

SHIMGE[®]
----- *for better life*

SERVICE MANUAL
TIMING AND CONSTANT TEMPERAUTRE
CIRCULATION PUMP

Model: XPH



- Warning**
- Ground motor before connecting to power supply.
 - Do not touch the pump while it is running.
 - Do not run the pump without water.

SHIMGE PUMP INDUSTRY GROUP CO., LTD.

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V. Trouble Shooting

Symptom	Possible cause(s)	Corrective action
Pump will not start or run	Loose or broken wiring	Tighten connections,replace broken wiring
	Blown fuse or open circuit breaker	Replace fuse or close circuit breaker
	Broken capacitor	Replace capacitor
	Fibers or foreign object lodged in impeller	Disassemble pump and clean
Pump vibrates and/or makes excessive noise	Foreign material in pump	Disassemble pump and remove foreign object
	Set flow too large	Switch to lower speed
	Gas within system	Exhaust the gas
Pump will not deliver water or develop pressure	Suction line (or valve) is closed	Open suction line or valve
	Gas within pipes or pump	Make pump running and loosen the connector of the outlet to ensure gas discharged
Temperature display is 00°C all the time	Loose or broken temperature sensor	Tighten connections,replace broken temperature sensor

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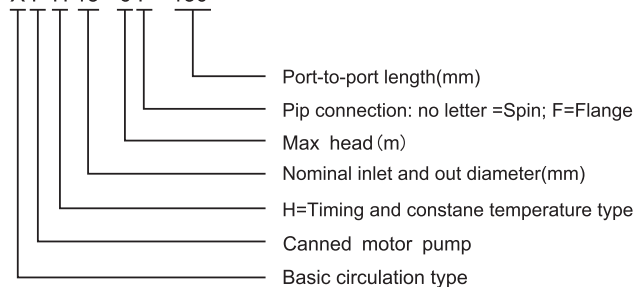
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I . Introduction

- 1.XPH series shielded silent circulating pump (hereinafter called as “pump”). The motor stator will be totally shielded and the rotary components will emerge into water, playing an important role in cooling and lubricating during working. The thin housing structure is used as rotor can, which fully separates the stator and water. The bearings are made of ceramic, which is durable and can be purified with water. The ceramic bearings can not only effectively cool the motor, but also reduce the noise. With the most reasonable hydraulic characteristics, pump can work within full head, so this product is able to be free of service if accurately used.
- 2.The pump could carries out fixed cycle operation all day around or constant temp operation between 0℃-75℃.
3. Heat-proof materials is adopted in motor, available for heat circulating compression system.

II .Type Key

X P H 15 - 6 F - 130



8. Power off status

When the system is power off, all the time and temperature ranges set will be recorded automatically. The system will load the data recorded after being charged with electricity.

9. Pump running conditions

- 1) Time adjusting mode: unconditional run (manually).
- 2) Timing mode: the pump operates when the current time corresponds to the time range set; it stops running when the current time isn't within the time range set.
- 3) Constant temperature mode: the pump operates when the current temperature corresponds to the temperature range set; it stops running when the current temperature isn't within the temperature range set.
- 4) Timing and constant temperature mode: the pump operates when the current time and temperature meet the conditions set simultaneously, otherwise it will stop running.

10. Other notes

- 1) The system is in non-working state when the indicator light of “RUN” is off; the pump is in operating state when the indicator light of “RUN” is on; the system is in working state when the indicator light of “RUN” flickers, but the current time or temperature does not meet the operating condition of the pump.
- 2) The mode can only be switched when the system is in “non-working” state.
- 3) In case of canceling the operating condition set, all you need to do is to enter the setting state of the mode, press the “OK” key, then the indicator lights of “Start” and “End” will extinguish simultaneously, and then all the operating conditions of this range can be canceled.
- 4) Please mare sure the current time has been corrected before setting the time range.

4. Operation to set the time range under timing mode

Press "OK" to set the time ranges when the system is in "Timing mode"; press the right or left "Adjusting" buttons and choose any number out of 0 to 9 to make a setting when the indicator light of "Time range No." flickers. After the former step press "OK" to set the starting and ending time of the pump.

Several operating time ranges can be set by taking above mentioned steps. When all the time ranges setting are finished, press "Mode shift" to return to the main interface or press the "Start/Stop" button directly to enter timing mode.

5. Operation to set the temperature range under constant temperature mode

Press "OK" to set a temperature range when the system is in "Temperature setting mode"; after the setting of starting and stop temperature is finished, press "OK" to return to the main interface, or press the "Start/Stop" button directly to enter constant temperature mode.

6. Operation to set the run conditions under timing and constant temperature mode

Press "OK" to set the time and temperature ranges when the system is in "Timing and constant temperature mode", the setting method of which is the same with that of time range setting of timing mode and temperature range setting of constant temperature mode.

Similarly, as for the timing and constant temperature mode, 10 different operating time and temperature ranges can be set according to users' demands. After the setting of operating conditions is finished, press "Mode shift" button to return to the main interface, or press the "Start/Stop" button directly to enter timing and constant temperature mode.

7. Operation of function viewing

Press "Function viewing" button to check the setting data of the current mode when the system is running. Press the right and left "Adjusting" buttons to switch the time ranges and then press "OK" to check the start/end time and the start/stop temperature. Press "Function viewing" again to return to the main interface.

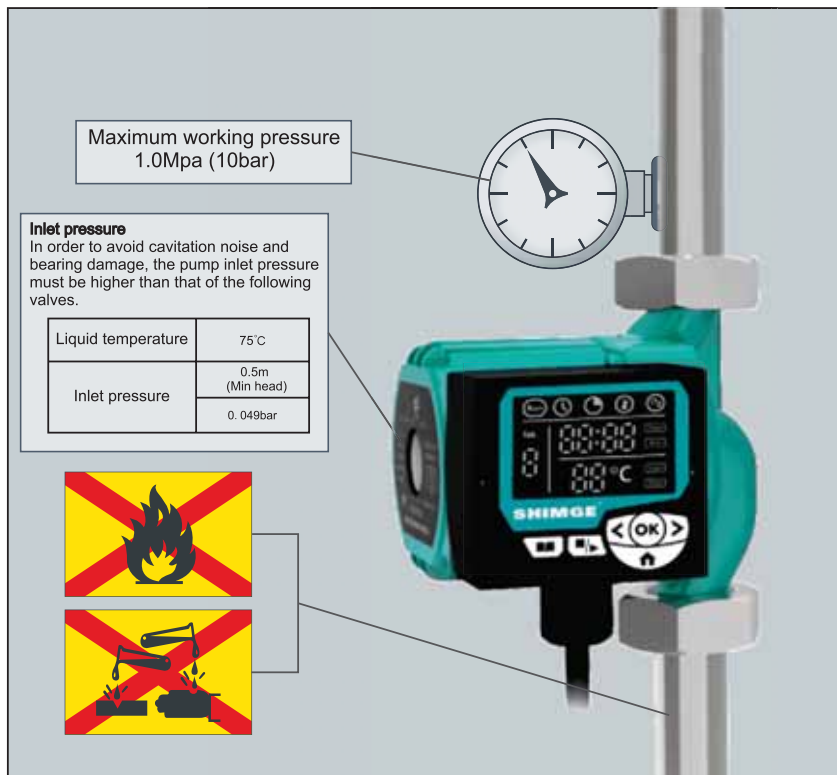
Press "Function viewing" to check the setting data of any mode when the system is not running or the pump operates under the "Time adjusting mode". Press "Mode shift" to switch the working mode, press the right and left "Adjusting" buttons to switch time ranges and then press "OK" to check the start/end time and the start/stop temperature. Press "Function viewing" again to return to the main interface.

III. Installation and Cautions

1. Make sure that the pipe system is securely connected before installation and confirm that the impurities, soldering leftover and wastes within the pipes have been cleaned.
2. Make sure the pump is located in dry and ventilation environment to avoid short circuit due to moisture or splashing into the casing, and guarantee its availability to service and replacement.
3. The protection cover must be added, for the requirement of outdoor installation; while action must be taken to avoid being splashed and to prevent electric shock risk in indoor installation. Do not install in bathroom to prevent vapor or water or moisture from going into the terminal box.
4. When complete installing the pump, connect the power supply and press the "start /stop" button as pilot run to check if the starting is normal, but the pilot running time can not be over 5 seconds so as to avoid idle running influencing shelf life of the bearing.
5. We strongly suggest users to install shutoff valves at intake and outlet ports for the sake of following pump service and maintenance.
6. When the pump is supplying water to match the heat system, do not touch the pump or pipes to avoid burning.
7. The motor must be strictly grounded. Securely connect the GND pin of the power plug to the power grounding hole. Do not attempt to defeat the GND plug of the pump.
8. The striking security caution markings must be set up at the scene during pump working to avoid any accident.
9. The power supply must be cut off before adjusting pump location or before any action that may touch the pump during the pump is working to avoid any accident.
10. Regularly check the pump and timely replace in case of any damage.
11. Regularly check the insulating resistor of the pump, the insulating resistor in cooled state can not be lower than 50M Ω ; and the insulating resistor can not be lower than 5M Ω when it closes to working temperature.
12. The cable can only be replaced with a corresponding cable or the dedicating components.
13. In winter, when the environment temperature is below 0°C, the water within the pipes must be exhausted thoroughly if the pump ceases working to avoid pump frost crack.
14. The heating supply pipes can not be always compensated with non-soft water to avoid the scale clogging the impeller.

15. Transmission Medium

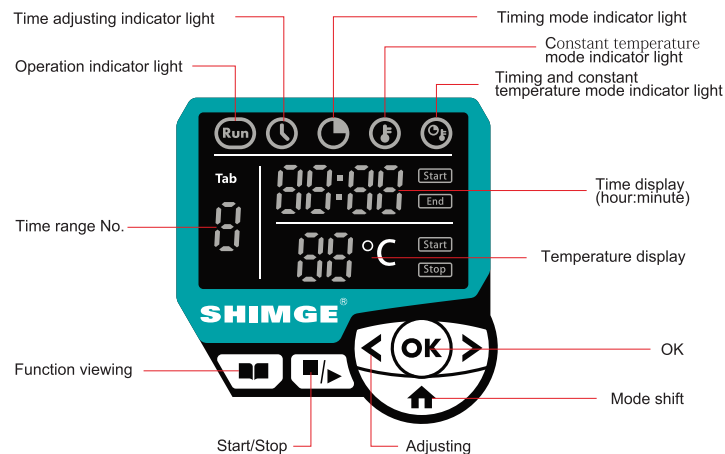
The medium transmitted must be soft water, thin clean non-erosive, non-solid particle contained liquid without fiber and minerals, and the PH value is 6.5-8.5.



IV. Operation Manual

1. Interface description

Shimge XPH series Timing and Constant Temperature circulation pump adopts a innovative and friendly operation interface and the overall operating parts are as follows:



2. Power On

The system will automatically run at the operating state before the power outage after it is charged with electricity and the operating state before the power outage will be saved.

Press the “Start/Stop” to start or stop the pump manually when it is in the “Time adjusting mode”.

Press “Mode shift”, and the mode will be switched among “Time adjusting mode”, “Timing mode”, “Constant temperature mode” and “Timing and Constant temperature mode”.

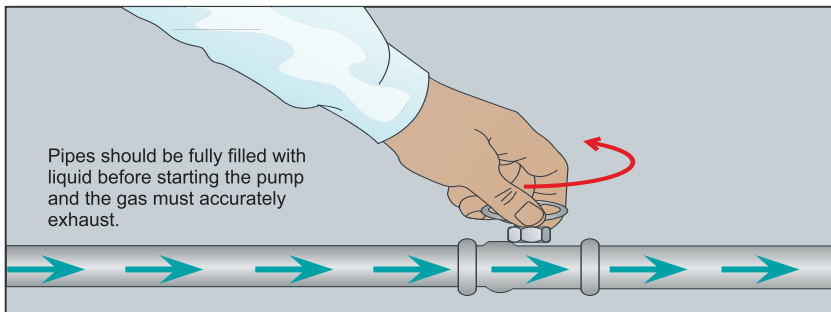
3.Operation to set current time

Press “OK” to correct the time displayed into the current time when the system is in “Time adjusting mode”; press the right or left “Adjusting” buttons to adjust the readings of “hour” and “minute” and then press “OK” to confirm the current time. The current readings will be recorded into the system-on-chip.

20. Pipe Exhaust

We suggest installing an automatic exhaust valve in pipe to ensure smooth emission of the system gas.

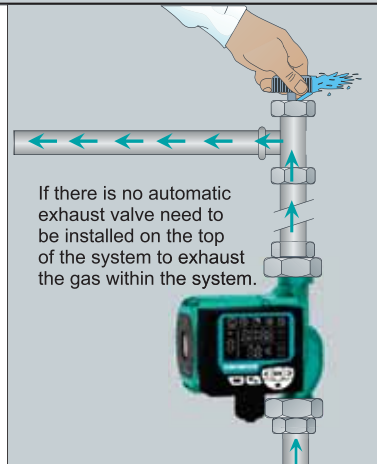
If the pump is used in household heat system, switch on the water source and turn on each tap, then the gas can be exhausted.



21. Pump Exhaust

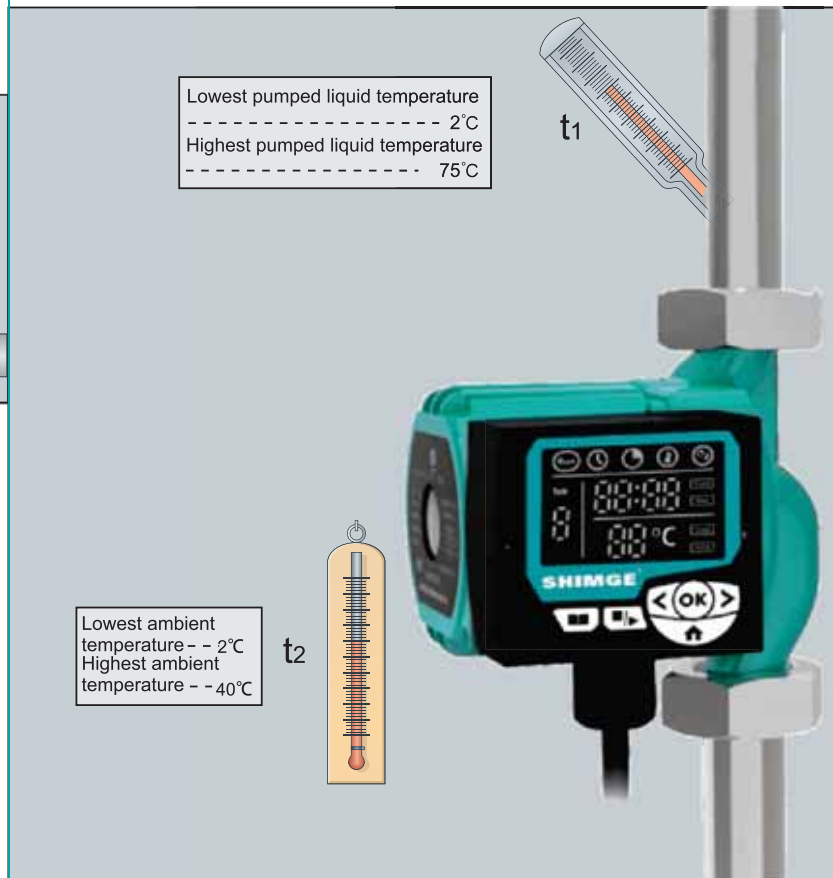
The gas within the pump must be also exhausted after the system being exhausted to ensure the pump a good running.

Note: care must be take not to splash the water column or drops go into the terminal box to avoid the electric fault.



16. Liquid and Ambient Temperature

System temperature(t_1) must be higher than environment temperature(t_2) to avoid the short circuit in terminal box on account of the condensation of pump body. Please refer to the temperature instructions on the product label.



17.Pump Installation

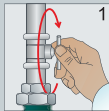
The motor shaft must be kept in horizontal direction when installing; the liquid flowing direction in pipe must be same with the arrow marked on pump body.

18.Pump Maintenance

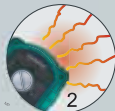
These operations can only be completed by qualified personnel.



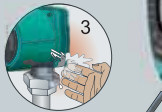
1. Make sure the power switch and inlet valve are all turned off in case any service needed.




2. An operating motor will run at a high temperature and will be too hot to touch.



3. The service or repair can only be started after the pump is cooled, otherwise the heat or the hot liquid will injure yourself.





19.Cable connect

