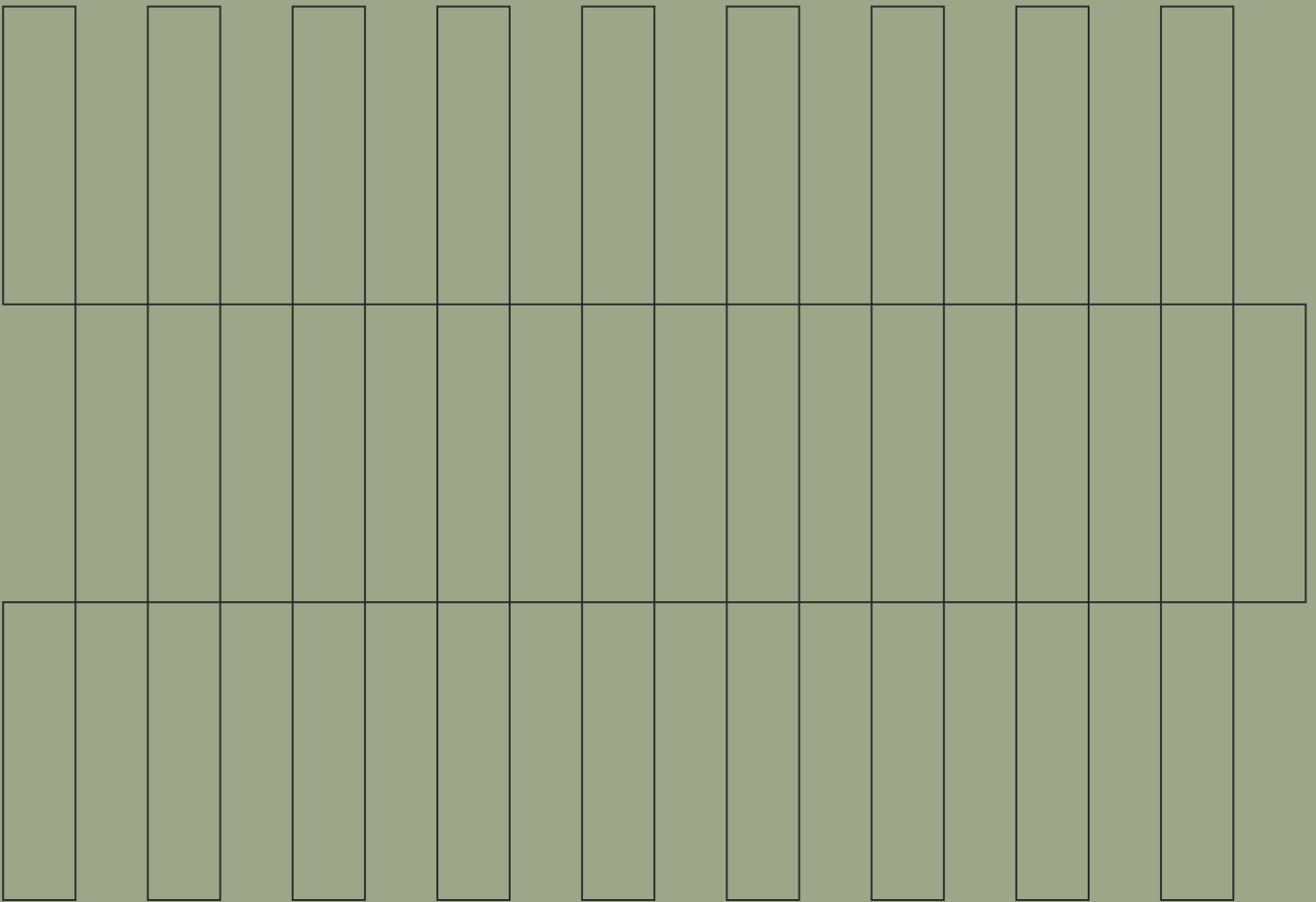


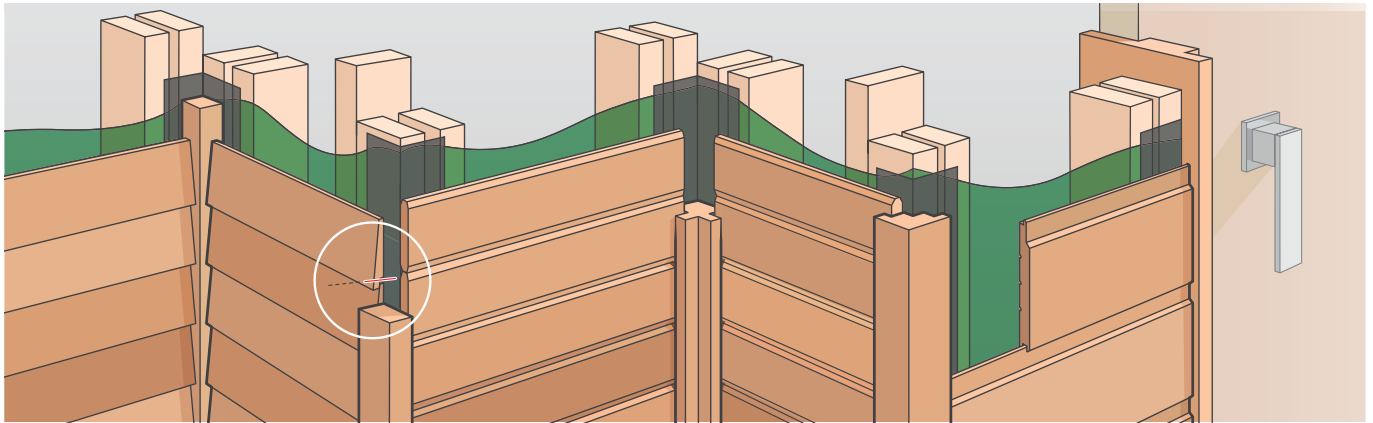
- Timber
- Aluminium
- Concrete



# Rib Clad

## External Installation Guide

# This guide explains how to install Western Red Cedar on external walls



This guide outlines basic measures that must be taken to ensure a successful installation of Western Red Cedar on external walls.

## Who's it for?

- Builders, installers, specifiers and competent handymen.

## What you'll need

- A basic level of building skill.
- Familiarity with standard building procedures refer to the standard building code if necessary.
- Carpentry tools.

## Storing and handling your timber

Avoid damaging your timber by following these suggestions:

- Keep it dry. Water stains on timber can be permanent.
- Do not step on or knock your timber profiles as this can break off the tongue or groove or crack a board.
- Handle pre-finished timber carefully to avoid scratching the face.
- When tongue and groove profiled boards are stacked on site, take care that they are stacked with side spacing and not in direct contact with the ground.

## Your goal

For external installation of Western Red Cedar, you should be aiming for a wall that not only looks good but has:

- Professional appearance.
- Neat ends and corners.
- Allows no moisture inside the building.
- Develops no rust streaks on the wall from fixings

### Watch: Moisture Control

Keeping moisture out must be your top priority to avoid rot and a wet interior. Timber must be kept ventilated and as dry as possible – all year round on both sides of the timber.

## Tools

You'll need the following equipment to complete this project:

- Nails – hot dipped galvanised, stainless steel or silicon bronze.
- Nail gun or hammer, measuring and levelling tools, drop saw.

# Supplies

You'll need the following supplies to complete this project:

- Breathable building paper
- Nails – hot dipped galvanised, stainless steel or silicon bronze (see section 9).
- Preserving oil.

## Getting Started

### 1. Building wrap

Using a breathable building paper, apply wrap to the wall as per specifications. All claddings may leak to some extent and wrapping stops moisture from getting into the framing or insulation, damaging the internal linings, or seeping lower into the building.

### 2. Batten over the building wrap

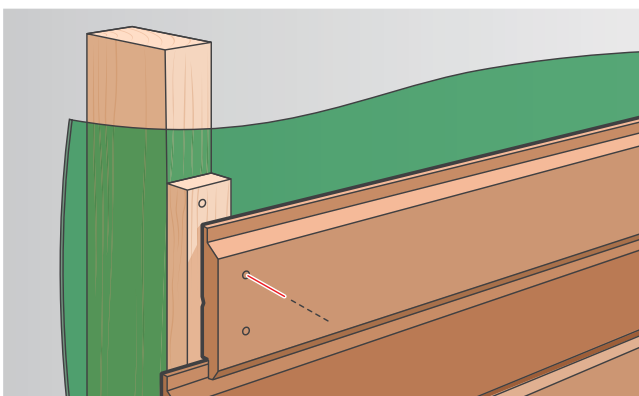
This reduces moisture and degrading tendencies by adding air space between the cladding and building paper.

#### a) Horizontal cladding

##### Note

This is an optional measure that gives improved moisture control.

- Use 40 x 12mm battens or larger, and securely nail them to the studs over the building wrap.



**Figure 1:** Preferred installation method for horizontal cladding showing:

- Frame
- Breathable building wrap
- 40 x 12mm batten for improved moisture control
- Face nailing

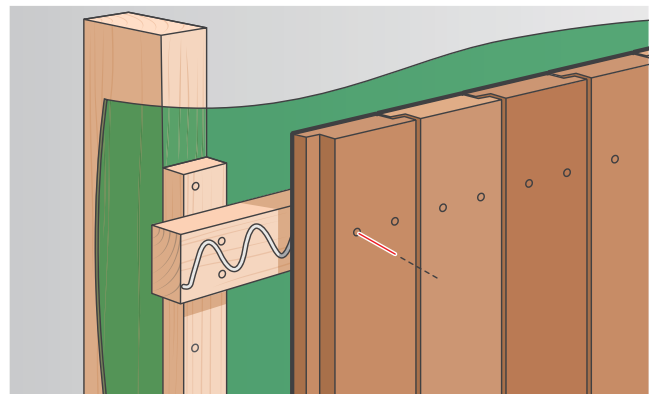
#### b) Vertical cladding

##### Note

Vertical cladding is not in the BCA building code. This makes some inspectors reluctant to pass buildings that use it. Before choosing vertical cladding, consult the relevant authority. Vertical cladding is also more prone to moisture problems, so extra care must be taken.

- Place 10 x 40 battens vertically over the studs.
- Place 70 x 45 battens horizontally over the building paper.

This is optimal providing a 10mm gap between the horizontal battens and the building wrap to provide improved moisture control. You must ensure that any moisture can flow to outside via the bottom of the wall, and doesn't get trapped at the horizontal battens. This method ensures that no moisture gets trapped in the wall.



**Figure 2:** Preferred installation method for vertical cladding showing:

- Frame
- Breathable building wrap
- 40 x 12mm batten
- 70 x 35mm or 67 x 30mm battens
- Glue (optional)
- Face nailing or claddings less than 100mm wide, secret nailing and glueing can be used with this batten method

### 3. Create a gap to let moisture out

At the bottom of the wall, ensure there is a gap of 12mm between flashings and the cladding for moisture to escape.

#### Warning

It is essential that the cladding nails do not penetrate to the back edge of the battens, and pierce the building wrap as this can allow water to leak into the building.

### 4. Check your cladding before you begin

- Check all your cladding for the following:
  - a. Quality
  - b. Colour
  - c. Length
- Make sure you know which side is the face so you don't install it back to front (it has happened).

#### Note

All Western Red Cedar comes in various colours, which are affected by factors like the trees' growth, sunlight and seasons. These natural variations give the timber a unique beauty. Be sure to check your timber colour now.

### 5. Seal the back face

Apply quality oil or paint to the back of the timber to minimise timber capillary absorption. This will seal the timber and help to control moisture ingress into the grain which prevents cupping, splitting and shrinkage.

### 6. Install the cladding

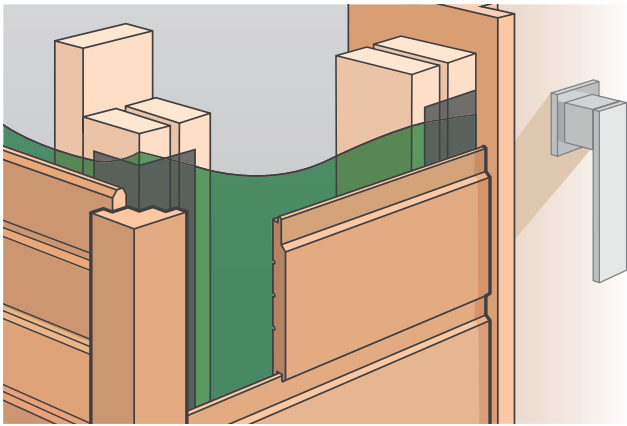
#### Note

The Timber Association of Australia does not recommend timber that is thinner than 18mm, for "in weather" applications. All thinner timbers are for soffits, verandah ceilings, or internal use. Garage doors regularly use 12mm thick timber.

#### Note

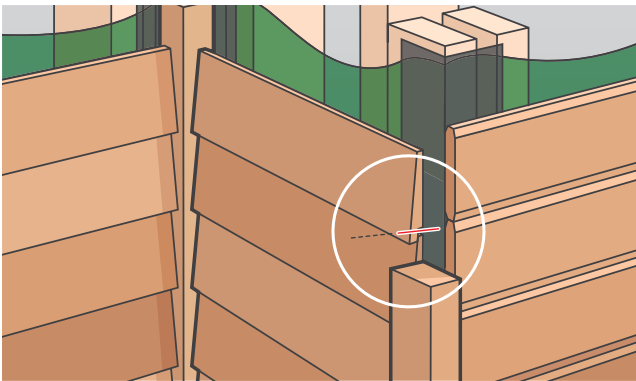
All flashings, fixings, breathable building wrap, moisture protection and flashings must be installed according to standard building practices, the requirements of the relevant building codes and common sense.

- Use stainless steel, silicon bronze or hot dipped galvanised nails (see section 7).
- Trim any little splits on the ends of the cladding. Make sure the cuts are straight and square, and that all boards are placed level, straight and nailed evenly and securely.
- For traditional weatherboards or siding, use one nail per stud, and ensure the nail is placed about 35mm above the bottom edge of each board. Take care that the nail does not catch the thin edge of the board below.
- The Timber Association of Australia recommends face fixing for all external timbers. For timbers wider than 90mm, use two nails per stud. Modinex Architectural recommends using secret fixing for any external cedar profiles that are less than 100mm wide. If the designer or builder insists on a nail free finish, use concealed fixings on a tongue and groove profile plus a construction adhesive. This method requires battens over the building wrap.
- Do not jam the tongue and groove of the boards too tightly together. Boards must be allowed to swell and contract both width ways and length ways to avoid damage and cracking.



**Figure 3:** VJ and shiplap T and G cladding, using designer corner stops from Modinex Architectural. **This diagram shows:**

- Standard framing
- Breathable building wrap
- Designer corner stops for external corners – ECT and ICT trims
- Door frame detail
- Extra weather protection at the internal and external corners.
- Also needed at windows.



**Figure 4:** Traditional siding / weatherboards and VJ T and G cladding, using conventional corner stops. **This diagram shows:**

- Standard framing
- Breathable building wrap
- Internal corner stop 32 x 32mm
- External corner stop 32 x 57mm
- One nail per weatherboard per stud
- Extra weather protection at the internal and external corners. Also needed at doors and windows.

## 7. Fixings

### Warning

You must not use bright steel nails in cedar at any time. When exposed to moisture or weather the corrosive tannins in Western Red Cedar will cause rust streaks.

Choose your fixings according to the look you are trying to achieve. Use aluminium, stainless steel, silicon bronze or galvanised nails. Flat head ring shank type nails are acceptable and the larger heads can be used for architectural effect. Silicon bronze nails are attractive as they are a similar colour to the timber

When nails are neatly aligned and finished flush with the surface of the cladding, a professional look is achieved. Puttys and fillers aren't recommended for clear coated finishes, as the timber surrounding the fixing can appear blemished.

External ceilings: Fixings are almost always concealed.

Make sure the roof above does not leak, as leaks could cause water damage marks.

## 8. Joins

All joins must be on a stud or batten. Pre-drill if needed, stagger all joins, and nail the ends carefully. For vertical cladding, ensure the timbers are cut on a mitre to help deflect moisture away from the building.

## 9. Finish wall ends, corners, doors and windows

### Note

There are a variety of ways to finish ends and corners and many are suitable, provided that moisture does not enter the building. See our online Projects for ideas, and to choose your style.

[www.modinex.com.au](http://www.modinex.com.au)

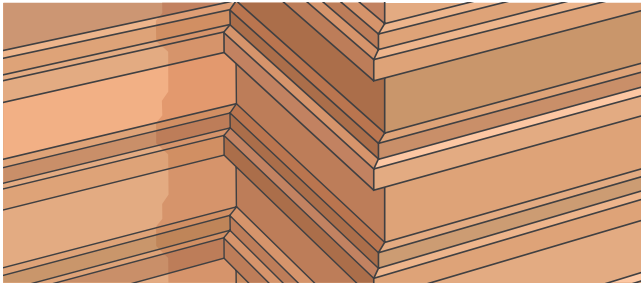
## Timber stops

Before installing the cladding, place nail stops to the limits of the claddings, the corners and the windows. Clad in between the stops, except where access is difficult.

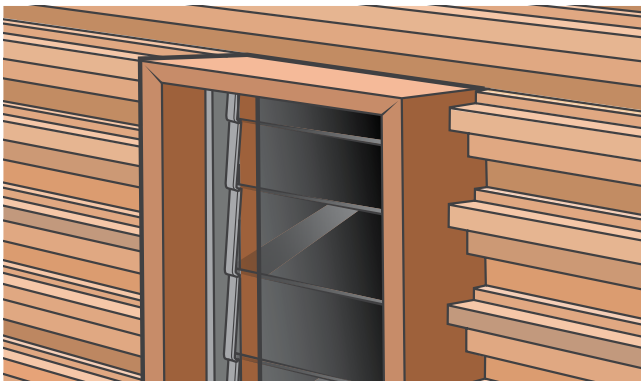
At windows, stops can be used vertically only, or placed completely around the window to give a frame effect. This can be especially effective if the stop is a chunky profile, and the cladding is quite bold. Or use no stops, and butt the cladding neatly to the door or window frame.

## More corner options

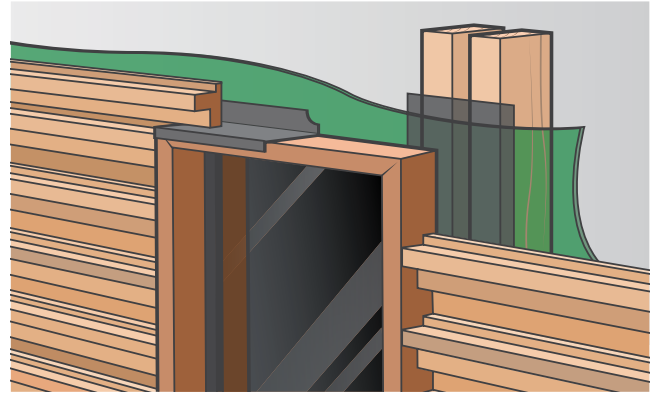
**Mitre:** Gives a stunning effect of a continuous line going around the building – particularly suitable for a bold profile in a modern setting. It demands more care – glue the corners securely to ensure the mitres do not pull away over time, with external glue.



**Figure 5:** Mitred corners shown on Castelation® Stepped Combination. Modinex Architectural recommends using external glue on all mitre cut corners to resist the corners opening up over time.



**Figure 6:** Bold and prominent window stop that frames the window. Window stop is DAR 140 x® Stepped Expression combination.



**Figure 7:** Flush finish window stop that frames the window. Window stop is DAR 91 x 30mm. **This diagram shows:**

- Standard timber wall
- Flashing over window framing
- Breathable building wrap and extra protection at window join
- Castelation® Stepped Combination as wall cladding.

**Square cut:** Used more often with vertical cladding. Cut the last board lengthways to finish flush with the turn in the wall. Then place the next board around the corner, and cover the cut edge of the last board. This will be the first board of the next wall, so make sure it is straight. If the profile has a tongue and groove, it may be necessary to cut off the groove on this first board.

## Applying timber over concrete block, tilt slab, blue board, ply or brick work

Timber can readily be placed over these walls to add a feature and reduce the heat buildup in concrete walls.

You'll need to ensure:

- You don't apply cladding directly to any solid wall. Moisture will be trapped at the back of the timbers and they will rot. Ensure there is an air space between the timber cladding and the solid wall using battens and all moisture or water that penetrates the cladding can readily escape to the outside at the bottom of the cladding.
- Vermin will not enter at the bottom of the wall.
- On vertical cladding, the horizontal battens allow space for water to escape. It is best to pack the horizontal studs out from the wall by placing vertical battens first, then the horizontal ones.
- Battens are fixed securely to the wall, using flush fixings according to the manufacturer's guidelines. The battens must be thick enough to take the cladding nails, without having the nail points hit the bricks. We suggest at least 30mm thick battens.

## 10. Preserve your timber

### Note

Any external finish on timber will need to be maintained, so choose wisely to minimise upkeep

### Warning

Do not use clear or tinted lacquer varnish or polyurethane – it will crack, peel and look unsightly. This includes timber with a pre-lacquered finish from Modinex Architectural (Two Tone and Satin) these are for alfresco and verandah ceilings or internal use only. For external timber in any conditions, Modinex Architectural only recommends oil or external paint.

## Timber preserving oil

Oil will fade over time and need reapplication, however this is an easy process.

Use clear oil if you want timber to go grey. It will soak into the timber, and assist in keeping the timber stable and straight.

Use tinted oil for UV protection to maintain the original color of the timber and prevent it going grey.

Use Cutek® Timber Preserving Oil for long term protection and low maintenance. It soaks into the timber, and if the timber becomes very dull, grey or dirty, it can be readily cleaned back with a timber cleaner, and the color is restored with more oil. No sanding or stripping is ever needed.

## Paint

Follow supplier recommendations for application and maintenance.

## Black walls

If you want an external black wall, Modinex Architectural only recommends using Black Ash, or Triple Black Ash from Cutek®.

Cutek® works better than most black stains to control dimensional stability.

### Warning

Be very careful – a black surface can make timber fiercely hot, causing boards to be less stable.

## 8. Gates, garage doors and fences

Western Red Cedar is perfect for feature gates, garage doors and fences, due to its durability, stability and light weight.

### Our tips:

- Do not make your gates or fences out of Blue Board, or similar, and then attach the timber directly to the board. Moisture will get to the back of the timber cladding and the timber will rot. Add battens so there is an air space, and make sure that moisture can escape out the bottom.
- It is best to use a metal frame for gates, with no backing behind the timber. Glue the timber to the metal frame, and screw it from behind using stainless steel screws to resist rust.
- Make sure there is an air space at the bottom of fences. Do not make the timber sit in the dirt. Allow at least 20mm gap.
- Garage doors are normally built using a specially constructed aluminum frame, and are clad with 12 or 15mm thick timber. Modinex Architectural have profiles available that are machined on both sides so the door looks attractive on the inside as well as the outside. Make sure you request timber that is clean on both sides and inform Modinex Architectural that it's for a garage door.

