

SNOW RETENTION SYSTEM

S-5! COLORGARD® SPECIFICATION

SECTION 07710 Prefabricated Roof Specialties

PART 1 GENERAL REQUIREMENTS

1.01 DESCRIPTION OF WORK

A. Summary of Work

1. Furnish all labor, material, tools, equipment, and services for the installation of complete S-5! "ColorGard" snow retention system as indicated on plans, and in accordance with provisions of Contract Documents.
2. Include all prefabricated metal color strips to match the roof panels, splice connectors for crossmember sections, "SnoClips" if indicated on drawings and any miscellaneous related items necessary for a complete installation.
3. Coordinate work covered in this section with work of other trades.

B. Related Sections

1. Roof and Wall Panels Section 07410
2. Metal Roofing Section 07610
3. Flashing and Sheet Metal: Section 07620
4. Roof Accessories Section 7720

1.02 SUBMITTALS

A. Product Data

Submit manufacturer's literature including installation instructions.

B. Testing

Submit lab test report showing minimum ultimate tensile load of _____ pounds. Test to conform with 1.03.A (below). [Specifier Note: Ultimate load varies with panel type and gauge. It can be found at www.lmcUrbs.com]

C. Shop Drawings

If not clearly shown on project drawings, submit roof drawing showing locations of all S-5! ColorGard assemblies including where pertinent, clamp spacing.

D. Samples

Submit sample of S-5! clamp and 24" section of ColorGard crossmember including matching sheet metal color strip, splice connector, and other hardware. Submit mock-ups of special assemblies mounted on panel specimens if requested.

1.03 QUALITY ASSURANCE

A. Testing

Furnish evidence of product testing performed specifically on the panel seam and gage being utilized on this project. Test report is to clearly indicate tensile load-to-failure of clamp in a direction parallel to the seam. Testing shall be done by recognized independent laboratory.

B. System Compatibility

Provide clamps complete with stainless steel set screws and stainless steel bolt and washer as furnished by the manufacturer. Plated ferrous attachment bolts and other fasteners are not acceptable.

C. Code Compliance

Comply with all applicable local, state, and national building codes, as well as OSHA regulations.

1.04 DELIVERY, STORAGE, AND HANDLING

A. Packaging

Deliver components to jobsite properly packaged for protection against damage in transportation.

B. Storage

Boxes containing S-5! clamps and other components should be stored in a dry place until ready for use.

C. Handling

Exercise care in unloading, storing and installing all components to prevent bending, warping, twisting, and surface damage. Replace any damaged materials.

PART 2 PRODUCTS

2.01 SYSTEM DESCRIPTION

A. Attachment to Roof

For standing seam panels, provide aluminum S-5-U, S-5-T or S-5-Z standing seam roof clamp. Carbon steel or plastic parts are not acceptable. No fastening penetrations of the roof membrane will be permitted. Clamp to attach to standing seams using a minimum of two stainless steel set screws (3/8" minimum diameter) having rounded point. Clamp spacing is to be at (every, every second) seam. [Specifier Note: Clamp spacing depends upon load data-see www.lmcUrbs.com]. In no event shall clamp spacing exceed 32 inches.

For face fastened panel systems and other roof types provide VersaBracket at spacing shown on plans.

B. Crossmember and Color Matching

S-5! "ColorGard" extrusion with receptacle in face to provide for insertion of color strip. Color strip is to be the same prefabricated material and originate from the same supplier as the roof panels.

Crossmember is to be continuous and include splice connectors to join adjacent sections, ensuring alignment and structural continuity. Attach crossmember to clamps using minimum 3/8" diameter stainless steel bolts with flat washers.

C. Snow/Ice Clips

Install [one SnoClip] [two SnoClips] per panel between panel seams. S-5! "SnoClips" are to be aluminum with rubber "foot" as furnished by LMCUrbs, clip to attach to crossmember and rest on panel flat, between panel seams to retard movement of snow/ice beneath crossmember. Minimum recommended frequency is one SnoClip per panel on panel widths up to 24" and two or more for panel widths greater than 24". Greater SnoClip frequency on all roof panel seam widths is optional to address unique snow conditions.

2.02 MATERIALS

A. Clamps and VersaBracket

Manufactured from certified 6061 T6 extruded aluminum, in strict conformity with The Aluminum Association, Incorporated "Aluminum Standards and Data" and ASTM standard B-221. Use (S-5-U, S-5-Z; S-5-T; VersaBracket) [Specifier Note: Select appropriate clamp or VersaBracket] Cast parts are not permitted.

B. Crossmember

Manufactured from certified 6061 T6 aluminum, in strict conformity with The Aluminum Association, Incorporated "Aluminum Standards and Data" and ASTM standard B-221. Minimum breaking strength of 175 pounds/ linear inch. Crossmember must be furnished with splice pieces to align adjacent sections and maintain continuity.

C. Fasteners and Other Hardware

Each clamp is to be secured to the panel seam with a minimum of two set screws, having nominal diameter of .375". Set screws are to have a round nose point to prevent damage to panel finish. Cup point set screws are not acceptable. Set screws and other clamp hardware is to be either 300 series stainless steel (18-8 alloy) having no iron content, or aluminum. Attachment bolt for clamp is to be .375" diameter with washer. VersaBracket is to be installed with a minimum of two screws into the base or as indicated on plans. Stainless or stainless-cap screws to be provided by contractor. Attach ColorGard to VersaBracket with a minimum of two self drilling screws as provided by manufacturer.

2.03 APPROVED MANUFACTURERS

A. LMCUrbs

827 Fisher Road; Longview, TX, 75604; Ph 800-284-1412; Fax 903-759-3598 see website www.lmcUrbs.com.

B. Other Manufacturers

Must meet all aspects of this specification and approved in writing by Architect 14 days prior to General Contractor bid date. Equality must be shown in every aspect of this specification, including, but not limited to tested load-to-failure values as enumerated in 1.02.B, verified by independent laboratory, and color match as enumerated in 2.01B. If tested load-to-failure values are lower than called out in this specification, then additional rows of assembly may be furnished to achieve compliance.

PART 3 EXECUTION

3.01 EXAMINATION AND PREPARATION

A. Clean Surface

Verify that panel seam area is reasonably clean and free of visible dirt and foreign matter at the clamp locations prior to installing clamps.

B. Seaming Complete

Verify that any required machine seaming is complete prior to installation.

C. Panel Attachment

Verify that panels are adequately attached and supported to the building structure to resist any loads imposed on the S-5 clamp.

D. Free Drainage

Verify that completed assembly installation will not in any way impede proper drainage of roof panels.

E. Discrepancies

Report any discrepancies to the above to the Project Architect before proceeding with the work.

3.02 INSTALLATION

A. Layout

Carefully lay out desired assembly locations true-to-line prior to installing clamps or VersaBrackets. Clamps should avoid panel attachment clips if the clip is a single piece design.

B. Clamp Installation

Assemble set screws to clamp and clamp to seam following all manufacturers printed instructions. Both set screws are to be at the same side of clamp. When application relies upon tested load-to-failure values, manufacturer's minimum recommended set screw tension shall be randomly verified using calibrated torque wrench per manufacturer's instructions.

C. System Installation

Install snow retention assemblies straight and true-to-line. Secure all color strip material to ColorGard per manufacturer's instructions. Join adjacent sections with splice pieces provided. Do not cantilever crossmember more than 6" past the last clamp in an assembly.

D. Fall Protection

Provide necessary fall and other hazard protection in accordance with OSHA regulations when installing snow retention assemblies.

E. Cleaning

Clean roof of any residual debris resulting from installation.

3.03 CLOSEOUT

A. Waste Disposal

Dispose of excess materials and packaging and remove debris from site.

B. Warranties

Deliver all warranties to Owner or Owner's designated representative.