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## Where quality is our priority

Balmoral Cedar is proud of its products. Customer satisfaction is the main reason for the care and attention we put into consistently producing high quality “Balmoral” shingles.

This Installation Guide provides basic information for the proper installation of our product on your roof or walls. Our shingles together with your installation skills should produce an appealing and satisfying look, which will last for generations.

## Quantity

The exposure (space between rows of shingles) and the desired look will determine the quantity required.

The following are commonly used exposures :

Width of exposure	Quantity	Area Covered
10 cm (4 in.)	1 square	7.3 m <sup>2</sup> (80 ft <sup>2</sup> )
12.5 cm (5 in.)	1 square	9.3 m <sup>2</sup> (100 ft <sup>2</sup> )
15 cm (6 in.)	1 square	11.2 m <sup>2</sup> (120 ft <sup>2</sup> )

Don't forget to account for waste

## Ventilation

For shingling roofs and walls, adequate ventilation is necessary for the durability of your shingles as it reduces moisture and it provides an energy efficient structure.

Install shingles over spaced sheathing, using 3 cm x 10 cm (1 in. x 4 in.) laths.

Installing a mesh screen will prevent insects from getting in through ventilation space, on corners, edges or walls. Lath sheathing should be nailed in a staggered pattern.

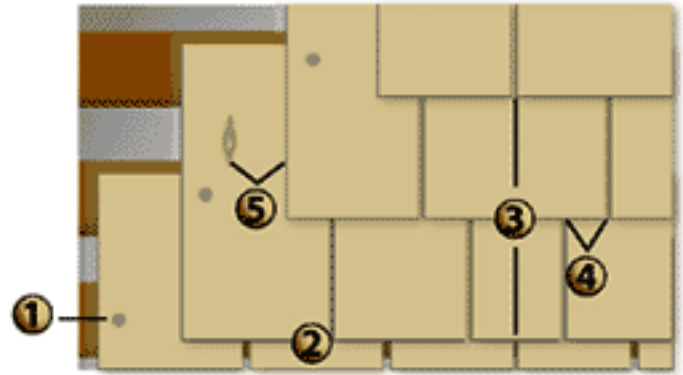
## The right way for walls

Install metal flashing above window and door openings, and caulk around openings. Make sure all door and window casings are in place before installing the shingles. Exposure on walls can be greater than on roofs as walls are less exposed to weather conditions.



## Aligning shingles

1. Place two nails 2 cm (3/4 in.) from each edge of the shingle and 4 cm (1.5 in.) above the exposure.
2. To avoid buckling, allow 3 to 6 mm (1/8 to 1/4 in.) space between each shingle for expansion.
3. Joints must not line up with joints in the two courses below.
4. There must be at least 4 cm (1.5 in.) space between joints in successive courses.
5. Joints must be placed in alternating rows, at least 4 cm (1.5 in.) from the start of imperfections.



## Walls

We recommend installing metal flashing over all inside corners, above windows and door openings and caulk around openings. First row should always be two shingles thick and protrude at least 2.5 cm (1 in.) from top of foundation.

Existing Walls: For existing walls, shingles are nailed to wooden laths 2.5 cm x 10 cm (1 in. x 4 in.) fixed directly to the frame or existing wall covering.

For quantity of shingles required, refer to the "Quantity" section.

## Roof

Install spaced sheathing so you can nail the shingles to the sheathing to obtain adequate ventilation. Check building codes to make sure proper sheathing is used for the type of building being roofed.

Install drip edge and valley flashing material and install a starter course at the eaves of the roof. Allow a 4 cm (1.5 in.) overhang beyond the eaves fascia and a 1.5 cm (1/2 in.) overhang beyond the rake fascia.

Install the first course of shingles on top of the starter course. (If heavy snow region, install two layers of shingles for starter.)

To align starter course and first course, stretch and tie a string at both ends of the eaves. To allow for expansion, space shingles 3 mm to 6 mm (1/8 in. to 1/4 in.) apart depending on the level of humidity in the shingles.

Offset adjacent shingle courses by at least 4 cm (1.5 in.) and do not let two joints line up directly in any three consecutive courses.

Using the right nails:

Make sure to use rust resistant nails to nail down shingles. Nails should penetrate 1/2 in. into the lath. Some codes require nails to penetrate 3/4 in. into the lath or deck.

## Roof valleys

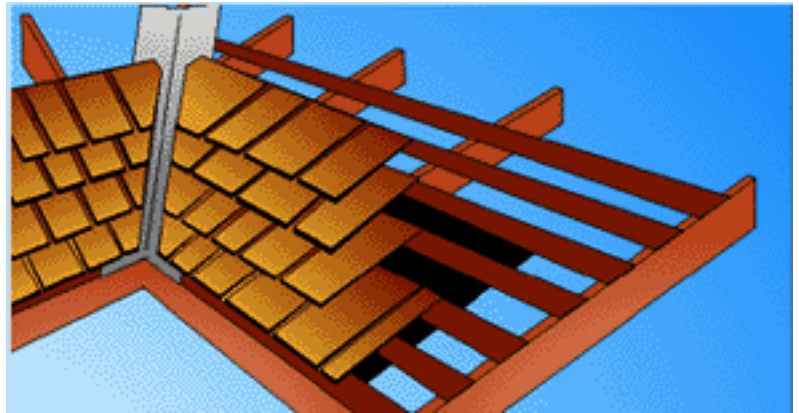
After flashing is installed, shingle away from both sides of the valley so the shingles adjacent to the valley can be cut using the same pattern.

Install shingles to within 5 cm to 10 cm (2 in. to 5 in.) each side of the center line of the valley. Never allow joints between shingles to break into a valley; make sure that all joints have a solid shingle beneath and on top of them.

Shingles should lap at least 18 cm (7 in.) over each side of the valley flashing and never lay shingles with the grain parallel with the center line of a valley.

Install shingles at top of valley at least 10 cm (4 in.) from each side of center line, increasing by 32 mm (1/8 in.) per 30 cm (1 ft) down the valley.

Snap chalk line down both sides of valley and use one shingle as a pattern for cutting others. Where a shingle course ends at a hip, cut each shingle individually. Use triangular pieces cut from shingles used valleys to finish hip edges.



## Chimney

Saddle flashing goes upslope of the chimney, and the apron flashing goes on the downslope side. Extend apron flashing at least 8 cm (3 in.) up the vertical surface. It should go at least 1.5 times the shingle exposure (minimum 15 cm (6 in.)) over the roof slope.

Carry cricket flashing at least 25 cm (10 in.) under the shingles. Extend step flashing over the roof at least 8 cm (3 in.) and up the chimney.

Cover by at least 10 cm (4 in.) with counterflashing to extend down within 3 cm (1 in.) of finished roof surface.

## Ridges and hips

For hips roof, install hip units before units, and use same exposure as for shingles. Using prefabricated hip and ridge units is faster as they come with mitered joints and concealed nailing.

Install double starter units over the course of shingles at low end of each hip. Snap chalk line on each side of the hip along the edges of both hip units, install hip units starting at low end of each hip, alternating the direction of miter joints.

Trim top hip units so they meet at ridge with their edges flush then install ridge units at both ends of the ridge working toward the center of the roof.

Create a saddle to cover where both courses meet. Use two rust resistant nails to install each hip and ridge unit.

Applying a 13 kg (30 pound) felt or kraft paper under hip or ridge units is recommended and installing concealed metal hip and ridge flashing is also a good idea for a more lasting roof and underlayment.