

## **Comparison of Compact Non Pressure & Compact High Pressure Solar Water Heater**

1. It is open loop system, inner tank basically is 0.28~1.0mm thickness, majority are 0.31/0.38/0.45mm thickness, while, high pressure solar water is closed loop solar water heater, with inner tank range from 1.0mm to 1.5mm thickness.
2. Non pressure solar water heater bear lower pressure, Max. 0.05MPA, while, high pressure solar water heater can bear 0.7Mpa,
3. There are copper heat pipe inside each vacuum tubes, work as heat exchanger, thus, there is NO water inside each vacuum tubes, even if one of the vacuum tube broke down, the system will keep on working, while, for non pressure solar water heater, there is water inside each tubes, if one vacuum tube beak down, all the water will leak out, system will not work.
4. Due to copper heat pipe with superior anti-freezing performance, it can well work under - 35~ -40 degree ambient, thus, no need to



worry about frozen problem in winter, while, for non pressure solar water heater, due to water will fill inside each vacuum tubes, when temperature is lower than - 5 degree, tube will burst due to frozen.

5. Compact heat pipe is closed loop system, with less energy loss, and copper heat pipe with high efficiency, thus, compact high pressure is more efficiency than non pressure solar water heater

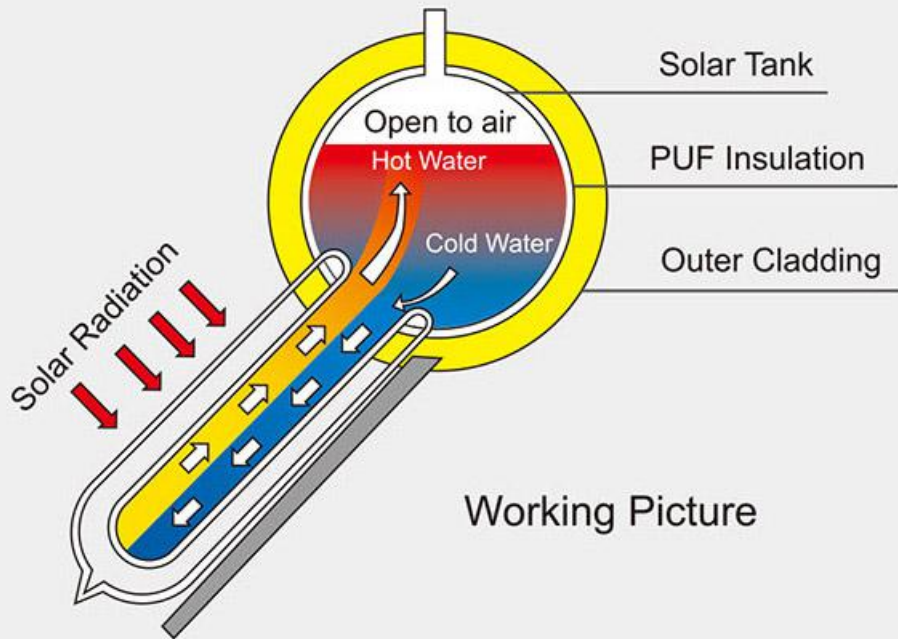
6. Due to inner tank of high pressure system is much thicker and each vacuum tubes are well configured with copper heat pipe, thus, lead to high cost, compared with high pressure solar water heater, non pressure solar system is affordable & bankable.

In a nutshell, world widely, non pressure is the best selling system, due to it is simple & easy for maintenance, cost effective in price, it enjoy a great market, for region with good purchasing power and harsh & long winter region, high pressure solar system is a premium choice.

**Advantage of Non Pressure Solar Water Heater.**

**Cheaper, cost effective, easy for maintenance.**

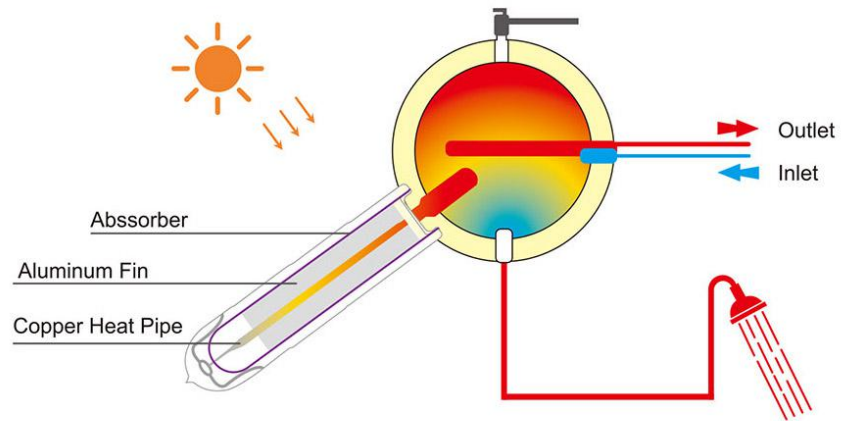
**Compact Non Pressure Solar Water Heater**



**Description**

Thermosyphon solar water heater(compact non-pressure solar water heater) relies on the natural circulation of water between the collector and the tank or heat exchanger. As water in the vacuum tubes is heated it rises naturally into the tank, while cooler water in the tank flows down to the bottom of the vacuum tubes, causing circulation throughout the system.

 How it works?



pressurized solar water heater working principle

- The heat pipe pressurized solar heater tank has no exhaust hole, therefore, it must bear the pressure come from tap water and hot water, when use, the hot water comes out because of water pressure.
- Vacuum tube absorbs solar energy, and conductive copper pipe transfers the heat into the pressurized solar water heater tank, in this case, the water inside the tank becomes hot.
- No water in the heat pipe makes the whole system can bear pressure.

Heat Pipe Description

- As the heat pipe has less heat capacity, it works very quick even under cloudy days and collect heat effectively.
- It can work normally even -37 degrees, as there is no water in the vacuum, it can effectively prevent low heat efficiency due to frost cracking or scaling!
- Each individual tube can work independently, and the whole system can still work if any one of them get damaged, the lifespan of our heat pipe is more than 15 years.





Compact High Pressure Solar Water Heater Application Case

