

SECTION 07 72 53

Blizzard Heavy Duty II Clamp to Seam Snow Guards

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Snow guards for metal roofs.
 - 2. Non-penetrating 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) (www.aluminum.org) - Aluminum Standards and Data, 2003 Edition.
- B. ASTM International (ASTM) (www.astm.org):
 - 1. A484/A484M-16 – Standard Specifications for General Requirements for Stainless Steel Bars, Billets, and Forgings
 - 2. A554-16 – Standard Specification for Welded Stainless Steel Mechanical Tubing
 - 3. A555/A555M-16 – Standard Specification for General Requirements for Stainless Steel Wire and Wire Rods
 - 4. B85-03 - Standard Specification for Aluminum-Alloy Die Castings
 - 5. B221-04a - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes
 - 6. F836M-02 (2015) – Standard Specification for Style 1 Stainless Steel Metric Nuts (Metric).
 - 7. F880-12 – Standard Specification for Stainless Steel Socket, Square Head, and Slotted Headless-Set Screws

1.4 SUBMITTALS

- A. Action Submittal:
 - 1. Shop Drawings: Include roof plans showing locations of snow guards on roof and attachment details and spacing, signed and sealed by a professional engineer.

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 (305 mm) 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 [mm] 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

Acceptable Manufacturer: Rocky Mountain Snow Guards, Inc., 4231 S. Natches Ct., Unit C, Englewood, CO 80110; Tel: 720-379-7756; Fax: 720-387-8361; Email: info@rockymountainsnowguards.com. Web: www.rockymountainsnowguards.com.

2.3 FENCE-TYPE SNOW RETENTION SYSTEMS FOR STANDING SEAM METAL ROOFS

- A. Basis of Design: Blizzard Heavy Duty II, manufactured by Rocky Mountain Snow Guards, Inc.
- 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-Q] [S-5-H] [S-5-H90] [S-5-V]
 - b. Set screws: 300 Series stainless steel, 18-8 alloy, 3/8 inch (9.525 mm) diameter, with round nose point.
 - 2. Brackets:
 - a. Manufactured from 5000 Series alloy and temper aluminum conforming to ASTM B221 and AA Aluminum Standards and Data.
 - 3. Aluminum Tubing (Cross Members):
 - a. Manufactured 6005a-T61 Series alloy and temper aluminum extrusions conforming to ASTM B221 and AA Aluminum Standards and Data.
 - 1) 1" O/D Tubing with .125" thickness walls.
 - 5. End Collar:
 - a. Manufactured from 6005a-T61 Series alloy and temper aluminum extrusions conforming to ASTM B221 and AA Aluminum Standards and data, with 1/4-20 x 3/8 inch (9.525 mm) stainless steel set screw.
 - 1) End Collar
 - 6. Ice Flags:
 - a. Aluminum.
 - 1) 3.5" wide.
 - 7. End Caps:
 - a. Stainless Steel.

PART 3- EXECUTION

3.1 EXAMINATION

- A. 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 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. Blizzard Heavy Duty II Snow Retention System:
 - 1. Pre-load 1 set screws into each clamp.
 - 2. Align clamp placement using a string line or laser guide light. 1st row is usually placed 12” from eave edge. Additional rows may be necessary. Placement of those rows must follow Rocky Mountain Snow Guards Snow Retention Plan for each project.
 - 3. Clamps may be a maximum of 48” apart.
 - 4. Reference installation instructions for the specific clamp used to assure they are oriented correctly. Torque ratings and specific clamp installation instructions are available at www.s-5.com.
 - 5. Tighten clamp set screws to manufacturers recommended torque. Test set screw torque using calibrated torque wrench.
 - 6. Insert Tubing through brackets. Insert swaged tubing end into non-finished end of the adjacent tube.
 - 7. Slide End Collars over tubes making sure that the Collars are on the INSIDE of the last Blizzard Heavy Duty II bracket on each run. This is necessary to hold the swaged tubing ends together within a run.
 - 8. Cut extended end of tube at end of run. Do not cantilever tubes more than 4 inches (101.6 mm) beyond last bracket at ends.
 - 9. Apply end cap to each tube.
 - 10. Install one Ice Flag per panel for panels less than 18” wide. Install 2 Ice Flags for panels wider than 18”.
 - a. Secure each Ice Flag by tightening the upslope nut until the Ice Flag will not slide side to side on the tube.

END OF SECTION