



Solar water heater

ing Hurras Solar Energy Technology Co.,Ltd



g Your Trust in Solar.

igh Quality Warm Your Family.



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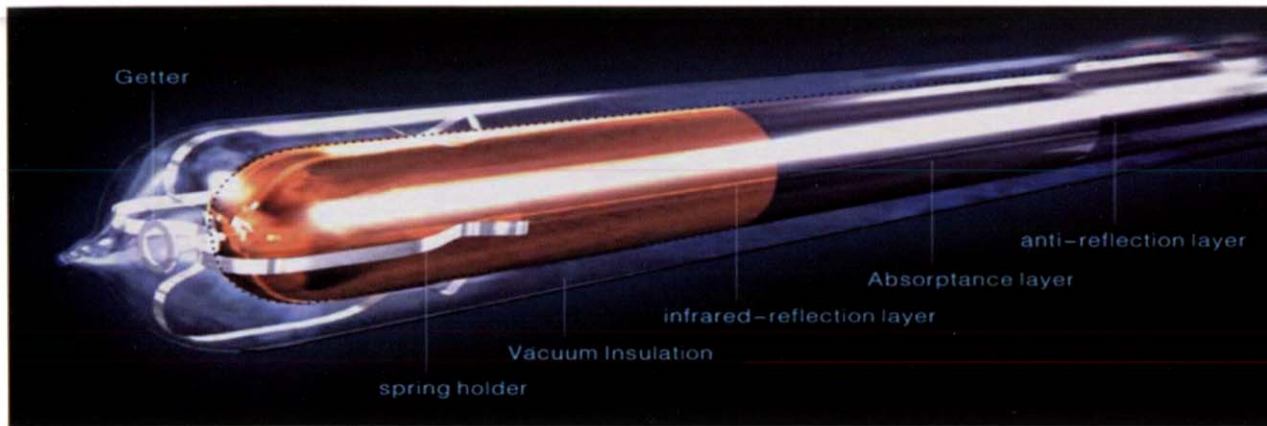
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ALN/AIN-SS/CU vacuum tuber

vacuum tube

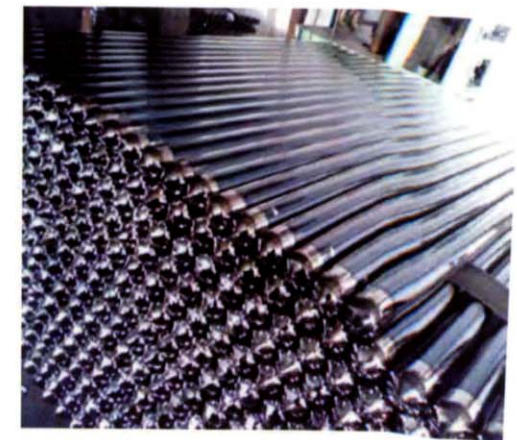
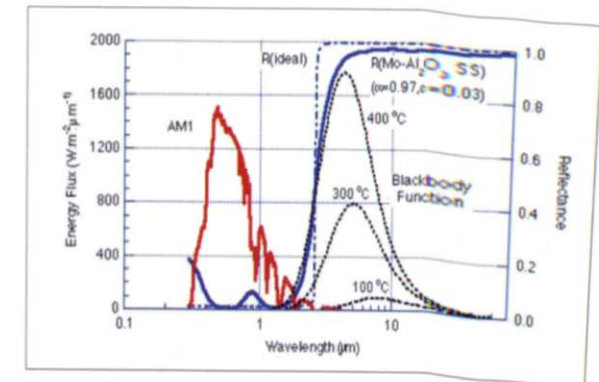
Feature:

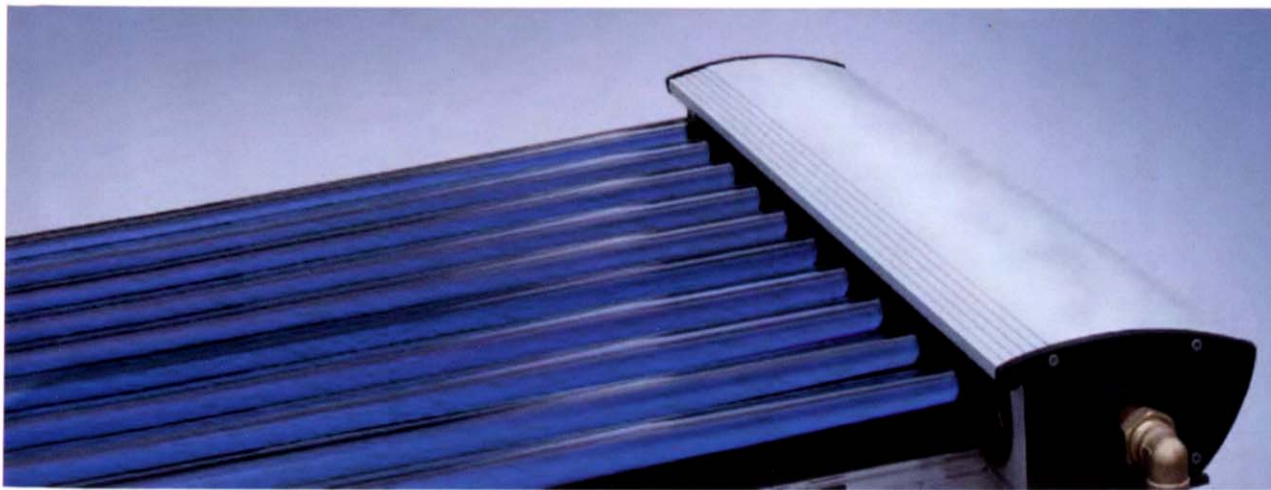
Hurras Vacuum tubes assimilate the advanced 12 layers of spattering deposition Of trivalent element technology, high borosilicate glass, gradual change of ALN/AIN-SS/CU selective complex absorptive coating. And these make vacuum tubes have high performance of absorptance and low reflection ratio. Through the interlayer, vacuum has a unique effect of thermo, with its temperature up to 380°C of idle sunning, performing a strong heating ability.

| Models | material | Models | length | coat ing | vacuum | Transmi- ttane | bearing hail |
|-----------|--------------|---------|---------|---------------|-------------------------|-------------------|-----------------|
| Ø 47x1500 | borosilicato | Ø 47 mm | 1500 mm | ALN/AIN-SS/CU | $\leq 5 \times 10^{-3}$ | 0.91 | Ø 25 mm |
| Ø 47x1800 | borosilicato | Ø 47 mm | 1800 mm | ALN/AIN-SS/CU | $\leq 5 \times 10^{-3}$ | 0.91 | Ø 25 mm |
| Ø 58x1800 | borosilicato | Ø 58 mm | 1800 mm | ALN/AIN-SS/CU | $\leq 5 \times 10^{-3}$ | 0.92 | Ø 25 mm |
| Ø 58x2100 | borosilicato | Ø 58 mm | 2100 mm | ALN/AIN-SS/CU | $\leq 5 \times 10^{-3}$ | 0.91 | Ø 25 mm |

Specification of all-glass Evacuated Solar Collector Tubes

- 1). Structure: all glass concentric dual tube geometr
- 2). Glass material: borosilicate glass
- 3). Absorptance: >0.92
- 4). Emittance: <0.08 (80°C)
- 5). vacuum: $<5 \times 10^{-3}$ Pa
- 6). Stagnation >230 m².°C/KW
- 7) average heat loss: <0.8 w/ m².°C
- 8). Lifetime >15 years





Solar collectors

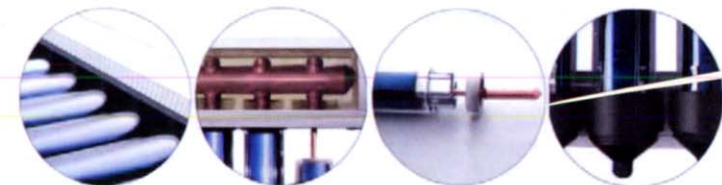
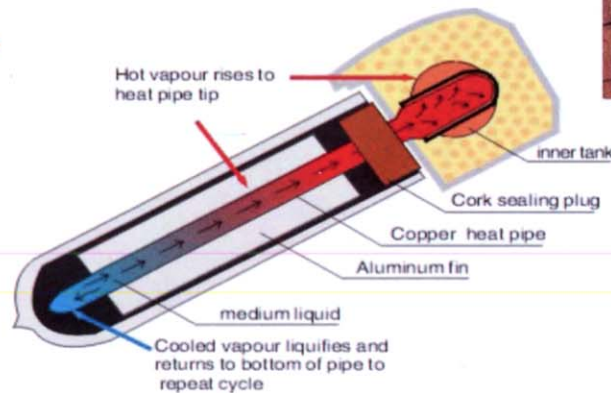
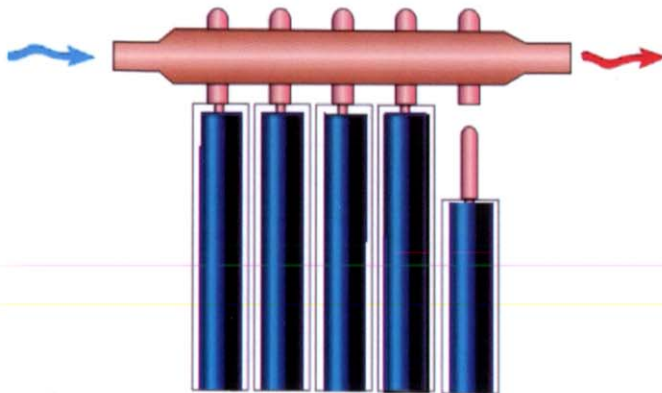
- ◆ Manifold (interior): red copper
- ◆ Manifold (exterior): aluminum alloy
- ◆ Glass tube dimensions: 58mm x 1.8m
- ◆ Daily efficiency: $\geq 55\%$ ($\geq 42\%$ in winter)
- ◆ Hail resistance: 25mm
- ◆ max pressure: 12 bar
- ◆ Coating of vacuum tube: ALN/AIN-SS/CU
- ◆ Heat Pipe: anti-freezing $> -35^{\circ}\text{C}$
- ◆ Inlet/outlet: 22 mm (3/4")
- ◆ Heat Pipe: anti-freezing $> -35^{\circ}\text{C}$
- ◆ manifold casing: silver (AL original), Black

Heat pipe collector

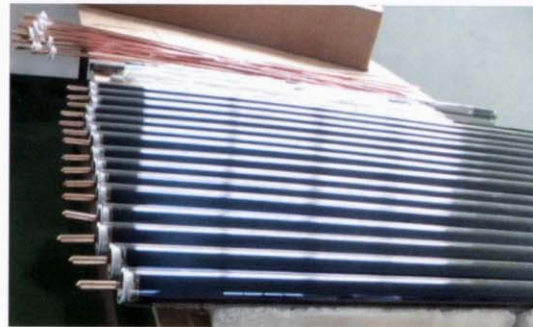
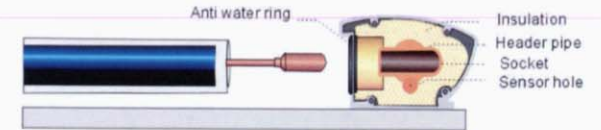
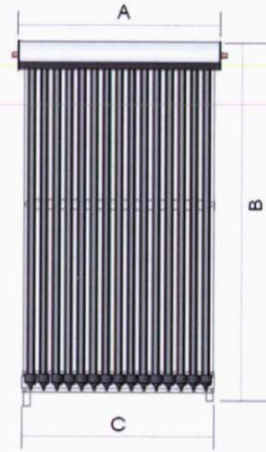
HCM Model

Feature:

- ◆ The pipeline is made of all the red copper and conducted By heat transfer medium liquid. Water can't flow in vacuum Tubes and operated when confined. The manifold uses Aluminum alloy mould material of high strength with Air flow design. It is furnished in good style.
- ◆ Can withstand high pressure when it works.
- ◆ Module design, arbitrary combination, which can meet the demand of large water consumption.



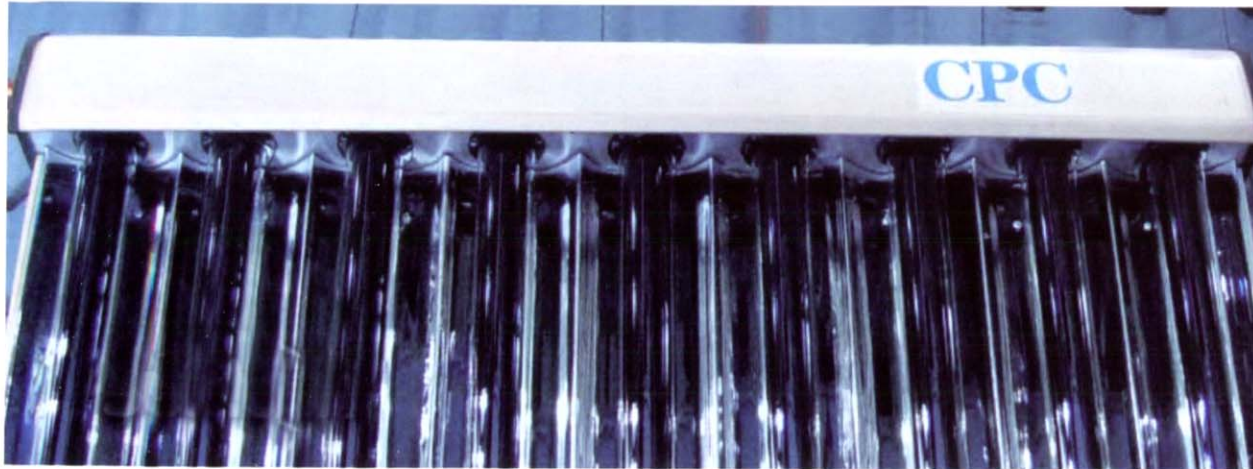
Solar collectors



| Models | vacuum tuber | Condenser Φ (mm) | Heat pipe | Whole pipe AL- fin | Thicker heat pipe | Adjust able frame | Capacity (Liter/Day /60℃) | Effective collector area M ² | size(mm) | | | | Qty (set) | | |
|------------------|----------------|------------------------|--------------|--------------------------|----------------------|-------------------------|---------------------------------|---|----------|------|------|-----|-----------|-------|--|
| | | | | | | | | | A | B | C | D | 20'ft | 40'hq | |
| HCM12-58/1800-02 | Ø 58x1800*12Pc | Ø 14 | • • | • •• | — | • • | 100-120 | 1.55 | 1070 | 2010 | 1005 | 125 | 141 | 342 | |
| HCM15-58/1800-02 | Ø 58x1800*15Pc | Ø 14 | • • | • •• | — | • • | 120-150 | 1.95 | 1295 | 2010 | 1230 | 125 | 121 | 295 | |
| HCM20-58/1800-02 | Ø 58x1800*20Pc | Ø 14 | • • | • •• | — | • • | 170-200 | 2.60 | 1670 | 2010 | 1605 | 125 | 92 | 223 | |
| HCM30-58/1800-02 | Ø 58x1800*30Pc | Ø 14 | • • | • •• | — | • • | 260-300 | 3.91 | 2420 | 2010 | 2355 | 125 | 67 | 166 | |

Above for the installation on the slope roof, we accept the custom-made according to your specifications

*Tips: • standard • optional • no

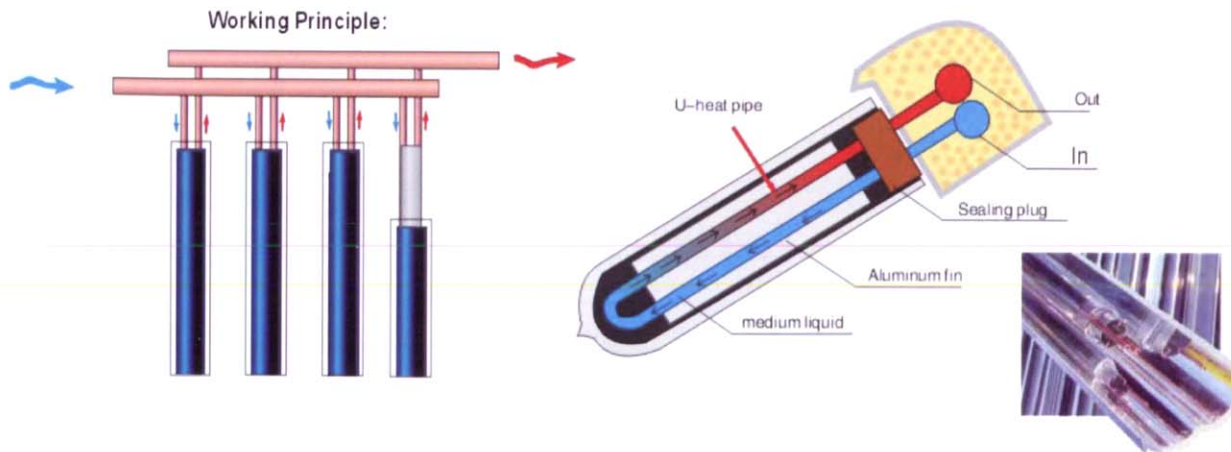


U-pipe collectors

SU, SU-C

Working Principle:

The U type series solar collector are always connected with existing heating supply device, The selective coating on the inner cover of the evacuated tube converts solar energy into heat energy and transfers heat to metal U tube by an aluminum fin. The liquid (usually glycol water antifreeze mixture) in the metal U tube is heated, and conducts the heat energy to the water inside the storage tank through plate exchanger or internal spiral coils.



Feature:

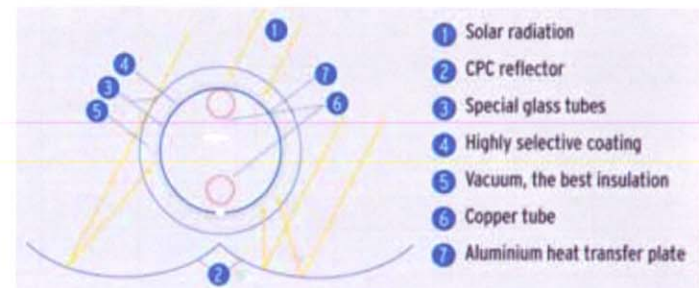
1. 360° absorber (CPC reflector)
2. high energy yield
3. high price/performance ratio
4. easier and faster modular installation
5. long lifetime and stable service.

CPC reflector

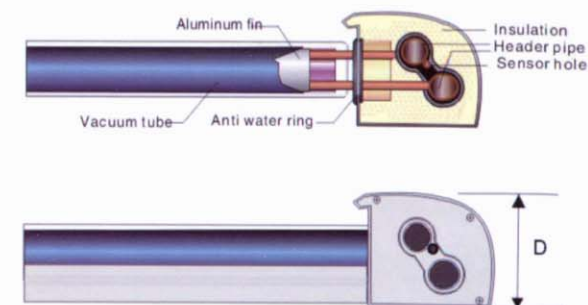
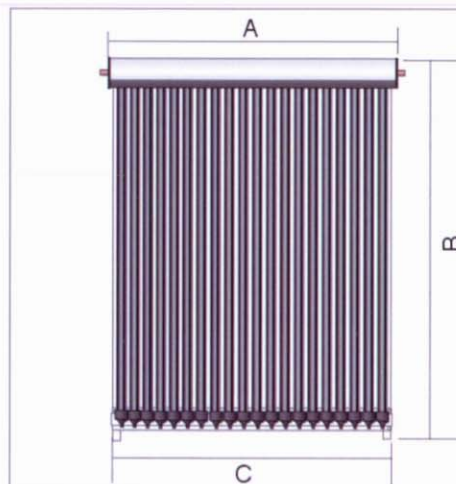
Maximum performance at minimum dimensions.

Absorber is bigger than gross surface area. Three dimensionally 360° shaped absorbers for the greatest possible energy collecting surface, utilized up to most of the diffuse and direct radiation from morning to evening.

360° absorber tube utilizes solar energy the year round in the most efficient way and provide the users with free energy even in the bad weather. Compared with the other collectors, the absorbers, thanks to 360° technology, absorbs direct and diffuse radiation in a much greater mass. In concert with vacuum tube insulation, heretofore unknown rates of efficiency have been achieved with our 360° absorber tubes. Even at sub-zero temperatures this construction prevents heat loss.



SU



- SU-9C
- SU-12C
- SU-15C

- SU-12
- SU-15
- SU-20

| Models | vacuum tuber | U-pipe Φ (mm) | CPC | preass embly | Thick er U pipe | Adju stabl e fram e | Capacity (Liter/Day/ 60℃) | Effective collector area M ² | size(mm) | | | | Qty (set) | | |
|----------------|----------------|---------------------|-----|-----------------|-----------------------|---------------------------------|---------------------------------|---|----------|------|------|-----|-----------|-------|--|
| | | | | | | | | | A | B | C | D | 20'ft | 40'hq | |
| SU-9 C | Ø 47x1500*9Pc | Ø 8 | • • | • • | • • | • • | 80-100 | 1.43 | 1020 | 1650 | 995 | 96 | 151 | 373 | |
| SU-12 C | Ø 47x1500*12Pc | Ø 8 | • • | • • | • • | • • | 110-130 | 1.91 | 1350 | 1650 | 1325 | 96 | 117 | 288 | |
| SU-15 C | Ø 47x1500*15Pc | Ø 8 | • • | • • | • • | • • | 140-160 | 3.15 | 1680 | 1650 | 1655 | 96 | 95 | 235 | |
| SU-10 | Ø 58x1800*12Pc | Ø 8 | — | • • | • • | • • | 80-100 | 1.55 | 1070 | 1970 | 1005 | 120 | 93 | 230 | |
| SU-15 | Ø 58x1800*15Pc | Ø 8 | — | • • | • • | • • | 130-150 | 1.95 | 1295 | 1970 | 1230 | 120 | 78 | 193 | |
| SU-20 | Ø 58x1800*20Pc | Ø 8 | — | • • | • • | • • | 180-200 | 2.60 | 1670 | 1970 | 1605 | 120 | 62 | 153 | |

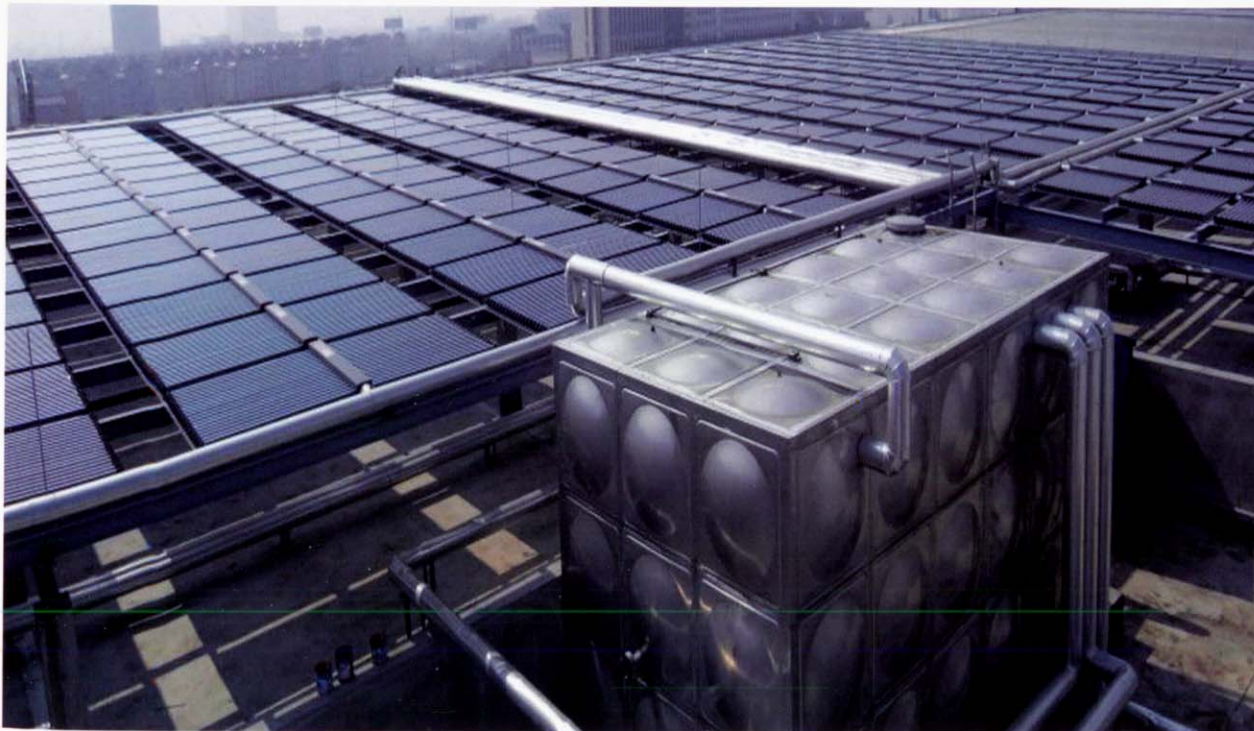
*Tips: • standard — no

non-pressure collector

HFM

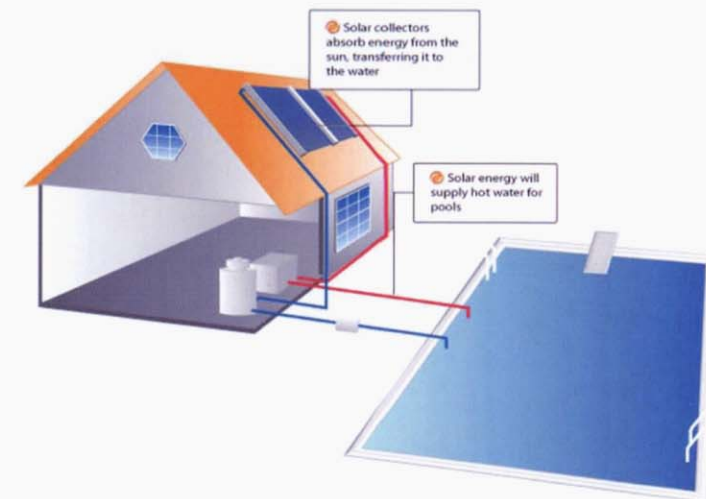
Advantages:

- ◆ Central solar water heating system is designed based on customers water consumption.
- ◆ By collecting the solar heat, it can heat a great amount of water that can accommodate tens of and hundreds of people.
- ◆ **Hurras** solar thermal collectors HFM series, a lot of these collectors can be linked together to make the solar central heating project. It is widely used in hotel, swimming pool, school etc.
- ◆ Investment only once, benefit forever.
- ◆ No harm, no pollution, saving and clean.



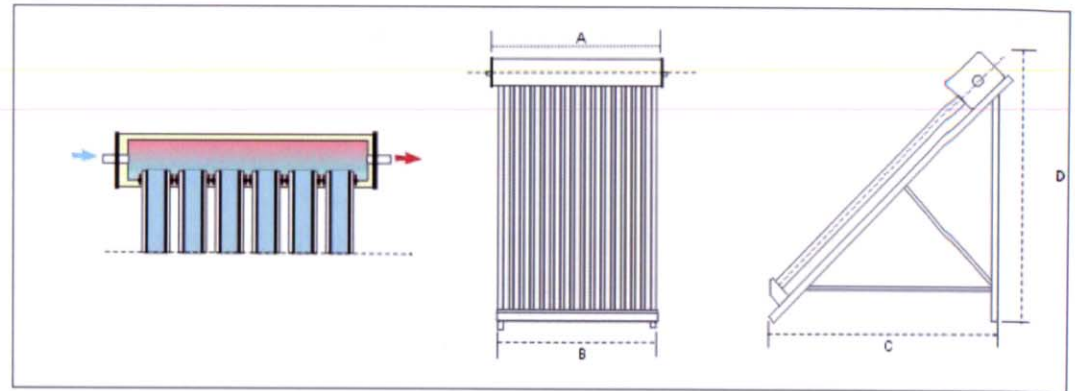
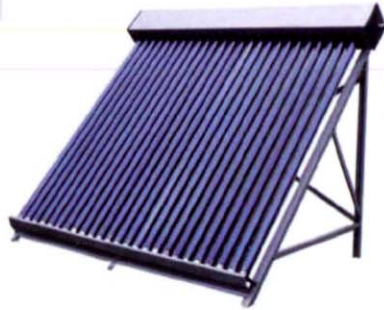
Specifications:

- ◆ Water tank (interior): stainless steel
- ◆ Water tank (exterior): PVDF
- ◆ Glass tube dimensions: 58mm x 1.8m / 47mm x 1.5m
- ◆ Heat preservation: 72h
- ◆ Hail resistance: 25mm
- ◆ lifetime: 15 years



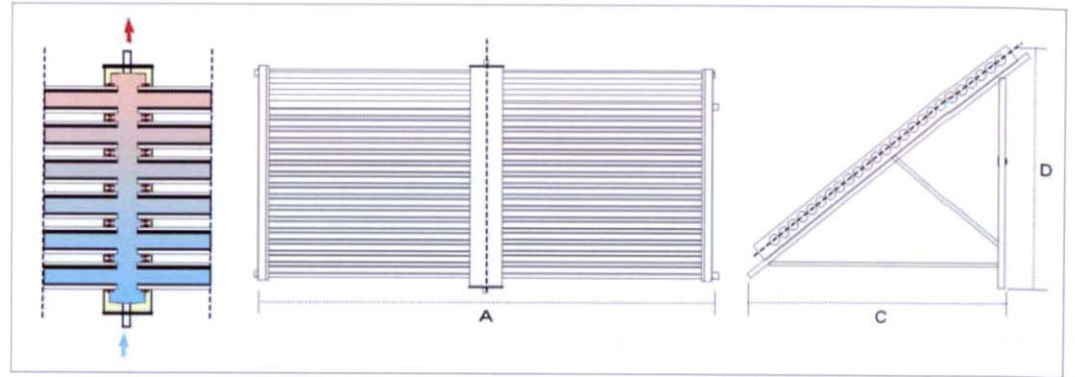
HFM25

- HFM25-47/1500
- HFM25-58/1800



HFM50

- HFM50-47/1500
- HFM50-58/1800



| Models | vacuum tuber | Heat pipe | | Connection size: | | Capacity (Liter/Day /60℃) | Effective collector area M² | size(mm) | | | | Qty (set) | | |
|---------------|----------------|-----------|---|------------------|-----|---------------------------|-----------------------------|----------|------|------|-----|-----------|-------|--|
| | | | | | | | | A | B | C | D | 20'ft | 40'hq | |
| | | | | | | | | | | | | | | |
| HFM25-47/1500 | Ø 47x1500*25Pc | — | — | G1" female | • • | 90-100 | 1.28 | 1070 | 2020 | 1005 | 123 | 112 | 276 | |
| HFM25-58/1800 | Ø 58x1800*25Pc | — | — | G1" female | • • | 140-150 | 1.95 | 1295 | 2020 | 1230 | 123 | 66 | 163 | |
| HFM50-47/1500 | Ø47x1500*50Pc | — | — | G1" female | • • | 180-210 | 2.60 | 1670 | 2020 | 1605 | 123 | 69 | 170 | |
| HFM50-58/1800 | Ø 58x1800*50Pc | — | — | G1" female | • • | 280-300 | 3.91 | 2420 | 2020 | 2355 | 123 | 40 | 96 | |

* we accept the custom-made according to your specifications

**Tips: • • standard • — no

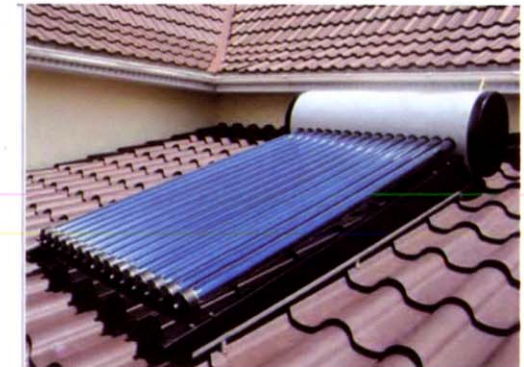
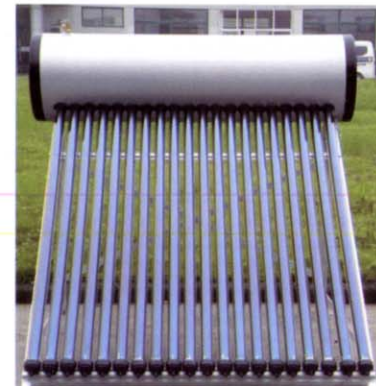
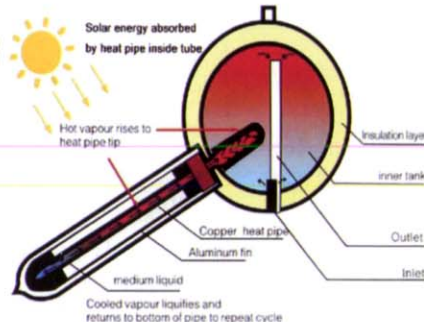


Integrated pressure system

UAC-H

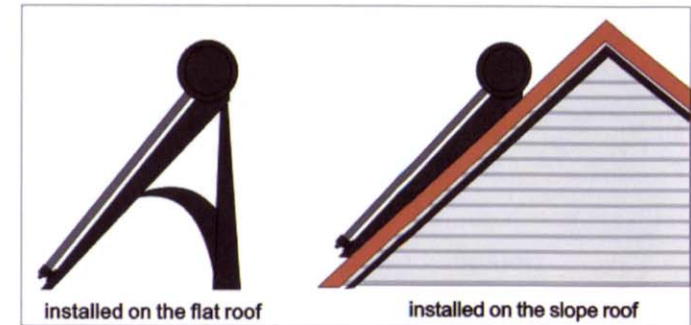
Feature:

- ◆ Highly efficient absorber of high performance with daily average efficiency over 50%;
- ◆ Start up quickly, heat pipe transfer the heat energy into the storage tank in one direction.
- ◆ Withstand pressure of 6 Bar, can be connected directly with city water.
- ◆ No water inside the evacuated tubes; the solar water heater can still in service even with several tubes breakage;
- ◆ Highly efficient insulation with polyurethane foam;
- ◆ Simple structure, easy to assembly and install, diffuse flat plate reflector can be assembled easily with its module structure;
- ◆ Can be used all year round in the cold climate;
- ◆ Can be used together with Auxiliary electric boost;
- ◆ Long service life, can be used as long as 15 years.



Specifications:

- ◆ Material of storage tank
- ◆ Outer tank: colorful steel, 0.4mm thick
- ◆ Inner Tank: SUS304, 1.5 mm
- ◆ thick Insulation Polyurethane foam, 50 mm
- ◆ working pressure: 6Bar
- ◆ Daily efficiency: $\geq 55\%$ ($\geq 42\%$ in winter)
- ◆ working temperature : $60^{\circ}\text{C} \sim -35^{\circ}\text{C}$
- ◆ vacuum tube specifications: 58mm*1800mm
- ◆ lifetime: 15 years
- ◆ inlet/outlet: 3/4"

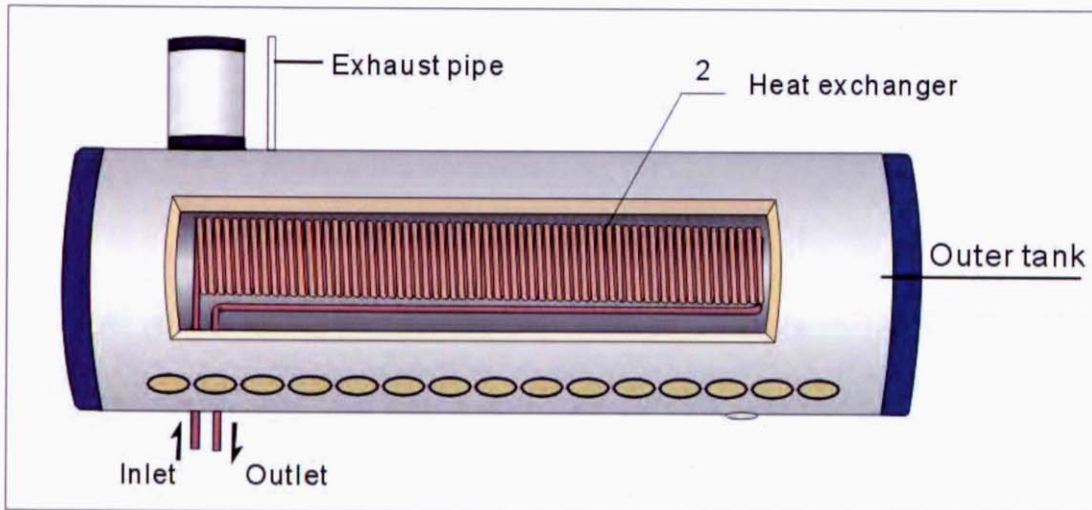


pre-heated pressure system

DLC

Feature:

- ◆ **Use in any time** : It adopts advanced design idea and integrates with high efficiency preheated patent technique, so it can warm the cold water rapidly when it flows through special pipe. It can overcome the short of traditional SWH, such as slow heating, long waiting time.
- ◆ **More Capacity**: We adopt special exchanging heat mode, it avoids mixed effect, so cold water can be heated at any moment.
- ◆ **Strong hydraulic pressure** : The hydraulic pressure is same as tap water, it is very suitable for tired person.
- ◆ **Economical and Environmental protecting**: There is no pollution when it is working since it depends on sunshine. Green and economical.
- ◆ **Easy operation** : It can supply water automatically, you can take it easy and enjoy good time.
- ◆ **Fashionable** : The appearance is fashionable and it can great integrate with your fitment.



Specifications:

- ◆ Tank material: interior SUS 304-2B
- ◆ Outer: PVDF / Color steel
- ◆ Frame: A8C-Aluminum alloy
- ◆ WAC- Galvanized steel
- ◆ Heat exchanger: Red copper
- ◆ Pressure: 6 Bar
- ◆ Heat preservation: 72-80h
- ◆ Hail resistance: 25mm

