



فيمب باور للخدمات الفنية ش.م.م
VEMP POWER TECHNICAL SERVICES L.L.C

Ultimate Innovations in Water Heating & Water Cooling Solutions



Solar Vemp Collector

Solar Vemp Boilers

Solar Vemp Series Thermosiphons



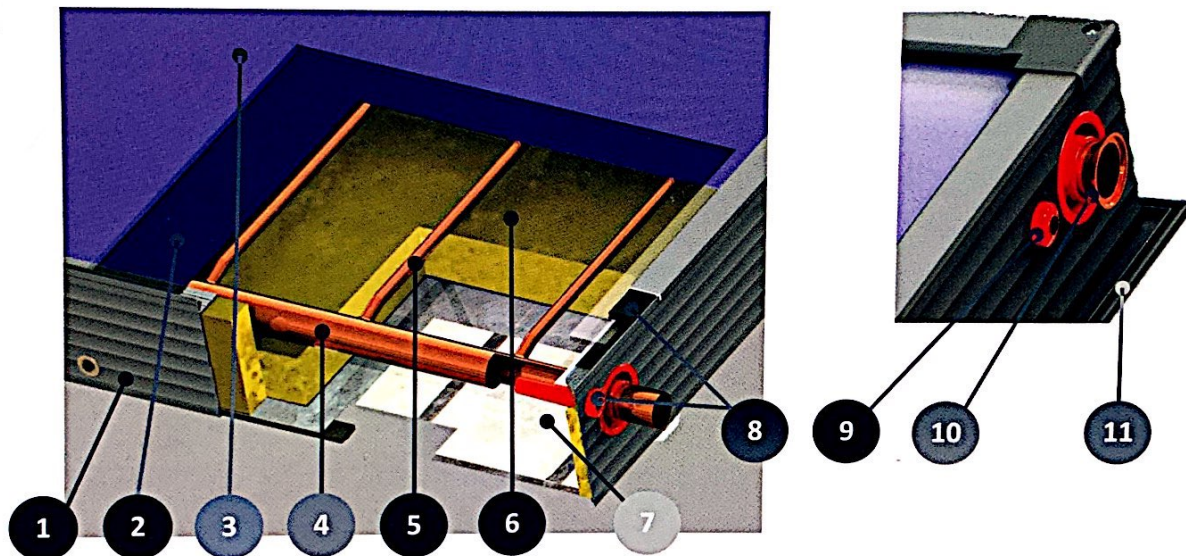
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The collectors

- Harp type
- Annual collector output:
488kWh/m² (Würzburg, 50°C)



Flat plate collector encasing harp type absorber with very high efficiency level. The efficiency factor is $\eta_0=0.83$ (based on aperture area), making it the most powerful certified collector of Greece and one among the best harp type collectors worldwide. This collector has been tested in NSCR DEMOKRITOS laboratory in Greece and is certified with SOLAR KEYMARK and soon with SRCC.



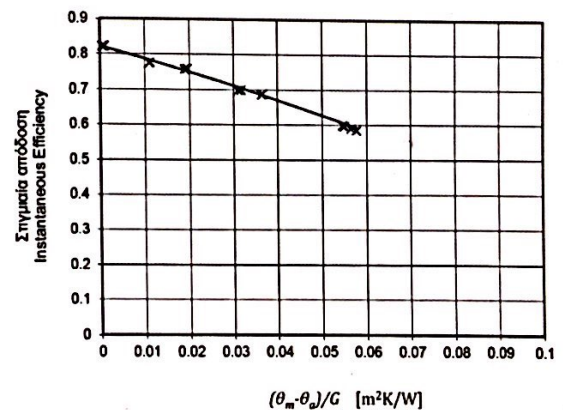
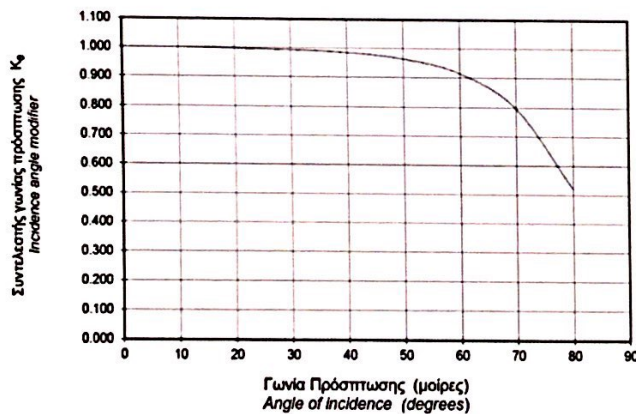
Description:

1. **Frame of the collector:** Aluminium profile powder coated for maximum protection in seaside areas.
2. **Absorbing surface:** Aluminum surface with blue titanium high selective treatment with high absorbance and low emission ($\alpha=95\%$, $\epsilon=4\%$), laser welded on the copper water frame.
3. **Transparent cover:** Security-Tempered prismatic 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 $\varnothing 8\text{mm}$.
6. **Thermal insulation:** 40mm thick layer of prepressed black mineral wool special for solar panels for minimum thermal loss. Rockwool insulation thermal conductivity: $\lambda=0.035 \text{ W/m}^\circ\text{K}$ (EN 13162) and heat capacity 0.84 kJ/kgK.
7. **Back cover:** Aluzinc 0,4mm thick. Aluzinc stands for aluminum and zinc fused in almost equal proportions, as a coating for the steel sheet that is coated with a silvery spangle composed of Aluminium (55%), Zinc (43,4%) and a touch of Silicon (1,6%). Great mechanical strength and 7 times more resisted 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) resist to extreme weather conditions and temperature changes.
9. **Temperature sensor socket (optional):** We offer you this extra feature for temperature monitoring.
10. **Special pipe shaping (optional):** For the use of special type connectors offering great flexibility and fast clip-on clip-off.
11. **Back frame (optional):** For the collector's mounting on special aluminum support structures.

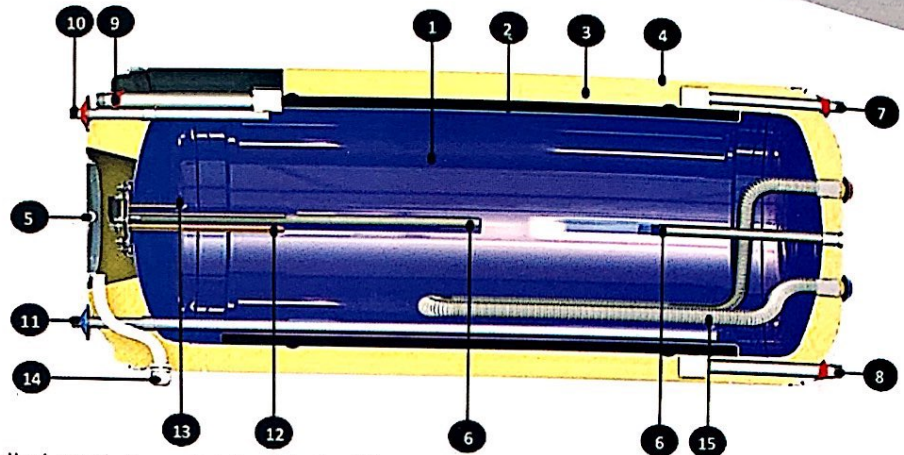
The collector can be installed on a flat roof, tiled roof and in-roof.

COLLECTORS TECHNICAL DATA / SPECIFICATIONS										
Model	1.50 V	1.50 H	1.82 V	1.82 H	2.00 V	2.00 H	2.37 V	2.37 H	2.72 V	2.72 H
Gross area [m ²]	1.50	1.50	1.82	1.82	2.00	2.00	2.37	2.37	2.72	2.72
Total Dimensions [mm]	L:1480	L:1010	L:1480	L:1230	L:1980	L:1010	L:1930	L:1230	L:2160	L:1260
	W:101	W:148	W:1230	W:1480	W:1010	W:1980	W:1230	W:1930	W:1260	W:2160
Weight empty [kg]	27.80	28.20	32.80	33.20	36.20	36.60	43.00	44.00	48.00	49.60
Max. operating Pressure [bar]	10									
Thermal Liquid Capacity [lt]	1.23	1.50	1.50	1.65	1.42	2.05	1.70	2.16	1.85	2.35
Collector front Cover-Thickness	LOW IRON TEMPERED GLASS 3.2mm									
Insulation	40mm-50kg/m ³ MINERAL WOOL, $\lambda=0.035$ [W/(mK)]									
Casing Material	ALUMINUM POWDER COATED									
Sealing Materials	POLYURETHANE - SILICON - EPDM									
Absorber Area [m ²]	1.38	1.38	1.72	1.72	1.86	1.86	2.23	2.23	2.57	2.57
Absorber Material-Treatment	ALUMINUM / PVD COATING / HIGH SELECTIVE - $A=0.95\pm0.02$ / $e=0.05\pm0.02$									
Absorber construction Type	LASER									
Heat transfer Medium	PROPYLENE GLYCOL + WATER MIXTURE									
Tests and Certifications	SOLAR KEYMARK									
EFFICIENCY VALUES BASED ON EN12975 STANDARD					EFFICIENCY VALUES BASED ON EN ISO 9806:2013 STANDARD (BASED ON GROSS AREA)					
Efficiency η_0	0,83				For the FMAX family: 0.761		For the FMAX 2.72: 0.774			
Thermal loss a_1 [w/(m ² K)]	3,93				For the FMAX family: 3.60		For the FMAX 2.72: 3.16			
IAM (K_0 at 50°)	0.96				0.96		0.96			
Thermal loss a_2 (w/(m ² K ²)	0.015				For the FMAX family: 0.014		For the FMAX 2.72: 0.012			
Stagnation temp. [°C]					190.5		190.5			
η_{col}					For the FMAX family: 59%		For the FMAX 2.72: 63%			



- Double layer of enamel
- Tank with 3mm thickness
- High density Insulation (50kg/m³)

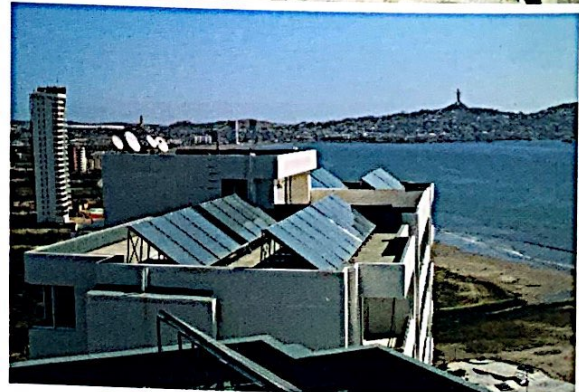
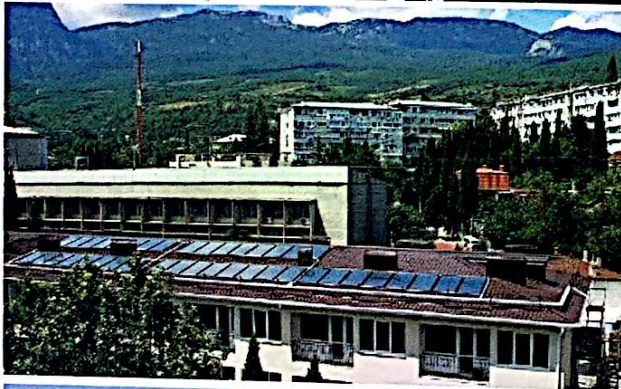
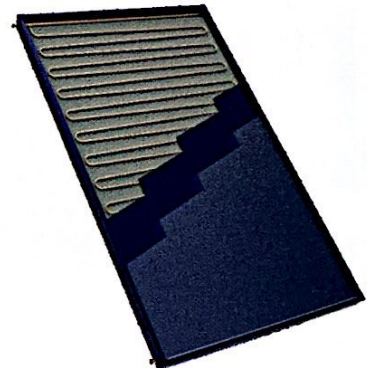
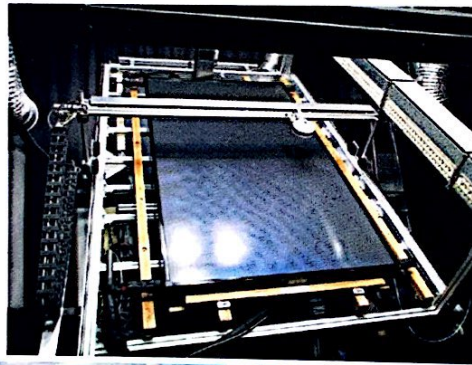
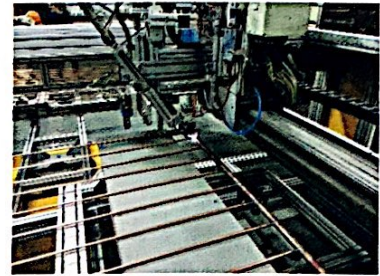
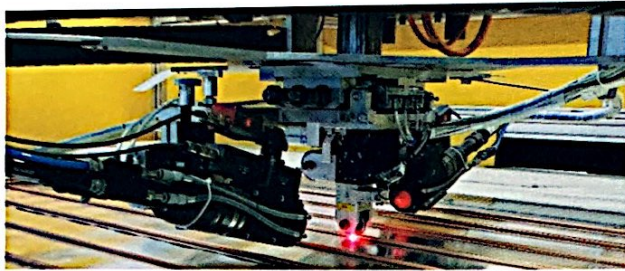
Solar VempBoilers



Water storage tank: Consists of hot rolled steel, 3mm thick with double internal layer of enamel, processed at 860° c, according to DIN 4753 Standard.

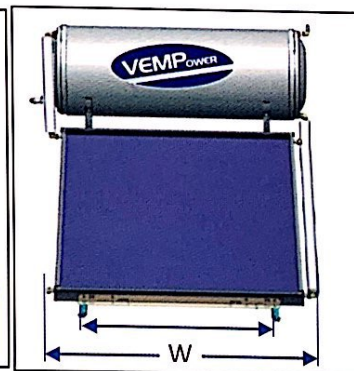
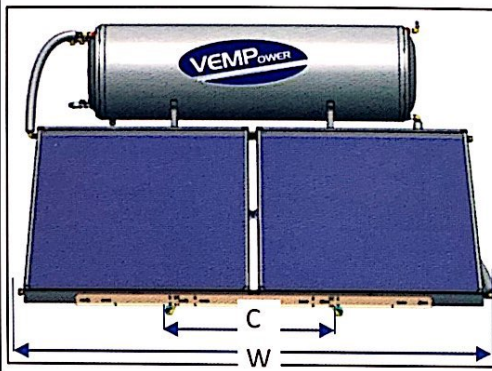
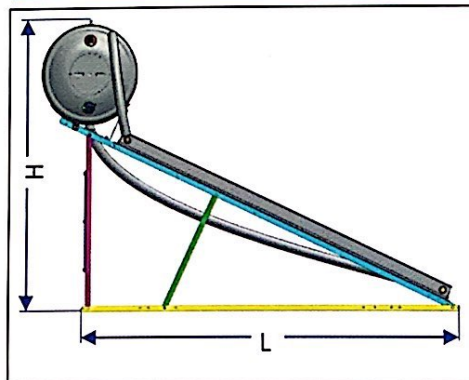
- Double jacket heat exchanger:** Consisting of cold rolled steel, 1.5mm thick, for the function of the closed loop circuit. The jacket is properly formed for resistance to contractions and expansions, during the operation of the solar system.
- Thermal insulation:** Ecological, incombustible and water-soluble high-density (>50kg/m³) expanded polyurethane surrounds the water storage tank and jacket for minimum heat loss, maintaining the hot water temperature, thickness 50mm.
- External casing:** Hot dip galvanized steel, powder coated RAL9006 / marine grade aluminum alloy.
- Side flange:** Wide opening for easy cleaning of minerals, inspection of the tank and maintenance. The flange is sealed with a silicon sealant with high heat resistance.
- Cathode protection:** 2 Magnesium anode rods for protection against corrosion and mineral deposits caused by electrolytic reactions.
- 2 bar safety valve connection point:** Inox 1/2" BSP male threaded pipe end.
- Jacket outlet:** Inox 3/4" BSP male threaded pipe end.
- Jacket inlet:** Inox 3/4" BSP male threaded pipe end. A tee fitting is attached which also provides the filling point for the closed circuit, which must be plugged after filling is done.
- Hot Water (DHW) outlet:** Inox BSP male threaded pipe end (3/4" for 300lt tank and 1/2" for rest).
- Cold Water inlet:** Inox BSP male threaded pipe end (3/4" for 300 & 500lt tank and 1/2" for rest). At this connection a 10 bar safety non return valve must be placed for pressure relief.
- Heating element:** Rated according to the destination country's local regulations (optional, for the use of electricity as an auxiliary power source).
- Safety thermostat (optional-standard only in case that electric heating element is present):** With bipolar protection and auxiliary fuse. All electrical components carry a CE marking according to EN 60335-1 and EN 660335-2-21 standards.
- Cable gland and cable tube:** Water resistant passage for the electric element's electric connections.
- Heat exchanger coil:** Optional part

STORAGE TANK SERIES BOILERS TECHNICAL DATA / SPECIFICATIONS						
Model		120	160	200	300	500
Capacity	[lt]	117	156	197	286	468
Dimensions DxL	[mm]	580x916	580x1116	580x1356	580x1970	700x2120
Protection - treatment – of main tank		ENAMELED + MG ANODE ROD				
Insulation material - density	[kg/m³]	ENVIROMENTALLY FRIENDLY EXPANDED POLYURETHANE (50 kg/m³)				
Maximum operating Temperature	[°C]	99				
Maximum tested Pressure	[bars]	15	15	15	15	15
Maximum working Pressure	[bars]	10	10	10	10	10
Heat exchanger capacity (jacket)	[lt]	8.6	12.9	18.3	25.8	30
Heat exchanger surface (jacket)	[m²]	0.62	0.91	1.28	1.79	2.1
Weight empty	[kg]	55	67	90	130	160



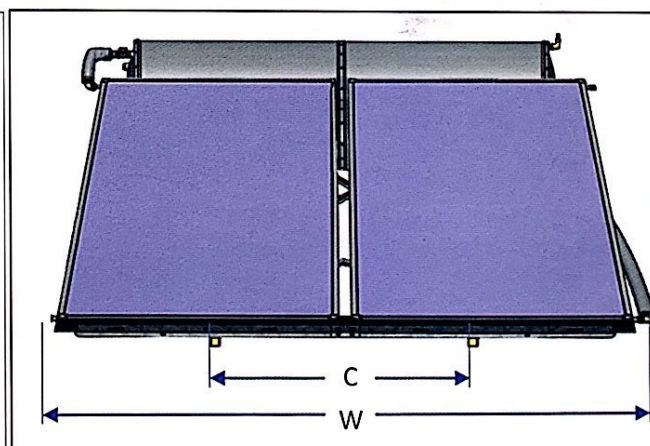
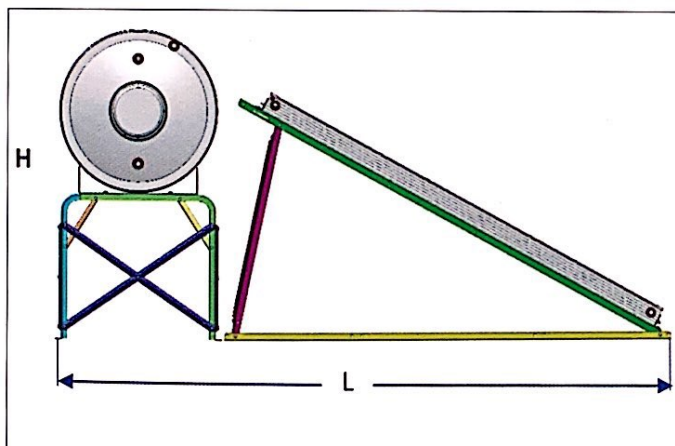
• SUPPORT MAIN DIMENSIONS

STANDARD TYPE SUPPORT KITS: Available for flat roof, tilt 25°-40° and inclined roof

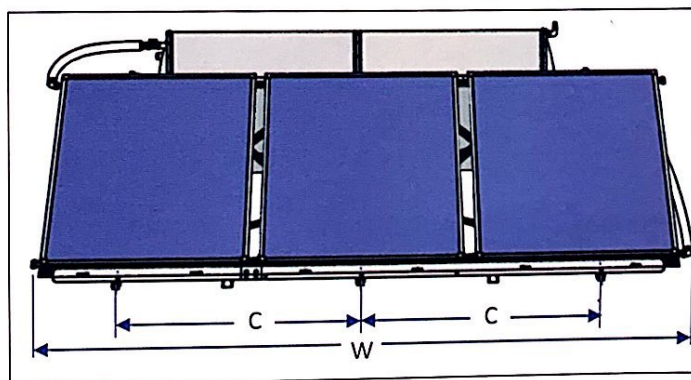


	120 FMAX 50	120 FMAX 182	160 FMAX 182	160 FMAX 200	160 FMAX 237	200 FMAX 237	200 FMAX 272
Tilt	25°	25°	25°	25°	25°	25°	25°
L	1670mm	1670mm	1670mm	2085mm	2085mm	2085mm	2085mm
H	1415mm	1415mm	1415mm	1620mm	1620mm	1620mm	1700mm
C	660mm	660mm	850mm	850mm	850mm	940mm	940mm
W	1100mm	1350mm	1350mm	1250mm	1385mm	1490mm	1490mm
Weight empty	105kg	110kg	122kg	130kg	136kg	152kg	165kg

	200 FMAX 300	300 FMAX 400	300 FMAX 474				
Tilt	25°	25°	25°				
L	1670mm	2085mm	2085mm				
H	1415mm	1620mm	1620mm				
C	940mm	940mm	940mm				
W	2240mm	2240mm	2670mm				
Weight empty	170kg	230kg	242kg				



	500 FMAX 544 @28°	500 FMAX 600 @28°
L	2760mm	2750mm
H	1380mm	1380mm
C	1360mm	1186mm
W	2705mm	3260mm
Weight empty	301kg	322kg





BAFA
Bundesamt für Wirtschaft
und Ausfuhrkontrolle



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UAE Supplier :- فيمب باور للخدمات الفنية ش.ذ.م.م

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