IKO Proven Performance™ | DYNASTY® Performance Shingles | *with* ***ArmourZone®***

Application Instructions

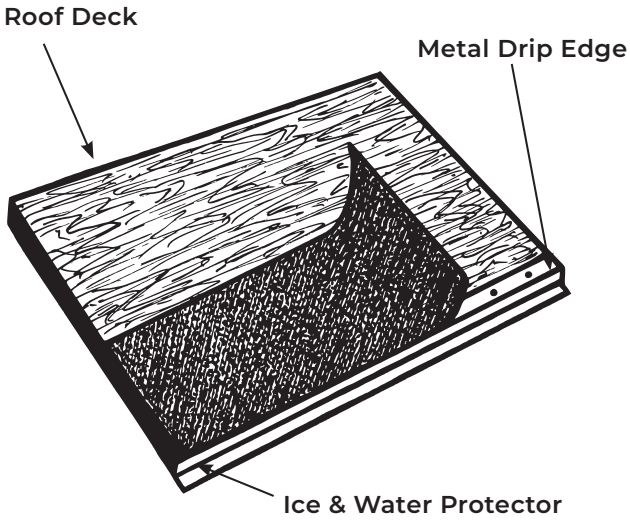
ENGLISH

IMPORTANT MESSAGE • PLEASE READ! IKO assumes no responsibility for leaks or defects resulting from improperly installed shingles, improper preparation of the surface to be roofed over, or failing to provide proper ventilation in accordance with local building codes. Use caution when stacking bundles on sloped roofs.

ROOF SLOPE / ROOF DECKS: Never apply asphalt shingles to roof slopes less than 2:12. For slopes 2:12 to less than 4:12 (LOW SLOPE), see special underlayment requirements outlined below. We do not recommend the application of our roof shingles directly to any type of roof insulation, including perlite or fiberglass, foam, wood fiber, or similar products. Further, the application of our roofing shingles directly over any structural decks including gypsum, nailable concrete, or similar products (without our prior approval) will void the warranty.

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STEPS 1-3



STEP 1:

PREPARE THE ROOF DECK: Deck must be smooth, firm, clean, dry and securely nailed. Wood panel decking is to be exterior grade, conforming to building code requirements. Panels are to be 9.5 mm min. thick plywood, or 4.8 mm min. thick non-veneer. The installation of asphalt shingles on dimensional lumber (including shiplap/board decks) is not recommended as it may potentially cause buckling problems,which are not covered by our Limited Warranty.

STEP 2:

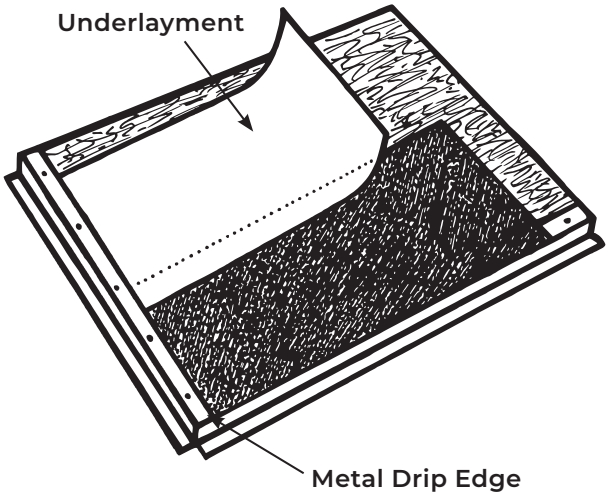
APPLY DRIP EDGE ALONG EAVES: Apply metal drip edge over underlayment or directly to the deck along the eaves, spacing nails approximately 305 mm apart, conforming to building code requirements.

STEP 3:

EAVE PROTECTION: Apply eave protection, such as IKO StormShield® Ice & Water Protector, as per building code requirements and manufacturer's instructions, overhanging eaves by 5 mm to 20 mm and extending up the roof at least 610 mm beyond the vertical projection of the interior surface of the outside wall. NOTE: IKO recommends the use of eave protection in all situations, however, if no ice and water protector is required by your local code or standard, then alternately apply first course of underlayment overhanging the eaves by 5 mm to 20 mm.

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STEPS 4-5



STEP 4:

UNDERLAYMENT: Apply either asphalt saturated felt or synthetic underlayment, such as IKO's Stormtite™, in horizontal courses up the roof with 50 mm side laps and 100 mm end laps. Trim the sheet to fit the final course at the peak. One layer of underlayment is required over the entire deck to qualify for an ASTM E108/UL790 Class A fire-resistance rating or which may be required per the local building code.

LOW SLOPE: For roof slopes less than 4:12 down to 2:12 apply underlayment in successive courses by overlapping the preceding sheet by 480 mm with 100 mm end laps. Alternatively, apply a single layer of ice and water protector over the entire deck per manufacturer's instructions.

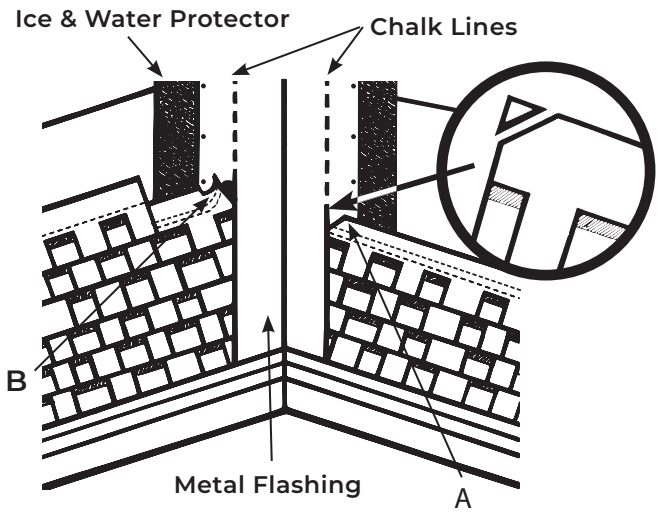
NOTE: *SHINGLES APPLIED ACCORDING TO THESE INSTRUCTIONS ON SLOPES 3:12 TO 4:12 WILL BE WARRANTED FOR THE FULL WARRANTY TERM. SHINGLES ON SLOPES LESS THAN 3:12 DOWN TO 2:12 WILL BE WARRANTED FOR 12 YEARS.*

STEP 5:

APPLY DRIP EDGE AT THE RAKES: Apply metal drip edge on top of any underlayment along rake edges, spacing nails approximately 305 mm apart.

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STEPS 6-7



STEP 6:

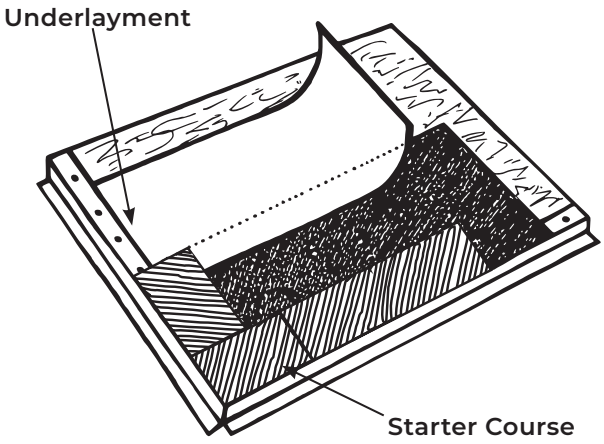
INSTALL FLASHING: Corrosion-resistant flashing must be used to help prevent leaks where a roof meets a wall, another roof, a chimney or other objects that penetrate a roof. Flashing shall conform to the requirements of applicable building code and good roofing practice.

STEP 7:

INSTALL OPEN METAL VALLEYS: Metal valleys are recommended. (Closed valley applications are acceptable but not recommended. Please see Limited Warranty for details.) Complete valley flashing before shingles are applied. Center a 915 mm wide strip of ice and water protector in the valley and then fasten at the edges with only enough nails to hold in place. Center a minimum 610 mm wide, minimum 28 gauge pre-finished/galvanized metal valley liner in the valley, and fasten the edges with only enough nails to hold in place. Snap two chalk lines the full length of the valley, 150 mm apart at the top and increasing in width 3 mm per 1/3 of a metre towards the bottom. When the shingles are being applied, lay them over the valley flashing, trim the ends to the chalk line, and cut a 50 mm triangle off the corner to direct water into the valley (A). Embed the valley end of each shingle into a 75 mm band of asphalt plastic cement(B). Do not place a nail in the shingle closer than 50 mm from the chalk line.

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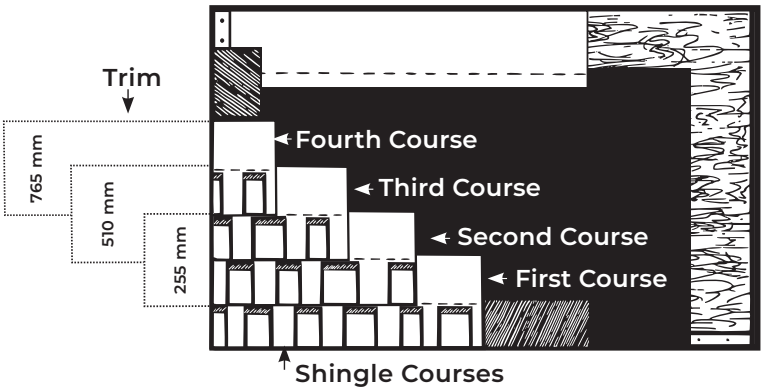
STEP 8



STEP 8:

INSTALL STARTER COURSE: IKO recommends using Leading Edge Plus™ Starter Shingles. Fold the Leading Edge Plus shingle along the perforation to separate. Cut the first starter shingle in half. Beginning at the left corner of the roof, start the eaves course by positioning one of the halves granule side up with the sealant adjacent to the eaves. It should overhang the eaves and rake edge by 5 mm to 20 mm. Start the rake course by taking the remaining half and positioning it flush to the top edge of the eaves starter with the sealant adjacent to the rake edge overhanging the rake edge by 5 mm to 20 mm. Fasten the half-length shingles with nails located about 75 mm from the eaves edge and 25 mm in from each end with a third in the center. Complete the eave and rake starter courses with full lengths of starter shingles maintaining a 5 mm to 20 mm overhang, and fastening with four nails per shingle. Alternatively, apply IKO EdgeSeal as directed by EdgeSeal application Instructions.

STEPS 9-13

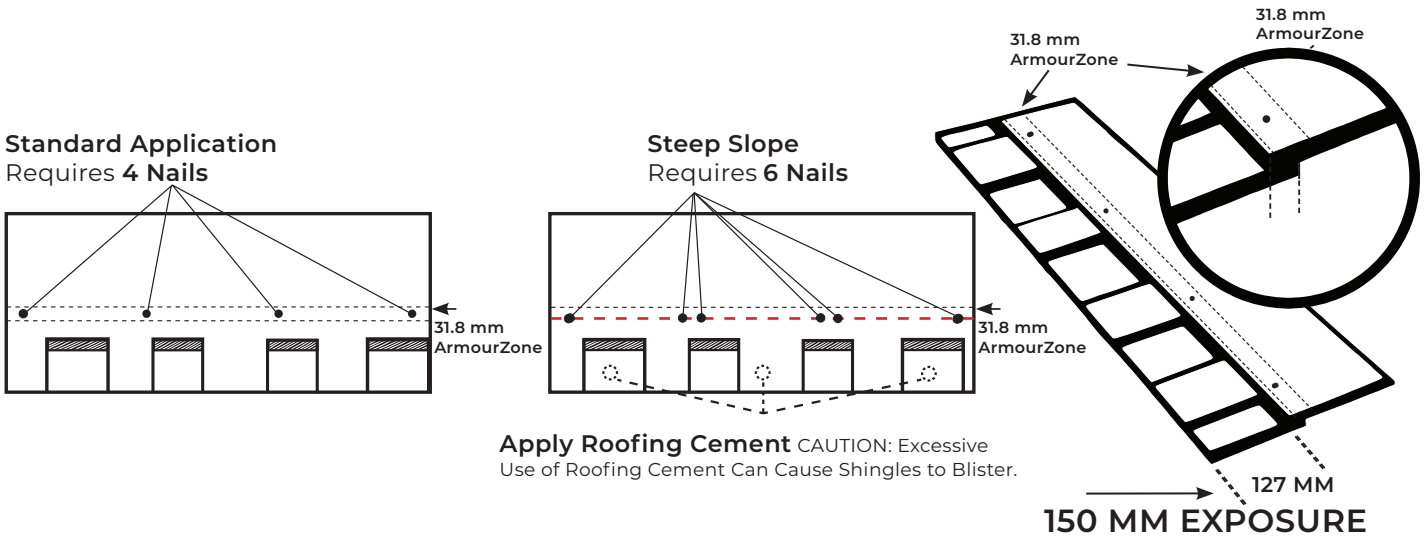


STEP 9:

INSTALL THE FIRST COURSE: Start with a full length shingle applied flush with starter course at rake and eave. Use four nails per shingle placed as shown below. After the first shingle in the course is installed, continue with full length shingles to complete the first course, trimming the last shingle so that it matches the overhang of the starter course below.

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IMPORTANT! — PROPER NAILING



PROPER NAILING:

NAILING ON STEEP SLOPES: On slopes of 21:12 (60°) or more, use six nails per shingle placed as shown above. NOTE: Each nail MUST penetrate both layers of the shingle by nailing into the lower nail line only. Ensure that no nail is within 50 mm of a joint/cutout of the underlying shingle. Seal down each shingle at time of application with three 25 mm diameter spots of roofing cement placed under the shingle 50 mm above the bottom edge and equally spaced along the shingle. Use roofing cement sparingly, as excessive amounts may cause blistering.

STEP 10:

CHALK LINES: To aid in alignment, snap horizontal chalk lines. Exposure is 150 mm.

STEP 11:

INSTALL THE SECOND, THIRD AND FOURTH COURSES: Trim off 255 mm, 510 mm, and 765 mm respectively, from the left end of the starting shingle and apply to overhang rake edge by 5 mm to 20 mm. Continue each course across the roof with full shingles butting ends loosely. Align the bottom
edge of the shingles with the tops of the saw teeth of the shingles in the underlying course. Note: Other offsets between 150 mm – 255 mm may be used. These alternative offsets will not adversely affect the applicable provisions of IKO's Limited Warranty, but may in some instances result in aesthetic issues.

STEP 12:

INSTALL THE FIFTH AND SUCCEEDING COURSES: Repeat the sequence of the first four courses up the roof. For maximum wind protection, cement shingles at rake edges.

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STEP 13:

MANUALLY SEAL SHINGLES (IF NEEDED): Shingles should seal to the underlying course when the factory applied asphalt sealant is sufficiently warmed by the heat of direct sunlight. When conditions such as cool weather, high winds or blowing dust might limit the effectiveness of the sealing strip, please follow the steep slope requirements above and manually apply roofing cement.

STEP 14:

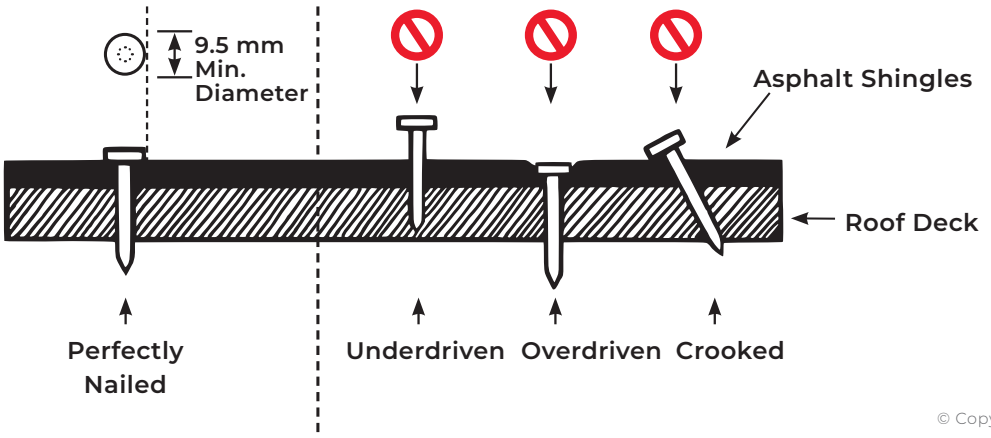
INSTALL HIPS AND RIDGES: IKO recommends its pre-cut hip and ridge products, or pre-formed high profile IKO UltraHP. For IKO pre-cut hip and ridge products, bend each piece over the hip or ridge, and nail per instructions on the wrapper. The exposed nail heads of the final shingle should be covered with roofing cement. For IKO UltraHP, follow the instructions on the box. Prior to application in cold weather, store hip and ridge shingles in a heated area to allow for easier bending.

IMPORTANT MESSAGE • PLEASE READ!

Shingles should seal to the underlying course when the factory applied asphalt sealant is sufficiently warmed by the heat of direct sunlight. When application conditions might limit the effectiveness of the sealing strip, such as in cool weather or in areas subject to high winds or blowing dust, shingle adherence should be ensured through manual sealing as described above. Starter strip shingles must be used at all eaves. Manual sealing is not required in the state of Florida.

IMPORTANT: FOR APPLICATIONS IT IS CRITICAL TO USE THE NAIL LINES AS A GUIDE AND POSITION NAILS IN EITHER NAIL LINE, OR IN THE ZONE BETWEEN THE NAIL LINES. IMPROPER NAILING CAN VOID IKO'S LIMITED WARRANTY.

FASTENERS: Nails must be 11 or 12-gauge roofing nails, corrosion-resistant, with at least 9.5 mm heads, and at least 25 mm long. For decks 20 mm thick or thicker, nails must go at least 20 mm into the deck. On thinner decks, nails must go at least 3 mm through the deck.



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