

SECTION 07 72 53

VERSAGARD™ SNOW GUARDS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Snow guards for metal roofs.
 - 2. 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. A554-16 – Standard Specification for Welded Stainless Steel Mechanical Tubing
 - 2. A555/A555M-16 – Standard Specification for General Requirements for Stainless Steel Wire and Wire Rods
 - 3. B85-03 - Standard Specification for Aluminum-Alloy Die Castings.
 - 4. B221-04a - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
 - 5. F836M-02 (2015) – Standard Specification for Style 1 Stainless Steel Metric Nuts (Metric).
 - 6. 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. Bracket 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. 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 PIPE-TYPE SNOW RETENTION SYSTEMS FOR EXPOSED FASTENED ROOFS

- A. Basis of Design: VersaGard, manufactured by S-5! Metal Roof Innovations, Ltd.
 - 1. Bracket:

- a. Manufactured from 6061-T6 aluminum extrusions conforming to ASTM B221 and to AA Aluminum Standards and Data.
 - 1) Model: VersaGard.
- b. Screws for attachment of brackets to roof: Type best suited to application: Metal to metal applications: ¼-14 self drilling point, 2 inch (50.8 mm) length, 3/8 inch (9.525 mm) hex washer head, Zinc/Aluminum cap. Metal to wood applications: ¼-14 type 17 AB milled point, 2 inch (50.8 mm) length, 3/8 inch (9.525 mm) hex washer head, Zinc/Aluminum cap.
2. Pipes (Cross Members):
 - a. Manufactured from 6005a-T61 Series alloy and temper aluminum extrusions conforming to ASTM B221 and AA Aluminum Standards and Data.
 - 1) Model: DualPipe
3. Pipe Couplings (Splices):
 - a. Manufactured from 6005a-T61 Series alloy and temper aluminum extrusions conforming to ASTM B221 and AA Aluminum Standards and Data.
4. Pipe Collars:
 - a. Manufactured from 6005a-T61 Series alloy and temper aluminum extrusions conforming to ASTM B221 and AA Aluminum Standards and data, with ¼-20 x 3/8 inch (9.525 mm) stainless steel set screw.
 - 1) Model: DualCollar
4. Snow and Ice Clips:
 - a. Aluminum, with rubber foot, minimum 3 inches (76.2 mm) wide.
 - 1) Model: DualClip II
5. End Caps:
 - a. Rubber or metal, black or color-match

PART 3- EXECUTION

3.1 EXAMINATION

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. VersaGard Snow Retention Systems
 1. Place brackets at maximum 32 inches (812.8 mm) on center or as required by in-service loads.
 2. Place brackets in straight, aligned rows using a string line.
 3. Clean roof area to receive bracket. Remove protective seal on butyl tape.
 4. Place brackets at spot of attachment and fasten with screws best suited for type of attachment.
 5. Install pipes through holes in brackets. Insert a pipe collar inside last bracket of either end of the run as pipe is inserted into brackets.
 6. Install pipe coupling at adjoining pipe end joints. Insert coupling halfway into pipe that will be joined to next pipe in the run.

7. Cut extended end of pipe at end of run. Do not cantilever cross members more than 4 inches (101.6 mm) beyond last bracket at ends.
8. Apply end cap to each pipe.
9. Install [one DualClip] [two DualClips] per panel between panel seams.
 - a. DualClips: Secure DualClip II to back side of pipe cross member using stainless steel #10 x ½ inch (12.7 mm) screw.

END OF SECTION