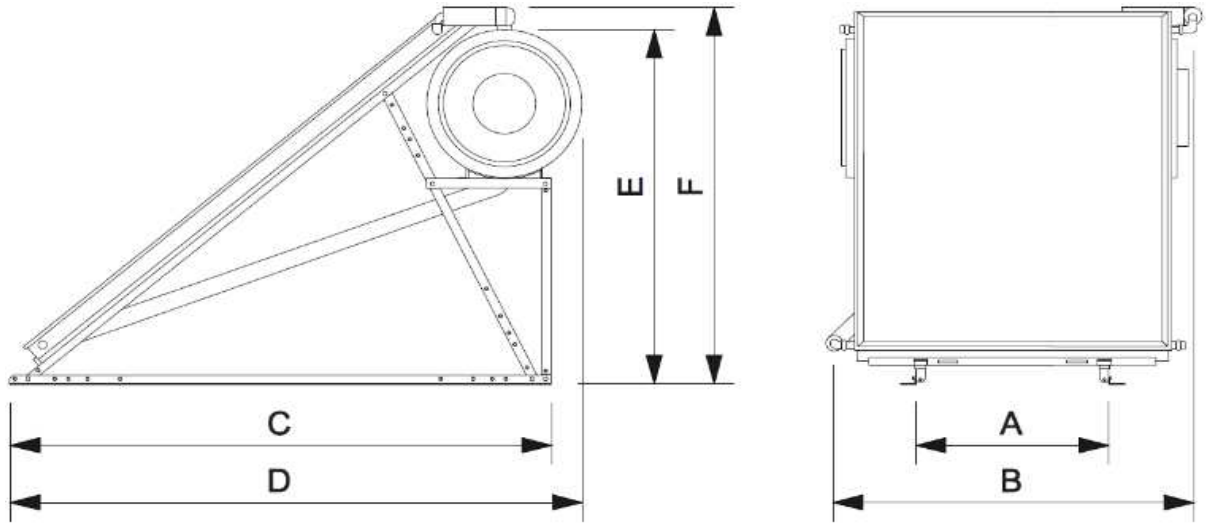
TSD 200/2,5 Thermosyphon System

Basic characteristics	
Purpose	solar thermal system for DHW heating with no circulation pump
Function	solar fluid is heated up in a solar collector, flowing by gravity into a twin-wall storage tank where it transfers its heat to water
Working fluid	water-glycol mixture (max. 1:1)
Code	**11 128**

Dimensions



A	1,00 m	C	2,00 m	E	1,35 m
B	1,35 m	D	2,10 m	F	1,47 m

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Scope of supply			
Collector KPR11+ ALP	1 piece	T-piece, 3/4“	1 piece
DHW Storage Tank S200	1 piece	Nipple 3/4“ x 3/4“	2 pieces
Support structure	1 piece	Nipple 3/4“ x 1/2“	3 pieces
Solar safety valve	1 piece	Nipple Ø 22 x Ø 22	-
DHW safety valve	1 piece	Elbow 3/4“ x 3/4“	2 pieces
3 kW heating element	optional	Elbow ø 22 x 3/4“	2 pieces
Check valve	1 piece	Plug 1/2"	2 pieces
Insulated tube 1	1 piece (500 mm)	Plug ø 22	2 pieces
Insulated tube 2	1 piece (1700 mm)	Antifreeze fluid	2 pieces

Technical data for separate components

Collector KPR11+ ALP

Dimensions and weights	
Height x width x depth	2030 x 1230 x 93 mm
Installation width	1280 mm
Total surface area	2,49 m²
Aperture area	2,29 m²
Absorber area	2,26 m²
Empty weight	50 kg
Glazing	
Material	tempered prism. glass
Thickness	4 mm
Absorber	
Material	aluminium, 0,5 mm thick
Surface finish	TiNOx
Design type	harp type, laser welded
Connection pipes material, dimension	copper 4 x Ø 22 mm x 0,7 mm
Absorber tubes material, dimension	copper 11 x Ø 8 mm x 0,5 mm
Max. working pressure	10 bar
Max. working temp.	120 ℃
Stagnation temp.	193 ℃
Heat transfer fluid	water-glycol, 1,64 l
Recommended flow rate	60 - 120 l/h
Thermal insulation	
Insulation material	mineral wool
Insulation thickness	40 mm
Frame	
Frame material	aluminium alloy
Frame colour	natural aluminium
Back plate	zinc-plated steel, 0,5 mm
Collector efficiency parameters related to aperture / absorber area	
η_{0a} [-]	0,745
a_{1a} [W/m²K]	3,556
a_{2a} [W/m²K]	0,017
Max. collector output for insolation of 1000 W/m²	
Q_{max} [W]	1706
Incidence angle modifiers	
$K_{\Theta\ 50°}$ [-]	0,874

DHW Storage Tank S200

Dimensions and weights	
DHW volume	198 l
Solar fluid volume	12 l
Total diameter inc. Insulation	580 mm
Total length inc. Insulation	1250 mm
Empty weight	86 kg
Total weight	296 kg
Max. working pressure	6 bar
Anticorrosion protection	
Inner lining	enamel
Anode rod	magnesium type
Thermal insulation	
Thickness	36 mm
Density	41 kg/m³
Materials	
DHW Tank	steel, 3 mm th.
Outer mantle	steel, 1,5 mm th.
Insulation mantle	zinc-plated steel
Paint colour	RAL 9007
Connection dimensions	
Solar collector - inlet and outlet	1/2" F
Cold and hot water	1/2" F
Heating element	5/4" F
PTR valve	3/4" F
Solar safety valve	1/2" F

Support structure

Material	
Support structure material	zinc-plated steel

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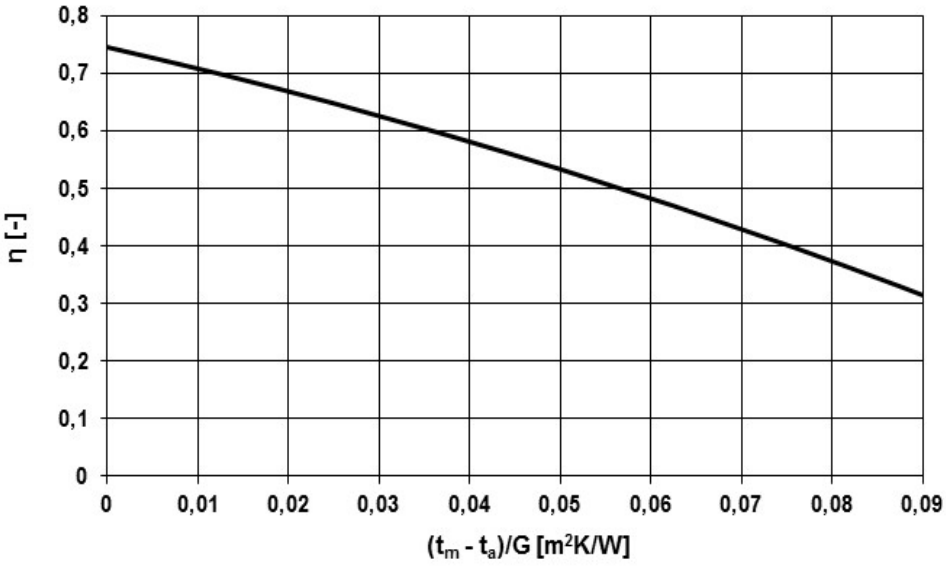
Collector graphs

Collector efficiency parameters related to aperture area



Collector pressure drop