

Energy Saving And Frequency Conversion Cold&Hot Water Circulation Pump

INSTRUCTION



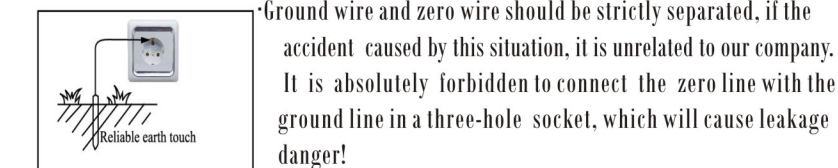
Please read this guide carefully, before you use this type pumps

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Dear customer:
Thank you for purchasing this series water pump, and we sincerely wish your water using problems can be completed solved by our products. Before you use the pump, please read the instruction carefully so as to you can install the pump correctly. Only correctly installation can the efficiency and advantages of the pump be brought into play to the greatest extent, with fewer faults, and the service life of the pump can be prolonged effectively. Our products are constantly innovating and developing. If the structure, performance and parameters of the pump you purchased are different from this instruction, please take the nameplate as the standard.

Special Warning ⚠
Before use, the pump must have reliable grounding. Do not change the three-core power plug of the pump, beware of power leakage. In order to ensure safety, it is necessary to install leakage circuit breaker or shock protector and other corresponding security measures.



Ground wire and zero wire should be strictly separated, if the accident caused by this situation, it is unrelated to our company. It is absolutely forbidden to connect the zero line with the ground line in a three-hole socket, which will cause leakage danger!
Please do not cover the motor or pump body with blankets or other items, keep the air circulation, otherwise it will cause fire. When installing the pump in the open air, protection should be provided, otherwise, the service life of the pump will be shortened due to wind, sunshine and rain, and even electric shock will occur. If it is installed indoors, the pump body should be prevented from splashing wet to avoid electric shock; Do not install the pump in the shower room to avoid leakage of water vapor or various emulsions into the motor.

After several years of normal use, if there is obvious noise in the motor, please replace the shield sleeve components in the pump in time to prevent the electric shock risk caused by leakage of water into the motor.

In case the pump should be installed in the case of leakage.

1. Application

Energy-saving circulation pump is specially designed for water circulation of ground heating, heating system.

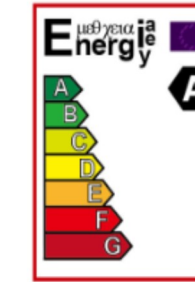
- Energy-saving circulation pump can be installed:
 - Ground heating system
 - Single Pipeline System
 - Double Pipeline system
 - Wall hung gas boiler
 - Solar energy&Air energy
 - Electric wall hanging furnace

Energy-saving circulation pump combined with permanent magnet motor and differential pressure control can achieve automatic regulation of pump performance to meet the actual needs.

2. Advantages

The use of energy-saving circulation pumps means:

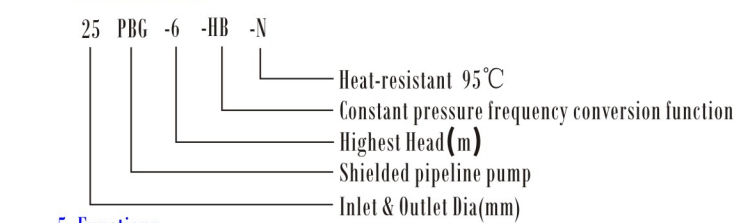
- Simple installation and operation: the installation of energy-saving cycle is simple, according to the system's needs switch pump performance, operation is very simple.
- Low Noise: The noise level in operation is lower than the standard set by EU.
- Low Energy Consumption: Lower power consumption than conventional circulating pumps. Energy-saving Class A as follows:



3. Applicable liquids

Clean, non-corrosive and non-explosive liquids, non-solid particles, non-fibrous substances and mineral oils. Water quality should meet acceptable standards in heating systems.

4. Model notes



5. Functions

In order to adapt to the application of different occasions and conditions, this product specially designs constant speed mode (CN mode), constant pressure mode (CP mode) and proportional high-efficiency energy-saving mode (PP mode). Each mode has three adjustable grades: Max, middle and min. Users can choose freely according to the application conditions. (The model of 25PBG-6-HB has CP and PP mode which can be adjustment and also has AUTO and night mode.)

6. Mode Characteristics

6.1 Constant speed mode (CN mode)

According to the heating demand of the system, the pump runs at a constant speed on constant curve at different gears.

6.2 Constant pressure mode (CP mode)

According to the heating demand of the system, the pump will deviate into or out of the maximum constant pressure curve at the working point. Head (pressure) will remain unchanged regardless of heating demand.

6.3 Proportional high-efficiency energy-saving mode (PP mode)

According to the heating demand of the system, the working point of the pump will rise or fall on the curve, the head (pressure) will decrease when the demand is reduced, the head (pressure) will increase when the heating demand is increased, and the pump will always operate at the high efficiency and energy saving point.

6.4 Automatic(self adaption) mode(25/32PBG-6-HB)

According to the requirement of system overload, the pressure and performance of the pump can be automatically controlled within the effective performance range of the pump.

6.5 Night mode (25/32PBG-6-HB)

In constant voltage mode, energy-saving mode and automatic mode, press **○** night mode and enter the night mode when the light is on. It will change over time and reduce power to run in the most energy-saving mode to reach the performance of flow and head.

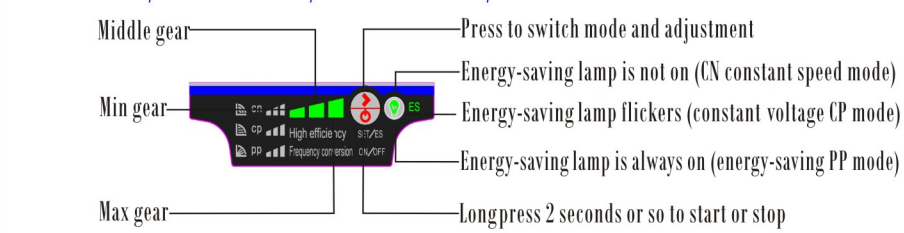
- Running at normal 15w in 0-60 minutes;

- After 60 minutes, the pump power will be reduced by about 15% automatically, i.e it runs around 38w.
- After 120 minutes, the pump power is reduced by about 38% automatically, i.e it runs around 28w.
- It will automatically withdraw from the night mode after the night mode runs for 7 hours; Re-press **○** to light on and enter night mode again.
- During the night mode, you can press **○** to light out at any time to exit the night mode.

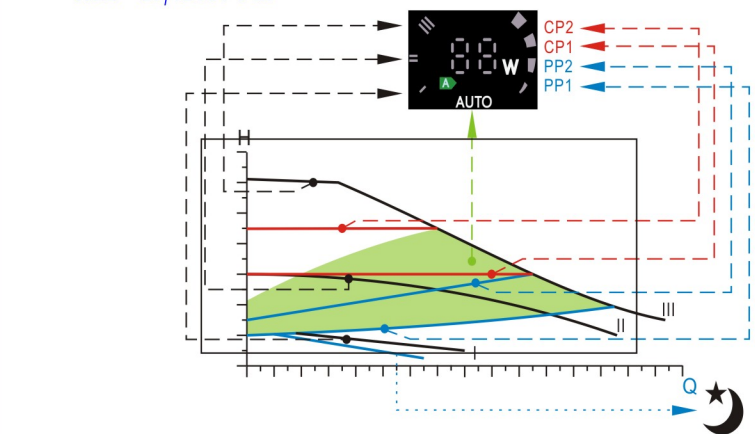
7. Control panel operation instructions

7.1 Panel description

7.1.1 25/32PBG-6-HB、25/32PBG-10-HB、25/32PBG-12-HB



7.1.2 25/32PBG-6-HB



7.2 Operation instructions (25/32PBG-6-HB, 25/32PBG-10-HB, 25/32PBG-12-HB)

- 7.2.1 The default soft start when the pump power-on and the default maximum gear with constant

speed are adopted. When power-off, the pump default last operation mode automatically without re-setting and has memory function.

7.2.2 When the pump is powered on, press the setting key **⏸** for about 2 seconds, and the pump shuts down or starts.

7.2.3 Press **⏸** to set the order of mode transformation:

- When the energy-saving lamp **🔆** is not on, it is in constant speed mode (CN mode): constant speed maximum gear → constant speed middle gear → constant speed minimum gear

- When the energy-saving lamp **🔆** flickers every 0.5 seconds, it is in constant voltage mode (CP mode): constant voltage maximum gear → constant voltage middle gear → constant voltage minimum gear.

- When the energy-saving lamp **🔆** is always on, it is proportional high-efficiency energy-saving mode (PP mode): maximum energy-saving gear → middle energy-saving gear → minimum energy-saving gear.

7.2.4 Press the setting key **⏸** for about 2 seconds and the pump is on standby. At this time, the energy-saving lamp **🔆** flickers every 2 seconds.

7.3 Operation instructions(25/32PBG-6-HB)

7.3.1 After power-on, the pump defaults to soft start and automatically operates in default automatic mode. With memory function, the pump defaults last operation mode and needn't to reset when power is turned on after power failure.

7.3.2 Press **⏸** to set the order of mode:

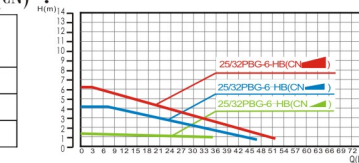
Auto mode (self adaption) → minimum gear of energy saving (PP1) → maximum gear of energy-saving (PP2) → constant voltage minimum gear(CP1) → constant voltage maximum gear(CP2) → constant speed maximum gear(CN III) → constant speed middle gear(CN II) → constant speed minimum gear(CN I)

7.3.3 In automatic (adaptive) mode, energy saving (PP) mode, constant voltage (CP) mode, press the night mode key to enter the night mode.

8. Parameters and performance curves:

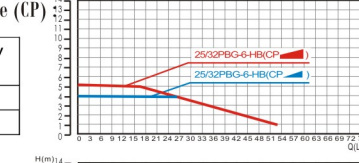
8.1.1 25/32PBG-6-HB(II) constant speed mode (CN) :

Gear position	Power (W)	Head (m)	Max flow (L/min)
🔴	45	6	60
🔵	25-45	4	55
🟢	10-45	1.5	50



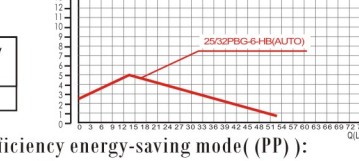
8.1.2 25/32PBG-6-HB(II) Constant voltage mode (CP) :

Gear position	Power (W)	Head (m)	Max flow (L/min)
🔴	20-45	5	55
🔵	10-45	4	55



8.1.3 25/32PBG-6-HB(Auto mode)

Gear position	Power (W)	Head (m)	Max flow (L/min)
AUTO	10-45	4.5	55



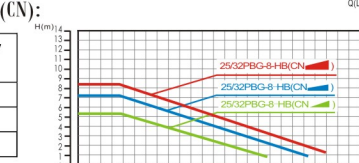
8.1.4 25/32PBG-6-HB(II) Proportional high-efficiency energy-saving mode (PP) :

Gear position	Power (W)	Head (m)	Max flow (L/min)
🔴	45	2.5-4.5	55
🔵	25-45	1.5-3	55



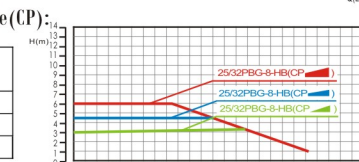
8.2.1 25/32PBG-8-HB(II) Constant speed mode(CN):

Gear position	Power (W)	Head (m)	Max flow (L/min)
🔴	100	8	70
🔵	80	6.5	60
🟢	60	5	55



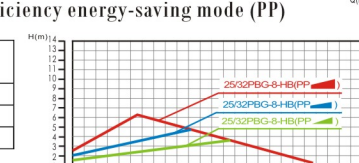
8.2.2 25/32PBG-8-HB(II) Constant voltage mode(CP):

Gear position	Power (W)	Head (m)	Max flow (L/min)
🔴	45-80	6	65
🔵	30-80	4.5	65
🟢	20-70	3	65



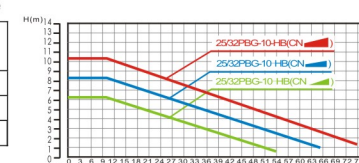
8.2.3 25/32PBG-8-HB(II) Proportional high-efficiency energy-saving mode (PP)

Gear position	Power (W)	Head (m)	Max flow (L/min)
🔴	15-85	3-6	65
🔵	10-80	2-4.5	65
🟢	8-50	1.5-3	65



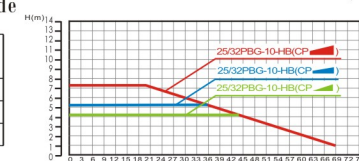
8.3.1 25/32PBG-10-HB(II) Constant speed mode

Gear position	Power (W)	Head (m)	Max flow (L/min)
🔴	110	10	80
🔵	90	8	70
🟢	60	6	60



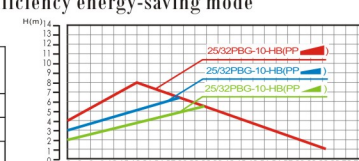
8.3.2 25/32PBG-10-HB(II) Constant voltage mode

Gear position	Power (W)	Head (m)	Max flow (L/min)
🔴	55-85	7	70
🔵	40-85	5.5	70
🟢	20-75	4	70



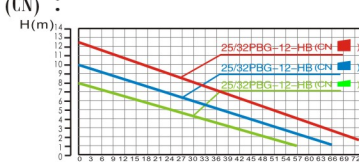
8.3.3 25/32PBG-10-HB(II) Proportional high-efficiency energy-saving mode

Gear position	Power (W)	Head (m)	Max flow (L/min)
🔴	25-90	4-8	70
🔵	15-85	3-6	70
🟢	10-60	2-5	70



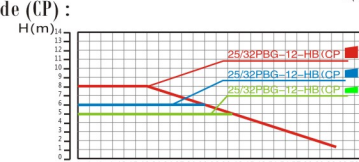
8.4.1 25/32PBG-12-HB(II) constant speed mode (CN) :

Gear position	Power (W)	Head (m)	Max flow (L/min)
🔴	110	12	85
🔵	90	10	75
🟢	60	8	65



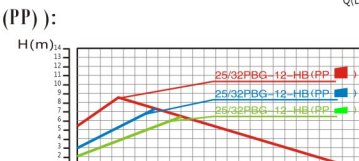
8.4.2 25/32PBG-12-HB(II) Constant voltage mode (CP) :

Gear position	Power (W)	Head (m)	Max flow (L/min)
🔴	65-85	8	75
🔵	50-85	6	75
🟢	25-85	5	75

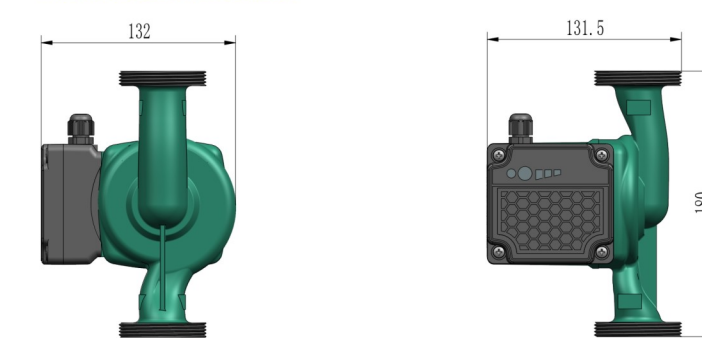


8.4.3 25/32PBG-12-HB(II) energy-saving mode (PP):

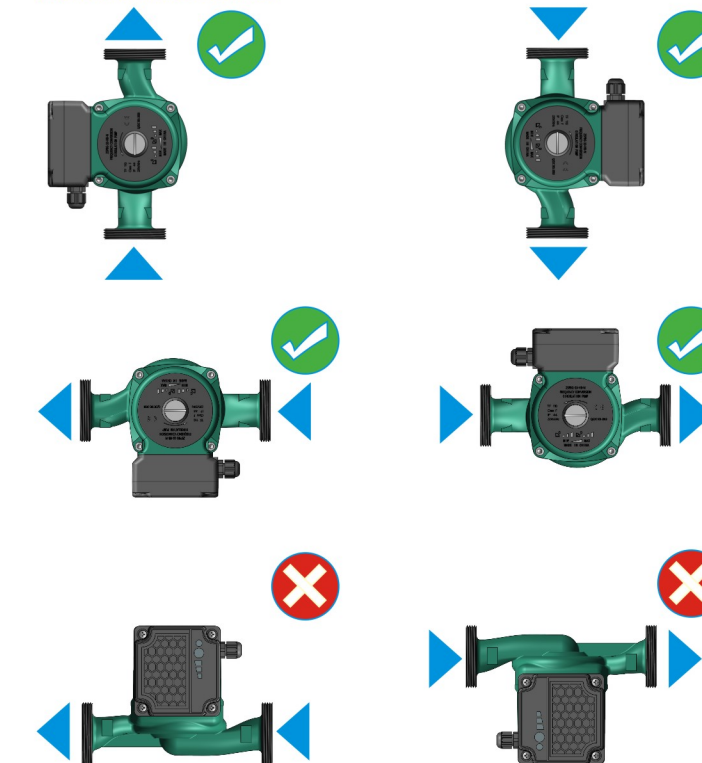
Gear position	Power (W)	Head (m)	Max flow (L/min)
🔴	30-90	5-9	75
🔵	20-85	3-7	75
🟢	15-60	2-6	75



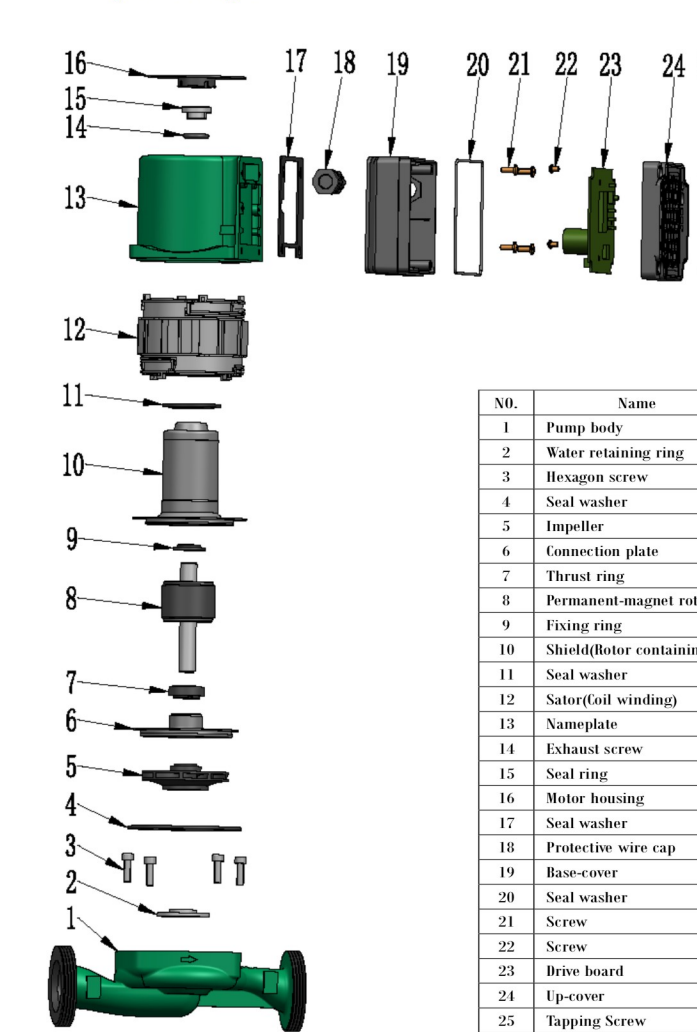
9. Installation dimension



10. Installation method



11. Explosion diagram



NO.	Name
1	Pump body
2	Water retaining ring
3	Hexagon screw
4	Seal washer
5	Impeller
6	Connection plate
7	Thrust ring
8	Permanent-magnet rotor
9	Fixing ring
10	Shaft(If motor containing)
11	Seal washer
12	Satur(foil winding)
13	Nameplate
14	Exhaust screw
15	Seal ring
16	Motor housing
17	Seal washer
18	Protective wire cap
19	Base-cover
20	Seal washer
21	Screw
22	Drive board
23	Seal washer
24	Ep-cover
25	Tapping Screw

12. Troubleshooting schematic

Troubles	Reasons	Solutions
1. Pump does not work	a) The fuse on the circuit board broke.	Replace fuses
	b) Tripping of operating current circuit breaker or operating voltage circuit breaker.	Close circuit breaker
	c) Internal foreign body or blocked by scale due to long-term suspension	Open the vent screw at the center of the trademark of the pump and use a screwdriver to align with the axis to rotate flexibly
	d) Pump failure	Replace pump
2. Noise of system	e) Power failure, maybe too low voltage	Check supply voltage, below standard voltage
	f) Pump blockage	Clean up impurities in pump
3. Pump noise	a) There is air in the system.	Exhaust the system
	b) Flow rate is too large.	Reduce flow
4. Insufficient performance	a) There is air in the pump.	Operate pump for exhaust itself.
	b) Inlet pressure is too low	Increase intake pressure and check air volume in expansion tank
1. Insufficient performance	a) Pump performance is too low	Move to maximum gear

1. If you want to mend or maintenance, please close the two-end taps and let the pump cool down, then you can maintain, avoiding scalding of the steam or hot liquid, which come out from the inside pressure system.
2. The power must be cut off first.
3. Only expert staff can install or maintenance.
4. If can't solve above problems, please contact your local dealer or directly contact with our factory.