

Product warranty card

provide for you sincerely:the quality of three-year warranty!

Distributor:_____purchase Date:_____

Distributor phone:_____

Model:_____Seal

Product lot number:_____

Notes:

- 1 please read carefully the product's instruction before using.
- 2,carefully fill out this card,no stamp dealers,or not to fill in the date of the warranty card is invalid.
- 3,this card can hold a three-year period to provide free warranty,but if the situation following does not guarantee:
improper use,unauthorized modification,artificial touch,case of irresistible natural and man-made and so on.
- 4,electrical year warranty:one year

This page from the user to fill in a detailed and properly preserved.



SOLAR ENERGY

Operation Manual

SOLAR WATER HEATERS

4. Insulation

A) The plumbing pipes running to and from the solar water heater should be heavily insulated. This insulation foam should be checked periodically(at least once every 3 years) for damage.
B) For any insulation that is exposed to sunlight,ensure any protective over/wrap/foil is in good condition,replacing as required.

5. Draining the Solar water heater

A) Draining of the manifold may be required if maintaining the system, or in preparation for extremely cold conditions (extended snow cove). To drain the solar water heater of fresh water(direct flow system):
Step 1:Turn off the mains water supply to the solar storage tank.
Step 2:If the storage tank or other system components are being concurrently drained, refer to their instruction manuals for details. If storage tank is not being drained, isolate piping to and from the solar water heater(isolation valves should already be installed) ,and open drain cocks on both lines (or undo fittings).

I. Important Information

1. Authorized Person(s)

A) Installation must be completed by a qualified tradesperson, who holds relevant industry licenses or certificates required for the work completed during the installation process.
B) The term “authorized person(s)” used throughout this document refers to a suitably qualified professional.

2. Pressure and Temperature Control and Relief

A) For open loop systems, the normal operating pressure should be<500kPa/72.5psi via use of a pressure limiting(pressure reduction) valve on the mains cold supply line.

3. Water Quality

A) Water in direct flow through the solar water heater must firstly meet potable water requirements and in addition the following:
Total dissolved solids<600 p.p.m. Total hardness<200p.p.m.
Chloride<250 p.p.m. Free Chlorine<5 P.P.M.
Magnesium<10 p.p.m.
B) In areas with hard water(>200ppm), lime scale may form inside the tube. In such regions,it is advisable to install a water softening device to ensure the long term efficient operation of the solar water heater.

4. Wind Stress

A) When installing the solar water heater, please consider the issue of wind resistance,and the resultant stress on attachment points.Please adhere to relevant building codes/regulations regarding installation of such subjects
B) The standard frame designed to withstand wind speeds of up to 80mph/128km/h without damage,For areas with wind speeds that may exceed this level and additional front track and rear legs (if applicable)should be installed.
C)If installing the low, mid, high or fixed angle roof frames, stainless steel cables may be used to further secure the frame,running from the top of the rear legs diagonally backwards.
D) It is the responsibility of the installation officer to ensure that the frame mounting is of suitable strength, Where applicable inspection by builder department officer or equivalent should be completed to ensure the installation is in accordance with relevant regulations.

5. Hail Resistance

A) The glass vacuum tubes are surprisingly strong and able to handle significant impact stresses once installed. Testing and impact stress modeling proves that the tubes are able to withstand impact from hail up to 25mm/1” in diameter, and even larger when installed at angle of 40° or greater.
B) If in the unlikely circumstance that a tube should become broken it can be easily replaced. A broken tube should be replaced by authorized persons only.

II. Precautions

1. Metallic Components

A) Always wear leather protective gloves when handling solar water heater xomponents.All effects have been made to make the metal components safe to handle,but there may still be some sharp edges,

2.Vacuum Tubes

A) Be careful when handling the vacuum tubes, as they will break if knocked heavily or dropped.
B) If exposed to sunlight and therefore hot(have internal pressure built up),the tubes make explode rather than implode if knocked and broken. This is a rare occurrence, but nevertheless safety precautions should be taken.

3.Broken Glass

A) If the vacuum tubes are struck by a hard object with sufficient force (I. branch falling on roof), they may break. During installation consideration should be taken as to the possible path any broken glass may take.Where possible protection consideration should be taken as to the possible path any broken glass may take. Where possible protection should be implemented to prevent broken glass from reaching ground level, where somcbody could walk on it (i.e.guttering on roof).
B) The home owner should be made aware by the Installation Officer, the location of the solar water heater and the possible vicinity of broken glass in the event of an extreme storm or falling object on the solar water heater.

4.Health & safety

A) Always wear safety glasses when handling vacuum tubes.
B) Wear leather gloves when handling metal components.
C) Adhere to safety regulations regarding working on roofs(or at a height).
D) When you install the inlet and outlet,do not use the pipe wrench. Tighten it manually, in order not to cause damage to the joint of mouthpiece and inner tank.
E)Temperature goes up very quickly when the vacuum tube is under sunlight. When you make the installation, use one piece of cloth to cover the tube, so that the vacuum tube doesn't get heated. And please add water in moming or evening when the sun has fallen for a long time during the use. Do not feed water during the daytime.

V. Maintenance

Under normal conditions the solar water heater is maintenance free. Other system components such as the pump may require periodic inspection and changing/ maintenance.Please refer to the documentation provided by the manufacturer of these other components.

APART FROM THOSE MAINTENANCE ITEMS OUTLINED BELLOW,ANY SYSTEM INSPECTION, MAINTENANCE OR REPAIR SHOULD ONLY BE COMPLETED BY AUTHORIZED PERSONS ATTEMPT TO MAINTAIN OR REPAIR THE SOLAR WATER HEATER OR ASSOCIATED COMPONENTS.

The following basic maintenance may be completed by the HOME OWNER

1. Cleaning

A) Regular rain should keep the vacuum tubes clean,but if particularly dirty they may be washed with a soft cloth and warm,soap water or glass cleaning solution but ONLY if the solar water heater is located in a position which does require climbing onto the roof ,use of stepladder or otherwise potentially dangerous location, If the tubes are not easily and safely accessible,high-pressure water spray is also effective.
B) If cleaning is required and the above outlined methods are not suitable,the company that supplied and installed the solar water heater should be contacted to complete such cleaning.

2.Leaves

A)During autumn,leaves may accumulate between or beneath the tubes,Please remove there leaves regularly to ensure optimal performance and to prevent a fire hazard,(The solar water heater will not cause the ignition of flammable materials). Such cleaning may only be completed by the homeowner if the tubes are easily and safely accessible.

The following maintenance may ONLY be completed by AUTHORIZED PERSONS.

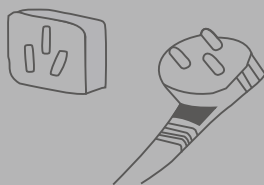
3. Broken Tube

A)If a tube is broken it should be replaced as soon as possible to maintain maximum solar water heater performance.
B)Any broken glass should be cleared away to prevent injury.
C) To replace a tube:
-Remove the tube clip(s),slide broken tube out and carefully pick up any glass pieces. Protective gloves must be worn when handling broken glass.
-When removing the broken tube,the rubber ring may pop out. Just return this ring into place before inserting the new tube.
-Avoid touching the glass wool insulation with bare hands,as it can cause mild skin Irritation.

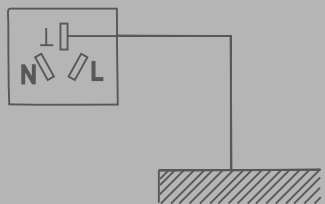
B) Please try the temperature before you use hot water,avoid being scalded. You had better turn on



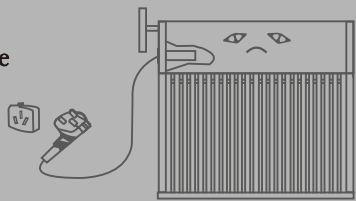
C) The user who use the auxiliary electric heating should pay attention especially;



All sockets of power plugs must be linked with GROUND lands.

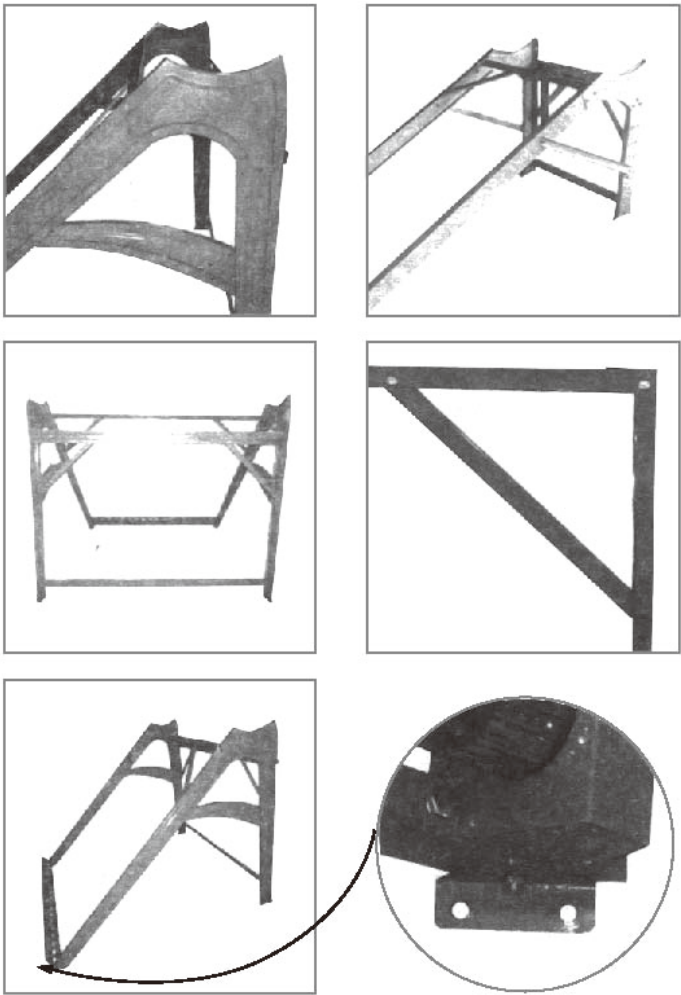


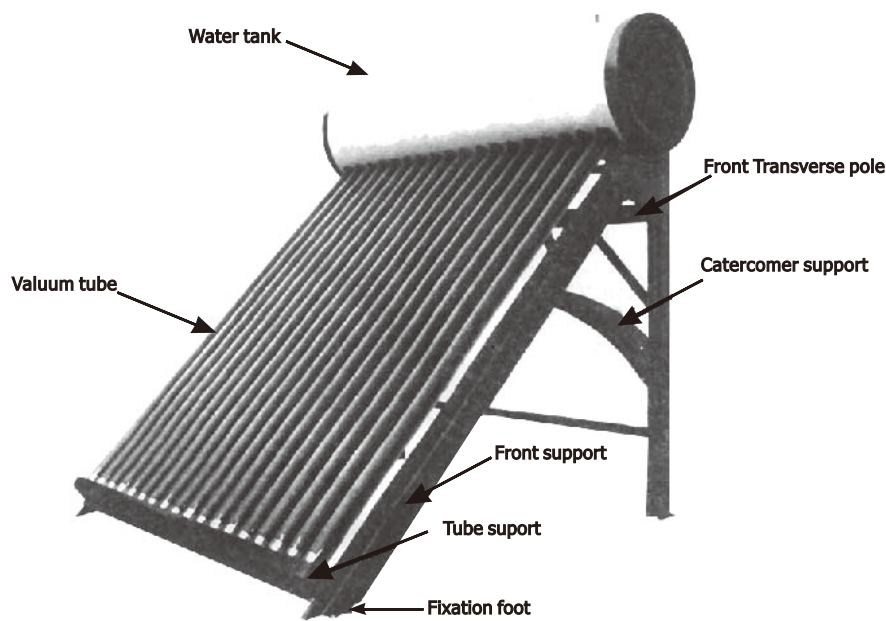
Don't use the auxiliary electric heating when the tank is lack of water!



III. Installation steps of solar water heater

1. Install the support frame of solar water heater





2. Install the water tank, and the vacuum tubes

When you insert the glass tubes, please follow the instuctions:Put the rubber ring around the glass tube and brush some lubricate(detergent) around it so as to rotate tube into tank slowly, Then aim tube at down holder and place into it. Put the rubber ring up tube till tightly anaiust the tank.
Note:please rotate the tube into the water tank slowly,not insert the tube directly.

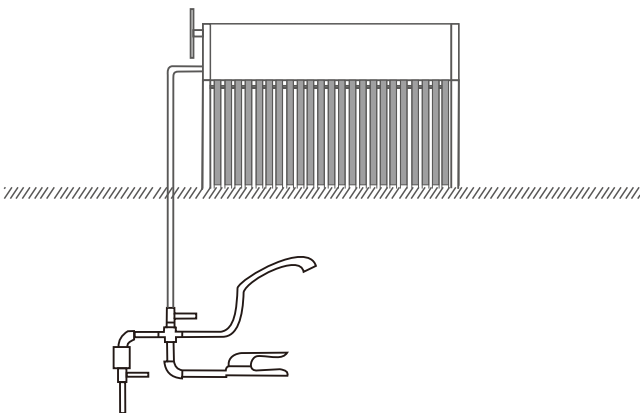
3. Tightne all screws then check the whole solar water heater.

Notice:Do not twist screws too tightly during the installation;tighten all screws after finish installing all element assemblies.

IV. Application Guide

1. Store hot watern

Undcr the sunlight,the vacuum tubes absorb solar energy by themselves then heat water in the tank.You can use the hot water stored in the heat preservation tank whenever you need.



2. How to Use

Turn on the hot water valve,the hot water will run out by itself,take care whether the temperature of hot water is suitable and sometimes you need to add some cold water to get the suitable water you need.
When you use up the hot water,and then add water in time,so that the solar water heater will work nomally.

3. Points for attention In using the water heater

A)On the sunny day,when the tank is lack of water for more than 15minutex,you can not add water during the daytime; otherwise the vacuum may explode when cncountering cold water sundenly.

