ALTEC Metalltechnik

ALTEC *SD_ON-ROOF and SD_VARIO*

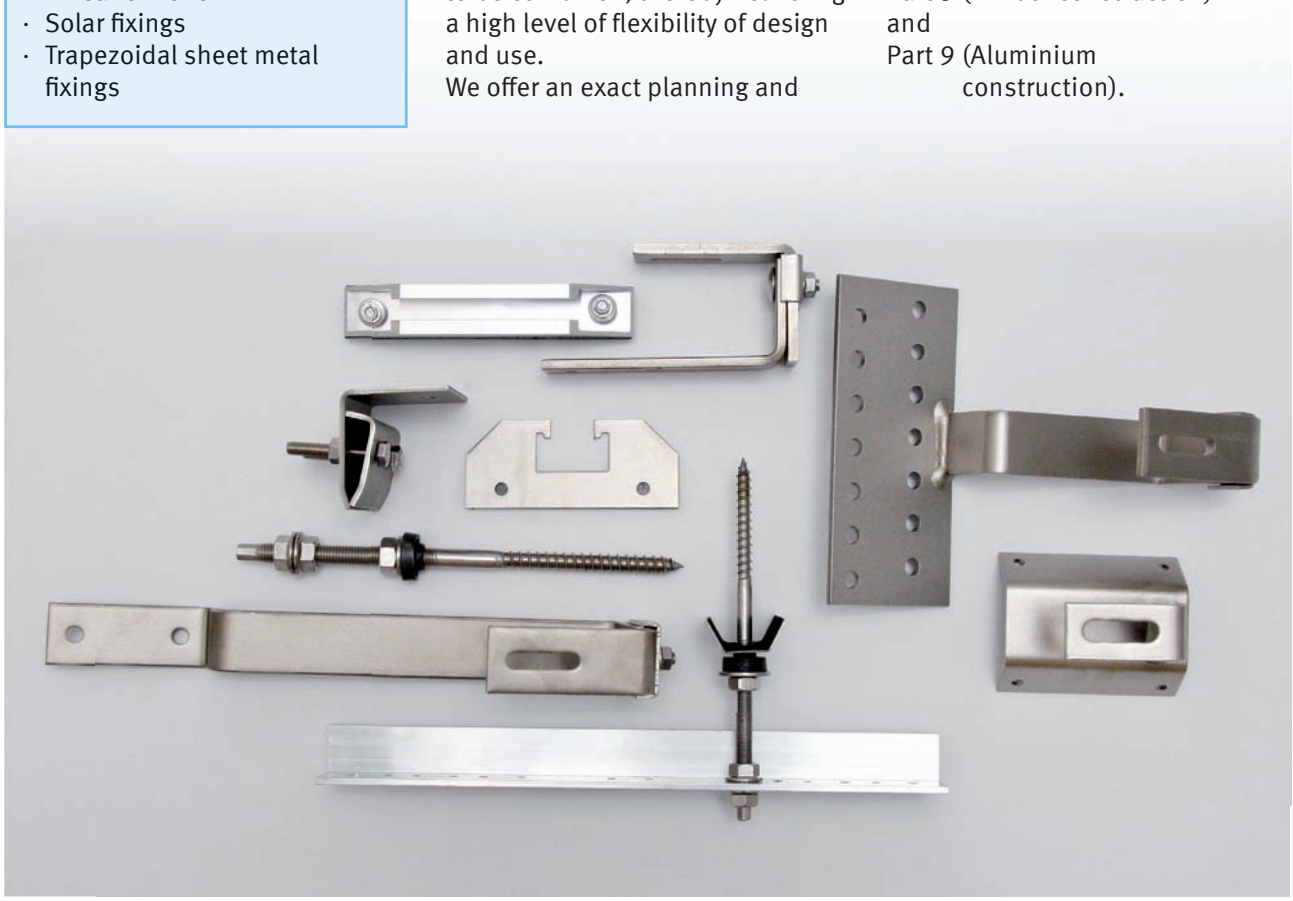
On-roof installation and raised brackets
on pitched roof systems

Roof fixings for every roof covering

ALTEC Metalltechnik GmbH roof fixings

- Standard and customised roof hooks for all roof coverings
- Clip fixings
- Adapter plates
- Hanger bolts
- Threaded rods
- Solar fixings
- Trapezoidal sheet metal fixings

The possibilities offered by our **ALTEC *SD_ON-ROOF*** fixing system are as varied as the pitched roofs themselves.
They allow any system to be adapted to any shape of roof.
The modular design of our installation systems enables all the available individual components to be combined, thereby delivering a high level of flexibility of design and use.
We offer an exact planning and roof design service to ensure utilisation of the entire roof area and maximise efficiency. This service also includes a static calculation of the complete system in line with Euro Code DIN EN 1991-1
Part 1 (Load assumptions),
Part 3 (Steel construction),
Part 5 (Timber construction) and
Part 9 (Aluminium construction).

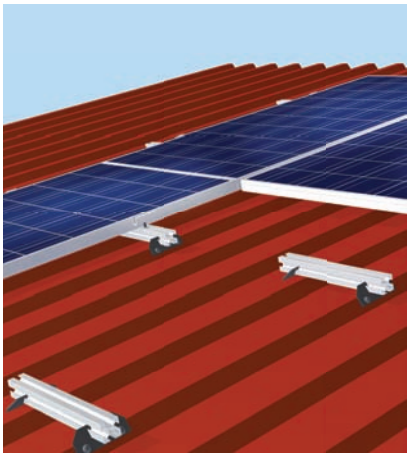


Made-to-measure roof hooks

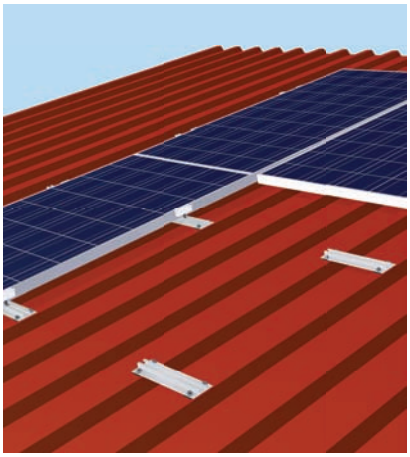
That is precisely why we manufacture customised roof hooks specifically tailored to your needs.
You specify the rod lengths, radii and the size of the base plate. You will then receive a quote within a few days as well as a drawing for your approval.
Made-to-measure manufacture is worthwhile even with smaller quantities, as your product is then precisely tailored to your needs – saving you installation time on site!
And what's more, made-to-measure components are more affordable than you think.
Complete our check-list and request a quote today!

Installation on trapezoidal-profiled roofs

Trapezoidal-C-rail fixing
(for horizontal module installation)
Use our Trapezoidal-C-rail fixings for this, which consist of only four components: a made-to-measure C-rail section (pre-drilled and stuck to EPDM tape), a central and end clip and two thin sheet metal bolts.
No pre-drilling is required.



Trapezoidal sheet metal fixing
(for vertical module installation)
Our trapezoidal fixings can be used on almost all trapezoidal-profiled sheet metal roofs. Regardless of the width of the ribbing, they guarantee simple and fast installation with minimal material.



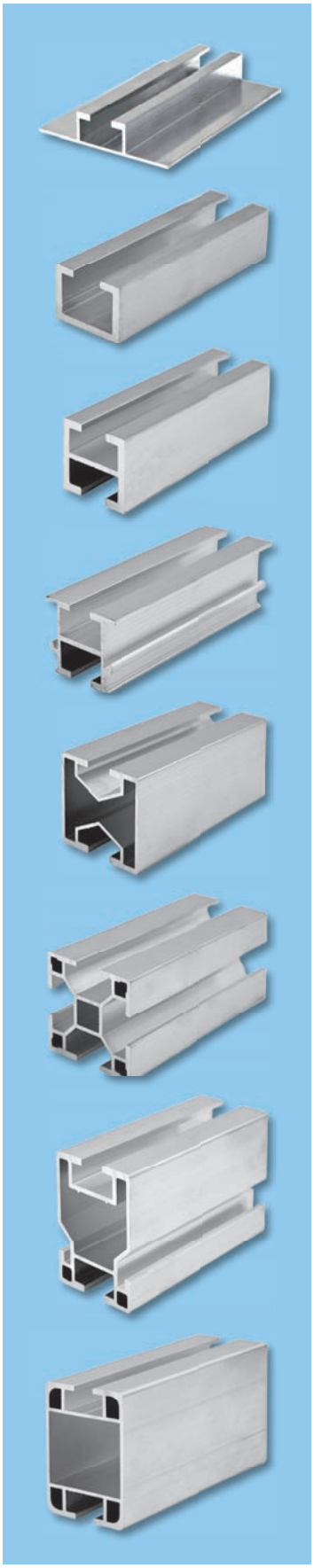
ALTEC *SD_TRAFIX-V-ECO*
(for vertical module installation)
Fix your modules in place even more affordably and quickly with this system. We offer three standard versions. Select the length and drilling pattern as required to ensure that the rail can be individually adapted to your needs. There is no need for pre-drilling by the use of thin sheet metal bolts.

Profile rails and connecting elements

We also have a wide range of profile rails to meet the most diverse requirements.
There are a total of eight profiles to choose from: ultra-lightweight 68 x 15 rails for use on trapezoidal-profiled roofs to large 75 x 120 rails. The **mounting rails** can also be **black anodised** on request.
The connecting elements in the ALTEC product range include cross-connector models, length expansion connectors and rail connectors.
End caps for profile rails help to minimise wind noise. We also have cable ties and cable clips to fix the solar cables in place.

CE-compliant and German Building Inspectorate-approved profiles and connectors

- Profile rails cut to the required length or up to 6 metres in length, drilled on request
- Rail connectors
- Lengthe xpansion connectors to compensate for changes to the length caused by temperature fluctuations
- Cross-connectors
- Accessories: profile rail end caps, cable ties, cable clips



Module fixings

Module fixings for framed and unframed modules

- Clip plates
- Clip brackets
- End clips
- Central clips
- Anti-slip clips
- Movement clips
- Position stops
- Accessories

Aluminium or stainless steel module clips brackets and/or end clips are fitted at the end of each row of modules.
They are adjusted to the thickness of the module frame and are available for all common module heights.
Naturally made-to-measure clips are also available on request.

Anti-slip clip brackets and end clips are used with horizontal module installation to prevent the end clip from sliding along the profile rail.

The clip comes with a 10 mm long bolt, which pierces the rail when the nut is tightened and prevents the clip from slipping.

Module clip plates or central clips are fitted between two adjacent modules. The threaded plate, optionally for M6 or M8, resembles the head of a hammer head bolt and is fixed to the bolt.
The optimum grip of the threaded plate ensures that the clip fixing rotates 90° into the profile. The gap between the modules is determined by the width of the clip.

We also offer the option of anodising the clips to coordinate with the colour of your system.

The end/central clip with its extended snap-off long nut serves as effective anti-theft protection, as the upper part of the nut comes loose when it is finally tightened and the bolt can no longer be removed the conventional way.

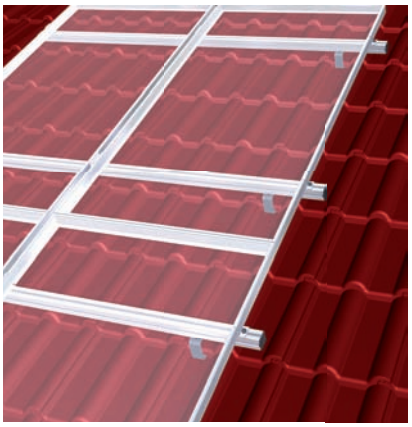
On-roof systems at a glance

Simple installation
The complete system consists of roof fixing elements (roof hooks, rabbet clamps, hanger bolts, trapezoidal shoes etc.), aluminium profile rails, stainless steel connecting elements and clip fixings to anchor the modules on the profile rails.
The choice of the roof fixing used depends on the type of roof covering, the condition of the load-bearing roof substructure, the load-bearing strength of the roof and its pitch. The modules can either be installed vertically or horizontally.

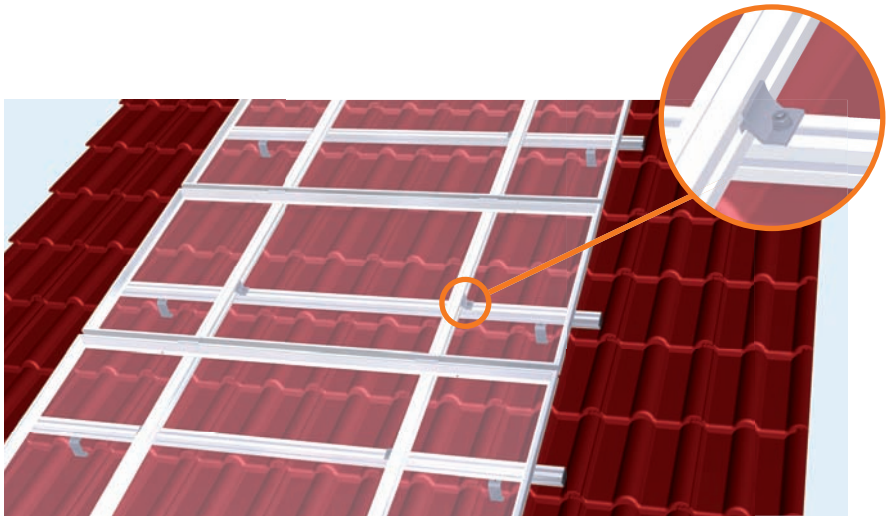
Installation with a cross joint
Use cross-fixing systems when the module manufacturer's specification about the ideal clamping area have to be precisely adhered to. Based on this, the first profile position is fixed on the fixing points on the roof. The second position can be positioned as required and the modules can thus be perfectly clamped in place.
In the event of higher wind and snow loads, a cross joint is best at distributing the loads that occur to the load-bearing components. Cross joints can also be used if fixing points and rails systems do not present appropriate intersections.

Benefits

- Optimised for all common roof coverings
- Simple and easy to install
- Very good value for money
- Corrosion-resistant as manufactured in stainless steel
- Can be combined with all ALTEC pitched roof installation components
- End-to-end service from advice to sale
- Statically-calculated constructions



Simple module installation



Cross-joint module installation

Vertical module arrangement

Horizontal module arrangement

Installation with a cross joint

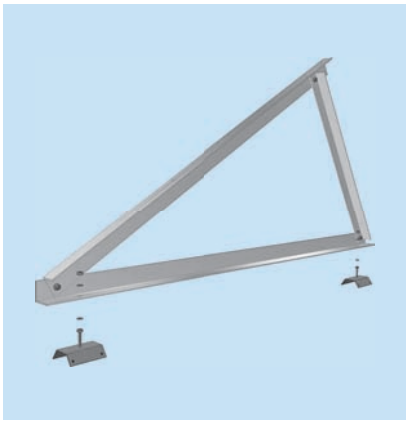
Raised support brackets on pitched roofs

Raised installation solutions are used in cases where there is not an optimum roof pitch. The angle of the module can be individually adapted to the optimum annual efficiency level at the location by the use of raised support brackets.
The bracket design consists of a top, support and base bracket, which are aligned and bolted on site.
Optimum utilisation of the roof surface is achieved if the elevated brackets are erected on a continuous base bracket. The distance of the modules from each other is based on the shading gap.
The type of roof fixing is based on the type of roof covering, and can either be hanger bolts, trapezoidal shoes or roof hooks. The selection and design is determined by individual parameters (roof pitch, wind and snow loads).

Vertical module arrangement

Horizontal module arrangement

ALTEC Metalltechnik GmbH will produce the optimum scheme for your roof based on your specific project data.



Continuous base bracket

Raised bracket parallel to the eaves

Raised bracket parallel to the edge

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