



FIRESTOP CAVITY BARRIERS CFS-VB/NVB

Application Guideline

Version 01
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1. CORNERS

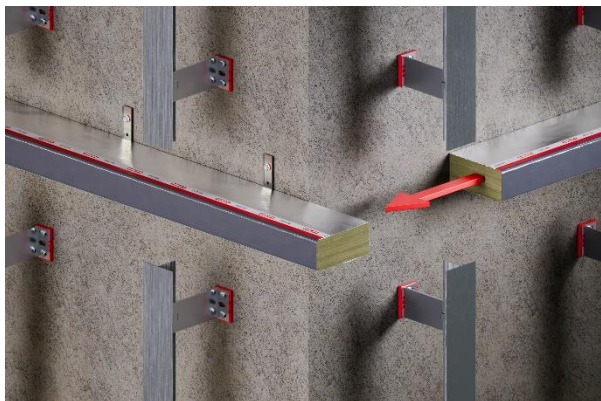
1.1 CFS-VB outside corners



Extend one ventilated barrier past the corner by the void width, such that the barrier edge is tightly abutted against the cladding.

The bracket closest to the corner should be installed at max 100mm from the edge and following the fastener operating instructions.

The oversailing barrier should have a minimum bearing on the substrate of 400mm and should be supported by a minimum of two brackets.

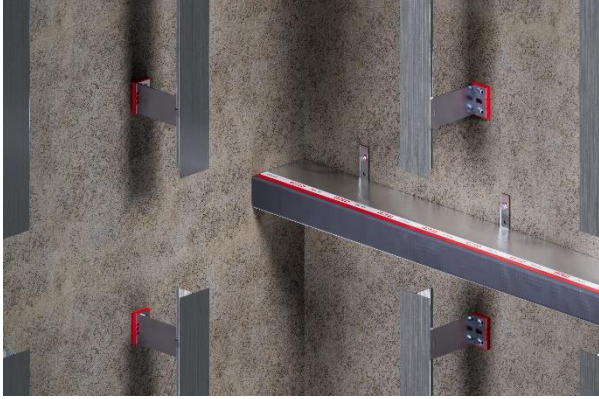


The other barrier should be abutted to the oversailing one and installed as per standard installation guidelines.

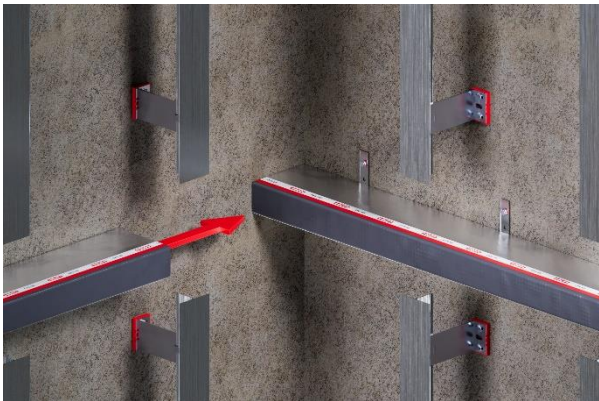


Ensure there is no gap between the cladding and the edge of the oversailing barrier.

1.2 CFS-VB inside corners



Install the first barrier, ensuring there is no gap between its edge and the base material.



Abut the other barrier directly onto the face of the one previously installed.



Ensure there is no gap between the two barriers.

2. INTERSECTION BETWEEN VENTILATED AND NON-VENTILATED BARRIERS

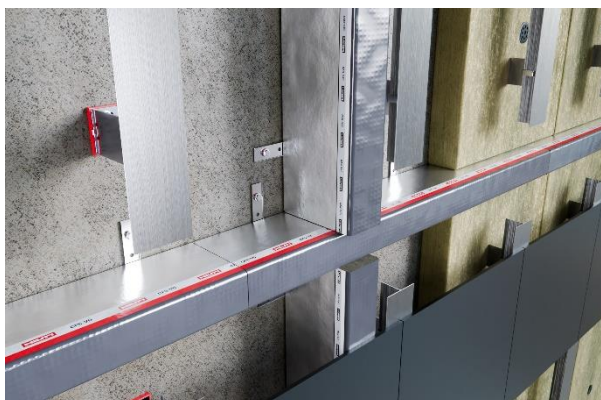
2.1 Intersection between CFS-VB and NVB



Install vertical barriers so that they run uninterrupted.



Abut the horizontal barriers against the vertical ones, ensuring there are no gaps between barriers.



Alternatively, horizontal barriers can run uninterrupted.

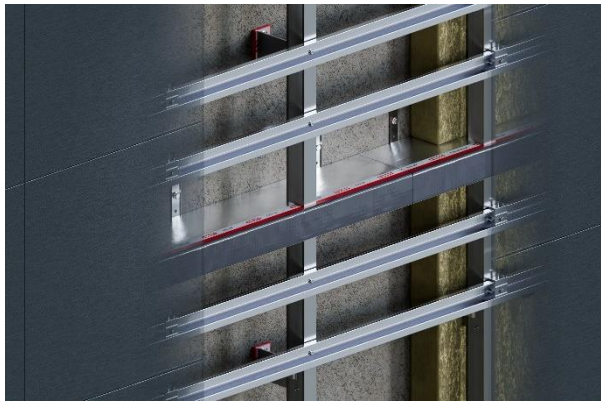
Make sure the intumescent material in the front of the barrier is free to expand.

3. INTERSECTIONS WITH FAÇADE PROFILES

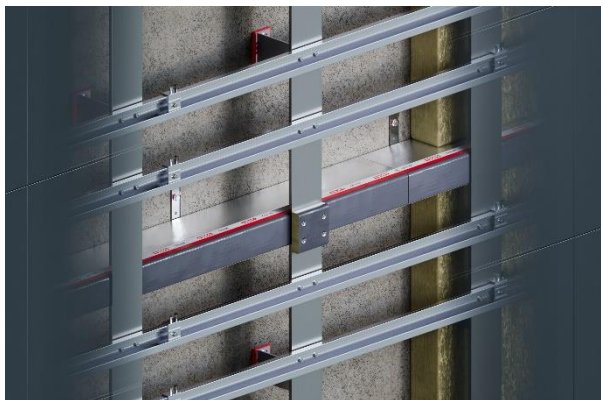
Ideally, vertical rails should not run continuously through a cavity barrier and should be stopped just above and below the barriers.

In situations where this is not possible, please follow the guidance below.

3.1 CFS-VB intersected by façade rail MFT-T or MFT-L



When the façade vertical rail fully intersects the cavity barrier, notch the barrier to accommodate the rail and ensure no gaps.



In a two-layer system, when the façade vertical rail partially intersects the leading edge of the barrier, attach a section of CFS-NVB in front of the rail to ensure no gap between the rail and the panel.

The CFS-NVB section should be centred with the ventilated barrier and run 10mm above and below it.

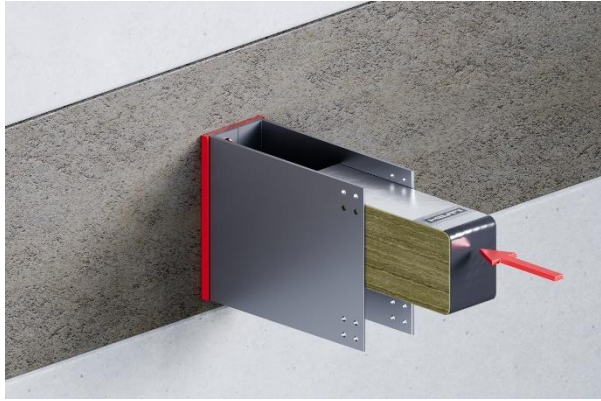
Make vertical incisions into the intumescent material of CFS-VB, in line with the edges of the rail, to ensure the barrier is free to expand



Alternatively, when the façade rail partially intersects the leading edge of the barrier, notch the barrier to accommodate the rail and fix the intumescent material to the front of the rail.

Ensure there are no gaps between the barrier and the rail.

3.2 CFS-VB intersected by façade profile MFT-S2S TT



In preparation for installing the S2S system, fix the MFT-S2S “U” bracket to the slab edge in its designated position using suitable Hilti anchors.

Check the width and length of the U bracket, then cut a section of CFS-NVB and friction install it into the U bracket. The CFS-NVB section should meet the following dimensions:

- Height: same as the ventilated barrier (to be installed)
- Width: 5mm more than the distance between the back of the U bracket and the edge of the TT profile.

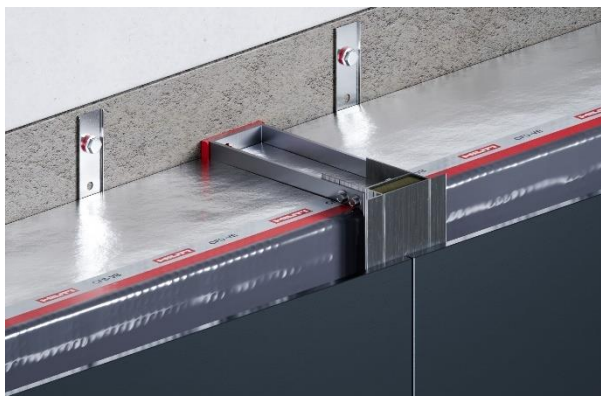


Take the MFT-S2S TT profile, position it over the CFS-NVB section, and then slide it over the NVB and onto the inner face of the U bracket.

The profile should close in the CFS-NVB section so that there are no gaps around said enclosure.

Once in position, fix the profile to the U bracket.

Slide one more section of CFS-NVB and friction fit it within the TT profile.



The CFS-NVB piece should extend 20mm above and below the ventilated barriers.

Install ventilated barriers so that they are centred with the CFS-NVB section inside the U bracket.

Ensure there are no gaps between the ventilated barriers and the U bracket.



Alternatively, the cavity in the TT profile can be filled with Hilti firestop foam CFS-F FX.

Drill two 13mm holes in the face of the TT profile face approximately 120mm apart, with the top hole 20mm above the top edge of the ventilated barrier.

Inject CFS-F FX into the cavity of the TT profile, starting from the bottom hole. Push the nozzle inside the cavity and dispense slowly, moving the nozzle side to side.



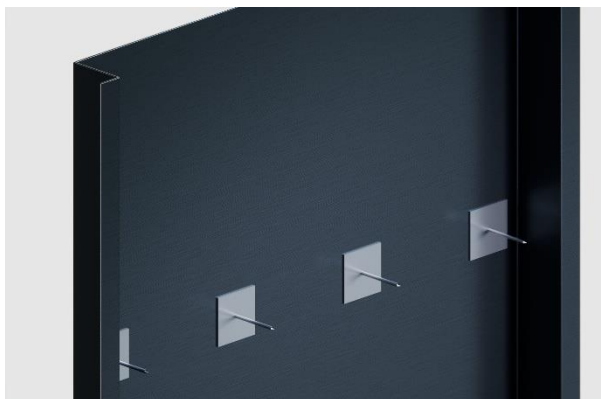
Wait for the foam to expand. If the foam is not visible at the top hole, then inject more CFS-F FX directly from the top hole, moving the nozzle side to side.

Install ventilated barriers so that they are centred with the NVB section inside the U bracket.

Ensure there are no gaps between the ventilated barriers and the U bracket.

4. CASSETTE PANELS

4.1 CFS-VB in cassette panel with horizontal infill



Install self-adhesive insulation pins on the inside of the cassette panel. Make sure they sit along the cavity barrier line.

The pins should sit 50mm from the edges and at max 170mm centres.



Cut a section of CFS-NVB so that it meets the following dimensions:

- Height: should extend 10mm above and below the horizontal ventilated barrier.
- Length: 10 mm longer than the back of the panel, as to ensure 5mm compression on each side.
- Depth: according to the panel return.

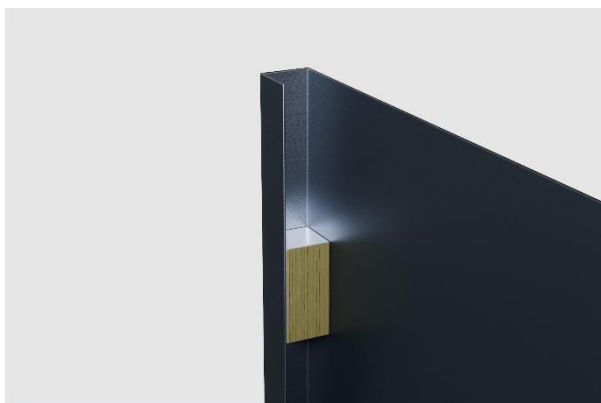
Apply the NVB section firmly on to the insulation pins, pushing it against the back of the cladding.



The CFS-NVB section should be centred with the ventilated barrier once the panel is installed.

Fix the cassette panel onto the façade rails and ensure the air gap does not exceed the one allowed by the ventilated barrier.

4.2 CFS-VB in cassette panel with vertical infills



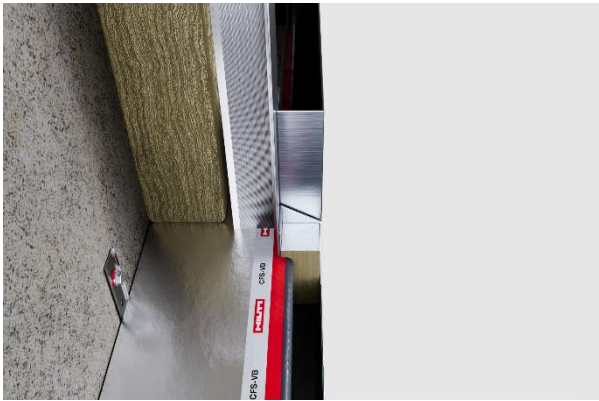
Cut two sections of CFS-NVB to be tight fit to the edge return of the panel.

Friction fit the sections into the panel return, so that they are centred with the horizontal ventilated barriers.

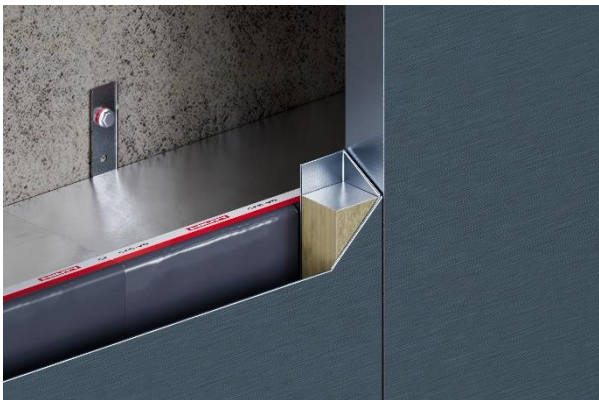
Depending on the depth of the panel return and the maximum air gap allowed by the ventilated barriers, consider the two scenarios below.



1. If the panel depth is bigger than the barrier allowed air gap, notch the barrier around the cassette panel return.



Always ensure the distance between the back of the panel and the edge of the barrier does not exceed the maximum air gap the barrier can accommodate.

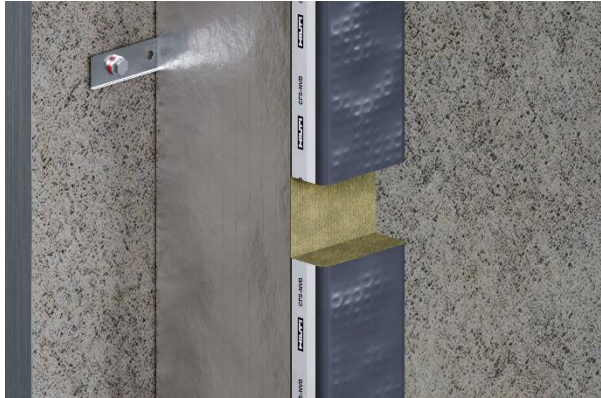


2. If the panel depth is less than the barrier allowed air gap, notching is not required.

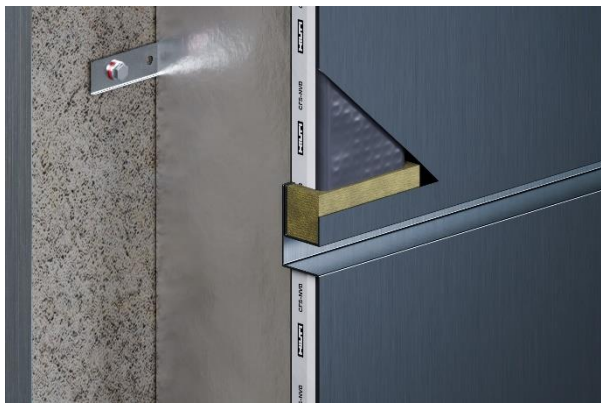


Make an incision into the intumescent material of CFS-VB, at the edge of the panel return, to ensure the barrier can freely expand into the cassette.

4.3 CFS-NVB notched around cassette panel



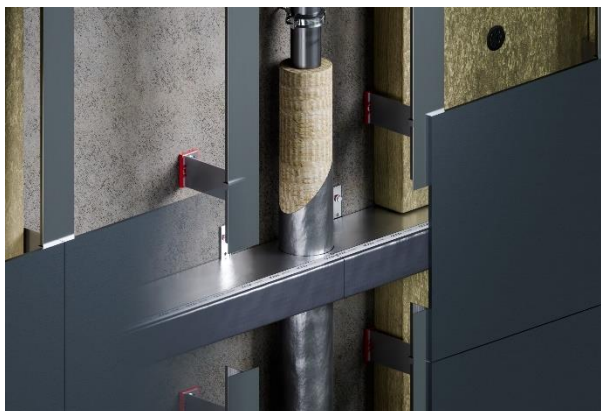
Where vertical non-ventilated barriers intersect a cassette panel, notch the barriers to accommodate the panel return.



Cut a section of CFS-NVB matching the barrier thickness and friction fit it into the cassette panel return, ensuring no gaps.

Position and fix the panels so that they fit snugly into the notch.

4.4 CFS-NVB intersected by insulated metal pipe



Install 25 mm thick locally sustained mineral wool insulation around the metal pipe, so that the insulation extends 300mm above and 400mm below the barrier.

Cut a hole into a cavity barrier to accommodate the pipe with its insulation.

Cut through the centre of the hole to obtain two barriers. Abut the barriers against the pipe insulation, ensuring no gaps.

5. MASONRY APPLICATIONS FOR CFS-NVB

5.1 CFS-NVB in a masonry cavity



Build brickwork up to the slab level and then install the non-ventilated barrier to the slab.

Continue the brickwork ensuring the needed compression of the NVB leading edge by the brickwork course.

5.2 CFS-NVB intersected by a masonry support bracket



Measure the location of the masonry support bracket in relation to the cavity barrier CFS-NVB.

Notch the barrier around the masonry bracket and ensure there are no gaps where the bracket intersects the barrier.

If necessary, fill any gaps with tightly packed mineral wool (from CFS-NVB).

6. OTHER APPLICATIONS

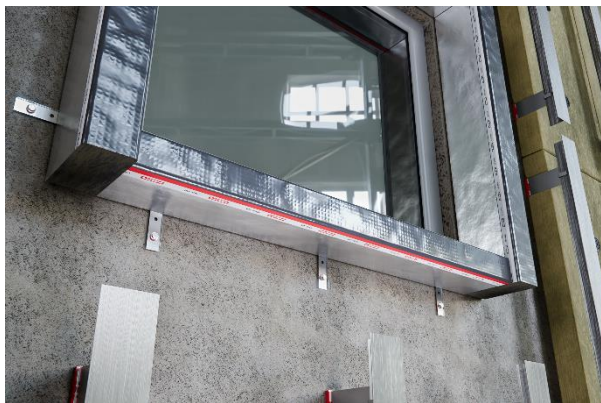
6.1 Cavity barriers around windows



Around windows, vertical non-ventilated barriers should be installed on both sides, extending above and below the opening.

Ventilated barriers should then be installed horizontally top and bottom, tightly abutted between the non-ventilated ones.

Alternatively, the window cavity can be sealed completely by non-ventilated barriers.



Where access constraints mean brackets cannot be fixed above the cavity barrier, brackets can be fixed beneath the horizontal barrier.

6.2 Cavity barriers boxing balcony brackets



When the cavity barrier line is interrupted by balcony brackets, encapsulate the balcony brackets with non-ventilated barriers vertically, and ventilated barriers horizontally.



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