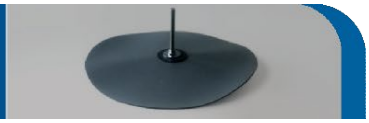
PROTECTED BY FLACHDACH TECHNOLOGIE

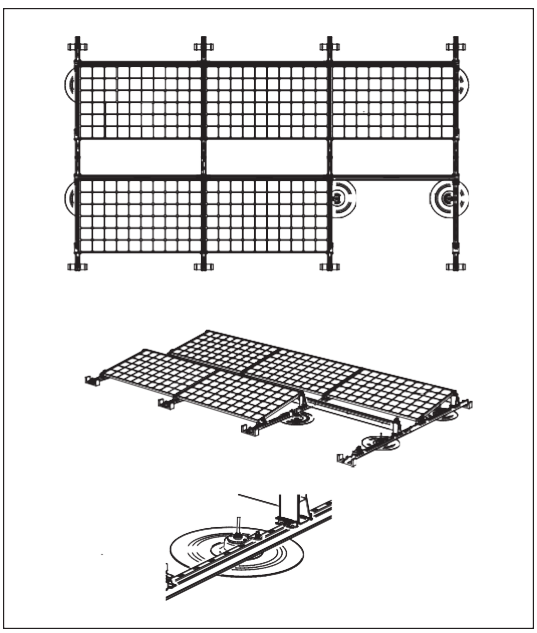
DATA SHEET

FDT Solarfix universal



Description

The universally applicable solar support was specifically developed for the mechanical fastening of common PV systems, but can also be used to secure railings, structures, and technical equipment. The FDT Solarfix universal enables a simple trade separation between roofers and solar installers. The manufacturer of the PV system (e.g. Schletter, K2,
Aerocompact) usually calculates the required rows and support spacing. The systems are optimally protected against shifting and uplift.
Ballasting can be completely eliminated, thus enabling the installation of PV systems even on roofs with limited structural reserves. The connection thread allows for system-specific connection of common PV systems.



Scope

The FDT Solarfix universal can be used on uninsulated and insulated flat roofs or pitched roofs (up to 20° roof pitch). The corresponding fastening elements for wood and trapezoidal sheet substrates can be supplied in the required lengths up to 380 mm are included.

For insulated constructions, thermal insulation with the following minimum specifications can be used:

1. EPS thermal insulation according to DIN EN 13163 Type DAA dh
2. Mineral wool according to DIN EN 13162 type DAA Compressive strength at least 70 kpa
3. PUR thermal insulation according to DIN EN 13165 Type DAA dh

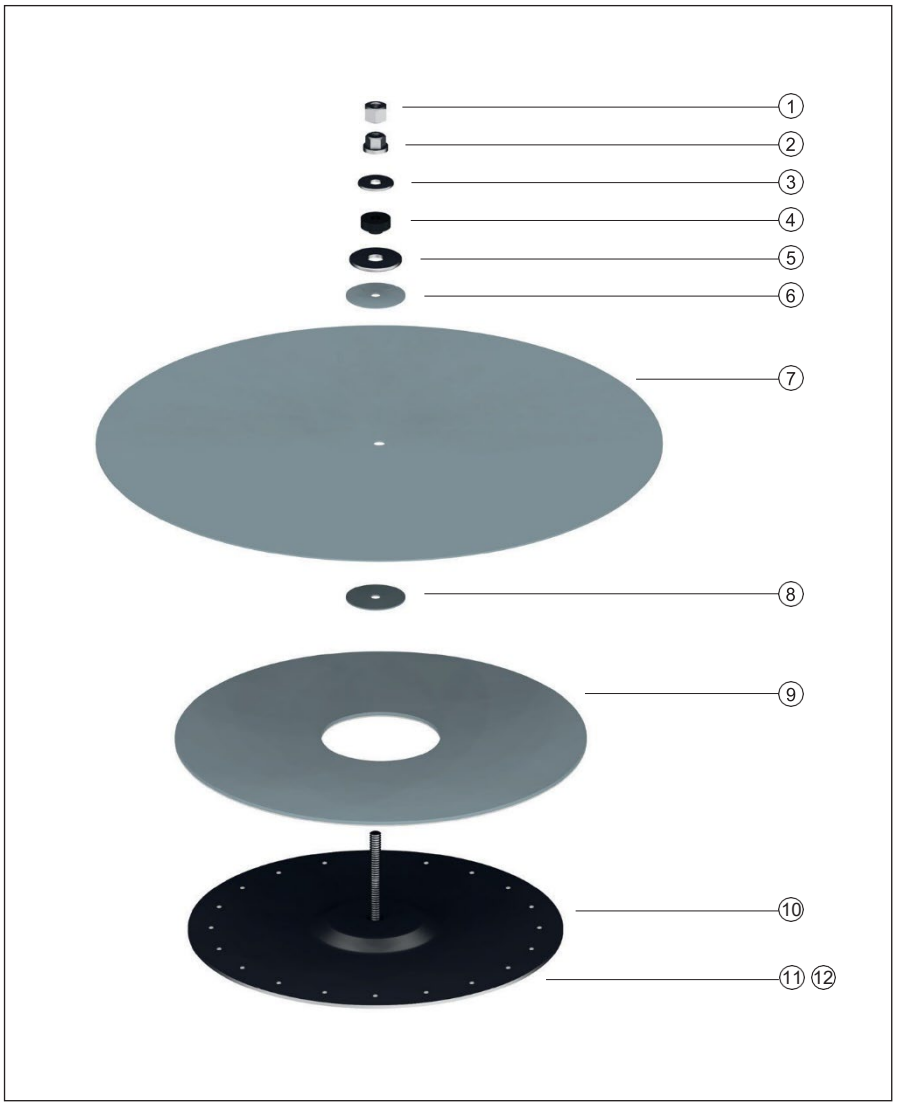
DEKRA Testing and Certification GmbH has the permissible vertical and horizontal forces in combination with the fastening elements were checked and determined.

Product advantages

- Compatible with all common PV constructions.
- For flat and pitched roofs
- Successfully in use on the market since 2010
- Compatible with Rhenofol and Rhepanol roofing membranes.
- Low installation height
- Low weight, even for roofs with low Suitable for load reserves.
- The risk from point loads is minimized

Delivery form

The FDT solar support consists of 12 components:



① Lock nut M10

② Flange nuts M10

③ Washer, A-Ø = 30 mm and I-Ø = 10 mm, Thickness 2 mm

④ Rubber nipples, Thickness 8 mm, A-Ø= 25 mm

⑤ Washer, A-Ø = 44 mm und I-Ø= 14 mm, Thickness 3 mm

⑥ Sealing disc 2 made of Rhepanol h/Rhenofol C, A-Ø = 50 mm and I-Ø = 8 mm

⑦ Rhepanol/Rhenofol sealing sleeve, A-Ø = 475 mm and I-Ø = 10 mm, Thickness 1.5 mm

⑧ Sealing disc 1 mad of Rhepanol h/Rhenofol C, A-Ø = 50 mm and I-Ø = 8 mm

⑨ A-Ø = 345 mm and I-Ø = 100 mm, thickness 2.5 mm

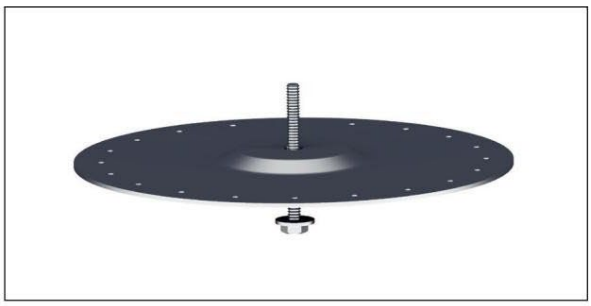
⑩ Base plate, A-Ø = 315 mm, height 12 mm, with holes for mechanical fastening

⑪ Washer, A-Ø = 30 mm and I-Ø = 10 mm, Thickness 2 mm

⑫ Threaded bolt, bolt M10, length 107 mm

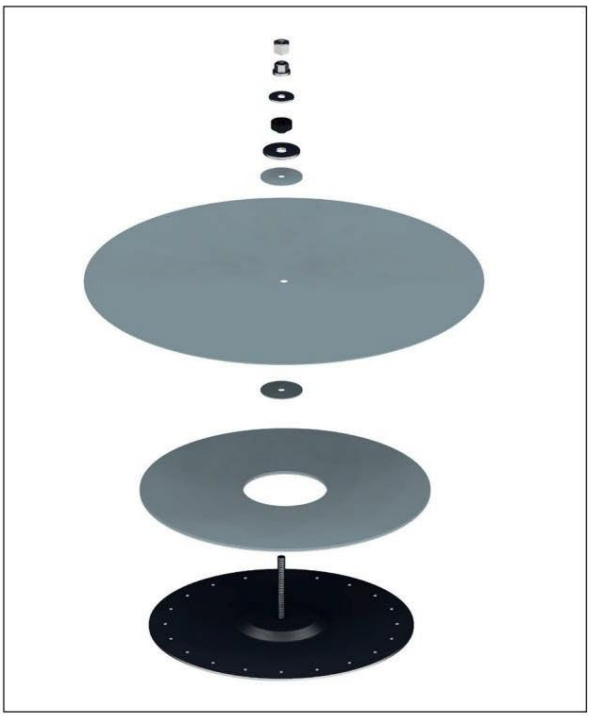
Notes on processing

The roofer installs the supports at the calculated distances and connects the supports via a Rhenofol or Rhepanol sleeve with the surface seal. The thread allows the PV systems to be connected in asystem-specific manner.



Step 1

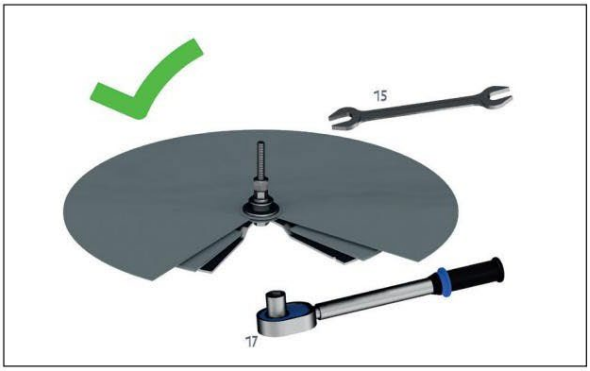
Assembling the FDT Solarfix universal. To begin with, the threaded bolt with the washer is inserted through the base plate from below.



Step 2

All other components are in the to be assembled in the order shown:

1. Protective bearing ring
2. Sealing washer 1
3. Sealing sleeve
4. Sealing washer 2
5. Washer (large)
6. Rubber nipple
7. Washer (small)
8. Flange nut M10
9. Lock nut M10

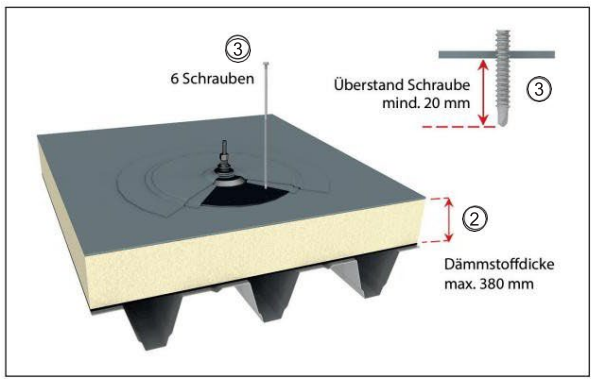


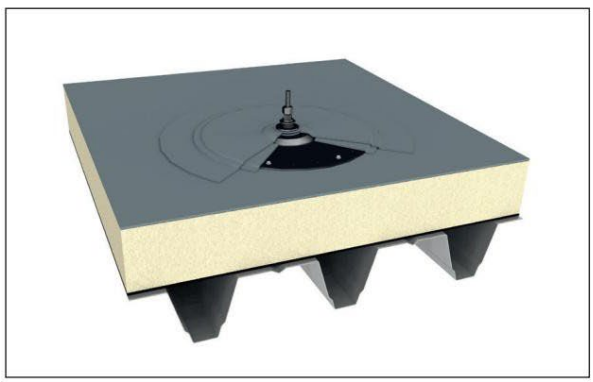
Step 3

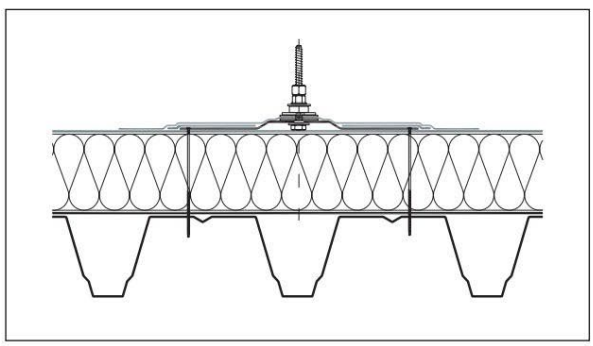
Check that all parts have been installed in the correct order. The screw connection is tightened with a torque wrench (17 mm socket) and an open-end wrench (size 15) secured with **5 Nm** to ensure the tightness of the system.

Finally, the counter nut is fitted to prevent the system from untwisting (e.g. due to vibrations).

Mounting on trapezoidal sheet metal







① **Trapezoidal sheet**

For substrates made of trapezoidal sheet metal, sheet thicknesses of 0.75 mm to 2.5 mm are possible for the mechanical fastening of the FDT Solarfix universal, with a maximum of 2.5 mm for double layers of sheet metal. The FDT Solarfix universal must be positioned so that it can be fastened to two upper chords.

Trapezoidal sheets must be dimensioned according to the static requirements.

② **Insulation material**

Insulation thickness max. 380 mm
(Requirements for the insulation material see page 1)

③ **Screws**

Each solar bracket must be secured to the top chords of the trapezoidal sheeting with at least six screws. Distribute the screws as evenly as possible across both top chords.
4.8 mm thick screws for an insulation thickness up to 300 mm
6.3 mm thick screws for an insulation thickness of 300 to max. 380 mm

Attention

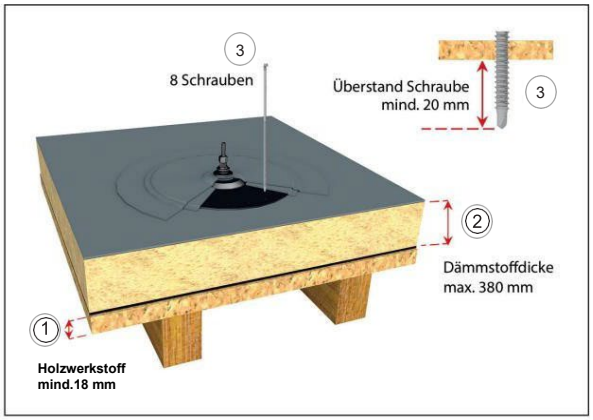
The screws are not included in the scope of delivery and must be ordered in the appropriate length.

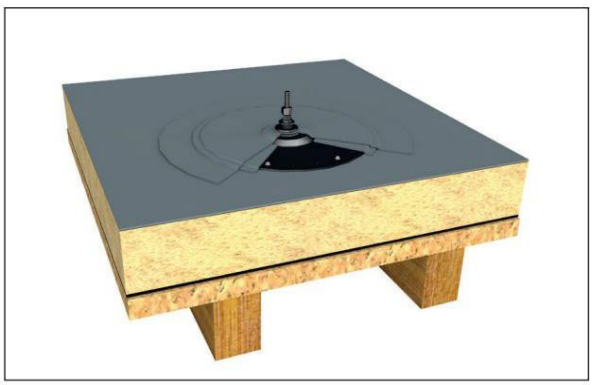
The screw must protrude at least 20 mm above the trapezoidal sheet on the underside.

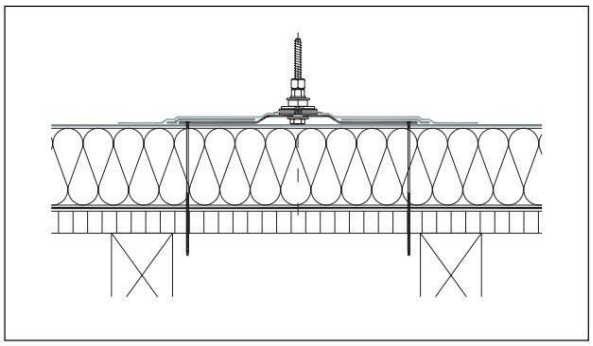
Notice

The screws tested in the system must be used. Using other screws will void the warranty.

Mounting on wood material







1 Wood-based material

For substrates made of wood-based material (OSB), a minimum thickness of 18 mm is required for mechanical fastening of the FDT Solarfix universal. The wooden substructure must be dimensioned according to the structural requirements.

2 Insulation material

Insulation thickness max. 380 mm

(Requirements for the insulation material see page 1)

3 Screws

Each solar holder must be secured to the wood material with at least 8 screws.
4.8 mm thick screws for an Insulation thickness up to 300 mm
6.3 mm thick screws for an insulation thickness of 300 to max. 380 mm

Attention

The screws are not included in the scope of delivery and must be ordered in the appropriate length.

The screw must protrude at least 20 mm above the wood material on the underside.

Notice

The screws tested in the system must be used. Using other screws will void the warranty.

System matrix FDT Solarfix universal

Roof pitch	Substructure	Thermal insulation	fasteners	forces	Remarks
0 – 5°	Trapezoidal sheet metal min. 0.75 mm	EPS according to DIN EN 13163 Type DAA dh thickness max. 380 mm	Min. 6 fasteners	Fv = 6.0 KN Fh = 3.62 KN	The fastening of the PV system to the thread is only up to a maximum height of 75 mm permissible.
0 – 5°	Trapezoidal sheet metal min. 0.75 mm	Miwo according to DIN EN 13162 Type DAA, min. 70 kpa, max. 380 mm	Min. 6 fasteners	Fv = 6.0 KN Fh = 3.62 KN	
0 – 5°	Trapezoidal sheet metal min. 0.75 mm	PUR according to DIN EN 13165 Type DAA dh, max. 380 mm	Min. 6 fasteners	Fv = 6.0 KN Fh = 3.62 KN	
0 – 5°	Wood-based material OSB min. 18 mm	EPS according to DIN EN 13163 Type DAA dh, max. 380 mm	Min. 8 fasteners	Fv = 7.0 KN Fh = 6.21 KN	
0 – 5°	Wood-based material OSB min. 18 mm	Miwo according to DIN EN 13162 TypeDAA, min. 70 kpa, max. 380 mm	Min. 8 fasteners	Fv = 7.0 KN Fh = 6.21 KN	
0 – 5°	Wood-based material OSB min. 18 mm	PUR according to DIN EN 13165 Type DAA dh, max. 380 mm	Min. 8 fasteners	Fv = 7.0 KN Fh = 6.21 KN	
>5° – 20°	Trapezoidal sheet metal min. 0.75 mm	EPS DAA dh thickness max. 380 mm MIWO type DAA min. 70 kpa, max. 380 mm PUR type DAA dh, max. 380 mm	Min. 6 fasteners	Fv = 6.0 KN Fh = 3.62 KN	The fastening of the PV system to the thread is only up to a maximum height of 50 mm permissible.
>5° – 20°	Wood-based material OSB min. 18 mm	EPS DAA dh thickness max. 380 mm MIWO type DAA min. 70 kpa, max. 380 mm PUR type DAA dh, max. 380 mm	Min. 8 fasteners	Fv = 7.0 KN Fh = 6.21 KN	

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