

# Solar Collector, flat collector

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**BASICX 2.38 4C**

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Solar installations with Basicx collectors convert the sun's radiant energy into usable heat.

The heat generated in the solar collectors is transferred via the operating medium to the domestic or industrial water tank, where it is stored. Efficient system operation is controlled by a differential temperature controller in conjunction with a circulating pump.

## A unique method of absorber connection

The Basicx flat-plate liquid collector has an absorber, in which a modern technology of connecting the plate with the pipe system, so far the only one of its kind on the market, is used. The technology consists in partial rolling of the copper pipe, which increases the transfer surface by seven times. An additional advantage is that the connector, i.e. the solder, is located outside the main heat transfer surface.

Considering the fact that thermal conductivity of copper from which the pipes are made is 401 W/mK and solder is only 60 W/mK this is a significant advantage.

## Innovative collector frame construction

In the Basicx collector, modern technology of aluminum frame bending was used. The technology consists in making the main frame from one section of the profile without unnecessary joints in the corners. The frame without joints is much tighter, has a more aesthetic appearance, and most importantly - there is no risk of unsealing after several years of operation.

The collector frame is powder coated for additional protection against weather conditions.

## High performance

Excellent absorber, well thought-out construction of the casing and very good thermal insulation of Basicx collector makes it reach very high efficiency both in summer and winter.

## Unique design

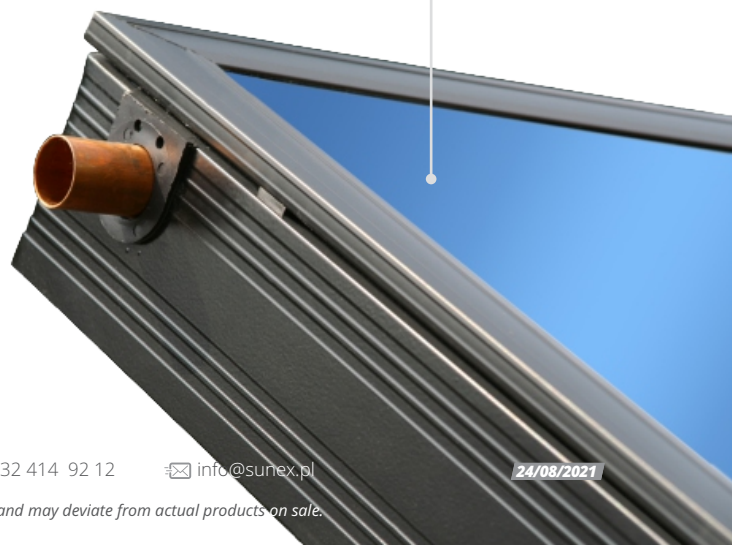
The black color of the collector housing and the dark blue and black shade of the absorber visible through the solar glass refine the look of any roof.

## Can be installed on any roof

Specially designed mounting sets, made of aluminum and stainless steel, ensure fast and safe installation of collectors on any roof with any covering.

## Standards & Testing

The Basicx collector has been tested at the testing laboratory of the AIT Austrian Institute of Technology in Vienna and bears the Solar Keymark quality seal.



## Technical Specifications

**BASICX 2.38 4C**

Application: Domestic hot water heating support  
Swimming pool heating support  
Underfloor heating support

<b>Dimensions:</b>	
Length	2240 mm
Width	1060 mm
Height	89 mm
Weight	40 kg

<b>Surface area:</b>	
Gross area	2,37 m <sup>2</sup>
Aperture area	2,19 m <sup>2</sup>
Absorber's area	2,19 m <sup>2</sup>

<b>Frame:</b>	
Frame material	Aluminium (without welds)
Sealing material	Glue

<b>Collector bottom:</b>	
Material thickness	Aluminium sheet 0.5 mm thick

<b>Absorber:</b>	
Material	Copper
Thickness	0,2 mm
Selective coating	highly selective
Solar absorptance	0,95 ± 1%
Hemispherical emittance	0,05 ± 2%
Absorber capacity	1,7 l
Heat transfer fluid	Propylene glycol + water
Flow pattern	Single harp
Dimensions of flow channels	10 x Ø8 x 0,5 mm
Dimensions of header	2 x Ø22 x 1,0 mm
Number of connections	4

<b>Glass:</b>	
Type	Tempered solar glass
Thickness	4 mm
Transmission rate	0,915

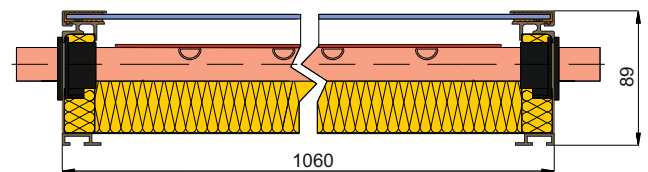
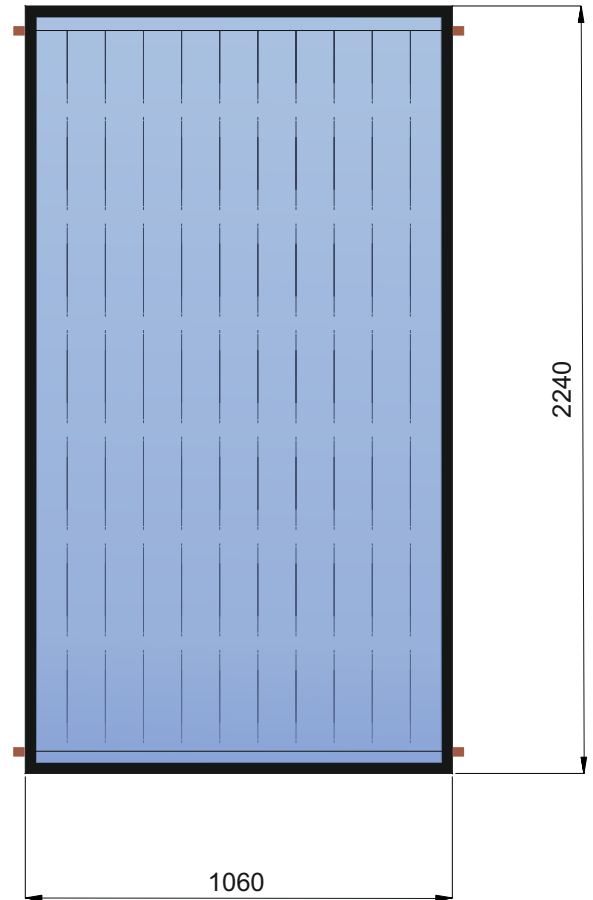
<b>Thermal insulation:</b>	
Material	Mineral wool
Thickness at the back wall	40 mm
Thickness at side wall	20 mm

<b>Additional data:</b>	
Stagnation temperature	Max. 187 °C
Max. operating pressure	6 bar
Collector efficiency $\eta_0$	80,2 %
Microventilation	Yes
Recommended Flow Rate	25 l/m <sup>2</sup> h
Connection in 1 row	Up to 10 collectors

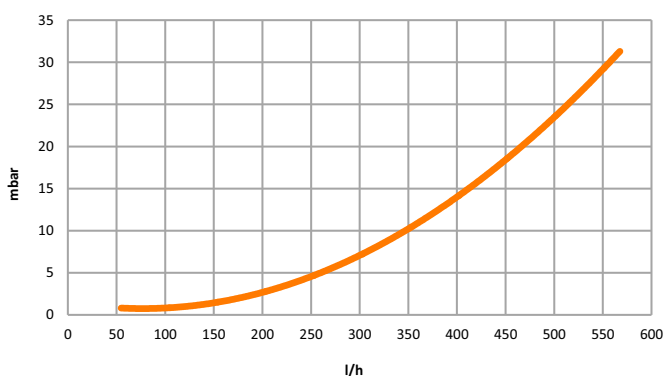
<b>Available colours:</b>	
	Black RAL 9005

<b>Assembly options:</b>	
	Roof
	Terrace
	Foundation
	Wall

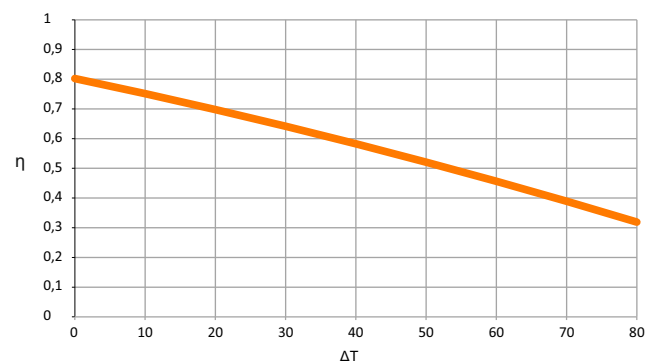
**Compliance with standard:** EN 12975



### Pressure drops



### Thermal efficiency



$$\alpha_1 = 3,949 [W/m^2K] \quad | \quad \alpha_2 = 0,011 [W/m^2K^2]$$