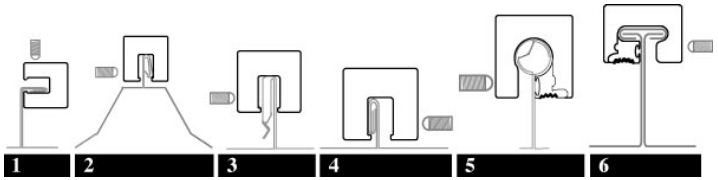
S-5!™ Clamp Installation

The clamps from S-5!™ come in a variety of options. Choose the appropriate clamp for every type of application. The heavy duty clamp with 2 bullet-nosed, stainless steel screws for attachment to seams are used for heavy demands including fall protection systems and in the ColorGard® snow guard system. The Mini-Clamps are utilized in various instances when multiple clamps are required for the attachment of fixed objects to the seams. Mini-Clamps with flange (Mini-FL) are the correct choice in solar systems, when rail systems with a underneath screw channel are used.

S-5! clamps attach to the panel seam by the tightening of "bullet-nosed" stainless steel setscrews against the seam material. (This is usually done with an industrial grade screwgun). The setscrews compress the seam material against the opposite wall of the clamp. They will "dimple" the seam material, but will not penetrate it. Threaded holes in the clamp (and stainless hardware provided) enable the easy attachment of various ancillary items to the clamps.



Determine how to position the clamp and which side of the clamp to load the setscrews into. When attaching to machine-folded seams (regardless of panel profile and geometry), S-5! clamps are designed to engage the seam as shown (4). For horizontal seam applications**,** the setscrews must be accessible from the top for tightening (1). On many snap-together type seams, the setscrews are opposite the open (or overlap) side of the seam (2). On some seams, this aspect of clamp orientation is not critical (3,5).

Take care that the bolt hole is in the desired (upslope or downslope) orientation and that the setscrews are on the correct side of the seam.
NOTE: Some horizontal seams may require additional hand crimping at the clamp location.

When relying upon published load values, setscrew tension should be periodically verified using a calibrated torque wrench between 18-20 Nm when used on 22 ga steel or between 15-17 Nm on 24 ga steel. For all other metals use a screw tension of 15-17 Nm. For further information please visit our web site. Using a 3/16" allen wrench attachment tip (provided with the clamps) (on a 1/4" drive screw gun), tighten and retighten setscrews as the seam material compresses.

Load testing of S-5!™ clamps is done with setscrews tensioned at 13 Nm (24 gauge steel and all other metals) or 17 Nm (22 gauge steel profiles). When relying upon published load values, for maximum holding strength, setscrews should be tensioned and re-tensioned as the seam material compresses. Screw tension should be verified using a calibrated torque wrench between 18 and 20 Nm when used on 22 ga steel and between 15-17 Nm for all other metals and thinner gauges of steel. Please visit our load table to determine the proper screw tensions and holding strength.

Caution: Battery-operated guns may not deliver consistent screw tension. Drywall guns may not deliver adequate tension.

Please use the products responsibly. Please note: Any loads imposed on the S-5! clamp will be transferred to the panels. Panels must be adequately attached to building structure to resist these loads. For critical installations, inquire for specific test data of ultimate tensile load on specific panel materials and seam types. When tabled values are used, screw tensions should be verified and factors of safety should be used as appropriate. The manufacturer expresses no opinions as to the suitability of the S-5! products for any specific application or project condition. On some types of metal roofs, i.e. Kalzip or snap lock types, don't fix the clamps on the clips. The thermal elongation of the panels may not be hindered!

Always provide worker protection when installing S-5!™ products. The S-5!™ clamps are not approved for use as a personal fall restraint device!

For all further information visit our web site **www.s-5.com** or contact us under **s-5@rooftech.de**.

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