

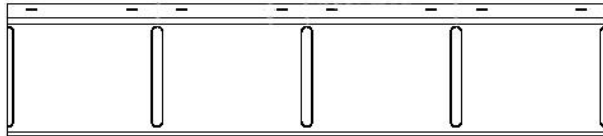


**CLASSIC I & CLASSIC II ROOFING SHINGLES
INSTALLATION INSTRUCTIONS**

Technical Assistance: (877) 674-4645
08:30 AM to 4:00 PM Eastern Time.

(This guide refers to the Classic I & Classic II Shingle as "Classic I")

Profile: The Classic I Shingle is 48" in length and 8.5" high (exposure to weather) with vertical embossments 12" O.C., 7 1/4" x 10 3/4" Joint Pans are provided for weather tight installation.

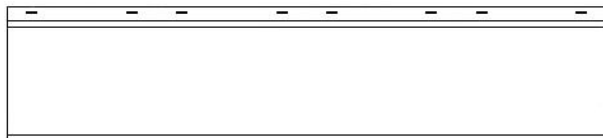


The Classic I Shingle



Joint Pan

Profile: The Classic II Shingle is exactly the same as the Classic I **without** vertical embossments. Joint Pans are provided for weather tight installation.

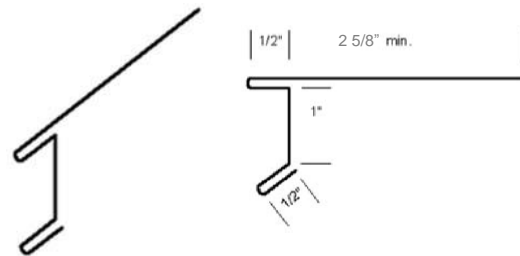


The Classic II Shingle

Underlayment: Surfaces to receive the Classic I Shingles are covered with approved underlayment. In absence of local code requirements, this may be two layers of Type 15 or one layer of Type 30 felt applied to the field of the roof. In areas subject to snow and ice build up (eaves, valleys, behind skylights, etc.), use self sealing membrane (bituthane) or two layers of Type 15 felt applied shingle fashion and cemented together with

roofing cement. Waterproof construction begins at eaves and continues up the roof at least 36" beyond the inside face of the exterior wall line. Underlayments are secured with staples or roofing nails without plastic caps.

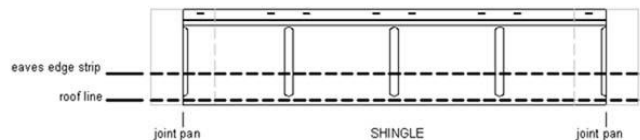
Eave and Rake Edge Strips: Eave and Rake edge strips must be of copper with 1/2" projecting double folds. Inner flange extends onto the roof deck at least 3" and is secured with copper nails spaced not more than 3" apart.



EAVE EDGE

RAKE EDGE

First Course: Installation begins at any location along the eave by locking a joint pan over the eave edge strip. Center of the first joint pan should be at least 12" from a gable, hip or valley. A second joint pan is locked over the edge strip 4' o.c. from the first. (On steeper slopes securing joint pans by nailing through their upper edges makes installation easier.) To assure proper vertical alignment, it is recommended to snap vertical chalk lines (square to the eaves and parallel to each other) at 2 feet on center. This allows the installer to quickly and accurately locate the joint pans. Lower edge of first shingle locks over both joint pans and edge strip; its sides should touch the raised ribs on the joint pans. Shingle is secured with 5 copper nails through slotted holes in its upper flange one at each end and on either side of each embossment. (It is not necessary to nail both sides of each embossment.) Nails are placed close to center of slots and driven so shingle is held tightly to the underlayment but not so tight the flange is deformed.



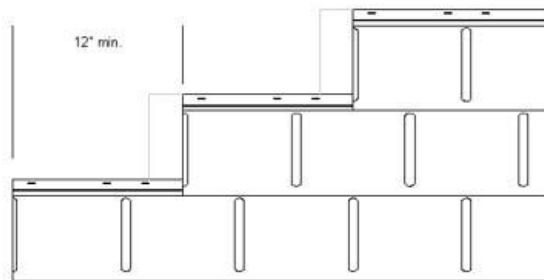
FIRST SHINGLE IN PLACE

Continue placing additional joint pans, 4'0" o.c., and shingles. (If shingles are at least 50 degrees it is not necessary to provide a deliberate space between them; if temperature is below 50 degrees a 1/16" space will accommodate expansion movement.)

CAUTION: Interlocking feature of The Classic I shingles allows less freedom to correct errors than a simple overlap. The first course must be installed straight and level. If eave is bowed or undulates, a condition not uncommon on older construction, the following method can be used to achieve a straight eave line.

First, install drip edge to eaves and gables as specified above. Next, measuring from the low points of the eave, snap a chalk line parallel to the eave at 6 inches. Bend a section of 9 inch wide copper at 6 inches to form a 6"-3" edge flashing. Measure from the chalk line to the leading edge of the drip edge. Trim the 3-inch leg of the flashing as required to allow it to be squeezed (hemmed) onto the drip edge and secure with copper nails 6 inches on center. The result is a straight starting line.

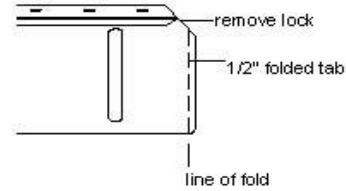
Second Course: Additional courses begin by placing joint pans at location of vertical shingle joints. Regardless of pattern of embossments, shingle end should be offset at least 12" from a vertical joint in the course immediately below.



OFFSET OF VERTICAL JOINTS

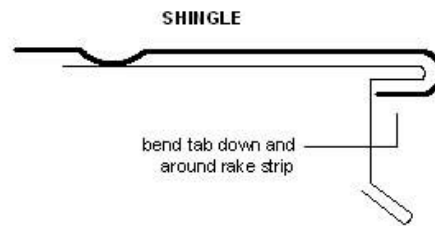
When embossments are staggered one half tab (6"), joint pans are centered between nailing slots.

Gable Rakes: Cut shingles at rakes to project 1/2" beyond rake strip. Trim locks to form a trapezoidal tab from the lower edge to below the bottom of the upper lock.



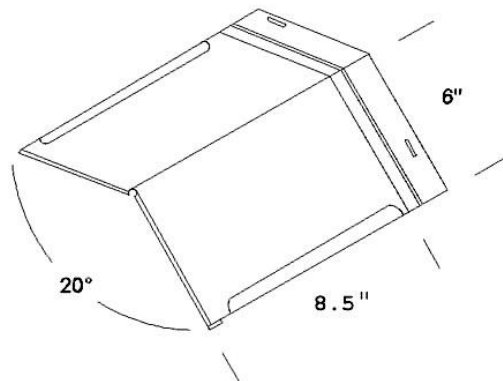
PATTERN FOR GABLE

Bend tab down; set shingle in place; and bend the tab around rake projection to finish lock. Squeeze lock closed with seaming pliers (tongs) to provide a tight connection and a finished, professional look.



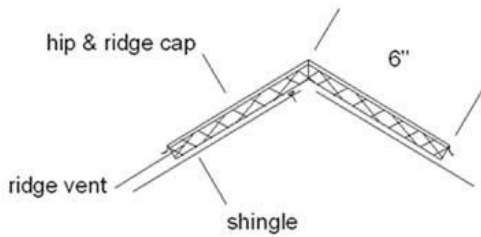
SHINGLE AT GABLE

Hips: Cut shingles to finish within 1" of hip (shingles do not have to meet over hips) and finish hip with Hip and Ridge Caps. Tabs are formed on the lower end of the first cap to lock over shingles at eaves and cap is secured with 2 copper nails. Additional caps lock into cap below and are secured with 2 copper nails. As an alternate, hips may be finished with custom copper hip caps or rolls.



HIP & RIDGE CAP

Ridges: Shingles are applied up to the ridge from both sides; last courses are cut to proper exposure and secured. Ridge venting may be achieved with under shingle vents (up to 1" thick) installed according to manufacturer's instructions. Ridge is finished with Hip & Ridge Caps, or custom caps, in manner described for hips.

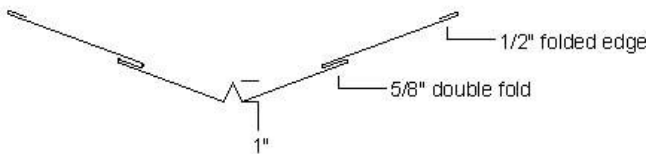


VENTED RIDGE DETAIL

Open Valleys: Open valleys are flashed with 30" wide by 10' long copper sheets. Sides edges of sheets are folded over 1/2"; 6-1/2" from folded edges. 5/8" wide double folds (locks) are formed the length of the sheet. Flashing sheets are centered in the valley and secured with 1 1/2" wide copper cleats 18" apart on both sides. When roofs are of unequal slope or deliver unequal quantities of water to the valley, a 1" high inverted V, (or "W" channel) may be formed in the center of the valley.

DO NOT NAIL SIDES OF VALLEYS!

Upper ends of valley sheets are nailed to roof deck; lower ends lap over the sheet below at least 6".

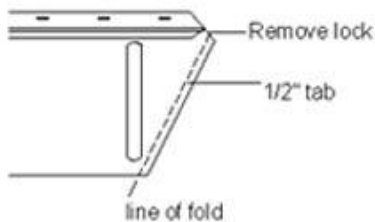


VALLEY WITH "W" CHANNEL

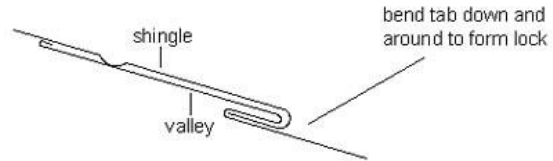
Shingles are cut to required shape and length (to double fold plus 1/2"). Lower and upper locks are trimmed to form a trapezoidal tab from the lower edge to below upper lock. Tab is turned down and under as a 1/2" open fold. Shingles are slid into place, folded edge engaging lock in the valley and secured with at least 2 copper nails.

NAILS MUST NOT PUNCTURE THE VALLEY!

Lock may be dressed with a mallet and block of wood.

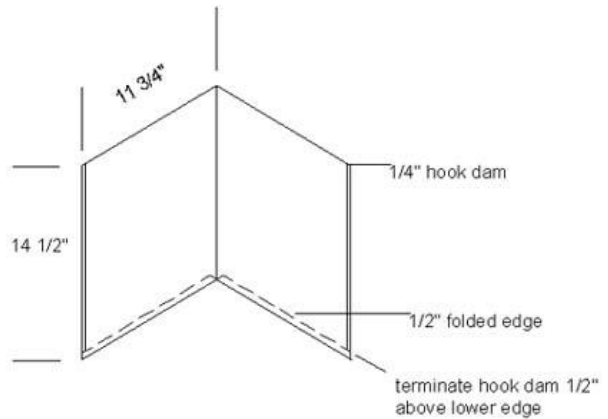


PATTERN FOR VALLEY



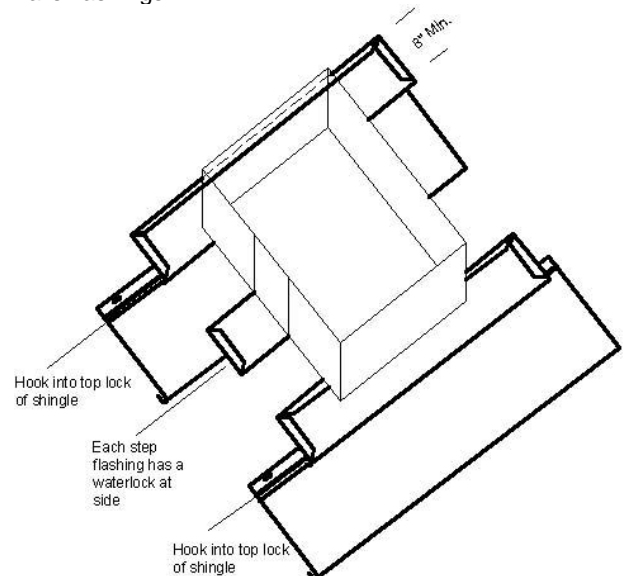
PATTERN FOR SHINGLE IN PLACE

Closed Valleys: Closed Valleys require intersecting roofs to be at the same slope so shingles align at the intersection. Separate pieces of copper, 24" wide by 15" long, are installed with each shingle course. Sides are turned over 1/4" as hook dams; lower edge is turned under 1/2" to engage locks at tops of shingles. Field shingles are then cut to the centerline of the valley, hooked into and covering the valley pan.



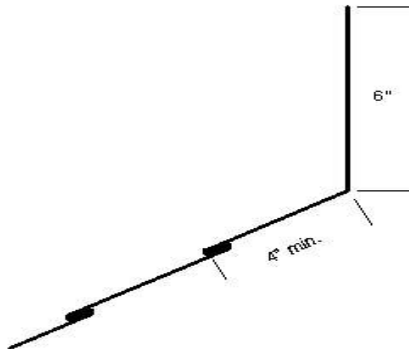
CLOSED VALLEY DETAIL

Chimney & Skylight Flashing: Weatherproofing chimneys, skylights and similar roof penetrations employs Roof to Rising Walls and Roof to Adjacent Walls flashings.



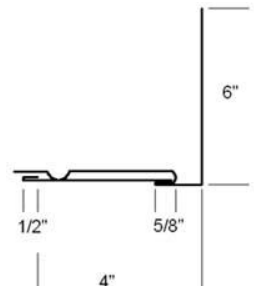
SKYLIGHT DETAIL

Roof to Rising Wall: Shingles are installed to within 1/2" of the wall. The last course is cut lengthwise to the proper exposure. A copper flashing is formed to extend over shingles at least 4" and up the wall 6". When "over shingle" flange exceeds 6" or in areas of severe weather, secure flashing to shingles with locking strip or cleats; secure upper edge with copper nails 3' o.c. A copper cap laps over the flashing at least 3".



ROOF TO RISING WALL

Roof to Adjacent Wall: A copper base flashing is formed to extend onto the roof (under shingles) at least 4". Its outer edge is folded over 1/2"; not less than 3" from this edge a 3/4" wide double fold (lock) is formed. This flashing is placed against wall and secured with 2" wide copper cleats 18" o.c. along its outer edge. Shingles are cut to required length (to double fold plus 1/2"); lower and upper locks are trimmed leaving a trapezoidal tab. Tab is turned under as a 1/2" open fold. Shingle is installed with its folded edge engaging the lock in the flashing, and secured with at least 2 copper nails.

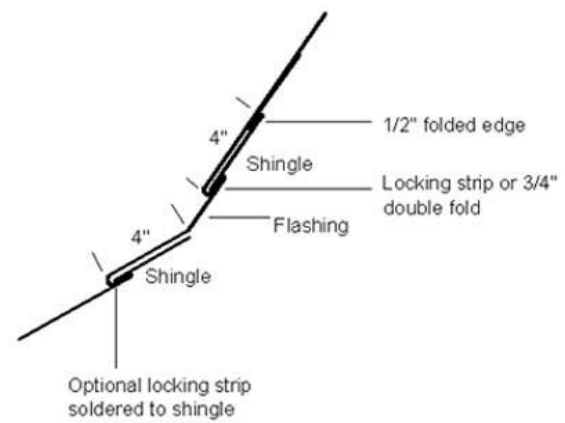


ROOF TO ADJACENT WALL

Upon completion lock may be dressed down with a mallet and block of wood. A copper cap flashing laps over the flashing at least 3".

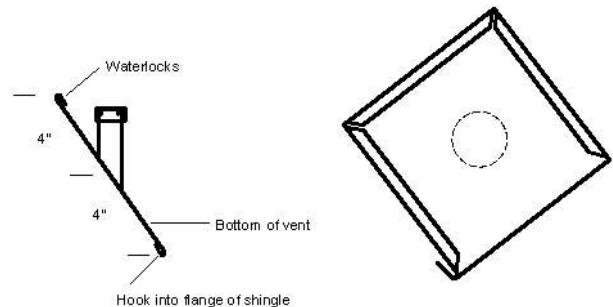
Change of Roof Slope: Change of roof slope may be accomplished by bending The Classic I Shingles at the proper location. Alternately a change of slope flashing is formed to extend over shingles on the lower slope at least 4" and under shingles on the upper slope not less

than 4". Often the flashing's lower edge is turned under 1/2" to hook over a locking strip secured (soldered) to the shingles, its upper edge is secured with cleats 2' o.c.



CHANGE OF SLOPE

Plumbing Vents: Form a copper vent cover from 16-ounce minimum copper. Tube should have a fully soldered lock seam and is attached to a roof flange at the appropriate slope. The bottom edge of the tube is snipped to provide alternating tabs, which lock the tube to the flange. This joint is also fully soldered. The top of the pipe is folded over and into the top of the vent stack. A pair of stove pipe crimpers makes this step easier but needle nose pliers work well also.



PLUMBING VENT DETAIL

Physical Data:

Composition	99.9% Pure Copper
Thickness	0.019" (25 B&S gauge)
Tensile Strength	36,000 PSI
Length	48"
Exposure	8.5"
Coverage per shingle	2.85 square feet
Packaging	18 shingles + joint pans (1/2 square/box)
Coverage per package	51 square feet (1/2 square)
Packages per square	2
Weight per square	143 pounds
Standard	ASTM B370