

S-5! Snow Retention Systems for Metal Roofs

1. MANUFACTURER

S-5!® Attachment Solutions
Metal Roof Innovations, LTD.
8655 Table Butte Road
Colorado Springs, CO 80908

Technical Assistance:
888-825-3432
Support@S-5.com
Fax: 719-495-0045

Internet Home Page: www.S-5.com

CSI Masterformat Category:
07 72 53 Snow Guards



2. PRODUCT DESCRIPTION

BASIC USE:

Snow retention systems are designed to retain snow and ice on roofs, reducing the probability and severity of property damage to the roof components (i.e. gutters, adjacent roofs), damage to objects below the roof (i.e. landscape, vehicles, etc.) or potential injury or death to pedestrians.

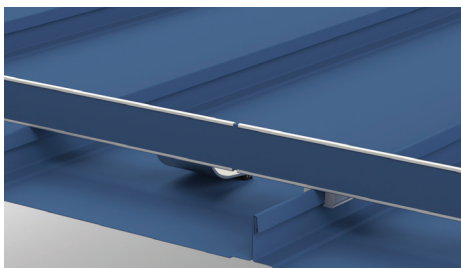
ADVANTAGES:

- Hundreds of independent laboratory tests have been performed on S-5! snow retention system attachment clamps across all major roof profiles and manufacturers. No other attachment solution is as lab tested, time tested or durable, with documented strength measured in tons.
- S-5! snow retention systems maintain the sleek aesthetics of metal roofs and compliment the design with matching color coatings or insert strips.
- S-5! snow retention systems do not penetrate the standing seam metal roof panel nor void the roof manufacturer's warranty. The systems utilize round-point setscrews to securely grip the metal roof panel seam without penetrating the weathering membranes. The round-point setscrews mechanically attach to the roof by tightening the setscrews with an industrial-grade screw gun to "dimple" the seam material into a mechanical interlock with the clamp.

PRODUCT TYPES:

COLORGARD®

ColorGard is the most versatile bar-type snow retention system for all applications. In order to be an indistinguishable element of the roof system, ColorGard utilizes a strip of the actual roof material as an insert to provide a perfect color-match for the life of the roof.

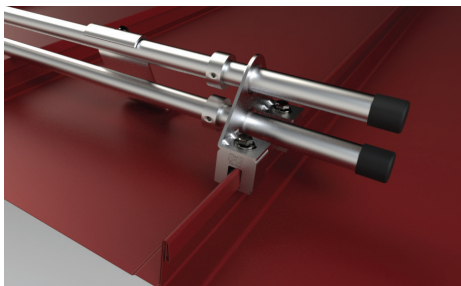


System Components:

- S-5! standard clamps; tested for specific metal roof manufacturer's system and configuration. Find specific metal roof manufacturer product and profile test data at www.S-5.com/LoadTable
- ColorGard® Punched or Unpunched Crossmember
- ColorGard® Crossmember Splice
- VersaClip™ clamp-attachment
- SnoClip™ II or III (depending upon seam height) or SnapClip™ II or III (depending upon seam height)

DUALGARD™

DualGard™ is the most versatile 1 inch two-pipe snow retention system for all standing seam roof applications. DualGard utilizes two patented S-5! Mini clamps for extra strength versus other two-pipe systems.

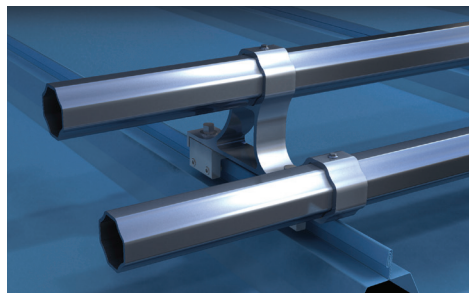


System Components:

- S-5! mini clamps; tested for specific metal roof manufacturer's system and configuration. Find specific metal roof manufacturer product and profile test data at www.S-5.com/LoadTable
- DualGard™ Brackets
- DualGard™ 1 inch o.d. aluminum pipe
- DualClip™ II or III (depending on seam height)
- DualGard™ Splice
- DualGard™ Collar
- DualGard™ End Caps

X-GARD™

X-Gard™ is a robust 2 inch pipe snow retention system available in a one- or two-pipe configuration designed to be attached to standing seam metal roofs involving extreme conditions and/or spanning distances up to 48 inches.

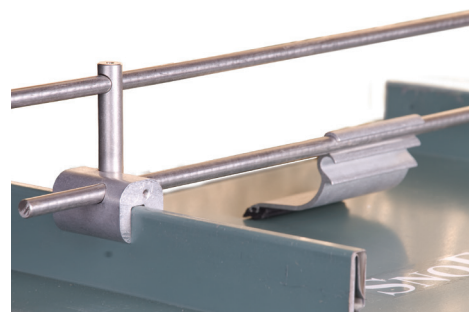


System Components:

- S-5! standard clamps; tested for specific metal roof manufacturer's system and configuration. Find specific metal roof manufacturer product and profile test data at www.S-5.com/LoadTable
- X-Gard™ 1.0 or 2.0 Brackets
- NEX® 2.0 Pipe OR optional 1.9 Round Pipe*
- X-Clip III™
- X-Gard™ End Caps
- X-Gard™ Splice

SNORAIL™ & SNOFENCE™

SnoRail™ (one rod) and SnoFence™ (two rods) are rail-type snow retention systems designed to be attached to standing seam metal roofs. They offer a sleek, stylish design for traditional standing seam roofing. Brass versions of the components are available for sheet copper roofing.



System Components:

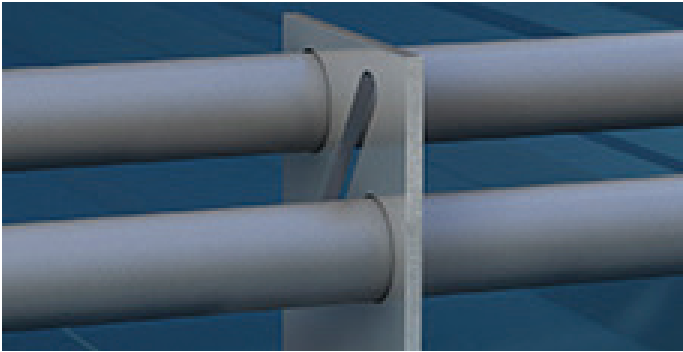
- S-5-ASF or S-5-AE seam clamps
- SnoPost™ or SnoPost E™
- Stainless Steel SnoRod™**
- Aluminum Coupling
- SnoClip™ II or III (depending upon seam height)
- SnapClip™ II or III (depending upon seam height)

*Optional; Not supplied by S-5!

**Mandatory; Not supplied by S-5!

VERSAGARD™

VersaGard™ is a versatile and economical 1 inch two-pipe snow retention system designed to be attached to exposed-fastened or face fastened metal roofs. VersaGard features a unique and patented “well” built into its base with a factory applied self-adhesive butyl sealant for leak-free attachment that will not crack or split. Upon removal of the protective seal, the bracket is also fastened with gasketed fasteners for a lifetime of worry-free performance.



System Components:

- VersaGard Bracket
- DualGard™ 1 inch o.d. aluminum pipe
- DualClip™ II or III (depending on seam height)
- DualGard™ Splice
- DualGard™ Collar
- DualGard™ End Caps

3. COMPOSITION & MATERIALS

S-5!® snow retention systems are made of mill-finished, aircraft quality aluminum. All associated hardware is stainless steel.

S-5! snow retention systems attached with aluminum S-5! clamps are completely compatible with painted or unpainted G-90 galvanized steel, bare or painted Aluminized, Galvalume®, Zinalume®, Zinalume® Plus, Acrylume®, Galvalume® Plus, Galfan® and Galvannealed steel, aluminum (painted, bare, or anodized), titanium-zinc (VM & Rheinzink®), and stainless steel metal roofs.

S-5! snow retention system may also be attached with brass S-5! clamps to provide metallurgical compatibility with copper roofs.

All S-5! snow retention systems can accept powder coated finishes to match the metal roof color if desired.*

4. TECHNICAL DATA

S-5! products are manufactured to meet or exceed the following standards:

- Aluminum Association (AA) - Aluminum Standards and Data, 2003 Edition.
- ASTM International (ASTM):
 - A484/A484M-16 – Standard Specifications for General Requirements for Stainless Steel Bars, Billets, and Forgings.
 - A554-16 – Standard Specification for Welded Stainless Steel Mechanical Tubing
 - A555/A555M-16 – Standard Specification for General Requirements for Stainless Steel Wire and Wire Rods
 - B221-04a - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
 - B85-03 - Standard Specification for Aluminum-Alloy Die Castings.
 - F836M-02 (2015) – Standard Specification for Style 1 Stainless Steel Metric Nuts (Metric).
 - F880-12 – Standard Specification for Stainless Steel Socket, Square Head, and Slotted Headless-Set Screws

ENVIRONMENTAL CONSIDERATIONS:

Where possible, S-5! products include a high percentage of recycled material, which lowers the environmental footprint. Additionally, S-5! products offer service lives equal

*Optional; Not supplied by S-5!

**Mandatory; Not supplied by S-5!

to the roof itself, and are 100% recyclable at the end of their extended service life, which may reduce the solid waste stream.

5. INSTALLATION

Detailed installation instructions can be obtained from manufacturer’s website: www.S-5.com

Store materials protected from harmful weather, damage, or abuse. Verify that site conditions are acceptable before proceeding.

Deliver materials in manufacturer’s original, unopened, undamaged containers with identification labels intact.

6. LIMITATIONS

Any loads imposed on the S-5! clamps will be transferred to the roof panels to which they are attached. Roof panels must be adequately fastened to building structure to resist these loads. For critical installations, contact the roof panel manufacturer for specific test data of ultimate tensile load on specific panel materials and seam types. When relying upon tested load values, setscrew tensions should be verified and factors of safety should be used as appropriate.

S-5! snow retention systems are tested for specific design snow loads, roof configurations, and metal roof manufacturers. For X-Gard™, DualGard™ and ColorGard systems, use the calculator located on the S-5! website (www.S-5.com/Calculator) to correctly place, configure, and provide the proper number of the snow retention devices in conjunction with the third-party test information for each metal roof manufacturer and profile. Always install S-5! systems in strict accordance with manufacturer’s published installation instructions.

7. COST & AVAILABILITY

Contact manufacturer-authorized distributors listed at www.S-5.com/Distributors for the most current product prices and product availability.

8. WARRANTY

Free 25-Year Limited Warranty:

All S-5! products and components are warranted to be free from defects in material and workmanship.

An optional ColorGard System Limited Lifetime Warranty is available on ColorGard snow retention systems. For additional details, visit the manufacturer website at www.S-5-ColorGard.com

9. MAINTENANCE

Maintenance is not normally required. Under extreme conditions, periodic inspection is advised and minor SnoClip adjustments may be necessary. If cleaning is desired, systems can be washed with mild soap and water with a clean water rinse.

10. TECHNICAL SERVICES

Technical assistance, including more detailed information, product literature, test results, project lists, assistance in preparing project specifications and arrangements for application supervision, is available by contacting S-5! or the nearest S-5! distributor.

APPROVED

PROJECT NAME _____

APPROVED BY _____

PRODUCT SELECTED _____

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