

Solar Installations on Metal Roofs

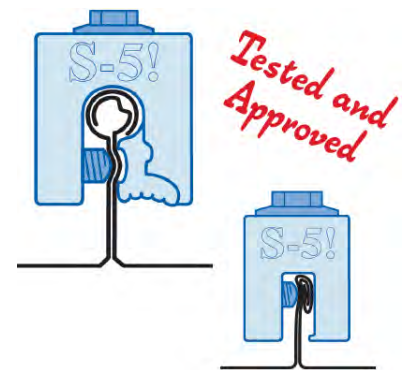
Mounting Solutions with S-5!® Clamps and Accessories



S-5! from USA developed innovative clamps for many international standing seam metal roofs and a very economic system to direct mount PV-modules. For over 30 years, S-5! has been the leading authority on metal roof attachment solutions in the US market. With S-5! products more than 2 GW of metal-roof solar arrays were mounted globally, including the headquarters of IBM, Google and Apple.

Since 2009 RoofTech is the S-5! Master Distributor in Europe and stocks the S-5! products that are common in the European market.

Many well-known manufacturers and dealers of mounting systems have been using the original S-5! clamps with their systems successfully worldwide for years. Installers appreciate the simple and safe installation without piercing the panels.



Rail system fixed with S-5! Z-Mini-FL clamps on a round bulb seam roof. Direct Mounting with S-5! PV-Kit 2.0 MidGrab

Tested holding strength of the *original* S-5!® Clamps

In contrast to plagiarism and conventional seam clamps, only the *original* S-5!® Clamps are all multiple tested by third-party accredited test-labs. The production in the USA is strictly quality controlled and certified according to ISO 9001. All S-5!® Z- and E-Clamps have in addition the official technical approval by the DIBt: Z-14.4-719.

RoofTech – The Specialists for Attachments on Metal Roofs - www.rooftech.de

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Professional Solar - Mounting with S-5!® Clamps

Rail Systems mounted with S-5!® Clamps

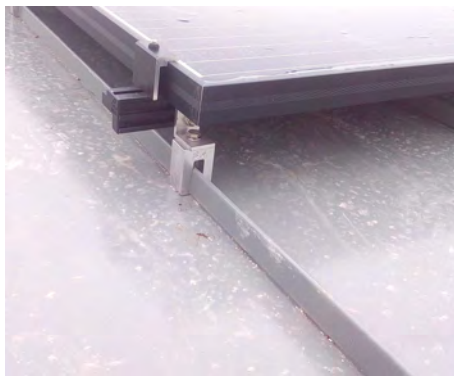
S-5!®'s standard and Mini clamps continue to be the attachment choice of worldwide popular rack and rail solar systems. The Mini-Clamps from S-5!®! provide sufficient holding strength to install rail-systems on many types of standing seam metal roofs without penetrating the panels.

To mount rail-systems with the screw channel located on the underside, the approved E-Mini-FL and Z-Mini-FL clamps with flange are the right choice. The hammer-head bolts can be fixed quickly and securely through the 18x11mm hole in the flange. For mounting on the Mini-Clamps without flange we offer stainless steel adapter plates.

C-shaped rails or rails with a side screw channel that are fastened with an angle adapter plate, the S-5!® Mini-clamps with the M8 threaded hole on top and the M8 stainless steel bolt are a simple and stable mounting option.



Rail systems fixed with S-5!® E-Mini-FL on a double folded seam roof and with N1.5-Mini on a Nailstrip seam roof.



Rail with bottom channel fixed on the S-5!® E-Mini-FL (with Flange)



C-rail mounted on S-5!® Z-Mini for round bulb seams



Rail with side screw channel fixed with an angle adapter on S-5!® Z-Mini

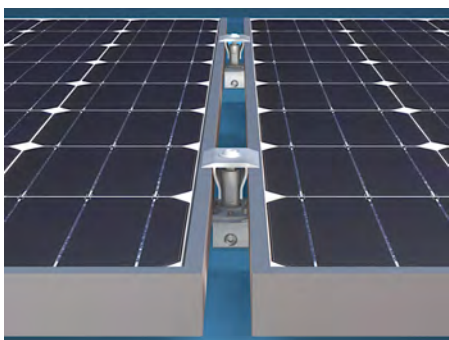
S-5!® PV-Kit 2.0 - The Direct-Mounting System

With the S-5!® PV-Kit 2.0 you can fix solar modules with frame height from 30mm - 46mm directly without using rail-systems. The stainless steel module support disc of the PV-Kit 2.0 has optimized teeth which enable the grounding of the modules. Therefore, no straps or wires are required between the modules.

- Easy transport, no cuttings or unusable remains.
- Pre-assembled MidGrab module clamp saves time and money.
- Flat screw head provides a smooth and clean surface.
- Less wind loads due to roof-parallel mounting of the modules.
- Only one module is fixed crosswise to the seams – therefore less cross-movements and stresses for the metal roof.
- Universally applicable on many different metal roofs with the S-5!® Mini Clamps and the Multi-Trapezoidal Bracket MTH.



S-5!® PV-Kit 2.0 MidGrab fixed on S-5!® Mini-Clamp



Roof-parallel installation, crosswise to the seam, with the PV-Kit 2.0 MidGrab and E-Mini on a double standing seam roof



S-5!® PV-Kit 2.0 MidGrab can be universally mounted as middle and end clamp.

Accessories for Solar Systems on Pitched and Flat Roofs



Protect your Solar Installation on Pitched Roofs

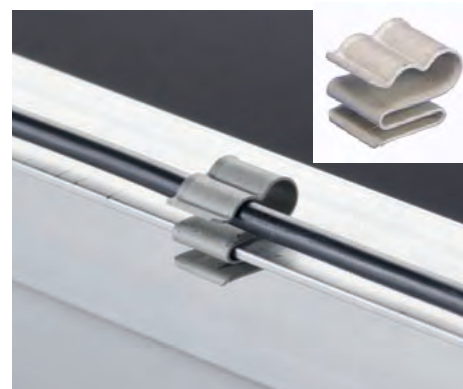
- BirdBlocker strips with **12,5cm or 20cm long** needles made of UV-resistant and recyclable HDPE plastic.
- "Needles" are joined together for extra stability.
- Simple, also afterwards, installation with stainless steel clips at the inner frame of the modules.
- No screwing, drilling or gluing to the PV-modules.
- No scratching or damage to the roof surface.
- 10 years product warranty.



CADDY® Solar Cable Clip

Made of steel and coated with the CADDY® ARMOUR corrosion protection
Class C4: corrosion load strong, protection duration long - over 15 years.

- Accommodates up to two cables with diameters of 5mm to 7mm.
- Can be installed at frames with thicknesses of 1.5mm to 2mm.
- Attaches to the solar panel frame in up to four orientations.
- Flared edges help prevent damages to the cable's insulation.
- Provides a long-term and reliable fixing of the cables.
- Easy to install, no tools needed.



CADDY® Tool-Free Flat Roof Support

for installations of cable trays and conduit pipes on flat roofs

- Easy transport to the roof due to low weight and packed in boxes.
- Quick and simple installation with clamps or pins
- UV- and corrosion resistant. Material: PP und PE.
- Foam bottom for protection of the roof membrane.
- Optimized load balancing. Thereby minimized point load.
- Optimal mounting level 10cm above the roof surface.



Different sizes for professional and economic laying of pipes and cable ducts with mesh cable trays or hole plate trays.

