

*Installation
Manual*

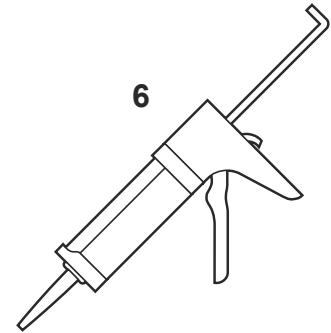
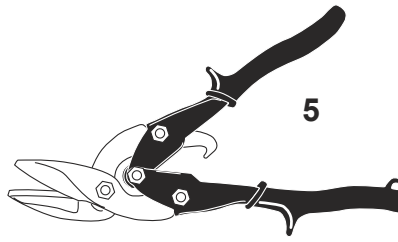
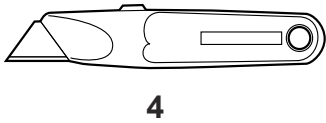
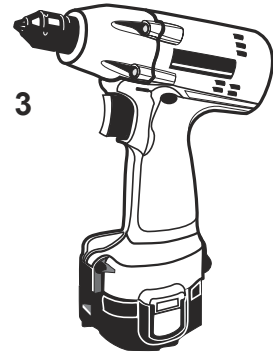
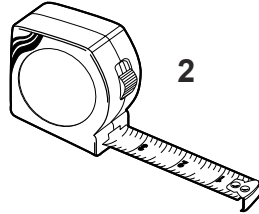
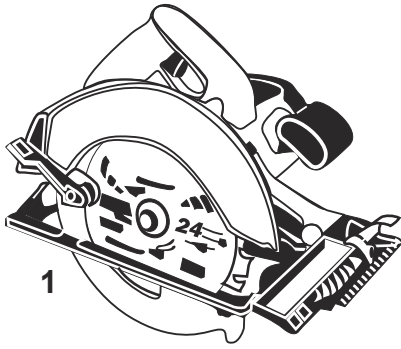


Future® Tile Products

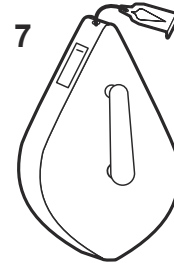


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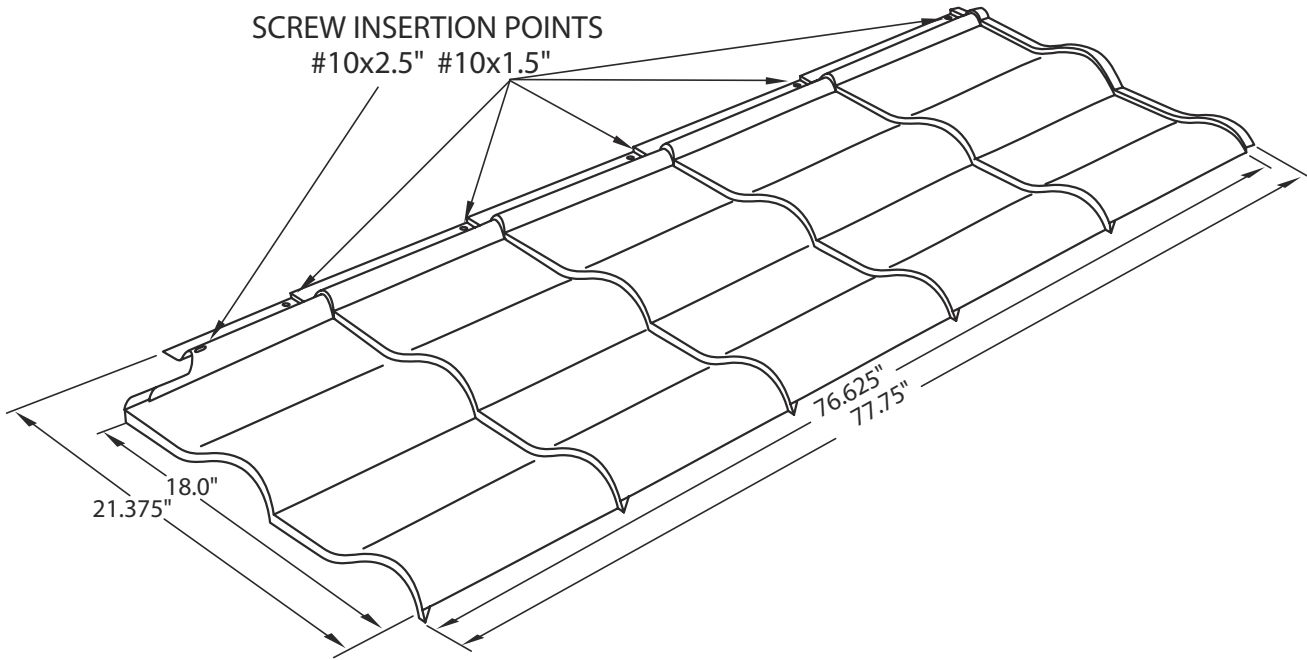
TOOLS



- 1) Circular Saw
- 2) A 25' or 30' tape measure
- 3) Power Driver
- 4) Utility knife (When re-roofing over composition shingle)
- 5) Tin snips
- 6) Caulking Gun
- 7) Chalk Line

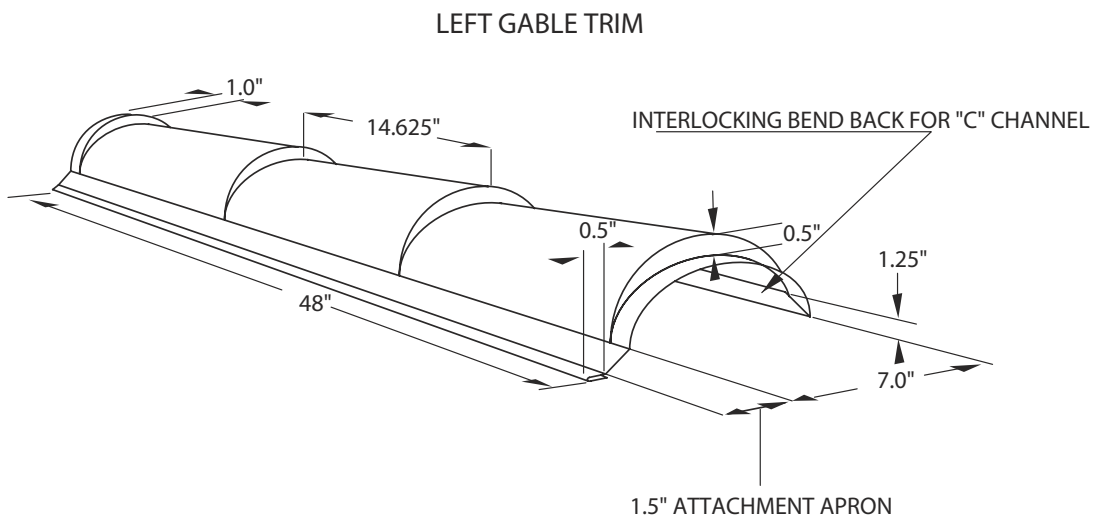
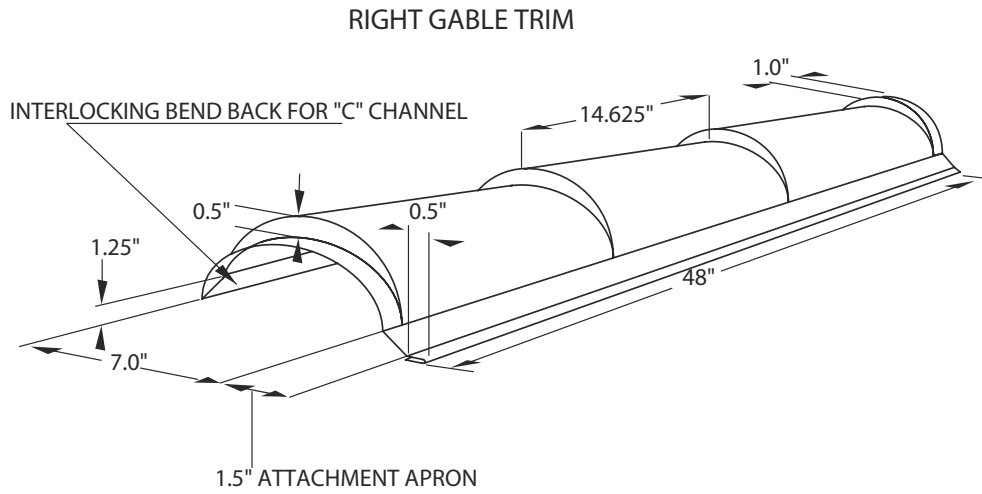
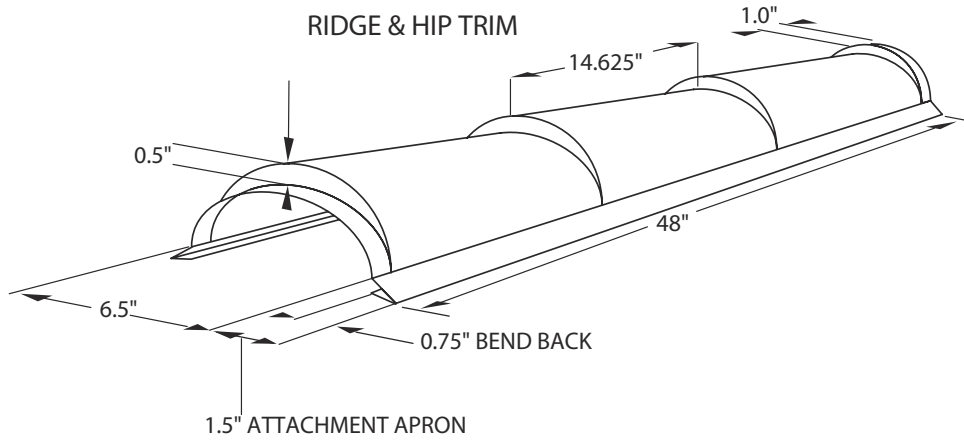


FUTURE MEDITERRANEAN TILE

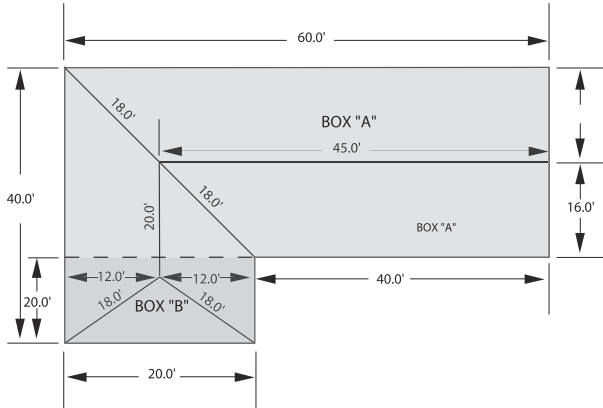


Actual Size	(Five Step)	21.37" X 76.125"
Exposed Dimensions	(Five Step)	18.0" X 75"
Coverage	(Five Step)	10.7 pcs. per square
Average weight per	(Five Step)	10.5 lbs.
Average weight per square Foot		1.12 lbs.

FUTURE MEDITERRANEAN TRIM



ESTIMATING MEDITERRANEAN TILES



SHORT FORM ESTIMATING FOR MEDITERRANEAN TILE.

Quick method for Salesman:

- 1) Determine the square footage without waste. (2400 s/ft.)
- 2) Add the linear feet of hips and valleys and multiply by 2. (144 s/ft.)
- 3) Add totals of #1 and #2. (2544 s/ft.)
- 4) Now multiply the total by 1.15, this yields the square footage including waste. (2,926 s/ft.)
- 5) Divide the square footage by 100 showing that 29.26 sqs. of Mediterranean Tile panels are needed.

Five and Two Step Tile Panel Coverage Table

		Rafter Length	
		Five Step Panels	Two Step Panel
One Panel	6 ft. 3"	One Panel	2 ft. 6"
Two Panels	12 ft. 6"	Two Panels	5 ft.
Three Panels	18 ft. 9"		
Four Panels	25ft.		
Five Panels	31ft. 3"		

The majority of the roof will be done using five step panels, two step panels are provided for hips, valleys and at the ridge to keep the waste at a minimum.

- 1) Begin by blocking off the roof as in our example.
- 2) Measure the width of the roof and divide by 1.5 (18")
***Note: Round up to the next full tile. This will give you the number of tiles horizontally.*
- 3) Measure the rafter length using the table above, determine the number of five step and two step panels needed vertically to the ridge.
- 4) Multiply the number of five step vertical panels by the number of horizontal panels to learn the total number of five step panels. Repeat the same procedure to determine the total number of two step panels of the roof within the block.
***Note: If the rafter and length of the roof are the same on the other side within the block, multiply by 2. If not, repeat the above procedure.*
- 5) Repeat the procedure until all blocks have been measured.
- 6) Add together the linear feet of all hips and valleys. Multiply the linear feet by .9 this will give you the number of waste "two step" panels.
- 7) All that remains is to add the number of five step panels in each block, and the number of two step panels, plus the number of waste two step tiles. This will give you the total number of tile panels needed including waste.

Estimating the above diagram using the Future Roof Mediterranean tile panels:

Box (A)

- 1) The rafter length 16 ft., the above chart indicates that two "five step" panels will allow us to go 12 ft. 6" vertically. Leaving us with 3 ft. 6". Checking the above chart we find that two "two step" panels will be needed.
- 2) The width is 60 ft. divided 1.5 (18") = 40 horizontal tile panels.
- 3) 2 (five step) X 40 = 80 X 2 (both sides are the same) = 160 "five step" tile panels.
- 4) 2 (two step) X 40 = 80 X 2 (both sides are the same) = 160 "two step" tile panels.

Box (B)

- 1) The rafter length 12 ft., the above chart indicates that two "five step" tile panels are needed vertically.
- 2) No "two step" tile panels are needed.
- 3) The width is 20 ft. divided 1.5 = 13.3 round up to 14 tile panels wide.
- 4) 2 (five step) X 14 = 28 X 2 (both sides are the same) = 56 "five step" tile panels.

Waste:

Linear feet of Hips and Valley's = 72 X .9 = 64.8 or 65 "two step" tile panels of waste.

Add Box (A) & (B):

- (A) 160 + (B) 56 = 216 "five-step" tile panels. At 10.7 pcs. per square = 20.19 squares
 (A) 160 "two step" tile panels, plus 65 tiles waste = 225 "two step" tile panels. At 26.7 pcs. per square = 8.43 squares

Total Squares of Mediterranean Tile 28.62 sqs.

Order

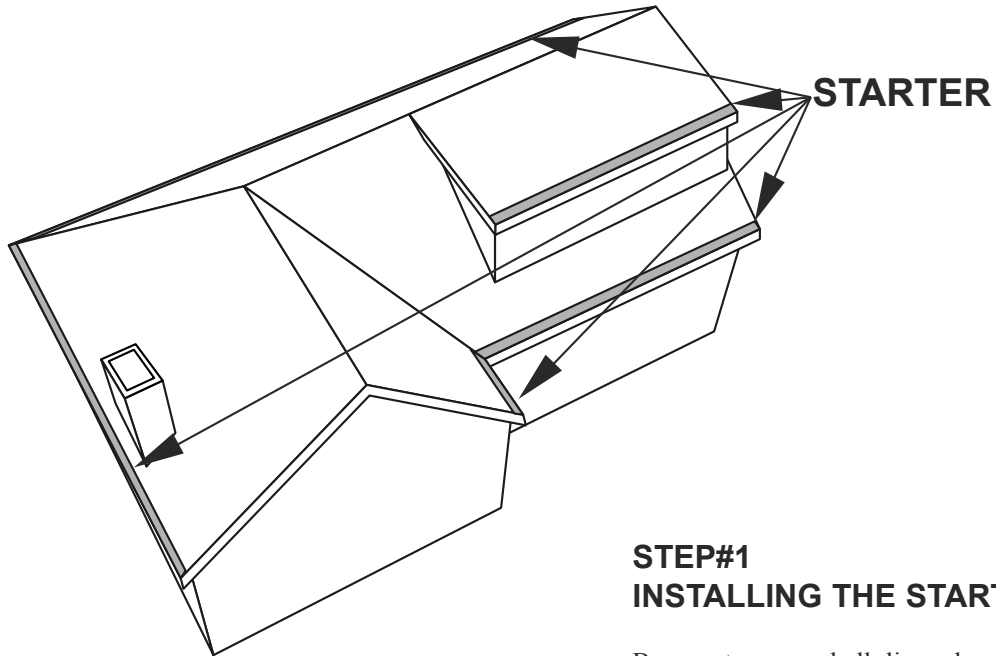
- 216 "five step" tile panels.
 225 "two step" tile panels.

Estimating hip and ridge trim pieces:

Measure the linear feet of Hips, and Ridge.

151 linear ft. Divide by 3.75 = 40.27 plus 10% = 44.74 or 45 pcs. of "Hip and Ridge Trim"

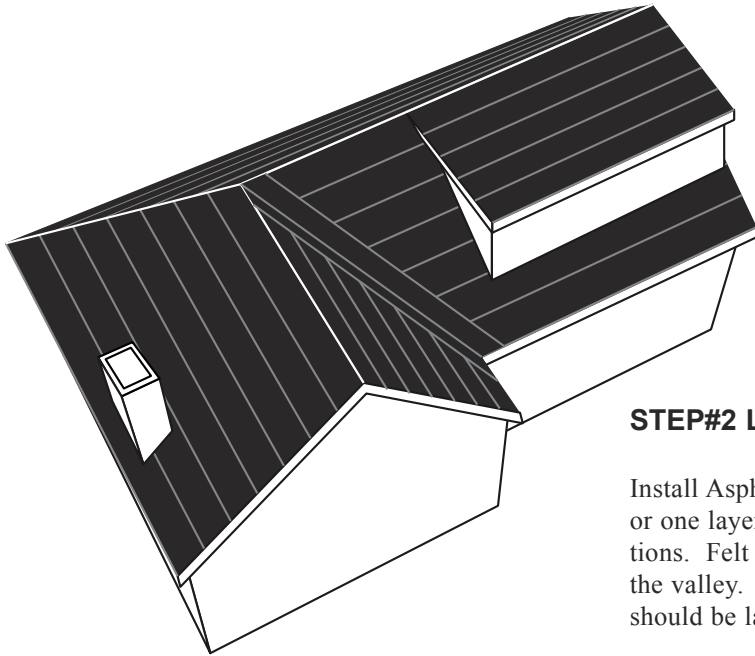
STARTING



STEP#1 INSTALLING THE STARTER STRIP

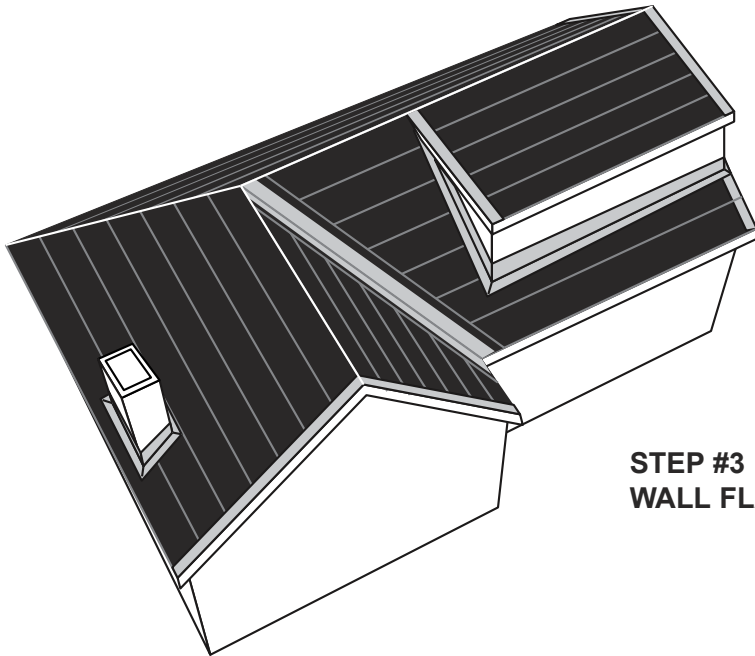
Be sure to use a chalk line when installing the Starter Strip at the eave. Do not depend on the eave being square or straight. Nail the Starter Strip every 16" along the length of the eave.

UNDERLAYMENT



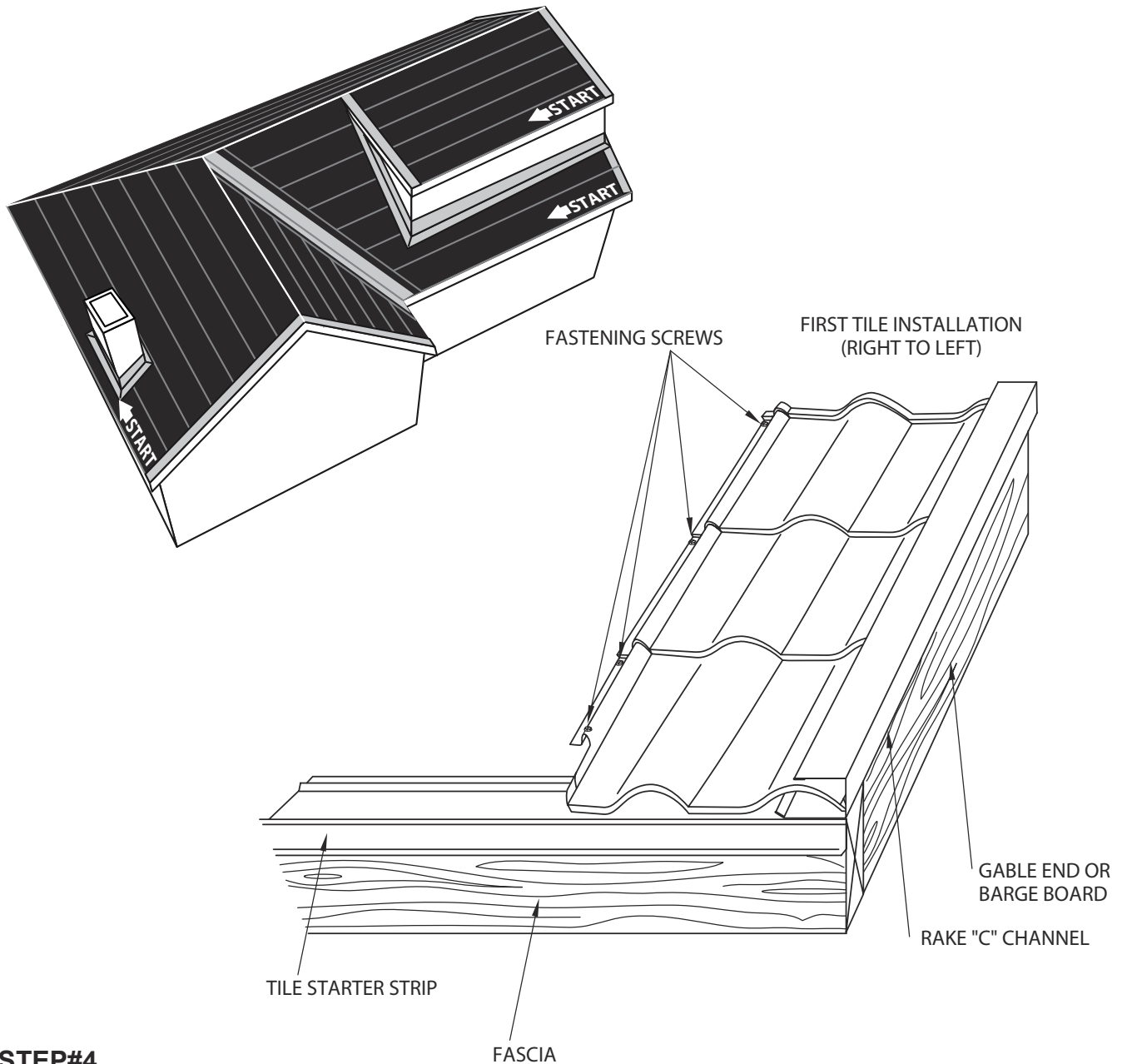
STEP#2 LAYING THE UNDERLAYMENT

Install Asphalt-saturated Organic felt two layers Type 15 or one layer Type 30 according to manufacturers instructions. Felt should be laid horizontally and woven in the valley. An additional perpendicular or vertical layer should be laid into the valley.



STEP #3 "C" CHANNEL RAKE, END/ SIDE-WALL FLASHING AND VALLEY.

STARTING TILES



STEP#4 INSTALLING THE MEDITERRANEAN TILES, MEASURING AND CUTTING.

Begin at the lower right hand side of the roof as Mediterranean Tiles install from right to left. Beginning at the bottom right hand side of the roof insert the right edge of the tile into the "C" Channel at the rake with the bottom edge of the tile resting on the Starter Strip align the tile vertically and horizontally (very important). The left side of the tile has open fastener attachment points. Fasten to the deck using 1 1/2" #8 screws of sufficient length to penetrate through the solid sheathing approximately 1/8th of an inch. Lock into place the right side of

the next tile over the fastening apron and into the interlocking fold on the left side of the preceding tile. Repeat the procedures across the roof from right to left.

**NOTES:

1. Be sure to flatten the portion of Starter at the 1/2" diamond rise below the Rake "C" Channel to allow the "C" Channel to lie flat at the fascia.
2. Squaring the roof at the eave and gable is very important. Refer to page 13 for a detailed explanation.

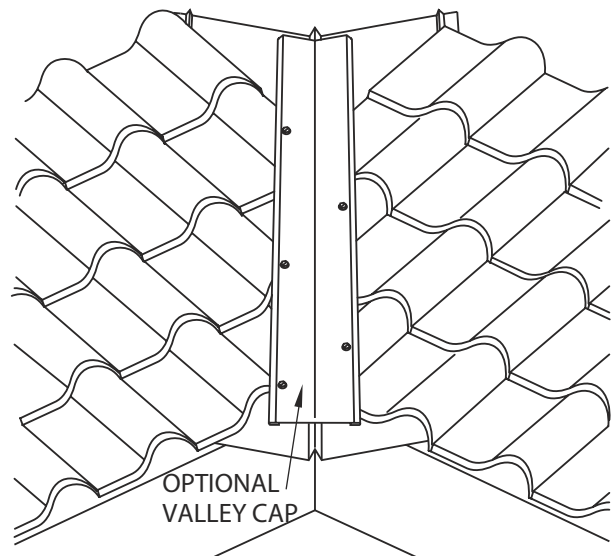
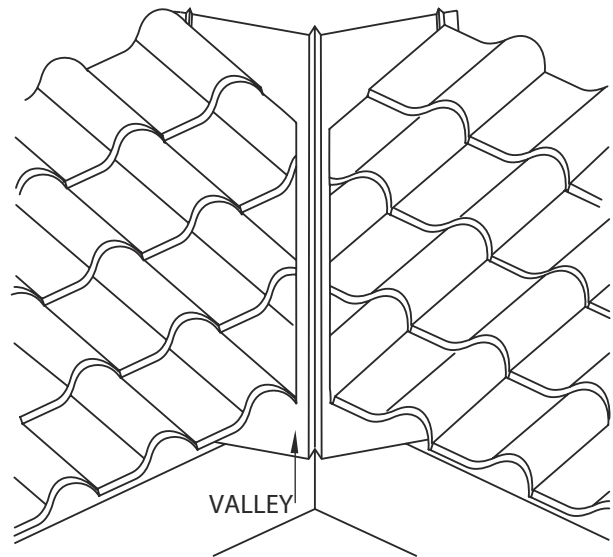
VALLEY

STEP #5 INSTALLING THE VALLEY WITH OPTIONAL VALLEY CAP

The valley is installed from the bottom up and over the starter Strip. Miter cut up the valley leaving a 2-3" opening.

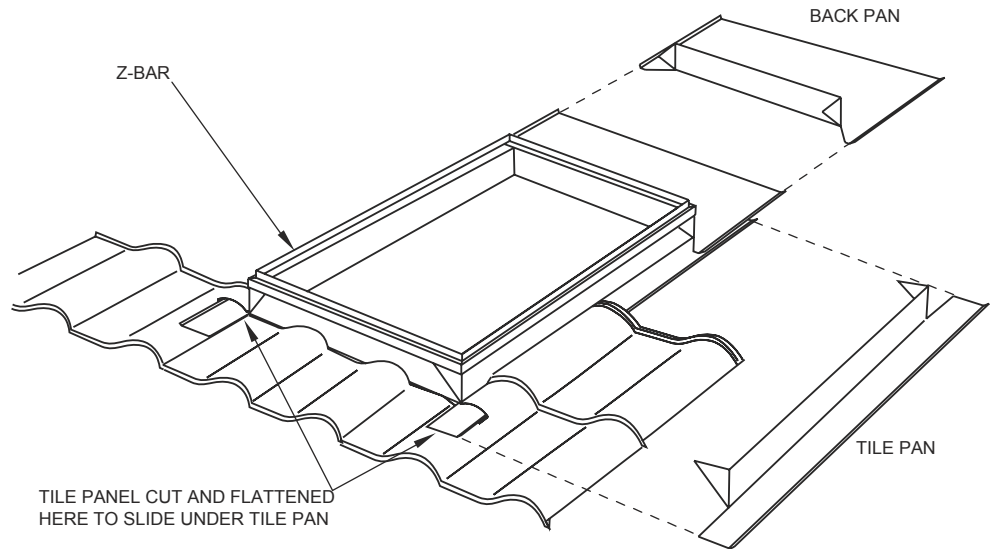
****NOTE:**

As an option Future Roof provides a Valley Cap which when installed will hide your valley cuts. The Valley Cap can be attached to the crown of the valley tiles with 1/2" Tek screws be sure not to screw into the valley.

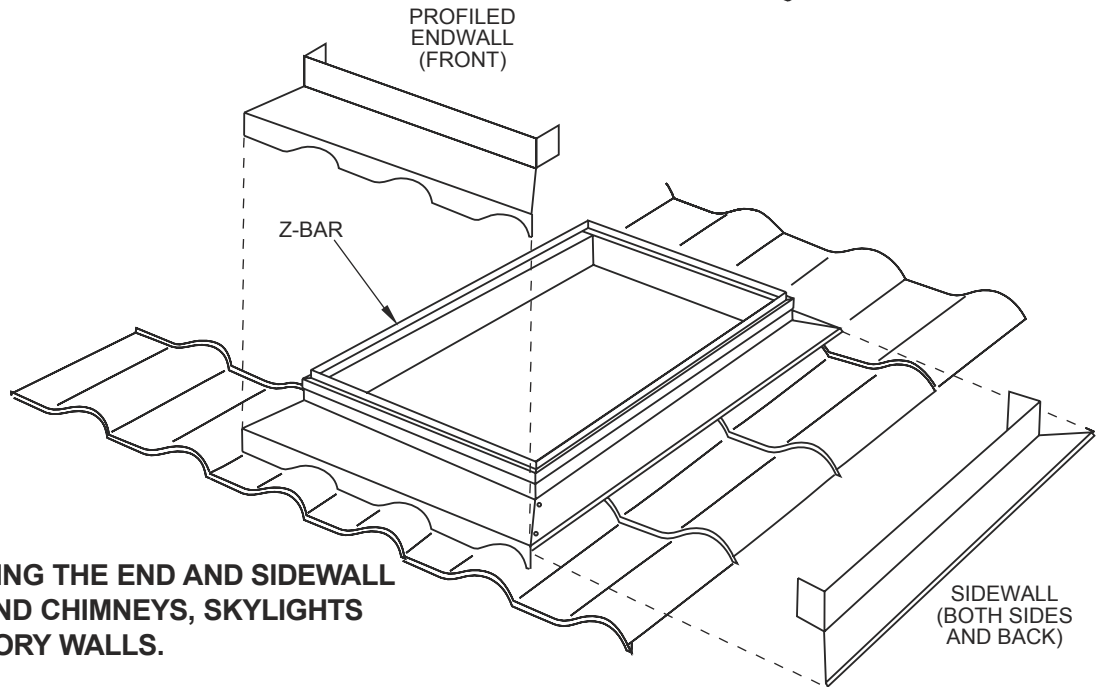


SIDE AND ENDWALL FLASHING

PART 1



PART 2



STEP #6 INSTALLING THE END AND SIDEWALL FLASHING AROUND CHIMNEYS, SKYLIGHTS AND SECOND STORY WALLS.

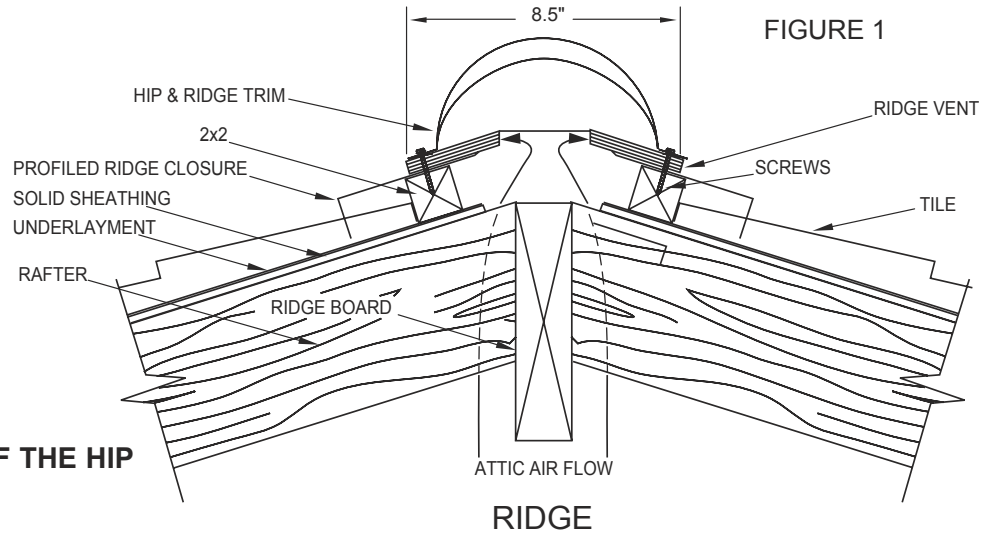
At the end and side wall areas around chimney's, skylights and second story walls. Beginning on both sides install the Tile Pan as shown in PART 1. With the Tile Pan in place install the Back Pan as shown in PART 1. At the intersection of the side wall make a cut into the tile perpendicular to the side wall approximately 3", make another cut approximately 1/2" at a right angle at the end of the 3" cut. With your fingers press down on the 3" X 1/2" cut producing an opening of approximately 3" X 1/2". The bottom portion of the Tile Pan flashing can now be brought out on top of the tile below the opening as shown in PART 1. Be sure and use a small amount of caulk in the area.

Miter, bend and install the Profiled Endwall flashing as shown in PART 2. Then miter, bend and install the Sidewall flashing on both sides and back as shown in PART 2.

****NOTE:**

All flashing including Tile Pan, Back Pan, Profiled Endwall and Sidewall are covered by Z-Bar as shown in PART 1 and PART 2.

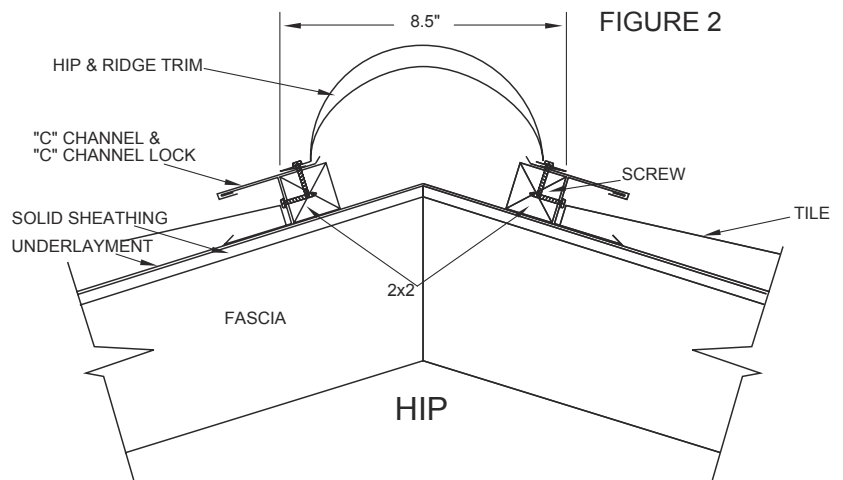
HIP AND RIDGE DETAIL



STEP #7 INSTALLATION OF THE HIP AND RIDGE:

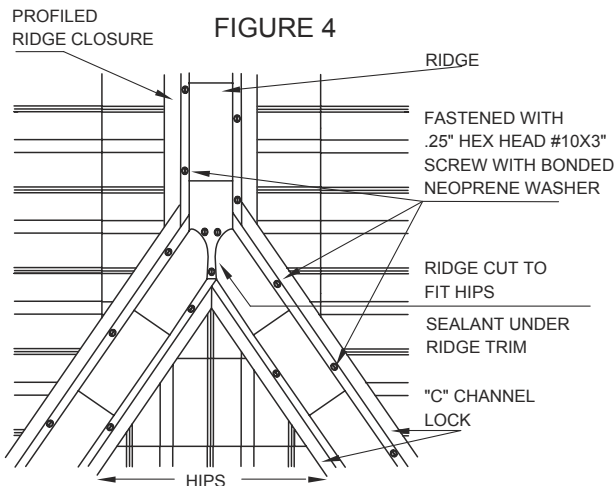
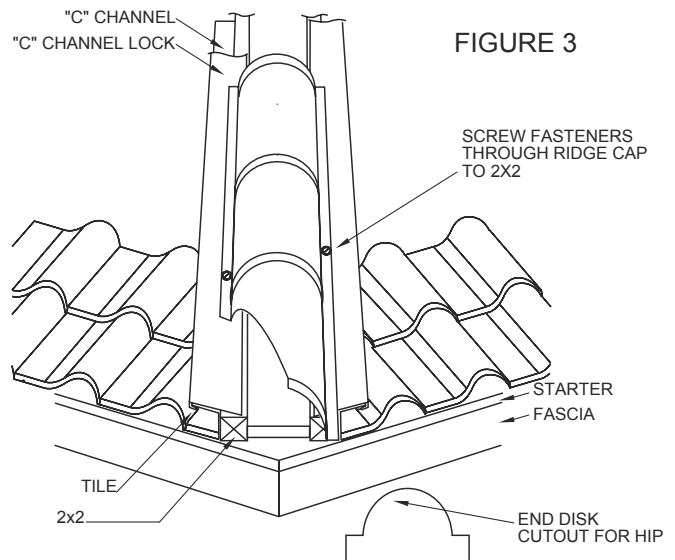
At the ridge install the 2x2 Outside to outside measurement of 8.5". Cover the 2x2s with underlayment. Cut the tiles flush to the 2x2. Install the profiled Ridge Closure as shown in fig. 1. If necessary to vent at the ridge, install the Ridge Vent as shown in Fig. 1. Cover with Hip and Ridge Trim and secure with screws to the 2x2s.

At the hip install 2x2s. Cover with underlayment and secure the "C" Channel Lock. Cover with the Hip and Ridge Trim and secure with screws into the 2x2s as shown in fig. 2.

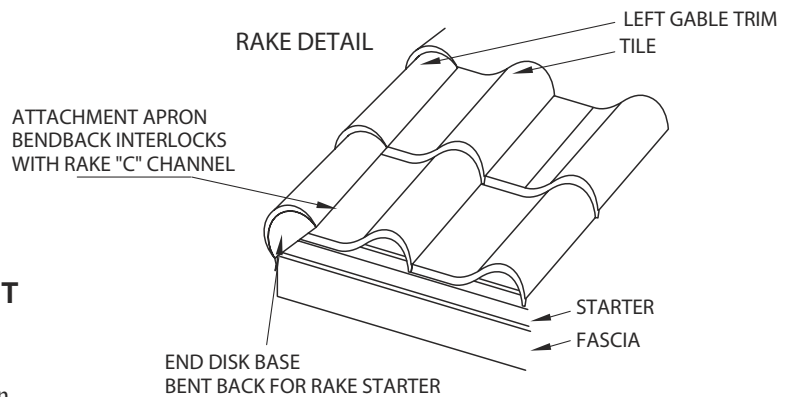
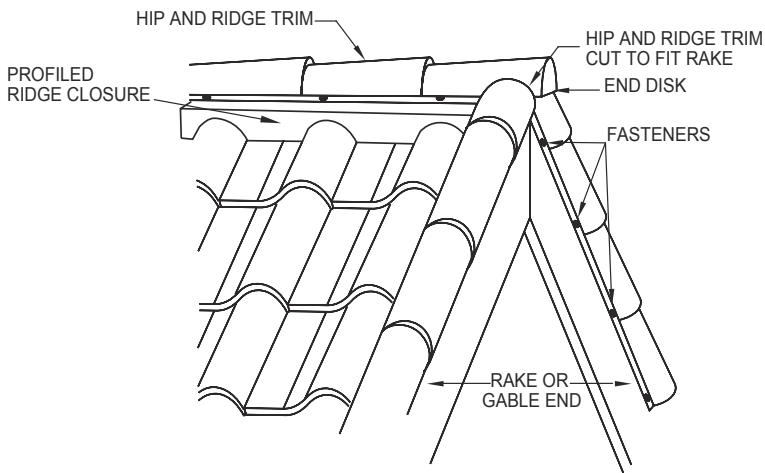
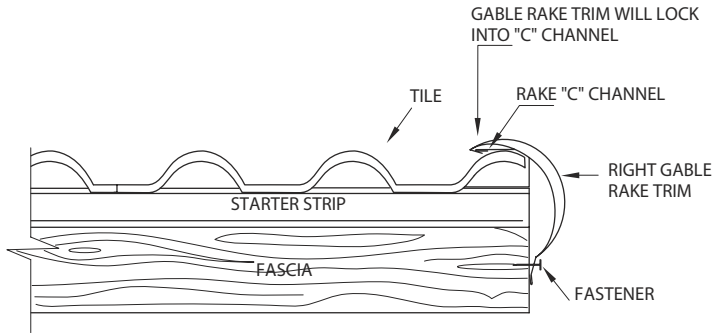


**NOTES:

1. Be sure to start the hip with Future Roof™ Hip Starter. This peice has the End Disk already installed at the factory to save you time.
2. Fig. 3 shows an overview of a completed hip.
3. Fig. 4 shows an overview of the intersection of two hips and a ridge.



RIGHT AND LEFT SIDE RAKE TRIM



STEP #8 INSTALLATION OF THE RIGHT/ LEFT SIDE RAKE TRIM

At the rake lock the attachment fold into the top portion of the “C” Channel and fasten through the apron to the barge-board.

** NOTES:

1. Future Roof offers a Rake Starter piece with the End Disk attached at the factory to save you time.
2. A Right Gable trim is differentiated as hooking onto the right side when standing on the ground and seeing the steps of the gable trim rise away from you.”

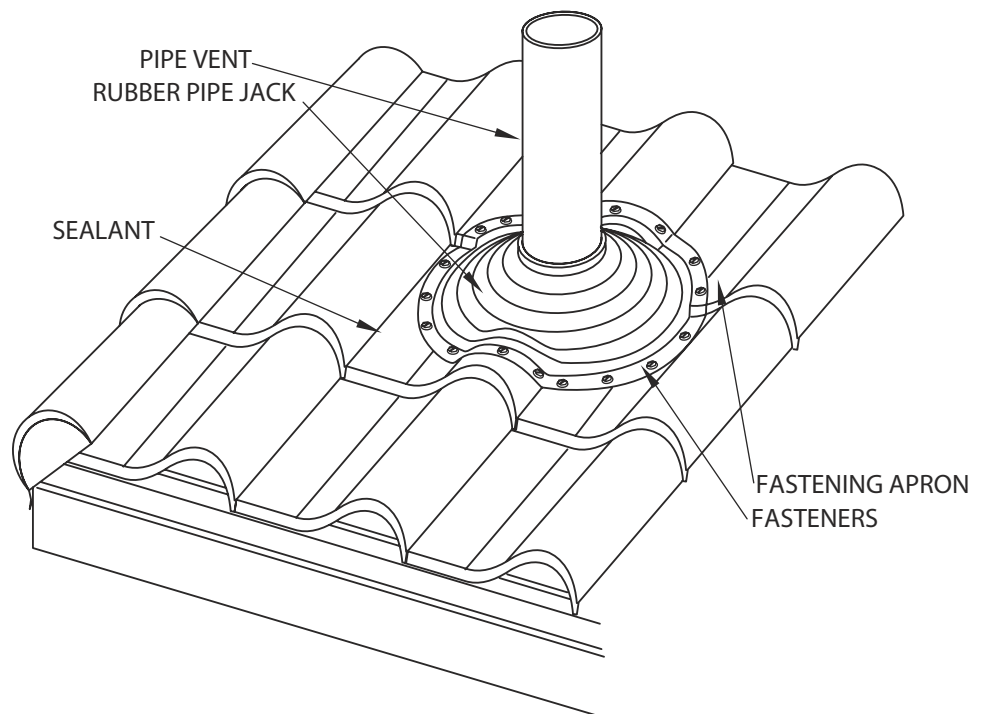
PIPE FLASHING

STEP #9 INSTALLATION OF PIPE FLASHING:

A flexible base Rubber Pipe Jack, shall be applied over and around pipe protrusion. Bases are available in a number of sizes depending on the O/D of the pipe. Apply clear sealant around base prior to attaching to the tile with #8 x 1" screws.

Beauty cover cones are available in a variety of sizes to color match your roof.

RUBBER PIPE FLASHING



SQUARING GABLE AND EAVE STARTERS

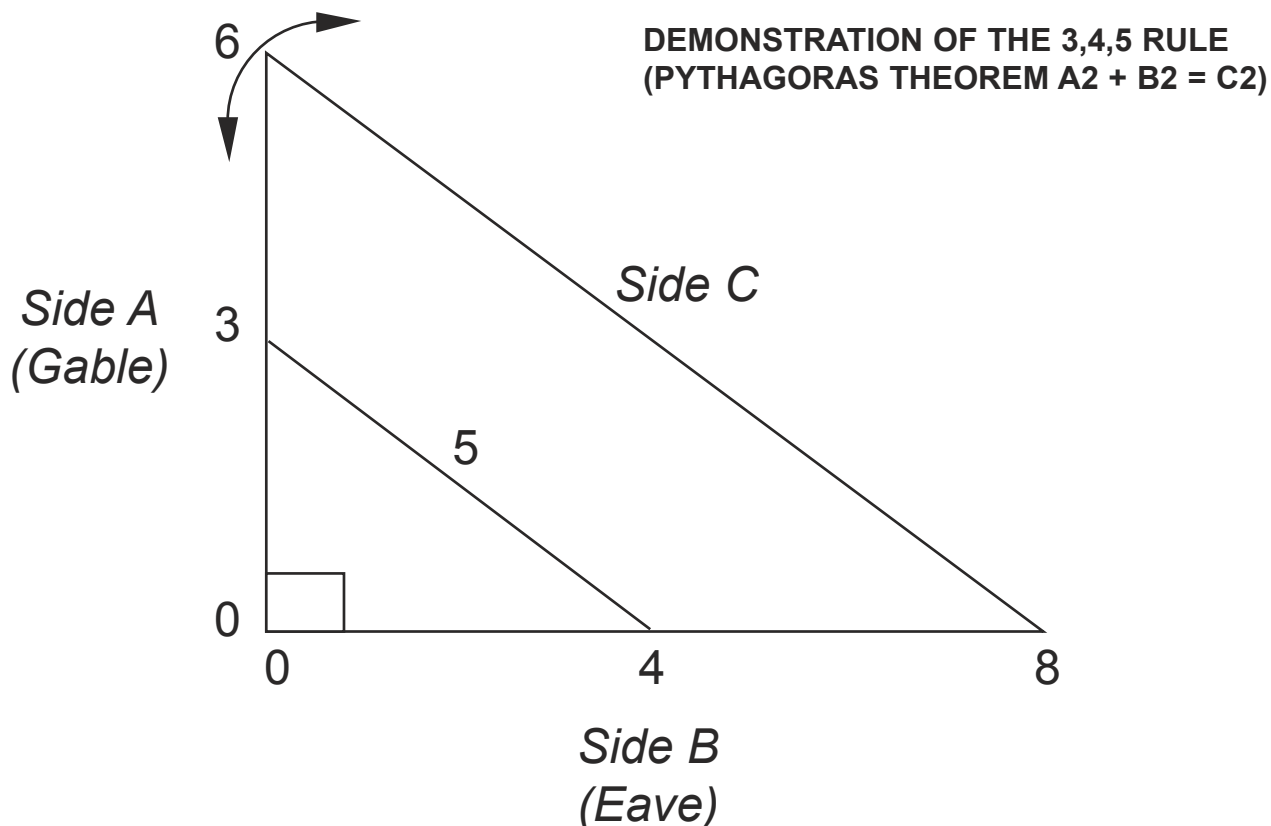
When installing tiles on a gable roof it is important to have the eave starter and gable starter square to each other (at 90 degrees) as this will help keep the line of each row of tiles straight. **DO NOT ASSUME THE ROOF IS SQUARE!** To square up starters to each it is useful to know the 3,4,5 rule. Which is as follows:

To have 2 sides of a triangle square (right angle) to each other, the length of one side of the triangle will equal any multiple of 3 (i.e. 3,6,9,12, etc.) and the other side of the triangle will be equal a multiple of 4 (i.e. 4,8,12,16, etc.) the third side of the triangle must equal a multiple of 5 (i.e.5,10,15,20, etc.) demonstrates this rule.

Moving side A (gable) in or out will either shorten or lengthen side C, do this until side C is exactly the appropriate multiply of 5. This will result in side A & B being square to each other.

** NOTES:

1. In many instances the existing roof gable is not square to the eave. In these situations placing a chalk/dry line at 90 degrees to the eave starter using the above method will give the installer a reference line to measure off of to help ensure the tiles are running square and aligned.
2. A quick method of squaring to the eave is the use of a 4-foot T square penciling a line. and using the line to place a chalk/dry line then quickly checking using the 3,4,5 method.
3. Use of multiple lines a cross the roof will help keep tiles aligned and square which can be very helpful when doing meeting points.





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