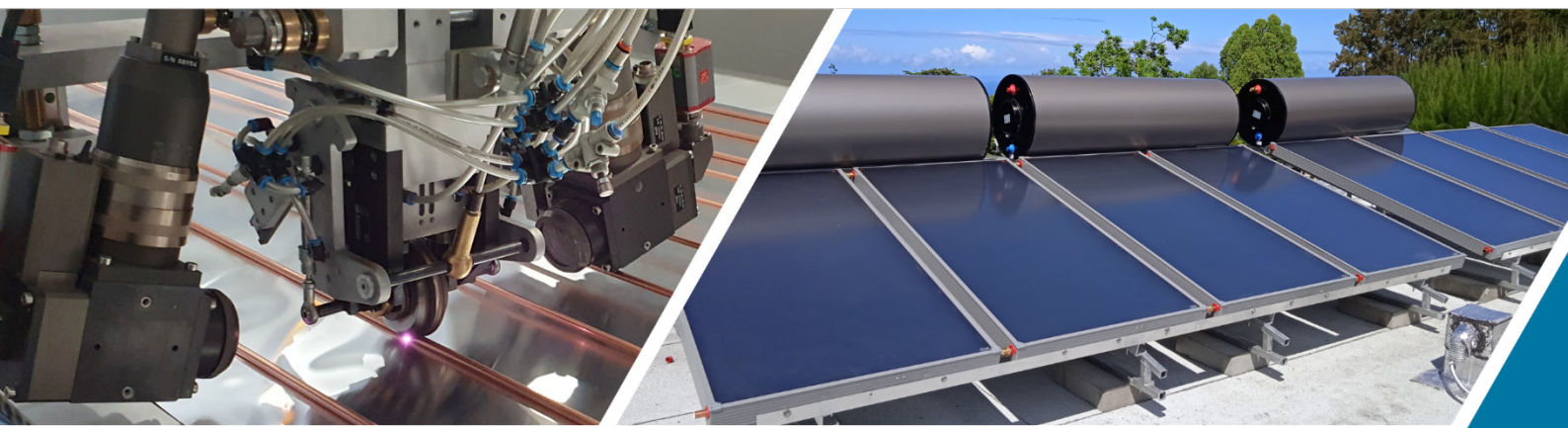


We start where you aim

solar flame



Natural circulation solar water heaters
OLS series

OLS series solar water heaters

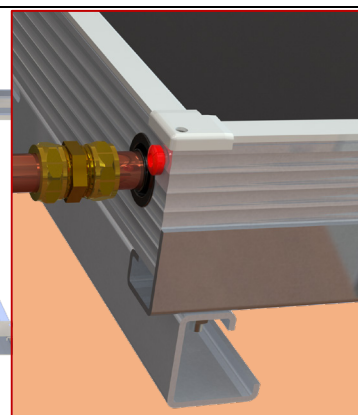
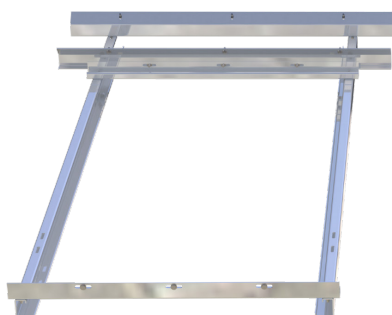
- ✓ Certified open loop systems
- ✓ Inox 316L tank, passivated
- ✓ Heavy duty aluminum support structures



➤ Direct heating of consumption water and fast heating. This series is perfect for warmer climates where freezing temperatures do not occur



➤ Aluminum supports made to last. These supports are designed to withstand even the most extreme physical phenomena like earthquakes and tornadoes.

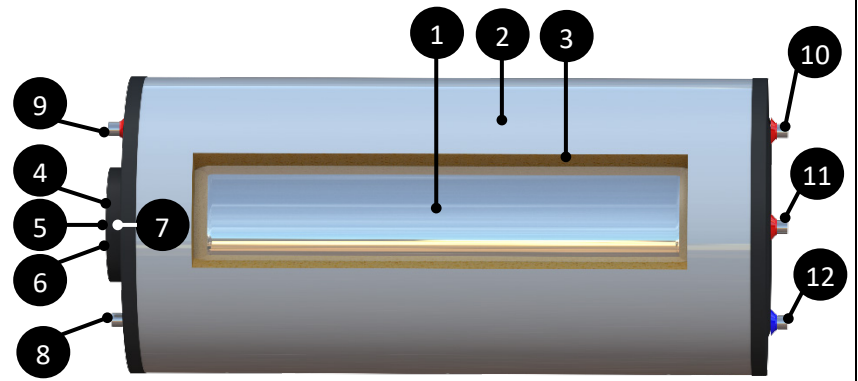


Model	Storage	Collector/s	Aluminum support for sloped surface				Standard support (flat 40° / slope)			
			Max. Height [mm]	Max. Depth [mm]	Max. Width [mm]	Net Weight [kg]	Max. Height [mm]	Max. Depth [mm]	Max. Width [mm]	Net Weight [kg]
200OLS200	OLS200	OLC200	660	1620	2560	87	1895	2080	1180	95
300OLS400	OLS300	2 x OLC200	660	1620	2560	144	1895	2080	1310	149

OLS hot water storage tanks

- The alternative solution
- Open loop
- Inox 316L tank, passivated

Light-weight yet durable and highly resistant to corrosion, both inside and outside. Ideal for warmer climates

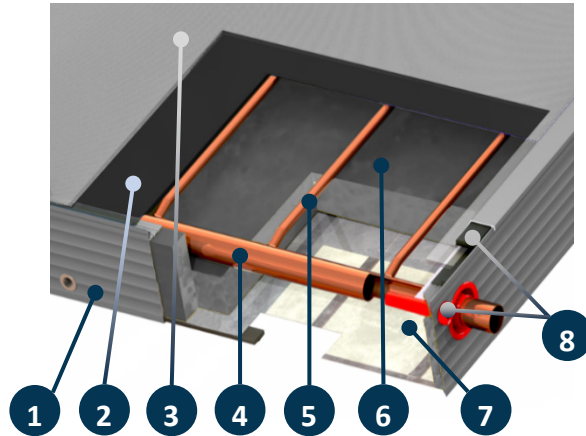
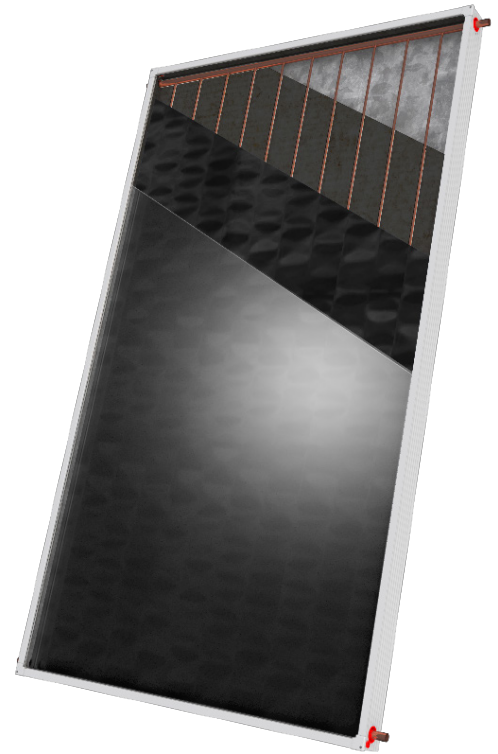


1. **Water storage tank:** Stainless steel vessel made of high-quality stainless steel (INOX316L), passivated for extra corrosion resistance.
2. **Outer cover:** 1 layer of primer and 2 layers of powder coating on Aluzinc cold rolled steel sheet. Aluzinc stands for aluminium and zinc, fused in almost equal proportions, as a coating for the steel sheet that is coated with a silvery spangle composed of Aluminum (55%), Zinc (43,4%) and a touch of Silicon (1,6%). Great mechanical strength and 7 times more resistant to corrosion than common galvanized steel.
3. **Thermal insulation:** Ecological and incombustible, high-density (>40kg/m³) expanded polyurethane surrounds the water storage tank and jacket for minimum heat loss, maintaining the hot water temperature, thickness 50mm.
4. **Side flange:** 1 ¼" threaded opening for safe sealing
5. **Cathode protection:** 1 Magnesium anode rod for extra protection against corrosion and mineral deposits caused by electrolytic reactions.
6. **Heating element:** Incoloy, rated according to the destination country's local regulations (optional, for the use of electricity as an auxiliary power source).
7. **Protective cover:** Protection of the electrical part.
8. **Cold Water inlet & outlet to collector:** Inox BSP male threaded pipe end 3/4". At this connection a 7 bar safety non return valve must be placed for pressure relief.
9. **Auxiliary inlet:** Inox BSP male threaded pipe end 3/4". For extra sensor or a pressure and temperature relief valve optionally may fit this end.
10. **Hot Water (DHW) outlet:** Inox BSP male threaded pipe end 3/4".
11. **Inlet from collector:** Inox BSP male threaded pipe end 3/4".
12. **Auxiliary inlet:** Inox BSP male threaded pipe end 3/4". Ideal for recirculation or drain.

OPEN LOOP TANK OLS SERIES SPECIFICATIONS			
Model		OLS200	OLS300
Capacity	[lt]	192	291
Dimensions DxD	[mm]	1330 x ø580	1980 x ø580
Inner tank construction material /protection against electrolytic corrosion		Inox 316L, passivated / Magnesium anode rod	
Insulation material		POLYURETHANE FOAM	
Insulation density	[kg/m ³]	40	
Insulation thickness	[mm]	50	
Maximum operating Temperature	[°C]	95	
Maximum tested Pressure	[bars]	12	
Maximum working Pressure	[bars]	7	
Outer cover construction material		Powder coated Aluzinc	Powder coated Aluzinc
Weight empty	[kg]	41	63

OLC200 collector

- 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:

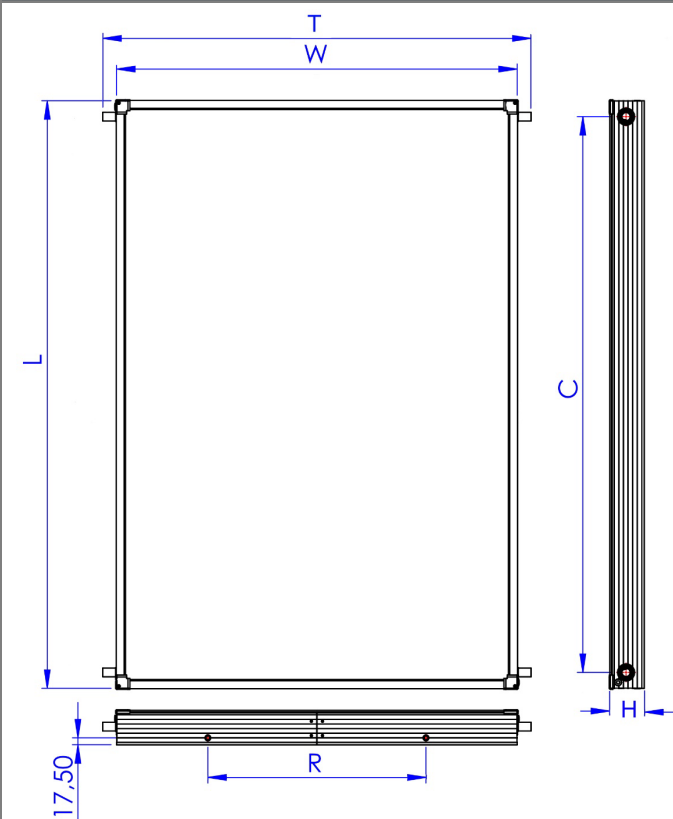
1. **Frame of the collector:** Aluminium profile powder coated for maximum protection in seaside areas.
2. **Absorbing surface:** Aluminium surface with black lacquer selective treatment with high absorption and low emission ($\alpha=90\%$, $\epsilon=20\%$), laser welded on the copper water frame.
3. **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: $\lambda=0.035$ 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 [m²]	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 [m²]	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/(m²K)]	3.26
IAM (K_0 at 50°)	0.028
Thermal loss a_2 (w/(m²K²)	0.85
Stagnation temp. [°C]	139.24
η_{col}	50%

Layout



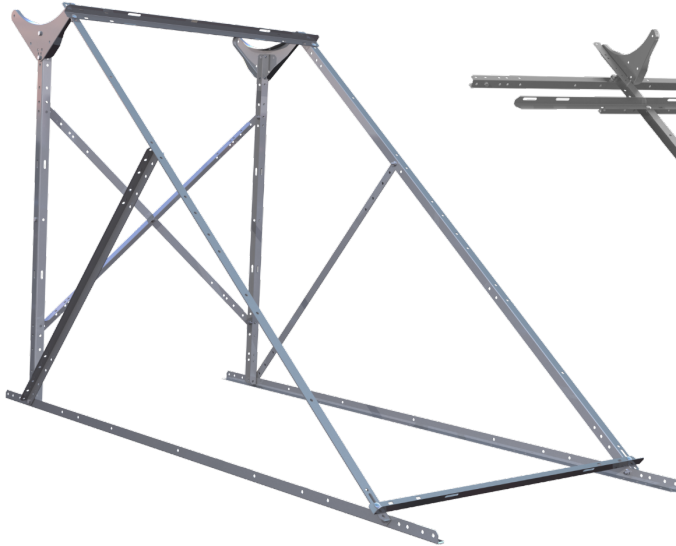
Critical dimensions

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)

Alternative STK mounting brackets

Flat roof 1 or 2 collectors

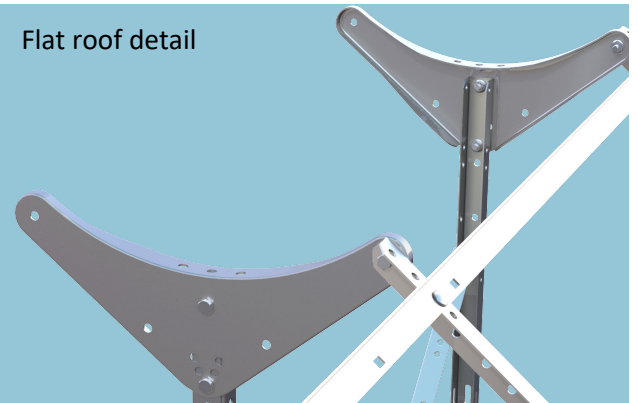


Slope roof 1 or 2 collectors

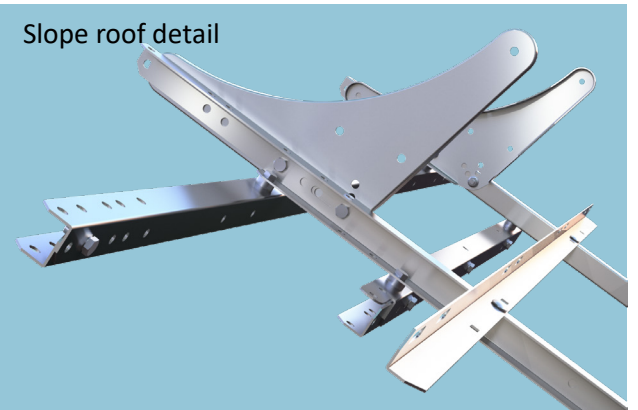


- ✓ Available for one or two collectors
- ✓ Available for tilt 40° and tilt 25°
- ✓ The same support kit can be configured for either flat or sloped surface
- ✓ Adjustable tank support for safe and rigid mounting of tank for sloped surfaces from 12°-39°.

Flat roof detail


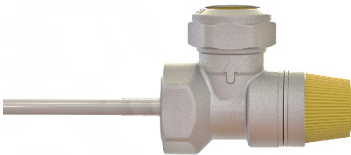
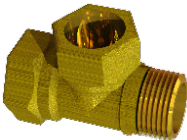



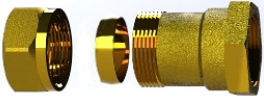
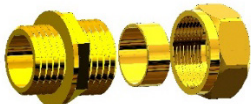




Slope roof detail



- ✓ The mounting brackets are made out of high-grade steel (S320).
- ✓ They are standard galvanized and may be even treated with highly anti-corrosive layer e.g. Magnelis.

Connection accessories

Nr	DESCRIPTION	FIGURE	200L	300L
1	SAFETY GROUP 3/4" 7BAR (OPTIONAL PART)		1	1
2	TEMPERATURE AND PRESSURE RELIEF VALVE 3/4" 95°C / 10 BAR (OPTIONAL PART)		1	1
2	TEE FITTING 3/4" F x 3/4" F x 3/4" M		1	1
3	CONNECTOR 3/4" M		1	1
4	COPPER ø22 PLUG COMPRESSION FITTING		2	2
5	ELBOW 3/4" F x ø22 COMPRESSION FITTING		1	1
6	RACCORD 3/4" F x ø22 COMPRESSION FITTING		0	1
7	RACCORD 3/4" M x ø22 COMPRESSION FITTING		1	0
8	CONNECTOR ø22 x ø22 COMPRESSION FITTING		2	2
9	ELBOW ø22 x ø22 COMPRESSION FITTING		0	2



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