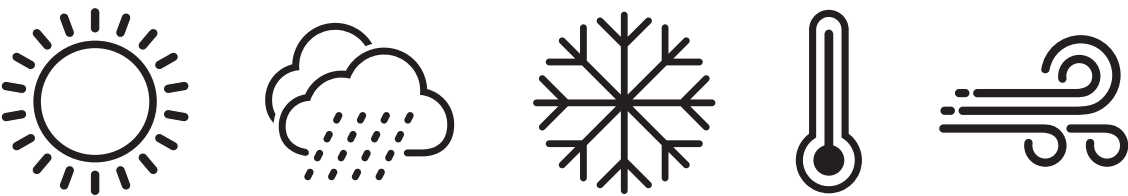


Flat roof installations.



Flat roof installations.

Flat roofs are used on all kinds of buildings, from single-family homes to blocks of flats, as well as in high-rise buildings, industrial and administrative buildings. Waterproof roof seals on top of flat roofs protect against penetration by water. The roof seal also needs to be resistant to burning brands and radiant heat in accordance with “EN V 1187 B roof t1”. Typical materials used to seal flat roofs today include bituminous sheeting and sealing and synthetic roofing membranes (films). Other kinds of weather in addition to precipitation itself can influence the roofing materials, including temperature, wind, air pressure and humidity.



All of these influences impact a flat roof and result in requirements applicable to sealing, water drainage, and the materials used.

Flat roof installations include, in particular, mounting parts of the building installations such as air conditioning units, ventilation ducts, pipelines or cable systems on flat roofs. Commonly-used solutions for mounting and fixing installations on flat roofs include:

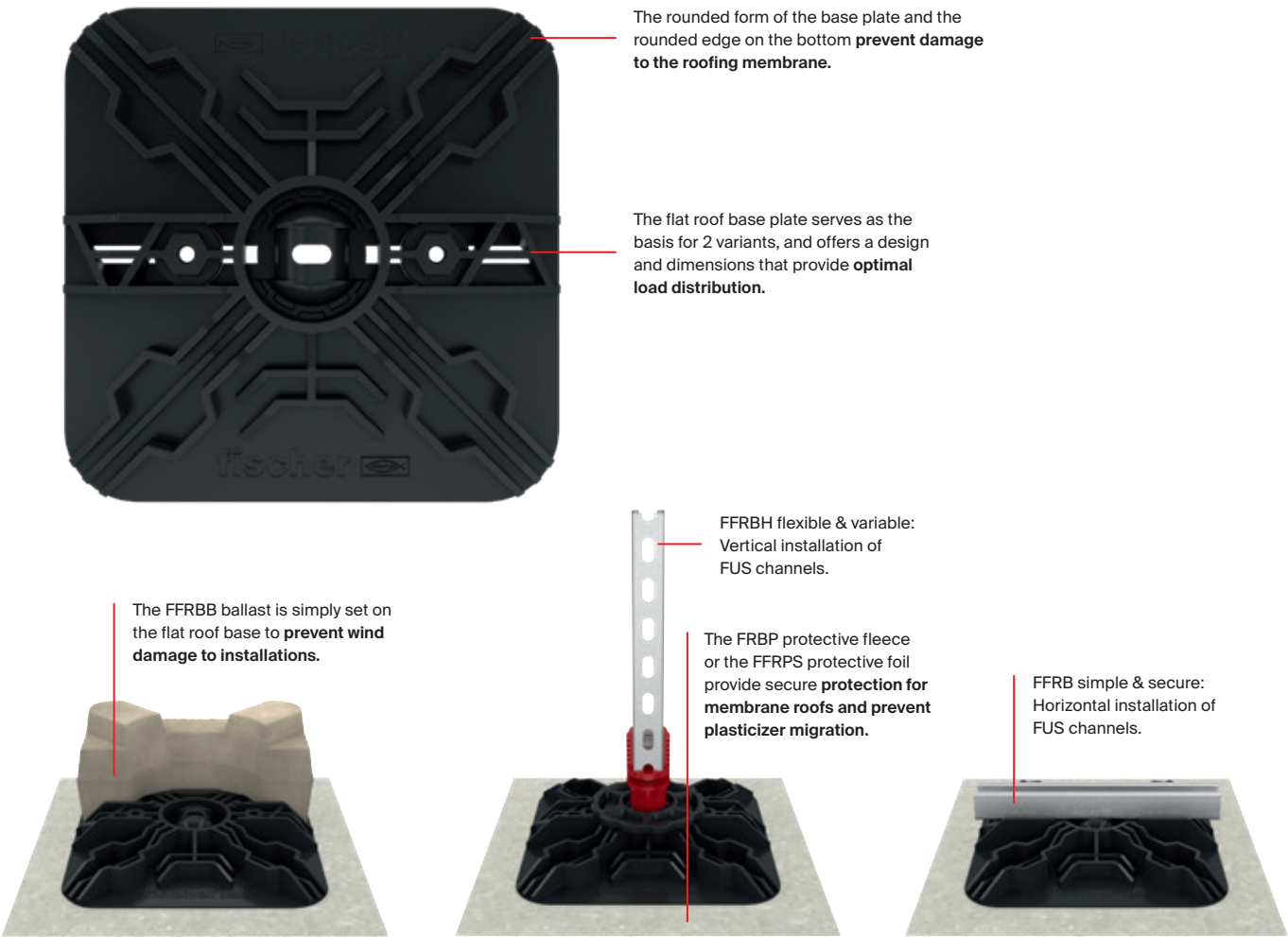
- Mounting on concrete or steelwork base structures
- Mounting on steel supports, placed on the roof structure, such as concrete
- Installation on concrete slabs for load distribution on the roof seal

Flat roofs are a specialised type of building roof. Roof types are primarily differentiated into:

- Flat roofs with a slope of 0° – 10° (in some countries 0° – 5°)
- Sloping roofs: >10° (or > 7° DIN 1055, or > 5° in some countries)

These commonly-used solutions influence the roof seal, and therefore the protection of the rooms and building areas below. They require a specialised flat roof bracket to serve as a load distributor and flexible installation point for secure, sealed installation on flat roofs. In addition to the mechanical stress on the flat roof waterproofing, there is a risk of plasticizer migration into the materials of the flat roof base, particularly with PVC flat roof membranes. Appropriate protective layers or underlays must be provided as a barrier.

Flat roof base FFRB and FFRBH. Secure and variable thanks to tolerance compensation.



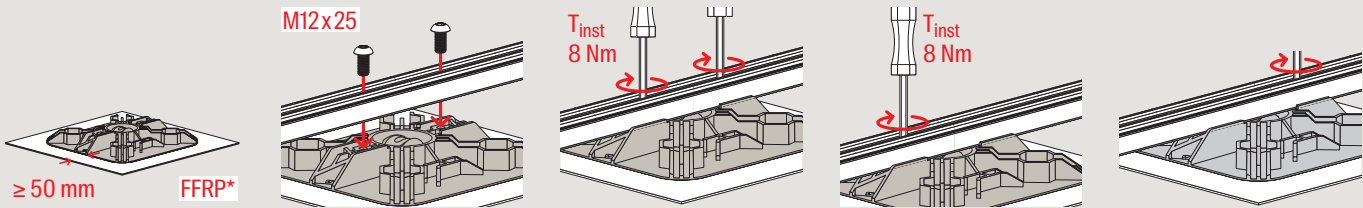
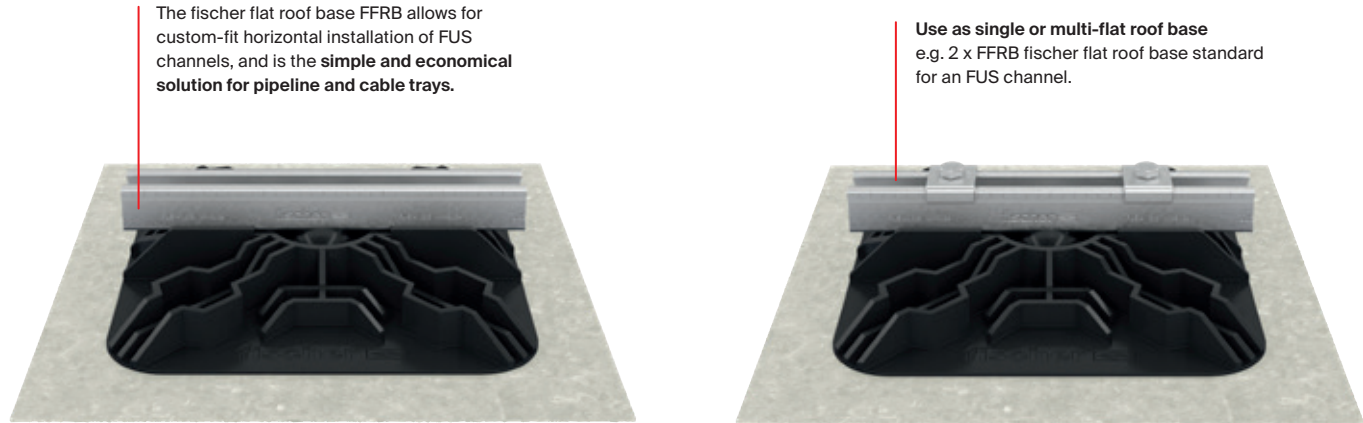
Your advantages at a glance

- The fischer flat roof base allows for installation of air conditioning units, maintenance platforms, walkways, pipelines and cable trays, and is the optimal solution for all installations on flat roofs.
- The fischer flat roof base ensures load distribution and reduction of point loads and thus protects against notifications of defects and recourse claims.
- The fischer flat roof base ensures the system fit with the hot-dip galvanised steel version of the proven FUS channel system, allowing for economical installation.
- The base plate of the flat roof base ensures the stable, load-bearing attachment of installations on flat roofs, and can be used for a wide range of different applications.

Flat roof base standard FFRB.

Simple & secure:

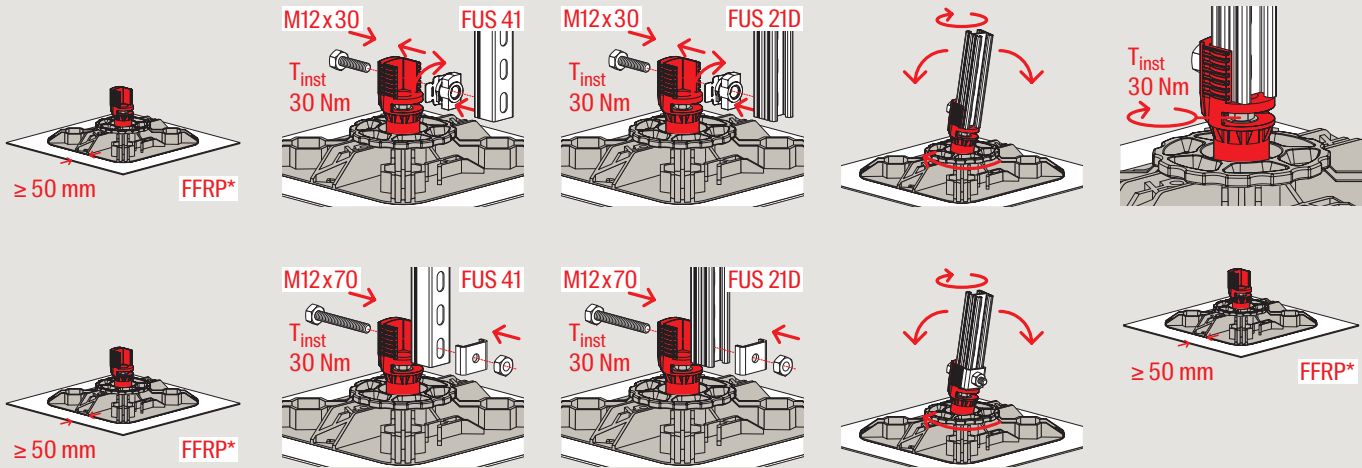
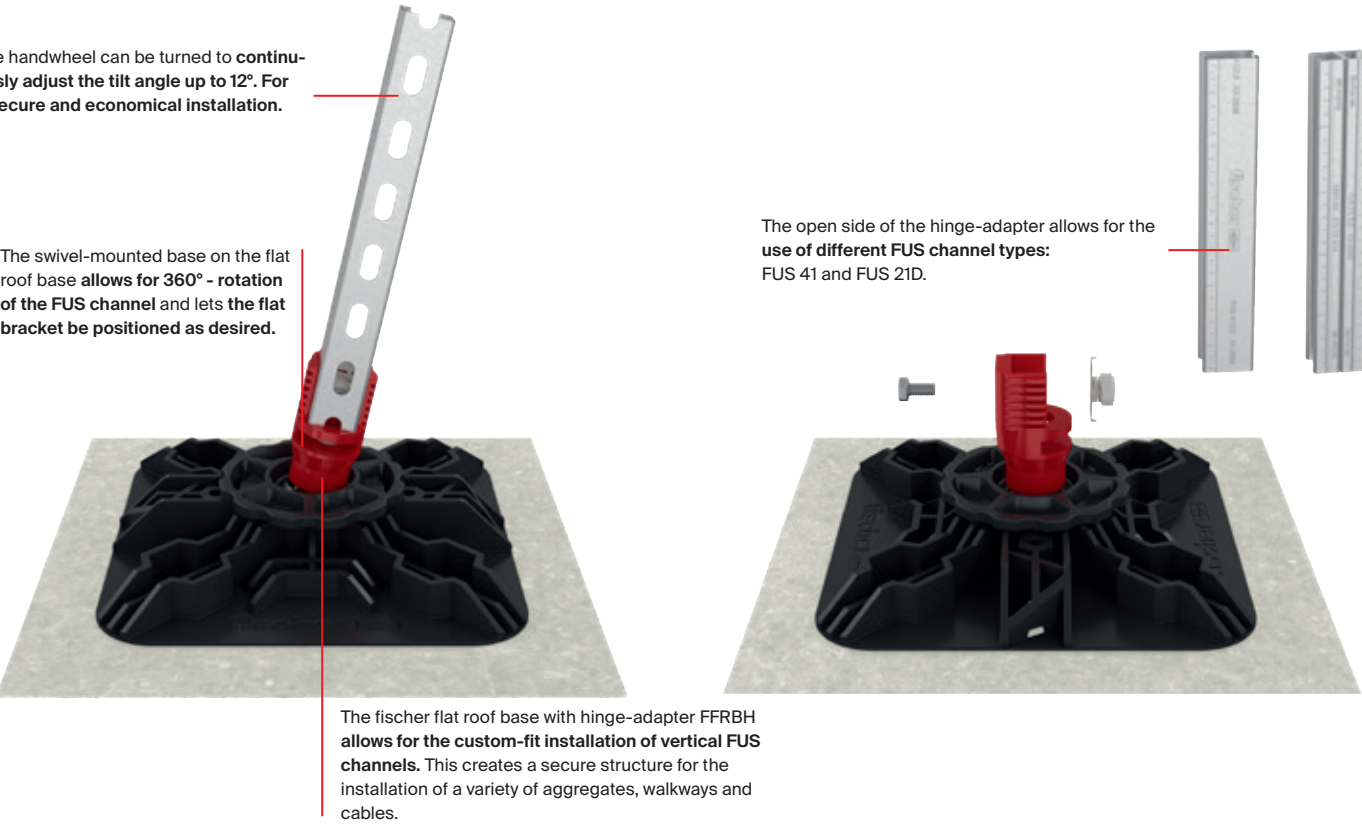
Horizontal installation of FUS channels.



Flat roof base flexible FFRBH.

Flexible & variable:

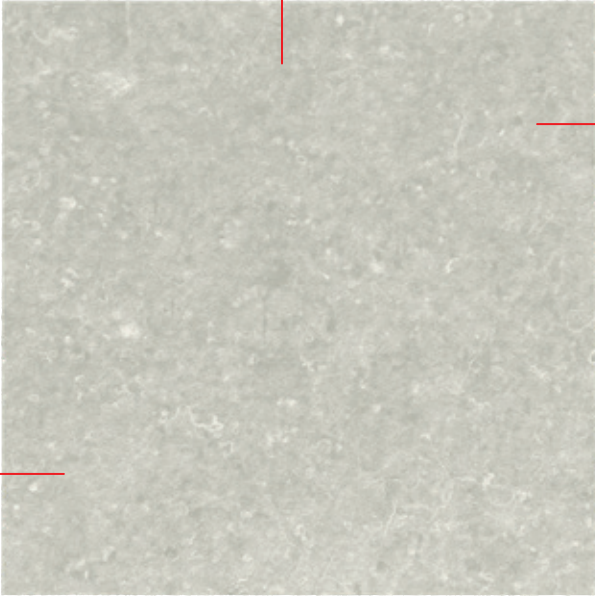
Vertical installation of FUS channels.



FFRP Flat roof base protector.

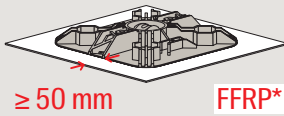
The secure foundation for installations on flat roofs

The fischer Flatroof protector FFRP ensures reliable **protection for membrane roofs** and **effectively prevents plasticizer migration**.



Thanks to its **moisture and temperature resistance**, as well as a **static friction coefficient of $\mu H = 0.3$** , the fleece provides reliable protection under various weather conditions

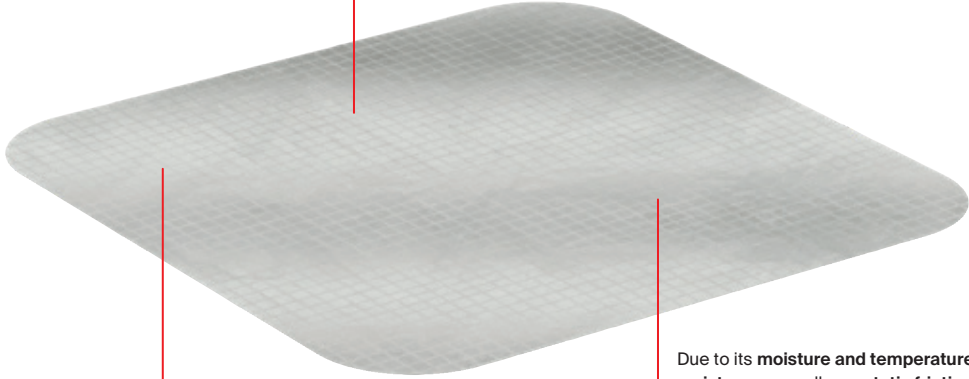
The protective fleece impresses with its **UV resistance** and **rot resistance**, guaranteeing long-term durability even under direct sunlight.



FFRPS Flat roof base protector self-adhesive.

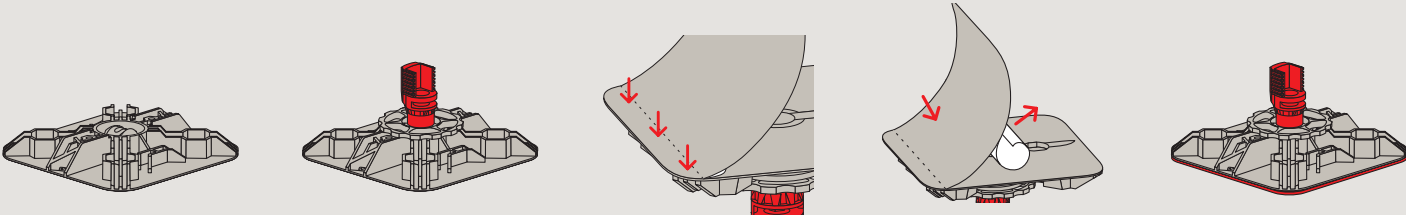
The non-slip base for installations on the flat roof

The FFRPS protective foil is **self-adhesive**, **fits perfectly to the shape of the FFRB and FFRBH flat roof bases**, and ensures a high coefficient of friction on the flat roof membrane as well as preventing plasticizer migration.



Due to its **moisture and temperature resistance** as well as a **static friction coefficient of $\mu H = 0.5$** , the foil provides reliable protection under various weather conditions and secure slip resistance.

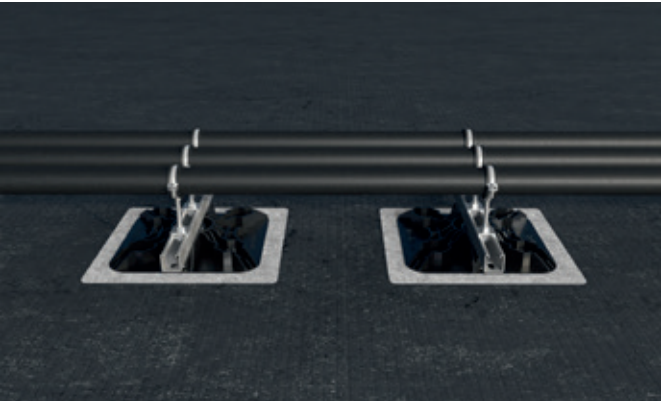
The protective foil impresses with its **UV and rot resistance**, guaranteeing long-term durability even under direct sunlight.



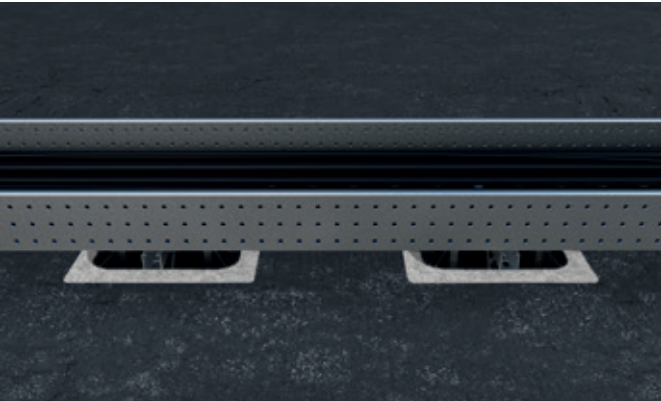
Applications

Flat roof installations.

Applications



Pipelines and pipeline routes:
Solution with FFRB flat roof base standard



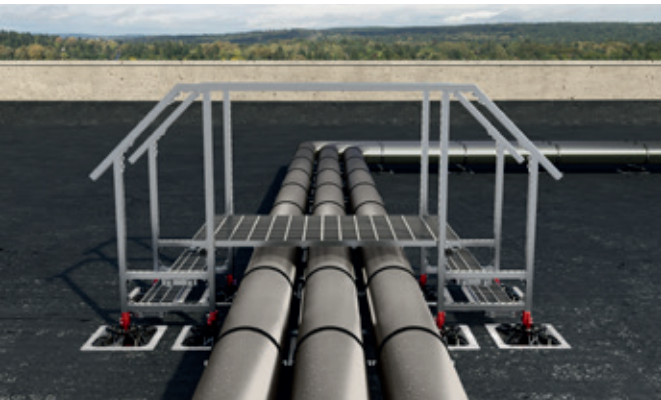
Electric cables and cable trays:
Solution with FFRB flat roof base standard



Ventilation systems and ventilation ducts:
Solution with FFRBH flat roof base flexible



Air conditioning systems, heat exchangers and cooling towers:
Solution with FFRBH flat roof base flexible

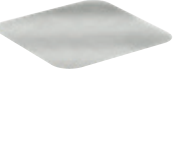


Maintenance platforms, walkways and bridges:
Solution with FFRBH flat roof base flexible



Solar thermal energy including accumulator, or photovoltaic:
Solution with FFRB flat roof base standard

Assortment and loads.

fischer Flat roof base									
									
FFRB	FFRBH	FFRP	FFRBB	FFRPS					
	Art.-No.	Length L [mm]	Width B [mm]	Height H [mm]	Height H ₁ [mm]	Tightening t _{inst} [Nm]	Max. recommended static load (upright) n _{empt.} [kN]	Thread	Drive
Item									
FFRB Flat roof base standard	559127	340	340	52	-	30	20	-	-
FFRBH Flat roof base hinged	559128	340	340	168	50	30	20	-	-
FFRP Flat roof base protector	559129	450	450	-	-	-	-	-	-
FFRPS Flatroof protector sa	580909	340	340	-	-	-	-	-	-
FFRBB Flat roof base ballast	559130	330	135	150	-	-	-	-	-
LKS Oval head screw M12x25 A2	559972	25	-	-	-	-	-	12	S 8

A variety of materials are used as insulation on flat roofs, and differ significantly in their compressive strength. Mineral wool is used frequently due to its other material properties, but has a low compressive strength (see the table below). In accordance with EN 13162, mineral wool insulation may be used as a sealing

material underlay for roofs with solar systems or other systems if the compressive strength is min. 70 kPa at 10 % compression, and if there is a load-distributing layer above the insulation. For smaller or line-shaped loads, the long-term compressive strength of the insulation materials becomes the governing factor.

Insulation material roof	Compressive strength insulation material	Max. resulting load for an area of 0.105 m ²	Long-term compressive strength insulation material	Max. load for an area of 0.105 m ²
Mineral wool	70 kPa	7.35 kN	15 KPA	1.726 KN
EPS / PIR	100 kPa	10.5 kN	20 KPA	2.301 KN
EPS / PIR	150 kPa	15.8 kN	25 KPA	2.877 KN
EPS / PIR Max.	200 kPa	21.0 kN	30 KPA	3.452 KN

As a result, in the worst-case scenario when using mineral wool as insulation, a base frame consisting of 2 beams and 4 FFRBH flexible flat roof bases can provide load transmission of up to 690 kg, depending on the construction of the frame and position where the load is applied to the frame. The insulating material and

its long-term compressive strength must be taken into consideration when calculating the load. In addition to the insulation, the load-bearing capacity of the entire roof structure must be taken into consideration with respect to handling the additional load of equipment, etc.

	Art.-No.	Length x Width [mm]	Sales unit [pcs]
Item			
FFRB Flat roof base standard	559127	340 x 340	2
FFRBH Flat roof base hinged	559128	340 x 340	2
FFRP Flat roof base protector	559129	450 x 450	10
FFRPS Flatroof protector sa	580909	340 x 340	10
FFRBB Flat roof base ballast	559130	330 x 135	1
LKS Oval head screw M12x25 A2	559972	25	50

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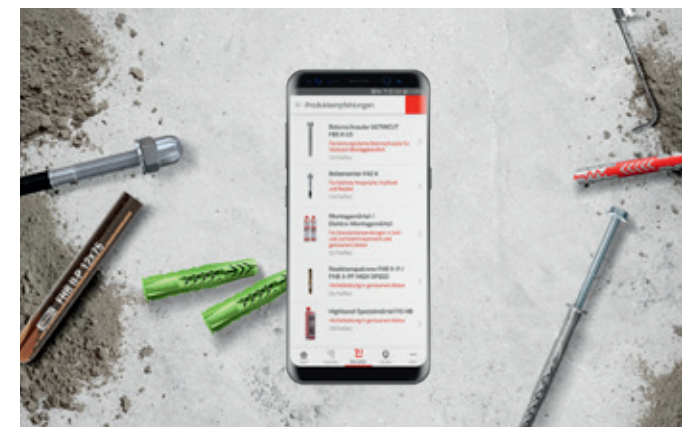
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