



THERMAL SOLAR COLLECTOR

D12c serie

The SYRIUS D12c solar thermal collectors complete the core of the SYRIUS SOLAR INDUSTRY product range. They combine the strengths of the D12 series with a new generation of absorbing surface to limit overheating. Just as efficient as its counterpart in normal Functioning, this new coating increases its emissivity at high temperatures, which significantly reduces the stagnation temperature.

Among its advantages: reduction of liquid losses due to evaporation from the stagnation glycol circuit, increase of the glycol and collector lifetime thanks to the reduction of stress on all parts.

Based on the Mirotherm® Control technology, which has been proven in the world market for more than 15 years.

Description

The sensors are designed for a wide range of applications and operating conditions conditions of use:

- Vertical mode use for : ISWH, SECS, collective use, thermosiphon
- High insulation of 40 mm of rock wool: use in Europe
- High resistance to snow and wind loads (zone 5) : use at high altitudes
- Hydraulic circuit allowing the Functioning in forced circulation and thermosiphon

Collectors guarantee 10 years

Certifications

SolarKeymark Sensor Certification
23.01.004



Energy Star EPA Program

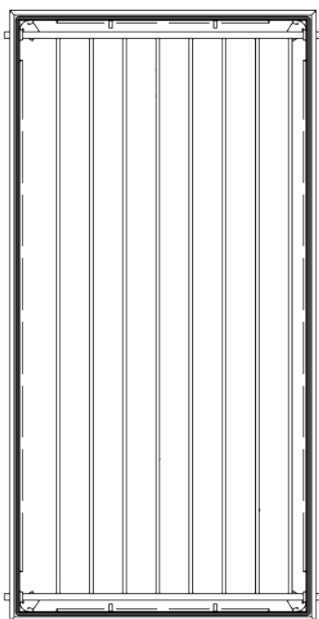


Made in France



Features

Model	C2000 D12c	C2500 D12c
Absorber coating	Selective aluminum laser welded on Cu tubes	
Absorptance / Emissance	Alanod Mirotherm Control highly selective	
Collector circuit	96% / 4% +/- 1%	
Collector circuit	Harp grid (8 tubes Cu. Ø 12 + 2 collectors tube Cu. Ø 22)	Harp grid (8 tubes Cu. Ø 12 + 2 collectors tube Cu. Ø 22)
Productivity value (W/m²)	699	687
Collector connection	4 outlets Ø 22 for compression fitting	
Dimensions (mm)	2033 x 1015 x 98	2033 x 1245 x 98
Gross area (m²)	2.06	2.53
Net area (m²)	1.83	2.28
Net weight (kg)	31	37
Liquid content (liters)	2.13	3
Nominal flow (l/h)	150	180
Nominal pressure loss *	0,6 mbar (low flow rat : 0,3 mbar, water/propylene glycol mixture/20°C)	
Covering	Tempered structured glass with low iron conten 3.2 mm (Solar Glass ESG)	
Transmission of covering	91 %	
Impact resistance of covering	Meets the requirements of the EN12975-2 standard	
Insulation	40 mm rock wool	
Frame collector	Anodised aluminium cover	
Angle of inclination	10° to 90°	
Recommended heat transfer fluid in Europe	Antifreeze mix based on propylene-glycol	
Guarantee	10 years	
Efficiency $\eta_{0,a}$ absorber area *	78.8 %	76.4 %
Heat loss coefficient a1 *	a1 : 3.82 W/(m².K)	a1 : 3.99 W/(m².K)
Heat loss coefficient a2 *	a2 : 0.016 W²/(m².K²)	a2 : 0.014 W²/(m².K²)
Max. stagnation temperature	140°C	
Max. operation pressure / admissible (bar)	10 / 7	
Wind resistance	3 kN/m² negative pressure (3000 Pa)	3 kN/m² negative pressure (2500 Pa)
Snow resistance	3 kN/m² positive pressure (3000 Pa)	



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