SnoGard™ EF Installation Instructions

Providing *The Right Way!*® to attach virtually anything to metal roofs!

S-5!® *The Right Way*

ATTENTION! This document is a guide only. This product may not be suitable for every application. The user is responsible for all necessary application engineering and design. We have online tools to help with this. Please scan the QR code to the right for additional information, warnings and disclaimers regarding product use.

You can also view load test results at www.S-5.com where applicable, or contact your S-5!® distributor for more information.

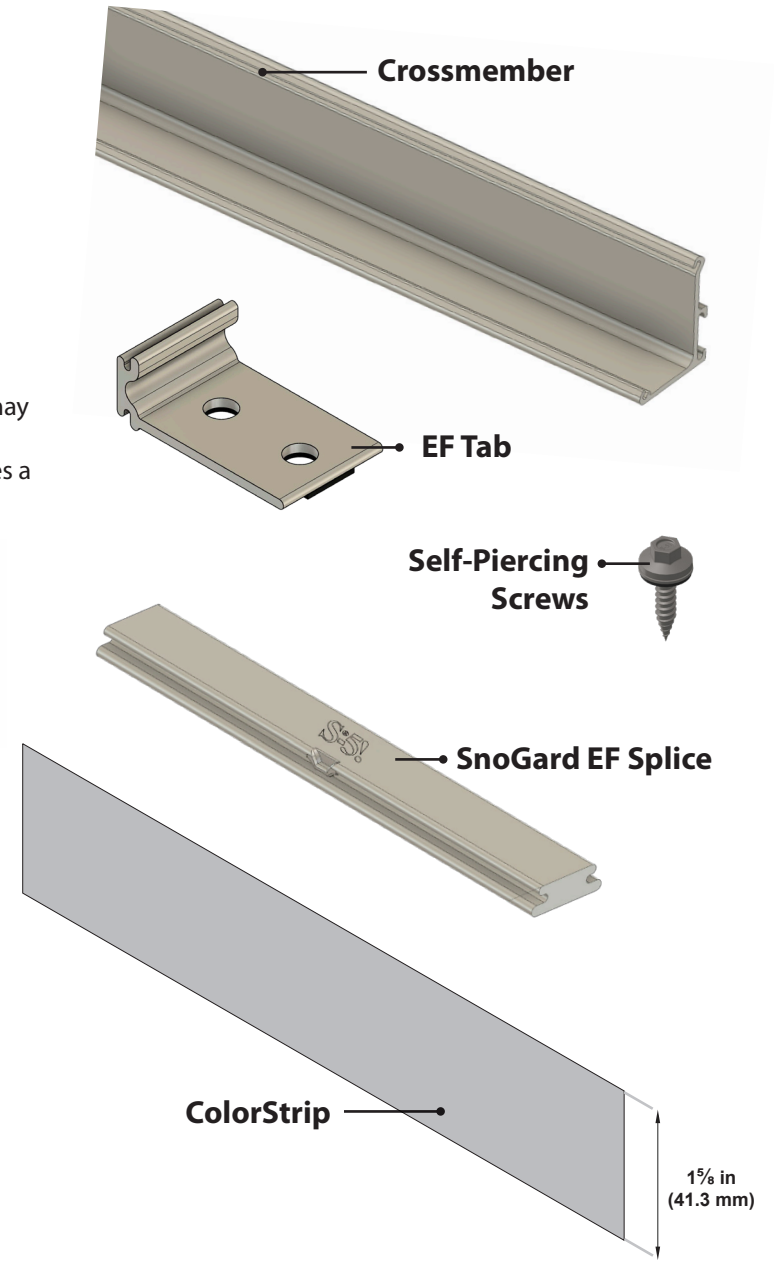
Components

- SnoGard EF Crossmember
- EF Tabs
- Self-Piercing Screws
- SnoGard EF Splice
- Optional ColorStrip™

IMPORTANT—USE THE CORRECT COLORSTRIP WIDTH: SnoGard EF requires ColorStrip material measuring **1-5/8 in. (41.3 mm) wide**. The ColorStrip may be obtained from the roofing material manufacturer. Using the same material and finish as the roof provides a consistent color match and service life.

PRO TIP

It is recommended that the ColorStrip be sheared, not slit, during manufacturing to maintain clean edges and optimal performance. Use tin snips to trim the ColorStrip to the required length on-site as needed.



Tools Required

- Tape Measure
- String Line
- Felt Tip Marker (Sharpie)
- 5/16-in Nut Driver
- Variable Torque Drive Screw Gun
- Vice Grip Pliers (if using ColorStrip)
- Tin Snips (if using ColorStrip)

Note: Any S-5! warranty and/or calculation may be void if a third-party structural engineer has not specified the hardware used. Failure to follow a structural engineer's guidance may result in a substandard installation. These instructions are intended for experienced users. Follow safety precautions and use appropriate tools.

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How to Install SnoGard™ EF

BEFORE YOU BEGIN: DETERMINE THE REQUIRED NUMBER OF ROWS

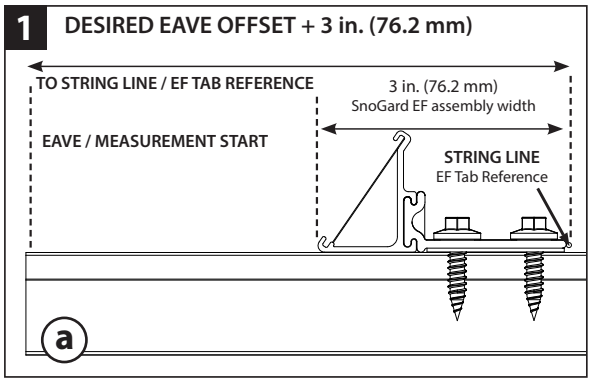
READ THESE INSTRUCTIONS COMPLETELY BEFORE BEGINNING THE INSTALLATION. Before installing SnoGard EF, refer to the **Prescriptive Loads Table** to determine the number of snow-retention rows required for the project. Use the roof design snow load, (not the ground snow load), along with the roof pitch and rafter length. Complete this step before laying out the first row.

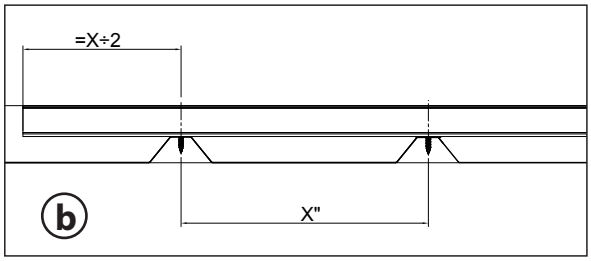
1 Determine Location and Prepare the First Row

a **Establish the First Crossmember Location:** Measure upslope from the eave to the desired edge of the SnoGard EF assembly. Add **3 in. (76.2 mm)** to this measurement to account for the width of the assembly and establish the EF Tab reference line. Stretch a string line across the roof at this location, ensuring it is straight and parallel to the eave.

b **Position the First Crossmember Between Ribs:** Beginning at the first inside rib from the rake edge of the roof, position the end of the crossmember so the cantilever equals half of the on-center rib spacing, not to exceed 6". Correctly positioning the first crossmember places subsequent crossmember joints between the roof ribs so that a splice does not interfere with an EF Tab.

c **Mark EF Tab Locations:** Using the string line as a guide, mark the roof at each EF Tab location with a felt tip marker (Sharpie). Use the upslope surface of the EF Tab as the reference point.



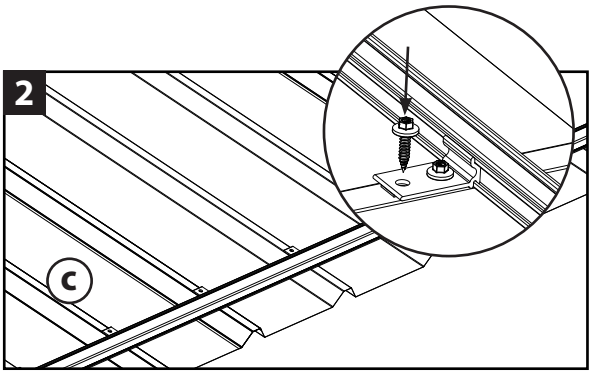


2 Prepare and Install the Crossmember

a **Load the EF Tabs onto the Crossmember:** Before positioning the crossmember on the roof, slide one EF Tab onto the crossmember for every rib the crossmember spans.

b **Position the Crossmember on the Roof:** Position the crossmember at the predetermined layout marks.

c **Position the EF Tabs on the Ribs:** Beginning at one end of the crossmember, slide the first EF Tab along the crossmember until it is centered directly over the roof rib and its upslope edge aligns with the layout mark. Install two S-5! self-piercing screws through the EF Tab and into the roof rib. Tighten the screws only enough to hold the tab and crossmember in position. Continue across the crossmember, positioning and initially fastening one EF Tab at every roof rib. Do not fully tighten the screws until the assembly is aligned and the ColorStrip is installed, if used.



PRO TIP

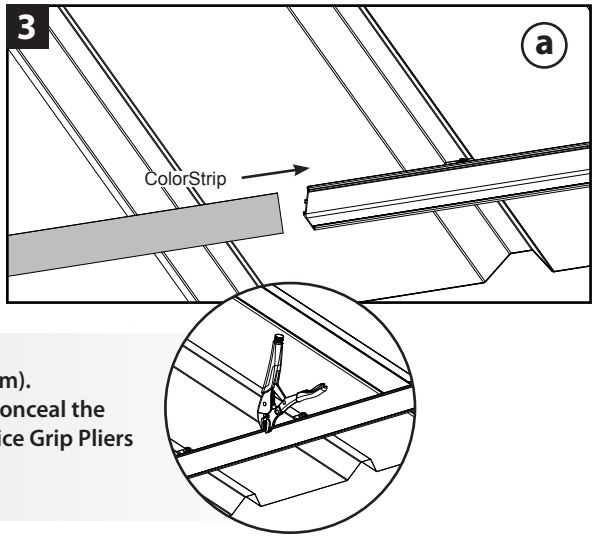
Use a variable-torque screw gun set to the lowest setting that fully seats the screws. Proper installation is indicated by slight compression of the sealing washer and a small, even amount of rubber visible around its edge. Do not overtighten the screws. Excessive torque can strip the screw in the roof panel and reduce its holding strength.

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3 Finish the Assembly and Continue the Run

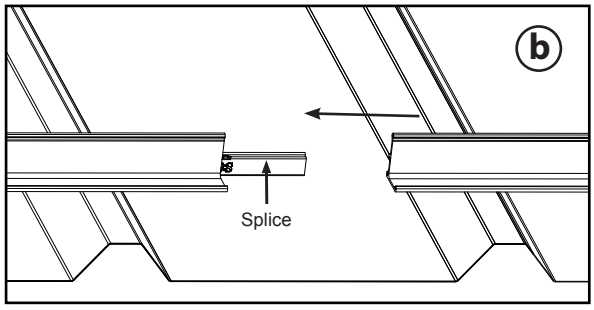


a **Install ColorStrip, if Applicable:** Before joining the crossmembers, slide the ColorStrip into the installed crossmember. Allow enough ColorStrip to extend beyond the end of the crossmember so it can continue into the adjoining crossmember. As installation progresses, guide the extended ColorStrip into the adjoining crossmember.

PRO TIP

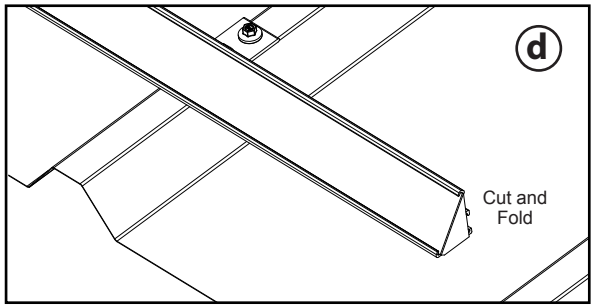
Where ColorStrip sections meet, overlap them by 1/2 in. (13 mm). Stagger the ColorStrip joints from the crossmember joints to conceal the connections. After each ColorStrip section is positioned, use Vice Grip Pliers to crimp it once near its center to limit lateral movement.

b **Connect the Crossmembers:** After loading the required EF Tabs onto the next crossmember, insert the SnoGard EF Splice into the installed crossmember until the end of the crossmember contacts the center dimple. Slide the adjoining crossmember onto the exposed end of the splice until it contacts the opposite side of the dimple. The dimple centers the splice and maintains a small space between the crossmembers for thermal expansion. The ColorStrip spans and conceals this space. Align the assembly with the layout marks and position and initially fasten the EF Tabs as described in Step 2c. Once the assembly is aligned and the ColorStrip is installed, if used, fully tighten all screws.



PRO TIP

If variations in the roof plane make the adjoining crossmembers difficult to align, temporarily leave the EF Tab nearest the splice on the previously installed crossmember unfastened. After connecting and aligning the crossmembers, install and fully tighten the screws in that tab.



c **Continue the Run:** Repeat the process for each additional crossmember, positioning one EF Tab at every roof rib and maintaining alignment with the string line or markings. Limit cantilever at end of run to 6 in.

d ***If using ColorStrip***, create a clean cut and fold over at each end of the run to prevent snow and ice from entering between the ColorStrip and the crossmember.

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SnoGard™ EF Snow Retention Load Table

Use roof design snow load, not ground snow load. For values between those listed in the table, always round up to the next listed value. For projects with a roof design snow load greater than 50 psf or a roof slope steeper than 9:12, please contact **S-5! Support** for assistance with calculations.

NUMBERS 1–4 IN THE TABLE = REQUIRED SNOW-RETENTION ROWS				
Roof pitch 1:12–3:12				
Rafter Length ≤ (ft)	≤20 psf	≤30 psf	≤40 psf	≤50 psf
≤10 ft	1	1	1	1
≤20 ft	1	1	1	1
≤30 ft	1	1	1	2
≤40 ft	1	1	2	2
≤50 ft	1	2	2	2
Roof pitch 4:12–6:12				
Rafter Length ≤ (ft)	≤20 psf	≤30 psf	≤40 psf	≤50 psf
≤10 ft	1	1	1	1
≤20 ft	1	1	2	2
≤30 ft	1	2	2	3
≤40 ft	2	2	3	3
≤50 ft	2	3	3	4
Roof pitch 7:12–9:12				
Rafter Length ≤ (ft)	≤20 psf	≤30 psf	≤40 psf	≤50 psf
≤10 ft	1	1	1	1
≤20 ft	1	2	2	2
≤30 ft	2	2	3	3
≤40 ft	2	3	3	4
≤50 ft	2	3	4	

REQUIRED SNOW-RETENTION ROWS — COLOR KEY			
1 — One row	2 — Two rows	3 — Three rows	4 — Four rows

BASIS OF CALCULATION The values shown in this table are based on the roof design snow load, roof slope, eave-to-ridge dimension, roof rib spacing of 12", and a 29-gauge roof panel. Tabulated values are governed by the lowest allowable capacity of the applicable components and connections within the load path. This table may also be used with roof panels thicker than 29 gauge and rib spacing less than 12 inches, provided all other applicable project conditions remain within the limits shown.The table provided applies only to SnoGard EF installed with the specified S-5! EF Tabs and fasteners. Do not use S-5! CF Tabs, clamps, brackets, or other attachment components with SnoGard EF; these combinations are not covered by the design values in this guide.

APPLICABILITY This guide provides pre-engineered, prescriptive system configurations for projects within the stated design parameters and limitations and does not constitute project-specific engineering. Do not extrapolate values beyond the tabulated limits. For conditions not represented—including greater roof design snow loads, longer eave-to-ridge dimensions, or steeper roof slopes—contact S-5! Support for assistance. Project-specific engineering shall be provided when required by the authority having jurisdiction.

ROOF SNOW LOAD Use the applicable roof design snow load, not the ground snow load when using this table. Roof snow load may be affected by project-specific conditions including roof geometry, exposure, thermal conditions, drifting, unbalanced snow accumulation, adjacent structures or roof elevations, parapets, obstructions, and sliding snow, as well as applicable building-code requirements. The appropriate roof design snow load shall be determined in accordance with the governing building code and project-specific design conditions. Consult a qualified design professional when required.

Need More Help? CONTACT SUPPORT AT **888.825.3432** OR **support@s-5.com**