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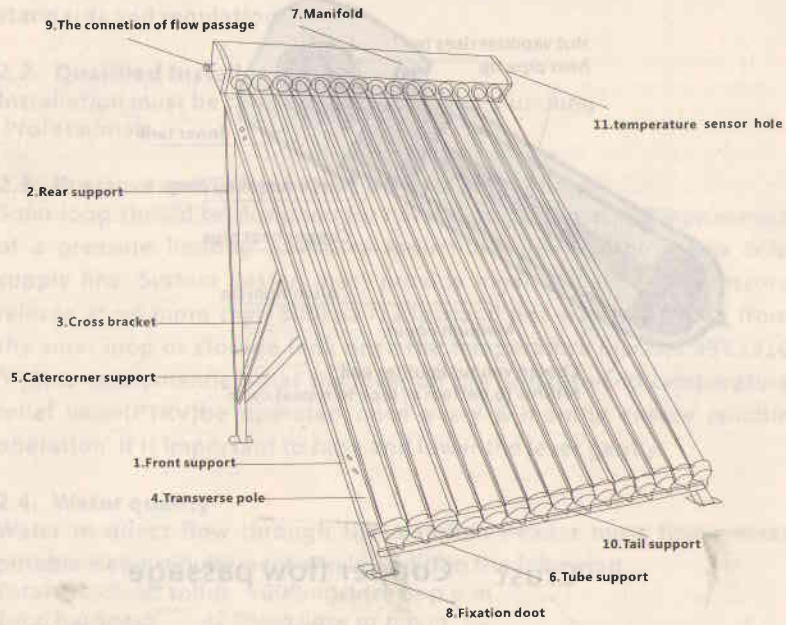
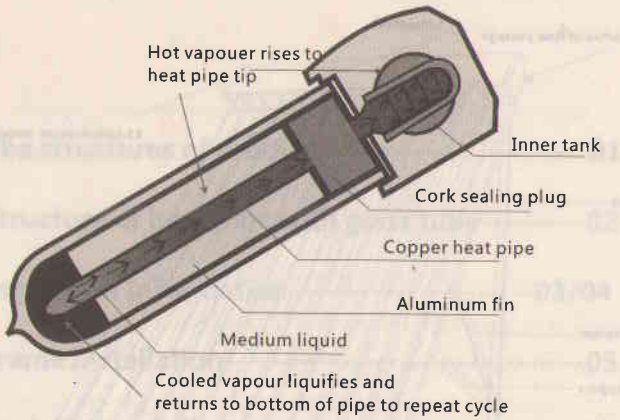
The structures of product

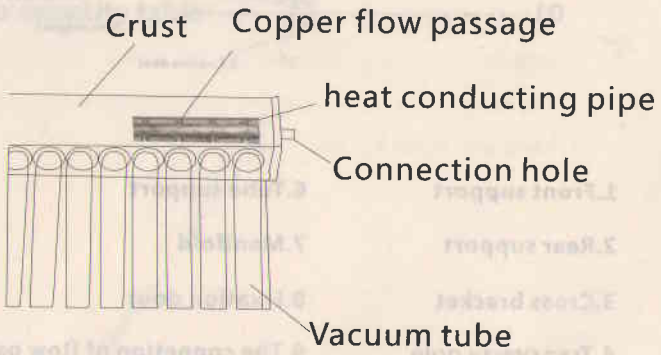


1.Front support
2.Rear support
3.Cross bracket
4.Transverse pole
5.Catercorner support
6.Tube support
7.Manifold
8.Fixation doot
9.The connetion of flow passage
10.Tail support
11.temperature sensor hole

English

Structure of heat pipe with glass tube





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Important Information

2.1.Local standards
Installation must be completed in accordance with the relevant local standards and regulations.

2.2. Qualified Installer
Installation must be completed by qualified plumbing Professionals.

2.3. Pressure and Temperature Control and Relief.
Solar loop should be designed for normal operation at<500kpa via use of a pressure limiting (pressure reduction)valve on the mains cold supply line. System design must provide mean for allowing pressure release at no more than 800kpa (113psi)and hot water dumping from the solar loop or storage tank once the temperature reaches 99℃(210 ℉).It is recommended that the lever on the pressure and temperature relief valve(PTRV)be operated once every 6 months ensure reliable operation. It is important to raise and lower the lever gently.

2.4. Water quality
Water in direct flow through the manifold header must firstly meet potable water requirement and in addition the following.
Total dissolved solids <600mg/litre or p.p.m
Total hardness <200mg/litre or p.p.m
Chloride <250mg/litre or p.p.m
Magnesium <10mg/litre or p.p.m
In areas with "hard" water(>200ppm).line scale may from inside pipe. In such regions, it is advisable to in stall a water softening device to ensure the long term efficient operation of the collector, or use a closed loop for the solar circulation loop.
If using a glycol/water must meet the above requirements, and the glycol must be changed periodically to prevent the glycol from becoming acidic.

2.5. Metallic corrosion
Both copper & stainless steel are susceptible to corrosion when high

English

concentrations of chloride are present. The solar collector may be used for heating of spa or pool water ,but levels of free chorine must not exceed 2p.p.m,in addition the warranty provided on the header when using for spa or pool heating is 2 years, which is the standard for spa and pool heaters. Chloride level present in most reticulated pubic potable water supplies are safe for use in the collector provided there is no use of bore waters in the reticulated supply.

2.6. Freeze Protection

Freeze protection should in corporate into the system by use of a" low manifold temperature" setting on the solar controller, which turns on the pump if the manifold drops below a preset level(eg5℃/41℉).Al-tematively a closed loop filled with a glycol-water may be used to provide against damage caused by freezing of the water inside.

2.7. Hail resistance

The glass evacuated tubes are surprisingly strong and able to handle significant impact stresses once installed. Testing and impact stress modeling proves that the tubes are able to withstand impact from hail up to 25mm/1" in diameter installed by the angle of impact and so installing the collectors at low angles do reduce their impact resistance. However, even when laying flat, impact by hail up to 20mm/3/4"n size will not cause breakage.

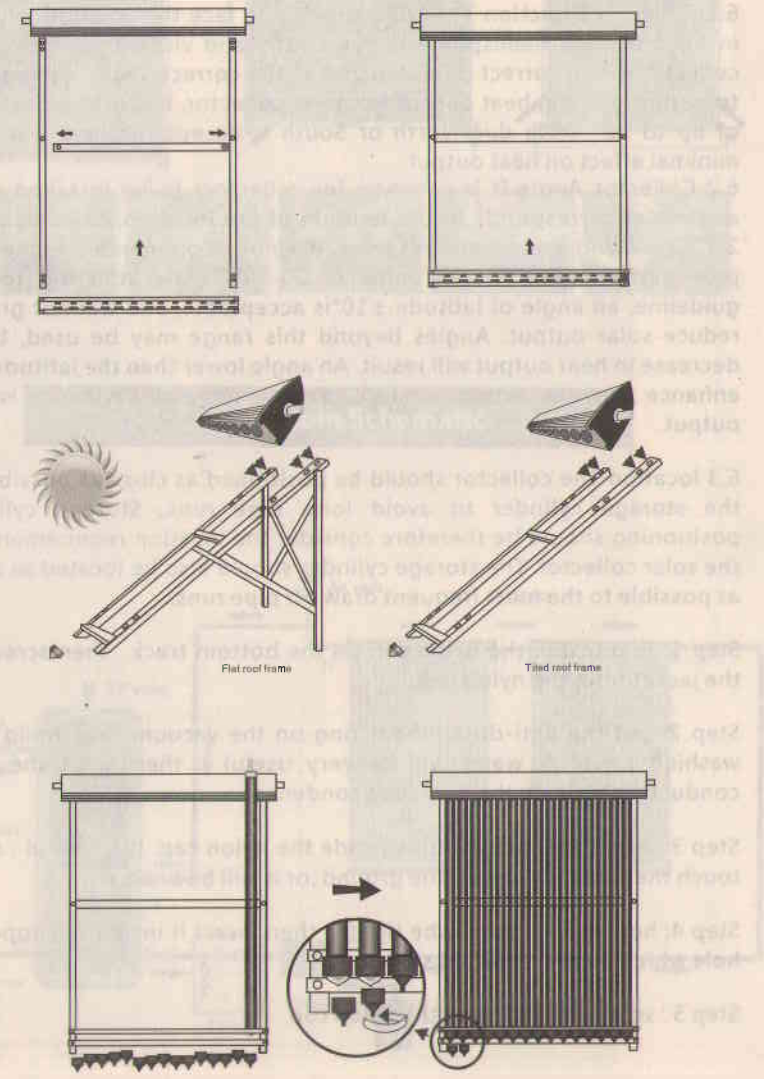
It is recommended that in areas prone to large hail(>20mm3/4')the solar collector should be installed at an angle of ±30-70°this angle is generally a common installation anyway.

If in the unlikely circumstance that a tube should become broken it can be easily replaced in a matter of minutes. The solar collector can still function properly with one or more broken tubes, however a reduction in heat output will result (depending upon how many tubes are broken).

2.8. System design and installation

Please read all installation instruction carefully before beginning system design or installation. The system configuration may need to be customized to suit the specific requirements of the installation. Please ensure that any system design meets local building, water quality regulations.

Frame Installation



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Installation Collector

6.1 Collector Direction The collector should face the equator ,which if in the Northern hemisphere is due South ,and vice versa. Facing the collector in the correct direction and at the correct angle is important to ensure optimal heat output from the collector, however a deviation of up to 10° from due North or South is acceptable, and will have minimal effect on heat output.
6.2 Collector Angle It is common for collectors to be installed at an angle that corresponds to the latitude of the location. See also point 2.2.7 installing at an angle less than 20°is not recommended as the heat pipe perform best in the angle of 20-70℃ while adhering to this guideline, an angle of latitude ±10°is acceptable, and will not greatly reduce solar output. Angles beyond this range may be used, but a decrease in heat output will result. An angle lower than the latitude will enhance summer output, while a greater angle will enhance winter output.

6.3 location The collector should be positioned as close as possible to the storage cylinder to avoid long pipe runs. Storage cylinder positioning should be therefore consider the location requirements of the solar collector. The storage cylinder should also be located as close as possible to the most frequent draw off pipe runs..

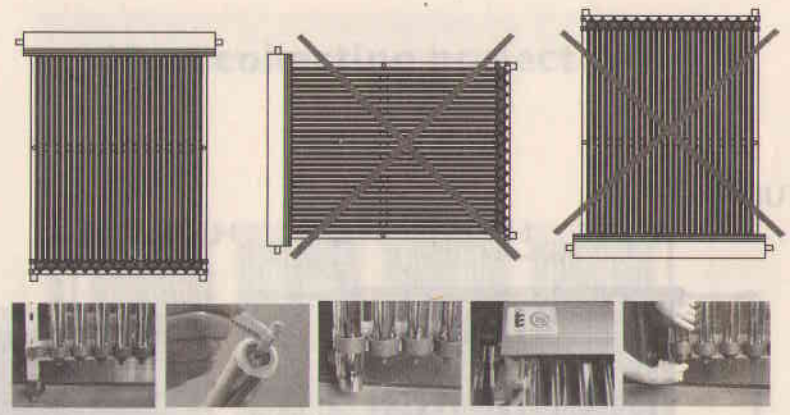
Step 1: first install the nylon cap on the bottom track , then screw off the jacket from the nylon cap.

Step 2: put the anti-dust rubber ring on the vacuum tube (mild dish washing liquid & water will be very useful), then paint the heat conduction resin on the heat pipe condenser .

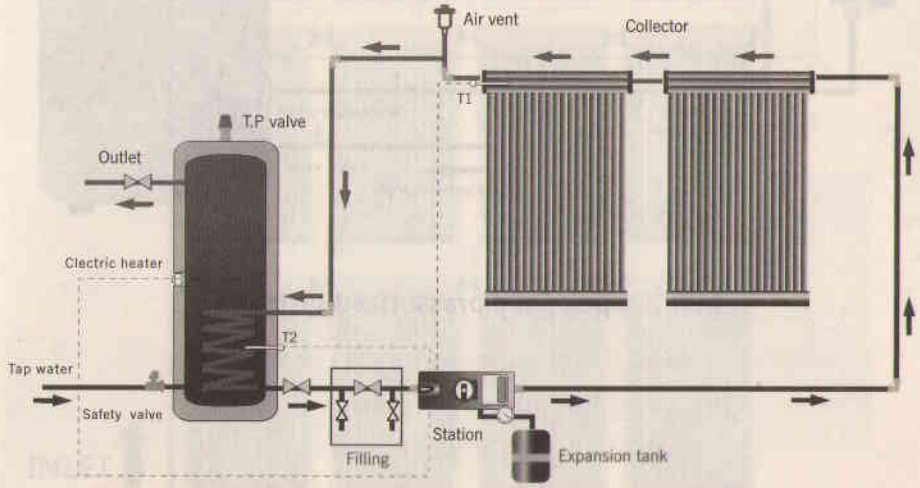
Step 3: insert the vacuum tube inside the nylon cap. (be careful : don t touch the vacuum tube on the ground ,or it will be broken)

Step 4: hold the vacuum tube tightly, then insert it inside the opposite hole which on the manifold slowly.

Step 5 : screw the jacket on the nylon cap.



System Schematic



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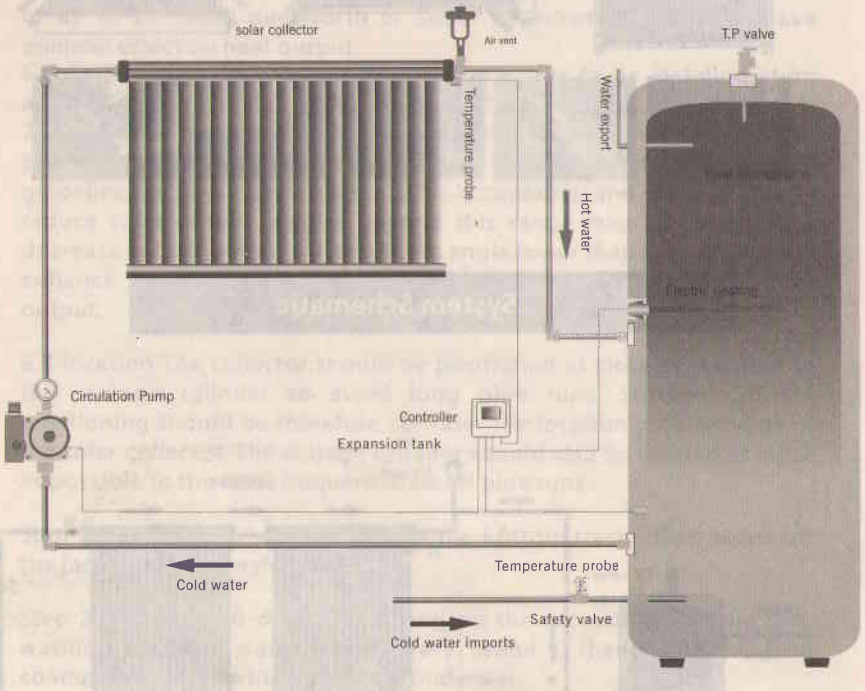
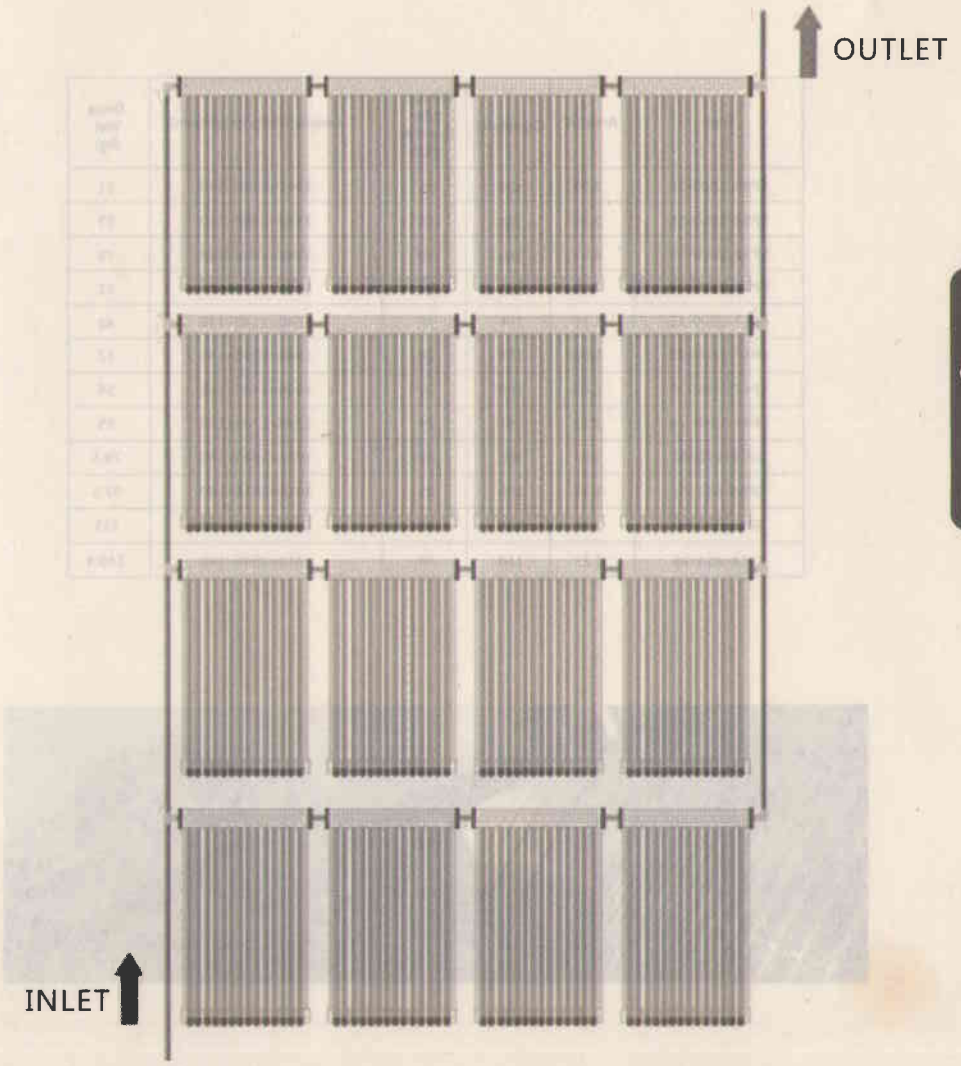


open-loop pressurized system

Heat collecting project



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Water capacity table

Type	Area(M^2)	Capacity(L)	Vacuum tube Quantity (pcs)	Length/Width/Height(mm)	Gross Wet (kg)
SP58-1800-15	1.92	120	15	1940×1260×140	51
SP58-1800-18	2.31	150	18	1940×1490×140	65
SP58-1800-20	2.57	180	20	1940×1640×140	70
SP58-1800-24	3.09	200	24	1940×1940×140	81
SP47-1500-15	1.39	106	15	1640×1140×140	40
SP47-1500-18	1.66	126	18	1640×1346×140	52
SP47-1500-20	1.85	140	20	1640×1480×140	56
SP47-1500-24	2.22	167	24	1640×1748×140	65
SP58-850-20	1.24	80	20	1010×1640×140	79.5
SP58-850-25	1.55	100	25	1010×2015×140	97.5
SP58-850-30	1.86	120	30	1010×2390×140	115
SP58-850-36	2.23	150	36	1010×2840×140	140.4

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