

Series 100

Series 100 circulator pumps
50/60 Hz



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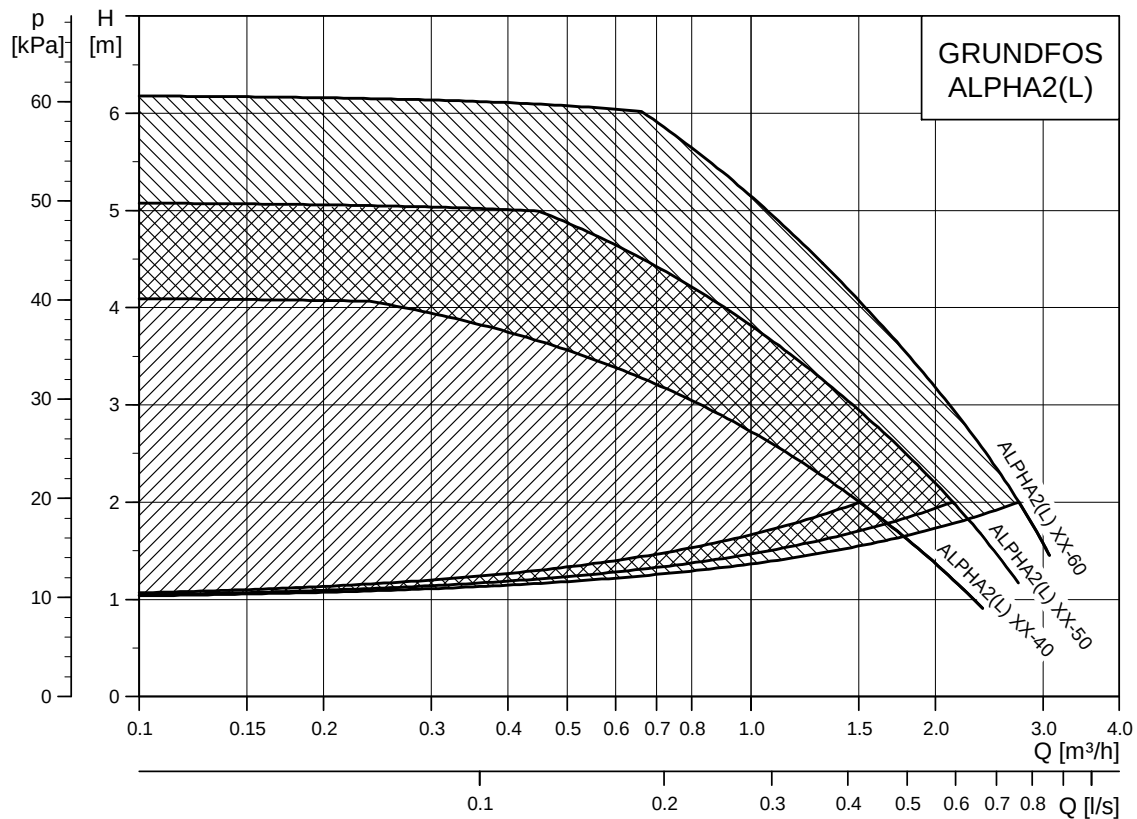
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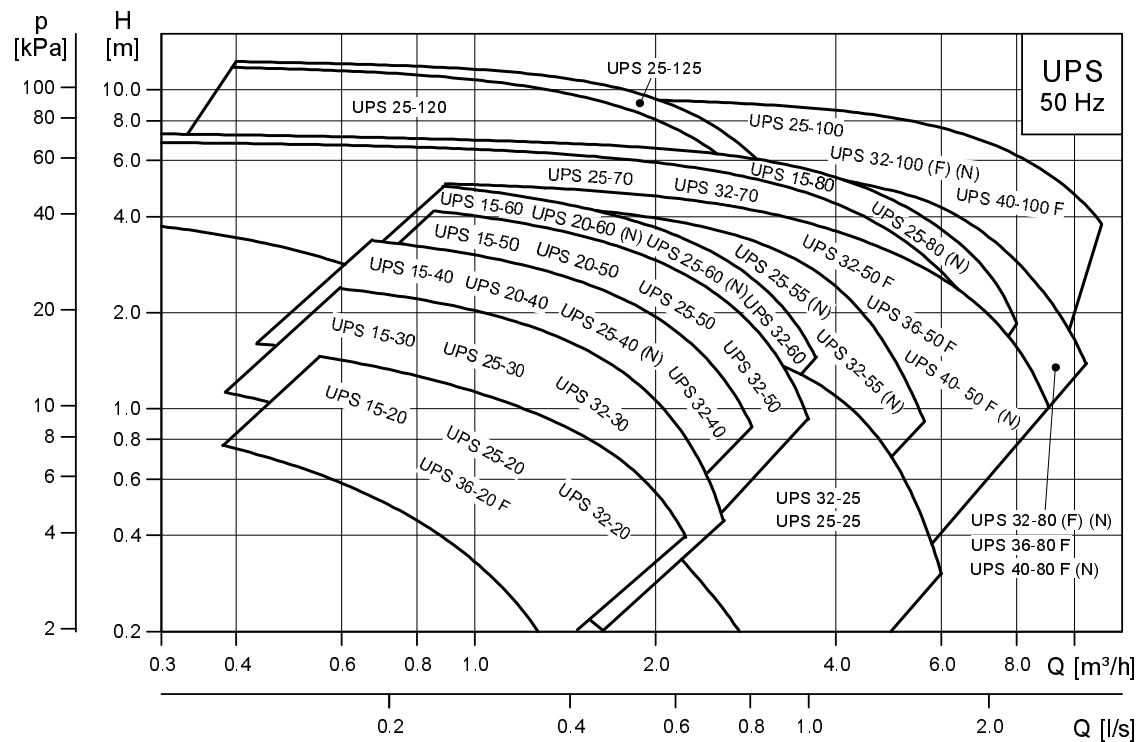
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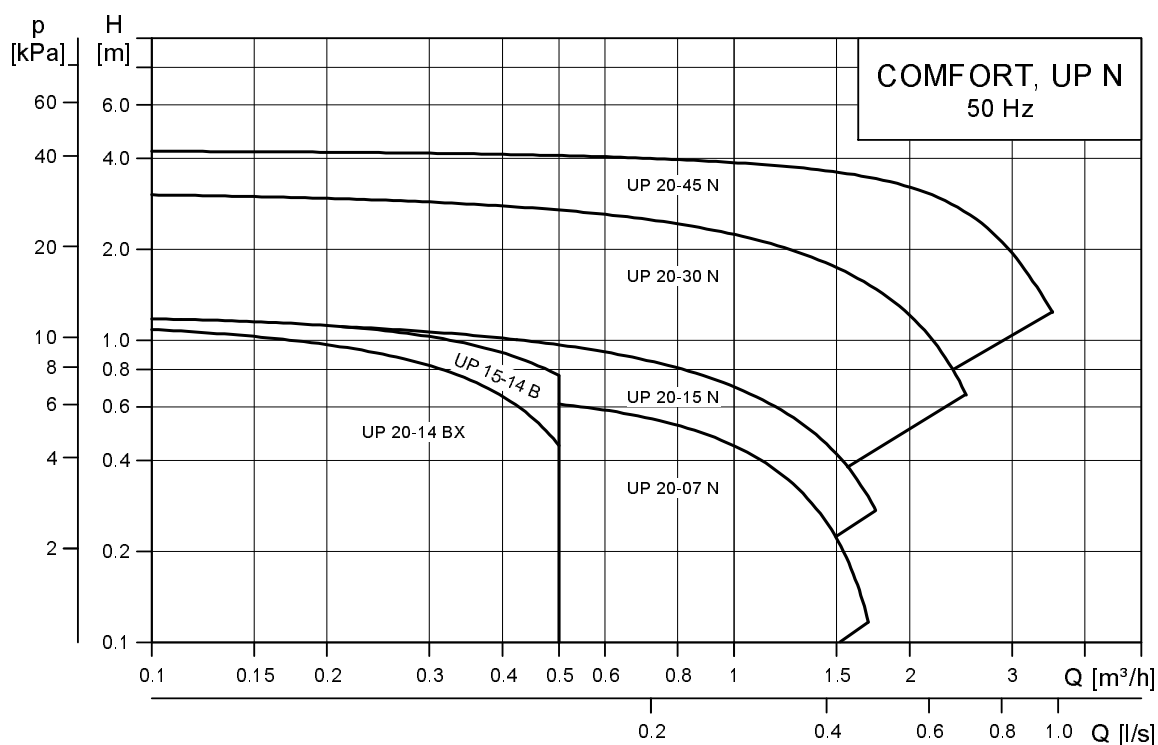
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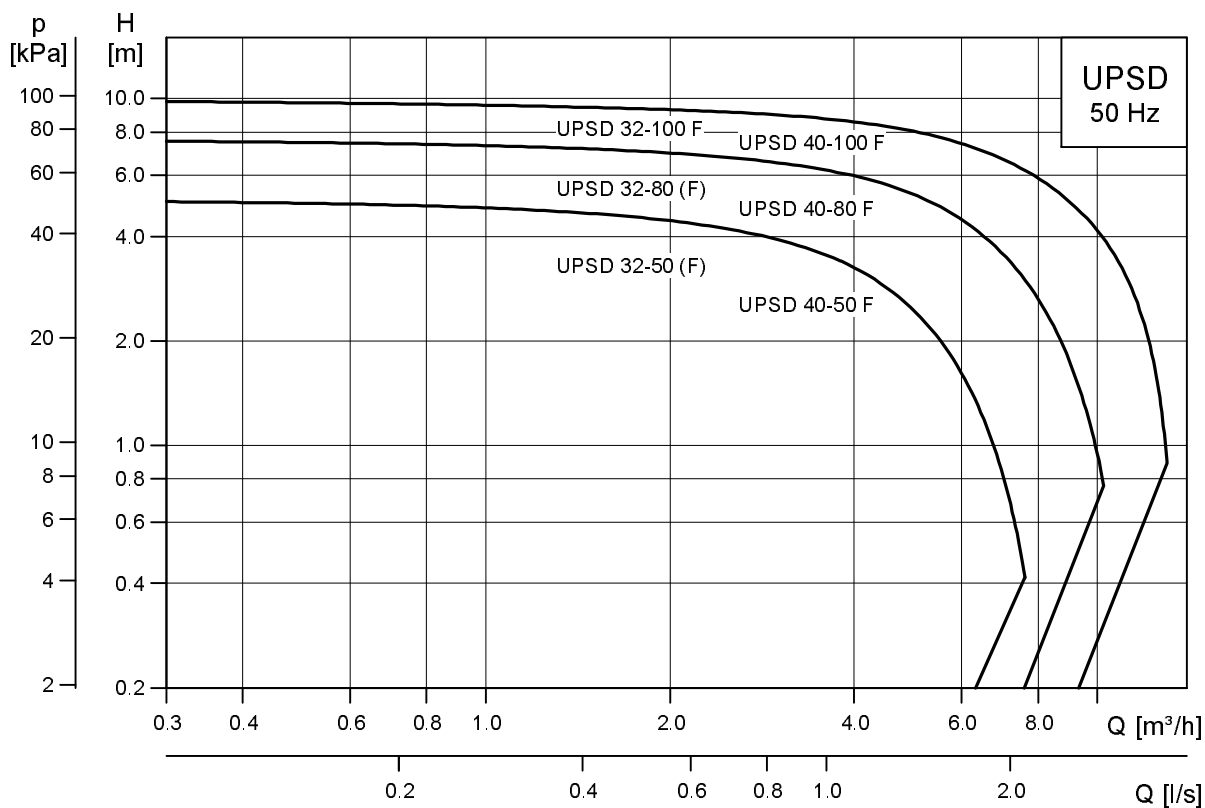
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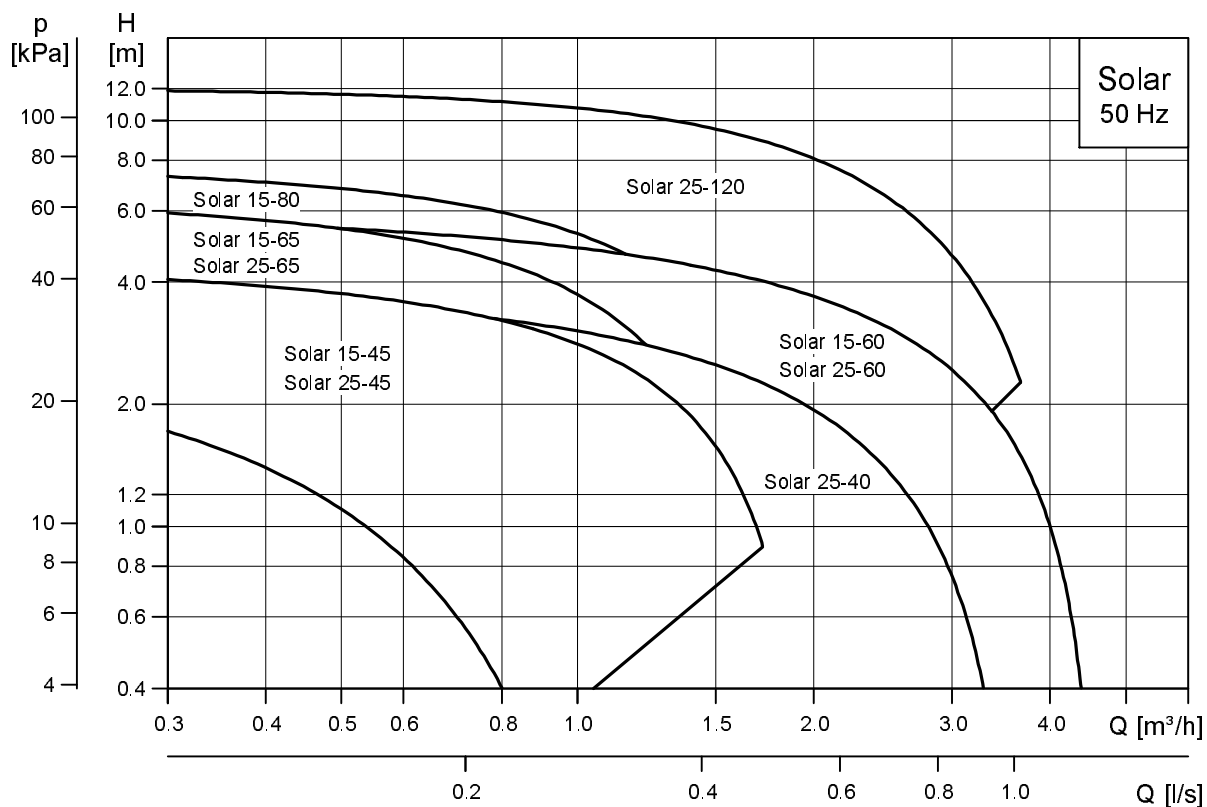
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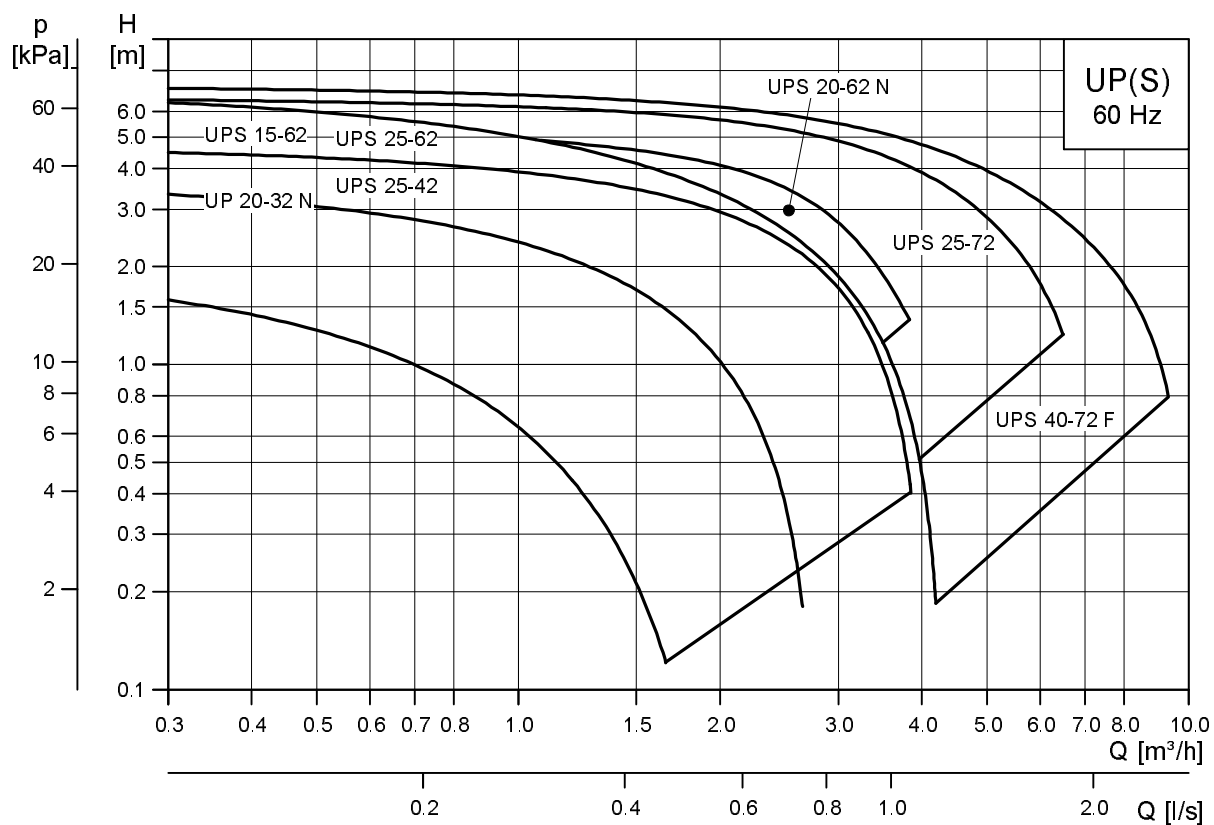
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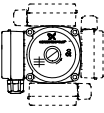
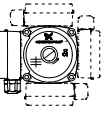
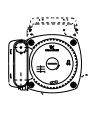
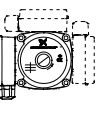
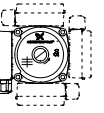
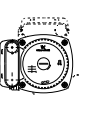
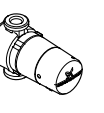
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Product range ALPHA2 (L), 1 x 230 V, 50 Hz

Pump material	Cast iron	Cast iron	Cast iron	Cast iron	Stainless steel	Stainless steel	Brass		
Liquid temperature	+2 to +95 °C	+2 to +110 °C	-25 to +110 °C	-25 to +95 °C	+2 to +110 °C	-25 to +110 °C	+2 to +95 °C		
Control box position									
	TM03 8497 1707				TM03 8497 1707				
Pump type									
ALPHA2 15-40	•								
ALPHA2 20-40					•				
ALPHA2 25-40 ★	•				•				
ALPHA2 32-40	•								
ALPHA2 20-50					•				
ALPHA2 25-50	•								
ALPHA2 15-60	•								
ALPHA2 15-60					•				
ALPHA2 25-60 ★	•				•				
ALPHA2 32-60	•								
Control box position									
	TM04 2538 2608								
Pump type									
ALPHA2 L 15-40	•								
ALPHA2 L 25-40	•								
ALPHA2 L 32-40	•								
ALPHA2 L 15-60	•								
ALPHA2 L 25-60	•								
ALPHA2 L 32-60	•								

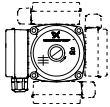
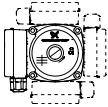
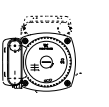
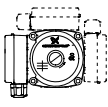
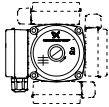
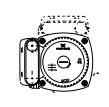
★ On request: Pump housing with air separator, type A.

Product range UPS, UP, 1 x 230 V, 50 Hz

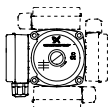
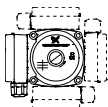
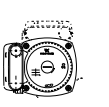
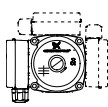
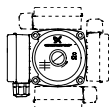
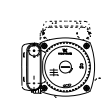
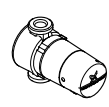
Pump material	Cast iron		Cast iron	Cast iron	Cast iron K-version	Stainless steel		Brass
Liquid temperature	+2 to +95 °C		+2 to +110 °C	-25 to +110 °C	-25 to +95 °C	+2 to +110 °C	-25 to +110 °C	+2 to +95 °C
Terminal box position	 TM02 7023 2303		 TM02 7023 2303	 TM04 2810 3408	 TM02 7024 2303	 TM02 7023 2303	 TM04 2810 3408	 TM02 7022 2303
UPS 15-20		•						
UPS 25-20 ★		•						
UPS 32-20		•						
UPS 36-20 F				•				
UPS 25-25				•				
UPS 32-25				•				
UPS 15-30		•						
UPS 25-30 ★		•						
UPS 32-30		•						
UPS 15-40		•						
UPS 20-40		•			•			
UPS 25-40 ★		•			•	•		
UPS 32-40		•						
UPS 15-50		•						
UPS 20-50		•						
UPS 25-50		•			•			
UPS 32-50		•						
UPS 32-50 F				•				
UPS 36-50 F				•				
UPS 40-50 F				•			•	
UPS 25-55				•			•	
UPS 32-55				•			•	
UPS 15-60		•						
UPS 20-60		•				•		
UPS 25-60 ★		•			•	•		
UPS 32-60		•						
UPS 25-70		•						
UPS 32-70		•						
UPS 15-80		•						
UPS 25-80				•			•	
UPS 32-80				•			•	
UPS 32-80 F				•				
UPS 36-80 F				•				
UPS 40-80 F				•			•	
UPS 25-100				•				
UPS 32-100				•			•	
UPS 32-100 F				•				
UPS 40-100 F				•				
UPS 25-120	•							
UPS 25-125	•							
UP 15-14 B								•
UP 20-14 BX								•
UP 20-07 N						•		
UP 20-15 N						•		
UP 20-30 N					•	•		
UP 20-45 N						•		

★ On request: Pump housing with air separator, type A.

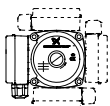
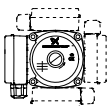
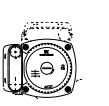
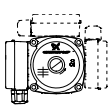
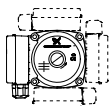
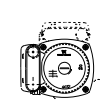
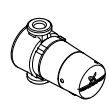
Product range UPS, UP, 3 x 400 V, 50 Hz

Pump material	Cast iron	Cast iron	Cast iron	Cast iron K-version	Stainless steel	Stainless steel	Brass
Liquid temperature	+2 to +95 °C	+2 to +110 °C	-25 to +110 °C	-25 to +95 °C	+2 to +110 °C	-25 to +110 °C	+2 to +95 °C
Terminal box position	 TM02 7023 2303	 TM02 7023 2303	 TM02 7023 2303	 TM04 2810 3408	 TM02 7024 2303	 TM02 7023 2303	 TM04 2810 3408
UPS 25-20		•					
UPS 32-20		•					
UPS 25-40		•					
UPS 32-40		•					
UPS 25-50		•					
UPS 32-50		•					
UPS 25-60		•				•	
UPS 32-60		•					
UP 20-15 N					•		
UP 20-30 N					•		

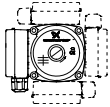
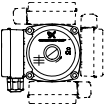
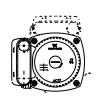
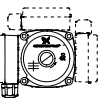
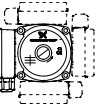
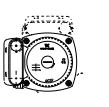
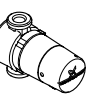
Product range UPSD, 1 x 230 V, 50 Hz

Pump material	Cast iron	Cast iron	Cast iron	Cast iron K-version	Stainless steel	Stainless steel	Brass
Liquid temperature	+2 to +95 °C	+2 to +110 °C	-25 to +110 °C	-25 to +95 °C	+2 to +110 °C	-25 to +110 °C	+2 to +95 °C
Terminal box position	 TM02 7023 2303	 TM02 7023 2303	 TM02 7023 2303	 TM04 2810 3408	 TM02 7024 2303	 TM02 7023 2303	 TM04 2810 3408
UPSD 32-50			•				
UPSD 32-50 F			•				
UPSD 40-50 F			•				
UPSD 32-80			•				
UPSD 32-80 F			•				
UPSD 40-80 F			•				
UPSD 32-100 F			•				
UPSD 40-100 F			•				

Product range SOLAR, 1 x 230 V, 50 Hz

Pump material	Cast iron	Cast iron	Cast iron	Cast iron K-version	Stainless steel	Stainless steel	Brass
Liquid temperature	+2 to +95 °C	+2 to +110 °C	-25 to +110 °C	-25 to +95 °C	+2 to +110 °C	-25 to +110 °C	+2 to +95 °C
Terminal box position	 TM02 7023 2303	 TM02 7023 2303	 TM02 7023 2303	 TM04 2810 3408	 TM02 7024 2303	 TM02 7023 2303	 TM04 2810 3408
SOLAR 25-40		•					
SOLAR 15-45		•					
SOLAR 25-45		•					
SOLAR 15-60		•					
SOLAR 25-60		•					
SOLAR 15-65		•					
SOLAR 25-65		•					
SOLAR 15-80	•						
SOLAR 25-120	•						

Product range UPS, UP, 1 x 220 V, 60 Hz

Pump material	Cast iron		Cast iron		Cast iron		Cast iron K-version	Stainless steel/ bronze		Stainless steel/ bronze	Brass	
Liquid temperature	+2 to +95 °C		+2 to +110 °C		-25 to +110 °C		-25 to +95 °C	+2 to +110 °C		+2 to +110 °C	+2 to +95 °C	
Terminal box position												
	TM02 7023 2303		TM02 7023 2303		TM02 7023 2303		TM04 2810 3408	TM02 7024 2303		TM02 7023 2303	TM04 2810 3408	
UPS 15-62	•						•					
UPS 20-62 N										•		
UPS 25-42			•									
UPS 25-62			•				•					
UPS 25-72					•							
UPS 40-72 F					•							
UP 20-32 N								•				

Type keys

GRUNDFOS ALPHA2

Example	ALPHA2	25	-40	180
Type range				
Nominal diameter (DN) of suction and discharge ports [mm]				
Maximum head [dm]				
= cast-iron pump housing (no letter) N = stainless-steel pump housing A = pump housing with air separator				
Port-to-port length [mm]				

GRUNDFOS ALPHA2 L

Example	ALPHA2 L	25	-40	180
Type range				
Nominal diameter (DN) of suction and discharge ports [mm]				
Maximum head [dm]				
Port-to-port length [mm]				

UP, UPS, UPSD

Example	UP	S	D	40	-50	F
Type range						
S = electric speed control						
Twin-head pump						
Nominal diameter (DN) of suction and discharge ports [mm]						
Maximum head [dm]						
Pipe connection: = pipe thread (no letter) F = flange Pump housing: = cast iron (no letter) N = stainless steel A = pump housing with air separator, upward water flow K = cold-water version KU = cold-water version (foam-filled terminal box and stator)						

GRUNDFOS COMFORT

Example	UP	20	-14	B	X	U	T	A
Type range								
Nominal diameter (DN) of suction and discharge ports [mm]								
Maximum head [dm]								
Brass pump housing								
Integrated isolating and non-return valves								
24-hour timer								
Thermostat								
AUTO _{ADAPT}								

UPS SOLAR

Example	SOLAR	15	-65	130
Type range				
Nominal diameter (DN) of suction and discharge ports [mm]				
Maximum head [dm]				
Port-to-port length [mm]				

Applications

The Grundfos circulator pumps, Series 100, are specifically designed for heating systems. The pumps are also suitable for circulation of domestic hot water and for circulation of liquid in cooling and air-conditioning systems.

UPS SOLAR pumps are suitable for circulation of water in residential solar thermal heating systems.

Heating systems

For central and district heating systems, use pump type ALPHA2 (L) or UPS.

The GRUNDFOS ALPHA2 (L) automatically controls the differential pressure by adjusting the pump performance to the actual heating demand, without the use of external components.

The UPS can be operated at three different speeds.

The pumps are used primarily for one- and two-pipe heating systems, but are, for example, also suitable for mixing loops in large systems.

For underfloor heating systems, it is advisable to use the pump type ALPHA2 N or UP(S) N, as the pumped liquid may often become aerated, causing an ordinary cast-iron pump housing to corrode.

Domestic hot-water systems

For circulation in domestic hot-water systems, use type ALPHA2 N, COMFORT or UP N with stainless-steel, brass or bronze pump housing.

The UP N can be connected to an on/off time switch to save energy. The on/off time switch can switch the pump on/off to limit pump operation to periods when hot water is usually required.

GRUNDFOS COMFORT is available with integrated timer, thermostat and AUTO_{ADAPT} function.

COMFORT AUTO versions (BA/BXA)

The built-in AUTO_{ADAPT} function adapts the operating hours of the pump according to the changing demand for domestic hot water. This means that the COMFORT AUTO provides the maximum comfort and saves energy at the same time.

It is recommended to keep the operating temperature lower than 65 °C to avoid lime precipitation.

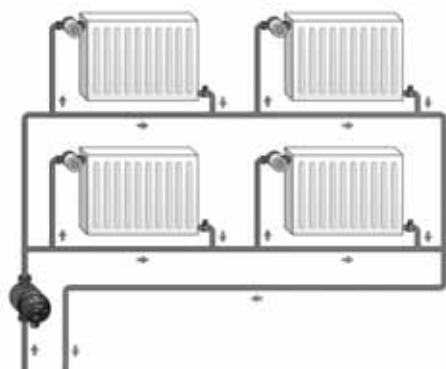


Fig. 1 One-pipe heating system

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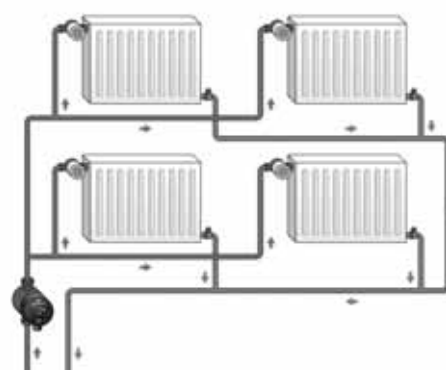


Fig. 2 Two-pipe heating system

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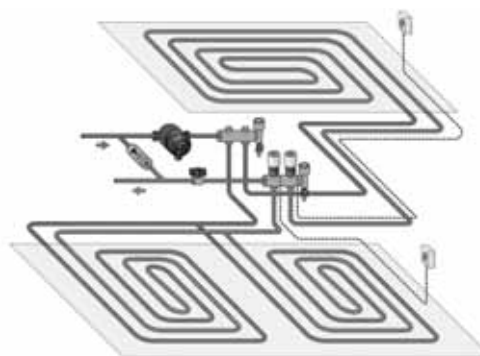


Fig. 3 Underfloor heating system

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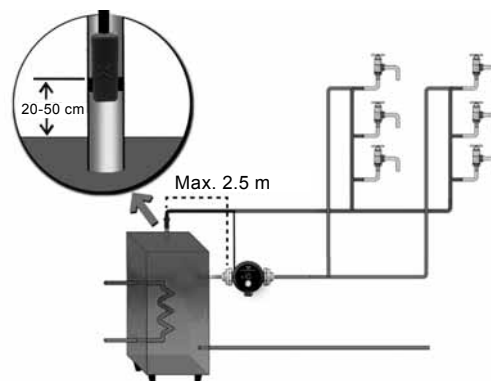


Fig. 4 Domestic hot-water system

TM04 9359 4010

Cooling and air-conditioning systems

For cooling and air-conditioning systems, use standard pumps, type UPS, or special versions, type UPS K, depending on type and size.

See product ranges on pages 6 to 9.

Temperature ranges: -25 °C to +95 °C
-25 °C to +110 °C.

These pumps are thus suitable for circulation of both cold and hot water.

Solar heating systems

For circulation in solar heating systems, use UPS SOLAR pumps. Solar systems often operate with very low flow compared to other heating systems, and the pump must be designed to handle

- water with anti-freeze
- high liquid temperatures
- large temperature fluctuations.

The UPS SOLAR is optimised for operation specifically under these conditions. During start-up at low outside temperatures, the stagnant water inside the pipes may be very cold and may create condensed water inside the stator. Therefore, the UPS SOLAR windings are double-coated, the stator housing has drain holes, and the pump housing is electro-coated. Very high liquid temperatures may also occur, for example if the tank is heated to maximum and the sun still shines. The UPS SOLAR can work with temperatures up to 140 °C for a short time.

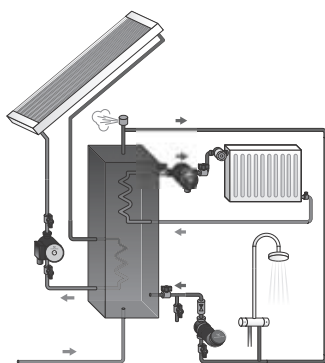


Fig. 5 Solar heating system

TM04 4623 1809

Construction

ALPHA2 (L), UP(S) and SOLAR

The ALPHA2 (L), UP(S) and SOLAR pumps are of the canned-rotor type, i.e. pump and motor form an integral unit without shaft seal and with only two gaskets for sealing. The bearings are lubricated by the pumped liquid.

The pumps are characterised by

- ceramic shaft and radial bearing
- carbon thrust bearing
- stainless-steel rotor can and bearing plate
- impeller of corrosion-resistant material
- pump housing of cast iron or stainless steel.

The UPS SOLAR pumps are furthermore characterised by

- glycol-resistant components
- pump housing of electro-coated cast iron.

GRUNDFOS COMFORT

GRUNDFOS COMFORT circulator pumps come with various pump housing versions and lengths incorporating isolating and non-return valves or prepared for subsequent fitting of such valves. The motor can be separated from the pump housing, enabling easy maintenance and replacement.

The rotor bearing is self-adjusting and lubricated by the pumped liquid.

The pumps have the following characteristics:

- A spherical motor.
- Parts in contact with the pumped liquid are hermetically separated from the stator with a stainless-steel spherical separator.
- The bearing has no play, and as it has only a single bearing point, it generates very low friction, resulting in reduced power input and noise.

Material specification

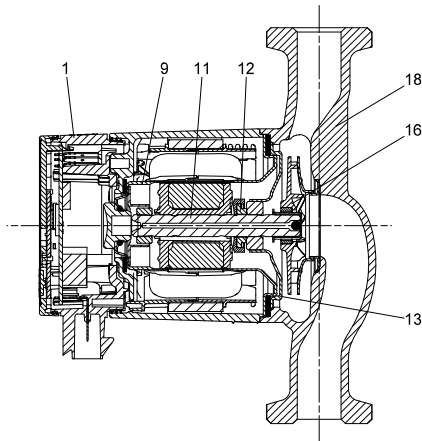


Fig. 6 GRUNDFOS ALPHA2 (L)

Pos.	Component	Material	EN/DIN W.-Nr.	AISI/ ASTM
1	Controller complete	Composite, PC		
9	Rotor can	Stainless steel	1.4301	304
	Radial bearing	Ceramic		
11	Shaft	Ceramic		
	Rotor cladding	Stainless steel	1.4301	304
	Thrust bearing	Carbon		
12	Thrust bearing retainer	EPDM rubber		
13	Bearing plate	Stainless steel	1.4301	304
16	Impeller	Composite PES/PP 30 % GF		
18	Pump housing	Cast iron	EN-JL 1020	A48-25B
		Stainless steel	1.4308	CF8
	Gaskets	EPDM rubber		

TM03 9728 4307

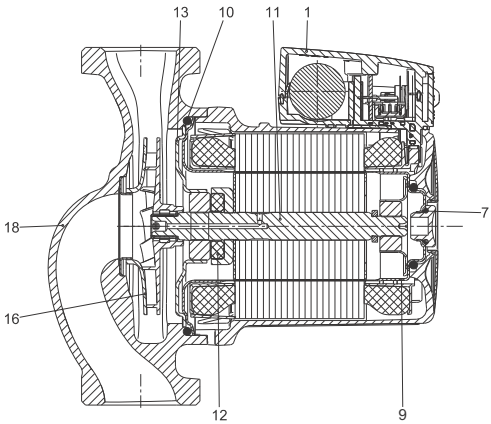
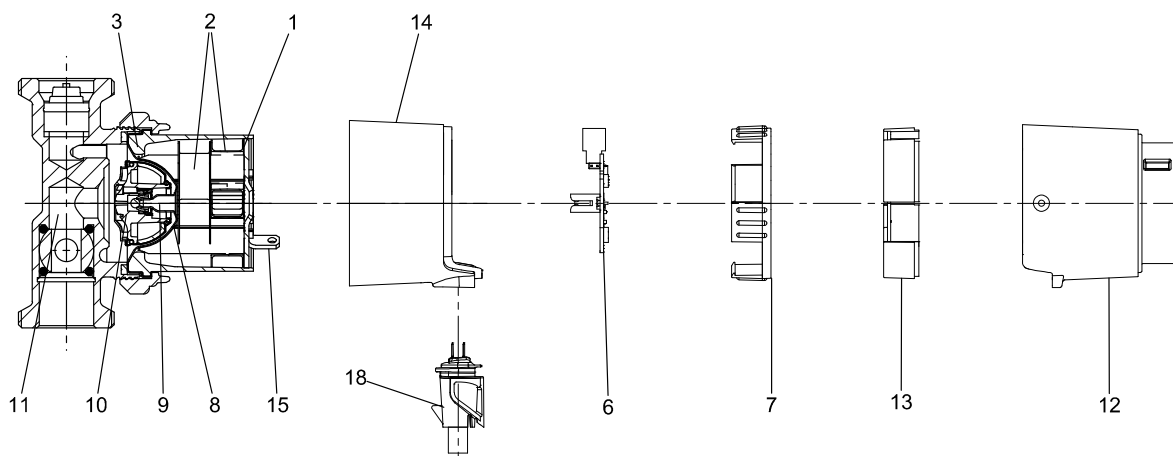


Fig. 7 UP, UPS, SOLAR pump

Pos.	Component	Material	EN/DIN W.-Nr.	AISI/ ASTM
1	Terminal box	Composite PPE/PS		
7, 10	Gaskets	EPDM rubber		
9	Rotor can	Stainless steel	1.4301 1.4521	304 444
	Radial bearing	Ceramic		
11	Shaft complete	Stainless steel for UPS xx-100	1.4404	316L
	Thrust bearing	Carbon		
12	Thrust bearing retainer	EPDM rubber		
13	Bearing plate	Stainless steel	1.4301	304
16	Impeller	Composite PES/PP 30 % GF		
18	Pump housing ¹⁾	Cast iron	EN-JL 1020 EN-JL 1030	A48-25B A48-30B
		Stainless steel	1.4301 1.4308	304 CF8

¹⁾ SOLAR, electro-coated cast iron

TM04 4037 0609



TM04 9301 3810

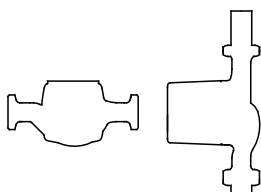
Fig. 8 GRUNDFOS COMFORT

Pos.	Component	Material	EN/DIN W.-Nr.	AISI
1	Stator lamination	Steel		
2	Stator windings	Copper wire and enamel		
3	Stator housing	Aluminium		
6	Retainer for pc board, lower	PA66/6		
7	Retainer for pc board, upper	PA66/6		
8	Spherical separator	Stainless steel	1.4016	430
9	Rotor can complete	Stainless steel/tungsten carbide	1.4571	316 Ti
10	Rotor, impeller	Stainless steel, EPDM, PPO, PFTE, graphite		
11	Pump housing	Brass MS 58		
12	Terminal box cover	PC/ABS		
13	Pc board with diode	FR 4		
14	Motor cover	PPO		
15	Screw	Stainless steel	1.4301	304
18	Alpha plug (BA/BXA)	PA66		

Installation

The pump must always be installed with horizontal motor shaft. At start-up, the rotor can be vented by removing the plug in the top of the motor.

Within a short time, the rotor forces the remaining air out into the system via the shaft.



TMO0 0361 5196

Fig. 9 Pumps with horizontal motor shaft

Motor

GRUNDFOS ALPHA2 (L)

The motor is a 4-pole, synchronous permanent-magnet motor.

The pump controller is incorporated in the control box which is fitted to the stator housing and connected to the stator via a terminal plug.

The ALPHA2 control box has a display and two selector buttons. The display is lit when the power supply is switched on and shows the actual power consumption.

The buttons are used for

- selection of pump setting
- activation or deactivation of Automatic Night SetBack.

The ALPHA2 L control box has one selector button. The button is used for selection of pump setting.

The controllers comply with EN 61000-6-2 and EN 61000-6-3.

The motor of GRUNDFOS ALPHA2 (L) is protected by the electronics in the control box and requires no external motor protection.

UP, UPS and SOLAR pumps

The motor is a 2- or 4-pole, asynchronous squirrel-cage motor in conformity with the EMC directive. The applied standards are EN 61000-6-2 and EN 61000-6-3.

The terminal box and the motor-pump unit have been wet-tested to EN 60335-1 and EN 60335-2-51.

The terminal box is easily accessible and has functional cable connecting terminals.

The cable entry is tight and incorporates cable relief.

The cable entry of single-phase motors can be pushed out of its guide to facilitate the correct fitting of the cable.

Insulation class: F/H.

Cable connection: Pg 11 for 5.6 to 10 mm cable.

The motor incorporates thermal overload or impedance protection. Therefore, no external motor protection is required.

GRUNDFOS COMFORT

The motor is a single-phase, 2-pole hysteresis-permanent-magnet motor in conformity with the EMC directive. The applied standards are EN 61000-6-2 and EN 61000-6-3.

The terminal box and the motor-pump unit have been wet-tested to EN 60335-1 and EN 60335-2-51.

The terminal box is easily accessible and has functional cable connecting terminals.

The cable entry is tight and incorporates cable relief.

The motor is impedance-protected and consequently short-circuit-proof.

No additional motor protection is required.

A green light on the motor is on when the motor is live.

Air separator pump

Grundfos Airlectric is a combined circulator pump and air separator. The air separator removes air from the centre of the system and thus offers optimum operating conditions for any automatic air vent, without extra installation cost.

The air-containing liquid is guided from the suction port to the nozzle of the air-separating chamber. In the nozzle, the liquid is caused to circulate considerably in the relatively large chamber, thus creating a low pressure in the top of the chamber. This low pressure combined with the now reduced low velocity of the liquid will cause a separation of air from the liquid. Due to its lower density, the air will escape through an automatic air vent fitted to the air-separating chamber.

The air separator pump is available only for upward water flow.

The pump housing has an Rp 3/8 thread for the air vent. The air vent is not supplied with the pump.

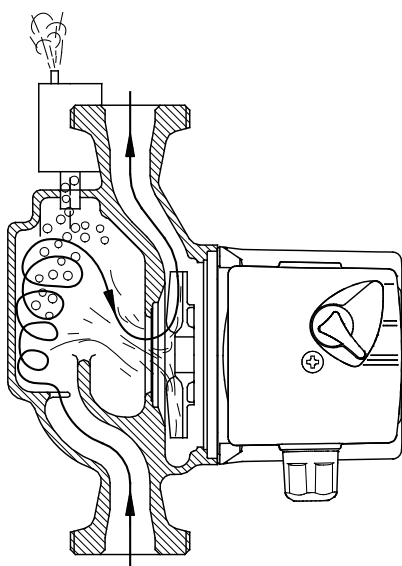


Fig. 10 Air separator pump

TM00 8966 4296

Pumped liquids

Depending on type, Grundfos circulator pumps are suitable for the following liquids:

- clean, thin, non-aggressive and non-explosive liquids without solid particles or fibres
- cooling liquids, not containing mineral oil
- domestic hot water
- softened water.

The kinematic viscosity of water is $\nu = 1 \text{ mm}^2/\text{s}$ (1 cSt) at 20 °C. If the circulator pump is used for a liquid with a higher viscosity, the hydraulic performance of the pump will be reduced.

Example: 50 % glycol at 20 °C means a viscosity of approx. 10 mm²/s (10 cSt) and a reduction of pump performance by approx. 15 %.

When selecting a pump, the viscosity of the pumped liquid must be taken into consideration.

Ambient and liquid temperatures

Liquid temperatures, see tables on pages 6 to 9.

The ambient temperature for standard pumps with a permissible minimum liquid temperature of +2 °C should always be lower than the liquid temperature, as otherwise condensation may form in the stator housing.

Maximum system pressure

Pump with unions (PN 10): 1.0 MPa (10 bar).

Flanged pump (PN 6/10): 0.6/1.0 MPa (6/10 bar).

Pump with Grundfos flanges: 1.0 MPa (10 bar).

Inlet pressure

To avoid cavitation noise and damage to the pump bearings, the following minimum pressures are required at the pump suction port.

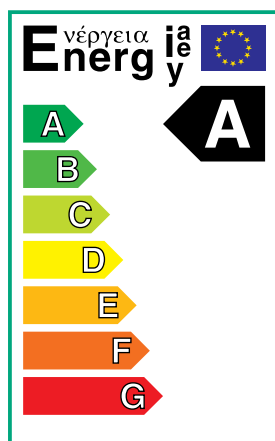
Liquid temperature	85 °C	90 °C	110 °C
	0.5 m head	2.8 m head	11.0 m head
Inlet pressure	0.049 bar	0.27 bar	1.08 bar

Energy labelling

Grundfos circulator pumps, except GRUNDFOS COMFORT, UP N and UPS SOLAR pumps, are provided with the energy label.

The energy label indicates the energy-saving level of the pump. The energy classification system has seven levels, i.e. from A to G. Level A is the best.

The energy label can be used to compare pumps of the same type and size.



TM03 0868 0705

Fig. 11 Energy label, A-labelled GRUNDFOS ALPHA2

Guide to performance curves, ALPHA2

Each pump setting has its own performance curve (Q/H curve). However, AUTO_{ADAPT} covers a performance range.

A power curve (P1 curve) belongs to each Q/H curve. The power curve shows the pump power consumption (P1) in Watt at a given Q/H curve.

The P1 value corresponds to the value that can be read from the pump display. See fig. 12.

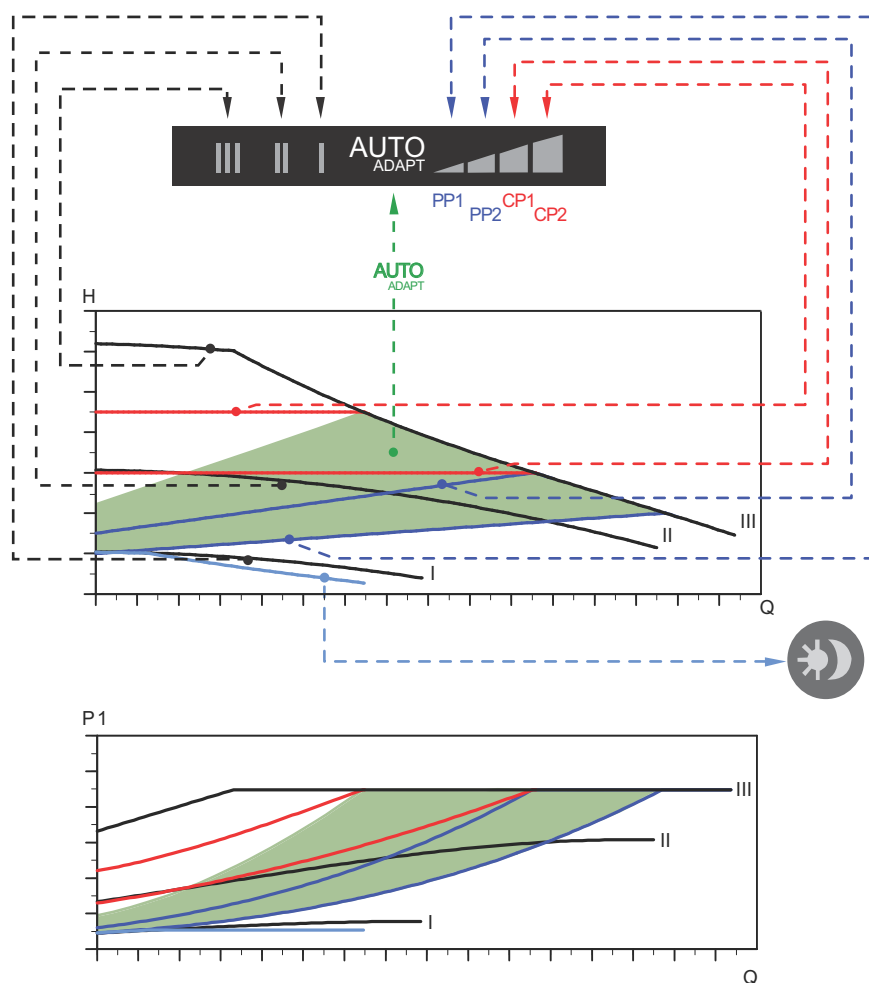


Fig. 12 Performance curves in relation to pump setting

Setting	Pump curve
AUTO _{ADAPT} (factory setting)	Setpoint within the shaded area
PP1	Lowest proportional-pressure curve
PP2	Highest proportional-pressure curve
CP1	Lowest constant-pressure curve
CP2	Highest constant-pressure curve
III	Constant speed, speed III
II	Constant speed, speed II
I	Constant speed, speed I
	Curve for Automatic Night SetBack

TM03 9161 3507

Curve conditions

The guidelines below apply to the performance curves on the following pages:

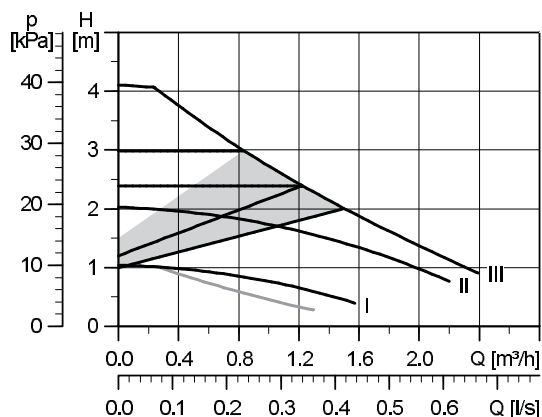
- Test liquid: airless water.
- The GRUNDFOS ALPHA2 (L) curves apply to a density of $\rho = 983.2 \text{ kg/m}^3$ and a liquid temperature of 60°C .
The measurements for UP and UPS have been made at a water temperature of 20°C .
- All curves show average values and **should not be used as guarantee curves**. If a specific minimum performance is required, individual measurements must be made.
- The GRUNDFOS ALPHA2 (L) curves apply to a kinematic viscosity of $\nu = 0.474 \text{ mm}^2/\text{s}$ (0.474 cSt).
The UP and UPS curves apply to a kinematic viscosity of $\nu = 1 \text{ mm}^2/\text{s}$ (1 cSt).
- The conversion between head H [m] and pressure p [kPa] has been made for water with a density of $\rho = 1000 \text{ kg/m}^3$. For liquids with other densities, for example hot water, the discharge pressure is proportional to the density.

Technical data

Product range ALPHA2 (L), 1 x 230 V, 50 Hz

ALPHA2 15-40, 25-40, 32-40

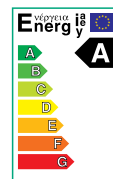
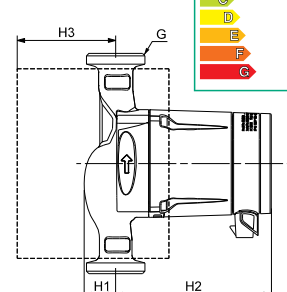
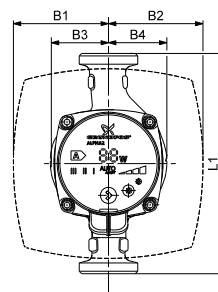
1 x 230 V, 50 Hz



TM04 3609 4708

Speed	P ₁ [W]	I _{1/1} [A]
Min.	5	0.05
Max.	22	0.19

The pump incorporates overload protection.



TM03 9215 3607 - TM03 0868 0705

Connections:

System pressure:

Liquid temperature:

Also available with:

See *Pipe connections* on page 52

Max. 10 bar

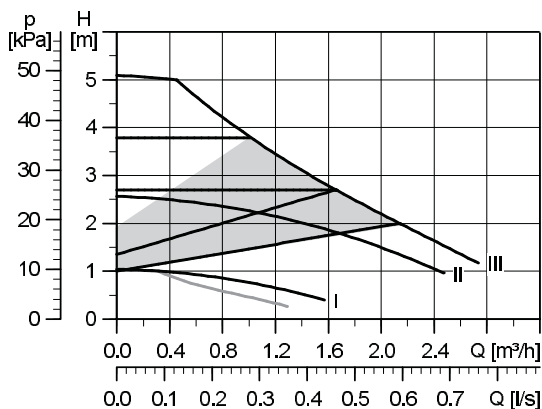
+2 °C to +110 °C (TF 110)

Stainless-steel pump housing, type N, and air separator, type A (only ALPHA2 25-40 180)

Pump type	Dimensions [mm]									Weights [kg]		Ship. vol. [m³]
	L1	B1	B2	B3	B4	H1	H2	H3	G	Net	Gross	
ALPHA2 15-40	130	78	78	47	51	26	127	58	1	1.9	2.1	0.00383
ALPHA2 20-40 N	150	78	78	46	49	28	127	58	1 1/4	2.3	2.5	0.00383
ALPHA2 25-40	130	78	78	48	48	27	127	58	1 1/2	1.9	2.1	0.00383
ALPHA2 25-40 (N, A)	180	78	77	48	48	27	127	58	1 1/2	2.1	2.3	0.00383
ALPHA2 32-40	180	78	78	47	48	27	127	58	2	2.1	2.3	0.00383

ALPHA2 25-50

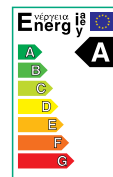
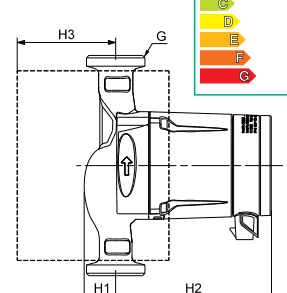
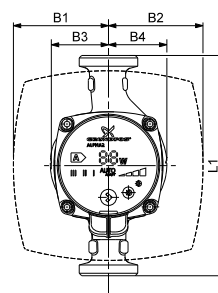
1 x 230 V, 50 Hz



TM04 3610 4708

Speed	P ₁ [W]	I _{1/1} [A]
Min.	5	0.05
Max.	32	0.27

The pump incorporates overload protection.



TM03 9215 3607 - TM03 0868 0705

Connections:

System pressure:

Liquid temperature:

See *Pipe connections* on page 52

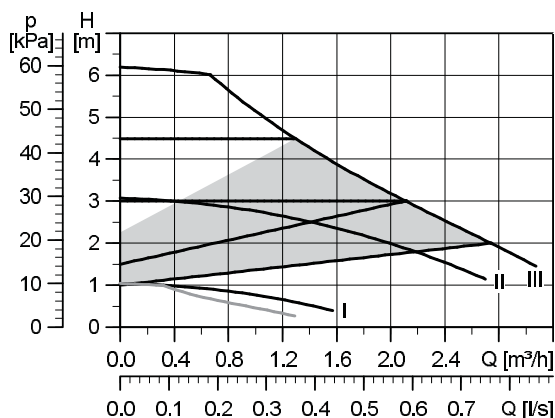
Max. 10 bar

+2 °C to +110 °C (TF 110)

Pump type	Dimensions [mm]									Weights [kg]		Ship. vol. [m³]
	L1	B1	B2	B3	B4	H1	H2	H3	G	Net	Gross	
ALPHA2 20-50 N	150	78	78	46	49	28	127	58	1 1/4	2.3	2.5	0.00383
ALPHA2 25-50	130	78	78	48	48	27	127	58	1 1/2	1.9	2.1	0.00383
ALPHA2 25-50	180	78	78	48	48	27	127	58	1 1/2	2.1	2.3	0.00383

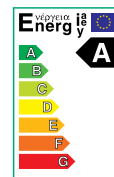
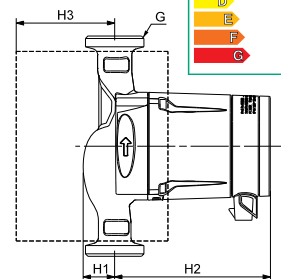
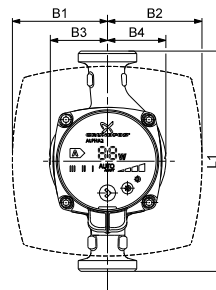
ALPHA2 15-60, 25-60, 32-60

1 x 230 V, 50 Hz



Speed	P_1 [W]	$I_{1/1}$ [A]
Min.	5	0.05
Max.	45	0.38

The pump incorporates overload protection.



TM03 9215 3607 - TM03 0868 0705

Connections: See *Pipe connections* on page 52
 System pressure: Max. 10 bar
 Liquid temperature: +2 °C to +110 °C (TF 110)
 Also available with: Stainless-steel pump housing, type N, and air separator, type A (only ALPHA2 25-60 180)

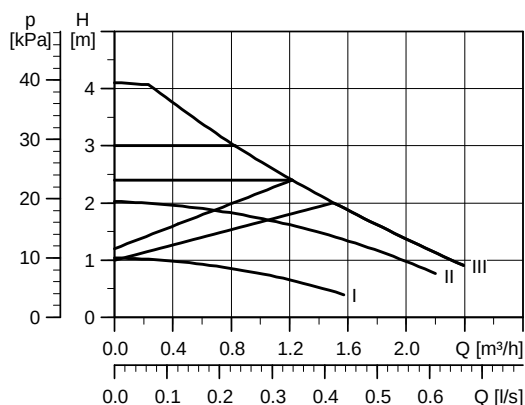
Pump type	Dimensions [mm]								Weights [kg]		Ship. vol. [m³]	
	L1	B1	B2	B3	B4	H1	H2	H3	G	Net		Gross
ALPHA2 15-60	130	78	78	47	51	26	127	58	1	1.9	2.1	0.00383
ALPHA2 20-60 N	150	78	78	46	49	27	127	58	1 1/4	2.3	2.5	0.00383
ALPHA2 25-60	130	78	78	48	48	27	127	58	1 1/2	1.9	2.1	0.00383
ALPHA2 25-60 (N, A)	180	78	78	46	49	28	127	58	1 1/2	2.1	2.3	0.00383
ALPHA2 32-60	180	78	78	47	48	27	127	58	2	2.1	2.3	0.00383

Technical data

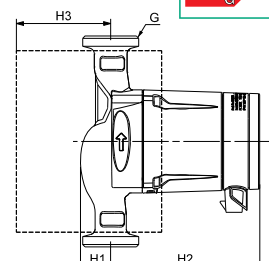
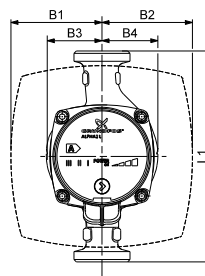
Product range ALPHA2 (L), 1 x 230 V, 50 Hz

ALPHA2 L 15-40, 25-40, 32-40

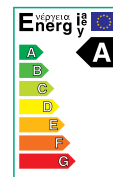
1 x 230 V, 50 Hz



TM04 3612 4708



TM04 2533 2608 - TM03 0868 0705



Speed	P ₁ [W]	I _{1/1} [A]
Min.	5	0.05
Max.	22	0.19

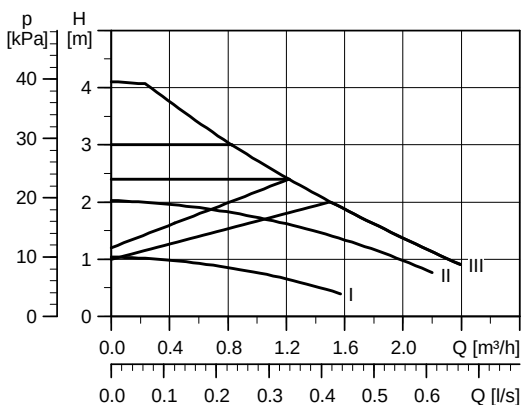
The pump incorporates overload protection.

Connections: See *Pipe connections* on page 52
 System pressure: Max. 10 bar
 Liquid temperature: +2 °C to +110 °C (TF 110)

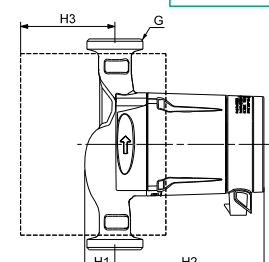
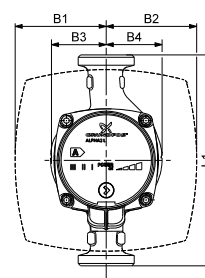
Pump type	Dimensions [mm]									Weights [kg]		Ship. vol. [m³]
	L1	B1	B2	B3	B4	H1	H2	H3	G	Net	Gross	
ALPHA2 L 15-40	130	78	78	47	51	26	127	58	1	1.9	2.1	0.00383
ALPHA2 L 25-40	130	78	78	48	48	27	127	58	1 1/2	1.9	2.1	0.00383
ALPHA2 L 25-40	180	78	78	48	48	27	127	58	1 1/2	2.1	2.3	0.00383
ALPHA2 L 32-40	180	78	78	47	48	27	127	58	2	2.1	2.3	0.00383

ALPHA2 L 15-60, 25-60, 32-60

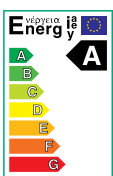
1 x 230 V, 50 Hz



TM04 3612 4708



TM04 2533 2608 - TM03 0868 0705



Speed	P ₁ [W]	I _{1/1} [A]
Min.	5	0.05
Max.	45	0.38

The pump incorporates overload protection.

Connections: See *Pipe connections* on page 52
 System pressure: Max. 10 bar
 Liquid temperature: +2 °C to +110 °C (TF 110)

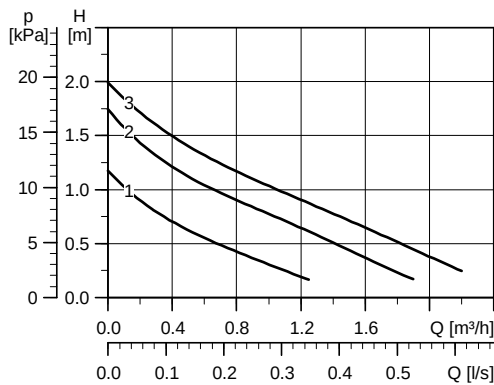
Pump type	Dimensions [mm]									Weights [kg]		Ship. vol. [m³]
	L1	B1	B2	B3	B4	H1	H2	H3	G	Net	Gross	
ALPHA2 L 15-60	130	78	78	47	51	26	127	58	1	1.9	2.1	0.00383
ALPHA2 L 25-60	130	78	78	48	48	27	127	58	1 1/2	1.9	2.1	0.00383
ALPHA2 L 25-60	180	78	78	48	48	27	127	58	1 1/2	2.1	2.3	0.00383
ALPHA2 L 32-60	180	78	77	47	48	27	127	58	2	2.1	2.3	0.00383

Technical data

Product range UPS, UP, 1 x 230 V, 50 Hz

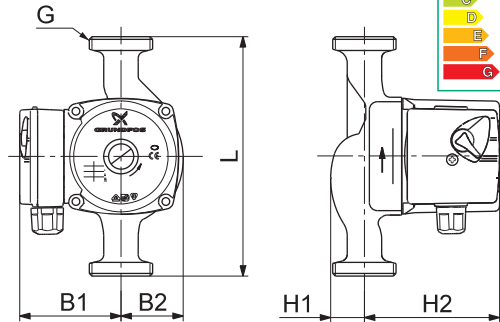
UPS 15-20, UPS 25-20, UPS 32-20

1 x 230 V, 50 Hz



TM00 9756 4708

Speed	P ₁ [W]	I _{1/1} [A]
3	65	0.26
2	40	0.18
1	25	0.11



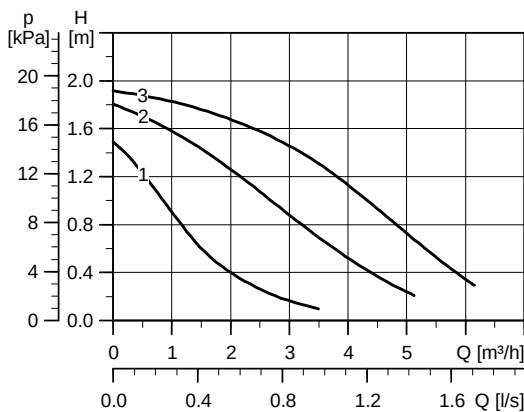
TM00 9386 2105 - TM03 0873 0705

Connections: See *Pipe connections* on page 52
 System pressure: Max. 10 bar
 Liquid temperature: +2 °C to +110 °C (TF 110)
 Also available with: Air separator, type A (only UPS 25-20 180)

Pump type	Dimensions [mm]						Weights [kg]		Ship. vol. [m³]
	L	H1	H2	B1	B2	G	Net	Gross	
UPS 15-20	130	32	102	75	51	1 1/2	2.4	2.6	0.004
UPS 25-20 (A)	180	32	102	75	51	1 1/2	2.6	2.8	0.004
UPS 32-20	180	39	102	75	51	2	2.6	2.8	0.004

UPS 36-20 F

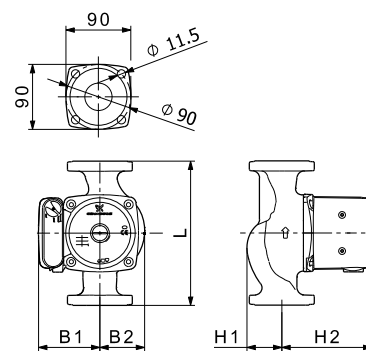
1 x 230 V, 50 Hz



TM04 3811 2409

Speed	P ₁ [W]	I _{1/1} [A]
3	50	0.22
2	40	0.18
1	25	0.12

The pump incorporates overload protection.



TM04 3843 0109 - TM03 0870 0705

Connections: See *Pipe connections* on page 52
 System pressure: Max. 10 bar
 Liquid temperature: -25 °C to +110 °C (TF 110)

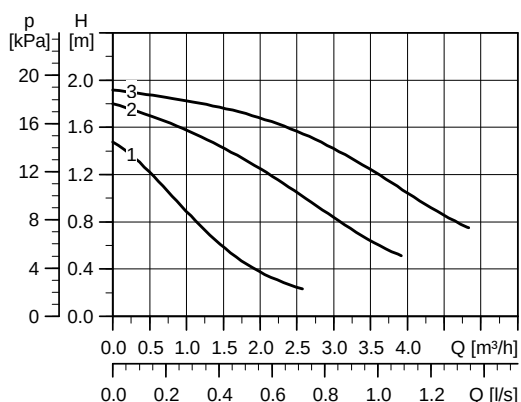
Pump type	Dimensions [mm]						Weights [kg]		Ship. vol. [m³]
	L	H1	H2	B1	B2	G	Net	Gross	
UPS 36-20 F	200	48	125	85	62	-	5.6	5.9	0.010

Technical data

Product range UPS, UP, 1 x 230 V, 50 Hz

UPS 25-25

1 x 230 V, 50 Hz

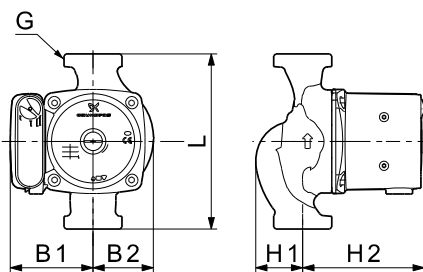


TM04 3750 2409

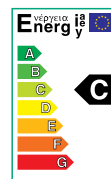
Speed	P ₁ [W]	I _{1/1} [A]
3	50	0.22
2	40	0.18
1	25	0.12

The pump incorporates overload protection.

Pump type	Dimensions [mm]						Weights [kg]		Ship. vol. [m³]
	L	H1	H2	B1	B2	G	Net	Gross	
UPS 25-25	180	46	125	85	62	1 1/2	4.4	4.6	0.008



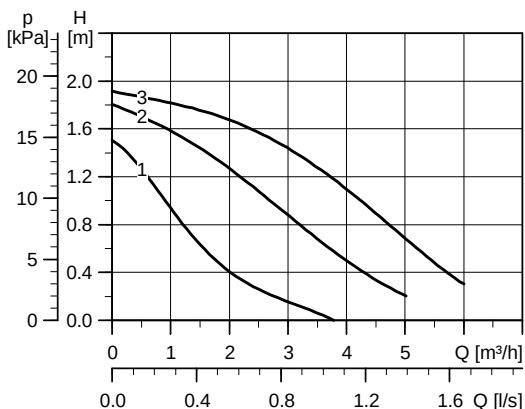
Connections: See *Pipe connections* on page 52
 System pressure: Max. 10 bar
 Liquid temperature: -25 °C to +110 °C (TF 110)



TM04 3847 5108 - TM03 0870 0705

UPS 32-25

1 x 230 V, 50 Hz

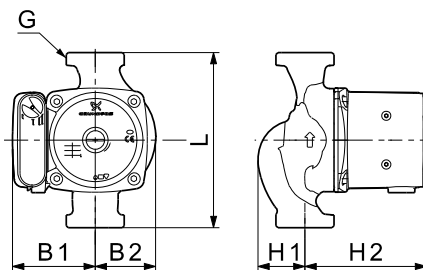


TM04 3759 2409

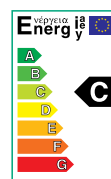
Speed	P ₁ [W]	I _{1/1} [A]
3	50	0.22
2	40	0.18
1	25	0.12

The pump incorporates overload protection.

Pump type	Dimensions [mm]						Weights [kg]		Ship. vol. [m³]
	L	H1	H2	B1	B2	G	Net	Gross	
UPS 32-25	180	48	125	85	62	2	4.5	4.8	0.008



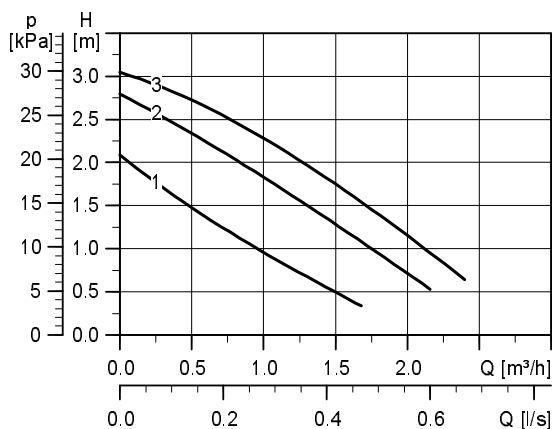
Connections: See *Pipe connections* on page 52
 System pressure: Max. 10 bar
 Liquid temperature: -25 °C to +110 °C (TF 110)



TM04 3847 5108 - TM03 0870 0705

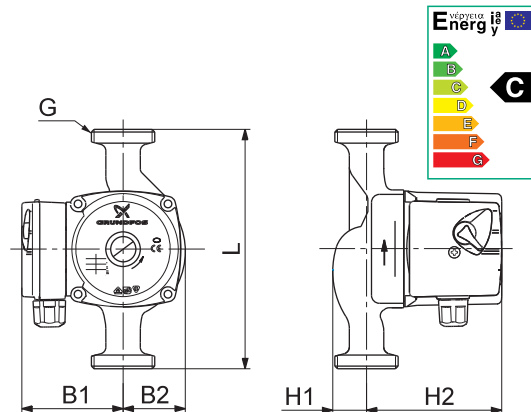
UPS 15-30, UPS 25-30, UPS 32-30

1 x 230 V, 50 Hz



TM04 5836 4009

Speed	P ₁ [W]	I _{1/1} [A]
3	55	0.24
2	35	0.17
1	25	0.11



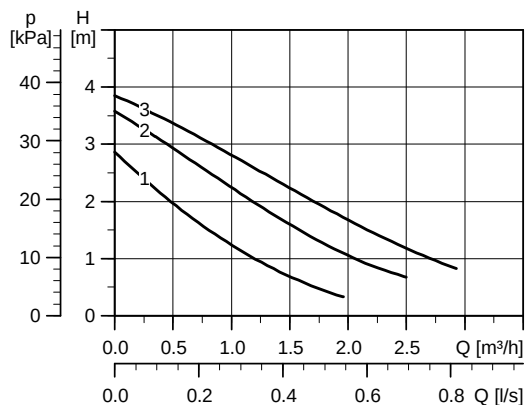
TM00 9386 2105 - TM03 0870 0705

Connections: See *Pipe connections* on page 52
 System pressure: Max. 10 bar
 Liquid temperature: +2 °C to +110 °C (TF 110)
 Also available with: Air separator, type A (only UPS 25-30 180)

Pump type	Dimensions [mm]						Weights [kg]		Ship. vol. [m³]
	L	H1	H2	B1	B2	G	Net	Gross	
UPS 15-30	130	28	102	75	51	1	2.3	2.5	0.004
UPS 25-30 (A)	180	32	102	75	51	1 1/2	2.6	2.8	0.004
UPS 32-30	180	39	102	75	51	2	2.6	2.8	0.004

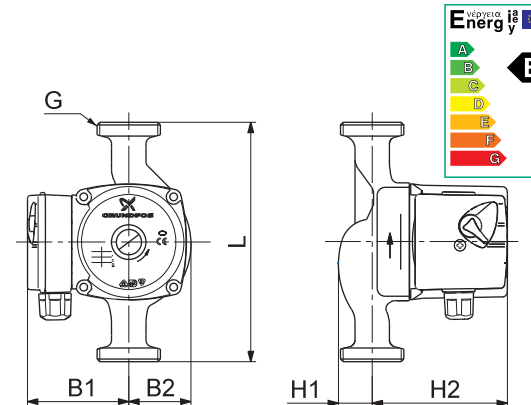
UPS 15-40, UPS 20-40, UPS 25-40, UPS 32-40

1 x 230 V, 50 Hz



TM00 9749 4708

Speed	P ₁ [W]	I _{1/1} [A]
3	45	0.20
2	35	0.16
1	25	0.12



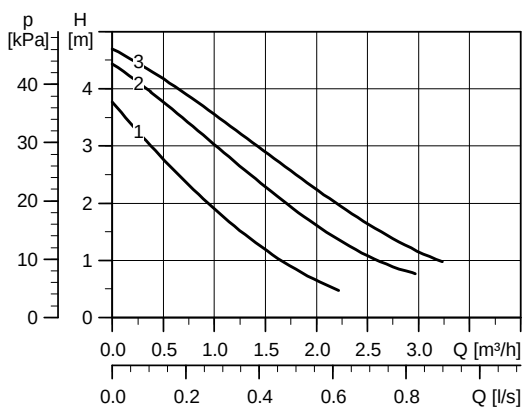
TM00 9386 2105 - TM03 0869 0705

Connections: See *Pipe connections* on page 52
 System pressure: Max. 10 bar
 Liquid temperature: +2 °C to +110 °C (TF 110)
 Also available with: Stainless-steel pump housing, type N, and air separator, type A (only UPS 25-40 180)

Pump type	Dimensions [mm]						Weights [kg]		Ship. vol. [m³]
	L	H1	H2	B1	B2	G	Net	Gross	
UPS 15-40	130	28	102	75	51	1	2.3	2.5	0.004
UPS 20-40 (K)	130	28	102	75	51	1 1/4	2.6	2.8	0.004
UPS 25-40 (K, N, A)	180	32	102	75	51	1 1/2	2.6	2.8	0.004
UPS 32-40	180	39	102	75	51	2	2.6	2.8	0.004

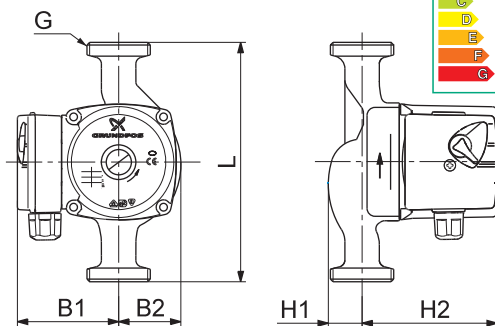
UPS 15-50, UPS 20-50, UPS 25-50, UPS 32-50

1 x 230 V, 50 Hz



TM00 9750 2105

Speed	P ₁ [W]	I _{1/1} [A]
3	50	0.23
2	45	0.20
1	35	0.16



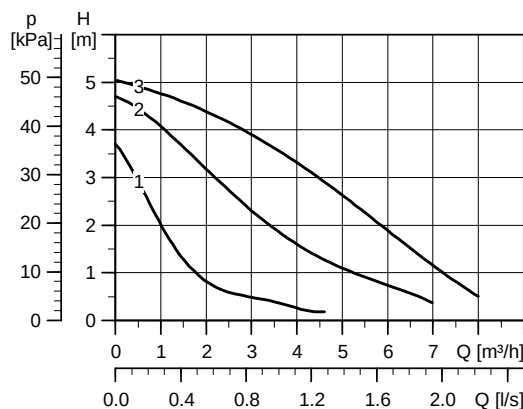
TM00 9386 2105 - TM03 0869 0705

Connections: See *Pipe connections* on page 52
 System pressure: Max. 10 bar
 Liquid temperature: +2 °C to +110 °C (TF 110)

Pump type	Dimensions [mm]						Weights [kg]		Ship. vol. [m³]
	L	H1	H2	B1	B2	G	Net	Gross	
UPS 15-50	130	28	102	75	51	1	2.3	2.5	0.004
UPS 20-50	130	28	102	75	51	1 1/4	2.6	2.8	0.004
UPS 25-50 (K)	180	32	102	75	51	1 1/2	2.6	2.8	0.004
UPS 32-50	180	39	102	75	51	2	2.6	2.8	0.004

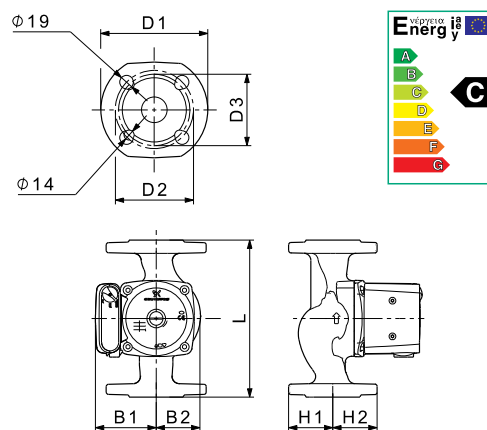
UPS 32-50 F, UPS 40-50 F

1 x 230 V, 50 Hz



TM04 3760 2409

Speed	P ₁ [W]	I _{1/1} [A]
3	105	0.46
2	100	0.44
1	75	0.32



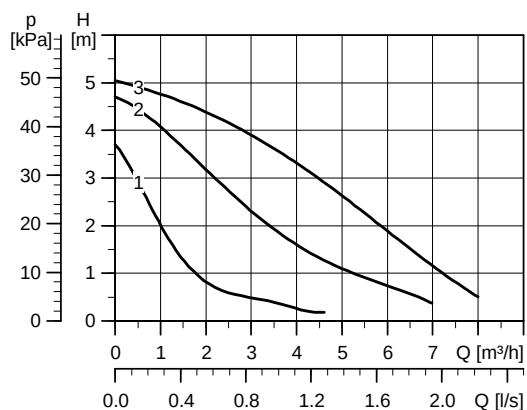
TM04 6005 4609 - TM03 0870 0705

Connections: See *Pipe connections* on page 52
 System pressure: Max. 10 bar
 Liquid temperature: -25 °C to +110 °C (TF 110)
 Also available with: Stainless-steel pump housing, type N (only UPS 40-50 F 250)

Pump type	Dimensions [mm]									Weights [kg]		Ship. vol. [m³]
	L	D1	D2	D3	H1	H2	B1	B2	G	Net	Gross	
UPS 32-50 F	220	140	100	90	62	125	85	62	-	7.4	7.7	0.010
UPS 40-50 F (N)	250	150	110	100	67	125	85	62	-	8.0	8.4	0.011

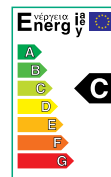
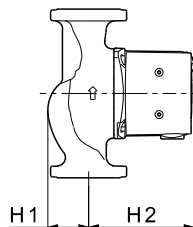
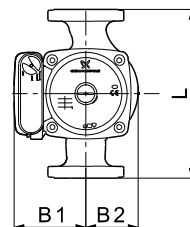
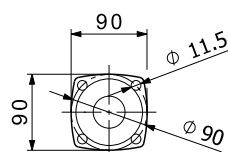
UPS 36-50 F

1 x 230 V, 50 Hz



TM04 3760 2409

Speed	P ₁ [W]	I _{1/1} [A]
3	105	0.46
2	100	0.44
1	75	0.32



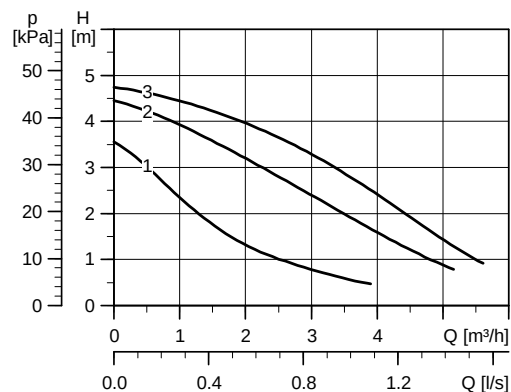
TM04 3843 0109 - TM03 0870 0705

Connections: See *Pipe connections* on page 52
 System pressure: Max. 10 bar
 Liquid temperature: -25 °C to +110 °C (TF 110)

Pump type	Dimensions [mm]						Weights [kg]		Ship. vol. [m³]
	L	H1	H2	B1	B2	G	Net	Gross	
UPS 36-50 F	200	48	125	85	62	-	5.7	6.0	0.010

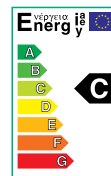
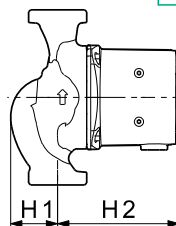
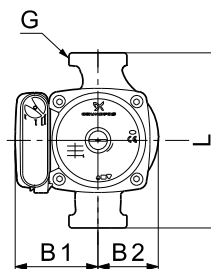
UPS 25-55

1 x 230 V, 50 Hz



TM04 3751 2409

Speed	P ₁ [W]	I _{1/1} [A]
3	85	0.38
2	80	0.36
1	65	0.30



TM04 3847 5108 - TM03 0870 0705

Connections: See *Pipe connections* on page 52
 System pressure: Max. 10 bar
 Liquid temperature: -25 °C to +110 °C (TF 110)
 Also available with: Stainless-steel pump housing, type N

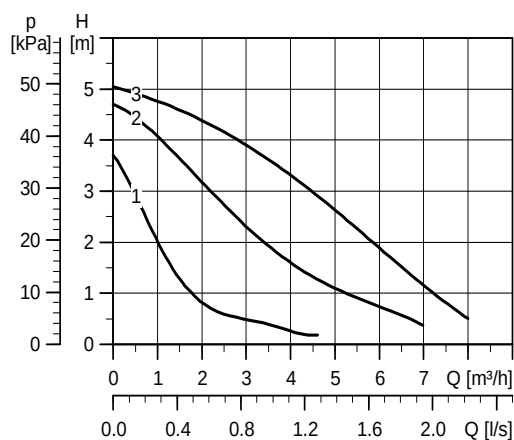
Pump type	Dimensions [mm]						Weights [kg]		Ship. vol. [m³]
	L	H1	H2	B1	B2	G	Net	Gross	
UPS 25-55 (N)	180	46	125	85	62	1 1/2	4.6	4.7	0.008

Technical data

Product range UPS, UP, 1 x 230 V, 50 Hz

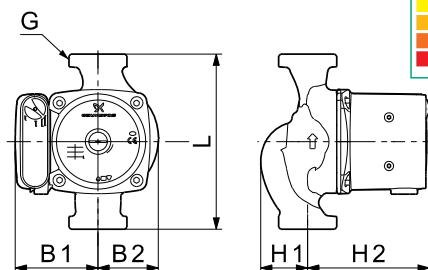
UPS 32-55

1 x 230 V, 50 Hz



TM04 3760 2409

Speed	P ₁ [W]	I _{1/1} [A]
3	105	0.46
2	100	0.44
1	65	0.32



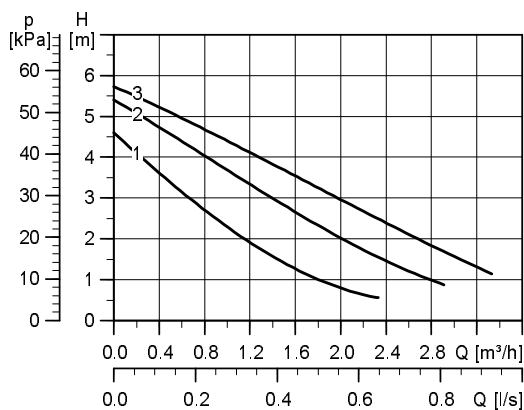
TM04 3847 5108 - TM03 0870 0705

Connections: See *Pipe connections* on page 52
 System pressure: Max. 10 bar
 Liquid temperature: -25 °C to +110 °C (TF 110)
 Also available with: Stainless-steel pump housing, type N

Pump type	Dimensions [mm]						Weights [kg]		Ship. vol. [m³]
	L	H1	H2	B1	B2	G	Net	Gross	
UPS 32-55 (N)	180	48	125	85	62	2	4.6	4.9	0.008

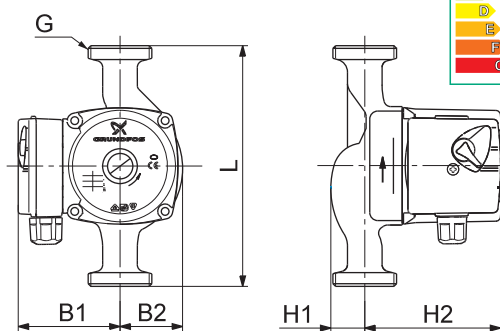
UPS 15-60, UPS 20-60

1 x 230 V, 50 Hz



TM04 3760 2409

Speed	P ₁ [W]	I _{1/1} [A]
3	105	0.46
2	100	0.44
1	65	0.32



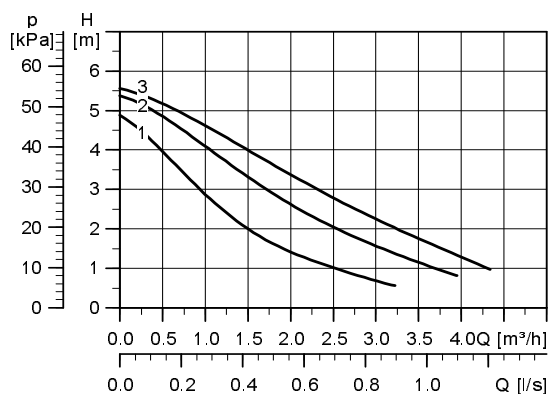
TM04 3847 5108 - TM03 0870 0705

Connections: See *Pipe connections* on page 52
 System pressure: Max. 10 bar
 Liquid temperature: +2 °C to +110 °C (TF 110)
 Also available with: Stainless-steel pump housing, type N (only UPS 20-60 130)

Pump type	Dimensions [mm]						Weights [kg]		Ship. vol. [m³]
	L	H1	H2	B1	B2	G	Net	Gross	
UPS 15-60	130	28	102	75	51	1	2.3	2.5	0.004
UPS 20-60 (N)	130	28	102	75	51	1 1/4	2.4	2.6	0.004

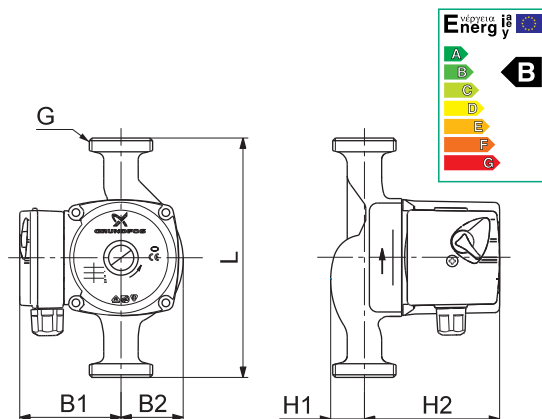
UPS 25-60

1 x 230 V, 50 Hz



TM04 5012 2409

Speed	P ₁ [W]	I _{1/1} [A]
3	60	0.28
2	55	0.25
1	50	0.21



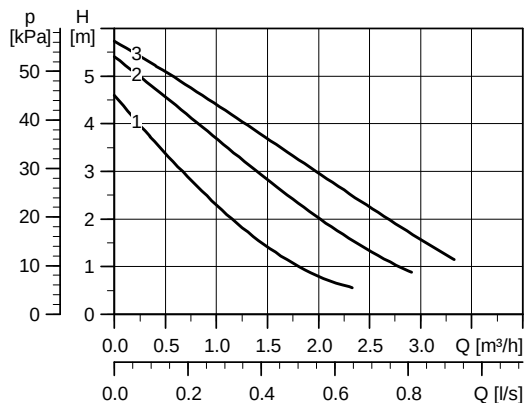
TM00 8945 2105 - TM03 0869 4608

Connections: See *Pipe connections* on page 52
 System pressure: Max. 10 bar
 Liquid temperature: +2 °C to +110 °C (TF 110)
 Also available with: Stainless-steel pump housing, type N, and air separator, type A

Pump type	Dimensions [mm]						Weights [kg]		Ship. vol. [m³]
	L	H1	H2	B1	B2	G	Net	Gross	
UPS 25-60 (K, N, A)	180	38	96	75	50	1 1/2	2.6	2.8	0.004

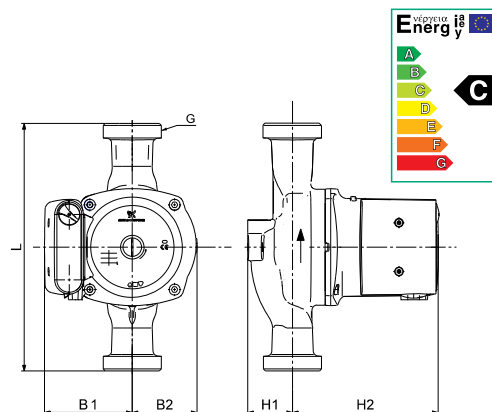
UPS 32-60

1 x 230 V, 50 Hz



TM00 9751 4708

Speed	P ₁ [W]	I _{1/1} [A]
3	70	0.30
2	60	0.27
1	50	0.22



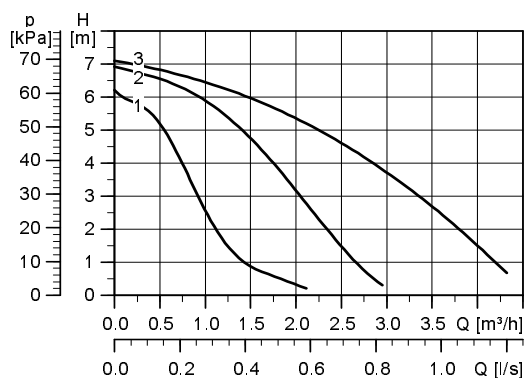
TM04 2809 3408 - TM03 0870 0705

Connections: See *Pipe connections* on page 52
 System pressure: Max. 10 bar
 Liquid temperature: +2 °C to +110 °C (TF 110)

Pump type	Dimensions [mm]						Weights [kg]		Ship. vol. [m³]
	L	H1	H2	B1	B2	G	Net	Gross	
UPS 32-60	180	39	102	73	51	2	2.6	2.8	0.004

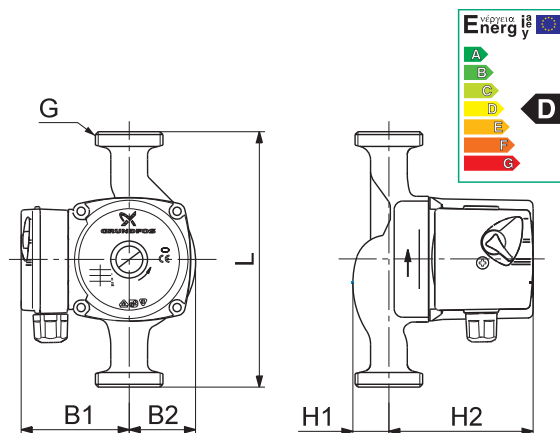
UPS 25-70, UPS 32-70

1 x 230 V, 50 Hz



TM04 5007 2409

Speed	P ₁ [W]	I _{1/1} [A]
3	140	0.62
2	120	0.56
1	95	0.45



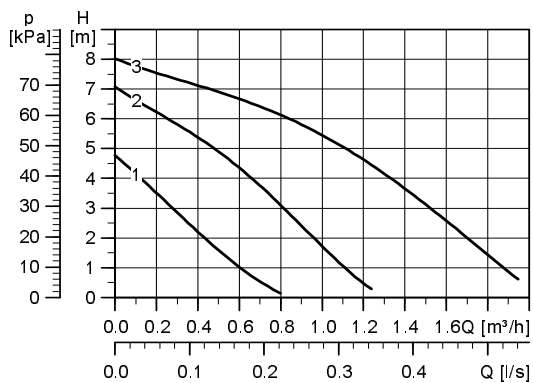
TM00 9386 2105 - TM03 0871 0705

Connections: See *Pipe connections* on page 52
 System pressure: Max. 10 bar
 Liquid temperature: +2 °C to +95 °C (TF 110)

Pump type	Dimensions [mm]						Weights [kg]		Ship. vol. [m³]
	L	H1	H2	B1	B2	G	Net	Gross	
UPS 25-70	180	32	102	75	51	1 1/2	2.4	2.6	0.004
UPS 32-70	180	32	102	75	51	2	2.6	2.8	0.004

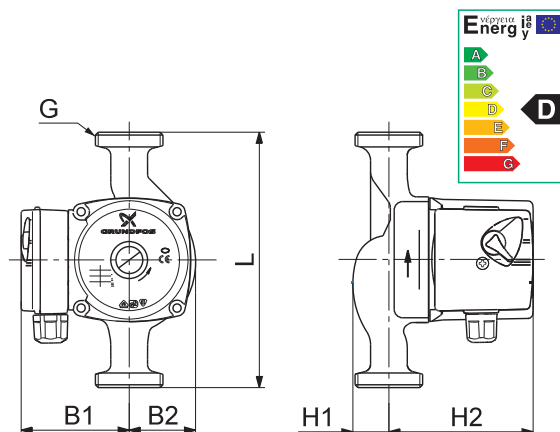
UPS 15-80

1 x 230 V, 50 Hz



TM04 5007 2409

Speed	P ₁ [W]	I _{1/1} [A]
3	110	0.47
2	75	0.34
1	45	0.22



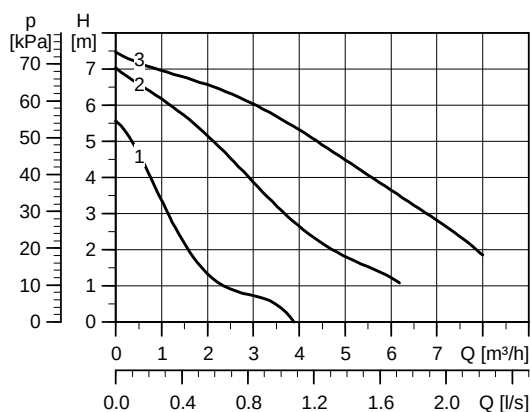
TM00 9386 2105 - TM03 0871 0705

Connections: See *Pipe connections* on page 52
 System pressure: Max. 10 bar
 Liquid temperature: +2 °C to +110 °C (TF 110)

Pump type	Dimensions [mm]						Weights [kg]		Ship. vol. [m³]
	L	H1	H2	B1	B2	G	Net	Gross	
UPS 15-80	130	28	102	75	51	1	2.3	2.5	0.004

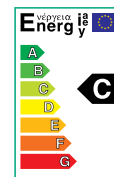
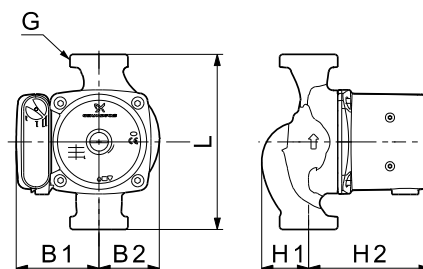
UPS 25-80

1 x 230 V, 50 Hz



TM04 3754 2409

Speed	P ₁ [W]	I _{1/1} [A]
3	165	0.70
2	155	0.70
1	110	0.50



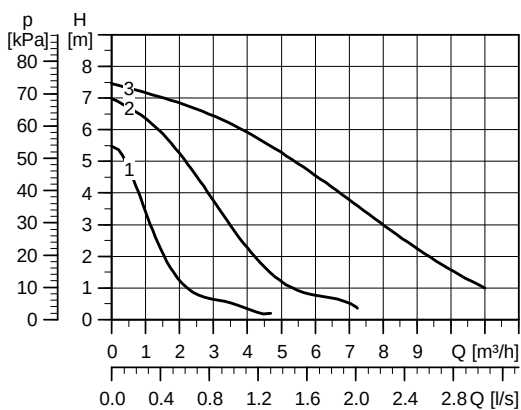
TM04 3847 5108 - TM03 0870 0705

Connections: See *Pipe connections* on page 52
 System pressure: Max. 10 bar
 Liquid temperature: -25 °C to +110 °C (TF 110)
 Also available with: Stainless-steel pump housing, type N

Pump type	Dimensions [mm]					Weights [kg]		Ship. vol. [m³]	
	L	H1	H2	B1	B2	G	Net		Gross
UPS 25-80 (N)	180	46	125	85	62	1 1/2	4.4	4.7	0.008

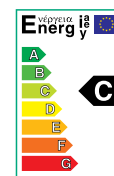
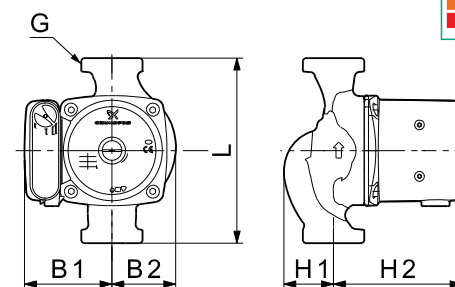
UPS 32-80

1 x 230 V, 50 Hz



TM04 3761 2409

Speed	P ₁ [W]	I _{1/1} [A]
3	220	0.98
2	200	0.90
1	135	0.60



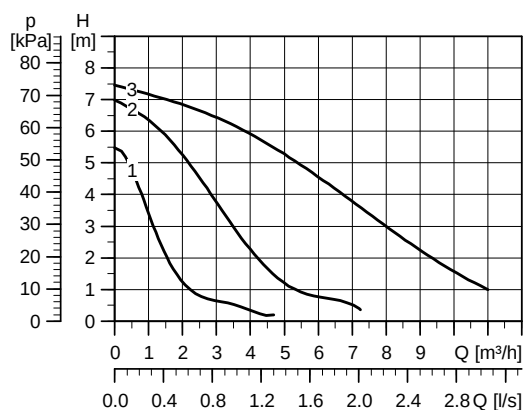
TM04 3847 5108 - TM03 0870 0705

Connections: See *Pipe connections* on page 52
 System pressure: Max. 10 bar
 Liquid temperature: -25 °C to +110 °C (TF 110)
 Also available with: Stainless-steel pump housing, type N

Pump type	Dimensions [mm]					Weights [kg]		Ship. vol. [m³]	
	L	H1	H2	B1	B2	G	Net		Gross
UPS 32-80 (N)	180	48	125	85	62	2	4.6	4.9	0.008

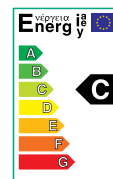
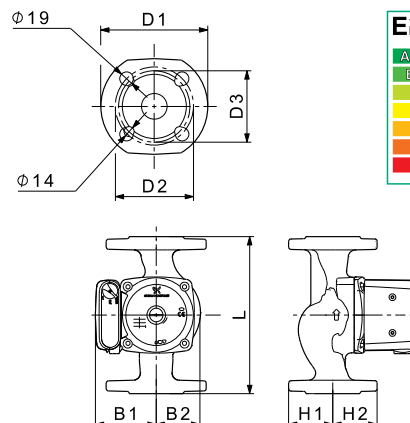
UPS 32-80 F, UPS 40-80 F

1 x 230 V, 50 Hz



TM04 3761 2409

Speed	P ₁ [W]	I _{1/1} [A]
3	220	0.98
2	200	0.90
1	135	0.60



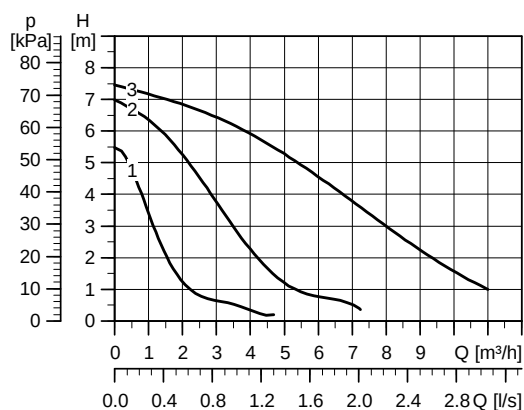
TM04 6005 4609 - TM03 0870 0705

Connections: See *Pipe connections* on page 52
 System pressure: Max. 10 bar
 Liquid temperature: -25 °C to +110 °C (TF 110)
 Also available with: Stainless-steel pump housing, type N (only UPS 40-80 F 250)

Pump type	Dimensions [mm]									Weights [kg]		Ship. vol. [m³]
	L	D1	D2	D3	H1	H2	B1	B2	G	Net	Gross	
UPS 32-80 F	220	140	100	90	62	125	85	62	-	7.4	7.8	0.010
UPS 40-80 F (N)	250	150	110	100	67	125	85	62	-	8.1	8.5	0.011

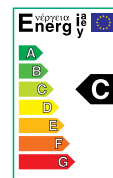
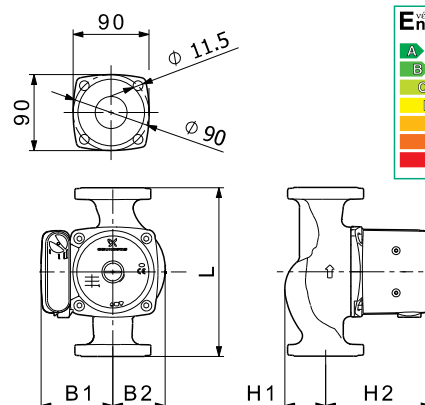
UPS 36-80 F

1 x 230 V, 50 Hz



TM04 3761 2409

Speed	P ₁ [W]	I _{1/1} [A]
3	220	0.98
2	200	0.90
1	135	0.60



TM04 3843 0109 - TM03 0870 0705

Connections: See *Pipe connections* on page 52
 System pressure: Max. 10 bar
 Liquid temperature: -25 °C to +110 °C (TF 110)

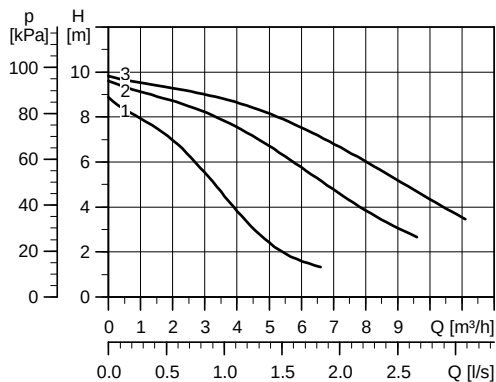
Pump type	Dimensions [mm]						Weights [kg]		Ship. vol. [m³]
	L	H1	H2	B1	B2	G	Net	Gross	
UPS 36-80 F	200	48	125	85	62	-	5.7	6.1	0.010

Technical data

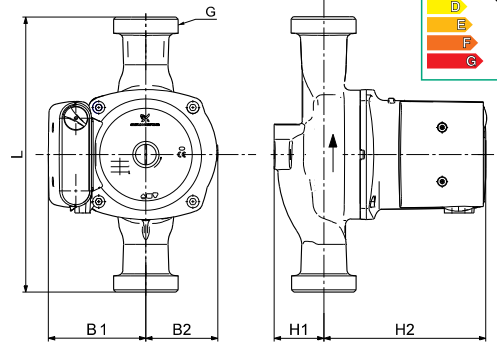
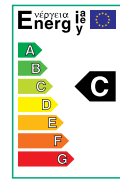
Product range UPS, UP, 1 x 230 V, 50 Hz

UPS 25-100, UPS 32-100

1 x 230 V, 50 Hz



TM04 3614 4708



TM04 2809 3408 - TM03 0870 0705

Speed	P ₁ [W]	I _{1/I} [A]
3	345	1.52
2	340	1.50
1	280	1.30

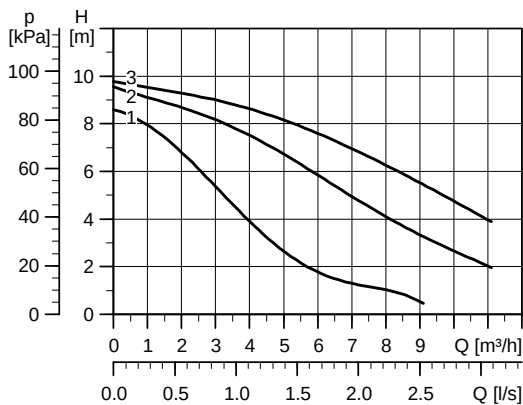
The pump has a built-in thermal switch and requires no additional motor protection.

Connections: See *Pipe connections* on page 52
 System pressure: Max. 10 bar
 Liquid temperature: -25 °C to +110 °C (TF 110)
 Also available with: Stainless-steel pump housing, type N (only UPS 32-100 180)

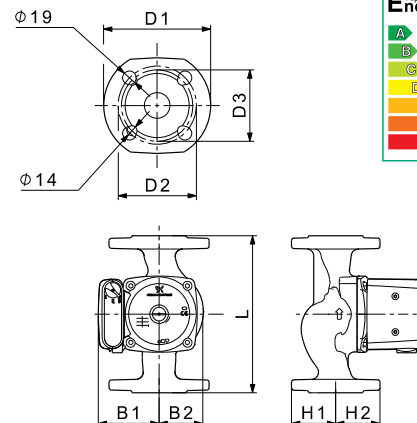
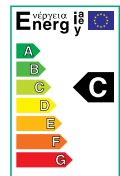
Pump type	Dimensions [mm]						Weights [kg]		Ship. vol. [m³]
	L	H1	H2	B1	B2	G	Net	Gross	
UPS 25-100	180	47	150	90	68	1 1/2	6.3	6.8	0.012
UPS 32-100 (N)	180	47	150	90	68	2	6.4	7.0	0.012

UPS 32-100 F, UPS 40-100 F

1 x 230 V, 50 Hz



TM04 3616 4708



TM04 6006 4609 - TM03 0870 0705

Speed	P ₁ [W]	I _{1/I} [A]
3	345	1.52
2	340	1.50
1	280	1.30

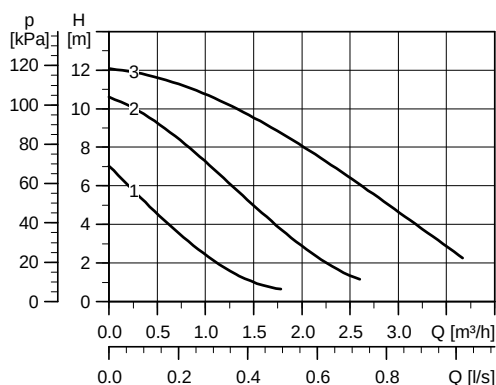
The pump has a built-in thermal switch and requires no additional motor protection.

Connections: See *Pipe connections* on page 52
 System pressure: Max. 10 bar
 Liquid temperature: -25 °C to +110 °C (TF 110)
 Also available with: Stainless-steel pump housing, type N (only UPS 40-100 F 250)

Pump type	Dimensions [mm]								Weights [kg]		Ship. vol. [m³]
	L	D1	D2	D3	H1	H2	B1	B2	Net	Gross	
UPS 32-100 F	220	140	100	90	62	150	90	68	9.0	9.8	0.016
UPS 40-100 F (N)	250	150	110	100	62	150	90	68	9.6	10.4	0.016

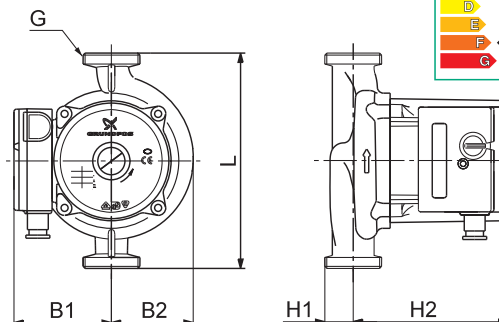
UPS 25-120

1 x 230 V, 50 Hz



TM02 2205 4708

Speed	P ₁ [W]	I _{1/1} [A]
3	235	1.02
2	180	0.78
1	120	0.53



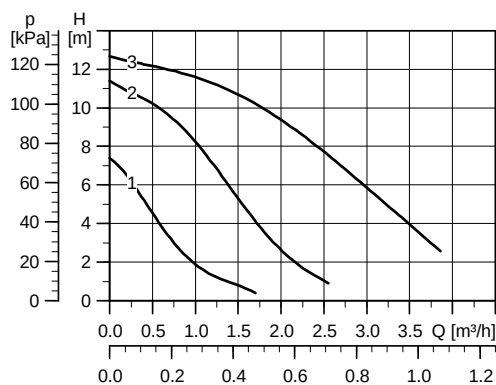
TM02 1329 2105 - TM03 0873 0705

Connections: See *Pipe connections* on page 52
 System pressure: Max. 10 bar
 Liquid temperature: +2 °C to +95 °C (TF 110)

Pump type	Dimensions [mm]						Weights [kg]		Ship. vol. [m³]
	L	H1	H2	B1	B2	G	Net	Gross	
UPS 25-120	180	32	130	82	69	1 1/2	4.4	4.6	0.006

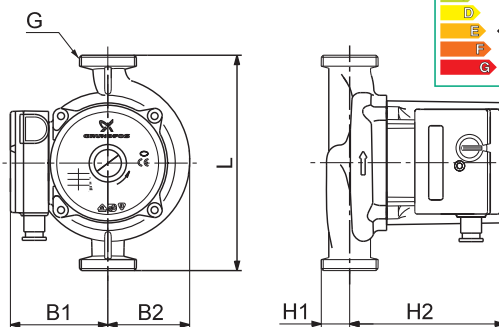
UPS 25-125

1 x 230 V, 50 Hz



TM02 2204 4708

Speed	P ₁ [W]	I _{1/1} [A]
3	270	1.18
2	210	0.93
1	135	0.61



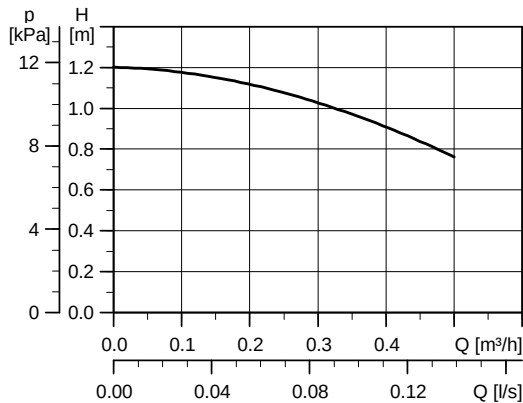
TM02 1329 2105 - TM03 0872 0705

Connections: See *Pipe connections* on page 52
 System pressure: Max. 10 bar
 Liquid temperature: +2 °C to +60 °C (TF 60)

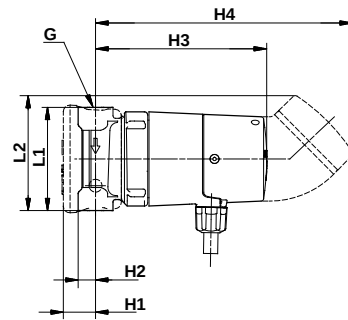
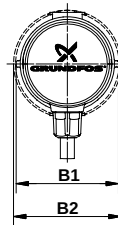
Pump type	Dimensions [mm]						Weights [kg]		Ship. vol. [m³]
	L	H1	H2	B1	B2	G	Net	Gross	
UPS 25-125	180	32	130	82	69	1 1/2	4.4	4.6	0.006

UP 15-14 B

1 x 230 V, 50 Hz



TM01 9070 4708



TM01 8554 1602

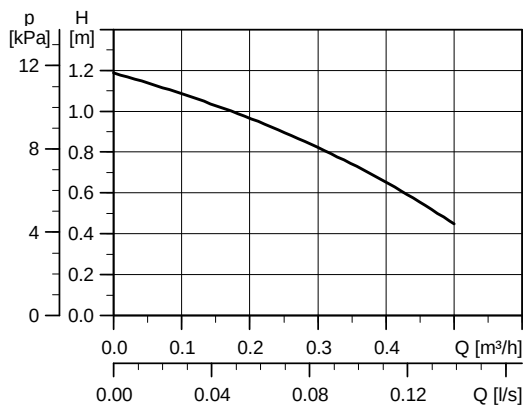
P_1 [W]	$I_{1/1}$ [A]
25	0.11

Connections: See *Fittings for COMFORT* on page 57
 System pressure: Max. 10 bar
 Liquid temperature: +2 °C to +95 °C (TF 95)

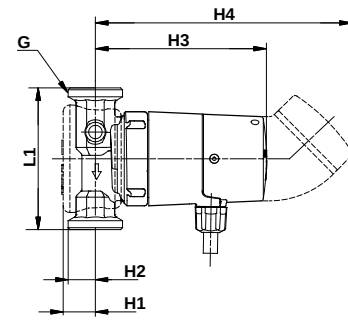
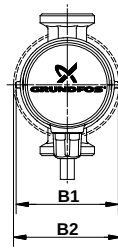
Pump type	Dimensions [mm]							Weights [kg]			Ship. vol. [m³]	
	L1	L2	H1	H2	H3	H4	B1	B2	G	Net		Gross
UP 15-14 B	80	-	25	13.5	133	-	79.5	84	Rp 1/2	1.00	1.12	0.0026
UP 15-14 BU	80	90	25	13.5	-	205	79.5	84	Rp 1/2	1.15	1.31	0.0034
UP 15-14 BT	80	-	25	13.5	155	-	79.5	84	Rp 1/2	1.05	1.24	0.0034
UP 15-14 BUT	80	90	25	13.5	-	205	79.5	84	Rp 1/2	1.16	1.32	0.0034

UP 20-14 BX

1 x 230 V, 50 Hz



TM01 9098 4708



TM01 8555 1602

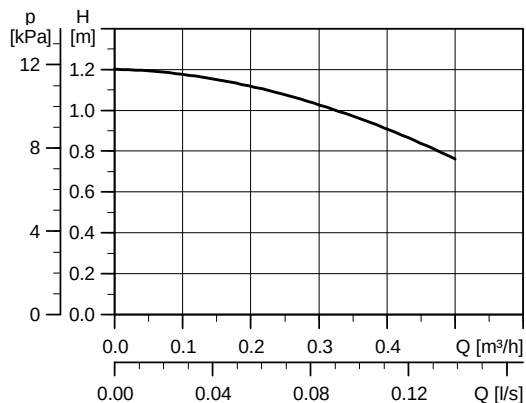
P_1 [W]	$I_{1/1}$ [A]
25	0.11

Connections: See *Fittings for COMFORT* on page 57
 System pressure: Max. 10 bar
 Liquid temperature: +2 °C to +95 °C (TF 95)

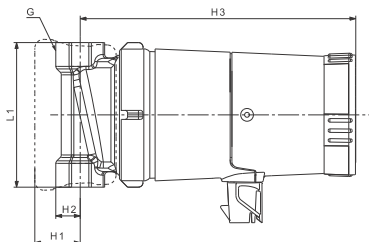
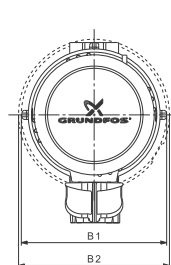
Pump type	Dimensions [mm]							Weights [kg]		Ship. vol. [m³]	
	L1	H1	H2	H3	H4	B1	B2	G	Net		Gross
UP 20-14 BX	110	25	21	133	-	79.5	84	G 1 1/4	1.20	1.35	0.0026
UP 20-14 BXU	110	25	21	-	205	79.5	84	G 1 1/4	1.35	1.51	0.0034
UP 20-14 BXT	110	25	21	155	-	79.5	84	G 1 1/4	1.25	1.44	0.0034
UP 20-14 BXUT	110	25	21	-	205	79.5	84	G 1 1/4	1.36	1.52	0.0034

UP 15-14 BA

1 x 230 V, 50 Hz



TM01 9070 4708



TM04 9299 3710

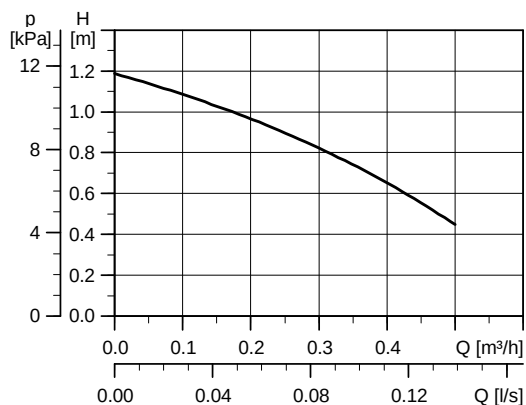
P_1 [W]	$I_{1/1}$ [A]
25	0.11

Connections: See *Fittings for COMFORT* on page 57
 System pressure: Max. 10 bar
 Liquid temperature: +2 °C to +95 °C (TF 95)

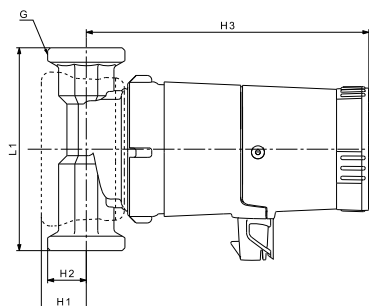
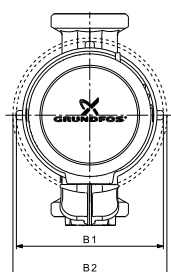
Pump type	Dimensions [mm]							Weights [kg]			Ship. vol. [m³]	
	L1	L2	H1	H2	H3	H4	B1	B2	G	Net		Gross
UP 15-14 BA	80	-	25	13.5	152	-	79.5	84	Rp 1/2	1.00	1.12	0.0026

UP 20-14 BXA

1 x 230 V, 50 Hz



TM01 9088 4708



TM04 9213 3710

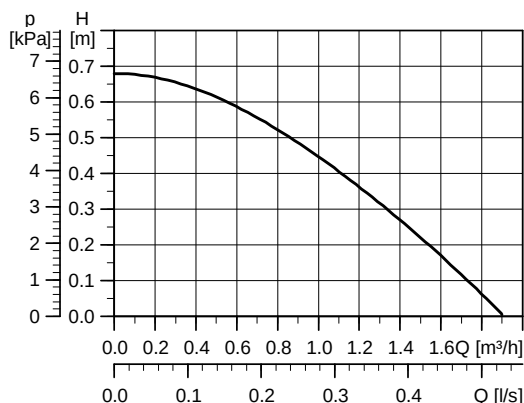
P_1 [W]	$I_{1/1}$ [A]
25	0.11

Connections: See *Fittings for COMFORT* on page 57
 System pressure: Max. 10 bar
 Liquid temperature: +2 °C to +95 °C (TF 95)

Pump type	Dimensions [mm]							Weights [kg]		Ship. vol. [m³]	
	L1	H1	H2	H3	H4	B1	B2	G	Net		Gross
UP 20-14 BXA	110	25	21	152	-	79.5	84	G 1 1/4	1.35	1.51	0.0034

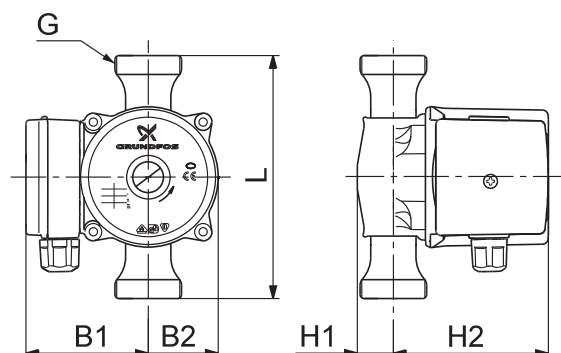
UP 20-07 N

1 x 230 V, 50 Hz



TM00 9760 4708

Speed	P ₁ [W]	I _{1/1} [A]
1	50	0.24



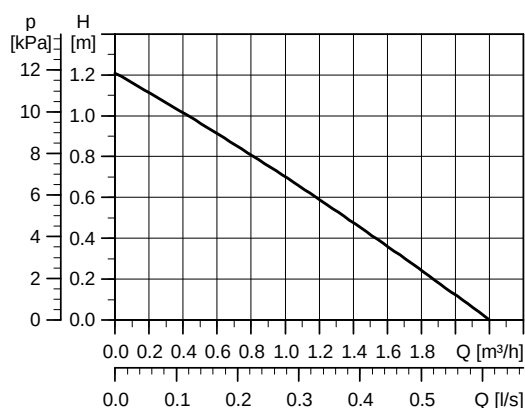
TM00 8932 2105

Connections: See *Pipe connections* on page 52
 System pressure: Max. 10 bar
 Liquid temperature: +2 °C to +110 °C (TF 110)

Pump type	Dimensions [mm]						Weights [kg]		Ship. vol. [m³]
	L	H1	H2	B1	B2	G	Net	Gross	
UP 20-07 N	150	25	100	75	43	1 1/4	2.1	2.3	0.004

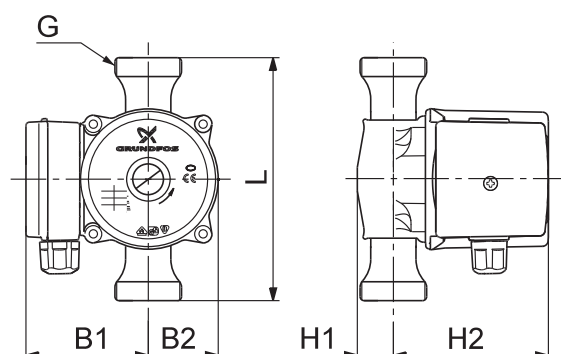
UP 20-15 N

1 x 230 V, 50 Hz



TM00 9765 4705

Speed	P ₁ [W]	I _{1/1} [A]
1	65	0.28



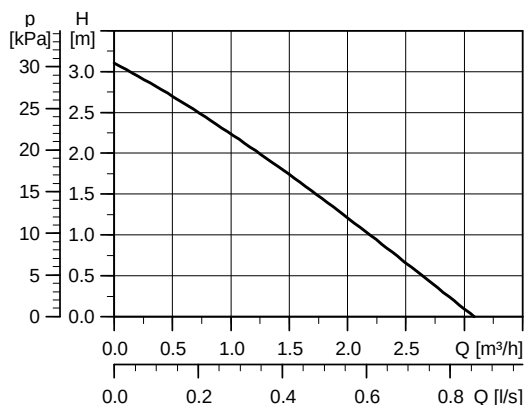
TM00 8932 2105

Connections: See *Pipe connections* on page 52
 System pressure: Max. 10 bar
 Liquid temperature: +2 °C to +110 °C (TF 110)

Pump type	Dimensions [mm]						Weights [kg]		Ship. vol. [m³]
	L	H1	H2	B1	B2	G	Net	Gross	
UP 20-15 N	150	28	100	75	43	1 1/4	2.1	2.3	0.004

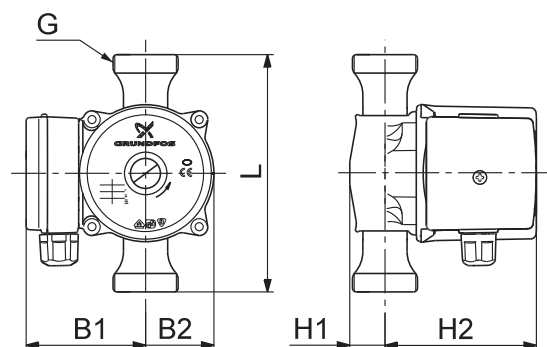
UP 20-30 N

1 x 230 V, 50 Hz



TM00 9752 4708

Speed	P ₁ [W]	I _{1/1} [A]
1	75	0.31



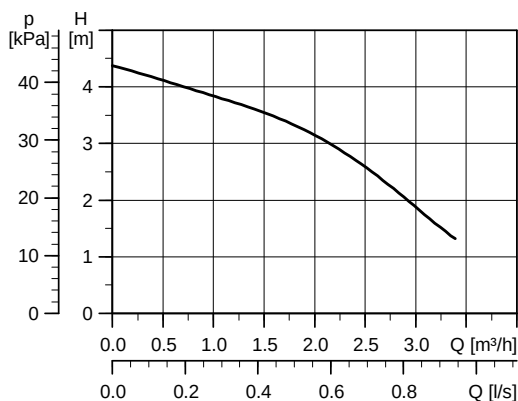
TM00 8932 2105

Connections: See *Pipe connections* on page 52
 System pressure: Max. 10 bar
 Liquid temperature: +2 °C to +110 °C (TF 110)

Pump type	Dimensions [mm]						Weights [kg]		Ship. vol. [m³]
	L	H1	H2	B1	B2	G	Net	Gross	
UP 20-30 N (K)	150	28	100	75	43	1 1/4	2.1	2.3	0.004

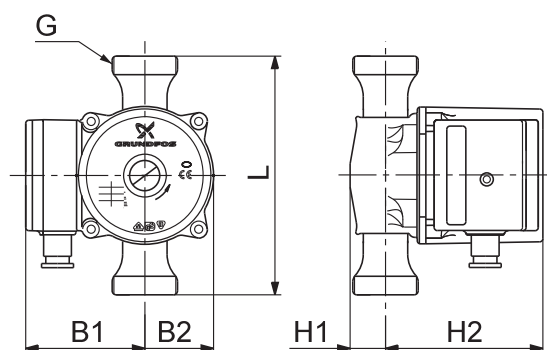
UP 20-45 N

1 x 230 V, 50 Hz



TM04 3749 2409

Speed	P ₁ [W]	I _{1/1} [A]
1	110	0.5



TM00 9388 2105

Connections: See *Pipe connections* on page 52
 System pressure: Max. 10 bar
 Liquid temperature: +2 °C to +110 °C (TF 110)

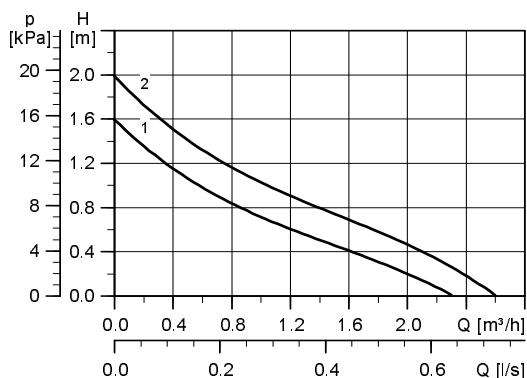
Pump type	Dimensions [mm]						Weights [kg]		Ship. vol. [m³]
	L	H1	H2	B1	B2	G	Net	Gross	
UP 20-45 N	150	25	126	85	53.5	1 1/4	3.6	3.8	0.008

Technical data

Product range UPS, UP, 3 x 400 V, 50 Hz

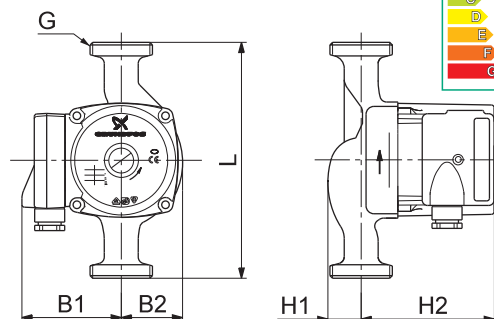
UPS 25-20, UPS 32-20

3 x 400 V, 50 Hz



TM04 5009 2409

Speed	P ₁ [W]	I _{1/1} [A]
2	60	0.15
1	85	0.16



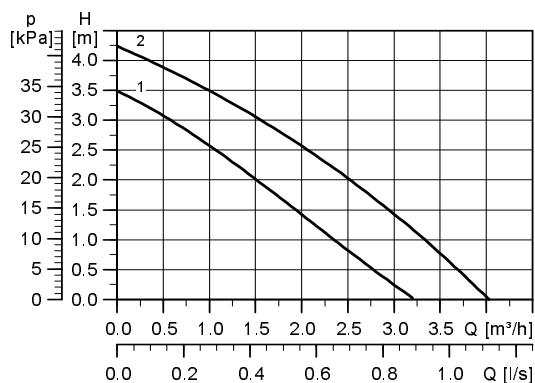
TM00 8960 2105 - TM03 0873 0705

Connections: See *Pipe connections* on page 52
 System pressure: Max. 10 bar
 Liquid temperature: +2 °C to +110 °C (TF 110)

Pump type	Dimensions [mm]						Weights [kg]		Ship. vol. [m³]
	L	H1	H2	B1	B2	G	Net	Gross	
UPS 25-20	180	32	102	75	51	1 1/2	2.6	2.8	0.004
UPS 32-20	180	39	102	73	51	2	2.6	2.8	0.004

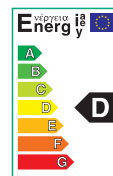
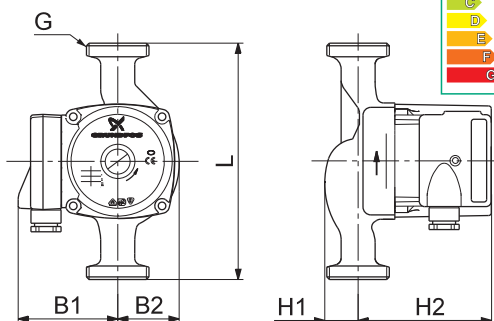
UPS 25-40, UPS 32-40

3 x 400 V, 50 Hz



TM04 5010 2409

Speed	P ₁ [W]	I _{1/1} [A]
2	95	0.18
1	110	0.20



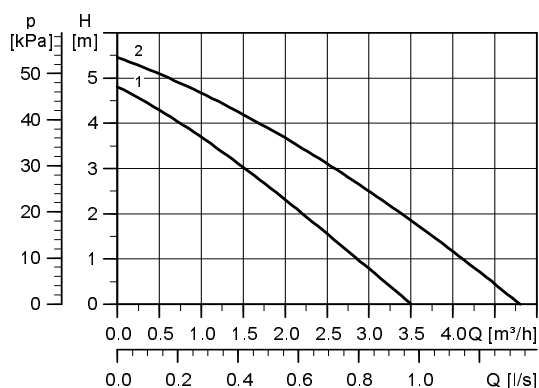
TM00 8960 2105 - TM03 0871 0705

Connections: See *Pipe connections* on page 52
 System pressure: Max. 10 bar
 Liquid temperature: +2 °C to +110 °C (TF 110)

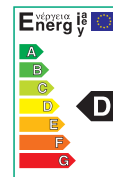
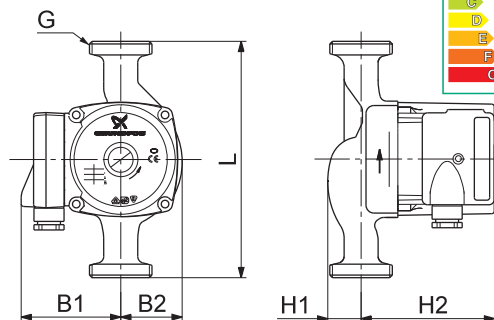
Pump type	Dimensions [mm]						Weights [kg]		Ship. vol. [m³]
	L	H1	H2	B1	B2	G	Net	Gross	
UPS 25-40	130	32	102	73	51	1 1/2	2.5	2.7	0.004
UPS 25-40	180	32	102	73	51	1 1/2	2.5	2.7	0.004
UPS 32-40	180	39	102	73	51	2	2.6	2.8	0.004

UPS 25-50, UPS 32-50

3 x 400 V, 50 Hz



TM04 5011 2409



TM00 8960 2105 - TM03 0871 0705

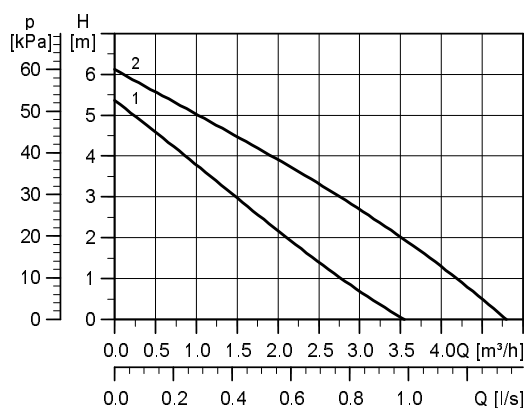
Speed	P ₁ [W]	I _{1/1} [A]
2	115	0.20
1	130	0.22

Connections: See *Pipe connections* on page 52
 System pressure: Max. 10 bar
 Liquid temperature: +2 °C to +110 °C (TF 110)

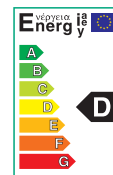
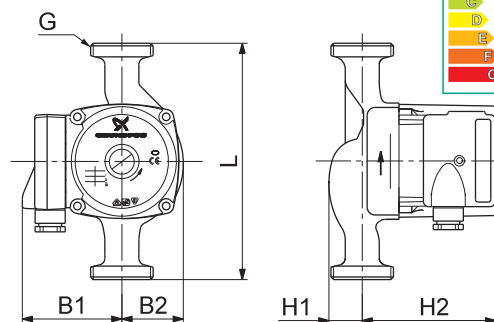
Pump type	Dimensions [mm]						Weights [kg]		Ship. vol. [m³]
	L	H1	H2	B1	B2	G	Net	Gross	
UPS 25-50	180	32	102	73	51	1 1/2	2.5	2.7	0.004
UPS 32-50	180	39	102	73	51	2	2.6	2.8	0.004

UPS 25-60, UPS 32-60

3 x 400 V, 50 Hz



TM04 8116 3110



TM00 8960 2105 - TM03 0871 0705

Speed	P ₁ [W]	I _{1/1} [A]
2	115	0.20
1	130	0.22

Connections: See *Pipe connections* on page 52
 System pressure: Max. 10 bar
 Liquid temperature: +2 °C to +110 °C (TF 110)
 Also available with: Stainless-steel pump housing, type N (only UPS 25-60 180)

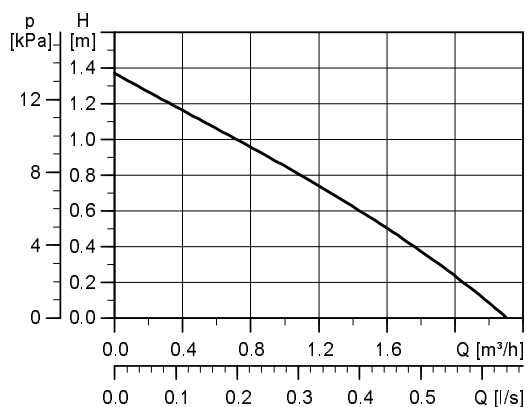
Pump type	Dimensions [mm]						Weights [kg]		Ship. vol. [m³]
	L	H1	H2	B1	B2	G	Net	Gross	
UPS 25-60 (N)	180	32	102	73	51	1 1/2	2.5	2.7	0.004
UPS 32-60	180	39	102	73	51	2	2.6	2.8	0.004

Technical data

Product range UPS, UP, 3 x 400 V, 50 Hz

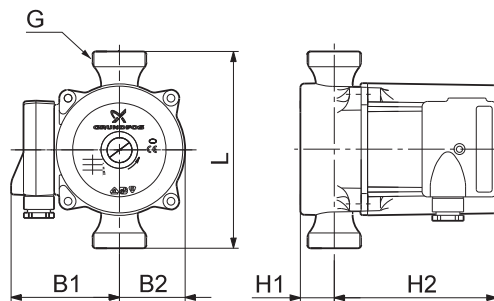
UP 20-15 N

3 x 400 V, 50 Hz



TM04 5561 3409

Speed	P ₁ [W]	I _{1/1} [A]
1	75	0.19



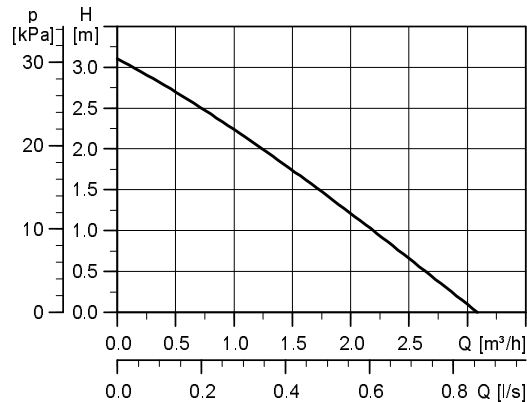
TM00 8964 4296

Connections: See *Pipe connections* on page 52
 System pressure: Max. 10 bar
 Liquid temperature: +2 °C to +110 °C (TF 110)

Pump type	Dimensions [mm]						Weights [kg]		Ship. vol. [m³]
	L	H1	H2	B1	B2	G	Net	Gross	
UP 20-15 N	150	28	100	73	43	1 1/4	2.1	2.3	0.004

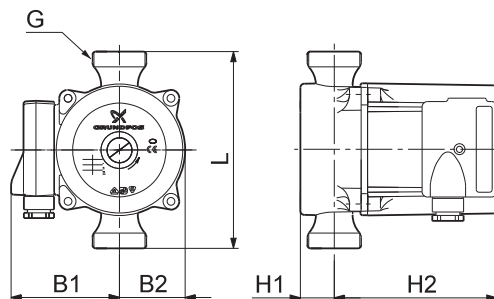
UP 20-30 N

3 x 400 V, 50 Hz



TM04 5562 3409

Speed	P ₁ [W]	I _{1/1} [A]
1	100	0.18



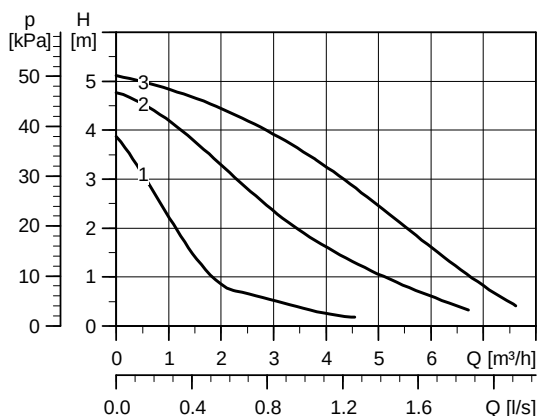
TM00 8964 4296

Connections: See *Pipe connections* on page 52
 System pressure: Max. 10 bar
 Liquid temperature: +2 °C to +110 °C (TF 110)

Pump type	Dimensions [mm]						Weights [kg]		Ship. vol. [m³]
	L	H1	H2	B1	B2	G	Net	Gross	
UP 20-30 N	150	28	100	73	43	1 1/4	2.1	2.3	0.004

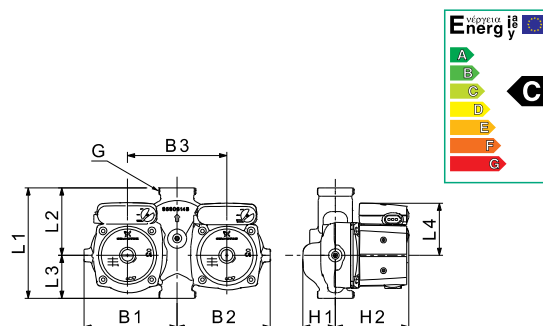
UPSD 32-50

1 x 230 V, 50 Hz



TM04 3793 0000

Speed	P ₁ [W]	I _{1/1} [A]
3	105	0.46
2	100	0.44
1	75	0.32



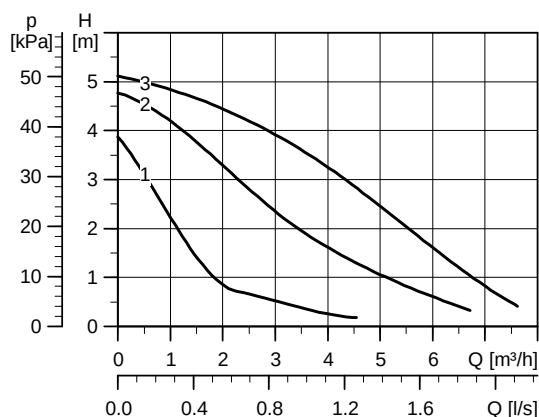
TM04 3841 5108 - TM03 0870 0705

Connections: See *Pipe connections* on page 52
 System pressure: Max. 10 bar
 Liquid temperature: -25 °C to +110 °C (TF 110)

Pump type	Dimensions [mm]									Weights [kg]		Ship. vol. [m³]	
	L1	L2	L3	L4	H1	H2	B1	B2	B3	G	Net		Gross
UPSD 32-50	180	110	70	85	53	120	166	152	162	2	10.7	11.1	0.018

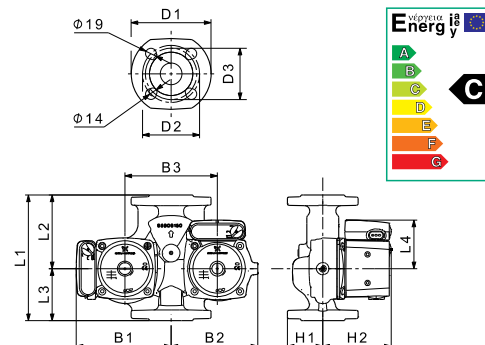
UPSD 32-50 F, UPSD 40-50 F

1 x 230 V, 50 Hz



TM04 3793 0000

Speed	P ₁ [W]	I _{1/1} [A]
3	105	0.46
2	100	0.44
1	75	0.32



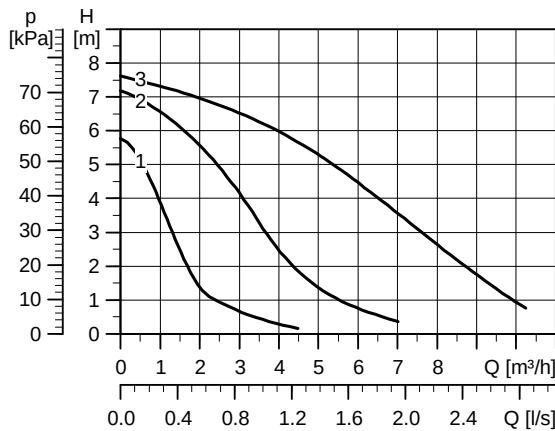
TM04 6006 4609 - TM03 0870 0705

Connections: See *Pipe connections* on page 52
 System pressure: Max. 10 bar
 Liquid temperature: -25 °C to +110 °C (TF 110)

Pump type	Dimensions [mm]													Weights [kg]		Ship. vol. [m³]
	L1	D1	D2	D3	L2	L3	L4	H1	H2	B1	B2	B3	G	Net	Gross	
UPSD 32-50 F	220	140	100	90	129	91	85	62	120	166	152	162	-	13.6	14.2	0.018
UPSD 40-50 F	250	150	110	100	129	121	85	67	120	166	152	162	-	14.1	14.8	0.021

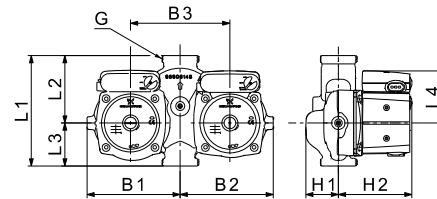
UPSD 32-80

1 x 230 V, 50 Hz

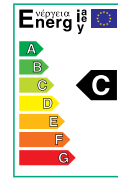


TM04 3794 0000

Speed	P ₁ [W]	I _{1/1} [A]
3	105	0.46
2	100	0.44
1	75	0.32



Connections: See *Pipe connections* on page 52
 System pressure: Max. 10 bar
 Liquid temperature: -25 °C to +110 °C (TF 110)

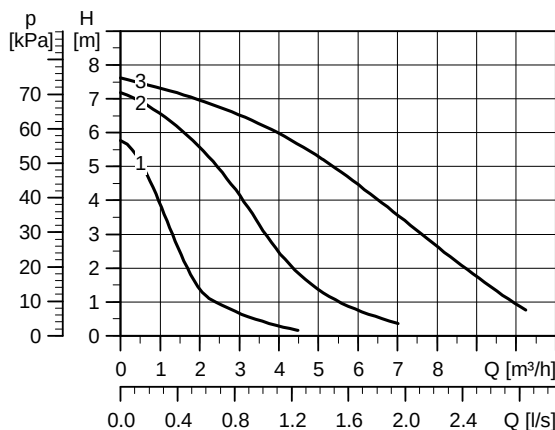


TM04 3841 5108 - TM03 0870 0705

Pump type	Dimensions [mm]										Weights [kg]		Ship. vol. [m³]
	L1	L2	L3	L4	H1	H2	B1	B2	B3	G	Net	Gross	
UPSD 32-80	180	110	70	85	53	120	166	152	162	2	10.8	11.3	0.015

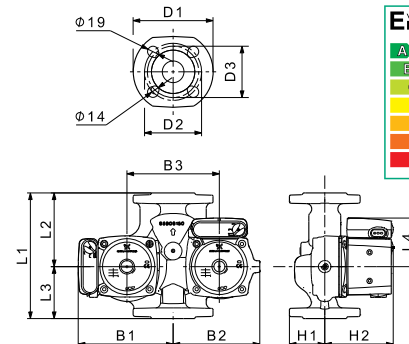
UPSD 32-80 F, UPSD 40-80 F

1 x 230 V, 50 Hz

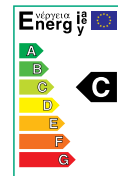


TM04 3794 0000

Speed	P ₁ [W]	I _{1/1} [A]
3	105	0.46
2	100	0.44
1	75	0.32



Connections: See *Pipe connections* on page 52
 System pressure: Max. 10 bar
 Liquid temperature: -25 °C to +110 °C (TF 110)

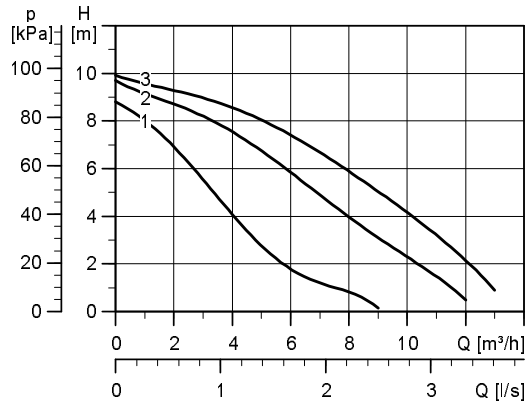


TM04 6006 4609 - TM03 0870 0705

Pump type	Dimensions [mm]													Weights [kg]		Ship. vol. [m³]
	L1	D1	D2	D3	L2	L3	L4	H1	H2	B1	B2	B3	G	Net	Gross	
UPSD 32-80 F	220	140	100	90	129	91	85	62	120	166	152	162	-	13.6	14.3	0.018
UPSD 40-80 F	250	150	110	100	129	121	85	67	120	166	152	162	-	14.2	14.8	0.021

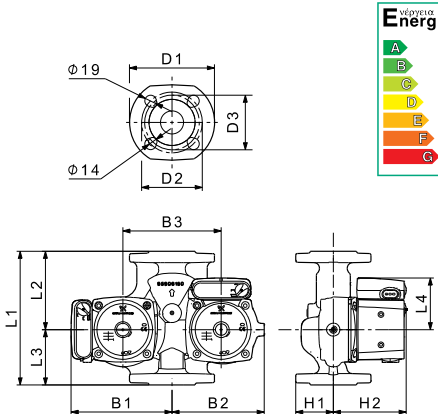
UPSD 32-100 F, UPS 40-100 F

1 x 230 V, 50 Hz



Speed	P ₁ [W]	I _{1/1} [A]
3	345	1.52
2	340	1.50
1	280	1.30

The pump has a built-in thermal switch and requires no additional motor protection.

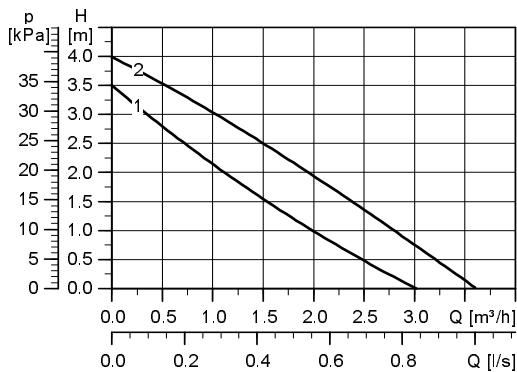


Connections: See *Pipe connections* on page 52
 System pressure: Max. 10 bar
 Liquid temperature: -25 °C to +110 °C (TF 110)

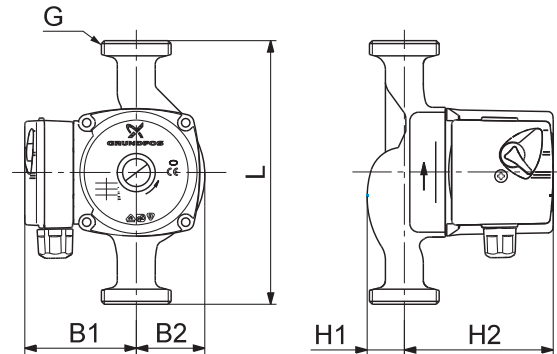
Pump type	Dimensions [mm]													Weights [kg]		Ship. vol. [m³]
	L1	D1	D2	D3	L2	L3	L4	H1	H2	B1	B2	B3	G	Net	Gross	
UPSD 32-100 F	220	140	100	90	125	90	90	62	145	175	162	170	-	17.5	18.4	0.03
UPSD 40-100 F	250	150	110	100	140	90	90	67	145	167	162	170	-	18.3	19.3	0.03

SOLAR 25-40

1 x 230 V, 50 Hz



TM04 5015 2409



TM00 9386 2105

Speed	P ₁ [W]	I _{1/1} [A]
2	55	0.16
1	35	0.25

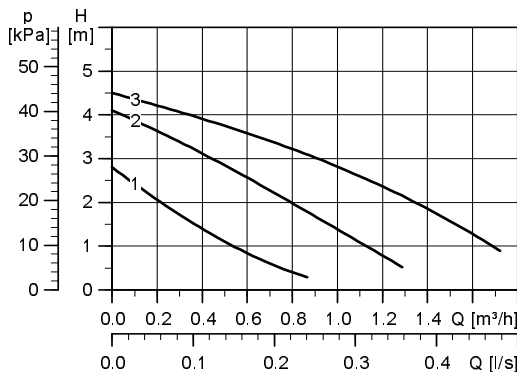
The pump has a built-in thermal switch and requires no additional motor protection.

Connections: See *Pipe connections* on page 52
 System pressure: Max. 10 bar
 Liquid temperature: -25 °C to +110 °C (TF 110)

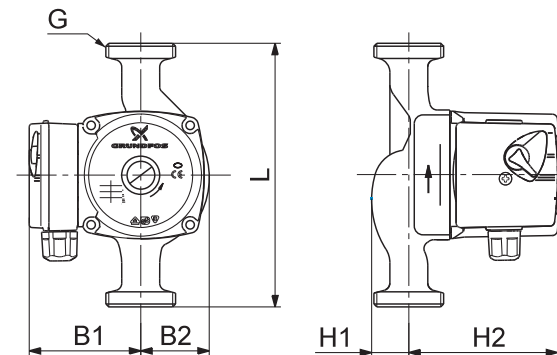
Pump type	Dimensions [mm]						Weights [kg]		Ship. vol. [m³]
	L	H1	H2	B1	B2	G	Net	Gross	
SOLAR 25-40	180	32	102	75	51	1 1/2	2.6	2.8	0.004

SOLAR 15-45, SOLAR 25-45

1 x 230 V, 50 Hz



TM04 5016 2409



TM00 9386 2105

Speed	P ₁ [W]	I _{1/1} [A]
3	50	0.21
2	35	0.16
1	20	0.10

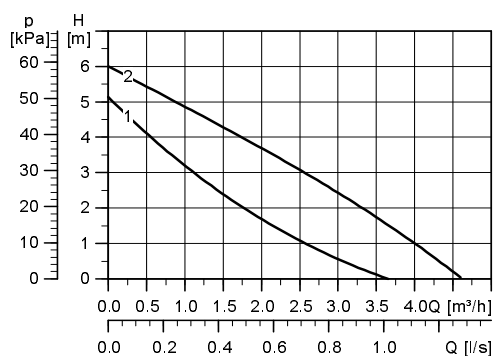
The pump has a built-in thermal switch and requires no additional motor protection.

Connections: See *Pipe connections* on page 52
 System pressure: Max. 10 bar
 Liquid temperature: +2 °C to +110 °C (TF 110)

Pump type	Dimensions [mm]						Weights [kg]		Ship. vol. [m³]
	L	H1	H2	B1	B2	G	Net	Gross	
SOLAR 15-45	180	32	102	75	51	1 1/2	2.6	2.8	0.004
SOLAR 25-45	130	24	102	75	51	1 1/2	2.4	2.6	0.004
SOLAR 25-45	180	26	102	75	47	1 1/2	2.6	2.8	0.004

SOLAR 15-60, SOLAR 25-60

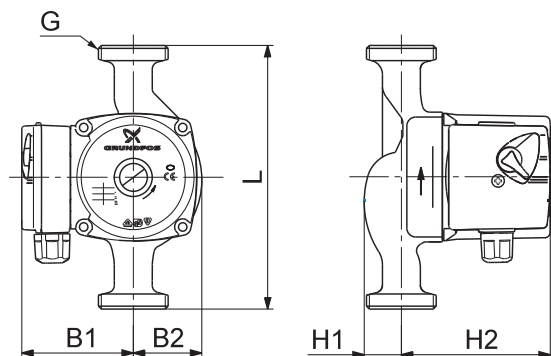
1 x 230 V, 50 Hz



TM04 5017 2409

Speed	P ₁ [W]	I _{1/1} [A]
2	80	0.28
1	65	0.34

The pump has a built-in thermal switch and requires no additional motor protection.



TM00 9386 2105

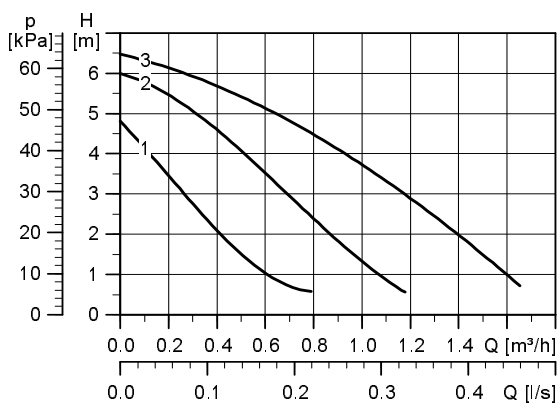
Connections:
System pressure:
Liquid temperature:

See *Pipe connections* on page 52
Max. 10 bar
+2 °C to +110 °C (TF 110)

Pump type	Dimensions [mm]						Weights [kg]		Ship. vol. [m³]
	L	H1	H2	B1	B2	G	Net	Gross	
SOLAR 15-60	130	32	102	75	51	1	2.6	2.8	0.004
SOLAR 25-60	180	32	102	75	51	1 1/2	2.6	2.8	0.004

SOLAR 15-65, SOLAR 25-65

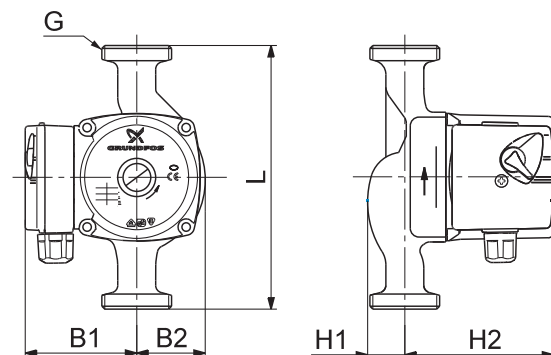
1 x 230 V, 50 Hz



TM04 5018 2409

Speed	P ₁ [W]	I _{1/1} [A]
3	80	0.36
2	65	0.30
1	50	0.24

The pump has a built-in thermal switch and requires no additional motor protection.



TM00 9386 2105

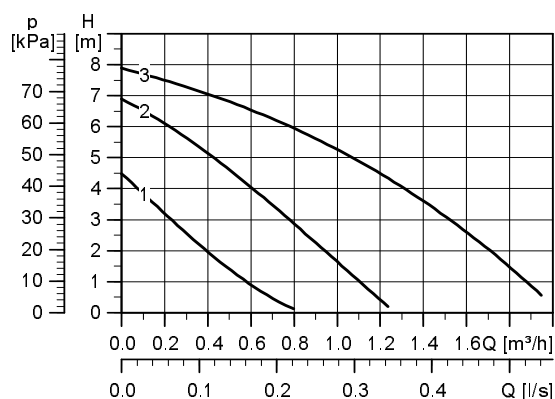
Connections:
System pressure:
Liquid temperature:

See *Pipe connections* on page 52
Max. 10 bar
+2 °C to +110 °C (TF 110)

Pump type	Dimensions [mm]						Weights [kg]		Ship. vol. [m³]
	L	H1	H2	B1	B2	G	Net	Gross	
SOLAR 15-65	130	32	102	75	51	1	2.6	2.8	0.004
SOLAR 25-65	130	24	102	75	47	1 1/2	2.4	2.6	0.004
SOLAR 25-65	180	26	102	75	47	1 1/2	2.6	2.8	0.004

SOLAR 15-80

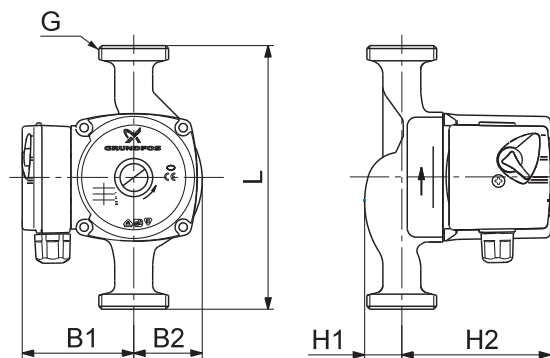
1 x 230 V, 50 Hz



TM04 5019 2409

Speed	P ₁ [W]	I _{1/1} [A]
3	80	0.36
2	65	0.30
1	50	0.24

The pump has a built-in thermal switch and requires no additional motor protection.



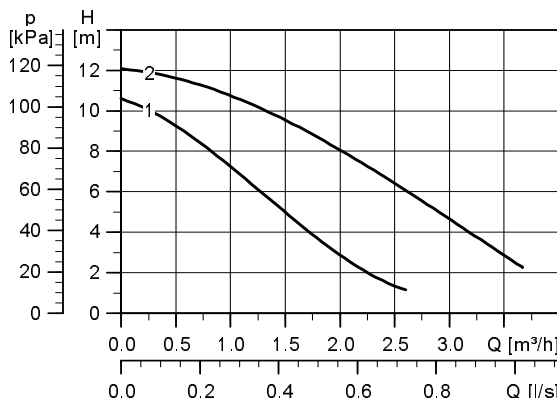
TM00 9386 2105

Connections: See *Pipe connections* on page 52
 System pressure: Max. 10 bar
 Liquid temperature: +2 °C to +95 °C (TF 110)

Pump type	Dimensions [mm]						Weights [kg]		Ship. vol. [m³]
	L	H1	H2	B1	B2	G	Net	Gross	
SOLAR 15-80	130	32	103	75	54	1	2.6	2.8	0.004

SOLAR 25-120

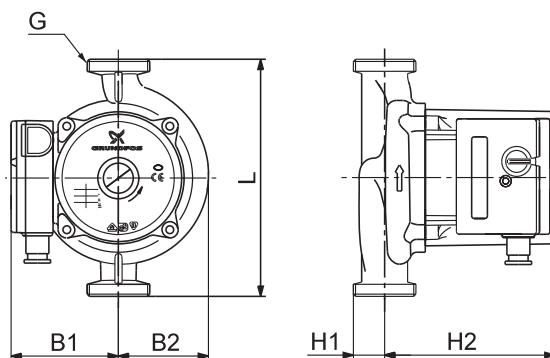
1 x 230 V, 50 Hz



TM04 5020 2409

Speed	P ₁ [W]	I _{1/1} [A]
2	180	0.79
1	230	1.01

The pump has a built-in thermal switch and requires no additional motor protection.



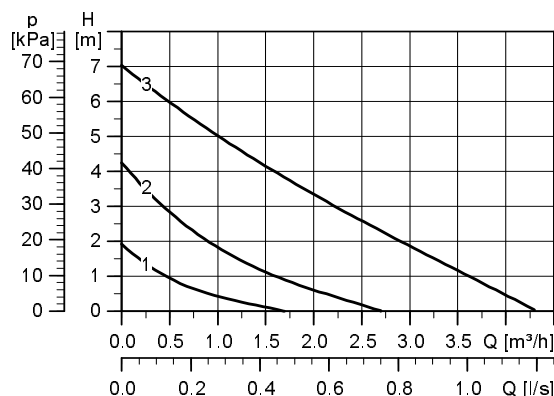
TM02 1329 2105

Connections: See *Pipe connections* on page 52
 System pressure: Max. 10 bar
 Liquid temperature: +2 °C to +95 °C (TF 110)

Pump type	Dimensions [mm]						Weights [kg]		Ship. vol. [m³]
	L	H1	H2	B1	B2	G	Net	Gross	
SOLAR 25-120	180	32	130	82	69	1 1/2	2.6	2.8	0.004

UPS 15-62

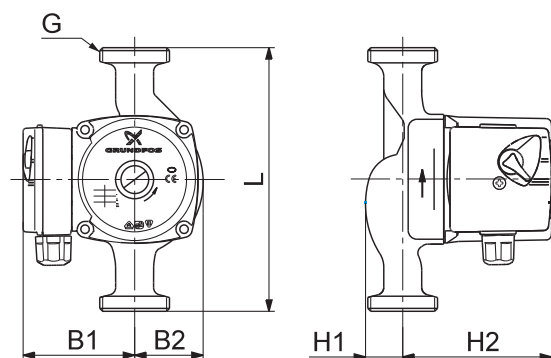
1 x 220 V, 60 Hz



TM04 5021 2409

Speed	P ₁ [W]	I _{1/1} [A]
3	115	0.51
2	65	0.30
1	35	0.17

The pump has a built-in thermal switch and requires no additional motor protection.



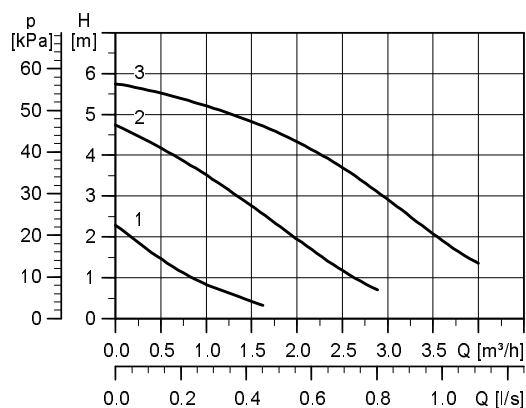
TM00 9386 2105

Connections: See *Pipe connections* on page 52
 System pressure: Max. 10 bar
 Liquid temperature: +2 °C to +95 °C (TF 110)

Pump type	Dimensions [mm]						Weights [kg]		Ship. vol. [m³]
	L	H1	H2	B1	B2	G	Net	Gross	
UPS 15-62	130	32	102	75	51	1 1/2	2.6	2.8	0.004

UPS 20-62 N

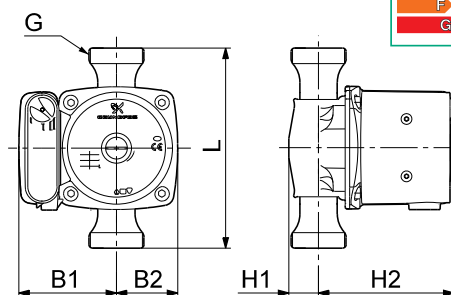
1 x 220 V, 60 Hz



TM04 5563 4009

Speed	P ₁ [W]	I _{1/1} [A]
3	150	0.68
2	135	0.64
1	90	0.44

The pump has a built-in thermal switch and requires no additional motor protection.



TM04 2811 3408 - TM03 0872 0705

Connections: See *Pipe connections* on page 52
 System pressure: Max. 10 bar
 Liquid temperature: +2 °C to +110 °C (TF 110)

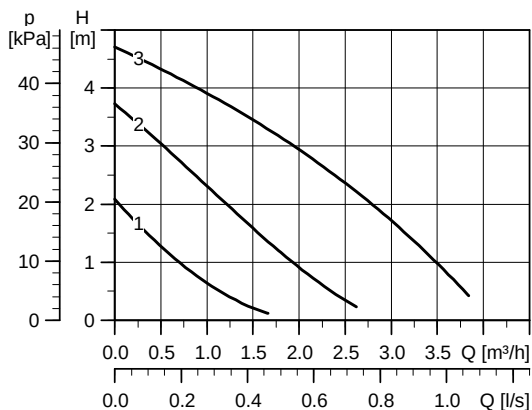
Pump type	Dimensions [mm]						Weights [kg]		Ship. vol. [m³]
	L	H1	H2	B1	B2	G	Net	Gross	
UPS 20-62 N	150	25	126	85	53.5	1 1/4	3.0	3.8	0.008

Technical data

Product range UPS, UP, 1 x 220 V, 60 Hz

UPS 25-42

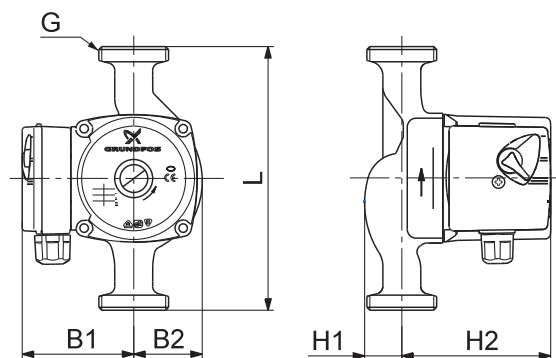
1 x 220 V, 60 Hz



TM01 0152 4708

Speed	P ₁ [W]	I _{1/1} [A]
3	85	0.40
2	50	0.26
1	30	0.15

The pump has a built-in thermal switch and requires no additional motor protection.



TM00 9386 2105

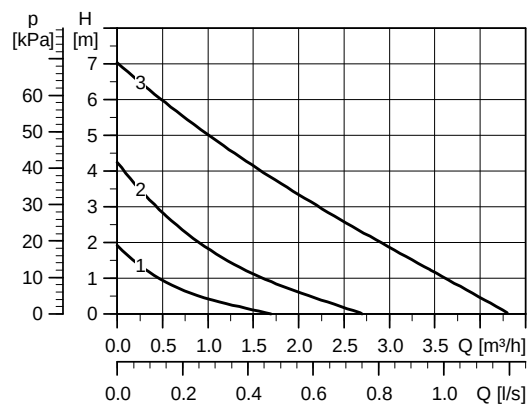
Connections:
System pressure:
Liquid temperature:

See *Pipe connections* on page 52
Max. 10 bar
+2 °C to +95 °C (TF 110)

Pump type	Dimensions [mm]						Weights [kg]		Ship. vol. [m³]
	L	H1	H2	B1	B2	G	Net	Gross	
UPS 25-42	180	32	102	75	51	1 1/2	2.6	2.8	0.004

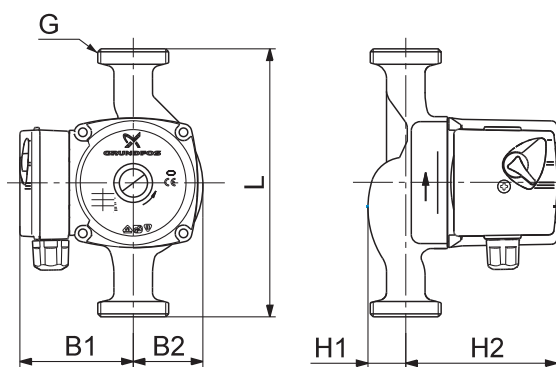
UPS 25-62

1 x 220 V, 60 Hz



TM01 0153 4708

Speed	P ₁ [W]	I _{1/1} [A]
3	115	0.51
2	65	0.30
1	35	0.17



TM00 9386 2105

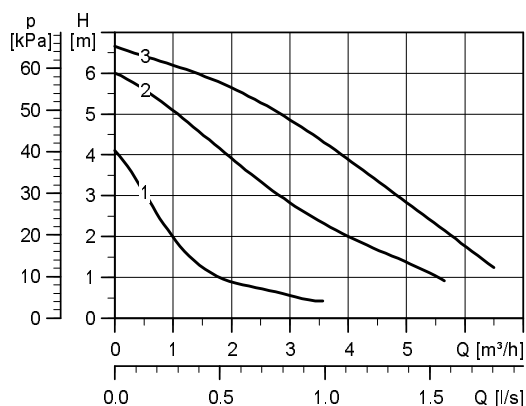
Connections:
System pressure:
Liquid temperature:

See *Pipe connections* on page 52
Max. 10 bar
+2 °C to +110 °C (TF 110)

Pump type	Dimensions [mm]						Weights [kg]		Ship. vol. [m³]
	L	H1	H2	B1	B2	G	Net	Gross	
UPS 25-62	180	32	102	75	51	1 1/2	2.6	2.8	0.004

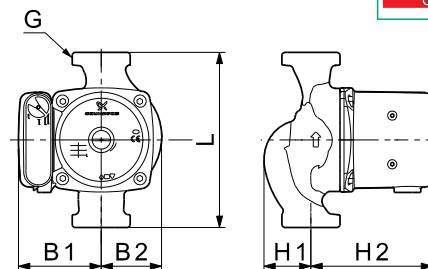
UPS 25-72

1 x 220 V, 60 Hz



TM04 5564 3409

Speed	P ₁ [W]	I _{1/1} [A]
3	135	0.60
2	125	0.58
1	90	0.44



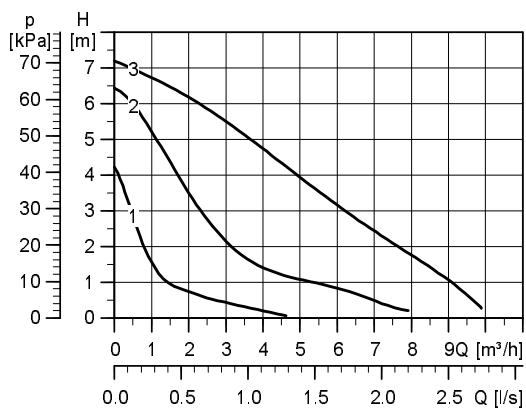
TM04 3847 5108 - TM03 0871 0705

Connections: See *Pipe connections* on page 52
 System pressure: Max. 10 bar
 Liquid temperature: -25 °C to +110 °C (TF 110)

Pump type	Dimensions [mm]						Weights [kg]		Ship. vol. [m³]
	L	H1	H2	B1	B2	G	Net	Gross	
UPS 25-72	180	46	125	85	62	1 1/2	4.0	4.7	0.008

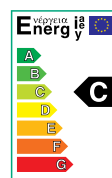
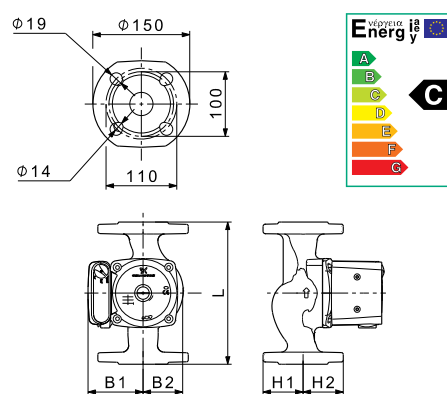
UPS 40-72 F

1 x 220 V, 60 Hz



TM04 5565 3409

Speed	P ₁ [W]	I _{1/1} [A]
3	160	0.72
2	140	0.68
1	90	0.44



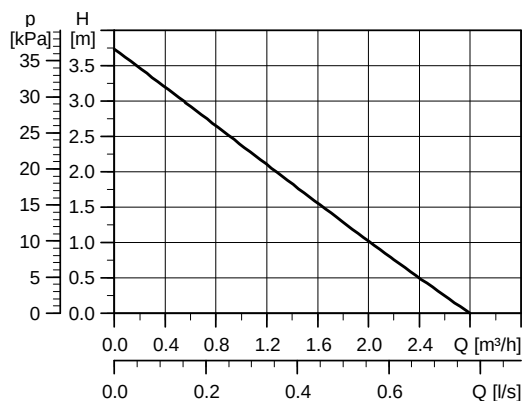
TM04 3845 5108 - TM03 0870 0705

Connections: See *Pipe connections* on page 52
 System pressure: Max. 10 bar
 Liquid temperature: -25 °C to +110 °C (TF 110)

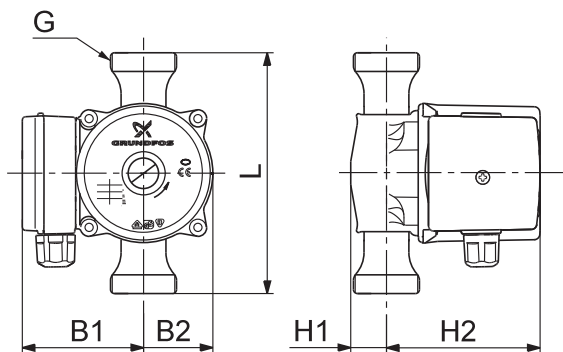
Pump type	Dimensions [mm]						Weights [kg]		Ship. vol. [m³]
	L	H1	H2	B1	B2	G	Net	Gross	
UPS 40-72 F	250	67	125	85	62	-	7.4	9.7	0.013

UP 20-32 N

1 x 220 V, 60 Hz



TM01 0154 4708



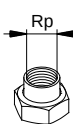
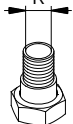
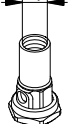
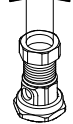
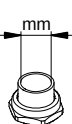
TM00 8932 2105

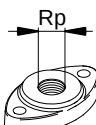
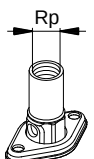
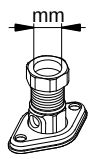
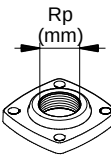
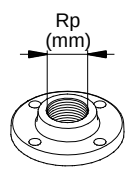
Speed	P ₁ [W]	I _{1/1} [A]
1	95	0.43

Connections: See *Pipe connections* on page 52
 System pressure: Max. 10 bar
 Liquid temperature: +2 °C to +110 °C (TF 110)

Pump type	Dimensions [mm]						Weights [kg]		Ship. vol. [m³]
	L	H1	H2	B1	B2	G	Net	Gross	
UP 20-32 N	150	28	100	75	43	1 1/4	2.1	2.3	0.004

Pipe connections

Product numbers, unions																
Pump type	Connection															
		3/4	1	1 1/4	1	1 1/4	3/4	1	1 1/4	Ø 22	Ø 28	Ø 15	Ø 18	Ø 22	Ø 28	Ø 42
20-xx	G 1 1/4	529932 ¹⁾														
20-xx N		529982 ²⁾			529983 ²⁾		519802 ²⁾			519801 ²⁾		529986 ²⁾ 529987 ²⁾ 529988 ²⁾ 529989 ²⁾				
25-xx	G 1 1/2	529921 ¹⁾ 529922 ¹⁾ 529821 ¹⁾			529925 ¹⁾ 529924 ¹⁾											
25-xx N		529971 ²⁾ 529972 ²⁾					519805 ²⁾ 519806 ²⁾ 519807 ²⁾			519808 ²⁾ 519809 ²⁾		529977 ²⁾ 529978 ²⁾ 529979 ²⁾				
32-xx	G 2	509921 ¹⁾ 509922 ¹⁾														
32-xx N		509971 ²⁾										529995 ²⁾				

Product numbers, flanges																								
Pump type	Connection																							
		3/4	1	1 1/4	1 1/2	3/4	1	1 1/4	Ø 22	Ø 28	3/4	1	1 1/4	1 1/2	2	Ø 32	Ø 40	Ø 50	1 1/4	1 1/2	Ø 32	Ø 40		
21-xx F	Oval	529607 ¹⁾	529604 ¹⁾	529605 ¹⁾	529606 ¹⁾	519705 ²⁾	519706 ²⁾	519707 ²⁾	519708 ²⁾	519709 ²⁾														
36-xx F	Square										509901 ¹⁾	509902 ¹⁾	509903 ¹⁾	509904 ¹⁾	509905 ¹⁾	509908 ¹⁾	509909 ¹⁾	509910 ¹⁾						
32-xx F	PN 6																		539903 ¹⁾	539904 ¹⁾				
	PN 10																		539703 ¹⁾ 96427029 ²⁾	539704 ¹⁾ 96427030 ²⁾				
40-xx F	PN 6																		539901 ¹⁾ 539911 ²⁾	539902 ¹⁾ 539912 ²⁾				
	PN 10																		539701 ¹⁾ 539711 ²⁾	539702 ¹⁾ 539712 ²⁾				

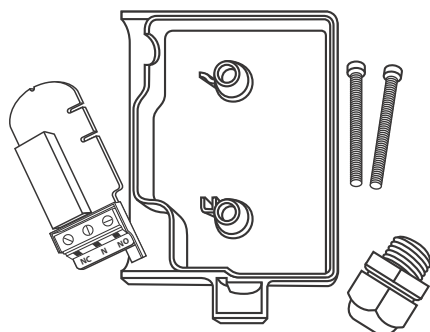
¹⁾ = cast iron

²⁾ = brass/bronze

Blank = not available

Alarm module

The alarm module offers the possibility of monitoring the pump for failures via external equipment. The module comes with both an NC (normally closed) and an NO (normally open) galvanically separated output. The alarm output is activated either when the mains supply fails or when the thermistor has cut out the motor.

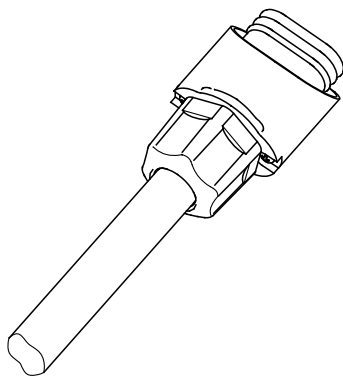


TM04 3958 0509

Fig. 13 Alarm module

Type	Product number
Alarm module	95906254

Service kit for ALPHA plug



TM01 9911 3400

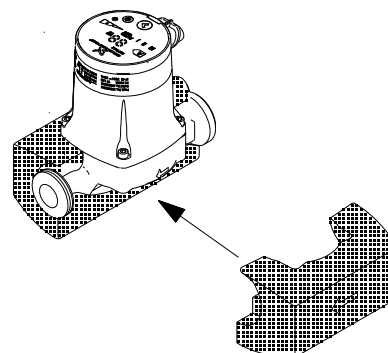
Fig. 14 Plug

Type	Product number
Plug - ALPHA2	595562
Plug - ALPHA2 L	
Plug - UPS xx-25	
Plug - UPS 40-50 F	
Plug - UPS xx-55	
Plug - UPS xx-80 (F)	
Plug - UPS xx-100 (F)	
Plug - UPSD	

Insulation kits

Series 100 can be fitted with two insulating shells. The thickness of the insulating shells corresponds to the nominal diameter of the pump.

The insulation kit, which is tailored to the individual pump type, encloses the entire pump housing. The two shells are easily fitted around the pump.



TM03 9505 4107

Fig. 15 Insulating shells

Insulation kit for pump type	Product number
ALPHA2 and ALPHA2 L XX-40, XX-50, XX-60	505821
ALPHA2 25-40 A, 25-60 A	505822
UPS 25-20	505821
UPS 32-20	505821
UPS 25-25	95906655
UPS 25-30	505821
UPS 32-25	95906655
UPS 32-30	505821
UPS 25-40	505821
UPS 32-40	505821
UPS 25-55	95906655
UPS 25-60	505821
UPS 32-55	95906655
UPS 32-60	505821
UPS 25-80	95906655
UPS 25-100	95906653
UPS 32-80	95906655
UPS 32-100	95906653
UPS 25-20 A	505822
UPS 25-30 A	505822
UPS 25-40 A	505822
UPS 25-60 A	505822
UPS 40-50 F	525243
UPS 40-50 F	95906655
UPS 40-80 F	95906655

Grundfos controllers

TS 3: On/off time switch

The on/off time switch is designed for wall mounting.

The time switch automatically switches the pump on/off at preset intervals. It is available with 24-hour or week dial.

Type	Time switch	Product number 1 x 220 V
TS 3/T	24-hour dial	96406992
TS 3/W	Week dial	96406993

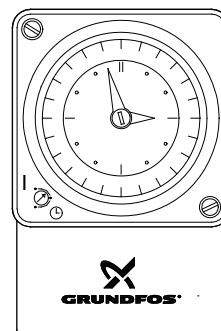


Fig. 16 TS 3

TM01 0205 2602

ST 200: On/off time switch and timed speed control

The ST 200 is designed to control all single-phase UP and UPS pumps.

The ST 200 automatically changes over from one speed to another at preset intervals or only switches on/off (according to wiring).

Type	Time switch	Product number 1 x 220 V
ST 200	24-hour dial	60041110
ST 200/TG	24-hour dial with battery back-up	60041210
ST 200/WG	Week dial with battery back-up	60041310

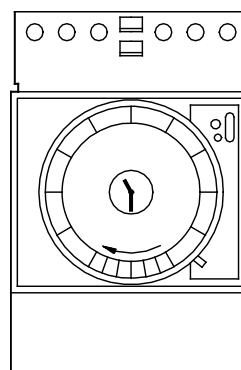


Fig. 17 ST 200

TM00 5142 5094

GES 200: Timed changeover between pump heads

The GES 200 is designed to control all single-phase twin-head pumps.

The GES 200 automatically changes over between the two pump heads at preset intervals.

By selecting different speeds for the duty pump and the standby pump, a speed control facility can be obtained (e.g. left pump on speed 3, right pump on speed 2).

Type	Time switch	Product number 1 x 220 V
GES 200/WG	Week dial with battery back-up	60020310

ET 2: Temperature switch

The ET 2 temperature switch can be used in conjunction with the ST 200, SAT 200 and GES 200.

The ET 2 is a switch controlling according to the outdoor, room, flow-pipe or return-pipe temperature.

Control signal	Type	Temperature switch	Product number
Temperature (outdoor, room, flow pipe, return pipe)	ET 2	With housing and outdoor sensor	ID4383
		With sensor for external pipe mounting	ID4384
		With sensor for internal pipe mounting and bushing	ID4385

Differential-pressure controllers are also available.

Terminal block

The terminal block is fitted to the terminal box and used for the connection of external controllers (e.g. for external changeover between two speeds).

Type	Product number
Terminal block	605003

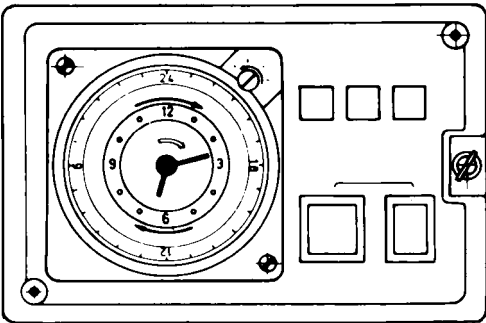


Fig. 18 GES 200/WG

TM00 9103 4396

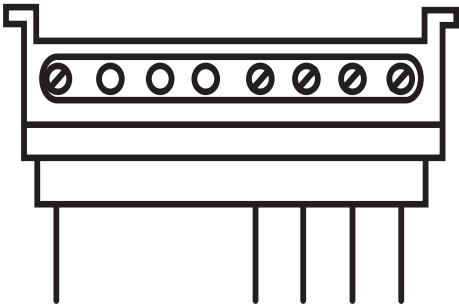
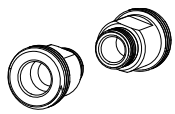
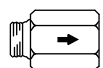
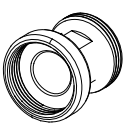
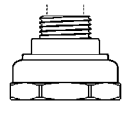
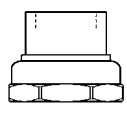
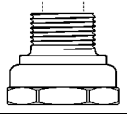
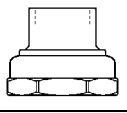
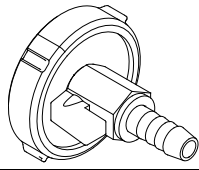


Fig. 19 Terminal block

TM00 5144 5094

Fittings for COMFORT

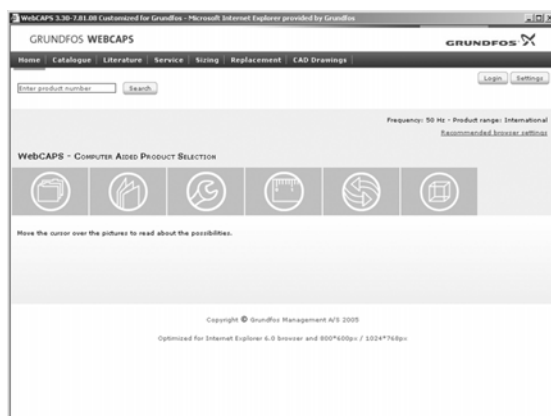
Pump type	Fitting	Description	Connection	Material	Product number
UP 15-XX		TM01 8539 0300 Extension set Length = 35 mm each	Rp 1/2 / G 1 1/4	Brass	96433911
		TM01 8540 0300 Extension set Length = 25 mm each	Rp 1/2 / G 1 1/2	Brass	96433912
		TM01 8541 0300 Extension set Length = 30 mm each	Rp 1/2 / G 1	Brass	96433913
		TM01 8647 0300 Non-return valve	1/2	Brass	96433904
		TM01 8648 0300 Isolating valve	1/2	Brass	96433905
UP 20-XX		TM01 8542 0300 Extension set Length = 40 mm	G 1 1/4 / G 1 1/4	Brass	96436559
		TM01 8643 0300 Union set	G 1 1/4 x 15 mm int. / R 1/2 ext.	Brass	96433907
		TM01 8644 0300 Union set	G 1 1/4 x Rp 3/4 int.	Brass	96433908
		TM01 8645 0300 Union set	G 1 1/4 x Rp 1/2 int. / R 3/4 ext.	Brass	96433909
		TM01 8646 0300 Union set	G 1/4 x 22 mm int.	Brass	96433910
UP 15-XX UP 20-XX		TM01 8560 0300 Venting flange	Flange Union nut Hose	PP CuZn40Pb2 PE	96433906

Timer and thermostat for COMFORT

According to the table below, the pump types B, BT, BX and BXT can be upgraded with a 24-hour timer. The timer for the pump types BT and BXT includes a thermostat for replacement.

Pump type	Supplied with			Product number	
	24-hour timer	Thermostat	Isolating valve and non-return valve	24-hour timer	24-hour timer + thermostat
UP 15-14 B				96433891	
UP 15-14 BU	•				
UP 15-14 BT		•			96433892
UP 15-14 BUT	•	•			
UP 20-14 BX			•	96433891	
UP 20-14 BXU	•		•		
UP 20-14 BXT		•	•		96433892
UP 20-14 BXUT	•	•	•		

WebCAPS

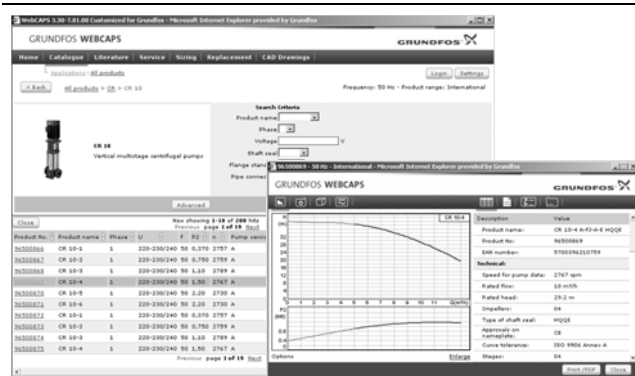


WebCAPS is a **Web**-based **C**omputer **A**ided **P**roduct **S**election program available on www.grundfos.com.

WebCAPS contains detailed information on more than 185,000 Grundfos products in more than 20 languages.

In WebCAPS, all information is divided into six sections:

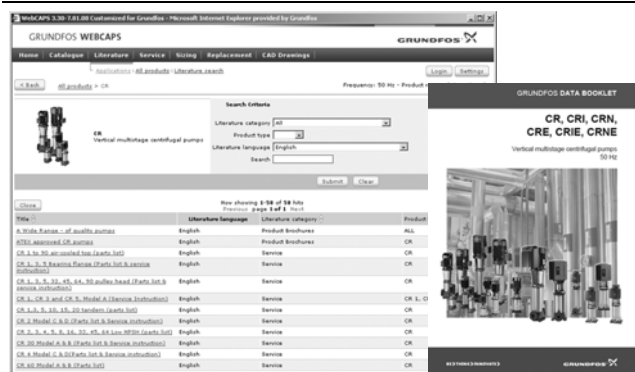
- Catalogue
- Literature
- Service
- Sizing
- Replacement
- CAD drawings.



Catalogue

This section is based on fields of application and pump types, and contains

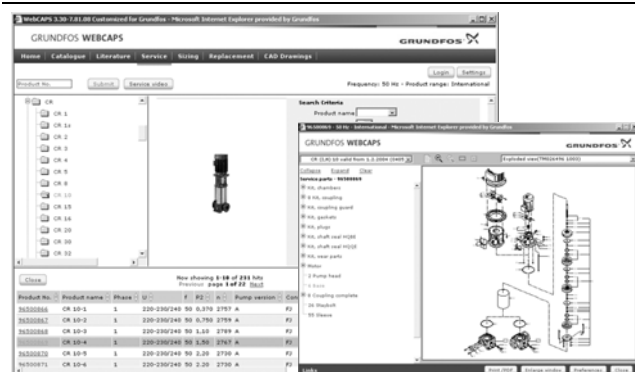
- technical data
- curves (QH, Eta, P1, P2, etc.) which can be adapted to the density and viscosity of the pumped liquid and show the number of pumps in operation
- product photos
- dimensional drawings
- wiring diagrams
- quotation texts, etc.



Literature

In this section you can access all the latest documents of a given pump, such as

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



Service

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

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



Sizing

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

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

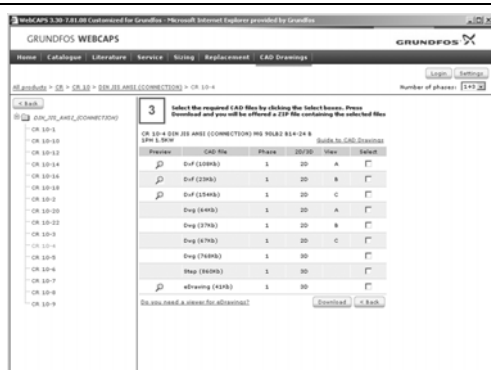


Replacement

In this section you find a guide to selecting and comparing replacement data of an installed pump in order to replace the pump with a more efficient Grundfos pump.

The section contains replacement data of a wide range of pumps produced by other manufacturers than Grundfos.

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



CAD drawings

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

These formats are available in WebCAPS:

2-dimensional drawings:

- .dxf, wireframe drawings
- .dwg, wireframe drawings.

3-dimensional drawings:

- .dwg, wireframe drawings (without surfaces)
- .stp, solid drawings (with surfaces)
- .eprt, E-drawings.

WinCAPS



Fig. 20 WinCAPS CD-ROM

WinCAPS is a **Windows-based Computer Aided Product Selection** program containing detailed information on more than 185,000 Grundfos products in more than 20 languages.

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

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

Subject to alterations.

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Repl. V7124413 1209

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ECM:1067519

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