A-Rated High Efficiency Circulation Pump
Installation and operating Instruction

ErP
READY
EEI≤0.23

Warning

Prior to installation, read these installation and operating instruction. Installation and operation must comply with local regulations and accepted codes of practice.

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1 General information

These operatin plain the functions and operation of the pump wheninstalled and ready for use. The figures referred to in the text can be found on the fold-out pate at the front

2 Low-energy circulation pump

Low-energy circulation pump is designed for the circulation of water inheating systems. Install the low-energy circulation pumps in

- Underfloor heating systems
- One-pipe systems
- Two-pipe systems

Low-energy circulation pump incorporates a permanent-magnet motor anddifference-pressure control enabling continuous adjustment of the pump performance to the actual requirements.

2.1 Advantages of installing a Low-energy circulation pump

The installation of a Low-energy circulation pump means

Easy installation and start-up

- Low-energy circulation pump is east to install. With the factory setting, the pump can, in most cases, be started without making any setting.

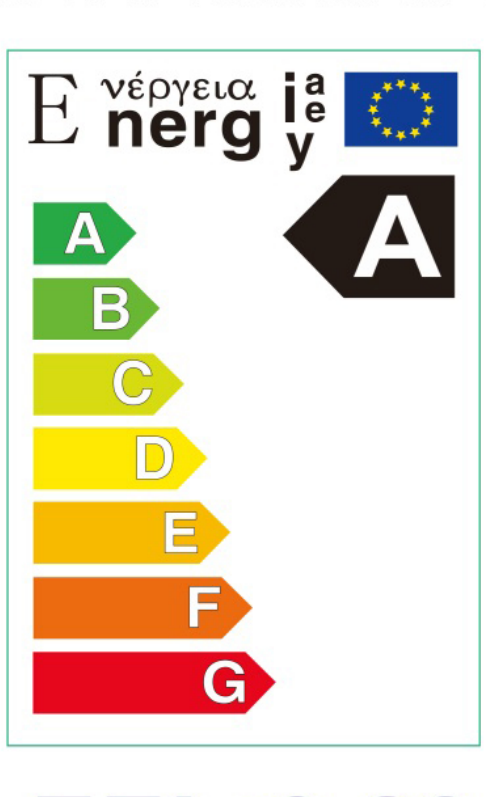
High degree of comfort

- Minimum noise from valves, etc.

Low energy consumption

- Low energy consumption compared to the convention circulation pumps

It is A-labelled as follows:



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3 Pump liquid

Clean, thin, non-aggressive and non-explosive liquids, not containing solid particles, fibers or mineral oil

In heating systems, the water meet the requirements of accepted standards on water quality in heating system

4 Connonation of the type

RS ☐/☐EA

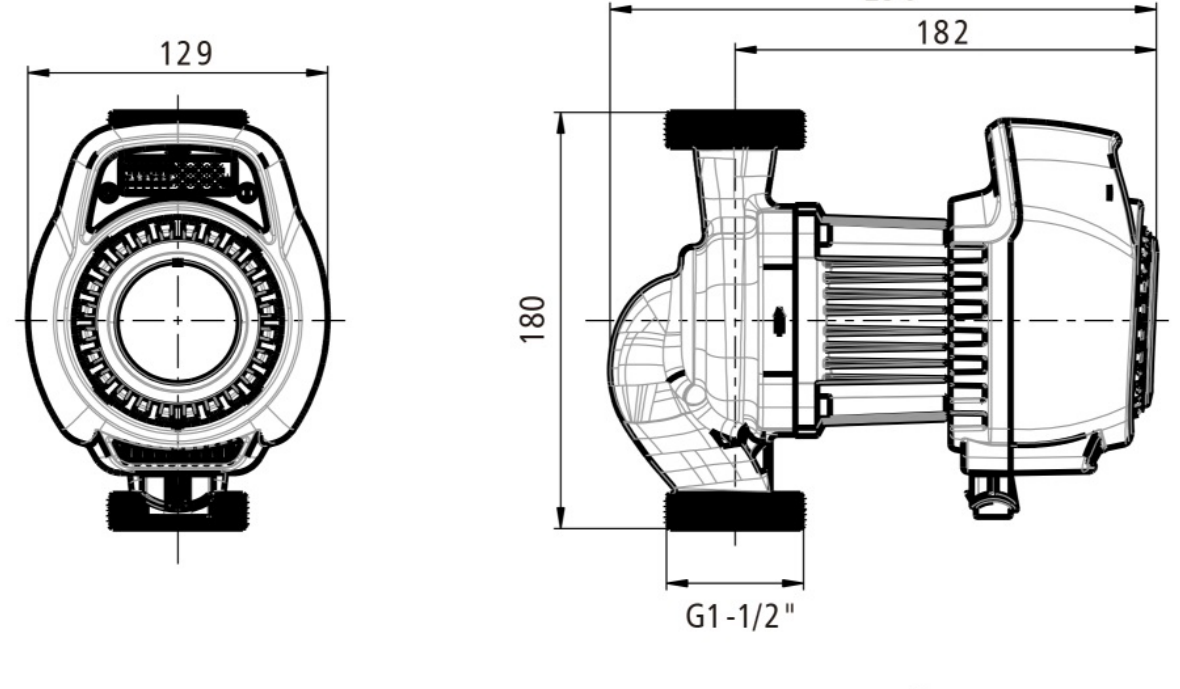
Screwed pipe pump

Nominal width (mm)
15(=1"), 25(=1-1/2"), 32(=2")

Maximum head (M)

Efficiency A class

5 Installation Size



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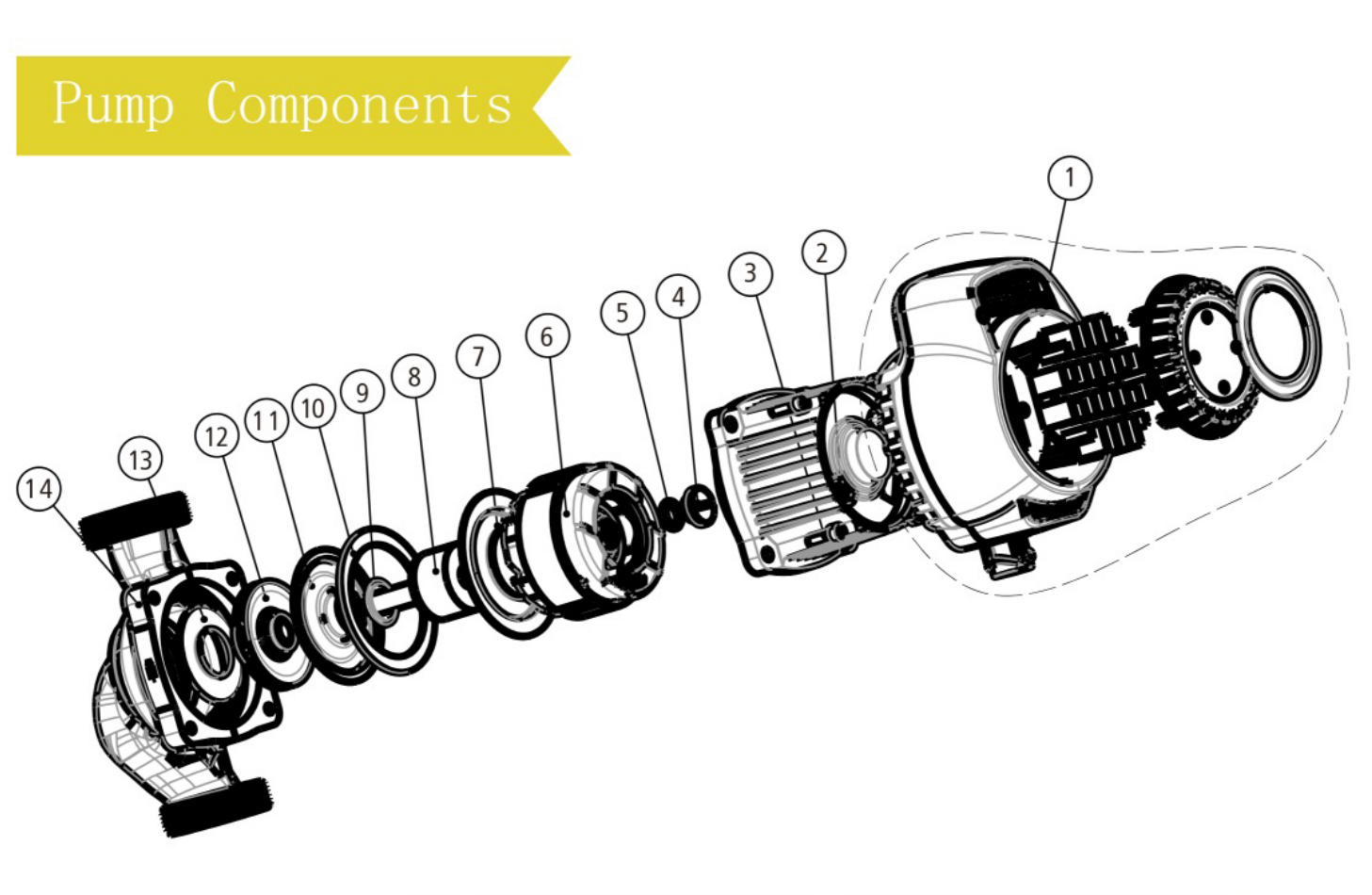
6 Pump Components



No.	Description	Material
1	Controller Box	ABS+PC
2	Pump Housing	ZL 104
3	Screw	SUS 304
4	Copper Screw	HPB59-1
5	Gasket	NBR
6	Wring	COPPER
7	Shielding Parts	SUS 304
8	Rotor	SILICON
9	Thrust Parts	NBR+A1203 97%
10	Gasket	NBR
11	Shielding Cover	SUS 304
12	Impeller	PES
13	Insert Fitting	SUS 304
14	Pump Body	HT 304

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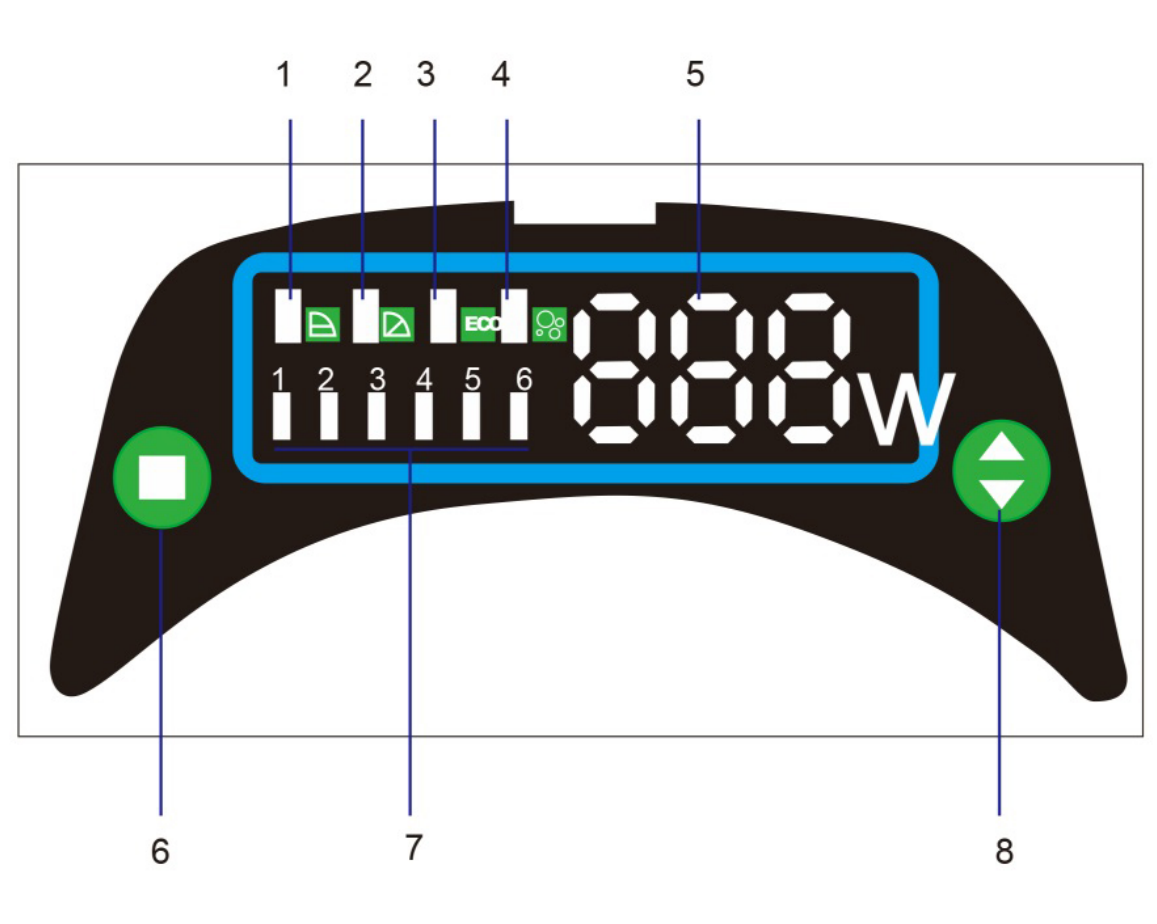
7 Control panel

7.1 Elements on the control panel



7.2 Lights fields indicating the pumps setting

Low-energy circulation pump has seven optional setting which can be selected with the push-button. See 8 in the above label

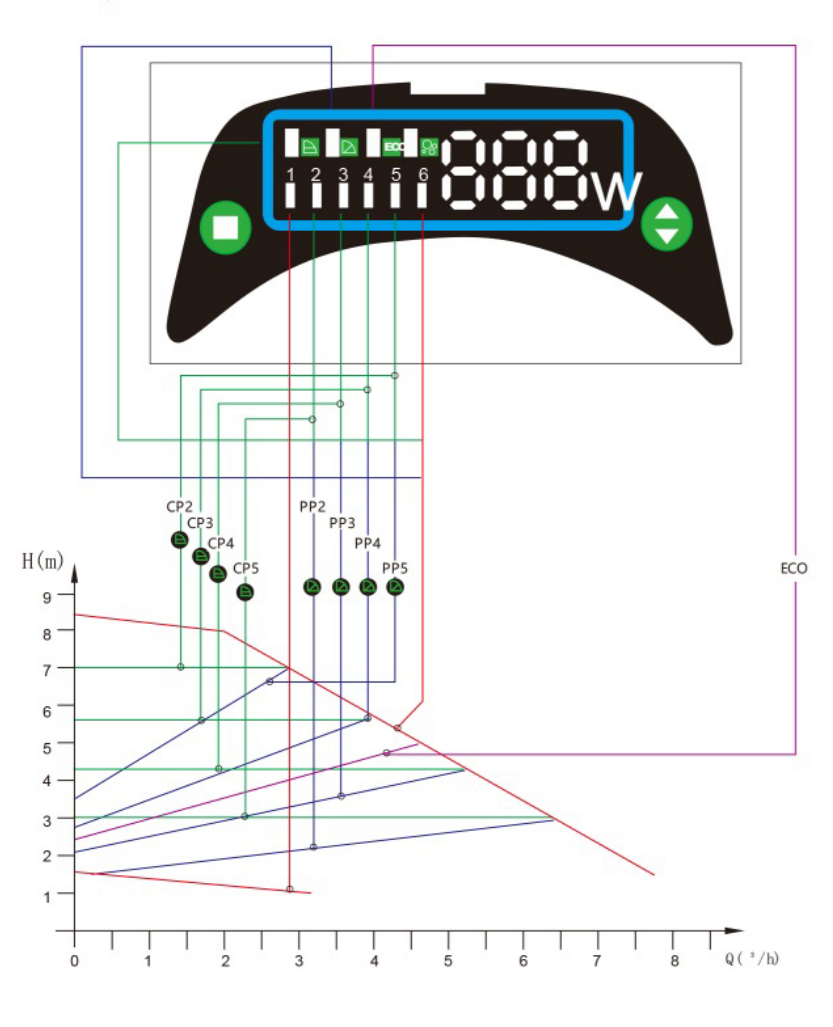
The pump setting is indicated by seven different light fields. See the above label.

7.3 Push-button for selection of pump setting

Every time the push-button is pressed, the pump setting is changed. A cycle is seven button presses.

Pos.		
1	◺	Light in Constant Pressure
2	◺	Light in Proportional Pressure
3	ECO	ECO mode
4	✿	Light in Air-Vent (Press Setting Button for 5~6seconds)
5	888W	Power Light
6	■	Button for change of control mode (The button is used for change the pumps modes, for example: from Constant pressure to proportional pressure, or toECO mode, also can for Air-venting mode.)
7	1 2 3 4 5 6	Light for each speeds (The 6 lights are shown the different working conditions. Only under two modes(Constant Pressure and Proportional Pressure, these lights can be chosen.)
8	⇕	Button for setting (This button is used for setting the different speeds(light in 1,2, 3,4,5,6) for two modes. Using this button, we can chose the speeds from Max.to Min..)

8



Conrol Panel Pump Curve	Describition
CP2,CP3,CP4,CP5	The Operating Point moves back and forth on the curve according to the volume of flow from the system. As shown in the graph,the pump pressure remains constant, not affected by the volume demands of flow.
CP1--Min. Speed CP6--Max.Speed	The two speeds are the min. and Max. ones under constant Pressure, the curve shown as in graph. can not keep constant. It rises and goes down as Manual operation.
PP2,PP3,PP4,PP5	The Operating Point moves back and forth on the Proportional Pressure curve according to the volume of flow from system. As shown in the graph. the pump pressure is directly proportional to the flow demands.
CP1--Min. Speed CP6--Max.Speed	The two speeds are the min. and Max. ones under Proportional Pressure,the curve shown as in graph. can not keep constant. It rises and goes down as Manual operation.
ECO	this mode use working as "autoadaptation". It confines the performance of the pumps in aimed scope. As shown in Graph.: 1.Performance can be adjusted according to the scale of system 2.Performance can be adjusted according to the changing of load during a specific period. Under the mode of ECO", the pump is controlled by means of Proportional pressure.

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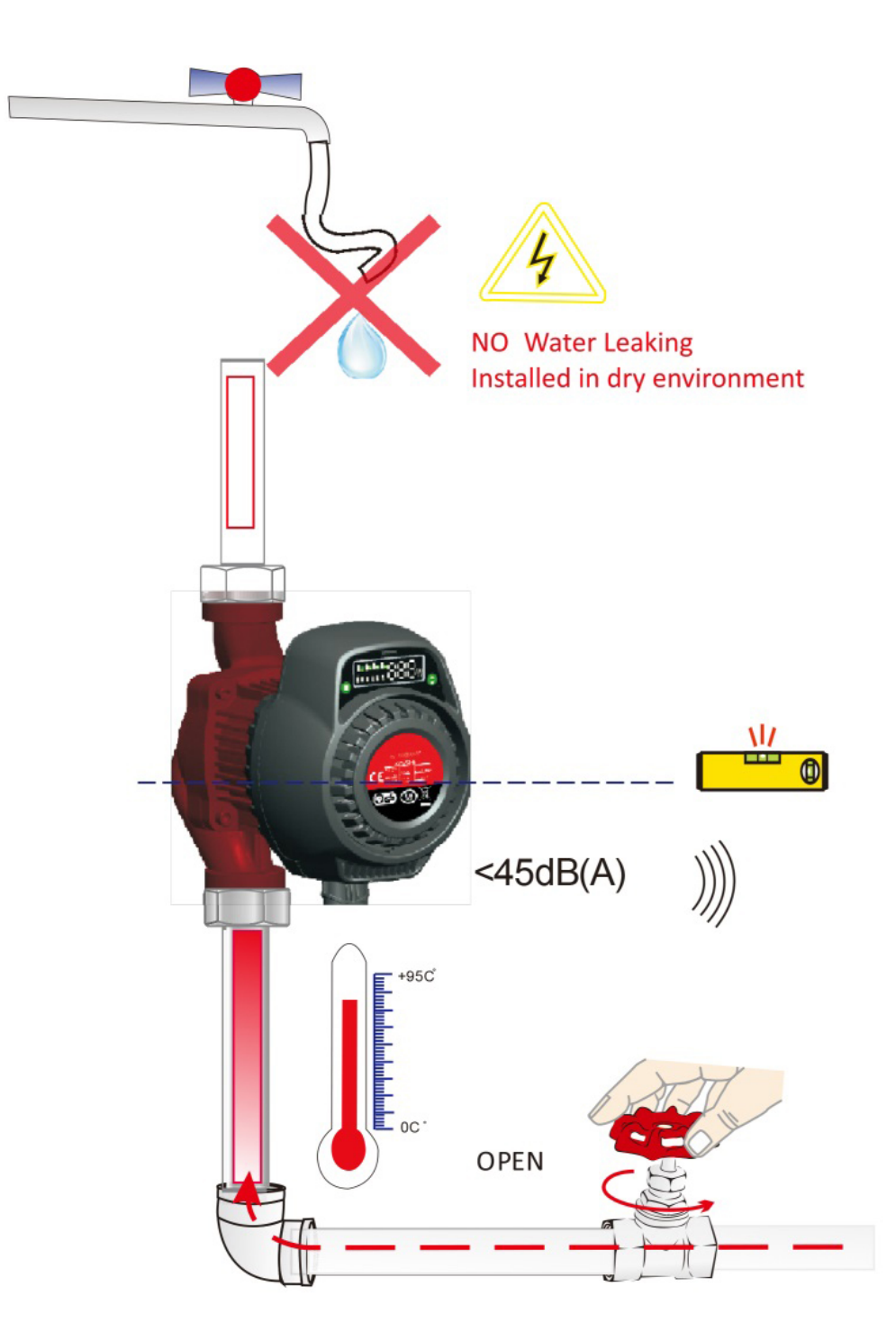
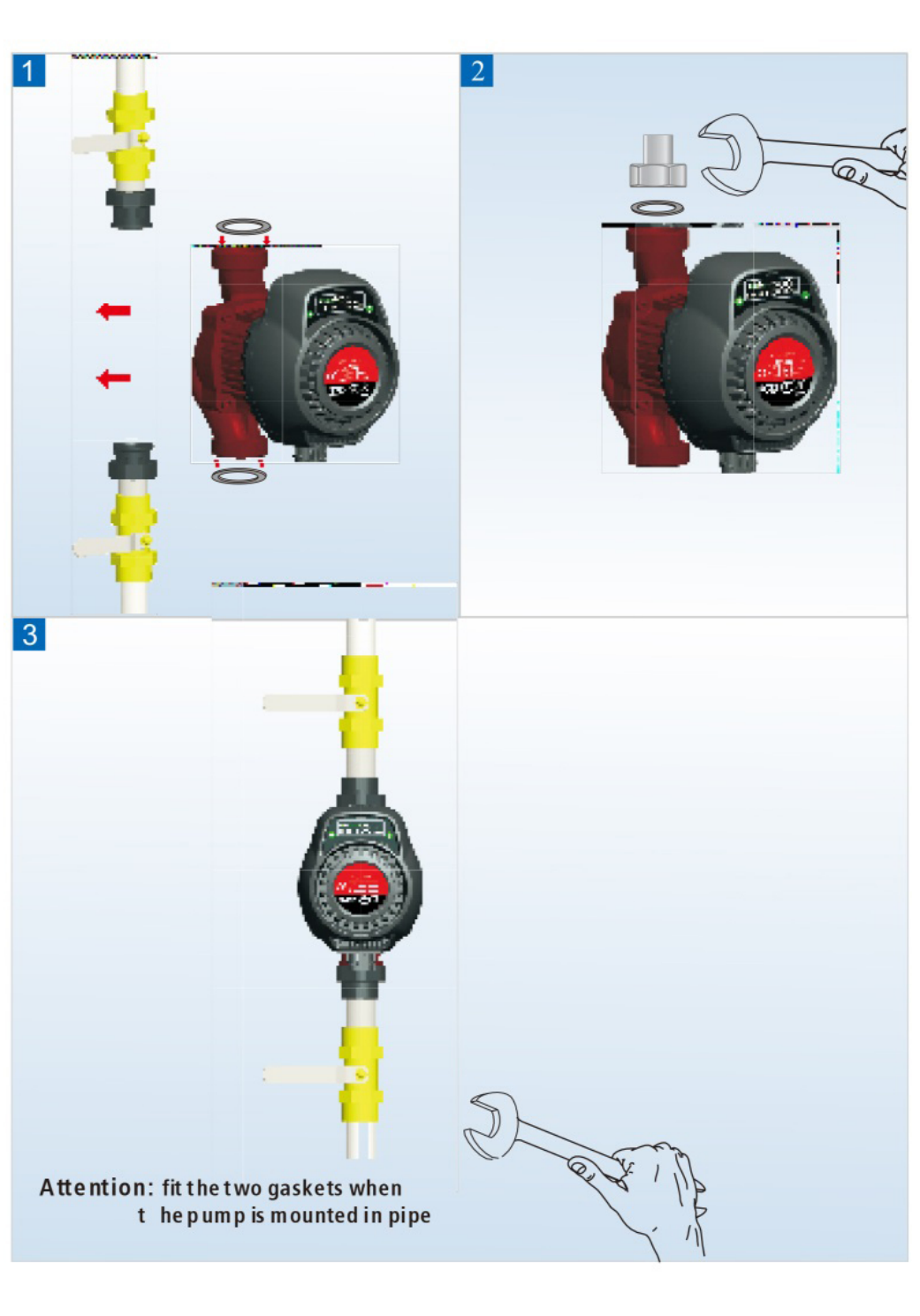
9 Installation





Attention: fit the two gaskets when the pump is mounted in pipe

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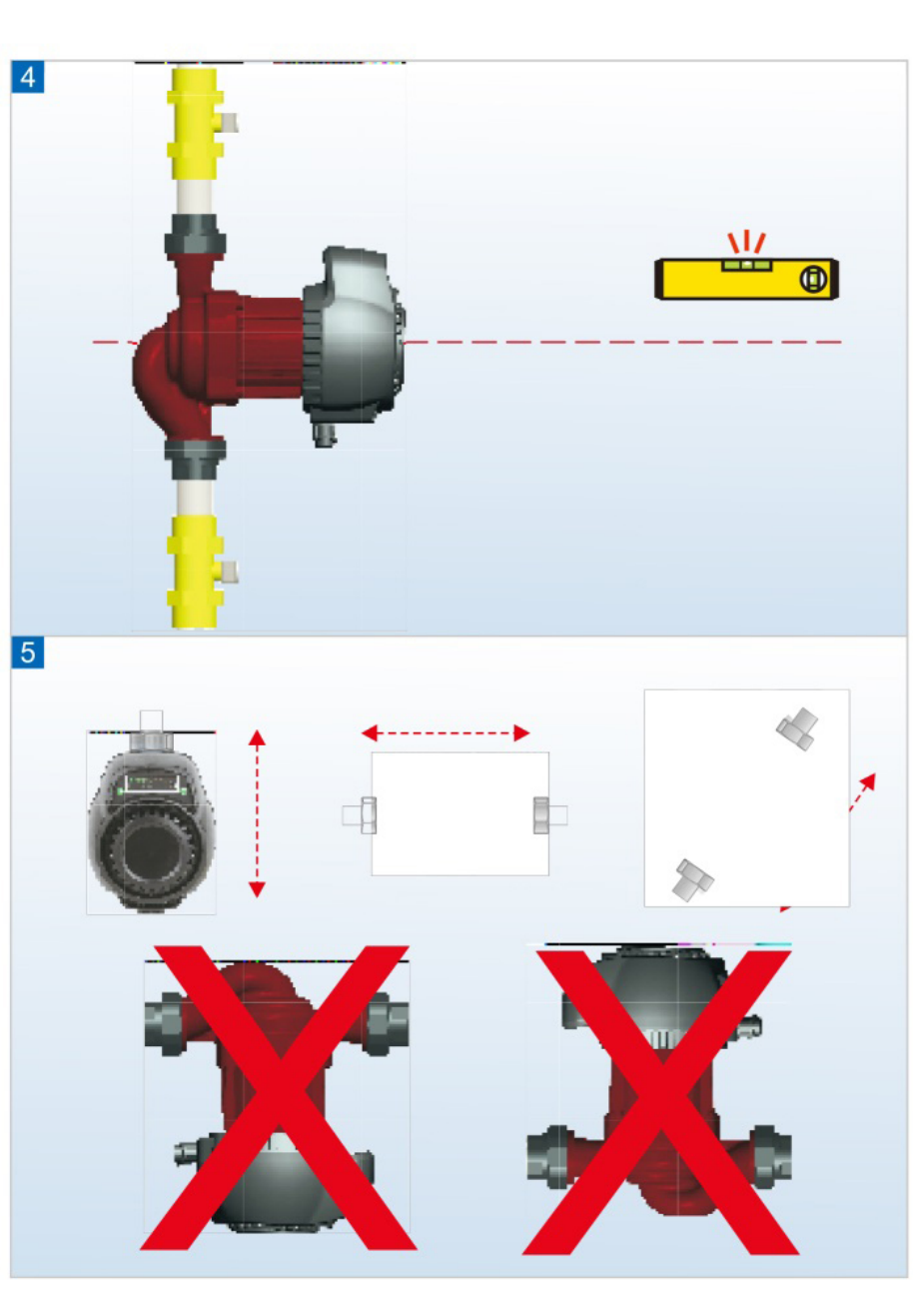
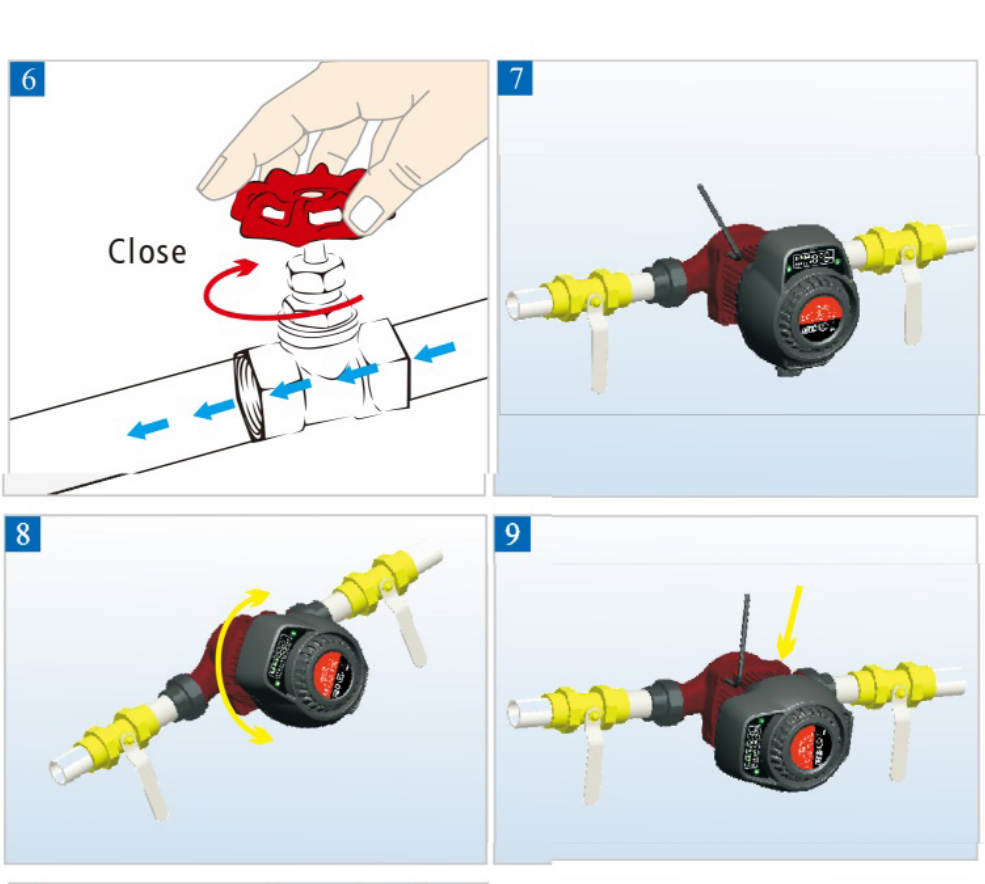
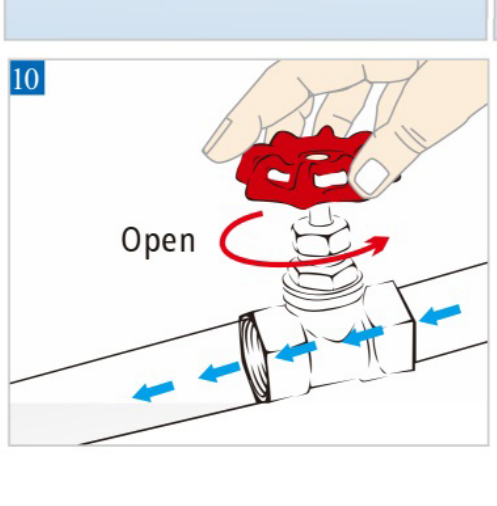






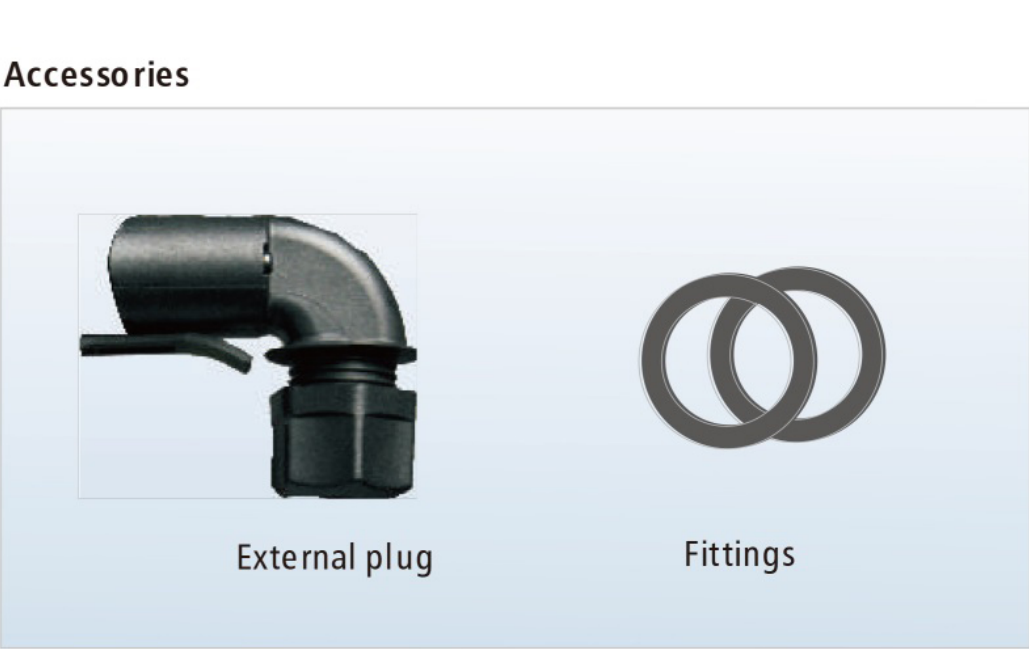
Warning

The pump liquid may be scalding hot and under the high pressure. Drain the system or closed isolated valves on either side of pump before removed the screws.

Warning

Connection only for qualified personel

Accessories



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10 Fault in finding chart

Warning

Before starting any work on the pump, make sure that the electricity supply has been switched off and that it cannot be accidentally switched on.

Fault	Control panel	Cause	Remedy
1. the pump does not run	light off	a) One fuse in the installation is blown	Replace the fuse
		b) The current-operated or voltage-operated circuit breaker has tripped out	Cut in the circuit break
		c) The pump is defective	Replace the pump
	Only show power	a) Electricity supply failure. Might be too low	Check that the electricity supply Falls within the specified range.
		b) The pump is blocked	Remove the impurities
2. Noise in the system	show power and light field for pump setting are on	a) Air in the system	Vent the system
		b) the flow is too high	Reduce the suction head
3. Noise in the pump	show power and light field for pump setting are on	a) Air in pump	Let the pump run, it vents itself over time
		b) the inlet pressure is too low	Increase the inlet pressure Check the air volume in the expansion tank if installed
4. Insufficient	show power and light field for pump setting are on	a) the pump performance is too low	Increase the suction head

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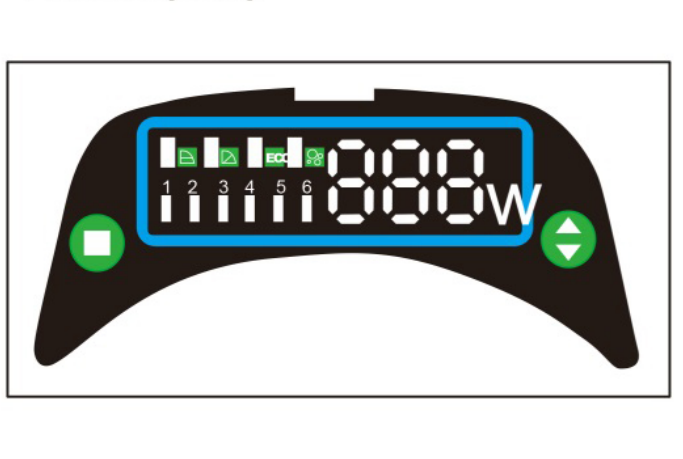
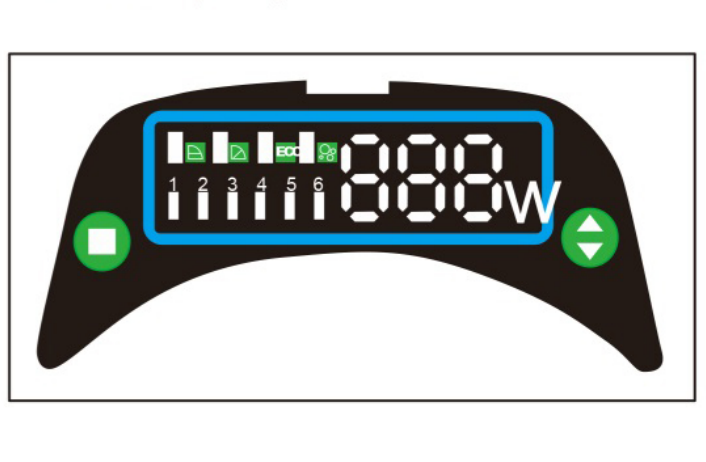
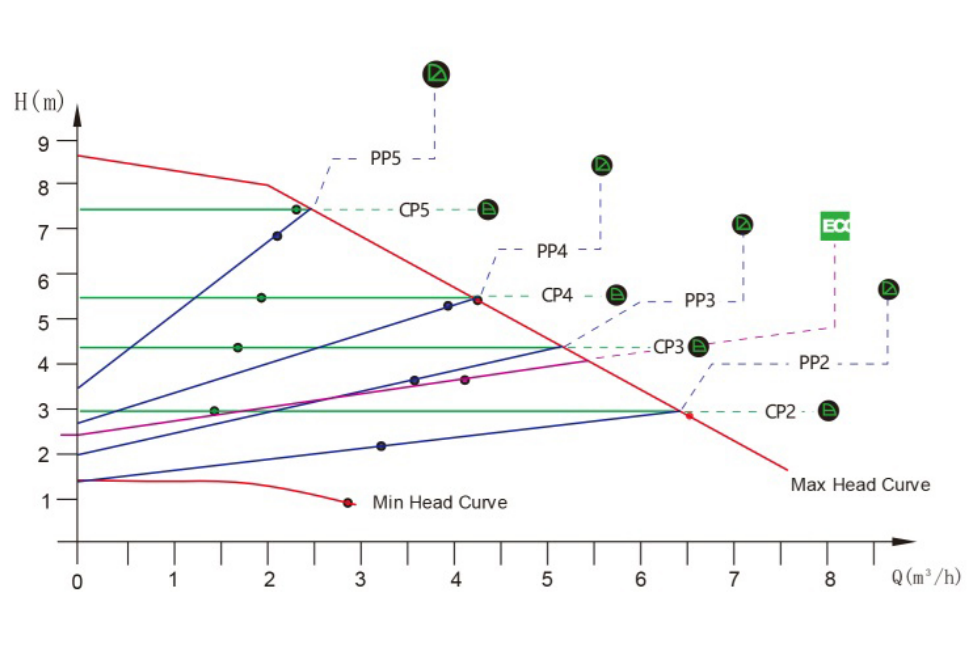
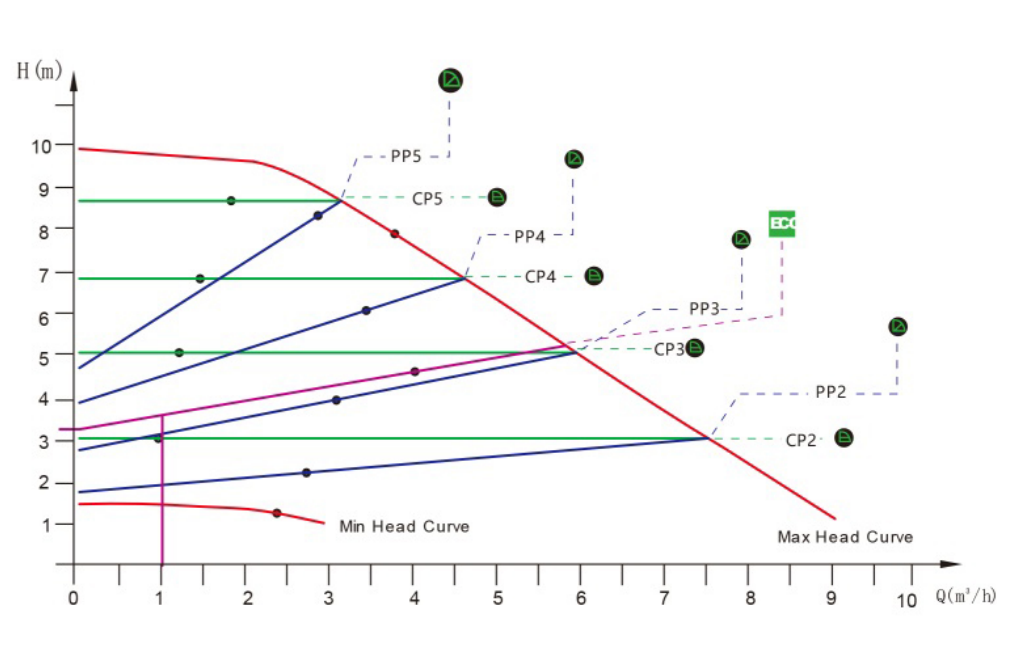
8 Meter pump



10 Meter pump