

Non-pressurized Solar Water Heater--SS series

Evacuated tube solar system, SUS304-2B/SUS316L stainless steel water tank

Thermosyphon Solar System Models

Product Model	Tank Capacity	Absorbing Area	Weight	Dimension (L×W×H)	Qty. per 20FT/40FT/40HQ
SS470-1500/47-12	100L	0.6m ²	44KGS	1470*940*1370	67 / 135 / 163
SS470-1500/47-15	130L	0.75m ²	52.5KGS	1470*1150*1370	56 / 111 / 135
SS470-1500/47-18	155L	0.9m ²	61KGS	1470*1360*1370	48 / 96 / 116
SS470-1500/47-20	170L	1m ²	67KGS	1470*1500*1370	44 / 89 / 108
SS470-1500/47-24	205L	1.2m ²	88KGS	1470*1780*1370	38 / 77 / 93
SS470-1500/47-30	260L	1.5m ²	111KGS	1470*2200*1370	32 / 64 / 78
SS470-1800/58-12	130L	0.92m ²	52KGS	1770*1050*1560	54 / 108 / 132
SS470-1800/58-15	165L	1.15m ²	62KGS	1770*1290*1560	45 / 89 / 108
SS470-1800/58-18	200L	1.37m ²	72KGS	1770*1530*1560	38 / 77 / 93
SS470-1800/58-20	220L	1.52m ²	80KGS	1770*1690*1560	35 / 70 / 85
SS470-1800/58-24	265L	1.83m ²	95KGS	1770*2010*1560	30 / 60 / 73
SS470-1800/58-30	300L	2.29m ²	112KGS	1770*2490*1560	24 / 49 / 59

Installation instruction

1. Tips of Installation (professional is needed)

(1) Fitting solar water heater is aloft work. Please do take care!

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(2)Please carefully read the instruction of installation before fitting solar water heater. Follow the instruction as possible as you can.

2. Instruction of installation

(1)The solar water heaters are used for sloping roof. They are dual purpose that is 30 degree angle for putting on sloping roof directly and 15 degree angle for keeping the ridge of house between the short stands.

(2) Handle with care when loading and fitting.

(3)Solar water heater should be put in the place with enough sunlight, and do not make it diagonal. Fasten the joint between solar water heater and the roof by No. 8 iron wire or expansion screw. A hard thing should be put under the stand.

(4)Don't jam the vent! The-joint should be fitted first. Upper vent discharges the gas, and the vent below is for overflow. Don't joint any pipe directly Or the tank may be broken because the gas can not be discharged smoothly.

(5)After jointing front and back stand, tank support and bracing, put the tank on the stand. Note the vent of vacuum tube should conform to culet box and put the ABS plastic base into the hole of culet box. Lap the tank with tank belt and make it on the tank support. At first, don t make it firm, fit the ornament ring with water over the vacuum tube and daub cleanser essence as lube on seal of vacuum tube, and then plug it into the inner hole (circumrotate emphatically). After the vacuum tube is plugged fully, turn up angle to be proper, then make the tank belt firm and plug bottom of the vacuum tube back into the corresponding ABS base (circumrotate emphatically).

(6)When joint inrushing and effluent pipe and pipe fitting, don't screw down effluent pipe great emphatically, and leaking nothing is OK.

(7) Joint the inrushing and effluent pipe using multiple pipes or cross linking pipes as possible as you can to reduce the corruption and heat losing. Pipe should be insulated by insulation material. If electric heater is assembled, its cable can be put in the insulation. Fixate the pipe on the stand and building. In cold area, atmospheric valve can be assembled, which can fully discharge water in the pipe.

(8)After sunning empty vacuum tube for three hours, inner temperature can reach over 250C. At this time, if cold water runs into it, the vacuum tube can be broken. Please take care! Some ways below can prevent the phenomenon occurring when solar water heater is just been fitted.

a. Fill vacuum tube with water fully. After fully cutting in, water immediately.

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- b. Shut out the vacuum tube for three hours, and water after the inner temperature reduces.
- c. First water during evening or night (In summer, water after the time that the sun has sunk for three hours.

(9)When fitting the electric heater, inner tank should connect the wire and assemble leakage protector. Lead must be cable of three cores. Sectional area of every wire must be not less than 0.75mm².

(10)If use the product replenished water by storage tank or automatically replenished water by ball cock and assembled vent-pipe, you should note vent-pipe may be frozen in winter (when ambient temperature is below 0°C), so please do not discharge water until make sure no snow is on the vacuum tube or cover the vacuum tube with opaque objects and sun it for half a day (not less than four hours), otherwise the tank will break because of negative pressure and you are responsible for the result

Use guide

1. If water for the first time you should pour cold water after the temperature in the vacuum tube reduces.
2. When you don't use the solar water heater, hot water, valve of vent and watering valve should be closed; when water, watering valve should be open, while other valves should be closed.
3. After watering fully, water will flow from pipe. At this moment, make the watering valve off, and the hot water valve on for two minutes, which makes the water in the tank vent some to prevent the condition from occurring that the hot water flows from the venting pipe for too much water in the tank, and heat loses.
4. When you are bathing, you should test temperature of water by your hand to prevent your body affecting because the water temperature is too high
5. When the temperature in the house is not high enough you can raise it by bath king or warm air blower.
6. You should adjust the water temperature according to season and sunlight and water pressure. You should adjust the valve of cold and hot water valve to suit for bathing.
7. When you use up the hot water in Summer, you must water immediately or in evening, otherwise vapor in the vacuum tube can be fully evaporated by the sunlight, and give rise to the high temperature (can reach over 25°C), which maybe result in the tubes are broken
8. In spring, summer, and autumn, if water heater is not used for many sunny days after it is filled with water, you should caution the vapor in the tank evaporates fully and water in the evening.
9. Don't sun empty water heater for a long time when there is no water in the vacuum tube to prevent the performance and service life of seal ring and vacuum tube being affected.
10. Before using the electric heater you should check the protector which is proof against the electricity leaks and fuse should be normal. First replenish water, and then connect power Don't heat the empty Cut off the electricity after the water is hot. Don't have the bath with electricity on!
11. Don't use it when it is raining, and keep the tank fully when the typhoon is blowing.
12. If discharging set is assembled, you should first turn off atmospheric valve, and then turn on the hot water vent to discharge the from the pipe.

<p>Can not vent</p>	<ol style="list-style-type: none"> 1.The water in the tank is discharged completely. You should use it after filling the tank with water and getting hot. 2.The vent of pipe is off or jammed You should joint it again, or dredge pipe. 3.The pipe is maybe frozen in winter. It will thaw by itself after the sun has risen for three hours, and the atmospheric valve can be assembled in cold area. 4.The watering and venting valves leak and the water pipe is empty for a long time, which makes the water flow back. 5.Something is wrong with your vent valve or hot water vent. It is not turned on in fact.
<p>Can not water or the overflow pipe can not vent</p>	<ol style="list-style-type: none"> 1.No water is supplied or hydraulic pressure is too low. 2.The pipe joint drops or breaks. 3.Something is wrong with the valve or it is not turned on. 4.If overflow pipe is assembled, maybe the overflow pipe drops, which results in no water flows back and you will feel non-watering. 5.Some vacuum tube is broken.
<p>Water temperature is not high</p>	<ol style="list-style-type: none"> 1.The water heater is just installed, and shining time is not enough. After the following day, it will get normal. 2.Watering and venting valve break or don't screw down, which makes the cold water continually flow into the tank, and hot water rise. 3.Sunlight is not good or radiation energy of sunlight in winter is not enough. Another sunny day is need. 4.Pipeline is not insulated. In winter, ambient temperature is too low and heat loses seriously, so insulation is maybe needed. 5. Vacuum tube leaks gas, and heat loses quickly.

<p>Water temperature is not steady</p>	<p>1.Pressure of tap water is bigger than hot water. You should first turn on cold water tap a little, and then turn on hot water tap, and adjust the cold water flow at last. 2.Pressure of tap water fluctuates. Don't turn on other tap water valve when having a bath.</p>
<p>Water temperature is too high and can not be adjusted</p>	<p>The pressure of tap water is too low. Have a bath when the hydraulic pressure is high or after the water is vented into the pool and gets cool.</p>
<p>When turn on the water valve, out of the tap water pipe is hot.</p>	<p>Hydraulic pressure is too low, and hot water flows back. When hydraulic pressure gets high, replenish water.</p>
<p>Flow from vent is not big</p>	<p>1. Hydraulic pressure of water pipe is too low, and the pressure difference between tank and vent is too small, so pressure is small after cold and hot water mixed. 2.The vent has small and less holes or it is partly jammed by something. You can exchange a vent of big flow or clean the vent.</p>

Common Sense of solar water heater

1. What is feature of solar water heater?

To compete with conventional energy resources such as electric and gas, solar water heater has obvious advantages

It is safe, clean, energy-saving, green etc, so it can be still gave way by electric gas water heater and occupies the market of water heater in the case of advertises and diffusion rate is not high obviously.

2. How to choose a solar water heater?

Good product should have instruction and maintenance card, mark and packing box etc. It should also have good appearance, reasonable structure, quality raw material, fine workmanship and improved after sale service. For example, inner and outer tank, reflecting board and stand should be made of stainless steel. The insulation should be made of imported polyurethane by integral foaming workmanship

3. How large capacity of solar water heater should you choose?

Usually one person needs 35-50 kg hot water (about 45C)for bath. Solar energy is non conventional energy, and it can not produce hot water when it rains, so you should choose the solar water heater which can supply double daily quantity of using water in order to keep the hot water for rainy day. If it rains lasting for many days, you can choose photovoltaic model so that hot water can be supplied in any climate at any time.

4. Which pipeline should be chosen?

Solar water heater is usually put on the roof, and certain pressure lies between the roof and the heater, meanwhile hot water temperature is high(can reach 90 °C)while outdoor temperature is low(can reach below -10 °C), so you had better choose multiple pipe or cross linking pipe cross linking pipe or consolidated plastic soft pipe, which are over pressure resistant, fire-resistant, frigostabile, harmless and insipid. Zinc-plated pipe has many disadvantages such as thermal capacity is big, the heat loses much, be easy to rust, pipe is easy to be frozen, so you had better not choose it

5. How to test the hot water heater?

There is no thing which can screen out sunlight in front of solar water heater installed. It should be put facing north, or north by west 10. Tank, pipeline, valve, joint should not leak. Insulated pipe should be covered fully. Vacuum tube and tank should be connected properly. Vacuum tube should not be broken and leak gas and get white.

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6. How to raise water temperature?

- (1). Insulate the pipeline
- (2). Choose the cross linking pipes which has small conductive coefficient.
- (3). Choose the solar water heater with large capacity and lengthen vacuum tube Keep more hot water to raise based water temperature.
- (4). Water immediately after bath, and keep the tank full during night as soon as possible to prevent the temperature of half tank of water being high, and the air in the upper tank losing heat for cycle
- (5). After tank is full, let some water out to prevent hot water flowing out from back water pipe
- (6). Sun the solar water heater lasting for two days, or sun half tank of water for one day
- (7). When you have a bath and feel water temperature little low, you can raise the temperature in the room by bath king or warm air blower. If you have the bath in the base, and feel the water temperature is a little low, you can add some boiling water
- (8). You can use the electric heater. After replenish water, connect the power. Have a bath after cutting off the electricity
- (9). If it is used for a long time, water temperature will be lowered. You can clean the face of vacuum tube and reflecting board and clean out the scale in the vacuum tube.