

affinity™

sleek + fast: next generation flashings



installation manual



The only BRANZ Appraised profiled metal cladding system in New Zealand
NZ BUILDING CODE COMPLIANCE

The Affinity Cladding System has been tested and has passed the NZ Building Code E2 / VM1 requirements for weather tightness. Assessment by BRANZ has resulted in compliance with every relevant aspect of the NZ Building Code and the issuing of BRANZ Appraisal No. 596

Dimond

DIMOND AFFINITY™ CLADDING SYSTEM INSTALLATION GUIDE

Step 1:

Mark the line for the top edge of the reference cladding sheet at Hmm (see table below) above the window opening and install a full length of sheet covering the openings to this mark. Ensure Eco-Foam is installed behind sheet at corners and joiner flashings. If the tops of window openings are not in line, base the set out on the most common window opening line.

Note: The dimension H may have to be increased or decreased if the window size is greater or smaller than the recommended size which is a 10mm gap to the framing all round the opening.

Profile	H (mm)
Corrugate	120
Sahara	90
Pacific	90



Step 2:

From the inside of the building mark the corners of the window opening onto the sheet by drilling a small hole accurately in each corner of the opening. From outside mark the bottom of the reference cladding sheet and mark the jamb cut line, using the marker holes as a guide. Extend the jamb cut line through to the top of the reference cladding sheet. The jamb cut line must be flush with the framed opening if the entire window opening is within the reference cladding sheet, mark the sill cut line between the bottom marker holes also flush with the framed opening. The jamb cut line to be marked with a straight edge.

Note:

1. The jamb and sill cut line locations may have to be adjusted to ensure the window flange achieves a minimum 10mm cover over the cladding. Check the window dimensions to determine any adjustment required.
2. The sill flashing is able to support large or heavy windows (eg, double glazed) if required. When this is the case, the sill cut line should be raised accordingly so the window head is in the right location when the window base sits on the sill flashing.



Step 3:

Cut out the window opening, firstly with a “rough” cut 20-50mm inside the framed opening of both jambs and across the sill if the entire window opening is located with the reference cladding sheet.



Step 4:

Carefully cut back from the rough cut line the true opening line flush with the framed opening. Ensure these cuts are straight, even and burr free.



Step 5:

Install all the cladding sheets below the first sheet, ensuring a visibly tight lap.



Step 6:

Repeat steps 4 and 5 for sheets below reference cladding sheet to complete all size window openings.



Step 7:

Cut a 35mm wide x Lmm long notch out of each corner of the reference cladding sheet at the top of the opening, where L is given in the following table:

Profile	L (mm)
Corrugate	55
Sahara®	50
Pacific™	55

**Step 8:**

Measure and cut the length of the head closure strip so that it will fit into the notched opening on either end of the window opening. Form a 5mm minimum height stopend on each of the head closure strip using folding pliers.



Step 9:

Cut, position and fix the head closure strip to the studs using galvanised clouts such that the top line of the strip is Xmm above the window opening and behind the cavity batten. The dimension X is given in the table below. The cavity closure strip requires taping to the building wrap ensuring clouts are covered.

Profile	X (mm)
Corrugate	131
Sahara®	116
Pacific™	108



Step 10:

Measure the length of the jamb flashing from the cut sheet edge at the sill to the underside of the top framed opening plus Jmm, where J is given in the following table. Cut the flashing to length, hold in position and mark the point of contact with the top edge of the cladding sheet at the sill. Jamb flashing must be a single length with no joins.

Profile	J (mm)
Corrugate	45
Sahara®	32
Pacific™	40



Step 11:

Cut the top end of the jamb flashing to match the slope of the head flashing by cutting the front edge back by 15mm cutting through the foam seal.



Step 12:

At the point of sill contact marked on the jamb flashing cut a 5mm long V-notch to allow the flashing to push over the edge of the cladding sheet with folding pliers, turn in the back edge at the bottom of the jamb.



Step 13:

If the grey butynol face of the jamb flashing is to be colour matched to the cladding, paint the surface with acrylic roof paint prior to fitting. Install jamb flashings behind cladding, compressing the butyl seal onto the end of the sheet. Locate V-notch over sheet edge at sill by 5m. Drill and rivet to sheet every second trough.



Step 14:

Cut the sill flashing to length being the dimension between the two jamb flashings. Sill flashings must be a single length with no joins.



Step 15:

Install sill flashing between cavity batten and back of cladding sliding down to position over edge of sheet such that the seal is compressed onto the sheet edge. The sill flashing is fixed by fastening the cladding through the back leg of the flashing and into the cavity batten.



Step 16:

Ensure suitable compression of the seals are achieved on all flashings.



Step 17:

Cut the head flashing to length to fit across the tops of the jamb flashings and into the notches cut in the reference cladding sheet. This should be the same length as the head closure strip. Do not position until after the window is installed. Install adhesive spacers every 200mm (maximum spacing), aligning top of spacer with the cut edge of the hem return.



Step 18:

Install the top cladding sheet over the window opening ensuring Eco-Foam is correctly positioned behind cladding. Locate Eco-Foam adjacent to square fold line on all corner and joiner flashings. Ensure a tight lap to the lower sheet is achieved.



Step 19:

Install aluminium window to opening, compressing the back of window flange over foam seals of the sill and jamb flashings to fix window.



Step 20:

Install the head flashings behind the cladding locating ends of the flashing between the top of the jamb and the underside of the head closure strip. Release any fixings adjacent to area to make easier.



Step 21:

Position head flashing over the top of the aluminium window ensure a close fit between face of window and the front of head flashing. Re-screw top sheet above head flashing. This will hold head flashing securely without fastening through the flashing. It may be necessary to rivet face of head flashing to the aluminium frame on large windows.



Step 22:

Fix head flashing end caps. Rivet through head flashing to secure.



Installing Head Flashing to Out-of-line Window Openings

In the case when the top of a window opening does not align to the preferred cladding set out as mentioned in Step 1, the special head flashing must be used in place of the standard head flashing for the profile.

When fitted, the back of the special head flashing extends through to the building wrap, with the head closure flashing sitting above. It will be necessary to slot and seal the cladding to allow the special head flashing to extend 20mm past the window edge each side.

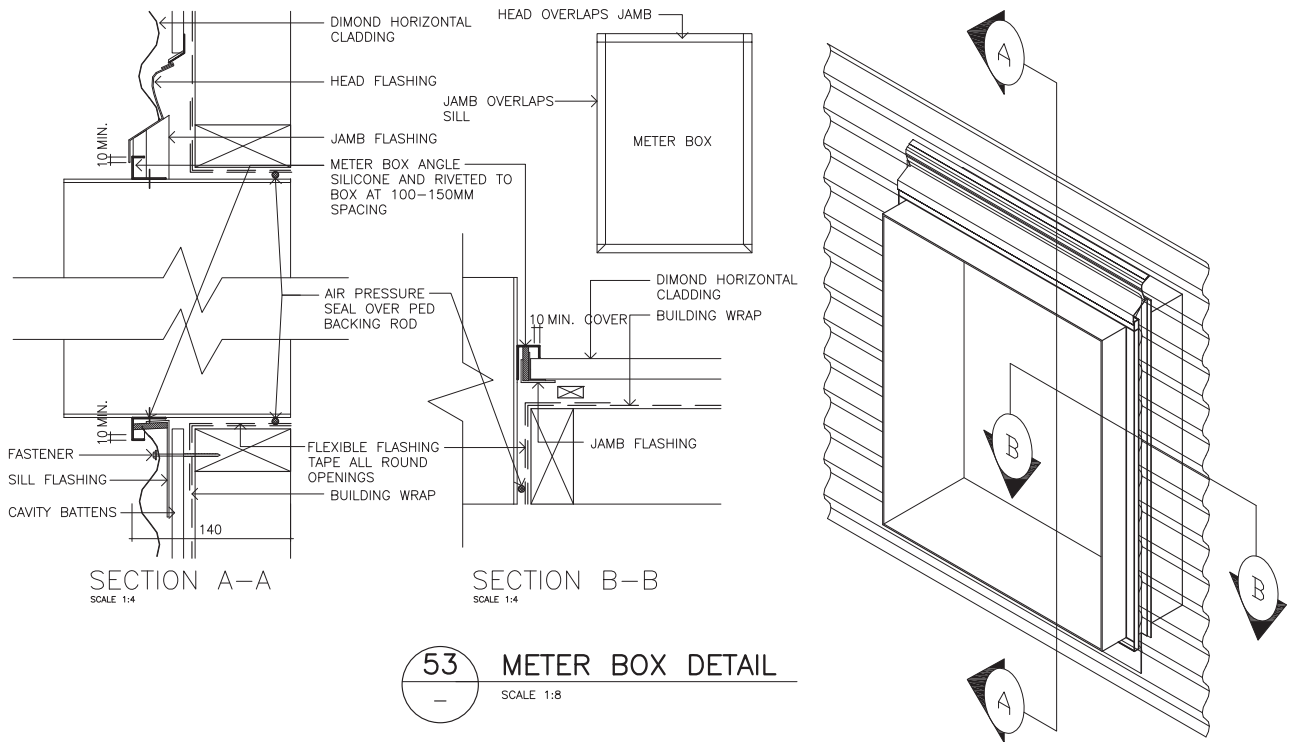
Rivet the flashing to the top of the window, and install the head flashing end caps as in Step 22.



Installing a Meter Box

Step 1:

Install meter box flashings to all four sides of the meter box (refer diagram). Rivet to box at 100-150mm spacing and seal using neutral cure silicone. Bottom flashing must be fitted into correct position. Side flashings should overlap bottom flashings and riveted into place. Top flashing should overlay both side flashings.



53 METER BOX DETAIL
SCALE 1:8

Step 2:

Ensure top of framed opening for the meter box is situated D mm below the top of framed opening for the windows, where D is any number of increments of 76mm to suit the preferred meter box height above ground. Follow the same steps for installing the window jamb and sill flashing. It may be necessary to cut back the cladding at the jamb lines to provide sufficient clearance for meter box installation. Ensure the jamb cut line is located such that the meter box angle will achieve a minimum 10mm cover of the cladding sheet. Push the meter box into opening compressing the back of the meter box flashing onto the foam seals. Fix meter box.

Note: Depending on the meter box location, the cladding sheet may have to be cut or slipped to reduce cover width and position the factory overlap edge correctly for the head flash

**Step 3:**

Install the head flashing following the same steps as for windows. Seal and rivet lap between the upstand of the meter box flashing and the back of the head flashing at the top of the meter box. Fit head flashing end cap as for windows.



Extract from Dimond Roofing and Cladding Systems Manual

2.4.7.8 INSTALLATION

(a) General

Detail for Builders

Refer to the Affinity™ Cladding System Builders' Guide for information about building wrap, wall framing, and window layout and size requirements.

Material Storage and Handling

General requirements apply (refer Dimond Manual, Section 2.3.1).

The window jamb and sill flashings must be kept free of contamination and any pressure on the seals during storage.

Sheets and flashings must be lifted and not dragged.

Framing and Cavity Batten Inspection (refer Affinity™ Cladding System Builders' Guide)

Before commencing the cladding installation, check that the framing is in suitable condition and alignment, and that there is sufficient framing to enable fixing of the flashings and cladding.

Check the cavity batten layout is correct to enable positioning of the flashings.

Check that the spacer blocks have been installed correctly to support the sill flashing.

If H3.1 treated timber cavity battens have been used, ensure the batten surface has been treated correctly to provide a separation between the treated batten and the cladding sheet. Suitable treatments are either a strip of paper based underlay or building wrap complying with E2 / AS1 Table 23, or pre-primed battens.

External and Internal Corners (refer Detail Drawing Nos 51 and 52*)

Ensure the corner flashing is fixed to a straight line. Leave the flashing over-length at the bottom end and trim in line with the cladding edge once the cladding is installed. Fasten the flashing at the top, middle and bottom using flat head fixings.

Ensure there is sufficient cavity batten beyond the edge of the flashing to allow fastening of the cladding without penetrating the flashing leg.

Apply the profiled foam seal in such a way that the cladding sheet is fixed over the seal, and that the seal is kept back at least 10mm from the sheet end.

Balustrades (refer Detail Drawing Nos 56 - 59*)

Ensure saddle flashings are correctly fitted behind the cladding and ensure that the cap flashing is installed to achieve the correct fall. Note that if a stanchion and handrail is to be installed, the inner lining should be a flat sheet cladding product, and not profiled metal. Rivet the cap flashings to the cladding profile at maximum 1000mm centres.

Soffit (refer Detail Drawing No 49*)

The soffit flashing must be installed prior to the soffit linings. Fix the soffit flashing to the soffit bearers with flat head fasteners to hold in place, and rivet to the cladding profile at maximum 1000mm centres.

Continued on next page...

2.4.7.8 Continued

Bottom of Wall (refer Detail Drawing Nos 46 and 47*)

Clarification must be sought to determine if the closure flashing is to be supplied and fitted as part of the Affinity™ Cladding System. The Affinity™ Cladding System cavity closure flashing is designed to allow adjustment in the vertical location to suit termination of the cladding sheets without having to trim the cladding profile. For example, the closure flashing can be lowered to support the sheet edge as much as 50mm below the cavity batten. Fix with flat head fasteners to each cavity batten.

Ensure that the cavity closure flashing is positioned to maintain a 2-3mm gap to the wrap.

Ensure that a drip edge is maintained by extending the cladding sheet 15-20mm past the cavity closure flashing. Also ensure the correct ground clearance is maintained.

Vertical Joint (refer Detail Drawing No 48*)

Ensure framing studs and battens are correctly spaced at the joint location.

Ensure the vertical flashing is fixed to a straight line. Leave the flashing over-length at the bottom end and trim in line with the cladding edge once the cladding is installed. Fasten the flashing at the top, middle and bottom using flat head fixings. Ensure there is sufficient cavity batten beyond the edge of the flashing to allow fastening of the cladding without penetrating the flashing leg.

Apply the profiled foam seal in such a way that the cladding sheet is fixed over the seal, and that the seal is kept back at least 10mm from the sheet end.

Horizontal Cladding Joint

The cladding sheets are to be installed horizontally with a minimum lap of one corrugation to the adjacent sheet.

Intersection with roofing (refer Detail Drawing Nos 50, 54, 55*)

Barge and Apron – Ensure the barge is ordered correctly to cover at least two crests of both the roofing and cladding profiles. Fix to roof purlins with screw fasteners, and rivet to the roof profile at mid spans. Fix to the cladding profile with rivets at maximum 1000mm centres.

Gutter – Ensure the apron flashing is correctly stop-ended to divert water into the gutter.

Fastening

Screw fastening – All screw fasteners must have a sealed head, and care must be taken to ensure that the seal is not over-compressed or deformed once installed. Screw fastening of the cladding must be through the cavity batten and into the wall framing. Fasten at every second trough of the cladding profile into every stud.

Ensure the correct fastener type is used to suit the cladding material.

When screw fastening Aluminium cladding a 6mm diameter clearance hole must be pre-drilled through the cladding sheet to allow for thermal movement at every fastener.

Rivets – All rivets must be 4.8mm diameter Aluminium, and colour-matched to the cladding colour.

(b) Specific Instructions for Cladding around Window and Meter Box Openings

Refer to the Affinity™ Cladding System Installation Guide for Window and Meter Box Openings, and Detail Drawing Nos 41 – 45.

*Refer to www.affinitysolutions.co.nz for a link to the CAD details.

Affinity™ Cladding System

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