



ISO 9001 : 2008

Greenlife Energy Systems

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GLS DOMESTIC SOLAR WATER HEATER (ETC TYPE) - Non Pressurised



Solar Water Heater (ETC TYPE)

- Latest ETC Solar Technology
- 2.5mm Hot Dip Galvanized Hot water Storage (Inner) Tank internally painted with High Food Grade Epoxy Paint for the Longer Life Against the Hard Water up to 1800 PPM
- Mg- Anode is used to avoid corrosion of tank from Hard Water Scaling.
- 65⁰ c Hot water in all Weather
- 50 MM HCFC Free, Eco Friendly, High Density PUF Insulation for Heat retention (Fill up PUF insulation with the MICROPROCESSOR SYSTEM)
- Highly rigid supporting Structure – 1.5 MM Powder coated GI
- Highly Protected Outer Cover and Side Cover – 0.5 MM Powder Coated GI
- Almost Nil Maintenance
- Return On Investment Within 3 YRS

GLS INDUSTRIAL SOLAR WATER HEATER (ETC TYPE) - Non Pressurised



Solar Water Heater (ETC TYPE)

- Latest ETC Solar Technology
- 3 mm Hot Dip Galvanized Hot water Storage (Inner) Tank internally painted with High Food Grade Epoxy Paint for the Longer Life Against the Hard Water up to 1800 PPM
- Mg- Anode is used to avoid corrosion of tank from Hard Water Scaling.
- 65⁰ c Hot water in all Weather
- Insulation : 100 MM ROCKWOOL
- Highly rigid supporting Structure – 35 X 5MM, 50 X 5 MM MS Angle Powder Coated
- Highly Protected Outer Cover and Side Cover – 0.5 MM Powder Coated GI / Al
- Almost Nil Maintenance
- Return On Investment Within 3 YRS
- Manifold Specification :-
 - Inner Tank:- 1.5MM GI
 - Outer Tank :- 0.5MM Powder Coated GI
 - Insulation :- 50MM PUF

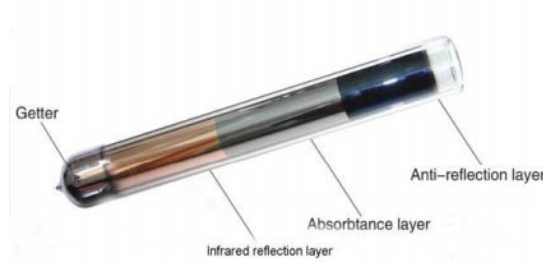
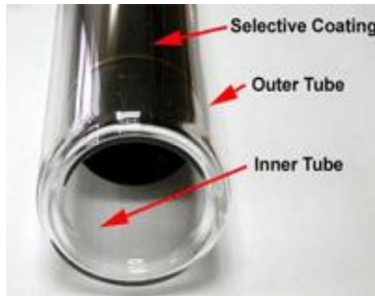
TECHNICAL SPECIFICATIONS OF GLES ETC TUBES Non- Pressurised

Evacuated glass tubes used as the absorber in ETC solar Water heaters. The ETC is having two concentric tubes with vacuum between the tubes. The outer tube is transparent allowing light rays to pass through with reflection. The inner tube of outer surface is coated with (Al-N-AL) for excellent solar radiation & absorption. The heat in side the glass tube will not transferred to the outer tube because of vacuum present in between concentric tubes.

GREENLIFE ETC Tube details & Specification

1. Ø58mm & 1800mm length

2. Ø58mm & 2100mm length



Type	58 X 1800	58 X 2100
Glass Thermal Energy Parameter	3.3*10 ⁻⁶ oC	3.3*10 ⁻⁶ oC
Outer Glass Tube Diameter	58mm	58mm
Inner Glass Tube diameter	47mm	47mm
Thickness of the Glass	1.8mm	1.8mm
Transmission Ratio of the Outer Glass Tube	>0.80	>0.80
Length of the Vacuum Tube	1800mm	2100mm
Solar Selective Absorber Coating	AL-N/AL	AL-N/AL
Absorptance (AM 1.5)	>0.93	>0.93
Emission Ration (80)	<0.07	<0.07
Size	58 X 1800	58 X 1800
Atmospheric Pressure Intensity in Vacuum Jacket	P<5*10 ⁻³	P<5*10 ⁻³
Stagnation Temperature	>230 Deg.C	>230 Deg.C
Heat Loss Coefficient	<0.75 W/M ²	<0.75 W/M ²
Hail Resistant Ability	Ø <25mm	Ø <25mm
Max. Pressure Resistant Ability	0.8MPa	0.8MPa

GLS DOMESTIC SOLAR WATER HEATER (ETC TYPE) - Pressurised



Pressurised Solar Water Heater (ETC TYPE)

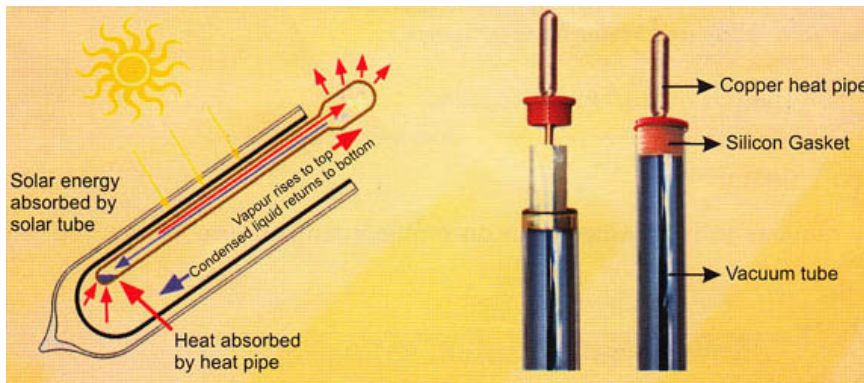
- Latest ETC Solar Technology
- 3 mm Hot Dip Galvanized Hot water Storage (Inner) Tank internally painted with High Food Grade Epoxy Paint for the Longer Life Against the Hard Water up to 1800 PPM
- Mg- Anode is used to avoid corrosion of tank from Hard Water Scaling.
- 65° c Hot water in all Weather
- 50 MM HCFC Free, Eco Friendly, High Density PUF Insulation for Heat retention (Fill up PUF insulation with the MICROPROCESSOR SYSTEM)
- Highly rigid supporting Structure – 1.5 MM Powder coated GI
- Highly Protected Outer Cover and Side Cover – 0.5 MM Powder Coated GI
- Almost Nil Maintenance
- Return On Investment Within 3 YRS

TECHNICAL SPECIFICATIONS OF GLS ETC TUBES - Pressurised

Heat Pipe

The heat pipe consists of a highly conducting fluid enclosed inside the pure copper tube of diameter 8mm sealed on both the ends.

The non-toxic liquid inside the Copper heat pipe has a boiling point of 25°C. So when the heat pipe is heated above 25 degree C, the liquid vaporizes. The vapor rapidly rises to the top of the heat pipe transferring the heat to the cold water inside the tank. As heat is lost at the condenser top, the vapour condenses to form a liquid and returns to the bottom of the heat pipe to repeat the process. Each heat pipe is tested to 250°C. For this reason the Copper heat pipe is relatively soft. Because of high temperature, the glass tube is given a twelve-layer coating. Given the strict quality control and high Copper purity, the life expectancy of the heat pipe is even longer than that of the solar tube.



Greenlife Pressurized Model

Sunlight, incident on the Vacuum Tube, passes through the outer transparent glass tube and strikes the outer surface of the inner glass tube with selective coating (AIN/AI). This glass tube, which acts like a black body, absorbs the radiation and the heat pipe gets heated up in the process. The presence of vacuum between the two tubes prevents heat loss to the surroundings. The heated inner tube transfers this heat to the heat pipe which is directly in contact with water inside the storage tank. Hot water is lower in density and therefore has a tendency to rise up. Cool Water from the tank flows down to replace the hot water, facilitating circulation by thermosyphon. And through this process, the entire water in the storage tank heats up and gets ready for use.

The storage tank is insulated with PUF, which minimizes the heat loss at night.

