COMFORT

Circulator pumps

50/60 Hz



be
think
innovate

GRUNDFOS

Table of contents

1. Product description 3
Type key . . . 3
Approvals . . . 3
Applications . . . 4
Performance range . . . 5

2. Operating conditions 6
Pumped liquids . . . 6
Temperatures . . . 6
Pressures . . . 6
Pump location . . . 6

3. Functions 7
COMFORT with $AUTO_{ADAPT}$ . . . 7
Temperature control mode for temperature control (T) variants . . . 9
COMFORT with digital timer . . . 10

4. Construction 11
Electrical insulation . . . 11
Motor . . . 11
Stator . . . 11
Spherical separator . . . 11
Bearing pin and bearing ball . . . 11
Rotor . . . 11
Pump housing . . . 12
Isolating valve and non-return valve . . . 12
Seal ring . . . 12
Union nut . . . 12
Sectional drawing . . . 13
Material specification . . . 13

5. Performance curves 14
Curve conditions . . . 14

6. Data sheets 15

7. Product numbers 34

8. Accessories 35
Fittings . . . 35
Spare parts . . . 35

9. Grundfos Product Center 36

1. Product description

Type key

Outside USA

Example:	COMFORT	15	-14	(M)	B	DT	(X)	(T)	(A)	PM	GB

Circulator pump

Length 80 mm / Rp 1/2

Maximum head [dm]

Motor (pump head only - fits all COMFORT pump housings)

Brass pump housing

Digital timer

Integrated isolating valve and non-return valve
Length 140 mm / G 1

Temperature control

$AUTO_{ADAPT}$

Permanent magnet

-	International
GB	Great Britain
DACH	Germany, Austria, Switzerland
CN	China

USA

Example:	COMFORT	10	-16	(T)	(A)	PM	B	5	LC

Circulator pump

Type range

Maximum head [dm]

Temperature control

$AUTO_{ADAPT}$

Permanent magnet

Brass pump housing

5	1/2" internal sweat
N5	1/2" NPT
U	1 1/4" NPSM with integrated isolating valve and non-return valve

Line cord

Approvals

Fig. 1 European approvals



Fig. 2 US approvals

Applications

Grundfos COMFORT circulator pumps are designed for the following:

- domestic hot-water systems in single- and two-family houses
- small heating systems
- cooling and air-conditioning systems.

The pumps are suitable for open and closed systems. They must be installed indoors.

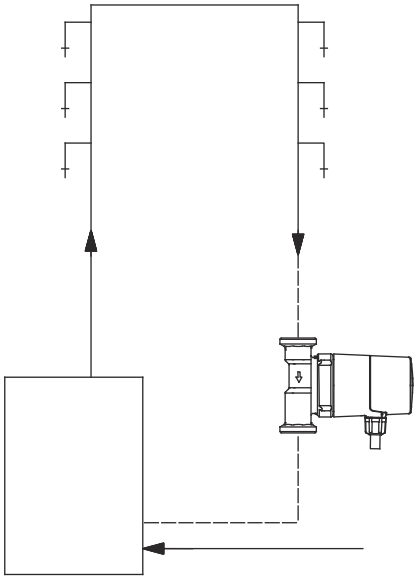


Fig. 3 Single-loop system

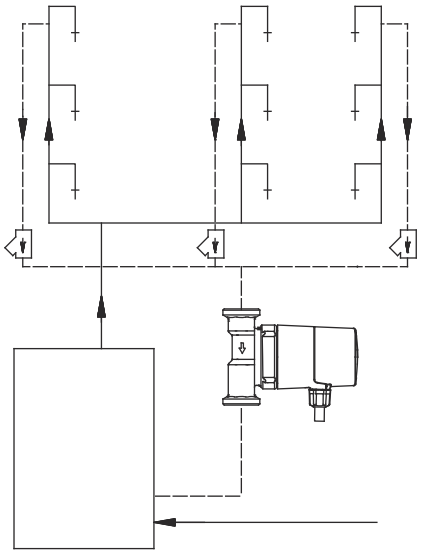


Fig. 4 Branched system

Domestic hot-water systems

For circulation of drinking water in domestic hot-water systems, we recommend to use Grundfos COMFORT types with brass pump housing in systems with hot-water storage tanks.

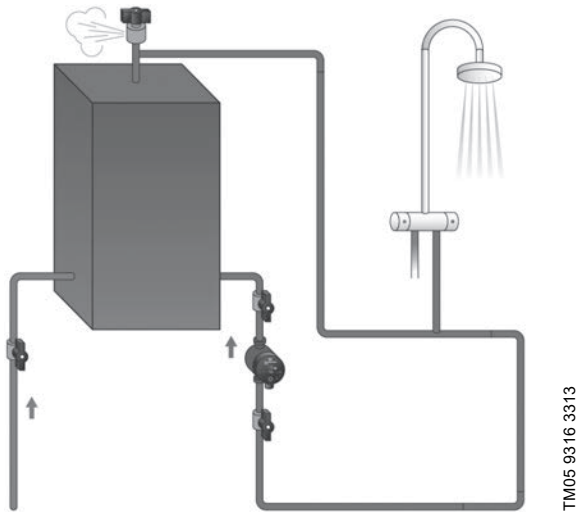


Fig. 5 Domestic hot-water system with hot-water storage tank

Performance range

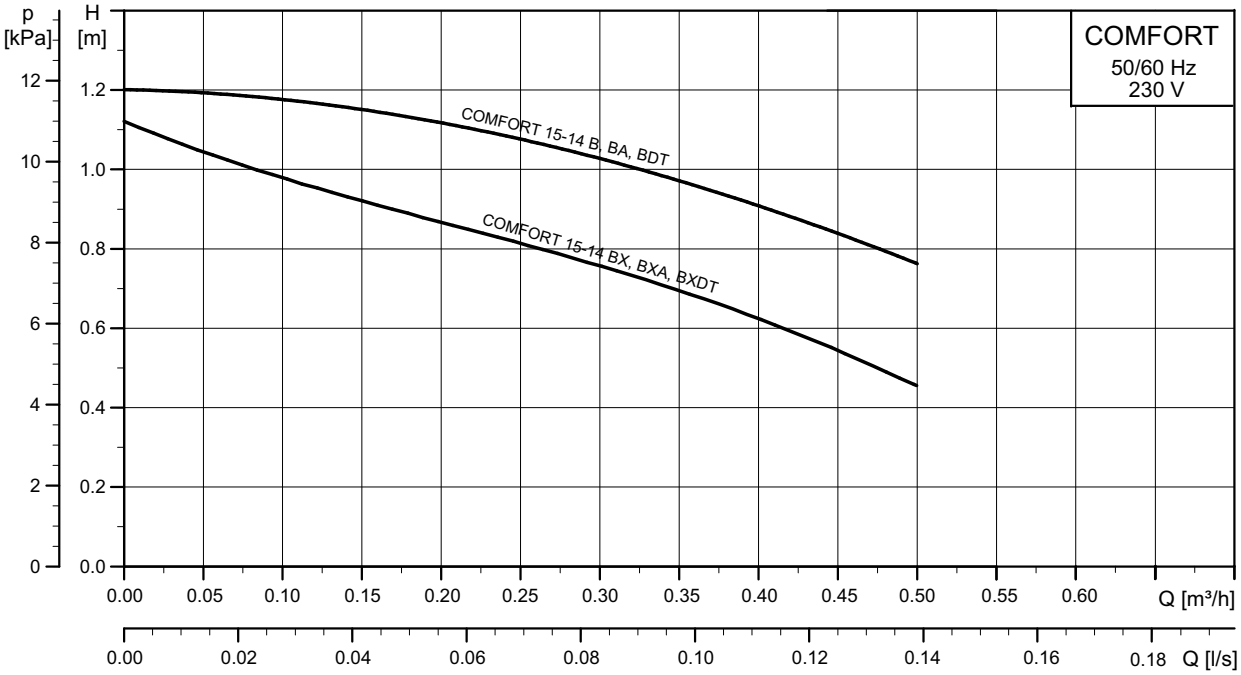


Fig. 6 COMFORT performance range (outside USA)

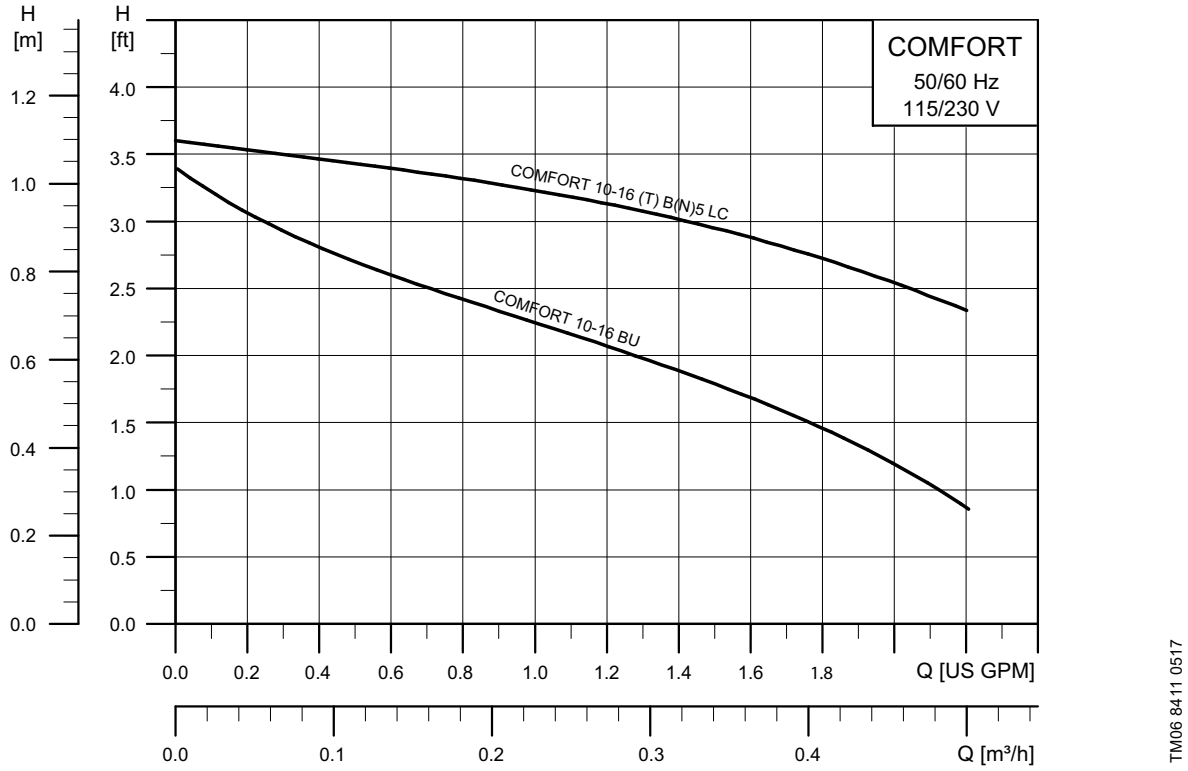


Fig. 7 COMFORT performance range USA

2. Operating conditions

Pumped liquids

- Thin, clean, 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 1 mm^2/s (1 cSt) at 20 °C. If the 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 approximately 10 mm^2/s, reducing pump performance by approximately 15 %.

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

Temperatures

Liquid temperature

Liquid temperature range: 2 to 95 °C.

Operating temperature

We recommend that you keep the operating temperature around 50 °C to minimise buildup of lime deposits. Be aware of the risk of legionella contamination.

Ambient temperature

The ambient temperature must always be lower than the liquid temperature to minimise condensation in the stator housing, and not exceed 40 °C.

Pressures

System pressure

Maximum system pressure (PN 10): 1.0 MPa (10 bar/ 145 psi).

Inlet pressure

To prevent cavitation noise and damage to the pump bearing, a minimum inlet pressure of 0.5 bar (5 m head) is required at the pump inlet port.

Pump location

Indoors, in a non-aggressive and non-explosive atmosphere.

Relative humidity: Maximum 95 %.

3. Functions

COMFORT with AUTO$_{ADAPT}$

COMFORT BA PM and BXA PM models have the following operation modes:

- AUTO$_{ADAPT}$ mode
- temperature control mode
- continuous 100 % mode.

AUTO$_{ADAPT}$ mode

The AUTO$_{ADAPT}$ function adapts the operating hours by switching on and off according to the tapping pattern of the users. This means that the pump provides maximum comfort and saves energy at the same time.

Energy-saving

The AUTO$_{ADAPT}$ function saves energy in two ways:

- Electrical energy consumption of the pump
- Heat energy consumption of the domestic hot-water system.

The AUTO$_{ADAPT}$ function automatically adjusts the number of operating hours, based on the hot-water consumption in the given system.

The AUTO$_{ADAPT}$ function requires a temperature sensor to be installed on the flow pipe 20 to 50 cm from the boiler outlet. This sensor and the temperature sensor incorporated in the pump detect when hot water is tapped. The detected tapping events are logged and used to predict the consumption pattern. The AUTO$_{ADAPT}$ function automatically controls the on/off behaviour of the pump according to this pattern. This ensures that the pump only runs when necessary, which saves both heat energy and electrical energy.

The pump needs two weeks to adapt when hot water is tapped. This means that the pump starts up in temperature mode the first two weeks even if you have selected AUTO$_{ADAPT}$.

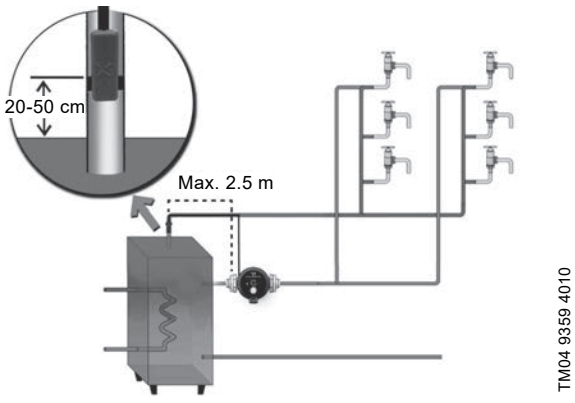


Fig. 8 COMFORT BA PM or BXA PM pump with built-in temperature sensor

AUTO$_{ADAPT}$ in heating systems regulated with a thermostatic regulating valve

In systems including a thermostatic regulating valve, choose a COMFORT pump without the AUTO$_{ADAPT}$ function.

Choosing a pump with AUTO$_{ADAPT}$ function will result in two active regulating systems working separately, which is not recommendable.

NOTE: If a pump with AUTO$_{ADAPT}$ function is installed in a circulation system where the temperature of the recirculated water is regulated by a thermostatic regulating valve, we recommend that you open the thermostatic regulating valve completely. This is done by setting the valve to max., which deactivates its regulating function.

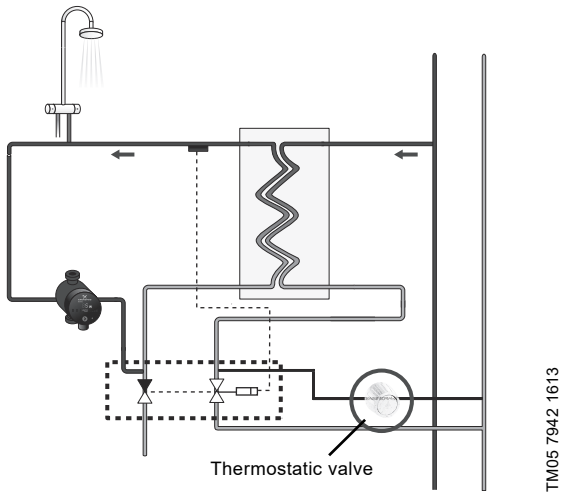


Fig. 9 Example of an application with thermostatic regulating valve

Control function

The control function is a combination of three parameters:

- detection of hot-water consumption
- event log function (when the demand occurs)
- pump control.

Detection of hot-water consumption

The detection of hot-water consumption is done via the temperature sensor installed in the flow pipe. The system logs the tapping events. Temperature rise caused by the pump operation is not registered in the event log.

Event log function

The AUTO$_{ADAPT}$ function incorporates an event log that learns the scheme of demand for hot water in the domestic hot-water system. Via the event log, the pump predicts when to start circulating hot water.

The event log function stores the weekly tapping events in the system. The hot-water consumption pattern for two weeks is stored in the event log. See example.

Date	Time of day															
	00:00	00:20	00:20	00:40	------>	07:00	07:20	07:20	07:40	07:40	08:00	08:00	08:20	------>	23:30	23:50
01	0		0			0		T		0		0			0	
02	0		0			0		T		T		0			0	
03	0		0			0		T		0		0			0	
04	0		0			0		T		0		0			0	
05	0		0			0		0		T		0			T	
06	0		0			0		T		0		0			0	
07	0		0			0		T		0		0			0	

0: No consumption.

T: Tapping event is registered.

Example

- From 07:20 to 07:40, six tapping events (T) are registered (morning bath).
- From 07:40 to 08:00, two tapping events (T) are registered.
- From 23:30 to 23:45, one tapping event (T) is registered.

This pattern implies that hot water should be available for tapping from 07:20 to 08:00.

At 08:00 the pump can stop circulating hot water. Likewise, the pump should circulate hot water for use from 23:30 to 23:50.

The data shown is for one week of operation only. The pump stores data for two weeks. When data for two weeks has been logged, the pump is able to distinguish between the tapping pattern during workdays and weekends.

Pump control

Pump operation is based on the data stored in the event log and on the temperature of the pipes.

The pump control incorporates a temperature hysteresis, meaning that the pump ensures that the hot-water temperature is within the range of what is accepted as hot water. This temperature hysteresis control is enabled when the data content of the event log makes it probable that hot water will be tapped within the next 20 minutes.

In the example, the hysteresis control will start at 07:00 and run continuously until 08:00.

Disinfection and flushing

Once a week a disinfection function is run for 15 minutes. If, at another time of the week, a higher temperature is measured, the disinfection run will be shifted to this time.

If the pump is switched off for eight hours, it will be on to do a flushing of the circulation pipe with a duration of 15 minutes.

Fault indication

Defective external temperature sensor

If in AUTO$_{ADAPT}$, the red error indicator LED is on and goes off when the pump is switched manually to temperature control mode, the external temperature sensor is defective. In this case, the pump turns internally to temperature control mode because the external temperature sensor is needed for the AUTO$_{ADAPT}$ control mode. The display does not automatically change to temperature control mode.

Defective internal temperature sensor

If in AUTO$_{ADAPT}$, the red error indicator is on and does not go off when the pump is switched manually to temperature control mode, the internal temperature sensor is defective. In this case, the pump uses the external temperature sensor for the temperature control mode.

Temperature control mode for AUTO$_{ADAPT}$ (BA, BXA) variants

The regulation of the COMFORT AUTO$_{ADAPT}$ models is based on temperature control. The operating range of the pump is kept within a calculated temperature range. This means that the pump operates in an average temperature area providing the maximum comfort and saves energy at the same time.

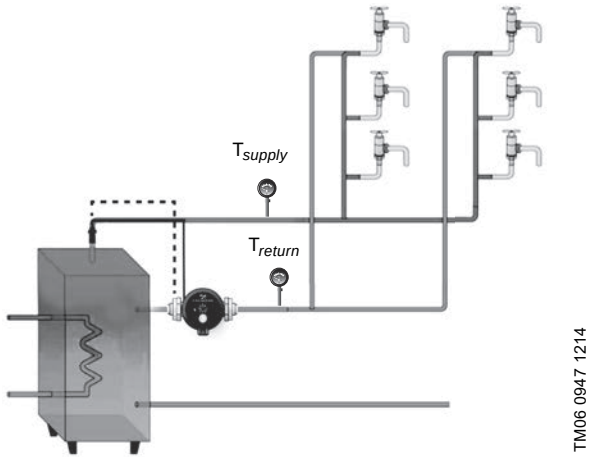


Fig. 10 Comfort in heat application

With temperature control, the maximum temperature measured at both sensors is stored and the pump automatically calculates the gap between T$_{stop}$ and T$_{start}$. The pump switches on when one of the sensors detects a lower temperature than T$_{start}$. The pump switches off when the T$_{stop}$ temperature is exceeded on both sensors.

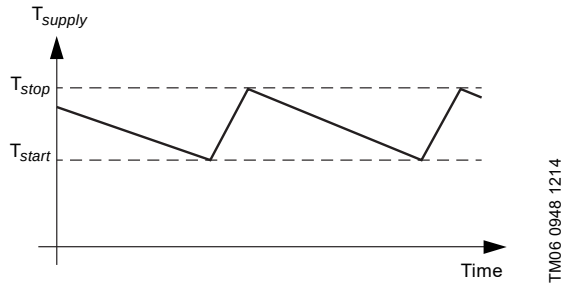


Fig. 11 Temperature control mode

Continuous 100 % mode

The pump is running continuously at full speed without any control.

Temperature control mode for temperature control (T) variants

The COMFORT T PM variant has an integrated temperature control mode that controls the circulation. The temperature control mode switches the pump off when a preset temperature limit T$_{off}$ is reached, and back on when a preset temperature limit T$_{on}$ is reached.

These temperature limits are set automatically and dynamically. Manual settings are not needed.

After the first installation or after a power cut-off, the pump carries out an identification run for 10 minutes to verify the system temperature. Based on the result, T$_{on}$ and T$_{off}$ are calculated. The identification run is repeated every 12 hours to avoid a wrong temperature setting, for example during night setback of the water heater.

- T$_{on}$ = T$_{sys}$ - 14 °C
- T$_{off}$ = T$_{sys}$ - 7 °C

COMFORT with digital timer

COMFORT BDT and BXDT PM models have the following functions and operating modes:

- Continuos 100 % mode.
  Set the pump to run in continuos 100 % mode with no defined operating periods.
- Digital timer.
  Use the default operating schedule or customise the pump's operating periods.

Continuous 100 % mode

The pump is running continuously at full speed without any control.

Digital timer

COMFORT BDT and BXDT PM models have an integrated digital timer. With the timer function you can customise the pump's operating periods ensuring optimal comfort while lowering energy costs.

The timer includes default operating periods:

- from 6:00 to 9:00
- from 11:00 to 13:00
- from 16:00 to 21:00.

You can either choose for the pump to operate according to the default schedule or customise it.

Setting the pump

Settings are done directly on the pump's operating panel. For instructions on how to set continuous 100 % mode and operating periods, scan the QR codes below to see the COMFORT quick guide and the COMFORT Digital Timer instruction video.

COMFORT quick guide
net.grundfos.com/qr/i/99245820

COMFORT Digital Timer instruction video
http://v2.t2g.me/?q=fc0652a6

Operating panel

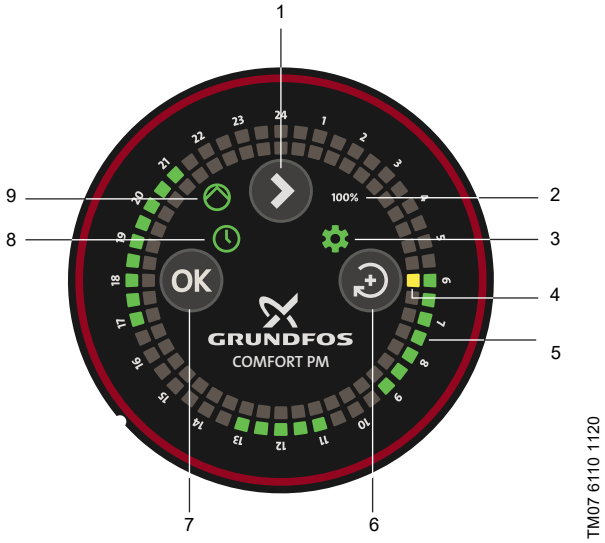


Fig. 12 Operating panel of the COMFORT BDT and BXDT PM models in default timer mode

Pos.	Description
1	Arrow button for changing mode.
2	100 % LED. When lit, the pump runs according to continuous 100 % mode.
3	Gear wheel LED. It lights up when the actual time and operating time can be set.
4	Actual time.
5	Timer LEDs showing the pump's operating periods.
6	Change button for toggling the actual time and timer LEDs.
7	OK button for confirming, changing or deleting settings.
8	Activated timer function. When lit, the LED indicates that the timer function is activated and that operating periods have been set.
9	Pump LED. It indicates that the pump is operating.

4. Construction

Grundfos COMFORT PM circulator pumps are available in various pump housing versions and lengths incorporating isolating and non-return valves or prepared for subsequent fitting of such valves.

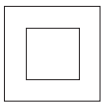
The motor can be separated from the pump housing, enabling easy maintenance and replacement.

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

The pumps have the following characteristics:

- Parts in contact with the pumped liquid are hermetically separated from the stator by 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.

Electrical insulation



TM05 9197 2913

Fig. 13 Protection Class II symbol

All Grundfos COMFORT PM models are electrically double insulated (Protection Class II). This makes the protective earth connector obsolete.

Motor

The motor is a single-phase, 12-pole, permanent-magnet motor in conformity with the EMC directive.

The permanent-magnet motor has no rotating bearing shaft. A green indicator light on the motor is on when the motor is running.

The pump motor is impedance-protected and short-circuit-proof. No additional motor protection is required.

The terminal box is easily accessible and has functional cable connecting terminals. The cable entry is tight and incorporates cable relief.

Enclosure class: IP 44

Insulation class: F

Voltages

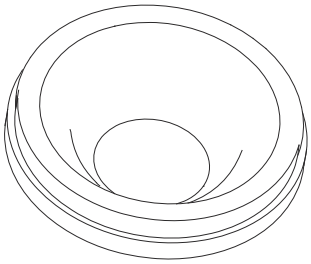
- Europe: 1 x 230 V, 50/60 Hz
- UK: 1 x 230 V, 50/60 Hz
- China: 1 x 230 V, 50/60 Hz
- USA: 1 x 115/230 V, 50/60 Hz.

Stator

The stator generates a magnetic field acting directly on the magnetic rotor. As a result, the rotor is caused to rotate. The axial components of the magnetic field act as an attractive force on the rotor, thus stabilising it in its longitudinal axis.

Spherical separator

The stainless-steel spherical separator hermetically seals the water-conducting part of the pump from the electrically active part of the motor without any additional seal.

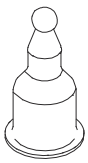


TM06 52014115

Fig. 14 Spherical separator

Bearing pin and bearing ball

The stainless-steel bearing pin is homogeneously welded by laser beam to the spherical separator and the bearing ball.

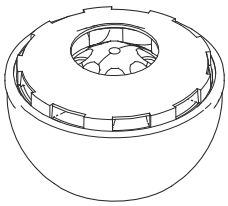


TM06 5202 4115

Fig. 15 Bearing pin

Rotor

The rotor is gimbal-mounted on the bearing ball with its own step bearing.



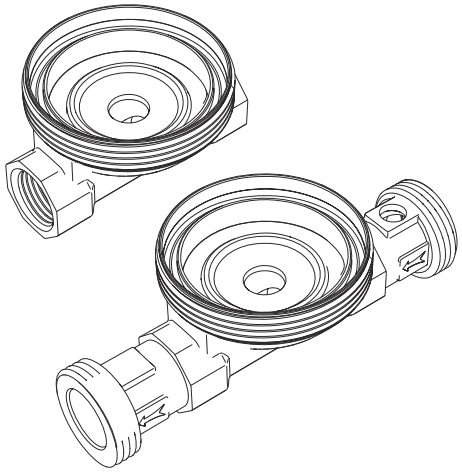
TM06 5203 4115

Fig. 16 Rotor

Pump housing

The pump housing is designed in such a way that a high hydraulic efficiency is achieved when the energy produced by the impeller is converted into pressure.

The pump housing thread enables connection to standard pipe dimensions.



TM06 8283 5016

Fig. 17 Pump housing with and without valves

Isolating valve and non-return valve

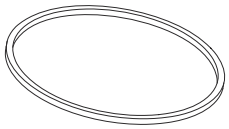
The COMFORT pump types BX (Europe) and BU (USA) have a built-in isolating valve and a non-return valve.

The isolating valve ensures that maintenance can be carried out while the inlet side is isolated.

The non-return valve isolates the outlet side during maintenance.

Seal ring

The COMFORT pump has just one seal ring between the spherical motor and the pump housing. The seal ring material is resistant to hydrolysis and ageing, thus lasting the entire pump life.

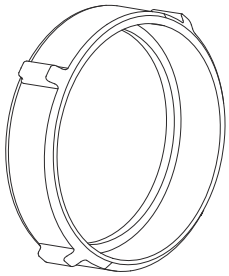


TM06 5206 4115

Fig. 18 Seal ring

Union nut

The union nut ensures that motor and pump housing are tightly connected. Thanks to the thread type, the seal ring is pressed evenly over the entire seal face.



TM06 5207 4115

Fig. 19 Union nut

Sectional drawing

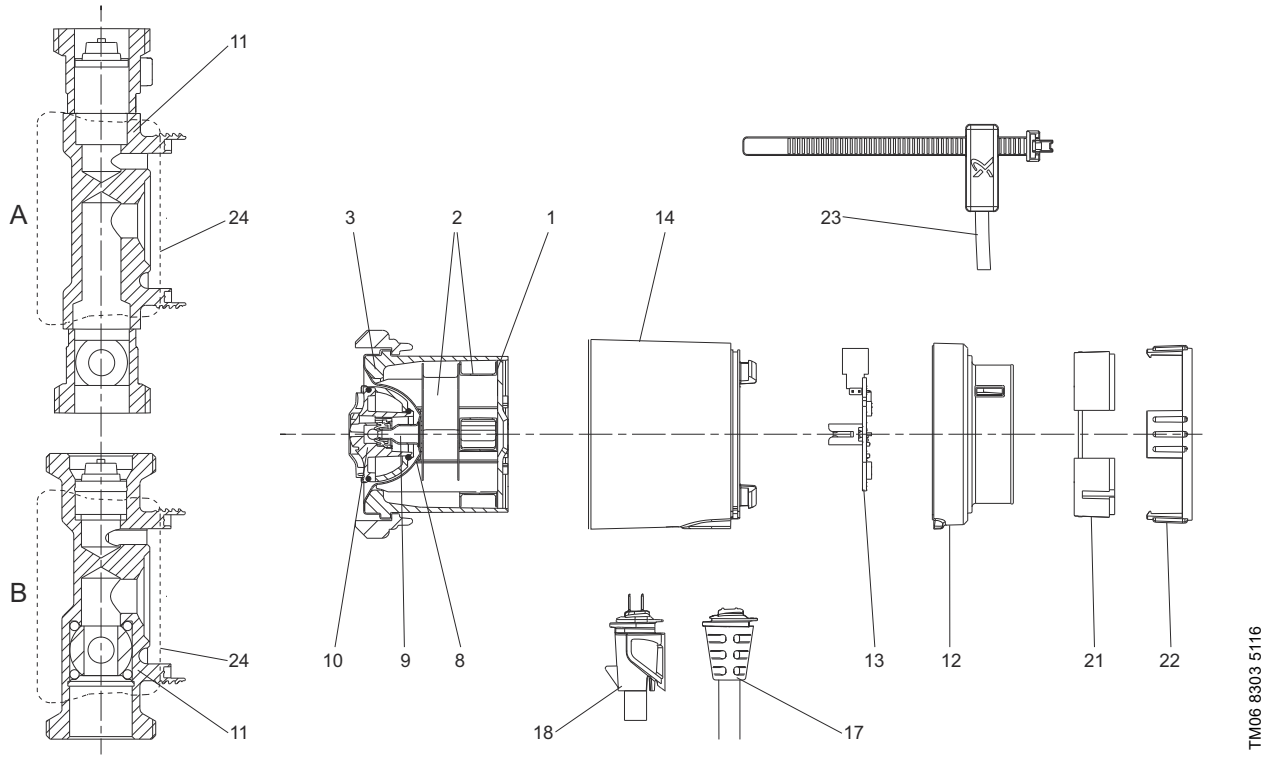


Fig. 20 Sectional drawing of COMFORT PM

Material specification

Pos.	Component	Material	EN	AISI
1	Stator lamination	Steel		
2	Stator windings	Copper wire and enamel		
3	Stator housing	Aluminium/P66		
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 A: Outside USA B: USA	 Brass (CW617N) Brass (ECOBRASS, $CuZn_{21}Si_3P$)	CW617N	
12	Terminal box cover	PC/ABS		
13	PC board with diode	FR 4		
14	Motor cover	PPO		
17	Cable with plug			
18	COMFORT plug (GB versions BA/BXA only)	PA66		
21	Cable ring 1 ($AUTO_{ADAPT}$ variant only)	PC/ABS		
22	Cable ring 2 ($AUTO_{ADAPT}$ variant only)	PC/ABS		
23	Temperature sensor ($AUTO_{ADAPT}$ variant only)			
24	Insulation shells	EPP 55		

5. Performance curves

Curve conditions

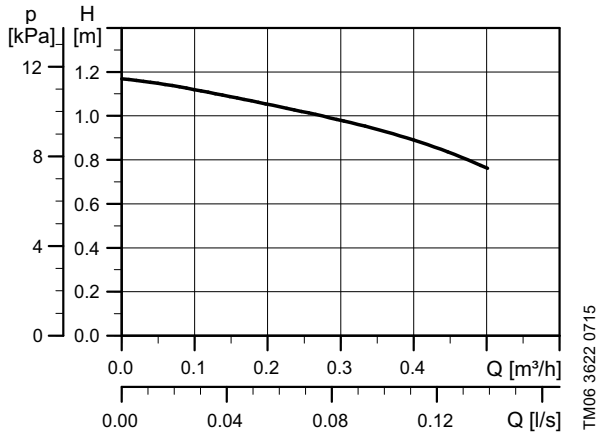
The guidelines below apply to the performance curves on the following pages:

- Test liquid: airless water.
- The measurements for COMFORT PM have been made at a water temperature of 20 °C.
- All curves show average values and must not be used as guarantee curves. If a specific minimum performance is required, individual measurements must be made.
- The COMFORT PM curves apply to a kinematic viscosity of υ = 1 mm^2/s (1 cSt).

The conversion between head H [m] and pressure p [kPa] was made for water with a density of ρ = 1000 kg/m^3. For liquids with other densities, for example hot water, the outlet pressure is proportional to the density.

6. Data sheets

COMFORT 15-14 B PM, 15-14 B PM DACH, 15-14 B PM CN, 15-14 B PM RU



TM06 3622 0715



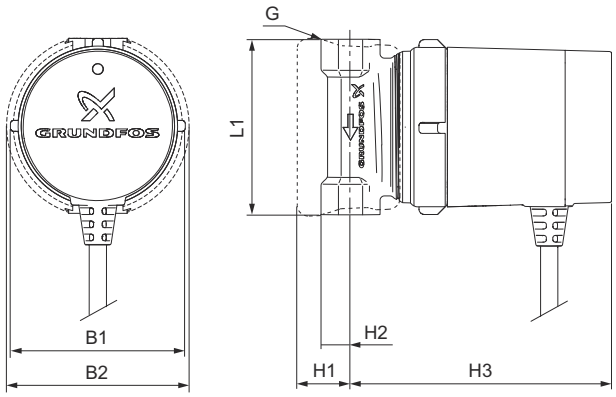
TM06 8275 5016

Connections: Rp 1/2. Various fittings see page 35.
System pressure: Max. 10 bar.
Liquid temperature: 2-95 °C (TF 95).
IP class: IP44

Electrical data, 1 x 230 V, 50/60 Hz

P1 [W]	$I_{1/1}$ [A]
7	0.07

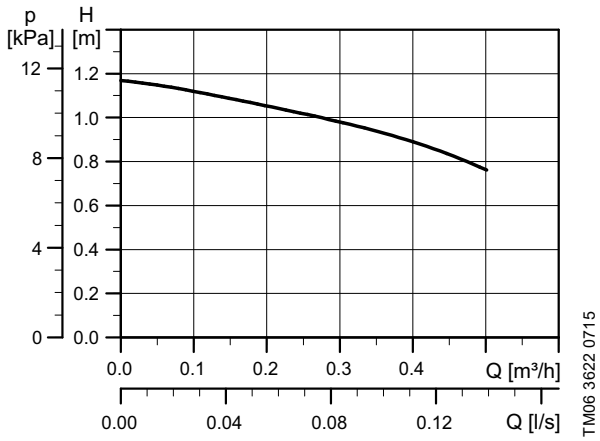
Dimensions



TM06 8292 5016

Pump type	Dimensions [mm]							Weights [kg]		Shipping volume [m^3]
	L1	H1	H2	H3	B1	B2	G	Net	Gross	
COMFORT 15-14 B PM COMFORT 15-14 B PM DACH COMFORT 15-14 B PM CN COMFORT 15-14 B PM RU	80	25	13.5	119	79.5	84	Rp 1/2	1.00	1.12	0.0026

COMFORT 15-14 BA PM, 15-14 BA PM DACH, 15-14 BA PM CN



TM06 3622 0715



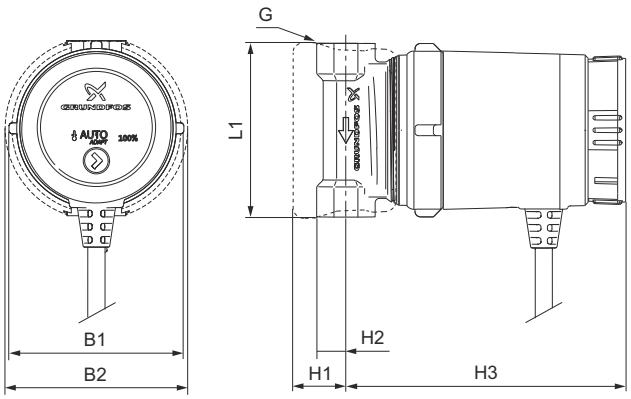
TM06 8274 5016

Connections: Rp 1/2. Various fittings see page 35.
System pressure: Max. 10 bar.
Liquid temperature: 2-95 °C (TF 95).
IP class: IP44

Electrical data, 1 x 230 V, 50/60 Hz

P1 [W]	$I_{1/1}$ [A]
7	0.07

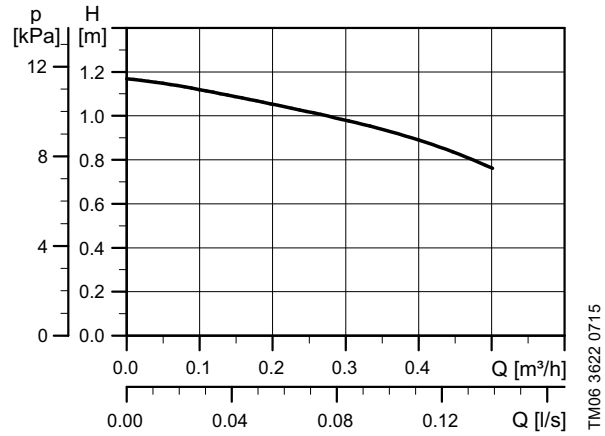
Dimensions



TM06 9258 2117

Pump type	Dimensions [mm]							Weights [kg]		Shipping volume [m^3]
	L1	H1	H2	H3	B1	B2	G	Net	Gross	
COMFORT 15-14 BA PM COMFORT 15-14 BA PM DACH COMFORT 15-14 BA PM CN	80	25	13.5	129	79.5	84	Rp 1/2	1.00	1.12	0.0026

COMFORT 15-14 BDT PM, 15-14 BDT PM DACH, 15-14 BDT PM CN



TM06 3622 0715



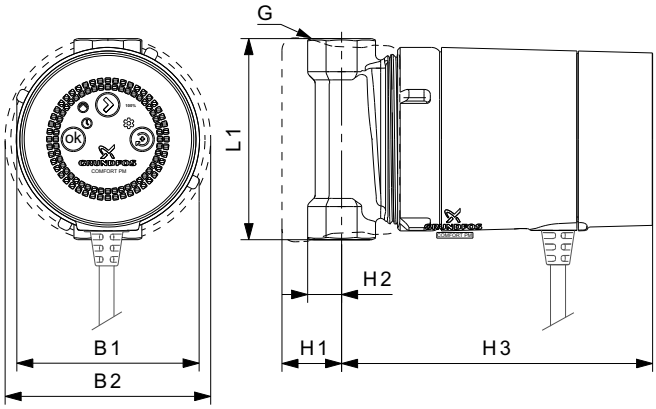
TM06 8275 5016

Connections: Rp 1/2. Various fittings see page 35.
System pressure: Max. 10 bar.
Liquid temperature: 2-95 °C (TF 95).
IP class: IP44

Electrical data, 1 x 230 V, 50/60 Hz

P1 [W]	$I_{1/1}$ [A]
7	0.07

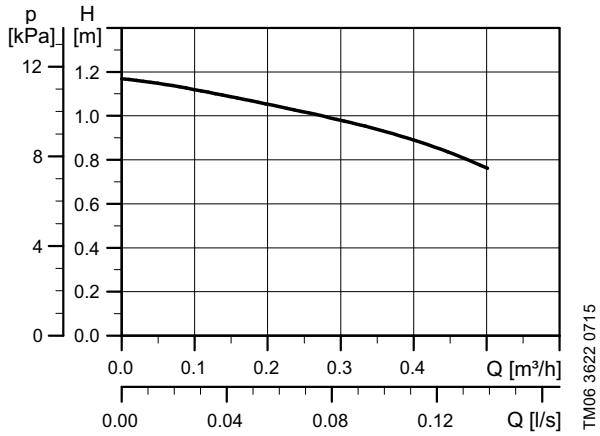
Dimensions



TM07 6114

Pump type	Dimensions [mm]							Weights [kg]		Shipping volume [m³]
	L1	H1	H2	H3	B1	B2	G	Net	Gross	
COMFORT 15-14 BDT PM COMFORT 15-14 BDT PM DACH COMFORT 15-14 BDT PM CN	80	25	13.5	124	80	84	Rp 1/2	1.00	1.1	0.0026

COMFORT 15-14 BDT PM GB



TM06 3622 0715



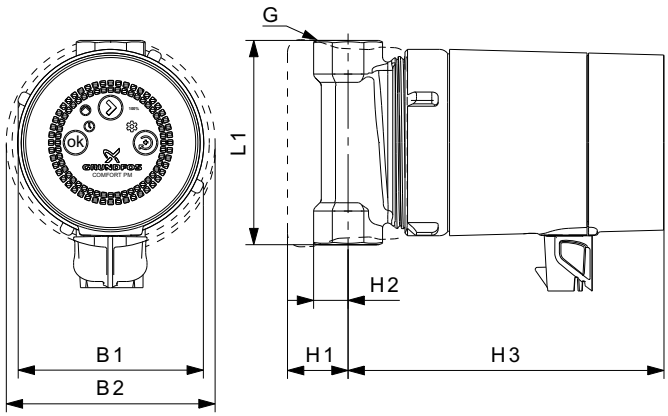
TM06 8275 5016

Connections:	Rp 1/2. Various fittings see page 35.
System pressure:	Max. 10 bar.
Liquid temperature:	2-95 °C (TF 95).
IP class:	IP44

Electrical data, 1 x 230 V, 50/60 Hz

P1 [W]	$I_{1/1}$ [A]
7	0.07

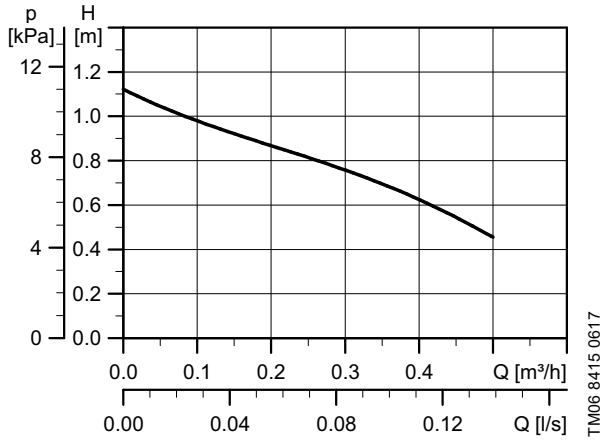
Dimensions



TM07 6163

Pump type	Dimensions [mm]							Weights [kg]		Shipping volume [m^3]
	L1	H1	H2	H3	B1	B2	G	Net	Gross	
COMFORT 15-14 BDT PM GB	80	25	13.5	124	80	84	Rp 1/2	1.00	1.1	0.0026

COMFORT 15-14 BX PM, COMFORT 15-14 BX PM DACH



TM06 8415 0617



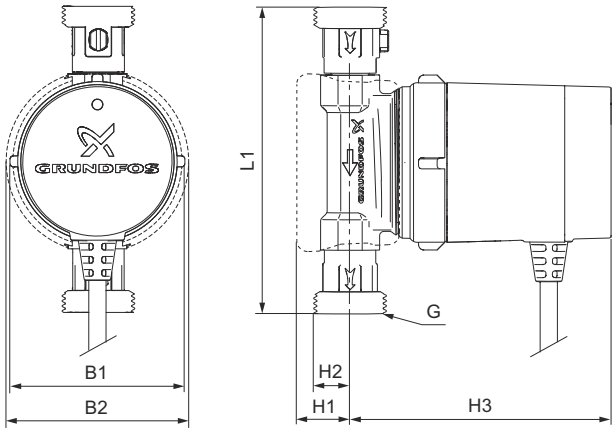
COMFORT_BX_BASIC_FIT_FOAM_0_R

Electrical data, 1 x 230 V, 50/60 Hz

P1 [W]	$I_{1/1}$ [A]
7	0.07

Connections:	G 1
System pressure:	Max. 10 bar.
Liquid temperature:	2-95 °C (TF 95).
IP class:	IP44

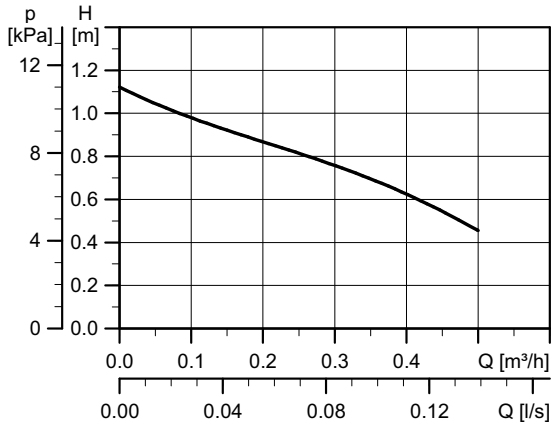
Dimensions



TM06 8285 5016

Pump type	Dimensions [mm]							Weights [kg]		Shipping volume [m^3]
	L1	H1	H2	H3	B1	B2	G	Net	Gross	
COMFORT 15-14 BX PM COMFORT 15-14 BX PM DACH	140	25	21	119	79.5	84	G 1	1.35	1.51	0.0034

COMFORT 15-14 BXA PM, 15-14 BXA PM DACH



TM06 8415 0617



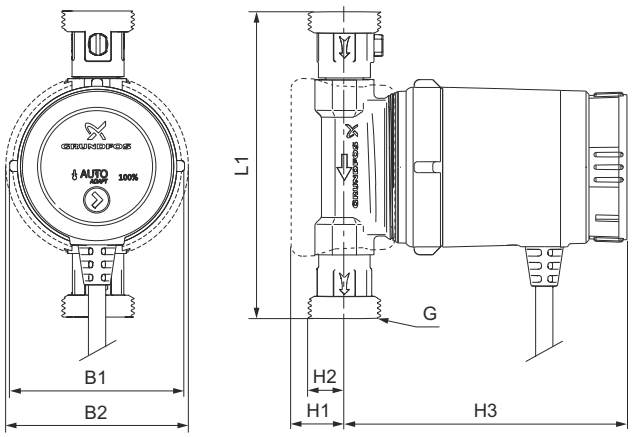
COMFORT_BXA_AUTOADAPT_FIT_FOAM_0_R

Electrical data, 1 x 230 V, 50/60 Hz

P1 [W]	$I_{1/1}$ [A]
7	0.07

Connections:	G 1
System pressure:	Max. 10 bar.
Liquid temperature:	2-95 °C (TF 95).
IP class:	IP44

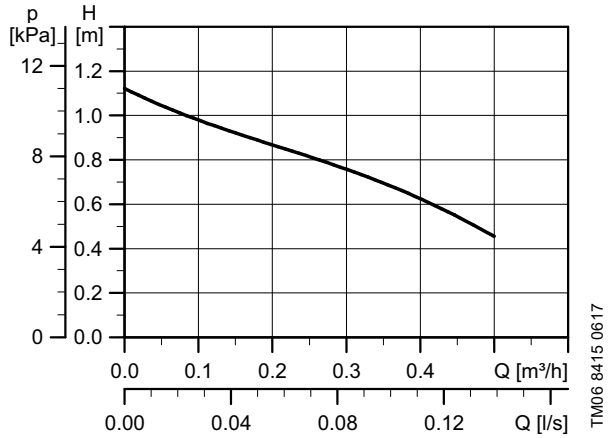
Dimensions



TM06 8290 5016

Pump type	Dimensions [mm]							Weights [kg]		Shipping volume [m^3]
	L1	H1	H2	H3	B1	B2	G	Net	Gross	
COMFORT 15-14 BXA PM COMFORT 15-14 BXA PM DACH	140	25	21	129	79.5	84	G 1	1.35	1.51	0.0034

COMFORT 15-14 BXDT PM, 15-14 BXDT PM DACH



TM06 8415 0617



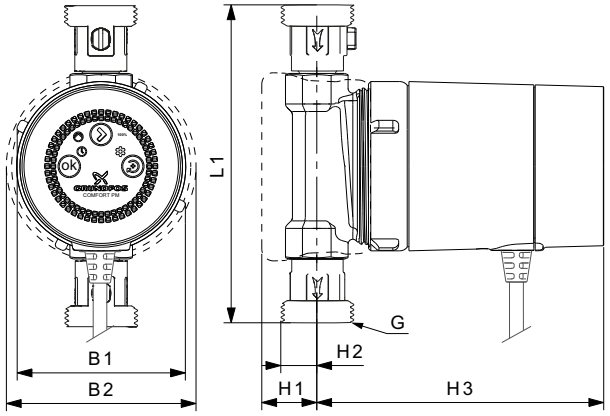
COMFORT_TIMER_FIT_FOAM_0_R

Electrical data, 1 x 230 V, 50/60 Hz

P1 [W]	$I_{1/1}$ [A]
7	0.07

Connections:	G 1
System pressure:	Max. 10 bar.
Liquid temperature:	2-95 °C (TF 95).
IP class:	IP44

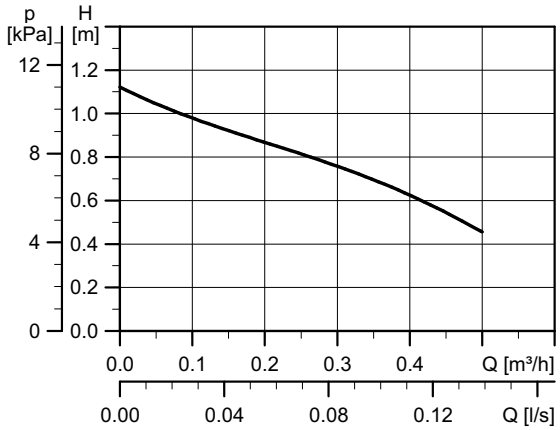
Dimensions



TM07 6191

Pump type	Dimensions [mm]							Weights [kg]		Shipping volume [m^3]
	L1	H1	H2	H3	B1	B2	G	Net	Gross	
COMFORT 15-14 BXDT PM COMFORT 15-14 BXDT PM DACH	140	25	21	124	79.5	84	G 1	1.2	1.3	0.0026

COMFORT 15-14 BXDT PM GB



TM06 8415 0617



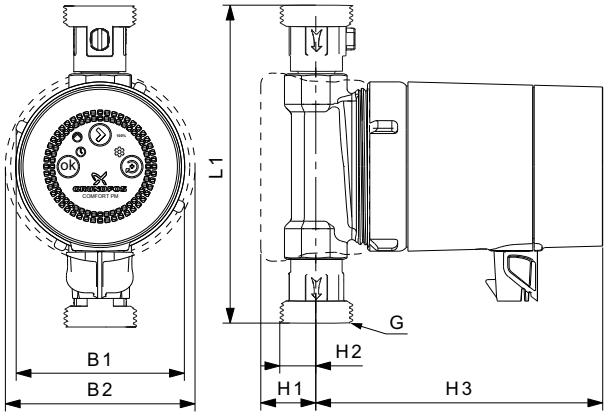
COMFORT_TIMER_FIT_FOAM_UK_0_R

Electrical data, 1 x 230 V, 50/60 Hz

P1 [W]	$I_{1/1}$ [A]
7	0.07

Connections: G 1
System pressure: Max. 10 bar.
Liquid temperature: 2-95 °C (TF 95).
IP class: IP44

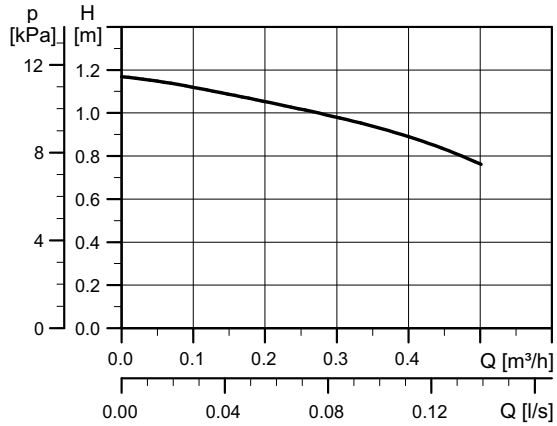
Dimensions



TM07

Pump type	Dimensions [mm]							Weights [kg]		Shipping volume [m^3]
	L1	H1	H2	H3	B1	B2	G	Net	Gross	
COMFORT 15-14 BXDT PM GB	140	25	21	124	79.5	84	G 1	1.2	1.3	0.0026

COMFORT 15-14 B PM GB



TM06 3622 0715



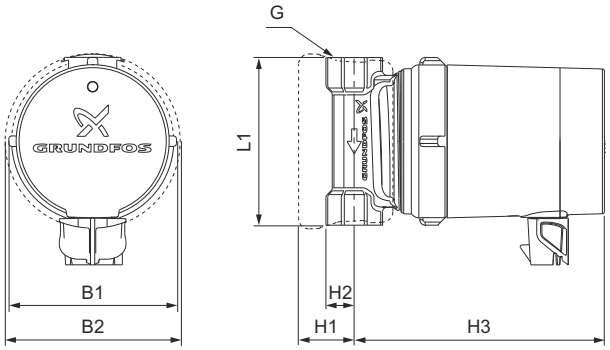
TM06 8269 5016

Connections:	Rp 1/2. Various fittings, see page 35.
System pressure:	Max. 10 bar.
Liquid temperature:	2-95 °C (TF 95).
IP class:	IP44

Electrical data, 1 x 230 V, 50/60 Hz

P1 [W]	$I_{1/1}$ [A]
7	0.07

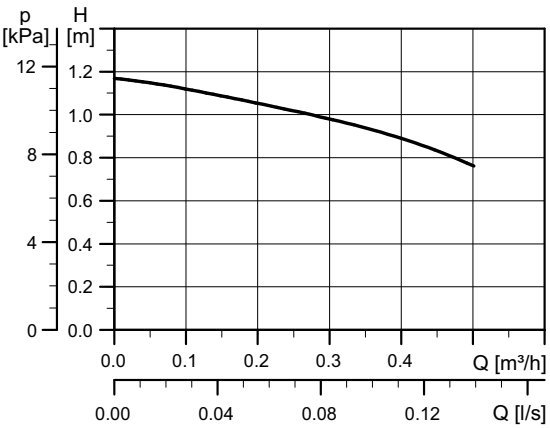
Dimensions



TM06 8280 5016

Pump type	Dimensions [mm]							Weights [kg]		Shipping volume [m^3]
	L1	H1	H2	H3	B1	B2	G	Net	Gross	
COMFORT 15-14 B PM GB	80	25	13.5	119	79.5	84	Rp 1/2	1.00	1.12	0.0026

COMFORT 15-14 BA PM GB



TM06 3622 0715



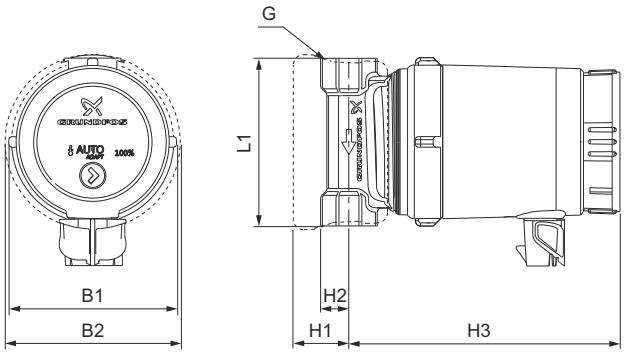
TM06 8268 5016

Electrical data, 1 x 230 V, 50/60 Hz

P1 [W]	$I_{1/1}$ [A]
7	0.07

Connections: Rp 1/2. Various fittings see page 35.
System pressure: Max. 10 bar.
Liquid temperature: 2-95 °C (TF 95).
IP class: IP44

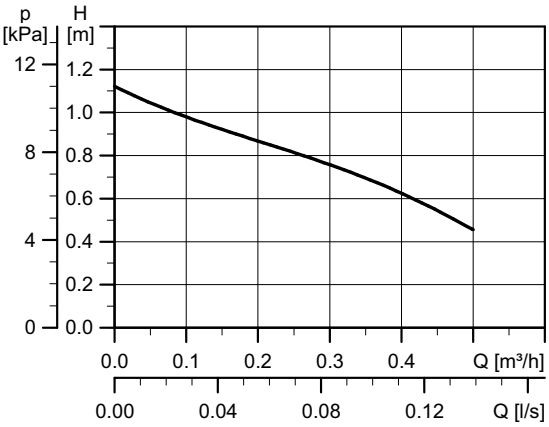
Dimensions



TM06 8281 5016

Pump type	Dimensions [mm]							Weights [kg]		Shipping volume [m^3]
	L1	H1	H2	H3	B1	B2	G	Net	Gross	
COMFORT 15-14 BA PM GB	80	25	13.5	129	79.5	84	Rp 1/2	1.00	1.12	0.0026

COMFORT 15-14 BX PM GB



TM06 8415 0617



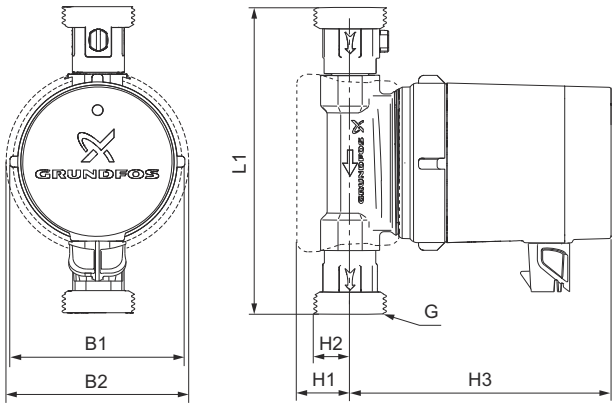
TM06 8266 5016

Connections:	G 1
System pressure:	Max. 10 bar.
Liquid temperature:	2-95 °C (TF 95).
IP class:	IP44

Electrical data, 1 x 230 V, 50/60 Hz

P1 [W]	$I_{1/1}$ [A]
7	0.07

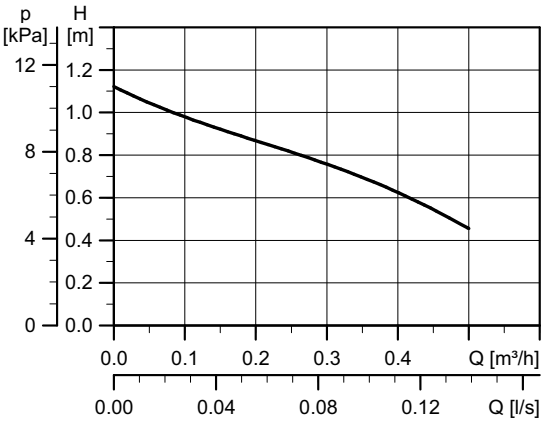
Dimensions



TM06 8297 5016

Pump type	Dimensions [mm]							Weights [kg]		Shipping volume [m^3]
	L1	H1	H2	H3	B1	B2	G	Net	Gross	
COMFORT 15-14 BX PM GB	140	25	21	119	79.5	84	G 1	1.35	1.51	0.0034

COMFORT 15-14 BXA PM GB



TM06 8415 0617



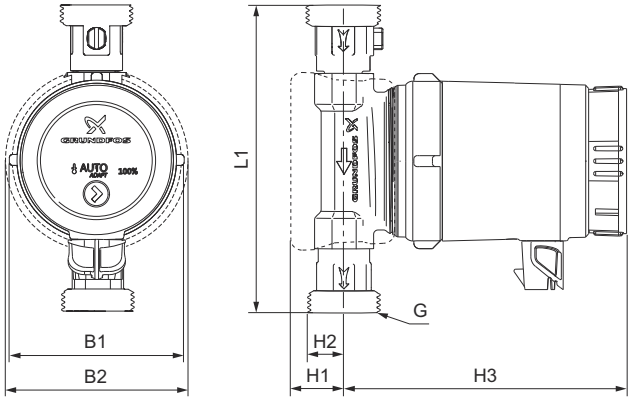
TM06 8265 5016

Electrical data, 1 x 230 V, 50/60 Hz

P1 [W]	$I_{1/1}$ [A]
7	0.07

Connections: G 1
System pressure: Max. 10 bar.
Liquid temperature: 2-95 °C (TF 95).
IP class: IP44

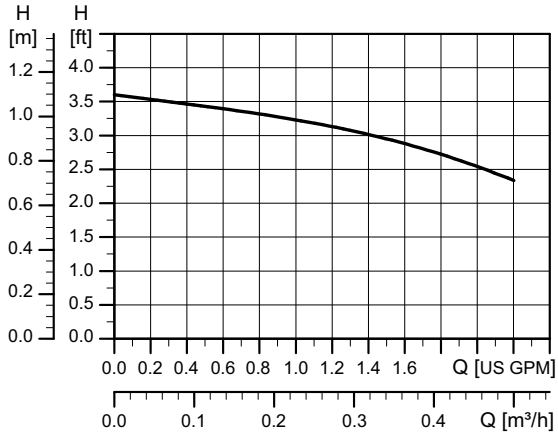
Dimensions



TM06 8298 5016

Pump type	Dimensions [mm]							Weights [kg]		Shipping volume [m^3]
	L1	H1	H2	H3	B1	B2	G	Net	Gross	
COMFORT 15-14 BXA PM GB	140	25	21	129	79.5	84	G 1	1.35	1.51	0.0034

COMFORT 10-16 PM B5/LC



TM06 3624 0715



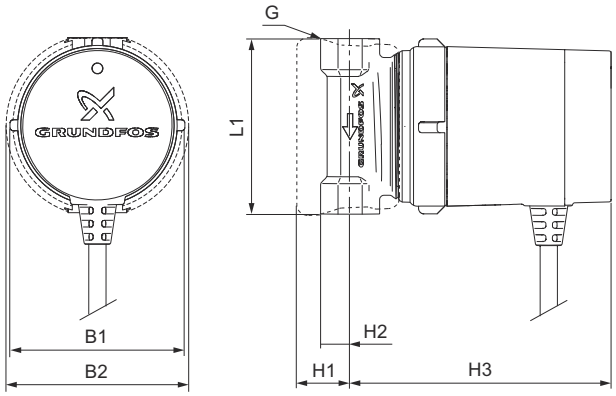
TM06 8275 5016

Connections: 1/2" sweat
System pressure: 145 psi
Liquid temperature: 2-80 °C / 35-176 °F
IP class: IP44

Electrical data, 1 x 115/230 V, 50/60 Hz

P1 [W]	$I_{1/1}$ [A]
6	0.07

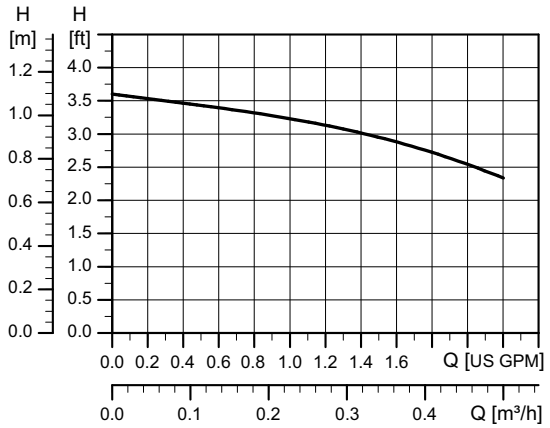
Dimensions



TM06 8292 5016

Pump type	Dimensions [inches]							Weights [lb]		Shipping volume [ft³]
	L1	H1	H2	H3	B1	B2	G	Net	Gross	
COMFORT 10-16 PM B5/LC	3 1/8	1	1/2	4 3/4	3	3 1/3	1/2" sweat	2.6	2.9	0.116

COMFORT 10-16 PM BN5/LC



TM06 3624 0715



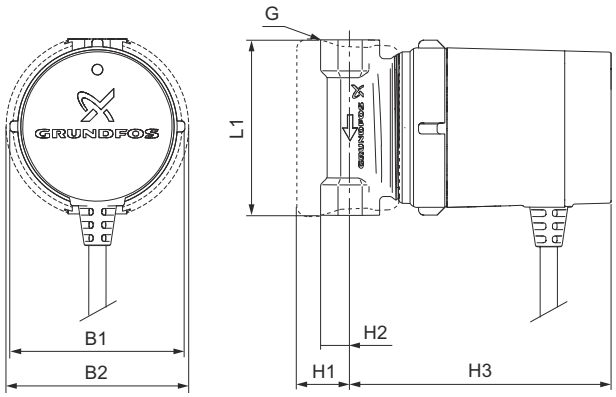
TM06 8275 5016

Connections: 1/2" NPT
System pressure: Max. 145 psi
Liquid temperature: 2-80 °C / 35 -176 °F
IP class: IP44

Electrical data, 1 x 115/230 V, 50/60 Hz

P1 [W]	$I_{1/1}$ [A]
6	0.07

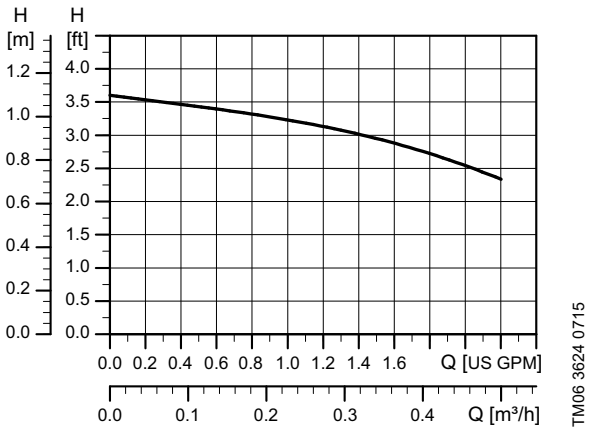
Dimensions



TM06 8292 5016

Pump type	Dimensions [inches]							Weights [lb]		Shipping volume [ft³]
	L1	H1	H2	H3	B1	B2	G	Net	Gross	
COMFORT 10-16 PM BN5/LC	3 1/8	1	1/2	4 3/4	3	3 1/3	1/2" NPT	2.6	2.9	0.116

COMFORT 10-16 T PM BN5/LC



TM06 3624 0715



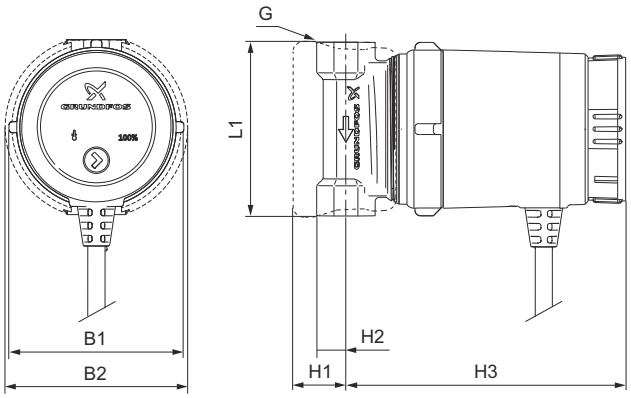
TM06 9246 2017

Connections: 1/2" NPT
System pressure: Max. 145 psi
Liquid temperature: 2-80 °C / 35-176 °F
IP class: IP44

Electrical data, 1 x 115/230 V, 50/60 Hz

P1 [W]	$I_{1/1}$ [A]
6	0.07

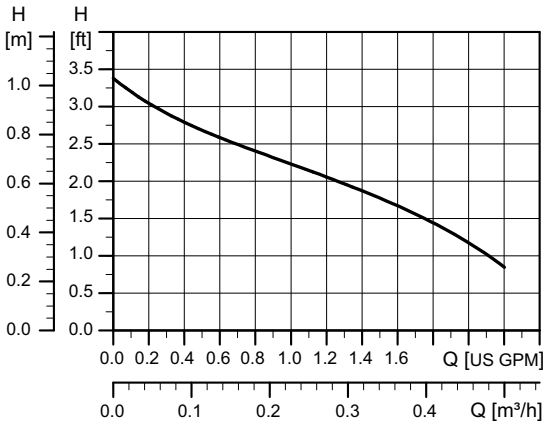
Dimensions



TM06 9251 2017

Pump type	Dimensions [inches]							Weights [lb]		Shipping volume [ft³]
	L1	H1	H2	H3	B1	B2	G	Net	Gross	
COMFORT 10-16 T PM BN5/LC	3 1/8	1	1/2	5 1/4	3	3 1/3	1/2" NPT	2.6	2.9	0.116

COMFORT 10-16 PM BU/LC



TM06 3625 0715



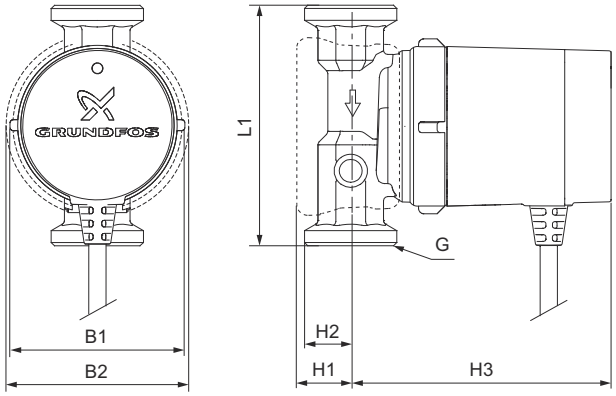
TM06 5324 4315

Electrical data, 1 x 115/230 V, 50/60 Hz

P1 [W]	$I_{1/1}$ [A]
6	0.07

Connections:	1 1/4" NPSM
System pressure:	Max. 145 psi
Liquid temperature:	2-80 °C / 35-176 °F
IP class:	IP44

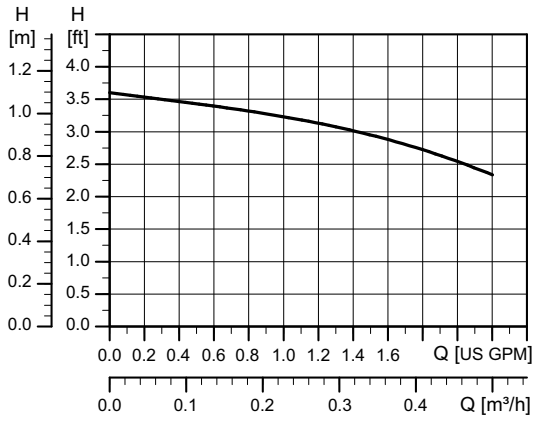
Dimensions



TM06 8299 5016

Pump type	Dimensions [inches]							Weights [lb]		Shipping volume [ft³]
	L1	H1	H2	H3	B1	B2	G	Net	Gross	
COMFORT 10-16 PM BU/LC	4 1/3	1	7/8	4 3/4	3	3 1/3	1 1/4" NPSM	3.4	3.8	0.152

COMFORT 10-16 A PM B5/LC



TM06 3624 0715



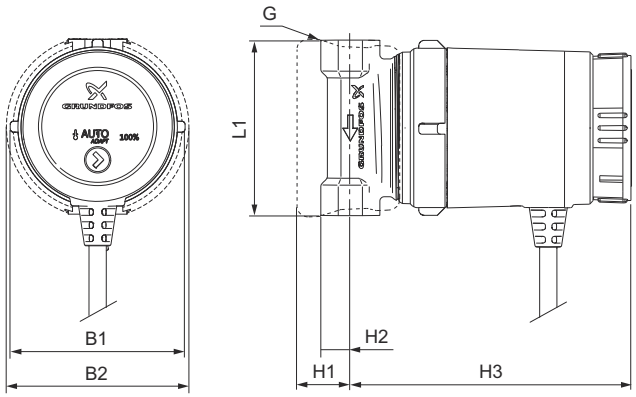
TM06 8274 5016

Connections:	1/2" sweat
System pressure:	Max. 145 psi
Liquid temperature:	2-80 °C / 35-176 °F
IP class:	IP44

Electrical data, 1 x 115/230 V, 50/60 Hz

P1 [W]	$I_{1/1}$ [A]
6	0.07

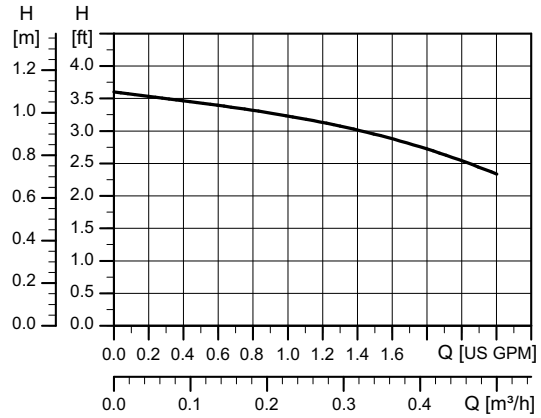
Dimensions



TM06 9448 2317

Pump type	Dimensions [inches]							Weights [lb]		Shipping volume [ft³]
	L1	H1	H2	H3	B1	B2	G	Net	Gross	
COMFORT 10-16 A PM B5/LC	3 1/8	1	1/2	5 1/4	3	3 1/3	1/2" sweat	2.6	2.9	0.116

COMFORT 10-16 A PM BN5/LC



TM06 3624 0715



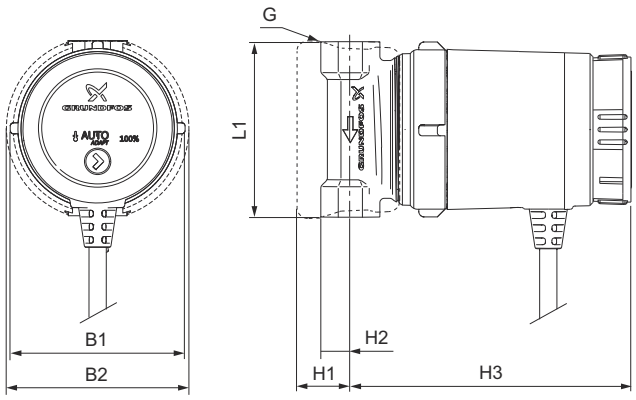
TM06 8274 5016

Electrical data, 1 x 115/230 V, 50/60 Hz

P1 [W]	$I_{1/1}$ [A]
6	0.07

Connections:	1/2" NPT
System pressure:	Max. 145 psi
Liquid temperature:	2-80 °C / 35-176 °F
IP class:	IP44

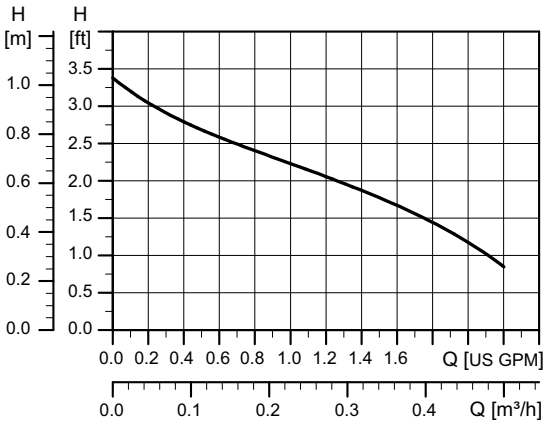
Dimensions



TM06 9448 2317

Pump type	Dimensions [inches]							Weights [lb]		Shipping volume [ft³]
	L1	H1	H2	H3	B1	B2	G	Net	Gross	
COMFORT 10-16 A PM BN5/LC	3 1/8	1	1/2	5 1/4	3	3 1/3	1/2" NPT	2.6	2.9	0.116

COMFORT 10-16 A PM BU/LC



TM06 3625 0715



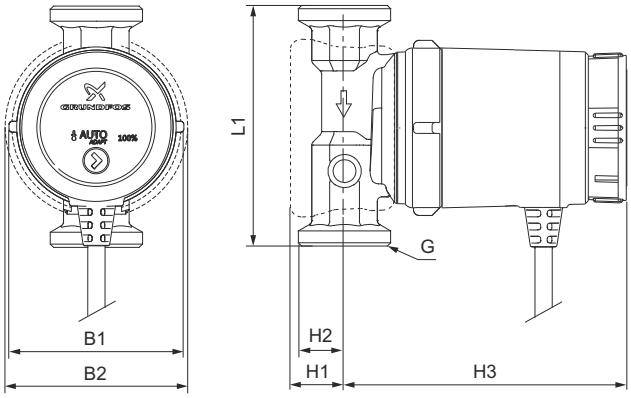
TM06 5323 4315

Electrical data, 1 x 115/230 V, 50/60 Hz

P1 [W]	$I_{1/1}$ [A]
6	0.07

Connections:	1 1/4" NPSM
System pressure:	Max. 145 psi
Liquid temperature:	2-80 °C / 35-176 °F
IP class:	IP44

Dimensions



TM06 8300 1515

Pump type	Dimensions [inches]							Weights [lb]		Shipping volume [ft³]
	L1	H1	H2	H3	B1	B2	G	Net	Gross	
COMFORT 10-16 A PM BU/LC	4 1/3	1	7/8	5 1/4	3	3 1/3	1 1/4" NPSM	3.4	3.8	0.152

7. Product numbers

COMFORT, International, DACH, GB, CN, RU, 50/60 Hz

Market region	Pump type	Product number	Port-to-port length [mm]	Connection	Supplied with: Plug	Supplied with: Isolating valve Non-return valve	Data sheet
International	COMFORT 15-14 B PM	97916771	80 mm	Rp 1/2			page 15
	COMFORT 15-14 BA PM	97916757					page 16
	COMFORT 15-14 BDT PM	99812350					page 17
	COMFORT 15-14 BX PM	97916772	140 mm	G 1		•	page 19
	COMFORT 15-14 BXA PM	97916749				•	page 20
	COMFORT 15-14 BXDT PM	99831281				•	page 21
Germany Austria Switzerland (D-A-CH)	COMFORT 15-14 B PM DACH	97989265	80 mm	Rp 1/2			page 15
	COMFORT 15-14 BA PM DACH	99302331					page 16
	COMFORT 15-14 BDT PM DACH	99831284					page 17
	COMFORT 15-14 BX PM DACH	97989266	140 mm	G 1		•	page 19
	COMFORT 15-14 BXA PM DACH	99302332				•	page 20
	COMFORT 15-14 BXDT PM DACH	99831285				•	page 21
Great Britain (GB)	COMFORT 15-14 B PM GB	99164484	80 mm	Rp 1/2	•		page 23
	COMFORT 15-14 BA PM GB	99164487			•		page 24
	COMFORT 15-14 BDT PM GB	99831287			•		page 18
	COMFORT 15-14 BX PM GB	99164486	140 mm	G 1	•	•	page 25
	COMFORT 15-14 BXA PM GB	99164488			•	•	page 26
	COMFORT 15-14 BXDT PM GB	99831289			•	•	page 22
China (CN)	COMFORT 15-14 B PM CN	98485504	80 mm	Rp 1/2			page 15
	COMFORT 15-14 BA PM CN	98485557					page 16
	COMFORT 15-14 BDT PM CN	99831292					page 17
Russia (RU)	COMFORT 15-14 B PM RU	99302358	80 mm	Rp 1/2			page 15

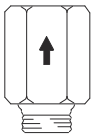
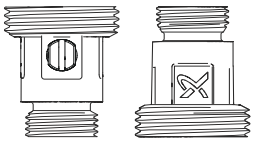
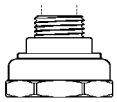
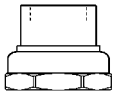
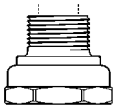
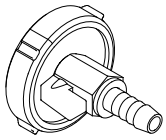
COMFORT, USA, 50/60 Hz

Market region	Pump type	Product number	Port-to-port length [inches]	Connection	Supplied with: Line cord	Supplied with: Isolating valve Non-return valve	Data sheet
USA★	COMFORT 10-16 PM B5/LC	98420206	3 1/8"	1/2" NPT	•		page 27
	COMFORT 10-16 PM BN5/LC	98420210			•		page 28
	COMFORT 10-16 T PM BN5/LC	99279870			•		page 29
	COMFORT 10-16 PM BU/LC	98420221	4 1/3"	1 1/4" NPSM	•	•	page 30
	COMFORT 10-16 A PM B5/LC	98420222	3 1/8"	1/2" NPT	•		page 31
	COMFORT 10-16 A PM BN5/LC	98420223			•		page 32
	COMFORT 10-16 A PM BU/LC	98420224	4 1/3"	1 1/4" NPSM	•	•	page 33

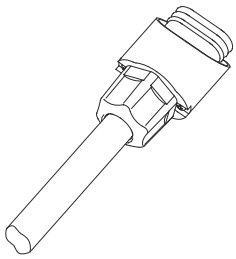
★ Lead-free pump housing

8. Accessories

Fittings

Fitting		Description	Connection	Material	Product number
	TM01 8647 0300	Non-return valve	1/2	Brass	96433904
	TM01 8648 0300	Isolating valve	1/2	Brass	96433905
	TM06 8451 0617	Fittings with integrated non-return valve and isolating valve	G 1 x Rp 1/2 int.	Brass	00ID8748
	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 8560 0300	Venting flange	Flange Union nut Hose	PP Brass PE	96433906
		Bulk COMFORT PM plug (80 pcs.)			98890117

Spare parts



TM01 9911 3400

Description	Product number
Spare plug for COMFORT PM	98685259

9. Grundfos Product Center

Online search and sizing tool to help you make the right choice.
http://product-selection.grundfos.com

All the information you need in one place

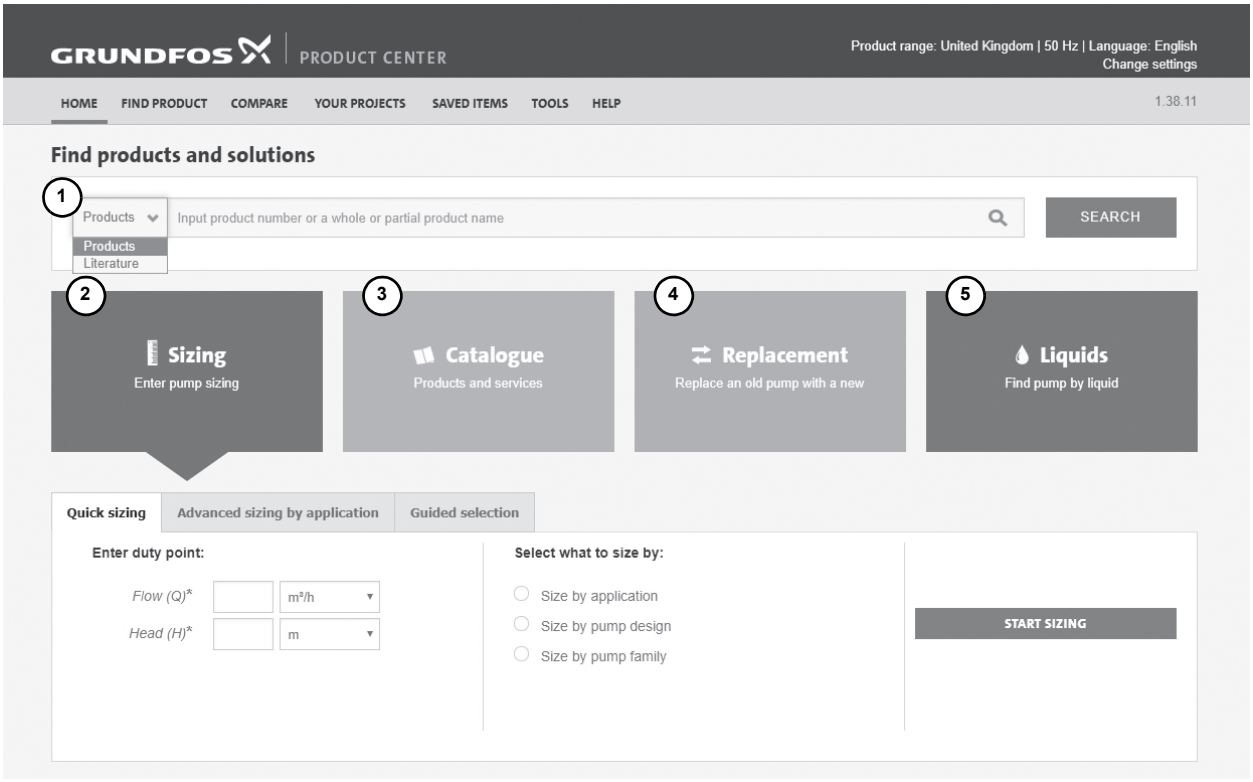
Performance curves, technical specifications, pictures, dimensional drawings, motor curves, wiring diagrams, spare parts, service kits, 3D drawings, documents, system parts. The Product Center displays any recent and saved items - including complete projects - right on the main page.

Downloads

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



TM07 2384



TM07 2383

Pos.	Description
1	This drop-down menu enables you to set the search function to "Products" or "Literature".
2	**SIZING** enables you to size a pump based on entered data and selection choices.
3	**CATALOGUE** gives you access to the Grundfos product catalogue.
4	**REPLACEMENT** enables you to find a replacement product. Search results will include information on the lowest purchase price the lowest energy consumption the lowest total life cycle cost.
5	**LIQUIDS** enables you to find pumps designed for aggressive, flammable or other special liquids.

Trademarks displayed in this material, including but not limited to Grundfos, the Grundfos logo and "be think innovate" are registered trademarks owned by The Grundfos Group. All rights reserved.

© 2020 Grundfos Holding A/S, all rights reserved.

98553150 05.2020
ECM: 1284181

GRUNDFOS A/S
DK-8850 Bjerringbro . Denmark
Telephone: +45 87 50 14 00
www.grundfos.com

GRUNDFOS