TiSUN®

THERMOSIPHON CLOSED LOOP SYSTEM

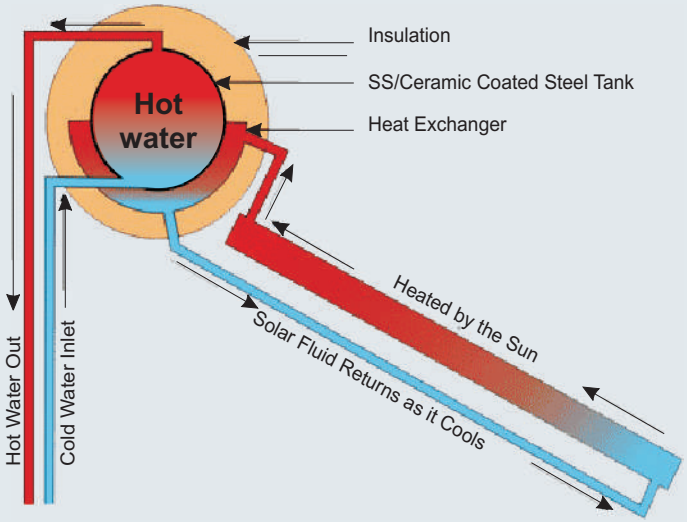
SIMPLE AND EFFICIENT SOLAR HOT WATER SYSTEM

M.N.R.E. APPROVED M.N.R.E.

- ECO-FRIENDLY
- SECURE IN SUPPLY
- ENERGY-EFFICIENT
- DURABLE THANKS TO MATURE TECHNOLOGY
- COST-EFFICIENT

SOLAR SYSTEMS FOR THE ROUGH REALITY

TiSUN®



THERMOSIPHON CLOSED LOOP SYSTEM

SIMPLE AND EFFICIENT SOLAR HOT WATER SYSTEM

A SOLAR HOT WATER SYSTEM THAT ATTRACTS ATTENTION. THANKS TO ITS FAST INSTALLATION, MINIMAL MAINTENANCE REQUIREMENT AND HIGH EFFICIENCY.

The System operates on the thermosiphon principle, meaning that heat transfer occurs entirely by means of natural convection, without pumps and control units. The solar fluid heated in the collector rises and transfers heat through a highly efficient jacketed shell system (Double Wall Tank). High- selectivity harp absorbers are used to guarantee the highest possible solar yield in this system.

Product Description

Collector	Modular flat collector with aluminum frame and laser welded, full area absorber with high-selectivity coating and maximum radiation absorbing solar safety glass guarantees the best solar yield. Due to circulating of the solar fluid in a closed loop, the tubes inside the panel always remain clean and clog free resulting in life long, efficient heat transfer and fast flow of the solar fluid.
Tank	Hot water tank with jacketed shell heat exchanger, unique with two risers for optimal solar fluid charging and hot water output and sacrificial magnesium anode. Electrical secondary heating can be retrofitted.
Mounting Frame	The hot dipped galvanized and then powder coated steel profiles allow upright or parallel roof installation. Thanks to the special design the frame can be quickly and easily erected and has a high load- bearing capacity.
Piping and Accessories	The thermosiphon system comprises all pre- insulated pipes and fittings required for installation. Necessary pressure relief valve and solar fluid for first fill are included with delivery.
Covers	The piping is additionally protected and the system's appearance optimised by two lateral piping ducts and a front cover.

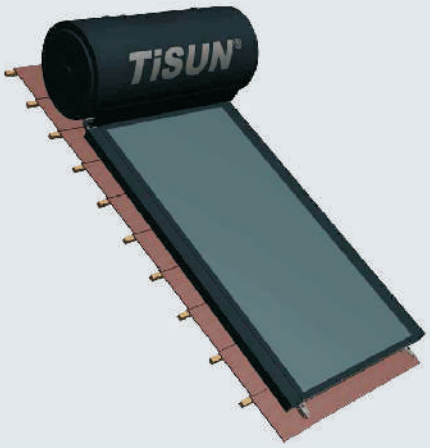
THERMOSIPHON CLOSED LOOP SYSTEM

Type	Gross Area	Aperture Area	Tank Volume	Weight
THSY 125 1H	2.09m²	1.92m²	125 L	145 Kg.
THSY 160 1H	2.09m²	1.92m²	150 L	170 Kg.
THSY 200 1H	2.09m²	1.92m²	195 L	185 Kg.
THSY 300 2H	4.18m²	3.84m²	282 L	270 Kg.

PRODUCT **OVERVIEW**

Thermosiphon closed loop systems are designed for heating water from solar energy, operating on the thermosiphon principle. The thermosiphon is a passive design, which allows heat transfer using natural convection ideally in a vertical heating system. Solar fluid (Water + Glycol) remains in closed loop. After getting heated in the solar panel it rises to outer jacket of tank and transfers the heat to the stored water in the tank before finally returning to lower side of the solar panel for renewed absorbtion of solar energy. The advantage is that it avoids using a conventional pump, which keeps the complexity and cost of a thermosiphon system low and at the same time ensure that the panel tubes always remain clean inside and for efficient heat transfer.

TiSUN thermosiphon systems are characterized by high- selectivity coated harp absorbers and various tank sizes perfectly coordinated with the system, together with unique charging properties.



Parallel roof installation

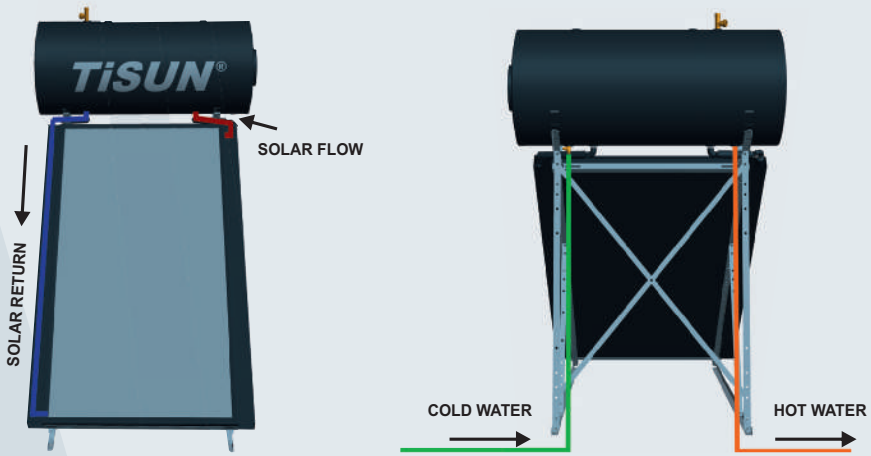
Parallel roof installation

AREA OF USE

Flat roof and free-standing installation

PRODUCT BENEFITS

- Solar- Keymark system test EN 12976 (same units in Europe)
- High efficiency due to high- selectivity coated absorber
- Laser welded, harp solar absorbers
- Long service life. Robust, temperature and weather-resistant design
- Low heat loss, thanks to excellent tank and collectors insulation
- Quick and simple installation
- Compact and space- saving design
- All necessary pipes, fittings, pressure relief valves and frost protection are included with delivery.



SPECIFICATION

Designation		THSY 125 1H	THSY 160 1H	THSY 200 1H	THSY 300 2H
Solar Collector	Quantity	1	1	1	2
	Dimension	1030 x 2030 mm	1030 x 2030 mm	1030 x 2030 mm	1030 x 2030 mm
	Gross Area	2.09 m²	2.09 m²	2.09 m²	2 x 2.09 m²
	Aperture Area	1.92 m²	1.92 m²	1.92 m²	2 x 1.92 m²
	Coating	High- selectivity	High- selectivity	High- selectivity	High- selectivity
	Absorber Type	Harp	Harp	Harp	Harp
	Heater	Cu 22 mm	Cu 22 mm	Cu 22 mm	Cu 22 mm
	Rear wall insulation	40 mm mineral wool with fleece cover layer	40 mm mineral wool with fleece cover layer	40 mm mineral wool with fleece cover layer	40 mm mineral wool with fleece cover layer
	Side insulation	20 mm mineral wool with fleece cover layer	20 mm mineral wool with fleece cover layer	20 mm mineral wool with fleece cover layer	20 mm mineral wool with fleece cover layer
Tank	Contents	125 L	150 L	195 L	282 L
	Diameter	500 mm	500 mm	580 mm	580 mm
	Length	1150 mm	1300 mm	1300 mm	1800 mm
	Max. operation Pressure	10 bar	10 bar	10 bar	10 bar
	Recommended operating Pressure	6 bar	6 bar	6 bar	6 bar
	Max. press. Solar fluid	3 bar	3 bar	3 bar	3 bar
	Max. temp (with safety)	94°C	94°C	94°C	94°C
	Insulating material	Rigid polyurethane foam	Rigid polyurethane foam	Rigid polyurethane foam	Rigid polyurethane foam
	Insulation thickness	40 mm	40 mm	40 mm	40 mm
	Connections	$^1/_2$"	$^1/_2$"	$^1/_2$"	$^1/_2$"
	Inner coating*	Ceramic	Ceramic	Ceramic	Ceramic
	Corrosion protection	Magnesium anode	Magnesium anode	Magnesium anode	Magnesium anode
	Heat exchanger	Jacketed shell	Jacketed shell	Jacketed shell	Jacketed shell
	Heat exchanger area	0.975 m²	0.975 m²	1.161 m²	1.57 m²
	Empty weight	58 kg	67 kg	85 kg	107 kg
	Full weight	185 kg	212 kg	280 kg	367 kg
Frame	Material	Steel			
	Thickness	2.5 mm			
	Manufactured	CNC			
	Corrosion Protection	Hot dip Galvanized + coating			
	Use	Elevated and flat roof installation			
Connections	Collector	Compression fitting dia. 22 mm			
	Tank	$^1/_2$", with double nipple and elbow to $^3/_4$" for solar connection			
Copper Pipe	Length	2,000 mm			
	Diameter	Dia. 22 mm			
	Insulating Material	Elastomer rubber with protective PE film			
	Insulating thickness	15 mm			

* In MS tank with coating. In SS tank without coating

Tisun-EDES Solar (India) Pvt. Ltd.

Head Office : Unit 62, Sanjay Mittal Indl. Est. I, Andheri -Kurla Road, Marol, Mumbai-400 059, INDIA.
Work : Unit No. 3/3A, Survey No. 56, Opp. Mittal Print & Pack, Bilalpada, Gaurai Pada, Vasai (E), Thane - 401 208.
Tel.:+91-22-67252677 | Telefax :+91-22-28564945 | E-mail:info.india@tisun.com | www.tisun.com