INSTALLATION MANUAL

SOTERIA® Metal Roofs – Eternalock Series Rev2024A
www.SoteriaMetalRoofs.com

DISCLAIMER NOTICE (PLEASE READ CAREFULLY):

These guidelines were approved by a consensus vote of participating members of Soteria Metal Roofs. These guidelines are updated or reaffirmed by the same process at intervals not exceeding three (3) years.

These guidelines were developed to summarize for the designer, installer or developer good roofing practice and industry guidelines for the installation of the Soteria Metal Roofs - ETERNALOCK series, which have been developed over a period of time from actual trade practice and the requirements of various building code agencies. These guidelines may not be applicable in all geographical areas. It is the responsibility of those individuals who are referring to these guidelines to independently research and determine which is best for their particular project. Accordingly, Soteria Metal Roofs expressly disclaim any expressed or implied warranties or any liability for any damages or loss that might be incurred as a result of the use of these guidelines.

It is important to recognize that these recommendations are neither warranties, explicit or implicit, nor representative of the only method by which a mechanically fastened metal roof system can be installed. Rather, they try to summarize for the designer, installer or developer good roofing practice and some of the industry standards for the installation of the Interlocking series which has been developed over a period of time from actual trade practice and the requirements of various building code agencies. It is the responsibility of those individuals who are referring to these guidelines to independently research and determine which is best for their particular project.

The installer of each system and/or the contractor or developer of each project shall be responsible and liable for safe and proper installation of each system, and also to initiate, maintain and supervise all safety programs and precautions for each project and project site, and to provide all required protection to prevent damage, injury, loss or death to any or all persons, property and work present or located on the project site. SOTERIA METAL ROOFS does not install any portion of its roofing systems and therefore will not have, and hereby specifically disclaims, any duty or responsibility for safe and proper installation or job-site safety as to any job-site where installation of any of its roofing systems occurs. Please follow the drawings, and report any issues or discrepancies to Soteria Metal Roofs.

NOTE:
Galvanic & Other Corrosion Warnings for Metal Roofs - Corrosion Standards for Metal Roofs
With metal roofing or any metal building components, the safest strategy is not to mix metals that come in direct contact with one another. Use aluminum flashing and fasteners with aluminum roofing, copper flashing and copper nails with copper roofing, etc. When this is not possible, choose a second metal that is not likely to lead to galvanic corrosion or use a physical barrier to separate the two metals.

Soteria Metal Roofs nor any of its directors, employees or other representatives shall be liable for damages arising out of or in connection with the use of this manual. This is a comprehensive limitation of liability that applies to all damages of any kind, including (without limitation) compensatory, direct, indirect or consequential damages, loss of data, income or profit, loss of or damage to property and claims of third parties.

Table of Contents

Soteria Metal Roofs Safety Recommendations

TIE-OFF: A safety harness is recommended for all roofs regardless of height or pitch. It is very important to familiarize yourself with the proper securing procedure for your type of fall resistant harness.

AVOID SLIPPERY ROOFS: Rain, snow, dew or frost can cause a roofs surface to become slippery. It is recommended to wait for a dry roof surface to ensure safe working conditions.

CLEAN WORK AREA: Keep the work area clean by nailing or screwing down fasteners. Remove cut off scrap material and any other types of debris to avoid an accident.

SECURE OPENINGS: Cover or barricade all openings (skylights, air vent openings) to ensure no workers can fall through.

INSPECT THE ROOF AND REMOVE ANY TRIPPING HAZARDS: Tools, electrical cords and other loose items pose as tripping hazards and should be removed from the roof when not in use.

UNDERSTAND THE LOCAL WORKER SAFETY REQUIREMENTS AND LAWS FOR YOUR AREA: It is the contractors' responsibility to know the laws and regulations. Failure to do so can result in penalties and injuries.

CONSIDER HOMEOWNER SAFETY WHEN WORKING

RECOMMENDED SAFETY EQUIPMENT

- ✓ Work Gloves
- ✓ Eye Protection
- ✓ Hard Hat
- ✓ Approved Safety Shoes or Boots
- ✓ Safety Harness
- ✓ Knee Pads
- ✓ Kidney Belt
- ✓ Roof Jacks
- ✓ Ladder Stand Offs

RECOMMENDED SAFETY TIPS

- ✓ Use proper attachments to secure safety harness
- ✓ Avoid installing on a windy day
- ✓ Avoid Installing on a wet or icy surface
- ✓ Avoid walking on seams of shingle panels
- ✓ Avoid having loose materials and tools on roof deck
- ✓ Properly secure material on the roof
- ✓ Be aware of your surroundings

NOTE: Use this only as a guideline. Understand and follow all required safety procedures for your area.

Roofing Definitions - Terms & Diagrams

Buckling - The distortion of asphalt shingles due to movement of the roof deck or underlying material on which shingles are applied.

Chalk Line - A line made on the roof by snapping a taut string dusted with chalk. Used for alignment purposes.

Clip – A small metal component used to secure two pieces of metal to each other or to secure Eternalock® shingles to solid decking.

Closed Valley – is valley that has an integral cover over the area where the shingles meet at the miter from adjoining roof planes. This valley carries water in hidden channels beneath the roof covering.

Course - A horizontal row of shingle panels running the length of the roof.

Deck / Decking - The surface, installed over the supporting frame members, to which the roofing is applied.

Dormer - A Framed window unit projecting through the sloped roof.

Drip Edge - used along the eaves and rakes to allow water runoff or drip clear of underlying construction.

Eaves - The horizontal, lower edge that provides water to exit from a sloped roof.

Eave Starter - Is used to begin the attachment of the metal roofing system. It is used at the eave (bottom) of the roof.

Side Wall Flashing - a flashing that sits on the vertical slope of a roof.

Fascia – Caps the perimeter of the gables and eaves of the roof and can then be used to hang gutters along the eaves.

Flush - To be level or even with another surface. Surfaces in the same plane.

Flashing - Pieces of metal used to prevent seepage of water into a building around any intersection or projection in a roof, such as vent pipes, chimneys, adjoining walls, dormers and valleys.

Gable - The inclined edge of a sloped roof.

Gutter - The trough that channels water from the eaves to the down spouts.

Hip - The inclined external angle formed by the intersection of two sloping roof planes. Runs from the ridge to the eaves.

Mansard Roof - A mansard or mansard roof (also called a French roof) is a four-sided gambrel-style hip roof characterized by two slopes on each of its sides with the lower slope, punctured by dormer windows, at a steeper angle than the upper.

Open Valley - Method of valley construction in which shingle panels are on both sides of the valley are trimmed along a chalk line snapped on each side of the valley. Panels do not extend across the valley. Valley flashing is exposed.

OSB - Oriented Strand Board. A decking made from wood chips and lamination glues.

Pipe Vents – Term used to describe plumbing pipes that project through a roof plane. Also called vent stacks.

Ridge - The uppermost, horizontal external edge by the intersection of two slopping roof planes.

Ridge or Hip Caps – Accessories used to cover the inclined external angle formed by the intersection of two sloping roof planes; either at the ridge or hip.

Ridge Vent – is an outtake vent for air integrated into the ridge flashing. A ridge vent's proper performance requires adequate intake vents, usually in the eave soffits of the home. For most homes this is the most effective method for siphoning air out of the attic.

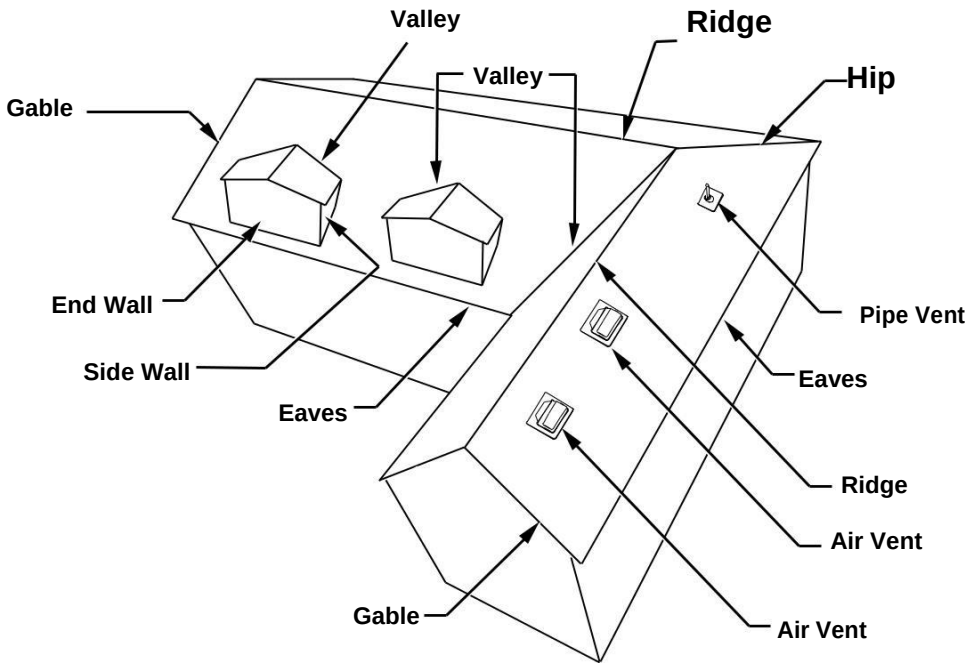
End Wall Flashing - A flashing that sits on the horizontal plane of a roof where the roof ends.

Snow breaks – are used to help break apart snow so it does not leave the roof surface in large sheets.

Underlayment – is a felt or synthetic sheet installed on the roof deck - below the roofing material.

Valley – Is the internal angle formed by the intersection of two sloping roof planes to provide water runoff.

Vent (Air Vent) - Any outlet for air that protrudes through the roof deck, such as a pipe or stack. Also any device installed on the roof deck, gable or soffit for the purpose of ventilating the underside of the roof deck.



Product Overview

Unsurpassed Value

The ever-changing climate is harsh on your home's exterior and limits the life of most roofs. SOTERIA Metal Roofs Eternalock® series roofing provides you with a lifetime of lasting beauty and protection, making it one of the most cost effective roofing options on the market today.

Superior Fastening System

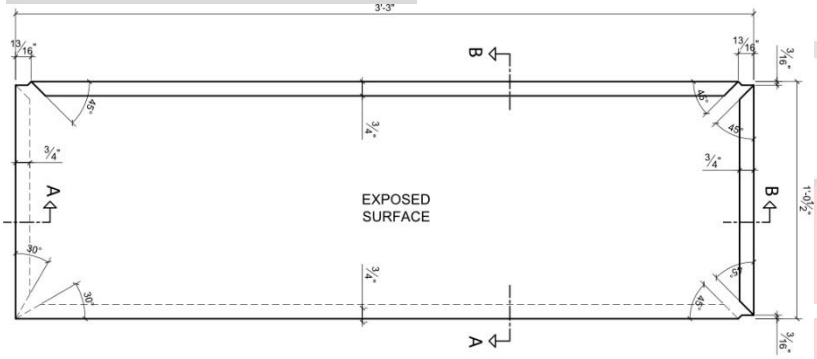
SOTERIA Metal Roofs superior 4-way interlocking, floating roofing system with hidden tornado clips, creates a weather-tight and wind-resistant bond, providing you with the highest hail and wind ratings in the industry.

Energy Efficient & Eco Friendly

SOTERIA Metal Roofs Eternalock® shingles utilize an Energy Star rated coating and will keep your home cooler and energy efficient. Our paint finish has a specialized embedded pigment that reflects the sun's powerful rays, dramatically reducing the heat gain in your attic by up to 35%.

Lasting Durability

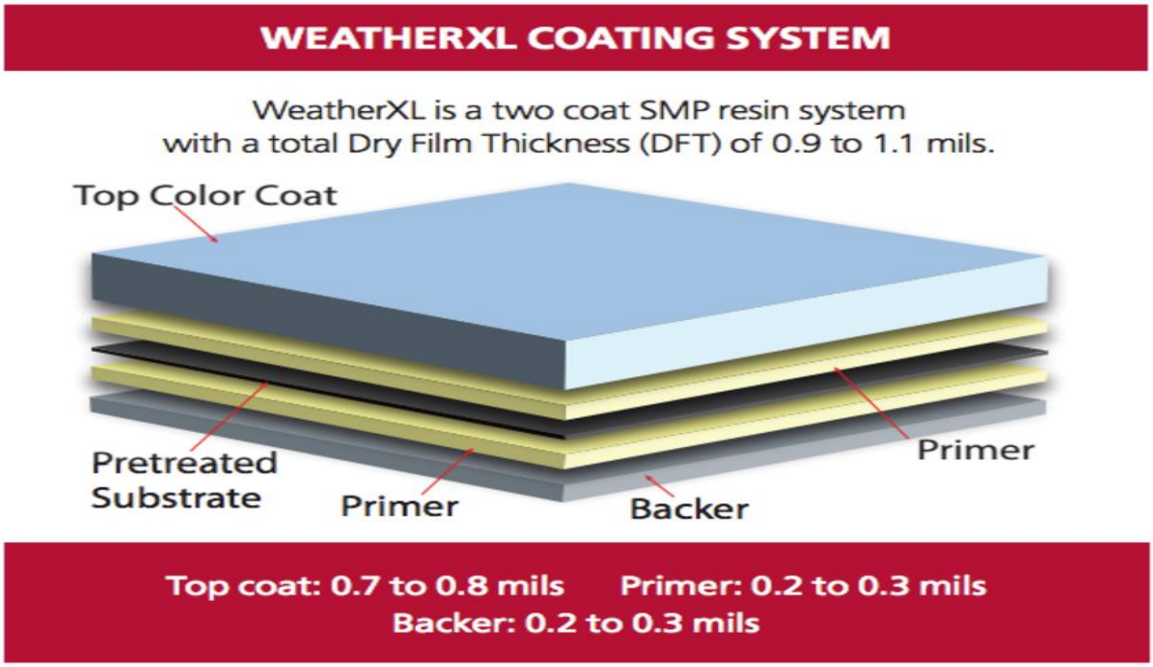
SOTERIA Eternalock® shingles are made from heavy gauge G-90 galvanized steel, or Aluminum and coated with a WeatherXL finish that will last decades. Soteria Metal Roofs coating will not chip, peel, blister or crack. Noted by architects around the world. WeatherXL Crinkle coatings are among the highest performing finish for exterior metals against UV sunlight and atmospheric weather conditions.



4 Square feet of exposed coverage per shingle panel.

1 Linear foot of exposed coverage per cap.

SOTERIA Eternalock® Protective Coatings



Roof Preparation

Laying Over Existing Asphalt Shingles
Soteria Metal Roofs Eternalock® series shingles can be installed directly on top of an existing asphalt roof if meeting the requirements of local building codes.

IMPORTANT: Longer nails must be used if installing Eternalock® shingles over asphalt ensuring the nails protrude a minimum of a 1/2" inch beyond the underside of the roof decking.
NOTE: It is NOT Recommended

- **Installing** SOTERIA Eternalock® shingles to a roof that exceeds the building code limits in your area. Exceeding building codes limits will put at risk the load capacity of the roof decking and building structure.
- **Installing** Soteria Metal Roofs Eternalock® shingles if it's suspected or known that the roof decking has deteriorated or rotted due to age, weather damage or mold contamination.
- **Installing** Soteria Metal Roofs Eternalock® shingles if the existing asphalt shingles have deteriorated to where they have curled, buckled or have excessive organic growth and it's obvious that the flatness of the roof will be compromised.

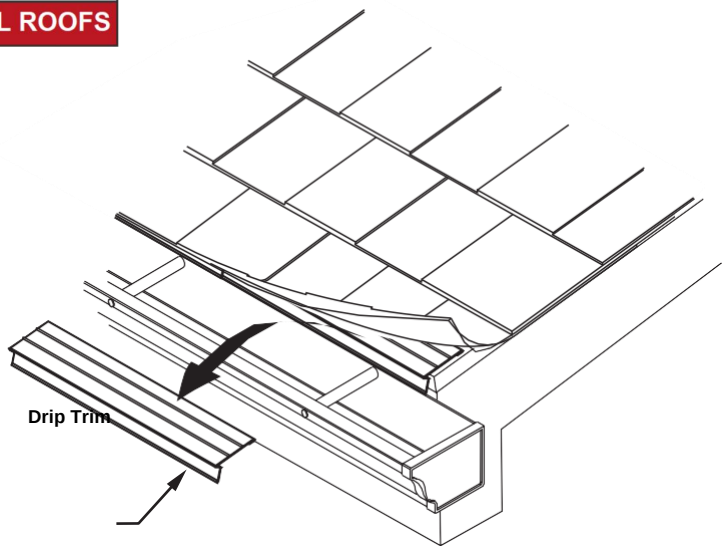


Fig. 1: Remove drip trim and discard

Cutting Asphalt Shingles – Around Perimeter
Existing Asphalt Shingles must be cut off. This should be a flush cut from the fascia, rake edge and/or gable around the perimeter of the roof. Additionally remove any moldings or metal drip edge trim where required. Therefore, curled edges of aged asphalt shingles can be cleaned or scraped off as long as the roof is relatively flat when applying the underlayment.

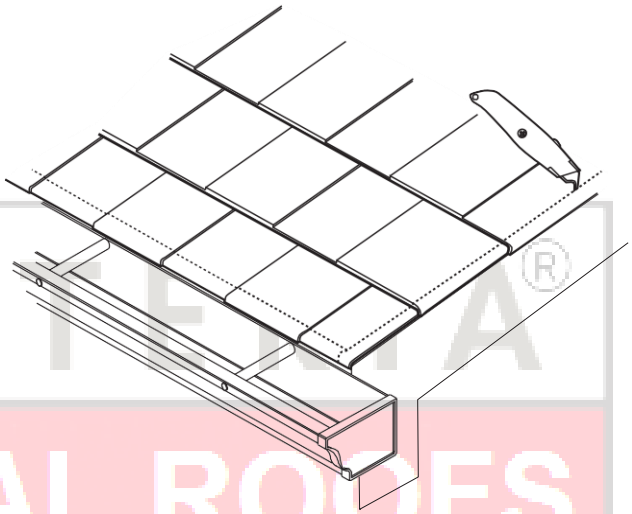


Fig. 2: Cut asphalt shingles flush with the gable end and fascia.

Removing Asphalt Shingles Safely
When removing asphalt shingles ensure that the work area perimeter below is clear. Set up pylons or caution tape to barricade all potential fall areas to ensure that there is no injury to persons on the ground from falling materials. Also take caution to prevent potential damage to property.

After asphalt shingles have been removed the roof decking and framing must be inspected for deck warping or damage. Decking must be fastened properly and cleared of any protruding nails, staples or screws. Any debris must be swept clean from the roof to ensure the proper installation of the underlayment.

Roof Decking Minimum Requirements
Roof decking minimum requirements are either ½" inch thick plywood or 15/32 OSB (Oriented Sheathing Board).

Clean the Eaves-Trough

Cleaning the Eaves-Trough will ensure that water will be unable to build up that could damage the newly installed roof

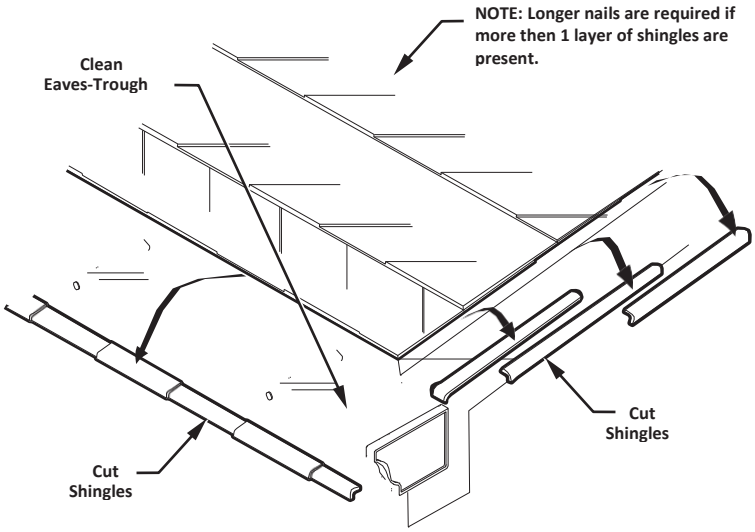
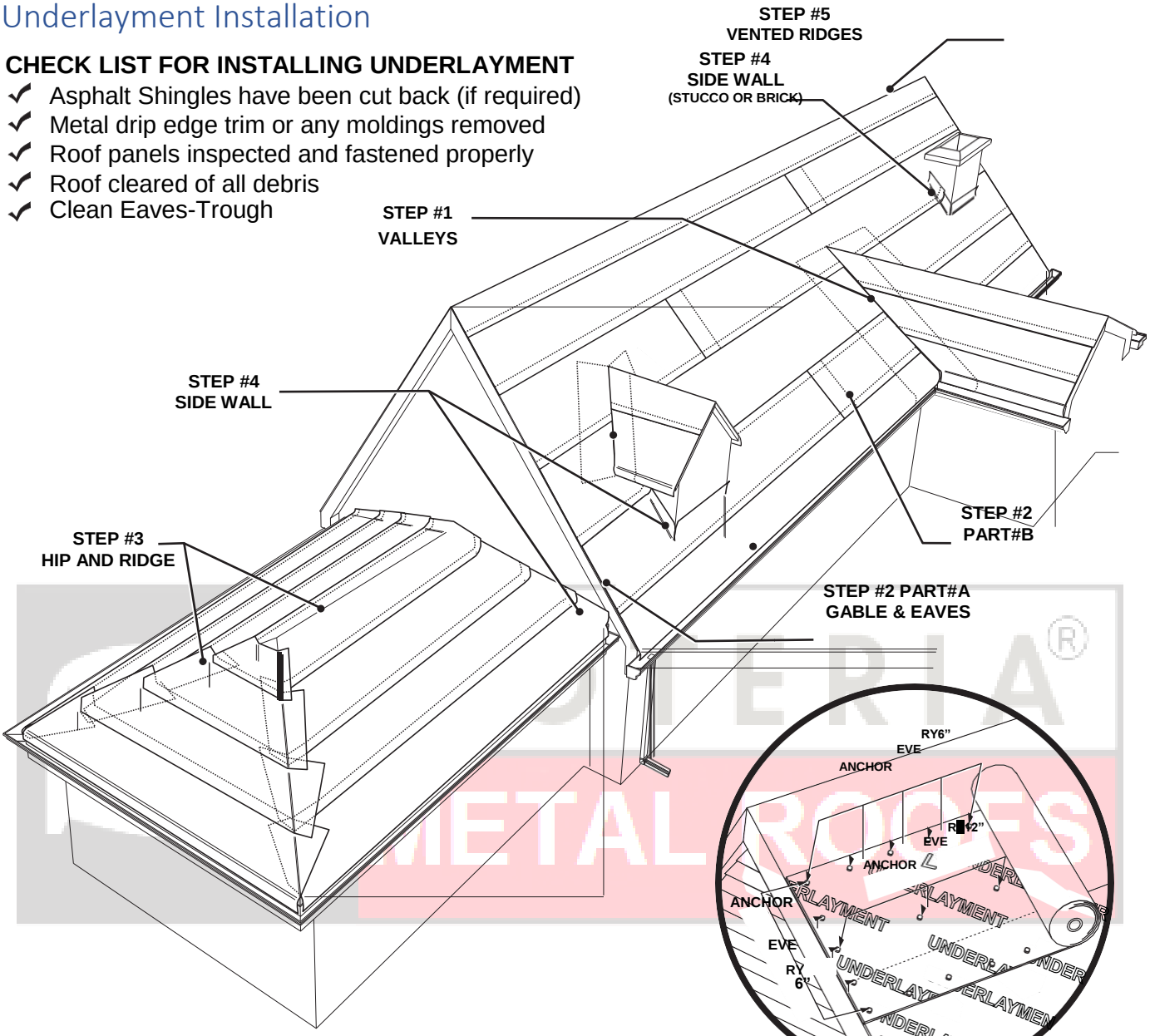


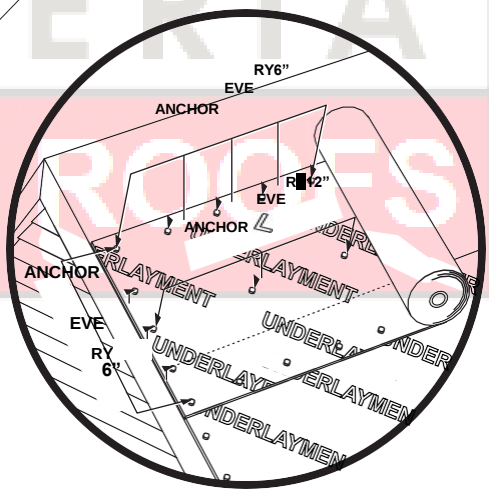
Fig. 3: Discard asphalt shingle cut offs and clean the eaves-trough.

Underlayment Installation

CHECK LIST FOR INSTALLING UNDERLAYMENT

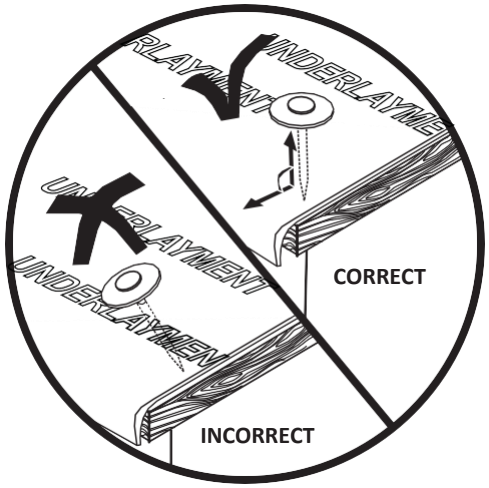
- ✓ Asphalt Shingles have been cut back (if required)
- ✓ Metal drip edge trim or any moldings removed
- ✓ Roof panels inspected and fastened properly
- ✓ Roof cleared of all debris
- ✓ Clean Eaves-Trough





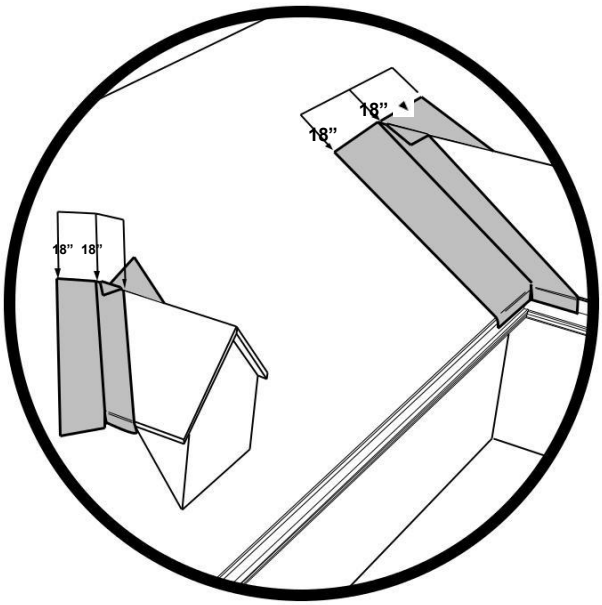
ATTACHING THE UNDERLAYMENT

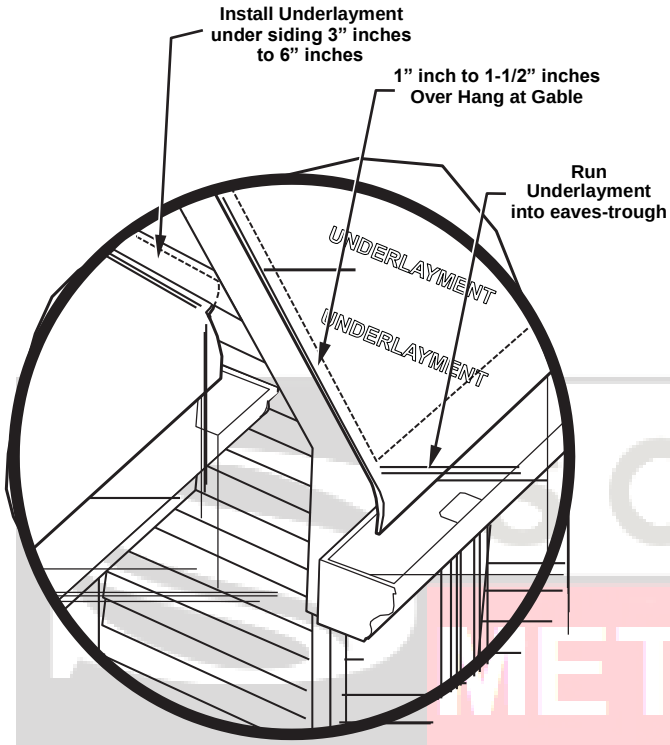
Attach the underlayment with the printed side up using the required anchors. The underlayment must be attached to the structural roof deck using 1-1/2" inch galvanized ring shank nails or plastic cap nails. If installing over asphalt, use longer nails with a minimum of a 1/2" inch beyond the underside of the roof decking. Space anchors 6" inches (15cm) (on the center) on the vertical and horizontal laps and every 12" inches (30cm) along the center of the roll. If the application of the underlayment and the final roofing occur in the same day, then the option to use every other printed anchoring placement is acceptable. All nails must be flush, 90 degrees to the roof deck and tight with the underlayment to the roof deck surface.



STEP #1

VALLEYS - With the printed side up, install the underlayment in the valleys first with a minimum of 18” inches on each side for the valleys.

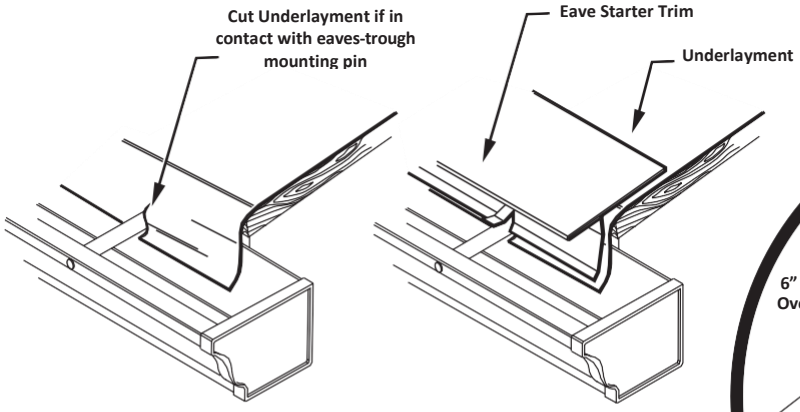


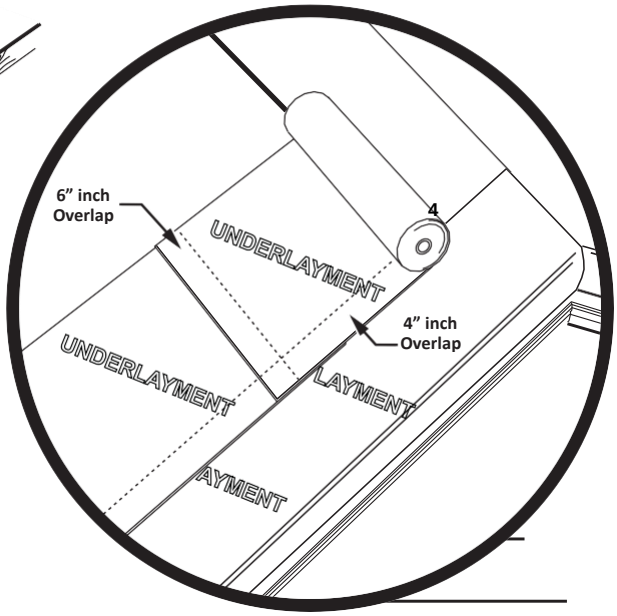


STEP #2 - PART A

GABLE & EAVES - Install the underlayment running into the eaves-trough and roll towards the gable with a 1” to 1-1/2” inch over hang at the gable end.

NOTE: Underlayment must run past the bottom portion of the starter trim into the eaves. Cut or slice any underlayment that may come in contact with any eaves-trough pins.



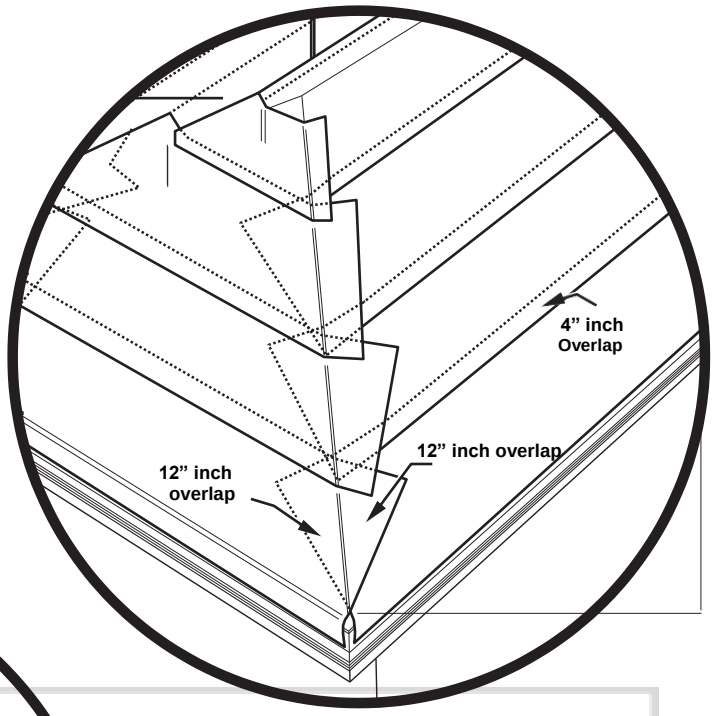


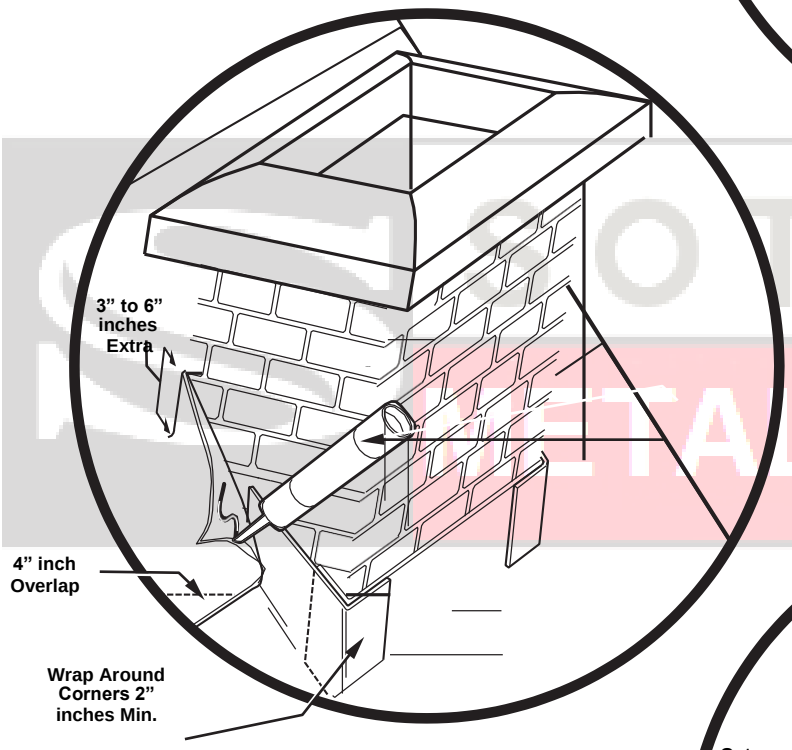
STEP #2 - PART B

SECOND LAYER - Start the second layer above the first bottom layer with a minimum overlap of 4” inches on the horizontal laps and 6” inches on the vertical laps.

STEP #3

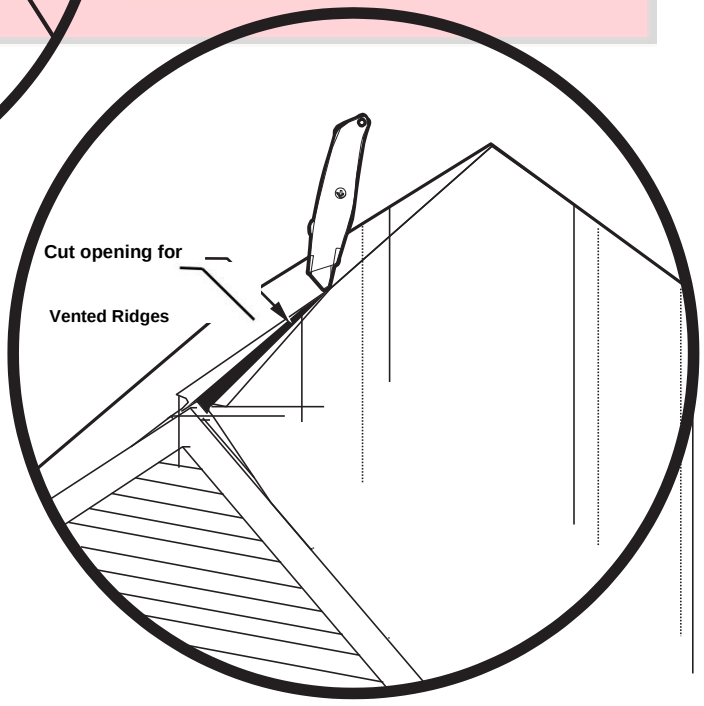
HIPS AND RIDGES - A minimum of 12” inches overlap on the vertical is required for hips and ridges.





STEP #4

GABLE TO SIDE WALL - Cut underlayment with a 1” to 1-1/2” inch over hang at gable end and leave 3” to 6” inches extra on other end for feeding up in behind the Side Wall siding or for sealing to brick or stucco. Wrap around corners a minimum of 2” inches.



STEP #5

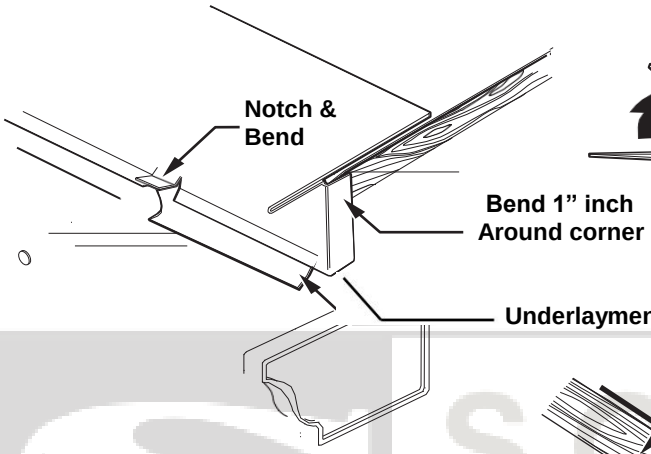
VENTED RIDGES - For vented ridges cut an opening for ventilation if required.

Eave Starter Trim Installation

NOTE: Before the Eave Starter Trim is installed the underlayment must first be installed. The underlayment will hang below the bottom edge of the Eave Starter Trim into the eaves-trough.

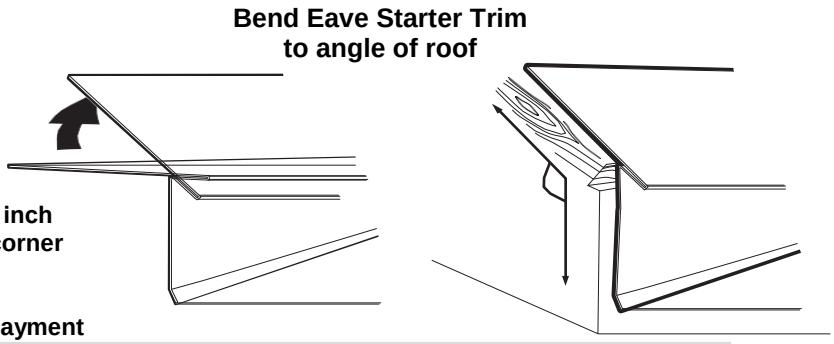
EAVES-TROUGH FASTENING PINS

Notch bottom portion of Eave Starter Trim and bend over eaves-trough pin if there is interference.



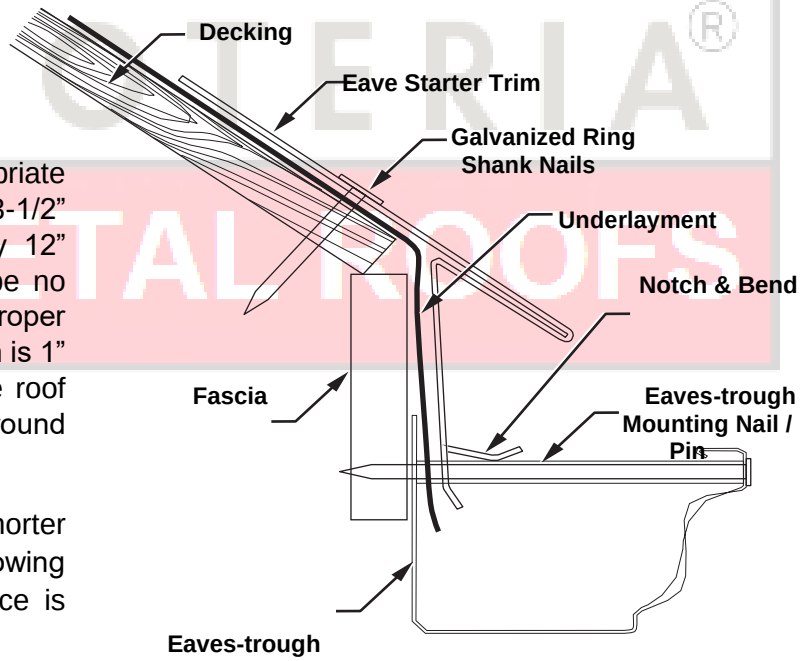
BENDING EAVE STARTER TRIM

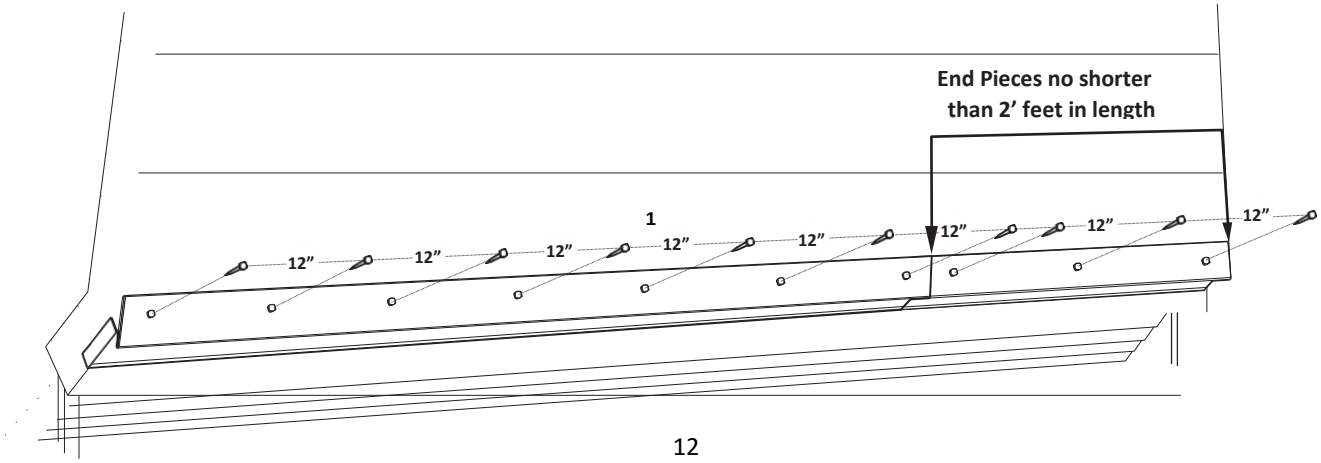
Determine the pitch of the roof and bend the Eave Starter Trim to the proper angle using a 10' foot break.



Attach the Eave Starter Trim with appropriate length Galvanized Ring Shank Nails 3-1/2" inches from the end of the trim - every 12" inches. Cut the final piece (that should be no shorter than 2' feet in length) with the proper cutting tool and measure to ensure the trim is 1" inch longer to the gable/rake edge of the roof (this extra 1" inch will be used to wrap around rake edge).

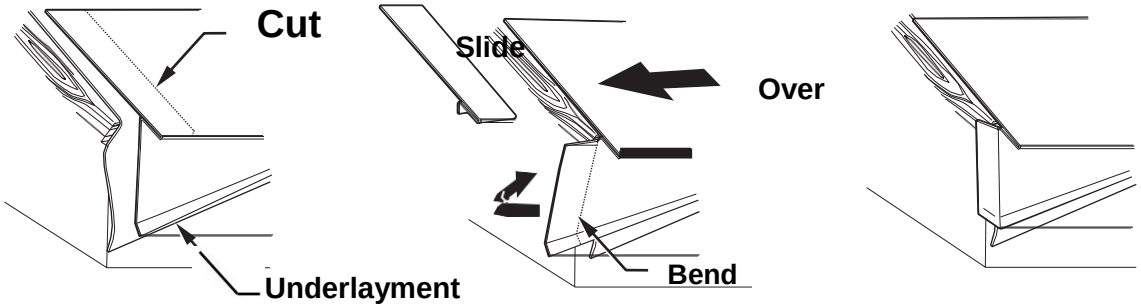
NOTE: End pieces of trim should be no shorter than 2' feet in length. Cut the following succeeding trim down to size if end piece is under 2' feet.





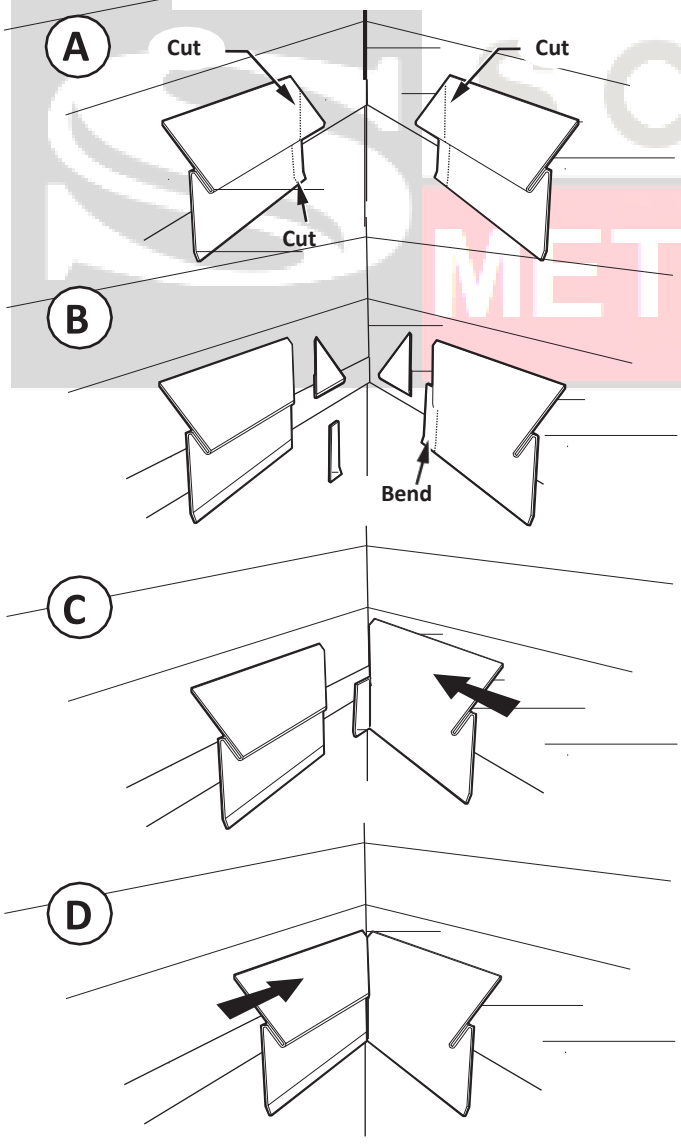
Installation of Eave Starter Trim at Gable Edge

Cut and notch out the top portion of the Eave Starter Trim 1” inch. Bend the bottom 1” inch portion (where the top has been notched out) and wrap around the gable edge. This bent flap will sit on the inside corner when the gable starter is installed.

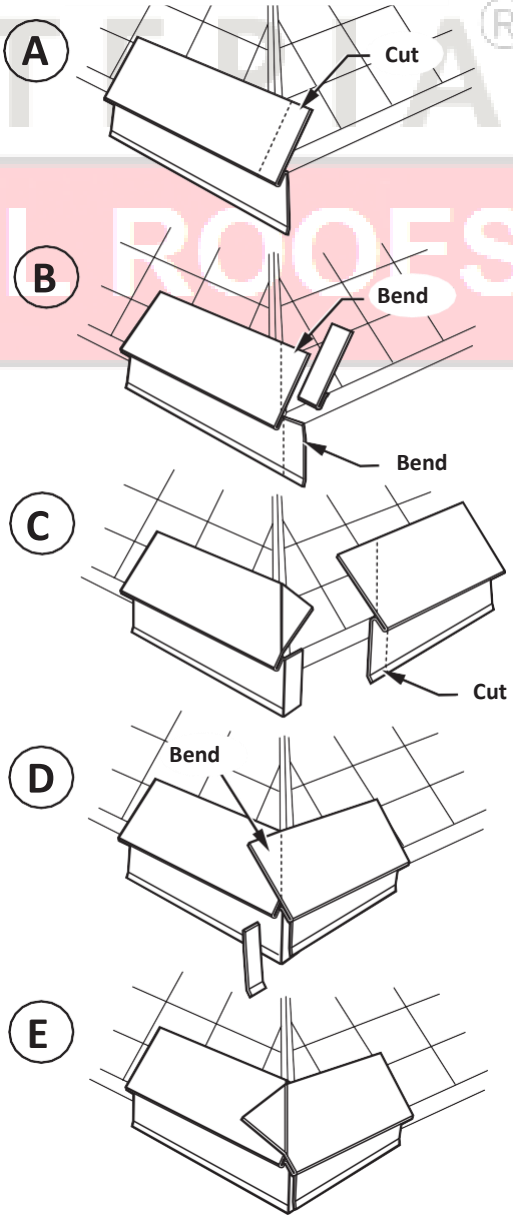


NOTE: Trims shown are for illustration purposes only. Larger size trim length is to be used.

INSTALLATION OF INSIDE CORNERS OF EAVE STARTER TRIM

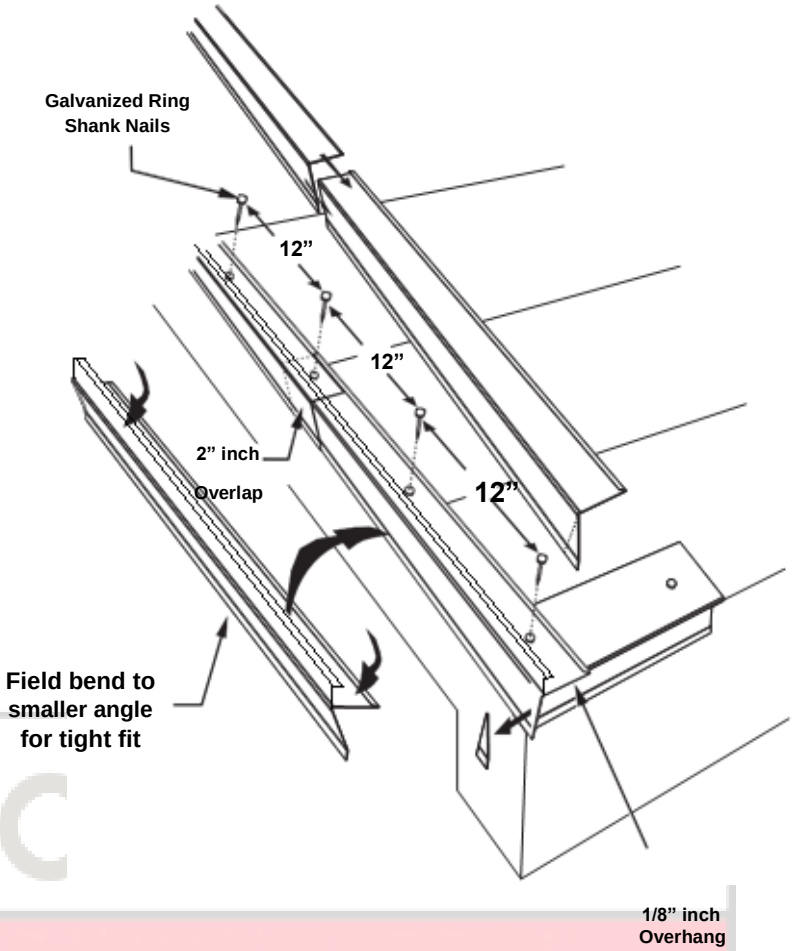


INSTALLATION OF OUTSIDE CORNERS OF EAVE STARTER TRIM



Installation of the Gable Starter F-Trim

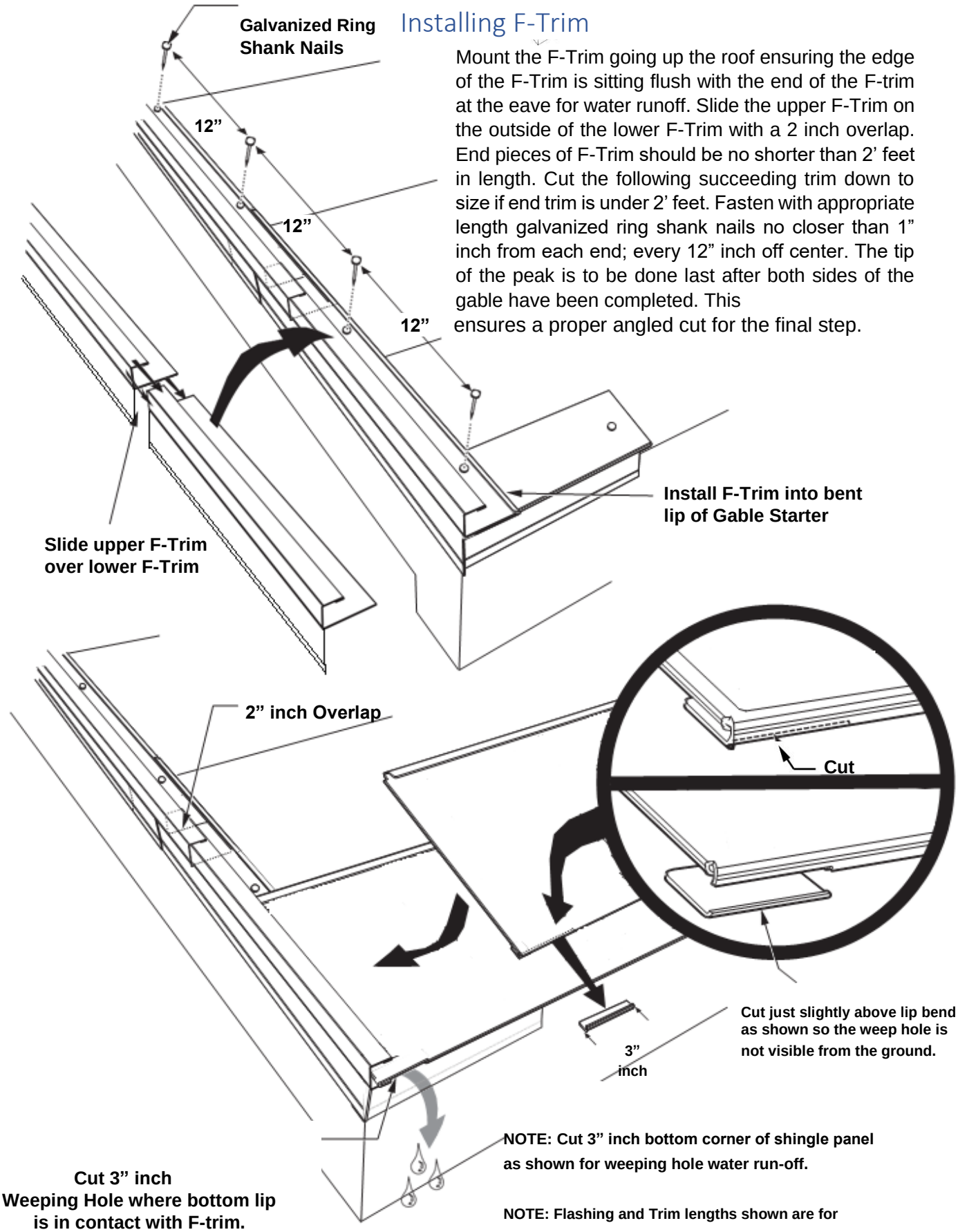
Bend the Gable Starter F-trim to a smaller angle (less than 90 degrees) before install. This will ensure a tight fit on the gable end corner ensuring no gaps will be visible from the ground. Install the Gable Starter F-trim on top of the underlayment with a 2” inch overlap of each 10’ foot section of trim going up the gable edge - with a 1/8” inch overhang at the Eave Starter (this will act as a water runoff). Where the water runoff is; ensure that the bent corner of the Eave Starter is on the inside of the Gable Starter F-trim. Cut the bottom section of the Gable Starter below where it’s flush, with the Eave Starter to ensure that it‘s square. End pieces of trim should be no shorter than 2’ feet in length. Cut the following succeeding trim down to size if end trim is under 2’ feet. Fasten with appropriate length galvanized ring shank nails no closer than 1” inch from each end every 12” inches off center.



NOTE: Flashing and Trim lengths shown are for illustration purposes only. Larger size flashing and trim lengths are to be used.

Installing F-Trim

Mount the F-Trim going up the roof ensuring the edge of the F-Trim is sitting flush with the end of the F-trim at the eave for water runoff. Slide the upper F-Trim on the outside of the lower F-Trim with a 2 inch overlap. End pieces of F-Trim should be no shorter than 2' feet in length. Cut the following succeeding trim down to size if end trim is under 2' feet. Fasten with appropriate length galvanized ring shank nails no closer than 1" inch from each end; every 12" inch off center. The tip of the peak is to be done last after both sides of the gable have been completed. This ensures a proper angled cut for the final step.

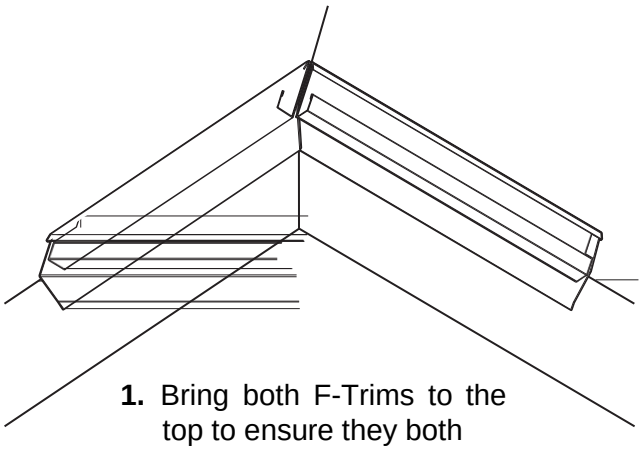


NOTE: Cut 3" inch bottom corner of shingle panel as shown for weeping hole water run-off.

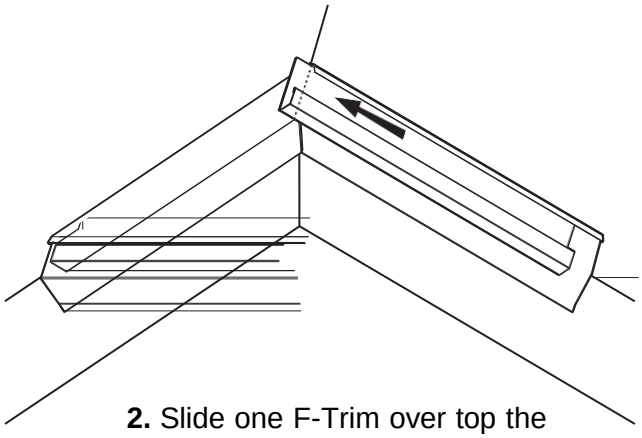
NOTE: Flashing and Trim lengths shown are for illustration purposes only. Larger size flashing and trim lengths are to be used

Installing F-Trim - GABLE PEAK

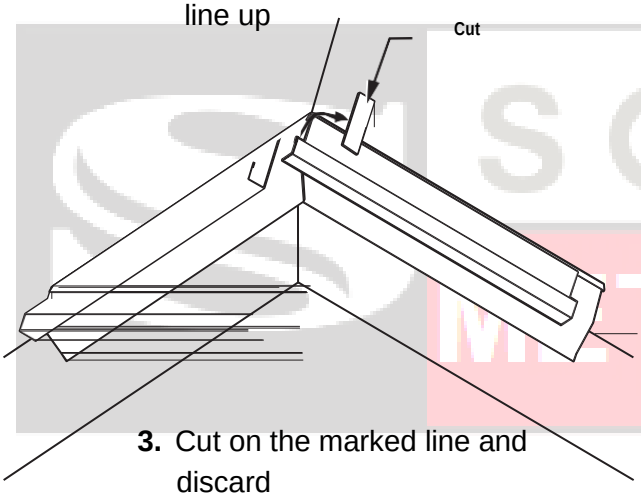
The tip of the gable peak is to be done last when both sides of the gable have been completed to ensure a proper angled cut for the final step.



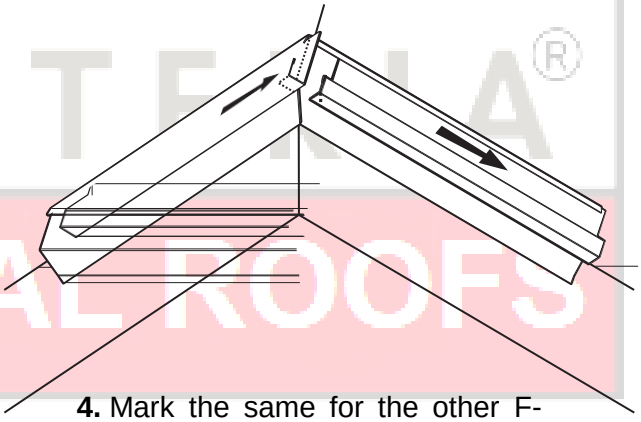
1. Bring both F-Trims to the top to ensure they both line up



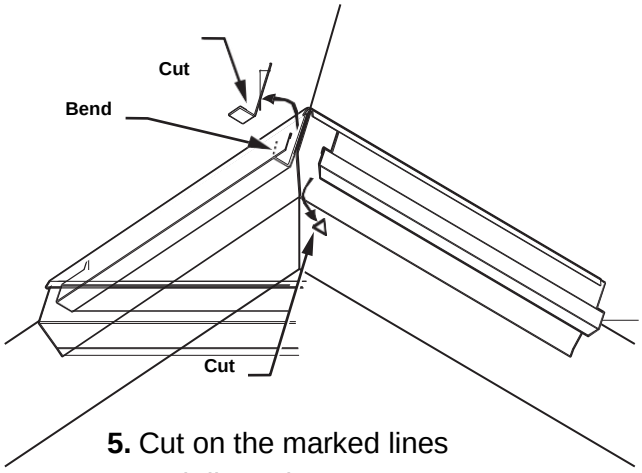
2. Slide one F-Trim over top the opposite F-Trim until flush and mark cutting line



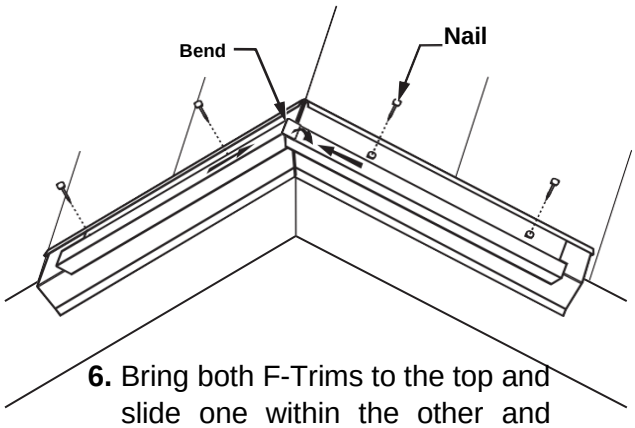
3. Cut on the marked line and discard



4. Mark the same for the other F-Trim as in step 2 and the front of the F-Trim on the other side straight down from the peak as shown



5. Cut on the marked lines and discard

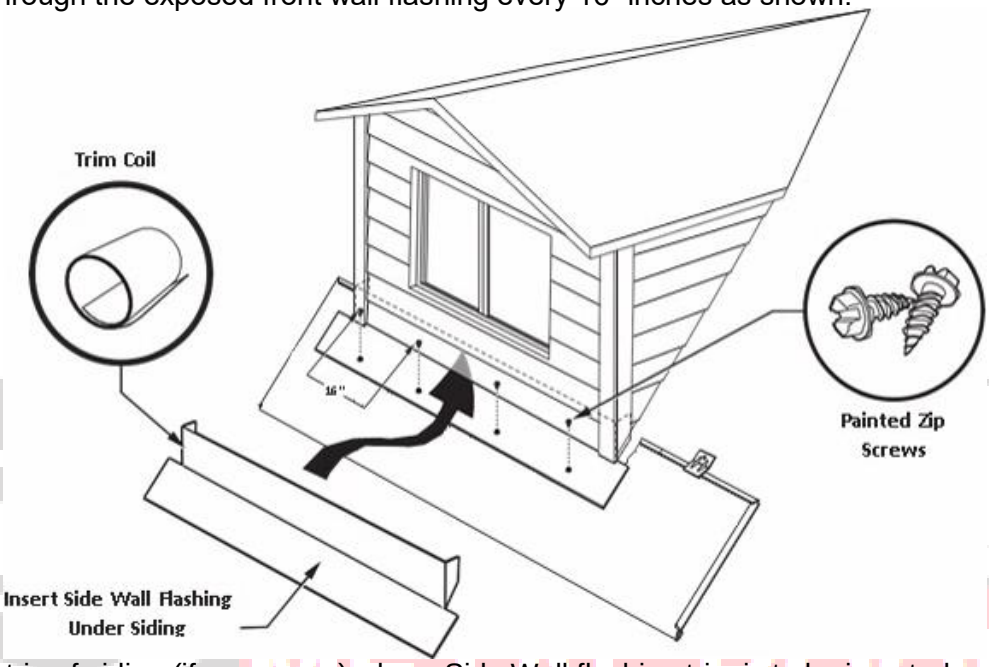


6. Bring both F-Trims to the top and slide one within the other and bend 1” inch extended tip over peak as shown and attach with nails

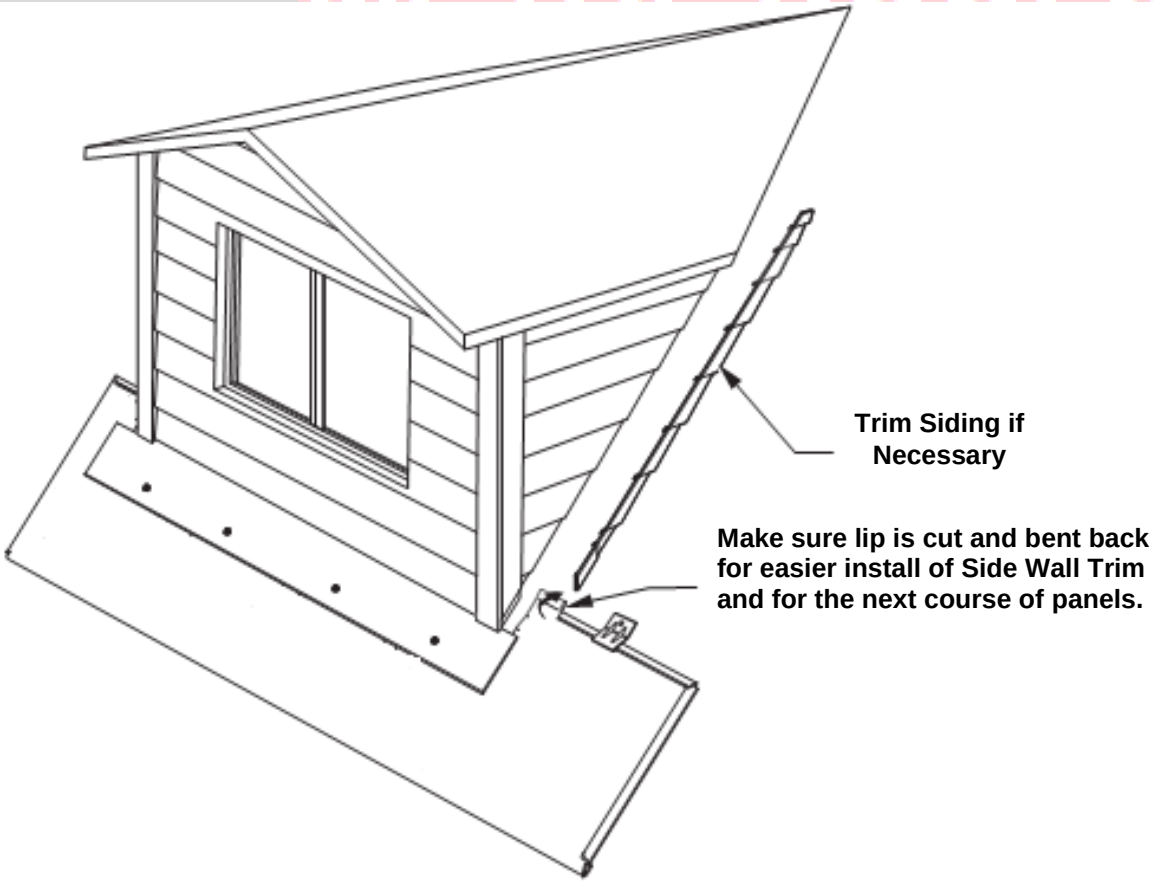
Installing End Wall (Headwall) Flashing

Always plan the job out before attaching flashing. Measuring, pre-cutting and pre-assembly is essential for a clean and correct install.

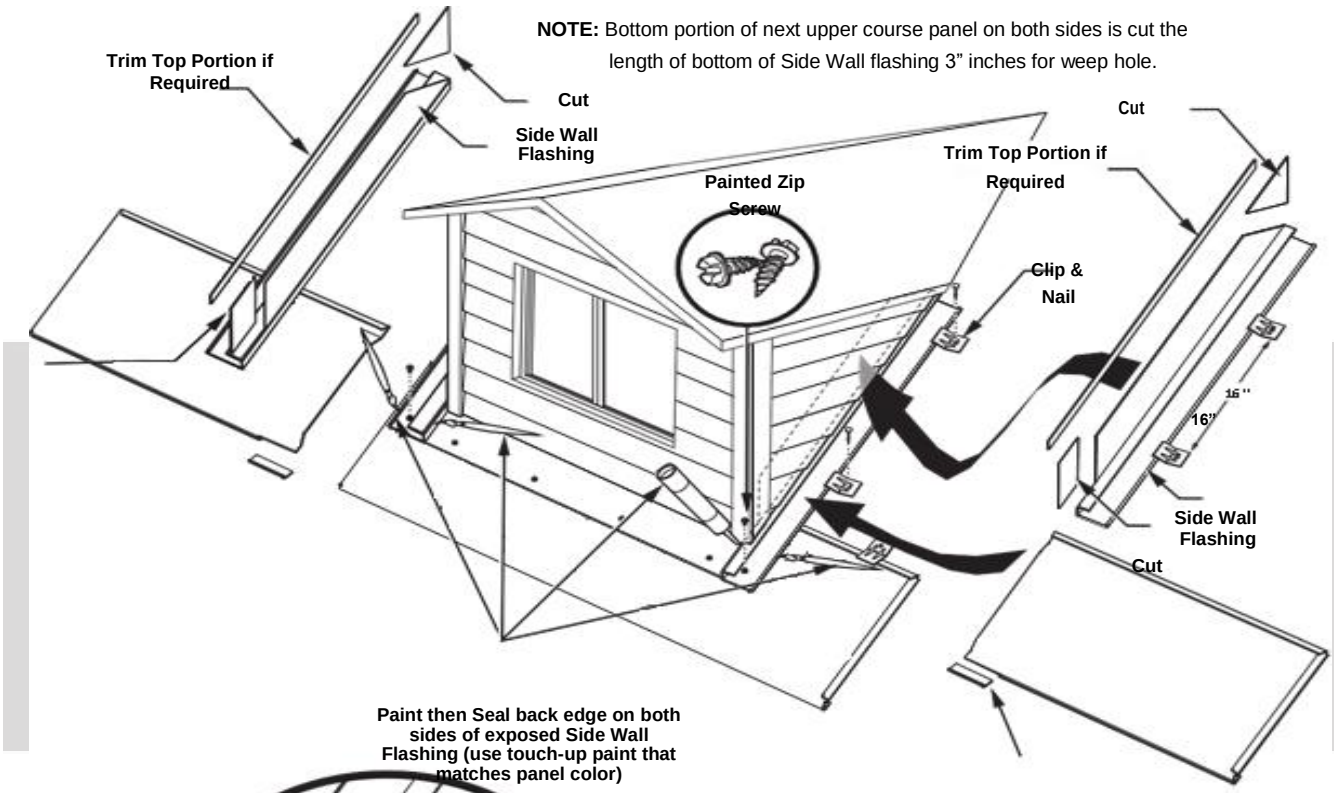
1. Cut and field bend Trim Coil for End Wall flashing. Bend corners for top portion and insert under siding. Bottom portion of End Wall Flashing should be extended on both sides past the window wall and are **NOT Fastened**. These extended portions will sit on the bottom of the Side Wall Trim. Fasten with painted zip screws through the exposed front wall flashing every 16” inches as shown.

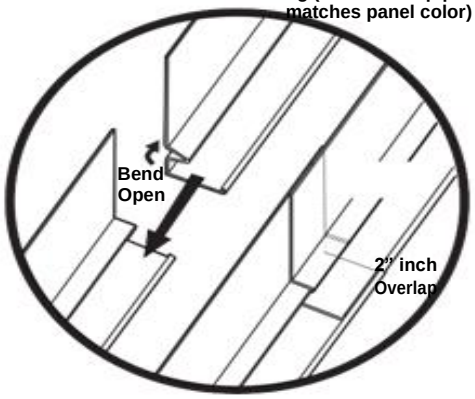


2. Cut small strip of siding (if necessary) where Side Wall flashing trim is to be inserted under siding.



3. Install Side Wall Flashing as far up as possible, under the siding, with the channel over lapping the bottom shingle panel. Cut top portion of Side Wall Flashing if necessary to fit. Ensure both channels are extended at an equal distance and in line with the End Wall Flashing. Attach using clips and nails every 16” inches as shown. Use touch-up paint on portion of uncolored trim and then seal back of exposed Side Wall Flashing where it is in contact with End Wall Flashing.

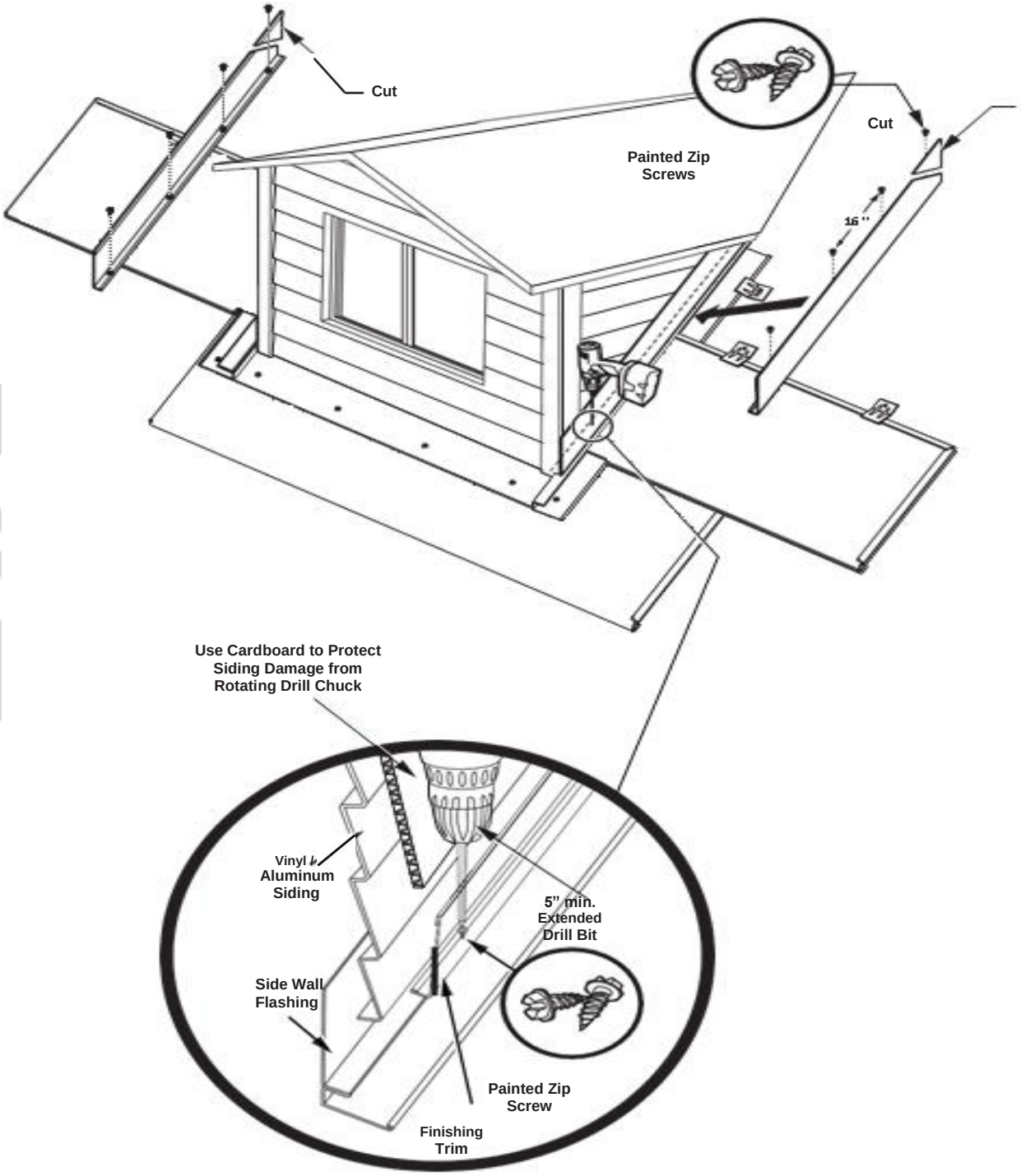




3” inch Weep Hole

NOTE: For Side Wall Flashing Trim longer then 10’ feet overlap by 2” inches as shown.

4. Measure and cut finishing trim with the bottom portion under the siding and top portion over the siding. Fasten with painted zip screws through the bottom portion into the Side wall flashing with an extended drill bit every 16" inches off center.

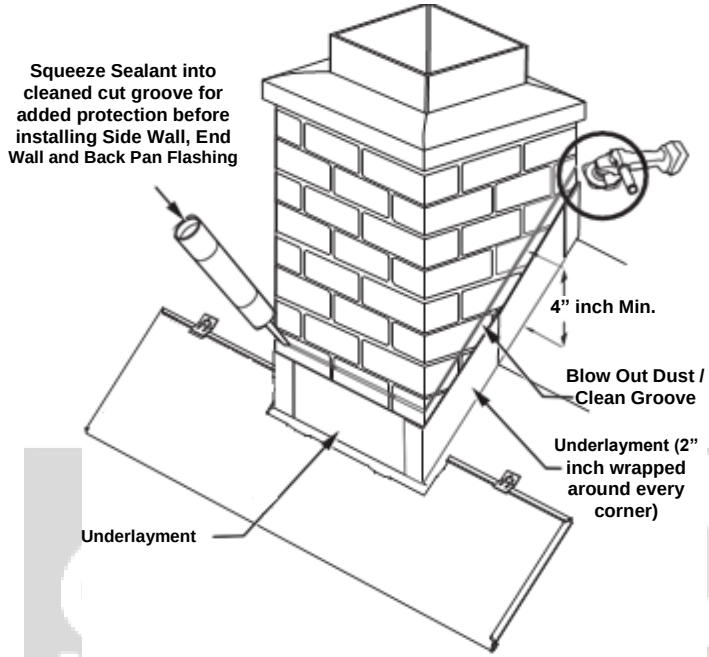


CUT AWAY VIEW

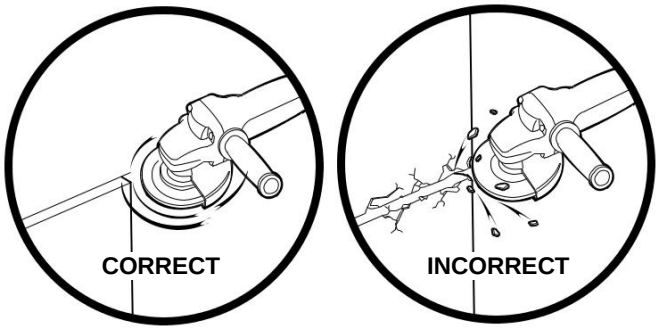
Installing End Wall (Headwall) Flashing - BRICK

Always plan the job out before attaching and sealing flashing. Measuring, pre-cutting and pre-assembly are critical for a clean and correct installation.

1. Cut a groove perpendicular (at a 90 degree angle) to the roof decking into the stucco or brick at least 4" inches above the roof deck. Mark this line out to ensure a true perpendicular perimeter cut is achieved. The groove should be past the mortar and the depth is adequate to ensure that the bent lip of the trim will sit far enough in the cut to create a tight seal so water can't pass in behind. **NOTE:** Blow out dust from cut groove and apply sealant before installing the flashing.

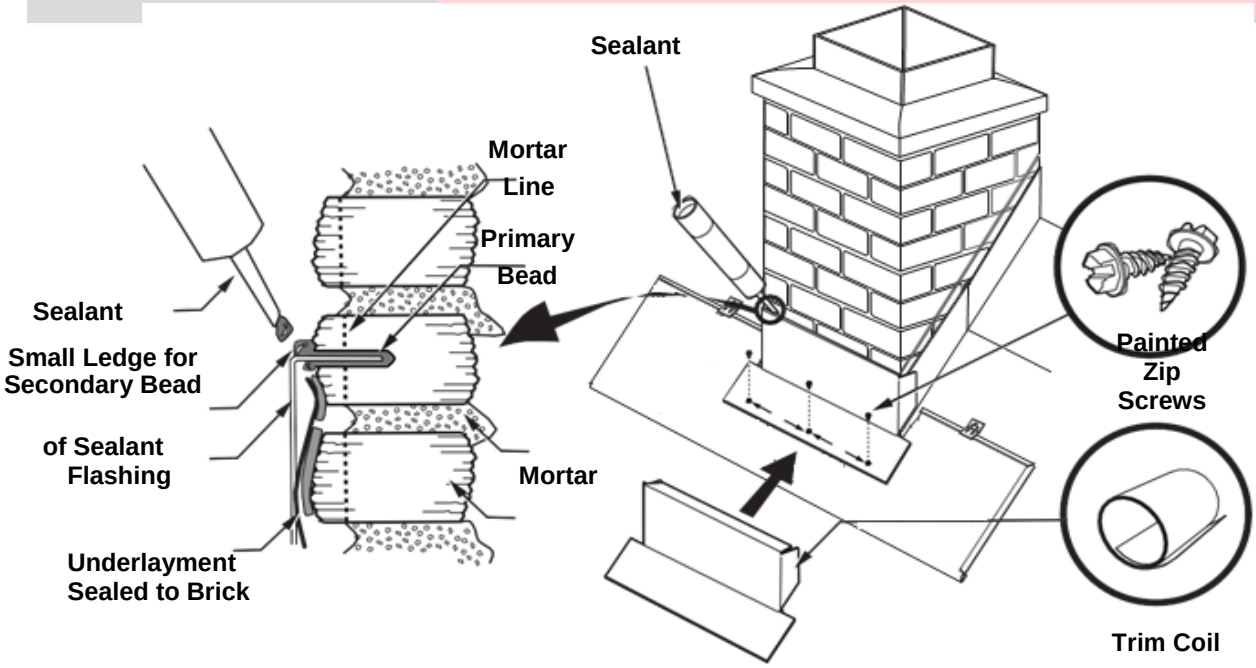


PROCEDURE FOR CUTTING STUCCO



Stucco walls are fragile and chip or crack easily. For best cutting results it's highly recommended that measurements are double checked. Ensure that the blade of the grinder is inspected for any wear or damage prior to cutting Stucco. Use a high RPM grinder and a slow and steady hand when cutting Stucco.

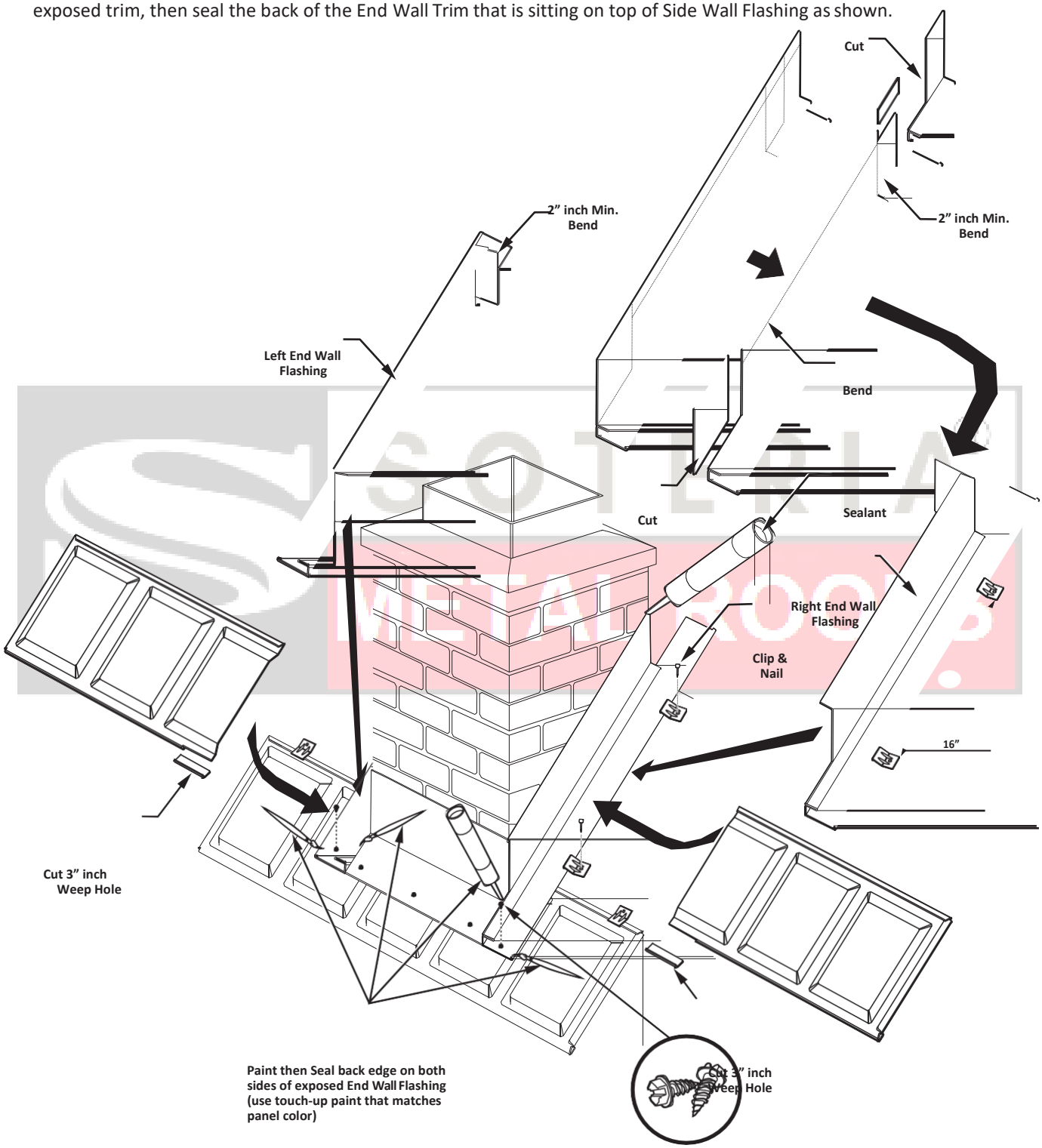
2. Begin with the End Wall flashing by cutting and field bending the Trim Coil as shown. Bend the top portion of the flashing, insert into the cut groove and seal. For all steps; the flashing should sit flat and square to the roof decking and the bent lip should fit in the cut groove slightly out at the top, this will provide a small ledge for the sealant to sit on. Use painted zip screws every 16" inches off center to attach bottom portion of flashing to the shingle panel.



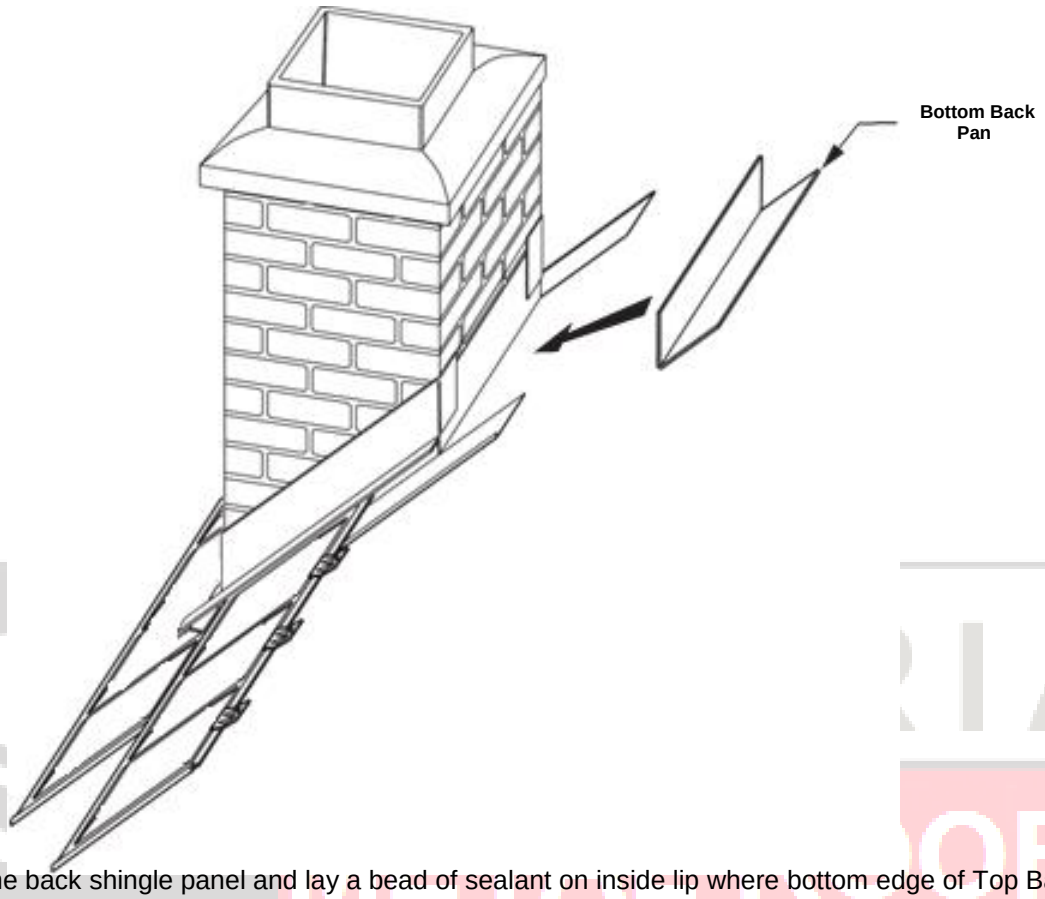
VIEW OF

BRICK WITH FLASHING

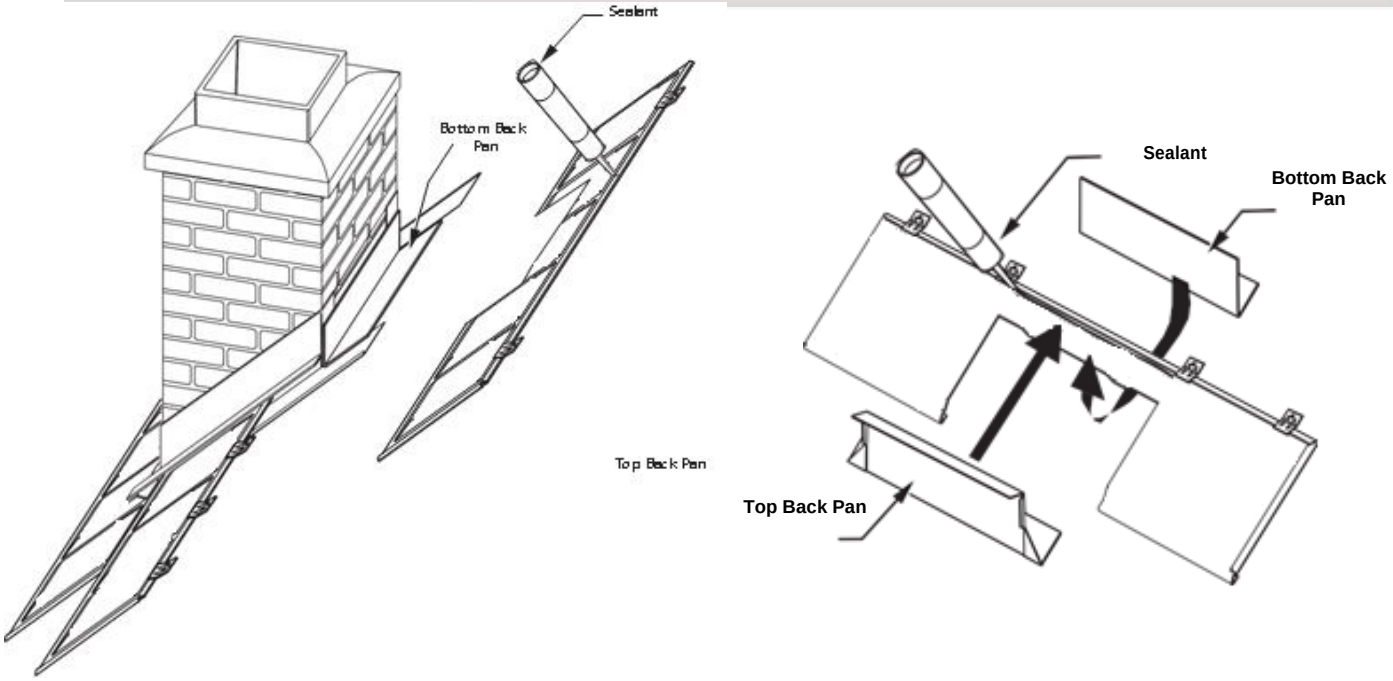
Cut, Bend and install End Wall Flashing as shown. Ensure that both channels are extended 3/4” of a inch or more past the chimney; at an equal distance. Trim front so it’s flush with the chimney corner and wrap back portion around a minimum of 2” inches. Insert top bent portion of End Wall Flashing into cut groove and seal. Attach with clips and nails every 16” inches off center. Use painted zip screws for the exposed End Wall Flashing channel. Use touch-up paint on uncolored portion of exposed trim, then seal the back of the End Wall Trim that is sitting on top of Side Wall Flashing as shown.



4. Cut and bend Top and Bottom Back Pan Flashing as shown. Install Bottom Back Pan first. The Bottom Back Pan is a simple right-angled flashing (the width of the chimney) which is cut below the groove and does not get sealed.

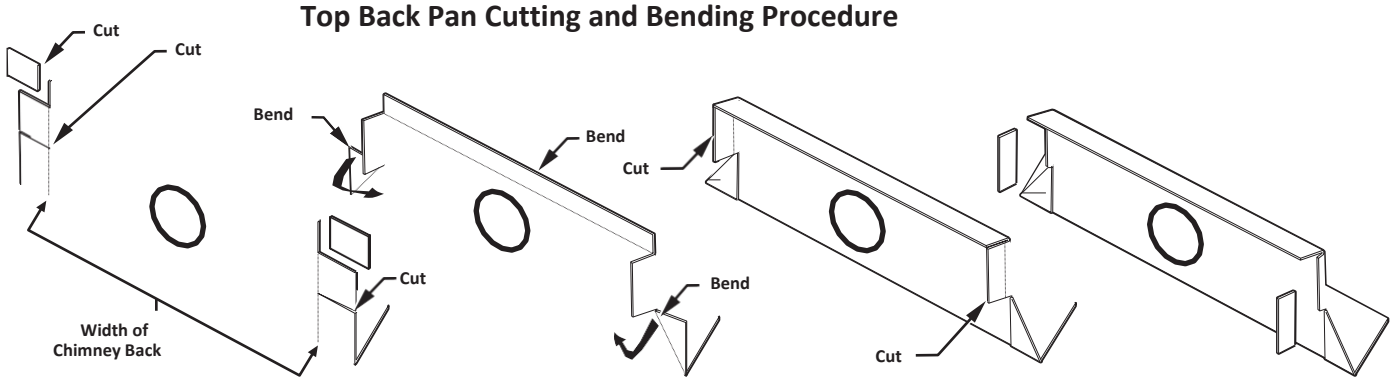


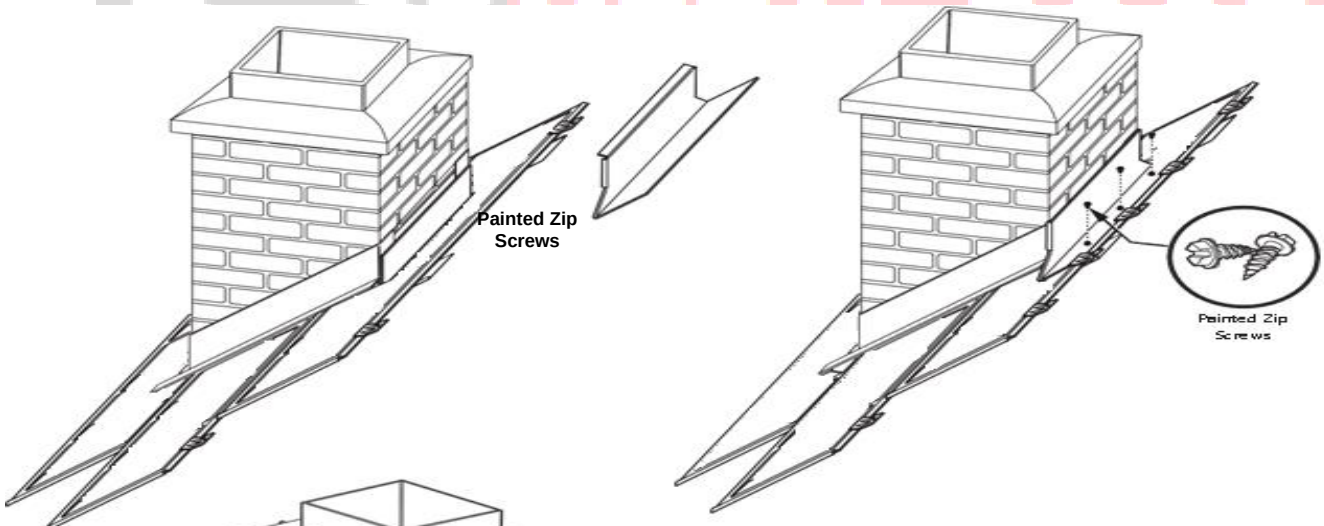
5. Install the back shingle panel and lay a bead of sealant on inside lip where bottom edge of Top Back Pan is to be inserted.

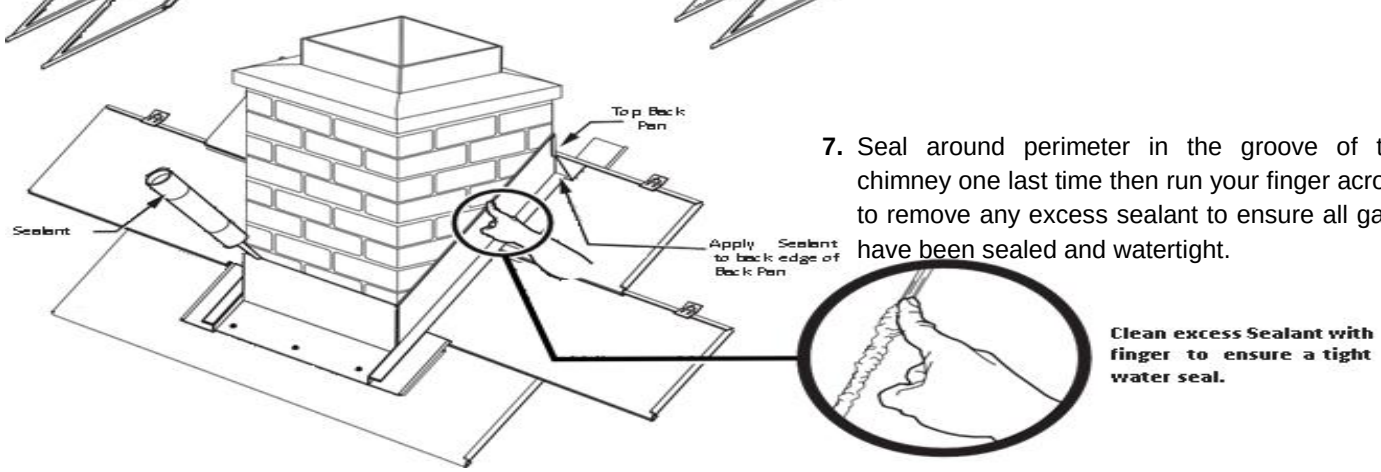


6. Install Top Back Pan and tap small extended edges around sides of chimney. Use Painted Zip screws every 16” inches off center to attach bottom and seal the bent edge that is inserted into the cut groove.

Top Back Pan Cutting and Bending Procedure

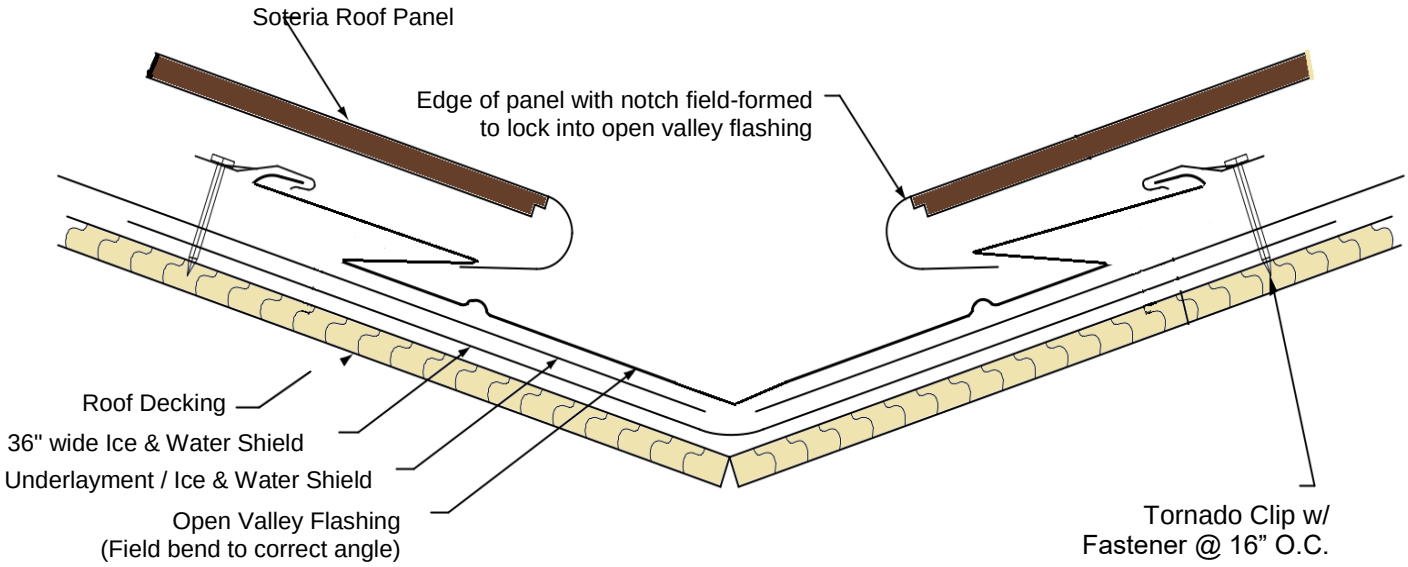






7. Seal around perimeter in the groove of the chimney one last time then run your finger across to remove any excess sealant to ensure all gaps have been sealed and watertight.

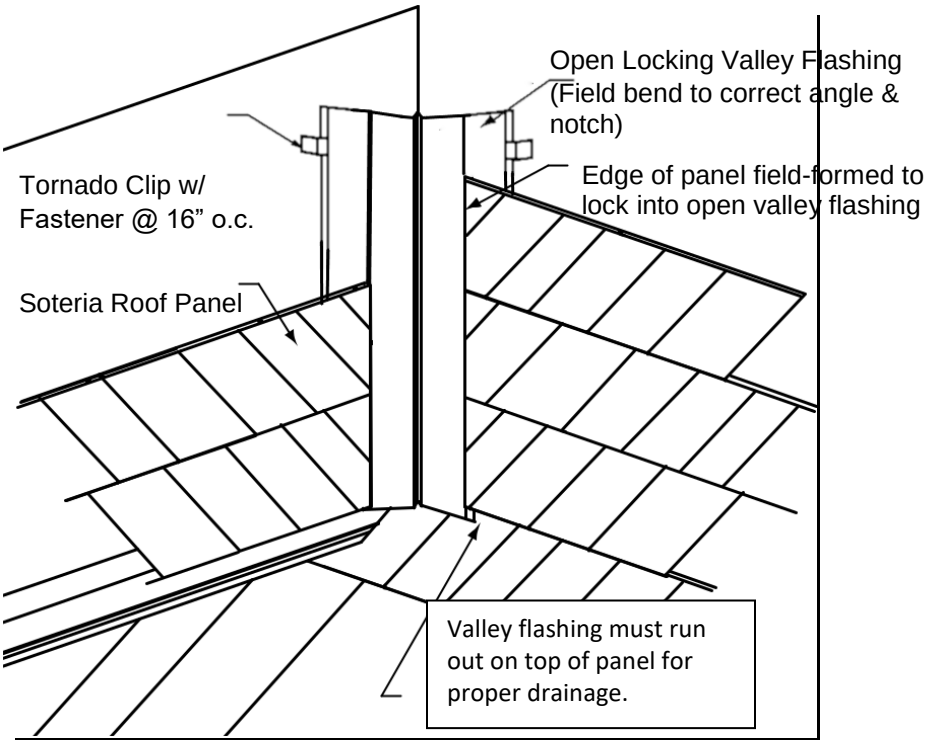
Open Locking Valley Flashing



Locking Open Valley Installation

To assure a properly aligned and straight valley installation, it is important to first snap a chalk line in the center of the valley, running the full length of the valley. (Make sure underlayment has been applied in the valley per local building codes.) Then begin installing the valley flashing from the bottom. Trim the bottom of the valley to the correct angle and allow 5/8" to bend around the eave starter. Notch hem of top valley and overlap valley 4" and put 2 rows of sealant between overlap.

Fasten valley in place with clips and fasteners on the outer edge of the valley every 16" on Centre. Remember to snip through the bottom clip and valley flashing so the valley flashing won't run out of place. Next install the Open Valley Adjustable Starter. Always use sealant when overlapping accessories. (The roofing panels will need to be field hemmed to lock onto the Open Valley).



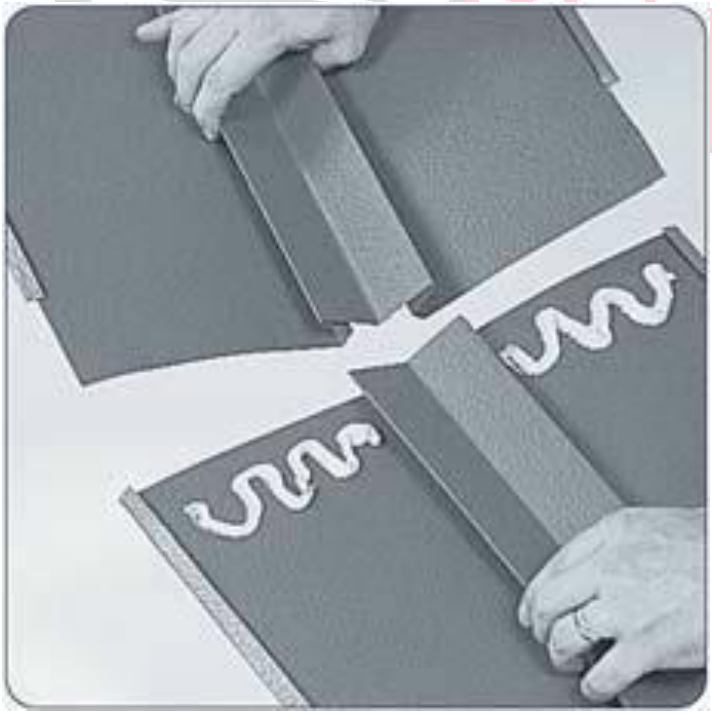
Floating Valley Installation

To assure a properly aligned and straight valley installation, it is important to first snap a chalk line in the center of the valley, running the full length of the valley. Install Ice & Water Shield in the valley if needed. Run panels up past the lowest point of the floating valley. Lay the valley flashing in the valley and over the panels coming up from below. Mark the valley so that it is long enough to drain any water out on top of the panel below. Trim and field form the valley as needed. Notch and lap the top of the valley if needed. Remember to apply two rows of sealant between the two pieces of valley at the lap. Fasten properly depending on which valley flashing you are using

Closed Valley Flashing Installation

For a properly aligned and straight valley installation, a chalk line is snapped through the center at the full length of the valley and used as a guide for installation. Install the valley flashing starting from the bottom. Trim the bottom of the valley flashing to the correct angle and hem 5/8” of an inch over the Eave Starter and 3/8” of an inch under the Eave Starter. Attach and fasten valley with shingle clips 16” inches off center on each side of the valley. Fasten Clips with appropriate length galvanized ring shank nails. Install the proceeding valley with a 4” inch overlap on top of the bottom valley. Once entire valley is installed, apply M-seal tape approximately 4 inches from centre on each side to prevent water from going behind the tiles in the valley.

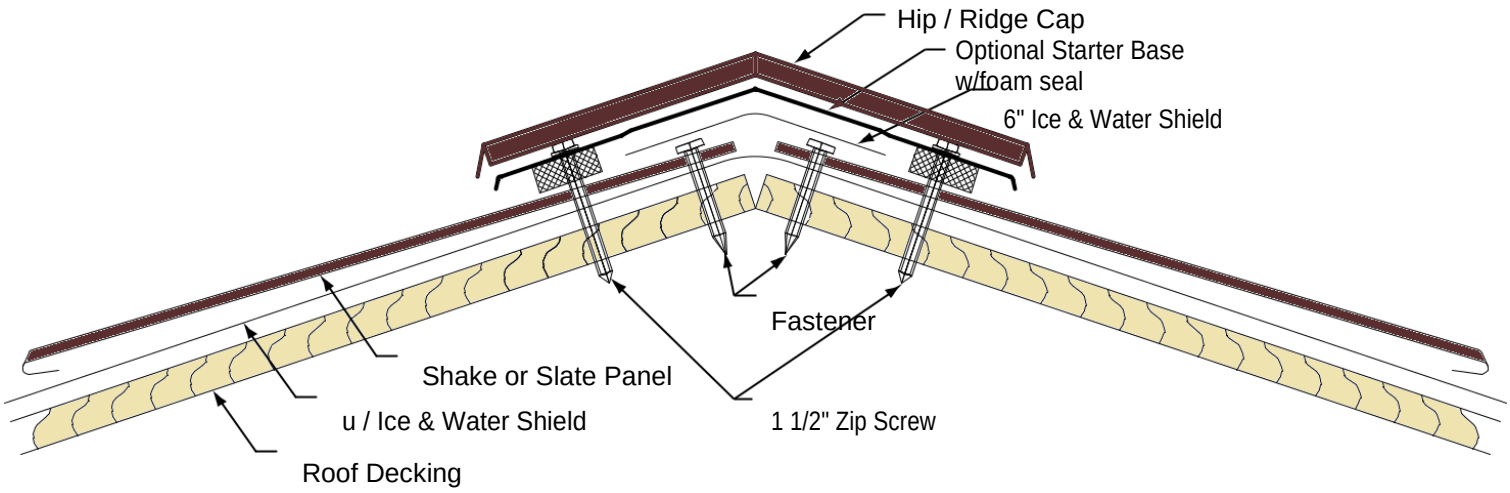
NOTE: Flashing and Trim lengths shown are for illustration purposes only. Larger size flashing and trim lengths are to be used.



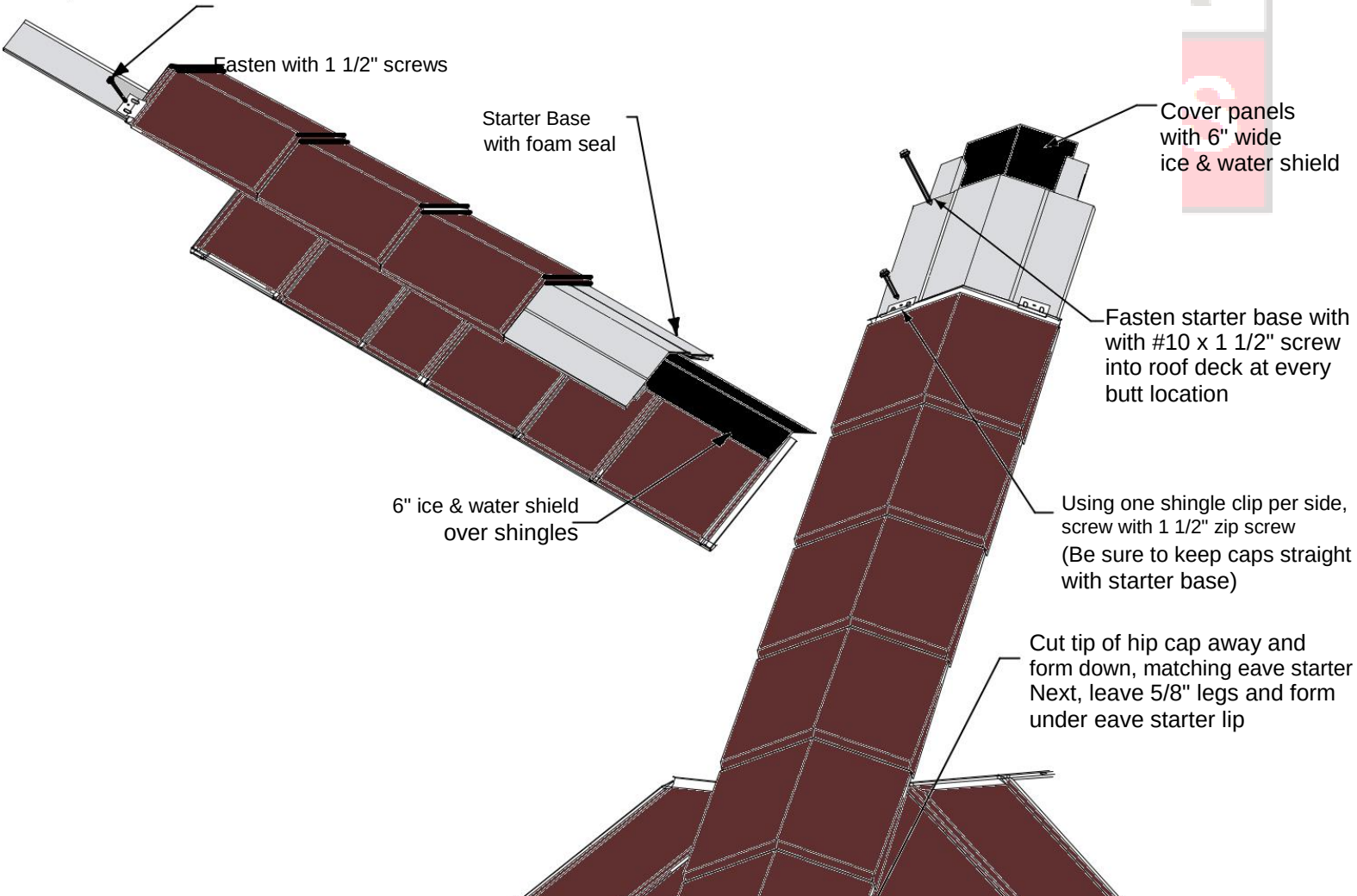
Valley flashing with a dormer finishes over the last course of shingles below the dormer’s eave. Place clip on one side of the valley flashing and fasten.
Next, apply pressure to the valley flashing, place clip the opposite side, and fasten to assure the Valley Flashing is seated. Do not fasten through the Valley Flashing. • Install the Valley Flashing with Tornado Clips 16 inches on-center.

To join two Valley Flashings, slide the upper flashing over the lower flashing, overlapping a minimum of 4 inches. Apply one-part urethane contractor-grade sealant at all joints. When two Valley Flashings meet at a ridge, miter the flashings to be flush at the ridge, where the two flashings join, overlay with Hip and Ridge Seal. Once entire length of valley is installed, apply M-seal tape approximately 4 inches from centre to prevent water from going behind the tiles in the valley.

Hip / Ridge Assembly (non-vented)



Cut panels to the proper length and install as close to the hip or ridgeline as possible. Cover cut edges with 6” of ice & water shield centered along the entire length of the hip or ridge edge. Bend Starter Base w/foam seal in a 10’ brake to the correct roof pitch. Install starter base over the panels and overlap subsequent pieces approximately 4” using sealant. The hip / ridge caps should be installed over starter base with #10 x 1 1/2” steel zip screws using 2 shingle clips per hip / ridge cap.



Hip and Ridge Installation – Vented

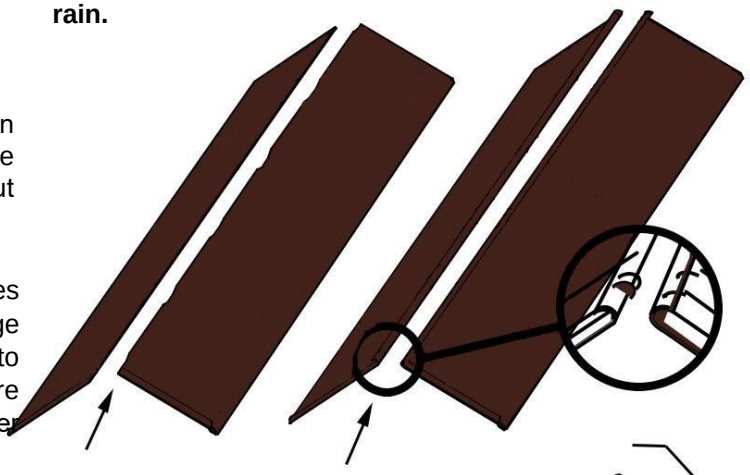
NOTE: If shingles need to be cut at ridge vent hole, make field bend to create a new inter lock bend to eliminate water from being driven into cut away void from driving rain.

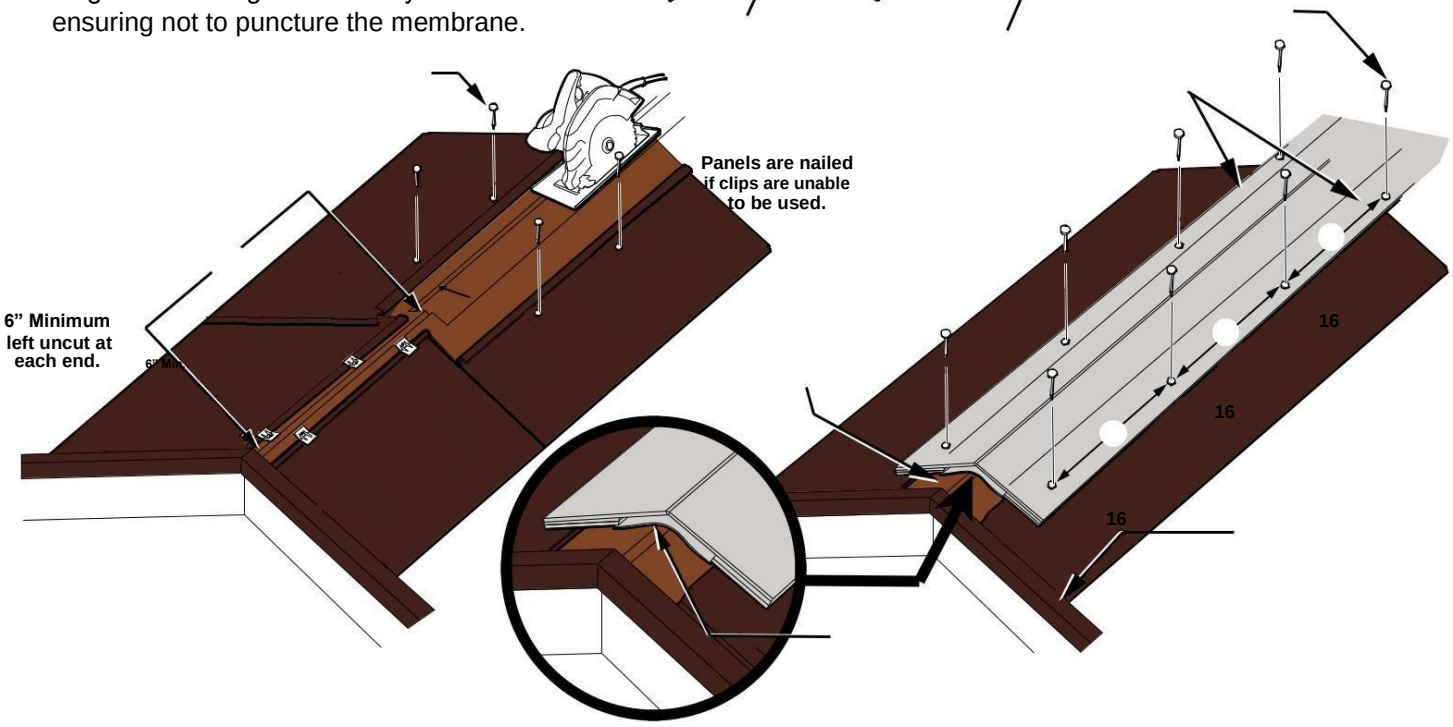
RIDGE VENT SLOT PREPARATION

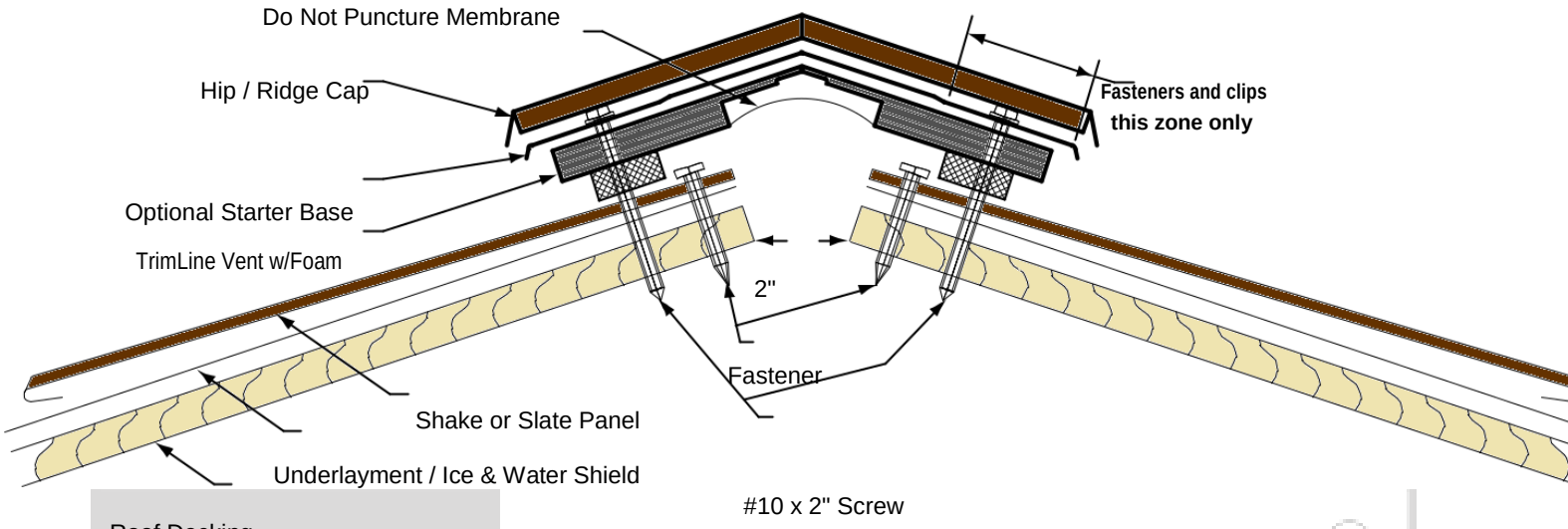
To Install the Ridge Vent a 2” inch slot (1” inch on each side of the ridge) must be cut along the entire length of ridge with a minimum of 6” inches left uncut on each end.

RIDGE VENT INSTALLATION

Once the ridge is cut and any over lapping shingles covering the ridge are trimmed and removed, the ridge vent is ready for installation. Insert the ridge vent into the J-trim as much as possible through the entire length of the ridge. Nail every 16” inches off center ensuring not to puncture the membrane.







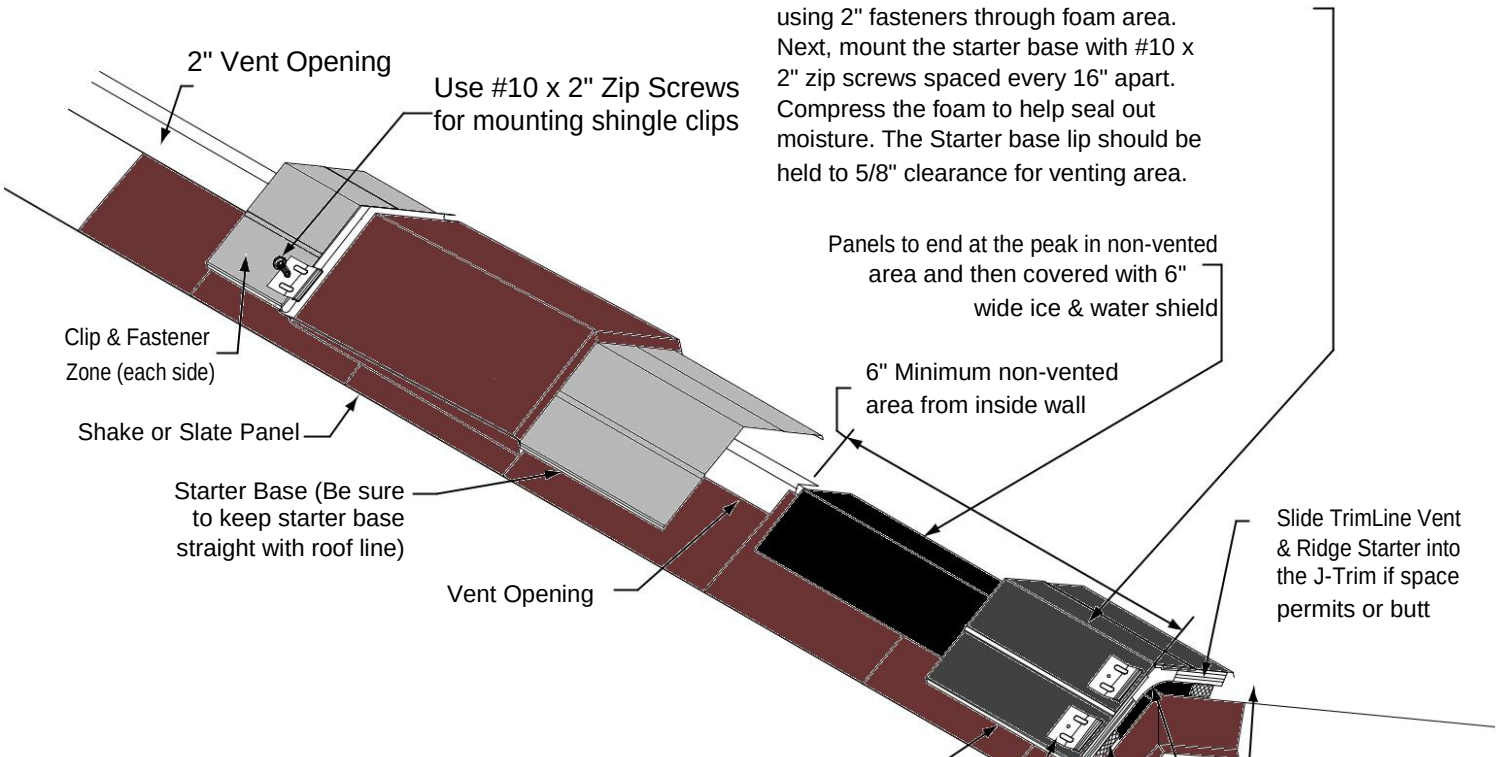
When using the TrimLine vent system, first cut appropriately sized, 2” wide venting opening through the roof decking to no closer than 6” of the end walls. When venting hips for more air flow, go down from the peak no more than 1/3 the maximum distance from the top. Going down the ridge too far effects air flow to the peak.

Lay TrimLine vent with foam the full length of ridge, matching the pitch angle of the roof and keep straight. Tack and use sealant when necessary.

Bend starter base to correct roof pitch over lapping 4” on splices.. Use 2” steel zip screw spaced 12” apart to keep the vent system as flat as possible.

Install hip / ridge caps over the starter base with #10 x 2" steel zip screws using 2 shingle clips per hip / ridge cap.

Mount TrimLine Vent w/Foam in position using 2" fasteners through foam area. Next, mount the starter base with #10 x 2" zip screws spaced every 16" apart. Compress the foam to help seal out moisture. The Starter base lip should be held to 5/8" clearance for venting area.



Ridge Starter Base

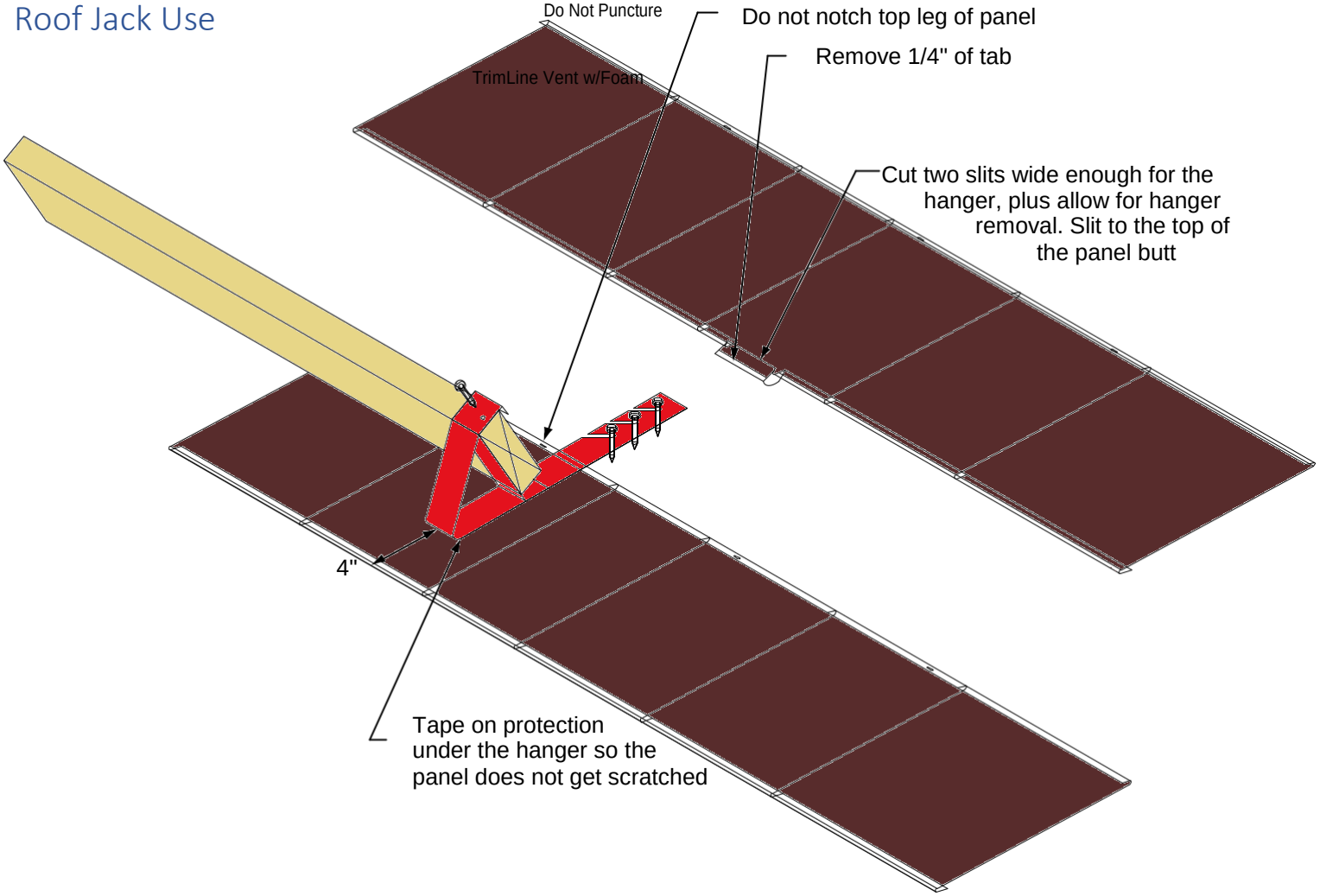
Use 4 tornado clips (for low profile)

7/8" J-Trim

MEMBRANE

Do Not Puncture

Roof Jack Use



IMPORTANT

See hanger instructions from the manufacturer for proper use and mounting instructions required..

These instructions show modification of the roofing panel

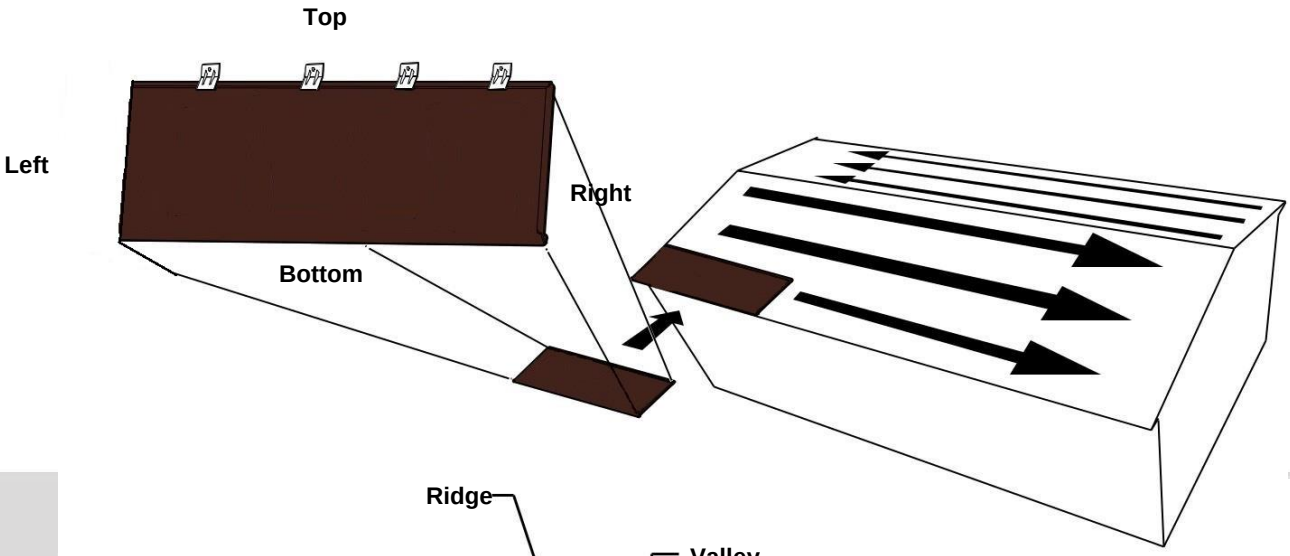
- . Mount hanger over top of panel per diagram.
- . Mount top panel with clips.
- . Remove hanger when done installing panels.

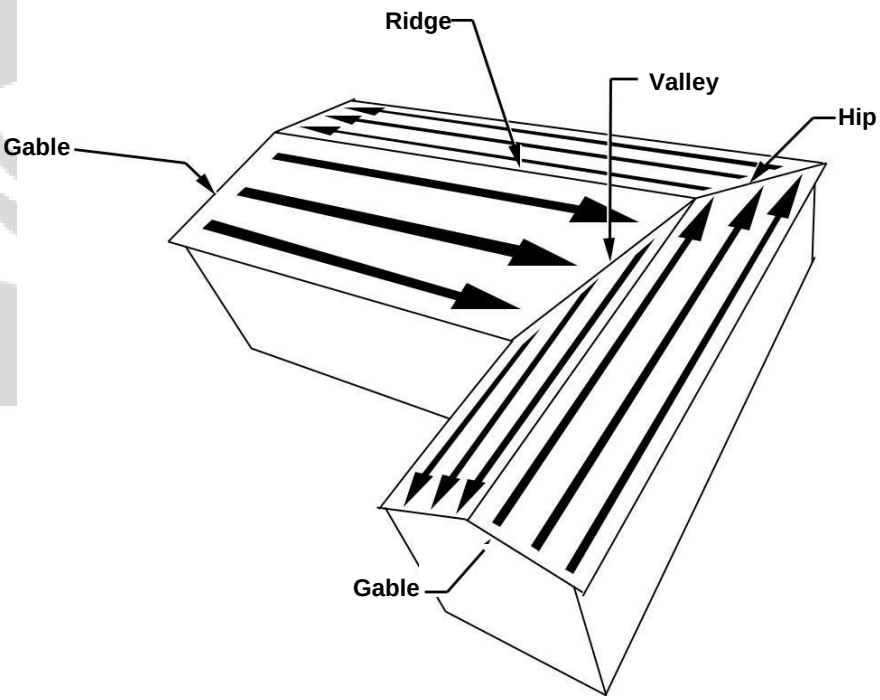
- Put a thin protector plate under butt of panel. Raise butt with a claw hammer on each side of tab when forming tab back in by hand. Do the final tuck with a narrow non-marring tool.

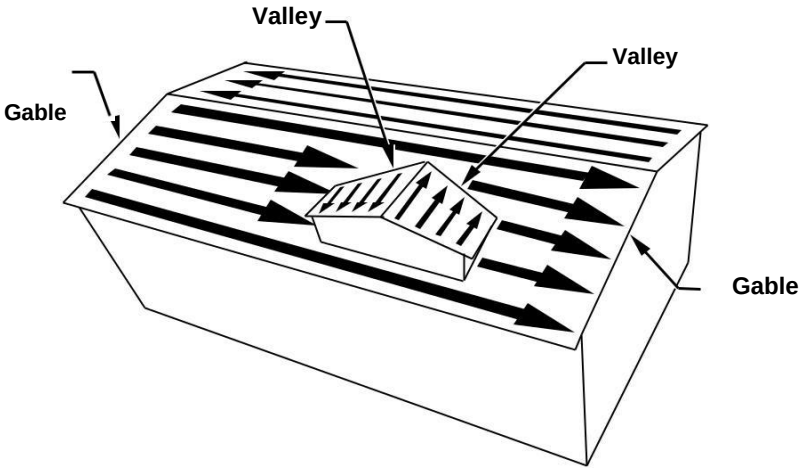
SOTERIA®
METAL ROOFS

Direction of Installation

Soteria Metal Roofs Eternalock® series shingles are designed to be installed from LEFT to RIGHT. Start with a full panel shingle from the rake edge in the bottom left hand corner of the roof after all of the preparation work has been completed.

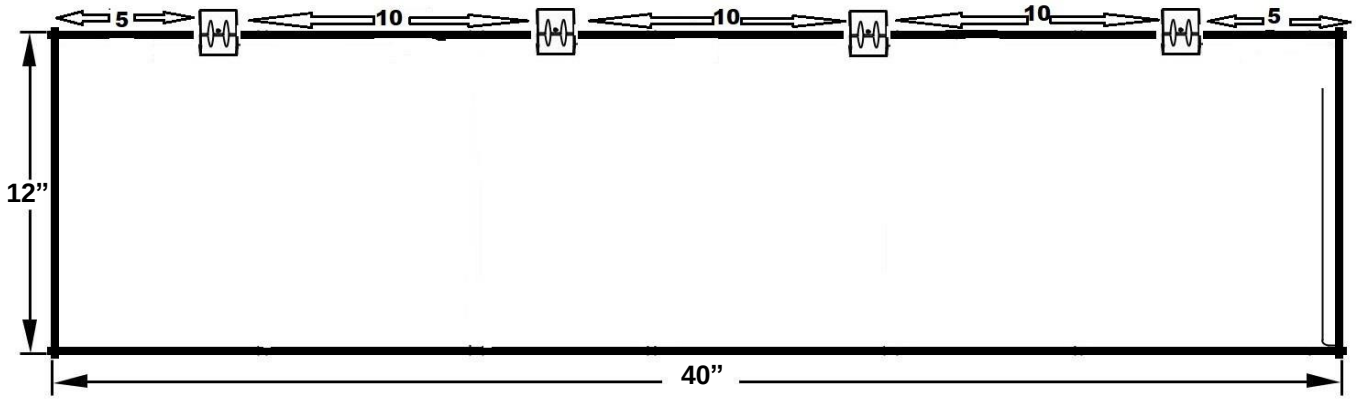






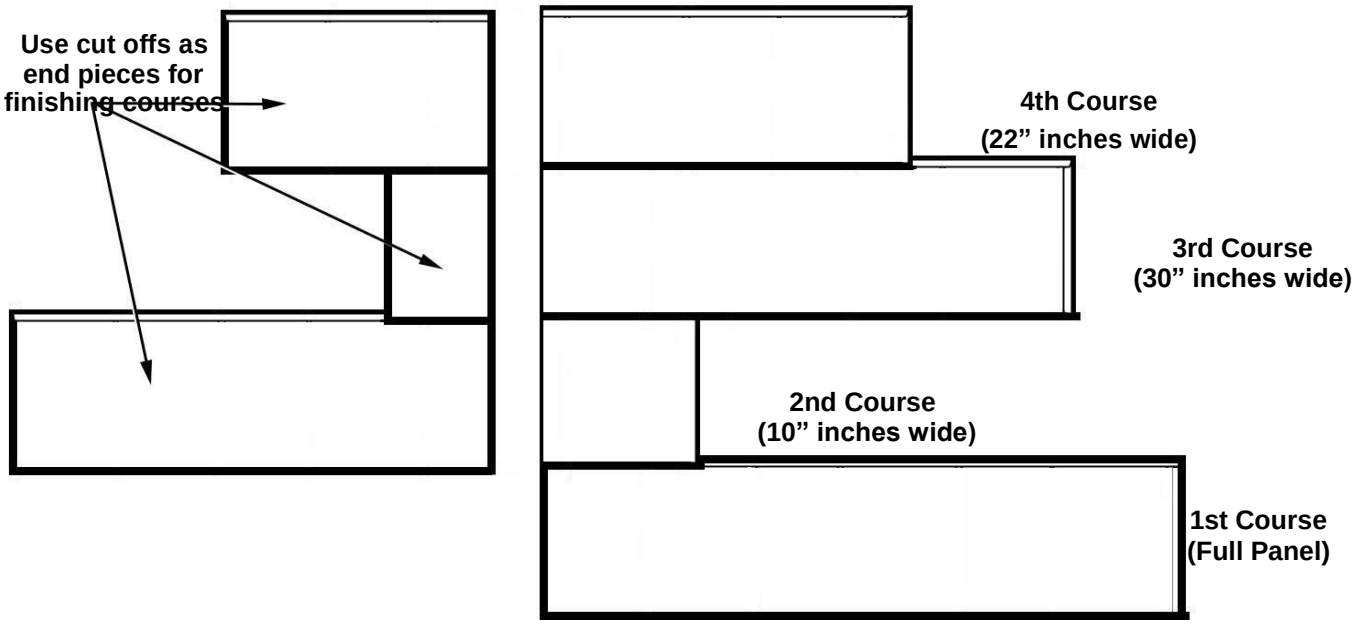
Fastening & Interlocking Shingle Panels

Shingle panels are installed using 3 to 4 clips per panel in an equally spaced pattern using the appropriate length galvanized nails. For panels where the final course top portion has to be cut and clips cannot be used, the panels are nailed on the portion where the caps will lay on top and are hidden.



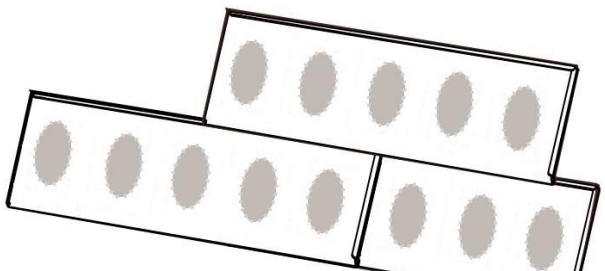
Pattern Layout for Shingle Panel Installation

Shingle panels are laid in a 4 course staggered pattern where 1 full panel is installed for the first course and 3 cut panels are installed for the next 3 courses and repeated as shown. All cut offs are saved and used as end pieces for courses. No vertical lines of the shingle panels should line up, trim if necessary.



Walking Over Panels

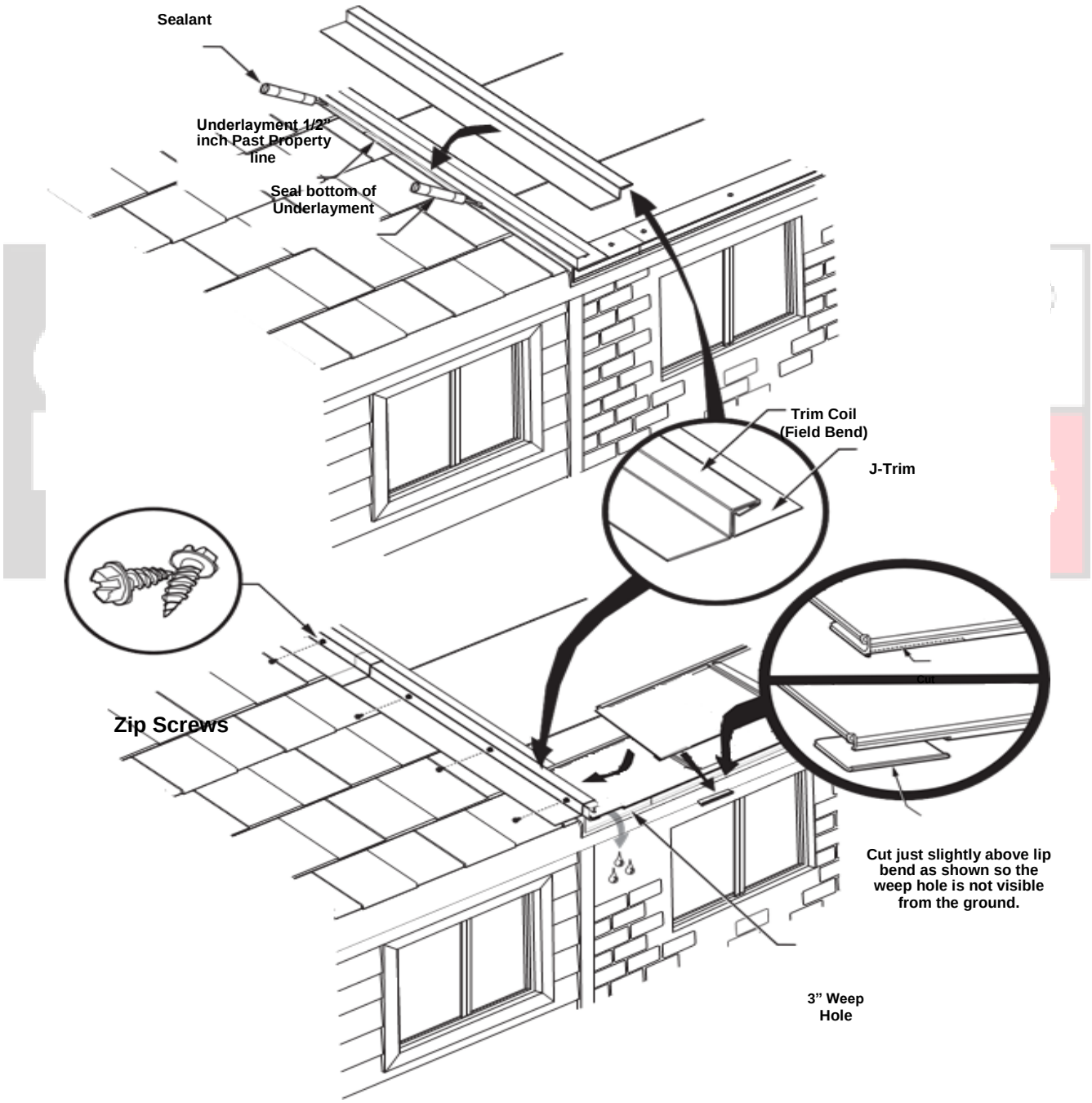
Take extra care when walking on top of panels. It is recommended to walk on the middle sections of the panel. Do not walk on the edges to minimize damage.



Semi-Detached House Trim & Flashing Installation

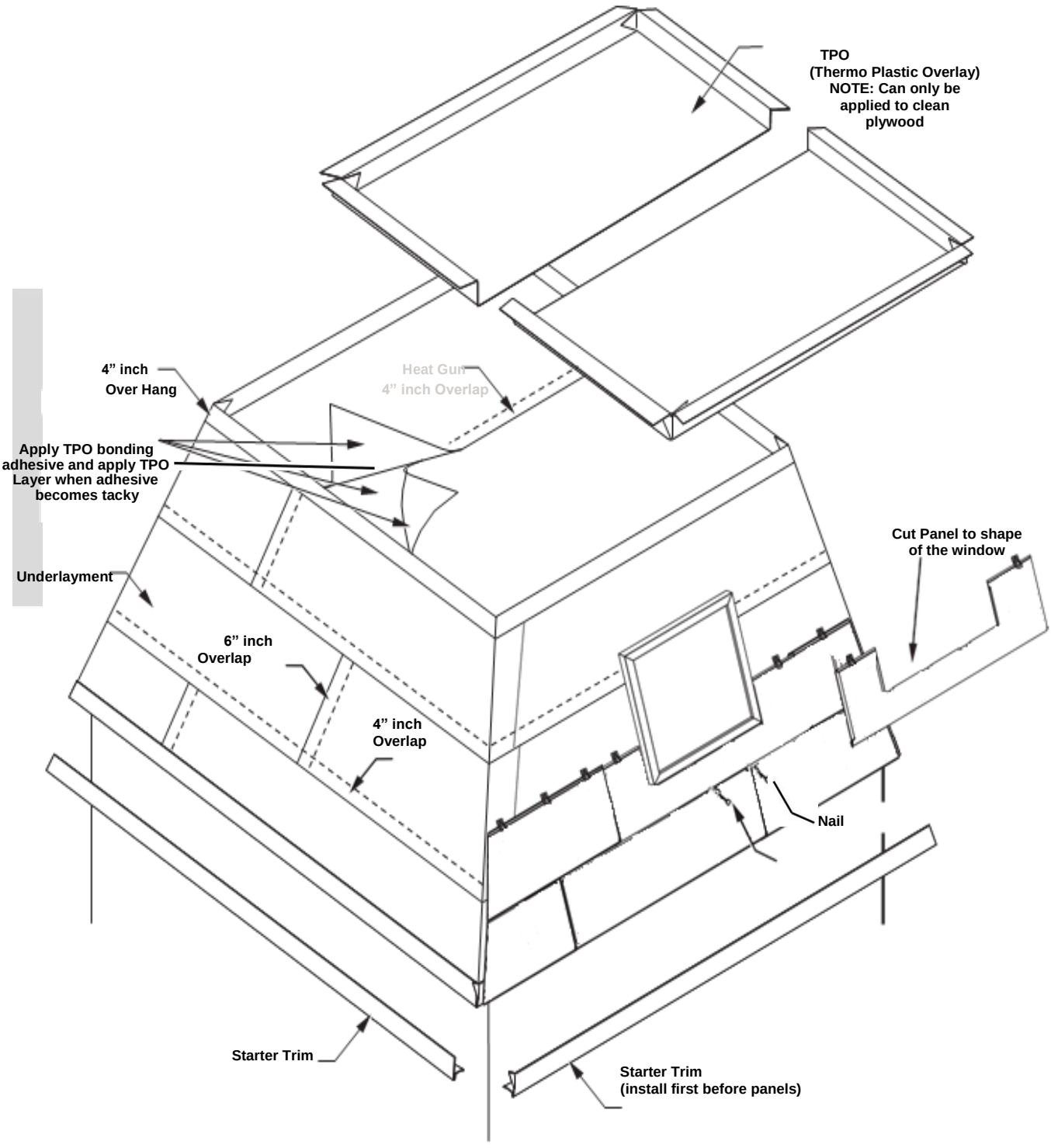
1. For Semi-Detached homes a line is marked on the property line that separate the homes. Install the Underlayment a 1/2” inch going past the property line. Install the J-Trim on the property line with appropriate length nails. Seal the underside of the exposed underlayment and the edge of the J-Trim to the underlayment that is a 1/2” inch past the property line. Cut and bend Trim Coil and hook inside of J-Trim. Attach using zip screws every 16” inches off center as shown. The Bottom of the first course Shingle Panel is cut 2-5/8” inches for a weeping hole.

NOTE: Flashing and Trim lengths shown are for illustration purposes only. Larger size flashing and trim lengths are to be used.

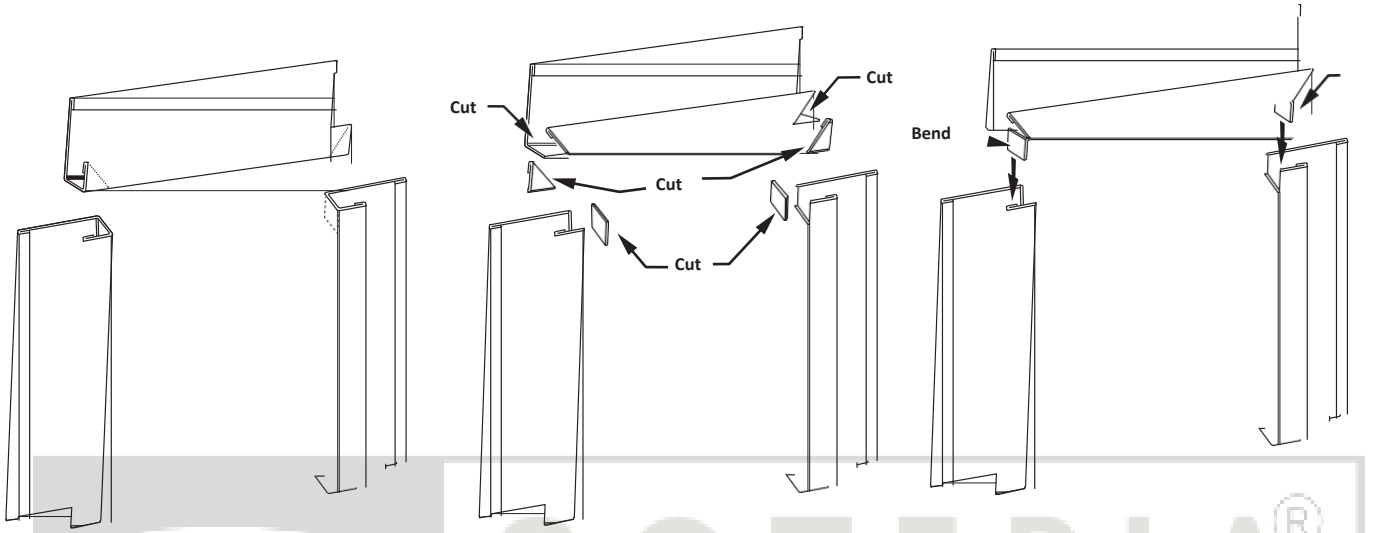


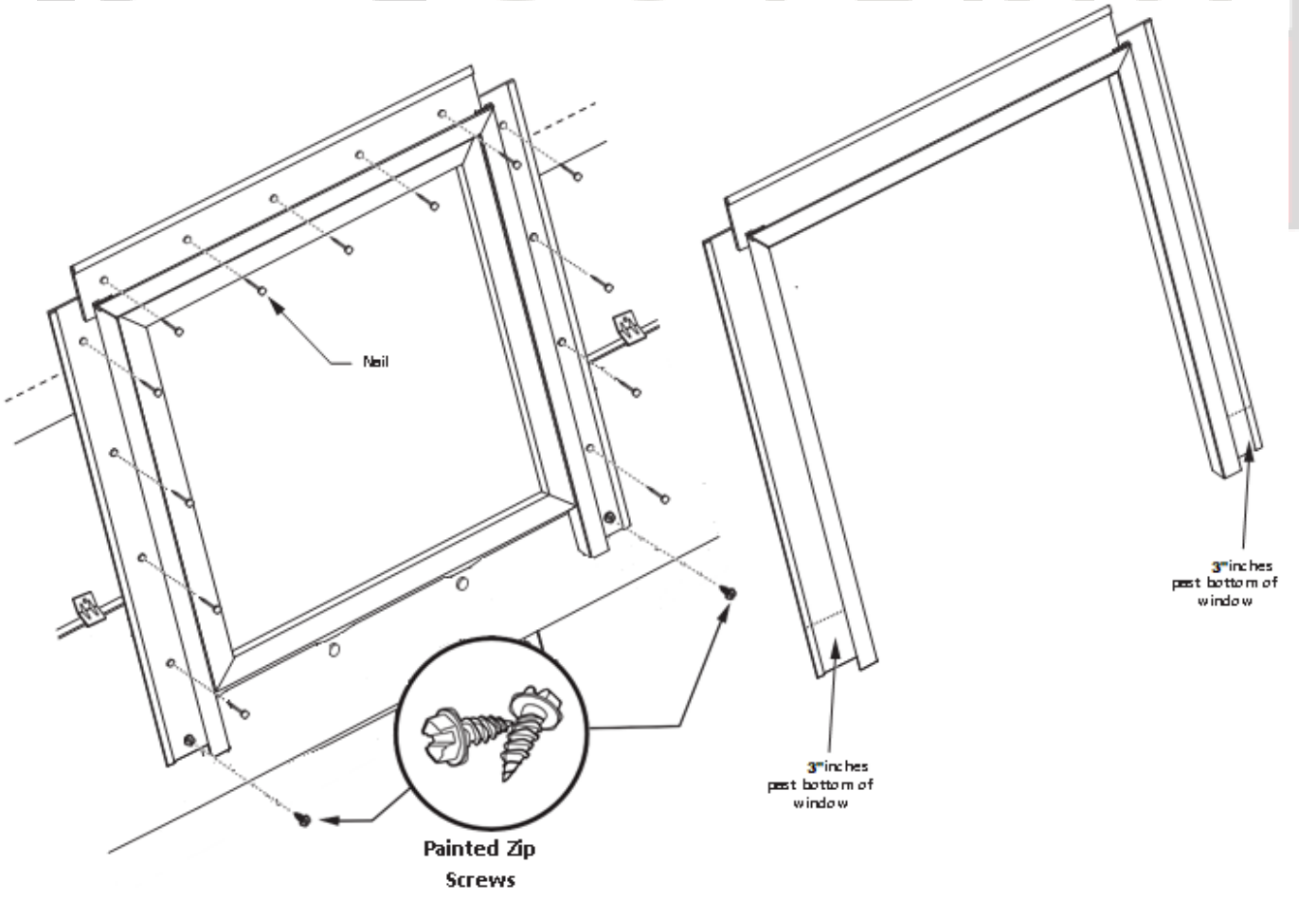
Installing Flashing and Trim - Mansard Roof

1. Install the Underlayment where Shingle Panels are installed, then the TPO (Thermo-Plastic Overlay) to the top of the roof. The TPO layer can only be installed on a clean plywood surface. Apply TPO bonding adhesive to the underside of the TPO layer and on the plywood surface and adhere when the glue has dried slightly and has become tacky. The TPO is installed up and over the edge of the roof with a 4” inch over hang and with a 4” inch overlap. Use a heat gun for the 4” inch overlapped TPO layer. Install the Starter Trim then the Shingle Panels as shown. The shingle panels around the window are cut to the shape of the window. Nail the portion of the shingle panels if clips are unable to be used.

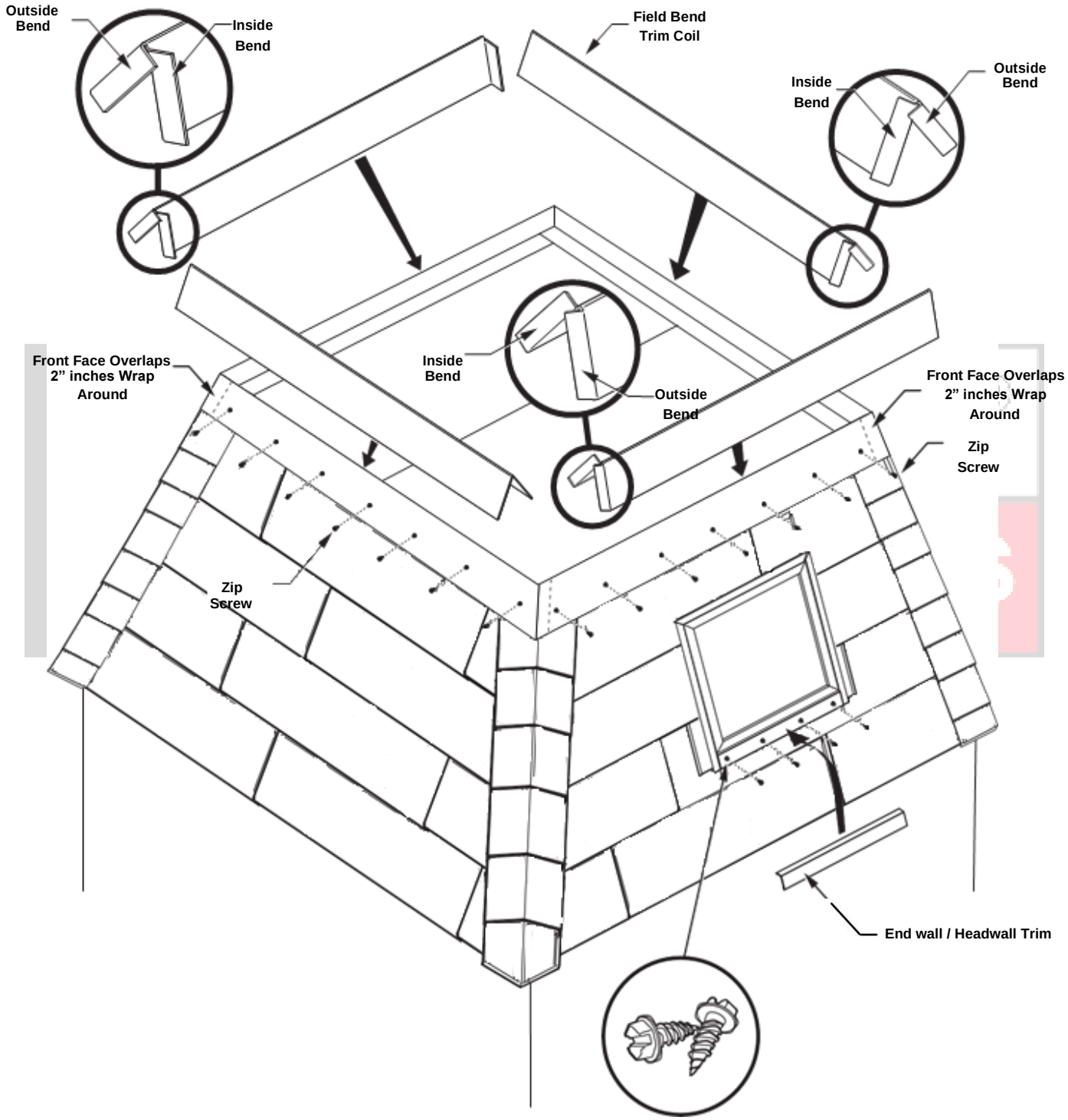


2. Cut and pre-assemble the J-trim as shown. Miter cut the top J-trim and trim the back to fold over the side J-trims. The window should be framed as shown. The side J-trims are to extend 2-7/8" inches past the bottom of the window. The 2-7/8" inches running past the bottom of the window is done so that it is in line with the Side Wall Trim when it is installed to the bottom of the window (pre-assemble if required). Attach top and side portion of J-trims with appropriate length nails and zip screw bottom exposed portion.





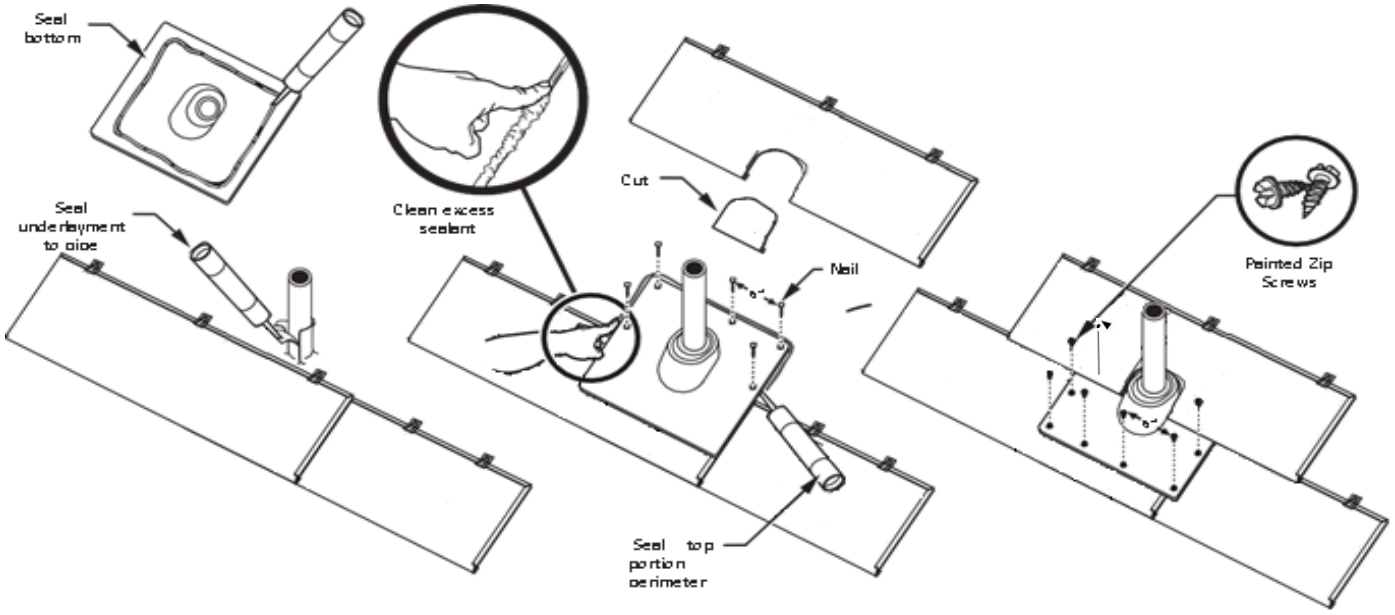
3. Install all Shingle Panels and Caps as close as possible to the top of the roof. Cut and field bend Trim Coil as shown with 3” inches sitting flat on top and bend up and over the edge of the roof to cover the top portion of the Shingle Panels. Wrap trim around the inside and outside corners by 2” inches. Outside bent corners of trim are overlapped by front face of trim and zip screwed every 16” inches off center. Install Side Wall Trim in-line with the bottoms of the J-Trim at the bottom of window and Zip Screw every 16” inches off center.



Zip Screws

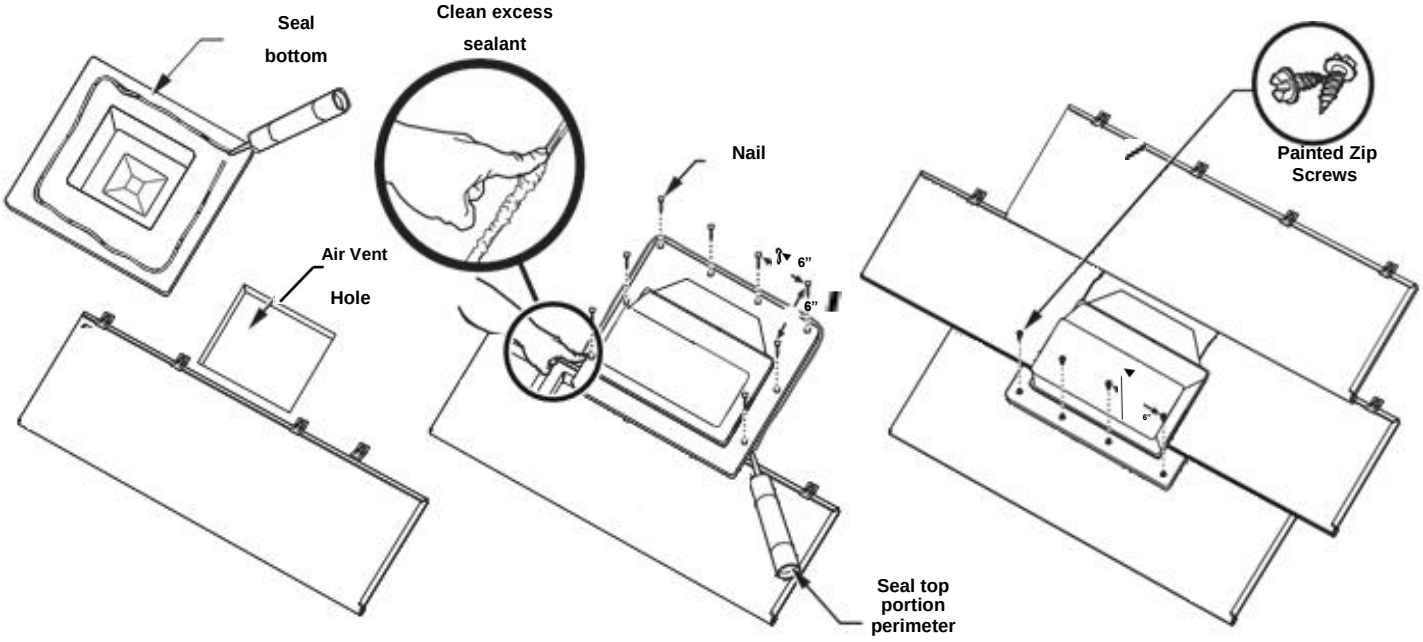
Pipe Vent Installation

Wrap underlayment up vent pipe and attach using sealant. Apply bead of sealant around base perimeter and apply pipe vent boot on top of lower panels ensuring a tight fit around pipe vent. Apply sealant again around the upper portion of vent where it will be covered with panels and clean excess with finger for tight water seal. Nail upper portion where vent boot will be covered by top panel every 6” inches off center. Cut and install upper panel. Use painted zip screws every 6” inches off center for attaching bottom exposed portion of pipe vent boot.



Roof Vent Installation

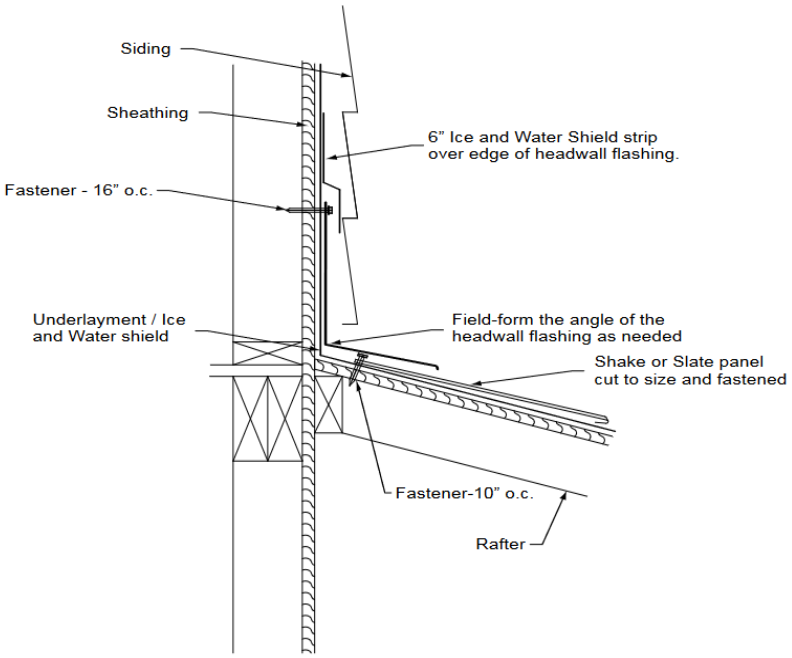
Apply bead of sealant around base of air vent and apply over vent hole. Apply sealant again around the upper portion of vent where it will be covered with panels around perimeter and clean excess with finger for tight water seal. Nail upper portion where air vent will be covered by top panel every 6” inches off center. Cut and install upper panels. Use painted zip screws every 6” inches off center for attaching bottom exposed portion of air vent.

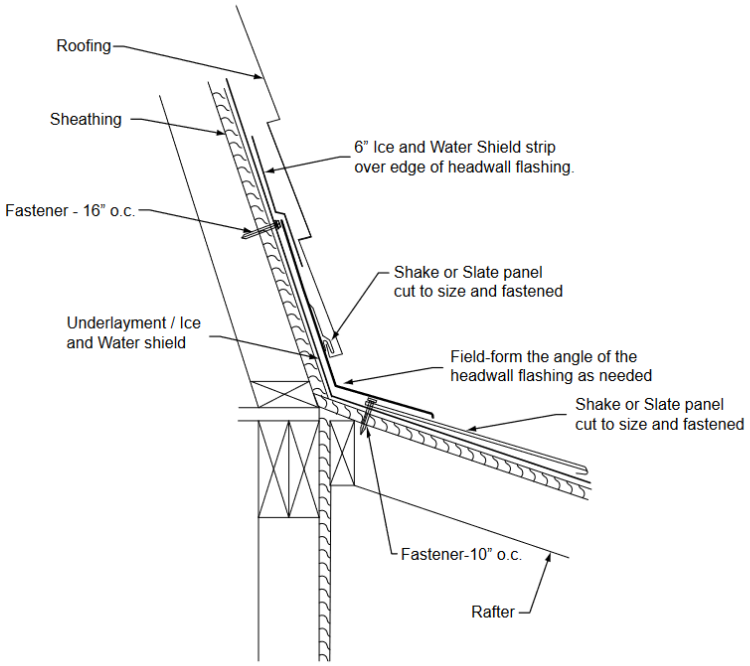


SOTERIA®
METAL ROOFS

Pitch (slope) Transitions – End wall (Headwall) application

Head Wall Flashing is designed to be used at the front of dormers, chimneys, roof transitions, etc Install 18" wide ice & water shield as counter flashing up the wall 9" and the rest on the deck. Next bring the panels up to the intersection and cut to width. Head Wall flashing is installed now and may need to be formed to match the slope of the roof.





Fasten in place and cover the top edge of the Head Wall Flashing with a 6" wide piece of Ice & Water Shield. Use matching embossed trim coil when custom flashings are required Always use proper sealants for water tightness.

Maintenance

Roofs made of metal shingle panels, in principle, do not require special maintenance. Most often, rainfall is enough to keep the metal clean. When an unusual amount of dirt is present on the surface a simple wash will do. However, it is necessary to carry out following operations:

- Inspect the roof regularly and make sure that water is draining properly. It is important to ensure a proper drainage, so clean your gutters and inspect the roof for any dips or dents that can hold water.
- Removing leaves from roof surface, that decay causing discoloration of the organic coat of sheets
- Removing layers of industrial dust (e.g. originating from limestone processing plants, cement plants, steelworks and mines), which reacts with water and causes damages of the organic coat of sheets.
- When walking on the roof, avoid stepping on the interlocks of the ETERNALOCK® shingles.
- To avoid scratching of the metal shingles, make sure to clean up the bottom of your rubber-soled shoes from any stones or debris before stepping on the roof.
- Inspect and remove any debris (leaves, nails etc…) on an annual basis
- Use touch up paint to protect any scratches

How to Clean Your Metal Roof

The finish on the metal shingle panels will give you many years of trouble free service.

However, a metal roof is not completely maintenance free. Dirt and pollen can alter the look of the

Finish. With some simple cleaning, the finish can be restored to its factory look. We have outlined

some things that you can do to protect the look of your metal roof.

CAUTION: DO NOT use a wire brush or anything that is abrasive that may potentially scratch the metal.

Remember: Walking on a metal roof can be slippery and extreme caution should be used in order to prevent injuries.

Cleaners you can use:

1. Use one cup of any non-toxic biodegradable cleaners, which contain less than 0.5% phosphate, dissolved into two gallons of warm water or

2. Use one cup of household ammonia dissolved into five gallons of water (room temperature)

When washing your roof, always start at the bottom and work your way up to the top. You can use a well-soaked cloth, sponge, brush (with soft bristles), or a low pressure washer spray.

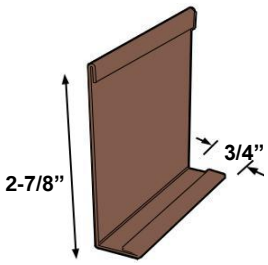
Only used the cleaners and cleaning tools recommended. If not, you can end up damaging the film on the paint.

If mildew or other fungal growth is a problem and you cannot remove it as discussed earlier, you can mix one cup of household bleach with five gallons of water, along with one cup of mild soap, which aids

Once the metal panels have been washed, thoroughly rinse with clean water to eliminate residue. You must remove all residue from the roof or you can damage the film on the metal roofing panel.

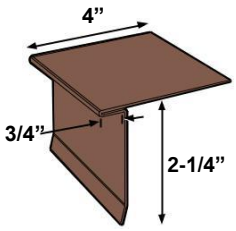
SOTERIA®
METAL ROOFS

Trim Dimensions



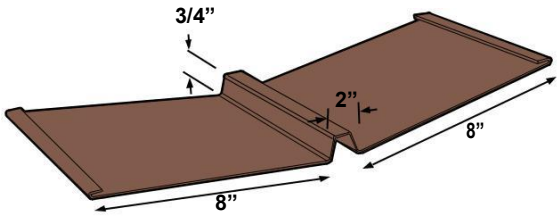
SIDE WALL FINISHING TRIM

10’ long



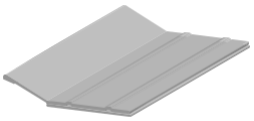
EAVE STARTER

10’ long

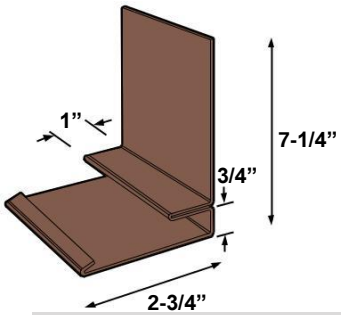


OPEN VALLEY FLASHING

10’ long

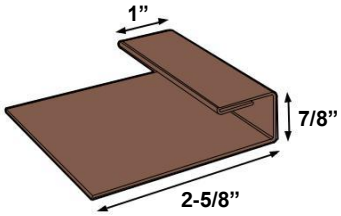


VALLEY STARTER



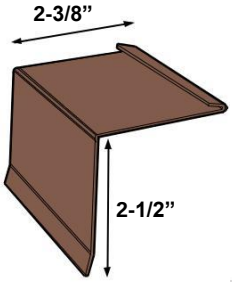
SIDE WALL FLASHING

10’ long



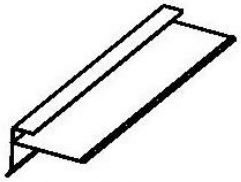
7/8” J-TRIM

10’ long



GABLE STARTER

10’ long

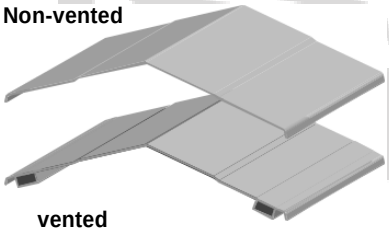


F-TRIM GABLE STARTER

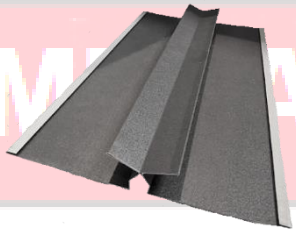
10’ long

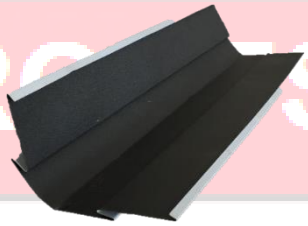
OPTIONAL RIDGE STARTER BASES

Non-vented



vented



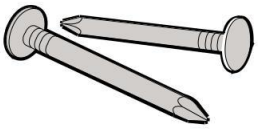


CLOSED VALLEY FLASHING

Parts and Accessories

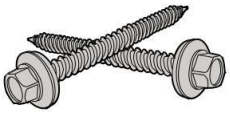
TORNADO CLIPS

.24" G90



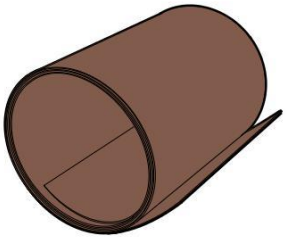
NAILS

1-1/2" Galvanized Ring Shank Nails



SNOW GUARD SCREWS

2" Hex Washer Head with Bonded Washer



TRIM COIL

13.1" X 50' long

TOUCH-UP PAINT

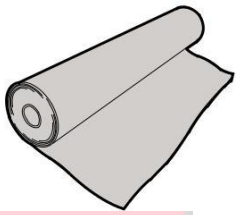
ZIP SCREWS

Painted / Mill Finish #8 - 1/2"

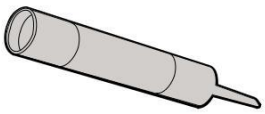
RIDGE VENT

9" x 20'

SNOW BREAK

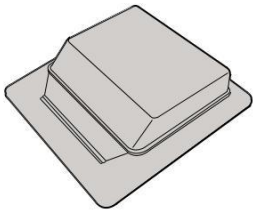


ROOFING UNDERLAYMENT *48" x 250' (10 Sq coverage)*



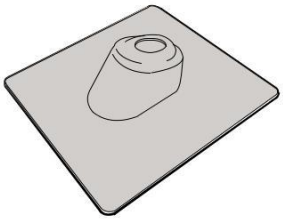
SEALANT

Clear Thermo Plastic Sealant



61 SQ. IN. SLANTBACK ROOF VENT

Vent Opening 9.75" X 11"



THERMOPLASTIC BASE PIPE FLASHING

3" Pipe

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