

Thermosiphon



TASOL
Solar Energy Solutions

Thermosiphon High Pressure Systems

This system includes a tank, collector and a timer. The tank is mounted above the collector - outside on the roof as a close-coupled system OR inside the roof as a split system. As the water in the manifold section of the collector gets warmer, the water rises and mixes with the colder water from the tank, eventually heating all the water to a high temperature.

This natural phenomenon is called the **thermosiphon effect**. Thermosiphon systems operate on the difference in densities of hot and cold water. The hot, less dense water rises to the tank. No external pump system with an energy source is required.

1.) Collector

The collector is an evacuated tube heat pipe collector. It consists of either sixteen or twenty double layered tubes which absorb the sun's energy.

There is no water in the tubes. The heat is transferred via the heat pipe to the manifold section of the collector. The outer tube is a minimum of 2mm glass thickness and conforms to the SABS mechanical test standards

2.) Kwikot Direct Solar Geyser

The Direct Solar Geyser differs from a conventional electric geyser in that it has two additional water ports as required for connecting the solar collectors.

The geyser still hosts an electrical element and thermostat. Polyurethane insulation between the inner cylinder and outer casement reduces energy and heat loss.



Thermosiphon System ↑



Kwikot Direct Solar Geyser ↑

2mm glass thickness ↑

Thermosiphon



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3.) Intelligent geyser management device

This device regulates the power supply to the geyser element during pre-set times. The geyser electrical element acts as a backup for the solar water heating system.

Although we supply the geyser element with electricity during the pre-set phases, the thermostat in the geyser will measure the water temperature, and thus determine whether the electricity supplied is required or not.

This ultimately reduces the time periods during which the element is using the electricity to heat the water, thus resulting in savings. The conventional geyser thermostat is replaced with an electronic thermostat and probe.

The control unit is installed in an area that is easily accessible. This enables the home owner to regulate the water temperatures and electricity usage to the geyser. There are four different cycle settings which could support different temperatures per day.

Other features

- Convenient to operate
- Load shifting capability to "off peak" periods
- Digital water temperature reading / settings
- Battery back up
- Leaking hot water pipe detection
- Element failure detection



SANS 1307

***All Tasol EVT direct systems are freeze resistant and SABS tested. Tasol EVT direct systems are maintenance free as they require no periodical Glycol replacement.**

*** Reference Terms and Conditions of sale for Warranty details**



Intelligent geyser management device ↑



Glass tube with heat pipe ↑