



GERMAN  
DESIGN  
AWARD  
WINNER  
2018

oltre la classe A 

# STRATOS® DR

STRATOS®





# SOLAR THERMAL SYSTEM WITH INTEGRATED HOT WATER STORAGE



## DESIGN, PERFORMANCE AND SAVINGS

INTEGRATED DHW STORAGE

MAXIMUM SPACE SAVING

HIGH PERFORMANCES

ELEGANT AESTHETICS

ENERGY SAVINGS



Percorso Efficienza  Innovazione oltre la classe A 



# WATER FROM THE SUN FOR FREE

THANKS TO THE SOLAR THERMAL SYSTEM WITH INTEGRATED STORAGE.

EFFICIENT, ECOLOGICAL AND AESTHETICAL DESIGN

**MODEL 110**



**MODEL 150**



**MODEL 180**



**MODEL 220**



**MODEL 260**



# SOLAR THERMAL SYSTEM **STRATOS® DR**

STRATOS® DR - COMPACT SOLAR THERMAL SYSTEM WITH DIRECT HEATING



Compared to traditional solar systems with natural circulation, which have an external storage tank, separated from the collector, the revolutionary STRATOS® DR system, produces domestic hot water through direct heating of the sanitary storage tank, which is integrated in the panel. Thanks to its elegant design and extremely small dimensions, the STRATOS® system is the ideal choice to combine quality, aesthetics and energy savings.

### STRUCTURE

Aluminum profile, anodizing treatment included. Tempered glass according to EN 12150, tested against impact according to EN 12976. Bottoms and walls with high insulation power ( $\lambda$  0,023 W/mk), thickness 30 mm.

### ABSORBING SYSTEM AND THERMAL EXCHANGE CIRCUIT

Direct heating of the integrated DHW store treated with special high selective solar painting.

### DHW ACCUMULATION

Sanitary accumulation made of stainless steel AISI 316L suitable and certified for drinking water according to 98/83/CE and subsequent amendments.

### INCLUDED ACCESSORIES

Vacuum break valve  
6 bar safety valve  
Fixing kit for flat and pitched roof  
Nr. 1 Cap of 1"1/4 gas M  
Nr. 1 Cap of 1/2" gas M

### CONNECTIONS

3 connections 1/2" gas F  
1 connection 1"1/4 gas F for heating element

### ACCESSORIES

See accessories section

### WARRANTY

See general conditions of sale and warranty

### SYSTEM COMPONENTS

### INCLUDED

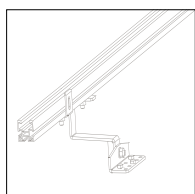
Frame structure anodized marine grade aluminum	✓
6 bar safety valve	✓
Vacuum break valve	✓
Nr. 1 cap of 1"1/4 gas M + Nr. 1 cap of 1/2" gas M	✓
Fixing kit for flat surfaces (42°) and pitched roofs	✓



P. MAX INLET	P. MAX ACCUMULATION	T. MAX
4 bar	6 bar	100°C

(\*)Essential to protect the system if it is emptied during periods of non-use or in the post installation phase before initial start-up.

### ACCESSORIES ON REQUEST (for more information see accessories section)



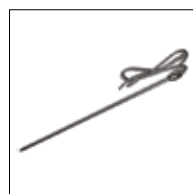
Suspended fixing kit for pitched roof



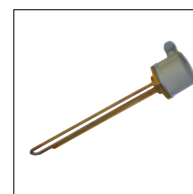
30° inclination Stratos® support kit



Protective PVC cloth (\*)



Anti-freeze device



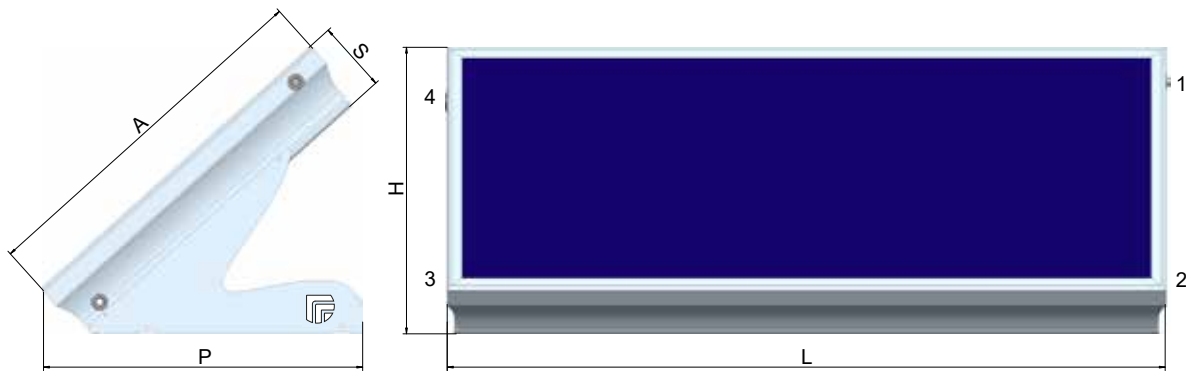
Electrical immersion heater



Heat Manager Smart Controller

# SOLAR THERMAL SYSTEM **STRATOS® DR**

STRATOS® DR - COMPACT SOLAR THERMAL SYSTEM WITH DIRECT HEATING

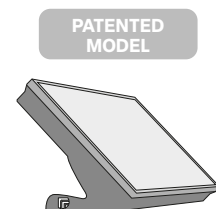


Model	L	P	H	A	S	DHW connections			Gross surface area [m <sup>2</sup> ]	Empty weight [kg]	Weight per m <sup>2</sup> In function [kg/m <sup>2</sup> ]
						1	2-3	4			
	[mm]										
<b>110</b>	2288	644	528	572	198	1" 1/4 Gas F	1/2" Gas F	1/2" Gas F	1,31	40	110
<b>150</b>	2288	644	631	727	198	1/2" Gas F	1/2" Gas F	1" 1/4 Gas F	1,66	52	115
<b>180</b>	2288	926	736	882	198	1" 1/4 Gas F	1/2" Gas F	1/2" Gas F	2,02	62	117
<b>220</b>	2288	926	831	1036	198	1/2" Gas F	1/2" Gas F	1" 1/4 Gas F	2,37	72	120
<b>260</b>	2288	926	935	1192	198	1" 1/4 Gas F	1/2" Gas F	1/2" Gas F	2,73	84	120

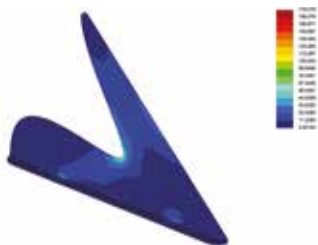
## SYSTEM STRATOS® DR

STRATOS® DR - COMPACT SOLAR THERMAL SYSTEM WITH DIRECT HEATING

Model	Net volume DHW storage [LT.]	Gross absorbing area [m <sup>2</sup> ]	Art. Nr.	Art. Nr. set of 3 pieces
<b>110</b>	105	1,31	3410316603215	341031660321503
<b>150</b>	140	1,66	3410316603216	341031660321603
<b>180</b>	175	2,02	3410316603217	341031660321703
<b>220</b>	210	2,37	3410316603218	341031660321803
<b>260</b>	245	2,73	3410316603219	341031660321903



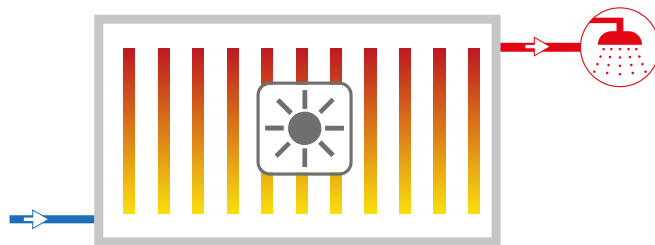
### RESISTANT, RELIABLE DESIGN PRODUCT



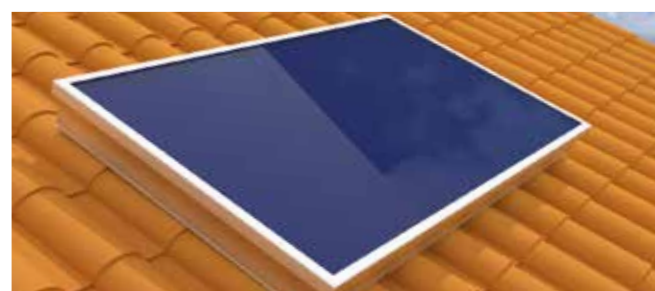
AESTHETICAL SUPPORT WITH 42° INCLINATION (FLAT SURFACES)



### HEAT FROM THE SUN



INCLINATION ANGLE FROM 10° TO 70° (PITCHED ROOFS)

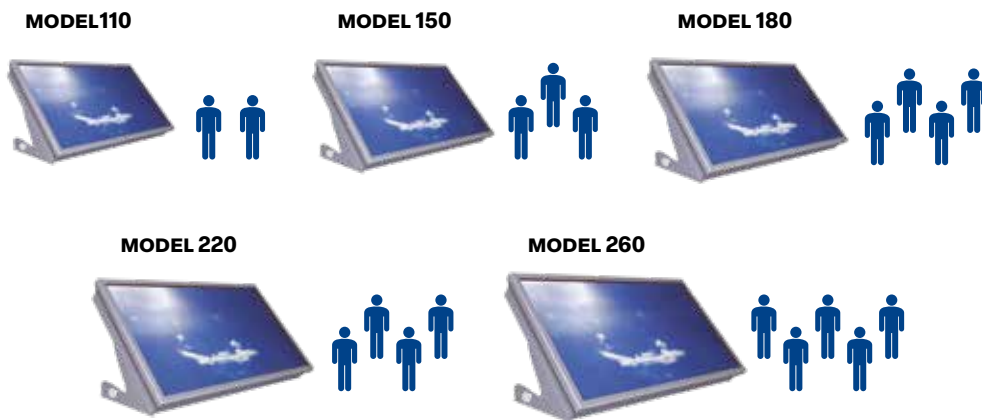


# TECHNICAL INSIGHTS



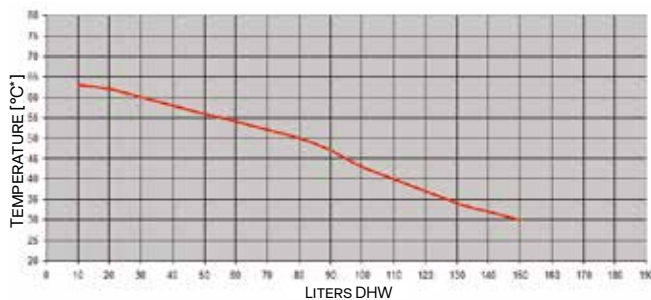
## CHOICE OF THE SYSTEM

For a better overall efficiency of the system we recommend the installation of the STRATOS DR in areas with high annual solar irradiation (Min. 1600W/m<sup>2</sup> per year). In these areas it is estimated that the needs of 3 people is covered with the model of 150 lt For 4 people the model of 200 lt is indicated.



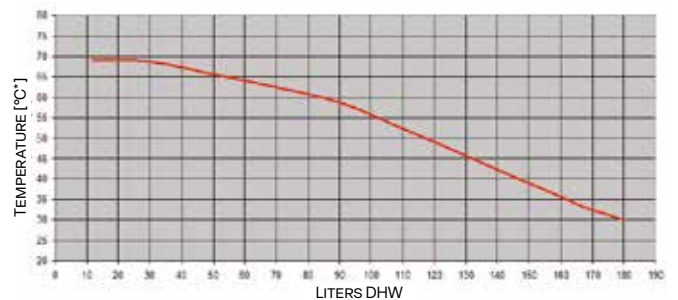
## DHW LEVY TEST

Test performed in February



The graphic shows the result of the domestic hot water levy test performed on the 150 lt STRATOS® model installed in central Italy (latitude 42° north). Average results achieved during a period in the month of February. On the axis of the ordinates the value drawn in liters is reported according to the outlet temperature.

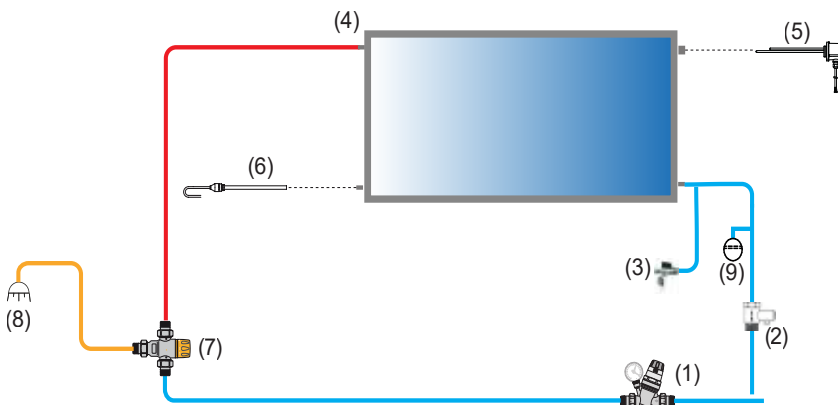
Test performed in May



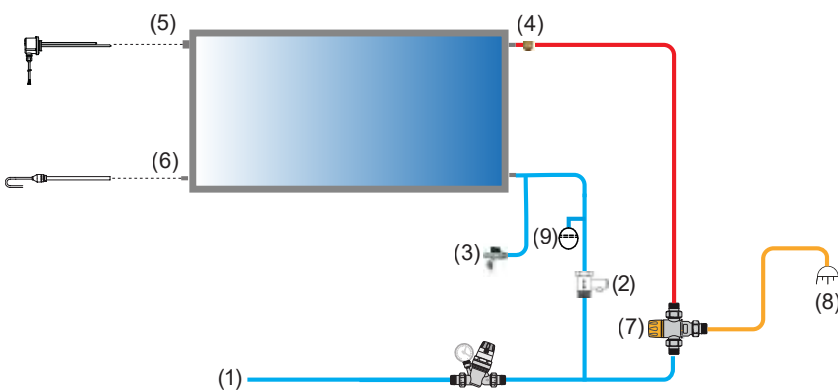
The graphic shows the result of the domestic hot water levy test performed on the 150 lt STRATOS® model installed in central Italy (latitude 42° north). Average results achieved during a period in the month of May. On the axis of the ordinates the value drawn in liters is reported according to the outlet temperature.

# TECHNICAL INSIGHTS

## TYPICAL INSTALLATION SCHEME



### INSTALLATION SCHEME FOR MODELS 110/180/260



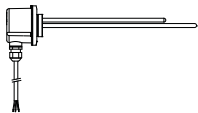
### INSTALLATION SCHEME FOR MODELS 150/220

## CONNECTION LEGEND

- 1** Domestic cold water inlet. If the pressure exceeds 4 bar, insert a pressure reducer. The water must be treated according to UNI 8065 standard and the adduction installation must be built according to UNI EN 806
- 2** 6 bar safety and non-return valve (included)
- 3** Drain tap for panel emptying (to be provided by the installer)
- 4** Vacuum break valve (included)
- 5** 1 1/4" gas F connection for integration of electrical immersion heater (to be ordered separately)
- 6** 1/2" gas F connection for anti-freeze Electrical heating (to be ordered separately)
- 7** Thermostatic mixing valve (to be ordered separately)
- 8** User
- 9** Expansion vessel

For other schemes with preheating functions, please refer to the section TECHNICAL SUPPORT

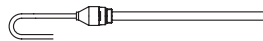
## ANTI-FREEZE PROTECTION AND USE OF HEATING ELEMENT



**HEATING ELEMENT**

### HEATING ELEMENT

It is possible to integrate the STRATOS® DR with an electric heating element. The heater is equipped with a comfort temperature regulation thermostat as well as a manual safety reset thermostat. The use of the heating element guarantees DHW available at a comfortable temperature able to meet the minimum requirements of the user.



**ANTI-FREEZE HEATING ELEMENT**

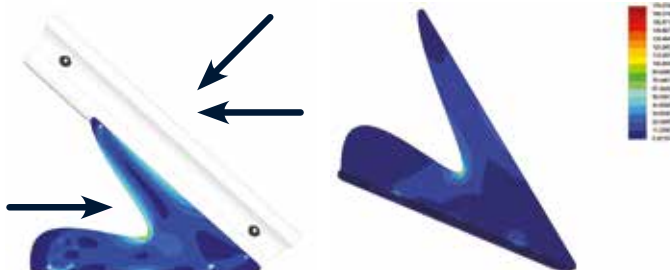
### ANTI-FREEZE HEATING ELEMENT

The STRATOS® DR system must be installed in areas free from frost risk. When it is exposed to temperatures below 0 °C (and in any case not below -5 °C) the installation and use of the anti-freeze safety heater element is necessary. If the temperature falls below -5°C the system must be emptied and suitably covered and protected. Always refer to the installation manual provided with the product.

## ANCHORAGE AND INSTALLATION WITH WINDPROOF BALLAST

The STRATOS® fixing systems, thanks to their specific design are extremely efficient and safe in all circumstances. Design studies and simulations carried out with the aid of highly sophisticated computer simulations such as the FEM, do not show structural criticalities and provide excellent resistance results to wind and snow loads, even in the most unfavorable conditions. The STRATOS® system if installed on flat surfaces must be secured to the ground to prevent any risk of overturning

due to wind forces. Fixing kits for flat surfaces allow anchoring directly to the ground through bolting with screws and dowels. If it is not possible to drill the support surfaces it is necessary to anchor the system through the fixing on ballast in solid and compact material with adequate overall weight. Always refer to the installation manual provided with the product.



SIMULATION WITH REM ANALYSIS OF WIND AND SNOW LOAD



INSTALLATION WITH WINDPROOF BALLAST