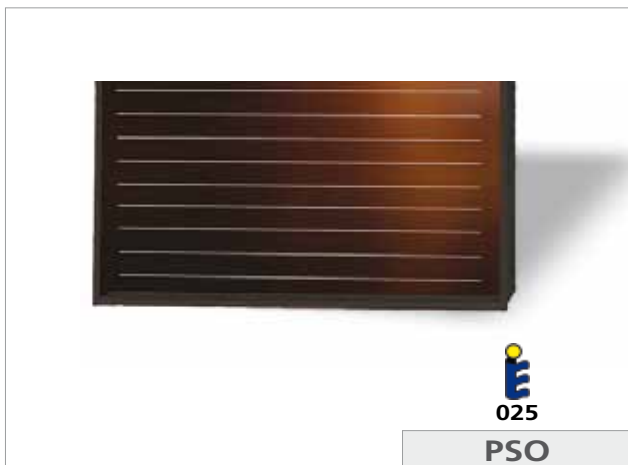


**PSO FLAT SOLAR COLLECTORS
FOR HORIZONTAL ASSEMBLY**



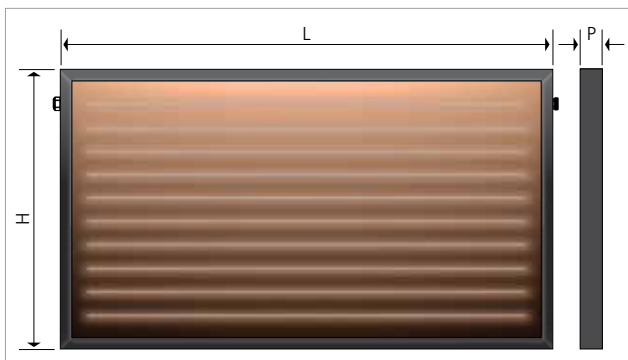
Description

giacosun® PSO flat solar collector for horizontal assembly is a structure of anodized aluminium sheet, dark brown colour, isolated on the bottom and on the walls with a layer of mineral wool. The highly selective absorbing plate, made of copper, brilliant bronze colour, with TINOX treatment is welded by ultra-sound technique to a series of copper pipes crossed by the thermo-vector fluid; the copper pipe series converges into the inlet and outlet conduits to make the hydraulic connections easier. The collector protection is made with a covering of highly selective toughened glass, having low iron content, extractable and interchangeable, keeping the hydraulic connection working. It is fixed into the structure by means of a double EPDM washer, resistant to high temperatures. In order to guarantee a rapid response to temperature variations, the sensor is fixed directly on the absorbing plate in an appropriate housing. The hydraulic connection to adjacent manifolds is made by using couplings having the tail piece directly drawn on the structure that, with the addition of a simple R20SC fitting, makes also the connection of the collector series to the system easier.



NOTE

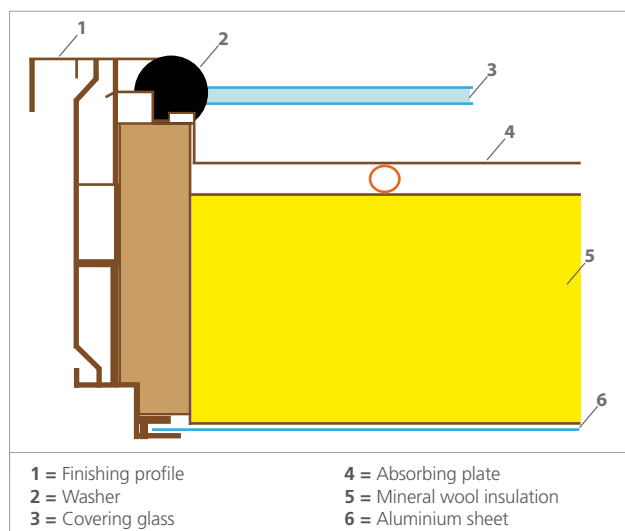
The bracket set for assembly on different coverings, and with various inclination angles has to be ordered separately.



Principal features

	PSO01Y001 (2,5 m ²)	PSO02Y001 (2 m ²)
Structure	Anodized aluminium 5/10	Anodized aluminium 5/10
Ground	Knurled aluminium 5/10	Knurled aluminium 5/10
Covering	4 mm transparent toughened glass	4 mm transparent toughened glass
Insulation (ground/lateral)	50/20 mm mineral wool	50/20 mm mineral wool
Washers	EPDM	EPDM
Weight (empty)	55 kg	48 kg
Fluid content	1,3 l	1,1 l
Dimensions (LxHxP)	2206x1205x100 mm	2206x1040x100 mm
Marking	Solar Keymark	Solar Keymark
Compliance	UNI EN 12975-1-2:2006	UNI EN 12975-1-2:2006
Guarantee	10 years	10 years

Panel section



- 1 = Finishing profile
- 2 = Washer
- 3 = Covering glass
- 4 = Absorbing plate
- 5 = Mineral wool insulation
- 6 = Aluminium sheet

Technical Data

	PSO01Y001 (2,5 m ²)	PSO02Y001 (2 m ²)
Collector total surface	2,65 m ²	2,30 m ²
Opening total surface	2,35 m ²	1,99 m ²
Absorbing plate - Material - Dimensions (LxH) - surface	2/10 TINOX copper 2101x1100 mm 2,31 m ²	2/10 TINOX copper 2101x935 mm 1,965 m ²
Plate pipes - horizontal - vertical	10 made of copper 8x0,6mm 2 made of copper 22x1 mm	10 made of copper 8x0,6mm 2 made of copper 22x1 mm
Absorption	95%	95 %
Emission	5%	5 %
Peak power	1699 W	1256 W
Instantaneous efficiency	0,772	0,772
Thermal capacity	48,6 kJ/K	27,5 kJ/K
Stagnation temperature	175°C	142°C
recommended capacity for m ²	15-40 l/h	15-40 l/h
Max. pressure	10 bar	10 bar

Hydraulic functioning

On the PSO solar collector, the hydraulic connections are laterally positioned on the structure. The inlet of the thermovector fluid is from the connection positioned laterally on the left; the conduit on the left functions as a collector and supplies in parallel the horizontal pipe series through which the fluid reaches the conduit on the right; the fluid outlet occurs from the connection positioned laterally on the right. The collector has anti-condensate holes passing through frame and insulation, closed by means of press plugs in EPDM rubber with reaction hole. Each hydraulic structure of the collector is tested at 15 bar pressure.

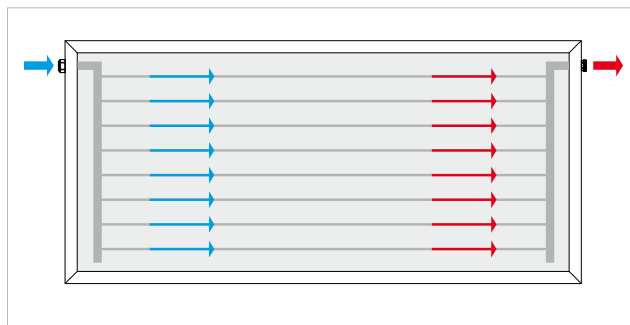
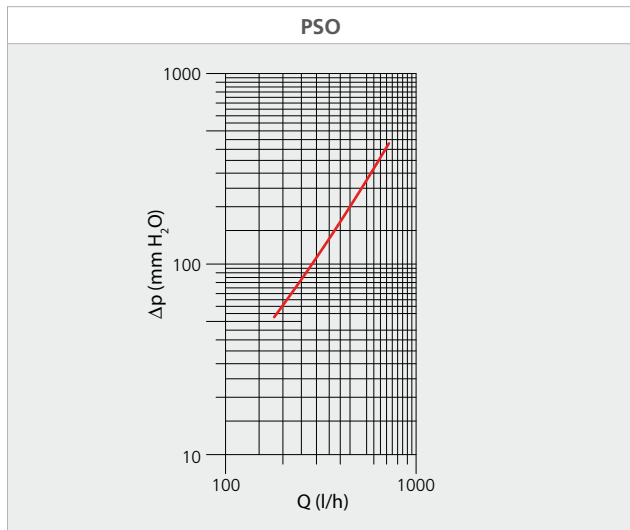
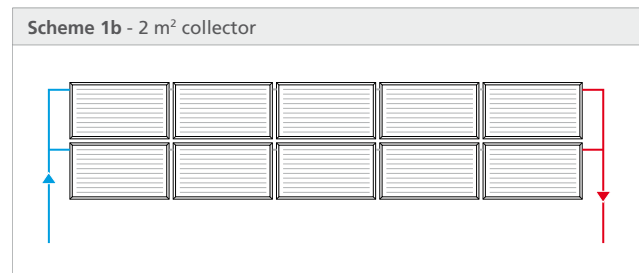
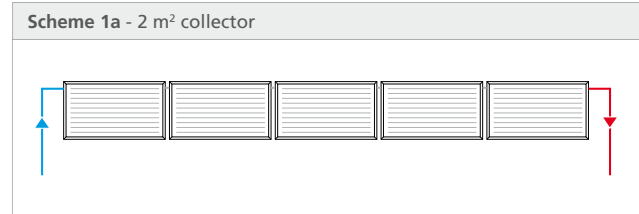


fig.1 2 m² collector
Use no. 1 R20SCY004 size ¾" fitting, for the connection to the system



Connection examples

It is recommended not to connect more than 5 PSO solar collectors in series. With systems having higher dimensions, we advise to install several collector series connected in parallel.



Solar Keymark

Solar Keymark represents the quality mark in Europe for products destined for solar thermal systems. Choosing Solar Keymark products means automatically satisfying the European standards, guaranteeing high quality and reliable information about the obtainable performance.

In Europe Solar Keymark is the reference for National and Regional Bodies, to grant contributions and fiscal benefits for public and private projects.



**PSO FLAT SOLAR COLLECTORS
FOR HORIZONTAL ASSEMBLY****Product specifications****2,5 m² PSO flat solar collector**

2,5 m² PSO flat solar collector, horizontal assembly, structure in 5/10 anodized aluminium sheet. Collector total surface 2,65 m², opening . 2,35 m² . 2101x1100 mm (LxH) absorbing plate, 2,31 m² surface, highly selective, brilliant bronze colour, 2/10 TINOX copper, ultrasound welding to copper pipes. 10 horizontal pipes 22x1 mm, 2 vertical pipes 8x0,6mm. 4 mm transparent toughened glass covering, extractable and interchangeable, fixed by means of EPDM double washer, resistant to high temperatures. Housing for fixing of the temperature sensor on absorbing plate. 2 brass hydraulic connections with tail piece, 3/4", conical. Mineral wool insulation on ground (50 mm) and walls (20 mm). 95% absorption, 5% emission. Fluid content: 1,3 l. Recommended capacity 15-40 l/h for m² . Max pressure 10 bar. Stagnation temperature 142°C. Dimensions (LxHxP): 2206x1205x100 mm. Weight 55 kg (empty). Compliance with UNI EN 12975-1-2:2006 standard. Marking: Solar Keymark. Guarantee 10 years. Part number PSO01Y001.

2,5 m² PSO flat solar collector

2 m² PSO flat solar collector, horizontal assembly, structure in 5/10 anodized aluminium sheet. 2,30 m² collector total surface, 1,99 m² opening. 2101x935 mm (LxH) absorbing plate, 1,965 m² surface, highly selective, brilliant bronze colour, 2/10 TINOX copper, ultrasound welding to copper pipes. 8 horizontal pipes 22x1 mm, 2 vertical pipes 8x0,6mm. 4 mm transparent toughened glass covering, extractable and interchangeable, fixed by means of EPDM double washer, resistant to high temperatures. Housing for fixing of the temperature sensor on absorbing plate. 4 brass hydraulic connections with tail piece, 3/4", conical. Mineral wool insulation on ground (50 mm) and walls (20 mm). 95% absorption, 5% emission. Fluid content: 1,1 l. Recommended capacity 15-40 l/h for m² . Max pressure 10 bar. Stagnation temperature 142°C. Dimensions (LxHxP): 2206x1040x100 mm. Weight 48 kg (empty). Compliance with UNI EN 12975-1-2:2006 standard. Marking: Solar Keymark. Guarantee 10 years. Part number PSO02Y001

Altre informazioni

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