

Specifications for trapezoidal metal roof mounting system

General System Description

Type:	Photovoltaic mounting system for trapezoidal metal roofs
Module Orientation:	Portrait and landscape
Elevation:	In addition to roof-parallel mounting, a light elevation of 5° is also possible (other solutions on request)
Materials:	Aluminum, EPDM
Repairer's warranty:	12 years

Roof suitability

Slope:	0° to max. 60° (with light elevation 5° to 20°)
Underground:	Roofs with trapezoidal, corrugated sheet and metal tile roofing

Properties

Sheet thicknesses:	<p>Minimum requirements apply to the sheet thicknesses:</p> <ul style="list-style-type: none"> - Sheet steel must have a thickness of at least 0.4 mm (tensile strength $R_{m,min}$: steel 360 N/mm²). - Aluminium sheet must have a thickness of at least 0.5mm. We recommend a thickness of 0.7mm (tensile strength $R_{m,min}$: aluminium 195 N/mm²).
Roof fastening:	<p>Trapez. mounting screw (cl 5,5 x 25mm E11 / cl 6,0 x 25 mm E16).</p> <ul style="list-style-type: none"> - High holding forces thanks to chip-reduced direct fixing with building authority-approved thin sheet metal screws (ETA, DIBt). - No pre-drilling, thanks to tip and moulded thread made of hardened carbon steel (head and thread stainless steel A2). - Easy and fast penetration of sheet steel. - More threads in the sheet metal for greater safety.

Rails:	<p>Components required depending on the Substructure design:</p> <ul style="list-style-type: none">- Short rail C24/C47/C71 (modules installed in portrait and landscape) Material: Aluminium and EPDM- Short rail C33 (modules installed in landscape) Material: Aluminium and EPDM- C-rail 47-2 (modules installed in portrait) Material: Aluminium
Fastening the modules:	<p>Clamping the modules with module clamps. Clamps for frame heights of 30-42 mm.</p> <p>It must be possible to mount the clamps manually into the mounting profile. Once screwed in, the clamps must remain in place. It must be possible for 1 person to insert the modules into the clamps.</p> <p>Alternative fastening of the modules via insertion rails.</p>
Electrical Properties:	<p>An approved way to integrate the mounting system into the lightning protection/equipotential bonding system.</p>
Approvals/Standards:	<p>CE Marking</p>
Documentation:	<p>Static verification of the stability of the overall system, occupancy plan, 3D overall occupancy overview, installation documentation.</p>