

We start where the rest aim

solar flame

solar collectors

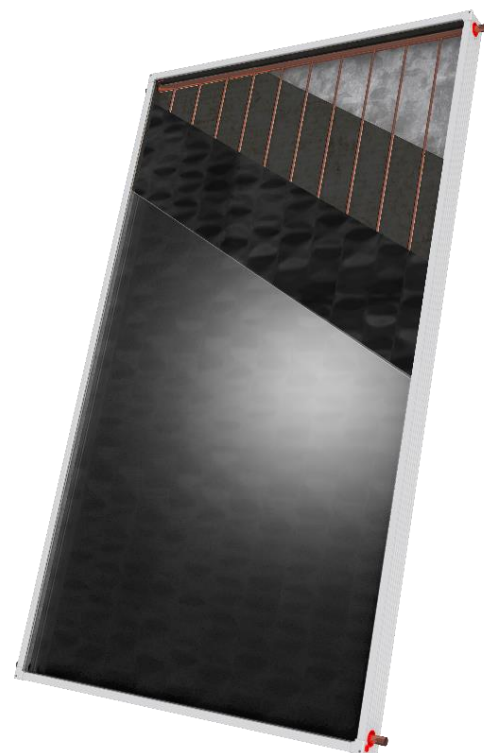
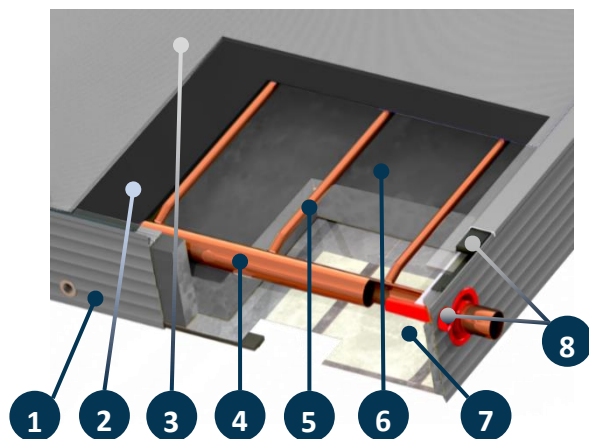


OLC200



BOLC017092022EN-v.1.1

- Harp type
- Ø12mm risers – open loop
- Annual collector output:
370 kWh/m² (Würzburg, 50°C)



Model OLC200 is a flat plate collector encasing harp type absorber with high efficiency. It is a great and affordable choice, best suited for open loop / natural circulation systems, making OLC200 a good choice especially for hotter climates and harder waters. The efficiency factor of OLC200 is $\eta_0=0.68$ (based on gross area). This collector has been tested in NSCR DEMOKRITOS laboratory in Greece and is certified with SOLAR KEYMARK.

Description:

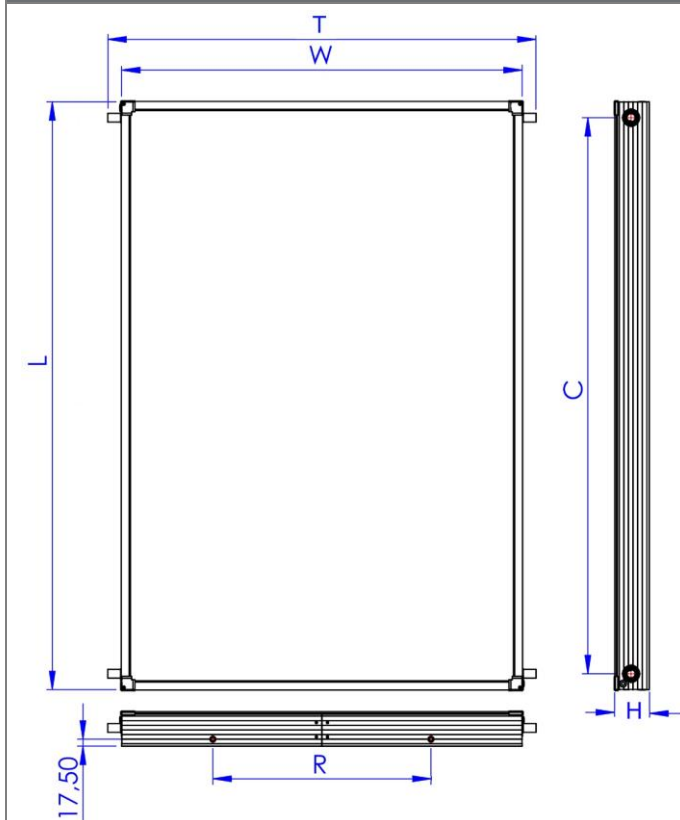
1. **Frame of the collector:** Aluminium profile powder coated for maximum protection in seaside areas.
2. **Absorbing surface:** Aluminium surface with black lacquer selective treatment with high absorption and low emission ($\alpha=90\%$, $\epsilon=20\%$), laser welded on the copper water frame.
3. **Transparent cover:** Security-Tempered solar glass for maximum protection against extreme weather conditions and temperature changes.
4. **Header of water frame:** Copper tubes $\varnothing 22$, which is welded to the vertical tubes with hard silver solder. Each water frame is tested at the pressure of 15 bars. Headers are punched with upper expansion for perfect fitting with vertical tubes and minimum pressure drop in the collector.
5. **Vertical tubes:** Copper tubes in diameter $\varnothing 12$ mm.
6. **Thermal insulation:** 30mm thick layer of prepressed mineral wool special for solar panels for minimum thermal loss. Thermal conductivity: $0=0.035$ W/m²K (EN 13162) and heat capacity 0.84 kJ/kgK.
7. **Back cover:** Aluminium sheet 0,4mm thick. Greater resistance to corrosion than common galvanized steel.
8. **Sealing materials:** For perfect waterproof finish and proper ventilation of collectors casing, all materials used (EPDM, polyurethane sealant, silicon air vents and silicon header flanges) resist to extreme weather conditions and temperature changes.

The collector can be installed on a flat roof, tiled roof and in-roof.

OLC200 COLLECTOR TECHNICAL DATA / SPECIFICATIONS

Model	OLC200
Gross area [m ²]	2.00
Total Dimensions [mm]	L:1980
	W:1010
	H:70
Weight empty [kg]	28.9
Max. operating Pressure [bar]	10
Thermal Liquid Capacity [lt]	2.15
Collector front Cover-Thickness	LOW IRON TEMPERED GLASS 3.2mm
Insulation	30mm MINERAL WOOL, $\lambda=0.035$ [W/(mK)]
Casing material	ALUMINUM POWDER COATED
Sealing Materials	POLYURETHANE - SILICON – EPDM
Absorber Area [m ²]	1.84
Waterframe type/material/thickness	harp, copper, $\varnothing 22$ headers (horizontal)- $\varnothing 12$ risers (vertical)
Number of vertical tubes	8
Absorber Material-Treatment	ALUMINUM / SEMI SELECTIVE – $A=0.90\pm 0.02$ / $e=0.20\pm 0.03$
Welding type	LASER
Heat transfer Medium	CONSUMPTION WATER (open loop)
Certificates	SOLAR KEYMARK SKM10112.1
Efficiency η_0	0.644
Thermal loss a_1 [w/(m ² K)]	3.26
IAM (K_θ at 50°)	0.028
Thermal loss a_2 (w/(m ² K ²)	0.85
Stagnation temp. [°C]	139.24
η_{col}	50%

Layout



Critical dimensions

model	L	W	H	C	T	R
2.00V	1980	1010	70	1900	1080	550

*R: M8 blind rivets position and spacing for mounting on a support structure. Located on both top and bottom side of the collector (2+2 rivets)



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