

INNOVATIVE IDEAS. EFFICIENT TECHNOLOGY.

Solmetall is your partner for unique solar thermal collectors, efficient wall (acclimatizing) heating systems and durable metal products.

**FROM CONNECTING THE PANEL
TO THE FINISHED SYSTEM.**



Index



SOLAR THERMAL COLLECTORS

Made in Germany _____	05
Models _____	06
Made your specifications _____	07
Accessories and complete solutions _	07



ABSORBER TECHNOLOGY

HTT patent _____	09
Benefits at a glance _____	10
Hydraulic solutions _____	11



MOUNTING SYSTEMS

Mounting Systems _____	12
------------------------	----



PREPARING

Preparing _____	13
Our location _____	14

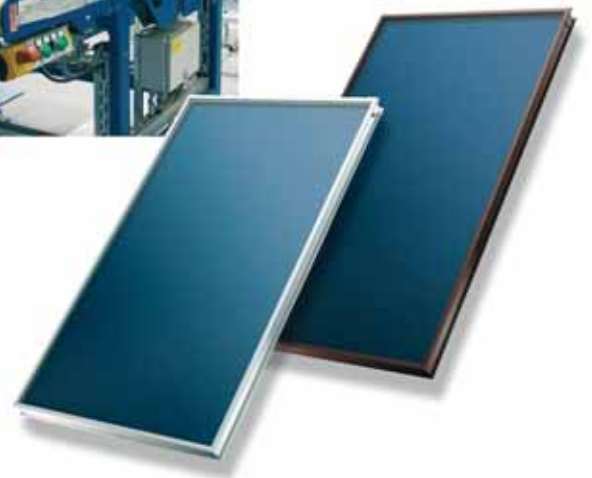
SOLAR THERMAL COLLECTORS



INNOVATIVE IDEAS. EFFICIENT TECHNOLOGY.

With our panels and wall heaters, which are patented and are based on a highly efficient technology, we see ourselves as a technology leaders in this area. Our professional metal processing is fast, flexible and reliable.

All our products are manufactured in Germany and meet with the highest standards.



HARNESSING THE SUNS POWER.

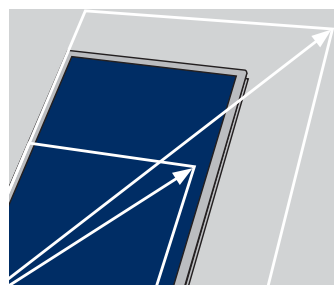
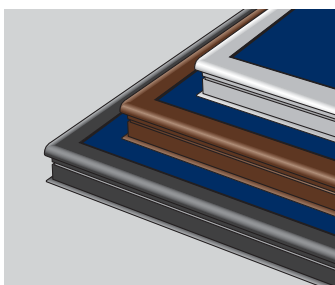
SolMetall panels are high-end products, which are extremely reliable and effective in their function.

Thanks to the patented HTT-technology and a selective absorber layer, our panels provide the best possible solar yield. All components are manufactured and assembled in Germany.

In this way can we ensure extreme durability and robustness. Trust us, with decades of experience we know!

We deliver exactly what you need - from ready-made assembly kits for complete panels to comprehensive total systems, including accessories such as stations or boilers.

COMPETENCE IS OUR STANDARD.



Our standard sizes are as follows:

> 2,1 m²

> 2,5 m²

> 2,3 m²

> 2,7 m²

SolMetall collectors are available to fit all locations.

Our range of products are available in four sizes with a total area from 2,1 m² and 2,7 m².

Thanks to this compact size, the collectors can be mounted quickly and easily.

If required we have the facility to make larger collectors with a total area of up to 11 m².

In short, your demand is our ambition.

With our knowledge and expertise, we have the solution to fit).

All SolMetall collectors have the characteristic, high-quality design with a completely smooth and even surface finish (thanks to HTT technology) in addition to an extremely stable, visually appealing framework.

Please contact us for more information on fixtures for on-roof, flat-roof, in -roof and roof elevations.



FROM COLLECTOR CONNECTIONS TO COMPLETE SYSTEMS.

What good is the best collector when it is not properly installed and connected?

MADE TO YOUR SPECIFICATIONS.

Need an individual solution? We can help!

A major asset of SolMetall is the ability to produce custom made collectors to your design. In addition to our standard designs, we can also provide different formed collectors, taking into account specific customer specifications – from thermally separated systems to individual collector forms specified by our consumers.

We convert solar energy efficiently to your specifications. Our Technicians are able to advise and assist through every step of the process.

Our offer does not stop at high-performance collectors. In addition to our mounting systems, we also supply all common connections and fasteners that are used to install SolMetall collectors. We want your system to achieve the best result, based on continuous usage at peak performance.

If you need complete solar thermal systems, we will supply you with all the components for your individual needs. In addition to our own products, we supply exclusively reliable products from market leaders.



HTT IS THE MOST CORROSION RESISTANT HEAT EXCHANGER.

With the unique HTT patent SolMetall has the most efficient and durable type of energy conversion in surface heat exchangers.

This technology is integral in our solar thermal collectors and wall heaters. As a result, our products are: less corrosive, provide even heat transfer, smoother surfaces and optimal flow conditions over conventional surface heat exchangers.



ONE PATENT WITH MANY POSSIBILITIES.

With the patented Thermal Conductive HTT we produce maximum heat from the surface.

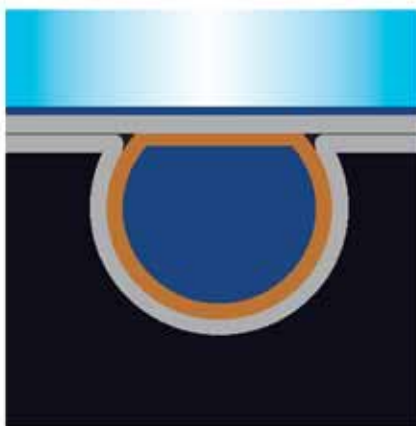
The principle has been refined to produce an ideal design.

In an exceptional process, heat is conducted through the absorber plate to the fluid conveying pipes which are connected with a specially developed adhesive method.

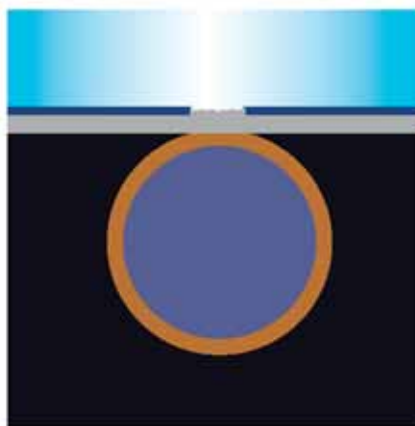
Thanks to the plates and protected D form the absorber tubes are completely enclosed [360°].

This larger area of contact results in a significantly improved heat transfer and thus optimum efficiency.

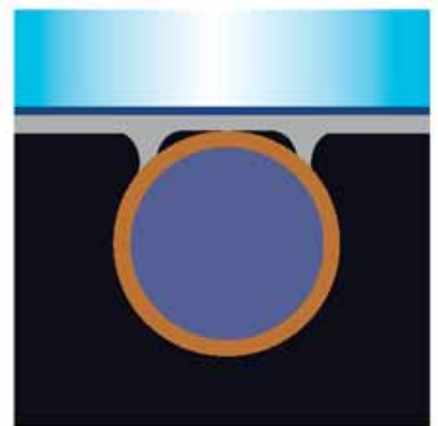
Simultaneously, the corrosion resistance is increased.



Sectional view
of SolMetall HTT



Sectional view
of ultrasonic welded absorber



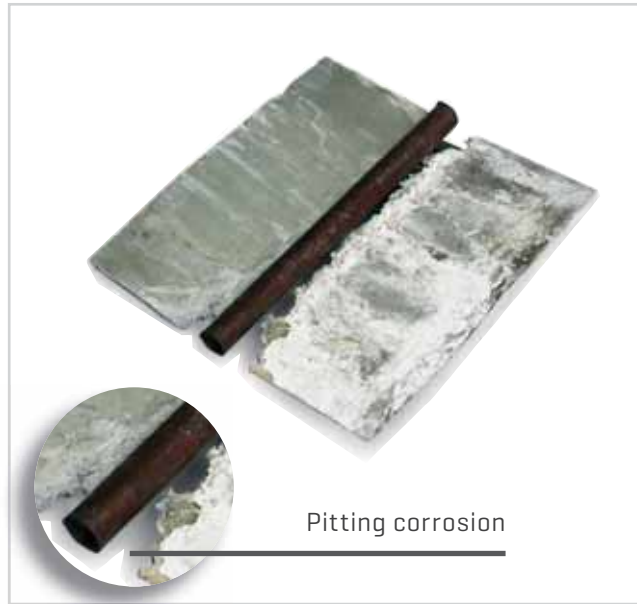
Sectional view
of a soldered absorber

BENEFITS AT A GLANCE



HTT-PATENT

With the patented Heat Transfer Technology there is no visible corrosion relevant and no material loss.



Laser + Ultrasonic welded absorbers

With conventional welded absorber systems corrosions are visible after short period.

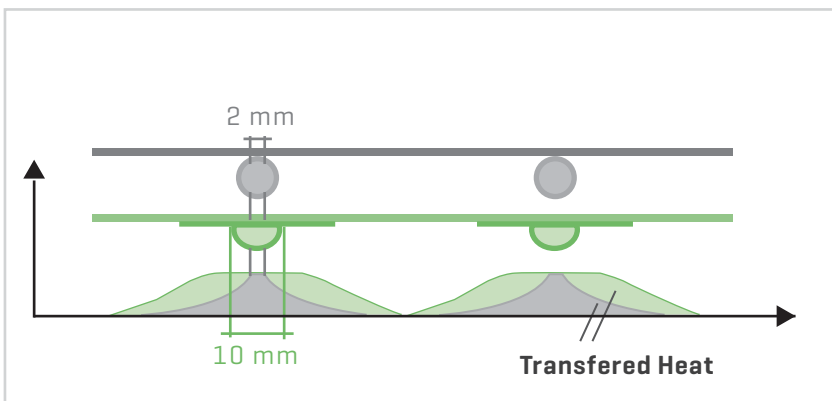
Less corrosion.

Whenever aluminium and copper are connected inevitably this creates galvanic corrosion.

With the HTT process, we reduce this to an absolute minimum. SolMetall assures the unprecedented long life of this system.

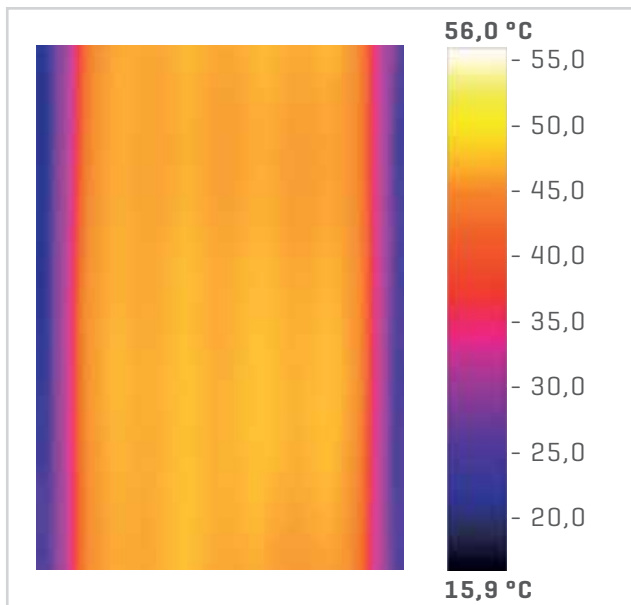
Better heat transfer.

The 360-D-shaped enclosure of the absorber tubes allows up to 20% better heat transfer from the absorber plate to the fluid, compared with conventional laser-welded Al-Cu absorbers [confirmed by an independent test institute].



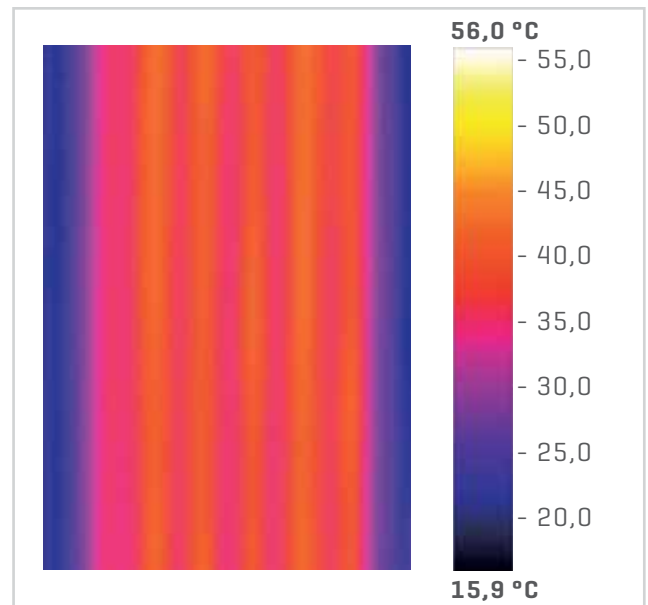
By the Test institute result:

The Heat Transfer Technology-Absorber transfers a minimum of 20% more heat through the solar fluid compared to normal welded systems produced by our competitors.



HTT-PATENT

When HTT system distributes heat across the entire surface.



Conventional systems

In conventional systems, the thermal image of the linear strip along welded raw compounds can be seen.

More even heat exchange.

Through the connection of the heat conducting surface the heat transfer is not only effective, but also uniform.

In conventional systems, the thermal image of the linear strip along welded raw compounds can be seen.

When HTT system distributes heat across the entire surface which is clearly visible.

Smoother surface.

Another advantage of the patented connection technology is the absolutely flat, even surface of the absorber coating.

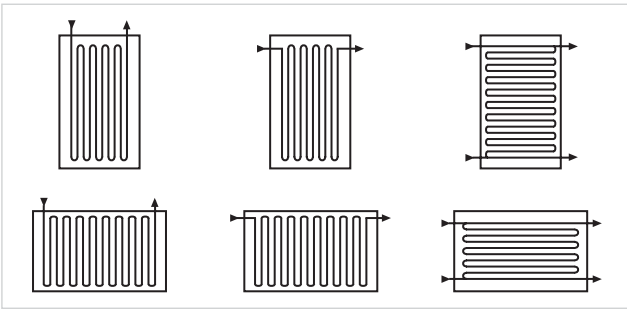
This is unique to the market and makes SolMetall collectors a design piece.

Optimal flow.

The unique shape of the D-tubes on the heat exchanger, coupled with the optimised heat transfer is another distinct benefit:

it enables a continuous turbulent flow of fluid therein and thus better heat exchange.

RIGHT SOLUTION FOR EVERY BUILDING.



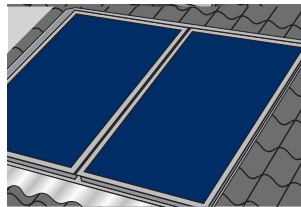
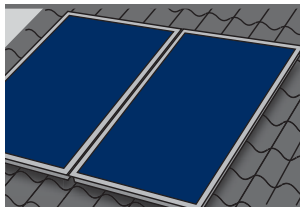
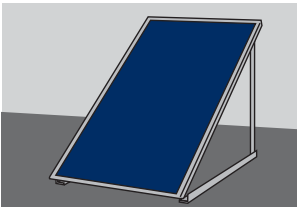
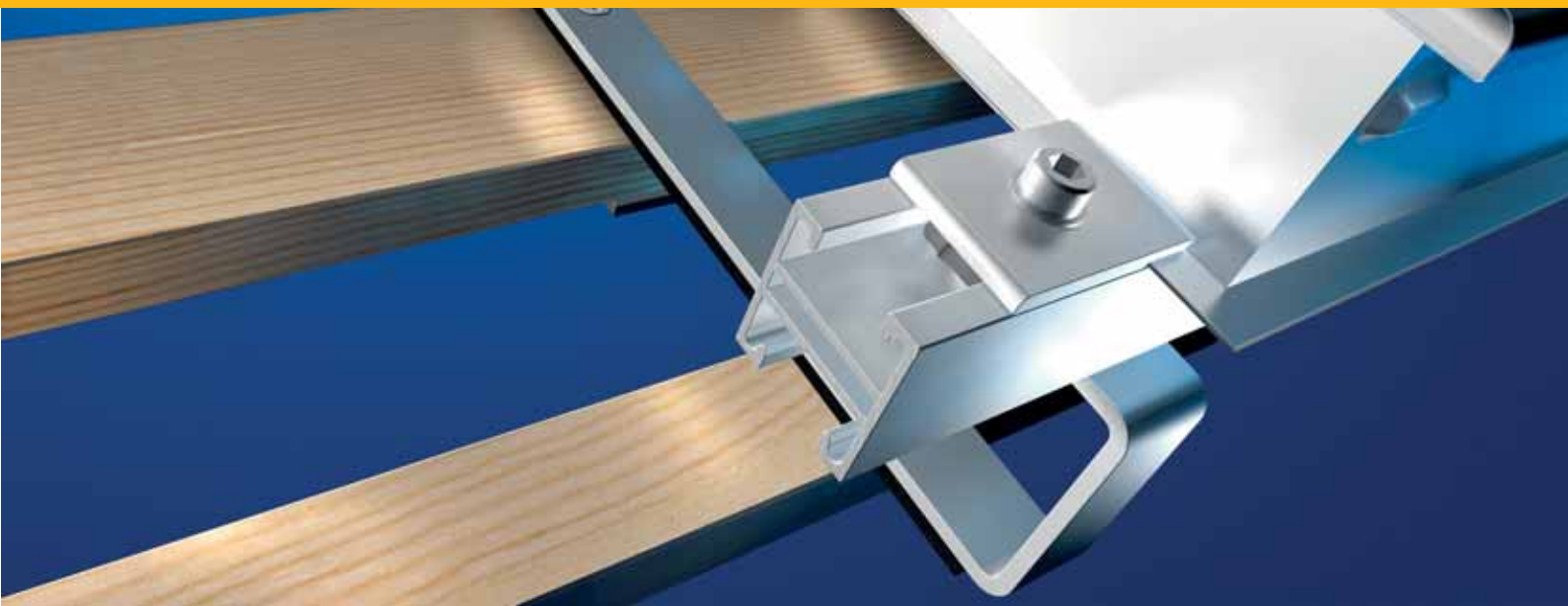
SolMetall-surface heat exchangers are available with a variety of tubing designs.

Whether a Meander, Header pipe or Harp form depends on your particular project.

An hydraulic system, precisely adjusted, helps to reduce energy use and increases efficiency.

For this purpose, heat exchangers are equipped with different tube diameters, so that a constant temperature is held at each point of the system producing an efficient and consistent performance.

Here a broad range of basic components and types of tubing that can be flexibly combined.



EFFICIENCY IS A MATTER OF POSITION.

For optimum yield of solar energy, and in addition to the state and angle of the sun, the right placement and angle of inclination of the panels modules are of extreme importance.

Just a few degrees can decide on the profitability of an investment. SolMetall offers a wide range of mounting options for all roof types:

Roof-mounted

Here, the solar elements are mounted in close proximity to the roof. For PV modules adequate ventilation must be ensured. For assembly our sturdy roof anchors, bolts and retaining clips are provided.

Inroof mounting

Mounting the solar panels in this way replaces the roof tiling in this area. The system is visually harmonious being flush with the roof.

Elevated mounting

This principle was designed for low angle roofs. A solid frame ensures the right balance. Due to the weight and wind load, a static test is recommended prior to mounting.

Flat-roof mounting

The solar elements are elevated at different angles to achieve the optimal function, in Germany the panels are set up at an angle of 45°. This angle is reduced in countries further South and is greater in countries further North. Adjustments are made easily.



MANUFACTURED, SORTED, PACKAGED AND DELIVERD.

In addition to metal machining, we offer our customers bespoke packaging for all products – from sorting to packing.

Our SolMetall commissioners know every single one of our products and ensure they leave punctually and are coordinated to the specific needs of our house, leaving you to focus on your core business.



The SolMetall plant is situated in the North Rhine-Westphalia Spenge – on the border of Niedersachsen.

Our employees are working on new ideas and reliable products in our company's 5,700 m² building.

Here we use modern high-tech machinery, for example, our unique flat plate collector production line with a total length of 100 meters.

Every „SolMetaller“ knows the quality standards at our plant in Spenge and acts according to our simple philosophy – No product leaves our premises, without having undergone rigorous testing.

SolMetall GmbH

Industriezentrum 22

32139 Spenge

Phone +49 5225 - 873 79-0

Fax +49 5225 - 873 79-29

kontakt@solmetall.de

www.solmetall.de