

Solar Thermal



The 21 century arrives with the latest solar thermal absorber technology.

Inspired by nature the one piece solar absorber uses roll bond aluminium technology that is expanded to leave a series of channels allowing the heat transfer fluid to move freely throughout the whole absorber area creating a uniform thermal collection area resulting in quicker heat up times and more efficient heat transfer.

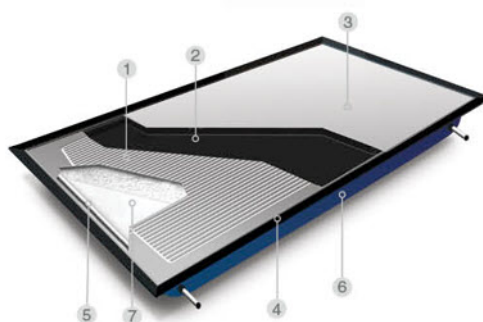
Stylish design allows the panels to minimise its visual impact



Suitable for domestic hot water, heating via heat pumps and swimming pools

Complete systems available

1. Roll-Bond absorber with a thickness of 1.5mm made using 99.5% aluminium is 100% recyclable
2. Coating: Semi Selective panting ($\alpha = 91\%$ $\epsilon = 36\%$)
3. Cover: Extra clear ($g = 91\%$), hardened glass (thickness 4mm)
4. Interlocking gasket and seal
5. Connection: Aluminium tube ($\varnothing 22\text{mm}$), on all 4 corners.
6. Tray: Aluminium (thickness 1 mm)
7. Insulation: Rock wool (thickness 50mm behind collector)

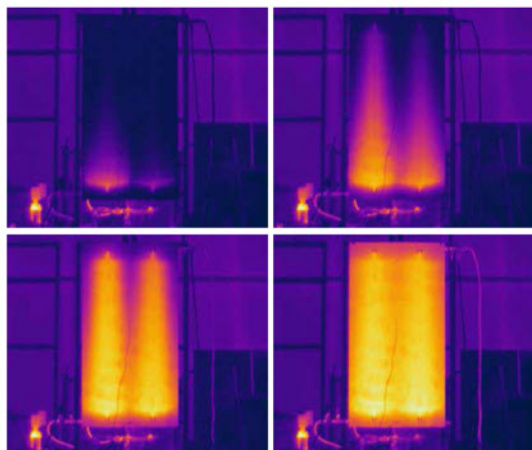


Inspired by nature



ABSORBER CHARACTERISTICS	DATA
Material	Aluminium
Dimensions	1980x885 mm
Channeling Type	1,5 mm
Internal thickness of channels	2 CH - double harp
Internal thickness of channels	3 mm
Outer diameter collector pipes	22 mm
Hydraulic connections	4*

* Compression fittings







Thermal image of CGA roll bond absorber

Surface temperature measurement using thermal imaging cameras was carried out at the CGA Technologies laboratory.

The result show that a stable temperature was achieved across the absorber in just 1½ minutes at a low flow rate of 1.25 l/h. The temperature difference across the absorber is less than 3°C, this is achieved thanks to the excellent properties of aluminium and the complete integration of the channels across the absorber plate.

Benefits

-  Top quality material and components guaranteed for a long service life
-  Roll bond technology maximises the heat transfer potential and hence performance
-  Ease of installation with simple mounting systems
-  High performance and quicker startup than traditional made flat plate

Functional Thermal Parameters	M.U.	DATA
Instantaneous absorber efficiency η^0		0.75
Linear coefficient of solar dispersion a_1	W/(m ² °K)	4.5
Temperature coefficient a_2	W/(m ² °K2)	0.02
Thermal peak power	W	1500
Pressure drop	mbar	60
Stagnation temperature	°C	180
Maximum working pressure	Bar	6
Minimum unit flow rate	Lt/h	120
Weight of empty collector	Kg	36
Volume of fluid in collector	lt	1.59
Gross area	m ²	2.1
Aperture area	m ²	1.81
Absorber area	m ²	1.71
Connecting pipe diameter	mm	22
Density of insulation	Kg/m ³	50
Heat transfer fluid*	Water - Propylene glycol mixture with corrosion inhibitors	
Standards UNI EN 12975 Solar Key Mark		
*Important: Product warranty is valid only for solar systems using this type of product		



For all of your solar thermal requirements please contact us.

NuVision Energy offer:
Complete solar thermal systems
Cylinders
Pumping stations
Solar controllers
Pipe and fittings
Antifreeze.