



SS360

Technical/Erection Information

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IMPORTANT NOTICE

READ THIS MANUAL COMPLETELY PRIOR TO BEGINNING THE INSTALLATION OF THE SS360 ROOFING SYSTEM.

IF THERE IS A CONFLICT BETWEEN PROJECT ERECTION DRAWINGS PROVIDED OR APPROVED BY THE MANUFACTURER AND DETAILS IN THIS MANUAL, PROJECT ERECTION DRAWINGS WILL TAKE PRECEDENCE.

Ice Dam Disclaimer

Kirby's standing seam roofs meet the load requirements dictated by governing codes and project specifications, including applicable snow loads. However, Kirby expressly disclaims responsibility for weather tightness or roof point loading issues or other hazards resulting from ice dam situations. Any time ice and snow can melt on the main body of the roof and refreeze at the eave or in the shadow of an adjacent wall, an ice dam situation may develop. In addition to local climate, ice dam formation is affected by many other factors, including but not limited to, roof insulation R value, roof panel color, interior temperature of building, heater location in building, eave overhangs, parapet walls, shading of building roof areas from adjacent trees, parapets, buildings, etc. These factors are design and maintenance issues and are outside the control of Kirby. Kirby specifically disclaims any liability for damage due to ice dam formation, although the following issues should be taken into consideration concerning standing seam roofs installed in freezing climates:

- Always use field seamed panels. These machine-folded seams are more durable when subjected to occasional icing.
- Eliminate "cold" eave overhangs and parapet walls from the building design. Roof overhangs outside the heated envelope of the building will tend to be colder than the roof areas over the heated envelope. Simple roof designs are preferred. Parapet walls at the eave allow ice and snow to collect due to shading effects and the lower roof temperatures caused thereby.
- Make sure the interior of the building is adequately insulated and the heating is properly distributed. Inadequate insulation in the roof and/or improper heat distribution causes heat flow through the main body of the roof. On days when the temperature is below freezing, this heat gain can cause ice and snow to melt and refreeze at the eave where the roof is colder.
- Lay out the building to prevent the eaves and other roof areas from being shaded during the winter. This may mean eliminating adjacent trees or reconsidering roof geometries.
- Consider using self-regulating heating cables at the eaves to mitigate the effects of ice dams.
- On building designs using attics, over-insulate the attic floor and provide adequate ventilation in the attic. This will reduce heat transfer through the roof resulting in more consistent roof temperatures between eave and field of roof.
- Increase the degree of diligence with respect to underlayment materials at roof areas prone to icing. This may include valleys, eaves, dormers and roof areas near dormers, parapets and the like where shading may occur.

For more information on this subject, please refer to the MCA's Metal Roof Design for Cold Climates manual.

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Descriptions and specifications contained herein were in effect at the time this publication was approved for printing. In a continuing effort to refine and improve products, the manufacturer reserves the right to discontinue products at any time or change specifications and/or designs without incurring obligation. **To insure you have the latest information available, please inquire.** Application details in this manual may not be appropriate for all environmental conditions, building designs, or panel profiles. Projects should be engineered to conform to applicable building codes, regulations, and accepted industry practices. Insulation is not shown in these details for clarity.

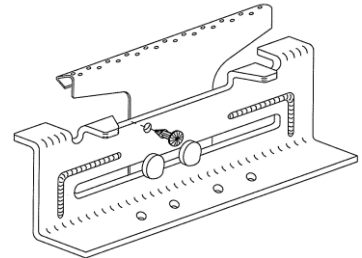
PRODUCT CHECKLIST

SS360 PANEL (SS3)

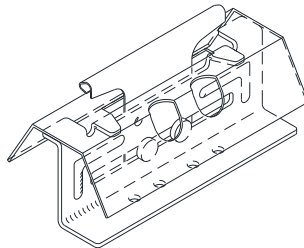
- 24 GA. (22 GA. OPTION)
- FACTORY APPLIED MASTIC
- PRE-NOTCHED
- PRE-DIMPLED

**PANEL CLIP (SSC01)**

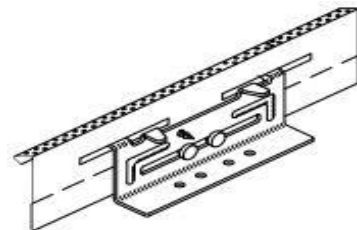
- LOW FLOATING
- 3 3/8" HIGH

**PANEL CLIP w/ HOOD (SSC11)**

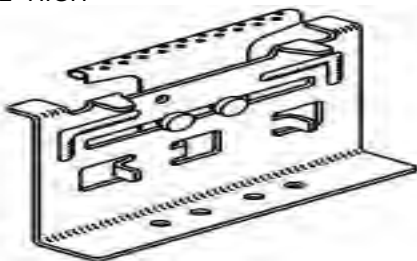
- LOW FLOATING
- 3 3/8" HIGH

**PANEL CLIP (SSC04)**

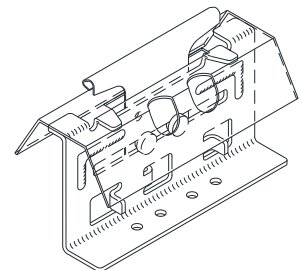
- LOW FLOATING PERIMETER
- 3 3/8" HIGH
- USE IN HIGH UPLIFT AREAS

**PANEL CLIP (SSC02)**

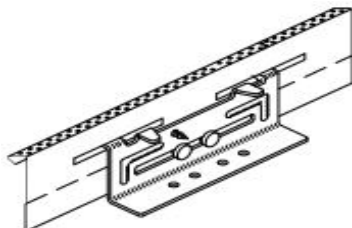
- HIGH FLOATING
- 4 1/2" HIGH

**PANEL CLIP w/ HOOD (SSC12)**

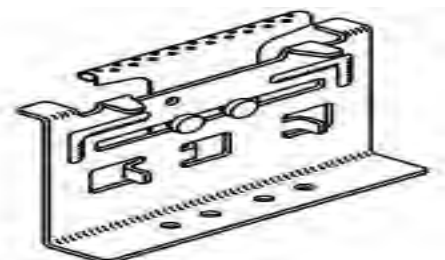
- HIGH FLOATING
- 4 1/2" HIGH

**PANEL CLIP (SSC05)**

- HIGH FLOATING PERIMETER
- 4 1/2" HIGH
- USE IN HIGH UPLIFT AREAS

**PANEL CLIP SUPER TALL (SSC03)**

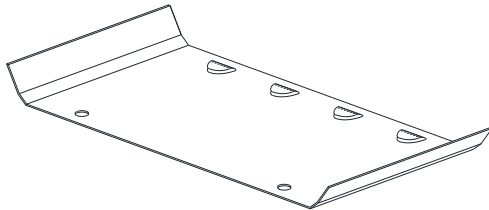
- HIGH FLOATING
- 5 1/2" HIGH



PRODUCT CHECKLIST

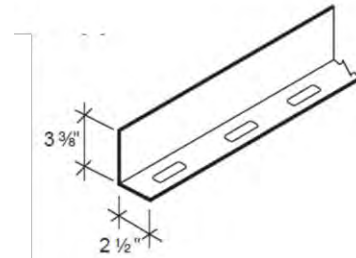
BACK-UP PLATE (SBP01)

- 16 GA. GALV.
- USED AT ENDLAP



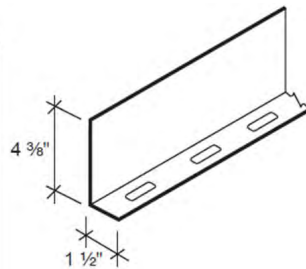
LOW RAKE SUPPORT (RSL20)

- 14 GA. PAINTED
- USED WITH LOW SYSTEM



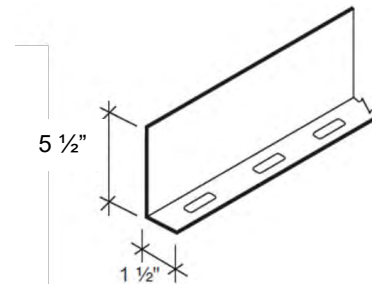
HIGH RAKE SUPPORT (RSH20)

- 14 GA. PAINTED
- USED WITH HIGH SYSTEM



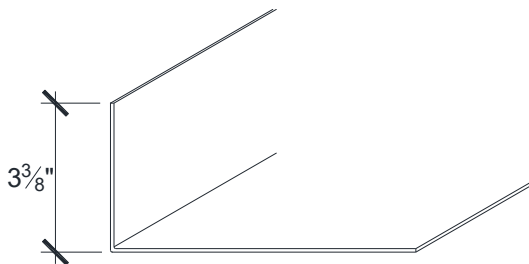
SUPER TALL RAKE SUPPORT (RSS20)

- 14 GA. PAINTED
- USED WITH HIGH SYSTEM



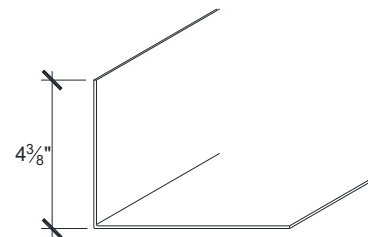
LOW RAKE SUPPORT ANGLE (RSAL20)

- 14 GA. PAINTED
- FOR OFF MODULE FINISH WITH LOW SYSTEM



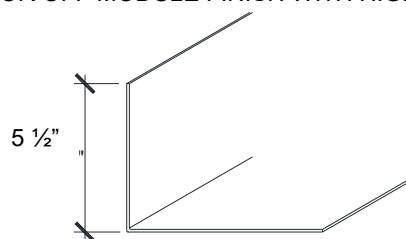
HIGH RAKE SUPPORT ANGLE (RSAH20)

- 14 GA. PAINTED
- FOR OFF MODULE FINISH WITH HIGH SYSTEM



RAKE SUPPORT ANGLE ST (RSAT10)

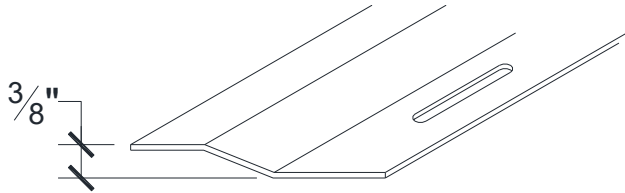
- 14 GA. PAINTED
- FOR OFF MODULE FINISH WITH HIGH SYSTEM



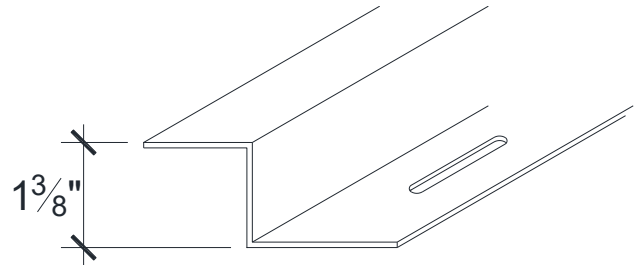
PRODUCT CHECKLIST

LOW RAKE SUPPORT PLATE (RLA410)

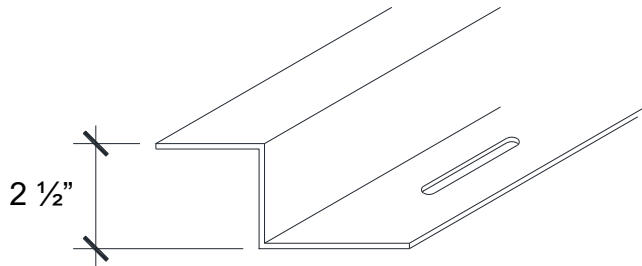
- 14 GA. PAINTED
- FOR OFF MODULE FINISH WITH HIGH SYSTEM

**HIGH RAKE SUPPORT PLATE (RHA410)**

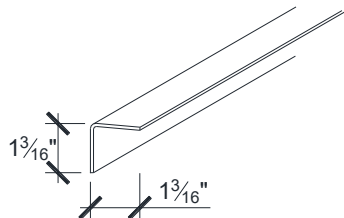
- 14 GA. PAINTED
- FOR OFF MODULE FINISH WITH HIGH SYSTEM

**S. TALL RAKE SUPPORT PLATE (RSA410)**

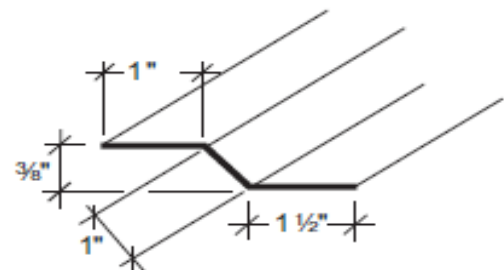
- 14 GA. PAINTED
- FOR OFF MODULE FINISH WITH HIGH SYSTEM

**EAVE SHEETING ANGLE (ESA20-)**

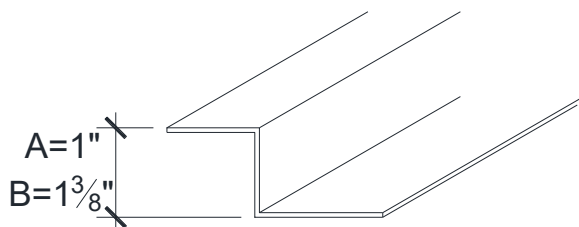
- USED WITH LOW SYSTEM
- 14 GA. PAINTED 20' LENGTH

**LOW EAVE PLATE (EPL10)**

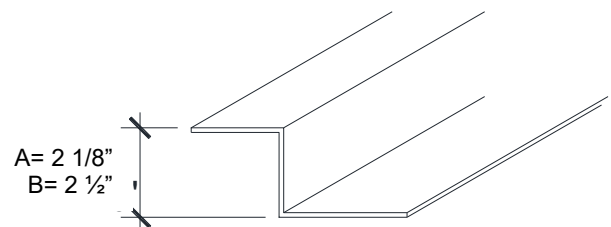
- USED WITH LOW SYSTEM
- 14 GA. PAINTED 10' LENGTH

**HIGH EAVE PLATE (EPH10A/B)**

- USED WITH HIGH SYSTEM
- 14 GA. PAINTED 10' LENGTH

**SUPER TALL EAVE PLATE (EPS10A/B)**

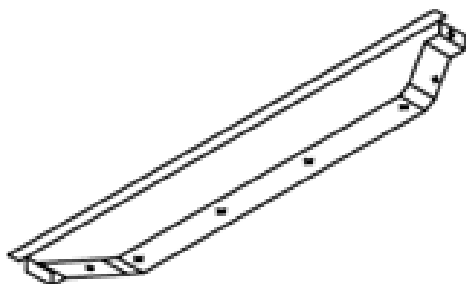
- USED WITH HIGH SYSTEM
- 14 GA. PAINTED 10' LENGTH



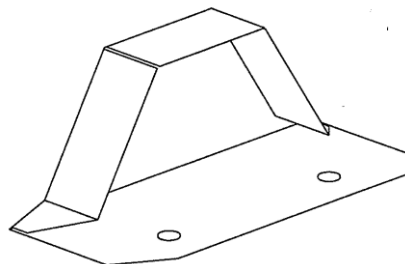
PRODUCT CHECKLIST

OUTSIDE CLOSURE (SLMC3)

- USED AT RIDGE OR HIGH EAVE

**INSIDE CLOSURE (MEC01)**

- USED AT LOW EAVE

**TAPE SEALANT (STP02)**

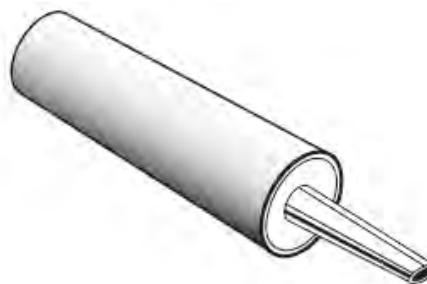
- 3/16" x 7/8" DOUBLE BEAD x 40' ROLL
- USED AT EAVES, OUTSIDE CLOSURES AND TRIM CONNECTIONS

**TAPE SEALANT (STP03)**

- 3/16" x 2 1/2" TRIPLE BEAD x 20' ROLL
- USED AT ENDLAPS, CURBS AND VALLEYS

**BUTYL CAULK (H3151)**

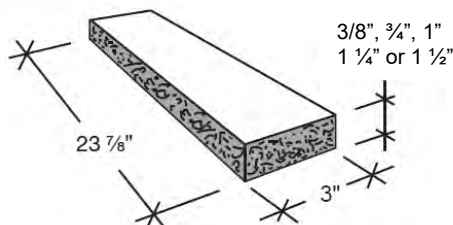
- USED AT EAVE, ENDLAPS, RIDGE AND HIGH SIDE

**TUBE SEALANT (TS--)**

- USED AT TRIM LAPS

**THERMAL BLOCK (SYB--)**

- POLYSTYRENE BLOCK USED TO INCREASE INSULATION CAPACITY ALONG PURLINS



PRODUCT CHECKLIST

FASTENER #1 (FD26CP) = H1021

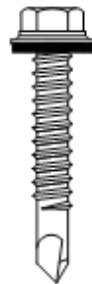
1/4"-14 x 1 1/4" TEK2 w/ WASHER

**USED AT:**

- EAVE PLATE TO EAVE STRUT

FASTENER #1A FD29CP)

1/4"-14 x 1 1/2" TEK2 w/ WASHER

**FASTENER #2 (FA07CP) = H1040**

12-14 x 1 1/4" HWH DP2 w/o WASHER

**USED AT:**

- CLIP TO PURLIN
- INSIDE CLOSURE TO EAVE PLATE

FASTENER #2A FC09CP)

12-14 x 1 1/2" HWH DP3 w/o WASHER

**USED AT:**

- CLIP TO PURLIN
- INSIDE CLOSURE TO EAVE PLATE

FASTENER #2B FA09CP)

12-14 x 2" HWH DP3 w/o WASHER

**USED AT:**

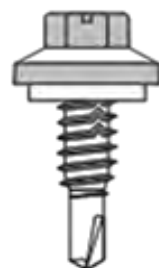
- CLIP TO PURLIN
- INSIDE CLOSURE TO EAVE PLATE

FASTENER #3 (FA12--) = H1073

1/4"-14 x 1 1/4" HWH DP3 ZINC HEAD

**FASTENER #4 (FA03--) = H1050**

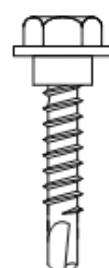
1/4"-14 x 7/8" HWH VRT DP1 ZINC HEAD

**USED AT:**

- FLASHING TO OUTSIDE CLOSURE
- GUTTER TO PANEL
- GUTTER STRAP TO PANEL
- FLASHING LAPS

FASTENER #5 (FD05CP) = H1076

1/4"-14 x 1 1/4" SHOULDER TEK2 SDS w/o WASHER

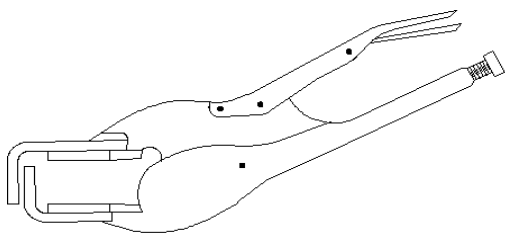
**USED AT:**

- RAKE SUPPORT TO RAKE ANGLE

PRODUCT CHECKLIST

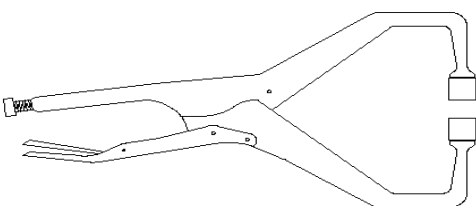
SS360 DUCKBILL VISE GRIP (S3PVG)

- USED AT PANEL ENDLAPS



SS360 LOCKING CLAMP (SSPLC)

- USED AT PANEL ENDLAPS



STANDING SEAM ROOF SYSTEMS

INSULATION & FASTENER RECOMMENDATIONS

INSULATION / FASTENERS	SS360 "LOW SYSTEM"	SS360 "HIGH SYSTEM"	SS360 SUPER TALL
NO INSULATION THERMAL BLOCK FASTENER	OK 3/8" SYB05A FA07CP	N/R	N/R
R10 THERMAL BLOCK FASTENER	OK NONE FA07CP	OK 1 1/4" H3303 FA07CP	N/R
R11 THERMAL BLOCK FASTENER	OK NONE FA07CP	OK 1 1/4" H3303 FA07CP	N/R
R13 THERMAL BLOCK FASTENER	OK NONE FA07CP	OK 1 1/4" H3303 FA07CP	N/R
R16 THERMAL BLOCK FASTENER	OK* NONE FC09CP	OK 1" SYB09 FC09CP	N/R
R19 THERMAL BLOCK FASTENER	OK* NONE FC09CP	OK 1" SYB09 FC09CP	N/R
R25 THERMAL BLOCK FASTENER	N/R	OK* 3/4" SYB07 FC09CP	N/R
R30 THERMAL BLOCK FASTENER	N/R	N/R	OK 1 1/2" H3305 FA09CP
R38 THERMAL BLOCK FASTENER	N/R	N/R	OK 3/4" SYB07 FA09CP

REFERENCE NOTES

OK - Kirby approved application

OK* - Kirby application conditionally approved. Application requires extra effort during erection to hold panel coverage and may induce oil canning or pillowing. **(REQUIRES DISCLAIMER)**

N/R - Not Recommended due to aesthetic issues or difficulty of installation. **(REQUIRES MANAGEMENT APPROVAL)**

FASTENERS

FA07CP 12 - 14 x 1 1/4" HWH BLAZER DP2 NO WASHER (CADMIUM PLATED)

FC09CP 12 - 14 x 1 1/2" HWH BLAZER DP2 NO WASHER (CADMIUM PLATED)

FA09CP 12 - 14 x 2" HWH BLAZER DP2 NO WASHER (CADMIUM PLATED)

Nominal Insulation Thicknesses (OVER PURLINS ONLY)

R10 – 3.25" (range of 2.95" to 3.4")

R25 – 8" (range of 7.5" to 8.0")

R11 – 3.5" (range of 3.3" to 3.75")

R30 – 10" (range of 9.5" to 10.25")

R13 – 4.25" (range of 3.85" to 4.375")

R38 – 12" (range of 11.5" to 12")

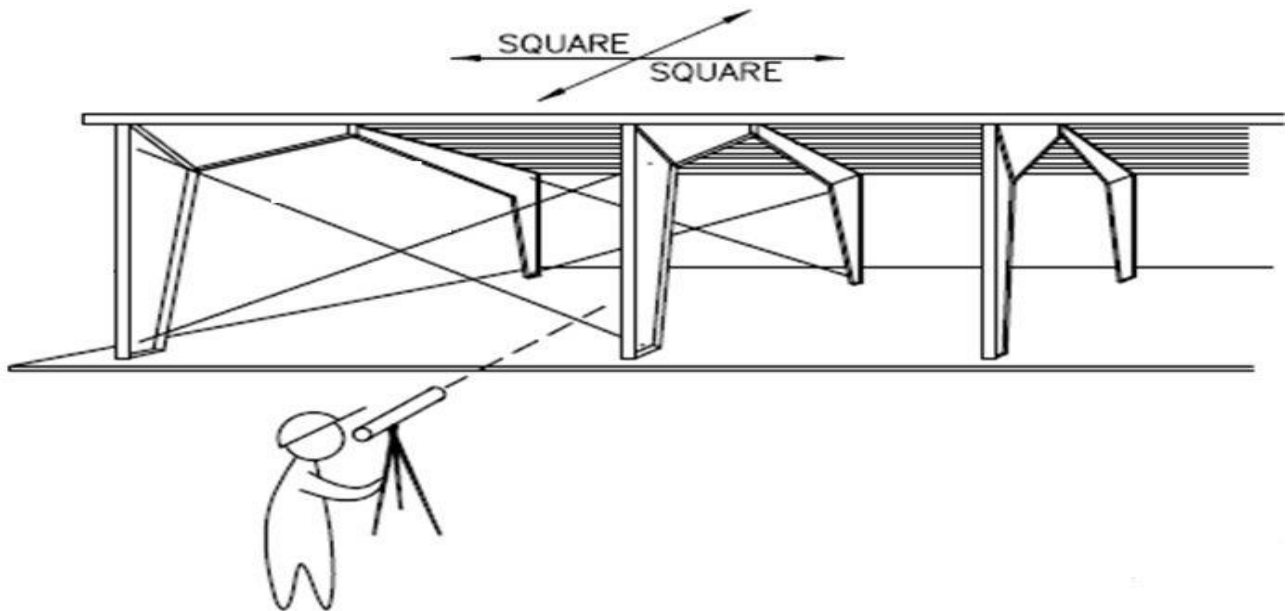
R16 – 5" (range of 5.0" to 5.30")

R19 – 6.25" (range of 5.6" to 6.375")

NOTE

It is the responsibility of the erector to install this roof using safe construction practices that are in compliance with OSHA regulations. The manufacturer is not responsible for the performance of this roof system if it is not installed in accordance with the instructions shown in this manual. Deviations from these instructions and details must be approved in writing by the manufacturer.

1. Read and understand contents of this manual before proceeding with roof installation. Contact Field Services with any questions.
2. The walls do not have to be erected before the roof is installed. However, for the purpose of this manual, we have assumed that the wall panels have been installed.
3. All primary and secondary framing must be erected, plumbed, and squared with bolts tightened according to accepted building practices. It is recommended that surveying equipment be used to check building alignment.



4. The substructure (eave to ridge) must be on plane with a tolerance of 1/4" in 20' and 3/8" in 40'.
5. Make sure a rake angle or an alternate structural flat surface has been installed on top of the purlins to accept the "Rake Support".
6. SS360 can be erected on various types of construction. However, for the purpose of this manual, we have assumed that the roof will be installed on a new, pre-engineered metal building. When there is a conflict between this manual and the Erection Drawings, the Erection Drawings will govern.
7. Kirby recommends the use of a screw gun with a speed range of 0 - 2000 RPM to properly install all fasteners referenced in this manual. Tools rated to 4000 RPM should never be used for self drilling fasteners typically supplied with metal building components.
8. Field cutting of the panels should be avoided where possible. If field cutting is required, the panels must be cut with nibblers, snips, or shears to prevent edge rusting. Do not cut the panels with saws, abrasive blades, grinders, or torches.

PANEL SHIPMENT

Upon receiving material, check shipment against shipping list for shortages and damages. Kirby will not be responsible for shortages or damages unless they are noted on the shipping list.

The panels are banded together, causing them to curl up. This enhances the strength of the bundles.

Panels banded in this manner may be handled by a forklift in lengths p to 30'. Lengths in excess of 30' must be lifted with a spreader bar.

UNLOADING

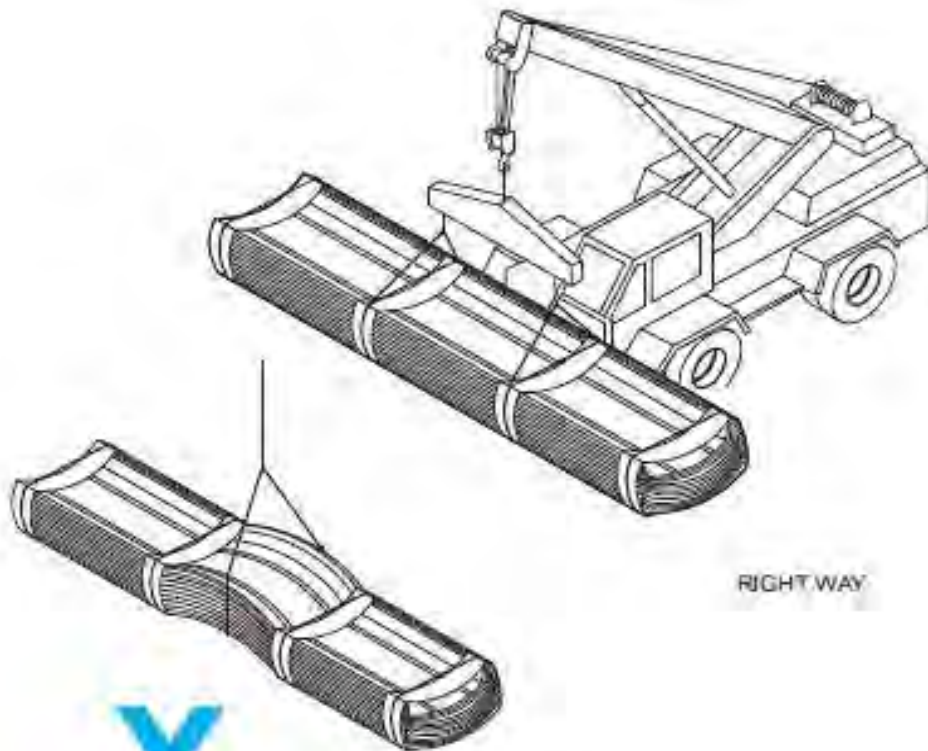
Each bundle should be lifted at its center of gravity. Where possible, bundles should remain banded until final placement on roof. If bundles must be opened, they should be retied before lifting.

When lifting bundles with a crane, a spreader bar and nylon straps should be used. **NEVER USE WIRE ROPE OR CHAIN SLINGS. THEY WILL DAMAGE THE PANELS.**

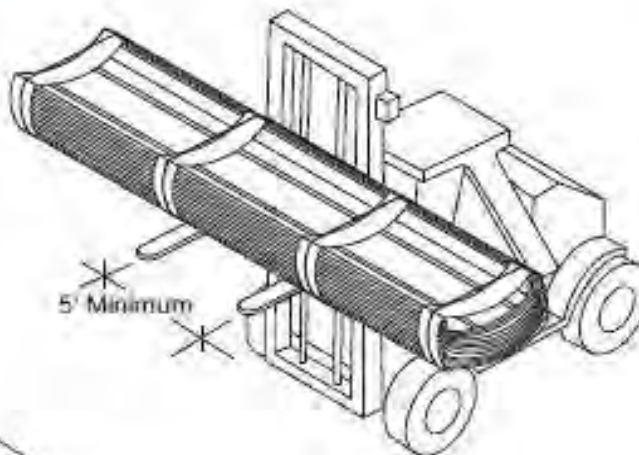
When lifting bundles with a forklift, forks must be a minimum of five feet apart. Do not transport open bundles. Drive slowly when crossing rough terrain to prevent panel buckling.

CAUTION

Improper unloading and handling of bundles and crates may cause bodily injury or material damage. The manufacturer is not responsible for bodily injuries or material damages during unloading and storage.

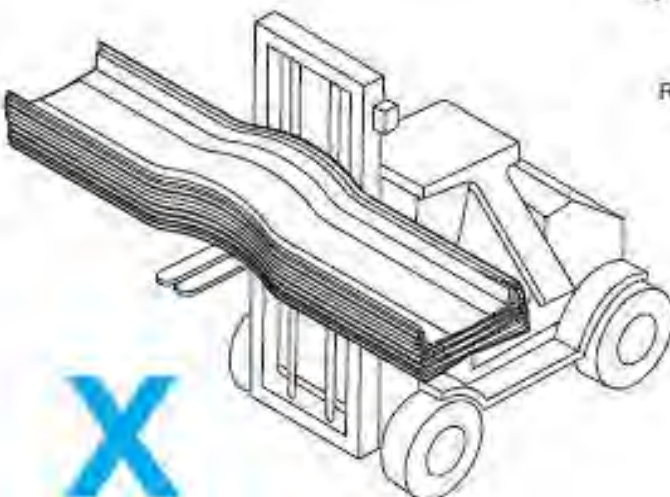


RIGHT WAY

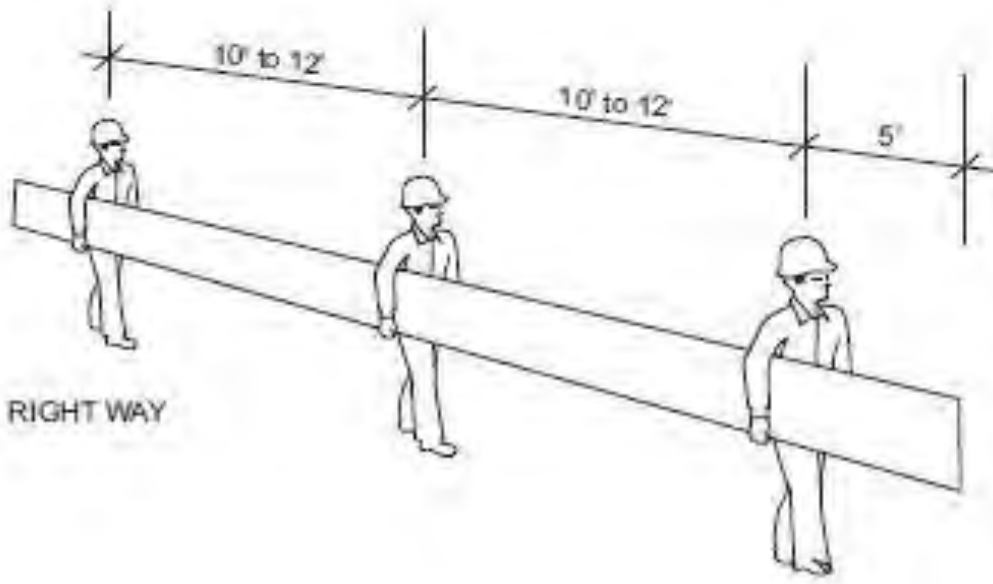


5' Minimum

RIGHT WAY



WRONG WAY



NOTE
Protective gloves should always be used while handling panels. OSHA safety regulations must be followed at all times.

Handling

Standing on one side of the panel, lift it by the seam. If the panel is over 10' long, lift it with two or more people on one side of the panel to prevent buckling.

Do not pick panels up by the ends.



Storage

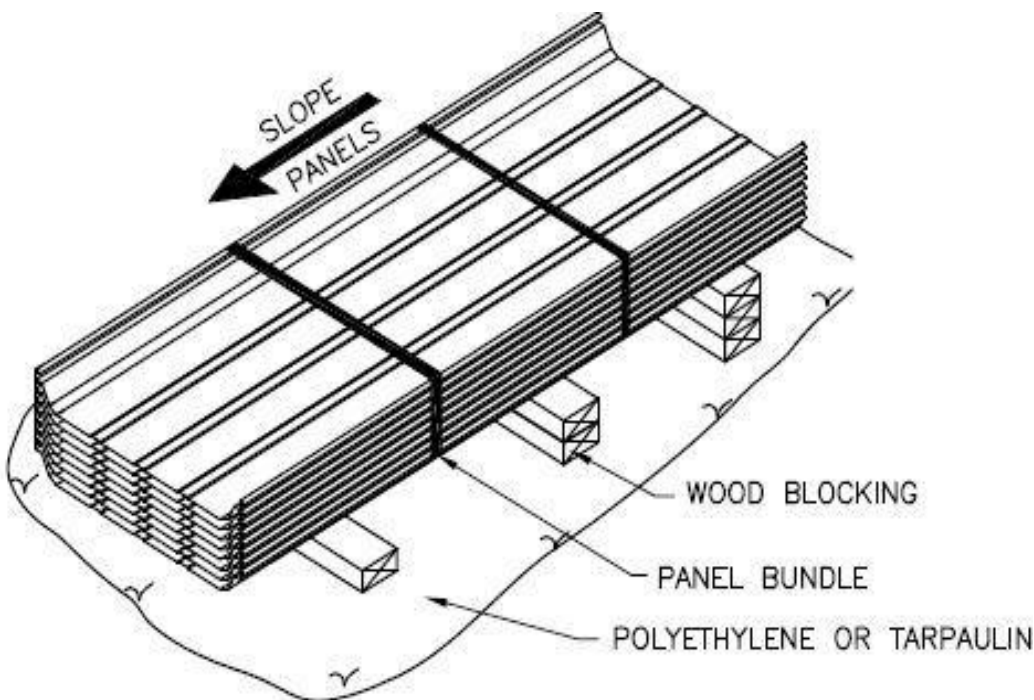
Check to see that moisture has not formed inside the bundles during shipment. If moisture is present, panels should be unbundled and wiped dry, then restacked and loosely covered so that air can circulate between the panels.

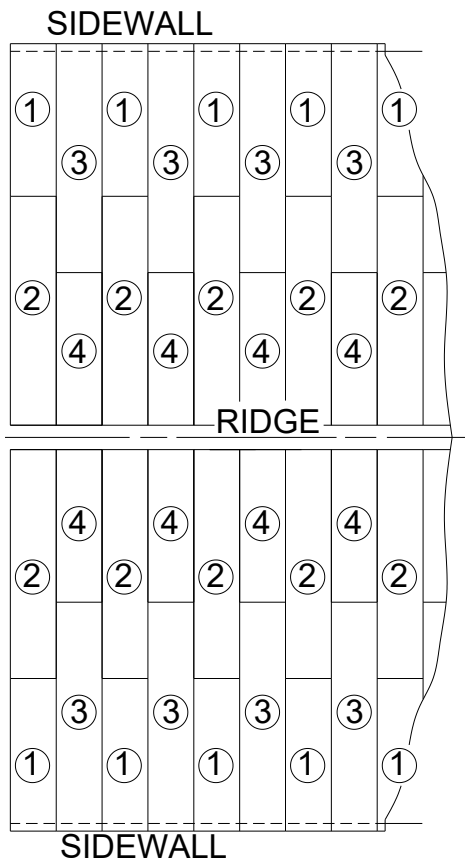
Store bundled sheets off the ground sufficiently high enough to allow air circulation beneath bundle and to prevent rising water from entering bundle. Cover the area beneath panels with polyethylene or a tarpaulin.

Slightly elevate one end of bundle. Prevent rain from entering bundle by covering with tarpaulin, making provision for air circulation between draped edges of tarpaulin and the ground.

PROLONGED STORAGE OF SHEETS IN A BUNDLE IS NOT RECOMMENDED.

If conditions do not permit immediate erection, extra care should be taken to protect sheets from staining or water marks.



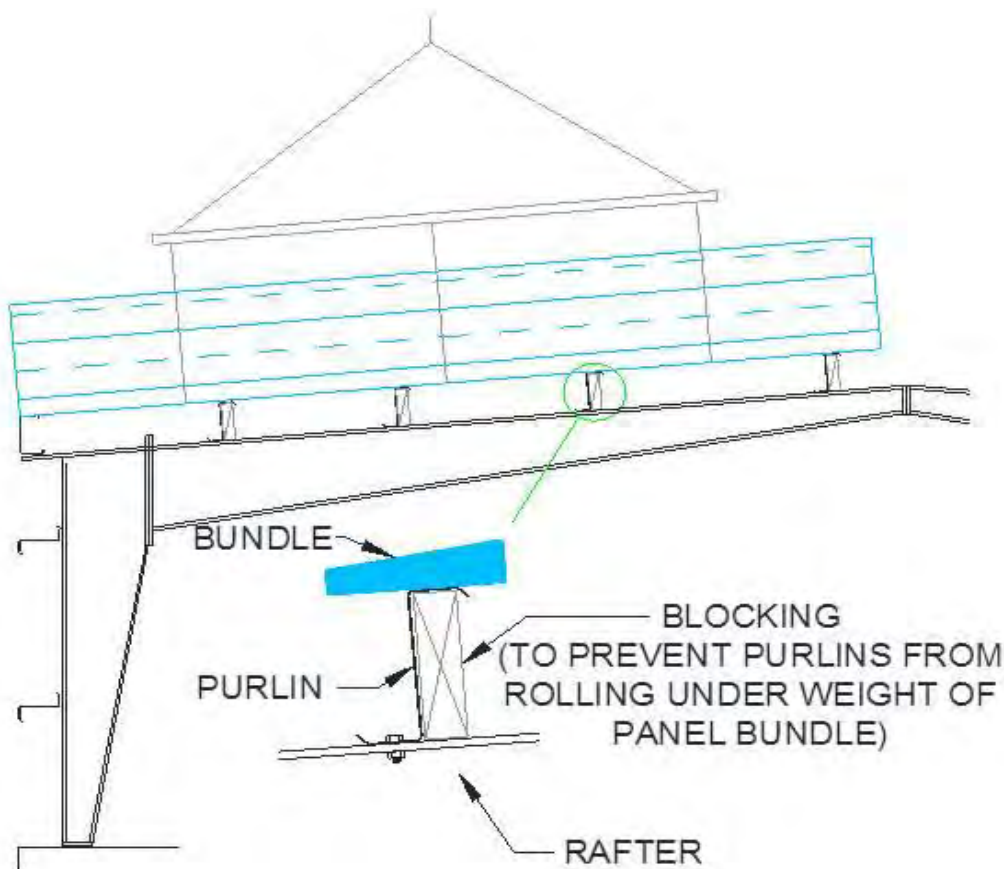


Panel Layout

The SS360 panels are non-handed therefore, the roof can be sheeted in either direction in most cases. Consult the Erection Drawings for job specific details.

For roofs requiring endlaps, the SS360 panel endlaps are staggered, occurring on alternating purlins.

The first panel run must use the short eave panel length.

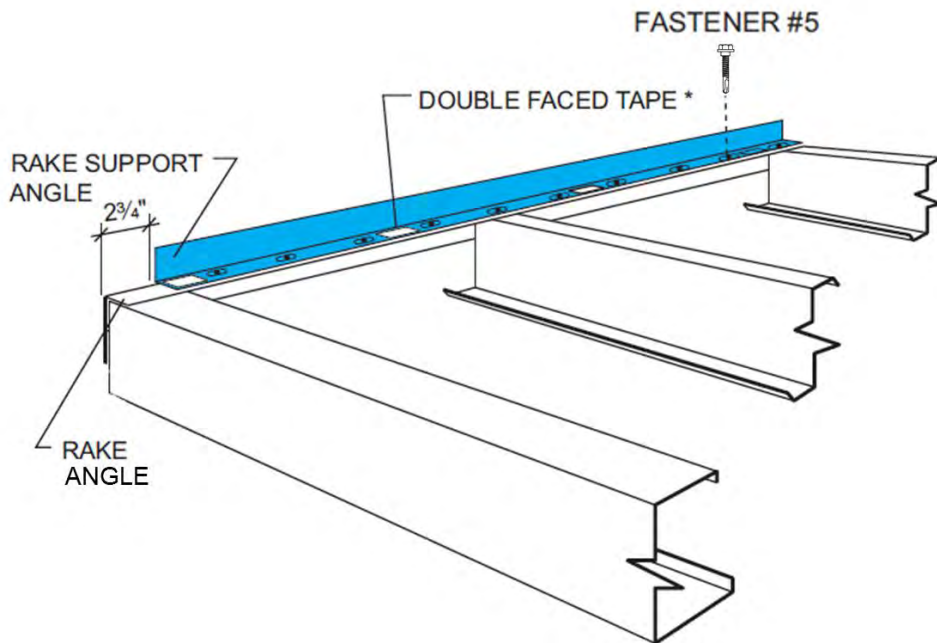


Bundle Placement

Bundles can be lifted and placed on the roof to facilitate handling. The bundles must be placed directly over a frame and the purlins must be blocked.

Do **NOT** slide bundles along roof framing.

STEP
1



Rake Support

Attach the rake support on top of the rake angle with fastener # 5 at 2'-0" centers with a fastener in the first and last pre-punched slot. The vertical leg is to be installed square with the eave.

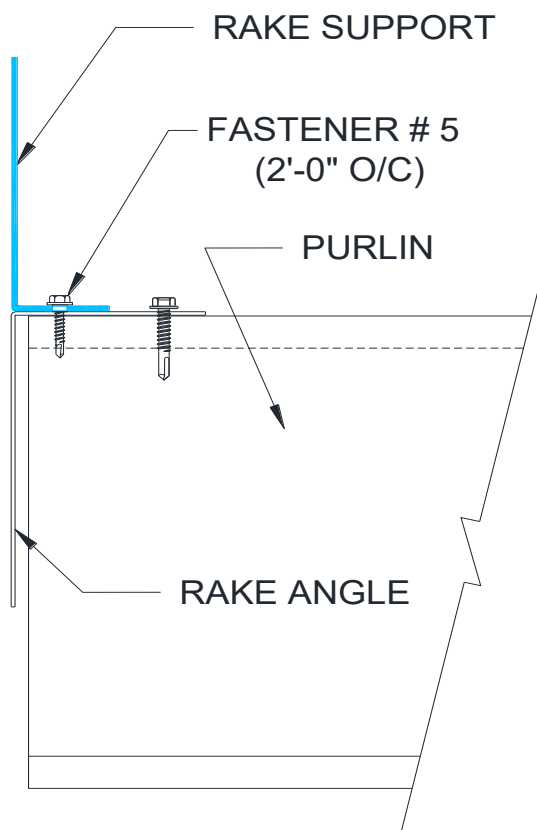
Center fasteners in slots. Make sure to hold back rake support angle 2 3/4" from low eave, high eave, and ridge to allow for expansion and contraction of the roof.

IT IS IMPORTANT THAT THE RAKE SUPPORT IS INSTALLED STRAIGHT AND SQUARE WITH THE EAVE AS, IT CONTROLS THE ALIGNMENT OF THE ROOF SYSTEM.

Install 6" pieces of double faced tape (not by building manufacturer) on 3'-0" centers to the top of the horizontal leg of the rake support. This will help hold the insulation in place at the rake.

CAUTION

It is important that shoulder fasteners are installed through the **CENTER** of the slotted holes of the rake support to allow for expansion and contraction.



STEP
2

Eave Plate

Install eave plates flush with the outside of the high crowns of the wall panels. Install with Fastener #1 at 1'-0" on center.

The end of the eave plate will butt align with the outside edge of the rake support.

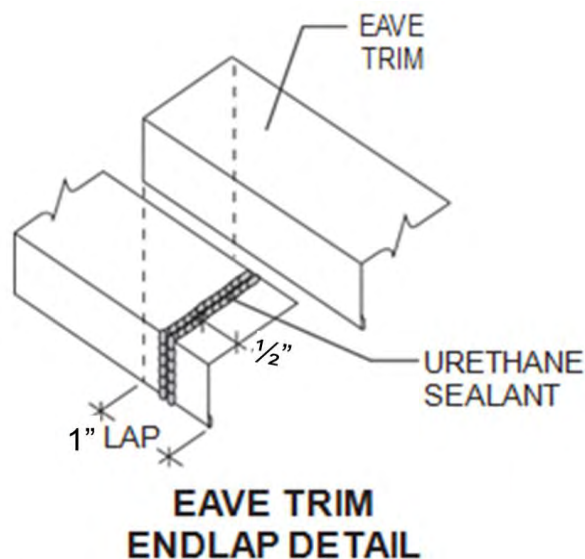
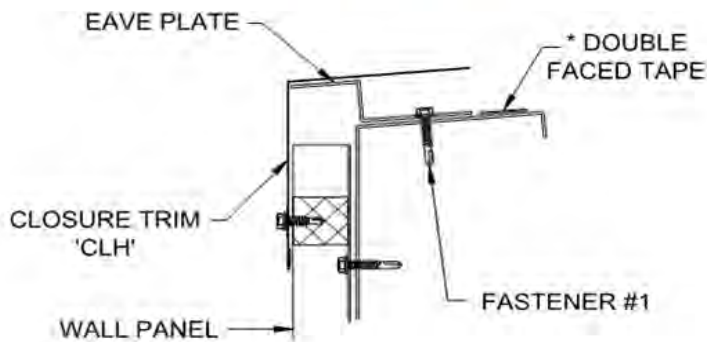
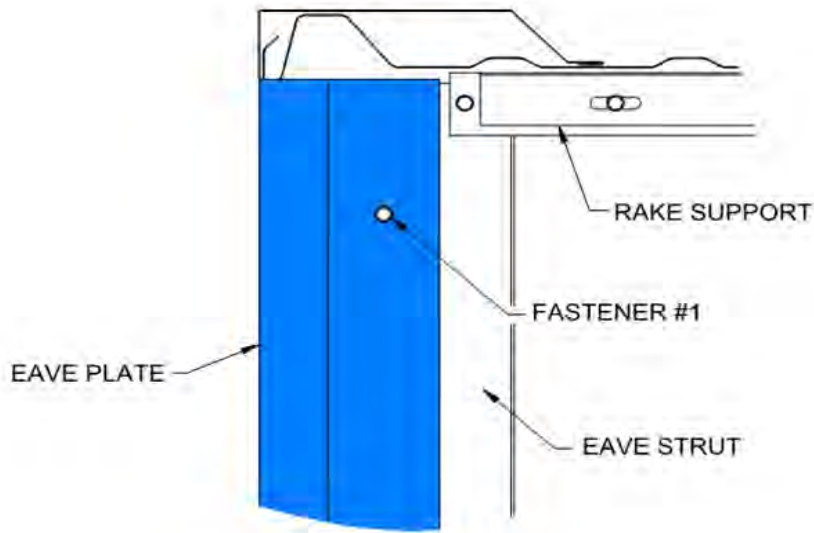
All of the eave plates may be installed at this time. Be sure to butt each eave plate end to end without leaving a gap between the plates.

Install eave trim to the top of the eave plates with pop rivets. Use three rivets per 10' piece. Trim must be pulled tight to wall panels before fastening to eave plates.

Install double faced tape along the length of the interior leg of the eave strut.

TRIM LAPS

Lap eave trim 1". Apply two beads of urethane sealant between the trim pieces, approximately 1/2" from the end of the bottom piece.



*Not by Building Manufacturer

STEP
3

Inside Closure

Prior to installing each inside closure, cut a 5" long piece of 3/16" x 2 1/2" tape sealant and apply it to the bottom of the inside closure.

Align the center of the first inside closure with the outside edge of the rake support. Then using Fastener #2, attach the first inside closure to the eave plate, locating the face of the inside closure with the downslope edge of the closure trim.

Locate additional closures on 24" centers from the first closure to maintain panel module, attaching each with Fastener #2. Install two fasteners per closure.

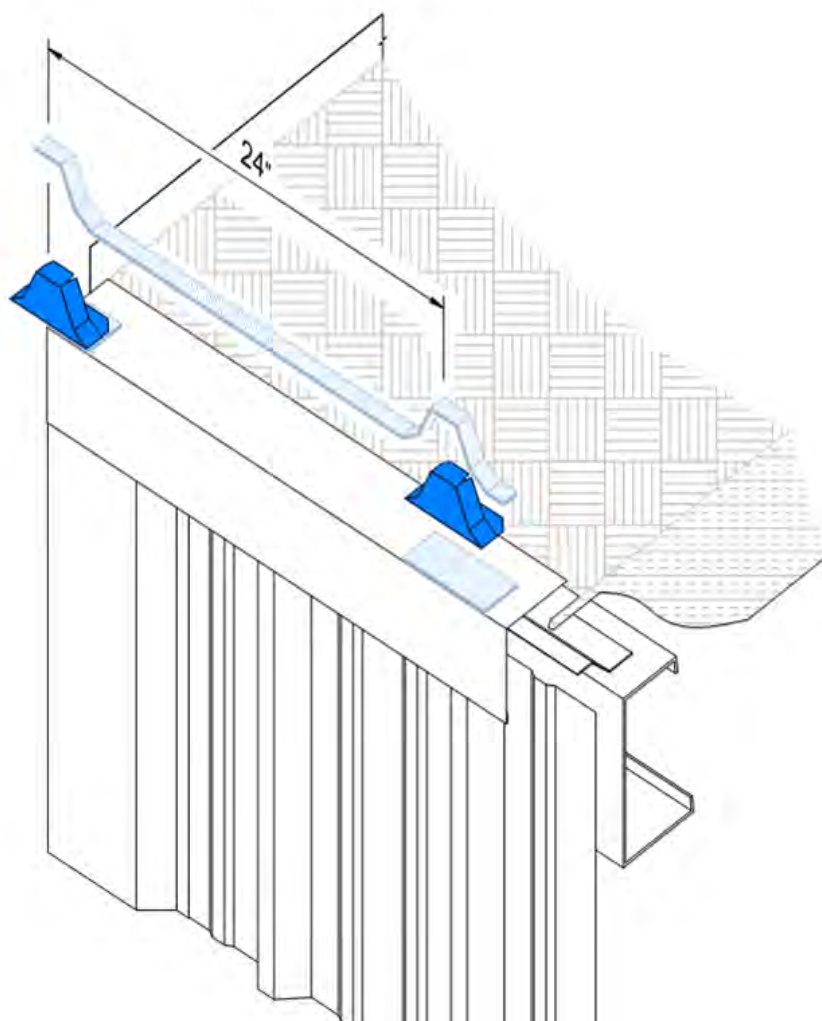
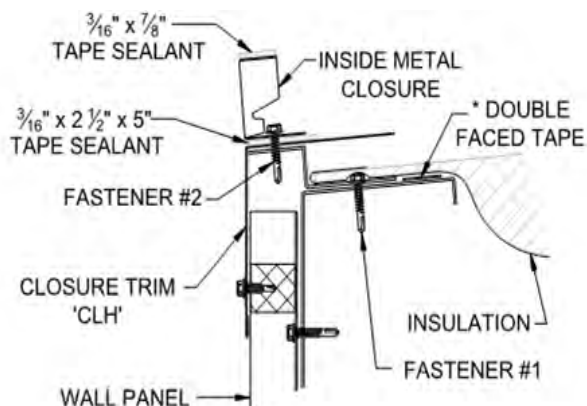
To maintain panel module, metal inside closures must be installed on 24" centers.

Place Double-Bead tape sealer across the top of the closure trim, the side and top of each closure. This tape should tie into the tape under the inside closure with no gaps to complete the seal at the eave.

Roll out insulation from eave to peak, laying the side of the insulation on top of the rake support. The first roll should be 3' wide. This will keep insulation sidelaps 1' from panel sidelaps. Allow approximately 4" of insulation to hang past the double faced tape (downslope) before sticking the insulation to the double faced tape. Cut and remove the fiberglass approximately 4" and fold the vapor barrier back over the insulation (upslope).

CAUTION

The fiberglass insulation must not interfere with the Tape Sealant.

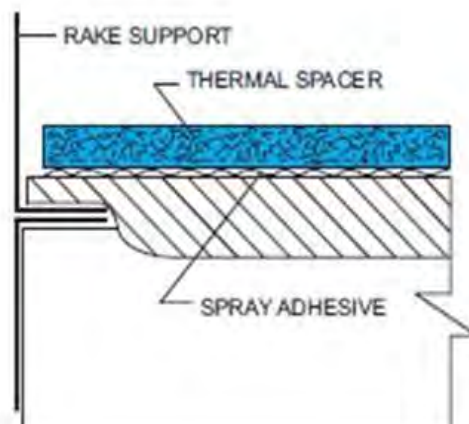
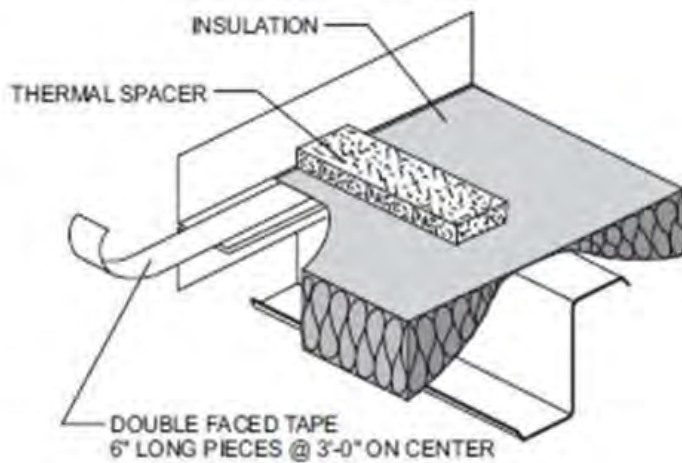
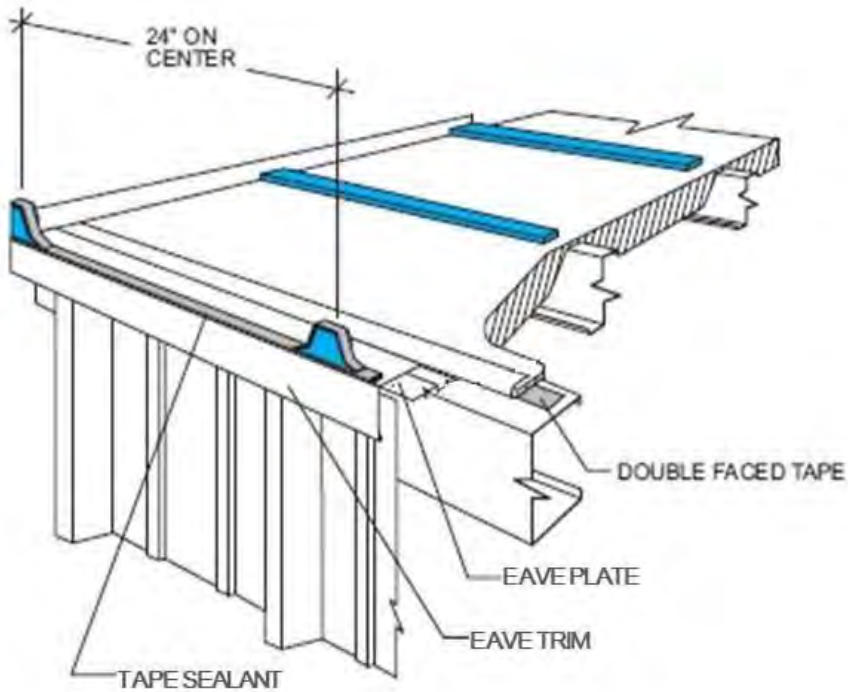


STEP
4

Thermal Blocks (If Required)

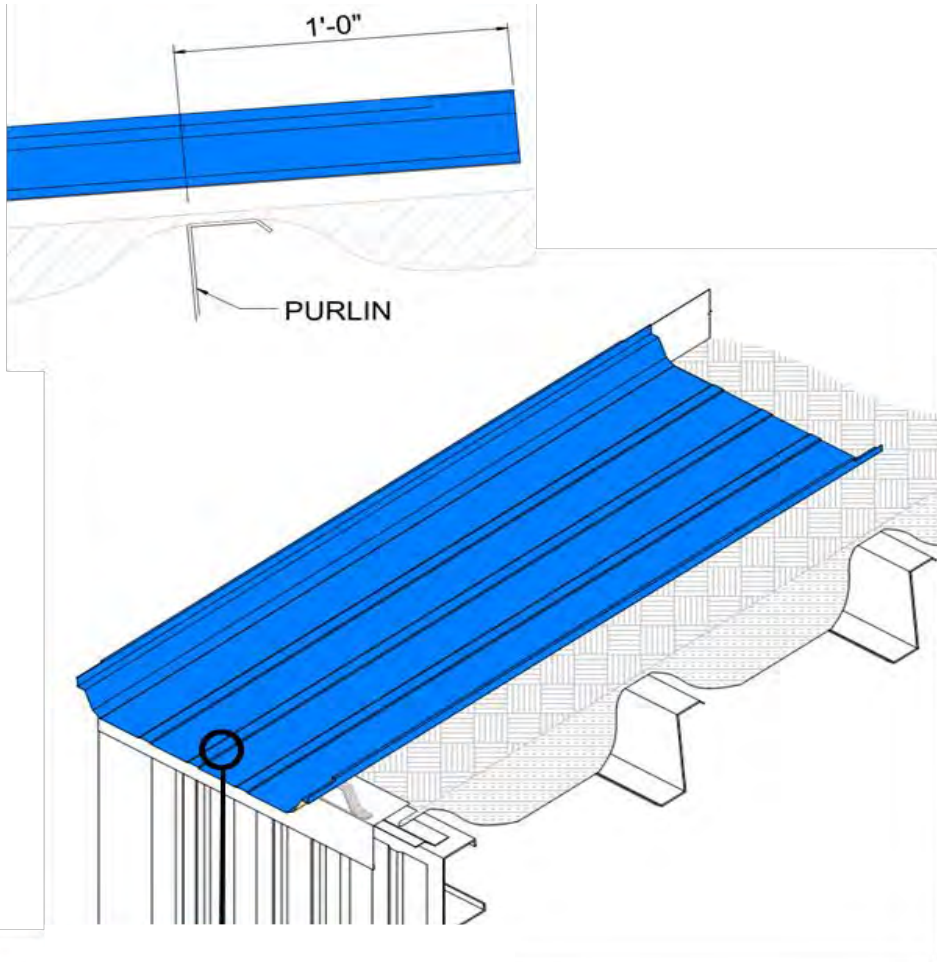
Position the thermal spacer on top of the insulation over each purlin and against the rake support prior to installing the roof panel.

Spay adhesive (not by Kirby) may be used to adhere the Thermal Block to the insulation.

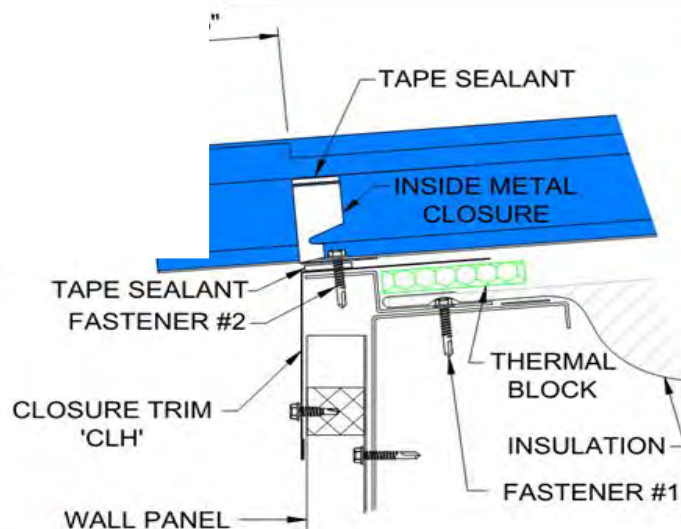


STEP
5

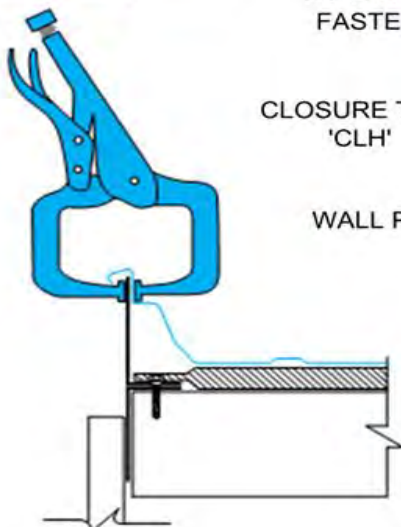
FIRST PANEL



Position the panel so that it overhangs the eave strut by the thickness of the wall covering plus 3". The upper end of the panel must be 1'-0" beyond the web of the purlin.



Lay the female lip of the panel over the rake support. To prevent wind damage, secure the female lip to the rake support with a "C" clamp or temporary pop rivet. Pop rivet must go through rake support. The panel will not be fastened permanently to the rake support until the rake trim is installed.



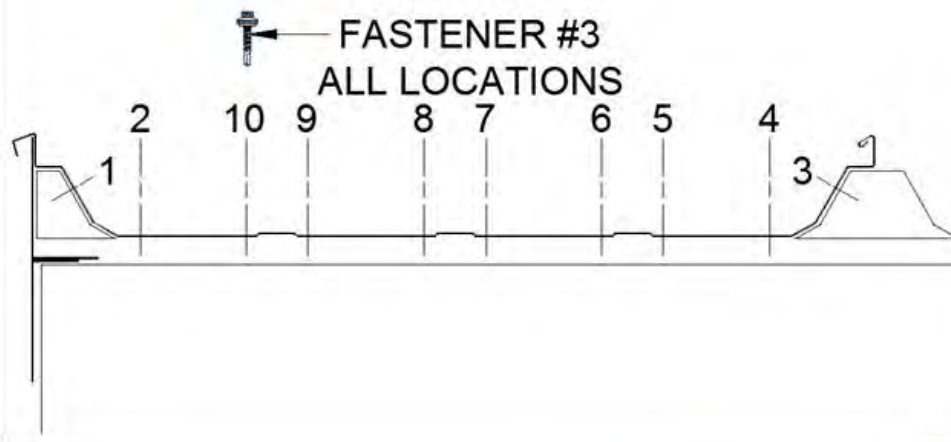
STEP
5

FIRST PANEL (CONTINUED)

Attach the panel to the eave plate and metal inside closures with Fastener #3.

Ten fasteners are required at this location.

NOTE: IT IS ESSENTIAL THAT THE ERECTOR MAINTAIN PANEL MODULE AT THE EAVE, WITH THE PROPER INSTALLATION OF THE INSIDE CLOSURES AND BY INSTALLING FASTENERS IN THE PROPER SEQUENCE.



CAUTION

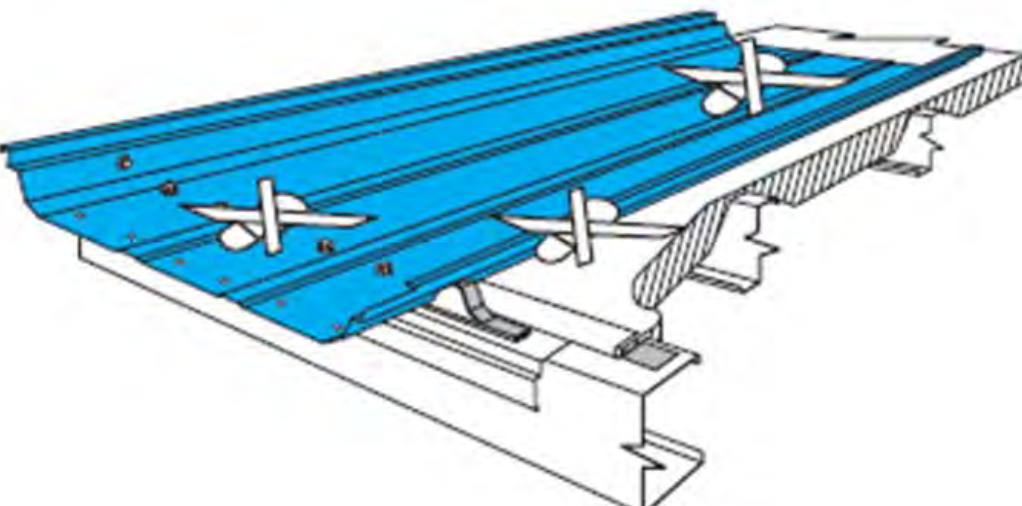
Do not stand on the panel when installing the screws at the eave. This may cause water ponding at the eave.

CAUTION

Do not, under any circumstance, step on the panel at the seam or at the panel ends until the adjacent side, end panels or eave fasteners are fully attached. The roof panel may not support the weight of a man at these locations and could affect panel module.

CAUTION

The roof should be swept clean of any drill shavings at the end of each day to prevent rust.



STEP
6

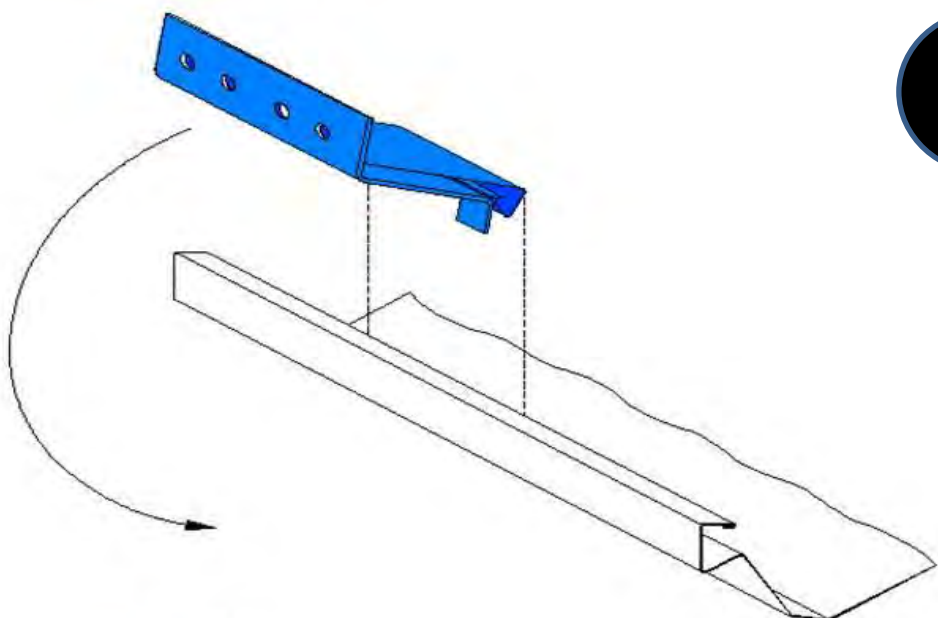
Install a clip on the male leg of the panel at the support member on the high end of the panel. **This should be the first clip installed as it controls the 24" module for the remainder of the panel.**

Check panel module before proceeding with installation.

Install clips at each support members for the remaining length of the panel.

CAUTION

Insure that the sliding tab of the clip is centered before attaching to the support member.



• Position the clip over the male leg of the panel as shown, and rotate clip downward.

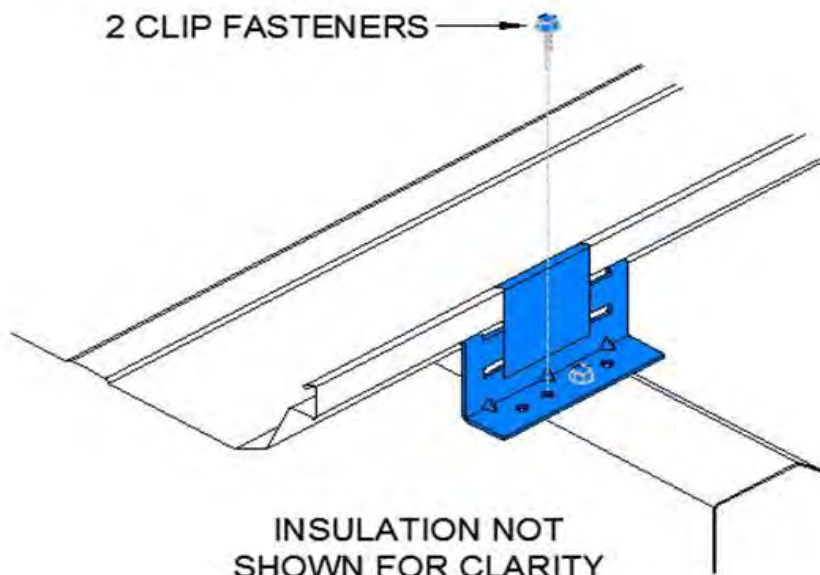


• With the upper clip firmly seated, position the base firmly against the purlin flange.



• When properly positioned, the vertical legs of the upper and lower sections of the clip will be pointed upward, as shown.

2 CLIP FASTENERS →



INSULATION NOT
SHOWN FOR CLARITY

IMPORTANT
As each clip is installed, maintain panel module.

STEP
7

NOTE

Steps 7 and 8 apply only where more than one panel is used on a single plane.

Slide a back-up plate onto the high end of panel; make sure the teeth on top of the back-up plate are on top of the panel.

Measure 5 $\frac{3}{4}$ " down from the high end of the panel. Place Triple Bead Tape Sealant at this location. The tape should be continuous covering the female rib across the panel and on top of the shoulder below the male rib.

Fill the area on the male rib above the Tape Sealant with Butyl Caulk.

CAUTION

Forcing the tape sealer back into the corners will lessen the thickness of the tape sealer where it is needed most.

RIGHT WAY

WRONG WAY

STEP
8

STANDARD ENDLAP

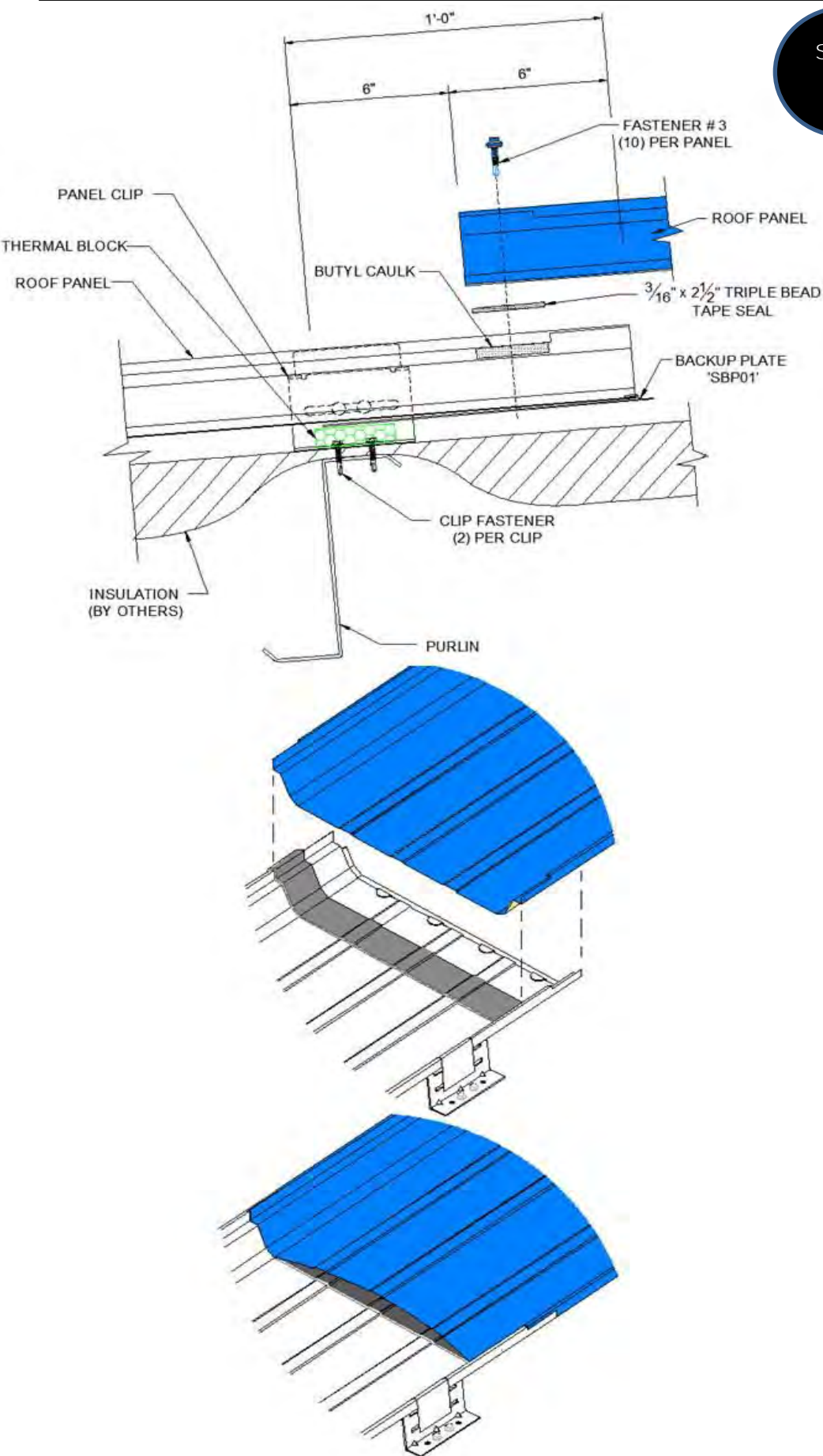
IMPORTANT

Prior to installing uphill panel, apply a 6" long bead of Butyl Caulk in the female leg to meet the factory applied caulk at the each end of the panel.

Install the upper panel by lapping the lower panel 6" and roll/setting the female seam over the lower panel female seam and the Rake Support.

Hold the middle of the upper panel up and slide the 3" notch under the lower panel male seam.

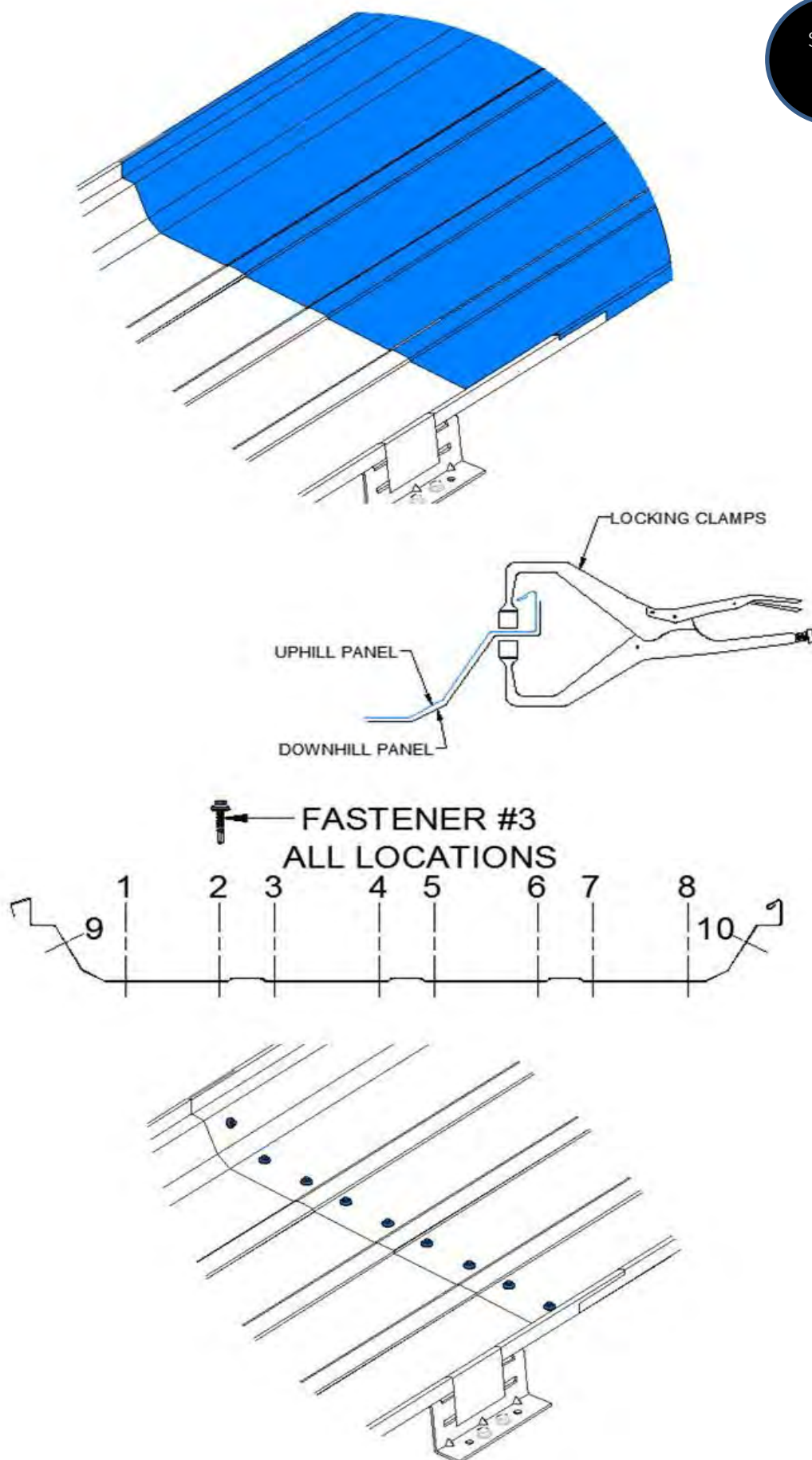
The lower and upper panel notches should now butt together to form a continuous seam.



STEP
8

ENDLAP (Continued)

Relax the middle of the upper panel onto the tape mastic on the lower panel.



Clamp the male seams together as shown before installing any fasteners.

CAUTION

Do not stand on the panel when installing the screws at the endlap. This may cause water ponding at the eave.

Secure the endlap by installing (10) Fastener #3 at panel dimple locations.

Do NOT remove clamp until all fasteners are installed.

Beginning at the high end of the panel, install clips at each support members for the length of the panel. Refer to Step 6.

Repeat the endlap procedures as required for each panel until the ridge or high eave is reached.

CAUTION

The roof should be swept clean of any drill shavings at the end of each day to prevent rust.

STEP
9

RIDGE PANEL

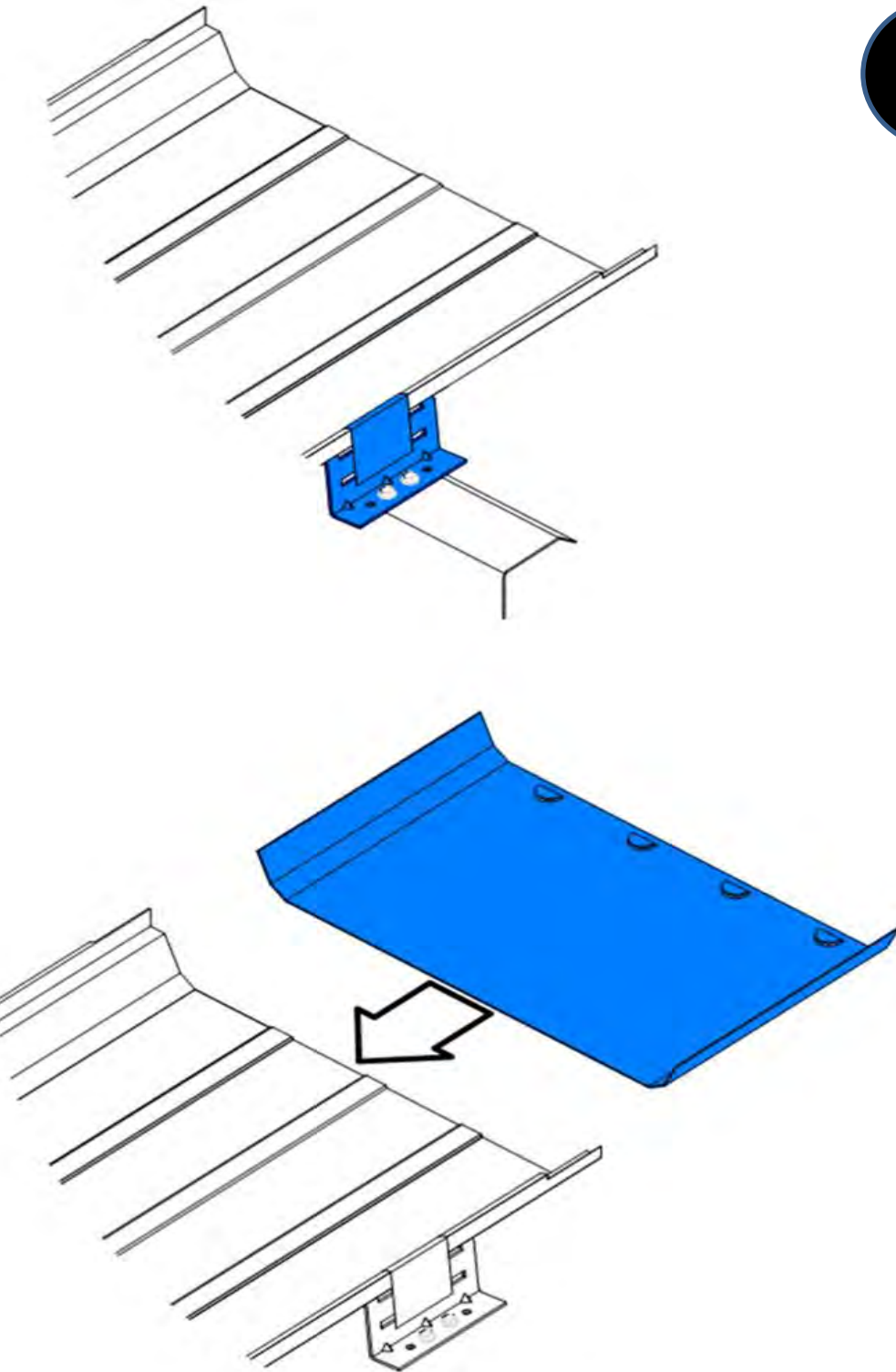
IMPORTANT

Prior to installing panel, apply a 6" long bead of Butyl Caulk in the female leg to meet the factory applied caulk at the each end of the panel.

Beginning at the high end of the panel, install clips at each support members for the length of the panel. Refer to Step 6.

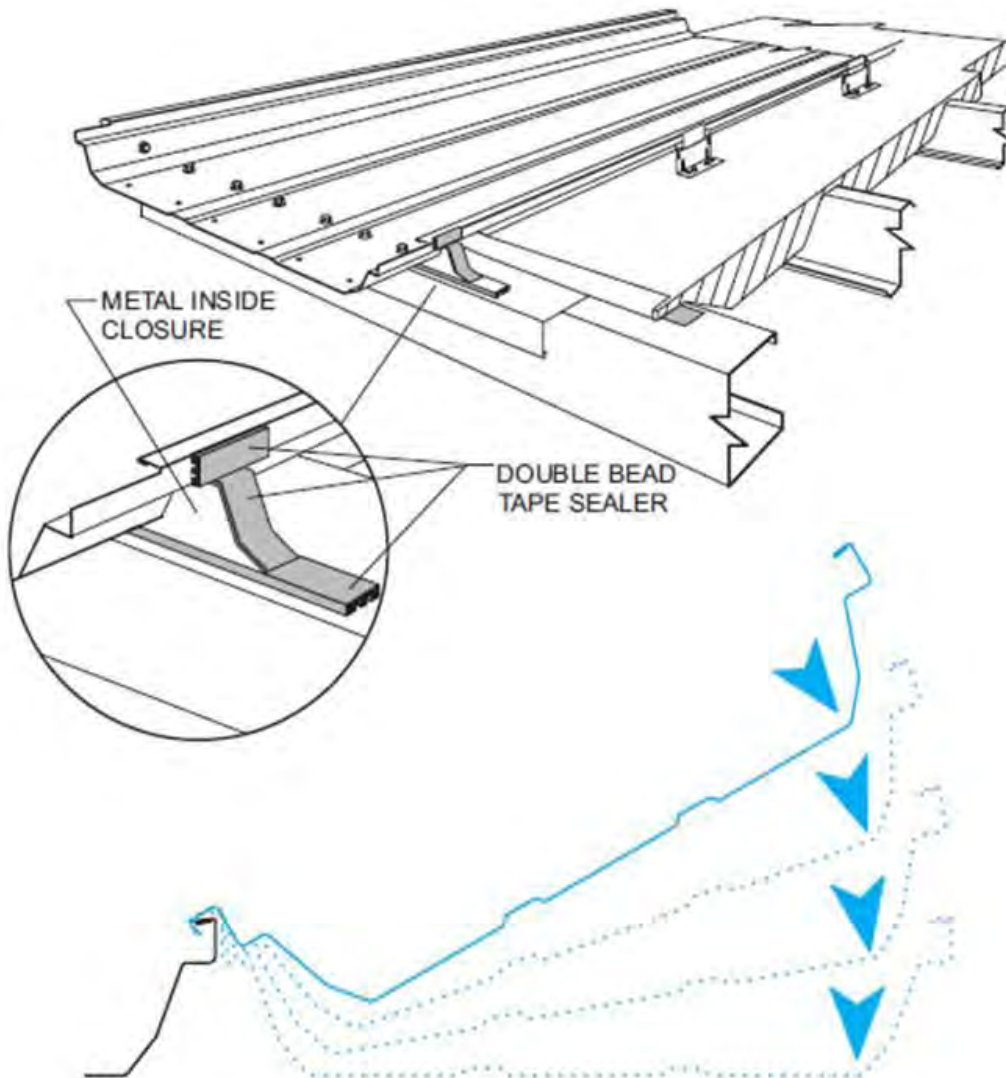
Check panel module before proceeding with installation. Make adjustments if required.

Slide a back-up plate onto the high end of panel; make sure the teeth on top of the back-up plate are on top of the panel.



STEP
10

SUBSEQUENT RUNS EAVE



Apply tape sealer to the male leg of the first panel run directly over the inside closure. This will prevent water infiltration through the end of the seam.

Install the next run of insulation and another inside closure using Fastener #2 (Refer to Step 3).

The second run of roof is now ready to install.

IMPORTANT

Prior to installing panel, apply a 6" long bead of Butyl Caulk in the female leg to meet the factory applied caulk at the each end of the panel.

Holding the male side of the next panel up, lay the female lip on top of the male leg of the adjacent panel and align it flush at the eave. Rotate the panel down, visually checking that the female lip is engaged onto the male leg of the adjacent panel along its entire length.

IF THE PANEL MUST BE RAISED FOR FURTHER ALIGNMENT, CARE SHOULD BE TAKEN TO AVOID PULLING THE FACTORY APPLIED MASTIC FROM THE FEMALE LIP.

Install Fastener #3 at eave in the recommended sequence. Ten fasteners are required at this location.

CAUTION

The roof should be swept clean of any drill shavings at the end of each day to prevent rust.

FASTENER SEQUENCE
SUBSEQUENT RUNS - EAVE

STEP
11

SUBSEQUENT RUNS ENDLAP

NOTE

Steps 11 applies only where more than one panel is used on a single plane.

IMPORTANT

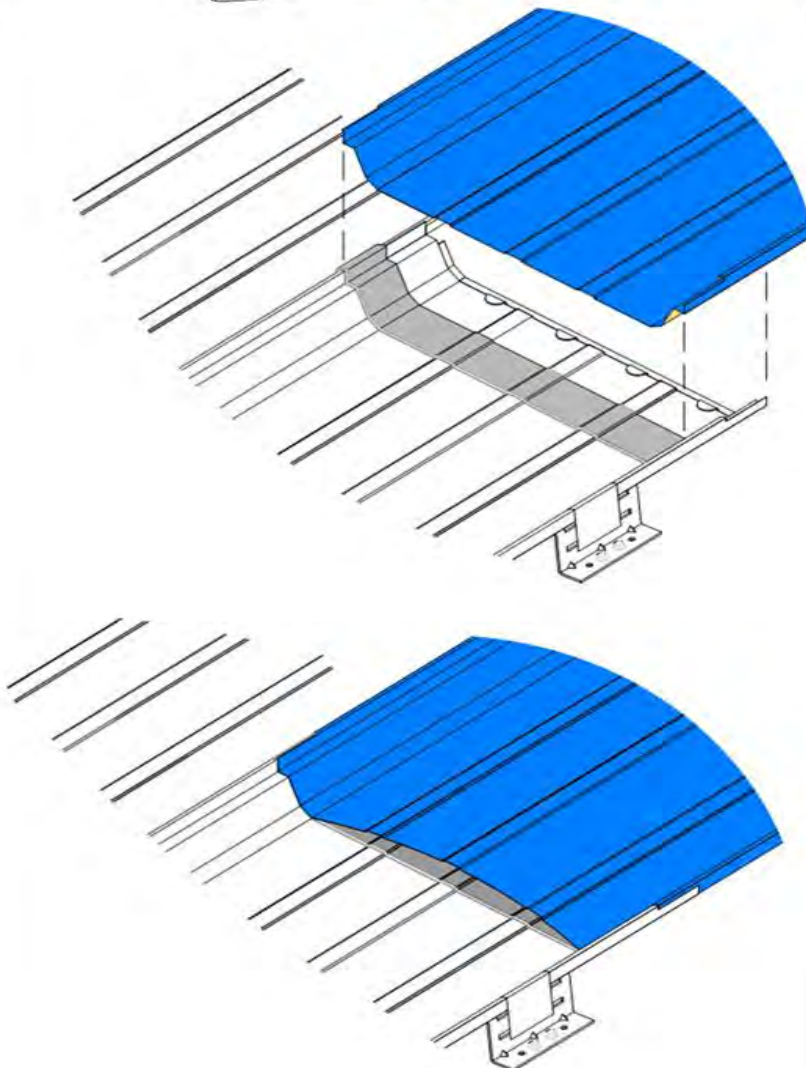
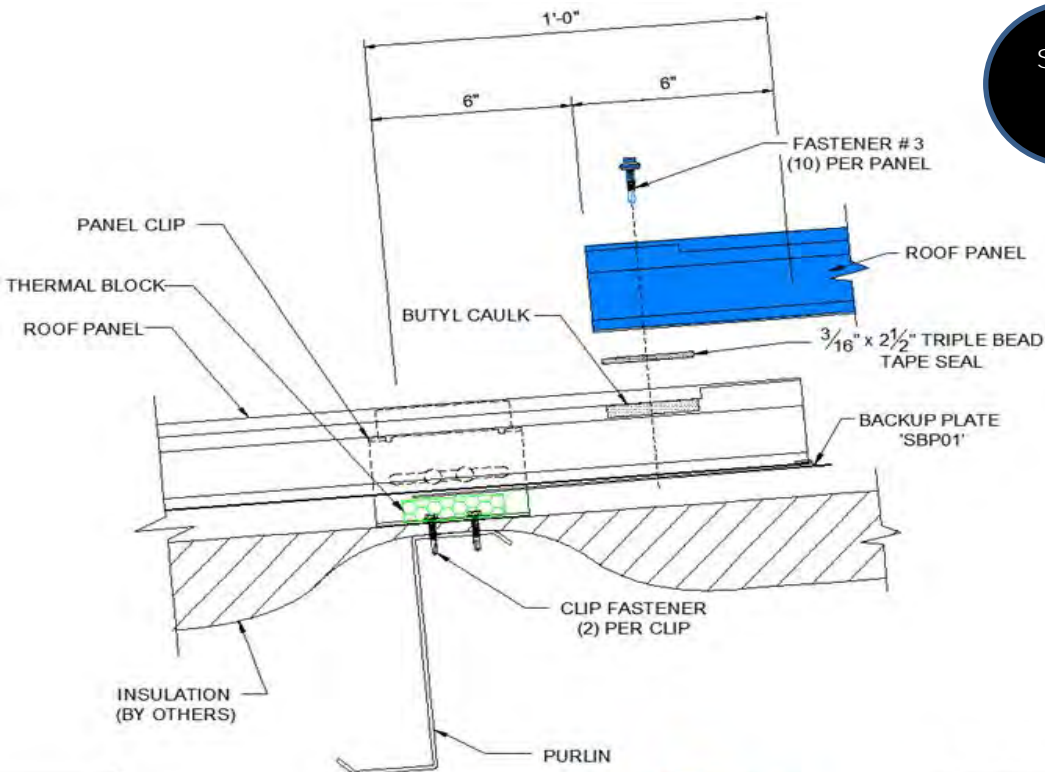
Prior to installing panel, apply a 6" long bead of Butyl Caulk in the female leg to meet the factory applied caulk at the each end of the panel.

Install the Back-Up Plate and sealant as shown in Step 7 on the lower panel.

Install the upper panel by lapping the lower panel 6" and roll/setting the female seam over the adjacent panel male seam.

Hold the middle of the upper panel up and slide the 3" notch under the lower panel male seam.

The lower and upper panel notches should now butt together to form a continuous seam.



STEP
11

SUBSEQUENT RUNS ENDLAP (CONTINUED)

Relax the middle of the upper panel onto the tape mastic on the lower panel.

Clamp the male and female ribs as shown before installing any fasteners.

CAUTION
Do not stand on the panel when installing the screws at the endlap. This may cause water ponding at the eave.

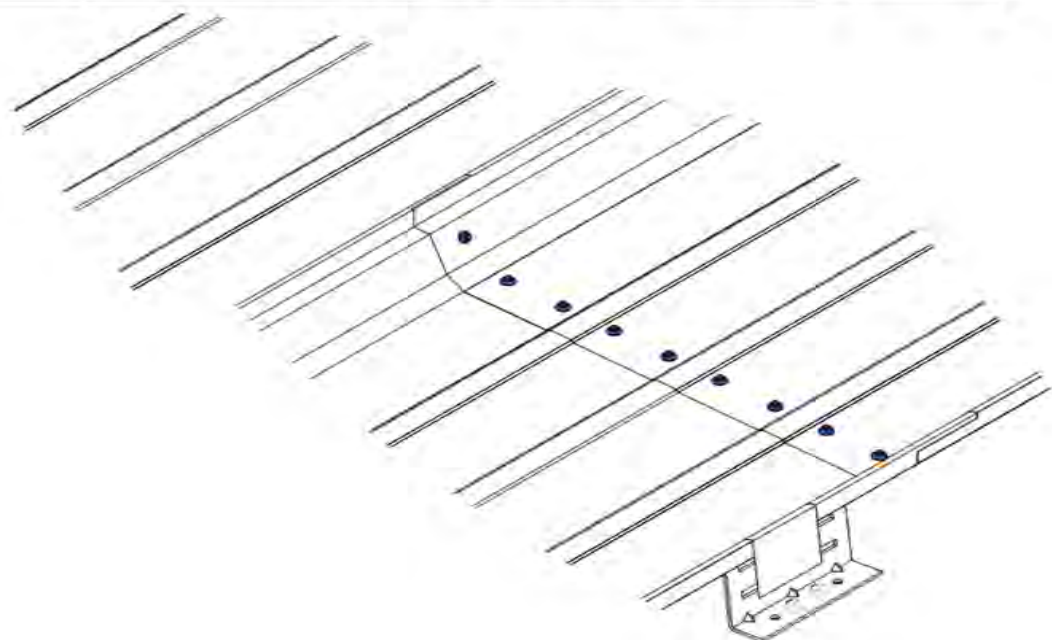
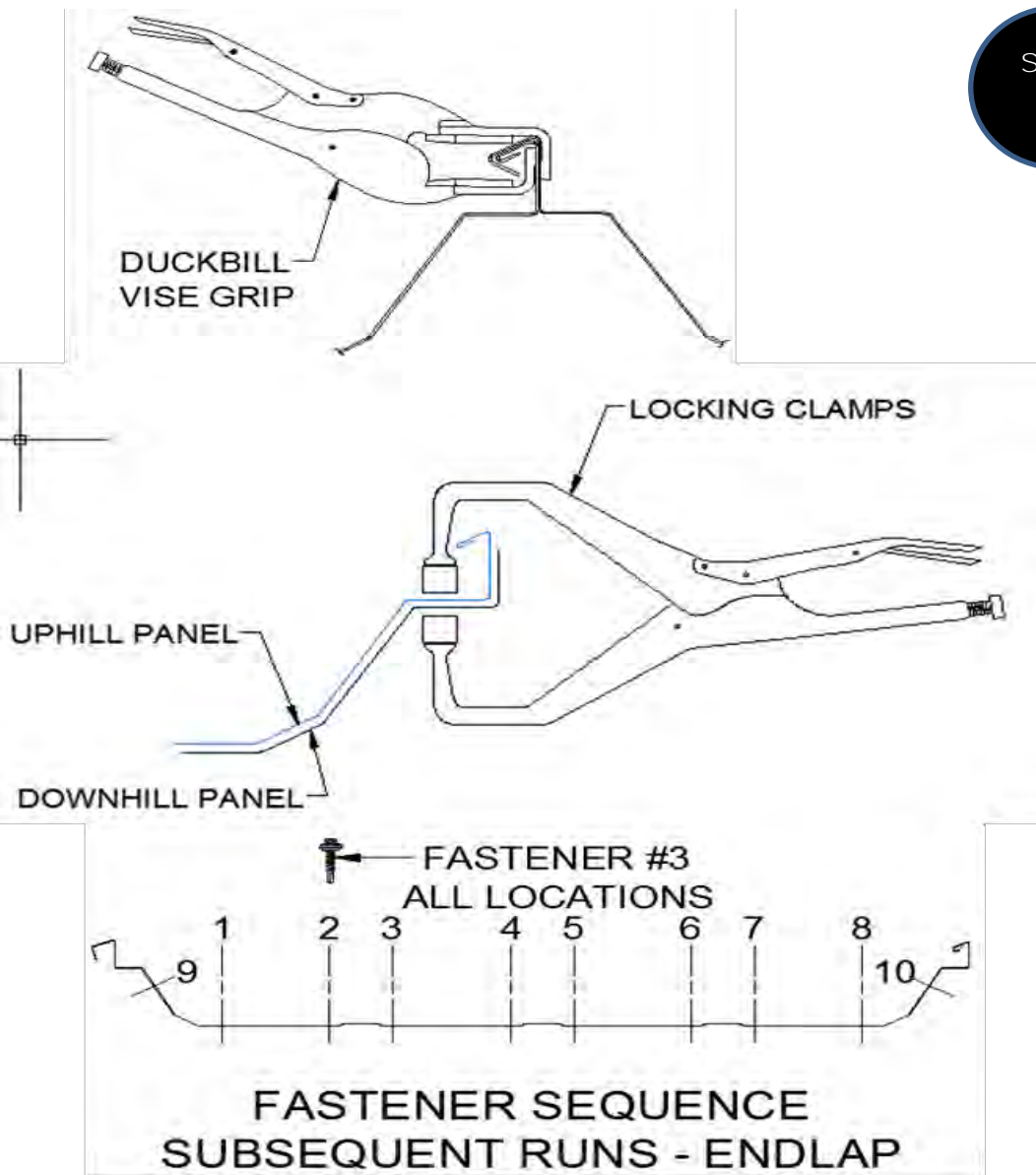
Secure the endlap by installing (10) Fastener #3 at panel dimple locations.

Do NOT remove clamps until all fasteners are installed.

Beginning at the high end of the panel, install clips at each support members for the length of the panel. Refer to Step 6.

Repeat the endlap procedures as required for each panel until the ridge or high eave is reached.

CAUTION
The roof should be swept clean of any drill shavings at the end of each day to prevent rust.



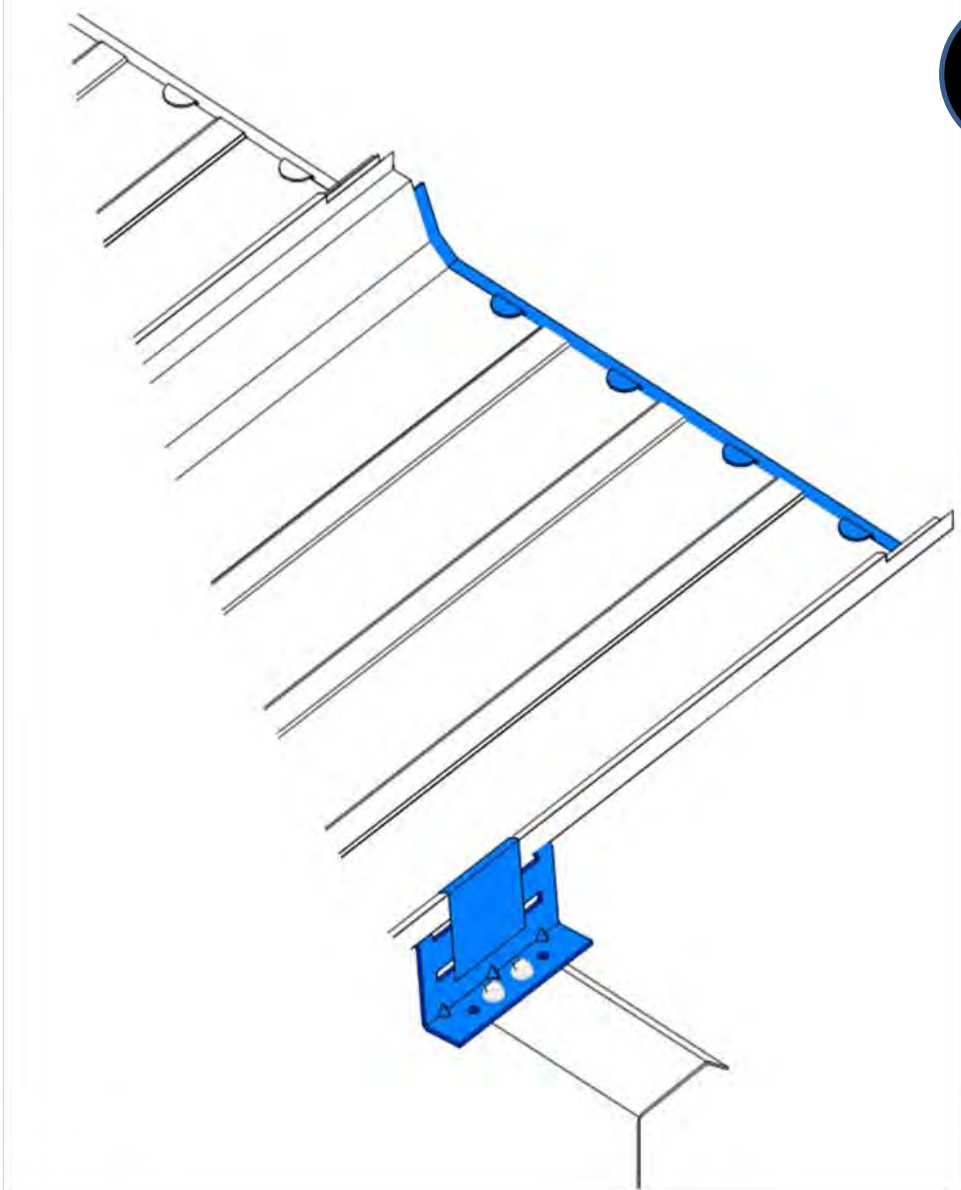
STEP
12

SUBSEQUENT RUNS RIDGE PANEL

Beginning at the high end of the panel, install clips at each support members for the length of the panel. Refer to Step 6.

Check panel module before proceeding with installation. Make adjustments if required.

Slide a back-up plate onto the high end of panel; make sure the teeth on top of the back-up plate are on top of the panel.



STEP
13

SEAMING THE ROOF

The metal building supplier furnishes the Standing Seam 360 roof system with non-handed panels. Sheets can be installed from either end of the building. Erection Drawing may have specific sheeting direction requirements.

The seaming process involves two different tools, the Standing Seam 360 electric roof seamer, and the hand seamer.

The Standing Seam 360 hand seamer is a two stage tool used at the starting end of each panel (eave or ridge) prior to seaming with the electric seamer.

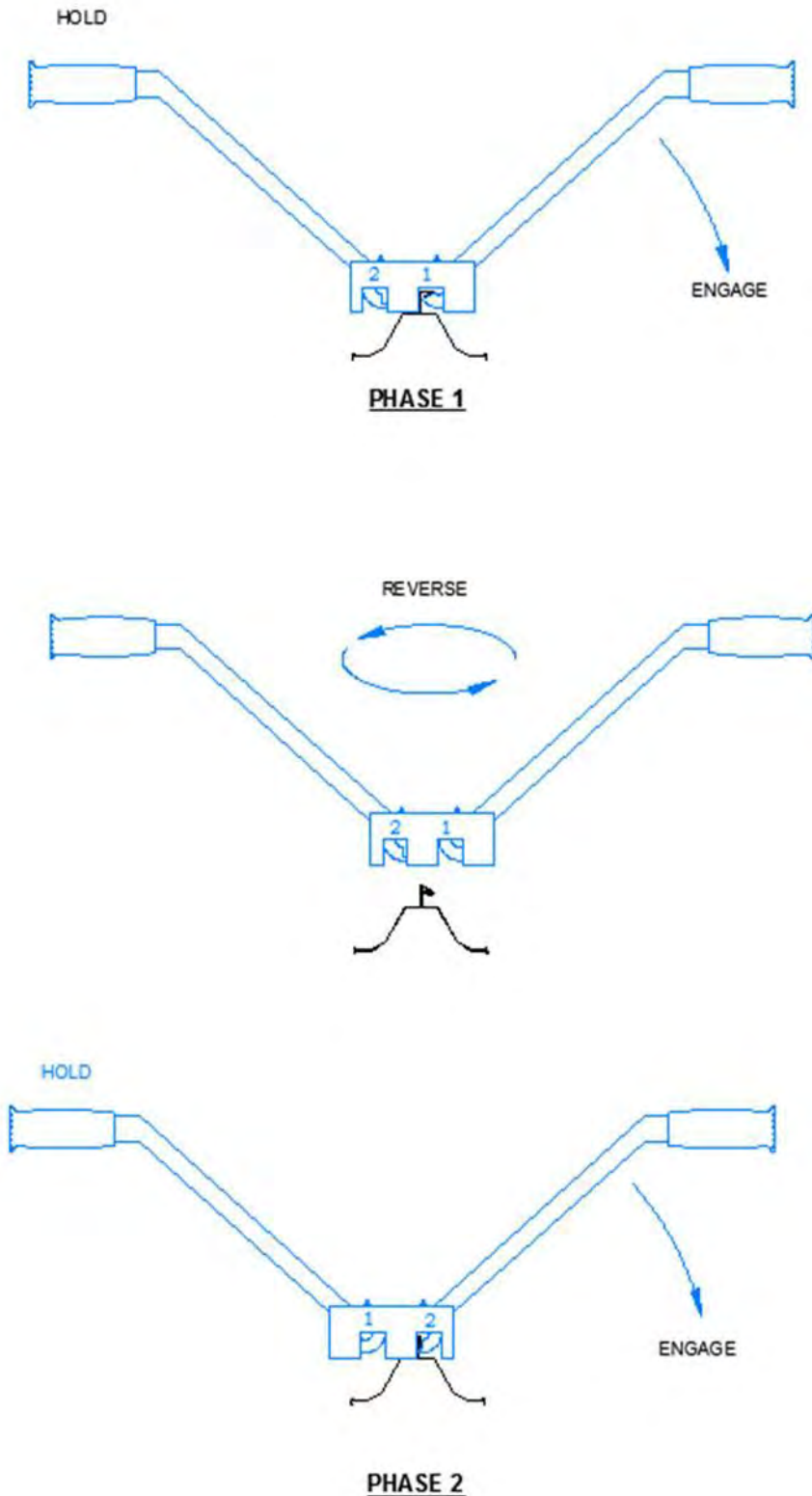
In the first stage place Phase 1 side of the seamer on to the open side of the seam at the end of the panel and engage the tool to a fully closed position.

Remove the seamer, move up the slope the width of the seamer jaws (approximately four inches), and engage the tool to a fully closed position. This should complete the first stage of hand seaming.

Remove the seamer and reverse the direction so that Phase 2 side of the seamer is pressed on to the open side of the seam, starting at the panel end engage the tool to a fully closed position to complete the seam.

Do this step only once.

The seam is now ready for the electric seamer.



STEP
13

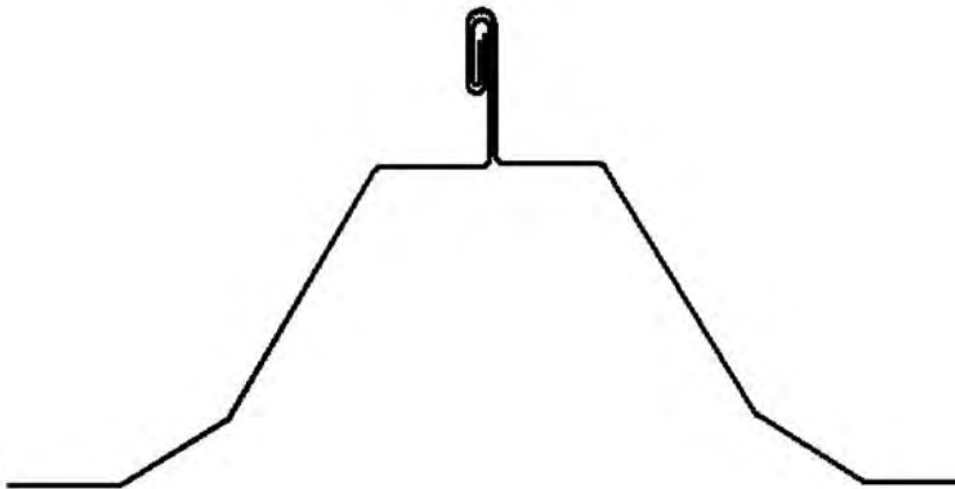
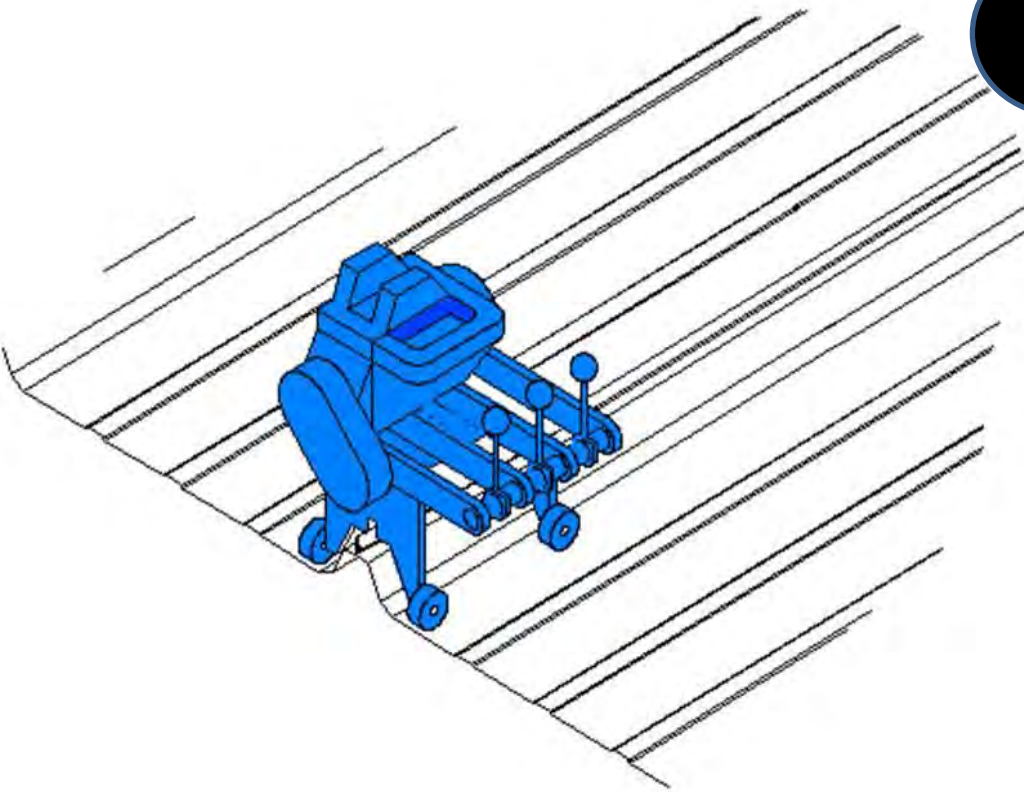
SEAMING THE ROOF

CAUTION

Remove all construction debris from roof to prevent Seamer and roof damage.

IMPORTANT

Refer to the Owner's Manual included with the Seamer for safe and practical seaming operations.



FINISHED SEAM

The Standing Seam 360 electric roof seamer is a single direction machine used for seaming the panels together at the sidelaps. Gable buildings will require the seamer to start at the eave on one side of the building and travel up the slope to the ridge and then travel down the slope to the eave on the opposite side of the building. Single slope buildings will require the seamer to start at either the high or low side of the building depending upon the sheeting direction.

To start the seaming process, place the electric seamer in position with the three handles in the unlocked positions. The seam rollers should be on the open side of the seam and the back of the seamer should be aligned with the end of panel (the hand seaming operation at the starting end of the panel should have already been completed). Lock the three handles in to position and start the seamer. Allow the seamer to complete its run to the opposite end of the panel.

Should further seaming be required after completing the run with the electrical seamer, finish with the two stage hand seaming process.

Do not run the electric seamer through any section of the panel that has been hand seamed.

The seamer should never be allowed to become a falling hazard to anyone beneath the roof. All safety precautions and OSHA safety regulations should always be followed for maximum worker safety.

STEP
14

LAST PANEL RUN

In most situations, the roof system will be designed to finish in the high.

With insulation in place, install rake supports as indicated on the Erection Drawings.

The male leg of the last panel run will need to be flattened before installation.

One Panel Eave to Ridge

Using the hand seamer and the electric seamer flatten the male leg for the full length of the panel.

CAUTION

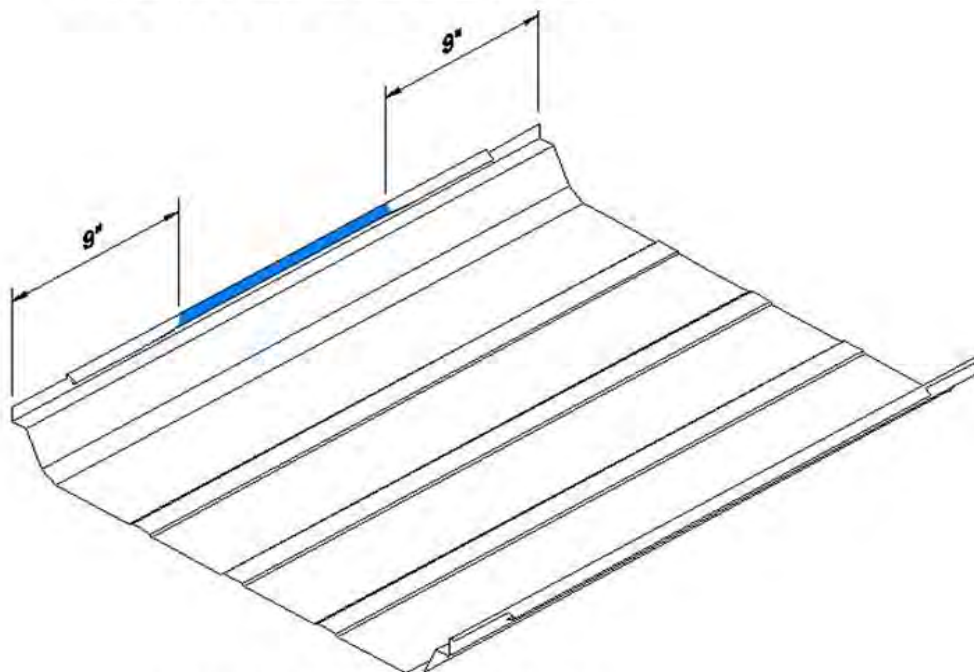
The seamer will not support itself while flattening the male leg on the last run. It must be supported during this operation.

Multiple Panels Eave to Ridge

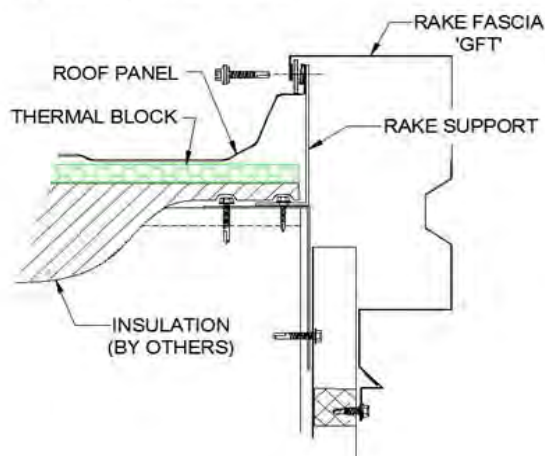
Using the hand seamer and the electric seamer flatten the male leg, with the exception of the first and the last 9" of each panel. This will allow for proper panel engagement at endlaps once panels are installed.

Following the installation of the endlap use the hand seamer to flatten the remainder of the male leg.

ONE PIECE PANEL EAVE TO RIDGE



MULTIPLE PANELS PER RUNS PANELS WITH ENDLAPS



STEP
15

OUTSIDE CLOSURE

After all panel runs are installed and sealed, return to first panel run at the ridge.

Fold 1 1/2" long piece of 3/16" x 7/8" tape sealant in half and place along rib under panel seam located 1" downhill of the notch.(as shown).

Place two more pieces of sealant along vertical of panel seam.

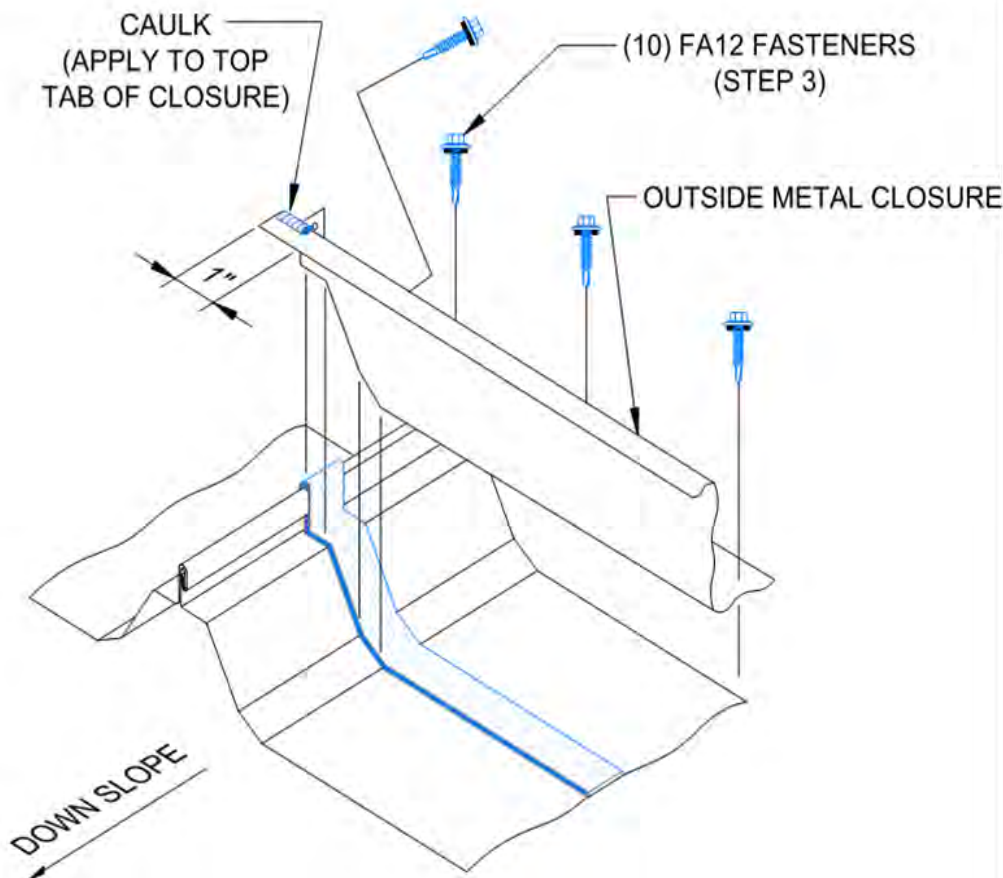
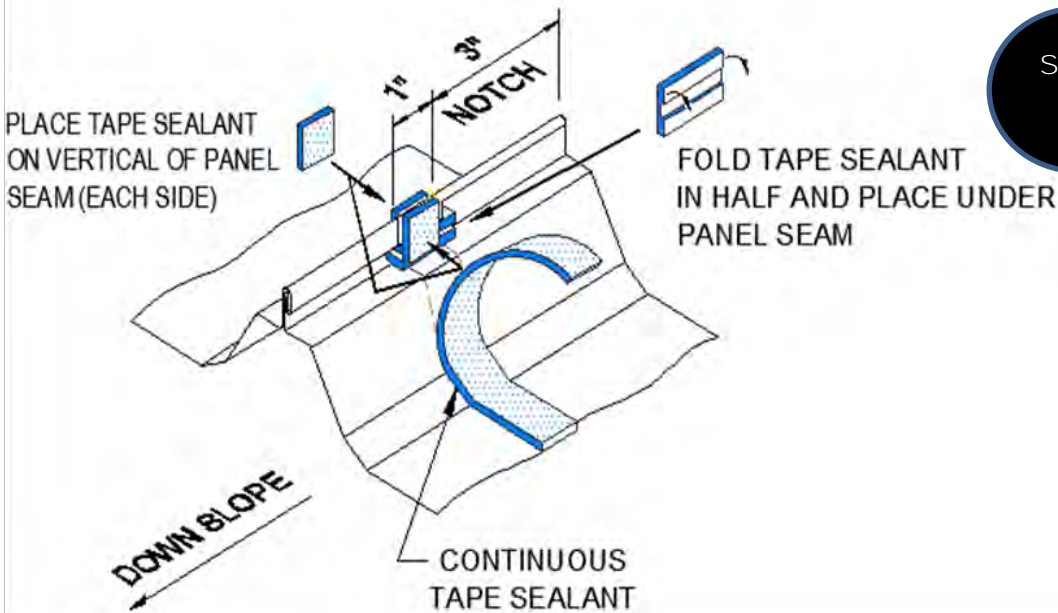
Install 3/16" x 7/8" tape sealant across panel flat and **over** panel rib and previous sealant, located 1" downhill of the notch.

Install metal closure flush with edge of sealant (located at edge of factory notch).

Secure in place with (10) FA12 fasteners.

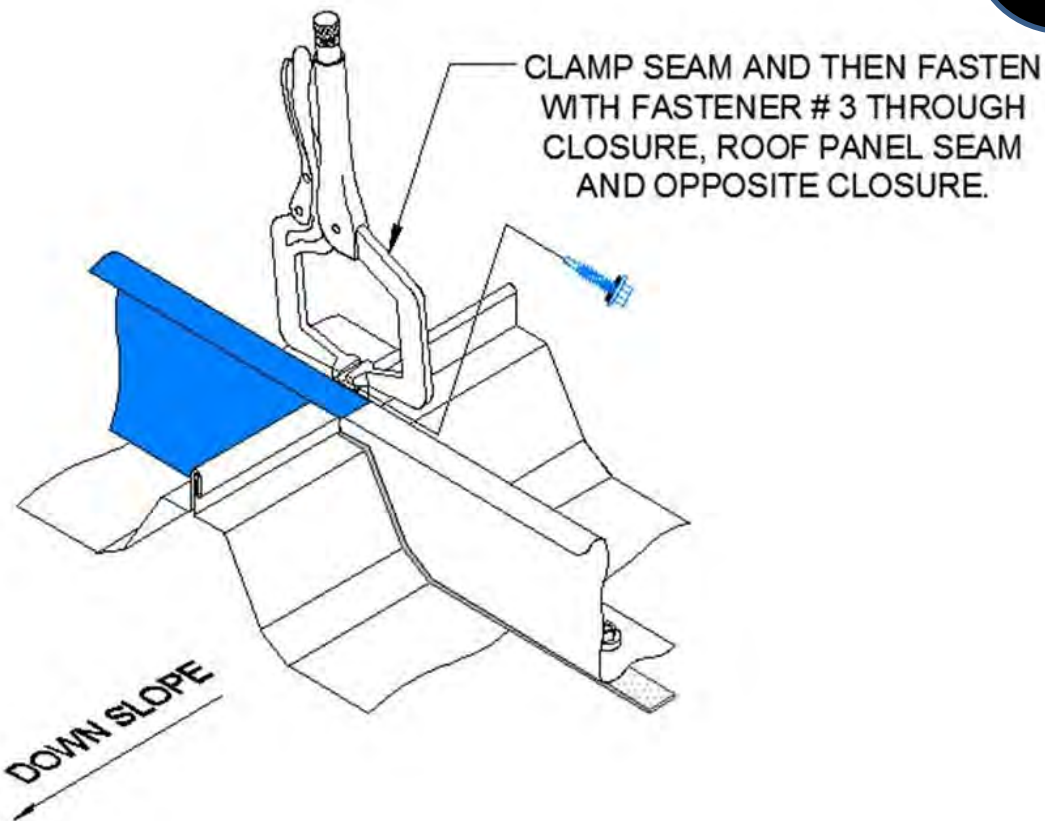
- (1) Fastener at base of trapezoids.
- (1) Fastener each side of the minor ribs. (omit fasteners in the 2 center pre-punched holes.)
- (1) Fastener thru the pre-punched holes into each trapezoid.

Apply 1" long urethane caulk along top tab of metal closure. (This is to ensure seal of next lapping metal closure).



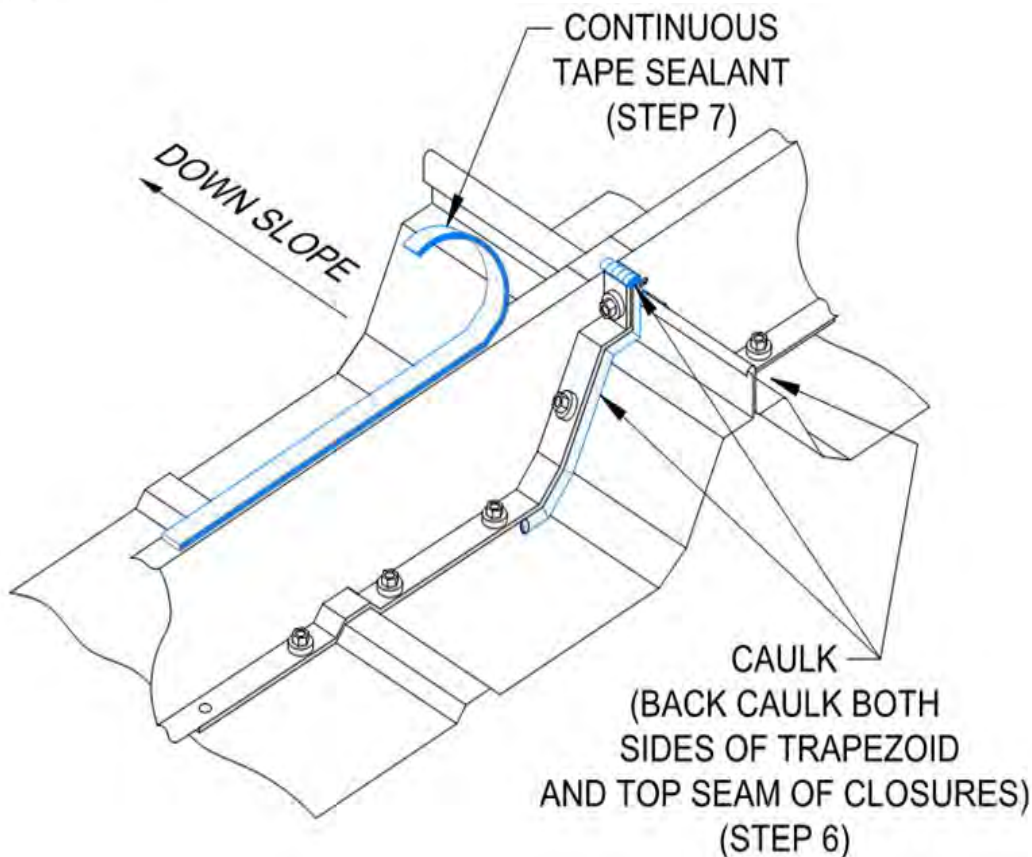
STEP
15

OUTSIDE CLOSURE (Continued)



Install the next closure same as the first.

Clamp the two metal closures together at seam and install (1) Fastener # 3 through hole at top of closure, roof panel seam and opposite closure.



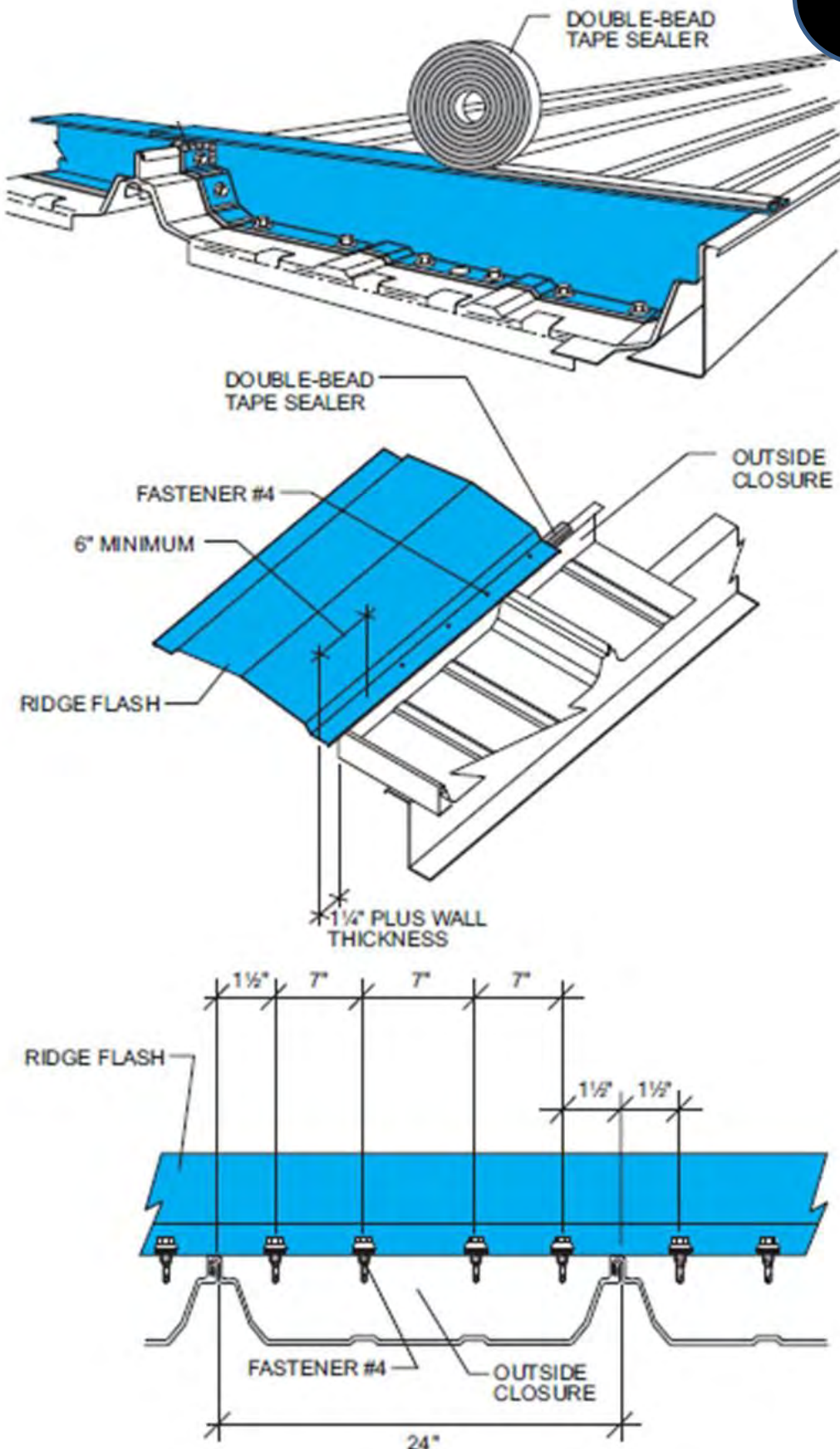
Apply caulk along backside of metal closures at trapezoidal location.

Apply caulk along top seam of metal closures and panel seam.

After closure installation, apply 3/16" x 7/8" tape sealant on top leg of metal closure.

STEP
16

RIDGE-OUTSIDE CLOSURE/FLASHING



Install the ridge flashing starting and ending $1 \frac{1}{4}$ " plus wall thickness outside the steel line.

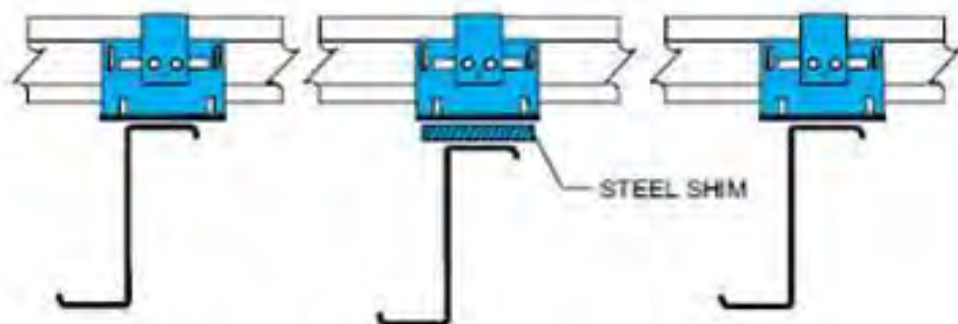
Fasten the ridge flashing to the outside closures with Fastener #4. Install a fastener $1 \frac{1}{2}$ " from panel seam on both sides of panel. Install additional fasteners 7" O.C.

Leave 6" unfastened on each end to allow for the rake trim to be installed later.

DO NOT FASTEN THROUGH THE LOCK OF THE STANDING SEAM.

CAUTION

The roof should be swept clean of any drill shavings at the end of each day to prevent rust.



CORRECTING OUT-OF-PLANE SUBSTRUCTURE

Occasionally a purlin may be encountered that is lower (out-of-plane) than those adjacent to it. When a clip is attached to this purlin, it will go down further than those adjacent to it, distorting the seam. This can cause the next panel sidelap to be difficult to engage. To compensate for this lower purlin, a steel shim may be placed under the clip to bring it up to the proper height (in plane). This shim should be no thicker than $\frac{1}{4}$ ". If $\frac{1}{4}$ " is not enough, then structural modification will be necessary.

Avoid "stair-stepping" of the panels at the eave. This will cause problems at the peak.

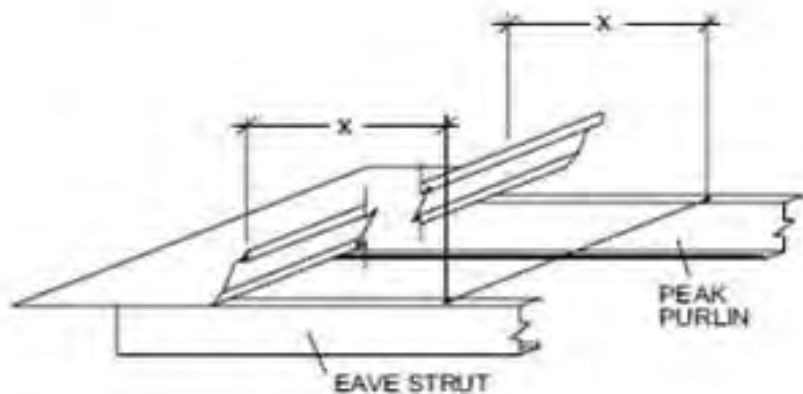
Any "stripped out" fasteners at the endlaps or outside closures should be immediately replaced with Fastener #3A. Place a 1" long piece of Double bead tape sealer over the "stripped out" hole before installing fastener. This will allow the fastener threads to be coated with tape sealer and provide a good seal.

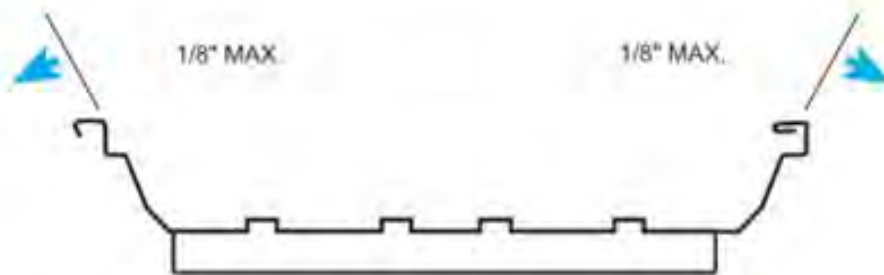
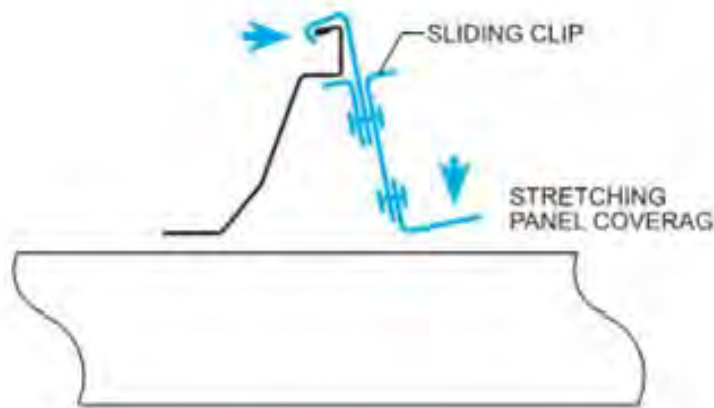
NEVER ALLOW PANELS TO COME INTO CONTACT WITH LEAD, COPPER, GRAPHITE, GASOLINE OR OTHER HARSH CHEMICALS AS THIS WILL VOID THE GALVALUME® WARRANTY.

CHECK ROOF FOR PANEL ALIGNMENT

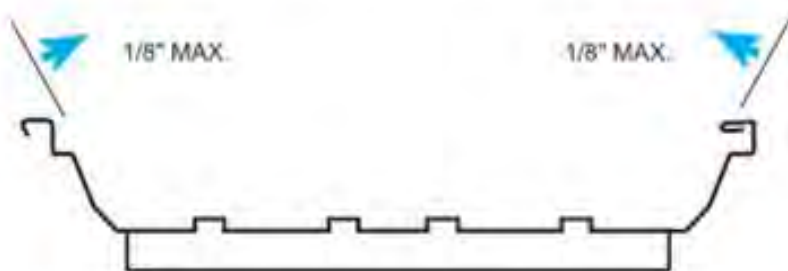
Check the roof every three or four runs for panel alignment as it is being erected. This can be accomplished by two different means.

1. Measure from the rake support to the seam of the last completed panel run. Take measurements at the ridge, eave, and all end-laps.
2. Attach a stringline to the eave plate and ridge purlin, running parallel to the rake support. The stringline should stay ahead of the work and can be moved across the roof as construction progresses. Measure from the stringline back to the last completed panel run. Take measurements at the ridge, eave, and all endlaps.





STRETCHING PANEL COVERAGE



SHRINKING PANEL COVERAGE

ADJUSTING PANEL WIDTH

NOTE

Do not adjust panel width more than $\frac{1}{4}$ " on any panel area.

CLIP

To stretch panel coverage, install the clip at the panel endlap or ridge with the base angled away from the panel. As the fastener is installed through the base of the clip and into the purlin, the clip base will rotate down to the purlin causing the top of the clip to move outward, stretching the panel coverage. Install the remainder of the clips as usual.

To shrink panel coverage, install the clip at the panel endlap or ridge with the base angled toward the panel. As the fastener is installed through the base of the clip and into the purlin, the clip base will rotate down to the purlin causing the top of the clip to move inward, shrinking panel coverage. Install the remainder of the clips as usual.

BACK-UP PLATES

To stretch panel coverage, bend the sides of the back-up plate out and install at endlap.

Do not bend either side more than $\frac{1}{8}$ ".
Install clips as usual.

To shrink panel coverage, bend the sides of the back-up plate in and install at endlap.

Do not bend either side more than $\frac{1}{8}$ ".
Install clips as usual.