

# SFERASOL™ SF-S

PATENTED SOLAR THERMAL COLLECTOR WITH FORCED CIRCULATION  
INTEGRATED WITH HEAT EXCHANGE SYSTEM AND 150 LITERS WATER STORAGE



## System Description

### Product

Integrated Storage Collector SFERASOL™ made by:

- 2 external methacrylate hemispheres
- 2 internal steel 09/10 P06 hemispheres
- 1 water tank in INOX AISI 304 stainless steel
- 1 heat exchanger in INOX AISI 304 stainless steel, length 8,20 m
- 1 INOX AISI 304 stainless steel basement
- 1 30W – 1.300 rpm Circulation Pump
- 1 Electronic Control Unit

### System Classification

System Model: .....SFERASOL™  
System Code: .....SF-S  
Classification: .....forced circulation, integrated with storage tank

### Collector System

Nr. of Collectors: .....1  
Gross Collector Surface: .....4,524 m<sup>2</sup>

### Collector Data

Type: .....  
Spherical  
Gross total surface: .....4,524 m<sup>2</sup>  
Aperture surface: .....1,130 m<sup>2</sup>  
Net total surface: .....0,891 m<sup>2</sup>  
Nr. of coverages: .....1  
Coverage Material: .....Methacrylate  
Coverage thickness: .....3 mm

Structure material: .....INOX AISI 304 Stainless Steel  
Net mass: .....130 kg  
Outer dimensions: .....1200\*1200\*1600 mm

### Absorber

Material: .....09/10 P06 steel  
Surface treatment: .....black selective paint - high opacity  
Connections: .....copper pipes Ø 8mm

### Thermalconvector fluid

Type: .....mixture of monopropylene glycol + water  
Antifreeze protection: .....YES

### Storage

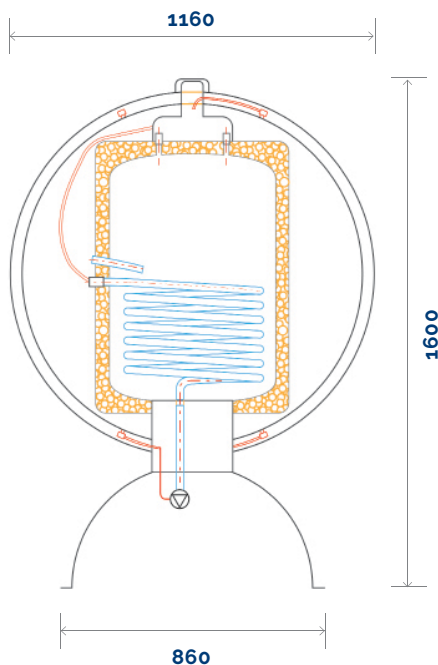
Capacity: .....150 liters  
Storage material: .....INOX AISI 304 steel  
Dimensions: .....Ø 600mm – H 850mm  
Isolation: .....polyurethane 45 kg/m<sup>3</sup>  
Isolation thickness: .....50 mm  
Heat Exchanger: .....Ø 27mm - INOX AISI 304  
Length: .....8200 mm  
Operating pressure: .....system pressure – max 6 bar

Protection against Corrosion: .....Magnesium anode, L 600mm  
Electric REsistance (optional) .....400W – 1200W

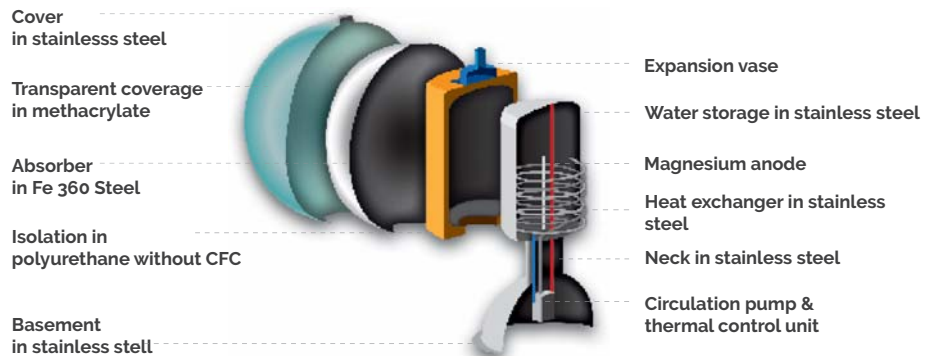
### Connections

Hot water: .....Ø ½" R  
Cold water: .....Ø ½" R

## Outer Diameter



## Components



100% produced in Italy.

ENEA Certified according to norm  
UNI EN 12976-2:2006



Look our video



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## System Thermal Performance, test results and data elaboration

Geolocalisation of test site: Lat: ..... 40° 09'N - 16°38'E (ENEA Trisaia)  
Positioning & orientation: ..... towards SOUTH - 0° horizontal inclination  
Test date: ..... October

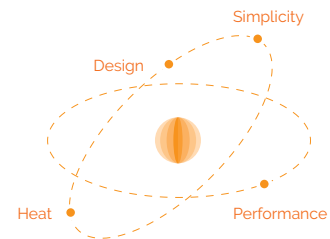
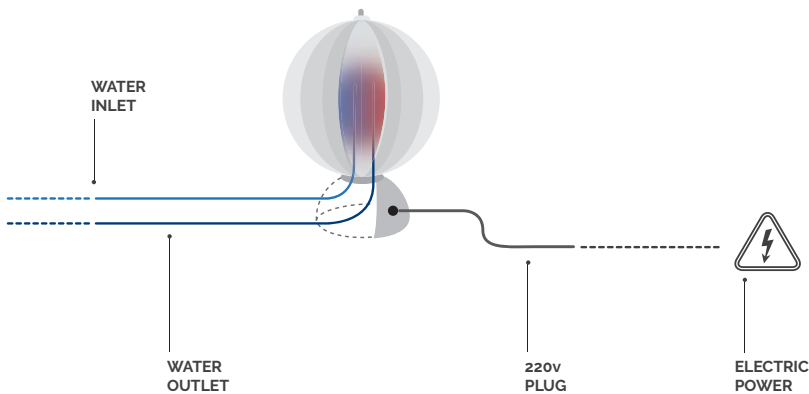
### Data input on 12 hrs daily operation

12 hours test						Draw-off			Output
H	Hd	Ta (day)	Tc	DT <sub>1</sub>	u	Vd	Td (max)	DT <sub>2</sub>	Q
(MJ/m <sup>2</sup> )	(MJ/m <sup>2</sup> )	(°C)	(°C)	(°C)	(m/s)	(l)	(°C)	(°C)	(MJ)
17.6	-	17.2	25.5	-8.3	-	450	48.4	22.9	14.1
14.2	-	17.8	25.4	-7.6	-	450	44.0	18.6	11.5
11.1	-	17.9	25.2	-7.3	-	450	37.2	12.0	7.5
7.6	-	12.7	25.1	-12.4	-	450	32.0	6.9	5.2
7.3	-	20.1	24.5	-4.4	-	450	37.9	13.4	6.5
6.3	-	15.1	23.8	-8.7	-	450	29.5	5.7	4.2
13.2	-	17.5	23.7	-6.2	-	450	43.4	19.7	12.7
11.8	-	15.9	23.7	-7.8	-	450	41.3	17.6	11.0
6.3	-	16.0	23.7	-7.7	-	450	30.5	6.8	4.3

Due to the particular shape of the collector, all measurements have been done considering the radiation onto the horizontal surface.

## Technology, Saving, Simplicity: All contained within a sphere.

Easy to install, efficient, economical and futuristic, **Sferasol™**, represents a new frontier in alternative heating. It is a fully integrated system needing only two hookup tubes (inlet and outlet for water) and a 220v outlet making your new solar system as easy to install as a washing machine. Within the **Sferasol™**, is a 150 liter sanitary hot water tank, a thermal exchange unit, a pump and control system. It requires no maintenance.



### DECLARATION OF CONFORMITY

The Manufacturer Sferasol Energy S.r.l. address: Via G. Pascoli, 1 - 10060 Scalenghe (TO) - ITALY declares under its own responsibility that the thermal solar collector named "Sferasol™SF-S" model is conform to essential specifications of safety according to the following directives:

- 2006/42/CE (machines);
- 2006/95/CE (low voltage);
- 2004/108/CE (ECM).

The product is supplied with CE mark and user manual. The person authorized to fill in the technical data sheet is the legal representative of Sferasol S.r.l. being in the Company seeds.

### Authorized Reseller