



Rocky Mountain Snow Guards Inc

ROCKY MOUNTAIN SNOW GUARDS
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FAX: (720) 387-8361
www.rockymountainsnowguards.com

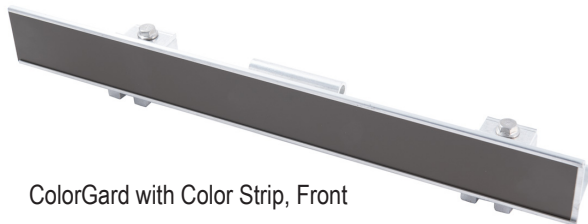
S-5® ColorGard SNOW BAR SYSTEM

AVAILABLE MATERIALS:

- ALUMINUM
- BRASS (S-5® B-CLAMP ONLY)

INFORMATION:

- 7'8" Punched or Unpunched bar
Clamps to fit all seam profiles
Specific load ratings for all panels
Excellent Choice for:
 - Standing seam metal panel roofs
 - Through-fastened metal panels (Versabracke)
 - Corrugated metal panels (Corrubracke)



ColorGard with Color Strip, Front



Unpunched ColorGard Bar with S Clamps, Veracips
and SnoClip II, Rear



Punched ColorGard Bar with S Clamps, Rear

EXAMPLES:



S-5![®]

The Right Way![®]

S-5-KHD Clamp

The S-5-KHD is the most heavy-duty and durable clamp in the S-5![®] family. Designed primarily for new construction, this clamp fits the very distinctive profiles of the Lysaght[®] Klip-Lok[®] 406, McElroy Mirage, Metal Sales Clip-Loc, and AEP Span Klip-Rib[®]. This clamp features an insert that is placed on the intermediate seam for extra hold. Significantly stronger than anything else on the market for these profile types, this clamp is geared for snow retention systems and other heavy duty applications in new construction where holding strength is critical. More strength means fewer rows of assembly, and roof warranties remain intact with zero-penetration S-5! technology.

For load critical applications such as snow retention and attaching solar panels, the assembly should be specifically engineered to each individual project for maximum protection. See www.S-5.com for full details.

In new construction, installation is as easy as snapping the S-5-KHD insert into the proper position under the roof panel, avoiding clips. Next, install the roof and place the S-5-KHD clamp above the insert on top of the installed panel. Tighten setscrews (two on each side) to specified tension. Then, affix ancillary items using the bolt provided. For more detailed installation instructions, including steps for retrofit construction, see the full S-5-KHD installation instructions available from your distributor and at www.S-5.com.



The S-5-KHD clamp features an insert that is placed on the intermediate seam for extra hold.

The right way to attach almost anything to metal roofs!

S-5-KHD



888-825-3432 | www.S-5.com |

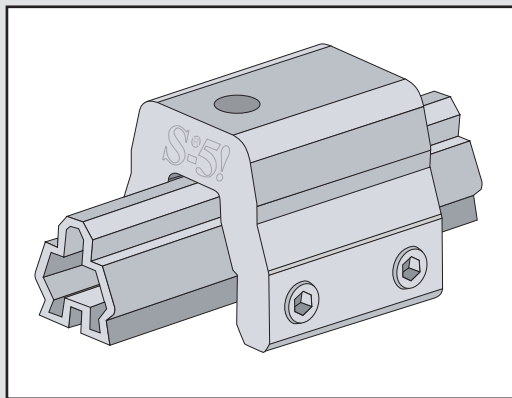
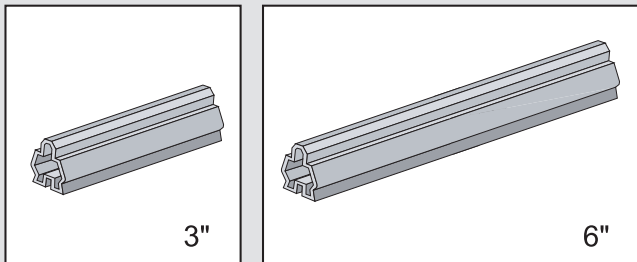


The strength of the S-5-KHD clamp is in its simple design. The patented setscrews will slightly dimple the metal seam material but not pierce it—leaving roof warranties intact.

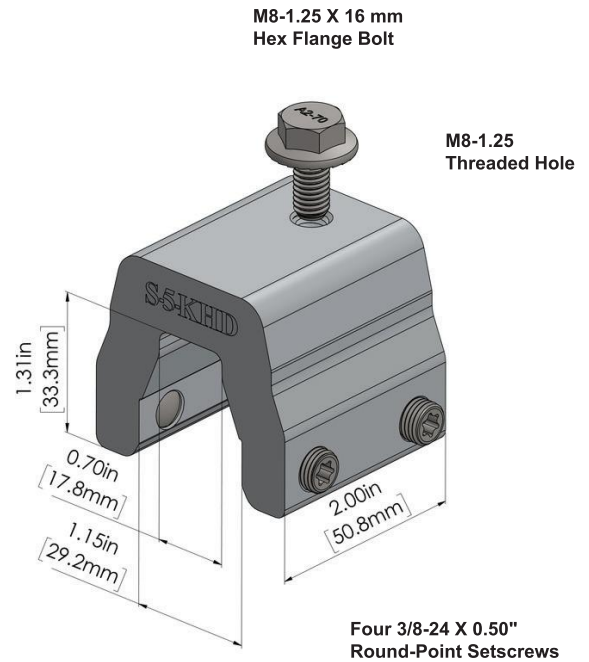
The **S-5-KHD** clamp is furnished with the hardware shown to the right. Each box also includes a bit tip for tightening the four setscrews using an electric screw gun. A structural aluminum attachment clamp, the S-5-KHD is compatible with most common metal roofing materials excluding copper. All included hardware is stainless steel. Please visit www.S-5.com for more information including CAD details, metallurgical compatibilities and specifications.

The S-5-KHD clamp has been tested for load-to-failure results on a variety of relevant profiles from leading manufacturers of panels. The independent lab test reports found on our website at www.S-5.com prove that S-5!® holding strength is unmatched in the industry.

S-5-KHD Insert Options

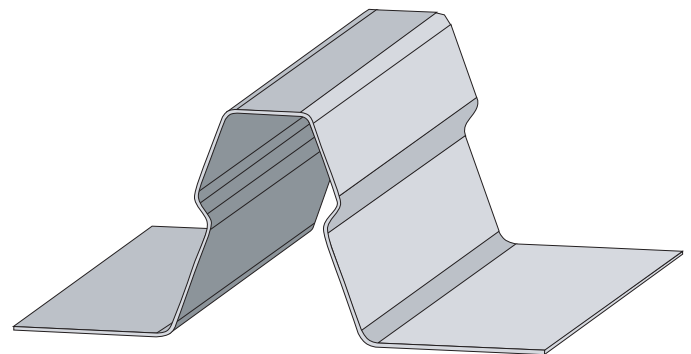


S-5-KHD Clamp



Please note: All measurements are rounded to the second decimal place.

Example Profile



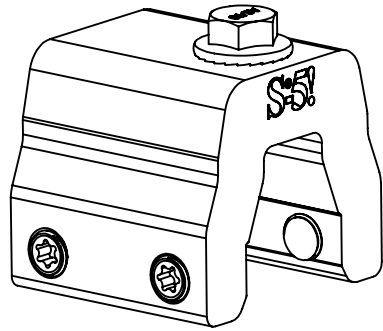
S-5!® Warning! Please use this product responsibly!

Products are protected by multiple U.S. and foreign patents. Visit the website at www.S-5.com for complete information on patents and trademarks. For maximum holding strength, setscrews should be tensioned and re-tensioned as the seam material compresses. 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 for published data regarding holding strength.

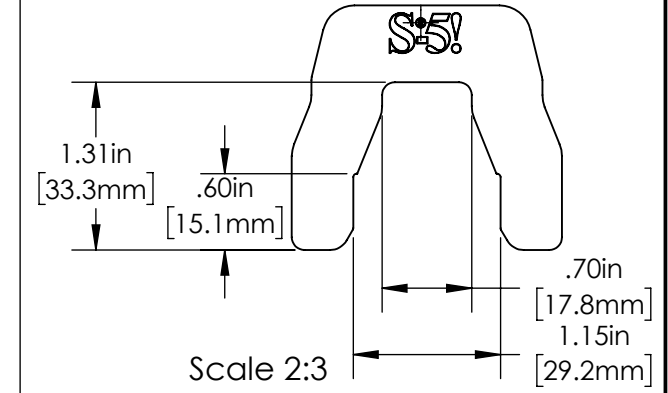
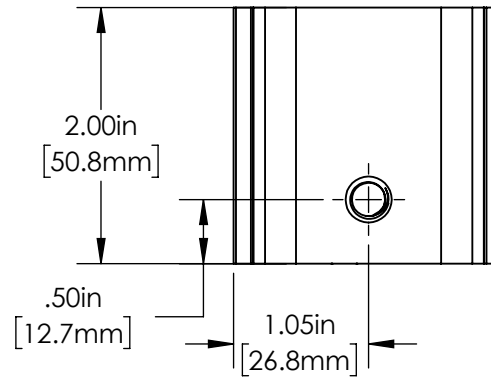
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Distributed by

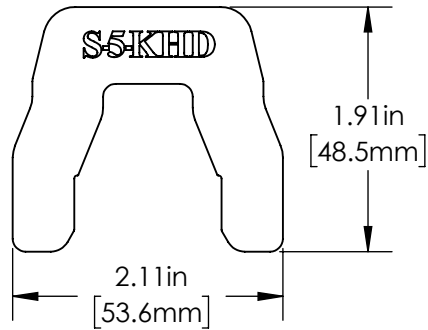
S-5-KHD



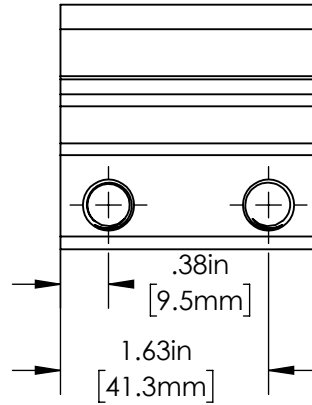
Top



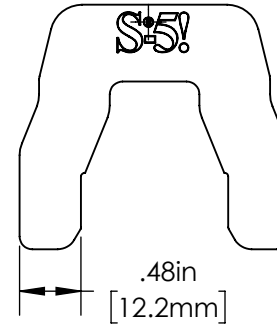
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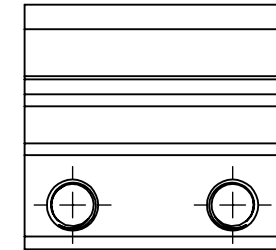
Left



Front

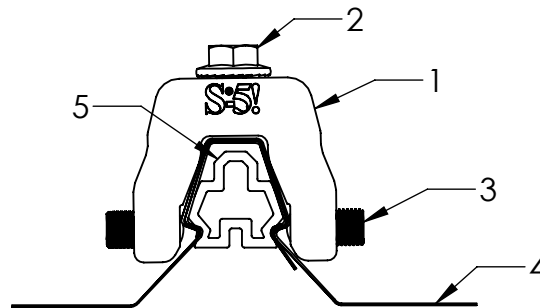


Right



General Notes:

1. S-5-KHD Clamp
2. M8-1.25 Stainless Steel Hex Flange Bolt (13mm Socket)
3. 3/8-24 Stainless Steel Round Point Setscrew (T30 Torx Drive)
4. Example roof
5. S-5-KHD Insert (Available in both 3" and 6" lengths)



FOR STANDING SEAM SPECIFIC MECHANICAL LOAD TEST INFORMATION AND CLAMP INSTALLATION INFORMATION PLEASE VISIT: WWW.S-5.COM

MATERIAL: 6061 T6 Al			METAL ROOF INNOVATIONS, LTD. 8655 TABLE BUTTE RD COLORADO SPRINGS, CO 80908 719-495-0518 719-495-0045(FAX)	
EST ASSEMBLY WEIGHT: 0.535 lbs [0.243 kg]				
SUPPLIED HARDWARE: M8-1.25 x 1.6 mm Bolt (4x) 3/8-24 x .500" Setscrews	TITLE S-5-KHD [CCD]			
SCALE: 2:3	DRAWING NO. KHD74-A-8-C	DRAWN BY JW	DATE 08/17/2020	
EST. WEIGHT: Clamp: 0.432 lbs [0.196 kg] Bolt: 0.035 lbs [0.016 kg] Setscrew: .017 lbs [0.008 kg]	S-5!® PRODUCTS ARE PROTECTED BY MULTIPLE U.S. AND FOREIGN PATENTS. VISIT OUR WEBSITE AT WWW.S-5.COM FOR COMPLETE INFORMATION ON PATENTS AND TRADEMARKS.			

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-KHD has 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. 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. Information contained within is intended to apply to the document as a whole.

The S-5-KHD was designed for the following profiles: Lysaght® Klip-Lok® 406, McElroy Mirage, Metal Sales Clip-Loc, and AEP-SPAN Klip-Rib®.

Tools Needed

The following tools are needed for **all** installations.

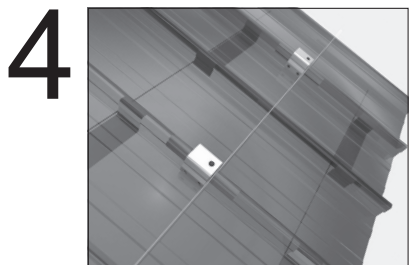
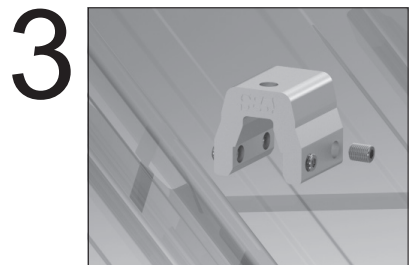
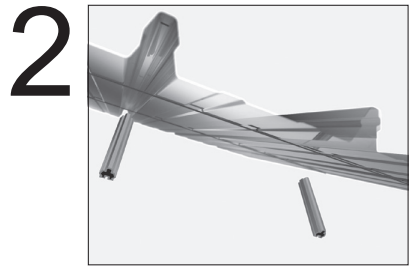
- String Line
- Tape Measure
- Felt Tip Marker
- Sealant
- Bit Tip (Included)
- Ratcheting Screw Gun
- Dial-Calibrated Torque Wrench
(For accurate tension values, do NOT use a clicking torque wrench)

The following tools are needed only for **retrofit** installations.

- Hammer
- Crescent Wrench
- Punch

To Install the S-5-KHD (New Construction)

1. Determining suitable clamp location: The S-5-KHD clamp can install anywhere along the intermediate rib, provided all four setscrews engage the concealed 6" insert and the end of the 6" insert is at least 12" from the roof panels attachment clip. Once suitable clamp location is determined, mark the underside and topside of the roof panel with a felt tip marker. The mark on the underside of the panel indicates the center point of where the 6" insert will snap into place, and the mark on the topside indicates the approximate location of where the clamp will be placed. Repeat this process for each clamp location.
2. Place sealant in the marked area - this will hold the insert into place while installing the roof panel. Snap the insert into place. The fit ranges from very tight to a little loose depending on the roof manufacturer and gauge of material (curling the roof panel some can help in this process). A measurement can be taken from the eave end of your roof panel to your center point mark - this will ensure locating the 6" insert can be accomplished should something happen to your mark. Note: Use of sealant is not for watertightness, as this is a non-penetrating system.
3. Once the roof is installed, locate your topside center mark mentioned in Step 1, and center a clamp in that location. Be certain the top bolt hole is in the proper orientation for the product or ancillary being attached. Tighten the setscrews on each side of the clamp evenly, by alternating tightening on each side of the clamp to the specified tension for all



S-5-KHD Installation Instructions

setscrews. Caution: Do not over-tighten one side or the other. Be sure clamp and setscrews engage 6" insert.

4. String a line from each clamp on the end and install the remaining clamps along the string line.

In order to function properly, the inserts should spread the rib slightly. The insert locations may be visible from the exterior side of the roof panel; this is unavoidable and should be expected (the roof panel clips also telegraph through).

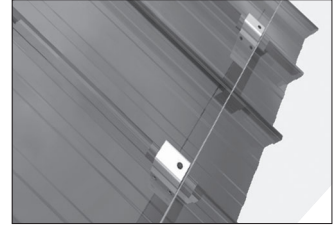
To Install the S-5-KHD (Retrofit)

Use these instructions for retrofit installations or those that are not new construction (not all retrofits can be accommodated with this product). Due to the limiting factors, the only applications that are recommended are snow retention or other assemblies that can be located within 3–6" from the eave. For these installations, the 3" S-5-KHD insert is used.

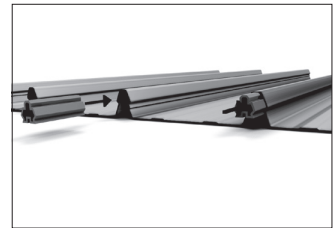
1. Inspection: A site survey is required to determine if the roof is pinned/attached at the end of the roof panel (eave) or the ridge. Next, measure the distance from the eave up to the first clip, do this on the inside of the seam.
 - A. If the roof is pinned at the eave and there is more than 3–4" of clearance from the roof edge to the clip, this product can be used.
 - B. If the roof is pinned at the ridge and there is 5–6"+ clearance, the product can most likely be used. Sufficient space is needed to allow for thermal expansion between the clip and the 3" S-5-KHD insert (space between roofing clip and KHD insert should never be less than 1.5").
2. Installation: Slide the 3" insert in from the bottom of the panel (or eave); if your situation is explained in 1A, then you may slide it up as far as you would like. This process is done by lightly tapping the insert with a hammer, if needed. If the insert twists during this process, use a crescent wrench to rotate the insert back into place before tapping it all the way in. A large punch can be used to tap the insert all the way into place. Be sure to place all the inserts the same distance from the eave.
3. Center the clamp over the insert. Be certain the top bolt hole is in the proper orientation for the product or ancillary being attached. Tighten the setscrews on each side of the clamp evenly, by alternating from side to side until the specified tension has been met for all setscrews. Caution: do not over-tighten one side or the other. Be sure clamp and setscrews engage 3" insert.

Note: When using this product with ColorGard® in a retrofit installation, be certain of the bolt hole orientation for Punched or Unpunched ColorGard.

***Be sure the project has been engineered, and note that this product can be combined with the S-5-K Grip and S-5-GX 10 insert if multiple rows are required.**



Use a string line to properly align clamps



Slide the 3" insert in the bottom of the panel



Example of correctly installed S-5-KHD clamp

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S-5!® Warning! Please use this product responsibly! Products are protected by multiple U.S. and foreign patents. For maximum holding strength, setscrews should be tensioned and re-tensioned as the seam material compresses. 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. For published data regarding holding strength, fastener torque, patents, and trademarks, visit the S-5! website at www.S-5.com. Copyright 2014, Metal Roof Innovations, Ltd. S-5! products are patent protected. S-5! aggressively protects its patents, trademarks, and copyrights. Version 043014.

Installation Instructions

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

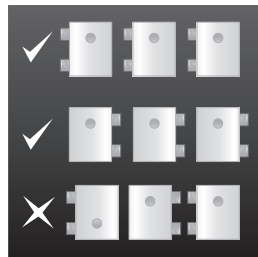
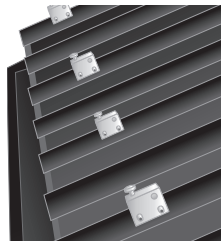
Notice to S-5![®] users: Specific layout and assembly schematics for S-5! products are the responsibility of the user or project designer. Due to the many variables involved with specific panel products, climates, snow melt phenomena, and job particulars, the manufacturer cannot and does not express 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 ColorGuard crossmember
- Tin Snips
- String Line
- Torque Wrench
- Pliers or Vice Grip

To Install ColorGuard[®]

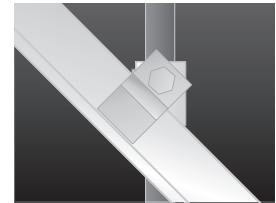
1. Before You Start: First, use a string line across the top of the panel seams at the desired location to establish a true line for installation of the S-5! clamps. Individually measuring from the eave to determine each clamp location is not recommended. **Before continuing, please take a moment to read the important notice about SnoClip[™] on the back side of these installation instructions.**



- 2. Preparing The Clamps:** If the ColorGuard assembly utilizes the VersaClip[™] for attachment of the ColorGuard crossmember, the bolt hole in the clamp should be at the upslope end of the clamp. If the assembly uses punched ColorGuard 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

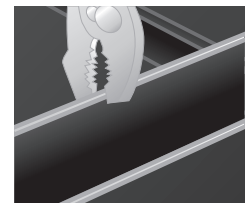
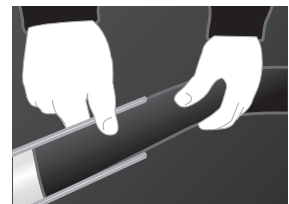
compresses. Screw tension should be verified using a calibrated torque wrench between 160 and 180 inch pounds when used on 22ga steel and between 130 and 150 inch pounds for all other metals and thinner gauges of steel. Please visit our load table at www.S-5.com to determine the proper screw tensions 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 ColorGuard 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 ColorGuard prior to placement of ColorGuard on the clamps. Align clips with S-5! clamp. VersaClip can be used with punched or unpunched ColorGuard.



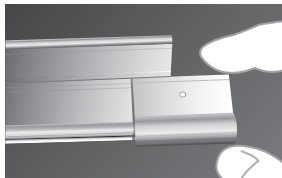
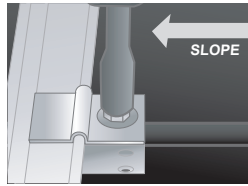
4. Installing The ColorGuard:

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 ColorGuard crossmember as shown (right). If the strip length is 8', it may be pre-assembled into the ColorGuard crossmember. If the strip is 10' long, it will be assembled to the ColorGuard as installation progresses. Joints in the ColorGuard should be concealed by offsetting the joints of the ColorStrip from the joints of the ColorGuard. The joints of the ColorStrips can be overlapped about 1/2" if desired. Each ColorStrip should be secured to the ColorGuard somewhere along its length. This is done by pinching the retainer lip of the ColorGuard with an ordinary pair of pliers. It can be done at one end of the ColorGuard section or anywhere along its length to prevent lateral migration of the ColorStrip.



5. Bolt ColorGard® to Clamps:

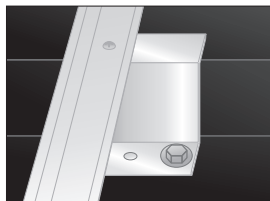
Attach ColorGard to clamps with the stainless bolts and washers provided. Bolts can be tightened with a 9/16" (17 mm) box-end wrench, or ratchet. On larger jobs, a 1/2" drive electric impact will expedite this work. Tension bolts to a minimum of 20 ft. lbs. (27 Nm). Add Splice pieces at each ColorGard 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.

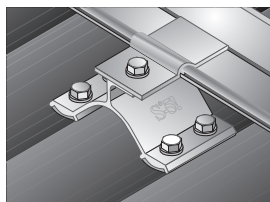
Using VersaBracket™

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.

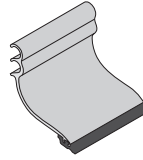


Using CorruBracket™

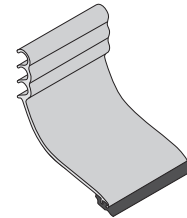
1. Install the bracket. See installation instructions that were included with your bracket.
2. Fasten ColorGard to the bracket in the same fashion as step 5.



Using SnoClip™

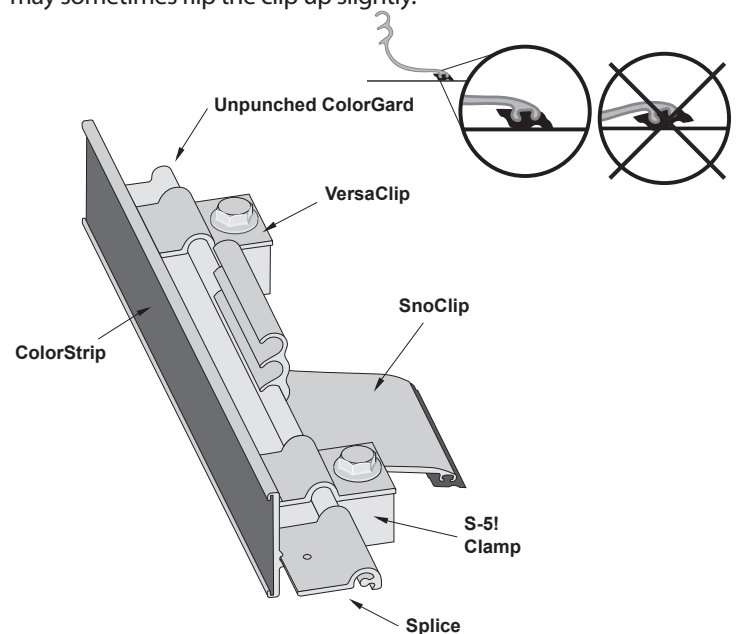
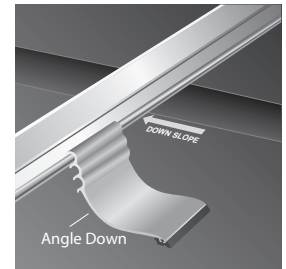


SnoClip II



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.



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Rocky Mountain
Snow Guards Inc



Stocked Color Strip Inserts for Colorgard Snow Fence Systems

Black

Charcoal Gray

Dark Bronze

Medium Bronze

Evergreen

ACTUAL COLORS MAY VARY

**We strongly recommend obtaining a
sample prior to purchasing.**

(877) 414-7606

www.RockyMountainSnowGuards.com

SECTION 07 72 53

COLORGARD® SNOW GUARDS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Snow guards for metal roofs.
 - 2. [Non-penetrating] [Face fastened] attachment system.

1.2 RELATED SECTIONS

- A. Division 01: Administrative, procedural, and temporary work requirements apply to this section.
- B. Section 07 41 13 - Metal Roof Panels
- C. Section 07 61 00 - Sheet Metal Roofing
- D. Section 07 62 00 – Sheet Metal Flashing and Trim
- E. Section 07 72 55 - Roof Accessory Attachment System.
- F. Section 13 34 19 – Metal Building Systems

1.3 REFERENCES

- A. Aluminum Association (AA) - Aluminum Standards and Data, 2003 Edition.
- B. ASTM International (ASTM):
 - 1. B85-03 - Standard Specification for Aluminum-Alloy Die Castings.
 - 2. B221-04a - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.

1.4 SUBMITTALS

- A. Action Submittal:
 - 1. Shop Drawings: Include roof plans showing locations of snow guards on roof and attachment details and spacing.
 - 2. Product Data:
 - a. Product description.
 - b. Construction details.
 - c. Material descriptions.
 - d. Individual component dimensions.
 - e. Finishes.
 - f. Installation instructions.
 - 3. Samples:

- a. Clamp samples.
 - b. 12-inch long cross member samples including all associated hardware.
- B. Informational Submittals:
 - 1. Include calculation of number and location of snow guards based on designed roof snow load, roof slope, roof type, components, spacings and finish
 - 2. Test results: Results of product tensile load testing, issued by a recognized independent testing laboratory, showing ultimate load-to-failure value of attachment.
- C. Closeout Submittals:
 - 1. Certification: Installer's certification that snow guard system was installed in accordance with manufacturer's instructions and approved Shop Drawings.

1.5 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Manufacturer to specialize in production of Snow Guard Products of the type specified with a minimum of 20 years documented experience.
- B. Installer Qualifications: Installer to specialize in metal roof installation and installation of Snow Guard Products with a minimum of 5 years documented experience.
- C. Mockup:
 - 1. Size: Minimum [8] [] feet long.
 - 2. Show: Snow guard attachment, cross members, and accessories.
 - 3. Locate [where directed.] [].
 - 4. Approved mockup may remain as part of the Work.

1.6 DELIVERY, STORAGE AND HANDLING

- A. Deliver components to jobsite properly packaged to provide protection during transport, delivery and handling.
- B. Store products in manufacturer's original labeled and unopened packaging in a clean and dry location, protected from potential damage, until ready for application.

PART 2 - PRODUCTS

2.1 SYSTEM DESCRIPTION

- A. Attachment system to provide attachment to standing seam metal roofs:
 - 1. With only minor dimpling of panel seams.
 - 2. Without penetrations through roof seams or panels.
 - 3. Without use of sealers or adhesives.
 - 4. Without voiding roof warranty.
- B. Performance Requirements: Provide snow guards to withstand exposure to the weather and environmental elements, and resist design forces without failure due to defective manufacture.
 - 1. Loading: Design snow guard system to resist minimum in-service vector load of [] pounds per linear foot of eave.
 - 2. Factor of safety: Utilize a factor of safety \geq [2] [] to determine allowable loads from ultimate tested clamp tensile load values.
 - 3. Source Limitation: Provide snow guard system as designed and tested by the manufacturer as a complete system. Install components by the same manufacturer.

2.2 MANUFACTURER

- A. Acceptable Manufacturer: S-5! Metal Roof Innovations, Ltd., 8655 Table Butte Road, Colorado Springs, CO. 80908; Tel: 888-825-3432; Fax: 719-495-0045; Email: support@s-5.com; Web: www.s-5.com
- B. Substitutions: Not permitted.

2.3 BAR/RAIL-TYPE SNOW RETENTION SYSTEMS FOR STANDING SEAM METAL ROOFS

- A. Basis of Design: ColorGard, manufactured by S-5! Metal Roof Innovations, Ltd.
- B. Components:
 - 1. Clamps
 - a. Manufactured from 6061-T6 aluminum extrusions conforming to ASTM B221 or aluminum castings conforming to ASTM B85 and to AA Aluminum Standards and Data.
 - 1) Model: No. [S-5-U.] [S-5-S.] [S-5-T.] [S-5-Z.] [S-5-E.] [S-5-B.] [S-5-Q.] [S-5-H.] [S-5-K700.] [S-5-H90.] [S-5-N.] [S-5-N 1.5.] [S-5-KHD.] [S-5-V.] [S-5-K Grip.] [S-5-R465.]
 - b. Set screws: 300 Series stainless steel, 18-8 alloy, 3/8 inch diameter, with round nose point.
 - c. Attachment bolts: 300 Series stainless steel, 18-8 alloy, 8 mm or 10 mm diameter, hex flange bolt..
 - 2. Brackets:
 - a. Manufactured from 6061-T6 or 6005-T5 alloy and temper aluminum extrusions conforming to ASTM B221 and AA Aluminum Standards and Data or cast aluminum.
 - 1) Model: No. [VersaBracket 47.] [VersaBracket 67.] [CorruBracket.].
 - b. Screws for attachment of brackets to roof: Type best suited to application: Metal to metal applications: ¼-14 self drilling point, 2 inch length, 3/8 inch hex washer head, Zinc/Aluminum cap. Metal to wood applications: ¼-14 type 17 AB milled point, 2 inch length, 3/8 inch hex washer head, Zinc/Aluminum cap.
 - 3. Cross Members:
 - a. Manufactured from 6061-T6 or 6005-T5 alloy and temper aluminum extrusions conforming to ASTM B221 and AA Aluminum Standards and Data.
 - b. Receptacle in face to receive color-matched metal strips.
 - c. Provide splice connectors ensuring alignment and structural continuity at end joints.
 - 4. Color Strips: Same material and finish as roof panels; obtained from roof panel manufacturer.
 - 5. Snow and Ice Clips:
 - a. Aluminum, with rubber foot, minimum 3 inches wide.
 - 1) Model: SnoClip II or SnapClip II for standing seam heights 1” to 1.75”
 - 2) Model: SnoClip III or SnapClip III for standing seam heights 1.75” to 3”

PART 3- EXECUTION

3.1 EXAMINATION

Prior to beginning installation, verify that:

- 1. Panel seaming is complete.
- 2. Panel attachment is sufficient to withstand loads applied by snow guard system.
- 3. Installation will not impeded roof drainage.

Prior to beginning installation, verify that:

1. Roof attachment is sufficient to withstand loads applied by snow guard system.
2. Installation will not impede roof drainage.

3.2 PREPARATION

- A. Clean areas to receive attachments; remove loose and foreign matter that could interfere with installation or performance.

3.3 INSTALLATION

- A. Install system in accordance with manufacturer's instructions and approved Shop Drawings

- B. ColorGard Snow Retention System:

1. Place clamps at maximum 32 inches on center or as required by in-service loads.
2. Place clamps in straight, aligned rows.
3. Place both set screws on same side of clamp.
4. Tighten set screws to manufacturer's recommended torque. Randomly test set screw torque using calibrated torque wrench.
5. Insert color-matched metal strips into cross members, staggering strips to cover cross member joints.
6. Attach cross members to clamps; tighten bolts to manufacturer's recommended torque.
7. Install splice connectors at cross member end joints.
8. Do not cantilever cross members more than 4 inches beyond last clamp at ends.
9. Install [one SnoClip or SnapClip] [two SnoClips or SnapClips] per panel between panel seams.
 - a. SnoClips: slide onto cross member before securing cross member to clamps
 - b. SnapClips: Secure [SnapClip II] [SnapClip III] to back side of cross member using stainless steel #10 x ½ inch screw

1. Place brackets at maximum 32 inches on center or as required by in-service loads.
2. Clean roof area to receive bracket. Remove protective seal on butyl tape
3. Place brackets in straight rows along underlying substrate.
4. Insert color-matched metal strips into cross members.
5. Place brackets at spot of attachment and fasten with screws best suited for type of attachment
6. Attach cross members to brackets using self drilling screws.
7. Install splice connectors at cross member end joints.
8. Do not cantilever cross members more than 4 inches beyond last bracket at ends.

9. Install SnoClips or SnapClips at spacings indicated on Shop Drawings.
 - c. SnoClips: slide onto cross member before securing cross member to clamps
 - d. SnapClips: Secure [SnapClip II] [SnapClip III] to back side of cross member using stainless steel #10 x ½ inch screw (provided).

END OF SECTION



Rocky Mountain Snow Guards Inc

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Rocky Mountain Snow Guards Snow Retention System Maintenance Guide

Systems designed by Rocky Mountain Snow Guards, installed properly should last the life of the roof. Rocky Mountain does not recommend adhesive tape or sealant attachment for any snow fence or snow guard system. Rocky Mountain snow retention systems installed on commercial buildings, above high traffic areas or in areas with high snow loads should be inspected by a qualified roofing or snow retention professional on an annual basis to ensure the system will continue to perform as designed.

Bolt Down Snow Fence Systems:

1. Inspect brackets, snow fence components and fasteners for evidence of damage.
2. Replace damaged parts prior to the next snow season.

Clamp to Seam Snow Fence and Snow Bar Systems:

1. Inspect brackets, snow fence and snow bar components for evidence of damage.
2. Replace damaged parts prior to the next snow season.
3. Check torque on set screws with an appropriate torque wrench.
4. Torque set screws to recommended torque. This is especially important after the 1st snow season.

Snow Guards:

1. Inspect snow guards for evidence of damage.
2. Inspect exposed fasteners.
3. Replace damaged parts prior to the next snow season.