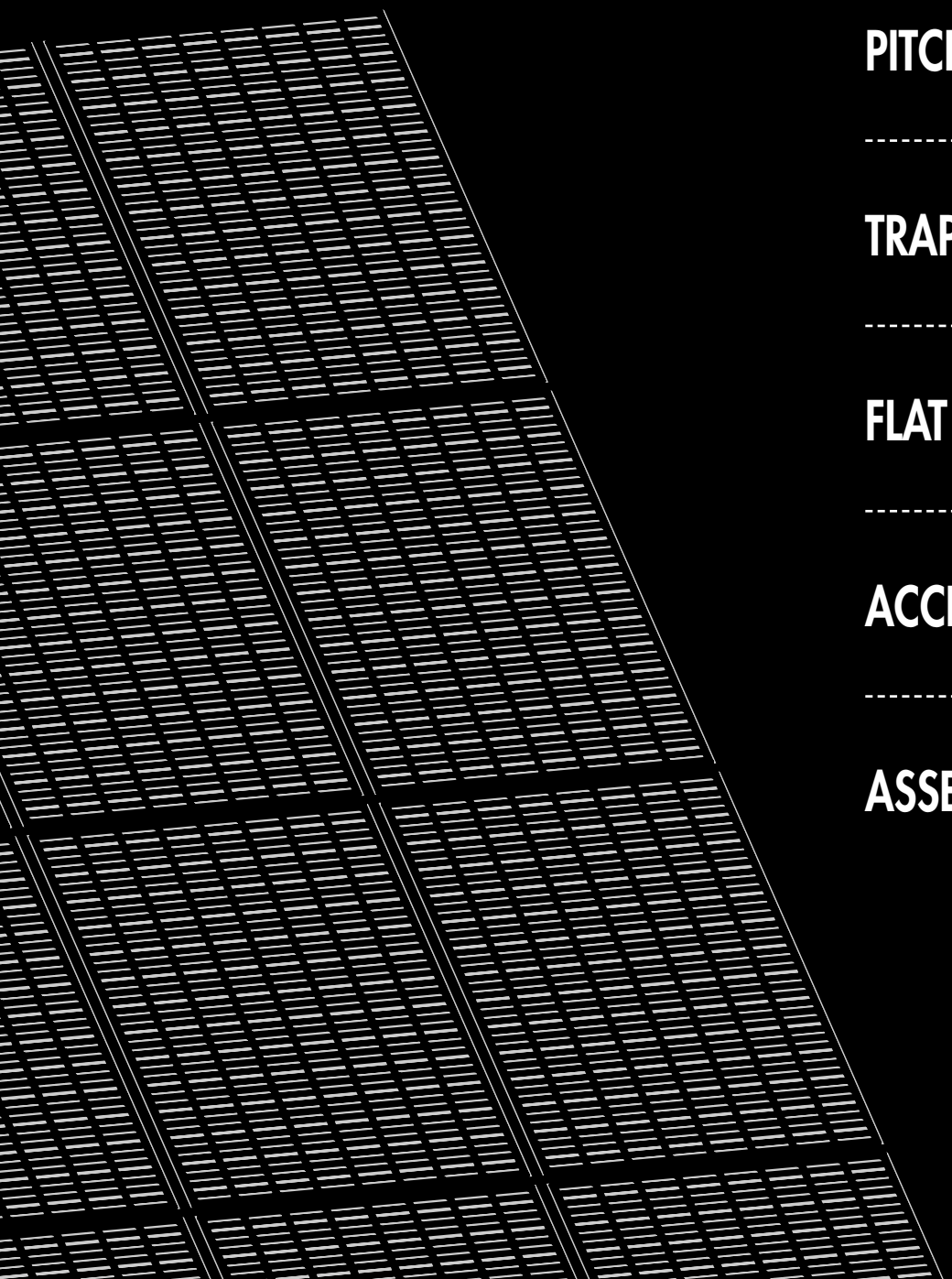
Eurotec®

The specialist for fastening technology

OUR RANGE
SOLAR MODULE INSTALLATION SYSTEMS



PITCHED ROOF

TRAPEZOIDAL SHEET

FLAT ROOF

ACCESSORIES

ASSEMBLY INSTRUCTIONS

www.eurotec.team/en

CONTENTS

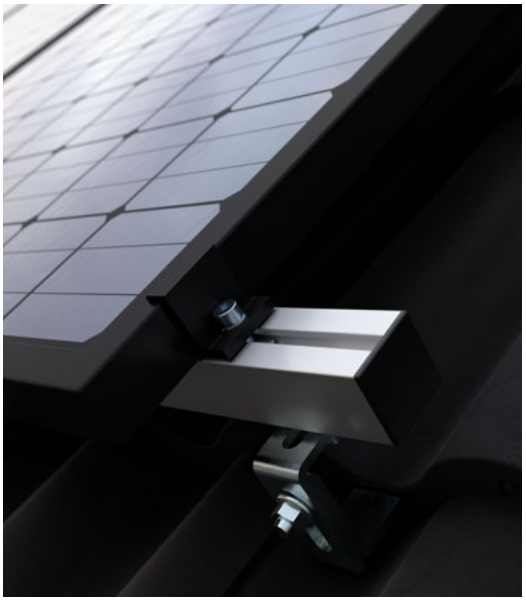
THE FASTENING SOLUTION FOR SOLAR MODULES

Obtaining electricity from renewable energies increasingly raises awareness of it in society.

As such, solar technology is enjoying increasing popularity nowadays. Due to the installation of solar systems, the selected mounting material is necessary, which can vary depending on the demand and local conditions. Eurotec provides its customers with the most important components in order to install solar modules in an easy and time-saving manner.

Whether a pitched roof, flat roof, or trapezoidal sheet roof – Eurotec delivers the right fastening system for every roof shape depending on the installation type. Depending on the application, this can be individually and accurately adjusted to ensure secure and permanent installation.

Apart from various types of installation profiles that form the basis for each solar module fastening, the product range also includes the matching roof hooks, module clamps, and all the necessary fastening equipment. Adjustable elevation for solar modules on flat roofs is also offered to the customer.



POSSIBLE COMBINATIONS

	Pitched roof installation profile FIX-FIT	Pitched roof installation profile	Pitched roof installation profile SLIM	Trapezoidal sheet installation profile	Installation profile Trap. EASY	Short rail Trapezoidal sheet	Flat roof installation profile
Roof hook FIX-FIT	X						
Longitudinal connector FIX-FIT	X						
Fixing screw FIX-FIT	X						
Module clamps FASTFIX	X	X	X	X	X		
FLEX roof hook		X					
FIX-FIT roof hook	X		X				
BASIC roof hook		X					
HEAVY roof hook		X					
Plain tile roof hook		X					
Slate roof hook		X					
U-connector, aluminium		X					
SLIM L-connector			X				
Hammer head screws M8 & M10		X	X	X			
Module clamps & cylinder head screws + slot nuts		X	X	X	X	X	
Module clamps for short rail						X	
Solar hanger bolt A2, including adapter plate		X					
L-adapter for solar hanger bolt			X				
Standing seam clamp		X					
Cross-connector set		X		X			
BiGHTY bi-metal thin sheet metal screw				X	X	X	
Load distribution plate							X
Corner connector							X
T-connector							X
Front joint							X
Rear joint							X
Ballast tray							X
Wind deflector							X
Equipotential bonding shim and clip		X	X	X	X	X	
Earthing terminal		X	X	X	X	X	X

FURTHER INFORMATION HERE:
WWW.EUROTEC.TEAM/EN/SOLAR

FASTENING SYSTEMS FOR PITCHED ROOFS

FASTENING SYSTEM

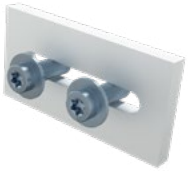
for pitched roofs

The Eurotec fastening system for pitched roofs is an all-in-one solution for the installation of solar modules on the pitched roof. The Eurotec roof hooks are easy to install and save both time and labour costs.

The process for using the fastening system for pitched roofs to install solar modules on the roof in only a few steps is explained below.

WHAT YOU NEED:

- Roof hooks FIX-FIT
- Screws: Paneltwistec or Topduo
- Mounting profile FIX-FIT
- Longitudinal connector FIX-FIT
- Fixing screw FIX-FIT
- FASTFIX module clamps



Longitudinal connector FIX-FIT

Roof hook FIX-FIT

Fixing screw FIX-FIT

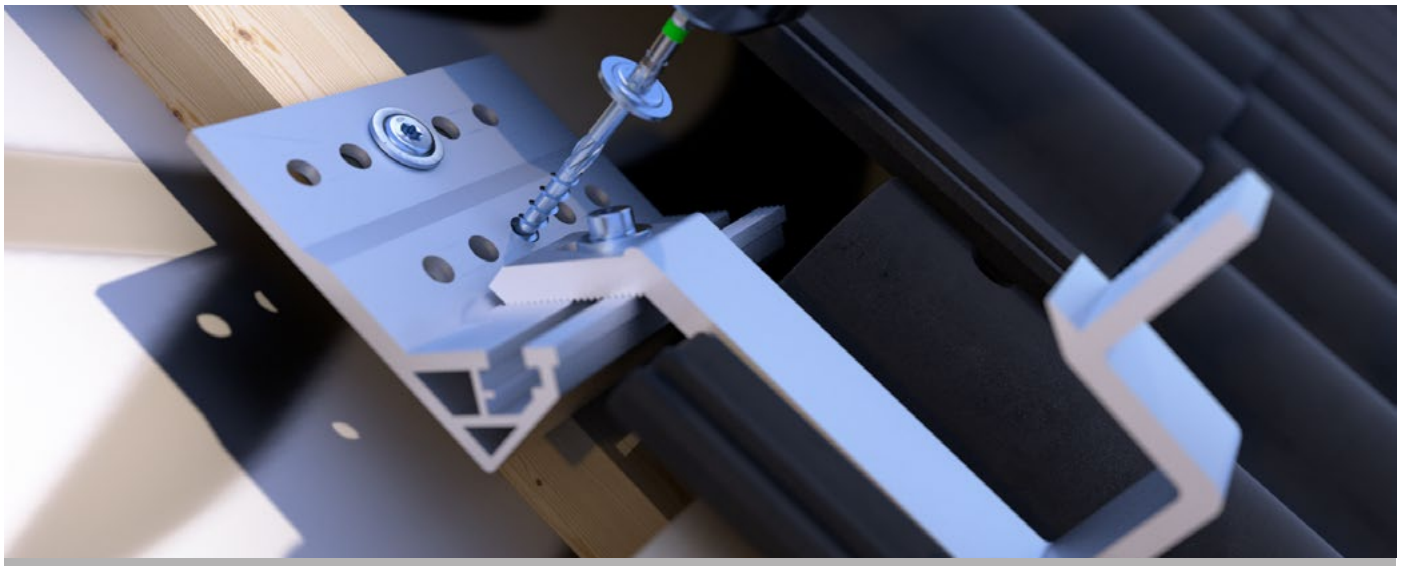
FASTFIX module clamps

Paneltwistec

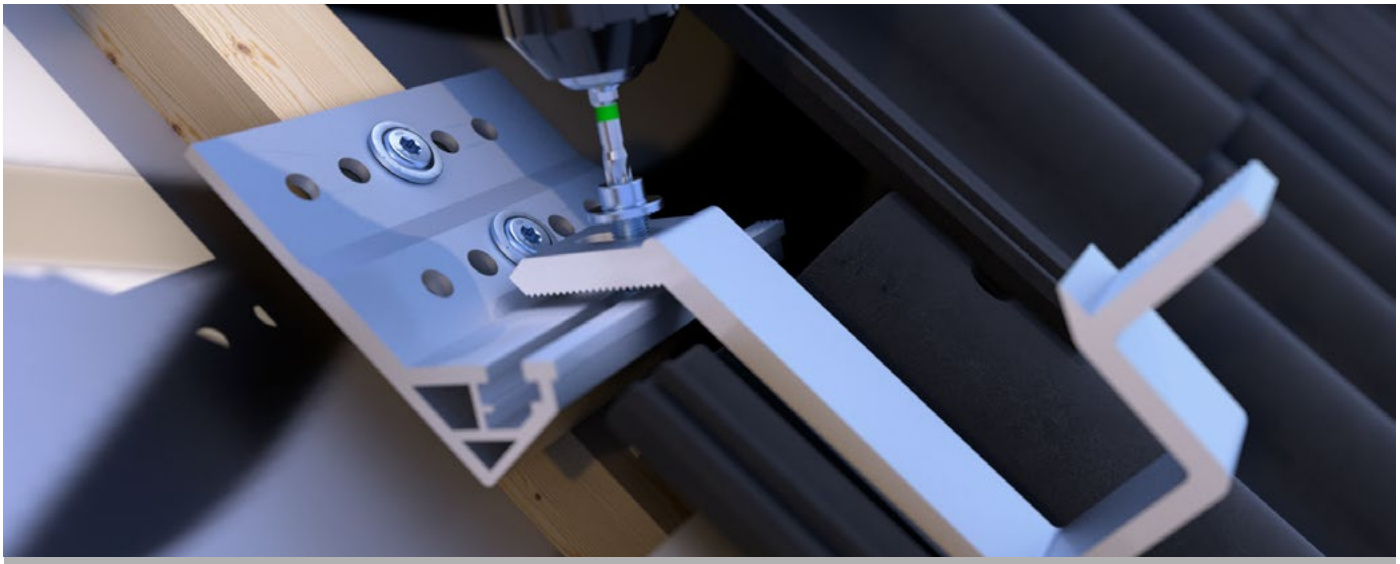
Topduo

Mounting profile FIX-FIT

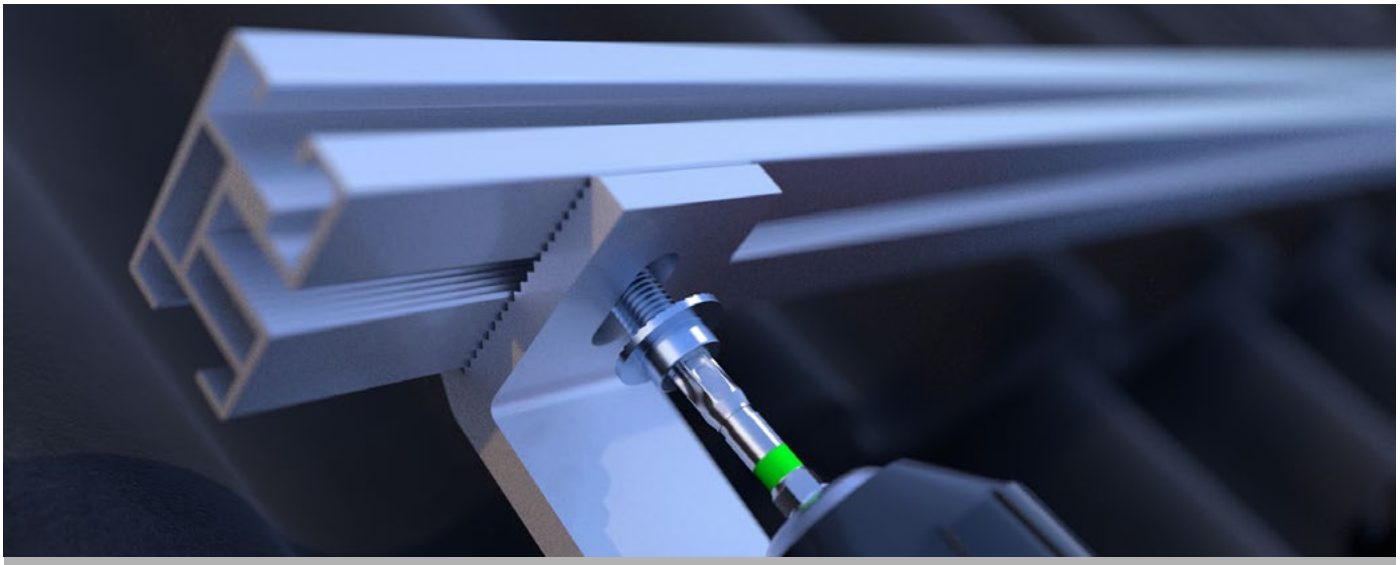
INSTALLATION EXAMPLE



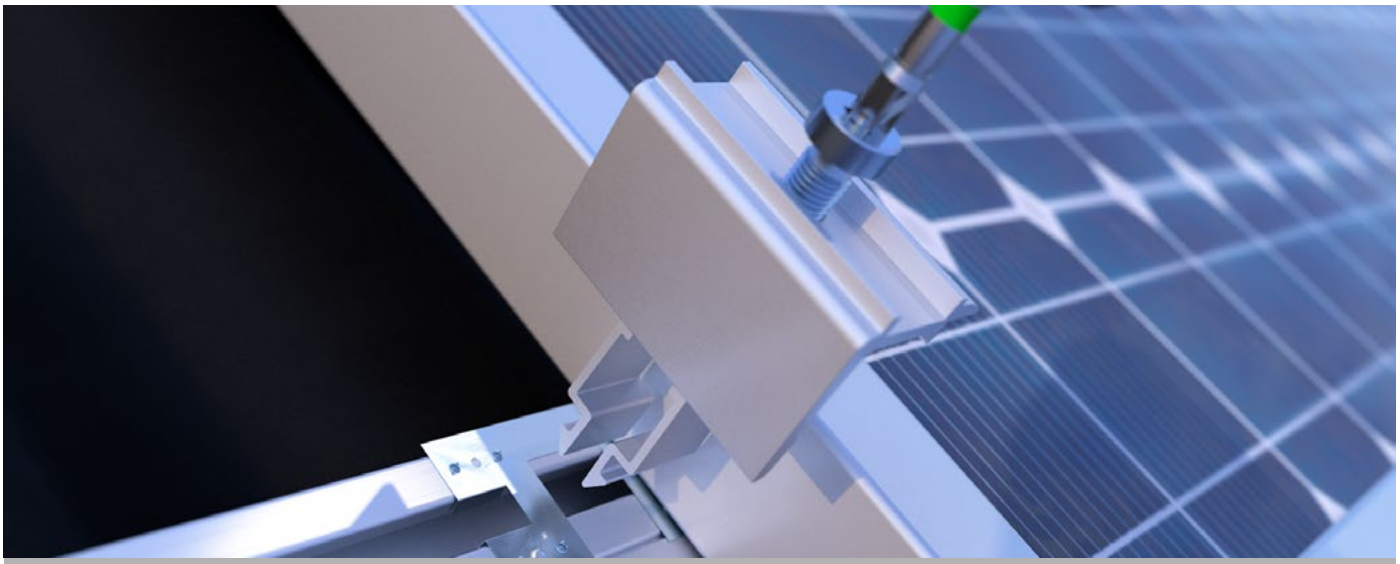
STEP 1: Screw the roof hook with the Paneltwistec AG plate head screws through the counter-battening into the rafter.



STEP 2: Position and fasten the hook.



STEP 3: Conveniently insert the FIX-FIT mounting profile and fasten it with the FIX-FIT fixing screw.



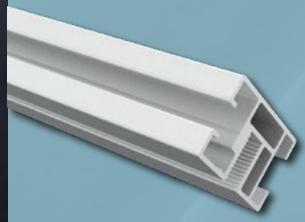
STEP 4: Click the Fastfix module clamp into the profile and fix it with the screw.

FIX-FIT
FIXING SYSTEM

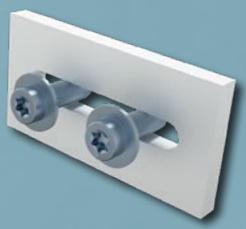
CONSTRUCTION ELEMENTS:

Roof hook
FIX-FIT

Mounting profile
FIX-FIT



Longitudinal connector
FIX-FIT



Fixing screw
FIX-FIT

Module clamps

FASTFIX

Tool

T40 BITS

FIX-FIT SYSTEM

ONE PERSON ASSEMBLY

1

T40 ONLY

ROOF HOOK FIX-FIT

infinitely laterally adjustable, aluminum

AL

The roof hook FIX-FIT is used for mounting solar panels in combination with the mounting profile FIX-FIT on pitched roofs. Due to our T40 ONLY system, you only need a TX 40 tool for mounting. The FIX-FIT system can be mounted comfortably by one person, because the mounting profile can simply be put on and fixed without holding it. The slotted hole allows you to vary the mounting height to adapt to the roof tiles and the supporting battens.

Roof hook FIX-FIT

Art. no.	Base plate		Hook		Installation height	Slotted hole	PU
	Dimensions [mm][a)]	Material	Dimensions [mm][b)]	Material	[mm]	[mm][c)]	
SOL100707	150 x 110 x 39	Aluminium	153 x 143,9 x 35	Aluminium	150,8 - 161,8	10 x Ø 9,3	30

a) length x width x depth; b) height x width x depth; c) bore width x hole length

ADVANTAGES / FEATURES

- T40 ONLY → One tool for everything – TX 40
- 1-man assembly → hook can be mounted by one person
- No loosening of the screw due to vibration thanks to ratchet teeth and micro-encapsulation
- Hook easy to adjust and fix
- Suitable for the FIX-FIT mounting profile

Suitable for this*

Mounting profile FIX-FIT

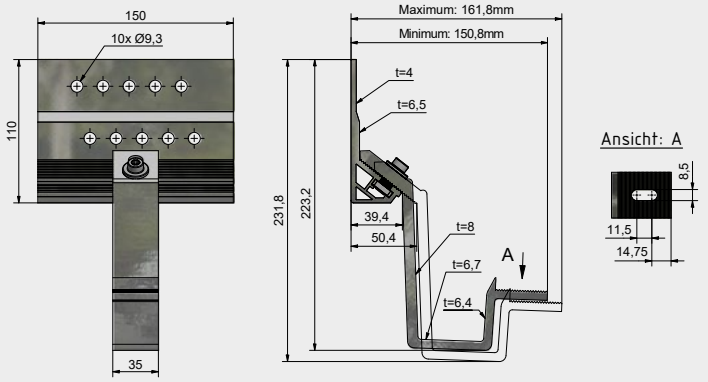
FASTFIX module clamps

Longitudinal connector FIX-FIT

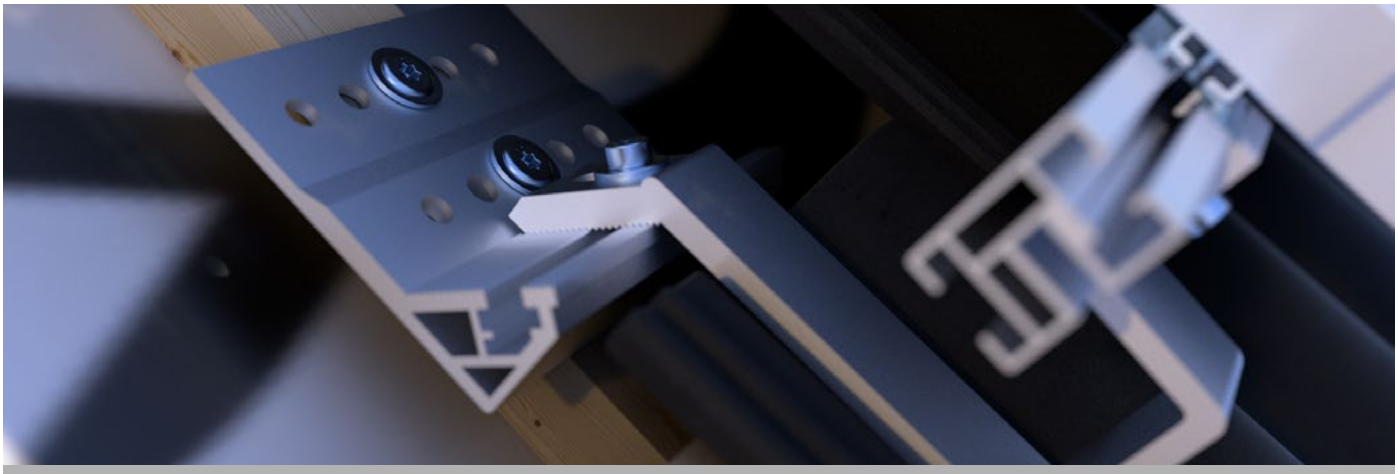
Fixing screw FIX-FIT

*Not included in the scope of delivery

TECHNICAL DRAWING

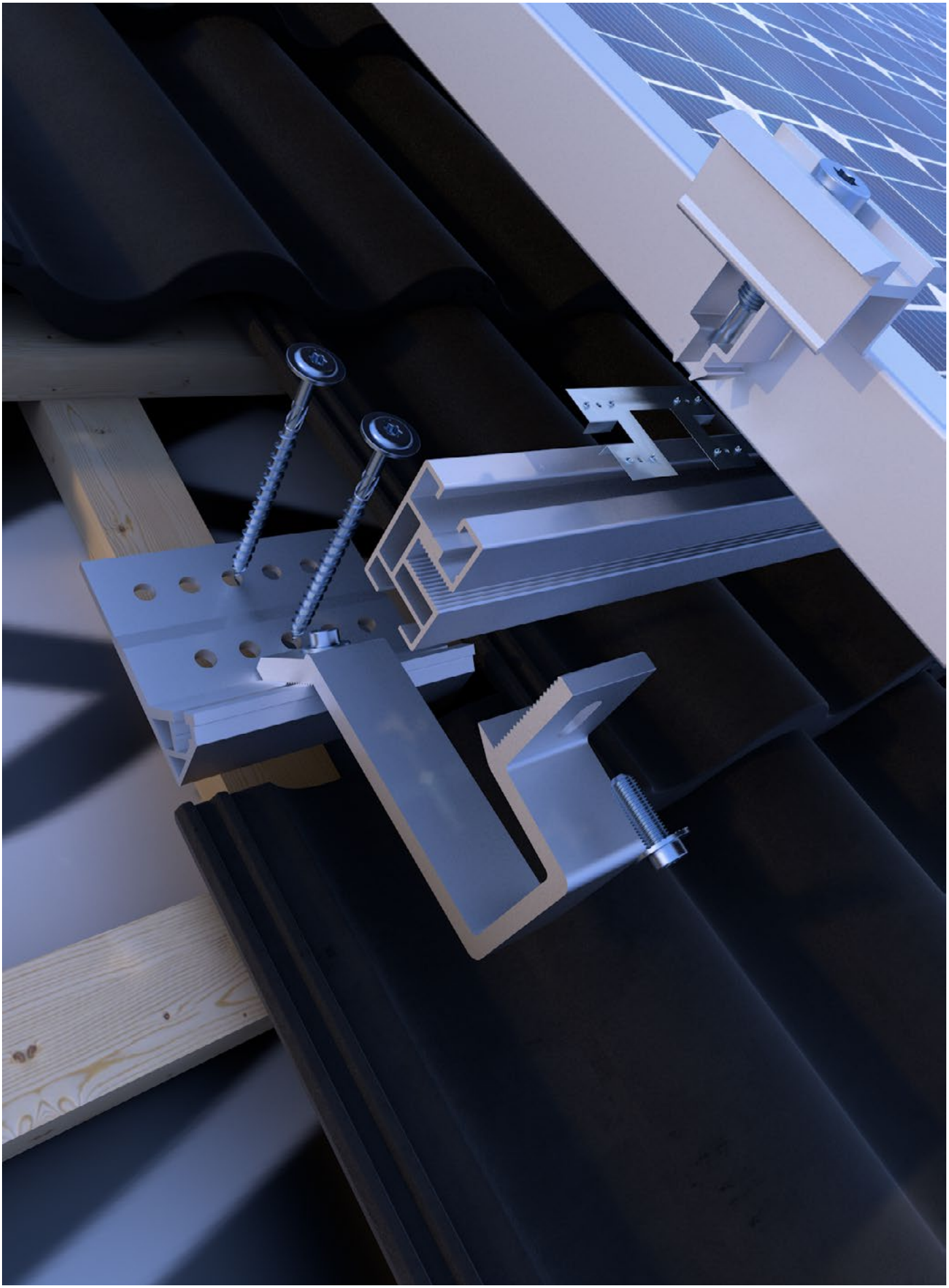


APPLICATION IMAGE



Roof hook FIX-FIT mounted on the counter batten, guided through the notched roof tile and with mounted mounting profile FIX-FIT.

EXPLODED VIEW



MOUNTING PROFILE FIX-FIT

Aluminium

The FIX-FIT mounting profile can be easily attached to the FIX-FIT roof hooks using the FIX-FIT fixing screw. Due to our T40 ONLY system, you only need a TX 40 tool for mounting. The FIX-FIT system can be mounted comfortably by one person, because the mounting profile can simply be placed and fixed without holding it.

Mounting profile FIX-FIT

Art. no.	Dimension [mm]	Material	Connection options	PU
SOL975748	40 x 26,3 x 6400	Aluminium	FASTFIX module clamps	1

ADVANTAGES / FEATURES

- T40 ONLY → One tool for everything – TX 40
- 1 man mounting → rail can be mounted by one person by one person, because the rail rests on does not have to be held
- Quick mounting due to screw channel
- Rail easy to mount from the side
- Suitable for Fastfix module clamp

Suitable for this*

Roof hook FIX-FIT VARIO

Roof hook FIX-FIT

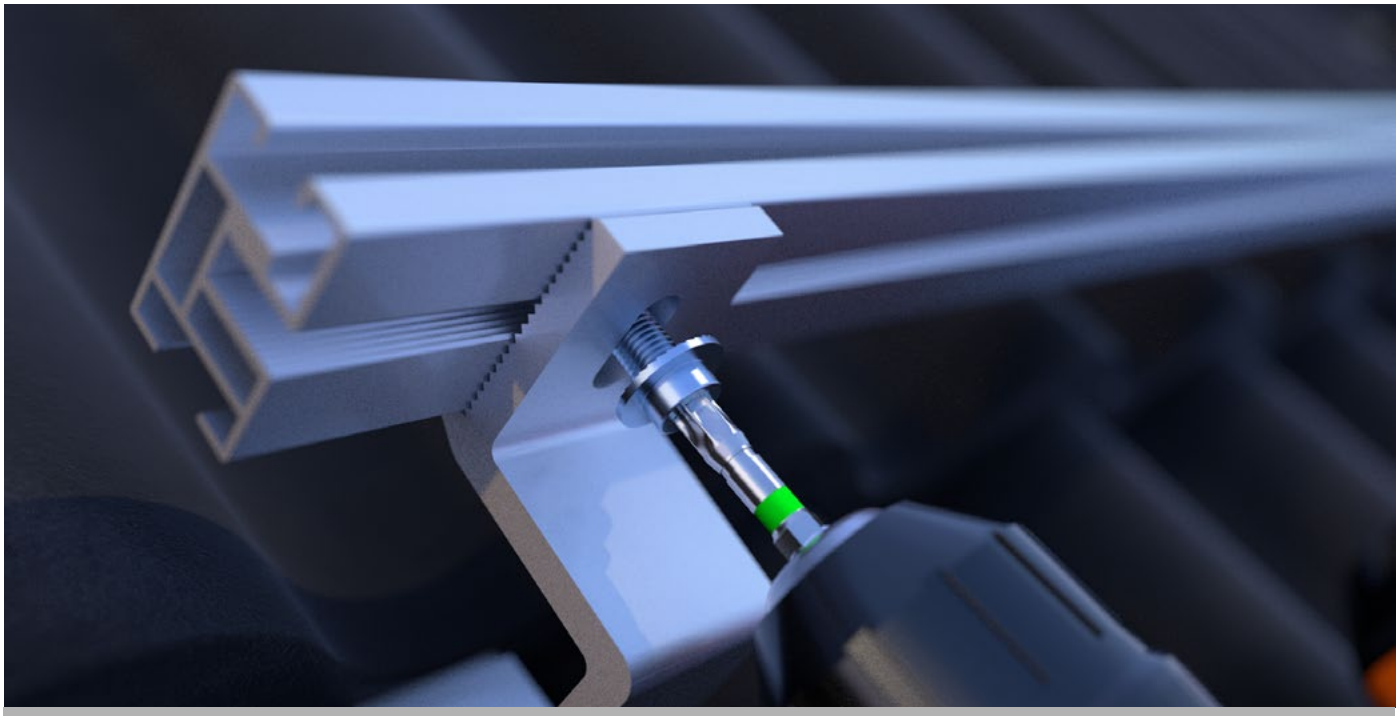
Longitudinal connector FIX-FIT

Fixing screw FIX-FIT

FASTFIX module clamps

*Not included in the scope of delivery

APPLICATION IMAGE



Mounting profile FIX-FIT attached to roof hook FIX-FIT by means of FIX-FIT screw.

LONGITUDINAL CONNECTOR FIX-FIT

For mounting profile FIX-FIT

The FIX-FIT longitudinal connector is made of aluminum and is used to connect FIX-FIT mounting profiles. The connector is placed on the respective ends of two mounting profiles and fixed with the enclosed FIX-FIT fixing screws.

Longitudinal connector FIX-FIT

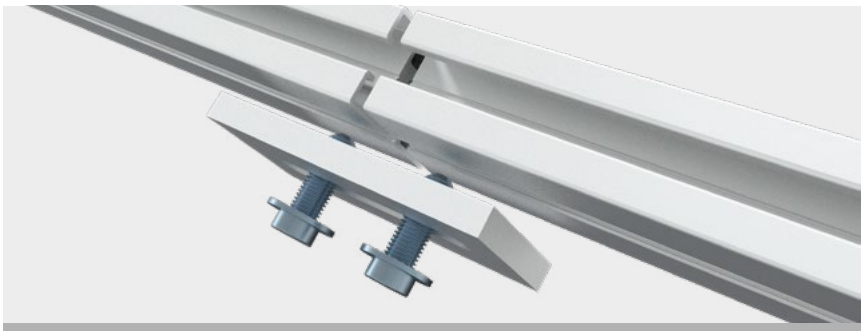
Mounting profile FIX-FIT | Fixing screw FIX-FIT

*Not included in the scope of delivery

Art. no.	Dimension [mm][a)]	Material	PU*
SOL100645	80 x 40 x 6	Aluminium	10

a) Length x width x height * Incl. 20 fixing screws FIX-FIT in scope of delivery

APPLICATION IMAGE



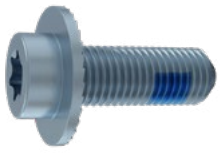
Two FIX-FIT mounting profiles are connected to each other by means of FIX-FIT longitudinal connectors.

FIXING SCREW FIX-FIT

For mounting profile FIX-FIT

The FIX-FIT fixing screw is suitable for fixing the FIX-FIT mounting profile to the roof hooks. Due to the locking teeth and micro-encapsulation, the screw will not loosen due to vibration. Due to our T40 ONLY system, you only need a TX 40 tool for mounting. The FIX-FIT system can be mounted comfortably by one person, because the mounting profile can simply be put on and fixed without holding it.

Fixing screw FIX-FIT



Art. no.	Dimension [mm]	Material	PU
SOL100709	M8 x 22	A2 stainless steel	200

TOOLWORKS LONG BITS

Art. no.	Designation	Drive	Material	PU
101012	Long bit 50 mm	TX40	Galvanised steel as per DIN 3126	2
101018	Long bit 50 mm	TX40	Galvanised steel as per DIN 3126	5

FASTFIX MODULE CLAMPS

AL

FIX-FIT SYSTEM

The module centre clamp can be used with solar modules with frame heights of 30–40 mm. It fastens the solar modules with a simple click function and is compatible with both trapezoidal sheet and pitched roofs. The FASTFIX module clamp is compatible with the pitched roof, pitched roof SLIM and trapezoidal sheet installation profiles.

FASTFIX module clamps

End clamp

Centre clamp

End clamp, black

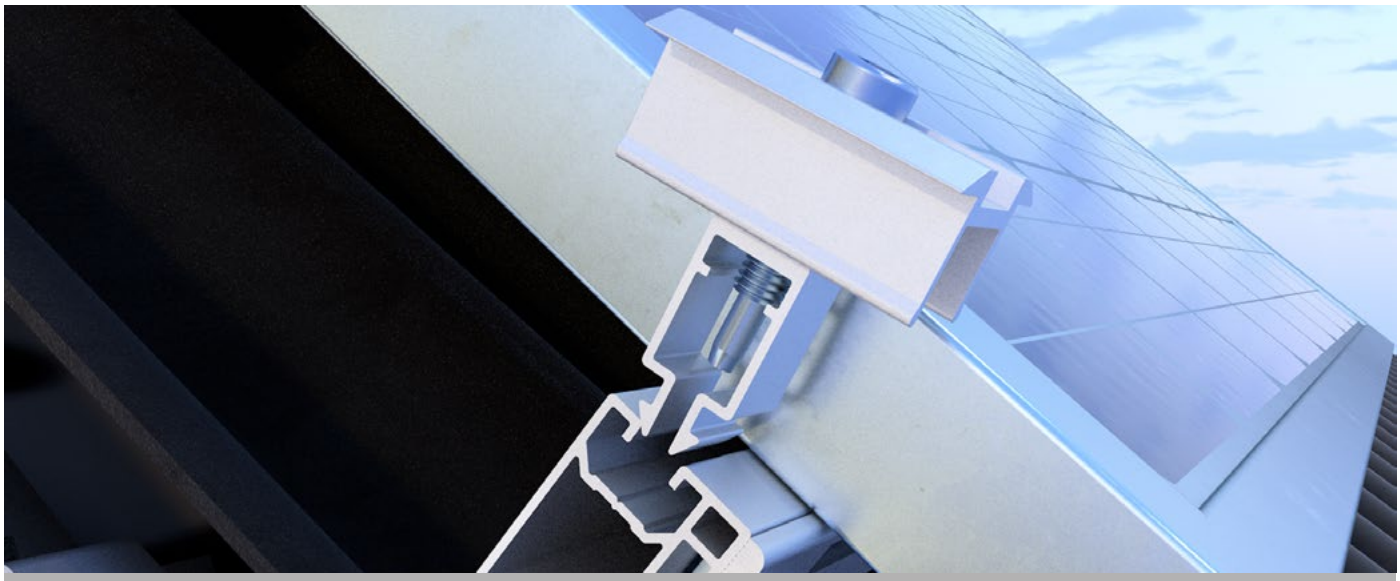
Centre clamp, black

Art. no.	Name	Clamp thickness = module height [mm]	Clamp length [mm]	PU
SOL100666	End clamp	30–40	37,6	40
SOL100667	End clamp, black	30–40	37,6	40
SOL100668	Centre clamp	30–40	37,6	40
SOL100669	Centre clamp, black	30–40	37,6	40

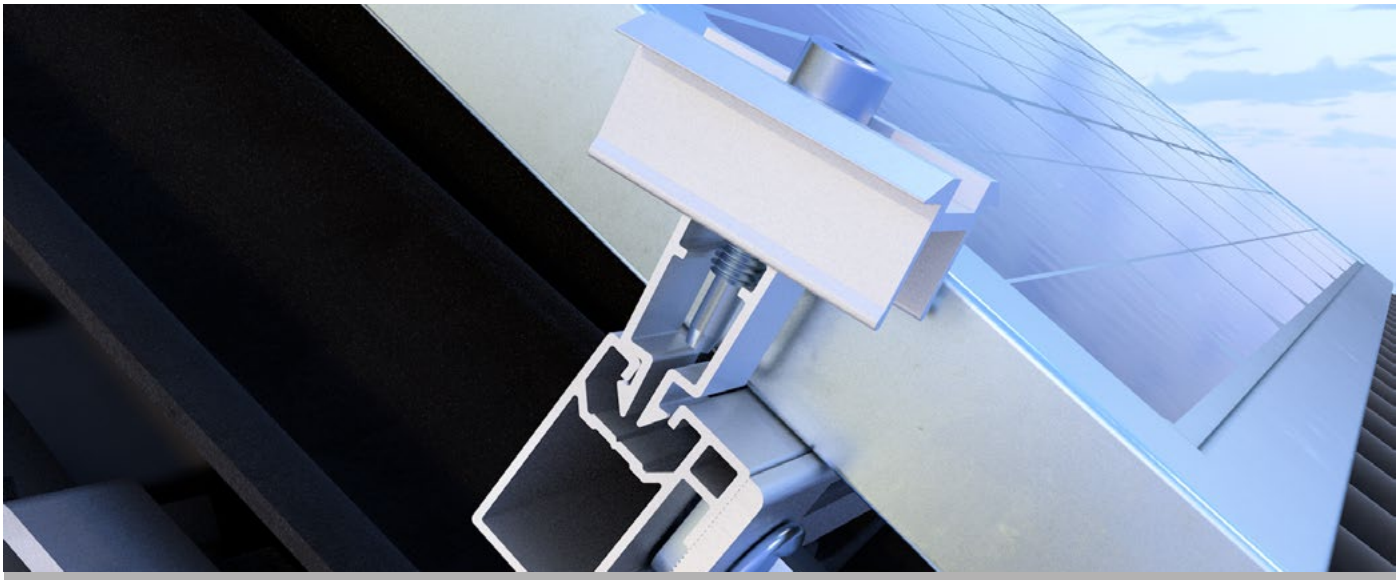
ADVANTAGES

- Weather-resistant
- Quick and easy installation

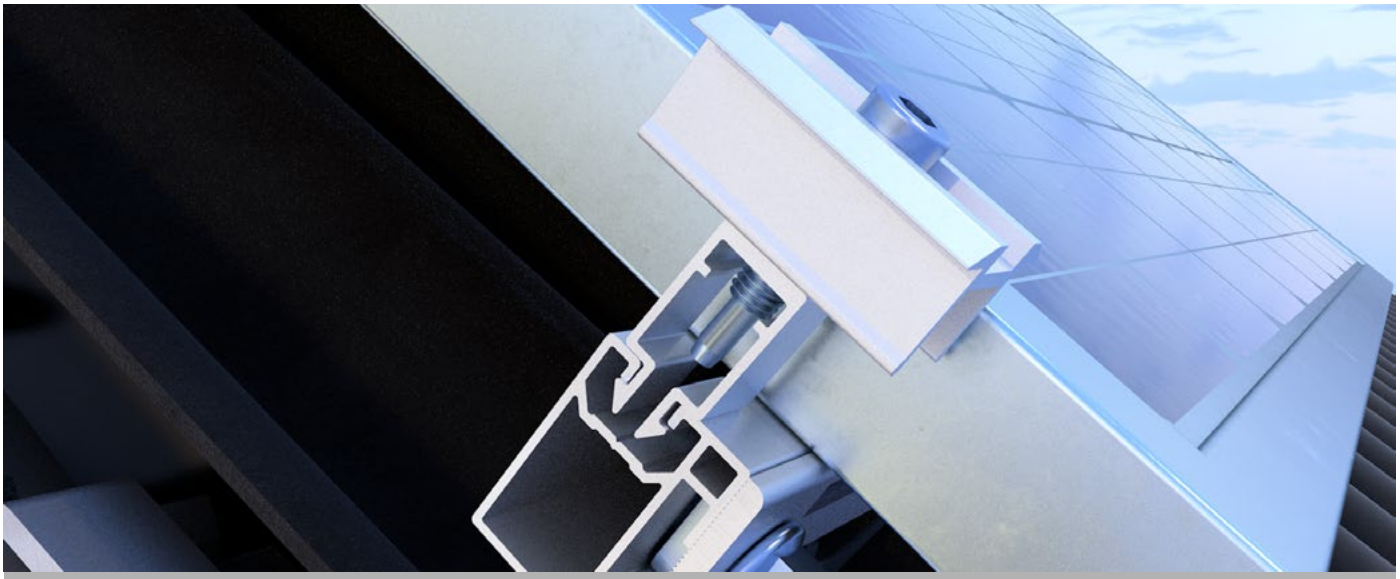
INSTALLATION EXAMPLE



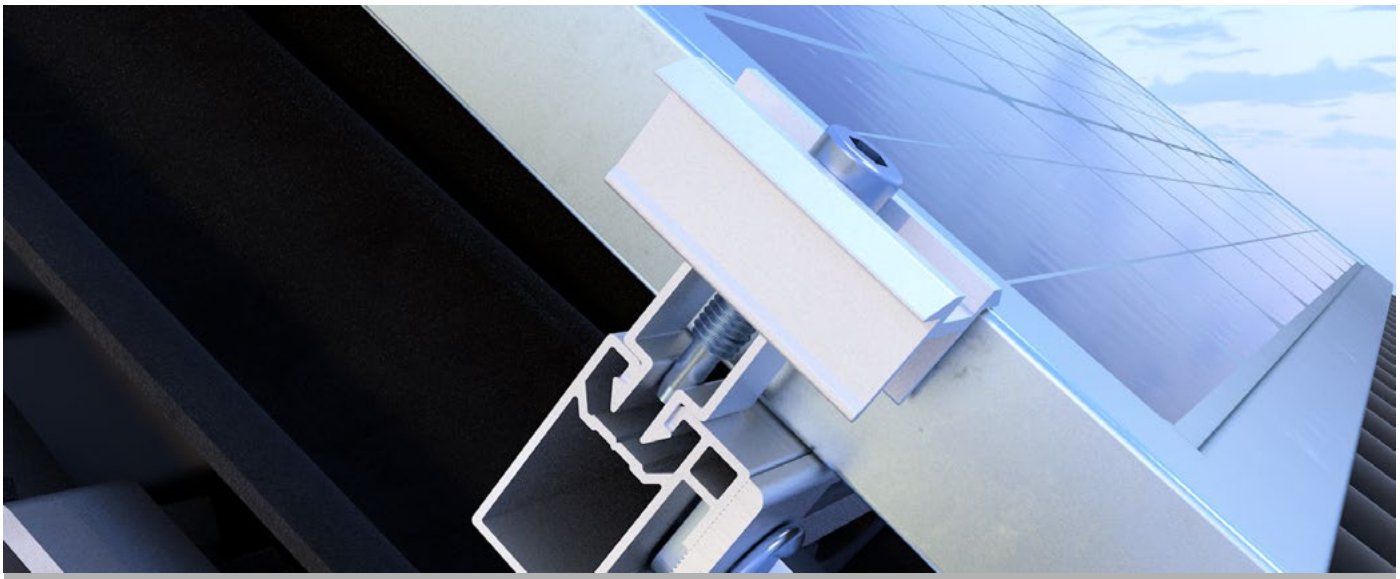
STEP 1: Unscrew the clamp screw and insert the FastFix into the rail at an angle.



STEP 2: One side of the clamp is locked directly in the case of angled insertion.



STEP 3: The straight clamp set-up makes it possible to click the second hook into the profile.



STEP 4: Finally, tighten the clamp with the screw.

ROOF HOOK FLEX

Triple-adjustable, A2 stainless steel

A2

EDELSTAHL Rost frei®

The roof hook FLEX is used to install solar panels in combination with the pitched roof installation profiles. The product is height-adjustable because of the slotted holes and has 3 lateral adjustment options to level out uneven roofs. To fasten the installation profile on the roof hook, you can use Eurotec hammer head screws in conjunction with the locking nuts.

Roof hook FLEX

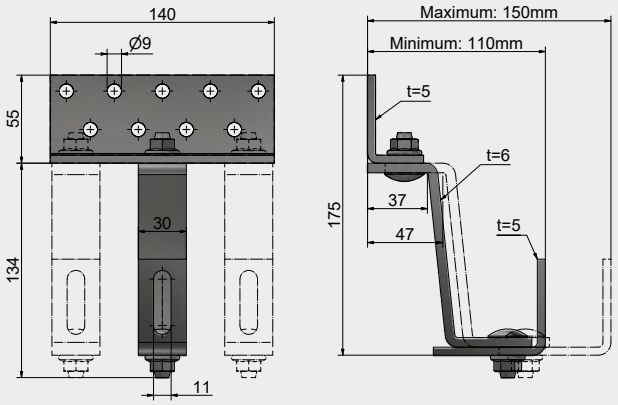
Art. no.	Base plate		Hook			Installation height	Slotted hole	PU
	Dimensions [mm][a)]	Material	Dimensions [mm][b)]		Material	[mm]	[mm][c)]	
SOL945517	140 x 55 x 35	1.4301	115 x 102,6 x 30; d=6	60 x 70 x 30; d=5	1.4301	110 - 150	Ø 11 x 40	30
SOL100712	140 x 55 x 35	1.4301	150 x 110 x 35; d=6	60 x 8 5x 35; d=5	1.4301	117,5 - 174,5	Ø 11 x 40	20

a) length x width x sheet thickness; b) height x width x depth; material thickness; c) bore width x hole length.

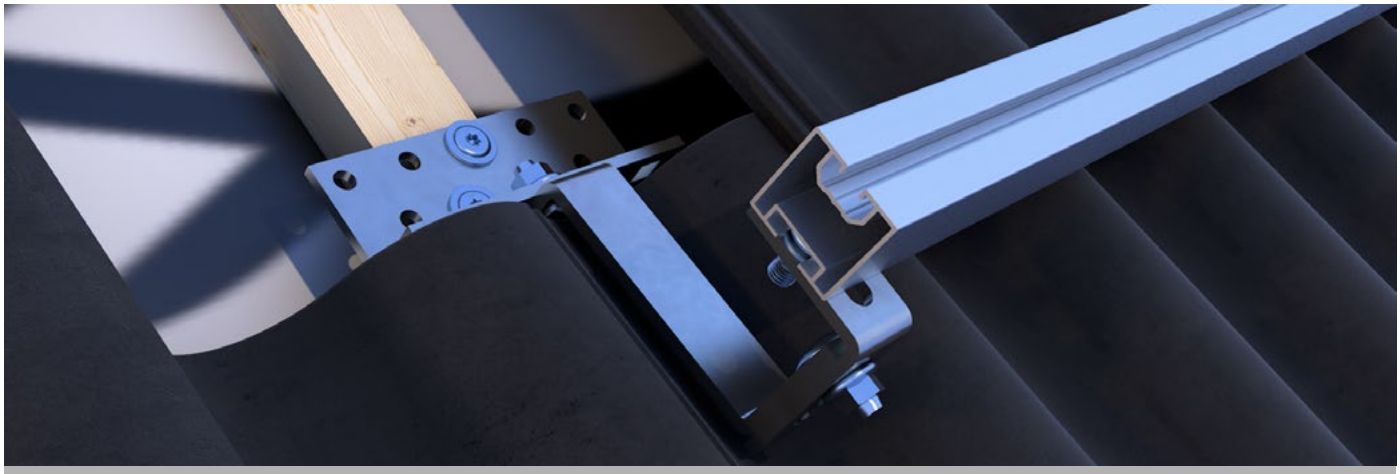
ADVANTAGES/SPECIFICATIONS

- Double height-adjustable roof hook with adjustment range from 110 to 150 mm & 117,5 to 174,5 mm
- Laterally adjustable with 3 adjustment options
- Height adjustment secured by DIN 603 A2-70 carriage bolt M10 and DIN 6923 A2-70 locking nut M10
- Stainless steel according to national technical certification Z-30.3-6

TECHNICAL DRAWING



APPLICATION IMAGE



Roof hook FLEX installed on the counter-batten, guided through the released roof tile, with pitched roof installation profile installed.

DETERMINING QUANTITIES – ROOF HOOKS FLEX

MEASUREMENT EXAMPLE: WITHOUT SNOW GUARD

						Number of roof hooks FLEX/m²								
Height above sea level [m] for snow load zone:					Snow load s_k*	Roof/module inclination								
1	1a	2	2a	3	kN/m²	20°	25°	30°	35°	40°	45°	50°	55°	60°
≤ 444	–	–	–	–	0.65	2.93	3.07	3.18	2.79	2.40	2.03	1.70	1.41	1.18
488	–	–	–	–	0.75	3.24	3.38	3.49	3.03	2.58	2.16	1.78	1.45	1.18
528	≤ 458	≤ 337	–	–	0.85	3.55	3.70	3.79	3.28	2.77	2.29	1.85	1.48	1.18
566	492	364	–	–	0.95	3.87	4.01	4.09	3.52	2.95	2.41	1.93	1.51	1.18
603	524	390	–	–	1.05	4.18	4.32	4.40	3.76	3.13	2.54	2.00	1.55	1.18
637	555	415	≤ 356	≤ 314	1.15	4.49	4.63	4.70	4.00	3.31	2.66	2.08	1.58	1.18
670	585	438	377	334	1.25	4.81	4.94	5.00	4.24	3.50	2.79	2.15	1.61	1.18
702	613	461	397	352	1.35	5.12	5.25	5.31	4.49	3.68	2.91	2.23	1.65	1.18
733	640	483	417	370	1.45	5.44	5.56	5.61	4.73	3.86	3.04	2.30	1.68	1.18

*s_k = characteristic value of snow load on the ground according to DIN 1055-5:2005

MEASUREMENT EXAMPLE: WITH SNOW GUARD

						Number of roof hooks FLEX/m²								
Height above sea level [m] for snow load zone:					Snow load s_k*	Roof/module inclination								
1	1a	2	2a	3	kN/m²	20°	25°	30°	35°	40°	45°	50°	55°	60°
≤ 444	–	–	–	–	0.65	2.93	3.07	3.18	3.11	2.99	2.85	2.68	2.49	2.28
488	–	–	–	–	0.75	3.24	3.38	3.49	3.40	3.27	3.10	2.91	2.69	2.45
528	≤ 458	≤ 337	–	–	0.85	3.55	3.70	3.79	3.69	3.54	3.35	3.13	2.88	2.61
566	492	364	–	–	0.95	3.87	4.01	4.09	3.98	3.81	3.61	3.36	3.08	2.78
603	524	390	–	–	1.05	4.18	4.32	4.40	4.27	4.09	3.86	3.59	3.28	2.95
637	555	415	≤ 356	≤ 314	1.15	4.49	4.63	4.70	4.56	4.36	4.11	3.81	3.48	3.12
670	585	438	377	334	1.25	4.81	4.94	5.00	4.85	4.63	4.36	4.04	3.68	3.29
702	613	461	397	352	1.35	5.12	5.25	5.31	5.14	4.91	4.61	4.26	3.88	3.46
733	640	483	417	370	1.45	5.44	5.56	5.61	5.43	5.18	4.86	4.49	4.07	3.62

*s_k = characteristic value of snow load on the ground according to DIN 1055-5:2005

Conversion example for roof hooks/m² → max. roof hook spacing along rafter axis = 1: (2.03 x 0.7) = 0.70 m

Whereby 2.03 = number of roof hooks/m²; 0.7 = rafter spacing in m. Conversion example applies with each rafter as fastening point for the roof hooks. Measurement according to DIN 1055-4:2005, EC 1-4 and DIN 1055-5:2005. All values provided should be viewed as subject to the assumptions that have been made. They represent example calculations and apply subject to typographical errors and printing errors.

FURTHER ASSUMPTIONS:
Gable roof; ridge height max. 18 m; wind load zone 1; suction coefficient of roof inclination cpe,H,1= -1.3; pressure coefficient in accordance with the roof inclination with the least favourable value taken into account (F, G, H); net load of PV module 0.15 kN/m². Roof hook not supported on roof covering. Pitched roof installation profile 40/40. Load is applied by the installation profile centrally in the top connection area of the roof hooks. Max. span width of the installation profile 1.40 m.

ROOF HOOK FIX-FIT VARIO

AL

FIX-FIT SYSTEM

Continuously adjustable, aluminium

The roof hook FLEX SLIM is used to install solar panels on pitched roofs in combination with the pitched roof installation profile SLIM. Thanks to the slotted hole, the installation height can be varied to adapt to the roof tiles and the main batten. The continuously adjustable lateral adjustment gives you the flexibility to easily align the hook to the counter batten and screw it in place. The slotted hole on the base plate makes it possible to further increase the installation height. To fasten the installation profile to the roof hook, Eurotec hammer head screws and locking nuts can be used.

Dachhaken FIX-FIT VARIO

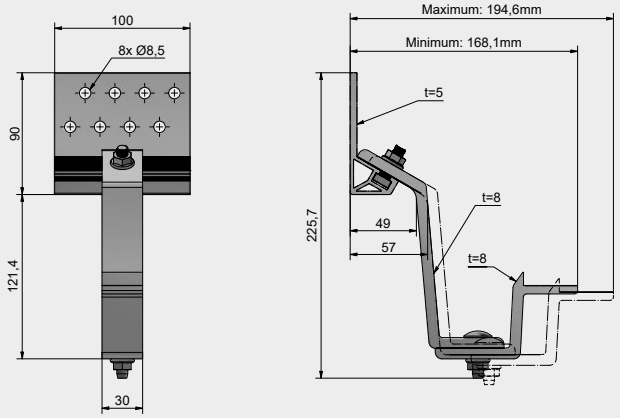
Art. no.	Base plate		Hook		Installation height	PU
	Dimensions [mm][a)]	Material	Dimensions [mm][b)]	Material	[mm]	
SOL100671	100 x 90 x 8	Aluminium	147 x 108, 6 x 30; d=8	Aluminium	168–194	16

a) Length x width x sheet thickness; b) Height x width x depth; material thickness; c) Bore width x hole length

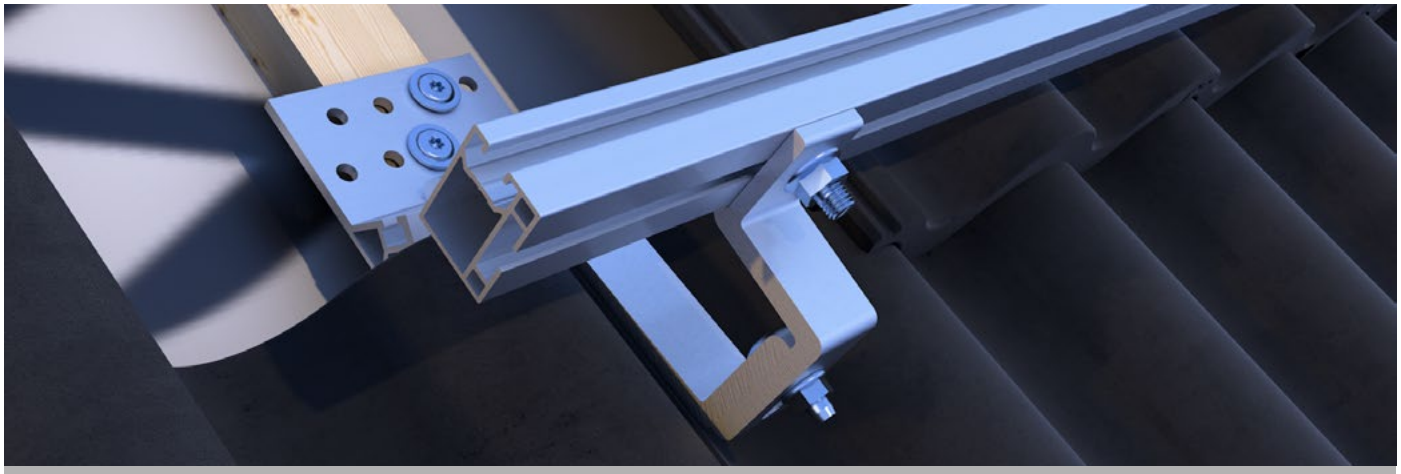
ADVANTAGES/SPECIFICATIONS

- Double height-adjustable roof hook with installation height from 169 to 187 mm
- Continuous lateral adjustment
- Height adjustment secured by DIN 603 A2 carriage bolt M8x20 and DIN 6923 A2-70 locking nut M8

TECHNICAL DRAWING



APPLICATION IMAGE



Roof hook FIX-FIT VARIO installed on the counter-batten, guided through the released roof tile, with pitched roof installation profile SLIM installed.

DETERMINING QUANTITIES – ROOF HOOKS FLEX SLIM

MEASUREMENT EXAMPLE: WITHOUT SNOW GUARD

						Number of roof hooks FIX-FIT VARIO/m²								
Height above sea level [m] for snow load zone:					Snow load s_k*	Roof/module inclination								
1	1a	2	2a	3	kN/m²	20°	25°	30°	35°	40°	45°	50°	55°	60°
≤ 444	–	–	–	–	0.65	2.93	3.07	3.18	2.79	2.40	2.03	1.70	1.41	1.18
488	–	–	–	–	0.75	3.24	3.38	3.49	3.03	2.58	2.16	1.78	1.45	1.18
528	≤ 458	≤ 337	–	–	0.85	3.55	3.70	3.79	3.28	2.77	2.29	1.85	1.48	1.18
566	492	364	–	–	0.95	3.87	4.01	4.09	3.52	2.95	2.41	1.93	1.51	1.18
603	524	390	–	–	1.05	4.18	4.32	4.40	3.76	3.13	2.54	2.00	1.55	1.18
637	555	415	≤ 356	≤ 314	1.15	4.49	4.63	4.70	4.00	3.31	2.66	2.08	1.58	1.18
670	585	438	377	334	1.25	4.81	4.94	5.00	4.24	3.50	2.79	2.15	1.61	1.18
702	613	461	397	352	1.35	5.12	5.25	5.31	4.49	3.68	2.91	2.23	1.65	1.18
733	640	483	417	370	1.45	5.44	5.56	5.61	4.73	3.86	3.04	2.30	1.68	1.18

*s_k = characteristic value of snow load on the ground according to DIN 1055-5:2005

MEASUREMENT EXAMPLE: WITH SNOW GUARD

						Number of roof hooks FIX-FIT VARIO/m²								
Height above sea level [m] for snow load zone:					Snow load s_k*	Roof/module inclination								
1	1a	2	2a	3	kN/m²	20°	25°	30°	35°	40°	45°	50°	55°	60°
≤ 444	–	–	–	–	0.65	2.93	3.07	3.18	3.11	2.99	2.85	2.68	2.49	2.28
488	–	–	–	–	0.75	3.24	3.38	3.49	3.40	3.27	3.10	2.91	2.69	2.45
528	≤ 458	≤ 337	–	–	0.85	3.55	3.70	3.79	3.69	3.54	3.35	3.13	2.88	2.61
566	492	364	–	–	0.95	3.87	4.01	4.09	3.98	3.81	3.61	3.36	3.08	2.78
603	524	390	–	–	1.05	4.18	4.32	4.40	4.27	4.09	3.86	3.59	3.28	2.95
637	555	415	≤ 356	≤ 314	1.15	4.49	4.63	4.70	4.56	4.36	4.11	3.81	3.48	3.12
670	585	438	377	334	1.25	4.81	4.94	5.00	4.85	4.63	4.36	4.04	3.68	3.29
702	613	461	397	352	1.35	5.12	5.25	5.31	5.14	4.91	4.61	4.26	3.88	3.46
733	640	483	417	370	1.45	5.44	5.56	5.61	5.43	5.18	4.86	4.49	4.07	3.62

*s_k = characteristic value of snow load on the ground according to DIN 1055-5:2005

Conversion example for roof hooks/m² → max. roof hook spacing along rafter axis = 1: (2.03 x 0.7) = 0.70 m

Whereby 2.03 = number of roof hooks/m²; 0.7 = rafter spacing in m. Conversion example applies with each rafter as fastening point for the roof hooks. Measurement according to DIN 1055-4:2005, EC 1-4 and DIN 1055-5:2005. All values provided should be viewed as subject to the assumptions that have been made. They represent example calculations and apply subject to typographical errors and printing errors.

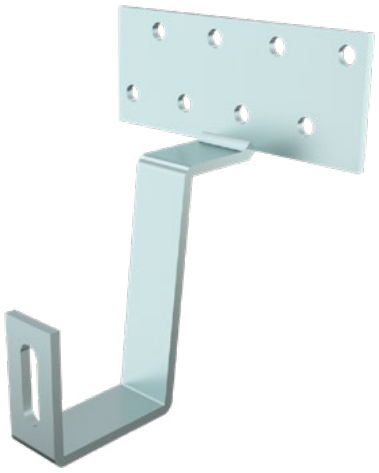
FURTHER ASSUMPTIONS:
Gable roof; ridge height max. 18 m; wind load zone 1; suction coefficient of roof inclination cpe,H,1= -1.3; pressure coefficient in accordance with the roof inclination with the least favourable value taken into account (F, G, H); net load of PV module 0.15 kN/m². Roof hook not supported on roof covering. Pitched roof installation profile 40/40. Load is applied by the installation profile centrally in the top connection area of the roof hooks. Max. span width of the installation profile 1.40 m.

ROOF HOOK BASIC

A2 stainless steel

The roof hook BASIC is used to install solar panels in combination with the pitched roof installation profiles. To fasten the installation profile on the roof hook, you can use Eurotec hammer head screws in conjunction with the locking nuts.

Roof hook BASIC



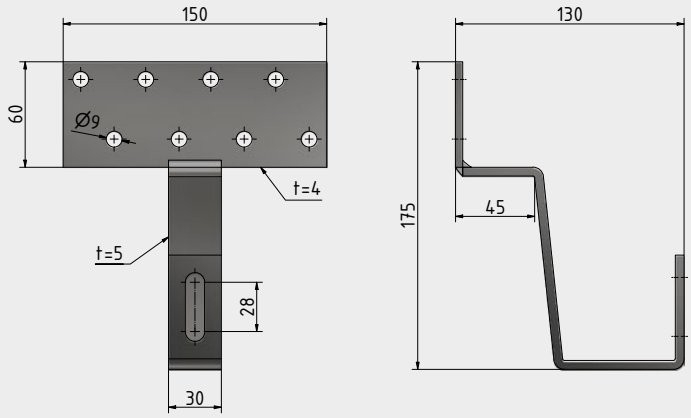
Art. no.	Base plate		Hook		Installation height	Slotted hole	PU
	Dimensions [mm][a)]	Material	Dimensions [mm][b)]	Material	[mm]	[mm][c)]	
SOL945513	150 x 60 x 4	1.4301	30 x 5	1.4301	130	Ø 11 x 39	20

a) Length x width x sheet thickness; b) Width x sheet thickness; c) Bore width x slotted hole length

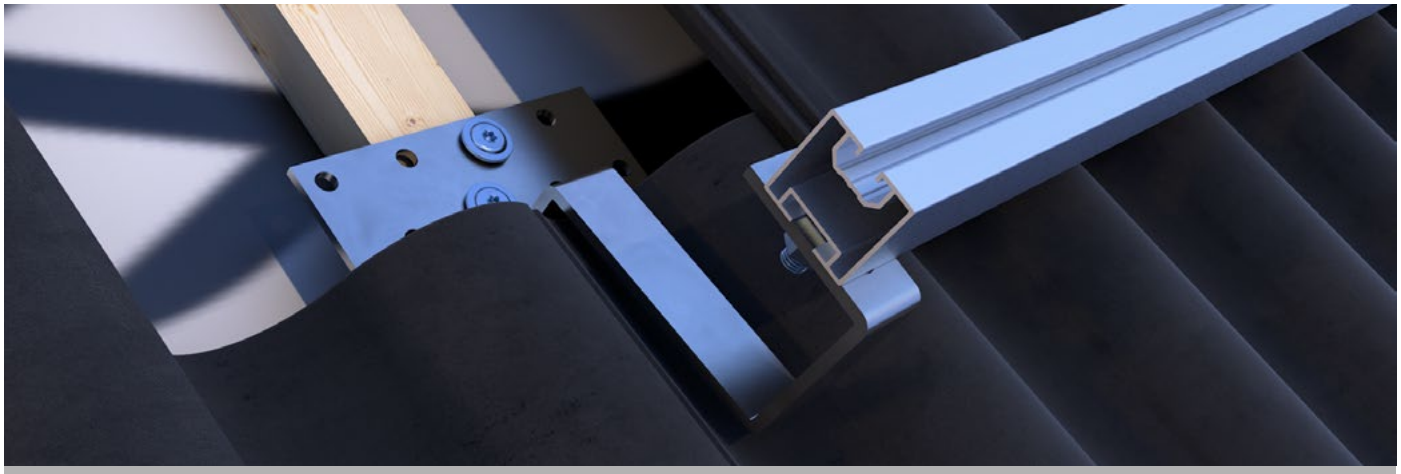
ADVANTAGES/SPECIFICATIONS

- Compatible with all roof tiles
- Corrosion-resistant stainless steel
- Adapted drilling pattern for maximum efficiency
- Stainless steel according to national technical certification Z-30.3-6
- Easy to handle

TECHNICAL DRAWING



APPLICATION IMAGE



Roof hook BASIC installed on the counter-batten, guided through the released roof tile, with pitched roof installation profile installed.

DETERMINING QUANTITIES – ROOF HOOKS BASIC

MEASUREMENT EXAMPLE: WITHOUT SNOW GUARD

						Number of roof hooks BASIC/m²								
Height above sea level [m] for snow load zone:					Snow load s_k*	Roof/module inclination								
1	1a	2	2a	3	kN/m²	20°	25°	30°	35°	40°	45°	50°	55°	60°
≤ 444	–	–	–	–	0.65	2.51	2.66	2.77	2.45	2.12	1.80	1.51	1.25	1.04
488	–	–	–	–	0.75	2.78	2.93	3.04	2.67	2.29	1.92	1.58	1.28	1.04
528	≤ 458	≤ 337	–	–	0.85	3.05	3.20	3.31	2.89	2.45	2.03	1.65	1.31	1.04
566	492	364	–	–	0.95	3.32	3.48	3.58	3.11	2.62	2.15	1.72	1.34	1.04
603	524	390	–	–	1.05	3.59	3.75	3.85	3.32	2.79	2.27	1.79	1.37	1.04
637	555	415	≤ 356	≤ 314	1.15	3.86	4.02	4.12	3.54	2.95	2.38	1.86	1.41	1.04
670	585	438	377	334	1.25	4.13	4.30	4.39	3.76	3.12	2.50	1.93	1.44	1.04
702	613	461	397	352	1.35	4.41	4.57	4.66	3.98	3.28	2.61	2.00	1.47	1.04
733	640	483	417	370	1.45	4.68	4.84	4.93	4.20	3.45	2.73	2.07	1.50	1.04

*s_k = characteristic value of snow load on the ground according to DIN 1055-5:2005

MEASUREMENT EXAMPLE: WITH SNOW GUARD

						Number of roof hooks BASIC/m²								
Height above sea level [m] for snow load zone:					Snow load s_k*	Roof/module inclination								
1	1a	2	2a	3	kN/m²	20°	25°	30°	35°	40°	45°	50°	55°	60°
≤ 444	–	–	–	–	0.65	2.51	2.66	2.77	2.73	2.66	2.56	2.42	2.27	2.09
488	–	–	–	–	0.75	2.78	2.93	3.04	3.00	2.91	2.79	2.63	2.45	2.25
528	≤ 458	≤ 337	–	–	0.85	3.05	3.20	3.31	3.26	3.16	3.02	2.85	2.64	2.41
566	492	364	–	–	0.95	3.32	3.48	3.58	3.52	3.41	3.25	3.06	2.83	2.57
603	524	390	–	–	1.05	3.59	3.75	3.85	3.78	3.66	3.49	3.27	3.02	2.73
637	555	415	≤ 356	≤ 314	1.15	3.86	4.02	4.12	4.04	3.91	3.72	3.48	3.20	2.89
670	585	438	377	334	1.25	4.13	4.30	4.39	4.31	4.16	3.95	3.69	3.39	3.06
702	613	461	397	352	1.35	4.41	4.57	4.66	4.57	4.41	4.18	3.90	3.58	3.22
733	640	483	417	370	1.45	4.68	4.84	4.93	4.83	4.65	4.41	4.11	3.77	3.38

*s_k = characteristic value of snow load on the ground according to DIN 1055-5:2005

Conversion example for roof hooks/m² → max. roof hook spacing along rafter axis = 1: (1.80 x 0.7) = 0.79 m

Whereby 1.80 = number of roof hooks/m²; 0.7 = rafter spacing in m. Conversion example applies with each rafter as fastening point for the roof hooks. Measurement according to DIN 1055-4:2005, EC 1-4 and DIN 1055-5:2005. All values provided should be viewed as subject to the assumptions that have been made. They represent example calculations and apply subject to typographical errors and printing errors.

FURTHER ASSUMPTIONS:
Gable roof; ridge height max. 18 m; wind load zone 1; suction coefficient of roof inclination cpe,H,1= -1.3; pressure coefficient in accordance with the roof inclination with the least favourable value taken into account (F, G, H); net load of PV module 0.15 kN/m². Roof hook not supported on roof covering. Pitched roof installation profile 40/40. Load is applied by the installation profile centrally in the top connection area of the roof hooks. Max. span width of the installation profile 1.40 m.

ROOF HOOK HEAVY

A2 stainless steel

The roof hook HEAVY is used to install solar panels in combination with the pitched roof installation profiles. To fasten the installation profile on the roof hook, you can use Eurotec hammer head screws in conjunction with the locking nuts.

Roof hooks HEAVY

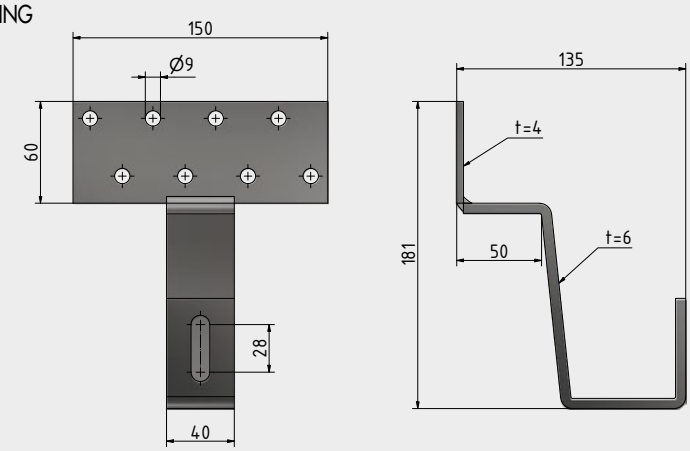
Art. no.	Base plate		Hook		Installation height	Slotted hole	PU
	Dimensions [mm][a)]	Material	Dimensions [mm][b)]	Material	[mm]	[mm][c)]	
SOL945628	150 x 60 x 6	1.4301	40 x 6	1.4301	135	Ø 11 x 39	20

a) Length x width x sheet thickness; b) Width x sheet thickness; c) Bore width x slotted hole length

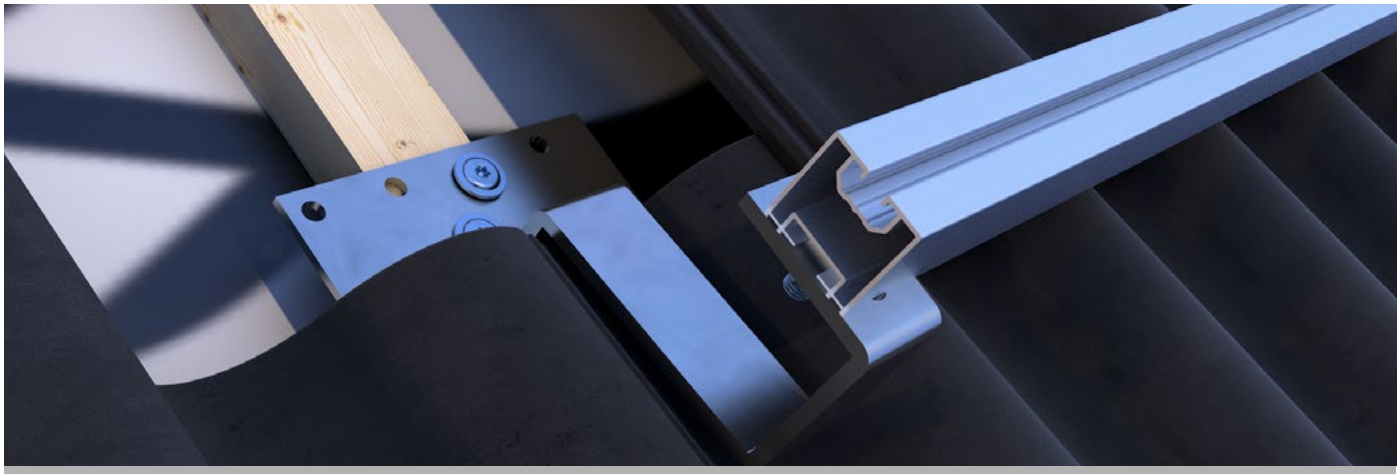
ADVANTAGES/SPECIFICATIONS

- Wider design and greater load-bearing capacity
- Compatible with all roof tiles
- Corrosion-resistant stainless steel
- Adapted drilling pattern for maximum efficiency
- Stainless steel according to national technical certification Z-30.3-6

TECHNICAL DRAWING



APPLICATION IMAGE



Roof hook HEAVY installed on the counter-batten, guided through the released roof tile, with pitched roof installation profile installed.

DETERMINING QUANTITIES – ROOF HOOKS HEAVY

MEASUREMENT EXAMPLE: WITHOUT SNOW GUARD

						Number of roof hooks HEAVY/m²								
Height above sea level [m] for snow load zone:					Snow load s_k*	Roof/module inclination								
1	1a	2	2a	3	kN/m²	20°	25°	30°	35°	40°	45°	50°	55°	60°
≤ 444	–	–	–	–	0.65	1.32	1.41	1.47	1.30	1.13	0.96	0.81	0.67	0.55
488	–	–	–	–	0.75	1.46	1.55	1.62	1.42	1.22	1.03	0.84	0.68	0.55
528	≤ 458	≤ 337	–	–	0.85	1.61	1.70	1.76	1.54	1.31	1.09	0.88	0.70	0.55
566	492	364	–	–	0.95	1.75	1.84	1.90	1.66	1.40	1.15	0.92	0.72	0.55
603	524	390	–	–	1.05	1.89	1.99	2.05	1.77	1.49	1.22	0.96	0.73	0.55
637	555	415	≤ 356	≤ 314	1.15	2.04	2.13	2.19	1.89	1.58	1.28	1.00	0.75	0.55
670	585	438	377	334	1.25	2.18	2.28	2.34	2.01	1.67	1.34	1.04	0.77	0.55
702	613	461	397	352	1.35	2.32	2.42	2.48	2.13	1.76	1.40	1.07	0.79	0.55
733	640	483	417	370	1.45	2.47	2.57	2.63	2.24	1.85	1.47	1.11	0.80	0.55

*s_k = characteristic value of snow load on the ground according to DIN 1055-5:2005

MEASUREMENT EXAMPLE: WITH SNOW GUARD

						Number of roof hooks HEAVY/m²								
Height above sea level [m] for snow load zone:					Snow load s_k*	Roof/module inclination								
1	1a	2	2a	3	kN/m²	20°	25°	30°	35°	40°	45°	50°	55°	60°
≤ 444	–	–	–	–	0.65	1.32	1.41	1.47	1.46	1.42	1.37	1.31	1.22	1.13
488	–	–	–	–	0.75	1.46	1.55	1.62	1.60	1.56	1.50	1.42	1.33	1.22
528	≤ 458	≤ 337	–	–	0.85	1.61	1.70	1.76	1.74	1.69	1.63	1.54	1.43	1.31
566	492	364	–	–	0.95	1.75	1.84	1.90	1.88	1.83	1.75	1.65	1.53	1.40
603	524	390	–	–	1.05	1.89	1.99	2.05	2.02	1.96	1.88	1.77	1.64	1.49
637	555	415	≤ 356	≤ 314	1.15	2.04	2.13	2.19	2.16	2.10	2.00	1.88	1.74	1.58
670	585	438	377	334	1.25	2.18	2.28	2.34	2.30	2.23	2.13	2.00	1.84	1.67
702	613	461	397	352	1.35	2.32	2.42	2.48	2.44	2.37	2.26	2.11	1.95	1.75
733	640	483	417	370	1.45	2.47	2.57	2.63	2.58	2.50	2.38	2.23	2.05	1.84

*s_k = characteristic value of snow load on the ground according to DIN 1055-5:2005

Conversion example for roof hooks/m² → max. roof hook spacing along rafter axis = 1: (0.96 x 0.7) = 1.49 m

Whereby 0.96 = number of roof hooks/m²; 0.7 = rafter spacing in m. Conversion example applies with each rafter as fastening point for the roof hooks. Measurement according to DIN 1055-4:2005, EC 1-4 and DIN 1055-5:2005. All values provided should be viewed as subject to the assumptions that have been made. They represent example calculations and apply subject to typographical errors and printing errors.

FURTHER ASSUMPTIONS:
Gable roof; ridge height max. 18 m; wind load zone 1; suction coefficient of roof inclination cpe,H,1= -1.3; pressure coefficient in accordance with the roof inclination with the least favourable value taken into account (F, G, H); net load of PV module 0.15 kN/m². Roof hook not supported on roof covering. Pitched roof installation profile 40/40. Load is applied by the installation profile centrally in the top connection area of the roof hooks. Max. span width of the installation profile 1.40 m.

ROOF HOOK PLAIN TILE

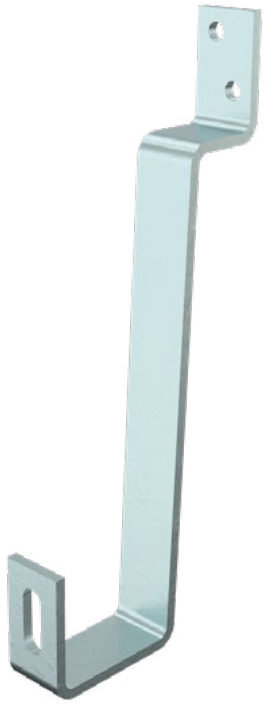
A2

EDELSTAHL® Rost frei

A2 stainless steel

The beaver tail roof hook from Eurotec is used in combination with the pitched roof installation profiles to install solar panels on roofs with beaver tail tiles. To fasten the installation profile on the roof hook, you can use Eurotec hammer head screws in conjunction with the locking nuts.

Beaver tail roof hook

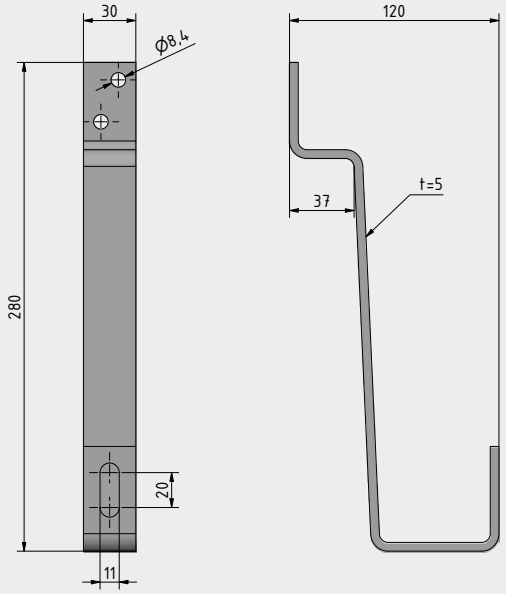


Art. no.	Dimensions [mm]	Material	PU
SOL100682	280 x 120 x 30 t=5	1.4301	30

ADVANTAGES AND SPECIFICATIONS

- Easy to handle
- Corrosion-resistant stainless steel
- Stainless steel according to national technical certification Z-30.3-6

TECHNICAL DRAWING



APPLICATION IMAGES

Plain tile roof hook mounted on the counter batten and covered with beaver tail tile.

Sample application

ROOF HOOK PLAIN TILE 2 MM

A2

EDELSTAHL Rost frei®

Stainless steel A2

The 2 mm plain tile roof hook from Eurotec is used to mount solar panels in combination with the pitched roof mounting profiles on roofs with plain tiles. The Eurotec hammerhead screws in combination with the locking nuts are suitable for fastening the mounting profile to the roof hooks.

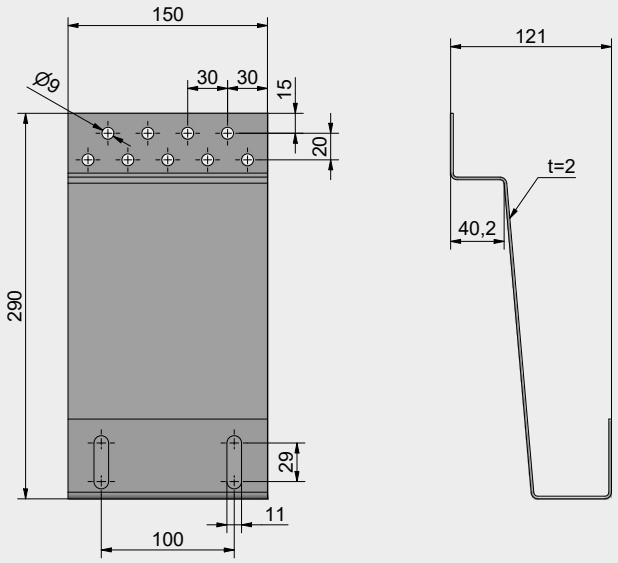
Roof hook plain tile 2 mm

Art. no.	Dimensions [mm]	Material	PU
S0L100713	290 x 121 x 150 t=2	1.4301	25

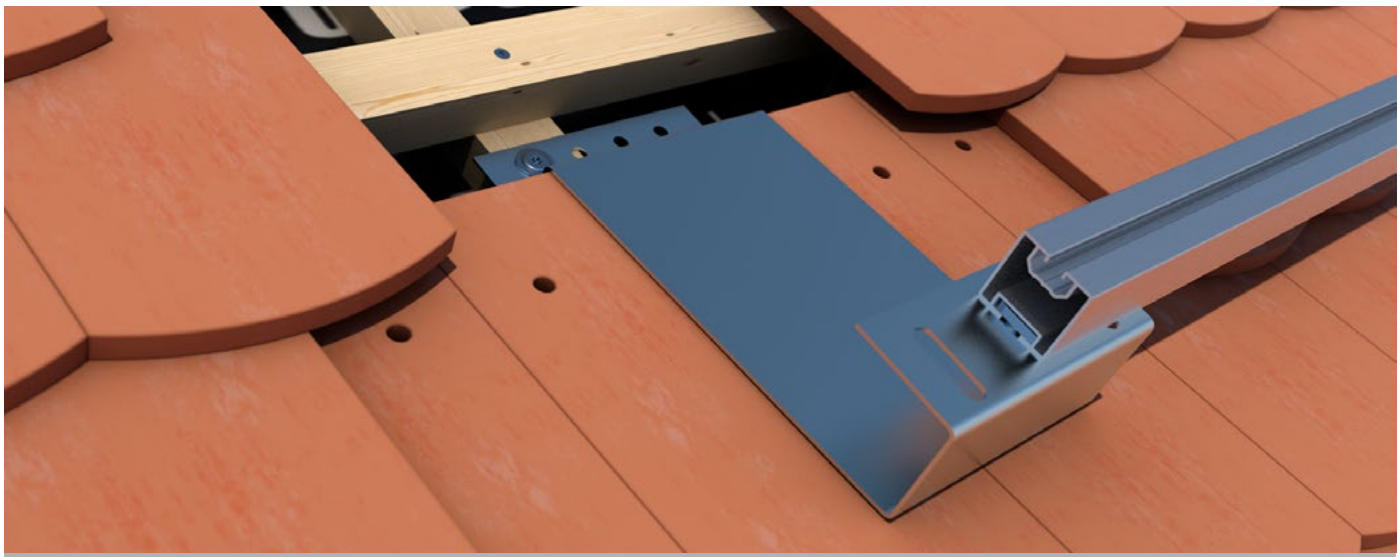
ADVANTAGES / SPECIFICATIONS

- Only suitable for double covers
- Easy to handle
- Corrosion-resistant stainless steel
- Stainless steel in accordance with general building authority approval Z-30.3-6

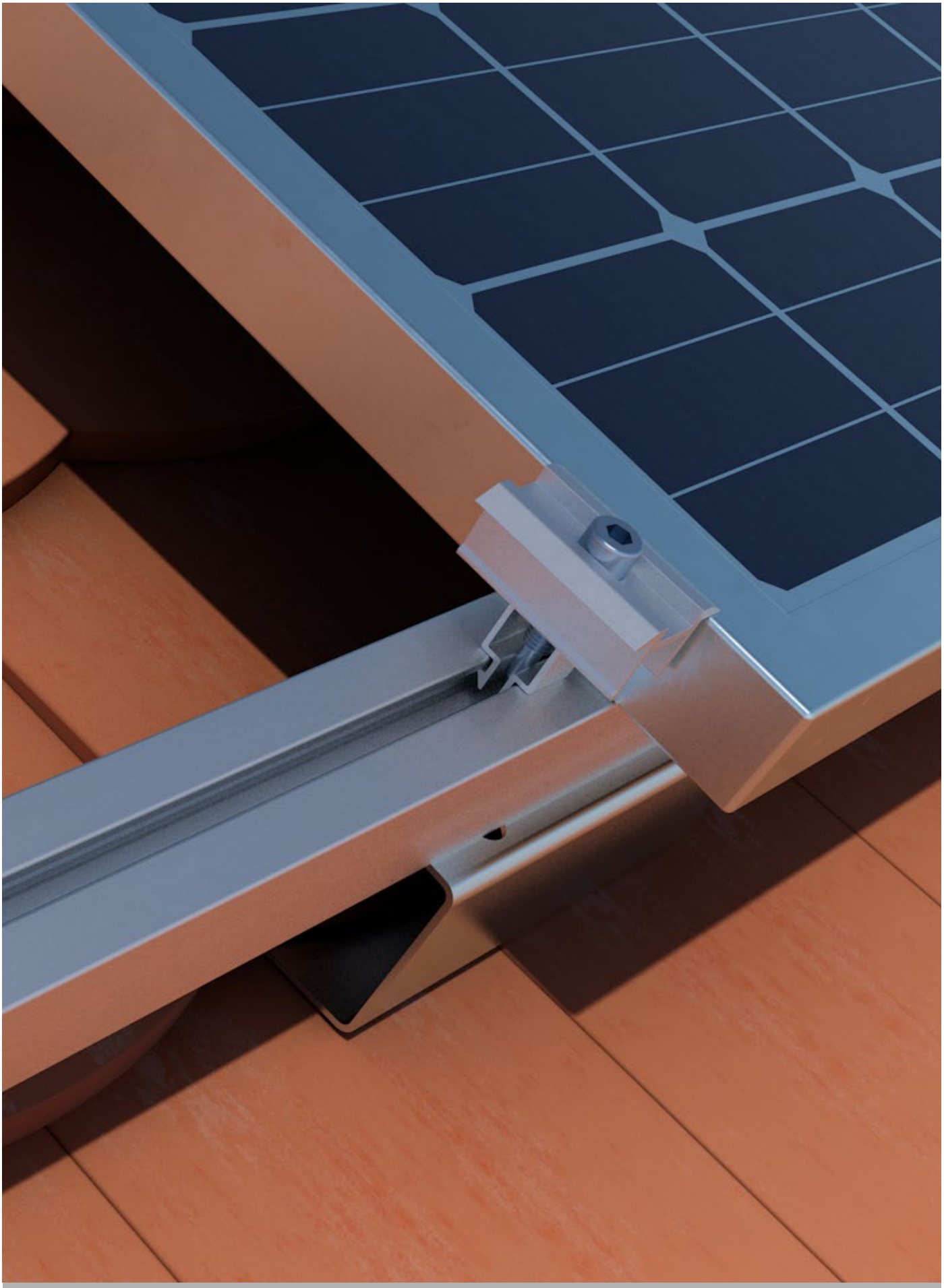
TECHNICAL DRAWING



APPLICATION IMAGES



Roof hook plain tile 2 mm mounted on the counter batten.



Application example

ROOF HOOK SLATE

A2 stainless steel

The slate roof hook is used to fasten the pitched roof installation profile on roofs with slate or bitumen sheeting shingles. The installation profile can be fitted to the roof hook here using hammer head screws and locking nuts from Eurotec. No adjustment is required for flat roofs.

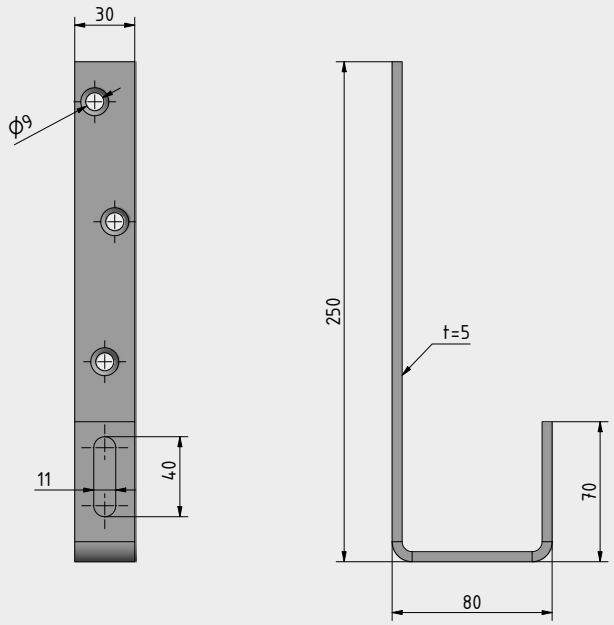
Slate roof hook

Art. no.	Dimensions [mm]	Material	PU
S0L945631	250 x 30 x 5	1.4301	40

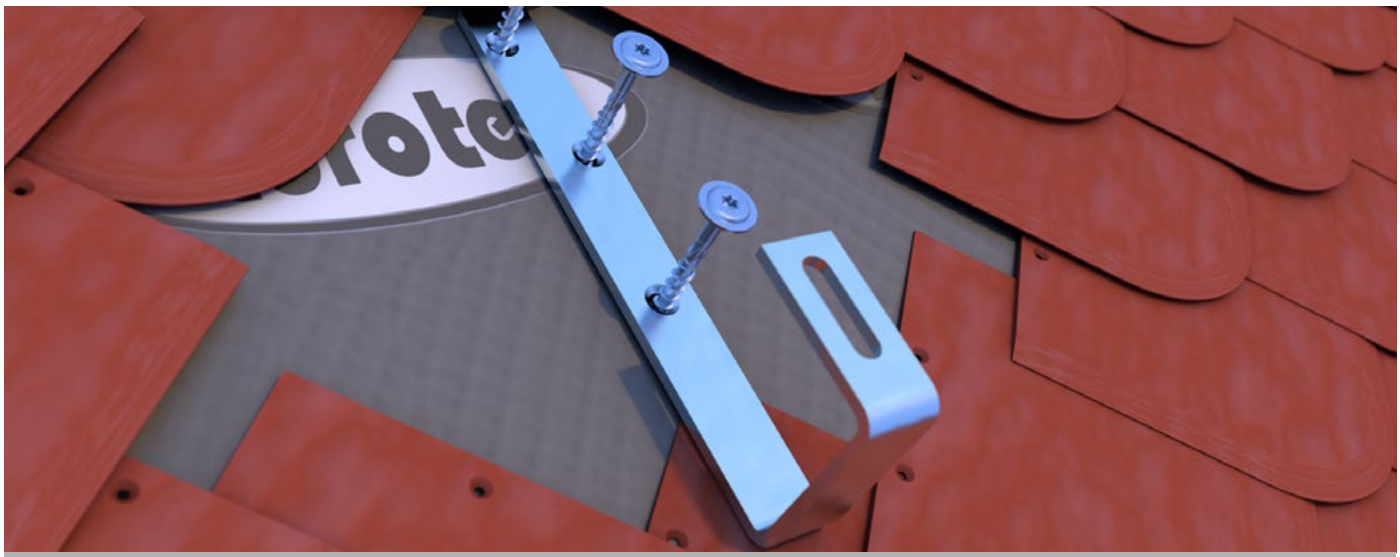
ADVANTAGES / SPECIFICATIONS

- Easy handling
- Corrosion-resistant stainless steel
- Stainless steel according to national technical certification Z-30.3-6

TECHNICAL DRAWING



APPLICATION IMAGES



Slate roof hook - application example

Application example

PITCHED ROOF INSTALLATION PROFILE

AL

Aluminium

The pitched roof installation profile can be installed to the roof hook easily with the hammer head screw and a locking nut.
This enables the installation profile to form a high-quality and durable foundation for fixing individual solar modules. The installation profile is available in the heights 40 and 80 mm.

Pitched roof installation profile

Art. no.	Dimensions [mm][a)]	Connection options[b)]	Material	PU
SOL975688	40 x 40 x 6400	Slot nut / hammer head screw	Aluminium	1
SOL975689	40 x 80 x 6400	Slot nut / hammer head screw	Aluminium	1

a) Width x height x profile length; b) Top: Slot nut M8. Bottom: Hammer head screw M8 or M10.

Recommended max. span = 1.40 m. This value applies for the assumptions made for determining the roof hook quantities.

ADVANTAGES/SPECIFICATIONS

- Weather-resistant
- Thanks to the high rigidity, large spans can be achieved
- Quick and easy installation

Cross section values			
W_x in mm³	W_y in mm³	I_x in mm⁴	I_y in mm⁴
93281	55440	381336	110880
32097	33195	65197	66390

Wx, Wy = section modulus, Ix, Iy = moment of inertia

APPLICATION IMAGES

Pitched roof installation profile 40 x 40/40 x 80 fastened to the roof hook by means of the hammer head screw and locking nut.

PITCHED ROOF INSTALLATION PROFILE SLIM

AL

High span widths, aluminium

The pitched roof installation profile SLIM can be fastened to the roof hook FLEX SLIM easily with the hammer head screw and a locking nut. The combination provides a high-quality and durable foundation on which the individual solar modules can be fitted. For particularly fast and straightforward fastening of the solar panels, we recommend our module clamps FASTFIX, which were specially developed for the profile geometry.

Pitched roof installation profile SLIM

Art. no.	Dimensions [mm]	Material	PU
SOL975699	30 x 40 x 4600	Aluminium	1
SOL100670	30 x 40 x 6400	Aluminium	1

ADVANTAGES / SPECIFICATIONS

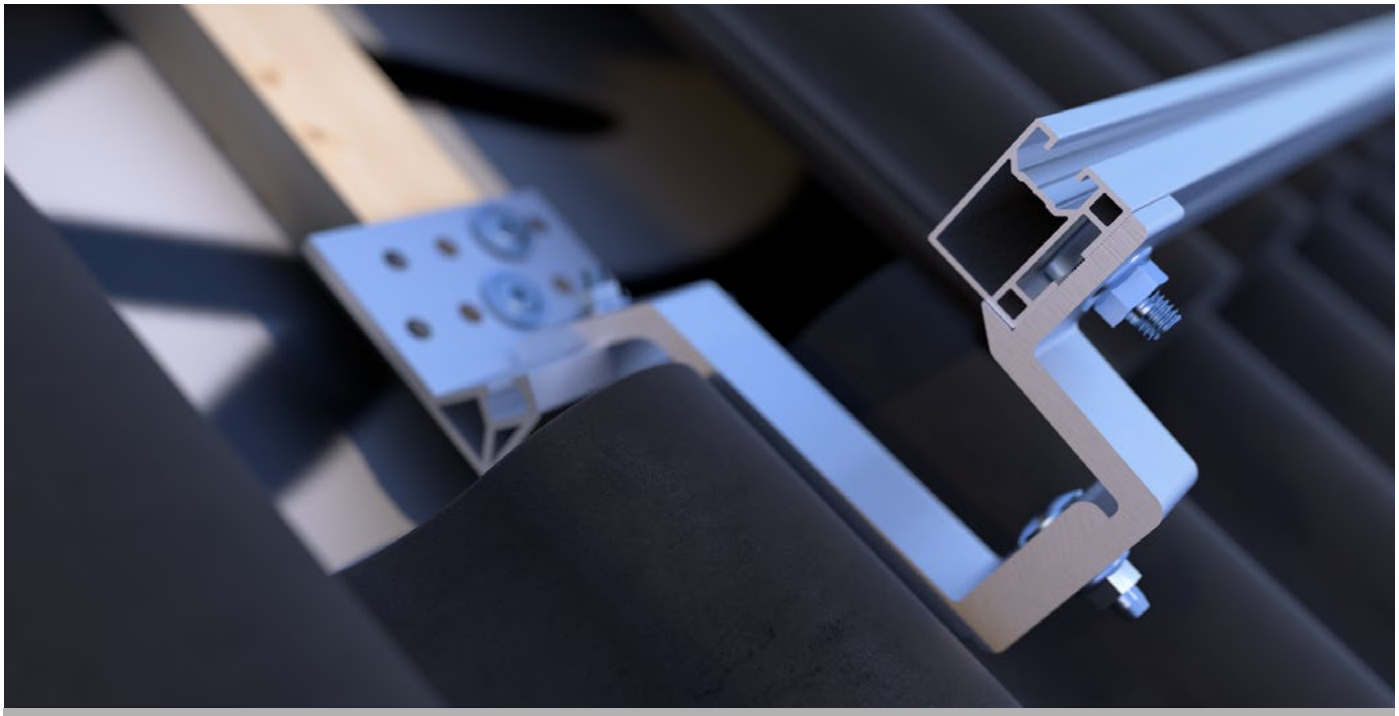
- Streamlined design
- Lateral attachment to the roof hook only with M8 hammer head screw

Compatible with it*

FASTFIX module clamps

*Not included in the scope of delivery

APPLICATION IMAGE



Pitched roof installation profile SLIM fastened to roof hook FLEX SLIM by means of hammer head screw and locking nut.

END CAPS

for the pitched roof & SLIM installation profile

The end caps serve as a termination to neatly terminate the installation profile. End caps also prevent undesired wind noise and also protect the hollow profile from dirt and rainwater.

End cap 30 x 40 mm

End cap 40 x 40 mm

Art. no.	Dimensions [mm][a)]	Matching profile [mm]	Material	PU
SOL100683	40 x 40	Pitched roof installation profile	Polypropylene	10
SOL100693	30 x 40	Pitched roof installation profile SLIM	Polypropylene	10

a) width x height

APPLICATION IMAGES

End caps attached to the pitched roof and pitched roof SLIM mounting profile.

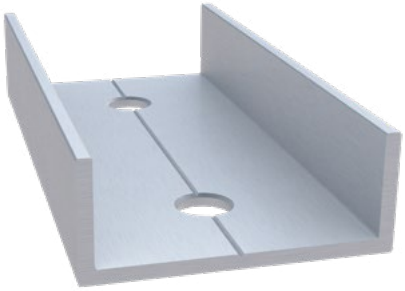
U-PROFILE CONNECTOR, ALUMINIUM

AL

For pitched roof installation profile

The U-profile connector is made of aluminium and is used to connect multiple individual pitched roof installation profiles. The connector is inserted under the ends of two installation profiles and fastened with hammer head screw and locking nut.

U-profile connector

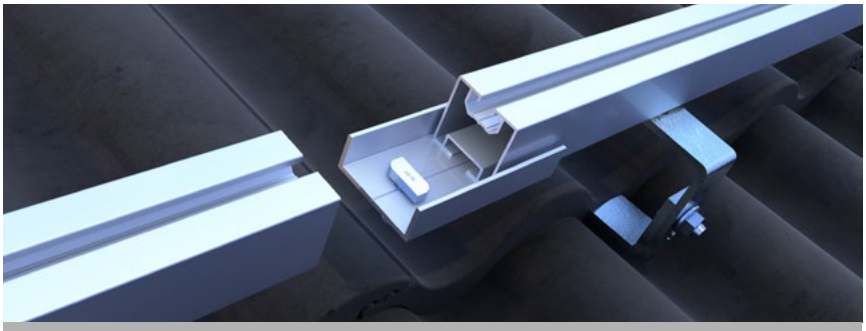


Art. no.	Dimensions [mm][a)]	Connection options	Material	PU*
SOL954654	50 x 20 x 100	Hammer head screw M8	Aluminium	20

a) Width x height x length

*Without screws in the scope of delivery

APPLICATION IMAGE



Two installation profiles are connected together with a U-profile connector.

H-PROFILE CONNECTOR, ALUMINUM

AL

for mounting profile pitched roof 40 x 40

The H-profile connector is made of aluminum and is used to connect several individual pitched roof mounting profiles. The connector is inserted into the respective end of two mounting profiles and mounted using screws. Our BiGHTY 5.5 x 19 mm is ideal for installation.

H-profile connector

Art. no.	Dimensions [mm][a)]	Material	PU
SOL975746	36,5 x 36,6 x 200	Aluminium	1

a) Width x height x length

Note
Insert the H-connectors into the ends of the mounting profiles. If more than 2 profiles are joined together lengthwise and the bond length is more than 12 m, an expansion joint of 3 cm must be maintained at the joints. 3 cm must be maintained at the joints.

APPLICATION IMAGE

The H-profile connector is inserted into the mounting profile to connect another profile to it.

L-PROFILE CONNECTOR SLIM

AL

The L-profile connector SLIM is made of aluminium and is used to connect multiple individual pitched roof SLIM installation profiles. The connector is inserted under the ends of two installation profiles and fastened with hammer head screws and locking nuts.

L-profile connector SLIM

Art. no.	Dimensions [mm]	Material	PU
SOL100673	30 x 40 x 150	Aluminium	10

Compatible with it*

Hammer head screw

Locking nut

*Not included in the scope of delivery

APPLICATION IMAGE

Two Slim installation profiles are joined together with L-profile connector Slim.

EUROTEC CALCULATION SERVICE

Pitched roof solar fastening system

Request form for preparing a proposal for a photovoltaic system on a trapezoidal pitched roof. The proposal includes a quantity calculation as well as the feasibility check for your project. You will automatically receive a preliminary measurement of the mounting elements when you place your order. Additional verifications, such as inspecting the roof structure, are not included in the scope of delivery. We are happy to submit a proposal to you for this.

Email: solar@eurotec.team

CONTACT

Construction project: _____ Tel: _____

Contact person: _____ Email: _____

INFORMATION ON THE CONSTRUCTION PROJECT:

Postcode: _____

Snow load zone: _____
(according to DIN 1055-5:2005)

Wind load zone: _____
(according to DIN 1055-4:2005)

Ground elevation above sea level: _____ m
(above sea level)

Module type:
(precise manufacturer specifications)

_____

_____

(If the type is unknown)

Weight of module: _____ kg

Module dimensions: _____ mm
(length x width)

Module height: _____ mm

Number of modules _____

Ridge height H: _____ m

Gable width: _____ m

Length on the eaves side: _____ m

Roof pitch α [degrees]: _____ °

Verge overhang: _____ m

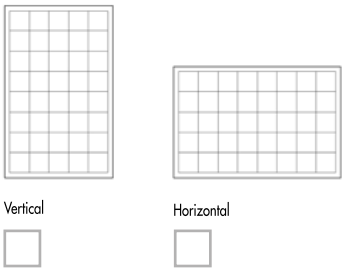
Eave overhang: _____ m

Rafters cross-section: _____ cm
(W x H)

Rafter spacing: _____ cm

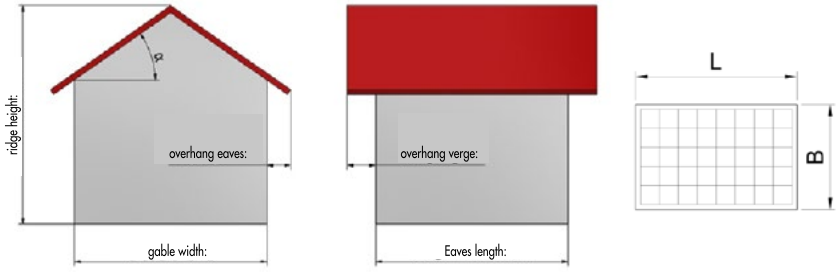
Roof with on-roof insulation:

Yes ☐ No ☐



Vertical ☐ Horizontal ☐

Alignment of modules: →



ADDITIONAL REQUIRED INFORMATION:

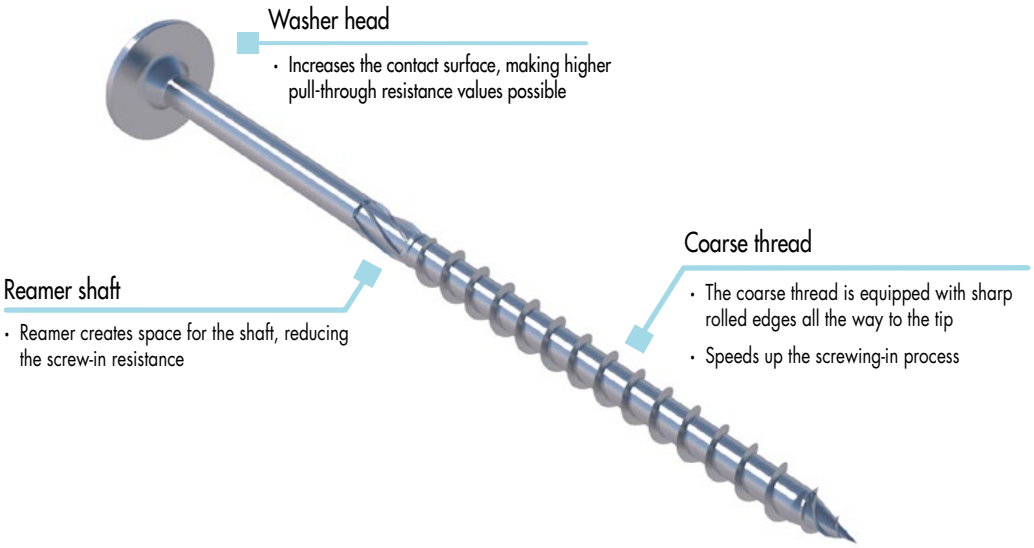
• Dimensioned sketches or status plan of the pitched roof specifying the orientation of the roof and all openings, roof structures, chimneys, lightning protection systems, adjacent buildings, etc.

NOTES:

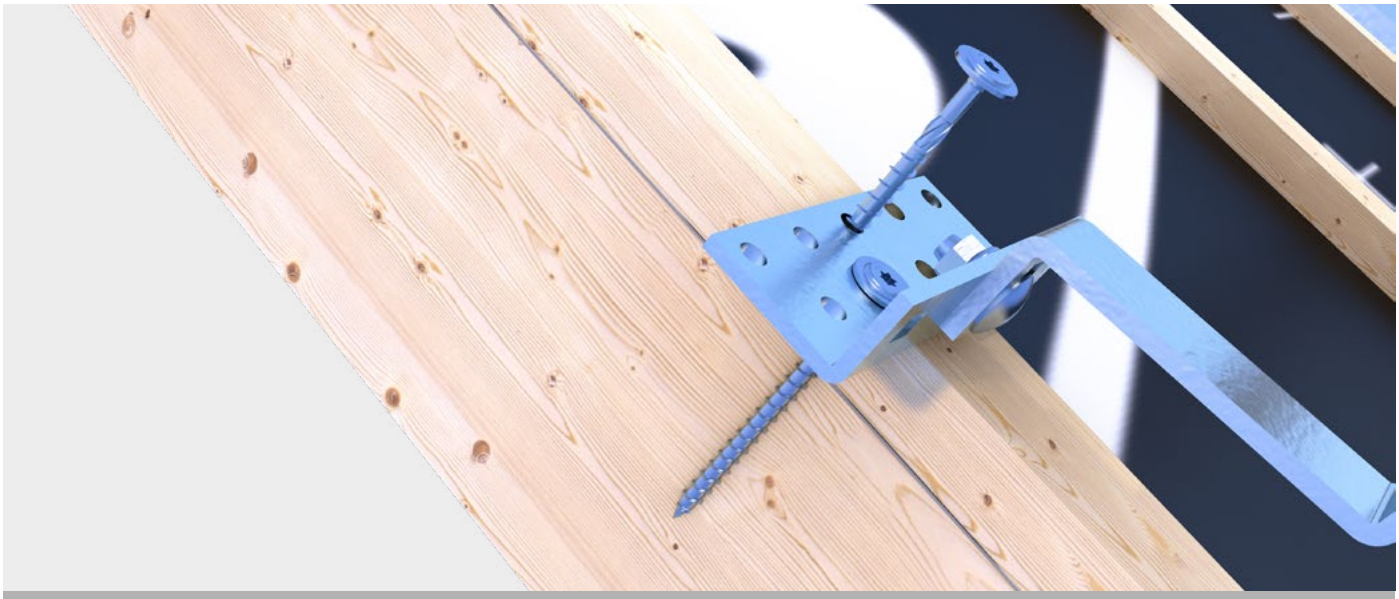
FASTENERS FOR ROOF HOOKS

PANELTWISTEC AG, WASHER HEAD SCREW

Paneltwistec AG is a wooden construction screw with a special screw tip and reamer shaft above the thread. The AG screw tip's special geometry reduces the torque needed to drive it in and minimises the risk of the timber splitting.



APPLICATION IMAGE



The Paneltwistec washer head screw is used to fasten the roof hook and is screwed into the rafters through the counter-batten.

Paneltwistec AG, washer head screw, hardened stainless steel			
Art. no.	Dimensions Ød x L [mm]	Drive	PU
975772	6.0 x 60	TX30 •	100
975773	6.0 x 80	TX30 •	100
975774	6.0 x 100	TX30 •	100
975775	6.0 x 120	TX30 •	100
975776	6.0 x 140	TX30 •	100

Paneltwistec washer head screw, hardened stainless steel			
Art. no.	Dimensions Ød x L [mm]	Drive	PU
945278	8.0 x 80	TX40 •	50
945270	8.0 x 100	TX40 •	50
945271	8.0 x 120	TX40 •	50
945272	8.0 x 140	TX40 •	50

Paneltwistec AG, washer head screw, A2 stainless steel*			
Art. no.	Dimensions Ød x L [mm]	Drive	PU
903211	8.0 x 80	TX40 •	50
903212	8.0 x 100	TX40 •	50
903213	8.0 x 120	TX40 •	50
903214	8.0 x 140	TX40 •	50

*Paneltwistec AG, washer head screw, A2 stainless steel does not have a reamer behind the thread

Paneltwistec AG, washer head screw, blue galvanised steel			
Art. no.	Dimensions Ød x L [mm]	Drive	PU
945713	6.0 x 60	TX30 •	100
945717	6.0 x 80	TX30 •	100
945719	6.0 x 100	TX30 •	100
945721	6.0 x 120	TX30 •	100
944588	8.0 x 80	TX40 •	50
944589	8.0 x 100	TX40 •	50
944590	8.0 x 120	TX40 •	50
944591	8.0 x 140	TX40 •	50

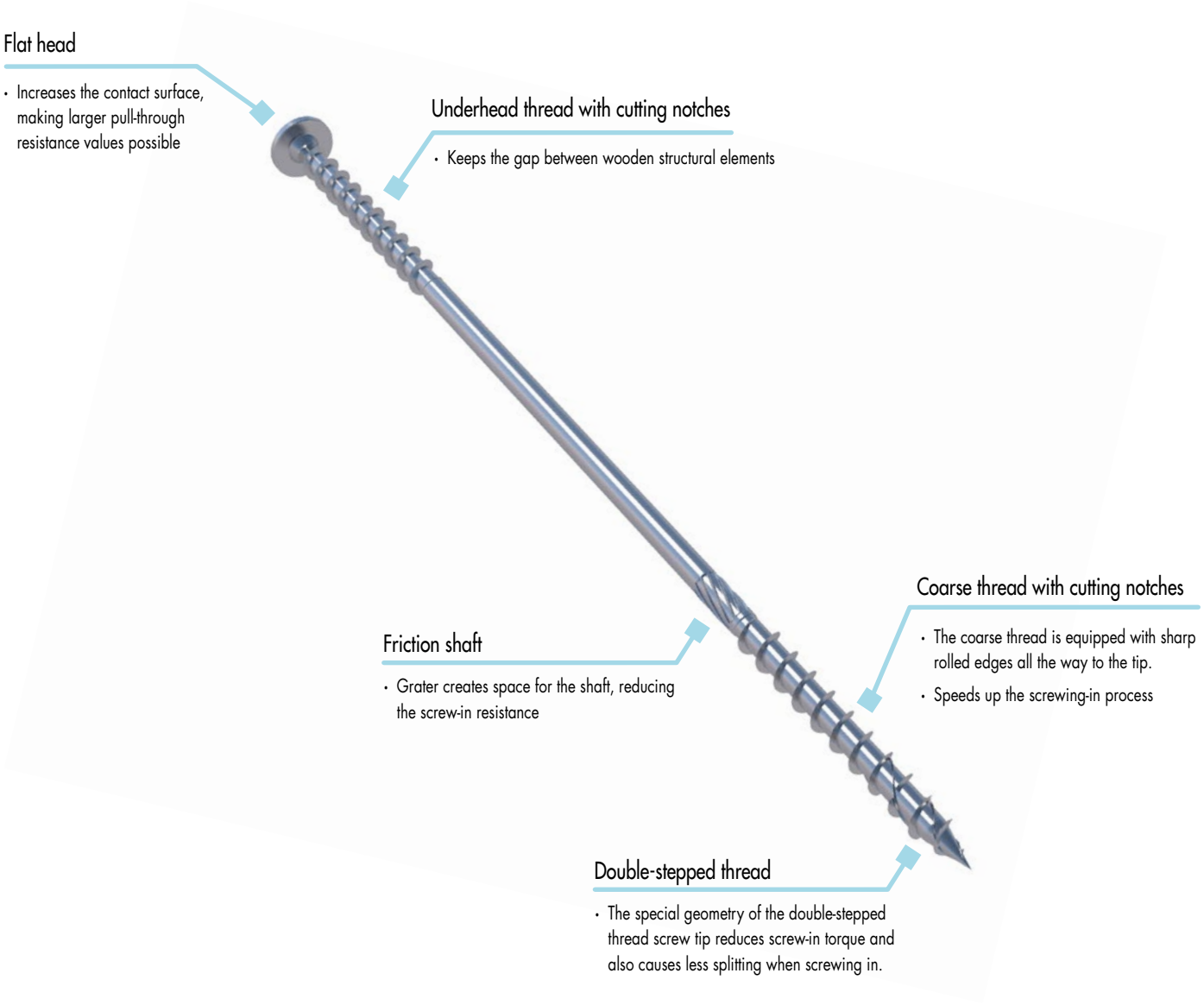
Note:
For longer sizes, visit our website.

TOPDUO ROOFING SCREW, WASHER HEAD

The timber construction screw for all over-rafter insulation systems

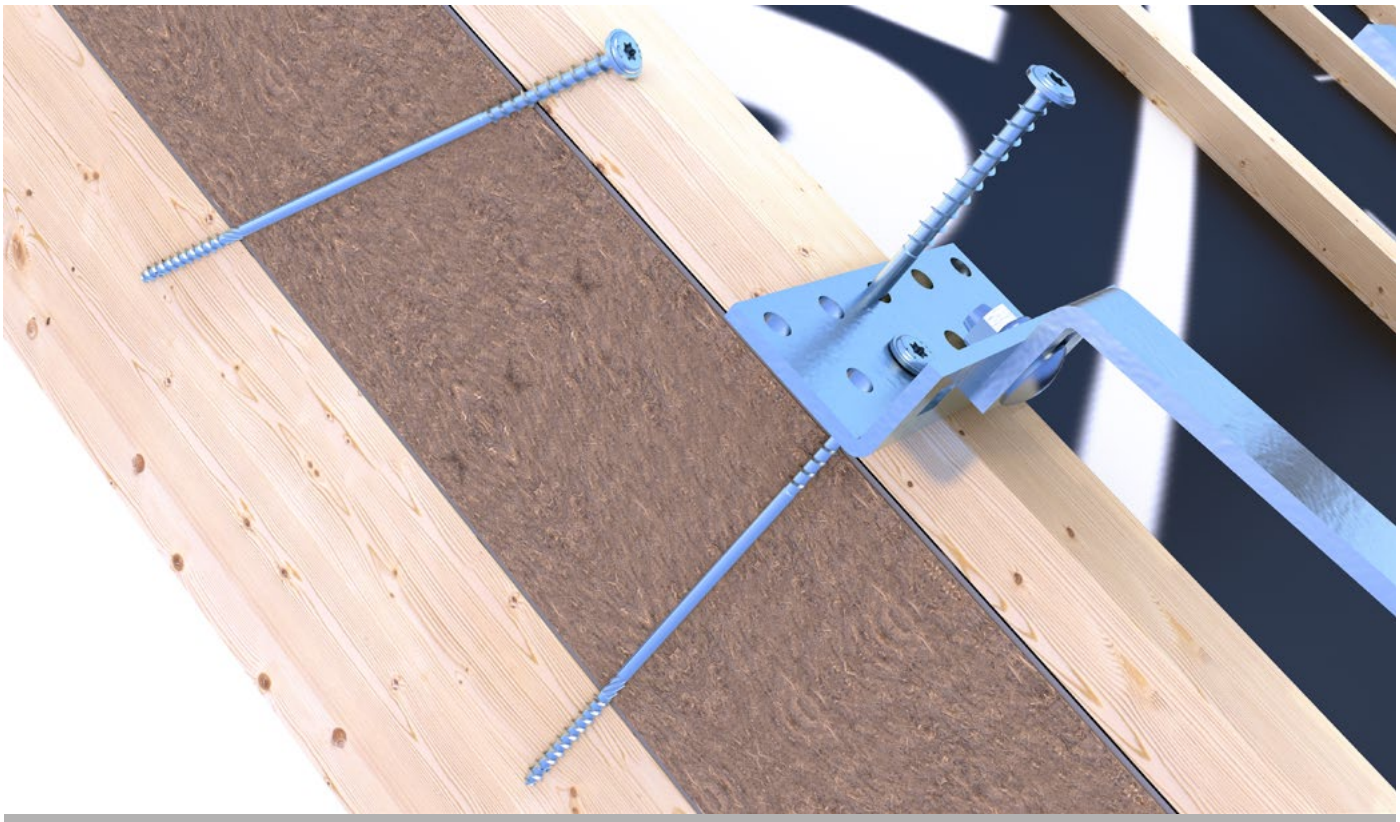
Europ. Techn. Bewertung
European Technical Assessment
ETA-11/0024

The Topduo roofing screw enables the fastening of over-rafter insulation materials with **high or low compressive resistance.** In addition, the high extraction resistance in both connecting timbers also makes the Topduo suitable for **many other applications in timber-frame construction.** Additionally, the screw is equipped with a double thread.



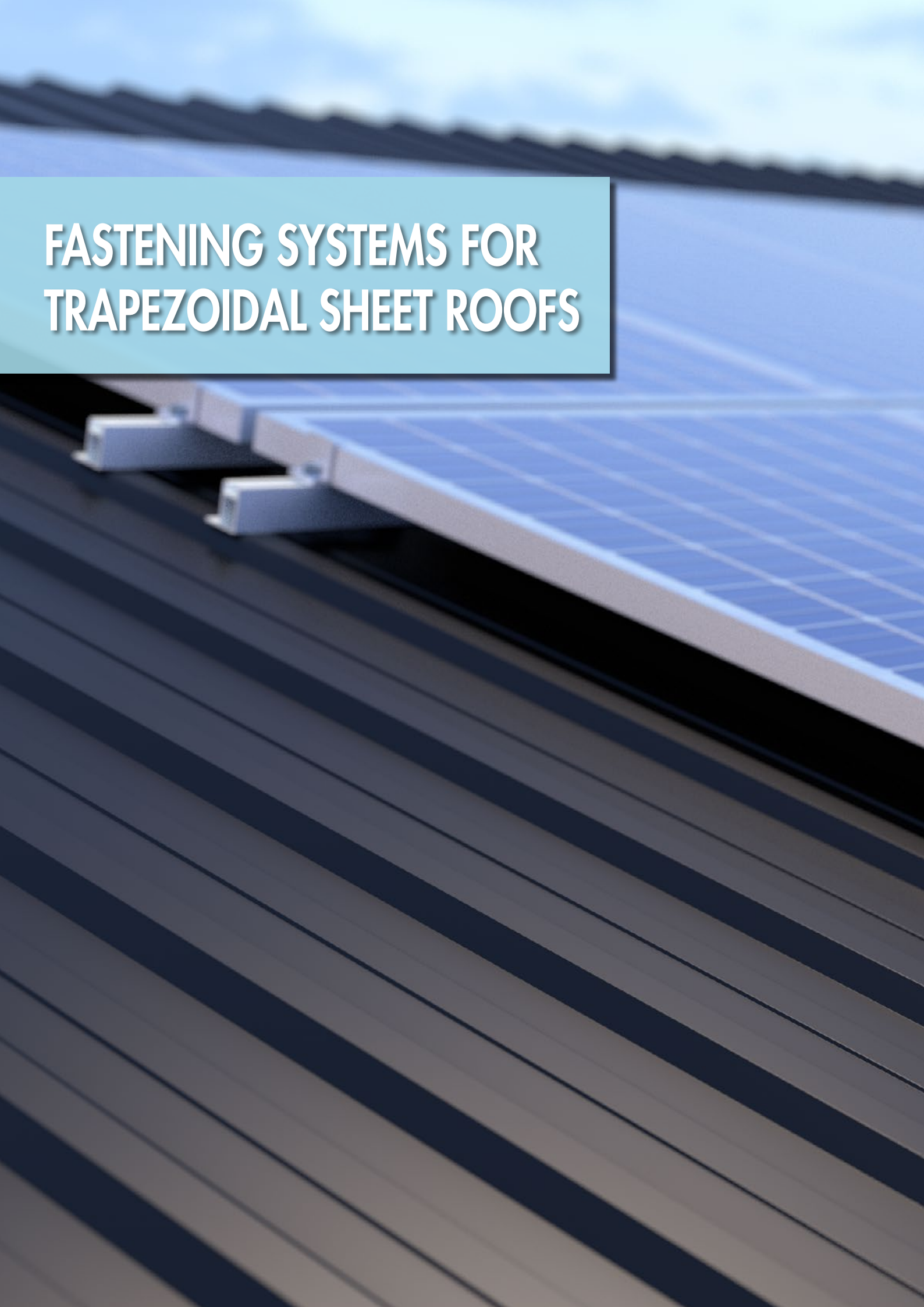
Topduo roofing screw						
Art. no.	Dimensions Ød x L [mm]	Thread beneath head [mm]	Driving thread [mm]	Head diameter Ødh [mm]	Drive	PU
Washer head						
945870	8.0 x 165	60	66	16.0	TX40•	50
945871	8.0 x 195	60	95	16.0	TX40•	50
945813	8.0 x 225	60	95	16.0	TX40•	50
945814	8.0 x 235	60	95	16.0	TX40•	50
945815	8.0 x 255	60	95	16.0	TX40•	50
945816	8.0 x 275	60	95	16.0	TX40•	50
945817	8.0 x 302	60	95	16.0	TX40•	50
945818	8.0 x 335	60	95	16.0	TX40•	50
945819	8.0 x 365	60	95	16.0	TX40•	50
945820	8.0 x 397	60	95	16.0	TX40•	50
945821	8.0 x 435	60	95	16.0	TX40•	50
945843	8.0 x 472	60	95	16.0	TX40•	50

APPLICATION IMAGE



Screwing a roof hook to a slanting roof with Topduo roofing screw

FASTENING SYSTEMS FOR TRAPEZOIDAL SHEET ROOFS



ATTACHMENT SYSTEM

for trapezoidal sheet roofs

The trapezoidal sheet installation profile is fastened to the trapezoidal sheet with thin-sheet screws and enables direct installation of solar modules parallel to the roof. Below, you will find an explanation of how the profile and the roof hooks can be installed on the roof in just a few steps.

Thin-sheet screw

Slot nut

FASTFIX module clamps

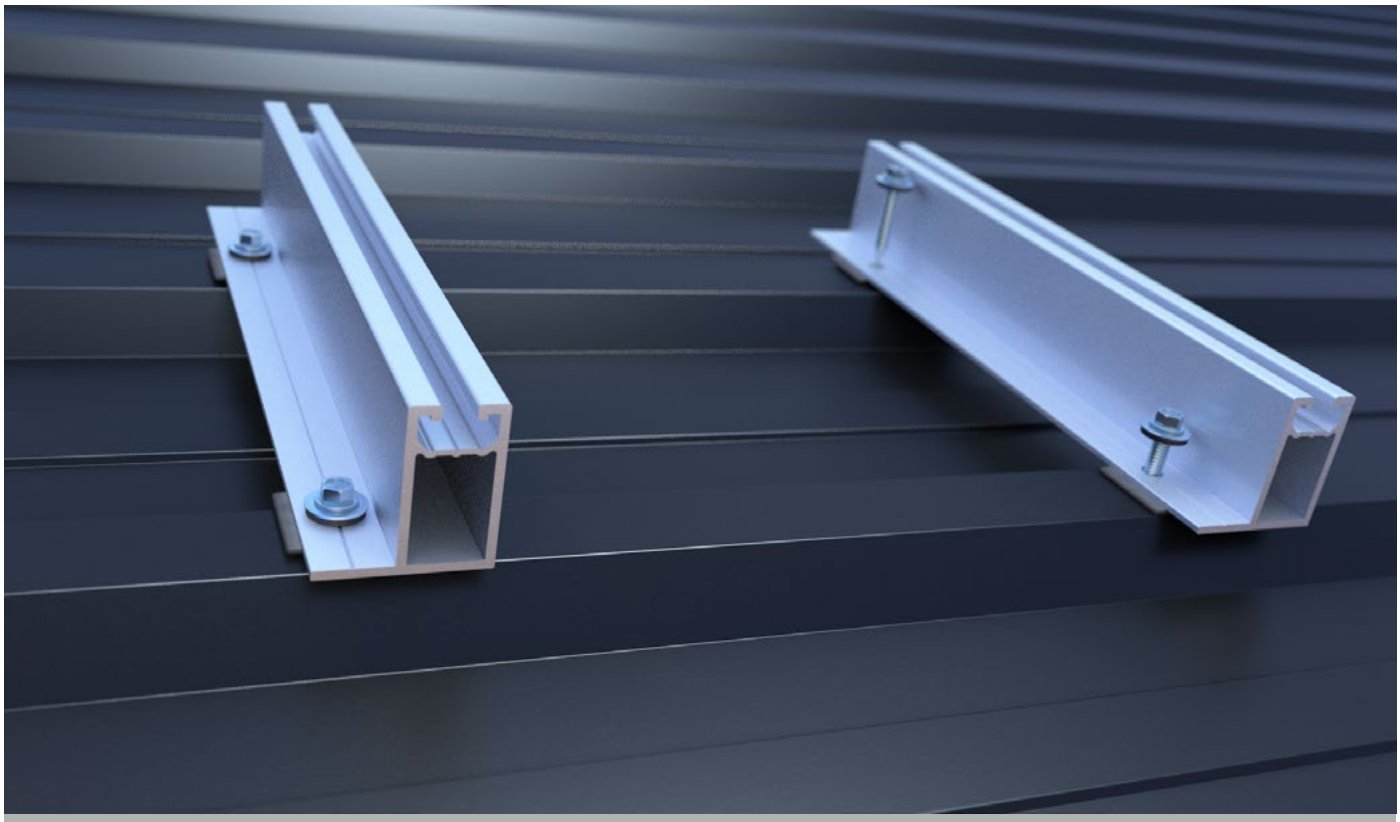
WHAT YOU NEED:

- Trapezoidal sheet installation profile
- Thin-sheet screw
- Slot nut
- Module clamps
- FASTFIX module clamps

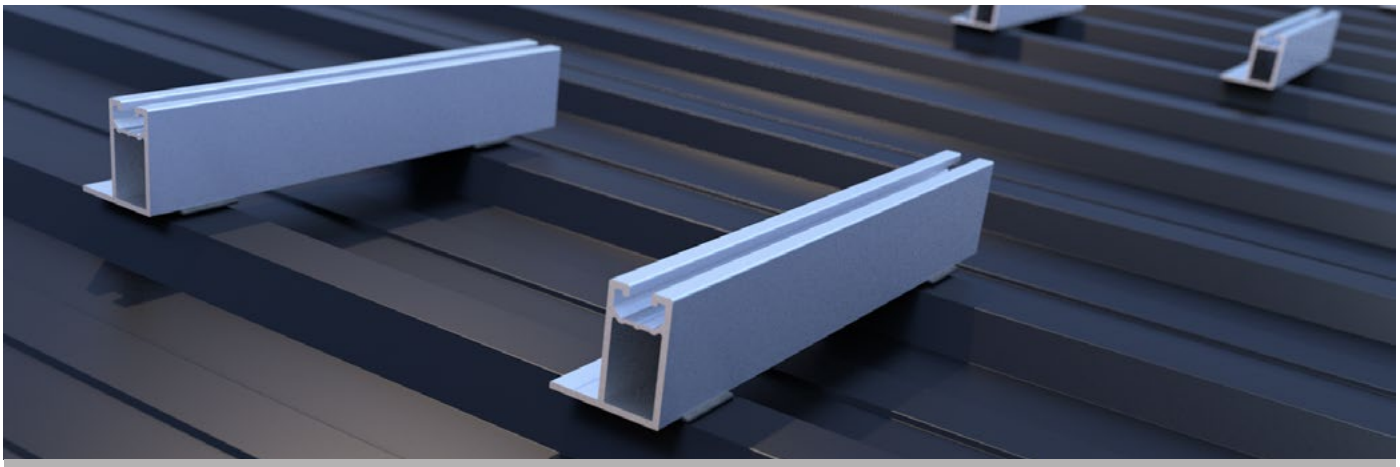
Module clamps

Trapezoidal sheet installation profile

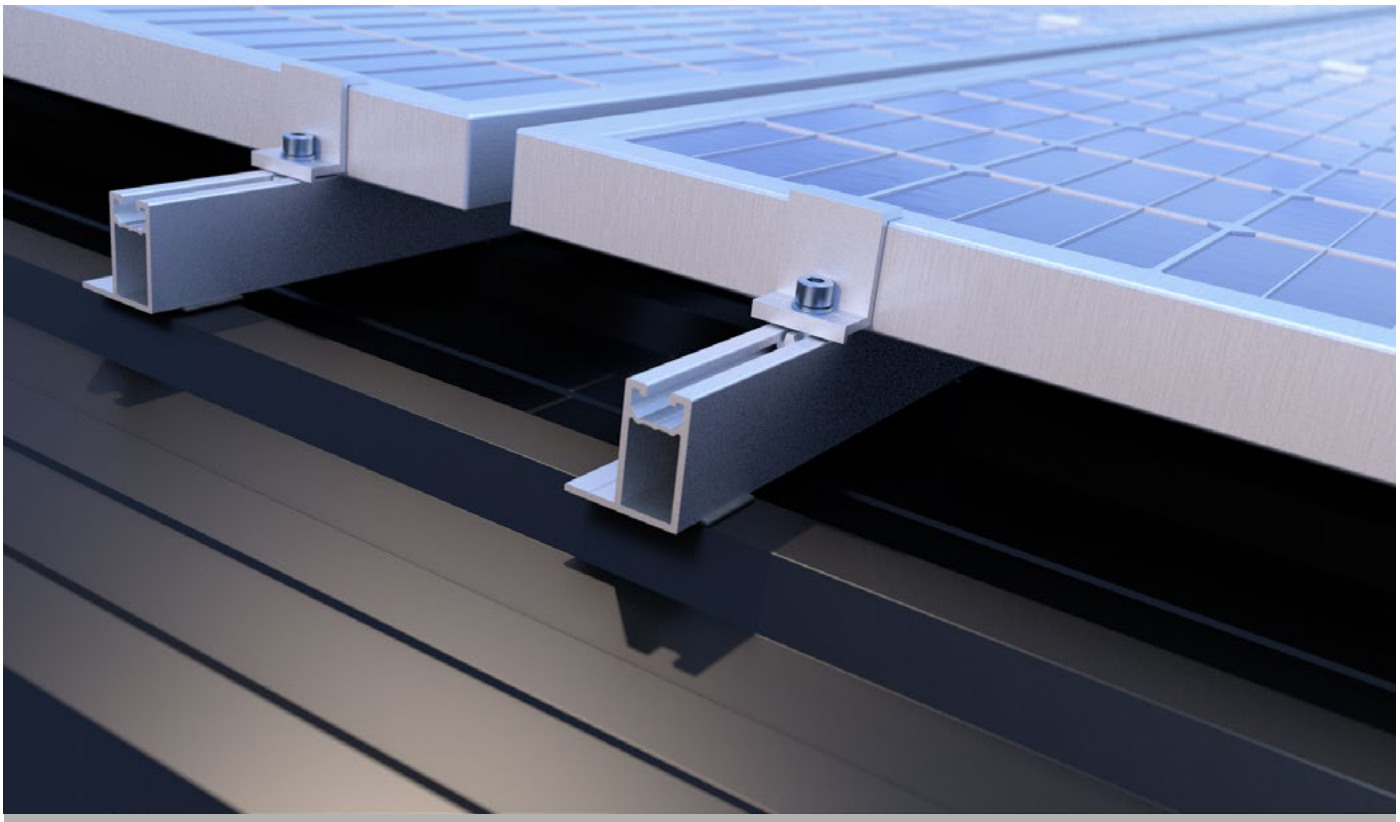
INSTALLATION EXAMPLE



STEP 1: In the first step, the trapezoidal sheet installation profile is screwed onto the trapezoidal sheet with thin sheet metal screws.



EXAMPLE: You have the option of attaching the trapezoidal sheet mounting profile as a continuous element or as short individual pieces.



STEP 2: In the final step, the solar panels are placed on the trapezoidal sheet installation profiles and fastened with the module clamps.

TRAPEZOIDAL SHEET INSTALLATION PROFILE

AL

The trapezoidal sheet installation profile is perfect for installing solar modules on trapezoidal sheet roofs. The profiles can be easily fitted using a thin sheet metal screw and Eurotec PUR 60 mm.

Trapezoidal sheet installation profile

Art. no.	Dimensions [mm]	Material	PU
SOL975698	44.5 x 45 x 370	Aluminium	1
SOL975692	44.5 x 45 x 6400	Aluminium	1

ADVANTAGES

- Weather-resistant
- Thanks to the high rigidity, large spans can be achieved
- Quick and easy installation

APPLICATION IMAGE

The trapezoidal sheet installation profile can be cut to size and fitted only in the positions where it is needed.

TRAPEZOIDAL SHEET INSTALLATION PROFILE EASY

AL

The trapezoidal sheet installation profile EASY is designed for installing solar modules on a trapezoidal sheet roof. With a length of 370 mm, it is compatible with all standard trapezoidal sheets and the large number of holes facilitates positioning and fastening. EPDM sealing strips are already applied under the profile, so no additional sealing/material partition layer needs to be fitted before fastening. As only the short elements need to be fitted at the required positions, this also makes handling and installation more user-friendly.

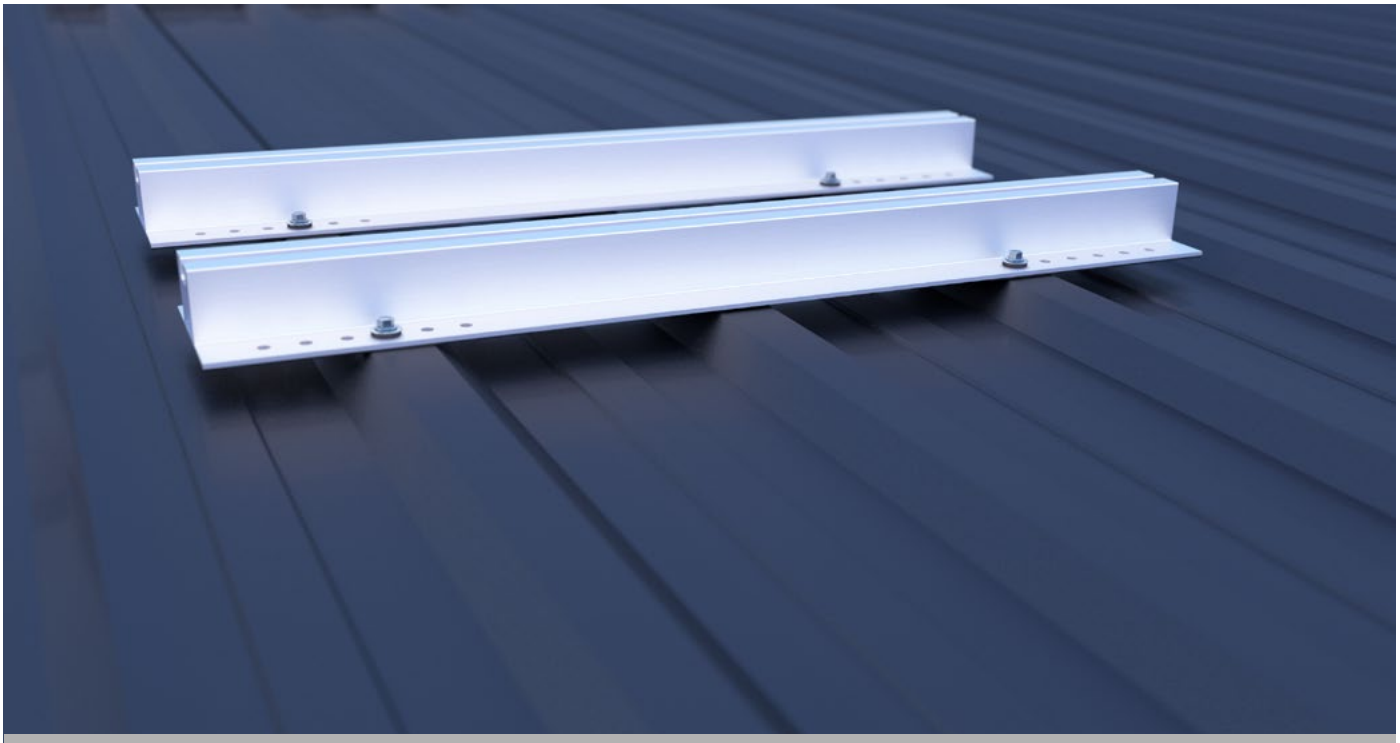
Trapezoidal sheet installation profile EASY

Art. no.	Dimensions [mm]	Material	PU
SOL100692	100 x 41 x 370	Aluminium	1

ADVANTAGES

- Straightforward installation, as easy to handle
- Compatible with all standard trapezoidal sheets

APPLICATION IMAGE



The trapezoidal sheet installation profile EASY is fastened at the necessary points and then serves as a installation base for the solar modules.

SHORT RAIL TRAPEZOIDAL SHEET

AL

The short rail trapezoidal sheet from Eurotec is ideal for direct module attachment to a trapezoidal sheet. Fastening using the short rail for trapezoidal sheets retains the best possible bearing load of the module.

Short rail trapezoidal sheet

Art. no.	Dimensions [mm]	Material	PU
SOL100705	26 x 40 x 100	Aluminium	1
SOL100701	26 x 40 x 150	Aluminium	1

ADVANTAGES

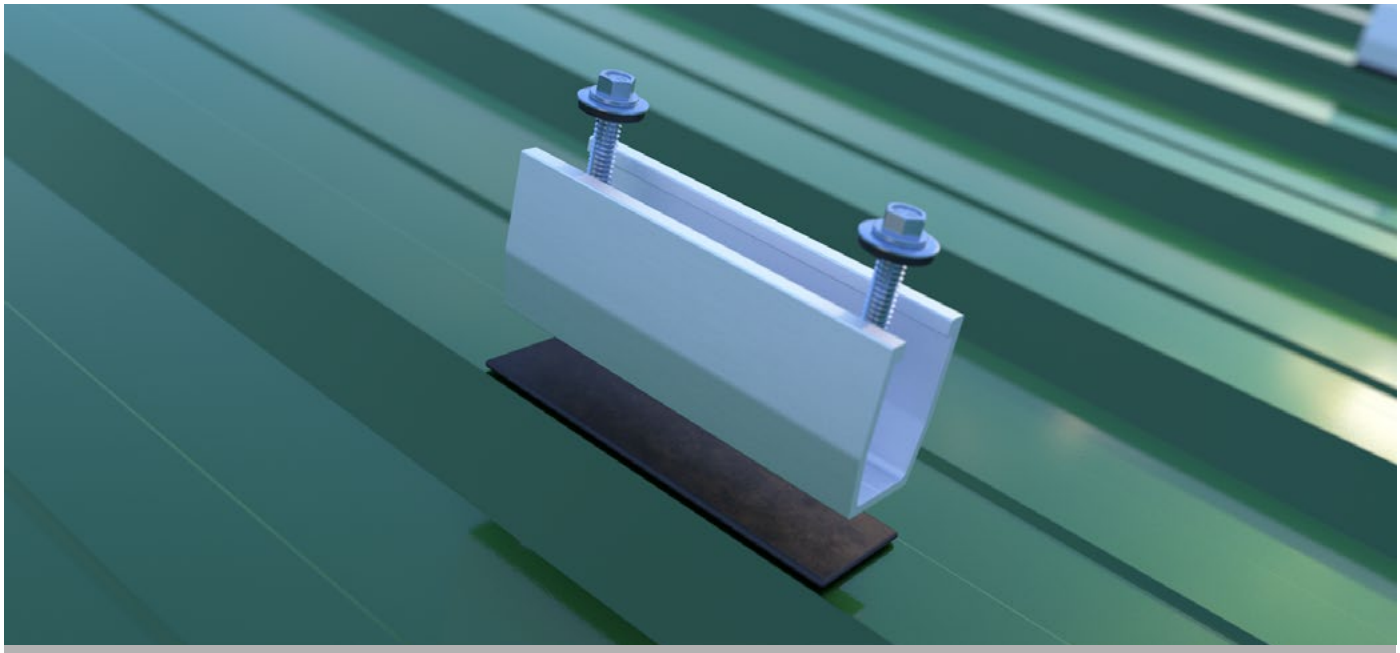
- Rail length: 100 mm/150 mm
- Sealing: Eurotec PUR 60 mm pre-bonding
- Recommended screws: 2x BiGHTY bi-metal thin sheet metal screws

Compatible with it*

Module clamps for short rail

*Not included in the scope of delivery

APPLICATION IMAGE



The short rail trapezoidal sheet is fastened to the trapezoidal sheet roof with the BiGHTY bi-metal thin sheet metal screw.

MODULE CLAMPS FOR SHORT RAIL

AL

The module clamp is suitable for solar modules with a frame height of 30–35 mm. The solar modules are fastened with a simple click function. The module clamp for short rails is only compatible with the short profile trapezoidal sheet.

Module clamps for short rail

End clamp, black

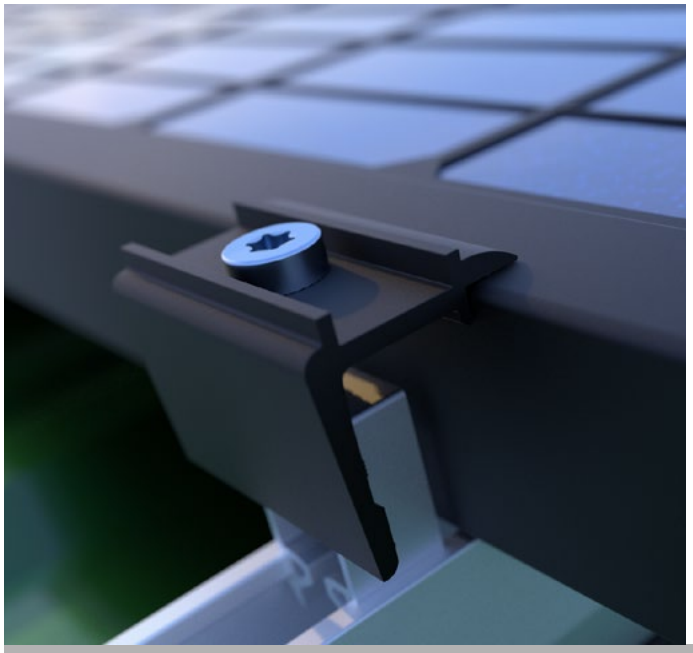
Centre clamp, black

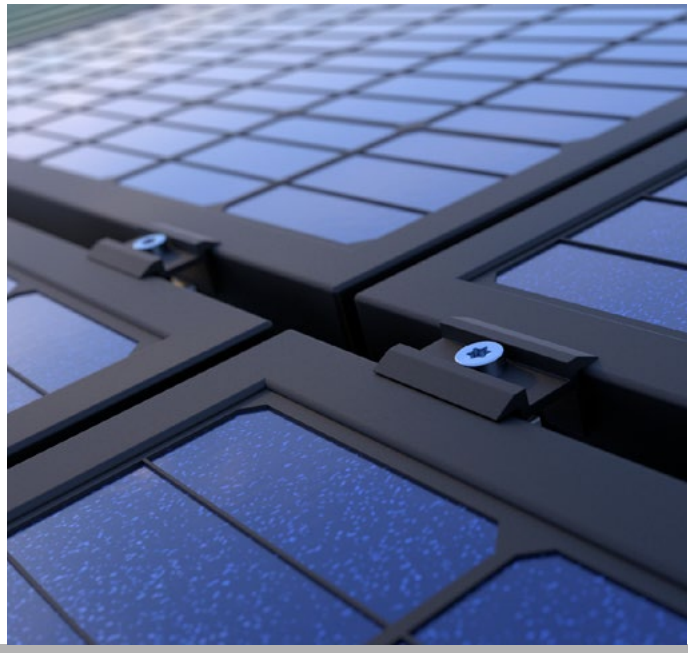
Art. no.	Name	Clamp thickness = module height [mm]	Clamp length [mm]	Material	PU
SOL100699	End clamp	30–35	37,6	Aluminium	40
SOL100700	Centre clamp	30–35	37,6	Aluminium	40

ADVANTAGES

- Weather-resistant
- Quick and easy installation

APPLICATION IMAGES





The Eurotec end and centre clamp are installed in the short rail to fasten the solar modules.

EUROTEC PUR 60 MM

Eurotec PUR is a one-sided adhesive tape consisting of closed-cell polyethylene foam and coated with acrylate dispersion adhesive. The product was designed for use as a sealing tape for roof and building structures.

Eurotec PUR 60 mm

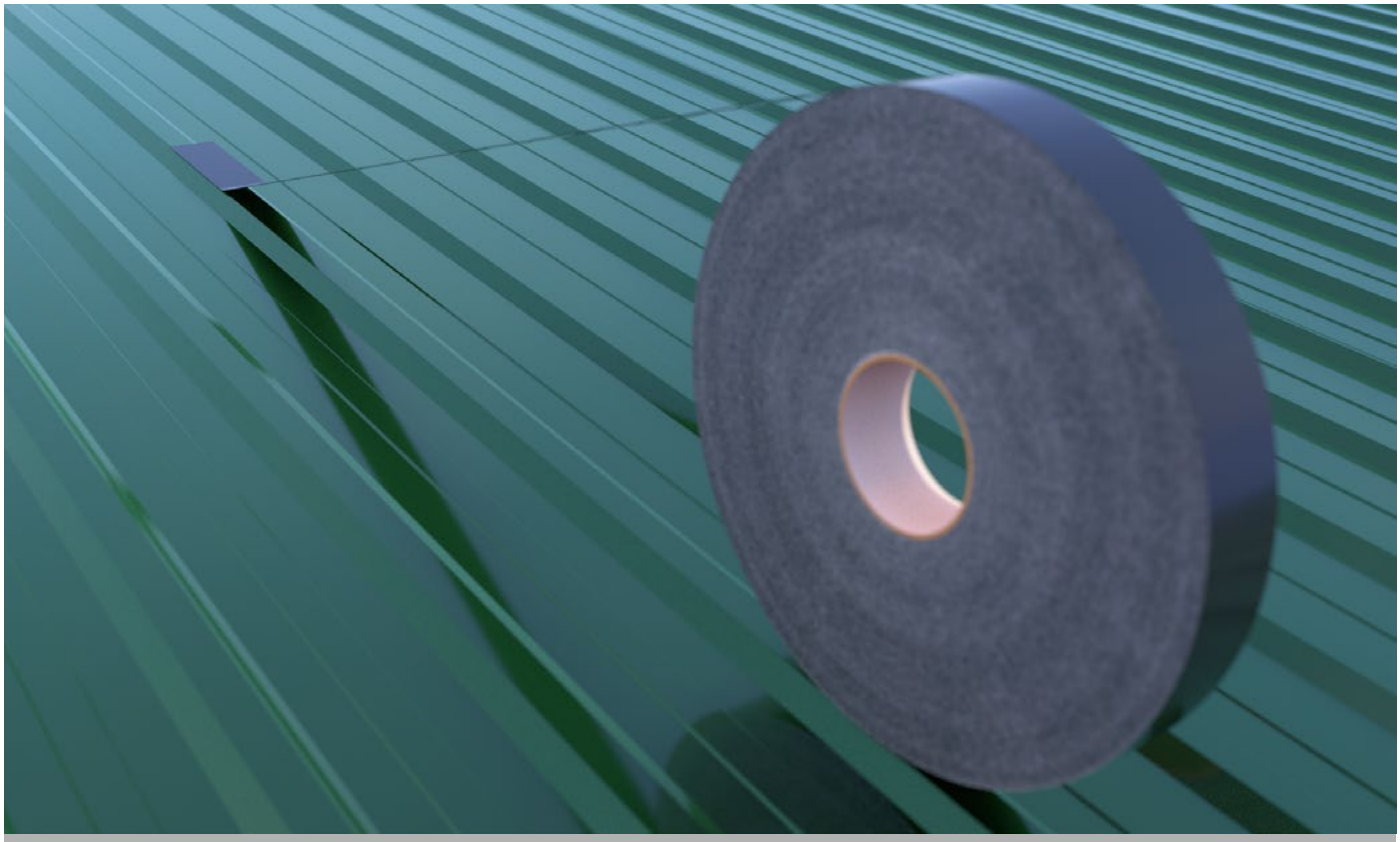
Art. no.	Dimensions [mm][a)]	Material	PU
954194	60 x 1 x 25000	Polyethylene foam	1

a) Width x thickness, length

ADVANTAGES AND SPECIFICATIONS

- Waterproof
- Solvent-free
- UV resistance

APPLICATION IMAGE



The Eurotec PUR 60 mm provides optimal sealing when the solar module fastening system is installed on trapezoidal sheet metal roofs.

A2 SOLAR HANGER BOLT

A2

A2-70 stainless steel with 3x locking nuts DIN 6923

A2-70 solar hanger bolt with EPDM seal for fastening installation profiles, compatible with corrugated sheet or corrugated fibre cement roofing.

A2 solar hanger bolt

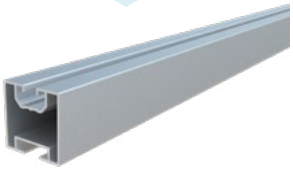
A2 solar hanger bolt					
	Dimensions, thread length				
Art. no.	M x L [mm]	Metric/wood thread [mm]	Material	Width across flats	PU
SOL111530	M10 x 180	85 / 80	A2-70 stainless steel	SW 7	50
SOL111520	M10 x 200	85 / 80	A2-70 stainless steel	SW 7	50
SOL111475	M10 x 250	140 / 80	A2-70 stainless steel	SW 7	50
SOL111521	M12 x 300	150 / 100	A2-70 stainless steel	SW 9	50

* Pre-fitted with: A2 solar hanger bolt, EPDM seal, 3 x A2-70 locking nuts DIN 6923

ADVANTAGES / SPECIFICATIONS

- With EPDM seal
- For corrugated sheet or corrugated fibre cement roofing

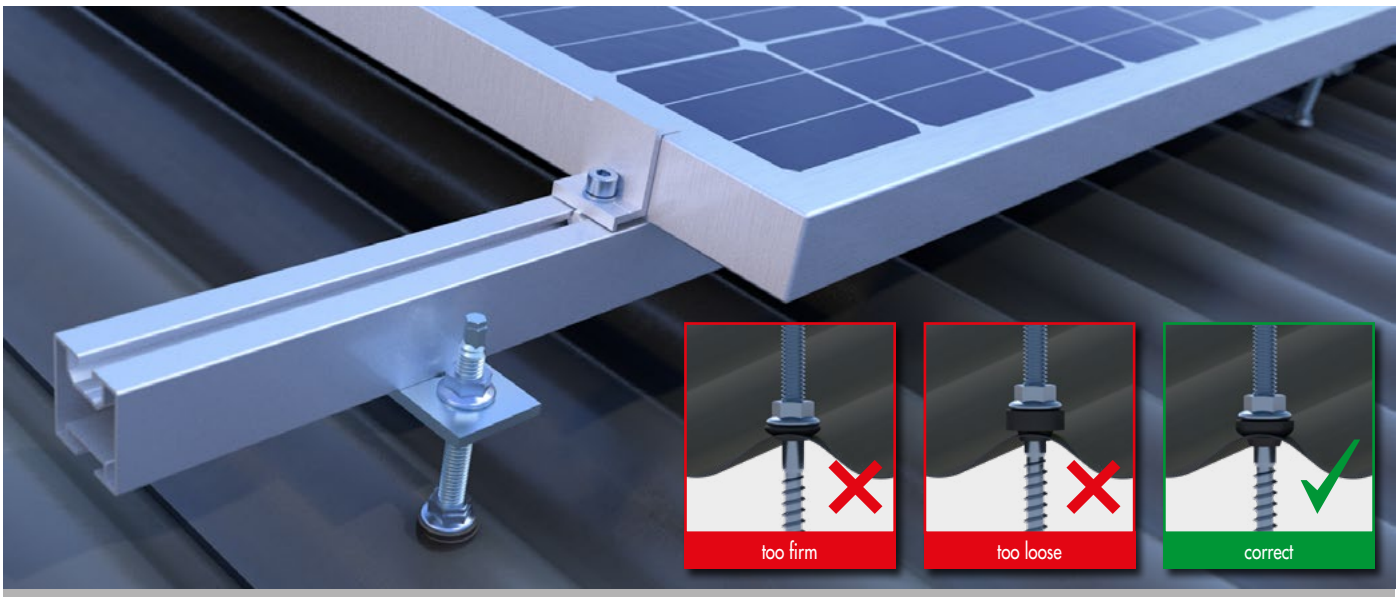
Compatible with it*



Pitched roof installation profile

*Not included in the scope of delivery

APPLICATION IMAGE



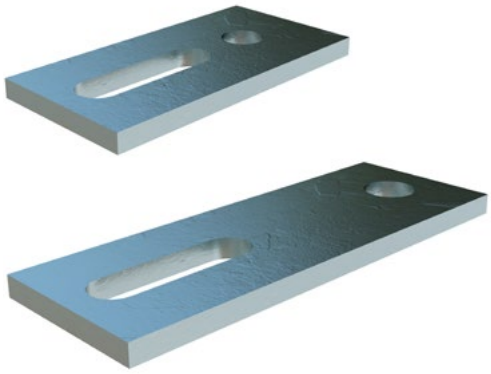
A2 solar hanger bolt on corrugated roof

ADAPTER FOR SOLAR HANGER BOLT

A2

A2 stainless steel

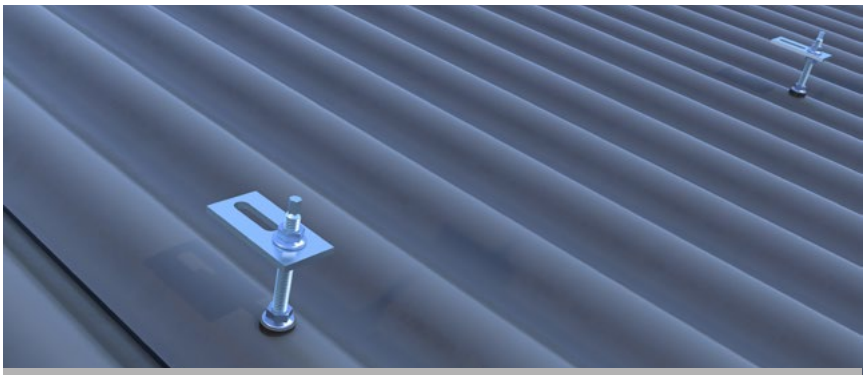
Adapter for solar hanger bolt



Adapter for solar hanger bolt					
Art. no.	Dimensions[a)] [mm]	Round hole [mm]	Slotted hole[b)] [mm]	Material	PU
SOL945518	80 x 40 x 5	Ø 11	Ø 11 x 40	A2 stainless steel	25
SOL945519	110 x 40 x 5	Ø 13	Ø 11 x 40	A2 stainless steel	25
SOL945520	80 x 30 x 5	Ø 11	Ø 11 x 30	A2 stainless steel	25

a) Length x width x sheet thickness; b) Bore width x slotted hole length

APPLICATION IMAGE



Adapter plate and solar hanger bolt for fastening a solar module fastening system on a corrugated sheet roof

L-ADAPTER FOR SOLAR HANGER BOLT

AL

Aluminium

L-adapter for solar hanger bolt

L-adapter for solar hanger bolt					
Art. no.	Dimensions[a)] [mm]	Round hole [mm]	Slotted hole[b)] [mm]	Material	PU
SOL100702	84,2 x 38 x 40 d=7,6	Ø 11	Ø 8.5 x 40	Aluminium	10

a) Length x width x sheet thickness; b) Bore width x slotted hole length

APPLICATION IMAGE

L-adapter plate and solar hanger bolt for fastening a solar module fastening system on a corrugated sheet roof

STANDING SEAM CLAMP

The Eurotec standing seam clamp is ideal for installation on the seam of a standing seam roof. Additional drilling into the roof from installation on the seam is not required. In this way, you can quickly install rails and modules on the roof.

Standing seam clamp

Art. no.	Dimensions [mm]	Material	Wrench size	PU
SOL100706	50 x 61 x 110	1.4301	WS13	10

APPLICATION IMAGES

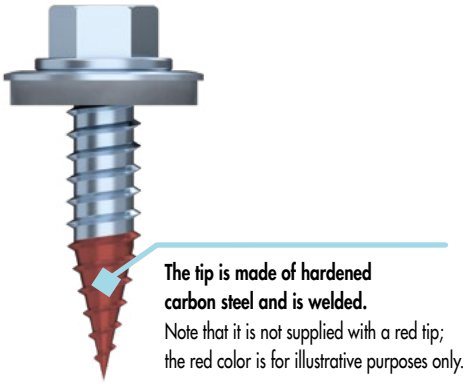
Installation of the standing seam clamp on the seam of the standing seam roof.

BIGHTY BI-METAL THIN-SHEET SCREW

The BiGHTY bi-metal thin-sheet screw from Eurotec is used primarily in factory building construction, in the solar industry and in companies specialising in the installation of trapezoidal sheet / sandwich panels in roof and façade applications. The specially designed thin-sheet screw is made up of a combination of A2 stainless steel with a welded tip made from hardened carbon steel. The hardened carbon steel tip presses a sort of collar during the fluid screwing process, giving the threads a perfect fit. This means that chips do not risk or interfere with the leak-tight EPDM connection.

BiGHTY bi-metal thin-sheet screw

Art. no.	Dimensions [mm]	Width across flats	Ø Sealing washer [mm]	Clamp thickness [mm]	PU
SOL100548	4.5 x 25	AF 8	14	1,00 – 8,00	200
SOL100550	6.0 x 25	AF 8	16	1,00 – 8,00	200
SOL100553	6.0 x 38	AF 8	16	1,00 – 20,00	200



The tip is made of hardened carbon steel and is welded.
Note that it is not supplied with a red tip; the red color is for illustrative purposes only.

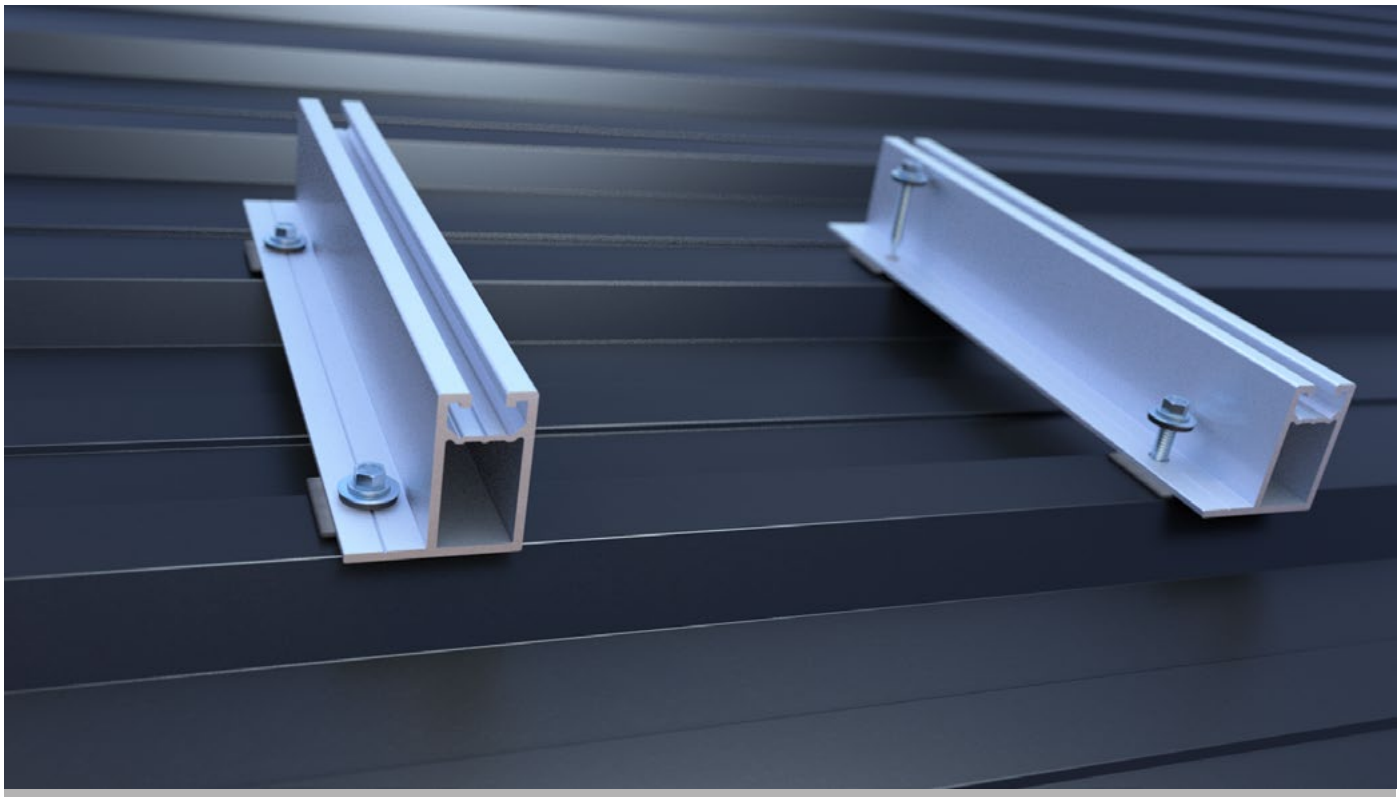
ADVANTAGES/SPECIFICATIONS

- Bi-metal screw
- Chip-free application of the seal
- High corrosion-resistance of screw
- Stainless steel according to DIN 10088
- No disruptive drilling chips between element and seal
- Maximum bore diameter:
  - → Aluminium up to 2.4 mm
  - → Sheet metal up to 2.0 mm
- High clamp thicknesses

MATERIAL

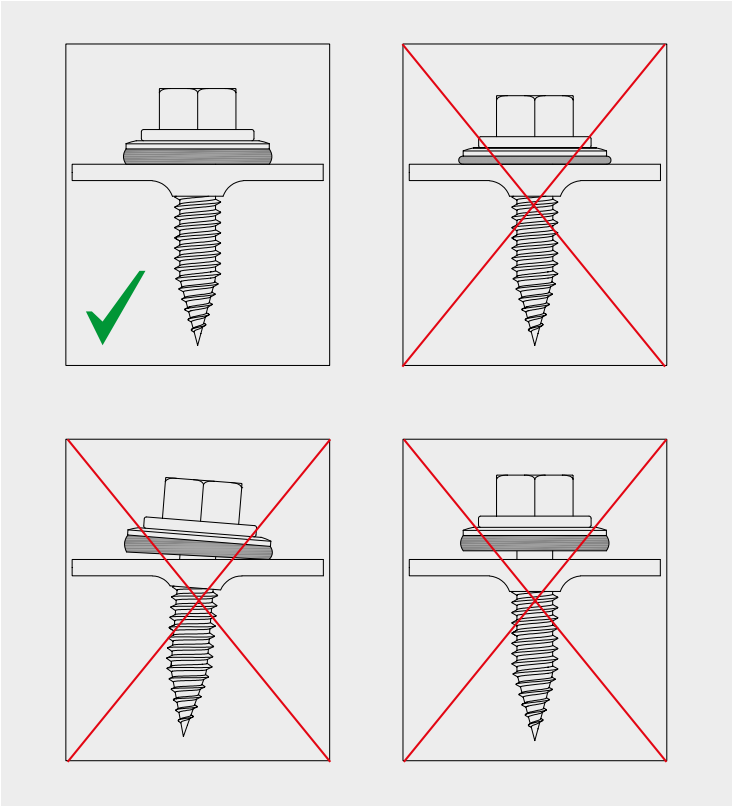
- Screw: stainless steel (1.4301) – EN 10088
- Washer: stainless steel (1.4301) – EN10088 with EPDM sealing ring

APPLICATION IMAGE



Thin sheet metal screws are perfect for the direct installation of the installation profile on trapezoidal sheets.

CORRECT SCREW CONNECTION BIGHTY BI-METAL DBS



APPLICATIONS

- Fastening of steel profile sheet onto aluminium
- Fastening of steel profile sheet onto steel sheet
- Fastening of aluminium onto steel sheet
- Fastening of aluminium onto aluminium
- **Recommended tightening torque:**

→ For steel profile sheet from 0.5 to 1.25 mm = approx. 3 Nm (from 0.5 to 0.8 mm material thickness = approx. 1 Nm)
→ For aluminium from 0.5 to 1.5 mm = approx. 1 Nm (from 0.5 to 0.8 mm material thickness = approx. 0.5 Nm)

INFO:
Includes an EPDM sealing washer and a hexagonal head with width across flats 8.

SOCKET WRENCH

for SST 8 mm

The socket wrench is ideal for screwing in hexagon nuts, bolts and sheet metal screws, especially for applications such as roof and façade cladding, as well as in the solar sector with self-drilling screws (BIGHTY bi-metal thin sheet metal screws). The socket wrench is very robust and can withstand high loads.

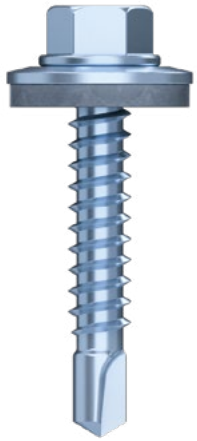
Socket wrench

Art. no.	Dimensions [mm]	Material	PU
945849	65 x 12,5	Steel	1

BIGHTY DRILLING SCREW

BiGHTY is a drilling screw that drills/forms its own tapped hole and also the counter thread in the element. This eliminates the need for pilot drilling and selecting the right borehole diameter. The specially formed drilling tip prevents the screw from drifting on the element surface. This makes it easy to start drilling. Centre-punching the drilling point is no longer necessary. The BiGHTY drilling screw thus represents a time-saving alternative to conventional self-tapping screws. The BiGHTY drilling screw can be used with standard cordless, electric or compressed-air screwdrivers with speeds of 1000 – 2500 rpm.

BiGHTY drilling screw



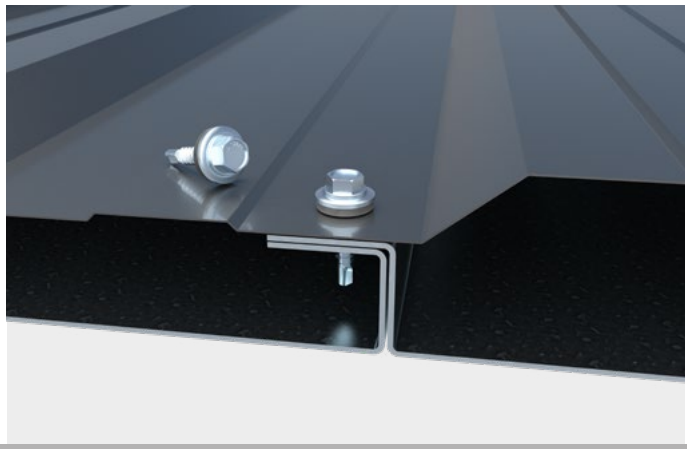
Art. no.	Dimensions [mm][a)]	Width across flats	Ø Sealing washer [mm]	H[a)] [mm]	PU
Bore diameter 3 mm					
945660	4.8 x 19	AF 8	14	4	500
945661	4.8 x 25	AF 8	14	10	500
945662	4.8 x 32	AF 8	14	17	500
945663	4.8 x 38	AF 8	14	23	200
945664	4.8 x 50	AF 8	14	35	200
Bore diameter 5 mm					
945665	5.5 x 19	AF 8	16	2	500
945666	5.5 x 25	AF 8	16	8	500
945667	5.5 x 32	AF 8	16	15	500
945668	5.5 x 38	AF 8	16	21	500
945669	5.5 x 50	AF 8	16	33	200
945670	5.5 x 60	AF 8	16	43	200
945672	6.3 x 25	AF 10	16	8	500
945673	6.3 x 32	AF 10	16	15	200
945674	6.3 x 38	AF 10	16	21	200
945675	6.3 x 50	AF 10	16	33	200
945676	6.3 x 60	AF 10	16	43	200
Bore diameter 12 mm					
945671	5.5 x 38	AF 8	16	14	500

a) For wood-steel connections:
H= clamp thickness + sheet thickness t; t_{max} = bore diameter. See sketch on p. 148.

ADVANTAGES/SPECIFICATIONS

- BiGHTY hardened stainless steel, special coating
- Stainless steel according to DIN 10088
- A2 and EPDM sealing washer

APPLICATION IMAGES



BiGHTY drilling screws for simple screw connection of trapezoidal sheets

BIGHTY BI-METAL DBS MAGAZINE SCREWDRIVER

The BiGHTY BI-Metal DBS magazine screwdriver enables effortless screw insertion thanks to its 1-click system, without the need for manual fixing. This screwdriver is particularly suitable for working with thin sheet metal screws with a width across flats of 8 mm and a length of between 22 and 38 mm.

Bighty bi-metal DBS magazine screwdriver

Art. no.	For BiGHTY BI-Metal DBS		Technical details of the drive unit		PU
	Screw length	Receptacle	Idle speed	Battery	
SOL100559	22–38 mm	SW 8	2.500U / min-1	18 V / 5.0 Ah Lithium-ion	1

BiGHTY Bi-metal thin sheet screw, Magazined					
Art. no.	Dimension [mm]	Width across flats	Ø sealing washer [mm]	Clamping thickness [mm]	PU
SOL100550-MAG	6,0 x 25 mm	SW 8	12	1,00 – 8,00	560
SOL100553-MAG	6,0 x 38 mm	SW 8	12	1,00 – 20,00	560

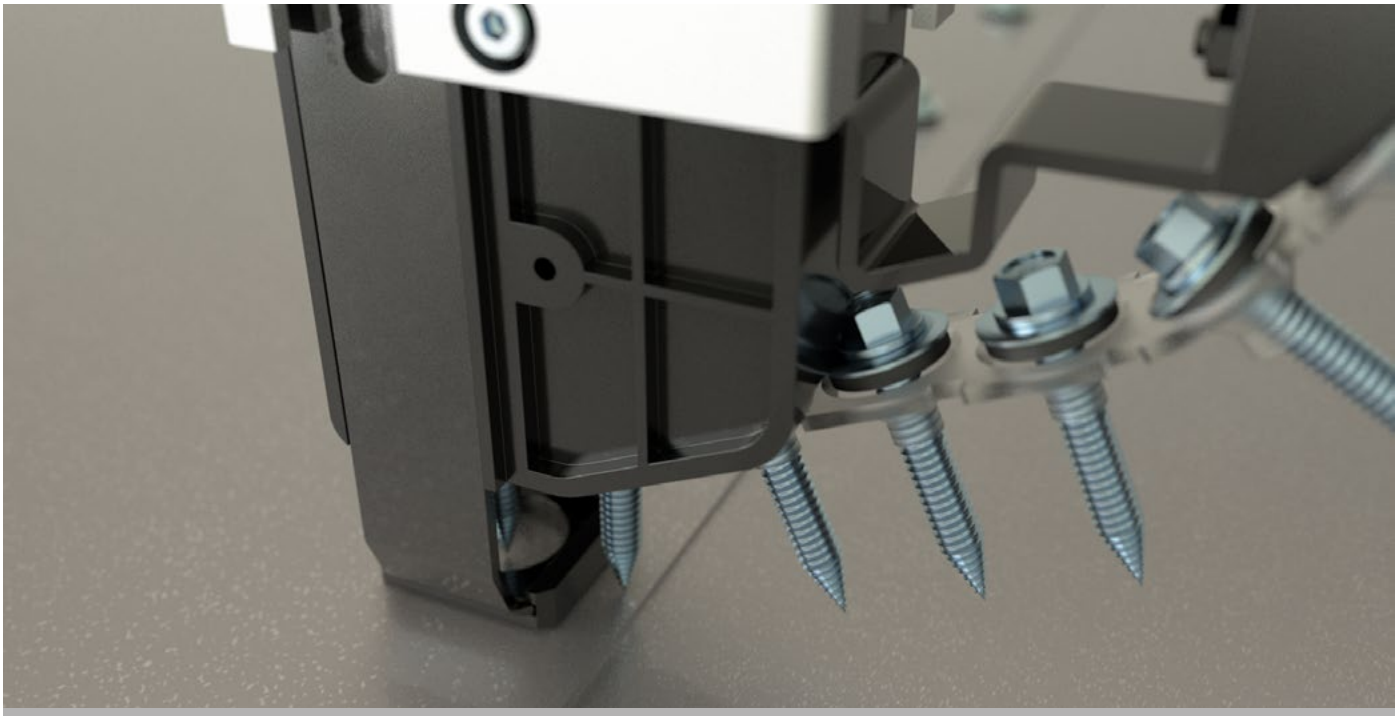
ADVANTAGES / PROPERTIES

- Health prevention, high processing comfort
- Time saving - quick insertion of the screw
- Precise screw-in depth adjustment
- Easy handling and precise screwing

MAIN AREAS OF APPLICATION

- Solar industry, specialized in the assembly of trapezoidal sheets/sandwich panels
- Hall construction
- Lightweight metal construction

APPLICATION IMAGE



Application example

EUROTEC CALCULATION SERVICE

Solar mounting for trapezoidal sheet metal roof

Request form for preparing a proposal for a photovoltaic system on a trapezoidal sheet metal roof. The proposal includes a quantity calculation as well as the feasibility check for your project. You will automatically receive a preliminary measurement of the mounting elements when you place your order. Additional verifications, such as inspecting the roof structure, are not included in the scope of delivery. We are happy to submit a proposal to you for this.

Email: solar@eurotec.team

CONTACT

Construction project: _____ Tel: _____

Contact person: _____ Email: _____

INFORMATION ON THE CONSTRUCTION PROJECT:

Postcode: _____

Snow load zone: _____
(according to DIN 1055-5:2005)

Wind load zone: _____
(according to DIN 1055-4:2005)

Ground elevation above sea level: _____ m
(above sea level)

Building height H: _____ m

Module type:
(precise manufacturer specifications)

_____

_____

Weight of module: _____ kg

(If the type is unknown)

Module dimensions: _____ mm
(length x width)

Module height: _____ mm

Number of modules _____

Trapezoid sheet metal type + manufacturer: _____

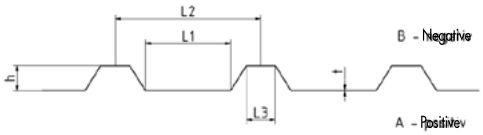
Length L1: _____ mm

Length L2: _____ mm

Length L3: _____ mm

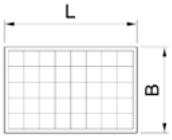
Height h: _____ mm

Sheet thickness t: _____ mm

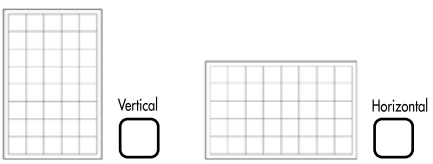


Installation type for the trapezoidal sheet metal: →(Positive or negative position)

Negative ☐ Positive ☐



Alignment of modules: →

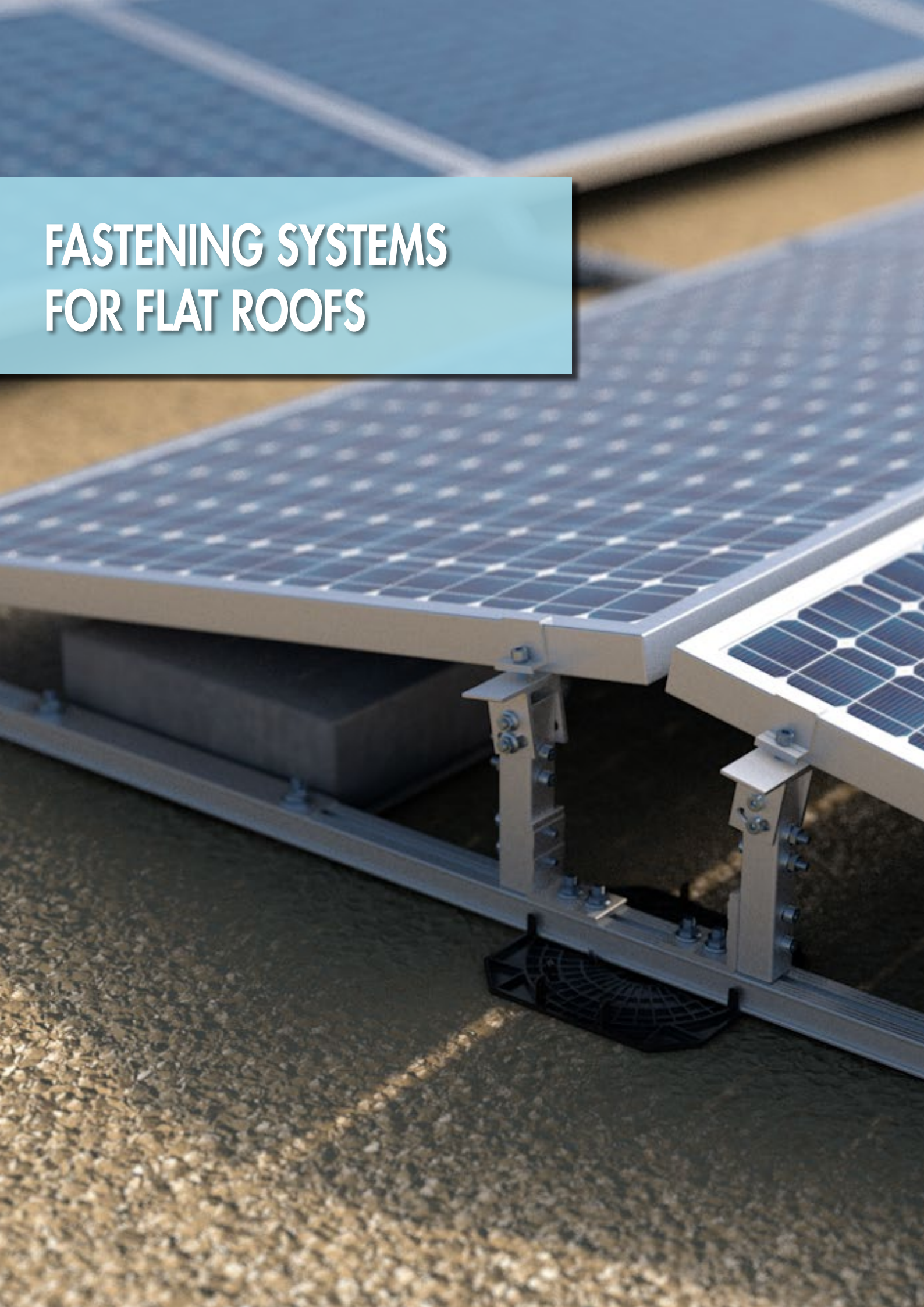


ADDITIONAL REQUIRED INFORMATION:

• Dimensioned sketches or status plan of the trapezoidal sheet metal specifying the orientation of the roof and all openings, roof structures, chimneys, lightning protection systems, adjacent buildings, etc.

NOTES:

FASTENING SYSTEMS FOR FLAT ROOFS



FASTENING SYSTEM

for flat roofs

In combination with the Eurotec fastening system for flat roofs, solar systems can be installed quickly, efficiently and flexibly. The 'joints' can be used to easily adjust the angles of the solar panels.

WHAT YOU NEED:

- Load distribution plate
- Flat roof installation profile
- Corner connector
- T-connector
- Joints
- Module clamps
- Ballast tray
- Wind deflector

Module clamps

Front joint

Rear joint

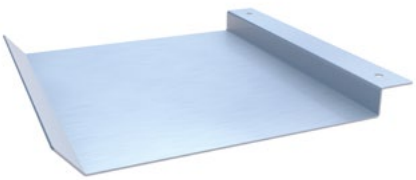
T-connector

Corner connector

Wind deflector

Load distribution plate

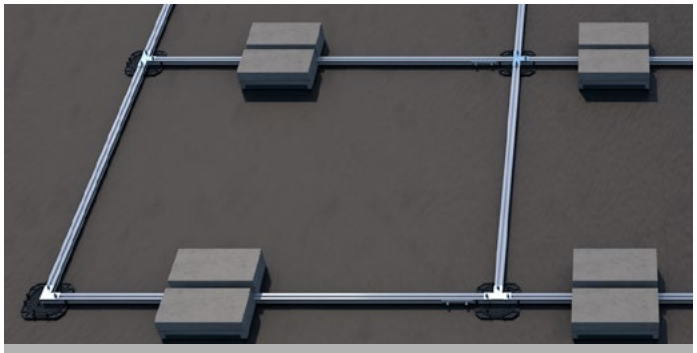
Flat roof installation profile



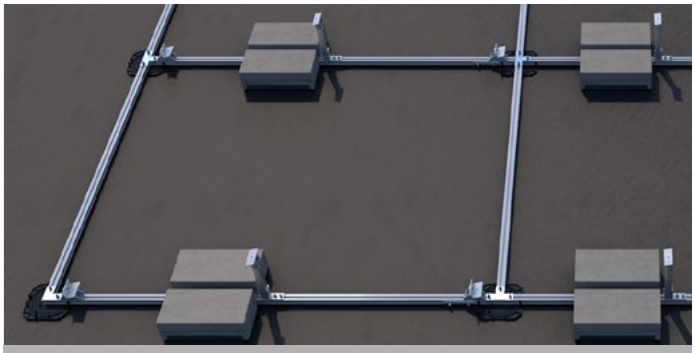
Ballast tray

INSTALLATION EXAMPLE

STEP 1: Connect the laid-out mounting profiles using corner and T-connectors. In addition, place a load distribution plate under each of the connection points.



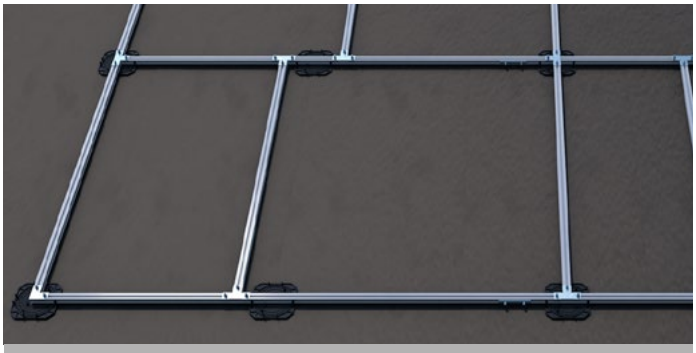
STEP 2: Position the ballast trays, as in this example, on all mounting profiles of length L1 and L3 (more information can be found in the assembly instructions).



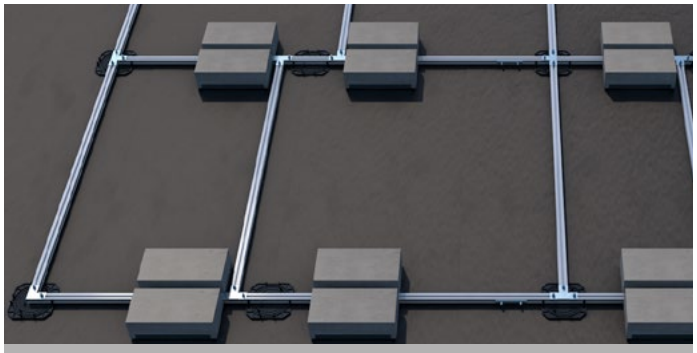
STEP 3: Once the basic framework of module panels is ready, you can screw down the module uprights.

STEP 4: Starting with the first module field row, you can now place the solar modules on the module uprights and fix them with module clamps.

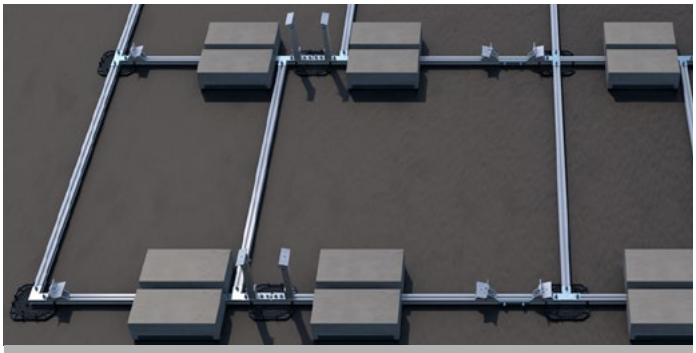
INSTALLATION EXAMPLE EAST-WEST SUPERSTRUCTURE



STEP 1: Connect the laid-out mounting profiles using corner and T-connectors. In addition, place a load distribution plate under each of the connection points.



STEP 2: Position the ballast trays in order to distribute the loads as evenly as possible (more information can be found in the installation instructions).



STEP 3: Once the basic framework of module panels is ready, you can screw down the module uprights.

STEP 4: Starting with the first module field row, you can now place the solar modules on the module uprights and fix them with module clamps.

ROOF PROTECTION CORK

The natural underlay for load distribution plates
When the load distribution plate is used on PVC film roofs, some of their contents, such as plasticisers, may cause problems. Thanks to the cork material, roof protection cork offers natural protection against mechanical damage to the roof membrane and prevents contact between the two materials. ***Free from PAH** (hazardous plasticiser in rubber).

Roof protection cork

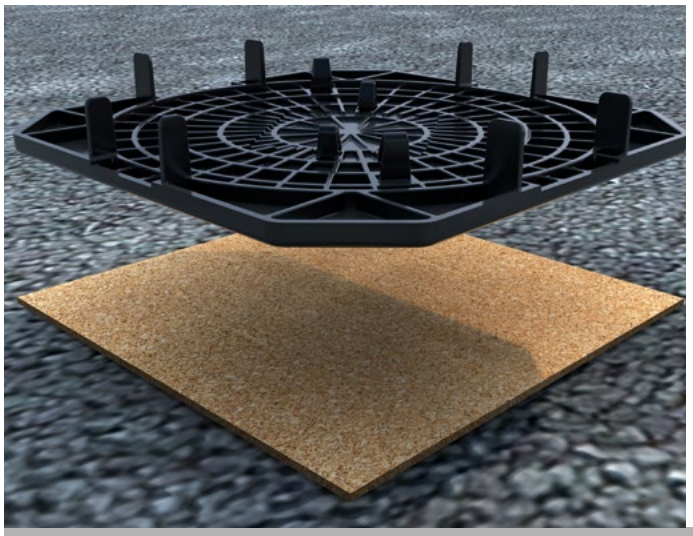
Art. no.	Dimensions[a)] [mm]	Material	PU
945395	200 x 200 x 3	Cork	10

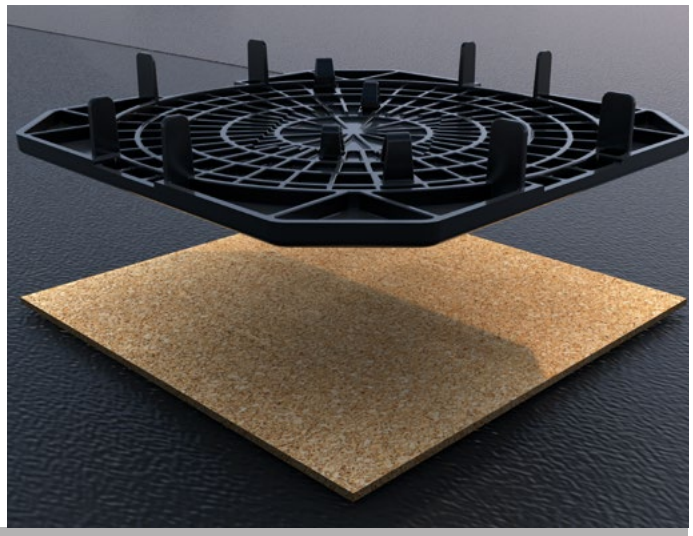
[a)]Width x length x height

ADVANTAGES
- Water-repellent (hydrophobic) and chemically neutral
- Does not rot and is resistant to most acids and alkalis
- Heat-insulating, noise- and vibration-damping
- Slip-resistant

FREE FROM PAH
PAH = hazardous plasticiser in rubber

APPLICATION IMAGES





Thanks to the cork material, roof protection cork offers natural protection against mechanical damage to the roof membrane.

LOAD DISTRIBUTION PLATE

Installing a solar system on an insulated flat roof often gives rise to difficulties with regard to load and load distribution. Insulating materials can become compressed by the load concentrated at certain points, thereby damaging the insulation and the flat roof. The Eurotec load distribution plate, by contrast, spreads the load over a larger surface and distributes it more evenly across the solar system.

Load distribution plate

Art. no.	Dimensions[a] [mm]	Material	PU
SOL100016	28 x 210 x 210	PP-C (polypropylene copolymer)	10

[a] Height x width x length

ADVANTAGES

- Quick and easy installation
- Controlled load distribution
- Low net weight gives the base surface additional protection
- Easy to transport unlike alternative designs
- Highly durable and resistant to UV radiation and rot
- Low installation height unlike conventional solutions for load distribution

APPLICATION IMAGE

The load distribution plate is placed on the roof protection cork and fitted with a installation profile.

FLAT ROOF INSTALLATION PROFILE

AL

The flat roof installation profile can be laid quickly and easily (in combination with the corner and T-connector). This enables the flat roof installation profile to form a high-quality and durable foundation for flexibly installation the components.

Flat roof installation profile

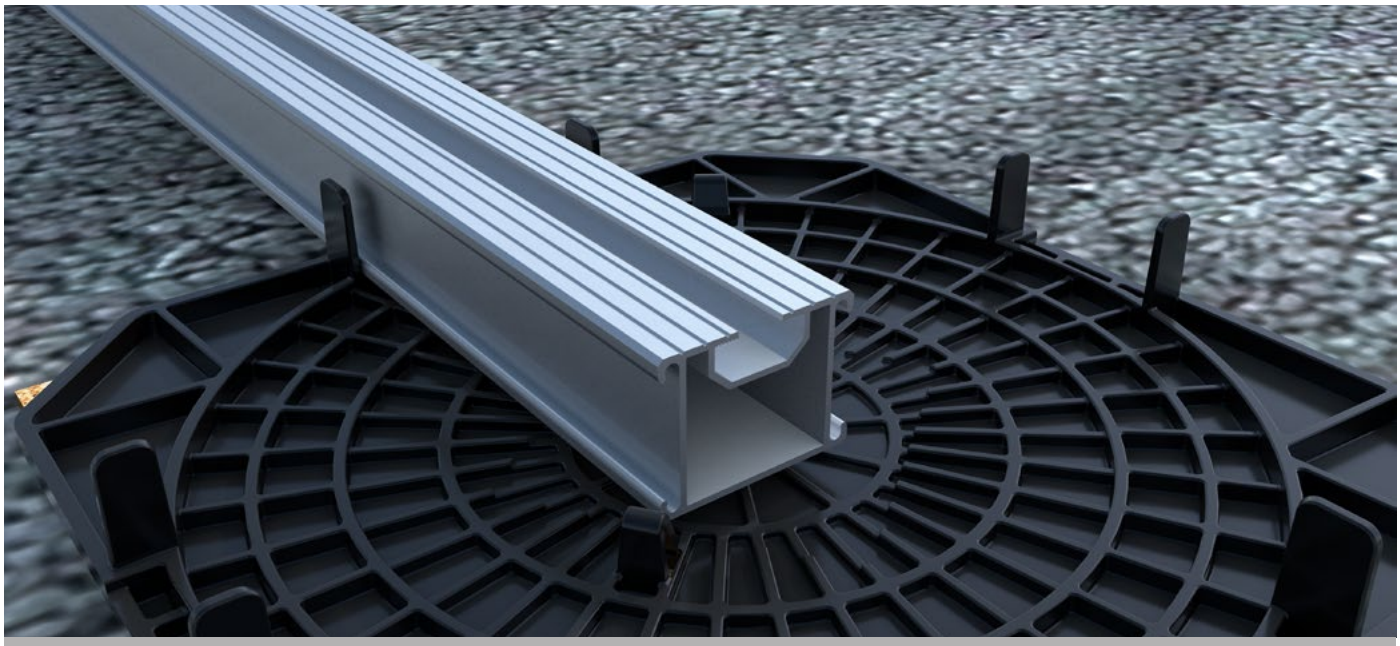
Art. no.	Dimensions[a)] [mm]	Material	PU
SOL100649	30 x 40 x 1300	Aluminium	1
SOL100650	30 x 40 x 1500	Aluminium	1
SOL100651	30 x 40 x 1745	Aluminium	1
SOL100652	30 x 40 x 2100	Aluminium	1
SOL100653	30 x 40 x 2300	Aluminium	1
SOL100654	30 x 40 x 2800	Aluminium	1
SOL100655	30 x 40 x 3000	Aluminium	1
SOL100694	30 x 40 x 6400	Aluminium	1

[a)]Height x width x length

ADVANTAGES

- Weather-resistant
- Quick and easy installation

APPLICATION IMAGE



The flat roof installation profile is simply laid on the load distribution plate.

PROFILE CONNECTOR

AL

The profile connector is used to connect two installation profiles quickly and easily. The connector is inserted, aligned centrally to the connection point and tightened with the two screws.

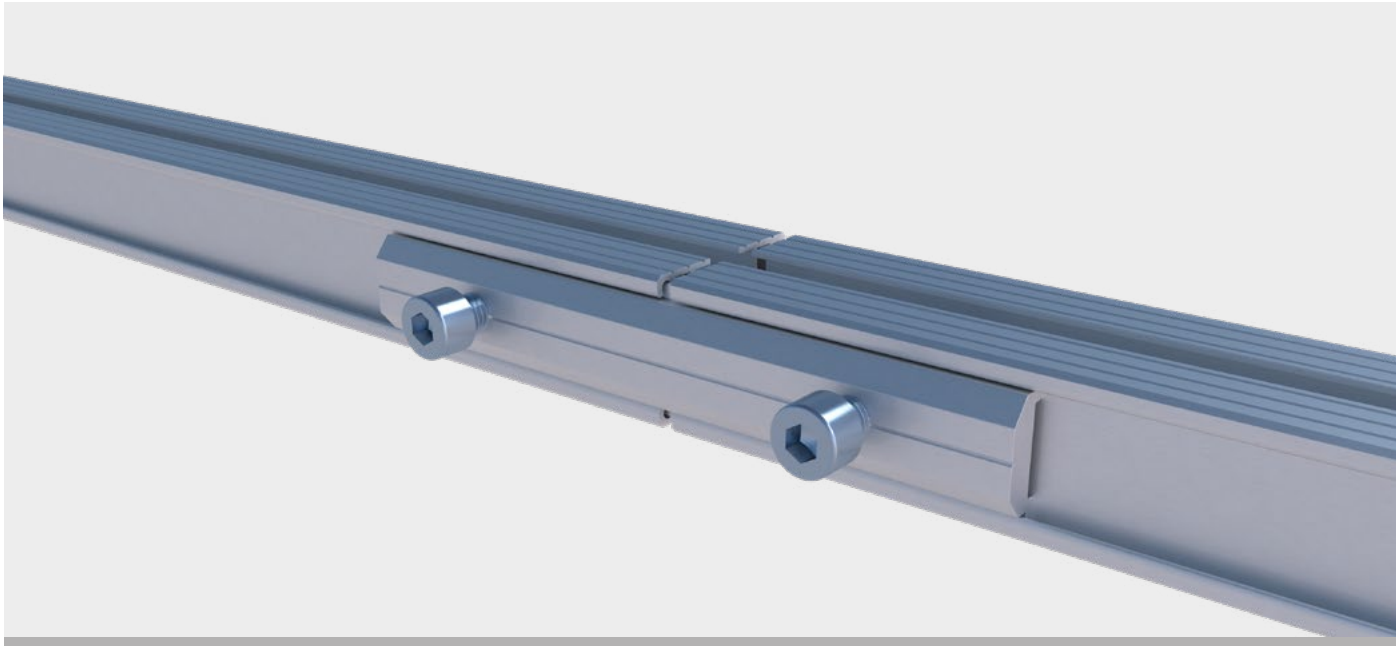
Profile connector

Art. no.	Dimensions [mm][a)]	Material	PU
SOL100642	26.2 x 8.2 x 150	Aluminium	1

ADVANTAGES/SPECIFICATIONS

- Easy to work with
- Aluminium
- Delivery includes screws

APPLICATION IMAGE



Connecting two installation profiles with profile connector

T-PROFILE CONNECTOR

A2

The T-profile connector can be used to create simple cross-connections.

T-profile connector

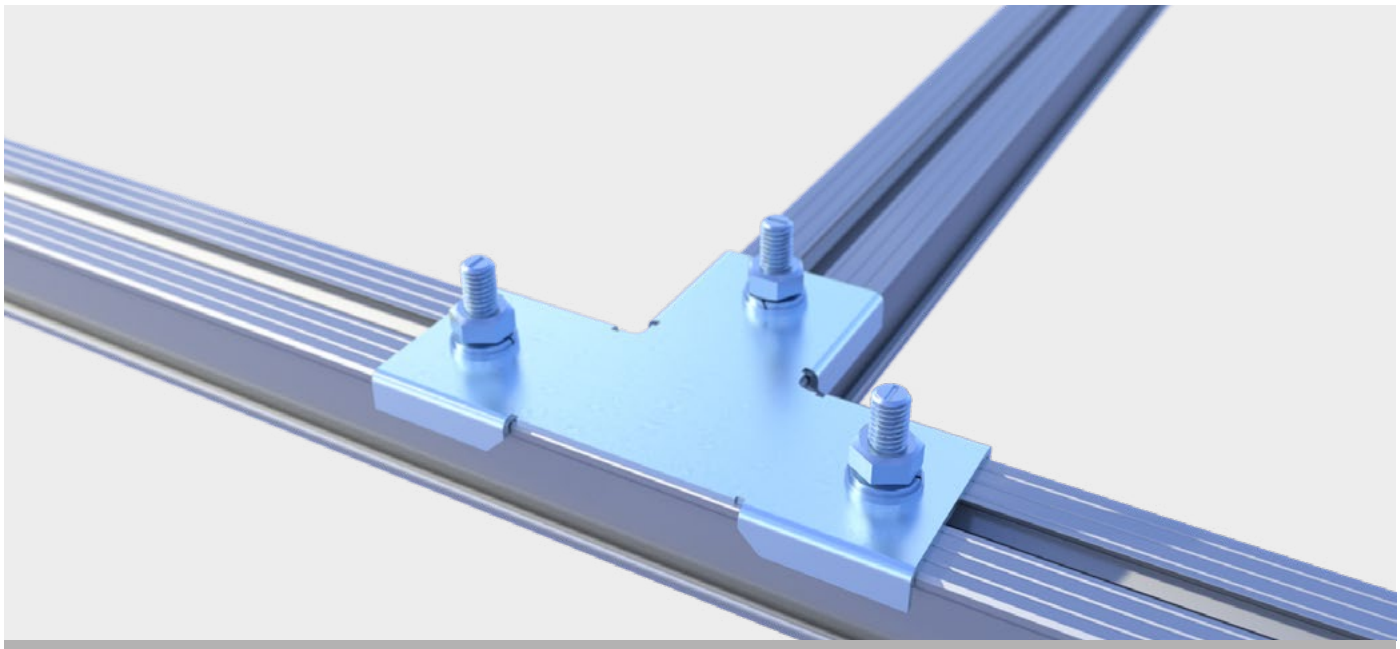
Art. no.	Dimensions [mm][a)]	Material	PU
SOL100643	10 x 87.5 x 130 t=2	A2 stainless steel	1

[a)]Height x width x length x material thickness

ADVANTAGES/SPECIFICATIONS

- Easy to work with
- Stainless steel according to DIN 10088
- Delivery includes screws

APPLICATION IMAGE



The T-profile connector connects two installation profiles together at a 90° angle.

CORNER CONNECTOR

A2

The corner connector can be used to create simple corner connections.

Corner connector

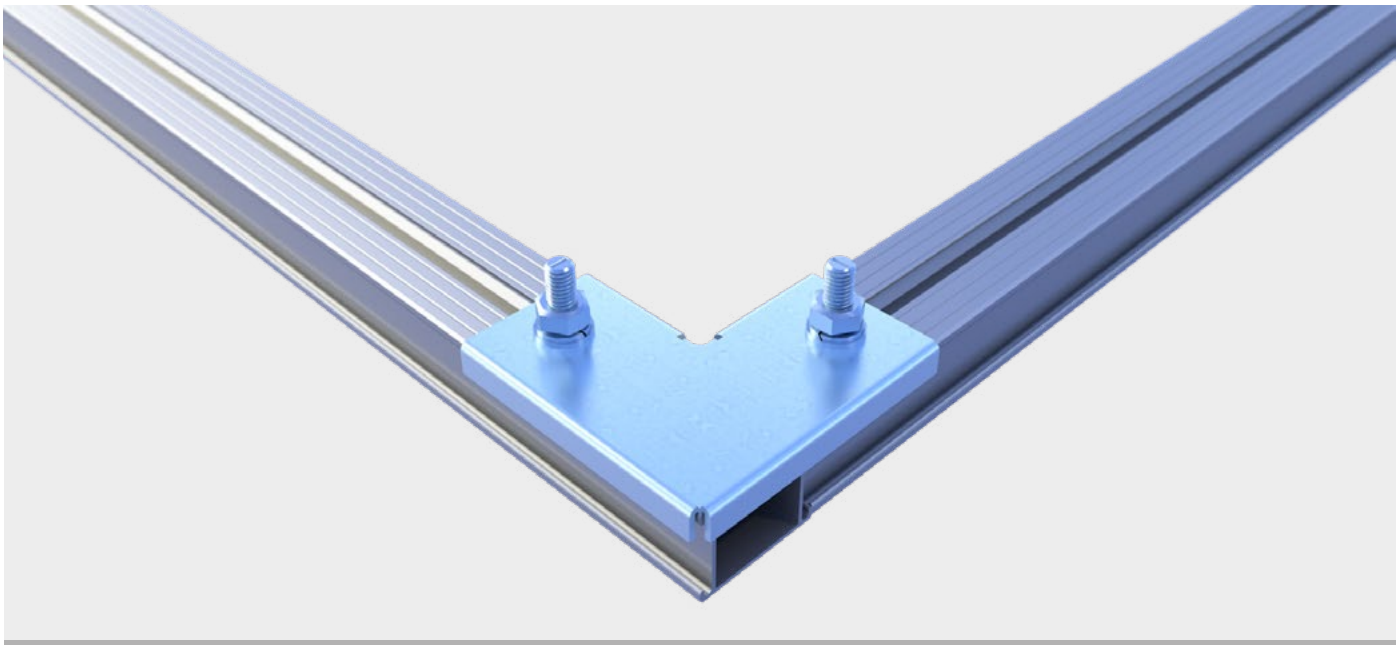
Art. no.	Dimensions [mm][a)]	Material	PU
S0L100644	10 x 87.5 x 87.5 t=2	A2 stainless steel	1

[a)]Height x width x length x material thickness

ADVANTAGES/SPECIFICATIONS

- Easy to work with
- Stainless steel according to DIN 10088
- Delivery includes screws

APPLICATION IMAGE



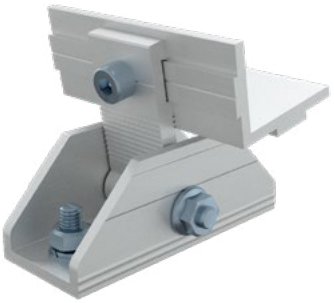
The installation profiles are screwed together at the ends with the corner connector.

FRONT JOINT FOR MODULE MOUNTING

AL

The solar panels can be fastened individually on the installation profile on the front joint for module mounting.
The angle of the panels can also be flexibly adjusted.

Front joint for module mounting

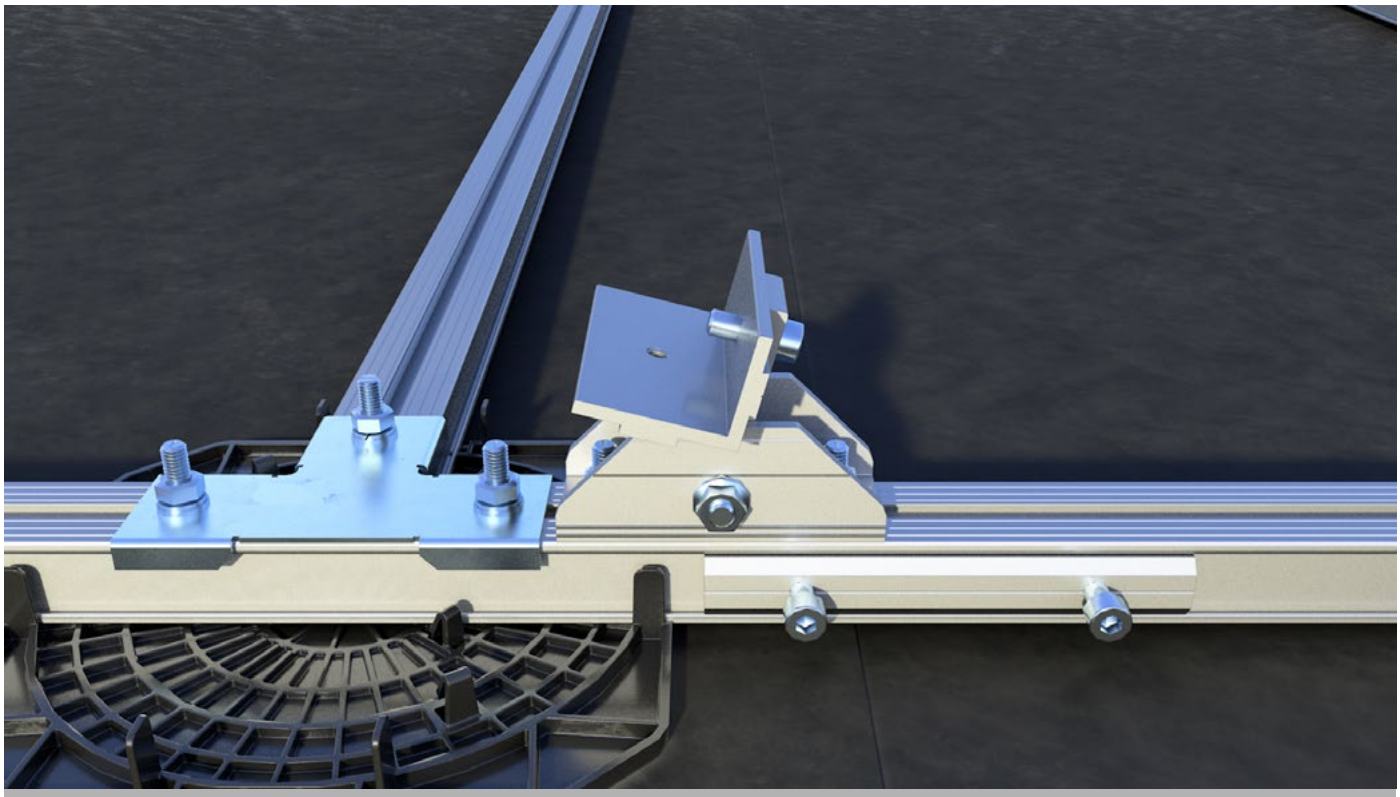


Art. no.	Dimensions [mm][a)]	Material	Coating	PU
SOL100660	80 x 90 x 100	Aluminium	Anodised	1

ADVANTAGES/SPECIFICATIONS

- Easy to work with
- Aluminium
- Delivery includes screws

APPLICATION IMAGE



Front joint for module mounting in installed state

REAR JOINT FOR MODULE MOUNTING

AL

The solar panels can be fastened individually on the installation profile on the rear joint for module mounting.
The angle of the panels can also be flexibly adjusted.

Rear joint for module mounting

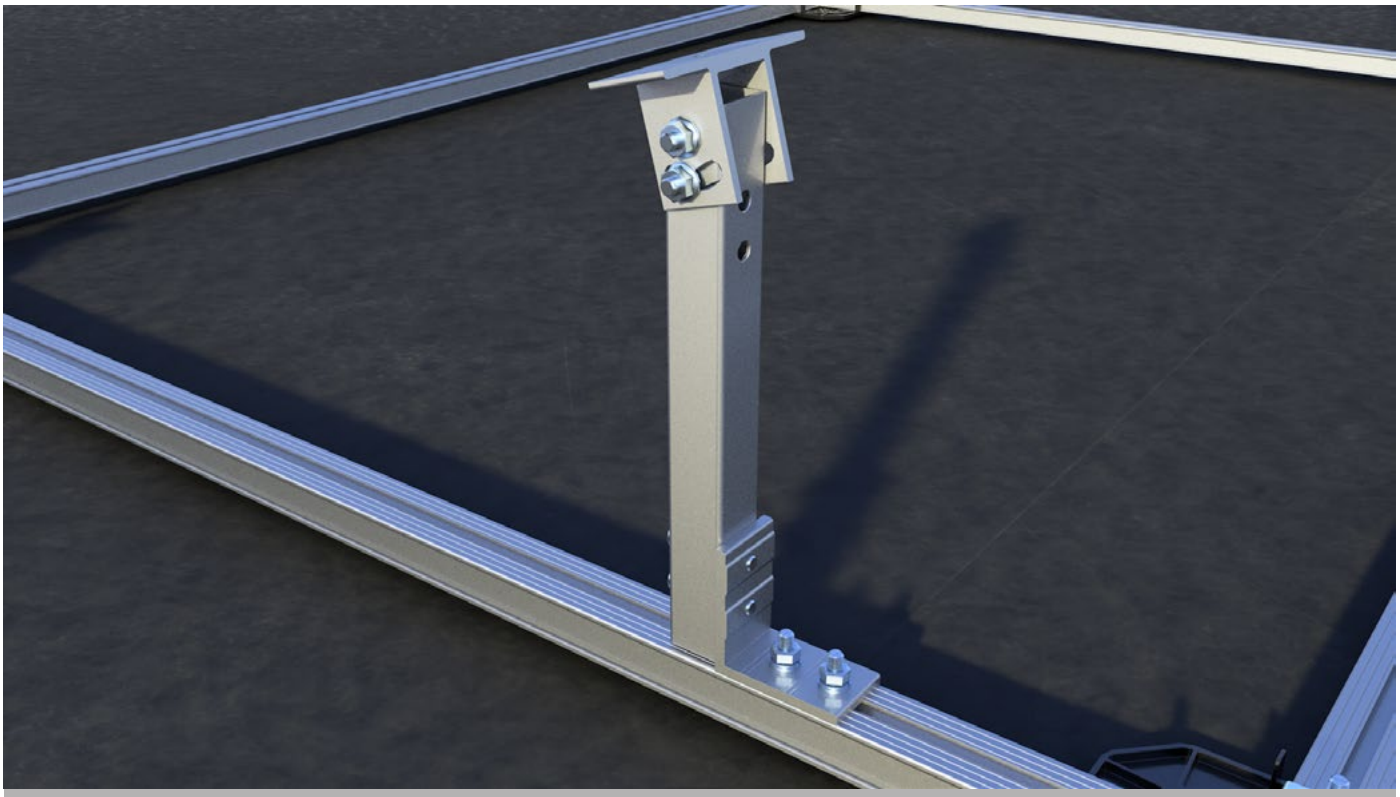
Art. no.	Angles	Material	Coating	PU
SOL100661	10°	Aluminium	Anodised	1
SOL100662	15°	Aluminium	Anodised	1
SOL100663	30°	Aluminium	Anodised	1

*Bracket for wind protection not included in the scope of delivery

ADVANTAGES/SPECIFICATIONS

- Easy to work with
- Aluminium
- Delivery includes screws

APPLICATION IMAGE



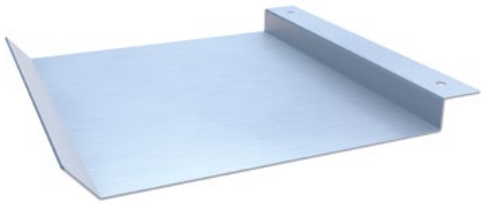
Rear joint for module mounting in installed state

BALLAST TRAY

AL

To enable the structure to be firmly secured on the roof, the ballast trays are installed and filled with stones.

Ballast tray



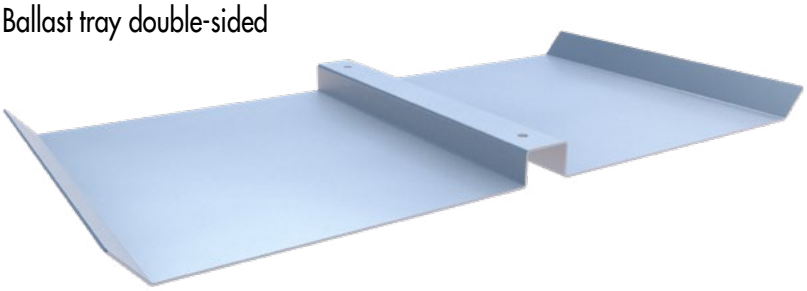
Art. no.	Design	Dimensions [mm][a)]	Material	PU
SOL100647	Single-sided	244 x 350 x 35 t=2	Aluminium	1
SOL100648	Double-sided	452 x 350 x 35 t=2	Aluminium	1

a)Width x length x height t=sheet thickness

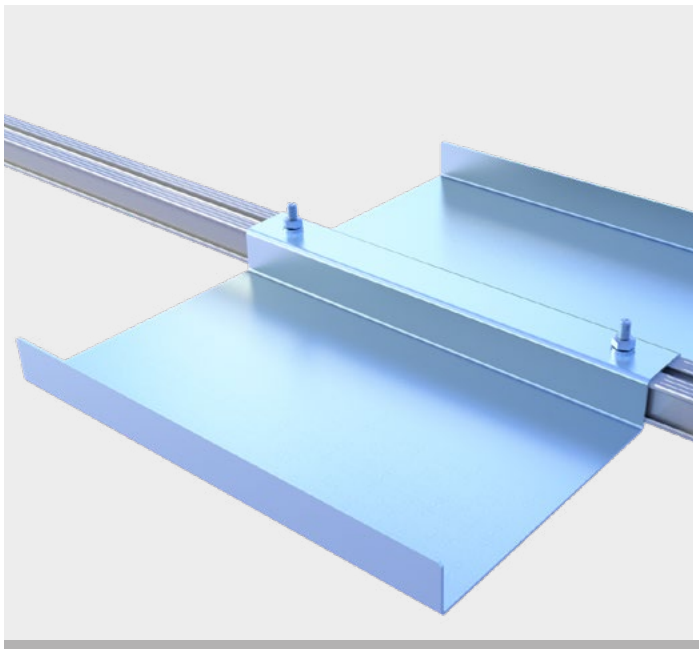
ADVANTAGES/SPECIFICATIONS

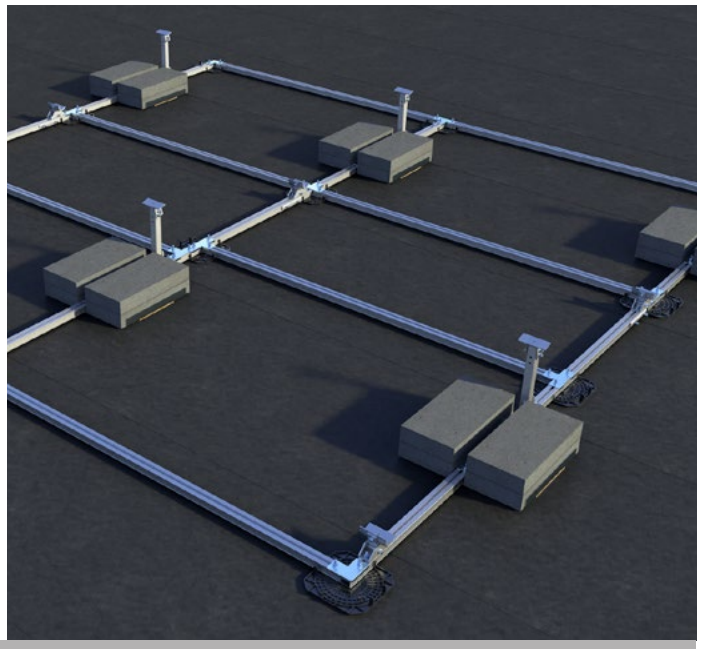
- Easy to work with
- Aluminium

Ballast tray double-sided



APPLICATION IMAGES





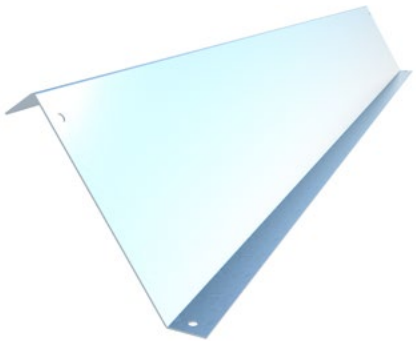
The single-sided ballast tray is fastened to the flat roof installation profile and weighed down with the corresponding stones.

WIND DEFLECTOR

AL

The wind deflector is used to channel the wind away at the back of the solar system.

Wind deflector



Art. no.	Version	Material	Coating	PU
SOL100684	Wind deflector 10°	Aluminium	Anodised	1
SOL100657	Wind deflector 15°	Aluminium	Anodised	1
SOL100685	Wind deflector 30°	Aluminium	Anodised	1

ADVANTAGES/SPECIFICATIONS

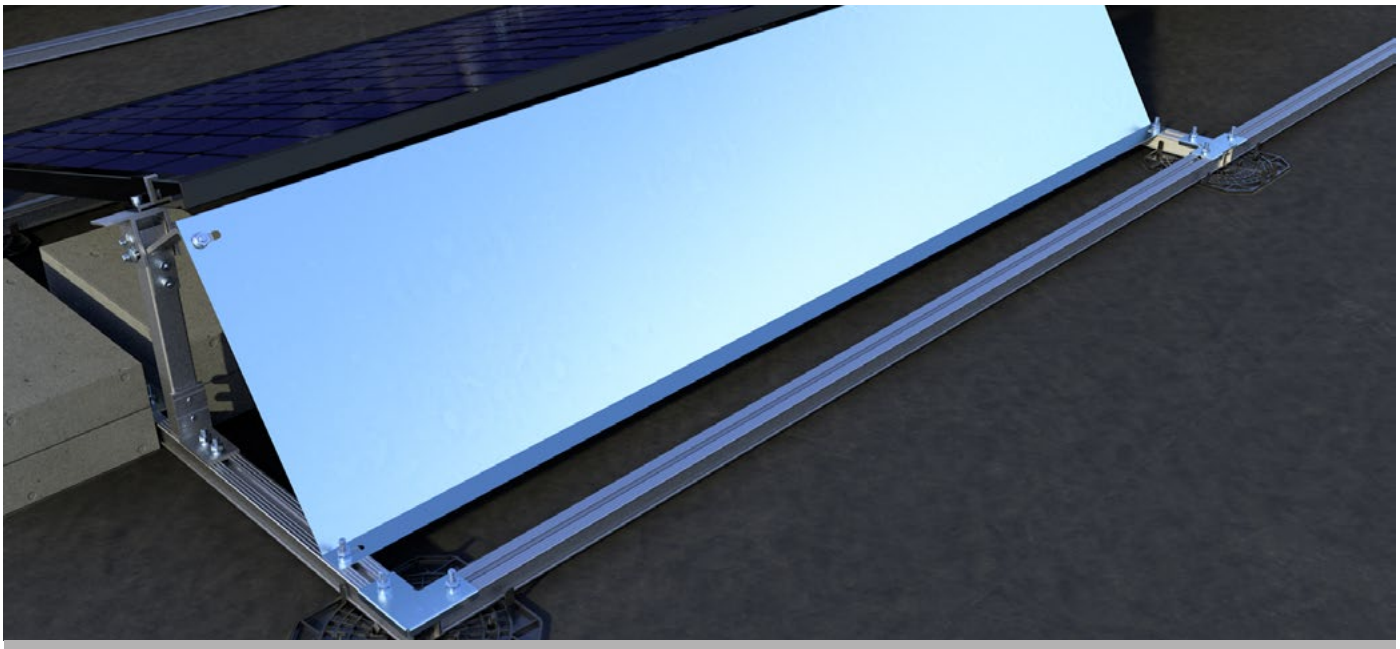
- Serves to deflect wind

Bracket for wind deflector

Art. no.	Dimensions [mm]	Material	PU
SOL100658	150 x 42.5 x 30	A2 stainless steel	1

A2

APPLICATION IMAGE



The bracket is screwed onto the rear joint for module mounting. The wind deflector can then be screwed on.

EUROTEC CALCULATION SERVICE

Flat roof solar mounting

Inquiry form for preparing a proposal for a non-penetrative flat-roof mounting frame for a photovoltaic system. The proposal includes a quantity calculation as well as the feasibility check for your project. You will automatically receive a reviewed lifting verification when you place your order. Additional stability verifications, such as inspecting the roof structure, are not included in the scope of delivery.
We are happy to submit a proposal to you for this.

Email: solar@eurotec.team

CONTACT

Construction project: _____ Tel: _____

Contact person: _____ Email: _____

INFORMATION ON THE CONSTRUCTION PROJECT:

Postcode: _____

Snow load zone: _____
(according to DIN 1055-5:2005)

Wind load zone: _____
(according to DIN 1055-4:2005)

Ground elevation above sea level: _____ m
(above sea level)

Module type:
(precise manufacturer specifications)

_____

_____

Weight of module: _____ kg

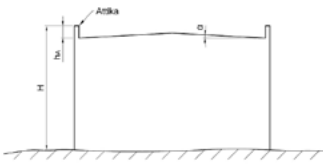
(If the type is unknown)
Module dimensions: _____ mm
(length x width)

Module height: _____ mm

Number of modules _____

Building height H: _____ m

Roof parapet height h_A: _____ m

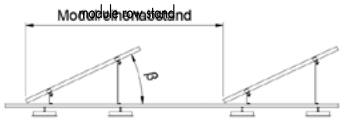


Roof pitch if necessary
α [degrees]: _____ °

Module angle of inclination
β [degrees]: _____ °

Module row spacing: _____ m
(requested)

Type of module support:
→(Please mark with a cross)

☐ 

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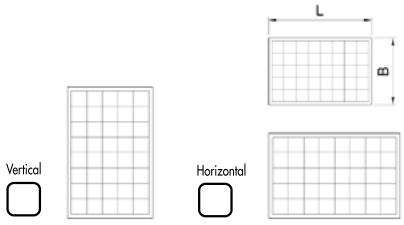


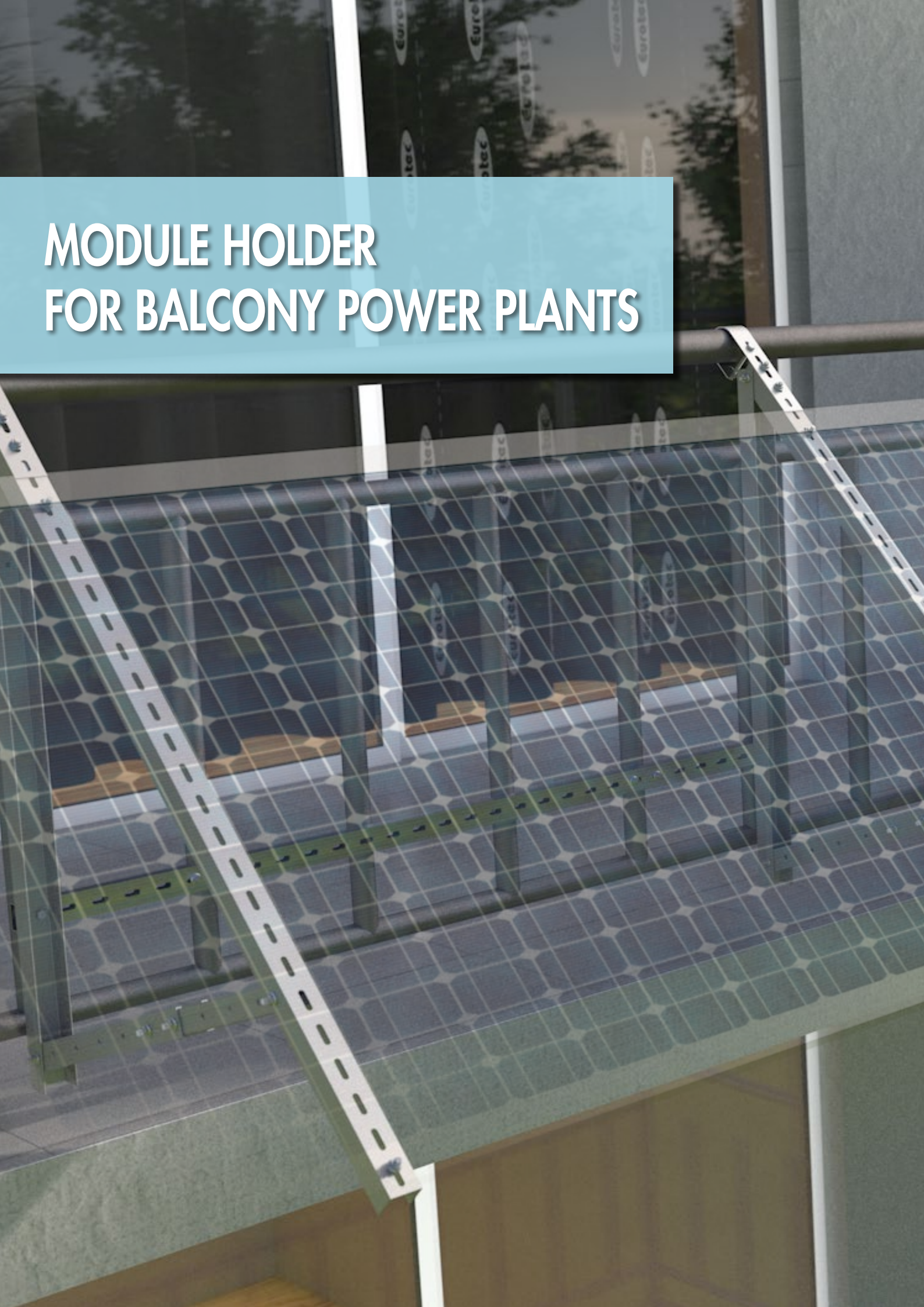
Alignment of modules:* →

ADDITIONAL REQUIRED INFORMATION:

• Dimensioned sketches or status plan of the flat roof specifying the orientation of the roof and all openings, roof structures, chimneys, lightning protection systems, adjacent buildings, etc.

NOTES:

MODULE HOLDER FOR BALCONY POWER PLANTS



MODULE HOLDER FOR BALCONY POWER PLANTS

The module bracket for balcony power plants made of high-quality aluminum is becoming increasingly popular on the solar market. Its adjustable design allows it to be adapted to different solar module sizes and installation requirements. With flexible tilt angles of 30, 35, 40, 45 or 50 degrees, it can be adapted to local conditions. The bracket is also robust enough to withstand high wind speeds and snow loads, making it versatile.

Module bracket for balcony power plants

Art. no.	Material	Solar module*		
		Length [mm]	Width [mm]	Thickness [mm]
SOL100001	Al6005-T5.SUS304	max. 2279	83–1134	30–50

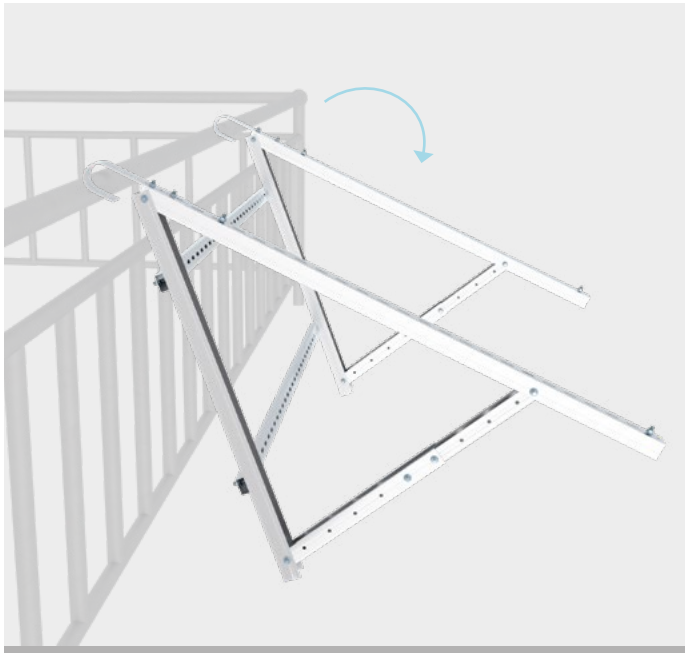
Adjustable angle range	Application	Max. wind speed	Max. snow load	PU
30–50°	Balcony, walls	180 km/h	1.5 kN/m²	1

* Check in advance whether the module can be mounted on the bracket

ADVANTAGES/SPECIFICATIONS

- Quick and easy to install
- Manually adjustable tilt angle for more power generation
- Low weight and attractive appearance

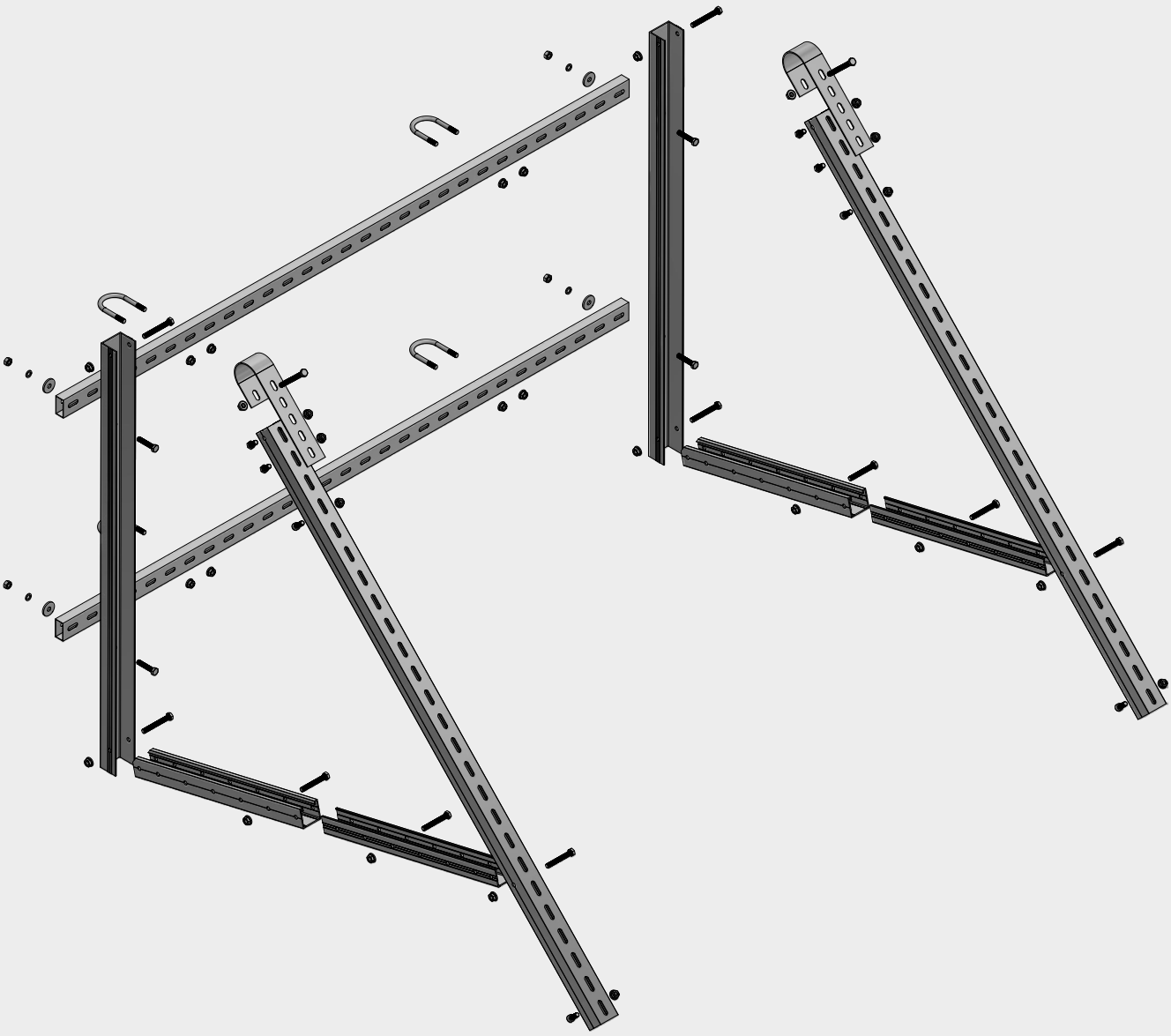
INSTALLATION EXAMPLE



Hang the pre-assembled balcony bracket on the railing.

Fasten the bracket using screws and round steel brackets.

EXPLODED VIEW



ACCESSORIES FOR THE SOLAR SYSTEMS

MODULE CLAMPS, ALUMINIUM

AL

Fastening with DIN 912, M8

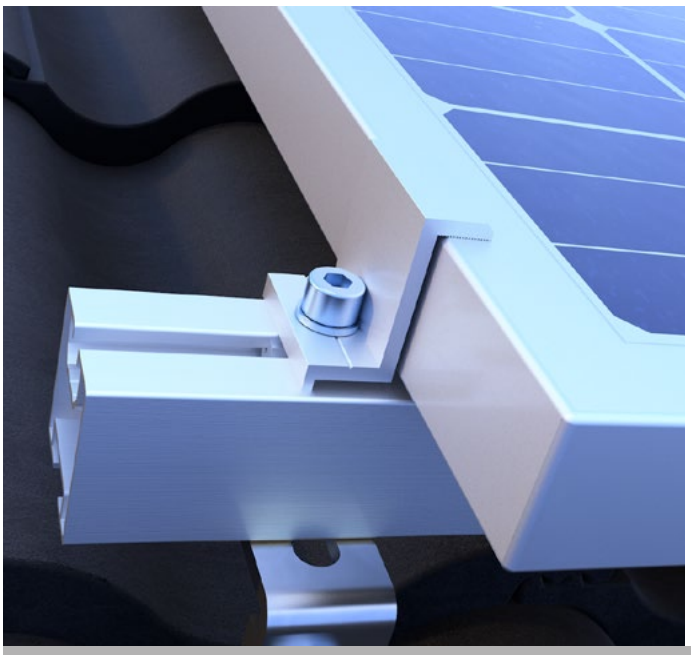
Eurotec centre/end clamps fasten the frame of the individual solar module to the installation profiles. The end clamps are specially designed for fastening the edges of the solar module field, while centre clamps can be used between two solar modules in the field. Furthermore, module clamps ensure even spacing between the individual solar modules.

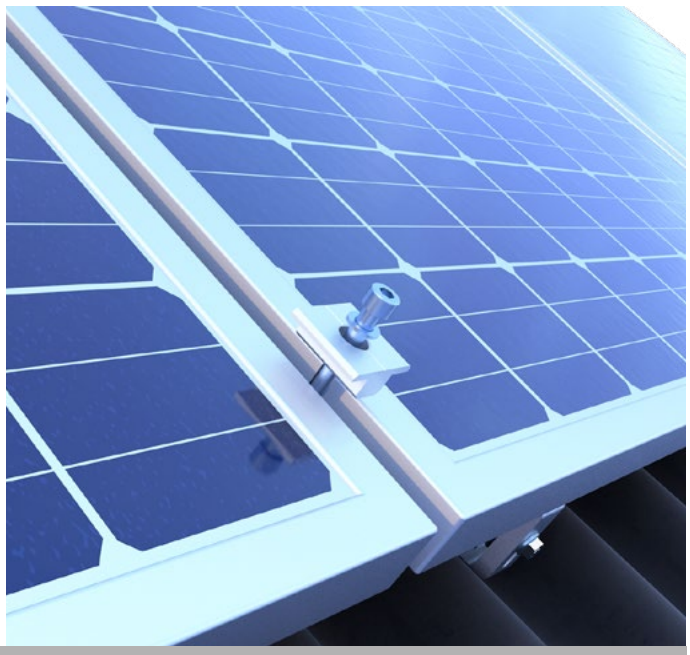
Module clamps

Art. no.	Name	Dimensions [mm]	PU
SOL100674	End clamp 30, black	32 x 33.3 x 37.5	50
SOL100675	End clamp 30	32 x 33.3 x 37.5	50
SOL100676	End clamp 32, black	32 x 35.3 x 37.5	50
SOL100677	End clamp 32	32 x 35.3 x 37.5	50
SOL100678	End clamp 35, black	32 x 38.3 x 37.5	50
SOL100679	End clamp 35	32 x 38.3 x 37.5	50
SOL100680	Centre clamp, black	39.9 x 14.9 x 37.5	50
SOL100681	Centre clamp	39.9 x 14.9 x 37.5	50

Clamp	Module height	Fastening base	Necessary cylinder head screw		Also required
			Min. dimensions	Max. dimensions	
Module end clamp 30	30 mm	Module elevation	M 8 x 16	M 8 x 60	
		Installation profile	M 8 x 16	M 8 x 16	Slot nut
Module end clamp 32	32 mm	Module elevation	M 8 x 16	M 8 x 60	
		Installation profile	M 8 x 16	M 8 x 16	Slot nut
Module end clamp 35	35 mm	Module elevation	M 8 x 16	M 8 x 60	
		Installation profile	M 8 x 16	M 8 x 16	Slot nut
Module centre clamp	30 mm	Module elevation	M 8 x 35	M 8 x 60	
		Installation profile	M 8 x 35	M 8 x 35	Slot nut
Module centre clamp	32 mm	Module elevation	M 8 x 35	M 8 x 60	
		Installation profile	M 8 x 35	M 8 x 35	Slot nut
Module centre clamp	35 mm	Module elevation	M 8 x 40	M 8 x 60	
		Installation profile	M 8 x 40	M 8 x 40	Slot nut

APPLICATION IMAGES





Eurotec end/centre clamp installed on the installation profile, to fasten the solar modules

FASTFIX MODULE CLAMPS

AL

FIX-FIT SYSTEM

The module centre clamp can be used with solar modules with frame heights of 30–40 mm. It fastens the solar modules with a simple click function and is compatible with both trapezoidal sheet and pitched roofs. The FASTFIX module clamp is compatible with the pitched roof, pitched roof SLIM and trapezoidal sheet installation profiles.

FASTFIX module clamps

End clamp

Centre clamp

End clamp, black

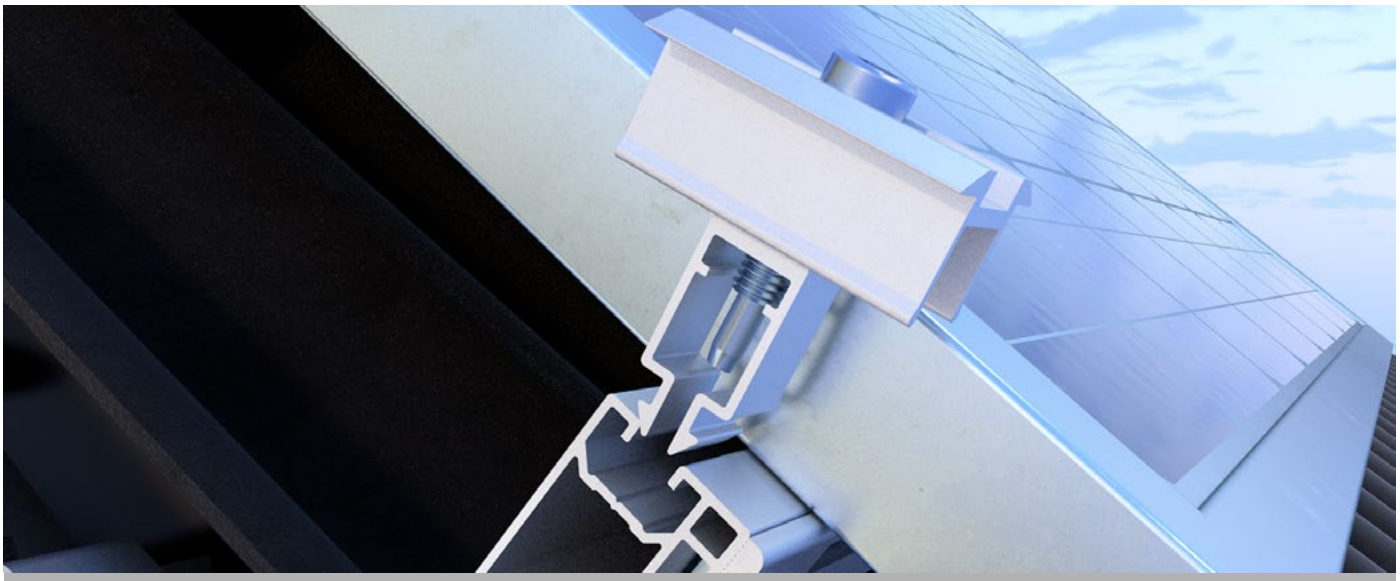
Centre clamp, black

Art. no.	Name	Clamp thickness = module height [mm]	Clamp length [mm]	PU
SOL100666	End clamp	30–40	37,6	40
SOL100667	End clamp, black	30–40	37,6	40
SOL100668	Centre clamp	30–40	37,6	40
SOL100669	Centre clamp, black	30–40	37,6	40

ADVANTAGES

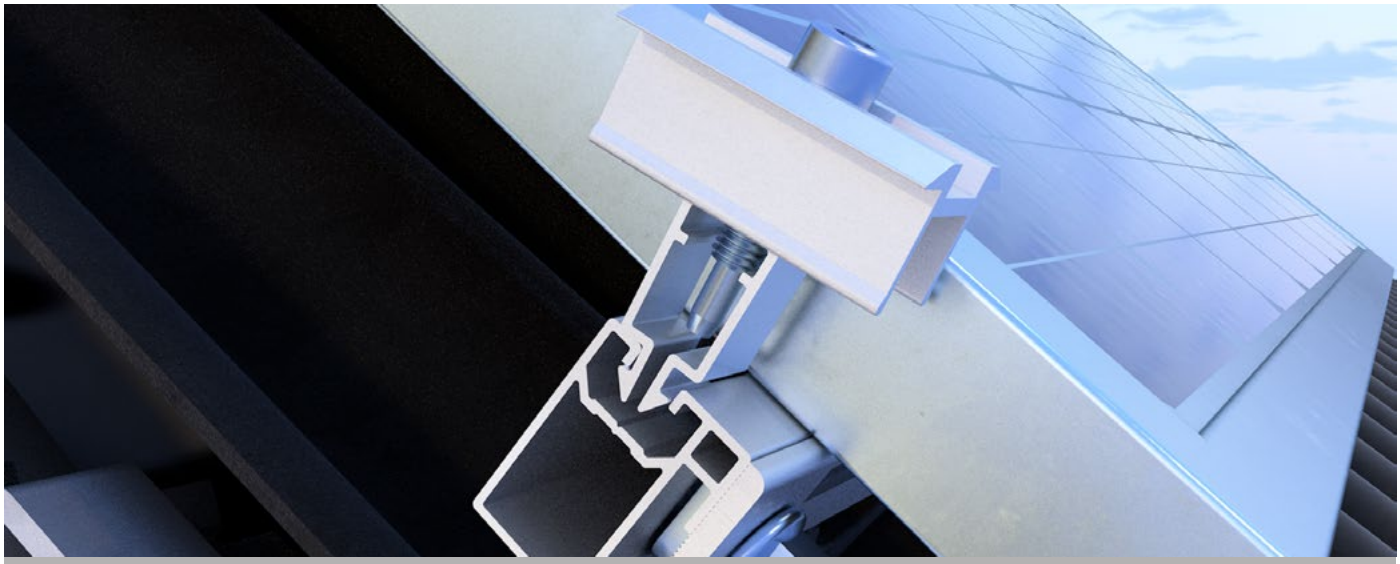
- Weather-resistant
- Quick and easy installation

INSTALLATION EXAMPLE



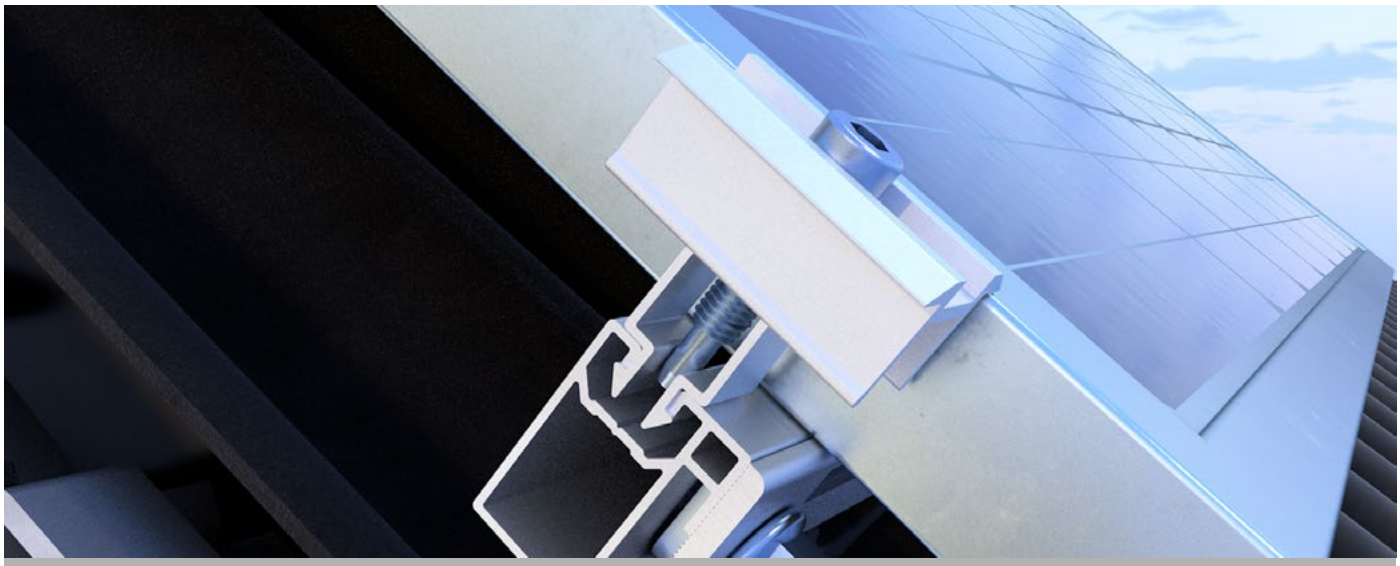
STEP 1: Unscrew the clamp screw and insert the FastFix into the rail at an angle.

FASTFIX MODULE CLAMP INSTALLATION EXAMPLE



STEP 2: One side of the clamp is locked directly in the case of angled insertion.

STEP 3: The straight clamp set-up makes it possible to click the second hook into the profile.



STEP 4: Finally, tighten the clamp with the screw.

DRAINAGE CLIP

The innovative drainage clip for solar modules offers the optimum solution for draining off dirt particles and water. This is the ideal way to ensure the performance and durability of your solar modules. The drainage clip, made of weather-resistant polypropylene, is easy to attach thanks to its clamping function and ensures a secure connection to the frame of the solar module.

Drainage clip

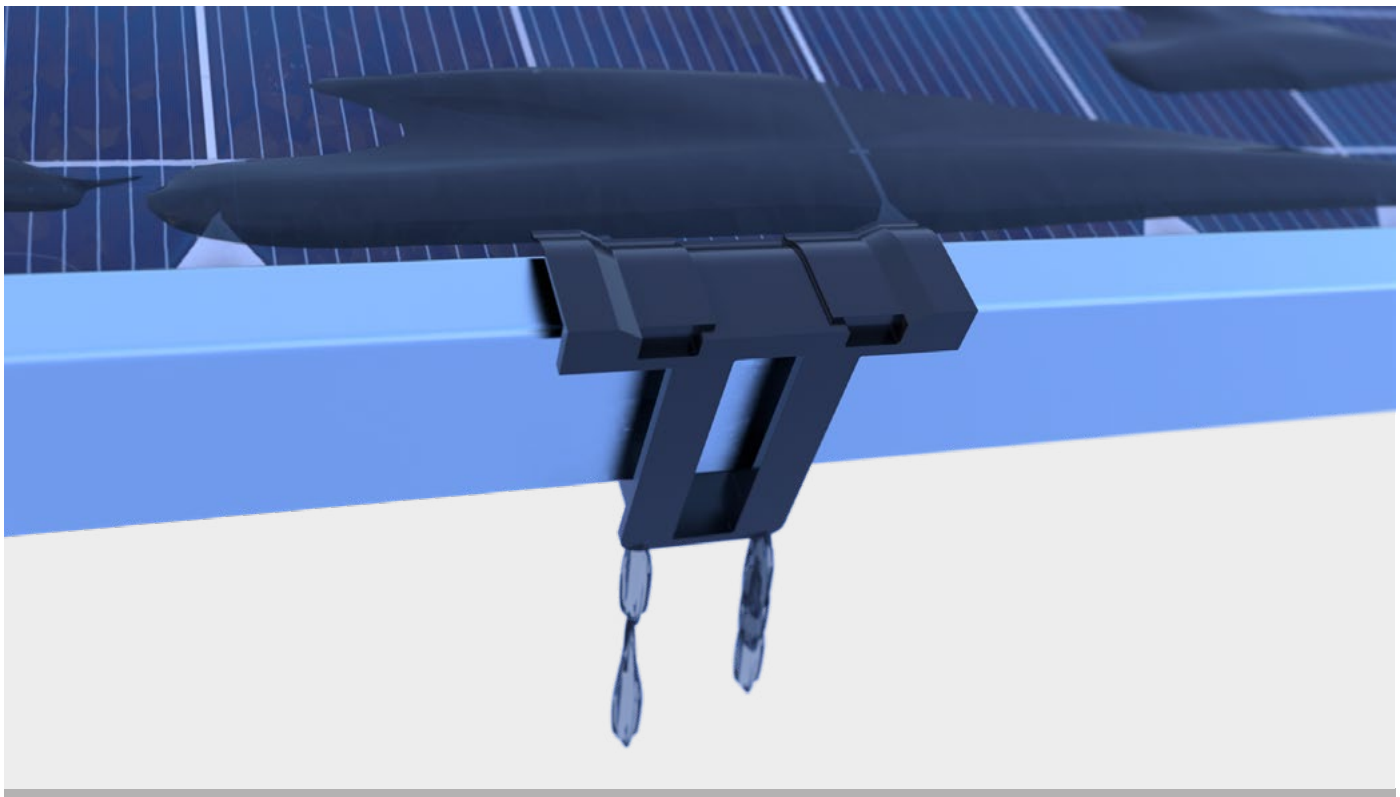
Art. no.	Dimensions [mm][a)]	For frame height [mm]	Material	PU
SOL100007	68 x 38 x 20,3	30	Polypropylene	1
SOL100008	68 x 43 x 20,3	35	Polypropylene	1

[a)]Width x height x depth

ADVANTAGES/SPECIFICATIONS

- Secure connection to the frame of the solar module
- Optimal solution for the drainage of dirt particles and water

APPLICATION IMAGE



The drainage clip is fitted to the end of a solar module and can thus drain off accumulated water.

CROSS-CONNECTOR SET

AL

For installation profiles

Two-part frame can bridge larger stretches and uneven spacings between rafters and level out uneven roofing surfaces. The cross-connector set is used for cross-connection of two installation profiles. The scope of delivery includes one connector plate, two slot nuts, two cylinder head screws, one hammer head screw and one locking nut.

Cross-connector set

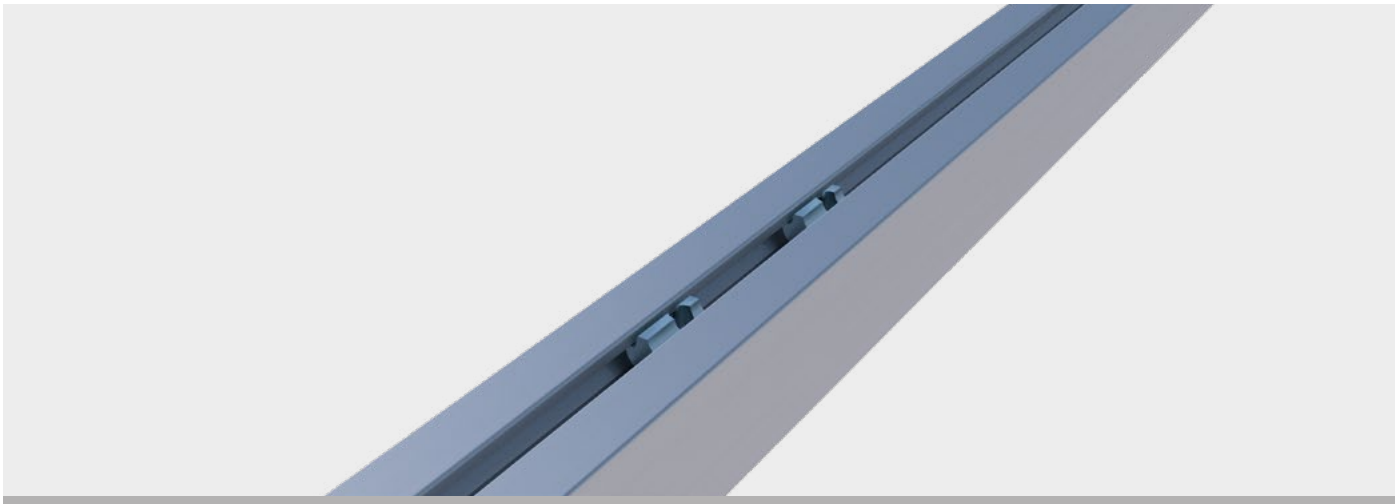
Art. no.	Dimensions [mm][a)]	Material	PU
S0L100633	115 x 80 x 4	Aluminium	1

a) Length x width x sheet thickness

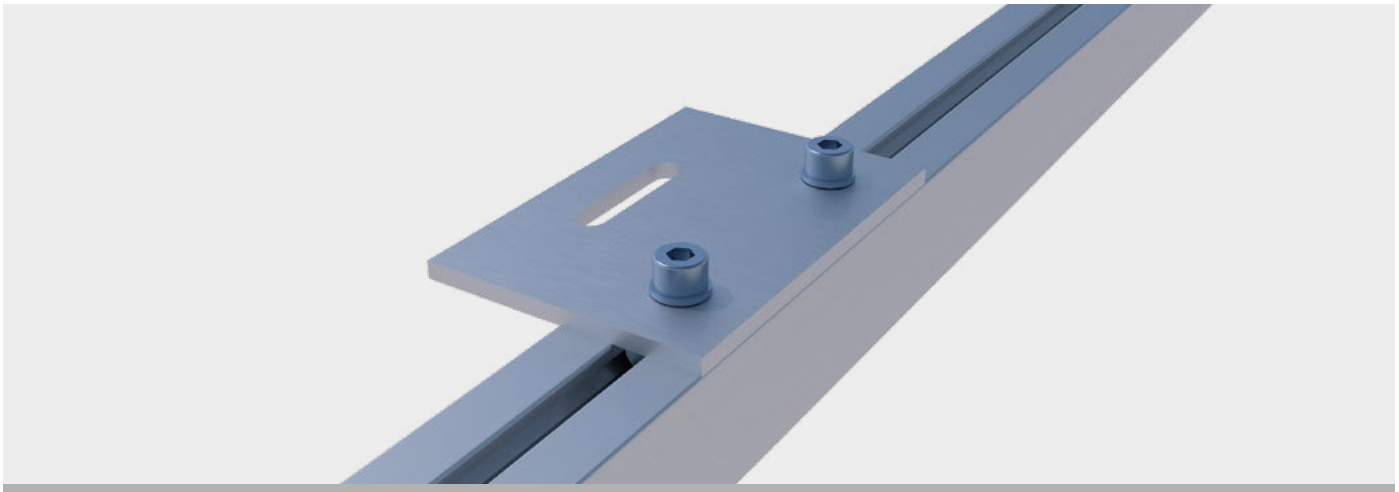
SCOPE OF DELIVERY:

1 x connector plate aluminium
2 x slot nut M8 aluminium
2 x A2-70 cylinder head screw DIN 912 M8x14
1 x A2-70 hammer head screw M10x25
1 x A2-70 locking nut M10

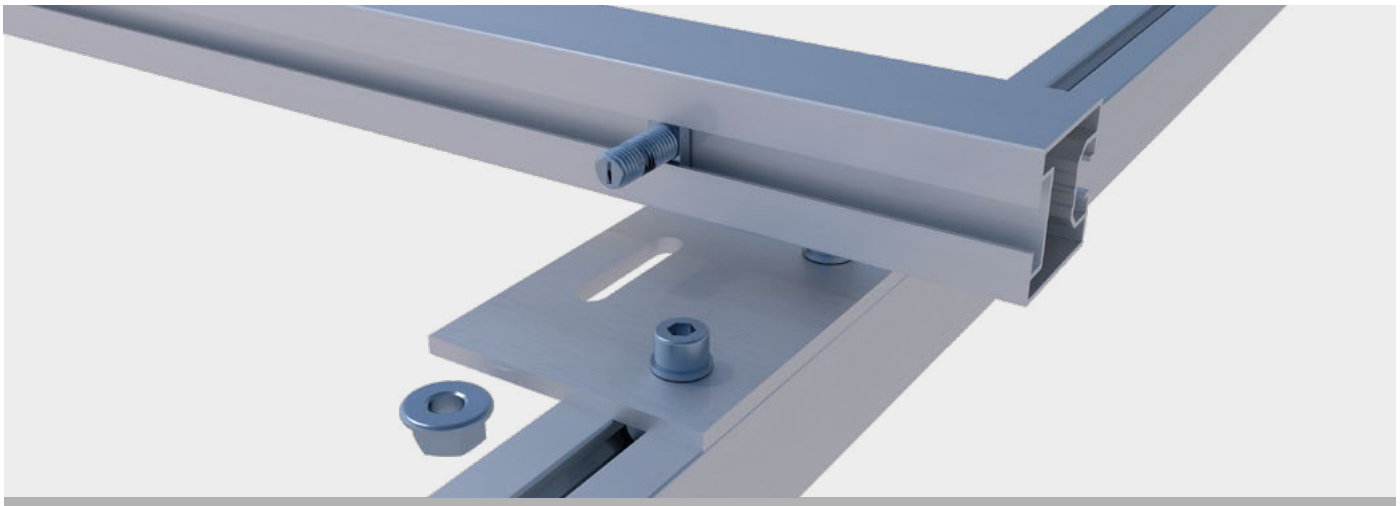
INSTALLATION EXAMPLE



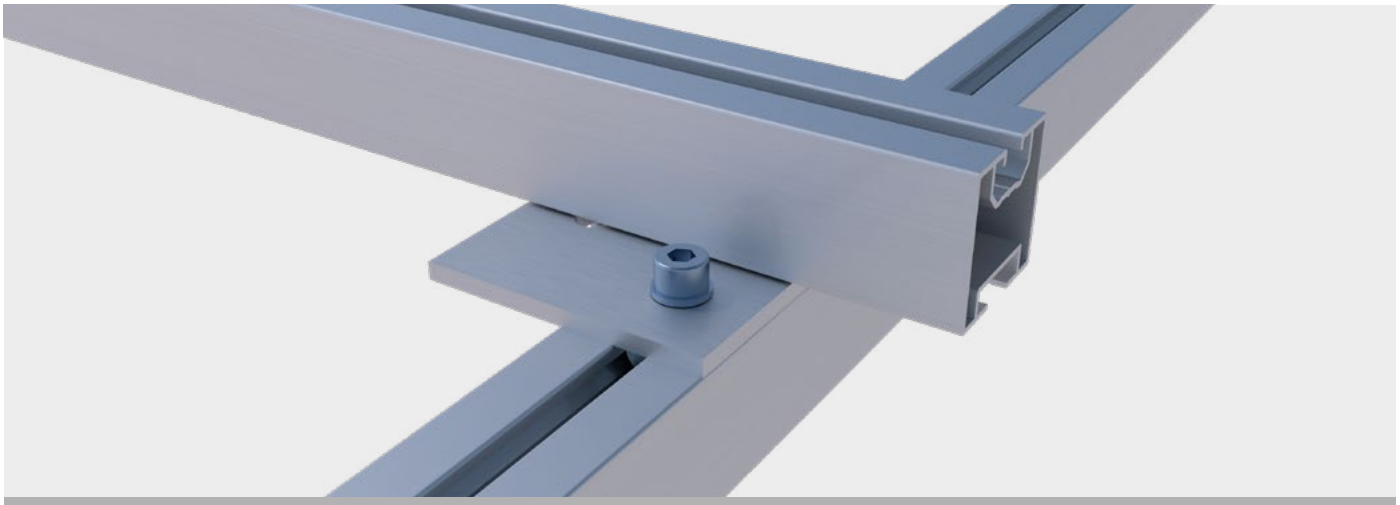
STEP 1: Insert slot nuts.



STEP 2: Fasten connector plate with cylinder head screws.



STEP 3: Insert hammer head screw into the crossbar.



STEP 4: Fasten through the connector plate with a locking nut.

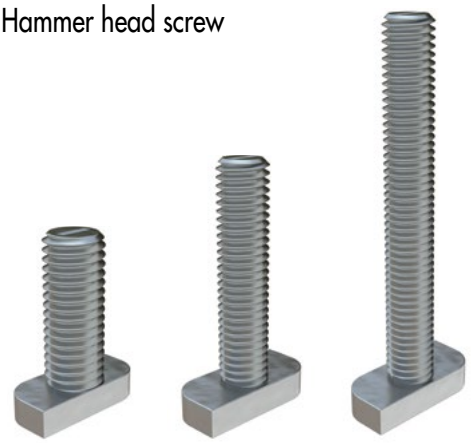
HAMMER HEAD SCREW

A2

A2-70 stainless steel

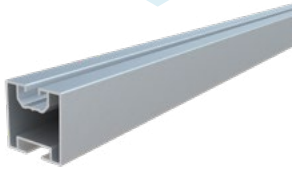
The hammer head screw is suitable for fastening installation profiles to the roof hook. Thanks to the special head geometry, the hammer head screws can easily be inserted into the underside of the installation profile.

Hammer head screw



Art. no.	Dimensions [mm]	Head dimensions [mm]	Material	PU
SOL945823	M 8 x 20	H4,15 x W10,15 x L23	A2-70 stainless steel	100
SOL945825	M 8 x 30	H4,15 x W10,15 x L23	A2-70 stainless steel	100
SOL945829	M 10 x 20	H4,65 x W10,15 x L23	A2-70 stainless steel	100
SOL945830	M 10 x 25	H4,65 x W10,15 x L23	A2-70 stainless steel	100
SOL945831	M 10 x 30	H4,65 x W10,15 x L23	A2-70 stainless steel	100

Compatible with it*



Pitched roof installation profile

*Not included in the scope of delivery

CYLINDER HEAD SCREW DIN 912

A2

With hex socket, A2-70 stainless steel

The DIN 912 cylinder head screw is made of stainless steel and is used to fasten centre and end clamps.
They are driven by a hex socket.

Cylinder head screw

Art. no.	Dimensions [mm]	Material	Width across flats	PU
100624	M 8 x 16	A2-70 stainless steel	6	100
100625	M 8 x 20	A2-70 stainless steel	6	100
100626	M 8 x 25	A2-70 stainless steel	6	100
100627	M 8 x 30	A2-70 stainless steel	6	100
100628	M 8 x 35	A2-70 stainless steel	6	100
100629	M 8 x 40	A2-70 stainless steel	6	100
100630	M 8 x 45	A2-70 stainless steel	6	100
100631	M 8 x 50	A2-70 stainless steel	6	100
100632	M 8 x 60	A2-70 stainless steel	6	100

LOCKING NUTS

DIN 6923, A2-70 stainless steel

A2

The Eurotec locking nuts are made of stainless steel and are used in combination with the hammer head screw to fasten installation profiles with roof hooks.

Locking nuts

Art. no.	Dimensions [mm]	Material	Width across flats	PU
SOL900015	M 8	A2-70 stainless steel	13	100
SOL900016	M 10	A2-70 stainless steel	15	100
SOL900018	M 12	A2-70 stainless steel	18	100

SLOT NUT M8, ALUMINIUM

For pitched roof and trapezoidal sheet installation profiles

AL

The slot nut is made of aluminium and is used together with Eurotec installation profiles. The slot nut can easily be inserted into the top of the profile to provide an fastening point for end and centre clamps or other installations.

Slot nut M8

Art. no.	Dimensions [mm]	Material	PU
SOL800330	22 x 9.8 x 12.8	Aluminium	200

Compatible with it*

Pitched roof installation profile

Trapezoidal sheet installation profile

*Not included in the scope of delivery

EQUIPOTENTIAL BONDING SHIM AND CLIP

As part of the Eurotec modular system, the equipotential bonding shim as well as the clip is a necessary component for electrical installation, as DIN VDE 0100-410 stipulates equipotential bonding (colloquially also referred to as grounding). The equipotential bonding products pierce the non-conductive oxide layer of the module frames with their spikes and thus enable excellent conductivity of the connected components and thus perfect protective grounding.

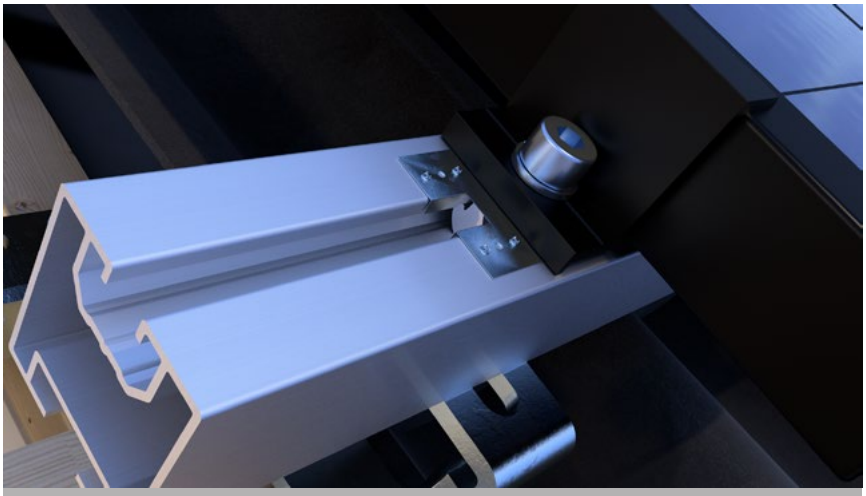
Equipotential bonding shim

SOL100711

SOL100703 * Only for module clamps (p. 84)

Art. no.	Dimensions [mm]	Material	PU
SOL100711	50 x 30 x 3,5	1.4301	40
SOL100703*	50 x 30 x 3,5	1.4301	50

APPLICATION IMAGE



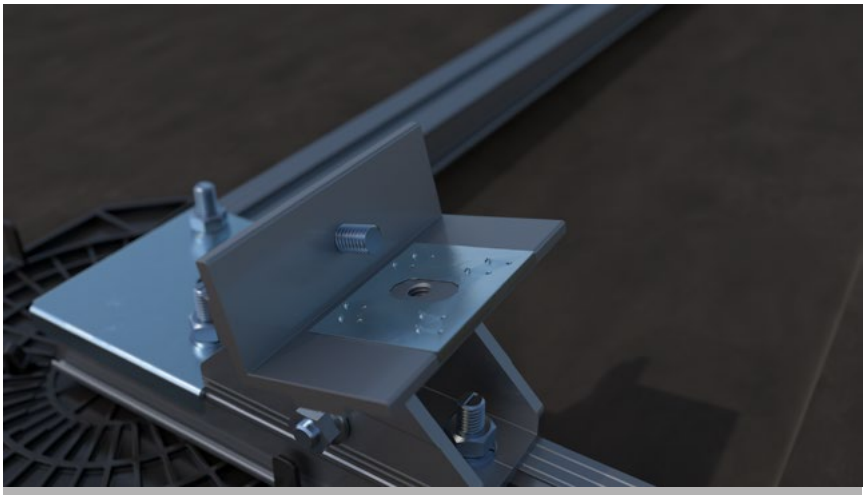
The equipotential bonding shim is located directly under the module clamp and is fixed by it.

Equipotential bonding clip

Art. no.	Dimensions [mm]	Material	PU
SOL100708	50 x 41 x 4,4 t=0,1	1.4301	40

INFO:
For flat roof Hinge for module mounting front/rear.

APPLICATION IMAGE



The equipotential bonding clip is placed on the module upright at the rear and fixed by the module clamp.

EARTHING TERMINAL

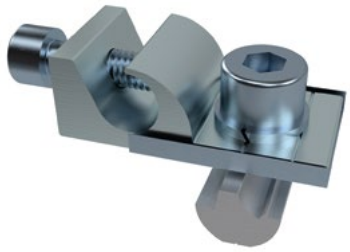
AL A2

The Eurotec earthing terminals are used to fasten earthing cables with a cross-section of up to 16 mm2 to installation profiles. They are clamped with an M6 cylinder head screw for this purpose. Thanks to their special surface finish, the Eurotec earthing terminals are ideal for a large number of installation environments.

Earthing terminal

Art. no.	Designation	Dimensions [mm]	Material	PU
SOL100704	Earthing terminal	10 x 32 x 37	Aluminium	5
SOL100710	Replacement screw (hammer-head screw)*	M 8 x 25	Stainless steel A2-70	20

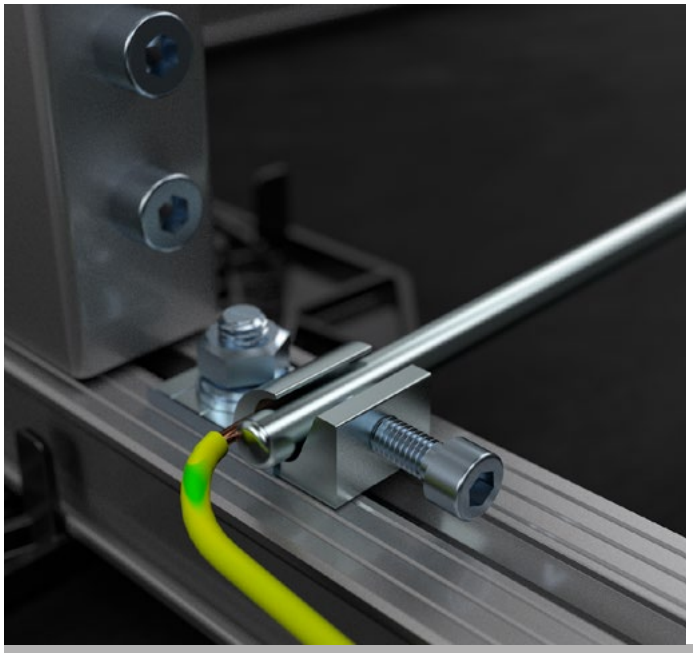
*The replacement screw enables installation on the flat roof system (without earthing clamp included in the scope of delivery).

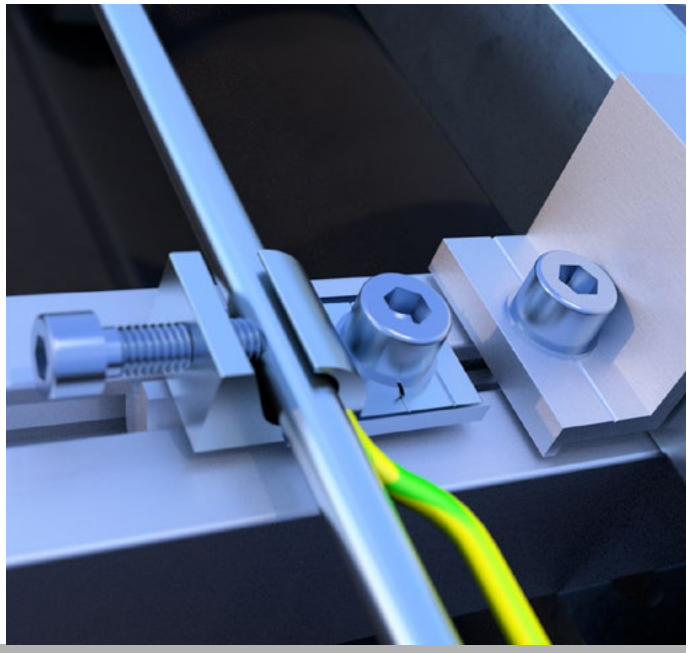


Earthing terminal

Earthing terminal with spare screw

APPLICATION IMAGES



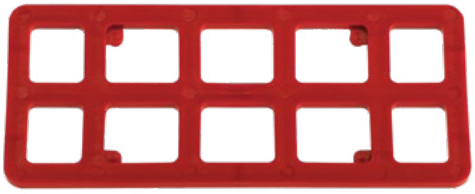


Earthing terminal application examples.

ADJUSTMENT BLOCK L

The adjustment block L is the ideal solution for leveling roof hooks at different heights. It can be used seamlessly with all our roof hooks. Thanks to its impressive load capacity of 3 tons, it is extremely robust and offers maximum flexibility on site with various height options available. When stacking multiple leveling blocks, pin connections ensure that the blocks do not slip sideways.

Adjustment block L

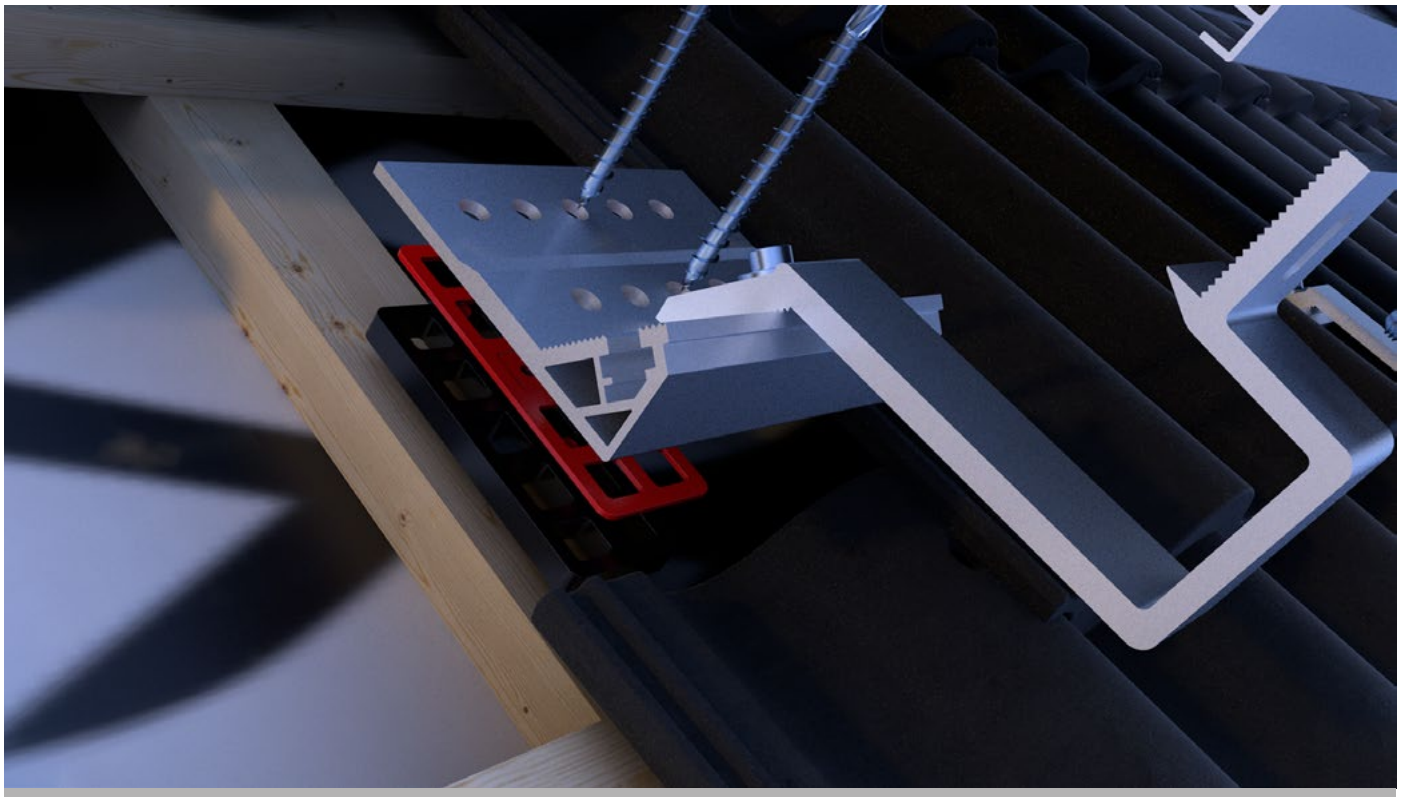


Art. no.	Designation	Dimension [mm]	Material	Load capacity [kg]	PU
SOL964578	Adjusting block L red	120 x 50 x 2	Polyethylene	3000	250
SOL964579	Adjusting block L green	120 x 50 x 3	Polyethylene	3000	250
SOL964580	Adjusting block L blue	120 x 50 x 5	Polyethylene	3000	250
SOL964581	Adjusting block L black	120 x 50 x 10	Polyethylene	3000	100
SOL964582	Adjusting block L yellow	120 x 50 x 15	Polyethylene	3000	100

ADVANTAGES/SPECIFICATIONS

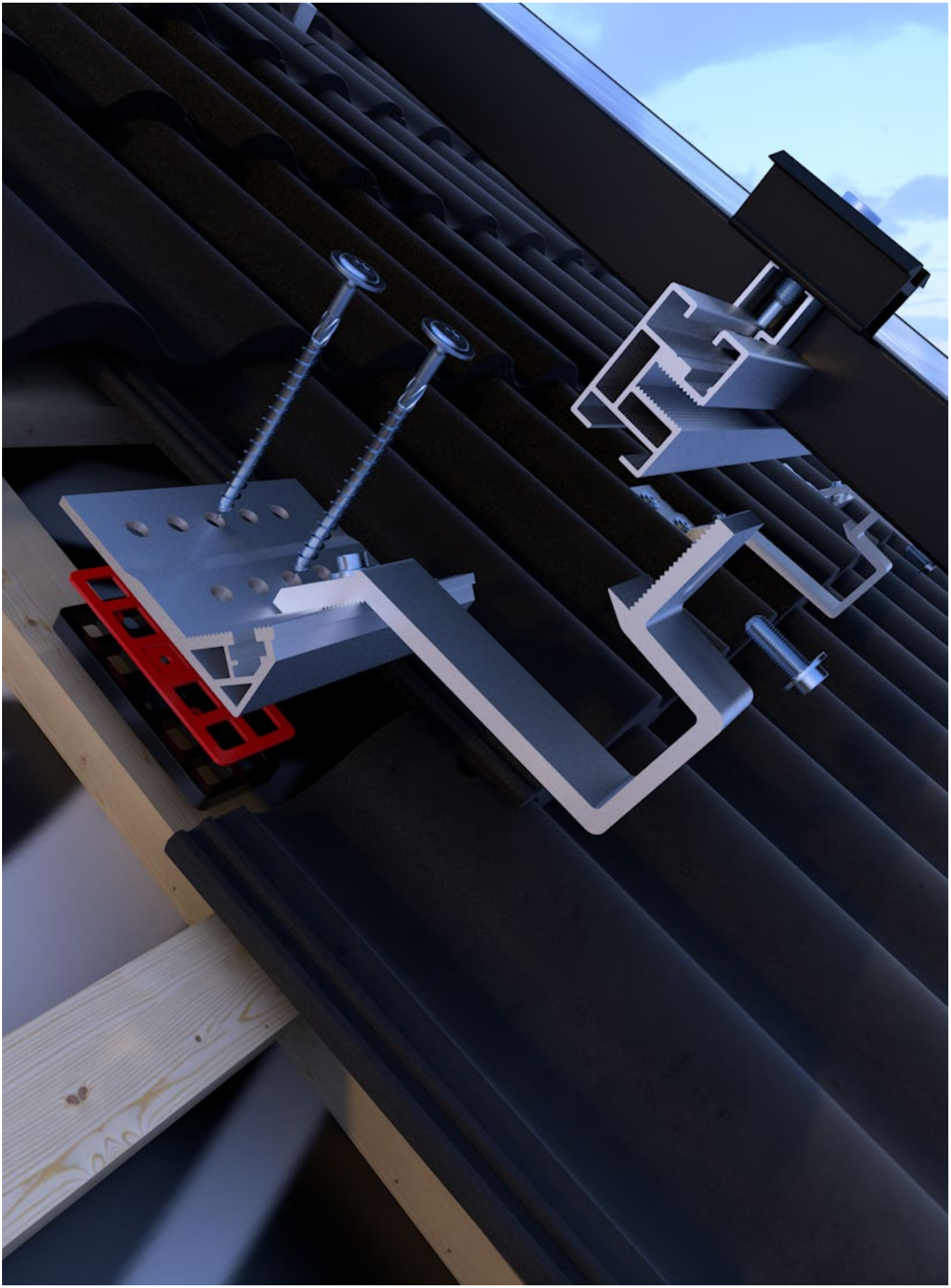
- Compatible with all roof hooks
- Available in 5 different heights
- Very pressure-resistant (load capacity: 3 tons)
- Pivot connection prevents slipping

APPLICATION IMAGE



Application example

EXPLODED VIEW



MOUNTING SYSTEMS FOR GROUND-MOUNTED SYSTEMS

GROUND-MOUNTED PHOTOVOLTAIC SYSTEMS
PROJECT DATA

CONTACT INFORMATION

Company name: _____ Date: _____

Street / house number: _____ Contact person: _____

Zip code / City: _____ Phone: _____

Country: _____ E-Mail: _____

INFORMATION ON THE PROJECT

Building project: _____ Estimated construction time: _____

Estimated investment amount: _____ Current status: _____

PRODUCT DATA MODULE

Frame type: Module with frame ☐ Module without frame ☐

Power (Wp): _____ Weight (kg): _____ Total output (Wp): _____

Length (mm): _____ Width (mm): _____ Thickness (mm): _____

ENVIRONMENTAL INFLUENCES

Wind load zone: _____ Snow load zone: _____

DETAILED PLANNING INFORMATION

Number of modules horizontal per block: _____ Number of modules vertical per block: _____ Number of blocks: _____

Module alignment: Horizontal ☐ Vertical ☐ Tilt angle: _____

Total number of modules: _____ Floor clearance (mm) Floor to module: _____

Additional information:

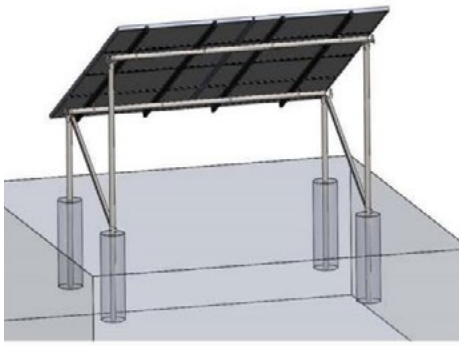
Please provide us with a dimensioned sketch or as-built plan of the system, indicating the compass direction and all possible interfering factors and adjacent buildings, etc.

FOUNDATION TYPE AND CONSTRUCTION TYPE

FOUNDATION:

Screw-in base sleeve: ☐

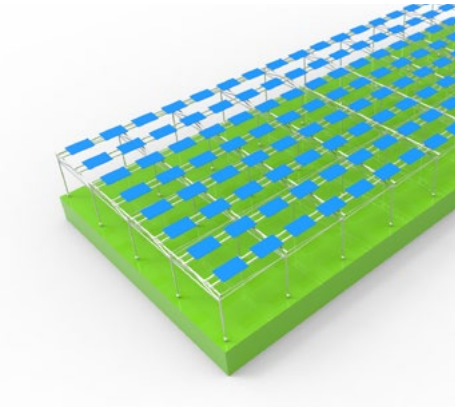
Concrete foundation: ☐



Impact post: ☐

SUBSTRUCTURE:

Single post: ☐



Agriculture: ☐

Carport aluminium: ☐

Carport steel: ☐

Preferred material: Aluminium ☐ Steel ☐

NOTES:

NOTES:

NOTES:

NOTES:

NOTES:

KEYWORD INDEX

FACILITATES THE SEARCH.

CONDITIONS OF SALE AND DELIVERY

All sales to the buyer, purchaser and contracting party ("Customer") shall only be made under the following conditions, unless other written agreements have been concluded in detail:

1. Scope, general points
Our terms and conditions apply exclusively! We do not recognise conditions of our Customers that contradict or deviate from our terms and conditions, unless we have expressly agreed to them in writing. Our terms and conditions apply even if we unconditionally execute an order despite knowledge of conditions that contradict or deviate from our terms and conditions. Our terms and conditions apply for all future business with our Customers. The Customer can access the latest version of these terms and conditions at any time at www.eurotec.team.

2. Quotation in written form
Our quotations are non-binding and subject to confirmation until our definitive order confirmation. Contracts and other agreements and deals arranged via our representatives only become binding with our written order confirmation. Oral agreements, even those made as part of our contract execution, are not valid unless they have been confirmed by us in writing.

3. Prices, packaging, off-setting
Unless otherwise stated in our order confirmation, our prices apply ex works, excluding packaging. Packaging is invoiced separately. The minimum order value is 50 euros. For lower quantities, we charge a processing fee of 30 euros.
a) Our prices do not include statutory VAT. Statutory VAT is listed and collected separately in the invoice at the statutory rate on the day of invoicing.
b) Our Customer may only assert offset rights if counterclaims have been established in a court of law or are uncontested or recognised. The precondition for exercising a right of retention is that the counterclaim results from the same contractual relationship.

4. Delivery, delivery time and force majeure
Unless otherwise agreed to in writing, the place of performance is our business premises. The goods are dispatched by third parties commissioned by us, at the Customer's risk and expense. From the point in time when we have made the goods available for delivery and informed the Customer that they are ready for dispatch, the Customer bears the risk of accidental loss or deterioration of the goods. This applies even if dispatch is delayed due to circumstances that are outside of our responsibility.
A precondition for prompt handover of the goods to the road haulage company is prompt ordering on the part of our Customer. If the goods are handed over to the commissioned road haulage company on time, we assume no liability for delayed delivery of the goods to the Customer. This applies even if a delivery deadline has been arranged with the Customer, in particular to a construction site. In this context, collected express delivery charges may only be waived for the Customer if there is also a legal basis for deducting these charges from the forwarding agent.
Delivery time specifications are strictly to be considered as approximate and non-binding. They begin with the date of our order confirmation, but not before all details of the order are fully clarified. The delivery time is deemed fulfilled if the goods have left the factory or their readiness for dispatch has been announced before the delivery time has expired. It shall be extended, without prejudice to our rights arising from default on the part of the Customer, by the period during which the Customer is in default with obligations vis-à-vis us that arise from this or other orders.
Among other things, the following reasons also release us from the obligation to comply with the delivery time in the case of our suppliers and entitle us to extend the delivery deadlines, to make partial deliveries or to fully or partially withdraw from the unfulfilled part of the contract, without us becoming liable for damages as a result, on condition that we are not charged with intent or gross negligence. Disruptions to operation and supply difficulties of any kind, for example machine, goods, material or fuel shortage, or force majeure events, e.g. bans on export and import, fire, strike and lockout, and new official measures that negatively impact production costs and dispatch.

5. Dispatch
Dispatch is performed at the Customer's expense and risk, even if carriage-paid delivery has been agreed. Additional costs for express dispatch are borne by the Customer in any case. Freight costs paid by us are only to be considered as freight prepaid for the Customer. Additional freight costs for express goods are borne by the Customer, even if we have assumed the transport costs in individual cases.
Goods announced as ready for dispatch must be accepted immediately and are charged as delivered ex works. If the goods are sent abroad or directly to third parties, the inspection and acceptance must take place in our factory; the goods are otherwise considered delivered in accordance with the contract, under exclusion of any complaints. The risk, including any confiscation, is transferred to the Customer with handover of the goods to the forwarding agent or carrier, but no later than when the goods leave our premises. Returns strictly require prior coordination with our Sales department. Defective goods returns will only be accepted with our express agreement. The goods are then credited with the deduction of 25 % return fee per item or at least € 50 restocking costs. Debit notes are strictly not accepted.

6. Design and property rights
The Customer is solely responsible and liable for ensuring that the goods ordered do not infringe the property rights of third parties. No check is performed on our side in this regard. The Customer shall indemnify us from third-party prohibitory injunctions or claims for damages. If a prohibitory injunction is asserted against us, the Customer shall bear the processing costs and compensate us for the financial loss and damage thus incurred.

7. Approval, quantity tolerances and call-off orders
For agreements with continuous delivery, the goods must be called off in monthly quantities that are as uniform as possible during the term of the contract. If goods are not called off in due time, we shall be entitled, after having set a grace period to no avail, to divide the goods ourselves at our own discretion or withdraw from the part of the agreement that has not yet been fulfilled, or assert claims for compensation for non-performance. In the case of call-off orders, the call-off orders must strictly be made within 12 calendar months. Surplus or short deliveries of up to 10 % of the order are admissible.

8.1 Payment conditions, invoice, retention
Invoices shall become due regardless of receipt of the goods and without prejudice to the right to report defects within 10 days from the invoice date with 2% discount, or within 30 days net.
Payment by means of a bill of acceptance or note receivable requires separate prior written agreement. In the case of payment by means of bill of acceptance with a maturity term not exceeding three (3) months and issued within one (1) week after the invoice date, discount charges will be invoiced.
Credit in the form of bills of exchange and cheques is valid subject to their receipt and irrespective of an earlier due date of the purchase price if the buyer is in default. The value is credited on the day on which we are able to access the equivalent value; the discount charges are calculated at the respective bank rate.
If due dates are not met, interest and commissions may be charged, subject to other rights in accordance with the respective bank rates for overdrafts, but no less than 5 % interest above the respective discount rate of the Deutsche Bundesbank.
All our claims shall become due immediately, regardless of the term of any bills of exchange received and credited, if the payment conditions are not met or if we become aware of circumstances that in our opinion make it appropriate to downgrade the creditworthiness of the Customer.
We may then also only execute outstanding deliveries against prepayment and withdraw from the contract after a reasonable grace period, and demand compensation for non-performance.
We may also prohibit the resale and processing of the delivered goods and demand their return or the transfer of the indirect ownership of the delivered goods at the Customer's expense. The Customer hereby authorises us to enter the Customer's premises in said cases and remove the delivered goods.
We are entitled to collateral in the customary scope and nature for our claims, even if they are conditional and limited. Offsetting or withholding of payments due to any counterclaims or notification of defects is excluded, with the exception of undisputed claims or claims determined in a court of law.

8.2 Payment conditions for online shop Customers
All orders must be paid for in advance. After placing an order in our online shop, you will receive an e-mail with the account details of our business account. The invoiced sum must be transferred to our account within 7 days. We are only able to execute your order after receiving your payment.

9. Reservation of title
Until all liabilities arising from the business relationship have been repaid in full, and in particular until all bills of exchange and cheques issued in payment, including finance bills, have been cashed, the goods we have delivered remain our property and are entitled to take them back at the Customer's expense in the event of payment default. Up to this point in time, the Customer is not entitled to pledge the goods to third parties or to transfer them by way of security; the Customer may only resell or process them in connection with the Customer's ongoing business activities. The Customer shall inform us of a pledging or any other impairment of our rights on the part of third parties without delay.
The Customer does not acquire any ownership of the goods delivered by us in the event of further processing pursuant to section 950 of the German Civil Code (BGB), as any processing on the part of the Customer is performed on our behalf.
The newly produced item serves as our security, without prejudice to the rights of third-party suppliers, up to the amount of our total claim arising from the business relationship. The item shall be kept by the Customer for us and deemed to be goods under the terms of these conditions. If the item is mixed with or otherwise connected to other objects that do not belong to us, we thereby acquire at least partial ownership of the new item in proportion to the value of the contractual item with regard to the other objects jointly processed. If the Customer sells the goods delivered by us, in any condition, we hereby assign to the customer all claims against the customer's purchasers arising from the sale of the goods, including all ancillary rights, until all our claims arising from the delivery of goods have been settled in full. At our request, the customer shall inform the sub-customers of the ceding of claims and provide us with the information required to assert our rights against the sub-customers, and hand over the documents to us. If the value of the securities provided to us exceeds our delivery claims by more than 20 %, we are obliged to reassign this amount at the Customer's request. If the reservation of title or the assignment of claims is not legally valid according to the law applicable where the goods are located, the security corresponding to the reservation of title or the assignment of claims that applies where the goods are located is deemed agreed upon. If cooperation on the part of the Customer is required hereby, the Customer must take all measures required to establish such rights.

10. Notification of defects and liability
Warranty rights on the part of our Customer are subject to the condition of the Customer duly fulfilling all legal obligations pursuant to section 377 and 378 of the German Commercial Code (HGB) with regard to obligations to inspect goods and provide notification of defects. In the case of defects, we may at our option rectify the defect or provide a replacement; if we are not willing or able to do this, in particular if the rectification of defects / provision of replacement is delayed beyond reasonable time limits for reasons within our responsibility or if the rectification of defects / provision of replacement fails to occur in some other way, our Customer shall be entitled to choose between withdrawing from the contract or demanding a corresponding reduction in the price. Unless otherwise stipulated below, any further claims of the Customer, regardless of their legal basis, are excluded. We are not liable for loss or damage that was not caused to the delivered item itself. In particular, we are not liable for lost profit or other financial loss of the Customer.
The above liability disclaimer does not apply where the loss or damage is the result of wilful misconduct or gross negligence; furthermore, it does not apply if the Customer asserts compensation claims for non-performance in the event of absence of an assured characteristic. Insofar as we have negligently breached a material contractual obligation, our obligation to pay compensation for personal injury or property damage is restricted to the coverage provided by our product liability insurance. We are willing to allow the Customer to view our policy on request. The warranty period is six (6) months, beginning with the transfer of risk. This period constitutes a statutory period of limitation. This period also applies for claims pursuant to section 1 and 4 of the German Product Liability Act (Produkthaftungsgesetz). Insofar as our liability is excluded or restricted, this also applies for the personal liability of our salaried and waged employees, staff members, representatives and performing agents. Goods that are the subject of complaints must not be returned without obtaining written agreement from us in advance, as we may otherwise refuse to accept the goods at the sender's expense. Returns of goods that have been fully or partially processed are not accepted under any circumstances.
Where available, the Customer must make use of technical descriptions and the Customer's specialist knowledge to satisfy itself that the purchased product is suitable for its intended application and make itself familiar with the application of this product. If the Customer is not familiar with the application, our staff are available to provide advice.
For all information and advice given by our employees, this information and advice is provided diligently and conscientiously. This information and advice does not by any means substitute the necessary consultation and construction-related services of architects and specialist planning companies. Only the authorised occupational groups are entitled to provide such consultation and services.

11. Place of performance, place of jurisdiction, miscellaneous
Consumer information: non-participation in dispute resolution. We are neither willing nor obliged to participate in dispute resolution proceedings before a consumer arbitration board. The place of performance for all obligations arising from this contract, including those for cheques and bills of exchange payable, is our company's head office. The place of jurisdiction for all disputes arising from the contractual relationship is at our discretion Hagen Local Court, insofar as the customer is a merchant.

Contracts with our Customer are governed exclusively by German law to the exclusion of the UN Sales Convention of 11 April 1980. The language of the contract is German.

Hagen, 16 February 2018
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