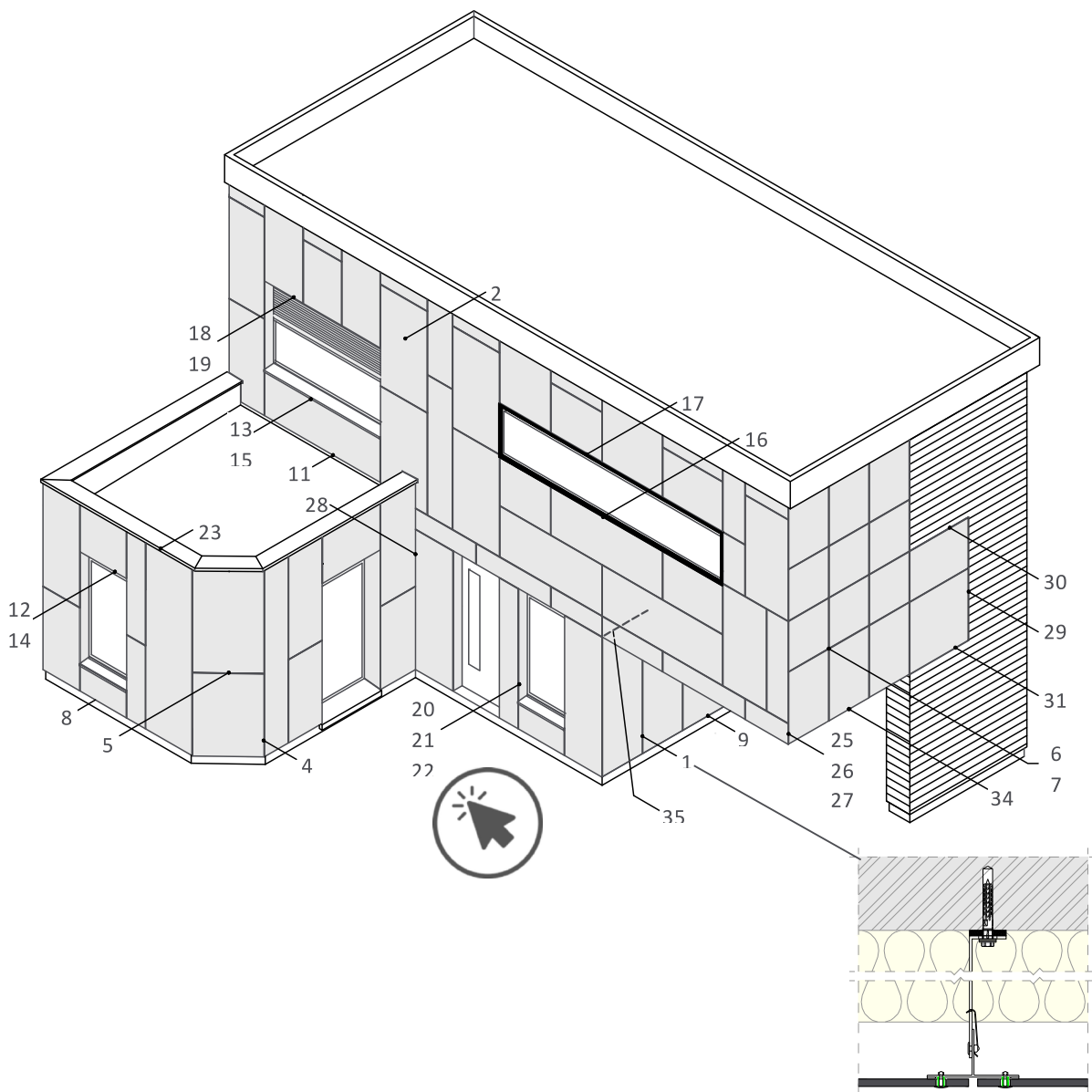




EQUITONE
Fibre cement facade materials

Construction details
Face fixings on metal support frame



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General information

This document provides generic construction details for EQUITONE façade systems with UNI-Rivet panel face fixings on metal support frame to assist with the design of EQUITONE façade.

This document is not designed to serve as an installation guide and is intended to be used in conjunction with EQUITONE Planning and Application Guide face fixings on metal support frame' and other relevant technical and installation documents.

The details included in this document only illustrate general principles for detailing of EQUITONE at different typical interfaces; and are not to be relied upon for weatherproofing and fire safety compliance with local regulations. The weatherproofing and fire performance of any project specific detail or application shall be evaluated by the project engineer or consultant.

Any components related to wind barriers, fire safety, moisture management and weather proofing including but not limited to membranes, flashings, water seals and sealants, airtightness tapes, horizontal and/or vertical fire barriers, etc, will need to be applied according to local regulations, project requirements and relevant standards.

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

All dimensions in this document are in inches [in] unless otherwise stated.

The information in this guide is comprehensive but not exhaustive, and the reader will need to satisfy themselves that the contents of this guide are suitable for their intended application. It is the responsibility of the project consultants (designer, architect, and engineers) to ensure that the information and details provided in this document are appropriate for the project.

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 in this document without prior notice. Please visit www.equitone.com to ensure you have the most current version.

This document is supplied in good faith and no liability can be accepted for any loss or damage resulting from its use. Images and construction details contained in this document are not to a specific scale, are indicative and for illustration purposes only and should not be used as final construction drawings.

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Please visit www.equitone.com for contact details and further information and technical documents.

Components

Materials



Maximum usable panel sizes (metric)

EQUITONE [linea]	10 mm	1220	2500	1220	3050
EQUITONE [lunara]	10 mm				
EQUITONE [tectiva]	8 & 10 mm				
EQUITONE [natura]	8 & 12 mm	1250	2500	1250	3100
EQUITONE [natura] PRO	8 & 12 mm				
EQUITONE [pictura]	8 & 12 mm				
EQUITONE [textura]	8 & 12 mm				

Maximum usable panel sizes (imperial)

EQUITONE [linea]	3/8 in	4'	8' - 2"	4'	10'
EQUITONE [lunara]	3/8 in				
EQUITONE [tectiva]	5/16 & 3/8 in				
EQUITONE [natura]	5/16 & 15/32 in	4' - 1"	8' - 2"	4' - 1"	10' - 2"
EQUITONE [natura] PRO	5/16 & 15/32 in				
EQUITONE [pictura]	5/16 & 15/32 in				
EQUITONE [textura]	5/16 & 15/32 in				

[Go to Content](#)**Panel fixings: UNI-Rivet**

Color matched and available in the following materials and grades:

Stainless Steel A2 (304) - Material number 1.4567
Available with additional protective coating (C5 acc. ISO 12944-2) for use in e. g. coastal areas

Stainless Steel A4 (316) - Material number 1.4578
Available with additional protective coating (C5 acc. ISO 12944-2) for use in e. g. coastal areas

Aluminum AlMg5 (5056A)
Available with additional protective coating (C5 acc. ISO 12944-2) for use in e. g. coastal areas

Rivets are available in different lengths to suit a range of support frame thicknesses.

For 8 mm EQUITONE panels and EQUITONE [linea]

Rivet type	Support frame Base Metal Thickness (BMT)
4x18 K15 Aluminum UNI-Rivet	0.067 in to 0.118 in
4x18 K15 Stainless Steel UNI-Rivet	0.067 in to 0.138 in
4x20 K15 Stainless Steel UNI-Rivet	0.138 in to 0.217 in



For 10 mm EQUITONE panels and EQUITONE [lunara]

Rivet type	Support frame Base Metal Thickness (BMT)
4x20 K15 Aluminum UNI-Rivet	0.067 in to 0.118 in
4x20 K15 Stainless Steel UNI-Rivet	0.067 in to 0.138 in
4x22 K15 Stainless Steel UNI-Rivet	0.138 in to 0.217 in

For 12 mm EQUITONE panels

Rivet type	Support frame Base Metal Thickness (BMT)
4x25 K15 Aluminum UNI-Rivet	0.067 in to 0.157 in
4x22 K15 Stainless Steel UNI-Rivet	0.067 in to 0.138 in
4x24 K15 Stainless Steel UNI-Rivet	0.138 in to 0.217 in

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Each panel thickness has its own corresponding UNI-Rivet with its own length of red and green sleeves. UNI-Rivet system is based on GO (gliding=green) & STOP (fixed=red) point principle intelligently allowing for 3-D movement in the connection. Only two STOP points are required per panel. Refer to UNI-Rivet Planning and Application Guide for further information.

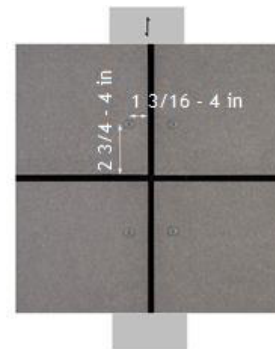
Panel hole size is 11 mm for both GO & STOP points, drilled with 11 mm EQUITONE drill bit.

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: $1 \frac{3}{16} - 4$ in

From the edge perpendicular to support frame: $2 \frac{3}{4} - 4$ in



Compressible Foam Tape

Used between the framing and panel as part of UNI-Rivet fixing system to allow in-out movement of the panel.



Perforated Closure

Aluminum perforated profile used to close the cavity entry and outlet to prevent the entry of birds and vermin.

Available in four different widths to suit a range of cavity thicknesses and two different colors: uncoated aluminum and black coated aluminum.

The perforation rate is approximately 35 %.



Baffle

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

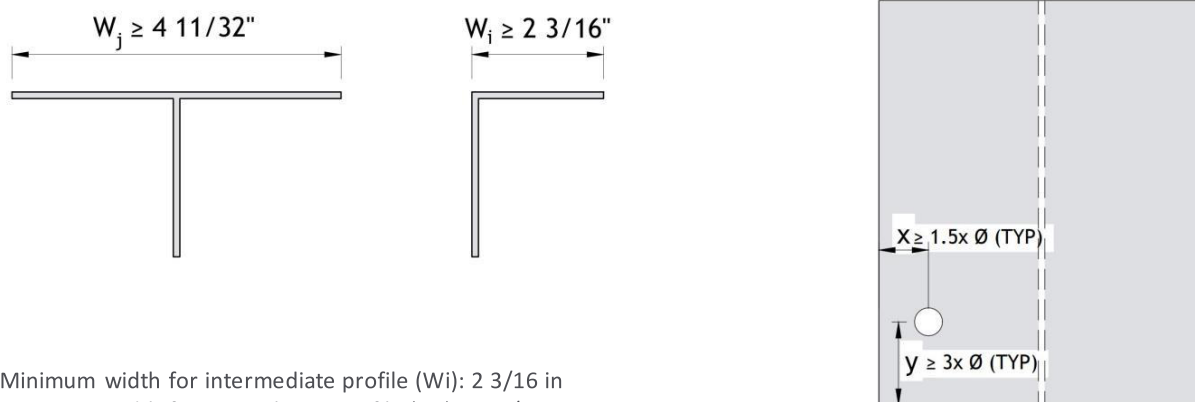
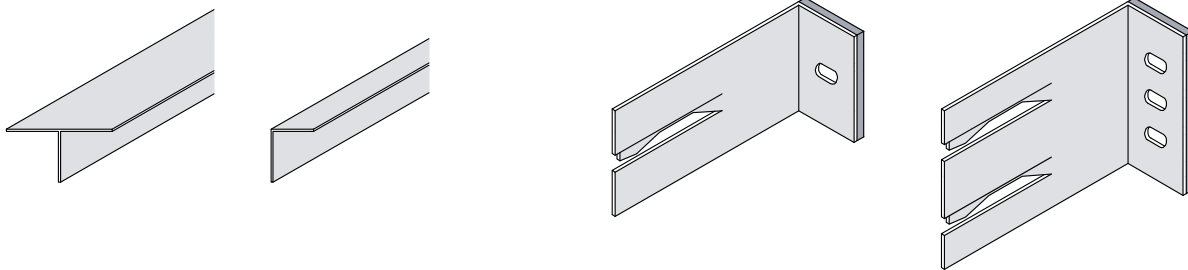
The profile is 23 gauge



Support frame

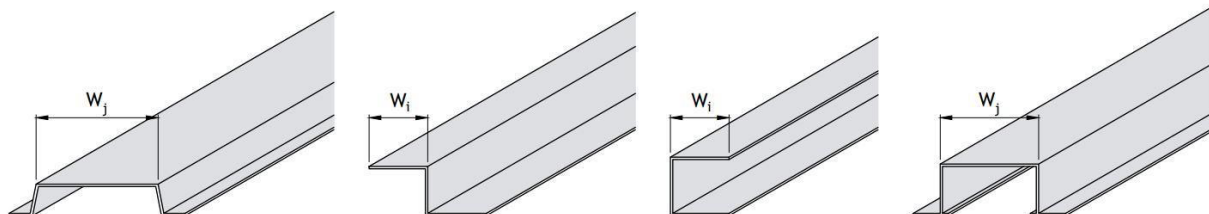
The construction details in this document are shown as an example with aluminum T- and L-profiles.

Vertical profiles	Gliding point bracket	Fixed point bracket
-------------------	-----------------------	---------------------



Minimum width for intermediate profile (W_i): 2 3/16 in
 Minimum width for vertical joint profile (W_j): 4 11/32 in
 Minimum fastener edge distance perpendicular to profile (x): 1,5x \varnothing of the fastener
 Minimum fastener edge distance parallel to profile (y): 3x \varnothing of the fastener

Other shapes of profiles



The cladding support frame and its connection to the substructure shall be designed and selected by the project engineer in accordance with the relevant standards. The support frame maximum deflection under the influence of load shall be limited to Span/300 with a maximum of 5/32 in.

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.

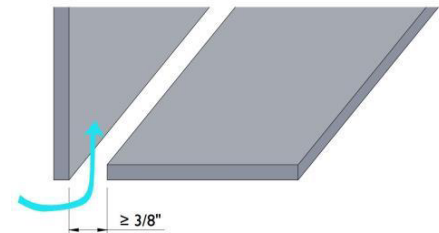
The bare minimum clear gap (cavity width) for ventilation behind the panels is $3/4$ in and may need to be increased based on the vertical distance between ventilation inlet and outlet. Typical cavity width will be governed by the framing dimensions and be approximately $1\ 3/16$ - $2\ 3/8$ in.

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.

The size of inlets and outlets should be executed as stipulated in this document and the Planning & Application Guide or according to local standards and building regulations. The following requirements are bare minimums.

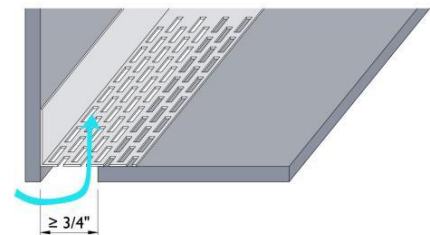
Ventilation without perforated closure

The size of ventilation inlet and outlet should be a minimum of $3/8$ in (≥ 4.75 in² / foot) and may need to be increased depending on local regulations and/or the vertical distance between inlets and outlets (cladding height).



Ventilation with perforated closure

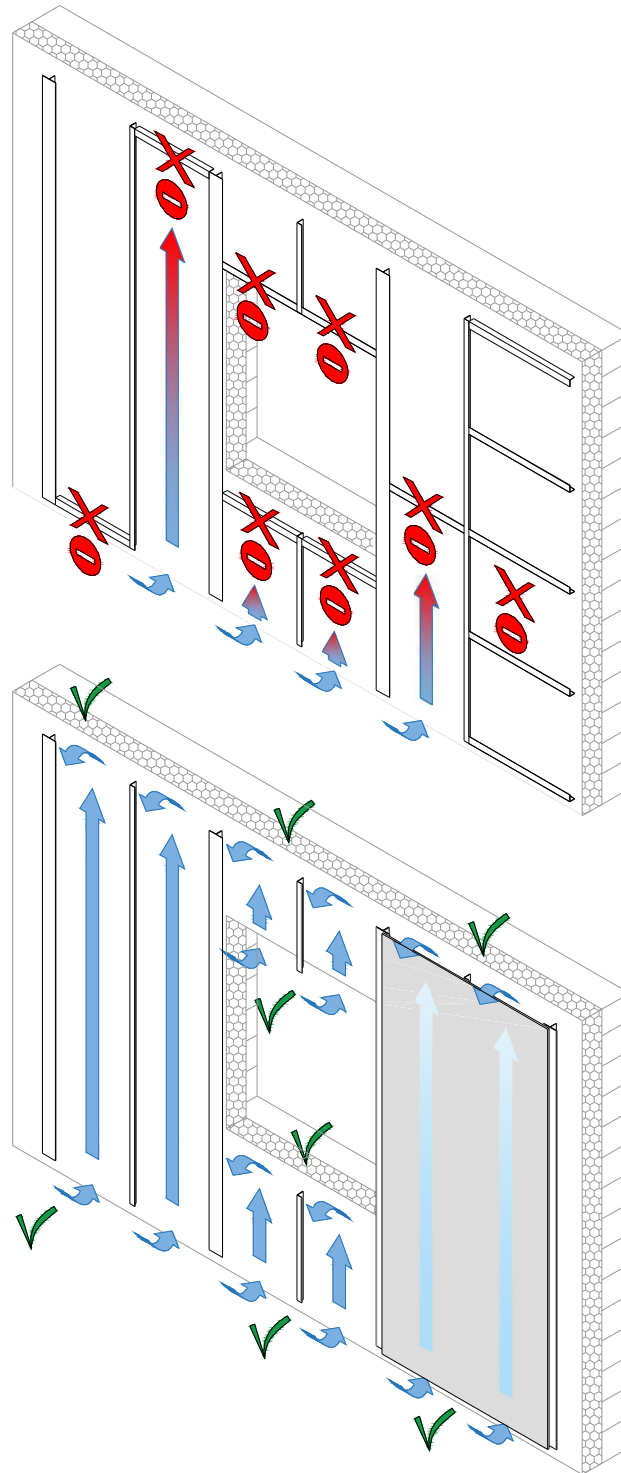
If by local regulations the use of a perforated closure is required e. g. to vermin proof the cavity then the size of the inlet and outlet must be increased depending on the open area percentage of the used profile to achieve a bare minimum open area of more than 4.75 in² / foot. E.g., in case of a 35 % perforated closure the minimum open gap should be minimum $1\ 3/16$ in.



The minimum open area may need to be increased depending on local regulations and/or the vertical distance between the ventilation inlet and outlet (cladding height)

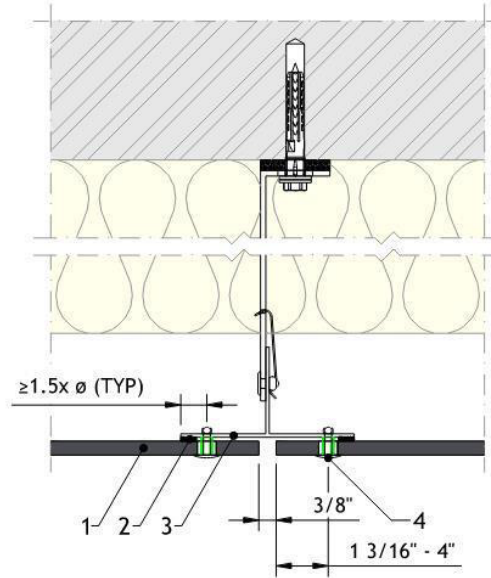
The perforated angle should be less than $1/32$ in in thickness when placed between EQUITONE and the support frame

Important points to consider (Do's and Don'ts) : Air flow

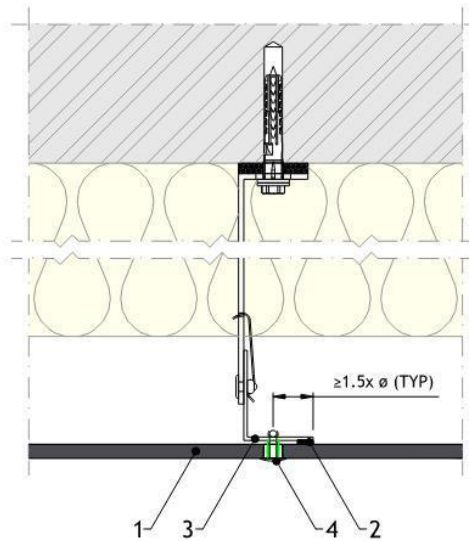


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1. EQUITONE facade panel
2. Foam tape
3. Metal support frame
4. UNI-Rivet

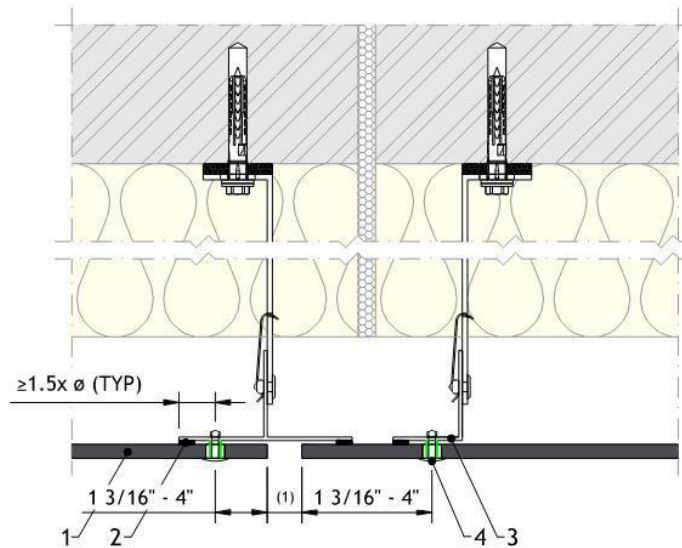


Detail 1 - Vertical joint

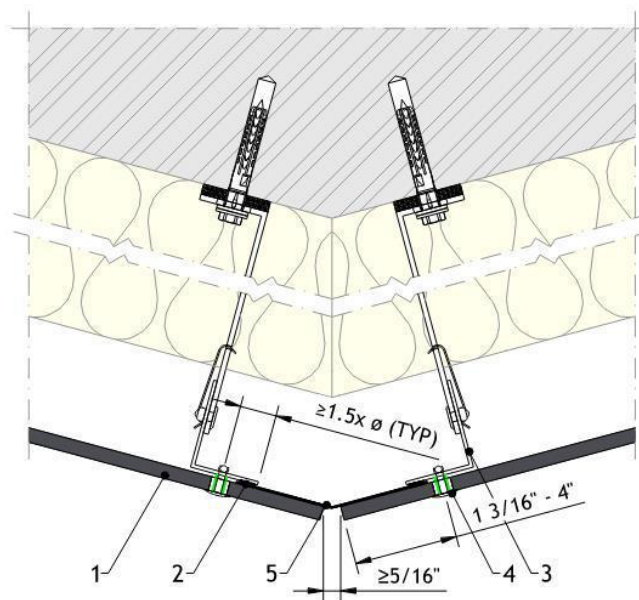


Detail 2 - Intermediate support profile

1. EQUITONE facade panel
2. Foam tape
3. Metal support frame
4. UNI-Rivet
5. Flashing⁽²⁾



Detail 3 - Vertical control joint



Detail 4 - Vertical joint at angle

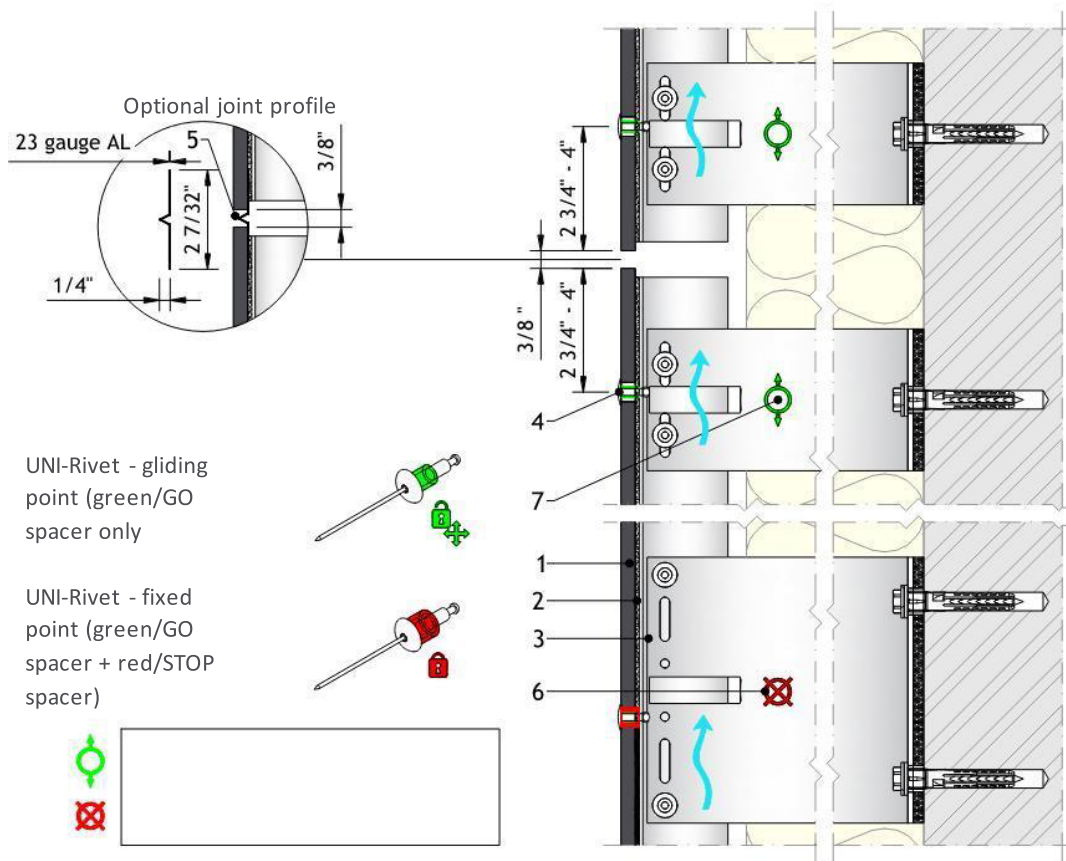
Notes:

- 1) The width of the the facade control joint should be equal or greater than the building control joint.
- 2) Flashings to close the joints may not be thicker as 1/32 in.

1. EQUITONE facade panel
2. Foam tape
3. Metal support frame
4. UNI-Rivet
5. Horizontal joint profile
6. Fixed point bracket
7. Gliding point bracket



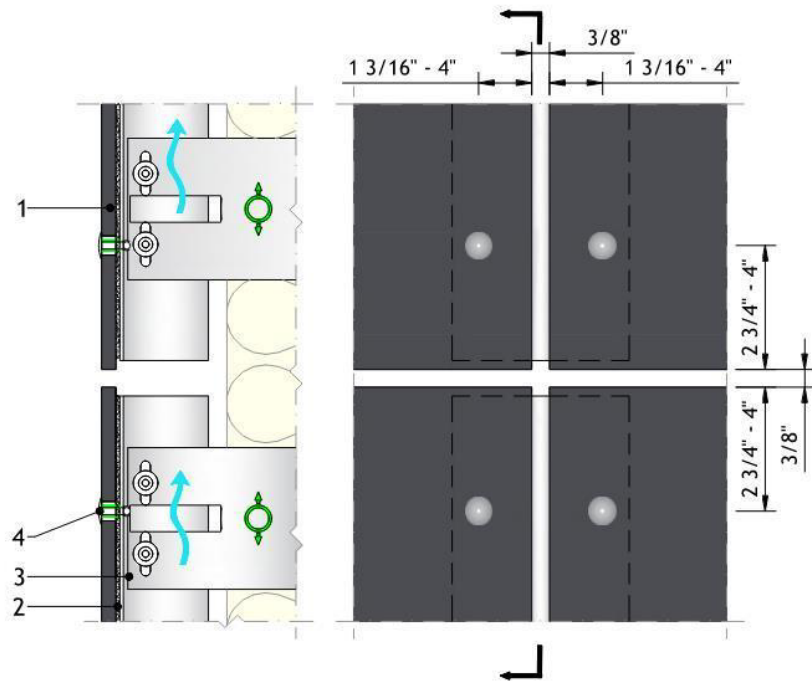
Free air flow



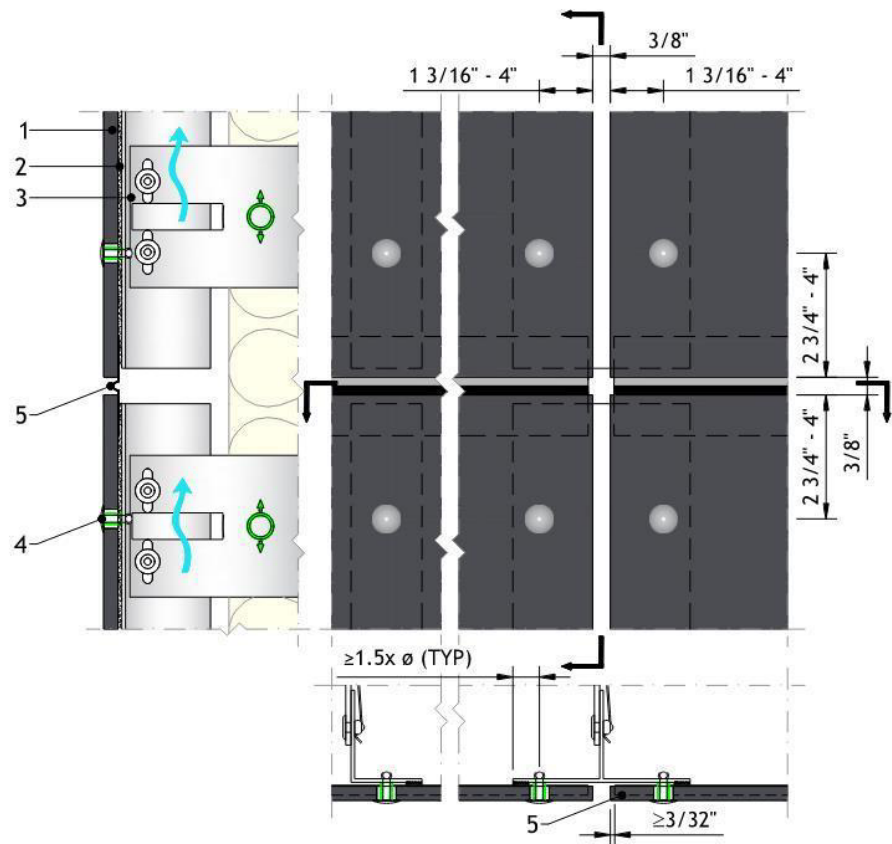
Detail 5 - Relation between fixed and gliding points

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1. EQUITONE facade panel
2. Foam tape
3. Metal support frame
4. UNI-Rivet
5. Horizontal joint profile




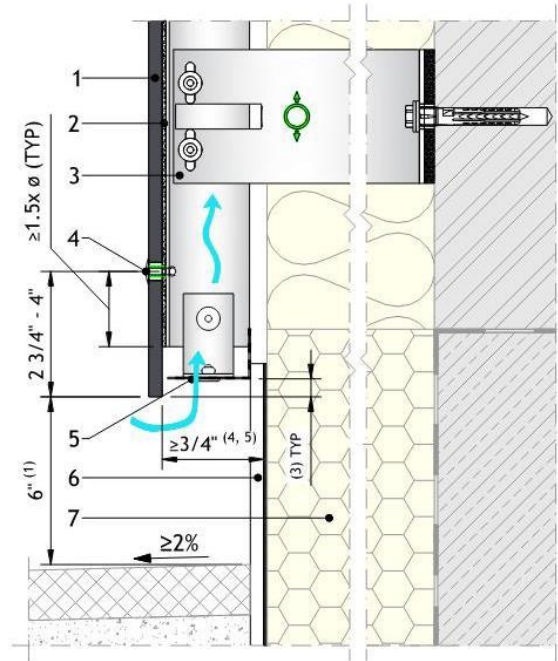
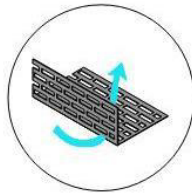
Detail 6 - Open horizontal joint junction with vertical joint



Detail 7 - Baffled horizontal joint junction with vertical joint

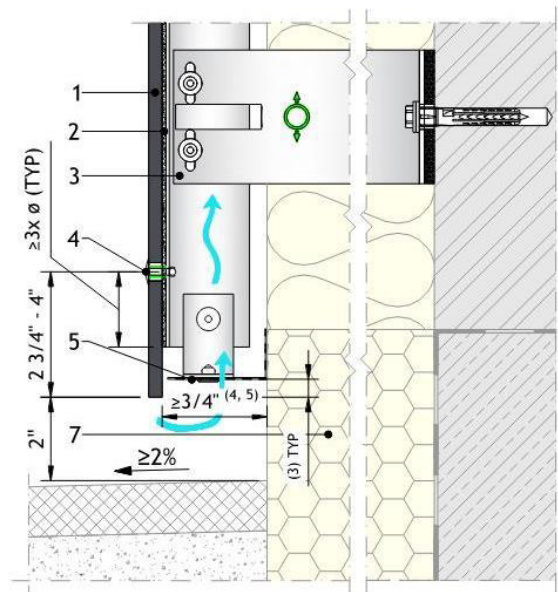
1. EQUITONE facade panel
2. Foam tape
3. Metal support frame
4. UNI-Rivet
5. Perforated closure
6. Skirting⁽²⁾ in EQUITONE [tectiva], EQUITONE [pictura], EQUITONE [textura]
7. Hard insulation suitable for use below ground level

Free air flow

Detail 8 - Base detail – Ground level

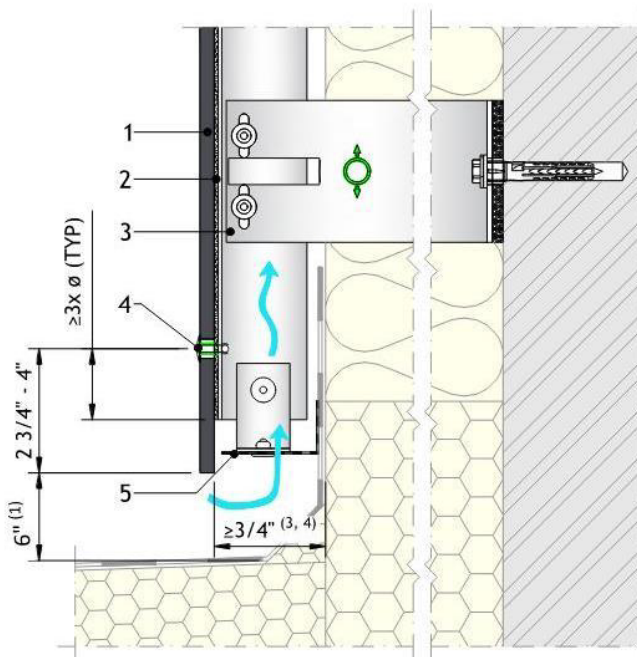
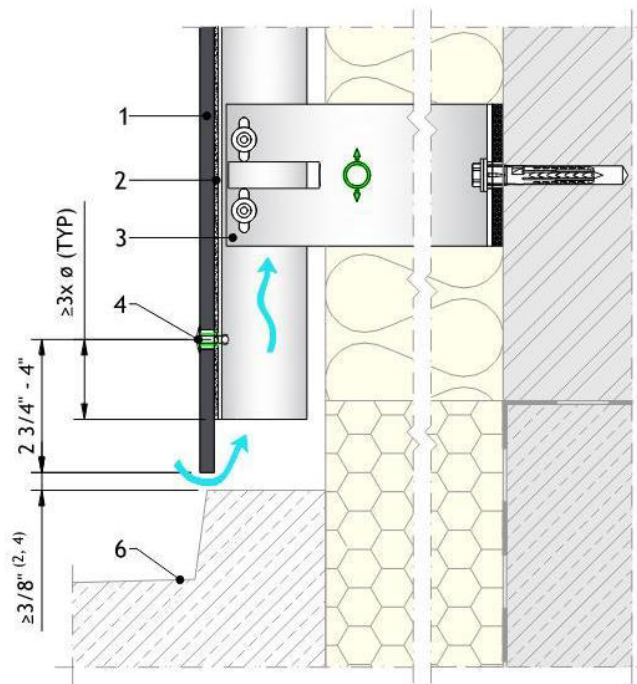
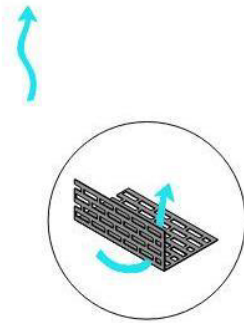
Detail 9 - Base detail – Covered area



Notes:

- 1) The distance to ground level is recommended to be, at minimum, 6 in. A smaller ground clearance is possible, but it may increase the risk of water marks and panel staining caused by splash back.
- 2) The skirting board could be concrete, natural stone, render, metal flashing or EQUITONE.
- 3) The facade panel should preferably overhang more than 3/8 in below the ventilation profile to create a drip edge.
- 4) When the inlet/outlet is wider than 3/4 inch continuous, a perforated closure is recommended to prevent debris build up. Total perforation area should be a minimum of 4.75 in² per linear foot. This roughly equates to a minimum continuous opening of 3/8 inch.
- 5) Inlet/Outlet, air cavity, and closure perforation sizing should be increased, from those expressed herein, depending upon building height and/or local legislation. Visit the Planning and Application Guide - Face Fixing to Metal for additional information.

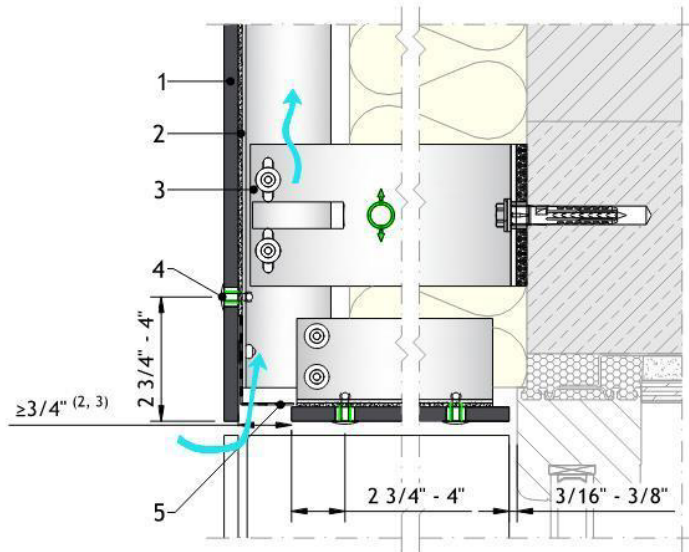
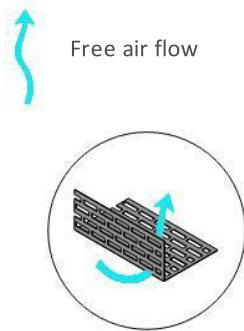
1. EQUITONE facade panel
2. Foam tape
3. Metal support frame
4. UNI-Rivet
5. Perforated closure
6. Balcony floor



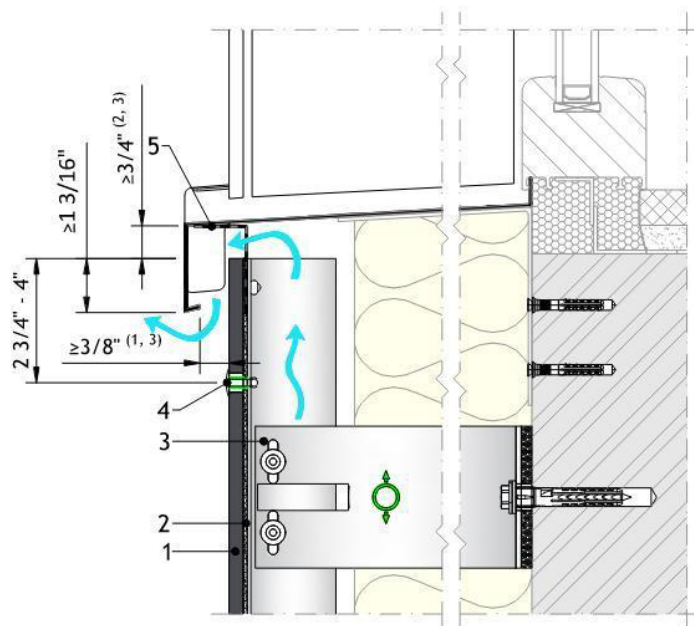
Notes

- 1) The distance to the ground level is recommended to be, at minimum, 6 in. A smaller ground clearance is possible but it may increase the risk of water marks and panel staining caused by splash back.
- 2) Where a perforated closure is not obstructing the inlet/outlet, the opening should be a minimum of 3/8 inch continuous.
- 3) When the inlet/outlet is wider than 3/4 inch continuous, a perforated closure is recommended. Total perforation area should be a minimum of 4.75 in² per linear foot. This roughly equates to a minimum continuous opening of 3/8 inch.
- 4) Inlet/Outlet, air cavity, and closure perforation sizing should be increased, from those expressed herein, depending upon building height and/or local legislation. Visit the Planning and Application Guide - Face Fixing to Metal for additional information.

1. EQUITONE facade panel
2. Foam tape
3. Metal support frame
4. UNI-Rivet
5. Perforated closure



Detail 12 - Window head – Option 1

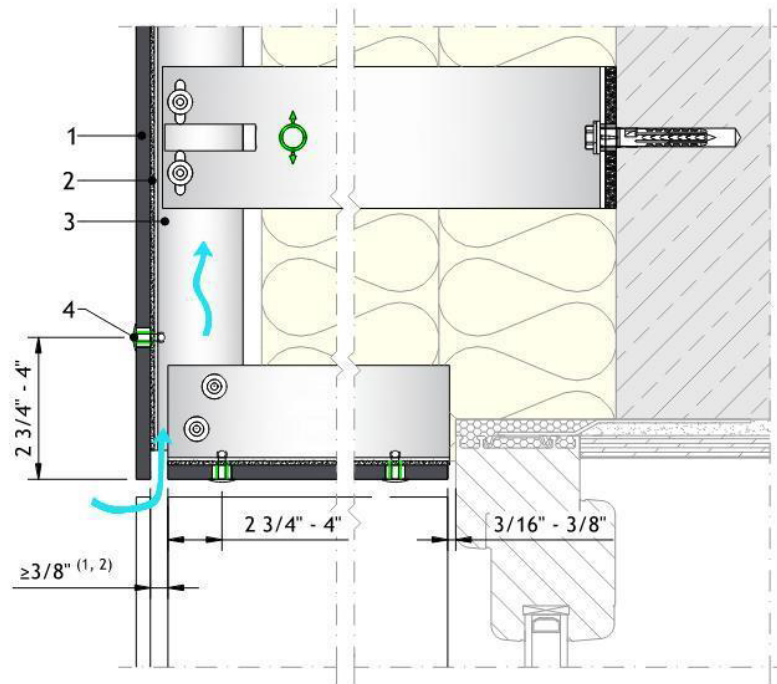
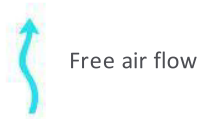


Detail 13 - Window sill – Option 1

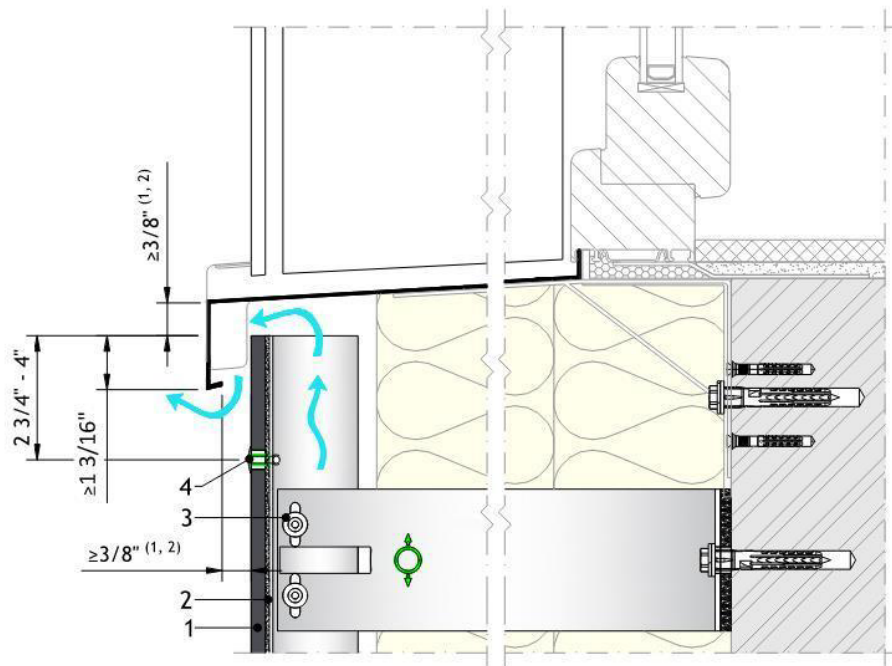
Notes:

- 1) Where a perforated closure is not obstructing the inlet/outlet, the opening should be a minimum of 3/8 inch continuous.
- 2) When the inlet/outlet is wider than 3/4 inch continuous, a perforated closure is recommended. Total perforation area should be a minimum of 4.75 in² per linear foot. This roughly equates to a minimum continuous opening of 3/8 inch.
- 3) Inlet/Outlet, air cavity, and closure perforation sizing should be increased, from those expressed herein, depending upon building height and/or local legislation. Visit the Planning and Application Guide - Face Fixing to Metal for additional information.

1. EQUITONE facade panel
2. Foam tape
3. Metal support frame
4. UNI-Rivet



Detail 14 - Window head – Option 2

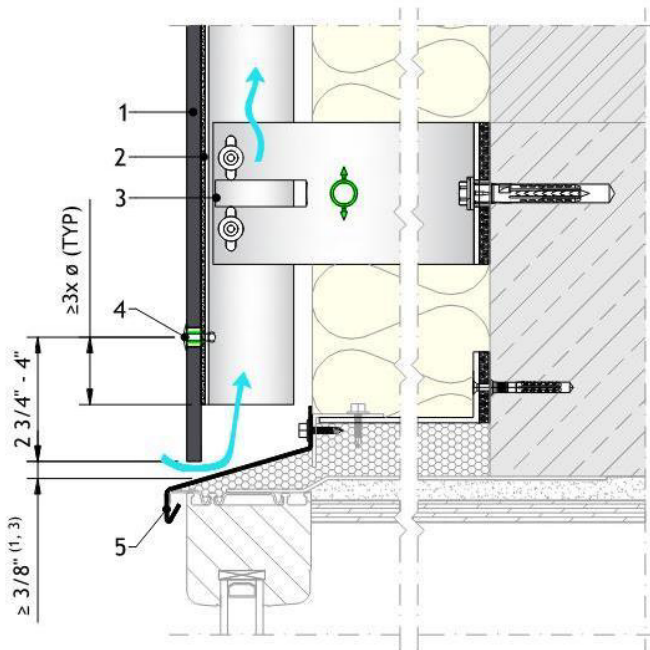
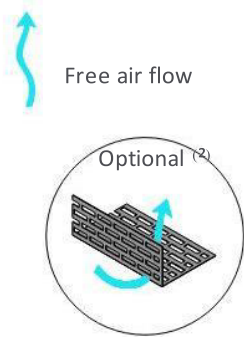


Detail 15 - Window sill – Option 2

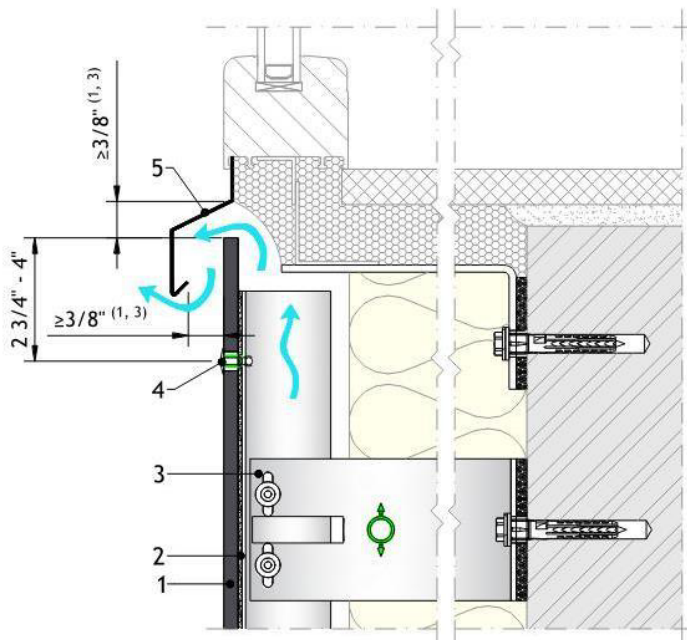
Notes:

- 1) Where a perforated closure is not obstructing the inlet/outlet, the opening should be a minimum of 3/8 inch continuous.
- 2) Inlet/Outlet, air cavity, and closure perforation sizing should be increased, from those expressed herein, depending upon building height and/or local legislation. Visit the Planning and Application Guide - Face Fixing to Metal for additional information.

1. EQUITONE facade panel
2. Foam tape
3. Metal support frame
4. UNI-Rivet
5. Aluminum flashing



Detail 16 - Window head – Flush window

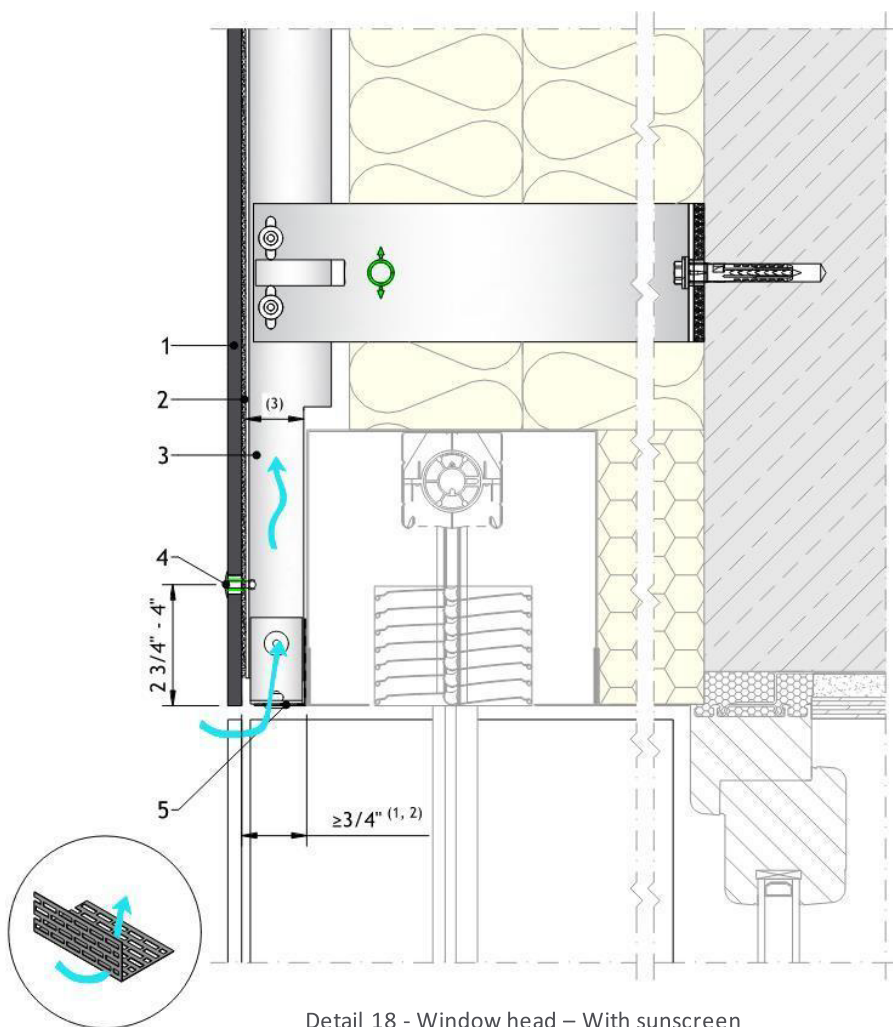
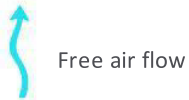


Detail 17 - Window sill – Flush window

Notes:

- 1) Where a perforated closure is not obstructing the inlet/outlet, the opening should be a minimum of 3/8 inch continuous.
- 2) When the inlet/outlet is wider than 3/4 inch continuous, a perforated closure is recommended. Total perforation area should be a minimum of 4.75 in² per linear foot. This roughly equates to a minimum continuous opening of 3/8 inch.
- 3) Inlet/Outlet, air cavity, and closure perforation sizing should be increased, from those expressed herein, depending upon building height and/or local legislation. Visit the Planning and Application Guide - Face Fixing to Metal for additional information.

1. EQUITONE facade panel
2. Foam tape
3. Metal support frame
4. UNI-Rivet
5. Perforated closure

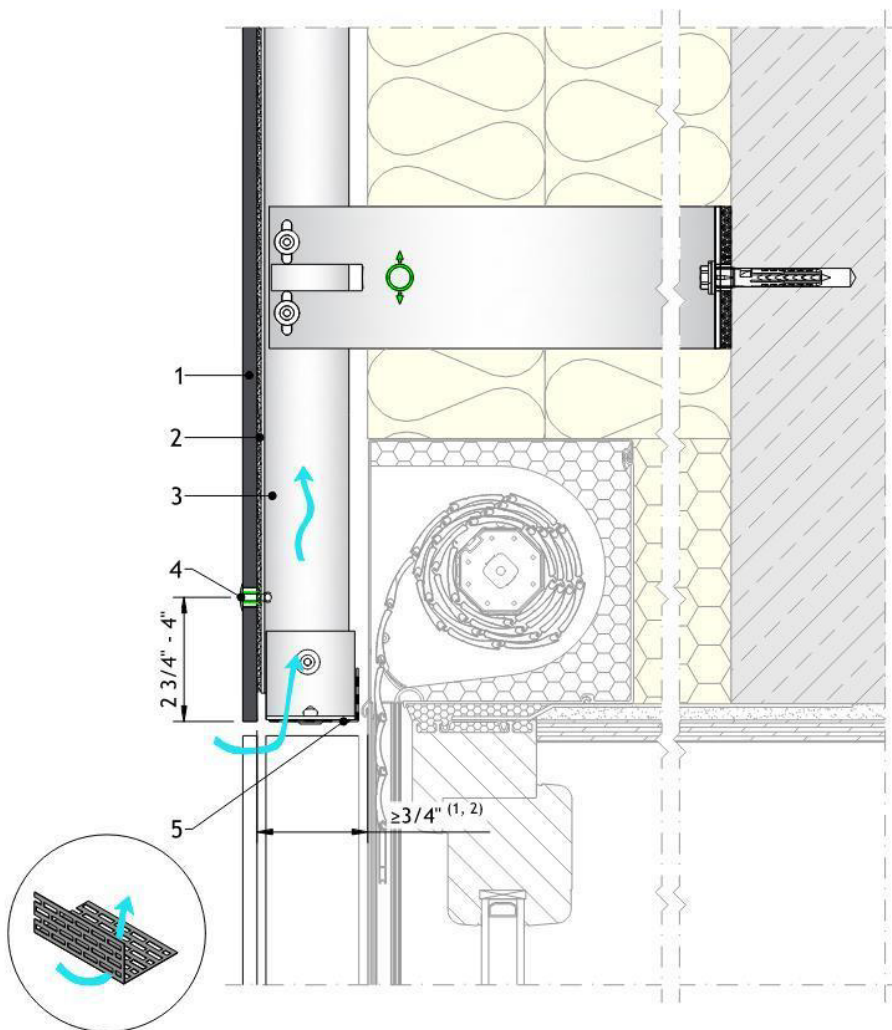
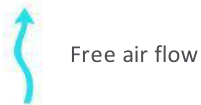


Detail 18 - Window head – With sunscreen

Notes:

- 1) When the inlet/outlet is wider than 3/4 inch continuous, a perforated closure is recommended. Total perforation area should be a minimum of 4.75 in² per linear foot. This roughly equates to a minimum continuous opening of 3/8 inch.
- 2) Inlet/Outlet, air cavity, and closure perforation sizing should be increased, from those expressed herein, depending upon building height and/or local legislation. Visit the Planning and Application Guide - Face Fixing to Metal for additional information.
- 3) The reduced section of the support profiles must be taken into account during static calculations.

1. EQUITONE facade panel
2. Foam tape
3. Metal support frame
4. UNI-Rivet
5. Perforated closure

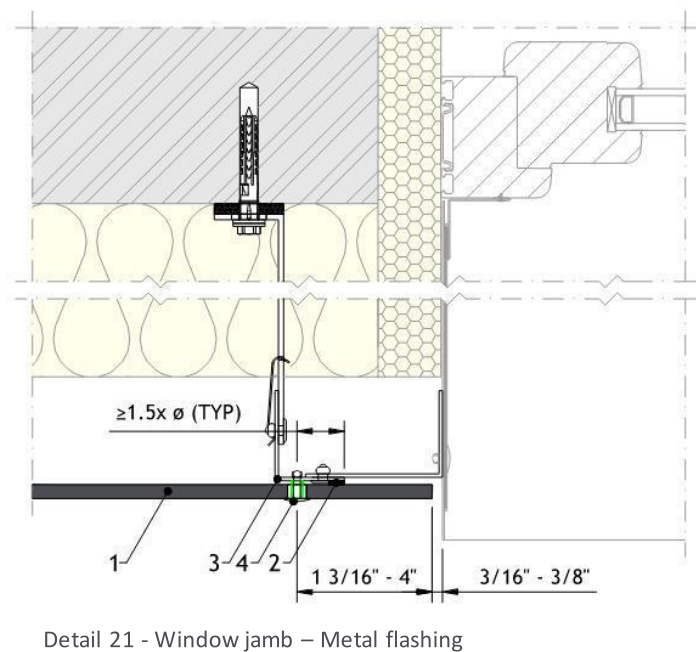
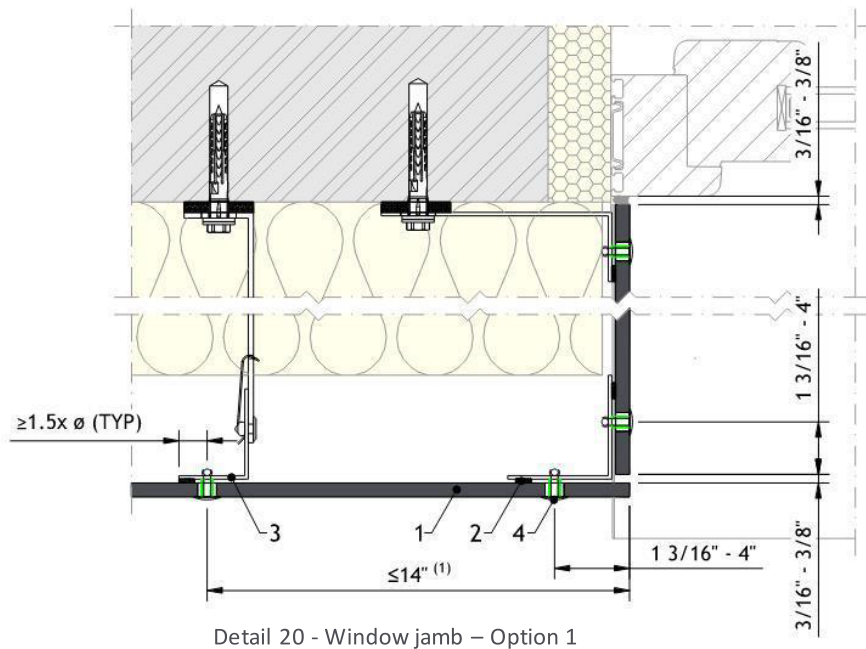


Detail 19 - Window head – With shutter

Notes:

- 1) When the inlet/outlet is wider than 3/4 inch continuous, a perforated closure is recommended. Total perforation area should be a minimum of 4.75 in² per linear foot. This roughly equates to a minimum continuous opening of 3/8 inch.
- 2) Inlet/Outlet, air cavity, and closure perforation sizing should be increased, from those expressed herein, depending upon building height and/or local legislation. Visit the Planning and Application Guide - Face Fixing to Metal for additional information.

1. EQUITONE facade panel
2. Foam tape
3. Metal support frame
4. UNI-Rivet

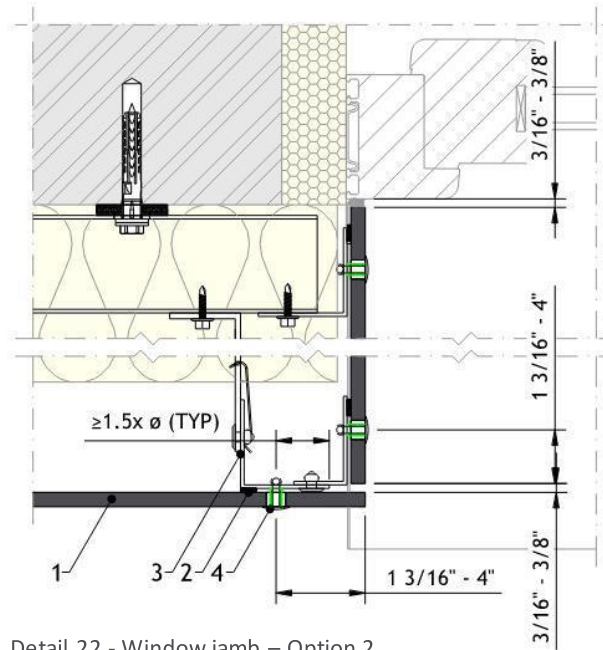


Note:

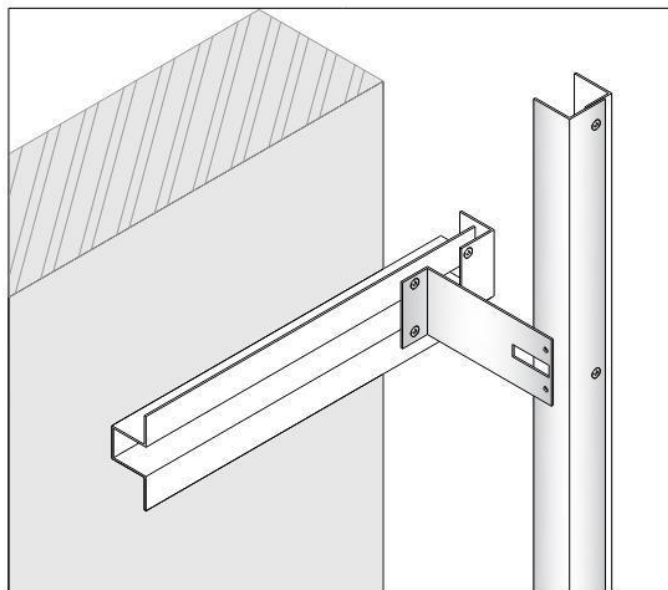
- 1) Panels with single span (panels with 2 columns of fixings) cannot be fixed to a floating angle like shown in the detail.

[Go to Content](#)

1. EQUITONE facade panel
2. Foam tape
3. Metal support frame
4. UNI-Rivet

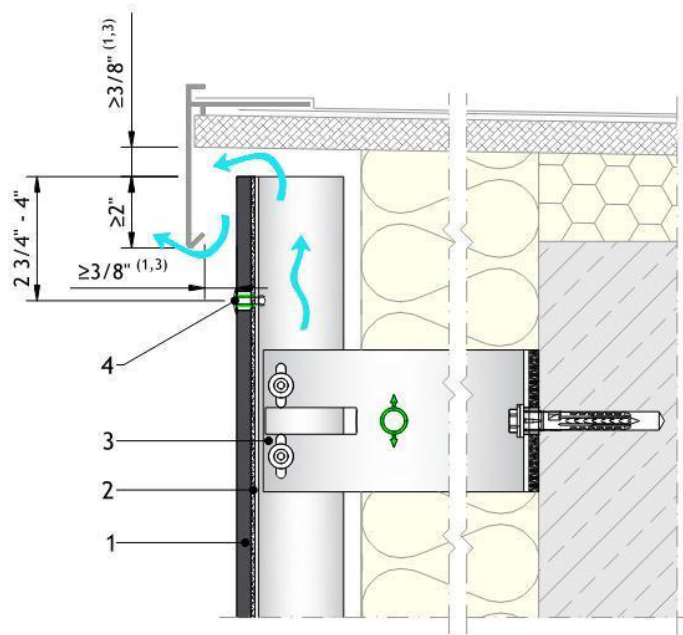
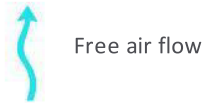


Detail 22 - Window jamb – Option 2

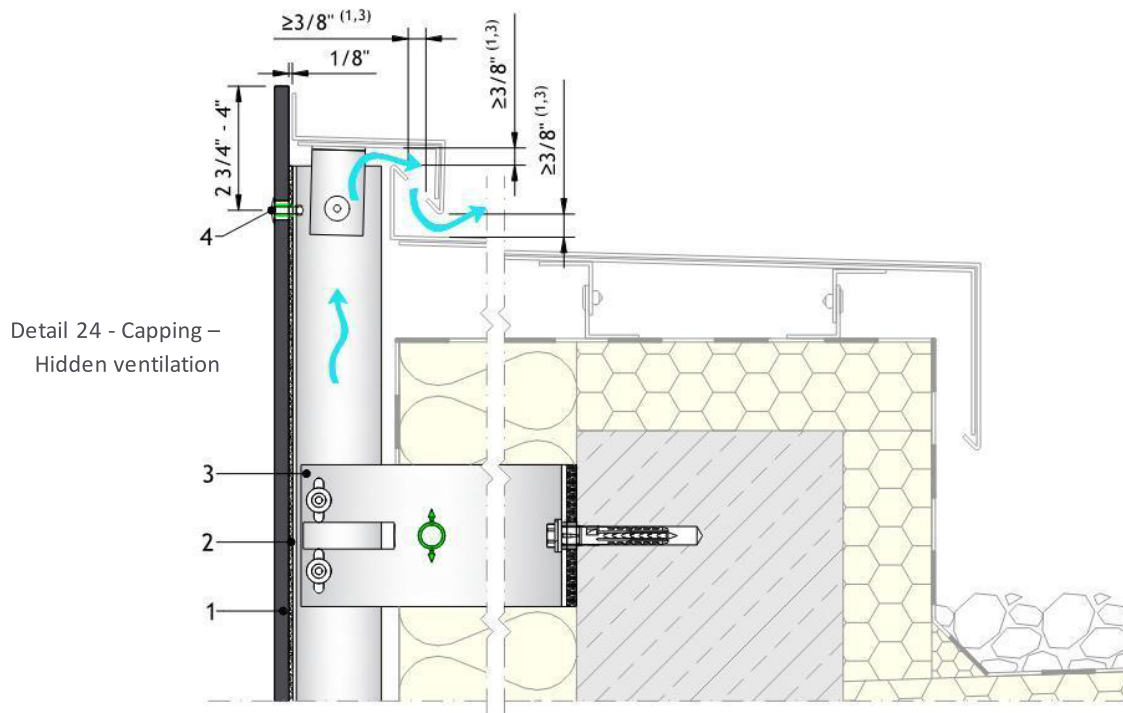


Isometric view of the support frame

1. EQUITONE facade panel
2. Foam tape
3. Metal support frame
4. UNI-Rivet



Detail 23 - Capping



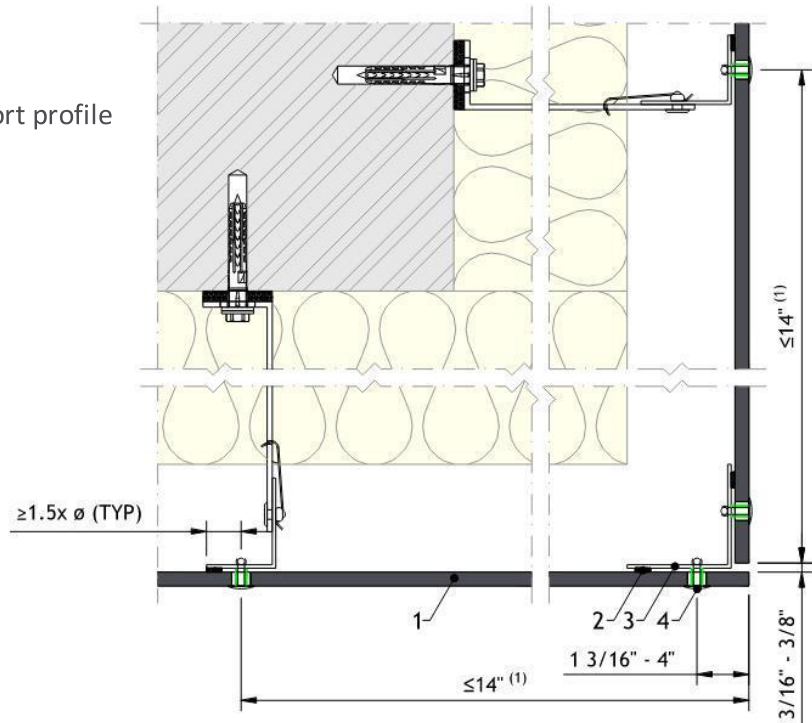
Detail 24 - Capping -
Hidden ventilation

Notes:

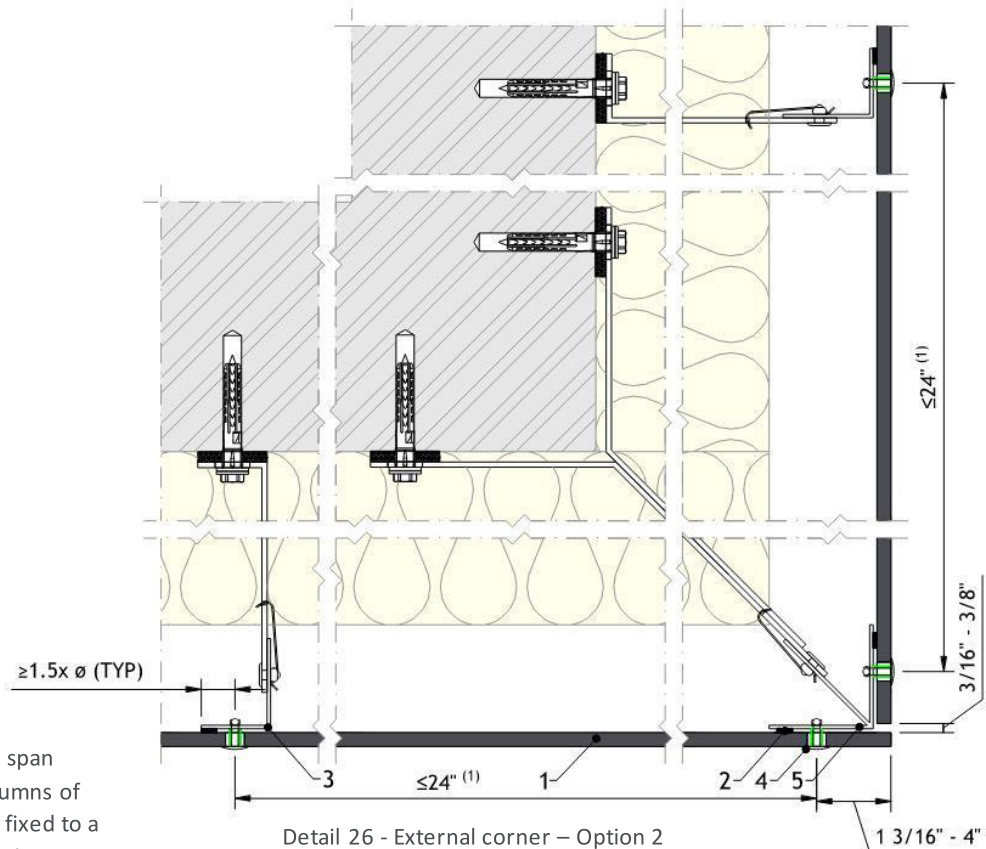
- 1) Where a perforated closure is not obstructing the inlet/outlet, the opening should be a minimum of 3/8 inch continuous.
- 2) When perforated closures are used underneath the capping, the ventilation outlet opening between the panel and capping should be a minimum of 1 3/16 inch. Total perforation area should be a minimum of 4.75 in² per linear foot. This roughly equates to a minimum continuous opening of 3/8 inch.
- 3) Inlet/Outlet, air cavity, and closure perforation sizing should be increased, from those expressed herein, depending upon building height and/or local legislation. Visit the Planning and Application Guide - Face Fixing to Metal for additional information.

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1. EQUITONE facade panel
2. Foam tape
3. Metal support frame
4. UNI-Rivet
5. Custom made metal support profile



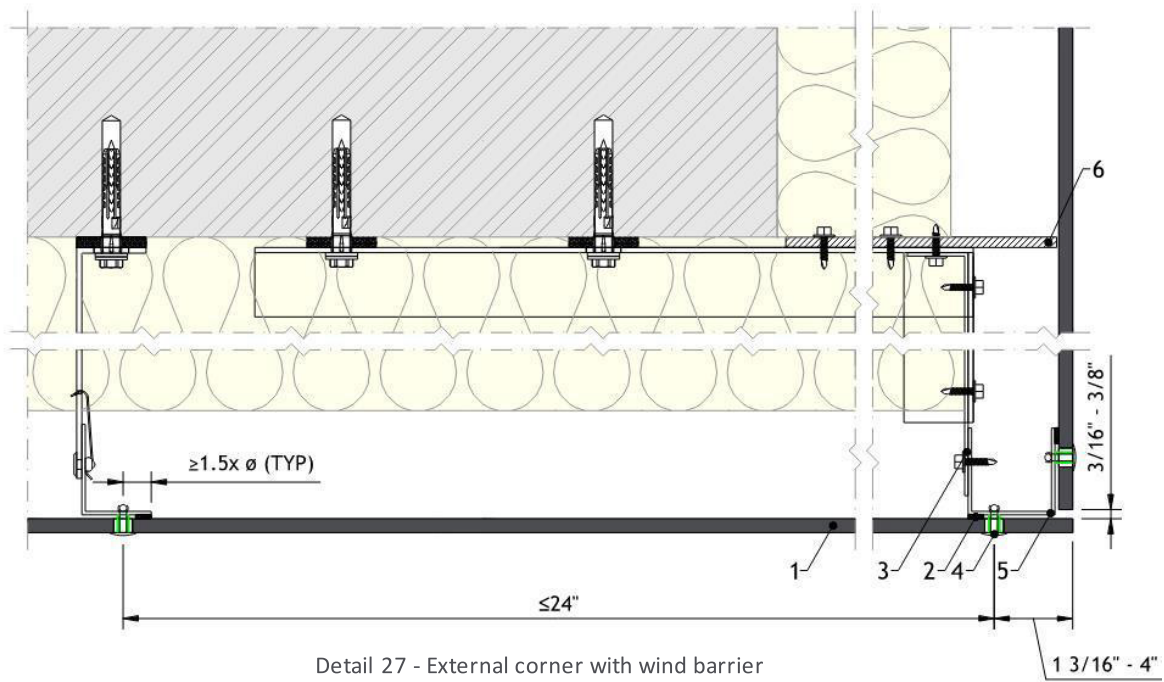
Detail 25 - External corner – Option 1



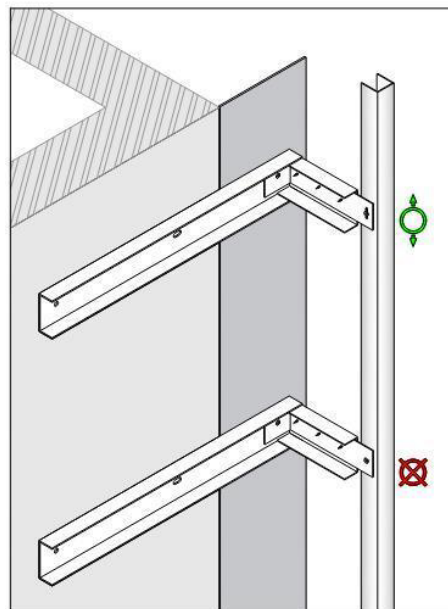
Detail 26 - External corner – Option 2

Note:

- 1) Panels with single span (panels with 2 columns of fixings) cannot be fixed to a floating angle like shown in the detail.



1. EQUITONE facade panel
2. Foam tape
3. Metal support frame
4. UNI-Rivet
5. U-shaped profile
6. Wind barrier (metal or fibre-cement)



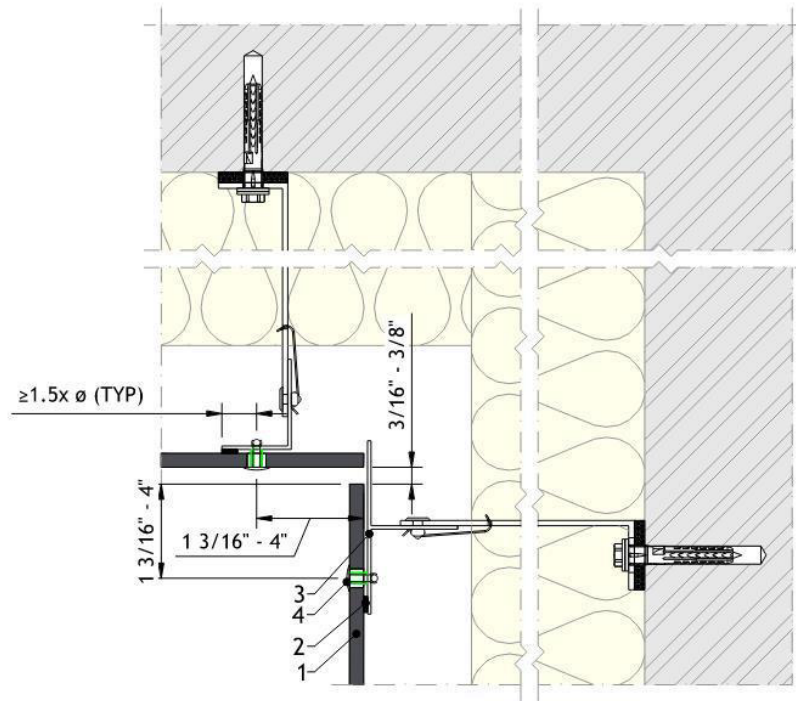
Isometric view of the support frame

Note:

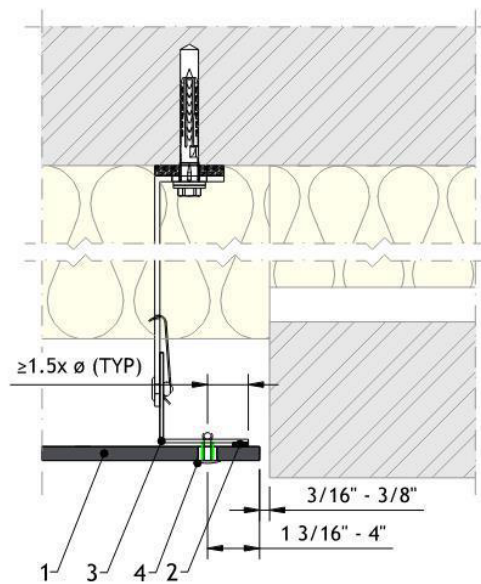
The installation of wind barrier is subject to local standards and building regulation.

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1. EQUITONE facade panel
2. Foam tape
3. Metal support frame
4. UNI-Rivet

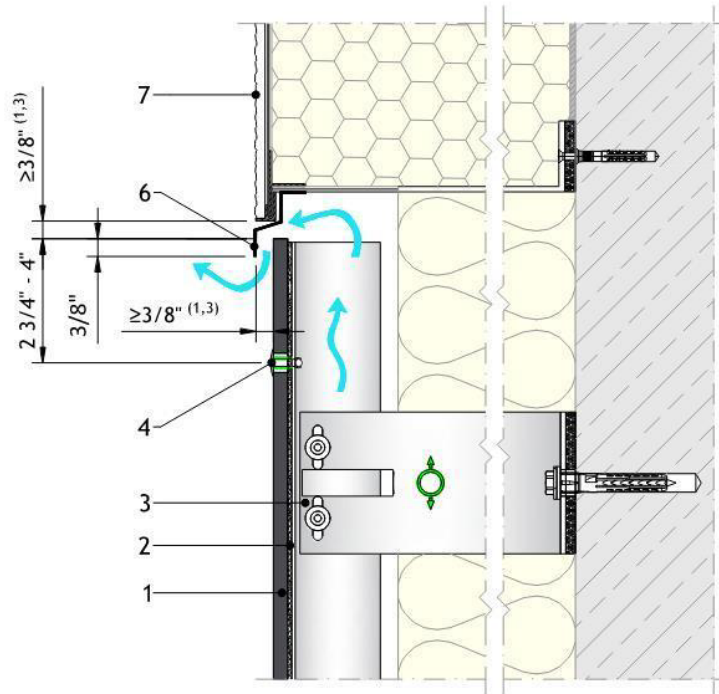


Detail 28 - Internal corner



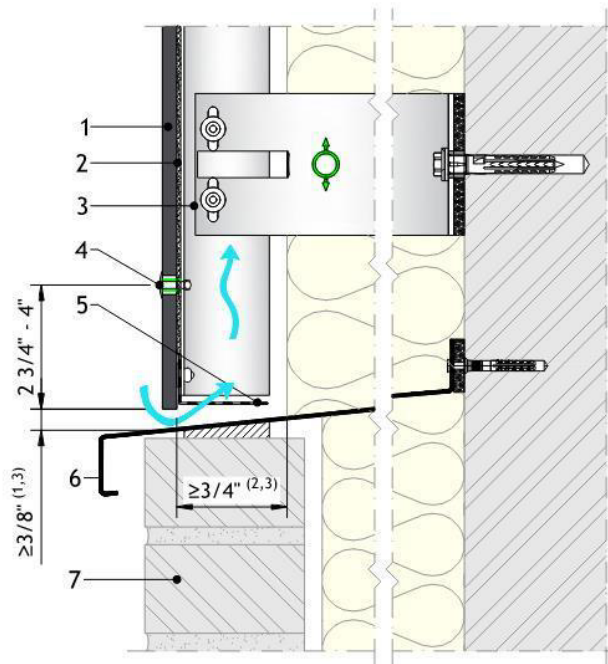
Detail 29 - Abutment

1. EQUITONE facade panel
2. Foam tape
3. Metal support frame
4. UNI-Rivet
5. Perforated closure
6. Aluminum flashing
7. Adjacent facade system



Detail 30 - Junction with other facade material – Head detail

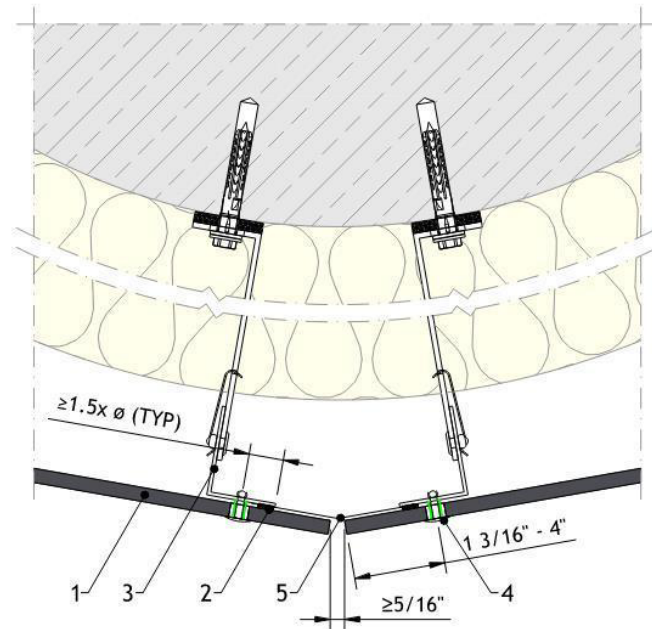
Detail 31 - Junction with other facade material – Base



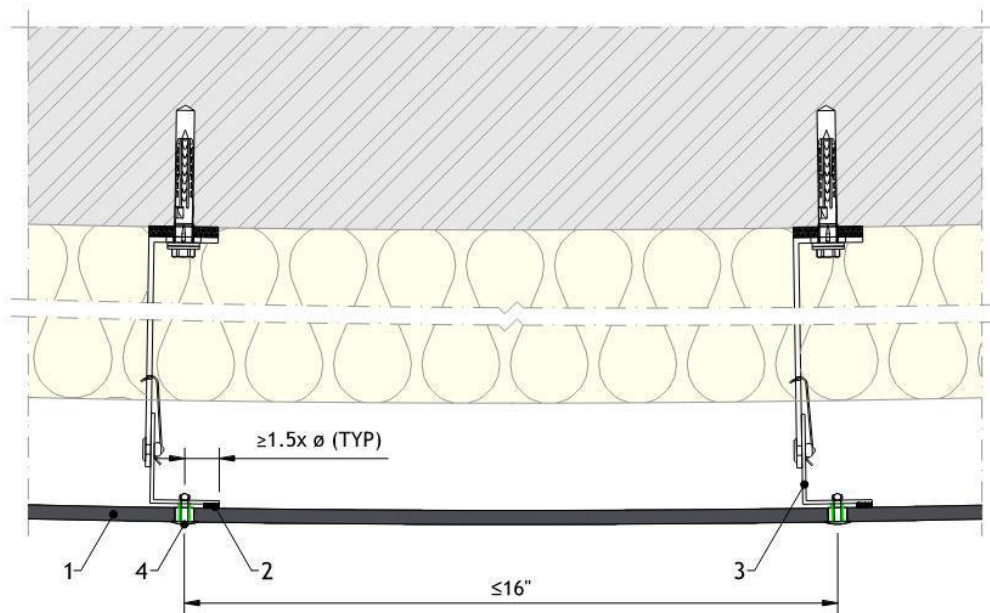
Notes:

- 1) Where a perforated closure is not obstructing the inlet/outlet, the opening should be a minimum of 3/8 inch continuous.
- 2) When the inlet/outlet is wider than 3/4 inch continuous, a perforated closure is recommended. Total perforation area should be a minimum of 4.75 in² per linear foot. This roughly equates to a minimum continuous opening of 3/8 inch.
- 3) Inlet/Outlet, air cavity, and closure perforation sizing should be increased, from those expressed herein, depending upon building height and/or local legislation. Visit the Planning and Application Guide - Face Fixing to Metal for additional information.

1. EQUITONE facade panel
2. Foam tape
3. Metal support frame
4. UNI-Rivet
5. Flashing⁽³⁾



Detail 32 - Segmented façade – Radius < 39 ft

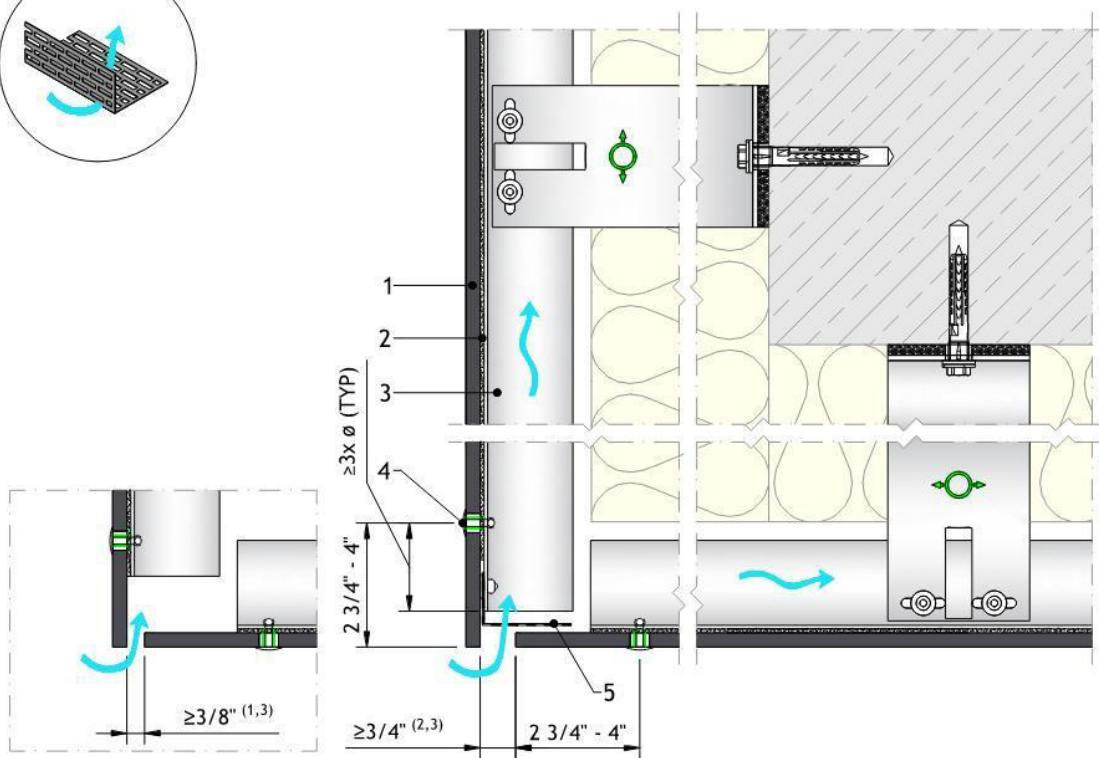
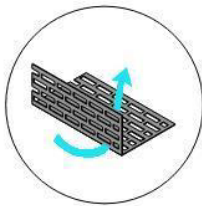


Detail 33 - Curved façade – Radius ≥ 39 ft

Notes:

- 1) The minimum radius for curved facade is 39 ft, the framing centers should be reduced to a maximum of 16 in.
- 2) For smaller radii the facade should be executed as segmented facade.
- 3) Flashings to close the joints may not be thicker than 1/32 in.

1. EQUITONE facade panel
2. Foam tape
3. Metal support frame
4. UNI-Rivet
5. Perforated closure

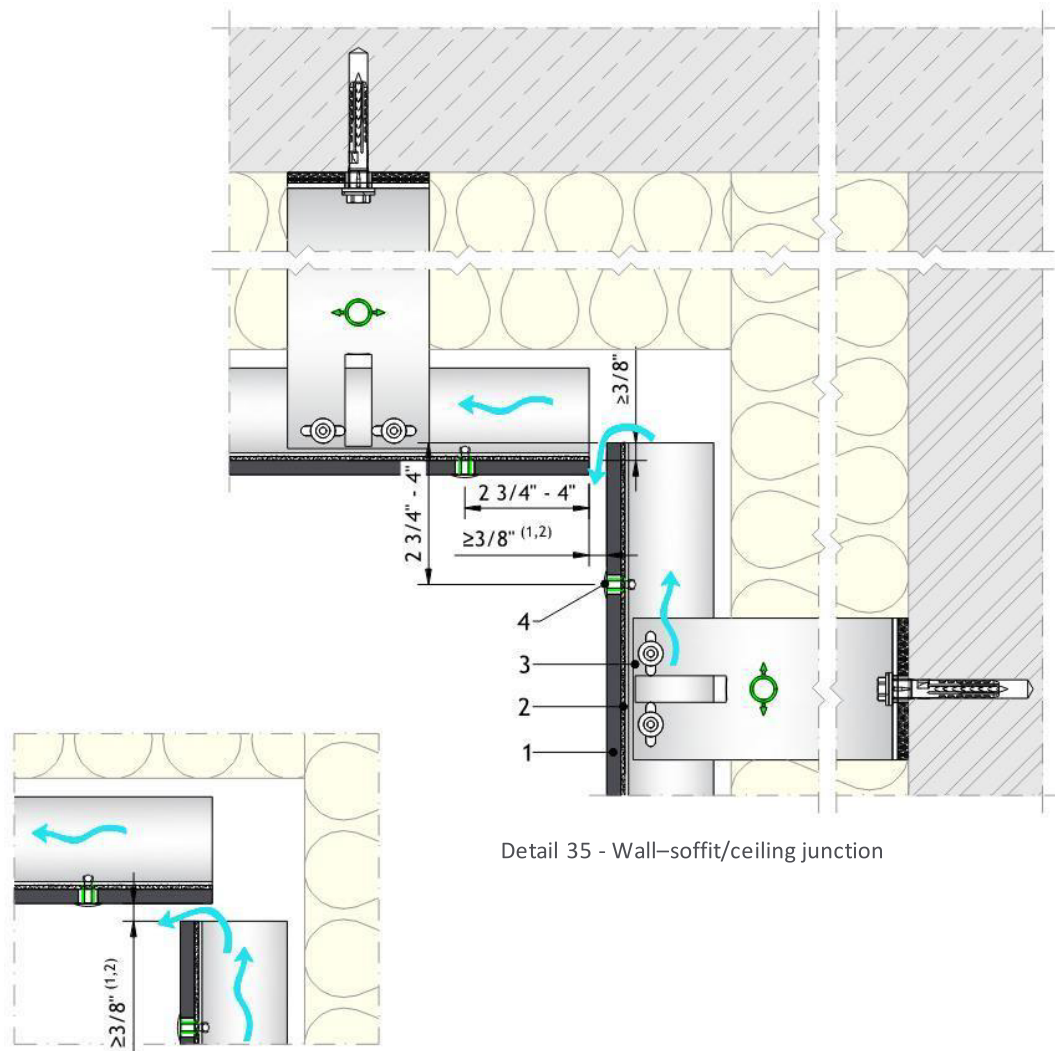
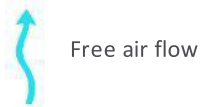


Detail 34 - Soffit/ceiling-wall junction

Notes:

- 1) Where a perforated closure is not obstructing the inlet/outlet, the opening should be a minimum of 3/8 inch continuous.
- 2) When the inlet/outlet is wider than 3/4 inch continuous, a perforated closure is recommended. Total perforation area should be a minimum of 4.75 in² per linear foot. This roughly equates to a minimum continuous opening of 3/8 inch.
- 3) Inlet/Outlet, air cavity, and closure perforation sizing should be increased, from those expressed herein, depending upon building height and/or local legislation. Visit the Planning and Application Guide - Face Fixing to Metal for additional information.
- 4) The maximum centre-spacing between the UNI-rivets in a ceiling application is 16 inches.

1. EQUITONE facade panel
2. Foam tape
3. Metal support frame
4. UNI-Rivet

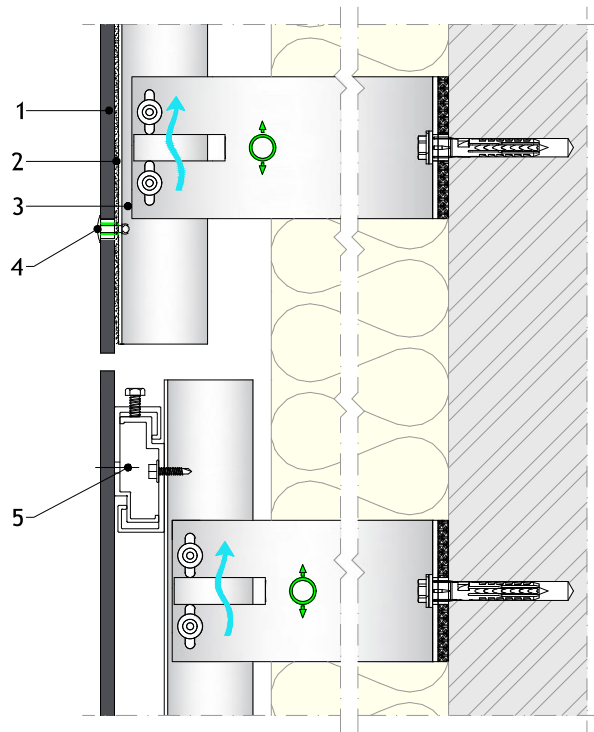
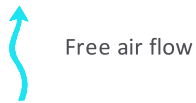


Detail 35 - Wall-soffit/ceiling junction

Notes:

- 1) Where a perforated closure is not obstructing the inlet/outlet, the opening should be a minimum of 3/8 inch continuous.
- 2) Inlet/Outlet, air cavity, and closure perforation sizing should be increased, from those expressed herein, depending upon building height and/or local legislation. Visit the Planning and Application Guide - Face Fixing to Metal for additional information.
- 3) The maximum centre-spacing between the UNI-rivets in a ceiling application is 16 inches.

1. EQUITONE facade panel
2. Foam tape
3. Metal support frame
4. UNI-Rivet
5. Concealed fixing



Detail 36 - Junction with panels with concealed fixings

Notes:

- 1) Check the construction details for concealed fixing for more information.
- 2) Depending on the specified concealed fixing system the minimum panel thickness could vary from 5/16 in to 15/32 in as applicable.
- 3) Special attention must be taken to the alignment of the panels with concealed fixing and the ones with face fixings.

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Your detail was not included?

Are you looking for details in DXF, DWG format?

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Website: www.equitone.com

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