

# PLANO 27

The high performance flatplate collector



## Harvest solar heat at the highest level.

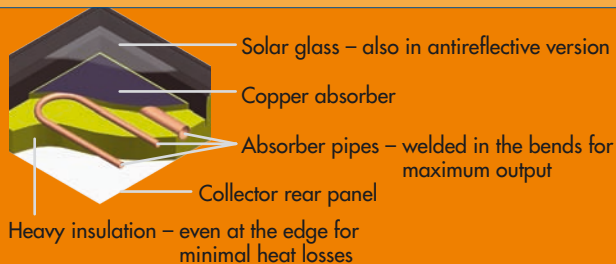
The PLANO 27 makes you more independent in a number of ways – for example, from rising oil and gas prices. Plus it is easy to accommodate, with its slim design.

The PLANO 27 harvests noticeably more solar energy than conventional models in its class and at the same time provides a form of heat generation which is attractive and efficient.

- significantly more heat from the sun
- high-quality design
- versatile roof integration options
- patented construction for more output
- long-term weather resistance and robust structure
- self-cleaning design with no lower frame to trap debris
- simple installation

Highly efficient solar systems





### High-performance presentation

The solar collector is the engine which drives a solar thermal system. It catches the sunlight via the absorber and converts it into energy for the hot water and heating support system. Thanks to a special anti-reflective solar glass and a serpentine piping arrangement on the inside of the collector, the PLANO 27 ensures a particularly high energy yield. The spacing between the absorber pipes is a mere seven centimetres. This is a unique feature in laser-welded collectors and sets new standards in efficiency.

On the inside of the flatplate collector, all bends and also the absorbers and collector pipes are each fastened to the absorber sheet with two welded connections. This enables excellent heat transfer.

### Patented self-cleaning effect:

A design that can think for itself! With conventional collectors, it is inevitable that dirt will collect over time. But with the PLANO 27, the lower collector edge lies flush with the glass. In this way, no dirt can accumulate and even snow slides easily off.

### Attractive in every respect

The PLANO 27 is a joy to behold. The collector is aesthetically pleasing to the eye with a high-quality anthracite finish and fits in beautifully with any architectural style. Completely in keeping with any surroundings. A numerous range of installation methods allows a visually appealing integration into the whole architectural look of the house, and it makes no difference whether it is fitted parallel or raised in a pitched roof, on a flat roof or to the facade of the building. The PLANO 27 is available in a version which can be fitted either landscape or portrait.

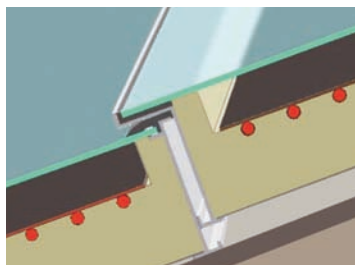
### Intelligently designed

The novel patented design of the PLANO 27 allows the collectors to be fitted in a particularly space-saving arrangement, including the simple creation of a series of rows. The collectors can be connected together so that they overlap like shingles, allowing the best

Collector	PLANO 27 VAR	PLANO 27 V	PLANO 27 H
Type of installation	portrait	portrait	landscape
Dimensions (W x H x D) in mm	1151 x 2242 x 100	1151 x 2242 x 100	2219 x 1174 x 100
Weight	41 kg	41 kg	42 kg
Total surface area	2.58 m <sup>2</sup>	2.58 m <sup>2</sup>	2.6 m <sup>2</sup>
Aperture surface area	2.33 m <sup>2</sup>		
Absorber surface area	2.26 m <sup>2</sup>		
Output (EN12975 - 2:2001)	Based on absorber/aperture surface area		
Conversion factor 0.0	0.85/0.82 [ - ]	0.81/0.79 [ - ]	Still under test
Efficiency level 0.05	0.62/0.61 [ - ]	0.61/0.59 [ - ]	Still under test
Efficiency level 0.1	0.35/0.34 [ - ]	0.34/0.33 [ - ]	Still under test
α1	3.97/3.86 W/(m <sup>2</sup> K)	3.35/3.25 W/(m <sup>2</sup> K)	Still under test
α2	0.0123/0.0119 W/(m <sup>2</sup> K <sup>2</sup> )	0.0170/0.0165 W/(m <sup>2</sup> K <sup>2</sup> )	Still under test
Stagnation temperature	199 °C at 1000 W/m <sup>2</sup>	196 °C at 1000 W/m <sup>2</sup>	194 °C at 1000 W/m <sup>2</sup>
Angle of incidence correction factor K (50°)	0.91 [ - ]	0.92 [ - ]	Still under test
Absorber	Full surface 0.2 mm copper absorber with highly selective coating		
Glazing	3.2 mm, double antireflective coated solar glass, textured	3.2 mm, textured	3.2 mm, textured
Hydraulics	Active top and bottom collector pipes (22 mm), in between serpentine piping arrangement made of laser-welded 10 mm copper pipes, spacing 70–90 mm		
Connections	4 pieces with flange for collector connection, connecting piece or sensor fitting		
Housing	Profile frame angled along three sides, riveted at the bottom, rear panel made of aluminium textured plate inserted and glued in the frame profile		
Seals	Glass surround at the top and sides made of weatherproof, vulcanised EPDM cover profile		
Insulation	Emission-free glass wool, 50 mm at rear/20 mm along sides		
Tests and certificates	Performance and quality tests according to EN12975-2: PLANO 27 H collector still under test Keymark certification: in progress		
Guarantee	Extended Consolar guarantee: 5 years, 10 years against loss of output (for 80 % of the Keymark yield data, Consolar provides a 10 year guarantee)		

possible use of the available roof surface. At the same time, a higher collector array capacity is achieved for a given surface area. As a result, the PLANO 27 is also particularly suitable for large-scale installations.

The high-performance version with double-sided anti-reflective coating achieves an even higher energy yield.



### Sturdy power package

The compact aluminium frame collector sets itself apart due to its particular stability. This

is due to the PLANO 27 being formed from a single piece which is angled along the top three sides. The high-quality manufacturing process makes the collector significantly more robust and weather-resistant than riveted-frame types.

### Easy installation

The PLANO 27 is a real lightweight. Installing the flatplate collector is correspondingly simple, thanks to a new and sturdy fastening profile. The collectors can easily withstand even high wind and snow loads.

### Supplied from any quarter

The PLANO 27 can be combined with all heat storage facilities made by Consolar. No matter what kind of requirements, we can find the right solution.

Consolar UK  
Greenshop Solar, Bisley, Stroud,  
Gloucestershire. GL6 7BX

UK 01452 772030  
info@consolar.co.uk  
www.consolar.co.uk

Consolar Solare Energiesysteme GmbH  
Strubbergstraße 70  
60489 Frankfurt a. M., Germany

D +49 (0)69-7409328-0  
info@consolar.de  
www.consolar.de

