

Installation Guide

1. Storage

It is recommended that *Authentic Roof*[™] slates be stored at temperatures above 32 °F (0 °C). Low temperatures will not affect the slates themselves, but may cause difficulty when installing. If slates are stored outdoors, place them in an environment that will allow them to return to a minimum ambient temperature of 50 °F (10 °C). Do not store pallets of slates on top of each other as this may cause cosmetic damage to the slates.

Important Reminder:

*Our polymer base alloy is virtually resistant to expansion/contraction. However, your roof deck is not; and this is why roof ventilation is so critical. To combat this shifting in the deck we have engineered spacer tabs to help ensure proper spacing between slates. The use of a nail gun directly counteracts these engineered tabs; **do not** use a nail gun to install the slates.*

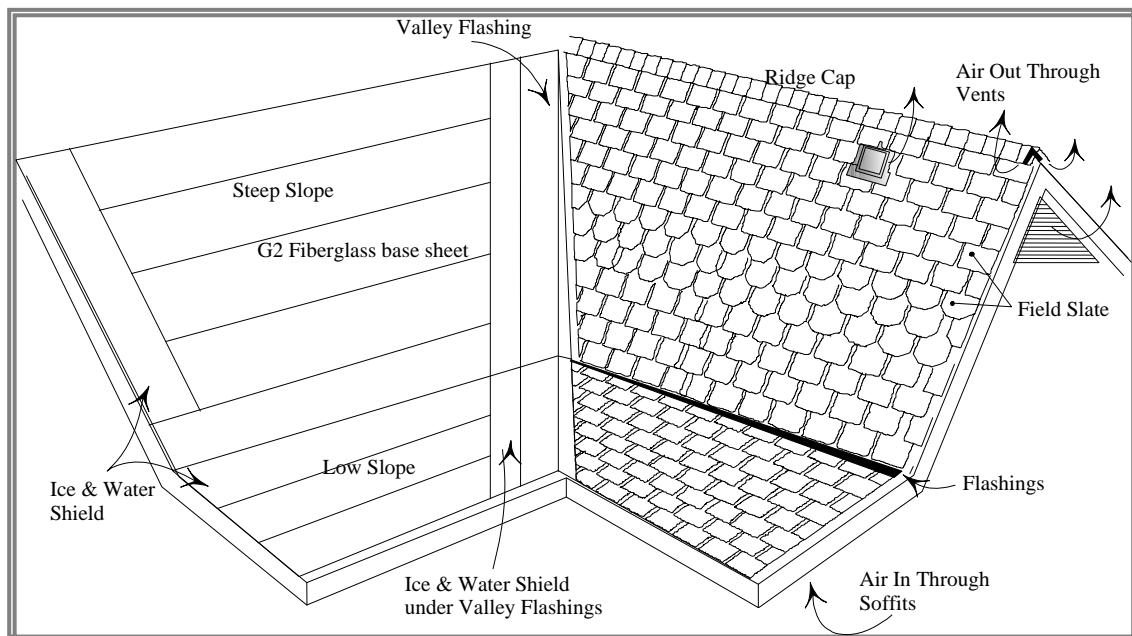


Figure 1

2. Cutting and Fastening

Authentic Roof™ slates should be hand nailed with a hammer to the roof deck with standard 1½" (38 mm) galvanized roofing nails; however, copper or stainless steel nails are the best choice due to their superior life expectancy. Place nails in the divots provided and ensure the head of the nail is flush with the surface of the slate. When cuts of a slate are required, with a utility knife simply score deep the face of the slate, and then snap the tile back in the opposite direction. The slates may also be cut using a circular saw, jigsaw or miter saw.

3. Color variation

Similar to real slate, *Authentic Roof*™ slates fluctuate in color from pallet to pallet. For an authentic look, all slates should be mixed during installation. This will ensure any color contrast to be evenly spread and balanced throughout the roof; minimizing any blotching of colors for visual appeal. For best results create presorted bundles by selecting one bundle from every pallet, then selecting one slate from every bundle. Create these mixed bundles until the roof installation is finished. Mechanically mixing the slates evenly spreads out each bundle as far as possible.

Important Reminder:

By taking one slate from each bundle and each bundle from a different skid, this will spread any color variation evenly. Crowe Building Products Ltd. will not be held liable for improper installation of the slates.

4. Roof Ventilation

It is imperative that your roof be vented appropriately. Without proper ventilation your roof is prone to condensation, mold mildew, warping of the roof deck, and/or deteriorating building materials. All roof structures should be vented in order to allow heat buildup and moisture to escape the attic area. Vents are to be placed proportionately at the eaves, i.e., soffits (for cold air in) and at or near the ridge (for hot air out). Cross-flow ventilation should be allowed for in valleys where Stress Skin roof panels or cathedral ceilings are in use. Metal, wood or polymer ridge vents are all acceptable.

Important Reminder:

Always ensure that your roof has adequate roof ventilation regardless of the roofing material being used. If not you may be at risk of serious structural damage.

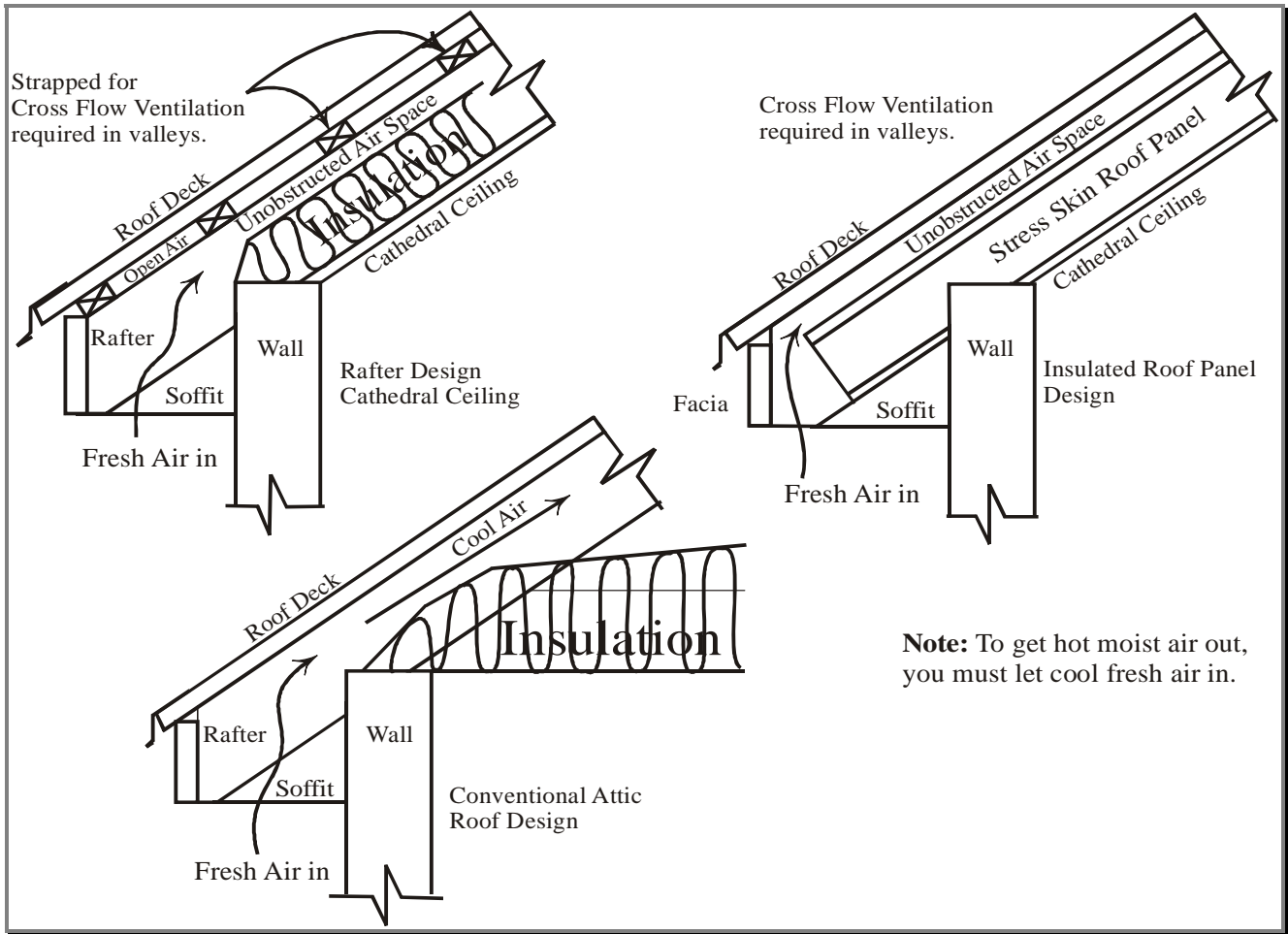


Figure 2

5. Preparing the roof deck

Solid Decking

Authentic Roof™ slates are to be installed on a sloped roof structure of no less than a 3/12 (14°) pitch. On a 3/12 (14°) to 4/12 (18°) pitch, the roof should be sealed with a peel and stick moisture resistant underlay (i.e. "Ice & Water Shield"®). The slates must be installed on a minimum of APA 15/32" (12 mm) plywood or 7/16" (11 mm) OSB and should never be installed over existing shingles or uneven roof decking. We recommend the use of 1/2" (13 mm) plywood.

Skip Sheeting

Authentic Roof™ can be installed on open skip sheeting (lats). On this type of installation, there must be a lat supporting the bottom edge of the slate, the nailing points located along the middle of the slate and at the top of the slate. Lat size should be a minimum of 1" x 3" (2.5 x 7.6 cm) nominal sizing and spacing between lats should not exceed 4" (10 cm).

Stress Skin Roof Panels

Authentic Roof™ can be installed on stress skin roof panels if the roof is "vertically" strapped and sheeted to create air space for ventilation. Due to heat buildup, all roofing requires air space; stress skin roof panels are no exception, eave and ridge venting is required. Allowances for cross-flow ventilation have to be made for valley areas.

Important Reminder:

Make sure the roof deck is a smooth solid surface, remove any debris and replace any necessary boards.

6. Underlay

A peel and stick water protector material must be installed in all valleys and is recommended over all eaves, open gable ends, skylights, pipes and any other protruding objects in the roof deck where the penetration of water and/or ice is possible. The remaining portion of the roof is to be covered with G2 Fiberglass base sheeting. Always install underlay horizontally, starting at the bottom (eaves) of the roof working your way to the top, ensuring that it is overlapped 6" (15 cm) downward to shed any water down the roof.

Important Reminder:

Authentic Roof is a standalone Class A rated roofing material, no special fire-rated underlay is required.

7. Drip Edge and Flashings

Drip edge must be installed on the bottom edge of the roof (eaves) and on the open gable ends to deflect any wind driven rain from penetrating in under the slates. Similarly, the installation of flashing is required in valleys, along side walls of dormers, around chimneys and pipes and any protruding structure that may hold a snow load or allow water to penetrate in. Metal flashings should be a minimum 26 gauge (0.4 mm) painted galvanized or if preferred, use copper. The use of a W-flashing in valleys is recommended.

Important Reminder:

Do not mix copper flashings with aluminum eaves trough. Sulfites from the copper will corrode the aluminum.

8. Starter Course

Cut the top 6" (15 cm) off the starter row of slates, this provides a step down for the third course of slates. When installing the starter row be sure to allow a 1" (2.5 cm) overhang from the drip edge. To ensure a secure fit, nail the starter slate down with two standard 1½" (3.8 cm) galvanized roofing nails in the nail divots located on the slate. Align the slate with a 3/16" (4.75 mm) space between slates using the engineered tabs on the sides of the slates.

Important Reminder:

Don't forget that the first row of exposed slates sits directly on top of the starter strip. When installing the first row, make sure they are shifted exactly half a slate sideways so to avoid slate side edges aligning.

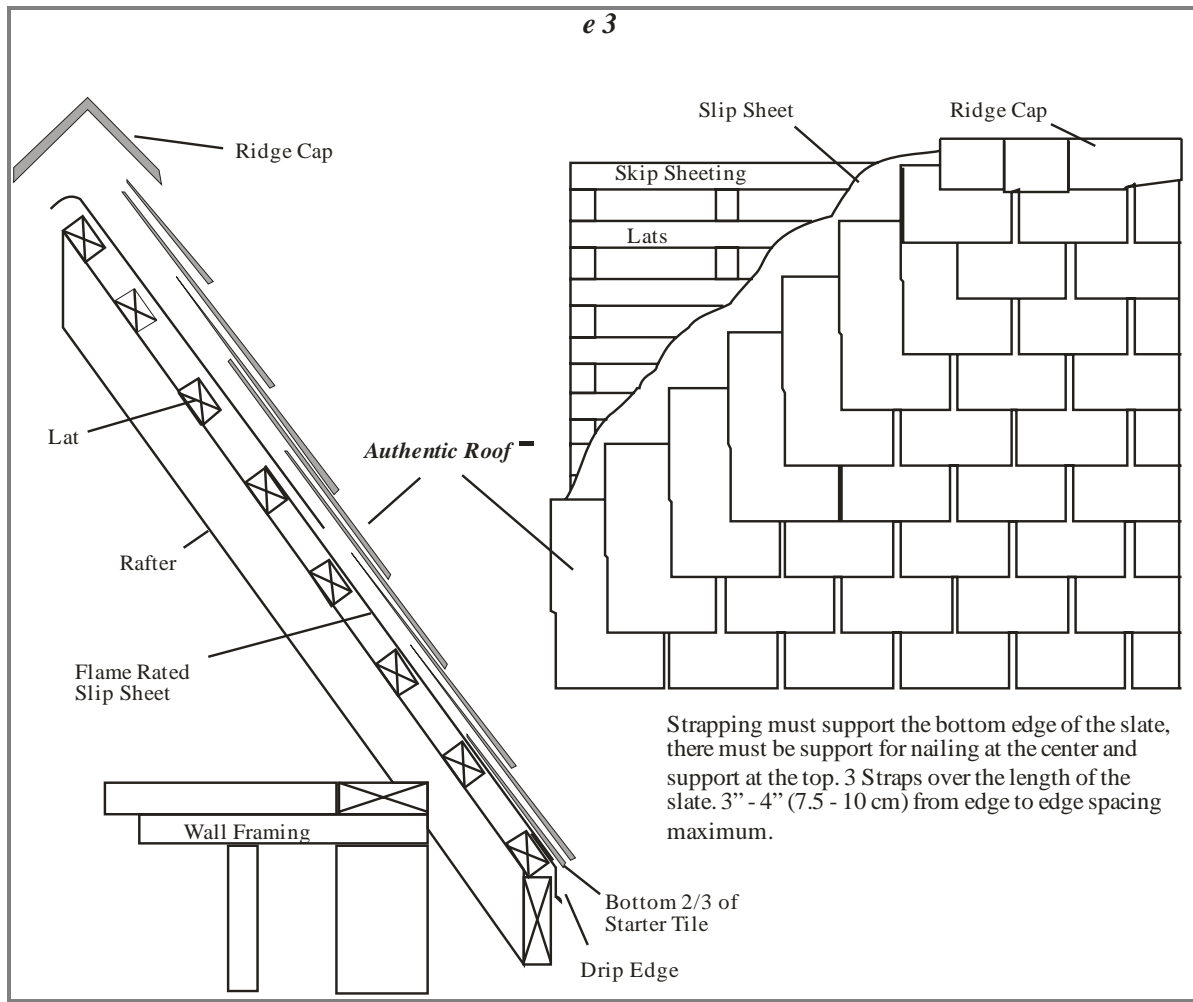


Figure 3

9. Installation

Authentic Roof™ slates are designed to be installed one at a time. Start at the bottom of the roof and install row by row working your way up the roof. Using the engineered tabs located on the sides of the slates, ensure there is a minimum 3/16" (4.75 mm) spacing between slates. Chalk lines should be snapped on the underlay to ensure a straight line of installation. When approaching pipes, chimneys or other objects that require cutting, simply outline the desired shape and use a utility knife, circular saw or jigsaw to cut it out. Continue installing **Authentic Roof**™ directly spaced one half slate over to ensure a consistent overlapping pattern.

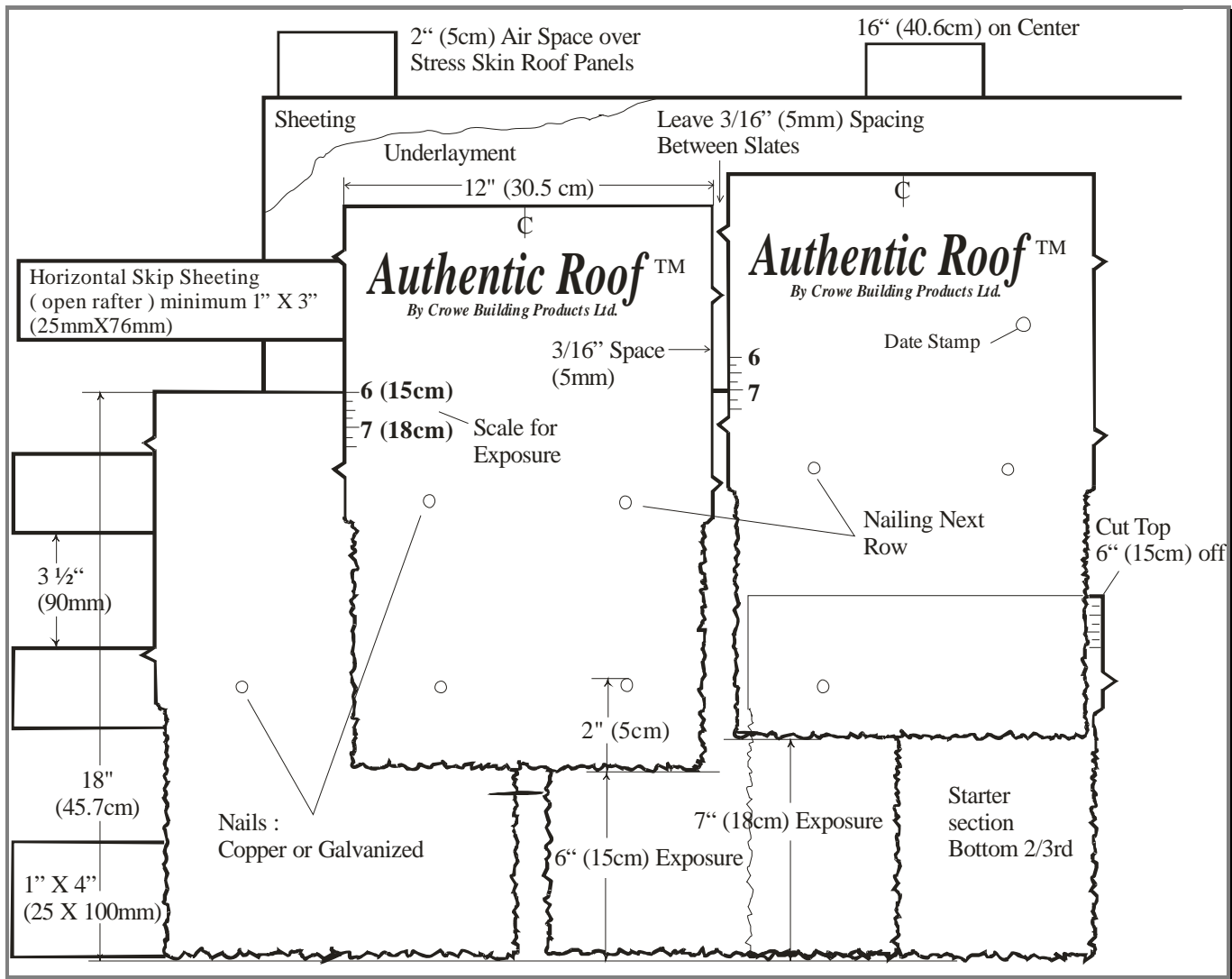


Figure 4

Important Reminder:

Frequently stop to examine your work from ground level to ensure that optimum visual appeal is being achieved. Do not forget to mix the slates on installation and do not use a nail gun to install **Authentic Roof™** slates. Exposures are 6", 6.5" and 7" (15 cm, 16.5 cm, and 18 cm) measured from the bottom of the slate. In high wind areas, a 6" (15 cm) exposure is required. The use of slate hooks is advised to attempt to correct any errors due to improper exposure selection. One hook should be placed in the center at the bottom of the slate. (Not warranted against hurricanes).

10. Installing Hip and Ridge Capping

Before installing hip or ridge capping, the sides of the slates should be slightly shaved off; starting at the top of the shale edge, sloping inward 3/4" (2 cm) from the edge at the top of the slate. This is done for cosmetic reasons only, so that the top points of the slates do not protrude out under the sides of the overlapping slates above. The same 1 1/2" (3.8 cm) standard roofing nails should be used to install the ridge cap. However, with the use of ridge venting, longer nails will be required to reach through the roof decking. It is difficult to bend the ridge caps to the desired shape. A heat strip gun must be used to warm the ridge channel located on the back of the ridge cap slates for increased flexibility. For the true authentic look, it is acceptable to use copper or zinc coated flashing as capping.

Important Reminder:

Score off the slight angle that extends past eaves for a uniform even look.

11. Snow Guards

For geographical areas where snow is present, the use of snow guards is highly recommended. Just like real slate, *Authentic Roof*™ slates use its smooth surface to shed snow that can apply extreme weight loads to your roof. For the added safety of pedestrian traffic below the roof, snow guards should be installed over all doorways, walkways and any areas likely to be walked along below.

NOTE:

Authentic Roof™ was invented to be “Do-It-Yourself” friendly; installation does not require any specialized equipment or training and can be completed by anyone with a solid knowledge of proper roofing procedures. Installation should be in accordance with these instructions and local state or provincial building codes. Failure to comply will void the warranty.

Questions regarding installation and product specifications should be forwarded to one of our technical support representatives at 1-888-533-3358 or email; techsupport@authenticroof.com.