

INTEGRATIVE PRESSURIZED SOLAR HEATING SYSTEM--SP470/SP500 series

Stainless steel water tank with heat pipe tube,SUS304-2B/SUS316L stainless steel solar system

Product Model	Tank Capacity	Absorbing Area	Weight	Dimension (L×W×H)	Qty. per 20FT/40FT/40HQ
SP470-1800/58-12	100L	0.92m ²	63KGS	1830*1210*1600	52 / 104 / 126
SP470-1800/58-15	125L	1.14m ²	78KGS	1830*1450*1600	43 / 86 / 104
SP470-1800/58-18	150L	1.37m ²	93KGS	1830*1690*1600	35 / 70 / 85
SP470-1800/58-20	165L	1.52m ²	103KGS	1830*1850*1600	32 / 64 / 78
SP470-1800/58-24	200L	1.83m ²	125KGS	1830*2170*1600	27 / 55 / 67
SP470-1800/58-30	250L	2.29m ²	156KGS	1830*2650*1600	23 / 46 / 55
SP500-1800/58-12	120L	0.92m ²	68KGS	1830*1210*1630	51 / 102 / 124
SP500-1800/58-15	150L	1.14m ²	83KGS	1830*1450*1630	42 / 84 / 102
SP500-1800/58-18	180L	1.37m ²	98KGS	1830*1690*1630	34 / 69 / 83
SP500-1800/58-20	200L	1.52m ²	109KGS	1830*1850*1630	31 / 63 / 76
SP500-1800/58-24	240L	1.83m ²	132KGS	1830*2170*1630	26 / 54 / 65
SP500-1800/58-30	300L	2.29m ²	164KGS	1830*2650*1630	22 / 45 / 53

It is the most effective and trouble-free system available today. In addition to reducing your water-heating bills, it will help preserve precious natural resources by using free energy from the sun.

As with an electric or gas water heater, your new solar water heating system operates automatically to ensure you will always have an ample supply of hot water.

However, there are simple steps you can take to increase both its efficiency and service life.

This manual provides the manufacturers recommended procedures for Blueclean integrated pressurized solar water heating systems. The procedures are essential for correct installation, troubleshooting and maintenance.

Read each section of this manual thoroughly before beginning work on the system.

The Solar Heating System

SP470/SP500 series is a pressurized system which means that just like your existing electric or gas water heater it relies on the municipal or well pressure to move the water into and out of the tank. When you turn on the hot water faucet, cold water is pushed into the hot water tank which pushes the hot water to the faucet. The

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SP470/SP500 series heat pipe solar system requires no pumps or additional equipment to operate. This means that you get an incredibly efficient solar water heater that has little need for maintenance and no parts that are likely to wear or break.

The Solar Storage Water Tank

The Blueclean Solar Water Tank is a pressurized tank designed to keep heat in and keep cold out. Its design, craftsmanship, and important accessories all contribute to the Blueclean's high performance and long life span. The Blueclean solar inner tank is made up of a high quality stainless steel(SUS304-2B or SUS316L). Set around this tank is 55mm of high density polyurethane insulation and around the insulation is a steel shell that protects the insulation from UV damage and keeps the whole tank isolated from the elements. Thanks to this design and the polyurethane insulation, the tank is able to maintain a high temperature difference between the water in the tank and the outside air temperature.

The Heat Pipe Evacuated tube Collector

The evacuated tube collector is made up of three components: an evacuated glass tube with a selective coating that optimizes absorption and minimized reflection, aluminum fins that transfer the heat inside the tube to a copper heat pipe, and a heat pipe which most efficiently transfers this heat to the water.

Heat pipe tube has two types for you choose, one is 0.6mm thickness, the other is 0.8mm thickness.

If your solar energy system is your only source of hot water, the system is equipped with a backup heater or heating element. On the few days a year when there may be insufficient solar energy, you are still assured of all the hot water you will need.

Installation of SP470/SP500 series

The location chosen for the water heater must take into consideration the following:

Local Installation Regulations

This water heater must be installed in accordance with these instructions, local codes, utility codes, utility company requirements or, in the absence of local codes.

Minimum Air Temperature

Blueclean Thermosiphon solar systems must not be installed in areas where the outside air temperature can fall below -30 degrees continuously for more than 18 hours. If the outside air temperature is to fall below -28 degrees for more than 4 hours, it is suggested that all potable water plumbing is installed with heat trace and insulated to protect against pipe freezing. Insulation and normal use are generally sufficient, but to avoid the possibility of freezing during a power failure, open a hot water faucet and allow a slow trickle of water to flow until power is restored. Because PEX can freeze, the heat tracing should thaw any exposed plumbing in the unlikely event that it were to freeze. Please contact your service technician for assistance and advice with protection against pipe freezing.

The complete solar energy system includes

- 1 Stainless steel material Super Insulated Water Tank
- 1 Stainless steel material or Aluminium material or Galvanized Steel Bracket, Painted
- 10-30 Evacuated Tube Solar Collectors(Heat pipe)
- 1 Magnesium Anode
- 1 T&P Valve
- 1 Solar Controller (optional)
- 1 220V Electric heater Heater (optional). 1500W or 2000W or 3000W