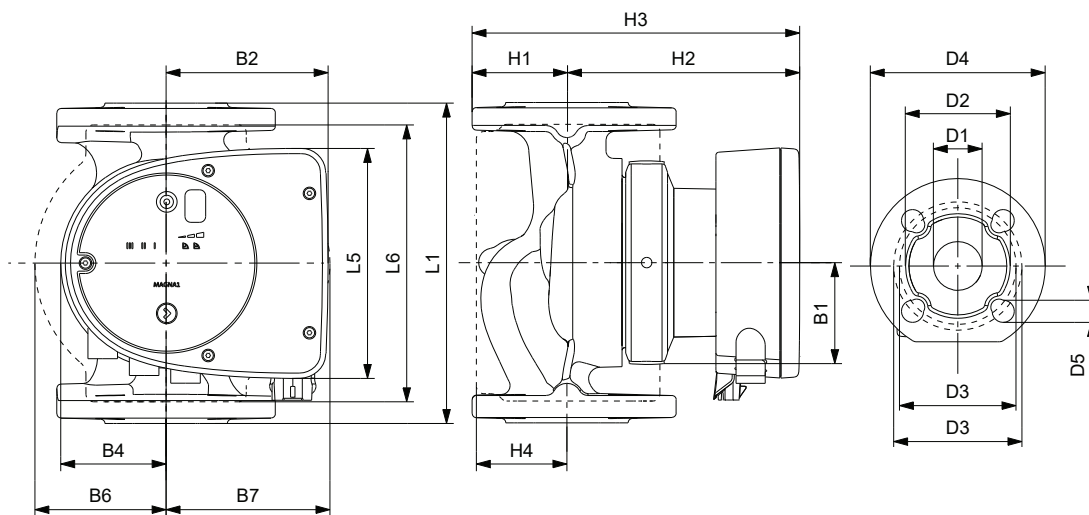
TM056287

Speed	P1 [W]	I _{1/1} [A]
Min.	15	0.17
Max.	329	1.48

The pump incorporates overload protection.

Net weight [kg]	Gross weight [kg]	Ship. vol. [m ³]
15.4	17.1	0.040

Connections:	See section 8.6 Pipe connections.
System pressure:	Max. 1.0 MPa (10 bar)
Liquid temperature:	-10 to 110 °C (TF 110)
Also available with:	Stainless-steel pump housing, type N
Specific EEI:	0.20



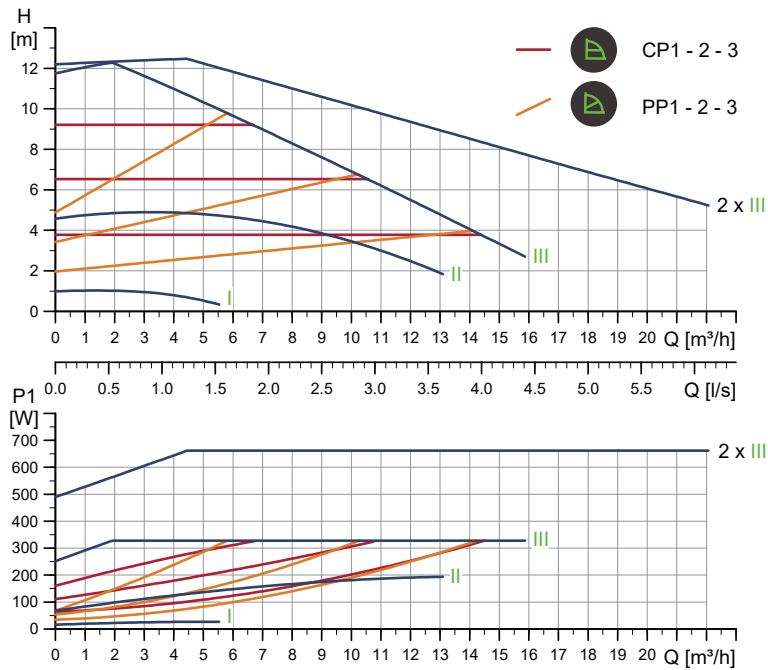
TM070067

Pump type	Dimensions [mm]																
	L1	L5	L6	B1	B2	B4	B6	B7	H1	H2	H3	H4	D1	D2	D3	D4	D5
MAGNA1 32-120 F (N)	220	204	216	84	164	73	106	116	65	301	366	86	32	76	90/100	140	14/19

For product numbers, see section Product numbers.

■ MAGNA1 D 32-120 F PN 10

1 × 230 V, 50/60 Hz



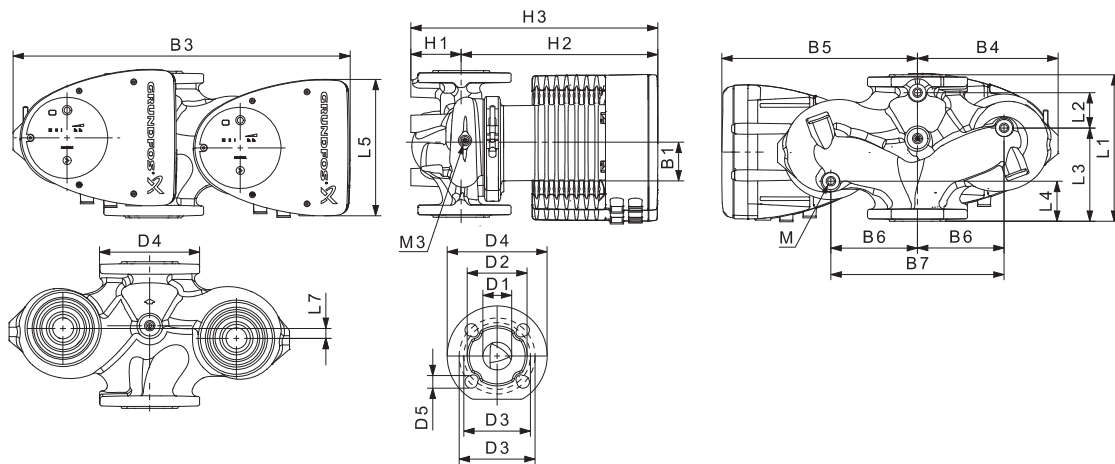
TM056334

Speed	P1 [W]	I _{1/1} [A]
Min.	16.3	0.18
Max.	335	1.50

The pump incorporates overload protection.

Connections:	See section 8.6 Pipe connections.
System pressure:	Max. 1.0 MPa (10 bar)
Liquid temperature:	-10 to 110 °C (TF 110)
Specific EEI:	0.22

Net weight [kg]	Gross weight [kg]	Ship. vol. [m³]
29.8	33.7	0.087

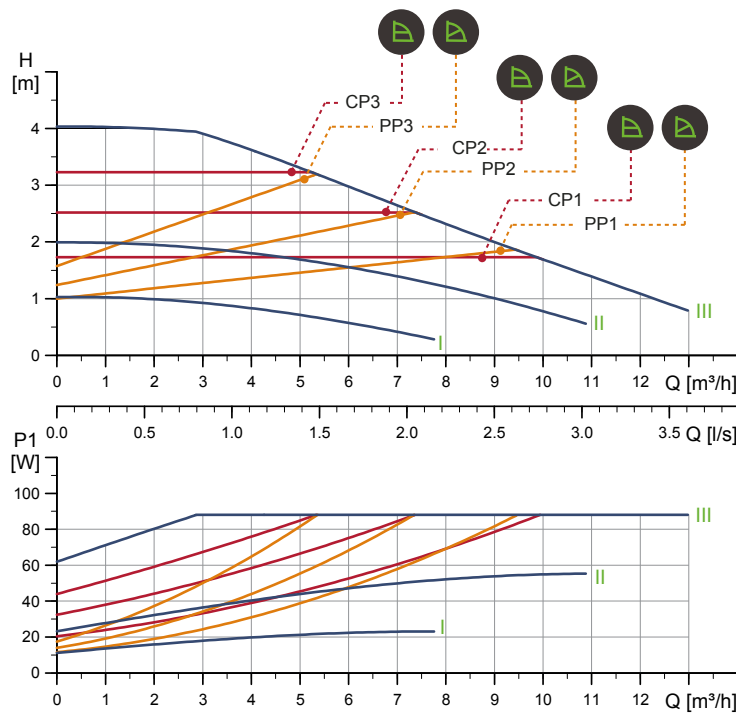


TM059237

Pump type	Dimensions [mm]																				Rp	
	L1	L2	L3	L4	L5	L7	B1	B3	B4	B5	B6	B7	H1	H2	H3	D1	D2	D3	D4	D5	M	M3
MAGNA1 D 32-120 F	220	97	90	50	204	50	84	502	210	294	130	260	68	300	368	32	76	90/100	140	14/19	12	1/4

For product numbers, see section Product numbers.

■ MAGNA1 40-40 F (N) 1
1 × 230 V, 50/60 Hz



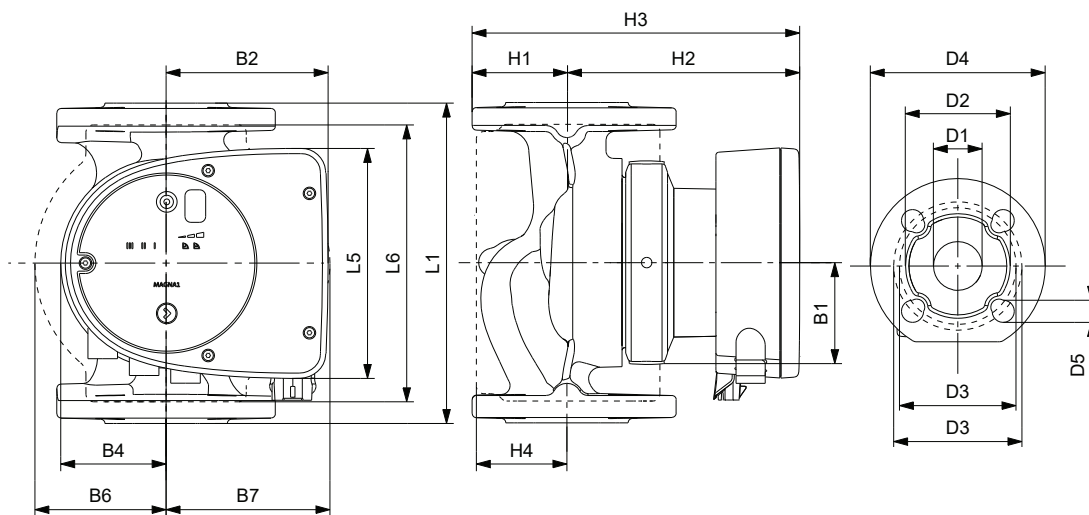
TM056332

Speed	P1 [W]	I _{1/1} [A]
Min.	12	0.11
Max.	90	0.72

The pump incorporates overload protection.

Net weight [kg]	Gross weight [kg]	Ship. vol. [m ³]
9.5	10.5	0.016

Connections:	See section 8.6 Pipe connections.
System pressure:	Max. 1.0 MPa (10 bar)
Liquid temperature:	-10 to 110 °C (TF 110)
Also available with:	Stainless-steel pump housing, type N
Specific EEI:	0.20

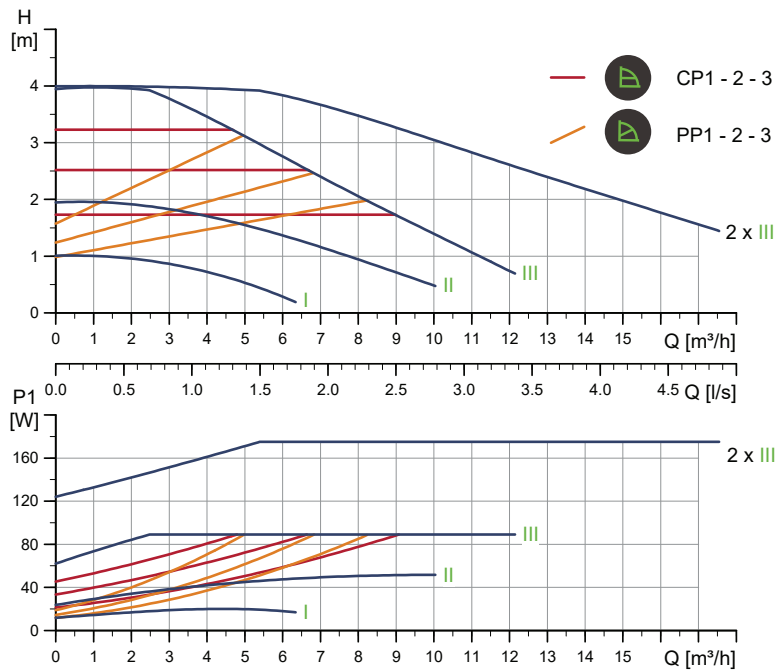


TM070067

Pump type	Dimensions [mm]																
	L1	L5	L6	B1	B2	B4	B6	B7	H1	H2	H3	H4	D1	D2	D3	D4	D5
MAGNA1 40-40 F (N)	220	158	220	58	111	69	105	105	65	156	221	83	40	84	100/110	150	14/19

For product numbers, see section Product numbers.

■ MAGNA1 D 40-40 F



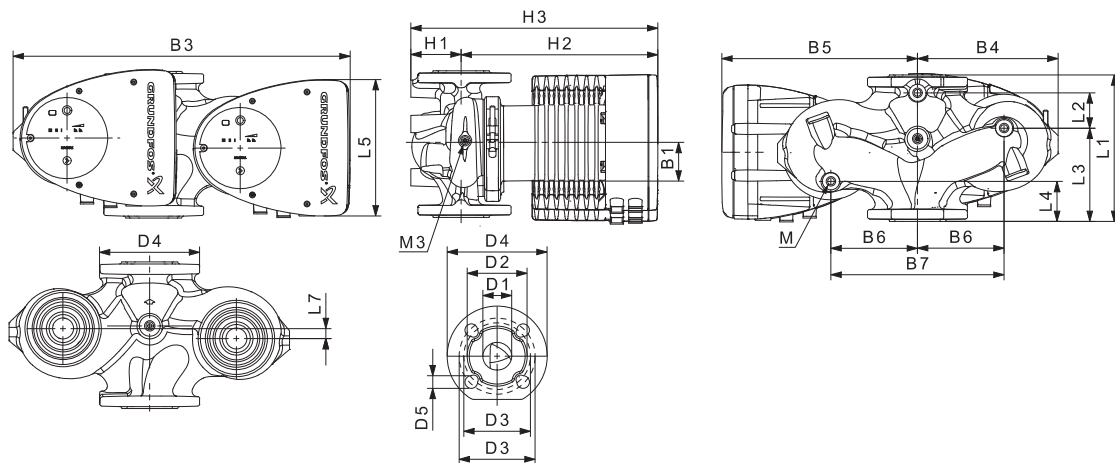
TM056370

Speed	P1 [W]	I _{1/1} [A]
Min.	12	0.11
Max.	90	0.72

Connections:	See section 8.6 <i>Pipe connections</i> .
System pressure:	Max. 1.0 MPa (10 bar)
Liquid temperature:	-10 to 110 °C (TF 110)
Specific EEI:	0.22

The pump incorporates overload protection.

Net weight [kg]	Gross weight [kg]	Ship. vol. [m³]
19.0	20.0	0.045

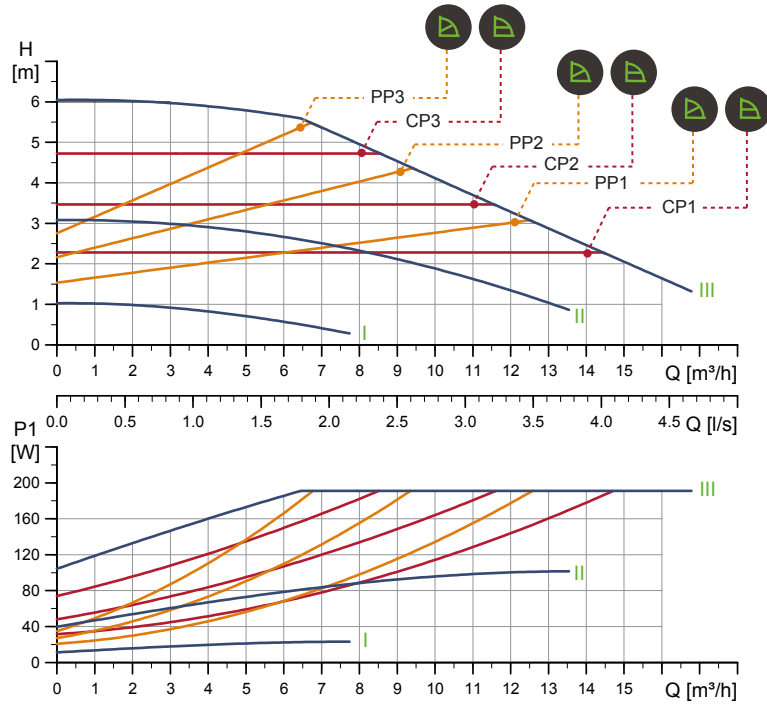


TM059237

Pump type	Dimensions [mm]																			Rp		
	L1	L2	L3	L4	L5	L7	B1	B3	B4	B5	B6	B7	H1	H2	H3	D1	D2	D3	D4	D5	M	M3
MAGNA1 D 40-40 F	220	53	140	60	158	15	58	452	211	241	130	260	76	156	232	40	84	100/110	150	14/19	12	1/4

For product numbers, see section Product numbers.

■ MAGNA1 40-60 F (N)



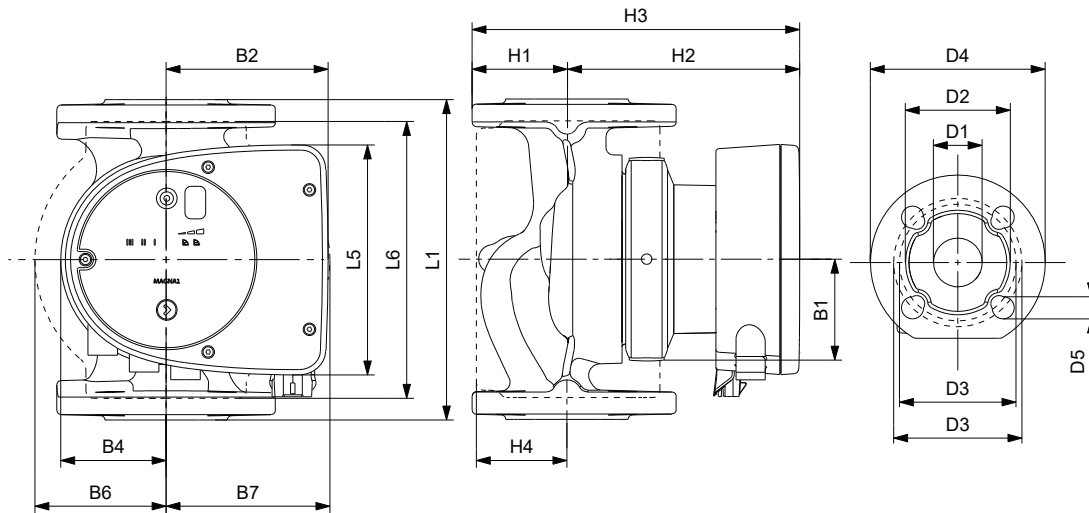
TM070565

Speed	P1 [W]	I _{1/1} [A]
Min.	12	0.11
Max.	194	1.56

The pump incorporates overload protection.

Net weight [kg]	Gross weight [kg]	Ship. vol. [m³]
9.5	10.5	0.016

Connections:	See section 8.6 Pipe connections.
System pressure:	Max. 1.0 MPa (10 bar)
Liquid temperature:	-10 to 110 °C (TF 110)
Also available with:	Stainless-steel pump housing, type N
Specific EEI:	0.20

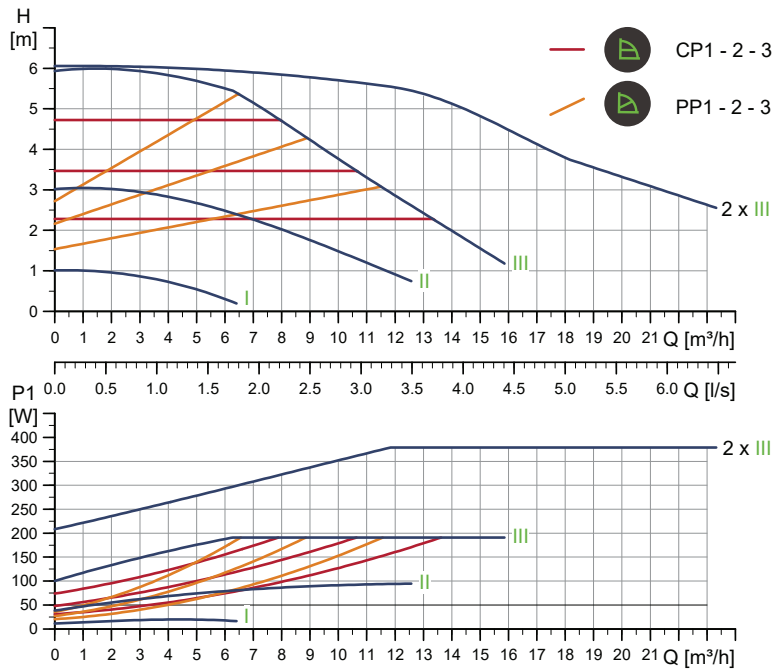


TM070067

Pump type	Dimensions [mm]																
	L1	L5	L6	B1	B2	B4	B6	B7	H1	H2	H3	H4	D1	D2	D3	D4	D5
MAGNA1 40-60 F (N)	220	158	220	58	111	69	105	105	65	156	221	83	40	84	100/110	150	14/19

For product numbers, see section Product numbers.

■ MAGNA1 D 40-60 F
1 × 230 V, 50/60 Hz



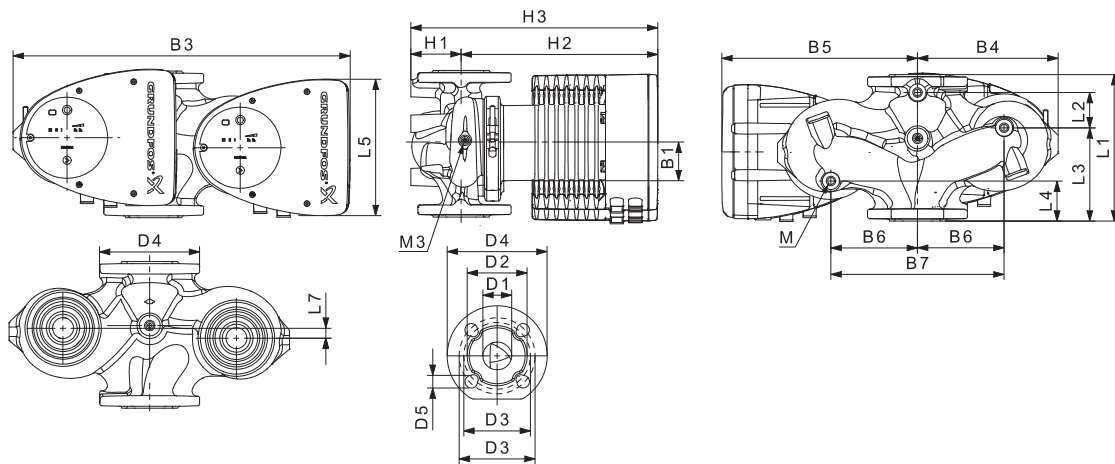
TM056371

Speed	P1 [W]	I _{1/1} [A]
Min.	12	0.11
Max.	194	1.56

The pump incorporates overload protection.

Connections:	See section 8.6 Pipe connections.
System pressure:	Max. 1.0 MPa (10 bar)
Liquid temperature:	-10 to 110 °C (TF 110)
Specific EEI:	0.22

Net weight [kg]	Gross weight [kg]	Ship. vol. [m³]
19.0	20.0	0.045

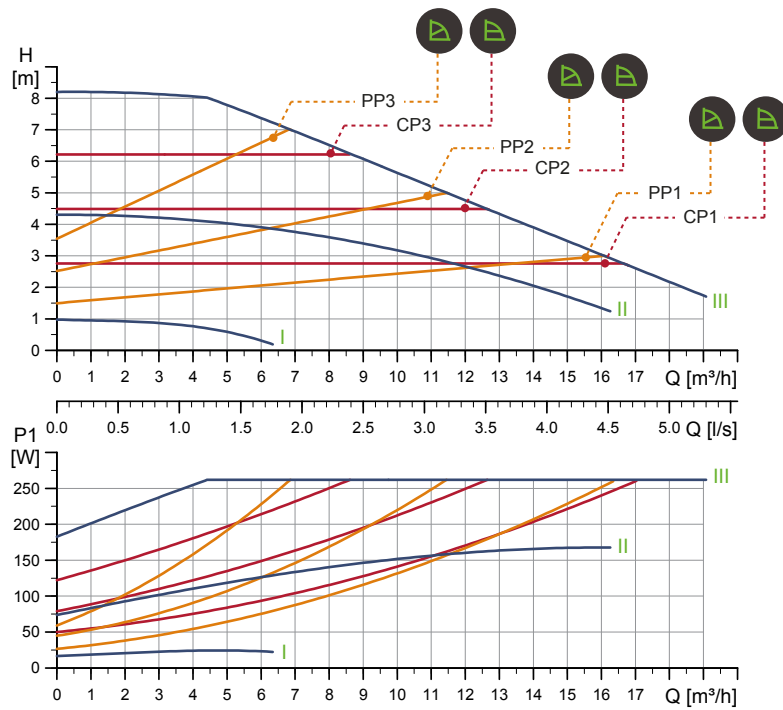


TM059237

Pump type	Dimensions [mm]																				Rp	
	L1	L2	L3	L4	L5	L7	B1	B3	B4	B5	B6	B7	H1	H2	H3	D1	D2	D3	D4	D5	M	M3
MAGNA1 D 40-60 F	220	53	140	60	158	15	58	452	211	241	130	260	76	156	232	40	84	100/110	150	14/19	12	1/4

For product numbers, see section Product numbers.

■ MAGNA1 40-80 F (N) PN 10
1 × 230 V, 50/60 Hz



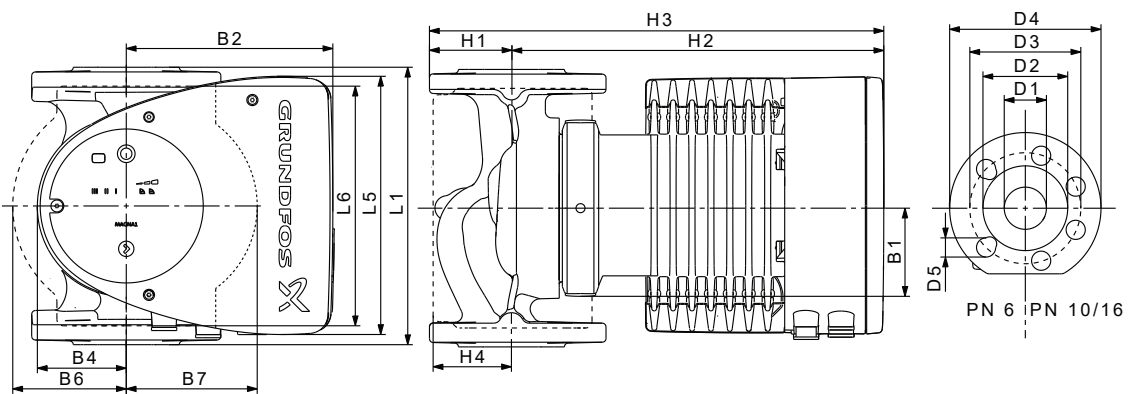
TM056288

Speed	P1 [W]	I _{1/1} [A]
Min.	17	0.19
Max.	267	1.18

The pump incorporates overload protection.

Net weight [kg]	Gross weight [kg]	Ship. vol. [m³]
16.5	18.2	0.040

Connections:	See section 8.6 Pipe connections.
System pressure:	Max. 1.0 MPa (10 bar)
Liquid temperature:	-10 to 110 °C (TF 110)
Also available with:	Stainless-steel pump housing, type N
Specific EEI:	0.20



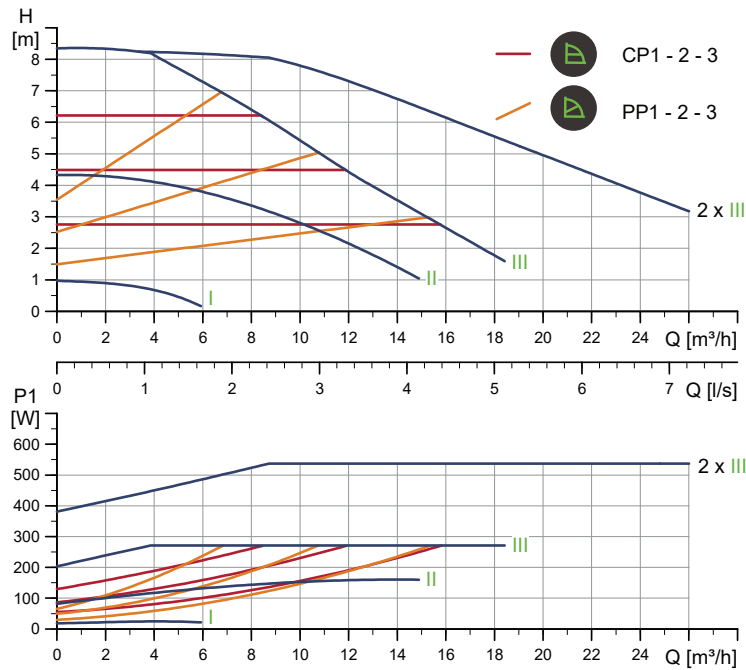
TM055276

Pump type	Dimensions [mm]																
	L1	L5	L6	B1	B2	B4	B6	B7	H1	H2	H3	H4	D1	D2	D3	D4	D5
MAGNA1 40-80 F (N)	220	204	220	84	164	73	106	128	65	304	369	83	40	84	100/110	150	14/19

For product numbers, see section Product numbers.

■ MAGNA1 D 40-80 F PN 10

1 × 230 V, 50/60 Hz



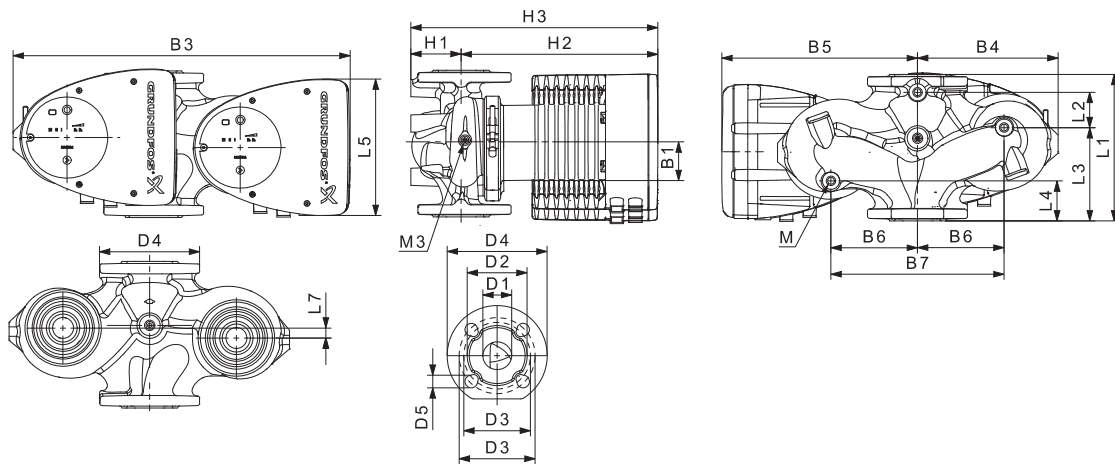
TM056335

Speed	P1 [W]	I _{1/1} [A]
Min.	18.4	0.20
Max.	276	1.25

The pump incorporates overload protection.

Connections:	See section 8.6 Pipe connections.
System pressure:	Max. 1.0 MPa (10 bar)
Liquid temperature:	-10 to 110 °C (TF 110)
Specific EEI:	0.23

Net weight [kg]	Gross weight [kg]	Ship. vol. [m³]
32.3	36.2	0.087

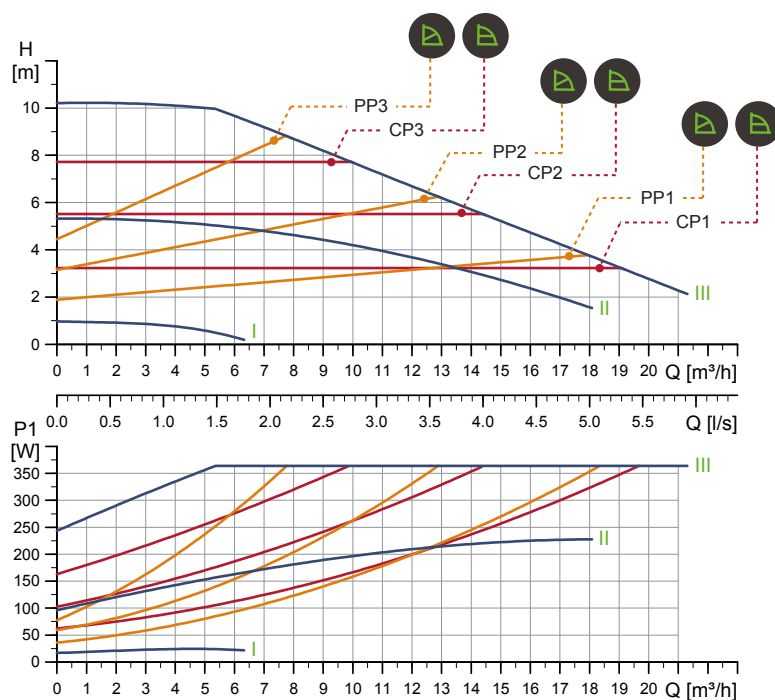


TM059237

Pump type	Dimensions [mm]																				Rp	
	L1	L2	L3	L4	L5	L7	B1	B3	B4	B5	B6	B7	H1	H2	H3	D1	D2	D3	D4	D5	M	M3
MAGNA1 D 40-80 F	220	53	140	60	204	15	84	502	210	294	130	260	76	303	379	40	84	100/110	150	14/19	12	1/4

For product numbers, see section Product number.

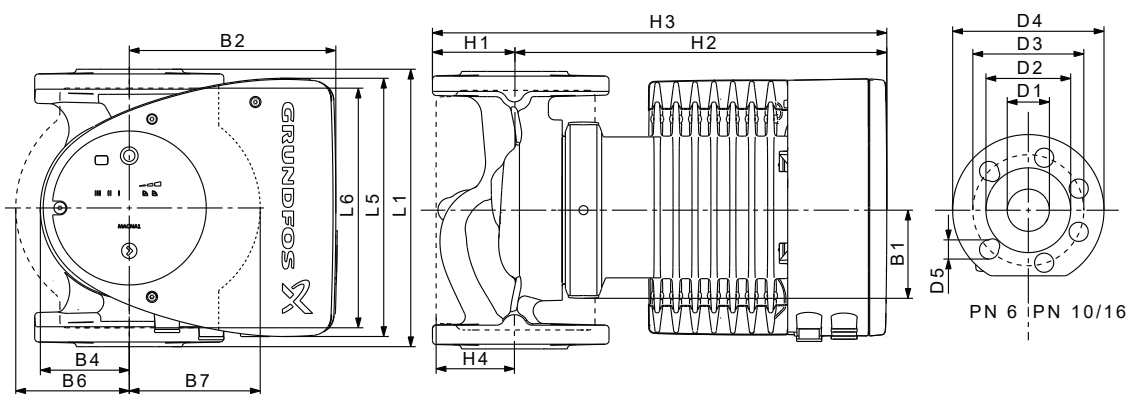
■ MAGNA1 40-100 F (N) PN 10
1 × 230 V, 50/60 Hz



TM056289

Speed	P1 [W]	I_{1/1} [A]
Min.	17	0.19
Max.	370	1.65
The pump incorporates overload protection.		
Net weight [kg]	Gross weight [kg]	Ship. vol. [m³]
16.5	18.2	0.040

Connections:	See section 8.6 <i>Pipe connections</i> .
System pressure:	Max. 1.0 MPa (10 bar)
Liquid temperature:	-10 to 110 °C (TF 110)
Also available with:	Stainless-steel pump housing, type N
Specific EEI:	0.20

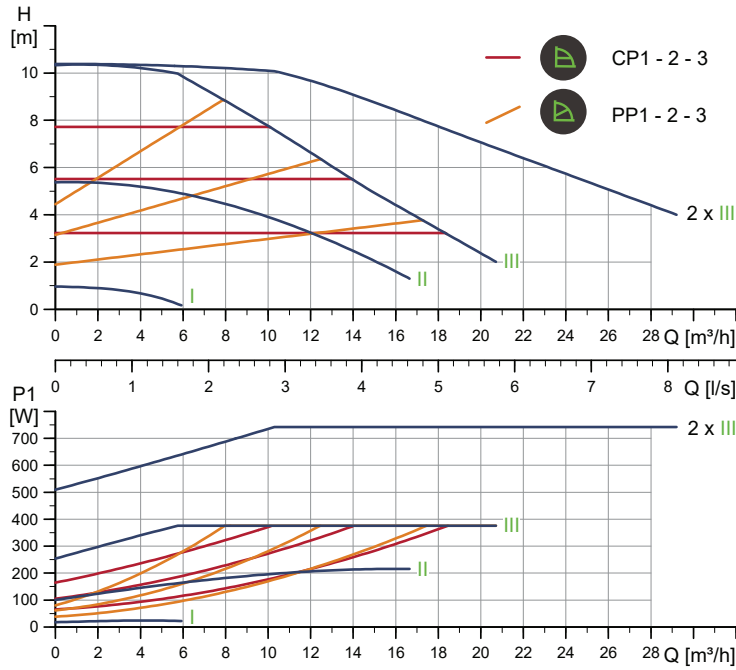


TM055276

Pump type	Dimensions [mm]																
	L1	L5	L6	B1	B2	B4	B6	B7	H1	H2	H3	H4	D1	D2	D3	D4	D5
MAGNA1 40-100 F (N)	220	204	220	84	164	73	106	128	65	304	369	83	40	84	100/110	150	14/19

For product numbers, see section Product numbers.

■ MAGNA1 D 40-100 F PN 10
1 × 230 V, 50/60 Hz



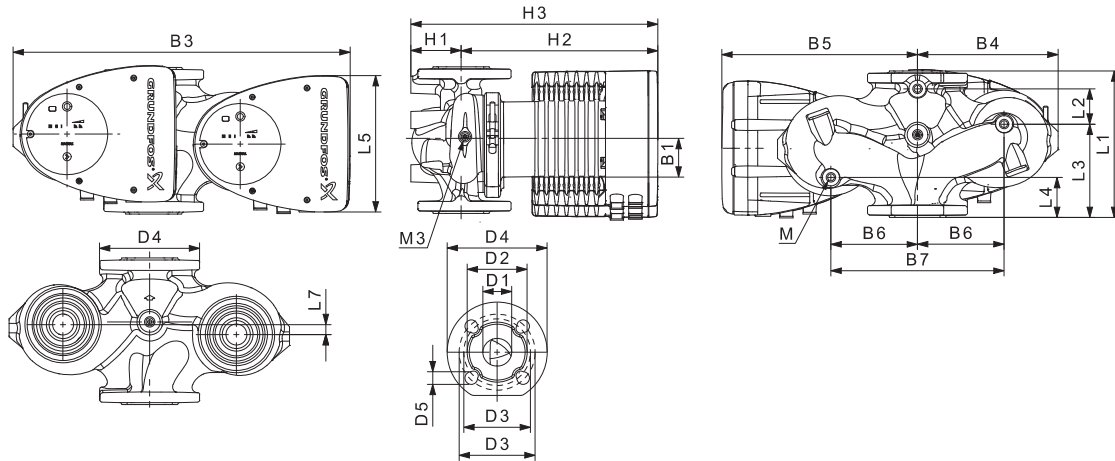
TM056336

Speed	P1 [W]	I _{1/1} [A]
Min.	18.1	0.20
Max.	383	1.70

The pump incorporates overload protection.

Connections:	See section 8.6 Pipe connections.
System pressure:	Max. 1.0 MPa (10 bar)
Liquid temperature:	-10 to 110 °C (TF 110)
Specific EEI:	0.23

Net weight [kg]	Gross weight [kg]	Ship. vol. [m³]
32.3	36.2	0.087

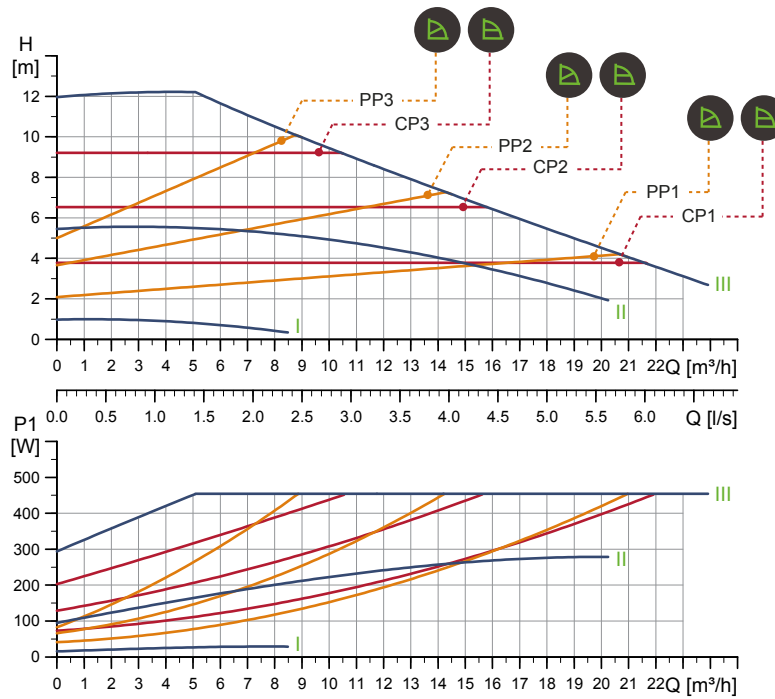


TM059237

Pump type	Dimensions [mm]																				Rp	
	L1	L2	L3	L4	L5	L7	B1	B3	B4	B5	B6	B7	H1	H2	H3	D1	D2	D3	D4	D5	M	M3
MAGNA1 D 40-100 F	220	53	140	60	204	15	84	502	210	294	130	260	76	303	379	40	84	100/110	150	14/19	12	1/4

For product numbers, see section Product numbers.

■ MAGNA1 40-120 F (N) PN 10
1 × 230 V, 50/60 Hz



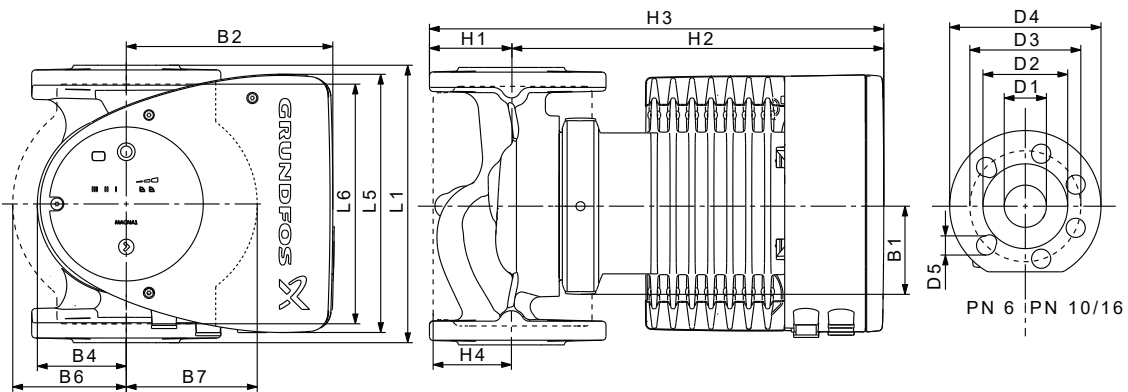
TM056290

Speed	P1 [W]	I _{1/1} [A]
Min.	15	0.18
Max.	463	2.05

The pump incorporates overload protection.

Net weight [kg]	Gross weight [kg]	Ship. vol. [m³]
16.2	17.7	0.040

Connections:	See section 8.6 Pipe connections.
System pressure:	Max. 1.0 MPa (10 bar)
Liquid temperature:	-10 to 110 °C (TF 110)
Also available with:	Stainless-steel pump housing, type N
Specific EEI:	0.20



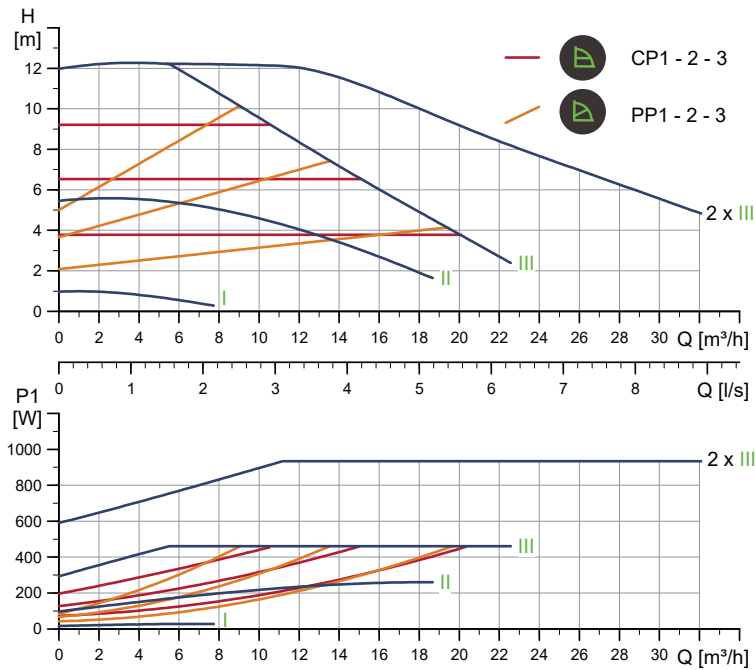
TM055276

Pump type	Dimensions [mm]																
	L1	L5	L6	B1	B2	B4	B6	B7	H1	H2	H3	H4	D1	D2	D3	D4	D5
MAGNA1 40-120 F (N)	250	204	220	84	164	73	106	128	65	304	369	83	40	84	100/110	150	14/19

For product numbers, see section Product numbers.

■ MAGNA1 D 40-120 F PN 10

1 × 230 V, 50/60 Hz



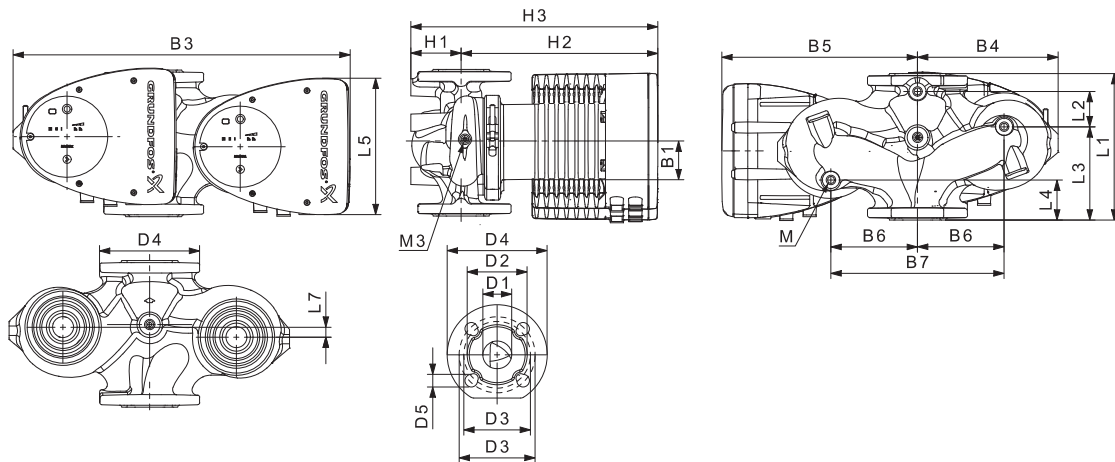
TM056637

Speed	P1 [W]	I _{1/1} [A]
Min.	17	0.19
Max.	476	2.10

The pump incorporates overload protection.

Connections:	See section 8.6 Pipe connections.
System pressure:	Max. 1.0 MPa (10 bar)
Liquid temperature:	-10 to 110 °C (TF 110)
Specific EEI:	0.22

Net weight [kg]	Gross weight [kg]	Ship. vol. [m³]
31.4	35.3	0.087

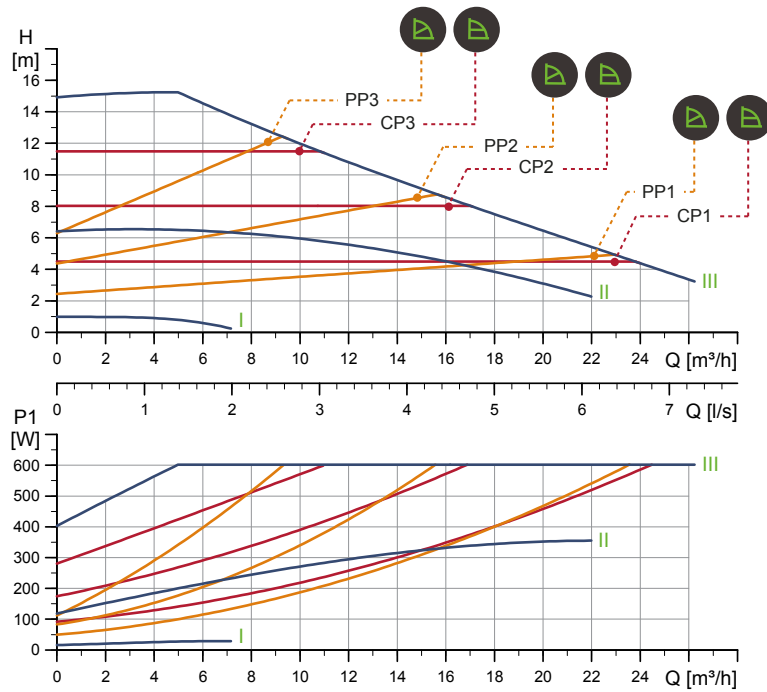


TM059237

Pump type	Dimensions [mm]																				Rp	
	L1	L2	L3	L4	L5	L7	B1	B3	B4	B5	B6	B7	H1	H2	H3	D1	D2	D3	D4	D5		M
MAGNA1 D 40-120 F	250	58	155	75	204	0	84	512	220	294	130	260	69	303	372	40	84	100/110	150	14/19	12	1/4

For product numbers, see section Product numbers.

■ MAGNA1 40-150 F (N) PN 10
1 × 230 V, 50/60 Hz



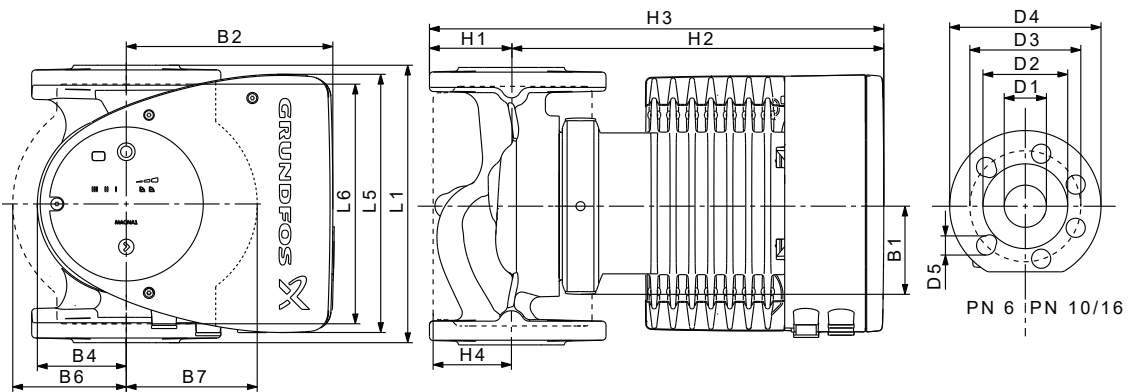
TM056291

Speed	P1 [W]	I _{1/1} [A]
Min.	16	0.18
Max.	615	2.71

The pump incorporates overload protection.

Net weight [kg]	Gross weight [kg]	Ship. vol. [m³]
16.2	17.7	0.040

Connections:	See section 8.6 Pipe connections.
System pressure:	Max. 1.0 MPa (10 bar)
Liquid temperature:	-10 to 110 °C (TF 110)
Also available with:	Stainless-steel pump housing, type N
Specific EEI:	0.20



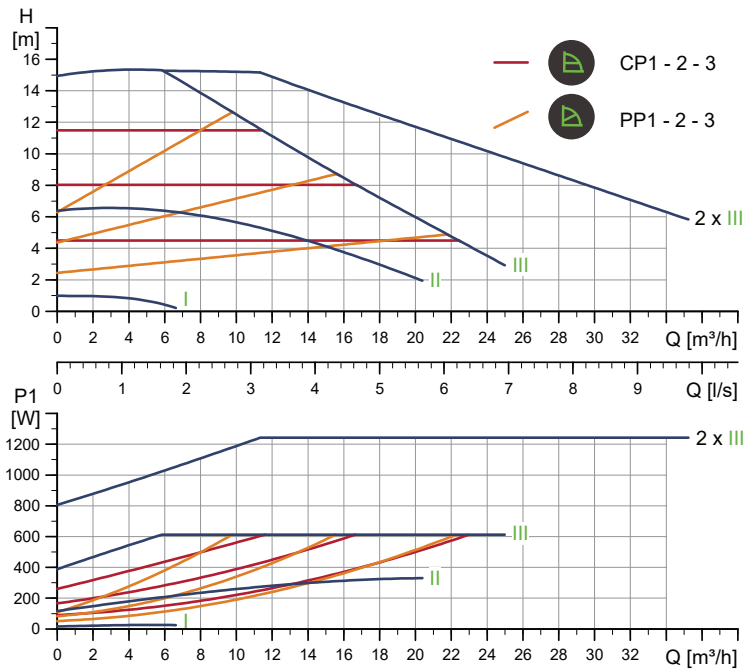
TM055276

Pump type	Dimensions [mm]																
	L1	L5	L6	B1	B2	B4	B6	B7	H1	H2	H3	H4	D1	D2	D3	D4	D5
MAGNA1 40-150 F (N)	250	204	220	84	164	73	106	128	65	304	369	83	40	84	100/110	150	14/19

For product numbers, see section Product numbers.

■ MAGNA1 D 40-150 F PN 10

1 × 230 V, 50/60 Hz



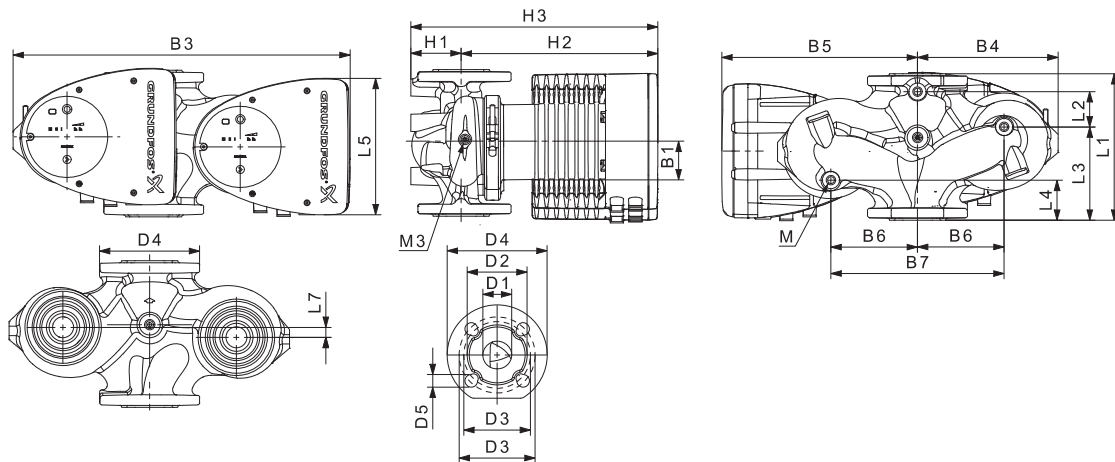
TM056338

Speed	P1 [W]	I _{1/1} [A]
Min.	16.9	0.18
Max.	630	2.77

The pump incorporates overload protection.

Connections:	See section 8.6 Pipe connections.
System pressure:	Max. 1.0 MPa (10 bar)
Liquid temperature:	-10 to 110 °C (TF 110)
Specific EEI:	0.21

Net weight [kg]	Gross weight [kg]	Ship. vol. [m³]
31.4	35.3	0.087

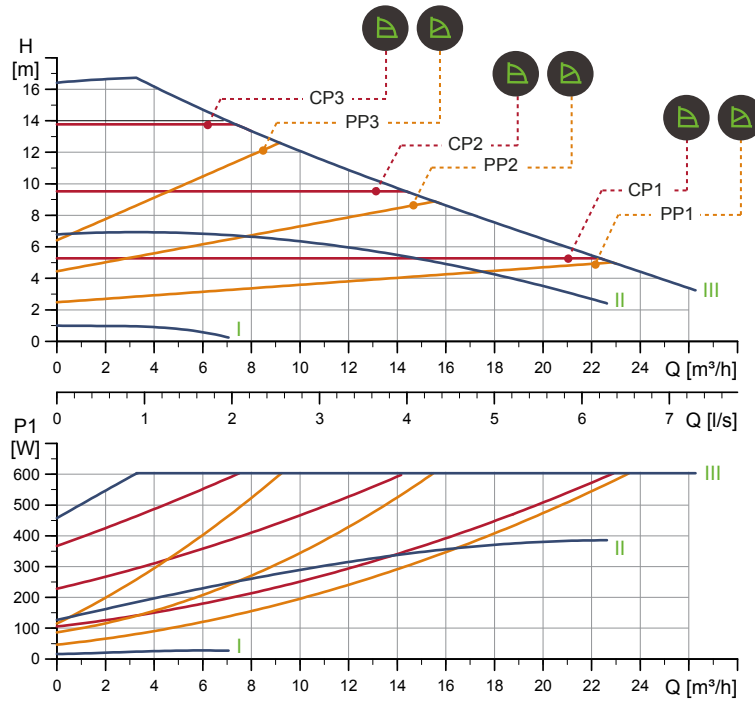


TM059237

Pump type	Dimensions [mm]																				Rp	
	L1	L2	L3	L4	L5	L7	B1	B3	B4	B5	B6	B7	H1	H2	H3	D1	D2	D3	D4	D5		M
MAGNA1 D 40-150 F	250	58	155	75	204	0	84	512	220	294	130	260	69	303	372	40	84	100/110	150	14/19	12	1/4

For product numbers, see section Product numbers.

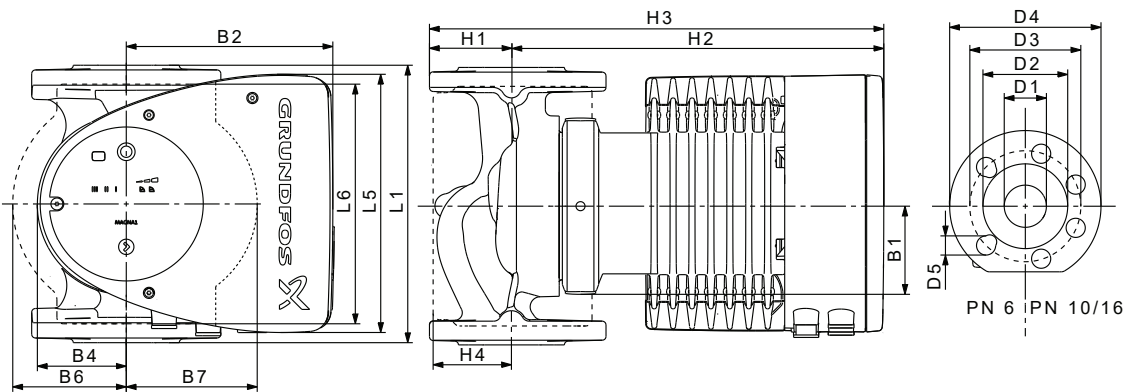
■ MAGNA1 40-180 F (N) PN 10
1 × 230 V, 50/60 Hz



TM056292

Speed	P1 [W]	I_{1/1} [A]
Min.	16	0.22
Max.	615	2.71
The pump incorporates overload protection.		
Net weight [kg]	Gross weight [kg]	Ship. vol. [m³]
16.2	17.7	0.040

Connections:	See section 8.6 <i>Pipe connections</i> .
System pressure:	Max. 1.0 MPa (10 bar)
Liquid temperature:	-10 to 110 °C (TF 110)
Also available with:	Stainless-steel pump housing, type N
Specific EEI:	0.20



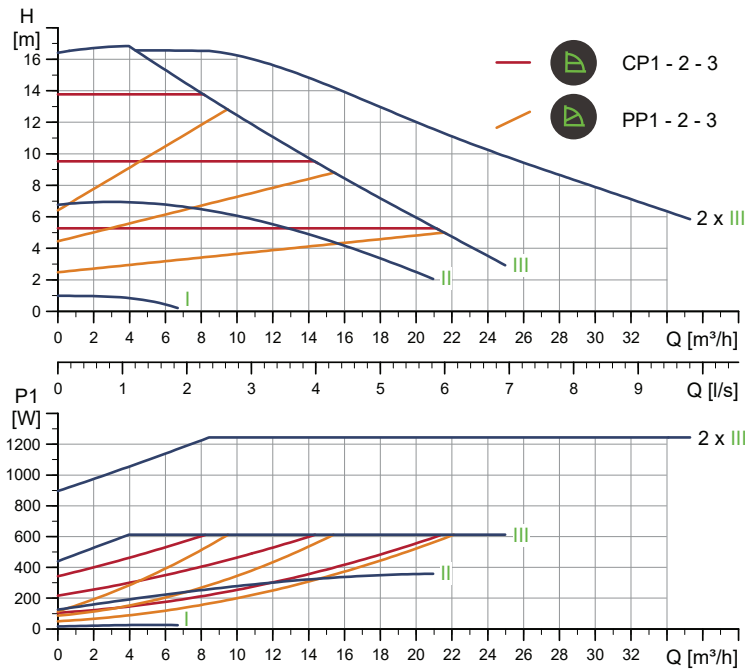
TM055276

Pump type	Dimensions [mm]																
	L1	L5	L6	B1	B2	B4	B6	B7	H1	H2	H3	H4	D1	D2	D3	D4	D5
MAGNA1 40-180 F (N)	250	204	220	84	164	73	106	128	65	304	369	83	40	84	100/110	150	14/19

For product numbers, see section Product numbers.

■ MAGNA1 D 40-180 F PN 10

1 × 230 V, 50/60 Hz



TM056339

Speed	P1 [W]	I _{1/1} [A]
Min.	15.4	0.19
Max.	629	2.75

The pump incorporates overload protection.

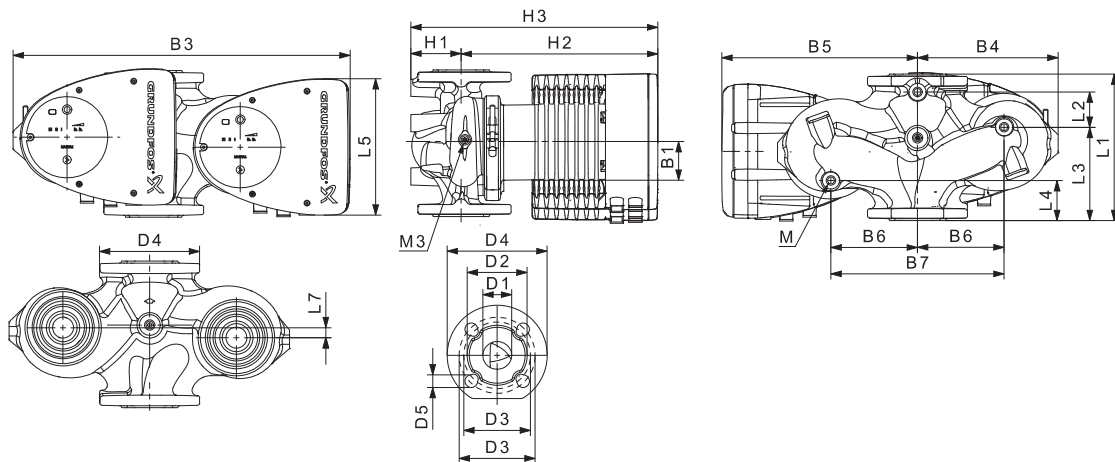
Connections: See section 8.6 Pipe connections.

System pressure: Max. 1.0 MPa (10 bar)

Liquid temperature: -10 to 110 °C (TF 110)

Specific EEI: 0.21

Net weight [kg]	Gross weight [kg]	Ship. vol. [m³]
31.4	35.3	0.087

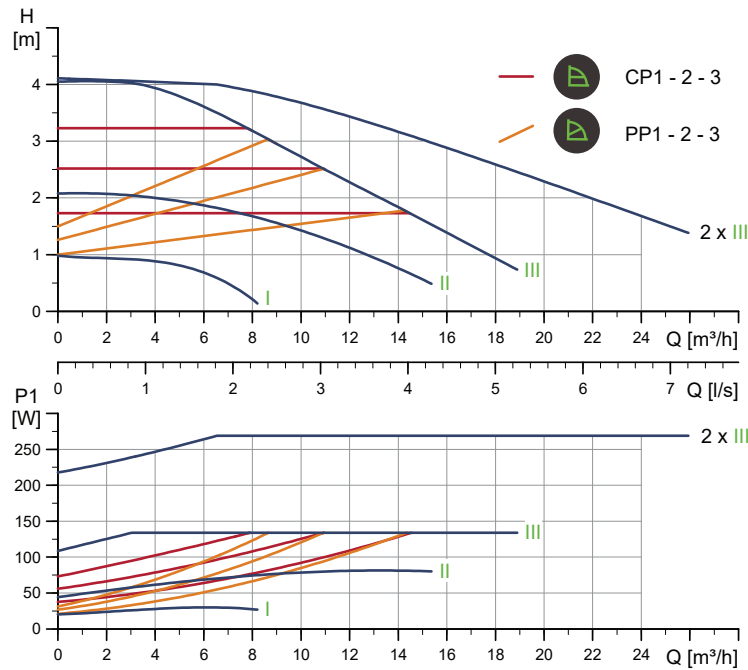


TM059237

Pump type	Dimensions [mm]																				Rp	
	L1	L2	L3	L4	L5	L7	B1	B3	B4	B5	B6	B7	H1	H2	H3	D1	D2	D3	D4	D5	M	M3
MAGNA1 D 40-180 F	250	58	155	75	204	0	84	512	220	294	130	260	69	303	372	40	84	100/110	150	14/19	12	1/4

For product numbers, see section Product numbers.

■ MAGNA1 D 50-40 F PN 10
1 × 230 V, 50/60 Hz



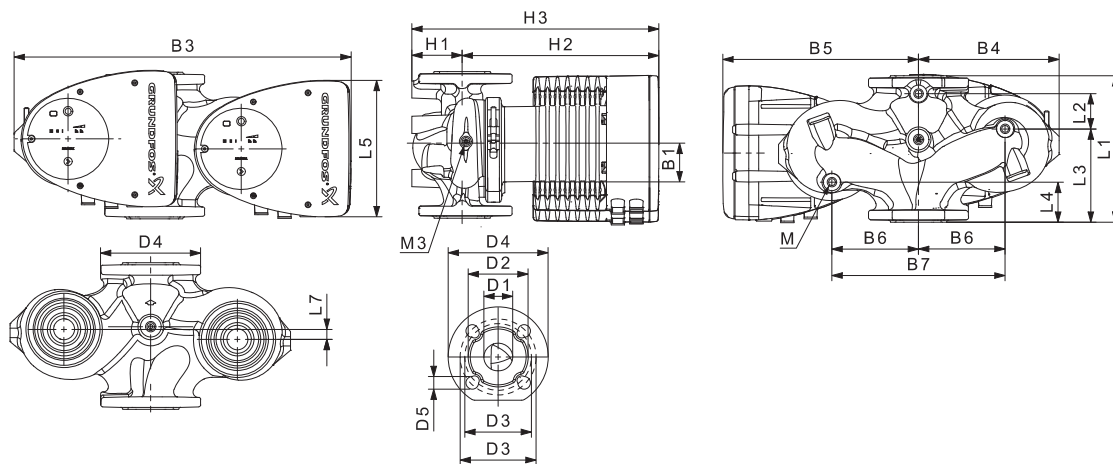
TM056340

Speed	P1 [W]	I _{1/1} [A]
Min.	21.1	0.22
Max.	137	0.65

The pump incorporates overload protection.

Connections:	See section 8.6 Pipe connections.
System pressure:	Max. 1.0 MPa (10 bar)
Liquid temperature:	-10 to 110 °C (TF 110)
Specific EEI:	0.23

Net weight [kg]	Gross weight [kg]	Ship. vol. [m³]
34.3	42.0	0.132



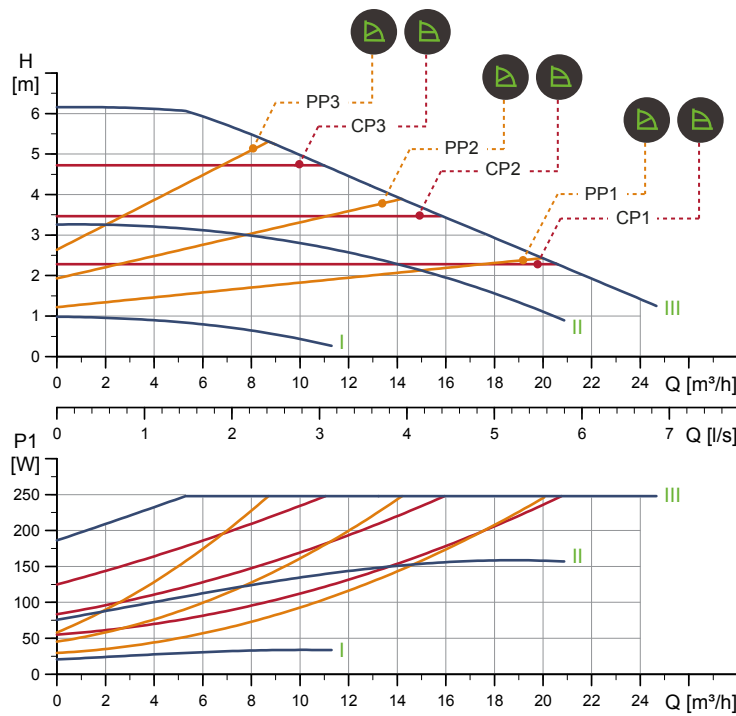
TM059237

Pump type	Dimensions [mm]																				Rp	
	L1	L2	L3	L4	L5	L7	B1	B3	B4	B5	B6	B7	H1	H2	H3	D1	D2	D3	D4	D5		M
MAGNA1 D 50-40 F	240	48	160	45	204	45	84	515	221	294	130	260	75	304	379	50	102	110/125	165	14/19	12	1/4

For product numbers, see section Product numbers.

■ MAGNA1 50-60 F (N) PN 10

1 × 230 V, 50/60 Hz



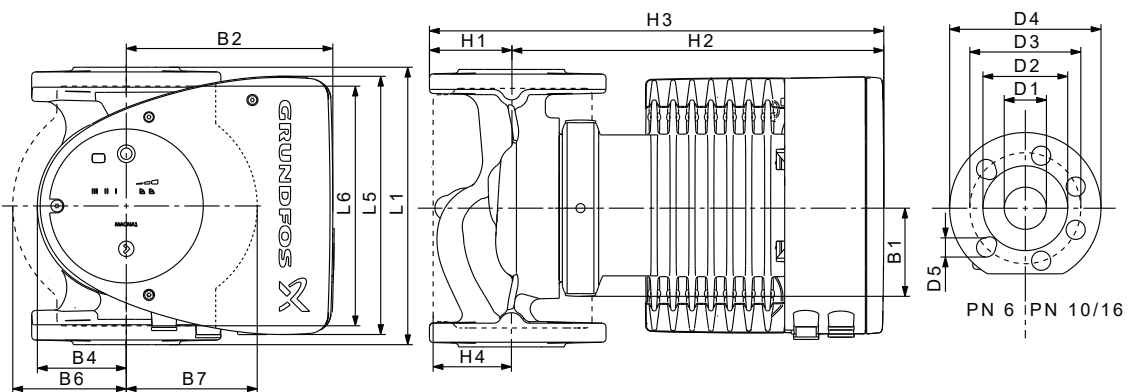
TM056294

Speed	P1 [W]	I _{1/1} [A]
Min.	20.9	0.22
Max.	252	1.15

The pump incorporates overload protection.

Net weight [kg]	Gross weight [kg]	Ship. vol. [m ³]
17.7	19.8	0.046

Connections:	See section 8.6 <i>Pipe connections</i> .
System pressure:	Max. 1.0 MPa (10 bar)
Liquid temperature:	-10 to 110 °C (TF 110)
Also available with:	Stainless-steel pump housing, type N
Specific EEI:	0.20

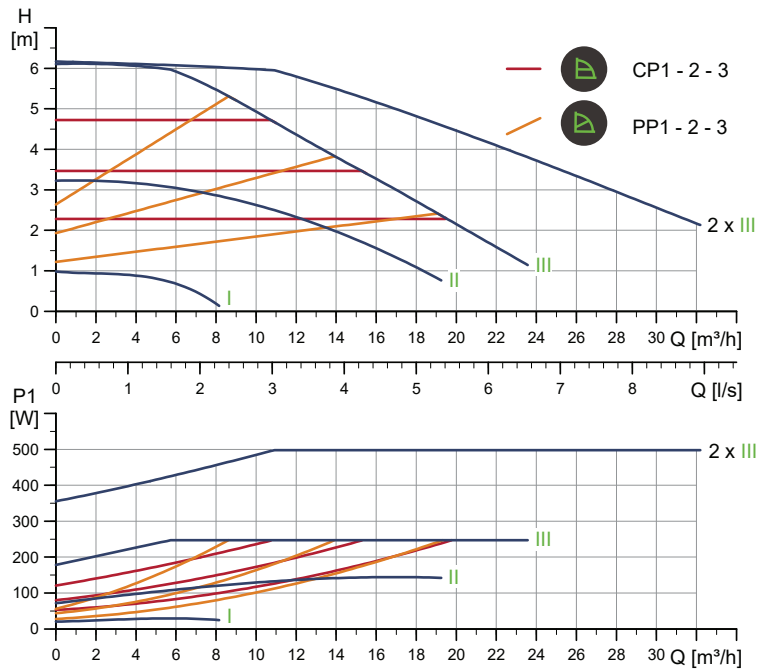


TM055276

Pump type	Dimensions [mm]																
	L1	L5	L6	B1	B2	B4	B6	B7	H1	H2	H3	H4	D1	D2	D3	D4	D5
MAGNA1 50-60 F (N)	240	204	240	84	164	73	127	127	71	304	375	97	50	102	110/125	165	14/19

For product numbers, see section Product numbers.

■ MAGNA1 D 50-60 F PN 10
1 × 230 V, 50/60 Hz



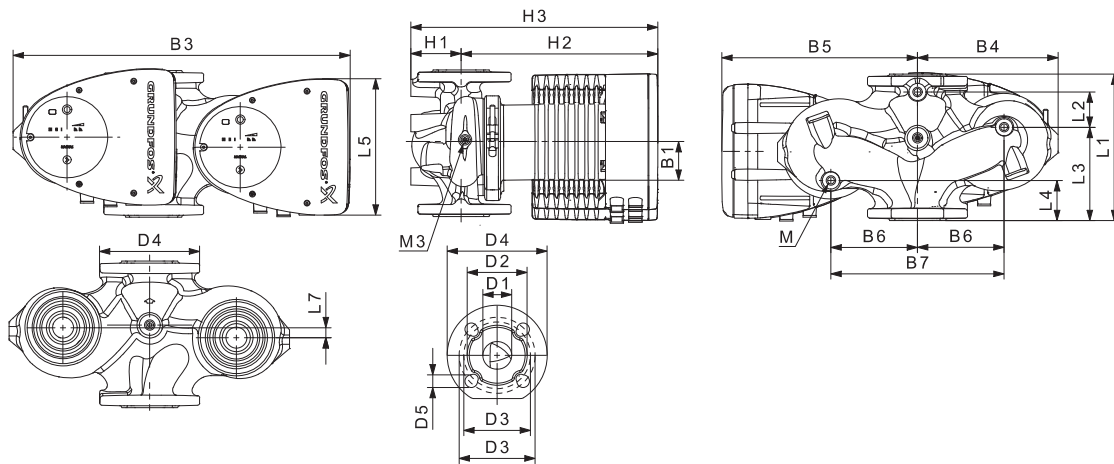
TM056841

Speed	P1 [W]	I _{1/1} [A]
Min.	20.9	0.22
Max.	253	1.15

The pump incorporates overload protection.

Connections:	See section 8.6 Pipe connections.
System pressure:	Max. 1.0 MPa (10 bar)
Liquid temperature:	-10 to 110 °C (TF 110)
Specific EEI:	0.23

Net weight [kg]	Gross weight [kg]	Ship. vol. [m³]
34.3	42.0	0.132



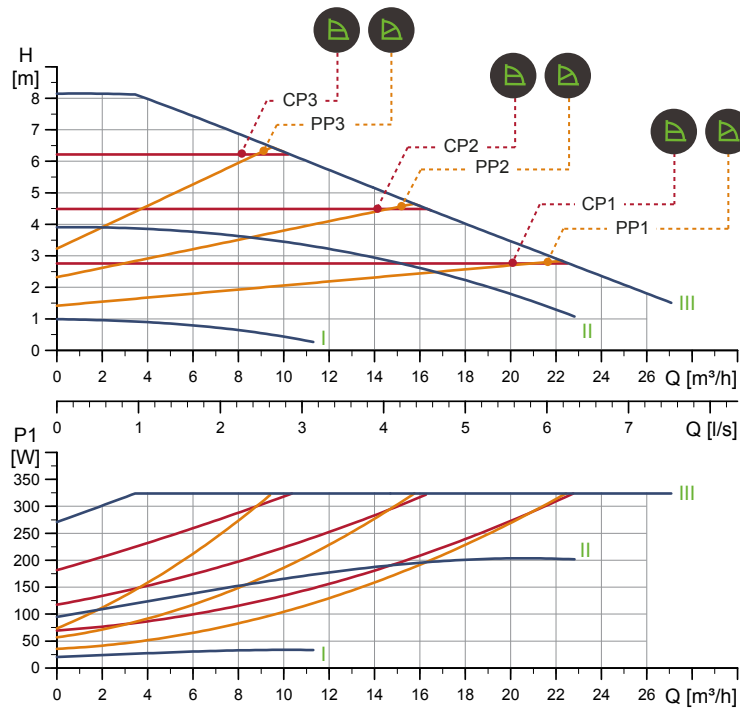
TM059237

Pump type	Dimensions [mm]																				Rp	
	L1	L2	L3	L4	L5	L7	B1	B3	B4	B5	B6	B7	H1	H2	H3	D1	D2	D3	D4	D5	M	M3
MAGNA1 D 50-60 F	240	48	160	45	204	45	84	515	221	294	130	260	75	304	379	50	102	110/125	165	14/19	12	1/4

For product numbers, see section Product numbers.

■ MAGNA1 50-80 F (N) PN 10

1 × 230 V, 50/60 Hz



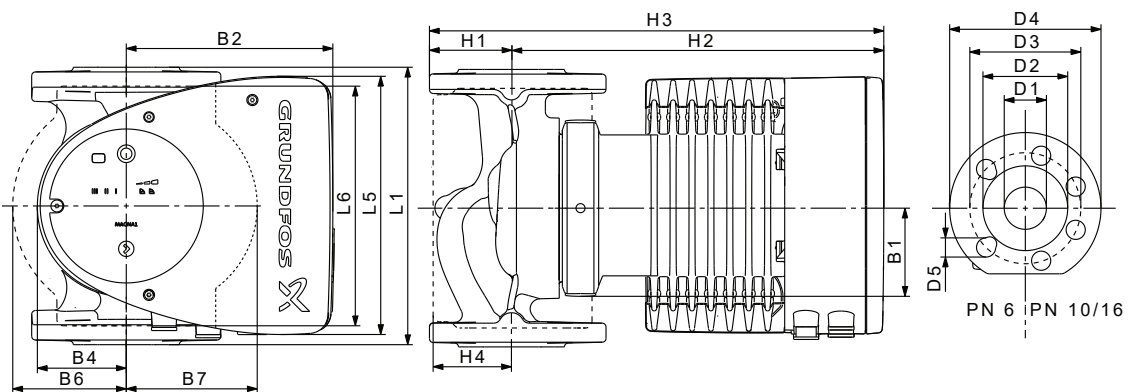
TM056295

Speed	P1 [W]	I _{1/1} [A]
Min.	20.9	0.22
Max.	331	1.48

The pump incorporates overload protection.

Net weight [kg]	Gross weight [kg]	Ship. vol. [m ³]
17.7	19.8	0.046

Connections:	See section 8.6 Pipe connections.
System pressure:	Max. 1.0 MPa (10 bar)
Liquid temperature:	-10 to 110 °C (TF 110)
Also available with:	Stainless-steel pump housing, type N
Specific EEI:	0.20



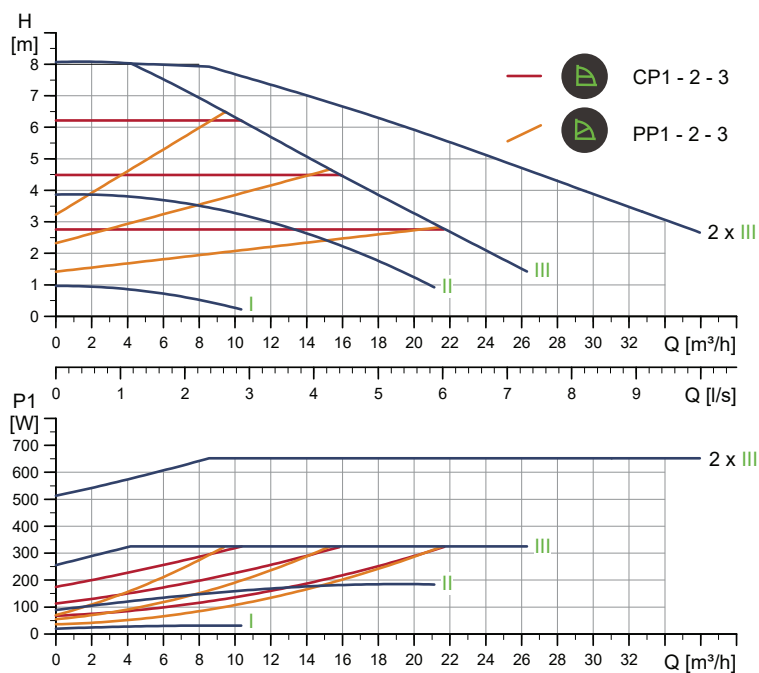
TM055276

Pump type	Dimensions [mm]																
	L1	L5	L6	B1	B2	B4	B6	B7	H1	H2	H3	H4	D1	D2	D3	D4	D5
MAGNA1 50-80 F (N)	240	204	240	84	164	73	127	127	71	304	374	97	50	102	110/125	165	14/19

For product numbers, see section Product numbers.

■ MAGNA1 D 50-80 F PN 10

1 × 230 V, 50/60 Hz



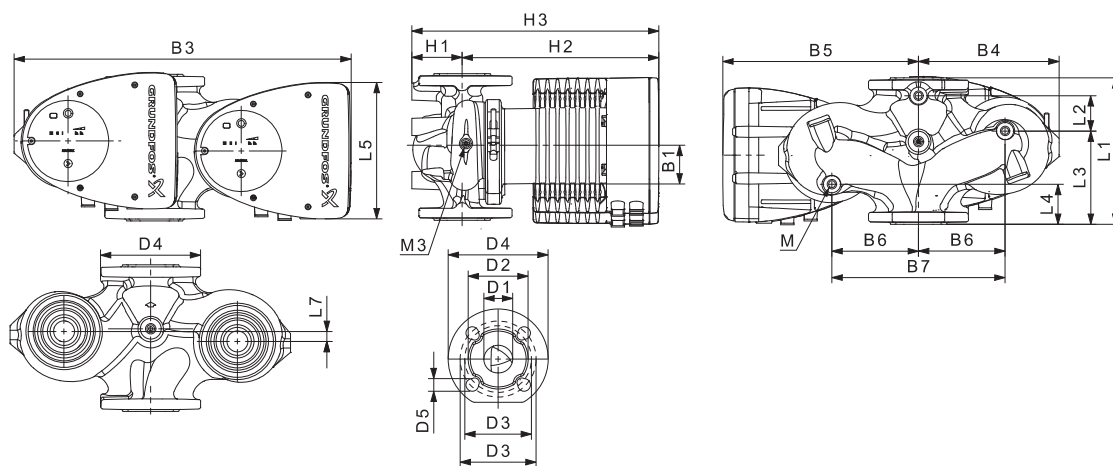
TM056342

Speed	P1 [W]	I _{1/1} [A]
Min.	20.6	0.22
Max.	331	1.48

The pump incorporates overload protection.

Connections:	See section 8.6 Pipe connections.
System pressure:	Max. 1.0 MPa (10 bar)
Liquid temperature:	-10 to 110 °C (TF 110)
Specific EEI:	0.22

Net weight [kg]	Gross weight [kg]	Ship. vol. [m³]
34.3	42.0	0.132

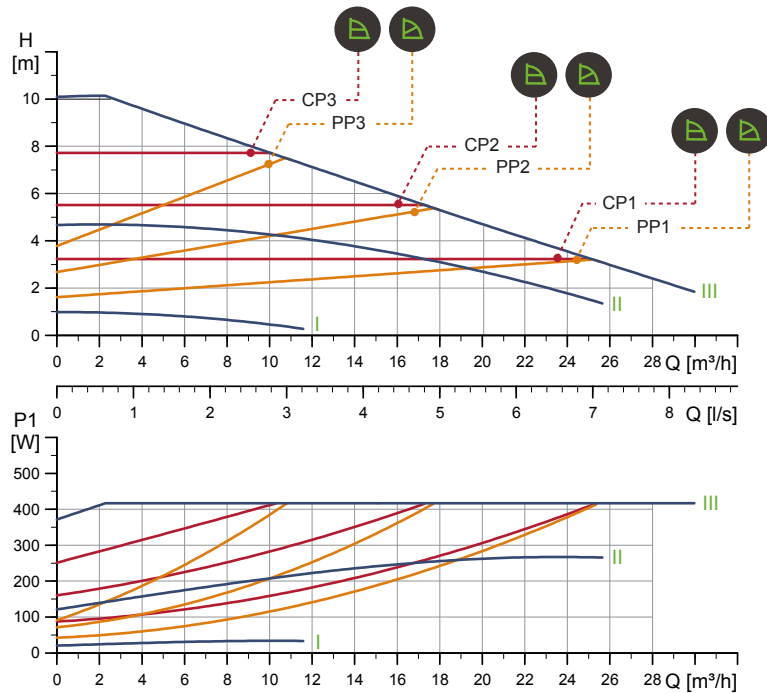


TM059237

Pump type	Dimensions [mm]																				Rp	
	L1	L2	L3	L4	L5	L7	B1	B3	B4	B5	B6	B7	H1	H2	H3	D1	D2	D3	D4	D5	M	M3
MAGNA1 D 50-80 F	240	48	160	45	204	45	84	515	221	294	130	260	75	304	379	50	102	110/125	165	14/19	12	1/4

For product numbers, see section Product numbers.

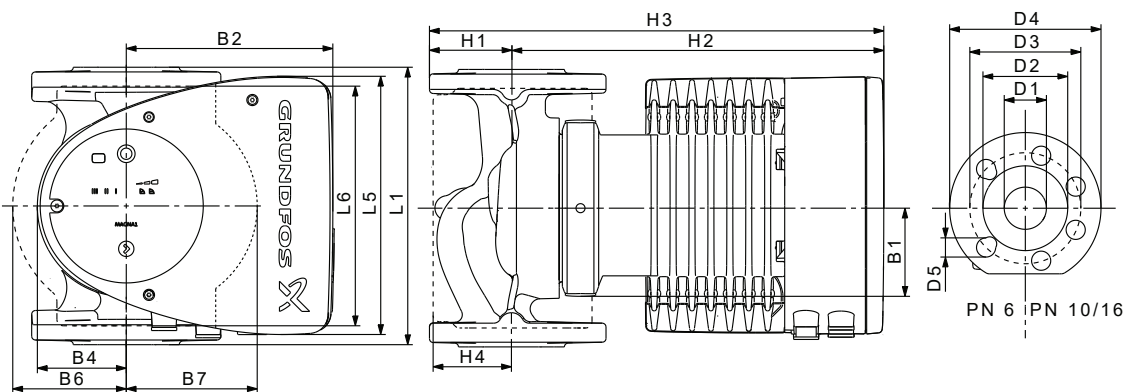
■ MAGNA1 50-100 F (N) PN 10
1 × 230 V, 50/60 Hz



TM056296

Speed	P1 [W]	I_{1/1} [A]
Min.	20.9	0.22
Max.	425	1.90
The pump incorporates overload protection.		
Net weight [kg]	Gross weight [kg]	Ship. vol. [m³]
18.2	20.4	0.046

Connections:	See section 8.6 <i>Pipe connections</i> .
System pressure:	Max. 1.0 MPa (10 bar)
Liquid temperature:	-10 to 110 °C (TF 110)
Also available with:	Stainless-steel pump housing, type N
Specific EEI:	0.20



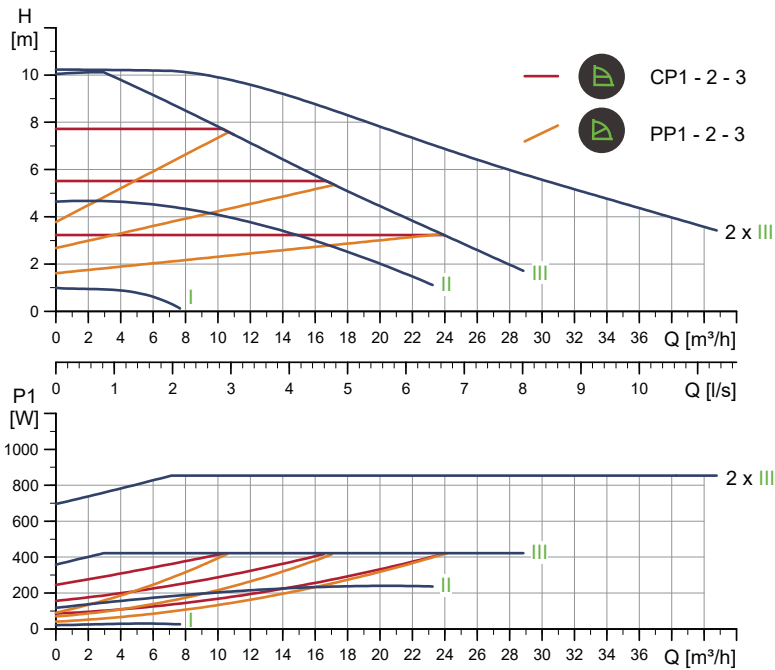
TM055276

Pump type	Dimensions [mm]																
	L1	L5	L6	B1	B2	B4	B6	B7	H1	H2	H3	H4	D1	D2	D3	D4	D5
MAGNA1 50-100 F (N)	280	204	240	84	164	73	127	127	72	304	376	97	50	102	110/125	165	14/19

For product numbers, see section Product numbers .

■ MAGNA1 D 50-100 F PN 10

1 × 230 V, 50/60 Hz



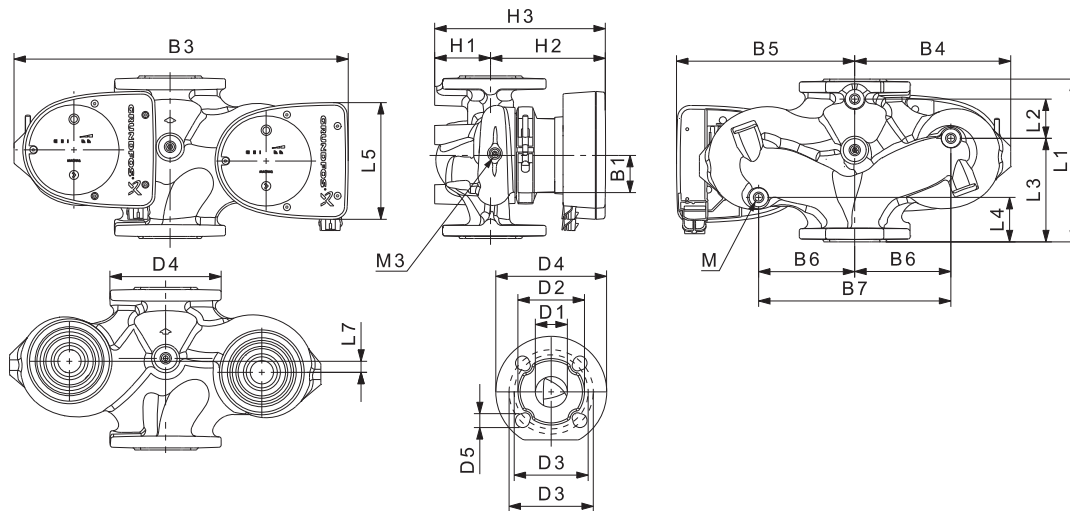
TM056343

Speed	P1 [W]	I _{1/1} [A]
Min.	21	0.22
Max.	433	1.93

The pump incorporates overload protection.

Connections:	See section 8.6 <i>Pipe connections</i> .
System pressure:	Max. 1.0 MPa (10 bar)
Liquid temperature:	-10 to 110 °C (TF 110)
Specific EEI:	0.22

Net weight [kg]	Gross weight [kg]	Ship. vol. [m³]
34.3	42.0	0.132

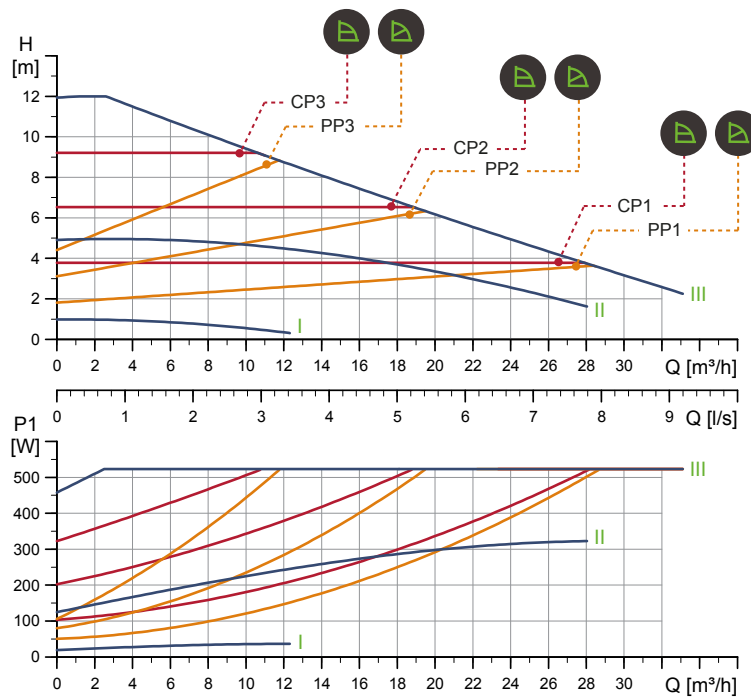


TM054960

Pump type	Dimensions [mm]																				Rp	
	L1	L2	L3	L4	L5	L7	B1	B3	B4	B5	B6	B7	H1	H2	H3	D1	D2	D3	D4	D5	M	M3
MAGNA1 D 50-100 F	280	175	75	75	204	0	84	517	223	294	130	260	75	304	379	50	102	110/125	165	14/19	12	1/4

For product numbers, see section Product numbers.

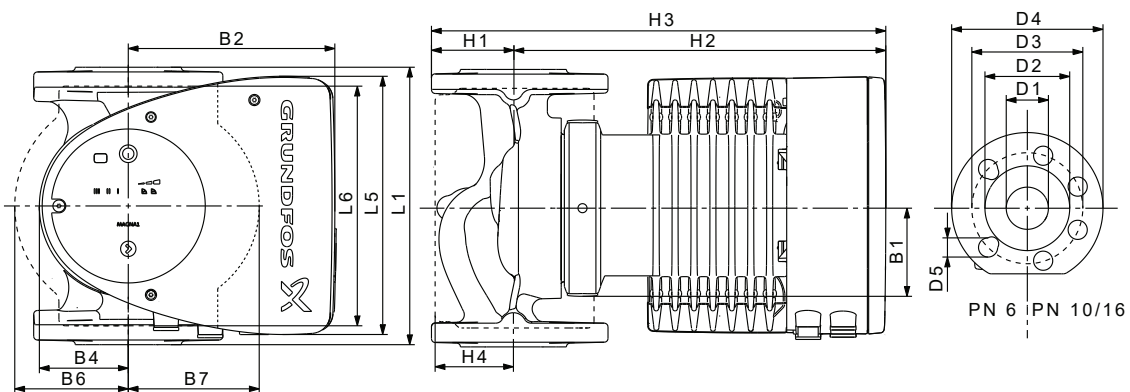
■ MAGNA1 50-120 F (N) PN 10
1 × 230 V, 50/60 Hz



TM056297

Speed	P1 [W]	I_{1/1} [A]
Min.	20.2	0.22
Max.	533	2.37
The pump incorporates overload protection.		
Net weight [kg]	Gross weight [kg]	Ship. vol. [m³]
18.2	20.4	0.046

Connections:	See section 8.6 <i>Pipe connections</i> .
System pressure:	Max. 1.0 MPa (10 bar)
Liquid temperature:	-10 to 110 °C (TF 110)
Also available with:	Stainless-steel pump housing, type N
Specific EEI:	0.20



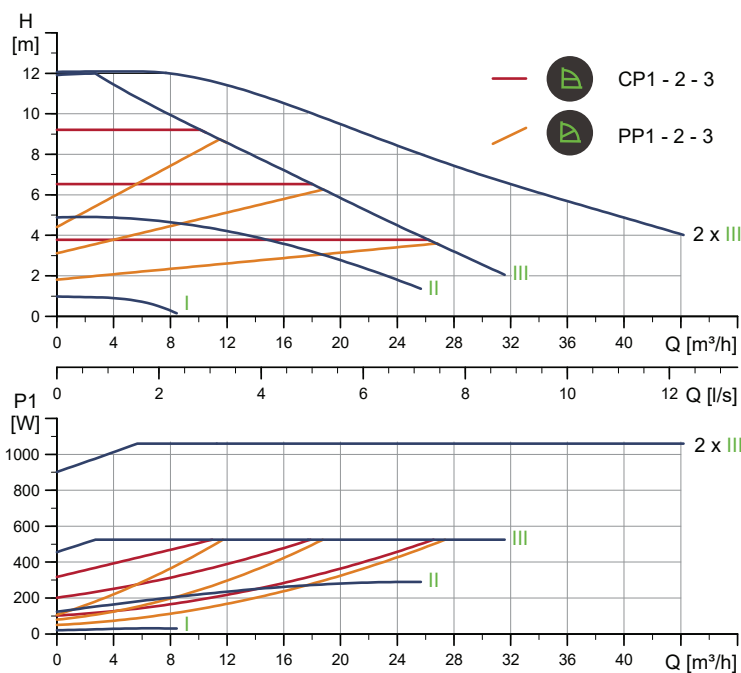
TM055276

Pump type	Dimensions [mm]																
	L1	L5	L6	B1	B2	B4	B6	B7	H1	H2	H3	H4	D1	D2	D3	D4	D5
MAGNA1 50-120 F (N)	280	204	240	84	164	73	127	127	72	304	376	97	50	102	110/125	165	14/19

For product numbers, see section Product numbers.

■ MAGNA1 D 50-120 F PN 10

1 × 230 V, 50/60 Hz



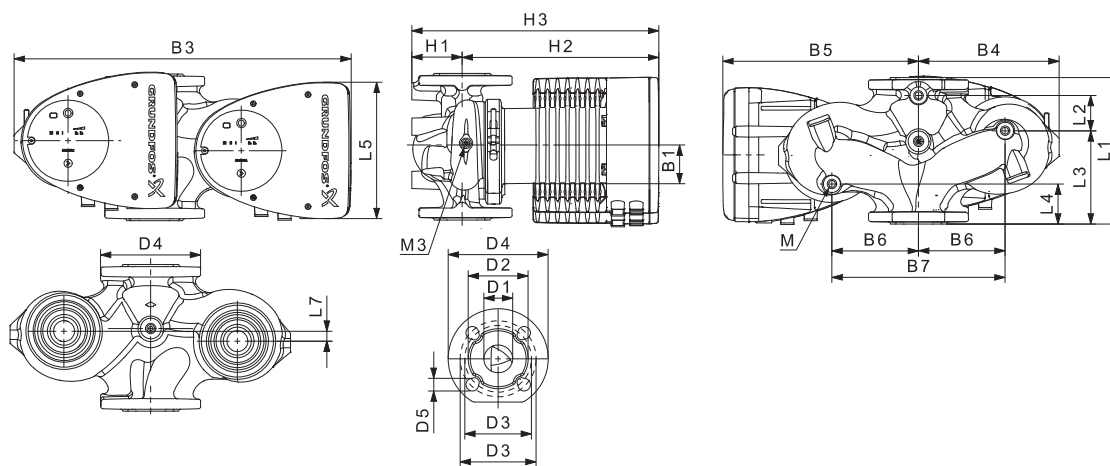
TM056344

Speed	P1 [W]	I _{1/1} [A]
Min.	20.7	0.22
Max.	534	2.37

The pump incorporates overload protection.

Connections:	See section 8.6 Pipe connections.
System pressure:	Max. 1.0 MPa (10 bar)
Liquid temperature:	-10 to 110 °C (TF 110)
Specific EEI:	0.22

Net weight [kg]	Gross weight [kg]	Ship. vol. [m³]
34.3	42.0	0.132

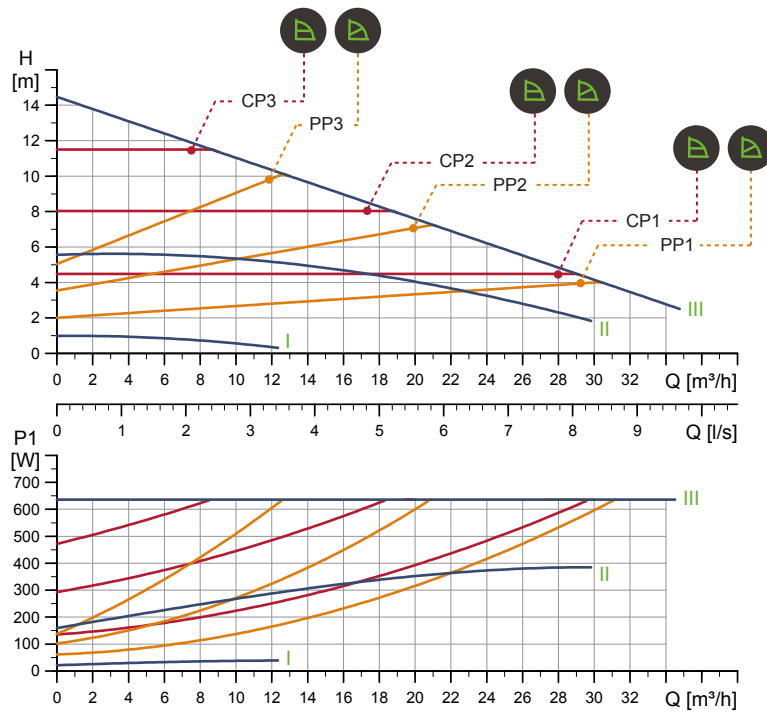


TM059237

Pump type	Dimensions [mm]																				Rp	
	L1	L2	L3	L4	L5	L7	B1	B3	B4	B5	B6	B7	H1	H2	H3	D1	D2	D3	D4	D5	M	M3
MAGNA1 D 50-120 F	280	175	75	75	204	0	84	517	223	294	130	260	75	304	379	50	102	110/125	165	14/19	12	1/4

For product numbers, see section Product numbers.

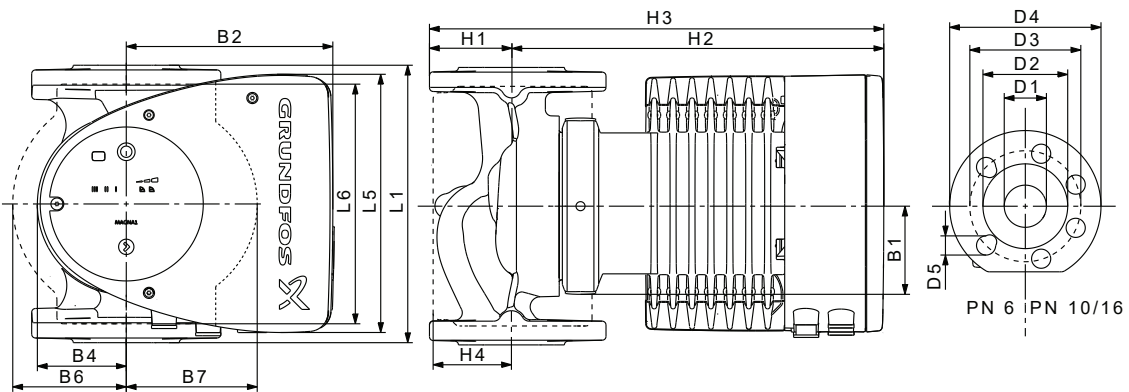
■ MAGNA1 50-150 F (N) PN 10
1 × 230 V, 50/60 Hz



TM056298

Speed	P1 [W]	I_{1/1} [A]
Min.	22.2	0.24
Max.	649	2.87
The pump incorporates overload protection.		
Net weight [kg]	Gross weight [kg]	Ship. vol. [m³]
19.1	21.3	0.046

Connections:	See section 8.6 Pipe connections.
System pressure:	Max. 1.0 MPa (10 bar)
Liquid temperature:	-10 to 110 °C (TF 110)
Also available with:	Stainless-steel pump housing, type N
Specific EEI:	0.20



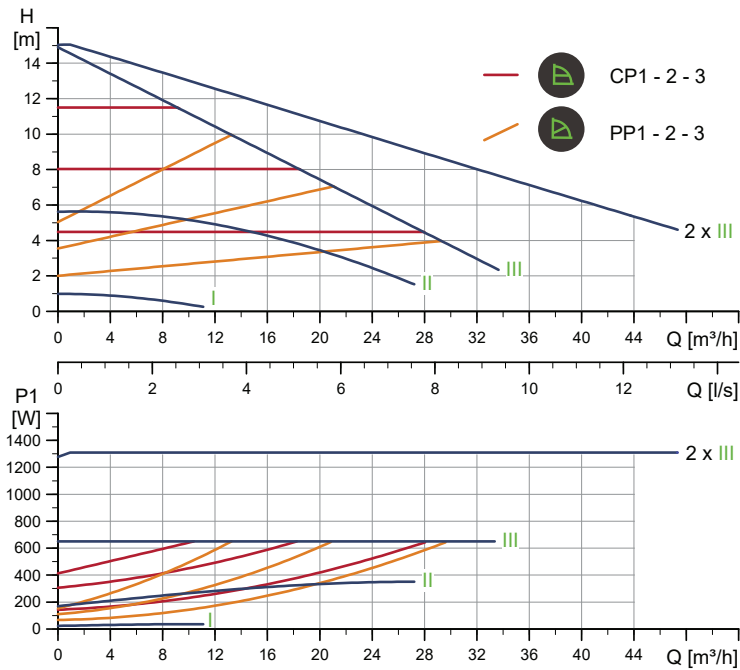
TM055276

Pump type	Dimensions [mm]																
	L1	L5	L6	B1	B2	B4	B6	B7	H1	H2	H3	H4	D1	D2	D3	D4	D5
MAGNA1 50-150 F (N)	280	204	240	84	164	73	127	127	72	304	376	97	50	102	110/125	165	14/19

For product numbers, see section Product numbers.

■ MAGNA1 D 50-150 F PN 10

1 × 230 V, 50/60 Hz



TM056345

Speed	P1 [W]	I _{1/1} [A]
Min.	23.8	0.26
Max.	653	2.88

The pump incorporates overload protection.

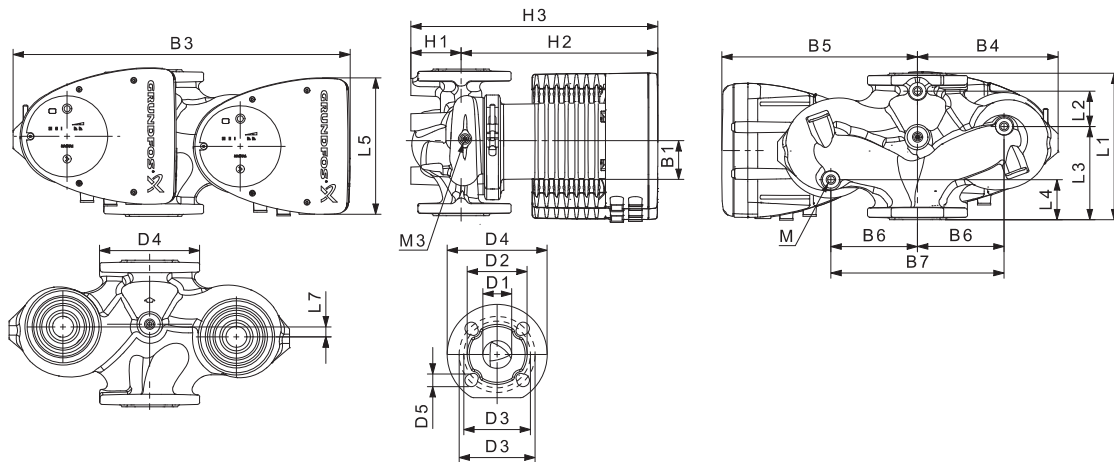
Connections: See section 8.6 Pipe connections.

System pressure: Max. 1.0 MPa (10 bar)

Liquid temperature: -10 to 110 °C (TF 110)

Specific EEI: 0.21

Net weight [kg]	Gross weight [kg]	Ship. vol. [m³]
36.1	43.7	0.132

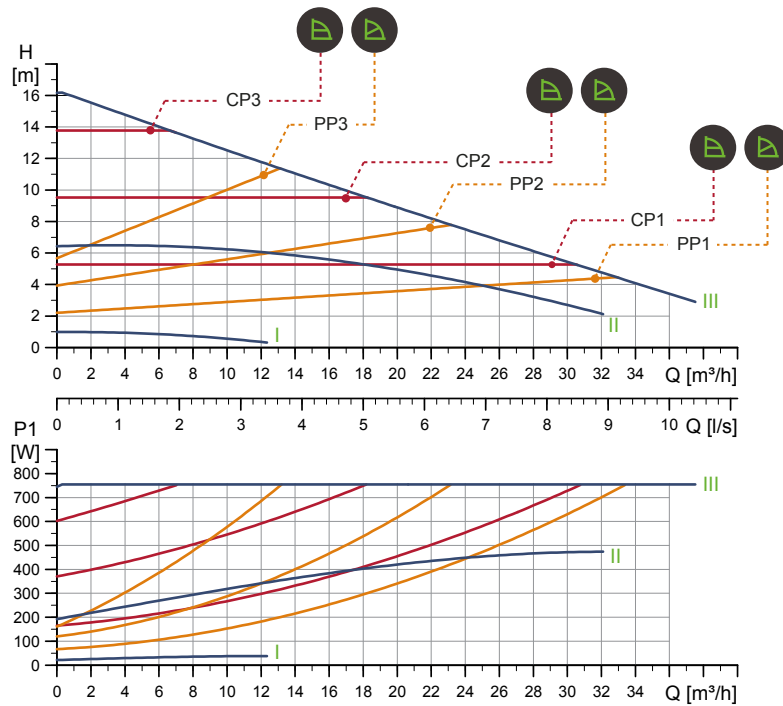


TM059237

Pump type	Dimensions [mm]																				Rp	
	L1	L2	L3	L4	L5	L7	B1	B3	B4	B5	B6	B7	H1	H2	H3	D1	D2	D3	D4	D5	M	M3
MAGNA1 D 50-150 F	280	175	75	75	204	0	84	517	223	294	130	260	75	304	379	50	102	110/125	165	14/19	12	1/4

For product numbers, see section Product numbers.

■ MAGNA1 50-180 F (N) PN 10
1 × 230 V, 50/60 Hz



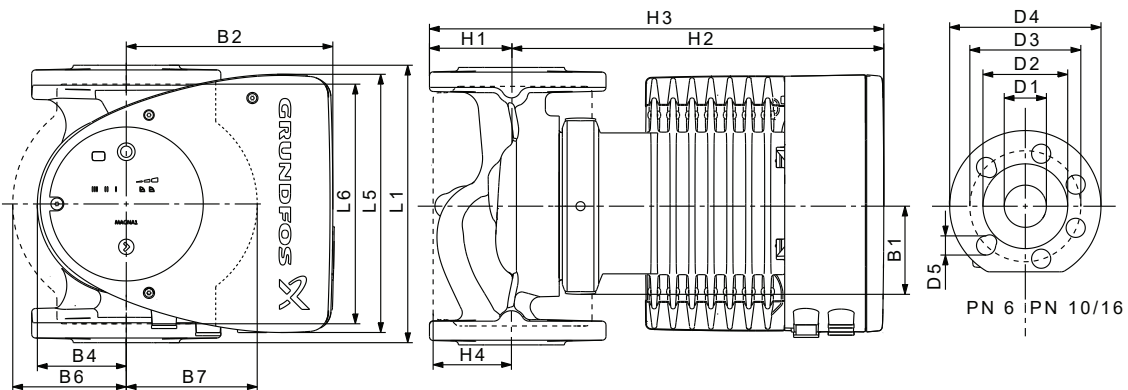
TM056299

Speed	P1 [W]	I _{1/1} [A]
Min.	22.1	0.24
Max.	769	3.40

The pump incorporates overload protection.

Net weight [kg]	Gross weight [kg]	Ship. vol. [m ³]
19.1	21.3	0.046

Connections:	See section 8.6 <i>Pipe connections</i> .
System pressure:	Max. 1.0 MPa (10 bar)
Liquid temperature:	-10 to 110 °C (TF 110)
Also available with:	Stainless-steel pump housing, type N
Specific EEI:	0.20



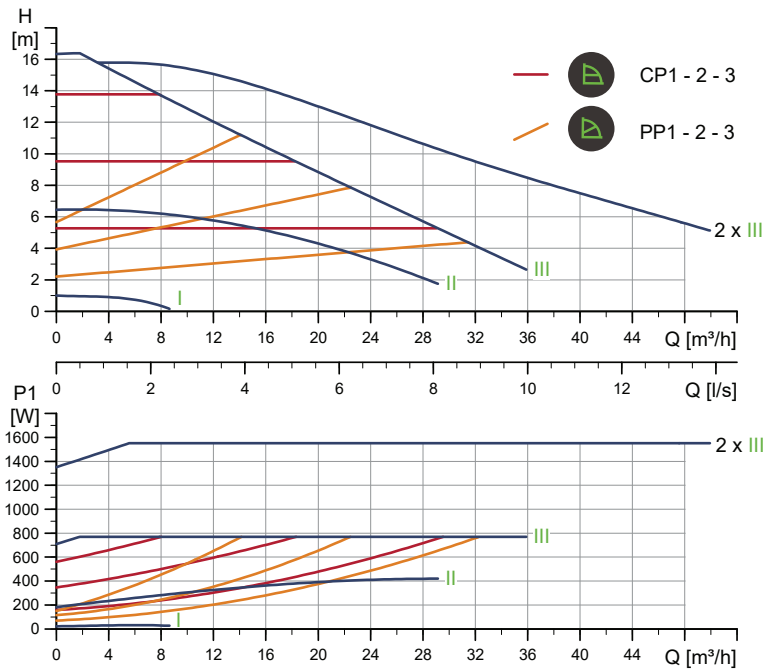
TM055276

Pump type	Dimensions [mm]																
	L1	L5	L6	B1	B2	B4	B6	B7	H1	H2	H3	H4	D1	D2	D3	D4	D5
MAGNA1 50-180 F (N)	280	204	240	84	164	73	127	127	72	304	376	97	50	102	110/125	165	14/19

For product numbers, see section Product numbers.

■ MAGNA1 D 50-180 F PN 10

1 × 230 V, 50/60 Hz



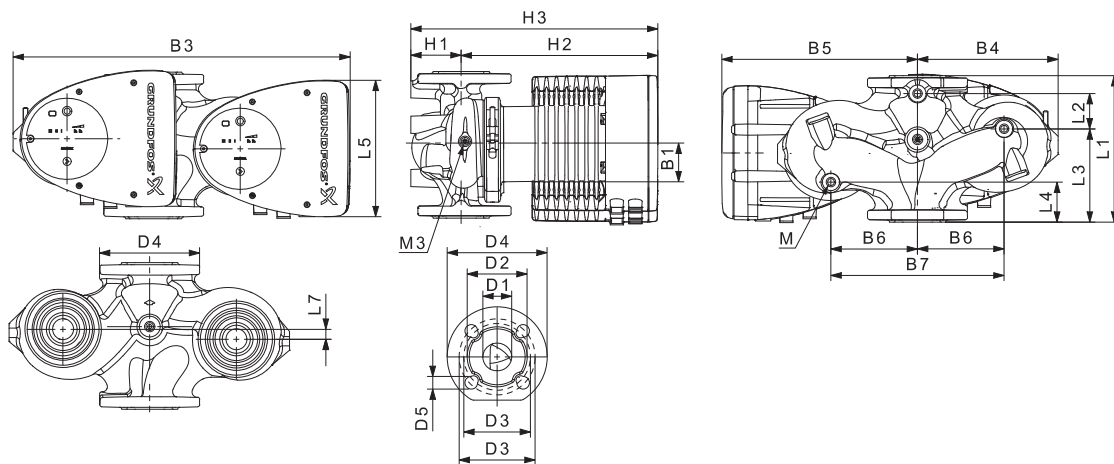
TM056346

Speed	P1 [W]	I _{1/1} [A]
Min.	22.4	0.23
Max.	785	3.46

The pump incorporates overload protection.

Connections:	See section 8.6 Pipe connections.
System pressure:	Max. 1.0 MPa (10 bar)
Liquid temperature:	-10 to 110 °C (TF 110)
Specific EEI:	0.22

Net weight [kg]	Gross weight [kg]	Ship. vol. [m³]
36.1	43.7	0.132



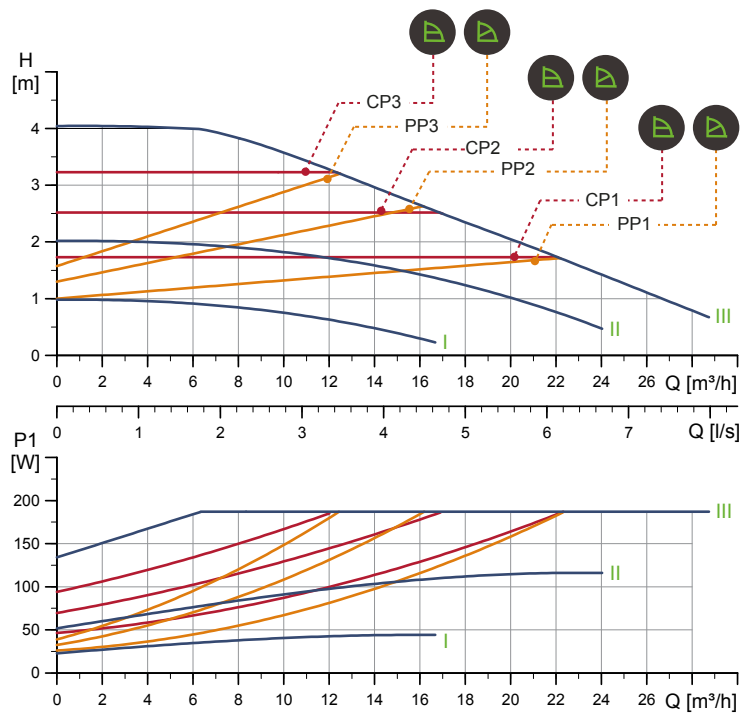
TM059237

Pump type	Dimensions [mm]																				Rp	
	L1	L2	L3	L4	L5	L7	B1	B3	B4	B5	B6	B7	H1	H2	H3	D1	D2	D3	D4	D5		M
MAGNA1 D 50-180 F	280	175	75	75	204	0	84	517	223	294	130	260	75	304	379	50	102	110/125	165	14/19	12	1/4

For product numbers, see section Product numbers.

■ MAGNA1 65-40 F (N) PN 10

1 × 230 V, 50/60 Hz



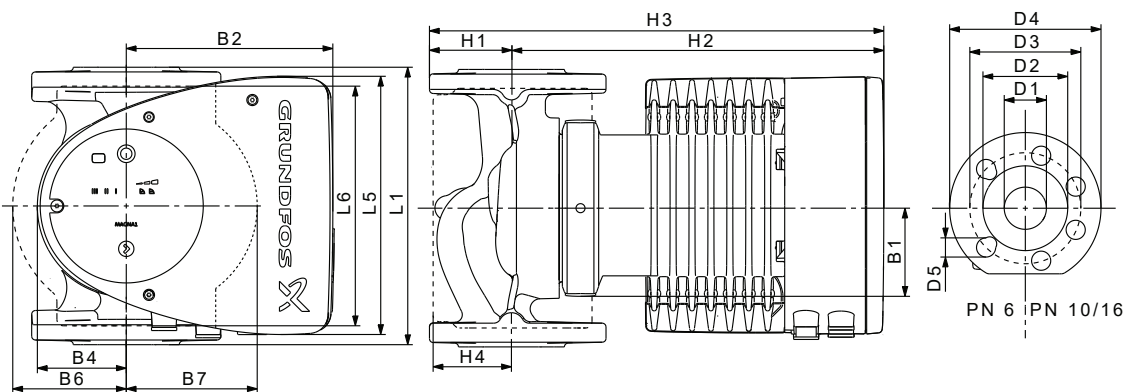
TM056300

Speed	P1 [W]	I_{1/1} [A]
Min.	23.2	0.24
Max.	190	0.90

The pump incorporates overload protection.

Net weight [kg]	Gross weight [kg]	Ship. vol. [m³]
20.7	23.0	0.057

Connections:	See section 8.6 <i>Pipe connections</i> .
System pressure:	Max. 1.0 MPa (10 bar)
Liquid temperature:	-10 to 110 °C (TF 110)
Also available with:	Stainless-steel pump housing, type N
Specific EEI:	0.20

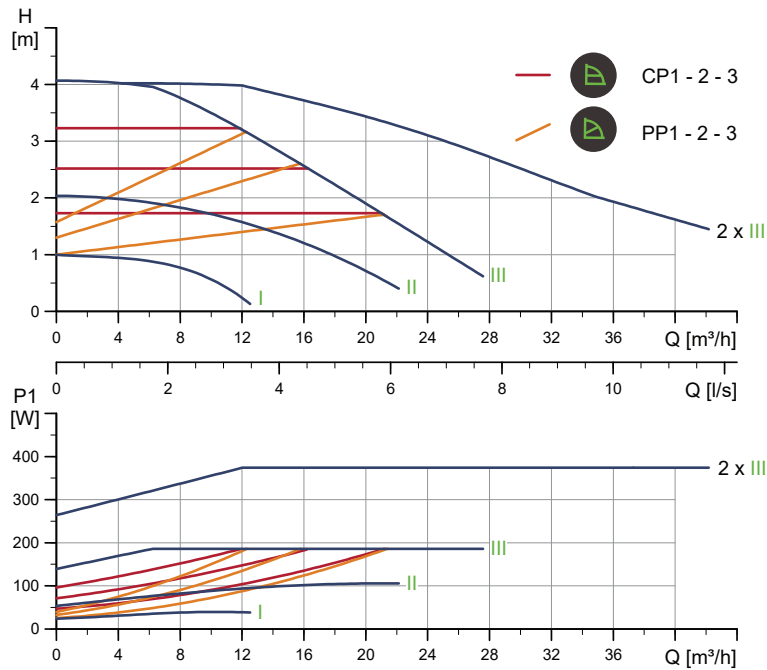


TM055276

Pump type	Dimensions [mm]																
	L1	L5	L6	B1	B2	B4	B6	B7	H1	H2	H3	H4	D1	D2	D3	D4	D5
MAGNA1 65-40 F (N)	340	204	296	84	164	73	133	133	74	312	386	94	65	119	130/145	185	14/19

For product numbers, see page section Product numbers.

■ MAGNA1 D 65-40 F PN 10
1 × 230 V, 50/60 Hz



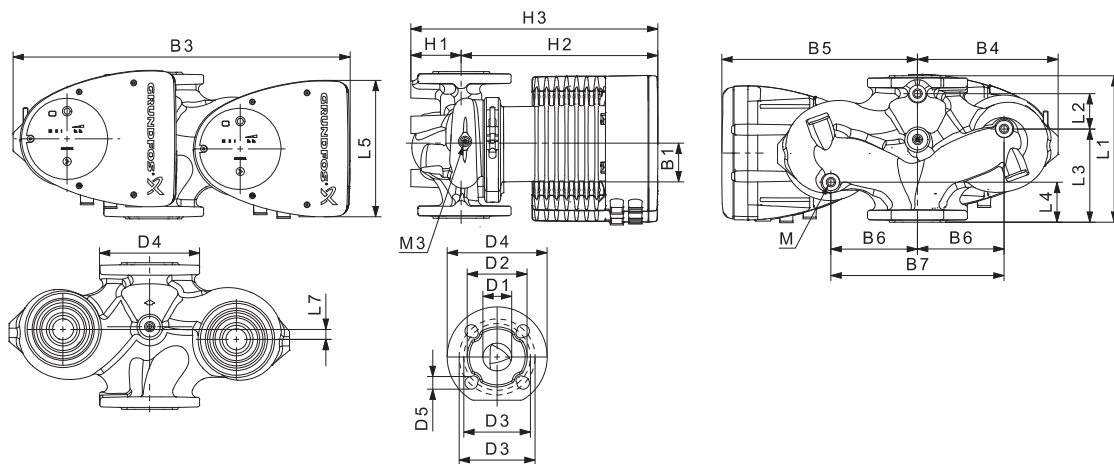
TM056347

Speed	P1 [W]	I _{1/1} [A]
Min.	23.9	0.26
Max.	189	0.89

The pump incorporates overload protection.

Connections:	See section 8.6 Pipe connections.
System pressure:	Max. 1.0 MPa (10 bar)
Liquid temperature:	-10 to 110 °C (TF 110)
Specific EEI:	0.23

Net weight [kg]	Gross weight [kg]	Ship. vol. [m³]
38.5	46.0	0.132

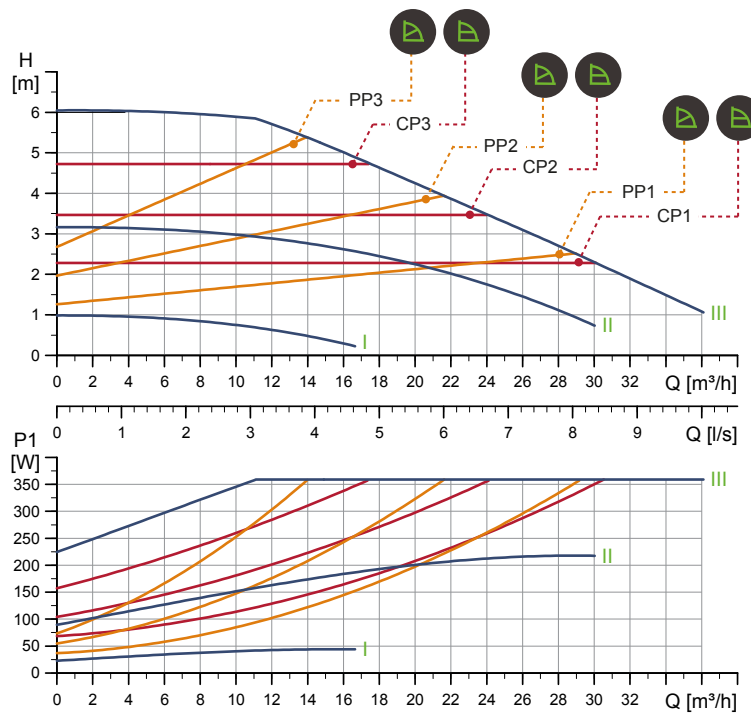


TM059237

Pump type	Dimensions [mm]																				Rp	
	L1	L2	L3	L4	L5	L7	B1	B3	B4	B5	B6	B7	H1	H2	H3	D1	D2	D3	D4	D5	M	M3
MAGNA1 D 65-40 F	340	218	92	92	204	0	84	522	228	294	130	260	77	312	389	65	119	130/145	185	14/19	12	1/4

For product numbers, see section Product numbers.

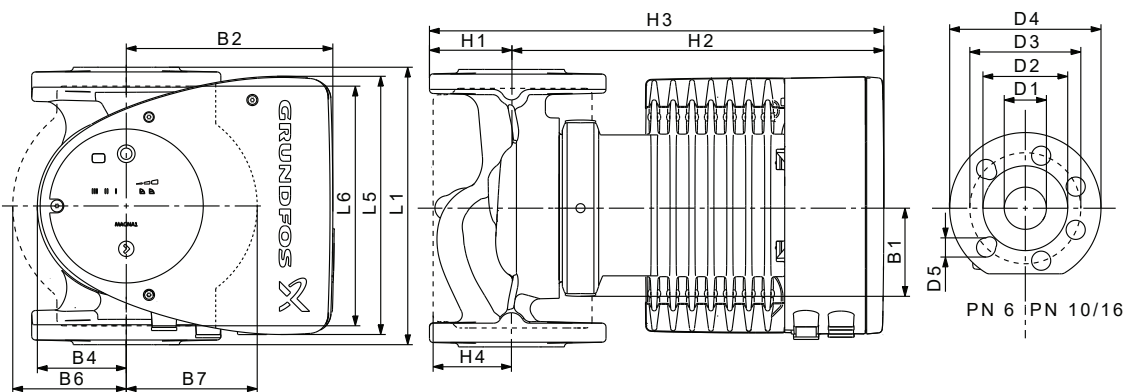
■ MAGNA1 65-60 F (N) PN 10
1 × 230 V, 50/60 Hz



TM056301

Speed	P1 [W]	I_{1/1} [A]
Min.	23.2	0.24
Max.	365	1.64
The pump incorporates overload protection.		
Net weight [kg]	Gross weight [kg]	Ship. vol. [m³]
20.7	23.0	0.057

Connections:	See section 8.6 <i>Pipe connections</i> .
System pressure:	Max. 1.0 MPa (10 bar)
Liquid temperature:	-10 to 110 °C (TF 110)
Also available with:	Stainless-steel pump housing, type N
Specific EEI:	0.20

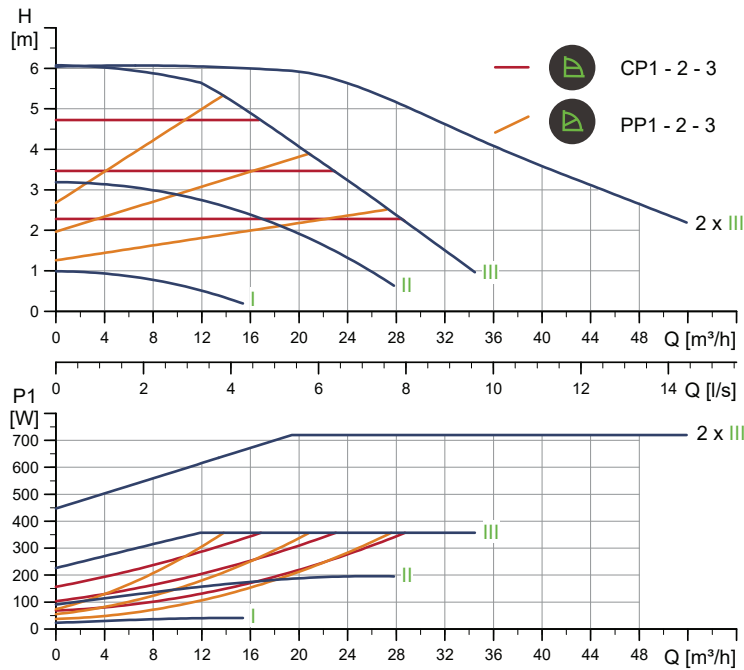


TM055276

Pump type	Dimensions [mm]																
	L1	L5	L6	B1	B2	B4	B6	B7	H1	H2	H3	H4	D1	D2	D3	D4	D5
MAGNA1 65-60 F (N)	340	204	296	84	164	73	133	133	74	312	386	94	65	119	130/145	185	14/19

For product numbers, see section Product numbers.

■ MAGNA1 D 65-60 F PN 10
1 × 230 V, 50/60 Hz



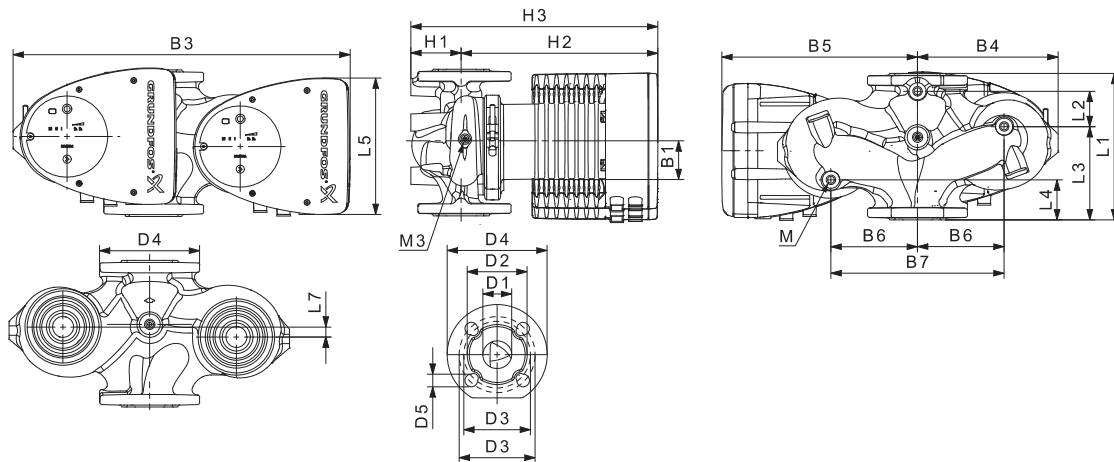
TM056348

Speed	P1 [W]	I _{1/1} [A]
Min.	21	0.24
Max.	364	1.63

Connections:	See section 8.6 Pipe connections.
System pressure:	Max. 1.0 MPa (10 bar)
Liquid temperature:	-10 to 110 °C (TF 110)
Specific EEI:	0.22

The pump incorporates overload protection.

Net weight [kg]	Gross weight [kg]	Ship. vol. [m³]
38.5	46.0	0.132



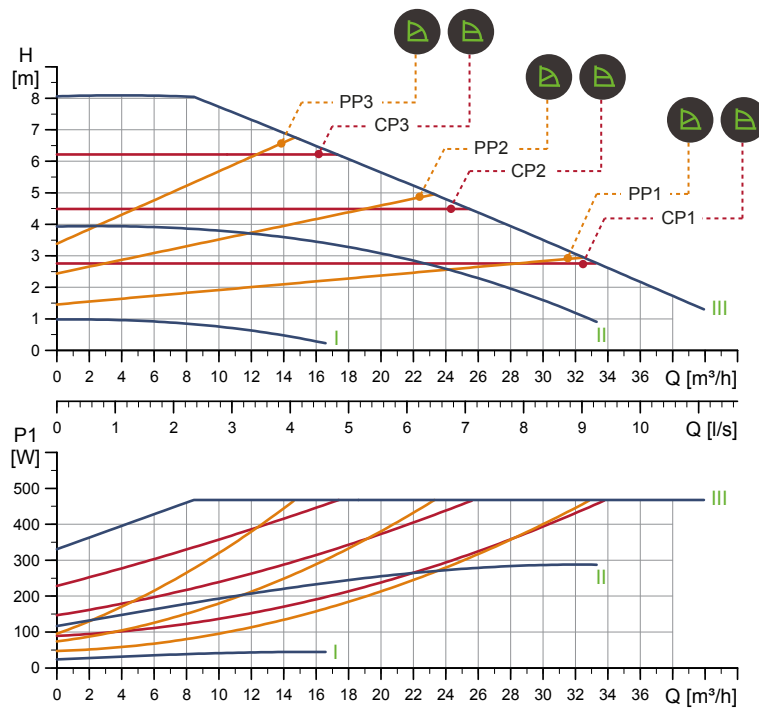
TM059237

Pump type	Dimensions [mm]																				Rp	
	L1	L2	L3	L4	L5	L7	B1	B3	B4	B5	B6	B7	H1	H2	H3	D1	D2	D3	D4	D5		M
MAGNA1 D 65-60 F	340	218	92	92	204	0	84	522	228	294	130	260	77	312	389	65	119	130/145	185	14/19	12	1/4

For product numbers, see section Product numbers.

■ MAGNA1 65-80 F (N) PN 10

1 × 230 V, 50/60 Hz



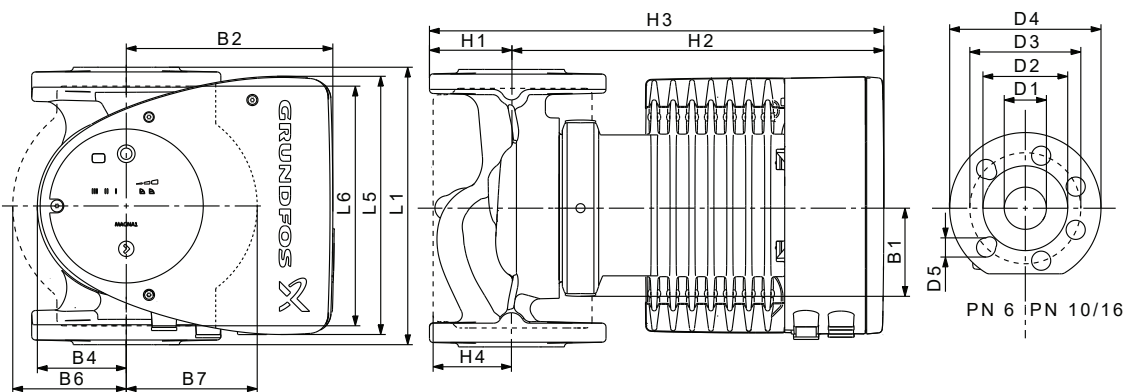
TM056302

Speed	P1 [W]	I _{1/1} [A]
Min.	24.2	0.26
Max.	476	2.11

The pump incorporates overload protection.

Net weight [kg]	Gross weight [kg]	Ship. vol. [m ³]
21.6	23.8	0.057

Connections:	See section 8.6 Pipe connections.
System pressure:	Max. 1.0 MPa (10 bar)
Liquid temperature:	-10 to 110 °C (TF 110)
Also available with:	Stainless-steel pump housing, type N
Specific EEI:	0.20



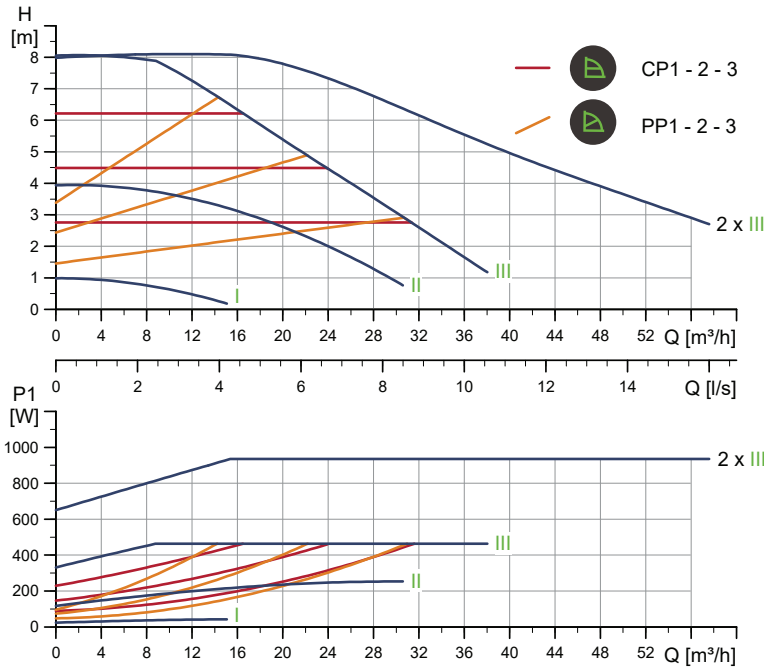
TM055276

Pump type	Dimensions [mm]																
	L1	L5	L6	B1	B2	B4	B6	B7	H1	H2	H3	H4	D1	D2	D3	D4	D5
MAGNA1 65-80 F (N)	340	204	296	84	164	73	133	133	74	312	386	94	65	119	130/145	185	14/19

For product numbers, see section Product numbers.

■ MAGNA1 D 65-80 F PN 10

1 × 230 V, 50/60 Hz



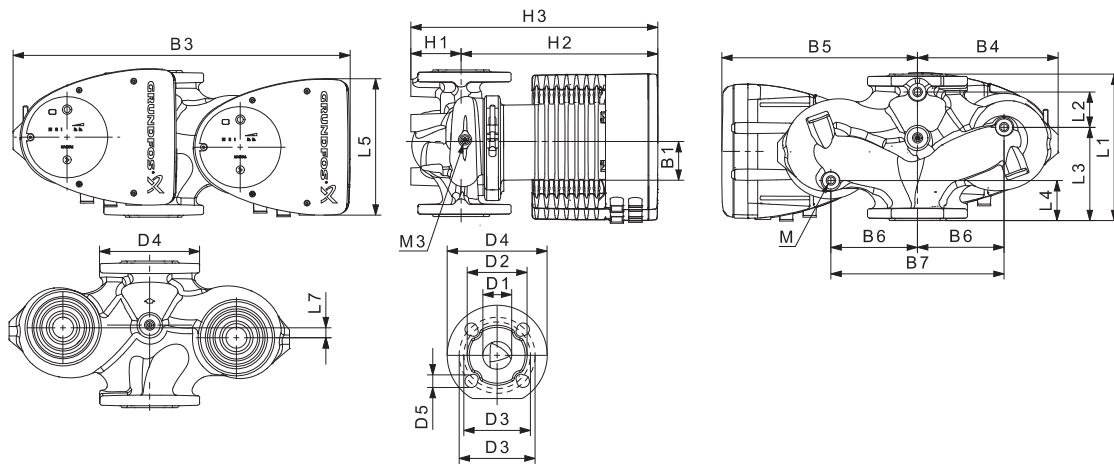
TM056349

Speed	P1 [W]	I _{1/1} [A]
Min.	24.2	0.26
Max.	472	2.11

The pump incorporates overload protection.

Connections:	See section 8.6 Pipe connections.
System pressure:	Max. 1.0 MPa (10 bar)
Liquid temperature:	-10 to 110 °C (TF 110)
Specific EEI:	0.21

Net weight [kg]	Gross weight [kg]	Ship. vol. [m³]
40.3	47.8	0.132

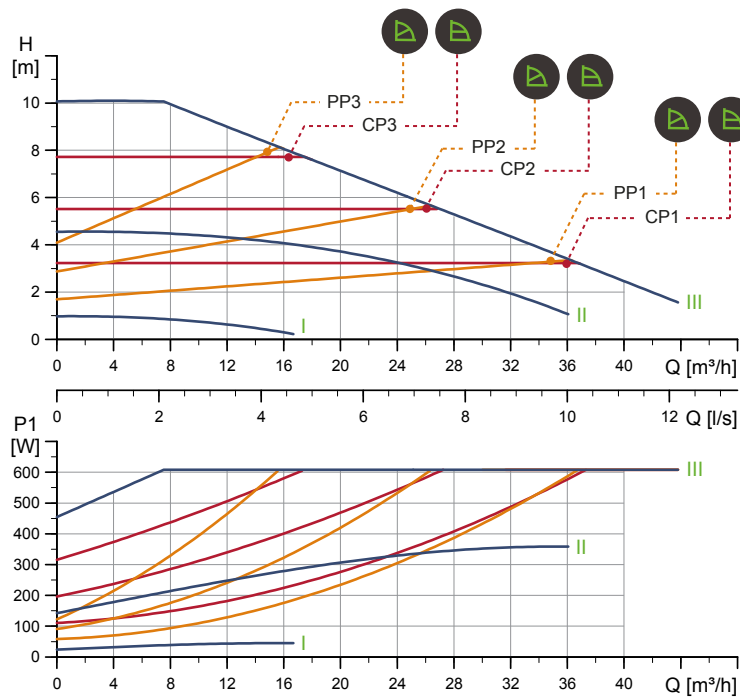


TM059237

Pump type	Dimensions [mm]																				Rp	
	L1	L2	L3	L4	L5	L7	B1	B3	B4	B5	B6	B7	H1	H2	H3	D1	D2	D3	D4	D5	M	M3
MAGNA1 D 65-80 F	340	218	92	92	204	0	84	522	228	294	130	260	77	312	389	65	119	130/145	185	14/19	12	1/4

For product numbers, see section Product numbers.

■ MAGNA1 65-100 F (N) PN 10
1 × 230 V, 50/60 Hz



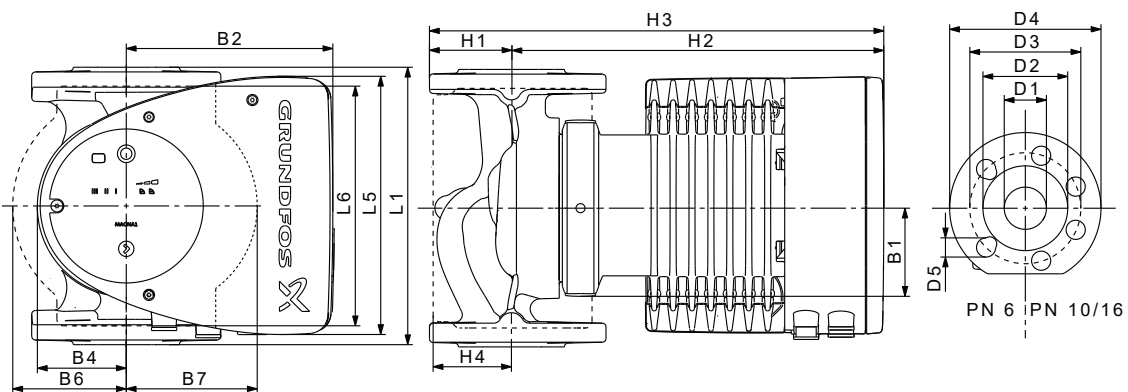
TM056303

Speed	P1 [W]	I _{1/1} [A]
Min.	24.7	0.26
Max.	619	2.73

The pump incorporates overload protection.

Net weight [kg]	Gross weight [kg]	Ship. vol. [m ³]
21.6	23.8	0.057

Connections:	See section 8.6 <i>Pipe connections</i> .
System pressure:	Max. 1.0 MPa (10 bar)
Liquid temperature:	-10 to 110 °C (TF 110)
Also available with:	Stainless-steel pump housing, type N
Specific EEI:	0.20

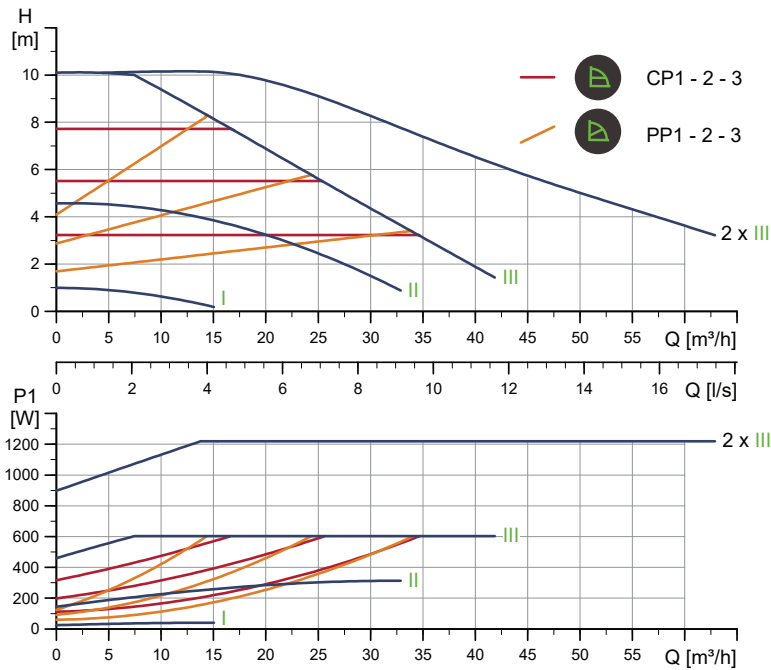


TM055276

Pump type	Dimensions [mm]																
	L1	L5	L6	B1	B2	B4	B6	B7	H1	H2	H3	H4	D1	D2	D3	D4	D5
MAGNA1 65-100 F (N)	340	204	296	84	164	73	133	133	74	312	386	94	65	119	130/145	185	14/19

For product numbers, see section Product numbers.

■ MAGNA1 D 65-100 F PN 10
1 × 230 V, 50/60 Hz



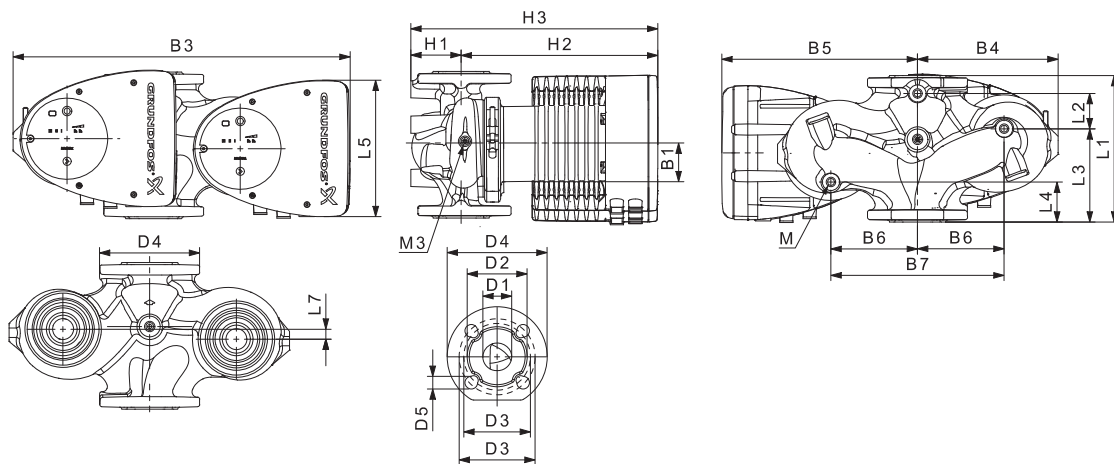
TM0566350

Speed	P1 [W]	I _{1/1} [A]
Min.	24.1	0.26
Max.	614	2.71

The pump incorporates overload protection.

Connections:	See section 8.6 <i>Pipe connections</i> .
System pressure:	Max. 1.0 MPa (10 bar)
Liquid temperature:	-10 to 110 °C (TF 110)
Specific EEI:	0.21

Net weight [kg]	Gross weight [kg]	Ship. vol. [m³]
40.3	47.8	0.132

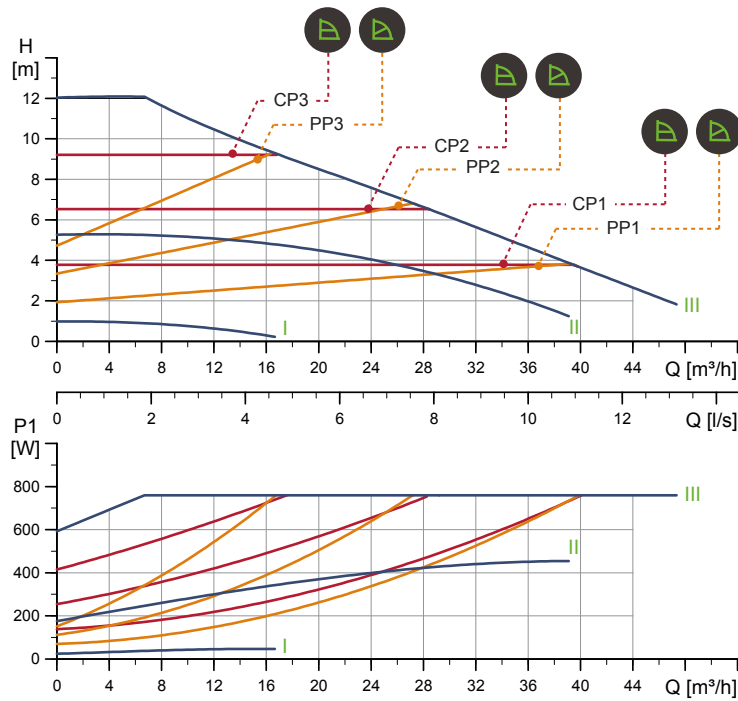


TM059237

Pump type	Dimensions [mm]																				Rp	
	L1	L2	L3	L4	L5	L7	B1	B3	B4	B5	B6	B7	H1	H2	H3	D1	D2	D3	D4	D5	M	M3
MAGNA1 D 65-100 F	340	218	92	92	204	0	84	522	228	294	130	260	77	312	389	65	119	130/145	185	14/19	12	1/4

For product numbers, see section Product numbers.

■ MAGNA1 65-120 F (N) PN 10
1 × 230 V, 50/60 Hz



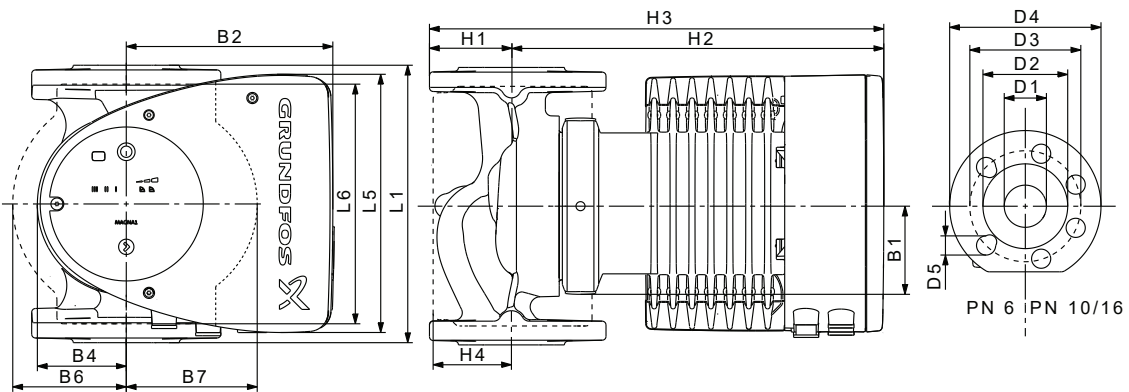
TM056304

Speed	P1 [W]	I_{1/1} [A]
Min.	24.38	0.26
Max.	774	3.42

The pump incorporates overload protection.

Net weight [kg]	Gross weight [kg]	Ship. vol. [m³]
21.6	23.8	0.057

Connections:	See section 8.6 <i>Pipe connections</i> .
System pressure:	Max. 1.0 MPa (10 bar)
Liquid temperature:	-10 to 110 °C (TF 110)
Also available with:	Stainless-steel pump housing, type N
Specific EEI:	0.18

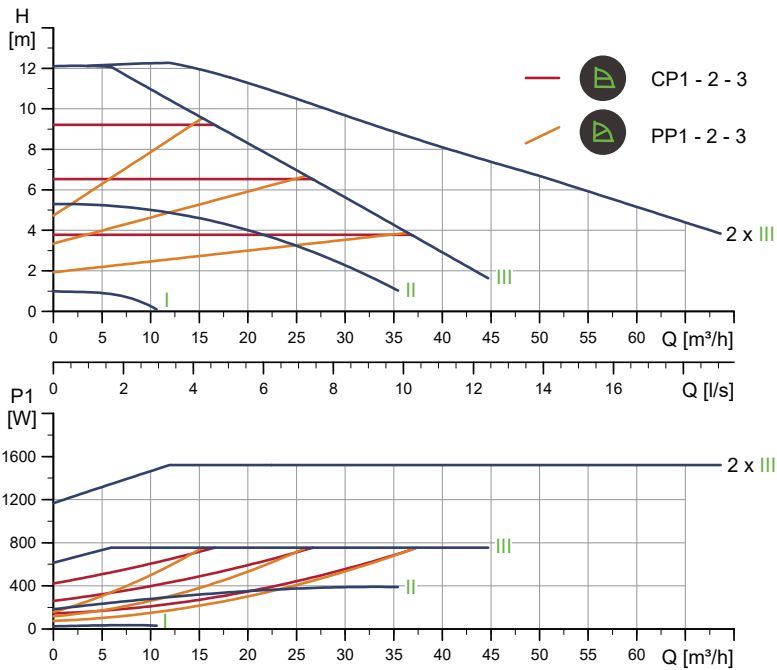


TM055276

Pump type	Dimensions [mm]																
	L1	L5	L6	B1	B2	B4	B6	B7	H1	H2	H3	H4	D1	D2	D3	D4	D5
MAGNA1 65-120 F (N)	340	204	296	84	164	73	133	133	74	312	386	94	65	119	130/145	185	14/19

For product numbers, see section Product numbers.

■ MAGNA1 D 65-120 F PN 10
1 × 230 V, 50/60 Hz



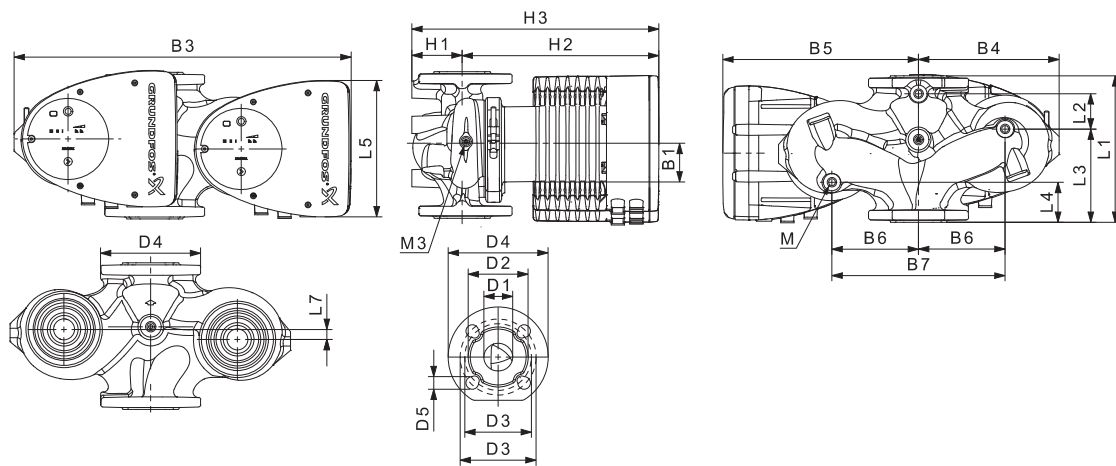
TM056651

Speed	P1 [W]	I _{1/1} [A]
Min.	24.9	0.27
Max.	769	3.39

The pump incorporates overload protection.

Connections:	See section 8.6 Pipe connections.
System pressure:	Max. 1.0 MPa (10 bar)
Liquid temperature:	-10 to 110 °C (TF 110)
Specific EEI:	0.21

Net weight [kg]	Gross weight [kg]	Ship. vol. [m³]
40.3	47.8	0.132

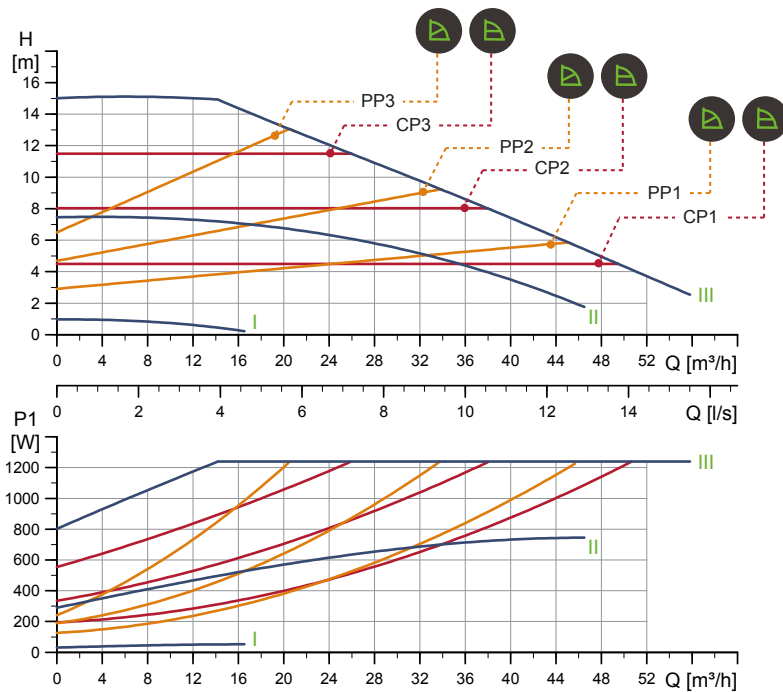


TM059237

Pump type	Dimensions [mm]																				Rp	
	L1	L2	L3	L4	L5	L7	B1	B3	B4	B5	B6	B7	H1	H2	H3	D1	D2	D3	D4	D5	M	M3
MAGNA1 D 65-120 F	340	218	92	92	204	0	84	522	228	294	130	260	77	312	389	65	119	130/145	185	14/19	12	1/4

For product numbers, see section Product numbers.

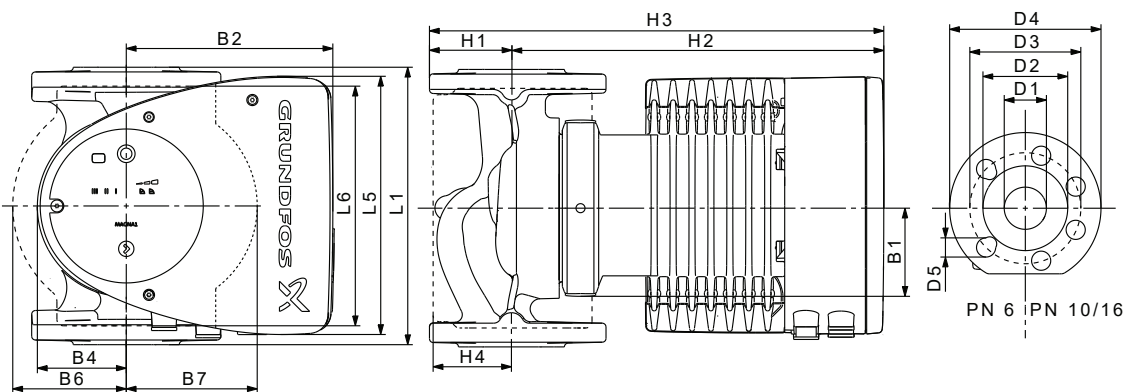
■ MAGNA1 65-150 F (N) PN 10
1 × 230 V, 50/60 Hz



TM056305

Speed	P1 [W]	I_{1/1} [A]
Min.	30.7	0.31
Max.	1263	5.53
The pump incorporates overload protection.		
Net weight [kg]	Gross weight [kg]	Ship. vol. [m³]
24.3	26.6	0.057

Connections:	See section 8.6 Pipe connections.
System pressure:	Max. 1.0 MPa (10 bar)
Liquid temperature:	-10 to 110 °C (TF 110)
Also available with:	Stainless-steel pump housing, type N
Specific EEI:	0.18

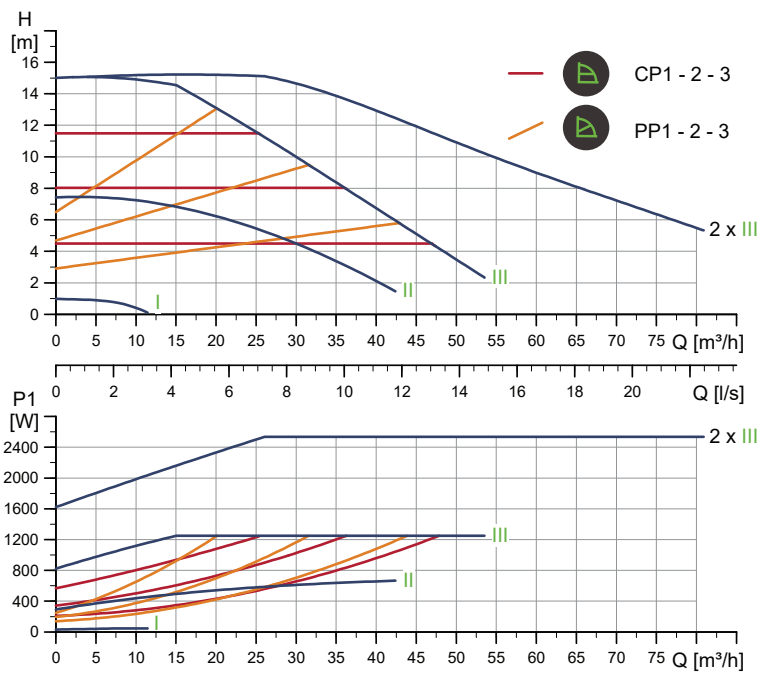


TM055276

Pump type	Dimensions [mm]																
	L1	L5	L6	B1	B2	B4	B6	B7	H1	H2	H3	H4	D1	D2	D3	D4	D5
MAGNA1 65-150 F (N)	340	204	296	84	164	73	133	133	74	312	386	94	65	119	130/145	185	14/19

For product numbers, see section Product numbers.

■ MAGNA1 D 65-150 F PN 10
1 × 230 V, 50/60 Hz



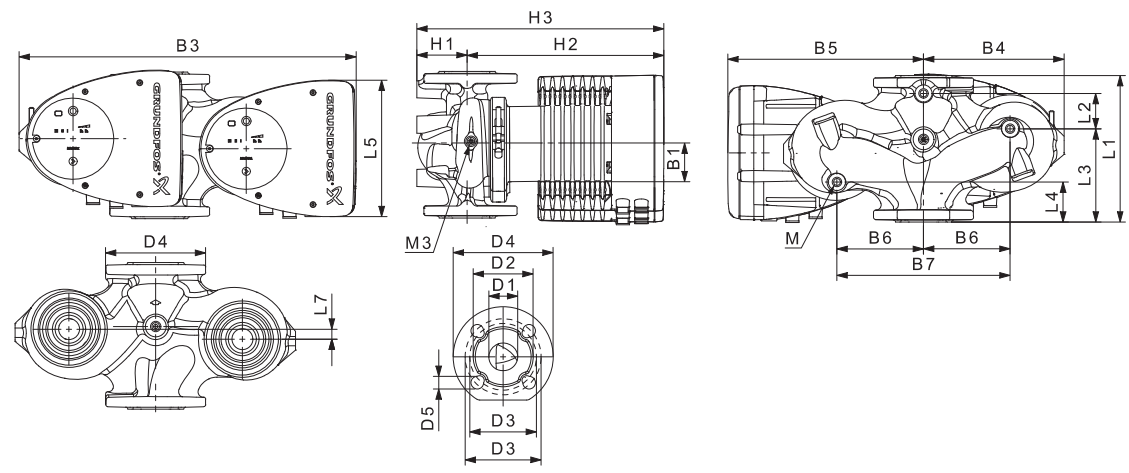
TM0566352

Speed	P1 [W]	I _{1/1} [A]
Min.	32.3	0.33
Max.	1275	5.62

The pump incorporates overload protection.

Connections:	See section 8.6 <i>Pipe connections</i> .
System pressure:	Max. 1.0 MPa (10 bar)
Liquid temperature:	-10 to 110 °C (TF 110)
Specific EEI:	0.21

Net weight [kg]	Gross weight [kg]	Ship. vol. [m³]
45.7	53.2	0.132



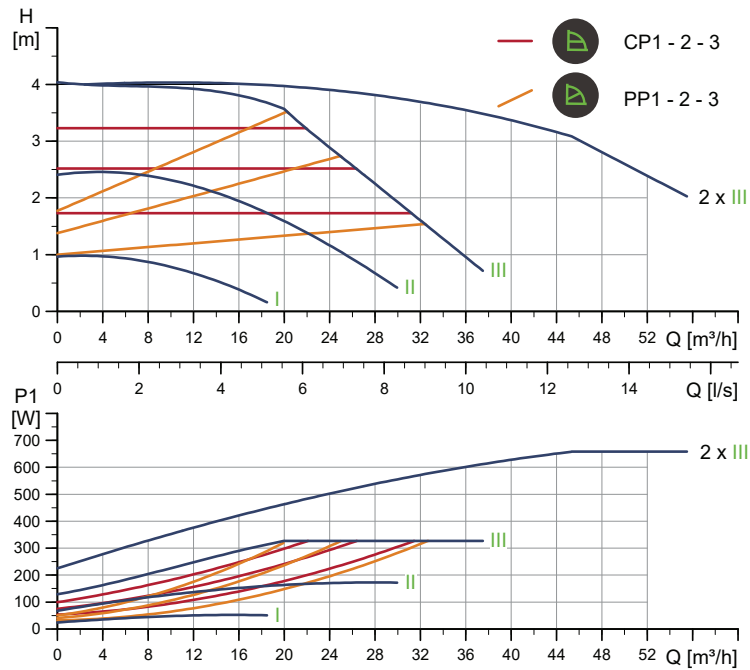
TM059237

Pump type	Dimensions [mm]																				Rp	
	L1	L2	L3	L4	L5	L7	B1	B3	B4	B5	B6	B7	H1	H2	H3	D1	D2	D3	D4	D5	M	M3
MAGNA1 D 65-150 F	340	218	92	92	204	0	84	522	228	294	130	260	77	312	389	65	119	130/145	185	14/19	12	1/4

For product numbers, see section Product numbers.

■ MAGNA1 D 80-40 F PN 10

1 × 230 V, 50/60 Hz



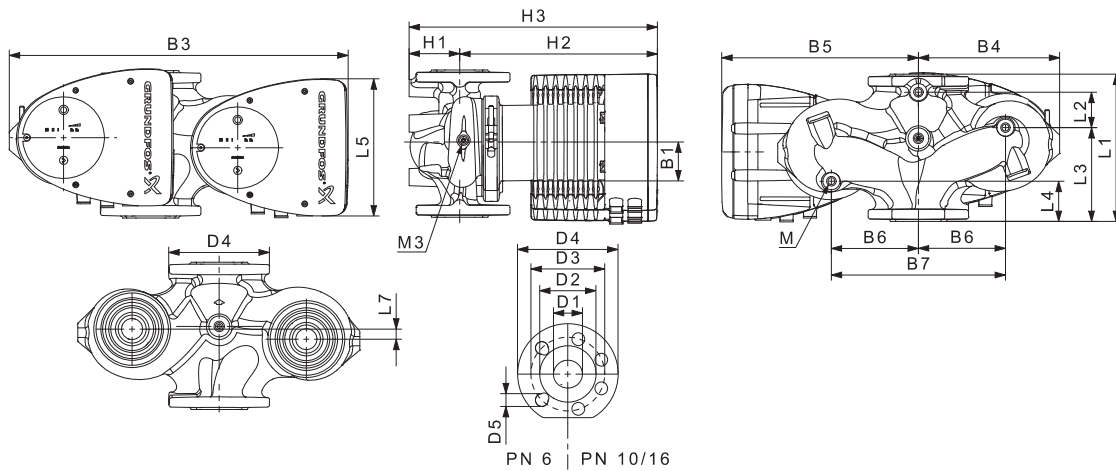
TM056353

Speed	P1 [W]	I _{1/1} [A]
Min.	25.3	0.27
Max.	333	1.49

The pump incorporates overload protection.

Connections:	See section 8.6 Pipe connections.
System pressure:	Max. 1.0 MPa (10 bar)
Liquid temperature:	-10 to 110 °C (TF 110)
Specific EEI:	0.21

Net weight [kg]	Gross weight [kg]	Ship. vol. [m³]
45.9	55.7	0.208



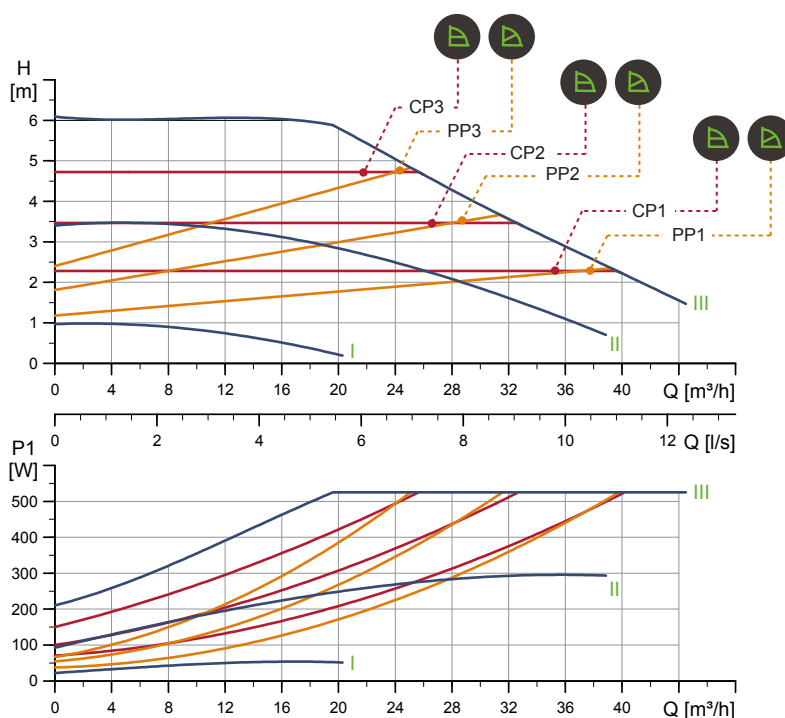
TM055275

Pump type	Dimensions [mm]																				Rp	
	L1	L2	L3	L4	L5	L7	B1	B3	B4	B5	B6	B7	H1	H2	H3	D1	D2	D3	D4	D5	M	M3
MAGNA1 D 80-40 F	360	218	102	102	204	0	84	538	244	294	130	260	97	318	415	80	128	150/160	200	19	12	1/4

For product numbers, see section Product numbers.

■ MAGNA1 80-60 F PN 10

1 × 230 V, 50/60 Hz



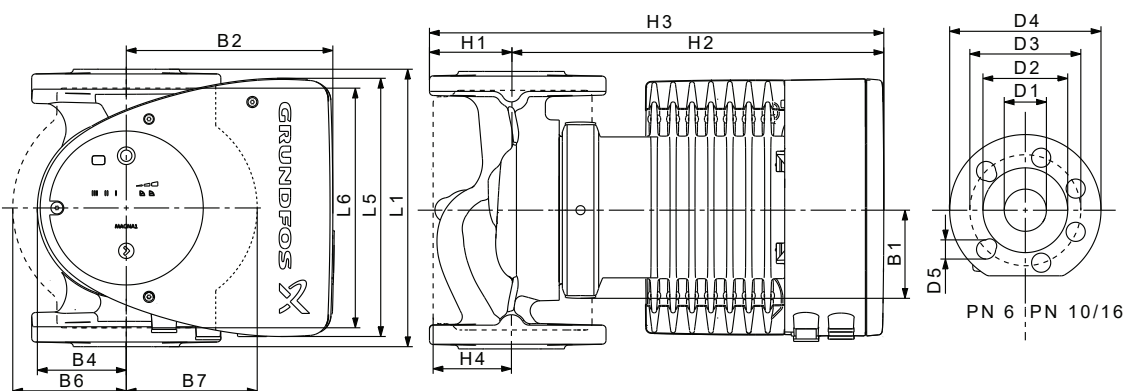
TM056307

Speed	P1 [W]	I _{1/1} [A]
Min.	23.6	0.24
Max.	536	2.37

The pump incorporates overload protection.

Net weight [kg]	Gross weight [kg]	Ship. vol. [m ³]
26.8	29.1	0.072

Connections:	See section 8.6 <i>Pipe connections</i> .
System pressure:	Max. 1.0 MPa (10 bar)
Liquid temperature:	-10 to 110 °C (TF 110)
Specific EEI:	0.20



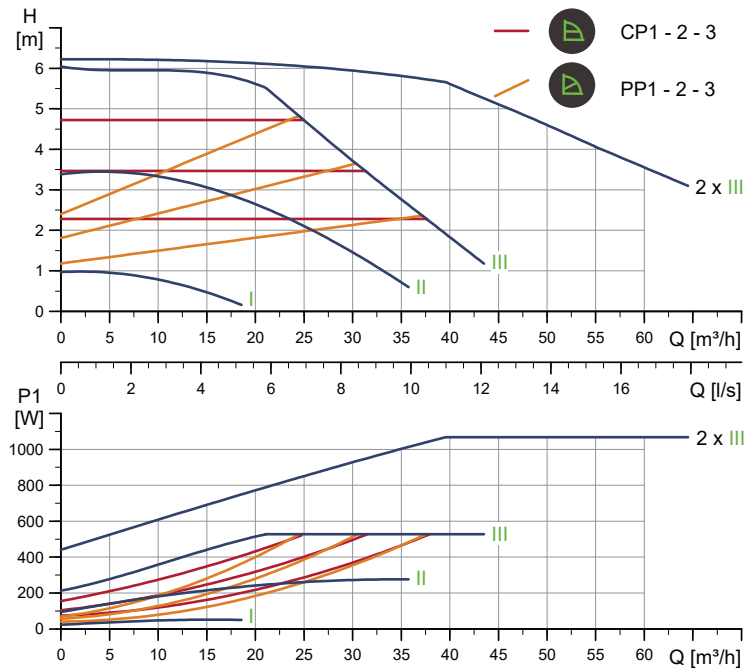
TM055276

Pump type	Dimensions [mm]																
	L1	L5	L6	B1	B2	B4	B6	B7	H1	H2	H3	H4	D1	D2	D3	D4	D5
MAGNA1 80-60 F	360	204	310	84	164	73	163	163	96	318	413	115	80	128	150/160	200	19

For product numbers, see section Product numbers.

■ MAGNA1 D 80-60 F PN 10

1 × 230 V, 50/60 Hz



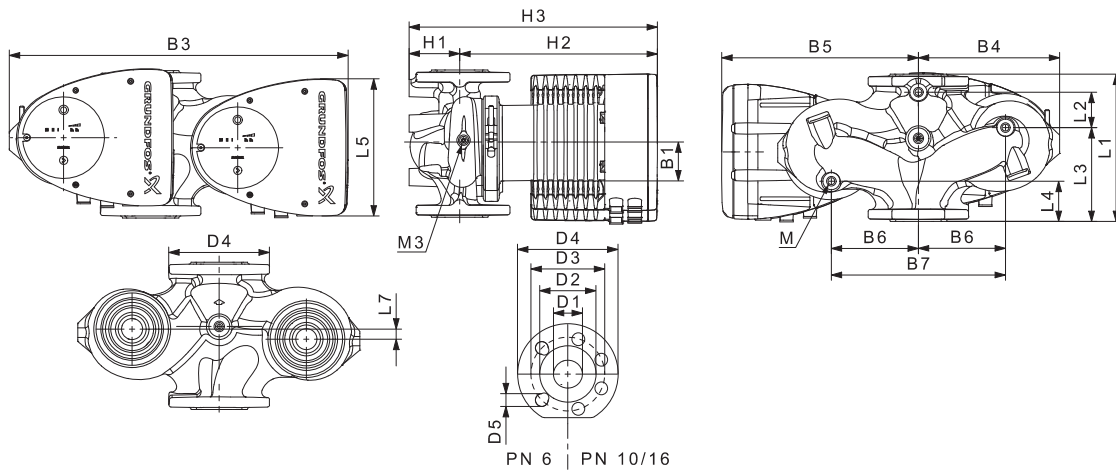
TM056354

Speed	P1 [W]	I _{1/1} [A]
Min.	24.7	0.27
Max.	537	2.38

The pump incorporates overload protection.

Connections:	See section 8.6 Pipe connections.
System pressure:	Max. 1.0 MPa (10 bar)
Liquid temperature:	-10 to 110 °C (TF 110)
Specific EEI:	0.20

Net weight [kg]	Gross weight [kg]	Ship. vol. [m³]
45.9	55.7	0.208



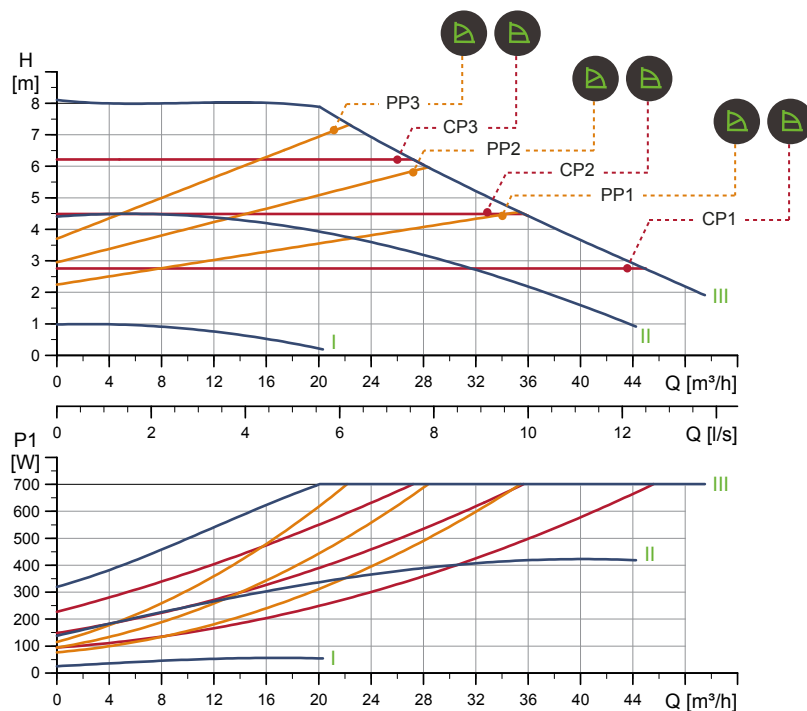
TM055275

Pump type	Dimensions [mm]																				Rp	
	L1	L2	L3	L4	L5	L7	B1	B3	B4	B5	B6	B7	H1	H2	H3	D1	D2	D3	D4	D5	M	M3
MAGNA1 D 80-60 F	360	218	102	102	204	0	84	538	244	294	130	260	97	318	415	80	128	150/160	200	19	12	1/4

For product numbers, see section Product numbers.

■ MAGNA1 80-80 F PN 10

1 × 230 V, 50/60 Hz



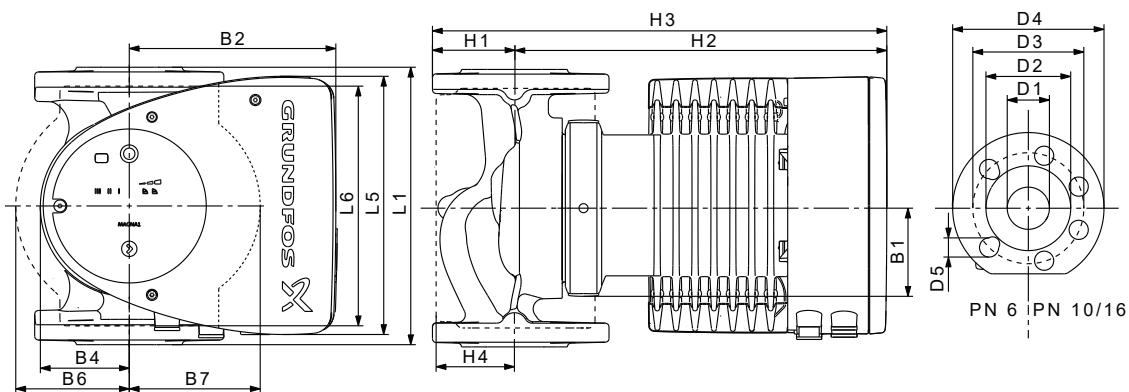
TM056308

Speed	P1 [W]	I _{1/1} [A]
Min.	26.3	0.28
Max.	715	3.14

The pump incorporates overload protection.

Connections:	See section 8.6 Pipe connections.
System pressure:	Max. 1.0 MPa (10 bar)
Liquid temperature:	-10 to 110 °C (TF 110)
Specific EEI:	0.20

Net weight [kg]	Gross weight [kg]	Ship. vol. [m³]
29.6	32.0	0.072



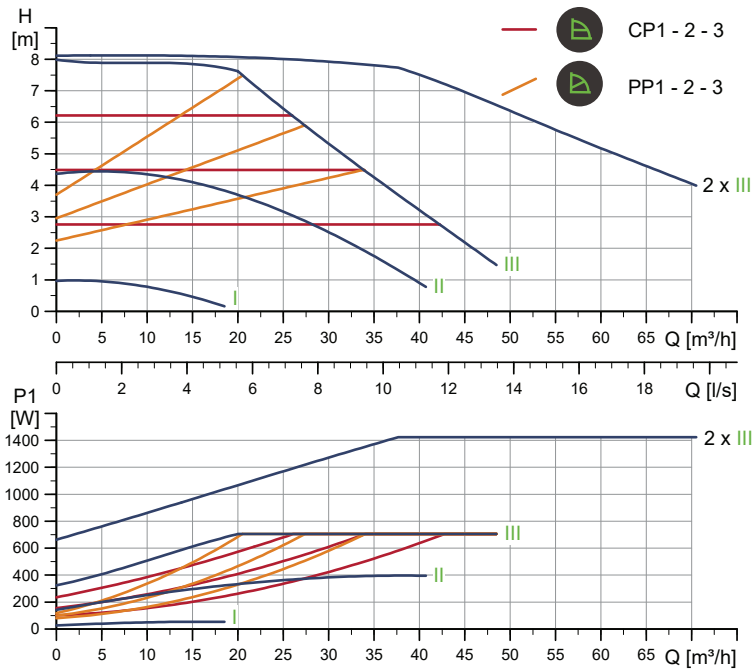
TM055276

Pump type	Dimensions [mm]																
	L1	L5	L6	B1	B2	B4	B6	B7	H1	H2	H3	H4	D1	D2	D3	D4	D5
MAGNA1 80-80 F	360	204	310	84	164	73	163	163	96	318	413	115	80	128	150/160	200	19

For product numbers, see section Product numbers.

■ MAGNA1 D 80-80 F PN 10

1 × 230 V, 50/60 Hz



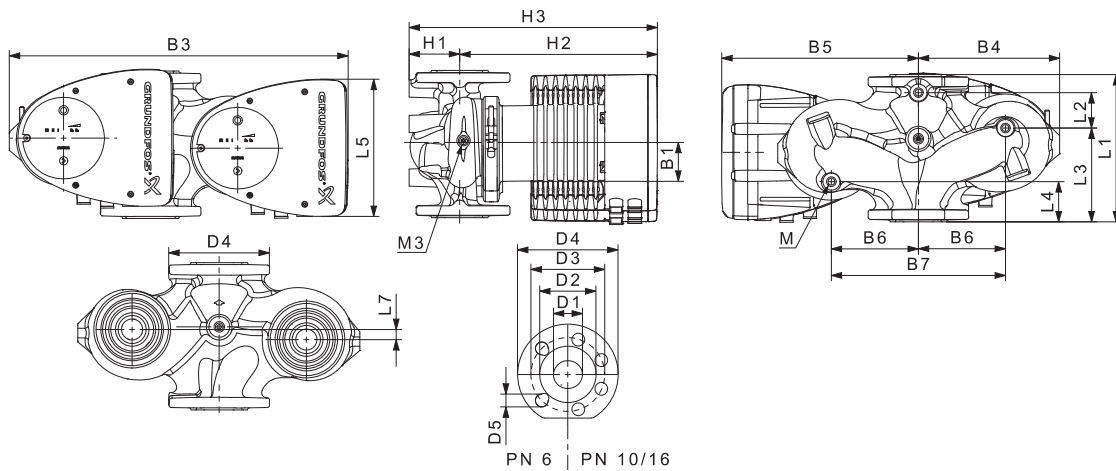
TM056355

Speed	P1 [W]	I _{1/1} [A]
Min.	27.3	0.27
Max.	718	3.15

The pump incorporates overload protection.

Connections:	See section 8.6 Pipe connections.
System pressure:	Max. 1.0 MPa (10 bar)
Liquid temperature:	-10 to 110 °C (TF 110)
Specific EEI:	0.21

Net weight [kg]	Gross weight [kg]	Ship. vol. [m³]
51.6	61.3	0.208

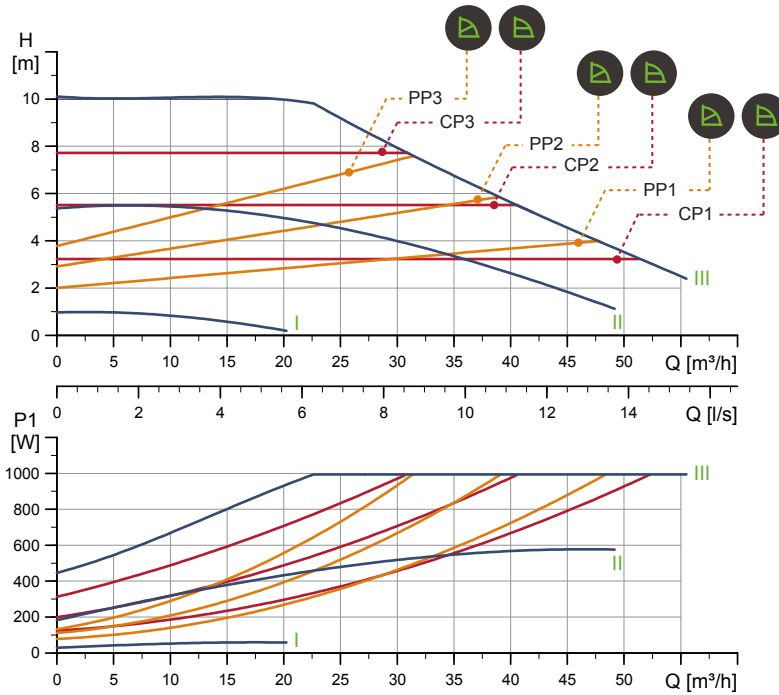


TM056275

Pump type	Dimensions [mm]																			Rp		
	L1	L2	L3	L4	L5	L7	B1	B3	B4	B5	B6	B7	H1	H2	H3	D1	D2	D3	D4	D5	M	M3
MAGNA1 D 80-80 F	360	218	102	102	204	0	84	538	244	294	130	260	97	318	415	80	128	150/160	200	19	12	1/4

For product numbers, see section Product numbers.

■ MAGNA1 80-100 F PN 10
1 × 230 V, 50/60 Hz



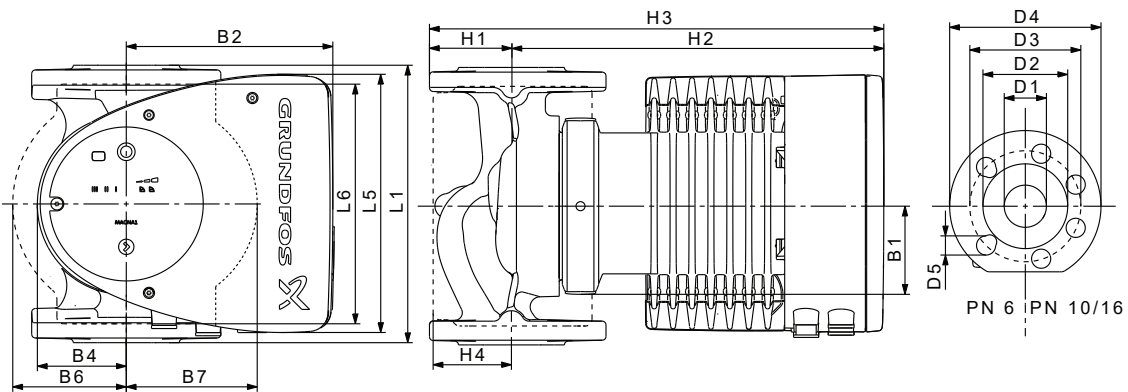
TM056309

Speed	P1 [W]	I _{1/1} [A]
Min.	30.7	0.31
Max.	1014	4.45

The pump incorporates overload protection.

Connections:	See section 8.6 Pipe connections.
System pressure:	Max. 1.0 MPa (10 bar)
Liquid temperature:	-10 to 110 °C (TF 110)
Specific EEI:	0.19

Net weight [kg]	Gross weight [kg]	Ship. vol. [m³]
30.2	32.6	0.072



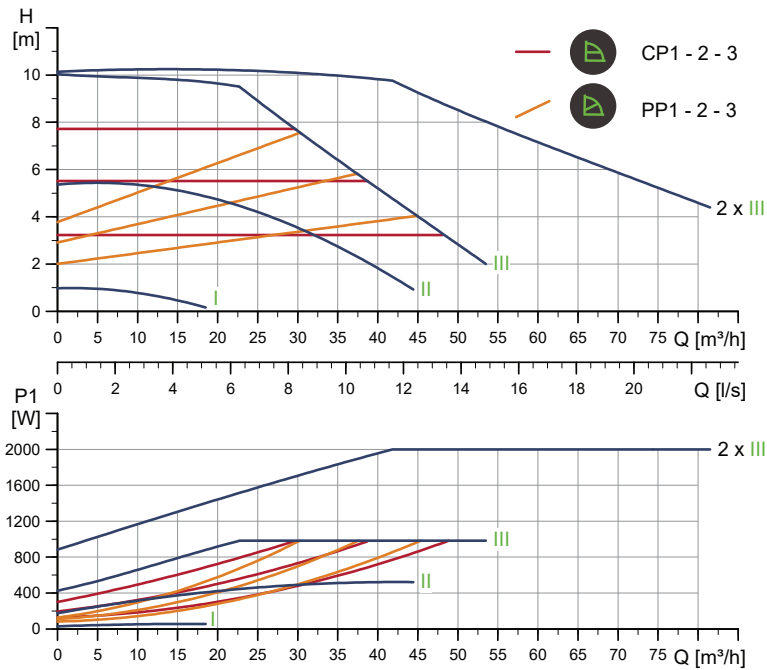
TM055276

Pump type	Dimensions [mm]																
	L1	L5	L6	B1	B2	B4	B6	B7	H1	H2	H3	H4	D1	D2	D3	D4	D5
MAGNA1 80-100 F	360	204	310	84	164	73	163	163	96	318	413	115	80	128	150/160	200	19

For product numbers, see section Product numbers.

■ MAGNA1 D 80-100 F PN 10

1 × 230 V, 50/60 Hz



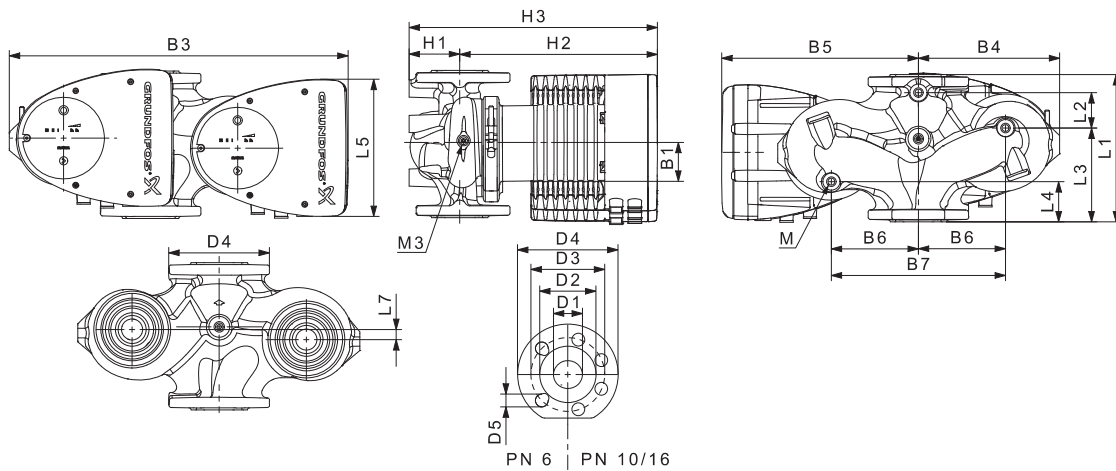
TM056356

Speed	P1 [W]	I _{1/1} [A]
Min.	31	0.32
Max.	1002	4.41

The pump incorporates overload protection.

Connections:	See section 8.6 <i>Pipe connections</i> .
System pressure:	Max. 1.0 MPa (10 bar)
Liquid temperature:	-10 to 110 °C (TF 110)
Specific EEI:	0.21

Net weight [kg]	Gross weight [kg]	Ship. vol. [m ³]
52.7	62.5	0.208



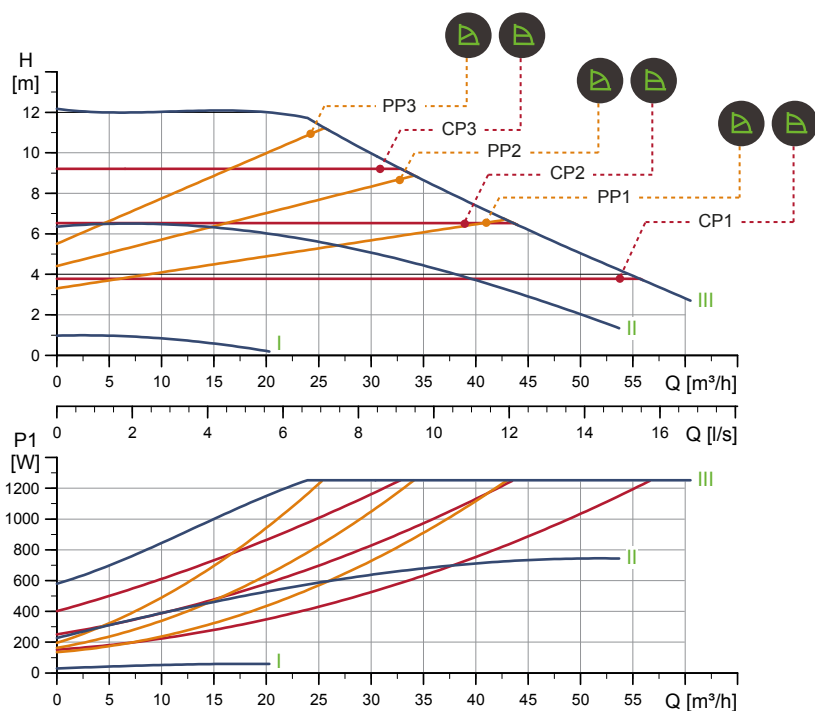
TM056275

Pump type	Dimensions [mm]																				Rp	
	L1	L2	L3	L4	L5	L7	B1	B3	B4	B5	B6	B7	H1	H2	H3	D1	D2	D3	D4	D5	M	M3
MAGNA1 D 80-100 F	360	218	102	102	204	0	84	538	244	294	130	260	97	318	415	80	128	150/160	200	19	12	1/4

For product numbers, see section Product numbers.

■ MAGNA1 80-120 F PN 10

1 × 230 V, 50/60 Hz



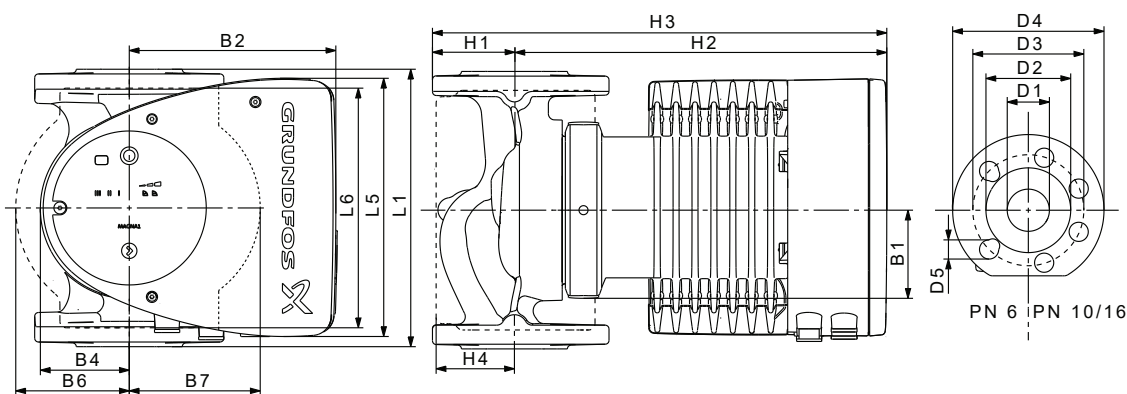
TM056310

Speed	P1 [W]	I _{1/1} [A]
Min.	30.5	0.31
Max.	1277	5.59

The pump incorporates overload protection.

Connections:	See section 8.6 Pipe connections.
System pressure:	Max. 1.0 MPa (10 bar)
Liquid temperature:	-10 to 110 °C (TF 110)
Specific EEI:	0.19

Net weight [kg]	Gross weight [kg]	Ship. vol. [m³]
30.2	32.6	0.072

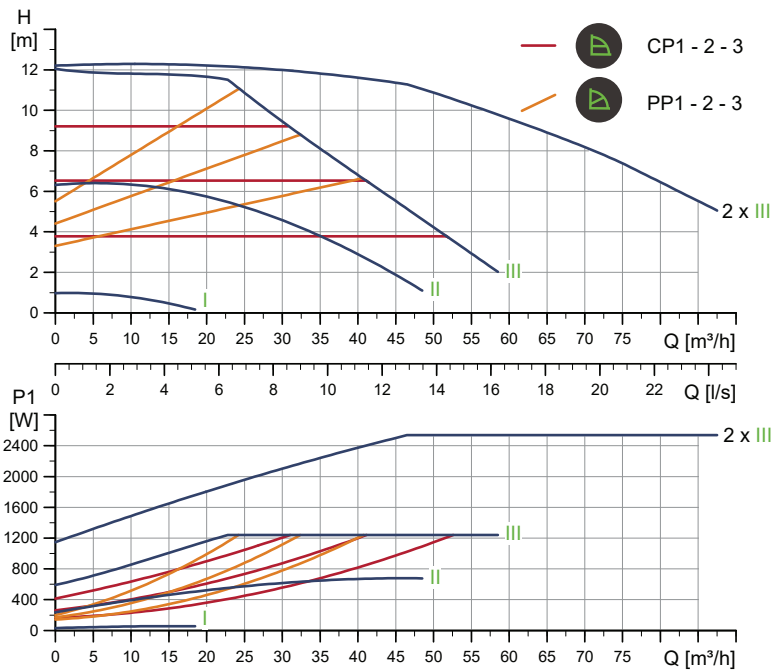


TM055276

Pump type	Dimensions [mm]																
	L1	L5	L6	B1	B2	B4	B6	B7	H1	H2	H3	H4	D1	D2	D3	D4	D5
MAGNA1 80-120 F	360	204	310	84	164	73	163	163	96	318	413	115	80	128	150/160	200	19

For product numbers, see section Product numbers.

■ MAGNA1 D 80-120 F PN 10



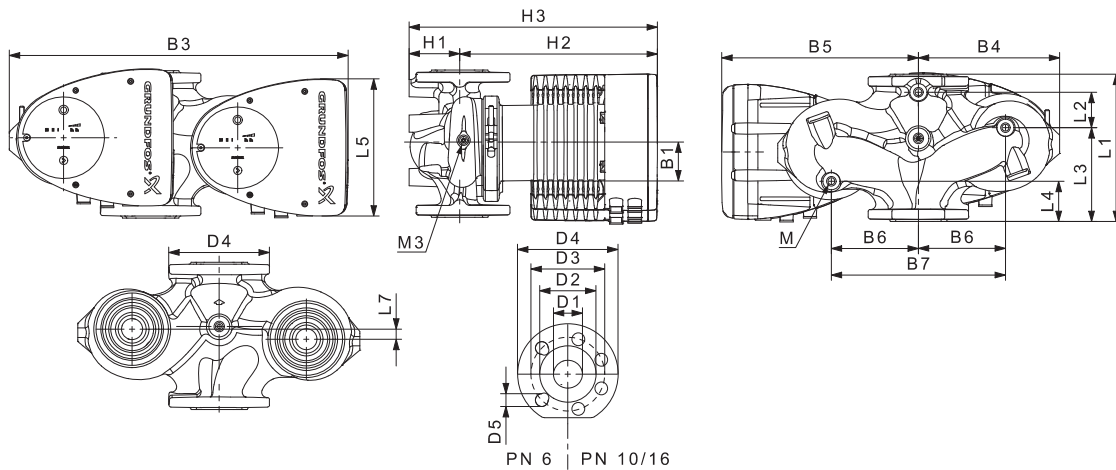
TM056357

Speed	P1 [W]	I _{1/1} [A]
Min.	32.2	0.33
Max.	1265	5.54

The pump incorporates overload protection.

Connections	See section 8.6 Pipe connections.
System pressure:	Max. 1.0 MPa (10 bar)
Liquid temperature:	-10 to 110 °C (TF 110)
Specific EEI:	0.21

Net weight [kg]	Gross weight [kg]	Ship. vol. [m³]
52.7	62.5	0.208



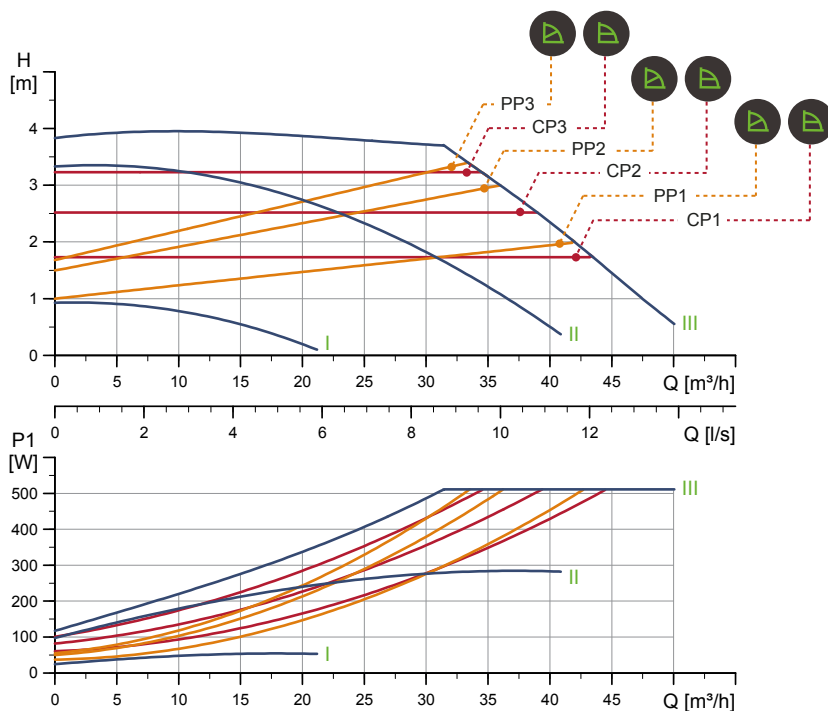
TM055275

Pump type	Dimensions [mm]																				Rp	
	L1	L2	L3	L4	L5	L7	B1	B3	B4	B5	B6	B7	H1	H2	H3	D1	D2	D3	D4	D5		M
MAGNA1 D 80-120 F	360	218	102	102	204	0	84	538	244	294	130	260	97	318	415	80	128	150/160	200	19	12	1/4

For product numbers, see section Product numbers.

■ MAGNA1 100-40 F PN 10

1 × 230 V, 50/60 Hz



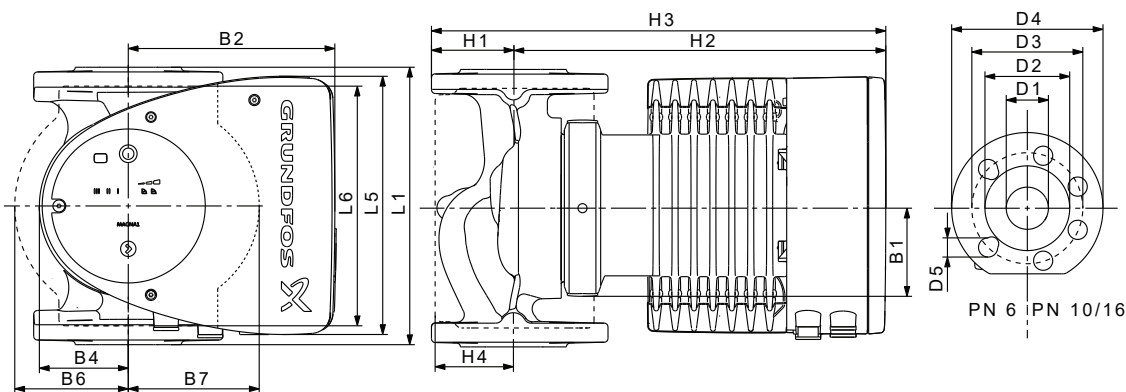
TM056311

Speed	P1 [W]	I _{1/1} [A]
Min.	26	0.27
Max.	521	2.32

The pump incorporates overload protection.

Connections:	See section 8.6 Pipe connections.
System pressure:	Max. 1.0 MPa (10 bar)
Liquid temperature:	-10 to 110 °C (TF 110)
Specific EEI:	0.19

Net weight [kg]	Gross weight [kg]	Ship. vol. [m³]
34.2	36.4	0.099



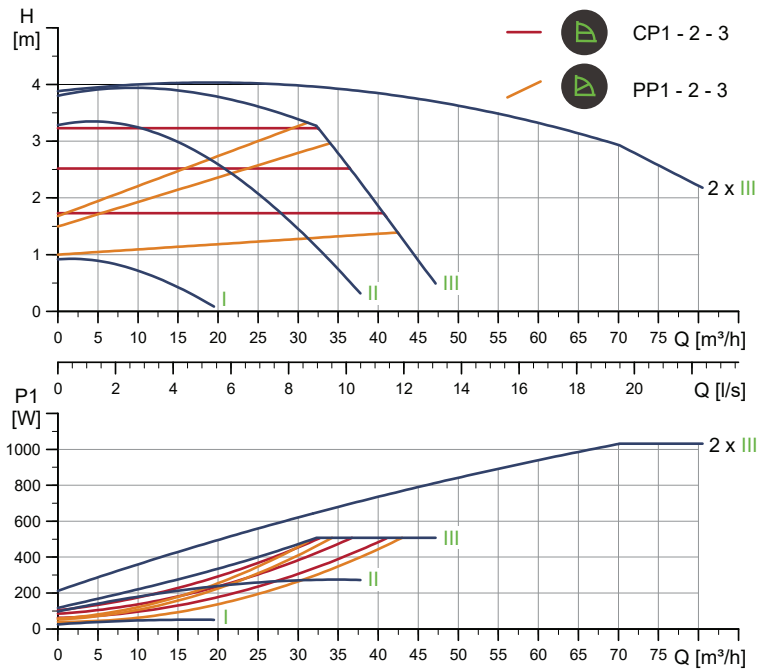
TM055276

Pump type	Dimensions [mm]																
	L1	L5	L6	B1	B2	B4	B6	B7	H1	H2	H3	H4	D1	D2	D3	D4	D5
MAGNA1 100-40 F	450	204	396	84	164	73	178	178	103	330	433	120	100	160	180	220	19

For product numbers, see section Product numbers.

■ MAGNA1 D 100-40 F PN 10

1 × 230 V, 50/60 Hz



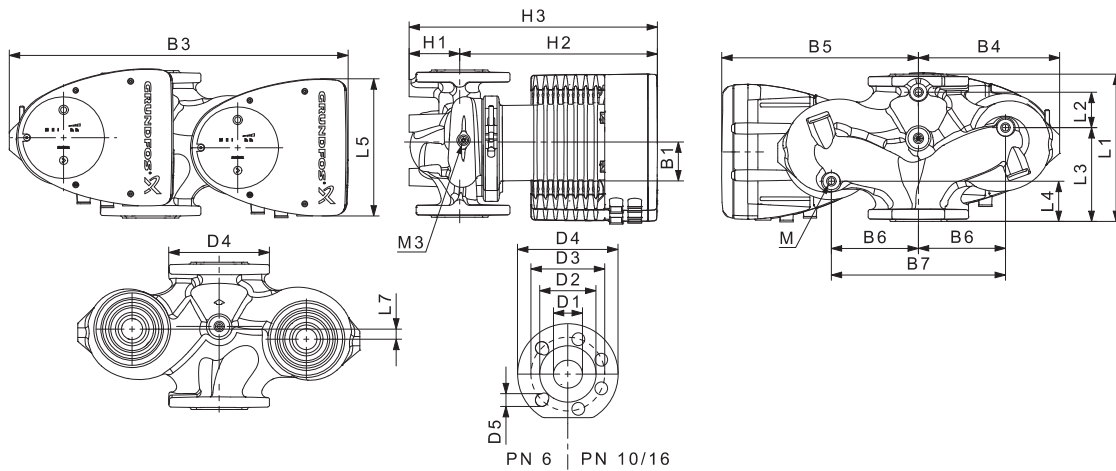
TM056358

Speed	P1 [W]	I _{1/1} [A]
Min.	26	0.27
Max.	518	2.3

The pump incorporates overload protection.

Connections:	See section 8.6 Pipe connections.
System pressure:	Max. 1.0 MPa (10 bar)
Liquid temperature:	-10 to 110 °C (TF 110)
Specific EEI:	0.19

Net weight [kg]	Gross weight [kg]	Ship. vol. [m³]
62.1	72.0	0.208

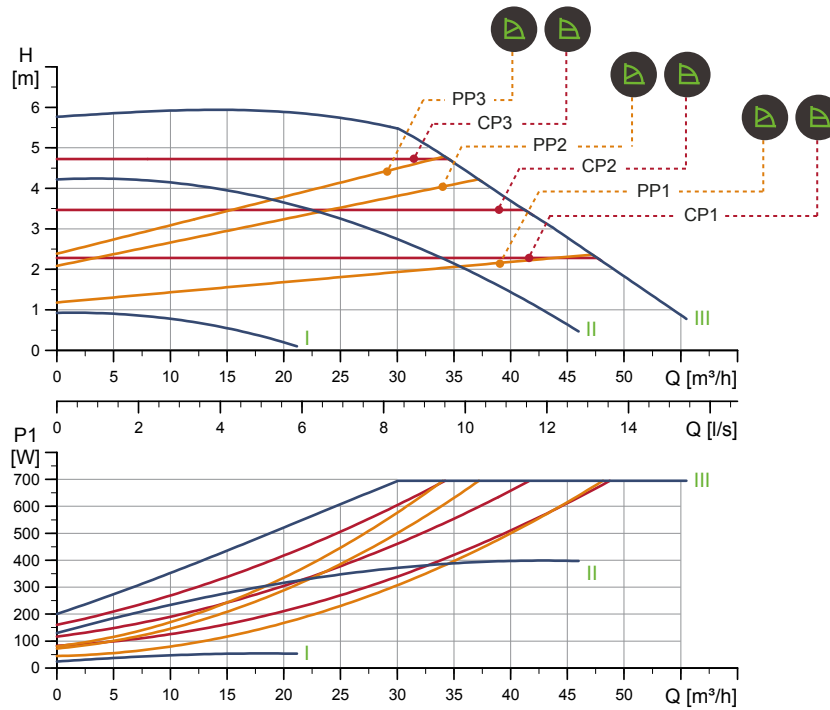


TM055275

Pump type	Dimensions [mm]																				Rp	
	L1	L2	L3	L4	L5	L7	B1	B3	B4	B5	B6	B7	H1	H2	H3	D1	D2	D3	D4	D5	M	M3
MAGNA1 D 100-40 F	450	243	147	147	204	0	84	551	252	299	135	270	103	330	434	100	160	180	220	19	12	1/4

For product numbers, see section Product numbers.

■ MAGNA1 100-60 F PN 10
1 × 230 V, 50/60 Hz



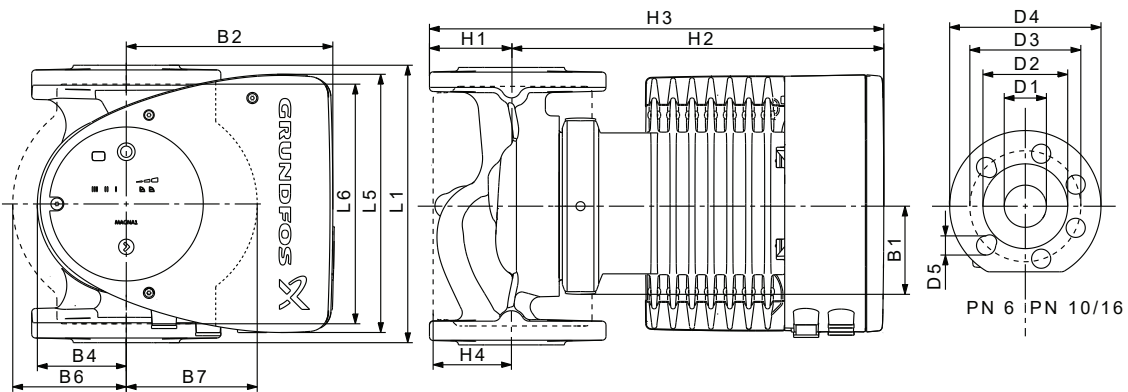
TM056312

Speed	P1 [W]	I _{1/1} [A]
Min.	25.6	0.27
Max.	708	3.13

The pump incorporates overload protection.

Connections:	See section 8.6 Pipe connections.
System pressure:	Max. 1.0 MPa (10 bar)
Liquid temperature:	-10 to 110 °C (TF 110)
Specific EEI:	0.19

Net weight [kg]	Gross weight [kg]	Ship. vol. [m³]
34.2	36.4	0.099

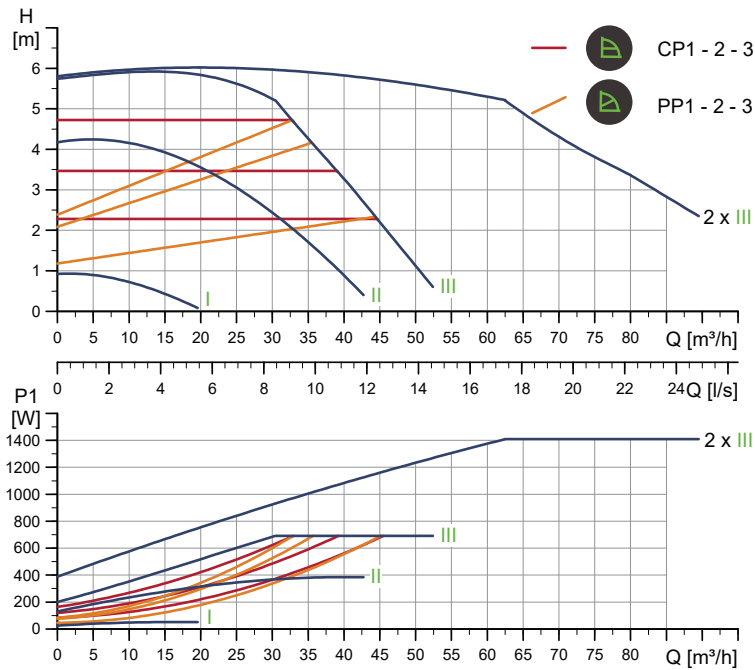


TM055276

Pump type	Dimensions [mm]																
	L1	L5	L6	B1	B2	B4	B6	B7	H1	H2	H3	H4	D1	D2	D3	D4	D5
MAGNA1 100-60 F	450	204	396	84	164	73	178	178	103	330	433	120	100	160	180	220	19

For product numbers, see section Product numbers.

■ MAGNA1 D 100-60 F PN 10
1 × 230 V, 50/60 Hz



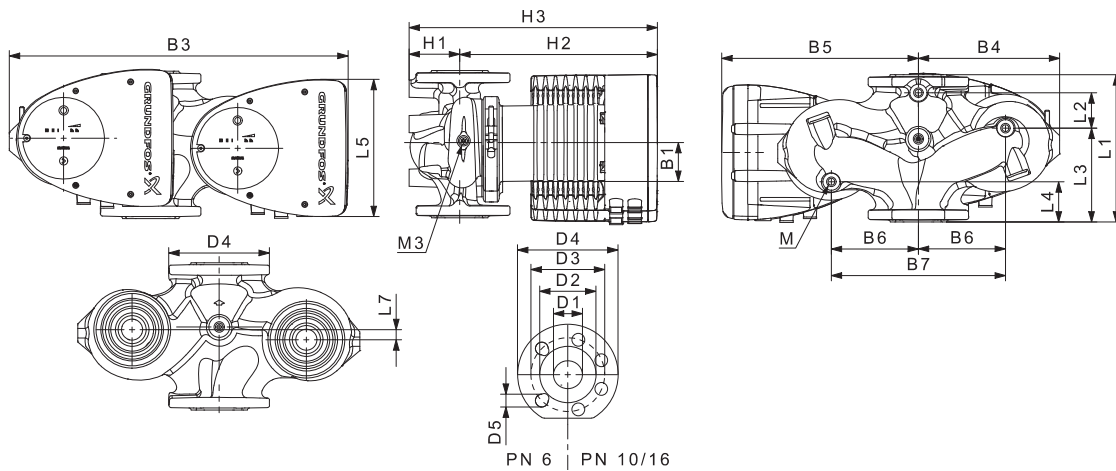
TM056359

Speed	P1 [W]	I _{1/1} [A]
Min.	26.1	0.28
Max.	705	3.11

The pump incorporates overload protection.

Connections:	See section 8.6 <i>Pipe connections</i> .
System pressure:	Max. 1.0 MPa (10 bar)
Liquid temperature:	-10 to 110 °C (TF 110)
Specific EEI:	0.22

Net weight [kg]	Gross weight [kg]	Ship. vol. [m³]
62.1	72.0	0.208



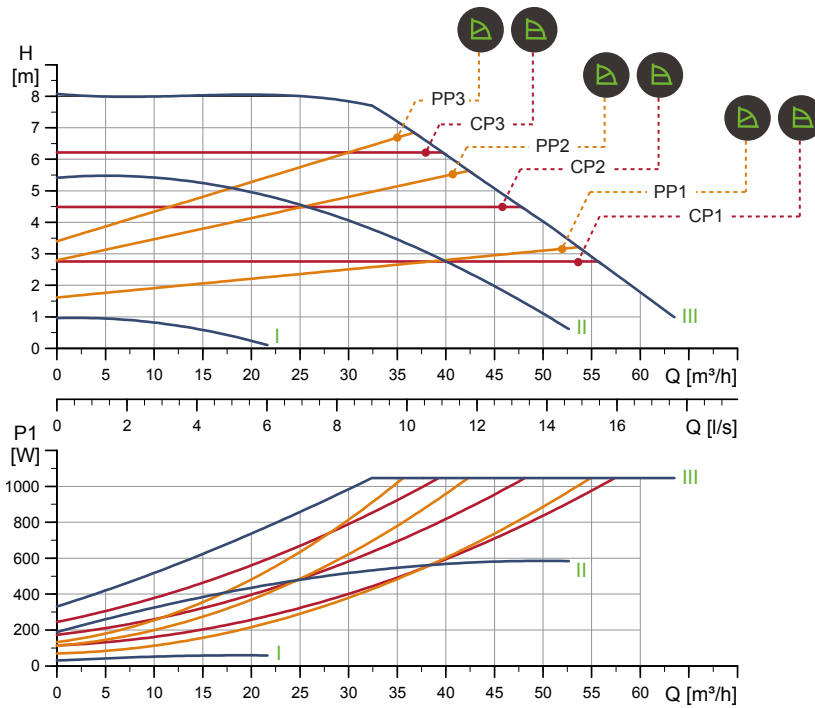
TM056275

Pump type	Dimensions [mm]																				Rp	
	L1	L2	L3	L4	L5	L7	B1	B3	B4	B5	B6	B7	H1	H2	H3	D1	D2	D3	D4	D5	M	M3
MAGNA1 D 100-60 F	450	243	147	147	204	0	84	551	252	299	135	270	103	330	434	100	160	180	220	19	12	1/4

For product numbers, see section Product numbers.

■ MAGNA1 100-80 F PN 10

1 × 230 V, 50/60 Hz



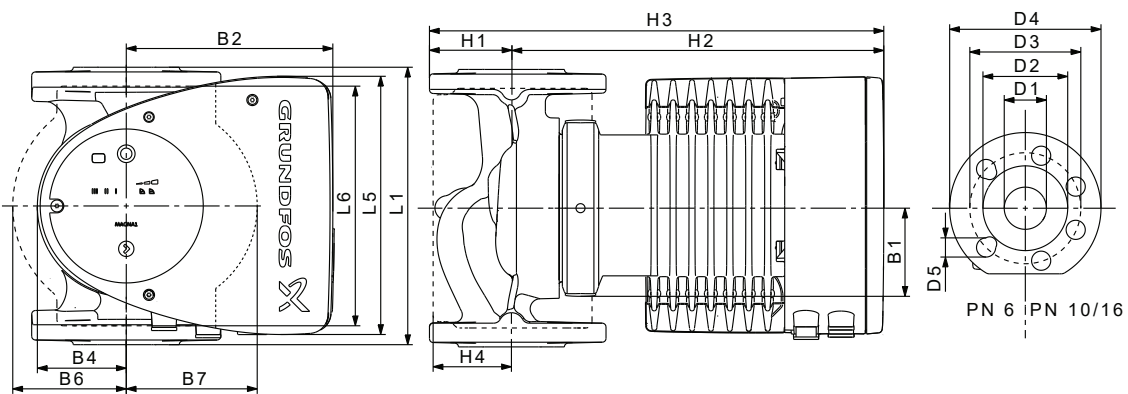
TM056313

Speed	P1 [W]	I _{1/1} [A]
Min.	31.4	0.32
Max.	1067	4.71

The pump incorporates overload protection.

Connections:	See section 8.6 Pipe connections.
System pressure:	Max. 1.0 MPa (10 bar)
Liquid temperature:	-10 to 110 °C (TF 110)
Specific EEI:	0.19

Net weight [kg]	Gross weight [kg]	Ship. vol. [m³]
34.8	37.0	0.099



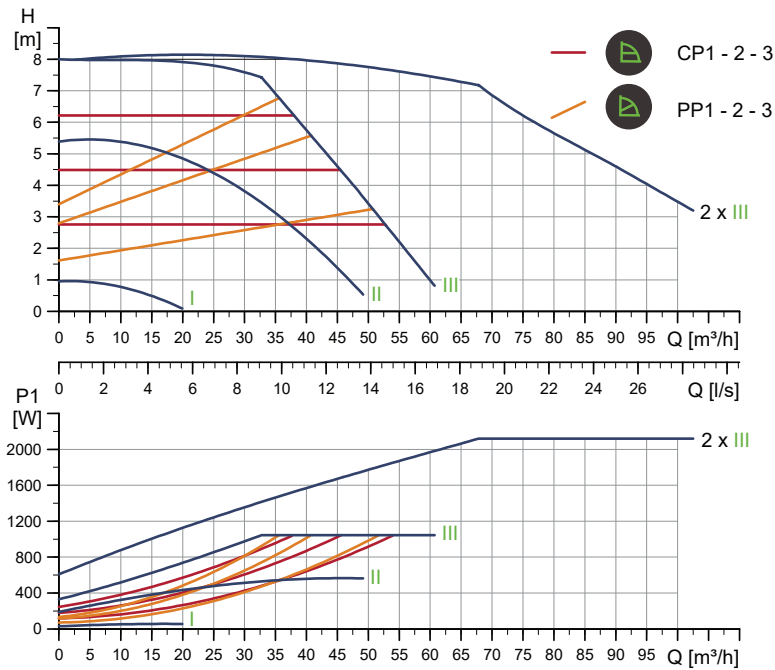
TM055276

Pump type	Dimensions [mm]																
	L1	L5	L6	B1	B2	B4	B6	B7	H1	H2	H3	H4	D1	D2	D3	D4	D5
MAGNA1 100-80 F	450	204	396	84	164	73	178	178	103	330	433	120	100	160	180	220	19

For product numbers, see section Product numbers.

■ MAGNA1 D 100-80 F PN 10

1 × 230 V, 50/60 Hz



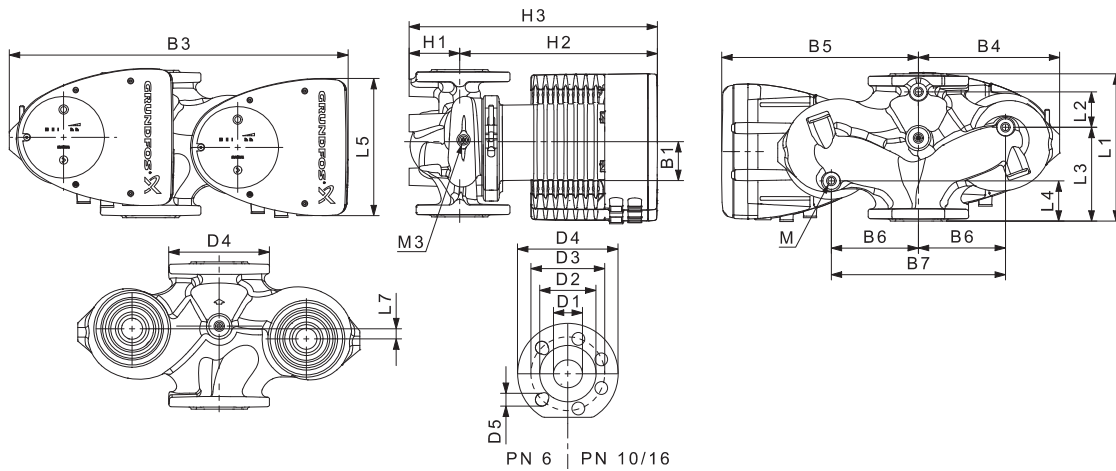
TM056360

Speed	P1 [W]	I _{1/1} [A]
Min.	31.3	0.32
Max.	1066	4.70

The pump incorporates overload protection.

Connections:	See section 8.6 Pipe connections.
System pressure:	Max. 1.0 MPa (10 bar)
Liquid temperature:	-10 to 110 °C (TF 110)
Specific EEI:	0.22

Net weight [kg]	Gross weight [kg]	Ship. vol. [m³]
62.3	72.2	0.208

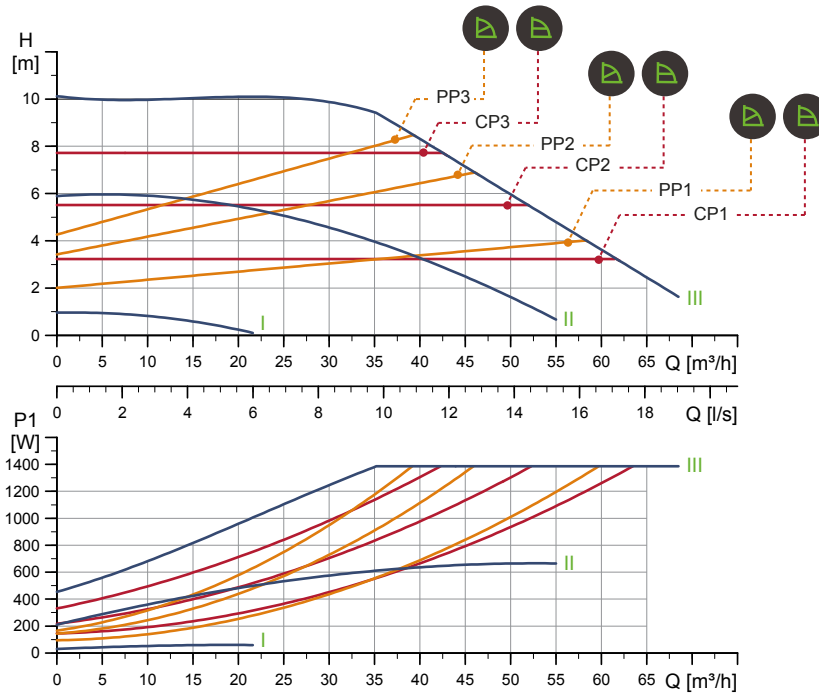


TM055275

Pump type	Dimensions [mm]																				Rp	
	L1	L2	L3	L4	L5	L7	B1	B3	B4	B5	B6	B7	H1	H2	H3	D1	D2	D3	D4	D5	M	M3
MAGNA1 D 100-80 F	450	243	147	147	204	0	84	551	252	299	135	270	103	330	434	100	160	180	220	19	12	1/4

For product numbers, see section Product numbers.

■ MAGNA1 100-100 F PN 10
1 × 230 V, 50/60 Hz



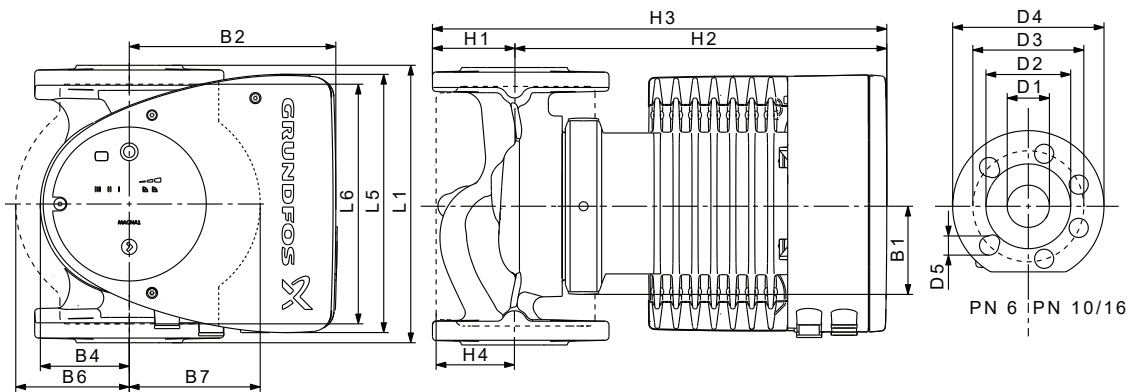
TM056314

Speed	P1 [W]	I _{1/1} [A]
Min.	31.3	0.32
Max.	1413	6.23

The pump incorporates overload protection.

Connections:	See section 8.6 Pipe connections.
System pressure:	Max. 1.0 MPa (10 bar)
Liquid temperature:	-10 to 110 °C (TF 110)
Specific EEI:	0.19

Net weight [kg]	Gross weight [kg]	Ship. vol. [m³]
34.8	37.0	0.099

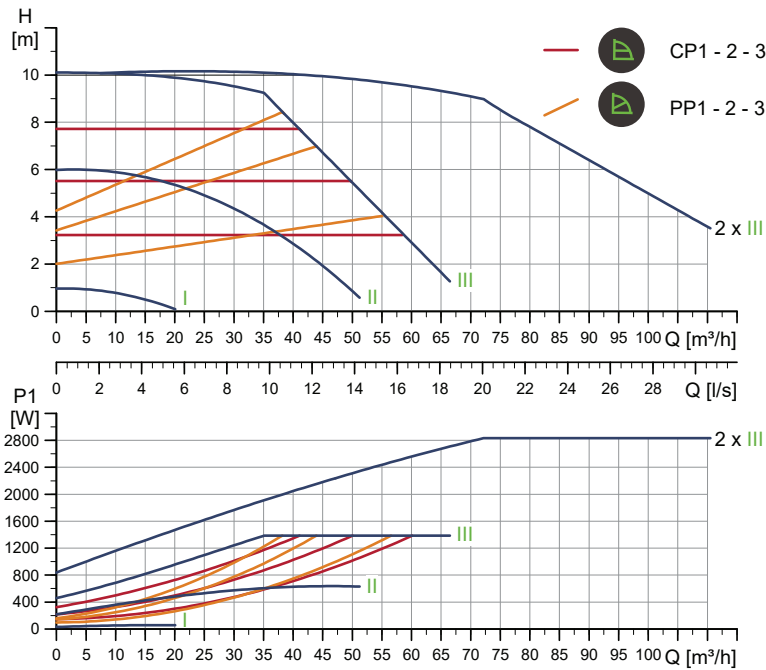


TM055276

Pump type	Dimensions [mm]																	
	L1	L5	L6	B1	B2	B4	B6	B7	H1	H2	H3	H4	D1	D2	D3	D4	D5	
MAGNA1 100-100 F	450	204	396	84	164	73	178	178	103	330	433	120	100	160	180	220	19	

For product numbers, see section Product numbers.

■ MAGNA1 D 100-100 F PN 10
1 × 230 V, 50/60 Hz



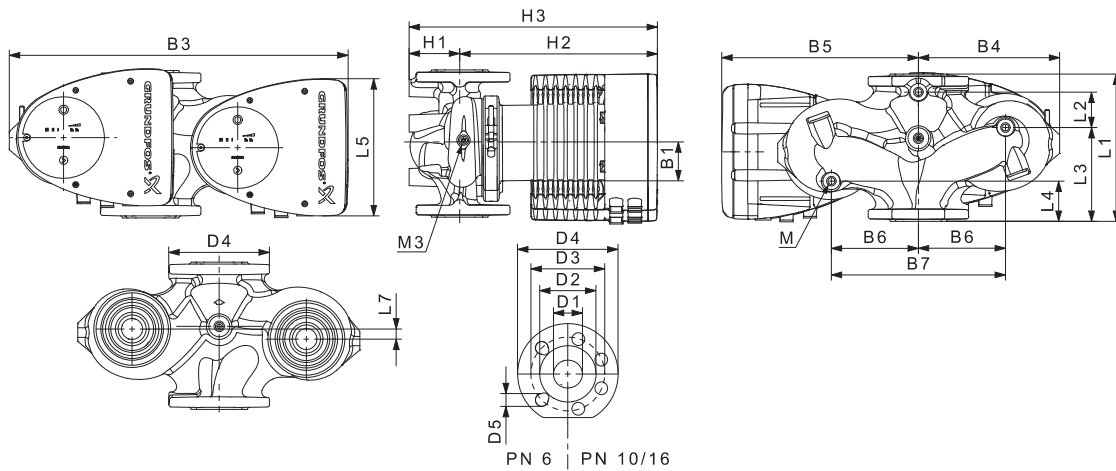
TM056361

Speed	P1 [W]	I _{1/1} [A]
Min.	31.1	0.32
Max.	1413	6.23

The pump incorporates overload protection.

Connections:	See section 8.6 Pipe connections.
System pressure:	Max. 1.0 MPa (10 bar)
Liquid temperature:	-10 to 110 °C (TF 110)
Specific EEI:	0.19

Net weight [kg]	Gross weight [kg]	Ship. vol. [m³]
62.3	72.2	0.208



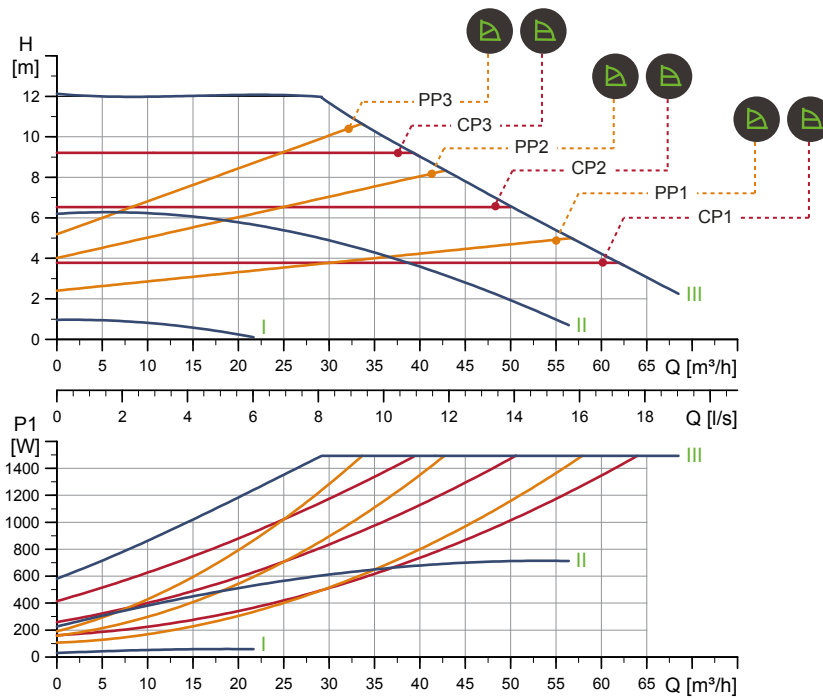
TM055275

Pump type	Dimensions [mm]																				Rp	
	L1	L2	L3	L4	L5	L7	B1	B3	B4	B5	B6	B7	H1	H2	H3	D1	D2	D3	D4	D5		M
MAGNA1 D 100-100 F	450	243	147	147	204	0	84	551	252	299	135	270	103	330	434	100	160	180	220	19	12	1/4

For product numbers, see section Product numbers

■ MAGNA1 100-120 F PN 10

1 × 230 V, 50/60 Hz



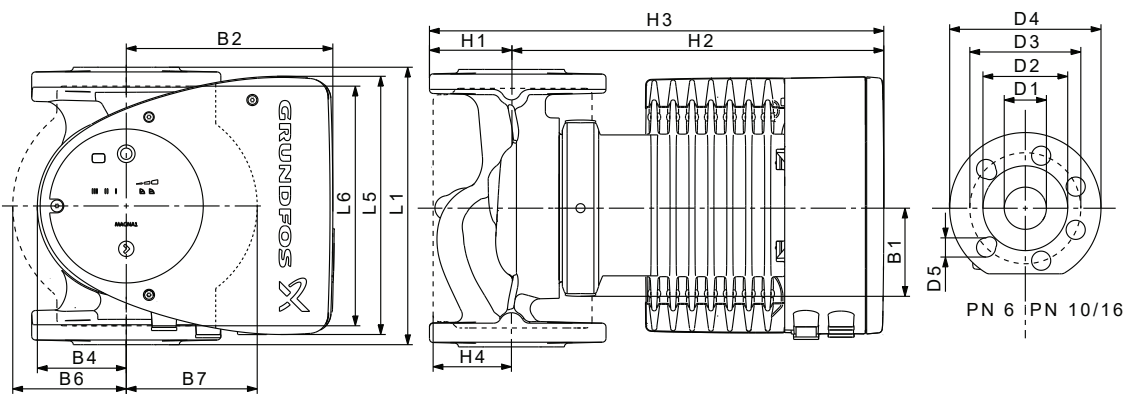
TM056315

Speed	P1 [W]	I _{1/1} [A]
Min.	31.1	0.32
Max.	1523	6.73

The pump incorporates overload protection.

Connections:	See section 8.6 <i>Pipe connections</i> .
System pressure:	Max. 1.0 MPa (10 bar)
Liquid temperature:	-10 to 110 °C (TF 110)
Specific EEI:	0.20

Net weight [kg]	Gross weight [kg]	Ship. vol. [m³]
34.8	37.0	0.099



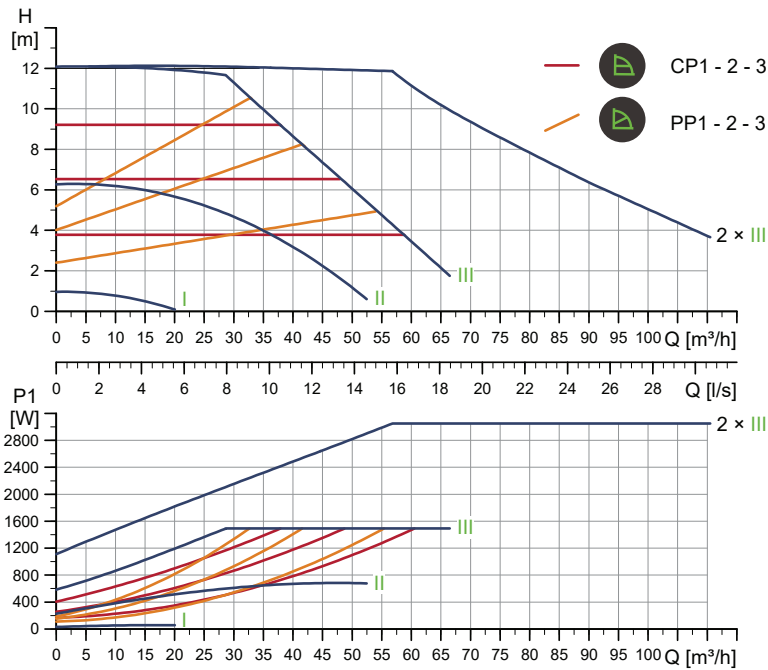
TM055276

Pump type	Dimensions [mm]																
	L1	L5	L6	B1	B2	B4	B6	B7	H1	H2	H3	H4	D1	D2	D3	D4	D5
MAGNA1 100-120 F	450	204	396	84	164	73	178	178	103	330	433	120	100	160	180	220	19

For product numbers, see section Product numbers.

■ MAGNA1 D 100-120 F PN 10

1 × 230 V, 50/60 Hz



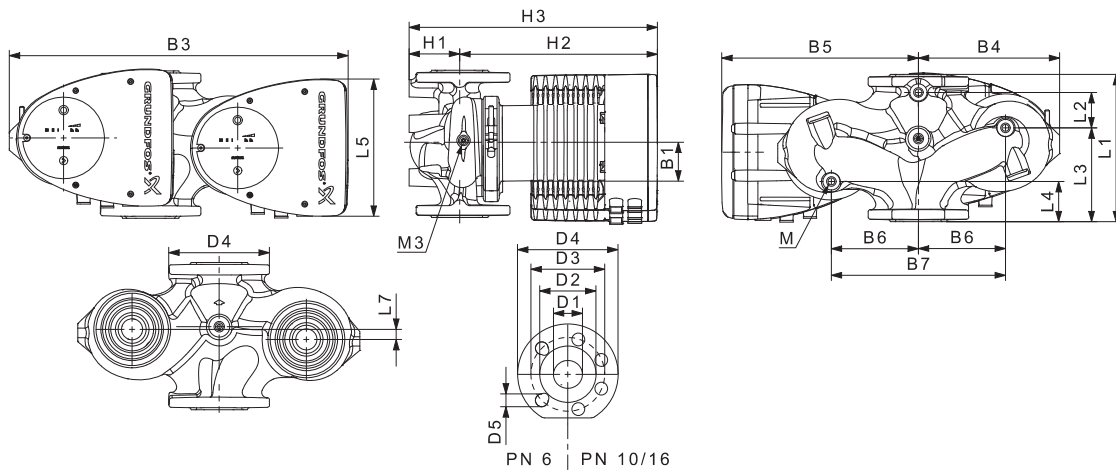
TM056362

Speed	P1 [W]	I _{1/1} [A]
Min.	31.2	0.32
Max.	1521	6.71

The pump incorporates overload protection.

Connections:	See section 8.6 <i>Pipe connections</i> .
System pressure:	Max. 1.0 MPa (10 bar)
Liquid temperature:	-10 to 110 °C (TF 110)
Specific EEI:	0.22

Net weight [kg]	Gross weight [kg]	Ship. vol. [m³]
62.3	72.7	0.208



TM055275

Pump type	Dimensions [mm]																				Rp	
	L1	L2	L3	L4	L5	L7	B1	B3	B4	B5	B6	B7	H1	H2	H3	D1	D2	D3	D4	D5	M	M3
MAGNA1 D 100-120 F	450	243	147	147	204	0	84	551	252	299	135	270	103	330	434	100	160	180	220	19	12	1/4

For product numbers, see section Product numbers.

8. Accessories

Insulating shells for applications with ice buildup

The accessory is for single-head MAGNA pumps used in applications with ice buildup.

The accessory set consists of two polyurethane (PUR) shells and metal clamps to ensure tight assembly.



TM055629

Fitting the insulating shells to a MAGNA1 pump

The dimensions of the insulating shells for differ from those of the insulating shells for heating systems. You can use the insulating shells for both stainless-steel and cast-iron pumps.

Pump type	Product number
MAGNA1 25-40/60/80/100/120 (N)	98538852
MAGNA1 32-40/60/80/100/120 (N)	98538853
MAGNA1 32-40/60/80/100 F (N)	98538854
MAGNA1 32-120 F (N)	98164595
MAGNA1 40-40/60 F (N)	98538855
MAGNA1 40-80/100 F (N)	98164597
MAGNA1 40-120/150/180 F (N)	98164598
MAGNA1 50-60/80 F (N)	98164599
MAGNA1 50-100/120/150/180 F (N)	98164600
MAGNA1 65-40/60/80/100/120/150 F (N)	98538839
MAGNA1 80-60/80/100/120 F	98538851
MAGNA1 100-40/60/80/100/120 F	98164611

Specifications

- Specific volume resistance greater than or equal to $10^{15} \Omega\text{cm}$, DIN 60093
- thermal conductivity at 10 °C 0.036 W/mK and at 40 °C 0.039 W/mK, DIN 52612
- density $33 \pm 5 \text{ kg/m}^3$, ISO 845
- working temperature range -40 to +90 °C, ISO 2796.

Condensation jacket

This accessory is intended for MAGNA pumps used in cooling applications, where temperature differentials can lead to condensation and water dripping from the pump. The condensation jacket minimizes condensation on the surface of the pump. Any remaining condensation will remain in the jacket and evaporate.

The condensation jacket is intended for condensing applications characterized by:

- Media temperature below 40 °C
- media temperature below ambient temperature
- high relative air humidity (RH)
- pump operation with low power consumption
- intermittent pump operation.



TM088154

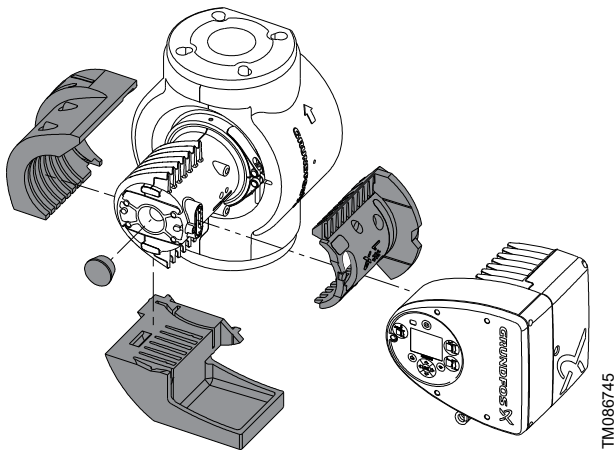
Condensation jacket fitted on a flanged pump

Condensation jacket for pumps with threaded pipe connection

Pump type	Product number	Product number
	1 kit	5 kits
MAGNA1 25-40/60/80/100/120	93242058	93242059
MAGNA1 32-40/60/80/100/120		

Condensation jacket for pumps with flanged pipe connection

Pump type	Product number	Product number
	1 kit	5 kits
MAGNA1 32-120 F	93085317	93085318
MAGNA1 40-80/100/120/150/180		
MAGNA1 50-60/80/100/120/150/180		
MAGNA1 65-40/60/80/100/120/150		
MAGNA1 80-60/80/100/120		
MAGNA1 100-40/60/80/100/120		

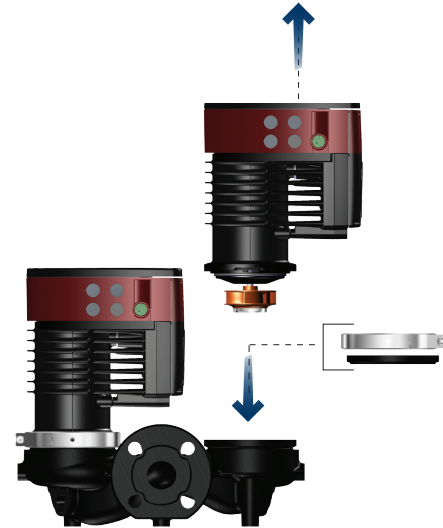


Example of condensation jacket shells (marked with grey)

Blanking flange

The accessory is used to blank off the opening when one of the pump heads of a twin-head pump is removed for service to enable uninterrupted operation of the other pump.

The accessory set consists of a blanking flange and a fastener set.



Position of blanking flange

Pump type	Product number
MAGNA1 D 25-40/60/80/100/120	
MAGNA1 D 32-40/60/80/100 (F)	98159373
MAGNA1 D 40-40/60 F	
MAGNA1 D 32-120 F	
MAGNA1 D 40-80/100/120/150/180 F	
MAGNA1 D 50-40/60/80/100/120/150/180 F	98159372
MAGNA1 D 65-40/60/80/100/120/150 F	
MAGNA1 D 80-40/60/80/100/120 F	
MAGNA1 D 100-40/60/80/100/120 F	

ALPHA plug accessories



ALPHA plugs



ALPHA plugs

Pos.	Description	Product number
1	ALPHA plug, standard plug connection	98284561

Pos.	Description	Product number
2	ALPHA angle plug, standard angle plug connection	98610291
3	ALPHA plug, 90° bend, including 4 m cable	96884669

Grundfos GO MI 301 module

In order for MAGNA1 pumps to communicate with Grundfos GO or Grundfos GO Remote via infrared (IR), you need this add-on module.

MI 301

The Grundfos GO MI 301 module has built-in infrared (IR) and radio communication. Use MI 301 in conjunction with an Android or iOS-based smart device with a Bluetooth connection. MI 301 has a rechargeable Li-ion battery and must be charged separately.



TM053890

MI 301

Supplied with the product:

- Grundfos MI 301
- battery charger
- quick guide.

Product

Grundfos GO variant	Product number
Grundfos MI 301	98046408

Together with the Grundfos GO module, you will need to download the Grundfos GO or Grundfos GO Remote app, which is available in Apple App Store and Google Play.

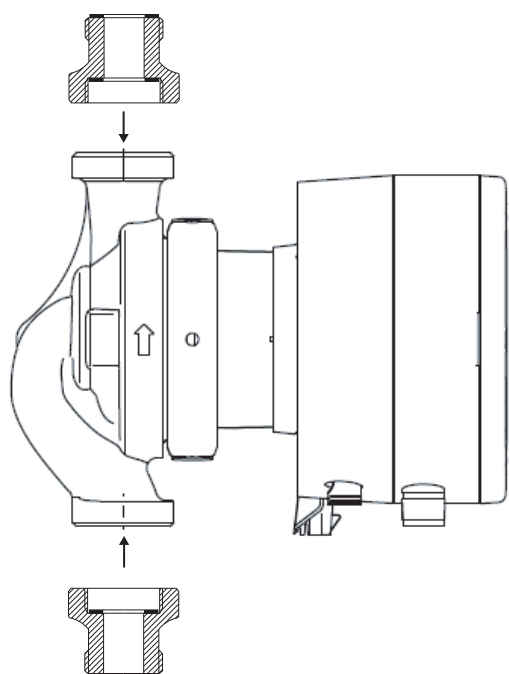
For function and connection to the pump, see the separate installation and operating instructions for the desired type of Grundfos GO setup.

Pipe connections

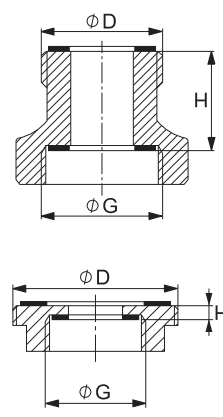
The accessory is designed to go from the pump to the pipe, working as an adapter with a specific extension length depending on the adapter type.

The accessory set includes everything you need for installation.

Thread-thread adapters



TM079314

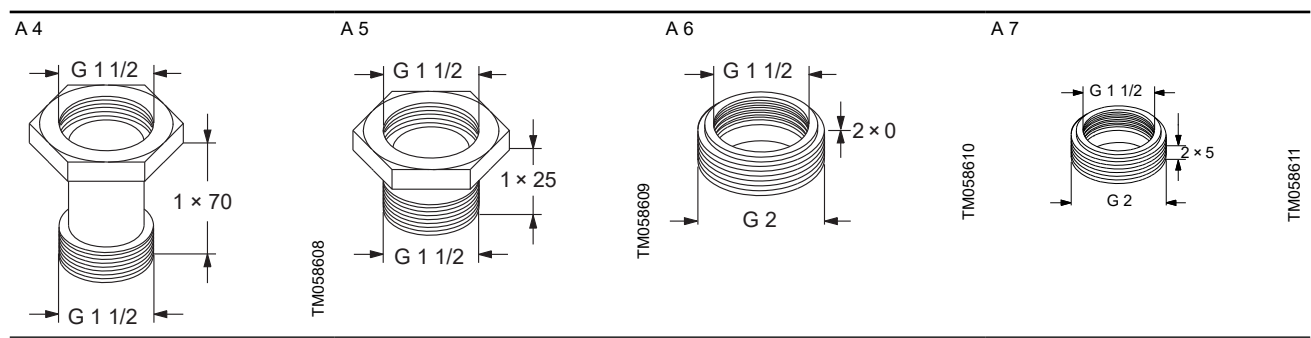


TM058617

TM058618

Example of thread-thread adapters

Pump Connection G	Union nut Connection D	Adapter length H [mm]	Adapter type	Figure	Material	Product number PN 10
G 1 1/2	G 1 1/2	1 × 70	A 4	1	Cast iron (GG)	535043
	G 1 1/2	1 × 25	A 5	1	Cast iron (GG)	535044
	G 2	2 × 0	A 6	2	Brass (Ms)	535045
	G 2	2 × 5	A 7	2	Bronze (Rg)	535046
	G 2	2 × 35	A 8	1	Cast iron (GG)	535047
G 2	G 2 1/4	2 × 5	A 21	2	Cast iron (GG)	535114
	G 2	1 × 20	A 9	1	Bronze (Rg)	535048
	G 2	1 × 26	A 10	1	Cast iron (GG)	535049
	G 2	1 × 70	A 11	1	Cast iron (GG)	535050

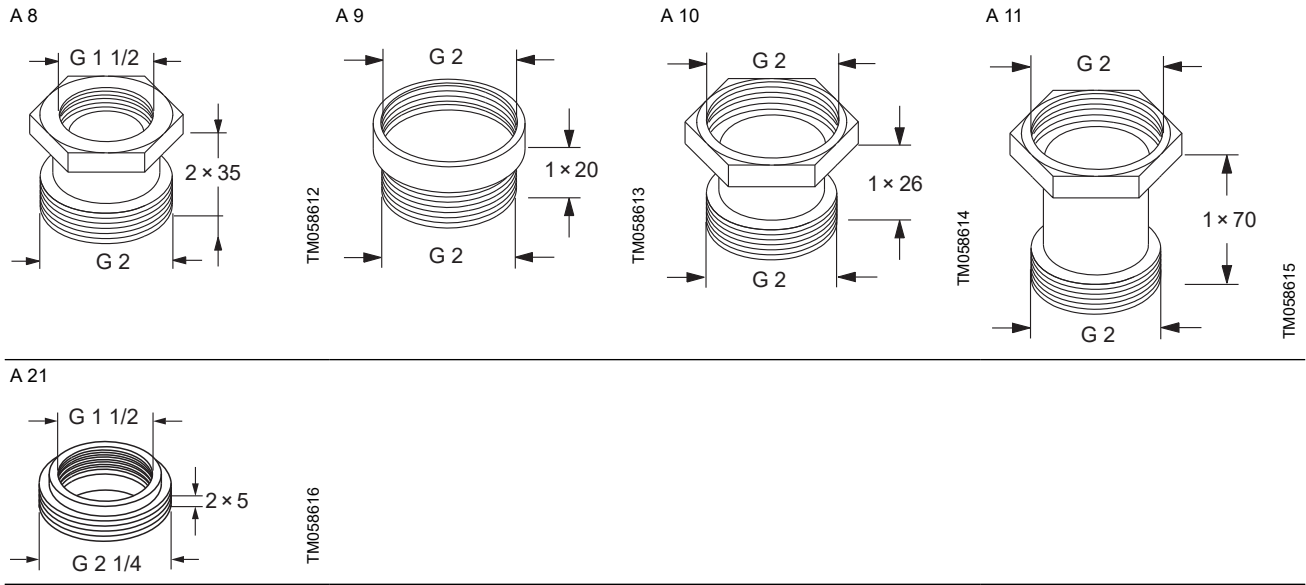


TM058608

TM058609

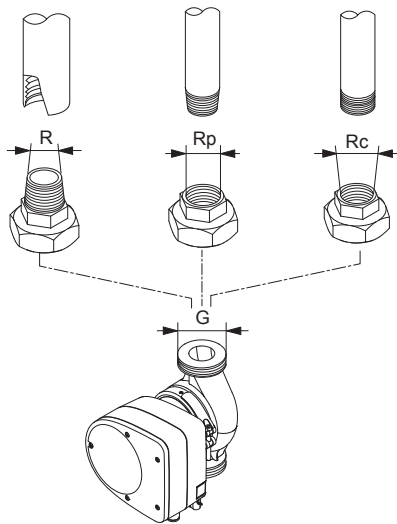
TM058610

TM058611



Thread types

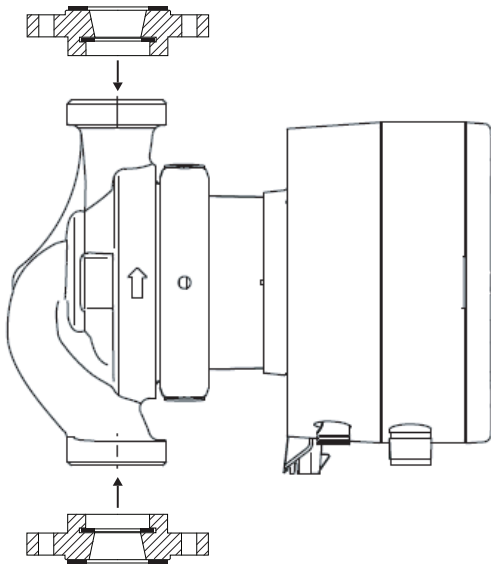
G-threads have a cylindrical form in accordance with the EN-ISO 228-1 standard. R-threads have a conical form in accordance with the ISO 7-1 standard. In the case of a thread of size 1 1/2 inch, the threads are specified as G 1 1/2 or R 1 1/2. You can only screw male G-threads (cylindrical) into female G-threads. You can screw male R-threads (conical) into female G- or R-threads. See fig. [G-thread and R-thread](#).



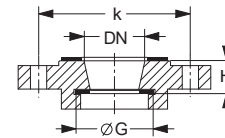
G-thread and R-thread

TM060438

Thread-flange adapters



TM079313



Example of thread-flange adapters

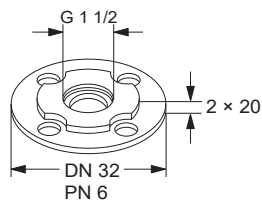
TM060450

New pump connection	Flange connection	Adapter length H [mm]	k [mm]	Adapter type	Figure	Material	Product number PN 6	Product number PN 10
G 1 1/2	DN 32 ¹⁾	2 × 0	90	A 16	3	Cast iron (GG)	535055 ²⁾	535055 ²⁾
	DN 32	2 × 20	90	A 14	3	Cast iron (GG)	535053	
	DN 40	2 × 20	100	A 17	3	Cast iron (GG)	535056	
	DN 50	1 × 20	110	A 19	3	Steel (St)	535058	
G 2	DN 32 ¹⁾	1 × 10	90	A 22	3	Cast iron (GG)	535115 ²⁾	535115 ²⁾
	DN 32	2 × 20	90	A 15	3	Cast iron (GG)	535054	
	DN 40	2 × 20	100	A 18	3	Cast iron (GG)	98614387 ²⁾	98614387 ²⁾
	DN 50	2 × 20	110	A 20	3	Cast iron (GG)	98614411 ²⁾	98614411 ²⁾

1) Grundfos square flange

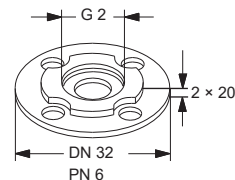
2) Combination flange PN 6 / PN 10

A 14

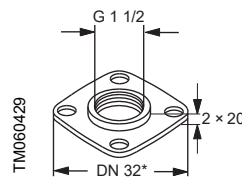


TM060428

A 15

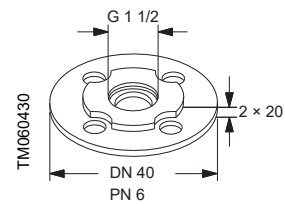


A 16



TM060429

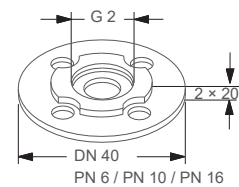
A 17



TM060430

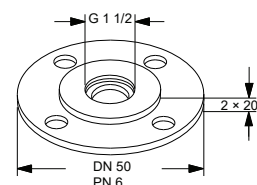
TM060431

A 18

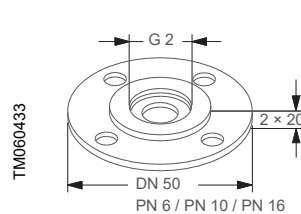


TM060432

A 19

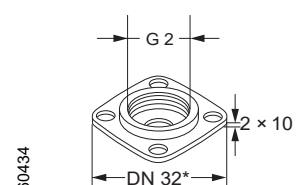


A 20



TM060433

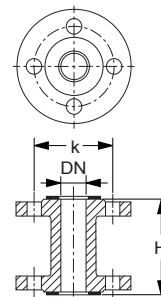
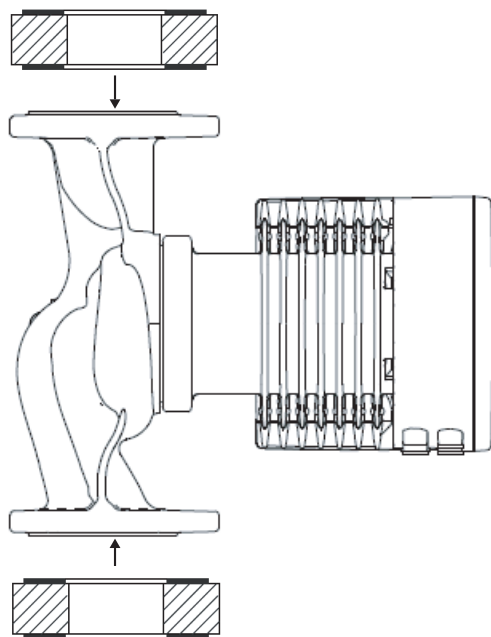
A 22



TM060434

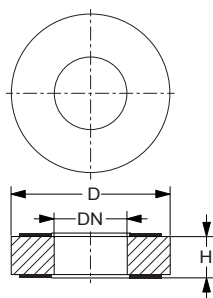
TM060435

Flange-flange adapters



Example of flange-flange adapter

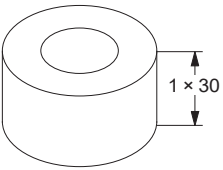
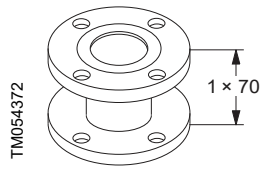
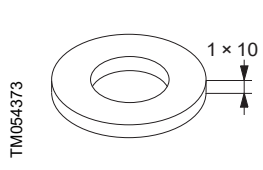
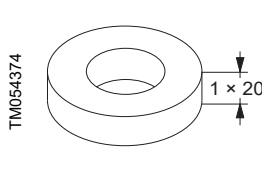
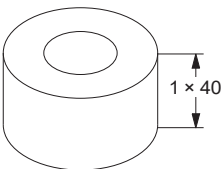
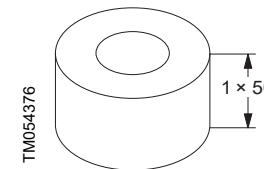
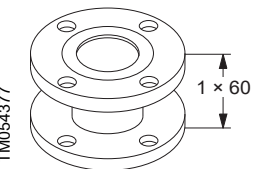
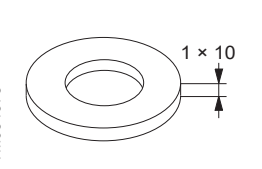
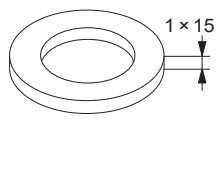
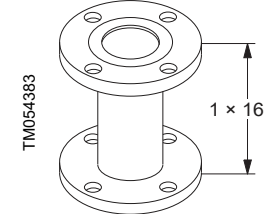
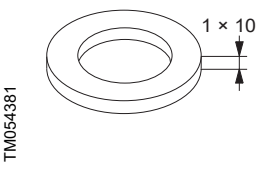
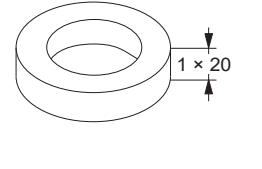
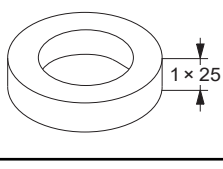
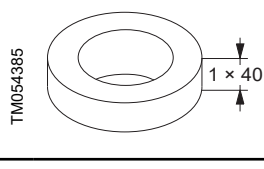
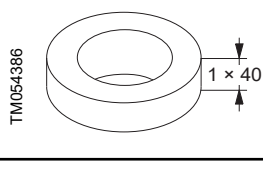
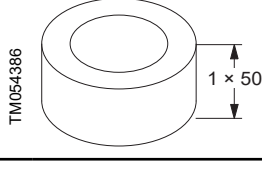
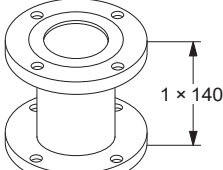
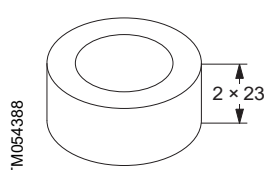
TM060449



TM079315

TM060451

Pump connection	Adapter length H [mm]	k [mm] PN 6	k [mm] PN 10	D [mm] PN 6	D [mm] PN 10	Adapter type	Figure	Material	Product number PN 6	Product number PN 10/16
DN 40	1 × 70	100	110			A 40-70	5	Steel (St)	539921	539721
	1 × 30			82	88	A 40-30	4	Steel (St)	96281076	96608515
DN 50	1 × 10			90	102	A 50-10	4	Steel (St)	549921	549821
	1 × 20			90	102	A 50-20	4	Steel (St)	549922	549822
	1 × 40			90	102	A 50-40	4	Steel (St)	96281077	96608516
	1 × 50			90	102	A 50-50	4	Steel (St)	549923	549823
	1 × 60	110	125			A 50-60	5	Steel (St)	549924	549824
DN 65	1 × 10			110	122	A 65-10	4	Steel (St)	559921	559821
	1 × 25			110	122	A 65-25	4	Steel (St)	559922	559822
	1 × 160	130	145			A 65-160	5	Steel (St)	559923	559823
DN 80	1 × 10			127	138	A 80-10	4	Steel (St)	569921	569821
	1 × 15			127	138	A 80-15	4	Steel (St)	569922	569822
	1 × 20			127	138	A 80-20	4	Steel (St)	569923	569823
	1 × 25			127	138	A 80-25	4	Steel (St)	569924	569824
	1 × 40			127	138	A 80-40	4	Steel (St)	569925	569825
	1 × 50			127	138	A 80-50	4	Steel (St)	569926	569826
	1 × 140	150	165			A 80-140	5	Steel (St)	569927	569827
DN 100	2 × 23				106	A 100-50	4	Steel (St)		96555529

A 40-30	A 40-70	A 50-10	A 50-20
			
	TM054372	TM054373	TM054374
A 50-40	A 50-50	A 50-60	A 65-10
			
	TM054376	TM054377	TM054378
A 65-25	A 65-160	A 80-10	A 80-15
			
	TM054383	TM054381	TM054382
A 80-20	A 80-25	A 80-40	A 80-50
			
	TM054385	TM054386	TM054386
A 80-140	A 100-50		
			
	TM054388	TM054389	

9. Product numbers

Single-head pumps

Pump type	Port-to-port length [mm]	Threaded pipe connection			Section
		Cast iron		Stainless steel	
		PN 10	PN 16	PN 10	
MAGNA1 25-40 (N)	180	99221216	99224453	99221223	. MAGNA1 25-40 (N) PN 10
MAGNA1 25-60 (N)	180	99221217		99221224	. MAGNA1 25-60 (N) PN 10
MAGNA1 25-80 (N)	180	99221213		99221225	. MAGNA1 25-80 (N) PN 10
MAGNA1 25-100 (N)	180	99221214		99221226	. MAGNA1 25-100 (N) PN 10
MAGNA1 25-120 (N)	180	99221215		99221227	. MAGNA1 25-120 (N) PN 10
MAGNA1 32-40 (N)	180	99221233		99221253	. MAGNA1 32-40 (N) PN 10
MAGNA1 32-60 (N)	180	99221234		99221254	. MAGNA1 32-60 (N) PN 10
MAGNA1 32-80 (N)	180	99221235		99221255	. MAGNA1 32-80 (N) PN 10
MAGNA1 32-100 (N)	180	99221236		99221256	. MAGNA1 32-100 (N) PN 10
MAGNA1 32-120 (N)	180	99221281		99221283	. MAGNA1 32-120 (N) PN 10

Pump type	Port-to-port length [mm]	Flange connection					Section
		Cast iron				Stainless steel	
		PN 6	PN 10	PN 16	PN 6/10	PN 6/10	
MAGNA1 32-40 F (N)	220				99221263	99221265	. MAGNA1 32-40 F (N) PN 10
MAGNA1 32-60 F (N)	220				99221269	99221271	. MAGNA1 32-60 F (N) PN 10
MAGNA1 32-80 F (N)	220				99221275	99221277	. MAGNA1 32-80 F (N) PN 10
MAGNA1 32-100 F (N)	220				99221237	99221257	. MAGNA1 32-100 F (N) PN 10
MAGNA1 32-120 F (N)	220				99221285	99221289	. MAGNA1 32-120 F (N) PN 10
MAGNA1 40-40 F (N)	220				99221291	99221299	. MAGNA1 40-40 F (N) 1
MAGNA1 40-60 F (N)	220				99221292	99221300	. MAGNA1 40-60 F (N)
MAGNA1 40-80 F (N)	220				99221303	99221323	. MAGNA1 40-80 F (N) PN 10
MAGNA1 40-100 F (N)	220				99221304	99221324	. MAGNA1 40-100 F (N) PN 10
MAGNA1 40-120 F (N)	250				99221305	99221325	. MAGNA1 40-120 F (N) PN 10
MAGNA1 40-150 F (N)	250				99221306	99221326	. MAGNA1 40-150 F (N) PN 10
MAGNA1 40-180 F (N)	250				99221307	99221327	. MAGNA1 40-180 F (N) PN 10
MAGNA1 50-60 F (N)	240				99221333	99221358	. MAGNA1 D 50-40 F PN 10
MAGNA1 50-80 F (N)	240				99221334	99221359	. MAGNA1 50-80 F (N) PN 10
MAGNA1 50-100 F (N)	280				99221335	99221360	. MAGNA1 50-100 F (N) PN 10
MAGNA1 50-120 F (N)	280				99221336	99221361	. MAGNA1 50-120 F (N) PN 10
MAGNA1 50-150 F (N)	280				99221337	99221362	. MAGNA1 50-150 F (N) PN 10
MAGNA1 50-180 F (N)	280				99221338	99221363	. MAGNA1 50-180 F (N) PN 10
MAGNA1 65-40 F (N)	340				99221382	99221394	. MAGNA1 65-40 F (N) PN 10
MAGNA1 65-60 F (N)	340				99221371	99221395	. MAGNA1 65-60 F (N) PN 10
MAGNA1 65-80 F (N)	340				99221372	99221396	. MAGNA1 65-80 F (N) PN 10
MAGNA1 65-100 F (N)	340				99221373	99221397	. MAGNA1 65-100 F (N) PN 10
MAGNA1 65-120 F (N)	340				99221374	99221398	. MAGNA1 65-120 F (N) PN 10
MAGNA1 65-150 F (N)	340				99221375	99221399	. MAGNA1 65-150 F (N) PN 10
MAGNA1 80-60 F	360	99221406	99221410				. MAGNA1 80-60 F PN 10
MAGNA1 80-80 F	360	99221407	99221411				. MAGNA1 80-80 F PN 10
MAGNA1 80-100 F	360	99221408	99221412				. MAGNA1 80-100 F PN 10
MAGNA1 80-120 F	360	99221409	99221413				. MAGNA1 80-120 F PN 10
MAGNA1 100-40 F	450	99221438	99221443				. MAGNA1 100-40 F PN 10
MAGNA1 100-60 F	450	99221439	99221444				. MAGNA1 100-60 F PN 10

Pump type	Port-to-port length [mm]	Flange connection				Section
		Cast iron			Stainless steel	
		PN 6	PN 10	PN 16	PN 6/10	
MAGNA1 100-80 F	450	99221440	99221445			. MAGNA1 100-80 F PN 10
MAGNA1 100-100 F	450	99221441	99221446			. MAGNA1 100-100 F PN 10
MAGNA1 100-120 F	450	99221442	99221447			. MAGNA1 100-120 F PN 10

Note: Click on a product number and go directly to the performance curve in Grundfos Product Center.

Twin-head pumps

Pump type	Port-to-port length [mm]	Threaded pipe connection		Section
		Cast iron		
		PN 10	PN 16	
MAGNA1 D 32-40	180	99221238		. MAGNA1 D 32-40 PN 10
MAGNA1 D 32-60	180	99221239		. MAGNA1 D 32-60 PN 10
MAGNA1 D 32-80	180	99221240		. MAGNA1 D 32-80 PN 10
MAGNA1 D 32-100	180	99221241		. MAGNA1 D 32-100 PN 10

Pump type	Port-to-port length [mm]	Flange connection				Section
		Cast iron				
		PN 6	PN 10	PN 16	PN 6/10	
MAGNA1 D 32-40 F	220				99221267	. MAGNA1 D 32-40 F PN 10
MAGNA1 D 32-60 F	220				99221273	. MAGNA1 D 32-60 F PN 10
MAGNA1 D 32-80 F	220				99221279	. MAGNA1 D 32-80 F PN 10
MAGNA1 D 32-100 F	220				99221242	. MAGNA1 D 32-100 F PN 10
MAGNA1 D 32-120 F	220				99221286	. MAGNA1 D 32-120 F PN 10
MAGNA1 D 40-40 F	220				99221293	. MAGNA1 D 40-40 F
MAGNA1 D 40-60 F	220				99221294	. MAGNA1 D 40-60 F
MAGNA1 D 40-80 F	220				99221308	. MAGNA1 D 40-80 F PN 10
MAGNA1 D 40-100 F	220				99221309	. MAGNA1 D 40-100 F PN 10
MAGNA1 D 40-120 F	250				99221310	. MAGNA1 D 40-120 F PN 10
MAGNA1 D 40-150 F	250				99221311	. MAGNA1 D 40-150 F PN 10
MAGNA1 D 40-180 F	250				99221312	. MAGNA1 D 40-180 F PN 10
MAGNA1 D 50-40 F	240				99230357	. MAGNA1 D 50-40 F PN 10
MAGNA1 D 50-60 F	240				99221339	. MAGNA1 D 50-60 F PN 10
MAGNA1 D 50-80 F	240				99221340	. MAGNA1 D 50-80 F PN 10
MAGNA1 D 50-100 F	280				99221341	. MAGNA1 D 50-100 F PN 10
MAGNA1 D 50-120 F	280				99221342	. MAGNA1 D 50-120 F PN 10
MAGNA1 D 50-150 F	280				99221343	. MAGNA1 D 50-150 F PN 10
MAGNA1 D 50-180 F	280				99221345	. MAGNA1 D 50-180 F PN 10
MAGNA1 D 65-40 F	340				99221376	. MAGNA1 D 65-40 F PN 10
MAGNA1 D 65-60 F	340				99221377	. MAGNA1 D 65-60 F PN 10
MAGNA1 D 65-80 F	340				99221378	. MAGNA1 D 65-80 F PN 10
MAGNA1 D 65-100 F	340				99221379	. MAGNA1 D 65-100 F PN 10
MAGNA1 D 65-120 F	340				99221380	. MAGNA1 D 65-120 F PN 10
MAGNA1 D 65-150 F	340				99221381	. MAGNA1 D 65-150 F PN 10
MAGNA1 D 80-40 F	360	99230392	99230413			. MAGNA1 D 80-40 F PN 10
MAGNA1 D 80-60 F	360	99221414	99221418			. MAGNA1 D 80-60 F PN 10
MAGNA1 D 80-80 F	360	99221415	99221419			. MAGNA1 D 80-80 F PN 10
MAGNA1 D 80-100 F	360	99221416	99221420			. MAGNA1 D 80-100 F PN 10
MAGNA1 D 80-120 F	360	99221417	99221421			. MAGNA1 D 80-120 F PN 10
MAGNA1 D 100-40 F	450	99221448	99221453			. MAGNA1 D 100-40 F PN 10
MAGNA1 D 100-60 F	450	99221449	99221454			. MAGNA1 D 100-60 F PN 10
MAGNA1 D 100-80 F	450	99221450	99221455			. MAGNA1 D 100-80 F PN 10
MAGNA1 D 100-100 F	450	99221451	99221456			. MAGNA1 D 100-100 F PN 10
MAGNA1 D 100-120 F	450	99221452	99221457			. MAGNA1 D 100-120 F PN 10

Note: Click on a product number and go directly to the performance curve in Grundfos Product Center.

10. Grundfos Product Center

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

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

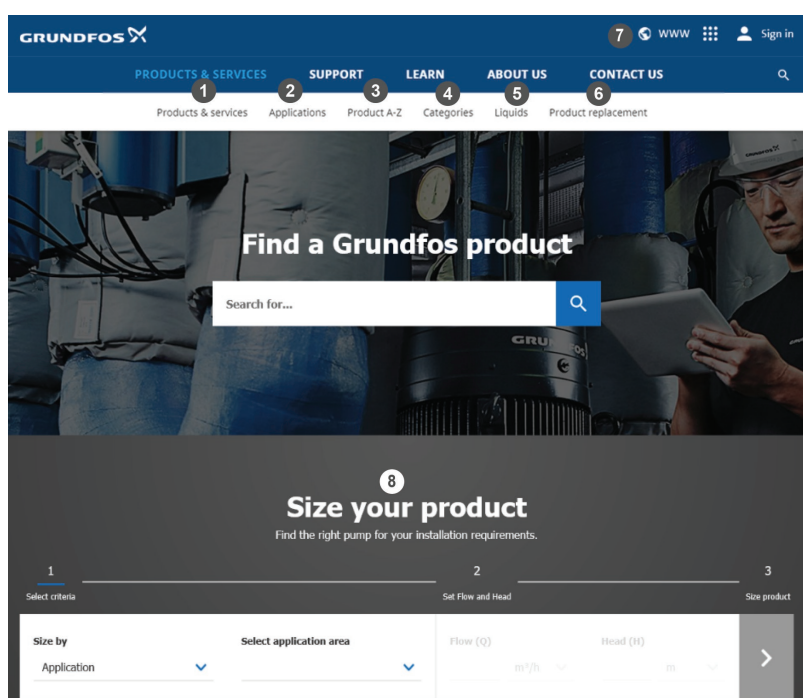
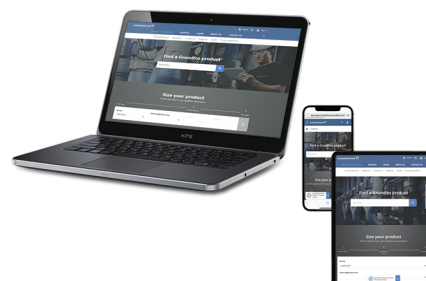
International view: <http://product-selection.grundfos.com>

All the information you need in one place

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

Downloads

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



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

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

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

11. Document quality feedback

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