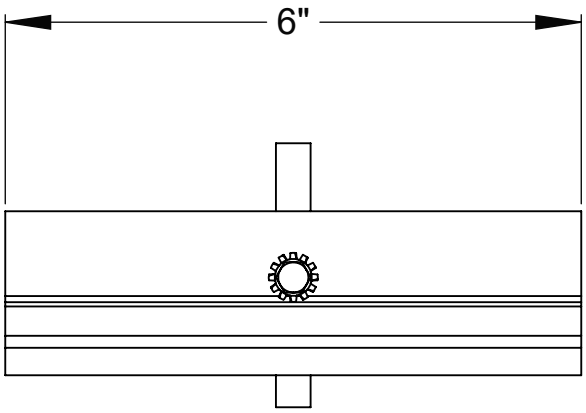
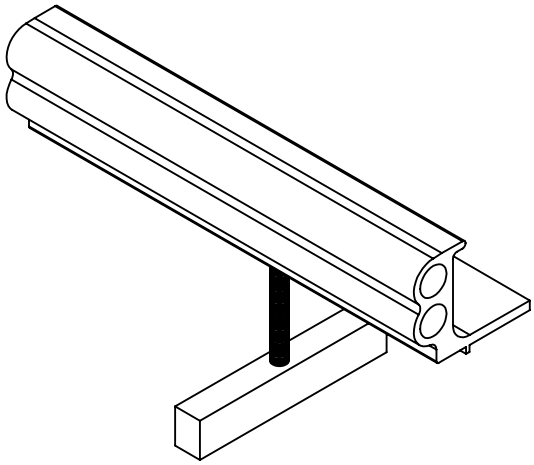
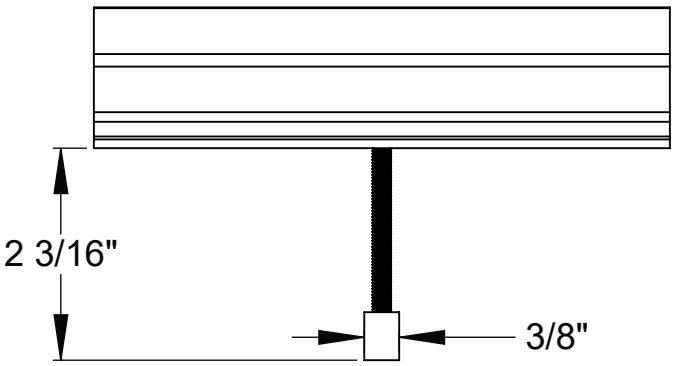
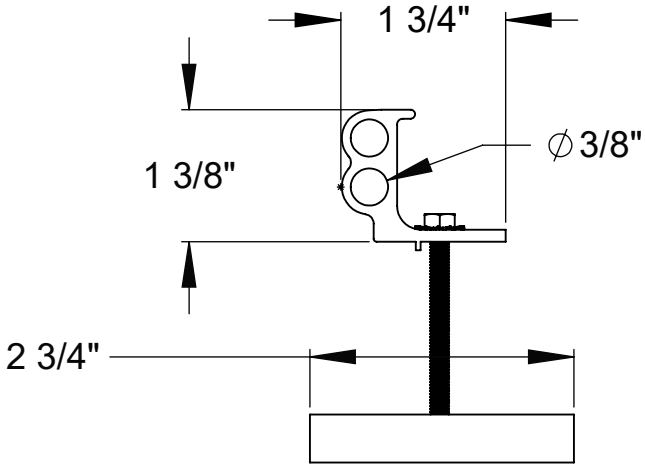
Cut Sheet - SNOW DOG-BLK

1. Installation to be completed in accordance with manufacturer's written specifications and installation instructions.
2. See spec sheet or contact manufacturer for detailed material, finishes, and configuration options.
3. Contact manufacturer for detailed layout.
4. Do not scale drawings.
5. Subject to change without notice.
6. For patent information, visit our Patent Page.









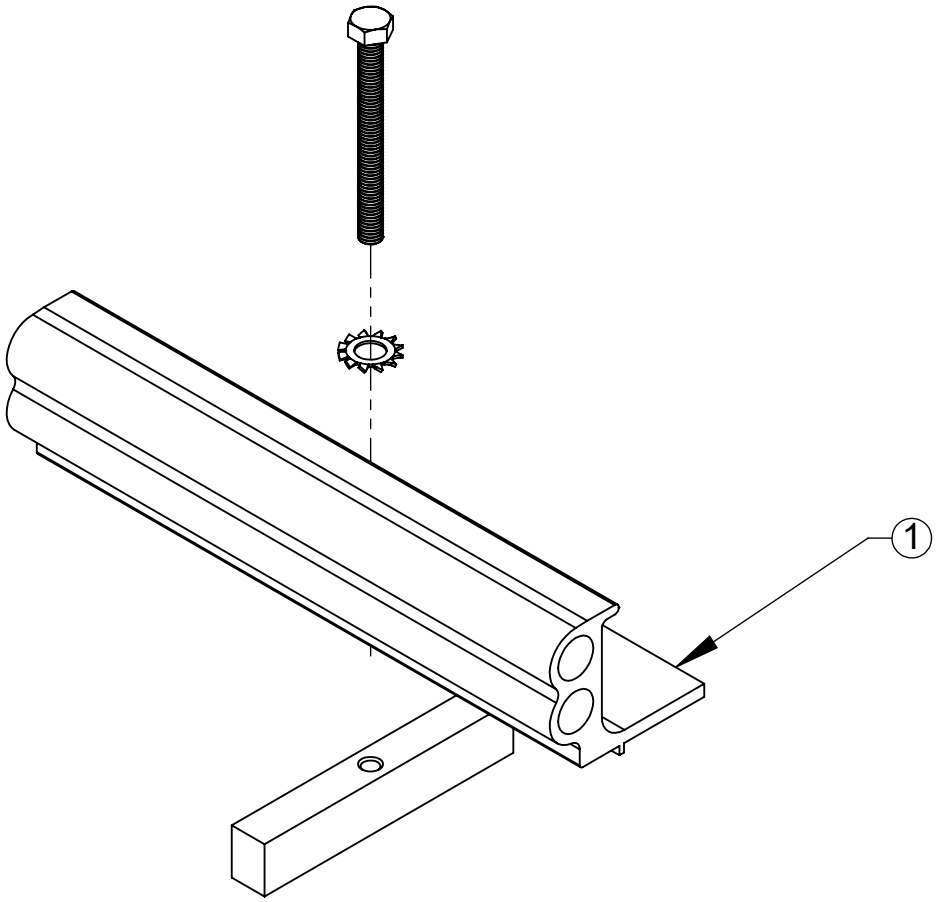
ALPINE SNOWGUARDS®

289 Harrel Street
Morrisville, VT 05661
Phone: 1.888.766.4273
Fax: 1.888.766.9994
Email: Info@alpinesnowguards.com

Scale: 1:2 | 1/18/2024

Assembly Sheet - SNOW DOG-BLK

1. Installation to be completed in accordance with manufacturer's written specifications and installation instructions.
2. See spec sheet or contact manufacturer for detailed material, finishes, and configuration options.
3. Contact manufacturer for detailed layout.
4. Do not scale drawings.
5. Subject to change without notice.
6. For patent information, visit our Patent Page.



ITEM NO.	PART CODE	DESCRIPTION	QTY
1	SNOW DOG-BLK	SOLAR SNOW DOG 6" AL-BLACK (PRE-ASSMBLED)	1

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Morrisville, VT 05661
Phone: 1.888.766.4273
Fax: 1.888.766.9994
Email: Info@alpinesnowguards.com

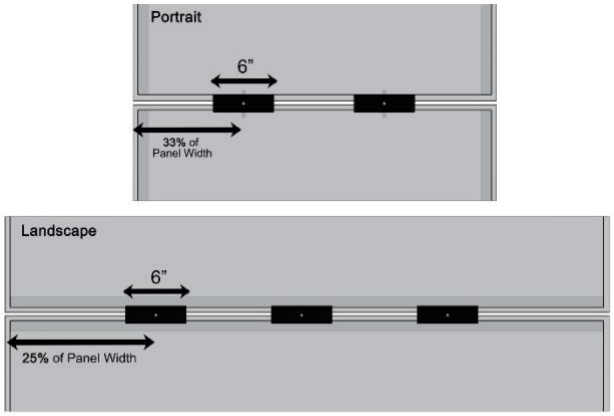
Scale: 2:3 | 1/29/2024

Snow Dog-BLK Installation Instructions
Solar Snow Management System

TYPICAL APPLICATION

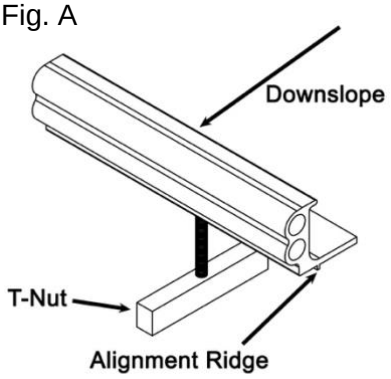
- Solar Panels (upslope panels only)

Portrait Layout: Alpine suggests using a minimum of two SNOW DOG-BLK per panel.
Landscape Layout: Alpine suggests using a minimum of three SNOW DOG-BLK per panel.



INSTALLATION

Fig. A



1. Ensure that SNOW DOG-BLK rounded edge is facing downslope (Figure A).

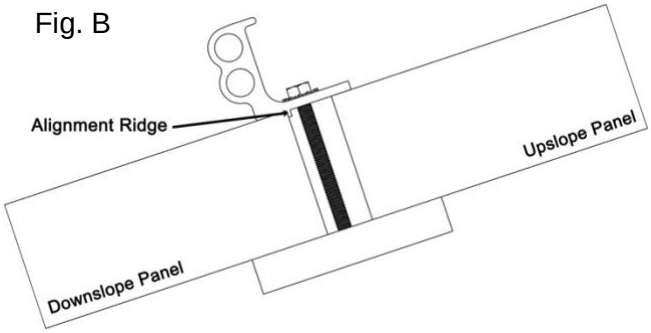
2. Align T-Nut parallel with SNOW DOG-BLK to fit between horizontal joints of array (Figure A).
   Note: *Will fit between joints 3/8"-7/8" wide.*

3. Engage top edge of downslope panel with Alignment Ridge so SNOW DOG-BLK rests on both the top of downslope panel and bottom edge of upslope panel (Figure B).

4. Turn T-Nut perpendicular to SNOW DOG-BLK to engage both the top edge of downslope panel and bottom edge of the upslope panel.

5. Tighten hex bolt on top of SNOW DOG-BLK. Fasten to 120-inch pounds.

Fig. B



Document Version 1.24.2024
07 72 53 Snow Guards

Snow Dog-BLK Specification Sheet
Snow Guards

PART 1 – GENERAL

1.1 SUMMARY

A. WORK INCLUDES

1. SNOW DOG-BLK pad-style snow guard that clamps directly to the solar panel.

B. RELATED SECTIONS

1. Section 481413: Solar Energy Collectors MasterFormat 2016 48 14 13
2. Section 077253: Snow Guards MasterFormat 2016 07 72 53

1.2 SYSTEM DESCRIPTION

A. COMPONENTS

SNOW DOG-BLK An aluminum pad-style snow guard, star washer, threaded Hex Bolt, and T-nut.

1. SNOW DOG-BLK (ships pre-assembled)

B. DESIGN REQUIREMENTS

1. Installation to be approved by solar array design engineer.
2. Minimum 2 pads per panel (Portrait). Minimum 3 pads per panel (Landscape).
3. It is important to design new structures and solar arrays or assess existing structure and solar arrays to make sure they will withstand the retained snow loads.

1.3 SUBMITTAL

A. Submit manufacturer's specifications, standard detail drawings, and installation instructions.

1.4 QUALITY ASSURANCE

A. Installer to be experienced in installation of specified solar racking system, roofing material, and snow guards for the area of the project.

1.5 DELIVERY / STORAGE / HANDLING

A. 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. Designed and exclusively distributed by Alpine SnowGuards®, a Division of Vermont Slate & Copper Services, Inc.
289 Harrel St. Morrisville, VT 05661 | 888-766-4273 | www.alpinesnowguards.com

2.2 MATERIALS

A. SNOW DOG-BLK – 6000 Series Aluminum
B. SSM-U T-NUT – 6000 Series Aluminum
C. B-HX SS-M5X0.8X 100 – 18-8 Stainless Steel
D. W-STR SS-M5 – 304 Stainless Steel

2.3 FINISH (choose one)

A. SNOW DOG-BLK – Anodized black (Standard)

PART 3 – EXECUTION

3.1 EXAMINATION

A. Substrate

1. Inspect solar array on which snow guards are to be installed and verify it will withstand any additional loading that it may incur. Notify general contractor, solar design engineer of record and owner of any deficiencies before installing Alpine SnowGuards' SNOW DOG-BLK.
2. Verify solar array has been installed correctly prior to installing snow guards.

3.2 INSTALLATION

A. Comply with architectural drawings, solar panel manufacturer's recommendation and solar array design engineer of record for location of system. Comply with manufacturer's written installation instructions.

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SOLAR SNOW MANAGEMENT

Solar arrays installed in snowy climates will shed snow in a glacial or avalanche-style event; even on slopes as low as 5°.

Alpine's solar snow guard system comprises three main components:

1. **Solar Snow Dog**: a 6-inch wide individual pad-style snow guard implemented between solar panels in the horizontal joint upslope in the array.
2. **Solar SnowMax-Universal:** an array-mounted fence-style system installed at the lowest edge of the solar array.
3. **SSG-313:** a roof-mounted, pipe-style snow guard system

Depending on the solar array's size, pitch, and location, Alpine solar snow retention components can be installed alone or, for best performance, in combination with one another.

ALPINE'S SOLAR SNOW GUARDS:

- Are a mitigation system that will allow snow to melt naturally or to be removed as needed without a roof avalanche event.
- Can be installed on new or retrofitted solar applications
- Are an ideal solution for solar arrays that shed snow onto important egress points.
- Undergo rigorous performance testing and supported the load values established in IEC 62938:2020 for solar panels.
- Have been in continuous service in multiple variations since 2012 with no reported failures.

CONTACT

INFO@ALPINESNOWGUARDS.COM
WWW.ALPINESNOWGUARDS.COM
888.766.4273

SOLAR SNOW GUARD SYSTEM

1 SOLAR SNOW DOG

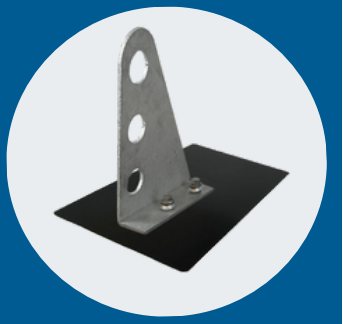
- Solar Snow Dog a 6-inch wide individual pad-style snow guard implemented between solar panels in the horizontal joint upslope in the array.
- Install 2 per panel in portait panel orientation, 3 per panel in horizontal panel orientation.
- Acts to hold and break up a sliding snow mass, preventing a roof snow avalanche.

2 SOLAR SNOWMAX UNIVERISAL

- Solar SnowMax- Universal is an array-mounted fence-style system installed at the lowest edge of the solar array.
- Taller fence style system is a proven solution that has been used in the conventional snow guard market for over 2 decades

3 SSG-313

- Solar Snow Guard- 313 is designed to stop snow that evacuates the array before it falls off the roof.
- The SSG-313 is intended to be installed in-line with the outer most load barring wall. (No closer then two feet from the array to allow for a snow landing zone.)



Solar Snow Management Overview

Recommended Components

Solar Snow Dog

- Pad-style snow guard that is 6” wide and installed upslope in the array in horizontal joints of panels that are spaced a minimum of 3/8”

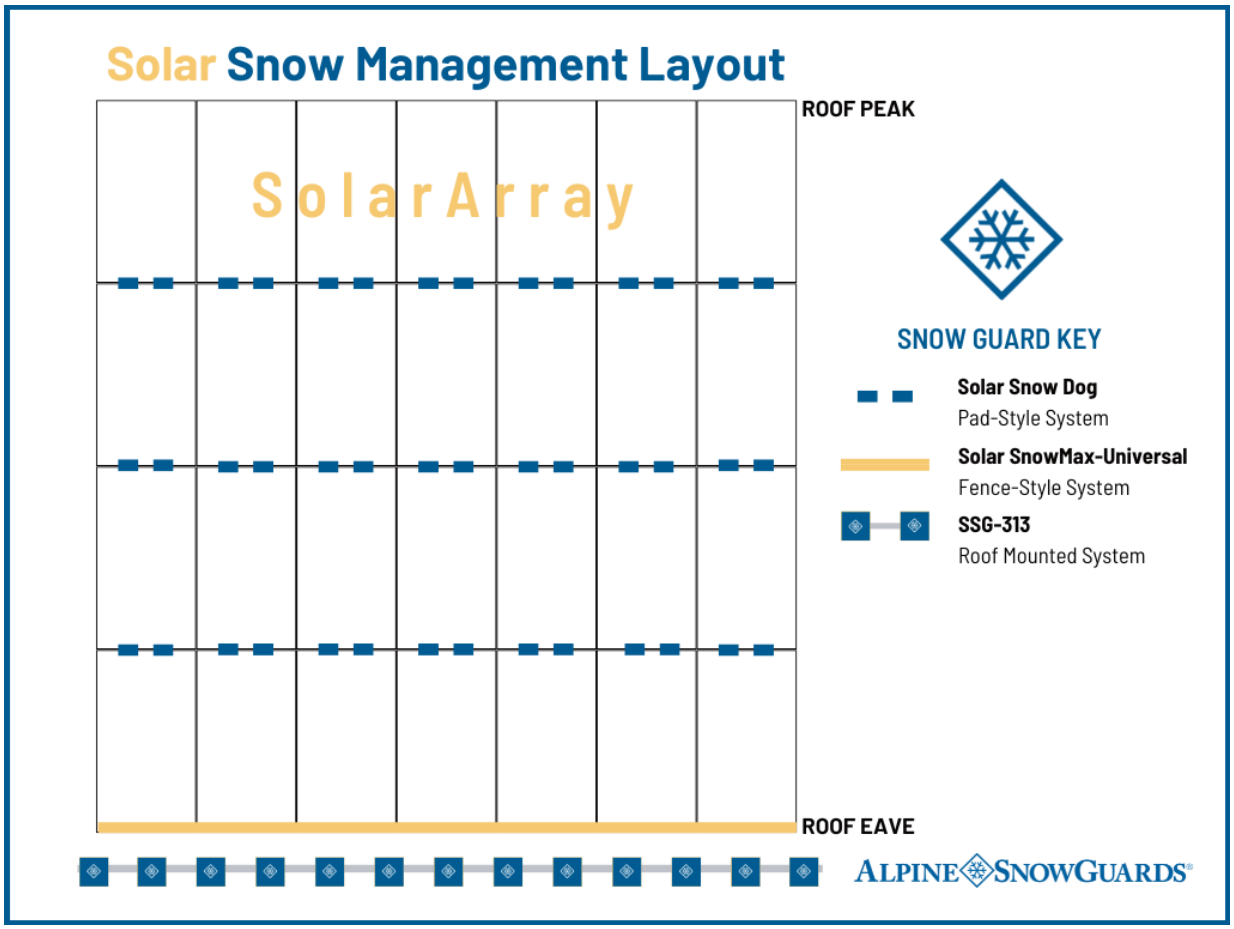
Solar SnowMax-Universal

- Array-mounted fence-style system that is 2” high and installed at lowest edge of array; limited in height to prevent panel shading and maximize snow holding potential
- Nearly eliminates panel shading except near sunrise and sunset on very low pitch applications

SSG-313

- Roof-mounted snow guard system with required minimum 24” landing zone between solar panels and roof-mounted snow guard system

When installed together, Solar Snow Dog and Solar SnowMax-Universal (SSM-U) will typically retain 4”-6” inches of snowfall which is 2-3 times the height of SSM-U’s bar.



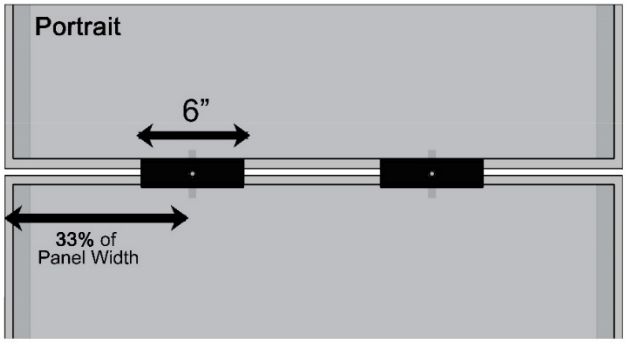
Solar Snow Management Overview

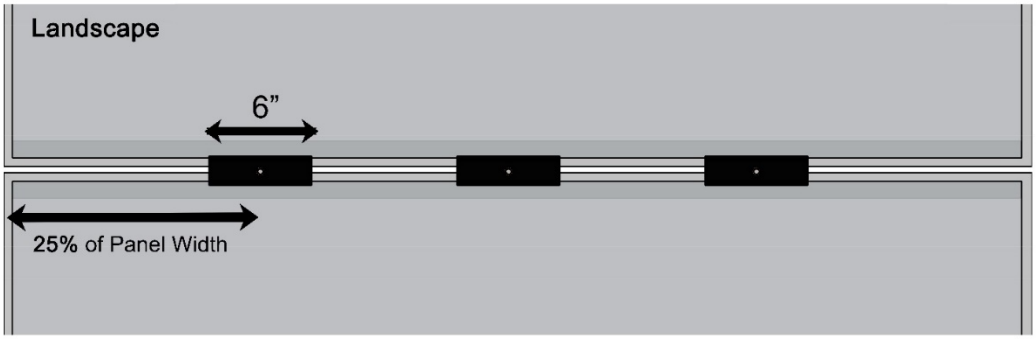
Portrait Orientation

- Alpine suggests a minimum of (2) Snow Dogs per panel, spaced at 33% of panel's width

Landscape Orientation

- Alpine suggests using a minimum of (3) Snow Dogs per panel, spaced at 25% of panel's width





Important Information About Snow Depths Greater than 6”

There may be conditions where snow accumulates to depths greater than 6” behind SSM-U and Snow Dog. If this happens, it is the responsibility of the building owner to clear the excess accumulation. This will ensure structural integrity. This will also help to protect critical safety areas below the array and allow for more power generation.

This solar snow management system slows the movement of snow and ice off the panels; limiting the chance for a large mass to evacuate all at once, similar to an avalanche.

Product Information

For product information, including Cut Sheets, Assembly, Specifications and Installation Instructions, visit https://www.alpinesnowguards.com/roof-type/solar-panels.