



FORCED CIRCULATION

Solar Hot Water Systems

Environmentally-friendly ECO STAR solar water heaters

Your eco-friendly partner

How does it work?

Forced circulation solar hot water installations are 'indirect' pumped heating systems. A water-based heat-transfer fluid is circulated through the solar collectors and absorbs heat. An electronic control unit (differential thermostat) measures the temperature of the fluid in the panel and also the water temperature inside the storage tank. When the temperature of the fluid in the panel is higher than the temperature of the water inside the tank, the electronic control unit activates the circulation pump. The fluid transfers its heat from the collectors to the potable water inside the storage tank through a heat exchange coil.



Forced circulation systems are suitable for places that consume large quantities of hot water such as Hotels, Restaurants, Hospitals, Staff Accommodations, Sports Centre, etc.

ECO STAR solar water heaters are manufactured to the highest quality standards, giving outstanding performance, and by economizing on power usage, better for the environment

Hot water available 24 hours a day

ECO STAR solar hot water systems are built to last and will supply hot water for many years. Moreover all units are fitted with electric backup booster elements to ensure hot water even on cloudy days and at night.



ECO STAR solar hot water systems significantly reduce the use of electrical energy and save you money.

Save on energy cost while reducing the environmental impact



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Specification of Storage Tank

Material	Steel Sheet
Welding	Automatic Metal Welding
Protection Coating	High Quality Glass – Enamel and protection Anode
Max. Working Pressure	10 bar
Water Test Pressure	15 bar
Max. Operating Temperature	95°C
Insulation	Removable Soft Polyurethane foam of 100 mm thickness. Density 20 kg/m ³
Coil	Steel tube
Maximum Coil Test Pressure	25 bar
Electric Resistance	2-4 KW 230V
External Cover	Soft pvc,

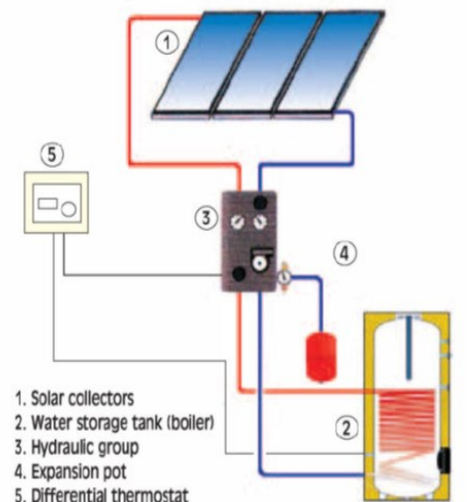


Specification of Solar Collector

- **External frame** : Anodized aluminum profile
- **Back side** : Galvanized sheeting - 0,6 mm
- **Back insulation** : Rock wool 40 mm
- **Side insulation** : Glass-wool of 20 mm
- **Water-tightness** : EPDM rubber/transparent silicone
- **Absorber** : A unique sheet of copper with selective titanium coating or with black paint / ultra sonic welding or type "omega" (ø).
- **Absorber's tubes** : Copper pipes ø10 & ø22 (risers and headers)
- **Cover** : Solar tempered glass

Technical Data

Model	ESF	150	200	300	500	750	1000
Storage Capacity	liters	139	197	289	462	725	1000
Surface area of Heat Exchanger	m ²	.78	.98	1.55	1.97	2.38	3.00
Height	mm	1120	1400	1620	1700	1780	2020
Diameter	mm	560	600	630	750	805 * 945	800 * 1000
Weight (empty)	kg	61	80	103	139	226	246
CONNECTIONS							
Heat Exchanger		1"	1"	1"	1"	1"	1"
Cold Water Inlet		1"	1"	1"	1"	1 1/2"	1 1/2"
Hot Water Outlet		1"	1"	1"	1"	1 1/2"	1 1/2"
Electric Element		1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"
Recirculation		3/4"	3/4"	3/4"	1"	1"	1"
SOLAR COLLECTORS							
Dimension	mm	1960 x 960 x 80					
No. of Collectors		1	2	2	3	5	8
Gross Collector Area	m ²	1.88	1.88	3.76	5.64	9.4	15.04
Back up Booster		2-4 KW 230V			6-9 kW 400V		



* Dimension without insulation



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