



Product Catalogue



Company Introduction



Since 1999 Century Sun Energy Co., Ltd has dedicated itself to saving global resources by supplying the world with superior solar water heating systems.

Century Sun Energy Company is situated in the beautiful village of Haining 100 km to the port of Shanghai and covers a production area of 12,000 square meters. It produces 48,000 solar water heaters and 27,00 high capacity industrial solar water heating systems per year, 60% of which are exported to overseas markets.

Century Sun Energy Co. is equipped with state of the art manufacturing equipment imported from Germany and carefully trained technicians. Its products are certified by ISO and CE and have a quality reputation throughout Germany, France, America, South Korea, South Africa and the world. Haining Yinuo Electric Company's is well known as a supplier of well designed and affordable products, and its competent and professional staff.

Customized design and manufacture is also available with our company. Century Sun Energy's mission is to serve its customers by providing them with the most appropriate solutions to their individual requirements. Regardless of your particular circumstances, Century Sun Energy Company's friendly, professional and experienced staff will tailor a special solution to your needs that will surprise and delight you.

You are welcome to compare our products, contact us and make inquiries, we are just a click away from you.





Solar Vacuum Tube



Single Target All-glass Vacuum Tube

Manufactured from borosilicate glass 3.3 the solar tube is a product with improved hailstone impact resistant and thermal shock resistance.

The evacuated tunnel consists of two concentric glass tubes which are sealed in a semicircular shape on one side and are joined to one another on the other side.

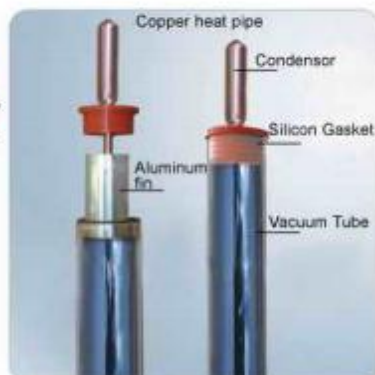
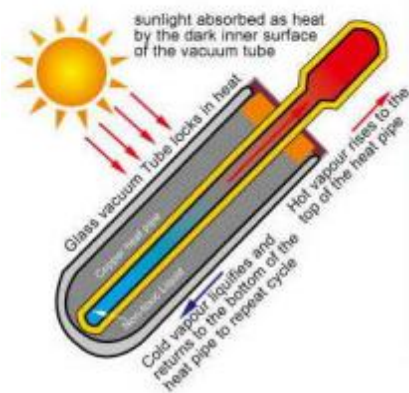
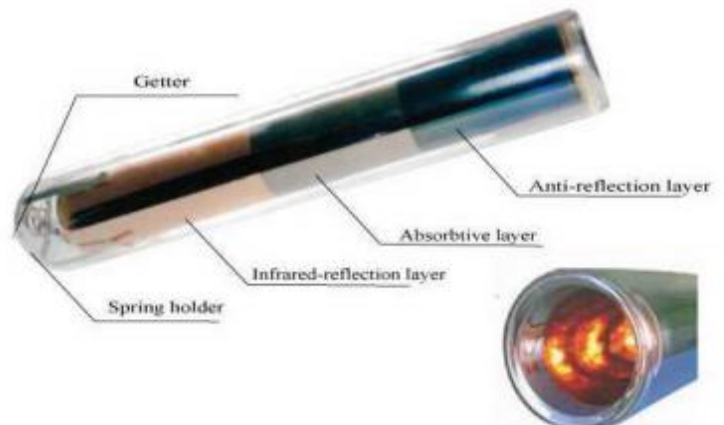
The space between the tubes is evacuated and then hermetically sealed, the internal glass tube is coated with an environmentally friendly, highly 'sensitive' layer on the outside, thus turning it into an absorber.

The coating is protected against adverse weathering influences within the evacuated space, the single-target aluminium spatter coating AL/AL-ALN(H)/AL-ALN(L)/ALN is characterised by extremely low emission and excellent absorption.



Three Target All-glass Vacuum Tube

Different from single target all-glass vacuum tube, this type of vacuum tube adopts a hi-tech spattering with 12 layers of solar absorptive coating Cu/SS-ALN(H)/SS-ALN(L)/ALN, which presents the vacuum tube with a much higher absorptance and lower emission ratio. In addition, three target vacuum tube is specially excellent in heat resistance, without any problem when its temperature risen up to 380°C against idle sunning, much more stable performance and longer lifespan.



Heat Pipe Vacuum Tube

A perfect combination of vacuum tube and copper heat pipe, heat pipe is such a copper pipe with its inside evacuated and filled with a small quantity of fluid, the fluid medium has a very low boiling point, when the medium get heated over its boiling point the fluid vaporizes, the vapor carrying with heat energy rapidly rises to the top of inside heat pipe for heat exchanging, as heat is released to the water, the vapor cooled and condenses to form liquid and returns to the bottom of inside heat pipe to once again repeat heat exchanging process. Because of the unique heat exchanging theory, heat pipe vacuum tube has a quick startup, high working temperature and bearing pressure, and super anti-freeze character.



Integrated Non-pressurized SWH



CS-WH—A

Vacuum Tube	Material	All-glass vacuum tube
	Spec.(mm)	Φ47×1500 Φ58×1800 Φ70×2000
	Tube (pcs)	15 / 16 / 18 / 20 / 24 / 30 / 36
Water Tank	Inner Tank	Imported food-grade stainless steel SUS304-2B
	Insulation	Integrated foam-forming polyurethane
	Outer Shell	Color steel plate/ Fluorocarbon plate (PVDF)
Bracket	Material	Imported galvanized steel, suitable for flat and slope roof
Optional Device	Electrical heater , Intelligent controller, Auxiliary tank, Anode Magnesium Bar	



CS-WH—B

Vacuum Tube	Material	All-glass vacuum tube
	Spec.(mm)	Φ47×1500 Φ58×1800 Φ70×2000
	Tube (pcs)	15 / 16 / 18 / 20 / 24 / 30 / 36
Water Tank	Inner Tank	Imported food-grade stainless steel SUS304-2B
	Insulation	Integrated foam-forming polyurethane
	Outer Shell	Color steel plate/ Fluorocarbon plate (PVDF)
Bracket	Material	Imported galvanized steel, suitable for flat and slope roof
Optional Device	Electrical heater , Intelligent controller, Auxiliary tank, Anode Magnesium Bar	



CS-WH—C

Vacuum Tube	Material	All-glass vacuum tube
	Spec.(mm)	Φ47×1500 Φ58×1800 Φ70×2000
	Tube (pcs)	15 / 16 / 18 / 20 / 24 / 30 / 36
Water Tank	Inner Tank	Imported food-grade stainless steel SUS304-2B
	Insulation	Integrated foam-forming polyurethane
	Outer Shell	Color steel plate/ Fluorocarbon plate (PVDF)
Bracket	Material	Imported galvanized steel, suitable for flat and slope roof
Optional Device	Electrical heater , Intelligent controller, Auxiliary tank, Anode Magnesium Bar	





CS-WH—D

Vacuum Tube	Material	All-glass vacuum tube
	Spec.(mm)	Φ47×1500 Φ58×1800 Φ70×2000
	Tube (pcs)	15 / 16 / 18 / 20 / 24 / 30 / 36
Water Tank	Inner Tank	Imported food-grade stainless steel SUS304-2B
	Insulation	Integrated foam-forming polyurethane
	Outer Shell	Color steel plate/ Fluorocarbon plate (PVDF)
Bracket	Material	Aluminium alloy, suitable for flat and slope roof
Optional Device	Electrical heater , Intelligent controller, Auxiliary tank, Anode Magnesium Bar	



CS-WH—E

Vacuum Tube	Material	All-glass vacuum tube
	Spec.(mm)	Φ47×1500 Φ58×1800 Φ70×2000
	Tube (pcs)	15 / 16 / 18 / 20 / 24 / 30 / 36
Water Tank	Inner Tank	Imported food-grade stainless steel SUS304-2B
	Insulation	Integrated foam-forming polyurethane
	Outer Shell	Stainless steel plate
Bracket	Material	Stainless flat steel, suitable for flat and slope roof
Optional Device	Electrical heater , Intelligent controller, Auxiliary tank, Anode Magnesium Bar	

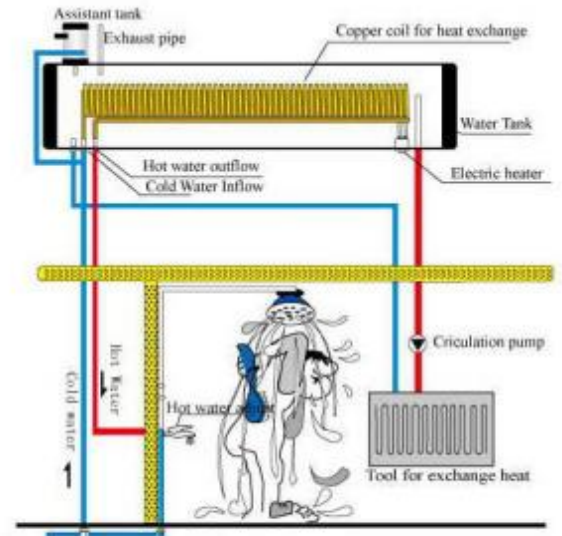
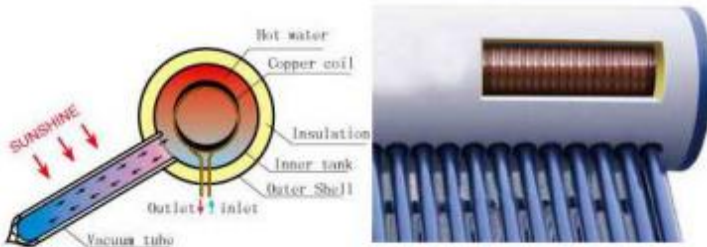


CS-WH—F

Vacuum Tube	Material	All-glass vacuum tube
	Spec.(mm)	Φ47×1500 Φ58×1800 Φ70×2000
	Tube (pcs)	15 / 16 / 18 / 20 / 24 / 30 / 36
Water Tank	Inner Tank	Imported food-grade stainless steel SUS304-2B
	Insulation	Integrated foam-forming polyurethane
	Outer Shell	Stainless steel plate
Bracket	Material	Stainless square tube, suitable for flat and slope roof
Optional Device	Electrical heater , Intelligent controller, Auxiliary tank, Anode Magnesium Bar	



Integrated Copper Coil Pressurized Solar Water Heating System



Also named thermosiphon solar water heating system, this type of solar water heater is such a water pre-heating system with a pile of copper coil installed inside water tank as heat exchanger.

Firstly, water in inner water tank will be heated enough by solar accumulation through vacuum tubes, when water from tap goes through copper coil, it will be heated by the hot water surrounded copper coil all the way till out, in this way we get instant hot water which is much more healthy and not limited to the capacity of water tank, and inside copper coil even makes it a more comfortable pressurized system which could be connected directly with tap water. With an additional auxiliary tank, the system will work automatically to refill water into water tank.

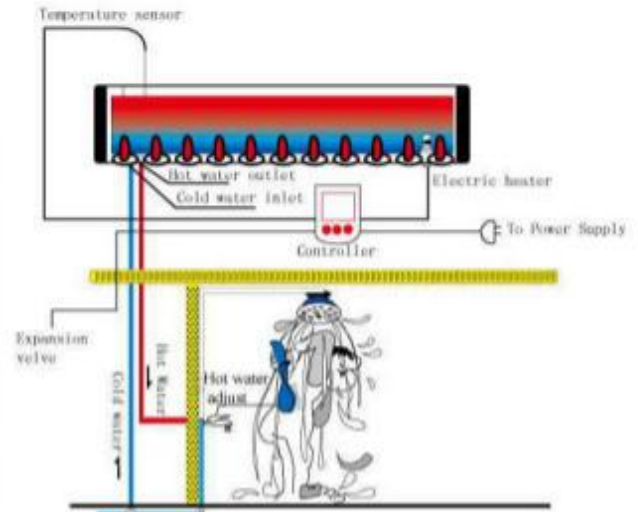
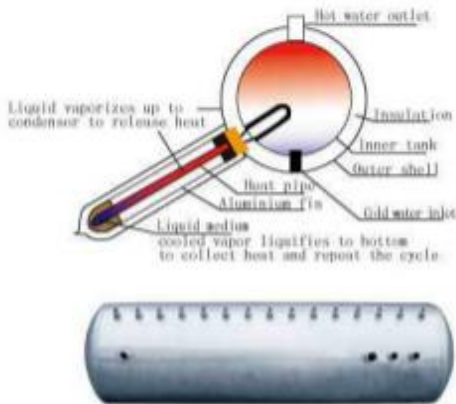
Parameters

Vacuum Tube	Material	All-glass vacuum tube
	Spec.(mm)	Φ58×1800 Φ70×2000
	Tube (pcs)	15 / 16 / 18 / 20 / 24 / 30 / 36
Water Tank	Inner Tank	Imported food-grade stainless steel SUS304-2B
	Insulation	Integrated foam-forming polyurethane
	Outer Shell	Color steel / PVDF/ Stainless steel
Bracket	Material	Galvanized steel / Stainless steel / Aluminium alloy
Optional Device	Electrical heater , Intelligent controller Auxiliary tank, Anode Magnesium Bar	
Working Pressure	6 Bar	





Integrated Heat Pipe Pressurized Solar Water Heating System



Heat pipe vacuum tube is adopted in this system as solar collecting device which is of the most efficient, the heat pipe tip is plugged into the copper cannula which is welded into water tank with the end closed to prevent contamination of water, no water would go through vacuum tube but be heated by heat pipe tip with cannula, so it is possible to remove the vacuum tubes and heat pipes without draining the system. At the same time the water tank itself is pressurized so that it could be connected directly with tap water, which makes your daily using of hot water much more comfortable.

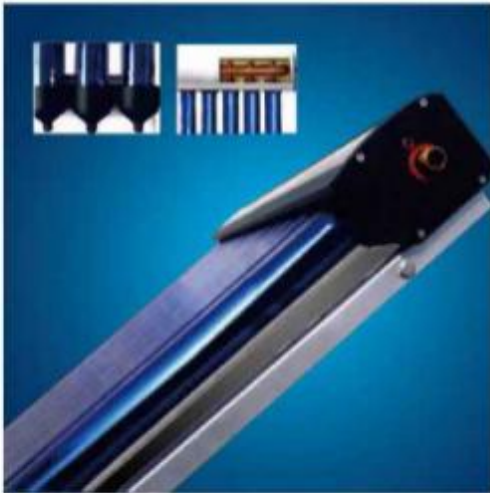
Designed specifically by factories to perform efficiently in extremely cold climates, the integrated insulation and the heat pipe vacuum tube produces a remarkable "all weather, all year round" performance.

Parameters

Heat Pipe Vacuum Tube	Material	Three target vacuum tube, red copper heat pipe
	Spec.(mm)	Φ47×1500 Φ58×1800 Φ70×2000
	Tube (pcs)	15 / 16 / 18 / 20 / 24 / 30 / 36
Pressurized Water Tank	Inner Tank	Food-grade SUS304-2B/ Porcelain enamel
	Insulation	Integrated foam-forming polyurethane
	Outer Shell	Color steel / PVDF/ Stainless steel
Bracket	Material	Galvanized steel / Stainless steel / Aluminium alloy
Optional Device	Electrical heater , Intelligent controller, Anode Magnesium Bar	
Working Pressure	6 Bar	
Anti-freezing	Below -35°C	



Heat Pipe Solar Collector



Heat pipe solar collector is such an efficient solar collecting device that composes of heat pipe vacuum tube, manifold and outer bracket, the manifold is again made up of inner flow passage, outer aluminium alloy crust and middle insulation layer.

The tip of heat pipe is plugged into the copper cannula which is mechanically welded into flow passage, heat pipe tip transfers its heat energy to copper cannula and flow passage, when the heat conducting medium in the loop flows through the passage, it absorbs the heat from the very copper passage and cannulas all the way till out.

Designed and manufactured by **factories**, the heat pipe solar collector provides high energy yield and long life expectancy. Produced from quality materials and components, the solar collectors are corrosion resistant and easy to install and maintain. Hailstone impact resistant and anti-freezing property ranks this collector amongst the finest solar system in the market place. The collectors could be connected together to work with water tank to form a solar water heating system or with radiator for house heating purpose.



Parameters

Heat Pipe	Material	Three target vacuum tube, red copper heat pipe
	Spec. (mm)	Φ47×1500 Φ58×1800
Vacuum Tube	Tubes (pcs)	12 / 15 / 20 / 25 / 30
	Flow Passage	High quality red copper
Manifold	Outer Shell	Aluminum alloy plate
	Insulation	Integrated foam-forming polyurethane
Bracket	Aluminium Alloy, suitable for flat or slop roof installation	
Working Pressure	10 bar	
Anti-freezing	Below -35°C	



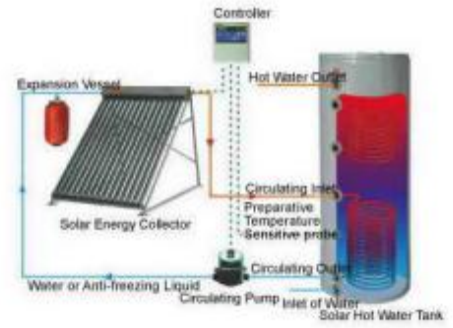
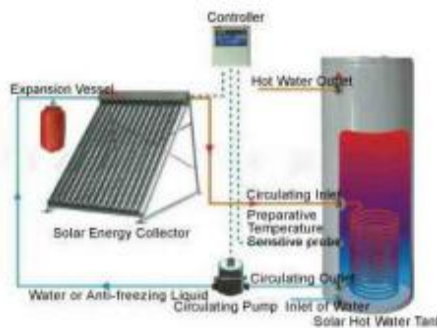
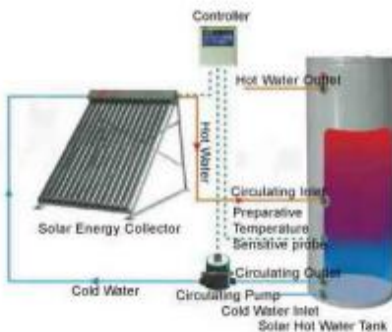
Split Heat Pipe Pressurized Solar Water Heating System



Split heat pipe pressurized solar water heating system is composed of heat pipe solar collector, pressurized water tank, integrated solar workstation system and its connecting pipeline. Copper coil could be installed in water tank and connected with solar collector for twice heat exchanging.

Solar workstation is an integrated controlling system composed of intelligent controller, circulating pump, flow meter, relief valve, pressure gauge, expansion vessel, check valve, etc.

This kind of heating system manufactured by factories works based on the temperature difference sensed between solar collector and water tank. When temperature difference sensed is higher than the preset value in controller, the pump will start to circulate the heat transferring medium in solar collector to release heat energy into water through copper coil installed in water tank, in this way the water temperature get raised and when it reaches the set max. value, the circulation stops automatically.



Parameters

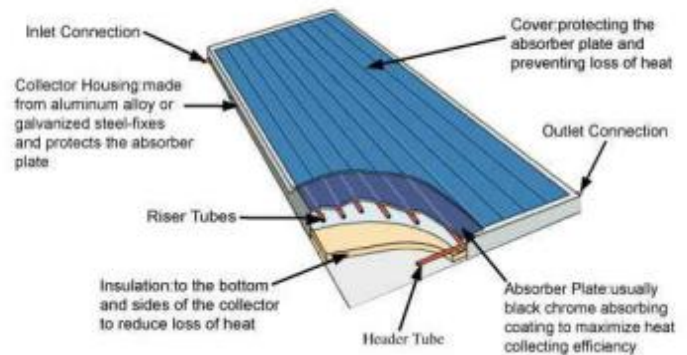
Heat Pipe Solar Collector	Material	Three target vacuum tube, red copper heat pipe
	Spec.(mm)	Φ47×1500 Φ58×1600
	Tube (pcs)	15 / 16 / 18 / 20 / 24 / 30 / 36
Pressurized Water Tank	Inner Tank	Food-grade SUS304-2B/ Porcelain enamel
	Insulation	Integrated foam-forming polyurethane
	Outer Shell	Pearlescent plate / Powder-coating plate / Stainless steel
Bracket	Material	Aluminium alloy / Galvanized steel / Stainless steel
Accessories	Solar workstation, Electrical heater, Magnesium rods	
Working Pressure	6 bar	
Anti-freezing	Below -35°C	



- ★ Heat pipe solar collector for thermal transmission, with a quick start up and super heating efficiency and anti-freezing
- ★ Super heat preservation with integrated polyurethane insulation, pressurized working offers much more comfortable using of hot water
- ★ The structure of system has been simplified by modularized collector and integrated workstation, easy assembly and installation and maintenance, water tank could be placed randomly indoors
- ★ The system serves all year round even in extremely cold climate
- ★ Long lifespan system, can be of good service as long as more than 15 years

Flat Panel Solar Collector

A flat panel collector is designed to generate maximum performance in all climatic conditions. The ultra-high efficiency absorber with its sputtered selective surface maximizes absorption and minimizes emission (heat loss). The copper risers are mechanically bonded to the copper absorber sheet ensuring maximum heat transfer. The flat panel collector can be used in both closed and open circuit systems and is designed to connect multiple collectors easily to each other to create large collector fields.

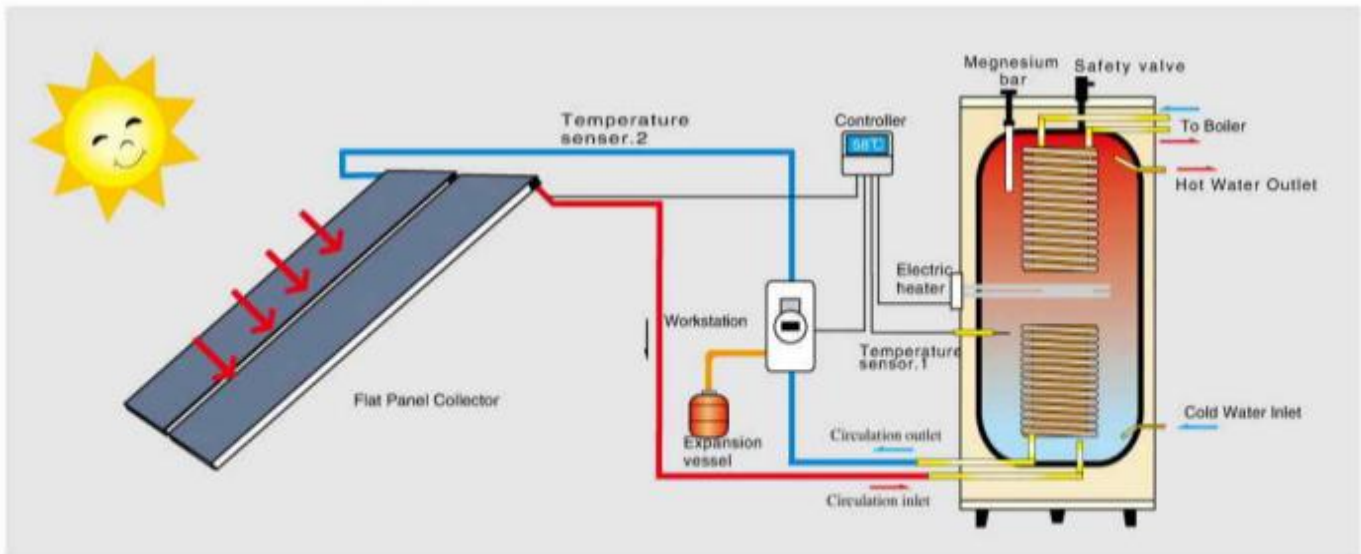


Parameters

Dimension	Sizes	2000*1060*70 mm / 2000*1060*80 mm / 2000*1060*90 mm
	Aperture area	2 square meters
	Net Weight	32kg / 33kg / 35kg accordingly
Glazing	Material	Tempered / Tempered textured / Tempered low-iron textured glass
	Thickness	4mm (3.2mm for tempered low-iron textured glass)
	Transmission	85%~90%
Absorber	Core Material	Copper & aluminum / All copper core
	Coating	Anodizing / Selective coating / Black chrome / Titanium-Nitride-Oxide
	Absorber	Copper & aluminum $\delta=0.45\text{mm}$ / All copper T2 $\delta=0.15\text{mm}$
	Header	All copper T2, $\Phi 25 \times 0.6 \times 1060\text{mm}$ / All copper T2, $\Phi 25 \times 0.6 \times 1060\text{mm}$
	Riser	Copper & aluminum, $\Phi 14 \times 0.45\text{mm}$ / All copper T2, $\Phi 10 \times 0.5\text{mm}$
Insulation	Jointing	Composite technology / Ultrasonic welding
	Materials	Glass wool+ benzene plate / glass wool+ high dense polyurethane foam
	Thickness	30mm / 40mm / 50mm
Casing	Material	Embossed aluminum back sheet 0.3mm
	Sealing	Anti-aging metal elasticity sealing
Working Pressure	3 Bar of Copper & aluminum, 10 bar of All copper core	
Working Temperature	(-)35~180°C	

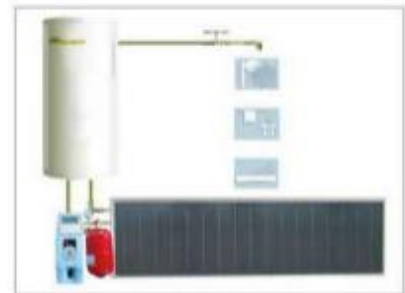


Flat Panel Pressurized Solar Water Heating System



The flat panel could be combined with water tank to form an integrated or split water heating system, and the working theory is as same as that of the heat pipe solar water heating system accordingly. Flat panel is adopted as solar collector makes it much easier in installation and maintenance.

The 'factory' flat panel water heating system is a kind of system specifically designed to provide efficient service in medium to high solar gain areas, while in split system the closed circuit design makes it suitable for frost prone and poor water quality areas.



Parameters

Flat Panel Solar Collector	Glazing	Tempered / Tempered textured / Tempered low-iron textured glass
	Coating	Anodizing / Selective coating / Black chrome / Titanium-Nitride-Oxide
	Core	Copper & aluminum / All red copper core
	Insulation	Glass wool + benzene plate / Glass wool + polyurethane foam
Pressurized Water Tank	Inner Tank	Food-grade SUS304-2B/ Porcelain enamel
	Insulation	Integrated foam-forming polyurethane
	Outer Shell	Pearlescent plate / Powder-coating plate / Stainless steel
Accessories	Solar workstation, Electrical heater, Magnesium rods	
Working Pressure	6 bar	



Solar Water Heater Accessories



Workstation System



Foam Workstation



Metal Workstation



Expansion Vessel



Intelligent Controller
(Non-pressurized system)



Intelligent Controller
(Non-pressurized system)



Intelligent Controller
(Integrated pressurized system)



Intelligent Controller
(Split pressurized system)



Assistant Tank
(Color steel)



Assistant Tank
(Stainless steel)



Circulating Pump



Connectors and Joints



Electrical Heater



Anode Magnesium Bar



Insulation with Flexible Stainless Steel Pipe



Industrial Water Heating System



Industrial water heating system consists of vacuum tube solar collectors (heat pipe solar collectors and flat panel solar collectors are also adaptable), storage water tank, controlling box, circulating pumps, pipelines and other accessories.

The working theory of industrial solar water heating system is as same as that of the split pressurized solar heating system.

The industrial water heating system with all-glass vacuum tube solar collector is the most cost effective and stable system.



Factory has it all, the complete choice of systems to provide a solar solution for every application, the best service with its world wide network of dealers and highly-trained staff, with the most systems installed in over 18 countries. Uninterrupted hot water even in inclement weather for a low running and maintenance cost. Pre-engineered, pre-tested plug & play systems easy to install, backed up by the experienced staff.

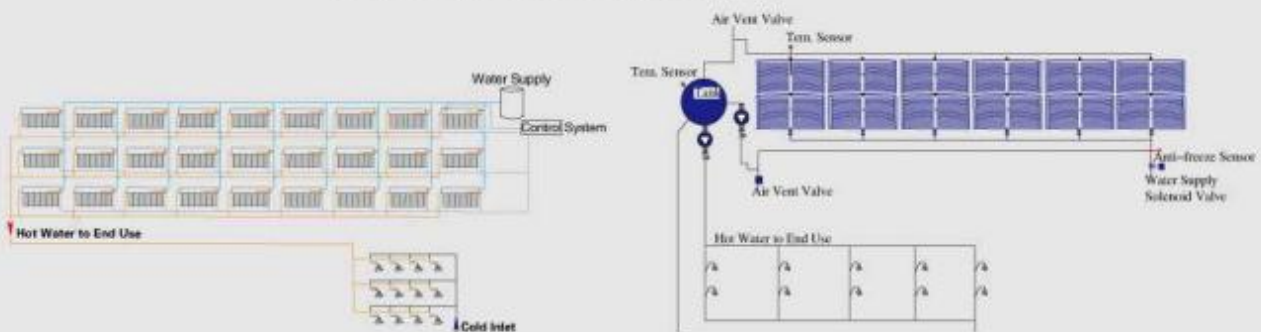
There are several applications such as Hotels, camp sites, farms, hospitals, schools, sport facilities etc. Systems can also be installed with the tank inside the roof. So called "remote" systems which is very economical and of good performance.

Parameters

Vacuum Tube	Material	All-glass vacuum tube
	Spec. (mm)	Φ47×1500 Φ58×1800
	Tube (pcs)	15 ~ 60
Manifold	Inner Tank	Food-grade stainless steel SUS304-2B
	Outer Shell	Color steel / Stainless steel
	Insulation	Integrated foam-forming polyurethane
Bracket	Galvanized steel / Stainless steel	
Hail Resistance	Φ25mm	



Multicellular Water Heating System



Spare Parts of Industrial Water Heating System



Industrial Water Tank



Controlling Box



Industrial Electrical Heater



Vacuum Tube Manifold



Industrial Pump



Pipeline Insulation



Temperature Control Valve



Pipeline Fittings



Industrial Water Tank



Industrial Magnetic Valve



Water Control Valve



Industrial Check Valve



Industrial Water Heating System Accomplished

We appreciate orders of industrial water heating system from both domestic and overseas, we also undertake the responsibility for overseas technical support against our industrial water heating systems.



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