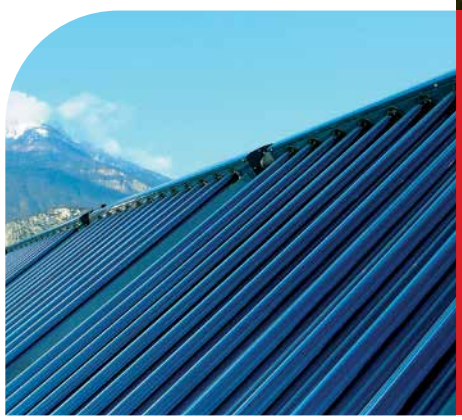
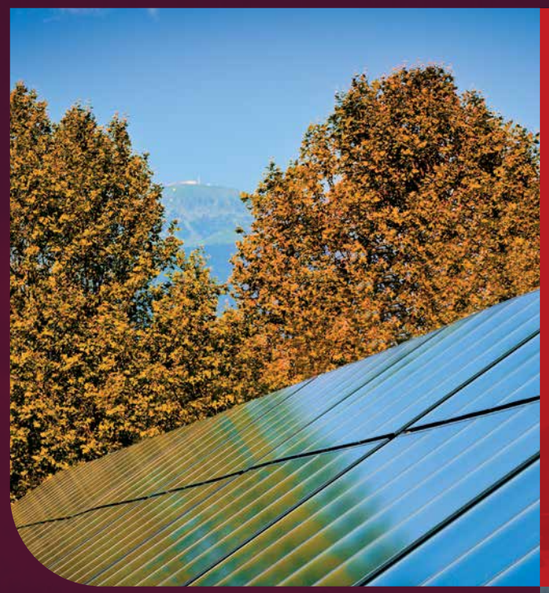
RADIANT
ECO SOLUTIONS

PRODUCT CATALOGUE

Edition 2022



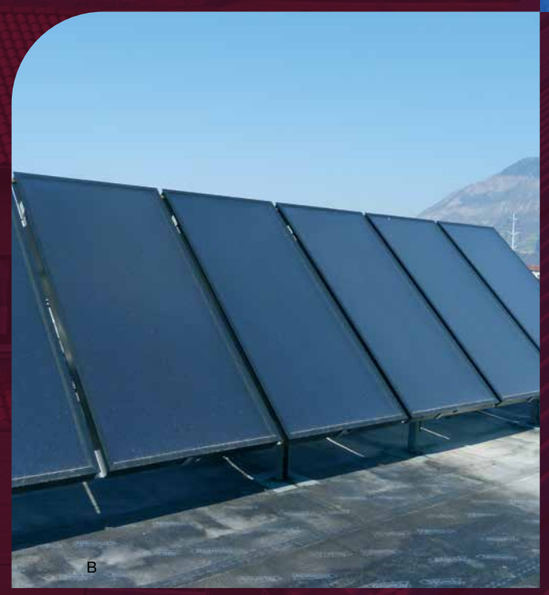



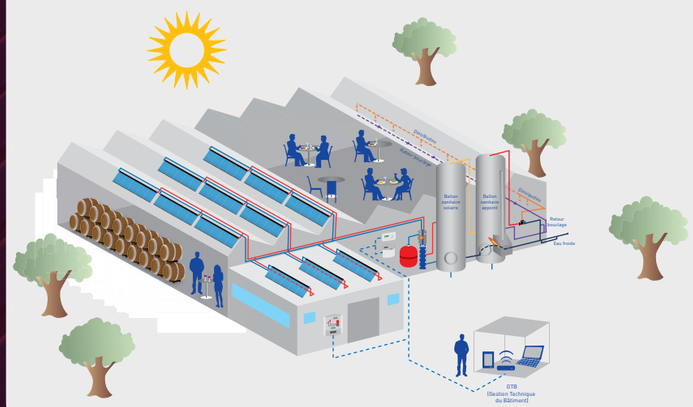
ABOUT US

RADIANT ECO SOLUTIONS IS ONE OF THE EUROPE'S LEADING MANUFACTURERS IN THE FIELD OF SOLAR THERMAL SYSTEMS, PRODUCING AND DISTRIBUTING UNIQUE PORTFOLIO OF HIGH QUALITY PRODUCTS ENABLED THE COMPANY TO PLAY A LEADING ROLE IN THE DEVELOPMENT AND IMPROVEMENT OF THE INDUSTRY.

THE COMPANY PRODUCES A WIDE RANGE OF STORAGE TANKS AND ENERGY SAVING EQUIPMENT, SUCH AS SOLAR HOT WATER STORAGE TANKS AND HIGH PERFORMANCE SOLAR COLLECTORS.

WE ARE ALWAYS EXPLORING OPTIONS FOR EXPANDING AND DEVELOPING OUR PRODUCT RANGE TO OFFER A WIDER PRODUCT SELECTION TO OUR CUSTOMERS. WE TAKE ALL THE NECESSARY STEPS TO ENSURE THAT OUR PRODUCTS ARE OF THE HIGHEST POSSIBLE QUALITY. WE ALWAYS FOCUS ON OUR CLIENTS' NEEDS AND ESTABLISH A TRUE PARTNERSHIP WITH THE GOAL OF ACHIEVING MUTUAL SUCCESS. WE HAVE A GREAT DEAL OF EXPERIENCE AND KNOW-HOW AND HAVE BEEN ABLE TO ACTIVELY PARTICIPATE IN ALL THE DEVELOPMENTS AND IMPROVEMENTS WHICH HAVE TAKEN PLACE IN THE FIELD OF HOT WATER SOLUTIONS OVER THE PAST SIX DECADES.





RADIANT ECO SOLUTIONS IS A HIGH-TECH PRODUCT MANUFACTURED USING THE LATEST TECHNOLOGY SINCE 1968.

Due to continuous improvement of quality and state-of-the-art technology, Radiant Eco Solutions has succeeded to be always a step ahead of its competitors. With an experienced product development division and advanced know-how, Radiant Eco Solutions has been awarded quality and efficiency certificates, making Radiant Eco Solutions, one of the leading industry of solar energy applications in Europe.

WHY SOLAR?

Solar energy is the energy received by the earth from the sun. This energy is in the form of solar radiation, which makes the accumulation of solar heat possible. Without the existence of solar energy, human life could not be supported on planet Earth due to many different factors. Solar energy represents the best way to combat the harmful carbon oxide emissions produced by traditional heat sources.

A Purified Environment:

The burning of fossil fuels (natural gas and petroleum) in homes accounts for 20% of greenhouse gas emissions and contributes to global warming while releasing tons of CO2 in to environment.
Air pollution caused by discharges from this combustion has a perceptible damaging effect on the health of the population.

Renewable and inexhaustible energy

Currently, most of the heating systems in use or on offer by certain providers are designed to rely on the technology of the last century and are based on the consumption of fossil fuel such as diesel, petroleum etc. However, this is not realistic anymore! On the opposite, the solar energy that the Earth obtains represents a renewable, inexhaustible collection, recovery and storage system.

HOW ARE WE SPECIAL?

Our new method of laser welding the pipe to the plate gives several advantages:

1. The selective surface is not affected at all because the joint is made on the rear side.

2. Laser welding is done at low temperatures, which reduces the tension of material between plate and pipe.

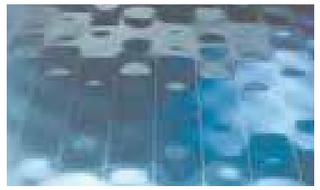
3. The absorber's coated surface remains intact and free from marks, that makes it suitable for clear glass.

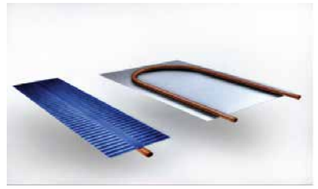
4. The absorber can resist to high temperature and high corrosion levels.

5. Our laser welding process is environmentally friendly since it needs no additives and does not release any harmful substances into the environment.

6. A protection foil prevents damage to the selective surface coating until the absorber is assembled with the collector.

7. RADIANT SOLAR ECO SOLUTIONS absorber is an absorber with superior flange efficiency (F'). This is achieved, amongst provides excellent thermal contact between pipe and flange.





THE SOLAR ABSORBER

The solar absorber is the most important component of a solar collector, RADIANT ECO SOLUTIONS is built with long experience in manufacturing solar absorbers and collectors.

RADIANT ECO SOLUTIONS offers now the new laser full plate absorber bonded by laser welding to copper header-riser tubing. The excellent selective material we use is a selectively blue coated copper substrate or MIROTHERM, a selectively blue coated aluminum substrate (optional). After extensive stagnation tests we are confident to sustain durability of our product at highest thermal stress. Also accelerated corrosion tests in brine solution have proven excellent results for extended life.

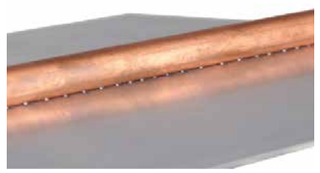
MIROTHERM coating was developed by ALANOD, a company renowned worldwide for its reflection coatings. A multi-layer selective coating is deposited on aluminum/copper substrate by PVD technique. A PVD anti corrosion layer protects the aluminum sheet on the rear side.

Solar absorption: α =0.95 ± 0.02
Thermal emission: ε = 0.05 ±0.02

The multilayer selective coating is deposited on anodized copper/ aluminium substrate by the Physical Vapour Deposition technique (PVD). The high infrared (IR) reflection ensures a low thermal emission coefficient (ε). The oxide layers on the top are optimized for a very high solar absorption coefficient (α) and resistance against environmental influences.

Our pulsed laser welds the tubes and metal sheet together in very small spots on the front side. Powered by 3 laser welding machines on fully automatic CNC machines, we can offer both strips and full plate absorbers, in widths up to 2000mm and length up 6000mm.

Titanium coating is applicable upon request *



FLAT-PLATE SOLAR THERMAL COLLECTOR

Solar

Simplified mounting and maintenance systems

Enhanced resistance

Extended 10-year warranty

Thermal high-performances

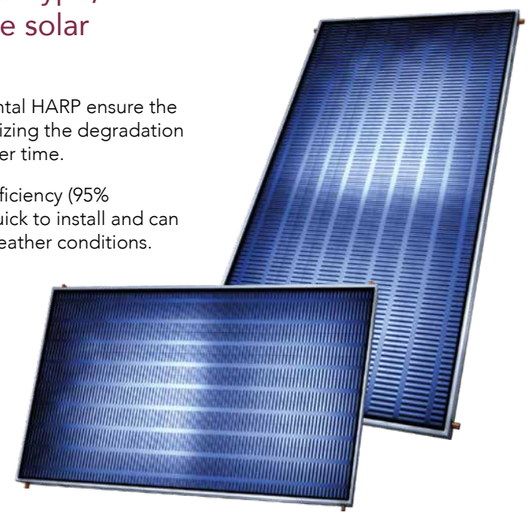
Certifications
• SOLAR KEYMARK

RADIANT ECO SOLUTIONS incorporates a flat-plate glazed (vertical or horizontal) collector, last generation, HARP type, specially dedicated to collective solar installations.

The choice of a Aluminium absorber with horizontal HARP ensure the natural flow of the heat transfer fluid, thus minimizing the degradation of the latter, while promoting its performance over time.

Offering a wide choice in installation and high efficiency (95% absorption, emission 5%), it is also simple and quick to install and can withstand high temperatures and the harshest weather conditions.

Certification SOLAR KEYMARK



ADVANTAGES

- Solar Keymark Certification
- Solar Tempered glass 4 mm, prismatic, low iron content for high transmission of solar radiation.
- Glass interchangeable for easy maintenance.
- HARP absorber, integral surface, continuous laser welding and PVD highly selective coating for guaranteed solar performance.
- Certified Glass wool insulation 30 mm (bottom insulation) 15 mm (side insulation) for minimal heat losses.
- Coated aluminium frame, weather-resistant, with structured aluminium back, guaranteeing a long service life.
- Silicone gasket mechanically protected and resistant to temperature and UV radiation.
- Optimized ventilation of the box.
- High mechanical resistance to snow and wind.
- Collar hydraulic connections provided.
- One model for integration and installation on roof
- Working pressure 6 bar, maximum 16 bar, with a stagnation temperature increased up to 230 ° C.
- Robust equipment with a neat finish, guaranteed for 10 years.

FLAT-PLATE SOLAR THERMAL COLLECTOR

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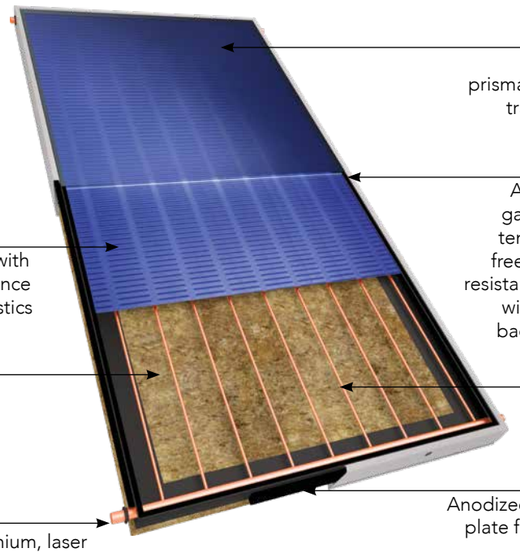
- SOLAR KEYMARK



Solar Tempered glass 4 mm, prismatic, low iron content for high transmission of solar radiation. Glass interchangeable

Aluminium frame with silicone gaskets, with dual resistance to temperatures and UV radiation, free of gas emission. Frame with resistant anthracite powder coating with a weatherproof aluminium back wall ensuring long lifetime and high safety in use

Blue selective absorber with high solar high performance and efficiency characteristics

Glass wool 30 mm, free of gas emission non inflammable

Copper tube risers, perfect welded to the absorber plate

Anodized aluminum casing and black plate for heavy corrosion resistance

Absorber 0.5 mm aluminium, laser welded integrally to copper tubing, Alanod Miro-therm PVD coated, highly selective, absorbtion factor (a95%), emission factor (e5%) flow for maximum guaranteed solar efficiency.

ATTACHMENTS AND SUPPORTS

Numerous installation options are available:
- On terrace roof, on supports.
- On sloping roof (flat tiles, corrugated tiles, tiles, slate, steel deck, cement).
- Integrated roof: flat tiles, corrugated tiles, tiles, slates.

RADIANT SOLAR VERTICAL COLLECTOR (RSV)

Solar

Simplified mounting and maintenance systems

Enhanced resistance

Extended 10-year warranty

Thermal high-performances

Certifications
- SOLAR KEYMARK

- Tempered 4 mm solar glass, prismatic with low iron content.
- Interchangeable glass.
- HARP absorber, integral surface, continuous laser welding and highly selective PVD coating.
- Certified Glass wool insulation.
- Coated aluminium frame, with structured aluminium bottom.
- Silicone gasket mechanically protected and resistant to temperature and UV radiation.
- Optimized ventilation.
- High mechanical resistance to snow and wind.
- Collar hydraulic connections provided. Warranty (according to our general sales conditions)
- 10 years (conditions apply).Possibilities of installation
- Terrace roof : on supports.
- Sloping roof: flat tiles, corrugated tiles, tiles, slates, container steel, cement.
- Integrated in the roof: flat tiles, corrugated tiles, tiles, slates.

VERTICAL FLAT PLATE COLLECTORS

TECHNICAL DATA	RADIANT SOLAR COLLECTOR					
Type	RSV 15	RSV 20	RSV 23	RSV 25	RSV 27	RSV 29
Dimensions (W,L,D) mm	1007*1501*85	1007*2006*85	1183*1893*85	1258*2008*85	1183*2260*85	1458*2007*85
Diameter of Absorber (mm)	8 x 0.4	8 x 0.4	8 x 0.4	8 x 0.4	8 x 0.4	8 x 0.4
Number of Risers (No)	8	8	10	11	10	12
Gross Area (m2)	1.51	2.02	2.24	2.53	2.67	2.93
Absorber Area (m2)	1.34	1.83	2.03	2.3	2.43	2.64
Thickness of Absorber (mm)	0.4	0.4	0.4	0.4	0.4	0.4
Diameter of Header (mm)	22 x 0.7	22 x 0.7	22 x 0.7	22 x 0.7	22 x 0.7	22 x 0.7
Operation pressure (bar)	10	10	10	10	10	10
Back side Insulation thickness (mm)	30	30	30	30	30	30
Sideward Insulation thickness (mm)	15	15	15	15	15	15

RADIANT SOLAR HORIZONTAL COLLECTOR (RSH)

Solar

Simplified mounting and maintenance systems

Enhanced resistance

Extended 10-year warranty

Thermal high-performances

Certifications
• SOLAR KEYMARK

- Tempered 4 mm solar glass, prismatic with low iron content for high transmission of solar radiation.
- Interchangeable glass
- HARP absorber, integral surface, continuous laser welding and highly selective PVD coating for guaranteed solar performance.
- Certified Glass wool insulation.
- Coated aluminium frame, weatherresistant, with structured aluminium bottom guaranteeing a long service life. Silicone gasket mechanically protected and resistant to temperature and UV radiation.
- Optimized ventilation.
- High mechanical resistance to snow and wind.
- Collar hydraulic connections provided.
- Robust.

Warranty (according to our general sales conditions): 10 years (conditions apply).

Possibilities of installation
- Terrace roof : on supports.
- Sloping roof: flat tiles, corrugated tiles, tiles, slates, container steel, cement.
- Integrated in the roof: flat tiles, corrugated tiles, tiles, slates.

HORIZONTAL FLAT PLATE COLLECTORS

TECHNICAL DATA	RADIANT SOLAR COLLECTOR					
Type	RSH 15	RSH 20	RSH 23	RSH 25	RSH 27	RSH 29
Dimensions (W,L,D) mm	1000*1500*85	2000*1000*85	1890*1180*85	2000*1250*85	2280*1200*85	2000*1450*85
Diameter of Absorber (mm)	8 x 0.4	8 x 0.4	8 x 0.4	8 x 0.4	8 x 0.4	8 x 0.4
Number of Risers (No)	13	17	16	17	19	17
Gross Area (m2)	1.51	2.02	2.25	2.53	2.66	2.93
Absorber Area (m2)	1.34	1.81	2.03	2.3	2.43	2.64
Thickness of Absorber (mm)	0.4	0.4	0.4	0.4	0.4	0.4
Diameter of Header (mm)	22 x 0.7	22 x 0.7	22 x 0.7	22 x 0.7	22 x 0.7	22 x 0.7
Operation pressure (bar)	10	10	10	10	10	10
Back side Insulation thickness (mm)	30	30	30	30	30	30
Sideward Insulation thickness (mm)	15	15	15	15	15	15

RADIANT ECO SOLUTIONS THERMOSIPHON

Solar

Simplified mounting and maintenance systems

Enhanced resistance

Extended 10-year warranty

Thermal high-performances

Certifications
• SOLAR KEYMARK

THERMOSIPHON SYSTEMS IS A NEW PRODUCT CREATED BY RADIANT ECO TO COVER THE NEEDS FOR DOMESTIC HOT WATER IN SMALL AND MEDIUM SIZED UNITS IN WHICH THERE IS LIMITED, IF ANY, SPACE FOR BIGGER INSTALLATIONS.

Thermosiphon systems is a new product created by Radiant Eco to cover the needs for domestic hot water in small and medium sized units in which there is limited ,if any, space for bigger installations.

Such units can be small and medium sized hotel units, maisonette complexes or large housing estates, small industrial properties etc.

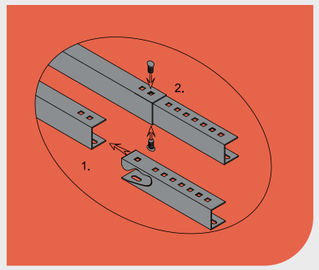
It has a capacity of 450L, with 6m2 of collector surface, while it can increase up to 8m2 depending on the climate and needs.

It has a new and improved support system, capable of withstanding any adverse conditions created by the external environment in combination with the mass and the volume of the system.

Due to the nature and the characteristics of the product, the acquisition and installation costs as well as the depreciation of the system will be much smaller than an equivalent forced circulation system for the same requirements.

Atlas is designed and assembledunder European (EN) and German (DN) standards. Some product specifications are offered below:

- Antimicrobial design for the heating of potable water
- Stable and direct hot water supply
- Functional design
- Easy and fast installation
- Space saving design
- 5 year guaranty
- Possibility to connect with central heating system and electric power
- Long life



THERMOSIPHONIC TANK TECHNICAL SPECIFICATION

Inner Tank Material:
DCP steel sheet. Thickness 2,5 mm for tank body (EN 10130/2006)

DCP steel sheet. Thickness 1,5 mm for jacket type heat exchanger (EN 10130/2006)

Insulation:
Hard Polyurethane foam density 45 kg/m3 (DIN 53420), self extinguishing (DIN 4102)

External Cover:
Pre-painted galvanised steel sheet 0,5mm (EN 10204)

Internal Anticorrosion Protection:
Internal glass enamel layer (DIN 4753-3) processed at 870o C.
Certified material for use with potable water (DIN 51032 & EN 1388-2)
Magnesium anode rod protection DIN 124382.2

Maximum Working Pressure for the Main Tank: 10 bar

Test Pressure for the Main Tank:
16 bar (EN-12976-2/2006)

Maximum Working Pressure for the Jacket (Exchanger): 3,0 bar

Test Pressure for the Jacket (Exchanger):
6 bar (EN 12976-2/2006)

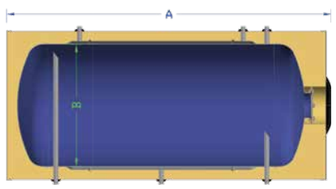
Maximum Working Temperature of the Main Tank: 95°C

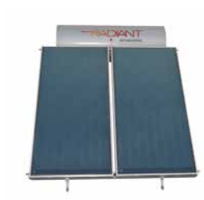
Heating Element:
Electric from 1,5 up to 4 kW (according to order)

Welding:
Metal Inert Gas MIG welding

Aluminium cover is applicable upon request *

TYPE	RT 120	RT 150	RT 200	RT 250	RT 300
Gross Capacity (liters)	110	136	190	230	276
Tank's Length (mm)	1000	1250	1250	1520	1760
Main Tank's Diameter (mm)	Ø400	Ø400	Ø440	Ø480	Ø480
External Diameter (mm)	Ø500	Ø500	Ø540	Ø580	Ø580
Jacket's Surface (m2)	0,625	0,625	0,78	1,19	1,52
Jacket's Capacity (liters)	6.6	6.6	7.8	9.9	15.5
Flange Diameter (mm)	Ø140	Ø140	Ø140	Ø140	Ø140
Empty Weight (Kg)	44	54	68	84	100





NOTE: The information provided in this document is intended for informational purposes only and is subject to change. Information may be changed or updated without notice.

TECHNICAL CHARACTERISTICS

Solar Type	SOL 20/15	SOL 25/15	SOL 20/20	SOL 25/20	SOL 27/20
Storage Tank Model	RT 150	RT 150	RT 200	RT 200	RT 200
Water Tank Standard Dimension	1250x500 mm	1250x500 mm	1250x540 mm	1250x540 mm	1250x540 mm
Water Tank Empty Weight	54 (kg)	54 (kg)	68 (kg)	68 (kg)	68 (kg)
Closed Circuit Water Content	4.6 (lt)	4.6 (lt)	4.9 (lt)	5.3 (lt)	5.8 (lt)
Collectors Surface Area	2.0 m^2	2.5 m^2	2.0 m^2	2.5 m^2	2.7 m^2
Collector Type	RSV 20	RSV 25	RSV 20	RSV 25	RSV 27
Number of Collectors	1	1	1	1	1
Solar Base Weight	35 (kg)	35 (kg)	38 (kg)	38 (kg)	38 (kg)

Solar Model	SOL 25/25	SOL 40/25	SOL 40/30	SOL 50/30	SOL 60/45
Storage Tank Capacity	RT 250	RT 250	RT 300	RT 300	RT 450
Water Tank (Standard Dimensions)	1520x580 (mm)	1520x580 (mm)	1760x580 (mm)	1760x580 (mm)	2050x750 (mm)
Water Tank Empty Weight	84 (kg)	84 (kg)	100 (kg)	100 (kg)	100 (kg)
Closed Circuit Water Content	6.2 (lt)	7.5 (lt)	8.0 (lt)	8.3 (lt)	9.8 (lt)
Collectors Surface Area	2.5 m2	4.0 m2	4.0 m2	5.0 m2	6.0 m2
Collectors Type	RSV 25	RSV 20	RSV 20	RSV 25	RSV 20
Number of Collectors	1	2	2	2	3
Solar Base Weight	40 (kg)	40 (kg)	44 (kg)	44 (kg)	68 (kg)

NOTE: Customized system capacities also available upon request*.

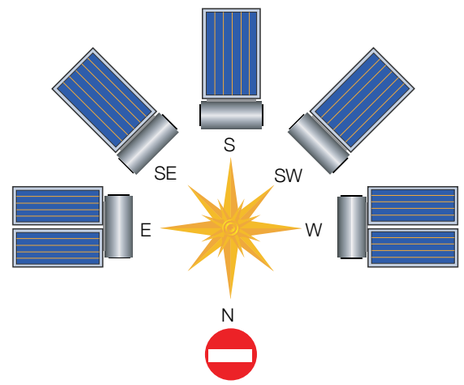
ORIENTATION OF SOLAR SYSTEM

The thermal performance of the solar system is optimized when is mounted facing South (when we are in the Northern hemisphere).

The actual performance however is minimal decreased when the system is oriented less than 45. degrees South East or South West.

If we increase the surface of the solar system, by using larger collectors or adding one more collector, the solar system can be oriented up to 90. degrees South East or South West, with minimal or no impact to the annual thermal performance.

ATTENTION: We will exactly do the opposite when we are at the Southern hemisphere.



RADIANT ECO MOUNTING SYSTEMS

Radiant Eco's metal fixation supports are manufactured taking into consideration the resistance, stability and ergonomics, providing solutions in many installation and transportation problems of the past.

The metal fixation structures are supplied with screws and bolts, needless to have any welding done for the completion of the installation. This way the whole installation becomes less time consuming.

They are manufactured of galvanized hot rolled metal sheet of 2mm thickness in modern CNC machines that provide accuracy and flexibility to the final structure, while they are designed to resist against time and under adverse weather conditions.

In addition the whole system, thanks to its design, covers less space when packed, making the transportation and storage easier.

And finally thanks to their ergonomic design their installation can be effected even by no certified person, simply by following the manual instructions.

With this system we achieve the following:

- Easy installation
- Less storage space
- Logistics' cost reduction
- Easy transportation

TECHNICAL CHARACTERISTICS OF THERMOSIPHONE BASE

Product: Thermosiphon solar unit support system

Type: Heavy grade flat plate base

Construction Material: Galvanized steel sheet

Connection materials:

- Bolts, nuts, washers brass fittings (included in package)
- Glycol antifreeze liquid (Included in package)
- Stainless steel tubing for the closed circuit
- Complete to be installed at the water network

Safety Valve 3 bar

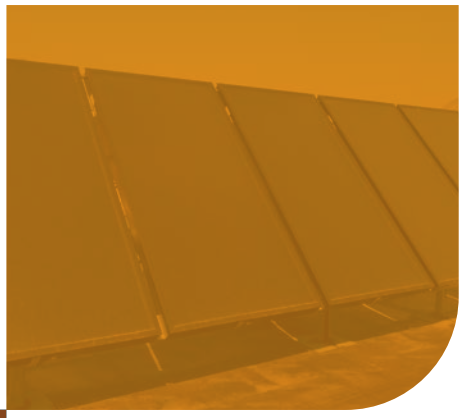
Collector Elbow/Adapter

Expansion Tank

Safety and Non-Return Valve

Insulated Flexible Stainless Steel Hose

NOTES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