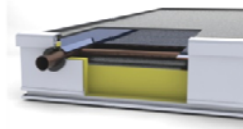


High Performance Solar Selective collectors

astera

TOP

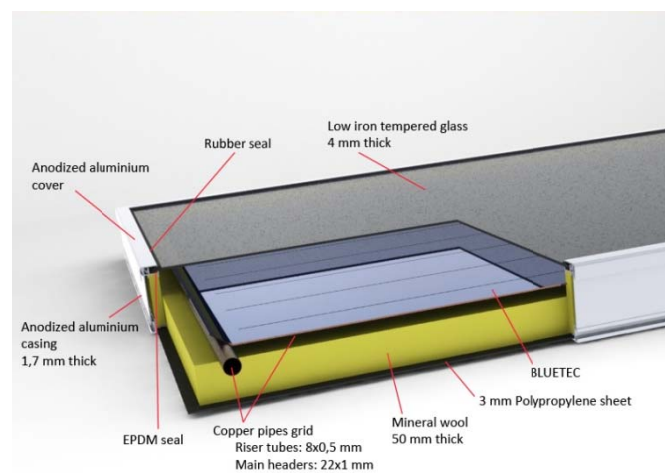
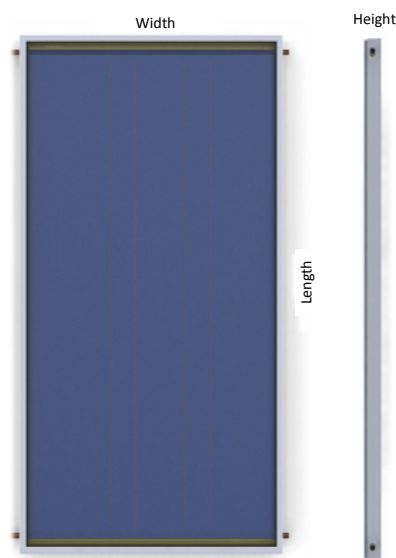
ASTERSA collectors are manufactured under the strictest quality standards. They have a continuous copper absorber with selective BLUETEC treatment, welded to a copper grid collector. Absorber weldings are carried out by induction and each unit produced undergoes to a watertightness test at 15 bar. The frame is made up of high quality anodized aluminium. The frontal transparent cover is a tempered low iron solar glass of high resistance and low emissivity. The back cover is made up of thermal Polypropylene sheet. The whole process has the ISO 9001 and ISO 14001 certifications.



10 year guarantee



		TOP20	TOP24
FLAT PLATE SOLAR COLLECTOR			
Aperture area	m ²	2,01	2,30
Length	mm	1.911	2.177
Width	mm	1.161	1.161
Height	mm	104,7	104,7
Gross area	m ²	2,22	2,53
Weigth	Kg	48,0	54,0
Optical efficiency	%	79,20	79,70
Loss coefficient:	k ₁ W/m ² -K	3,722	3,756
	k ₂ W/m ² -K ²	0,018	0,016
Correction factor k ₍₅₀₎		0,94	0,94
Effective thermal capacity	J/K	11.388	12.504
ABSORBER			
Emission (ε) / Absorption (α)	%	5,0/95,0	5,0/95,0
Absorber area	m ²	2,03	2,32
Material		Copper sheet	
Selective treatment		BLUETEC	
FRONTAL COVER			
Solar glass		High transparency tempered glass, tough and with low iron content. Thickness of 4.0 mm. Transmissivity >91%	
CASING			
Material		Extruded Al-6063 T5 anodized aluminium	
Thickness	mm	1,70	1,70
Joint		Neutral silicone watertight sealed and EPDM joint between the solar glass and the aluminium casing	
Isolation		High density mineral wool. ξ = 0,035 W/m-K. average δ back 30 Kg/m ³ and lateral 50 Kg/m ³ .	
Thickness	Back mm	50	50
	Lateral Mm	20	20
Back finish		Polypropylene 3 mm	
HYDRAULICS			
Heat transfer fluid		Water plus glycol. 30% Recommended concentration.	
Capacity	l	1,50	1,70
Recommended flow rate per unit	l/h	90	108
Maximum working pressure	bar	10,0	10,0
Test pressure	bar	16,0	16,0
Stagnation temperature	°C	205,4	
Grid ratio (Ø22/Ø8)	n/n	2/11	2/11
External connections		Rigid straight copper pipe of 22 mm.	
Integrated probe shell		Yes	



Certification standards		EN 12975-1:2000; EN 12975-1:2001; EN 12975-2:2001; AC:2002; ME-542-01	
Homologation password	Nr.:	NPS - 5211	NPS - 5411
Keymark certification	Nr.:	011- 7S1516F	

