

Residential



Residential

ADVANCED PROTECTION

for

EXTREME CLIMATES

Commercial

Industrial

Commercial

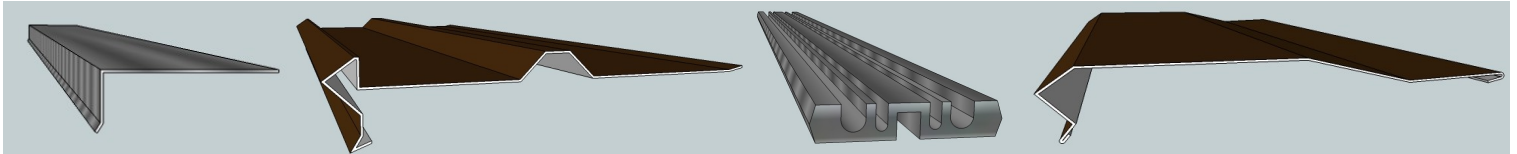


INSTALLATION MANUAL

SnoFree™ Roof Panel System



Installing the SnoFree™ Panel Eave System for New Roofs



SFP– CLEAT

SFP– BASE

SFP– EXTRUSION

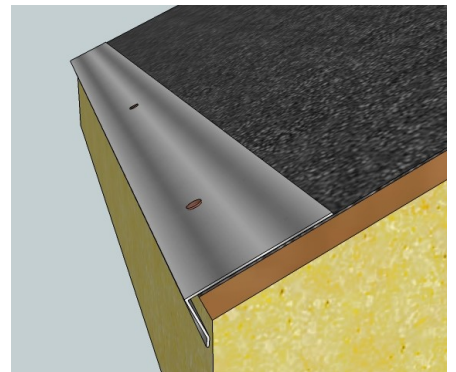
SFP– TOP COVER

Step # 1 Placing the Cleat

Install Ice and Water Shield as per code to the edge of sheeting.

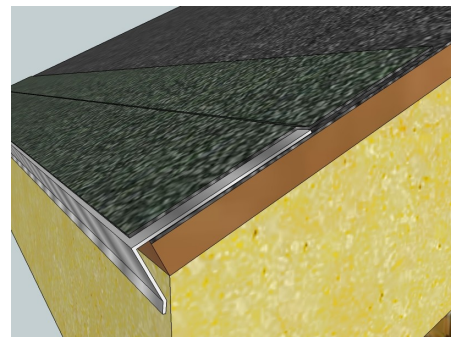
Install the supplied 4' Long cleat to the surface on top of the Ice and Water Shield layer. Attach with pan headed screws or flat roofing nails a minimum of 18" O.C.

NOTE: Align the cleat level and square for the entire eave. Any variation will affect the installation of the remaining steps and may result in an unsatisfactory finished product.



Step # 2 Install Ice and Water Shield Strip

Install 6" or 12" Strip of Ice and Water Shield over the installed cleat to ensure proper protection. Ensure that the protective layer is properly attached to the upper protective layer with minimal wrinkles or gaps.

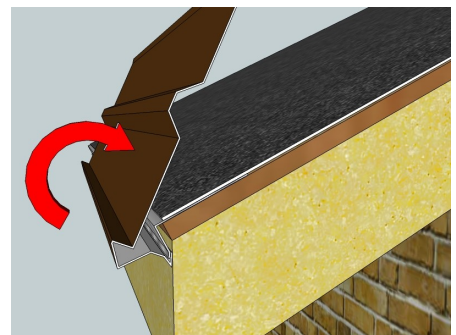


Step # 3 Install SFP – Base

Hook the lower open hem with the installed cleat and rotate properly until the base is resting on the roofing deck.

End Cap Installation—Refer to Page 5

All ends of a panel run must have an end cap. We recommend that end caps should be installed prior to the base piece. The end cap will ensure that the conductive oven effect inside the panel system will stay effective and will also protect the panel from wind.



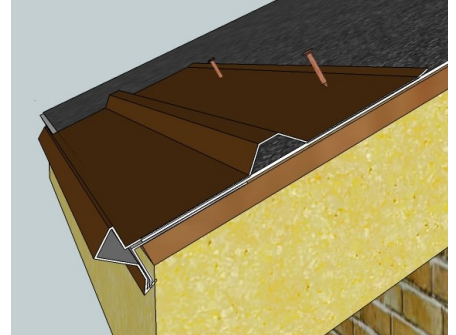
Installing the SnoFree™ Panel Eave System

Step # 4 Attaching the Base Panel to the Roof

Once base is firmly on the roof, Attach lower base with pan headed screws or flat headed nails between 2" and 3" from the back of the base to ensure that penetrations are protected once the cover is installed. Seal all penetrations.

Remove any protective plastic from the panel prior to the next step.

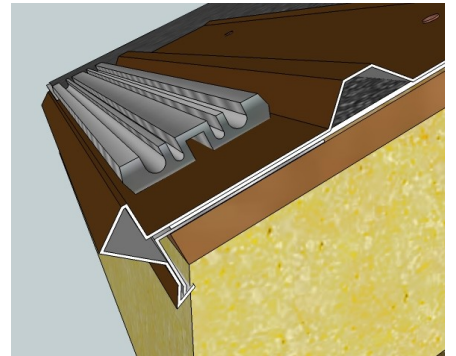
If you are installing the **SFP 36** or the **SFP 48**. You will need to attach both base pieces with screws. If desired, you can attach the upper base to the lower base with small self tapping screws through the side of the connecting rib.



Step # 5 Insert the SFP - 4X or SFP - 6X Extrusion

Set the extrusion into the corresponding channel. Leave adequate space between the end of the extrusion and any End caps or End Walls for the heating cable to pass through to the next chamber or to bend around to start the second pass of cable in the extrusion.

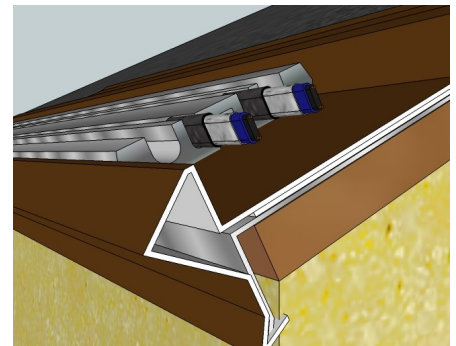
OPTIONAL: If you would like to adhere the extrusion in the bottom of the tray. You may use any form of adhesive that will work properly on all metal or Kynar surfaces.



Step # 6 Install heating cable or Hydronic Tubing

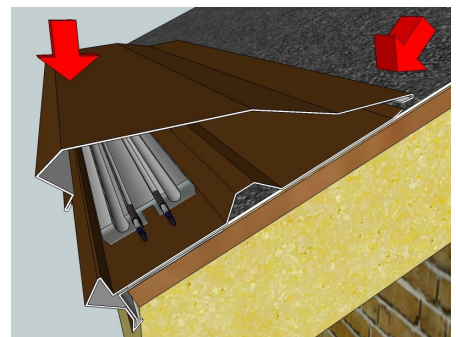
Insert heating cable in extrusion channels. Inspect all edges of extrusions and make sure that all edges are free of rough cuts or metal cutting burrs. Any obstruction that can cause harm to the tubing or the jacket of the cable can cause damage to the working capability of the system.

Do not try to force any splices or end seals into the extrusion.



Step # 7 Install SFP – Top Cover

Once all connections within the panel system are finished. Attach the cover by hooking the back open hem into the base lip, pulling towards the front of the eave panel. Once there is a proper continuous connection made, Push downward on the top edge of the cover to snap the cover over the base panel.



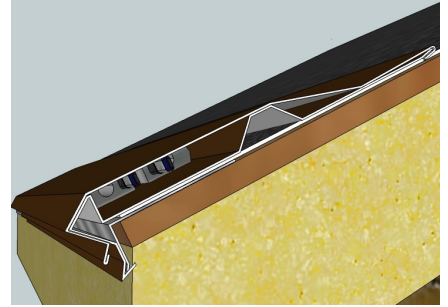
Installing the SnoFree™ Panel Eave System

Step # 8 Finalizing the Cover Installation

Firmly install the SNAP2LOCK Cover by putting downward force onto the nose of the cover. Ensure the cover is properly seated onto the base piece.

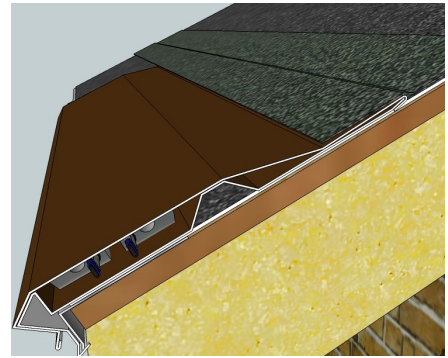
Remove any protective plastic from the panel prior to the next step.

Install all SFP-XJ expansion joint covers during this stage of the process. Apply adequate sealant on the bottom of the expansion joint cover on both sides to ensure that no water can enter into the base system below.



Step # 9 Attach the 2nd Layer of Moisture Barrier

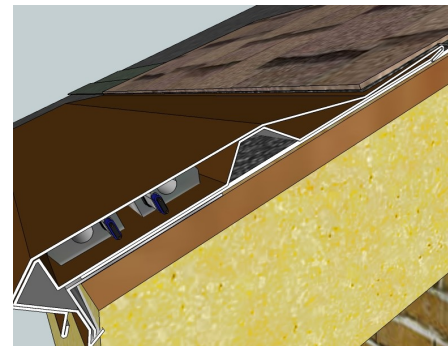
Attach the last strip of Ice and Water Shield Moisture barrier. Install the barrier over the cover from the first bend in the metal to a minimum of 4" above the system onto the existing barrier installed prior to Step # 1.



Step # 10 Finish your Roofing Material

Finish all roofing material (Ex. Shingles, Shakes, Standing Seam Panels, Etc.)

We recommend installing all roofing material to cover the last ice and water shield strip previously installed. Any rigid form of material is not recommended to be installed past the last upper bend on the cover to ensure easy access to the cable and extrusion.



End Cap installation: Proceed to next page

End caps for all rake or gabled edges to be explained in the next section of instructions.

This step may require stronger understanding of working with sheet metal and a professional may be needed to ensure a seamless look.

Ridge Cap Installation

Ridge caps are used for any outside corner connections of eave panels. If your project needs a ridge cap for a clean, finished look. Simply cut the ridge cap to the necessary length and ensure that the ridge cap covers all entrances into the panel system. Gasket based screws or rivets will work best to attach the ridge cap to the SFP cover.

This step may require stronger understanding of working with sheet metal and a professional may be needed to ensure a desirable finished look.



Installing the SnoFree™ Panel Eave System **End Cap Installation**

For all rake endings or panel terminations

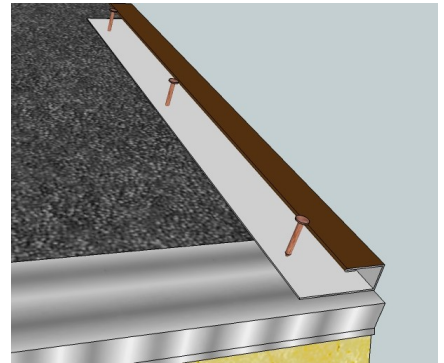
Step # 1 **Installing the End Cap**

This step is to be implemented after Step # 2 on the EAVE INSTALLATION INSTRUCTIONS

Remove any protective plastic from the end cap prior to fastening the end cap.

Install end cap along the rake or termination end by screwing or nailing into the deck of the roof. Plan to have the end cap end slightly above the end of the metal on the panel. Seal all penetrations.

HINT: You may leave this piece long depending on your transition into your roofing material, cut to length according to your discretion.

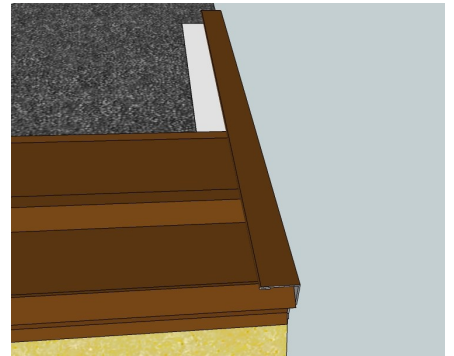


Step # 2 **Insert the SFP Base into the End Cap**

Hook the front end of the base onto the cleat and slide the panel into the end cap.

Firmly attach the base to the roof deck and follow remaining steps to finish your eave panel system.

HINT: If you are installing **SFP-18 or greater**, make sure you leave adequate space between end cap and the base to allow for the cables to leave the extrusion and enter into the next extrusion above.

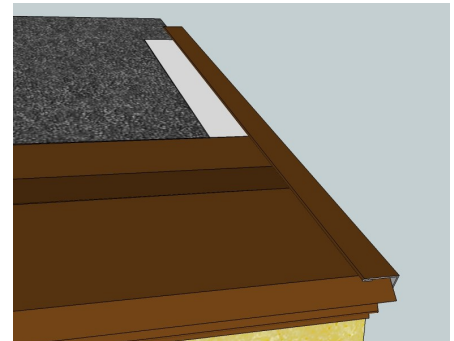


Step # 3 **Install the SFP Top Cover**

Follow all other steps in EAVE INSTALLATION prior to cover installation.

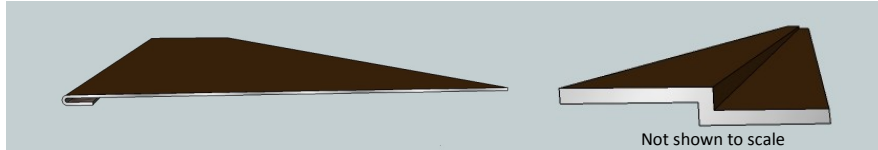
Install the cover onto the base and slide into the end cap to ensure that the end cap properly protects the opening of the panel system.

After top cover is installed. Cut and bend all remaining end cap to ensure a smooth transition of the metal. The end cap should be finalized prior to final roofing material installation.





Installing the SnoFree™ Panel Eave System on Existing Roofs



SFP- TRANSITION *

SFP- Z METAL *

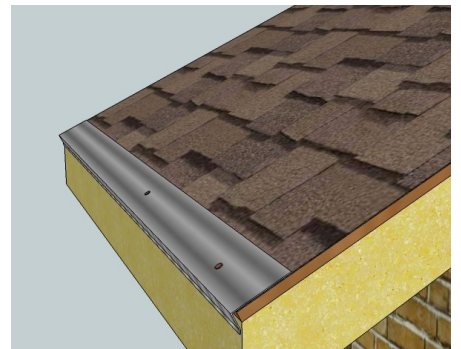
* IN ADDITION TO THE REQUIRED PARTS OF THE EAVE PANEL SYSTEM

Step # 1 **Placing the Cleat**

Install the supplied 4' Long cleat to the surface on top of the existing asphalt shingle roof. Attach with pan headed screws or flat roofing nails a minimum of 18" O.C.

Seal all Penetrations properly.

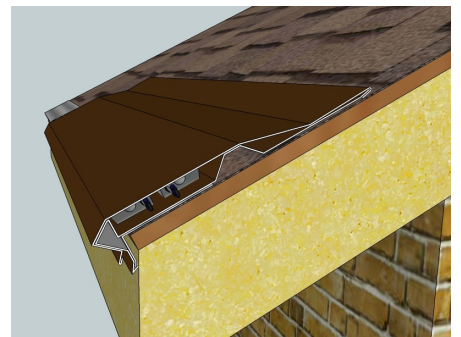
NOTE: Align the cleat level and square for the entire eave. Any variation will affect the installation of the remaining steps and may result in an unsatisfactory finished look.



Step # 2 **Refer to page 1 of "Installing Eave System"**

Follow steps #2 through #8 in the section of "Installing the SnoFree™ Panel Eave System for New Roofs"

We recommend a bead of sealant along the back side of the panel system to ensure no water is seeping into the fasteners under the cover and base.

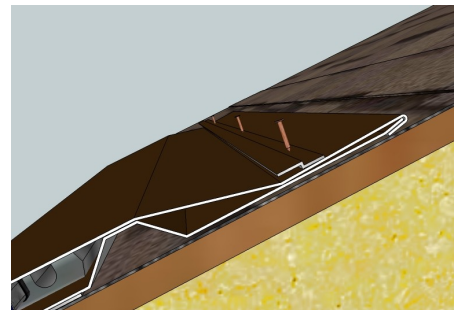


Step # 3 **Install SFP – Z Metal**

Install the Z Metal along the tail of the system.

We recommend a bead of sealant underneath the "Z Metal".

Attach with small screws or metal rivets that will hold firmly into the metal top cover and base.

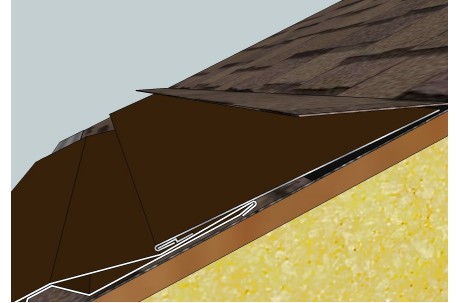


Installing the SnoFree™ Panel Eave System for Existing Roofs

Step # 4 **Install the Transition Flashing**

Lift up the next available course of shingles. Insert the open hem of the transition piece into the corresponding lip of the recently installed Z Metal, while the tail of the transition piece should extend up underneath the course of shingle until it reaches the shingle fasteners.

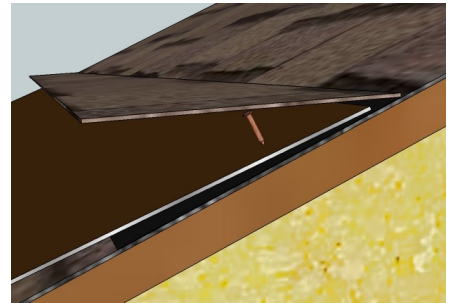
HINT: If the transition is too wide to fit between the Z metal and the fasteners. Trim the transition piece to fit, trimming the side without the hem.



Step # 5 **Attach Transition**

Attach the Transition pieces into the roof deck with small screws or roofing nails.

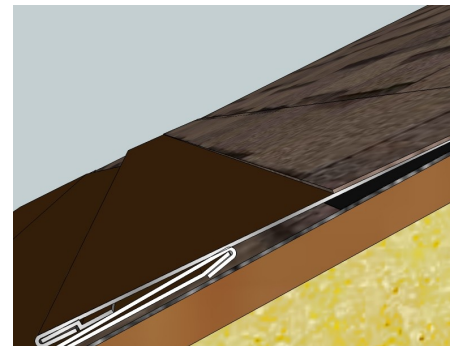
CAUTION: When installing this system on older roofs, be careful to not harm the affected shingle course. Shingles can become brittle over time and can be damaged if not careful.



Step # 6 **Lay Shingles Flat**

Re-apply shingle course to the transition piece. If shingles are not laying flat, new sealant may be needed to adhere the asphalt shingle to the transition piece.

Ensure that all fasteners are sealed underneath sealant or the shingle course.

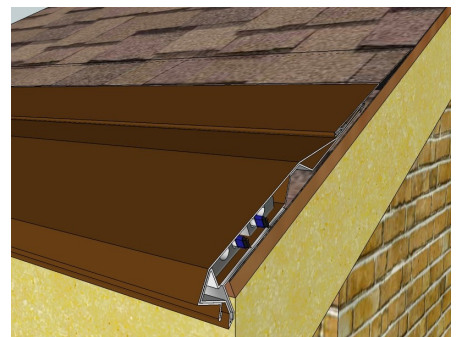


Step # 7 **Finished**

Your SFP Heated Eave Panel system for existing roofs is finished.

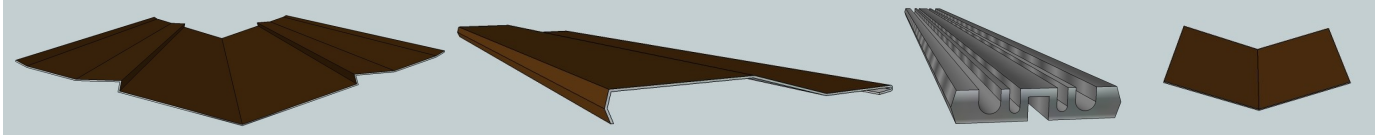
Follow all other instructions for any other connection that you may need or consult a sheet metal professional for any questions regarding bending or onsite fabrication.

Picture shown without End Cap installed. Refer to Page 5 for end cap installation.





Installing the SnoFree™ Valley System for New Roofs



SFP – VALLEY BASE

SFP – VALLEY COVER / 2 Each

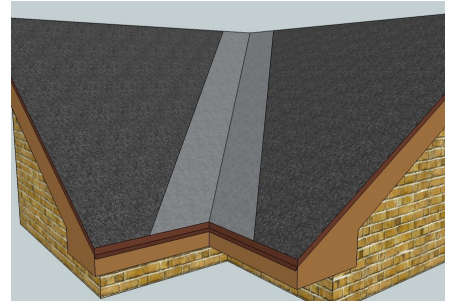
SFP – EXTRUSION

SFP – V CONNECTOR

Step # 1 Install Ice and Water Shield over Sheeting

Install Ice and Water Shield as per code to the sheeting.

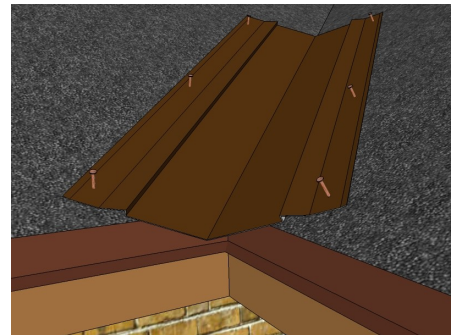
OPTIONAL: Install “Roll Valley” material in valley continuously for added protection against future possible leakage. Seal all penetrations.



Step # 2 Install Valley Base

Install the valley base in the valley and attach with pan headed screws or nails 1 1/2” from the lip throughout length of the valley.

Overhang the base to ensure sufficient material to cover all the ice and water shield material.

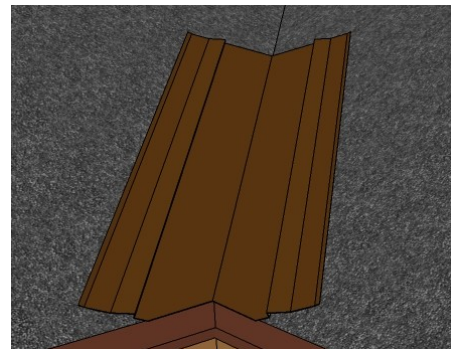


Step # 3 Cut the base of the valley

Cut the base material at the bottom section to allow the melted water to empty into the rain gutter (if present).

Make sure to overhang the base a minimum of 3/4” over the drip edge lip.

Remove protective plastic from metal prior to the next step.



Installing the SnoFree™ Valley System for New Roofs

Step # 4 Attaching the connector to the valley base

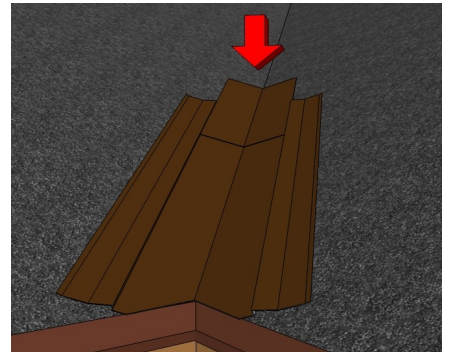
Install the connector valley into the top portion of the valley where the next upper valley will intersect.

Lay the connector into the top of the valley tray no more than 12" past the top of the bottom valley.

Attach with screws at the top of the connector into the ice and water shield.

Do not attach the connector through the valley tray base. Seal all penetrations.

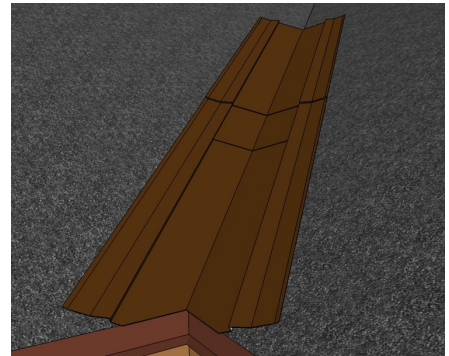
Remove protective plastic from metal prior to the next step.



Step # 5 Install the next valley base

Install the next course of valley base inline with the bottom base. The next course will sit on top of the valley connector that was just installed.

Do not place any fasteners inside the valley tray area, unless properly protected with sealant or gasket type screws.

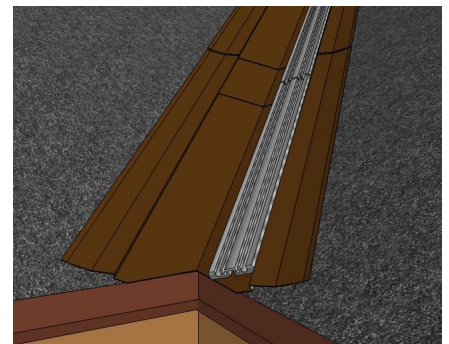


Step # 6 Place the extrusions and Heat Trace

Place the extrusion into the area of the valley to receive the valley cover. Apply an adhesive to hold the extrusion in place against the vertical rib on the valley base.

Install the heat trace cable or hydronic tubing into the extrusions.

HINT: If the roof is too steep to hold the extrusion in place while installing the heat source, Proceed to the next step with the cover and then slide the finished extrusion into the valley cover.

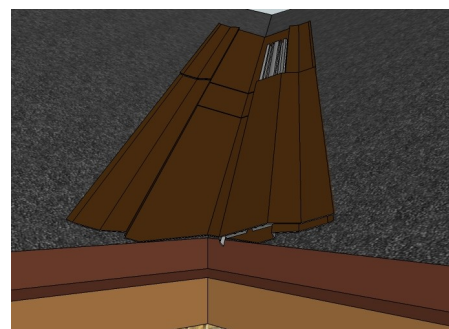


Step # 7 Install Valley Cover

Once all connections within the valley panel system are finished. Attach the cover by hooking the back open hem into the base lip, pulling towards the center of the valley. Once there is a proper continuous connection made, Push downward on the top in order to seat the cover on top of the extrusion.

Leave sufficient material on end to cut and bend, to cover the ends of the extrusion while keeping a clean and professional look.

Remove any protective plastic before the next step.



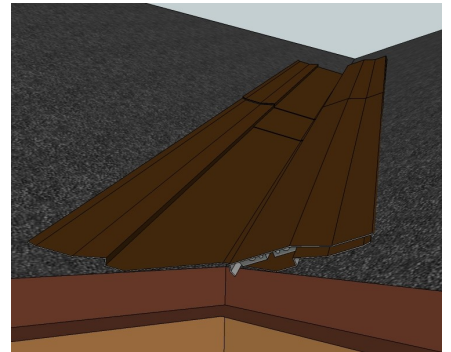
Installing the SnoFree™ Valley System for New Roofs

Step # 8 **Attach all Covers and Expansion Joints**

Install remaining valley cover on both sides of the valley.

Attach expansion joint covers to all joints in the valley system. Apply adequate sealant on the bottom side of the expansion joint cover to ensure that minimum amounts of water can enter into the bottom tray area.

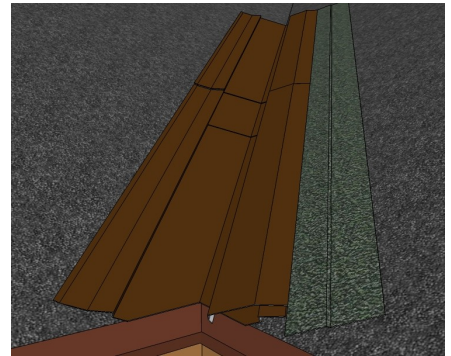
Remove all protective plastic on metal prior to the next step.



Step # 9 **Install Ice and Water Shield Strip**

Attach the last strip of Ice and Water Shield Moisture barrier. Install the barrier over the cover from the first bend in the metal to a minimum of 4" above the system onto the existing barrier installed prior to Step # 1.

Confirm that all moisture barrier is installed according to the manufacturer's instructions.



Step # 10 **Install roofing material**

Once all steps have been followed for both sides of the valley. Finish off with your roofing material.

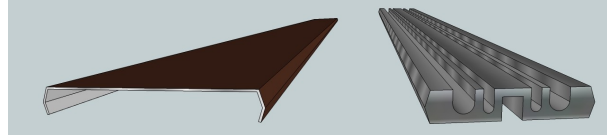
Cut and bend all edges to hide the extrusion as shown on the left side of the valley in the diagram to your right.

HINT: If you are combining the valley system with the SFP– Eave Panel system. We recommend the valley is installed first and terminate the eave system into the valley cover. A professional with experience in sheet metal should make this transition to keep a clean and finished look.





Installing the SnoFree™ Valley System for Existing Roofs



SFP – VALLEY EXISTING

SFP – EXTRUSION

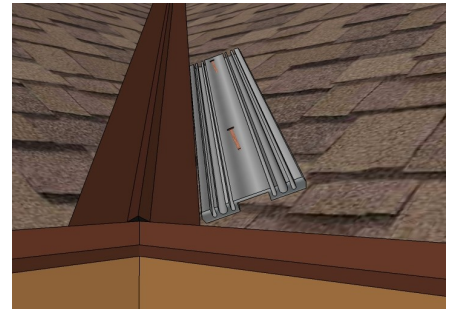
Step # 1 **Mark the location and Install Extrusion**

Mark the area on the roof to receive the extrusions. Allow sufficient space for drainage water to flow freely down to the gutter or drip edge.

The extrusion should be installed no more than 3" from the bottom of the trough of the valley.

Pre-drill the extrusion through the center no less than 30" O.C. Make sure that you countersink the holes to allow for the screw to sit flush on the extrusion.

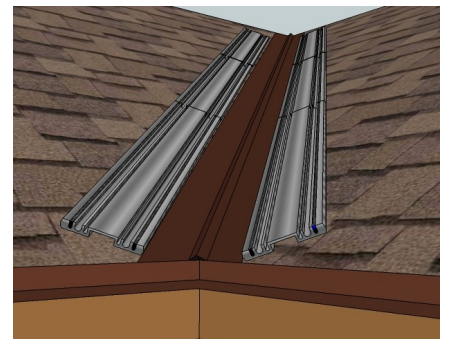
Apply a generous amount of sealant to the roof where the screw will be inserted to ensure proper sealing of the hole that will be created.



Step # 2 **Install Heating Material**

Install all heat cable or hydronic tubing into the appropriate channels into the extrusion.

HINT: If the valley changes direction, ensure sufficient space between the extrusions to allow for the cable or tubing to bend.

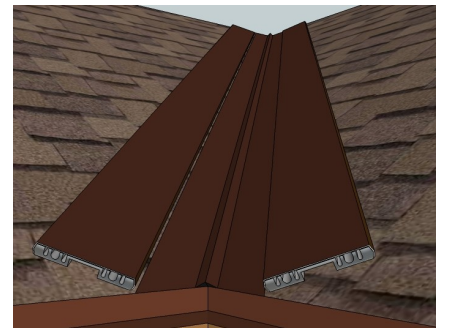


Step # 3 **Install the Valley Cladding**

Once all extrusions and heating material are placed. Install the cladding by putting downward pressure to snap over the top of the extrusion.

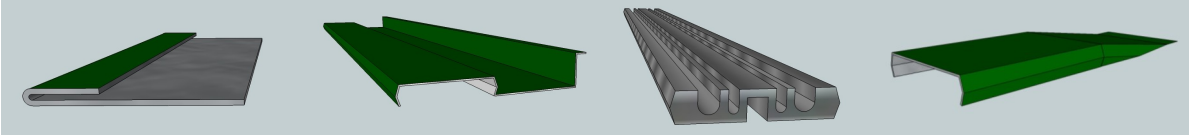
Install all Expansion joints with adequate sealant on the bottom side of the expansion joint to ensure no water enters into the extrusion area below.

HINT: Using extra Expansion joint covers; Fabricate the expansion joints for the top and the bottom to act as end caps for the extrusion. Notch and bend back the edges of the end cap where the cable or tubing will enter or exit. Creating a larger hole to deter damage to the outer jacket of the cable or the hydronic tubing. Sealant is recommended around those holes for protection.





Installing the SnoFree™ Standing Seam System for Metal Roofs



SFP – SSP CLIP

SSP – STANDING SEAM
PANEL

SFP – EXTRUSION

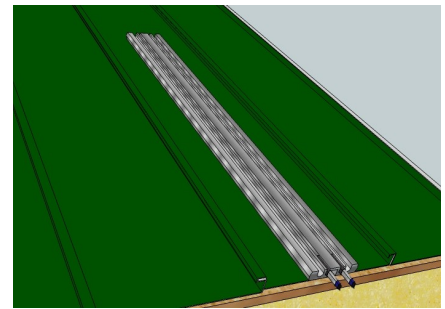
SFP – RAMP

Step # 1 **Mark the location and Install Extrusion**

Mark the area on the roof to receive the extrusions. Make certain that the extrusion is square between the ribs. This measurement will vary upon the size panel system that you order.

Apply a generous amount of primer (not supplied) to the surface of the roof and the underside of the extrusion to confirm the best possible adhesion. Apply metal bonding sealant to the roof where the extrusion will be installed to ensure proper adhesion of the extrusion to the roof.

NOTE: Cutting the extrusion may be needed depending on the desired length.



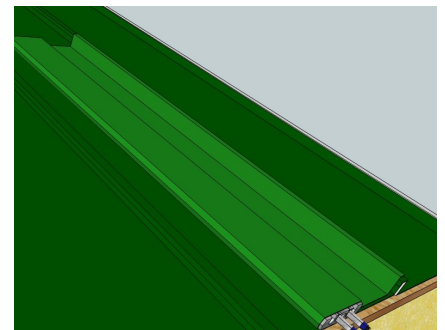
Step # 2 **Install SSP Panel onto the Extrusion**

Install heating cable or tubing according to specifications and design.

Snap the panel onto the extrusion with downward pressure.

Ensure that the tail flange of the panel fits over or snug against the rib of the metal roof. (Each panel will vary depending on the roof type. The installer must use his/her best judgment on the installation of the panel.)

Remove all plastic from the metal prior to the next step.

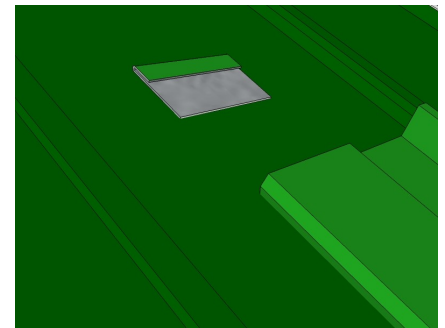


Step # 3 **Install the SSP-Clip**

Properly measure and mark the location of the Ramp Clip above the finished section of the SSP Panel. Remove the plastic on the metal prior to adhesion.

Properly adhere the clip to the metal roof using the correct primer and adhesive. If screws are used, properly seal all penetrations.

NOTE: For added protection, we recommend a bead of sealant along the back of the clip to direct water to either side of the clip.



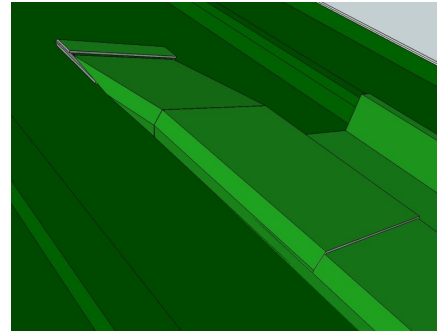
Installing the SnoFree™ Standing Seam System for Metal Roofs

Step # 4 **Attach the Ramp**

Insert the tab on the ramp into the recently installed clip. Apply sealant inside the clip in order to hold the ramp securely.

Apply a generous amount of sealant on the bottom of the ramp where it will meet with the extrusion and the SSP Panel. Put downward pressure to snap the ramp over the extrusion and the SSP Panel.

Remove all protective plastic on metal prior to the next step.

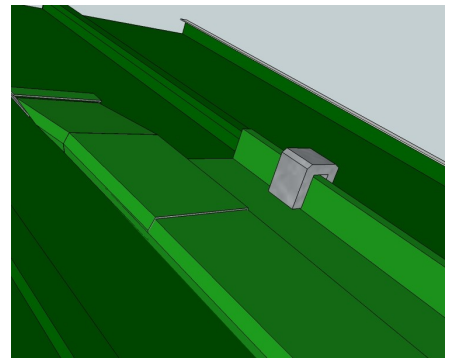


Step # 5 **Install Clamps**

Firmly attach the panel to the rib of the standing seam roof.

Use non-penetrating clamps that are designed to work with the type of seam that is associated with your standing seam roof.

If penetrations are made with screws or rivets due to a lack of usable clamps, seal all penetrations properly.

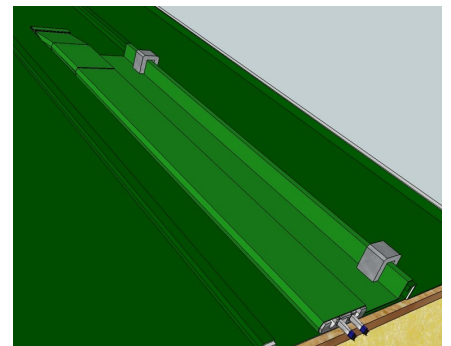


Step # 6 **Finalize the system**

Install adequate quantities of clamps on all panels.

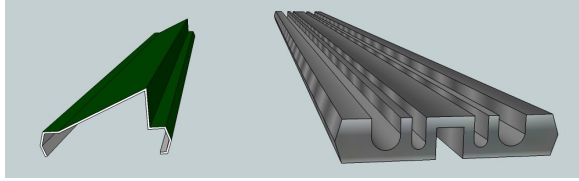
Leave a 1" Excess of SSP panel overhanging the extrusion to cut and bend down to cover the end of the extrusion. Any areas where the wire enters and exits the panel should have a generous amount of sealant placed to protect the jacket of the heating cable from any sharp edges of the metal.

If there is no excess available to fabricate an end seal, Contact Heat Trace Specialists for Expansion Joints to cut and fabricate end seals on site.





Installing the SnoFree™ Snow Rail for Metal Roofs



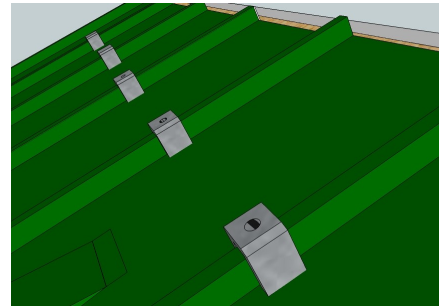
SFP – SNO RAIL

SFP – EXTRUSION

Step # 1 **Mark the location and Install Clamps**

Mark the area on the roof to receive the snow rail. Install clamps onto the ribs along the appropriate line.

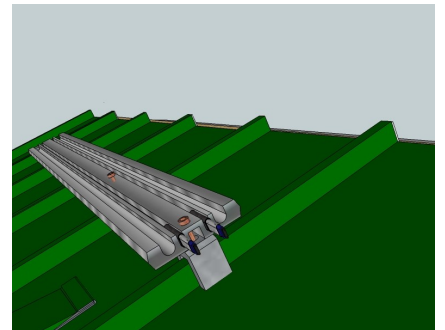
NOTE: This snow rail is not a structural fence for heavy snow loads. This heated rail system should be installed in conjunction with a TRA-MAGE snow fence system on all roofs that can accumulate sliding snow.



Step # 2 **Install Extrusion**

Install the extrusion onto the installed clamps by pre-drilling the extrusion and attaching the extrusion into the approved bolt for the clamp that was chosen.

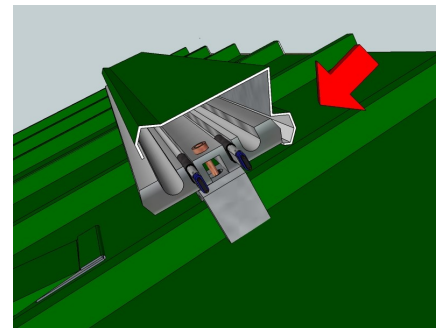
Install heating cable or tubing according to specifications and design.



Step # 3 **Install the SFP-Sno Rail**

Install the Sno-Rail starting on the upper side of the slope of the roof and hook the lip on the panel onto the bottom of the extrusion.

While still hooked on the front of the lip, rotate towards the front of the rail and snap into place over the top of the extrusion.





Installing the SnoFree™ Snow Rail for Metal Roofs

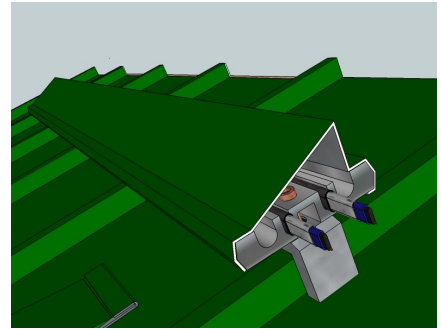
Step # 4 Finalize the Sno Rail

Once the rail has been attached firmly to the extrusion below, ensure that the lip on the panel is firmly locked onto the extrusion.

NOTE: For added protection, the installer may install a small self-tapping screw through either side into the extrusion. Ensure there is no penetrations into the roof or the heating element.

Remove all protective plastic on metal.

The installer should field fabricate an end cap for all ends to ensure the heat stays within the system to properly melt snow and ice.



Tools Needed:

- **1)** Radial arm saw or “chop saw” to cut the aluminum extrusions. A 100 tooth carbide tipped saw blade is suggested. **2)** Metal shears or “tin-snips”.
- **3)** Use the appropriate metal cutting blade to trim the cladding (sheet metal) as needed. **4)** Hand and/or powered screwdriver(s) with the appropriate tip(s) for the attachment screws to be used. All screws should be the flush head type (Pan Headed) for best results. **5)** A folding bar to create or modify any bends. **6)** Safety Glasses and/or any other safety equipment needed. **7)** Use all ladders in a safe & responsible manner and avoid overhead power lines.

LEGAL DISCLAIMER:

- This installation manual shows the best known method of installation at the time of the writing of this document. Heat Trace Specialists recommends all parties that install these systems to use their best judgment on common roofing and sheet metal installation methods. We only guarantee the product material supplied by Heat Trace Specialists.
- Heat Trace Specialists designed this system for certified and qualified contractors and any other licensed construction professionals. Any professional installer of these products understands that any property damage from water that entered through any penetration from the system will not hold Heat Trace Specialists or any affiliate liable for expenses or damages. All penetrations into the deck of the roof must be properly sealed and covered.
- All installers of Heat Trace Specialists’ products are legally required to install all products according to local, state and federal laws and codes.
- While installing Heat Trace Specialists’ products use all protective gear and proper tools that are recommended in electrical installation and in the construction industry. Heat Trace Specialists is not liable for any product that is installed incorrectly or damaged during the installation process.
- Because roofs and buildings are all different, Heat Trace Specialists recommends you use your best judgment when installing our products to achieve the best possible results for appearance, safety, and effective operation.
- Heat Trace Specialists does not offer instructions for every aspect of the installation process, we only offer the basics and we rely on the common knowledge and ability of the final installer to find the proper method of installation within their own industry and according to their local codes. Any installer should be trained in working with sheet metal and capable of finishing all parts and connections with the best of their ability and workmanship capabilities. Heat Trace Specialists does not warranty any workmanship of said installers and hereby is exempt from all liability.
- If any panel is being installed in an area with high winds. A few self-tapping screws can be installed on the nose of the system per section and end caps to ensure minimal damage does occur.
- Heat Trace Specialists products must be installed, operated and maintained in accordance with Heat Trace Specialists instructions. Heat Trace Specialists is not liable for damage or unsatisfactory performance of products resulting from accident, negligence, alteration, unauthorized repair, improper application or installation of the products. Heat Trace Specialists is not liable for any incidental or consequential damages.
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