RELIABLE PUMPS FOR PROJECT

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2024.05

PURITY

PVE multi-stage centrifugal pump manual

CONTENTS

THANKS FOR CHOOSING PUIRTY PUMPS !

Purity Pump Co., Ltd. is a professional enterprise integrating R&D, production and sales of inline pumps, centrifugal pumps, sewage pumps, fire pump system, non–negative pressure water supply and smart water systems.

Purity Pump
Taking "Dedicated to Energy Saving of Industrial Pumps" as the market strategic positioning;
With the purpose of "brand, innovation and service";
Taking "getting better and better" as our business philosophy.

In the exploration of the field of industrial pumps, Purity continues to improve and surpass itself. It is honored to participate in the drafting of national standards for centrifugal pumps, intelligent variable frequency circulating electric pumps, vertical pipeline pumps, and has successively won the title of "National High–tech Enterprise" and "National Science and Technology Enterprise" "National–level specialized and special new 'little giant' enterprise" and other honors.

Thank you for choosing the Purity sewage pump series produced by Purity Company. At the same time, you will enjoy the high–quality products and sincere services we provide you!

Purity water pumps are produced in strict compliance with national standards. With rich experience in water pump manufacturing, they use high–quality raw materials such as high–quality alloy mechanical seals, Chinese famous brand enameled wires, famous brand bearings, and high–quality sand steel sheets to ensure the reliable quality of water pump products. Purity sewage pumps have a full range of types, including national standard flanges, non–standard flanges and direct plug–in water outlets, etc., to fully meet your needs.

Attention

Warning: Please strictly follow the "Instructions for Use".

Before powering on, please check the insulation resistance carefully to prevent leakage.

The electric pump should be reliably grounded and equipped with a leakage protection switch.

It is strictly forbidden to touch it after power is on. Do not wash, swim or herd livestock in the water nearby to avoid electric shock.

Regardless of any failure of the electric pump, the power must be cut off first and then inspected.

PVE multi-stage centrifugal pump

Product overview

PVE vertical multi-stage centrifugal pump is suitable for conveying low viscosity, non-flammable and non-explosive vaporized liquid without solid particles, which has the characteristics of high cost performance, small flow, high head, low noise and stable operation etc.

Conditions of use

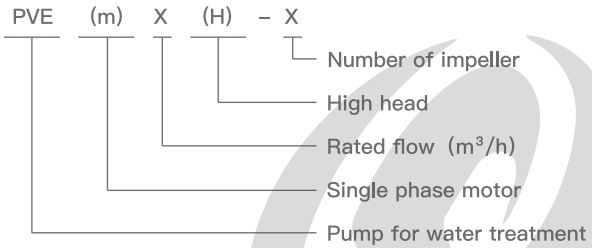
1. Liquid temperature: 4-60℃
2. Ambient temperature no exceed: 40℃
3. Volume ratio of solid impurities in the liquid: ≤0.1%,
4. Particle size: ≤0.2mm
5. Maximum working pressure: 1.5mpa
6. Maximum altitude: 1000m

PURITY PUMPS

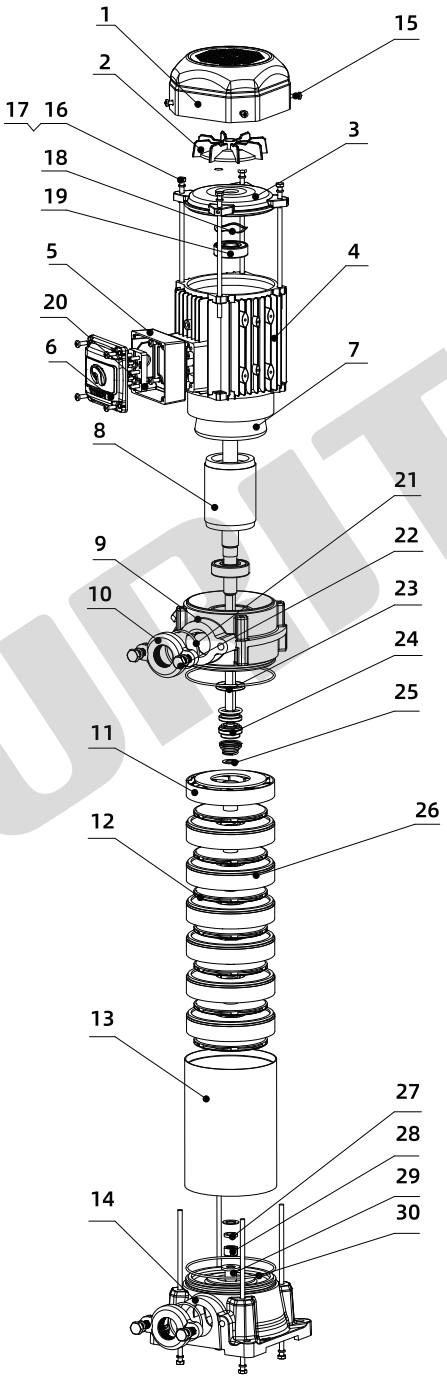
Product use

High-rise building water supply, water plant filtration and transportation, pipeline pressurization, flushing system, water treatment, reverse osmosis system and other equipment

Model description and nameplate style



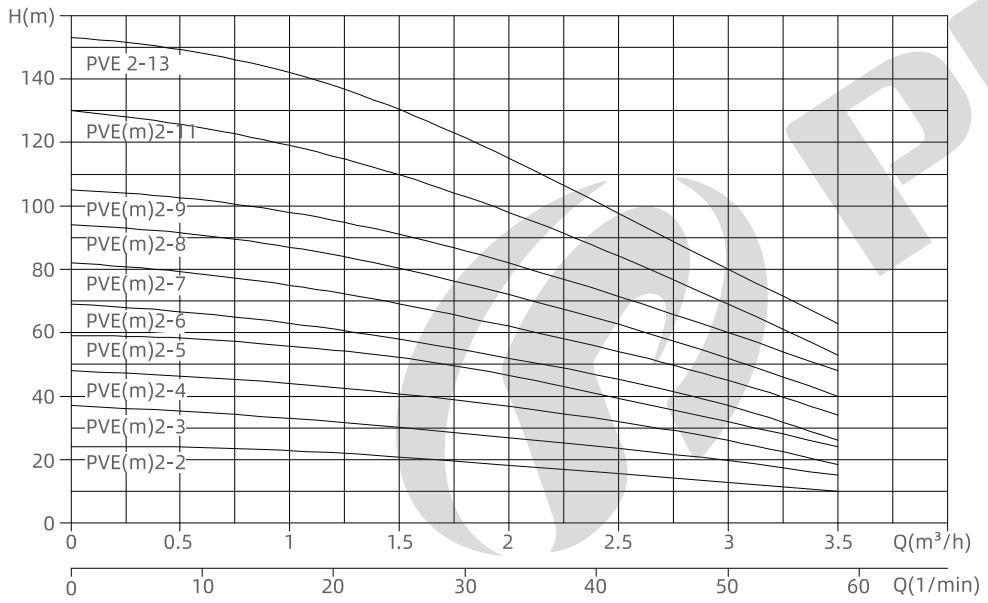
Structure diagram



1	Fan cover
2	Fan
3	Rear end cover
4	Motor case
5	Terminal box bottom
6	Terminal box cover
7	Coil
8	Rotor
9	Connection
10	Inlet and outlet flange
11	Final stage guide
12	Impeller
13	Pressure-resistant cylinder
14	Base
15	Cross screw
16	Hexagonal pull rod
17	Spring washer
18	Wave washer
19	Bearing
20	Terminal
21	Water inlet o-ring
22	Hexagonal bolt
23	Water deflector
24	Mechanical seals
25	Flat washer
26	Deflector
27	Impeller locking spring washer
28	Impeller locking nut
29	Wear-resistant ring
30	Pressure-resistant cylinder o-ring

Installation diagram Dimensions and weights

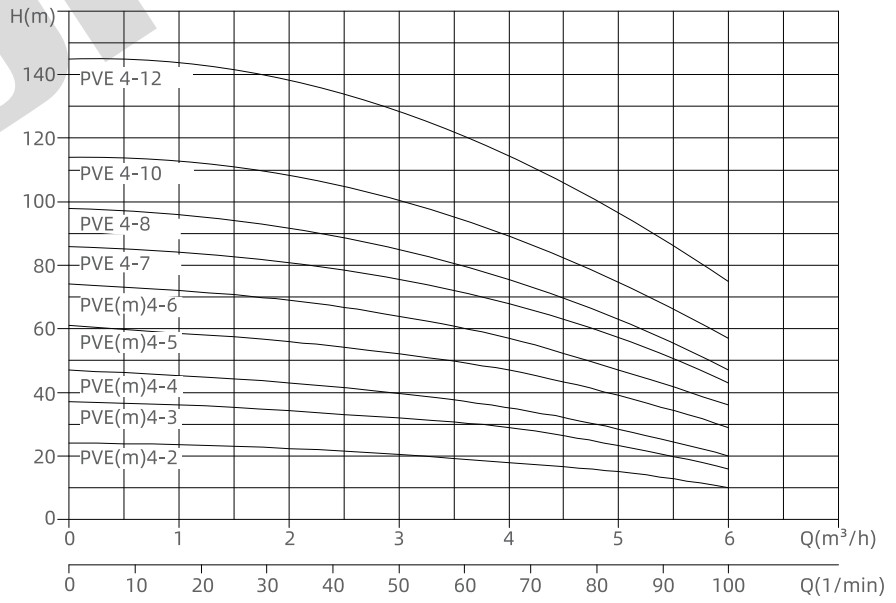
Model	Power(kw)	Voltage(v)	Frequency(Hz)	Rated flow(m^3/h)	Rated head(m)
PVE 2-2	0.37	220/380	50	2	18
PVE 2-3	0.55				26
PVE 2-4	0. 75				35
PVE 2-5	1.1				44
PVE 2-6	1.1				52
PVE 2-7	1.1				62
PVE 2-8	1.5				72
PVE 2-9	1.5				82
PVE 2-11	1.8				98
PVE 2-13	2.2	380			115



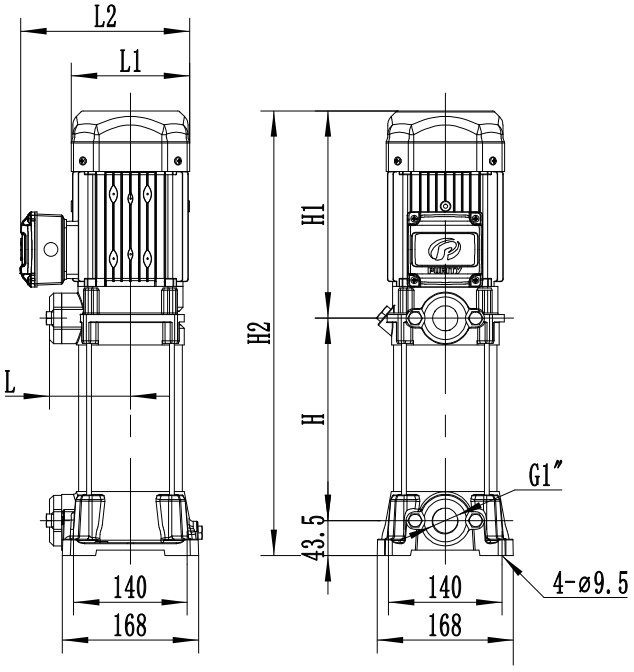
PURITY PUMPS

Installation diagram Dimensions and weights

Model	Power(kw)	Voltage(v)	Frequency(Hz)	Rated flow(m^3/h)	Rated head(m)
PVE4-2	0.55	220/380	50	4	18
PVE4-3	0.75				27
PVE4-4	1.1				36
PVE4-5	1.5				47
PVE4-6	1.5				57
PVE4-7	2.2	380			58
PVE4-8	2.2				76
PVE4-10	2.2				90
PVE4-12	3				113



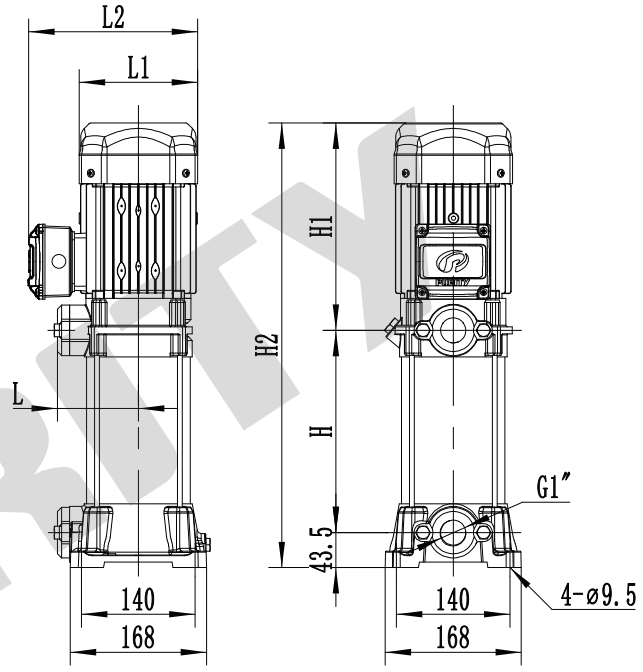
Installation diagram Dimensions and weights



Model	H	H1	H2	L	L1	L2
PVE 2-2	130	256.5	430	100	146.5	135.5
PVE 2-3	154		454			
PVE 2-4	178		478			
PVE 2-5	202		502			
PVE 2-6	226		526			
PVE 2-7	250		550			
PVE 2-8	274	290.5	608		160.5	140.5
PVE 2-9	298		632			
PVE 2-11	346		680			
PVE 2-13	394		728			

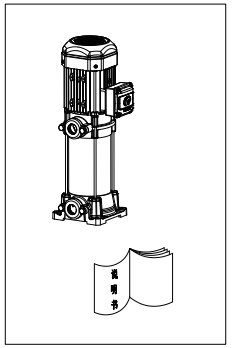
PURITY PUMPS

Installation diagram Dimensions and weights

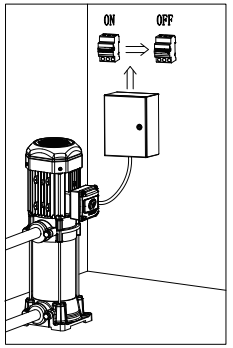


Model	H	H1	H2	L	L1	L2
PVE 4-2	130	256.5	430	100	146.5	135.5
PVE 4-3	154		454			
PVE 4-4	178		478			
PVE 4-5	202	290.5	536		160.5	140.5
PVE 4-6	226		560			
PVE 4-7	250		584			
PVE 4-8	274		608			
PVE 4-10	322		656			
PVE 4-12	370	331.5	745		185.5	167.5

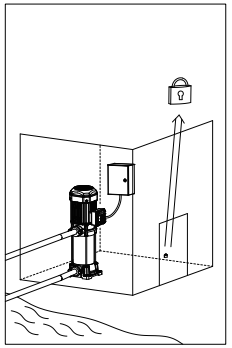
Pump installation and precautions



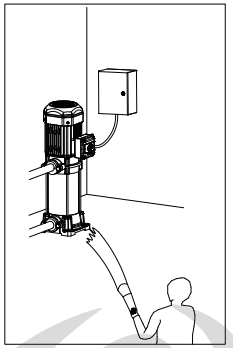
1. To ensure the normal and safe operation of the electric pump, please read the instruction manual carefully before use.



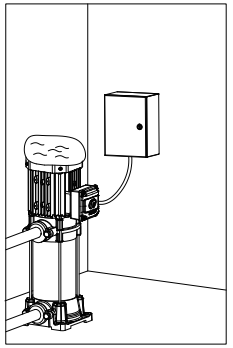
2. The electric pump should be reliably grounded to prevent leakage, and should be equipped with a leakage protection switch. The electric box or plug should be in an area not affected by moisture.



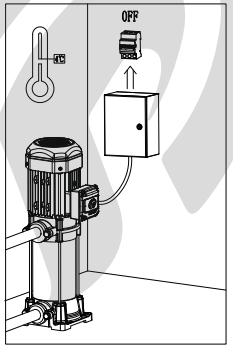
3. During the operation of the electric pump, it is strictly forbidden to touch it. Do not wash, swim or put livestock in the water near the working area to prevent it from happening.



4. Avoid pressurized water from splashing onto the electric pump and prevent water from submerging the electric pump.



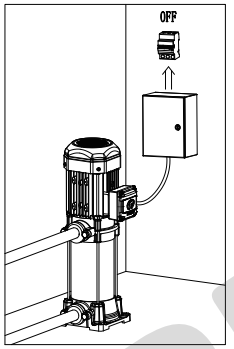
5. Keep the water pump ventilated.



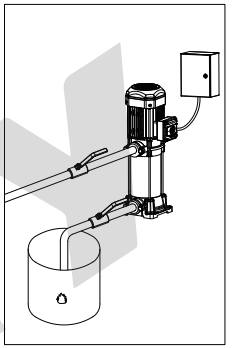
6.When the ambient temperature is below 4℃ or the pump is not used for a long time, the liquid in the pipe system should be drained to prevent the pump cavity from freezing and cracking. Before start the pump, please pay attention to check the pump first.

PURITY PUMPS

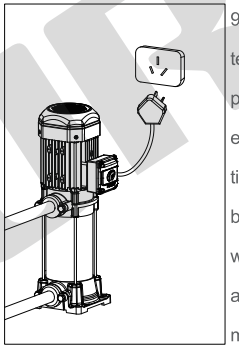
Pump installation and precautions



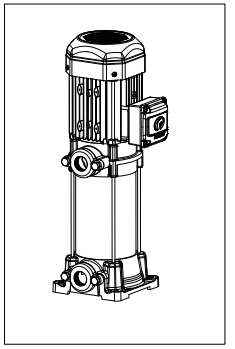
7. The pumped liquid may be hot and under high pressure. Before moving or disassembling the pump, the valve must be closed before draining the liquid in the pump and pipeline to avoid burns.



8. The water pump shall not deliver flammable, gasifiable or explosive liquids beyond the specified value.

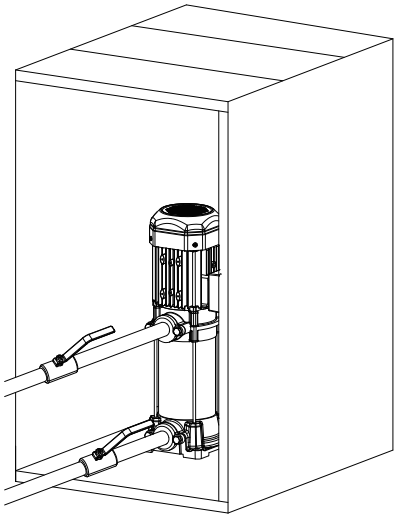


9. During installation andmaintenance, ensure the water pump is not accidentally connected. If it is not used for a long time, the power supply must be cut off first, and then the water pipe valves at the inlet and outlet of the water pump must be closed.



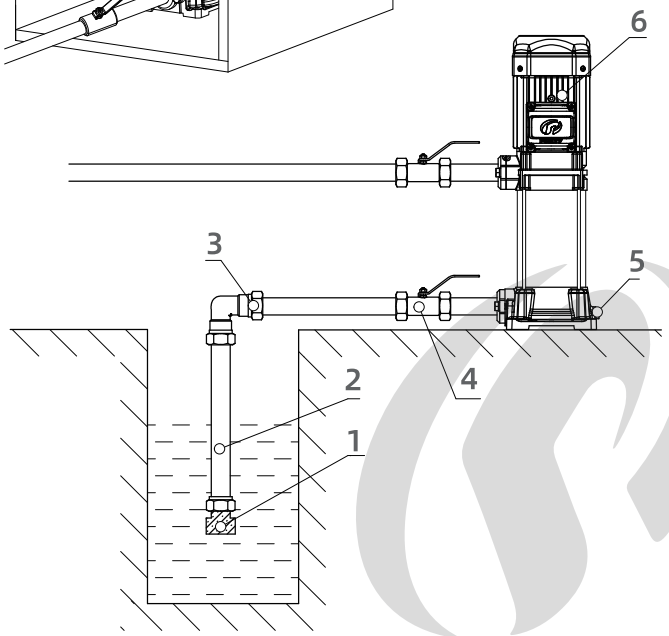
10. Supply power according to the voltage indicated on the nameplate. If not used for a long time, keep it at room temperature in a dry, ventilated, and cool place.

Pump installation and precautions



1. The pump should be installed so that the inlet and outlet pipes are as short as possible and the number of bends is as small as possible. The pump can be installed outdoors, but it must be covered with suitable materials to prevent wind and rain.

2.When used on pipelines, valves should be installed on the inlet and outlet pipes. A check valve should be installed on the inlet pipe.



1.bottom valve
2.inlet pipe
3. flexible joint
4. valve
5.brain bolt
6.electric pump

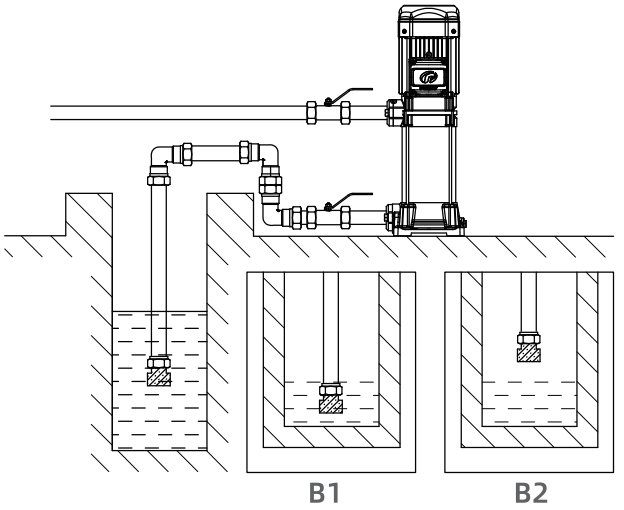
Correct installation diagram A

Pump installation and precautions

1. When install the electric pump, it is forbidden to use too soft rubber hose for the water inlet pipe to avoid flattening.
2. The bottom valve should be installed vertically and 30cm away from the bottom of the water to avoid sucking mud and sand (B2).
3. All joints of the inlet pipe must be sealed, and elbows should be minimized, otherwise water will not be sucked.
4. The diameter of the water inlet pipe should be at least the same as the diameter of the water inlet to prevent excessive hydraulic loss and affect the output performance.
5. When using, pay attention to the water level drop, and the bottom valve should not be exposed to the water surface (B1).
6. When the length of the water inlet pipe is greater than 10 meters or the lifting height of the water inlet pipe is greater than 4 meters, the diameter of the water inlet pipe must be greater than the diameter of the water inlet of the electric pump.
7. When installing the pipeline, ensure that the electric pump will not be subjected to pipeline pressure.
8. In order to prevent solid particles from entering the electric pump, a filter must be installed on the inlet pipeline.

Notes on water outlet pipe installation

The diameter of the water outlet pipe should be at least the same as the water outlet diameter to minimize pressure drop, high flow rate and noise.



Incorrect installation diagram B

Troubleshooting

Fault phenomenon	Cause Analysis	Measures
The motor does not run after power is turned on	1. No power supply 2. Fuse burnt out 3. Starter overload device tripped 4. Starter contacts cannot be closed, or coil burnt out 5. Control circuit fault 6. Motor fault	1. Power supply 2. Replace fuse 3. Reset 4. Repair 5. Check 6. Repair
After the power is turned on, the starter is overloaded and the protector immediately trips	1. One of the fuses is burnt out 2. The overload device has bad contacts 3. The wire connector is loose or bad 4. The motor winding is bad 5. The water pump is stuck and cannot rotate 6. The overload current setting is too low	1. Replace the fuse 2. Replace 3. Tighten or replace 4. Repair 5. Check and adjust 6. Reset
The starter occasionally trips	1. The overload current setting value is too low 2. Peak load is coming in, the voltage is too low	1. Reset 2. Check the power supply system
Uneven pump flow	1. Pump inlet pressure is too low (cavitation) 2. Suction side pipe is partially blocked 3. Water inlet pipe is too small	1. Check the inlet status 2. Clean the pipeline 3. Increase the water inlet pipeline
The pump is running but no water is coming out	1. The suction side pipeline or the water pump inlet is blocked 2. The bottom valve or check valve is stuck and causes the closed state 3. The suction side pipeline leaks 4. There is air in the pipeline or pump 5. The motor is reversed	1. Clean the pipeline 2. Repair 3. Repair 4. Check the inlet status 5. Change the motor direction
When the switch is turned off, the pump reverses	1. Leakage in the suction side pipeline 2. Damage to the bottom valve or check valve	1. Repair 2. Repair
Shaft seal leakage	Shaft seal damaged	Replace
Noise	1. Cavitation occurs 2. The pump shaft is not in the correct position and does not rotate flexibly 3. The head of the device is too low compared to the head of the pump 4. The inverter does not operate	1. Check the inlet status 2. Adjust the pump shaft position 3. Improve the system or reselect the model 4. Check the inverter

If you still cannot troubleshoot a problem by following the instructions in the table above, please call your local dealer or contact PURITY PUMP CO., LTD.

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