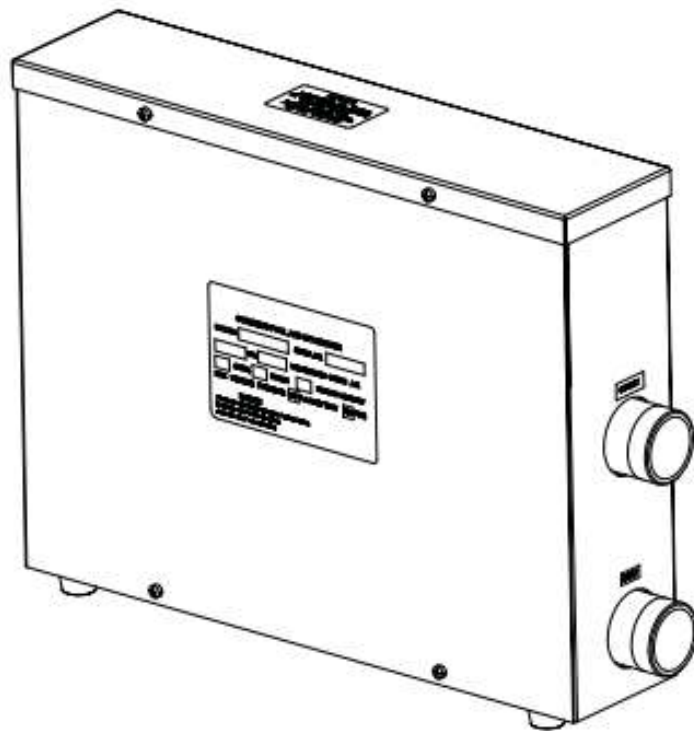




POOL HEATER



This is the original instruction, please read all manual instructions carefully before operating. VEVOR reserves clear interpretation of our user manual. The appearance of the product shall be subject to the product you received. Please forgive us that we won't inform you again if there is any technology or software updates on our product.

WARNING

Only professional staff can install and maintain this equipment. Any damages and issues from unauthorized alteration or improper maintenance of this pool heater, will not be responsible by warranty.

1.0 LOCATION AND PLUMBING

A. Installation: Location

Swimming pool heater may be conveniently located in a shed or basement, fixed on a smooth and flat surface. Its suggested position should be close to the pool filtration system. Select a location closed to incoming electrical service instead of too long.

Refer to Figure 1 for correct installation and connection with the filtration system. Leave at least 200 – 300 mm space above and around the heater for maintenance and repair.

Warning! Without auto-control system
Turn on circulation system first, then power on heater;
Power off the heater first, then turn off the circulation system

CAUTION
DO NOT INSTALL ANY SHUT-OFF VALVE ON DISCHARGE SIDE OF HEATER. A SWING CHECK VALVE IS PERMITTED.

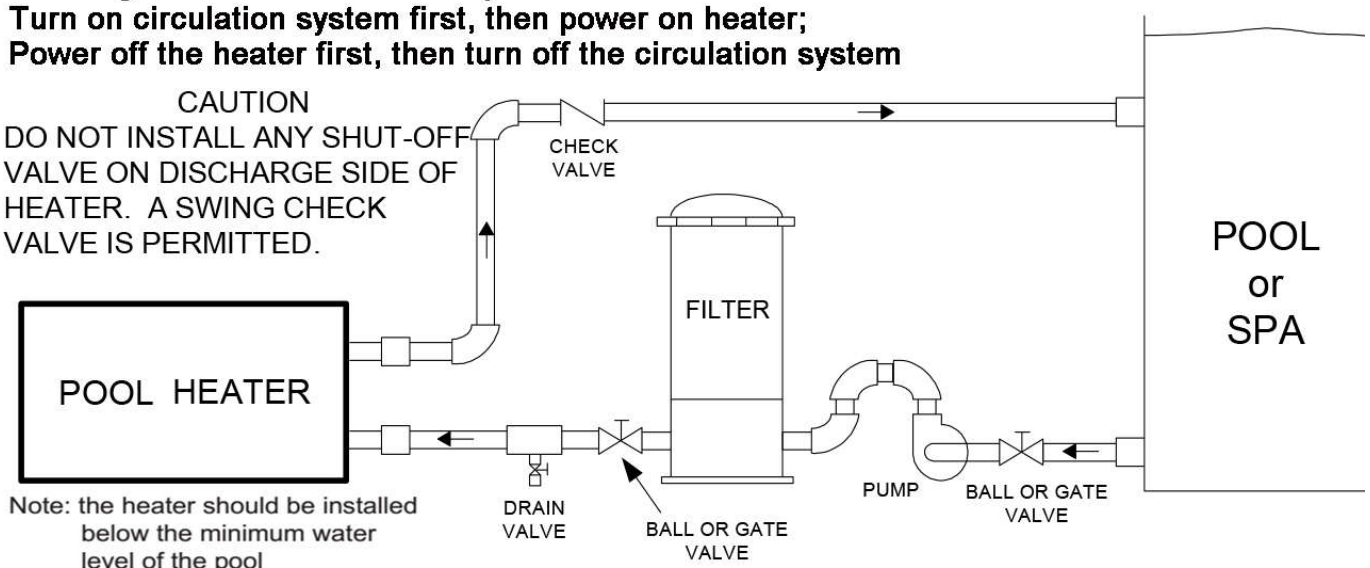


Figure 1 Plumbing

B. Installation: Plumbing

If you use a plastic pipe, the temperature should be at least 120°C/248°F.

A plumbing bypass around the pool heater is not necessary unless flow rates through the heater exceed 44GPM. The lack of sufficient flow will not allow the switch to activate the heater.

In larger Olympic-sized or public pools, it may be necessary to use two or more heaters to obtain sufficient KW capacity. If so, heaters must be placed in parallel, so that each heater takes equal flow.

C. Electrical installation

1. Check tech-plate rating to ensure the heater matches your electrical supply.

2. CHECK ELECTRICAL CONNECTIONS TO ALL COMPONENTS within the heater for tightness. These can become loose during shipment and handling.

3. Check components, and clean where is accumulated moisture, rust, or dust during shipping.

All other internal connections are completed and tested at the factory.

Wiring diagrams are showed on Figure 2. Please refer your local electrical rules for correct wiring, proper conduit sizes, and other local requirements.

Please connect the pool heater to a correct voltage circuit device according to the tech-plate.

Bring proper size of wires from the conjunction box with 125% of heater's ampere rating, also connect the power conductors to pool heater through terminal block.

Ground wires must be insulated copper conductors and the same size as supply wiring, but not less than 12 AWG.

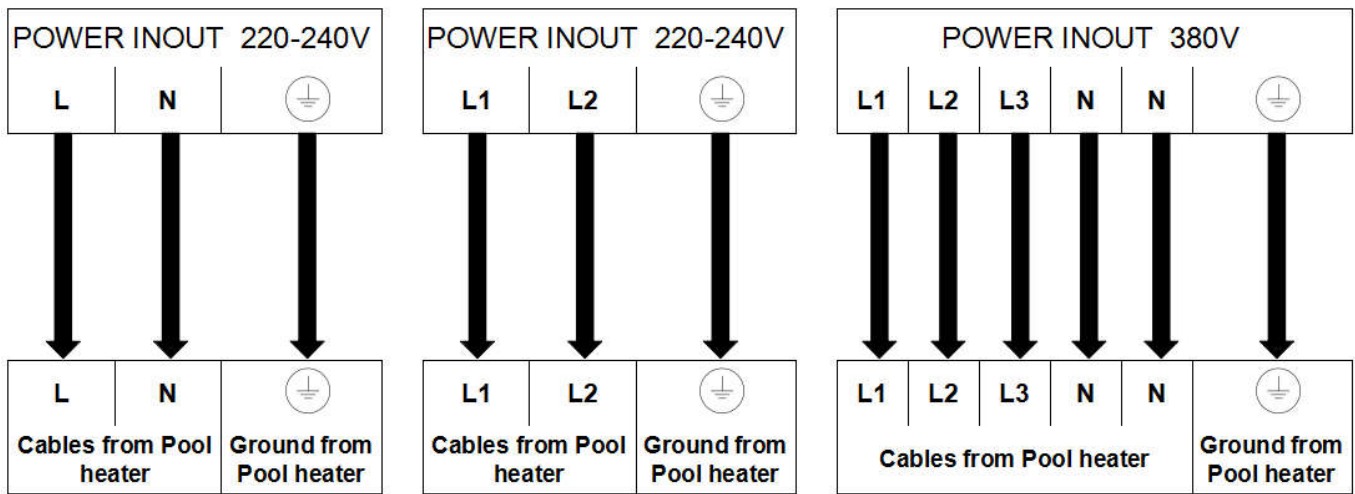


Figure 2 Wiring

Startup Procedure:

1. Make sure that the pump is on, or the heating elements will fail if allowed to operate dry.
2. Turn on the leakage switch and power at the main disconnect switch.
3. Turn on the pool heater.

When closing down the pool, shut off the power at the main disconnect switch, and drain the water from the system. Water must not be allowed to freeze in the heater, as this will cause severe damage.

2.0 OPERATION

1. Water and electricity must be tested first.
2. Press "ON" on the power switch to start the machine, and the current water temperature will be showed on the display screen soon.

Heating indicator "4" keep blinking, which means the pool heater is working.

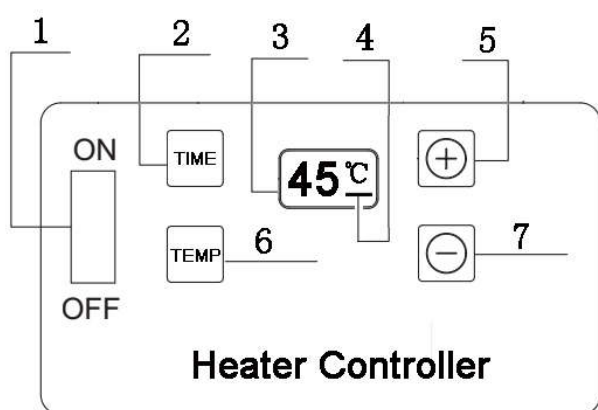
3. Factory default temperature is 45°C/113°F, default heating time is 8 hours.

Heater is protected with 65°C/149°F high temperature limited unit.

4. Set the temperature: press button “6” first, and press button “5” or “7” to increase or decrease the setting temperature by 1℃, the setting temperature will be displayed when its digits blinking for 5 seconds.

Adjust the heating time: press button “2” first, then press button “5” or “7” to raise or lower the heating time by 1 hour.

5. If reconnected to power, the setting temperature or heating time will keep same as last time.



Model	Power kW	Voltage V (50/60Hz)	Pipe Diameter	Dimension Mm
ST-5.5	5.5	220-240 V~ 380-415 3N~	1.5inch	480*106*355
ST-9	9	220-240 V~ 380-415 3N~		
ST-11	11	220-240 V~ 380-415 3N~		
ST-15	15	220-240 V~ 380-415 3N~		
ST-18	18	220-240 V~ 380-415 3N~		

Digital heater control panel:

- | | | |
|---|--|-------------------|
| 1. Power switch | 2. Time control button (1-15 hours) | 3. Display |
| 4. Heating indicator | 5. Up button | |
| 6. Temperature control button (22-50℃/72-122℉) | 7. Down button | |

3.0 OPERATION

Semi-Annual Cleaning:

Accumulated sludge in the vessel can cause the elements damaged. The pool heater should be drained and cleaned to remove any scale or sludge twice a year (before summer start-up and before winter). Clean it multiple times if pool water contain sediment or other dust.

- | | |
|--|--|
| 1. Power off the pool heater. | 2. Open drain valve. |
| 3. Keep water running until it is clear. | 4. Close the valve and restart normally. |

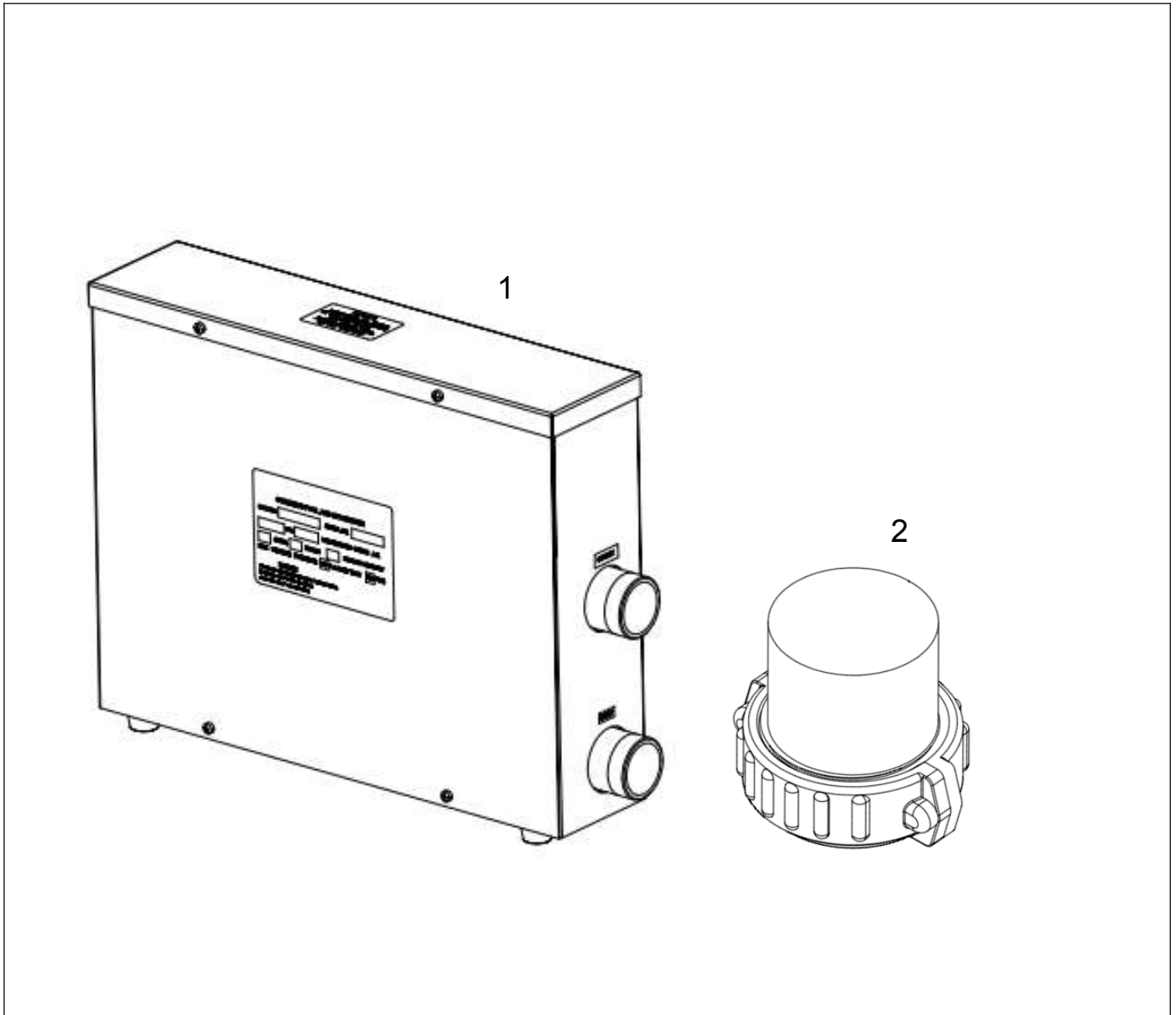
4.0 TROUBLESHOOTING

Symptom	Possible cause	Remedy
Low Heat	Heater too small for spa	Check heater sizing requirement of spa .
	Heat loss from poor weather(cold,high winds)	Use spa cover
No Heat	No power to heater	Check the circuit breaker whether its “ON”
	Insufficient Flow/Pressure	Check that pump is running and filter is clean; Turn to high speed if using a 2-speed pump.
	Machine not calling for heat	Set the higher temperature.
Fuse blow or circuit breaker opens	Shorted heating elements	Replace heating element
	Undersized wire	Replace field wiring
“EE” blinking	Temperature sensor fault	Check the sensor for loosen, or replace a new one after cutting off power.
“EH” blinking and working with buzz	Temperature is over 5 °C /41°F than setting temperature	Possibility of plumbing blockage or lack of water, check the water supply,water pump and valves. After solving the problem, restart the pool heater.
	Abnormal temperature rising for three times in a short time.	

5.0 BEFORE INSTALLATION

Parts

Check that the following parts are included in the packaging:



1. Pool heater

2. Union assembly w/t O-ring x 2

Manufacturer:

QINGYUAN FENLE SAUNA & POOL EQUIPMENTS CO., LTD.

Address:

**M1-10, YINGFU INDUSTRIAL PARK, HIGH & NEW TECHNOLOGY INDUSTRIAL
DEVELOPMENT ZONE, CN**