

# [Viroc]

## Installation Guide





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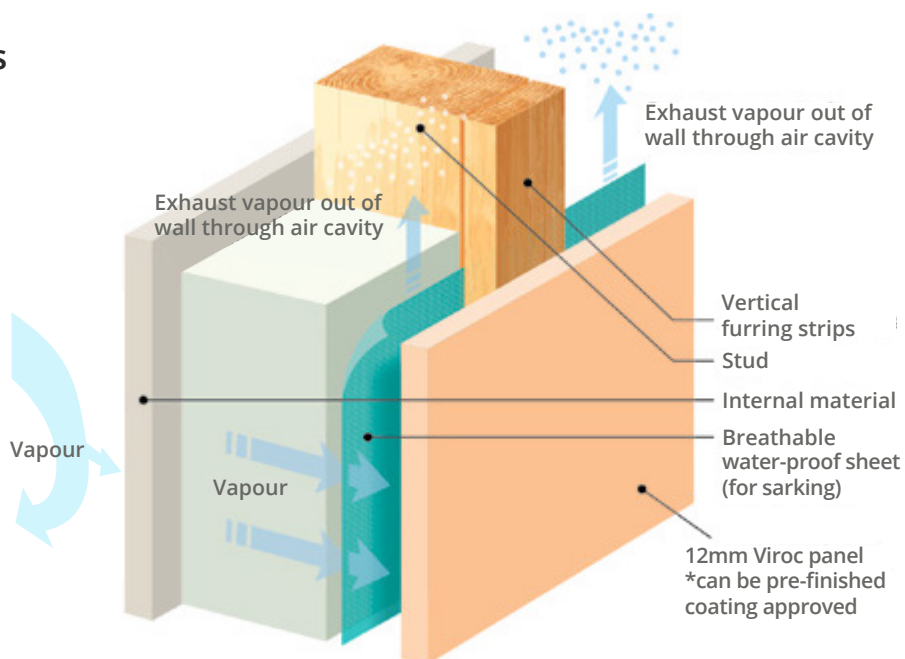
Viroc Installation Instructions 2021

1

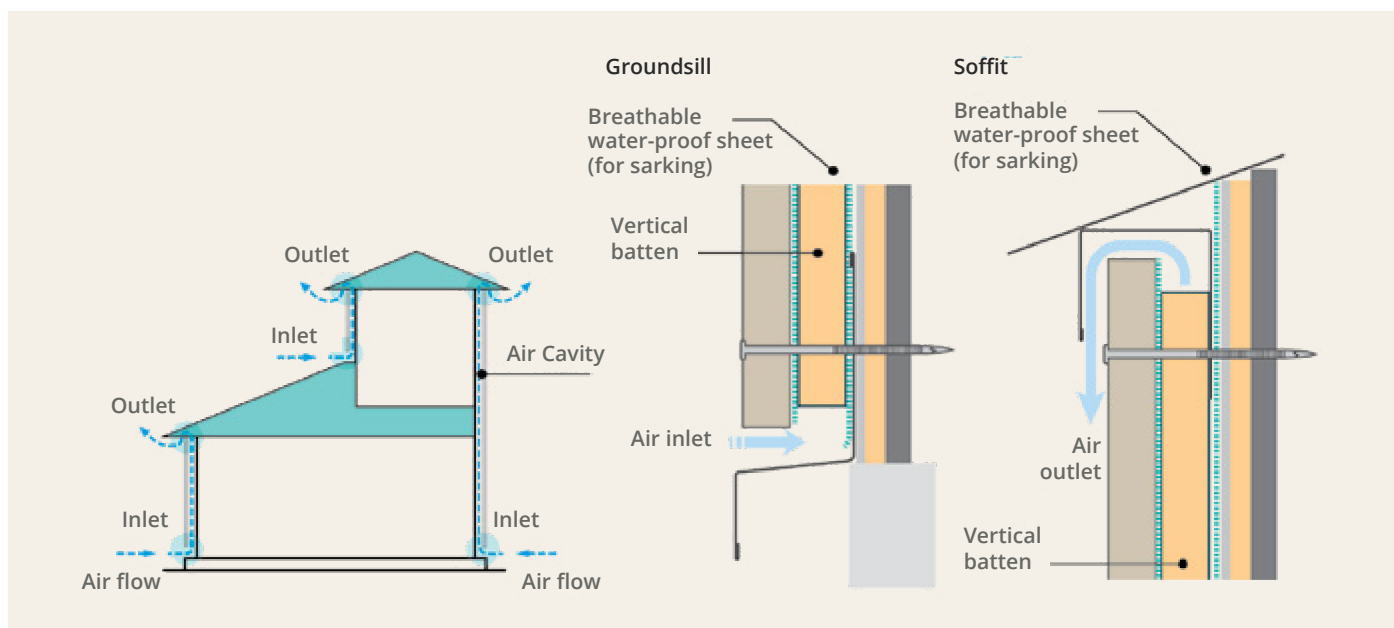
## Outdoor cladding applications

The Viroc system is a cavity-based extruded fibre-reinforced cement panel wall cladding. Viroc panels are available in range of surface profiles patterns and prefinished colours. Panels are rebated to form hidden laps and are fixed with clips to form a drained and ventilated cavity.

The system incorporates a primary and secondary means of weather resistance (first and second line of defence) against water penetration by separating the cladding on the external wall framing with a normal 15mm drained and ventilated cavity.



### Key points of the rain screen system



## VERY IMPORTANT!



Avoid breathing silica dust. Inhalation of respirable silica dust can cause Silicosis, a potentially disabling lung disease when drilling, cutting or abrading cladding panels during installation or handling:

1. Work outdoors where feasible or use mechanical ventilation.
2. Wear an approved respirator.
3. Warn others in the area.

For further information refer to the material safety datasheet.

## Handling the Viroc panels

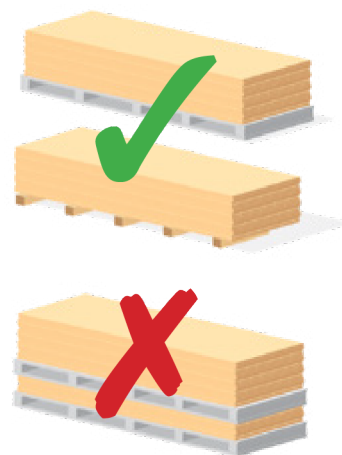
### Transporting Viroc panels

- When transporting the panels by vehicle, stack them flat.
- Tie the panels down and cover with plates to avoid damage or shifting when braking.
- Take extra care to avoid damaging panels when loading/unloading.
- When hoisting panels, always put spacers between the panels and ropes or straps to avoid damaging them.
- Do not stack pallets with more panels on the top of the pallet than underneath, as this could cause panels to collapse.



### Storage of Viroc panels

- Store panels flat and under cover. Keep the panels dry and off the ground prior to installation to avoid moisture conditions that could effect the quality of the work.
- Panels should not be stacked more than two pallets high and should be loaded with a fork-lift or sling, taking care not to drop the pallet.
- Keep panels clean when handling on site and take care not to damage the edges.
- If necessary to stand panels on edge prior to installation, take care to avoid rough or abrasive surfaces that could damage the factory-applied coating or sealer.
- Panels should be carried mid-span and on edge for ease of handling and to avoid breakage...



**Very Important**

### Option to pre-coat panels

1. Carry the panels by holding their lengthwise edges under your arm.
2. Take extra care to avoid hitting anything with the panels. Dropping the panels may damage the edges.
3. Don't touch the panels with dirty hands.

Viroc panels can be ordered **PRE-COATED** from Stack Panel if required.





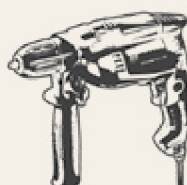
## Necessary tools



Dust-proof circular saw



Dust collector



Electric drill/ screwdriver



Melamine planer



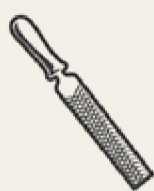
Tacker



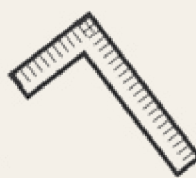
Hammer



Nail claw



Hand file



Framing square



Slate saw



Sealant cartridge gun



Tape measure



Cutter knife



Tin shears



Plumb bob



Chalking line



Sealant spatula

## Installation order

Timber frame/steel frame with clips (15mm)

1. Check the frame

2. Install sill flashing

3. Install waterproof breathable sheet

4. Marking

5. Install accessories  
(outside & inside corners, vertical joints, and etc)

6. Measurement

7. Cut & ...

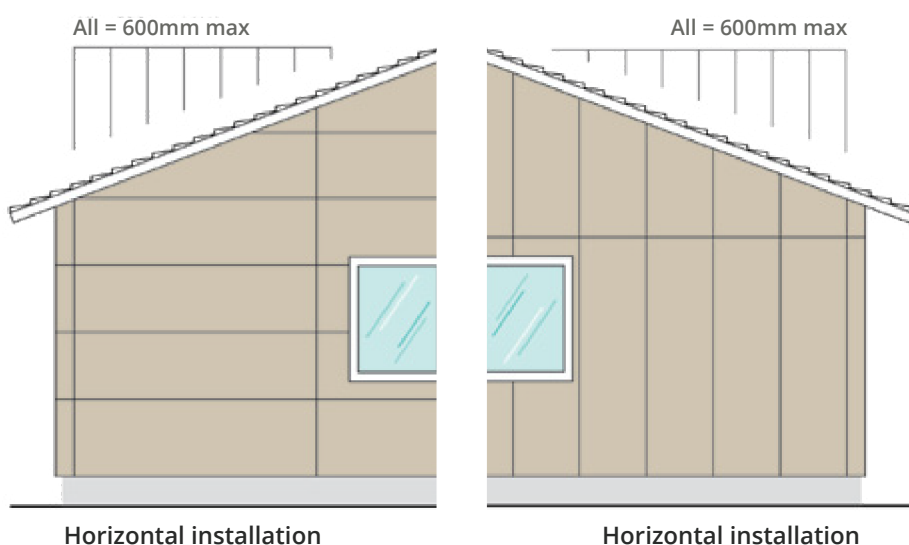
8. Fasten siding panels

9. Touch up & paint inspection

10. Sealant

## 1. Panel set-out

- When laying out the panels, take into consideration the appearance of the building, the length of provided accessories and how to minimize material waste.
- Layout sealant joints in advance to create an aesthetically pleasing finish.
- Include the inside dimension of the pre-formed outside corners in consideration of panel arrangement.
- Vertical joints should be aligned with studs.
- Include the sealant joint width (10mm) for each vertical joint.
- Pay attention to window locations and eave soffit height to provide more than 150mm max for the panels above and below window frames (B, C, figure below right) and panels below the soffit. (A).
- Avoid installing less wide panels in these locations.



Sheets are 1250 x 3000mm in 12mm thickness. Refer to fixing diagram 60 mm max.

## 2. Wind load table

Viroc panels have been tested and results reported by Summermore Pty Ltd. to the requirements of:

- AS/NZS 1170.0
- AS/NZS 1170.1
- AS/NZS 1720.1
- AS1684

Wind Loading	Speed	Equivalent From Test Data
Low	<32m/s	N1, N2
Medium	37m/s	C1, N3
High	44m/s	C2, N4
Very High	50m/s	C2, N4
Extra High	55m/s	C2, N4
Specific Design	>55m/s	Engineer designed

As wind zones in NZ 3604 are a simplified method of calculating wind action based on AS/NZ 1170.2, it is recommended that fixing testing data is made readily available to suitably qualified engineers for Specific Design.

Testing data shows suitable fixing details for wind speeds up to 60m/s (C3), which is outside the scope of NZS 3604.

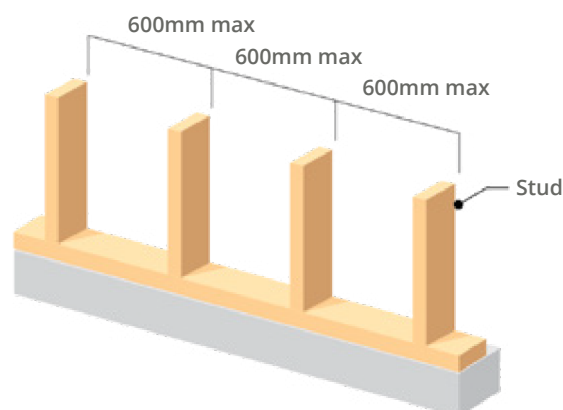
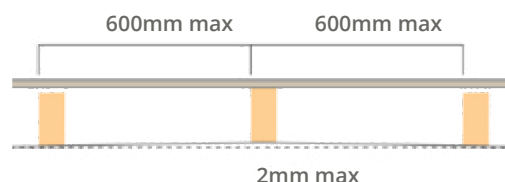
Viroc has also been certified by Summermore Pty Ltd. to meet and generally exceed the requirements of NZS 1170.5 (Earthquake Actions in New Zealand).

## 3. Check the frame

### Timber frame

Check that the frame is set out to accommodate wind loading, services and openings. Allow for 35mm battening and flashing plus...

- Carefully place spacers so as not to block the ventilation holes behind the eave flashing.
- Check flashing is horizontal with a level.
- Fix the flashing with nails or screws at intervals of 600mm or less.



### A.

Should meet National Construction Code (NCC) 2016 Volume Two. 3.1.2.3 Surface water drainage (b) slab-on-ground - finished slab heights:

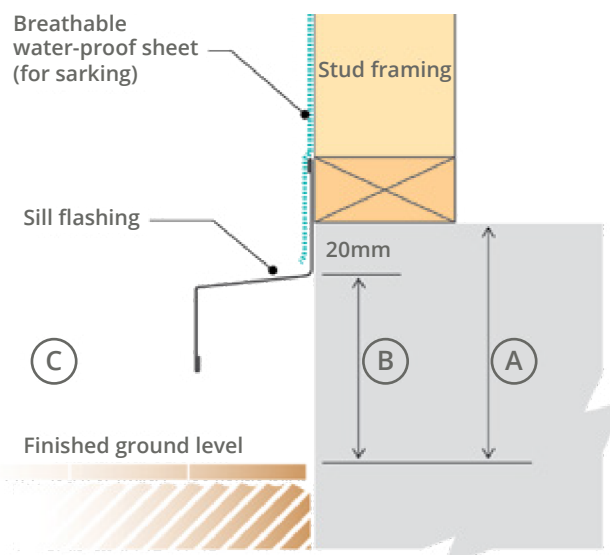
1. 50mm or more
2. 100mm or more
3. 150mm or more

### B.

1. 30mm or more
2. 80mm or more
3. 130mm or more

### C.

1. Paved concrete areas
2. Low rainfall intensity, sandy, or well-drained areas
3. Any other areas.



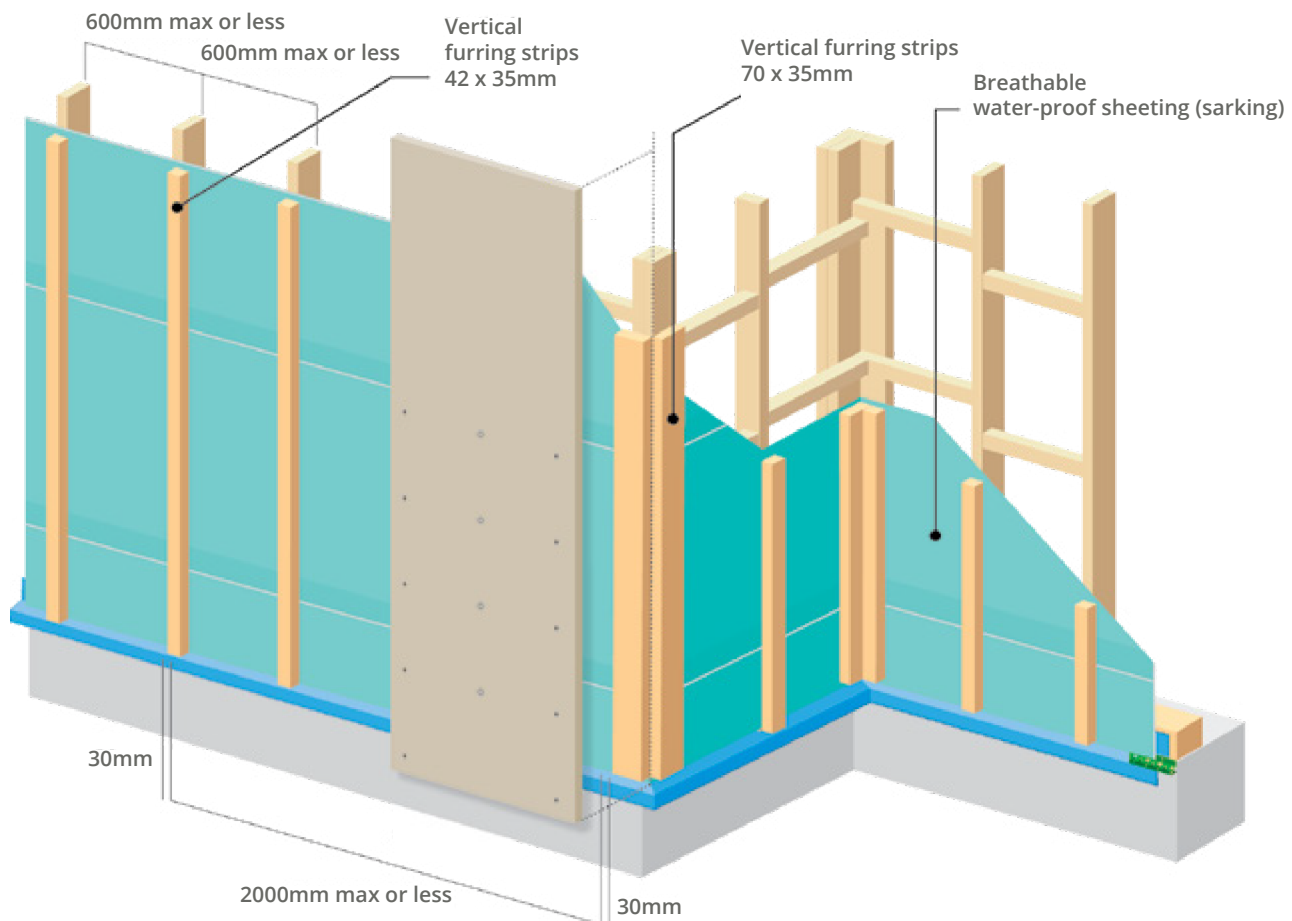


### 3. Check the frame (continued)

#### Timber frame

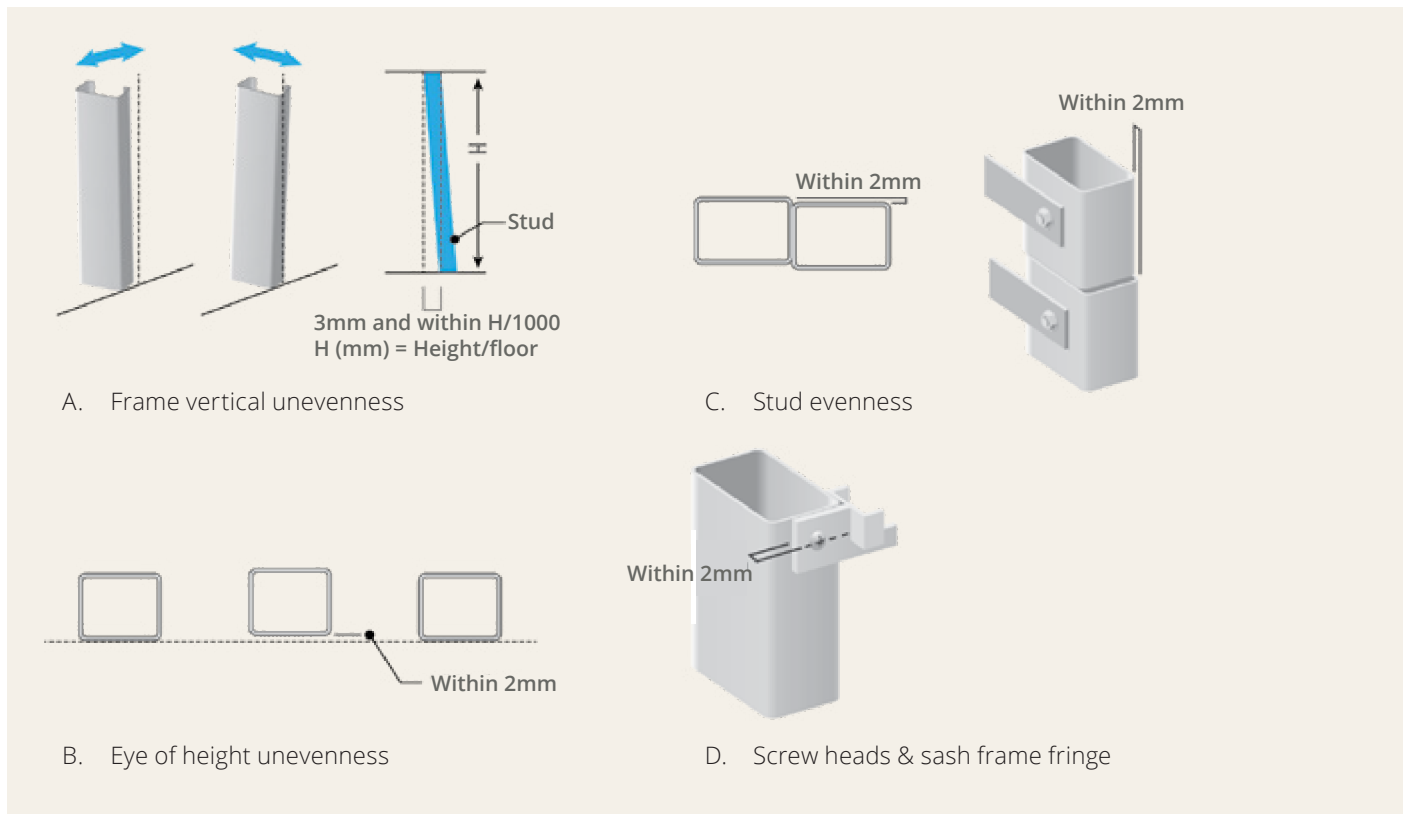
Vertical panel installation shown below. Allow for batten ventilation for horizontal batten runs.

- Carefully place spacers so as not to block the ventilation holes behind the eave flashing.
- Check flashing is horizontal with a level.
- Fix the flashing with nails or screws at intervals of 600mm or less.



### 3. Check the frame (continued)

#### Steel frame



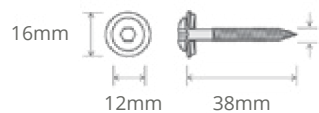
## 4. Board fastening

### Fasteners heading & text

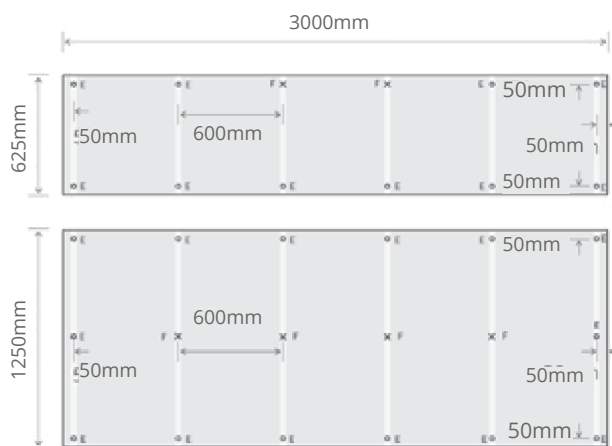
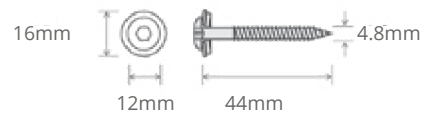
Note that fixing are required as per generic certification and wind loads.

The maximum dimension of the Viroc panel, when applied on a metallic structure is 1500 x 1250mm.

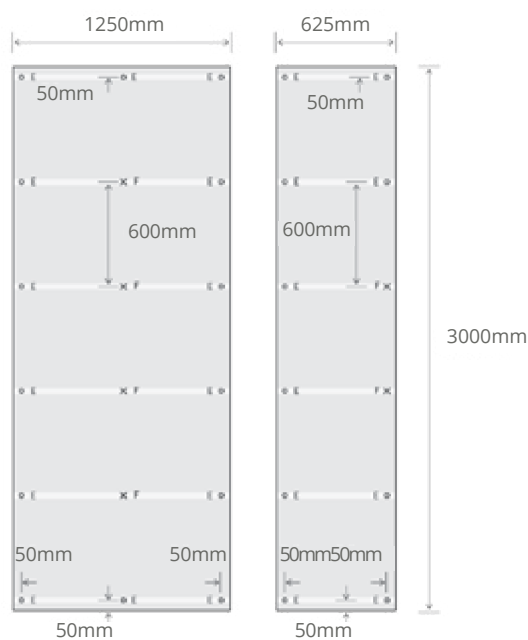
#10 Viroc 12mm



#12 Viroc 12 and 16mm



○ E: Expansion hole  $\varnothing 10\text{mm}$       × F: Fixed support  $\varnothing 5\text{mm}$



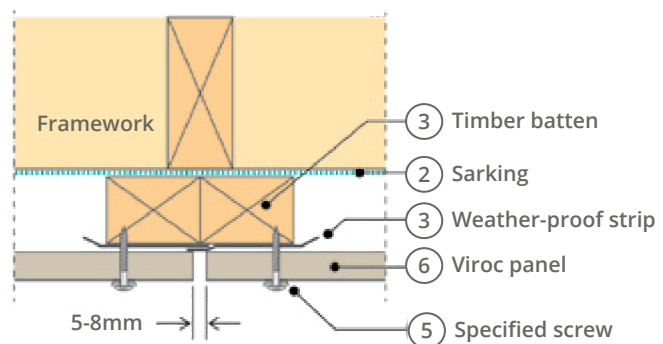
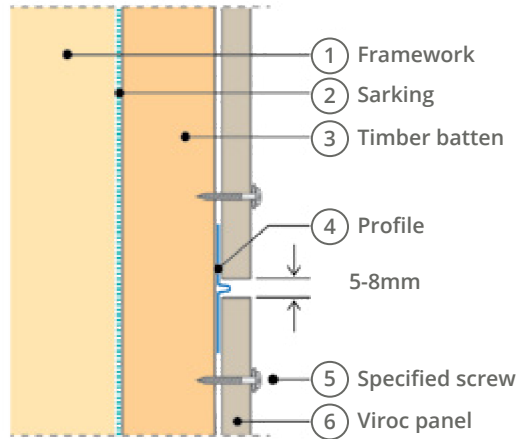
○ E: Expansion hole  $\varnothing 10\text{mm}$       × F: Fixed support  $\varnothing 5\text{mm}$



## 4. Board fastening (continued)

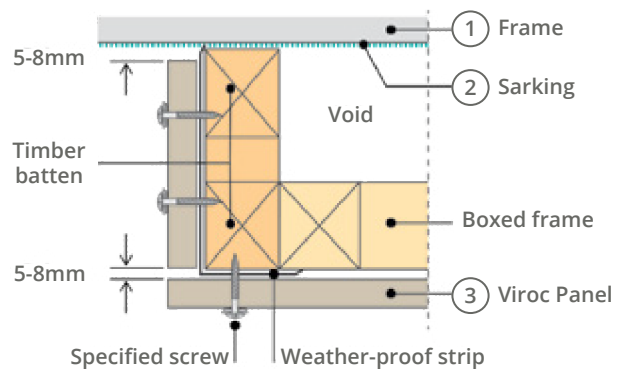
Wall runs vertical and horizontal

1. Framework.
2. Sarking.
3. Timber batten.
4. Join profile.
5. #10 specified screw.
6. 12mm Viroc panel.
7. Weather-proof strip.



## Returns

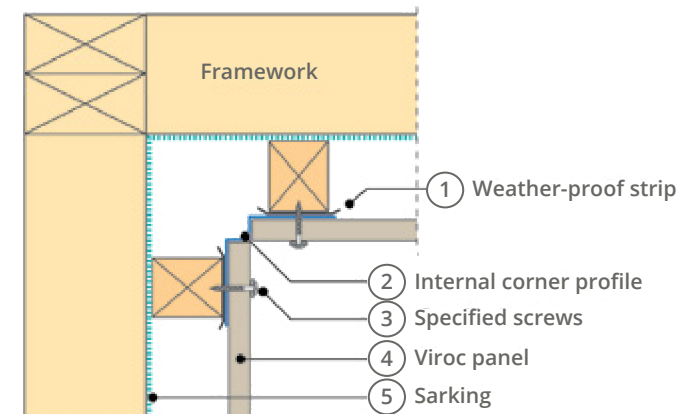
1. Framework.
2. Sarking.
3. 12mm Viroc panel.



## 4. Board fastening (continued)

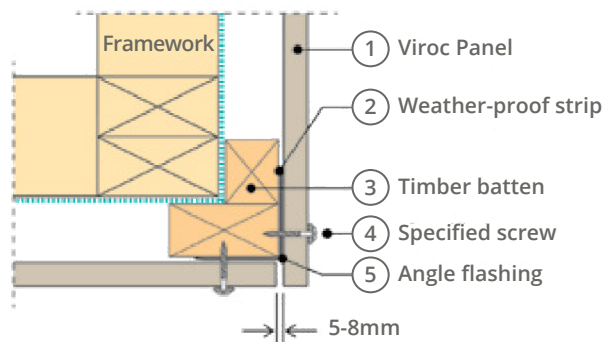
### Internal corners

1. Weather-proof strip.
2. Internal corner profile.
3. #10 specified screw.
4. 12mm Viroc panel.
5. Sarking.



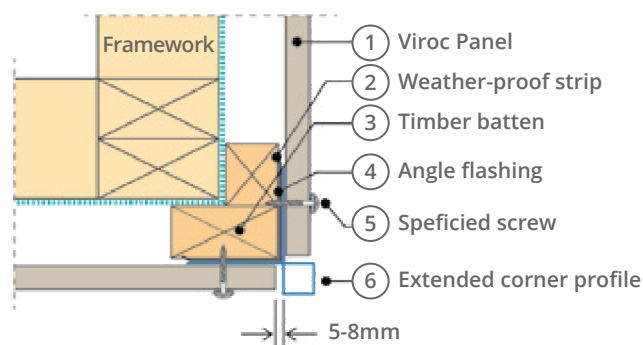
### External corners

1. 12mm Viroc Panel.
2. Weather-proof strip.
3. Timber batten.
4. #10 specified screw.
5. Angle flashing.



Option 1

1. 12mm Viroc Panel.
2. Weather-proof strip.
3. Timber batten.
4. Angled flashing.
5. #10 specified screw.
6. External corner profile.

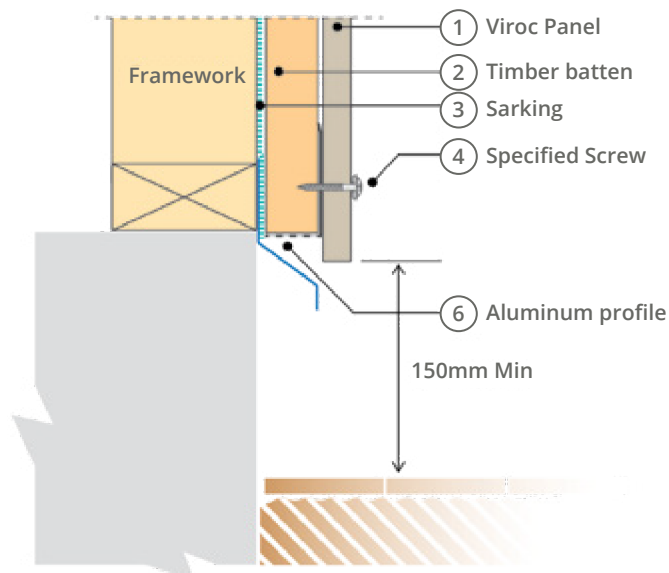


Option 2

## 4. Board fastening (continued)

### Ground detail

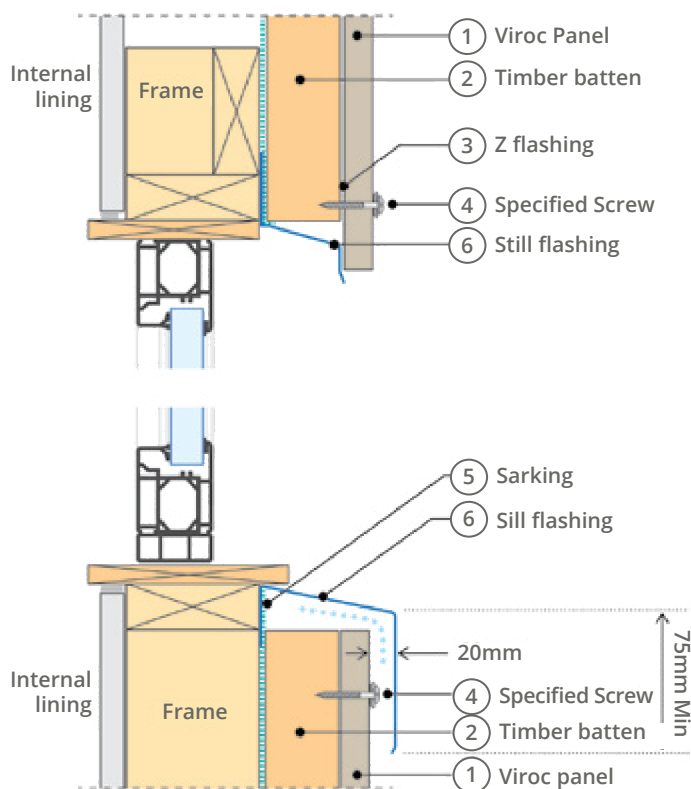
1. 12mm Viroc panel.
2. Timber batten.
3. Sarking.
4. #10 specified screw.
5. Copy to be provided.
6. Copy to be provided.



### Lintel section

#### External corners

1. 12mm Viroc Panel.
2. Timber batten.
3. Z flashing.
4. #10 specified screw.
5. Sarking.
6. Sill flashing.

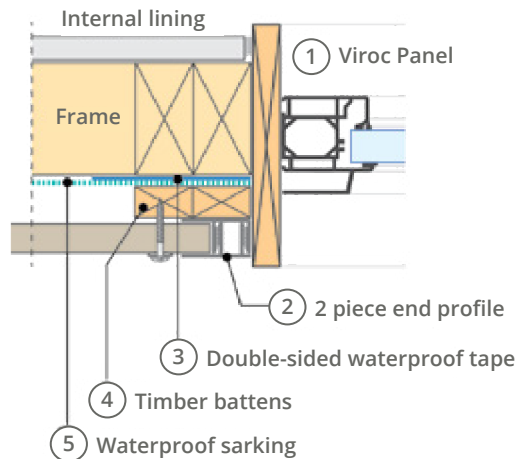




## 4. Board fastening (continued)

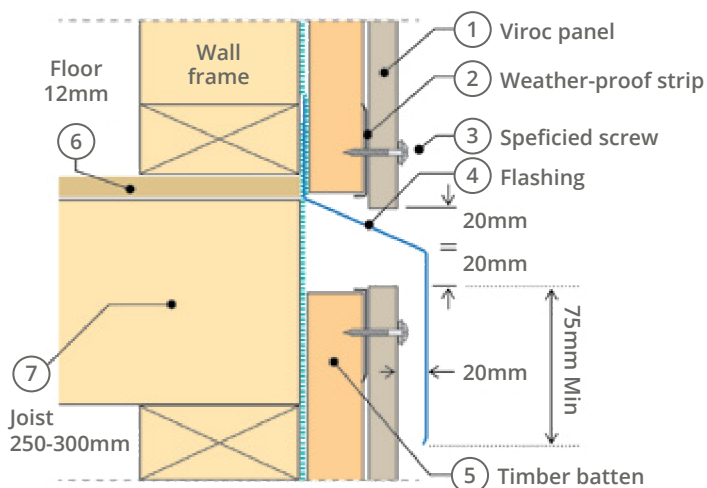
### Window jamb board detail

1. Window frame.
2. 2-piece end profile.
3. Double-sided waterproof tape.
4. Timber batten.
5. Waterproof sarking.



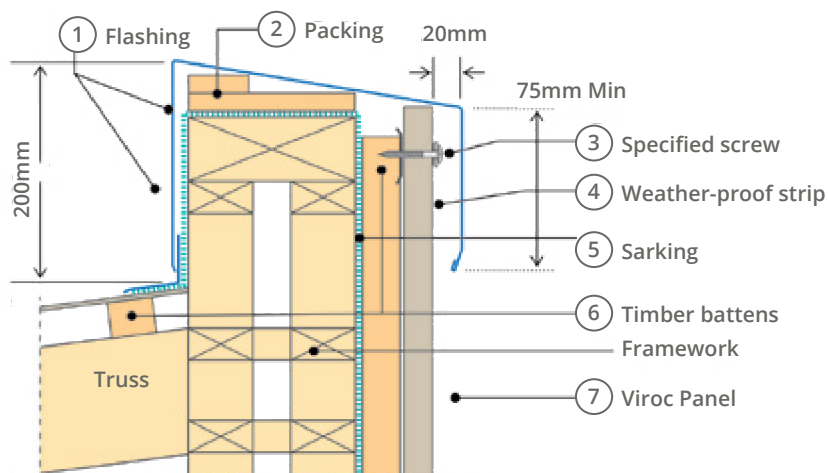
### Horizontal break even between storeys

1. 12mm Viroc Panel.
2. Weather-proof strip.
3. #10 specified screw.
4. Flashing.
5. Timber battens.
6.  $\pm 12\text{mm}$  floor.
7. Joist (250-300mm).



### Parapets

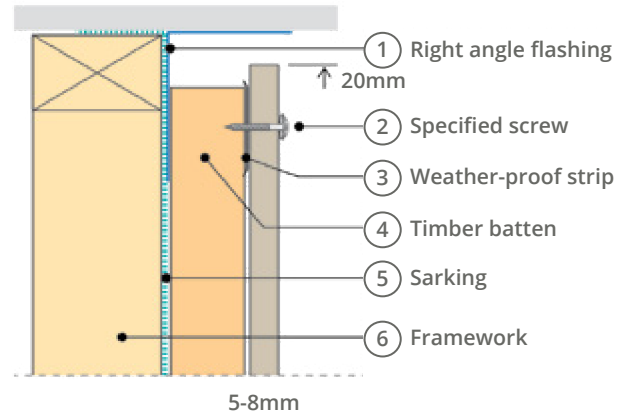
1. Cover flashing.
2. Packing strips.
3. #10 specified screw.
4. Weather-proof strip.
5. Sarking.
6. Timber battens.
7. 12mm Viroc panel.



## 4. Board fastening (continued)

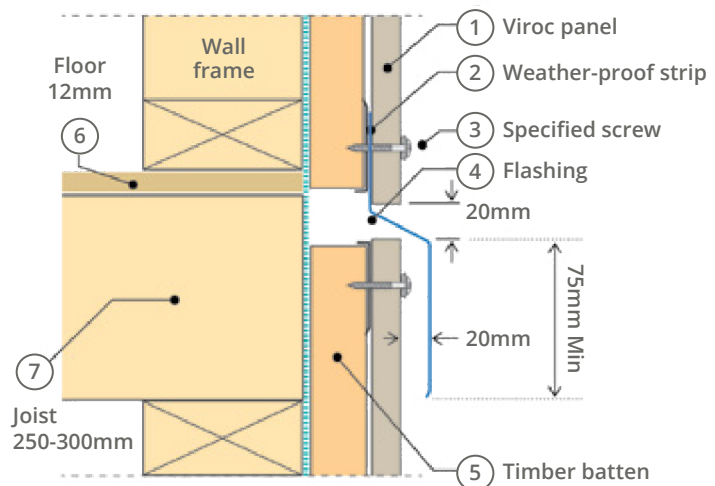
### Termination detail

1. Right angle flashing.
2. Specified screw.
3. Weather-proof strip.
4. Timber batten.
5. Sarking.
6. Framework.



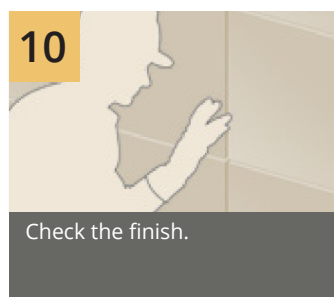
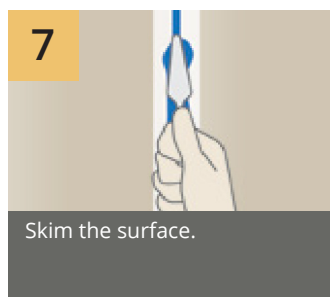
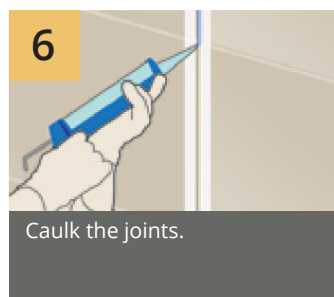
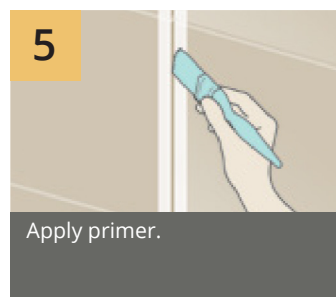
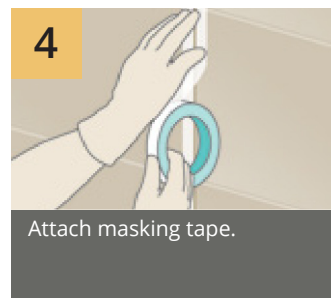
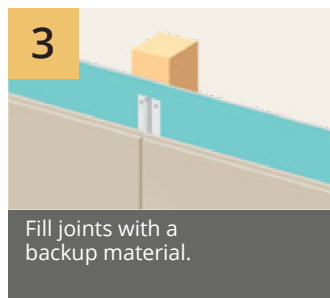
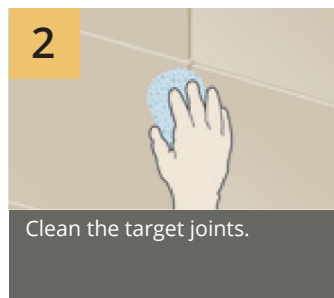
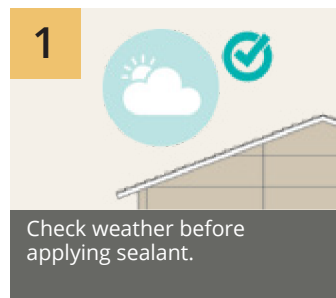
### Material change or alternative storey break

1. 12mm Viroc Panel.
2. Weather-proof strip.
3. #10 specified screw.
4. Aluminum profile.
5. Timber battens.



## 5. Applying sealant

### Application order

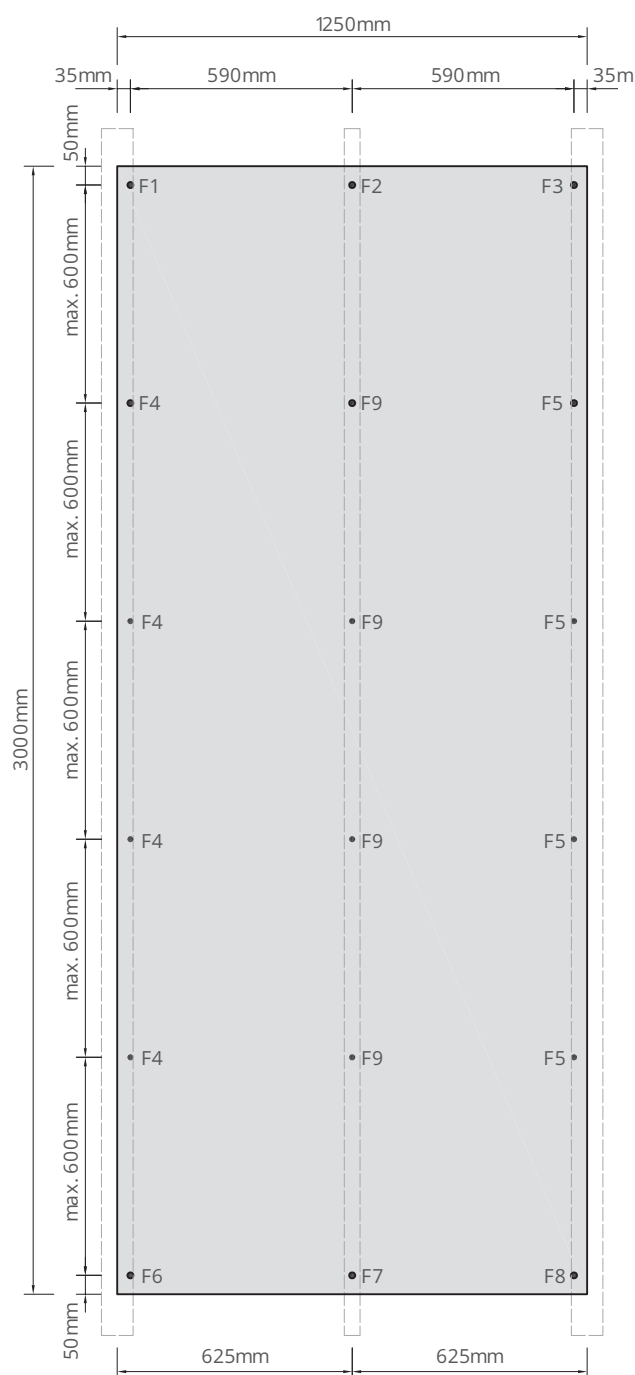


**NOTE:** No need to fill the joints with a backup material if metal joiners with bond breaker are used.



## 6. Internal Wall Cladding

### Board Fastening

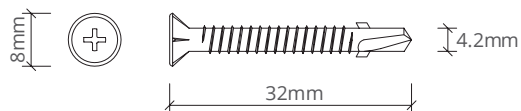


### Distance to edges

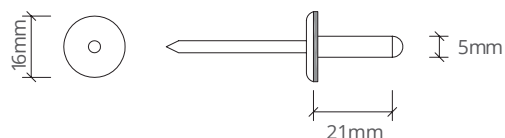


### Fastening to steel structures

IMET C8- 4.2x32

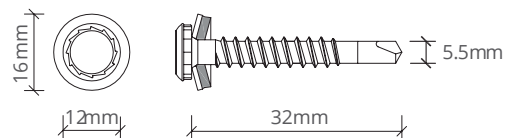


Rivet C16- 5x21

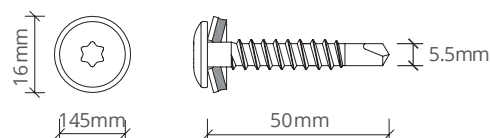


### Alternative screws for metallic structure

EMET V12-A 16-5.5x32



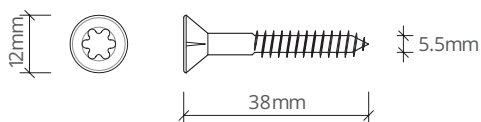
EMET C14-A 16-5.5x50



## 6. Internal Wall Cladding (continued)

### Fastening to timber structures

IMAD C12-5.5x38

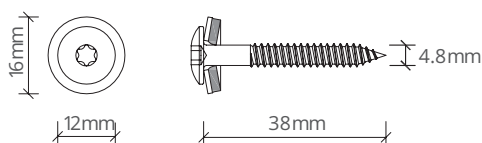


NAIL 1x35



### Alternative screw for wood structure

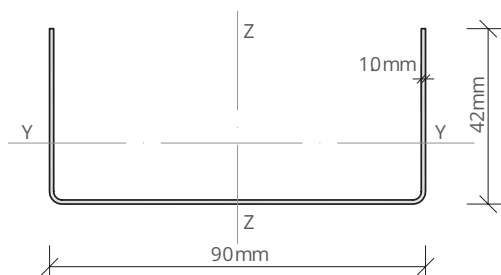
EMAD C12-A16-4.8x38



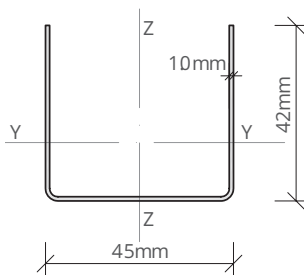
### Profiles

**Steel:** Profile thickness should be 1mm minimum, galvanized according to Standard EN10326 Class Z 275 minimum.

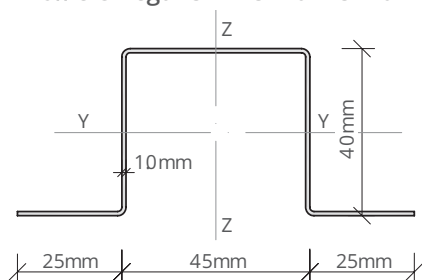
#### Profile U90 - 42x90x42



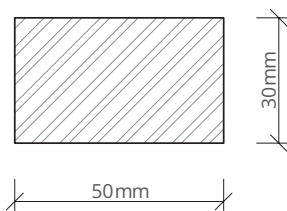
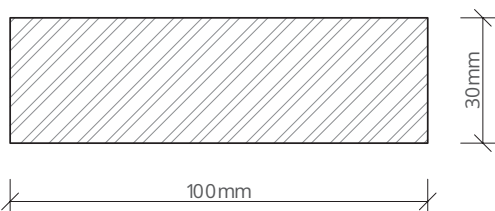
#### Profile U45 - 42x45x42



#### Profile Omega45 - 25x40x45x40x25

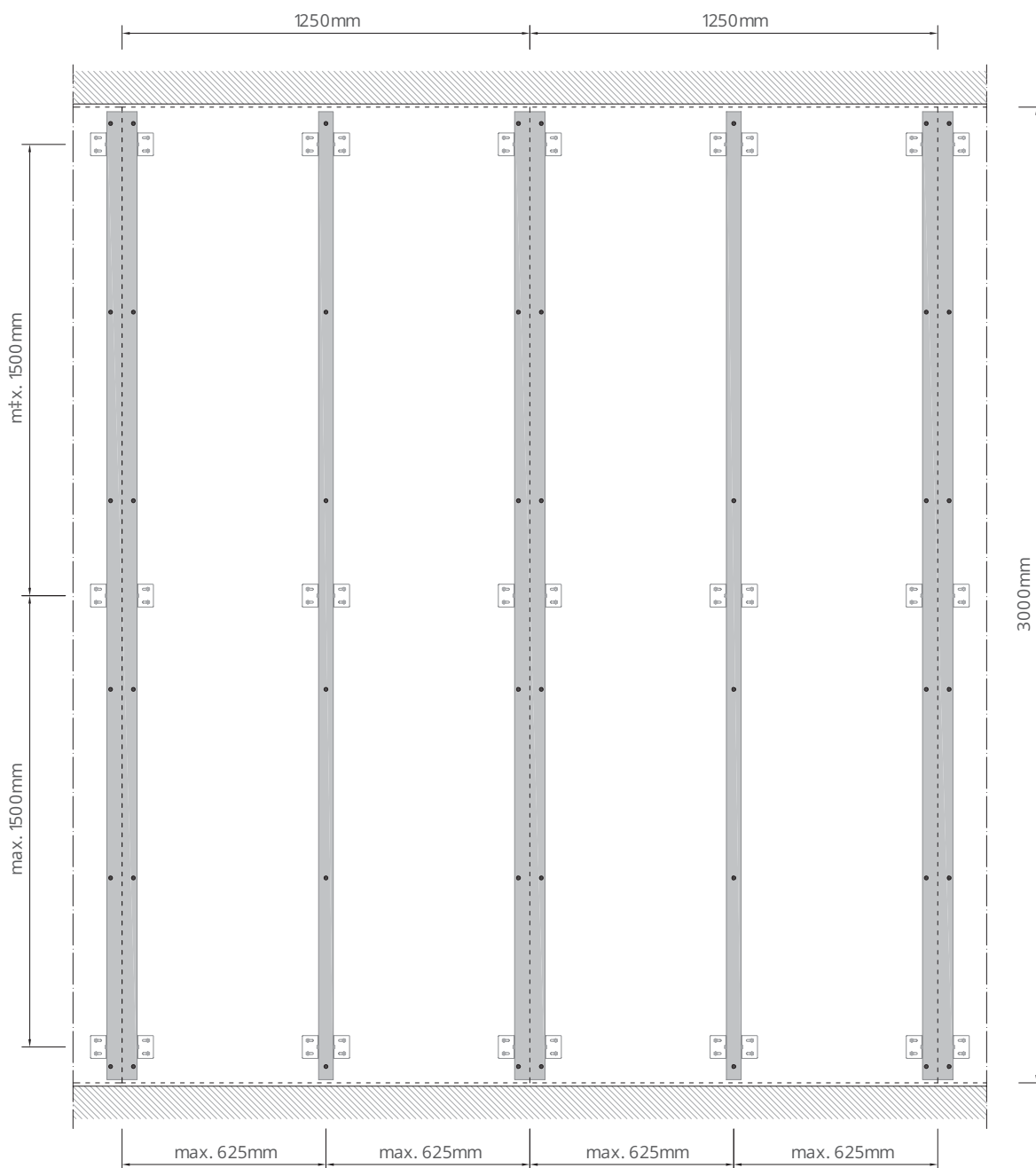


**Wood:** Class resistance C18 according to Standard EN338.



## 6. Internal Wall Cladding (continued)

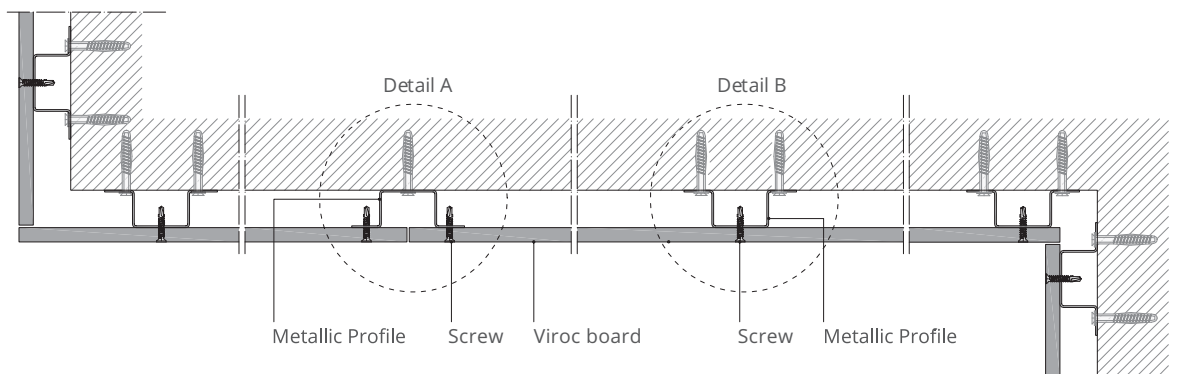
### Support structure



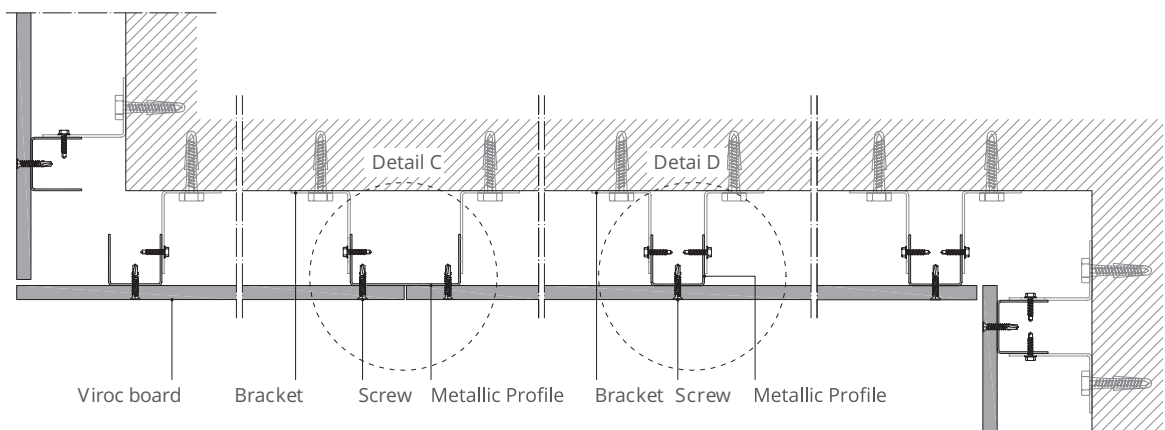
## 6. Internal Wall Cladding (continued)

### Horizontal Sections

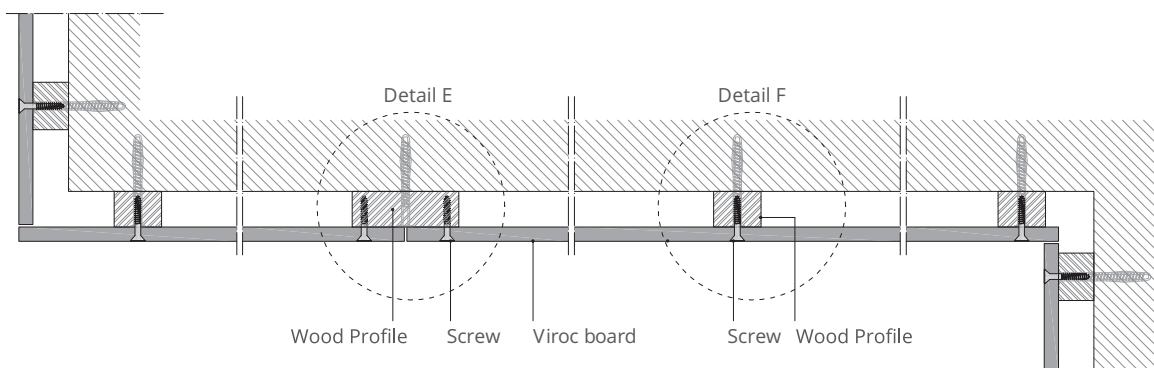
#### Steel structure



#### Steel structure (alternative)

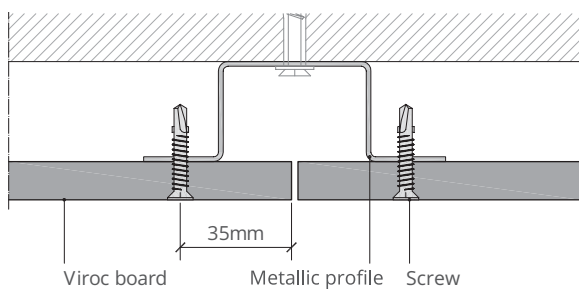


#### Wood structure

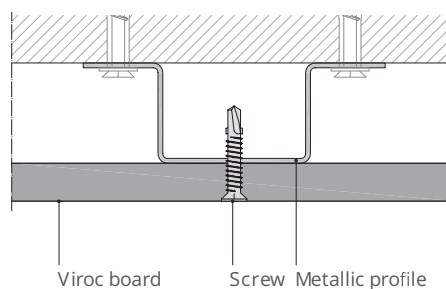


## 6. Internal Wall Cladding (continued)

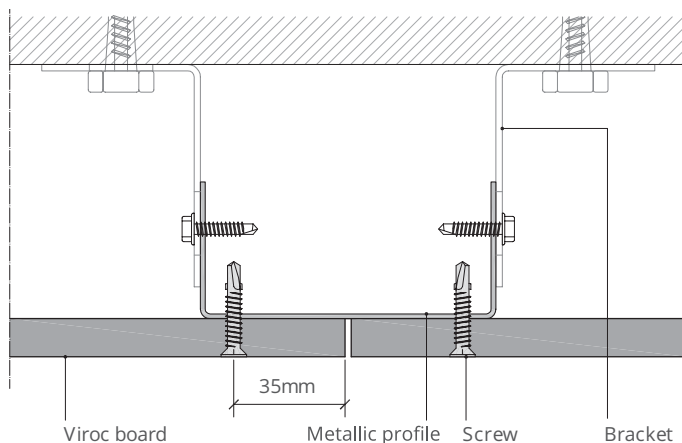
**Detail A (steel structure)**  
Joints between boards



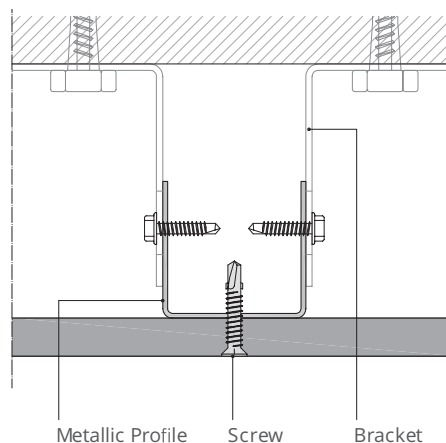
**Detail B (steel structure)**  
Board central zone



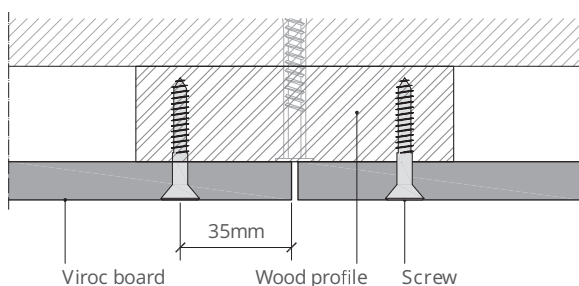
**Detail C (steel structure, alternative)**  
Joints between boards



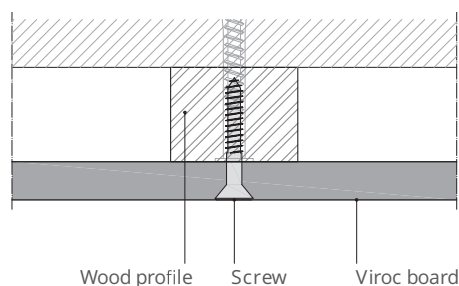
**Detail D (steel structure, alternative)**  
Board central zone



**Detail E (wood structure)**  
Joints between boards



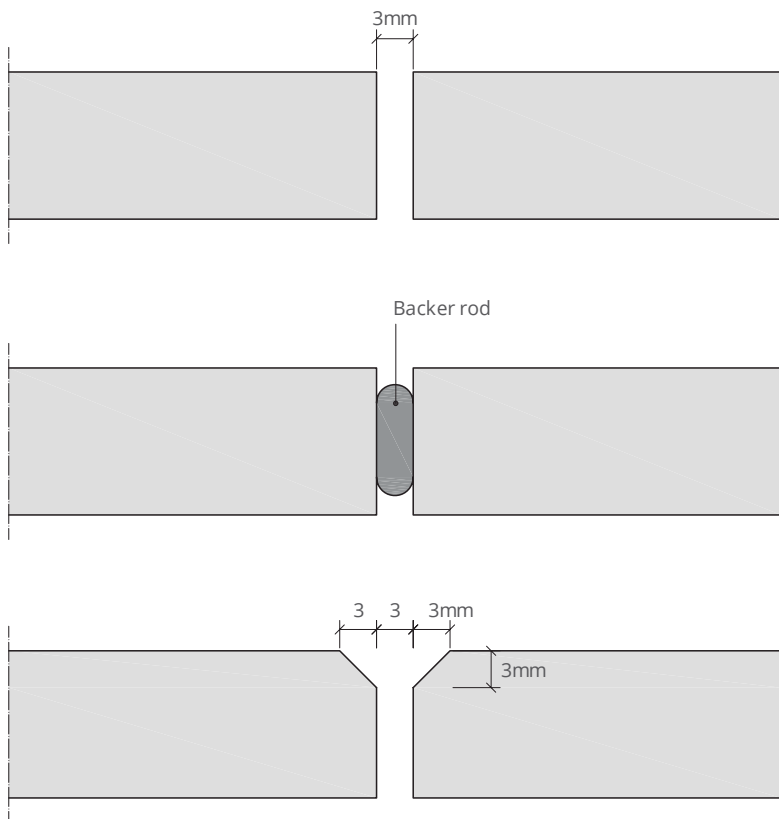
**Detail F (wood structure)**  
Board central zone





## 6. Internal Wall Cladding (continued)

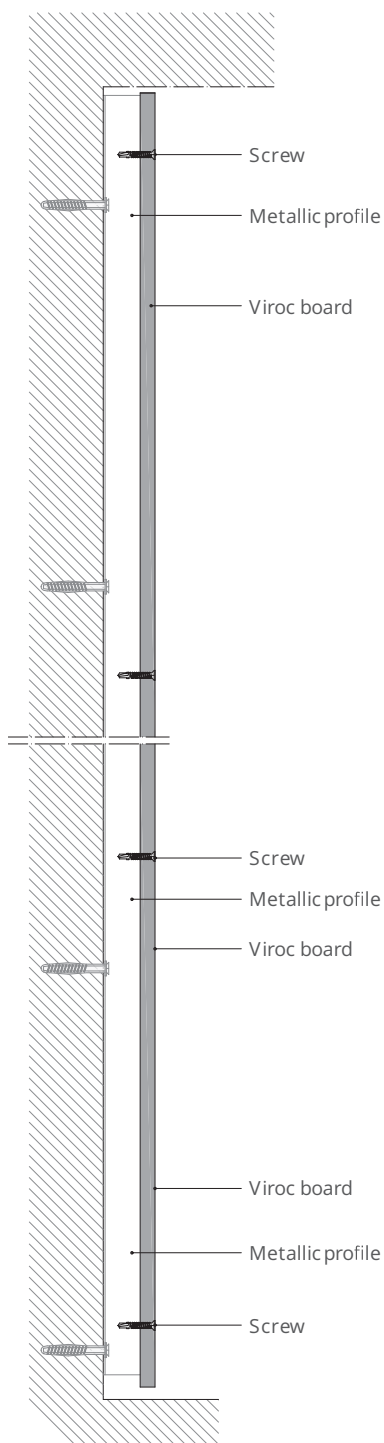
Detail of the joint



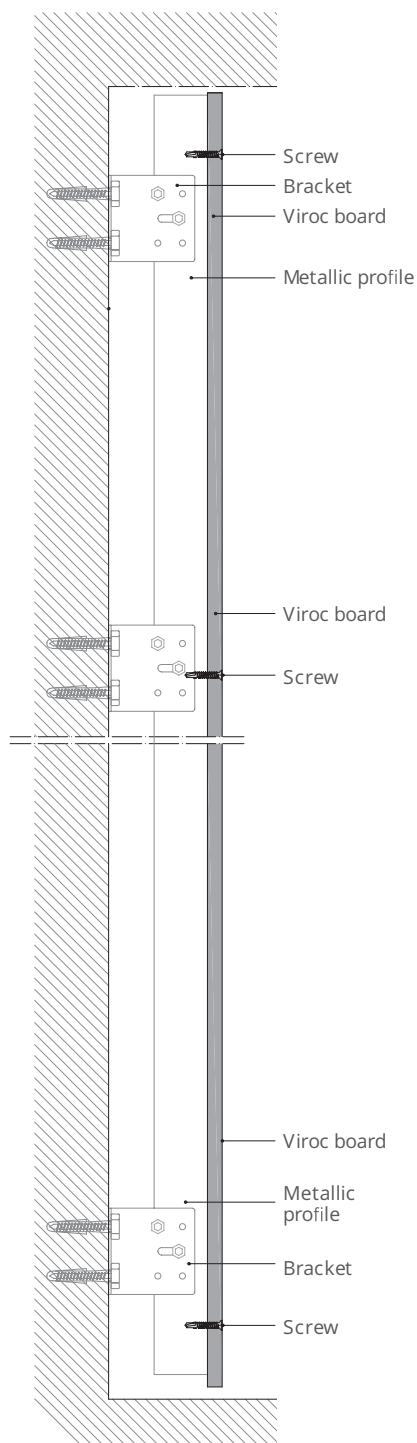
## 6. Internal Wall Cladding (continued)

### Vertical sections

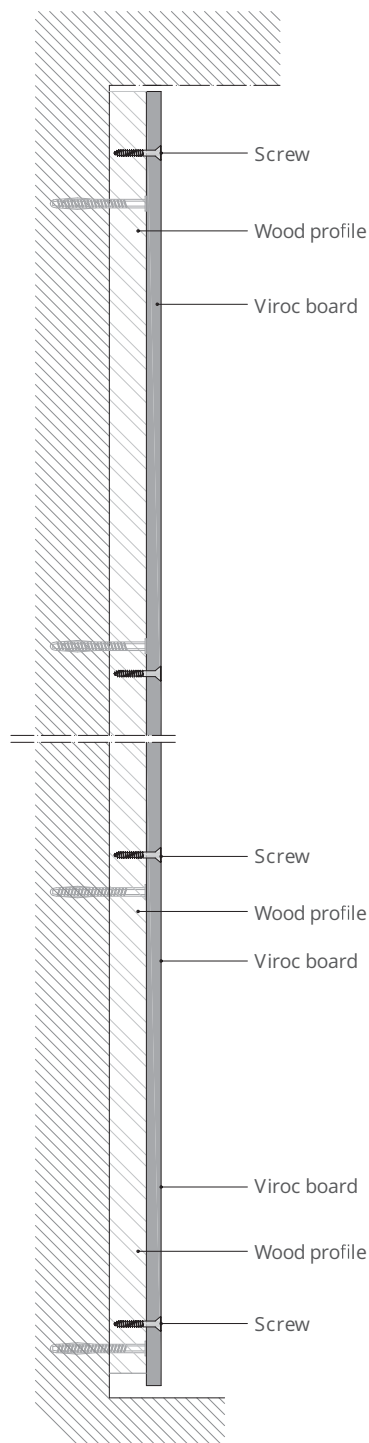
Steel structure



Steel structure (alternative)



Wood structure





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Phone 02 9666 6688 (NSW) 07 3267 6222 (QLD)  
Email [sales@grayking.com.au](mailto:sales@grayking.com.au)  
[grayking.com.au](http://grayking.com.au)