

A.O.SMITH
WATER HEATER
A.O.SMITH WATER HEATER CO.,LTD

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ELJH Cylinder Electric Wall-Hung Water Heater
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INSTALLATION & INSTRUCTION MANUAL

Congratulations on your purchase of a new, high quality wall - hung water heater from A.O.Smith. Your heater is equipped with technology and features that only a company with over sixty years of experience can deliver. With the proper care, your heater will deliver comfortable hot water for years to come.

We are concerned about your safety and ask you to read this manual thoroughly and pay close attention to all of the warning and information contained inside. Be sure to keep these instructions for future reference.

Thank you for buying an A.O.Smith brand water heater.

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General Safety Information

We strongly suggest that you read this manual thoroughly before installation and use of this water heater. Be sure to keep these instructions for future reference.

- A. O. Smith Company will not be liable for any damage resulting from incorrect installation of this water heater. Only professionals recognized by A. O. Smith are allowed to install this water heater for you.
- Be sure to shut off the power before any repair and maintenance for this water heater. Non-professionals are not allowed to adjust or repair this water heater.
- Hot water may cause serious scalding injury. Hot water must be mixed with cold water before shower or washing.
- The water heater system may produce steam or extremely hot water if burned without water inside the tank. Any parts dipped in the water needs to be examined or repaired by qualified professionals before next use.
- For water heaters equipped with power cord, if the power cord is damaged, only customer service personnel of water heater manufacturer or similar professionals are allowed to replace it. All key parts of this water heater are insulated or have heat-insulated coating, users may rest assured in using it.
- For the purpose of safe use, it is prohibited to alternate the installation position of the pressure-relief safety valve without permission or block its outlet.

Attention: If not abide by the content of this manual strictly, fire may be caused and leads to property damage, personal injuries or death.

Warning: Power socket cannot be used unless it is well grounded. Do not use ungrounded water heater.

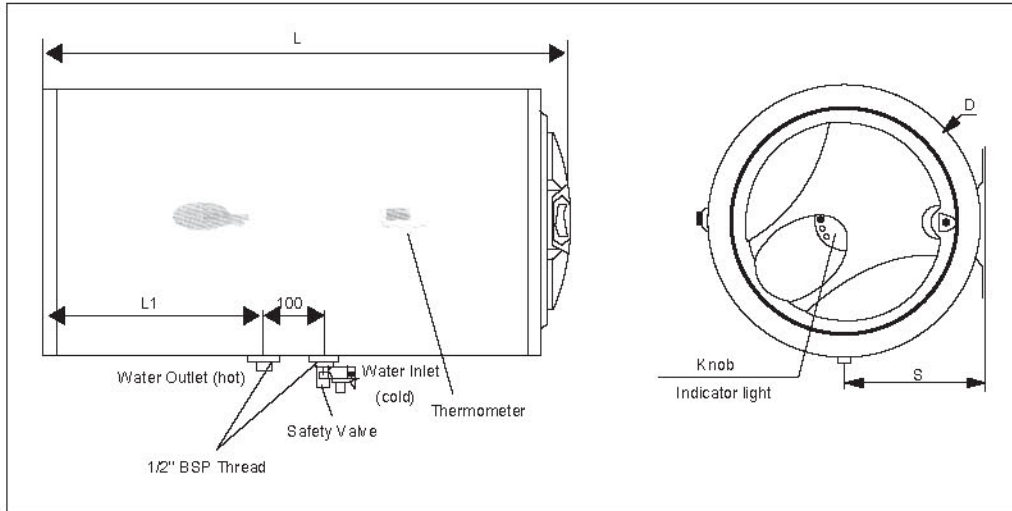


Figure I - Physical Characteristics

Model	ELJH-30	ELJH-40	ELJH-45	ELJH-50	ELJH-55	ELJH-60	ELJH-65	ELJH-80	ELJH-100
L(mm)	605	710	830	830	962	962	795	865	1025
S(mm)	200	200	200	200	200	200	250	250	250
D(mm)	ø360	ø360	ø360	ø360	ø360	ø360	ø463	ø463	ø463
L1(mm)	195	280	345	345	405	405	320	370	450

Standard: GB4706.1 GB4706.12

Model	Capacity (L)	Voltage(V)/Frequency(Hz)	Input (W)	Current (A)	Temp. Range(°C)	Rated Water Pressure (MPa)	Net Weight (Kg)
ELJH-30	30	220VAC 50/60Hz	500/800/1500/2000	6.8/9.1	(30~75) ± 5	0.8	17
ELJH-40	40	220VAC 50/60Hz	500/1250/1500/2000	6.8/9.1	(30~75) ± 5	0.8	19
ELJH-45	45	220VAC 50/60Hz	1500/2000	6.8/9.1	(30~75) ± 5	0.8	21
ELJH-50	50	220VAC 50/60Hz	500/1250/1500/2000	6.8/9.1	(30~75) ± 5	0.8	21
ELJH-55	55	220VAC 50/60Hz	1500/2000	6.8/9.1	(30~75) ± 5	0.8	24
ELJH-60	60	220VAC 50/60Hz	500/1250/1500/2000	6.8/9.1	(30~75) ± 5	0.8	24
ELJH-65	65	220VAC 50/60Hz	1500/2000	6.8/9.1	(30~75) ± 5	0.8	28
ELJH-80	80	220VAC 50/60Hz	500/1500/2000	6.8/9.1	(30~75) ± 5	0.8	31
ELJH-100	100	220VAC 50/60Hz	1500/2000	6.8/9.1	(30~75) ± 5	0.8	35

Chart I - Specifications

Safety Features

High Limit:

The high limit rapidly cuts off live line and zero line simultaneously to guarantee safety in case the water heater happens to be faulty and water temperature exceeds the highest temperature pre-set in the thermostat.

Safety Valve:

This appliance has a pressure relief valve(see Figure I). It must be installed in the inlet piping (blue). It has been factory set at 0.8 MPa and is not adjustable. This valve relieves and discharges when the actual pressure in the piping exceeds this set rate. The discharge outlet of this valve must face downward, and the discharged water must be piped into or within 15cm above a suitable drain. Under any circumstances, the drain line cannot be blocked, and must be open to atmosphere. Please refer to Figure VII for water installation.

Product Features

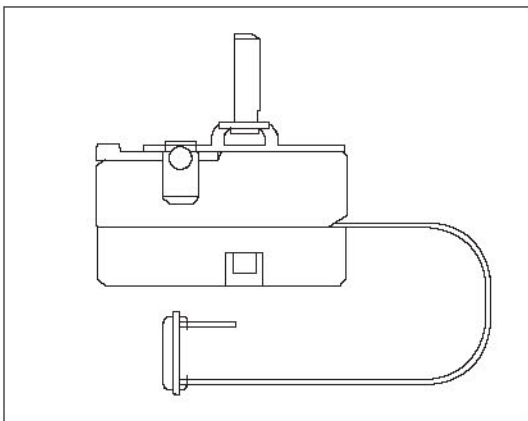


Figure II

Thermostat:

The liquid-expansion thermostat senses water temperature fast, reliable and accurate. Water temperature can be adjusted by the external knob conveniently and fast (See figure II).

Enamel Coating Tank:

With the advanced anticorrosive technique, A. O. Smith Company evenly coats special silicon frit onto the tank inner surface and fuse the frit coating to the steel at a high temperature of 870°C, forming a durable enamel coated tank. It can endure huge impact without breaking off and completely isolate the water inside the tank from the tank surface. It has passed the 100,000 times cycle test per UL (Underwriters' Laboratories) standard and proved to be one of the most durable water heater tanks due to its antirust and antiscaling features.

High-efficient Energy-saving Insulation Layer:

This extra-thick CFC-free polyurethane insulation layer keeps temperature well and reduces heat loss maximally.

Anode Rod Protection:

This strong anode rod with stainless-core protects the tank to be durable and greatly prolongs the life of water heater.

Warning: Hot water exceeding 50°C can produce scalding injury. Care should be taken when the temperature is set over 50°C for the safety of your family and children in particular.

Installation Instruction

Installation:

Locate the heater near electric power socket, floor drain and point of water use. Be sure the inlet and outlet of the heater are on the bottom and facing downward. Don't permit to install it vertically!

Warning: Be sure to install the water heater with the provided mounting brackets. The heater can be hung up only after the mounting brackets are solidly mounted and double check. Serious damage and harm can result if the heater falls off from the wall.

Installation Procedure and Cautions

- Make sure that the wall can withstand double weight of fully filled water heater.
- To locate the fixing bolts, make sure that there is a clearance of no less than 300mm between the right side of the heater and the wall in order to facilitate opening up the plastic service cover for maintenance or resetting the high limit when necessary. In case the water heater is embedded in the ceiling, the right side ceiling of the heater should be removable so as to remove the plastic service cover for maintenance when necessary.
- Use 10mm drill to drill 2 holes of at least 90mm depth in wall. The 2 holes should be in line horizontally. See Figure III for distance specification.

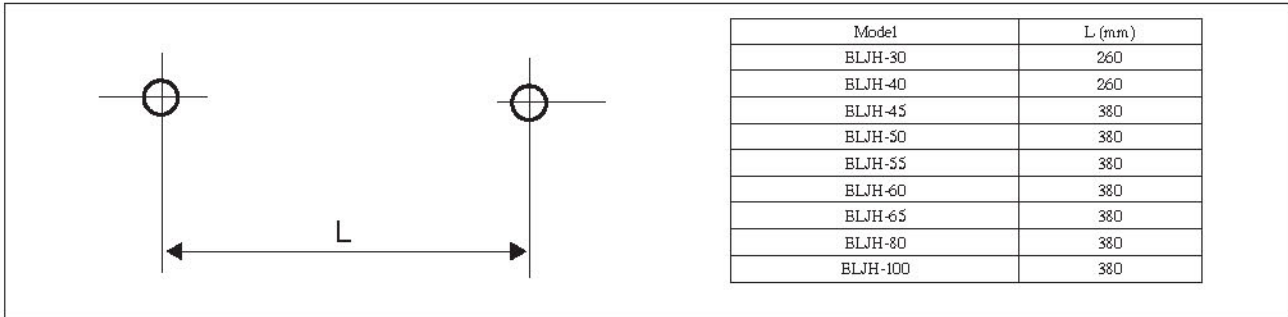


Figure III

Use the hex wrench and expansion bolts to mount and fix the hangers on the wall. See Figure IV for details:

- Cautions:
- * The nylon expansion tube must be put through the hole of the hanger first, before inserted into the drilled hole.
 - * Must use the special hex wrench to drive the bolt into the nylon expansion tube. Don't permit to use other tools. Once the bolt head pressing the hanger plate and making the hanger unmovable by itself, stop further tightening to prevent damaging the nylon tube.

Hang up the water heater by placing the 2 square holes of mounting bracket into the hanger hooks on the wall. Move the water heater downward to ensure that the square holes are fastened to the root of the hanger hooks and confirm water heater is fixed steadily. See Figure V for details.

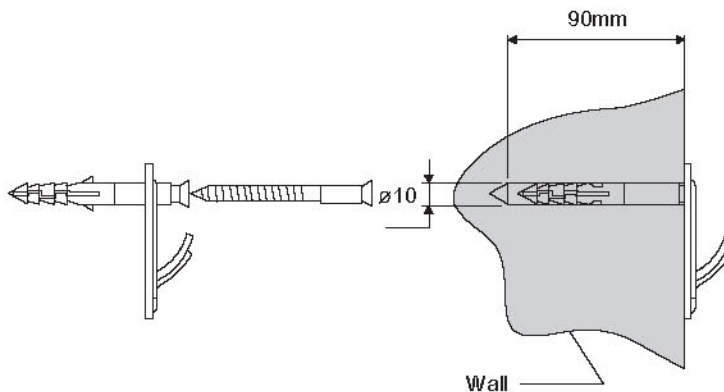


Figure IV

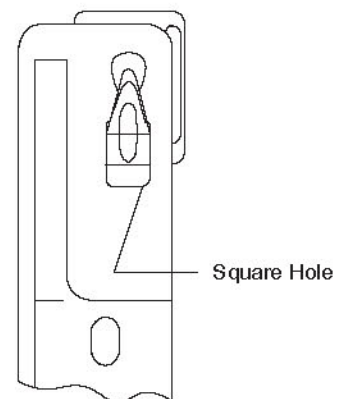


Figure V

Caution: The provided mounting hangers can only be used on solid cement wall. Inappropriate installation may result in heater falling off. See Figure VI for details.

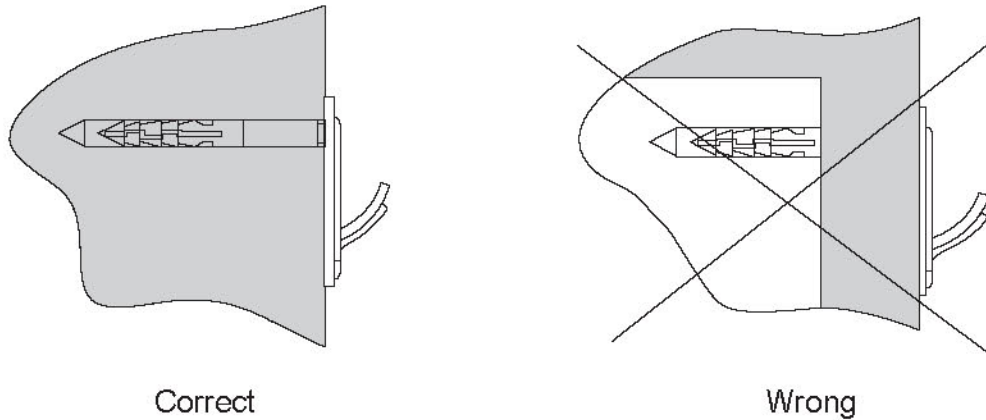


Figure VI

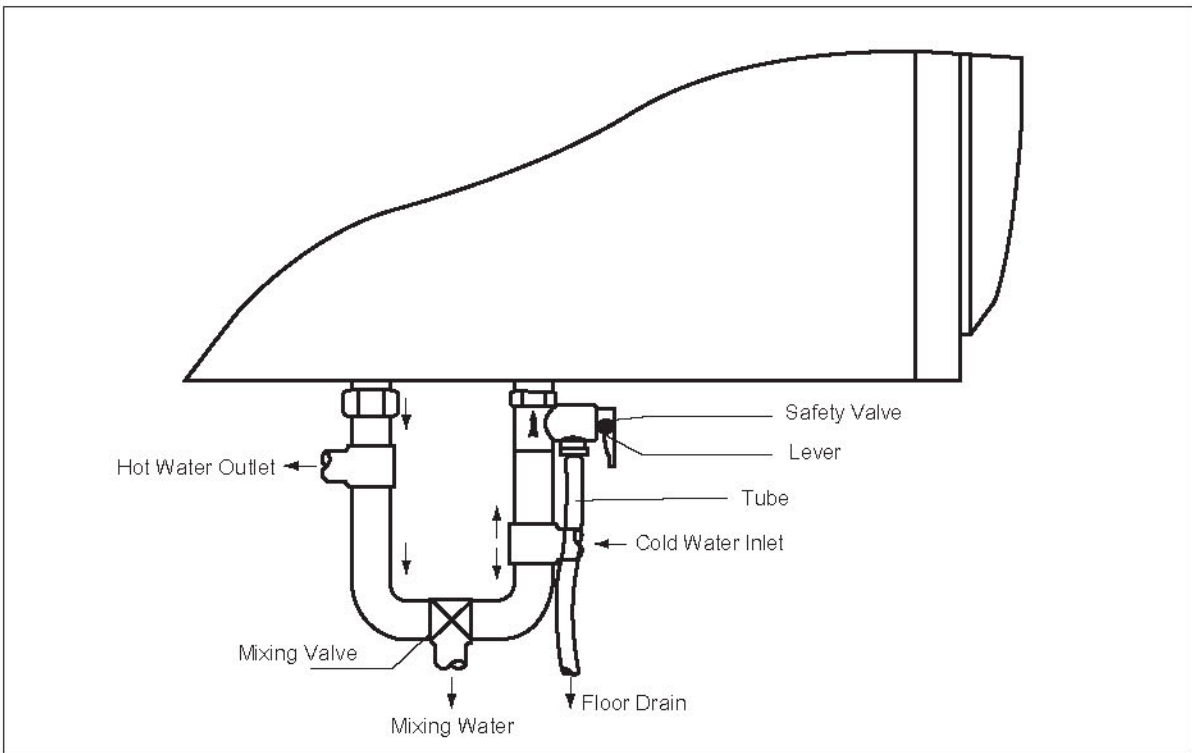


Figure VII Water Connection

Water Connection:

Install the pressure-relief safety valve in the water inlet (blue). The direction of arrow points to the water heater. It indicates the direction of water flow current. Connect hot water pipe to the red outlet. See above content about safety valve for the installation of safety valve. Attention: Make sure a suitable tape thread sealant is used for all connections to prevent leakage. Meanwhile the safety valve must not be tightened too fast to prevent damage. In case that the supplying water pressure is close to the safety valve rating, please install a pressure-reducing valve in inlet piping with sufficient distance away from the heater. See Figure VII for water connection details.

Electrical Power Connection:

The power cord and plug have been equipped and connected with this water heater. Just plug it into a corresponding socket. Attention: Please make sure the water heater and the socket are appropriately grounded. More over, the socket must be of good quality to ensure good contact with the plug.

Filling:

After all the piping connection is done, fully open the cold water faucet and hot water faucet to fill the water heater and drain the air out until water flows from outlet faucet, which indicates the heater is filled. Then close the hot water faucet and check all the connections to see if there is any leak. If it leaks, drain the heater completely, repair the leaking joint and then re-fill the heater.

Operation Instructions

Temperature Setting:

Set the water temperature by adjusting the temperature setting knob on the right side of the water heater. The set temperature goes up when turning down the knob and the set temperature goes down when turning upwards. Normally, it has been factory set at the highest temperature.

Operating:

After making sure the heater is filled up, turn the power on. When the indicating light is on, the heater is being heating; if the light goes off, it means the heater has been heated to the set temperature.

Note:

It is normal that there is water dripping from the safety valve outlet during heating. Under normal use, the safety valve lever should be opened periodically. If water flows, the relief valve is in good working condition; if not, please contact local customer service for maintenance.

Repair and Maintenance

Declaration: Only qualified service technicians are allowed to repair and maintain this water heater. Incorrect operation may cause serious injuries or property loss.

Warning-Electric shock: This appliance must be unplugged before being opened up or repaired.

Attention: Before calling for repair service, please use the Troubleshooting lists on the next page as a guide to correct apparent problems.

Maintenance:

When it is necessary to drain the water heater, close inlet valve, open outlet valve and lift the lever of pressure-relief safety valve, then the water will flow out of the discharge pipe.

Clean water tank periodically to remove scale.

Step by step guides: 1) Shut off power, 2) Remove pressure-relief safety valve and water inlet. 3) Connect water outlet to tap water to become water inlet; connect original water inlet to floor drain with a pipe to become water outlet. 4) Fully open the water inlet valve to wash the tank with large water flow until the water flowing out of the tank becomes clean. 5) Re-connect water inlet and outlet according to Figure VII and start to use after leakage test is qualified.

Caution: Water discharged could be very hot, please take care so as not to be scalded.

Troubleshooting

Problem	Possible Cause	Solution
Indicator light off No hot water	1) Heater is not switched on 2) Heater is power off 3) No power in power socket on the wall 4) Control circuit or internal wiring error	1) Rotate the adjusting knob 2) Turn on the heater power 3) Check the socket 4) Contact customer service
Indicator light off Water temperature too high	1) High-limit trip 2) Thermostat faulty	1) Contact customer service 2) Contact customer service
Indicator light on, no hot water	Heating element(s) breakdown or internal wiring error	Contact customer service
Piping connection leaks	Connectaion not sealed	Re-connect piping, must use tape thread sealant
Cover leaks	Tank or parts leak	Shut off power immediately and contact customer service

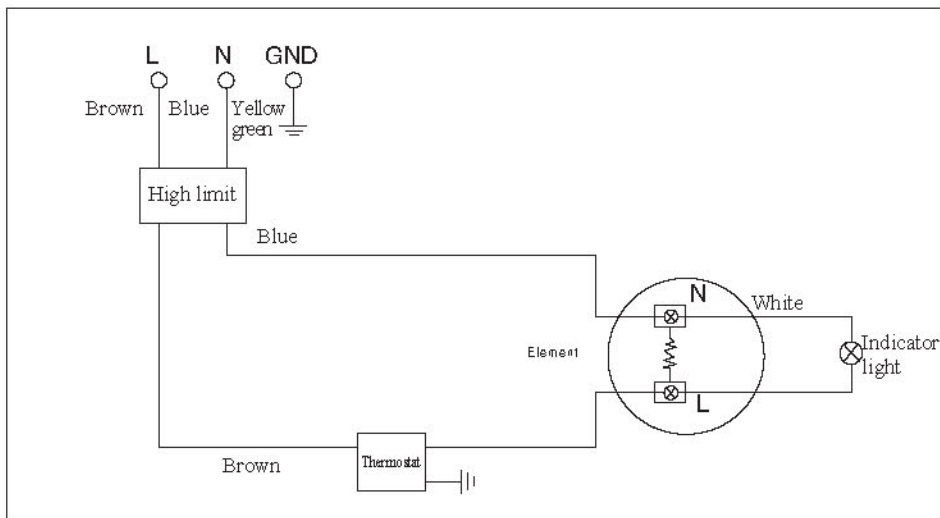


Figure VIII Wiring Diagram