

## Installation Instructions

**S-5!® Warning!** Please use these products responsibly! Visit our website or contact your S-5! distributor for available load test results. The user and/or installer of these parts is responsible for all necessary engineering and design to ensure the S-5! clamps have been properly spaced and configured.

**Notice to S-5! users:** Due to the many variables involved with specific panel products, climates, snow melt phenomena, and job particulars, the manufacturer cannot and does not express any opinions as to the suitability of any S-5! assembly for any specific application and assumes no liability with respect thereto. S-5! products are tested for ultimate holding strength on various profile types and materials. Visit [www.S-5.com](http://www.S-5.com) for more details. This document is an installation guide only and the photographs and drawings herein are for the purpose of illustrating installation tools and techniques, not system designs.

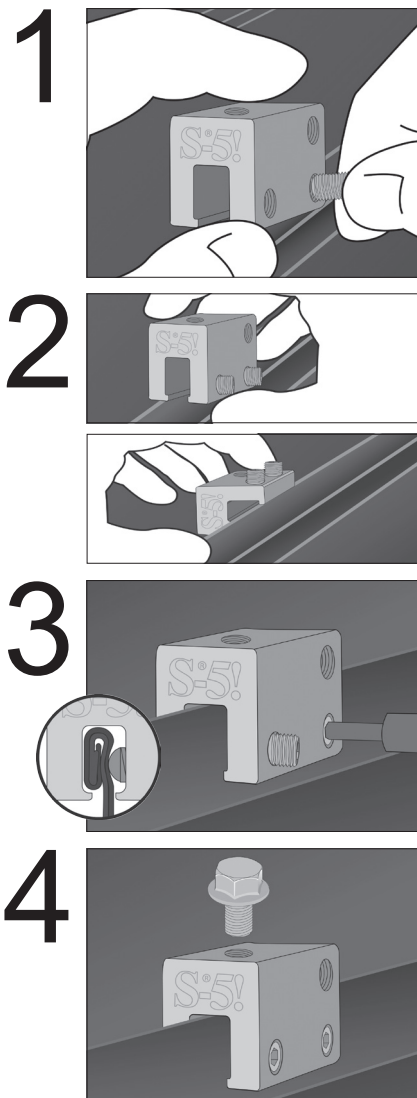
**The S-5-U, S-5-S, S-5-E, S-5-B, and S-5-V clamps are made for standing seam profiles.** For horizontal seam applications, the setscrew(s) must be accessible from the top for tightening. S-5-U clamps have two bolt holes to accommodate both vertical or horizontal seam applications; visit [www.S-5.com](http://www.S-5.com) for more details.

## Tools Needed

- Screw Gun
  - 3/16" Allen Bit Tip (provided)
  - Dial-Calibrated Torque Wrench\*
- (\*For accurate tension values, do NOT use a clicking torque wrench)

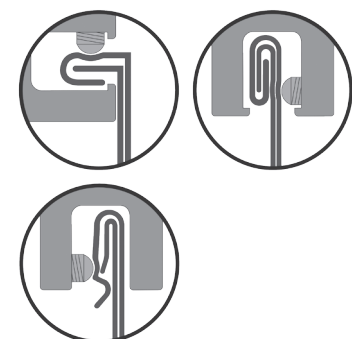
## To Install the S-5-U, S-5-S, S-5-E, S-5-B, and S-5-V

1. Partially thread the setscrews into the clamp by hand. (The S-5-U has four setscrew locations to make the clamp more versatile; however, only two setscrews are used per clamp. Both setscrews should always be loaded into the same side of the clamp.)
2. Determine how to position the clamp. When attaching to machine-folded seams (regardless of panel profile and geometry), S-5! clamps are designed to engage the seam as shown in Illustration 1 on the right. On many snap-together type seams, the setscrews are opposite the open (or overlap) side of the seam. On some seams, this aspect of clamp orientation is not critical.
3. Tighten the setscrews at the base of the clamp using a screw gun and the included screw gun bit tip. Setscrews should be tensioned and re-tensioned as the seam material compresses, i.e. tighten the first setscrew, then the second; then repeat until each setscrew achieves the recommended torque. The setscrews will dimple the seam material but will not penetrate it. Setscrew tension should be verified using a calibrated torque wrench between 160 and 180 inch pounds when used on 22ga steel and between 130 and 150 inch pounds for all other metals and thinner gauges of steel. Once installed properly, these clamps require zero maintenance or inspection for the life of the roof.
4. For attachment applications utilizing an M10-1.5 X 16 mm Hex Flange Bolt, tighten the included M10 bolt to 20 foot pounds. For attachment applications utilizing an M8-1.25 X 16 mm Hex Flange Bolt, tighten the included M8 bolt to 13 foot pounds.



Above illustrations show S-5-U clamp on a vertical seam. Step 2 shows both vertical and horizontal applications.

Illustration 1

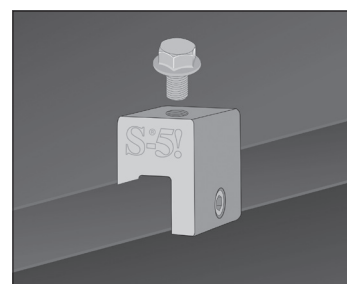
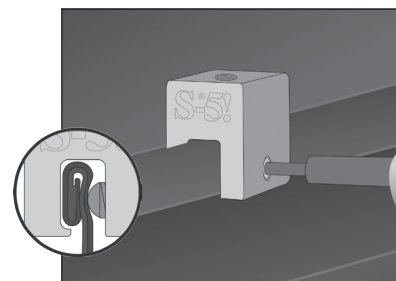
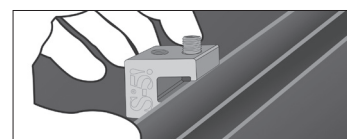
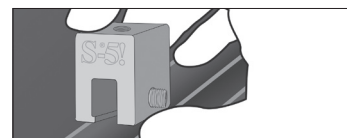


(Top) S-5-U clamp on both vertical and horizontal seams.  
(Bottom) S-5-S on a vertical seam.

## S-5-U Mini, S-5-S Mini, S-5-E Mini, S-5-B Mini, and S-5-V Mini Installation Instructions

### To Install the S-5-U Mini, S-5-S Mini, S-5-E Mini, S-5-B Mini, and S-5-V Mini

1. Partially thread the setscrew into the clamp by hand.
2. Determine how to position the clamp. When attaching to machine-folded seams (regardless of panel profile and geometry), S-5!® clamps are designed to engage the seam as shown in Illustration 1 on the front page. On many snap-together type seams, the setscrew is opposite the open (or overlap) side of the seam. On some seams, this aspect of clamp orientation is not critical.
3. Tighten the setscrew at the base of the clamp using a screw gun and the included screw gun bit tip. The setscrew will dimple the seam material but will not penetrate it. Setscrew tension should be verified using a calibrated torque wrench between 160 and 180 inch pounds when used on 22ga steel and between 130 and 150 inch pounds for all other metals and thinner gauges of steel.
4. For attachment applications utilizing an M8-1.25 X 16 mm Hex Flange Bolt, tighten the included M8 bolt to 13 foot pounds.



Above illustrations show S-5-E Mini clamp on a vertical seam. Step 2 shows S-5-E Mini on vertical applications and S-5-U Mini on horizontal applications.



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#### **S-5!® Warning! Please use this product responsibly!**

Products are protected by multiple U.S. and foreign patents. Visit the website at [www.S-5.com](http://www.S-5.com) for complete information on patents and trademarks. For maximum holding strength, setscrews should be tensioned and re-tensioned as the seam material compresses, i.e. tighten the first setscrew, then the second; then repeat until each setscrew achieves the recommended torque. Clamp setscrew tension should be verified using a calibrated torque wrench between 160 and 180 inch pounds when used on 22ga steel, and between 130 and 150 inch pounds for all other metals and thinner gauges of steel. Consult the S-5! website at [www.S-5.com](http://www.S-5.com) for published data regarding holding strength.

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