Back Flange

Back Upturn

Under-pan

Over-pan

Front Downturn

Side-lap

INSTALLATION DETAILS

Issued January 23rd, 2005

These install details are provided to demonstrate the recommended installation method for Metro Roof products and accessories.

The details and information in this document reflect current roofing practices used in the United States. Consult with Metro Roof Products for additional information.
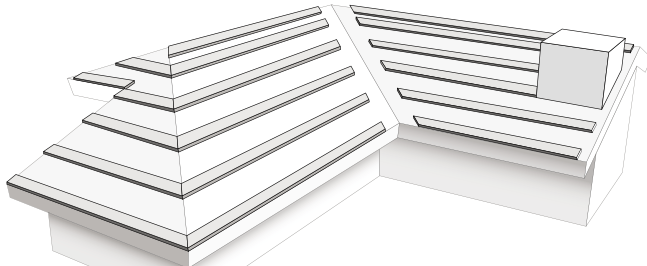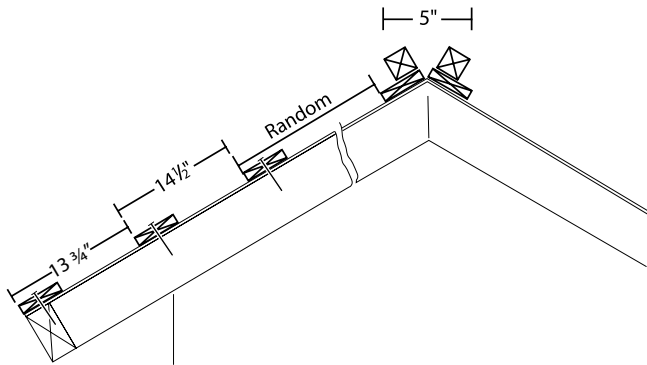
General
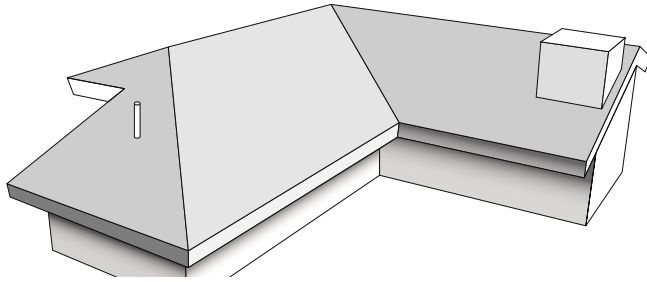
Metro Roman Tile panels are Installed on new or existing roofs pitched a minimum of 2-½:12 (12 degrees). An underlayment is to be installed as per local code and manufacturers instructions.

Panel Battens

1"x4" or 2"x2" panel battens may be used over a solid sheathed roof deck. For installation using 1"x4" counter battens, 2"x2" panel battens must be used (see Counter Battens). Panel battens are installed parallel to the ridge/fascia. The first panel batten is positioned flush with the fascia or batten build-up. The second panel batten is positioned 13-¾" from the fascia to accommodate the "Bird-Stop" metal.

⚠️ *14 ½" o/c panel batten spacing is critical to allow panels to fit properly.*

Wood panel battens can be 2"x2", 1"x3" or 1"x4". Consult Metro regarding approved steel purlin sections. Precise panel batten spacing is critical because the rear of each Metro panel must fit snuggly against the batten.

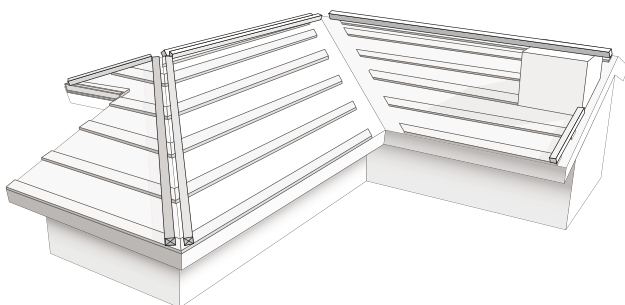Battens are fastened to supporting framing members as per code and Metro instructions.

⚠️ *For the 1st course of panels, a spacing of 13 3/4" is used when Metro Roman Bird-stop is installed at the fascia.*

Ridge Battens
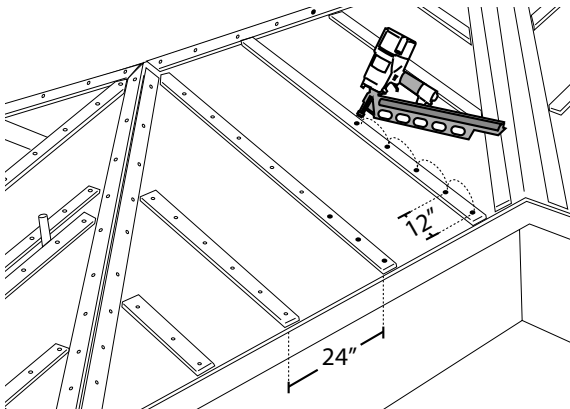
2"x2" ridge battens or double stacked 1"x4" pcs. are used to provide approximately 1½"of build-up height for hip and ridge pcs. Hip battens are installed directly on top of each intersecting panel batten, so that cut panels can be fitted against the battens.
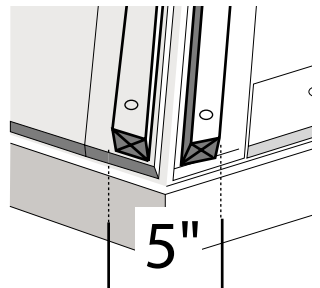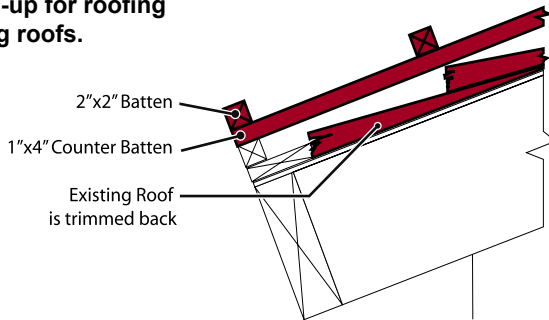
Space Ridge/Hip battens 5" apart.

5"

Metro Roman Tile Installation

Counter Battens

1"x4" counter battens are placed approximately 24" o/c directly over rafters. Fasteners must penetrate 1" into or through the roof framing members and be placed 12" o/c.

⚠️ *When counter battens are used, install 1"x4" battens down both sides of valley flashing as shown.*
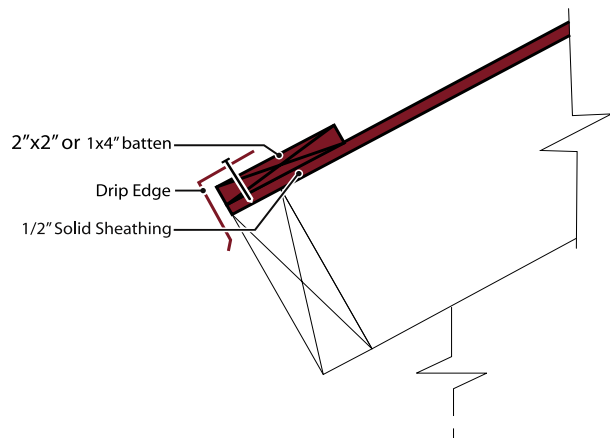
2"x2" Batten
1"x4" Counter Batten
Underlayment

Counter battens (1"x4") are used when roofing over uneven surfaces or for additional ventilation, i.e. to create a cold roof application.

Fascia build-up for roofing over existing roofs.

2"x2" Batten
1"x4" Counter Batten
Existing Roof is trimmed back

When reroofing over wood shingles or shakes, the existing roof is cut back around the perimeter to allow a build-up of 1"x4", 2"x2" or a combination of both, to provide a solid nailing foundation. Wood is built up to match the underside of the 1"x4" counter battens placed on top of the existing roof. Consult local codes for other specific requirements.
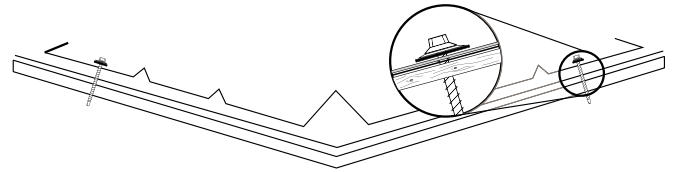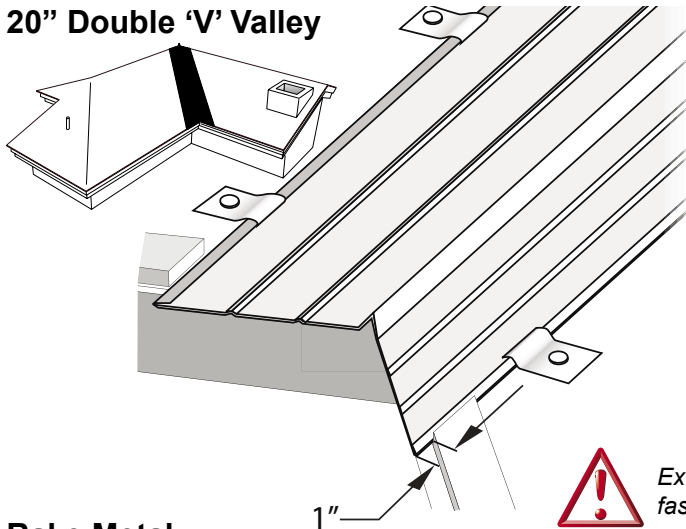
Drip Edge
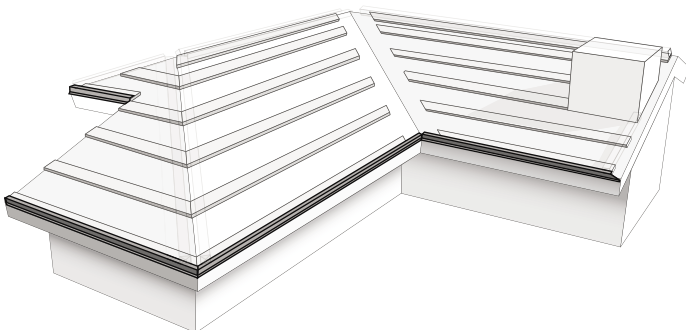
A standard "Drip-Edge" flashing is used along the eave/fascia, and should be installed over the batten, as shown.

2"x2" or 1x4" batten
Drip Edge
1/2" Solid Sheathing

Metro Roman Tile Installation ⚠️ Indicates critical areas of installation 3
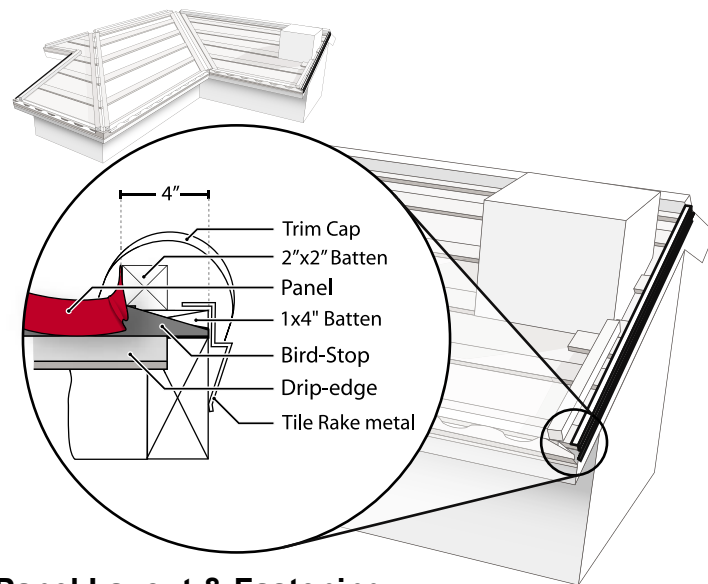
Metro Roof Products

20" Double 'V' Valley

Install 20" (508mm) Double 'V' Valley metal overlapping a min. of 4" (100mm). Valleys are attached with site fabricated clips as shown. Washer and rubber grommet screws are acceptable at the outside locations, as shown above.

⚠️ *Extend valley a min of 1" past the fascia/eave edge.*

1"

Rake Metal

4"

Trim Cap
2"x2" Batten
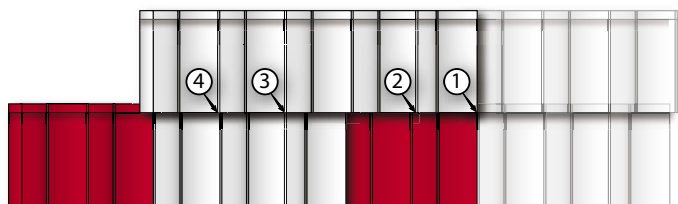Panel
1x4" Batten
Bird-Stop
Drip-edge
Tile Rake metal

Metro Tile Rake metal is installed along the rake edges as shown. Tile Rake metal aids in positioning Metro Trim Caps, and is placed on the wood build-up. The Metro Trim Caps cover battens and folded up Metro panels, as shown.

Panel Layout & Fastening

Fastening Location

Overlap each panel over the 2" side-lap

2"
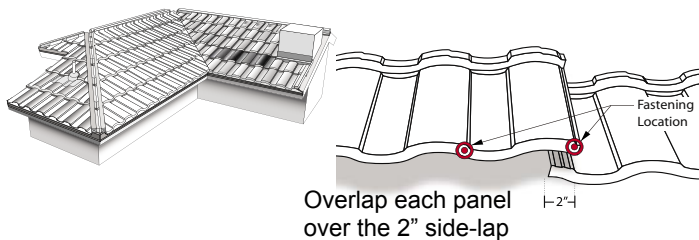
Full panels are laid from the top of the roof (1st full course from the ridge) down to the fascia. Roman Tile panels are laid from right to left.

Each Roman Tile panel is fastened to the battens with a minimum or four (4) .131" dia x 2-3/8" long corrosion resistant ring shank nails through the front down turn of the panels as shown. #10 x 2" long 1/4" hex head corrosion resistant screws may be used in place of nails.
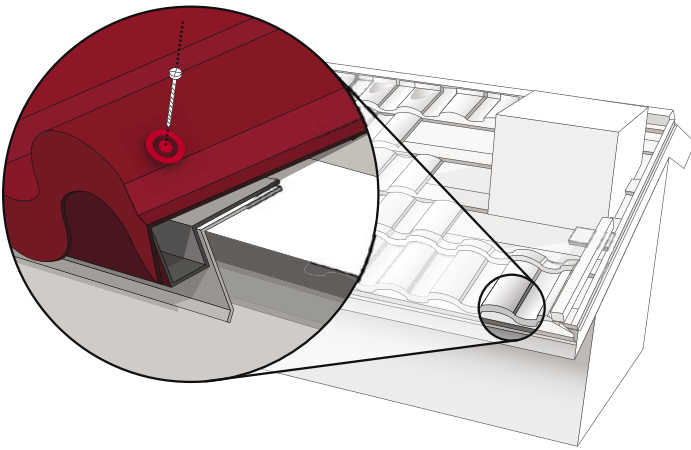
④ ③ ② ①

Stagger Metro Roman Tile panels 1-2 "'pan" modules to eliminate negative visual effects of continuous side-laps.

⚠️ *Metro panels are fastened on the right side of each overlapped pan as shown.*

Metro Roman Tile Installation   ⚠️ Indicates critical areas of installation   4
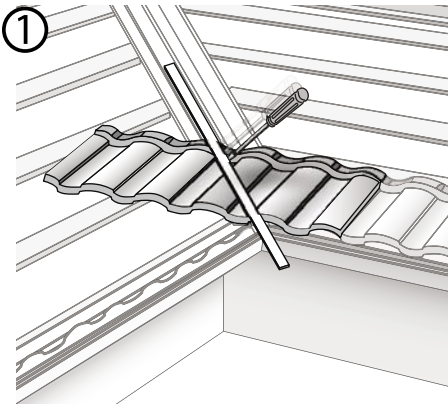
Fastening First Course

Fasten the first course of panels at the raised panel section, through the fascia metal, and into the 1"x4" batten. This is the only place where it is acceptable to fasten panels through the top.
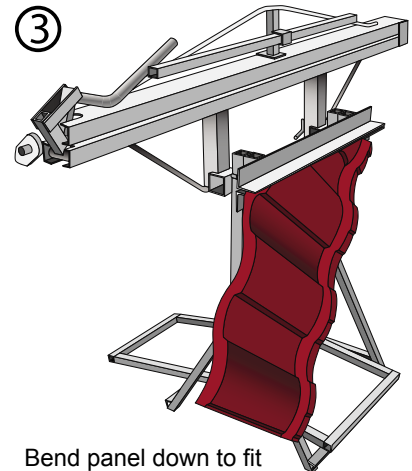
Valley Panels

① Measure, mark and cut panels to fit tightly against valley center (reverse 'V'). Fasten valley section panels to roof decking similar to the other panels without penetrating valley flashing.
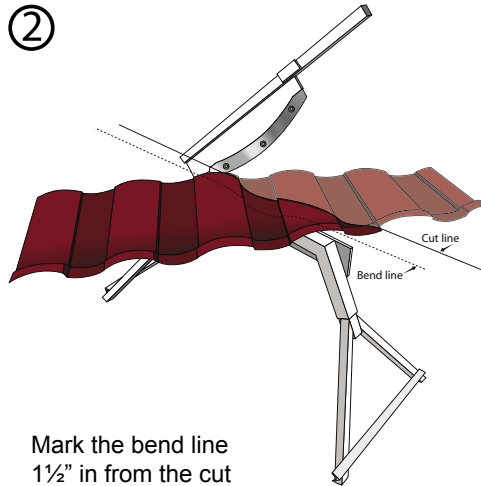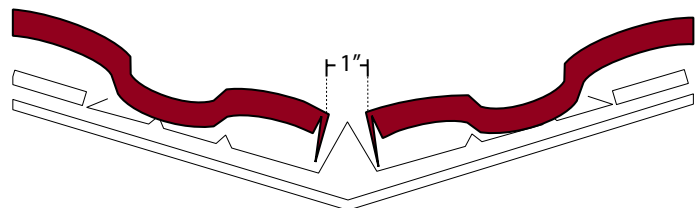
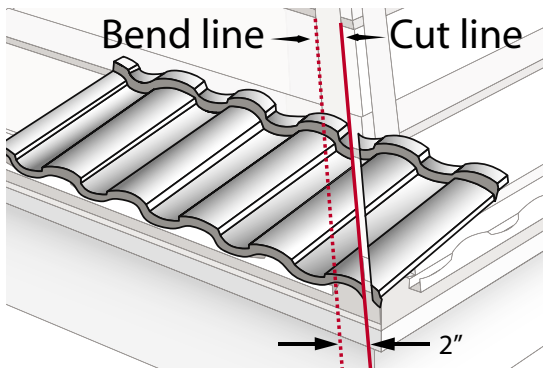② Mark the bend line 1½" in from the cut line.

Cut line

Bend line
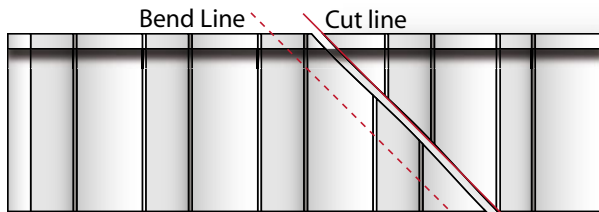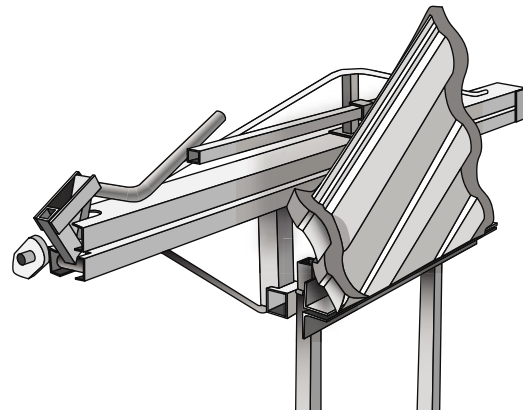
③ Bend panel down to fit into valley metal

Start the 1st panel 12" (300mm) from the valley edge. This allows for a valley cut section to be securely fastened to the roof deck without penetrating the valley flashing.
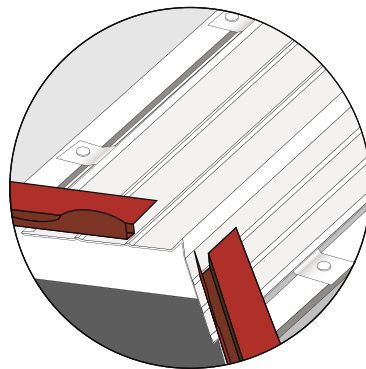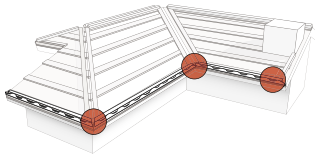
1"

Hip Panels

Bend line → ← Cut line

2"

Bend Line · Cut line

⚠️ *½" is deducted from the actual measurment when making hip cuts.*

Hip cuts are measured, cut and bent similarly to valleys. Each hip panel is bent up a min. of 1½" and fastened against the hip board.
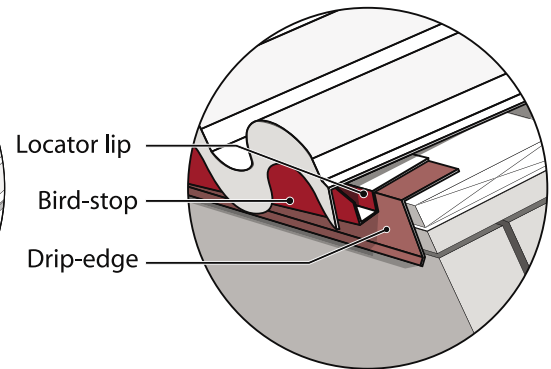
Bird-Stop Metal

Locator lip

Bird-stop

Drip-edge
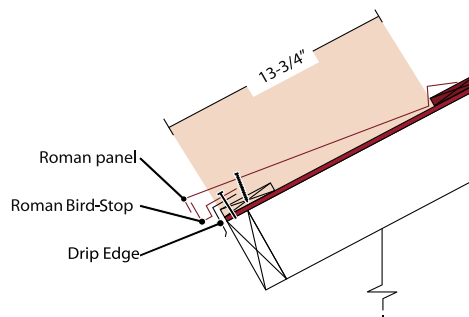
Bird stop metal extends into valleys as shown.

The Bird-Stop riser metal creates a ¾" off-set from the fascia. The use of this 'Bird-Stop' requires standard Drip-Edge metal to be installed on a (1"X4" or 2"X2") support batten.
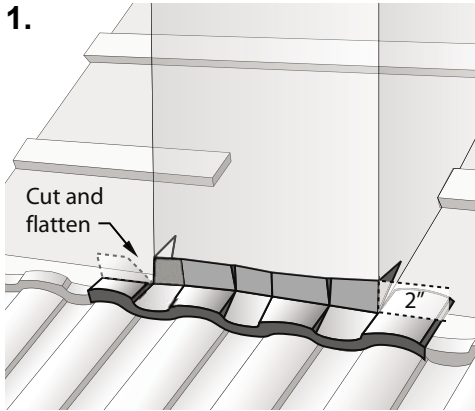
⚠️ The second panel batten is positioned 13-¾" from the fascia to accommodate the Bird-Stop metal.
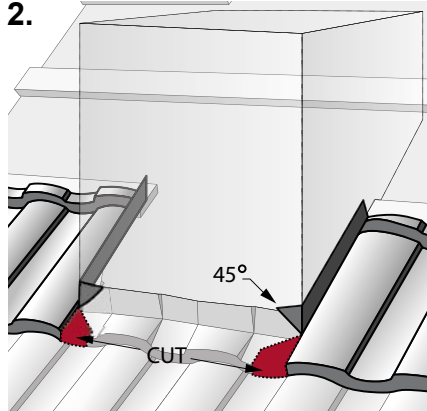
13-3/4"

Roman panel

Roman Bird-Stop

Drip Edge

Roman-Tile Install

SIDE-HEAD WALL/CHIMNEY/SKYLIGHT

The following details apply to any square cornered protrusion through a roof.

1.

Cut and flatten

2"
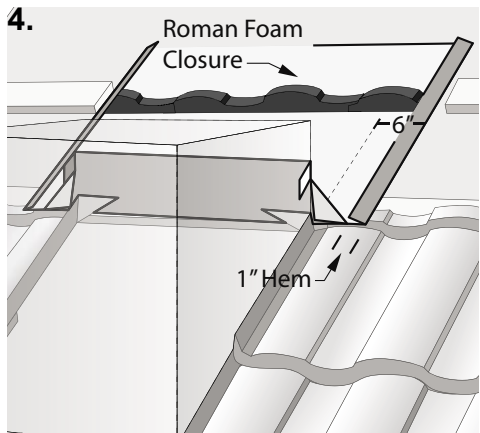
At front of chimney, measure, cut, and fold up panel 2". Cut panels on a 45 degree angle as shown and fold tabs around chimney.

2.

45°

CUT

On sides of chimney, cut and fold up panels 2" as shown.

3.

NO BATTEN

45°

Caulking
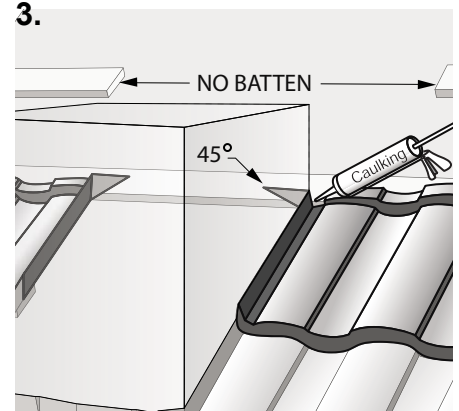
At back of chimney, seal each top corner section. Keep panel battens away from saddle as shown.

4.

Roman Foam Closure

6"

1" Hem

At back of chimney, install chimney saddle as shown. Extend saddle a minimum of 6" past each side of chimney. Hem ends 1" to keep water on saddle flashing.
Install a section of Metro Roman Foam Closure across the chimney saddle as shown (align with Roman profile).

5.

6"

2"
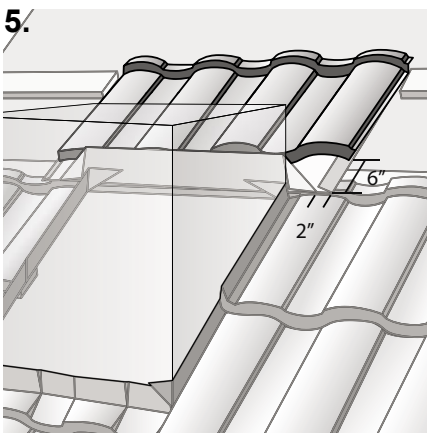
Apply a bead of sealant across Foam Closure and 'Seat' back cut-section panel onto Foam Closure. Panels are fastened through the front downturn of the panels, the Foam Closure and saddle into decking.

6.

Fold flap down to fit tight against saddle bend

Saddle
Panel
Batten

2"
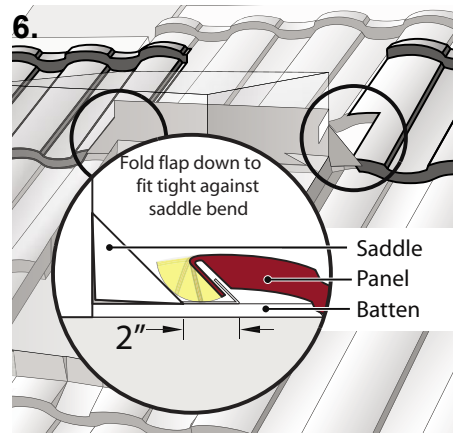
Where applicable, cut and fold panels to overlap the hand fabricated hem on the sides of the chimney saddle.

Always start from the bottom of the item being flashed to ensure correct weather protection.
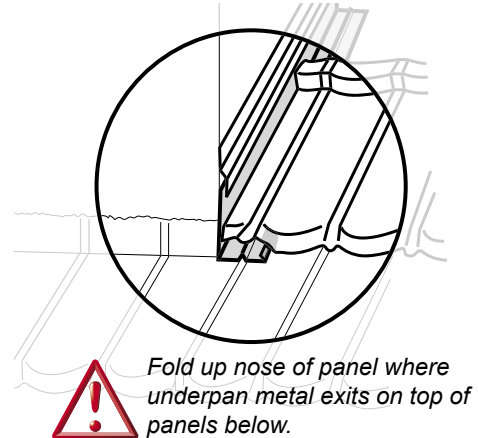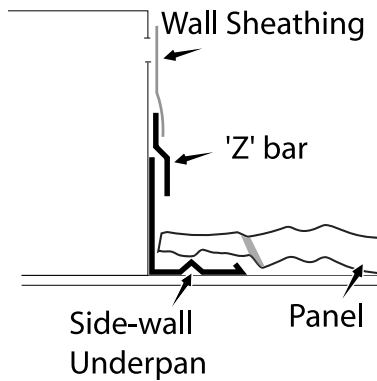
Counter Flashing metal or Z-bar covers bent up edges of panels.
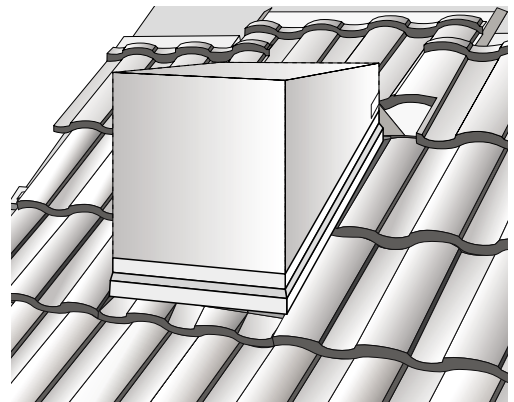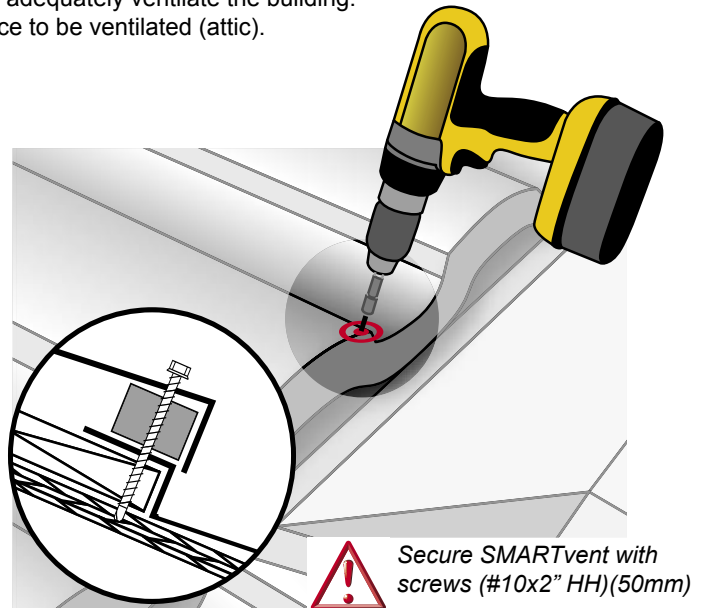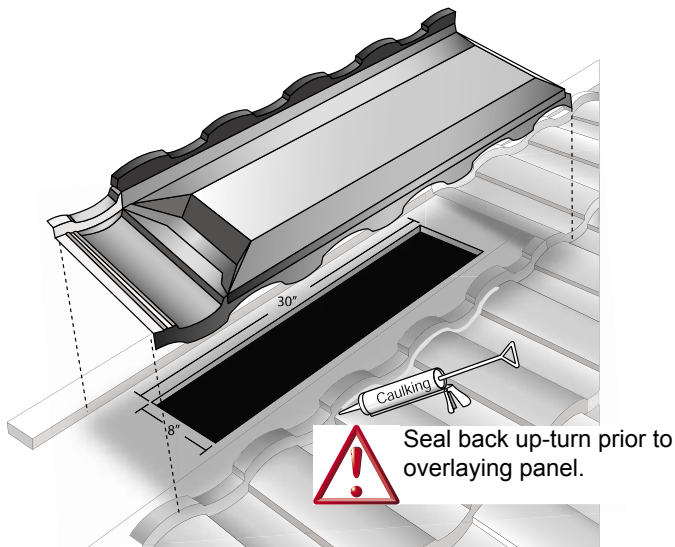
ALTERNATE FLASHING DETAIL

Side-wall Underpan metal is covered with counter flashing or standard Z-bar.

Panel front down-turn is flared out to allow Underpan to exit onto panel below.

Wall Sheathing

'Z' bar

Side-wall Underpan

Panel

Fold up nose of panel where underpan metal exits on top of panels below.

SMARTvent - Roman Tile

Metro Roman Tile SMARTvents are used in place of regular panels where ventilation is required. The vents are installed similar to panels after cutting ventilation hole in decking (approximately 8" x 30"). A Metro Roman Tile SMARTvent provides approximately 82sq. inches of Net Free Vent Area (NFVA). Care should be taken to adequately ventilate the buliding. Building codes require a minimum NFVA of 1/300 the area of the space to be ventilated (attic).

30"

8"

Caulking

Seal back up-turn prior to overlaying panel.

Secure SMARTvent with screws (#10x2" HH)(50mm)

SMARTjack and SMARTsleeve

Metro offers both a SMARTjack and SMARTsleeve for use with it's stone-coated roof panels. The Metro 3-in-1 SMART-jack is a moldable stone-coated roof flashing and is available in a small(SMARTjack12"x16") and large (Roman SMARTjack18"x18") base size. Apply sealant under 3-in-1 SMARTjacks.
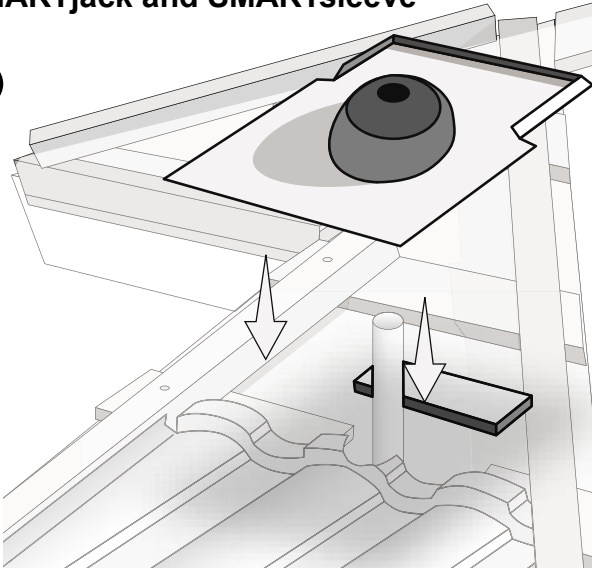
The Metro 'Sandwhich' method should be used if a vent location prevents a SMARTjack 3-in-1 from being folded up and over a panels back flange,
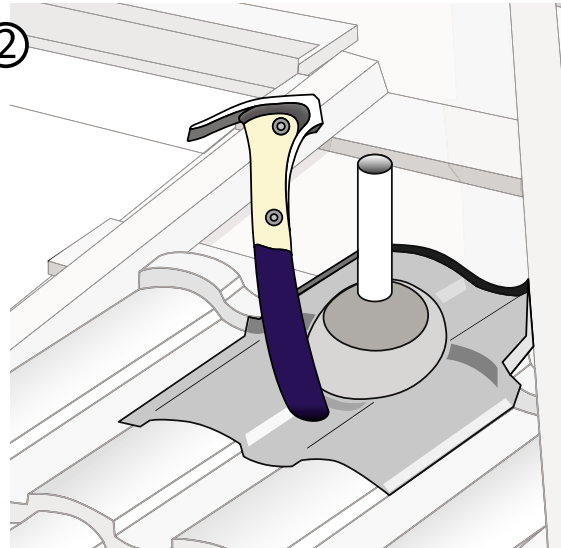
18"

18"
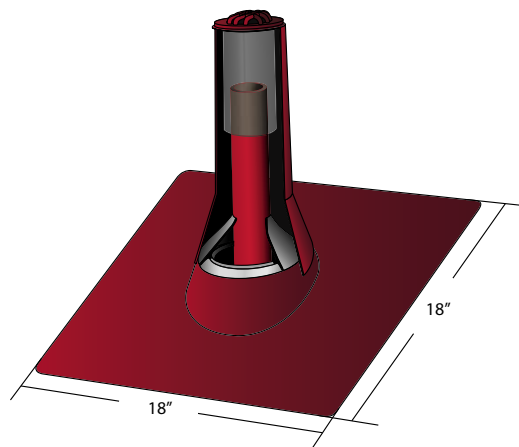
SMARTjack and SMARTsleeve

①

Cut panel battens a min. of 6" from the protruding pipe. Flatten the panel directly below the pipe to avoid a hump. Cut and hem a lip around the perimeter of the SMARTjack on the section placed above the panel batten. Install a block behind the protrusion to support the back of the SMARTjack.
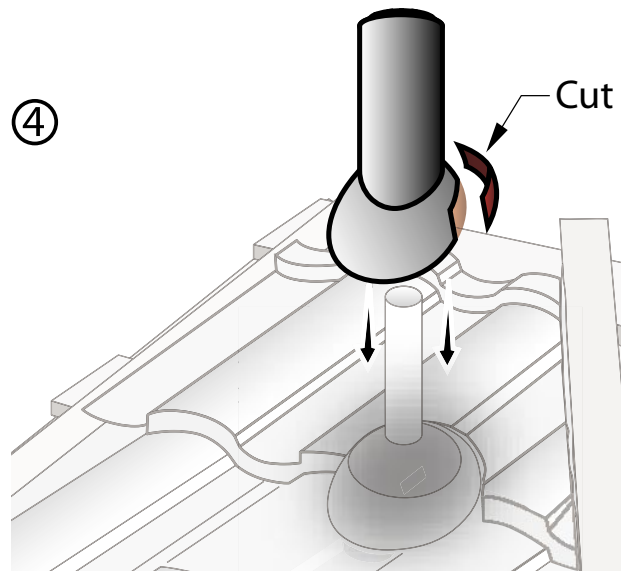
②

Slide the SMARTjack into place. Mold base of SMARTjack to conform with panel.

③
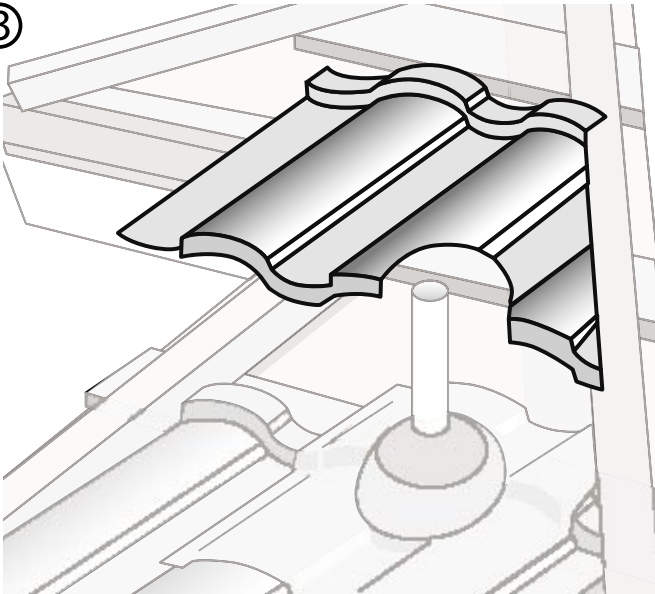
Measure, mark, and cut Roman panels to cover back section of SMARTjacks. Seal around flashing.

④

Cut

For added protection and appearance, SMARTsleeves are cut to conform to the panels and are installed over pipes. Sleeves are fastened with a screw through the front of the SMARTsleeve into the SMARTjack.
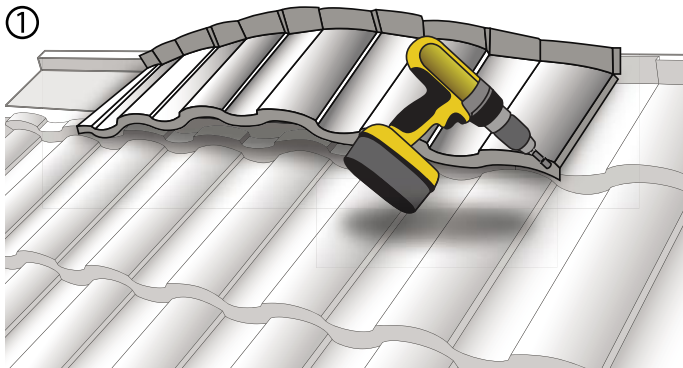
Ridge Panels

The following steps should be followed to ensure adequate weather protection along the ridge.
The top course of panels require cut and bent panels to complete the ridge line.
Bend all ridge panels using Metro's top bender.
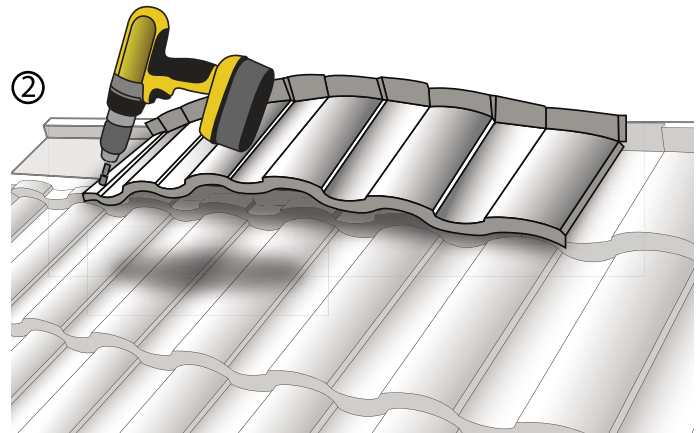
①

Cut Line
Bend Line

②
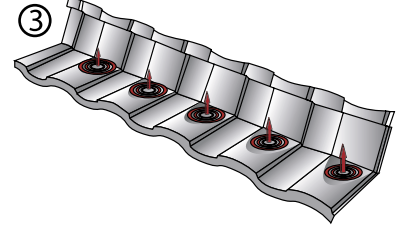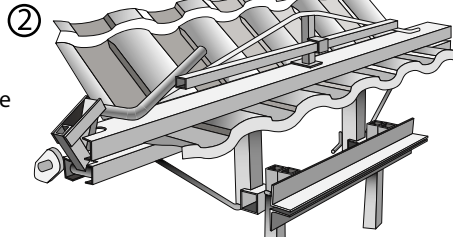
Always bend the ridge panels before cutting as they deform slightly and are difficult to install. Deduct ½" from measurements and mark both bend and cut lines for each panel.
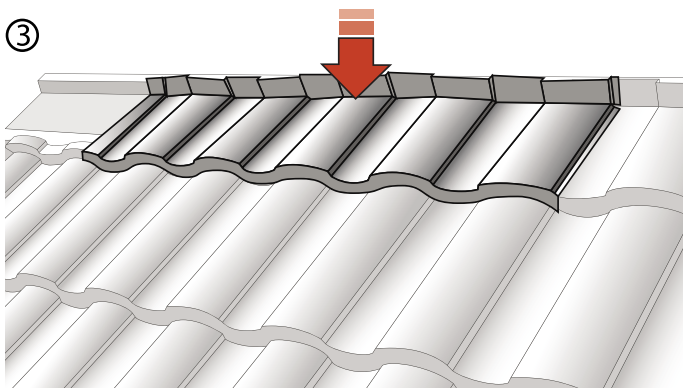
③

After bending and cutting, reshape panels to match existing panel courses.
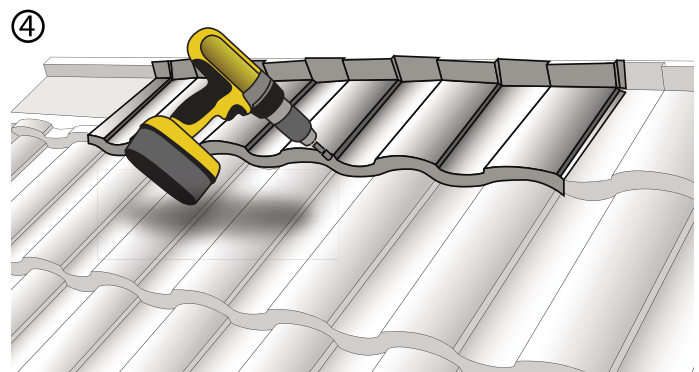
①

Fasten panels first at bottom right corner.

②

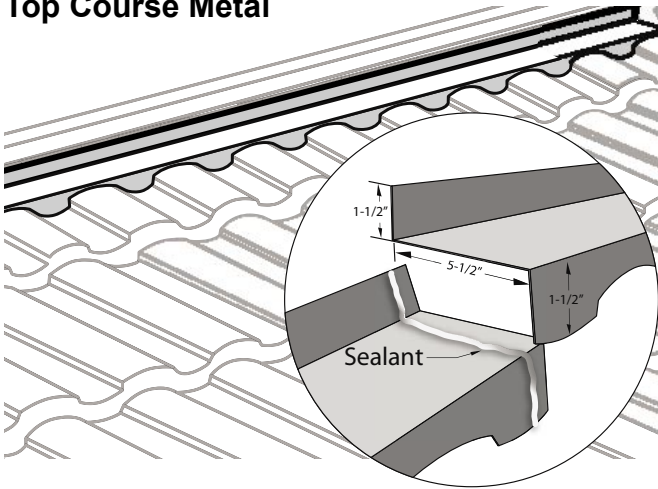Then fasten panels at bottom far left corner. Panels are then pushed down and fastened into place.

③

Push back of panel into position against ridge batten before fastening.

④

Additional fasteners are applied as necessary.

Top Course Metal

Roman Top Course metal may be used to avoid bending and cutting full panels at the ridge or chimney.

Roman Top Course metal can also be used at the front of chimneys and skylights.
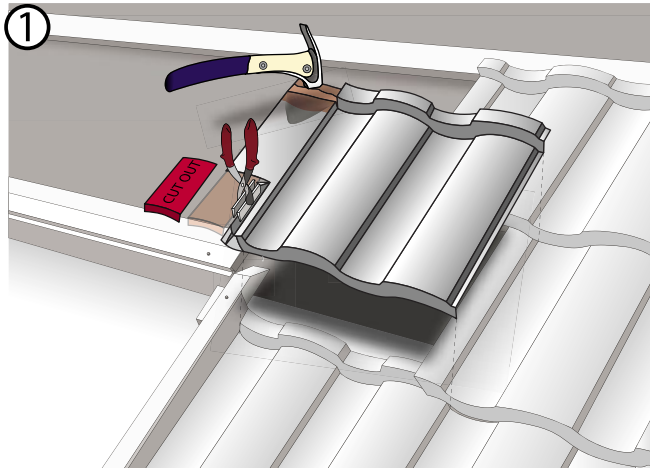
⚠️ *Top Course Metal is used where the last panel course before the ridge measures 4½" or less.*
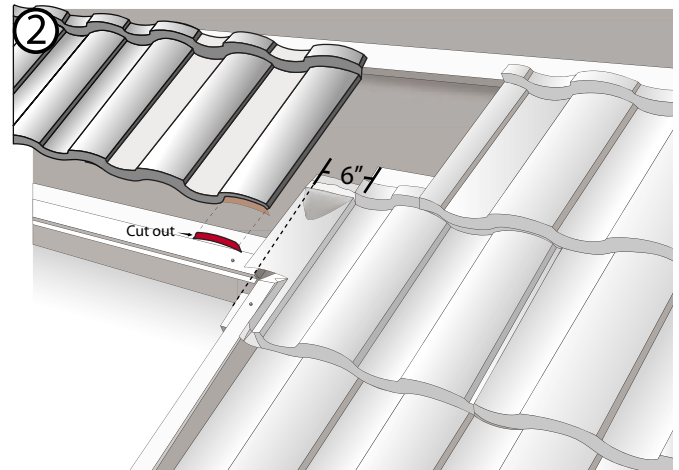
Apply a bead of sealant between two overlapping top course pieces.
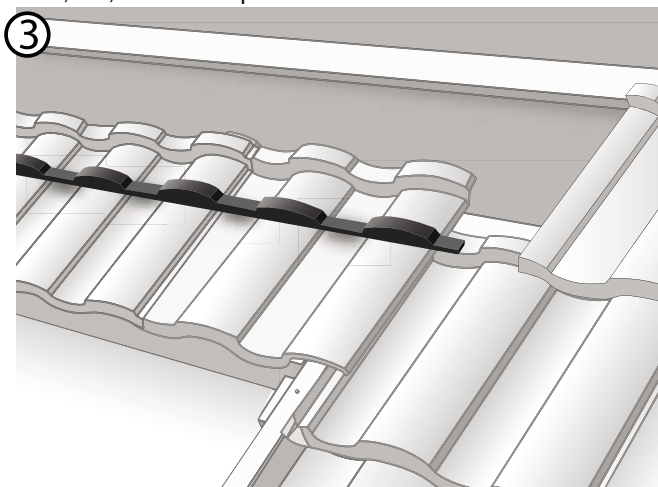
Short Course

This detail is needed where the fascia/eave steps out from the main roof course line.

① Where panels intersect with a stepped fascia, stop panel battens approximately 6" away from new fascia line. If nessesary, notch, cut, and flatten panel at this intersection as shown.

② The 1st full panel (short course) piece is notched and fitted as shown.

③ Place Metro Roman Foam Closure strip in line with main coursing row. Use sealant to secure.
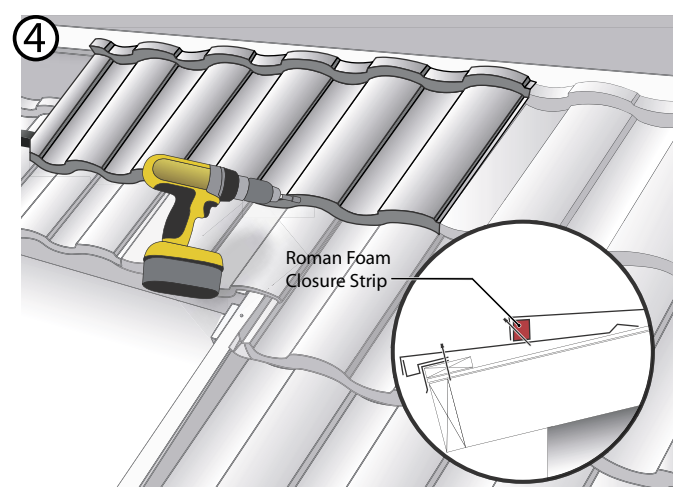
④ Install full panels aligned with main courses. Fasten with screws, through front down-turn of panel through the Foam Closure strip, and into the panel below as shown.

Metro Roman Tile Installation   ⚠️ Indicates critical areas of installation

Roman-Tile Install

TRIM CAP DETAILS

HIP/RIDGE INTERSECTION
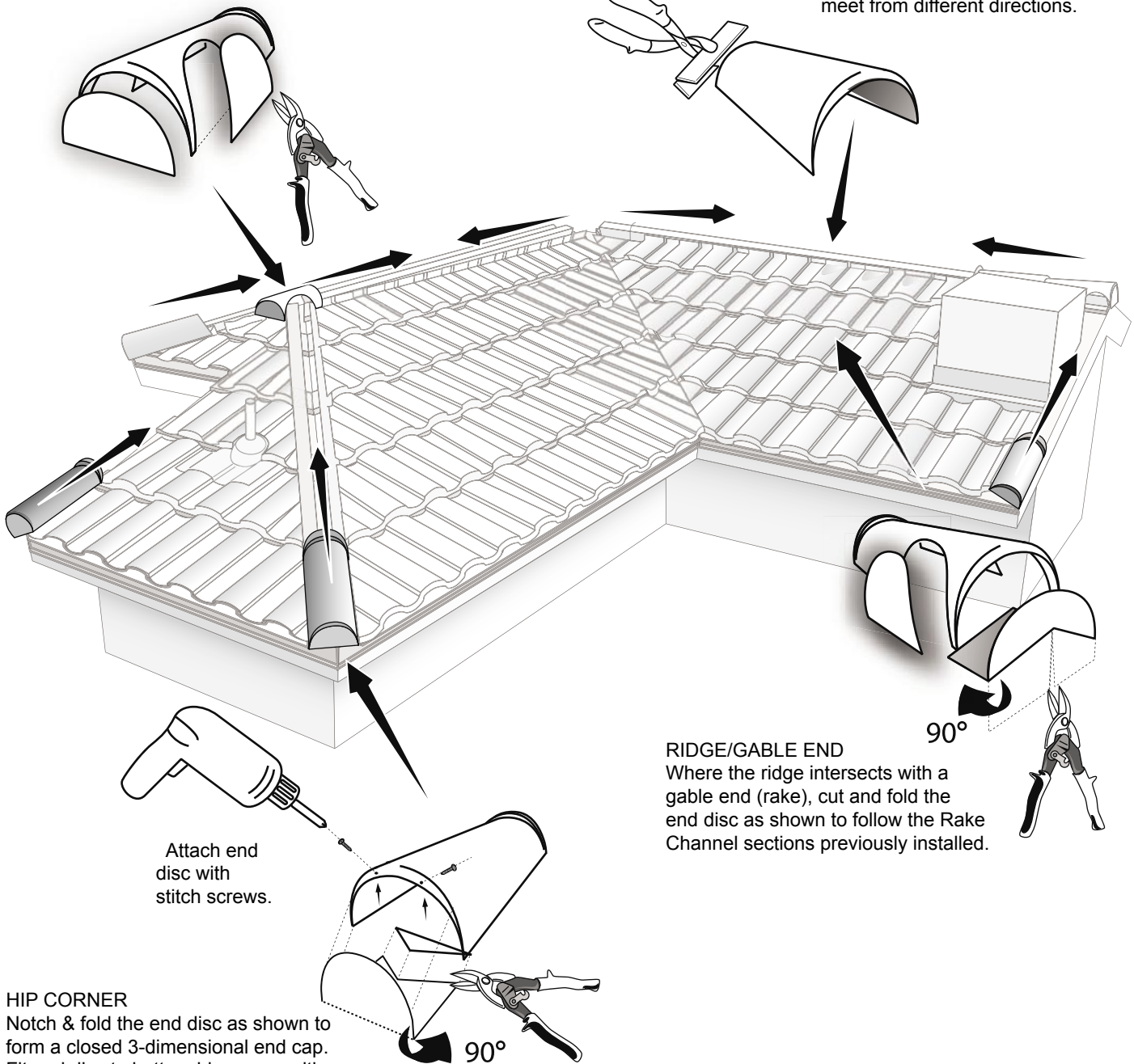Install hip caps from the bottom using 2 fasteners per trim cap. Overlap trim-caps at hip/ridge intersection. Cut and fit the ridge cap over both intersecting hip caps as shown.

RIDGE CENTER CAP
At the center of a ridge line, a small/short ridge cap, as shown, can be made where cap pieces meet from different directions.

Attach end disc with stitch screws.

RIDGE/GABLE END
Where the ridge intersects with a gable end (rake), cut and fold the end disc as shown to follow the Rake Channel sections previously installed.

90°

HIP CORNER
Notch & fold the end disc as shown to form a closed 3-dimensional end cap. Fit end disc to bottom hip corner with stitch screws and install balance of trim caps up the hip. Nail each cap on either side of hip boards.
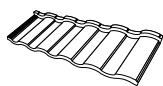
90°

After installing trim caps at intersections, seal cut edges and apply Metro basecoat and stone chip for a complete stone coat finish.
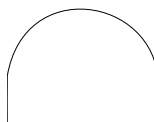
Metro Roof Products
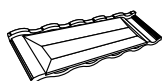
Materials & Accessories:

Metro RomanTile
52" x 16.5"
5.5 lbs.
21 pcs. per square

Barrel Cap Trim
14.5" x 6"
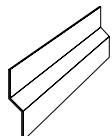1 lbs.

Trim End Disc
6" x 4"
.15 lbs.

MetroTile SMARTvent
52" x 14.5" x 3.5"
10.5 lbs.
Net Free Vent Area 82.5"

'Bird-stop' Metal
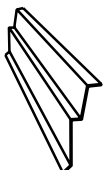79" x 5"
3.75 lbs.
Stone Coated
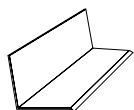
Foam Closure
1" x 1" x 79"
Black foam

'Z'-bar Metal
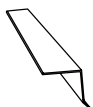79" x 2.5"
3.5 lbs.
Stone Coated

20" Double 'V' Valley
120" x 20" x 1"

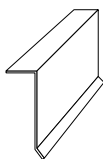**Tile Rake Metal 120"**
120" x 2" x 1.75"
2.1 lbs.

2.5" Head-wall Flashing
79" x 2.5"
3.3 lbs.
Stone Coated

Drip Edge Flordia
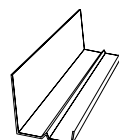120" x 2" x 2.5"
3.3 lbs.

Chimney Saddle
60" x 16"
6.75 lbs.

Fascia/Counter Flashing
79" x 3.25" or 5"
3.75 lbs.
Stone Coated

Top Course
79" x 1.5" x 4.5" x 2.25"
4.10 lbs.
Stone Coated

Side-Wall Underpan metal
120" x 4"
5 lbs.

Other Items Needed:

Caulk *(sealant)*
Drill
Metal snips
Screw Gun
Metro Cutter *(optional)*
Nail gun
Roofing nails *(ring shank)*
Roofing felt
Hammer
Hand benders
Tape measure
Caulking gun

General:
Metro RomanTile panels are produced from Aluminum-zinc alloy coated steel complying with ASTM A792.

Testing:
Metro RomanTile panels have been tested according to the toughest Building Code Standards. Testing has been conducted to evaluate fire, wind, penetration, water infiltration, and durability. Information regarding specific tests and approvals can be obtained from Metro Roof Products.

Warranty:
Metro RomanTile panels carry a limited warranty for fifty years. This limited warranty is transferable and does not cover damage due to improper handling or installation.

Packing and Storage:
A pallet of Metro Roman Tile panels contains 19 squares. Care should be taken to store Metro RomanTile panels and accessories. They should be placed under a tarp, or placed in an area free from moisture and debris.

Dissimilar Metals:
To avoid adverse corrosion effects caused by dissimilar metals, **COPPER** and **LEAD** flashings should not be used with Metro roof products and accessories. (refer to Metro SMARTbrief #02004)

Ventilation:
Ensure proper attic ventilation as prescribed per local codes. Either SMARTvents or ridge venting can be installed to achieve adequate ventilation.

Finish coating
Minor scuffing of Metro RomanTile panels can be repaired with a Touch-Up kit from Metro Roof Products. Use the Metro adhesive *(not caulking)*. Unfinished flashing materials can be painted with durable acrylic aerosol paints. Colored aerosol paints should never be sprayed on stone coated panels or accessories made by Metro Roof Products.

Roofing felt
Unless local conditions require otherwise, a min. of either one layer of type 30, or two layers of Type 15 lb. roofing felt (or equivalent) should be used with Metro RomanTile panels.

Roofing nails
Corrosion resistant .131" dia. x 2" long ring shank roofing nails are used to attach Metro roof products and accessories.

Sealant/Caulking
Only exterior grade urethane or (non-acidic) sealant should be used. Only use Metro Repair-kit adhesive to apply stone chips.

Metro Roof Products

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