

SHAKES AND SHINGLES

Installation Instructions



SHINGLES

Western Red Cedar Shingles are 450mm long and vary in width. They have an attractive smooth sawn appearance on both faces. Available in No.1 Blue Label (Premium Roofing Grade) and No. 2 Red Label (Wall grade), they are supplied in bundles, with the coverage (or number of bundles required/m²) depending on the exposure (or amount of overlap) required- Refer to the Coverage Charts below.



SHAKES

Western Red Cedar Shakes are 600mm long and vary in width. They have one sawn face and one textured face (split naturally along the grain) -the appearance and feel is far less regular than Shingles. Only one grade along with ridge capping is distributed by Tilling Timber. Like Shingles, the amount required is dependent upon the exposure so again refer to the Coverage Charts below.

Installation

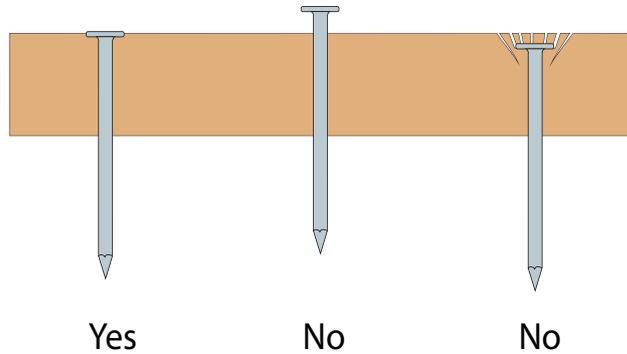
Sarking

It is essential that only "breather type" (vapour permeable) sarking is employed beneath battens for either Cedar Shingles or Shakes for walls or roofs.

Nails

Use 2 nails for each Shingle/Shake. Use only corrosion resistant-hot dipped galvanised steel or stainless steel flat head nails or equivalent staples. Nail shingles so that the following row will cover nails by 40mm.

Place nails 20mm from the edge of the Shingle or Shake. Nails should be long enough to penetrate 20mm into the sub- framing. As a general example, see diagram below.



GENERALLY

Space Shingles and Shakes 5-10mm apart. These gaps allow for expansion and prevent any possible buckling. Alternate course joints should not align and adjacent course joints should be offset minimum 40mm.



WALLS

Exposure

Exposure is the amount of each Shingle or Shake left uncovered.

Maximum exposure limits for walls - Shingles 210mm

Shakes 290mm

Working out your quantities

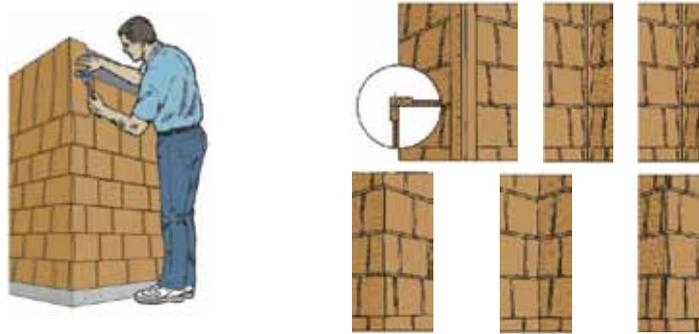
Measure the area in m², deducting windows, doors etc. From the table below determine the coverage per bundle based on the intended exposure. Divide area by coverage, adding 5% to give the required number of bundles.

Exposure mm	Approx. Coverage per SqM 450mm Shingles	per Bundle 600mm Shakes
100	1.7	0.7
125	2.1	0.8
140	2.3	0.9
190	3.2	1.4
210	3.6	1.6
290	N/R	2.1

Wall Installation

Shingles and Shakes can be applied to internal and external walls with a solid nailing base. Timber battens must be applied over brick or other nail resistant surface.

Set out string line from the lowest common point on job. Fix lowest row **THEN** fix the second row directly over the first row to create a weatherproof double layer situation. Straight edge or random set the next row overlapped to maintain required exposure. Refer to diagrams for corner applications and treatments.



ROOFS

Pitch

The pitch of a roof is determined by the increase in height (the rise) over the length on plan (the run) e.g. 150mm rise in 300mm run = 1:2 or 26.57 degree pitch.

The minimum recommended pitch for Shake roofs is 1:3 or 18 degrees and 1:4 or 14 degrees for Shingle roofs.

Exposure

Exposure is the amount of each Shingle or Shake left uncovered.

Maximum exposure limits for roofs - Shingles 140mm
Shakes 190mm

Working out your quantities

Determine ground area of the building including overhangs in m². Calculate the pitch of the roof and increase ground area total by the appropriate percentage below –

1 in 1 add 42% , 1 in 2 add 12% , 1 in 3 add 5% , 1 in 4 add 3% , 1 in 5 add 2%.

From the table below determine the coverage per bundle based on the intended exposure. Divide area by coverage, adding 5% to give the required number of bundles.

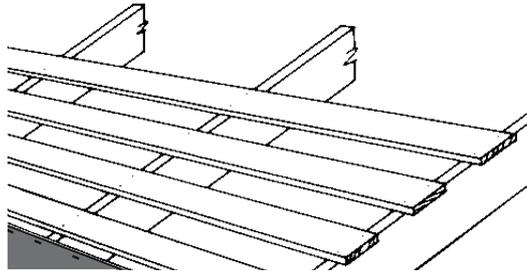
For Shingles add 1 bundle per 8 lineal metres of hips, ridges and valleys and 1 per 3.3 lineal metres for Shakes.

For Shingles add 1 bundle per 18 lineal metres of perimeter double starter course over guttering, 1 bundle per 7.5 lineal metres for Shakes.

Exposure mm	Approx. Coverage per SqM 450mm Shingles	per Bundle 600mm Shakes
140	2.3	0.9
190	N/R	*1.4
210	N/R	N/R
290	N/R	N/R

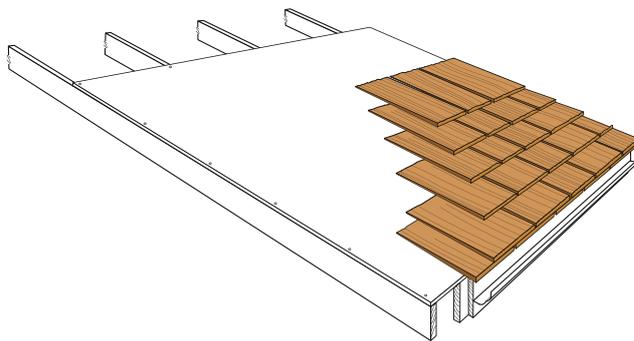
A good Cedar roof will be a minimum three layers. Maximum exposures shown are calculated to achieve a bare 3 layers and reductions in exposure will result in additional roof thickness.

BATTENING



Shakes or Shingles may be laid on spaced battens or solid surfaced roofs. In normal conditions 89x19mm or 140x19mm softwood battens laid at centres the same as the Shake or Shingle exposure intended will be sufficient. Spaced battens are preferred to solid sheathed roofs in areas of high humidity however in snow or cyclonic areas solid sheathing and other special requirements may apply-please enquire.

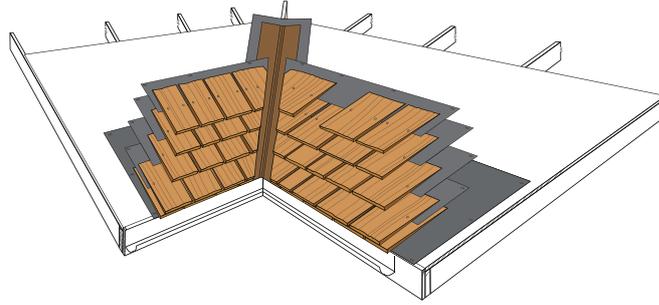
ROOF INSTALLATION



Begin with a double or triple layer at gutter edge of roof. Use a straight edge to line up rows of Shingles or Shakes. Let Shingles or Shakes protrude at least 40mm over edge to ensure proper spillage into gutter. Overhang 25mm beyond gable end.

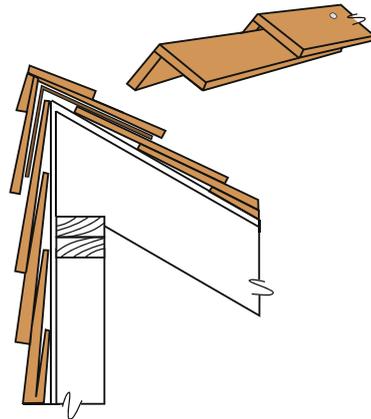
Valleys

Valleys must be constructed with the utmost care and from durable materials to avoid leaks. Metal valley sheets, colourbond or fully painted zincalume at least 500mm wide should be laid over double sarking and only nailed at edge extremities. Shingles and Shakes abutting the valley should be trimmed 75mm from the centre line.

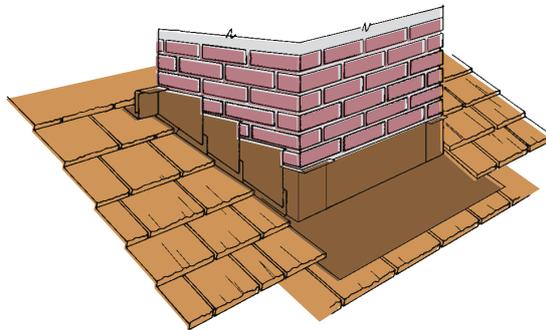


Hips & Ridges

Factory manufactured hips & ridge cappings are available to complement both Shingles & Shakes. Alternatively, a ridge may be built by selecting Shingles or Shakes of uniform width between 100 and 125mm wide, bevel cutting edges of shakes to form the required ridge shape. Use alternative pattern to lay ridge caps and a double starter course at gutters.



Flashings



Any building components protruding through the roof should be flashed and counter flashed on all edges. Flashing should extend at least 150mm under the Shingles or Shakes and should be counter flashed. Metal should be painted after bending to shape, and be dry before installation. A mastic or silicon caulk should be used to seal all possible water entry points. Flashing may also be required at ridges or pitch changes in more complex roof structures.



MAINTENANCE

The life span of Western Red Cedar Shingle and Shake roofs can vary from area to area, primarily because of different climatic conditions, varying roof slopes and the presence of overhead vegetation. Thus, it is almost impossible to predict accurately the life of a roof. It is possible, however to increase the roof's longevity through proper and regular maintenance throughout the years.

Debris should be removed from the roof immediately it accumulates by sweeping with a stiff broom or wire brush. This is basic but important housekeeping because accumulated debris retain moisture and eventually cause problems. In fact, moisture retention is believed to be the major contributing factor to the growth of moss, fungus and mildew, any or all of which may eventually cause decay and reduce the service life of the roof. If the roof is kept free from debris, moisture normally will evaporate or run off the roof through the eaves trough.

A broom or wire brush is also relatively effective in removing moss, although this method provides only temporary control of the problem. The use of chemical treatments that kill moss, fungus or mildew is a more effective method. The effectiveness of the different chemicals depends upon the ingredients and the degree to which the wood absorbs and retains the chemical.

In dry weather, control of moss can be accomplished by spraying or brushing the roof with a solution of household bleach (sodium hypochlorite) mixed in a ratio of one part bleach to four parts water. Caution should be exercised in the use of all chemicals because of their high toxicity.

Generally there is no hazard to plants provided that the chemicals do no contact the surrounding soil. If this should happen, either by direct contact or by the chemicals running through a septic tank and into the soil, no vegetation may grow for some time since the soil may be sterilized.

The use of a 150mm wide zinc strip nailed over the ridge (or a 75mm wide zinc strip nailed under the ridge cap) has also proved quite effective. The zinc strips should run the full length of the roof and have a portion exposed to the weather. The reaction between the rain water and the zinc forms a dilute chemical solution that is carried down over the roof and retards formation of moss, fungus and mildew. Special caution should be exercised in the use of copper strips, wires or fasteners because an electrolytic reaction can occur with other metals and/or with the extractives in the cedar. This results in damage to nails, metal valleys and gutters.

The above has been produced as a general construction guide. For more specific construction details refer to Cedar Shakes & Shingles Bureau –Roof and Wall Metric Construction Manuals