

# INSTALLATION OF COLORGARD® SNOW RETENTION SYSTEMS BY S-5!™

**NOTICE TO S-5 USERS:** Specific layout and assembly schematics for S-5! products are the responsibility of the user or project designer. 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! clamps are tested for ultimate holding strength on various seam types and materials. This information is available from S-5! distributors as well as from the S-5! website: [www.S-5solutions.com](http://www.S-5solutions.com). 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. **Clamp spacing should never exceed 32"**.

## 1. BEFORE YOU START



COLORGARD is easy to install. First, use a string line across the top of the panel seams at the desired location to establish a true line for installation of the S-5! clamps. Individually measuring each clamp location from the eave is not recommended.

When installing clamps on roof panels which utilize a two-piece panel attachment clip, the clamp may be installed at a clip location if desired. When panel system utilizes a one-piece clip, the clip locations should be avoided.



## 2. PREPARING THE CLAMPS

Bolt at upslope end  
with **VERSACLIP**

If the COLORGARD assembly utilizes the **VERSACLIP** for attachment of the COLORGARD crossmember (left), the bolt hole in the clamp should be at the upslope end of the clamp. If the assembly does not use VersaClip the hole should be at the downslope end of the clamp (right).

Bolt at downslope end  
without **VERSACLIP**

**DOWNSCOPE** →

Determine which side of the clamp to load the set screws into, and assemble all set screws to all clamps, being careful that the bolt hole will be in the correct (upslope or downslope) orientation, with the set screws on the correct side of the seam.

**BOTH SET SCREWS ARE IN THE SAME SIDE OF THE CLAMP**

When attaching clamps to seams which are machine folded, the S-5-U clamp is designed to engage the seam as shown ("b"). For horizontal seam applications set screws must be accessible from the top for tightening ("a"). On many snap-together type seams, the set screws are opposite the open, or overlap side of the seam ("e"). On some type panel seams, this aspect of clamp orientation is not critical ("c", "d", "f"). The S-5-U clamp has four set screw holes for the sake of versatility. Only two set screws are used in any given application. **NOTE:** Some "a" style seams may require hand crimping at the clamp location if the normal seam configuration after seaming is not completely closed as illustrated. A special crimping tool is available. Ask your distributor.

## 3. INSTALLING THE CLAMPS



Position the clamps appropriately on the panel seam, using the string line as a guide. Using an Allen-wrench attachment tip for a 1/4" screwgun, tighten and retighten set screws as the seam material compresses. (These screwgun tips are available from your S-5! product distributor.) On low seam profiles, a 4" bit extension on the screwgun will facilitate this work. **Clamp spacing should never exceed 32"**.

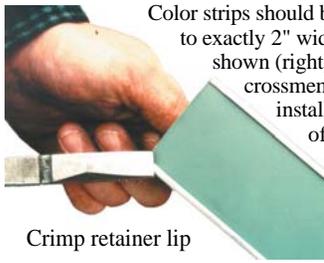
**NOTE:** Do not be concerned if after installation the clamp appears slightly "cocked" on the panel seam. It will straighten out when COLORGARD is installed.

Holding strength of S-5! clamps is highly dependent upon set screw tension. Consult your distributor or the S-5! website for screw tension when relying on tested holding strength. Most industrial grade screwguns are rated at 115 inch pounds tightening torque and will deliver between 115 and 150 in lbs (13-17 Nm) at the highest torque setting. For critical installations screw tension should be periodically verified as tested using a torque indicating wrench.

**CAUTION:** Battery operated guns may not deliver consistent screw tension. Drywall guns may not deliver adequate tension.

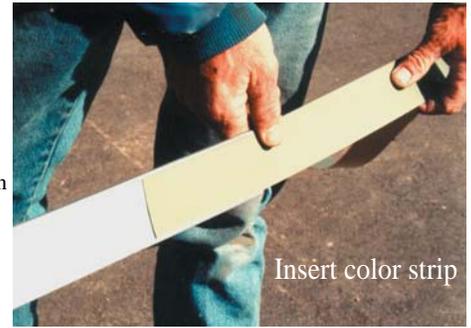


#### 4. INSTALLING THE COLORGARD®



Crimp retainer lip

Color strips should be sheared from the same prefinished metal as the roof panels. Shear strips to exactly 2" wide (8' or 10' long). Slide the color strip into the COLORGARD crossmember as shown (right). If the strip length is 8 feet, it may be pre-assembled into the COLORGARD crossmember. If the strip is 10 feet long it will be assembled to the COLORGARD as installation progresses. Joints in the COLORGARD can be concealed, if desired by offsetting the joints of the color strip from the joints of the COLORGARD. When this is done, the joints of the color strips should be overlapped about 1/2 inch. Each color strip should be anchored to the COLORGARD somewhere along its length. This is done by pinching the retainer lip of the COLORGARD with an ordinary pair of pliers. It can be done at one end of the COLORGARD section as shown (at left), or anywhere along its length.



Insert color strip

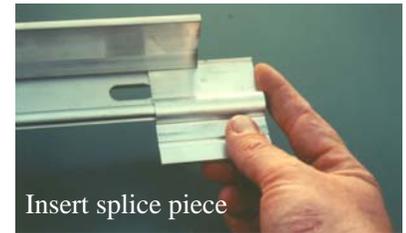
Attach COLORGARD to clamps with stainless bolts and washers provided. Bolts can be tightened with a 9/16" box-end wrench, or ratchet. On larger jobs a 1/2" drive electric impact will expedite this work. Tension bolts to 42 ft. lbs. (57 N.m.)



Bolt COLORGARD to clamps



Add splice pieces at each COLORGARD joint as shown at right. The "dimple" in the splice piece will automatically provide a 1/8" space between adjoining sections to allow for linear thermal expansion of the COLORGARD.



Insert splice piece



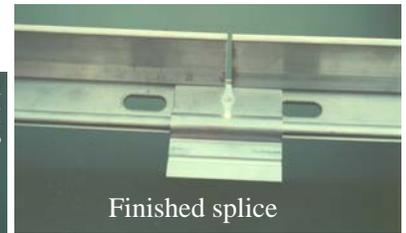
Slide VERSACLIPS into COLORGARD



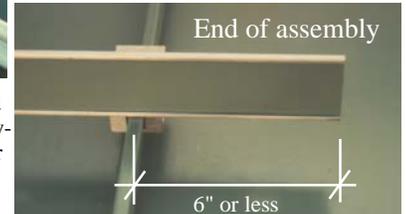
VERSACLIP™



Check bolt tension when using VERSACLIP



Finished splice



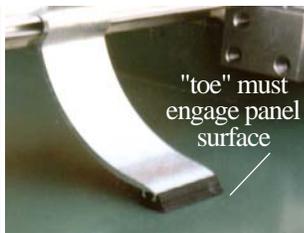
End of assembly

**USING VERSACLIP™** When seam spacing is not divisible by 4" (e.g. 12", 16", 24") or when panels are not laid up true-to-dimension, or when COLORGARD is installed askew to the panel seams (e.g. parallel with the line of a valley-above right) the VERSACLIP facilitates installation. The VERSACLIPS are inserted into the COLORGARD (above left) prior to placement of COLORGARD on the clamps. Align clips with S-5 clamp, install and tighten bolt (above center). Bolt tension should be verified at 42 ft. lbs. (57 Nm) when using VERSACLIP. VERSACLIP can be used with punched or unpunched COLORGARD.

**COLORGARD CUTTING TIP:** If it is necessary to field cut COLORGARD, such as at the end of an assembly, it can be done with a hack saw, or electric reciprocating saw with a fine-tooth metal cutting blade. A power mitre saw with a fine tooth carbide tip blade also works well. Clamp the COLORGARD into place on the saw table, and feed the blade into the material slowly.



SNOCLIP™



"toe" must engage panel surface



**USING SNOCLIP™** SNOCLIPS can be added to the assembly using a mallet, pliers, or Channel-Locks. One, two or three clips are used between seams depending upon seam spacing and system design. SNOCLIP has three locks available for use depending upon seam height (far left). Mount the SNOCLIP to the back of the COLORGARD using the lock that results with the rubber "foot" resting properly on the panel surface. When applying downward pressure on the part, the "toe" should engage the surface of the panel just before the "heel".

#### Using VersaBracket™

Install the bracket as shown. Fasten unpunched ColorGard to the top flange of the bracket using two 3/4" screws provided. Base is punched with three 1/4" holes for fasteners furnished by others.



Peel release paper from base



Fasten to structure through pre-punched holes (screws not by S-5!)



Install color strip and SNOCLIPS

# S-5! COLORGARD®

from Metal Roof Innovations, Ltd. ...where better ideas are an every day thing!

www.S-5solutions.com

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