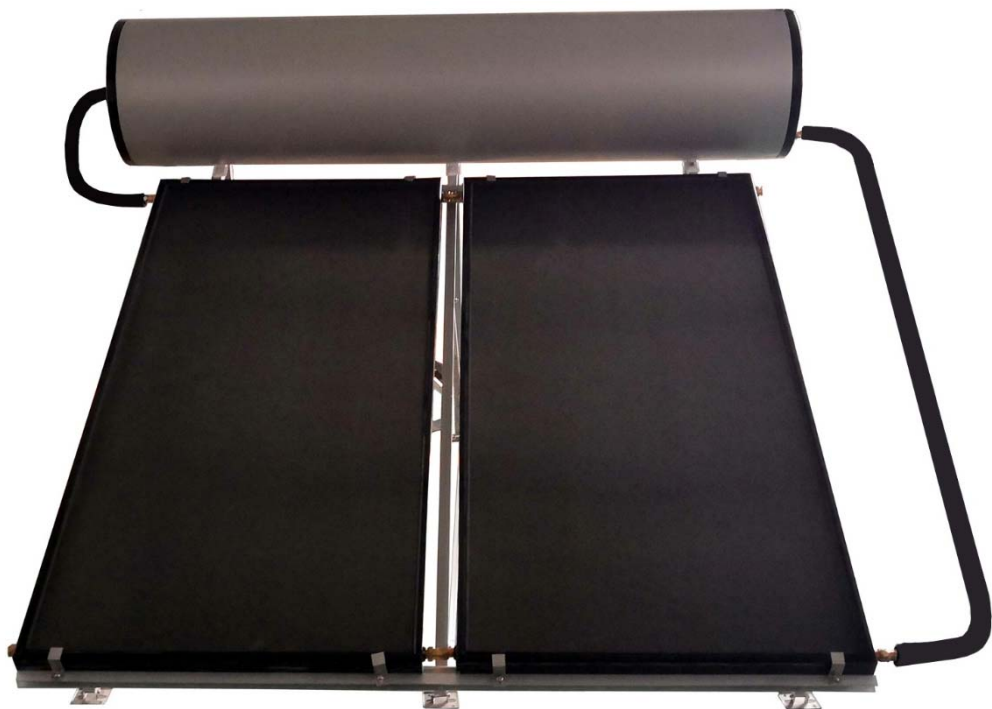


Flat Panel Solar Water Heater
Installation and Operation Manual



Flat Panel Solar Water Heater

Thanks for using our solar water heater. You're now having a solar water heater with the top-level technology, superb performance and safety. To bring its full effectiveness to you, please carefully read this Installation and Operating Manual before installing and operating your solar water heater. **Please keep your Installation and Operating Manual for later reference.**

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Flat Panel Solar Water Heater

1. Features

1.1 Advanced technology

The core parts of the solar water heater – flat plate solar collector and enameled steel inner tank involve numerous national patented technologies. The solar collector with advanced technology in gathering solar energy features water-tightness, high heat absorption, independent heat supply, fast energy output, wide scope of application and long working life.

1.2 Low heat loss

With imported polyurethane foam en-bloc high pressurized, which is of high density and strength, the solar water heater has excellent heat insulation.

1.3 Superb process technology

The inner tank is made of special steel, formed up with advanced punching technology and auto non-electrode replacing welding technology. A special silicate is sintered by high temperature to the inner tank's walls, forming a special protection layer featuring freedom of leakage, rust/erosion and scaling, thereby effectively preventing leakage between the water tank and the heat-gathering tubing and ensuring the cleanness of water.

1.4 Easy for functional extension

This solar water heater can be equipped with a computerized controller and electric heater. The user has a few options depending on his actual needs.

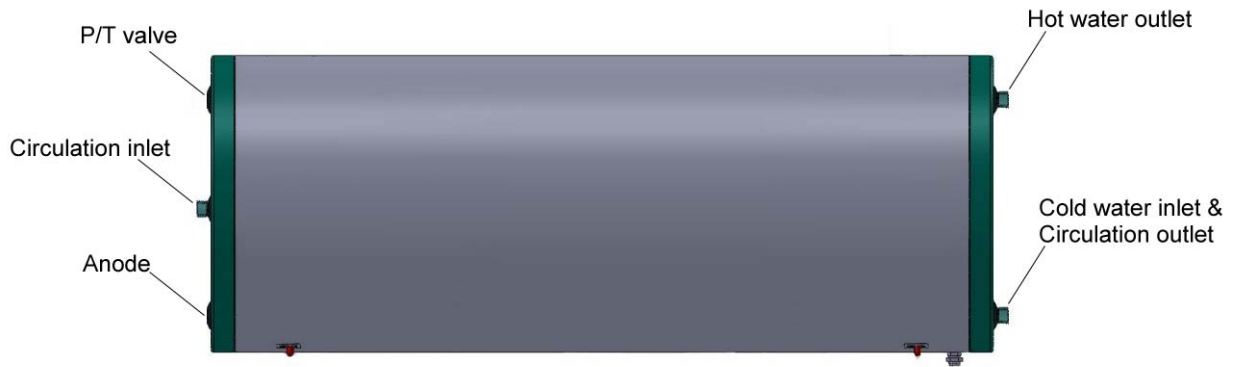
2. Main Components

2.1 Flat plate panel



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2.2 Water tank



2.3 Bracket (sloping roof & flat roof)

2.3.1 Sloping roof bracket



2.3.2 Flat roof bracket



Flat Panel Solar Water Heater

3. Method of Installation

Attention!

- The solar water heater must be installed by qualified professionals
- Installation foundation of the solar water heater shall bear twice the weight of water tank holding capacity
- Installation must be safe and stable to prevent damage and accident
- It is recommended to provide the hot/cold water pipelines with adequate insulation in order to prevent freezing in winter.
- Foundation must be level and fastening must be firm and reliable.
- Before installation, make sure that solar collector is not exposed in sunlight for a long time in case the copper connection end gets scalded.

3.1 Installation of solar panel



The flat panel(s) is fixed with the “Z” fasteners:

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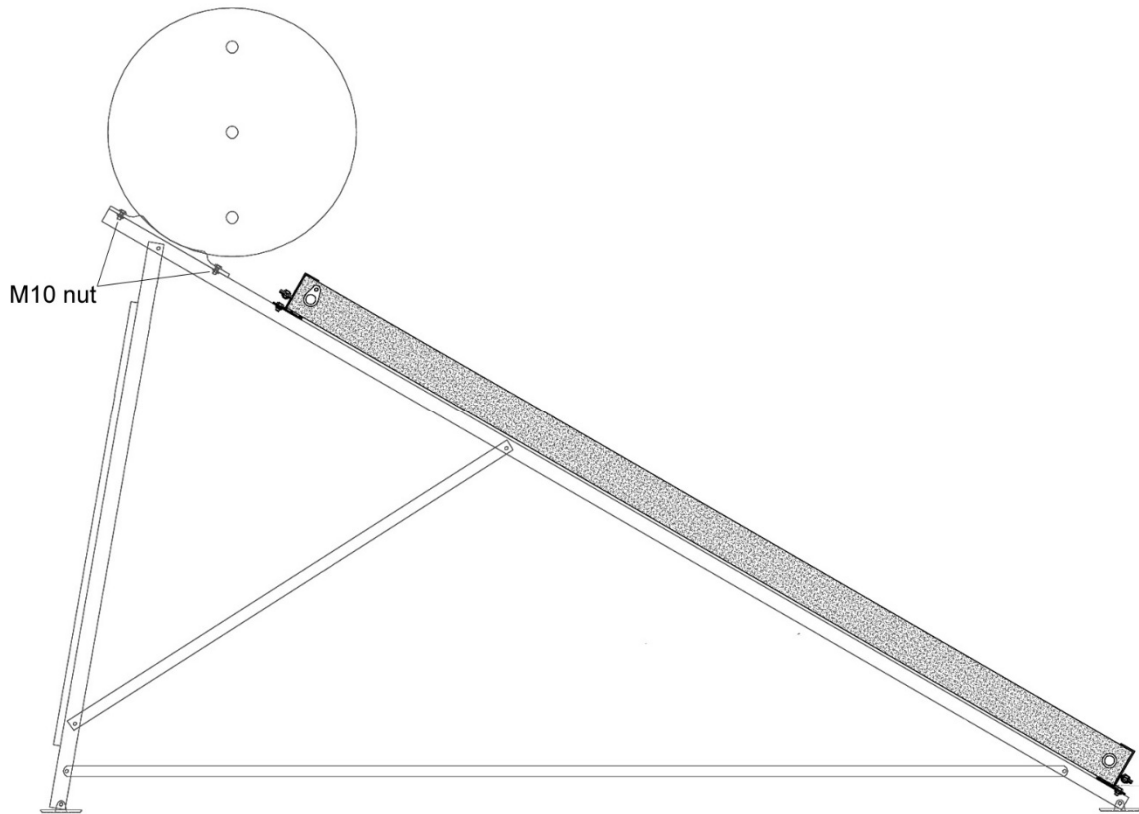
3.2 Installation of Water Tank and Bracket

Firstly fix the hunger on the tank.



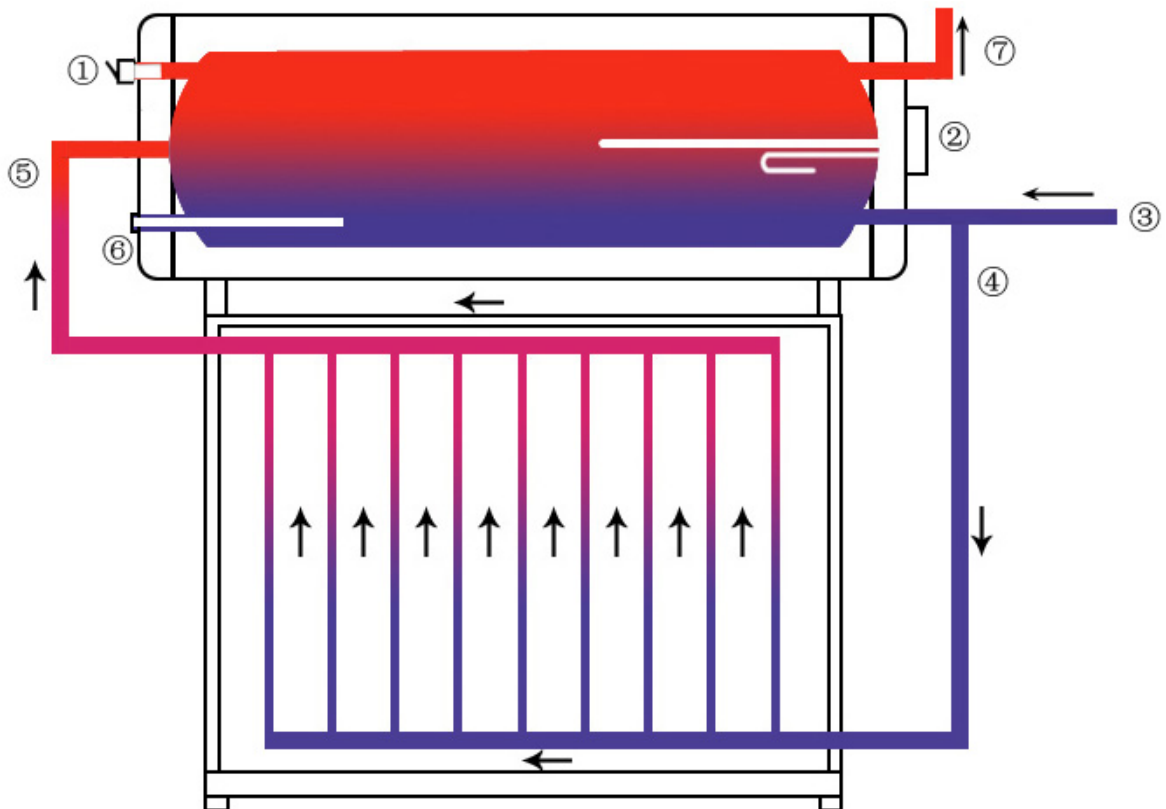
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Then set water tank symmetrically on the bracket and fixed with the M9 nuts.



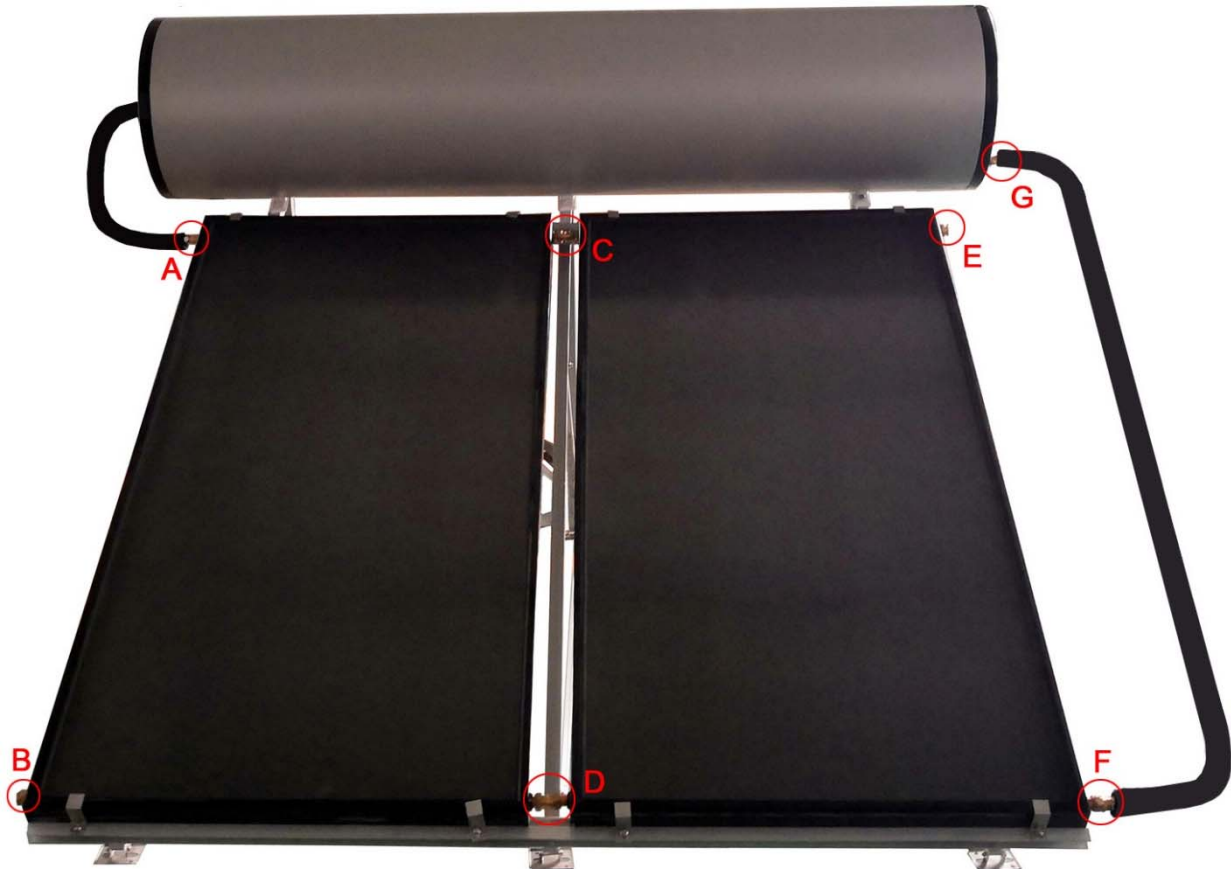
3.3 Connection between solar panel and water tank

Please pay attention to the following drawing and picture when installing pipelines.



- ① T/P valve ② Electric heater ③ Cold water inlet ④ Circulation outlet
- ⑤ Circulation inlet ⑥ Magnesium anode ⑦ Hot water outlet

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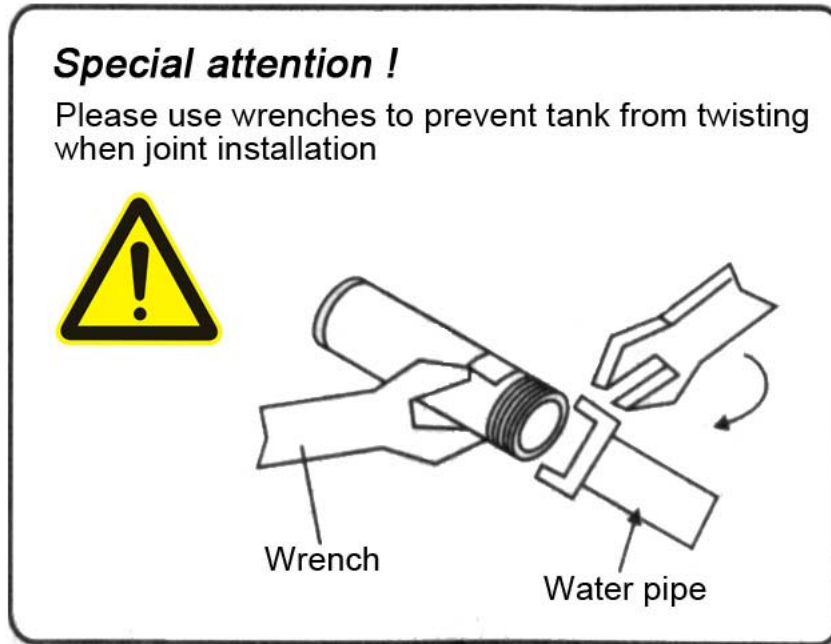


If solar water heater is equipped with two or three units of solar collectors, please see the connection of two solar collectors from the marks C and D.

Attention!

- ✧ The tank's cold water inlet and hot water outlet are 3/4" thread joint, and the joint of P/T valve is 3/4".
- ✧ Layout should be according to the pipe installing regulation.
- ✧ A one-way valve should be installed at cool water inlet joint.
- ✧ The outside pipes need over 50mm insulation to avoid being frozen in winter.
- ✧ If solar water heater is installed higher than the around buildings, a lightning rod is needed. The lightning rod of building should be 50cm higher than the water tank and the interval space not less than 30mm.
- ✧ While connecting pipes, do not use very big force with wrench tools:

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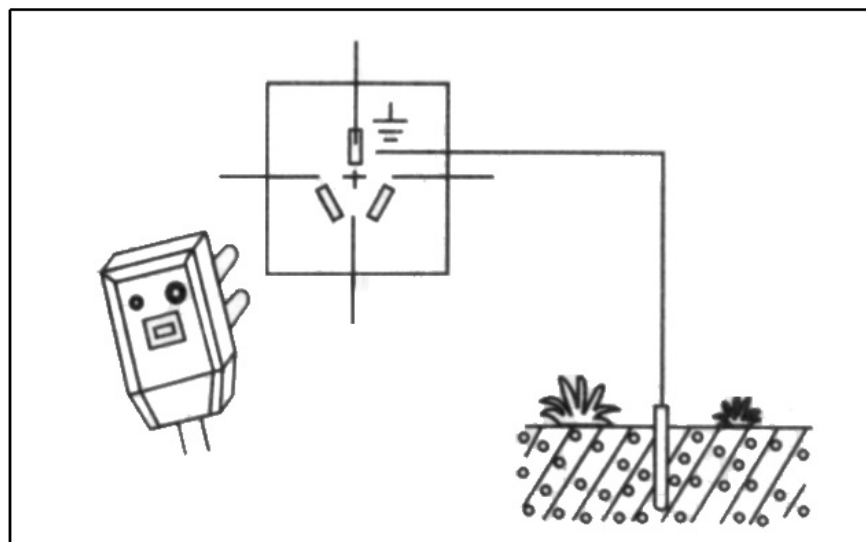
3.4 Installing computerized controller

If the solar water heater is equipped with one computerized controller, please carefully read the Controller's User Manual before installing and operating the Controller.

The Controller should be located in a prominent location that is accessible to the homeowner. Care should be taken to ensure that the controller is not placed where it is within easy reach of children, near electromagnetic fields or in damp locations.

Attention!

- ▲ The socket and plug should be connected well.
- ▲ If electric heater is installed, do connect the live wire, null wire and ground wire correctly with power-leakage protection plug. The socket should be connected to ground reliably.
- ▲ Use tri-wire plug of safe protection, and the rated current value of socket $\geq 10A$.
- ▲ Wiring according to controller instruction manual.



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4. Notices

4.1 Prohibition of isolation without water

Under normal circumstances, keep the water tank full. If the solar water heater is not used for a long time, the heat collecting tubes should be covered with shade cloth.

4.2 No shadow

The solar collectors face south without shelter.

4.3 Wind stress

When installing solar water heater, please consider the issue of wind resistance, and resultant stress on attachment points.

4.4 P/T valve

4.4.1 Please refer to separate P/T valve instruction manual for operating.

4.4.2 Following installation, the P/T valve lever **MUST** be operated **AT LEAST ONCE A YEAR** by the solar water heater owner to ensure that waterways are clear.

4.4.3 The P/T valve should be inspected **AT LEAST ONCE EVERY TWO YEARS**, and replaced, if necessary.

4.5 Magnesium anode

The magnesium anode should be inspected at the timely basis to extend the life of water tank according to water quality.

Replace the magnesium anode AT LEAST ONCE TWO YEARS.

4.6 Water Quality

In areas with “hard” water, lime scale may foam inside the safety valve and P/T valve. In such regions, it is advisable to install a water softening device.

4.7 Expansion tank

In areas with high temperature weather, the pressure inside water tank rises quickly. It is an optional means to install a suitably sized expansion tank significantly minimize the amount of hot water dumped by the P/V valve due to overpressure.

5. Common Failures and Troubleshooting

Assembly, maintenance and repair shall be carried out only by qualified technicians. If the problems fail to be solved, please contact the local distributors/installers.