SUNSYSTEM®

Energy from the sun

Thermosyphonic systems TSSM

A **thermosyphon system** is a cost-effective way to heat water with solar energy. It makes use of the natural thermal convection of liquids to transfer the heat from the solar collectors to the water tank. The models range from 120 l to 300 l volumes, for flat or inclined roofs.

The system is comprised of flat plate collector connected to a water tank with a cylinder-type heat exchanger. The circulation of the heat carrier liquid is driven by natural thermal convection. The heat carrier inside the absorber of the collector heats up by the solar energy and moves up along the piping to reach the water tank, positioned above the collector. There it passes through the heat exchanger and gives away its heat to the water inside the tank. As it cools down, the heat carrier then is returned to the collector to repeat the process.

Product Features

Robust
Durable lightweight support withstanding severe climate conditions.

Durable
Enameled water tank with anode protection against corrosion.

Reliable
Optional energy back-up provided by electric heating element.

Eco-friendly
Entirely self-powered system with zero emissions of greenhouse gasses. No energy is consumed for the circulation of the liquids as natural convection process is employed.

Space-saving technology
The entire system is mounted outside the useable area of the house - on the roof.

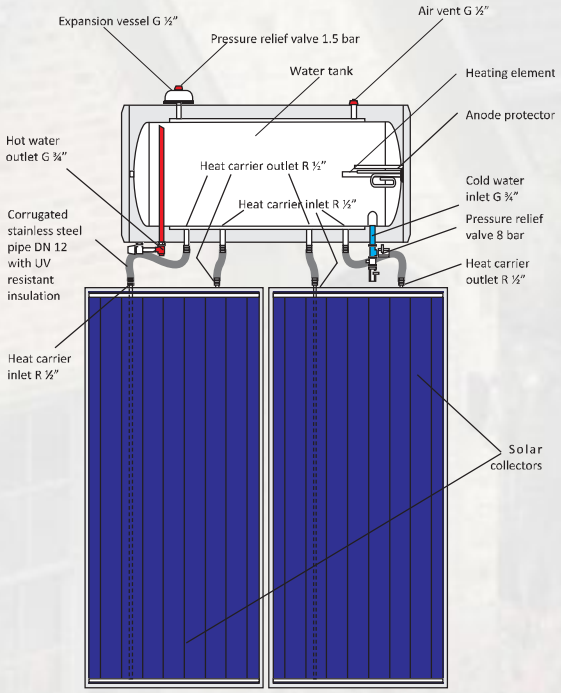
Flexible
The support system is easily adaptable to fit different kinds of roof structures and slants.

Budget-sparing
The thermosyphon technology employs natural liquid circulation and does not entail expensive equipment as in the forced circulation systems.

Smart design
All connections are placed between the tank and collector and do not protrude outside the boundaries of the unit.

Extra safety
Temperature and pressure relief valve supplied as an option.

Approved
Solar Keymark certified.



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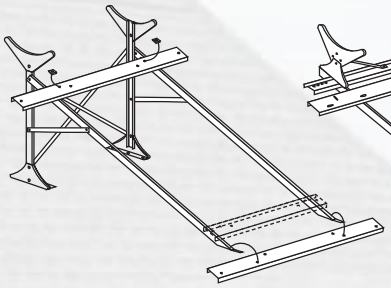
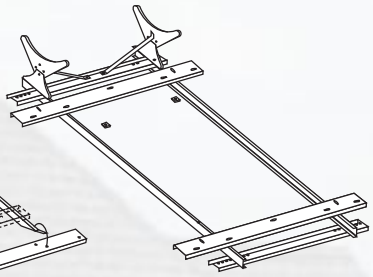
Support assembly for Thermosyphonic systems TSSM

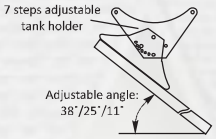
Support assembly for **TSSM** for **flat roof**



Support assembly for **TSSM** for **inclined roof**



The support system comes in two versions: for **flat roof** and for **inclined roof**. The **flat roof** model is adjustable to fit even roofs inclined in small degrees. This way the optimum tilt angle can easilly be achieved on various roof slants.



Technical specifications:

	Model	MU	TSSM 120	TSSM 150	TSSM 200	TSSM 300
Solar collectors	Solar collectors (w. standard or selective absorber coating)		1 x PK x 2,15	1 x PK x 2,15 or 1 x PK x 2,70	2 x PK x 1,66 or 1 x PK x 2,15 or 1 x PK x 2,70	2 x PK x 2,15
	Test pressure	bar	25			
	Operating pressure	bar	6			
	Flow rate of heat carrier	l/m²h	50			
	Thickness of glass pane	mm	4.2			
	Glass pane		Protective prismatic solar glass Durasolar® P+			
	Case material		Powder coated Al (color: RAL 9006)			
	Absorber material		Cu			
	Absorber coating		Selective coating **'eta plus'**			
	Insulation		Rock wool λ=0.0374 W/m.K (DIN 18165); g=30kg/m³; δ=35mm			
	Heat carrier		Propylene Glycol			
	Stagnation temperature	°C	200			
Water tank	Volume of water tank	l	120	150	200	300
	Tank dimensions L x D	mm	1000 x 520	1250 x 520	1250 x 580	1750 x 580
	Operating pressure / tank max. temp.	bar/°C	8/95			
	Test pressure of water tank	bar	13			
	Operating pressure /Mantle max temp.	bar/°C	1,5/95			
	Test pressure of mantle	bar	3			
	Heating element (optional)	kW	2		3	
	Overall weight excl. water load	kg	135	145	180	235

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