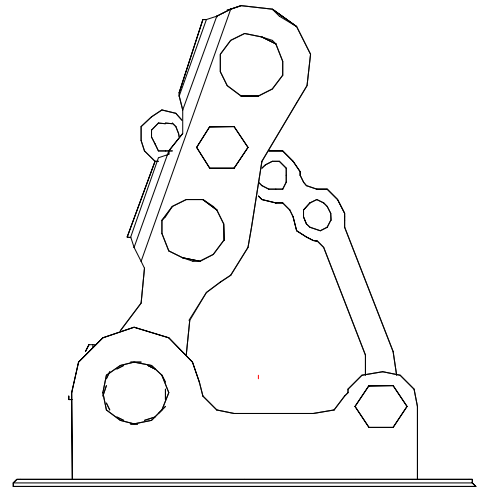
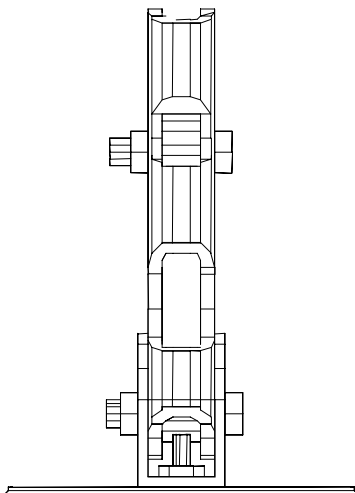
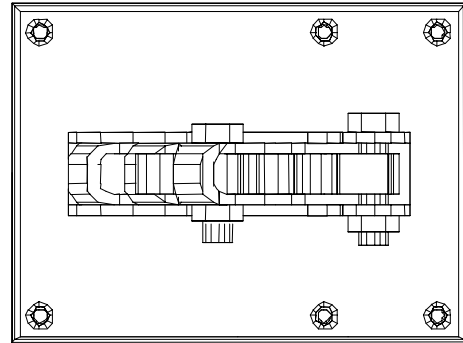
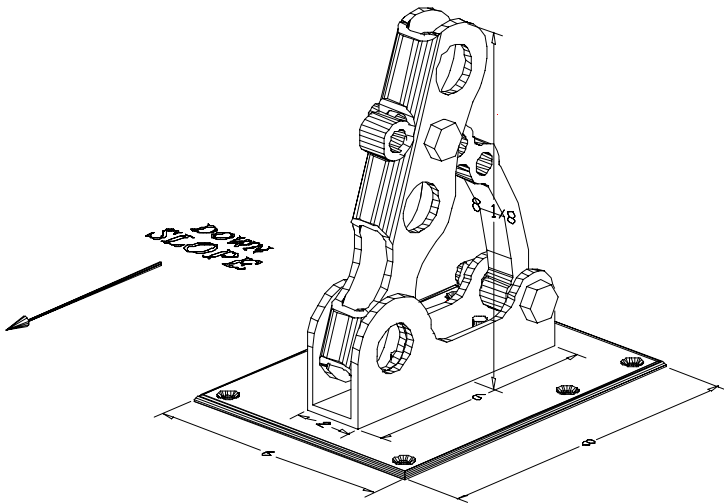




ALPINE SNOWGUARDS

A Division of Vermont Slate & Copper Services, Inc.

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#215 Three-pipe Adjustable Snow Guard For use with membrane roofs.

Available in aluminum with a stainless steel base plate, brass with stainless steel base plate or all brass.

Patent # D430005, D428799 and D426453

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Assembly Instructions for Membrane Roof Style Snowguards #215

I. Base Plate (The base plate is the flat piece with the two threaded studs.)

- A. A Continuous block is required underneath the membranous roof surface to attach the base plate. This base flange is 8" long. , Mounting this system over insulation alone may crush the insulation and cause the roof to leak.
- B. Place the base plate on top of the finished membrane roof.
- C. Before fastening base plate through membrane to mounting block below, apply a generous amount of acceptable sealer under the flange.
- D. Consult with an engineer or fastener company to determine the fastener required to attach the base plate to the wood block. Fasteners must exceed 2000 pounds sheer combined.

II. Membranous Flashing of Base Plate

- A. Use an acceptable piece of flashing material 18" square.
- B. Cut two small holes in membrane flashing to fit tightly over threaded studs.
- C. Before installing flashing apply a generous amount of acceptable sealer around threaded rods.
- D. Apply flashing over base plate using proper mastics and installation techniques so as to create a water tight patch.
- E. The threaded studs are now the only part of the base plate exposed. NOTE: Due to the sealer applied around the studs there may be bleed out at this opening. When the base block is installed and tightened this bleed out will help to create a water tight compression fitting.

III. Installation of snowguard block

- A. Install base block over threaded studs.
- B. Place one gasketed washer over each stud.
- C. Place locking nut over gasketed washer and tighten.
- D. Insert tubing through the holes in the uprights.

IV. Locking Collars, End Caps, and Ice Flags (optional)

- A. Locking collars (#65) should be placed over each end of each line of tubing. Center the tubing on the snowguards and tighten the set screw on the collar until it no longer slips.
- B. End caps (#56) are installed by pressing the cap into the end of the pipe.
- C. Ice flags (#95), if used, should be placed over the top tube so that the long leg rests against the uphill side of both tubes. Use the carriage bolt and nut to hold the ice flag in position.

Snowguard Layout for Pipe Style Brackets

- * Contact the manufacturer for detailed layout.
- * Horizontal spacing between brackets should be 48" maximum. This may have to be decreased due to variable conditions.
- * Do not install runs than 100 feet long without a break to allow for thermal expansion.
- * First row of snowguards is installed above outer most wall or support of the building.
- * Tubing is 1" O.D. aluminum.
- * Brackets are made of aluminum and are available in other metals.
- * One, two and three pipe systems are available.

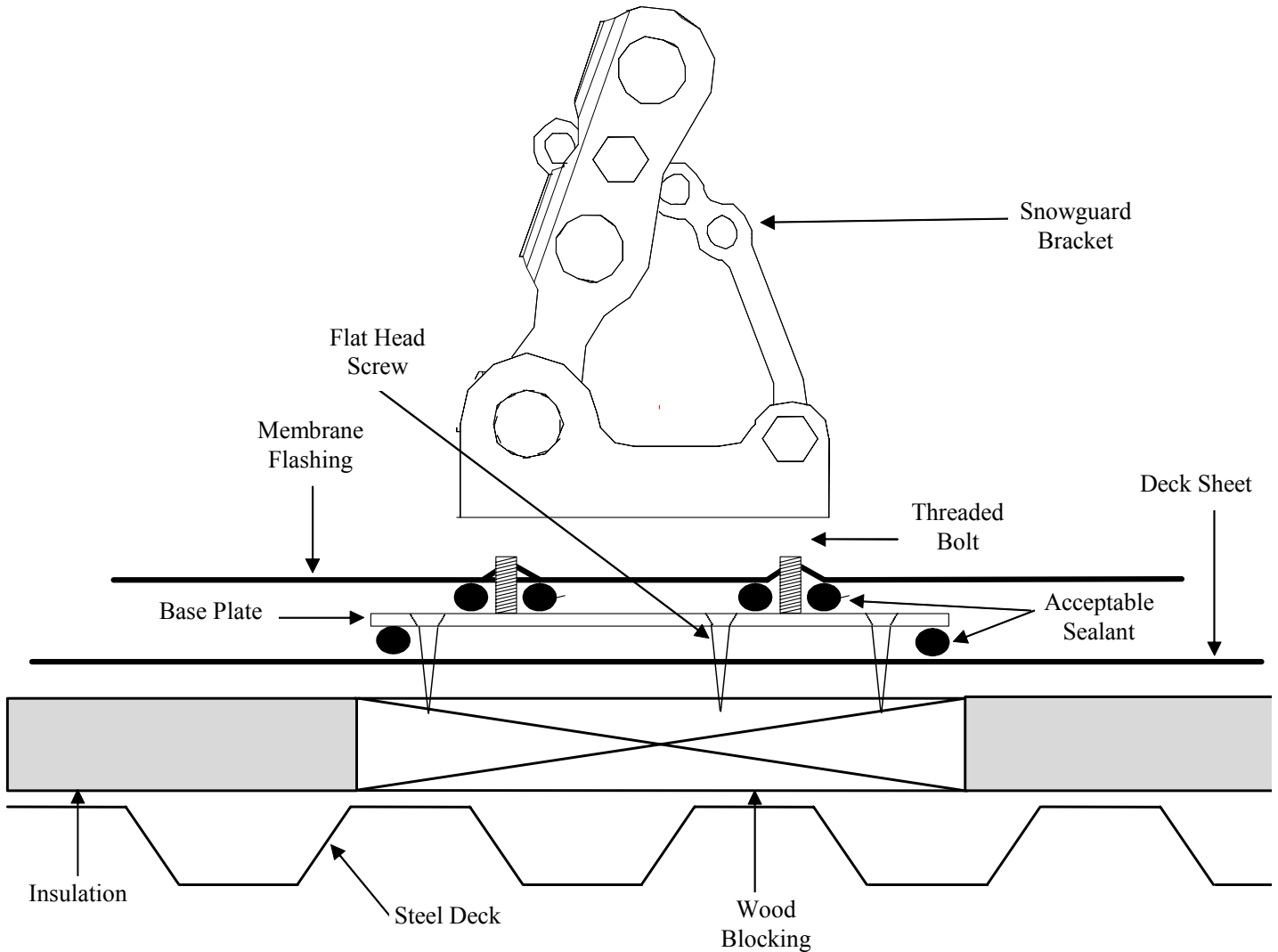
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#215 Membranous Roof Snowguard Installation Detail

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#215 Snowguard Specification Sheet

PART 1 - GENERAL

1.1 SUMMARY

A. WORK INCLUDES

1. #215 Snowguard that attaches directly to the roof deck.
2. Provide appropriate snowguard and fasteners for the roof system.

B. RELATED SECTIONS

1. Section 07600: Flashing and Sheet Metal.
2. Section 07500: Membrane Roofing
3. Division 7: Thermal and Moisture Protection.

1.2 SYSTEM DESCRIPTION

A. COMPONENTS:

1. #215 Snowguard system consists of snowguard bracket and base plate
2. Aluminum tubing.
3. Threaded Couplings.
4. End Caps (optional).
5. End Collars (optional).
6. Fasteners
 - a. To be of metal compatible with snowguards.
 - b. Fasteners should be selected for compatibility with the roof deck.
 - c. Fastener strength should exceed or be equal to that of the snowguard system.
7. Adhesive: to be membrane roof manufacturer approved.

B. DESIGN REQUIREMENTS:

1. Spacing to be recommended by manufacturer or building engineer.
2. Fasteners into the roof deck or structure must meet or exceed a combined 2000 pounds of shear.
3. A minimum of 6 fasteners per snowguard.
4. It is important to design new structures or assess existing structures to make sure that they can withstand retained snow loads.

1.3 SUBMITTAL - Submit manufacturer's specifications, standard detail drawings, recommended layout and installation instructions.

1.4 QUALITY ASSURANCE - Installer to be experienced in the installation of specified roofing material and snowguards for not less than 5 years in the area of the project.

1.5 DELIVERY / STORAGE / HANDLING - Inspect material upon delivery and order replacements for any missing or defective items. Keep material dry, covered and off the ground until installed.

PART 2 - PRODUCTS

2.1 MANUFACTURER

- A. Alpine SnowGuards. A division of Vermont Slate & Copper Services Inc., P.O. Box 430, Stowe, VT (888) 766-4273.

2.2 MATERIALS

- A. Snowguard Block and Flag are extruded and milled 6061-T6 Aluminum
- B. Base Plate is 11 gauge thick 302 Stainless Steel.
- C. Tubing is 6005-T5, 1" outside diameter and 1/8" wall thickness extruded Aluminum.
- D. Threaded Couplings are 6061-T6 Aluminum 5" long.
- E. End Caps are 302 stainless steel.
- F. Ice Flags are 5052-H32 Aluminum 3" x _ (as needed).
- G. End Collars are 6061 T-6 aluminum shaft collars.
- H. Fasteners are 302 or 304 Stainless Steel.

2.3 FINISH - All materials provided mill finish.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Substrate: Inspect roof system to be properly attached and installed to withstand additional loading incurred. Notify General Contractor of any deficiencies before installing Alpine SnowGuards.

3.2 INSTALLATION

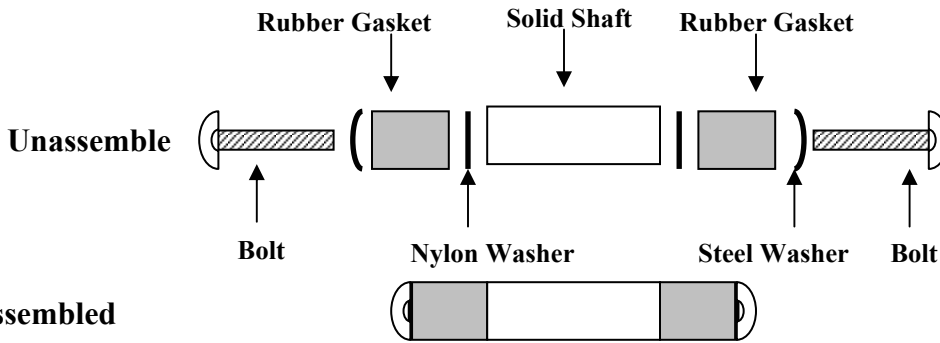
- A. Comply with architectural drawings for location and with Manufacturer's instructions for installation.

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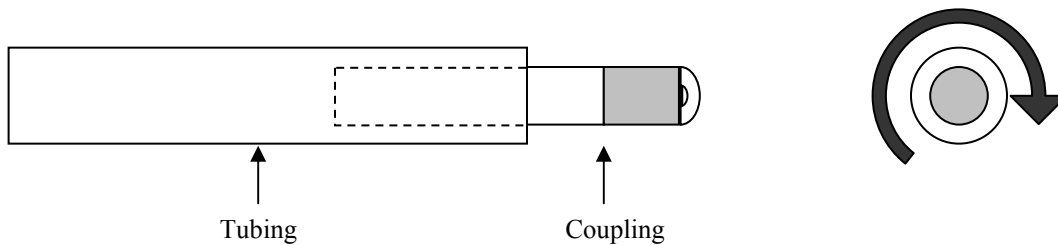


Installation of #86 Pipe Coupling

Couplings come assembled and ready for application. If they come unassembled or loosened during shipping then assemble as per the detail below. **DO NOT OVERTIGHTEN** prior to inserting the coupling into the #75 tubing. Overtightening the bolt will cause the gasket to expand and make installation of the coupling difficult.



1. Insert assembled coupling into the end of one pipe so that half of the solid aluminum shaft is inserted.
2. Begin twisting the exposed half of the coupling in a clock-wise motion until the rubber gasket engages the pipe. Continue to tighten until the coupling can not be easily pulled out of the pipe.



3. Slide next section of tubing over the exposed half of the coupling. Begin twisting the tubing in a clock-wise motion until the rubber gasket engages the pipe. Continue to tighten until the tubing can not be easily pulled off of the coupling.
4. If the system needs to be unassembled, simply turn the tubing counter clockwise until the coupling disengages. Then turn the coupling's solid shaft counter clockwise until it disengages from the tubing.

