

Closed Loop Flat Panel Solar Water Heater

User's Manual

Version 1.1

(Please read carefully the manual before use)

The manufacturer has quality control system certified by ISO9001: 2000

This product is approved by Solar Keymark(EN12976)

User Notice

Thank you for selecting our closed loop flat panel solar water heater with so many advantages. Elegant shape、high efficiency、working under pressure、easy to use、safe and reliable. it's your best solution to supply hot water for family. Please read carefully the manual before use.

Please check accessories and user's manual according to the packing list when opening the package.

Local agent or franchised store take charge of the installation& trail run and after service, please write down the telephone number and address of the store where you purchase from in order to get our timely service.

Both package and warranty card have serial number. Neither no series number nor damaged series number may be fake. please pay more attention to it.

Make sure to mix hot and cold water before shower or washing. Otherwise.it will cause severe burn.

Warning: Please fill up with cold water before heated by electrical back up element

Use hot water while the electrical back up element is working is strictly forbidden.

The connection of wire is "X" way. You must use sheathed copper wire with three cords(size: $\geq 1.5\text{mm}^2$)when you install or replace the wire.

Please keep the cold water valve open at all times.

Attention: Due to the violation of this manual caused damage to the product, water leakage, outbreak of a fire, cause loss of property or personal injury, our company shall not be responsible for it.

Warning: It's forbidden to use the electrical back up element without grounded wire

Closed loop flat panel solar water heater-build a all-weather domestic hot water center for you! Please keep the manual well to be ready for consulting later on.

This manual is exclusive used for closed loop flat panel solar water heater.

Catalogue: I. Product Features

II. Name of Each Part

III. Method of Installation

IV. Using Method and Notices

V. Maintenance service

I. Product Features

1) Advanced Technology

closed loop flat panel solar water heater with separate water tank and flat panel can get hot water according to thermosiphon principle. Enamel coated inner tank is made of special metal material. formed up with advanced punching technology and auto non-electrode replacing welding technology. a special silicate is sintered by high temperature to the wall of inner tank. forming a special protection layer with no leakage、 no corrosion、 no scale advantages .

2) flat panel

The most efficient Germany imported blue titanium selective coating.

Minimize the damage to absorption layer and copper pipe with whole plate laser welding.

High strength special low-iron tempered glass with transmittance more than 92%.

High quality assured with advanced producing process technology and equipment.

3) Double Protecting

Imported P/T valve provides the automatic pressure release and protects the water tank against the influence of high

temperature and pressure. One-way water-in release valve can drain out water automatically and resist the influence of super-high water pressure outside.

4) Aluminium Alloy Bracket

It's made of Al-Mg-Si antirust aluminium alloy material and produced by advanced numerical

control(NC) equipment with

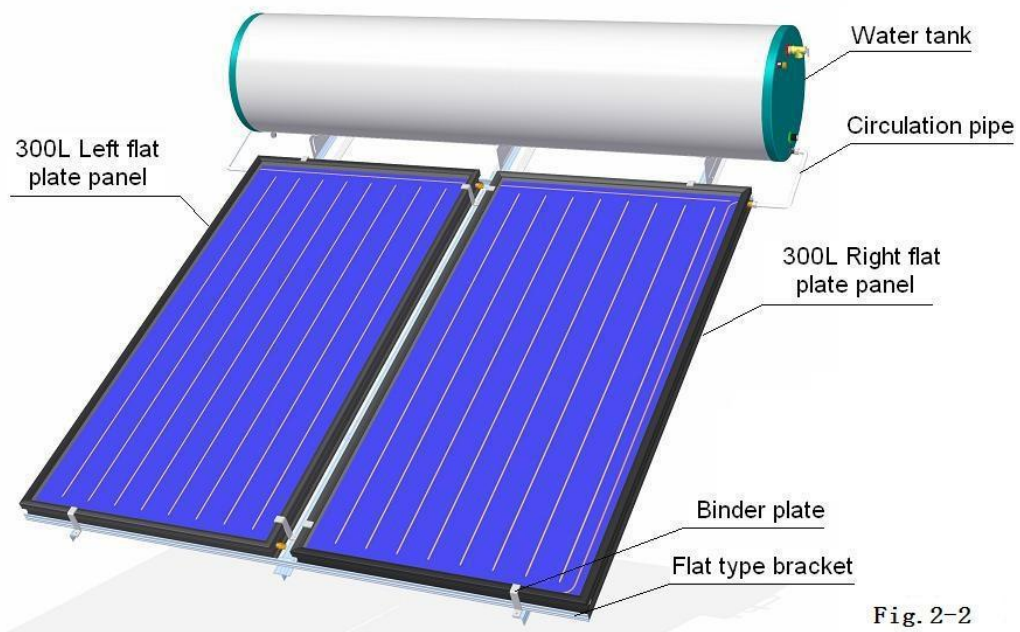
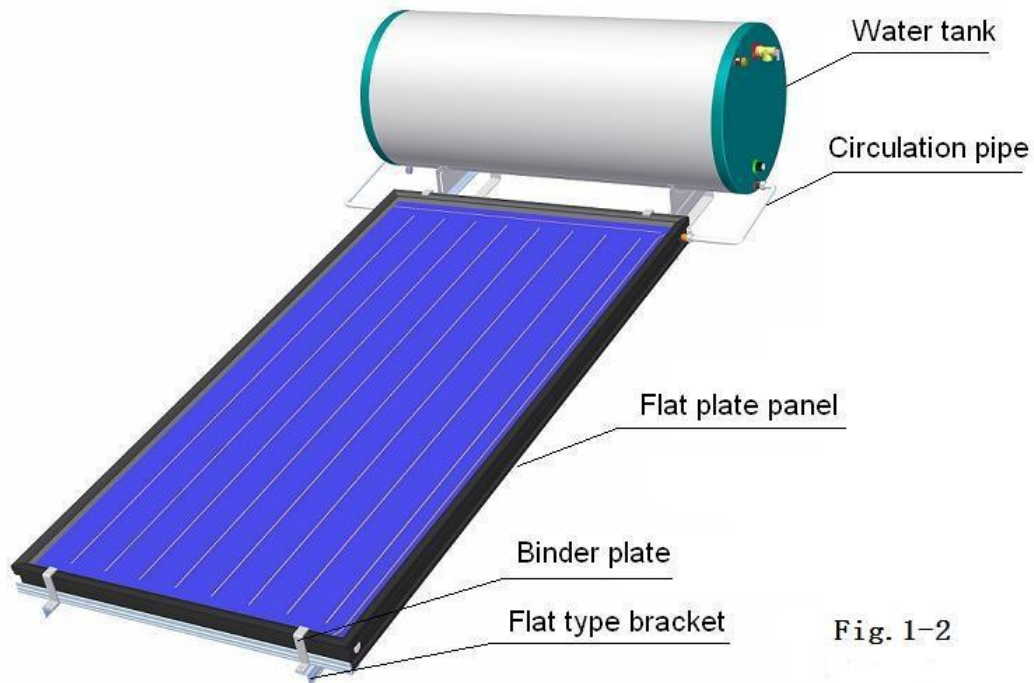
high hardness and strength.

5) Wide Scope Of Application

The jacket type structure with medium which will not freeze under -35°C has high heat exchange efficiency and high systematic stability. it can be installed and used in the tropic, temperate zone and frigid zone.

II. Name of Each Part

1. Closed loop flat panel solar water heater with sloping type bracket



2. Water Tank

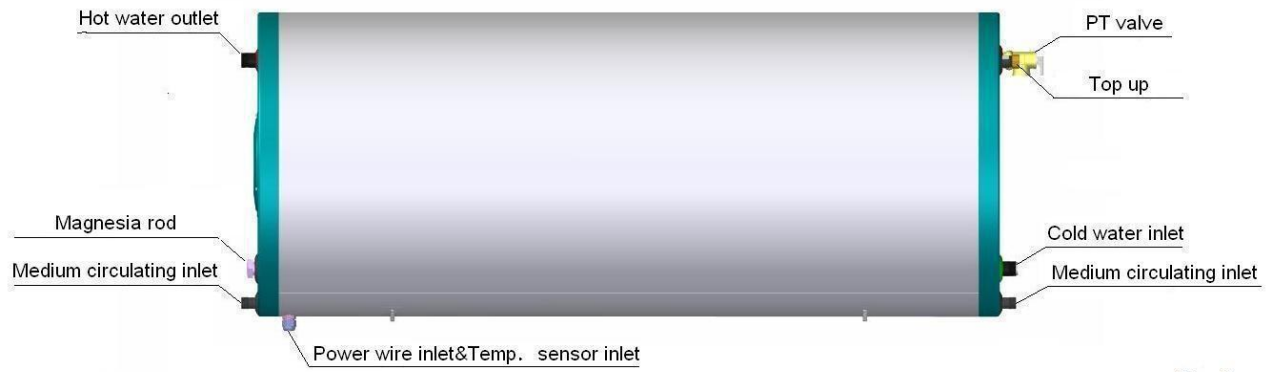


Fig. 3

3.1 Single Flat Panel For Small Capacity Water Tank

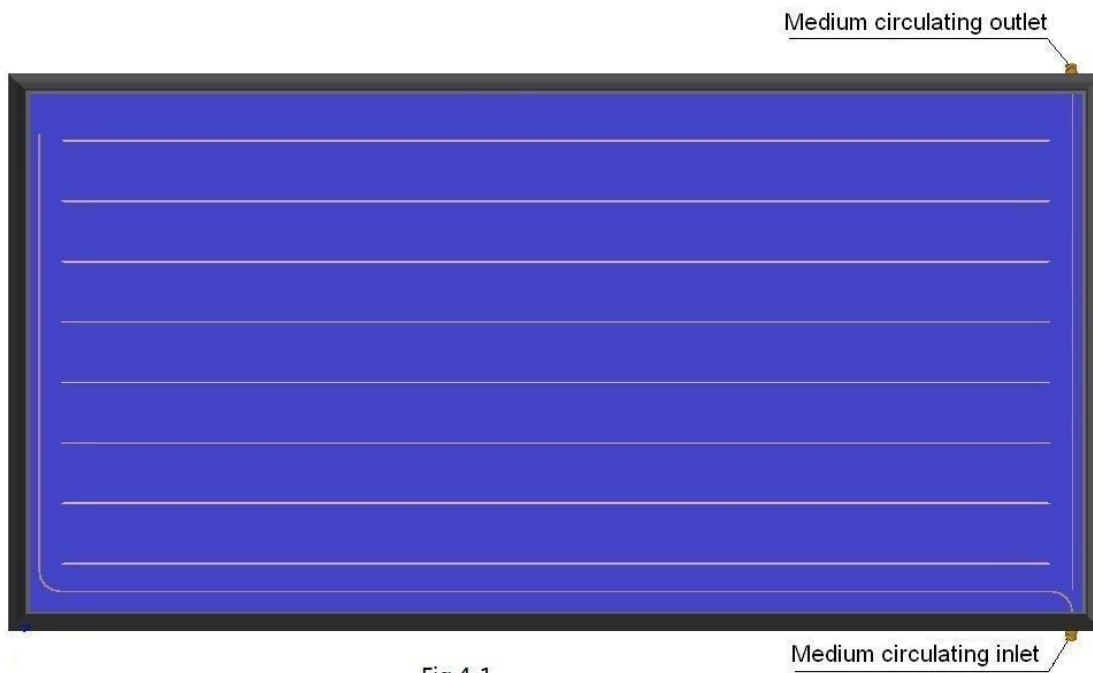
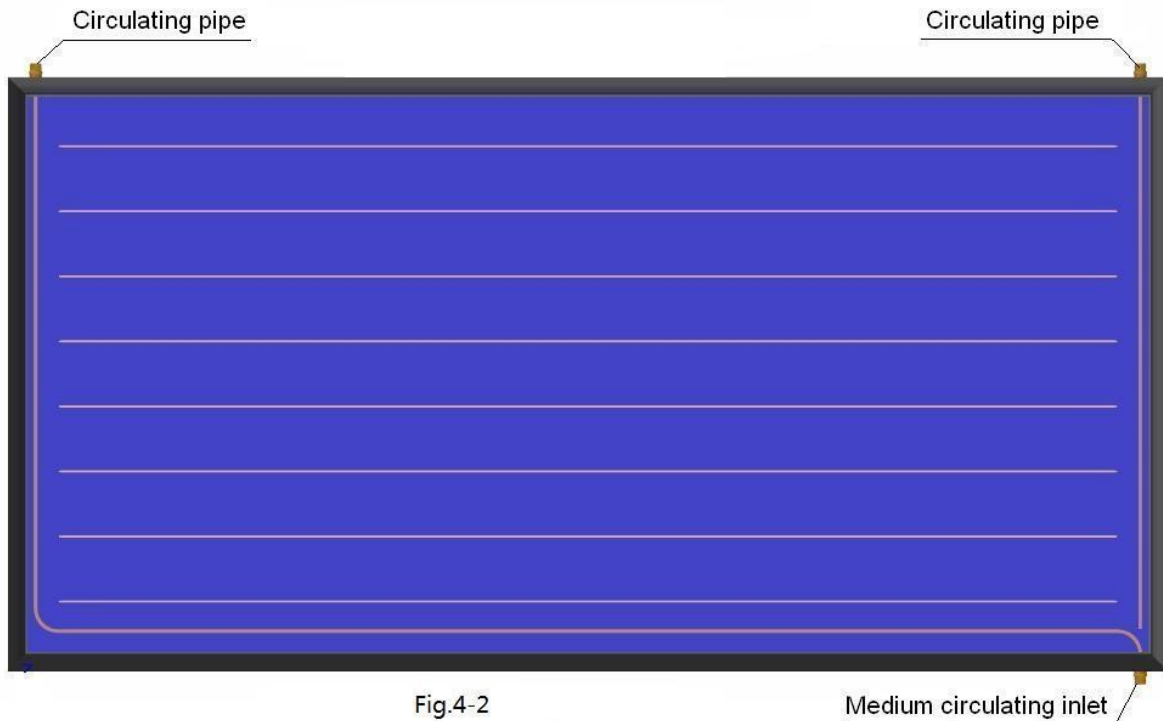
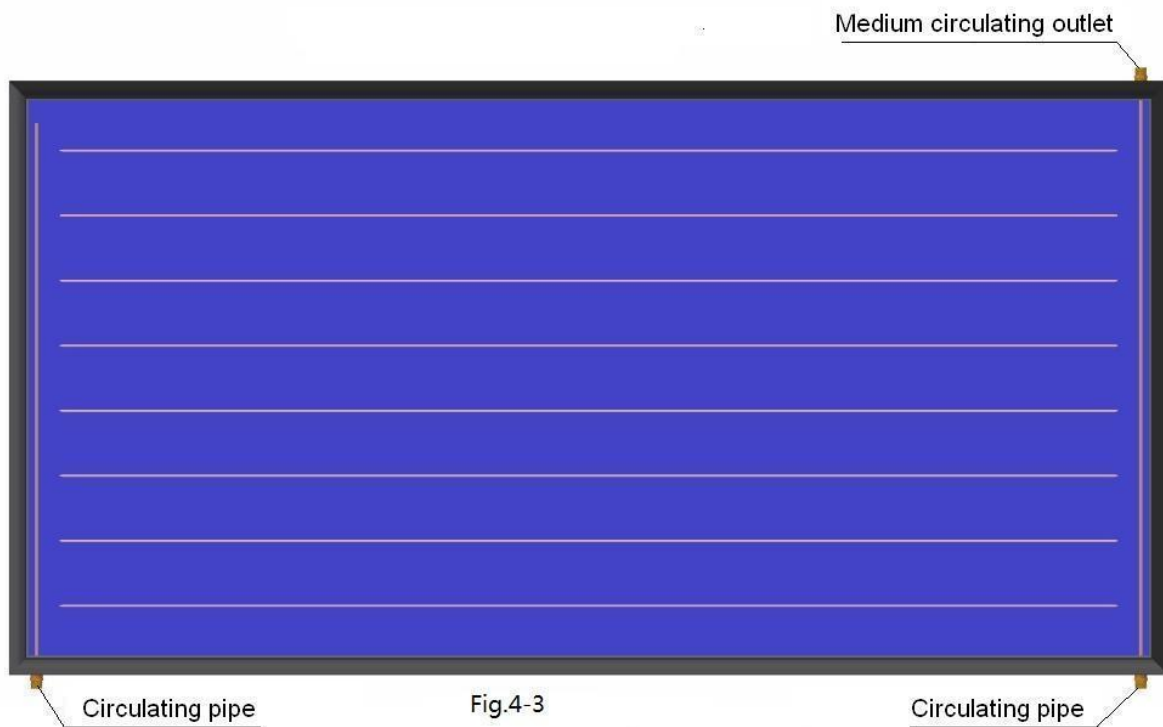


Fig.4-1

3.2 Right Flat Panel For Big Capacity Water Tank



3.3 Left Flat Panel For Big Capacity Water Tank



III.Method of Installation

Attention:

- All the installation of solar water heater must be completed by the qualified installer.
- Installation site should be flat and without shading in case of affecting the collecting efficiency.
- Installation site of solar water heater must can bear 2 times weight of full water tank.
- All the installation of solar water heater must be firmly fixed in case of damage and accident
- Please use the insulation to keep all pipes warm in case of freeze in winter

1.1 Installation of sloping type aluminium alloy bracket for small capacity water tank

- 1) The six tile clamps must be fixed firmly on the sloping roof first.
- 2) Assemble right&left tank supports, right&left vertical bars, and six tile clamps with M6x16 screws&nuts.
- 3) Assemble two horizontal bars and right&left vertical bars with M8x20 screws&nuts.
- 4) Assemble one set of diagonal bars and right&left vertical bars with M6x16 screws&nuts.

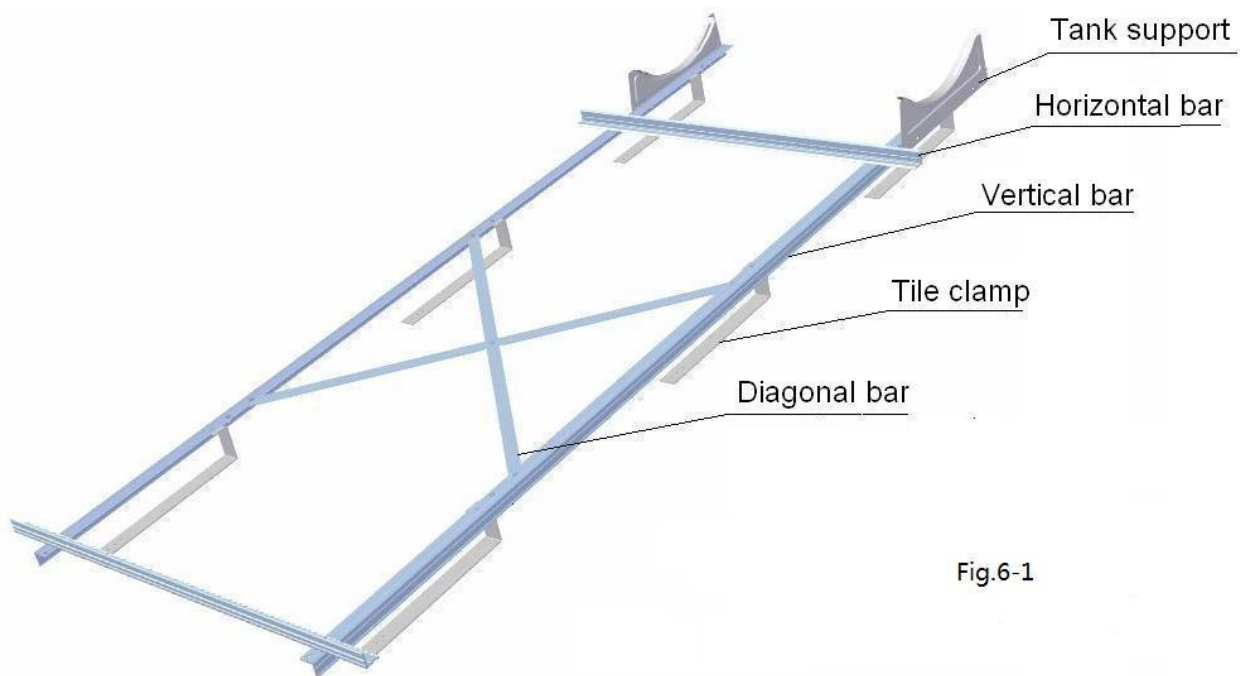
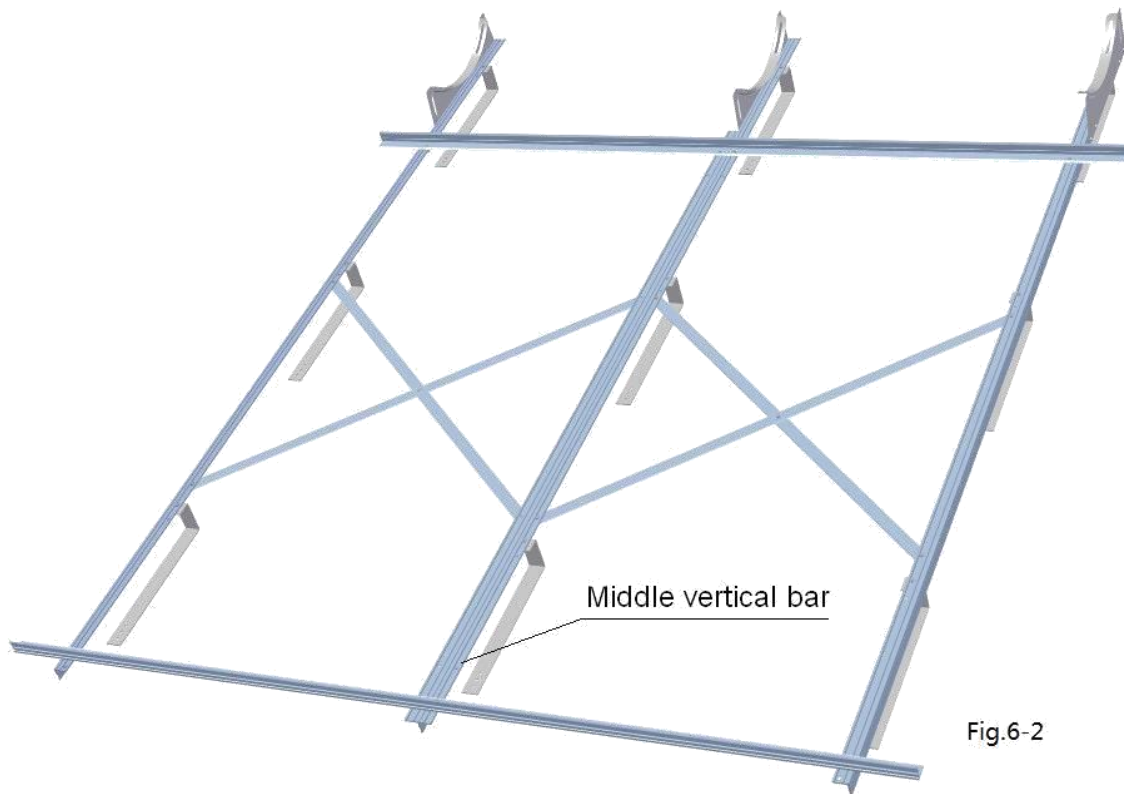


Fig.6-1

1.2 Installation of sloping type aluminium alloy bracket for big capacity water tank

- 1) The nine tile clamps must be fixed firmly on the sloping roof first.
- 2) Assemble right&middle&left tank supports, right&middle&left vertical bars, and nine tile clamps with M6x16 screws&nuts.
- 3) Assemble two horizontal bars and right&left vertical bars with M8x20 screws&nuts.
- 4) Assemble two sets of diagonal bars and right&middle&left vertical bars with M6x16 screws&nuts.



2. Installation of water tank

Set the water tank symmetrically on the supporting bracket and fix with M8 nuts.

3. Installation of flat panel

Set the flat panel symmetrically on the supporting bracket and fixed by binder plate with M6x12 screws&nuts.

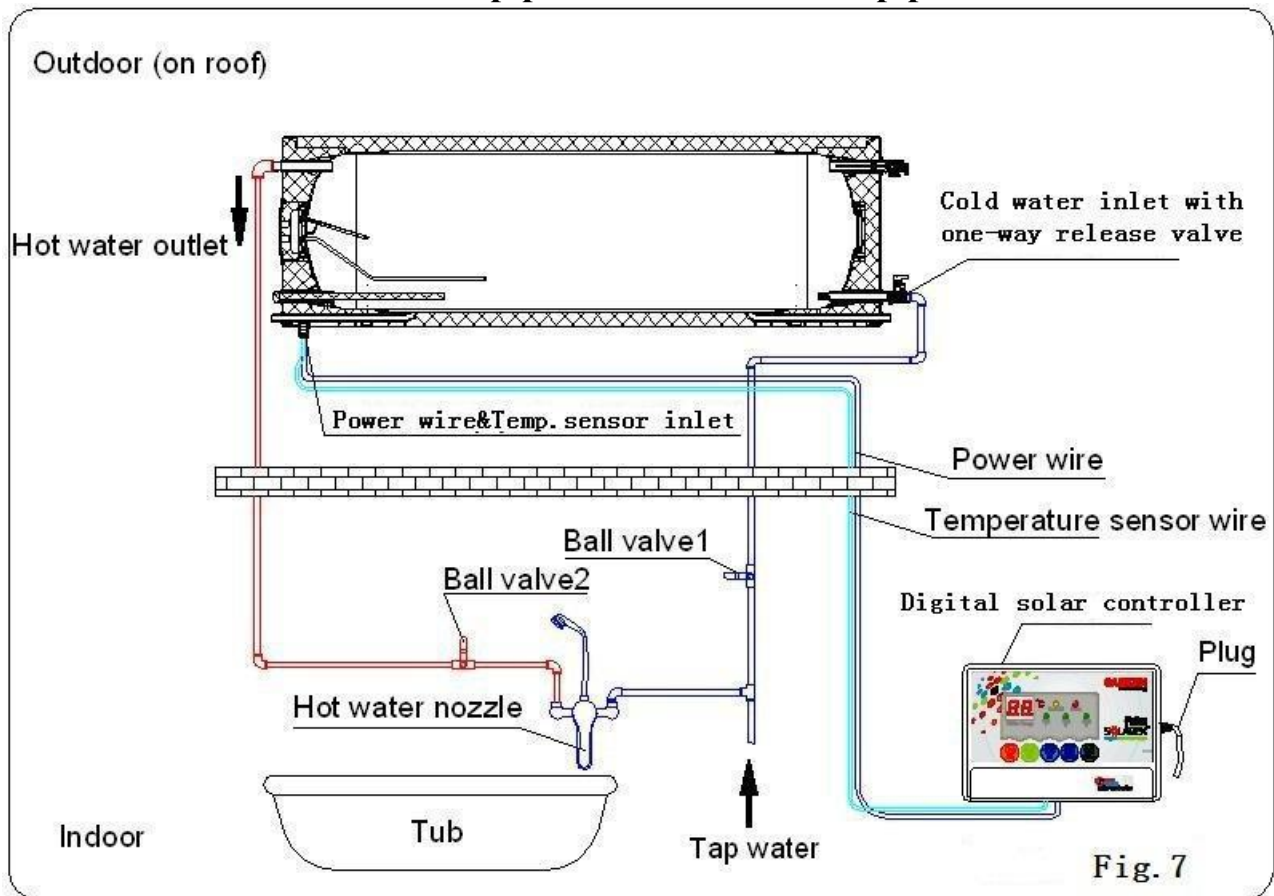
4. Connection of flat panel and water tank

Connect the medium circulating outlet of flat panel to the medium circulating inlet of water tank with SUS304 corrugated pipe and Connect the medium circulating inlet of flat panel to the medium circulating outlet of water tank with SUS304 corrugated pipe.

5. Fill the circulating medium

Unscrew the “top up” cover at the right side of water tank and then fill the circulating medium according to III.technical parameters in case of excess circulating medium damages water tank because of high pressure.

6. Connection of inside water pipes and outside water pipes



Attention:

- Cold water inlet pipe and hot water outlet pipe of water tank must be fixed first by one

spanner in case of damaged under twist force. and then connect to water pipes with another spanner softly.

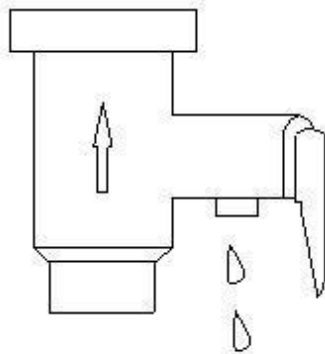
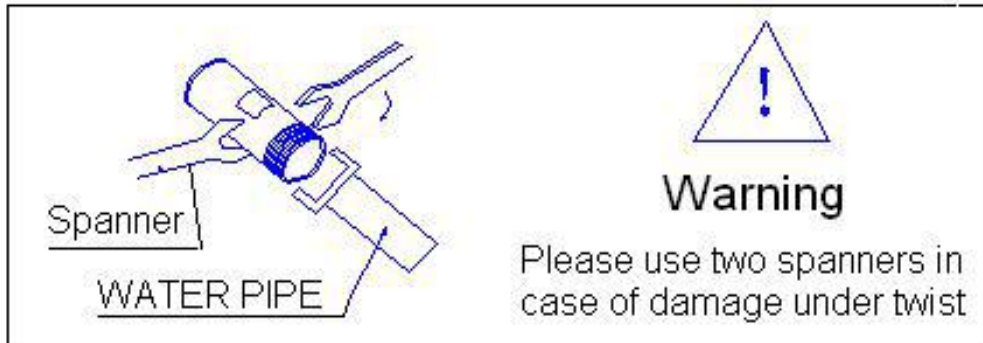
- Layout should be according to the pipe installing regulation.
- One-way safe draining valve should be installed at cool water inlet joint.

which should be connected with air and towards downside, the position cannot be too deep, normally 10mm.

- The outside pipes need over 50mm warm-keeping to avoid being frozen in winter.

- If solar water heater is higher than the around buildings, lightning rod is

The lightning rod of building should be 50cm higher than the water tank and the interval space not less than 30mm.



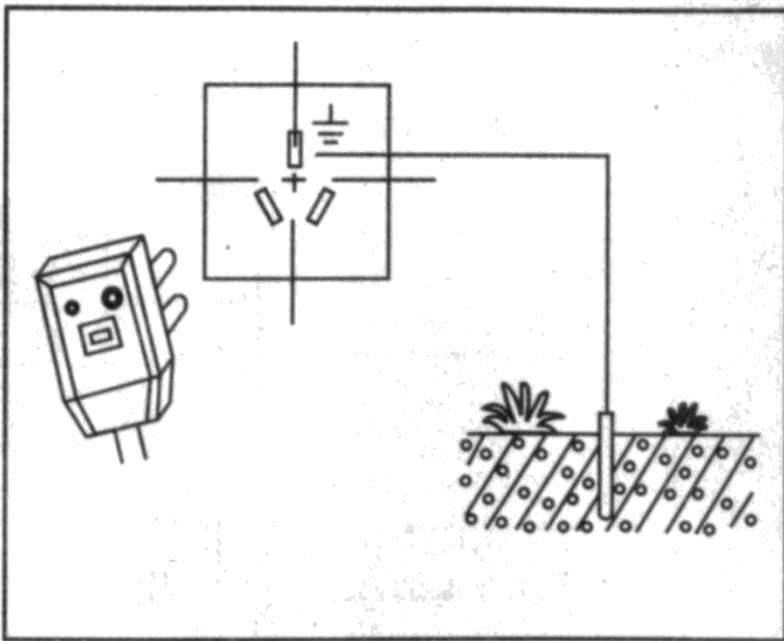
- During electric heating element working, there are drops from the one-way safety valve, it is normal. It shows that the pressure in tank is over 0.6 MPa. Don't block this outlet !
- Water drain pipe $\varnothing 9$ is suggested to connect to the above safety valve to keep safe pressure-releasing.

8. Installation of intelligent controller:

Caution

- The socket and plug should be connected well.
- If auxiliary electric heating system 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. (Fig.8)



●Use tri-wire plug of safe protection, and the rated current value of socket $\geq 16A$

- Safe measures should be taken and layout to specification.
- Installation of digital solar controller Details see the manual of MicroController.

Correctly use digital solar controller. Please read the manual before using.

Details see its manual.

Connection Drawing Of Electrical Element And Controller

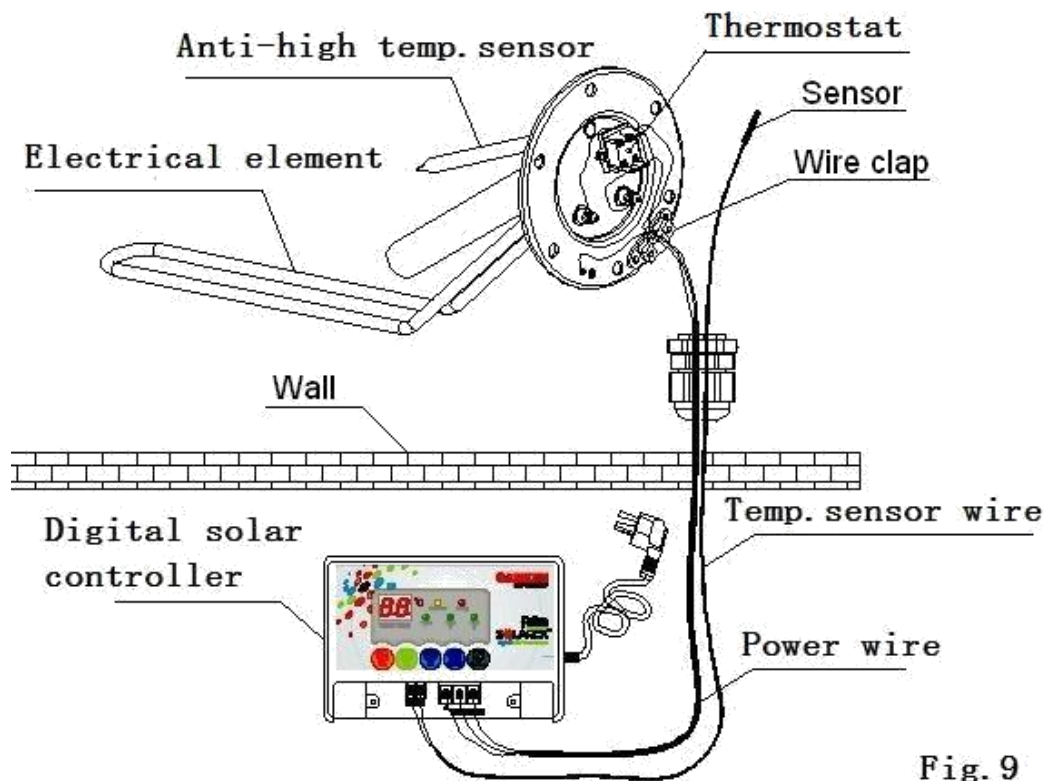


Fig. 9

IV. Using Method and Notices

Caution:

- The light collecting plates should face south with nothing blocked, and supports be reliable to anti-strong wind.

- Filling water: The heater is filled water by pressure and free of filling device (Fig.6), water will be automatically filled till fullness and then stops.

- Using water: Water can be used under pressure.

V. Maintenance service

If your water heater is in abnormal use, please make inspection and treatment step by step according to “fault and disposal”; if you can't resolve or have something unclear, you shall contact with the appointed authorized maintenance service by company or the service center in various areas and our company will make full service for you. The irresistible natural disaster is excluded in service scope. Thanks for cooperation.