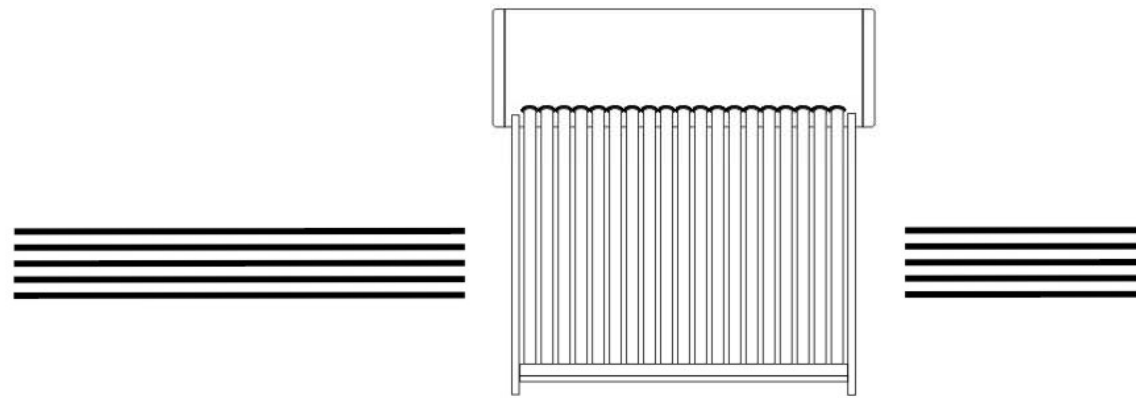




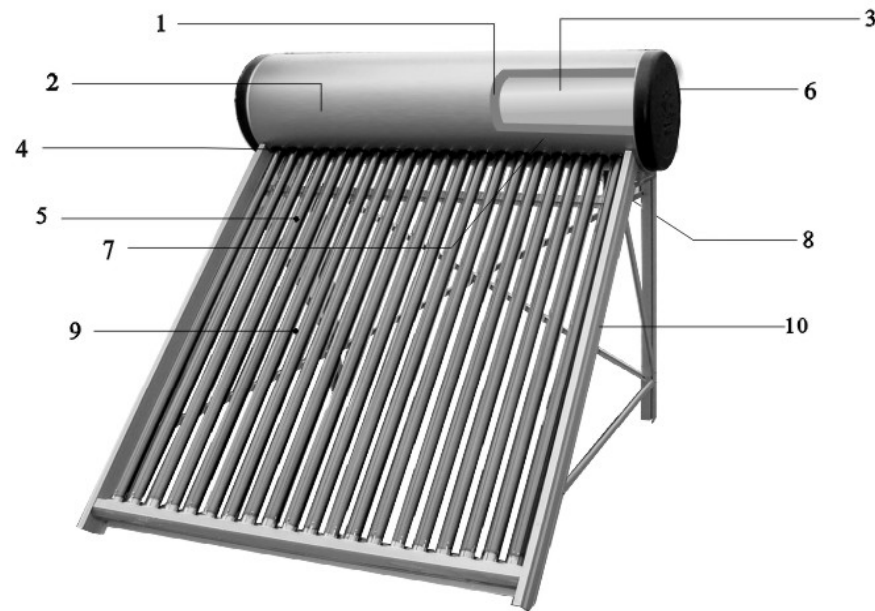
*Originating from nature and sharing with the world*



CE CCC CB ISO9001

ST-1.5/1.8M

## Product structure



1.Heat preservation layer

3.Inner tank

5.Evacuated solar collector tubes

7.Rubber seal

9.Reflecting plates

2. Water tank shell

4.Anti-dirt seal

6. Water tank cover

8. Water loading works

10.Frame

## Artworks Feature

### Strict art workse

Full machining, full moulds and large scale production strictly according to ISO9001 International Quality System to make sure about the quality. The products are made from 50 separately artworks from the production line and each artwork has an strict size request, operation tip, procedure and standard for quality check.

### Main performance feature

- A.** Full year running regard less the season, weather and the time by solar solar water heater with electric heater back up.
  - B.** High resistance for wind, hail and severe temperature
  - C.** High efficiency heat absorb b evacuated solar collector tube with reflecting plates to increase the absorbing for the sunlight as much as possible.
  - D.** High temperature keeping by more thickness of polythene injection frothing, featured less heat losing and temperature keeping can be over 48 hours and after 100 hours, the tank water still warm .
  - E.** High quality stainless steel tank and total body are treated for anti-rust.
  - F.** Silicon rubber seal: no poison, no smell and can keep water clean and featured by long life, high temperature
  - G.** Full micro. Computer managing system , easy to use.\*
  - H.** Mineralizing water by anode dirt cleaning system\*
- \* with this star, it mean optional spare parts

### Installation explanation

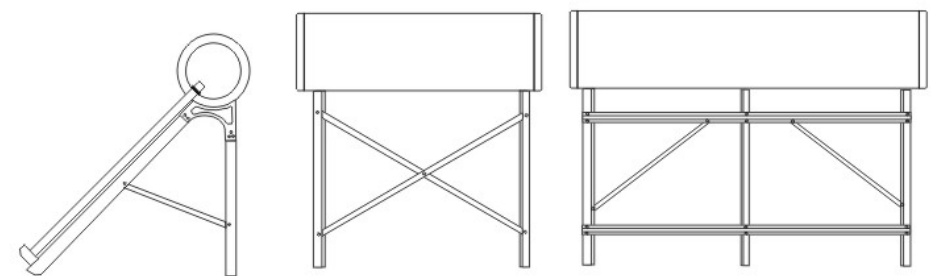
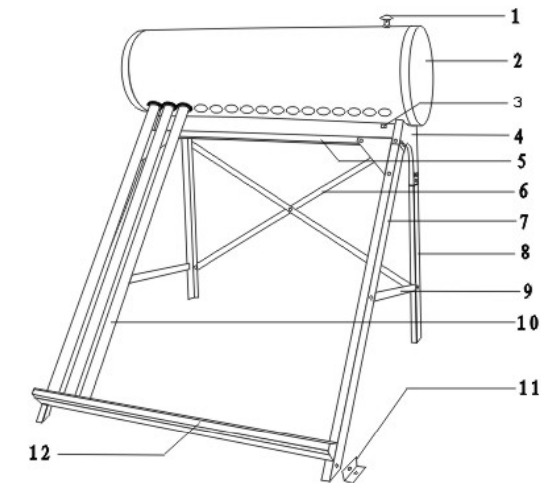
1. to install the solar water heater, it is operated on high location, please pay attention for the safety
2. Before installation, please read carefully the installation explanation and follow it as much as possible or invite the professional workers to install
3. before installation, please clean the inner water tank.

## Installation explanation

1. during the transportation, please move carefully
2. Solar water heater should be installed under the sun with full sunlight and fixed by no 8 steel rod or self-expanding screw or by cement with the roof and the frame should be supported by hard material
3. the air hose should not be stuck by anyway and it should be installed with three pass, the down are for over drop water and should not connect to any other pipe or the water tank will be damaged because of no exhaust air hose for the pressure.
4. the front and back frame should be connected by strengthening rod and put the water tank on the frame. Pay attention the water tank evacuated tube hole should be in symmetry with the frame tail holes and put the ABS plastic cover into the tail hole and also put the water tank bolts on to the frame seat for the tank and fix it late (not now). Take the evacuated solar collector tube and put the anti-dirt seal on to the tube and put some soap water as lubricating agent to give the possibility to plug into the tank holes with water already loaded into the tubes by rotating way. After fixed the solar collector tubes into the tank and adjust the tank position and then fix the bolts under the tank. And then take all solar collector tubes to put into the ABS tail support of tail holes (rotate in a hard way)
5. connect the down and up loading water pipe, please select special composed pipe to reduce the heat lose and the pipe should be back up by the warm keeping material, if with electric heater back up system, you can put the cable into the warm keeping material of the pipe. And fix the down and up loading water pipe onto the building and the frame. At the north area, it can install a exhaust valve for the down and up loading water pipe to let the pipe empty in order to receive the hot water immediately
6. evacuated solar collector tubes can reach up to 270°C after absorb the sunlight with the empty tube. When loading the water, the tubes will be crack immediately. Therefore please pay special attention and in order to avoid such problem, you can follow the following ways:

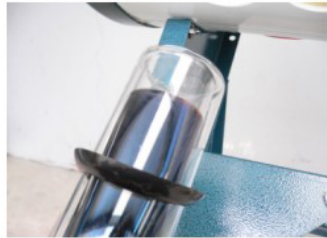
- A. Load the tube full before plug into the tank hole and then load the water to the tank fully
- B. Cover the solar tubes after 3 hours to wait the temperature of the tube temperature dropdown and then load the water.

## INSTALLATION STRUCTURE



- |                           |                |                    |
|---------------------------|----------------|--------------------|
| 1, Exhaust, air hose pipe | 5, Up rod      | 9, Bottom rod      |
| 2, Tank                   | 6, Down rod    | 10, Vacuum tube    |
| 3, Up & down water pipe   | 7, Frame       | 11, Anti-wind leg  |
| 4, Support Tank           | 8, support leg | 12, Bottom support |

## ASSEMBLY OF THE SOLAR COLLECTOR



1. Put one top of evacuated tube in dust ring



2. Smear lubrication on the top of tube such as washing-up liquid.



3. Insert evacuated tubes into holes of water tank by revolving form.



4. Then put the other top of tube into the hole of under bottom support.

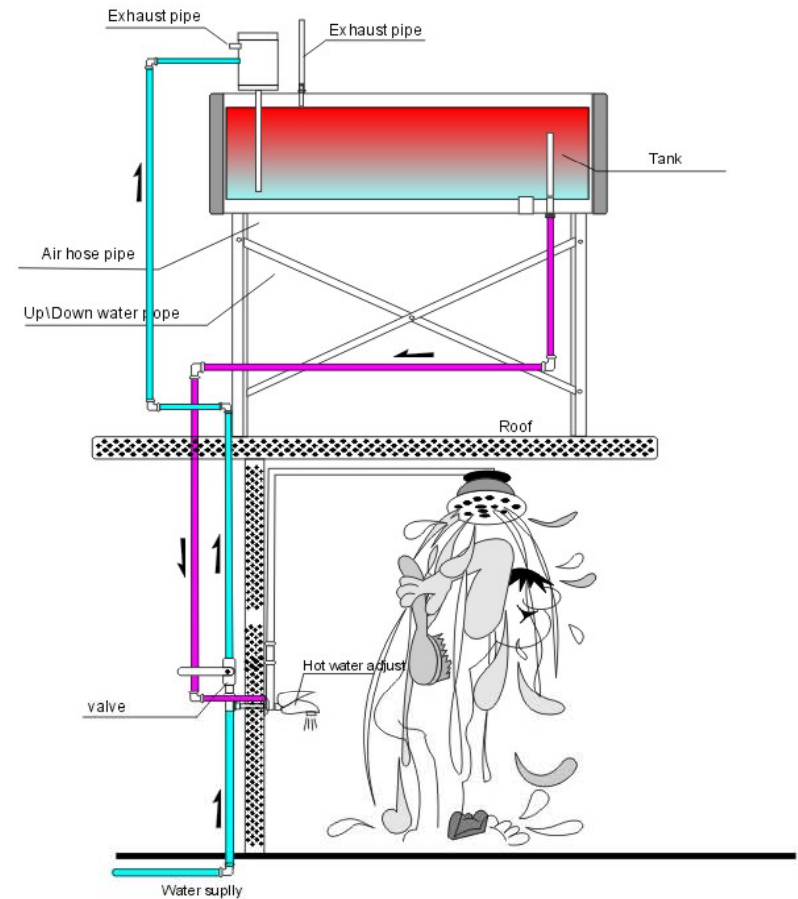


5. Cover up the dust ring carefully.



6. Now, you finished the installation.

## INSTALLATION DRAWING



Please try the hot water by your hand before bathing, to avoid injured the skin.



## All glass evacuated solar collector tube performance and specification

<b>Structure</b>	<b>All glass concentric dual tube structure</b>	
<b>Glass material</b>	<b>Borosilicate glass</b>	
<b>Out tube diameter and thickness</b>	Φ47±0.7mm/1.5mm; Φ58±0.7mm/2.0mm; Φ70±0.7mm/2.0mm	
<b>Inner tube diameter and thickness</b>	Φ37±0.7mm, 1.5mm Φ47±0.7mm, 1.6mm	
<b>Length of tube</b>	1500(±5mm); 1800(±5mm); 2100(±5mm)	
<b>Absorbing coating performance</b>	<b>constructure</b>	Graded AL-N/AL Solar selective absorbing coating
	<b>Method of deposition</b>	<b>DC reactive sputtering</b>
	<b>Absorbing rate</b>	>93%
	<b>Emittance</b>	<6%(80℃)
<b>Vacuum degree</b>	P<5x10 <sup>-3</sup> Pa	
<b>Get the calories</b>	9.6MJ/M <sup>2</sup>	
<b>Solar radiance exposure</b>	≤2.8MJ/M <sup>2</sup>	
<b>Average heat loss coefficient</b>	≤8.6W/(M <sup>2</sup> .K)	
<b>Life time</b>	Over 15 years	

### Explanation:

- 1.The data of the above column for reference only.
- 2.the tank size can be selected according to the area sunlight condition the products can be made to fit for flat and slope roof installation mode

## USER INSTRUCTURE

- 1.For the first time water loading,the vacuum tube must keep cool down.
- 2.When not use the product, please shut up the valve for hot water & cold water & the exhaust valve. If to load water to the storage tank, open the exhaust valve till the water down, the storage tank is full, then you shut up the two valve.
- 3.If in cold winter time, you use the bath lights or warm fan machine to keep the room temperature high.
- 4.To adjust the hot water temperature, should be according to the season, sunlight and water pressure to avoid hurt from the hot water.
- 5.In the sevorous area, please the tank empty when not use in winter to avoid the pipe crack ny frexeed.
- 6.In summer, after use the hot water,should load the water immediately or wait to the night, otherwise the vacuum tube wter will be dry up ny high temp erture. At the same time, when you load water, the solar tube will break.
- 7.In spring, summer, autom,if need to load the water, please be careful about the tank to not be dry by these solar tube, should be at night.
- 8.Please avoid the solar water heater to be heater empty, for a long time, it will damage the rubber seal, and defect the per formance of solar tube.
- 9.If use electric heater, please check the fuse position of it is ok and avoid the electric heater work without water.
- 10.during the storm with lightening, please don't use solar water heater and keep the tank full.
- 11.During the snow days, please take of the reflecting plate in order to not let the snow cover the tube.
- 12.In summer, if hot water not much used or temperature too high, please take some shade to cover part of solar tube to reduce the heating.

## SOLAR WATER HEATER TROUBLE SHOOT

Trouble	Sunny day, no hot water	Water tank unable to load full	Water tank leakage	When taking bath, the water hot and cold from time to time	No hot water come down during the winter time
just star	1. the water heater has some cover or dirt or pollution 2. up water loading valve not shut fully and the cold water take away the hot water from the tank	1. no pressure from the water supply system 2. up water loading pipe leaking 3. water tank leaking	1. rubber seal break or installed improperly 2. water tank inner pipe crack	The cold water supply pressure not stable	1. up and down water loading pipe iced 2. it is too cold 3. the pipe no warm keeping material
just in	1. take off the cover and install it properly in a good position 2. change the up water loading valve	1. add a new micro pump 2. change the up load pipe 3. change water tank	1. change the rubber seal or install it again to let the tank and solar tube correctly 2. change the water tank	Add an side storage water tank to store the cold water and make the water supply stable or change an automatic high temperature valve	1. ask the dealer put warm keeping material (charged) 2. every night after use up the water from the tank, empty the tank and earlier morning load the water to the tank again 3. use electric heating belt (from the dealer) 4. for the coldest days, open the hot water valve to let the hot water come down a little bit but continuously

### ☺ Attention: How to identify the quality of the solar tubes

- 1) Check the color of the tube to be smooth
- 2) Check the button tip where the tube are vacuumed if it is well.
- 3) Check the button shining part, it can be an mirror, if it is dark, it mean less vacuum degree, if white, no vacuum
- 4) Put the solar tube under the sun after a few hour to feel the out side pipe, if good vacuum solar tube, you will feel cool and if it is hot, the solar tube is bad.

The products can use in any season and the life is over 15 year with simple maintenance

#### ① clean the vacuum solar collector tube

If in lots of dust and no rain area, the solar tubes and the reflecting plate will catch by the dirt to reduce the efficiency of the solar tubes and reflecting rate. So according to the dirt condition, the solar tubes should be clean in half year or one year. First by soap water to clean it and then washed by water the solar tubes and the reflecting plate. If more rain, no need to clean.

#### ② clean the scale

if the water quality are not good in some area or use the water directly from the ground with lots of impurity and it is easy to deposit scale in the tank and solar tubes and it will affect the efficiency of the solar water heater, it is according the situation, every one or two year, the tank and the tube should be clean by professional workers or by select the antidiirt magnesium alloy pipe to clean the dirt.

## Guarantee Condition

☺ Dear customer:

First of all, thank you to select and use our APPLE Solar water heater, we will give you guarantee according to the consumer right protection law's regulation and the guarantee card and the invoice of the representative.

☺ We provide you the following service:

If there are any defective of our product after sale, we will exchange and the condition as follows:

- 1) solar vacuum tube has air leakage and become white
- 2) water tank leakage
- 3) frame crack naturally

The products has 3 year guarantee after sales and if with the following condition, we will charge for the repair:

- 1) over the guarantee period
- 2) no guarantee card and valid invoice of the products
- 3) invoice and guarantee card change by the user him self
- 4) the damage by improper use or improper maintenance or the transportation
- 5) the damage of force majeure from the bad weather.