Terreal Breeze
Installation Manual

Greater Kailesh I, New Delhi

• 220B Bush Road, Rosedale, 0632 •
• T : (09) 415 2669 • Email : info@spsbuilding.co.nz

Pioneers in the art of building envelopes in terracotta for more than 20 years, TERREAL assures you architectural quality and technical performances of its ventilated facades and of its active participation in sustainable development.
TERREAL continues to develop and adapt its range to customer demand by launching a new low-cost system: Breeze®

1. Area of application

Breeze® is an extra slim (16mm) double skin rainscreen cladding system it has small dimensions (30 x 60cm) with overlapping horizontal joints. It offers the advantage of the double skin thermal insulation and moisture protection of the building thanks to its complete closed-wall system and through ventilation. Its format makes it lighter and easier to install and also more cost efficient than other large double skin products.
It can be used for new structures as well as for upgrading residential, commercial or industrial buildings.

2. *The Advantages of Breeze® System*

➔ Economical:

Thanks to its small format, it is a very light weight facade system. It is simple to install and maintenance-free.

➔ Water and wind-resistant:

The overlapping section of the Breeze® and its closed vertical joints prevent the ingress of water. The fixing system combined with the rigidity of the tile ensures a very good wind load resistance.

➔ 100% natural, recyclable and eco-friendly:

Breeze® is made of natural terracotta, a building material that combines thermal inertia and durability.

➔ Thermaly efficient:

Combined with insulation, Breeze® provides the building with high energy-performance envelop.

3. *Support Structure*

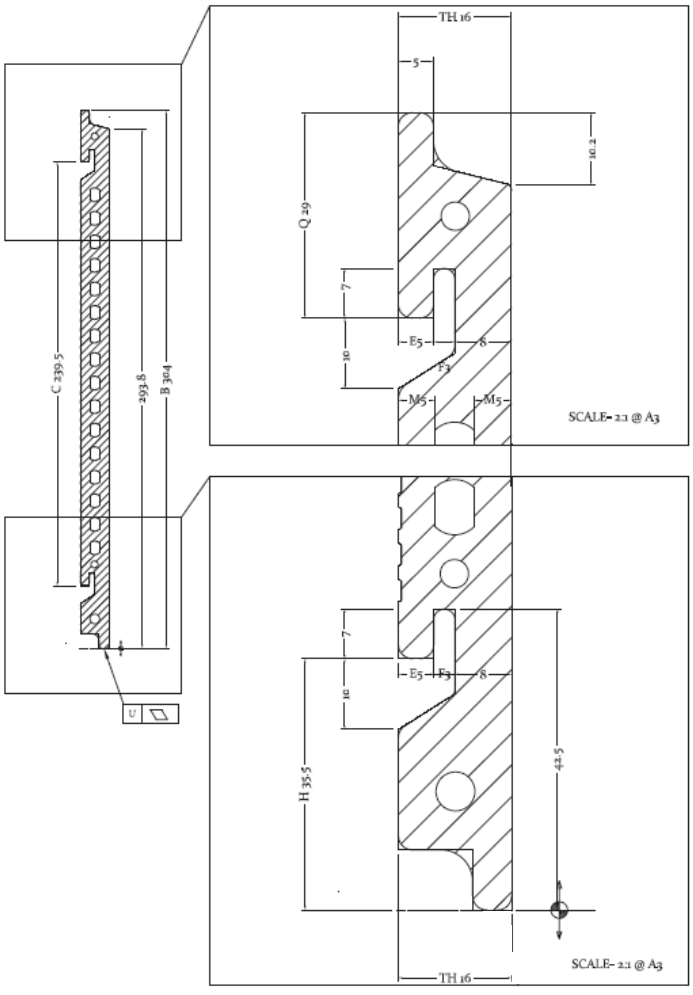
To apply the Breeze® system SYMONITE specifies the use of its proprietary Support Structure. The SYMONITE T50 system consists of an aluminium ventilated rain screen support structure for cladding products. The depth of the cavity can vary between a minimum of 50 to maximum 255 mm.

- Breeze® terracotta panels are secured to the vertical T50VR aluminium profile using the fixing clips fastened with 2 self tapping stainless steel screws. The terra cotta tile is well-supported at four points by the clips and on its two smaller sides by an EPDM rubber gasket. It can reach a wind load resistance of 2380 Pa and has a deformation strength of 150 daN.

Dimensions (mm) H x L x th	Module (mm)	Quantity of products per sqm	U. weight (kg)	Weight per sqm (kg)	Quantity of profiles per main course sqm	Quantity of clips per main course sqm
304 x 594 x 16	300 x 600	5.56/m²	4.88	27.13	1,67 lm/m²	11,11/m²

H = Height, L = Length, th = thickness

Terreal Breeze		
Label	Tolerance in mm	Dimension
A	±1.0	594
B	±1.5	304
C	±1.5	239
H	±0.5	35.5
Q	±0.5	29
TH	±1.0	16



Label	Tolerance in mm	
T	± 0.5	Squareness
U	± 2	Straightness of the top edge
X	± 2	Flatness over the height
W	± 2	Flatness over the length
V,D,Z ,Y	± 3	Sail effect at 4th point (3 fix points)

Flatness

Perpendicularity

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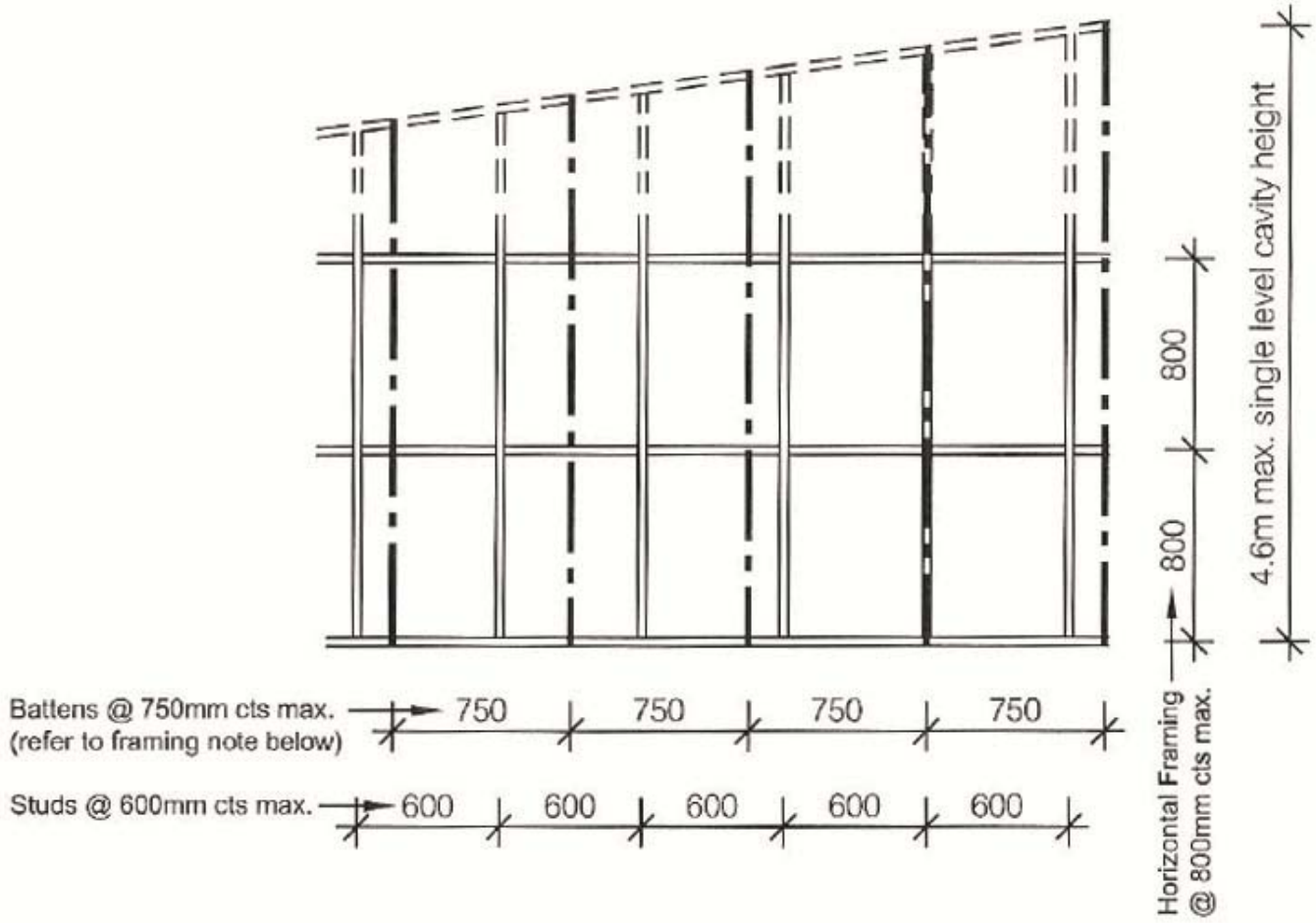
3a. FRAMING

Framing must comply with NZS3604: 2011
- Studs at 600mm centres
- Nogs/Dwangs at 800mm maximum centres
- Fixings of nogs/dwangs to studs to comply with NZS3604:2011 table 8.19 for cavity battens up to 600mm centres.

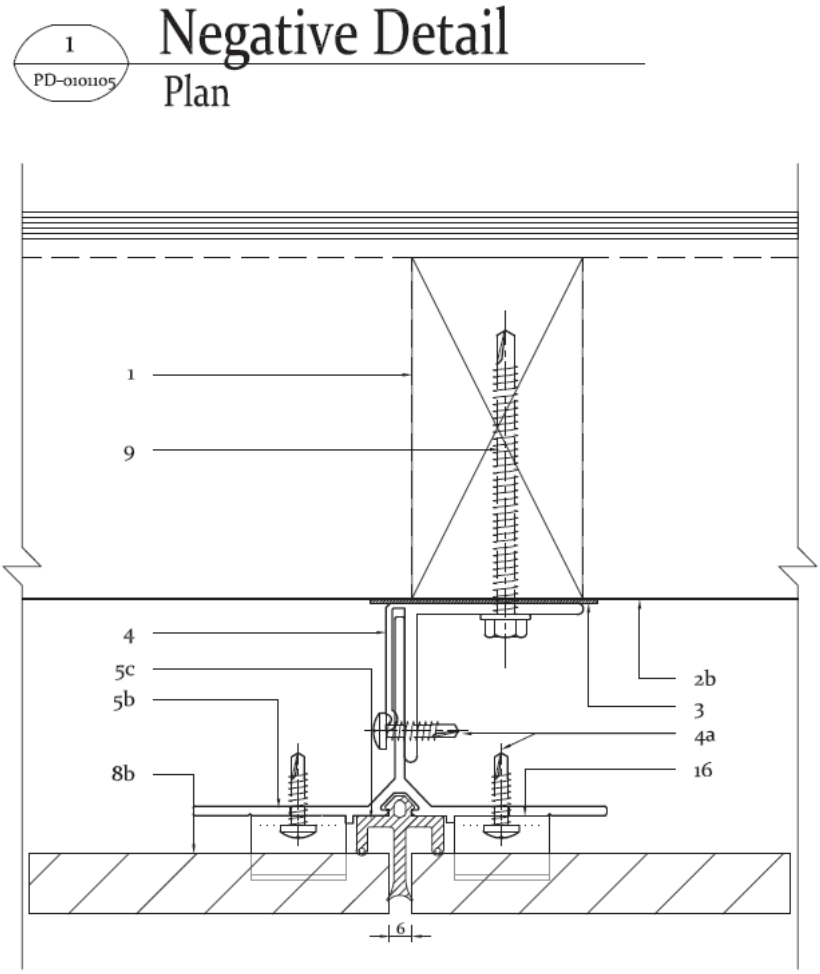
NOTE: - For cavity battens over 600mm Centres increase nog/dwang fixings to 2x end nails or 3x
skewed nails per connection.



5. Details

5A. Negative Detail

In the vertical joint, a negative detail is created by installing the tiles 6 mm apart from each other. The T50VR come standard with a black powder coated finish. A black EPDM gasket separates the tiles from each other and the T50VR. Even if water were to pass the EPDM gasket, it will be channelled down in the angles on the back of theT50VR.



1. TIMBER FRAMING

2a. RIGID WALL UNDERLAY, FIBRE CEMENT SHEET 6MM

2b. FERRARI STAMISOL FA

3. BUTYL STRIP

4. BRACKET T50 BR

4a. SELF-DRILLING HEX HEAD SCREW CLASS 4 HDG 12g x 22 mm

5. VERTICAL ALUMINUM SUPPORT T50 VR

5a. SELF-DRILLING WAFER PHIL 8-18 X 12 MM

8b. TERREAL BREEZE TERRA COTTA TILE, 16MM DOUBLE WALL

9. 14g x 75 mm TIMBER TEK SCREW CLASS 4 HDG / 1 PER BRACKET

10. HORIZONTAL JOINT CLOSER T50 HR

11b. POWERBOND 5300 TAPE, 9x0.6mm

12a. ALUMINUM Window JOINERY

13. T50 CL ALUMINUM CLIP PROFILE

14. T50 JC ALUMINUM JAMB CLOSER

5B. INTERMEDIATE SUPPORT

To add strength in high wind zones it may be necessary to provide intermediate supports. These are applied in much the same fashion as the vertical joint supports except that in this case only one C-clip per horizontal joint is needed. The EPDM gasket is trimmed flush with its outer fins to provide forced buffer against the back of the tile, this in turn locks the tile against any unwanted motion.

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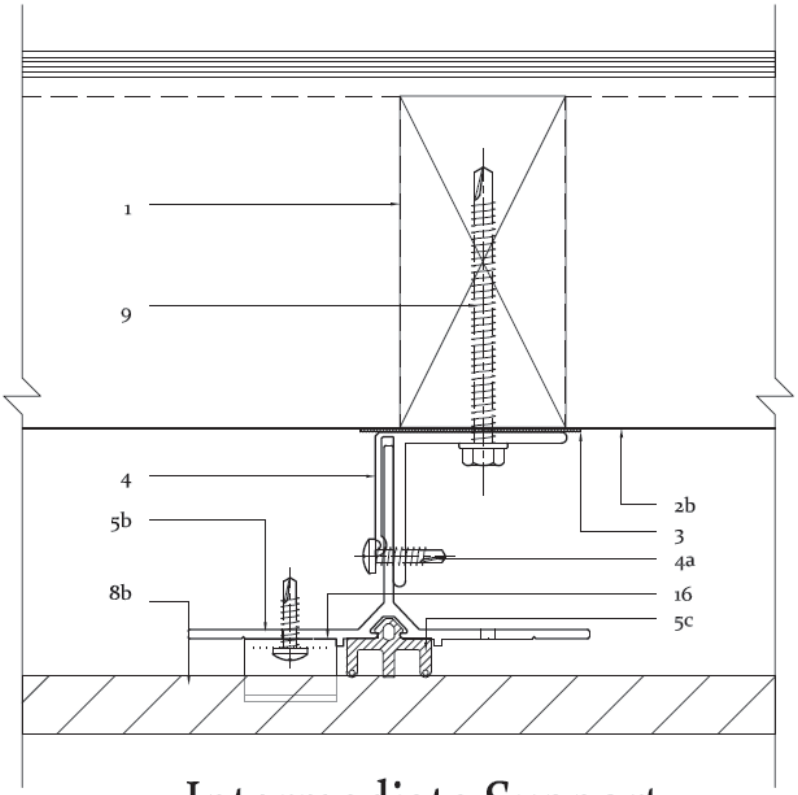

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Intermediate Support
Plan
1:2 @ A3

5C. HORIZONTAL JOINT

The Breeze system does not require any mechanical fixings or flashings in the horizontal joint. On the contrary, mechanical fixings may cause bulking and skewing of the cladding tiles at the junction of horizontal and vertical joints. If water is forced to run through the horizontal joint, it will be able to run through gap and down the rainscreen to be drained at the bottom of the facade.

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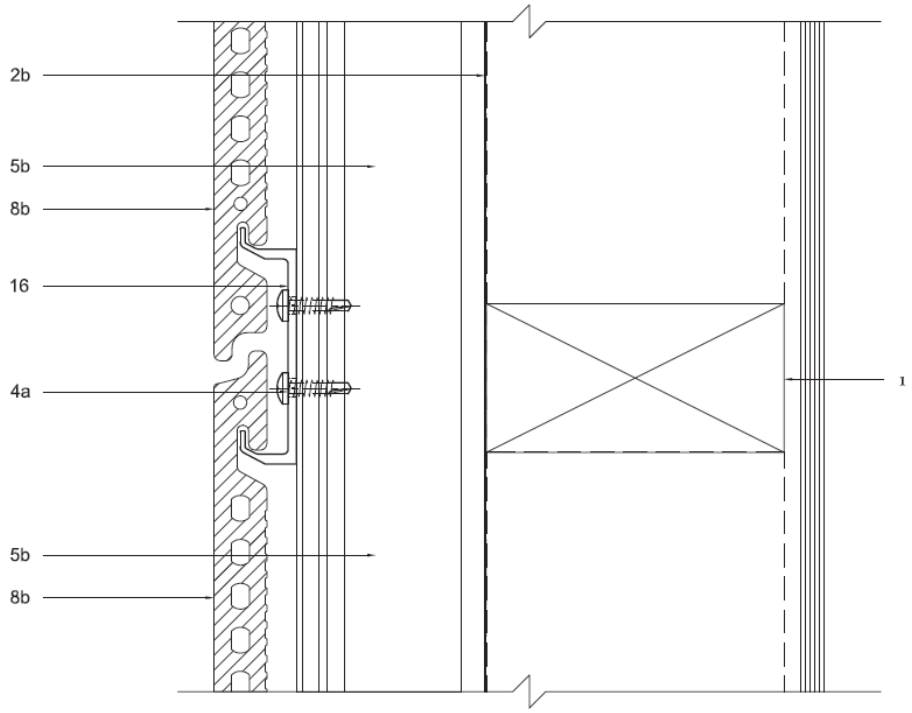

3 PD-0101106 Horizontal Joint Section

5D. BOTTOM OF CLADDING

At the bottom of the cladding, a perforated blank aluminium profile is used to close off the cavity without eliminating ventilation or drainage. Due to this profile, the T50 system is one of the most ventilated and open systems, with excellent weather performance. The lowest tile is hung past the bottom of the T50VR using a bisected C-clip

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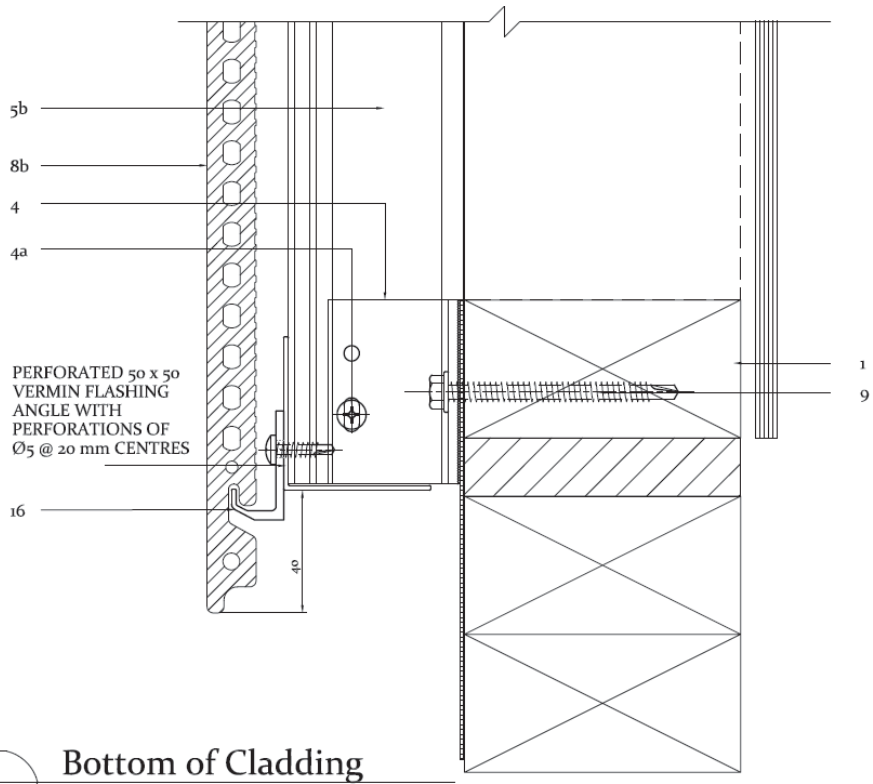
13. T50 CL ALUMINUM CLIP PROFILE

14. T50 JC ALUMINUM JAMB CLOSER



4 PD-0101106 Bottom of Cladding Section

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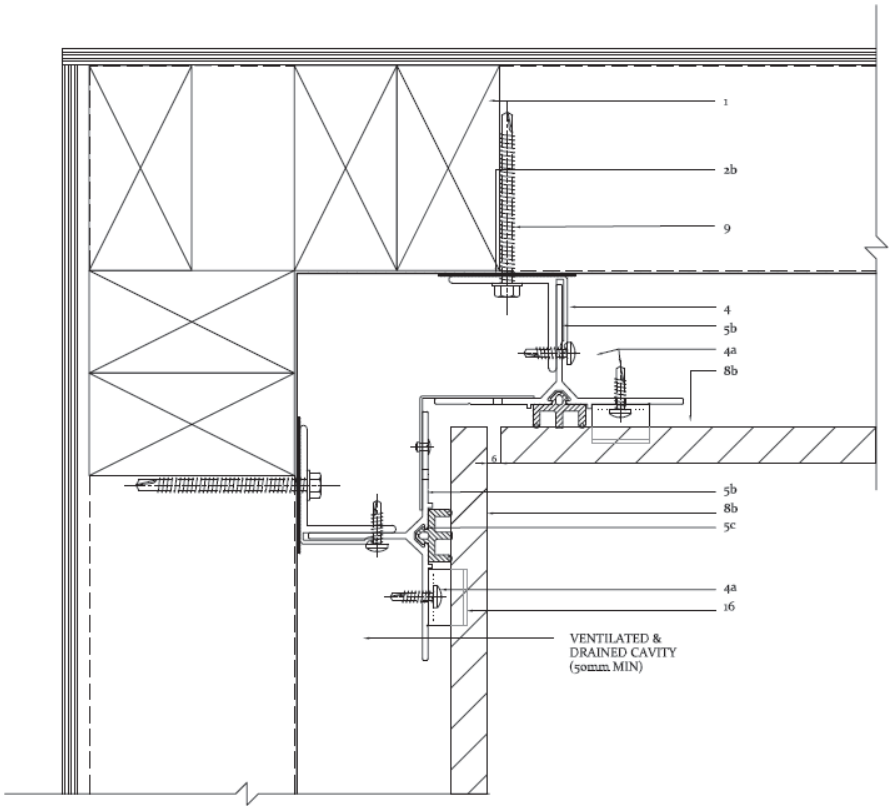
5E. CORNER DETAILS

The standard solutions for internal and external corners consist of a 50x50 angle fixed to the vertical T50VR profiles. The 50x50 angle is inserted in between the T50VR and T50CL on both sides and aligned with the T50VR's. The angle is then fixed with a pop rivet to one T50VR only (not to both T50VR's) . Finally the T50VR's are fixed into the T50BR brackets.



1
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Internal Corner
Plan

1. TIMBER FRAMING

2a. RIGID WALL UNDERLAY, FIBRE CEMENT SHEET 6MM

2b. FERRARI STAMISOL FA

3. BUTYL STRIP

4. BRACKET T50 BR

4a. SELF-DRILLING HEX HEAD SCREW CLASS 4 HDG 12g x 22 mm

5. VERTICAL ALUMINUM SUPPORT T50 VR

5a. SELF-DRILLING WAFER PHIL 8-18 X 12 MM

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9. 14g x 75 mm TIMBER TEK SCREW CLASS 4 HDG / 1 PER BRACKET

10. HORIZONTAL JOINT CLOSER T50 HR

11b. POWERBOND 5300 TAPE, 9x0.6mm

12a. ALUMINUM Window JOINERY

13. T50 CL ALUMINUM CLIP PROFILE

14. T50 JC ALUMINUM JAMB CLOSER

5F. CORNER DETAILS - MITRED CORNERS

When applying an external corner both tiles need to be mitre chamfered down their meeting side. Although this can be done individually with a hand grinder, PRIME.design recommends standardising this procedure. Using a watercooled ceramics blade and batch cutting will yeild the best results.

2
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External Corner
Plan

1. TIMBER FRAMING

2a. RIGID WALL UNDERLAY, FIBRE CEMENT SHEET 6MM

2b. FERRARI STAMISOL FA

3. BUTYL STRIP

4. BRACKET T50 BR

4a. SELF-DRILLING HEX HEAD SCREW CLASS 4 HDG 12g x 22 mm

5. VERTICAL ALUMINUM SUPPORT T50 VR

5a. SELF-DRILLING WAFER PHIL 8-18 X 12 MM

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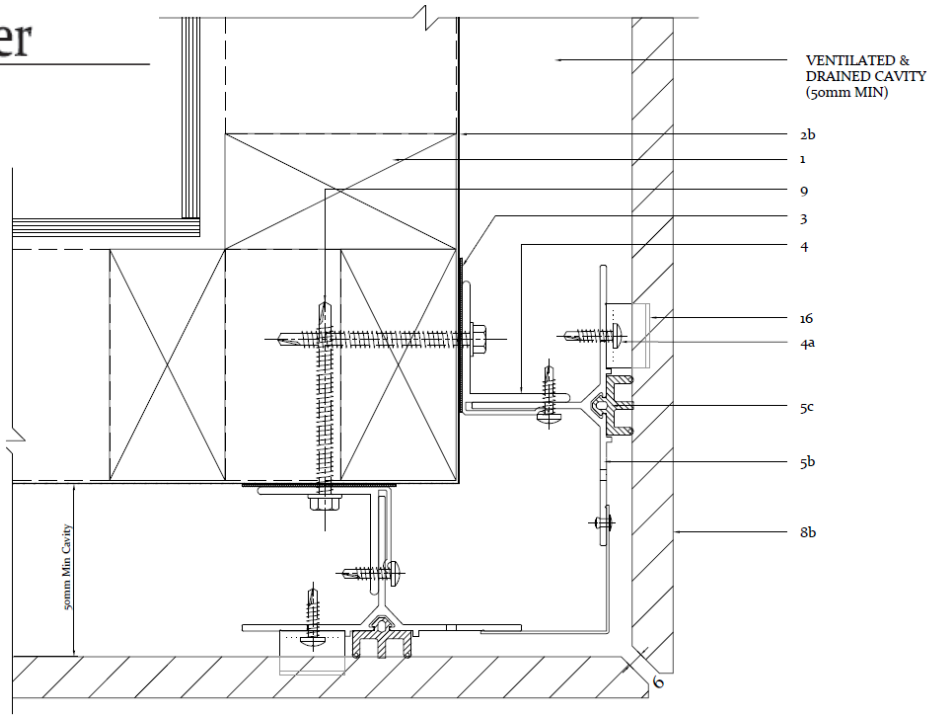
10. HORIZONTAL JOINT CLOSER T50 HR

11b. POWERBOND 5300 TAPE, 9x0.6mm

12a. ALUMINUM Window JOINERY

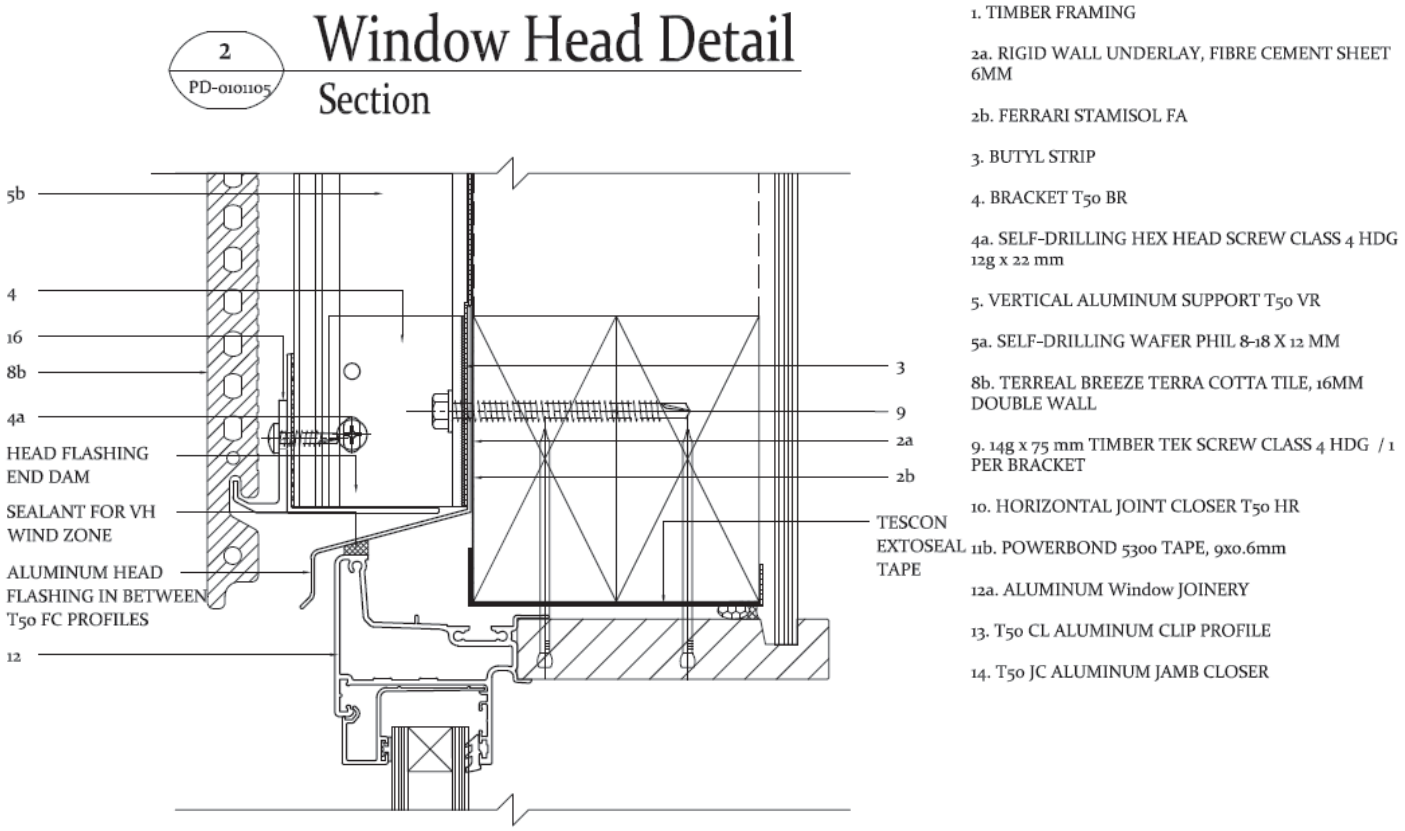
13. T50 CL ALUMINUM CLIP PROFILE

14. T50 JC ALUMINUM JAMB CLOSER

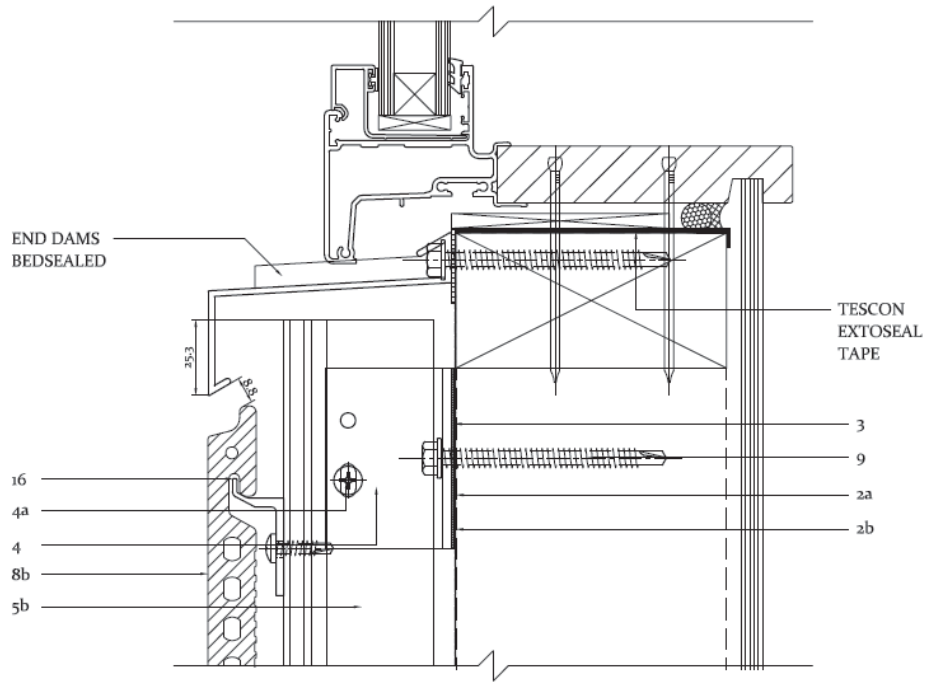


Window Head

SYMONITE has developed a window flashing system that incorporates effortless with the cladding system and offers a complete weather tight and durable system that can be easily installed.



Window Sill



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Window Sill Detail
Section

1. TIMBER FRAMING

2a. RIGID WALL UNDERLAY, FIBRE CEMENT SHEET 6MM

2b. FERRARI STAMISOL FA

3. BUTYL STRIP

4. BRACKET T50 BR

4a. SELF-DRILLING HEX HEAD SCREW CLASS 4 HDG 12g x 22 mm

5. VERTICAL ALUMINUM SUPPORT T50 VR

5a. SELF-DRILLING WAFER PHIL 8-18 X 12 MM

8b. TERREAL BREEZE TERRA COTTA TILE, 16MM DOUBLE WALL

9. 14g x 75 mm TIMBER TEK SCREW CLASS 4 HDG / 1 PER BRACKET

10. HORIZONTAL JOINT CLOSER T50 HR

11b. POWERBOND 5300 TAPE, 9x0.6mm

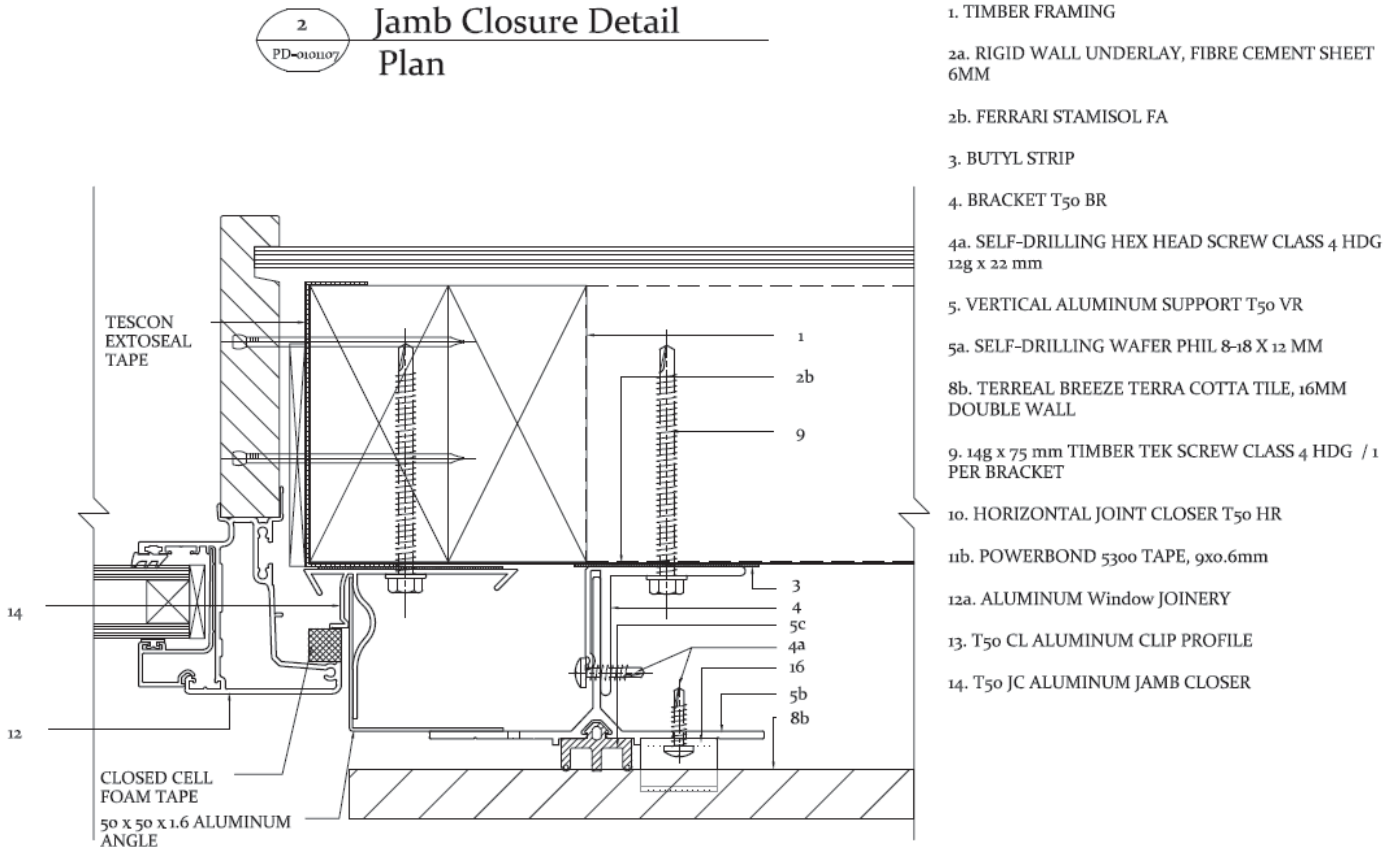
12a. ALUMINUM Window JOINERY

13. T50 CL ALUMINUM CLIP PROFILE

14. T50 JC ALUMINUM JAMB CLOSER

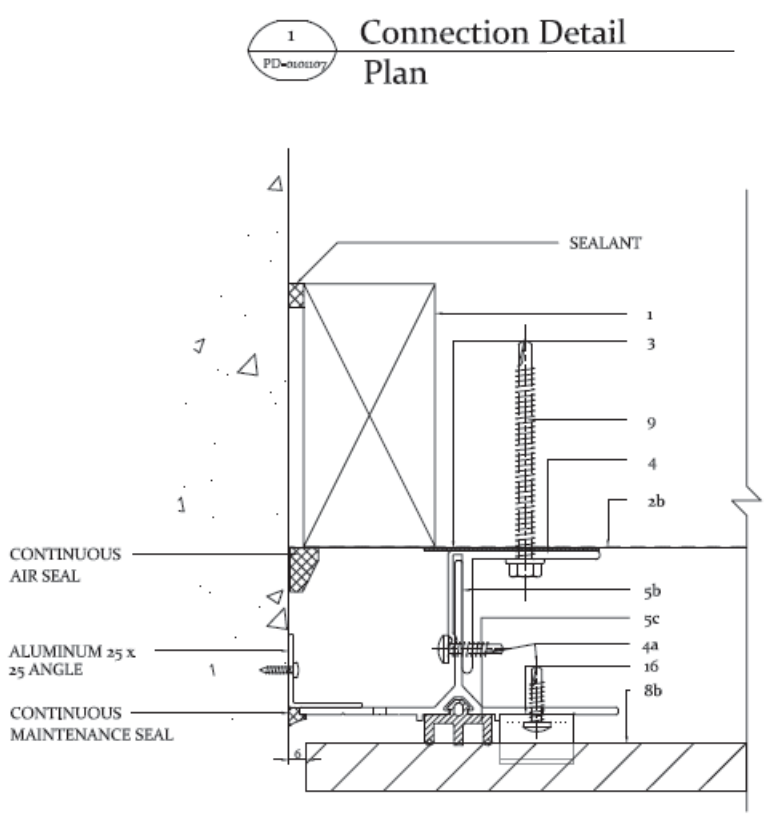
Window Jamb Closure

Please note number 14 in following detail,this is the proprietary SYMONITE jamb profile T50JC. To perform correctly this profile must be in place before the windows are installed. This solution allows the cladding to be installed before or after the installation of the windows.
An equal aluminium 50x50 angle slides into T50JC and T50VR and aligns almost automatically when the support system is installed.



5H. WALL CONNECTION

When the T50 system meets a concrete wall or terminates against any face where a space may be left it must be closed and sealed against vermin. This is achieved by fitting a 25x25mm aluminium angle continuously to the T50VR using T50CL profile, clamped and screw fixed in place. Fix through the aluminium angle to the face being sealed against with recommended screw fixings. A maintenance seal is then applied over the angle to further protect against weathering and other issues. To aid in the possible replacement of tiles it is a requirement that the maintenance seal be applied to the 25x25EA/T50VR rather than the tile itself. A 6mm gap between the tile and the concrete is required to allow for thermal expansion.



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12a. ALUMINUM Window JOINERY

13. T50 CL ALUMINUM CLIP PROFILE

14. T50 JC ALUMINUM JAMB CLOSER

5I. SOFFIT

Where the T50 system meets a soffit it is necessary to close any vermin ingeress as much as possible. this can be achieved by screw fixing an aluminium 25 X 25 X 1.6mm equal angle to the soffit,the space allowed between the tile face and the angle should never be more than 7mm. The top tile is located 15mm below the soffit and secured using a bisected C-clip.

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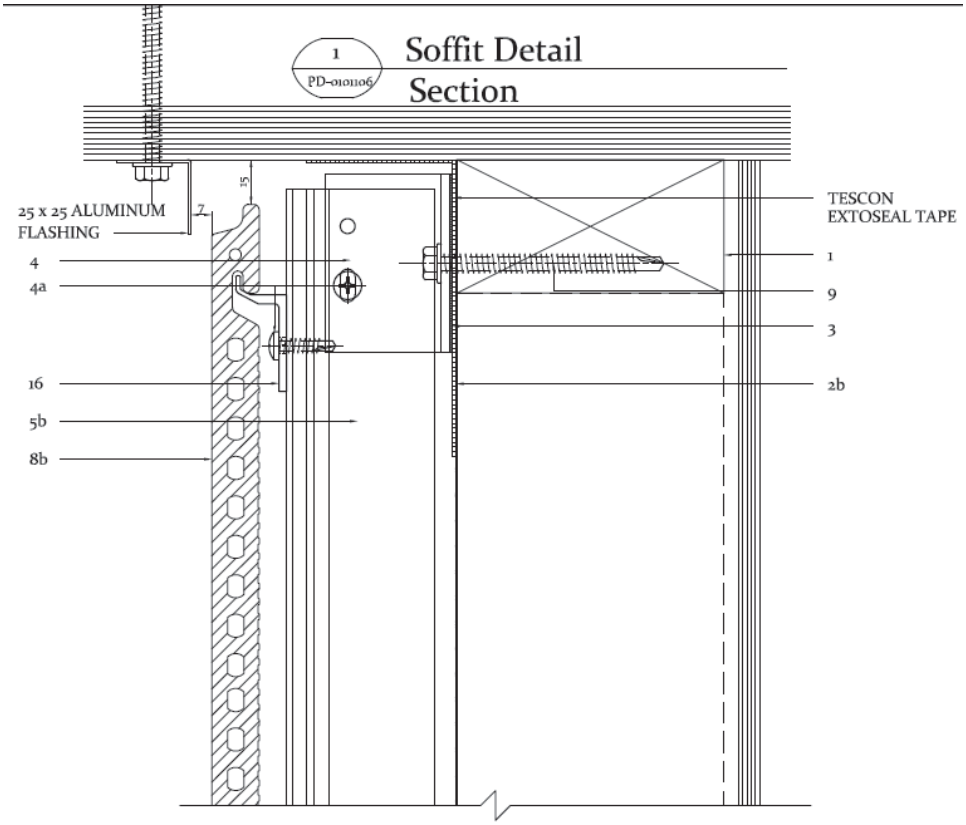
13. T50 CL ALUMINUM CLIP PROFILE

14. T50 JC ALUMINUM JAMB CLOSER



5J. INTER-STOREY

At the inter-storey detail, a flashing with a 15° inclination is required. The solution provides sufficient ventilation, capacity for water to be drained to the exterior, and protection against seismic movements.

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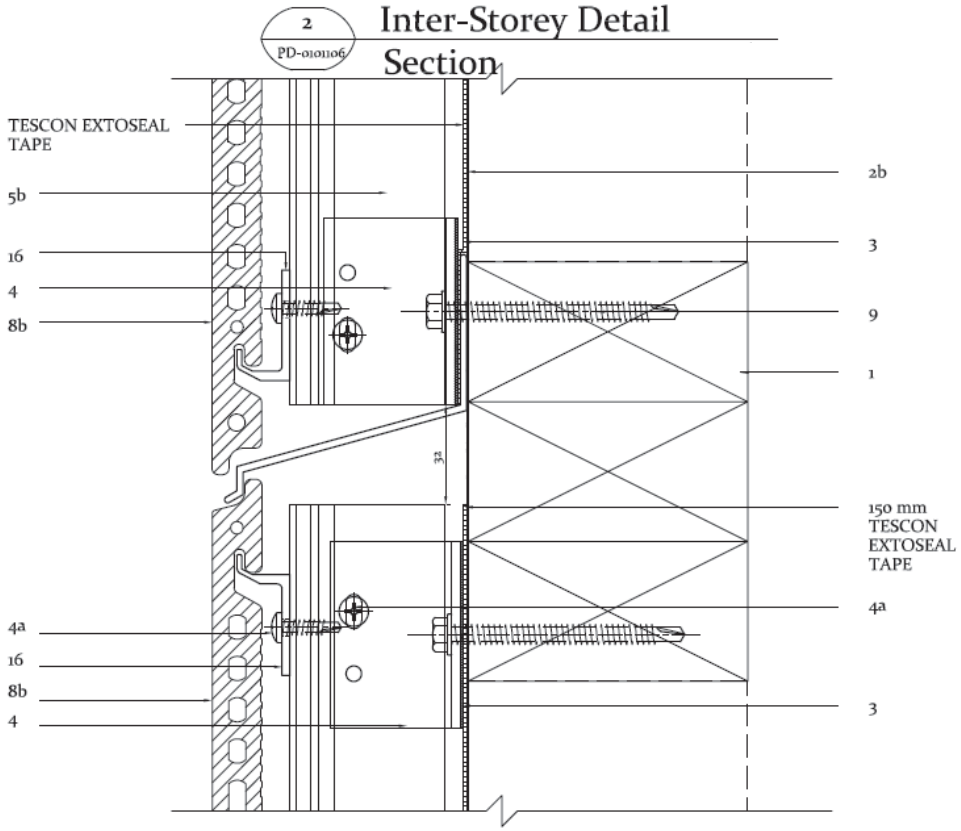
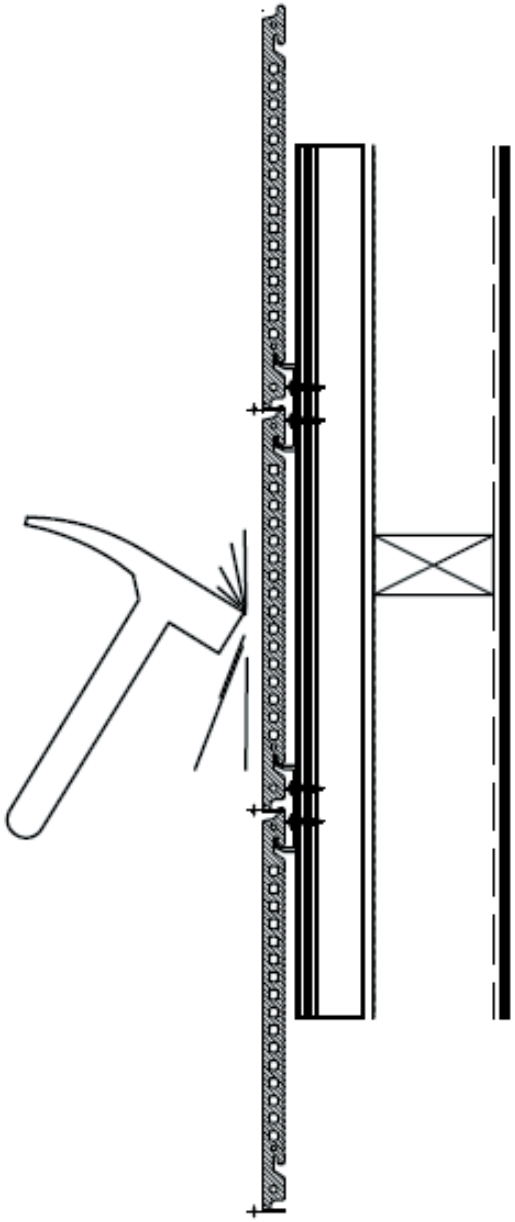
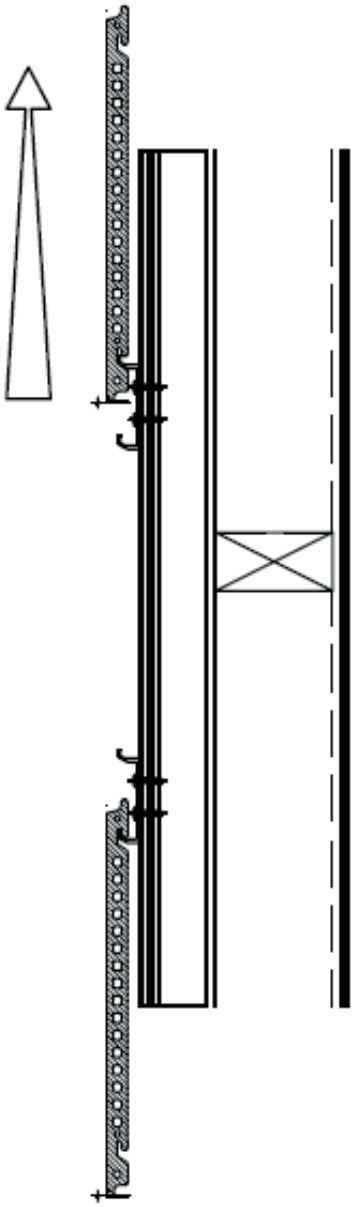


5K. TILE REPLACEMENT

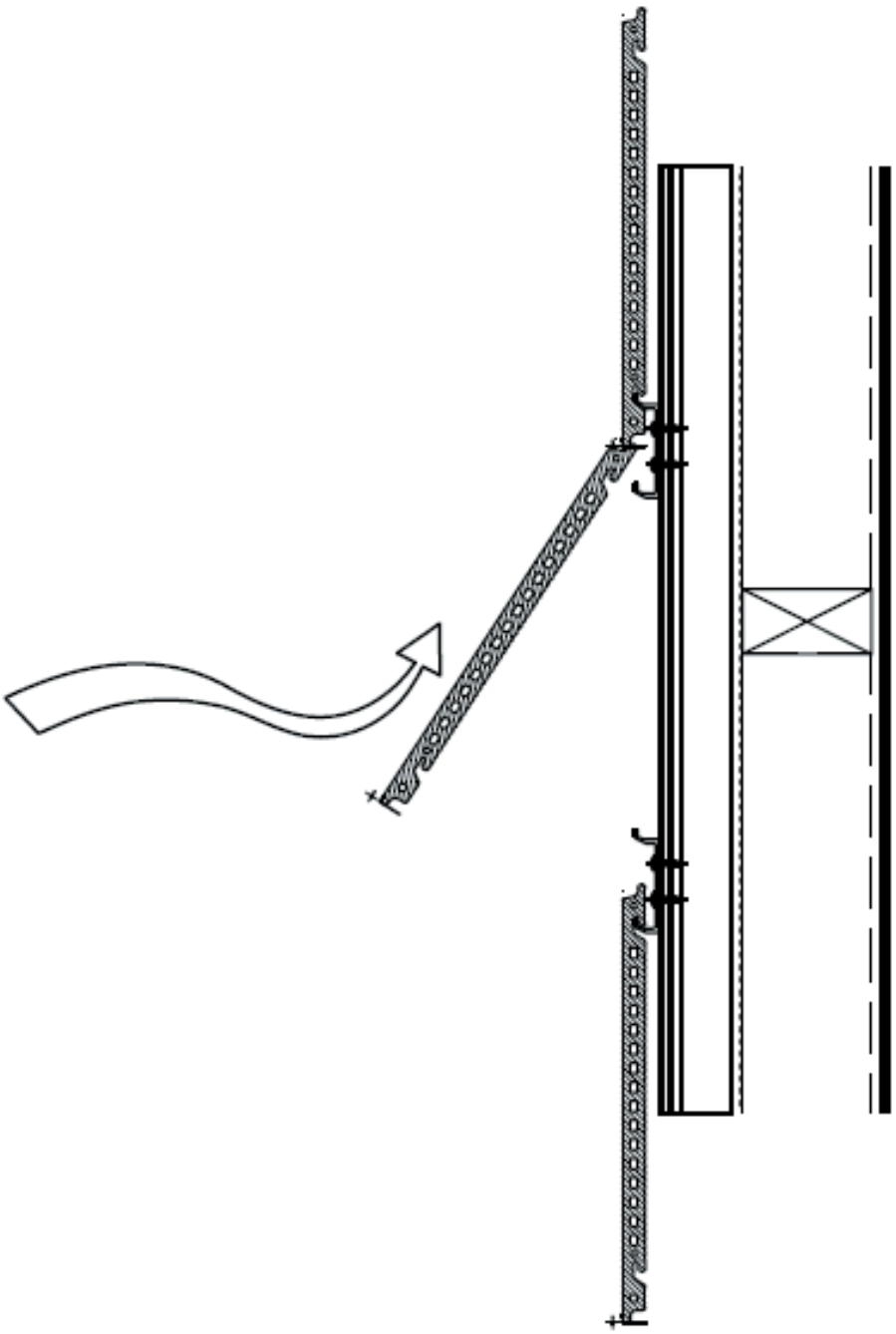


Step 1.
Break away remaining tile, take safety precautions to protect from personal harm.



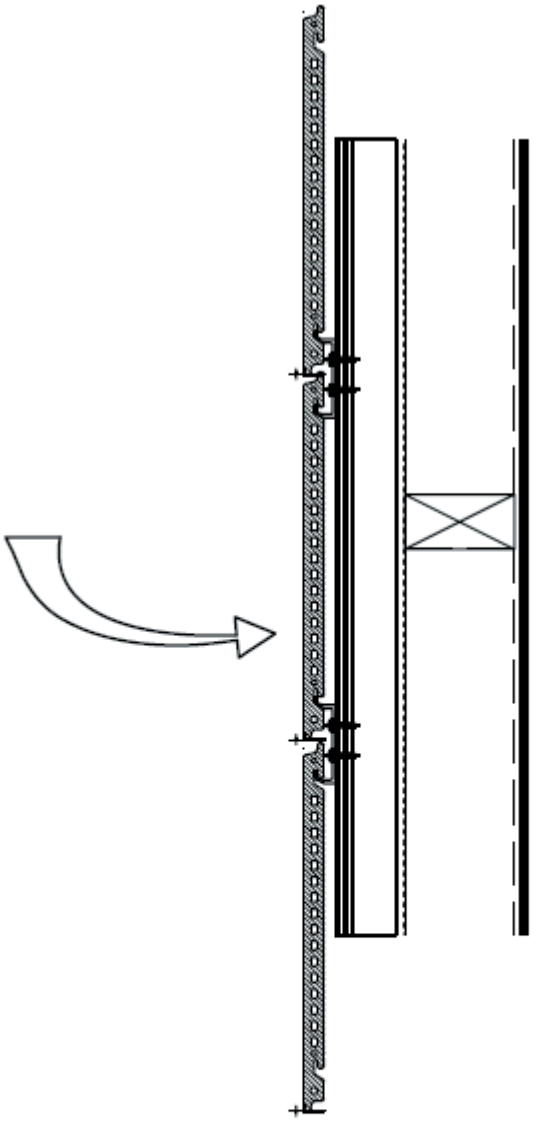
Step 2.
Lift tile directly above intended replacement to give as much space as possible.

5K. TILE REPLACEMENT Cont.

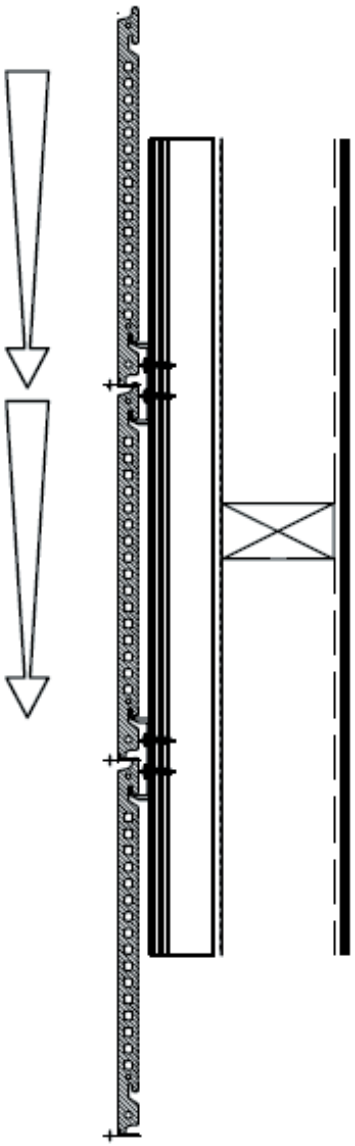


Step 3.
Slide replacement tile into position top first.

5K. TILE REPLACEMENT Cont.



Step 4.
Align tile so that both locating channels are in the correct position over the C-clips for complete support.



Step 5.
Gently lower both tiles back into position, be sure to check that they are firmly locked in place.

6. OTHER REMARKS

A joint between the aluminium sections must always coincide with a joint between the panels. The joint is preferably continued at the same height. A façade sheet must always be fixed on sections on which the fixed fastening points are at the same height. This means, for example, that at windows the sections and the panels must be detached to avoid a joint between sections under the sheet.

If for some reason, the aluminium sections (corner section, bottom section, etc.) have to cope with additional movements or deflections (for instance deflections due to temporary loads), the structure needs to be detached from the panels.

If necessary, the aluminium sections must be pre-drilled, and are fixed according to the principle of fixed and free fastening points. Joints between the metal sections must coincide with joints between the panels.

Finishing sections in metals that can leach (such as zinc, copper, lead, etc.) are advised against because of possible soiling.