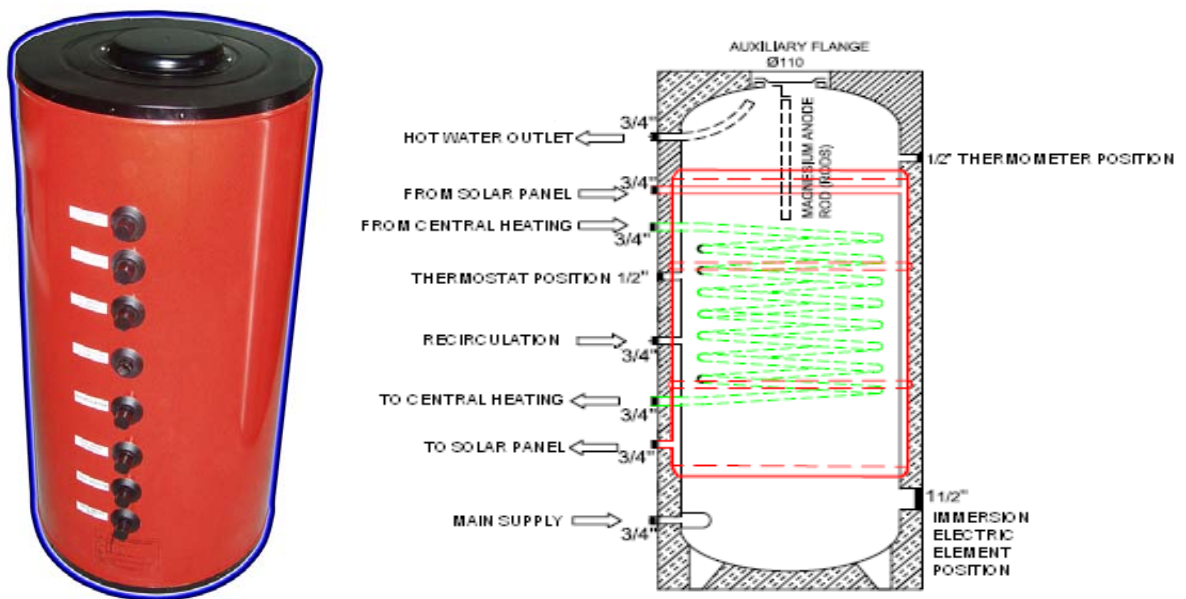




## SOLAR ENERGY SYSTEMS

### Boilers Technical Data



**OPUS™ Triple energy closed loop vertical boilers are manufactured from the best materials with the most advanced manufacturing technologies to ensure their durability and ease of use.**

OPUS™ Triple Energy closed loop vertical boilers include electric heating element and 2 heat exchangers.

One heat exchanger, which resides inside the boiler, is spiral like a serpentine. This heat exchanger can be connected to the central heating.

The Second heat exchanger is an outer steel jacket that surrounds the tank. The space created between the tank and the jacket forms heat exchanger volume that is connected to the solar collector in closed circuit. This large surface heat exchangers require small temperature difference for transfer of heat from the collector to storage.

Both heat exchanger loops are filled with antifreeze solution, thus avoiding possible freezing in the collector's fluid channels.

**Available sizes – 130L, 160L, 200L, 300L**

<b>TRIPLE ENERGY CLOSED LOOP VERTICAL BOILERS – TECHNICAL DATA</b>			
<b>Capacity:</b>	<b>160L</b>	<b>200L</b>	<b>300L</b>
<b>Dimensions (Diameter x height):</b>	Ø530x1300mm	Ø580x1300mm	Ø580x1700mm
<b>Weight (Kg):</b>	75 Kg	86 Kg	110 Kg
<b>System type:</b>	Close loop with 3 heat exchangers – Serpentine, outer steel jacket and electric heating element.		
<b>Electric Heating Element:</b>	2500W as a standard, 2000W, 3000W, 3500W, and 4000W by request. Nominal A.C 230 Volts		
<b>Main cylinder:</b>	2.5 mm hot rolled steel, DD13 - EN 10111, Low Carbon 0.08% max (DIN 1623 DCP 1203)		
<b>Dished Heads:</b>	3.0 mm hot rolled steel, DD13 - EN 10111, Low Carbon 0.08% max (DIN 1623 DCP 1203)		
<b>Perimetric exchanger (closed-circuit jacket):</b>	1.5 mm steel (DIN 1623 DCP 1203)		
<b>Serpentine:</b>	Steel tube - Schedule 40, Cleaned and Enamel coated		
<b>External Casting:</b>	0.5mm galvanized steel electrostatic coated with powder and oven baked.		
<b>Internal protection:</b>	Vitreous enamel double coat each coat: 180µ - 280µ coating procedure according to DIN 4753/T3		
<b>External protection:</b>	Vitreous enamel single coat: 180µ - 280µ coating procedure according to DIN 4753/T3		
<b>Thermal insulation:</b>	50mm high density Polyurethane - with low Freon content		
<b>Electric resistance:</b>	1.5-4Kw /220V		
<b>Safety features:</b>	thermostat and thermal security valve		
<b>Cathodic Protection:</b>	Magnesium anode AZ31 protects the steel by a sacrificial electrochemical action. 0.003% max of iron content.		
<b>Thermostat:</b>	Pointer set at: 60°C; Hand reset differential: 10°C; Disk temperature cut-off: 100 ± 5°C		
<b>Welding process:</b>	Automatic welding ensures the precision and high quality. No welding is carried out after Glass lining.		
<b>Cleaning:</b>	At the top of the main tank there is an opening of 140mm diameter which allows the easy cleaning of the inside of the tank.		
<b>Test Pressure:</b>	15 bar		
<b>Regular Working Pressure:</b>	6 Bar		
<b>Electric Test:</b>	The electric system tested automatically for Earthing, Insulation test, Breakdown, Leakage current (ph), Leakage current (0), Current.		
<b>Metal cleaning:</b>	High pressure steel grid blasting		