

Before Installing the SN❄️BAR™ System

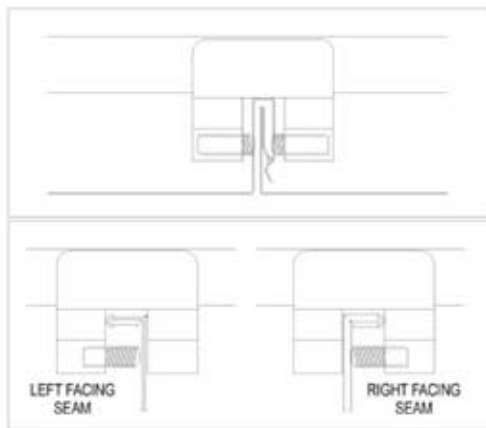


Figure #1
Two Set Screw Type Seam
And One Set Screw Type Seam

Read the DESIGN CONSIDERATIONS (on the last page), and make sure the roof panels you are attaching to are properly attached to the structure at a fixed point (See note in Fig. 2). This does not mean the clips, clips do not fix the roof panels, the standing seam panels must be attached with enough fasteners to withstand the added load incurred by the retained snow.

REQUIRED TOOLS: Make sure to have the proper tools for installing the SN❄️BAR™ System.

RUBBER Mallet, DRILL GUN, TORQUE WRENCH (to tighten set screws to 90 in/lbs), ALLEN BITS (provided by SN❄️BAR™), NUT DRIVER (size is 5/16", available from SN❄️BAR™), FLEX DRIVER (available from SN❄️BAR™), CHALK LINE, TAPE MEASURE, HACK SAW, and FILE to De-bur.

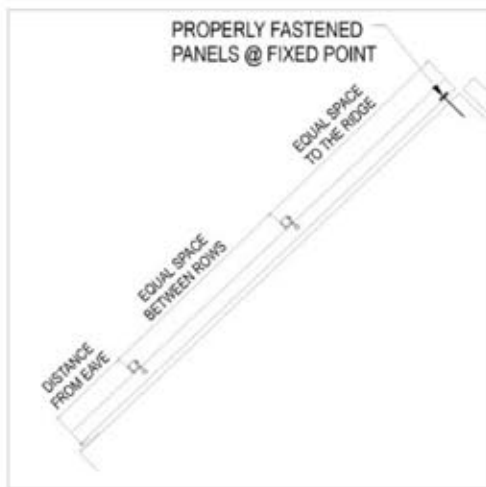


Figure #2
Roof panel must be properly fixed at the ridge or eave

MAKE SURE YOU HAVE ALL THE SN❄️BAR™ PARTS: Check packing slip with the Clamps, Bars, Set Screws (See note below about ONE Screw per clamp), Tek Screws, End Caps, Optional Ice Stoppers (if ordered with your project).

DETERMINE if your roof panel seam requires ONE SET SCREW or TWO SET SCREWS (See Figure 1). If your roof panel is a mechanically seamed roof with a single lock (such as, AEP Span-Lok, Butler VSR, MBCI Batten-Lok, American Buildings Lok-Seam, etc.), you only need ONE SET SCREW, and your job was only provided with ONE SET SCREW PER CLAMP. All other seam types require TWO SET SCREWS.

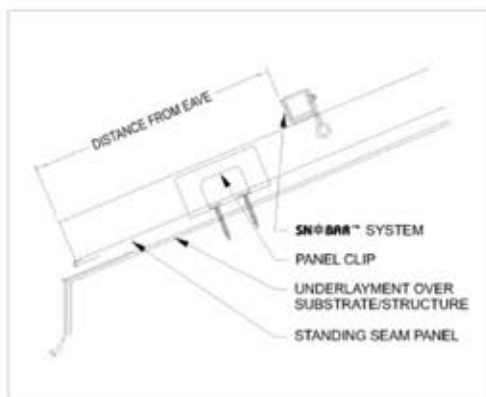


Figure #3

Make a layout plan of where the SN❄️BAR™ System is needed on the roof before starting installation. If additional rows of SN❄️BAR™ System are needed on the roof or certain roof areas (based on Design Considerations) make sure to layout and space the additional rows equally up the roof slope (see Fig. 2). For example, if the roof from eave to ridge is 26'-0", and you were putting two rows of SN❄️BAR™ System on, you would put the first row at 12" up from the eave, and the second row would be put at 13'-6" from the eave (or 12'-6" from the first bar).

Lastly, before installing the SN❄️BAR™ System make sure you are properly tied off with the correct safety equipment/harness for working on sloped roofs. **NEVER** use the SN❄️BAR™ System as a tie off point or support for safety.

SN❄️BAR™ Installation Instructions

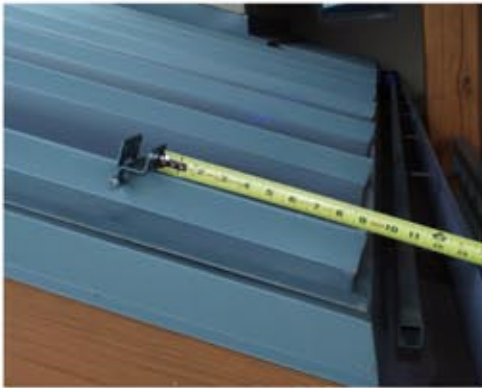


Figure #4



Figure #5



Figure #6



Figure #7

1. For seams using TWO SET SCREWS. Screw the Set Screws into the clamps equidistant, leaving just enough room for the clamp to be installed onto the seam. For seams needing only ONE SET SCREW determine how the clamp direction is going based on how roof panel seams face (See Fig. 1) and partially screw in the set screw into ONLY ONE side of the clamp.
2. Based on the layout, measure 12" to 18" from the eave line to the first row of SN❄️BAR™ (if there is a overhang, place the first row of SN❄️BAR™ at the bearing wall). Make sure there is no panel clip at that location so that the SN❄️BAR™ will not fix the panel. (See Fig. 3) **Note:** In a case where the metal roofing system has two piece floating clips to allow for thermal movement, the SN❄️BAR™ clamp can be placed at the clip.
3. Set first clamp in proper orientation to roof slope (See Fig. 3 and 4). Hand tighten Set Screws to seam, making sure clamp is centered and bottom of clamp is down tight to top of seam. While putting downward pressure on the clamp, torque one of the two set screws to 90 in/lbs (See Fig. 5).
4. Based on a twelve foot long bar, set opposite end clamp per steps 2 and 3. Once clamp is in place, snap chalk line between the two clamps for placement of remaining clamps. Install the remaining clamps on each seam per step 3 (See Fig. 6). During installation of clamps, periodically check the set screws of previously installed clamps for proper torque.
5. Install Plastic End Caps at each end of bar. Be sure to de-bur any field cut bars prior to installing End Caps (See Fig. 7).
6. Place bar in clamps, making sure that the end of the bar does not extend past clamp more than 3" (See Fig. 8). The 3" rule applies to the beginning of the bar as well as in valley areas (See Fig. 9), when in a continuous run do not extend the bar more than half of the width of the panel (See Fig. 12). **Note:** Bar may have to be cut to length depending on panel width so that the bar never cantilevers more than half a panel width in a continuous run or more than 3" at the end/beginning of the bar and in valleys (See Fig. 10 as to what **NOT TO DO**).
7. Making sure the bar is seated tightly in the first clamp, apply downward pressure to bar while installing the two (2) Tek Screws through the back of the clamp (See Fig. 11). Follow the same procedures for the opposite end. Then, install the tek screws in the remaining clamps, ensuring that the bar is seated in the clamp and that the clamp is level and flush with the seam. **Note:** When using Stainless Steel bar, at times, you might have to pre-drill the Tek Screw holes with a #30 drill bit (1/8") prior to installing the Tek Screws.



Figure #8



Figure #9

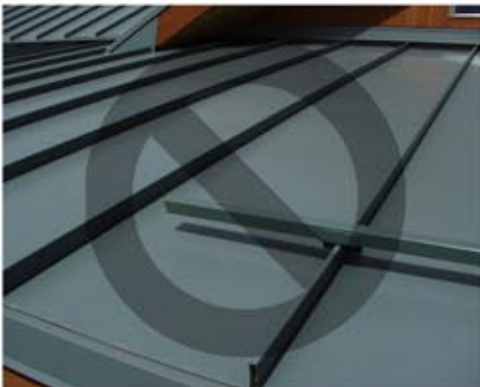


Figure #10 - DO NOT DO

8. If a short run of **SN❄️BAR™** is needed, make sure to span at least two seams. In a continuous run of **SN❄️BAR™**, you may have to cut a bar so that you do not end up with a short bar at one seam. One clamp and a short bar clamped on one seam is not acceptable (See Fig. 14 as to what **NOT TO DO**)
9. When the optional Ice Stoppers are used, make sure the Ice Stopper has the Tek Screw hole on the upslope side of the bar and is seated in the middle of the panel tightly onto the bar, apply downward pressure to Ice Stopper while installing the two (2) Tek Screws through the back of the Ice Stopper (Fig 13). For Panel widths 24" or less use one (1) Ice Stopper per panel and for greater than 24" use two (2) Ice Stoppers per panel. Typically Ice Stoppers are only installed on the first run of **SN❄️BAR™** above the eave line.
10. Repeat steps 4 through 8 until continuous bar is in place. Always make sure that the end of the bar does not exceed more than half the width of the panel or that the ends of the bars are no further apart that 2" (See Fig. 12). This means for certain width panels, the bars may have to be field cut by 4" to 12".
11. For additional rows of **SN❄️BAR™** up the slope, repeat steps 3 through 9. Make sure that if multiple rows of **SN❄️BAR™** are needed on a roof or in certain areas, always space them equally up the roof slope. For example, if you have a 31'-6" panel length from eave to the ridge that requires three rows of **SN❄️BAR™**, place the first row of **SN❄️BAR™** 18" up from the eave and the second row 10'-0" up from the first row of **SN❄️BAR™**, then place the third and final row at 10'-0" up from the second row (or 21'-6" up from the eave).

*Riddell & Company, Inc. and Action Manufacturing, LLC are under no liability if failure occurs from improper installation, improper set screw torque, improper panel attachment, improper roof system installation, or inadequate design of the **SN❄️BAR™** system.*



Figure #14 - DO NOT DO



Figure #11

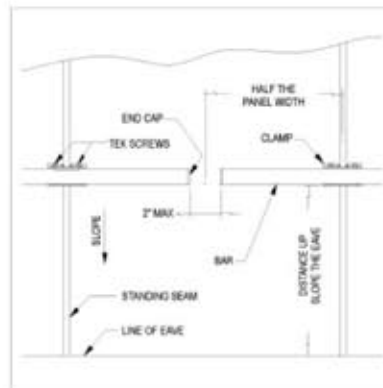


Figure #12

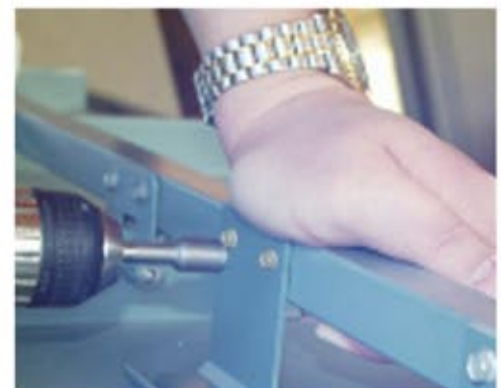


Figure #13

Design Considerations

1. All loads incurred by the **SN❄️BAR™** System will be transferred to the panels. Therefore, proper panel attachment to substrate/structure is necessary to prevent roof panels from sliding under snow load. New and existing structures must be evaluated to insure they can withstand retained snow loads. (In instances where there is an overhang at the eave edge, it is imperative to make sure that the overhang can hold the accumulated loading, otherwise, the first row of **SN❄️BAR™** should occur at the bearing wall.)
2. It is not recommended to place the **SN❄️BAR™** System in isolated areas such as doorways, vents and partial roof areas. Please call for special design considerations in these areas.
3. No snow retention system is capable of retaining 100% of snow and ice from falling off the roof.
4. Roof system should be a minimum of 24 gauge steel and have a seam height of at least 1". It is not recommended to use a clamp type system when the roof panel uses a separate seam cover or batten.
5. Clamp spacing varies depending on seam spacing (12"o.c. up to 42"o.c.). Clamps should be placed at every seam, so that the load is distributed evenly to every roof panel.
6. Designer/Architect, Installer, or Owner of the project should have knowledge of the local snow loads (ground snow load PSF), climatic conditions, roof slope, roof orientation, potential drifting, and roof design prior to installing **SN❄️BAR™**.
7. After considering the above factors, determine lineal footage of **SN❄️BAR™** required based on length of panels, roof slope, snow loading, and areas needing protection from falling snow. More than one row of **SN❄️BAR™** may be needed.
8. Call SnoBlox-SnoJax at 1-800-SNOJAX 1 or visit us at www.SNOBLOX.com for further information.
9. Finally, no matter how much is designed into a system, Mother Nature will throw more at us than we have considered, such as drifting, ice, unusual amounts of snowfall, etc. Owners must be aware of these conditions and when these extremes are reached, snow and ice should be physically removed from the roof. Any snow retention system will not prevent possible wind blown overhangs or cornices. The owner must be aware of these situations and remove them as they occur.

*It is the sole responsibility of the Designer/Architect, Installer, or Owner to assess the suitability of using the **SN❄️BAR™** based on the above design considerations*



Manufactured by Action Manufacturing, LLC
Marketed by Riddell & Company, Inc.
Marketed by SnoBlox-SnoJax

671 Willow Street Lemoyne, PA 17043
1-800-SNOJAX 1 (717) 697-1999 Fax: (717)-697-2452
www.SNOBLOX.com www.SNOJAX.com