Installation Instructions · SS 1.5 Panels

Rider: The details and written instructions described in this manual are suggested installation methods to ensure a quality application of our products, and should be considered as a guideline only. METAL EXPERTS® recognizes that installation techniques can vary based upon builder and geographical preferences, and that there are other acceptable ways to install our products.

〔 GENERAL INFORMATION 〕

Thank you for choosing the METAL Roofing & Siding EXPERTS® Standing (Mechanical) Seam 1.5 panel (herein referred to as SS 1.5) for your project. At METAL Roofing & Siding EXPERTS® we are dedicated to providing the highest quality products and service.

These instructions are to assist you in the installation of your metal package and to give you a general understanding of our SS 1.5 profiles. This booklet contains proven methods of installation but is not intended to cover all instances, designs or building codes. Every project is unique and thus may require revisions to compensate. The installer must allow for expansion and contraction tolerances for this roofing system. The project owner must ensure that this product & installation method meets all of your local building codes.

SS 1.5 is an economical concealed fastener roofing panel that is ideal for both residential and commercial applications. Where installed as roofing the minimum roof pitch these panels can be installed at is a 1/12 Pitch.

This panel is offered in 6 different profiles, 26 and 24 gauge steel, and depending on your profile preference, there are up to 26 colours to choose from with our outstanding 40 Year Paint Warranty. With the flexibility of our product you will have an opportunity to select the panel gauge and colour that is just right for you.

All the necessary trims and accessories required for your project are also available and outlined in this manual. We have listed our Standard Trims, but are not limited to these. Where customized trims are required we can build to suit your project.

With every installation, some oil canning is a natural occurrence in the flat portion of the panel which does not affect the performance of the panel and is therefore not cause for rejection.

Thank you for choosing METAL Roofing & Siding EXPERTS® SS 1.5 profile.

Installation Instructions · SS 1.5 Panels continued

ORDERING ROOF PANELS AND SCREWS

METAL Roofing & Siding EXPERTS® has state of the art software to take the dimensions of your building and turn it into a comprehensive quotation and cut list for the most detailed of projects. It is critical however, prior to ordering panels, to measure and verify all lengths required for your project.

SS 1.5 panels can be ordered in lengths starting at 1'0" and as long as 40'0" for delivered product. For orders greater than 40', please contact us for special manufacturing arrangements. These panels cannot be stacked thus crating is necessary to protect the panels in shipment. Also to be noted, a mechanical means of off loading the truck will be required.

To avoid having to make any unnecessary cuts at the job site, check and double check that the panels ordered are the correct length for your requirements and that the quantities are correct. In roofing applications, where a venting ridge is being used panels should be 2" short of the ridge. Regardless of venting at the ridge, the panel should extend 1" past the eave.

Panels being used on the upper side of a transition or valley application should be ordered a little shorter to accommodate installation. Standard and expanding foam closures are often used in the appropriate locations to assure a good seal is established and maintained. See the General Installation Information section on page 8 for further details.

ORDERING AND APPLYING TRIM

The ridge cap, which is used at the peak of a roof where opposing roof slopes join is the most common flashing. Where venting at the ridge is desired, ensure that vented closures, vented z-bar, and a standard 6" flat ridge cap is ordered to accommodate the closure strip. Other typical flashings include eave flashing, gable flashing, sidewall and endwall flashing, valleys and transitions. All standard trims are designed for a 4/12 pitch; the roof slope should be mentioned when ordering ridge caps, endwalls and eave flashing when the slope is 5/12 or greater. When ordering a transition, where a steeper slope meets a lesser slope, both slopes are required.

The use of gable flashing protects the gable end and adds to the appearance of the structure. It is to be fastened approximately every 12" to the face of the building or fascia where applicable with metal screws. On a roofline where the edge of a panel ties into a wall, a sidewall or endwall flashing is required to slip up under the wall cladding and over the roof sheeting. In both cases, butyl tape sealant and/or metal roofing sealant are required to ensure a water-tight seal between the flashing and cladding.

At the ridge, non-vented or vented closures should be installed between the ridge cap and the roof panel with z-bar to prevent the penetration of driving rain or foreign debris. The ridge cap is fastened to the z-bar using #12 x 3/4" screws.

Installation Instructions · SS 1.5 Panels continued

ROOF APPLICATION

Notice: Prior to beginning your installation use a check list to make sure you have everything you will need to install your metal roof. (See Sect. 6 - Pg. 7)

- Panel installation should begin at the gable end of the roof opposite the prevailing rain bearing wind.
- The minimum roof slope recommended is 1" in 12" of rise (1/12 pitch).
- On an end lap ensure the panel above overlaps the lower panel by at least 9". Two rows of butyl tape sealant should be applied across the panels at end laps. Secure the overlapping panels to each other using rivets. It is also advisable to apply butyl tape sealant where panels and trims meet.
- At the gable ends extend the sheet 1" beyond the gable fascia unless you are using a gable trim in which case the sheet should be within 1-3/4" from the roof edge.
- An overhang of 1" at the eave is recommended.
- Measure one panel width in from the gable end and run a chalk line from the eave to the ridge.
- For the remaining panels to line up square across the roof it is critically important this first panel is laid square to the eave and ridge.
- Due to the nature of the product, eave closures are unavailable. Use metal roofing sealant to fill in the space where the 2 panels join along the eave. Closures at the ends of the ridge cap are recommended.
- The panels are fastened down by clips. Depending on the length of your panel, you will need to use floating clips or fixed clips. See page 10 for complete clip installation instructions. Eave screws should be applied as per the instructions on page 12. At the ridge, do not fasten until you are installing the z-bar.

TRIMMING & CUTTING STEEL PANELS

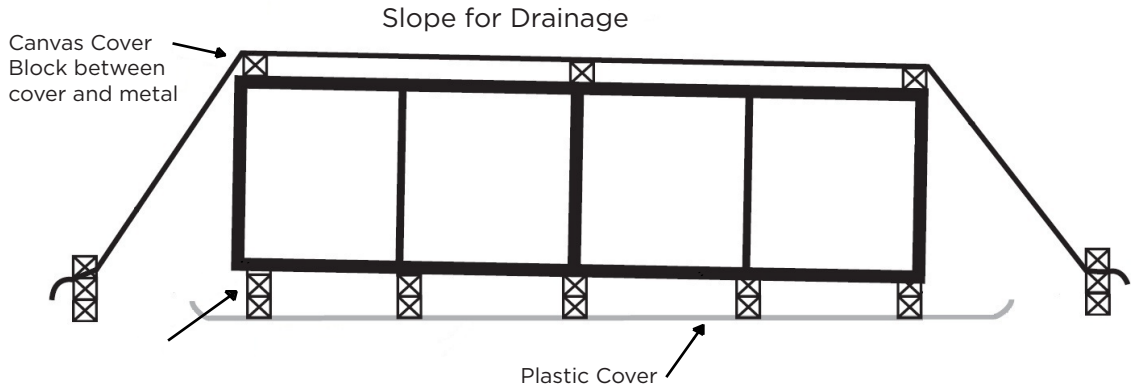
For cutting panels the best device(s) are hand shears, nibblers or circular saw with a proper metal cutting blade. You have to be particularly careful when using nibblers or a circular saw as they both have a tendency to leave hot metal particles that can burn the paint surface or leave rust marks on panels and trims. Filings can also be left by the application of screws. All of which could impact the terms of the product warranty. Care should be taken to remove all particles after installation.

〔 STORAGE & HANDLING 〕

METAL Roofing & Siding EXPERTS® SS 1.5 panels and trim paint finishes are formulated to withstand severe weather conditions. If however, installation of the metal is delayed, the preferred method of storage is indoors in a well ventilated dry location. Any outdoor storage of panels or trims is at the risk of the customer. Please inspect all panels and trims at time of delivery. If moisture is present, all panels should be uncrated, wiped and allowed to dry completely. Failure to remove entrapped moisture between the sheeting immediately will affect the service life of the metal and potentially void the warranty. It is not recommended to store the bundled panels for an extended period of time. Avoid the contact of the following items with the metal at all costs; salt, water, corrosive chemicals, ash, industrial plant fumes generated or released nearby, foundries, plating works, kilns, fertilizer and wet or green lumber. Please see our warranty for other conditions for your consideration.

Where there is no alternative but to store panel bundles outside, they must be elevated off the ground, with ground cover and cover sheet tarps, and a slope to allow for drainage. See the below diagram as a point of reference. **Panels and trims left wet WILL result in damage**. Be sure to store material that is not going to be installed immediately in a dry location. Wet material should be re-stacked and air-dried if installation is not immediate.

Any outdoor storage of panels & trims is at the customer's own risk



Installation Instructions · SS 1.5 Panels continued

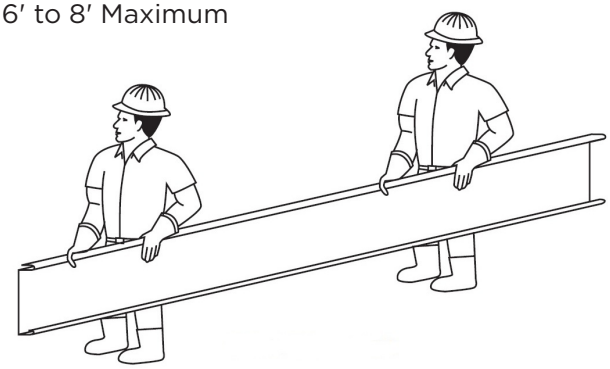
GENERAL HANDLING

Crates should be handled carefully to avoid being damaged. Precautions should be taken to prevent bending of the panel or abrasion to the finish. The following steps are highly recommended:

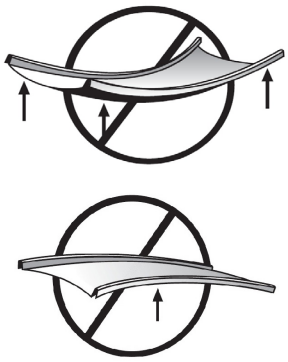
1. Leave crate(s) intact during handling and until the individual panels are ready to be installed. Do not lift crates by the banding.
2. Lift crates at the center of gravity point.
3. Where using a crane, use spreader bars and nylon band slings. The use of wire rope slings WILL damage the panels.
4. When using a forklift, spread the forks to their maximum spacing and centre the load to prevent scratching on the next panel.
5. Individual panels should be handled carefully to prevent buckling or damage to the finish. When removing from the crate it should never be allowed to slide over another panel but rather "rolled" out of the crate in order to minimize any damage.
6. Wear cut resistant gloves when handling panels.

Correct Manual Handling

6′ to 8′ Maximum

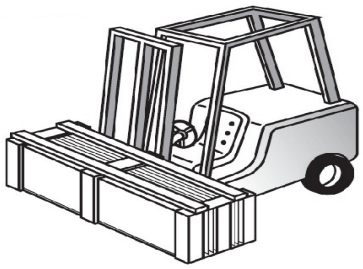


Incorrect Handling



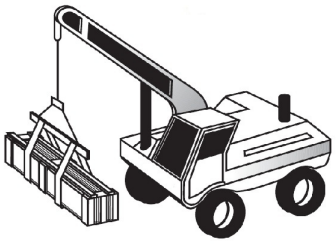
For Panels Under 20′

Forklift



For Panels over 20′

Crane



Installation Instructions · SS 1.5 Panels continued

〔 SAFETY 〕

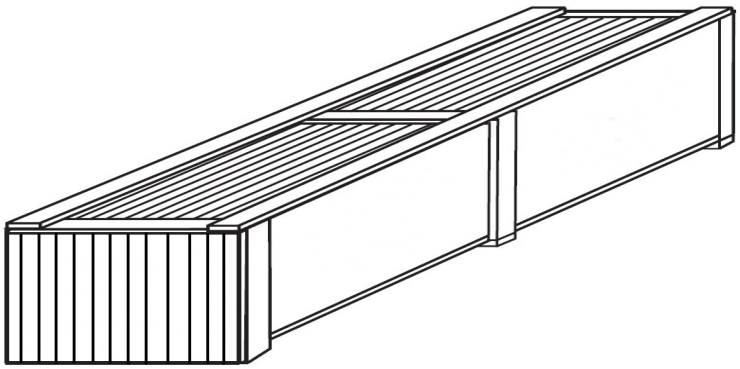
All local, provincial, and federal safety regulations set out by OH&S must be followed when working on any construction project.

If you must walk on the installed SS 1.5 panel take great care and wear non slip shoes. Metal roofs can become slippery and should not be walked on when they are wet, covered in frost and or snow. When walking or standing on a metal roof keep your feet on the flat portion and not on the rib.

Since metal roofing is sharp, cut resistant gloves should be worn when handling. When drilling or cutting metal panels and trims there is the potential for metal shards to be produced and to become airborne therefore, safety glasses should also be worn.

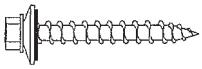
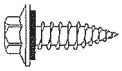
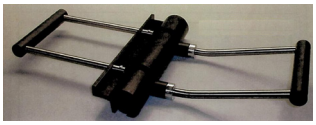
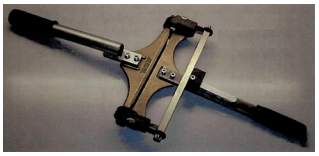
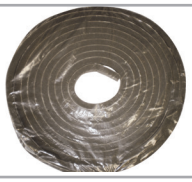
〔 PACKAGING 〕

To protect the SS 1.5 panel(s), each order is prepared in our waterproof paper and then crated similar to the below illustration. Please note the maximum number of panels per crate is 44. Dependent on lengths and quantities, some orders may be subject to crating charges. This will be determined on an order by order basis and advised at time of order acknowledgment.



Installation Instructions · SS 1.5 Panels continued

〔 ACCESSORIES, TOOLS & EQUIPMENT 〕

Part	Description	Part	Description
	#10 x 1-1/2" Woodgrip Screw		Magnetic Nut Drivers
	#12 x 3/4" Woodgrip Screw		Snips
	#10 x 1" Pancake Head Screw		Tape Measure
	Roof Boot Flashing		Single Lock Hand Seamer
	Butyl Tape Sealant		Double Lock Hand Seamer
	Flex-O-Vent		Electric Seamer
	Universal Tab Foam Closure (TCU15)		Chalk Line
	Metal Roof Sealant		Electric Shear
	Caulking Gun		Cordless Screw Gun or Drill

Installation Instructions · SS 1.5 Panels continued

〔 GENERAL INSTALLATION INFORMATION 〕

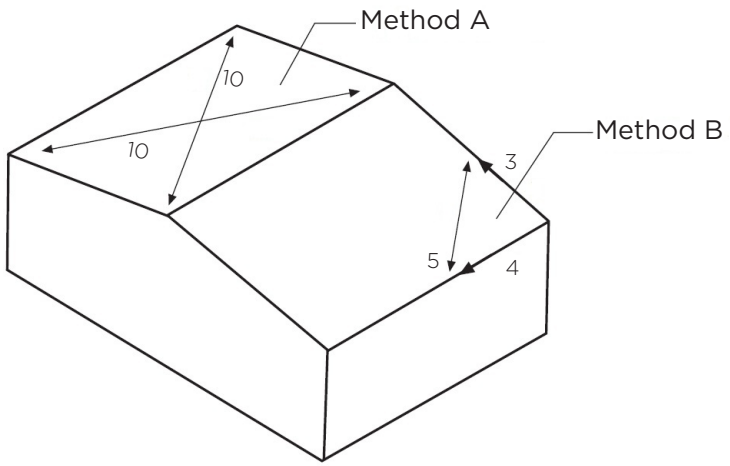
It is recommended that the installer review the installation instructions and become familiar with all aspects of the process before beginning the project. Prior to starting installation, the substrate and framing should be inspected to ensure that all supporting members are straight, level and plumb to avoid any panel distortion. The substrate should also be free of all debris and smooth to avoid puncturing the roof cladding. All substructures must be designed to meet the local code requirements. Check with the local municipality for the guidelines applicable to your project.

Where being installed as a roofing panel, the minimum roof pitch this product can be installed on is 1/12. A minimum of 1/2" plywood decking (or per the local building code, whichever is greater) or solid substrate with either an approved synthetic underlayment.

Prior to installing panels, review the trims to be installed and their method of installation as some trims are required to be installed prior to the panels. All panels should be installed plumb, straight and square to the eave. To check for roof squareness, several methods can be used. Here are two examples of how the installer can check:

Method A: Measure diagonally from the corner of the eave to the corner of the ridge on one slope of the roof. Repeat this on the opposite eave and ridge. If these numbers correspond then the roof is square. See the diagram below.

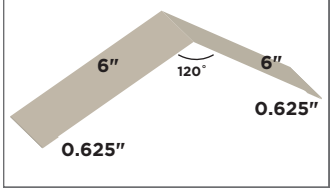
Method B: Measure and mark into the roof 4' from the edge of the eave, then measure and mark 3' up the gable. Next, measure from the 4' mark to the 3' mark, this should measure 5'. This means the roof is square. See the diagram below.



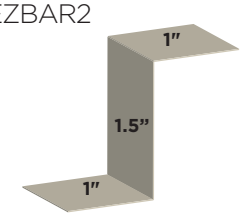
Installation Instructions · SS 1.5 Panels continued

〔 TRIM LOCATION CHART 〕

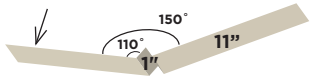
1 MERC3



MEZBAR2



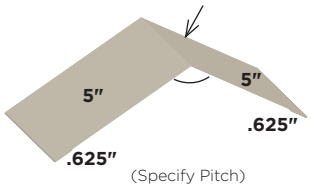
2 MEVF1



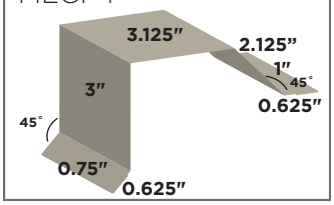
3 Dek Tite



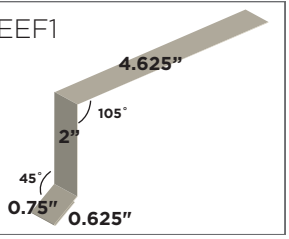
4 MEHC1



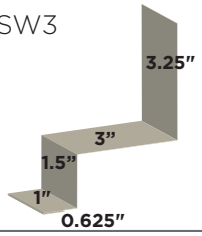
5 MEGF4



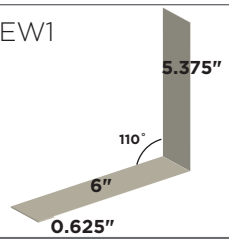
6 MEEF1

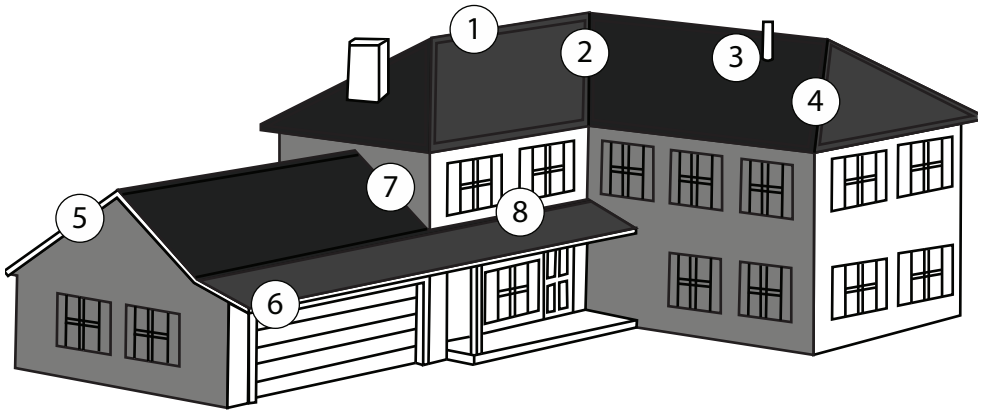


7 MESW3

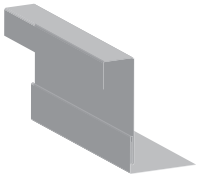


8 MEEW1

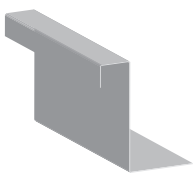




Floating Clip



Fixed Clip



Installation Instructions · SS 1.5 Panels continued

Some field cutting and fitting of panels and trims will be required by the installer. Minor field corrections are to be expected and are a normal aspect of any project installation.

When applying sealants, ensure the surface is clean and dry to ensure the best adherence and seal is achieved with each trim and flashing application.

It is important to note that oil canning in the flat area of the SS 1.5 panels is a common occurrence and does not affect the overall integrity of the panels. Therefore oil canning is not a reason for rejection. Distortion in the panel caused by; handling, an uneven substrate, ripples or laps in the underlayment, construction debris or extreme temperature changes are not a cause for rejection of the material.

〔 CLIP INSTALLATION 〕

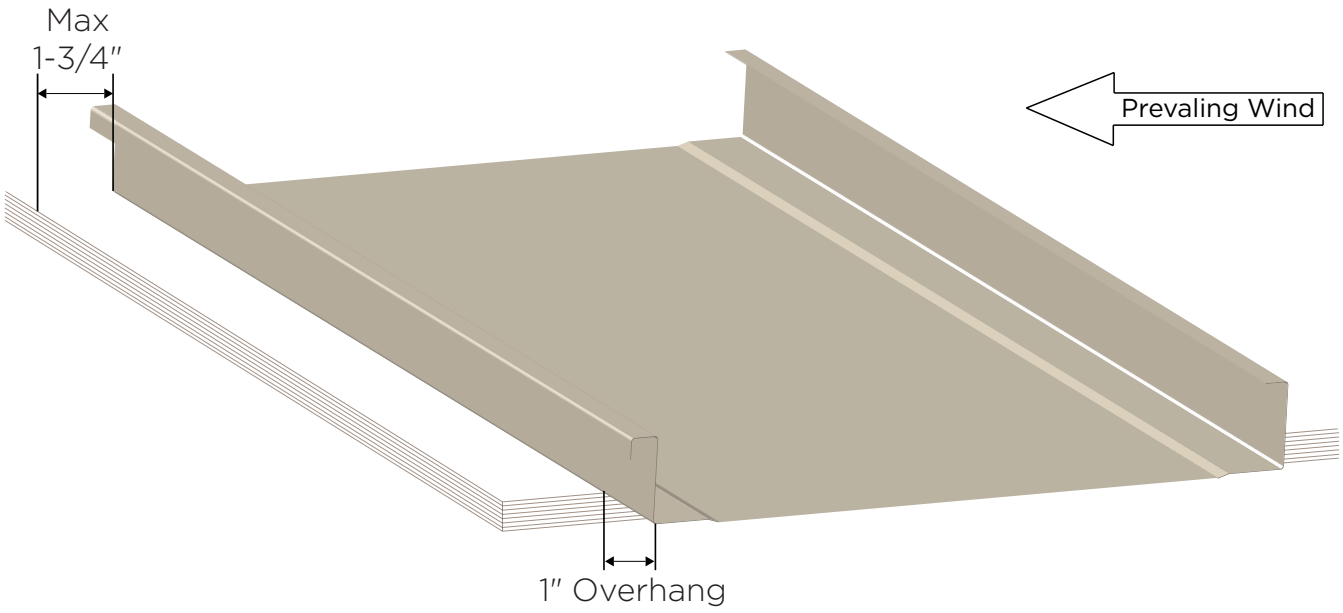
1. Clips are to be installed 24" on centre. Both the eave and ridge clips are to be installed within 4-6" from the end of the panel.
2. For panels less than 26' long, only fixed clips are to be installed.
3. For panels longer than 26', use a fixed clip at the eave and floating clips the rest of the panel length. Floating clips allow for the expansion & contraction of the panels.

〔 ROOF PANEL INSTALLATION 〕

When installing SS 1.5 panels, the first panel should be installed at the gable end of the roof opposite to the prevailing rain bearing wind.

For the best results a synthetic underlayment over the solid roof deck should be used to repel any moisture from the roof deck and will reduce or eliminate any potential issues with condensation.

1. After checking to ensure that the roof deck is adequate and the proper underlayment is installed, snap a chalk line within 1-3/4" in from the gable edge that is plumb and square as illustrated below.
2. Align the female edge of the first panel with the chalk line leaving a 1" overhang at the eave.



Installation Instructions · SS 1.5 Panels continued

3. At the ridge the sheet should be perpendicular to the ridge for trim attachment.
4. Check the panel alignment to ensure it is plumb and square. If it is correct, fasten the panel to the roof deck along the starting gable edge of the panel with #10 x 1-1/2" colored woodgrip screw every 2' on centre. Please note the recommended installation below.

Correct



Sealing material slightly visible at edge of metal washer. Assembly is water tight.

Too Loose



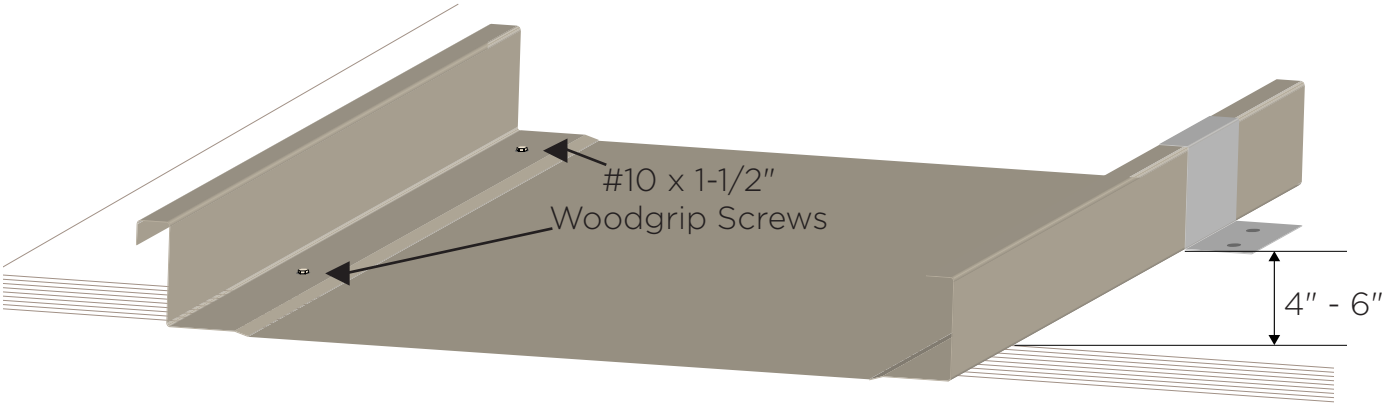
Sealing material not visible, not enough compression to seal properly.

Too Tight

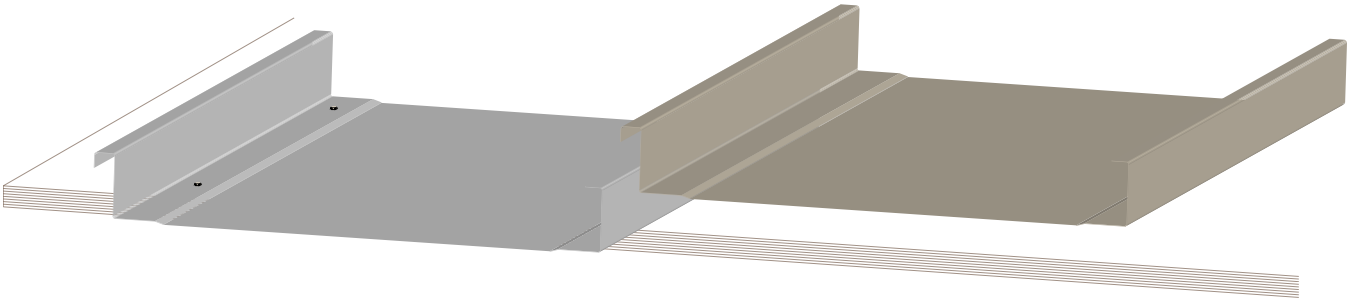


Sealing material extruded beyond edge of washer.

NOTE: To avoid panel distortion and allow for maximum expansion and contraction of the panel they should be snug. Do not overdrive the woodgrip screws when fastening panels to the solid deck.



5. Install the clips as per the recommended methods on page 10.



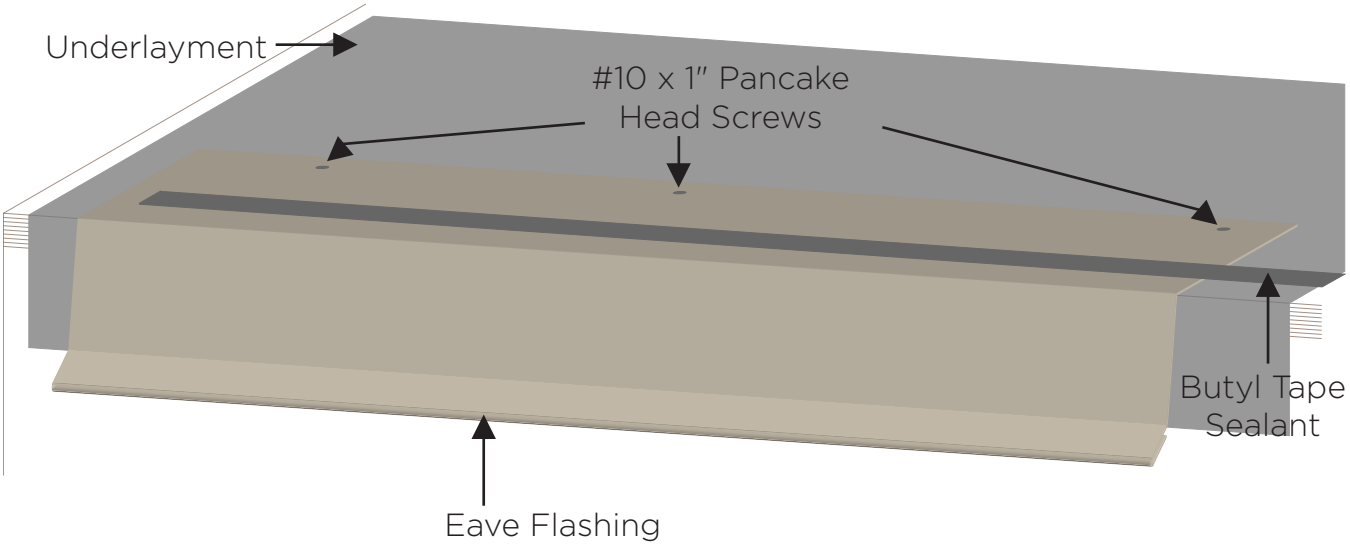
6. Align the next panel over lap edge with the starter panel's under lap edge. Ensure that the panels are flush. The panel should extend the eave by no more than 1".
7. Lightly compress the panel from the eave to the ridge. Check that the panel has remained flush at the eave.
8. Follow the hand seaming instructions on page 20 to fasten the panels at the eave.
9. Continue to apply panels as in steps 5 through 7.

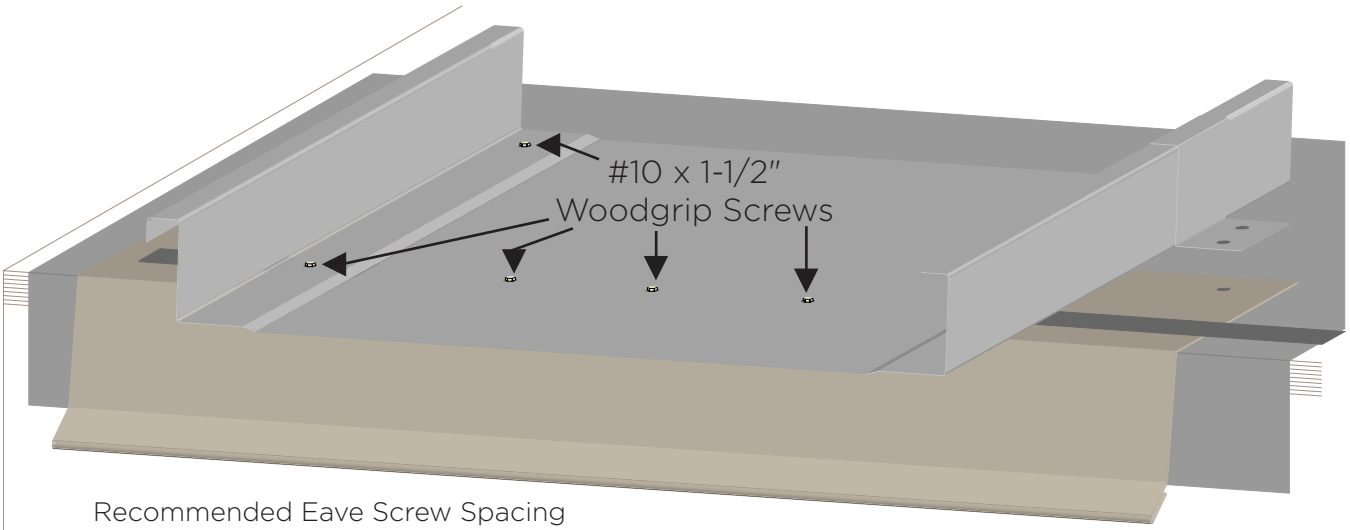
Installation Instructions · SS 1.5 Panels continued

〔 EAVE FLASHING 〕

Note: The eave flashing must be installed prior to the installation of the panels.

1. Attach the eave flashing to the roof deck prior to panels with #10 x 1" pancake head screws.
2. Place a row of butyl tape sealant on the top portion of the eave flashing.
3. Install the SS 1.5 panel, with a 1" overhang, and fasten at the eave with #10 x 1-1/2" woodgrip screws between the minors in the flat of the panel to ensure a good seal as illustrated below.



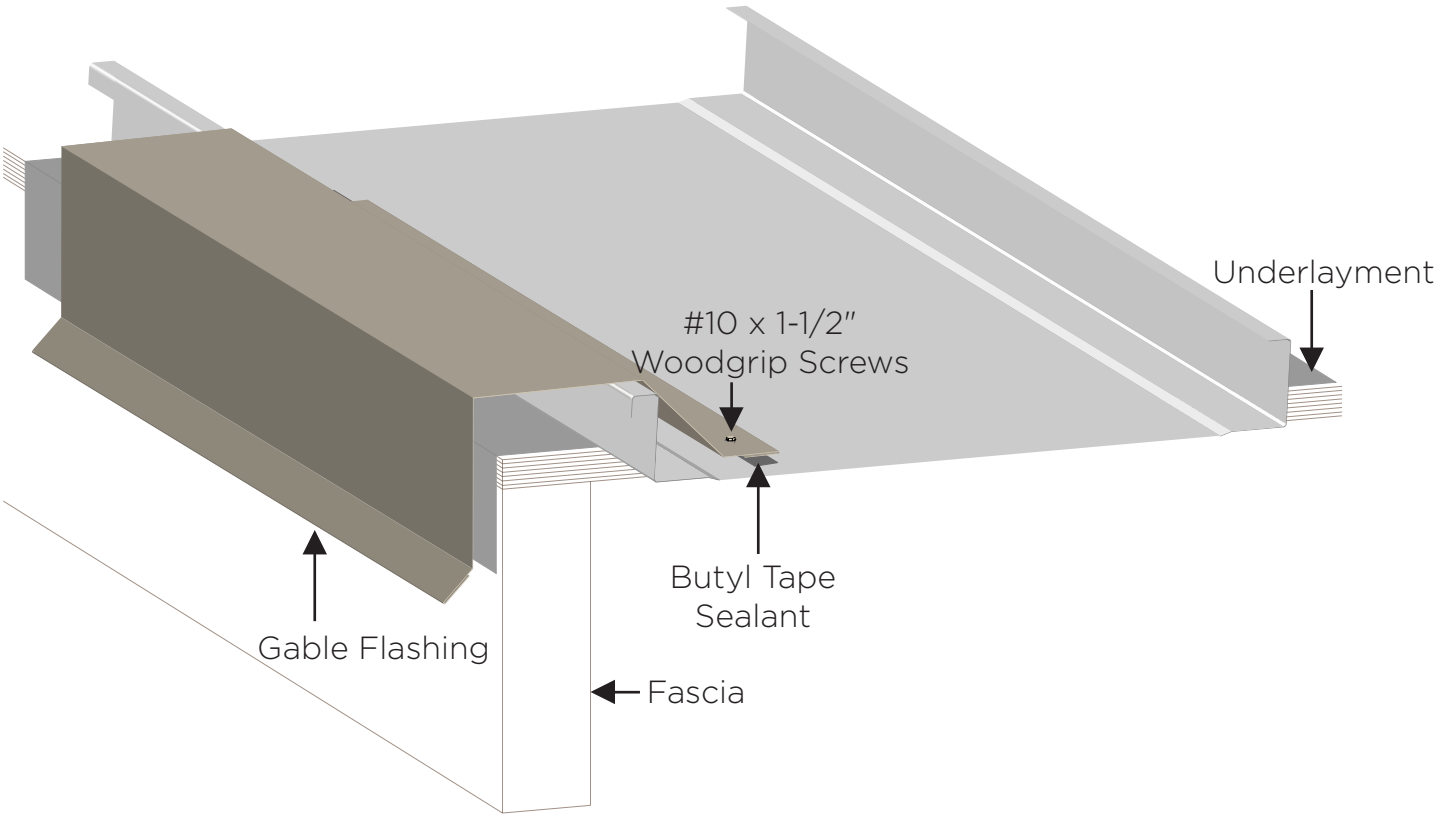


Recommended Eave Screw Spacing
2 screws per 12" panel
3 screws per 16" panel
4 screws per 20" panel

Installation Instructions · SS 1.5 Panels continued

〔 GABLE FLASHING 〕

1. Place roof panel(s) as per the installation instructions.
2. Place a row of butyl tape sealant from the eave to the ridge where the gable trim will sit as illustrated below. This will ensure a good seal.
3. Place the gable flashing on top of the panel so that it is flush with the face of the fascia.
4. Fasten the gable flashing down with #10 x 1-1/2" woodgrip screws every 12" through the already applied butyl tape sealant, panel and into the roof deck as illustrated below.
5. Place the same fasteners in the face of the trim attaching to the fascia.

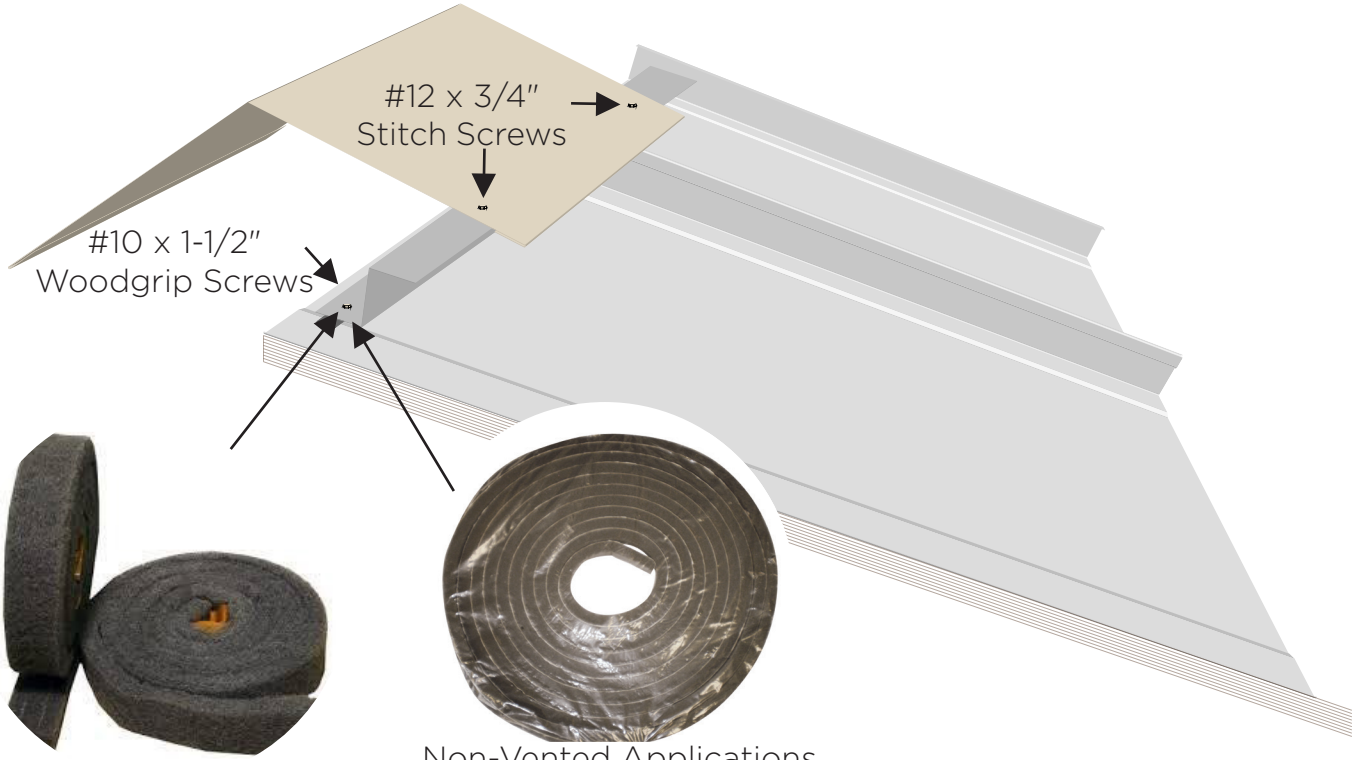


Installation Instructions · SS 1.5 Panels continued

〔 RIDGE CAP/HIP FLASHING & Z-BAR - STANDARD AND VENTED 〕

Note: The gable flashing must be installed prior to installing the ridge cap.

1. Panels should end parallel to the ridge. Where venting at the ridge, ensure the panels are 2" short of the ridge to allow for air flow.
2. Cut the z-bar (vented or non-vented) into lengths that will fit between the ribs of the panel. Apply a row of butyl tape sealant to the bottom of the z-bar to seal it to the panel. Fasten through the z-bar, panel and substrate with #10 x 1-1/2" woodgrip screws setback as illustrated below.
3. Install the closure strip (vented or non-vented) behind of the z-bar as illustrated below.
4. Fasten the ridge cap to the z-bar using #12 x 3/4" stitch screws as illustrated below.



Vented Applications
use Flex-O-Vent

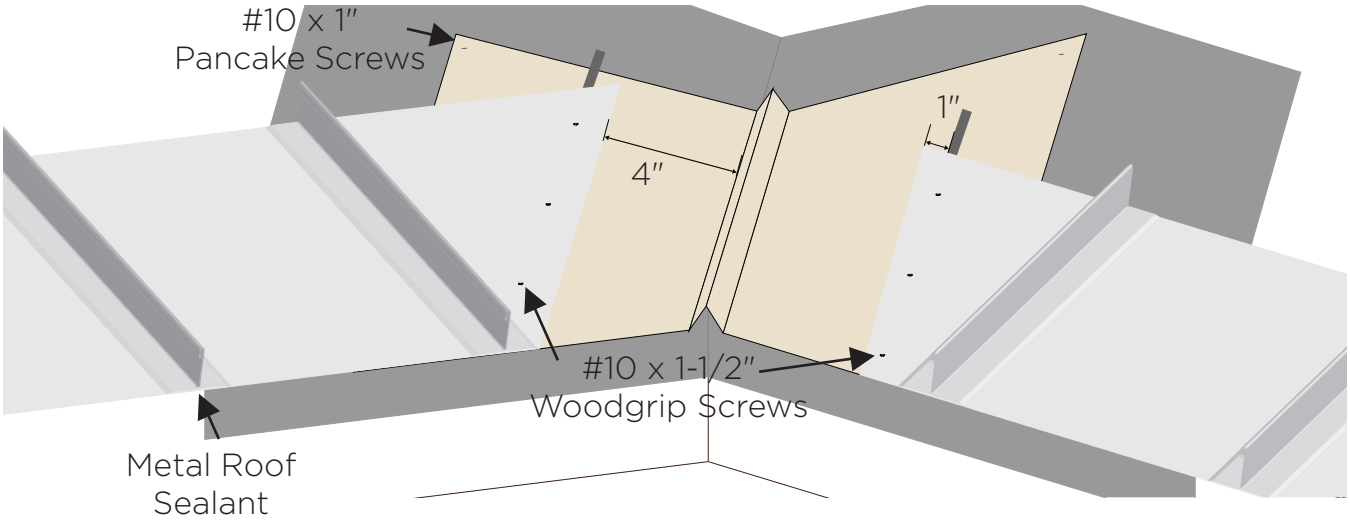
Non-Vented Applications
use TCU15

Installation Instructions · SS 1.5 Panels continued

〔 VALLEY FLASHING 〕

Note: The valley flashing must be installed prior to the installation of the panels.

1. Place an additional layer of underlayment in the valley with 18" on each side of centre.
2. Begin placing the valley trims at the eave leaving a 1" overhang, fastening with #10 x 1" pancake head screws. When the valley is longer than 10'3", end-lap valley trims by a minimum of 6" and seal with metal roofing sealant or butyl tape sealant.
3. Parallel to the valley, place a row of butyl tape sealant approximately 1" from the end of where the panel will sit on the valley flashing, for the entire length of the valley.
4. Field cut the panels in accordance to your roof pitch and place onto the roof and into the valley. Leave at least 4" from the centre of the valley to the start of the panel.
5. After panels are cut and installed, place #10 x 1-1/2" woodgrip screws approximately 1" from the edge of the panel where it meets the valley flashing, making sure that the fastener penetrates the previously applied butyl tape sealant. This needs to be done for the full length of the valley. See below for fastener placement.
6. Seal panel ends (the major rib) with metal roof sealant as illustrated below.

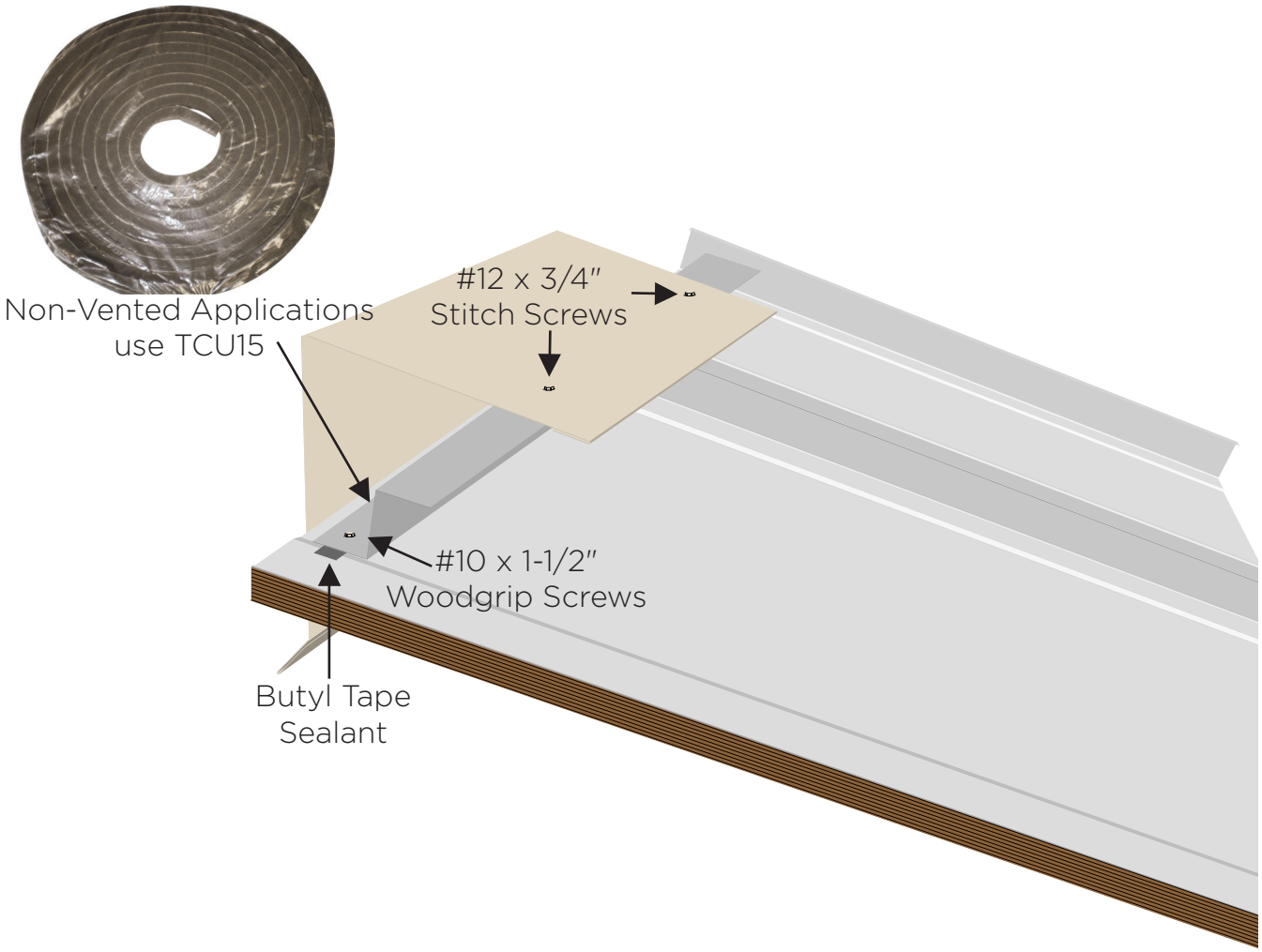


Installation Instructions · SS 1.5 Panels continued

〔 PEAK CAP FLASHING 〕

Note: The gable flashing is to be installed prior to the peak cap flashing.

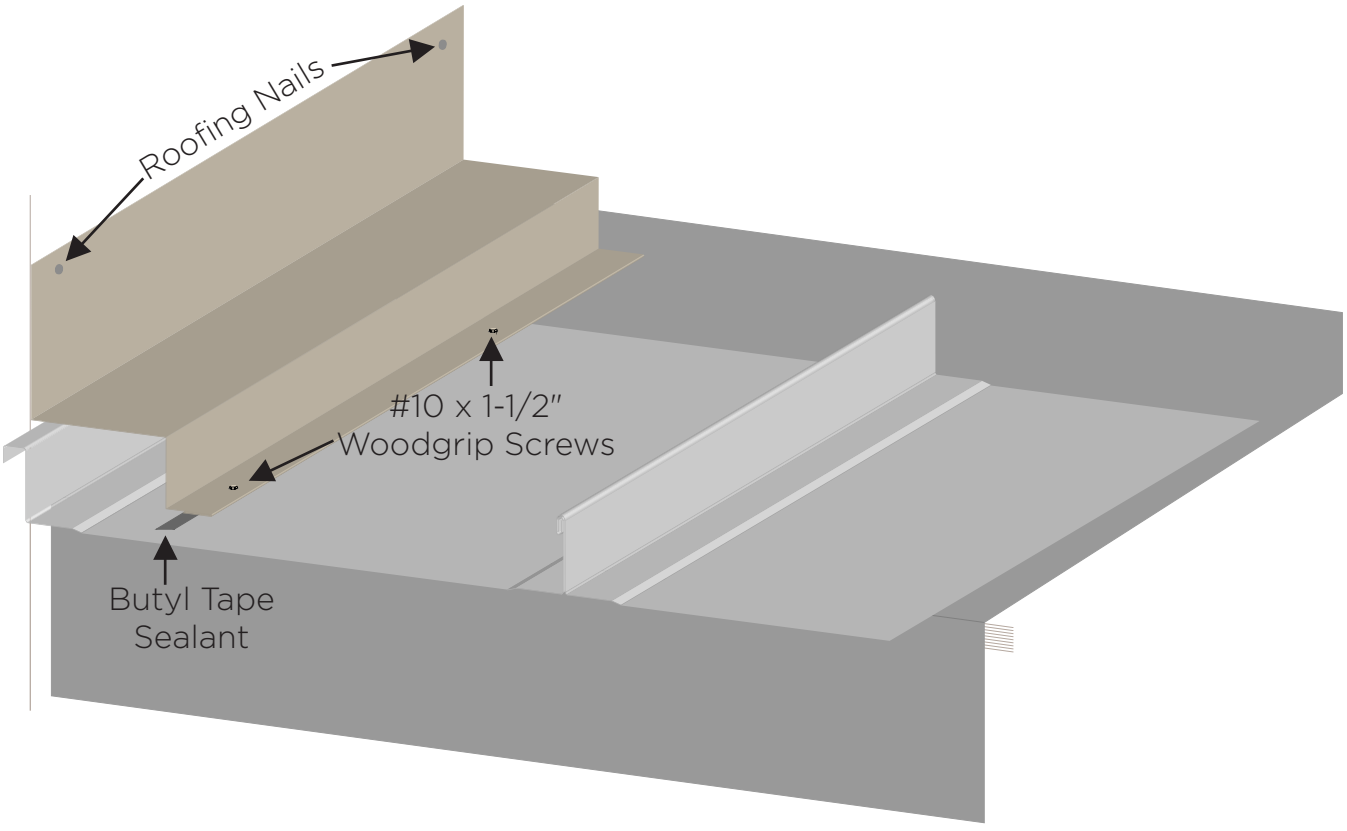
1. Panels at the peak should be parallel to the edge with no overhang.
2. Cut the non-vented z-bar into lengths that will fit between the ribs of the panel. Apply a row of butyl tape sealant to the bottom of the z-bar to seal it to the panel. Fasten through the z-bar, panel and substrate with #10 x 1-1/2" Woodgrip screws setback as illustrated below.
3. Install the non-vented closure strip behind of the z-bar as illustrated below.
4. Put a row of butyl tape sealant on top of the z-bar. Place the peak cap on top of the z-bar and fasten with #12 x 3/4" stitch screw every 12" as illustrated below.
5. Fasten the face of the peak cap flashing with #10 x 1-1/2" woodgrip screws into the fascia every 12".



Installation Instructions · SS 1.5 Panels continued

〔 SIDEWALL FLASHING 〕

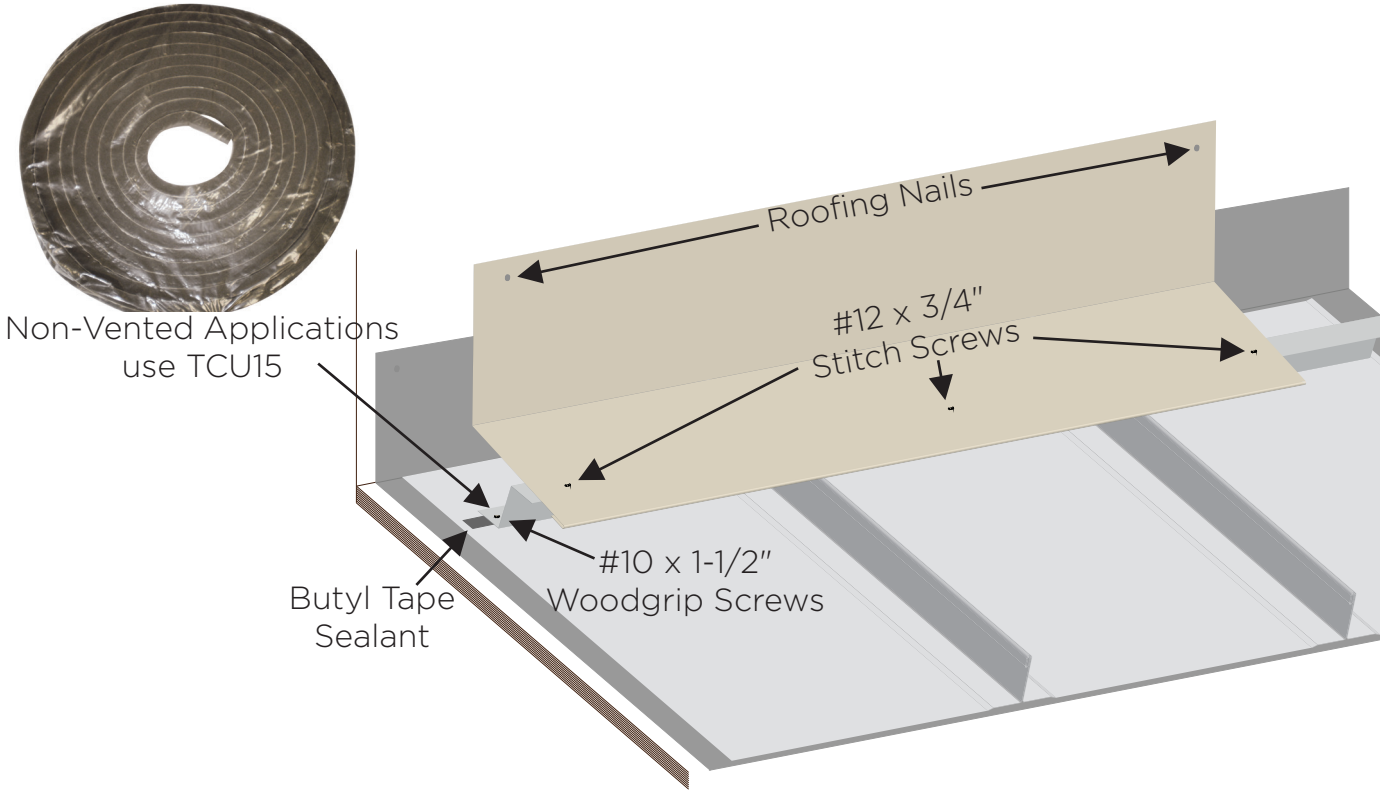
1. Place butyl tape sealant along the length of the panel where the sidewall flashing will meet to provide a good seal as illustrated below.
2. The sidewall flashing should be installed under the wall covering and over the roofing panel. Attach the trim to the wall with roofing nails.
3. Attach the trim to the panel with #10 x 1-1/2" woodgrip screws making sure to screw through the previously applied butyl tape sealant.



Installation Instructions · SS 1.5 Panels continued

〔 ENDWALL FLASHING 〕

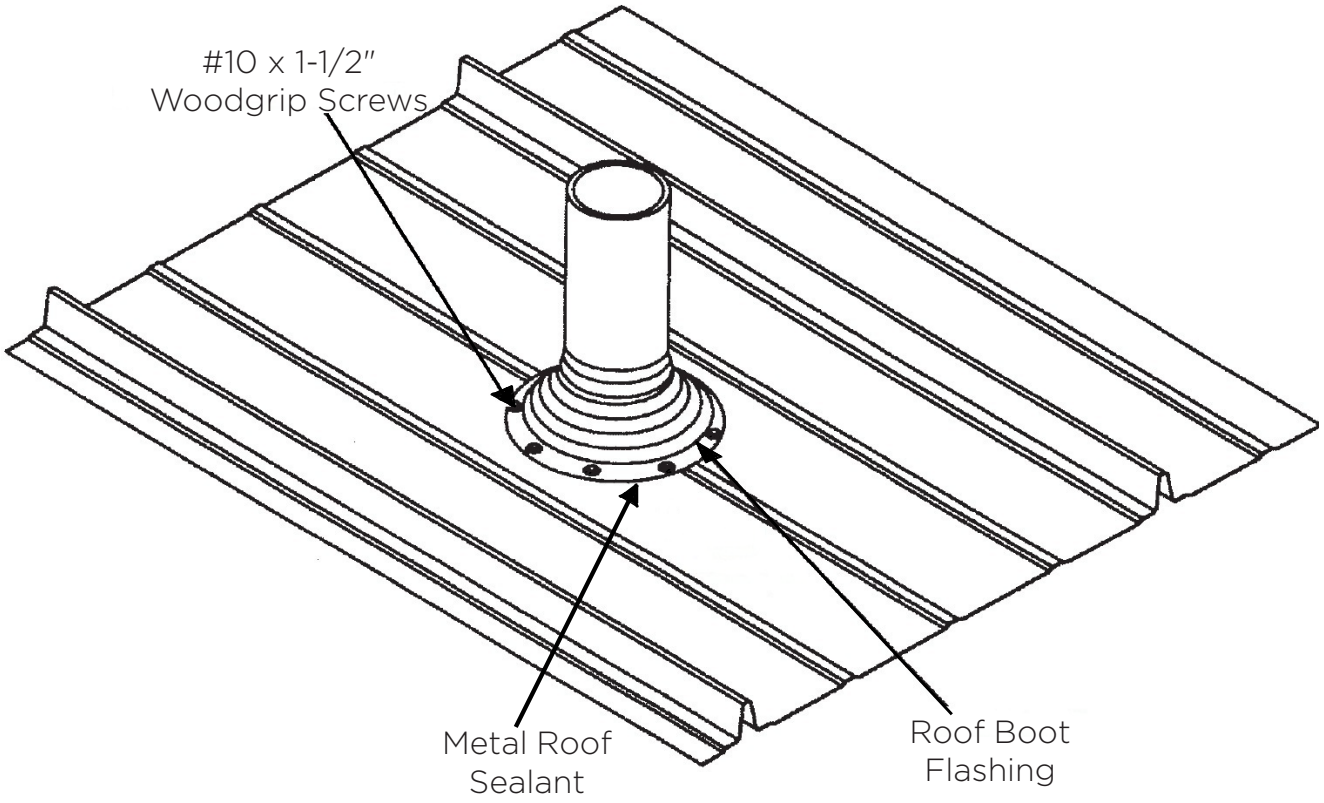
1. Panels should end parallel to the high side of the wall.
2. Cut and attach the non-vented z-bar to fit between the ribs of the panel, placing a row of butyl tape sealant to seal the z-bar to the panel, and attach it to the panels through the substrate with #10 x 1-1/2" woodgrip screws setback as illustrated below.
3. Install the non-vented closure strip behind of the z-bar as illustrated below.
4. The endwall flashing should be installed under the wall covering and over the roofing panel. Attach the trim the wall with roofing nails.
5. Put a row of butyl tape sealant on top of the z-bar. Place the endwall flashing on top of the z-bar and fasten using #12 x 3/4" stitch screws as illustrated below.



Installation Instructions · SS 1.5 Panels continued

〔 VENT FLASHING 〕

1. Cut the pliable roof boot flashing to the appropriate pipe diameter as indicated on the sleeve.
2. Slide the roof boot flashing over the pipe.
3. Seal between the base and roof panel with a tube of metal roof sealant.
4. Adjust the roof boot to fit the contours of the panel.
5. Fasten the roof boot to the roof with #10 x 1-1/2" woodgrip screws.



Thank you for choosing METAL Roofing & Siding EXPERTS® and our SS 1.5 profile.

For additional information about our products or questions that may arise from the review of this manual please contact us at 1-888-2METAL4 (1-888-263-8254).

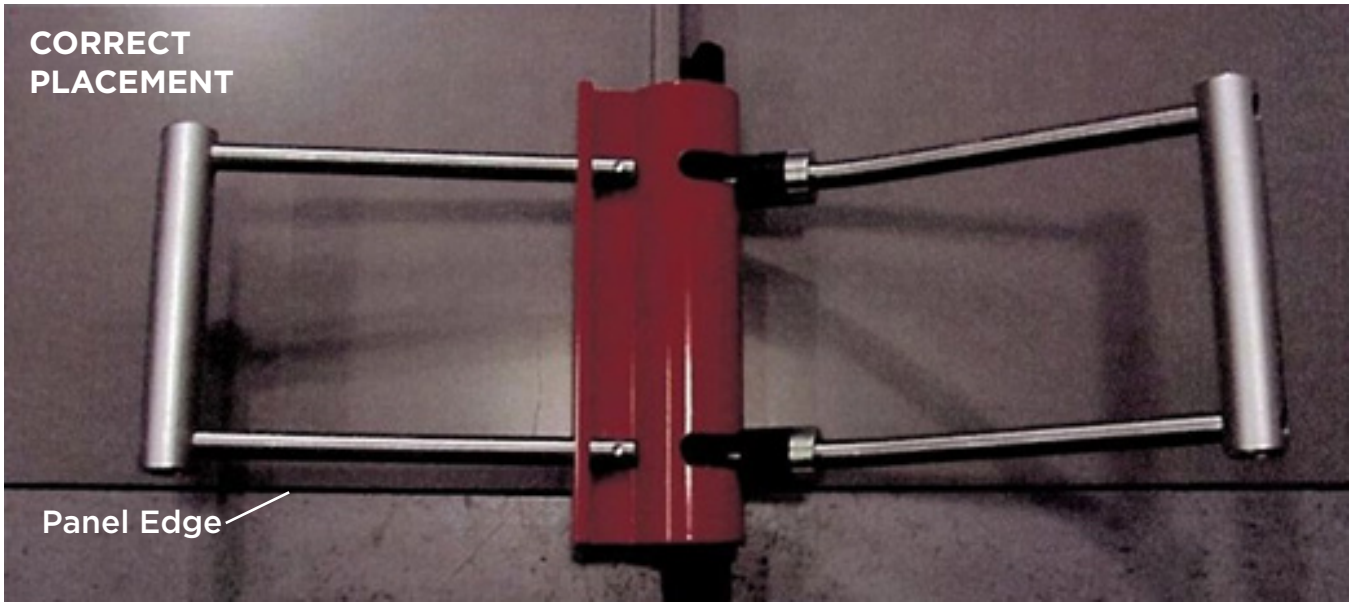
We hope you enjoy your roof for many years to come!

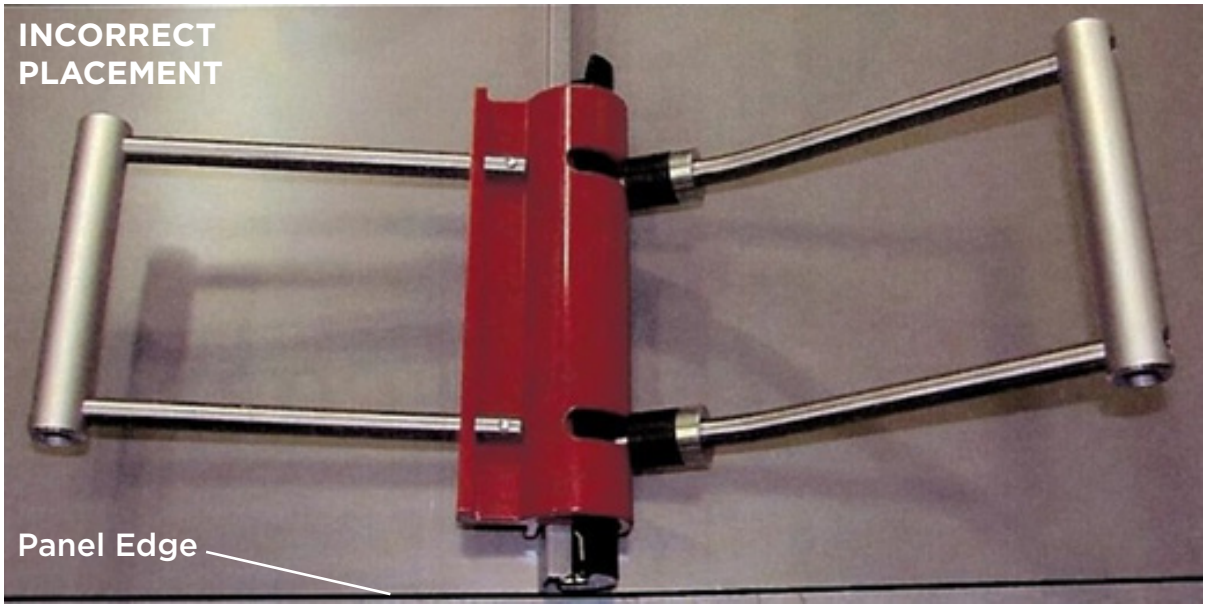
Installation Instructions · SS 1.5 Panels continued

〔 HAND SEAMER - ALIGNMENT 〕

Once all the panels have been installed, use each of the hand seamers to seam each joint at both the eave and the ridge. While the SSX Seamer does have an auto-start feature, we recommend that you complete both the single lock seam and double lock seam at least 12" from the eave. This will give you a solid surface to place the SSX Seamer.

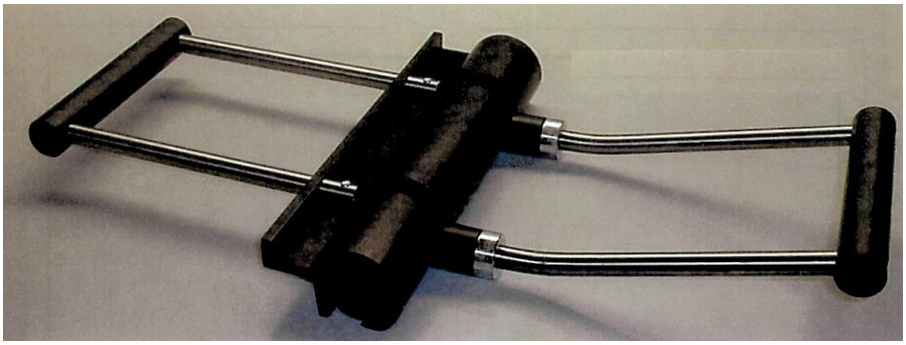
When making the first crimp, at the edge of the panel with the 90° hand tool, you must start towards the middle of the tool. If you have the panel edge at the end of the tool, the relief in the tool die will not form the metal correctly. Then when you place the power seamer on the panel, it will not turn the seam properly.





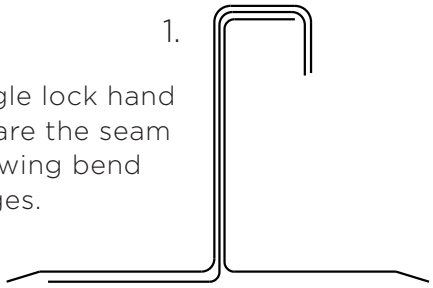
Installation Instructions · SS 1.5 Panels continued

(SINGLE LOCK HAND SEAMER)

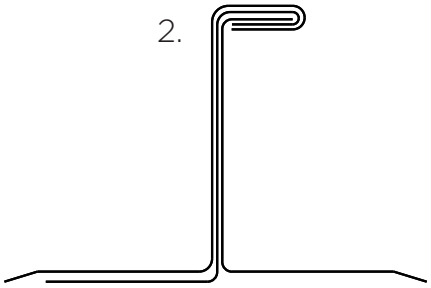


1.

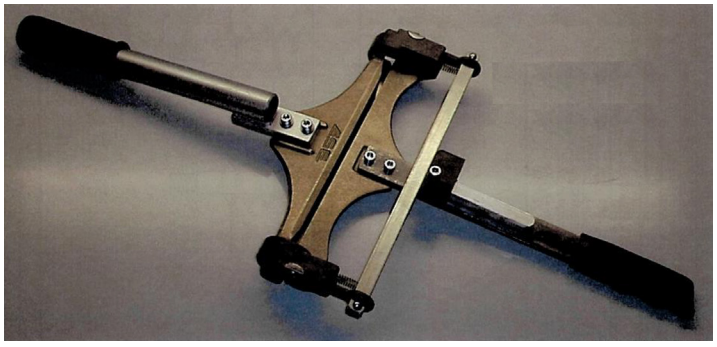
Using the single lock hand seamer, prepare the seam to the following bend stages.



2.

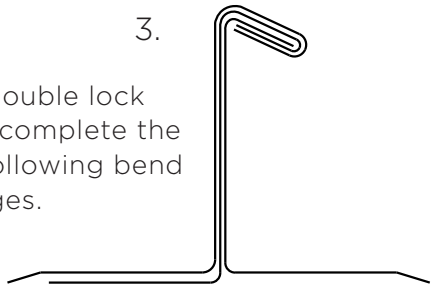


(DOUBLE LOCK HAND SEAMER)

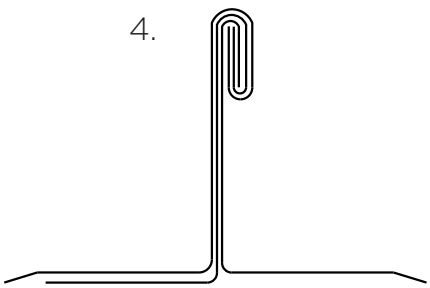


3.

Using the double lock hand seamer, complete the seam to the following bend stages.



4.



Your seams are now ready for the SSX Seamer.

Material & Installation CheckList

(MATERIALS CHECK LIST)

- [ ] Strapping
- [ ] Underlay/Ice & Water Shield
- [ ] Roofing/Siding Panels (prepare a cut list)
- [ ] All required Trims
- [ ] Fasteners (stitch screws necessary for low slope app)
- [ ] Closures
- [ ] Ridge Cap Vented Closures
- [ ] End Closures (for ridge cap)
- [ ] Butyl Tape Sealant & Caulking
- [ ] Insulation
- [ ] Roof Boots

(INSTALLATION TOOLS CHECK LIST)

- [ ] Chalk Line
- [ ] Pencil or Scratch Tool
- [ ] Utility Knife
- [ ] String Line
- [ ] 25' Measuring Tape
- [ ] Screw Gun w/appropriate Hex Head Sockets
- [ ] Hex Driver(s)
- [ ] Vice Grips – Standard & Duckbill
- [ ] Snips – Right, Left & Centering cuts
- [ ] Caulking Gun & Caulk
- [ ] Hammer
- [ ] Drill & Bits (to pre-drill holes)

(NICE TO HAVE)

- [ ] Power Shears

(SAFETY CHECK LIST)

- [ ] Gloves
- [ ] Ear Plugs
- [ ] Safety Vest
- [ ] Safety Harness & Tie Down
- [ ] Soft Sole Footwear
- [ ] Head Cover
- [ ] Sunscreen
- [ ] Safety Glasses - Sunglasses

Packaging & Storage

PACKAGING: Sheets and trims are packaged using protective packaging to help protect the goods in shipping and handling. See "Storage Instructions" to help ensure the goods are stored correctly before installation.

The customer should take whatever steps necessary to ensure the goods remain dry after delivery. Wood skids will be used when deemed appropriate by Metal Experts® for that order. Additional crating charges may apply to specific orders. This kind of protection helps ensure the goods are not damaged during shipping, handling, and storage.

STORAGE INSTRUCTIONS: If siding panels are not to be used immediately the panels should be stored in a dry place. The panels should be unbundled and stood on end indoors, if possible. It is very important to store the panels in a dry, well ventilated area. If the product cannot be stored indoors, elevate one end of the bundle 8" to allow any moisture to run off while being stored. DO NOT store panels in direct contact with the ground. Make sure to put some type of a block under the bundles when set on the ground. Ensure there is good airflow around the entire bundle to avoid moisture build up. Avoid storing panels near alkaline materials such as fertilizer, cement, lime, salt, etc. Moisture trapped between the panels will cause paint to bubble and white rust to form on painted and unpainted panels. **METAL EXPERTS® assumes no liability for panels that are not properly stored.**

PANEL CUTTING: When cutting painted panels, ensure the metal particles and fragments do not end up on the painted surface. Metal particles on painted surfaces will result in rusting and pitting in that area. We suggest that the panel be turned upside down and all cutting be done looking at the backside of the material. Installers should be certain to wipe away any debris from the material after cuts to prevent this problem. Panels should be cut in an area where the metal particles do not end up on other panels or building material. **Failure to remove metal particles from the panel(s) will result in a voided warranty**.

WHITE RUST/OXIDATION: White rust on bare galvanized metal will oxidize when installed outside. It is the result of zinc oxidation in the absence of oxygen. This occurs in coil or bundles of sheet metal that are nested and absorb moisture from humidity in the air or direct rainfall. The oxidation appears as a white chalky build-up on the surface of the metal. This can be stopped by applying a vinegar solution or light oil, such as WD-40.

Any outdoor storage of panels & trims is at the customer's own risk

