



# SOLAR WATER HEATERS

Clean energy for a sustainable future.





- The first invention Heat Pipe-Flat Plate collector, anti-frozen, Storage tank separate with the collectors scale free and more safe. The tank and collectors can be separated complying with the
  - New structure, no medium liquid needed, free maintenance customer requirement. By the natural or forced circulation to
    - Overheating prevention, longer service lifetime pressurized tank make the tank invisible.
    - Slope/flat roof multifunction, more harmony of inclined roof installatioz
    - Water storage tank split with the solar collectors
    - Available both for the building integration and high cost/performance.
    - Innovation leader of popularized solar energy in future



### Unique overheating protection

The new structure can prevent the overheating in summer (overheating can damage the tank and shorten the lifetime), meanwhile, the relative low temperature can ensure the high sunlight absorbing efficiency.



- Stylish slimline design
- Thermosiphon operation minimizes maintenance
- Electric booster models available
- Inner tank material: stainless steel
- Blue selective coating Absorber
- Details of the Product and quality is important for us
  - Reliable, low maintenance operation
  - Flexible solution with options of collector and tank capacity
  - Easy to mounting and installation



### Installation combine with the building integration

Conveniently mounted on the slope roof, no location limited.

Any angel installation, free occupied, It is the really solar energy and building integrated which is the new development trend of solar energy in future.

SAVE %55 TO %85 OF YOUR WATER HEATING ENERGY CONSUMPTION

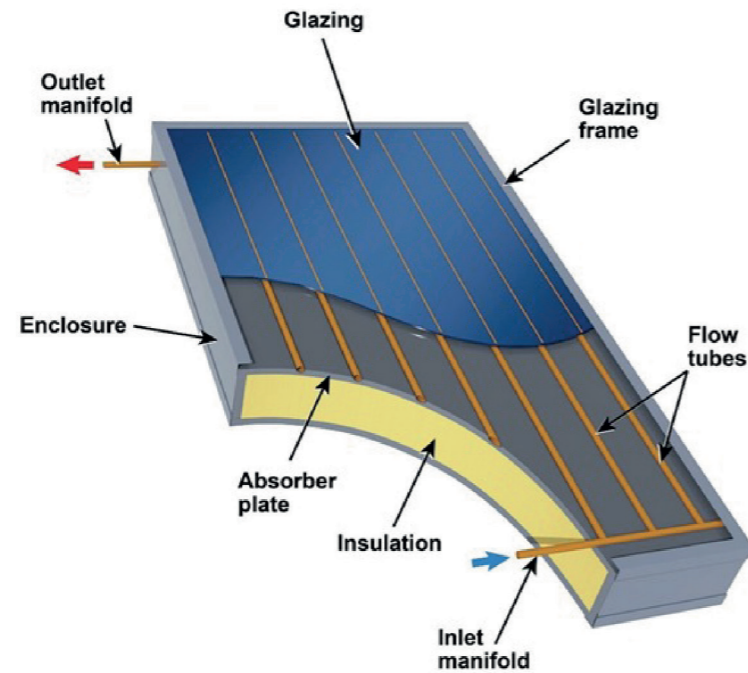
**24h**

whole day high pressure hot water outlet

# Flat Plate Solar

## Working principle of flat plate solar collector:

A flat plate solar collector is an enclosed metal box with a glass top and a colored absorber plate in the center. To reduce heat loss, the collector's bottom and sides are insulated. Solar energy is converted into heat energy as it travels through the glass cover of the absorber plate. The heat energy is transferred to heat transfer liquid passing through copper pipes, which are attached to the absorber plate.



## Collector

### Cover

Mistlite low iron extra clear tempered glass

### Thickness of cover

3.2mm

### Header pipe

Φ22mm (thickness: 0.8mm)

### Risers

Φ10mm (thickness: 0.7mm)

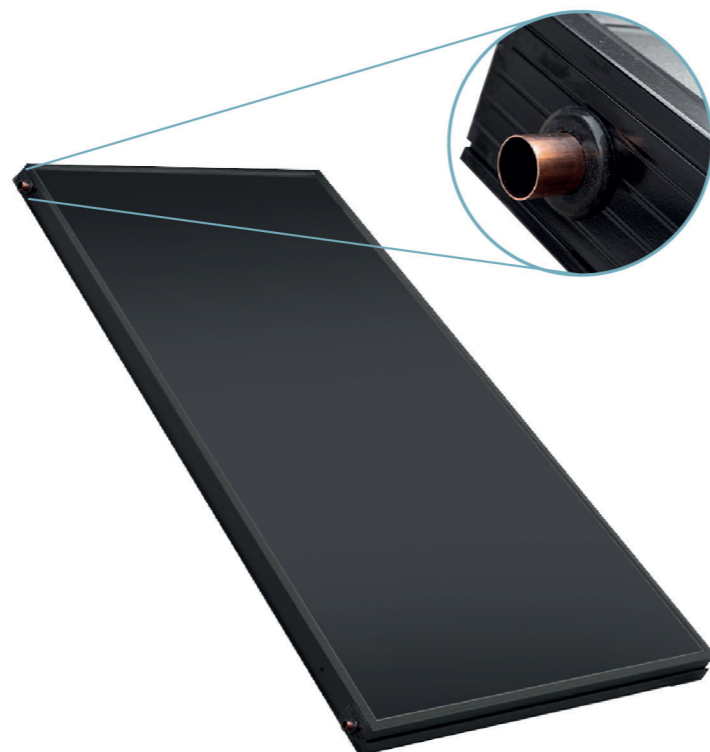
### No. of risers: 7

### Distance between pipes

110mm

### Liquid heat transfer

Water or Anti-freeze fluid (Water-glycol)



Cross Area (m2)	
Efficiency Area (m2)	2
Gross Weight of Collector (KG)	55±3

### Transparent Cover

Number of Cover (pc)	2
Dimension L*W (mm)	1975*975
Cover Material	Float Glass/Low-iron Glass
Cover Thickness (mm)	4
Cover Transmission	89%-91.4%

### Absorber

Dimension L*W (mm)	1840*956
Material	Red copper
Surface Treatment	Blue Titanium
Construction Type	Fin and Tube (Ultrasonic Welding)
Header Material	Copper TP2
Header Tube Size (mm)	Φ25*1060*0.8 2 pcs
Riser Tube Material	Copper TP2
Riser Tube Size	Φ10*1886*0.6 8 pcs
Fill Capacity	1.8L Including Header Pipe

### Thermal Insulation

Insulation Material	60K * 50mm Rock Wool
Insulation Thickness	Polyurethane (side)
Conductivity (W/mK)	0.032 under 75°C

### Casing

Frame Material	Aluminum Alloy
Frame Color	Silver Color
Back Plate	0.5 mm Galvanized Steel
Max Operation Temperature	200°C
Maximum Pressure (Mpa)	1,4
Sealing Material	EPDM

### Limitation of Operation

Max. Working Temperature	120°C
Max. Working Pressure	1.2 Mpa
Recommended Circulation Flow	Propylene Glycol&water mixture
Resistance to freezing	-40°C

Cross Area (m2)

2

Efficiency Area (m2)

1.28

Gross Weight of Collector (KG)

55±3

Model	Panel Size
ECS-60	1000MM*2000MM
ECS-80	1000MM*2000MM
ECS-100	1000MM*2000MM
ECS-150	1000MM*2000MM
ECS-200	1000MM*2000MM/2PCS
ECS-250	1000MM*2000MM/2PCS
ECS-300	1000MM*2000MM/2PCS
ECS-350	1000MM*2000MM/2PCS
ECS-400	1000MM*2000MM/3PCS
ECS-450	1000MM*2000MM/3PCS
ECS-500	1000MM*2000MM/4PCS



# Water Tank

Model	Volume (L)	Tank Dimensions
ECS-60	60L	470MM*530MM
ECS-80	80L	470MM*700MM
ECS-100	100L	470MM*900MM
ECS-150	150L	470MM*1305MM
ECS-200	200L	470MM*1750MM
ECS-250	250L	470MM*2180MM
ECS-300	300L	470MM*2430MM
ECS-350	350L	540MM*1620MM
ECS-400	400L	540MM*1820MM
ECS-450	450L	540MM*2050MM
ECS-500	500L	540MM*2270MM

## INNER TANK

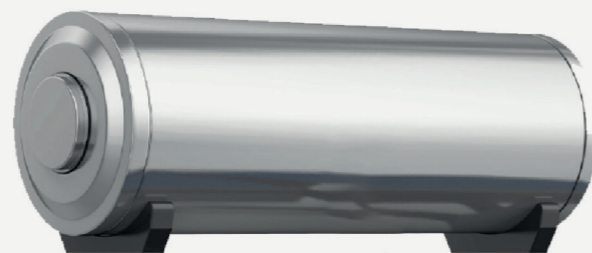


Material of Inner Tank	1.4mm thickness SUS304-2B food grade type	Diameter: 360mm
Material of outer Tank	0.41mm thickness Stainless steel /Galvanized Steel	Diameter: 460mm
Insulation	Polyurethane foam, 50mm thickness	Density: 35kg/m <sup>3</sup>
Heat Preservation Period		72 Hours
Welding Method		Argon Arc Welding

## GALVANIZED STEEL



## STAINLESS STEEL



# Accessories

## PT VALVE



- ⦿ Temperature and Pressure safety valves, with dual temperature and pressure protection;
- ⦿ Dimension 150Dmm x 70mm 0.5 x2.755"
- ⦿ Maximum working pressure 0.6Mpa
- ⦿ Permissible temperature 120°C
- ⦿ Dimension of Interface 15mm/0.5", 20mm/0.75"
- ⦿ Material of valve: brass

## MAGNESIUM BAR



To soften water in hard water area;

## CHECK VALVE



To prevent hot water from flowing backwards  
Material Brass  
Dimension of Interface 20mm/0.75"

## BACKUP HEATING ELEMENT



To heat water when rainy and cloudy days;  
Material Ingle 800  
Dimension /1.25"  
Power 1500/3000 W  
Voltage: 220 ACV      Frequency: 60 HZ



# Tankless Solar Water Heater



## Feature

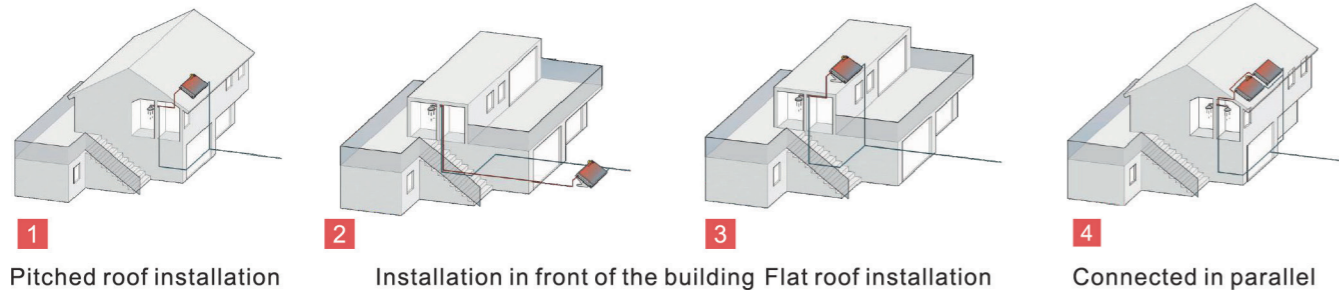


- All-in-one tankless compact solar water heater
- High pressure, Max. operating pressure 4 Bar
- Fast and easy to install
- Light weight, easy handling
- Short payback period
- High performance

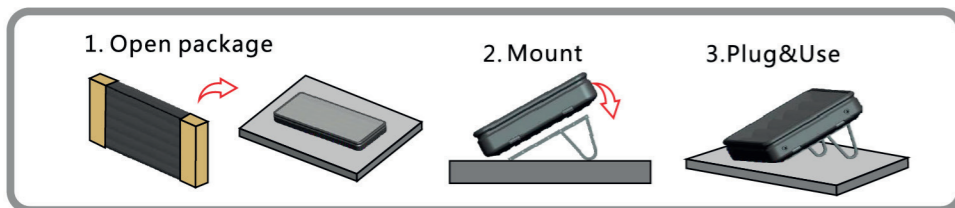


Controller

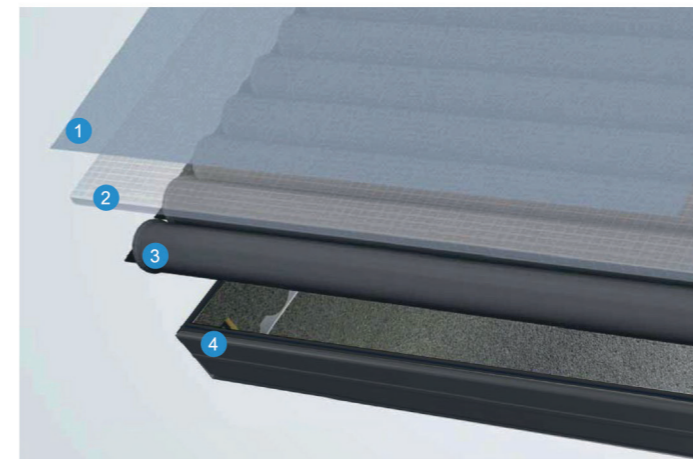
## The application



## Fast installation



Simple installation



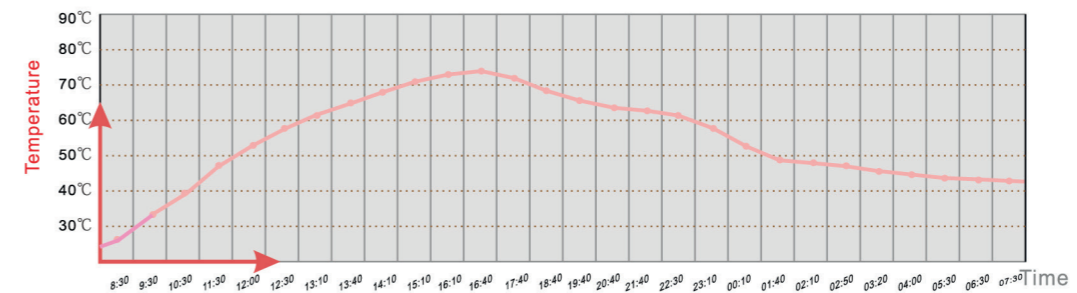
- 1. Tempered safety solar glass
- 2. Clear heat insulation
- 3. Storage tank integrated into collector
- 4. Case box

The working principle is easy but brilliant, the water is heated and stored in the solar collector directly. The hot water is created in a few minutes, the process is quick and the water always remains fresh and clean.

And there are no transfer losses between the media and no circulation is required to heat the water. The smallest amount of sunlight can be converted into heat and use effectively.



## Thermal performance



## SPM Tankless compact solar water heating system

MODEL	SPM150L	SPM300L
Gross area	1.905m <sup>2</sup> (SPM150L)	1.905m <sup>2</sup> (SPM150L*2)
Dimensions (LxWxH)	2140*890*226mm	2140*890*226mm*2
Weight	42kg	42kg*2pcs
Capacity	150L	300L
Insulation	EPP	EPP
Max. operating temperature	85°C	85°C
Max. operating pressure	4 bar	4 bar
Heating rod (optional)	1.5KW	1.5KW
Connections	2x3/4" male thread	2x3/4" male thread
Installation	Flat roof/Slope roof	Flat roof/Slope roof
Users		

