



evergreen power limited

2009 - 2010 edition

Solar Thermal System Pressurized Heating System

your valued solar partner



www.evergreenpower.com.hk



Evergreen Power Limited (EPL) is Asia's leading supplier of solar lighting, heating and power system. We specialize in delivering practical solar applications for our customers and partners. Based in Hong Kong, EPL believes solar green energy will become inevitable part of life in the 21st century and beyond. **Our aim is to deliver cost effective solar solution.** During these years, we have acquired strong technical expertise and experience working with agencies and distributors in Asia, Europe and Africa. We believe in long term, mutually beneficial relationships with our customers and create value through collaboration to enhance customer competitiveness. **Quality is what we built in each and every of our products which are backed by our extended warranty.** We have successfully delivered systems for powering computers, mobile phones and lightings to schools and communities in Africa and street illumination in Asia and other remote locations where electricity is not readily available.

Clean. Green. Efficient. Household heating is the major consumer of energy in most homes. Installing a solar hot water system will not only help the environment by reducing CO2 emission, it can also reduce your heating bill by up to 80%.

EPL Residential Solar Water Heater is a clean, cost effective solution that uses the sun's energy to heat your water. The appliance is **attractive, safe, and reliable** with minimal maintenance required over its long operational life. Our solar water heating systems are backed by a **10 year limited warranty**. By choosing to install a solar water heating system in your home, you can also increase the property value of your home and reduce your monthly electricity bills.



EVACUATED TUBE

Evacuated tube technology delivers significantly better performance than traditional absorbers in the market today. Their advanced design incorporates tubes that consist of 2 layers of borosilicate glass with a vacuum layer between them. This vacuum acts like a thermos flask, retaining up to 97% of the thermal energy, resulting in increased efficiency. The Sun's thermal energy is then transferred to the manifold via the heat pipe located inside each tube.

The small amount of evaporative liquid in each tube is super heated by the Sun's energy and forms a vapour. The vapor rises to the top of each pipe; this heat is then transferred to the water flowing through the manifold. The heated water is then returned to the tank. The cylindrical design of the tubes ensures effective collection of the Sun's thermal energy throughout the day.



EPL Solar Heating System Installed in Italy, Cagliari (Pitch 42 degree)

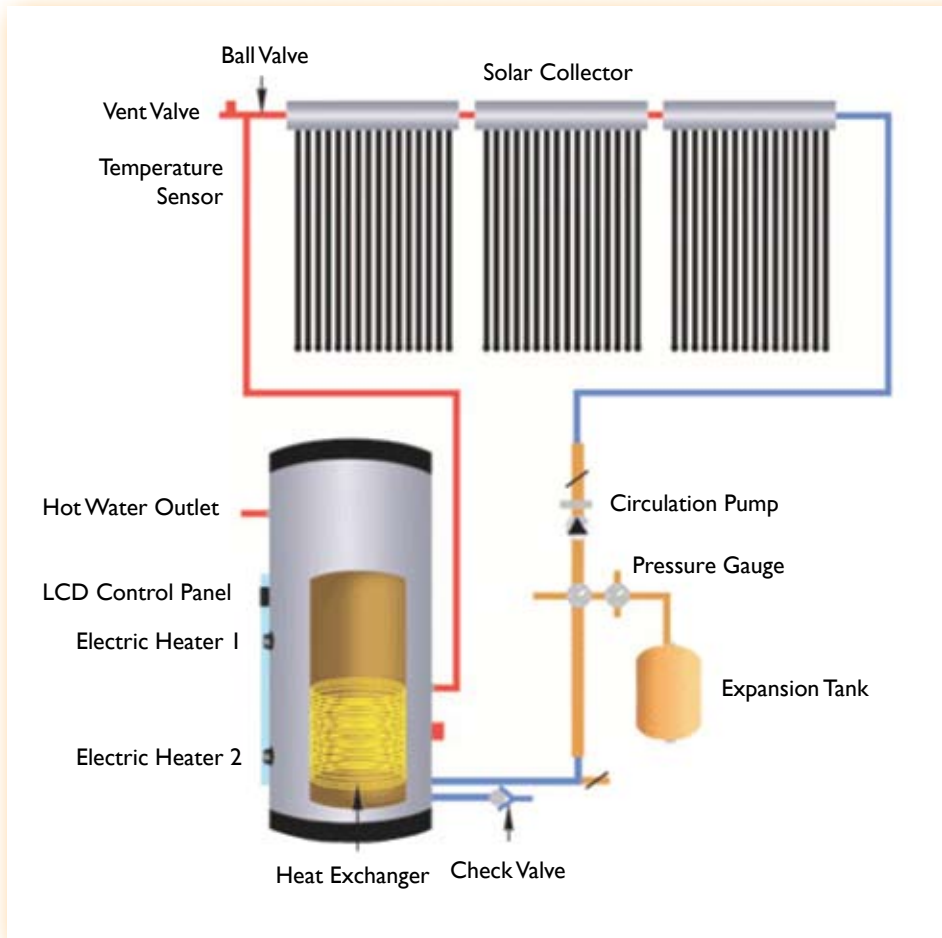


32 Tubes Solar Heating System on roof (Pitch 30 degree)

KEY FEATURES

1. Internationally certified product DIN EN 12975-1/2:2006-06
2. Reliable, efficient, twin-glass evacuated tubes
3. Copper heat pipes for rapid heat transfer
4. Easy plug-in installation and maintenance free
5. Suitable for mains pressure water (up to 8 bar/116psi)
6. Corrosion resistant silver brazed copper header
7. All stainless steel frame (439 grade SS)
8. Black or Silver aluminium casing
9. Stable solar conversion throughout the day (tubes passively track the sun)
10. The perfect solar collector for domestic solar water heater systems
11. Ideal for commercial solar water heating application

Working Principle of Pressurized Solar Water Heater



Evacuated Tube Collector Specification:

- Manifold Casing Material : 304 stainless steel or powder coated aluminium
- Frame Material : 304 stainless steel
- Header Pipe Material : C 12200 copper
- Insulation : Polyurethane 55mm
- Rubber Seals and Rings : UV stabilized high temperature silicone rubber
- Optimal Installation Angle : 30-70°vertical,0°horizontal
- Maximum Operating Pressure : 6 bar-85 psi
- Pressure Drop : 700 pa@3.3L/min for 20 tube manifold (SRCC)
- Optimal Flow Rate : 0.1L/min/tube-0.026G/min/tube



Electronic Controller Specification:

- Clear LCD display of time, relays, errors and temperatures
- Constant display of all three sensor temperatures
- Comprehensive system error reporting
- 3 Relays: to run pumps, valves and other consumers
- Daily time control of relays
- Degree Celsius °C and Fahrenheit °F temperature display options
- 110-240V, 50-60Hz compatible
- Widely adjustable temperature ranges for each function
- Ability to turn any function OFF
- Auto recovery with memory of time and settings after power cut
- Low 3VA power consumption
- High accuracy NTC thermostats (sensors)
- Functions and errors listed on front panel for easy reference.
- Left and right knock-out panels for conduit entry



PSP Controller MPI 12 with clear LCD display of time, relays, errors and temperatures

Due to continuous product improvement, product specifications are subject to change without notice ***

EPL Pressurized Heating System



200L Stainless Steel Water Tank with CFC-free insulation



Details of the pump inner with gauges and valves

WATER TANK SPECIFICATION

Tank Capacity	150L	200L	250L	300L
Overall Tank Height (mm)	890	1100	1560	1750
Weight (w/o heating coil)	23kg	29kg	34kg	42kg
Inner Tank Diameter	480mm			
Outer Casing Diameter	610mm			
Standard Ports	3/4" - 2" female BPP thread			
Temperature Sensor Ports	8mm ID - total 80mm depth			
Insulation Material	56mm CFC-free Polyurethane Insulation			
Inner Tank Material	4mm SUS304 2B Food Grade Stainless Steel			
Outer Tank Casing	0.6mm 304 2B Stainless Steel			
Special Aluminium / Zinc Anodes	20mm x 400mm Zinc Anodes			
Maximum Tank Pressure Rating	6 bars			

EPL Solar Water Heater Systems use stainless steel tanks which have a natural oxide barrier to corrosion. Stainless steel tanks are tough, durable and lighter than their equivalent vitreous enamel mild steel tanks. The tanks are of a high quality and offer a 10 year warranty.

POWER PUMP SPECIFICATION

Power Pump	Data	
Working Media Temperature	-25 ~ +110	
Power Supply	Single Phase 220V/50Hz	
Max Output Power	93W	
Max Output Water	3.3t/h	
Lift	6m	
Min Input Pressure	+50	0.05 bar
	+95	0.3 bar
	+110	1.0 bar
Max Environmental Temperature	40°C	
Max. Working Pressure	6.0 bar	
Available Working Media	Water or Glycol Liquid	
Speed Control	Three Speed Control	
Dimension (L x B x Th)	480 x 200 x 154mm	

SPECIFICATIONS

Model	Number of E-Tubes	Dimension (mm)			Tank Capacity (litres)
		Tube Diameter	Tube Length	Collector Area	
EPL-PS-15-1800	15	58	1800	2.8	150
EPL-PS-20-1801	20	58	1800	3.3	200
EPL-PS-25-1802	25	58	1800	4.0	250
EPL-PS-30-1803	30	58	1800	4.8	300
EPL-PS-40-1804	40	58	1800	5.8	400
EPL-PS-50-1805	50	58	1800	6.5	500

Due to continuous product improvement, product specifications are subject to change without notice ***

Tat Wing Commercial Building | Suite 7-B | 14-16 Hillwood Road | Tsim Sha Tsui | Kowloon | Hong Kong
 T: (852) 2311 2488 | F: (852) 2311 2489 | E: customer@evergreenpower.com.hk | www.evergreenpower.com.hk