



CLAMP-TO-SEAM SYSTEM • PRODUCT COVER SHEET

Rocky Fence

Two-Pipe Aluminum Snow Fence System

AVAILABLE FINISHES

- Mill-finish aluminum
- Powder-coated aluminum

SYSTEM COMPONENTS

- S-5! Standard Clamp with stainless-steel setscrews
- Two-pipe aluminum upright
- 1 in. O.D. aluminum tubing
- End collars and end caps

OPTIONAL COMPONENTS

- Ice flags

INFORMATION

- Clamp selection must match the actual standing-seam profile.
- Bracket locations and row spacing must follow the project-specific RMSG Snow Retention Plan.
- Use a torque wrench and current S-5! torque guidance during installation.



ROCKY FENCE SYSTEM — MILL-FINISH CLAMPS

BEFORE FULL INSTALLATION

Verify clamp fit on the actual seam and follow the manufacturer's installation specifications.



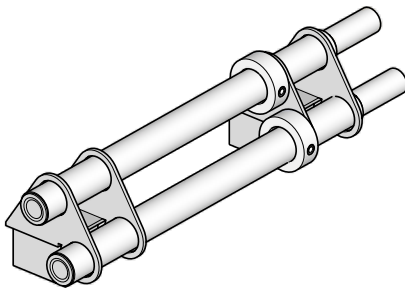
Rocky Mountain Snow Guards Inc

ROCKY MOUNTAIN SNOW GUARDS
4231 S NATCHES COURT, UNIT C
ENGLEWOOD, CO 80110
PHONE: (877) 414-7606
FAX: (720) 387-8361
www.rockymountainsnowguards.com

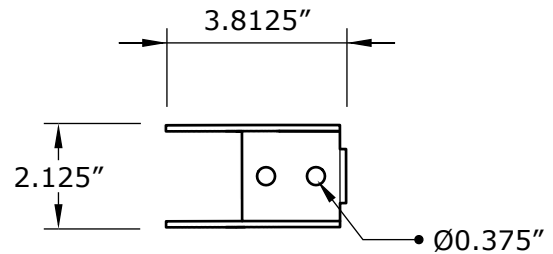
ROCKY FENCE SNOW FENCE SYSTEM

☒ SELECT DESIRED MATERIAL:

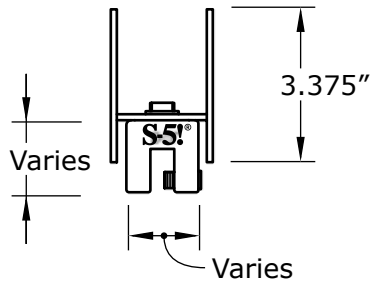
- ☐ POWDER COATED ALUMINUM
☐ MILL FINISH ALUMINUM



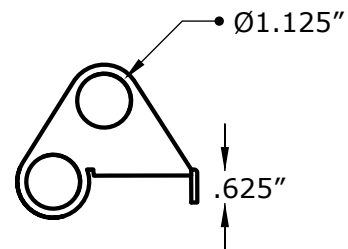
ISOMETRIC VIEW



TOP VIEW



FRONT VIEW



SIDE VIEW

MANUFACTURER NOTES:

1. CONTACT MANUFACTURER FOR SPECIFIED LAYOUT PATTERN.
2. FOR CUSTOM MATERIALS CONTACT MANUFACTURER.
3. OTHER SIZES ARE AVAILABLE ON A CUSTOM BASIS.

NOTES:

1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
2. DO NOT SCALE DRAWING.

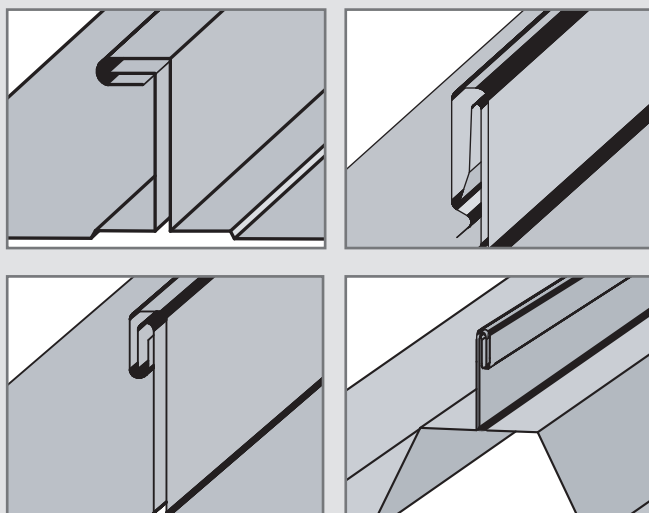


The strength of the S-5-U clamp is in its simple design. The patented setscrews will slightly dimple the metal seam material but not pierce it—leaving the roof manufacturer's warranty intact.

The **S-5-U** and **S-5-U Mini** clamps are each furnished with the hardware shown to the right. Each box also includes a bit tip for tightening setscrews using an electric screw gun. A structural aluminum attachment clamp, the S-5-U 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.

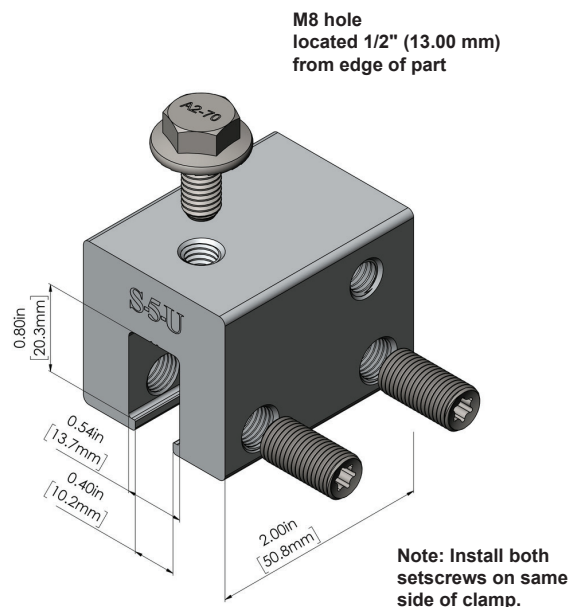
The S-5-U clamp has been tested for load-to-failure results on most major brands and profiles of standing seam roofing. The independent lab test data found at www.S-5.com can be used for load-critical designs and applications. S-5!® holding strength is unmatched in the industry.

Example Profiles

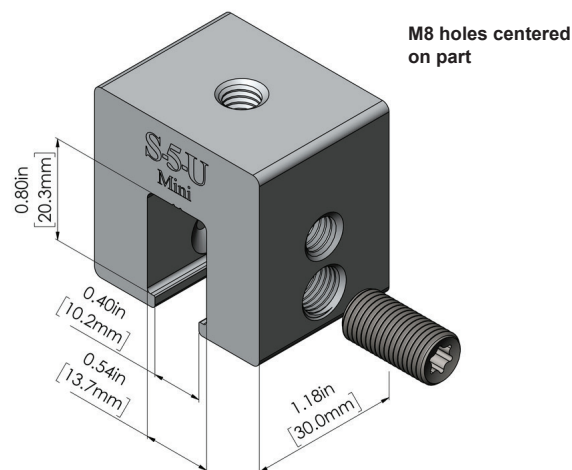


For horizontal seams under 0.65", do not use this clamp. Visit www.S-5.com for more detailed information and proper clamp usage.

S-5-U Clamp



S-5-U Mini Clamp



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

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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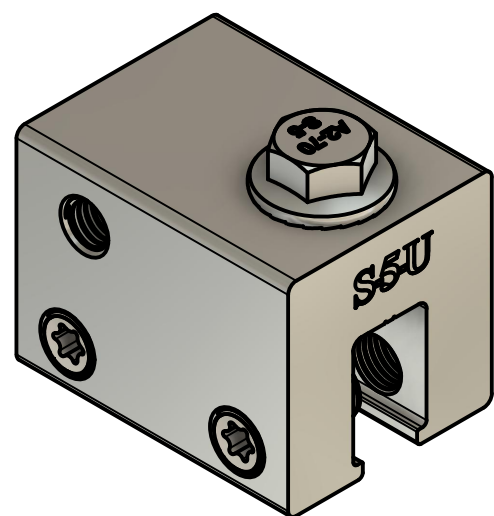
Distributed by



**Rocky Mountain
Snow Guards Inc**

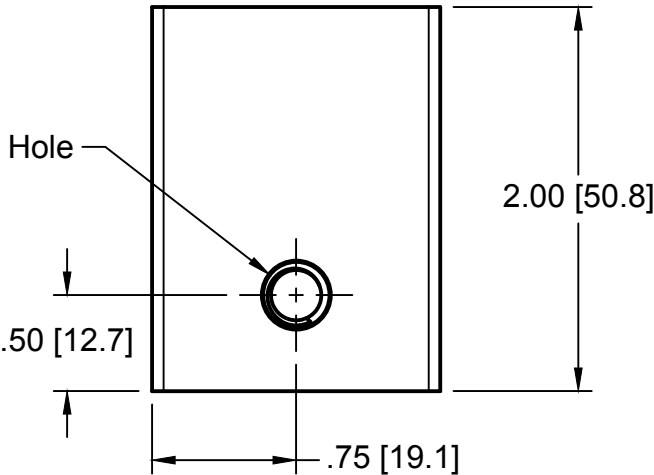
4231 S. Natches Court, Unit C, Englewood, CO 80110
(877) 414-7606 / www.rockymountainsnowguards.com

S-5-U

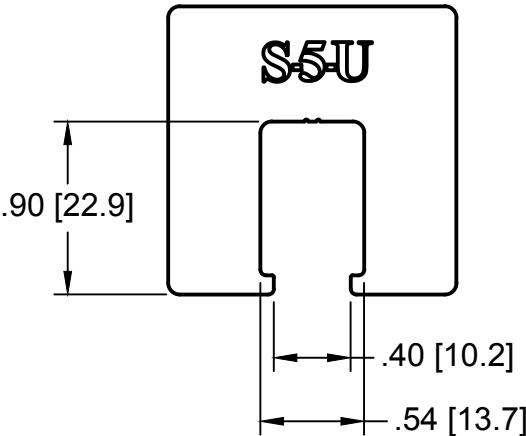


Top

M8-1.25 Threaded Hole

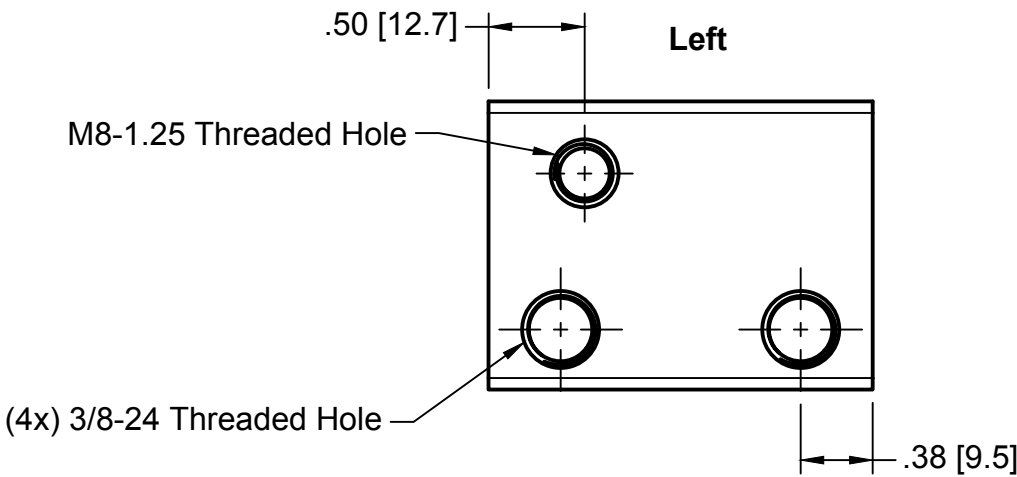


S-5-U

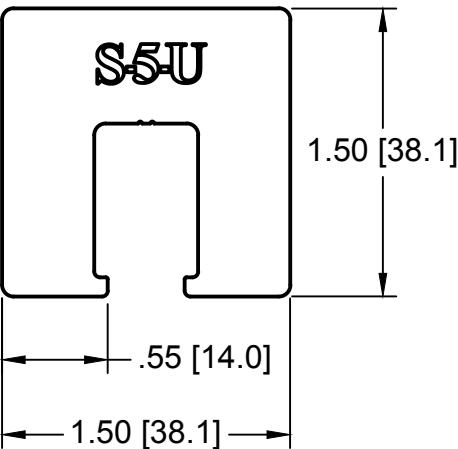


Left

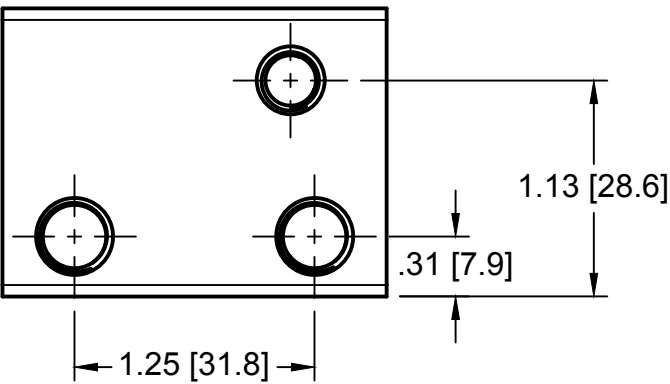
M8-1.25 Threaded Hole



Front

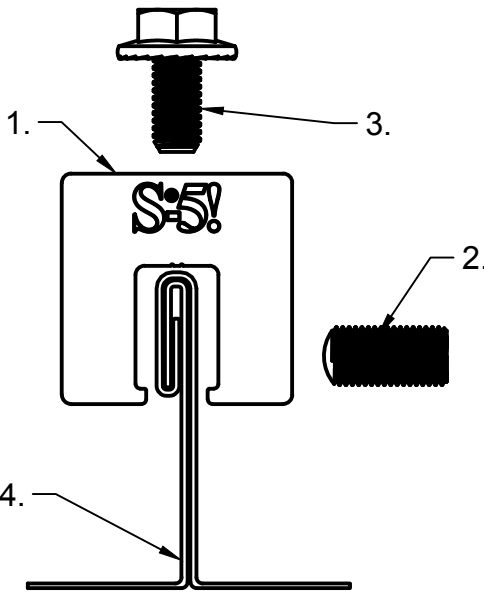


Right



General Notes:

1. S-5-U
2. 0.9" 3/8-24 T30 Drive SetScrew
3. M8-1.25 16 mm Bolt
4. Example roof



MATERIAL: 6000 Series AL				METAL ROOF INNOVATIONS, LTD.		
EST ASSEMBLY WT: 0.390 lbs				8750 WALKER RD COLORADO SPRINGS, CO 80908 719-495-0518 719-495-0045 (FAX)		
HARDWARE: (2x) 0.9" 3/8-24 T30 Drive SetScrew, M8-1.25 16 mm Bolt	TITLE S-5-U [CCD]					
	DRAWING NO. U11-B-16-E		DRAWN BY SNLR		DATE 5/3/2022	
	SCALE 1:1	FILE NAME U11-B-16-E (S-5-U) [CCD]				
	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					



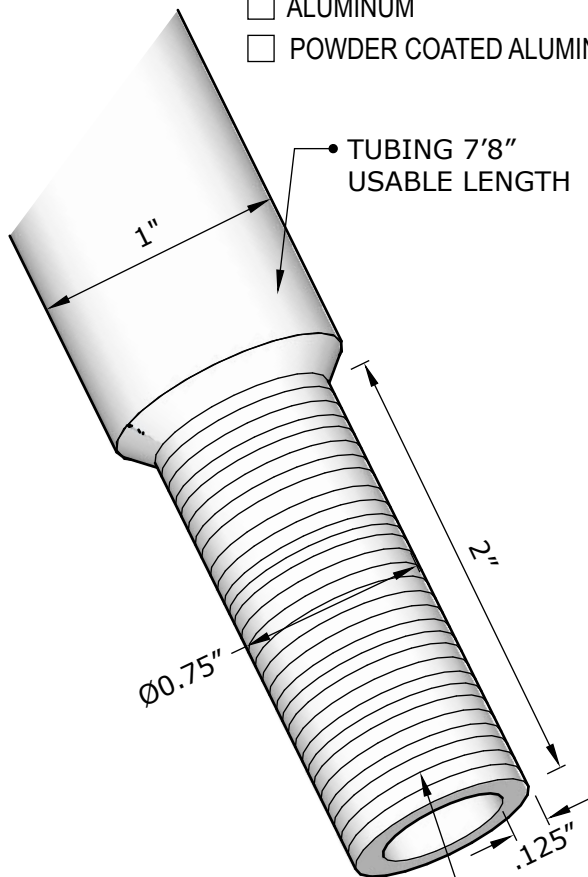
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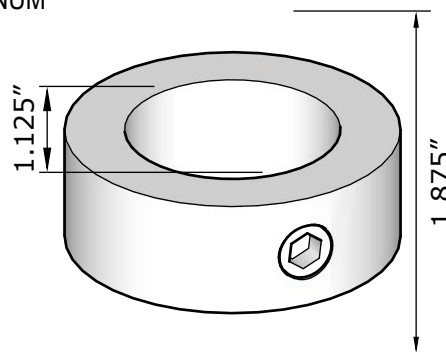
ALUMINUM SNOW FENCE COMPONENTS

☒ SELECT DESIRED MATERIAL:

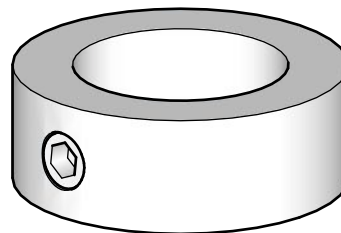
- ☐ ALUMINUM
☐ POWDER COATED ALUMINUM



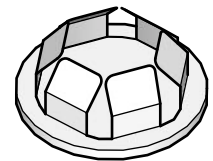
PERSPECTIVE



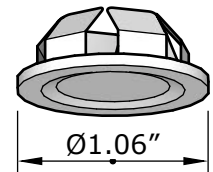
TOP VIEW
END COLLAR



PERSPECTIVE
END COLLAR



TOP PERSPECTIVE
END CAP



BOTTOM PERSPECTIVE
END CAP

SHOWN WITH SWAGED END TO
CONNECT TO TUBES - OVERALL LENGTH 7'10"
ALTERNATE: 7'8" TUBING WITH SEPARATE INTERNAL COUPLER

MANUFACTURER NOTES:

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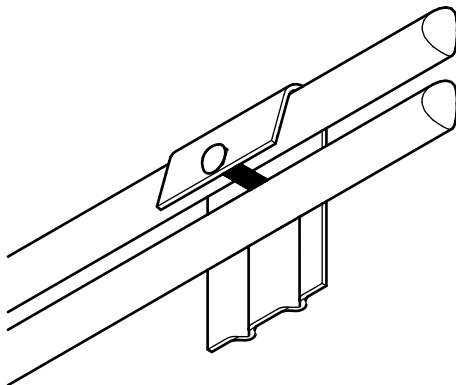
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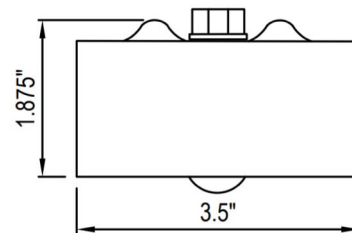
ICE FLAG - SNOW FENCE SYSTEM ACCESSORY

☒ SELECT DESIRED MATERIAL:

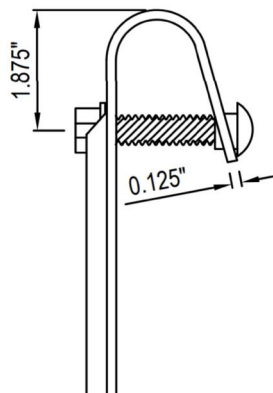
- ☐ COPPER - 16 OZ
☐ PAINTED ALUMINUM - 0.032"



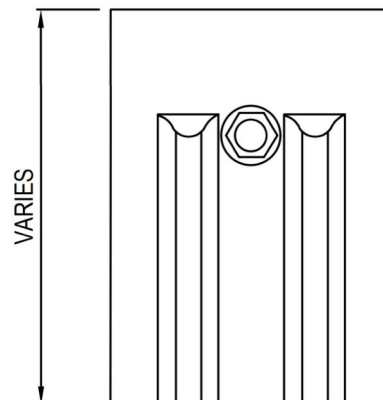
ISOMETRIC VIEW



TOP VIEW



SIDE VIEW



FRONT VIEW

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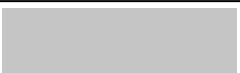


Rocky Mountain Snow Guards, Inc.

Powder Coating Colors for Snow Guards and Snow Fences

rockymountainsnowguards.com

Phone: 877-414-7606

					
RAL 1001 Beige	RAL 1011 Brown Beige	RAL 1013 Oyster White	RAL 1015 Light Ivory	RAL 1019 Grey Beige	RAL 2012 Salmon Orange
					
RAL 3002 Carmine Red	RAL 3007 Black Red	RAL 3009 Oxide Red	RAL 3031 Orient Red	RAL 5003 Sapphire Blue	RAL 5009 Azure Blue
					
RAL 5014 Pigeon Blue	RAL 5019 Capri Blue	RAL 6021 Pale Green	RAL 6028 Pine Green	RAL 7000 Squirrel Grey	RAL 7001 Silver Grey
					
RAL 7003 Moss Grey	RAL 7004 Signal Grey	RAL 7005 Mouse Grey	RAL 7006 Beige Grey	RAL 7010 Tarpaulin Grey	RAL 7011 Iron Grey
					
RAL 7012 Basalt Grey RMSG-Charcoal Gray	RAL 7013 Brown Grey RMSG-Med Bronze	RAL 7015 Slate Grey RMSG-Liberty Gray	RAL 7016 Anthracite Grey	RAL 7021 Black Grey	RAL 7030 Stone Grey
					
RAL 7032 Pebble Grey	RAL 7033 Cement Grey	RAL 7036 Platinum Grey	RAL 7037 Dusty Grey	RAL 7039 Quartz Grey	RAL 7042 Traffic Grey A
					
RAL 7043 Traffic Grey B	RAL 7044 Silk Grey	RAL 7046 Telegrey 2	RAL 7047 Telegrey 4	RAL 7048 Pearl Mouse Grey	RAL 8004 Copper Brown
					
RAL 8017 Chocolate Brown	RAL 8019 Grey Brown	RAL 8022 Black Brown	RAL 8024 Beige Brown	RAL 8025 Pale Brown	RAL 8028 Terra Brown
					
RAL 9003 Signal White	RAL 9004 Signal Black	RAL 9005 Jet Black	RAL 9011 Graphite Black	RAL 9022 Pearl Light Grey	
Various Products Stocked in Colors in this Row	 RMSG-Dark Bronze	 RMSG - Black	 Cardinal GR07 RMSG-Harbor Gray		



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POWDER COATING COLOR SIGN-OFF FORM

RMSG STANDARD COLORS

(Additional powder color choices are available upon request)

Black



Harbor Gray



Liberty Gray



Medium Bronze



Dark Bronze



Standard Color Name or Custom Powder Color Code: _____

To remove the powder coating option, enter "MILL FINISH" in the Color Code line above.

Colors vary from manufacturers and colors selected from a digital source may not resemble the final product. By signing this document we herein authorize Rocky Mountain Snow Guards Inc. to use the selected color choice to powder coat the purchased product. Furthermore, I recognize that powder coatings may not match the roof color exactly but are meant to be similar or complimentary to the existing roof color. Color samples are available upon request.



INSTALLATION GUIDE • CLAMP-TO-SEAM SYSTEM

Rocky Fence

Clamp-to-Seam Snow Fence

SYSTEM OVERVIEW

Each Rocky Fence System is comprised of one S-5! Standard Clamp attached to a 2-pipe aluminum upright.

1

STEP 1

Screw setscrews into each clamp

Screw the stainless steel setscrews into each clamp.

Approximately 2 setscrews on each S-5! clamp.



2

STEP 2

Mark bracket locations

Using a laser level or chalk line, mark bracket locations 12 in. from the eave edge.

First course only. Additional snow-fence rows may be necessary. Use the Rocky Mountain Snow Guards Snow Retention Plan for the location of additional rows.

3

STEP 3

Tighten each setscrew

Use a torque wrench to achieve the required torque.

Recommended torque values are available at www.s-5.com.





Installation Instructions

STEPS 4–7

4

STEP 4

Install upright to S-5! clamp

Install the Rocky Fence upright onto the S-5! clamp.



5

STEP 5

Insert aluminum tubing

Insert two 1 in. O.D. aluminum tubes through the brackets.



6

STEP 6

Install and tighten end collars

Slide the end collars onto the tubing and tighten.

Install collars to the inside of the last bracket to hold the tubing together at joints.



7

STEP 7

Finish the assembly

Insert the end caps and attach ice flags, if required.



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

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 either vertical or horizontal seam applications; visit www.S-5.com for more details.

Tools Needed

- Screw Gun*
- T30 Torx Bit Tip (provided)
- Dial-Calibrated Torque Wrench
(For accurate tension values, do NOT use a clicking torque wrench; inquire with S-5! for proper tool sourcing)

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 A; with setscrew opposite seam fold. On many snap-together type seams, the setscrews are on the open (or overlap) side of the seam. On some seams, this aspect of clamp orientation is not critical.
3. Tighten the setscrews 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. When relying on published load values, setscrew tension should be verified periodically using a calibrated torque wrench as indicated below to ensure the tool is consistently achieving the proper torque range. **Note:** See "Step 3 Note" at bottom of document on fitting S-5-U and S-5-V on certain vertical double-folds.

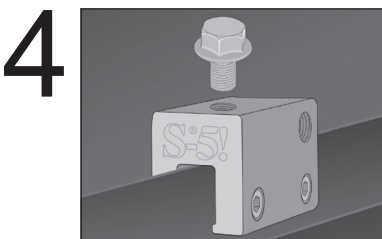
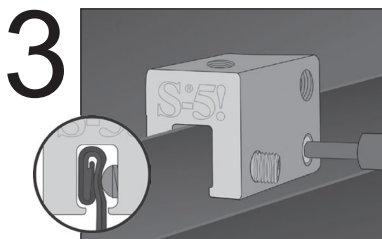
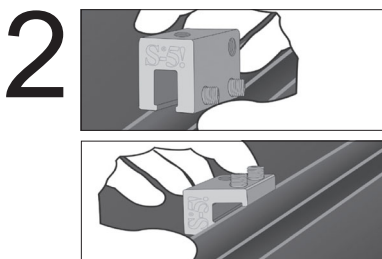
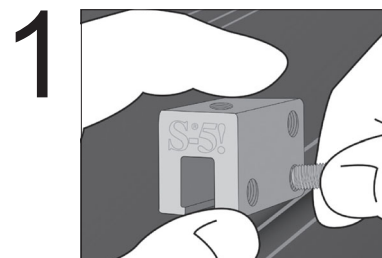
* For time-saving tool recommendations, call S-5!

Specified Torque	Inch Pounds	Foot Pounds	Nm
22ga steel	160–180	13–15	18–20
All other metals and thinner gauges of steel	130–150	11–12.5	15–17

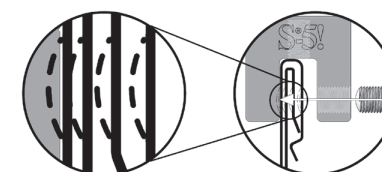
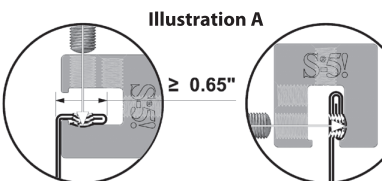
Once installed correctly, these clamps require no maintenance or re-inspection for the life of the roof.

4. For critical attachment applications utilizing an M8-1.25 X 16 mm Hex Flange Bolt, tighten the included M8 bolt to 160 inch pounds (13 foot pounds).

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



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



(Top) S-5-U clamp on both vertical and horizontal seams. (Bottom) S-5-S on a snap together seam with blow up illustrating deformation of seam as setscrew is tightened

For horizontal seams equal to or greater than .65\"/>

For horizontal seams equal to or less than .50\"/>

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 A on the front page; with setscrew opposite seam fold. On many snap-together type seams, the setscrew is on the open (or overlap) side of the seam. On some seams, this aspect of clamp orientation is not critical.
3. Tighten the setscrew using a screw gun* and the included screw gun bit tip. The setscrew will dimple the seam material but will not penetrate it. When relying on published load values, setscrew tension should be verified periodically using a calibrated torque wrench as indicated below to ensure the tool is consistently achieving the proper torque range. **Note:** See "Step 3 Note" at bottom of document on fitting S-5-U Mini and S-5-V Mini on certain vertical double-folds.

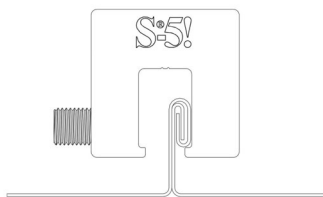
*For time-saving tool recommendations, call S-5!

Specified Torque	Inch Pounds	Foot Pounds	Nm
22ga steel	160–180	13–15	18–20
All other metals and thinner gauges of steel	130–150	11–12.5	15–17

Once installed correctly, these clamps require no maintenance or re-inspection for the life of the roof.

4. For critical attachment applications utilizing an M8-1.25 X 16 mm Hex Flange Bolt (sold separately), tighten the bolt to 160 inch pounds (13 foot pounds).

Step 3 Note: When installing S-5-U, S-5-V, S-5-U Mini, or S-5-V Mini on a vertical double fold, you may need to lift clamp in a manner that allows the lip of the clamp to engage the bottom of the seam and the setscrew(s) to fully engage the fold while tightening the setscrew(s). See clamp lip engagement in figure below. This will assist in making the clamp sit more vertically on the seam.



NOTE: Any S-5! warranty and/or calculation may be void if hardware is used that was not furnished by S-5! directly or through one of their licensed distributors

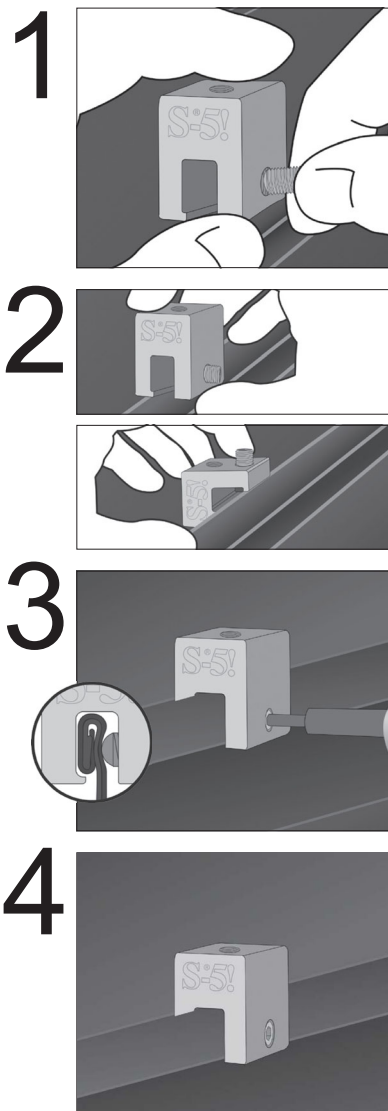
S-5!® Warning! Please use this product responsibly!

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, 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 for published data regarding holding strength.

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S-5! aggressively protects its patents, trademarks, and copyrights. Version 040820.

USEBVI-V1.2-0420



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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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.