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THERMOSIPHON SYSTEMS

GREENoneTEC **1**
SOLAR COLLECTORS



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HOT WATER SUPPLY SAFE & RELIABLE



THERMOSIPHON SYSTEMS FROM GREENoneTEC



The high-performance but attractively priced "Slimline" quality collector is the starting point for the thermosiphon system from GREENoneTEC. The connection lines from the solar collector to the storage tank are well protected by being integrated in the collector. Energy losses are therefore eliminated and the full power of the sun is used for heating water. Apart from the quick and easy installation, this clever solution also satisfies demanding aesthetic requirements. The generated heat can also be stored over a longer period thanks to a special tank insulation.

All thermosiphon systems (150, 200, 300 litres) are designed as "high pressure" dual-circuit systems and thereby guarantee maximum solar yields. This makes a substantial contribution towards cutting costs and saves you money according to the maxim:

"We don't get a bill from the sun"



THERMOSIPHON SYSTEMS
WITH QUALITY FROM GREENoneTEC



TSD 150 | 200 | 300



COMPACT HOT WATER SYSTEM – TSD WITH ENAMELLED DOUBLE-WALLED STORAGE TANK



TSD300



TSD200/150



PRODUCT ADVANTAGES of TS systems from GREENoneTEC

- High-performance collectors with integrated return line
- Production with state-of-the-art robotic production technology
- Frost-proof
- Maximum heat transfer to the absorber through special laser welding technology
- Toughened solar safety glass
- Low investment costs
- Long service life & Minimum maintenance requirements
- Perfect heat storage & Natural heat circulation
- Easy transport and straightforward installation thanks to the modular system design
- Fastening systems for flat roofs 30°, 40° and roof-mounted installation in parallel
- Installation system for wind loads up to 210 km/h (tested acc. to EN 1991)
- 5-year system warranty
- All components and spare parts from a single source
- No electricity required
- Worldwide best system performance (Solar Keymark tested)



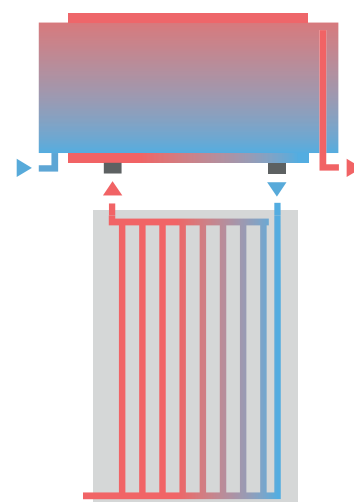


TSD SOLUTION

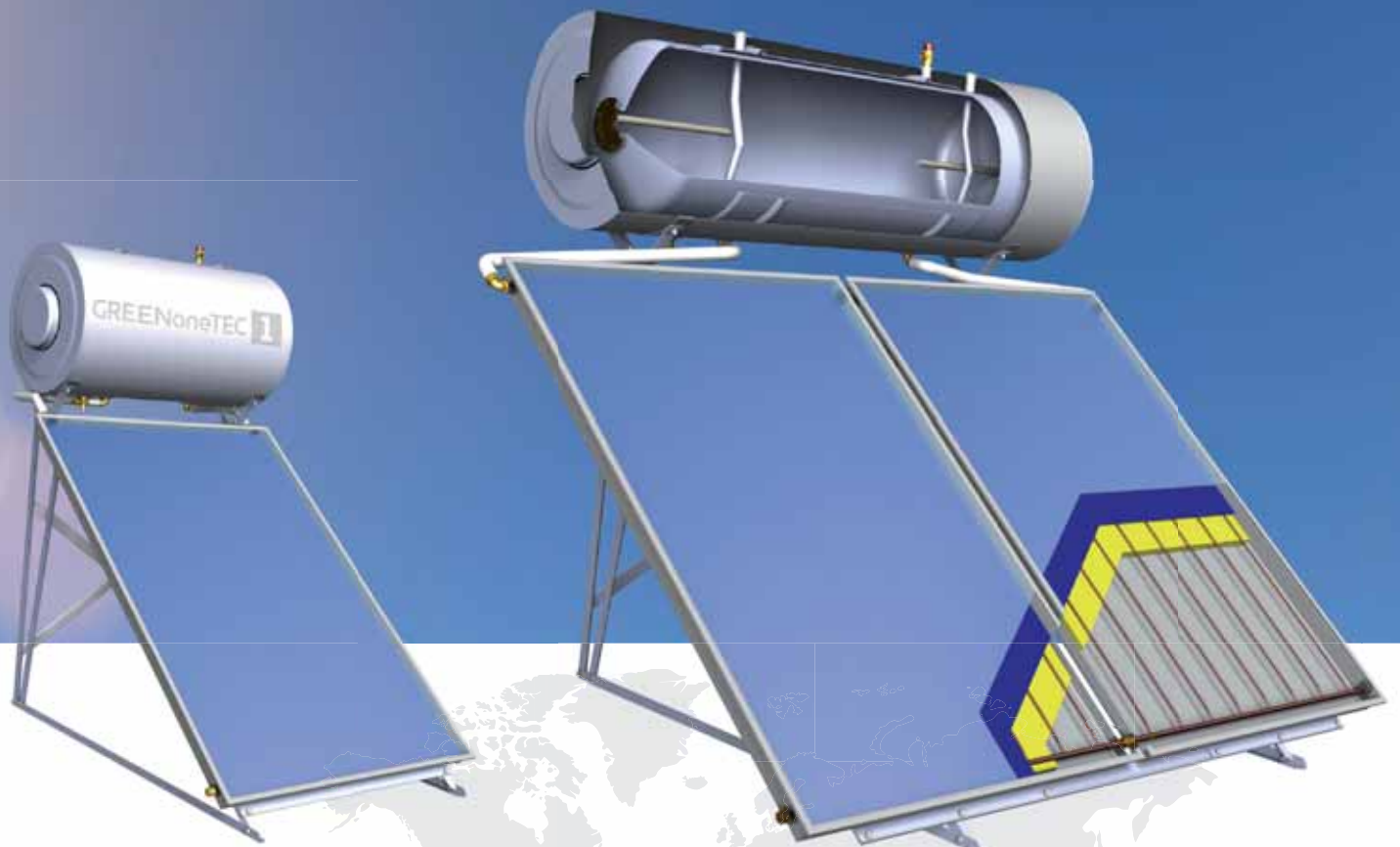
As a dual-circuit system, the GREENoneTEC **TSD** thermosiphon system with a **double-walled storage tank (enamelled)** is available in three sizes. The storage tank is provided with two exchangeable magnesium anodes for maximum corrosion protection as standard. The special thermosiphon collector has an integrated return line (TSD 150, 200). As an option, the storage tank can also be equipped with a heating rod for rapid water heating.

Collector	TSD 150	TSD 200	TSD 300
Overall area [m ²]		2.03	
L x W x H [mm]		1733 x 1173 x 73	
Weight of collector, empty [kg]		29	
Number of collectors	1	1	2
Housing		Al-frame	
Absorber sheet		Al, highly selective vacuum coating	
Tank	TSD 150	TSD 200	TSD 300
Weight of tank [kg]	68	83	106
Tank capacity [l]	152	198	282
Tank insulation		PU foam 50 mm	
Compressive strength - primary		max. 3 bar	
Compressive strength - secondary		max. 6 bar	
Tank connections		3/4" female thread - primary circuit	
Heat transfer medium		Glycol / water mixture	
Tank material		Steel, powder-coated	
Corrosion protection		2 x magnesium anode	
System	TSD 150	TSD 200	TSD 300
Weight of overall system (empty) [kg]	112	125	165
Weight of overall system (filled) [kg]	264	323	447
Capacity of solar circuit [l]	7.1	9.8	14.7
Heating rod (optional)	1,5 kW / 220 V *	2,5 kW / 220 V *	4 kW / 220 V *
Mounting material		Steel, galvanized	

Operating principle - TSD



* on request 110 V



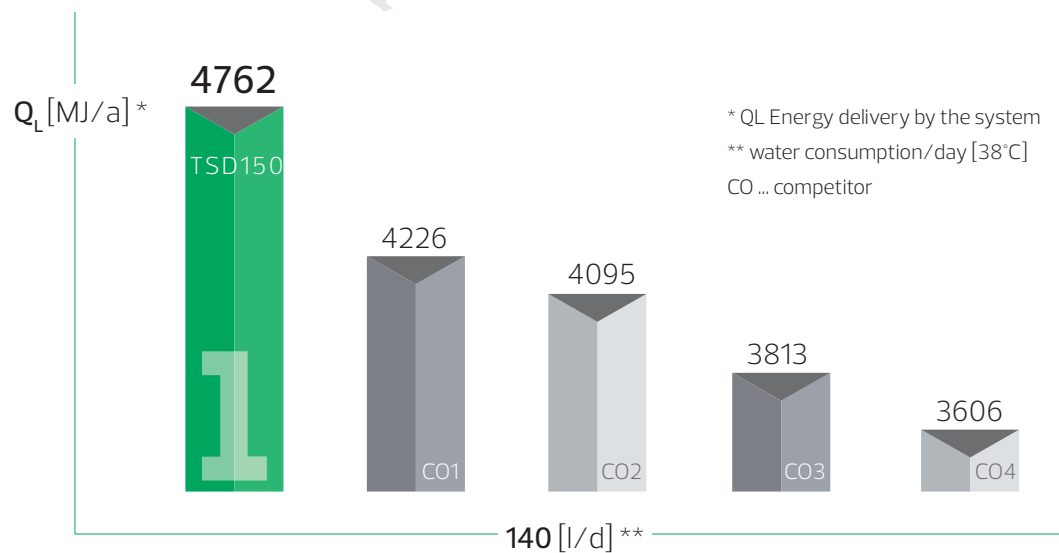
BEST SYSTEM PERFORMANCE

According to Solar Keymark system test
Location: Athens / Tank size 150l - TSD



Athen

Solar Keymark certified



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BEST CUSTOMISED SOLUTION



THE UNIQUE QUALITY OF OUR HIGH-PERFORMANCE ABSORBERS

The GREENoneTEC manufacturing technology for full-surface high-performance absorbers is unique in the market and therefore provides the basis for the decisive advantage of our collectors.

The harp register used in the thermosiphon collector is manufactured on a fully automated soldering machine.

Laser welding technology

Based on multi-stage quality assurance procedures, our production has been designed for industrial mass production and relies on optimised laser welding technology and a highly automated copper and aluminium semi-finished products manufacture.

- Highly selective absorber coating
- Laser-welded absorbers in aluminium/copper with excellent strength and durability values of the weld seams
- Automated quality assurance concept with 100% pressure test to 15 bar on all absorbers



FASTENING SYSTEMS FOR EASY AND SAFE INSTALLATION

The all-in-one solution

High quality TS systems also need an optimal fastening concept. GREENoneTEC supplies optimised fastening systems and accessories for flat roofs 30°, 40° and roof-mounted installation in parallel for all TS systems.

Simple, universal and safe

The focus is on short installation times and maximum safety in accordance with EN 1991 for the technical design and material selection.

Installation manuals

Installation manuals with clearly arranged illustrations, text passages, maintenance and service hints are enclosed with all fastening systems as standard.



ADDED VALUE FOR OUR CUSTOMERS:

- All-year-round delivery performance > 98% even in the seasonal peak months
 - Optimum utilisation of production capacity
 - Transport and cost-optimised packaging solutions
 - All types of shipping possible (truck, air and sea)
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PERFECT LOGISTICS SERVICE

TOP LOGISTICS PERFORMANCE IN PACKAGING AND DELIVERY

The GREENoneTEC supply chain

A decisive competitive advantage for us and for our customers is our ability to generate a seamless supply chain and hence the associated extremely reliable delivery performance. Our modern high bay warehouse allows us to provide cost-optimised production even during the winter months and to guarantee a constant supply capacity at peak times.

Customised packaging solutions

All GREENoneTEC products can be packed in our in-house packaging centre for all types of shipping (truck, air and sea).



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TOP BRAND IN SOLAR INDUSTRY



CERTIFIED MANAGEMENT SYSTEMS:

- Quality management according to ISO 9001
- Environmental management system according to ISO 14001
- Occupational Health and Safety Management System BS OHSAS 18001

PRODUCT CERTIFICATES:

- Solar Keymark
- Austria Solar Seal of Quality (AT)
- Austrian Ecolabel (AT)
- CSTBat (FR)
- MCS (UK)
- SRCC (USA)
- ICC-International Code Council (USA)
- DLC - Dubai



A MARK OF QUALITY AND INNOVATION

The best products – Made in Austria

GREENoneTEC develops and produces the best solar thermal collectors and fixing systems in customized OEM versions. We supply our high performance large-area collectors to solar thermal power plants and, on the global market for thermosiphon systems as well, our customers trust our innovative system applications.

Trademark for best quality

GREENoneTEC has developed into a brand which stands for the highest production quality and innovation in the solar market. Praise that brings a lot of responsibility with it.

As the driving force in the market, we accept this challenge every day to provide sustainable success for our customers.

Quality control

The quality assurance of our products begins in the development phase and ends with the delivery of the products. We test our products according to defined quality and performance criteria. Collectors and systems are subject to extreme weather conditions and continuous stress at the outdoor testing site of our own test centre. Performance measurements, without the influence of weather conditions or seasonal in-

terruptions, are possible at our indoor test laboratory; the measurements taken here satisfy official testing requirements.

Efficiency, performance and high-tech

Advances in the core technologies of soldering, welding and bonding enable us to manufacture solar collectors to the highest quality in industrial mass production. We create the basis for high-performance, consistently high quality products with an excellent price-to-performance ratio.

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SOLAR COLLECTORS



GREENoneTEC Solarindustrie
Industriepark St. Veit, Energieplatz 1
A-9300 St. Veit/Glan, Austria

Tel.: +43 4212 28136-0
Fax: +43 4212 28136-250
Mail: info@greenonetec.com