S-5!®
The Right Way!

E-Clamps

The S-5!® E-Clamps with an opening slot of 7mm offer stable and professional mounting solutions on the double standing seam roof.

The E-Clamps, made of Aluminium, are suitable for all roofing materials except Copper.

The special features of the E-Clamps are the exact fit with the “nose” under the seam and the high pressure point of set screw which will compress the metal at the seam without piercing it.

The E-Clamp with two set-screws, two M8 threads on top and one M8x16 stainless steel screw is used for heavy demands e.g. fall protection systems, in the S-5! ColorGard® snow retention.

PU: E-Clamp is packed with 50 pcs. per box.

The E-Mini with one set-screw and M8 thread on top is utilized in various instances when multiple clamps are required for the attachment of rigid objects to the seams, e.g. the S-5-PVKIT® 2.0, rail systems, the RoofTech tube snow retentions, signs, walkways, satellite dishes, etc..

The **E-Mini-FL with one set-screw and Flange with hole (18x11mm)** is mostly used in the solar sector for rail systems with screw channel at the bottom.

The S-5!® Mini clamps are now supplied without M8x16 stainless steel screws. These screws can be ordered separately from us. PU: 100 pieces per box.

PU: E-Mini: 90 pcs / box, E-Mini-FL: 125 pcs. / box.

E-Clamp

E-Mini

E-Mini-FL

Examples of applications: S-5!® ColorGard® Snow Retention, Fall Protection, Solar Installations, Walkways, Steps, etc..

In contrast to plagiarism and conventional seam clamps, only the original S-5!® E-Clamps are all multiple tested and have the official technical approval by the DIBt: No. Z-14.4-719 (until 05/2027).

The S-5!® E-Clamp, E-Mini and E-Mini-FL were tested by the Institute KIT in Karlsruhe on the complete roof structure together with the Rheinzink double standing seam system in the required four load directions and are currently the only approved standing seam clamps for this handcrafted double standing seam roof.

In addition, S-5!® has tested the holding strength of all clamps on a wide range of seam types and metal finishes from various manufacturers by independent testing institutes in the USA. This type of test tests the clamp itself and the connection of the clamp to the profile under test conditions. Tests made with load pulling parallel (shear) to seam and with load pulling normal (tensile) to seam. The test results proved the outstanding performance of the S-5!® clamps.
The load-bearing capacity values from the building approval Z-14.4-719 may be used for static calculations.

Please don’t hesitate to contact us for more information, the test results and technical assistance.

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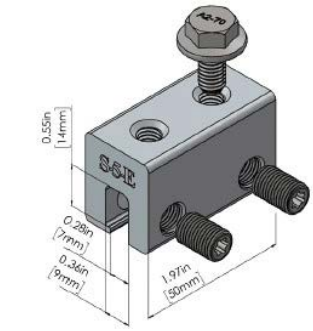
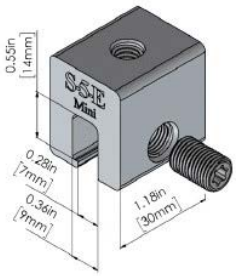
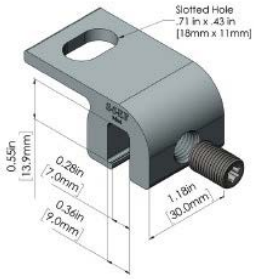


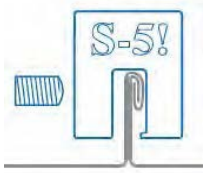
S-5!® E-Clamp



S-5!® E-Mini



S-5!® E-Mini-FL



To install the S-5!® E-Clamps:

- Partially thread the setscrews into the clamp by hand. Determine how to position the clamp. When attaching to machine-folded seams (regardless of panel profile and geometry), S-5!® E-clamps are designed to engage the seam as shown in illustration on the right, with the “Nose” under the seam.
- If the foot of a sliding clip extends into the clamping area of the clamp, the thermal elongation of the seam can be hindered. The clamps must then be placed at a distance of approx. 25 mm from the sliding clip.
- The set screws are fitted with the S-5!® mounting bit with a tightening force of 15 -17 Nm.
  For galvanized steel with a thickness of more than 0.7 mm, tighten with 18 - 20 Nm.
- Tighten the set screws on the E-Clamps and tighten both again.
- Many screw-drivers do not always offer a constant tightening force. The tightening force must therefore be checked with a calibrated torque wrench and the set screws tightened if necessary.
- If an M8x16 stainless steel screw is used for the installation in the M8 thread on the top side, it must be tighten it with a torque of 18 Nm.

Please note in general: (Please also note the S-5! installation instructions that are included in every S-5! product box)

- Installation with our products should only be carried out by specialists and specialist companies with qualifications for the respective installation and with experience in working on roofs. During installation, the warranties of all trades and the roof as well as the regulations for work on roofs (e.g. the use of fall protection, safety catches from an eaves height of 3m, accident prevention, building regulations, etc.) must be observed.
- In the event of non-observance of our installation instructions, when installing or assembling our products with components of the competition and when using and combining further components that were not purchased from us, we shall not accept any liability for any resulting defects and damage. The warranty is excluded in this respect.
- The suitability of the clamps for the intended metal roof profile must be checked before installation. Depending on the use of the respective clamp, it must be ensured that the forces transferred from the clamp to the seam can be absorbed by it and by the supporting structure. In particular, the snow and wind loads, the additional loads from the installations attached to the clamps, as well as the increased stresses in the edge and corner areas of the roof structure must be taken into account. A sufficient number of clamps must be provided. For statically relevant clamps, a distance of at least 500 mm from the standing seam profile end must be maintained.
- The building owner or operator is responsible for the stability of a structural system. The installer of the system is responsible not only for the system but also for the roof on which he installs the system. Anyone who installs a system on an existing roof without first checking its stability is violating existing law! The sufficient holding force of the roofing on the substructure must always be ensured. Verification must be provided by the client. In cases of doubt, a structural engineer must be consulted in advance to determine the load and its removal.
- In the case of handcrafted metal roofing on wooden formwork, the edge and corner areas should not be covered with PV-modules due to the limited load-bearing capacity of the roofing and the adhesion. In the middle area, it is usually not possible to skip over the seams. We therefore recommend installing clamps on each seam. The installation of e.g. PV systems represents a punctual load application, therefore we recommend reduced clip distances and screwed clips. The clamp should be installed and fixed between the clips to achieve optimum load distribution.
- The thermally induced change in length of the roofing must not be hindered! When mounting rigid objects such as rails, pipes, cable ducts, etc. on the clamps, these must be separated at regular intervals (after max. 3m) to limit deformation due to thermally induced changes in length (in longitudinal and transverse direction).
- The respective installation instructions do not release the executing company from clarifying the application possibilities and use of our products, also in connection with the other materials used, on the individual object in advance. The material properties of the respective metals, the combination with each other as well as the processing instructions and regulations of all manufacturers involved (also those of the metal roof) must be observed.
- RoofTech and S-5! recommend that the planned installation, PV system, snow guard, etc. be checked by a qualified specialist who is responsible for the snow and wind loads, the loads of the installation, the statics and assembly as well as the planning and construction of and on metal roofs.
- S-5! clamps are not suitable for use as fall protection or guardrails. The S-5! clamps may only be used for this purpose in a certified and approved fall protection system. The respective system provider for fall protection is responsible for this and must provide proof of this.
- The suitability of our products for the intended use is checked by the planner and user himself. If technical details are not described separately, this does not release the executing company from checking in individual cases and prior clarification of a technically correct issue. As a matter of principle, RoofTech GmbH, S-5!-Metal Roof Innovations Ltd. and our producers do not accept any responsibility for the installation, suitability and applications. S-5! products are protected by international patents of Metal Roof Innovations, Ltd.

Further installation instructions and information can be found on our homepage www.rooftech.de or please request them from us.

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