

*Here's a Tip... If flashed incorrectly, corner locations are the most likely areas for leaks to occur.*

## MASONRY CHIMNEYS AND WALLS

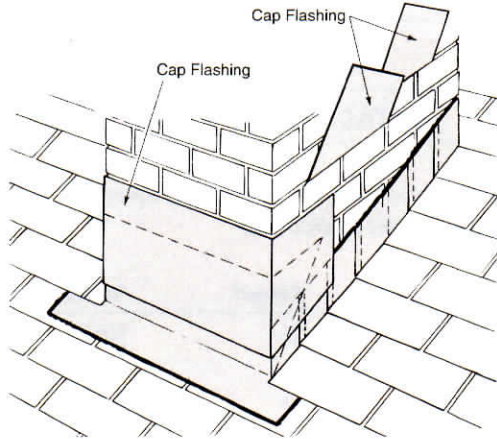


Figure 6-11: Applying cap flashing.

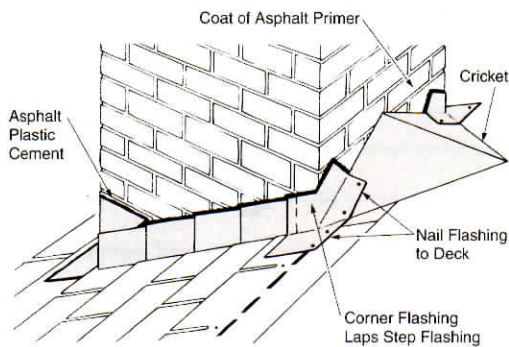


Figure 6-12: Applying corner flashing.

If a cricket is not used (Figure 6-13), the vertical sidewall base flashing should be pre-bent and extend up the chimney at least 6" and up the roof deck at least 12", with appropriately formed sides and corners. The first course of shingle material to cross the roof deck on the uppermost side of the chimney should be trimmed back a minimum of 2" from the chimney vertical flashing bend and set in asphalt plastic cement. This 2" setback allows quick water drainage, prevents water from working up under the shingles, and promotes a natural cleaning of debris from the high side of the chimney.

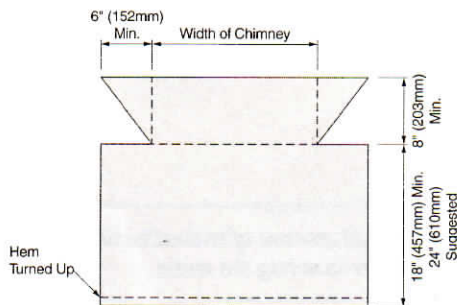
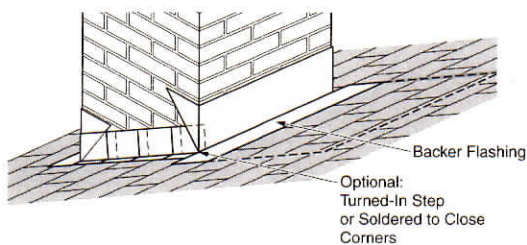


Figure 6-13: Example of sheet metal back flashing for upslope portion of masonry chimney.

**CONTINUOUS COUNTER FLASHING:** This optional counter flashing technique uses a continuous metal piece instead of the typical staggered (stepped) counter flashing along the side of a chimney or wall with mortar joints. It is an alternative to stepped counter flashing, which can lead to water leaks along the vertical joints in high wind or permit the entry of wind-driven, fine-grained snow. With continuous counter flashing, the apron flashing is continuous over the shingles and up the masonry wall. The vertical wall portion is then covered with counter flashing (Figure 6-14).

### BEFORE CUTTING THE "REGLET":

1. Mount a guide or ledger on the side of the chimney or wall to be cut.
2. With a dry masonry or diamond wheel on a circular saw or grinder, cut a groove (also known as a "reglet" or "raggle") in a straight line parallel to the roof slope. The groove should be a minimum of 1" deep into the masonry ( $1\frac{1}{4}$ " to  $1\frac{1}{2}$ " is preferred).

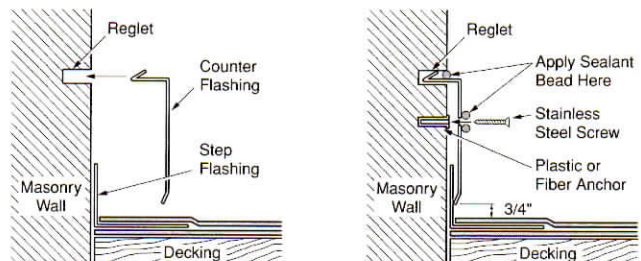
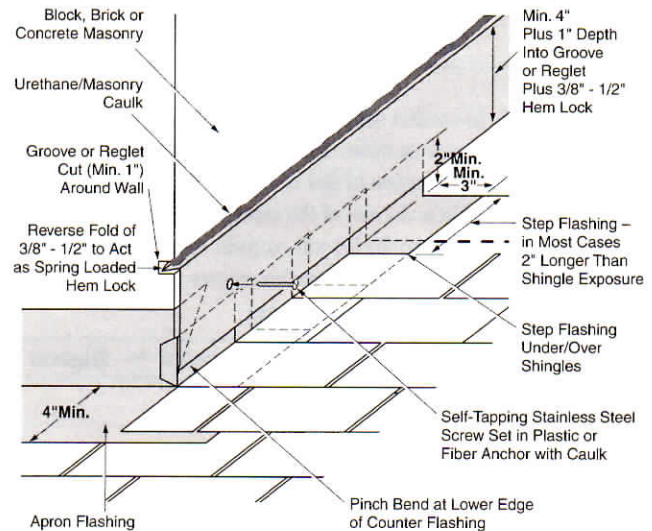


Figure 6-14: Continuous counter flashing against masonry chimneys and walls.

Apply shingles and step flashing to the roof at the joint with the masonry chimney or wall. Pay particular attention to any metal corner bends and joints (Figure 6-14).

Choose the appropriate length and width dimensions of metal to be used for continuous counter flashing. Plan your sequence of bends in advance, and form the metal. A metal brake is preferred for accurate bends. Also, don't forget to allow extra length to accommodate each bend (obviously, this depends on the thickness of the metal used).



*Here's a Tip...* Thoroughly clean the groove with water to remove all dust. Wet-cleaning of the masonry joint is the best way to remove dust that can prevent proper adhesion of caulking material. Compressed air, vacuuming, or use of a wire brush are not as thorough as cleaning with water. Allow to dry completely.

## FLASHING AROUND CHIMNEYS

Because chimneys are usually built on an independent foundation that is separated from the main house foundation, the chimney can move independently of the rest of the house. To allow for chimney/deck movement, the base flashing is secured to the roof deck and counter or cap flashing is secured to the chimney. When movement occurs, the step-cap flashing system will act as a moveable joint.

In moderate to severe climates that experience heavy snow, ice or high winds, waterproofing shingle underlayment such as CertainTeed WinterGuard™ is recommended for installation around the base of the chimney. Prime the masonry surfaces and run the waterproofing underlayment up the sidewall 3" or 4". It is a flexible material that will accommodate the differential movement of chimney and deck.

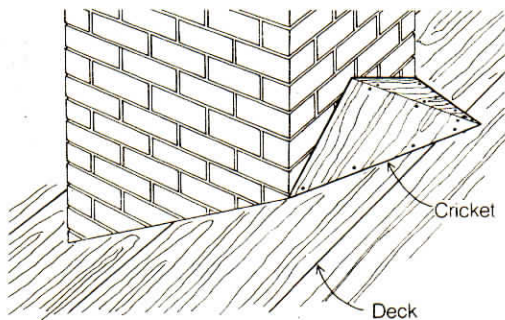


Figure 6-8: Chimney through the roof deck.

For chimneys projecting through the roof surface, we recommend that a "cricket" be installed at the intersection of the uppermost face of the chimney and the roof deck. The cricket, sometimes called a wood saddle, is an important element in preserving the integrity of the flashing that will be installed because it prevents the build-up of ice and snow at the rear of the chimney and diverts water runoff around the chimney. It also prevents water from "ponding" and backing up under the shingles during winter freeze/thaw periods.

The cricket should be in place before roofing installation begins, because all roofing materials from the felt underlayment to the roofing shingles are applied over it.

A cricket consists of two triangular sections of plywood joined to form a level ridge that extends from the centerline of the chimney back to the roof deck. Nail the sections to the deck and to each other along their meeting edge, customizing as necessary to get a tight fit.

Crickets are recommended when a chimney is wider than 24", the roof pitch is 6/12 or greater, and where snow and ice accumulations are likely.

Apply shingles up to the front vertical edge of the chimney. Apply base flashing against the front vertical wall as shown in Figure 6-9. Apply step flashing to the side and back walls as described previously for side walls.

*Here's a Tip...* When flashing at a wall or chimney where the two points meet, place an extra piece of step flashing on each side with a horizontal cut about 3" at the bend on both pieces. Interlock them together for an extra water-tight fit. (Thanks to Marty Holley from Gabanna, OH.)

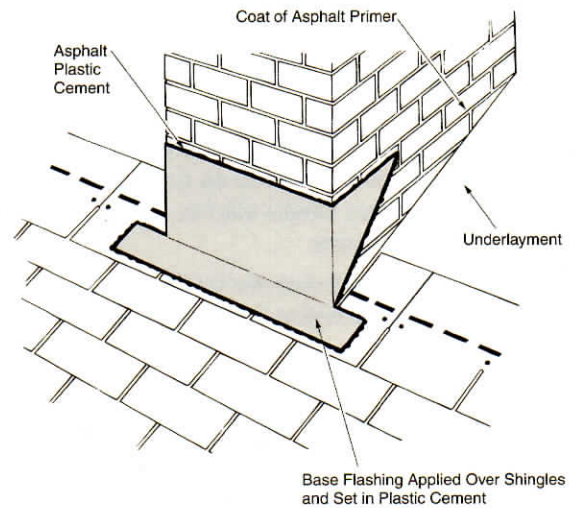


Figure 6-9: Chimney base flashing application.

Cap flashing techniques will vary with the type of chimney finish, such as stucco or brick. In general, for positive exclusion of water from the chimney joint, begin by setting the metal cap flashing, typically copper, aluminum, or galvanized, into the brickwork as shown in Figure 6-10. This is done by cutting out a mortar joint to a depth of 1½" and inserting the bent edge of the flashing into the cleared joint. Once in place and being under a slight amount of spring tension, the flashing cannot be dislodged easily. Refill the joint with portland cement mortar, silicone caulk, or use a soft metal wedge and polyurethane sealant. Finally, bend the flashing down to cover the base flashing, or pre-bend it so it will lie snugly against the masonry.

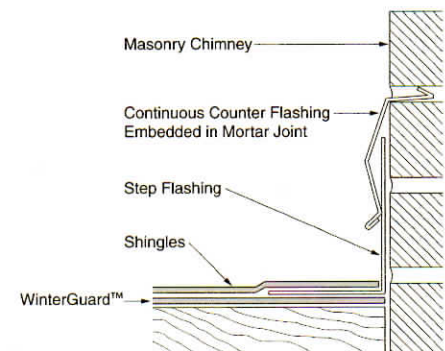


Figure 6-10: Through-wall metal counter flashing embedded in masonry.

Use one continuous piece of cap flashing on the lowermost and uppermost sides of the chimney as shown in Figure 6-11. On the sides of the chimney, use several pieces of similar-sized flashing, trimming each to fit the particular location of brick joint and roof pitch. Start the side units at the lowest point and overlap each at least 3" side-to-side. If the sides of the chimney have a continuous surface, such as a stucco finished chimney, use a continuous piece of cap flashing.