

MAGNA1

Model C
Circulator pumps
50/60 Hz



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1. Product data

Product description

The New MAGNA1 model C circulator pumps are designed for circulating liquids in the following systems:

- heating systems
 - main pump
 - mixing loops
 - domestic hot-water systems
 - heating surfaces
 - air-conditioning surfaces
- air-conditioning and cooling 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.

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

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	

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).
- The new MAGNA1 is designed to communicate with Grundfos GO Remote, 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



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Single-head MAGNA1 pumps



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Connecting Grundfos GO Remote to MAGNA1

Type key

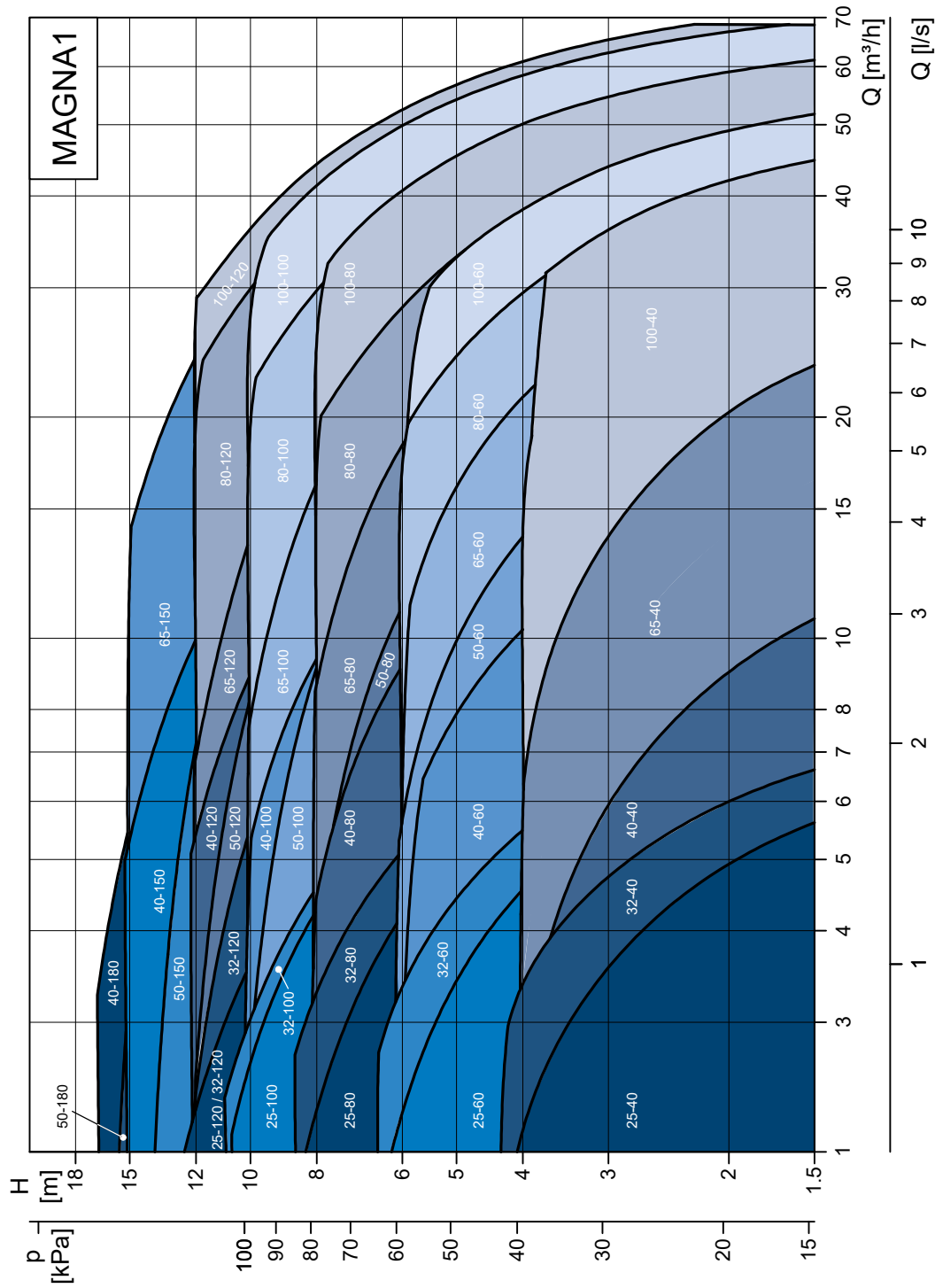
Example

MAGNA1 D-80 -120-F-N-360

Example	MAGNA1	(D)	80	-120	(F)	(N)	360
Pos.	1	2	3	4	5	6	7

Pos.	Code	Explanation	Designation
1	MAGNA1	MAGNA3	Type range
2	(D)	Single-head pump Twin-head pump	
3	80		Nominal diameter (DN) of inlet and outlet ports [mm]
4	-120		Maximum head [dm]
5	(F)	Threaded Flange	Pipe connection
6	(N)	Cast iron Stainless steel	Pump housing material
7	360		Port-to-port length [mm]

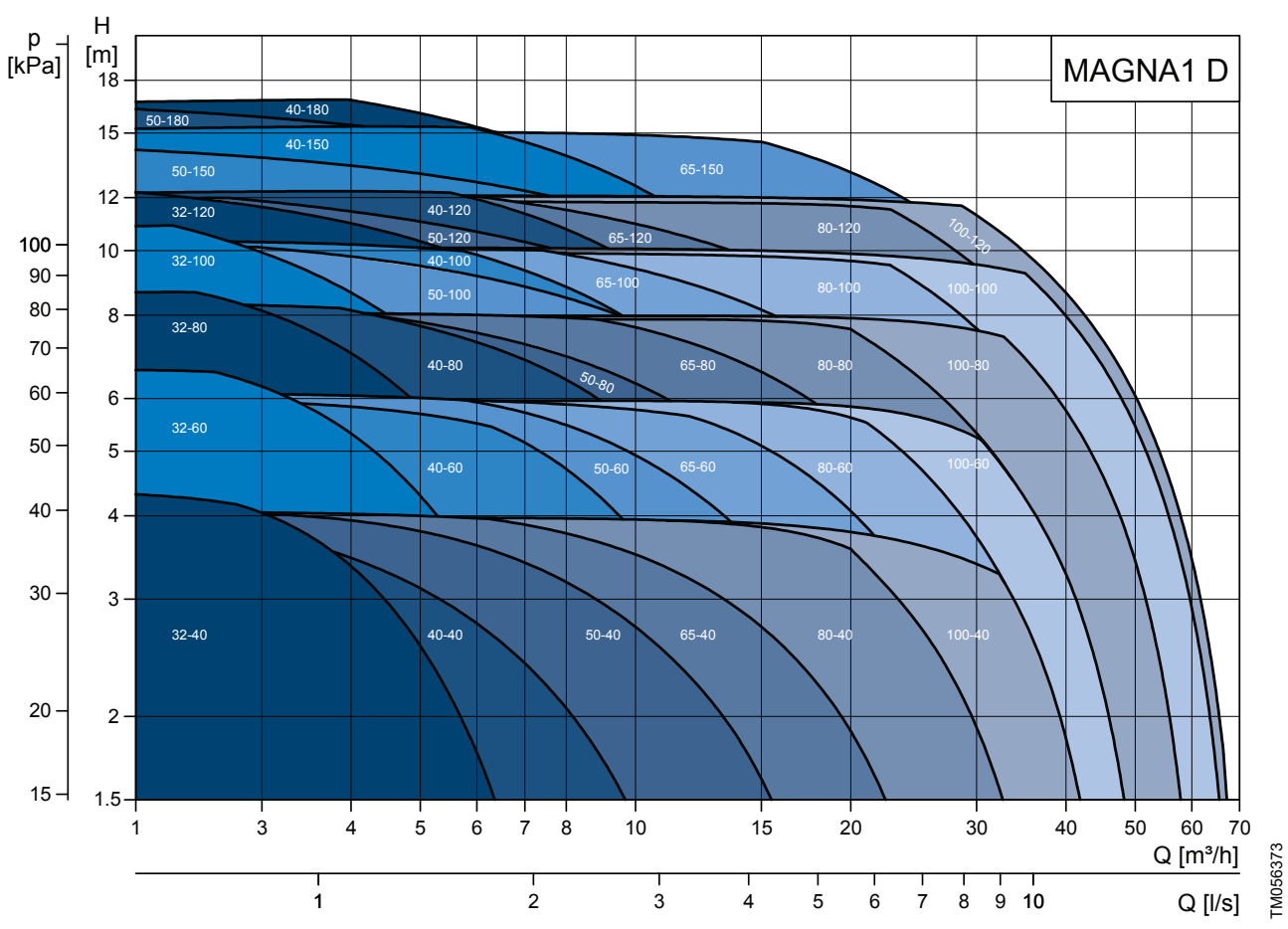
Performance range, MAGNA1



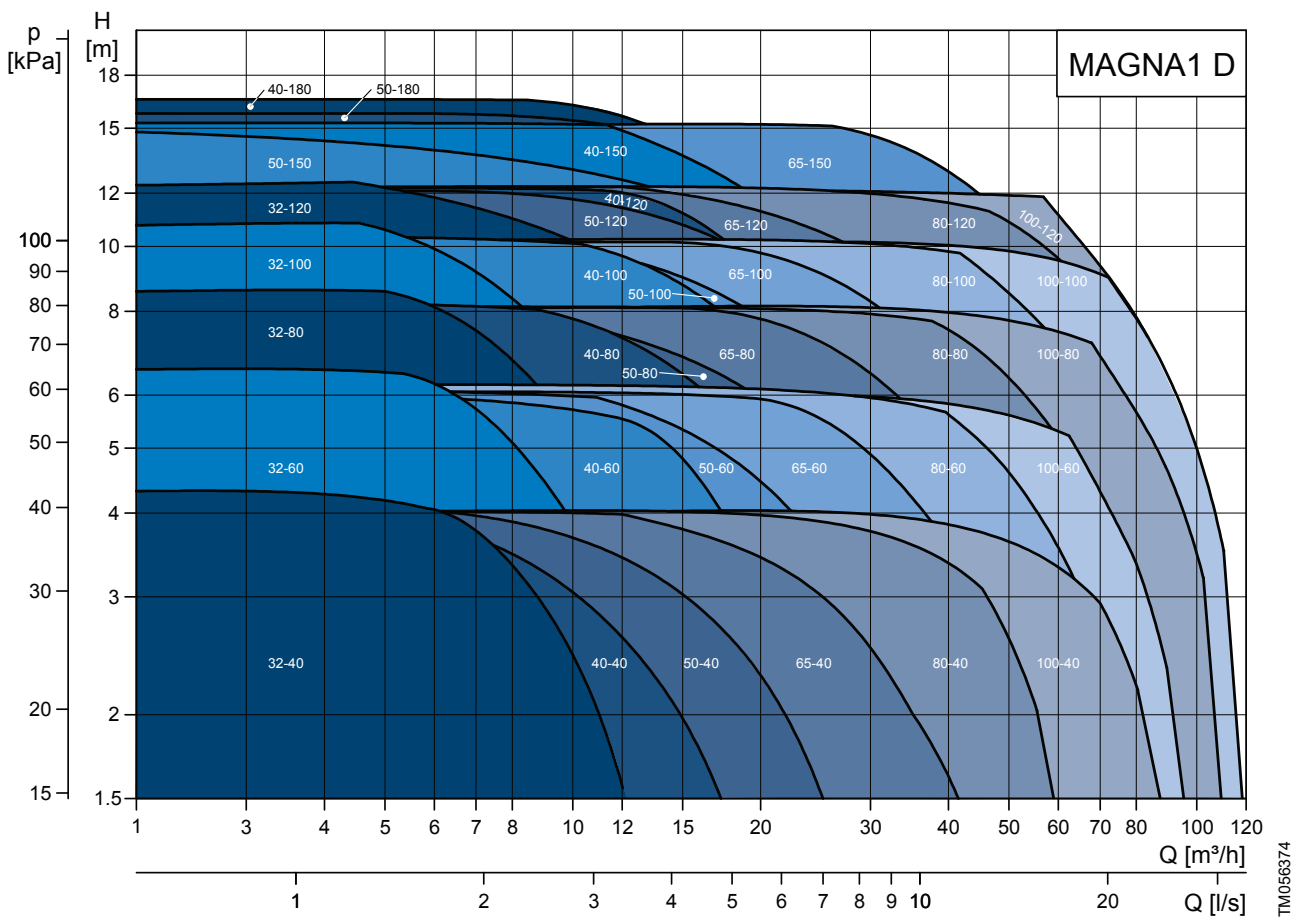
Performance range, MAGNA1

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Performance range, MAGNA1 D, single-head operation



Performance range, MAGNA1 D, twin-head operation



Product range

Single-head pumps

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

Pump type	Port-to-port length [mm]	Flange connection					Data sheet, page
		Cast iron				Stainless steel	
		PN 6	PN 10	PN16	PN 6/10	PN 6/10	
MAGNA1 32-120 F (N)	220				•	•	MAGNA1 32-120 F (N) PN 10
MAGNA1 40-40 F (N)	220				•	•	MAGNA1 D 40-40 F
MAGNA1 40-60 F (N)	220				•	•	MAGNA1 40-60 F (N)
MAGNA1 40-80 F (N)	220				•	•	MAGNA1 40-80 F (N) PN 10
MAGNA1 40-100 F (N)	220				•	•	MAGNA1 40-100 F (N) PN 10
MAGNA1 40-120 F (N)	250				•	•	MAGNA1 40-120 F (N) PN 10
MAGNA1 40-150 F (N)	250				•	•	MAGNA1 40-150 F (N) PN 10
MAGNA1 40-180 F (N)	250				•	•	MAGNA1 40-180 F (N) PN 10
MAGNA1 50-60 F (N)	240				•	•	MAGNA1 50-60 F (N) PN 10
MAGNA1 50-80 F (N)	240				•	•	MAGNA1 50-80 F (N) PN 10
MAGNA1 50-100 F (N)	280				•	•	MAGNA1 50-100 F (N) PN 10
MAGNA1 50-120 F (N)	280				•	•	MAGNA1 50-120 F (N) PN 10
MAGNA1 50-150 F (N)	280				•	•	MAGNA1 50-150 F (N) PN 10
MAGNA1 50-180 F (N)	280				•	•	MAGNA1 50-180 F (N) PN 10
MAGNA1 65-40 F (N)	340				•	•	MAGNA1 65-40 F (N) PN 10
MAGNA1 65-60 F (N)	340				•	•	MAGNA1 65-60 F (N) PN 10
MAGNA1 65-80 F (N)	340				•	•	MAGNA1 65-80 F (N) PN 10
MAGNA1 65-100 F (N)	340				•	•	MAGNA1 65-100 F (N) PN 10
MAGNA1 65-120 F (N)	340				•	•	MAGNA1 65-120 F (N) PN 10
MAGNA1 65-150 F (N)	340				•	•	MAGNA1 65-150 F (N) PN 10
MAGNA1 80-60 F	360	•	•				MAGNA1 80-60 F PN 10
MAGNA1 80-80 F	360	•	•				MAGNA1 80-80 F PN 10
MAGNA1 80-100 F	360	•	•				MAGNA1 80-100 F PN 10
MAGNA1 80-120 F	360	•	•				MAGNA1 80-120 F PN 10
MAGNA1 100-40 F	450	•	•				MAGNA1 100-40 F PN 10
MAGNA1 100-60 F	450	•	•				MAGNA1 100-60 F PN 10
MAGNA1 100-80 F	450	•	•				MAGNA1 100-80 F PN 10
MAGNA1 100-100 F	450	•	•				MAGNA1 100-100 F PN 10
MAGNA1 100-120 F	450	•	•				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		Data sheet, page
		Cast iron		
		PN 10	PN 16	
MAGNA1 D 32-40	180	•		MAGNA1 D 32-40 PN 10
MAGNA1 D 32-60	180	•		MAGNA1 D 32-60 PN 10
MAGNA1 D 32-80	180	•		MAGNA1 D 32-80 PN 10
MAGNA1 D 32-100	180	•		MAGNA1 D 32-100 PN 10

Pump type	Port-to-port length [mm]	Flange connection				Data sheet, page
		Cast iron				
		PN 6	PN 10	PN 16	PN 6/10	
MAGNA1 D 32-120 F	220				•	MAGNA1 D 32-120 F PN 10
MAGNA1 D 40-40 F	220				•	MAGNA1 D 40-40 F
MAGNA1 D 40-60 F	220				•	MAGNA1 D 40-60 F
MAGNA1 D 40-80 F	220				•	MAGNA1 D 40-80 F PN 10
MAGNA1 D 40-100 F	220				•	MAGNA1 D 40-100 F PN 10
MAGNA1 D 40-120 F	250				•	MAGNA1 D 40-120 F PN 10
MAGNA1 D 40-150 F	250				•	MAGNA1 D 40-150 F PN 10
MAGNA1 D 40-180 F	250				•	MAGNA1 D 40-180 F PN 10
MAGNA1 D 50-40 F	240				•	MAGNA1 D 50-40 F PN 10
MAGNA1 D 50-60 F	240				•	MAGNA1 D 50-60 F PN 10
MAGNA1 D 50-80 F	240				•	MAGNA1 D 50-80 F PN 10
MAGNA1 D 50-100 F	280				•	MAGNA1 D 50-100 F PN 10
MAGNA1 D 50-120 F	280				•	MAGNA1 D 50-120 F PN 10
MAGNA1 D 50-150 F	280				•	MAGNA1 D 50-150 F PN 10
MAGNA1 D 50-180 F	280				•	MAGNA1 D 50-180 F PN 10
MAGNA1 D 65-40 F	340				•	MAGNA1 D 65-40 F PN 10
MAGNA1 D 65-60 F	340				•	MAGNA1 D 65-60 F PN 10
MAGNA1 D 65-80 F	340				•	MAGNA1 D 65-80 F PN 10
MAGNA1 D 65-100 F	340				•	MAGNA1 D 65-100 F PN 10
MAGNA1 D 65-120 F	340				•	MAGNA1 D 65-120 F PN 10
MAGNA1 D 65-150 F	340				•	MAGNA1 D 65-150 F PN 10
MAGNA1 D 80-40 F	360	•	•			MAGNA1 D 80-40 F PN 10
MAGNA1 D 80-60 F	360	•	•			MAGNA1 D 80-60 F PN 10
MAGNA1 D 80-80 F	360	•	•			MAGNA1 D 80-80 F PN 10
MAGNA1 D 80-100 F	360	•	•			MAGNA1 D 80-100 F PN 10
MAGNA1 D 80-120 F	360	•	•			MAGNA1 D 80-120 F PN 10
MAGNA1 D 100-40 F	450	•	•			MAGNA1 D 100-40 F PN 10
MAGNA1 D 100-60 F	450	•	•			MAGNA1 D 100-60 F PN 10
MAGNA1 D 100-80 F	450	•	•			MAGNA1 D 100-80 F PN 10
MAGNA1 D 100-100 F	450	•	•			MAGNA1 D 100-100 F PN 10
MAGNA1 D 100-120 F	450	•	•			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.

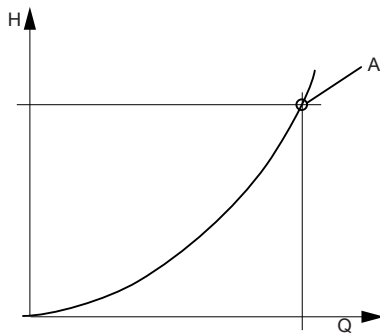
Pump size

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.

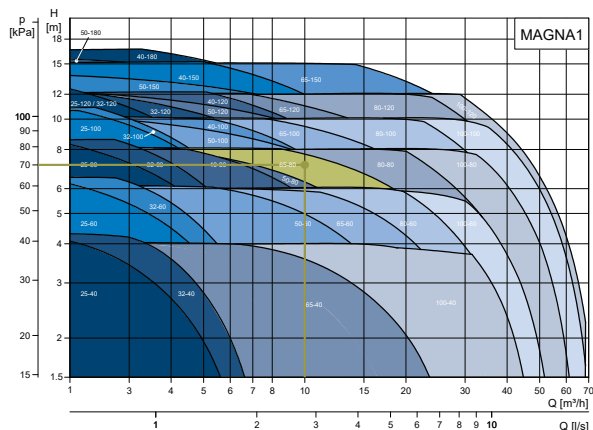


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System characteristic

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.



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Pump selection

Find the specific pump data in the section . This information will help you determine whether you have found the correct pump size or not.

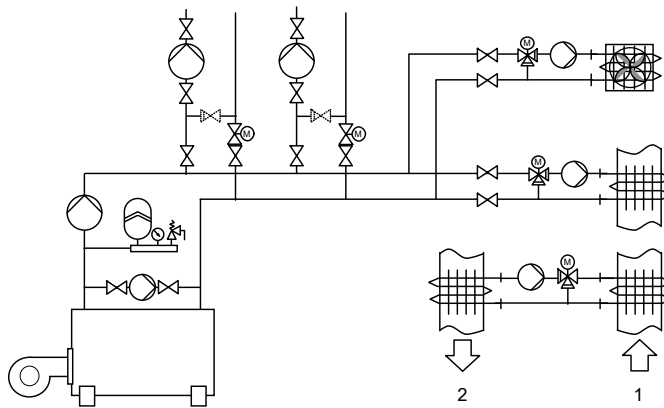
Note: To ensure an efficient operation it is important not to oversize the pump. All pumps have a "best point" (η_{max}), indicating where the pump is working most efficiently. When operating at your duty point, the pump must work in the most efficient Q and H area.

Related information

Performance range, MAGNA1

System applications

Heating systems

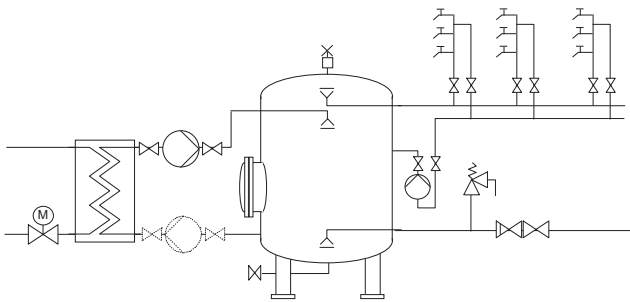


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- One- and two-pipe heating systems
- main pumps
- zone pumps
- mixing loops
- boiler shunt pumps
- pumps for heating surfaces
- calorifiers
- underfloor heating systems
- solar-heating systems
- ground-source heat-pump systems
- heat recovery systems.

Pos.	Description
1	In
2	Out

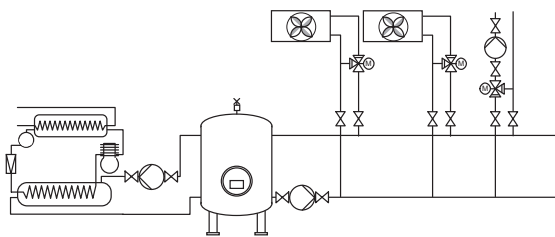
Domestic hot-water systems



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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.

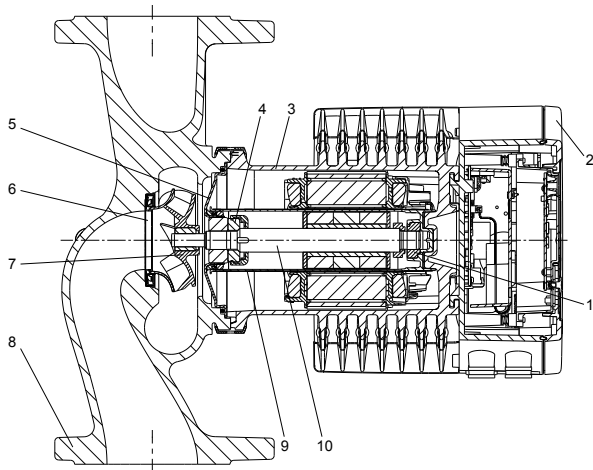
The pump housing of stainless-steel versions is not treated and painted and appears in blank steel. See fig. Stainless-steel version.



Stainless-steel version

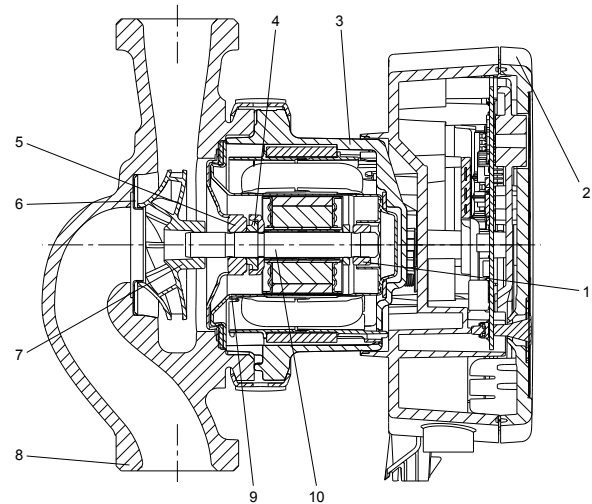
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Sectional drawings



Terminal-connected version with PPS composite rotor can

TM069997



Plug-connected version with stainless-steel rotor can

TM069947

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
Water containing glycol	Maximum viscosity = 10-50 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.

Location

The pump is designed for indoor installation.

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

As the pump contains stainless-steel parts, it is important that it is not installed directly in environments, such as:

- Indoor swimming pools where the pump would be exposed to the ambient environment of the pool.
- Locations with direct and continuous exposure to a marine atmosphere.
- In rooms where hydrochloric acid (HCl) can form acidic aerosols escaping from, for example, open tanks or frequently opened or vented containers.

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

Stainless-steel variants of MAGNA1 can be used to pump pool water. See Pumped liquids, page Pumped liquids.

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

- Position the pump in such a way that sufficient cooling is ensured.
- The ambient temperature must not exceed 40 °C.

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.

Ambient conditions

Ambient temperature during operation	0-40 °C
Ambient temperature during storage and transport	-40 to 70 °C
Relative humidity	Maximum 95 %

Ambient temperatures below 0 °C require the following conditions:

- The media temperature is +5 °C.
- The media contains glycol.
- The pump runs continuously and does not stop.
- For twin-head pumps cascade operation every 24 h is mandatory.

Maximum 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.

Minimum 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.

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

Single-head pumps DN	Liquid temperatures		
	75 °C	95 °C	110 °C
	Inlet pressure [bar] / [MPa]		
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

In the case of manual synchronous operation, the required relative inlet pressure must be increased by 0.1 bar or 0.01 MPa compared to the stated values for single-head pumps or twin-head pumps in single-head operation.

Note: The actual inlet pressure plus pump pressure against a closed valve must be lower than the maximum permissible system pressure.

The relative minimum inlet pressures apply to pumps installed up to 300 metres above sea level. For altitudes above 300 metres, the required relative inlet pressure must be increased by 0.01 bar or 0.001 MPa per 100 metres altitude. The pump is only approved for an altitude of 2000 metres above sea level.

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	

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.

Pumped liquids

The pump is suitable for thin, clean, non-aggressive liquids, not containing solid particles or fibres that may attack the pump mechanically or chemically.

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.

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

Do not use the pump for flammable, combustible or explosive liquids, such as diesel oil and petrol.

Do not use the pump for aggressive liquids, such as acids and seawater.

If the pump is not used during periods of frost, take the necessary steps to prevent frost bursts.

Additives with a density or kinematic viscosity higher than that of water will reduce the hydraulic performance.

Do not use additives that in any way can or will disturb the functionality of the pump.

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.

You can use the pump for pumping water or glycol mixtures up to 50 %. See section General recommendations on page General recommendations.

The pumping of glycol mixtures reduces the hydraulic performance.

Related information

General recommendations

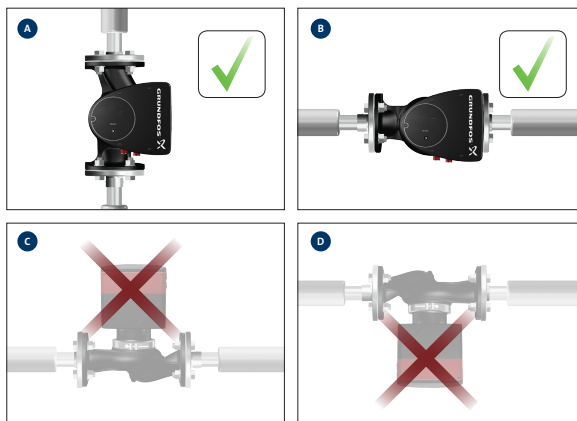
Electrical data

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	$I_{leakage} < 3.5$ 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

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.



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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.



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net.grundfos.com/qri/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

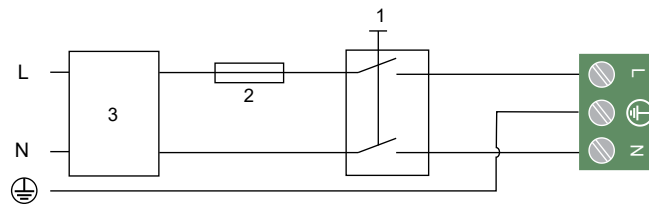
Plug-connected versions

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.

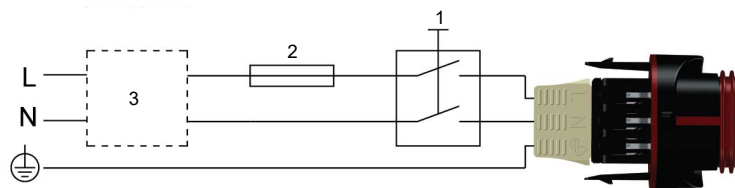
Wiring diagrams



TM032397

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

Pos.	Description
1	External switch
2	Fuse
3	RCD

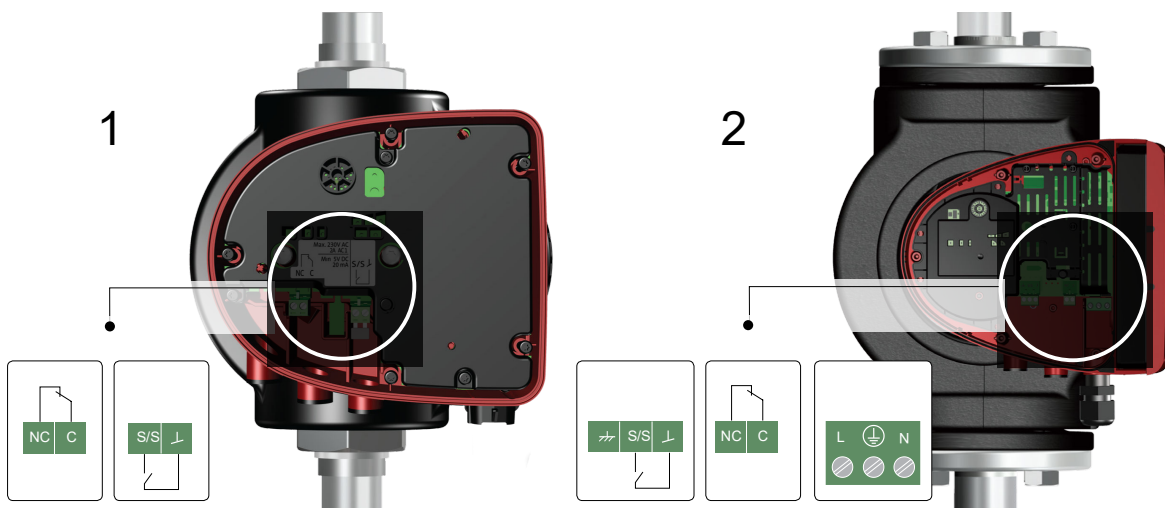


TM055277

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

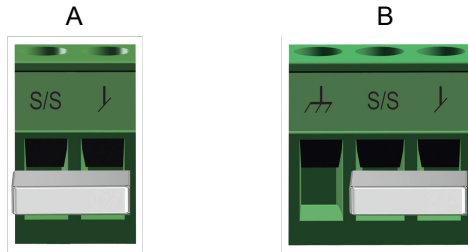
External control connections in the control box

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 wire-break.

For more information on communication, see section External control and monitoring.

Related information

External control and monitoring

TM079310

TM079311

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		•	Twin-head pump function
External control and monitoring			
Digital input		•	External control and monitoring
Relay output		•	
Communication			
Grundfos GO Remote		•	Grundfos GO Remote

Related information

Twin-head pump function

External control and monitoring

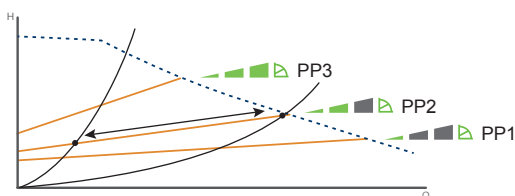
Grundfos GO Remote

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

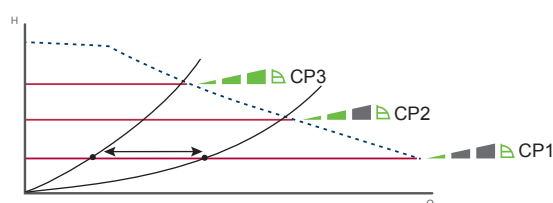
Three proportional-pressure curves or settings

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

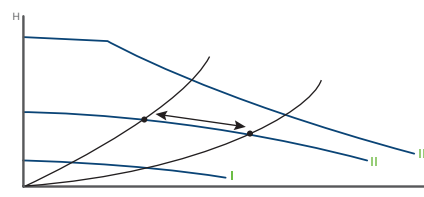
Three constant-pressure curves or settings

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.

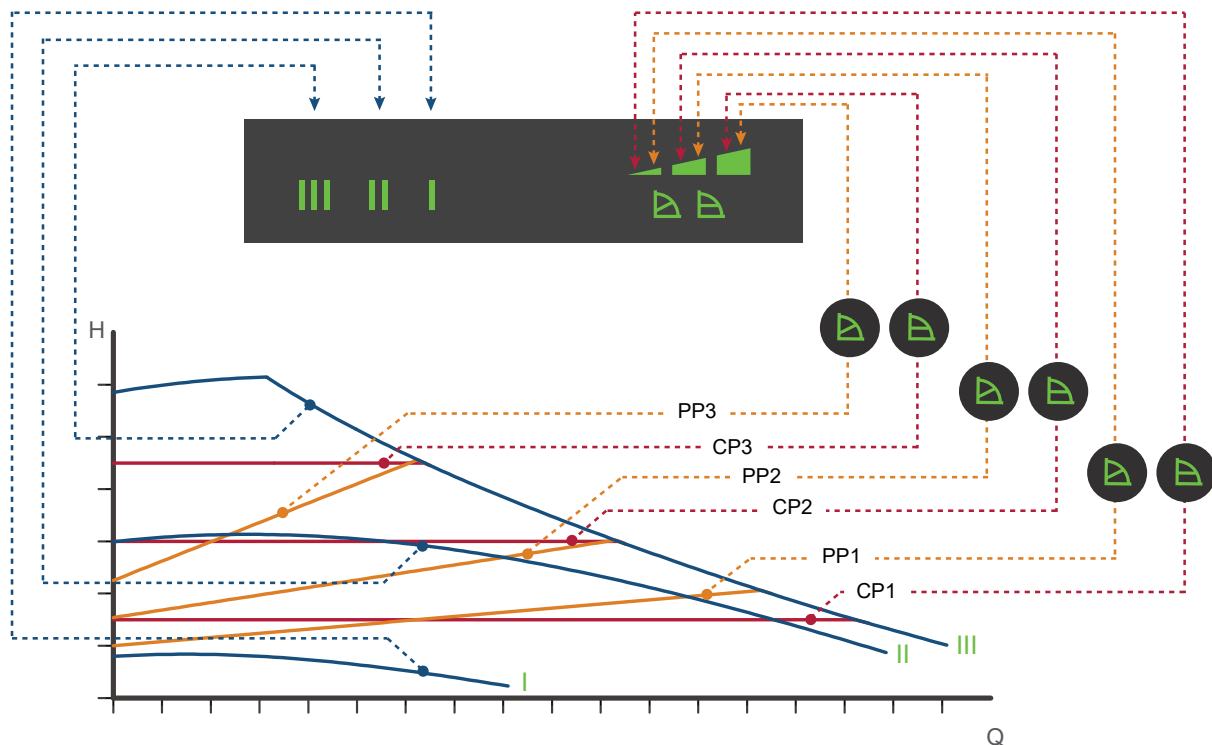


TM05557

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.

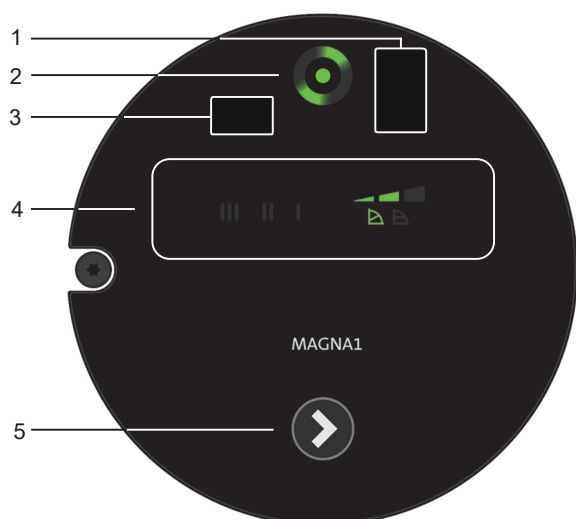
Selecting control mode

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>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>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>

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). 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 Remote

MAGNA1 single-head pumps are designed for infrared communication (IR) with Grundfos GO Remote, while MAGNA1 twin-head pumps can also communicate via radio.

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.

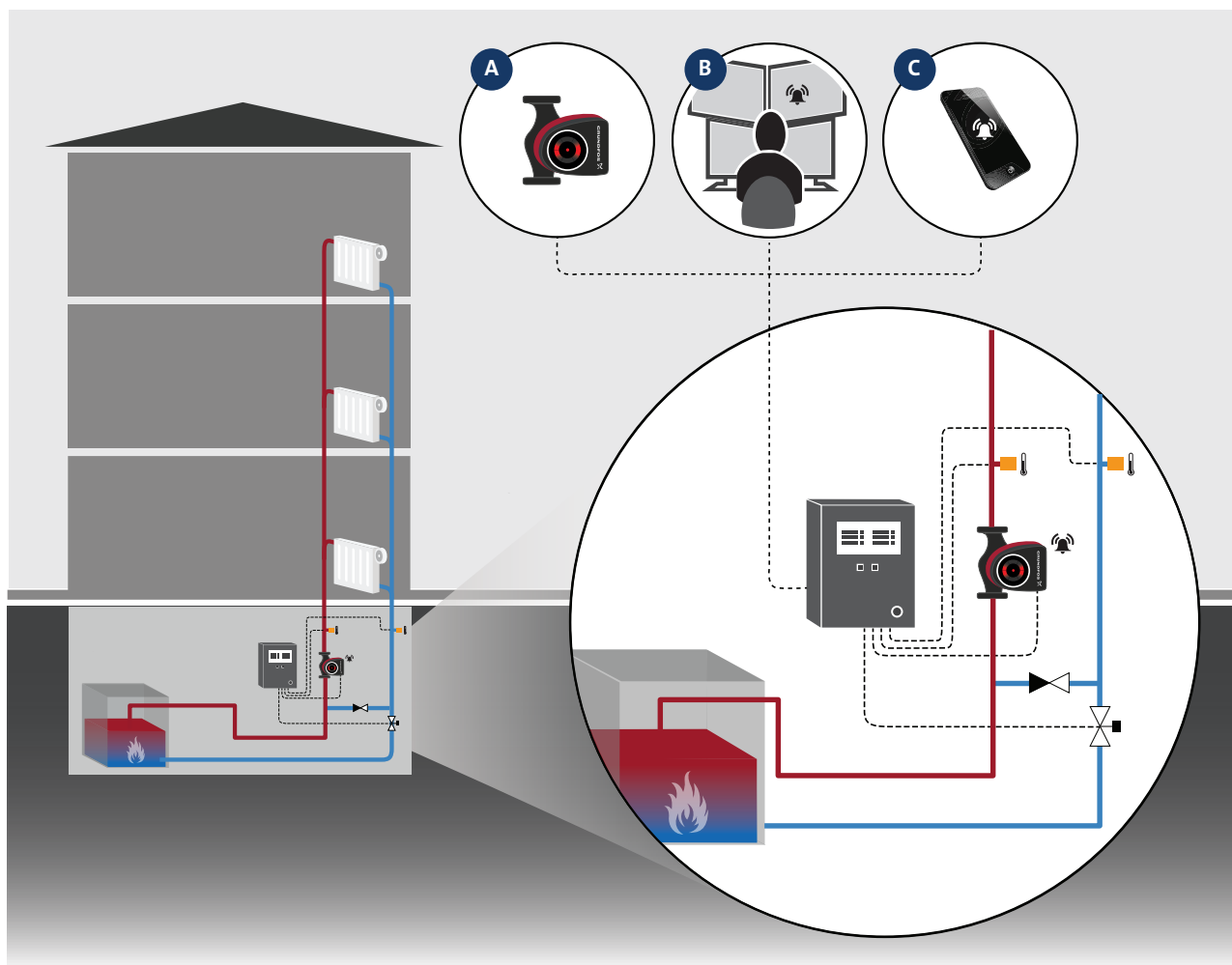
For further information, see section External control and monitoring.

Related information

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

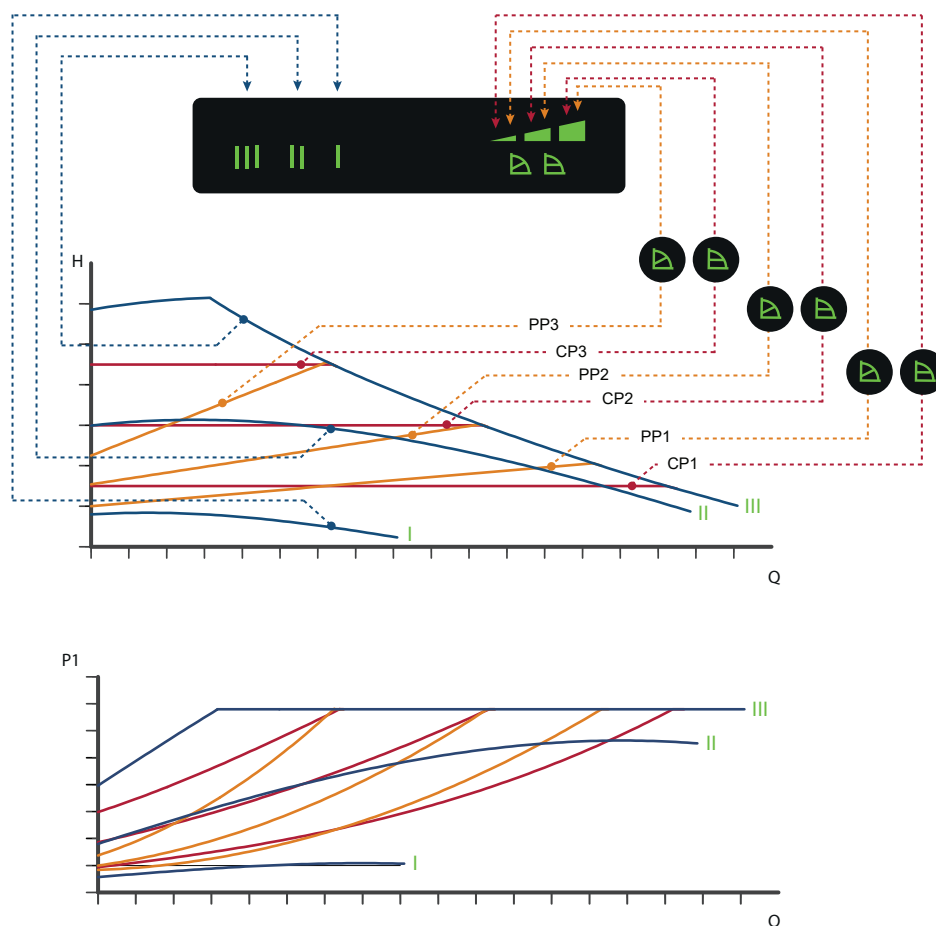
Digital input

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.



TM052778_3617

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.

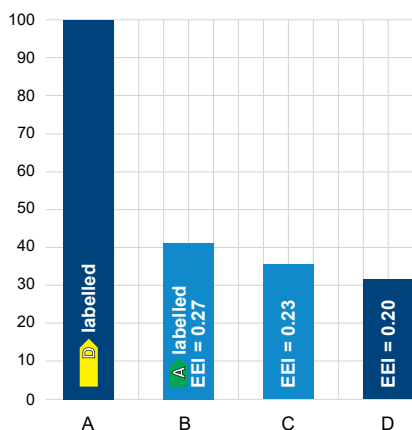
- Test liquid: airless water.
- The curves apply to a density of $\rho = 998.2 \text{ kg/m}^3$ and a liquid temperature of $20 \text{ }^\circ\text{C}$.
- All curves show average values and must not be used as guarantee curves. If a specific minimum performance is required, make individual measurements.
- 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

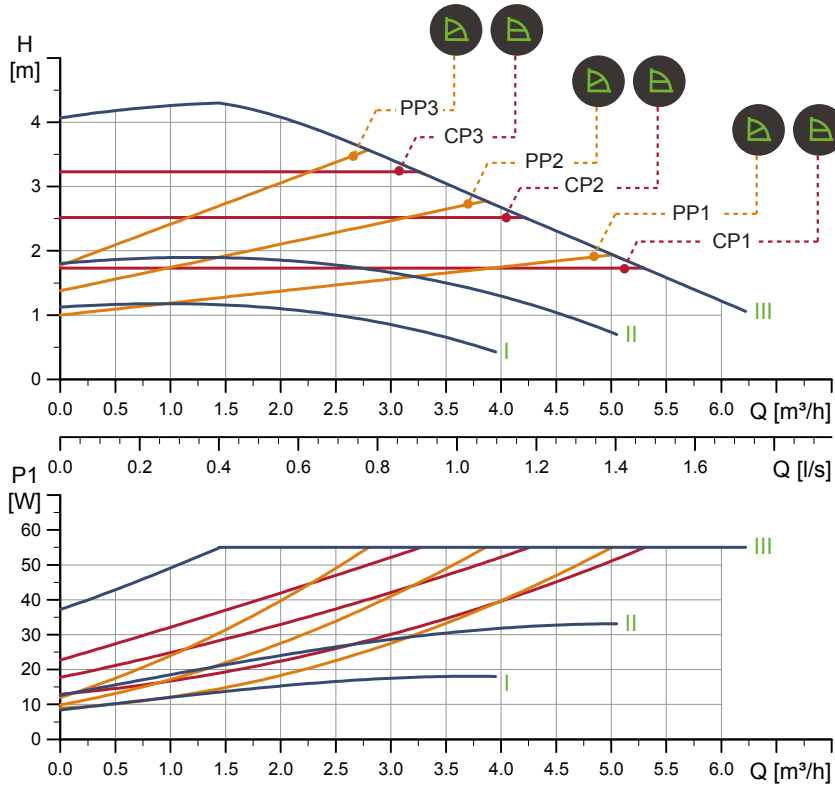
Markings and approvals

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 wheeled 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

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



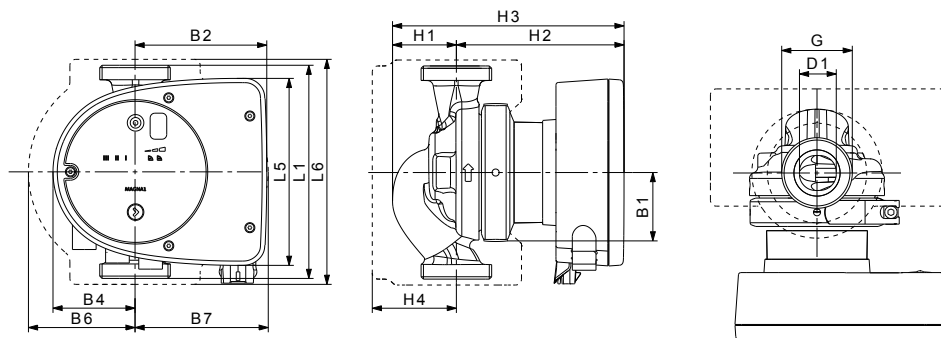
TM056316

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. [m³]
4.4	5.4	0.012

Connections:	See section 8.5 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.

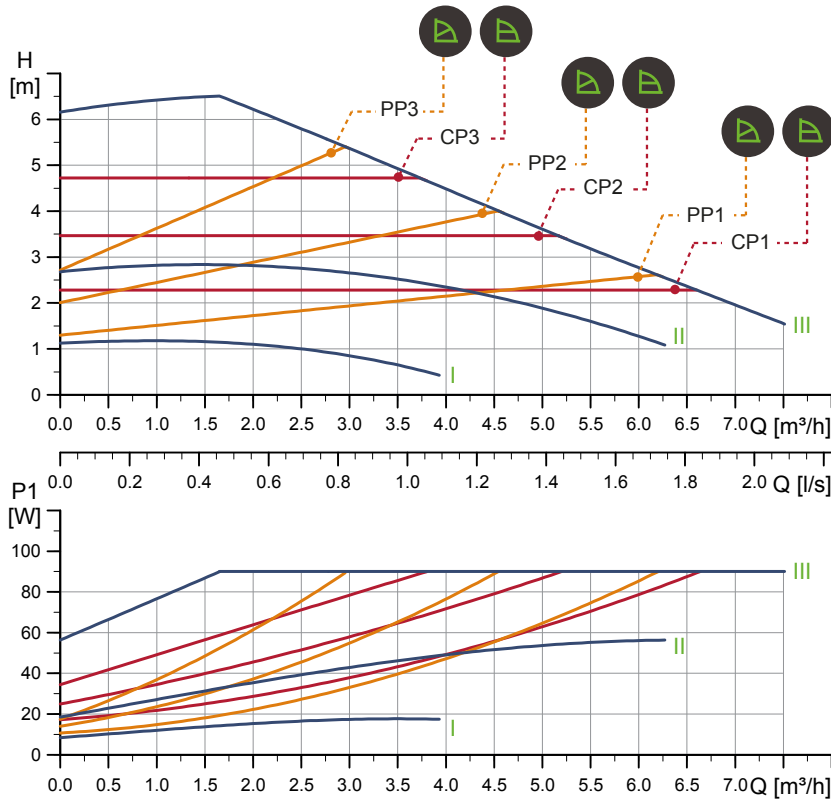


TM069948

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

For product numbers, see page section Product numbers.

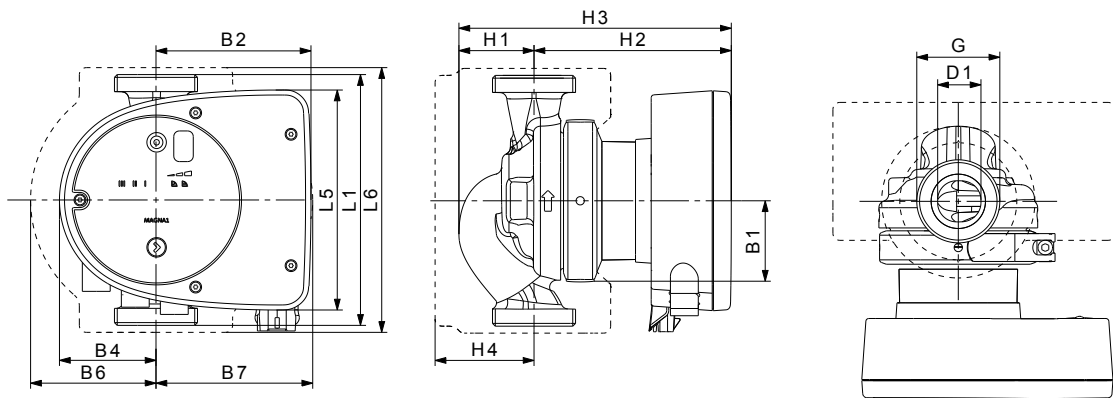
■ MAGNA1 25-60 (N) PN 10
1 × 230 V, 50/60 Hz



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 8.5 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.



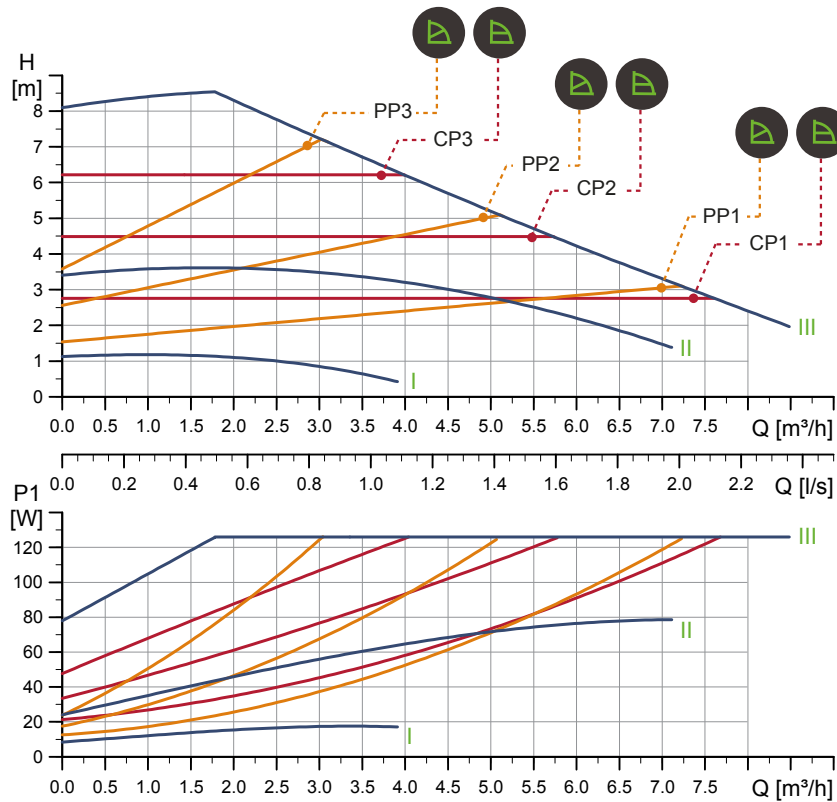
TM069948

Pump type	Dimensions [mm]													[inch]
	L1	L5	L6	B1	B2	B4	B6	B7	H1	H2	H3	H4	D1	G
MAGNA1 25-60 (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

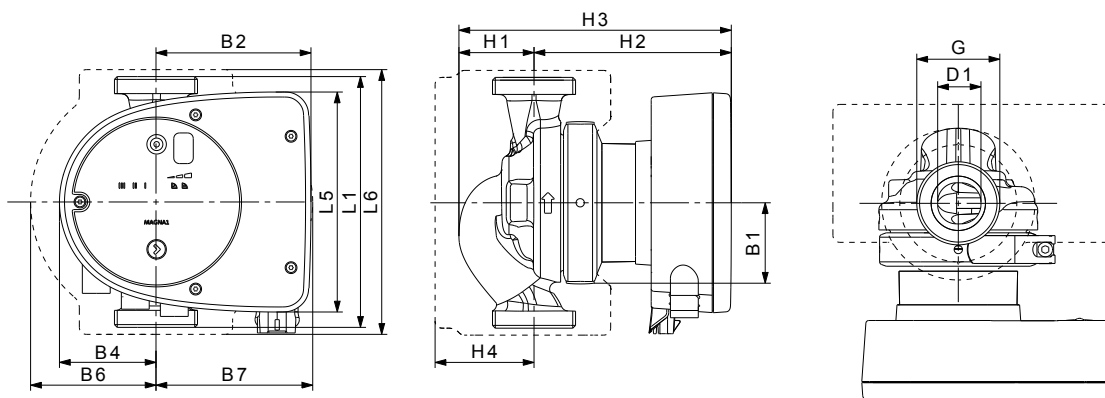
Connections: See section 8.5 Pipe connections.

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.

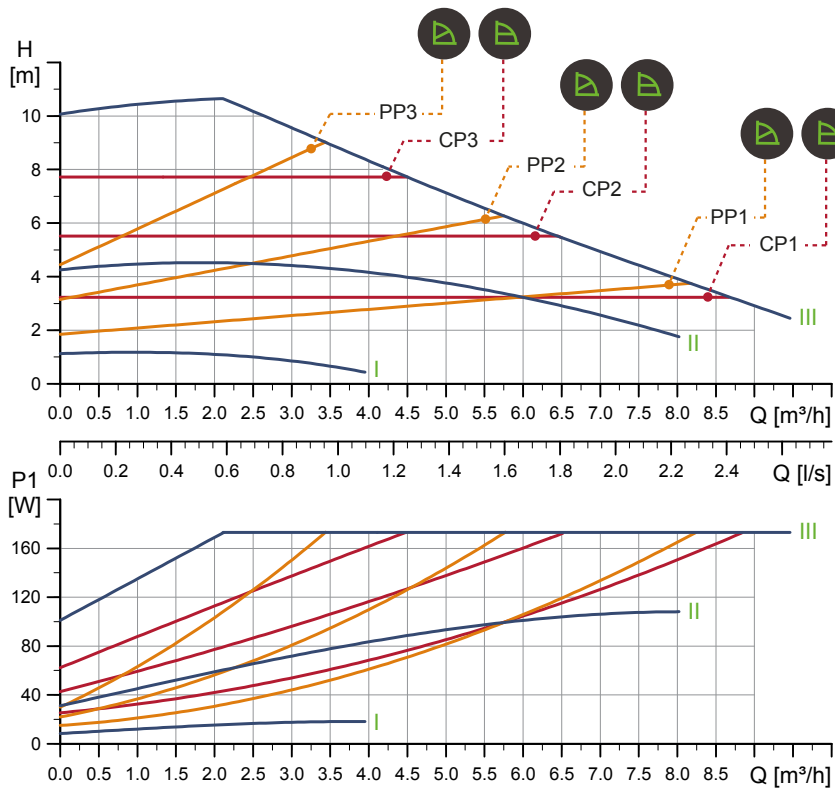


TM069948

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



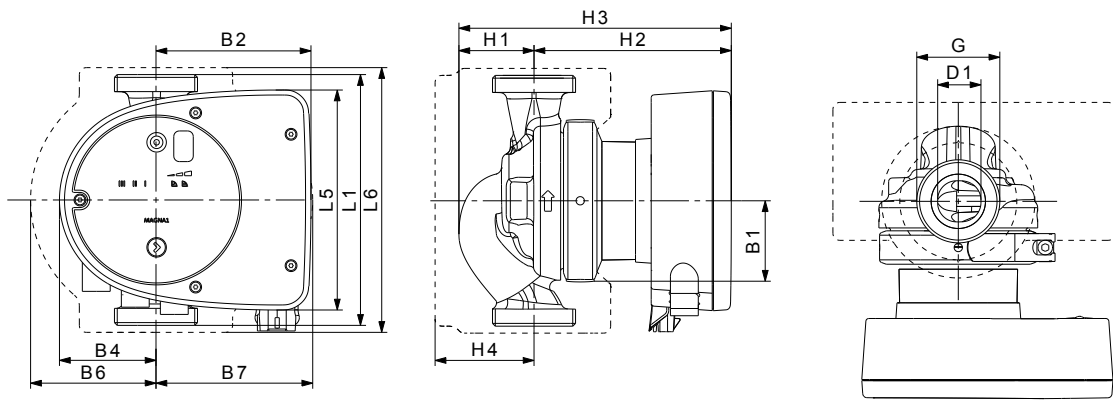
TM056322

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. [m ³]
4.4	5.4	0.012

Connections:	See section 8.5 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.

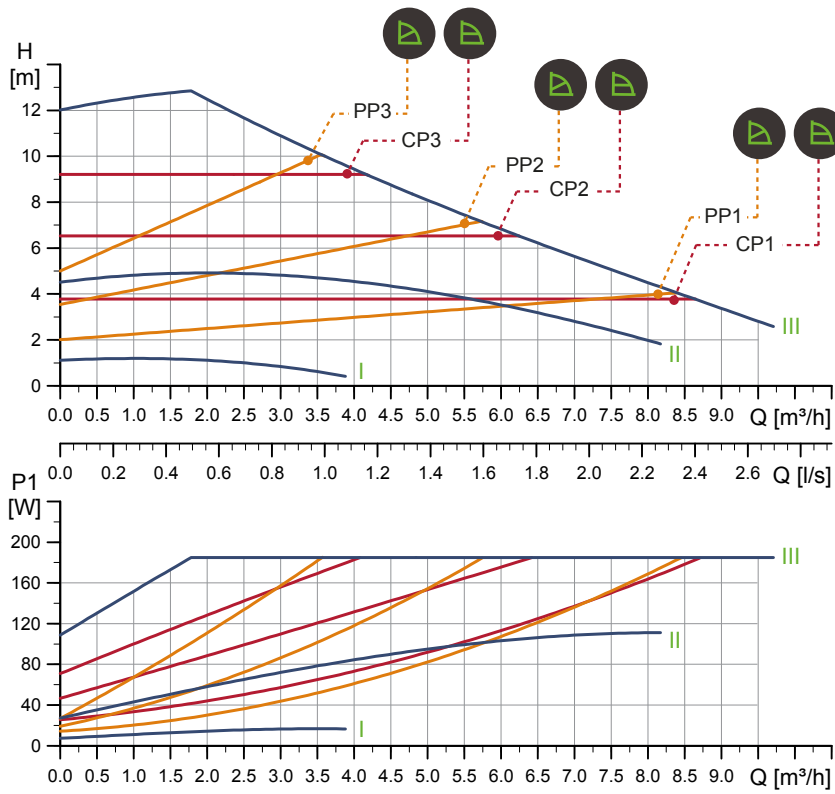


TM069948

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

For product numbers, see section Product numbers.

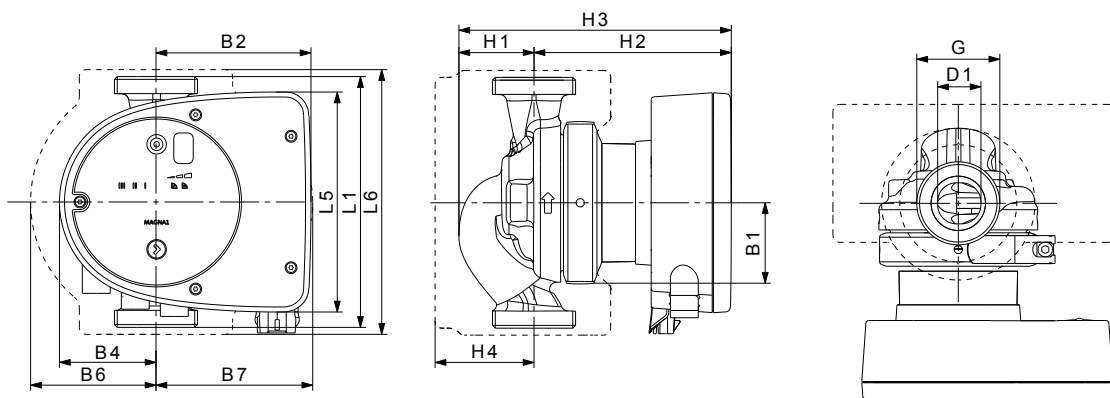
■ MAGNA1 25-120 (N) PN 10
1 × 230 V, 50/60 Hz



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 8.5 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.

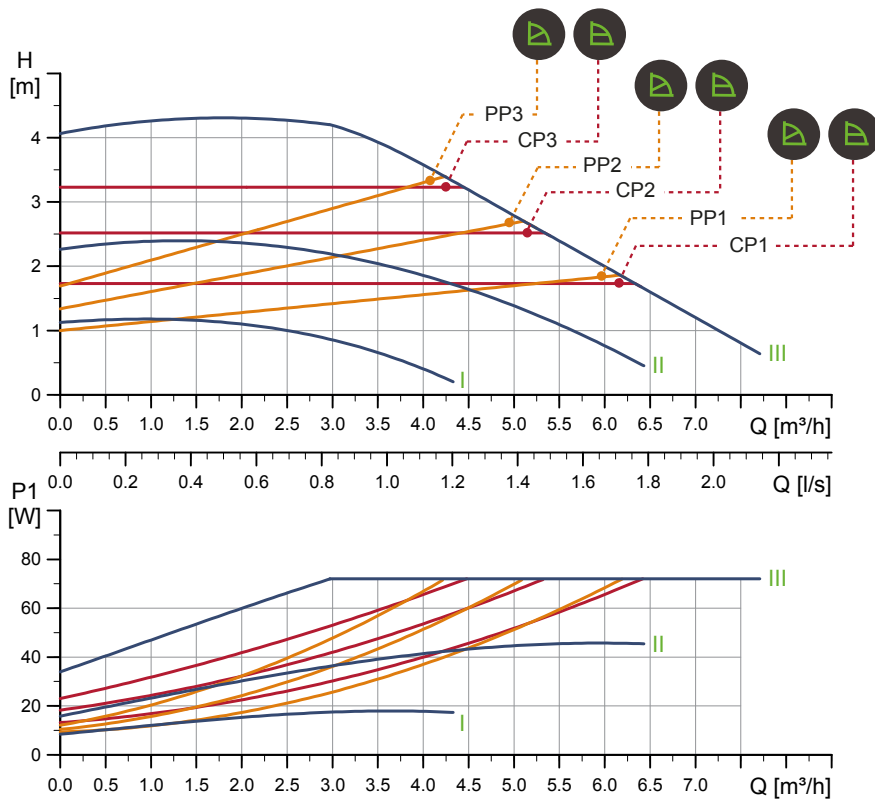


TM069948

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



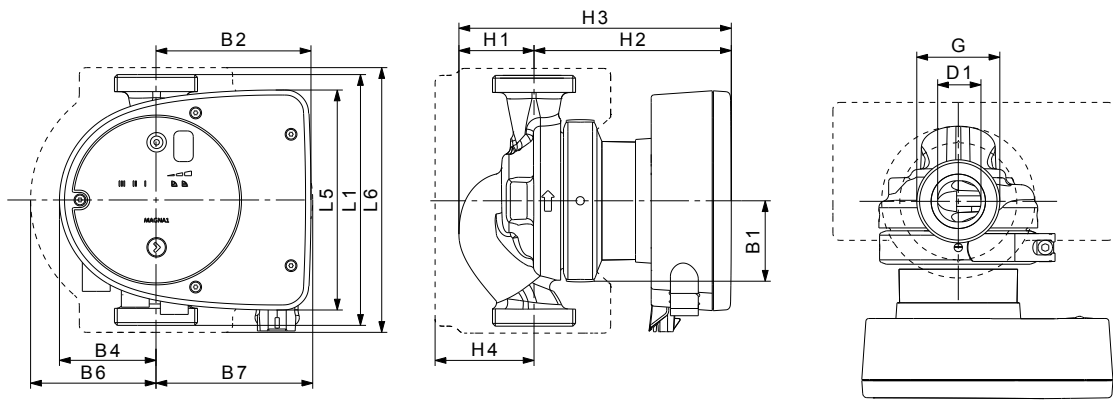
TM056325

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. [m ³]
4.4	5.4	0.012

Connections:	See section 8.5 <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.



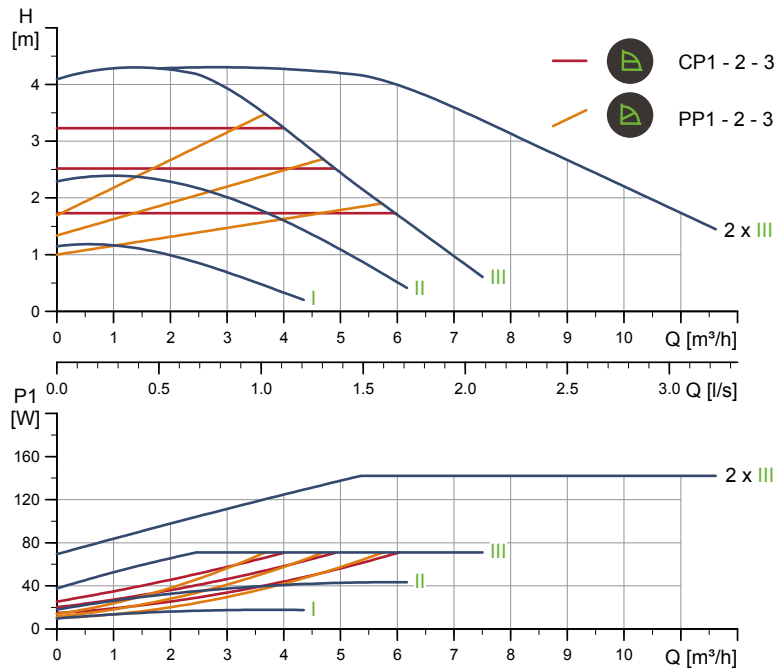
TM069948

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



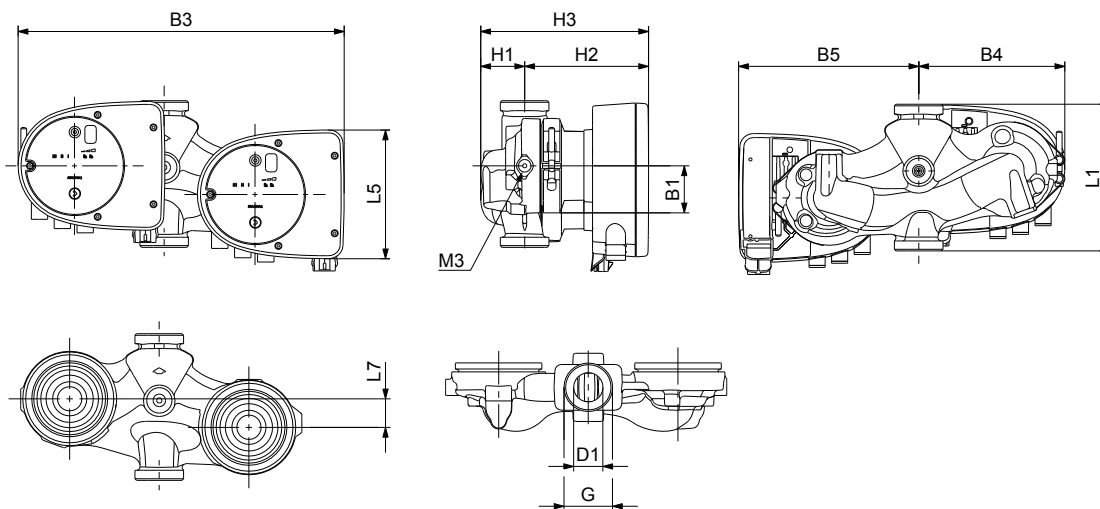
TM056363

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

The pump incorporates overload protection.

Connections:	See section 8.5 <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]
12.4	13.4	0.045

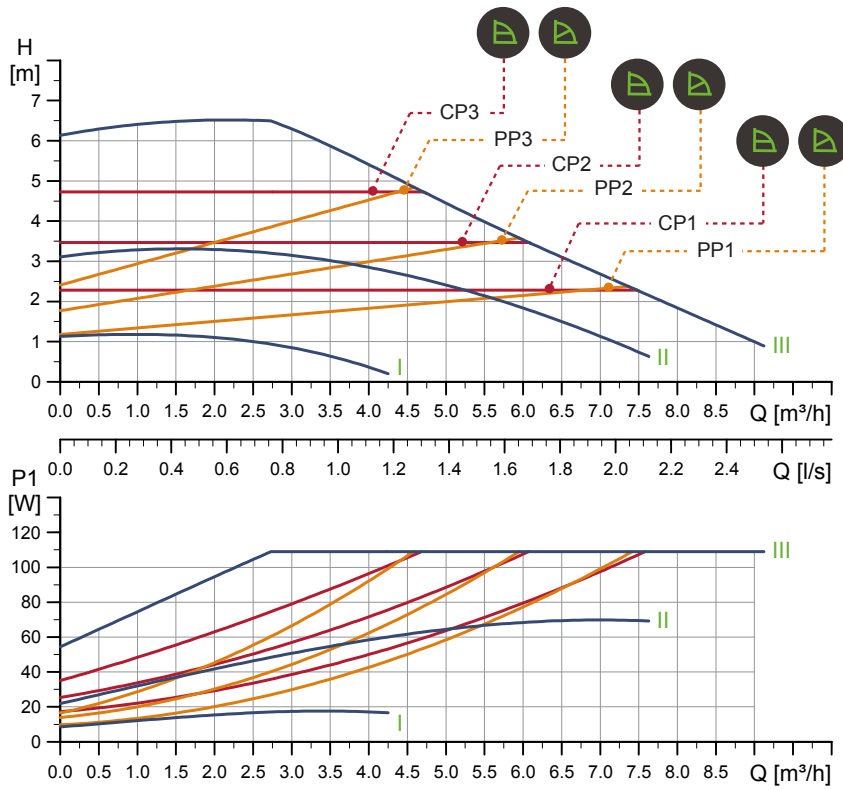


TM070068

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



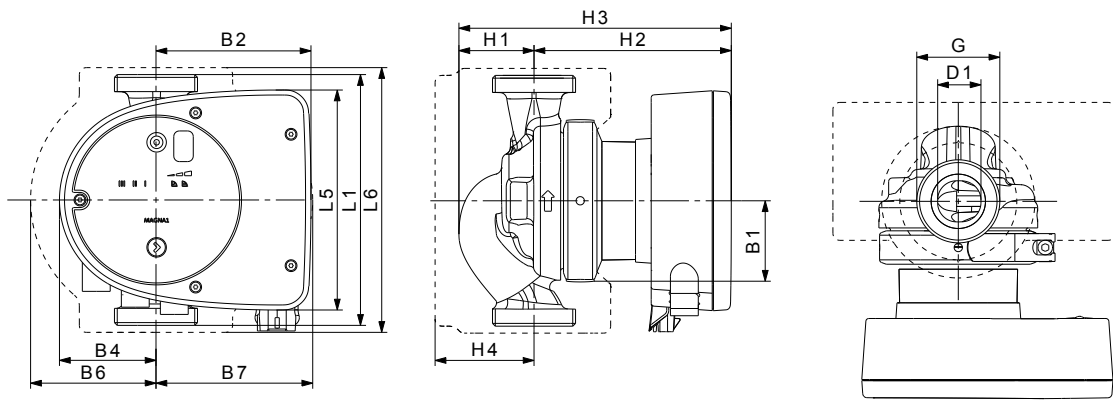
TM056327

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. [m ³]
4.4	5.4	0.012

Connections:	See section 8.5 <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.



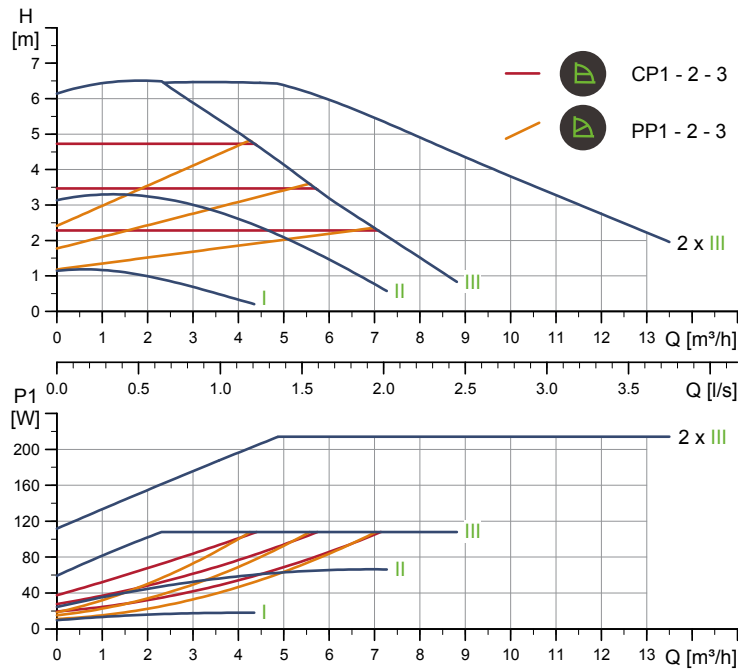
TM069948

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



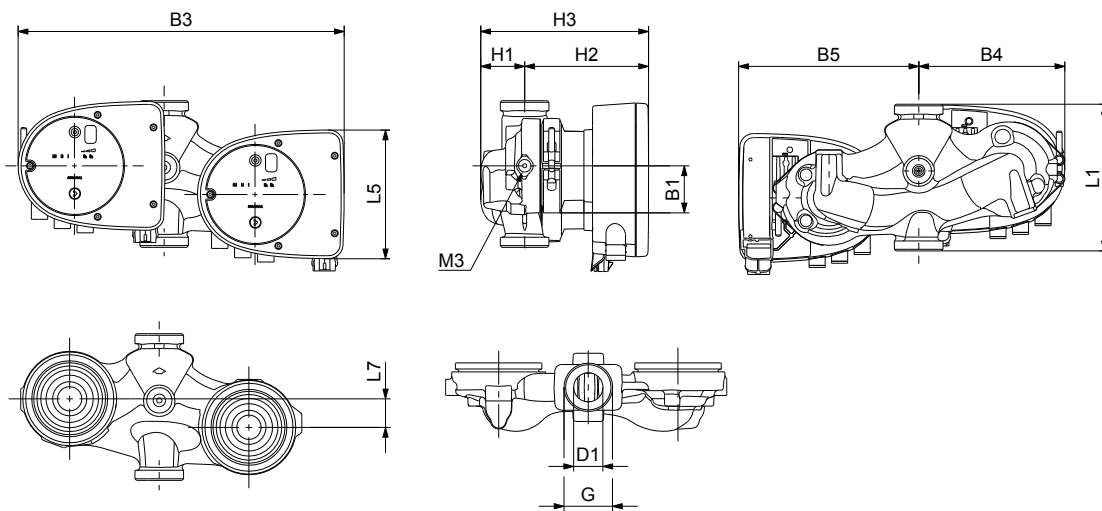
TM056365

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

The pump incorporates overload protection.

Connections:	See section 8.5 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

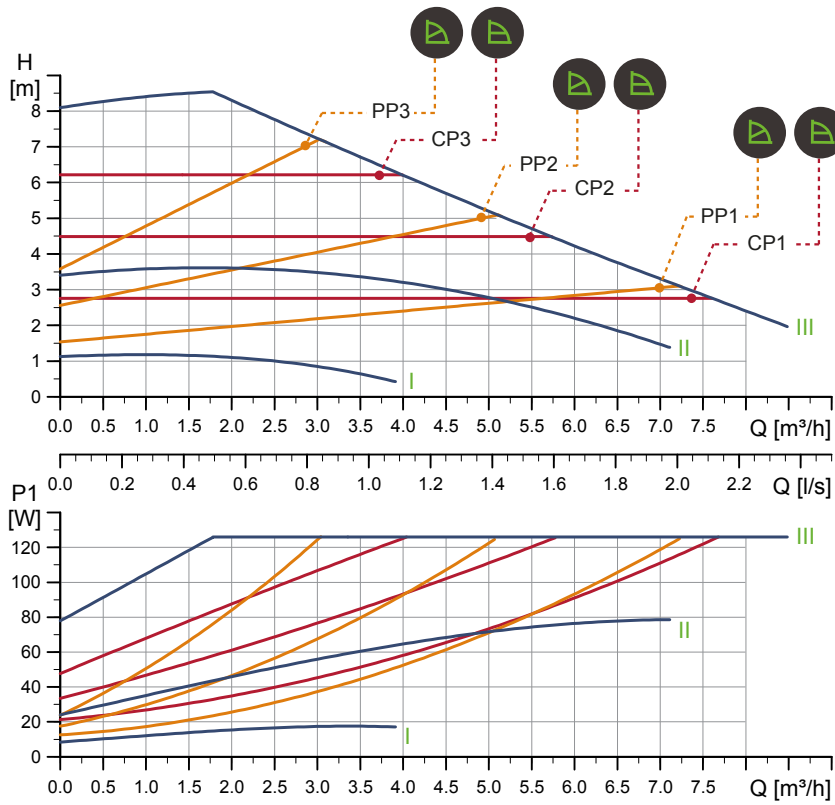


TM070068

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.

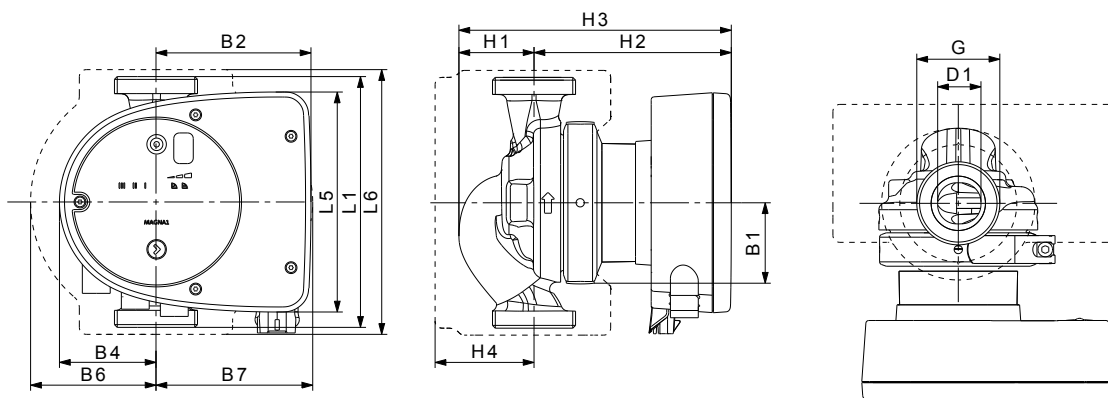
■ MAGNA1 32-80 (N) PN 10
1 × 230 V, 50/60 Hz



TM070563

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]
4.4	5.4	0.012

Connections:	See section 8.5 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.



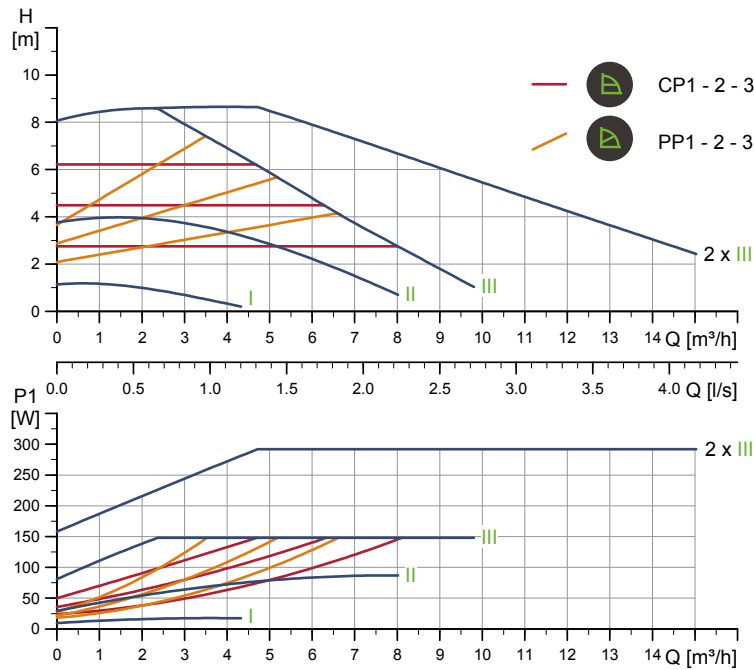
TM069948

Pump type	Dimensions [mm]													[inch]
	L1	L5	L6	B1	B2	B4	B6	B7	H1	H2	H3	H4	D1	G
MAGNA1 32-80 (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



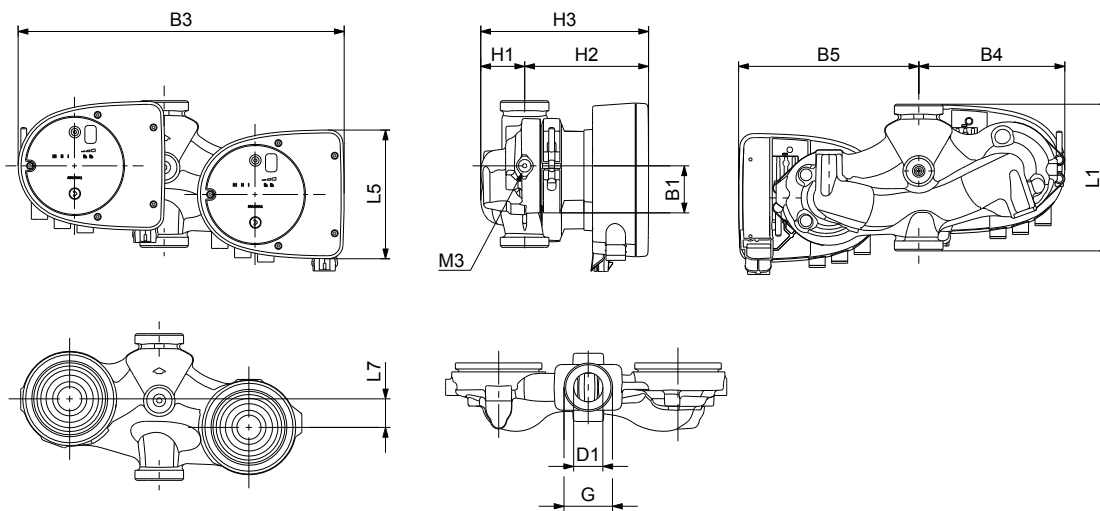
TM056367

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

The pump incorporates overload protection.

Connections:	See section 8.5 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

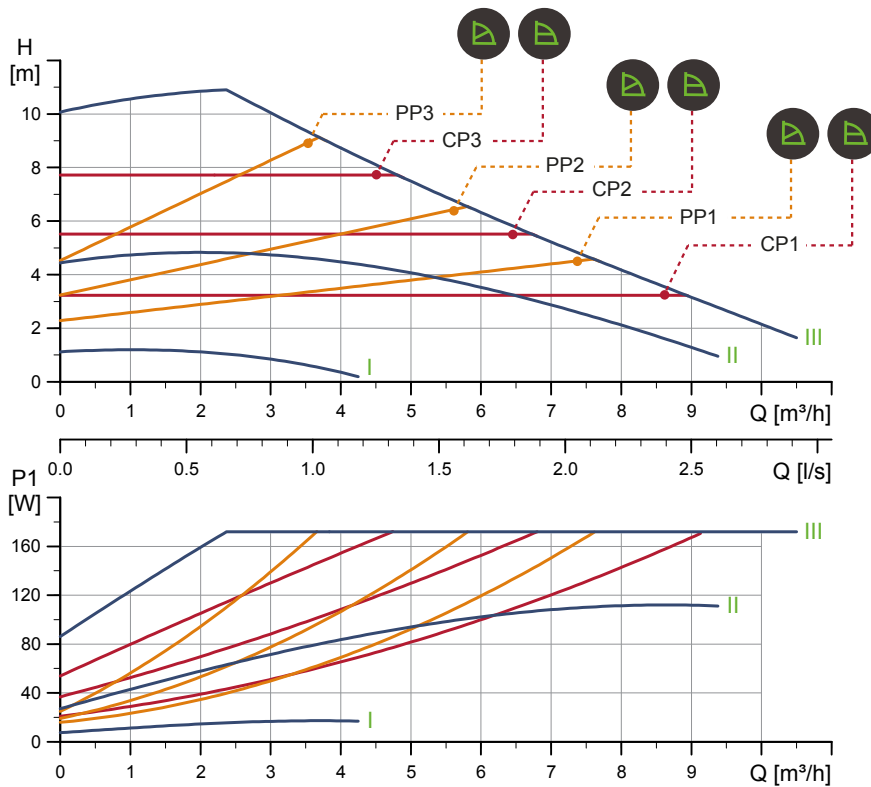


TM070068

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.

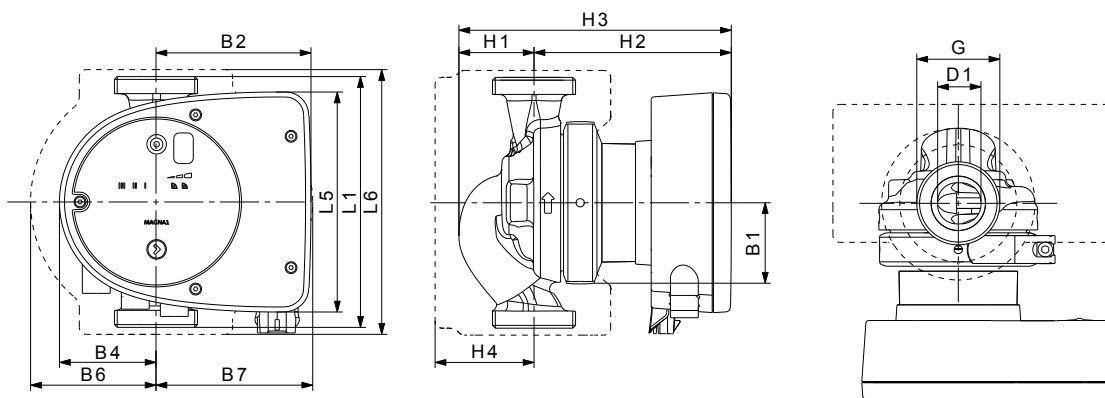
■ MAGNA1 32-100 (N) PN 10
1 × 230 V, 50/60 Hz



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 8.5 <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.



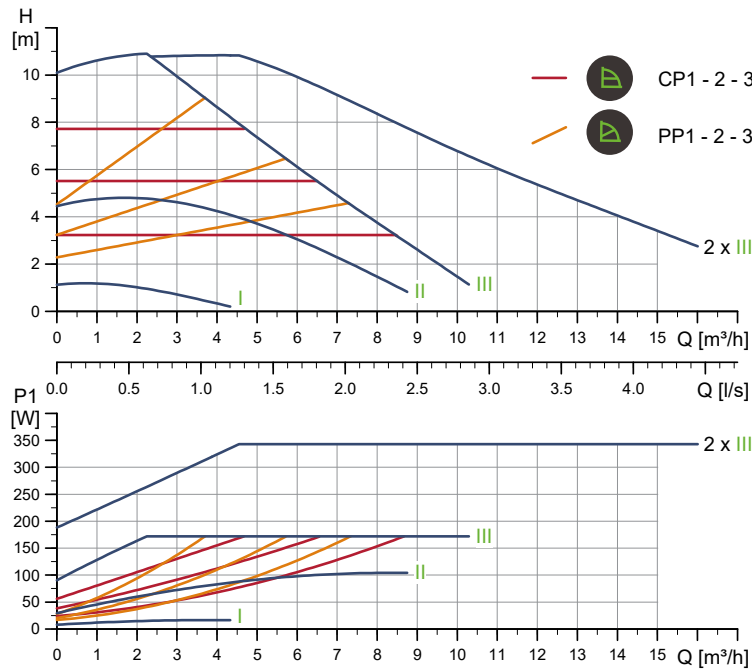
TM069948

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



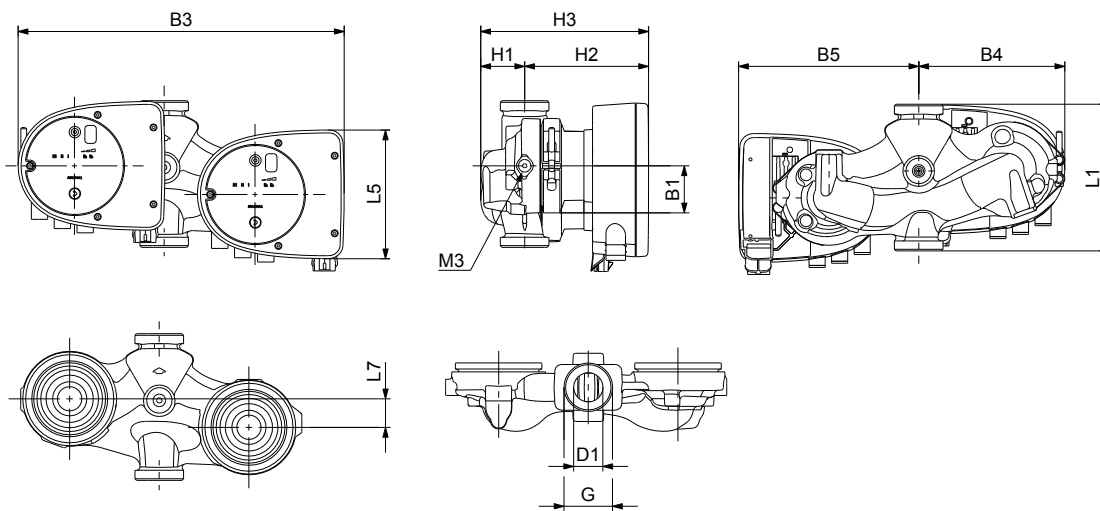
TM056369

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

The pump incorporates overload protection.

Connections:	See section 8.5 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

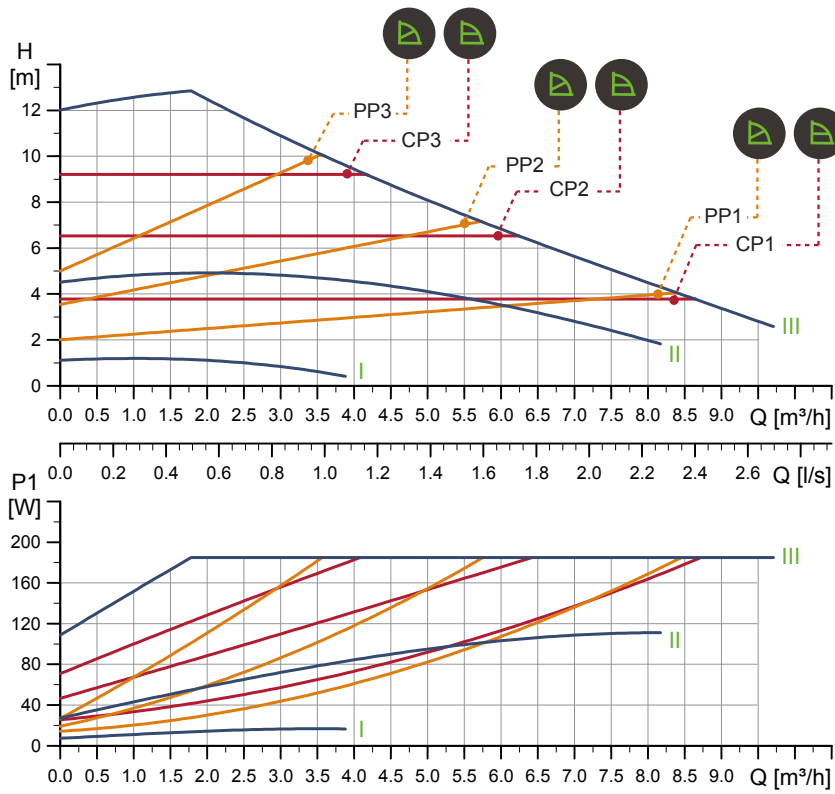


TM070068

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



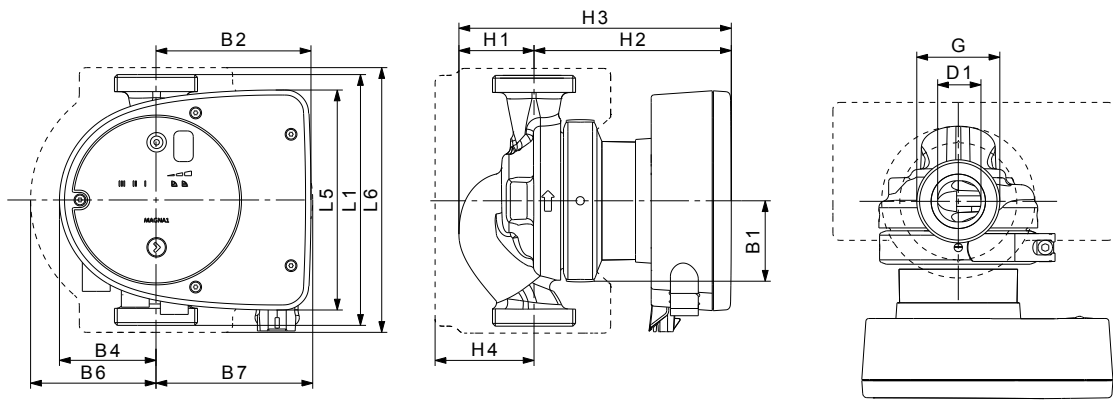
TM056324

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 8.5 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.

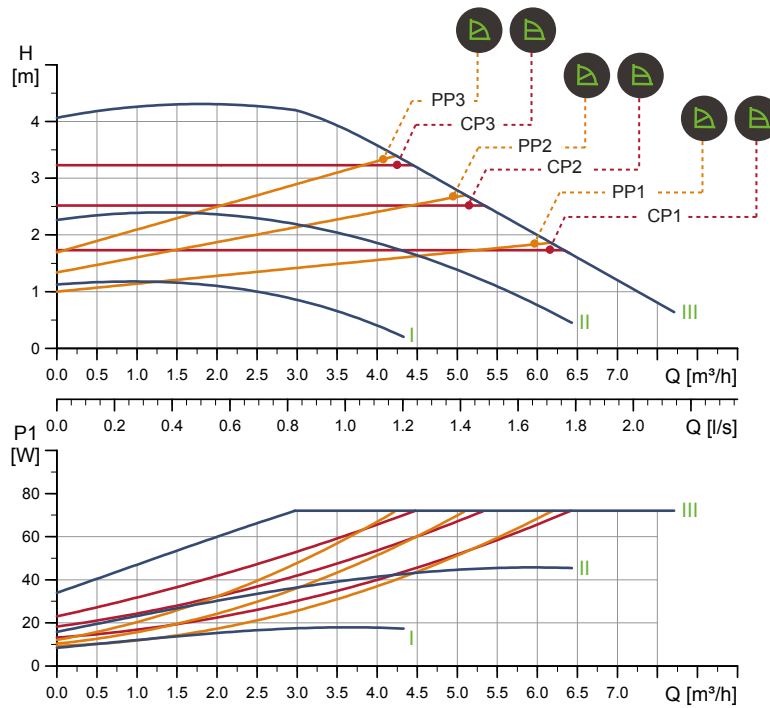


TM069948

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



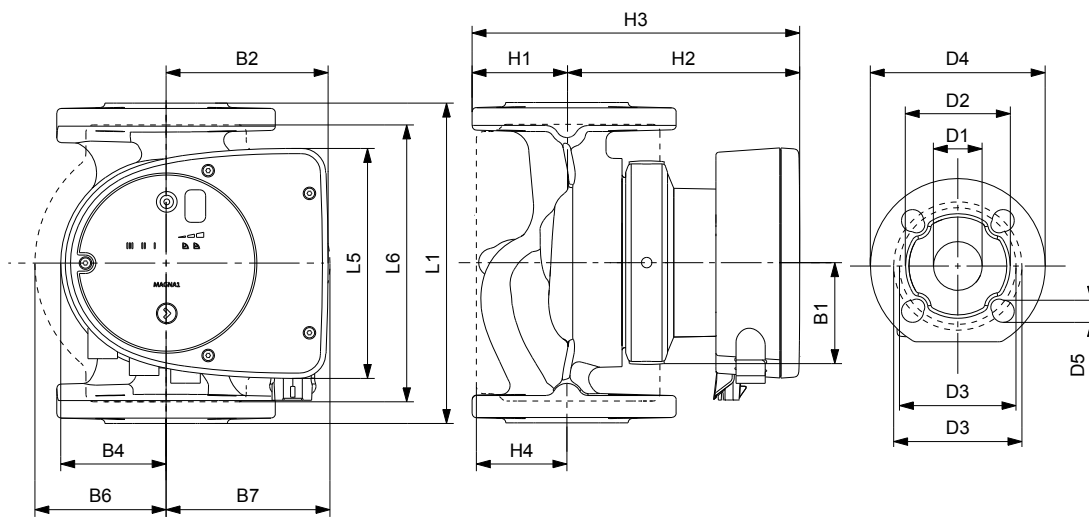
TM056325

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. [m ³]
7.4	8.4	0.016

Connections:	See section 8.5 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.



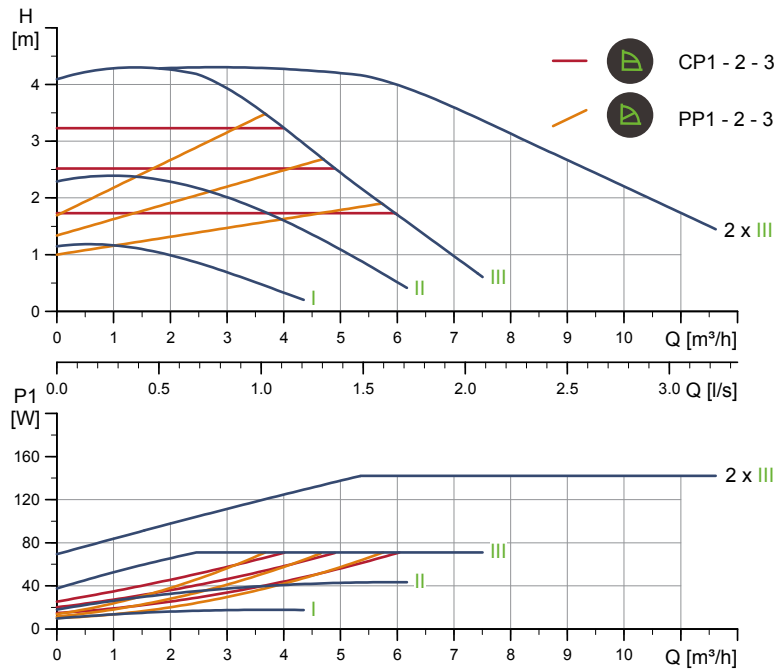
TM070067

Pump type	Dimensions [mm]																
	L1	L5	L6	B1	B2	B4	B6	B7	H1	H2	H3	H4	D1	D2	D3	D4	D5
MAGNA1 32-40 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

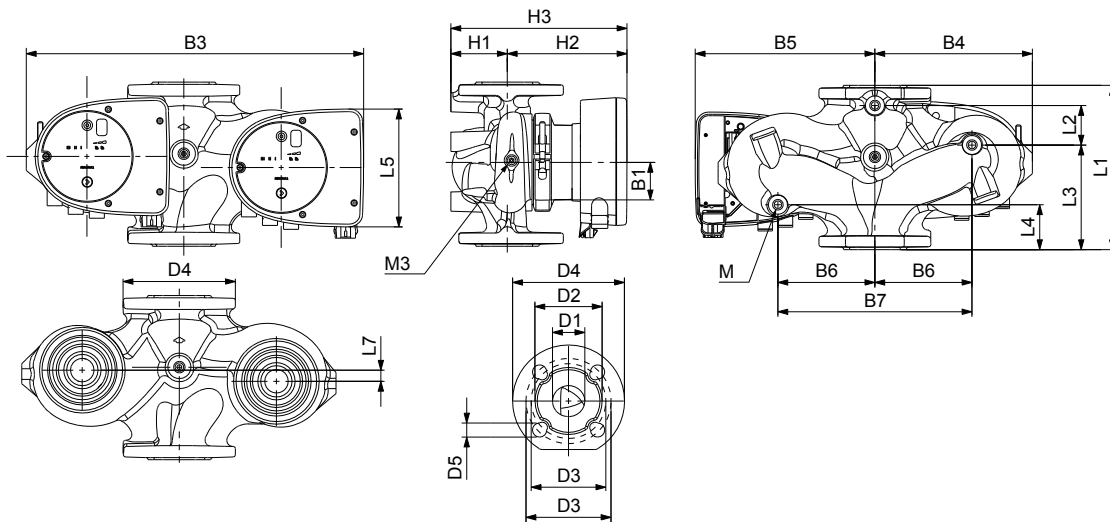
1 × 230 V, 50/60 Hz



TM056363

Speed	P1 [W]	I_{1/1} [A]
Min.	9	0.09
Max.	73	0.59
The pump incorporates overload protection.		
Net weight [kg]	Gross weight [kg]	Ship. vol. [m³]
14.7	15.7	0.045

Connections:	See section 8.5 <i>Pipe connections</i> .
System pressure:	Max. 1.0 MPa (10 bar).
Liquid temperature:	-10 to 110 °C (TF 110).
Specific EEI:	0.23.



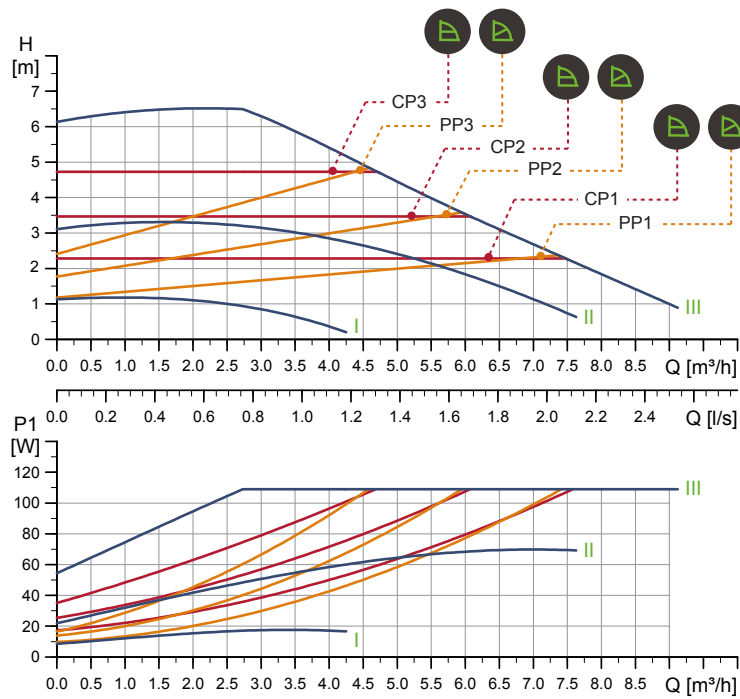
TM070069

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



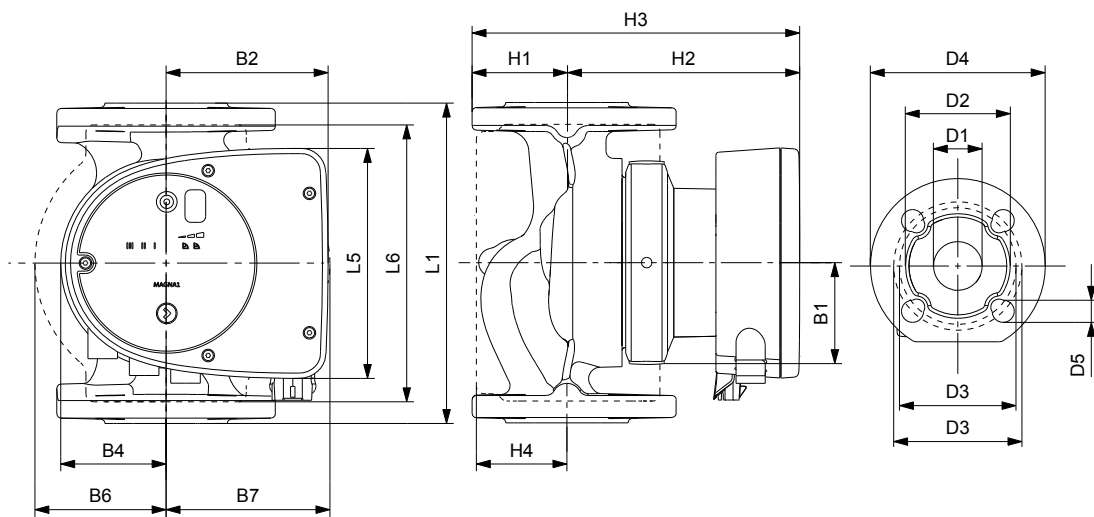
TM056327

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. [m ³]
7.4	8.4	0.016

Connections:	See section 8.5 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.



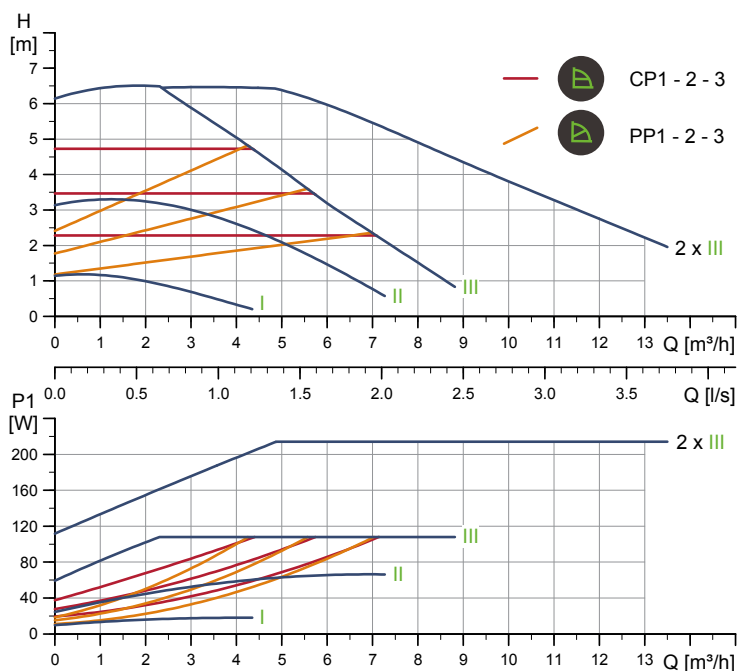
TM070067

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



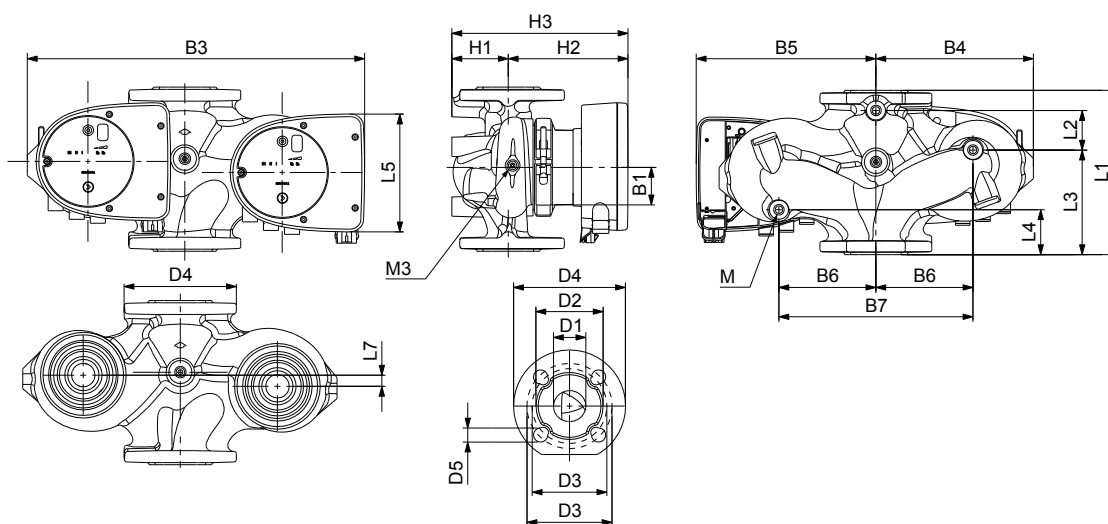
TM056365

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

The pump incorporates overload protection.

Connections:	See section 8.5 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



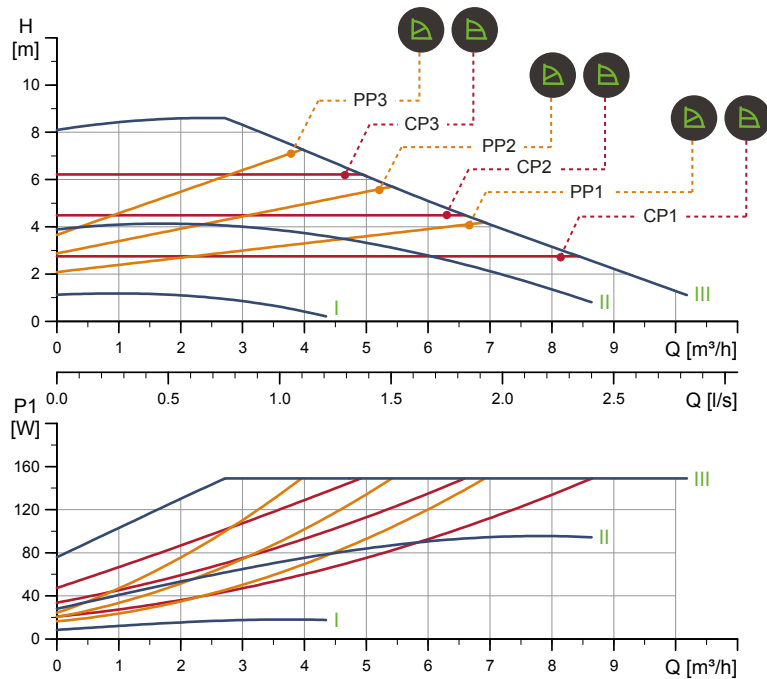
TM070069

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 32-60 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



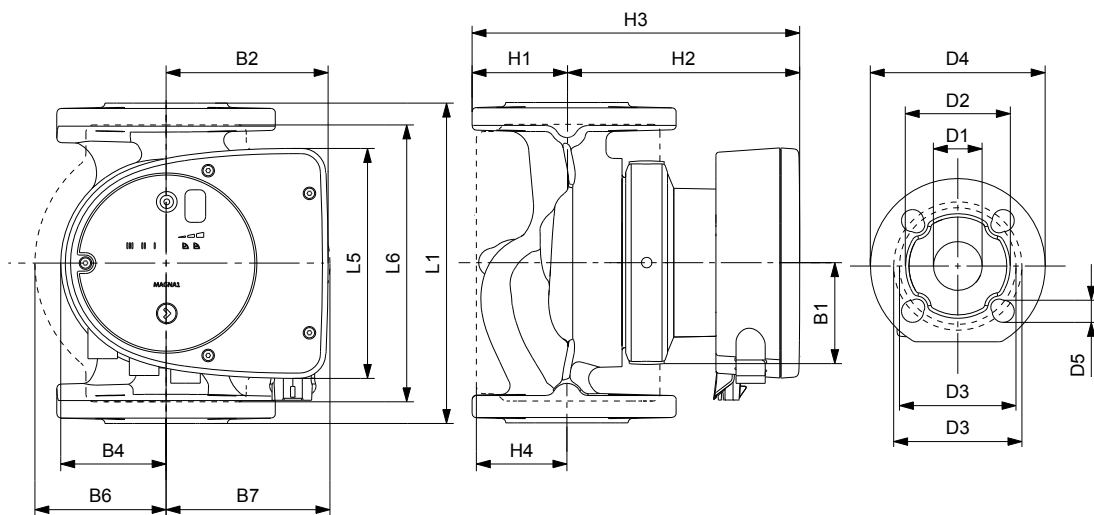
TM070564

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. [m ³]
7.4	8.4	0.016

Connections:	See section 8.5 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.



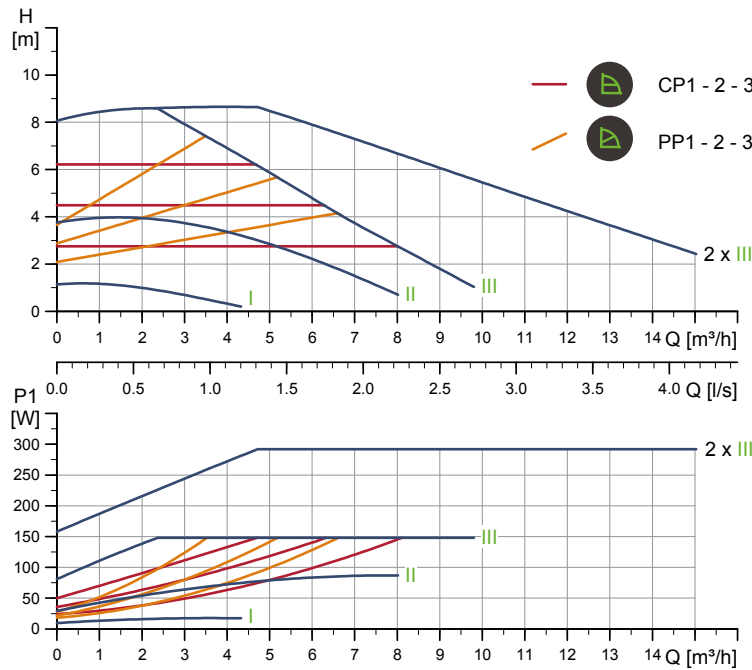
TM070667

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



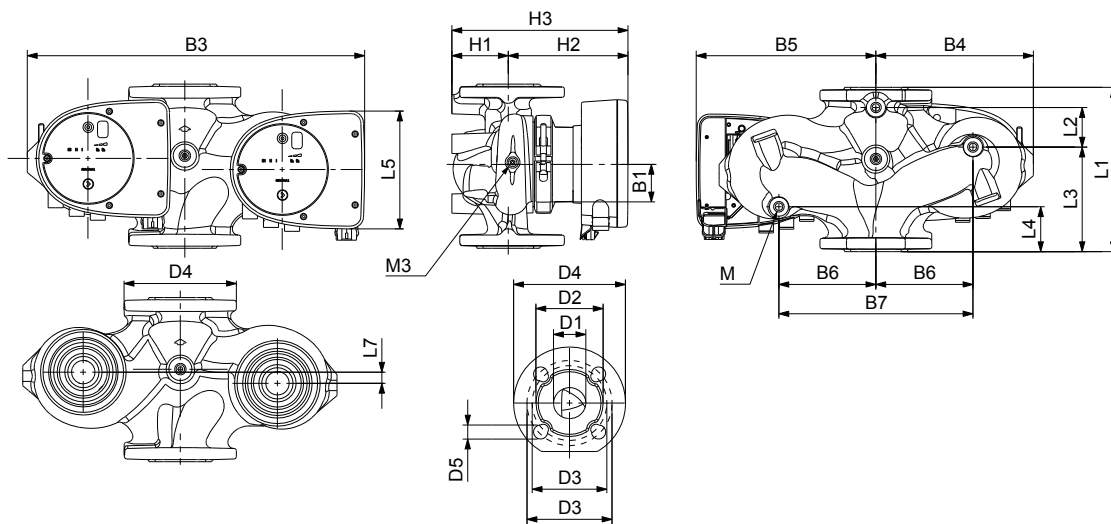
TM056367

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

The pump incorporates overload protection.

Connections:	See section 8.5 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. [m ³]
14.7	15.7	0.045

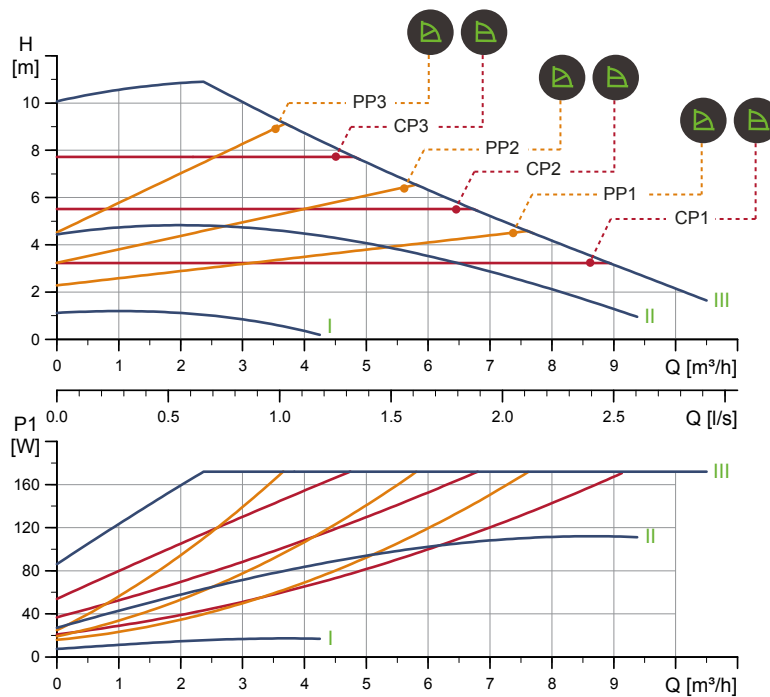


TM070069

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 32-80 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



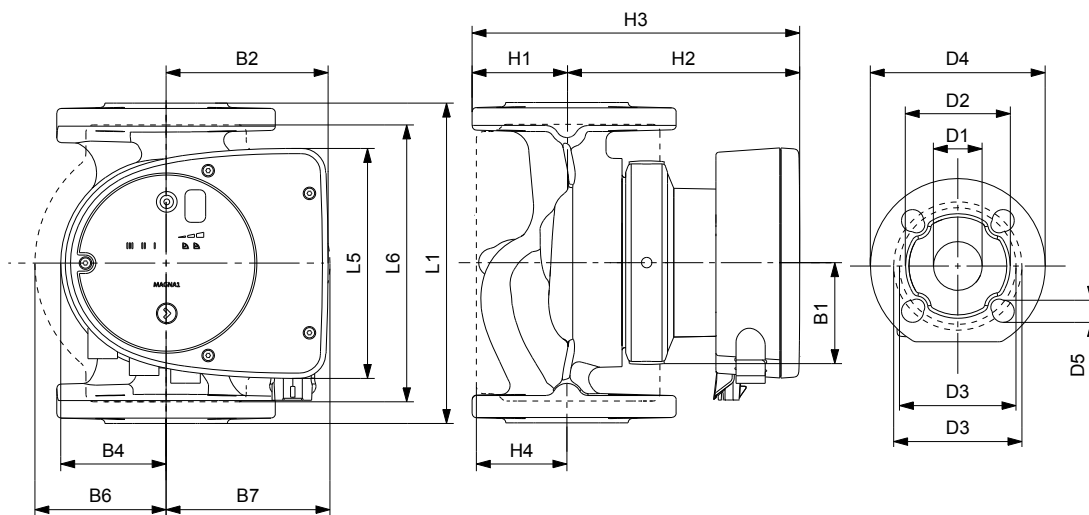
TM056331

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. [m ³]
7.4	8.4	0.016

Connections:	See section 8.5 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.



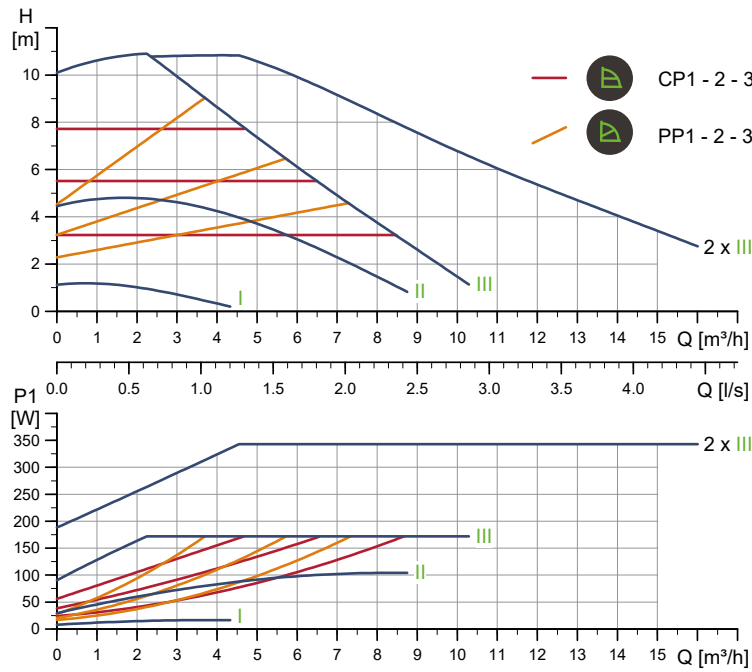
TM070067

Pump type	Dimensions [mm]																
	L1	L5	L6	B1	B2	B4	B6	B7	H1	H2	H3	H4	D1	D2	D3	D4	D5
MAGNA1 32-100 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



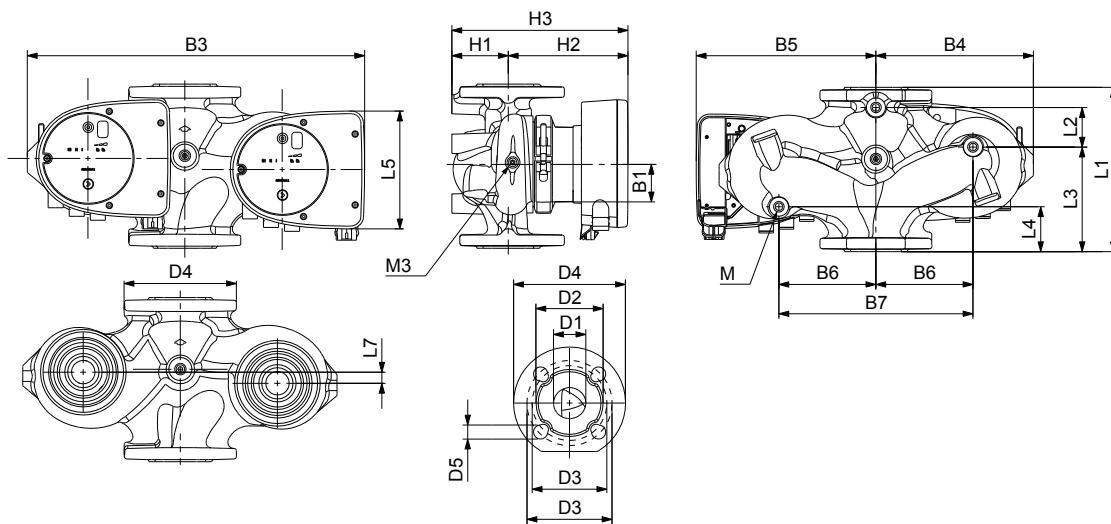
TM056369

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

The pump incorporates overload protection.

Connections:	See section 8.5 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

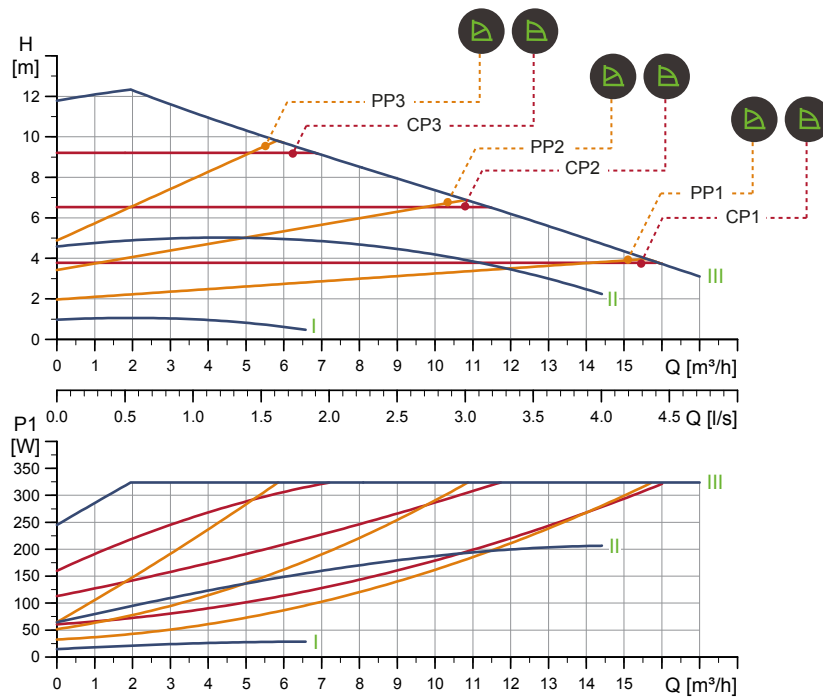


TM070069

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



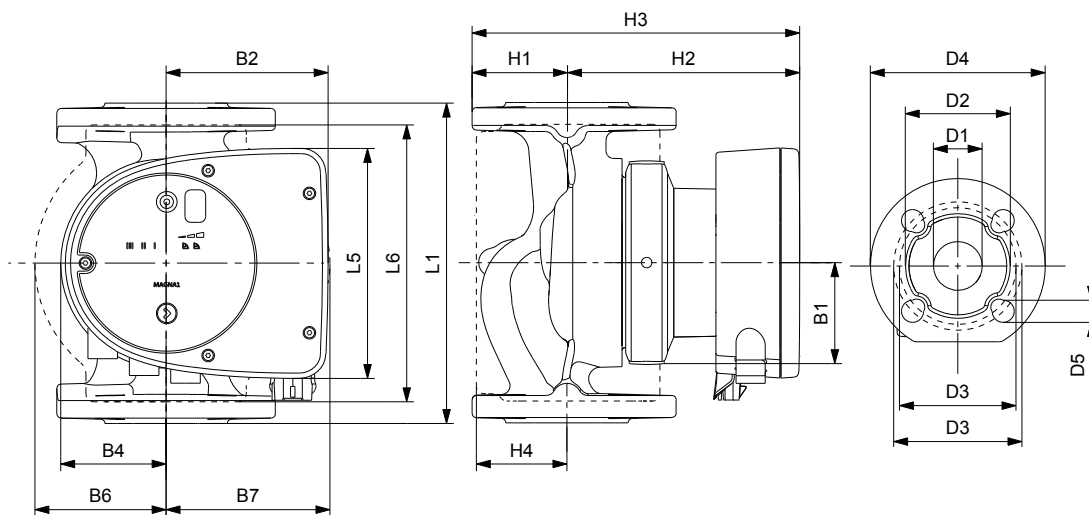
TM056287

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 8.5 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.



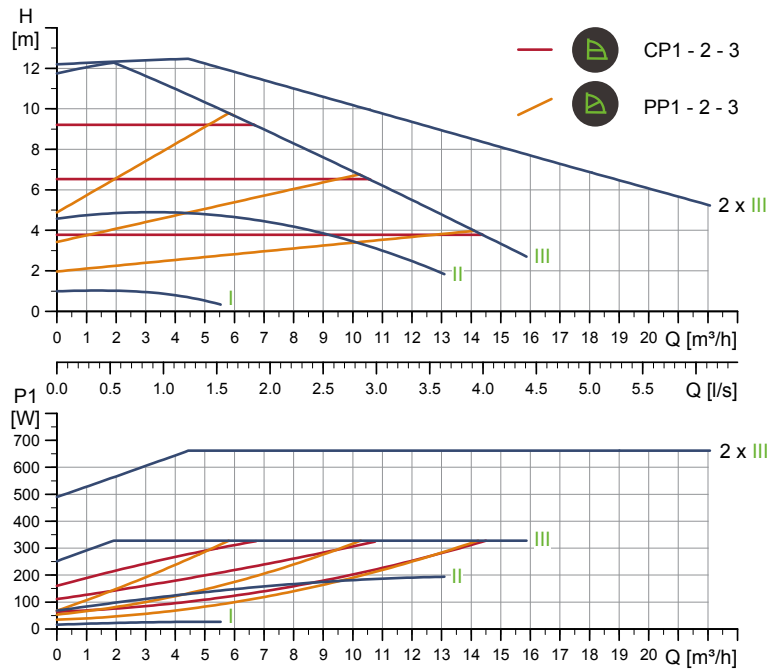
TM070067

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



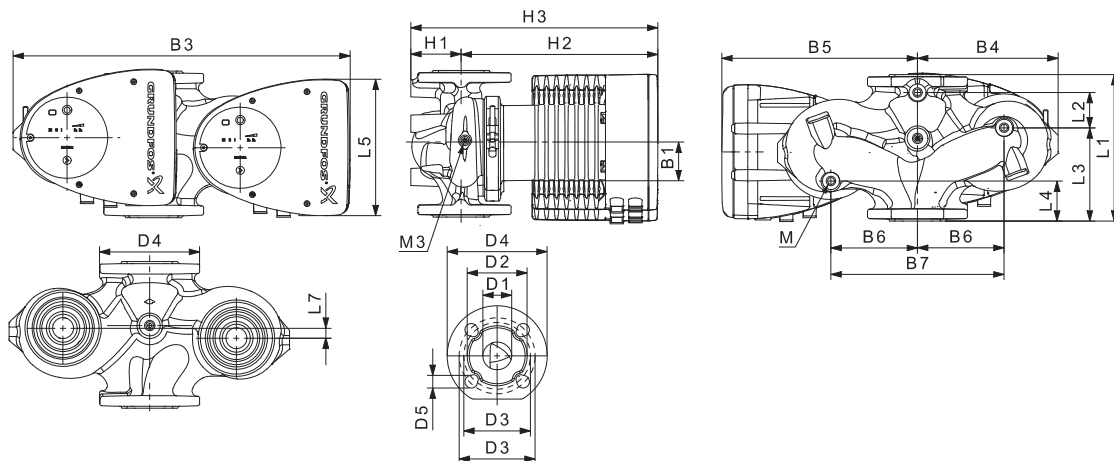
TM056334

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

The pump incorporates overload protection.

Connections:	See section 8.5 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

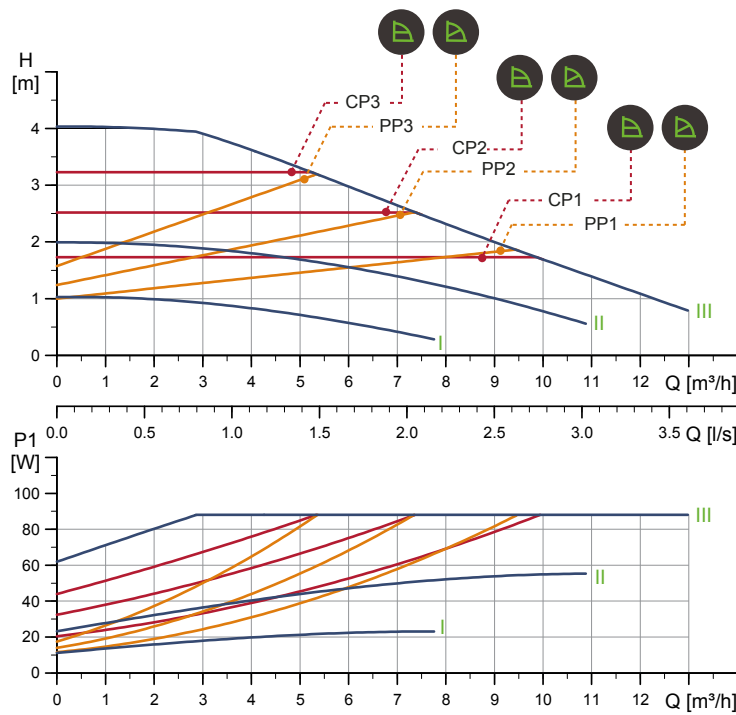


TM059237

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
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



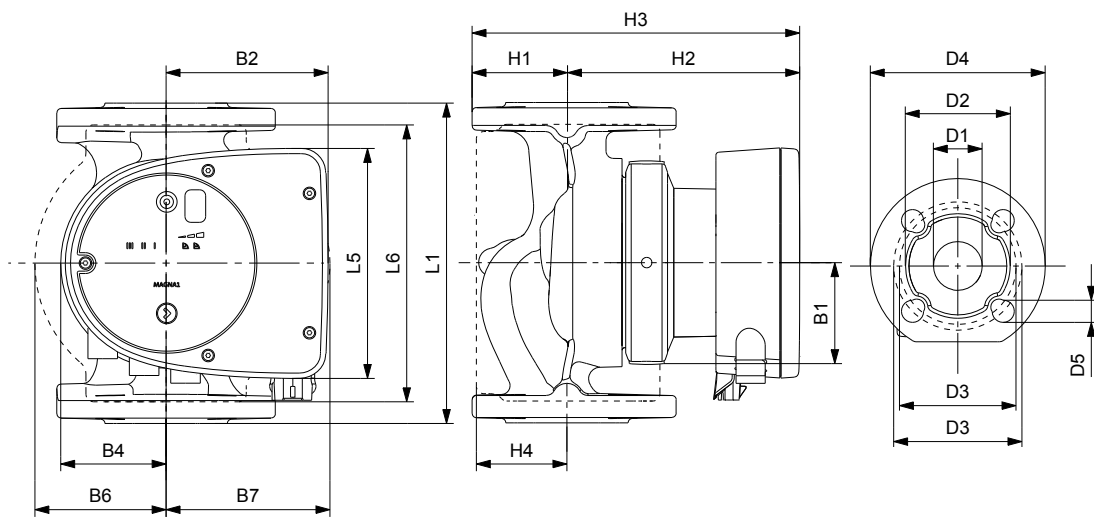
TM056332

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 8.5 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.

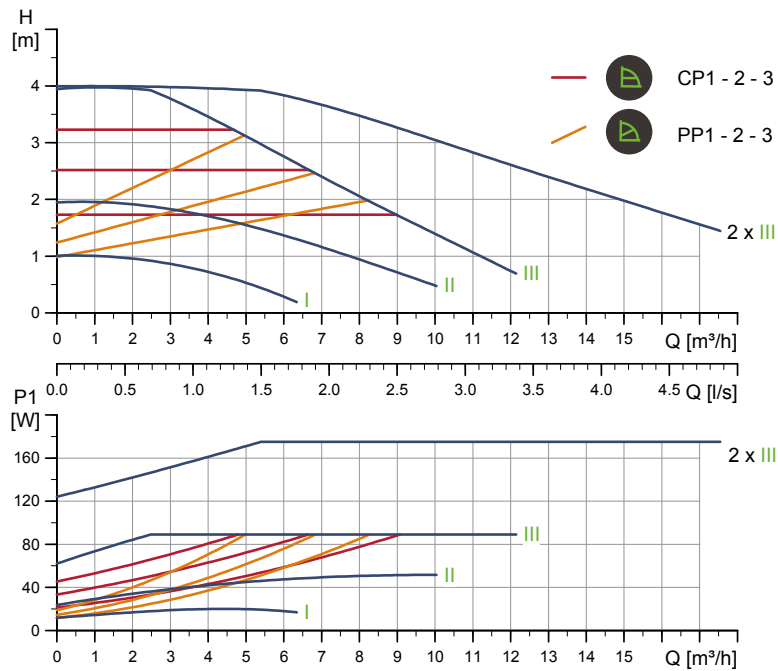


TM070067

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



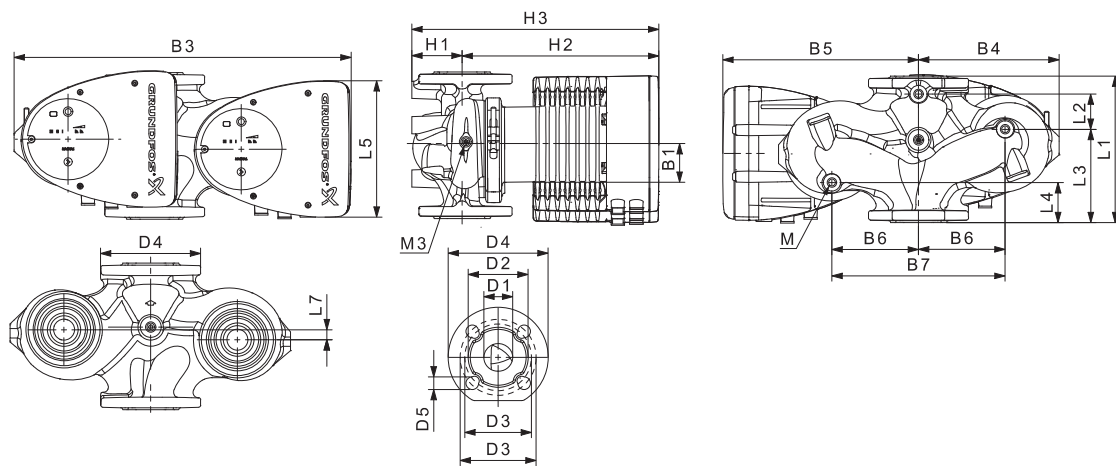
TM056370

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

The pump incorporates overload protection.

Connections:	See section 8.5 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

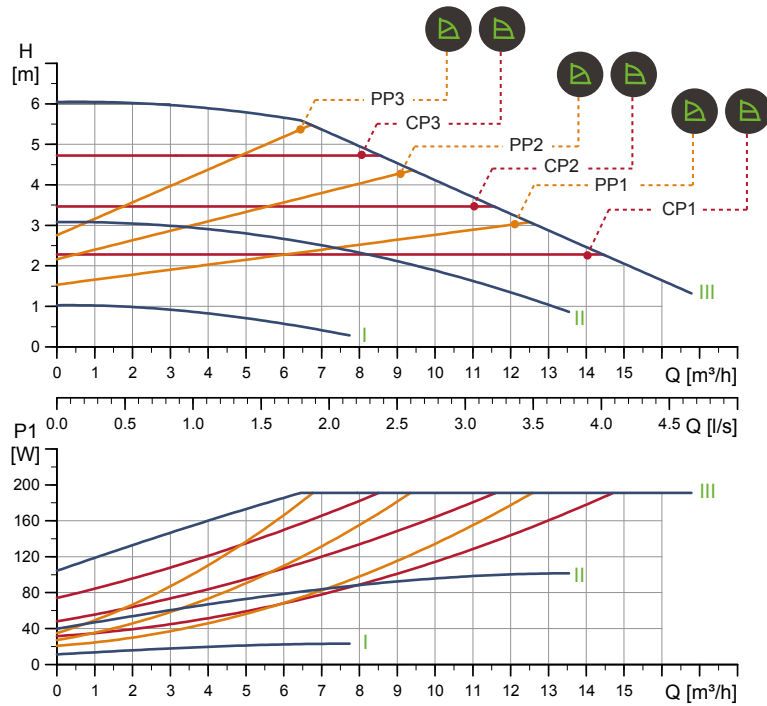


TM059237

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 40-40 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)



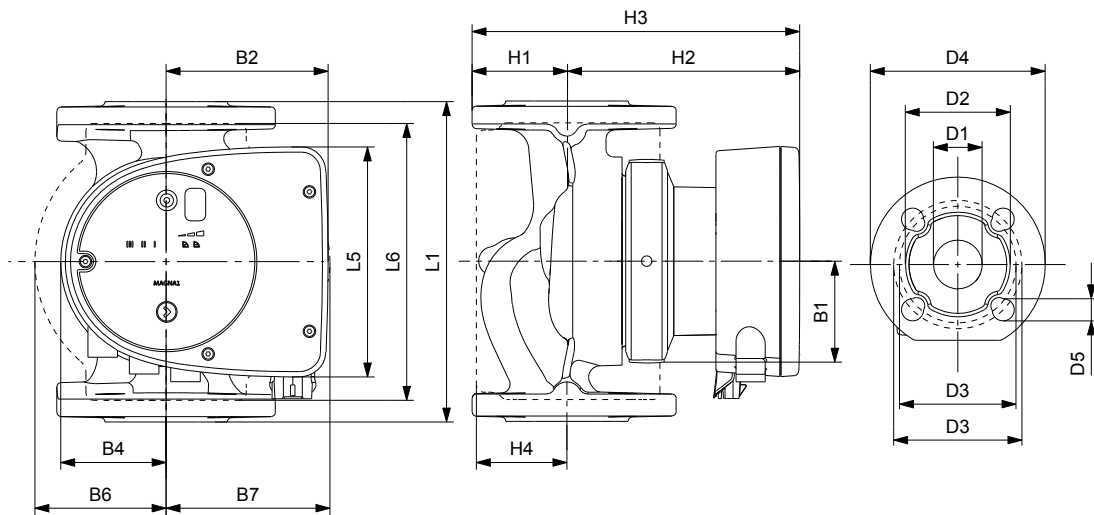
TM070565

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. [m ³]
9.5	10.5	0.016

Connections:	See section 8.5 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.



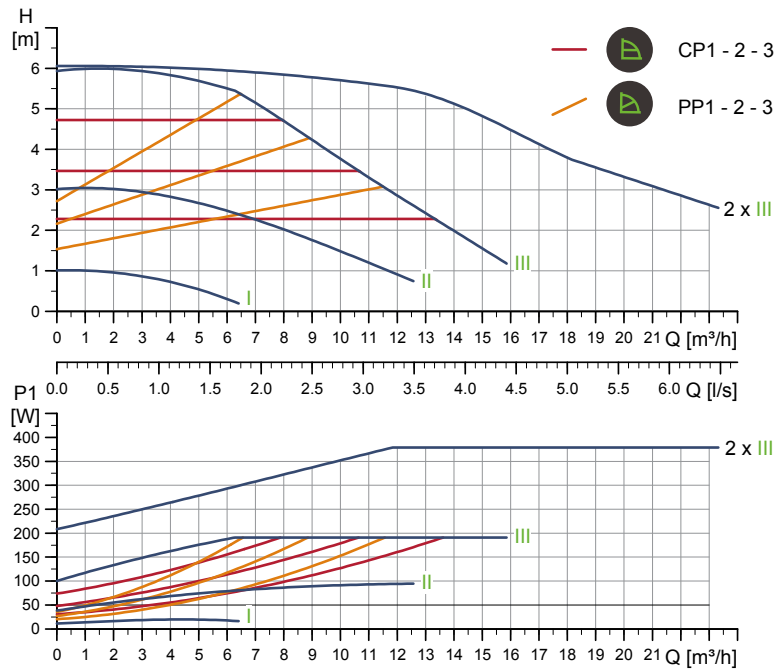
TM070067

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



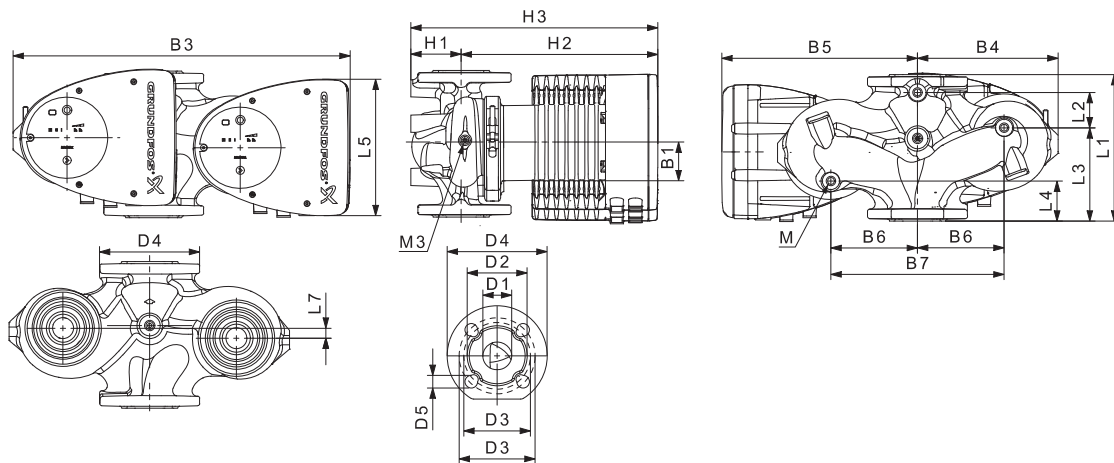
TM056371

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

The pump incorporates overload protection.

Connections:	See section 8.5 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



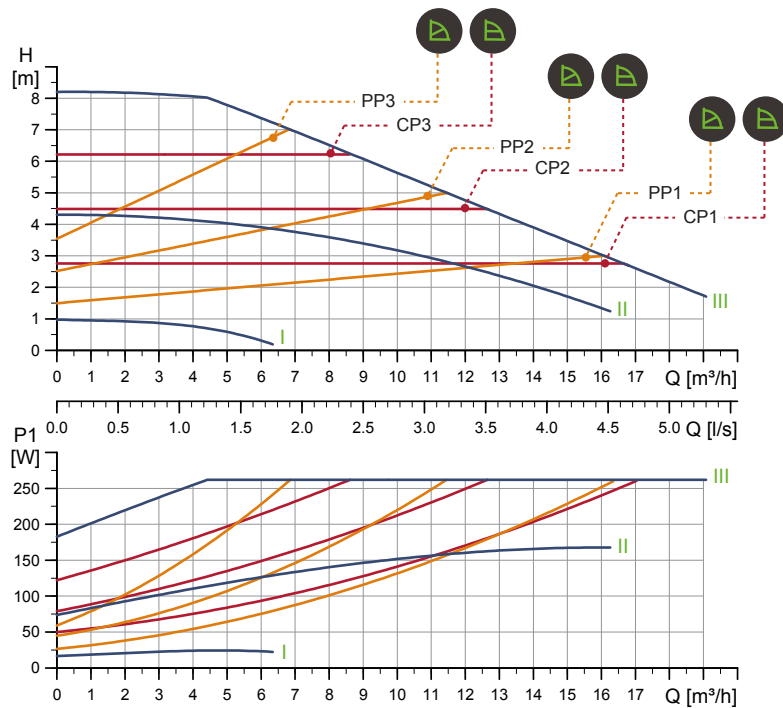
TM059237

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
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



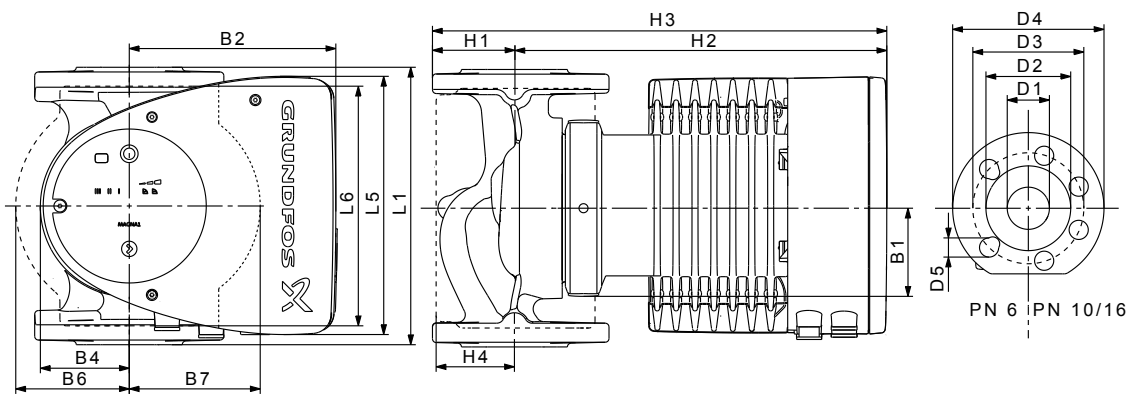
TM056288

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. [m ³]
16.5	18.2	0.040

Connections:	See section 8.5 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.



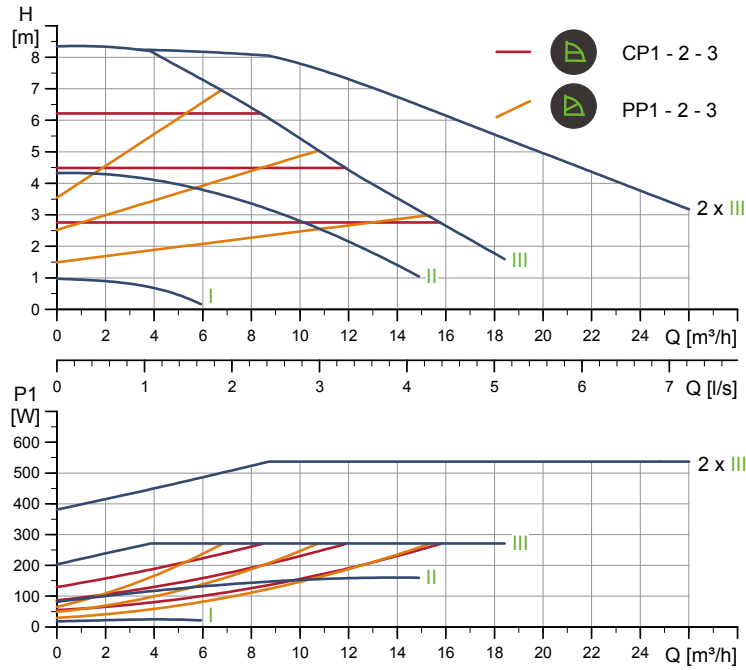
TM055276

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



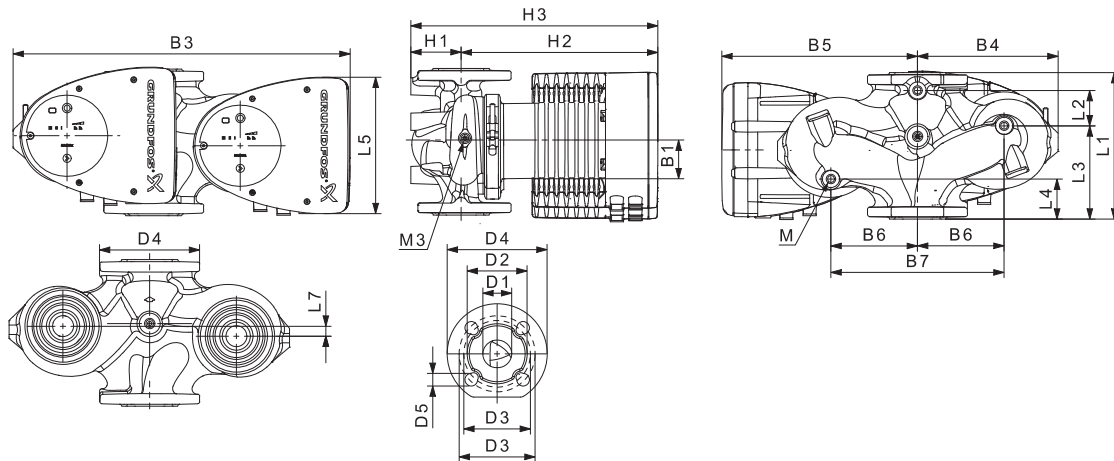
TM056335

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

The pump incorporates overload protection.

Connections:	See section 8.5 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

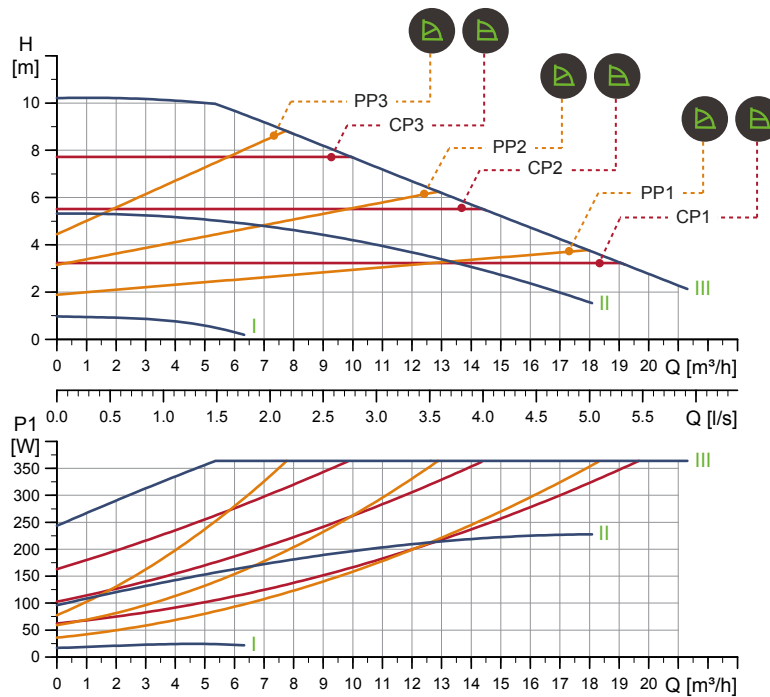


TM059237

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
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



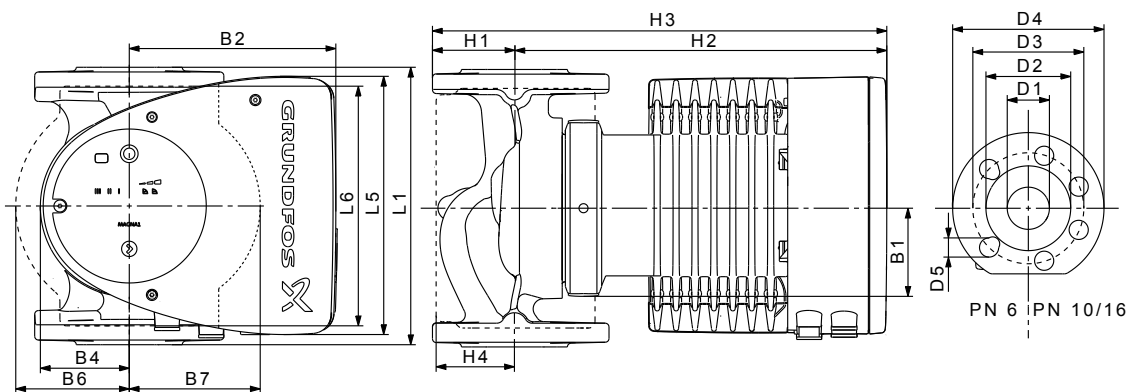
TM056289

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. [m ³]
16.5	18.2	0.040

Connections:	See section 8.5 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.



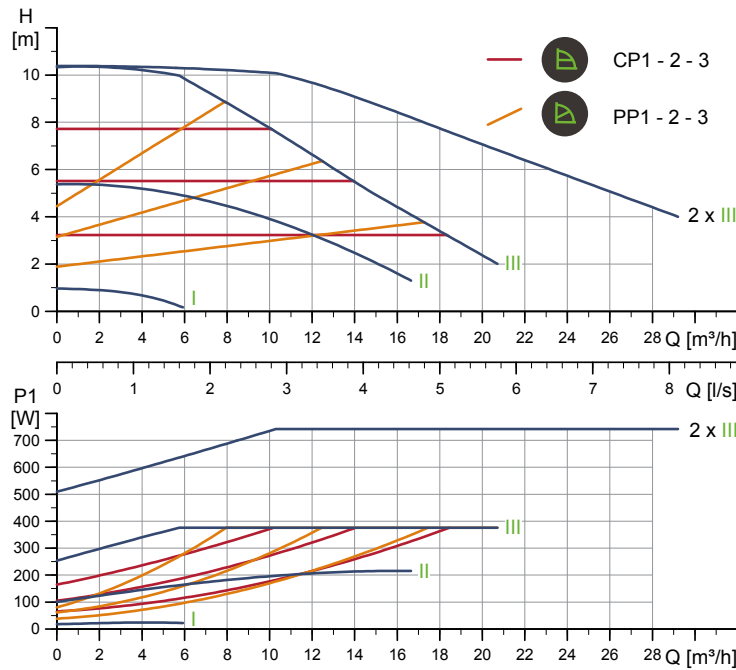
TM055276

Pump type	Dimensions [mm]																
	L1	L5	L6	B1	B2	B4	B6	B7	H1	H2	H3	H4	D1	D2	D3	D4	D5
MAGNA1 40-100 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



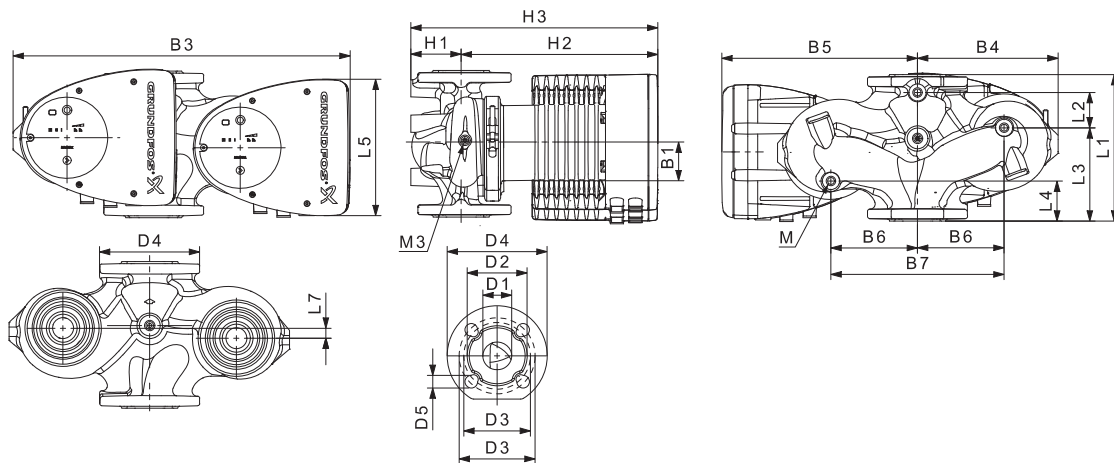
TM056336

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

The pump incorporates overload protection.

Net weight [kg]	Gross weight [kg]	Ship. vol. [m ³]
32.3	36.2	0.087

Connections:	See section 8.5 <i>Pipe connections</i> .
System pressure:	Max. 1.0 MPa (10 bar).
Liquid temperature:	-10 to 110 °C (TF 110).
Specific EEI:	0.23.

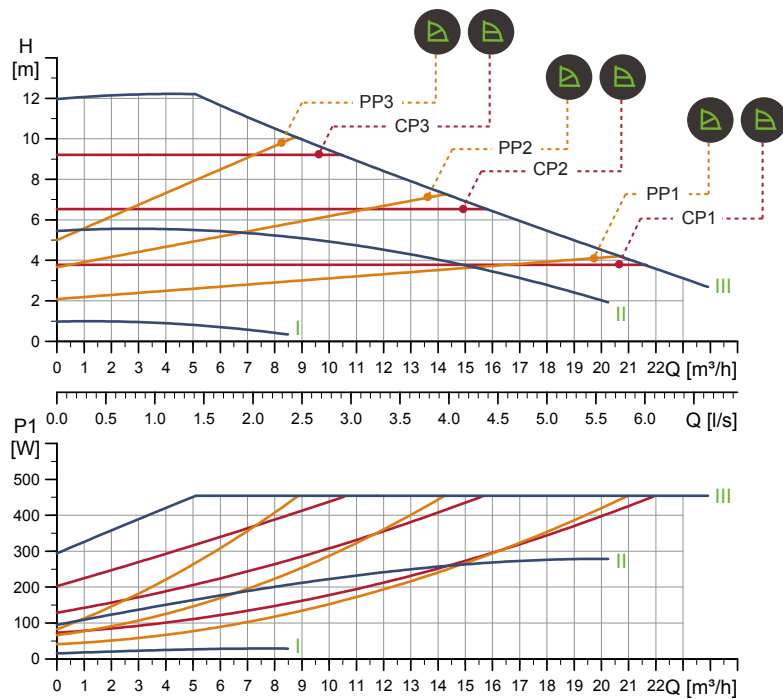


TM059237

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



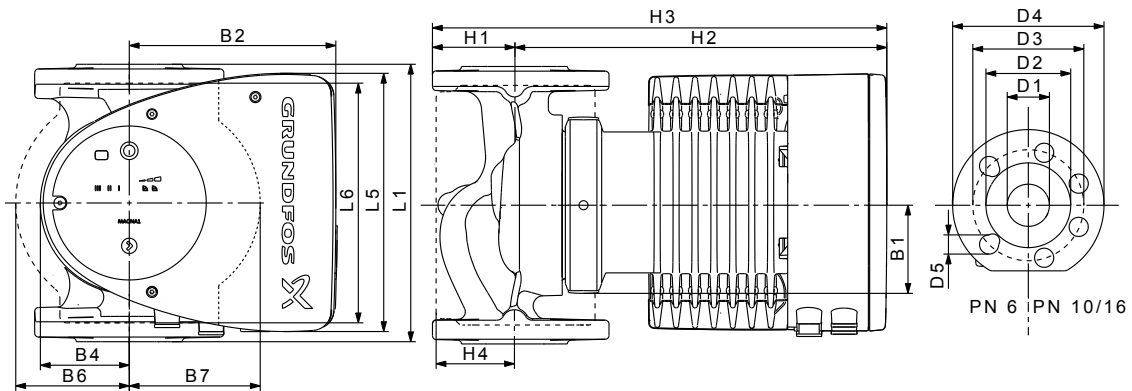
TM056290

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. [m ³]
16.2	17.7	0.040

Connections:	See section 8.5 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.



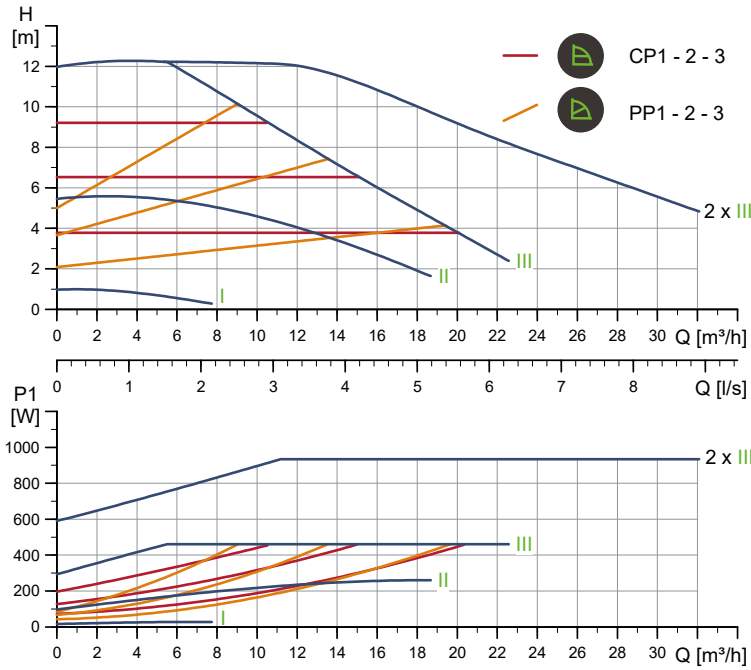
TM055276

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



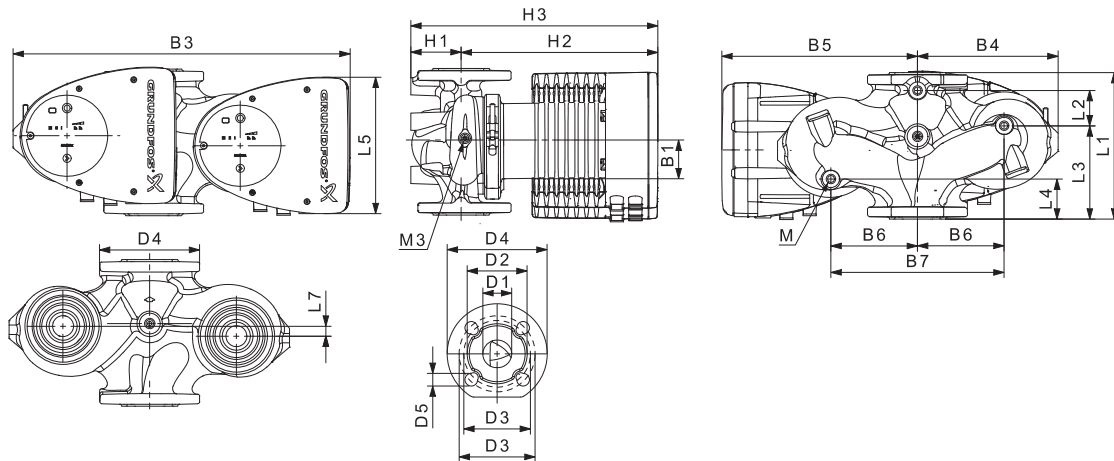
TM056337

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

The pump incorporates overload protection.

Connections:	See section 8.5 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

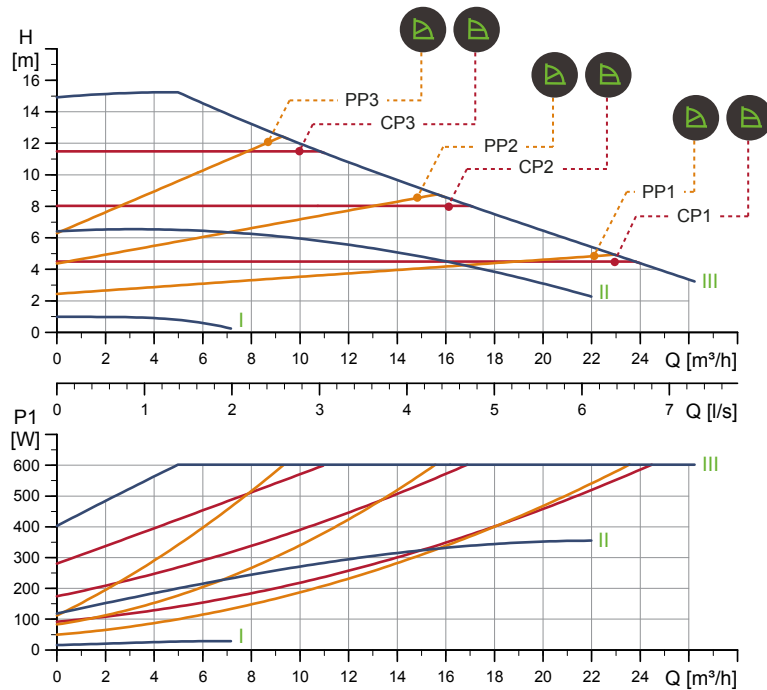


TM059237

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



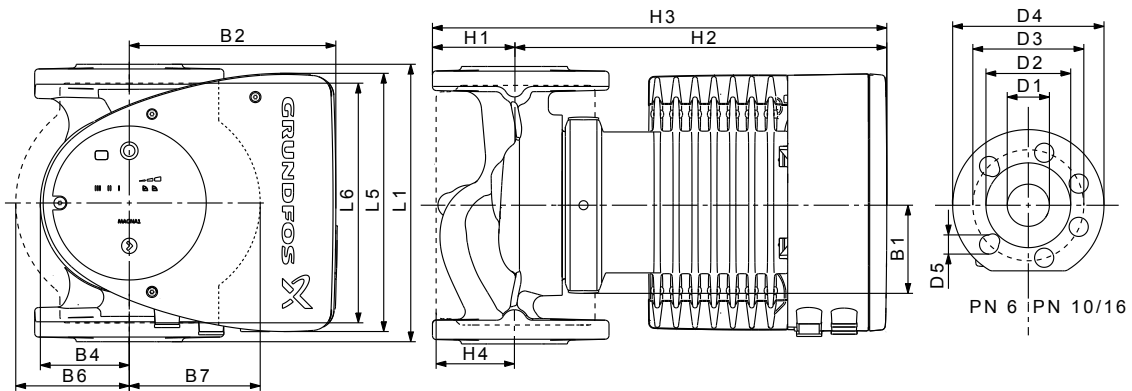
TM056291

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. [m ³]
16.2	17.7	0.040

Connections:	See section 8.5 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.



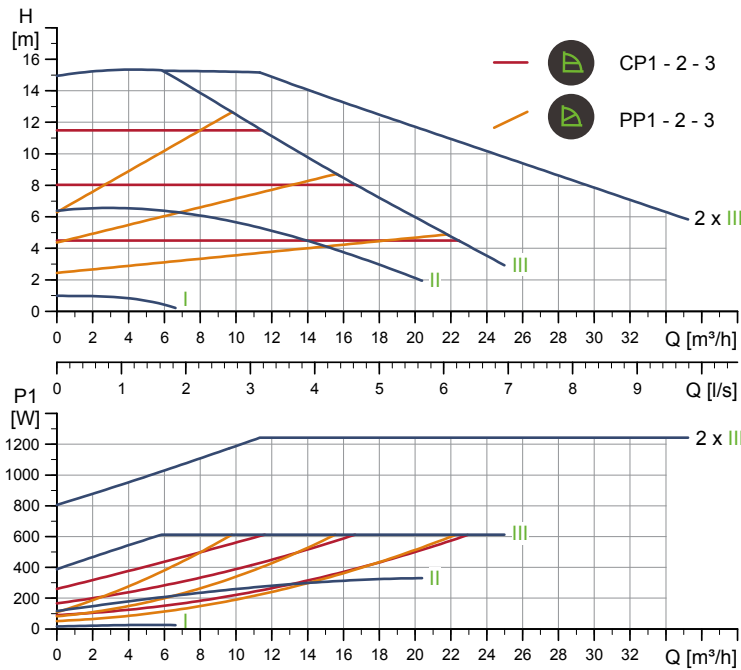
TM055276

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



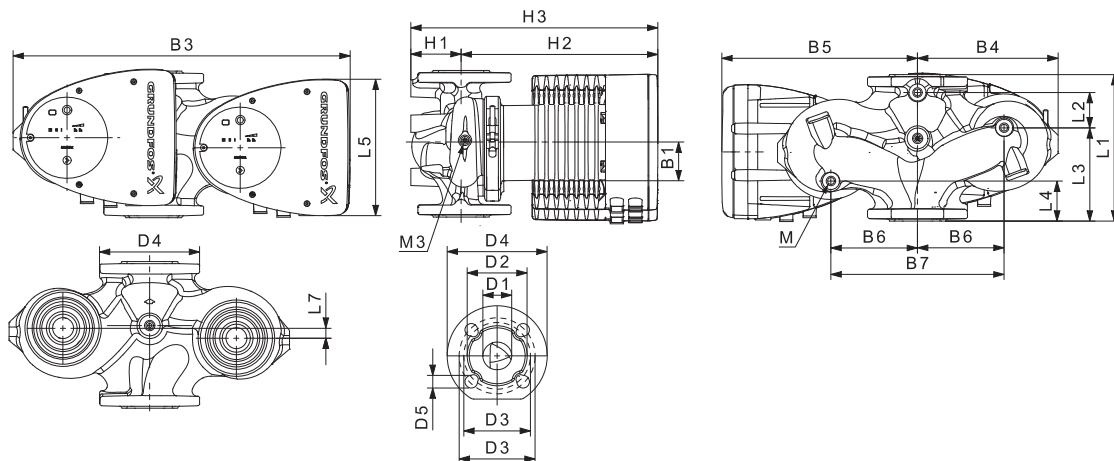
TM056338

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

The pump incorporates overload protection.

Connections:	See section 8.5 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

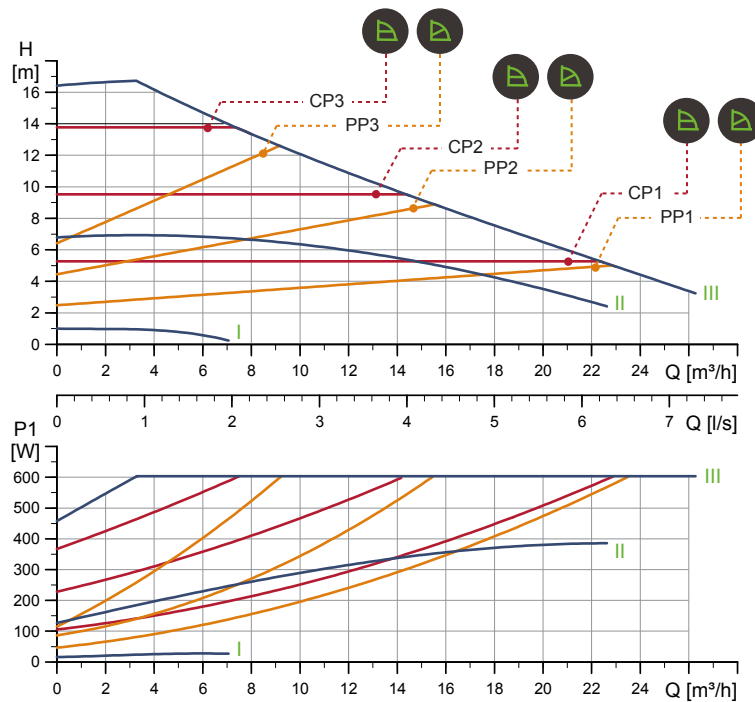


TM059237

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



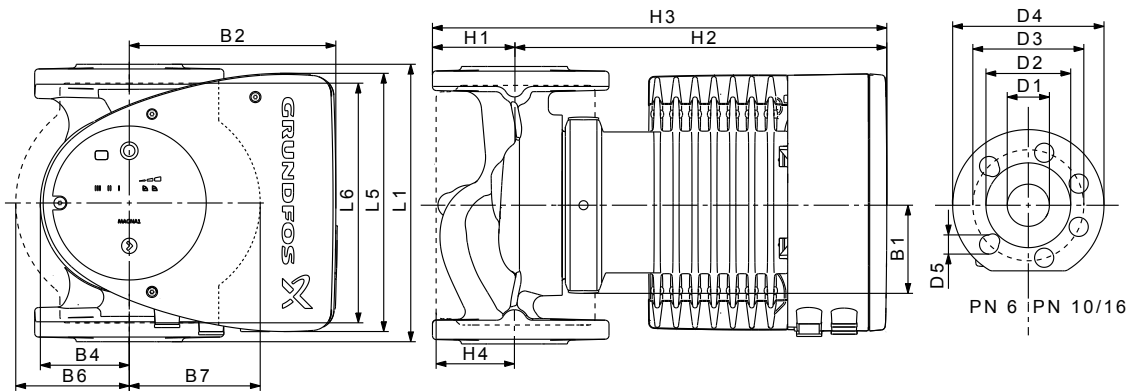
TM056292

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. [m ³]
16.2	17.7	0.040

Connections:	See section 8.5 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.

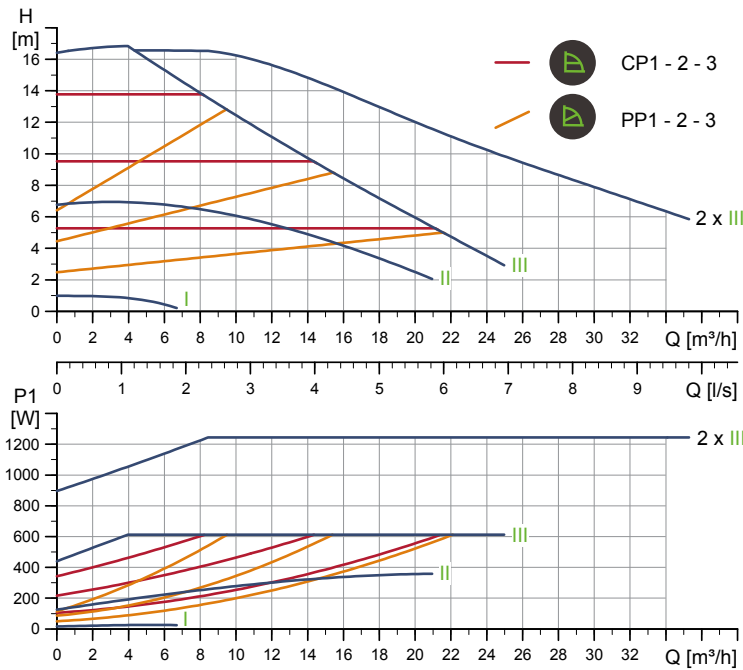


TM055276

Pump type	Dimensions [mm]																
	L1	L5	L6	B1	B2	B4	B6	B7	H1	H2	H3	H4	D1	D2	D3	D4	D5
MAGNA1 40-180 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



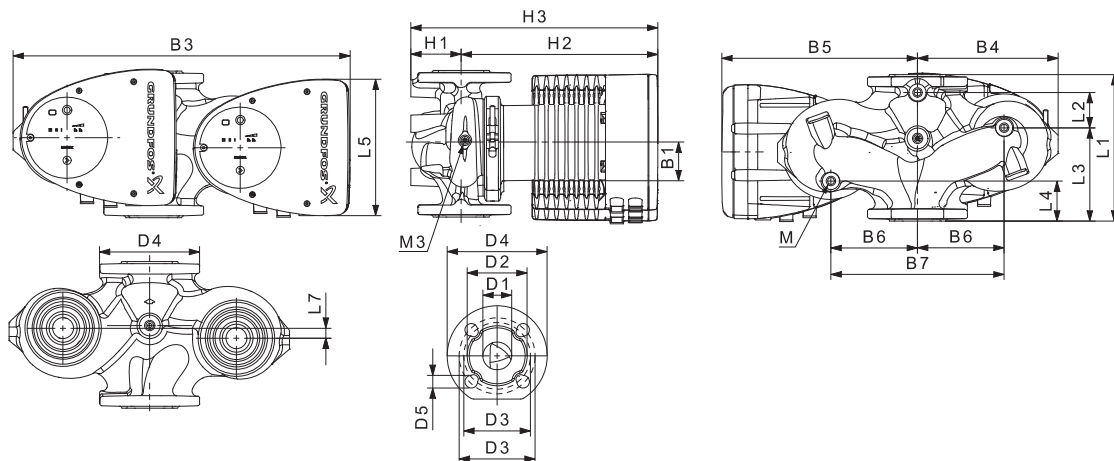
TM056339

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

The pump incorporates overload protection.

Connections:	See section 8.5 <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]
31.4	35.3	0.087



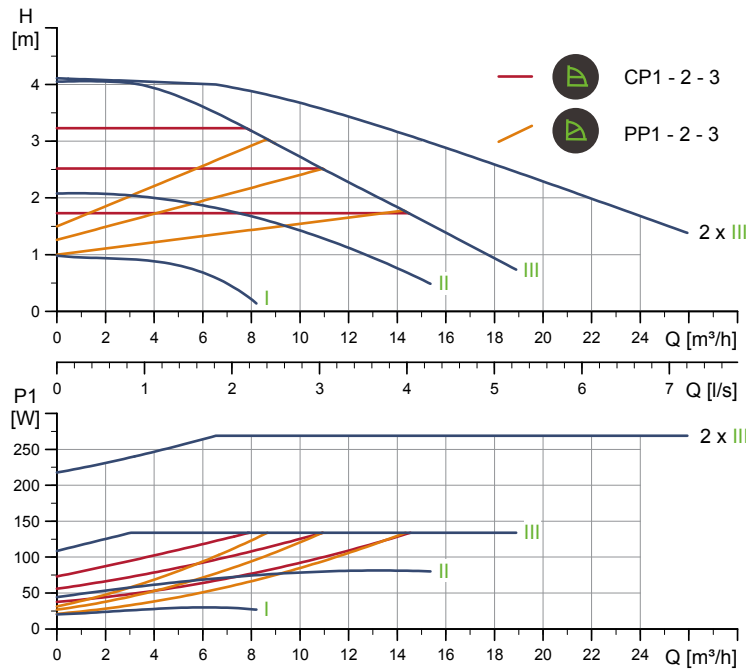
TM059237

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 40-180 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



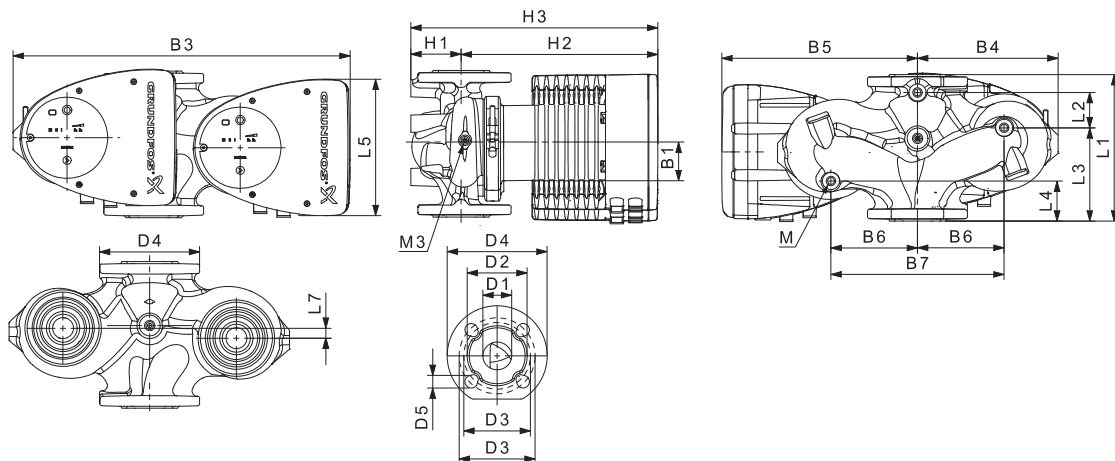
TM056340

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

The pump incorporates overload protection.

Net weight [kg]	Gross weight [kg]	Ship. vol. [m ³]
34.3	42.0	0.132

Connections:	See section 8.5 Pipe connections.
System pressure:	Max. 1.0 MPa (10 bar).
Liquid temperature:	-10 to 110 °C (TF 110).
Specific EEI:	0.23.

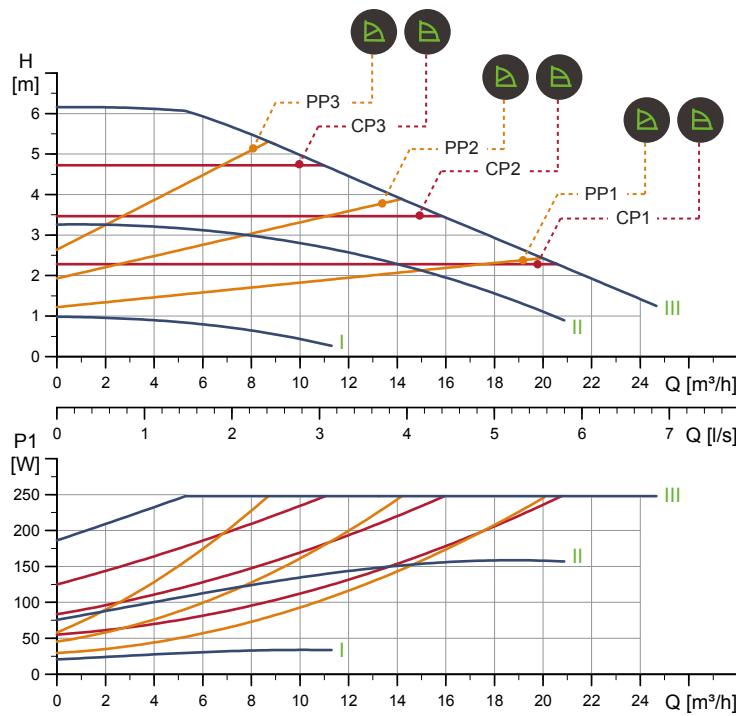


TM059237

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



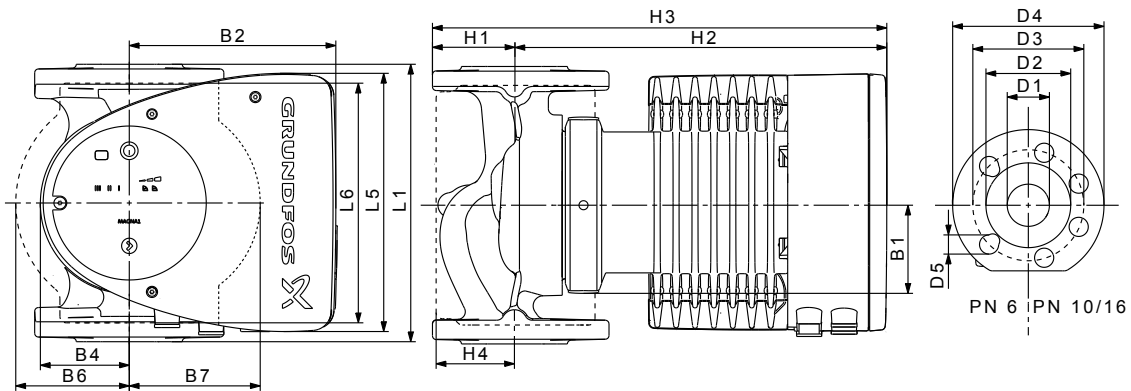
TM056294

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. [m³]
17.7	19.8	0.046

Connections:	See section 8.5 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.



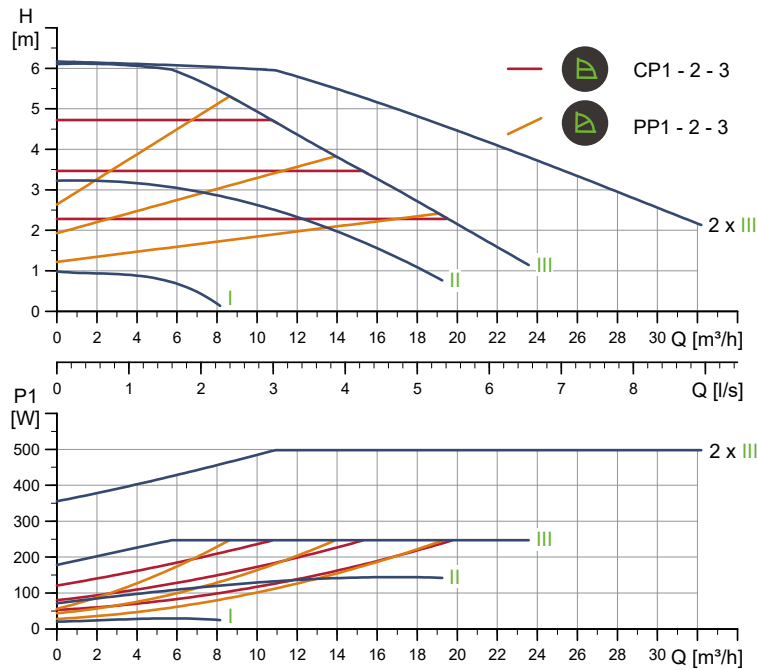
TM055276

Pump type	Dimensions [mm]																
	L1	L5	L6	B1	B2	B4	B6	B7	H1	H2	H3	H4	D1	D2	D3	D4	D5
MAGNA1 50-60 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



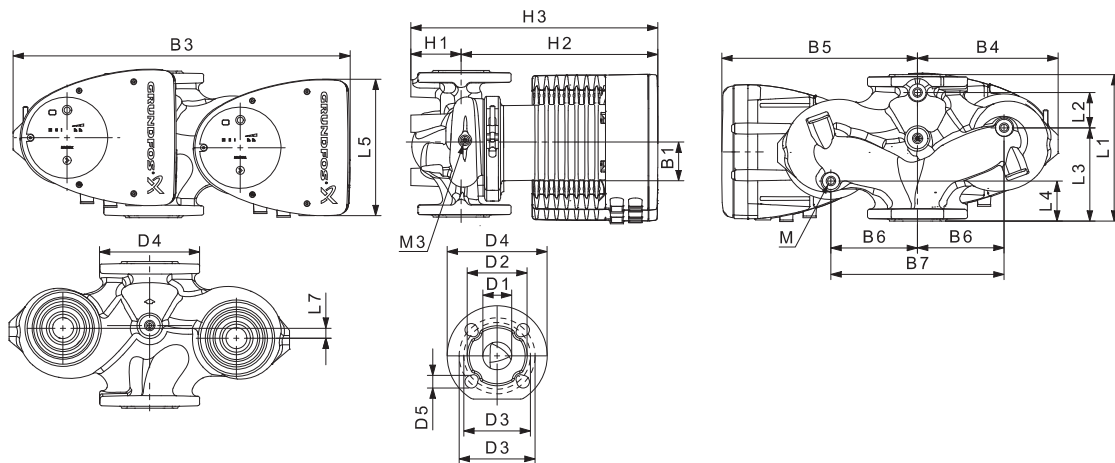
TM056341

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

The pump incorporates overload protection.

Connections:	See section 8.5 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

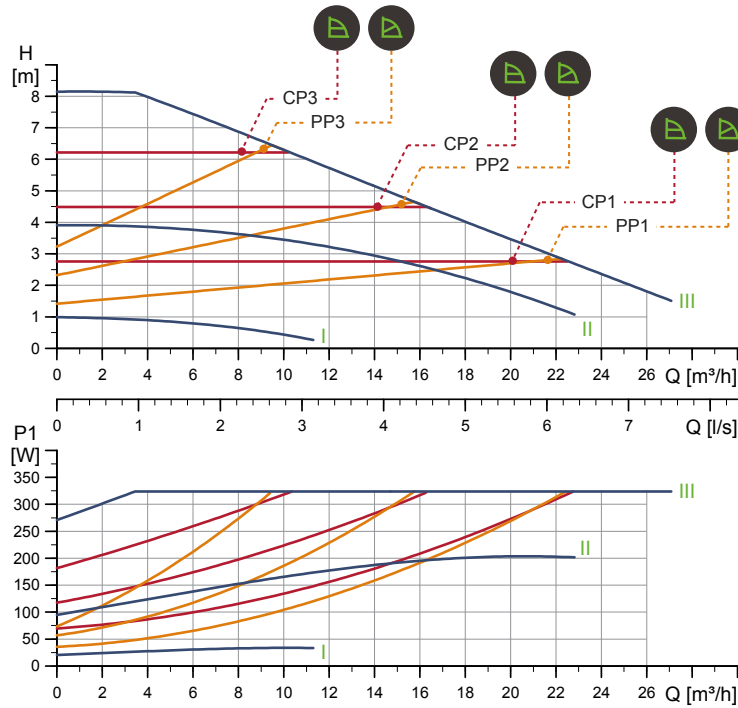


TM059237

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 50-60 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



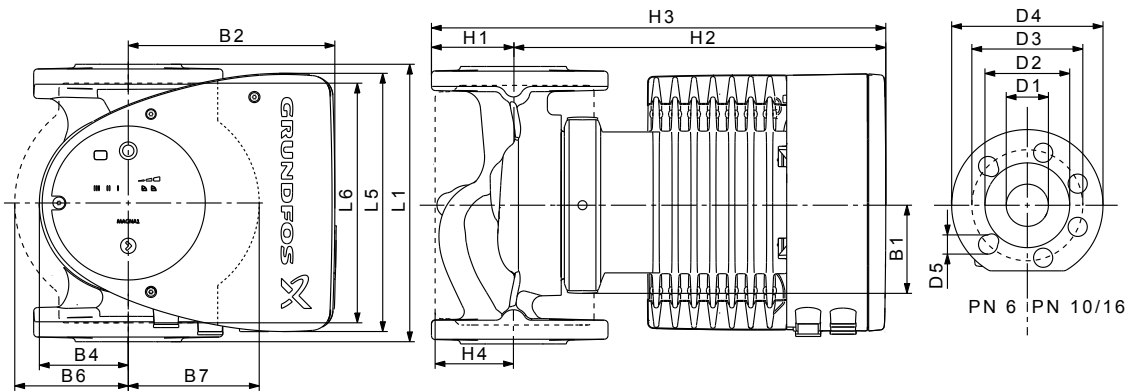
TM056295

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. [m³]
17.7	19.8	0.046

Connections:	See section 8.5 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.



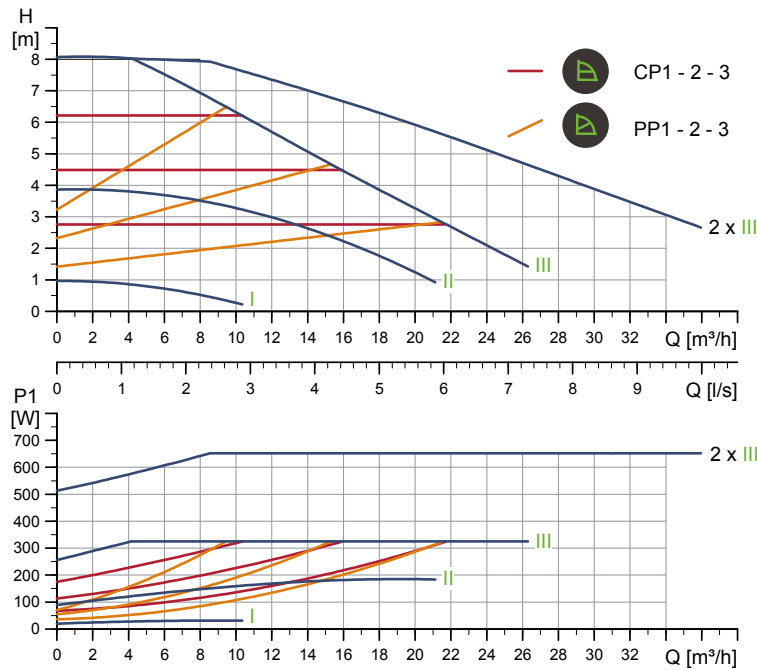
TM055276

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



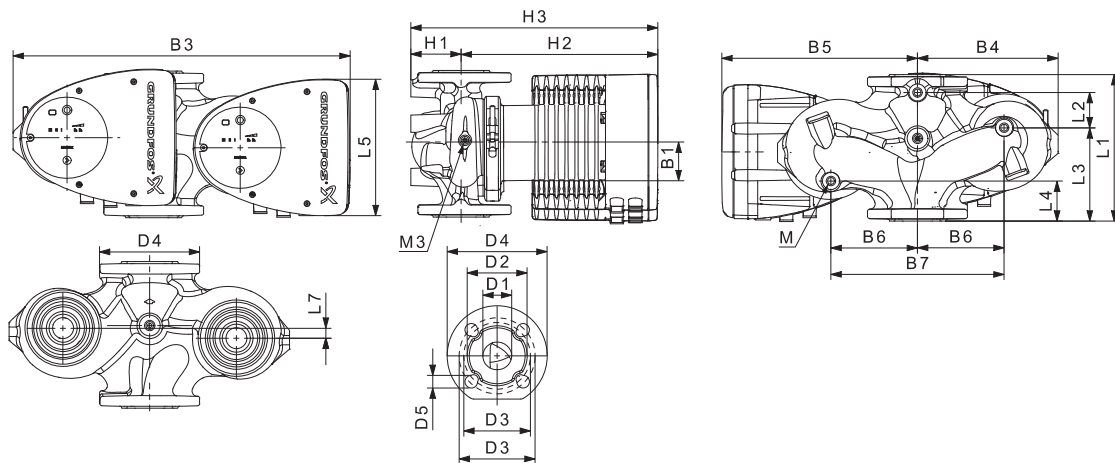
TM056342

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

The pump incorporates overload protection.

Connections:	See section 8.5 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

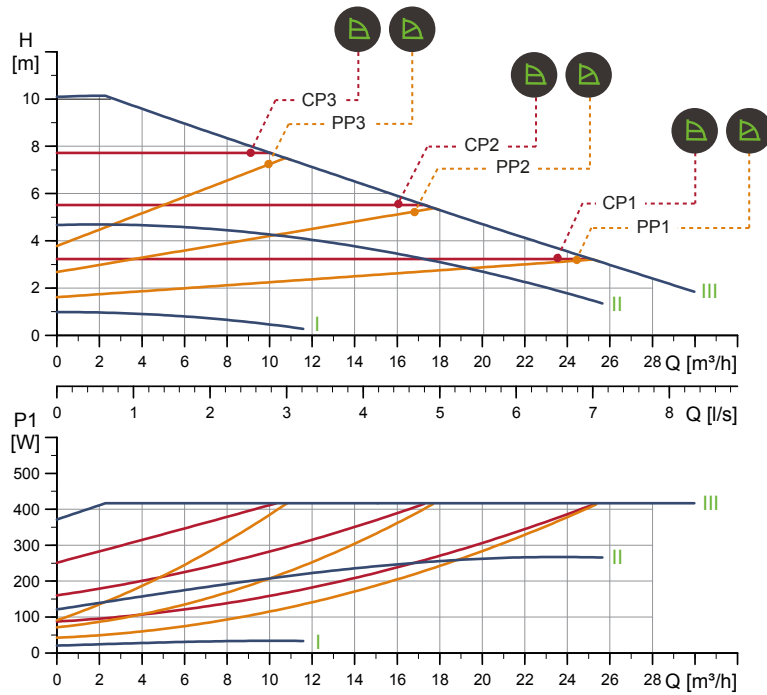


TM059237

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
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



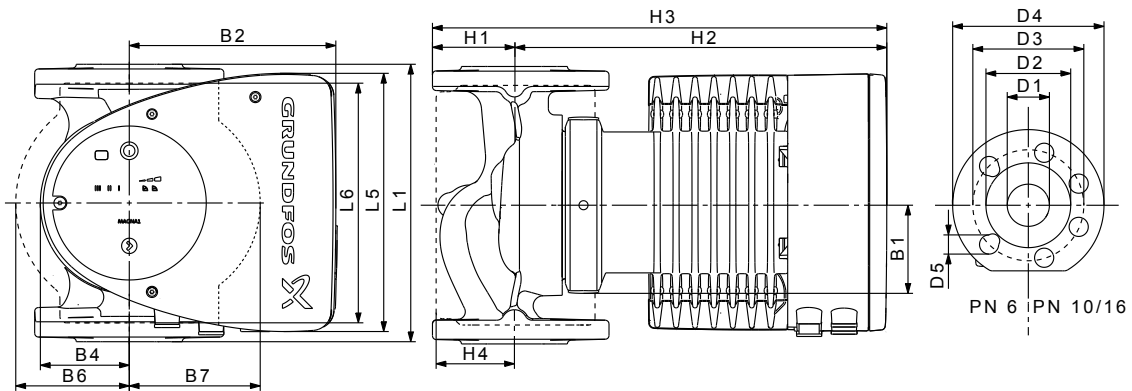
TM056296

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. [m ³]
18.2	20.4	0.046

Connections:	See section 8.5 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.



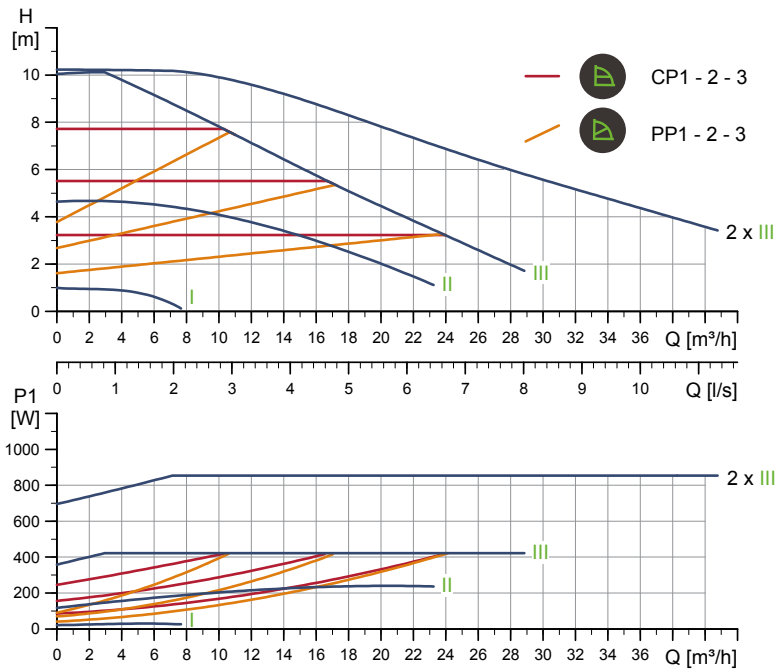
TM055276

Pump type	Dimensions [mm]																
	L1	L5	L6	B1	B2	B4	B6	B7	H1	H2	H3	H4	D1	D2	D3	D4	D5
MAGNA1 50-100 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



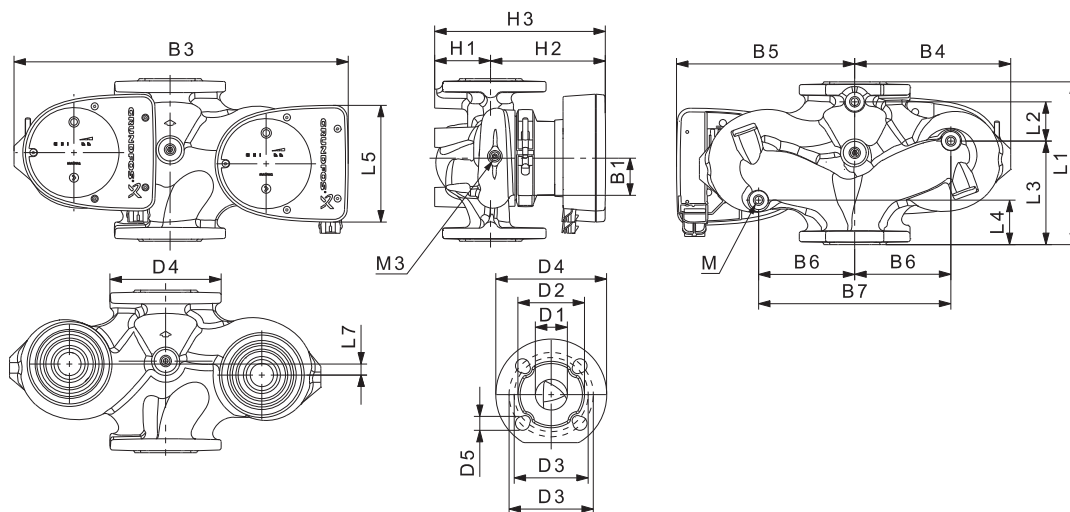
TM056343

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

The pump incorporates overload protection.

Connections:	See section 8.5 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

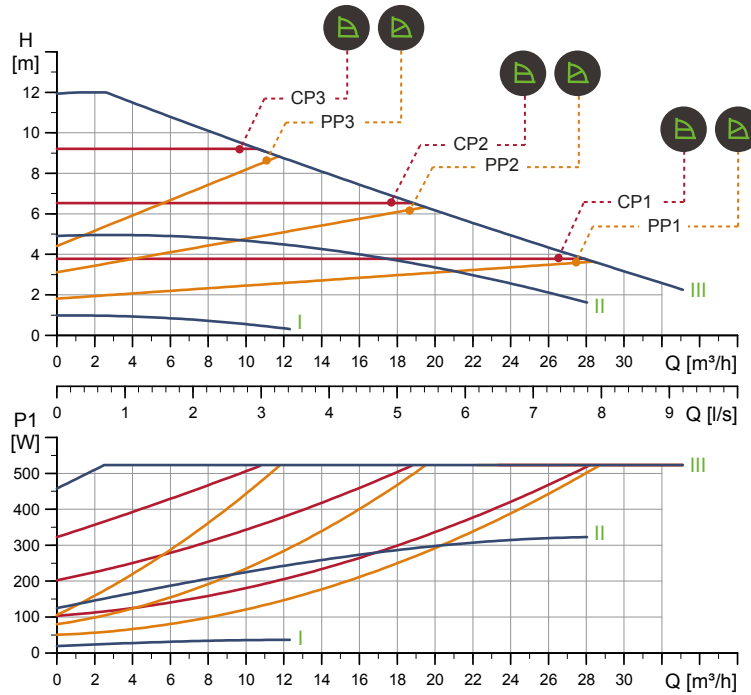


TM054960

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



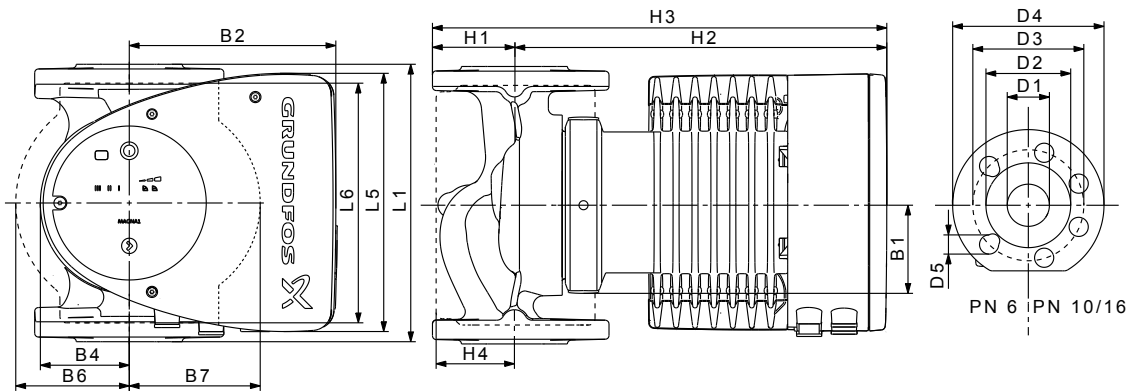
TM056297

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. [m ³]
18.2	20.4	0.046

Connections:	See section 8.5 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.



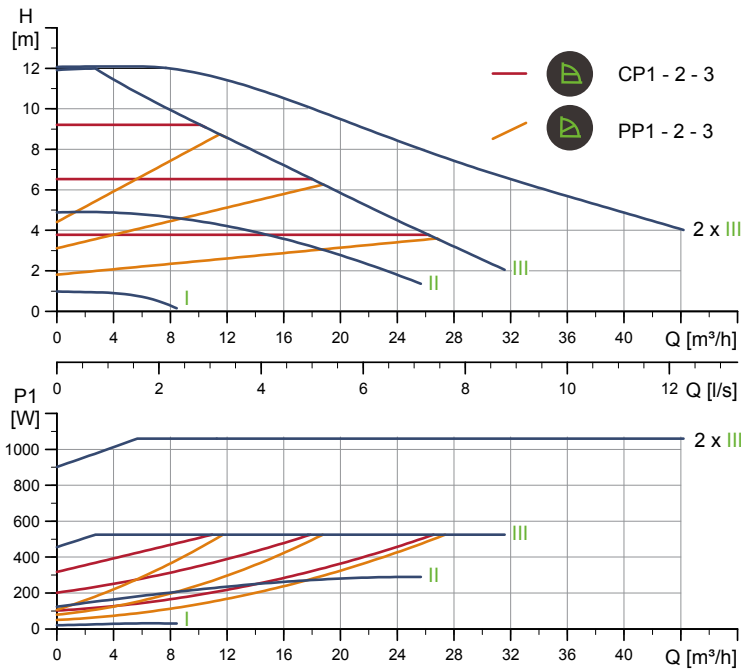
TM055276

Pump type	Dimensions [mm]																
	L1	L5	L6	B1	B2	B4	B6	B7	H1	H2	H3	H4	D1	D2	D3	D4	D5
MAGNA1 50-120 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



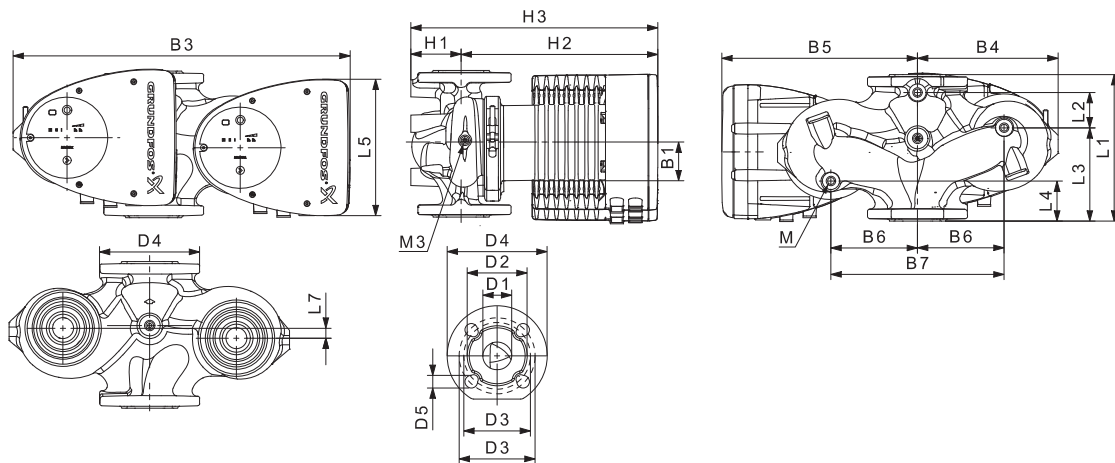
TM056344

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

The pump incorporates overload protection.

Connections:	See section 8.5 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

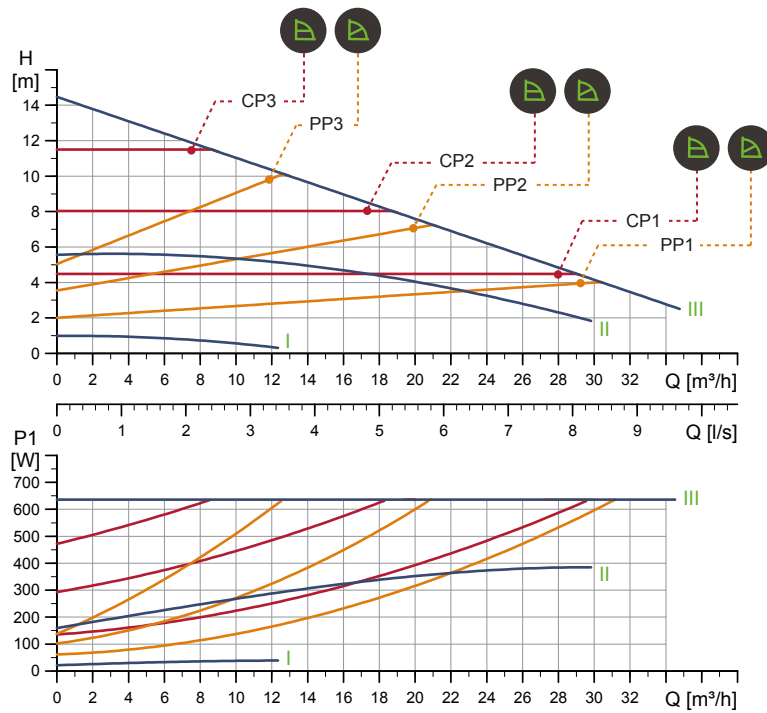


TM059237

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
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



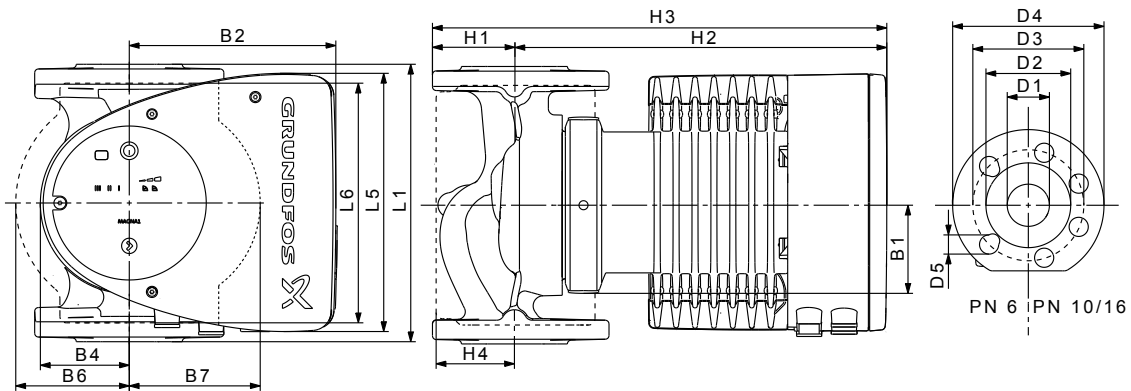
TM056298

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. [m ³]
19.1	21.3	0.046

Connections:	See section 8.5 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.



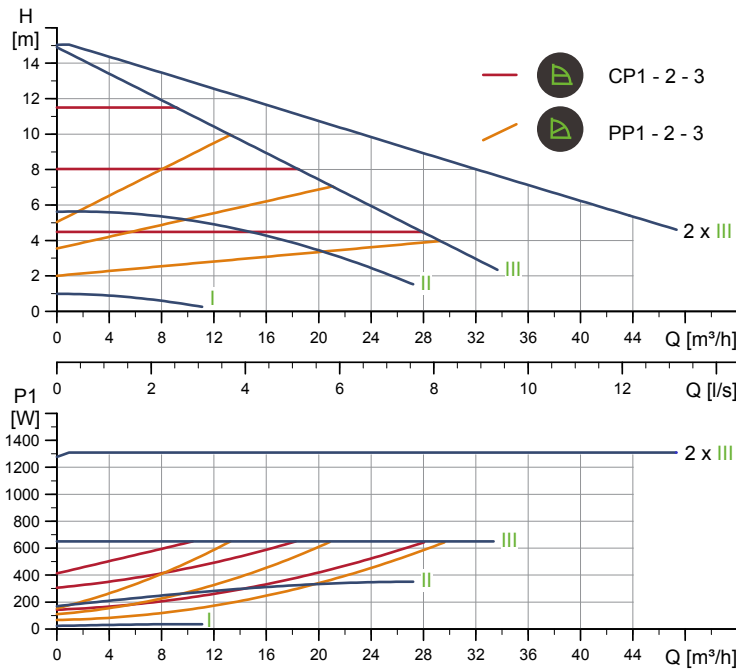
TM055276

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



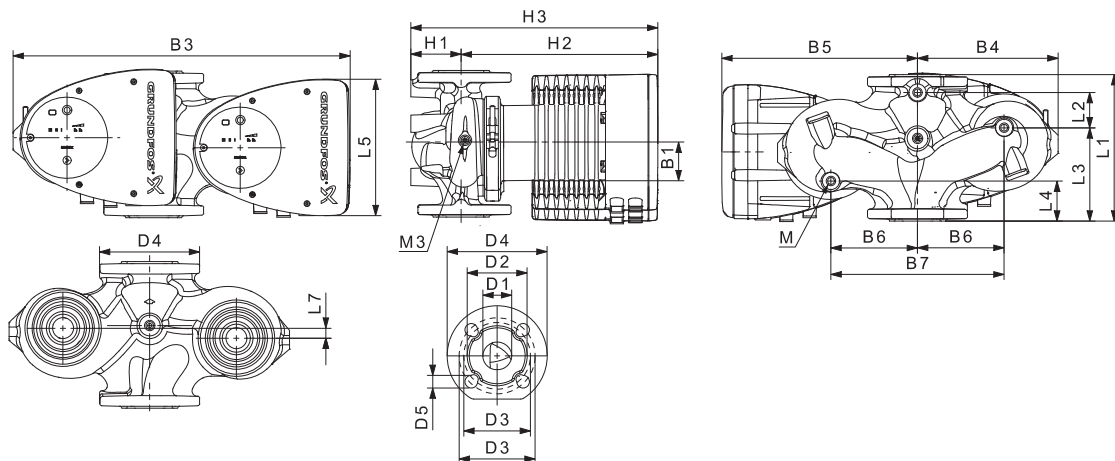
TM056345

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

The pump incorporates overload protection.

Connections:	See section 8.5 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



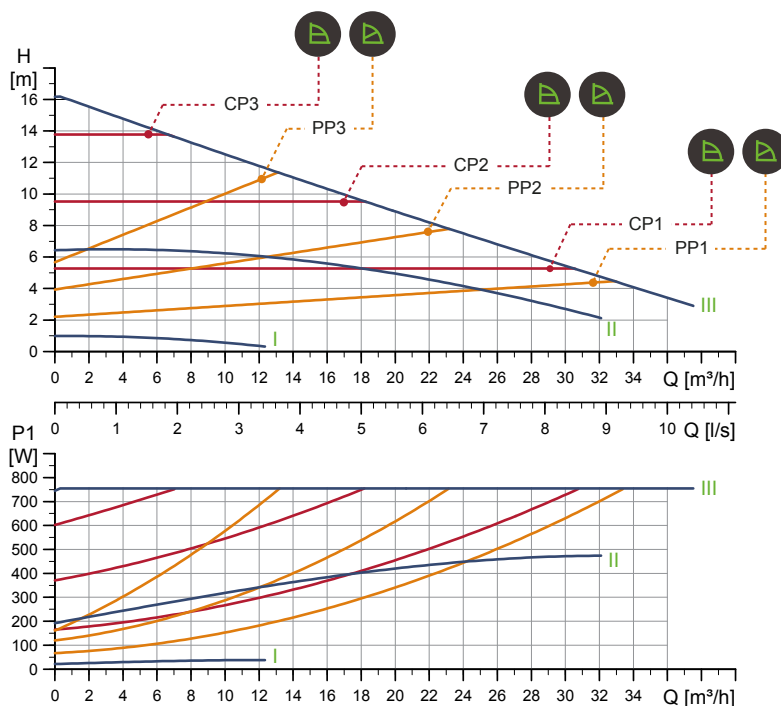
TM059237

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
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



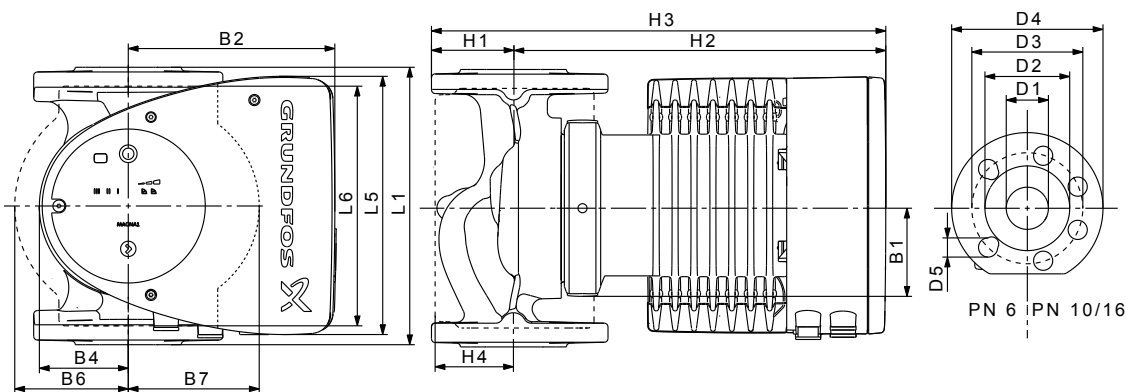
TM056299

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. [m³]
19.1	21.3	0.046

Connections:	See section 8.5 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.



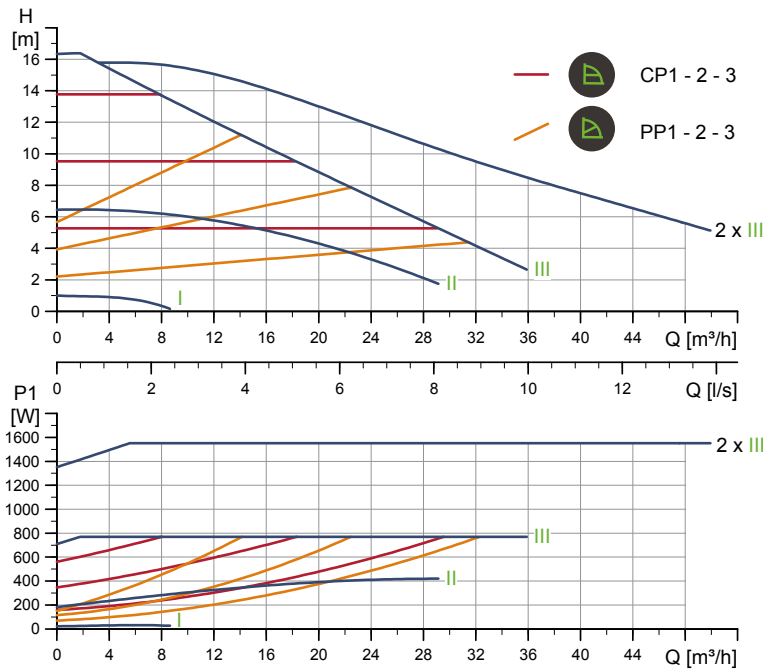
TM055276

Pump type	Dimensions [mm]																
	L1	L5	L6	B1	B2	B4	B6	B7	H1	H2	H3	H4	D1	D2	D3	D4	D5
MAGNA1 50-180 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



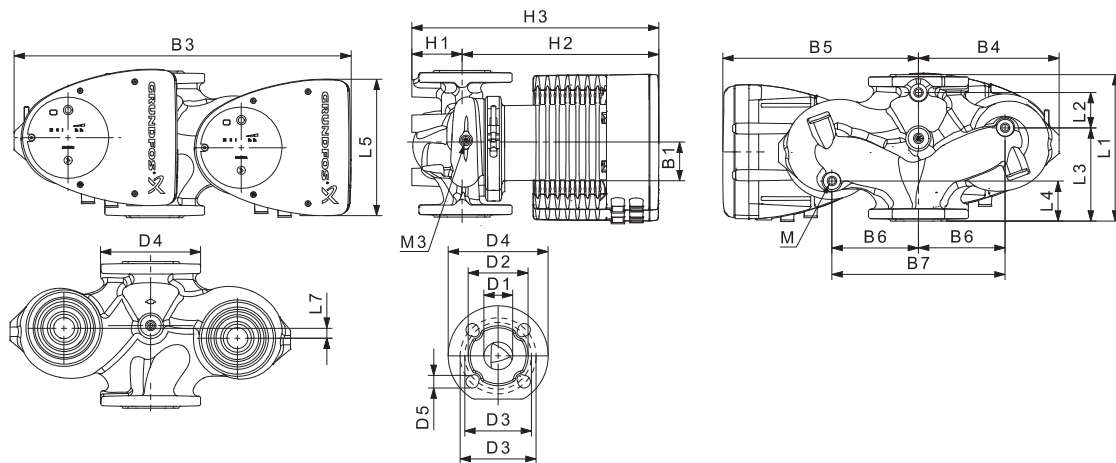
TM056346

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

The pump incorporates overload protection.

Connections:	See section 8.5 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



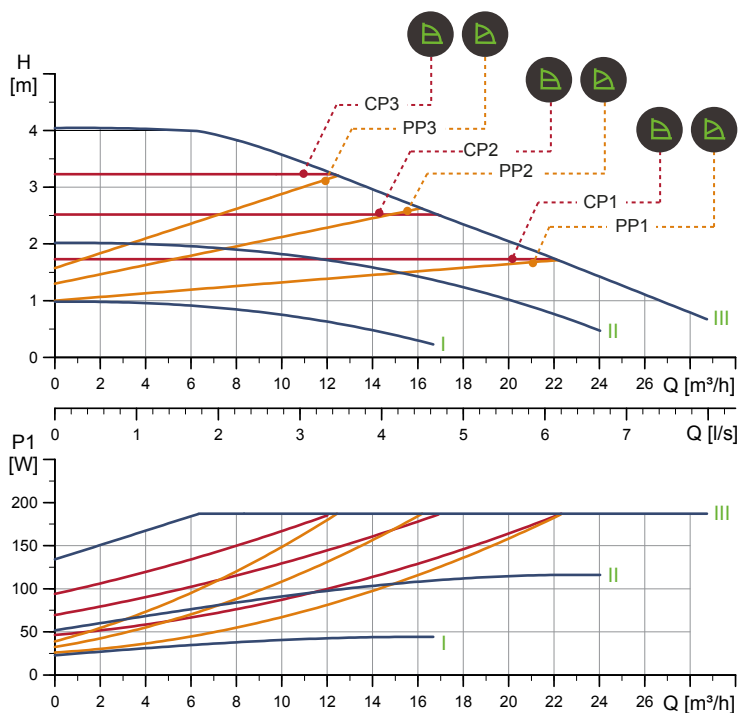
TM059237

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	M3
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



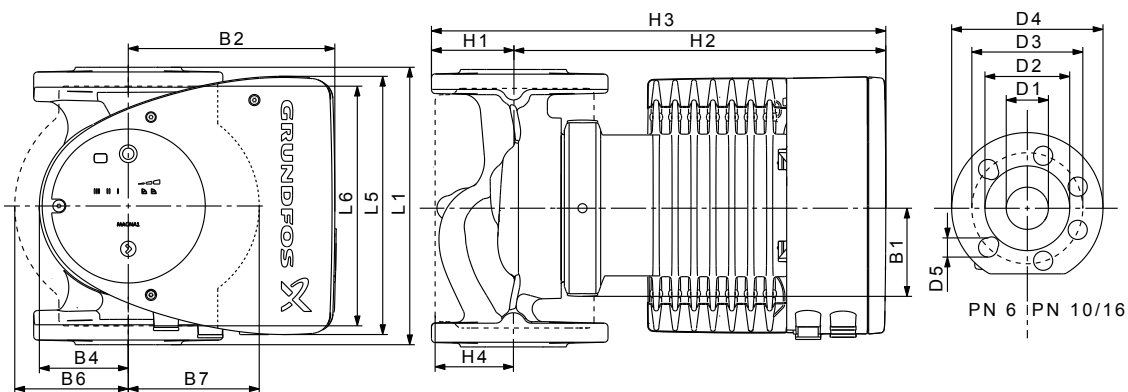
TM056300

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. [m ³]
20.7	23.0	0.057

Connections:	See section 8.5 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.

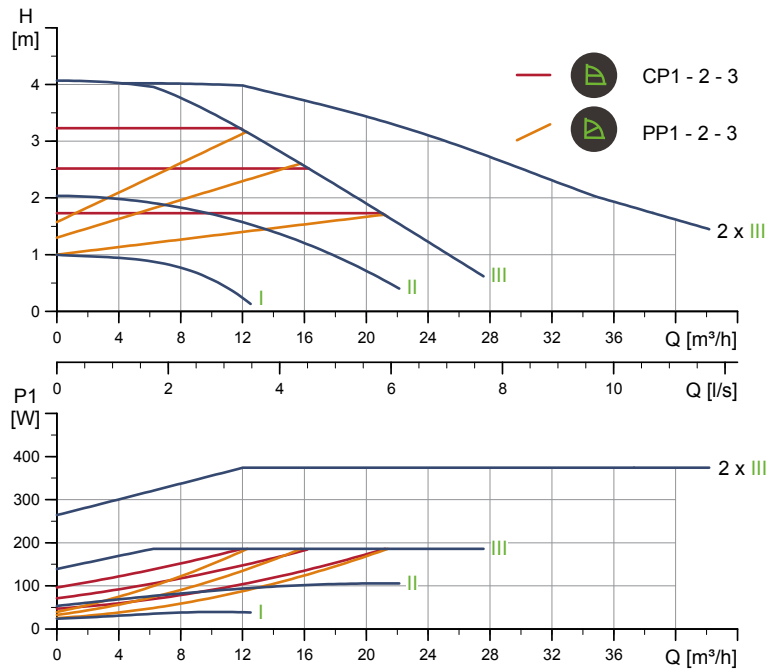


TM055276

Pump type	Dimensions [mm]																
	L1	L5	L6	B1	B2	B4	B6	B7	H1	H2	H3	H4	D1	D2	D3	D4	D5
MAGNA1 65-40 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



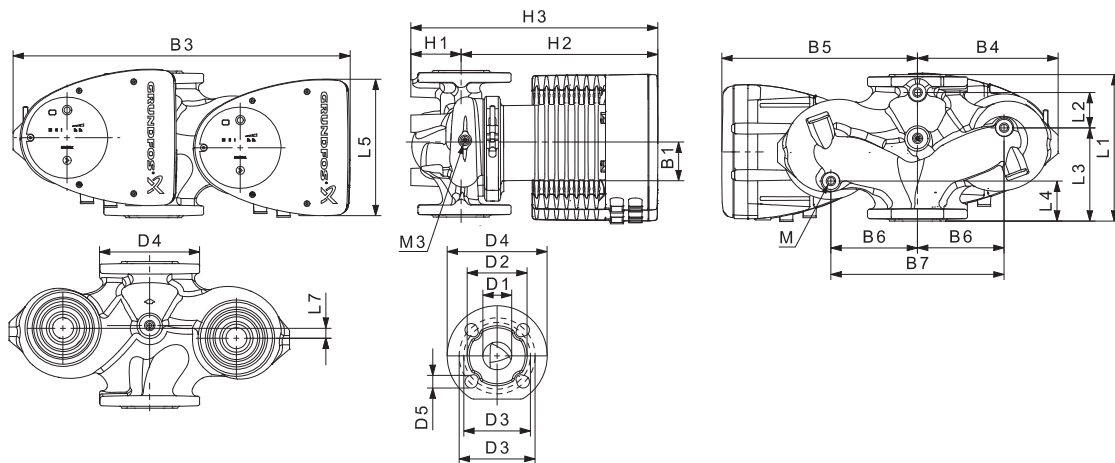
TM056347

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

The pump incorporates overload protection.

Connections:	See section 8.5 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

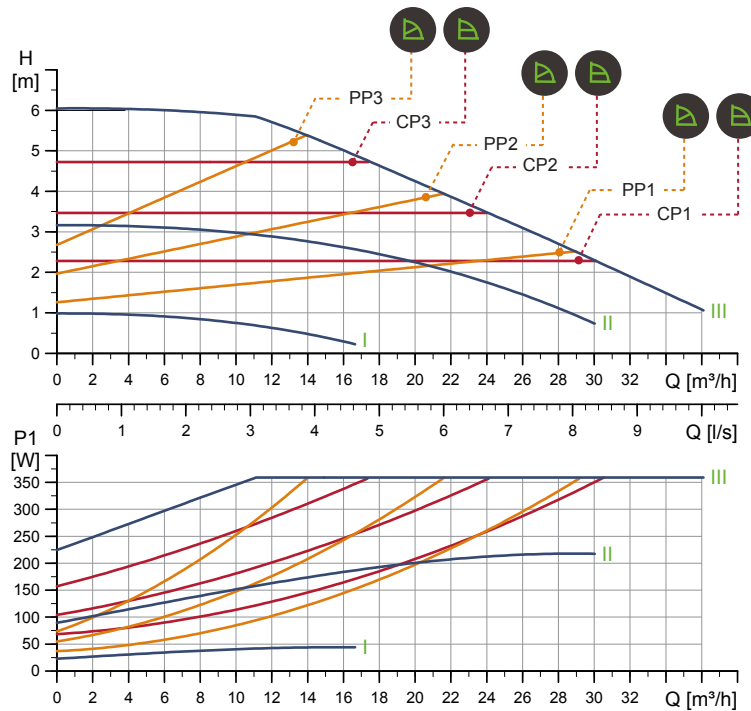


TM059237

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



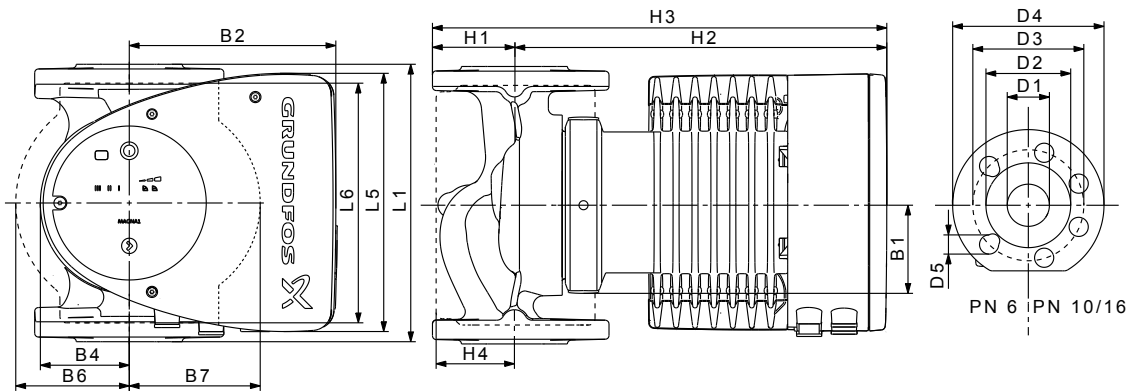
TM056301

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. [m ³]
20.7	23.0	0.057

Connections:	See section 8.5 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



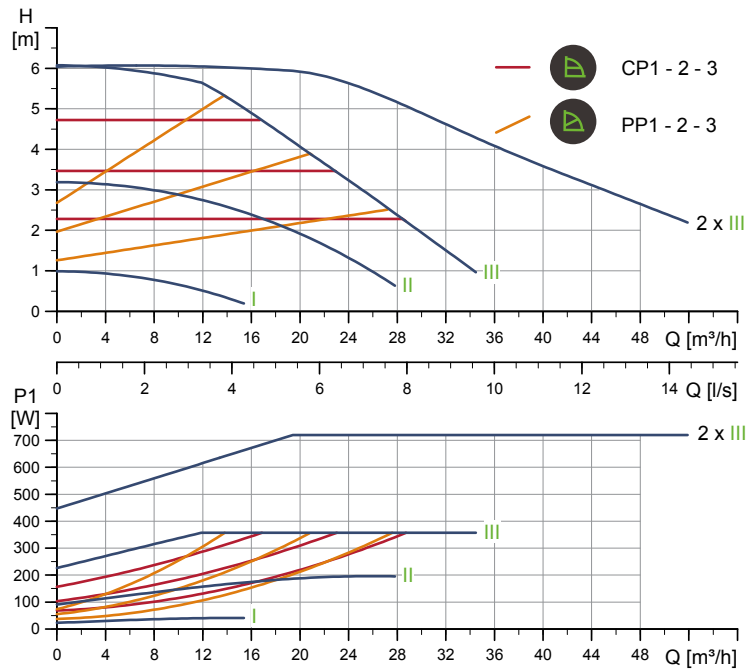
TM055276

Pump type	Dimensions [mm]																
	L1	L5	L6	B1	B2	B4	B6	B7	H1	H2	H3	H4	D1	D2	D3	D4	D5
MAGNA1 65-60 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



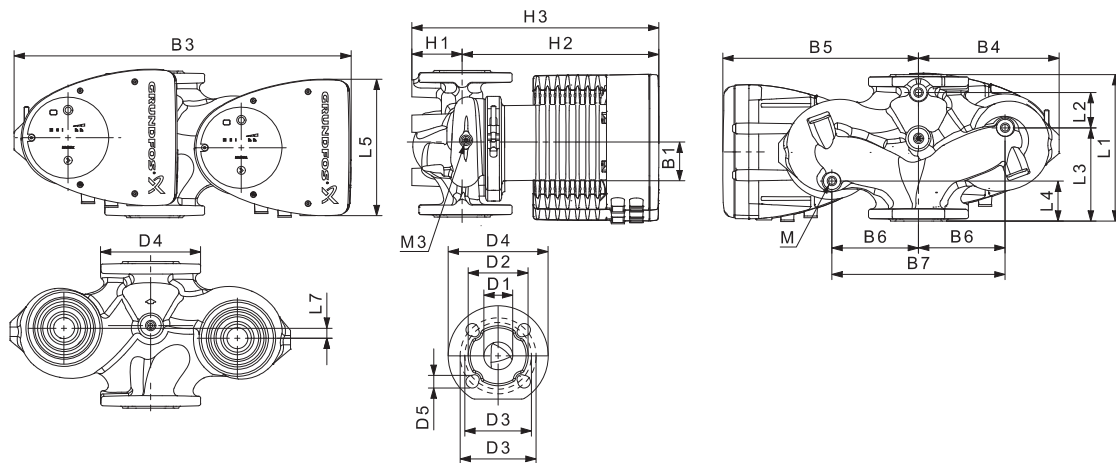
TM056348

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

The pump incorporates overload protection.

Connections:	See section 8.5 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]
38.5	46.0	0.132

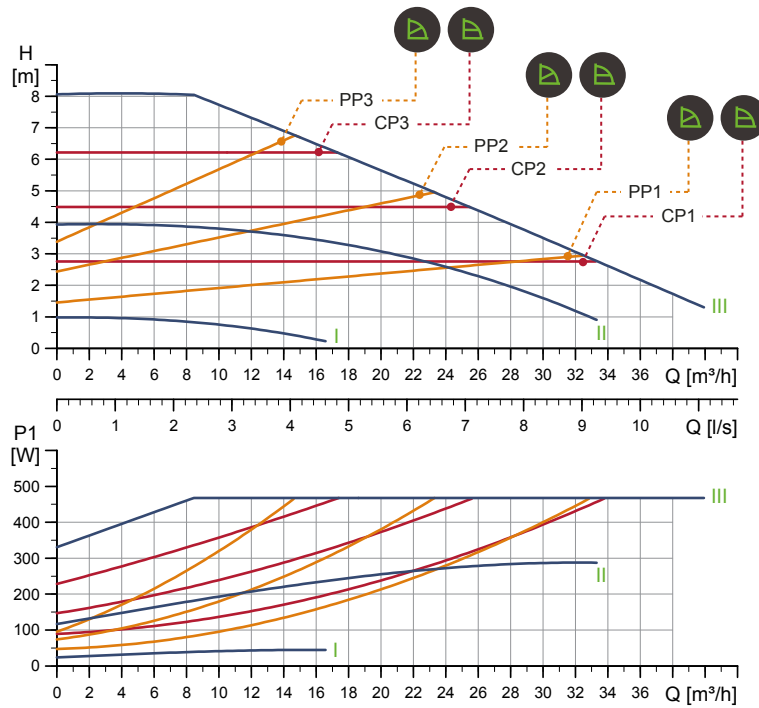


TM059237

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



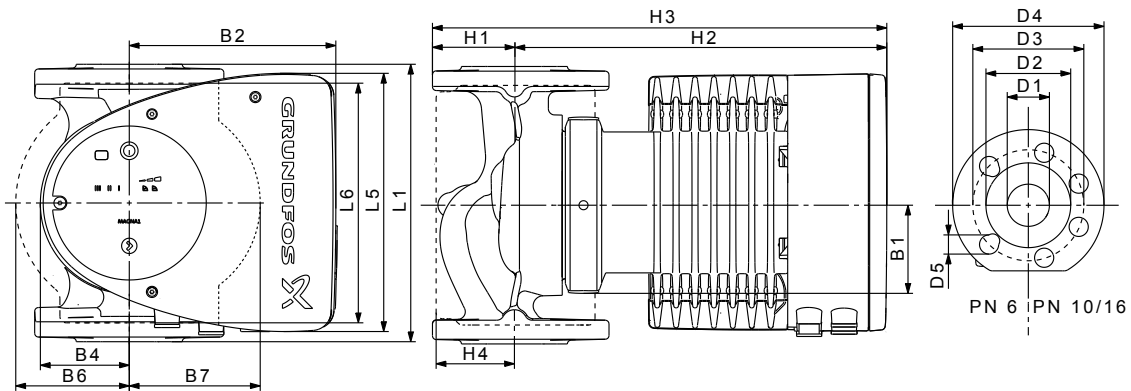
TM056302

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 8.5 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.



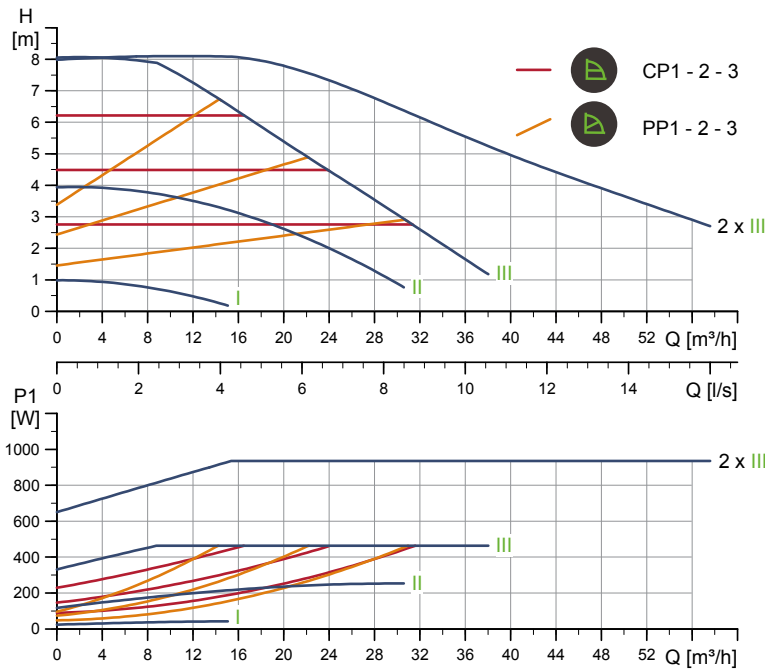
TM055276

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



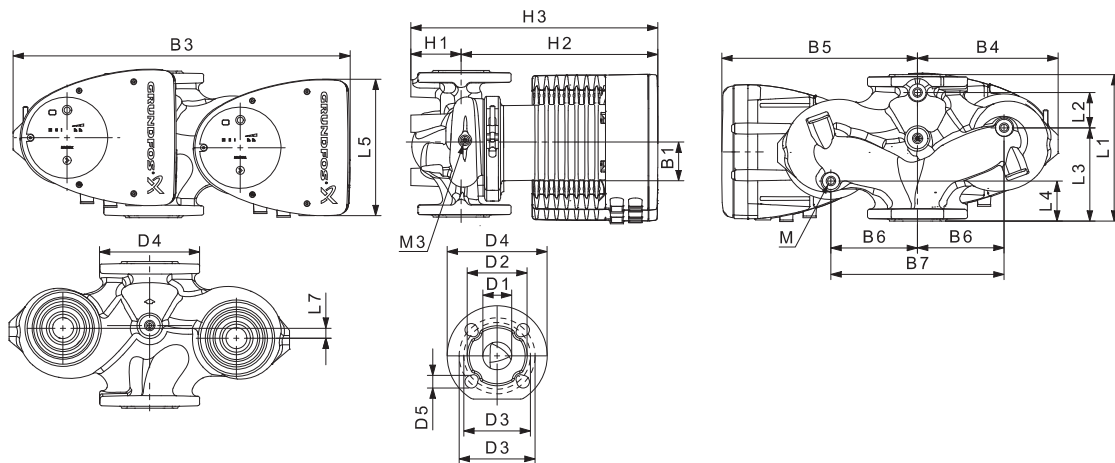
TM056349

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

The pump incorporates overload protection.

Connections:	See section 8.5 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



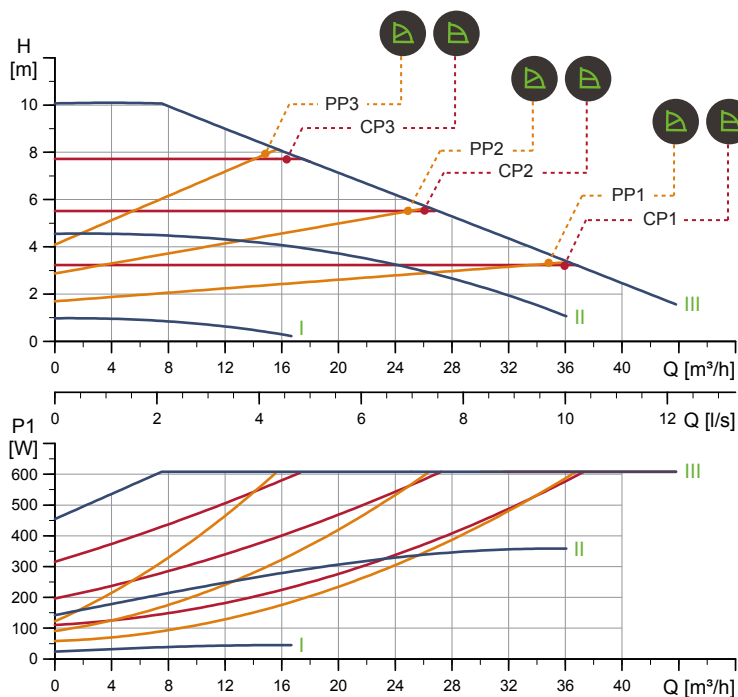
TM059237

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
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



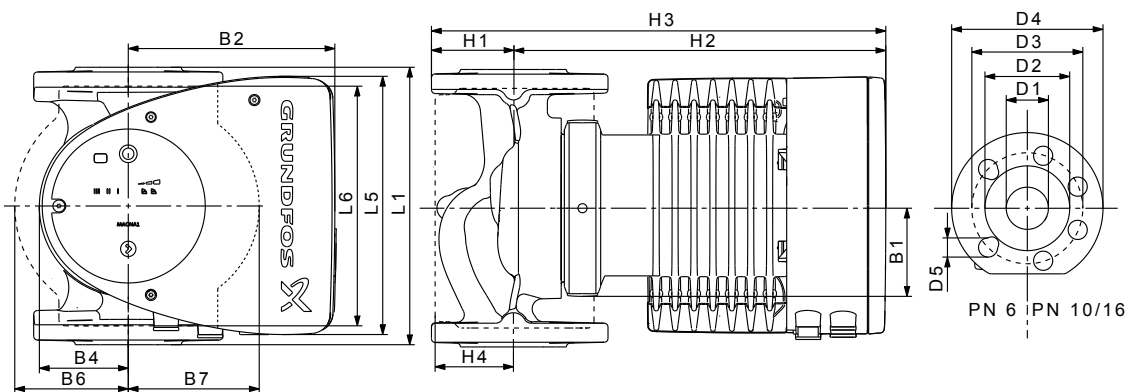
TM056303

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 8.5 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.



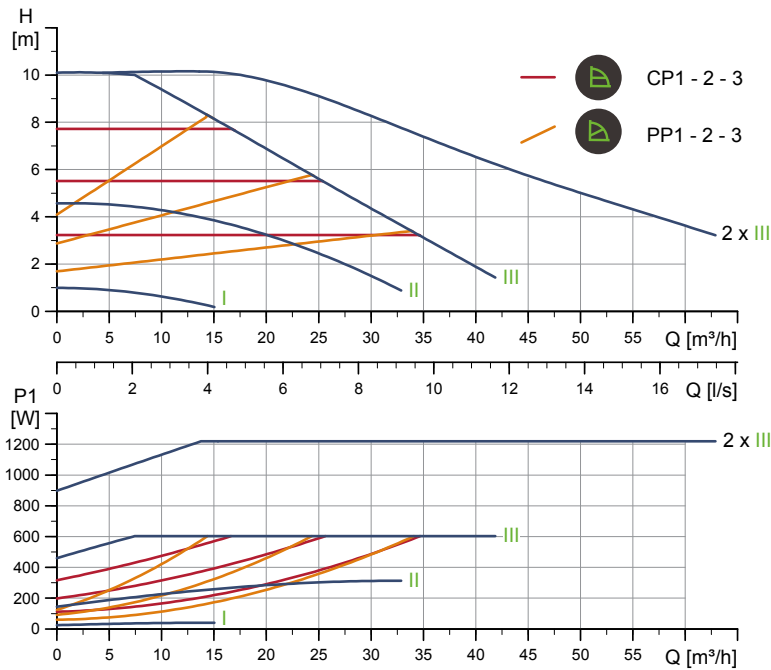
TM055276

Pump type	Dimensions [mm]																
	L1	L5	L6	B1	B2	B4	B6	B7	H1	H2	H3	H4	D1	D2	D3	D4	D5
MAGNA1 65-100 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



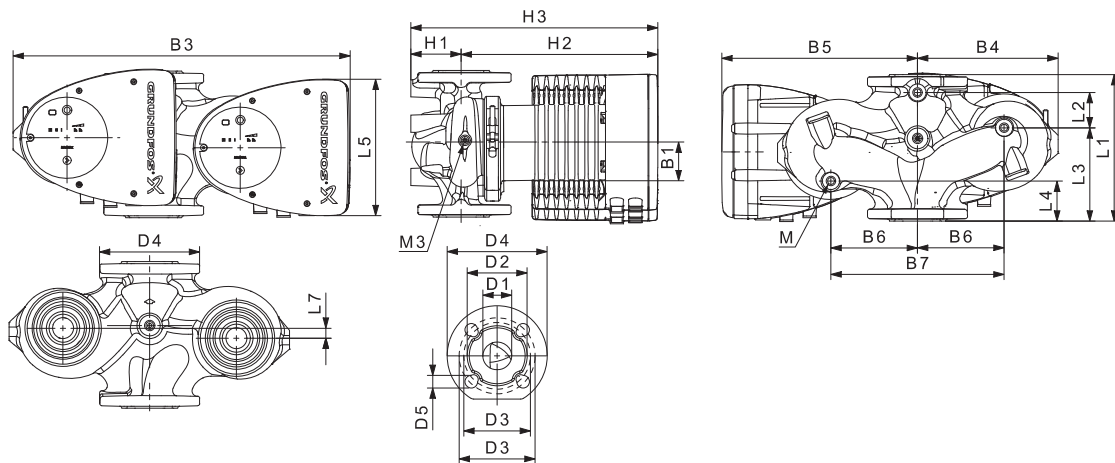
TM056350

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

The pump incorporates overload protection.

Connections:	See section 8.5 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

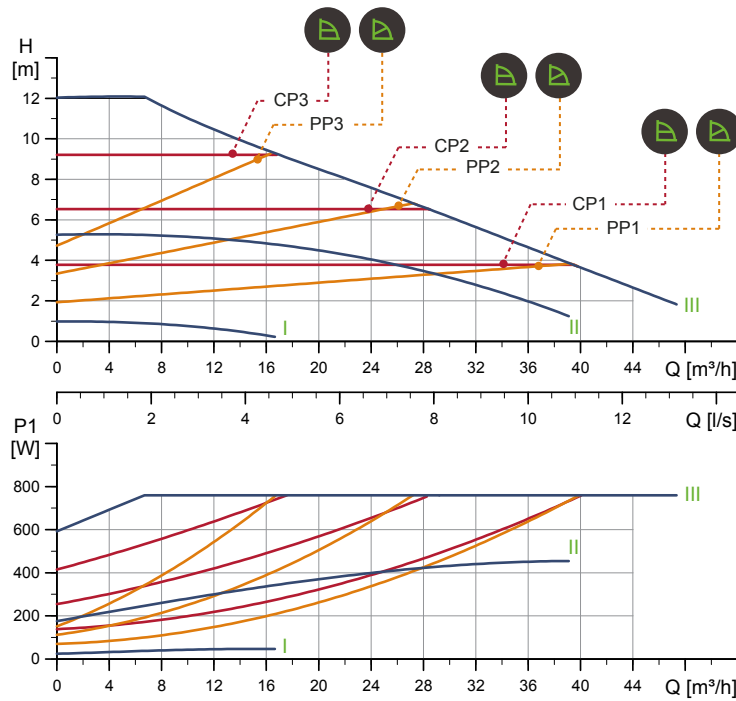


TM059237

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
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



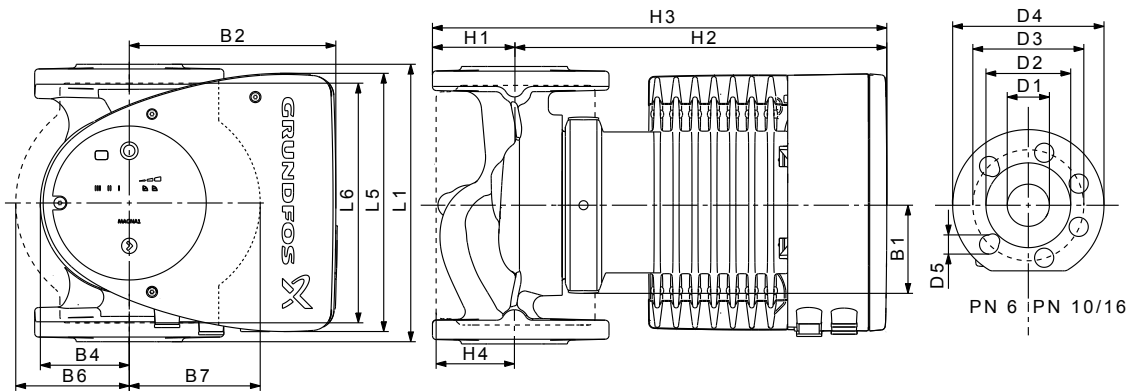
TM056304

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. [m ³]
21.6	23.8	0.057

Connections:	See section 8.5 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.



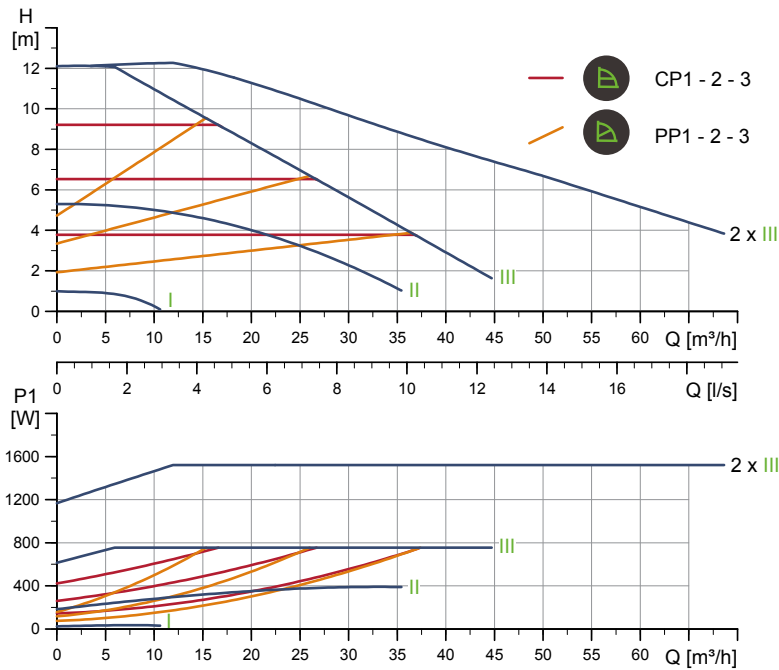
TM055276

Pump type	Dimensions [mm]																
	L1	L5	L6	B1	B2	B4	B6	B7	H1	H2	H3	H4	D1	D2	D3	D4	D5
MAGNA1 65-120 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



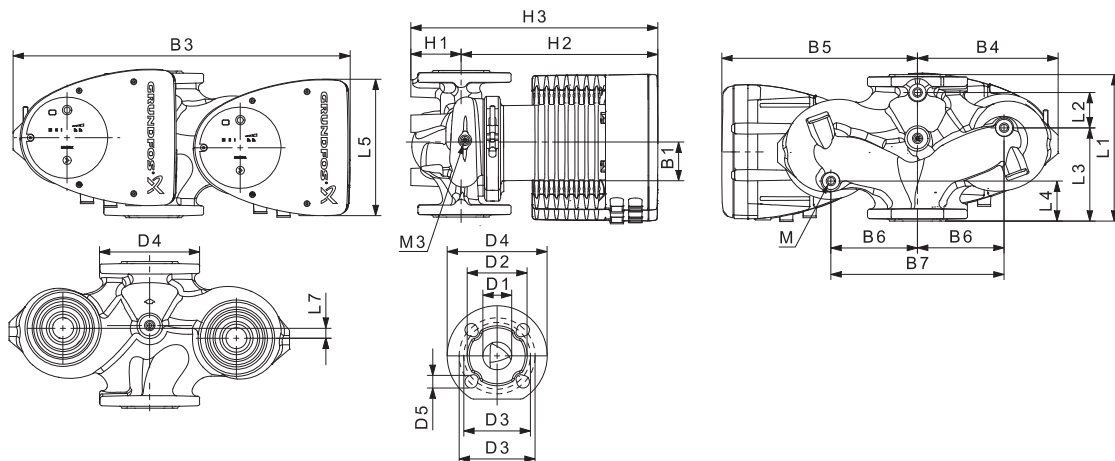
TM056351

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

The pump incorporates overload protection.

Connections:	See section 8.5 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

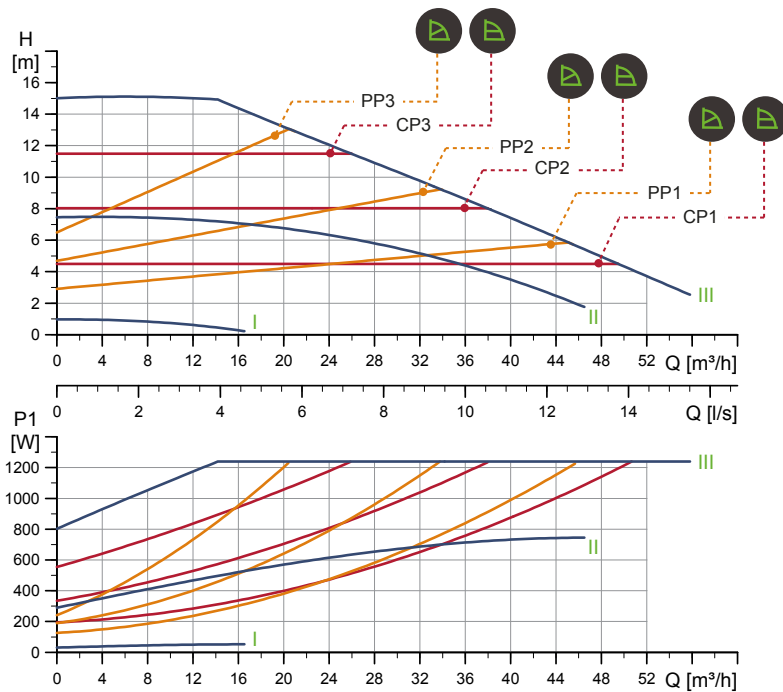


TM059237

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.

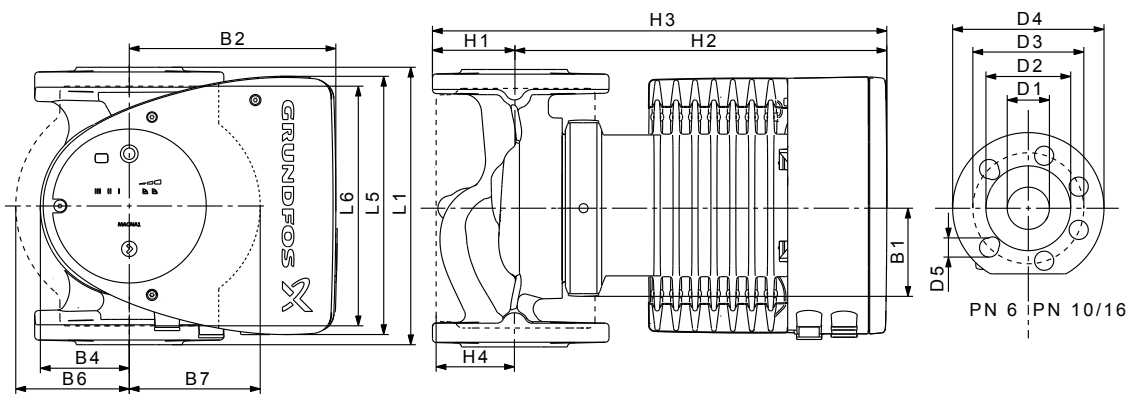
■ MAGNA1 65-150 F (N) PN 10
1 × 230 V, 50/60 Hz



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 8.5 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.



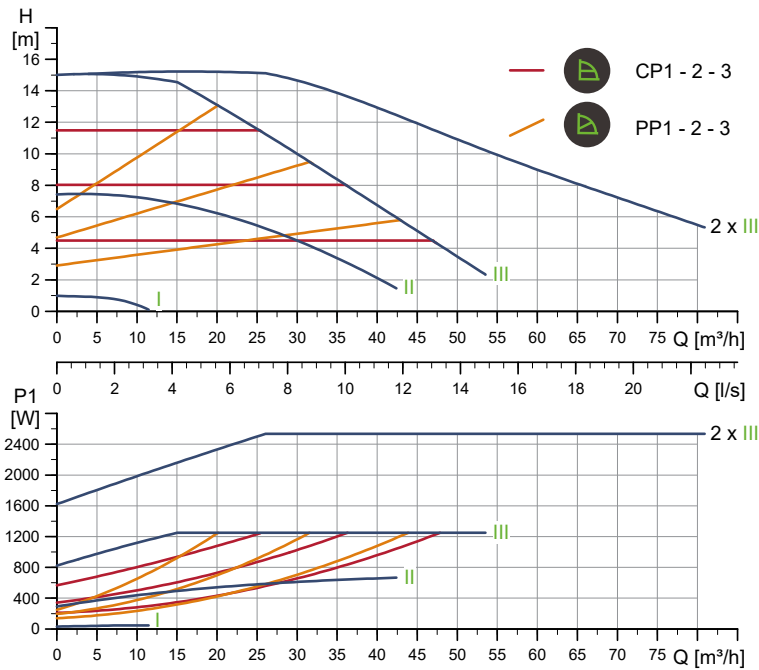
TM055276

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



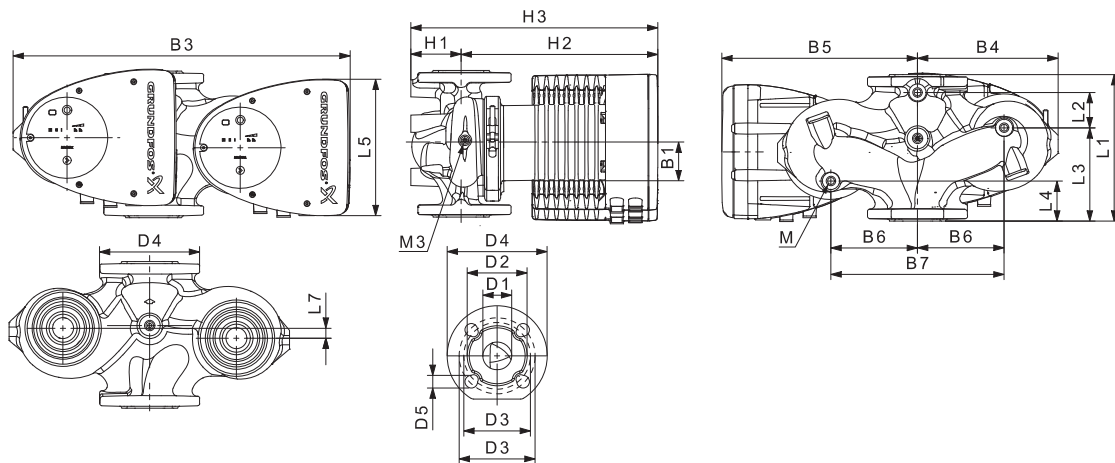
TM056352

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

The pump incorporates overload protection.

Connections:	See section 8.5 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. [m ³]
45.7	53.2	0.132



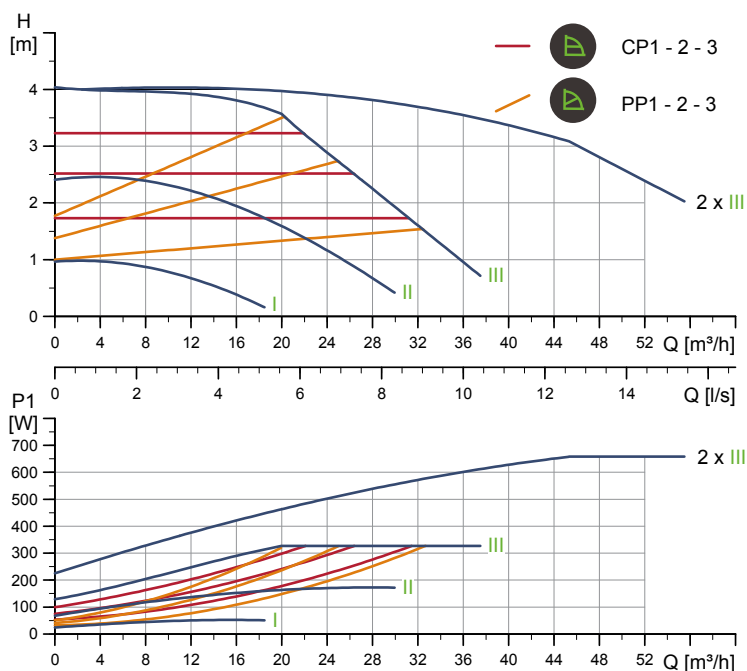
TM059237

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
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



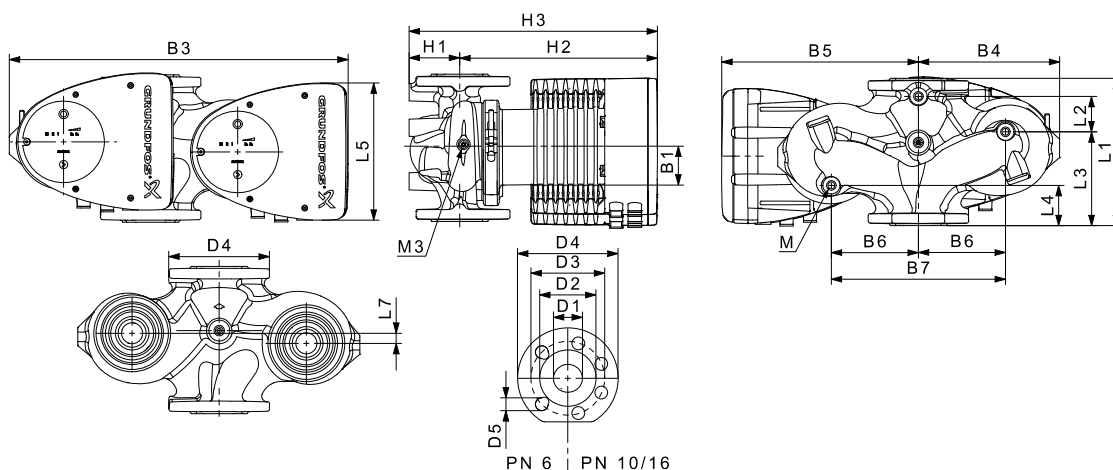
TM056353

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

The pump incorporates overload protection.

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

Connections:	See section 8.5 <i>Pipe connections</i> .
System pressure:	Max. 1.0 MPa (10 bar).
Liquid temperature:	-10 to 110 °C (TF 110).
Specific EEI:	0.21.



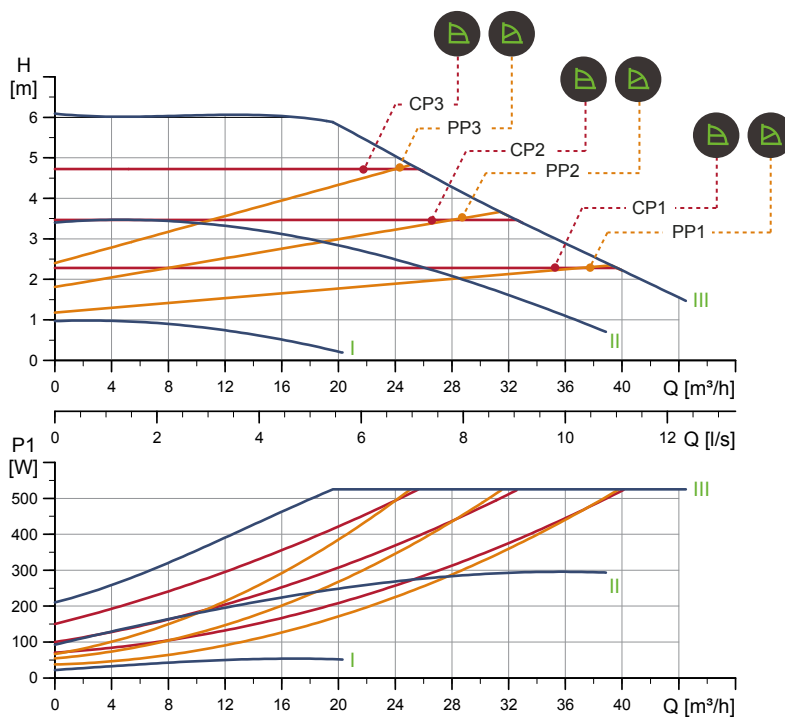
TM055275

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 80-40 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



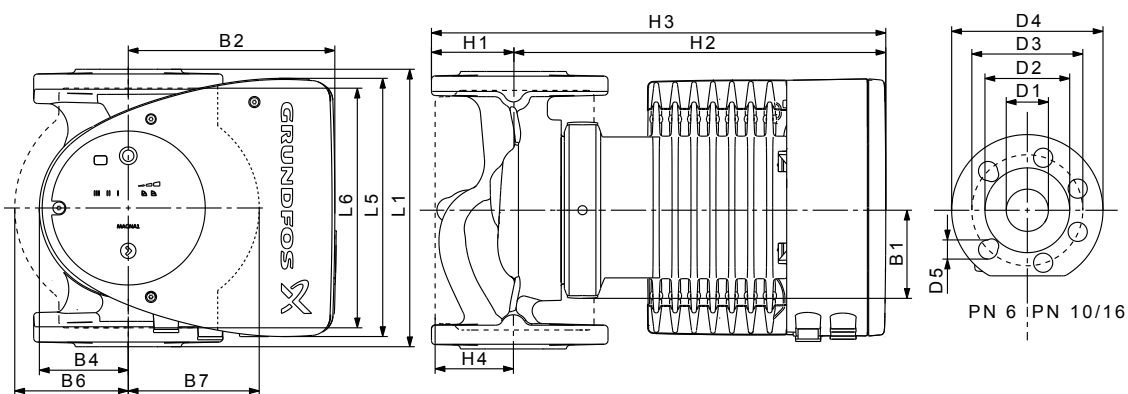
TM056307

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



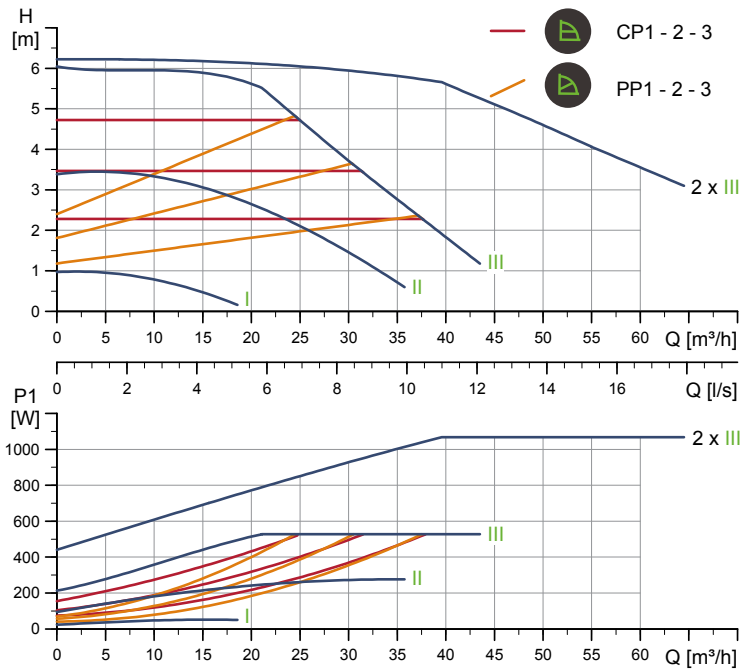
TM055276

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



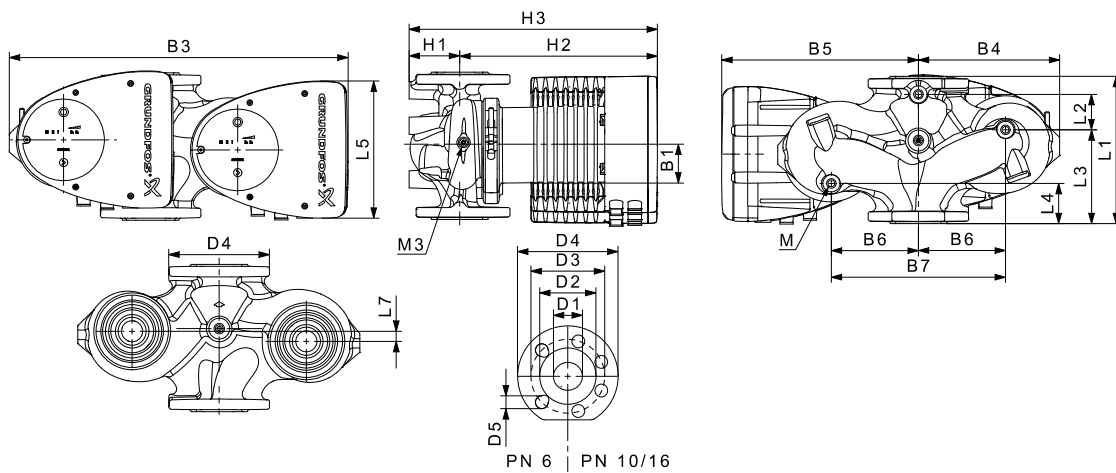
TM056354

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

The pump incorporates overload protection.

Connections:	See section 8.5 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



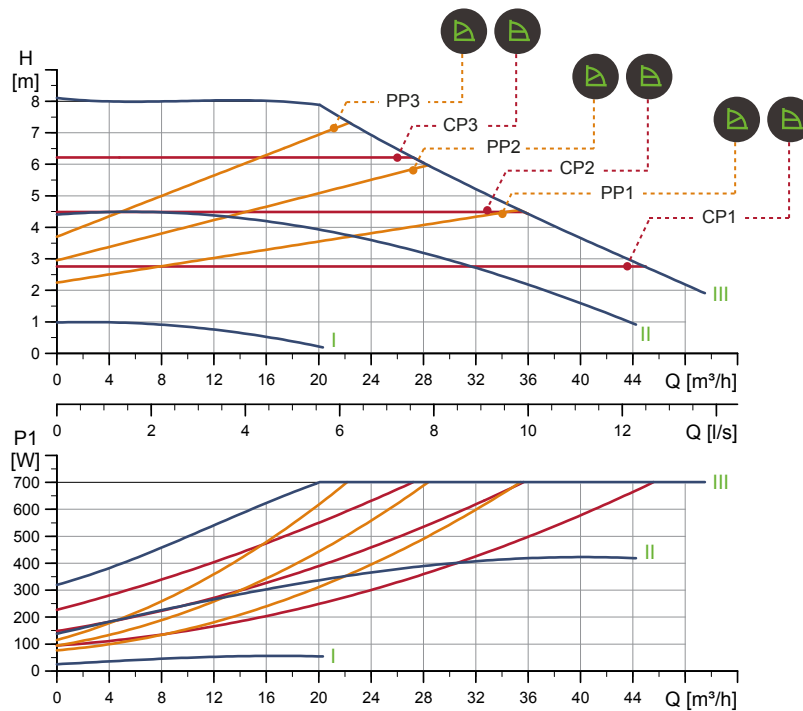
TM055275

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
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



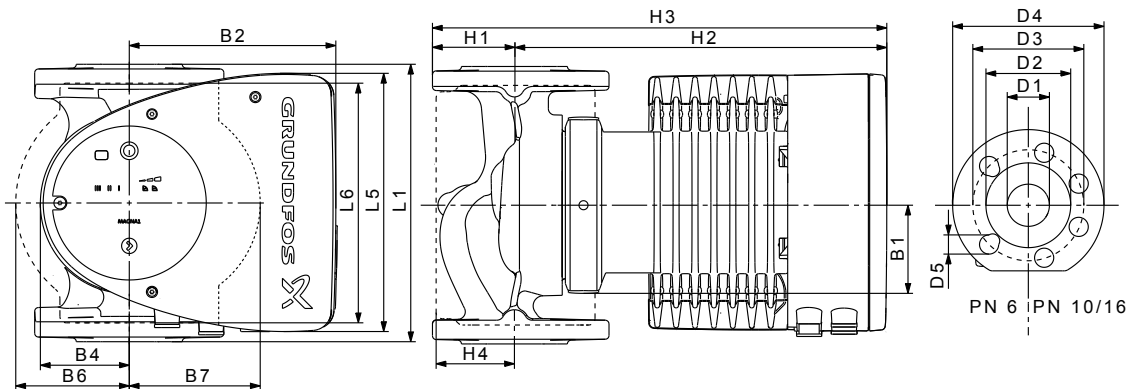
TM056308

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

The pump incorporates overload protection.

Connections:	See section 8.5 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. [m ³]
29.6	32.0	0.072



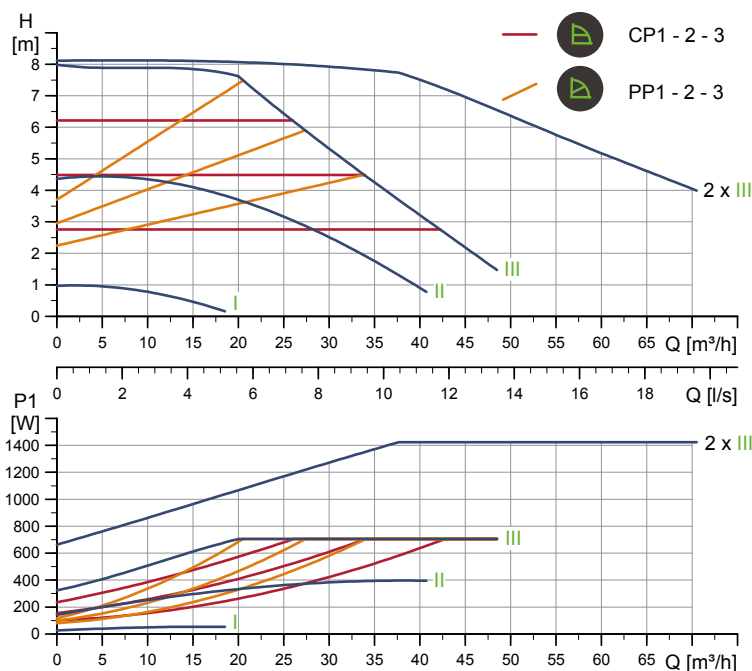
TM055276

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



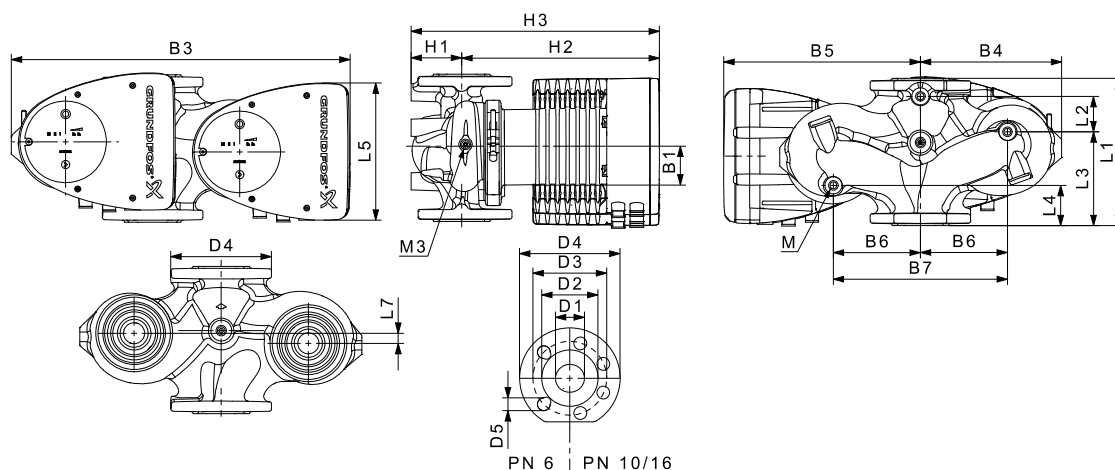
TM056355

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

The pump incorporates overload protection.

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

Connections:	See section 8.5 Pipe connections.
System pressure:	Max. 1.0 MPa (10 bar).
Liquid temperature:	-10 to 110 °C (TF 110).
Specific EEI:	0.21.



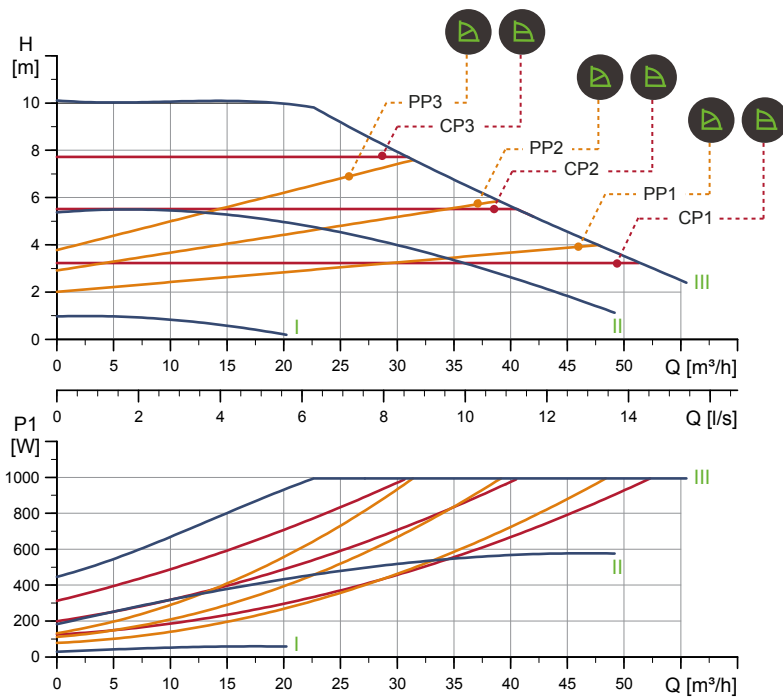
TM055275

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 80-80 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



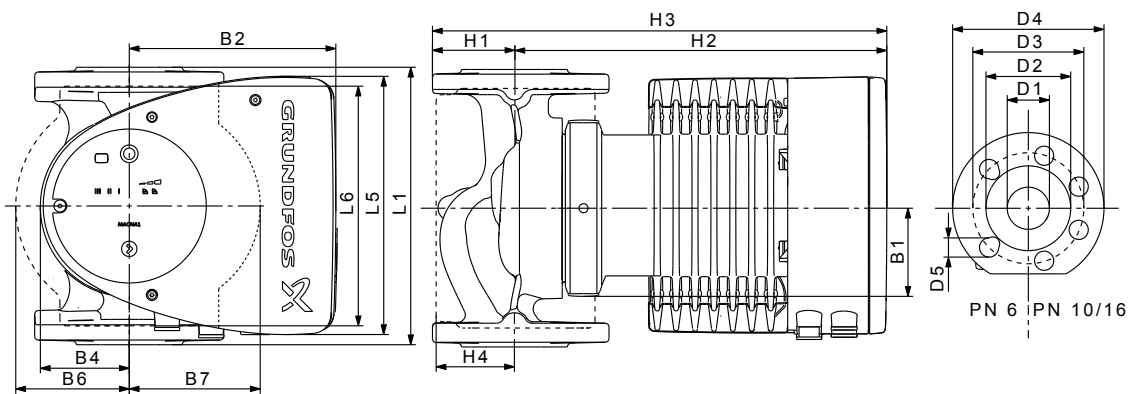
TM056309

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

The pump incorporates overload protection.

Connections:	See section 8.5 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



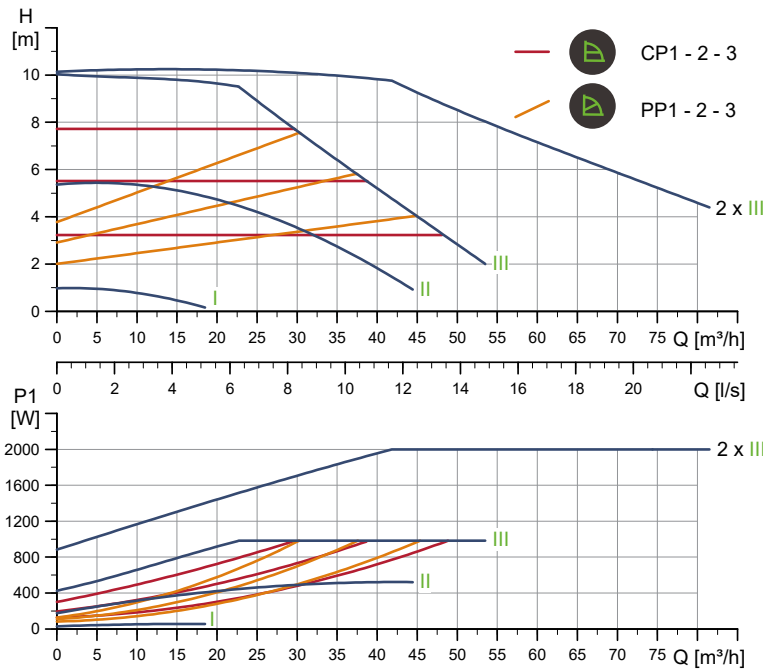
TM055276

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



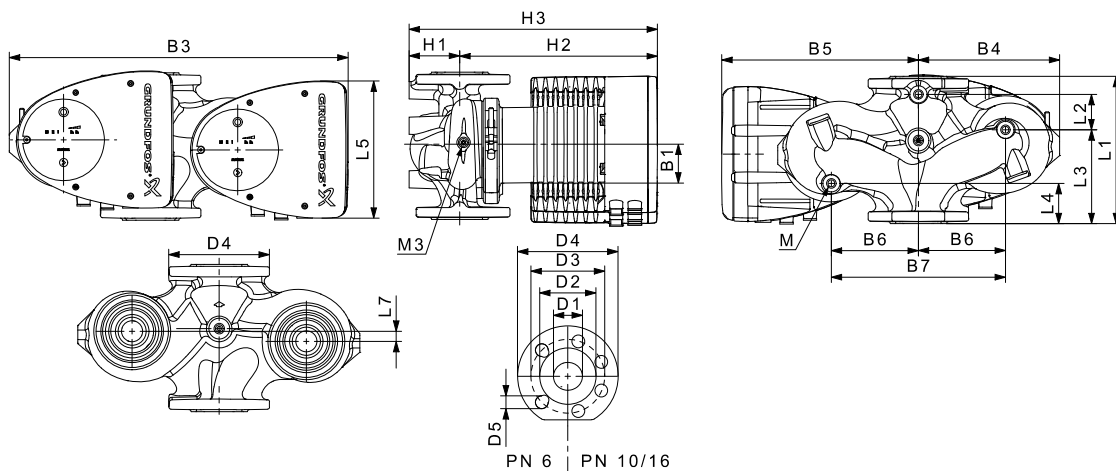
TM056356

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

The pump incorporates overload protection.

Connections:	See section 8.5 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



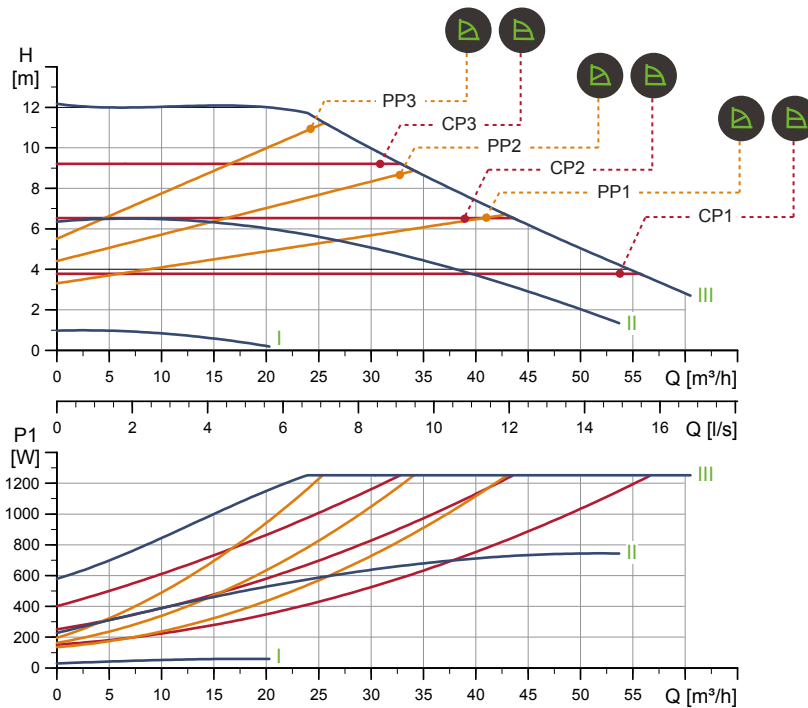
TM055275

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 80-100 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



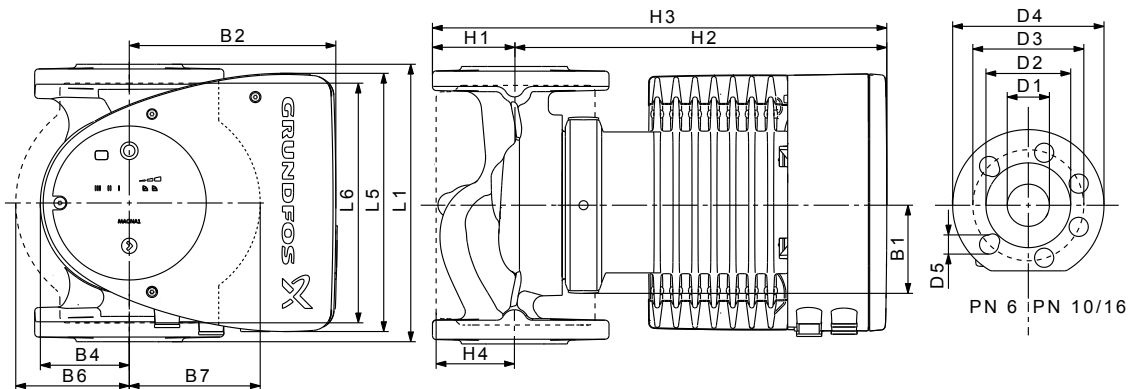
TM056310

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

The pump incorporates overload protection.

Connections:	See section 8.5 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

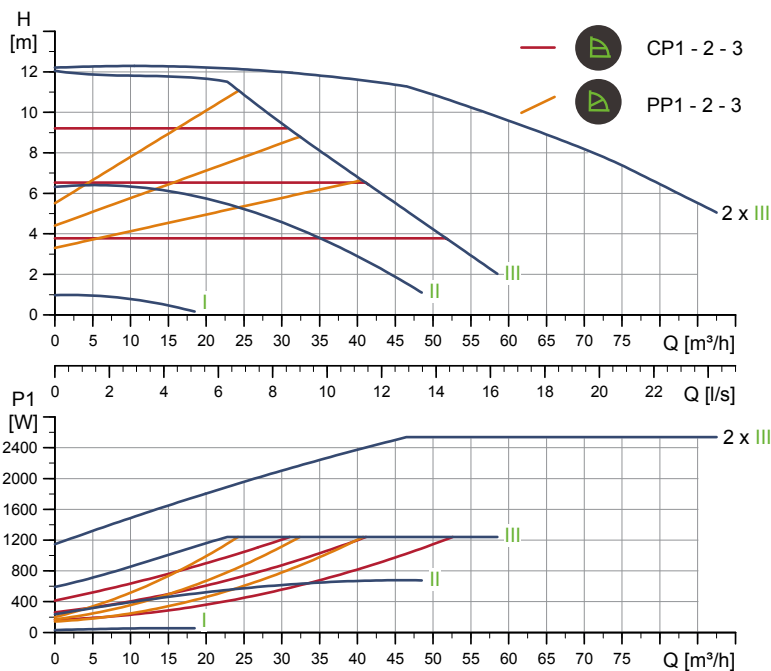


TM055276

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



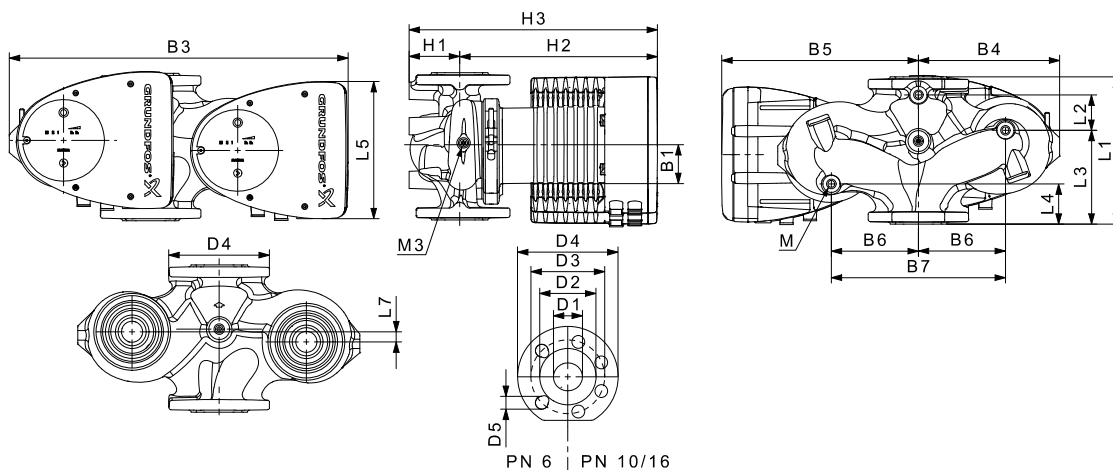
TM056357

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

The pump incorporates overload protection.

Connections	See section 8.5 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



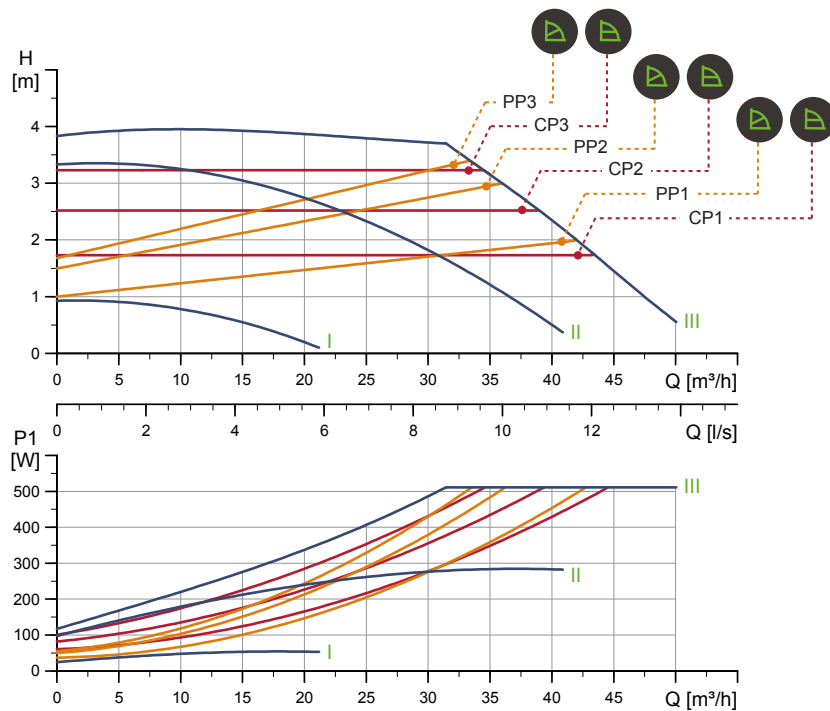
TM055275

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



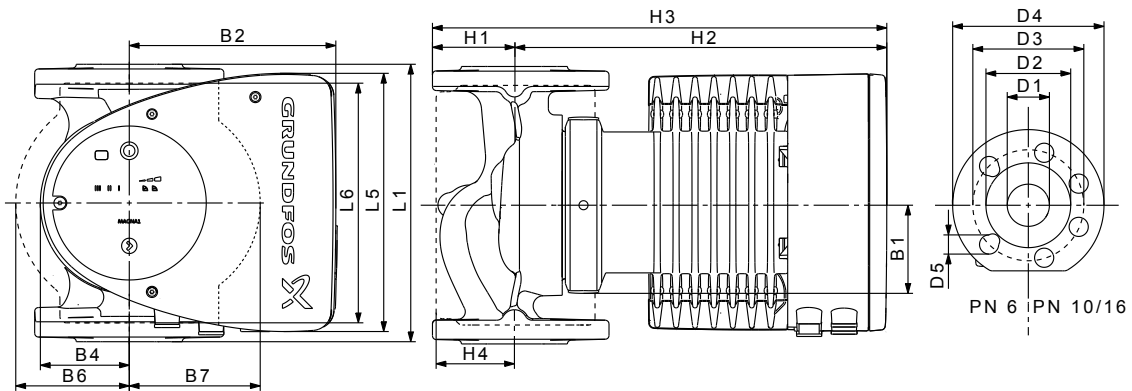
TM056311

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

The pump incorporates overload protection.

Connections:	See section 8.5 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

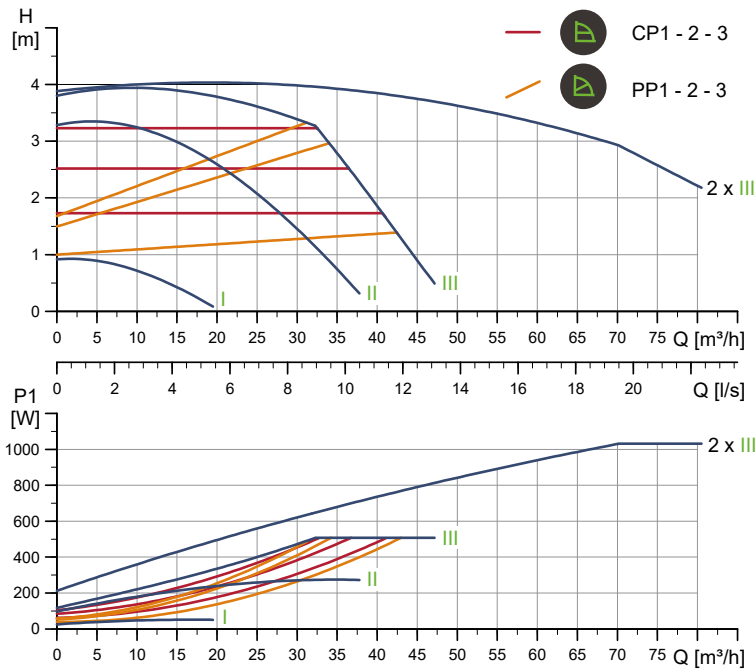


TM055276

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



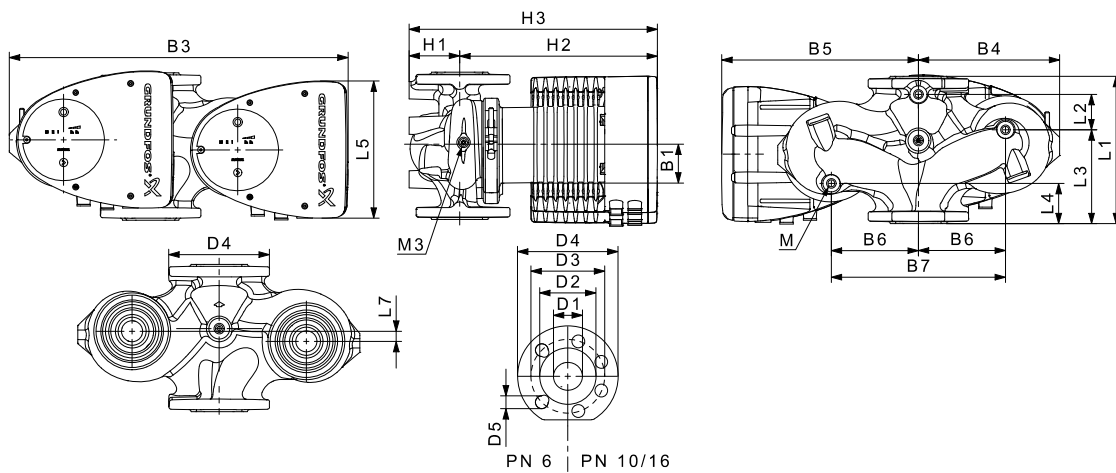
TM056358

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

The pump incorporates overload protection.

Connections:	See section 8.5 <i>Pipe connections</i> .
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



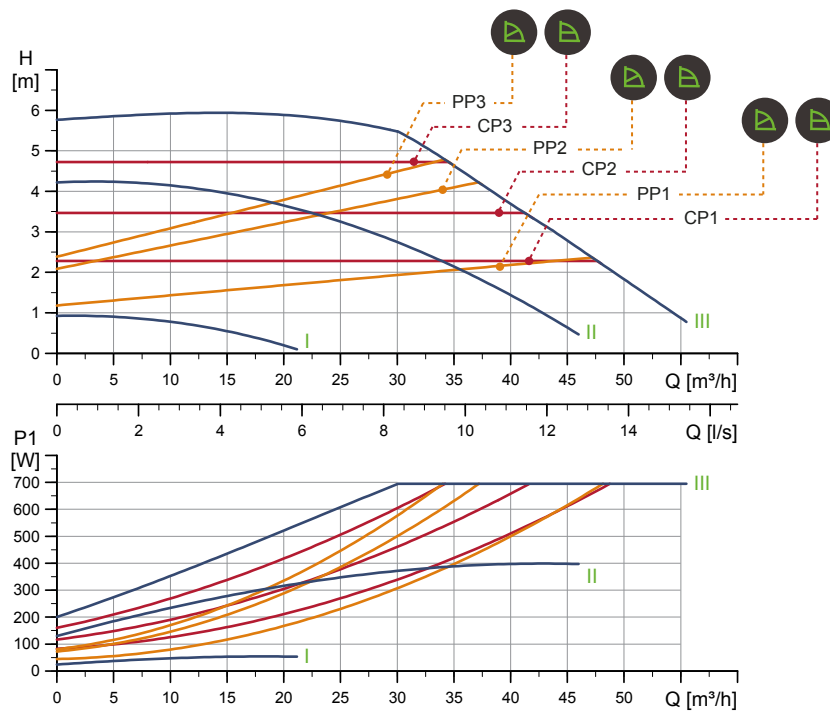
TM055275

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
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



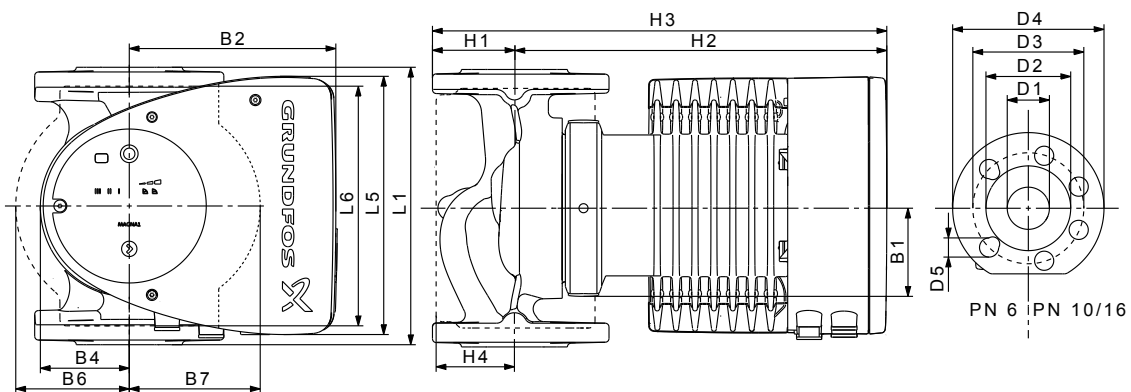
TM056312

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

The pump incorporates overload protection.

Connections:	See section 8.5 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

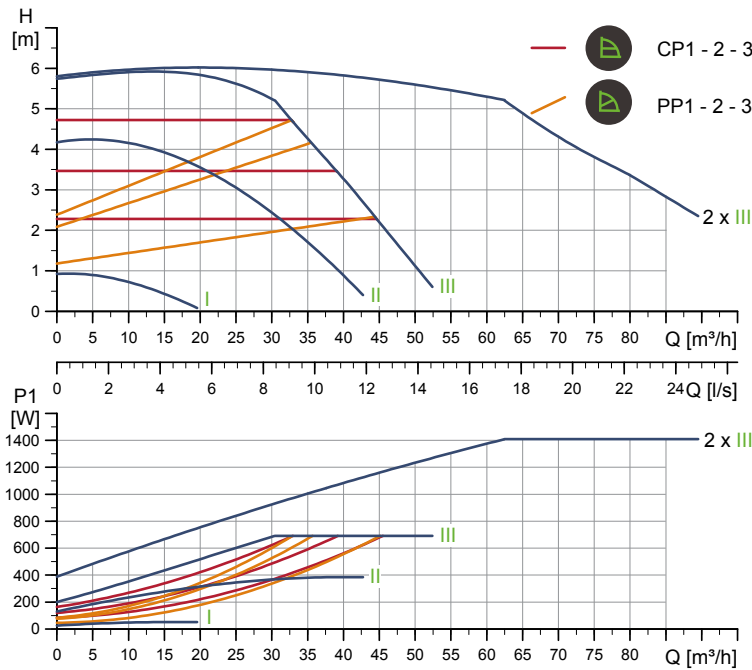


TM055276

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



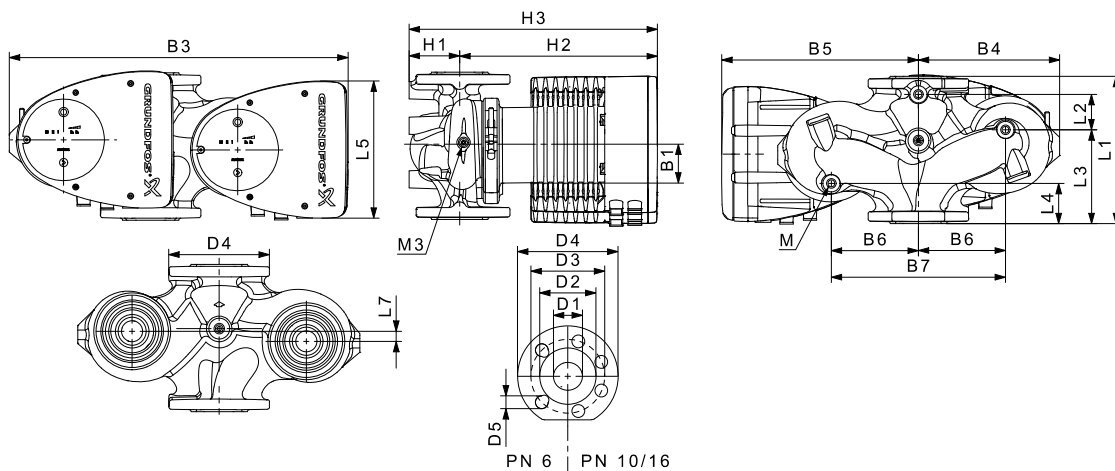
TM056359

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

The pump incorporates overload protection.

Connections:	See section 8.5 <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



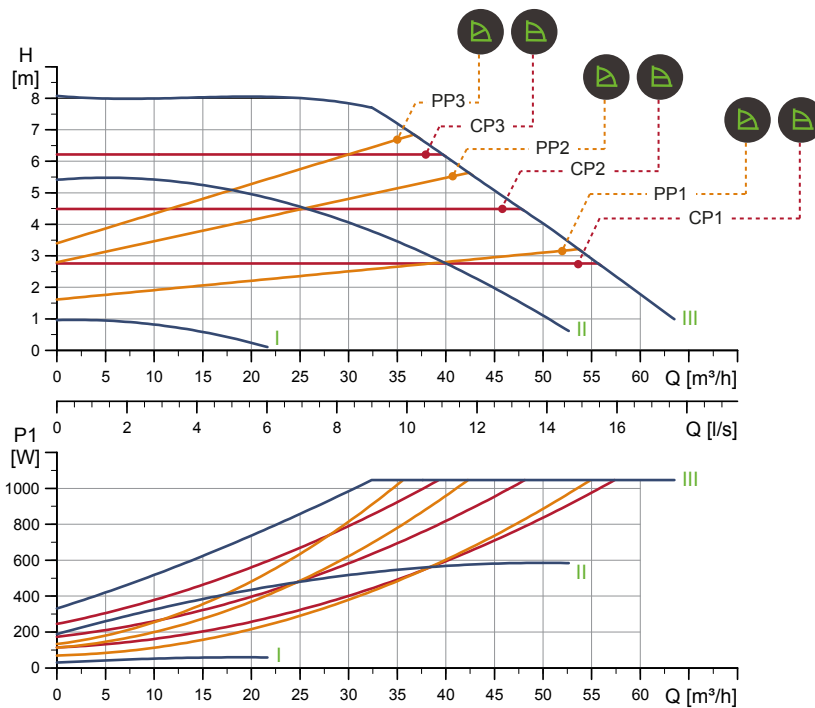
TM055275

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 100-60 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



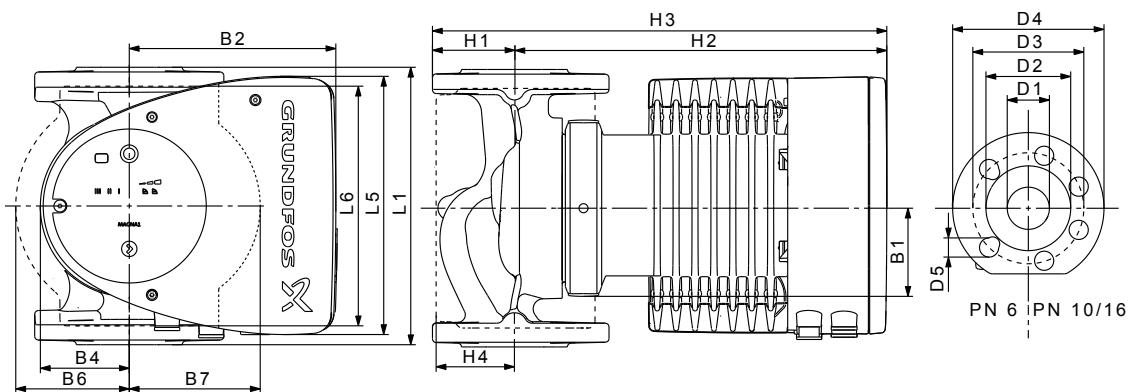
TM056313

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

The pump incorporates overload protection.

Connections:	See section 8.5 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



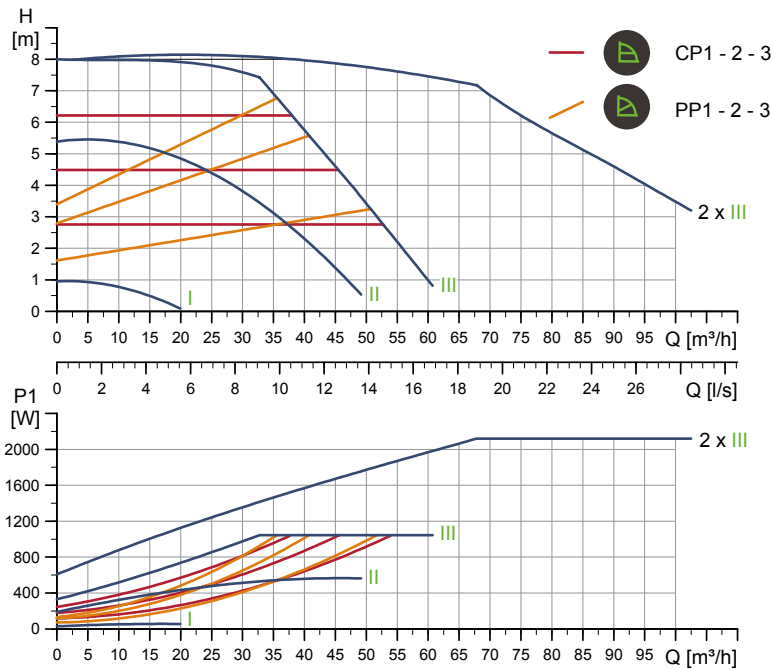
TM055276

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



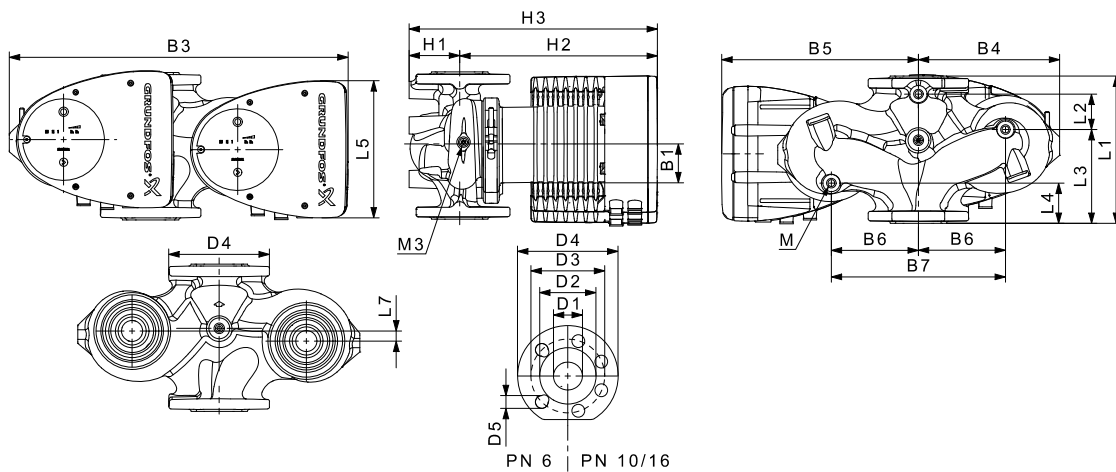
TM056360

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

The pump incorporates overload protection.

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

Connections:	See section 8.5 <i>Pipe connections</i> .
System pressure:	Max. 1.0 MPa (10 bar).
Liquid temperature:	-10 to 110 °C (TF 110).
Specific EEI:	0.22.

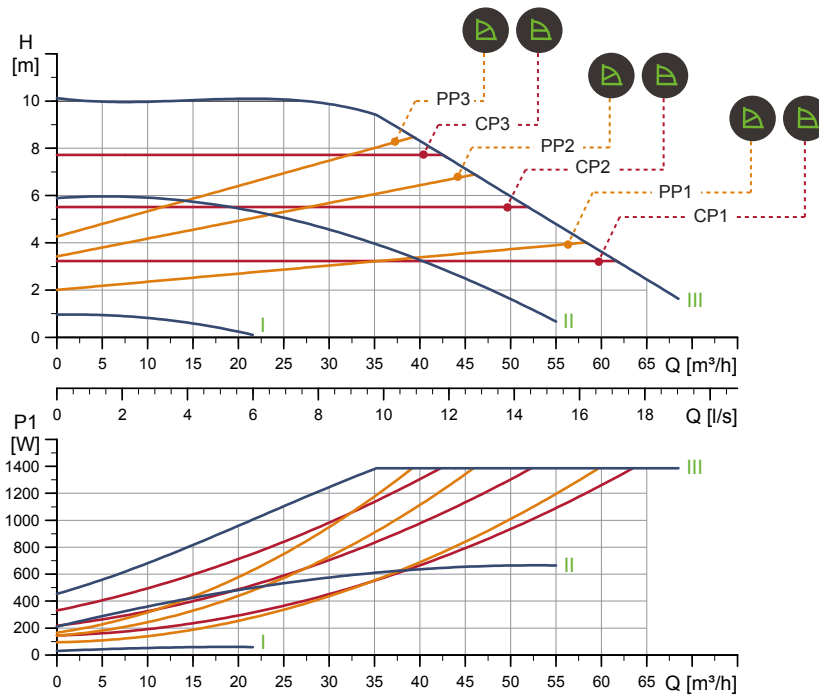


TM055275

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.

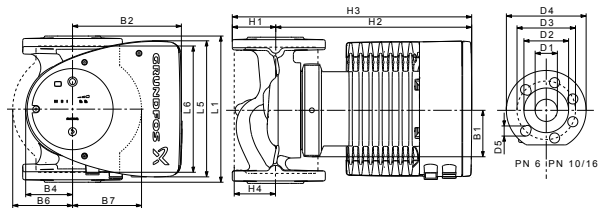
Net weight [kg]	Gross weight [kg]	Ship. vol. [m ³]
34.8	37.0	0.099

Connections: See section 8.5 Pipe connections.

System pressure: Max. 1.0 MPa (10 bar).

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

Specific EEI: 0.19.



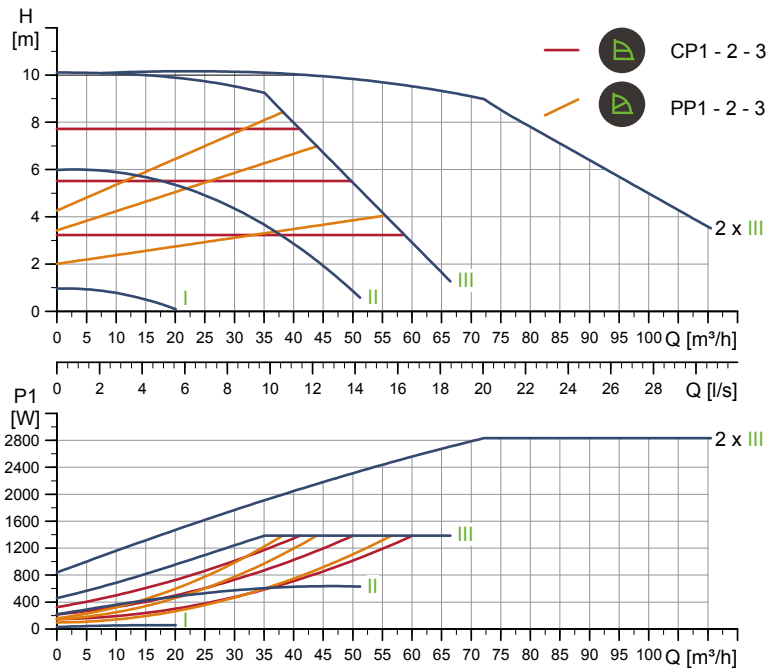
TM056276

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



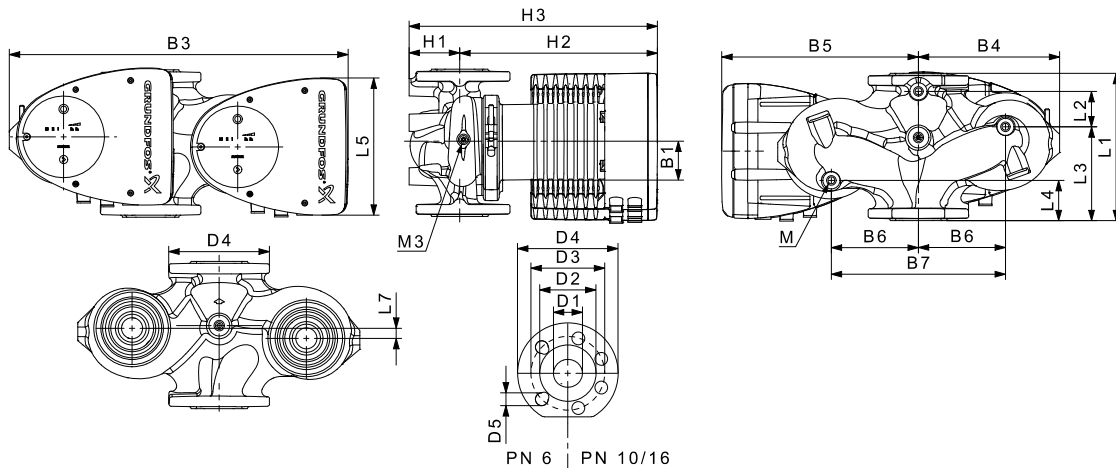
TM056361

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

The pump incorporates overload protection.

Connections:	See section 8.5 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

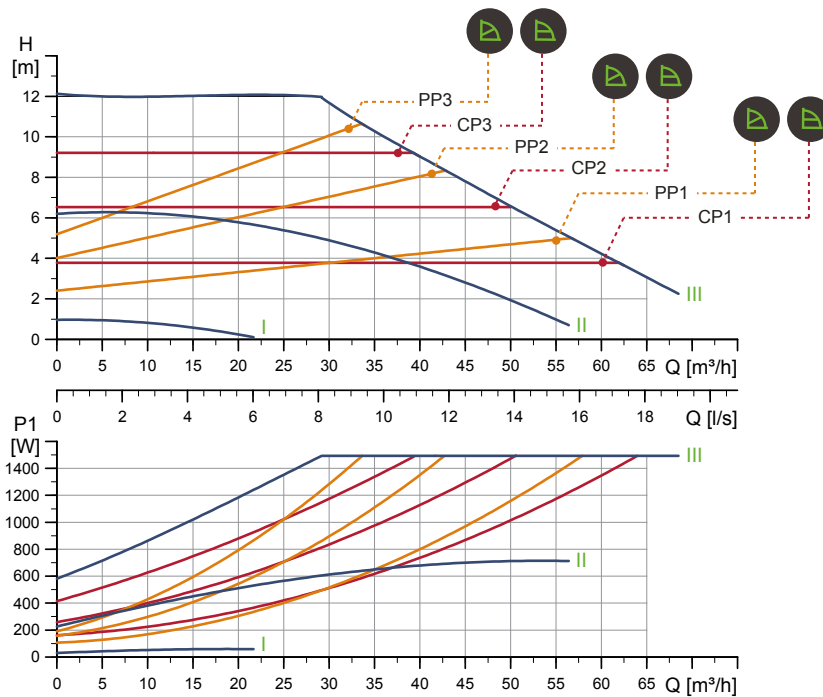


TM055275

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



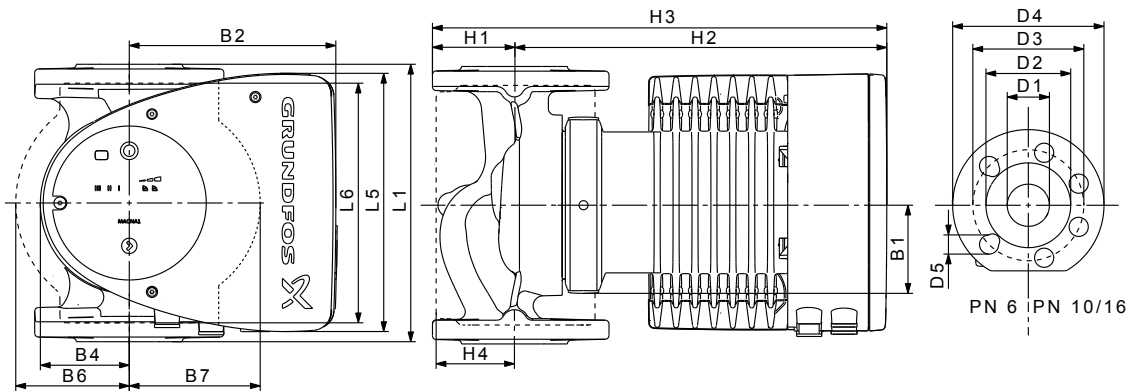
TM056315

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

The pump incorporates overload protection.

Connections:	See section 8.5 <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

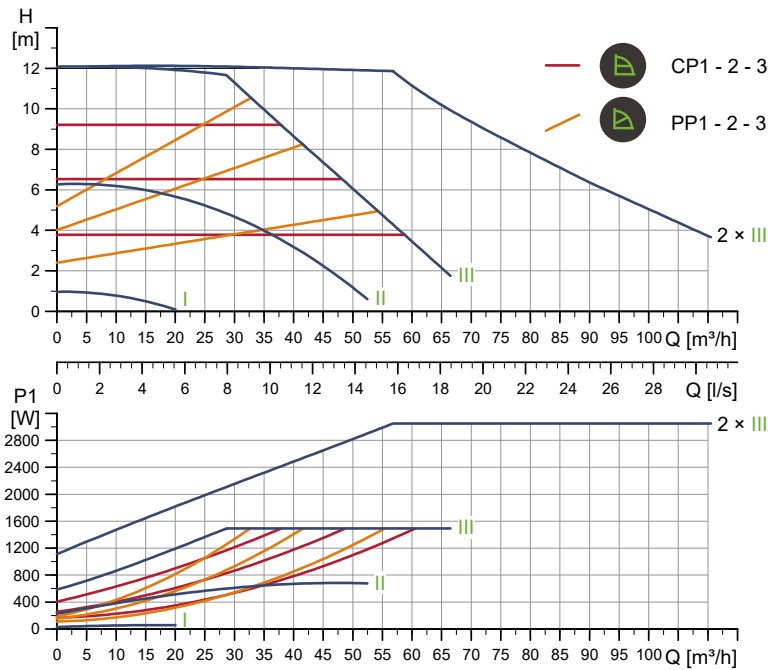


TM055276

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



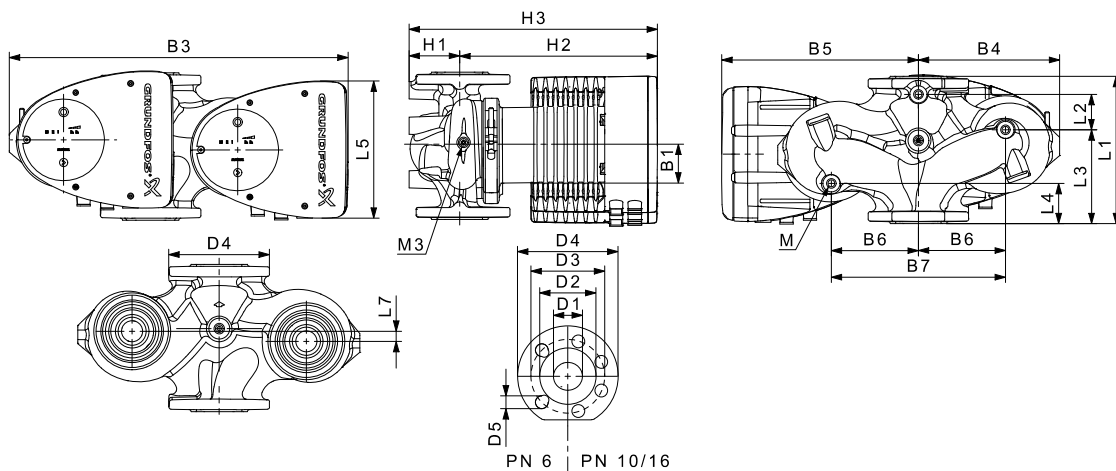
TM056362

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

The pump incorporates overload protection.

Connections:	See section 8.5 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	72.7	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
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.



TM055529

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

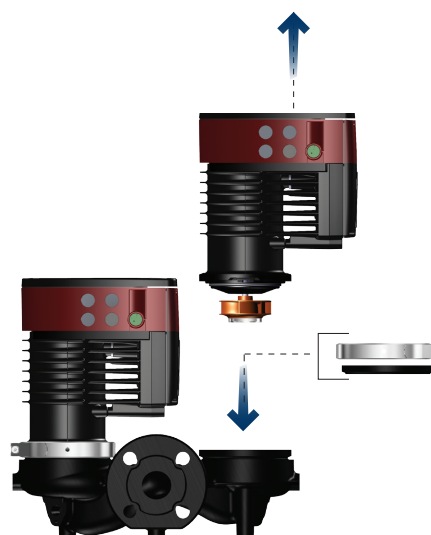
Specifications

- 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.

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.



TM068518

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



TM053073

ALPHA plugs

Pos.	Description	Product number
1	ALPHA plug, standard plug connection	98284561
2	ALPHA angle plug, standard angle plug connection	98610291
3	ALPHA plug, 90 ° bend, including 4 m cable	96884669

Grundfos GO

MAGNA1 single-head pumps are designed for infrared communication (IR) with Grundfos GO Remote, while MAGNA1 twin-head pumps can also communicate via radio.

In order to communicate with Grundfos GO Remote via infrared, you need an add-on module.

MI 301

MI 301 has built-in infrared 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 Remote app, which is available in Apple App Store and Google Play.

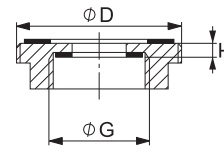
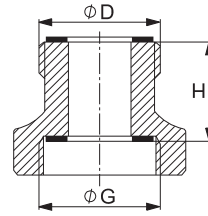
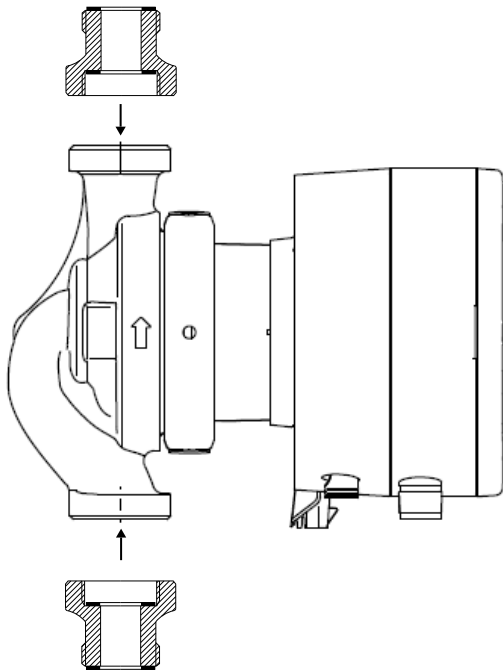
For function and connection to the pump, see the separate installation and operating instructions for the desired type of Grundfos GO setup.

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



Example of thread-thread adapters

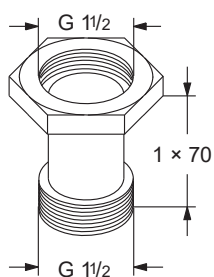
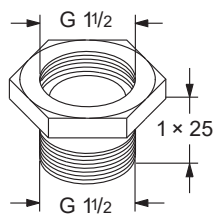
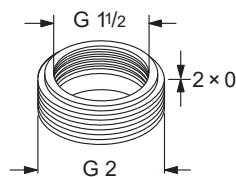
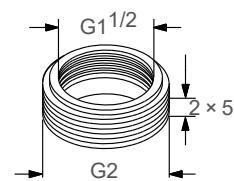
TM058617

TM058618

TM079314

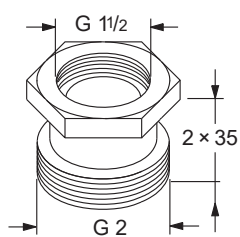
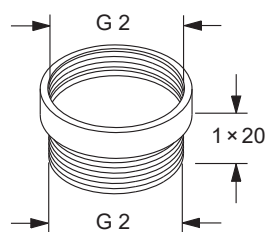
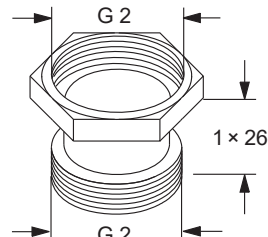
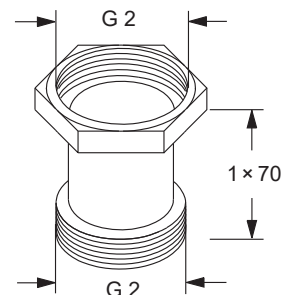
New pump Connection G	Union nut Connection D	Adapter length H [mm]	Adapter type	Figure	Material	Product number PN 10
G 1 1/2	G 1 1/2	1 × 70	A 4	1	Cast iron (GG)	535043
	G 1 1/2	1 × 25	A 5	1	Cast iron (GG)	535044
	G 2	2 × 0	A 6	2	Brass (Ms)	535045
	G 2	2 × 5	A 7	2	Bronze (Rg)	535046
	G 2	2 × 35	A 8	1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

A 4

A 5
TM058608A 6
TM058609A 7
TM058610

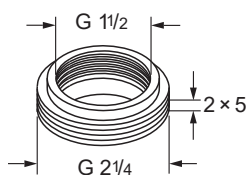
TM058611

A 8

A 9
TM058612A 10
TM058613A 11
TM058614

TM058615

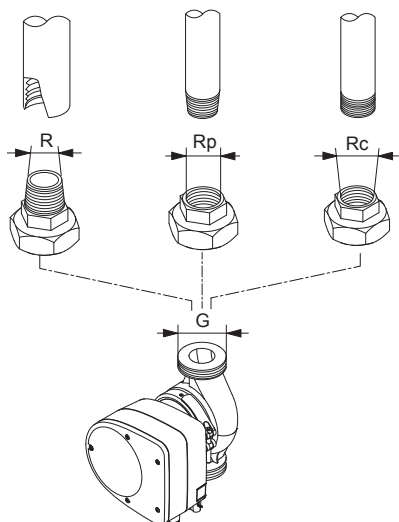
A 21



TM058616

Thread types

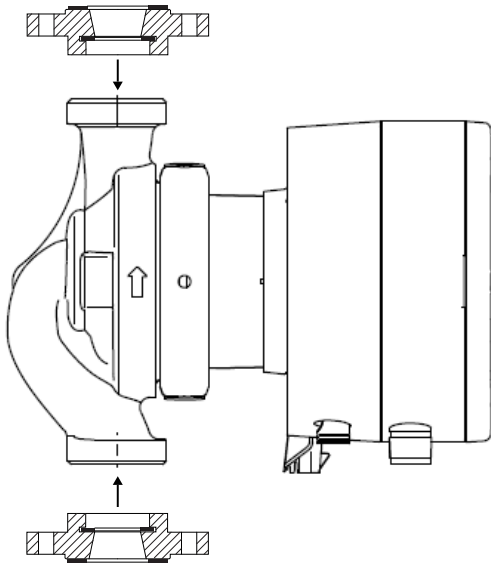
G-threads have a cylindrical form in accordance with the EN-ISO 228-1 standard. R-threads have a conical form in accordance with the ISO 7-1 standard. In the case of a thread of size 1 1/2 inch, the threads are specified as G 1 1/2 or R 1 1/2. You can only screw male G-threads (cylindrical) into female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



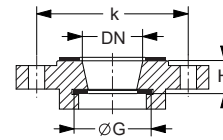
TM060438

G-thread and R-thread

Thread-flange adapters



TM079313



Example of thread-flange adapters

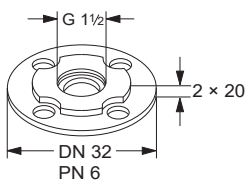
TM060450

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*	2 × 0	90	A 16	3	Cast iron (GG)	535055**	535055**
	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 × 10	90	A 22	3	Cast iron (GG)	535115**	535115**
	DN 32	2 × 20	90	A 15	3	Cast iron (GG)	535054	
	DN 40	2 × 20	100	A 18	3	Cast iron (GG)	98614387**	98614387**
	DN 50	2 × 20	110	A 20	3	Cast iron (GG)	98614411**	98614411**

* Grundfos square flange

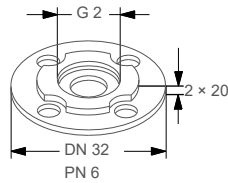
** Combination flange PN 6 / PN 10

A 14



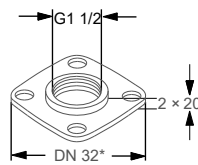
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A 15



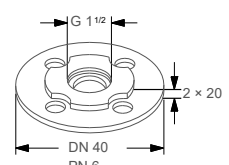
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A 16



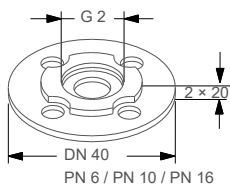
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A 17



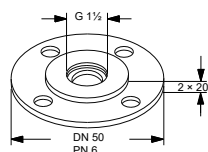
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A 18



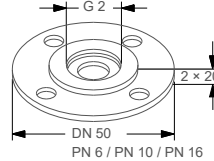
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A 19



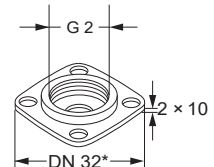
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A 20



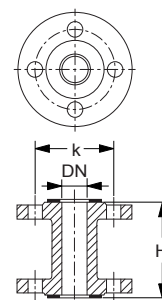
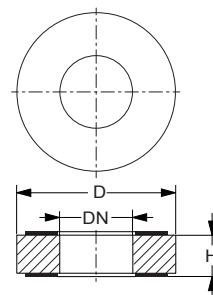
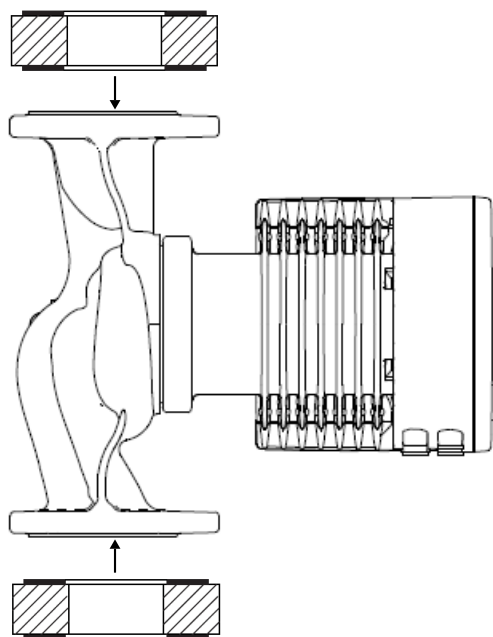
TM060434

A 22



TM060435

Flange-flange adapters



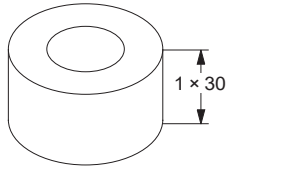
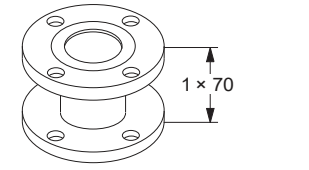
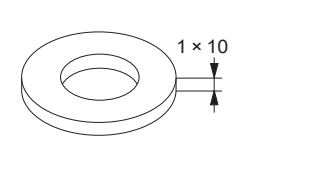
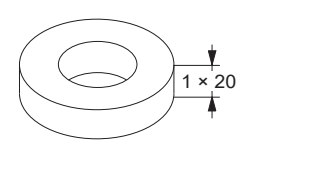
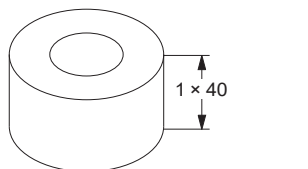
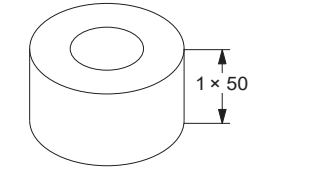
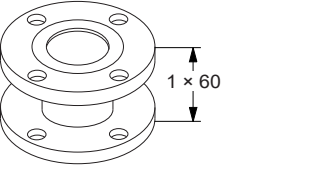
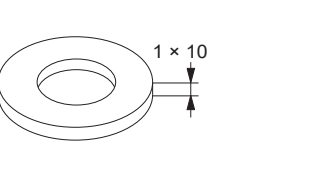
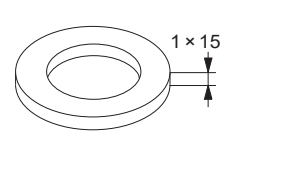
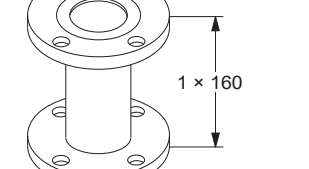
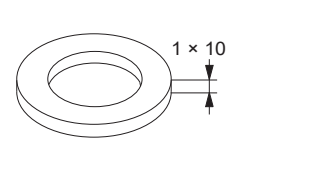
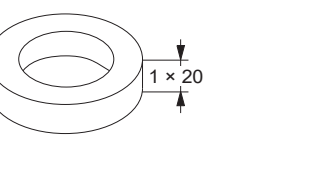
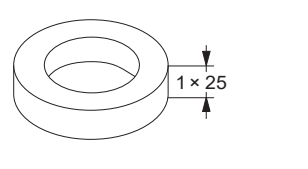
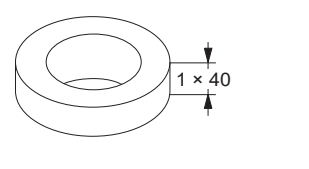
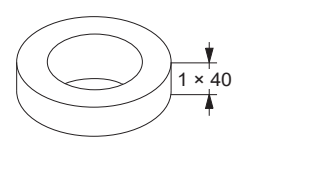
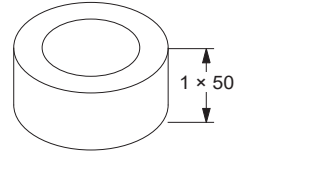
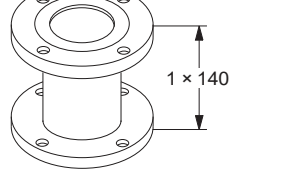
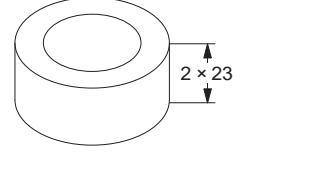
TM079315

Example of flange-flange adapter

TM060451

TM060449

New pump connection	Adapter length H [mm]	k		D		Adapter type	Figure	Material	Product number PN 6	Product number PN 10/16
		[mm] PN 6	[mm] PN 10	[mm] PN 6	[mm] PN 10					
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
	1 × 10			90	102	A 50-10	4	Steel (St)	549921	549821
DN 50	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
	1 × 10			110	122	A 65-10	4	Steel (St)	559921	559821
DN 65	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
			
A 50-40	A 50-50	A 50-60	A 65-10
			
A 65-25	A 65-160	A 80-10	A 80-15
			
A 80-20	A 80-25	A 80-40	A 80-50
			
A 80-140	A 100-50		
			

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

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 100-60 F	450	99221439	99221444				. MAGNA1 100-60 F PN 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

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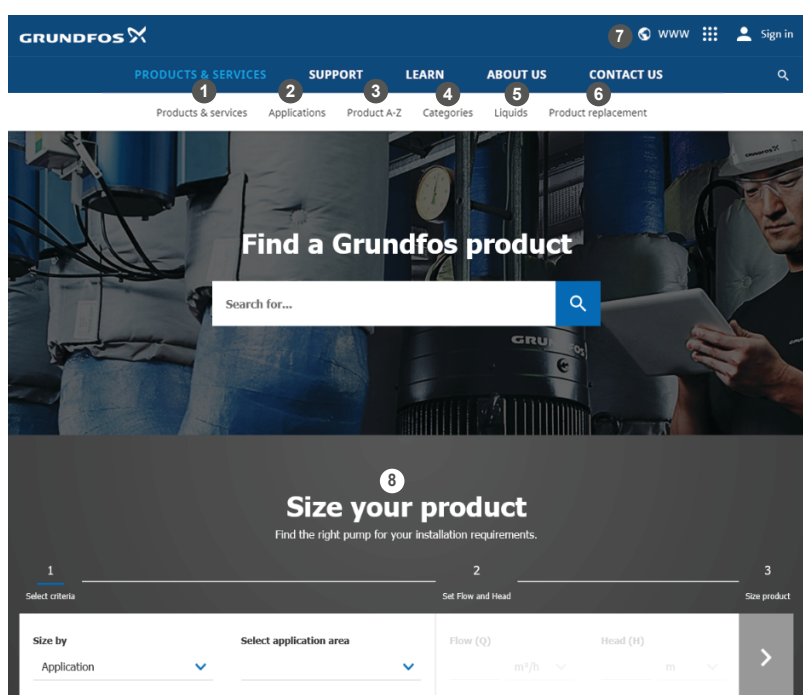
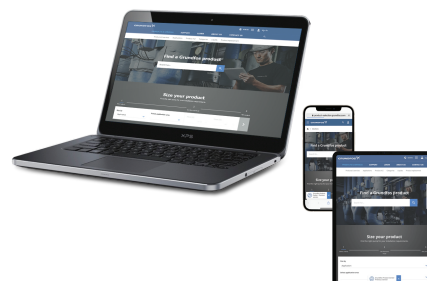
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All the information you need in one place

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.



TM072383-1

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

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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.

