

GENERAL GUIDELINES

Use only accessories supplied by Soteria Metal Roofs, with matching finish. Do not combine dissimilar metal parts with these metal roofing systems. Insulate metal flashings from contact with existing metal or masonry with a coating of roofing cement and a layer of roofing underlayment.

Most lineal flashings have a return flange, which is part of a channel for water to drain under the shingles. Be careful not to flatten this return flange. No nails should penetrate the flashing within this channel area. Fasten these flashings to the roof with Tornado Clips 12" on center.

Uphill flashings should nest inside or lap downhill by 3" and be sealed with Butyl or Polyether Sealant in matching colors or clear.

Minimum pitch is 3:12. On steep installations, distribute weight loads by placing planks under ladders or other scaffolding used on the roof. Adhere to all applicable building codes.

Installation Sequence

1. Prepare roof and apply underlayment.
2. Install **EAVE STARTER**.
3. Install **GABLE EDGE TRIMS (F-trim), VALLEY** and **SIDEWALL FLASHING**
4. Install **SHINGLES**, left to right, eave to ridge.
5. Install **RIDGE/HIP CAPS** as needed.

Roof Preparation

Eternalock shingles may be installed over solid sheathing, or old composition shingles which are in good condition. To prepare for re-roofing, nail down any loose or curled shingles and protruding nails, cut off overhanging shingles from eaves and gables and remove any ridge or hip caps. Sweep the roof clean. Eternalock shingles may not be installed over wood shakes or shingles, tile, cement shakes, or metal.

Underlayment

Underlayment should be synthetic underlayment. Cover entire roof with underlayment, from left to right, eave to ridge. Allow underlayment to overhang eaves by 1½", and extend up all pipes, chimneys and sidewalls by 1½'.

Lap head and end joints 18", lap successive courses 6". Run additional underlayment lengthwise up all valleys and hips and against all sidewalls. Nail underlayment 12" on centers using either 1-1/2" inch galvanized ring shank nails or Plastic-Top Felt Nails. In areas with heavy ice and snow potential, use ice & water shield or similar underlayment above overhanging eaves plus two feet past exterior wall line.

Fasteners

Use 11 gauge hot dipped galvanized or stainless steel nails or screw (flat top). Fasteners should be of adequate length to fully penetrate decking.

Eave Starter

Install Eave Starter on all eaves. Underlayment should extend 1½" down onto fascia beneath the Eave Starter. Nail Eave Starter to roof deck 12" on centers. Gutters should be installed behind the overhanging underlayment and the Eave Starter Drip Edge.

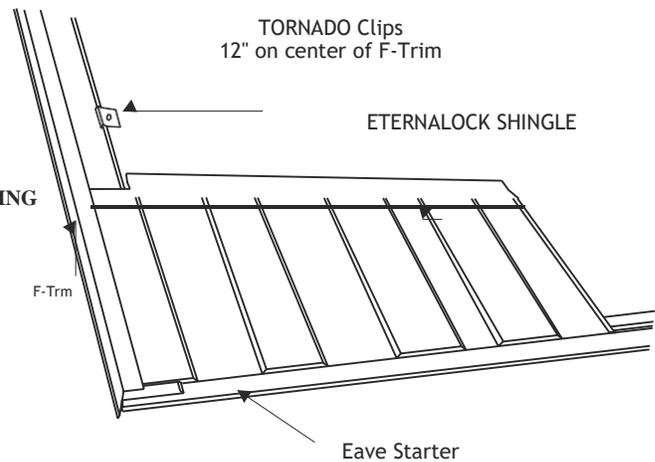
Gable Edge Trim

Install Gable Edge Trim on all gable ends. Underlayment should extend 1½" onto fascia beneath Gable Channel. Gable Edge Trim should overlap Drip Edge at the eave ½" and be plumb-cut with the gable. Fasten Gable Edge Trim to roof deck using Tornado Clips 12" on centers. Uphill pieces should lap downhill pieces by at least 4". Cut a drain in the butt of the first shingle that overlaps the end of the water return channel.

ETERNALOCK Metal Shingle

Shingles are installed from left to right, eave to ridge. Begin the first shingle by inserting into the left trim piece. Remove the butt of the first shingle that covers the end of the water return channel. Lock the bottom edge of the shingle over the drip Edge. Each shingle receives a minimum of four evenly spaced Tornado clips. Succeeding shingles lock into the side lock of the previously installed shingle and proceed on a parallel course from left to right. The bottom lock of the next course of shingles is locked into the top lock of the shingles below. Successive courses of shingles are staggered on a random basis, or in a full 2/3, 1/3 panel stagger pattern, avoiding direct repeat of vertical lines in successive courses.

When a shingle is installed into the Gable Edge Trim, insert fully so it extends all the way into the receiving channel.

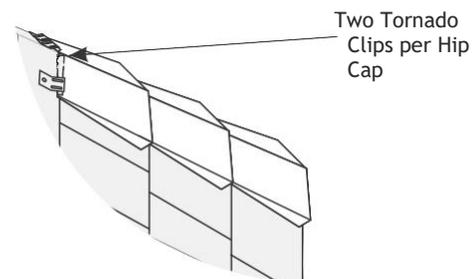


Hip Treatment

Create a chalk line on one or both sides of the hip as a guide. Cut the panels to the hip angle so that the gap at the hipline is minimal and secure into place. As an option, use a minimum of a 6" adhering waterproof membrane prior to installing the Ridge/Hip caps

For the first cap on a hip, modify a Ridge/Hip Cap that will fit over the shingles, lock into the Eave Starter and bend the end of the cap to conform to corner of the roof.

Hook four Tornado Clips into the back flange of the Ridge/Hip Cap and fasten them in place. Be certain the fasteners are long enough to penetrate solid decking. Continue to lock the caps into each other as they are installed up the hip line. Flatten shingle butts as needed to allow Ridge/Hip Caps to sit as flat as possible.

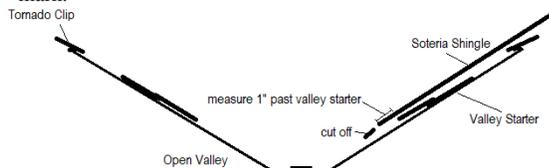


Open Valley

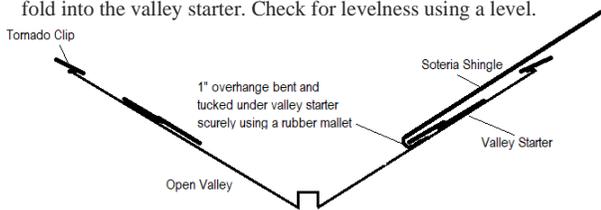
Prepare the valley by laying a full width of underlayment down the valley, using Plastic-Top Felt Nails. Valley is installed in all roof valleys by use of Tornado Clips fastened to the return flanges, 12" on centers, on each side of the Valley. Like all lineal flashings, uphill Valley should lap downhill Valley by at least 4" and be sealed with Sealant. Valley should lock into the Eave Starter. Trim and fold tabs to conform to the corner and fit the Eave Starter. Install the adjustable Valley starters using a screws and adjusted to create different open valley widths.

As shingles reach a previously-installed open Valley, shingles are trimmed and folded into the valley starter on each side of the Valley as follows:

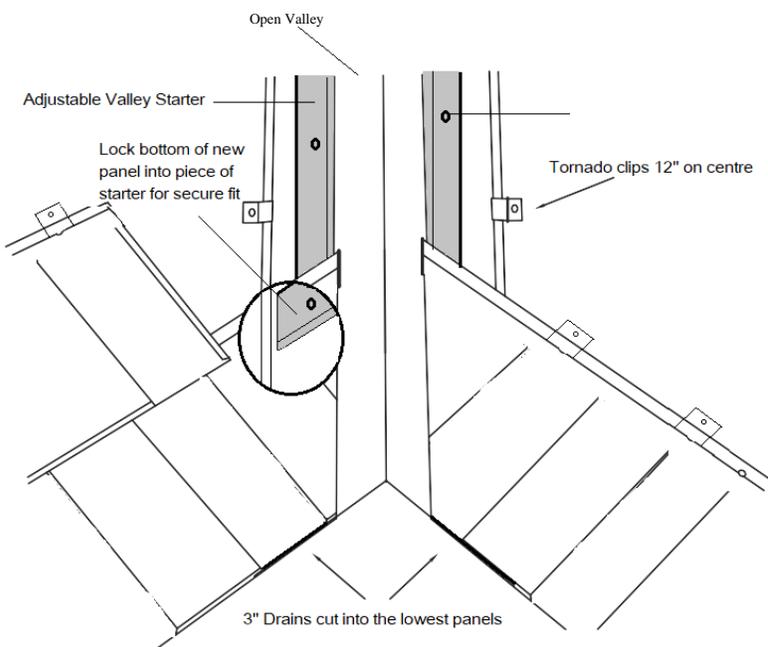
- Lay the shingle in place where it will be installed into the valley and mark the shingle with a line that runs parallel to the Valley starter, 1" from the edge of the valley starter. Cut the shingle along this mark.



- Using hand a hand bender, grip the shingle 1" from the trimmed edge and fold a full 180° downward and back under. Install the trimmed and folded shingle by locking the fold into the valley starter. Check for levelness using a level.

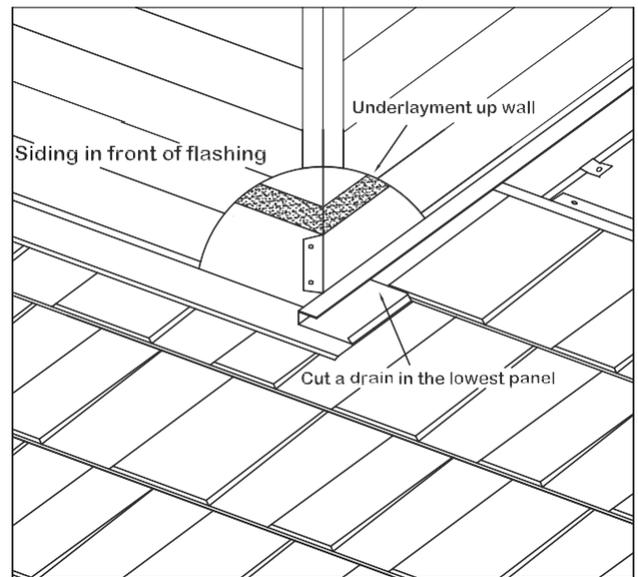


Remember to stagger succeeding courses of shingles proceeding out of a valley to the right.



Sidewall Flashing

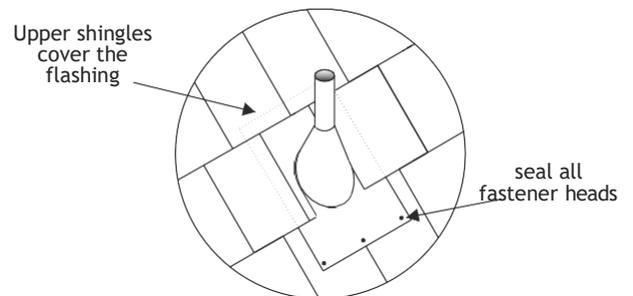
Sidewall flashing should be fastened to the roof deck using tornado clips attached to the return flange 12" on center. Sidewall Flashing has a leg extending up the wall which should be inserted behind the sidewall covering. If the flashing cannot go behind the siding, attach it to the sidewall and seal, or secure to wall with a terminator bar and seal. If the sidewall is masonry, treat as chimney side flashing. Sidewall flashing should extend 1/2" past the Eave Starter at the eave. Shingles are installed into Sidewall Flashing by inserting the shingle into a receiving channel in the flashing. Cut a drain in the butt of the first shingle that covers the end of the water return channel. Be sure that no nails penetrate the water channel. All shingle nails should be driven outside this channel.



Vent Pipe Flashing

Bring underlayment 1 1/2" up around pipe, and add an additional piece of underlayment extending 18" to each side the downhill side of which should rest on top of the shingles beneath the vent pipe. Seal underlayment seams, especially around pipe, with roofing cement.

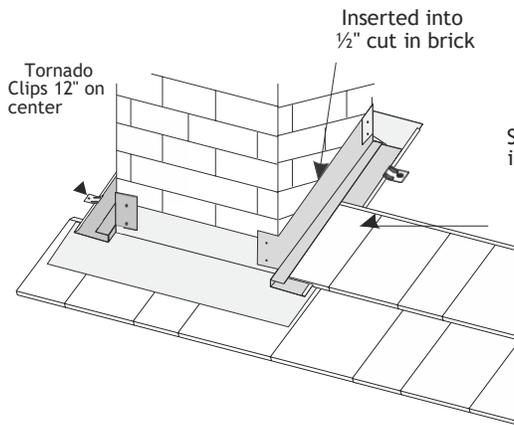
When installing the shingles, ensure the top of the pipe flashing is covered by the upper course of shingles. The bottom of the flashing must rest on top of the lower course of shingles. Install shingles up to and around the pipe. Trim the shingles as necessary. Apply a bead of sealant around the pipe.



Form return flanges on the sides of the concealed portion of the pipe flashing. Apply a bead of sealant around the perimeter of the bottom side of the pipe boot and place it over the pipe. Fasten the concealed portion of the flashing with Tornado Clips. Fasten the exposed portion of the flashing to the shingles with pop rivets or stainless steel screws. Seal the fastener heads. Trim uphill shingles to fit around pipe if necessary, and fill the gap between the shingle and the pipe flashing with sealant.

Chimney Flashing

Make a 1/2" cut in the masonry above existing flashings, parallel to the roof deck. On the downhill side of the chimney, field-form a flashing to be received into this cut, extend down to the roof deck and 4" out on top of the installed shingles below. On the sides of chimney, use Sidewall Flashing. The downhill ends of Sidewall Flashings should rest on top of the front chimney flashing. On the uphill side of the chimney, a flashing should be formed to be received into the masonry cut, extend down the back of the chimney, and rest on top of the Sidewall Flashings. The uphill portion of this flashing should lay beneath the shingles above. If the chimney is over 18" wide, the uphill side should be cricketsed.



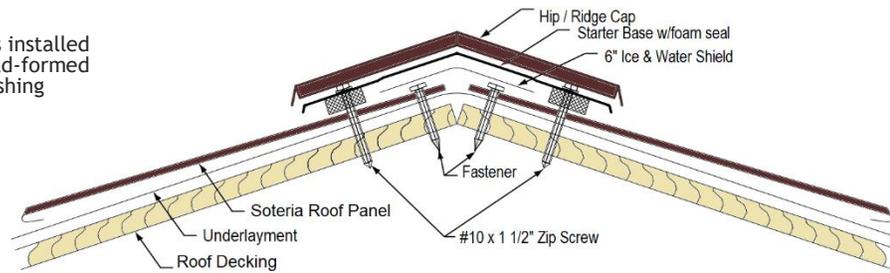
Shingles installed into field-formed flashing

Ridge Treatment

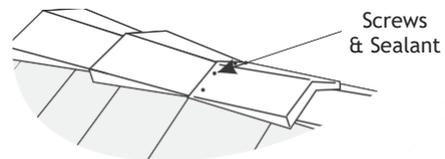
The ridge must be watertight before installing Ridge/Hip Caps. Cut panels to the proper length and install as close to the hip or ridgeline as possible. Cover cut edges with 6" of ice & water shield centered along the entire length of the hip or ridge edge. Bend Starter Base w/foam seal in a 10' brake 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

Seal exposed screw heads. Ridge Caps may also be run from one direction, with the low end of the caps facing the predominant wind direction.

Make Ridge Watertight Before Installing Ridge Caps



Seal exposed screw heads. Ridge Caps may also be run from one direction, with the low end of the caps facing the predominant wind direction.



Caps Meet in Center