

# Kaneba™

## CASSETTE CLADDING L SERIES INSTALLATION GUIDE



**STEP 1: Install vertical CCS15 corner and wall ends**

**STEP 2: Install horizontal CCS15 and CCS16 members**

**STEP 3: Install horizontal CCS3 Support Rails**

**STEP 4: Measure and order trimmings and panels**

**STEP 5: Install trimmings (Copings, skirtings, trims).**

**STEP 6: Install panels**

**STEP 7: Install horizontal joint trims (optional)**

## OVERVIEW

There are two main aspects to installing Cassette Cladding namely 'First fix' and 'Second fix'.

**First fix** commences any time before or after window frames are installed, but after the building structure is in place and provided with a completed building underlay. First fix means checking and setting lines and fitting standardized Cassette Cladding componentry to the building.

First fix may take place days or months before the second fix panels are installed on the building<sup>1</sup>.

Before second fix commences the first fix components and the building underlay system can be visually inspected, and water and pressure tested.

The First fix component measuring guides allows specific lines to measure from to easily establish irrefutable second fix panel sizes.

Fabrication of all Cassette Cladding second fix items like (trimmings, copings and facing panels) are done by Cassette Cladding fabrication partners and falls outside the scope of this document.

---

<sup>1</sup> Dependent on durability and exposure limitations of other products like the building underlay.

Second fix preferably takes place after first fix is complete, but the two 'fixes' can take place in the correct installation sequence simultaneously on separate parts of the building. Second fix involves installing trimmings, taking possession of facing panels, slotting them into the correct position on the first fix support rails and mechanically securing them.

## RECOMMENDED SEQUENCE OF WORK

### Installation Drawings

Designer drawings usually in the form of building consent drawings include many details for the building. Information relevant to Cassette Cladding may be spread over multiple drawings and specifications.

To consolidate relevant information for easy reference the Cassette Cladding installer may consolidate the information for efficient use on the job site and produce Installation Drawings.

Installation Drawings may also show the intersection of other trades with the Cassette Cladding but must not alter the Cassette Cladding details or the project design drawings.

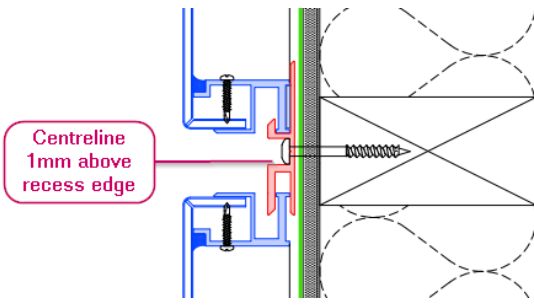
Check for obvious mistakes that needs to be corrected by the Designer because it will make installation problematic.

Useful information to simplify installation would include but is not necessarily limited to:

- 1) Co-ordination requirements with other work.
- 2) Fully dimensioned elevations for First Fix component installation:
  - A. Positions of relevant Cassette Cladding details.
  - B. CCS15 Internal Corners and their fastener requirements.
  - C. CCS15 External Corners and their fastener requirements.

- D. Horizontal panel joint centrelines (including bottom and top of wall)
  - E. Vertical panel joint centrelines (including vertical terminations)
  - F. Horizontal joint type CCS3 and their fastener requirements (and relevant surface finish colour/s)
  - G. Relevant information contained in this guidance document.
- 3) Fully dimensioned elevations for Second Fix component installation:
- A. Fully dimensioned elevations showing Second Fix panels and component positions
  - B. A separate schedule allocating a specific number for each facing panel and component to simplify ordering

- A. Is the correct horizontal joint centrelines obtained from the theoretical reference line for the building or, Must the horizontal joint centrelines be obtained from the as built FFL levels.
- B. Positioning of vertical edges to be determined from edges obtained from theoretical reference lines or, Must these edges line up with the actual as built structure.

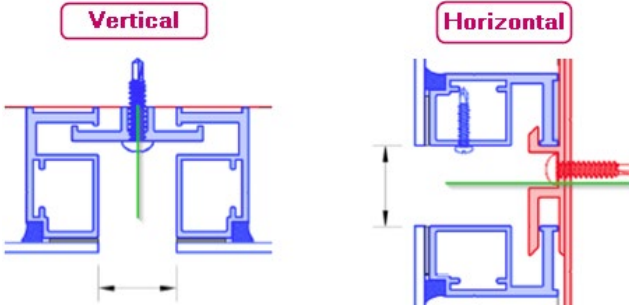
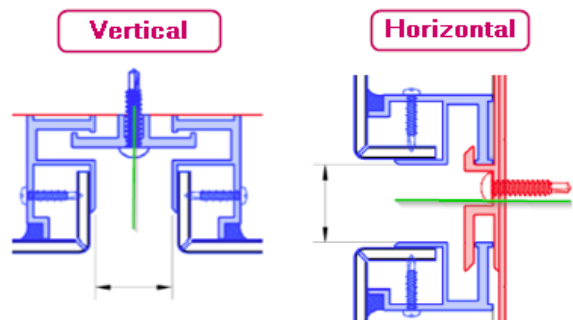


Panel Ref	Width (mm)	Height (mm)	Cladding Type	Cladding Finish	Panel Type (P1 / P2)	Panel Edge Type	Frame Finish	Joint Strip Finish

Panel schedule in CC Explainer Docs

Panel joint widths are indicated as the distance between the relevant extrusion

24mm P1: EDGE TREATMENT OPTION 3

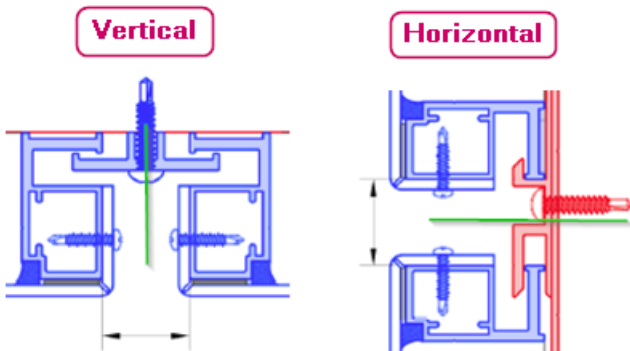


1.1 **Joint centrelines**

For correct positioning of components note joint centrelines are indicated as follows regardless of varying panel options.

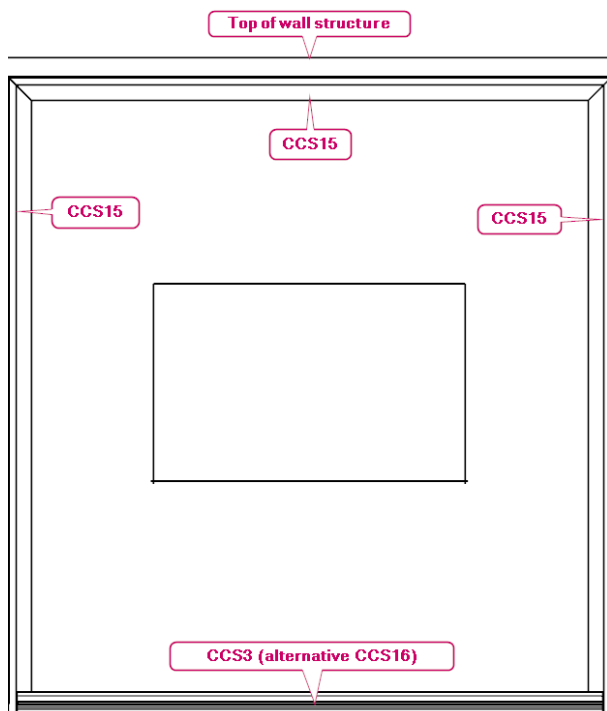
Reference lines for variance with structural tolerances needs to be clarified. For example:

**24mm P2: EDGE TREATMENT OPTION 4**



- 1) It is recommended to install Cassette Cladding corner members (CCS15 Internal Corner & External Corner) first.
- 2) Even though it is easier to start installation at the bottom of the wall with each corner it can also be started at the top.
- 3) CCS15 corners must align perfectly where they join at their ends and must be perfectly plumb in both axes. Therefore, check the accuracy of the structure before installation.
- 4) Fasten CCS15 with screws (#123) to framing at maximum 800mm vertical c/c on each flange.

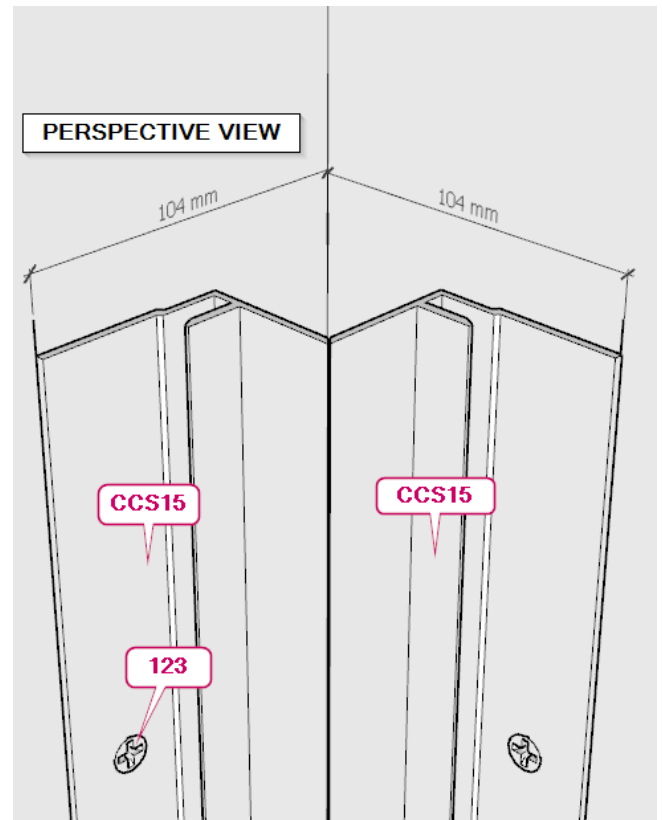
**‘Picture frames’**



- 6) The bottom of the wall will, dependant on the option of detail L14 selected to be a CCS3 rail combined with a skirting where a sloping bottom is required, or detail L 14A a CCS16 where a level bottom edge of wall cladding with no skirting is desired.

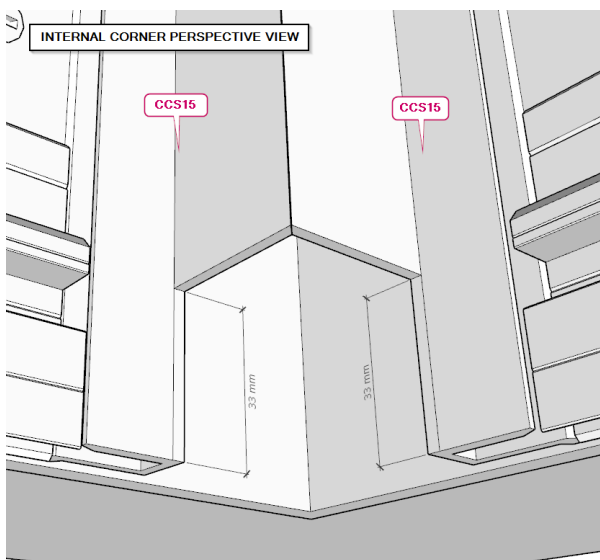
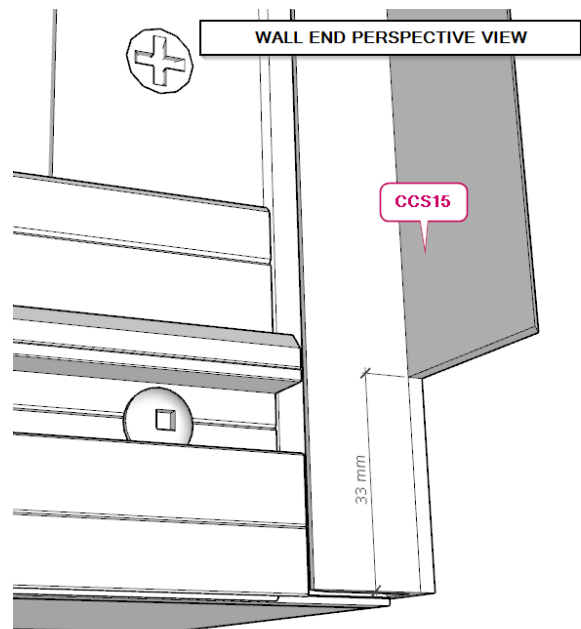
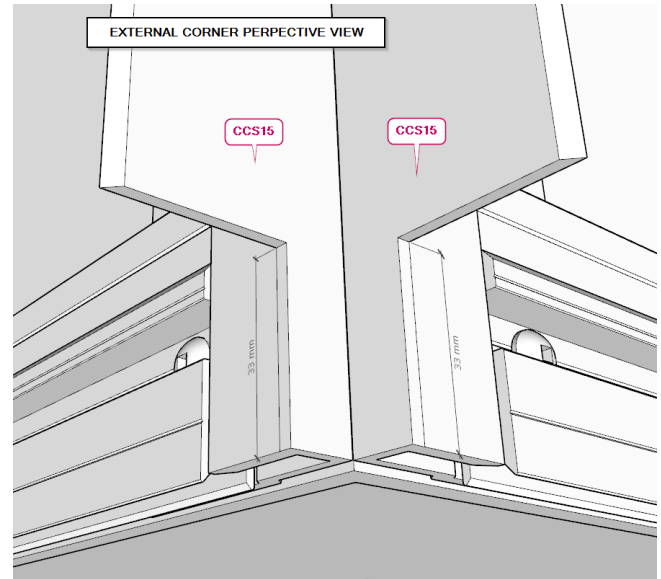
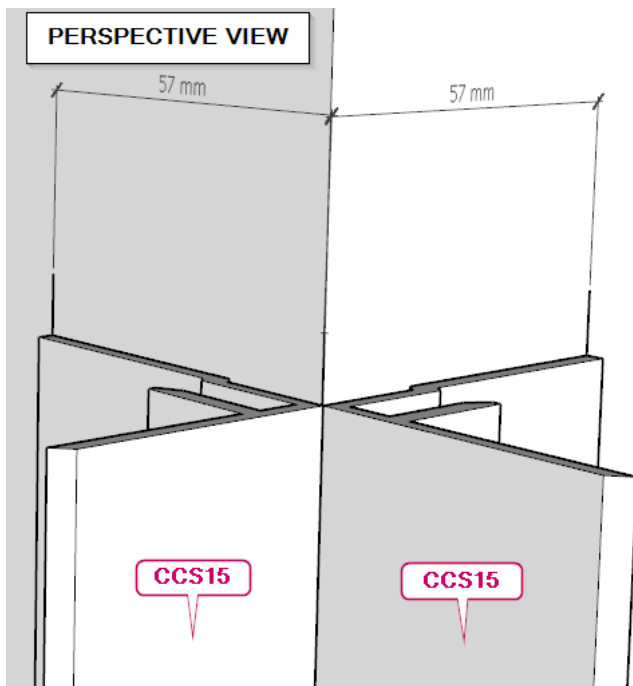
**Internal Corners**

- 7) As per detail L03 orientate the two CCS15 members correctly and offset with edge 104mm from the internal corner.
- 8) Based upon the application it may be easier to attach the two CCS15 members to each other with an angle in the unseen internal corner and then offering it up to the building for attachment. This will ensure a tidy finish where the two CCS15 members meet after installation.



**External Corners**

- 9) As per detail L04 orientate the two CCS15 members correctly and offset the edge 57mm from the external building underlay corner.
- 10) Based upon the application it may be easier to attach the two CCS15 members to each other with an angle in the eternal part that will be covered with the corner capping.
- 11) Fasten CCS15 with screws (#123) to framing at maximum 800mm vertical c/c on each flange.



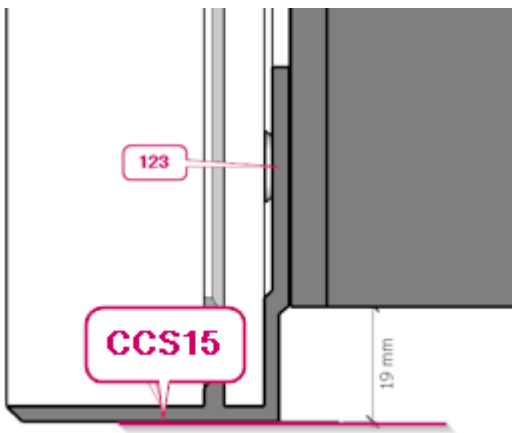
- 12) Ends of the CCS15 internal or external corners align with the building underlay bottom edge.
- 13) Trim 33mm off the one flange to avoid obstruction with the skirting that will follow for detail L14 is selected not for detail L14A.
- 14) Align the cut with the bottom edge of the panel – that will coincide with the CCS3 panel edge groove to follow.

**Inter-storey transitions and joins**

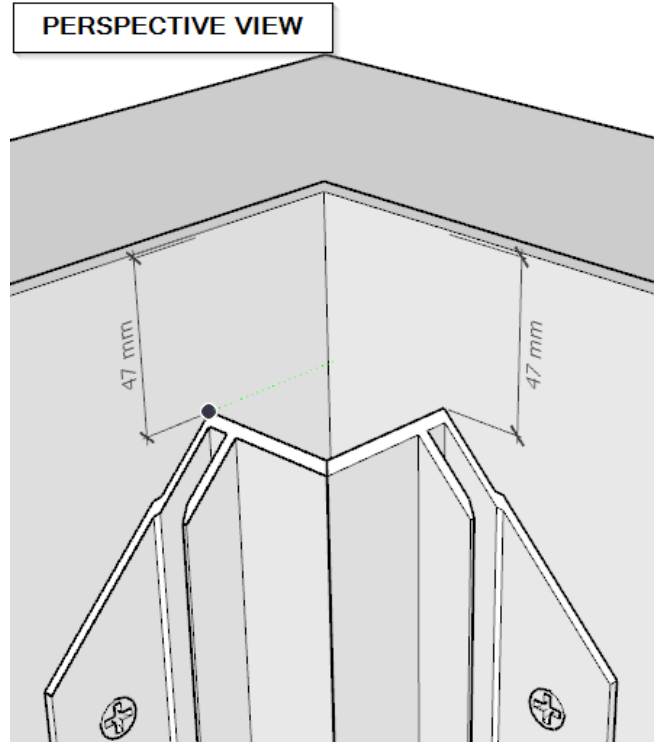
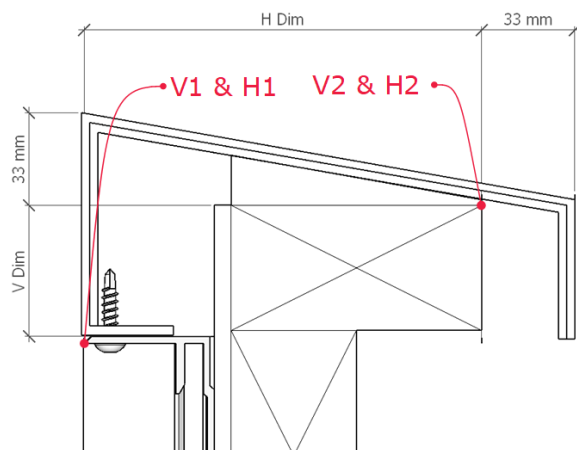
15) A gap of 3mm must be provided for thermal movement where CCS15 ends meet.

**Vertical members terminating at a fascia or bottom of wall detail L14A**

- 16) Where vertical CCS15 terminates at the bottom of a fascia overhang the structure by 19mm.
- 17) The same detail applies (with a different overhang) for detail L14A at the bottom of a wall.



**Terminate at top of wall or fascia**

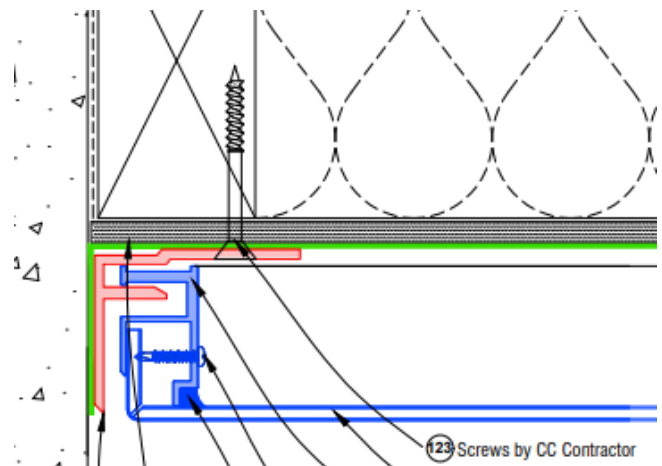


- 19) Cut the CCS15 at a 45° angle for the top horizontal CCS15 rail to follows.
- 20) It is preferable for the CCS15 termination to end approximately 47mm from the top of the wall structure.

**1.3 Install vertical wall ends**

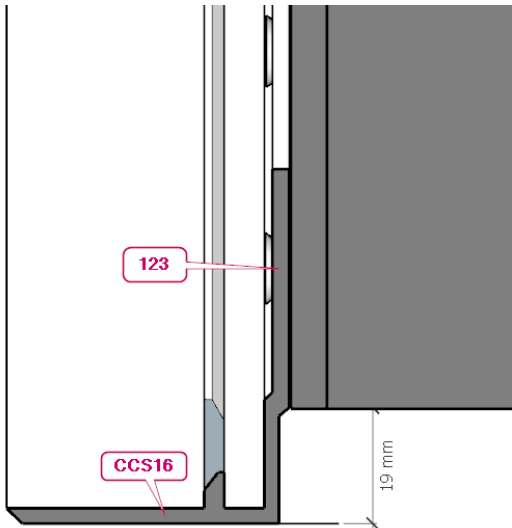
- 1) Like for the corners fit the vertical CCS15 wall terminations.

**Detail L13**

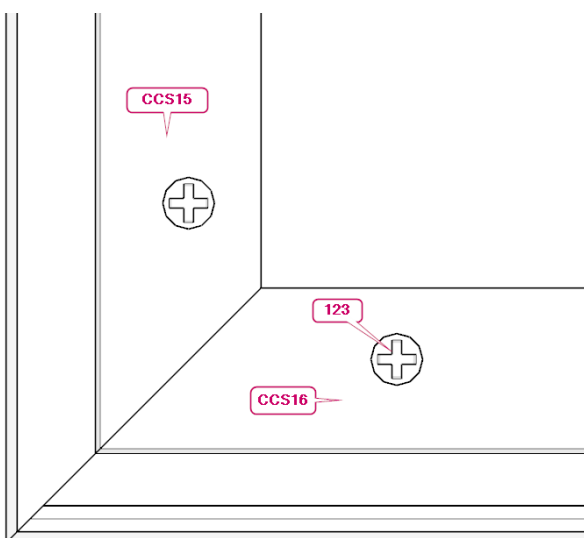


**1.4 Bottom edge of fascia (CCS16)**

- 1) CCS16 must be installed so that its flat surfaces are plumb, and they must be installed in a straight and level line from end to end.

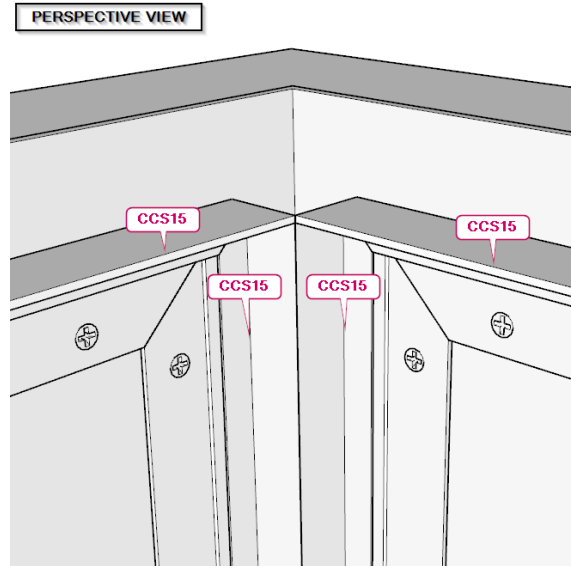


- 3) It is easier to install CCS16 in sequence from one end to another.
- 4) A step is provided in the back of the CCS16 for visual positioning of the component with the structure.
- 5) Where CCS16 intersect with CCS15 vertical mitre at 45°.



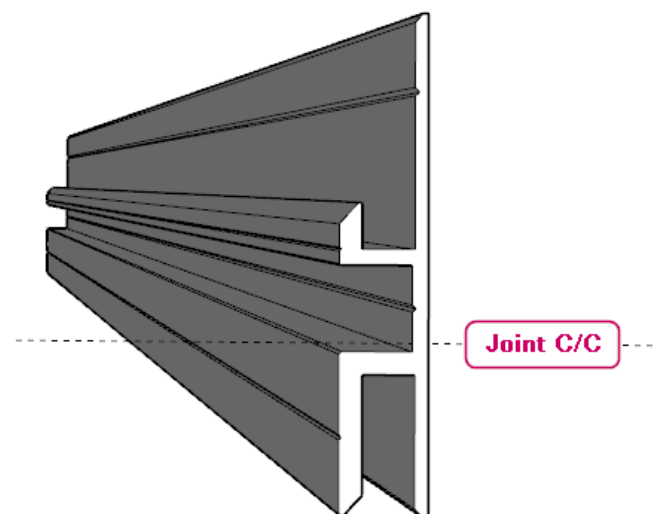
**1.5 Install CCS15 at top edge**

**(Detail L12)**

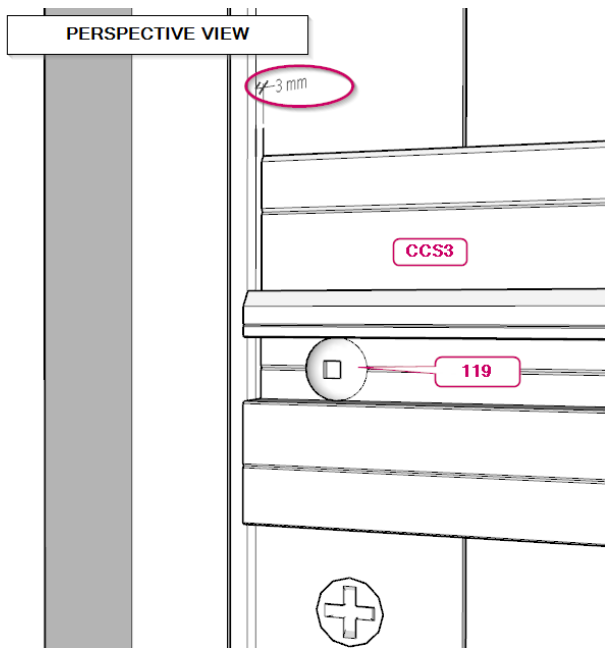
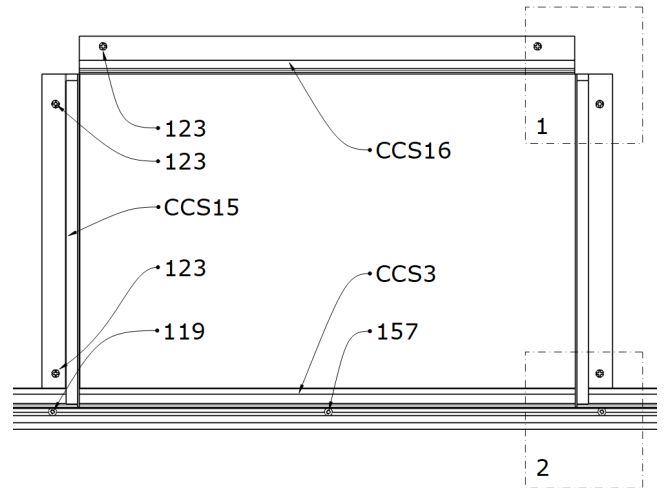


- 2) Mitre at 45° angles to join vertical CCS15 rails engaging sides of panels.
- 3) CCS15 is connected to wall structures with screw # 123.
- 4) CCS15 must be installed straight and level.

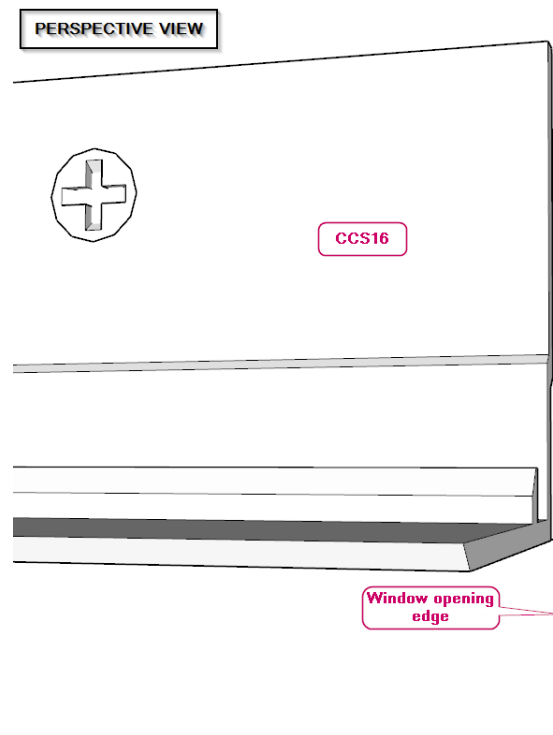
**1.6 Install CCS3 support rails**



- 2) CCS3 is connected to wall structures by screwing them to corner profiles (CCS15) with screw 119 and screwing them directly to the wall structure with screw 157.
- 3) CCS3 must be installed straight and level.
- 4) The joint centreline position is 1mm above the bottom ledge of the rail.
- 5) Positioning, in relation to CCS15 edges are 3mm short of each end to provide for thermal movement.

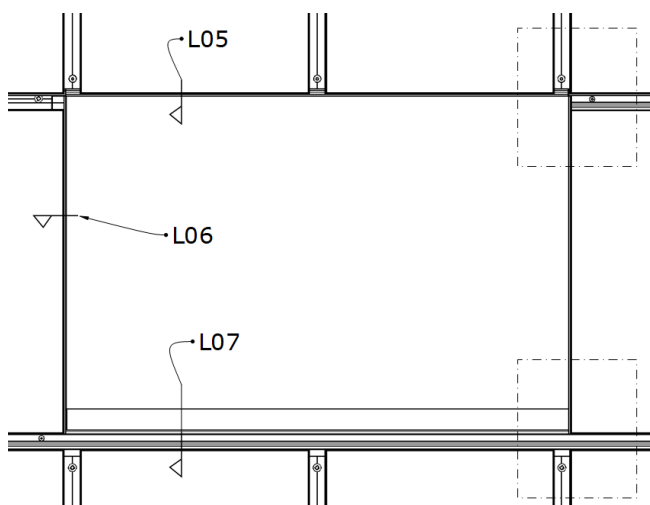


**CCS16 Window head**



**1.7 Window Openings**

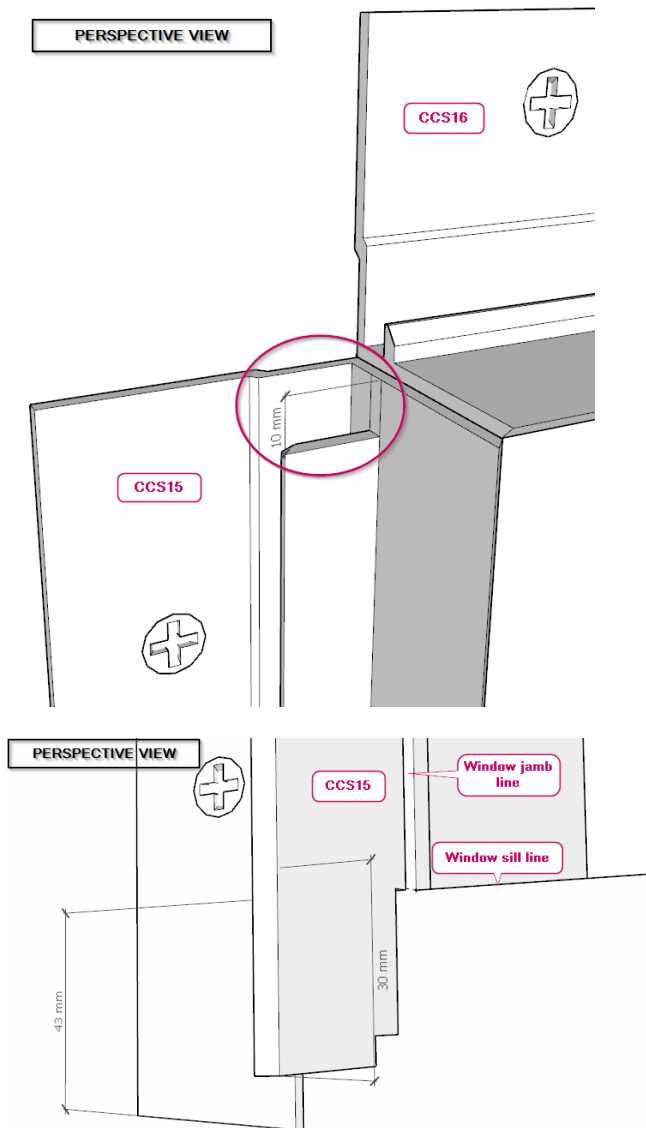
**Elevation**



- 3) CCS16 must be installed horizontal.
- 4) Fasten CCS16 with screw 123 at maximum 600mm c/c.

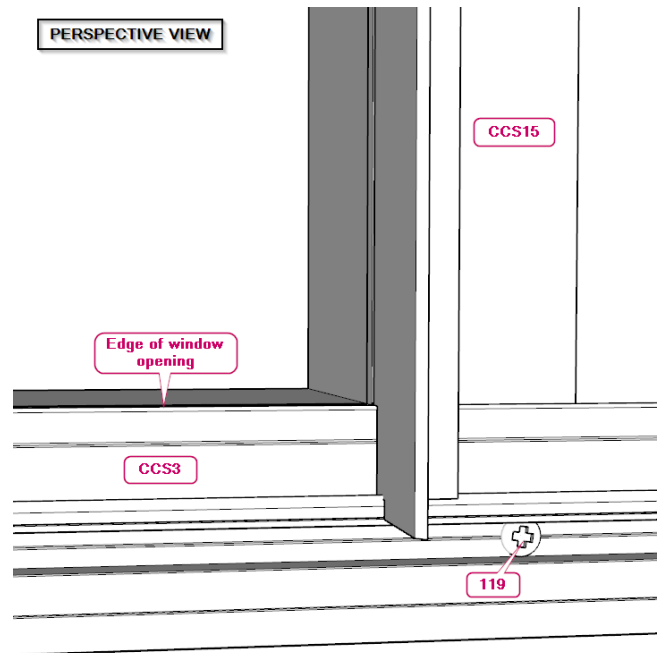


**Window Jambs**



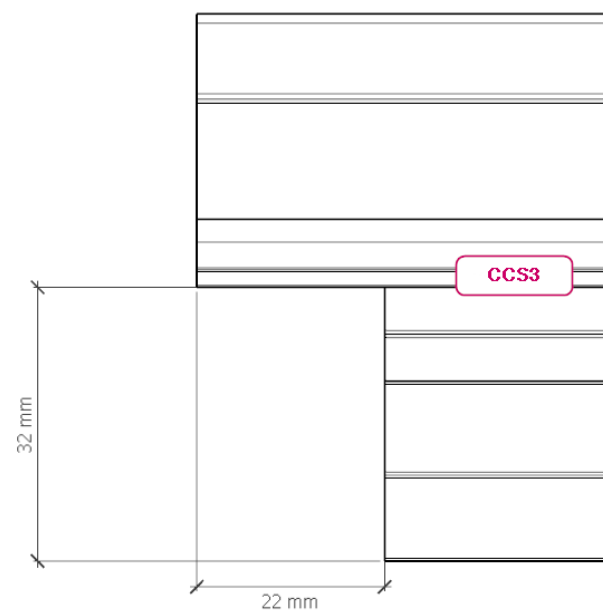
- 6) The overall height of CCS15 is 43mm longer than the window opening height where there is a horizontal joint continuing from the window sill.
- 7) CCS15 is trimmed at the bottom to receive CCS3 to fit snug into the bottom edge.
- 8) Attach CCS15 with screws 123.

**CCS3 Window sill profile (with horizontal joint continuing)**

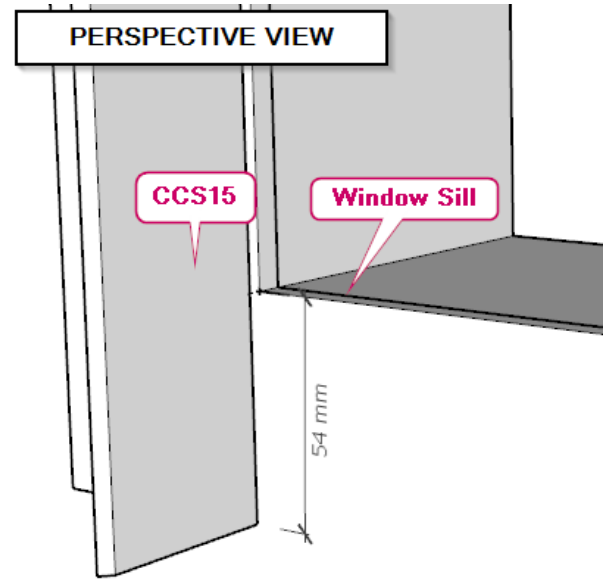
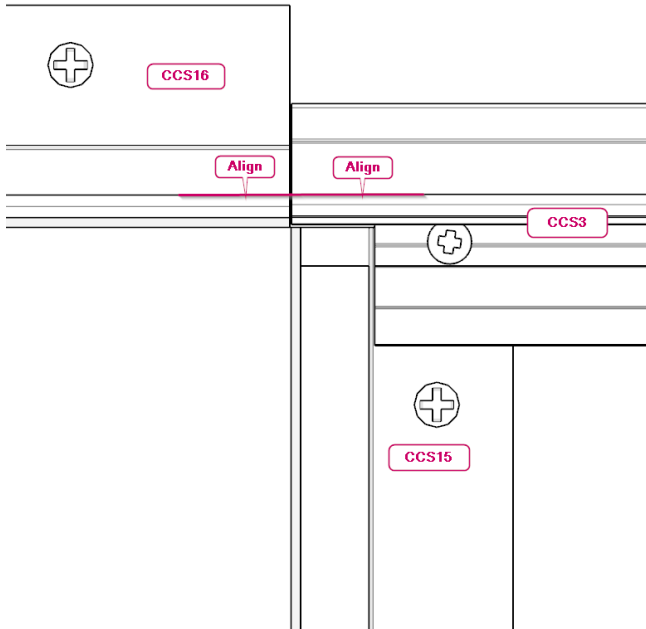


- 10) Fasten with screw 157 into framing or screw 119 into metal (CCS15).

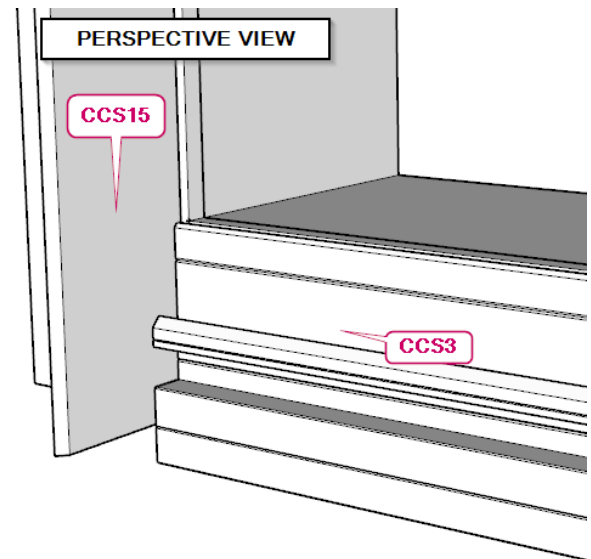
**Window head joint continues**



11) Where the horizontal panel joint continues from the window head component trim CCS3 to fit onto CCS16



16) CCS3 then finishes off against CCS15.



- 12) Fasten CCS3 with screw 157 into framing and screw 119 into CCS15.
- 13) Alignment of the bottom of panel edge 'hook' of CCS16 and CCS3 is important.

**Windowsill joint continues horizontally**

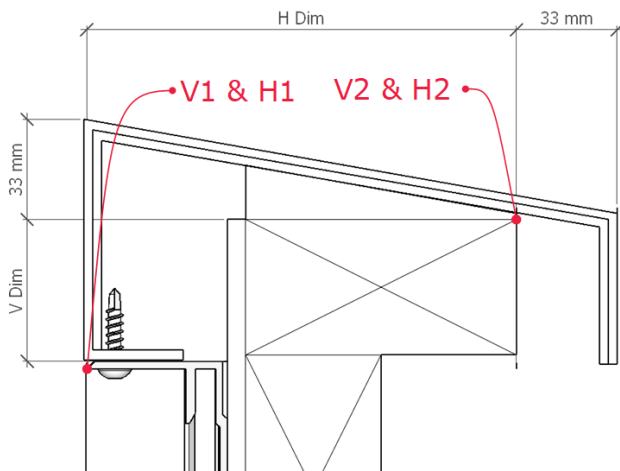
14) Continuation of horizontal panel joints at the window sill is simply a continuation of the CCS3 rail.

**Windowsill joint don't continue horizontally**

### 1.8 Taking finishing trim dimensions for fabrication

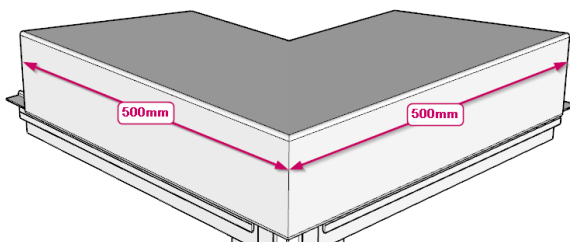
- 1) Once first fix components discussed before in this guide is installed finishing trims can be measured and ordered.

#### Coping

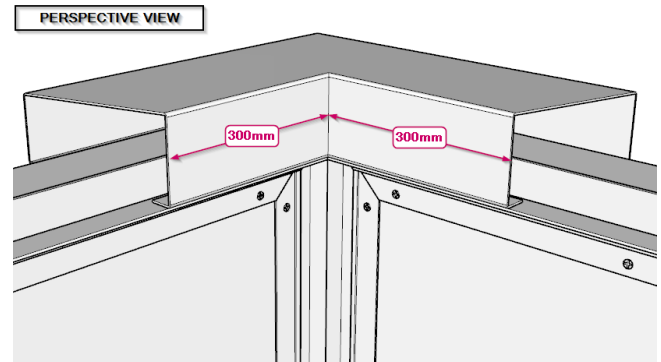


- 3) Horizontal coping dimension taken from H1 to H2 = H Dim. (This will result in an overall width of the coping of H Dim + 33mm.)
- 4) Coping sections are fabricated in 2400mm lengths as standard and ordered as a total.

#### Coping External Corner

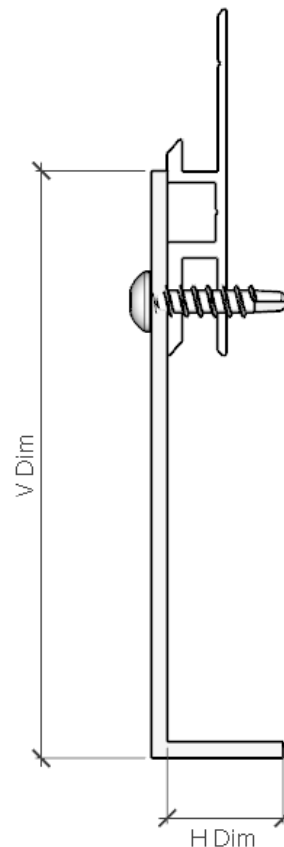


#### Coping internal corner



- 6) Internal corner coping units are fabricated as standard so that the edge offset distance is 300mm in each direction.

#### Skirting

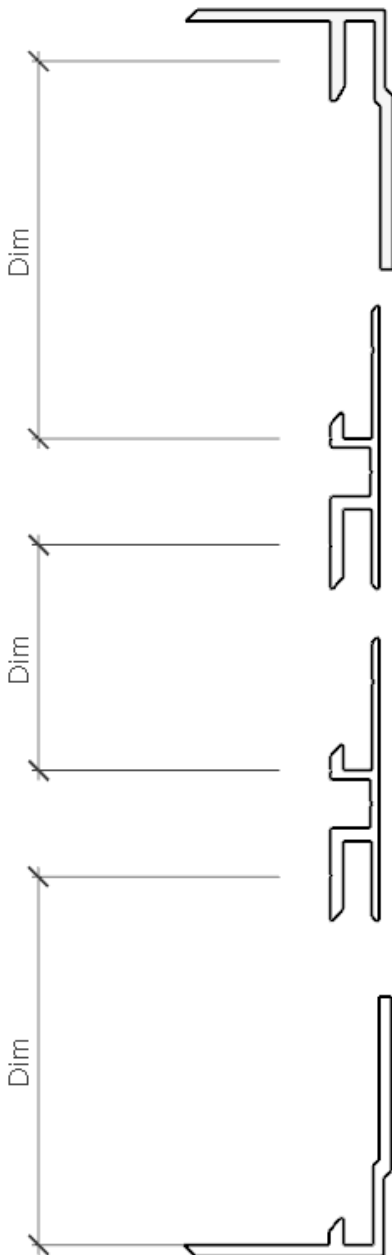


8) Skirting pieces are fabricated in 2400mm lengths.

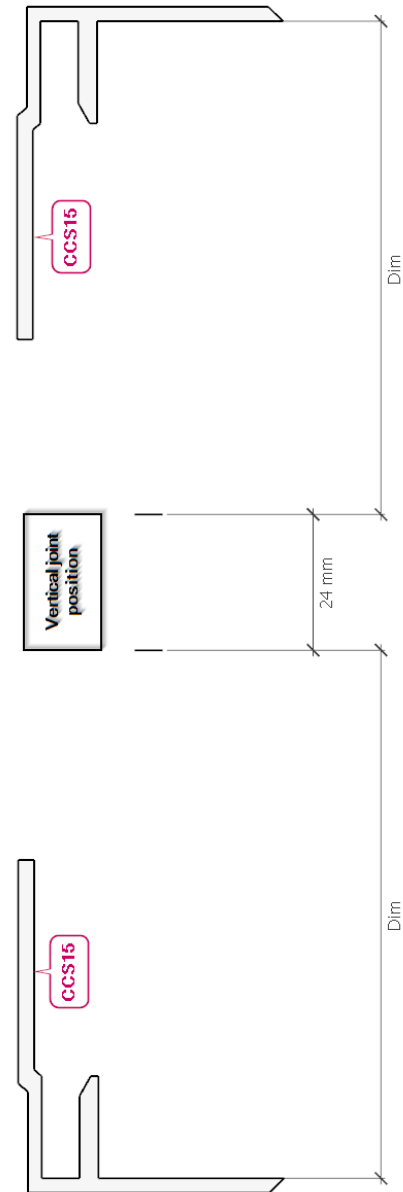
**1.9 Taking panel dimensions and panel clamp dimensions for fabrication**

1) Dimensions between 'first fix' Cassette Cladding members are needed to fabricate panels from.

**Height dimensions**

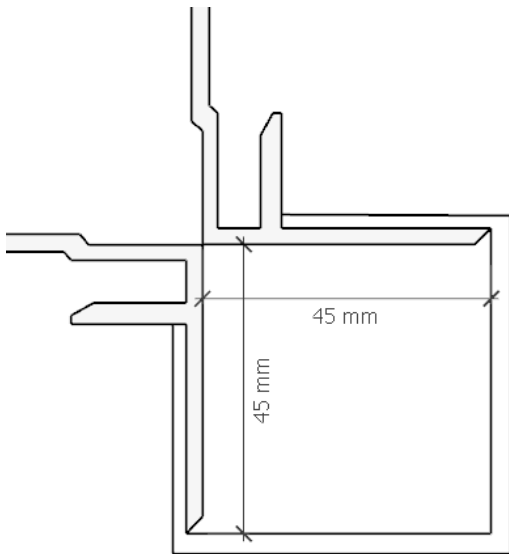


**Width dimensions**

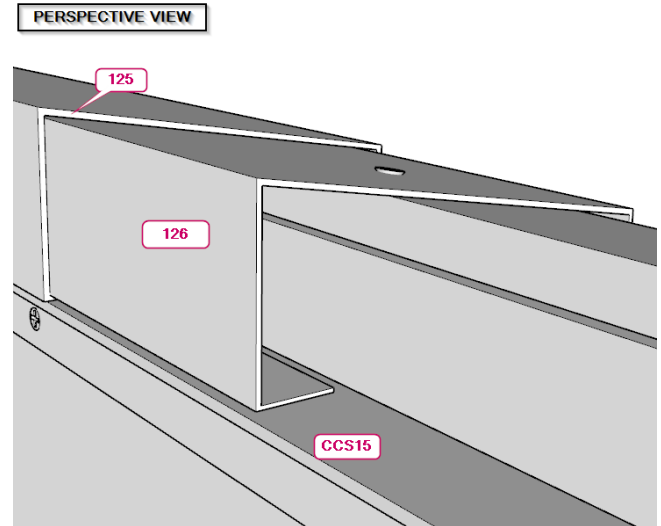


4) Use the spreadsheet order sheet for recording relevant dimensions.

**External corner**



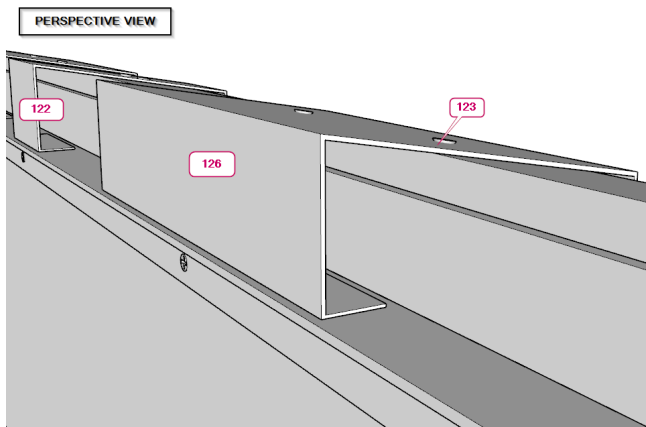
- b. 200mm jointer brackets between expansion joint brackets at coping joints.
- 2) Fix 100mm coping support brackets (item 122) with two screws (123) to top of wall between coping jointers so that no 'bracket' is spaced further than 1200mm apart.



6) Use the spreadsheet ordering sheet to record the correct type of external corner.

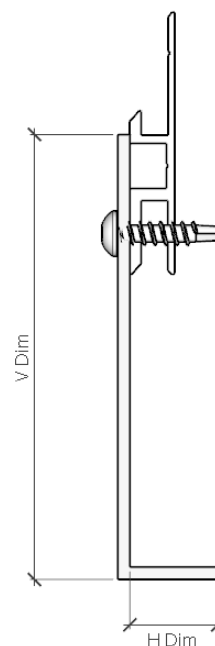
**1.10 Install Finishing trims**

**Coping**



- 1) Fix coping jointers (item 126) with two screws (123) to top of wall as follows:
- a. 300mm expansion joint brackets maximum 8000mm apart.

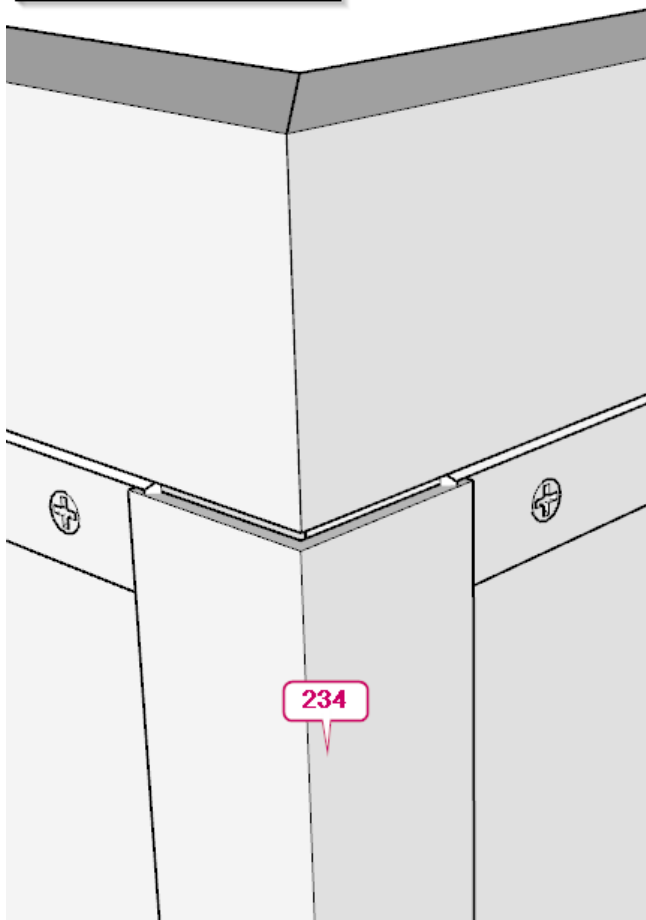
**Skirting**



- 4) Finish the bottom end of Cassette Cladding at ground level off with skirting (130).
- 5) Skirting is held in place with Screws 119 through the flange of CCS3.
- 6) Ensure Skirtings are equipped with ventilation holes.
- 7) Ensure Skirting pieces fit together to avoid vermin from entering the wall.

**External Corner Trim (234)**

**PERSPECTIVE VIEW**

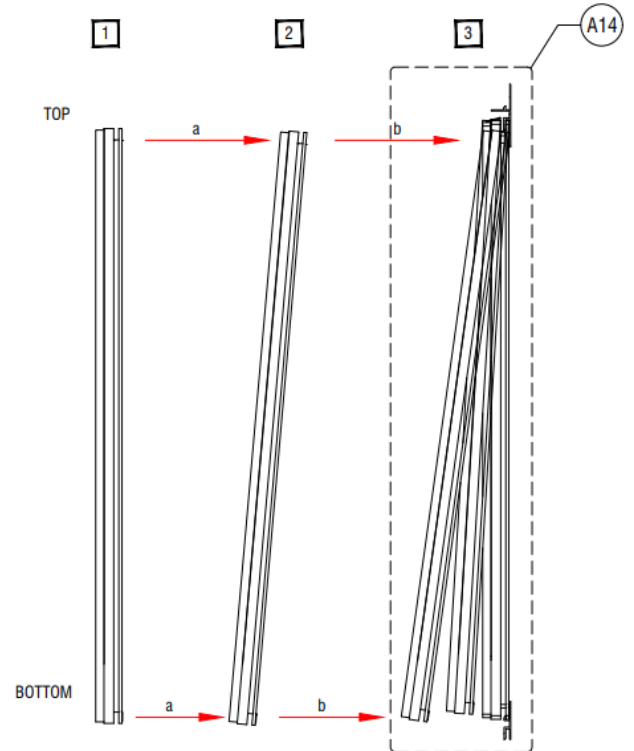


- 8) External corner trim (234) are screwed to CCS15 internal corners with screw 233 at 600mm c/c.
- 9) Where trim 234 terminates at the bottom it aligns with the bottom edge of the panel frame it abuts.

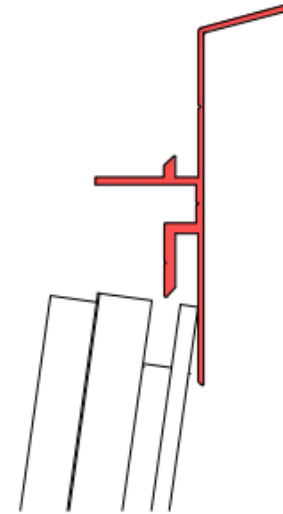
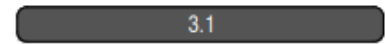
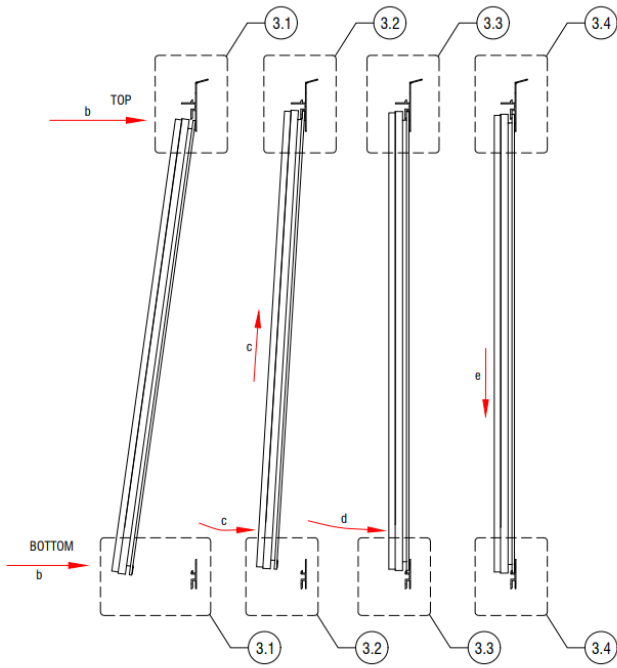
**1.11 Install panels**

- 10) Handle and move panels carefully to avoid damage to the surfaces.

**Installation motion**

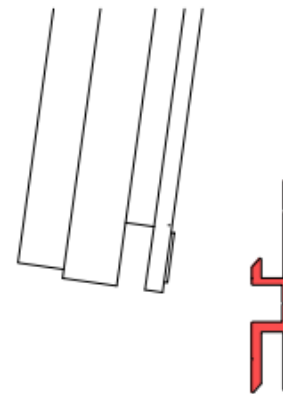


- 12) Orientate the panel correctly and make sure it is in the correct location.
- 13) Tilt the top of the panel towards the support rail where the top of the panel will be supported.
- 14) Slide the top edge of the panel into the downwardly facing cavity of the Support Rail.
- 15) Push the panels upwards and the base towards the bottom support rail.
- 16) Ensure the bottom edge of the panel perimeter frame clears the top edge of the bottom rail 'hook' and lower the panel into its engaged position.



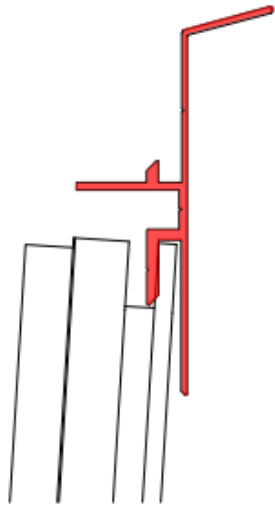
TOP

18) Take care not to tilt the panel so that it disengages from the bottom hook.

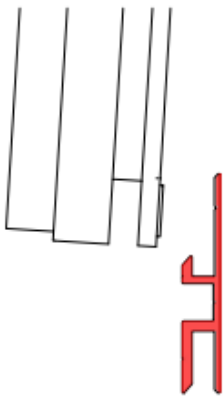


BOTTOM

3.2

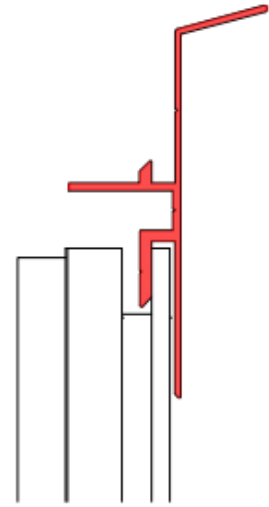


TOP

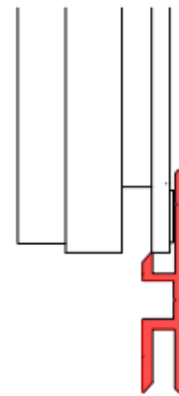


BOTTOM

3.3



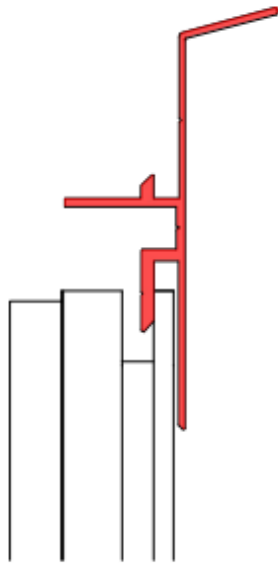
TOP



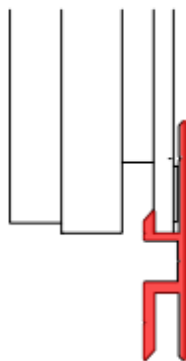
BOTTOM



3.4

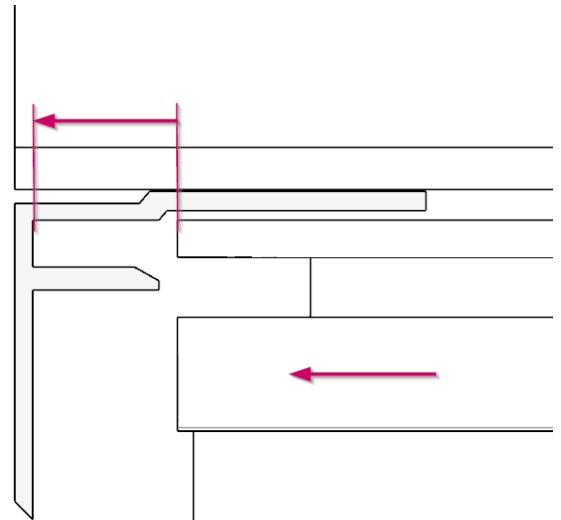


TOP

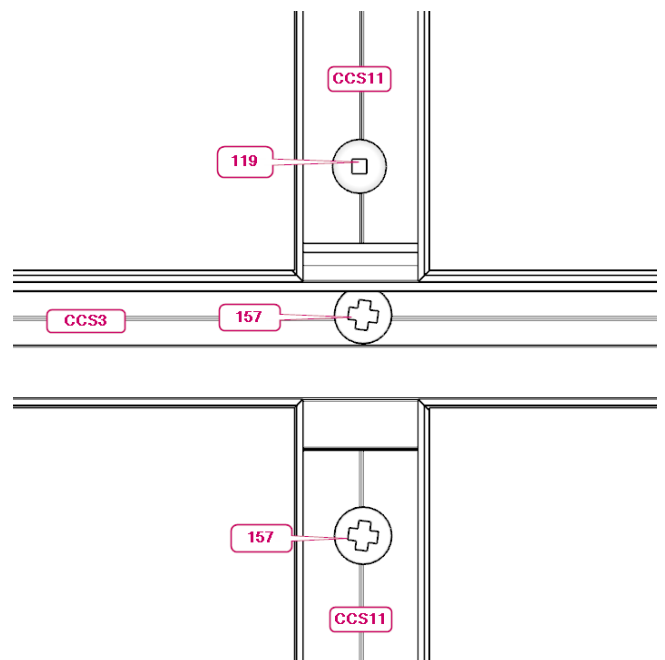


BOTTOM

- 19) Once the panel is in its location the top edge and bottom edge of the panel frame should align visually with the groove lines in the support rails the panel vertical height was measured from.
- 20) Panels that engage on the vertical edge with CCS15 needs to be pushed sideways after the rocking engagement motion to engage the vertical edge.

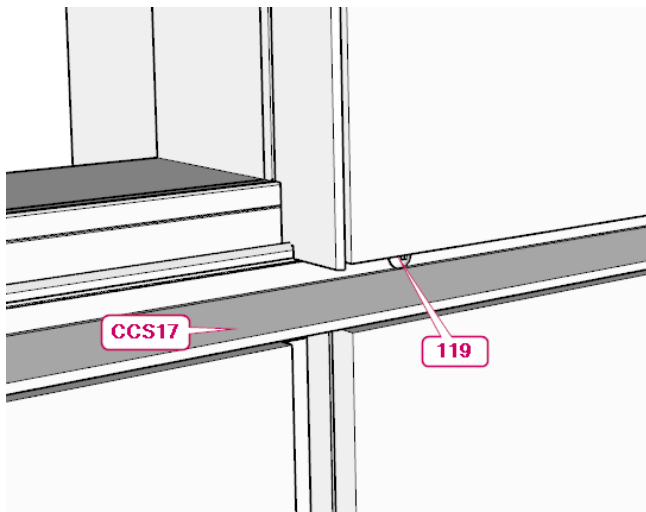


**CCS11 Vertical joint strips**



- 21) CCS 11 vertical panel edge clamp are inserted after placement of panels and secured with screws (119) at each panel corner and where the strips overlaps the CCS3 flange.
- 22) The bottom end of each CCS11 is stopping 3mm short of the support rail at its bottom it and screws (119) are not positioned further than 15mm away from the ends to ensure it obtains a structural fixing.
- 23) CCS11 rails are then fixed into structure at centres not exceeding 600mm with screw (157)

### **CCS17 Horizontal joint trims**



- 24) The windowsill is treated with CCS17 attached with screw 119.
- 25) Other horizontal joints can be treated with CCS17 to provide an alternative look.
- 26) Fix CCS17 with screw 119 at determined visual intervals.

### **1.12 Panel details**

- Panels fitting in the Cassette Cladding First Fix frame vary significantly in detail and specification. For the drawings attached one option were used – CCS1-3; however, there are numerous. It is

important to ensure the specification is followed so that the correct panel option is selected.

## **2 CASSETTE CLADDING**

### **2.1 Overview**

### **2.2 Storage and Cassette Cladding First Fix guidance**

- 1) It is recommended to work from Installation Drawings. Evaluate them before work commence on a job site to ensure you have enough materials of the correct specification and the correct equipment available.
- 2) When you are instructed to commence installation.
  - a. Perform a site installation readiness assessment to ensure the preceding trades are complete and obtain written confirmation from the manager that they are suitable for you to proceed.
  - b. Familiarize yourself with safety hazards on site and only proceed if safe.
- 3) Store components in a location so that it will avoid tripping hazards and not be subject to damage from other construction activity.
- 4) Allow sufficient time for ordering and lead times.

### **2.3 Second Fix guidance**

- 1) It is recommended to wear protective gloves to avoid injury on sharp edges of components.
- 2) Where no mechanical handling equipment is available use more than one person to carry a panel, especially on windy days.
- 3) Care must be taken when handling Cassette Cladding panels. The protective peel off foil does not provide significant impact and scratch resistance and the finished panel edges are easily damaged.
- 4) Do not carry Cassette Cladding panels on the flat, carry on edge to avoid excessive

bending that may result in permanent deformation of panels and / or stress marks.

- 5) Store Cassette Cladding panels on site in a manner that will avoid damage and secure panels in a manner that will protect it from movement or being blown over by wind. Movement may be caused by wind, vibration, people, etc.
- 6) No cutting, trimming, or welding of Cassette Cladding panels are permitted outside the Cassette Cladding fabrication facility. It may damage the finish, decrease the strength, or result in visual imperfections or failure in performance of the Cassette Cladding design. Return any component parts that require alteration to the factory for correction or replacement with new parts.

#### **2.4 Install Cassette Cladding panels**

- 1) All components and panels must be installed in accordance with the guidance provided by this document.
- 2) Do not install panels if any visual defect in the building underlay is visible.
- 3) Visually verify First Fix for compliance.
- 4) Co-ordinate with other trades impacting on the Cassette Cladding installation, including window, door and building underlay installations.
- 5) With reference to the correct location for the panels slide them into position as follows:
  - a. First ensure the bottom receiving track of the carrier rail is free of debris.
  - b. Offer the panel up slightly tilting forward at the top to slot it into the top receiving slot of the carrier rail. With a flowing movement push the panel up into the slot, then push the bottom forward so that it is positioned above the bottom carrier rail receiving slot and release the panel.
  - c. Ensure the panel is fully hooked by visually checking the line of the extrusion below lining up with the panel edge. The same should apply to the top of the panels where the

groove line in the carrier rail should be visible

### **3 ACCEPTABLE VISUAL FINISHING LEVELS**

When inspecting the Cassette Cladding installation for an acceptable level of visual finish the following criteria applies.

#### **Panel surfaces**

- 1) Surfaces are acceptable where the normal person cannot identify features that may appear as defects at a normal viewing distance.
- 2) Normal viewing distance may vary:
- 3) For a building fascia 20m from ground level normal viewing will be from standing beside the building approximately 30m away
- 4) For a ground level wall panel viewing distance will be not necessarily be right by the panel but where people will normally stand viewing the panels.
- 5) At a building entry normal viewing distance may therefore be as close as 1m.

#### **Flatness of walls**

- 6) Cassette Cladding will generally follow the line of walls even though its attachment brackets can accommodate a level of structural tolerances.
- 7) For the L series details defects in substructure line can be corrected by a maximum of plus 5 or minus 5mm, everything more than this will show in the finished surfaces of the Cassette Cladding
- 8) Where substructures are flat the maximum acceptable deviation
- 9) for vertical members are 3mm from line in a 5.2m run and 5mm from line in an 11m run.
  - for horizontal members to be 3mm from line on an 8.5m run.

#### **Joint widths**

- 10) Joint widths vary constantly due to thermal expansion / contraction. Movement is

temperature / colour dependant and joint widths between larger panels will tend to fluctuate more.

- 11) Permissible vertical and horizontal misalignment of abutting ends of Cassette Cladding panels maximum 3mm

#### **4 MAINTENANCE**

- 1) It is the responsibility of the Designer to determine normal maintenance requirements to comply with NZBC Acceptable Solution B2/AS1. The extent and nature of maintenance will depend on the geographical location and exposure of the building. As a guide, it is recommended that basic normal maintenance tasks shall include but not be limited to:
  - 2) Washing down exterior surfaces every 6 – 12 months. (Do not use a high-pressure water blaster to wash down the cladding.)
  - 3) Maintaining the exterior envelope and connections including joints, penetrations, flashings and sealant that may provide a means of moisture entry beyond the exterior cladding.
  - 4) Pruning back vegetation that is close to or touching the building.
  - 5) Ensure finished ground levels maintain the required clearances from the building.