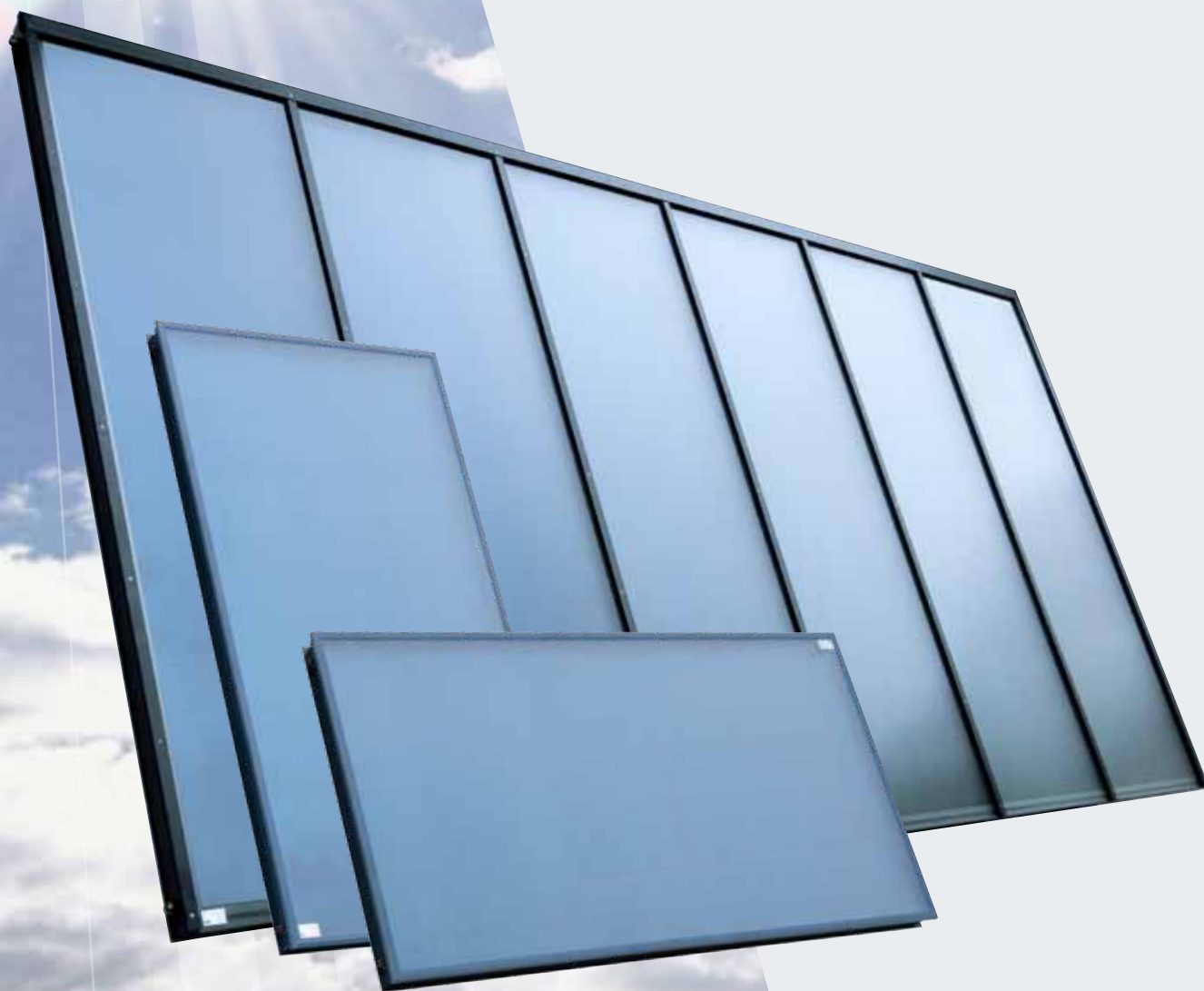


The TiSUN logo is located in the top right corner. It consists of the word "TiSUN" in a bold, white, sans-serif font, with a registered trademark symbol (®) to its upper right. The text is set against a solid red rectangular background.

TiSUN®

COLLECTORS FOR THE ROUGH REALITY





TiSUN® was the first Austrian company to receive the Austria Solar quality seal.



Solar Keymark



Standards-
tested drinking
water



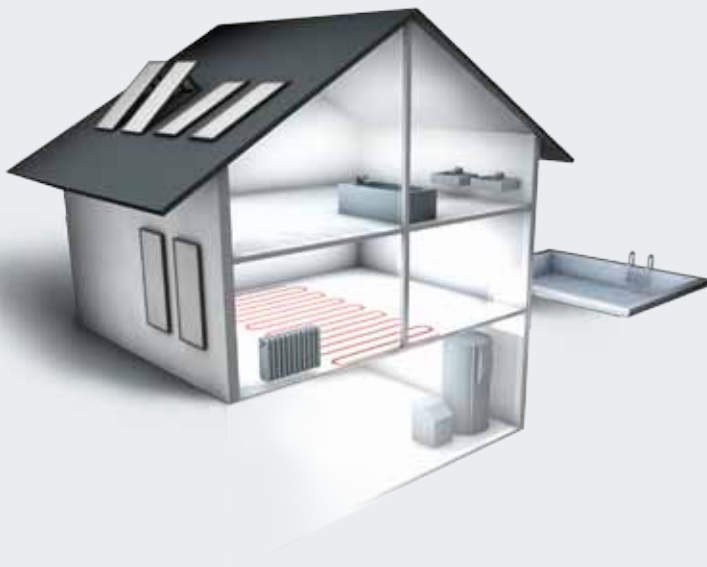
Spanish certification
Ministerio de Industria,
Turismo y Comercio

BIG SPENDER.

THE SUN BESTOWS US WITH VAST QUANTITIES OF PURE ENERGY

Where there is sun, there is life. Since time immemorial. This endless ball of energy radiates free of charge – and contains the greatest potential of all renewable energy sources. In only 3 hours the sun delivers as much energy to Earth as the entire population of the Earth uses in a year! Altogether the sun emits 5,000 times more energy onto our planet than required by the entire human race together! We would be extremely foolish not to accept this manna from heaven. Out of respect for nature. As a responsibility to our children. For the love of life.

Solar thermal systems convert solar energy to snug warmth and help keep a clear conscience.



ECO-FRIENDLY



SECURE IN SUPPLY



ENERGY-EFFICIENT



DURABLE THANKS TO
MATURE TECHNOLOGY

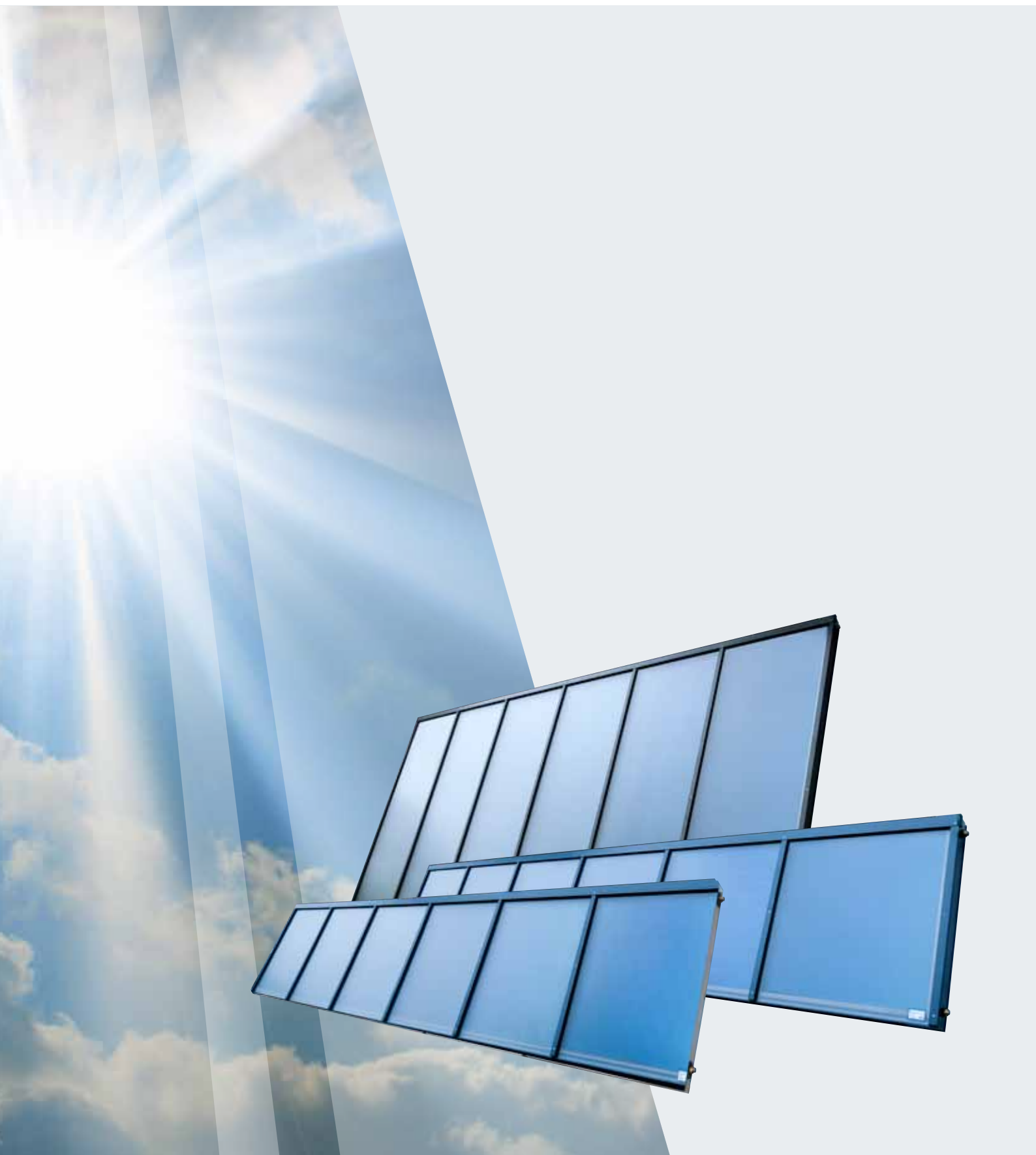


COST-EFFICIENT

THE ADVANTAGES AT A GLANCE

- Clean, environmentally friendly and economical energy
- Considerable reduction in CO₂ emissions: a single household can save one tonne of CO₂ thanks to a solar heating system
- Cutting-edge technology: individually manufactured, fast installation, low maintenance requirements
- Independent of energy prices from fossil fuel resources
- Absolute supply security
- Federal and state financial incentives





VALUABLE COLLECTION: THE SUN'S RAYS

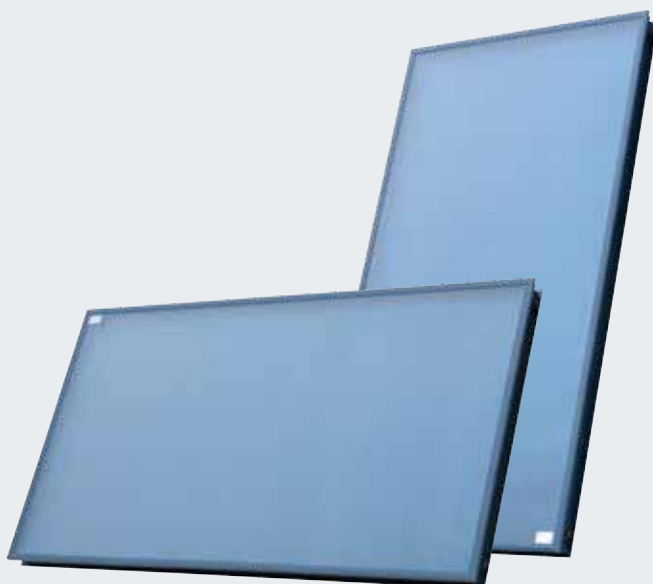
HIGH-TECH AS A SUN WORSHIPPER

SIMPLE AND EFFICIENT: TiSUN SOLAR COLLECTORS

The solar collectors play the major role in the process of collecting solar energy. They catch the sun's rays and convert them into valuable heat. Imagine it like a garden hosepipe that has been lying in the sun for a long time. The water within suddenly heats up.

OVER 60 % EFFICIENCY

The collector includes an aluminium absorber instead of a rubber hose. This worships the sun, warms itself – and then gives the heat to the water flowing through it. A special coating and highly efficient insulation ensure that as little of the sun's heat is lost as possible. So simple, and yet so effective. The efficiency of the solar collectors is generally more than 60 %. In plain language: Around 400 kWh of hot water can be obtained from the approximately 1,000 kWh solar radiation per square metre in Austria each year. Clean, economical, environmentally friendly.



SAVE ENERGY IN STYLE

TiSUN offers leading edge solar collectors in a world-wide technology comparison and have now reached the roofs of 39 countries around the world. Their attractive design makes TiSUN solar collectors not just a clear acknowledgement of sustainable energy generation, but also a visual plus for a building.

TiSUN KOLLEKTOREN

TiSUN offers module solar collectors that exploit the sun's energy to the full. Their robust construction ensures that they will enjoy a long service life – in any weather conditions. The mature technology used in these collectors achieves a particularly high degree of efficiency. And excellent insulation values guarantee low heat losses. TiSUN solar collectors can be installed on practically any kind of roof – and come with a 10-year guarantee.

■ TiSUN MODULE COLLECTORS

■ TiSUN LARGE COLLECTORS

- In-roof large collector
- On-roof large collector

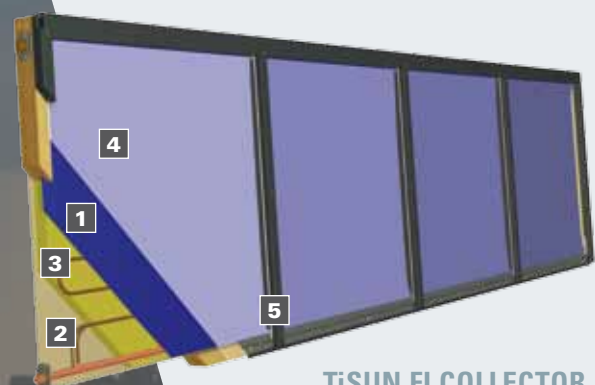
PRODUCT HIGHLIGHTS

- High efficiencies ($\eta_0 = 0.79$) thanks to PVD coating, laser welding and meander system (absorption 95 %, emission 5 %)
- Simple and rapid installation for all areas of use (in-roof, on-roof and free-standing variants for 15 different roof types)
- Long service life due to robust, temperature and weather-resistant construction
- Low heat losses thanks to high insulation values
- 10-year guarantee
- Solar Keymark tested (quality seal)
- Great expertise with 20 years of experience

- 1 Absorber:** Laser-welded full-area absorber with high-selectivity PVD coating and meandering flow.
- 2 Rear panel:** Wooden rear panel
- 3 Insulation:** 40 mm mineral wool, emission-free, non-flammable – A1 DIN 4102 Part 1, SPF inspected
- 4 Cover:** Prismatic solar safety glass, 4 mm thick, with high light transmission
- 5 Housing:** Anthracite powder-coated aluminium frame structure with wooden rear panel, wood frame is glued to be watertight and heat-resistant

Panel distribution

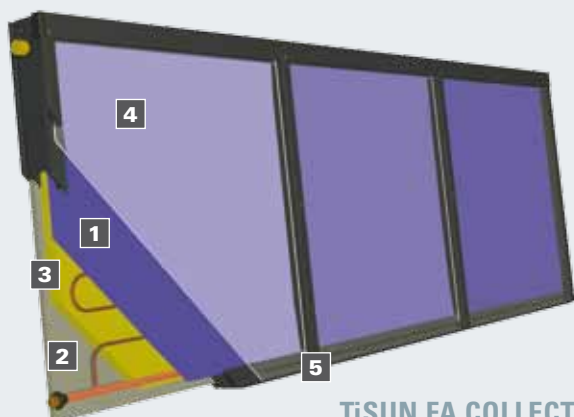
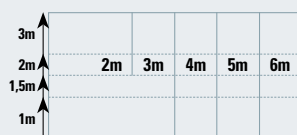
3m					
2m	2m	3m	4m	5m	6m
1m					



TiSUN FI COLLECTOR

- 1 Absorber:** Laser-welded full-area absorber with high-selectivity PVD coating and meandering flow.
- 2 Rear panel:** Aluminium sandwich rear panel
- 3 Insulation:** 20 mm heat-resistant special PU hard foam and 40 mm mineral wool, emission-free, non-flammable – A1 DIN 4102 Part 1, SPF tested
- 4 Cover:** Prismatic solar safety glass, 4 mm thick, with high light transmission
- 5 Housing:** Anthracite powder-coated aluminium frame structure with aluminium sandwich rear panel

Panel distribution



TiSUN FA COLLECTOR

A COLLECTOR FOR EVERY ROOF

TiSUN COLLECTORS: STABLE, AESTHETIC AND POWERFUL:

SUN GIANT I – FA

The TiSUN FA large collector is manufactured and supplied in a single piece in sizes from 3 to 18 m² (standard widths: 2 to 6 m; heights: 1, 1.5, 2 or 3 m). Custom sizes can be manufactured in rectangular and non-rectangular shapes in any width and height (max. 3 x 6 m for a single unit). This giant collector is suited to on-roof installation and freestanding installation on pitched and flat roofs or on the ground.

SUN GIANT II – FI

The TiSUN FI large collector fits almost seamlessly into the roof type and surface, thereby fulfilling an intelligent dual function: solar energy and high-quality insulation. The in-roof collector is ready for use immediately in standard sizes from 4 to 18 m², but can also be manufactured in special sizes: in rectangular and non-rectangular shapes in any width and height (max. 3 x 6 m for a single unit).

PRODUCT ADVANTAGES

- High efficiency – absorption 94 %
- Simple and rapid installation for all areas of use (in-roof, on-roof and free-standing variants as standard for 15 different roof types)
- Long service life due to robust, temperature and weather-resistant construction and materials
- Low heat losses
- 10-year guarantee
- Solar Keymark certification is a guarantee of the HIGHEST quality
- Great expertise with 20 years of experience
- Aesthetic integration into architecture and environment

FI specifications

Type	FI
Collector type	In-roof flat collector
Installation type	In-roof mounting with crane
Gross area	See other list
Connections	4 x connections, 22 x 0.8 mm copper pipes, including compression rings, support sleeve and union nut, for customised collectors as required
Roof tilt	from 15° to 70°
Collector sealing	Aluminium profile system with double temperature and UV-resistant silicone seals, emission-free
Permissible operating pressure	10 bar
Absorption	94 %
Maximum no-flow temperature	195 °C
Snow load pressure	maximum 250 kg/m ²

FI 1 in-roof collector

Type	Glass	Gross	Aperture	Absorber	External dimensions (H x B)	Weight	Heat transport capacity approximately
FI 1/4	4	4,30 m ²	3,66 m ²	3,72 m ²	1,07 x 4,01 m	105 kg	4.6 litres
FI 1/5	5	5,37 m ²	4,57 m ²	4,66 m ²	1,07 x 5,01 m	132 kg	5.8 litres
FI 1/6	6	6,43 m ²	5,49 m ²	5,59 m ²	1,07 x 6,00 m	160 kg	6.9 litres

FI 2 in-roof collector

FI 2/2	2	4,10 m ²	3,62 m ²	3,70 m ²	2,01 x 2,02 m	102 kg	3.6 litres
FI 2/3	3	6,10 m ²	5,43 m ²	5,56 m ²	2,01 x 3,02 m	152 kg	5.4 litres
FI 2/4	4	8,10 m ²	7,24 m ²	7,41 m ²	2,01 x 4,01 m	202 kg	7.2 litres
FI 2/5	5	10,10 m ²	9,10 m ²	9,26 m ²	2,01 x 5,01 m	250 kg	9.0 litres
FI 2/6	6	12,10 m ²	10,86 m ²	11,11 m ²	2,01 x 6,00 m	302 kg	10.8 litres

FI 3 in-roof collector

FI 3/2	2	6,10 m ²	5,52 m ²	5,66 m ²	3,01 x 2,02 m	150 kg	4.9 litres
FI 3/3	3	9,10 m ²	8,29 m ²	8,50 m ²	3,01 x 3,02 m	225 kg	7.3 litres
FI 3/4	4	12,10 m ²	11,10 m ²	11,33 m ²	3,01 x 4,01 m	302 kg	9.8 litres
FI 3/5	5	15,10 m ²	13,82 m ²	14,16 m ²	3,01 x 5,01 m	375 kg	12.2 litres
FI 3/6	6	18,10 m ²	16,58 m ²	16,99 m ²	3,01 x 6,00 m	450 kg	14.6 litres



Tiled roof

Side lock panel roof

Bitumen roof

Corrugated cement asbestos roof

Profiled and corrugated sheet metal roof

Tin joint and copper roofs

Plain tile, slate and flat cement asbestos roofs

FA specifications

Type	FA
Collector type	On-roof flat collector
Installation type	On-roof installation with crane
Gross area	See other list
Connections	4 x connections, 22 x 0.8 mm copper pipes, including compression rings, support sleeve and union nut, for customised collectors as required
Roof tilt	from 15° to 70°
Collector sealing	Aluminium profile system with double temperature and UV-resistant silicone seals, emission-free
Permissible operating pressure	10 bar
Absorption	94 %
Maximum no-flow temperature	195 °C
Snow load pressure	maximum 250 kg/m ²



FA 1 on-roof collector

Type	Glass	Gross	Aperture	Absorber	External dimensions (H x B)	Weight	Heat transport capacity approximately
FA 1/3	3	3,24 m ²	2,74 m ²	2,79 m ²	1,07 x 3,02 m	73 kg	3,5 litres
FA 1/4	4	4,30 m ²	3,66 m ²	3,72 m ²	1,07 x 4,01 m	96 kg	4,6 litres
FA 1/5	5	5,37 m ²	4,57 m ²	4,66 m ²	1,07 x 5,01 m	122 kg	5,8 litres
FA 1/6	6	6,43 m ²	5,49 m ²	5,59 m ²	1,07 x 6,00 m	147 kg	6,9 litres

FA 1,5 on-roof collector

FA 1,5/3	3	4,56 m ²	4,01 m ²	4,09 m ²	1,51 x 3,02 m	106 kg	4,2 litres
FA 1,5/4	4	6,04 m ²	5,33 m ²	5,45 m ²	1,51 x 4,01 m	140 kg	5,6 litres
FA 1,5/5	5	7,58 m ²	6,67 m ²	6,81 m ²	1,51 x 5,01 m	176 kg	7,1 litres
FA 1,5/6	6	9,04 m ²	8,01 m ²	8,17 m ²	1,51 x 6,00 m	210 kg	8,5 litres

FA 2 on-roof collector

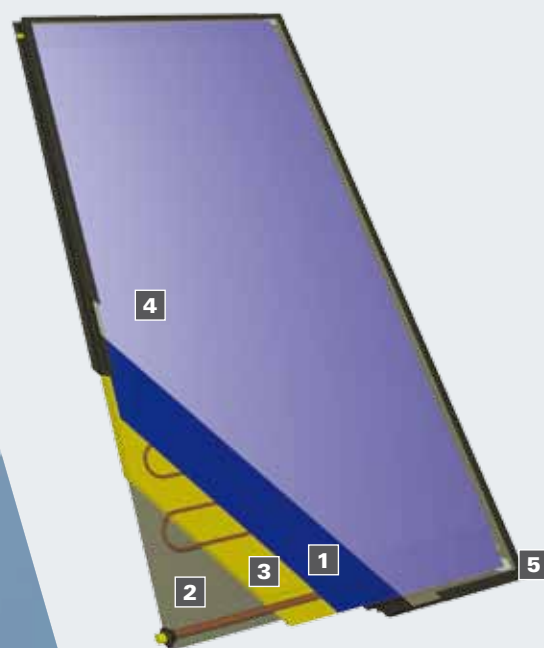
FA 2/2	2	4,10 m ²	3,62 m ²	3,70 m ²	2,01 x 2,02 m	94 kg	3,6 litres
FA 2/3	3	6,10 m ²	5,43 m ²	5,56 m ²	2,01 x 3,02 m	140 kg	5,4 litres
FA 2/4	4	8,10 m ²	7,24 m ²	7,41 m ²	2,01 x 4,01 m	186 kg	7,2 litres
FA 2/5	5	10,10 m ²	9,10 m ²	9,26 m ²	2,01 x 5,01 m	232 kg	9,0 litres
FA 2/6	6	12,10 m ²	10,86 m ²	11,11 m ²	2,01 x 6,00 m	278 kg	10,8 litres

FA 3 on-roof collector

FA 3/2	2	6,10 m ²	5,52 m ²	5,66 m ²	3,01 x 2,02 m	140 kg	4,9 litres
FA 3/3	3	9,10 m ²	8,29 m ²	8,50 m ²	3,01 x 3,02 m	209 kg	7,3 litres
FA 3/4	4	12,10 m ²	11,10 m ²	11,33 m ²	3,01 x 4,01 m	278 kg	9,8 litres
FA 3/5	5	15,10 m ²	13,82 m ²	14,16 m ²	3,01 x 5,01 m	345 kg	12,2 litres
FA 3/6	6	18,10 m ²	16,58 m ²	16,99 m ²	3,01 x 6,00 m	414 kg	14,6 litres



- 1 Absorber:** Laser-welded full-area absorber with high-selectivity PVD coating and meandering flow.
- 2 Rear panel:** Structured aluminium rear panel
- 3 Insulation:** 40 mm mineral wool, emission-free, non-flammable – A1 DIN 4102 Part 1, SPF inspected
- 4 Cover:** Prismatic solar safety glass, 4 mm thick, with high light transmission
- 5 Housing:** Weather-resistant anthracite powder-coated aluminium frame construction



TiSUN FM COLLECTOR

Technische Daten FM

Type	FM-S 2,55 (vertical)	FM-W 2,55 (horizontal)	FM-S 2,00 (vertical)	FM-W 2,00 (horizontal)
Type	Module flat collector			
Collector type	In-roof mounting, on-roof mounting and freestanding installation			
Installation type	2,55 m²	2,55 m²	2,00 m²	2,00 m²
Gross area	2,36 m²	2,36 m²	1,85 m²	1,85 m²
Aperture area	2,37 m²	2,37 m²	1,86 m²	1,86 m²
External dimensions (H x W)	2,16 x 1,18 m	1,18 x 2,16	2,00 x 1,00 m	1,00 m x 2,00 m
Weight	46 kg	46 kg	38 kg	38 kg
Heat transport capacity, approximately	2,1 lt	2,1 lt	1,6 lt	1,6 lt
Connections	4 connections, copper pipe 18 x 0.8 mm			
Roof tilt	von 15° bis 70°			
Collector sealing	Aluminium profile system with dual temperature and UV-resistant silicon seal, emission free			
Permissible operating pressure	10 bar			
Absorption	94 %			
Conversion factor	0,79			
Maximum noflow temp.	211 °C			
Snow load pressure	maximum 250 kg /m²			

THE UNIVERSAL GENIUS

TiSUN FM MODULE COLLECTOR: LOOKS GOOD ON ANY ROOF

TiSUN's 'small' solar collector is suitable for all purposes. It can be installed either vertically or horizontally on any roof type: quickly and easily. Free-standing or on-roof installation – anything is possible. Suitable mounting systems (for every roof type) and weather-resistant frames complete the TiSUN collector range. The collectors can be connected with one another in just a few actions, which will naturally be done by our installation and service team..

AREAS OF USE

- In-roof mounting
- On-roof installation – on tiles and plain tiles, slate, Spanish tiles, metal
- Freestanding installation

PRODUCT ADVANTAGES

- High efficiency – absorption 94 %
- Simple and rapid installation for all areas of use (in-roof, on-roof and free-standing variants as standard for 15 different roof types)
- Long service life due to robust, temperature and weather-resistant construction and materials
- Low heat losses
- 10-year guarantee
- Solar Keymark certification is a guarantee of the HIGHEST quality
- Great expertise with 20 years of experience
- Aesthetic integration into architecture and environment



Tiled roof

Side lock panel roof

Bitumen roof

Corrugated cement asbestos roof

Profiled and corrugated sheet metal roof

Tin joint and copper roofs

Plain tile, slate and flat cement asbestos roofs



- 1 Filling and flushing pump:** for quick and clean filling and flushing of solar systems with the heat transport medium
- 2 Solar check case:** for commissioning and annual inspection of solar systems
- 3 Pressure unit:** for quick checks on all hydraulic joints between the collectors for leaking connections
- 4 Mounting wrenches for collector connections:** all wrench combinations for all cutting ring threaded connections
- 5 Transport device for module collectors:** Transport and mounting aid for FM collectors

**1****2****3****4****5**

1A SOLAR ACCESSORIES— 1A SERVICE

SOLAR ACCESSORIES FOR ALL EVENTS

As a full-service supplier, we offer our customers a broad range of solar accessories. TiSUN solar components are produced in accordance with the same rigorous quality standards as the full systems.



MATURE SERVICE CULTURE ENSURES SATISFIED TISUN CUSTOMERS – WORLDWIDE

As one of the leading European suppliers of solar heat, we have concentrated our attention on first-class service alongside quality and innovation for 20 years. The TiSUN Customer Competence Center supports customers and partners worldwide. From simple orders to detailed technical queries – our international team has the right answer for any question.

MOUNTING: FAST, SAFE, CLEAN

Whether we are talking about using a crane to mount large collectors up to 18 m² or the installation of module collectors – TiSUN can guarantee its customers a perfect mounting system, in-roof and on-roof mounting.



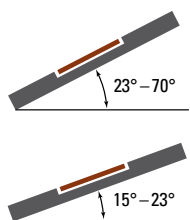
SERVICE DOES NOT FINISH WITH INSTALLATION

TiSUN solar systems are subject to the strictest inspection criteria by nine international test centres. Nevertheless, TiSUN's high standard demands regular maintenance. Our own After Sales Team is responsible for this.

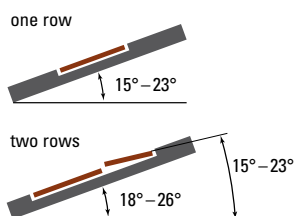




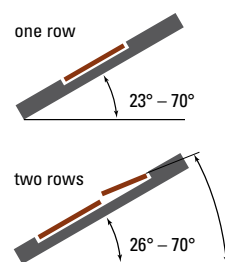
- 1 Flashing set for FI single collector:** Rainproof, anthracite-coloured aluminium sheet metal edging for tiled roof, plain tile, slate and Spanish tile. For a roof tilt of 15°-23° or 23°-70°.
- 2 Flashing set for multiple FI collectors from 15°-23°:** Rainproof, anthracite-coloured aluminium sheet metal edging for tiled roof, plain tile, slate and Spanish tile. For a roof tilt of 15°-23°.
- 3 Flashing set for multiple FI collectors 23°-70°:** Rainproof, anthracite-coloured aluminium sheet metal edging for tiled roof, plain tile, slate and Spanish tile. For a roof tilt of 23°-70°.



1



2

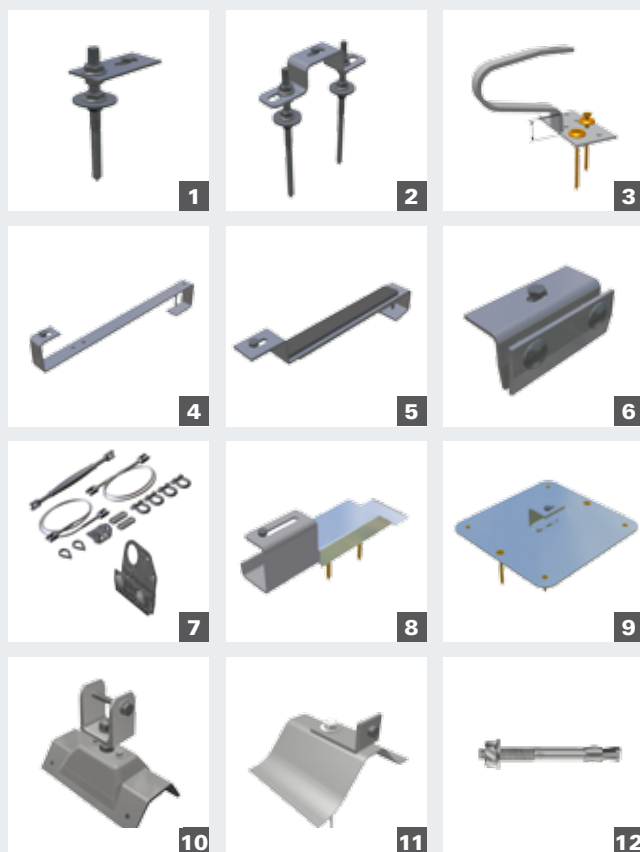


3

IN-ROOF, ON-ROOF, FREE-STANDING MOUNTING – EVERYTHING IS POSSIBLE

INTELLIGENT TiSUN MOUNTING SYSTEMS AND FLASHING SETS FOR EVERY ROOF

Depending on the roof and roofing, various mounting systems and flashing sets are used when mounting a TiSUN solar system to guarantee the maximum degree of safety and efficiency.



MOUNTING VARIANTS

- 1** Universal mounting hanger bolt
- 2** Universal mounting DUO hanger bolt
- 3** Rafter anchor for roof tiles
- 4** Roof hook for roof tiles
- 5** Plain tile hook for plain tiled roof
- 6** Joint clamp for tin joint roof
- 7** Universal guy cable set for tin joint roofs
- 8** Solar bracket for side locks plates
- 9** Bitumen flange plate for bitumen roof
- 10** Profiled sheet metal bracket for profiled sheet metal or corrugated sheet metal
- 11** Corrugated cement asbestos calotte
- 12** Anchor bolt for concrete



ECO-FRIENDLY



SECURE IN SUPPLY



ENERGY-EFFICIENT



DURABLE THANKS TO
MATURE TECHNOLOGY



COST-EFFICIENT

