S-5!®

The Right Way!

ColorGard® is the only snow retention system to be warranted for the life of the roof! Its unsurpassed holding strength and perfect color-match are guaranteed!

WARRANTED * FOR THE LIFE OF THE ROOF · S-5!®

The right way to attach almost anything to metal roofs!

ColorGard®

When snow accumulations begin to melt, the result can be catastrophic as the blanket of snow avalanches off the roof, dumping tons of snow onto anything in its path, damaging landscape, gutters, adjacent roofs, vehicles, and causing injury or death to passers-by. ColorGard® dramatically reduces the risks associated with rooftop avalanches and maintains the clean colorful appearance of the roof with perfect color and finish matching, which lasts as long as the roof itself! ColorGard is the only snow retention system designed and engineered on a site-specific basis; guaranteed to perform, to not damage the roof or finish, and to exactly match the roof color—for the entire life of the roof*.

Today's premium Kynar 500® and Hylar 5000® (PVDF) paint systems used on metal panels are "coil-coated" and oven-cured. This is the only finish application method that can be warranted against color fade for 30 years or longer. Nothing can equal it! So, why settle for less in a snow guard system? While some dyes, powder-coats and air-dried color application methods may initially simulate a perfect match, the color soon begins to fade and becomes increasingly mismatched with a few years of age. By utilizing a strip of the actual roof material, ColorGard perfectly matches the roof—forever!

ColorGard is mechanically attached with patented S-5!® clamps. S-5! is the trusted name in metal rooftop attachment technology worldwide. S-5! patented, round-point setscrews grip the seam securely without penetration and without damage to the panel's protective finishes. The clamps are precision-machined from aircraft quality, high tensile aluminum—not cast or plastic. All related hardware is non-ferrous stainless steel for lasting performance.

*See optional limited ColorGard System Warranty Program information at www.S-5-ColorGard.com

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Can ColorGard® be Retrofitted to an Existing Roof?

Yes, **ColorGard®** can be easily retrofitted to existing roofs, or incorporated into new construction design. Using S-5!® CorruBrackets™ or VersaBrackets™, ColorGard installs perfectly on corrugated and exposed-fastened roofs. ColorGard can be installed any time of year.

Is Design Assistance Available For ColorGard®?

Yes! It is critical to design a solution that takes into account the effects of gravity on a snow-covered roof. The tested holding strength of ColorGard must be checked and proven against the actual "in-service" gravity loads of the roof. This important step in application engineering should not be omitted for any snow retention product.

Consult with your distributor or use our online calculator at **www.S-5.com** to help quickly and easily design each job. The calculator will help you "tailor" the ColorGard system on a project-specific basis, allowing for all the variables involved—and even provide a printout of the calculations and a material requirement list.

S-5! also offers its Certified Engineer Stamp Program. To receive the engineer stamp of approval, simply submit your project calculations to our registered engineer for a professional review. Learn more at www.S-5.com/Calculator.

How Easy is it to Install?

Once designed, ColorGard is easy to install, requiring tools that are common to the trade. Because S-5! ColorGard uses mechanical attachment rather than adhesives, installation can be done any time of year, with no cleaning, no priming, no cure times, and no callbacks!
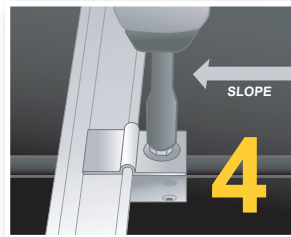
What About Cost?

ColorGard is the best buy on the market! This is the best news of all! ColorGard has greater holding strength, better aesthetics, longer service life, and lower installed cost than any other engineered system on the market. Pound-for-pound of holding strength, ColorGard is a better buy than individual cleats or glued units.

Why is S-5!® the Best Choice?

The premium finishes used on today's metal roof products are fluorocarbons—paint resins that are similar in chemical composition to "Teflon," the popular non-stick coating. The benefits of this type of paint are related to its nonstick characteristics. Chemical bonds like tapes, glues and adhesives, therefore, provide only temporary and unreliable solutions. Other mechanical alternatives that involve penetrating the roof or galling the surface result in leakage, corrosion, and voided warranties. Thanks to our patented round-tip setscrews, S-5! clamps do not pierce metal paneling, thereby protecting roof coatings and weather-tightness warranties.

Check out our
ColorGard® Mobile Calculator

1 **2** **3** SLOPE **4** SLOPE

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DESIGN COMPONENTS, INC.

S-5!® The Right Way!

VersaClip
Unpunched ColorGard
Splice
S-5! Clamp
SnoClip III

1. ColorGard®

ColorGard® snow retention system is manufactured from mill finished high quality aluminum. It comes in 8' long sections, in punched or unpunched configurations. Splices are included with ColorGard for adjacent sections. For use with S-5!® standard clamps, VersaBracket™ and CorruBracket™.

2. Punched Crossmember

Punched ColorGard is slotted every 4" on center for seams that are spaced accordingly, i.e. divisible by 4". The slotted configuration works well with S-5! clamps.

4.00" (101.60 mm)
0.44" (11.80 mm)
1.00" (25.40 mm)
12.00" (305.00 mm)
2.15" (55.00 mm)
1.50" (38.10 mm)

3. Unpunched Crossmember

Unpunched ColorGard is the most versatile and easy to install, when used with the S-5! VersaClip™. Unpunched does not need holes, as the VersaClip accommodates any seam spacing. The unpunched configuration works well with VersaBracket, and is the right choice when the roof is laid out with untrue seam width or when the seam width is not divisible by 4. If in any doubt, use unpunched.

4.00" (102.00 mm)
2.15" (55.00 mm)
12.00" (305.00 mm)
1.50" (38.10 mm)

4. VersaClip™

Purchased separately. VersaClip makes installation easy as it simply slides on the ColorGard crossmember. It can be used with all S-5! clamps (one per clamp), and is optional with CorruBracket. VersaClip is not needed with VersaBracket. VersaClip is also handy when installing ColorGard askew, such as is required in the valleys between intersecting rooflines.

1.50" (38.10 mm)
2.50" (63.50 mm)
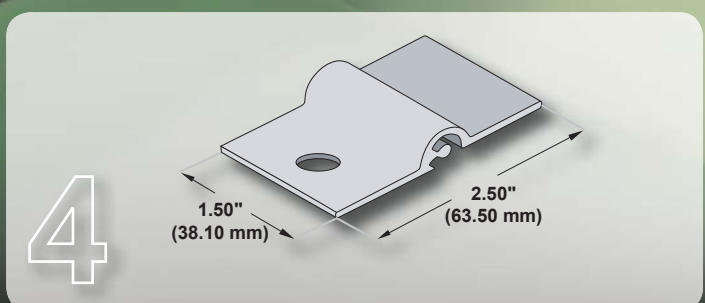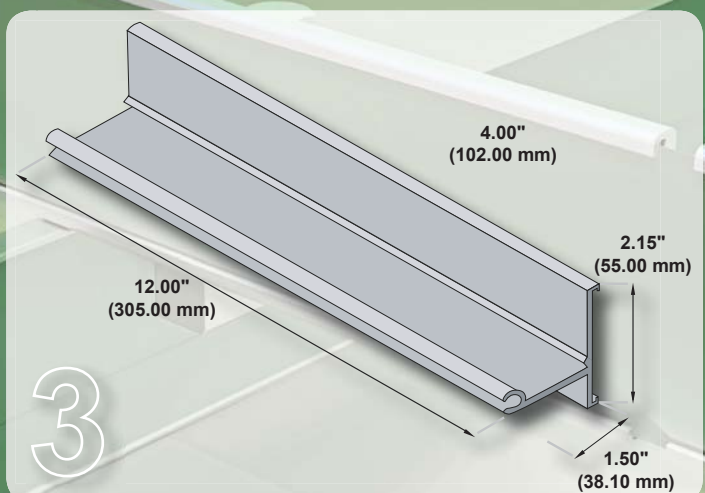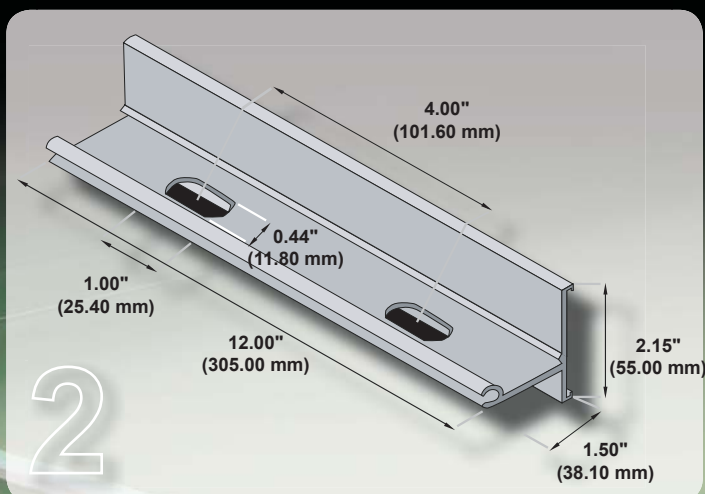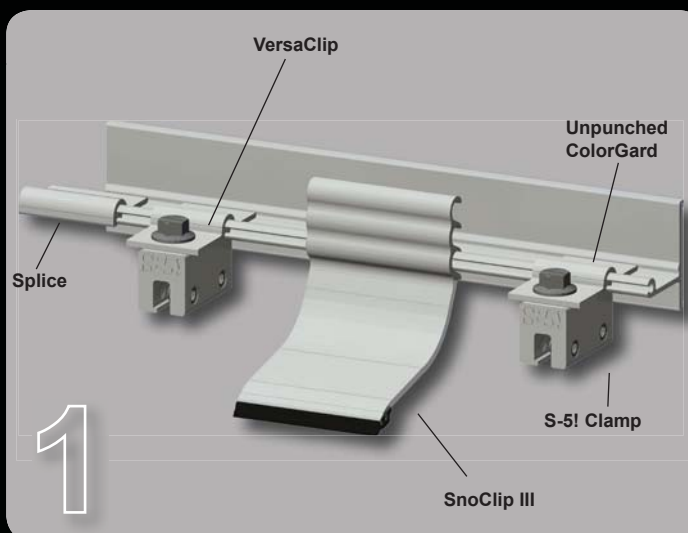
Please note: Bars come in 8' lengths, but shown here in 12" diagrams. All measurements are rounded to the second decimal place.

The right way to attach almost anything to metal roofs!

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ColorGard®

WARRANTED * FOR THE LIFE OF THE ROOF

Splice

Included with crossmembers. Use the Splice to join two pieces of ColorGard® together, ensuring continuous, unbroken protection. The dimple in the center is designed to provide a gap, allowing for expansion and contraction of the ColorGard sections.

**2.00"** (58.10 mm)   **1.50"** (38.10 mm)

SnoClip™

SnoClip™ is added to retard the migration of snow and ice beneath the crossmembers. See the SnoClip brochure for more details.

ColorStrip

Not included. The ColorStrip should be supplied in 2" wide strips by the manufacturer of the roofing material in order to ensure a perfect color match for the life of the roof system.
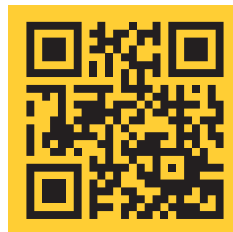
2.00" (50.80 mm)
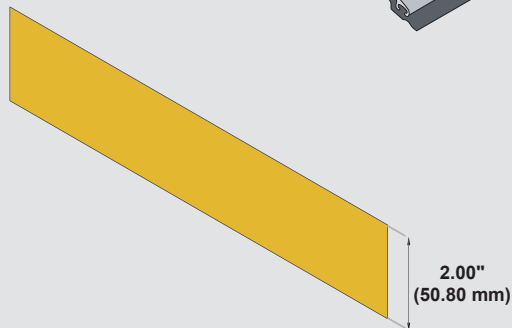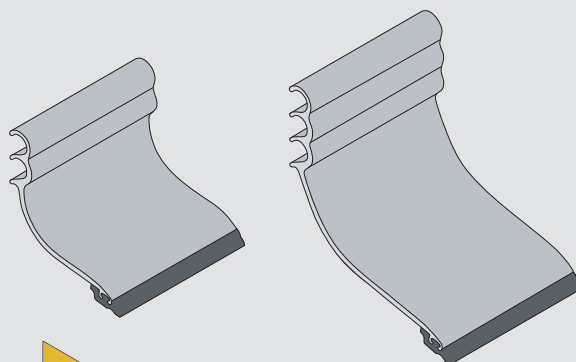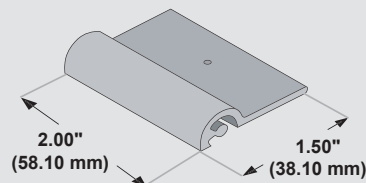
For use with all these S-5!® products
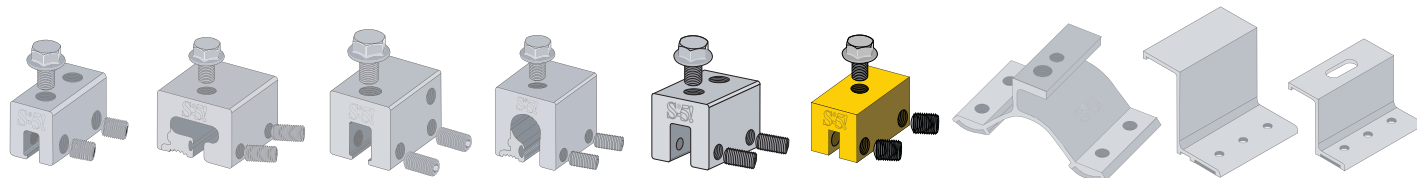
Note: Do not use ColorGard with attachment spacing greater than 32" (81.30 cm). Custom ColorGard, Splice, and SnoClips are available for seam spacing greater than 32" (81.30 cm). Please inquire through a distributor.

*See optional limited ColorGard System Warranty Program information at www.S-5-ColorGard.com

Check out our ColorGard® Mobile Calculator

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DESIGN COMPONENTS, INC.

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metal building accessories since 1978

S-5!®

The Right Way!

The right way to attach almost anything to metal roofs!
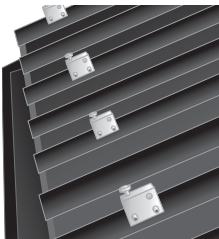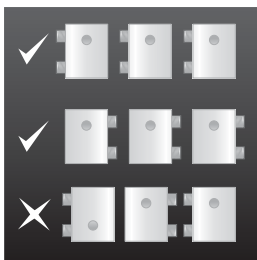
Installation Instructions

Stop! Has your ColorGard® system been designed properly with the assistance of a distributor or the online ColorGard calculator? If not, see our Calculator and Load Table at www.S-5.com, or ask your distributor!

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 the S-5! website: **www.S-5.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" with standard products (contact your distributor for products to accommodate a seam spacing greater than 32").
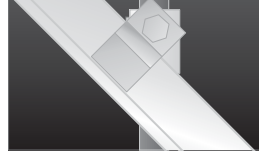
Tools Needed

- Electric Screw Gun
- Box End Wrench, 1/2" Drive Impact Wrench, or Ratchet
- Saw to cut ColorGard crossmember
- Tin Snips
- String Line
- Torque Wrench
- Pliers or Vice Grip Pliers

To Install ColorGard®

1. **Before You Start:** 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 from the eave to determine each clamp location is not recommended. **Before continuing, please take a moment to read the important notice about SnoClip™ on the back side of these installation instructions.**

2. **Preparing The Clamps:** If the ColorGard assembly utilizes the VersaClip™ for attachment of the ColorGard crossmember, the bolt hole in the clamp should be at the upslope end of the clamp. If the assembly uses punched ColorGard without VersaClip, the hole should be at the downslope end of the clamp. When using the S-5-U, determine which side of the clamp to load the setscrews into, and thread the setscrews into all clamps, being careful that the bolt hole will be in the correct (upslope or downslope) orientation, with the setscrews on the correct side of the seam. Both setscrews must be on the same side of the clamp.

3. **Installing The Clamps:** S-5! clamps are installed differently depending upon clamp model and seam style. Please see the installation instructions included with your clamps. 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 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. Please visit our load table at **www.S-5.com** to determine the proper screw tensions and holding strength.

   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), the VersaClip facilitates installation. The VersaClips are inserted into the ColorGard prior to placement of ColorGard on the clamps. Align clips with S-5! clamp. VersaClip can be used with punched or unpunched ColorGard.

4. **Installing The ColorGard:** To maintain color conformity over time, ColorStrips should be sheared from the same pre-finished metal as the roof panels. Shear strips to exactly 2" wide (8' or 10' long). Slide the ColorStrip into the ColorGard crossmember as shown (right). If the strip length is 8', it may be pre-assembled into the ColorGard crossmember. If the strip is 10' long, it will be assembled to the ColorGard as installation progresses. Joints in the ColorGard should be concealed by offsetting the joints of the ColorStrip from the joints of the ColorGard. The joints of the ColorStrips can be overlapped about 1/2" if desired. Each ColorStrip should be secured 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 or anywhere along its length to prevent lateral migration of the ColorStrip.

5. Bolt ColorGard® to Clamps:
Attach ColorGard to clamps with the stainless bolts and washers provided. Bolts can be tightened with a 9/16" (17 mm) box-end wrench, or ratchet. On larger jobs, a 1/2" drive electric impact will expedite this work. Tension bolts to a minimum of 20 ft. lbs. (27 Nm). Add Splice pieces at each ColorGard joint as shown below. 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. Trim ColorGard at the end of the assembly, being sure it does not cantilever more than 4" beyond the last clamp of an assembly. Any trimmed piece of ColorGard must be attached with at least two clamps.
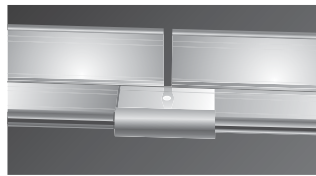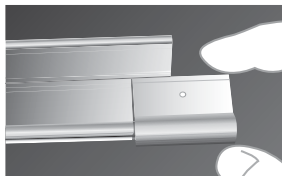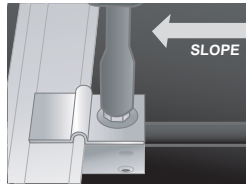
ColorGard Cutting Tip: If it is necessary to field cut ColorGard, such as at the end of an assembly, it can be done with a hack saw or electric reciprocating saw with a fine-tooth metal cutting blade. A power mitre saw with a fine tooth carbide tip blade also works well.

Using VersaBracket™

1. Install the bracket. See installation instructions that were included with your bracket.

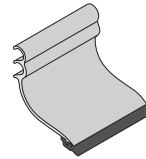**2.** Fasten unpunched ColorGard to the top flange of the bracket using a 1/4 - 14 self-drilling screw.
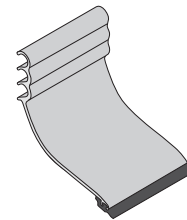
Using CorruBracket™

1. Install the bracket. See installation instructions that were included with your bracket.

2. Fasten ColorGard to the bracket in the same fashion as step 5.
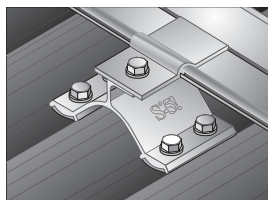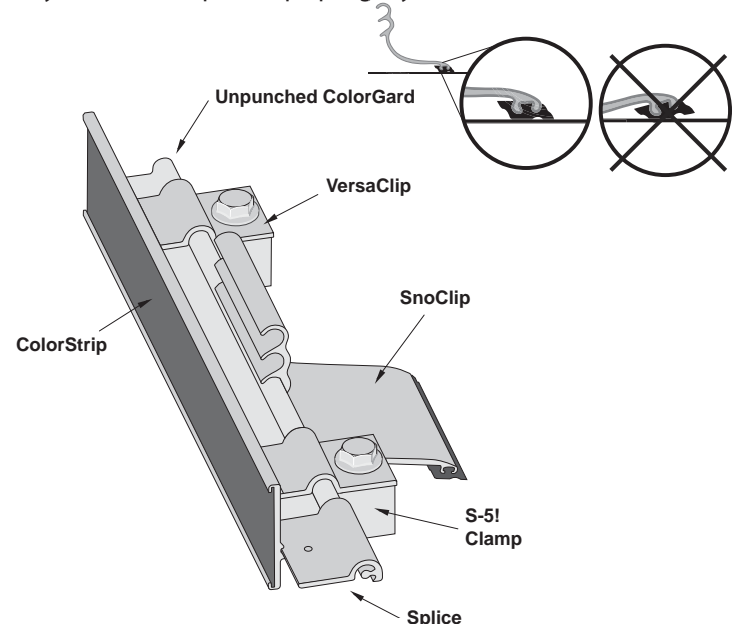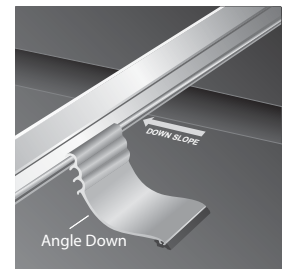
Using SnoClip™

SnoClip II   SnoClip III

IMPORTANT NOTICE! — SnoClip™ design has changed. SnoClip must now slide on from the end of the ColorGard crossmember. Be sure to slide SnoClip onto assembly before attaching crossmember to clamps (a new Retro-Fit SnoClip™ is also available from your authorized S-5!® distributor.) One SnoClip is used between seams (in rare cases two SnoClips may be desired; see www.S-5.com for details). 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." Periodic maintenance over time may be necessary to ensure that the SnoClips maintain the appropriate positioning, as snow weight may sometimes flip the clip up slightly.

Unpunched ColorGard

VersaClip

ColorStrip

SnoClip

S-5! Clamp

Splice

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

These instructions are for use by those experienced in the trade. Always follow appropriate safety precautions and use appropriate tools.