

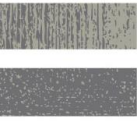


# **EQUITONE** system

## construction details

EQUITONE with face fixings on metal support frame

New Zealand



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# General information

This document provides generic construction details for EQUITONE façade systems to assist with the design of EQUITONE façade.

Construction details in this document have been independently certified for the purpose of compliance with Clause E2, External moisture, of the New Zealand Building Code within the scope of E2/VM1 and E2/VM2 for EQUITONE façade systems with the recommended pliable and rigid weather barrier, respectively, as described in the 'General components'.

The weatherproofing performance of any project specific detail or application that is different from or not included in the construction details of this document shall be evaluated by the project engineer or consultant.

It is the responsibility of the project designer, architect and engineer to ensure that the information and construction details provided in this document are appropriate for the intended application.

Cladding support frame and its connection to substructure shall be designed by the project engineer in accordance with the relevant standards. The support frame maximum deflection under the influence of load shall be limited to  $\text{Span}/250$ .

The support frame, fixings, flashings and the like shall be of adequate corrosion resistance appropriate to the corrosivity category of the project location.

Flashings and capping shall be designed with respect to project wind loading, relevant standards and regulations.

This document is not designed to serve as an installation guide, and is intended to be used in conjunction with other relevant technical and installation documents.

Construction details contained in this document are not to a specific scale, and are for illustration purposes only.

The information in this document is correct at the time of issuing. However, due to our committed program of continuous material and system development we reserve the right to amend or alter the information contained therein without prior notice. Please contact your local EQUITONE sales organisation to ensure you have the most current version.

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# Ventilation

A ventilated façade is a kind of two stage construction, an inner structure with a protective outer skin, and the cladding panel or rainscreen. A ventilated façade consists of an insulated and weathertight structure, a ventilated cavity formed with a cladding support frame, and the cladding panel.

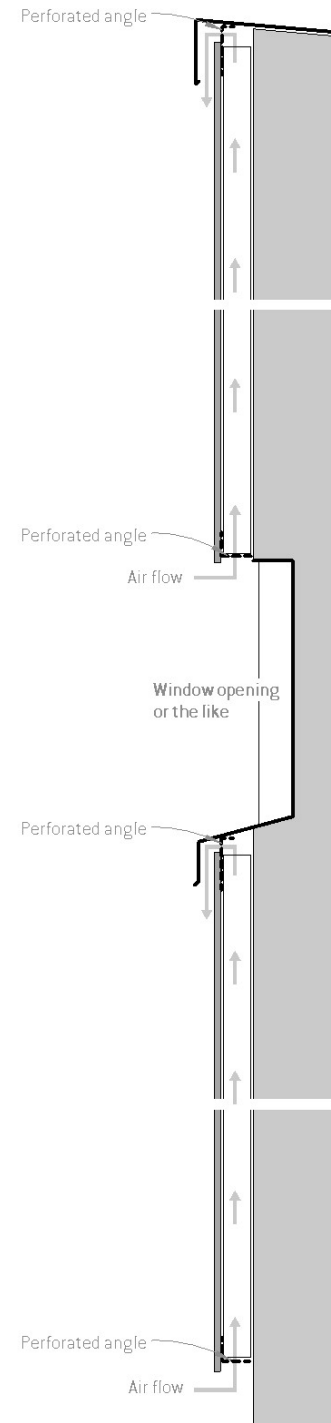
Allowance for adequate ventilation is paramount in ensuring a successful EQUITONE façade. Ventilated façades provide a number of added benefits to the building and its occupants. These may include but are not limited to the following:

- Positive contribution to energy savings
- Minimises thermal bridges
- Assists with condensation management
- Reduces thermal movement of the structure and cladding support frame
- Dissipates radiant heat
- Increases acoustic performance of the external wall
- Provides an effective drainage path for any moisture passing the cladding skin
- Eliminates the need for exposed caulking and sealant, therefore reducing maintenance requirements
- Assists with Keeping the weather barrier dry and healthy
- Architectural design freedom
- Provides opportunities for concealing external services such as downpipes within the cavity
- Proven to be a more sustainable and healthier façade construction

Air must be allowed to enter the cavity from bottom of the façade, window head, soffit, slab junctions, and the like, and exit from top of the façade, capping, window sill, slab and soffit interfaces, and the like.

All air inlets and outlets are protected against entry of birds and vermin into the cavity with a corrosion resistant perforated profile (angle).

The perforated angle should be of maximum 0.9mm in thickness, where placed between the cladding panel and support frame, and be of a minimum 50% open area with aperture size of maximum 3mm to 5mm. The perforations must be kept open and unobstructed to maintain drainage and ventilation of the cavity. The perforated angle shall be positioned to allow an adequate drip edge to the cladding panel.



# Components

## Material



EQUITONE [tectiva]



EQUITONE [lines]



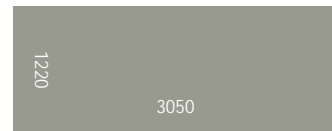
EQUITONE [natura]



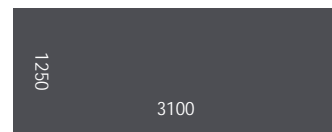
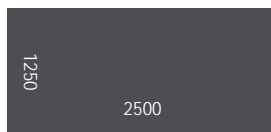
EQUITONE [pictura]

### Maximum available panel sizes

EQUITONE [tectiva] 8 mm thick  
EQUITONE [lines] 10 mm thick



EQUITONE [natura] 8 and 12 mm thick  
EQUITONE [natura] PRO 8 and 12 mm thick  
EQUITONE [pictura] 8 and 12 mm thick



## Panel fixings

### UNI Rivet

Colour coded and available in the following materials and grades:

#### Stainless Steel 304 (A2)

Available with additional protective coating for NZ exposure zone E (Very High) as defined in NZS 3604:2011

#### Stainless Steel 316 (A4)

#### Aluminium Almg5

Available with additional protective coating for NZ exposure zone E (Very High) as defined in NZS 3604:2011

#### Notes

Stainless Steel UNI Rivets are available in two lengths to suit a range of support frame thicknesses.

4x18 K15 (standard length): Suitable for Base Metal Thickness of min. 1.1mm to 3.75mm  
4x18 K20: Suitable for Base Metal Thickness of min. 3.75 to 5.75mm

Aluminium UNI Rivet is only available in one length suitable for Base Metal Thickness of 1.15mm to 2.75mm.

Each panel thickness has its own corresponding UNI rivet.

UNI Rivet system is based on GO (gliding) & STOP (fixed) point principle intelligently allowing for 3-D movement in the connection. Only two STOP points are required per panel. Refer to UNI Rivet application guide for further information.

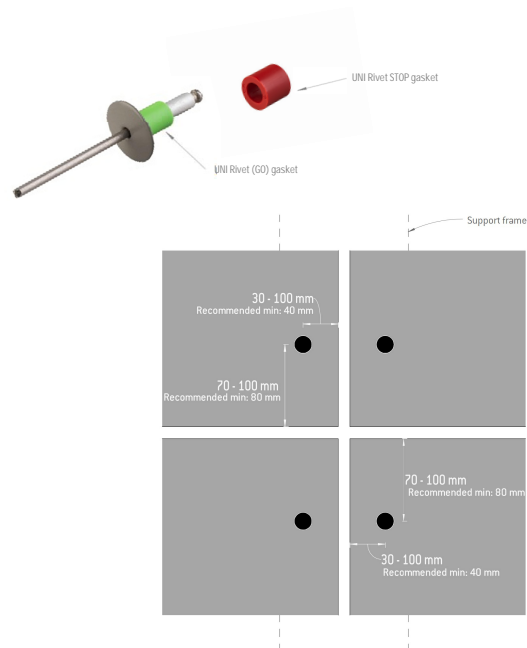
Panel hole size is 11mm for both GO & STOP points, drilled with 11mm EQUITONE drill bit.

EQUITONE UNI Rivet centralising tool must be used for drilling rivet hole in support frame.

UNI Rivet panel edge distance:

From the edge parallel to support frame: 30 – 100 mm (Recommended: 40 mm)

From the edge perpendicular to support frame: 70 – 100 mm (Recommended: 80 mm)



# Components

## Compressible EPDM gasket

Tesa® 61102

A compressible closed-cell EPDM gasket used for sealing interfaces with flashings and the like.

Minimum width:

- 9mm where a narrow strip is required as specified on the construction details
- 48mm where located on vertical joints as specified on the construction details



## Expanding foam gasket

pro clima CONTEGA® FIDEN EXO

A pre-compressed sealing tape used to seal interfaces with window joineries and the like as specified on the construction details.

The required tape size depends on the gap which needs to be sealed. Refer to pro clima CONTEGA® FIDEN EXO datasheet to determine the required tape size.



## Baffle

Black coated aluminium baffle used to close and form expressed panel horizontal joint.



## Weather resistive barrier option 1

Flexible air barrier (pliable membrane)

EQUITONE façade systems have been certified with pro clima SOLITEX EXTASANA® pliable membrane to E2/VM1 for the purpose of compliance with Clause E2 of the NZBC for the following scope:

Serviceability wind pressure: Up to  $\pm 1515\text{Pa}$

Ultimate wind pressure: Up to  $\pm 2500\text{Pa}$

Building height: Up to 10m

pro clima SOLITEX EXTASANA® shall be applied in accordance with pro clima SOLITEX EXTASANA® installation guidelines and relevant standards.



## Weather resistive barrier option 2

Rigid air barrier

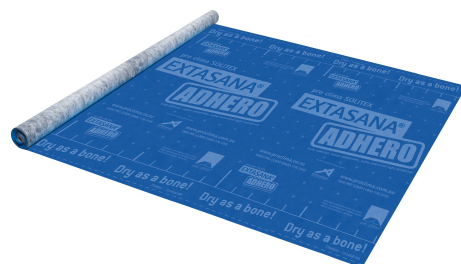
Where a rigid air barrier is required the ADHERO version of pro clima SOLITEX EXTASANA® may be used with 6mm Kalsi (RigidBacker) fibre cement sheeting.

EQUITONE façade systems have been certified with pro clima SOLITEX EXTASANA® ADHERO and Kalsi to E2/VM2 for the purpose of compliance with Clause E2 of the NZBC for the following scope:

Serviceability wind pressure: Up to  $\pm 2250\text{Pa}$

Building height: Up to 25m

pro clima SOLITEX EXTASANA® ADHERO shall be applied in accordance with pro clima SOLITEX EXTASANA® ADHERO installation guidelines and relevant standards.



# Components

## Flashing tape pro clima TESCON EXTORA®

A pressure sensitive adhesive tape for overlaps and end laps used with both weather resistive barrier options.



## Sill tape pro clima TESCON EXTOSEAL®

A flexible tape for use around window and door openings, used with both weather resistive barrier options.



## Sealing tape pro clima TESCON® NAIDECK mono patch

A single-sided adhesive nail or screw sealing adhesive used with both weather resistive barrier options.



## Foil tape pro clima TESCON® ADHISO WS

A pure aluminium tape for wet seal connections to TESCON EXTOSEAL® and EXTORA® and SOLITEX EXTASANA®.

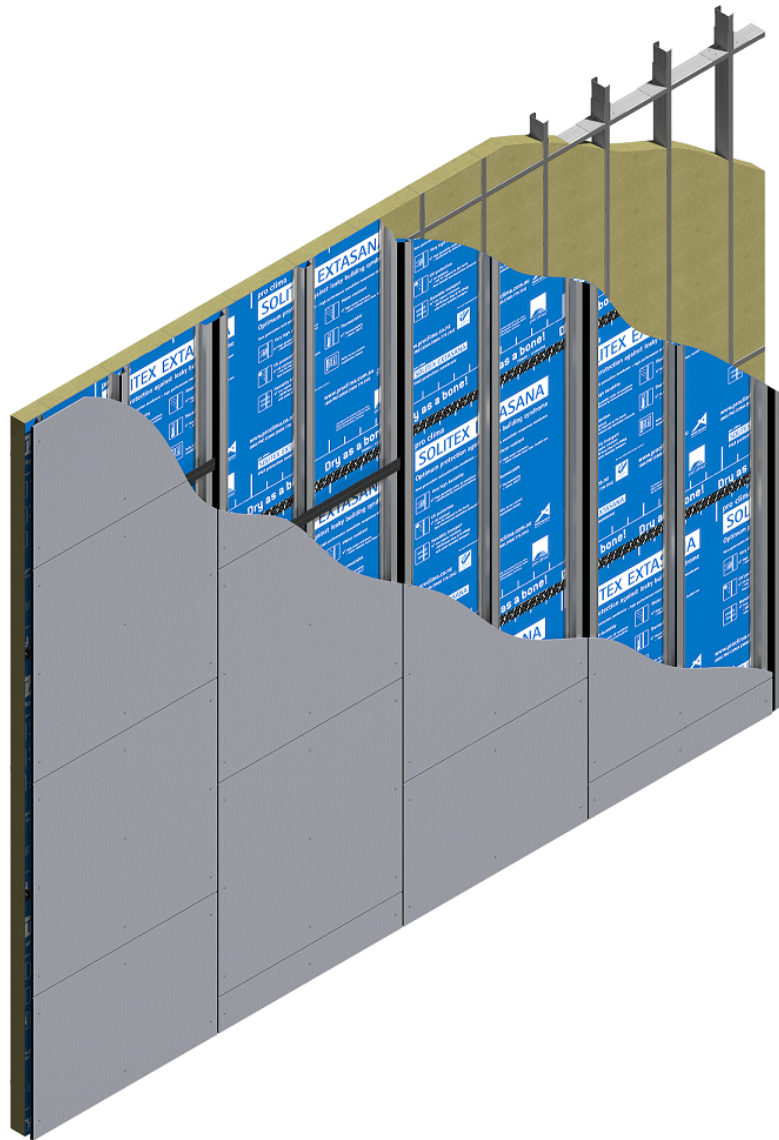


## Grommet pro clima ROFLEX and KALFEX

pro clima ROFLEX is used to seal pipe and pro clima KALFEX for cable penetrations. pro clima ROFLEX and KALFEX are used with both weather resistive barrier options.



# EQUITONE system



flexible air barrier (pliable membrane)  
single layer top hat construction



# Support frame

EQUITONE may be fixed to vertical metal top hat profiles with minimum gauge (thickness) of 1.15mm BMT, minimum depth of 35mm and minimum width of 50 and 120mm for intermediate and joint profiles, respectively.

Metal top hats shall be of adequate corrosion resistance required for the project.

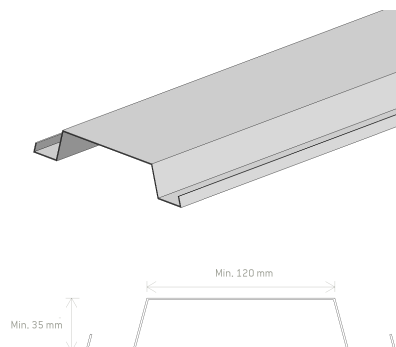
Maximum deflection of support framing must be limited to  $\text{Span}/250$ .

Structure and support frame shall be designed to relevant standards including, but not limited to, the following:

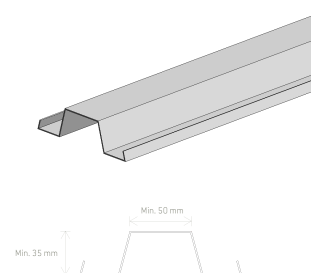
- AS/NZS 4600 – Cold-formed steel structures
- NZS 3404 – Steel structures
- NZS 3604 – Timber framed buildings

## Top hat profiles

120 x 35 mm, minimum 1.15mm BMT  
Located on vertical joints as specified on the construction details



50 x 35 mm, minimum 1.15mm BMT  
For intermediate panel support as specified on the construction details



## Notes

Support frame and its connection to substructure shall be designed by project engineer in accordance with the relevant standards. Refer to UNI Rivet span tables for maximum vertical and horizontal spacing of panel fixings.

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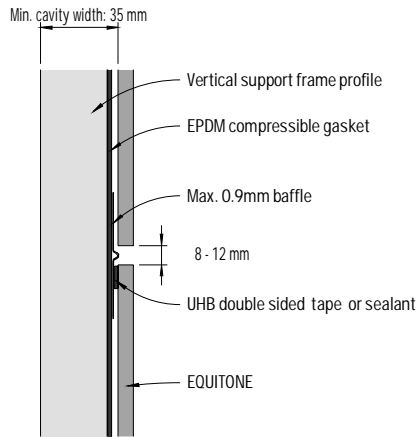


Figure 1: Baffled horizontal joint  
(Not suitable for EQUITONE [material])

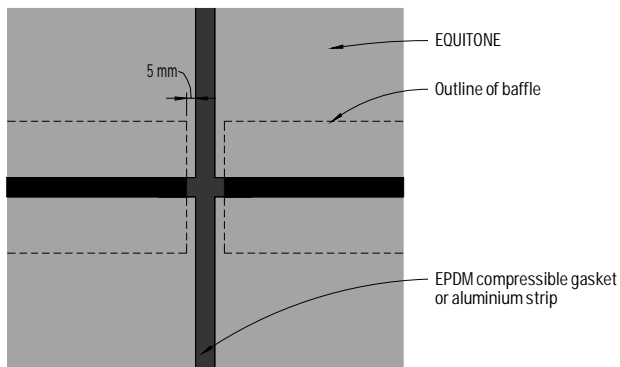


Figure 2: Baffled horizontal joint  
junction with vertical joint - Elevation

Notes

- 1) Depending on the project requirements max. 0.9mm (powder) coated aluminium strip may be used in lieu of EPDM strip on vertical joints for higher UV resistance.
- 2) EQUITONE [material] requires open horizontal panel joints. Horizontal open joint detail requires project engineer's evaluation and approval, and the selection of appropriate rigid and UV resistant weather resistive barrier (membrane).

Intermediate (narrow) EPDM compressible gasket may be applied as shown in dashed line, replacing the wide one, where the metal strip behind is of desired colour

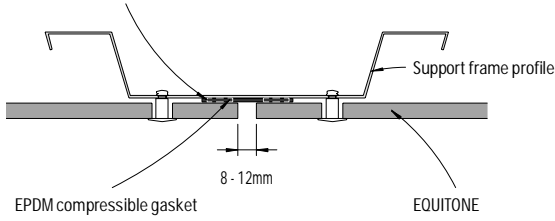


Figure 3: Vertical joint - Detail 1

Intermediate (narrow) EPDM compressible gasket may be applied as shown in dashed line, replacing the wide one, where the metal strip behind is of desired colour

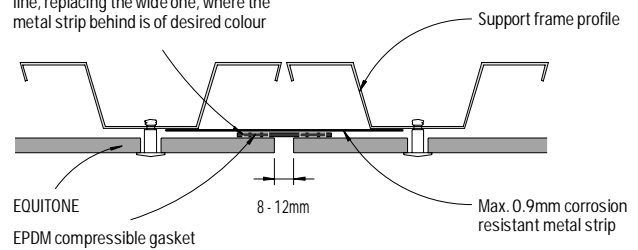


Figure 4: Vertical joint - Detail 2

Intermediate (narrow) EPDM compressible gasket may be applied as shown in dashed line, replacing the wide one, where the metal strip behind is of desired colour

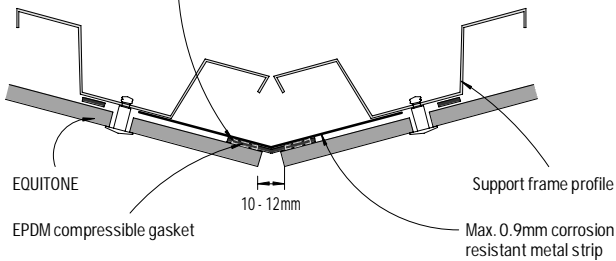


Figure 5: Vertical joint - Detail 3

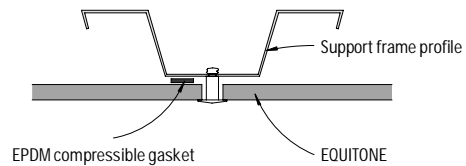


Figure 6: Intermediate panel fixings connection

#### Notes

1) Depending on the project requirements max. 0.9mm (powder) coated aluminium strip may be used in lieu of EPDM strip on vertical joints for higher UV resistance.

2) In Figure 4 & 5, the metal strip should be fixed ONLY to one of the profiles (either left or right) where allowance for horizontal and/or vertical movement of the cladding frame is required.

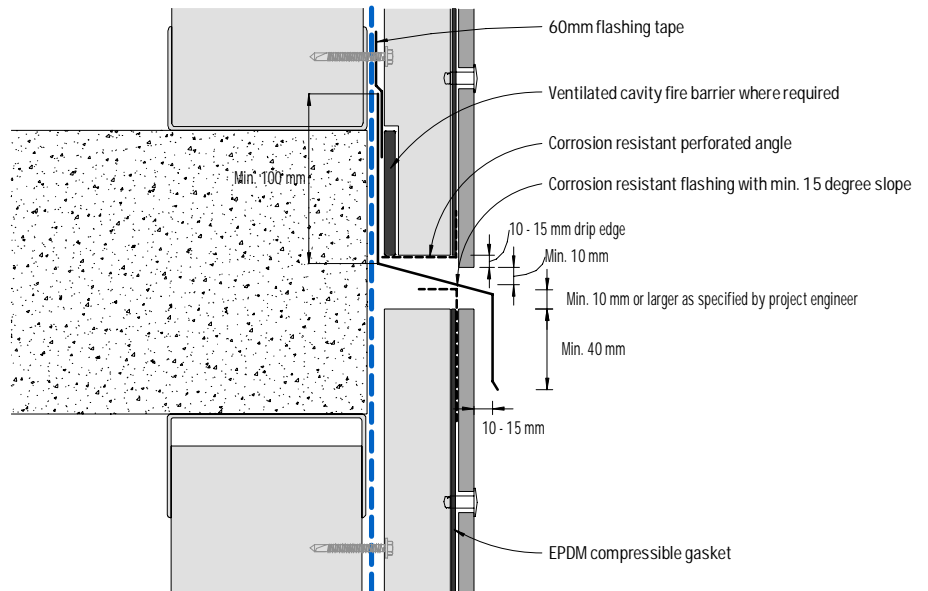


Figure 7: Horizontal control joint

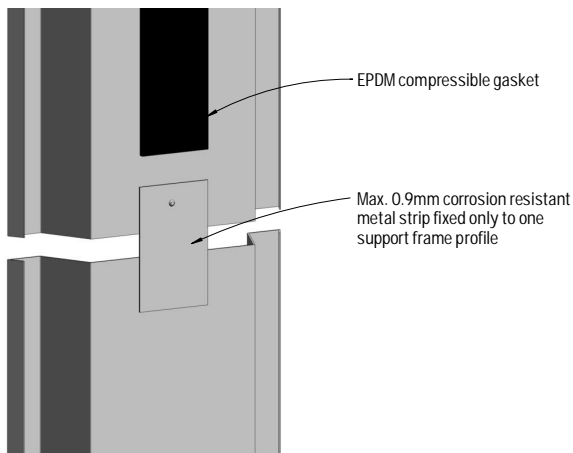


Figure 8: EPDM gasket support over control joint or the like

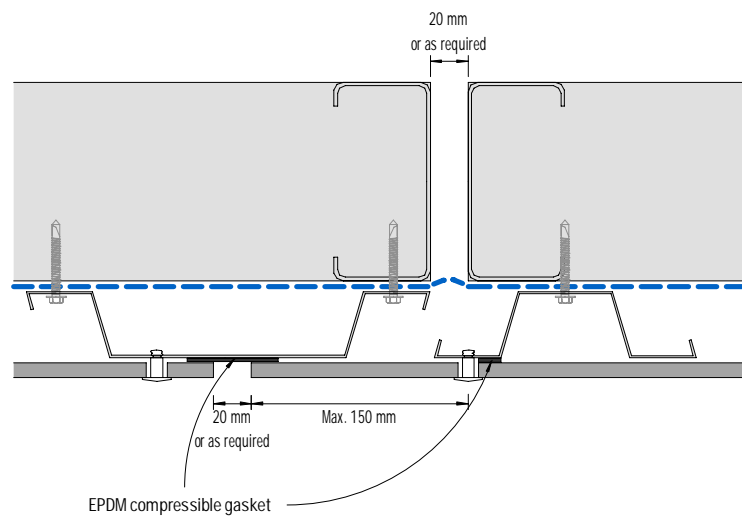


Figure 9: Vertical control joint

Notes

- 1) Support frame profiles must NOT be fixed crossing over a control joint.
- 2) Allowance for movement at the location of any control joint must be made in the cladding and its support frame design and installation. Panel must NOT be fixed bridging over any control joint.
- 3) Corrosion resistant perforated angle shall be of max. thickness of 0.9mm where located between panel and support frame, and be of min. 50% open area with aperture size of 3-5mm.

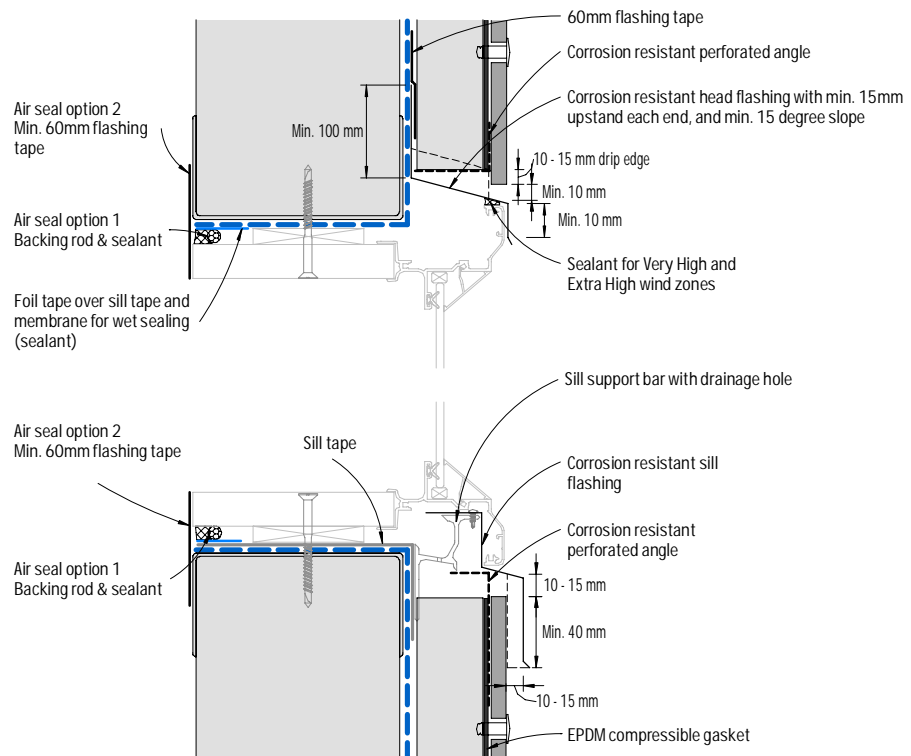


Figure 10: Flush window - Head and sill

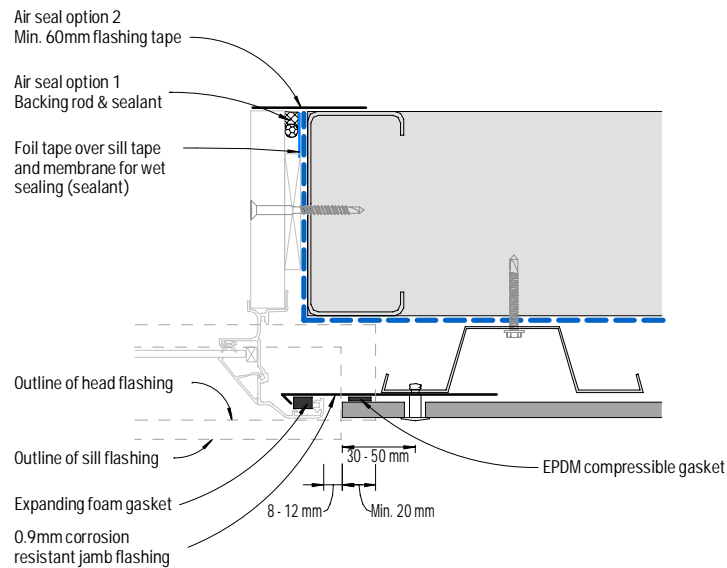


Figure 11: Flush window - Jamb

**Notes**

- 1) ONLY sealant compatible with the foil tape should be used. Should any sealant be intended to be used directly on the flashing and/or sill tape it must be confirmed with its manufacturer to ensure compatibility with these tapes in accordance with the relevant standards.
- 2) Corrosion resistant perforated angle shall be of max. thickness of 0.9mm where located between panel and support frame, and be of min. 50% open area with aperture size of 3-5mm.

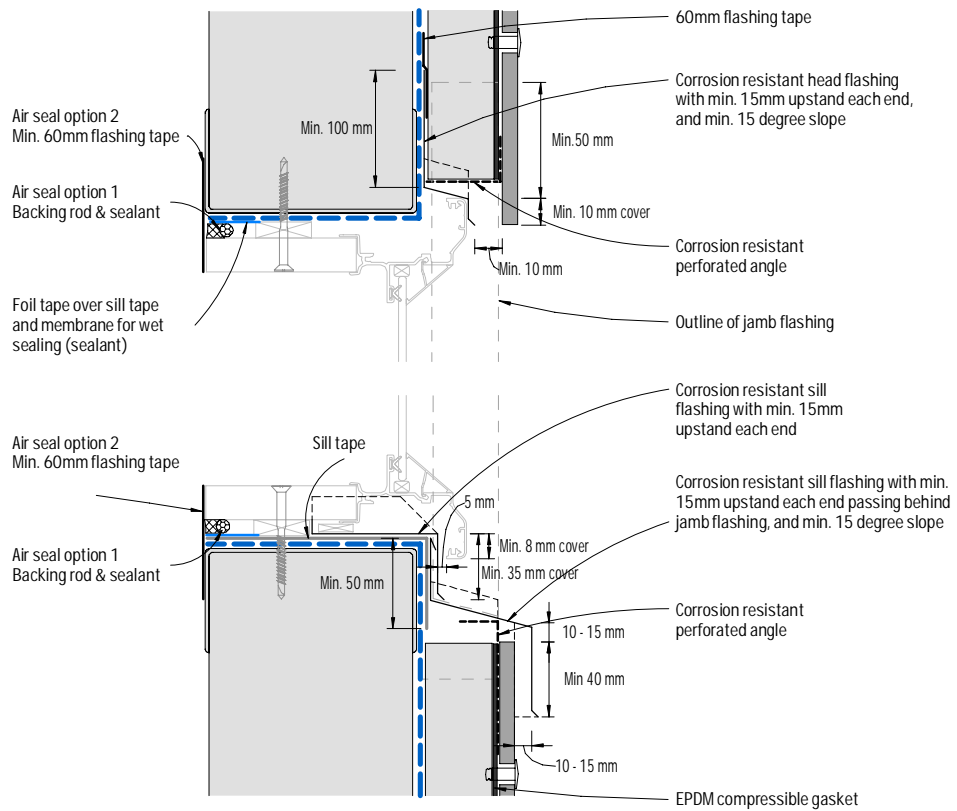


Figure 12: Recessed window - Head and sill

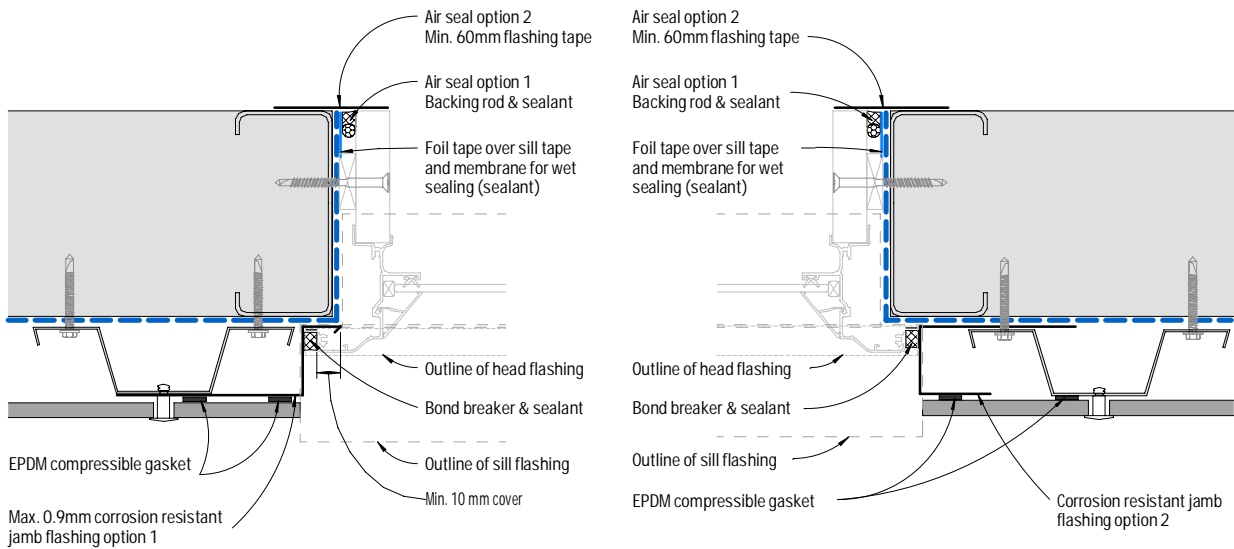


Figure 13: Recessed window jamb - Option 1

Figure 14: Recessed window jamb - Option 2

Notes

- 1) ONLY sealant compatible with the foil tape should be used. Should any sealant be intended to be used directly on the flashing and/or sill tape it must be confirmed with its manufacturer to ensure compatibility with these tapes in accordance with the relevant standards.
- 2) Corrosion resistant perforated angle shall be of max. thickness of 0.9mm where located between panel and support frame, and be of min. 50% open area with aperture size of 3-5mm.

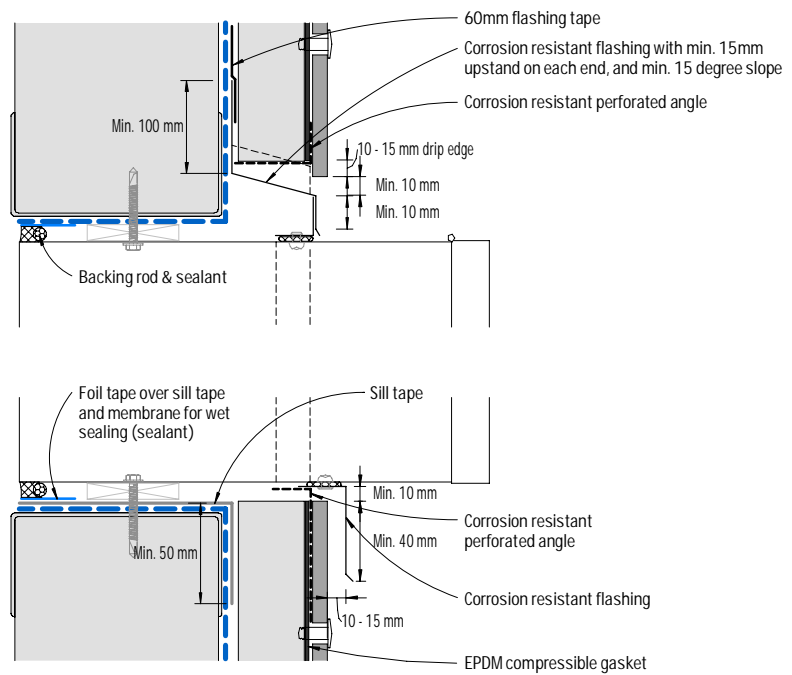


Figure 15: Meter box - Section

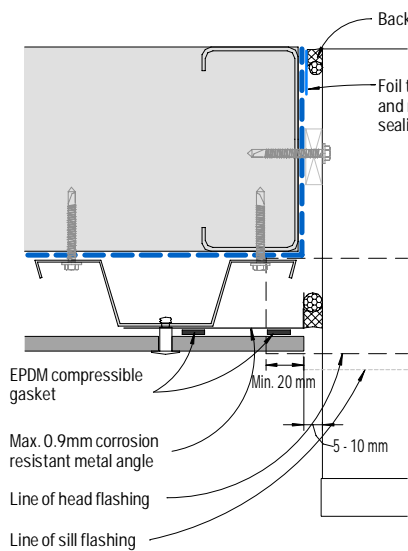


Figure 16: Meter box - Plan view - Detail 1

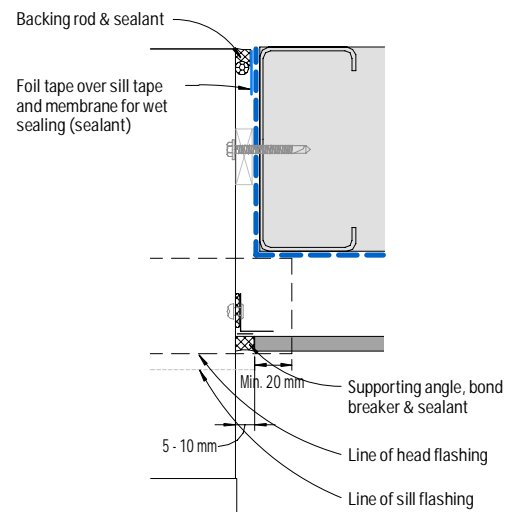


Figure 17: Meter box - Plan view - Detail 2

Notes

- 1) ONLY sealant compatible with the foil tape should be used. Should any sealant be intended to be used directly on the flashing and/or sill tape it must be confirmed with its manufacturer to ensure compatibility with these tapes in accordance with the relevant standards.
- 2) Corrosion resistant perforated angle shall be of max. thickness of 0.9mm where located between panel and support frame, and be of min. 50% open area with aperture size of 3-5mm.



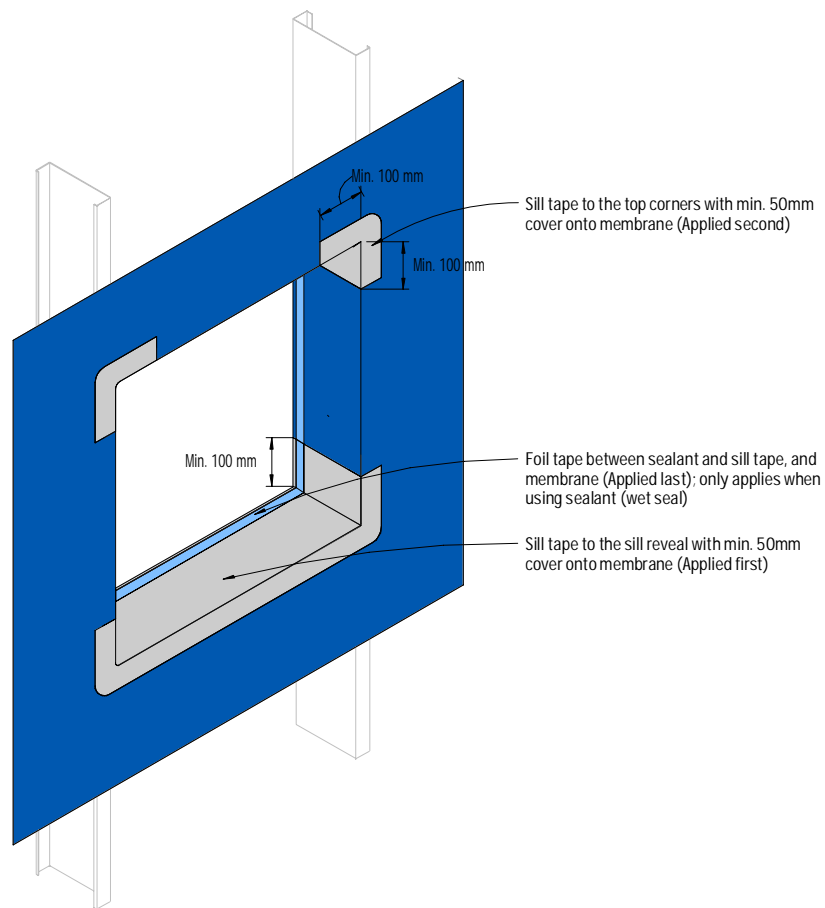


Figure 18: Isometric view of window/meter box opening - Tape application

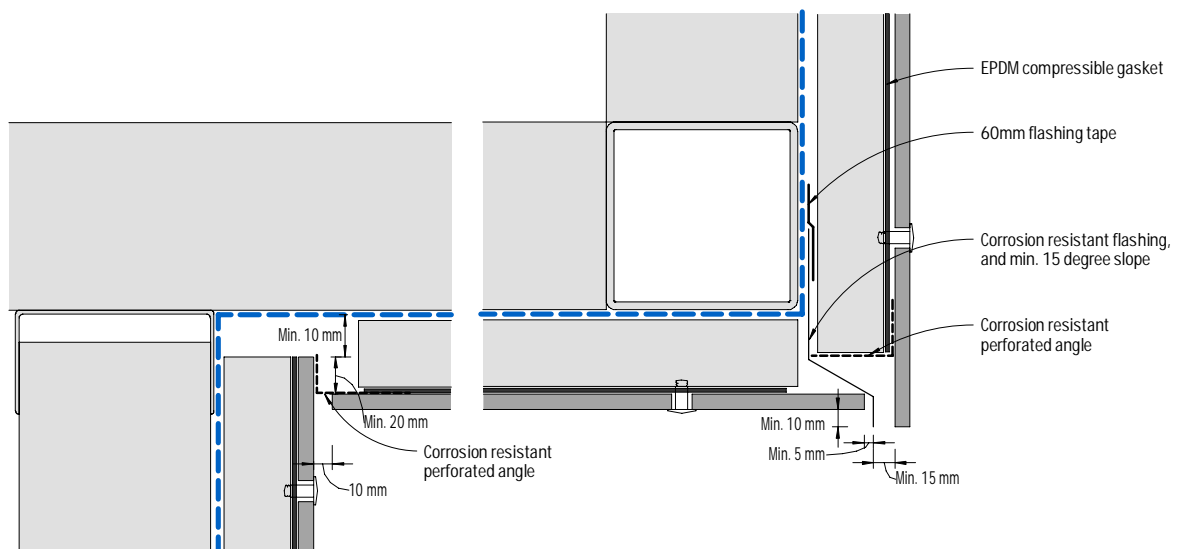


Figure 19: Soffit junction

Notes

- 1) ONLY sealant compatible with the foil tape should be used. Should any sealant be intended to be used directly on the flashing and/or sill tape it must be confirmed with its manufacturer to ensure compatibility with these tapes in accordance with the relevant standards.
- 2) Support frame profiles must NOT be fixed crossing over a control joint.
- 3) Corrosion resistant perforated angle shall be of max. thickness of 0.9mm where located between panel and support frame, and be of min. 50% open area with aperture size of 3-5mm.

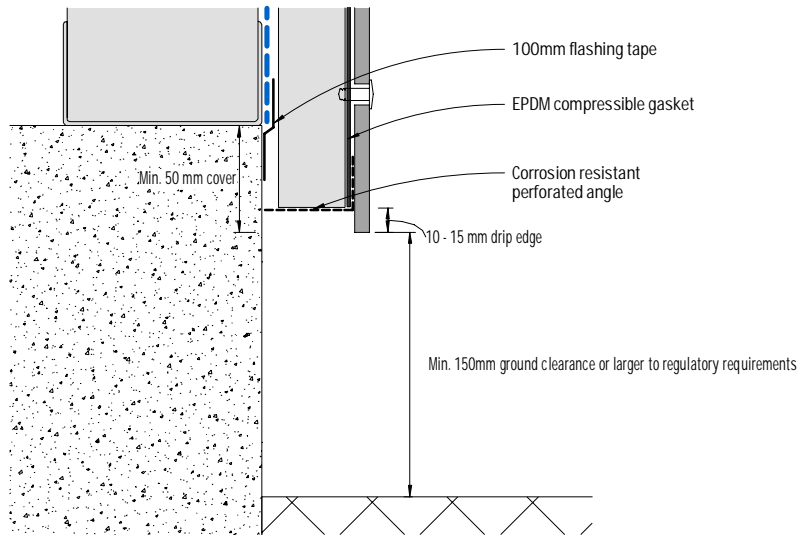


Figure 20: Base detail

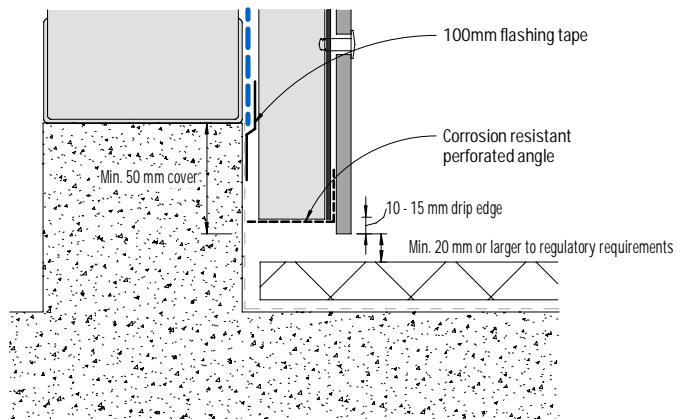


Figure 21: Base detail - Covered area

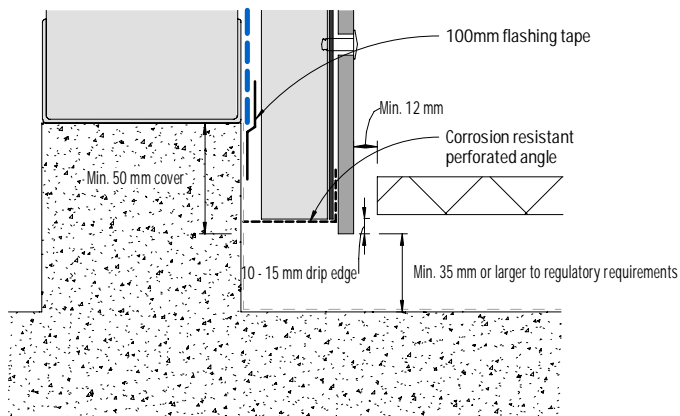


Figure 22: Base detail - Balcony

Notes

1) For EQUITONE [materia], minimum ground clearance is **300mm**.

2) Corrosion resistant perforated angle shall be of max. thickness of 0.9mm where located between panel and support frame, and be of min. 50% open area with aperture size of 3-5mm.

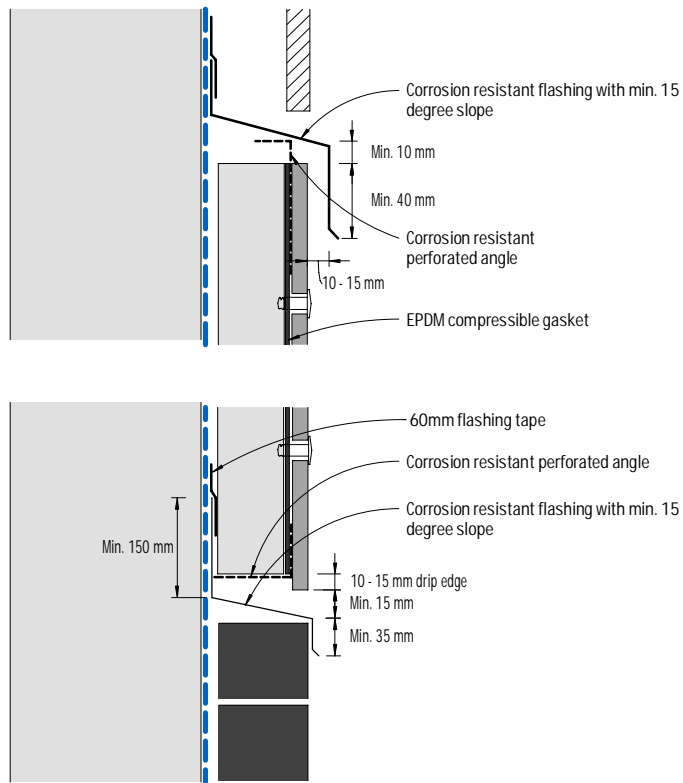


Figure 23: Junction with other materials - flush detail

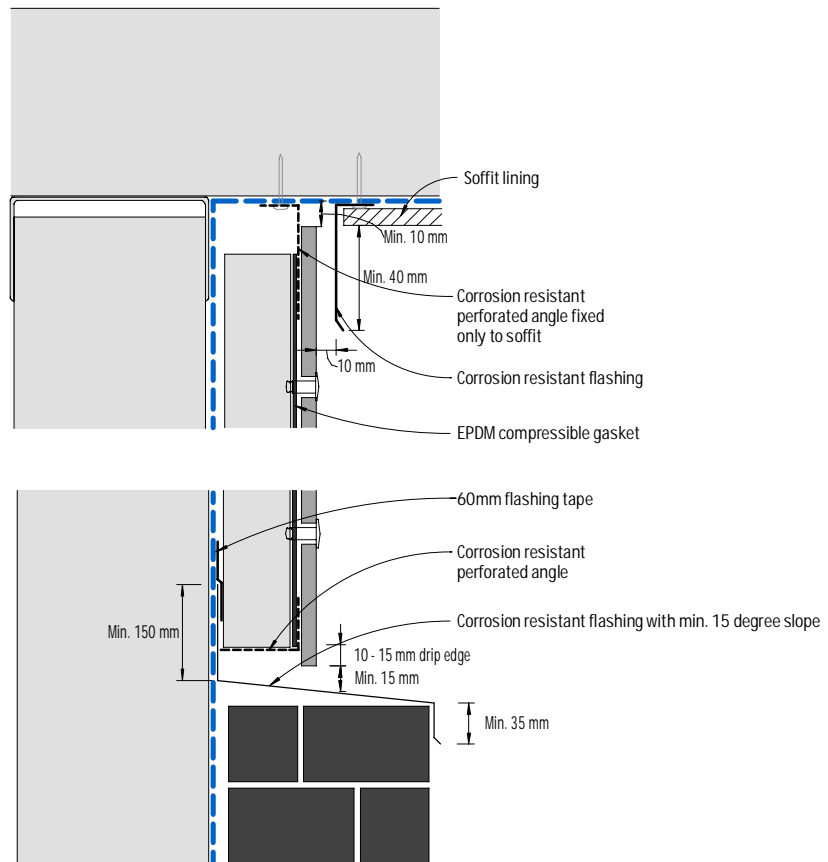


Figure 24: Junction with other materials, eaves or the like - recessed detail

Notes

- 1) Support frame profiles must NOT be fixed crossing over a control joint.
- 2) Corrosion resistant perforated angle shall be of max. thickness of 0.9mm where located between panel and support frame, and be of min. 50% open area with aperture size of 3-5mm.

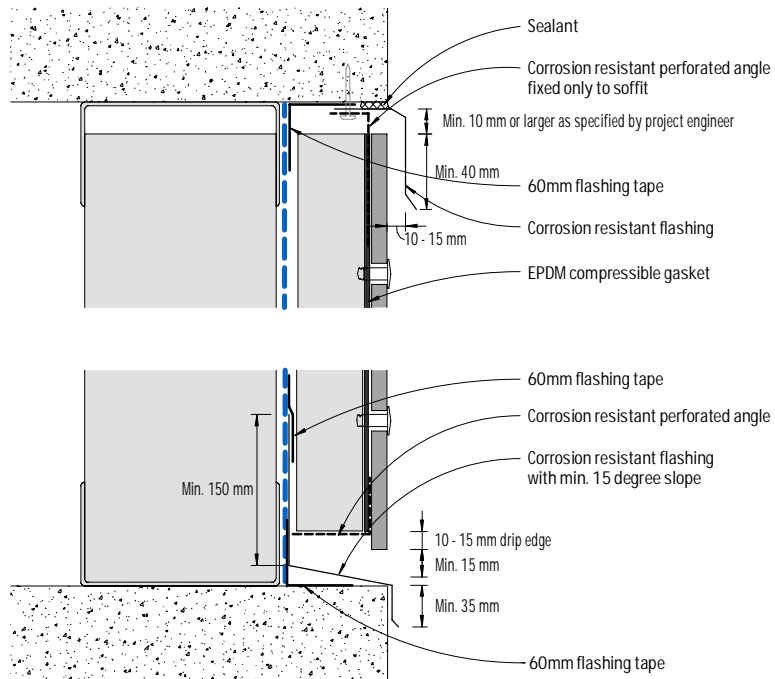


Figure 25: Exposed concrete slab or beam - Cladding flush

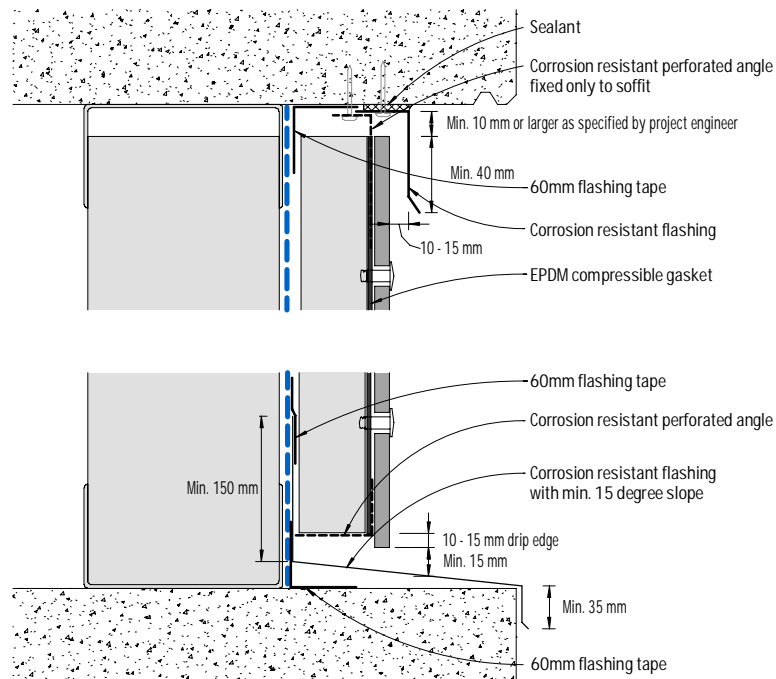


Figure 26: Exposed concrete slab or beam - Cladding recessed

Notes

- 1) Support frame profiles must NOT be fixed crossing over a control joint.
- 2) Corrosion resistant perforated angle shall be of max. thickness of 0.9mm where located between panel and support frame, and be of min. 50% open area with aperture size of 3-5mm.

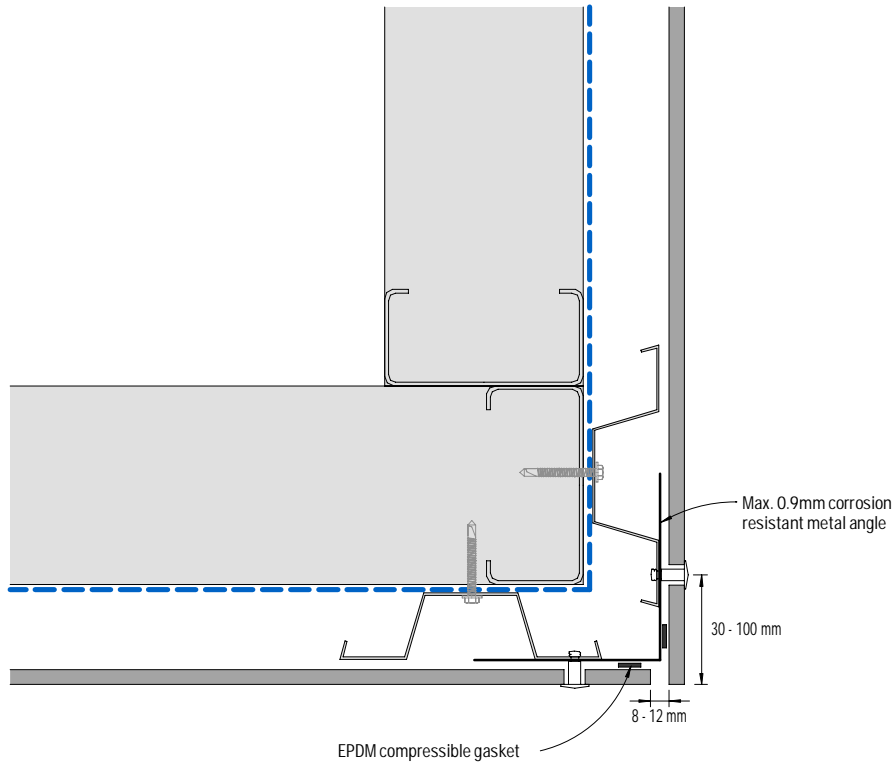


Figure 27: External corner - Detail 1

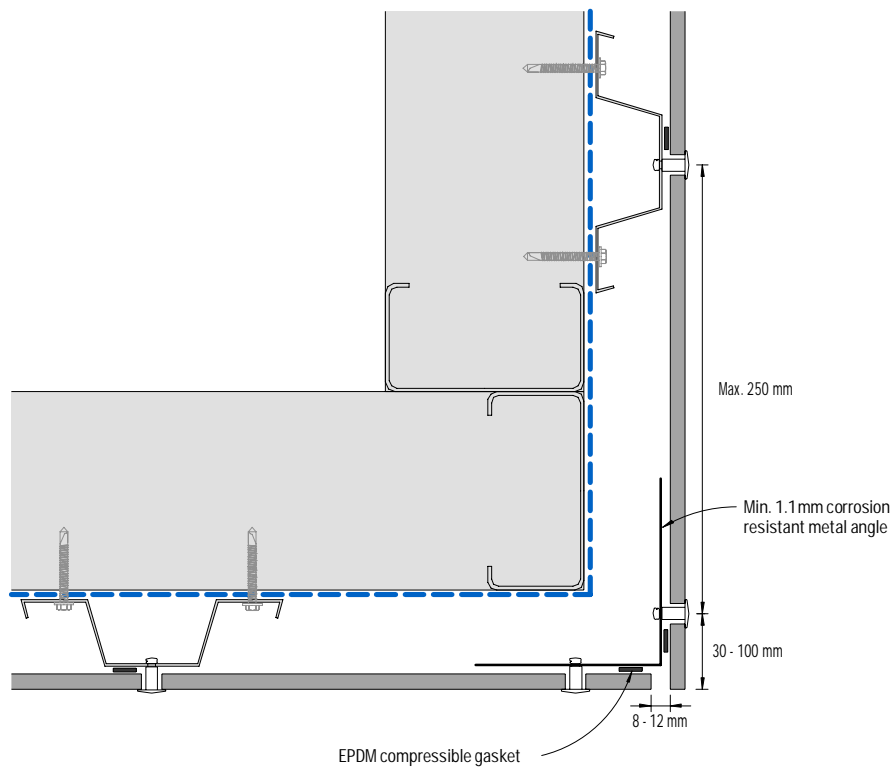


Figure 28: External corner - Detail 2

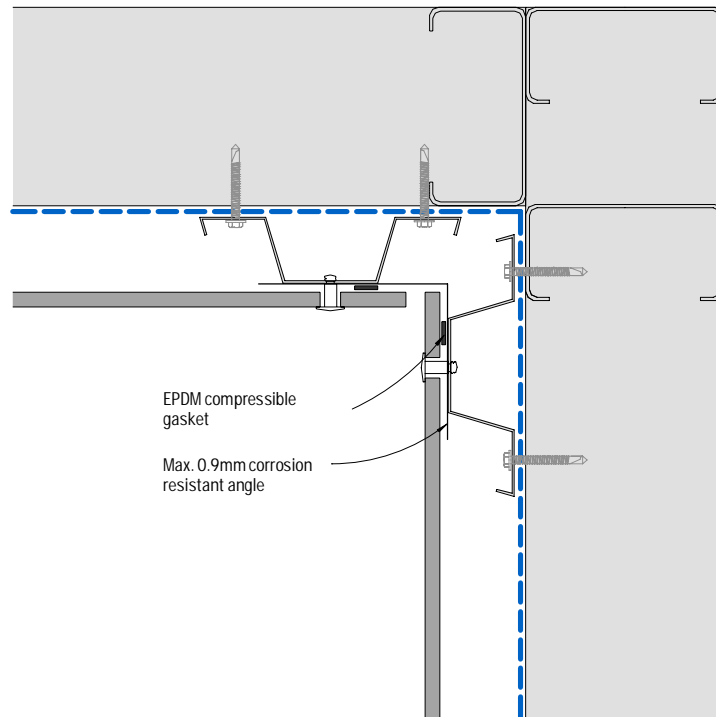


Figure 29: Internal corner

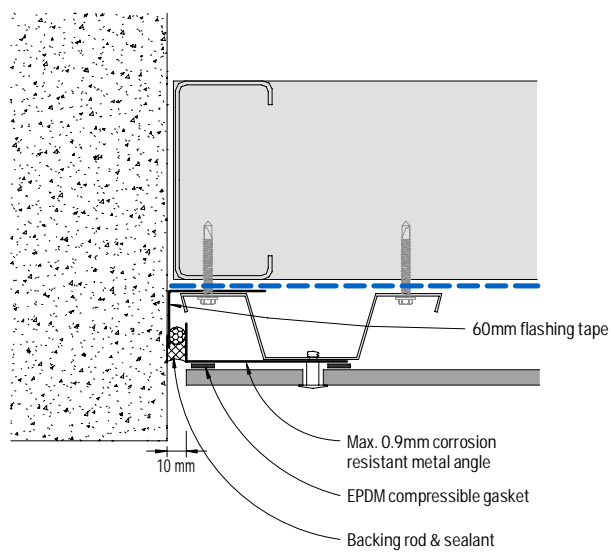


Figure 30: Abutment

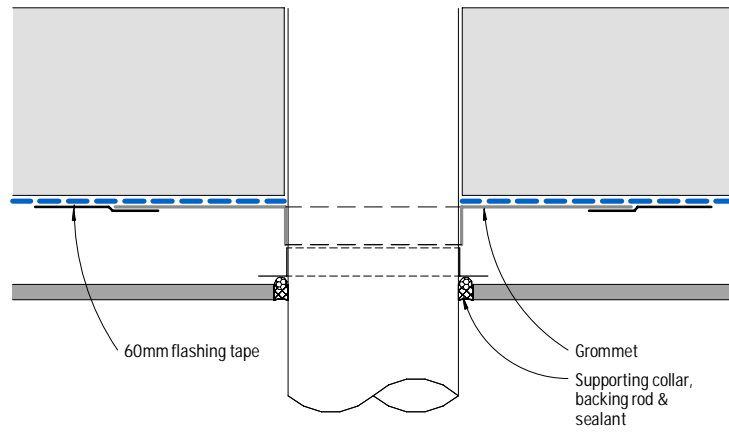


Figure 31: Pipe penetration - Plan view

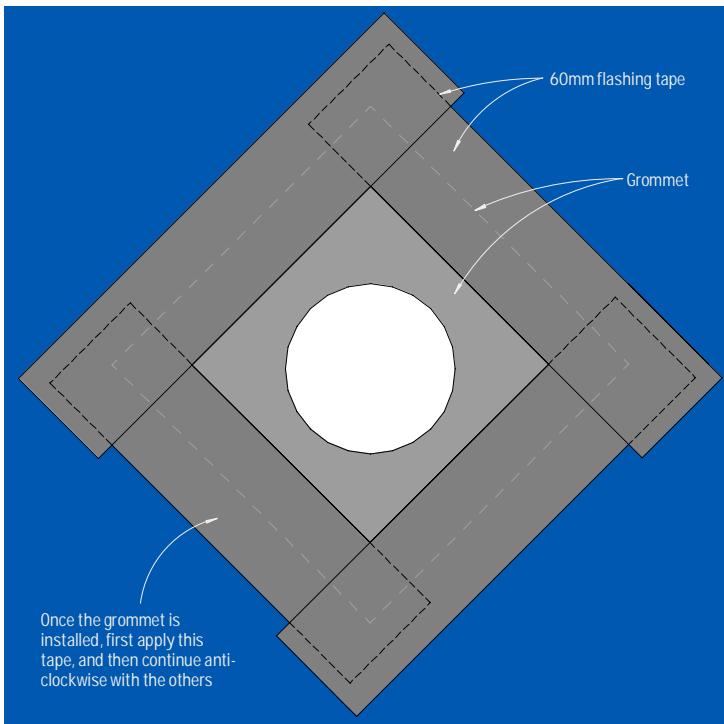


Figure 32: Pipe penetration - Elevation

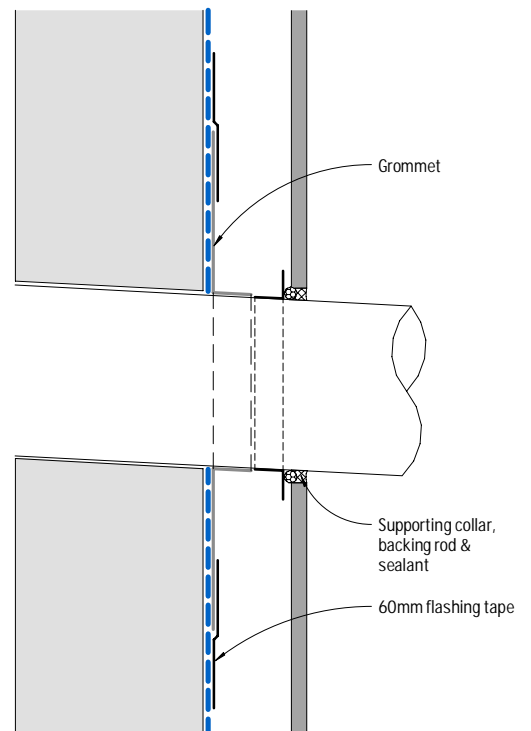


Figure 33: Pipe penetration - Section

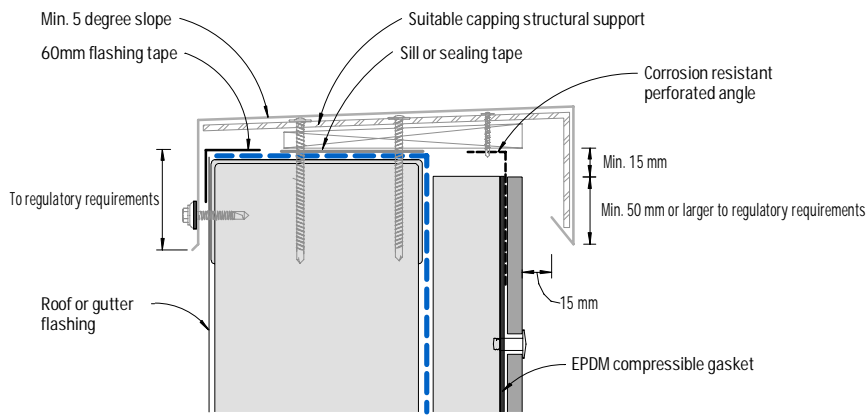


Figure 34: Capping - Detail 1

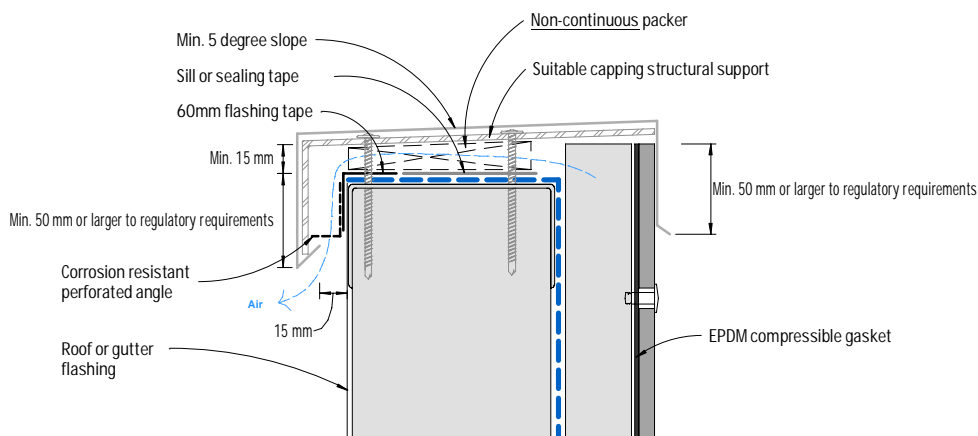


Figure 35: Capping - Detail 2  
(Not suitable for EQUITONE [material])

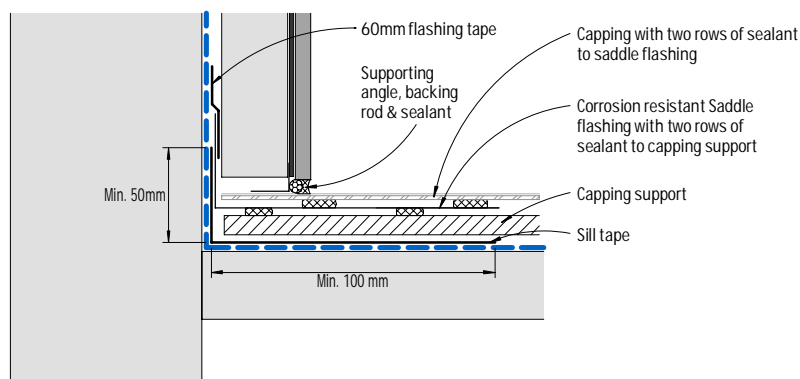


Figure 36: Parapet junction - Section

Notes

- 1) For EQUITONE [material], the following capping dimensions should be followed.
  - A minimum 20mm between panel face and rear of the capping
  - A minimum 50mm overlap with the panel for building up to 8m or larger to regulatory requirements.
  - A minimum 80mm overlap with the panel for building up to 20m or larger to regulatory requirements.
  - A minimum 100mm overlap with the panel for building over 20m or larger to regulatory requirements.
- 2) Any face fixings of capping shall be through an over sized hole (by min 5mm) in the capping as well as the panel.
- 3) Corrosion resistant perforated angle shall be of max. thickness of 0.9mm where located between panel and support frame, and be of min. 50% open area with aperture size of 3-5mm.
- 4) Capping shall be designed and engineered accordingly to provide adequate allowance for ventilation as shown in Figures 34 & 35.



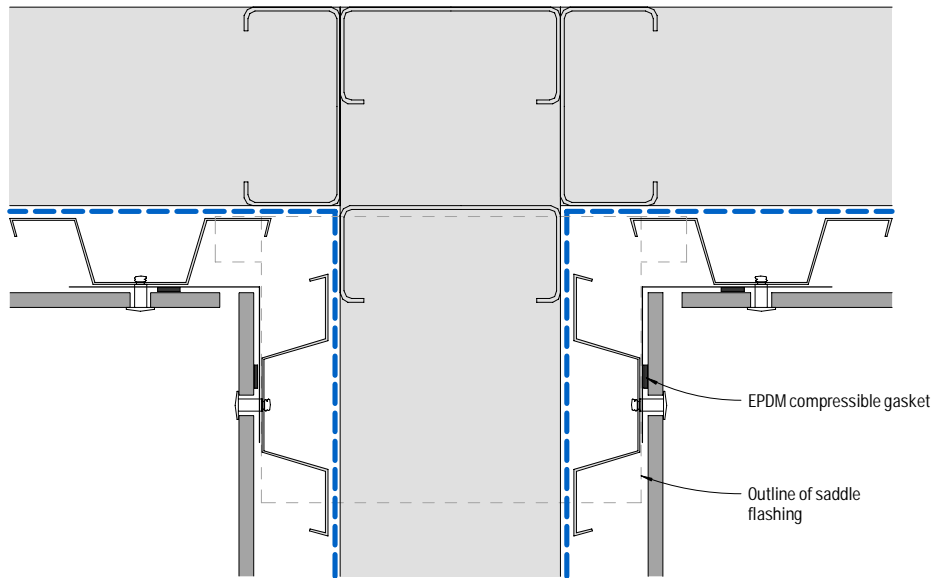


Figure 37: Parapet junction - Plan view

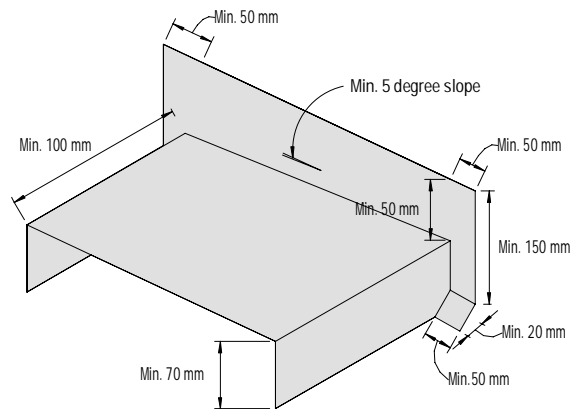
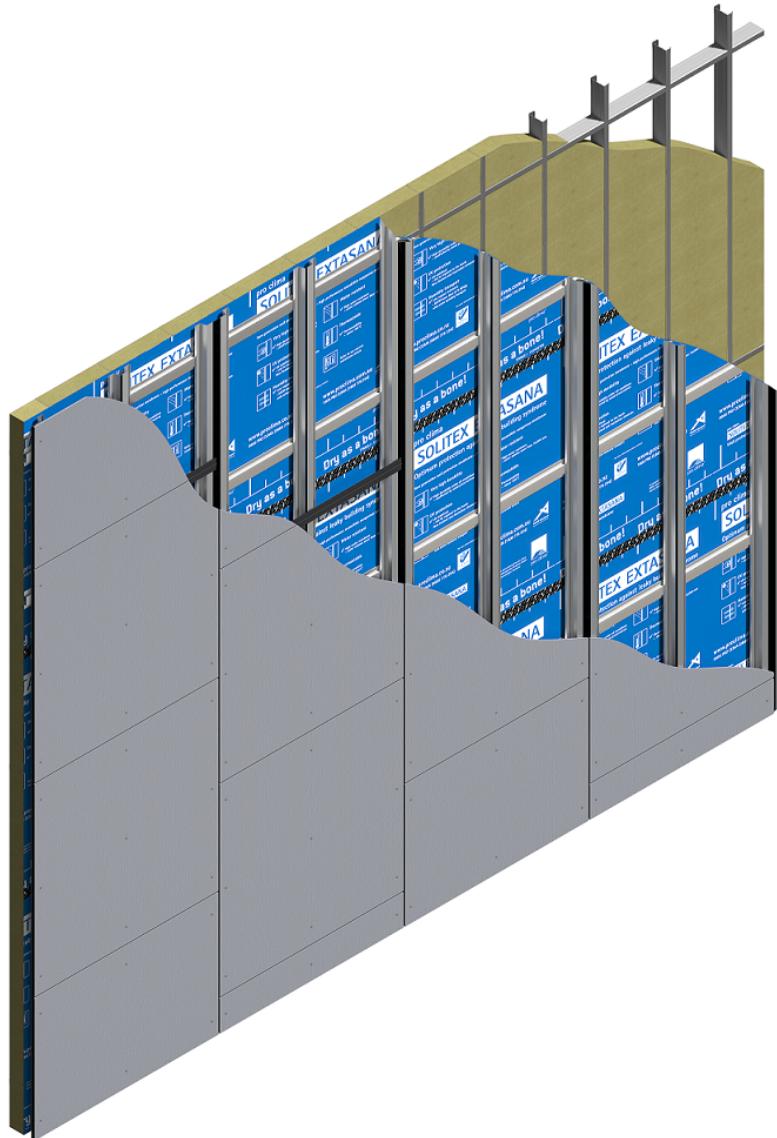


Figure 38: Corrosion resistant saddle flashing

# EQUITONE system



flexible air barrier (pliable membrane)

double layer top hat construction

# Support frame

EQUITONE may be fixed to double layer metal top hat construction where the structure is not designed to directly accommodate vertical top hat profiles. In this type of construction, first a layer of horizontal top hat profiles is installed at the required spacing, followed by vertical top hat profiles to which EQUITONE is fixed.

Metal top hats shall be of adequate corrosion resistance required for the project.

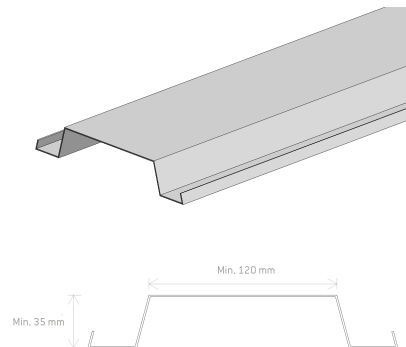
Maximum deflection of support framing must be limited to  $\text{Span}/250$ .

Structure and support frame shall be designed to relevant standards including, but not limited to, the following:

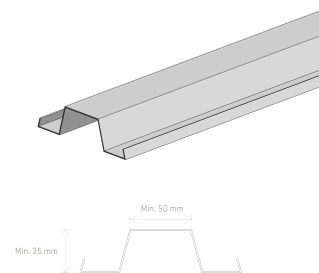
- AS/NZS 4600 – Cold-formed steel structures
- NZS 3404 – Steel structures
- NZS 3604 – Timber framed buildings

## Top hat profiles

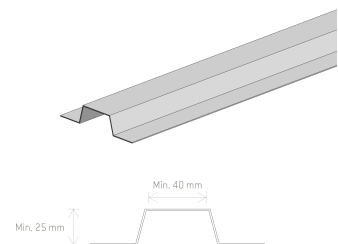
120 x 35 mm, minimum 1.15mm BMT  
Installed vertically on vertical joints as specified on the construction details



50 x 35 mm, minimum 1.15mm BMT  
Installed vertically as specified on the construction details



40 x 25 mm, minimum 1.15mm BMT  
Installed horizontally to accommodate vertical top hat profiles



## Notes

Support frame and its connection to substructure shall be designed by project engineer in accordance with the relevant standards. Refer to UNI Rivet span tables for maximum vertical and horizontal spacing of panel fixings.

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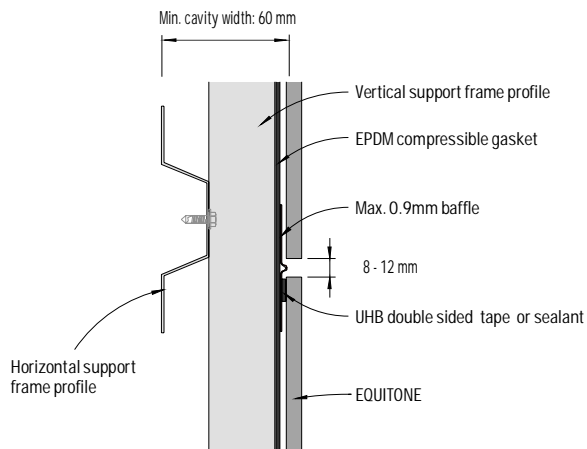


Figure 1: Baffled horizontal joint  
(Not suitable for EQUITONE [material])

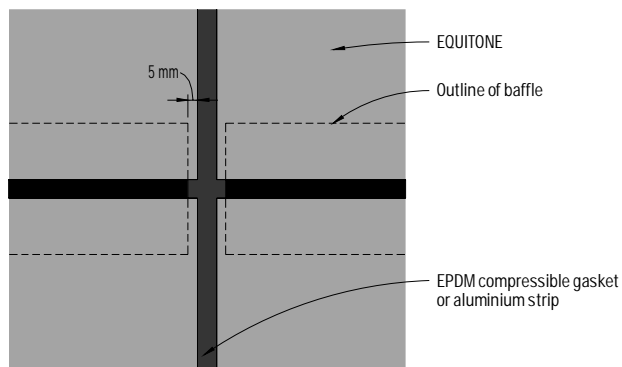


Figure 2: Baffled horizontal joint  
junction with vertical joint - Elevation

Notes

- 1) Depending on the project requirements max. 0.9mm (powder) coated aluminium strip may be used in lieu of EPDM strip on vertical joints for higher UV resistance.
- 2) EQUITONE [material] requires open horizontal panel joints. Horizontal open joint detail requires project engineer's evaluation and approval, and the selection of appropriate rigid and UV resistant weather resistive barrier (membrane).
- 3) The length of support frame profiles must NOT exceed 3,150mm.

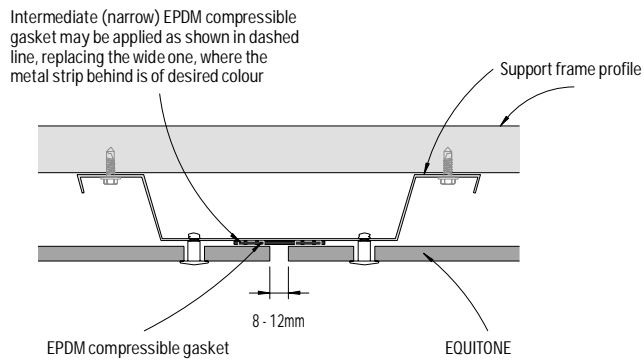


Figure 3: Vertical joint - Detail 1

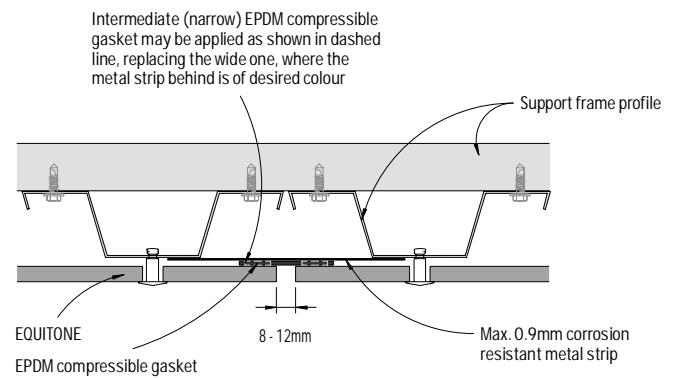


Figure 4: Vertical joint - Detail 2

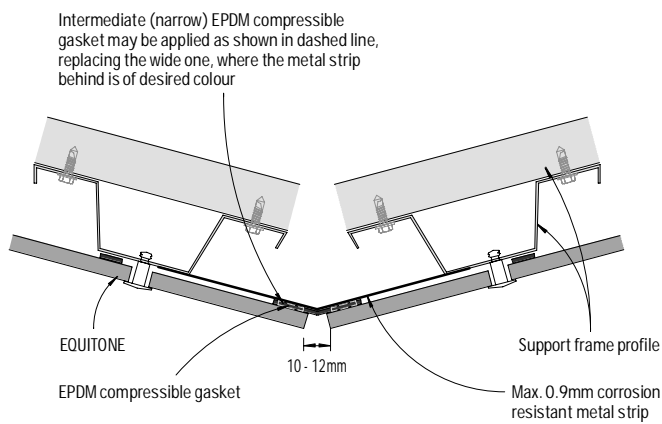


Figure 5: Vertical joint - Detail 3

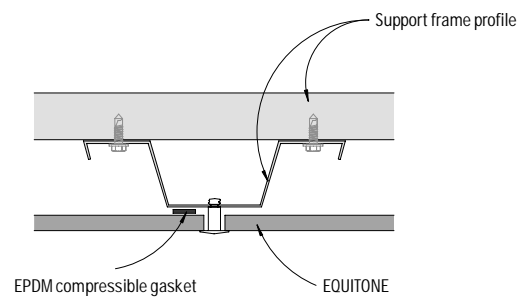


Figure 6: Intermediate panel fixings connection

Notes

1) Depending on the project requirements max. 0.9mm (powder) coated aluminium strip may be used in lieu of EPDM strip on vertical joints for higher UV resistance.

2) In Figure 4 & 5, the metal strip should be fixed ONLY to one of the support frame profiles (either left or right) where allowance for horizontal and/or vertical movement of the cladding frame is required.

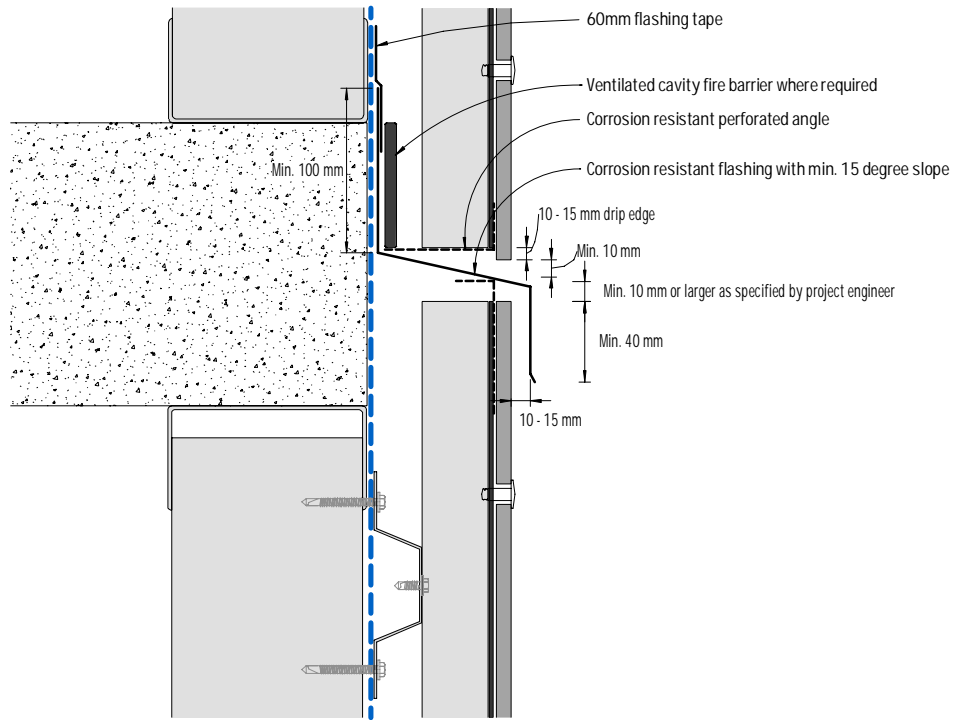


Figure 7: Horizontal control joint

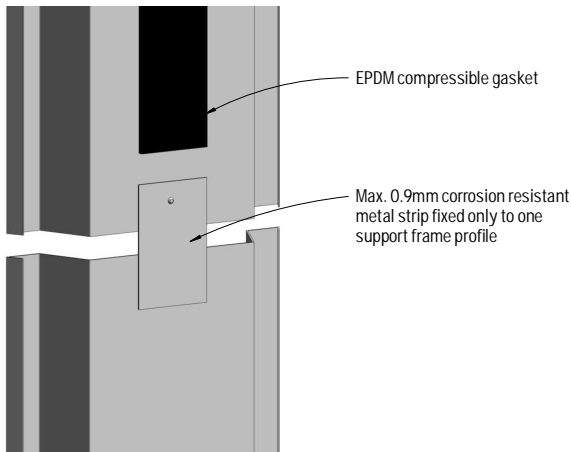


Figure 8: EPDM gasket support over control joint or the like

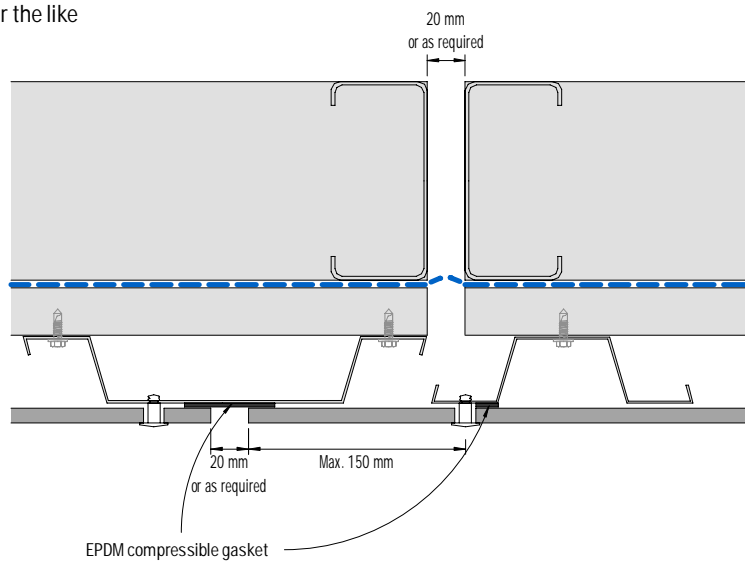


Figure 9: Vertical control joint

Notes

- 1) Support frame profiles must NOT be fixed crossing over a control joint.
- 2) Allowance for movement at the location of any control joint must be made in the cladding and its support frame design and installation. Panel must NOT be fixed bridging over any control joint.
- 3) Corrosion resistant perforated angle shall be of max. thickness of 0.9mm where located between panel and support frame, and be of min. 50% open area with aperture size of 3-5mm.

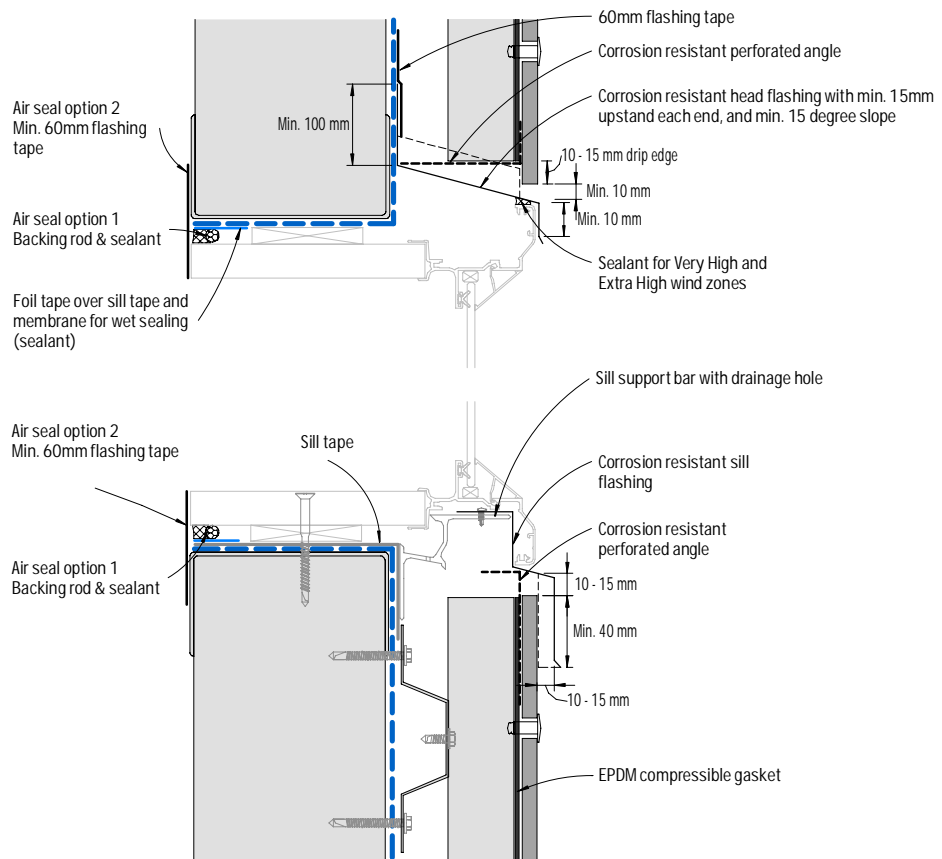


Figure 10: Flush window - Head and sill

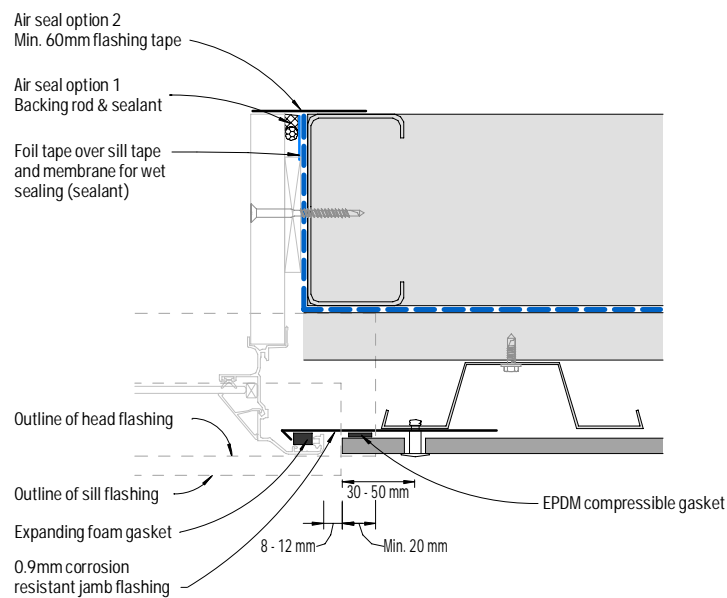


Figure 11: Flush window - Jamb

**Notes**

- 1) ONLY sealant compatible with the foil tape should be used. Should any sealant be intended to be used directly on the flashing and/or sill tape it must be confirmed with its manufacturer to ensure compatibility with these tapes in accordance with the relevant standards.
- 2) Corrosion resistant perforated angle shall be of max. thickness of 0.9mm where located between panel and support frame, and be of min. 50% open area with aperture size of 3-5mm.



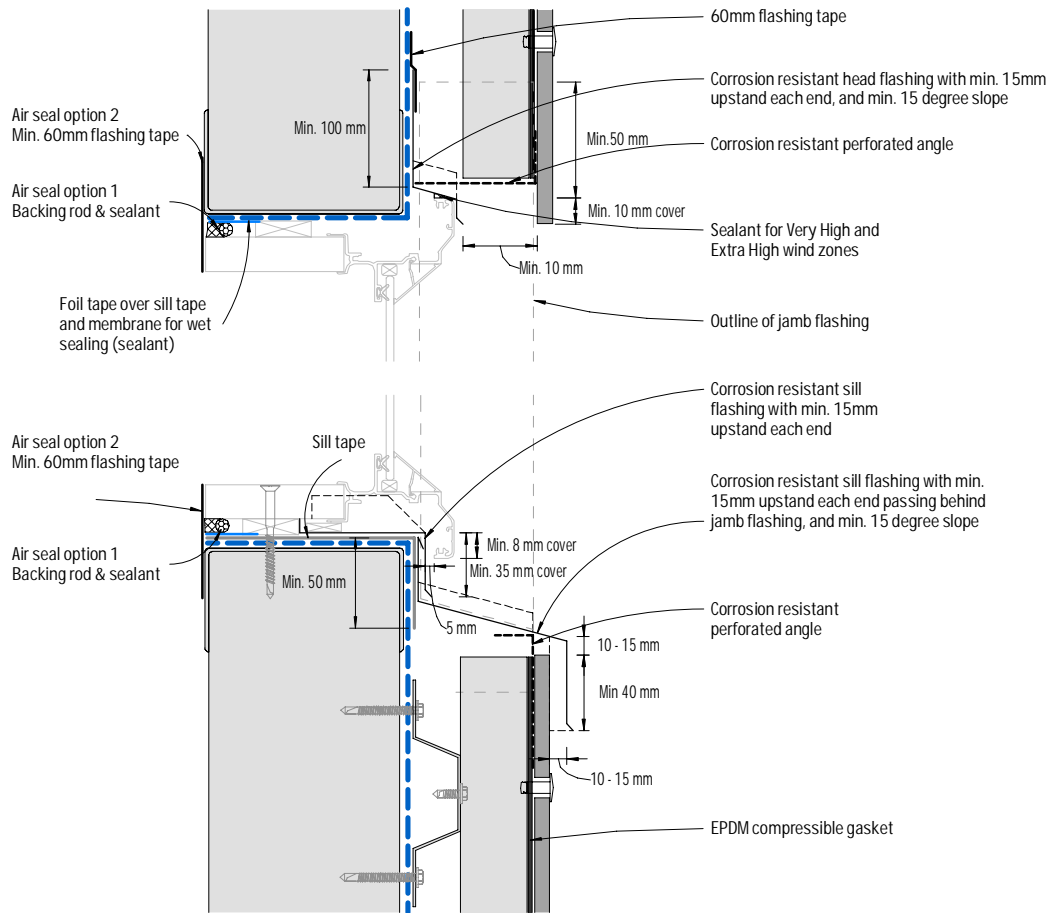


Figure 12: Recessed window - Head and sill

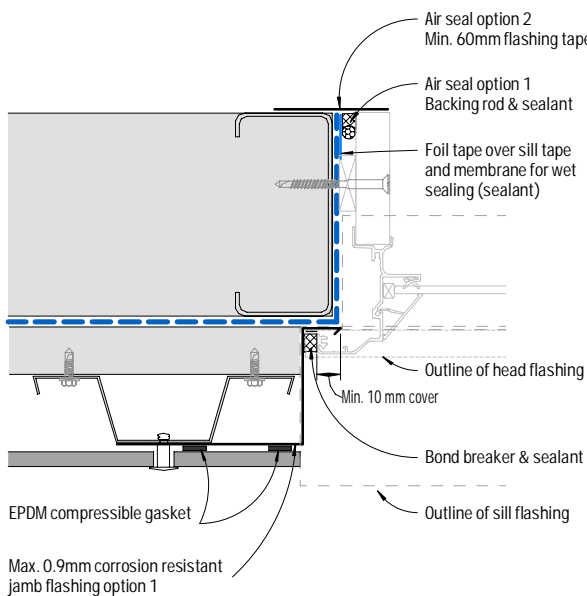


Figure 13: Recessed window jamb - Option 1

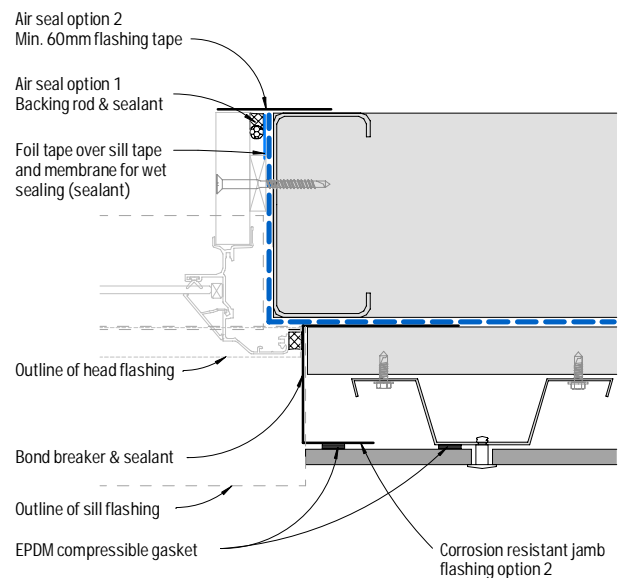


Figure 14: Recessed window jamb - Option 2

Notes

- 1) ONLY sealant compatible with the foil tape should be used. Should any sealant be intended to be used directly on the flashing and/or sill tape it must be confirmed with its manufacturer to ensure compatibility with these tapes in accordance with the relevant standards.
- 2) Corrosion resistant perforated angle shall be of max. thickness of 0.9mm where located between panel and support frame, and be of min. 50% open area with aperture size of 3-5mm.

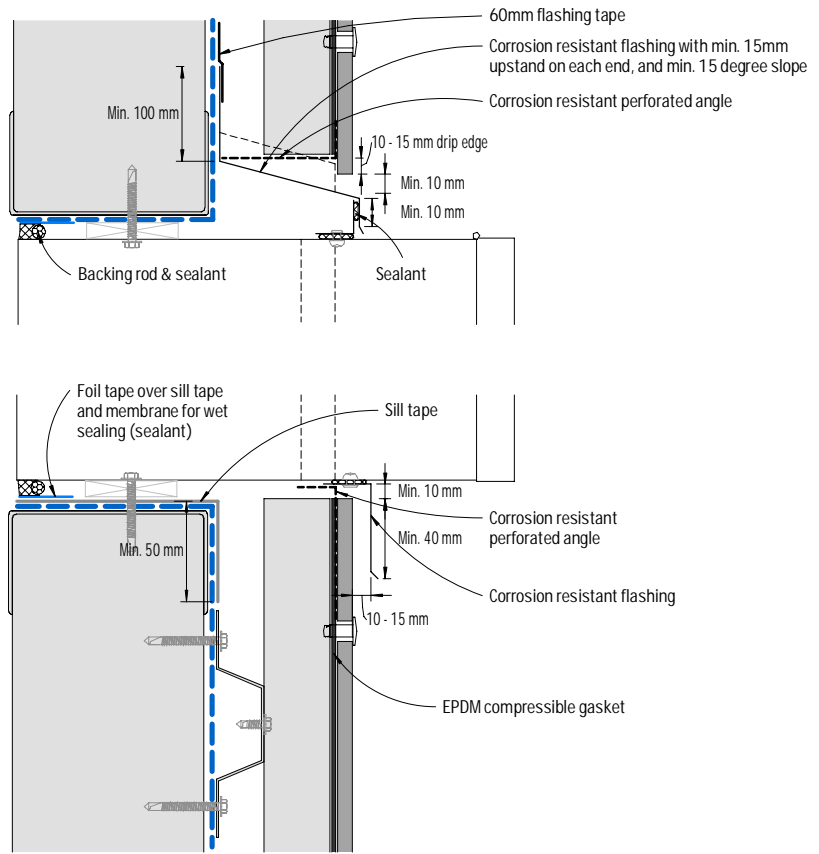


Figure 15: Meter box - Section

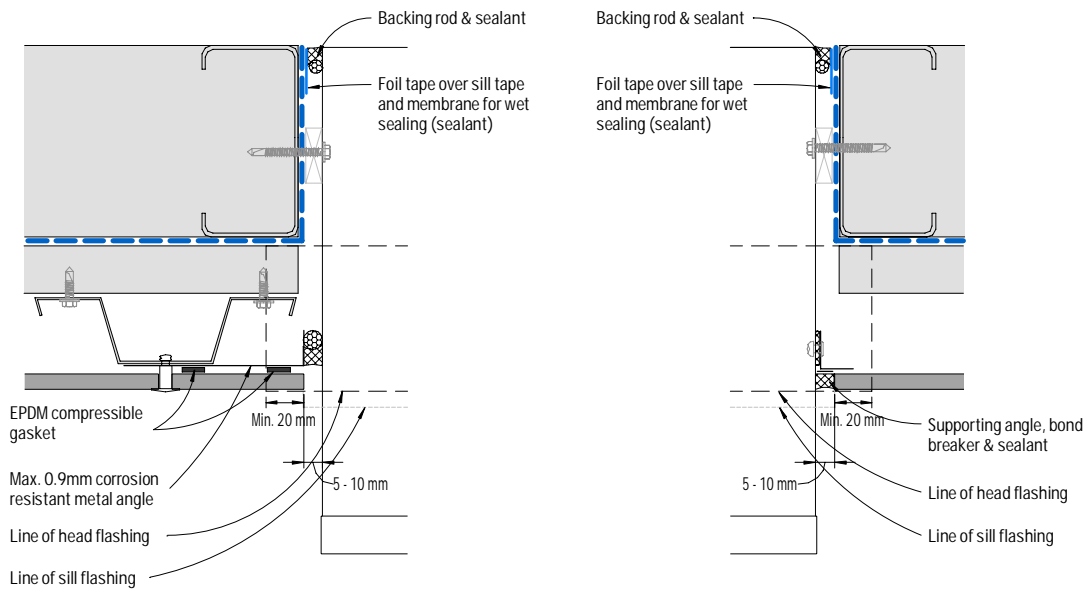


Figure 16: Meter box - Plan view - Detail 1

Figure 17: Meter box - Plan view - Detail 2

Notes

- 1) ONLY sealant compatible with the foil tape should be used. Should any sealant be intended to be used directly on the flashing and/or sill tape it must be confirmed with its manufacturer to ensure compatibility with these tapes in accordance with the relevant standards.
- 2) Corrosion resistant perforated angle shall be of max. thickness of 0.9mm where located between panel and support frame, and be of min. 50% open area with aperture size of 3-5mm.

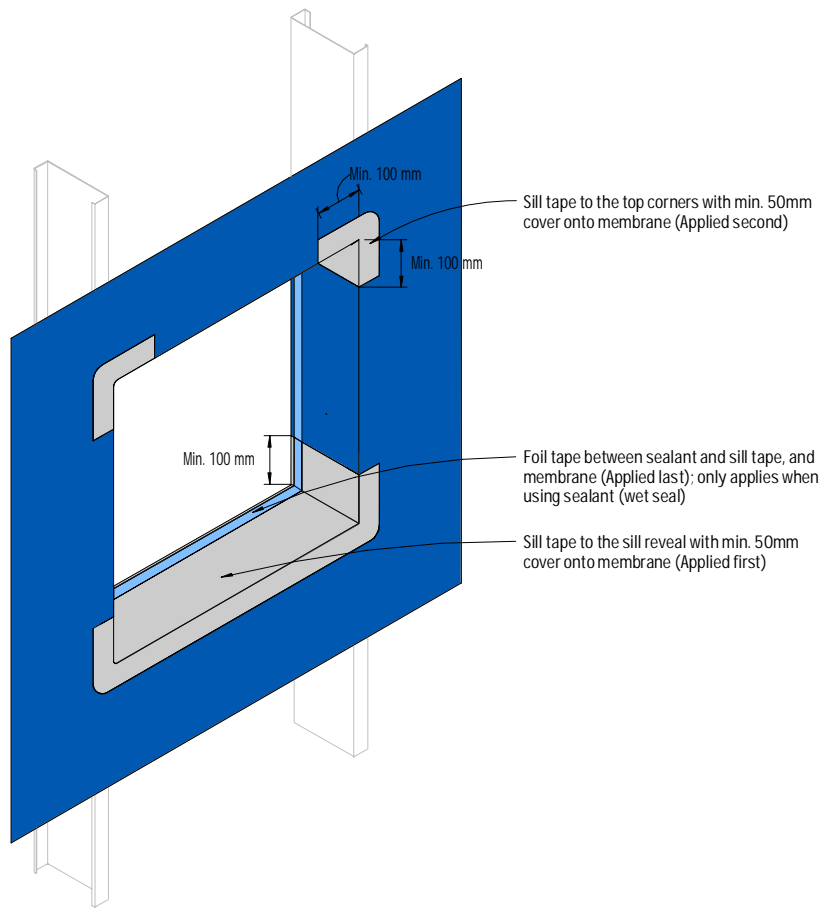


Figure 18: Isometric view of window/meter box opening - Tape application

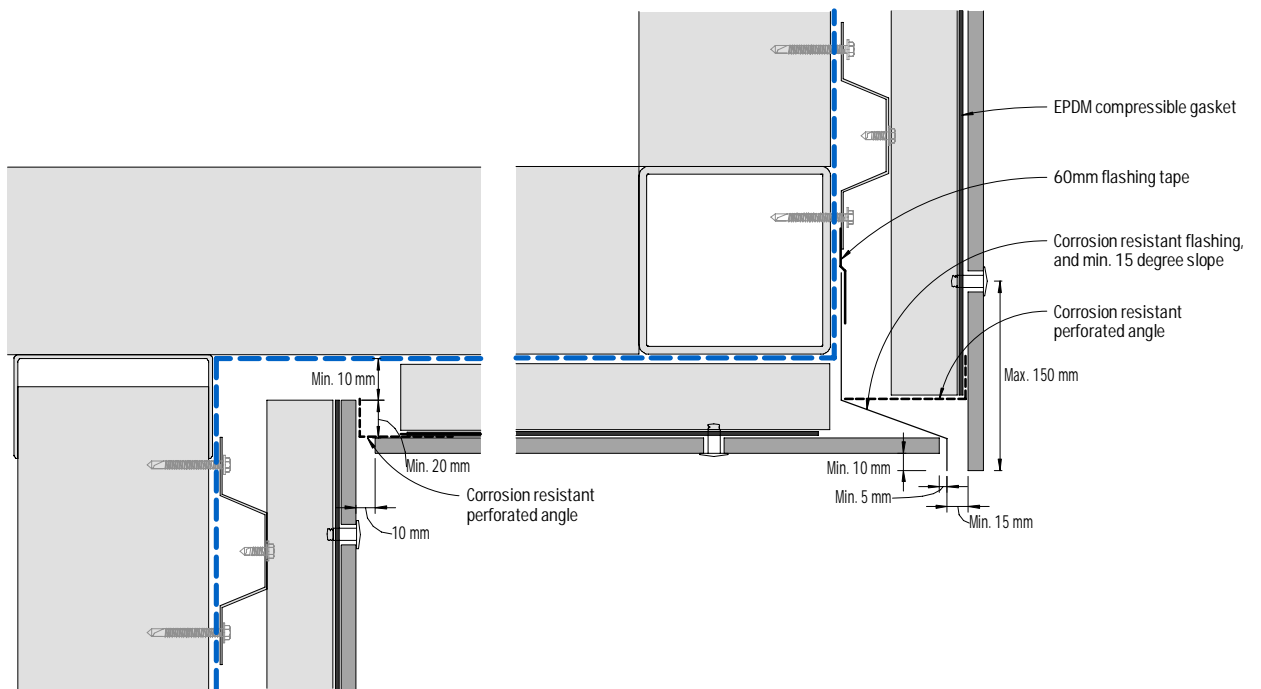


Figure 19: Soffit junction

Notes

- 1) ONLY sealant compatible with the foil tape should be used. Should any sealant be intended to be used directly on the flashing and/or sill tape it must be confirmed with its manufacturer to ensure compatibility with these tapes in accordance with the relevant standards.
- 2) Support frame profiles must NOT be fixed crossing over a control joint.
- 3) Corrosion resistant perforated angle shall be of max. thickness of 0.9mm where located between panel and support frame, and be of min. 50% open area with aperture size of 3-5mm.

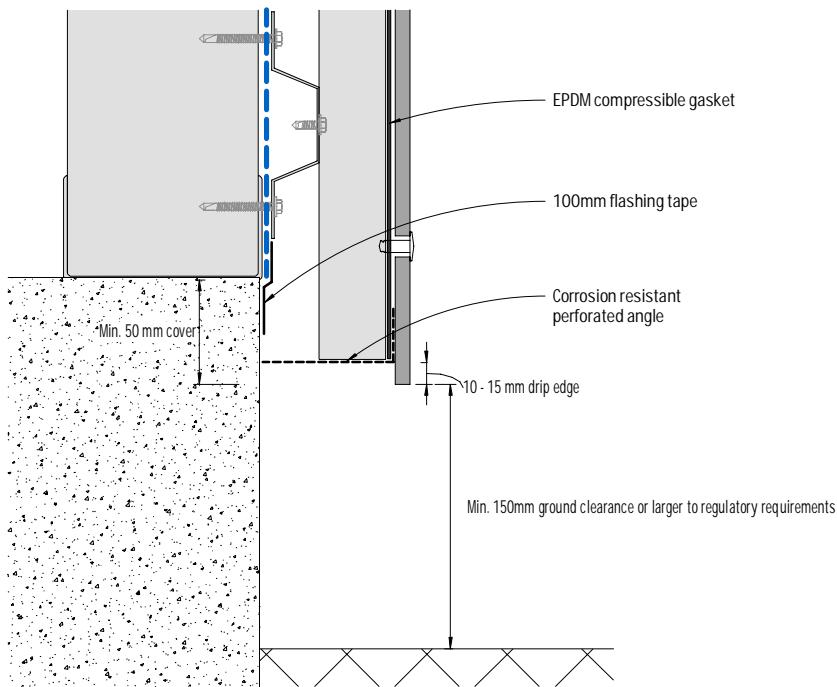


Figure 20: Base detail

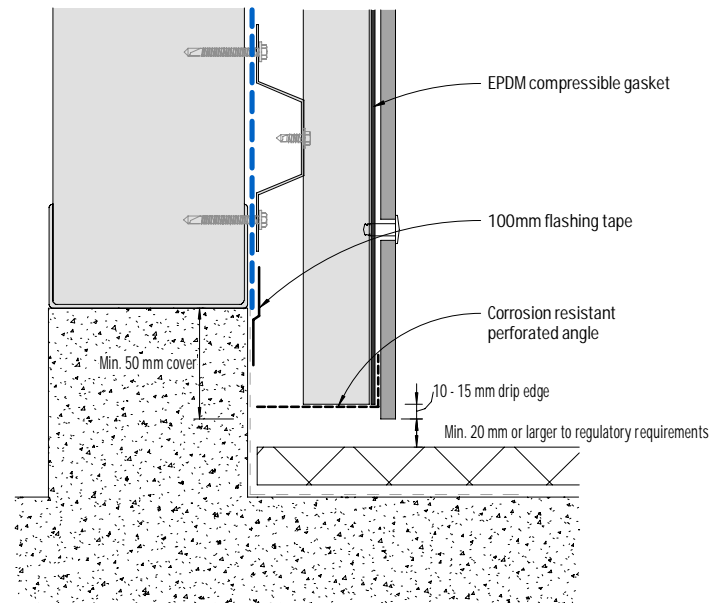


Figure 21: Base detail - Covered area

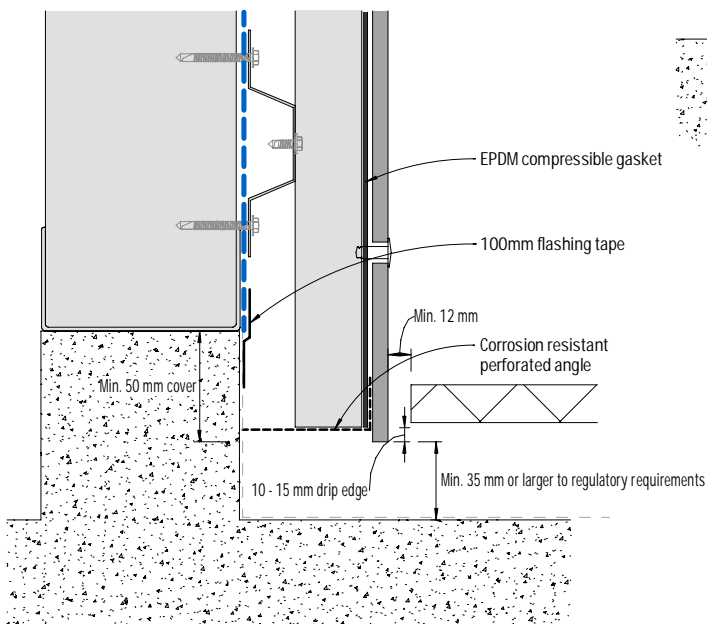


Figure 22: Base detail - Balcony

Notes

1) For **EQUITONE [materia]**, minimum ground clearance is **300mm**.

2) Corrosion resistant perforated angle shall be of max. thickness of 0.9mm where located between panel and support frame, and be of min. 50% open area with aperture size of 3-5mm.

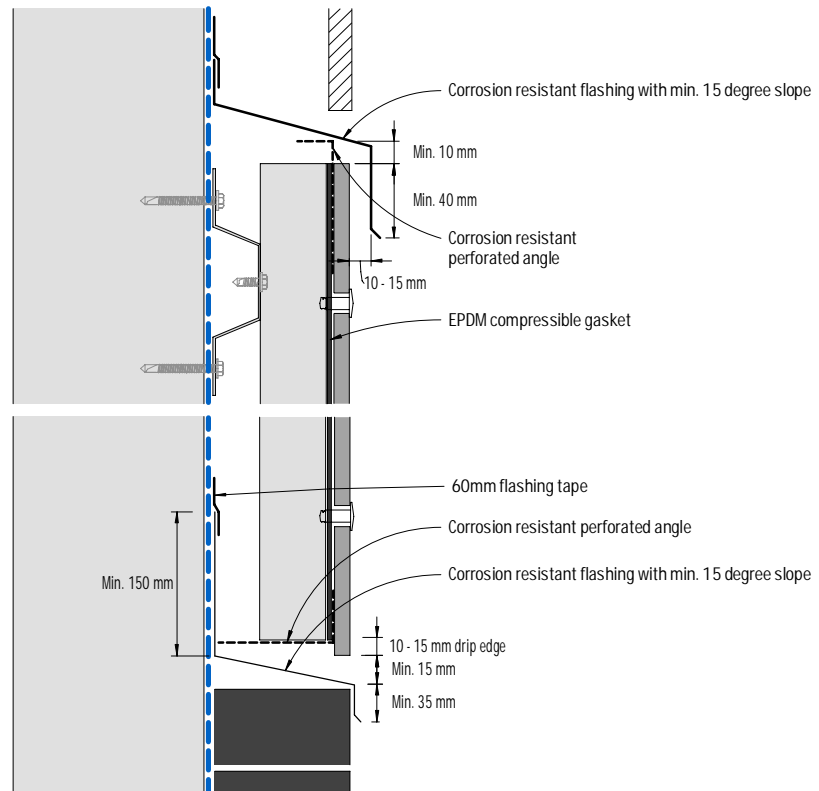


Figure 23: Junction with other materials - flush detail

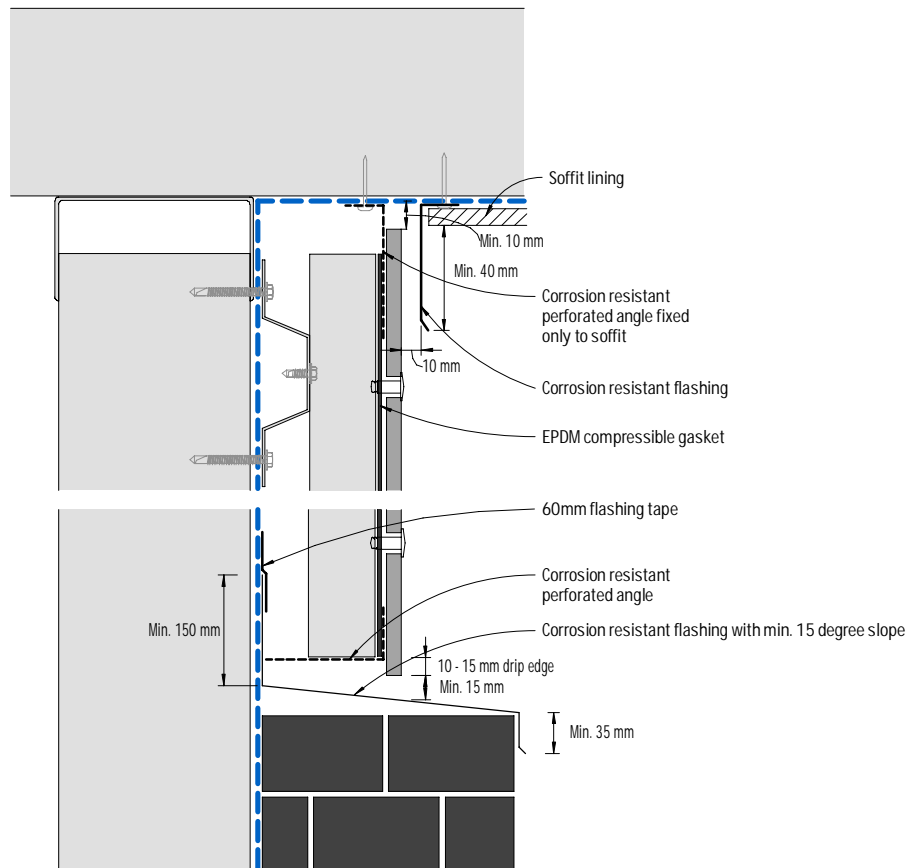


Figure 24: Junction with other materials, eaves or the like - recessed detail

Notes

- 1) Support frame profiles must NOT be fixed crossing over a control joint.
- 2) Corrosion resistant perforated angle shall be of max. thickness of 0.9mm where located between panel and support frame, and be of min. 50% open area with aperture size of 3-5mm.

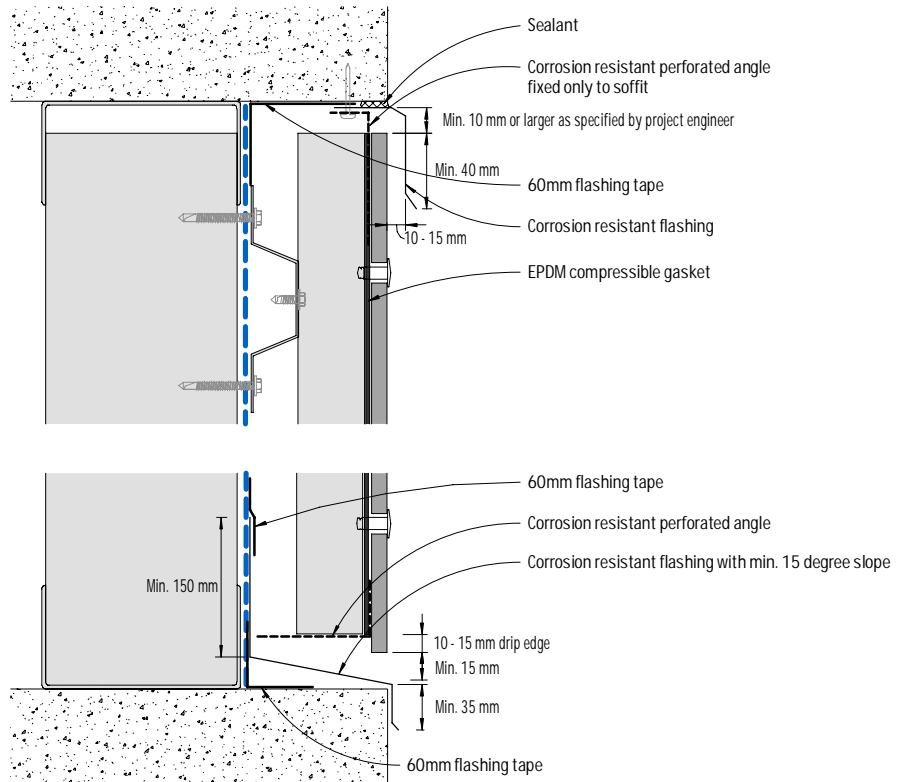


Figure 25: Exposed concrete slab or beam - Cladding flush

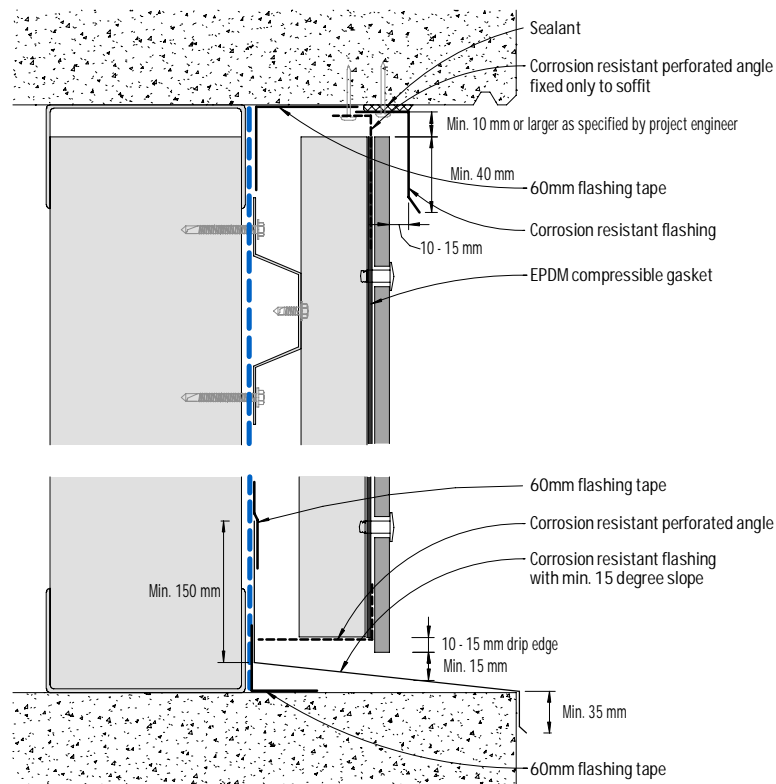


Figure 26: Exposed concrete slab or beam - Cladding recessed

Notes

- 1) Support frame profiles must NOT be fixed crossing over a control joint.
- 2) Corrosion resistant perforated angle shall be of max. thickness of 0.9mm where located between panel and support frame, and be of min. 50% open area with aperture size of 3-5mm.

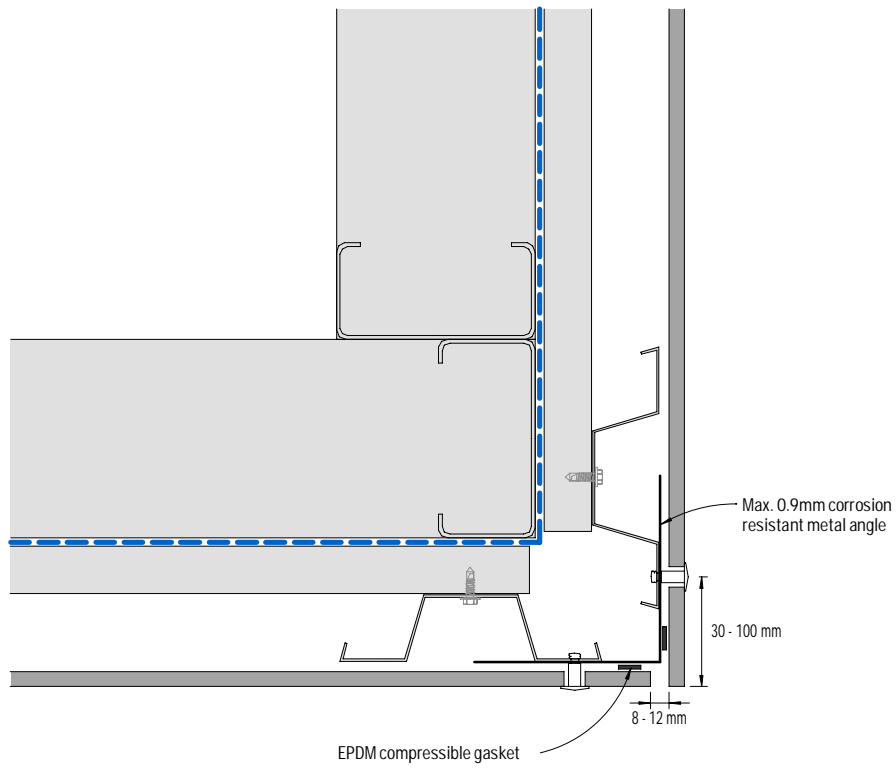


Figure 27: External corner - Detail 1

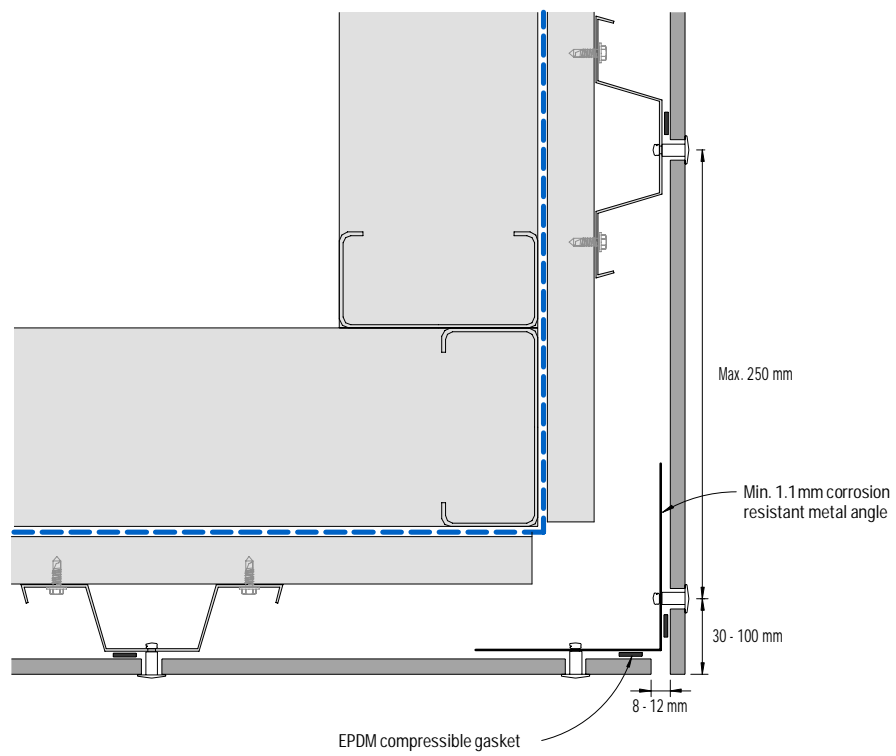


Figure 28: External corner - Detail 2

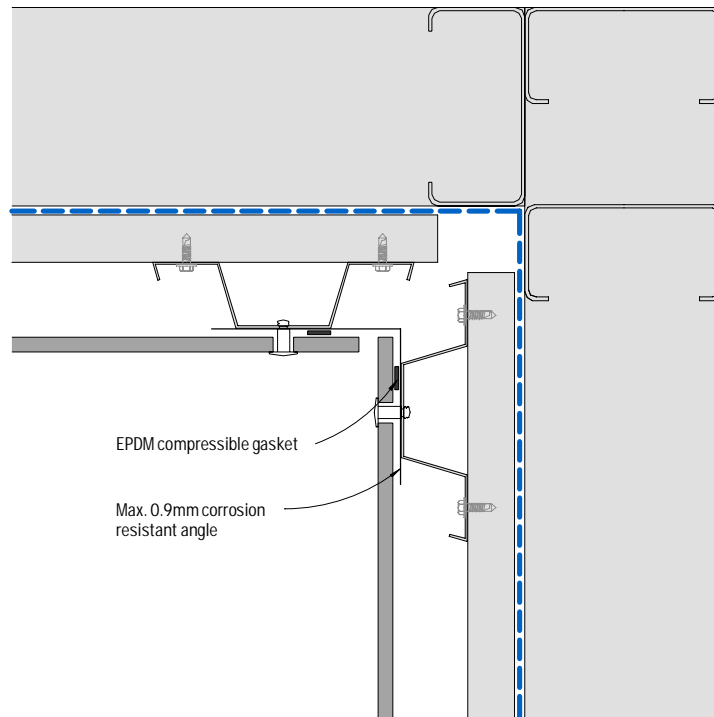


Figure 29: Internal corner

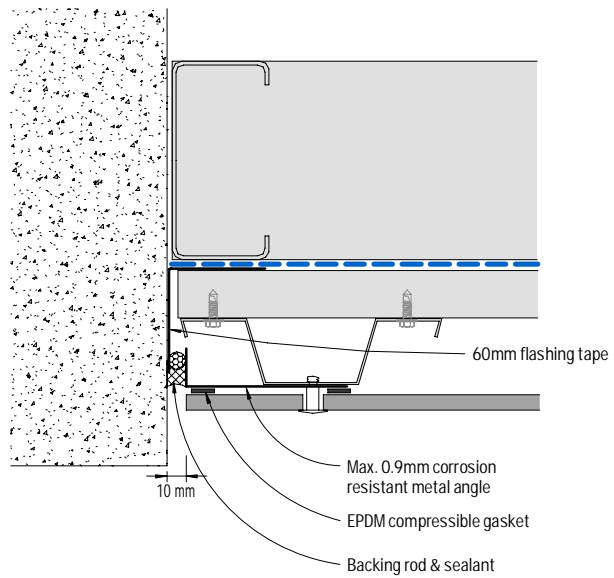


Figure 30: Abutment



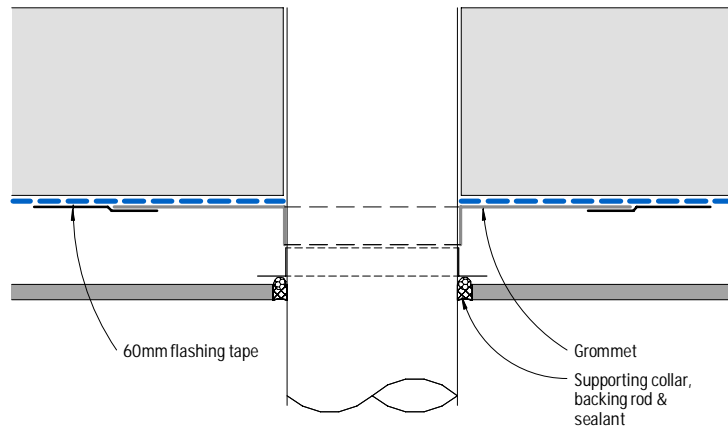


Figure 31: Pipe penetration - Plan view

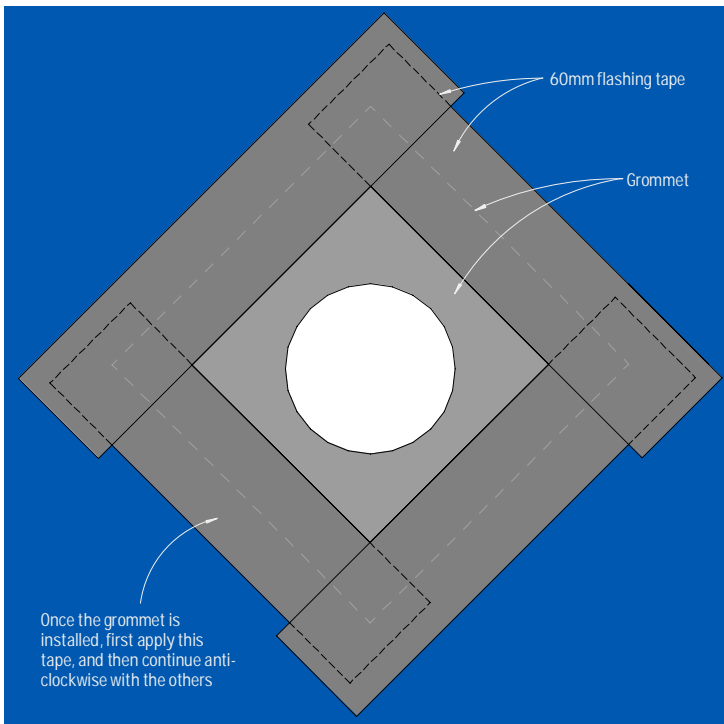


Figure 32: Pipe penetration - Elevation

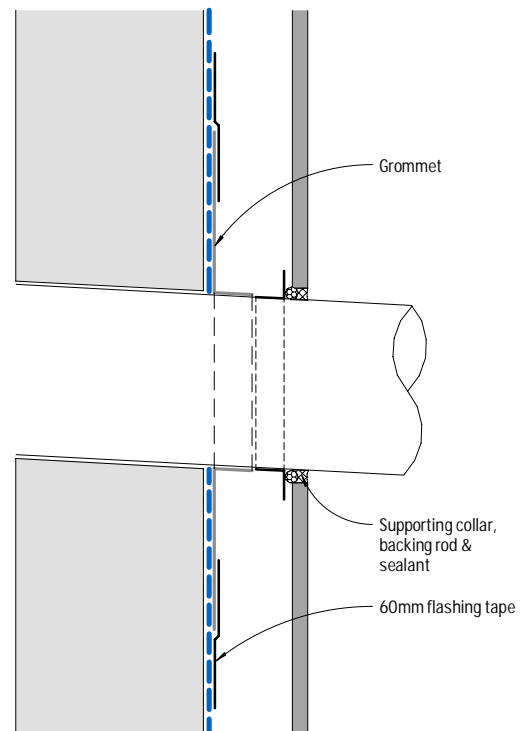


Figure 33: Pipe penetration - Section

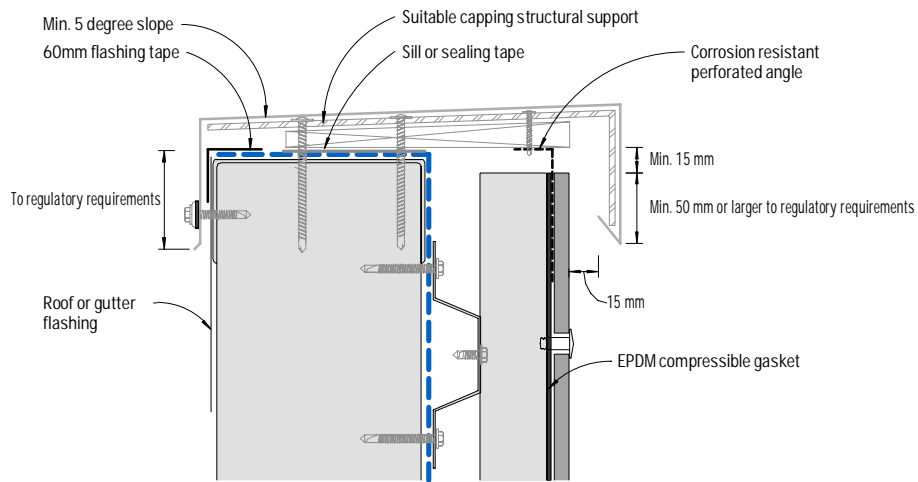


Figure 34: Capping - Detail 1

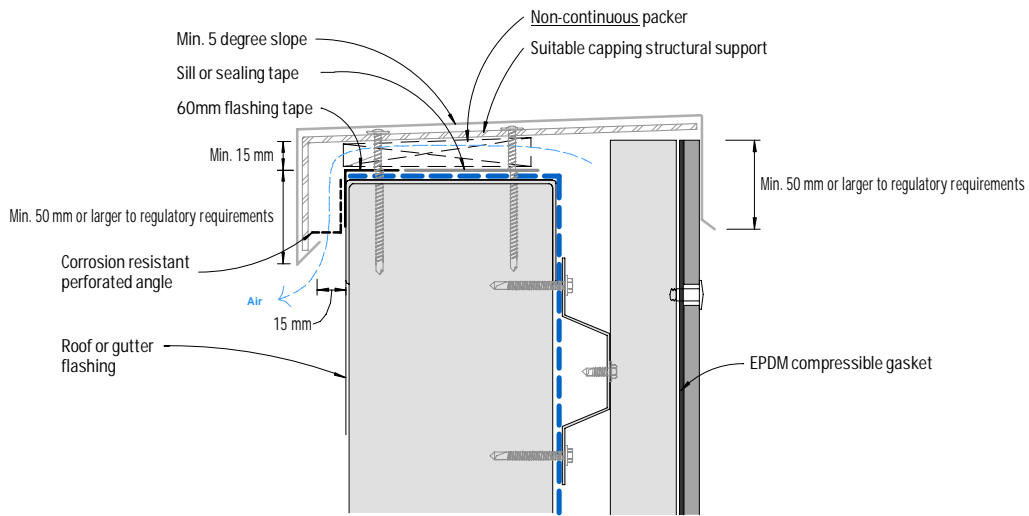


Figure 35: Capping - Detail 2  
(Not suitable for EQUITONE [material])

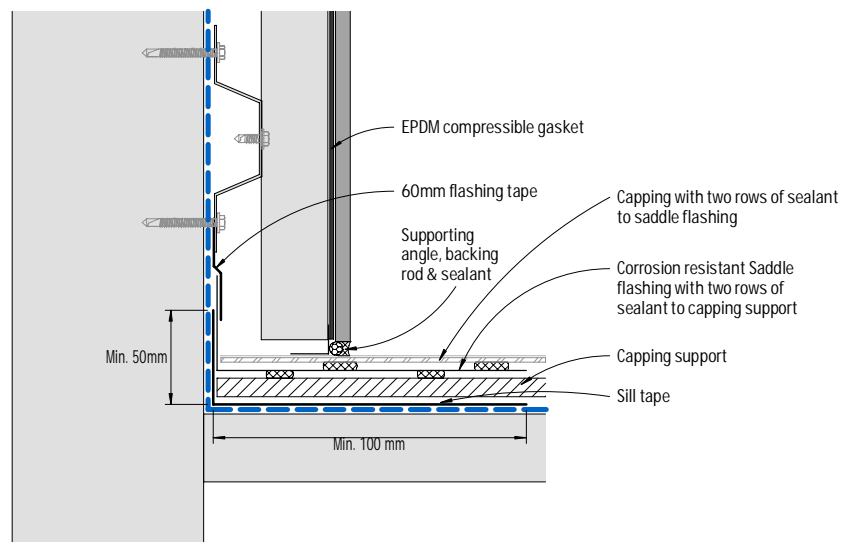


Figure 36: Parapet junction - Section

Notes

- 1) For EQUITONE [material], the following capping dimensions should be followed.
  - A minimum 20mm between panel face and rear of the capping
  - A minimum 50mm overlap with the panel for building up to 8m or larger to regulatory requirements.
  - A minimum 80mm overlap with the panel for building up to 20m or larger to regulatory requirements.
  - A minimum 100mm overlap with the panel for building over 20m or larger to regulatory requirements.
- 2) Any face fixings of capping shall be through an over sized hole (by min 5mm) in the capping as well as the panel.
- 3) Corrosion resistant perforated angle shall be of max. thickness of 0.9mm where located between panel and support frame, and be of min. 50% open area with aperture size of 3-5mm.
- 4) Capping shall be designed and engineered accordingly to provide adequate allowance for ventilation as shown in Figures 34 & 35.

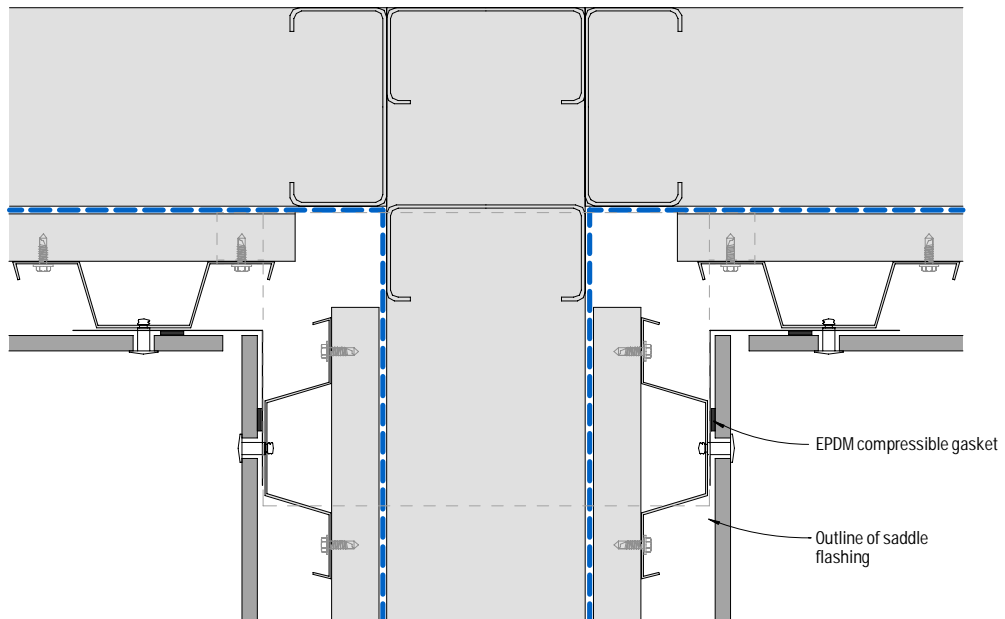


Figure 37: Parapet junction - Plan view

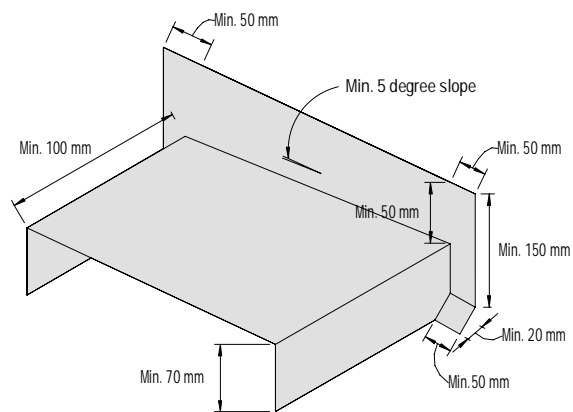
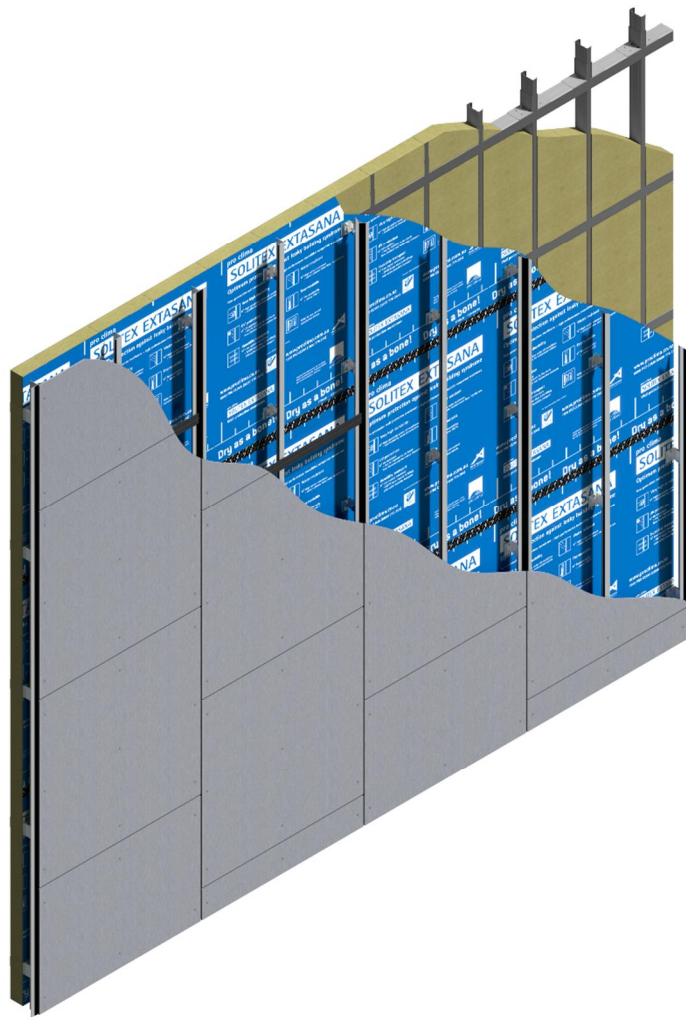


Figure 38: Corrosion resistant saddle flashing

# EQUITONE system



flexible air barrier (pliable membrane)  
aluminium bracketry construction

# Support frame

EQUITONE may be fixed to NVELOPE NV1 thermally broken aluminium bracketry framing system.

Support frame shall be of adequate corrosion resistance required for the project.

Structure and support frame shall be designed to relevant standards including, but not limited to, the following:

- AS/NZS 1664.1 – Aluminium structures
- AS/NZS 4600 – Cold-formed steel structures
- NZS 3404 – Steel structures
- NZS 3604 – Timber framed buildings

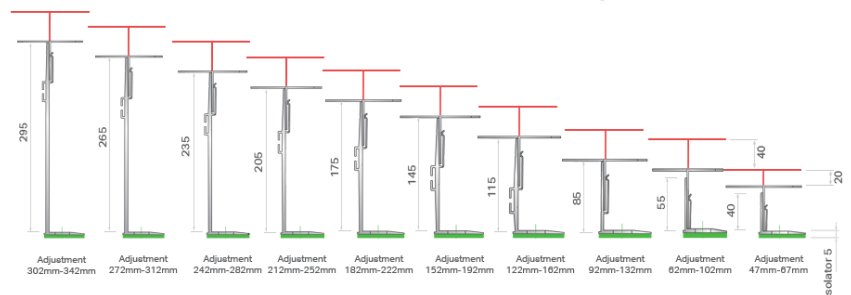
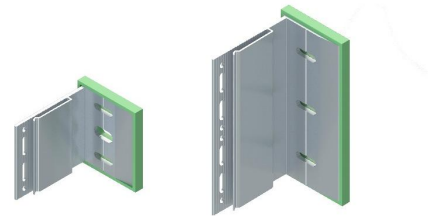
## Thermal isolator gasket

Used to minimise thermal bridging, and to separate aluminium from steel or concrete.



## Bracket

NVELOPE aluminium brackets are available in two sizes, ie single and double, with various depths to suit a wide range of cavity widths from approx. 50 to 300mm.



## Vertical rail (profile)

NVELOPE aluminium vertical L and T rails  
 Minimum face width of T rail: 120 mm  
 Minimum face width of L rail: 40 mm



## Notes

Support frame and its connection to substructure shall be designed by project engineer in accordance with the relevant standards. Refer to UNI Rivet span tables for maximum vertical and horizontal spacing of panel fixings. The application of NVELOPE system shall be in accordance with its supplier's recommendations and guidelines. Refer to NVELOPE and EQUITONE brochure for detailed information on NVELOPE components and their available sizes and options.

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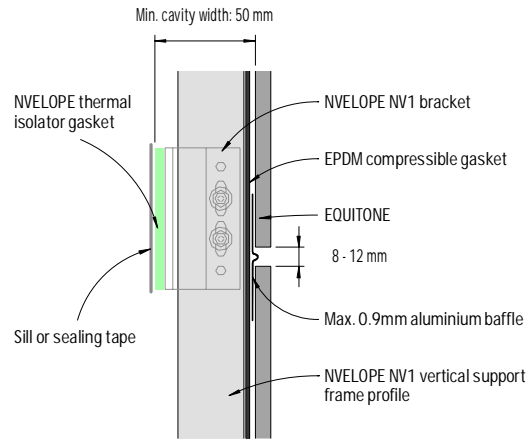


Figure 1: Baffled horizontal joint  
(Not suitable for EQUITONE [materia])

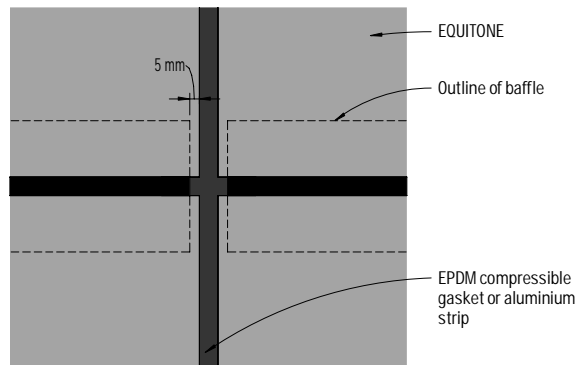


Figure 2: Baffled horizontal joint  
junction with vertical joint - Elevation

Notes

- 1) Depending on the project requirements max. 0.9mm (powder) coated aluminium strip may be used in lieu of EPDM strip on vertical joints for higher UV resistance.
- 2) EQUITONE [materia] requires open horizontal panel joints. Horizontal open joint detail requires project engineer's evaluation and approval, and the selection of appropriate rigid and UV resistant weather resistive barrier (membrane).

Intermediate (narrow) EPDM compressible gasket may be applied as shown in dashed line, replacing the wide one, where the metal strip behind is of desired colour

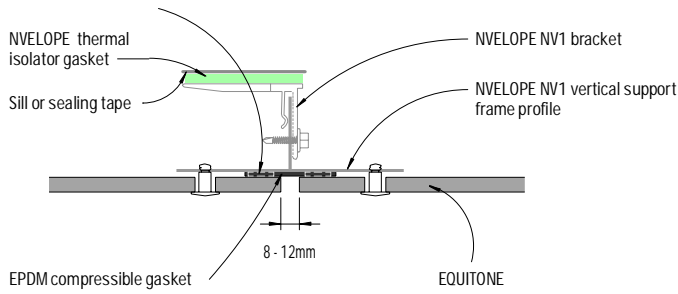


Figure 3: Vertical joint - Detail 1

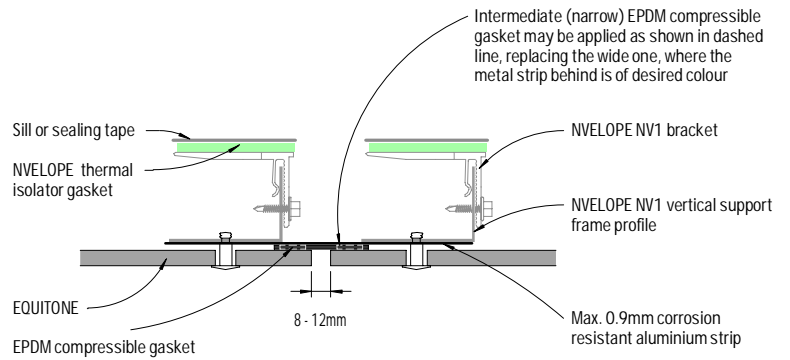


Figure 4: Vertical joint - Detail 2

Intermediate (narrow) EPDM compressible gasket may be applied as shown in dashed line, replacing the wide one, where the metal strip behind is of desired colour

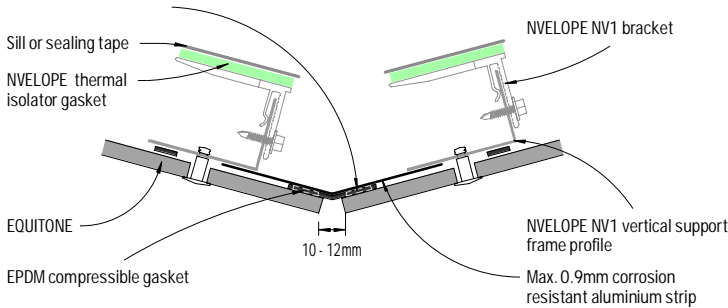


Figure 5: Vertical joint - Detail 3

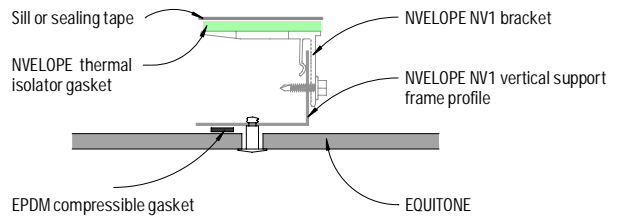


Figure 6: Intermediate panel fixings connection

Notes

- 1) Depending on the project requirements max. 0.9mm (powder) coated aluminium strip may be used in lieu of EPDM strip on vertical joints for higher UV resistance.
- 2) In Figure 4 & 5, the aluminium strip should be fixed ONLY to one of the support frame profiles (either left or right) where allowance for horizontal and/or vertical movement of the cladding frame is required.
- 2) EPDM compressible gasket strip is applied away from the panel hole, and usually to one side of the support frame profile as shown in Figure 6.



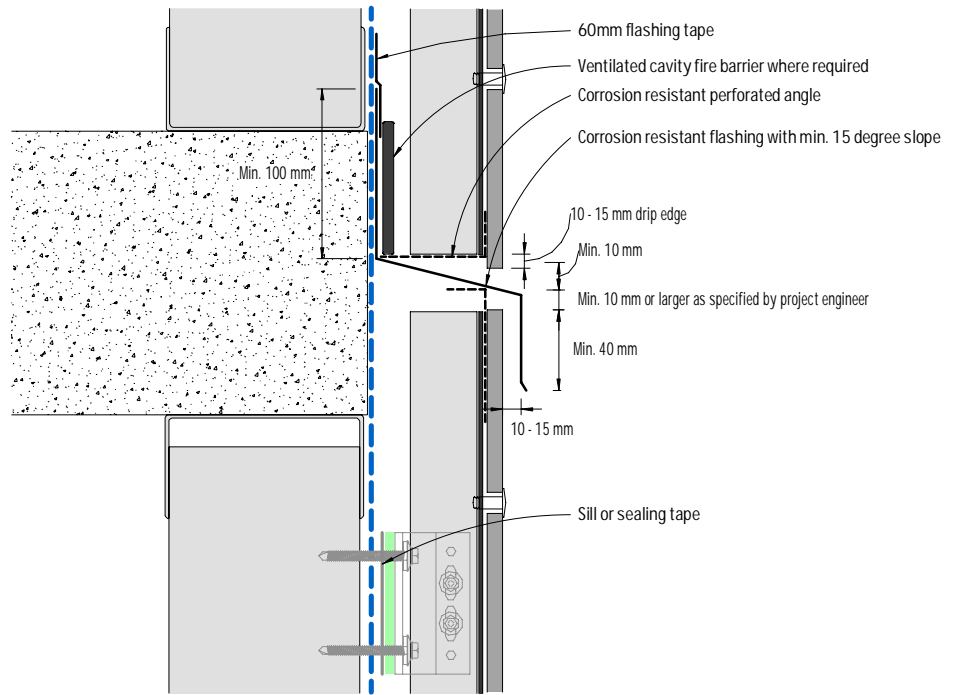


Figure 7: Horizontal control joint

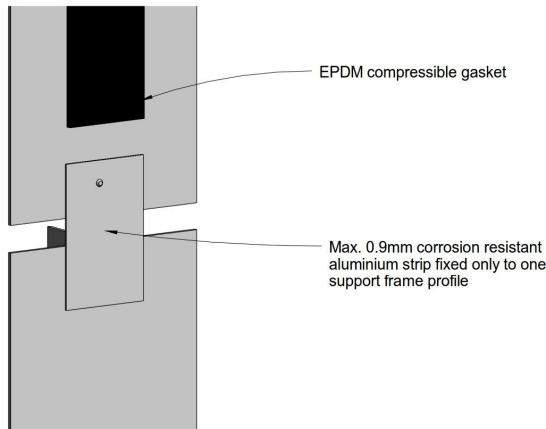


Figure 8: EPDM gasket support over control joint or the like

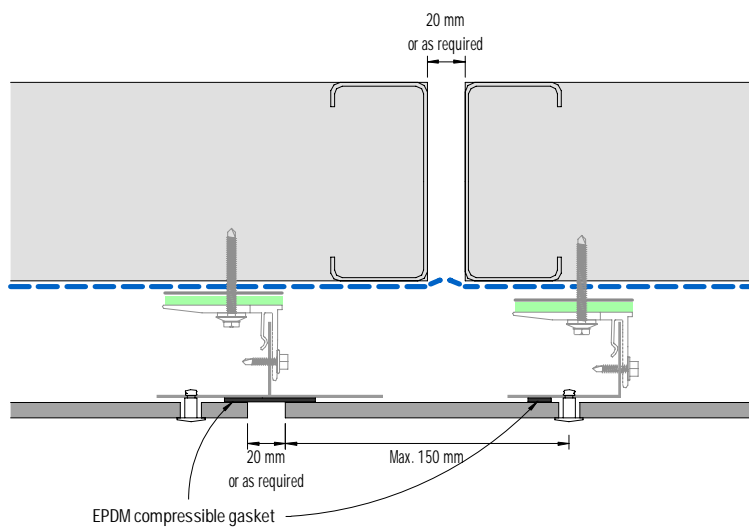


Figure 9: Vertical control joint

Notes

- 1) Support frame profiles must NOT be fixed crossing over a control joint.
- 2) Allowance for movement at the location of any control joint must be made in the cladding and its support frame design and installation. Panel must NOT be fixed bridging over any control joint.
- 3) Corrosion resistant perforated angle shall be of max. thickness of 0.9mm where located between panel and support frame, and be of min. 50% open area with aperture size of 3-5mm.

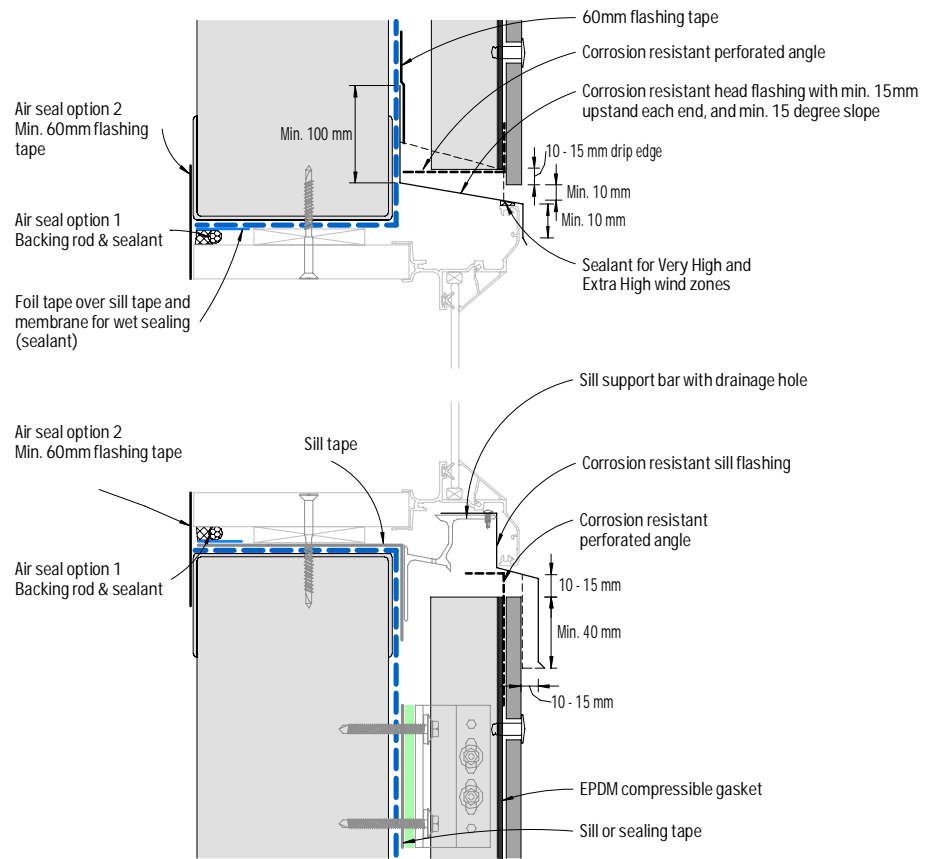


Figure 10: Flush window - Head and sill

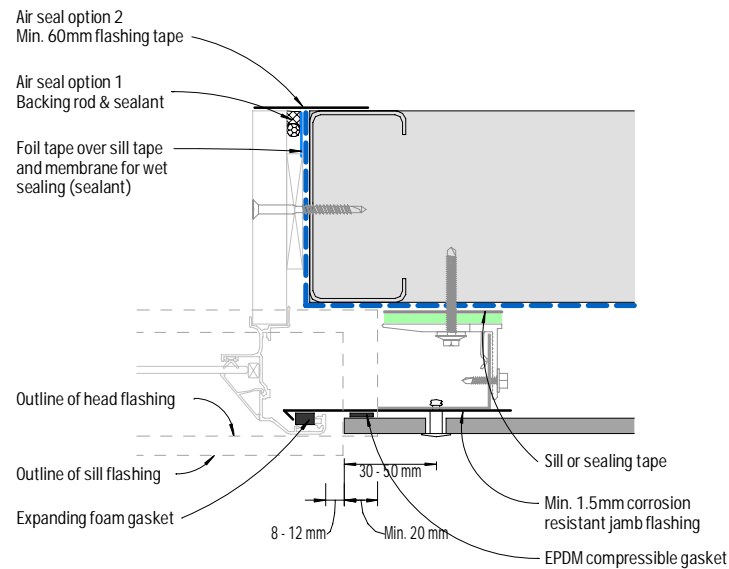


Figure 11: Flush window - Jamb

**Notes**

- 1) ONLY sealant compatible with the foil tape should be used. Should any sealant be intended to be used directly on the flashing and/or sill tape it must be confirmed with its manufacturer to ensure compatibility with these tapes in accordance with the relevant standards.
- 2) Corrosion resistant perforated angle shall be of max. thickness of 0.9mm where located between panel and support frame, and be of min. 50% open area with aperture size of 3-5mm.

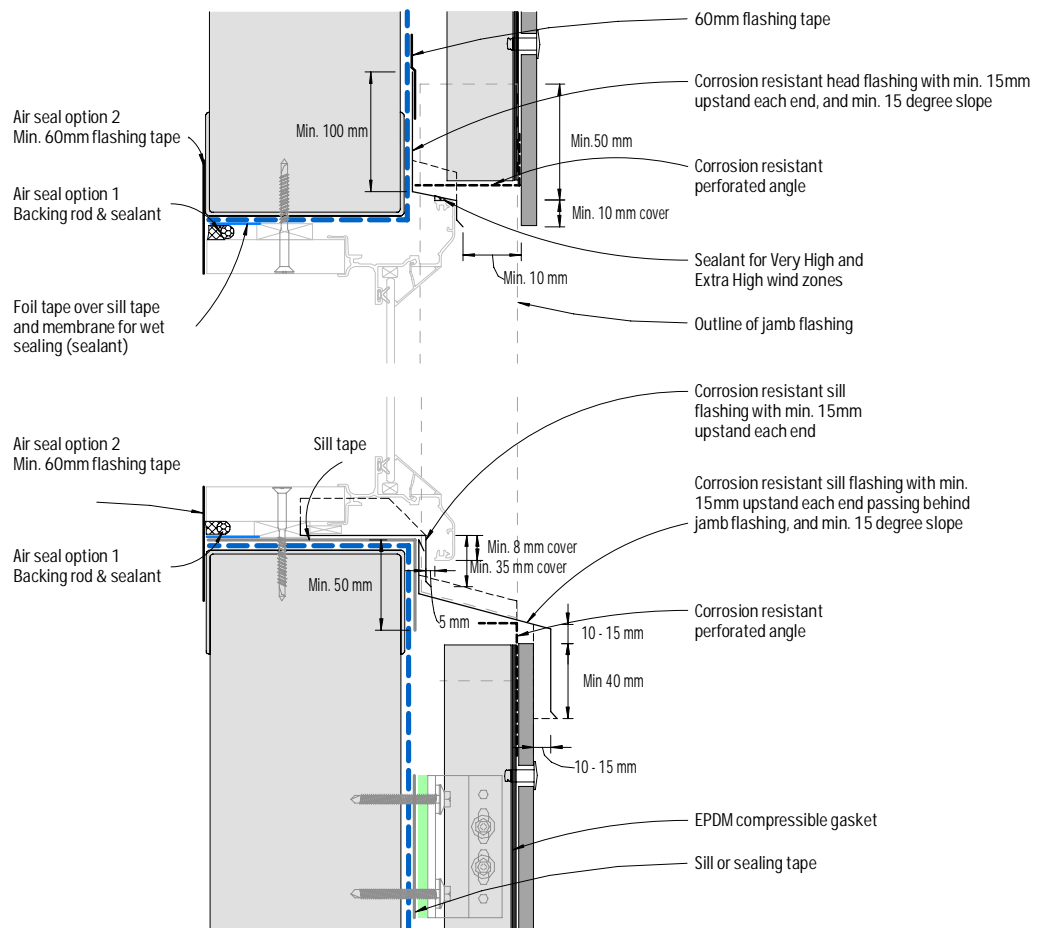


Figure 12: Recessed window - Head and sill

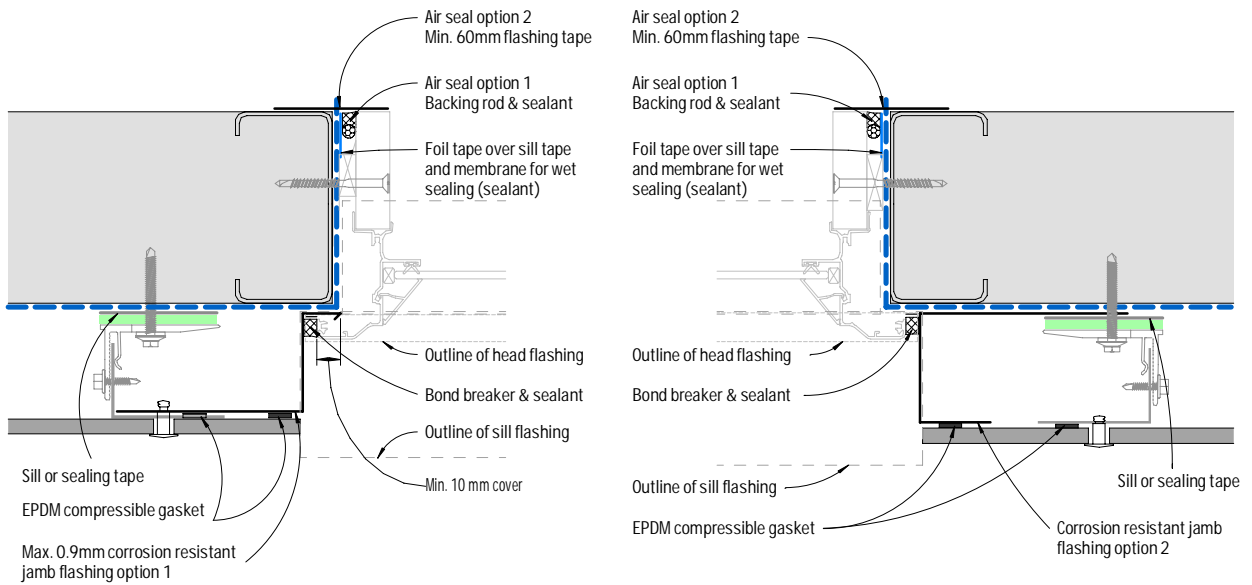


Figure 13: Recessed window jamb - Option 1

Figure 14: Recessed window jamb - Option 2

Notes

- 1) ONLY sealant compatible with the foil tape should be used. Should any sealant be intended to be used directly on the flashing and/or sill tape it must be confirmed with its manufacturer to ensure compatibility with these tapes in accordance with the relevant standards.
- 2) Corrosion resistant perforated angle shall be of max. thickness of 0.9mm where located between panel and support frame, and be of min. 50% open area with aperture size of 3-5mm.

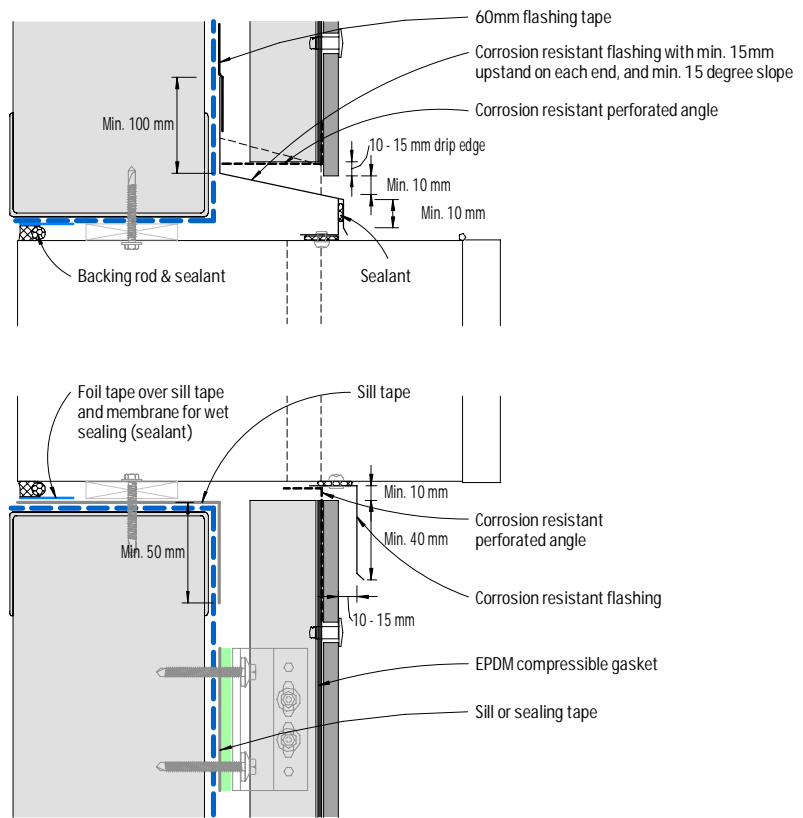


Figure 15: Meter box - Section

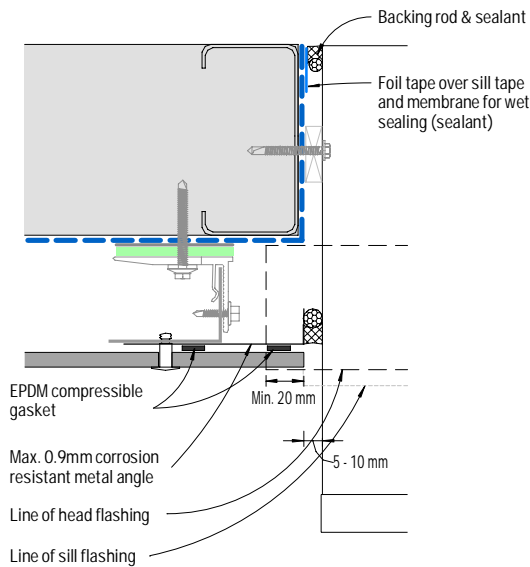


Figure 16: Meter box - Plan view - Detail 1

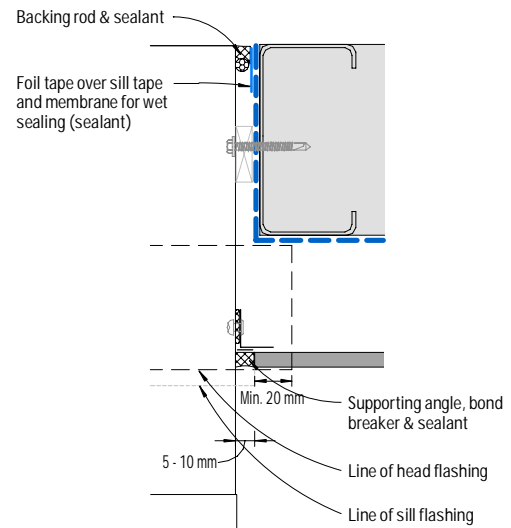


Figure 17: Meter box - Plan view - Detail 2

Notes

- 1) ONLY sealant compatible with the foil tape should be used. Should any sealant be intended to be used directly on the flashing and/or sill tape it must be confirmed with its manufacturer to ensure compatibility with these tapes in accordance with the relevant standards.
- 2) Corrosion resistant perforated angle shall be of max. thickness of 0.9mm where located between panel and support frame, and be of min. 50% open area with aperture size of 3-5mm.

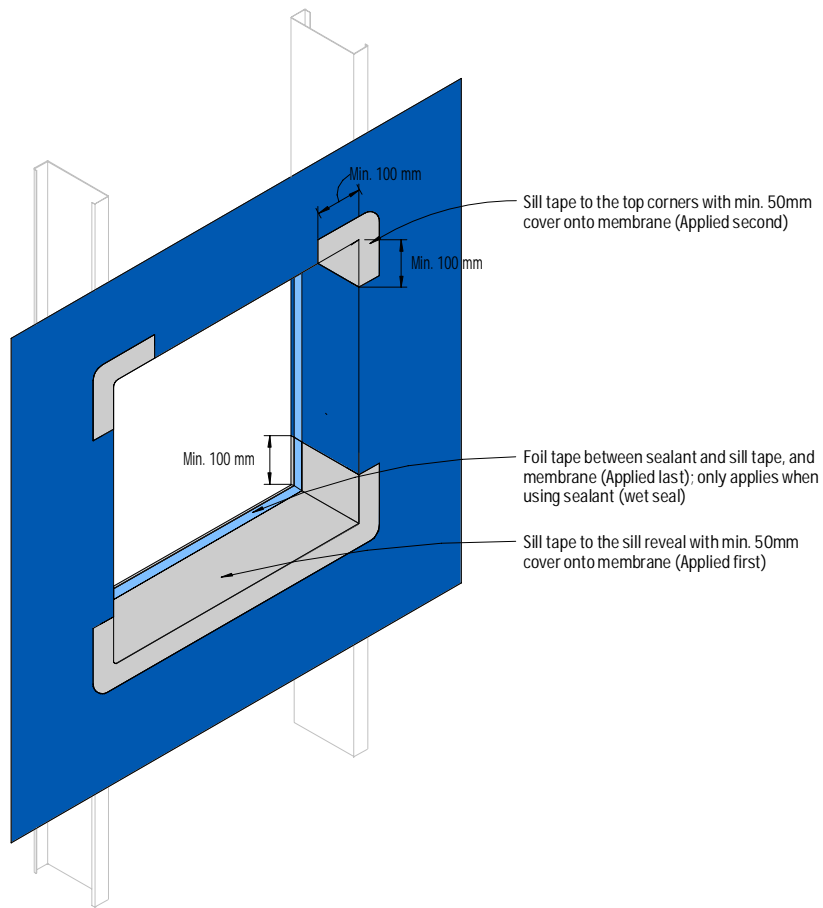


Figure 18: Isometric view of window/meter box opening - Tape application

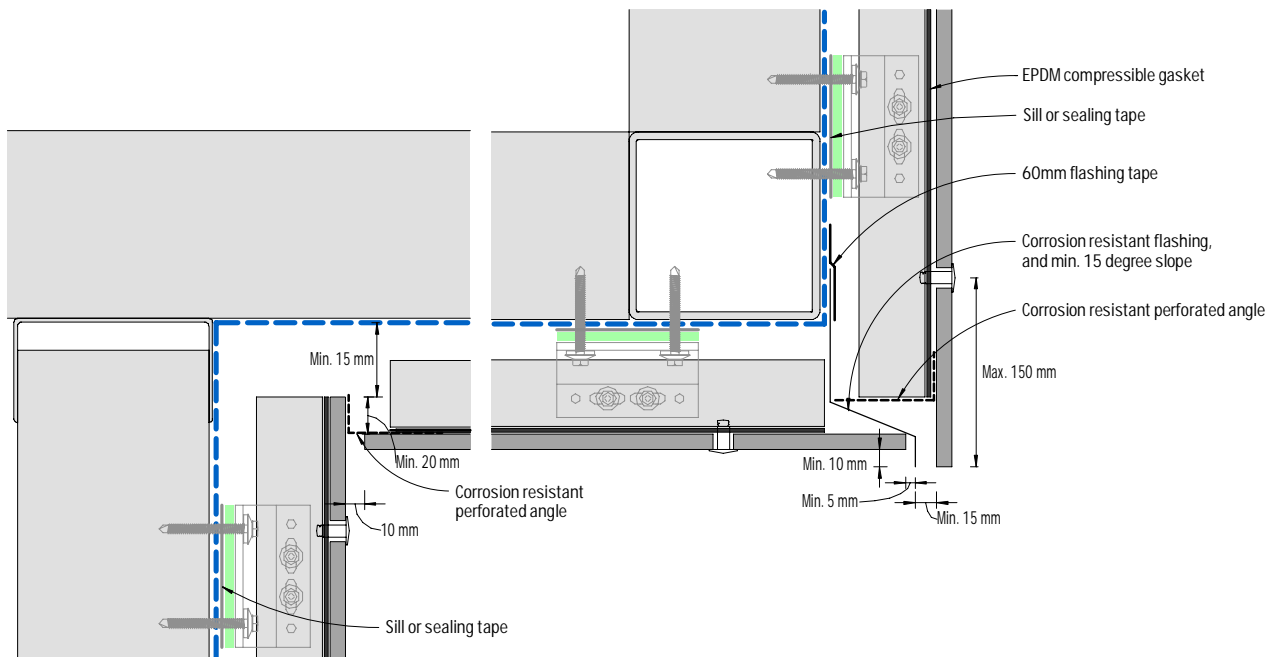


Figure 19: Soffit junction

Notes

- 1) ONLY sealant compatible with the foil tape should be used. Should any sealant be intended to be used directly on the flashing and/or sill tape it must be confirmed with its manufacturer to ensure compatibility with these tapes in accordance with the relevant standards.
- 2) Support frame profiles must NOT be fixed crossing over a control joint.
- 3) Corrosion resistant perforated angle shall be of max. thickness of 0.9mm where located between panel and support frame, and be of min. 50% open area with aperture size of 3-5mm.

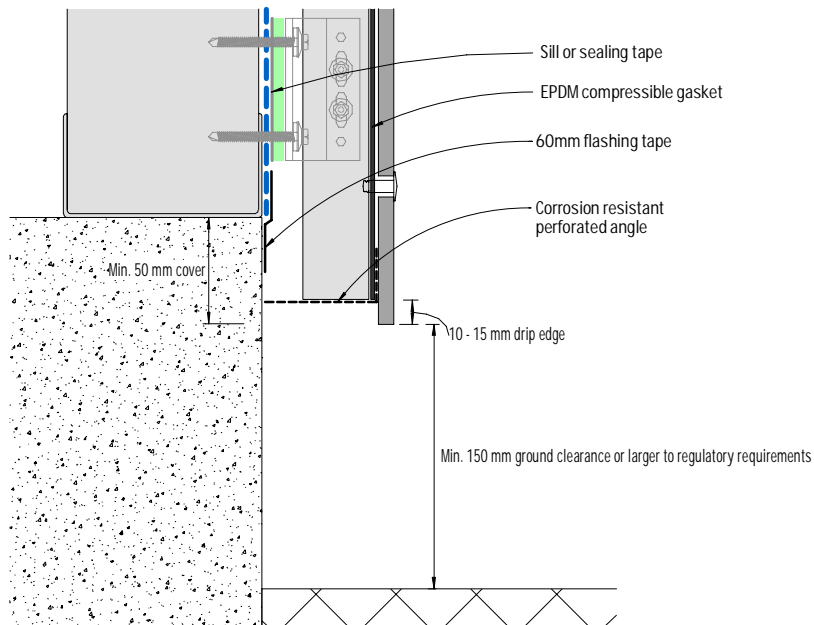


Figure 20: Base detail

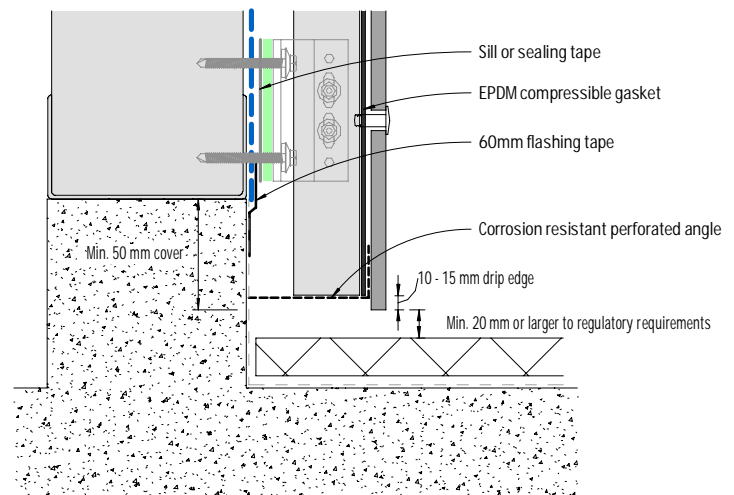


Figure 21: Base detail - Covered area

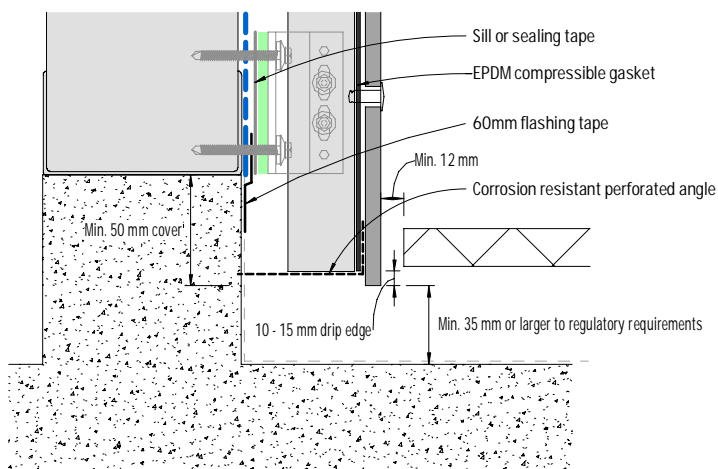


Figure 22: Base detail - Balcony

Notes

1) For **EQUITONE [materia]**, minimum ground clearance is **300mm**.

2) Corrosion resistant perforated angle shall be of max. thickness of 0.9mm where located between panel and support frame, and be of min. 50% open area with aperture size of 3-5mm.

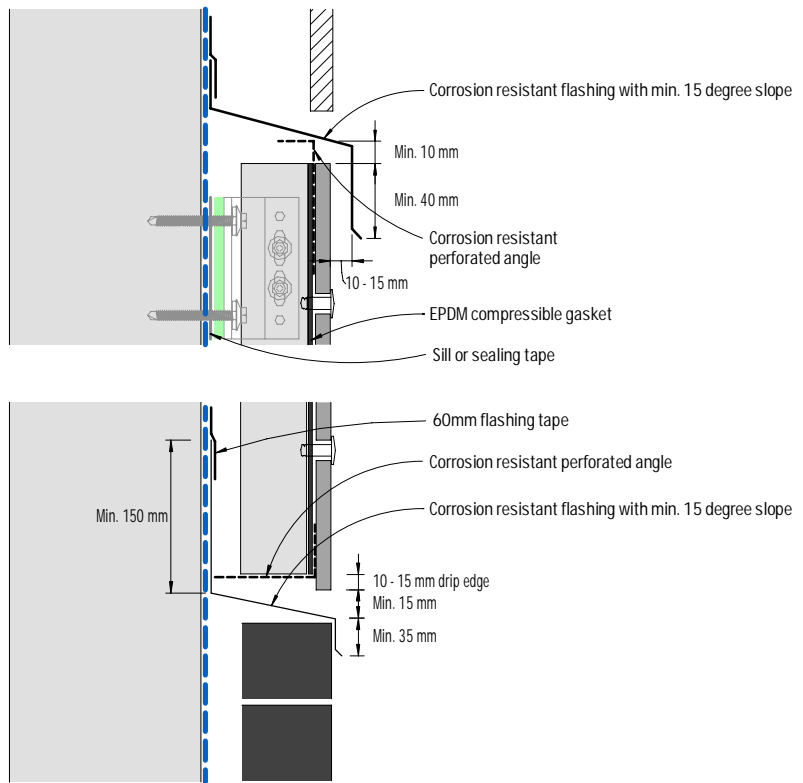


Figure 23: Junction with other materials - flush detail

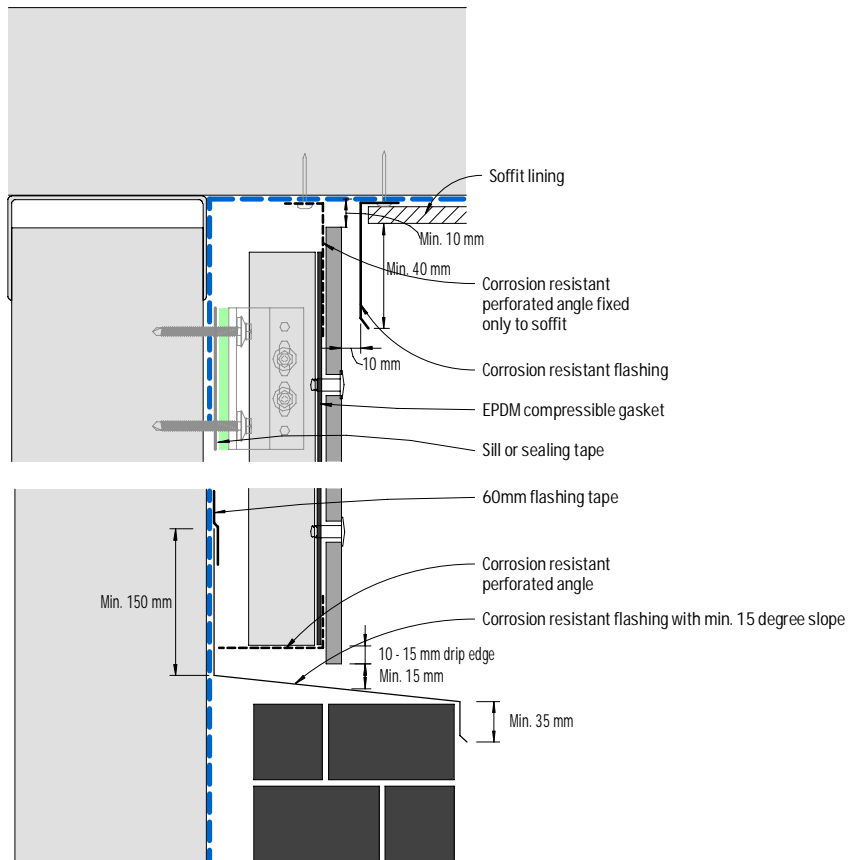


Figure 24: Junction with other materials, eaves or the like - recessed detail

Notes

- 1) Support frame profiles must NOT be fixed crossing over a control joint.
- 2) Corrosion resistant perforated angle shall be of max. thickness of 0.9mm where located between panel and support frame, and be of min. 50% open area with aperture size of 3-5mm.

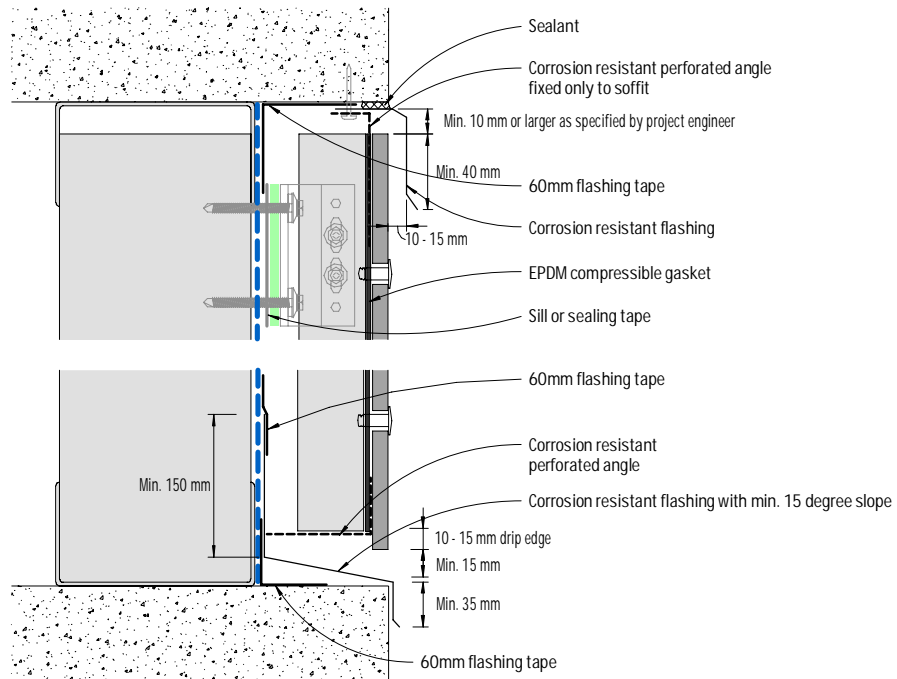


Figure 25: Exposed concrete slab or beam - Cladding flush

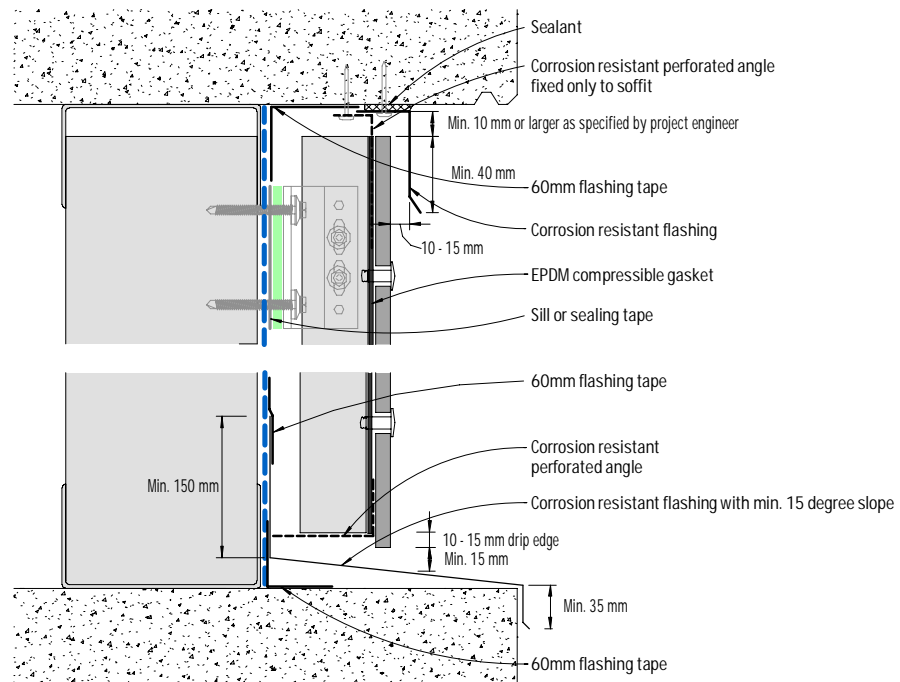


Figure 26: Exposed concrete slab or beam - Cladding recessed

Notes

- 1) Refer to Pro Clima's flashing tape application guide for any pre-treatment required on concrete or masonry for the application of the flashing tape onto these substrates.
- 2) Support frame profiles must NOT be fixed crossing over a control joint.
- 3) Corrosion resistant perforated angle shall be of max. thickness of 0.9mm where located between panel and support frame, and be of min. 50% open area with aperture size of 3-5mm.



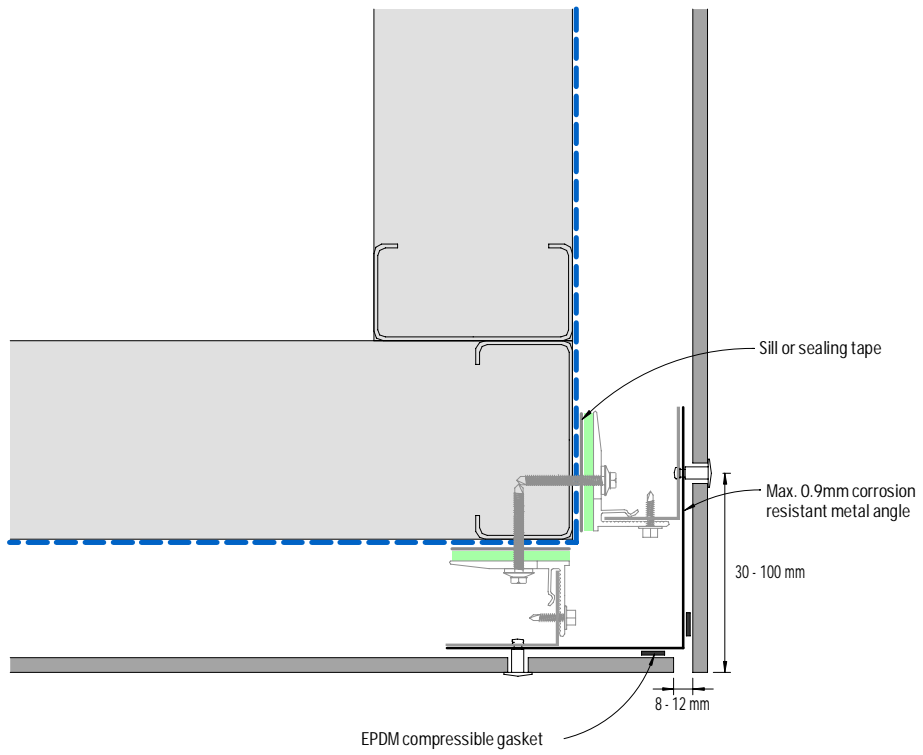


Figure 27: External corner - Detail 1

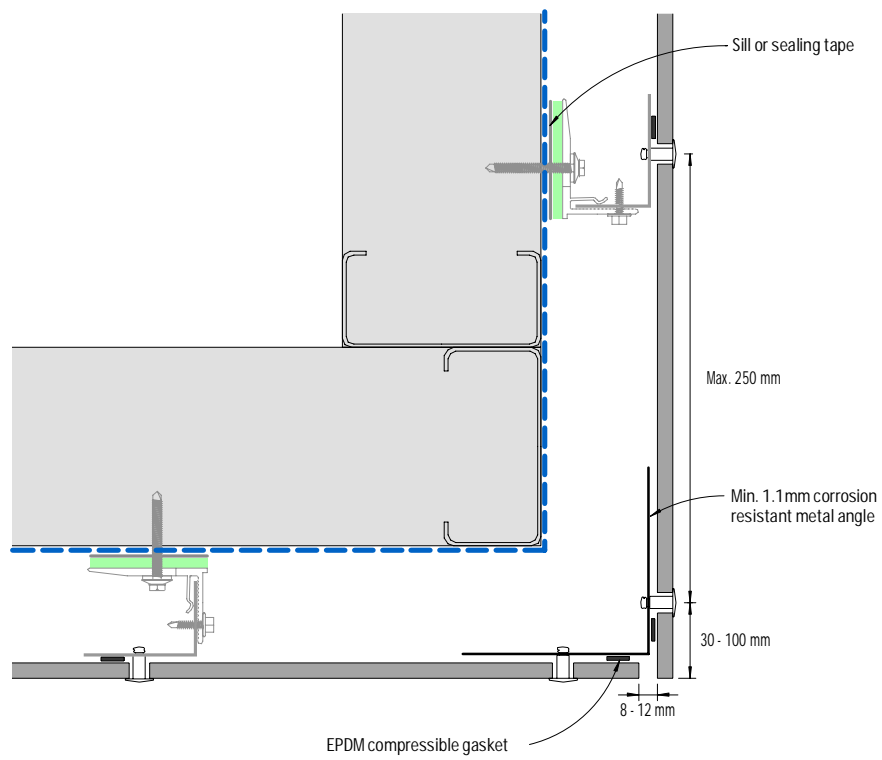


Figure 28: External corner - Detail 2

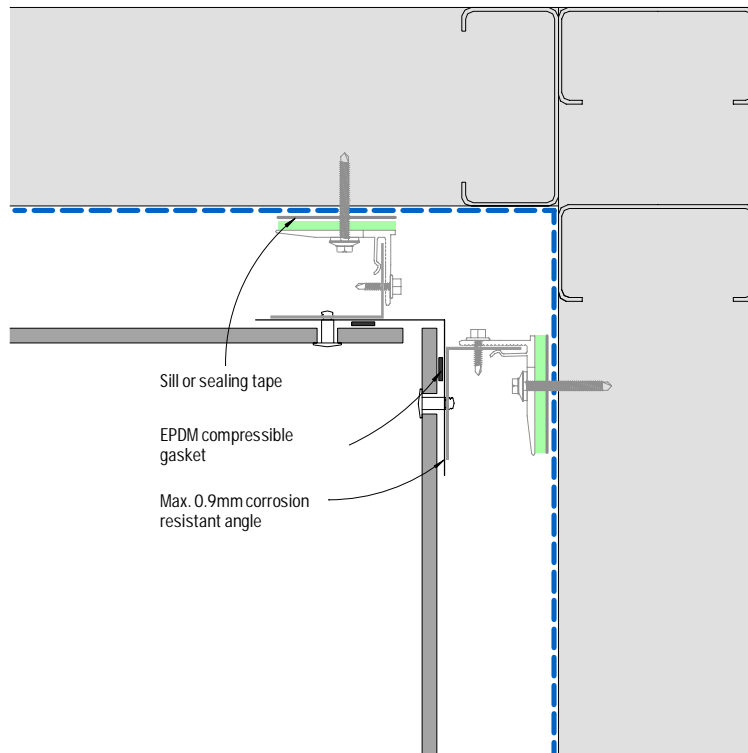


Figure 29: Internal corner

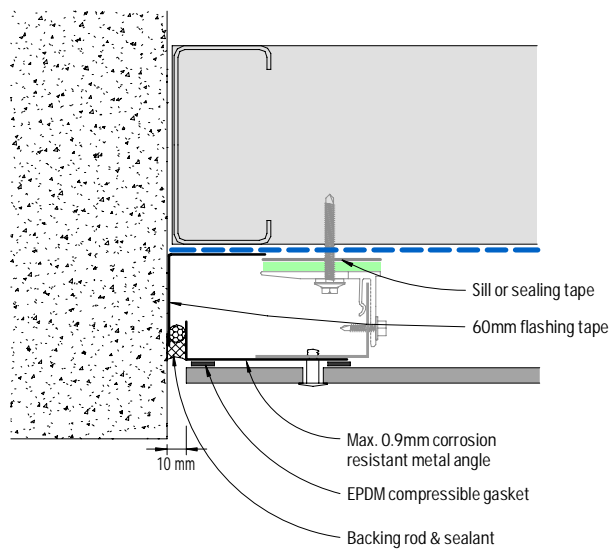


Figure 30: Abutment

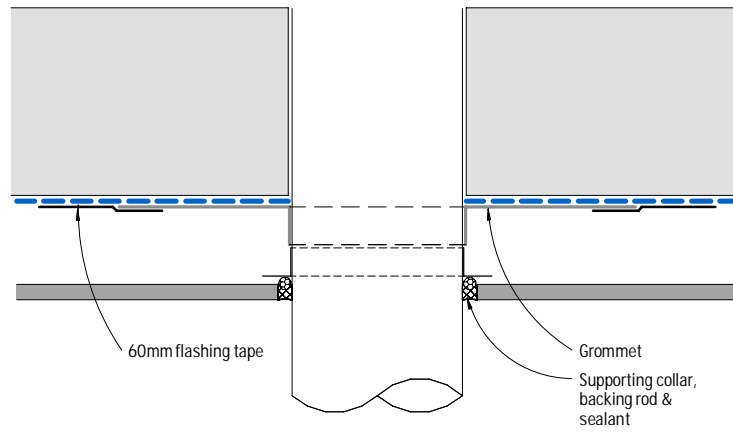


Figure 31: Pipe penetration - Plan view

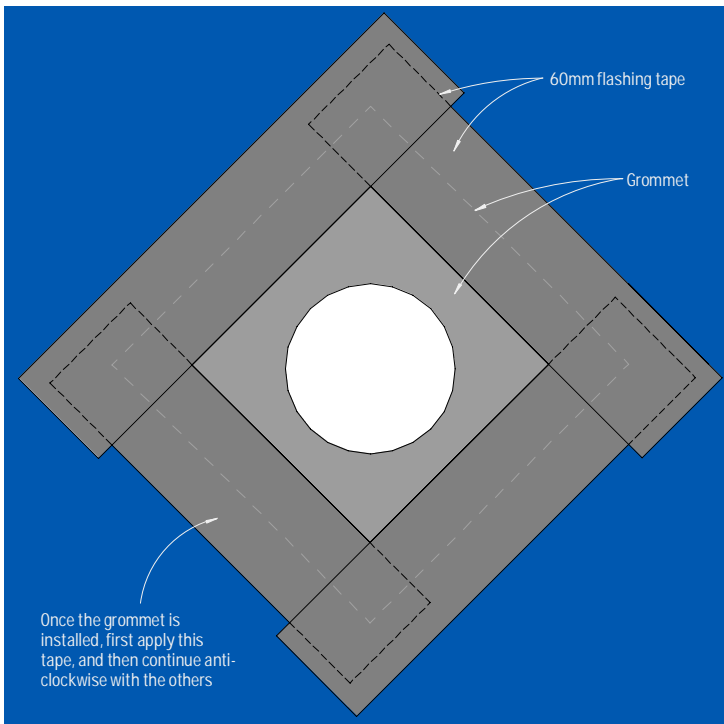


Figure 32: Pipe penetration - Elevation

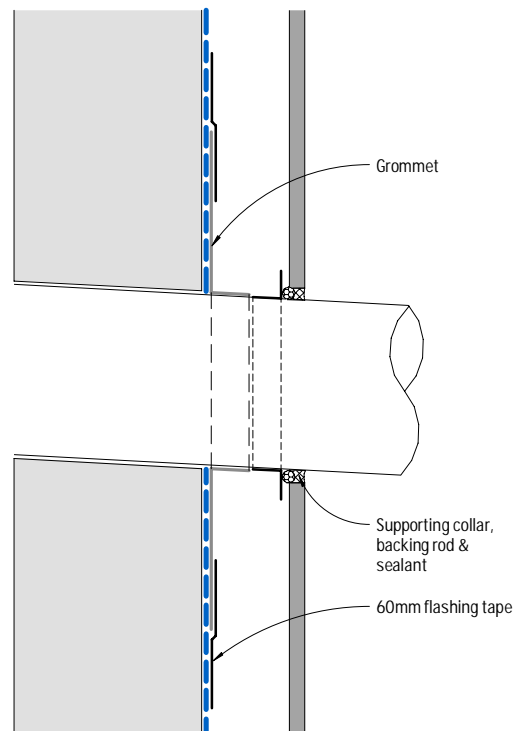


Figure 33: Pipe penetration - Section

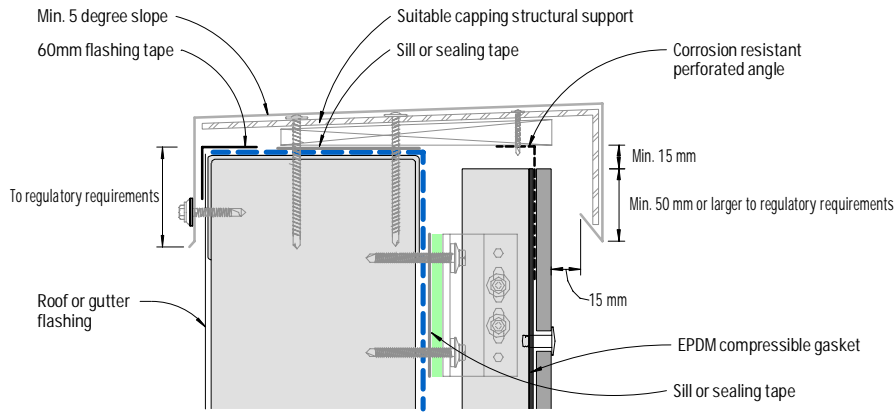


Figure 34: Capping - Detail 1

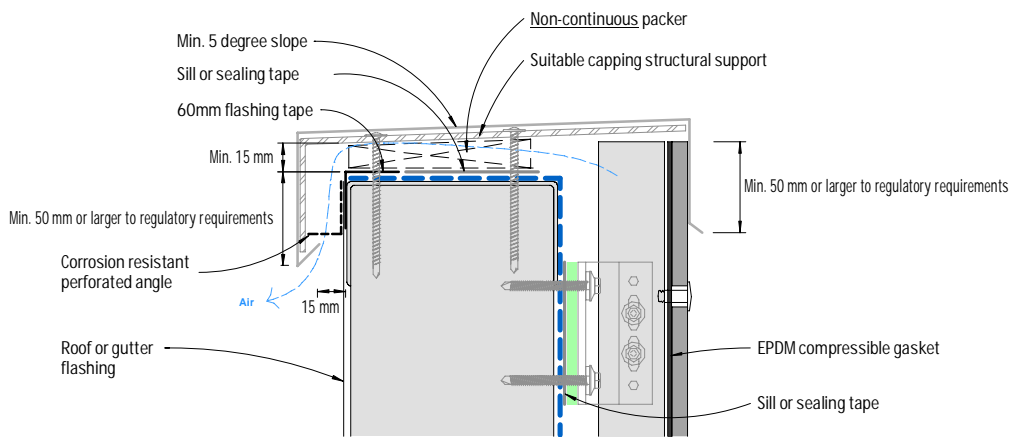


Figure 35: Capping - Detail 2  
(Not suitable for EQUITONE [material])

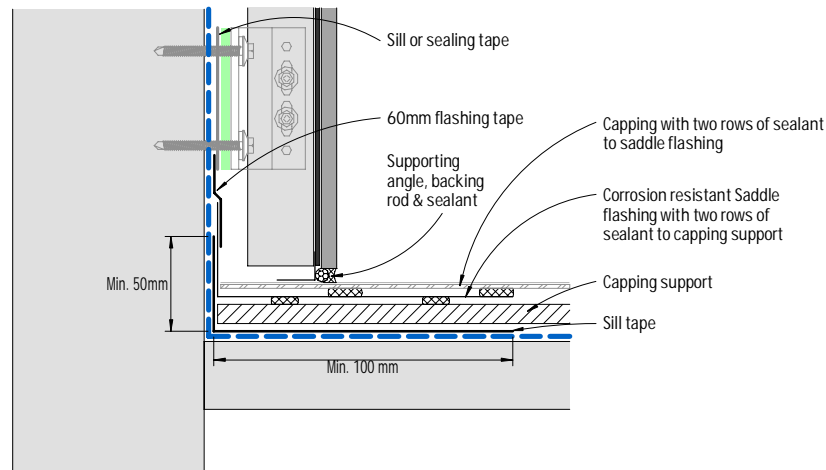


Figure 36: Parapet junction - Section

Notes

- 1) For EQUITONE [material], the following capping dimensions should be followed.
  - A minimum 20mm between panel face and rear of the capping
  - A minimum 50mm overlap with the panel for building up to 8m or larger to regulatory requirements.
  - A minimum 80mm overlap with the panel for building up to 20m or larger to regulatory requirements.
  - A minimum 100mm overlap with the panel for building over 20m or larger to regulatory requirements.
- 2) Any face fixings of capping shall be through an over sized hole (by min 5mm) in the capping as well as the panel.
- 3) Corrosion resistant perforated angle shall be of max. thickness of 0.9mm where located between panel and support frame, and be of min. 50% open area with aperture size of 3-5mm.
- 4) Capping shall be designed and engineered accordingly to provide adequate allowance for ventilation as shown in Figures 34 & 35.

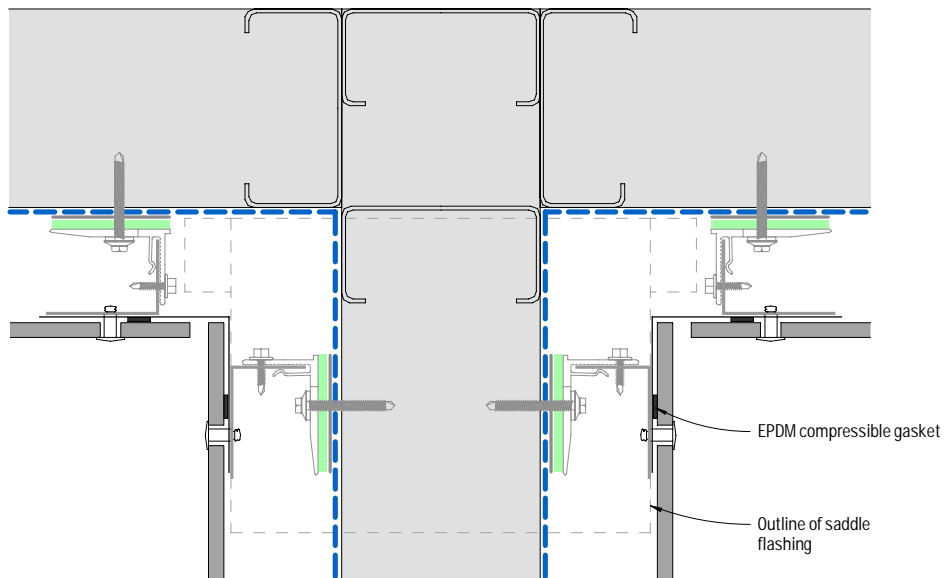


Figure 37: Parapet junction - Plan view

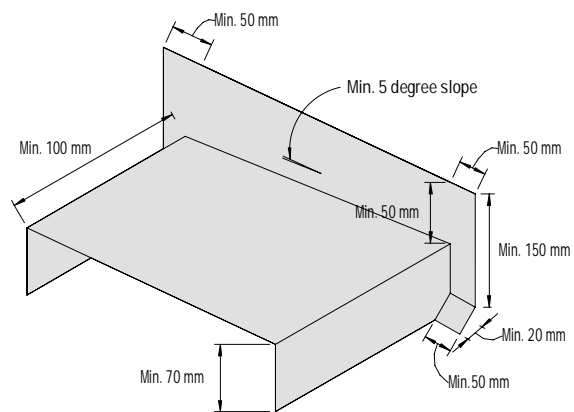
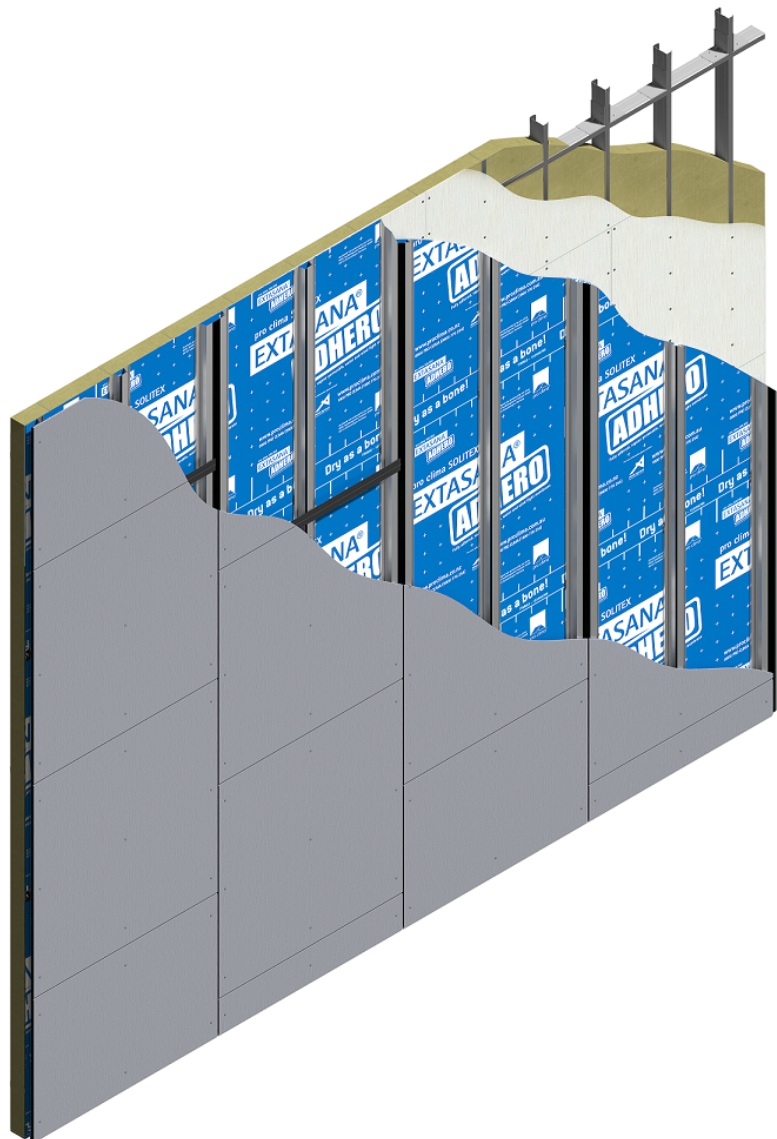


Figure 38: Corrosion resistant saddle flashing

# EQUITONE system



rigid air barrier  
single layer top hat construction

# Support frame

EQUITONE may be fixed to vertical metal top hat profiles with minimum gauge (thickness) of 1.15mm BMT, minimum depth of 35mm and minimum width of 50 and 120mm for intermediate and joint profiles, respectively.

Metal top hats shall be of adequate corrosion resistance required for the project.

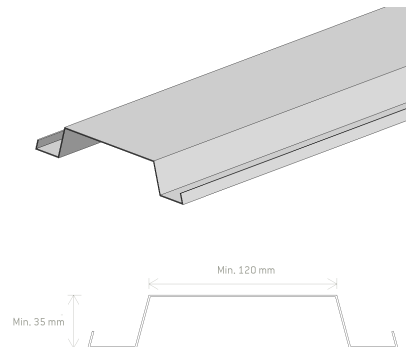
Maximum deflection of support framing must be limited to  $\text{Span}/250$ .

Structure and support frame shall be designed to relevant standards including, but not limited to, the following:

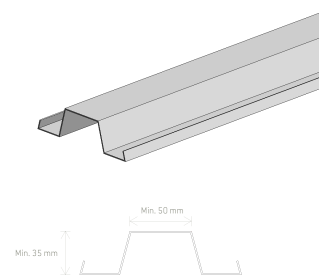
- AS/NZS 4600 – Cold-formed steel structures
- NZS 3404 – Steel structures
- NZS 3604 – Timber framed buildings

## Top hat profiles

120 x 35 mm, minimum 1.15mm BMT  
Located on vertical joints as specified on the construction details



50 x 35 mm, minimum 1.15mm BMT  
For intermediate panel support as specified on the construction details



## Notes

Support frame and its connection to substructure shall be designed by project engineer in accordance with the relevant standards. Refer to UNI Rivet span tables for maximum vertical and horizontal spacing of panel fixings.

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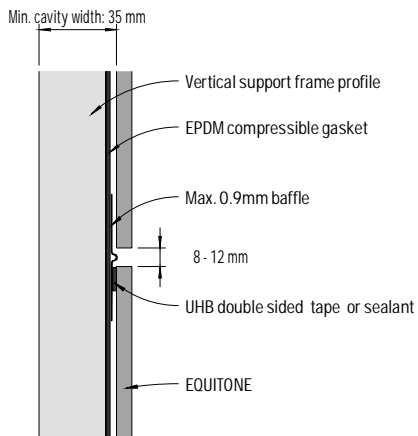


Figure 1: Baffled horizontal joint  
(Not suitable for EQUITONE [material])

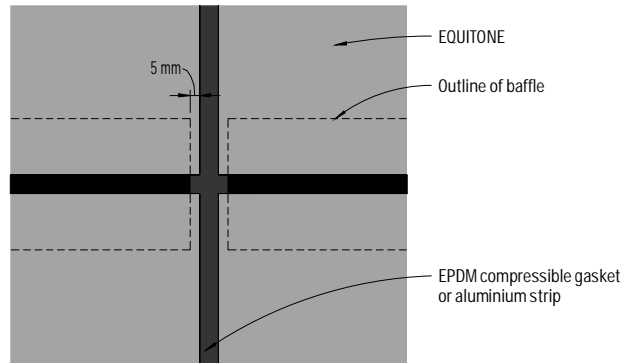


Figure 2: Baffled horizontal joint  
junction with vertical joint - Elevation

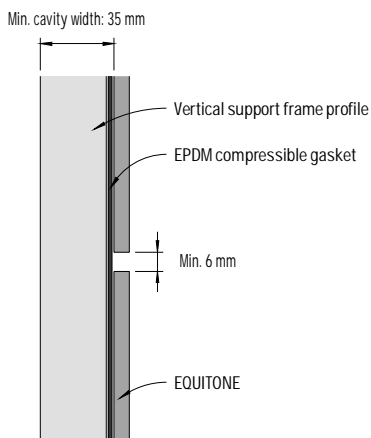


Figure 3: Open horizontal joint

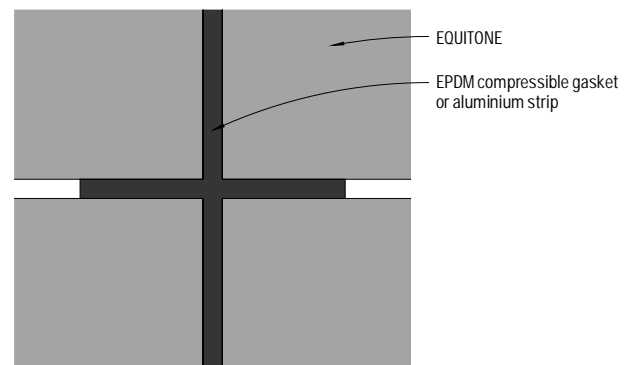


Figure 4: Open horizontal joint junction  
with vertical joint - Elevation

**Notes**

- 1) Horizontal open joint detail (Figure 3 & 4) requires project engineer's evaluation and approval, and the selection of appropriate UV resistant weather resistive barrier (membrane).
- 2) In Figure 4, visible part of the support frame profiles and weather barrier may be coated black with suitable paint.
- 3) Depending on the project requirements max. 0.9mm (powder) coated aluminium strip may be used in lieu of EPDM strip on vertical joints for higher UV resistance.

Intermediate (narrow) EPDM compressible gasket may be applied as shown in dashed line, replacing the wide one, where the metal strip behind is of desired colour

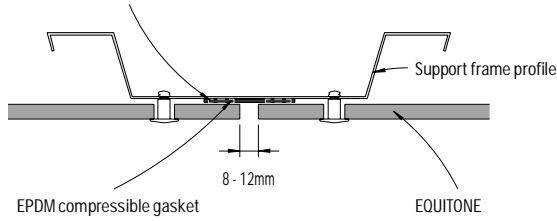


Figure 5: Vertical joint - Detail 1

Intermediate (narrow) EPDM compressible gasket may be applied as shown in dashed line, replacing the wide one, where the metal strip behind is of desired colour

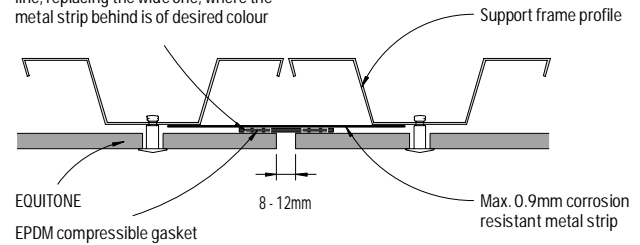


Figure 6: Vertical joint - Detail 2

Intermediate (narrow) EPDM compressible gasket may be applied as shown in dashed line, replacing the wide one, where the metal strip behind is of desired colour

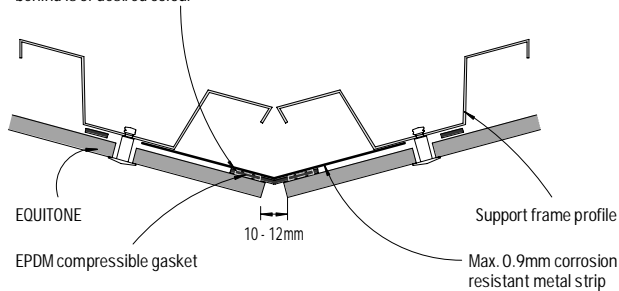


Figure 7: Vertical joint - Detail 3

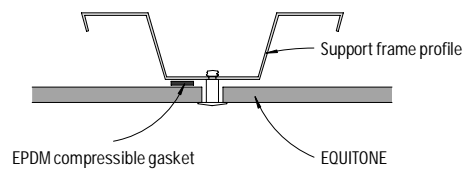


Figure 8: Intermediate panel fixings connection

#### Notes

1) Depending on the project requirements max. 0.9mm (powder) coated aluminium strip may be used in lieu of EPDM strip on vertical joints for higher UV resistance.

2) In Figure 6 & 7, the metal strip should be fixed ONLY to one of the support frame profiles (either left or right) where allowance for horizontal and/or vertical movement of the cladding frame is required.

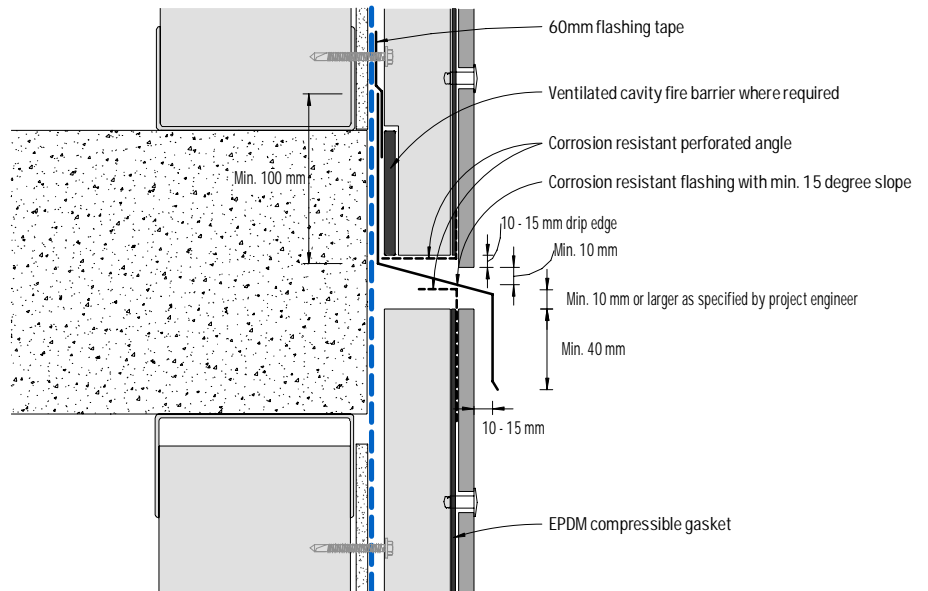


Figure 9: Horizontal control joint

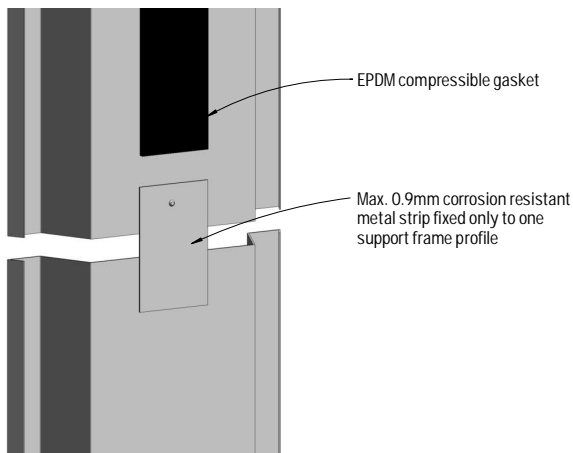


Figure 10: EPDM gasket support over control joint or the like

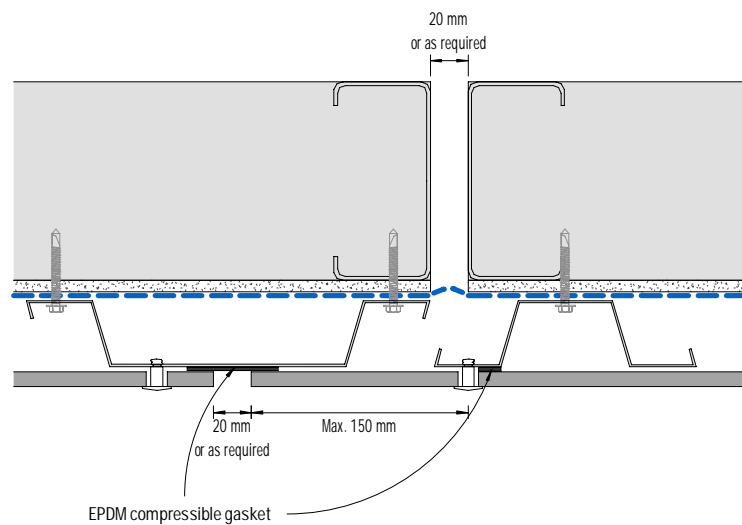


Figure 11: Vertical control joint

Notes

- 1) Support frame profiles and Kalsi RigidBacker must NOT be fixed crossing over a control joint.
- 2) Allowance for movement at the location of any control joint must be made in the cladding and its support frame design and installation. Panel must NOT be fixed bridging over any control joint.
- 3) Corrosion resistant perforated angle shall be of max. thickness of 0.9mm where located between panel and support frame, and be of min. 50% open area with aperture size of 3-5mm.

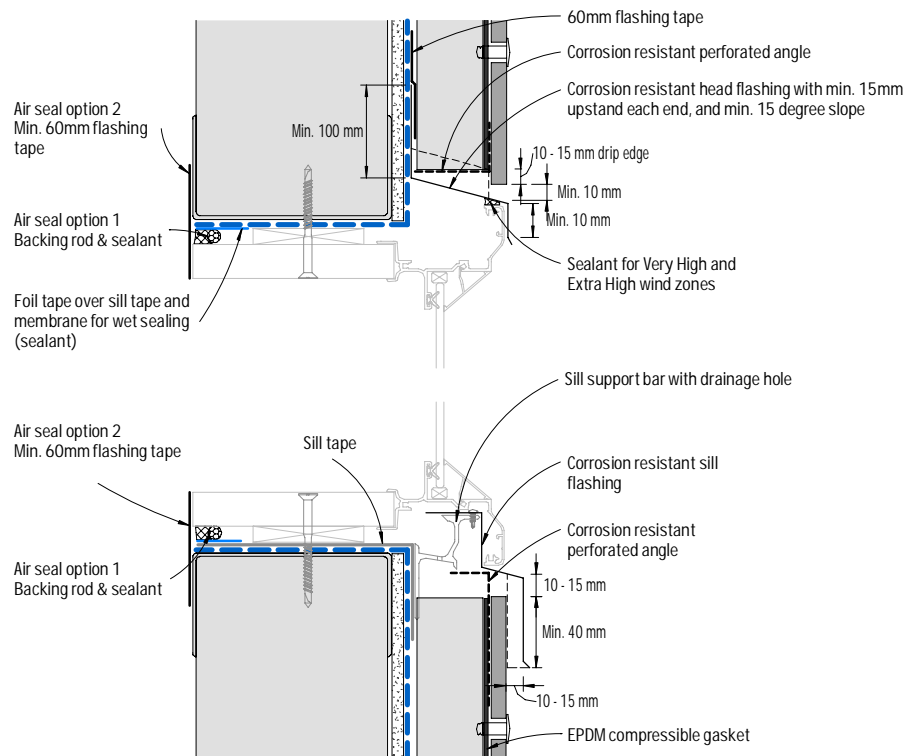


Figure 12: Flush window - Head and sill

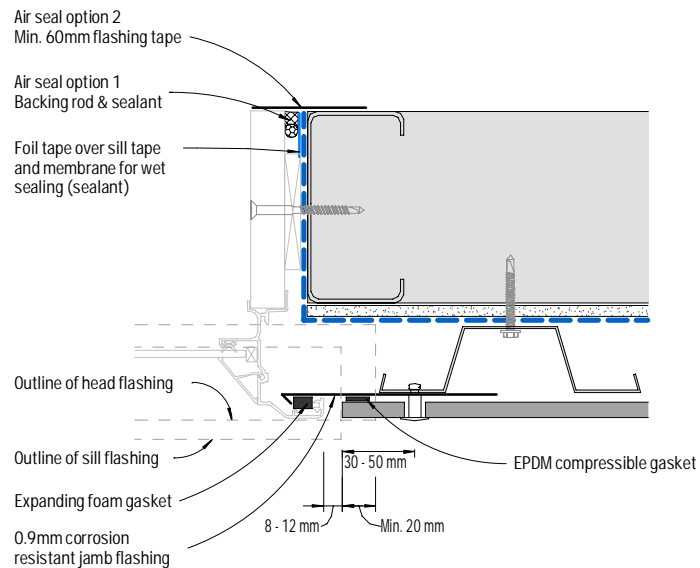


Figure 13: Flush window - Jamb

**Notes**

- 1) ONLY sealant compatible with the foil tape should be used. Should any sealant be intended to be used directly on the flashing and/or sill tape it must be confirmed with its manufacturer to ensure compatibility with these tapes in accordance with the relevant standards.
- 2) Corrosion resistant perforated angle shall be of max. thickness of 0.9mm where located between panel and support frame, and be of min. 50% open area with aperture size of 3-5mm.

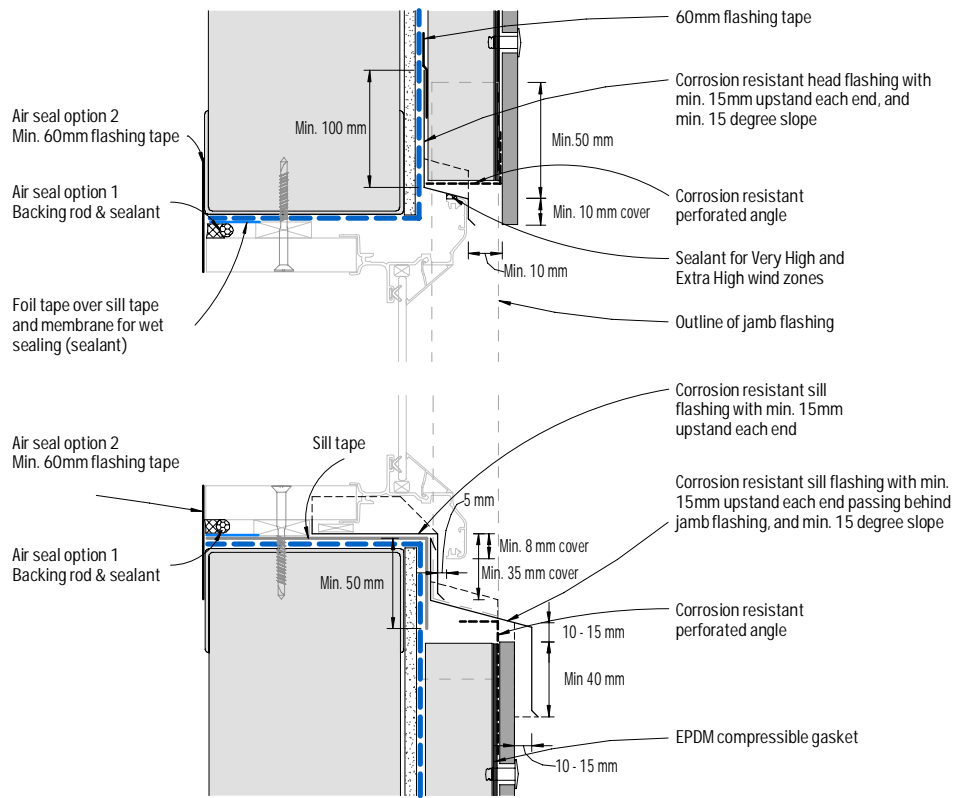


Figure 14: Recessed window - Head and sill

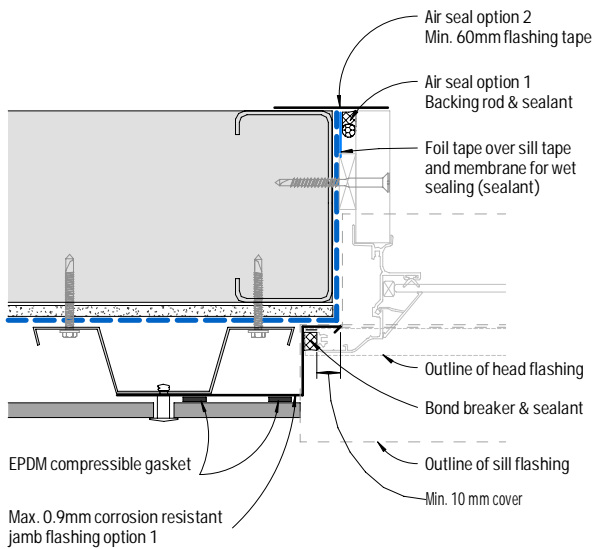


Figure 15: Recessed window jamb - Option 1

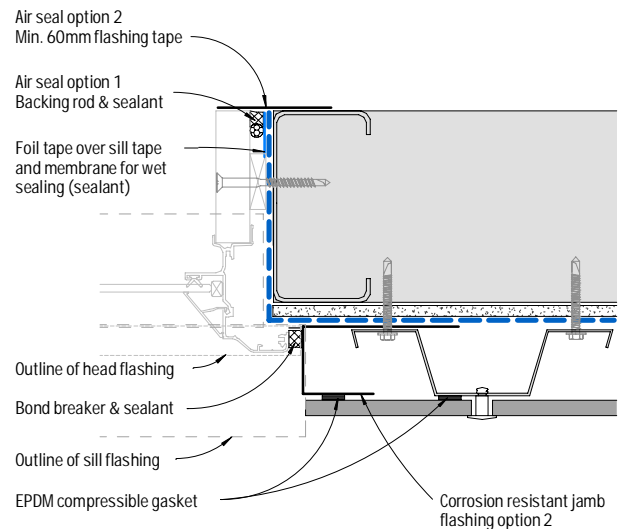


Figure 16: Recessed window jamb - Option 2

Notes

- 1) ONLY sealant compatible with the foil tape should be used. Should any sealant be intended to be used directly on the flashing and/or sill tape it must be confirmed with its manufacturer to ensure compatibility with these tapes in accordance with the relevant standards.
- 2) Corrosion resistant perforated angle shall be of max. thickness of 0.9mm where located between panel and support frame, and be of min. 50% open area with aperture size of 3-5mm.

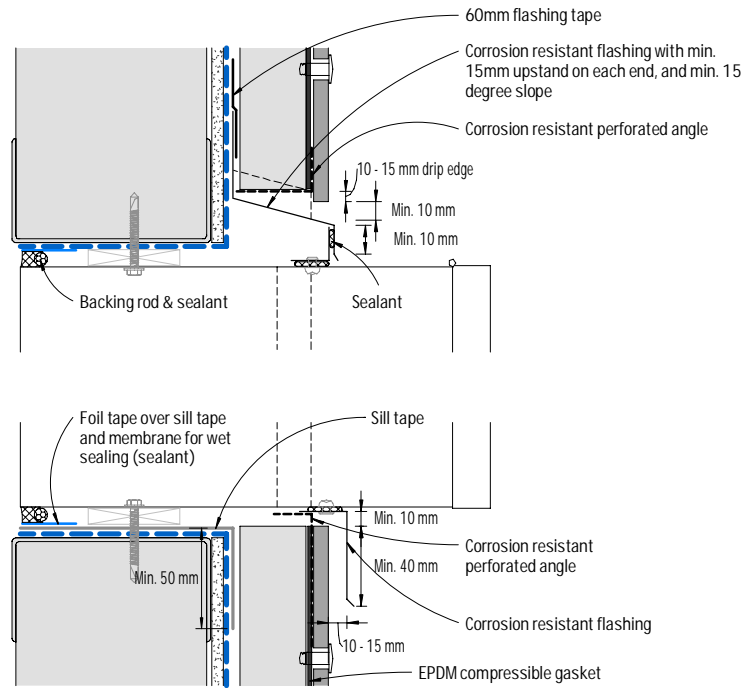


Figure 17: Meter box - Section

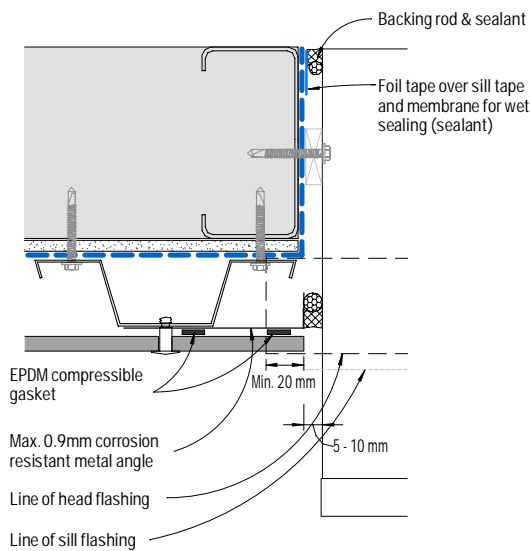


Figure 18: Meter box - Plan view - Detail 1

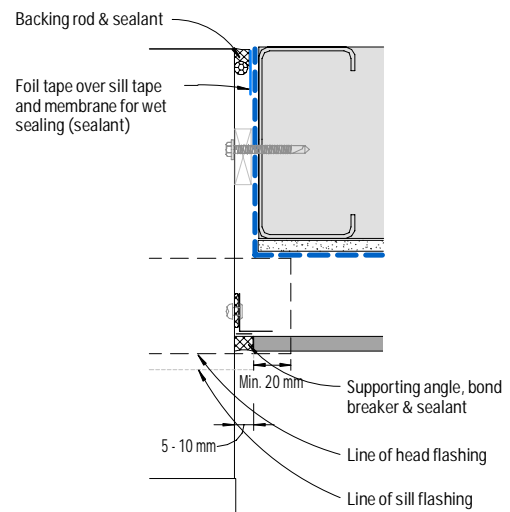


Figure 19: Meter box - Plan view - Detail 2

Notes

- 1) ONLY sealant compatible with the foil tape should be used. Should any sealant be intended to be used directly on the flashing and/or sill tape it must be confirmed with its manufacturer to ensure compatibility with these tapes in accordance with the relevant standards.
- 2) Corrosion resistant perforated angle shall be of max. thickness of 0.9mm where located between panel and support frame, and be of min. 50% open area with aperture size of 3-5mm.

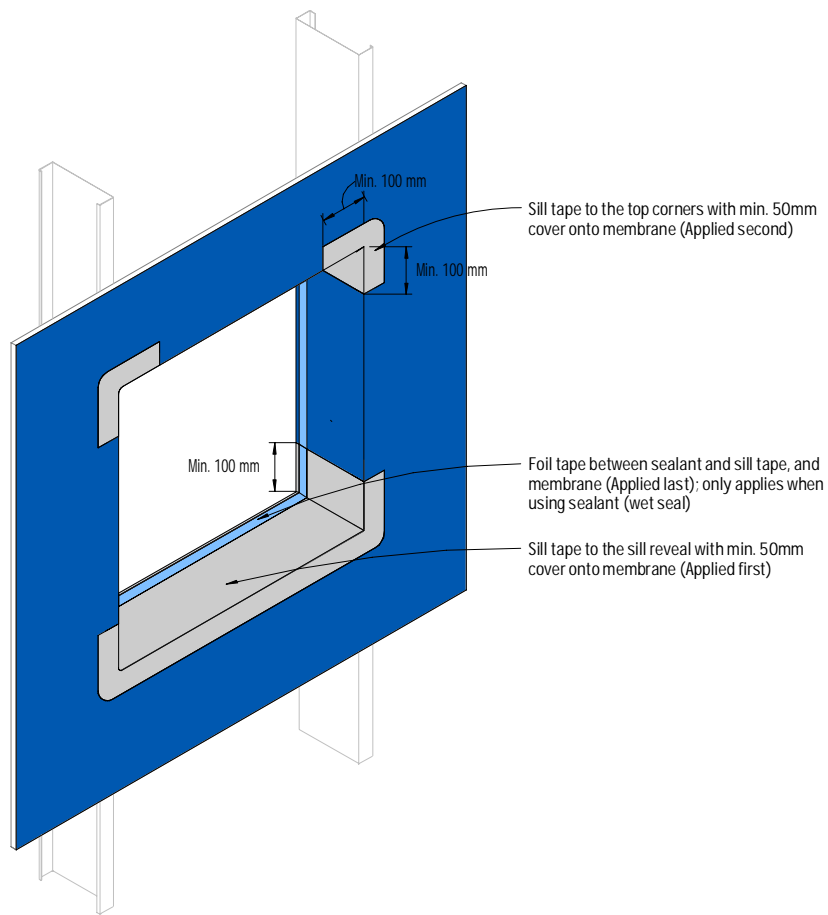


Figure 20: Isometric view of window/meter box opening - Tape application

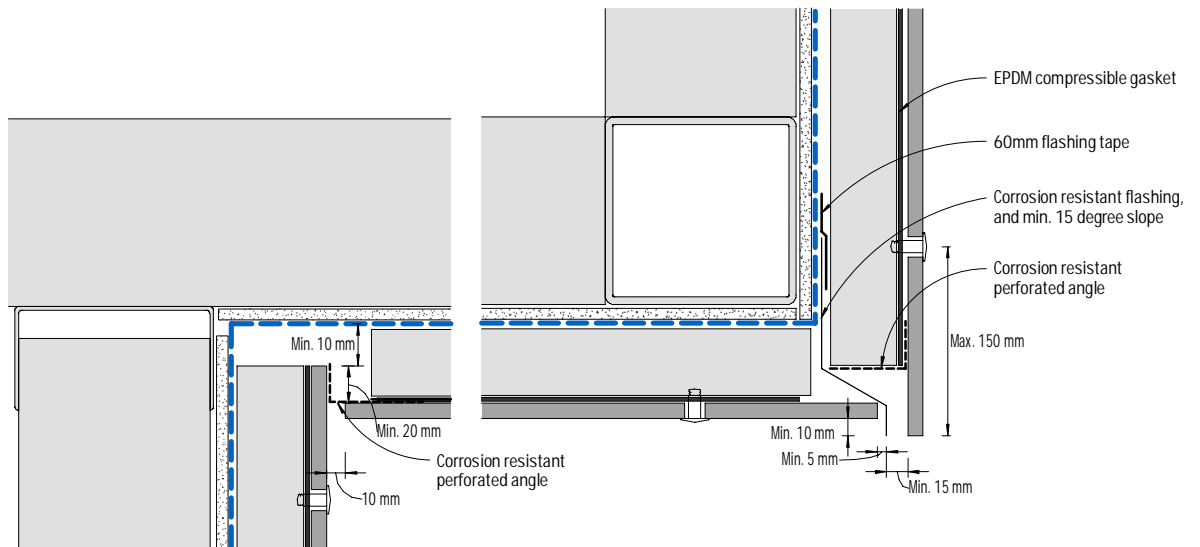


Figure 21: Soffit junction

Notes

- 1) ONLY sealant compatible with the foil tape should be used. Should any sealant be intended to be used directly on the flashing and/or sill tape it must be confirmed with its manufacturer to ensure compatibility with these tapes in accordance with the relevant standards.
- 2) Support frame profiles and Kalsi RigidBacker must NOT be fixed crossing over a control joint.
- 3) Corrosion resistant perforated angle shall be of max. thickness of 0.9mm where located between panel and support frame, and be of min. 50% open area with aperture size of 3-5mm.

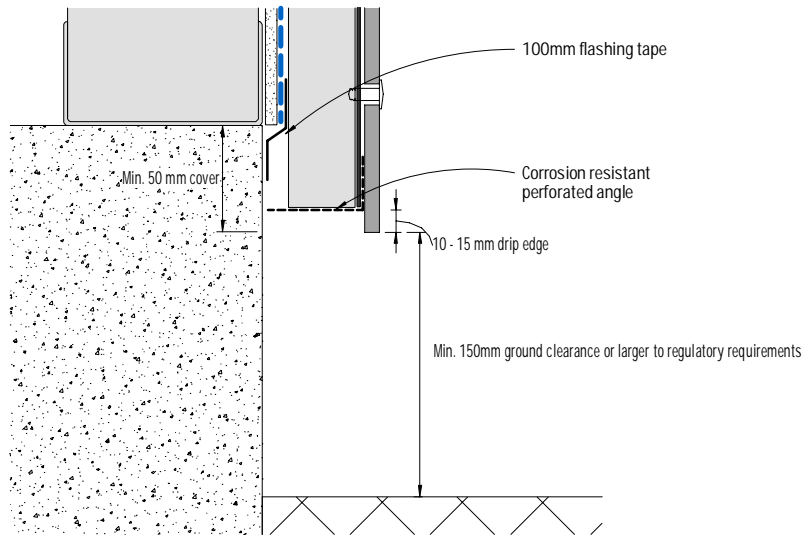


Figure 22: Base detail

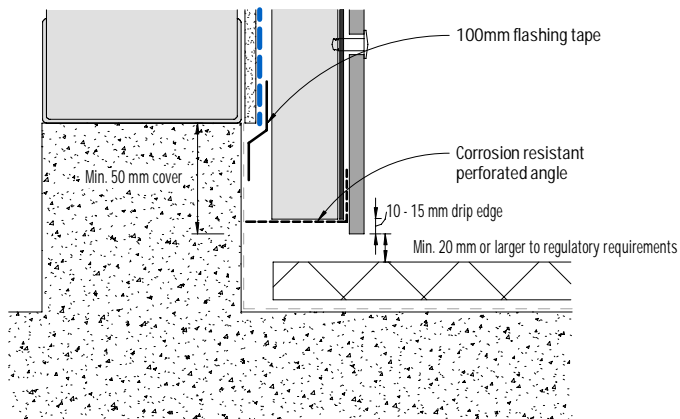


Figure 23: Base detail - Covered area

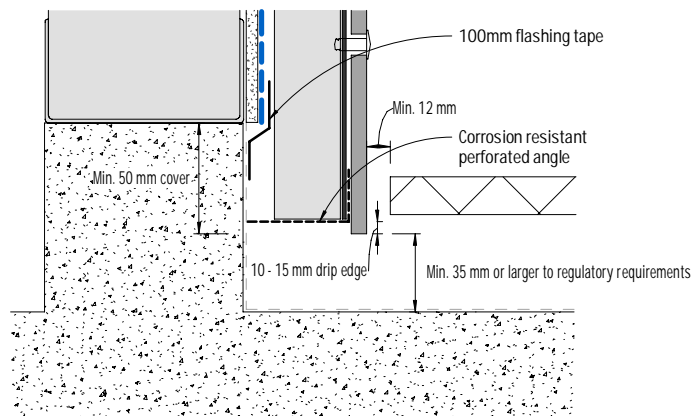


Figure 24: Base detail - Balcony

Notes

1) For **EQUITONE [materia]**, minimum ground clearance is **300mm**.

2) Corrosion resistant perforated angle shall be of max. thickness of 0.9mm where located between panel and support frame, and be of min. 50% open area with aperture size of 3-5mm.



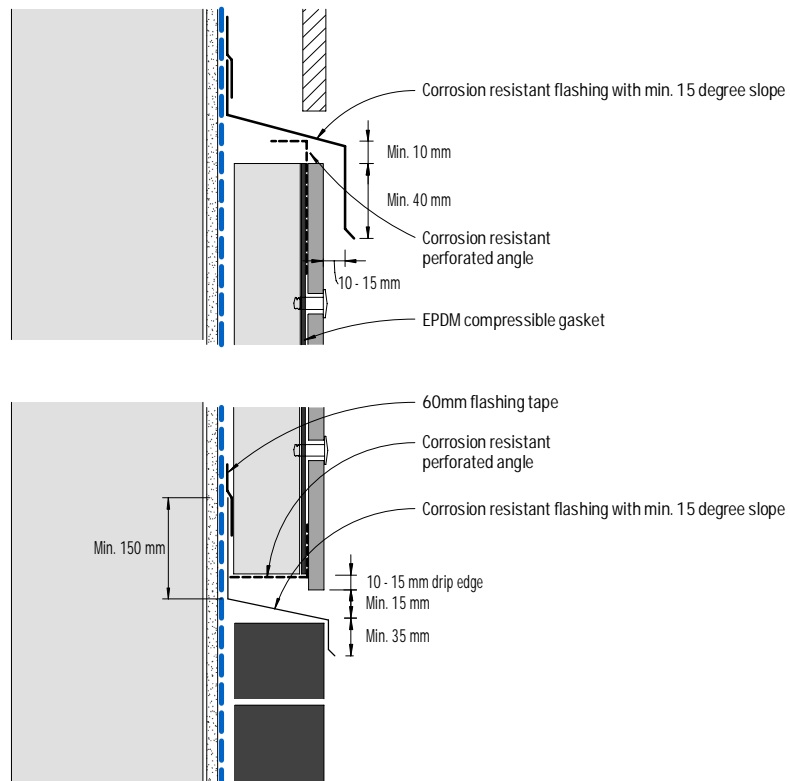


Figure 25: Junction with other materials - flush detail

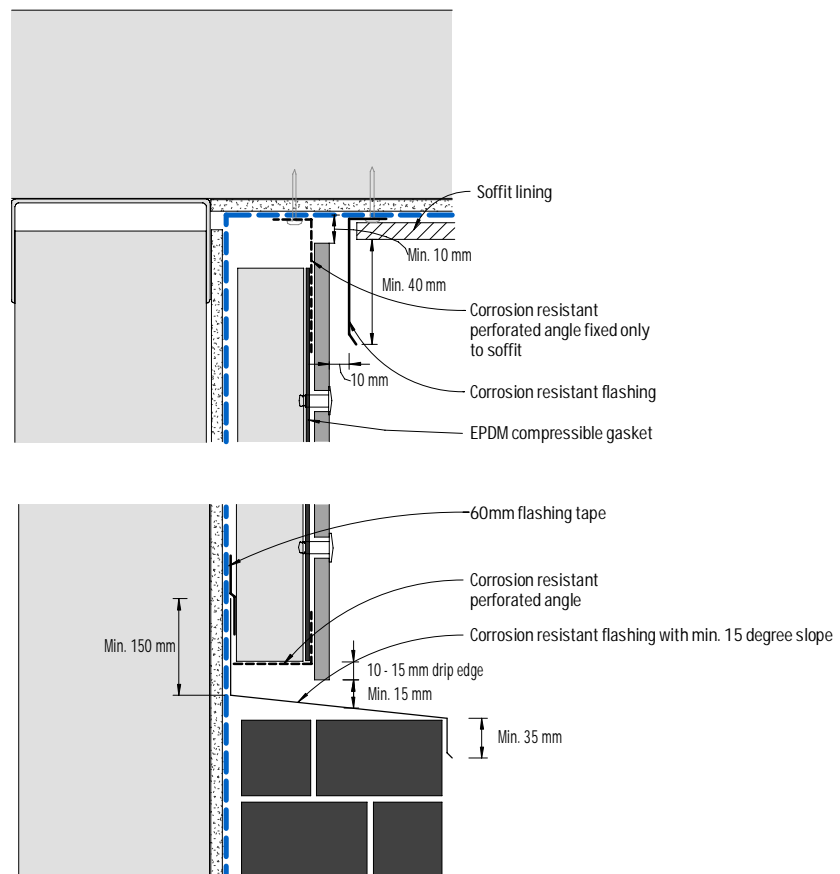


Figure 26: Junction with other materials, eaves or the like - recessed detail

Notes

- 1) Support frame profiles and Kalsi RigidBacker must NOT be fixed crossing over a control joint.
- 2) Corrosion resistant perforated angle shall be of max. thickness of 0.9mm where located between panel and support frame, and be of min. 50% open area with aperture size of 3-5mm.

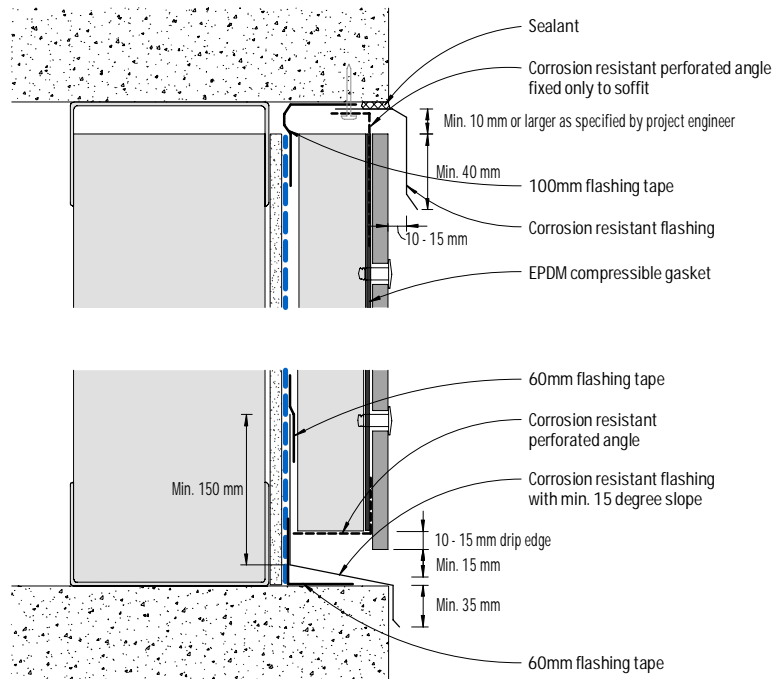


Figure 27: Exposed concrete slab or beam - Cladding flush

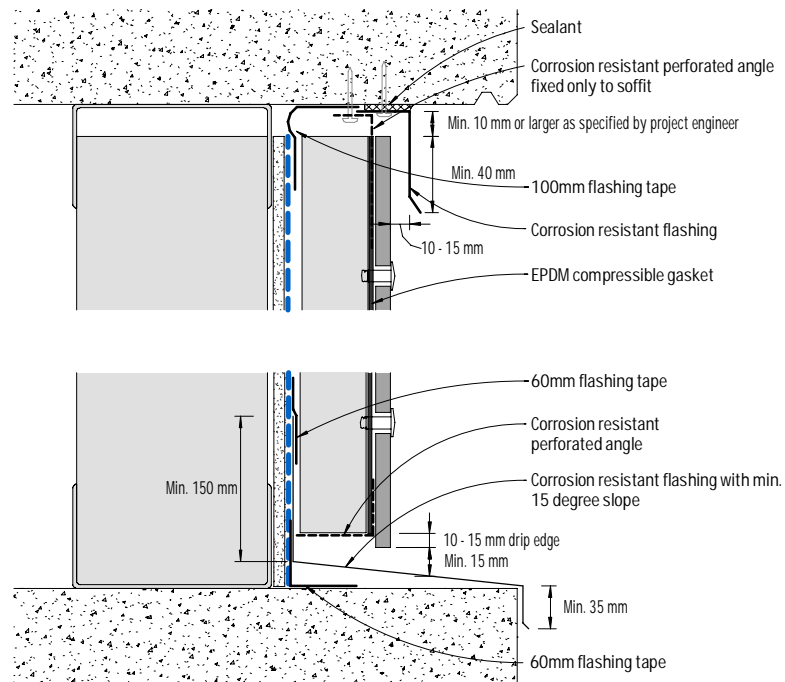


Figure 28: Exposed concrete slab or beam - Cladding recessed

Notes

- 1) Support frame profiles and Kalsi RigidBacker must NOT be fixed crossing over a control joint.
- 2) Corrosion resistant perforated angle shall be of max. thickness of 0.9mm where located between panel and support frame, and be of min. 50% open area with aperture size of 3-5mm.

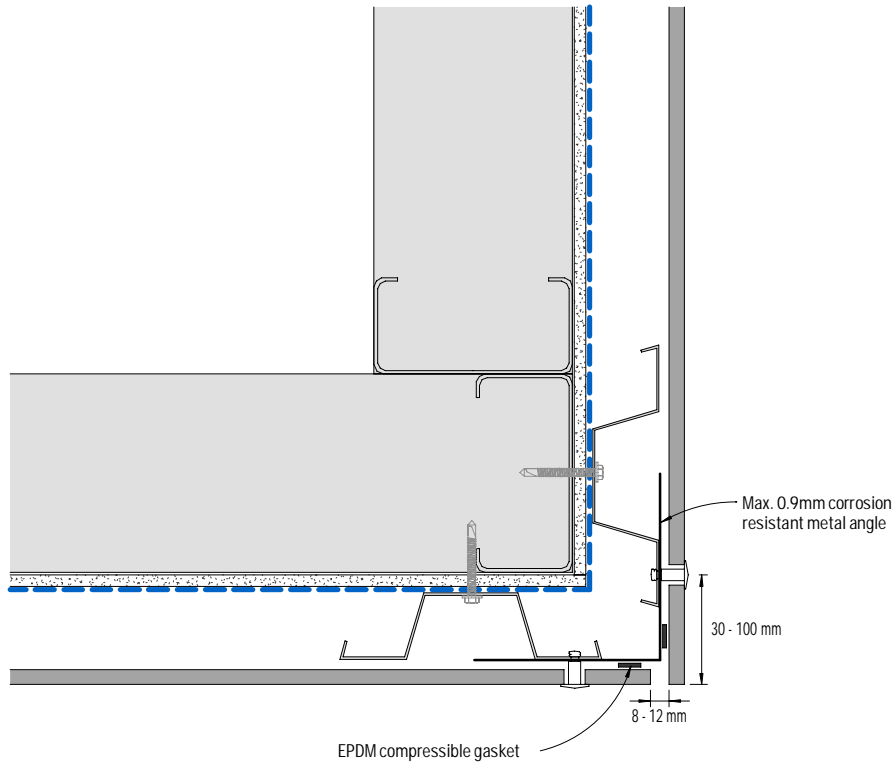


Figure 29: External corner - Detail 1

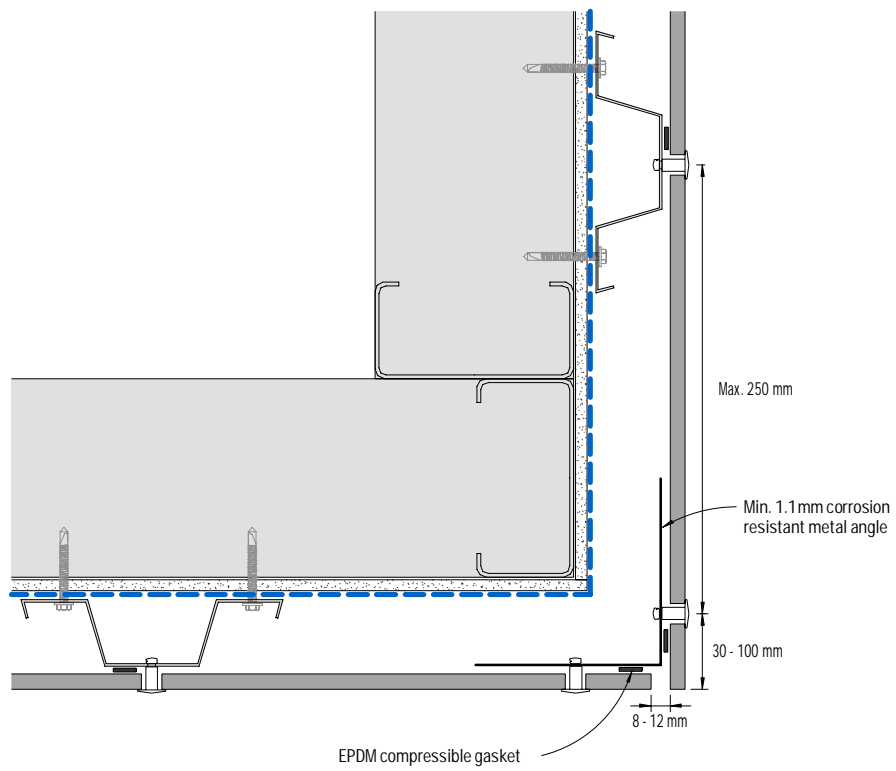


Figure 30: External corner - Detail 2

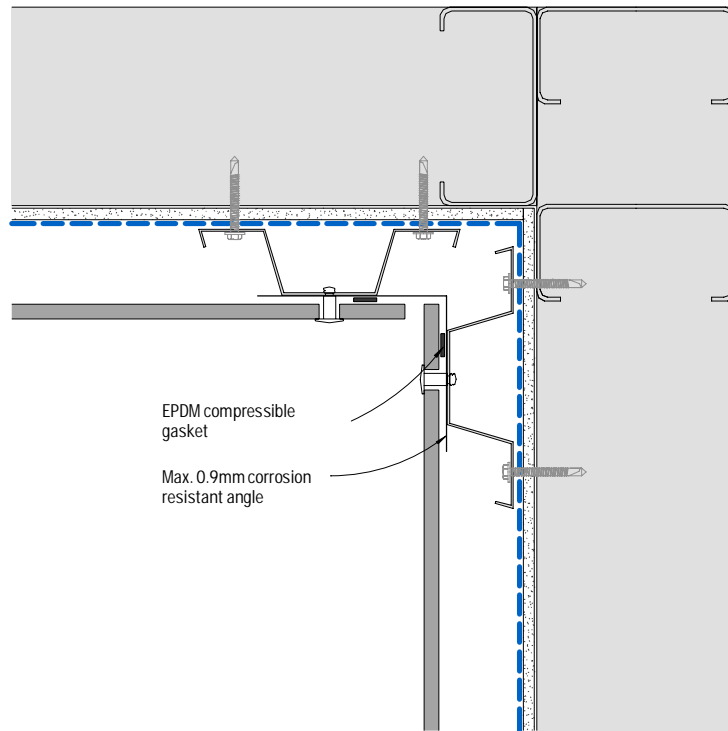


Figure 31: Internal corner

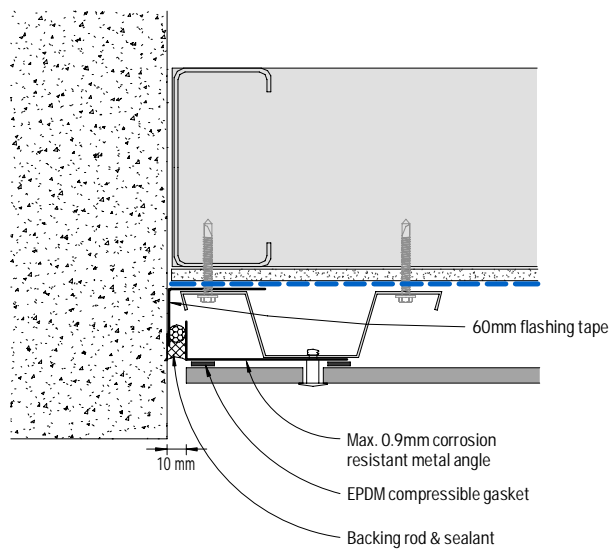


Figure 32: Abutment

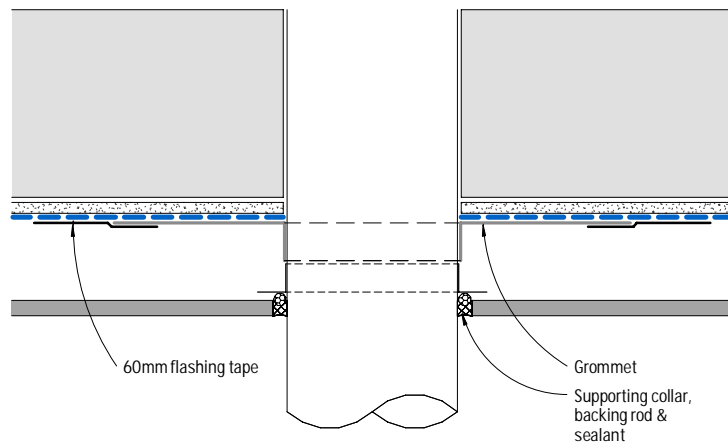


Figure 33: Pipe penetration - Plan view

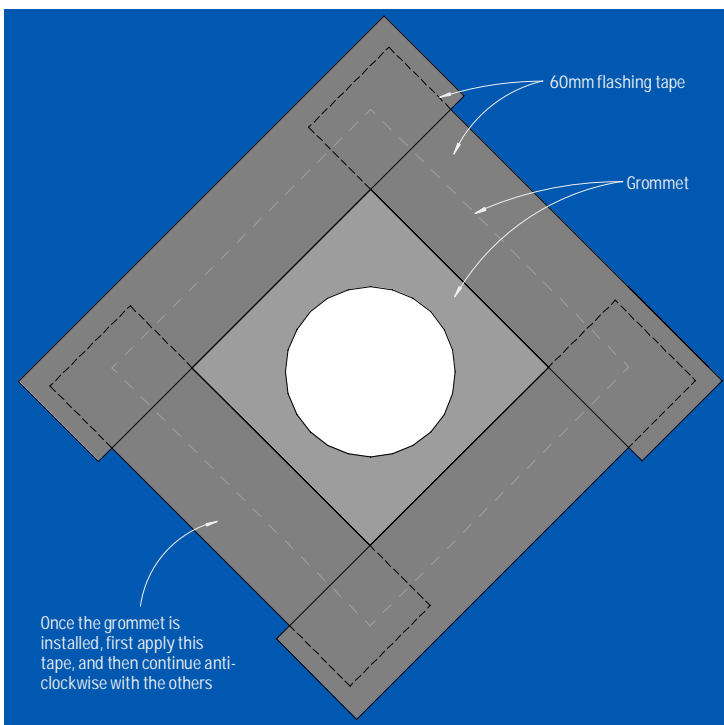


Figure 34: Pipe penetration - Elevation

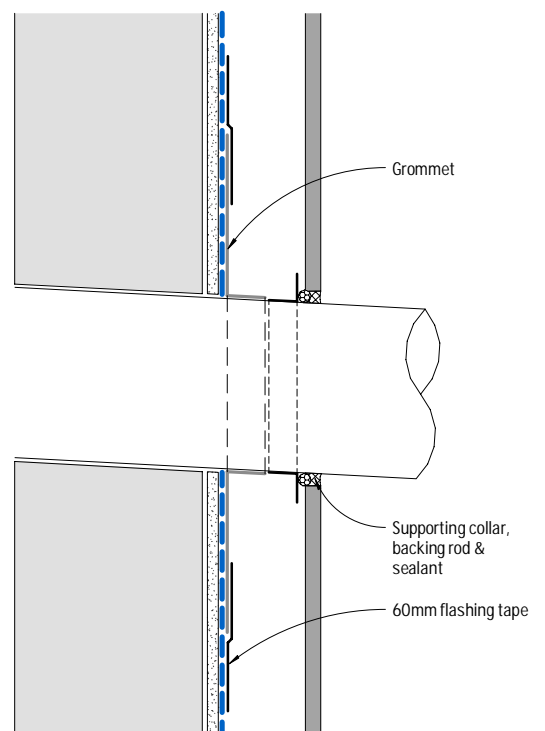


Figure 35: Pipe penetration - Section

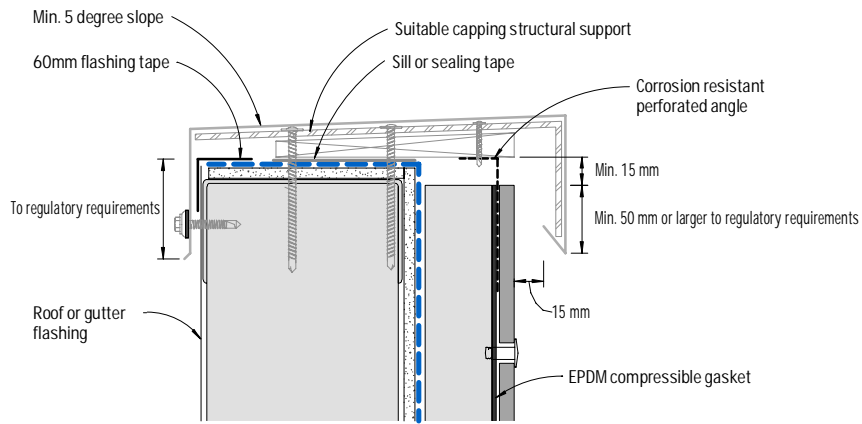


Figure 36: Capping - Detail 1

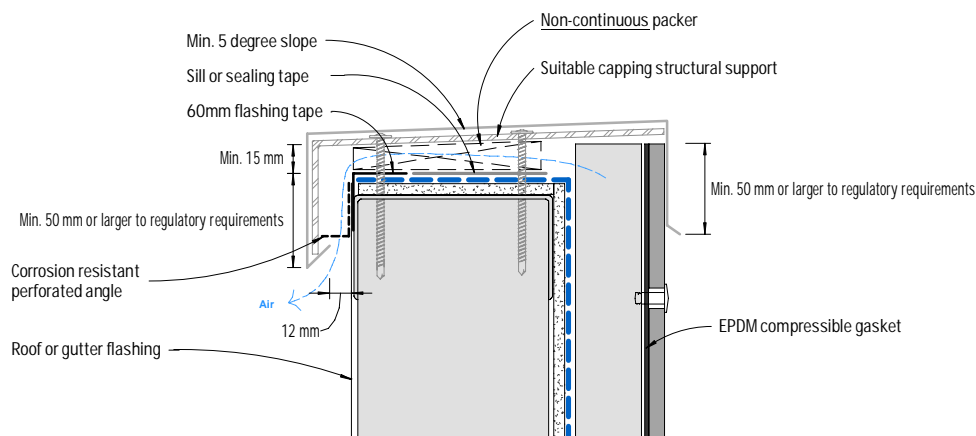


Figure 37: Capping - Detail 2  
(Not suitable for EQUITONE [material])

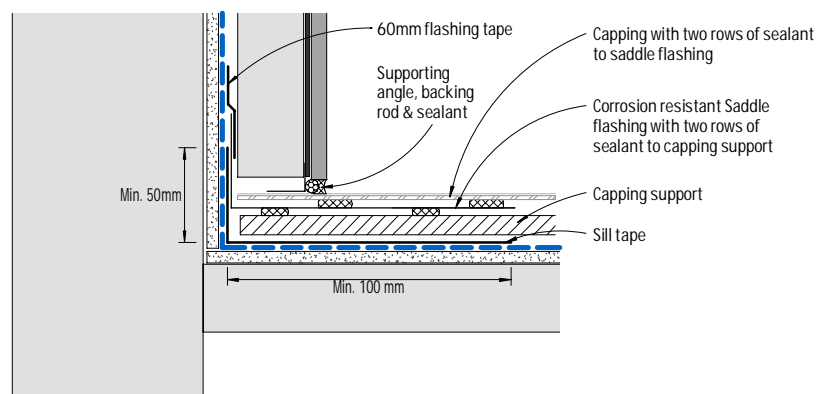


Figure 38: Parapet junction - Section

Notes

- 1) For EQUITONE [material], the following capping dimensions should be followed.
  - A minimum 20mm between panel face and rear of the capping
  - A minimum 50mm overlap with the panel for building up to 8m or larger to regulatory requirements
  - A minimum 80mm overlap with the panel for building up to 20m or larger to regulatory requirements
  - A minimum 100mm overlap with the panel for building over 20m or larger to regulatory requirements
- 2) Any face fixings of capping shall be through an over sized hole (by min 5mm) in the capping as well as the panel.
- 3) Corrosion resistant perforated angle shall be of max. thickness of 0.9mm where located between panel and support frame, and be of min. 50% open area with aperture size of 3-5mm.
- 4) Capping shall be designed and engineered accordingly to provide adequate allowance for ventilation as shown in Figures 36 & 37.

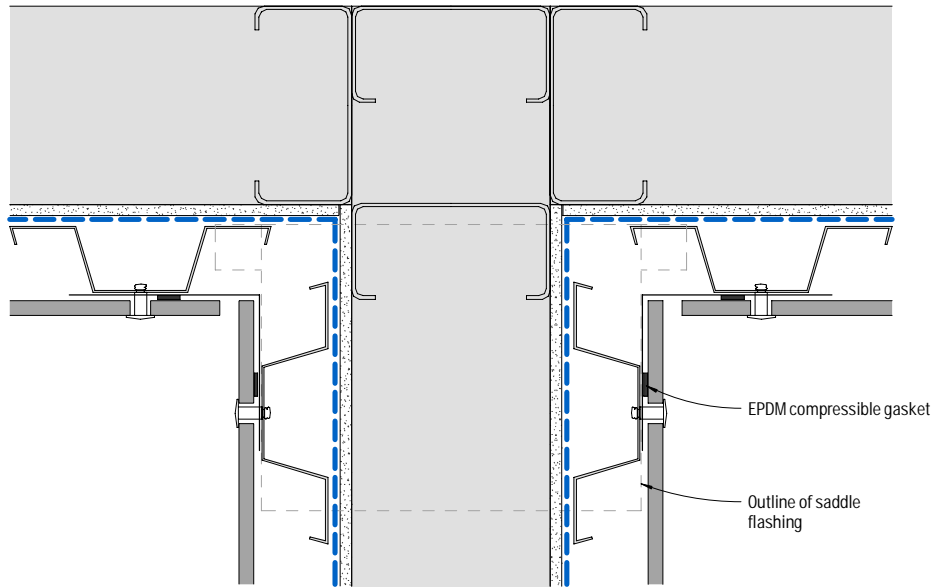


Figure 39: Parapet junction - Plan view

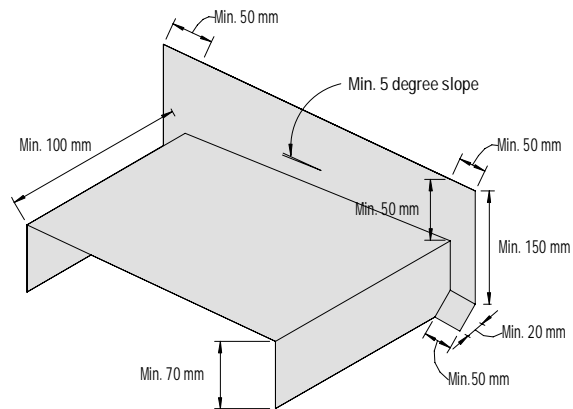
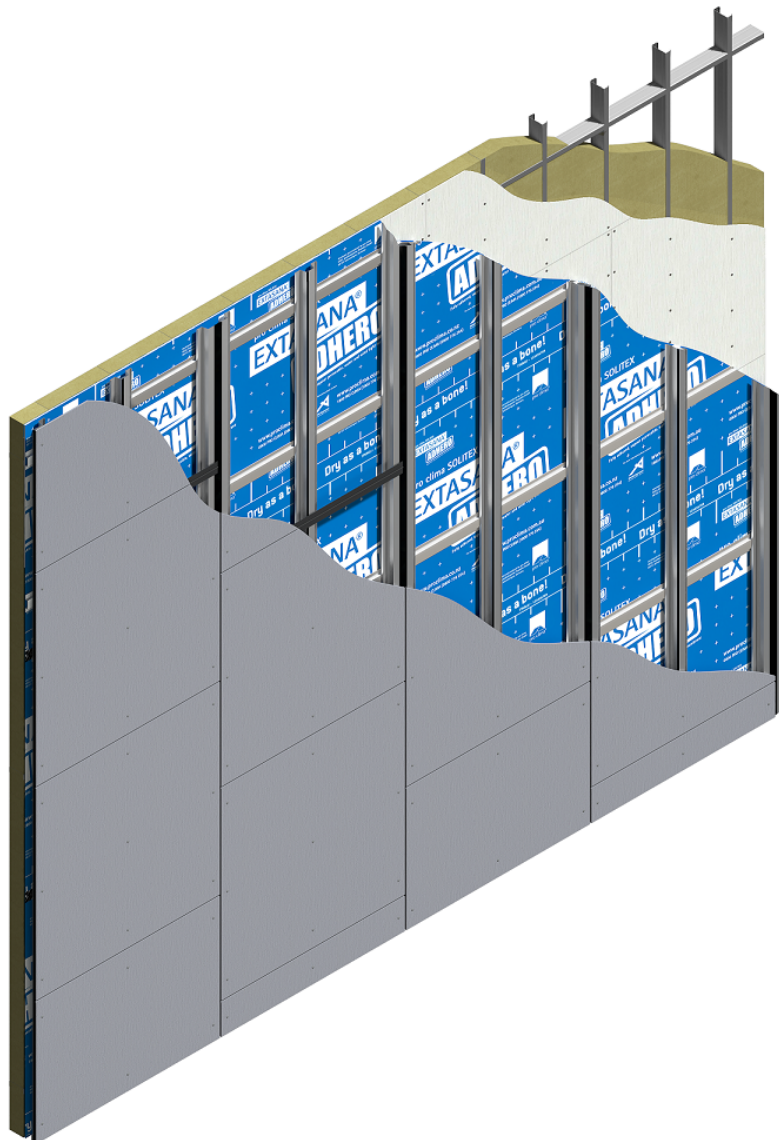


Figure 40: Corrosion resistant saddle flashing

# EQUITONE system



rigid air barrier  
double layer top hat construction



# Support frame

EQUITONE may be fixed to double layer metal top hat construction where the structure is not designed to directly accommodate vertical top hat profiles. In this type of construction, first a layer of horizontal top hat profiles is installed at the required spacing, followed by vertical top hat profiles to which EQUITONE is fixed.

Metal top hats shall be of adequate corrosion resistance required for the project.

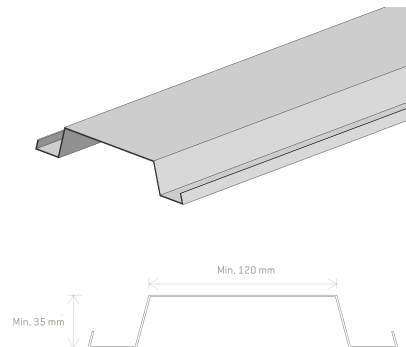
Maximum deflection of support framing must be limited to  $\text{Span}/250$ .

Structure and support frame shall be designed to relevant standards including, but not limited to, the following:

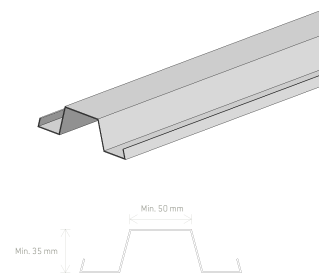
- AS/NZS 4600 – Cold-formed steel structures
- NZS 3404 – Steel structures
- NZS 3604 – Timber framed buildings

## Top hat profiles

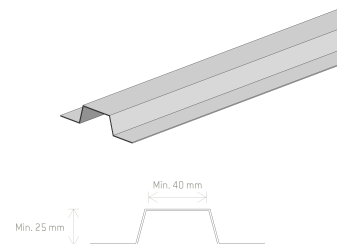
120 x 35 mm, minimum 1.15mm BMT  
Installed vertically on vertical joints as specified on the construction details



50 x 35 mm, minimum 1.15mm BMT  
Installed vertically as specified on the construction details



40 x 25 mm, minimum 1.15mm BMT  
Installed horizontally to accommodate vertical top hat profiles



## Notes

Support frame and its connection to substructure shall be designed by project engineer in accordance with the relevant standards. Refer to UNI Rivet span tables for maximum vertical and horizontal spacing of panel fixings.

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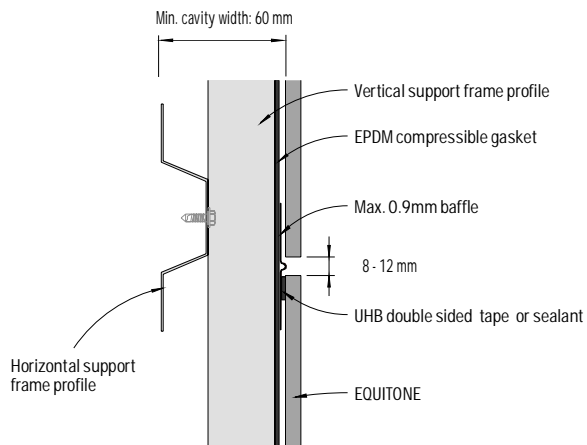


Figure 1: Baffled horizontal joint  
(Not suitable for EQUITONE [material])

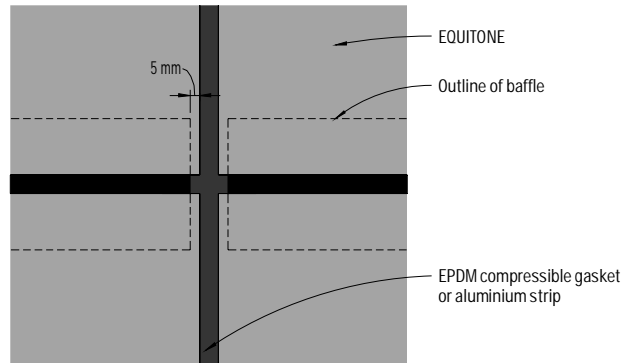


Figure 2: Baffled horizontal joint  
junction with vertical joint - Elevation

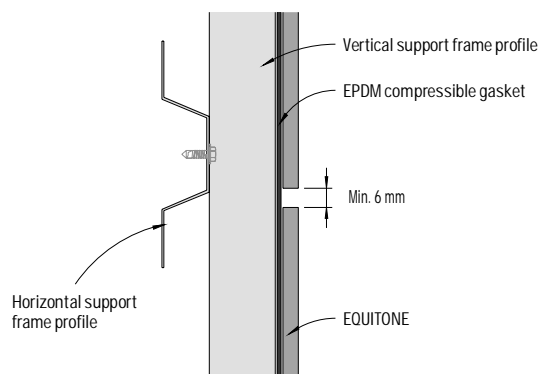


Figure 3: Open horizontal joint

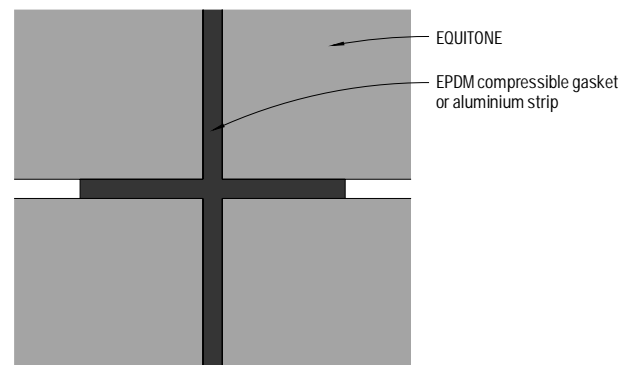


Figure 4: Open horizontal joint junction  
with vertical joint - Elevation

#### Notes

- 1) Horizontal open joint detail (Figure 3 & 4) requires project engineer's evaluation and approval, and the selection of appropriate UV resistant weather resistive barrier (membrane).
- 2) In Figure 4, visible part of the support frame profiles and weather barrier may be coated black with suitable paint.
- 3) Depending on the project requirements max. 0.9mm (powder) coated aluminium strip may be used in lieu of EPDM strip on vertical joints for higher UV resistance.
- 4) The length of support frame profiles must NOT exceed 3,150mm.

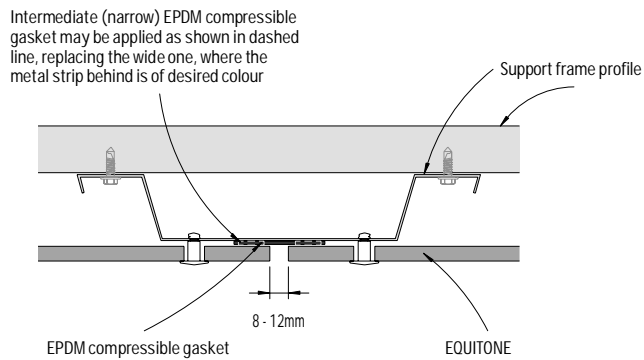


Figure 5: Vertical joint - Detail 1

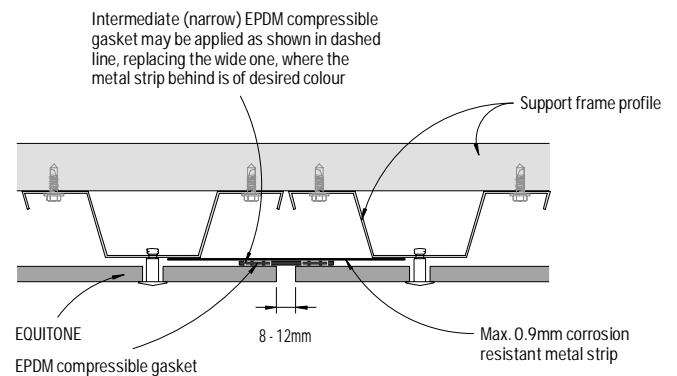


Figure 6: Vertical joint - Detail 2

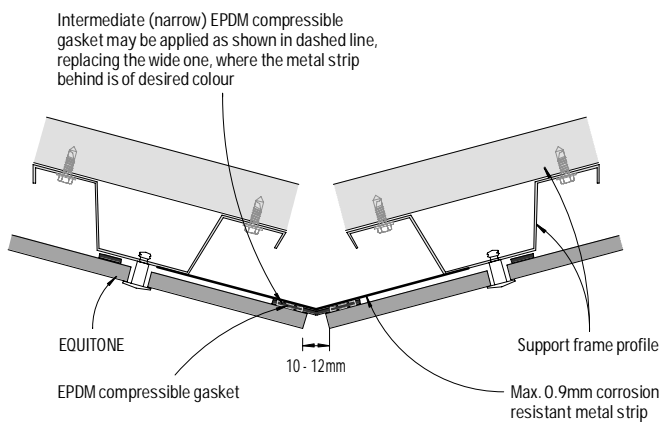


Figure 7: Vertical joint - Detail 3

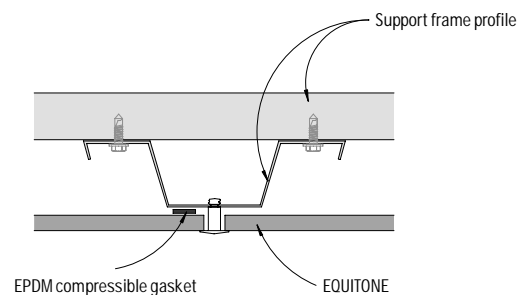


Figure 8: Intermediate panel fixings connection

Notes

1) Depending on the project requirements max. 0.9mm (powder) coated aluminium strip may be used in lieu of EPDM strip on vertical joints for higher UV resistance.

2) In Figure 6 & 7, the metal strip should be fixed ONLY to one of the battens (either left or right) where allowance for horizontal and/or vertical movement of the cladding frame is required.

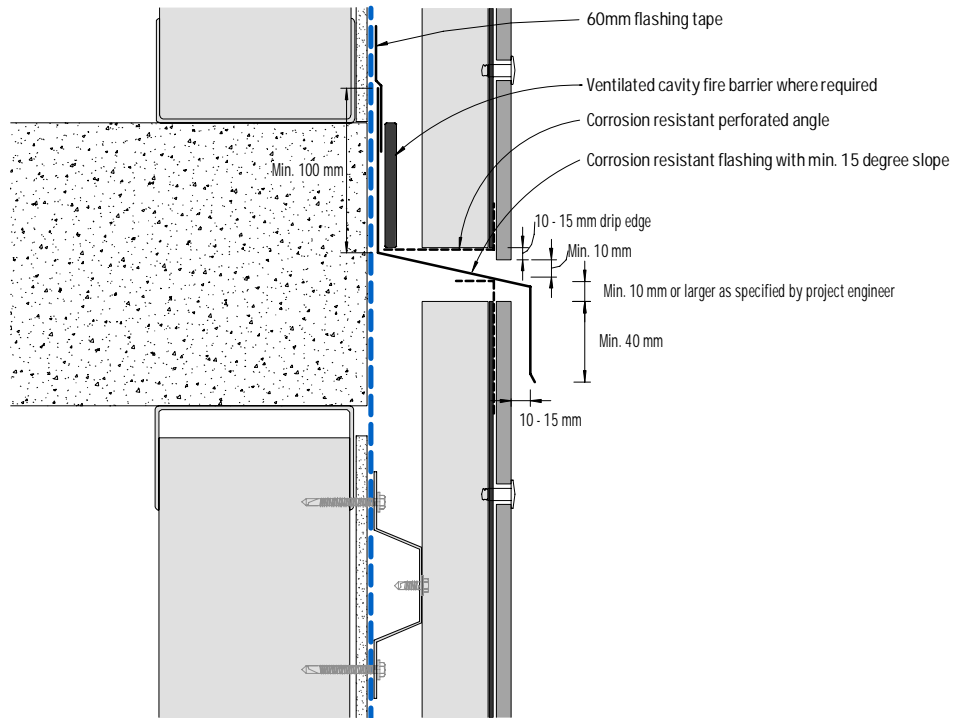


Figure 9: Horizontal control joint

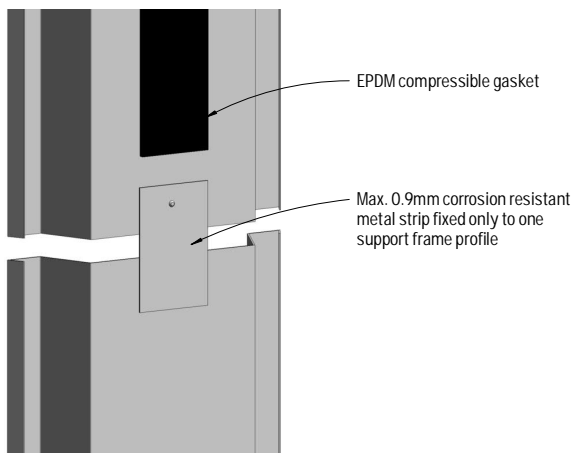


Figure 10: EPDM gasket support over control joint or the like

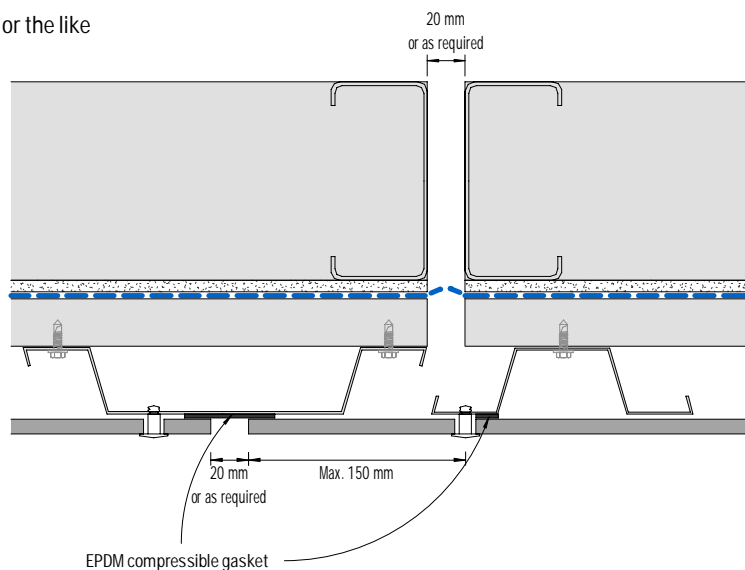


Figure 11: Vertical control joint

Notes

- 1) Support frame profiles and Kalsi RigidBacker must NOT be fixed crossing over a control joint.
- 2) Allowance for movement at the location of any control joint must be made in the cladding and its support frame design and installation. Panel must NOT be fixed bridging over any control joint.
- 3) Corrosion resistant perforated angle shall be of max. thickness of 0.9mm where located between panel and support frame, and be of min. 50% open area with aperture size of 3-5mm.

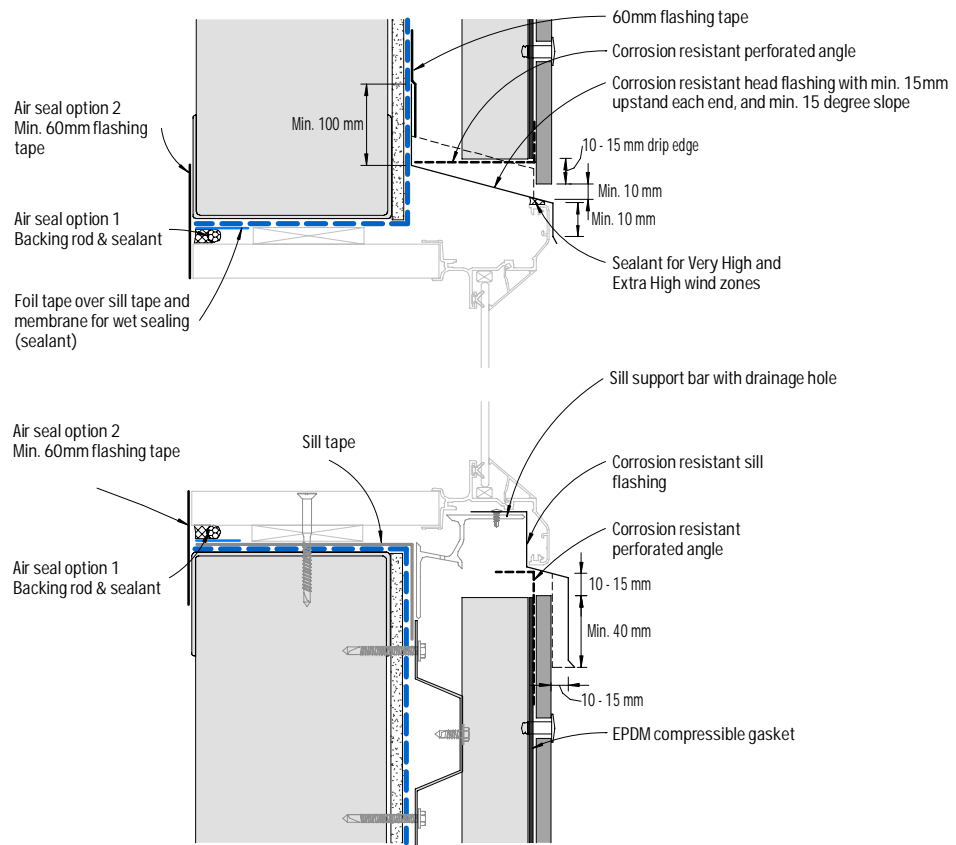


Figure 12: Flush window - Head and sill

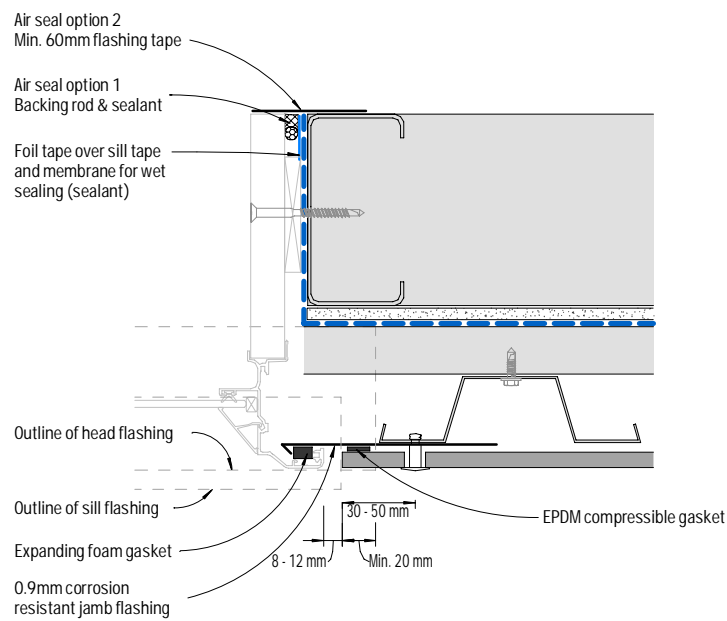


Figure 13: Flush window - Jamb

Notes

- 1) ONLY sealant compatible with the foil tape should be used. Should any sealant be intended to be used directly on the flashing and/or sill tape it must be confirmed with its manufacturer to ensure compatibility with these tapes in accordance with the relevant standards.
- 2) Corrosion resistant perforated angle shall be of max. thickness of 0.9mm where located between panel and support frame, and be of min. 50% open area with aperture size of 3-5mm.

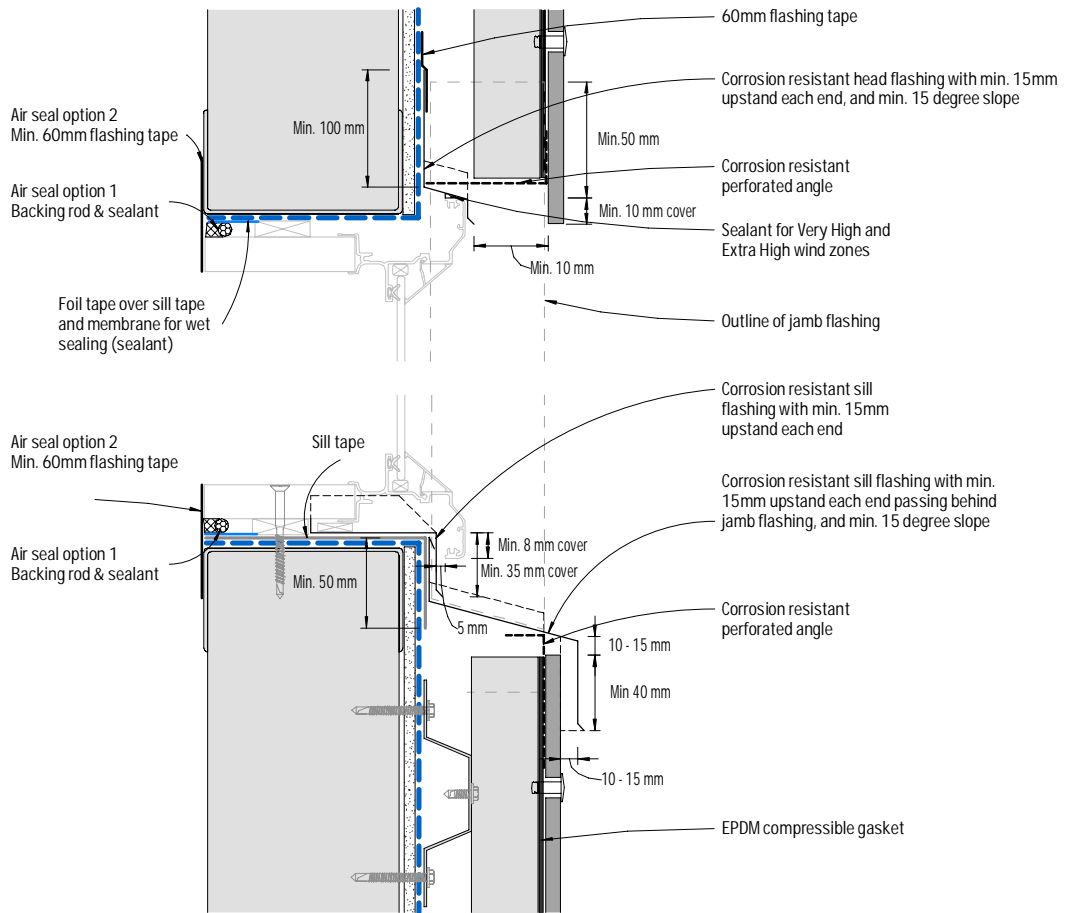


Figure 14: Recessed window - Head and sill

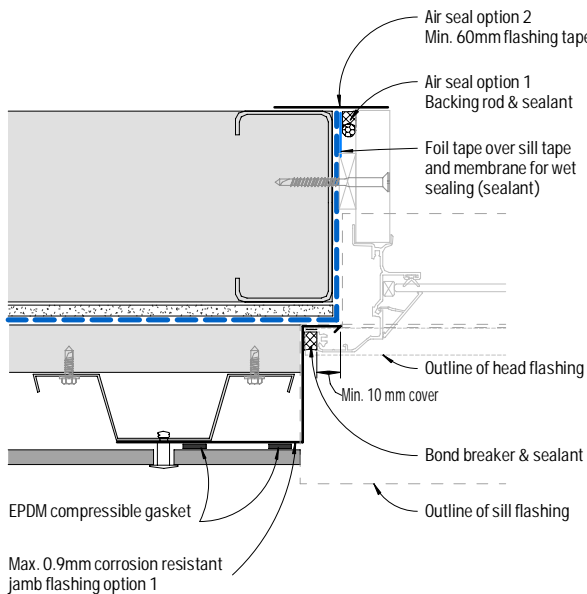


Figure 15: Recessed window jamb - Option 1

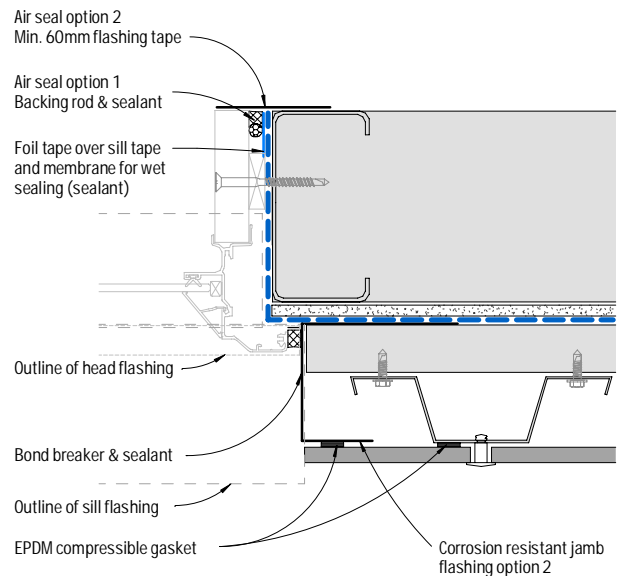


Figure 16: Recessed window jamb - Option 2

Notes

- 1) ONLY sealant compatible with the foil tape should be used. Should any sealant be intended to be used directly on the flashing and/or sill tape it must be confirmed with its manufacturer to ensure compatibility with these tapes in accordance with the relevant standards.
- 2) Corrosion resistant perforated angle shall be of max. thickness of 0.9mm where located between panel and support frame, and be of min. 50% open area with aperture size of 3-5mm.

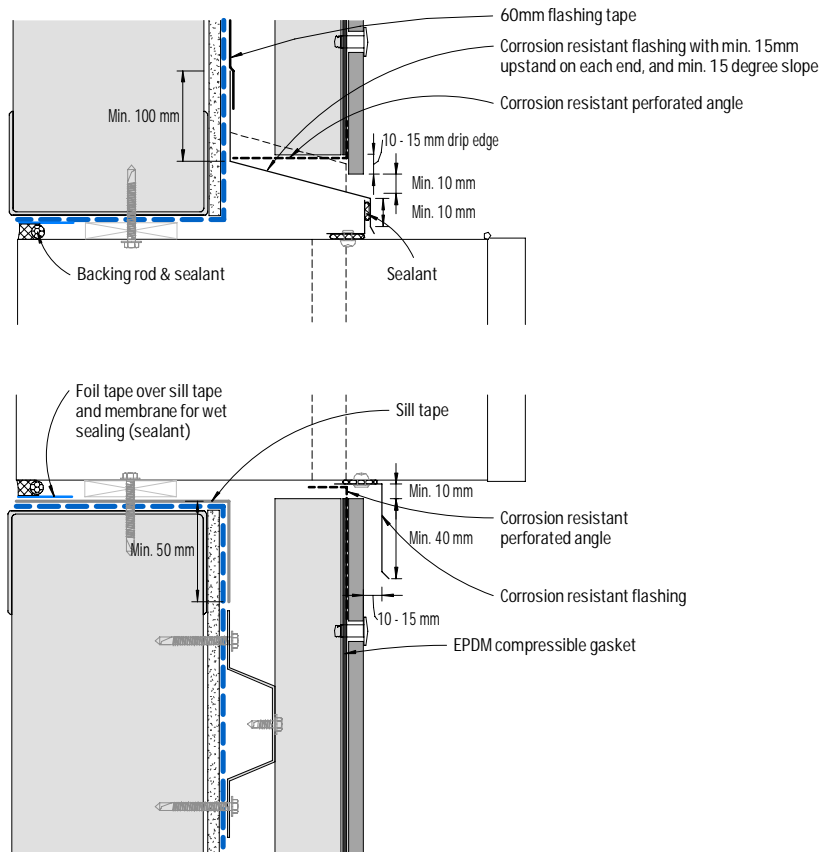


Figure 17: Meter box - Section

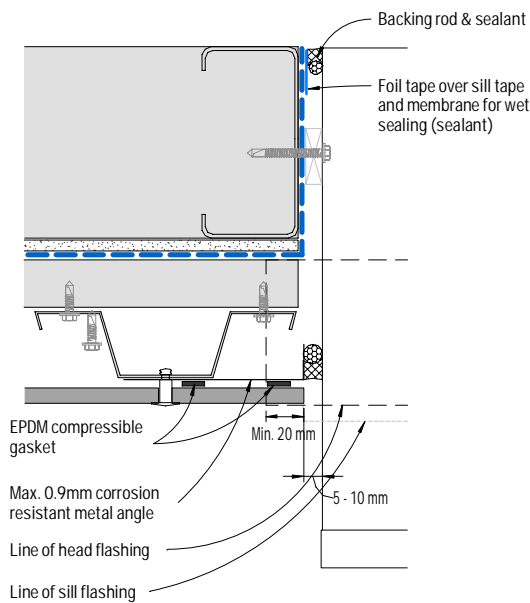


Figure 18: Meter box - Plan view - Detail 1

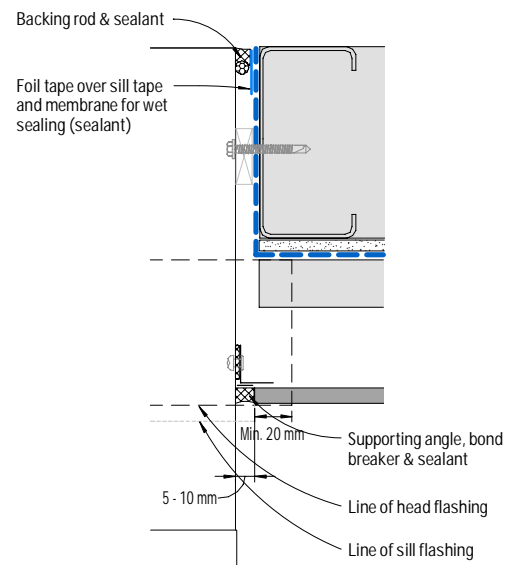


Figure 19: Meter box - Plan view - Detail 2

Notes

- 1) ONLY sealant compatible with the foil tape should be used. Should any sealant be intended to be used directly on the flashing and/or sill tape it must be confirmed with its manufacturer to ensure compatibility with these tapes in accordance with the relevant standards.
- 2) Corrosion resistant perforated angle shall be of max. thickness of 0.9mm where located between panel and support frame, and be of min. 50% open area with aperture size of 3-5mm.



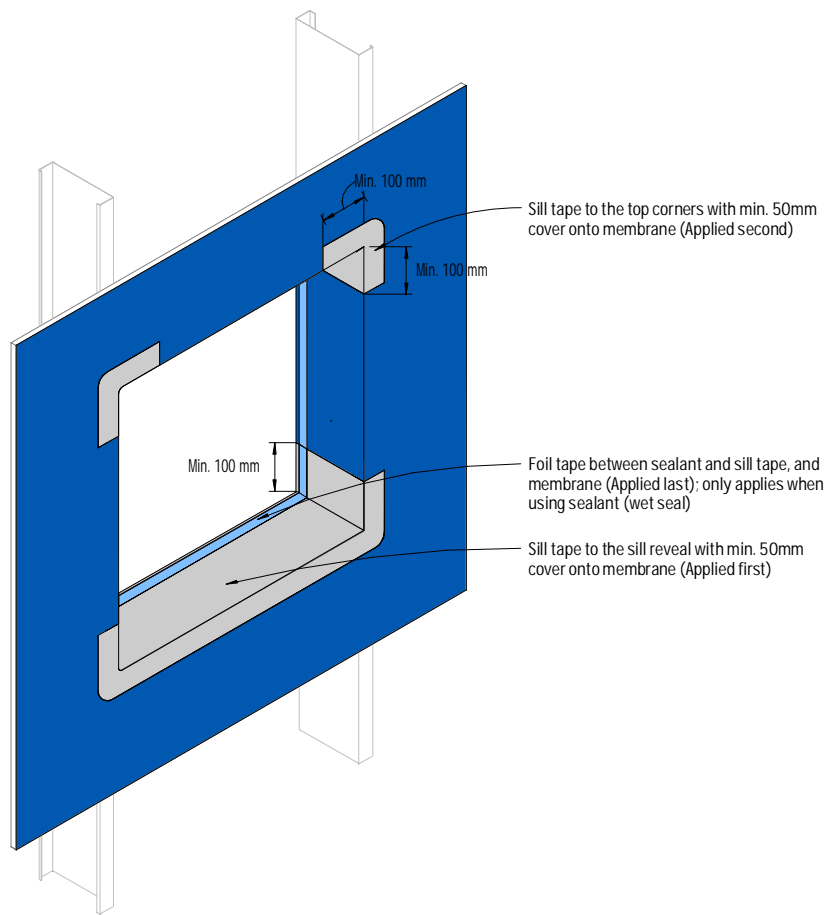


Figure 20: Isometric view of window/meter box opening - Tape application

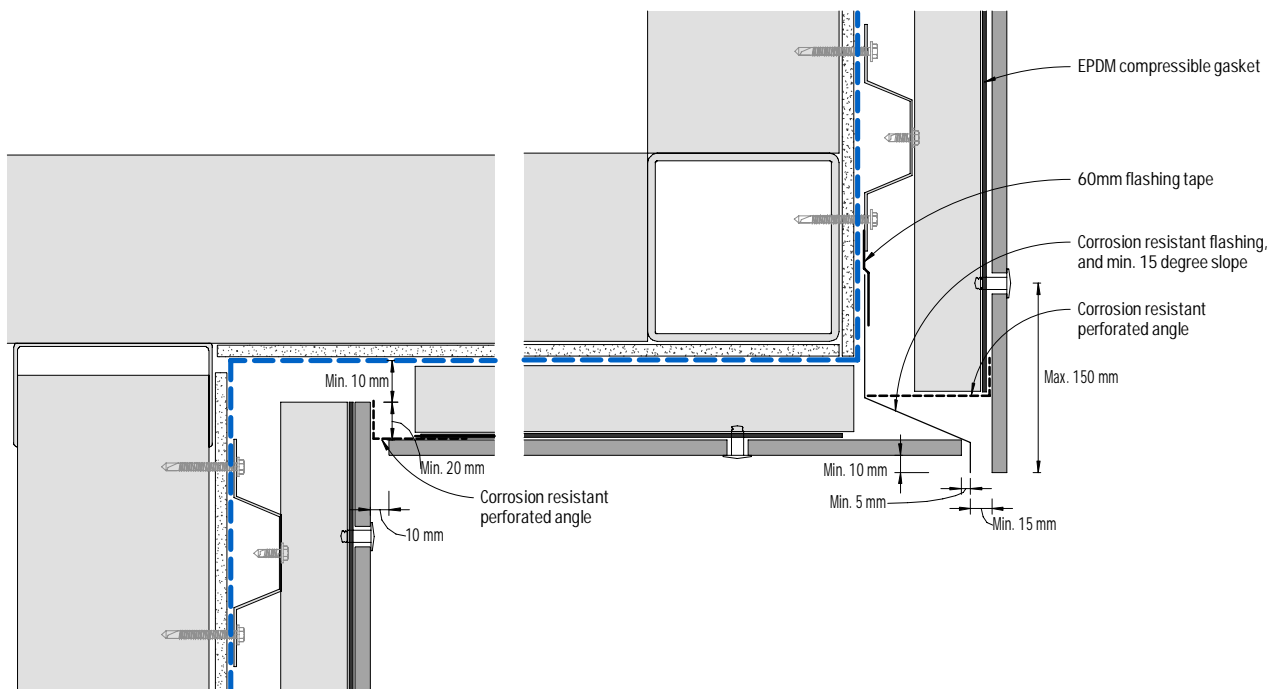


Figure 21: Soffit junction

Notes

- 1) ONLY sealant compatible with the foil tape should be used. Should any sealant be intended to be used directly on the flashing and/or sill tape it must be confirmed with its manufacturer to ensure compatibility with these tapes in accordance with the relevant standards.
- 2) Support frame profiles and Kalsi RigidBacker must NOT be fixed crossing over a control joint.
- 3) Corrosion resistant perforated angle shall be of max. thickness of 0.9mm where located between panel and support frame, and be of min. 50% open area with aperture size of 3-5mm.

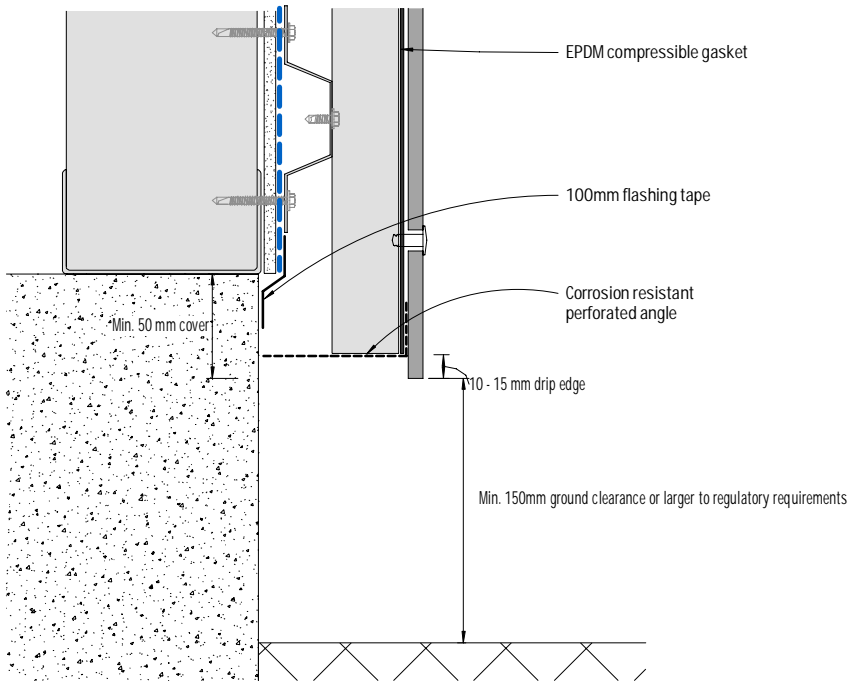


Figure 22: Base detail

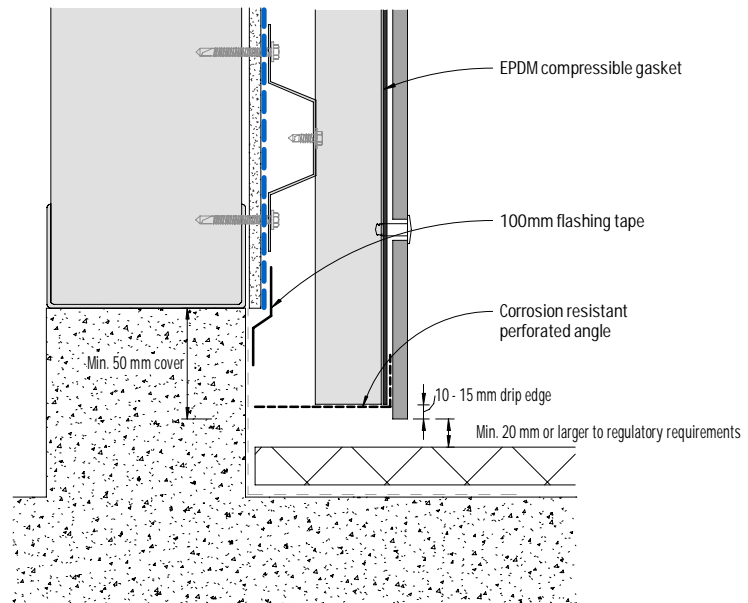


Figure 23: Base detail - Covered area

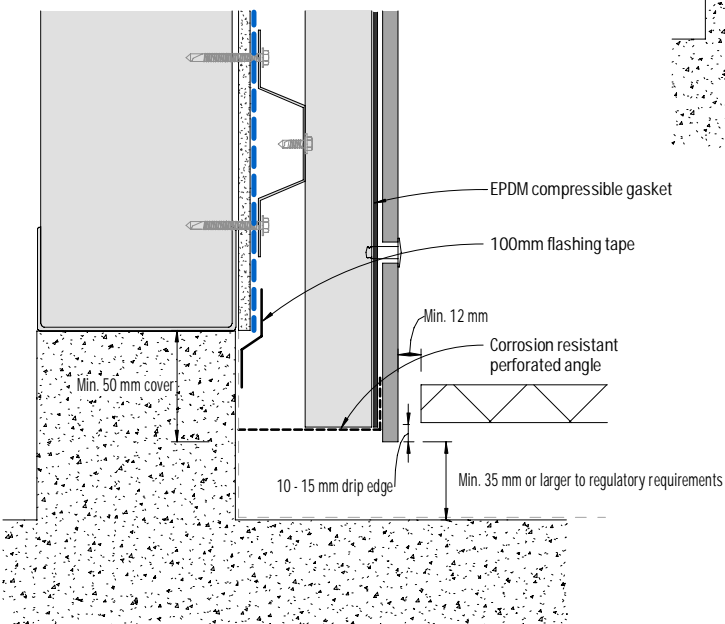


Figure 24: Base detail - Balcony

Notes

- 1) For **EQUITONE [materia]**, minimum ground clearance is **300mm**.
- 2) Corrosion resistant perforated angle shall be of max. thickness of 0.9mm where located between panel and support frame, and be of min. 50% open area with aperture size of 3-5mm.

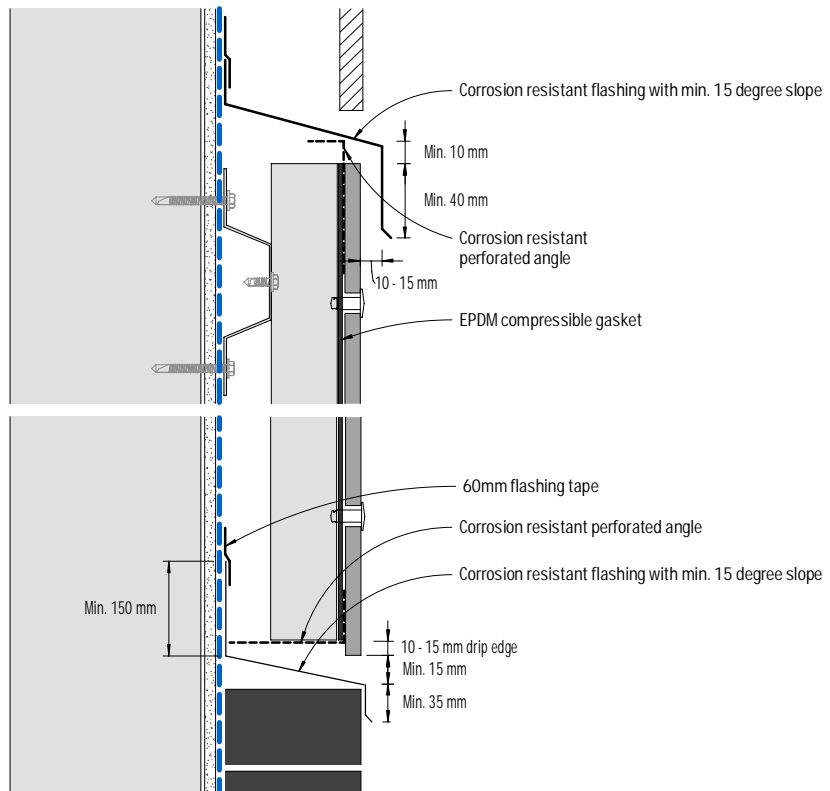


Figure 25: Junction with other materials - flush detail

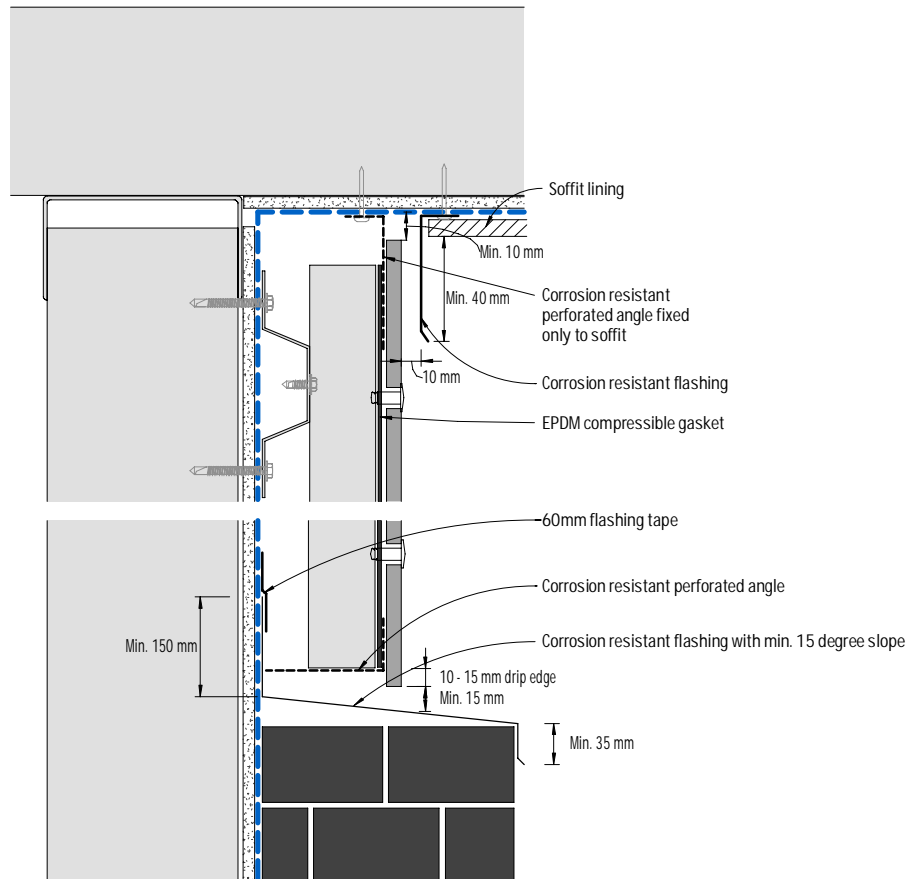


Figure 26: Junction with other materials, eaves or the like - recessed detail

Notes

- 1) Support frame profiles and Kalsi RigidBacker must NOT be fixed crossing over a control joint.
- 2) Corrosion resistant perforated angle shall be of max. thickness of 0.9mm where located between panel and support frame, and be of min. 50% open area with aperture size of 3-5mm.

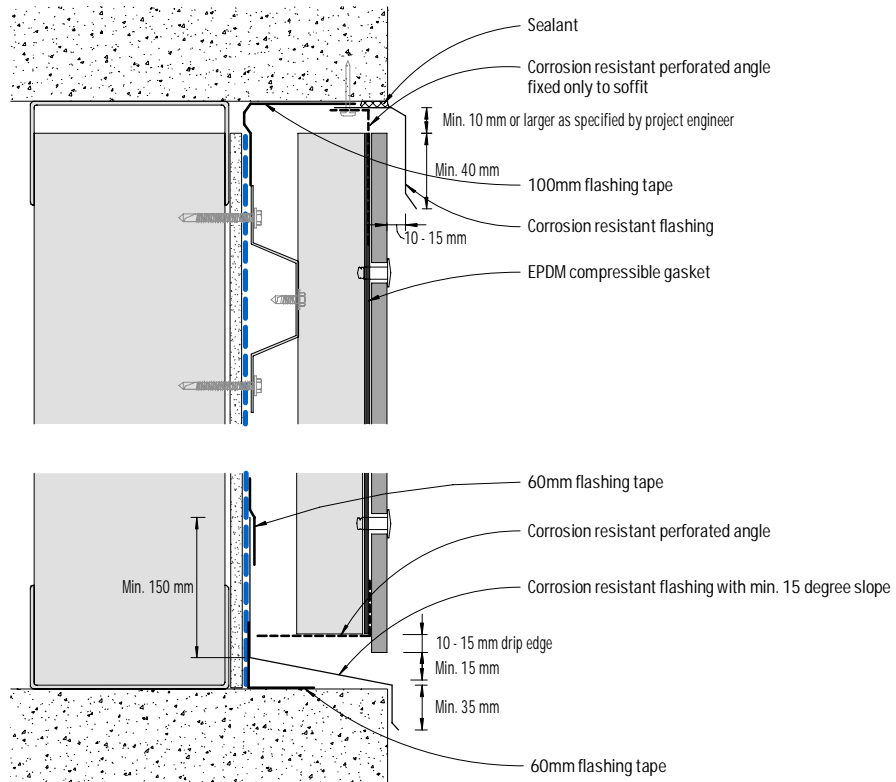


Figure 27: Exposed concrete slab or beam - Cladding flush

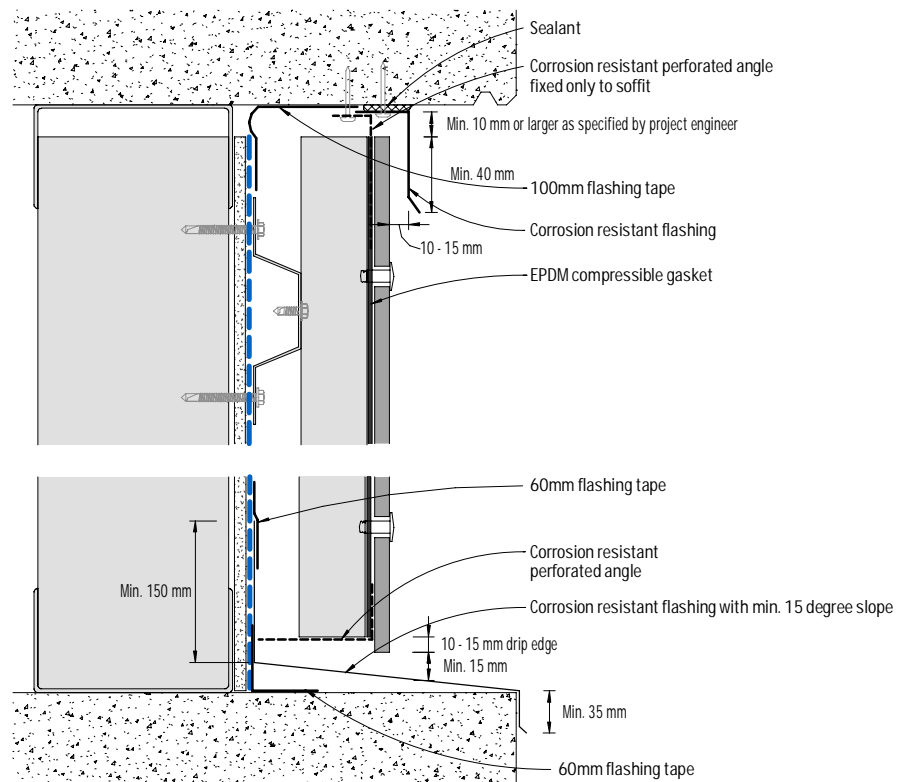


Figure 28: Exposed concrete slab or beam - Cladding recessed

Notes

- 1) Support frame profiles and Kalsi RigidBacker must NOT be fixed crossing over a control joint.
- 2) Corrosion resistant perforated angle shall be of max. thickness of 0.9mm where located between panel and support frame, and be of min. 50% open area with aperture size of 3-5mm.

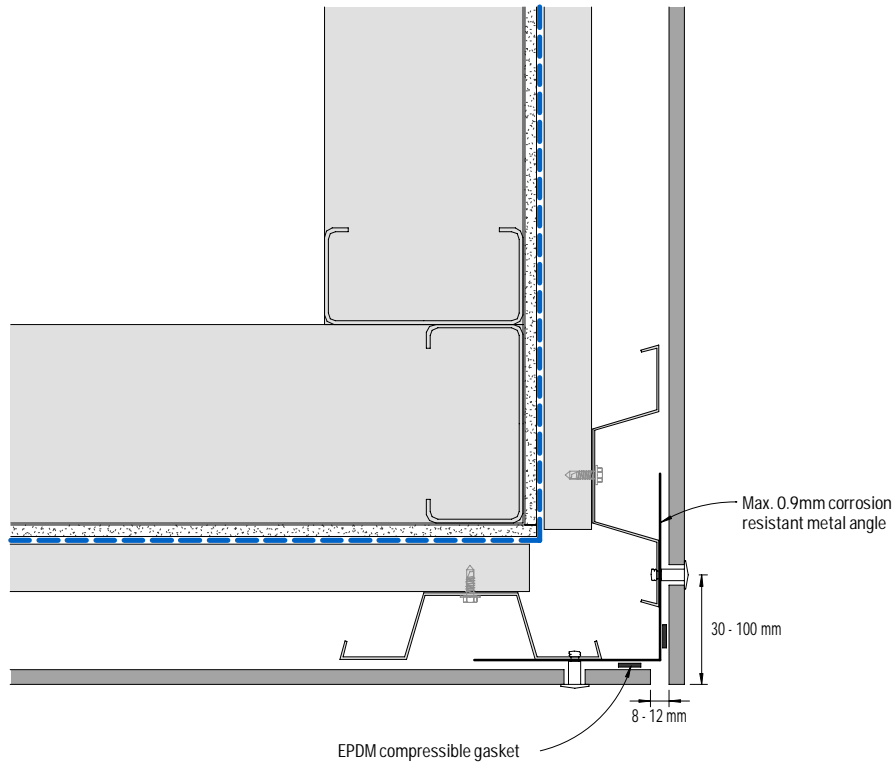


Figure 29: External corner - Detail 1

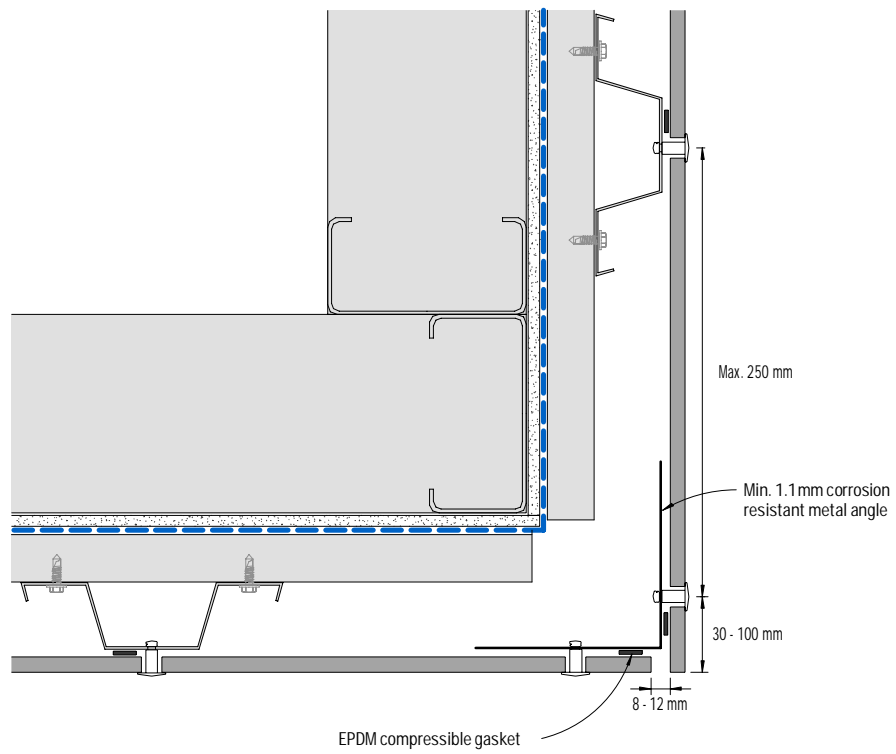


Figure 30: External corner - Detail 2

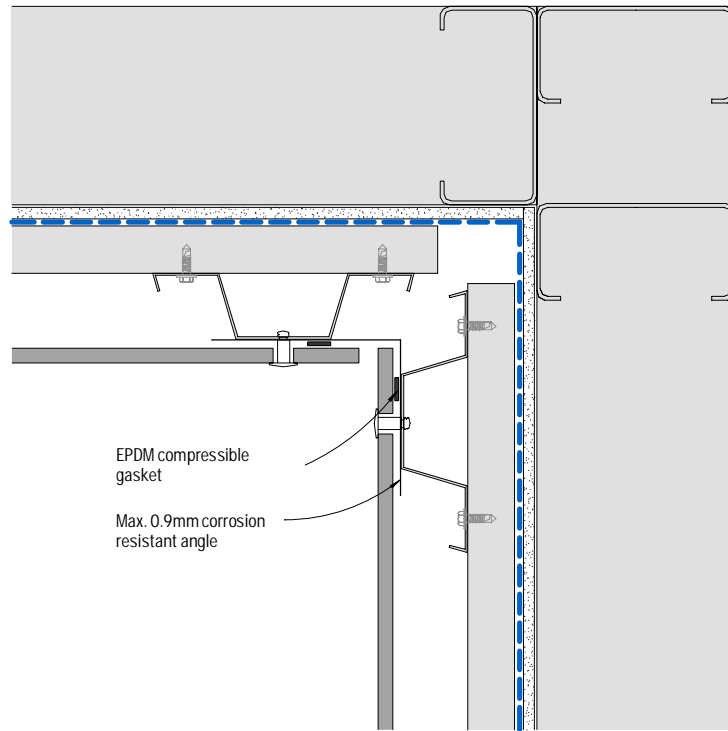


Figure 31: Internal corner

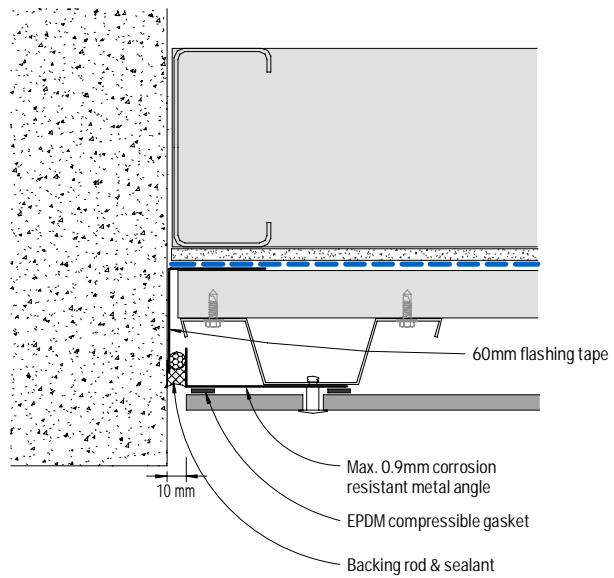


Figure 32: Abutment

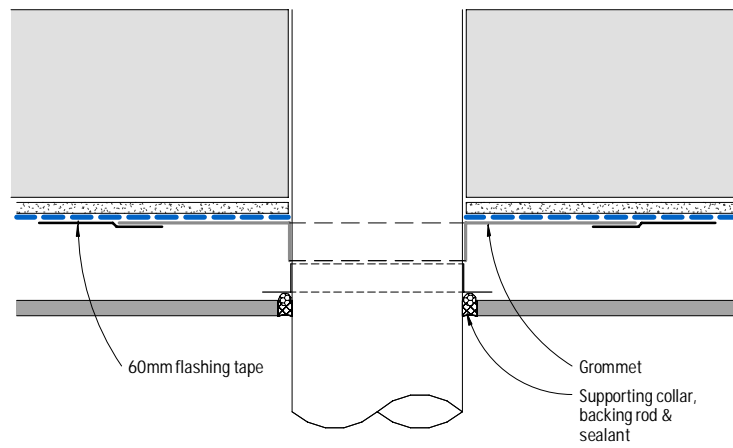


Figure 33: Pipe penetration - Plan view

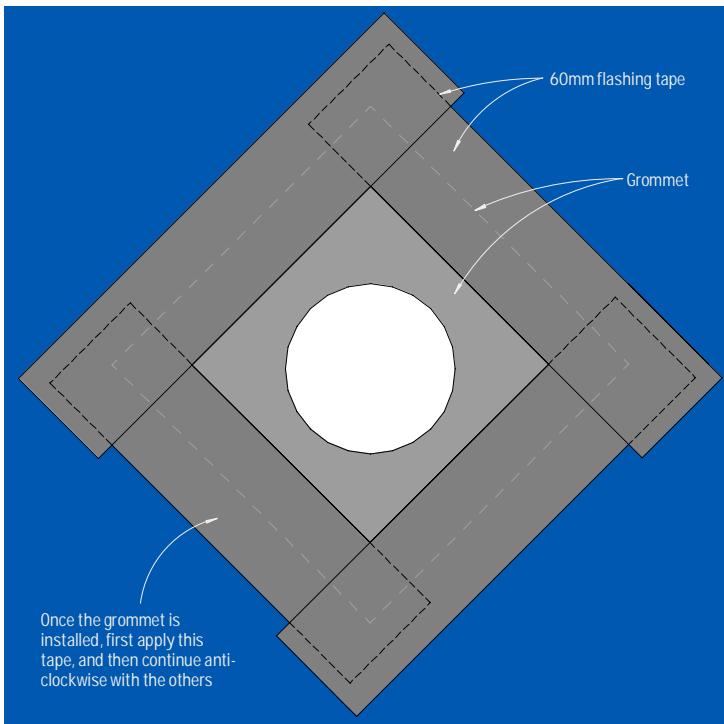


Figure 34: Pipe penetration - Elevation

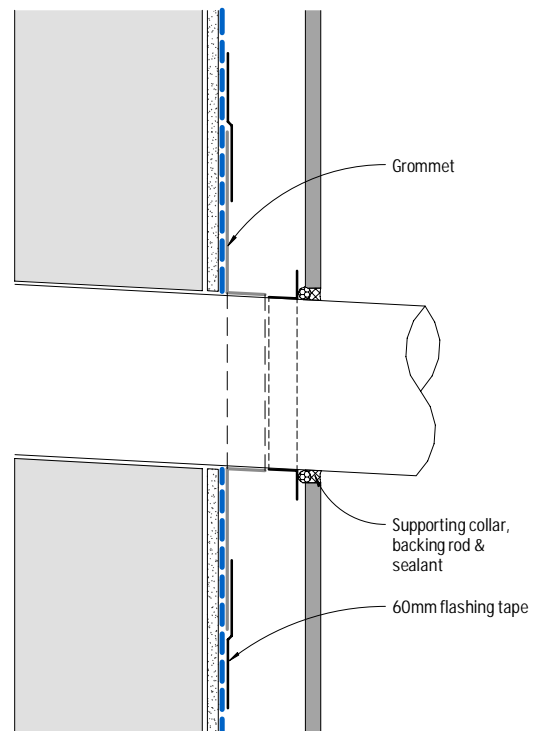


Figure 35: Pipe penetration - Section

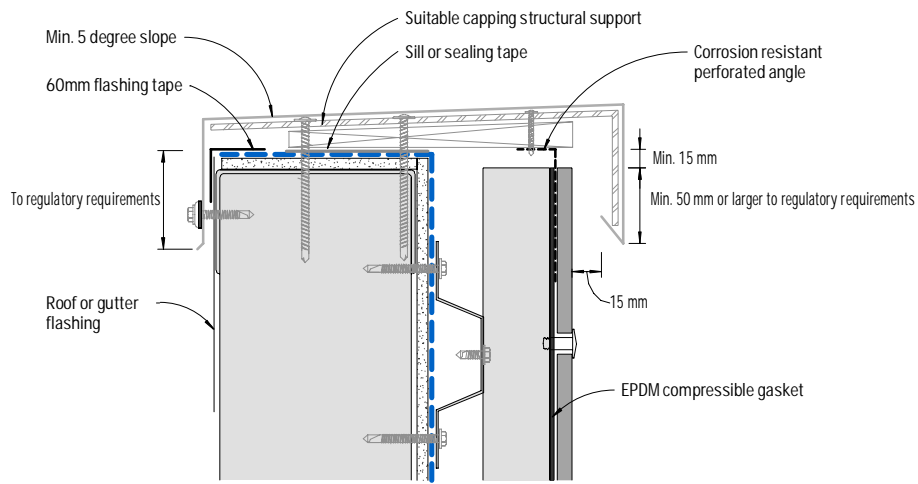


Figure 36: Capping - Detail 1

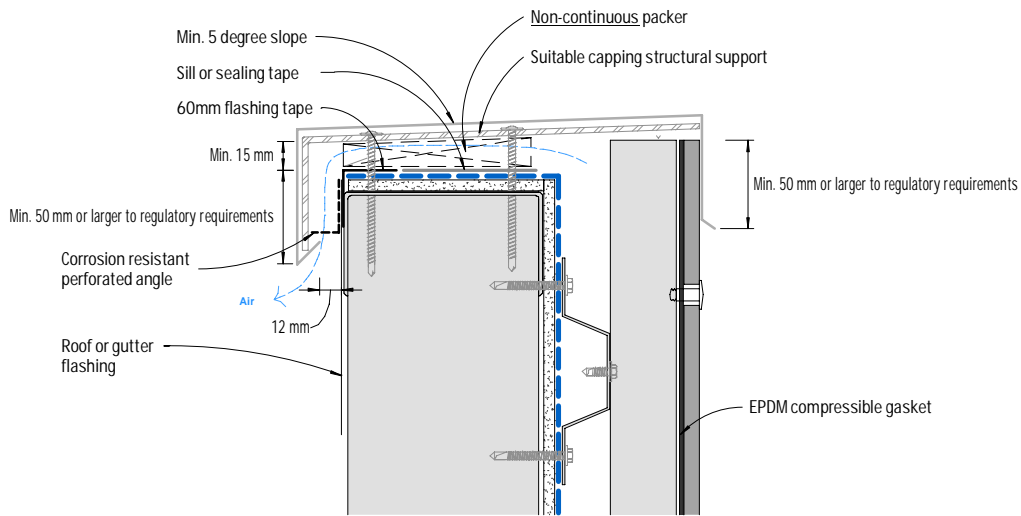


Figure 37: Capping - Detail 2  
(Not suitable for EQUITONE [material])

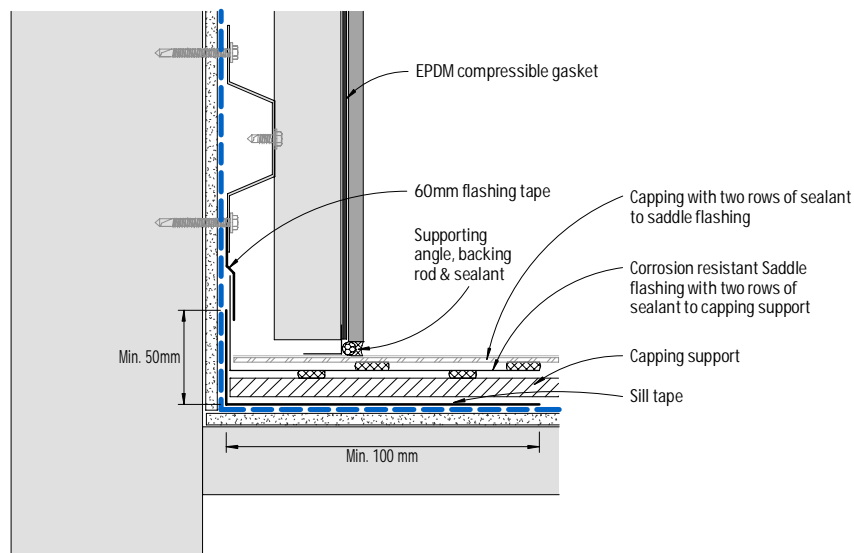


Figure 38: Parapet junction - Section

Notes

- 1) For EQUITONE [material], the following capping dimensions should be followed.
  - A minimum 20mm between panel face and rear of the capping
  - A minimum 50mm overlap with the panel for building up to 8m or larger to regulatory requirements.
  - A minimum 80mm overlap with the panel for building up to 20m or larger to regulatory requirements.
  - A minimum 100mm overlap with the panel for building over 20m or larger to regulatory requirements.
- 2) Any face fixings of capping shall be through an over sized hole (by min 5mm) in the capping as well as the panel.
- 3) Corrosion resistant perforated angle shall be of max. thickness of 0.9mm where located between panel and support frame, and be of min. 50% open area with aperture size of 3-5mm.
- 4) Capping shall be designed and engineered accordingly to provide adequate allowance for ventilation as shown in Figures 36 & 37.



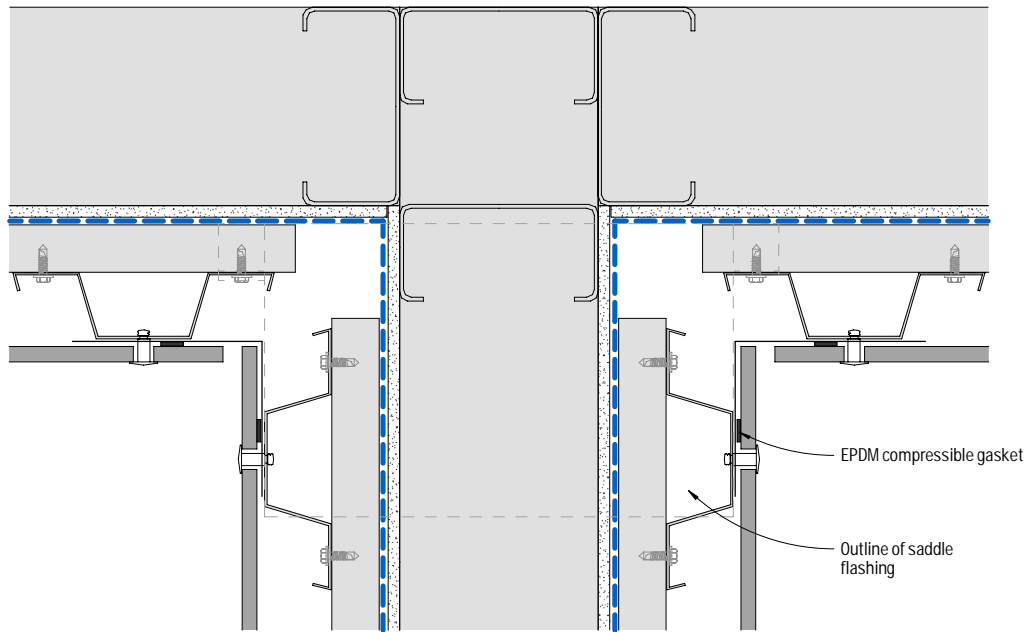


Figure 39: Parapet junction - Plan view

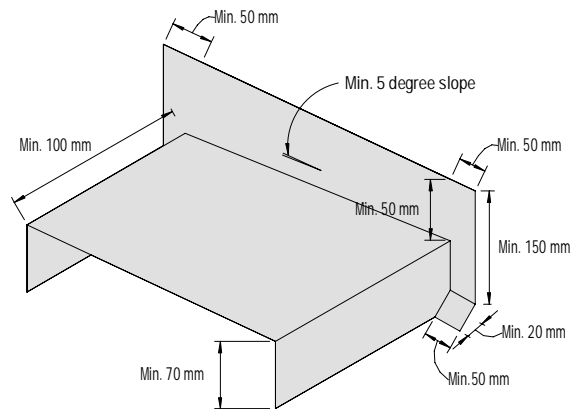
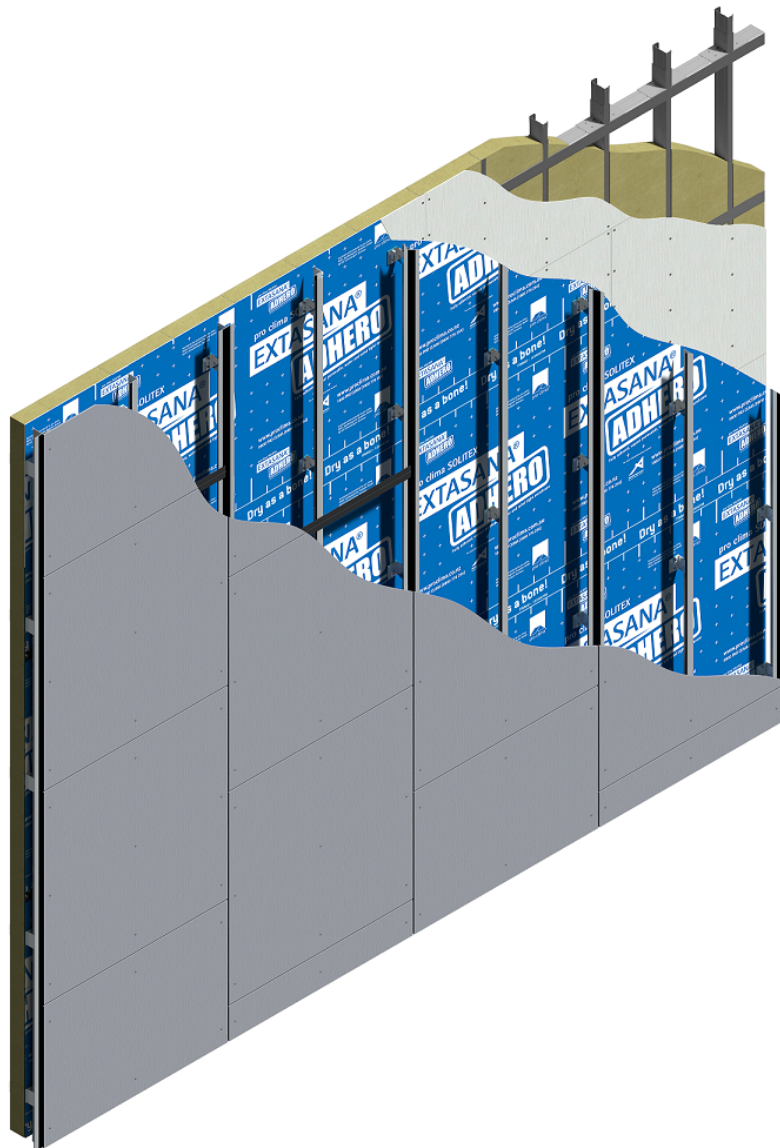


Figure 40: Corrosion resistant saddle flashing

# EQUITONE system



rigid air barrier  
aluminium bracketry construction

# Support frame

EQUITONE may be fixed to NVELOPE NV1 thermally broken aluminium bracketry framing system.

Support frame shall be of adequate corrosion resistance required for the project.

Structure and support frame shall be designed to relevant standards including, but not limited to, the following:

- AS/NZS 1664.1 – Aluminium structures
- AS/NZS 4600 – Cold-formed steel structures
- NZS 3404 – Steel structures
- NZS 3604 – Timber framed buildings

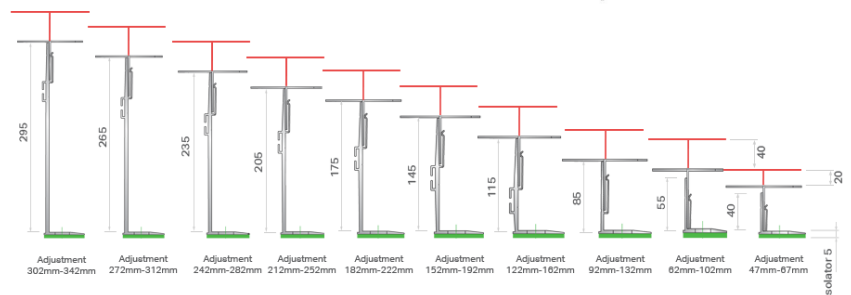
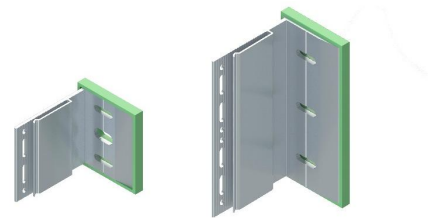
## Thermal isolator gasket

Used to minimise thermal bridging, and to separate aluminium from steel or concrete.



## Bracket

NVELOPE aluminium brackets are available in two sizes, ie single and double, with various depths to suit a wide range of cavity widths from approx. 50 to 300mm.



## Vertical rail (profile)

NVELOPE aluminium vertical L and T rails  
 Minimum face width of T rail: 120 mm  
 Minimum face width of L rail: 40 mm



## Notes

Support frame and its connection to substructure shall be designed by project engineer in accordance with the relevant standards. Refer to UNI Rivet span tables for maximum vertical and horizontal spacing of panel fixings. The application of NVELOPE system shall be in accordance with its supplier's recommendations and guidelines. Refer to NVELOPE and EQUITONE brochure for detailed information on NVELOPE components and their available sizes and options.

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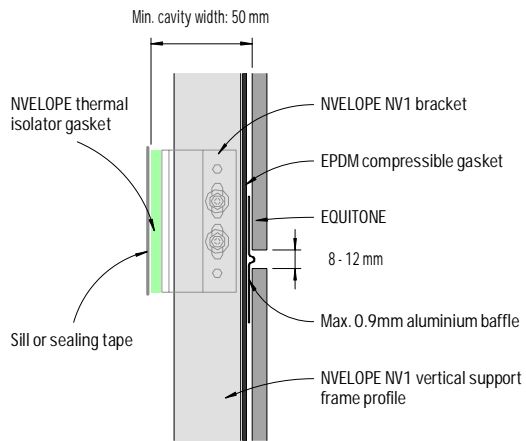


Figure 1: Baffled horizontal joint  
(Not suitable for EQUITONE [material])

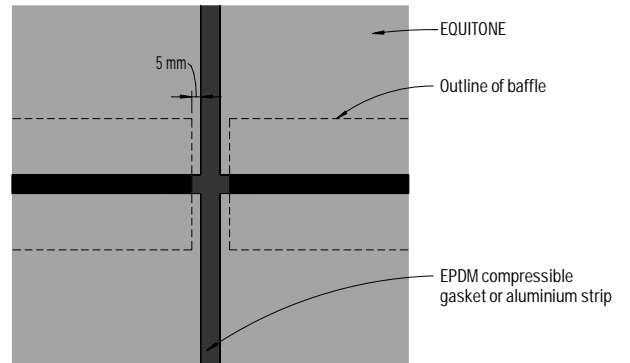


Figure 2: Baffled horizontal joint  
junction with vertical joint - Elevation

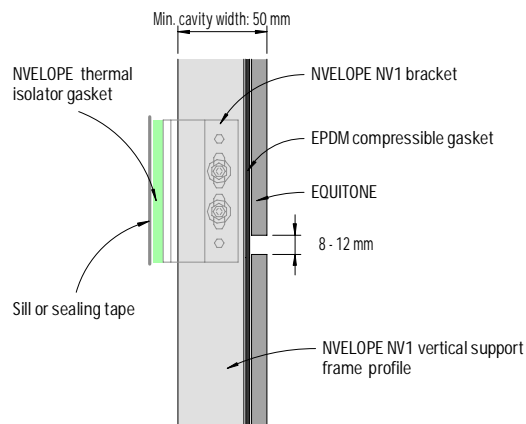


Figure 3: Open horizontal joint

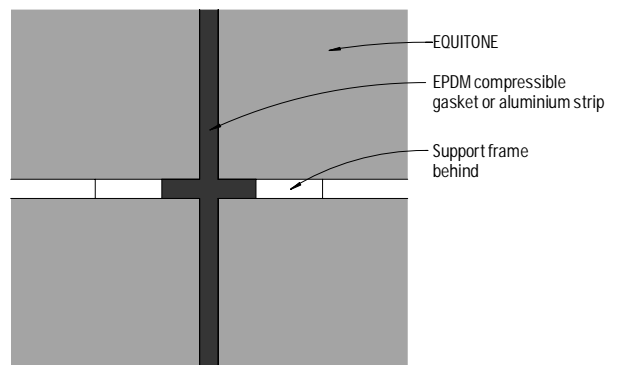


Figure 4: Open horizontal joint junction  
with vertical joint - Elevation

**Notes**

- 1) Horizontal open joint detail (Figure 3 & 4) requires project engineer's evaluation and approval, and the selection of appropriate UV resistant weather resistive barrier (membrane).
- 2) In Figure 4, visible part of the support frame profiles and weather barrier may be coated black with suitable paint.
- 3) Depending on the project requirements max. 0.9mm (powder) coated aluminium strip may be used in lieu of EPDM strip on vertical joints for higher UV resistance.
- 4) The length of NVELOPE NV3 vertical and horizontal rail, and expressed joint profile must NOT exceed 3,150mm.

Intermediate (narrow) EPDM compressible gasket may be applied as shown in dashed line, replacing the wide one, where the metal strip behind is of desired colour

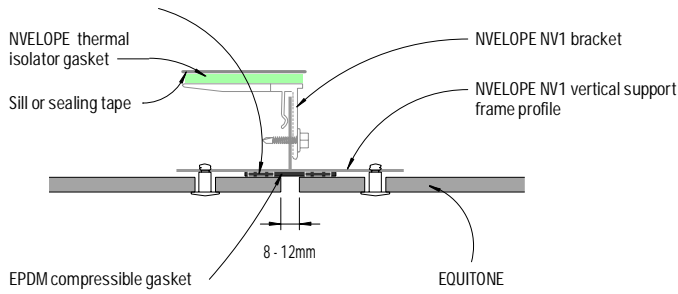


Figure 5: Vertical joint - Detail 1

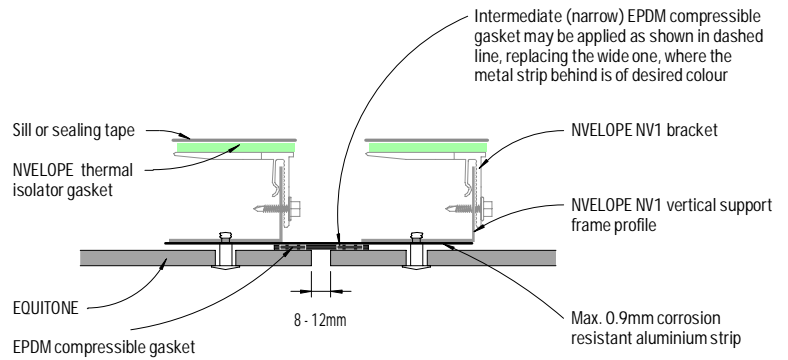


Figure 6: Vertical joint - Detail 2

Intermediate (narrow) EPDM compressible gasket may be applied as shown in dashed line, replacing the wide one, where the metal strip behind is of desired colour

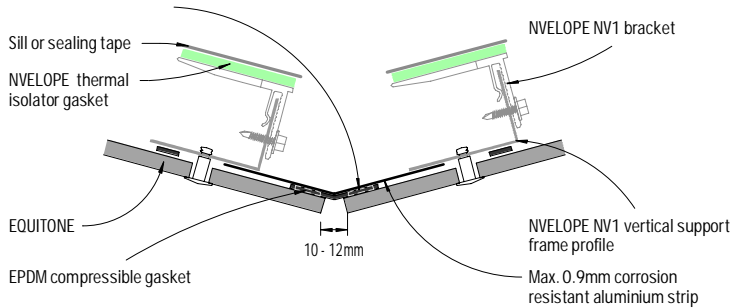


Figure 7: Vertical joint - Detail 3

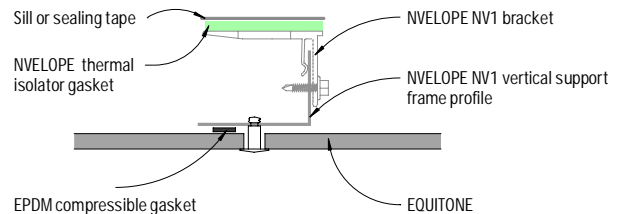


Figure 8: Intermediate panel fixings connection

Notes

- 1) Depending on the project requirements max. 0.9mm (powder) coated aluminium strip may be used in lieu of EPDM strip on vertical joints for higher UV resistance.
- 3) In Figure 6 & 7, the aluminium strip should be fixed ONLY to one of the support frame profiles (either left or right) where allowance for horizontal and/or vertical movement of the cladding frame is required.
- 2) EPDM compressible gasket strip is applied away from the panel hole, and usually to one side of the support frame profile as shown in Figure 8.

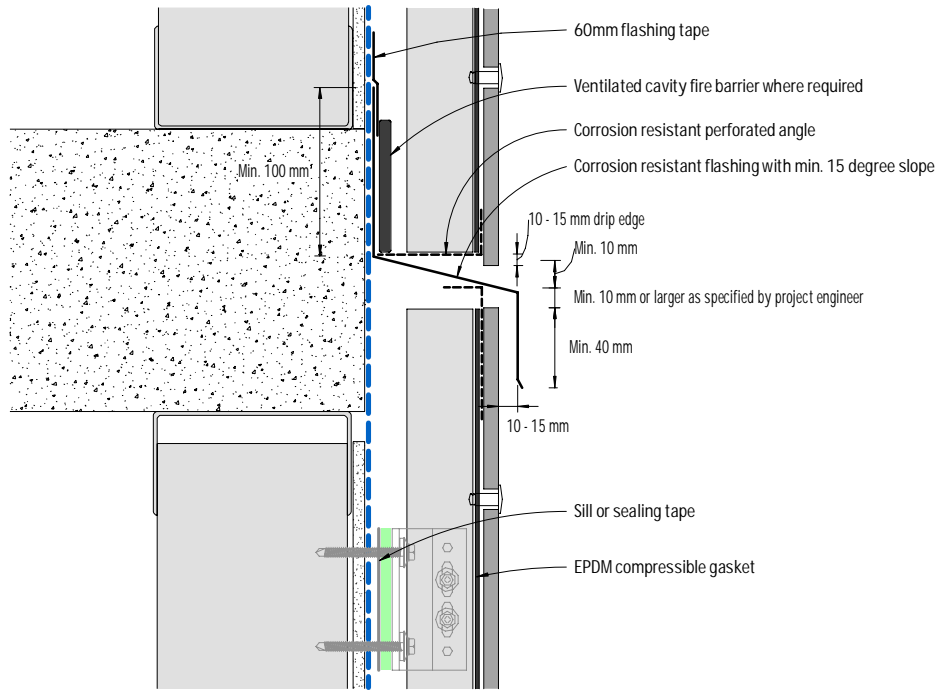


Figure 9: Horizontal control joint

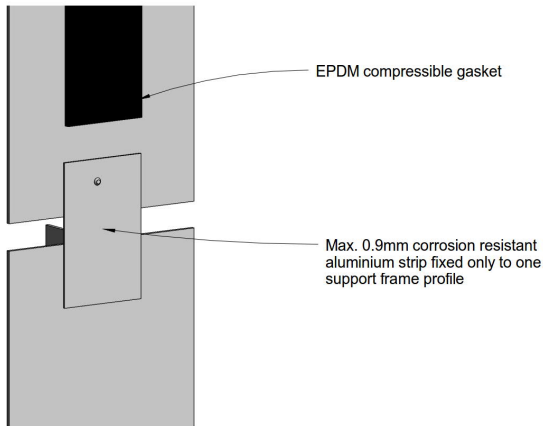


Figure 10: EPDM gasket support over control joint or the like

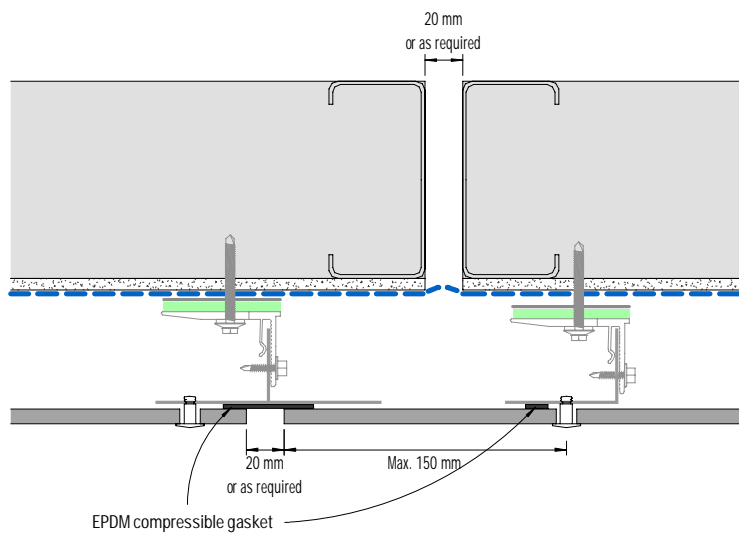


Figure 11: Vertical control joint

Notes

- 1) Support frame profiles and Kalsi RigidBacker must NOT be fixed crossing over a control joint.
- 2) Allowance for movement at the location of any control joint must be made in the cladding and its support frame design and installation. Panel must NOT be fixed bridging over any control joint.
- 3) Corrosion resistant perforated angle shall be of max. thickness of 0.9mm where located between panel and support frame, and be of min. 50% open area with aperture size of 3-5mm.

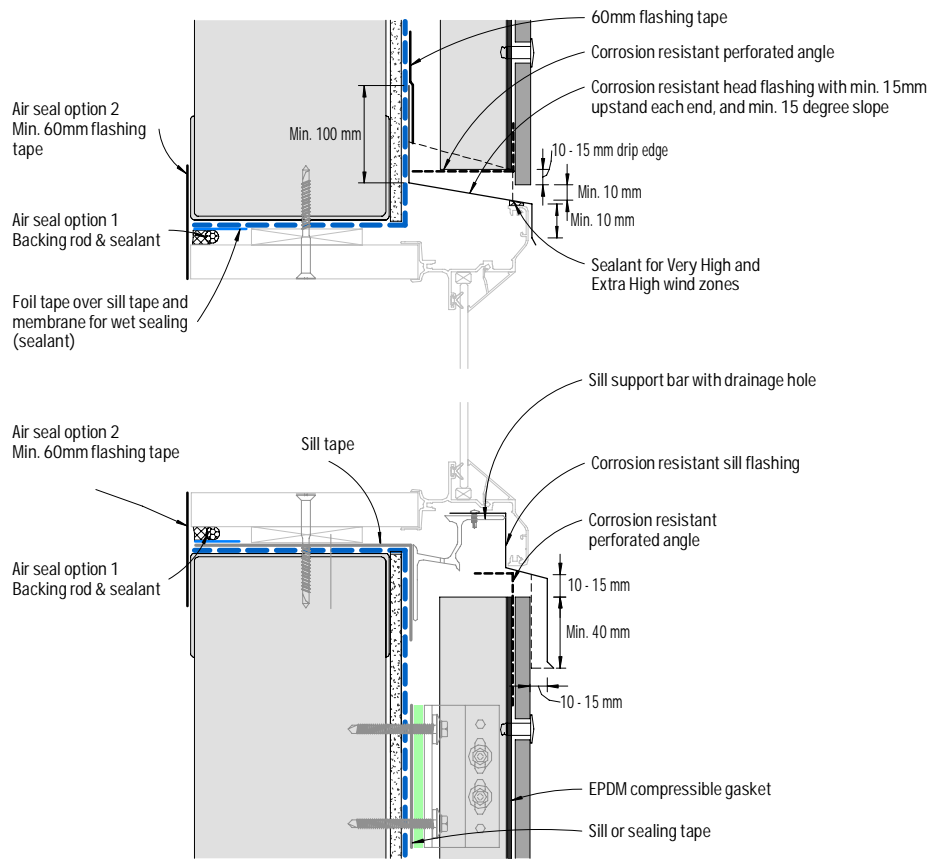


Figure 12: Flush window - Head and sill

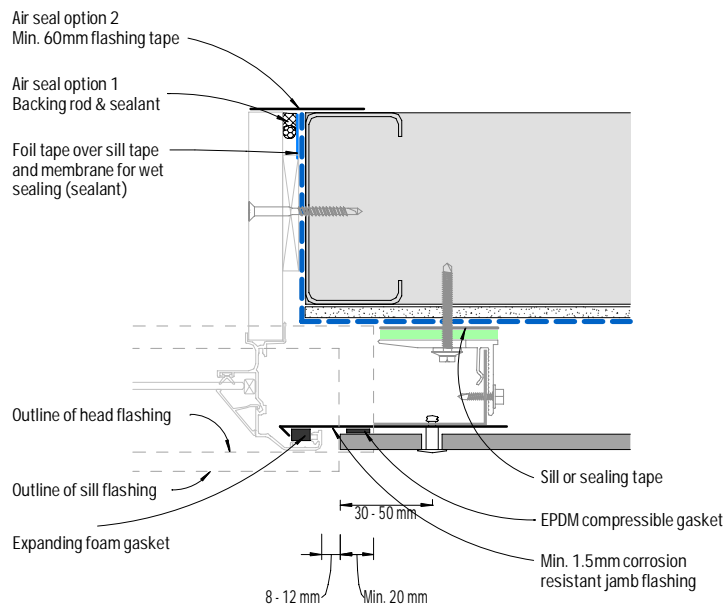


Figure 13: Flush window - Jamb

**Notes**

- 1) ONLY sealant compatible with the foil tape should be used. Should any sealant be intended to be used directly on the flashing and/or sill tape it must be confirmed with its manufacturer to ensure compatibility with these tapes in accordance with the relevant standards.
- 2) Corrosion resistant perforated angle shall be of max. thickness of 0.9mm where located between panel and support frame, and be of min. 50% open area with aperture size of 3-5mm.



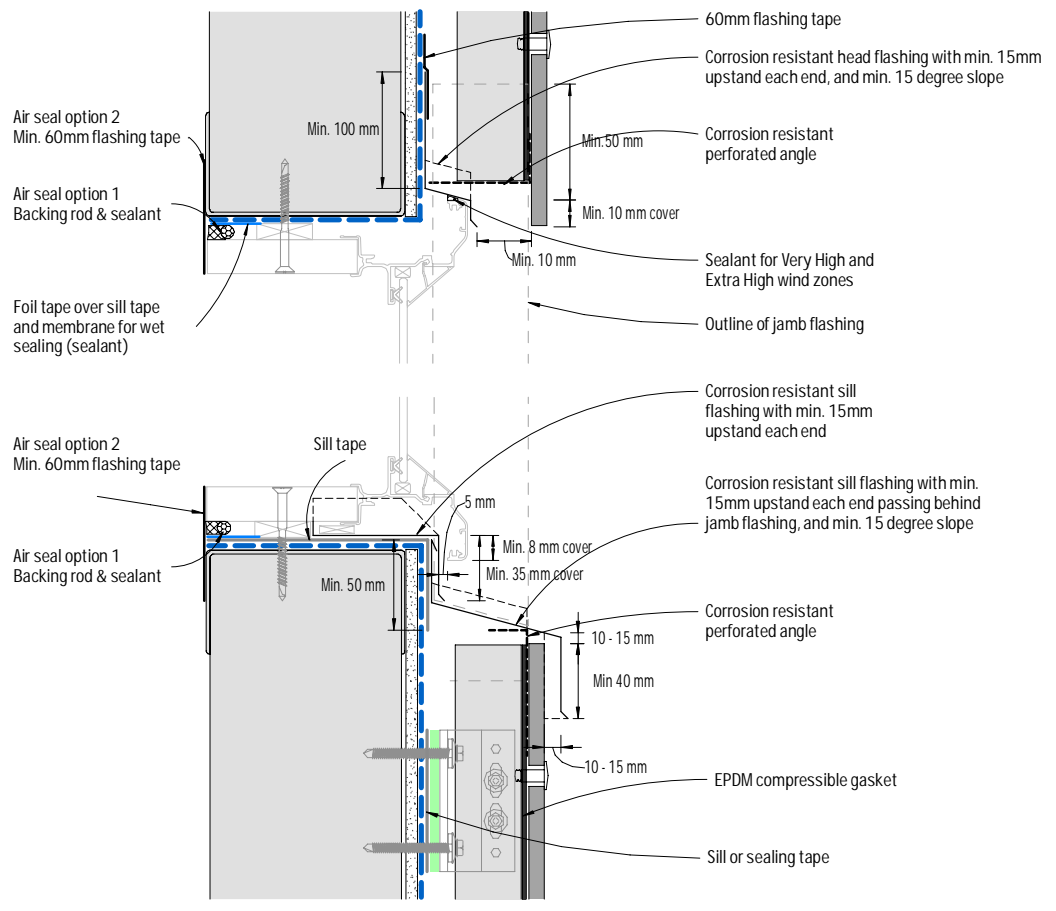


Figure 14: Recessed window - Head and sill

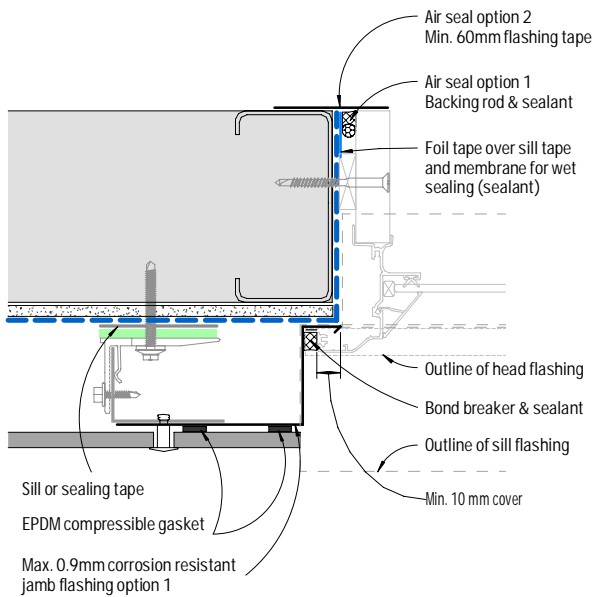


Figure 15: Recessed window jamb - Option 1

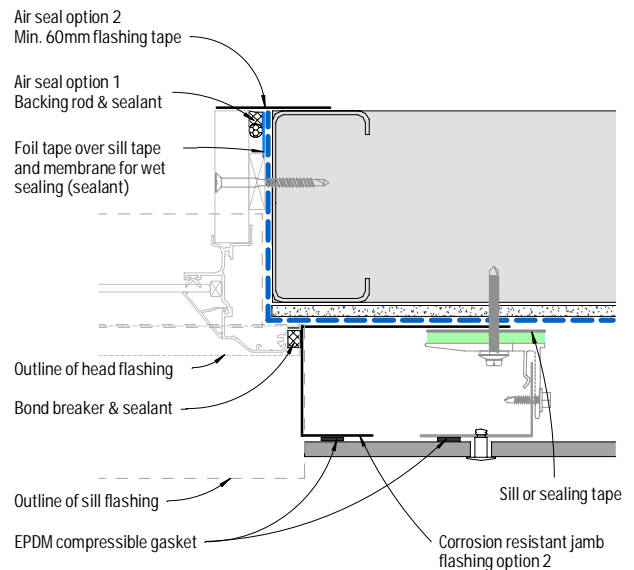


Figure 16: Recessed window jamb - Option 2

Notes

- 1) ONLY sealant compatible with the foil tape should be used. Should any sealant be intended to be used directly on the flashing and/or sill tape it must be confirmed with its manufacturer to ensure compatibility with these tapes in accordance with the relevant standards.
- 2) Corrosion resistant perforated angle shall be of max. thickness of 0.9mm where located between panel and support frame, and be of min. 50% open area with aperture size of 3-5mm.

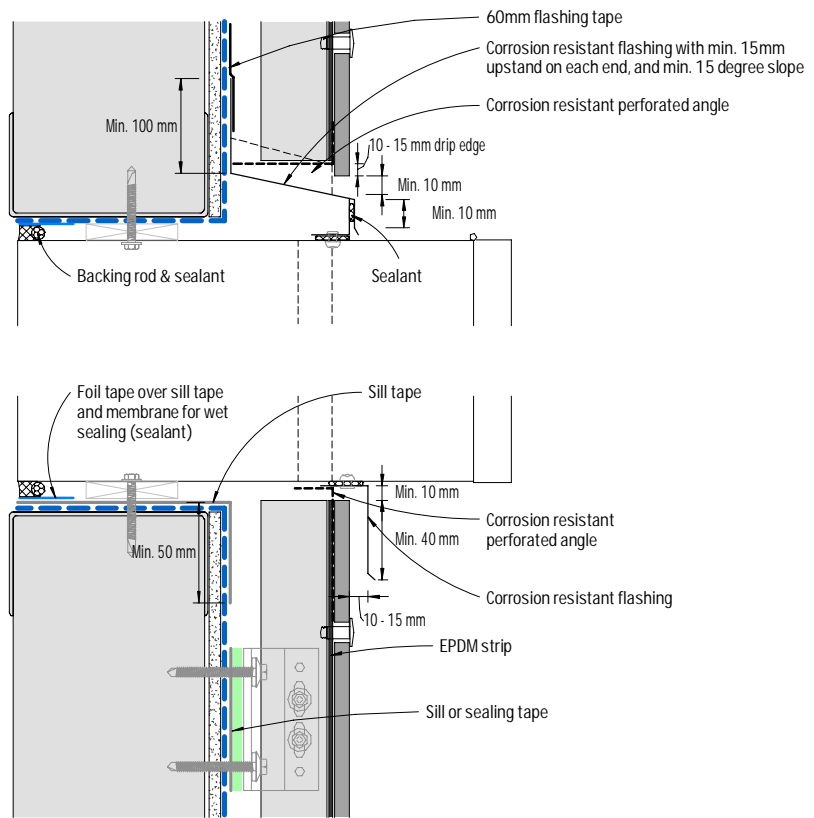


Figure 17: Meter box - Section

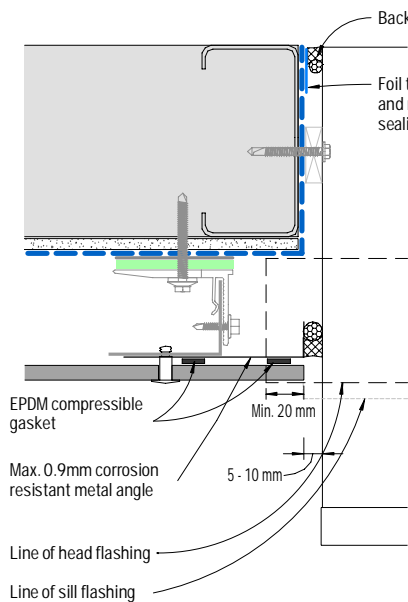


Figure 18: Meter box - Plan view - Detail 1

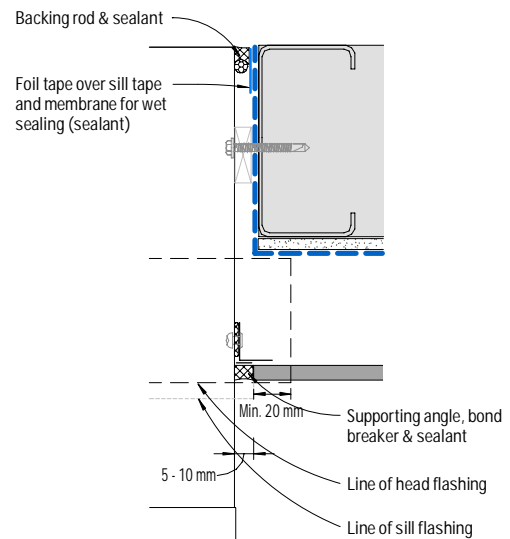


Figure 19: Meter box - Plan view - Detail 2

Notes

- 1) ONLY sealant compatible with the foil tape should be used. Should any sealant be intended to be used directly on the flashing and/or sill tape it must be confirmed with its manufacturer to ensure compatibility with these tapes in accordance with the relevant standards.
- 2) Corrosion resistant perforated angle shall be of max. thickness of 0.9mm where located between panel and support frame, and be of min. 50% open area with aperture size of 3-5mm.

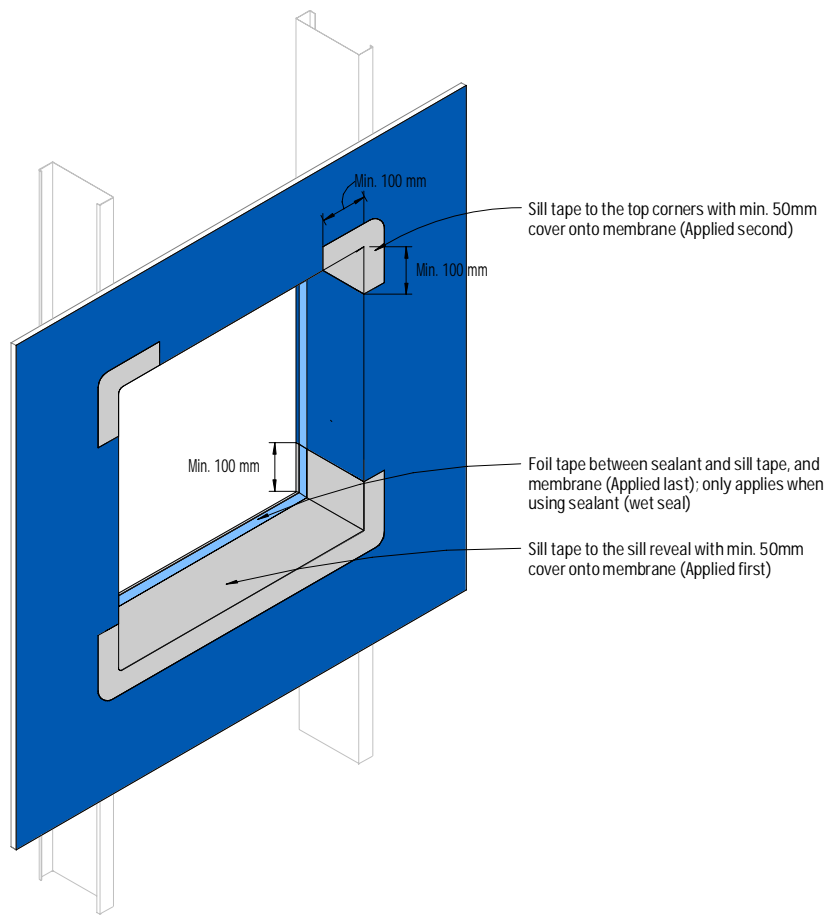


Figure 20: Isometric view of window/meter box opening - Tape application

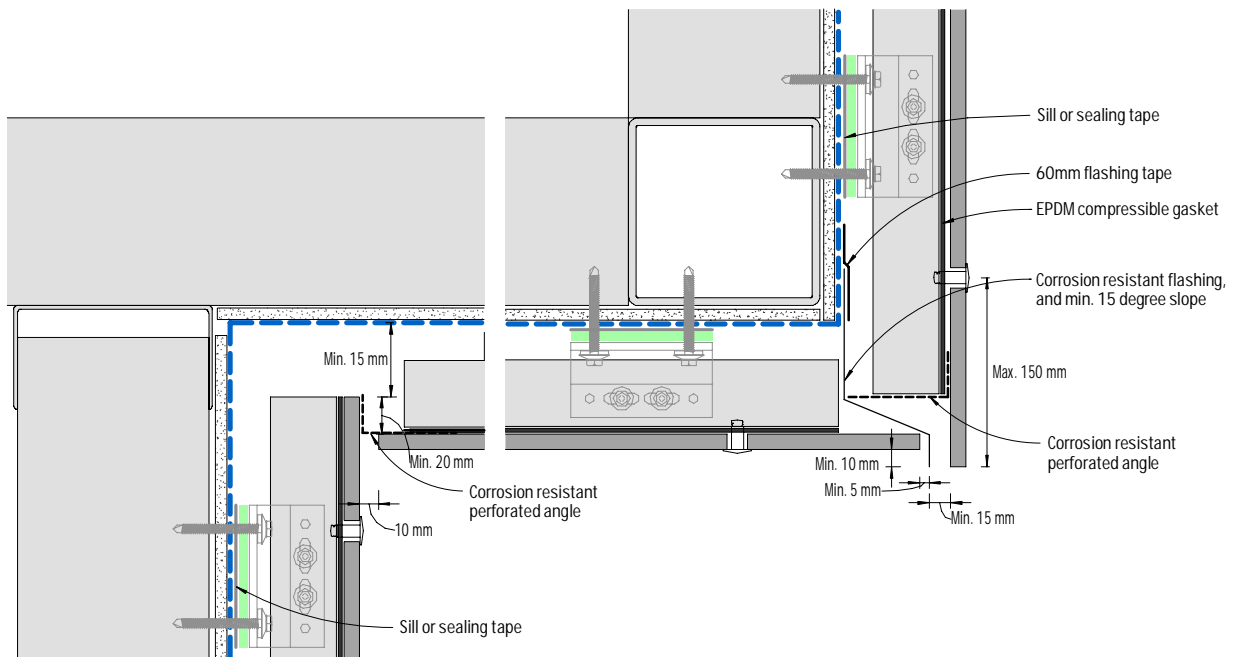


Figure 21: Soffit junction

Notes

- 1) ONLY sealant compatible with the foil tape should be used. Should any sealant be intended to be used directly on the flashing and/or sill tape it must be confirmed with its manufacturer to ensure compatibility with these tapes in accordance with the relevant standards.
- 2) Support frame profiles and Kalsi RigidBacker must NOT be fixed crossing over a control joint.
- 3) Corrosion resistant perforated angle shall be of max. thickness of 0.9mm where located between panel and support frame, and be of min. 50% open area with aperture size of 3-5mm.

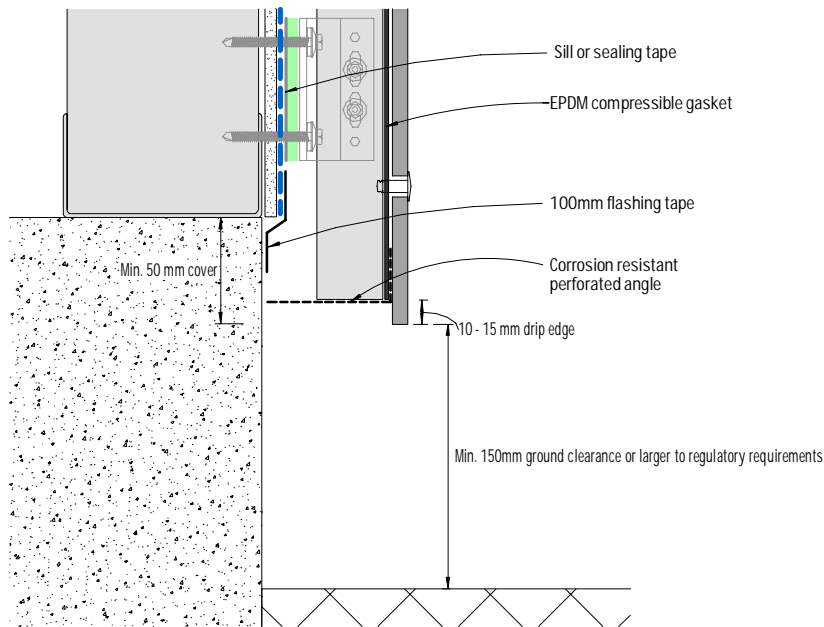


Figure 22: Base detail

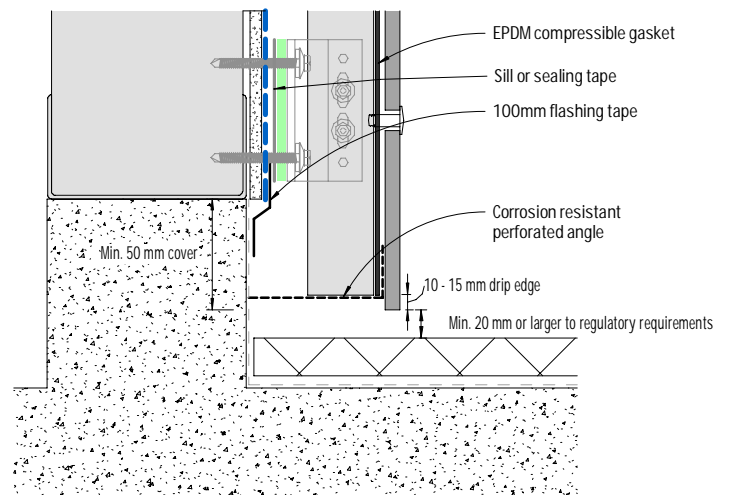


Figure 23: Base detail - Covered area

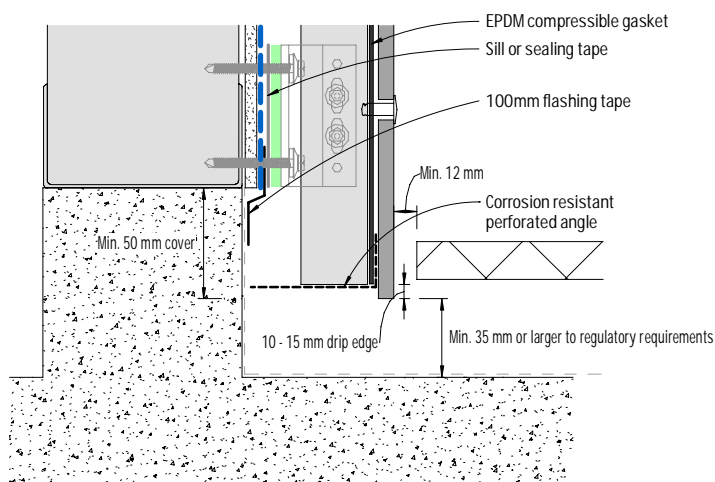


Figure 24: Base detail - Balcony

Notes

1) For **EQUITONE [materia]**, minimum ground clearance is **300mm**.

2) Corrosion resistant perforated angle shall be of max. thickness of 0.9mm where located between panel and support frame, and be of min. 50% open area with aperture size of 3-5mm.

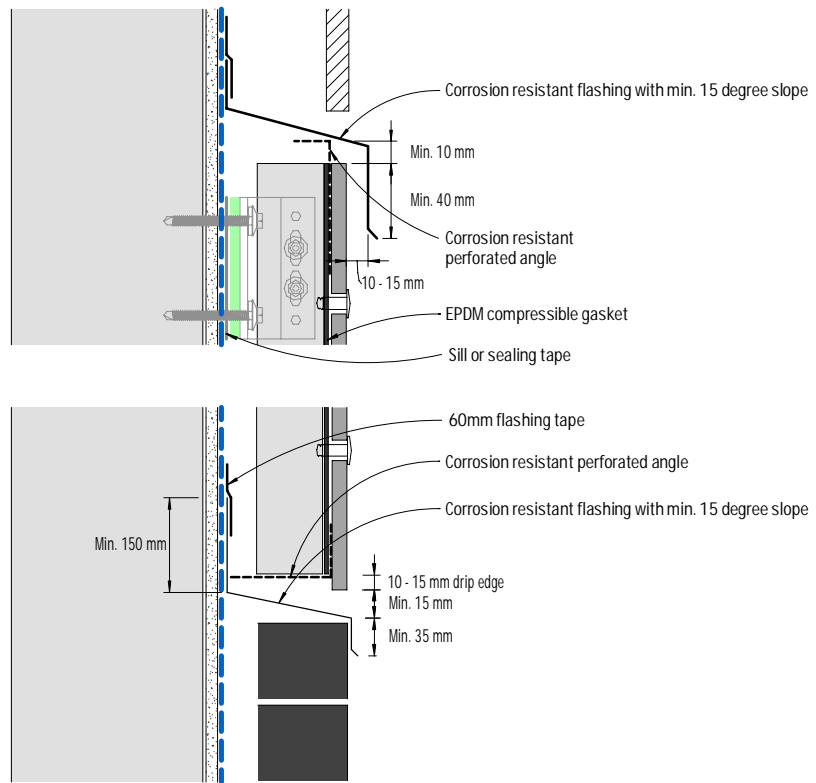


Figure 25: Junction with other materials - flush detail

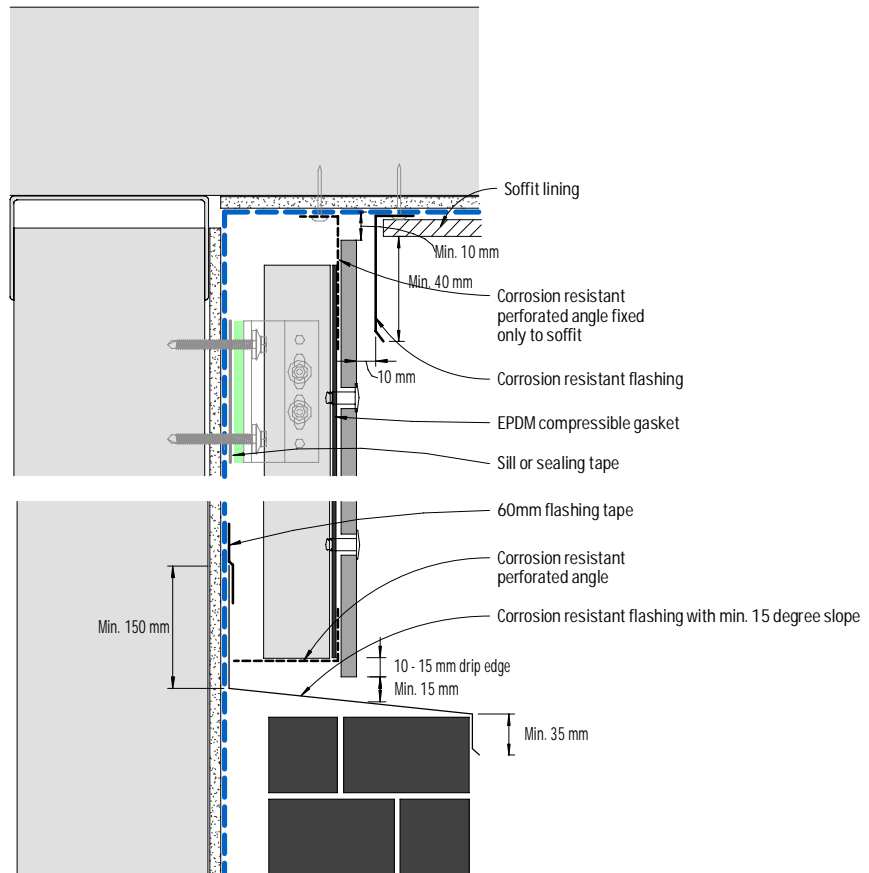


Figure 26: Junction with other materials, eaves or the like - recessed detail

Notes

- 1) Support frame profiles and Kalsi RigidBacker must NOT be fixed crossing over a control joint.
- 2) Corrosion resistant perforated angle shall be of max. thickness of 0.9mm where located between panel and support frame, and be of min. 50% open area with aperture size of 3-5mm.

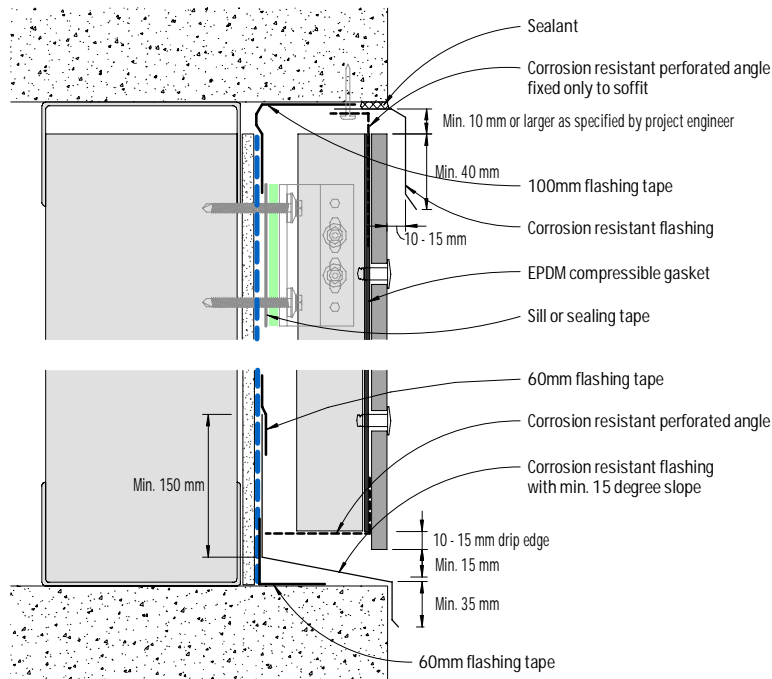


Figure 27: Exposed concrete slab or beam - Cladding flush

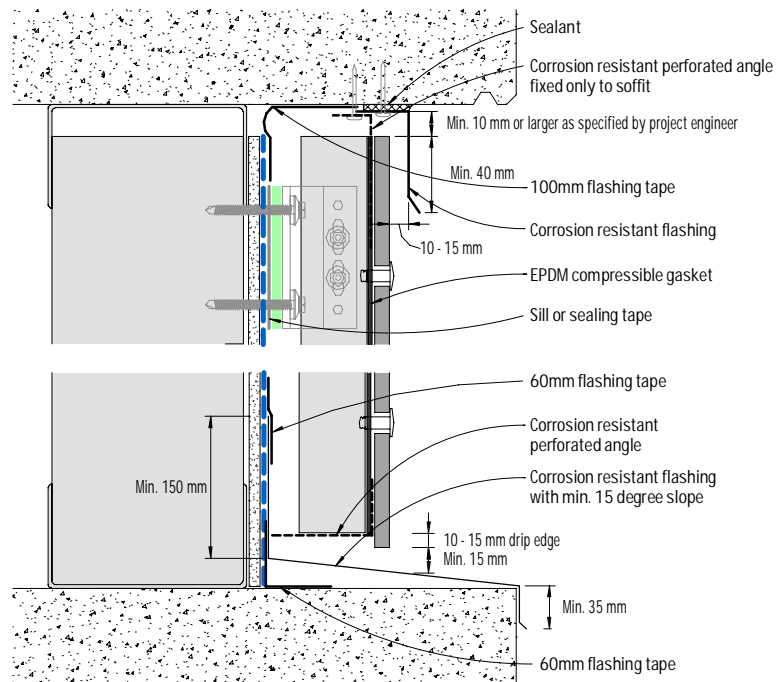


Figure 28: Exposed concrete slab or beam - Cladding recessed

Notes

- 1) Refer to Pro Clima's flashing tape application guide for any pre-treatment required on concrete or masonry for the application of the flashing tape onto these substrates.
- 2) Support frame profiles and Kalsi RigidBacker must NOT be fixed crossing over a control joint.
- 3) Corrosion resistant perforated angle shall be of max. thickness of 0.9mm where located between panel and support frame, and be of min. 50% open area with aperture size of 3-5mm.

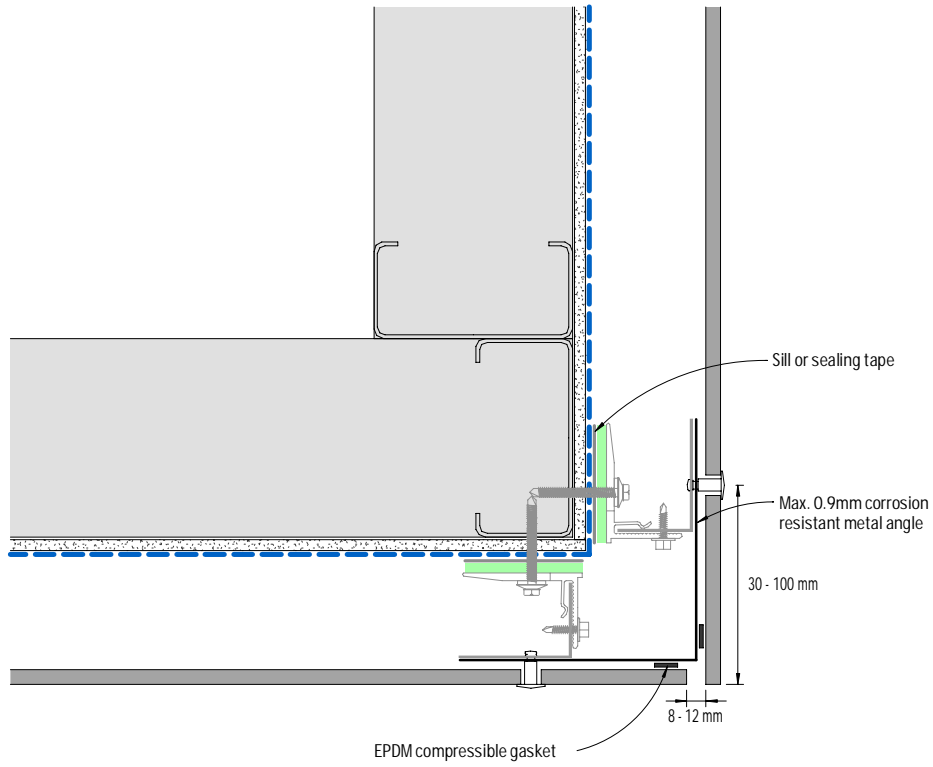


Figure 29: External corner - Detail 1

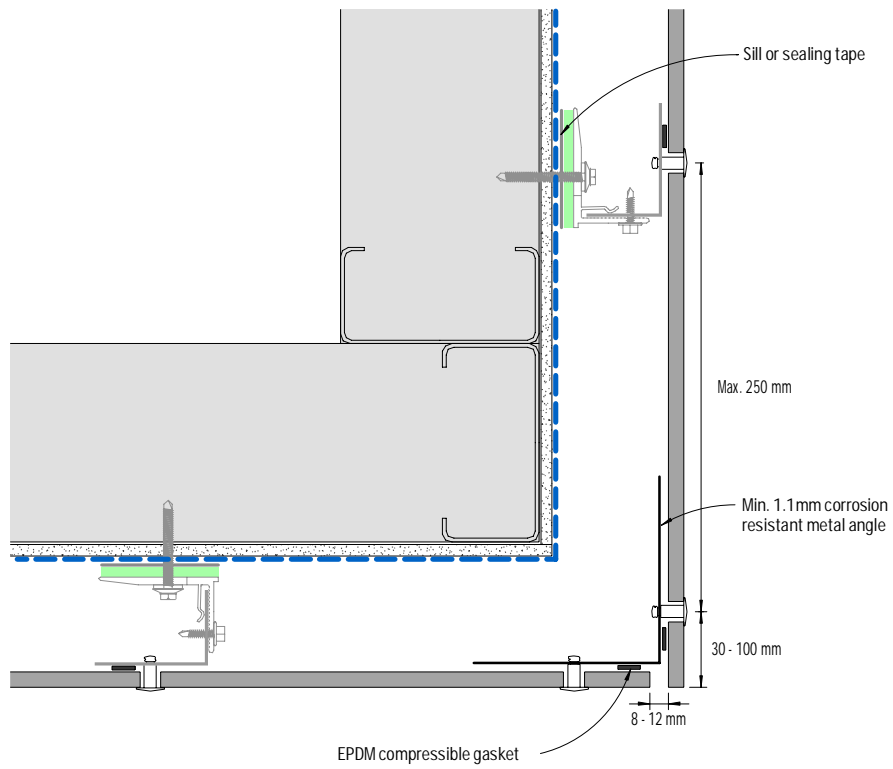


Figure 30: External corner - Detail 2

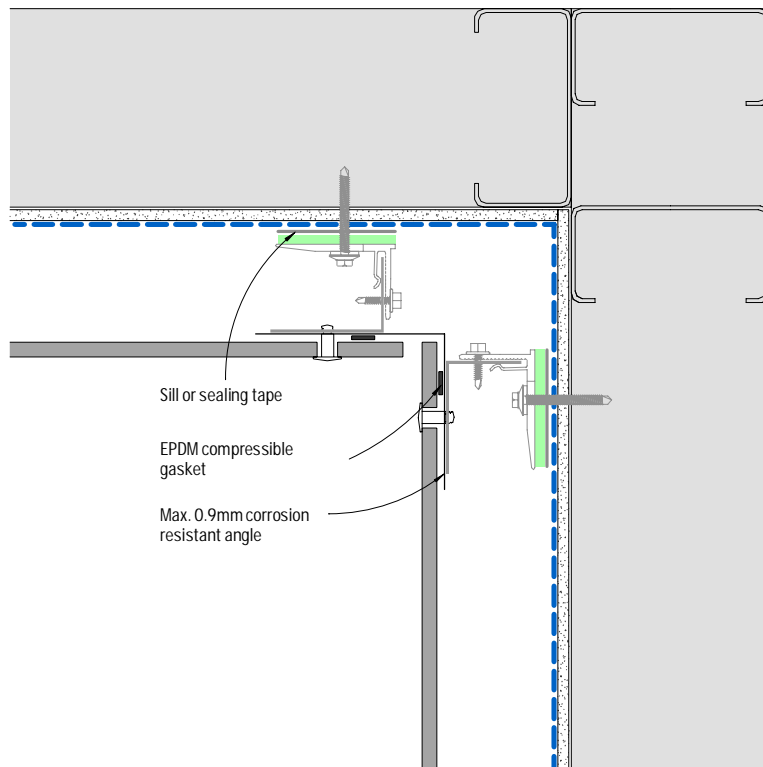


Figure 31: Internal corner

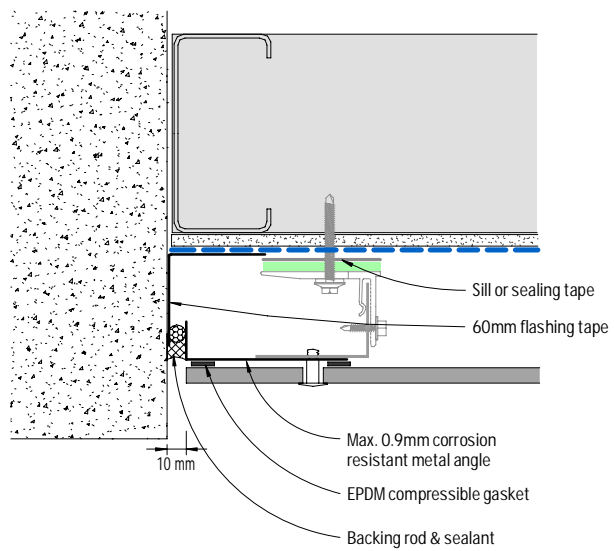


Figure 32: Abutment



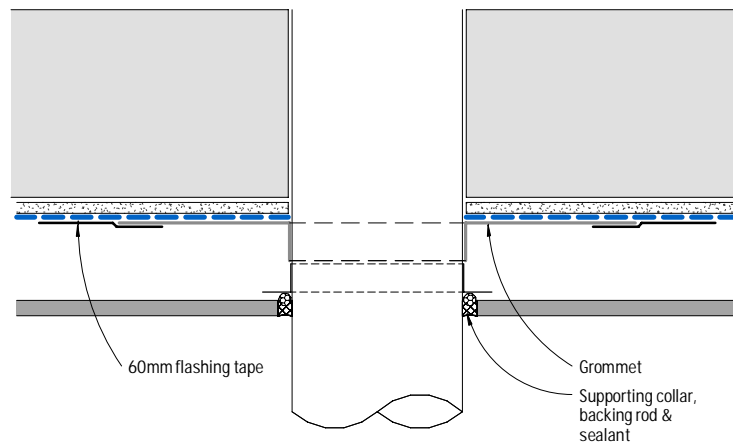


Figure 33: Pipe penetration - Plan view

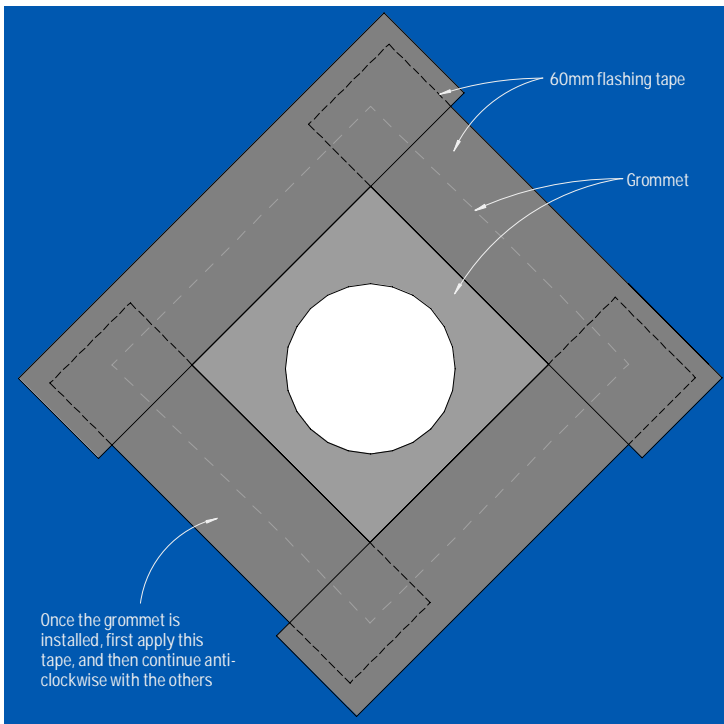


Figure 34: Pipe penetration - Elevation

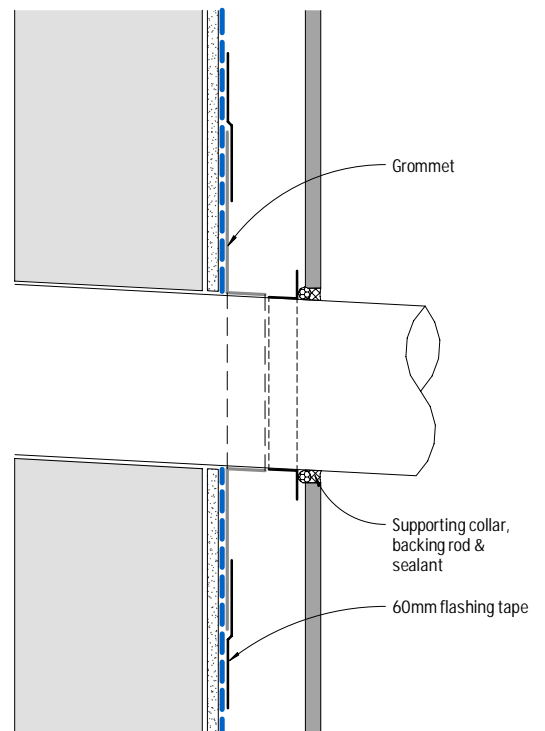


Figure 35: Pipe penetration - Section

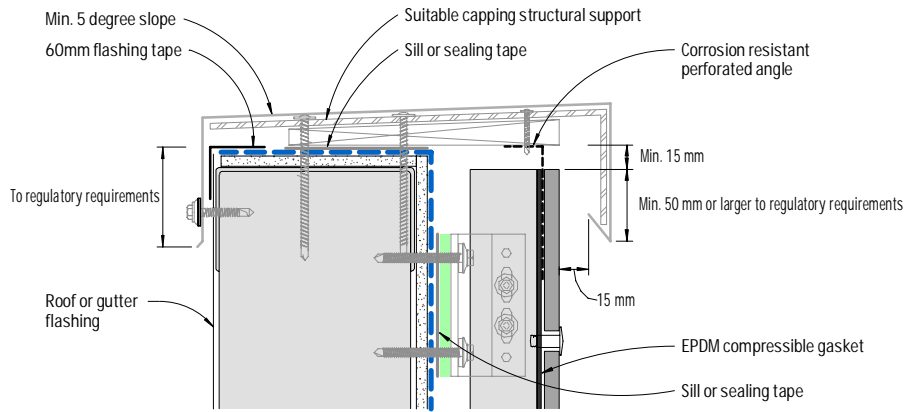


Figure 36: Capping - Detail 1

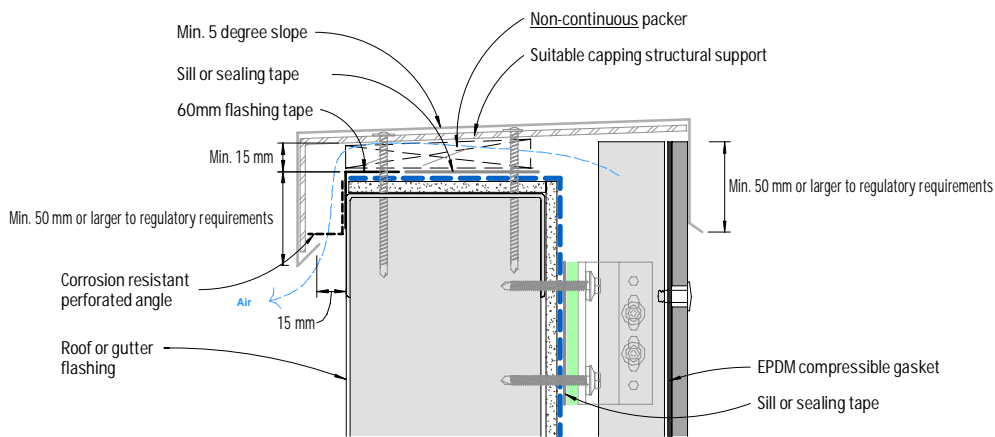


Figure 37: Capping - Detail 2  
(Not suitable for EQUITONE [material])

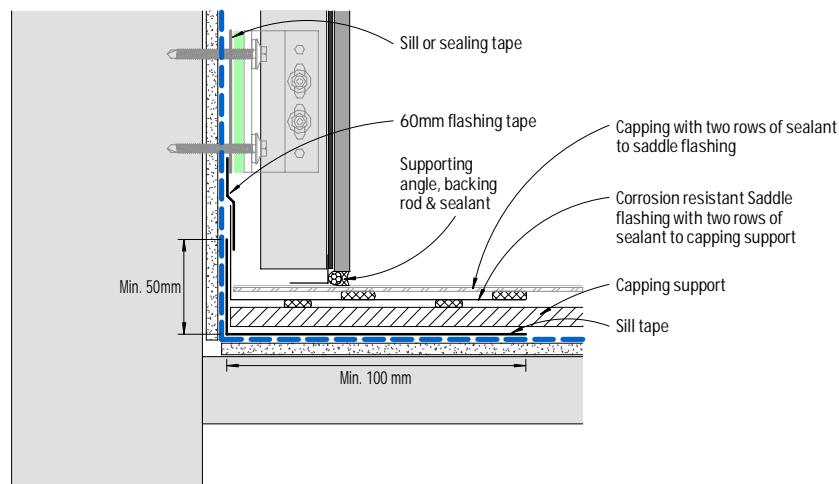


Figure 38: Parapet junction - Section

Notes

- 1) For EQUITONE [material], the following capping dimensions should be followed.
  - A minimum 20mm between panel face and rear of the capping
  - A minimum 50mm overlap with the panel for building up to 8m or larger to regulatory requirements.
  - A minimum 80mm overlap with the panel for building up to 20m or larger to regulatory requirements.
  - A minimum 100mm overlap with the panel for building over 20m or larger to regulatory requirements.
- 2) Any face fixings of capping shall be through an over sized hole (by min 5mm) in the capping as well as the panel.
- 3) Corrosion resistant perforated angle shall be of max. thickness of 0.9mm where located between panel and support frame, and be of min. 50% open area with aperture size of 3-5mm.
- 4) Capping shall be designed and engineered accordingly to provide adequate allowance for ventilation as shown in Figures 36 & 37.

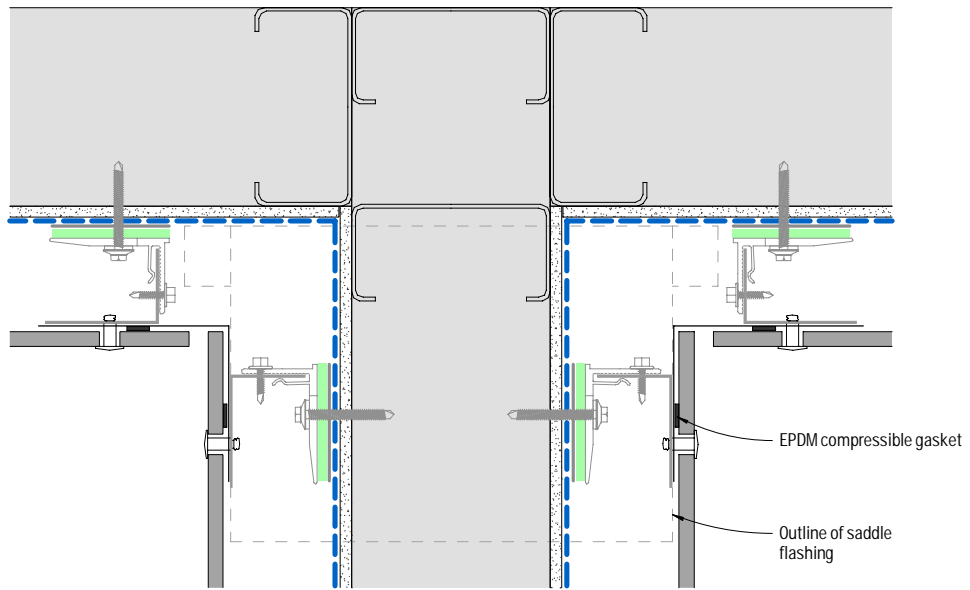


Figure 39: Parapet junction - Plan view

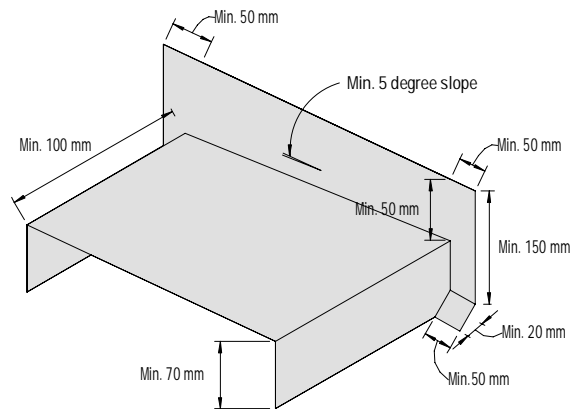


Figure 40: Corrosion resistant saddle flashing

# EQUITONE system

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