ROOFING INDUSTRIES

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PENETRATION

Table 1: Durability Requirements of Nominated Building Elements (cont'd)

Building Element	Component	Situation/Function	Not less than 50 years	Not less than 15 years	Not less than 5 years
Flashings *(See note at top of table)*	Roof, wall or window	All flashings to roof *cladding*, *flues* and other roof penetrations		✓	
		Requires the removal of *cladding* above the roof to be replaced	✓		
		Hidden flashings such as behind brick veneer, stucco or spandrel panels	✓		
		Visible and does not require the removal of the *cladding* to be replaced		✓	
		Requires the removal of the *cladding* to be replaced	✓		

Table 1A Requirements for radiata pine and Douglas fir solid timber to achieve a (minimum) 50 year durability performance

Ref No.	Wood-based building components	Species or type	Level of treatment (2) to NZS 3640
1D.4	Valley boards and boards supporting flashings or box gutters and flashings to roof penetrations and upstands to roof decks (10)	Radiata pine Douglas fir	H1.2

(10) Any metal flashing shall be separated from the treated timber with building paper.

B2/AS1 - Flashings

E2

Functional requirement

- **E2.2** *Buildings* must be constructed to provide *adequate* resistance to penetration by, and the accumulation of, moisture from the outside.

- **Performance**
- **E2.3.2** Roofs and exterior walls must prevent the penetration of water that could cause undue dampness, damage to *building elements*, or both.

E2 - 8.1.7 Roof penetrations

The maximum length of profiled *roof cladding* above penetrations shall be as shown in Table 17.

The edge of roofing penetrations over 200 mm wide shall be supported in either direction with additional *framing* as shown in Figure 21.

E2

Table 9: Maximum catchment areas above penetrations
Paragraph 8.1.7 and Figure 22

Penetration width	Maximum roof length above penetrations in metres
800 to 1200 mm	4 m
600 to 800 mm	6 m
400 to 600 mm	8 m
0 to 400 mm	10 m

NOTE: Refer to Table 17 for profiled metal roofing.

Figure 21: Penetration support
Paragraphs 8.1.7 and 8.4.17

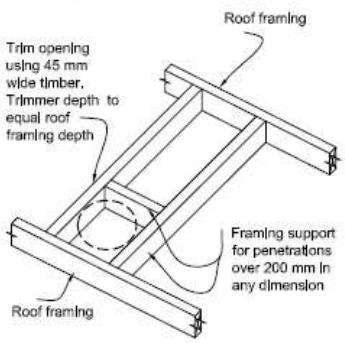
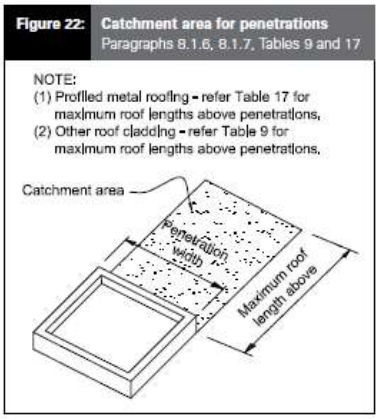


Figure 22: Catchment area for penetrations
Paragraphs 8.1.6, 8.1.7, Tables 9 and 17



E2

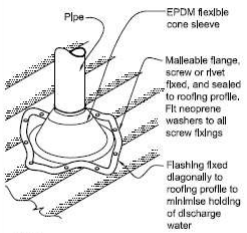
Roof penetrations shall be flashed as follows:

- Pipe penetrations up to 85 mm shall be flashed using an *EPDM* boot *flashing* as shown in Figure 53,
- Pipe penetrations up to 500 mm shall be flashed using a soaker *flashing* and *EPDM* boot *flashing* as shown in Figure 54,
- Rectangular penetrations up to 1200 mm wide shall be flashed using a soaker type *flashing* as shown in Figure 55.

COMMENT:

- Penetrations on lower pitched *roofs*, larger penetrations, or needing specialised complex *flashings* will require *specific design* to suit the particular circumstances.
- **The New Zealand Metal Roof and Wall Cladding Code of Practice should be consulted for guidance.**

Figure 53: Flashing for small pipes
Paragraphs 8.3.10, 8.4.17, 9.6.8.5 and 9.6.9.6



NOTE:
(1) Max. roof pitch for this flashing 45°, minimum pitch 10° if base of flange covers one or more complete troughs.
(2) For pipes up to 85 mm diameter.

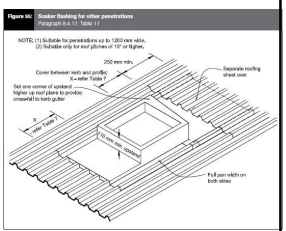
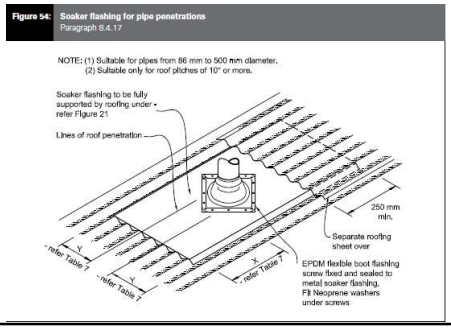
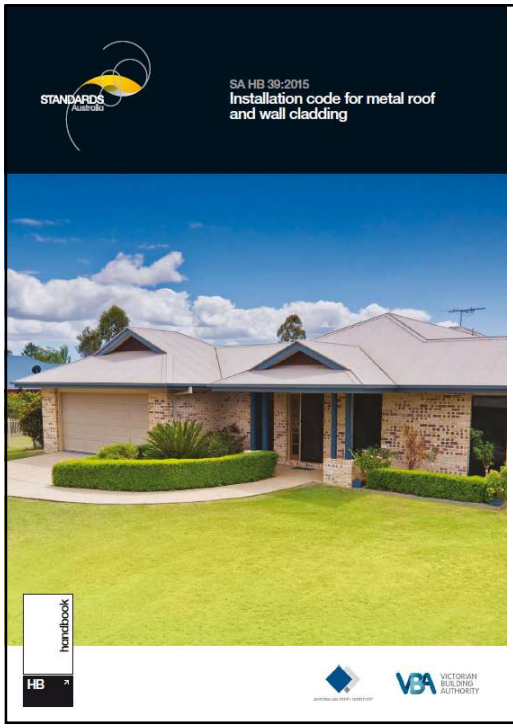


Figure 54: Soaker flashing for pipe penetrations
Paragraph 8.4.17





SA HB 39:2015

Installation code for metal roof and wall cladding.

SA HB 39:2015

Stop-ending:

- The roof covering sheets on the lower side of the penetration to be stop-ended to the full height of the corrugations or ribs.

Clearance

- The opening in the roof coverings and upstand to be sized so as to leave an annular gap of not less than 20 mm between the service and the penetration (see figure 5.5.C). No service to be directly fastened to, or suspended from, the roof surface, soaker gutter or its apron flashing.

Apron

- The penetration to be flashed with an appropriately sized soaker and apron flashing around its perimeter as specified in clause 8.5.1.F.

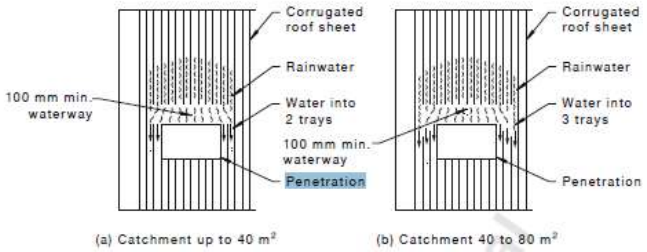
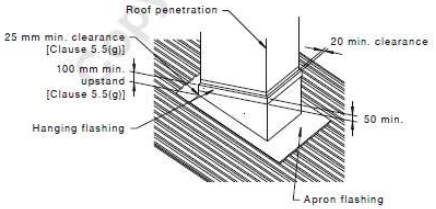


FIGURE 5.5(A) DIVERSION OF FLOW AROUND LARGE PENETRATIONS



DIMENSIONS IN MILLIMETRES

FIGURE 5.5(C) CLEARANCE GAP

SA HB 39:2015

8.6 Penetration

8.6.1 Collar Flashing

- Where any part of the roof surface is penetrated by any pipe, pole, duct, flue, shaft, cable or tank support, the penetration is to be flashed to prevent the entry of rainwater, and to permit the roof surface and penetrating object to expand and contract without detrimental effect to any part of the roof (see figure 8.6.1 A).

- In addition, particular attention is to be paid to the following:

a) Pondage Collar flashing to permit the total drainage of the area above the penetration.

b) Material compatibility – All collar flashing materials to be as given in Table 2.3.A & B.

c) Inert Catchment – All collar flashings to be manufactured from materials that:

i. Are not adversely affected by the run-off from inert catchments; and
ii. Have no detrimental effect on the roof surface, including gutters, soakers and down pipes.
iii. Galvanised steel collar flashings to be installed only on a galvanized steel roof surface.

SA HB 39:2015

TABLE 2.3(A)

ACCEPTABILITY OF DIRECT CONTACT BETWEEN METALS

Roof drainage system components and any cladding material	Accessory or fastener material												Fastener material
	Aluminium alloys		Copper and copper alloys*		Stainless steel (300 series)		Zinc-coated steel and zinc		Aluminium/zinc alloy-coated and aluminium/zinc/magnesium alloy-coated steel		Lead		Ceramic or organic coated
	Atmospheric classification												
	SI and VS	Mild	SI and VS	Mild	SI and VS	Mild	SI and VS	Mild	SI and VS	Mild	SI and VS	Mild	SI and VS and mild
Aluminium alloys	Yes	Yes	No	No	†	Yes	‡	‡	Yes	Yes	No	No	Yes
Copper and copper alloys	No	No	Yes	Yes	No	Yes	No	No	No	No	No	Yes	Yes
Stainless steel (300 series)	No	No	No	No	Yes	Yes	No	No	No	No	No	Yes	Yes
Zinc-coated steel and zinc	Yes	Yes	No	No	No	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
Aluminium/zinc and aluminium/zinc/magnesium alloy-coated steel	Yes	Yes	No	No	No	Yes	‡	‡	Yes	Yes	No	No	Yes
Lead§	No	No	Yes	Yes	Yes	Yes	No	Yes	No	No	Yes	Yes	Yes

8.6.2 Large Penetration

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Where large ducts/pipes penetrate the surface, adequate drainage of the roof surface above the penetration is to be provided (see Clause 5.5).
In addition, particular attention is to be paid to the following:

a) Penetration support –

b) Cutting penetration – Where power cutters are used to cut out the roof section, all occupational health and safety regulations to be observed. On completion of the cut, the whole of the area to be thoroughly cleaned to remove all traces of metal cuttings and swarf.

c) Rib sealing –Ribs on the upstream end of the penetration to be folded, fastened and sealed as shown in figure 5.5 B or proprietary rib sealers to be fitted, fastened and sealed to render the rib end watertight (see figure 7.13)

d) Anti-capillary cuts – All female ribs in crest-fixed sheeting to have an anti-capillary cut above all soakers to allow drainage to the roof thus preventing seepage of water into the rib-lap (see figure 8.6.1D).

e) Stop-ending – Roof coverings at the lower end of penetrations to have their trays or valleys stop-ended to the full height of the rib.

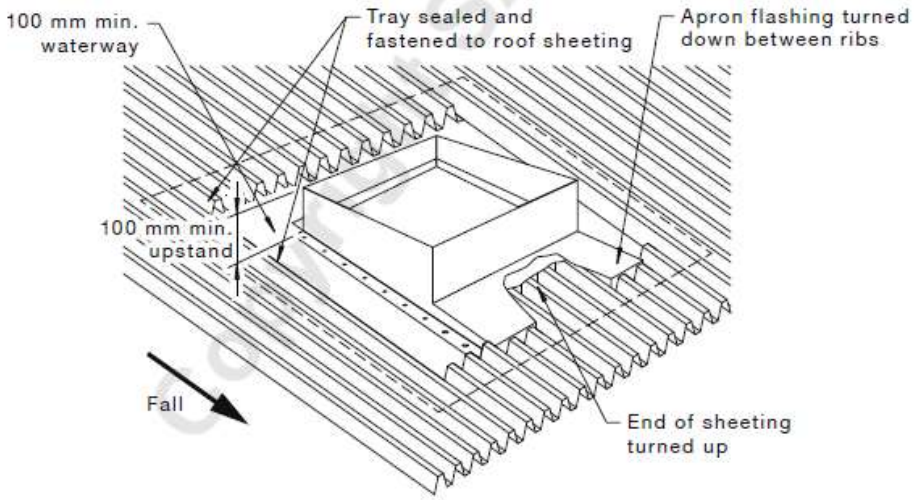
f) Stop-ending sheets – The high end of all roof covering sheets to be turned up to the full height of the ribs under transverse cappings to provide a watertight tray (see figure 8.6.2 A).

g) Cut-end sheets - Where longitudinal ribs have been removed on any sloping side, the pan is to be turned up to the height of the rib to form a new narrower tray.

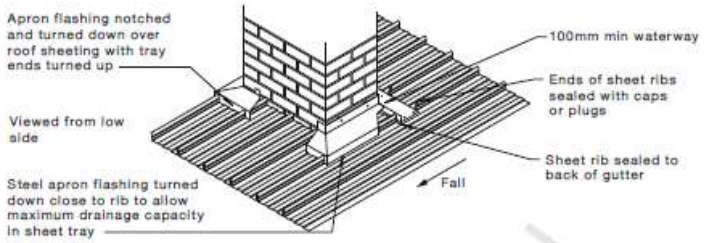
h) Synthetic rubber – Synthetic rubber flashings to be installed to the manufacturer's specification and are not to block the flow path of the water on the roof.

SA HB 39:2015

(a) Ribs stop-ended and sealed

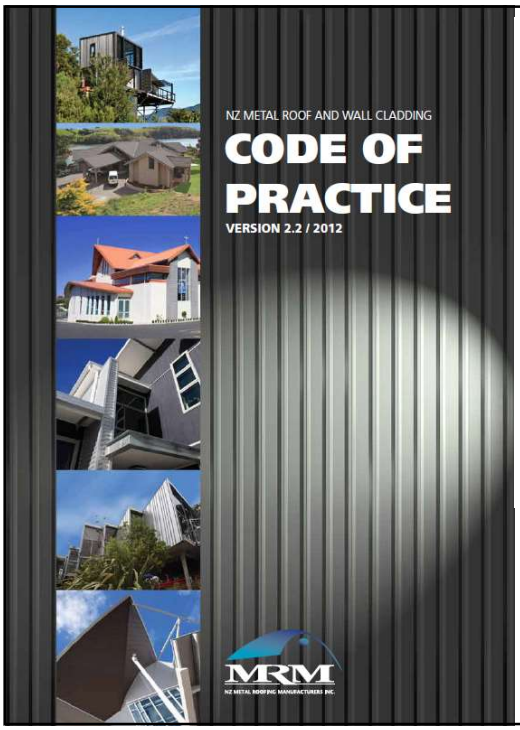


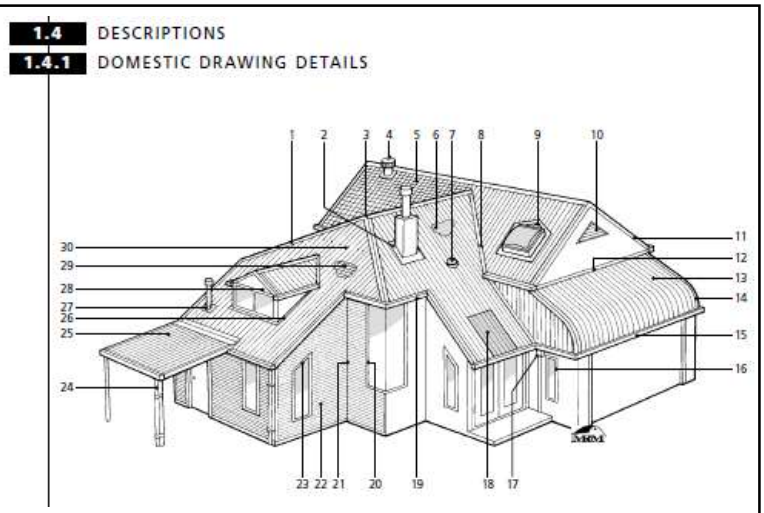
SA HB 39:2015



NOTE: This Figure is reproduced in adapted form with permission from BlueScope Steel Limited trading as BlueScope Lysaght.

FIGURE 8.6.2(B) STOP-ENDS ON TRANSVERSE CAPPING





No penetration must be made in roof cladding below the minimum pitch for the profile.

6.0 Penetrations

MRM
NZ METAL ROOFING MANUFACTURERS INC.

In this Code of Practice a penetration is any hole cut in roof or wall cladding, where projections such as pipes, ducts, chimneys, doors and windows pass through roof and wall cladding. The type of penetration design is determined by how large the hole is, what shape it is, the pitch and type of the roof, the catchment area, where it is situated on the roof and how it matches or otherwise with the module of the cladding.

Penetrations may be executed in roofs of any pitch down to the limit of 8° for corrugate and 3° for other profiles, except that there shall be no penetrations in the portion of curved or drape roofs where the pitch fall below these limits.

All penetrations must be made watertight by the use of flashings.

Where more than one rib of profiled cladding is removed, additional structural members must be provided to support the roof cladding.

RESPONSIBILITY

- **The designer must provide details for the additional support required in the drawings for all penetrations greater than 600mm x 600mm. The weight of any penetration such as an air conditioning unit, or plant platform, must not be imposed on the roof cladding without additional support.**
- **The removal of structural members must not occur without written permission supported by engineering calculation.**
- **The person who cuts the hole in the roof must be responsible to ensure that sufficient additional support is provided for the roof cladding and the penetration flashing.**
- **All holes greater than 300mm x 300mm cut in roof cladding must have additional structural support.**

DURABILITY

The back curb of penetration flashings manufactured from metallic coated steel and which have no fall, will collect dirt and debris.

Due to the presence of continued moisture, the subsequent ponding can cause deterioration and premature corrosion and affect the durability of the back curb.

This design of flashing when manufactured from metallic coated steel, is not covered by any manufacturers warranty, therefore a diverter or cricket design with a back curb and a minimum fall of 1.5˚ should be used.

CATCHMENT

The water flow can be restricted by the penetration side flashing up to 50% of the normal pan width only if the:

- **design rainfall is no greater than 100mm/hr,**
- **sheeting length is less than 40m**
- **catchment is less than 20m$_2$**
- **profile is asymmetrical**
- **pan is at least 100 mm wide**

Symmetrical sinusoidal and symmetrical trapezoidal profiles must have full pan width for free discharge. *(see profile capacity section 8.2.3)*

When the total catchment area exceeds 40m$_2$ the discharge must be spread over two or more pans to provide for additional drainage. When the catchment area includes the walls of adjacent buildings it must be calculated as in *section 8.2.1.*

In snow zones more than 500m above sea level, only full pan width discharge must be used.

No penetration must be made in the pitch area between 0˚ and 3˚ for trapezoidal or 8˚ for corrugate profiles on a curved roof.

The back and side curbs of a penetration flashing act as a gutter draining the catchment behind the obstruction which often discharges onto the roof into one corrugation or pan of a profiled sheet.

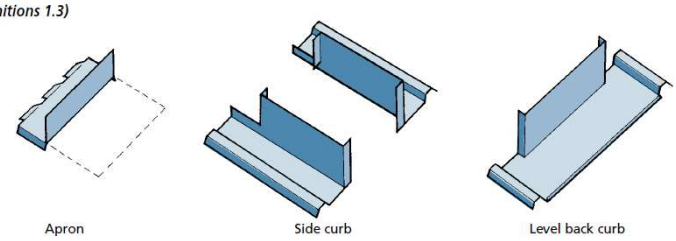
The back and side curbs of roof penetrations must be regarded as internal gutters and therefore must be designed with the same parameters as gutters.

A diverter or cricket penetration design should be used when:

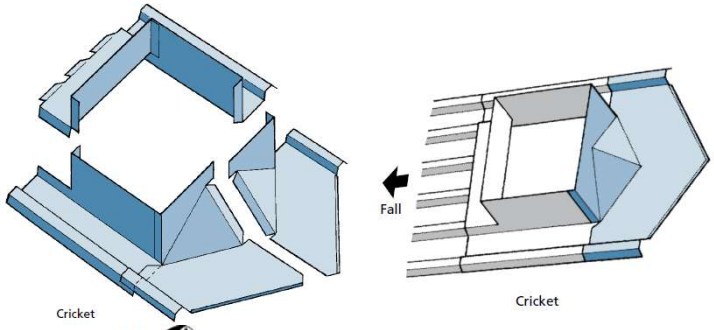
- the width of the penetration exceeds 600mm
- the catchment is greater than 40m$_2$
- where there is a likelihood of snow

6.2.1 NOMENCLATURE.

The nomenclature used in describing penetration flashings may differ in different parts of New Zealand: ***(refer to definitions 1.3)***



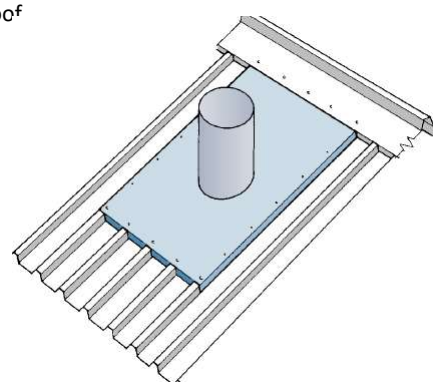
Drawing 6.2.1.A
This detail is suitable for penetrations up to 600mm wide.



Drawing 6.2.1.B

Type B
Over-flashings are those that drain at the plane of the rib of the roof
These are also known as Watershed or back flashings.
Watershed flashings (over or back)

- Simple
- Recommended to first purlin from the ridge if > 300mm wide.
- Not suitable if over 1.100m wide
- Not universally accepted aesthetically
- Can be used in conjunction with sprung or over-roof design.

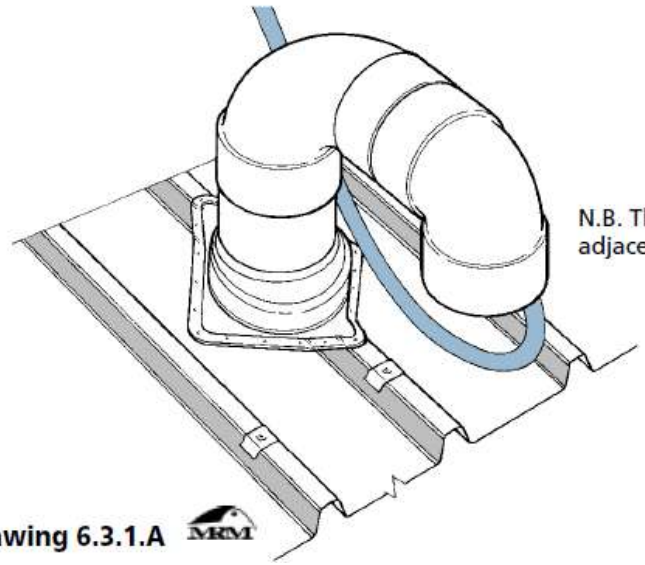


TYPE B WATERSHED

Watershed flashings are not the preferred method of roof penetration flashing, and they are not regarded as aesthetically acceptable in many installations. They are an acceptable method of penetration flashing within the restrictions stated.

A 'watershed' or back flashing is utilised in the end span, and is **best restricted to within 1.5m of the ridge** so that it will not restrict roof movement or cause expansion or condensation problems.

If it is no wider than 1100mm (1200mm - 50mm downturn at each edge) the back tray can be made in one piece but a deeper or longer penetration is subject to another design detail. It is not acceptable to seam or join flat sheet as a back flashing. ***(see detail 6.2.8A)***



N.B. This boot flashing must be fixed adjacent to the purlin for support.

Drawing 6.3.1.A

E2 - 9.0 Wall Claddings

E2 - 9.1.9 Penetrations

9.1.9.1 Penetrations through cavities

- Window penetrations through cavities shall meet the requirements of Paragraph 9.2 to Paragraph 9.9.

9.1.9.2 Other cavity penetrations

- Where penetrations of the *wall cladding* are wider than the *cavity batten* spacing, allowance shall be made for air flow between adjacent cavities by leaving a minimum gap of 10 mm between the bottom of the vertical *cavity batten* and the *flashing* to the opening.

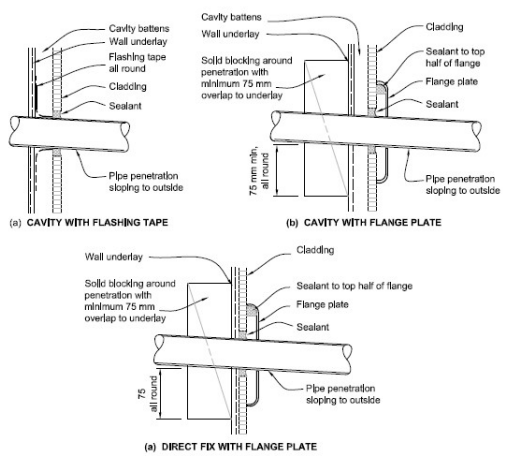
9.1.9.3 Pipes and service penetrations

- Pipes and service penetrations shall be made *weathertight* by using methods shown in Figures 68 and 69. *Flashing* tape complying with Paragraph 4.3.11, and sealant complying with:

a) Type F, Class 20LM or 25LM of ISO 11600, or

b) low modulus Type II Class A of Federal Specification TT-S-00230C

E2

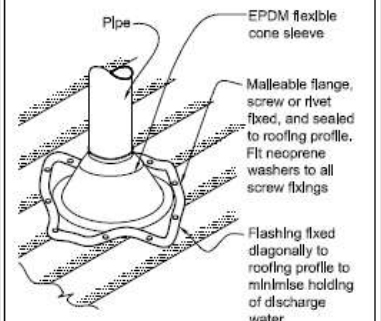


COMMENT:
Where possible, pipe penetrations, meterboxes and similar penetrations should be located in sheltered areas of the *building*, such as a porch, or be installed behind a weatherproof glazed panel.

E2 - 9.6.8.5 Vertical profile: penetrations

Pipe penetrations shall be as per Figure 53.

Figure 53: Flashing for small pipes
Paragraphs 8.3.10, 8.4.17, 9.6.8.5 and 9.6.9.6

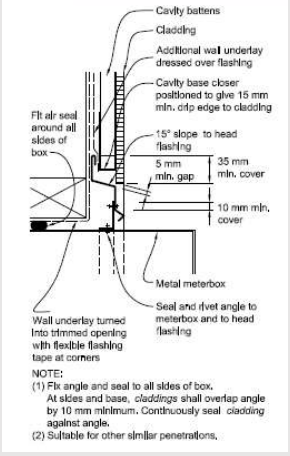


NOTE:
(1) Max. roof pitch for this flashing 45°, minimum pitch 10° if base of flange covers one or more complete troughs.
(2) For pipes up to 85 mm diameter.

E2 - 9.6.8.5 Vertical profile: penetrations

The heads of larger penetrations shall be flashed in similar fashion to Figure 69, with head *flashings* adjusted to suit the profile and other *flashings* as per window and door details in relevant paragraphs.

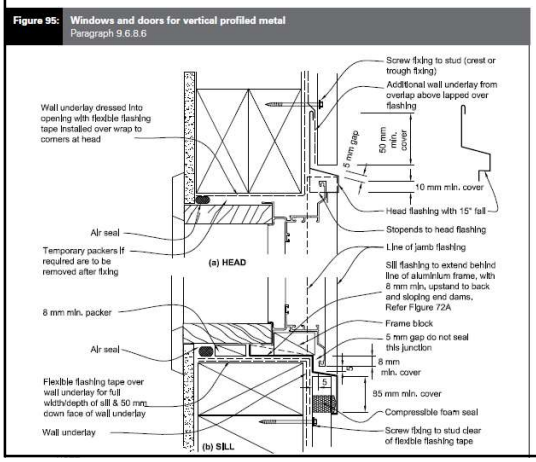
Figure 69: General meterbox and similar penetrations
Paragraphs 9.1.9.3, 9.6.8.5 and 9.6.9.6

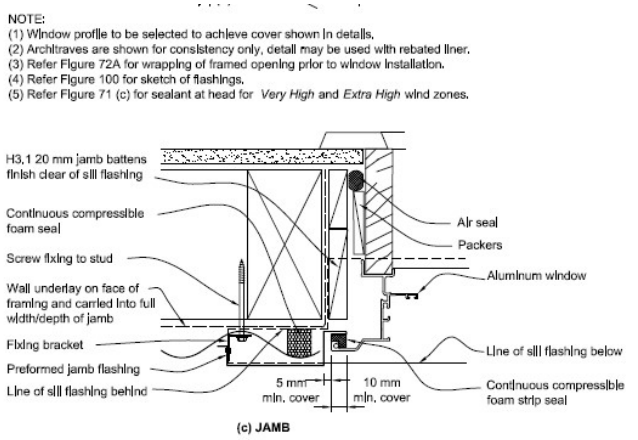


NOTE:
(1) Fix angle and seal to all sides of box. At sides and base, *claddings* shall overlap angle by 10 mm minimum. Continuously seal *cladding* against angle.
(2) Suitable for other similar penetrations.

E2 - 9.6.8.6 Vertical profile: windows and doors

Windows and doors in vertical profiled metal *claddings* shall be flashed as shown in Figure 95 and Figure 100.





E2 - 9.6.9.6 Horizontal profile: penetrations

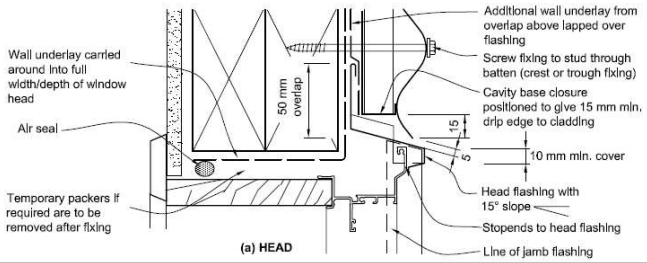
- All services penetrations through *claddings* shall be flashed and sealed. Pipe penetrations are shown in Figure 53.
- The heads of larger penetrations shall be flashed in a similar fashion to Figure 69.

E2 - 9.6.9.7 Horizontal profile: windows and doors

Windows and doors shall be installed in accordance with Paragraph 9.1.10, and as shown in Figure 99 and Figure 100.

Window Head Flashing

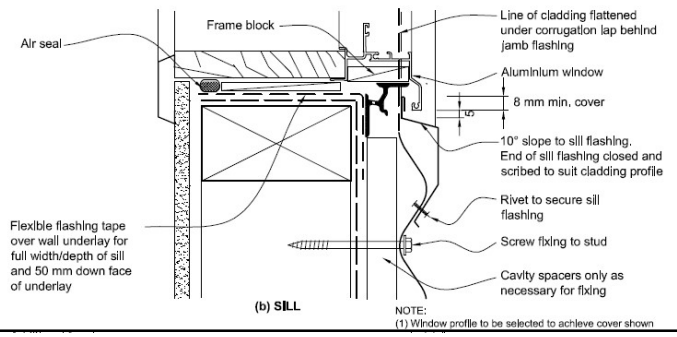
Figure 99: **Windows and doors for horizontal profiled metal on cavity**
Paragraph 9.6.9.7



E2 - 9.6.9.7 Horizontal profile: windows and doors

Windows and doors shall be installed in accordance with Paragraph 9.1.10, and as shown in Figure 99 and Figure 100.

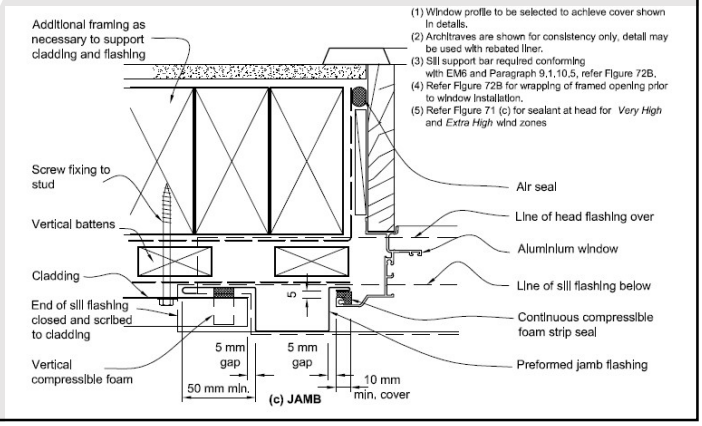
Window Jamb Flashing

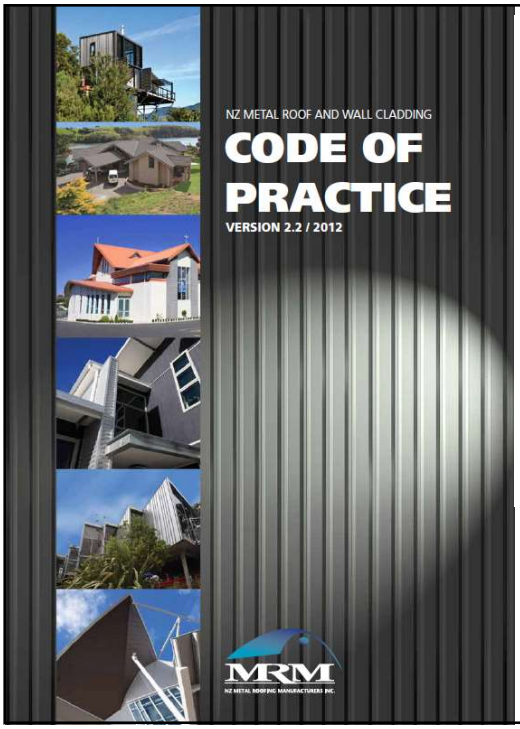


E2 - 9.6.9.7 Horizontal profile: windows and doors

Windows and doors shall be installed in accordance with Paragraph 9.1.10, and as shown in Figure 99 and Figure 100.

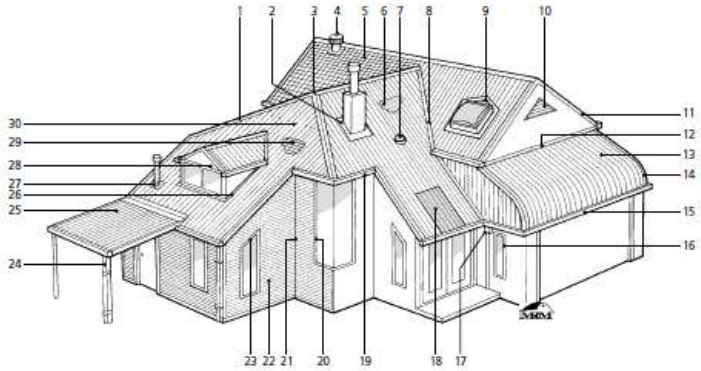
Window Sill Flashing





1.4 DESCRIPTIONS

1.4.1 DOMESTIC DRAWING DETAILS



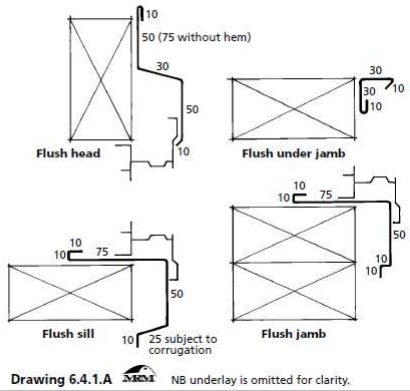
No penetration must be made in roof cladding below the minimum pitch for the profile.

6.4 WINDOW FLASHINGS FOR METAL CLADDING

A permeable and absorptive underlay must be provided under all metal wall cladding, and when there is no air cavity behind it, provision must be made for ventilation. (see section 4.2. & 4.3.)

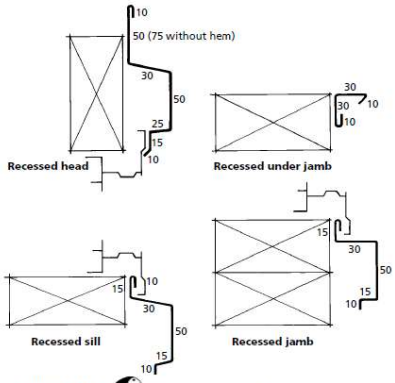
Synthetic wraps must not be used as an underlay directly under metal cladding unless they conform to table 4.3.1.

6.4.1 FLUSH WINDOW FLASHINGS

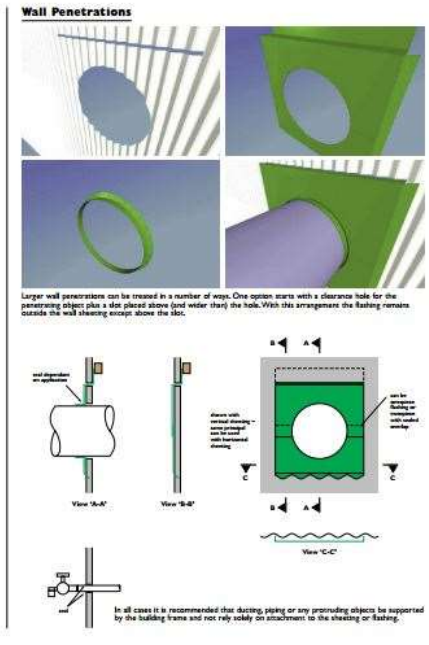


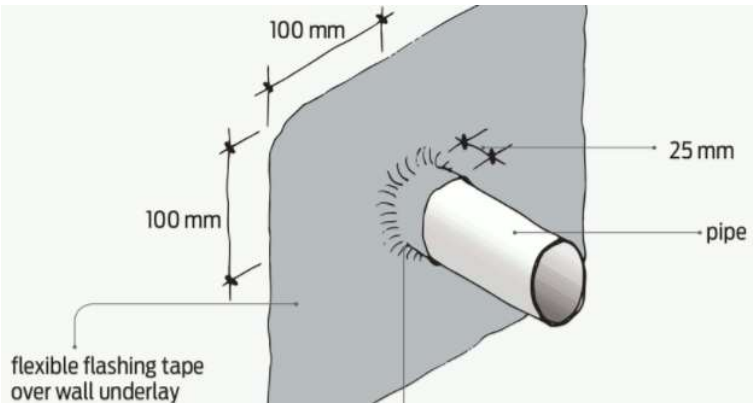
Drawing 6.4.1.A NB underlay is omitted for clarity.

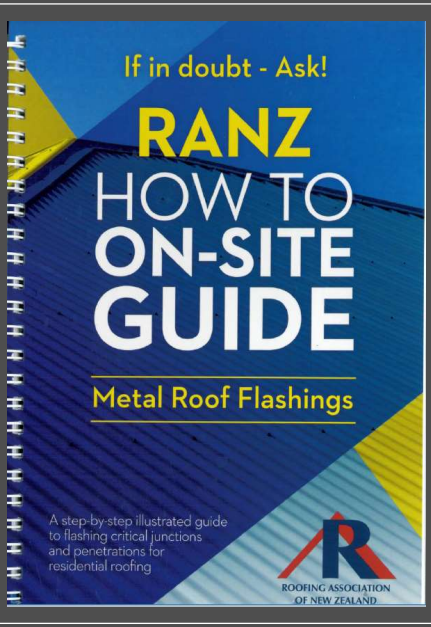
6.4.2 RECESSED WINDOW FLASHINGS



Drawing 6.4.2.A NB underlay is omitted for clarity.






If in doubt - Ask!
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GUIDE
Metal Roof Flashings
A step-by-step illustrated guide to flashing critical junctions and penetrations for residential roofing
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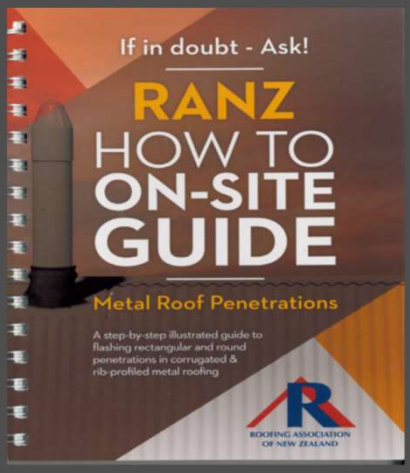
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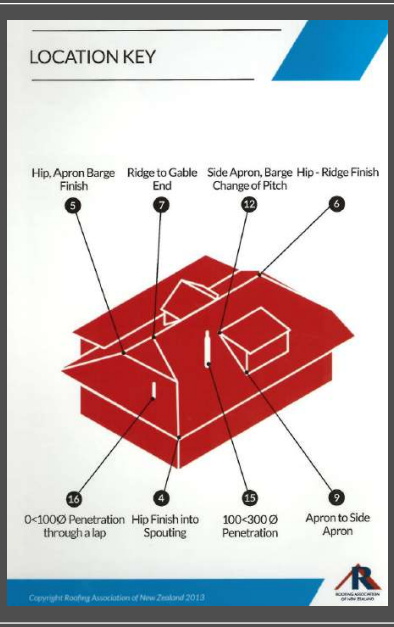
LOCATION KEY
Hip, Apron Barge Finish
Ridge to Gable End
Side Apron, Barge Change of Pitch
Hip - Ridge Finish
5
7
12
6
16
4
15
9
0<100Ø Penetration through a lap
Hip Finish into Spouting
100<300 Ø Penetration
Apron to Side Apron
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15 100<300Ø PENETRATION
4 stages to complete
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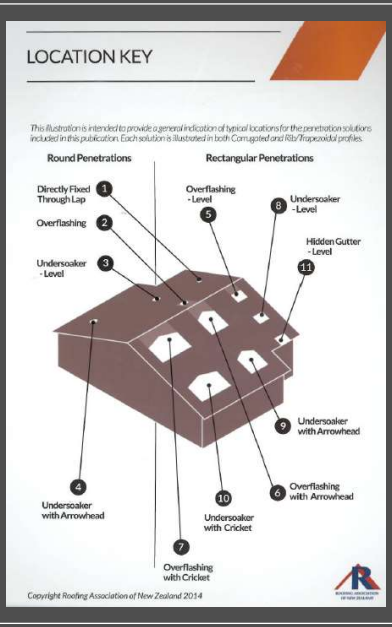


Window Sill Detail – Eurostyle Spanlok

Although the details in technical detail ES45WO12A appear dissimilar to details in E2/AS1, it refers to the flashing being generally in compliance with E2/AS1. This is technically correct. E2/AS1 does not provide details for profiled metal cladding vertically fixed over a drained cavity but the detail is consistent with and follows the principles that are set out in E2/AS1 for other cladding materials on a drained cavity.

The item described as a flashing in technical detail ES45WO12A in fact serves the purpose of providing a transition from the trapezoidal profile to a uniform flat element and can be considered not as a flashing but an extension of the cladding.

The general requirements for window sills for claddings over a drained cavity are (para 9.1.10.5(b)):

- Window sills as shown in Paragraphs 9.2 to 9.9, without sill flashings
- Sill support bars

Sill details are shown for a number of claddings on drained cavity:

- in Figures 73C, masonry veneer.
- Fig 86 rusticated weatherboard on cavity
- Fig 91 fibrecement weatherboard on cavity
- Fig 99 horizontal profiled metal on cavity (refers to 72B for sill support bar, and for wrapping of framed opening prior to window installation.
- Fig 116 Fibre cement sheet

None of these sill details provide for a sill flashing, which is consistent with para 9.1.10.5(b).

The critical aspects of these details are:

- The wrapping of the framed opening prior to window installations
- The 8mm cover to joinery.

Other differences simply reflect the various geometric differences of the various cladding materials and do not affect the weatherproofness of the details.

Looking now at the sill detail for Eurostyle Spanlok, these critical aspects are retained:

- The upturn of the cladding extension sits back close to but not fixed or sealed to the sill support bar (in the same way that is shown for claddings in the above details in E2/AS1). The cladding extension is sized to provide a 10mm minimum cover for the window sill facing (cf 8mm minimum specified in E2/AS1).
- The notes to technical detail ES45WO12A refer to E2/AS1 for wrapping the framed opening prior to window installation.

The weathertightness of the detail does not rely on the sealant applied between the cladding extension and joinery sill facing. The purpose of that sealant is to complement the fixing of the cladding extension to the grab flashing that is fixed to the cladding profile ridges.

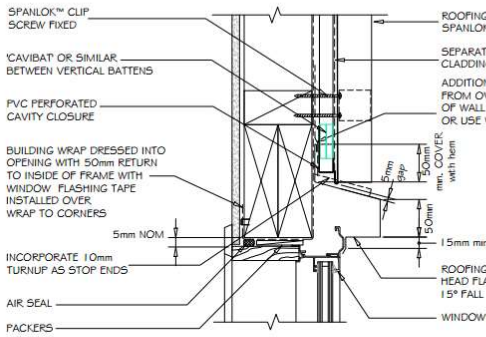
The sill details for Eurostyle Spanlok shown in technical detail ES45WO12A are an Alternative Solution based on E2/AS1, and comply with the Building Code.

EUROSTYLE SPANLOK™
WINDOW / DOOR HEAD FLASHING FOR VERTICAL CLADDING.

DETAIL NO. ES45WO12A

DATE DRAWN 07/12/15

FILE REFERENCE RI-ES45WO12A.DWG



A – WINDOW HEAD VERTICAL CLADDING 1:5

GENERAL NOTES:

(1) REFER TO E2/AS1 FOR GENERAL WINDOW OPENING FOR WRAPPING OF FRAMED OPENING PRIOR TO WINDOW INSTALLATION.
(2) A MIN. OF 8mm EFFECTIVE COVER AT SILLS SHALL BE PERMITTED WHERE NECESSARY TO ALLOW FOR TOLERANCES.
(3) WINDOW PROFILE TO BE SELECTED TO ACHIEVE COVER SHOWN IN DETAILS.
(4) ARCHITRAVES ARE SHOWN FOR CONSISTENCY ONLY, DETAIL MAY BE USED WITH REBATED LINER.
(5) LIASE WITH WINDOW MANUFACTURER PRIOR TO INSTALLATION.
(6) SEAL HEAD FLASHING TO WINDOW IN VERY HIGH & EXTRA HIGH WIND ZONES.

REFERENCE FLASHINGS:
NZ METAL ROOF AND WALL CLADDING CODE OF PRACTICE.
E2/AS1 OR REFER MANUF DETAILING.
DIMENSIONS ARE INDICATIVE ONLY

NOTES:

- These details are generally in compliance with E2/AS1 and/or the NZ Metal Roof & Wall Cladding Code of Practice and in some cases specific details by 'Roofing Industries'.
- The building designer is ultimately responsible to ensure that details used meet the requirements of the NZ Building Code for the specific project.
- Details of the supporting structure including cavity battens are indicative only and are the responsibility of the building designer. For steel framed buildings thermal break cavity battens may be required.
- Underlay selection and building wrap types are the responsibility of the designer, Netting or other support is generally required at roof pitches less than 8 degrees combined with a self supporting underlay. At roof pitches of 8° and above where non self supporting underlay is used or purlin spacing is in excess of self supporting criteria, netting or other support should be used. Alternative support to netting should be used in severe coastal environments including when aluminium is used.
- These details are for Roofing Industries profile/s as nominated and may not be applicable to other profiles.
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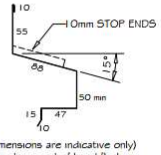


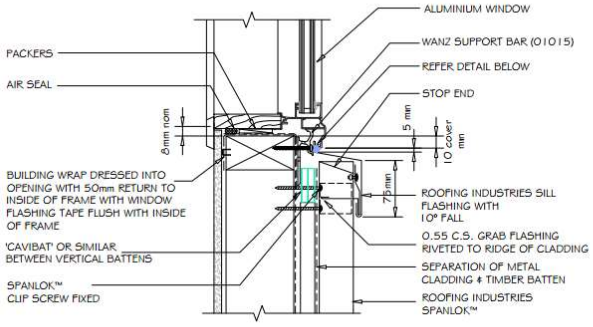
(Dimensions are indicative only)
Turn down end of head flashing to jamb flashing

EUROSTYLE SPANLOK™
WINDOW / DOOR SILL FLASHING FOR VERTICAL CLADDING.

DETAIL NO. ES45W012C

DATE DRAWN 07/12/15

FILE REFERENCE RI-ES45W012C.DWG



B – WINDOW SILL VERTICAL CLADDING 1:5

GENERAL NOTES:

(1) REFER TO E2/AS1 FOR GENERAL WINDOW OPENING FOR WRAPPING OF FRAMED OPENING PRIOR TO WINDOW INSTALLATION.
(2) A MIN. OF 8mm EFFECTIVE COVER AT SILLS SHALL BE PERMITTED WHERE NECESSARY TO ALLOW FOR TOLERANCES.
(3) WINDOW PROFILE TO BE SELECTED TO ACHIEVE COVER SHOWN IN DETAILS.
(4) ARCHITRAVES ARE SHOWN FOR CONSISTENCY ONLY, DETAIL MAY BE USED WITH REBATED LINER.
(5) WHERE SUPPORT BRACKETS ARE REQUIRED BY THE WINDOW MANUFACTURER TO CARRY THE FRAME AND GLAZING LOADS THEY MUST BE SUPPLIED AS AN INTEGRAL PART OF THE WINDOW MANUFACTURER'S RECOMMENDATIONS.
(6) LIASE WITH WINDOW MANUFACTURER PRIOR TO INSTALLATION.

REFERENCE FLASHINGS:
NZ METAL ROOF AND WALL CLADDING CODE OF PRACTICE.
E2/AS1 OR REFER MANUF DETAILING.
DIMENSIONS ARE INDICATIVE ONLY

NOTES:

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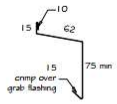
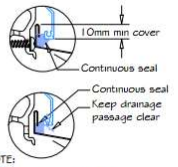


Sill flashings stop ended to receive jamb flashings (Dimensions are indicative only & show minimum lap covers)



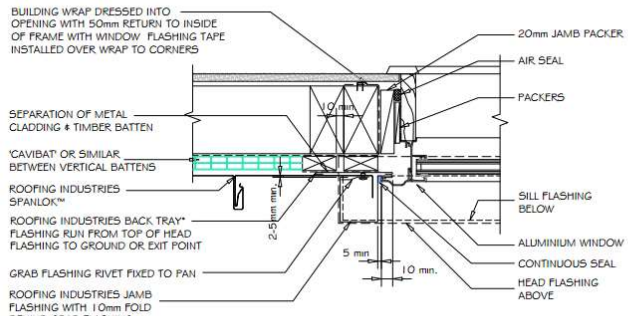
NOTE:
Sill sealing method for flange end type drainage systems

EUROSTYLE SPANLOK™
WINDOW / DOOR JAMB FLASHING FOR VERTICAL CLADDING.

DETAIL NO. ES45W012B

DATE DRAWN 01/01/16

FILE REFERENCE RI-ES45W012B.DWG



B – WINDOW JAMB VERTICAL CLADDING 1:5

GENERAL NOTES:

(1) REFER TO E2/AS1 FOR GENERAL WINDOW OPENING FOR WRAPPING OF FRAMED OPENING PRIOR TO WINDOW INSTALLATION.
(2) A MIN. OF 8mm EFFECTIVE COVER AT SILLS SHALL BE PERMITTED WHERE NECESSARY TO ALLOW FOR TOLERANCES.
(3) WINDOW PROFILE TO BE SELECTED TO ACHIEVE COVER SHOWN IN DETAILS.
(4) ARCHITRAVES ARE SHOWN FOR CONSISTENCY ONLY, DETAIL MAY BE USED WITH REBATED LINER.
(5) LIASE WITH WINDOW MANUFACTURER PRIOR TO INSTALLATION.

REFERENCE FLASHINGS:
NZ METAL ROOF AND WALL CLADDING CODE OF PRACTICE.
E2/AS1 OR REFER MANUF DETAILING.
DIMENSIONS ARE INDICATIVE ONLY

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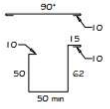

* Back tray size may require to increase to ensure coverage at ends of head flashings. (Dimensions are indicative only) Turn down end of head flashing


THANK
YOU!