

**PSI FLAT SOLAR COLLECTOR  
FOR EMBEDDED ASSEMBLY**



**Description**

giacosun® PSI flat solar collector for assembling embedded into the roof a structure of lamellar fir-wood, allowing optimal aesthetic integration, completed with a finish profile of anodized aluminium, insulated at the bottom with a mineral wool layer. 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, extractable and interchangeable, fixed to 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 plate in an appropriate housing. The hydraulic connection to adjacent collectors is made by using couplings having the tail piece directly drawn on the structure.

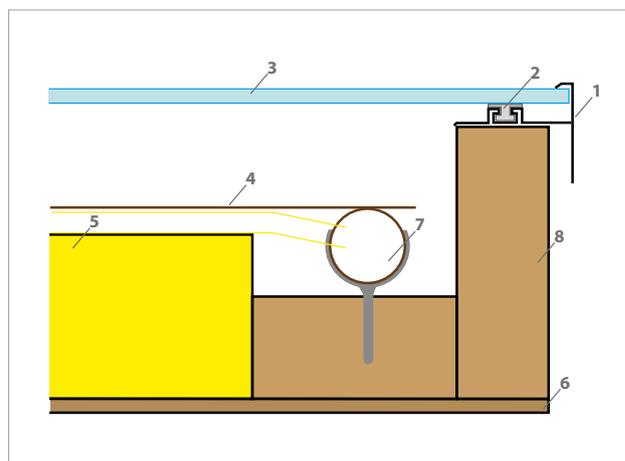
**Principal features**

	PSI30Y001 (2,5 m²)
Structure	Lamellar fir-wood
Ground	4 mm waterproof sheet
Profile	in alluminio anodizzato
Covering	4 mm transparent toughened glass
Ground insulation	Mineral wool and black synthetic fabric, 50 mm thickness
Washers	EPDM
Weight (empty)	59 kg
Fluid content	1,3 l
Dimensions (LxHxP)	1170x2170x100 mm
Marking	Solar Keymark
Compliance	UNI EN 12975-1-2:2006
Guarantee	10 years

**REMARK**  
The bracket set has to be ordered separately and it includes the bridge connections for collectors assembled in series.

**Important:**  
To avoid water infiltration into the metal roof finishing the PSI collectors must be installed with a minimum slope of 18°.

**Panel section**



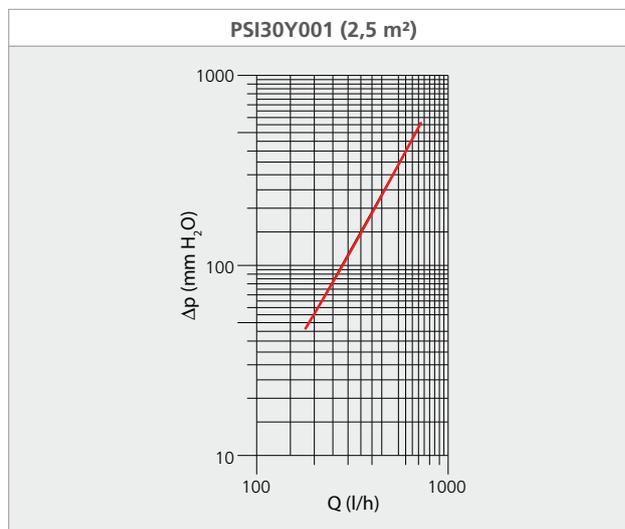
- 1 = finishing profile
- 2 = Washer
- 3 = Covering glass
- 4 = Absorbing plate
- 5 = Mineral wool insulation
- 6 = Masonite ground
- 7 = copper pipes
- 8 = Lamellar wood structure

Part Number	Surface and dimensions
PSI30Y001	2,5 m² (1170x2170x100mm)
PSI31Y001	1,25 m² (1170x1180x100mm) - on demand
PSI32Y001	1,50 m² (1170x1400x100mm) - on demand

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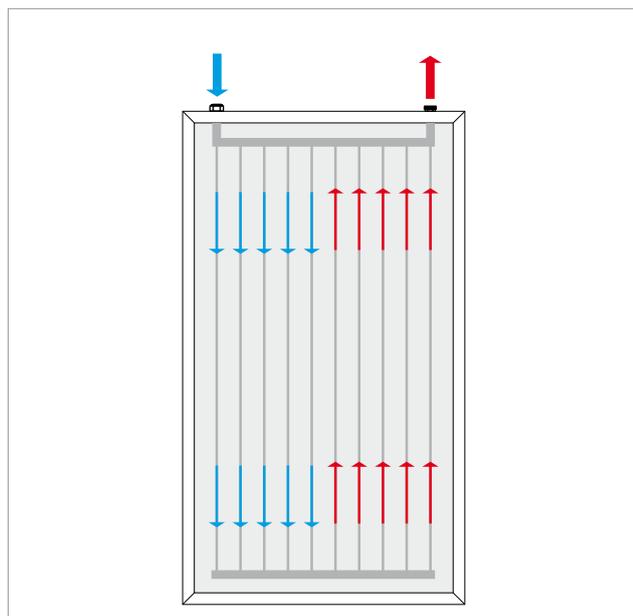
**Technical Data**

PSI30Y001 (2,5 m <sup>2</sup> )	
Collector total surface	2,54 m <sup>2</sup>
Opening total surface	2,34 m <sup>2</sup>
Absorbing plate - Material - Dimensions (LxH) - surface	2/10 TINOX copper 1100x2101 mm 2,31 m <sup>2</sup>
Plate pipes - horizontal - vertical	2 made of copper 22x1 mm 10 made of copper 8x0,6 mm
Absorption	95%
Emission	5%
Peak power	1597 W
Instantaneous efficiency	0,772
Thermal capacity	48,6 kJ/K
Stagnation temperature	175°C
m <sup>2</sup> recommended capacity	15-40 l/h
Max. pressure	10 bar



**Hydraulic functioning**

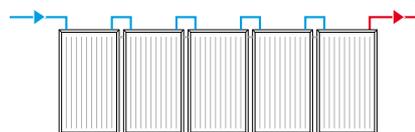
On the PSI solar collector, the hydraulic connections are positioned on the upper side of the structure. The inlet of the thermovector fluid is from the connection positioned above left. The inlet/outlet conduit, functioning as a collector, is throttled in the central position to deviate the fluid in descending direction and supply in parallel the first series of vertical pipes. The thermovector fluid, reaches and supplies the lower conduit, crosses the second series of vertical pipes in an upward direction, by reaching again the inlet/outlet conduit. The fluid outlet is from the connection positioned above right.



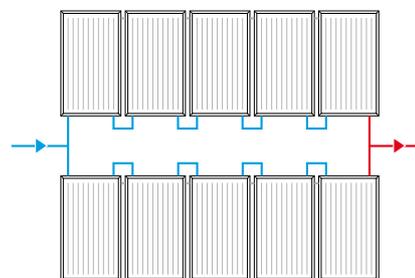
**Connection examples**

It is recommended not to connect more than 5 PSI solar collector in series

Scheme 1a - 2,5 m<sup>2</sup> collector



Scheme 1b - 2,5 m<sup>2</sup> collector



## 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.



## Product specifications

### PSI flat solar collector 2,5 m<sup>2</sup>

PSI flat solar collector 2,5 m<sup>2</sup>, to be embedded, lamellar fir-wood structure, finishing profile made of anodized aluminium. Total collector surface 2,54 m<sup>2</sup>, opening 2,34 m<sup>2</sup>.

Absorbing plate of 1100x2101 mm (LxH), surface 2,31 m<sup>2</sup>, highly selective in TINOX 2/10 copper, brilliant bronze colour, ultrasound welding to copper pipes, 2 horizontal pipes 22x11 mm, 10 vertical pipes 8x0,6mm. Covering in 4 mm transparent toughened glass, extractible and interchangeable, fixed by means of EPDM double washer, resistant to high temperatures. Housing for fixing of the temperature sensor on absorbing plate. 2 hydraulic connections with conical 3/4" tail pieces. Mineral wool insulation on ground of 50 mm. 95% absorption, 5% emission. Fluid content: 1,3 l. Recommended capacity 15-40 l/h for m<sup>2</sup>. Max. pressure 10 bar. Stagnation temperature 174,2 °C. Dimensions (LxHGxP): 1170x2170x100 mm. Weight 59 kg (empty). Compliance standard UNI EN 12975-1-2:2006. Marking: Solar Keymark. Guarantee 10 years.

Part Number PSI30Y001.

## Additional information

For additional information please check the Giacomini website at the following address: [www.giacomini.com](http://www.giacomini.com)

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