



technical bulletin

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Re-roofing with Metric Shingles

This bulletin provides general guidelines for reroofing using “metric” type asphalt shingles. Metric shingles are slightly larger than standard 12” x 36” shingles and typically measure 13¼” x 39³/₈”. Variations of two basic application methods are commonly used: bridging and nesting. Either method will provide satisfactory results when properly applied. Additional reroofing recommendations may be found in ARMA’s Residential Asphalt Roofing Manual.

Bridging

Bridging over an existing 5” exposure strip shingle roof:

1) Starter Strip

Remove the tab portion from a full-size shingle and position the remaining strip over the existing roof (with the factory-applied adhesive strip along the eaves). Cut a half tab (69/16”) from the rake end and apply the remaining portion (13¼” x 32¹³/₁₆”) at the eaves, overlapping the butts of the existing second course. Continue the starter strip by applying full length shingle strips (without tabs) evenly along the existing roof at the eaves.

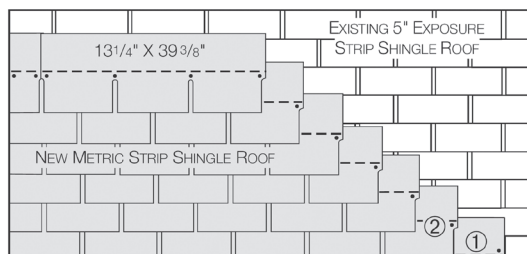
Note: The existing roof should overhang the eaves far enough to carry water off into the gutter. If this is not the case, cut and apply the starter strip so that it will provide sufficient overhang for proper drainage.

2) First Course

Start with a full-size shingle applied flush with the starter strip along the eaves. This course should overlap the butts of the third course of the existing roof.

3) Second and Succeeding Courses

Remove a half tab (69/16”) from the rake end of a full-size shingle and apply the remaining portion (13¼” x 32¹³/₁₆”) over the headlap of the first course, providing a first course exposure of 55/8”. Continue with full-length shingles. Begin each succeeding course - through the sixth - with a shingle from which an additional half tab (69/16”) has been removed to establish an across-and-up application pattern. Start the seventh course with a full shingle.



1. Starter Strip 7⁵/₈” wide (tabs cut from shingle)
2. First and succeeding courses consisting of full-width shingles

Figure A: Bridging application of metric strip shingles over 5” exposure three-tab strip shingles

Nesting

The advantage of nesting is that it minimizes the uneven appearance which can be caused by the existing roof material. Shingle exposure will be the same as in the existing roof - except for the first course, which will have an exposure of either 1¾" or 35/8" (depending on the existing roof). Approximately 12% more material will be required than for bridging, except when reroofing over metric type shingles which requires no additional material. This nesting method may reduce the wind resistance of the shingle. Contact the manufacturer for their approval before applying shingles by this method.

Nesting over an existing 5" exposure three-tab strip shingle roof:

1) Starter Strip

Remove the tabs and the 25/8" from the head of a fullsize metric shingle so that its width is equal to the exposure of the existing shingles. Position the remaining strip over the existing roof (with the factory-applied adhesive strip along the eaves). Cut a half tab (69/16") from the rake end and apply the remaining portion (13¼" x 3213/16") at the eaves. Continue the starter strip by applying 5" x 393/8" metric shingle strips evenly along the existing roof at the eaves.

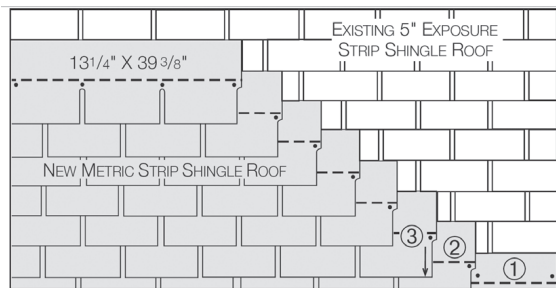
Note: The existing roof should overhang the eaves far enough to carry water off into the gutter. If this is not the case, cut and apply the starter strip so that it will provide sufficient overhang for proper drainage.

2) First Course

Remove 3¼" (or less if the starter strip is wider than 5") from the tabs of a full-size metric shingle and apply the remaining portion of the shingle (10" x 393/8") so that it fits between the butts of the existing third course. This course must also be applied evenly along the eaves edge of the new starter strip.

3) Second and Succeeding Courses

Remove a half tab (69/16") from the rake end of the first shingle in the second course, and continue with fullwidth metric shingles for the remainder of the course, placing the top edge of each new shingle against the butt edge of the old shingle in the course above. This method will create an exposure of 5" after the first course. Begin each succeeding course - through the sixth - with a shingle from which an additional half tab (69/16") has been removed to establish an across-and-up application pattern. Start the seventh course with a full shingle.



1. Starter Strip 5" wide
 2. First course 10" wide
 3. Second and succeeding courses full-width shingles
- Note: Exposure first course 1¾"; All other courses 5" exposure

Figure B: Nesting application of metric strip shingles over 5" exposure three-tab strip shingles

Nesting over an existing 55/8" exposure three-tab metric shingle roof:

1) Starter Strip

Remove the tabs and the 2" from the head of a full-size metric shingle so that its width is equal to the exposure of the existing shingles. Position the remaining strip over the existing roof (with the factory-applied adhesive strip along the eaves). Cut a half tab (69/16") from the rake end and apply the remaining portion (13 1/4" x 32 13/16") at the eaves. Continue the starter strip by applying 55/8" x 393/8" metric shingle strips evenly along the existing roof at the eaves.

Note: The existing roof should overhang the eaves far enough to carry water off into the gutter. If this is not the case, cut and apply the starter strip so that it will provide sufficient overhang for proper drainage.

2) First Course

Remove 2" (or less if the starter strip is wider than 55/8") from the tabs of a full-size metric shingle and apply the remaining portion of the shingle (11 1/4" x 393/8") so that it fits between the butts of the existing third course. This course must also be applied evenly along the eaves edge of the new starter strip.

3) Second and Succeeding Courses

Remove a half tab (69/16") from the rake end of the first shingle in the second course, and continue with fullwidth metric shingles for the remainder of the course, placing the top edge of each new shingle against the butt edge of the old shingle in the course above. This method will create an exposure of 55/8" after the first course. Begin each succeeding course - through the sixth - with a shingle from which an additional half tab (69/16") has been removed to establish an across-and-up application pattern. Start the seventh course with a full shingle.

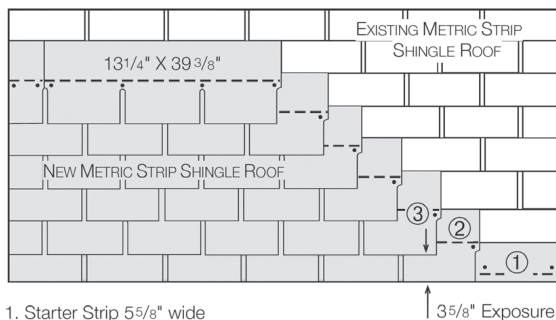


Figure C: Nesting application of metric strip shingles over 55/8" exposure three-tab strip shingles

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