FarmTec vertical sheeting installation guide Non-domestic

TECHNICAL NOTE:
EPS-FT-001-EN-v1

Fibre cement sheeting has commonly been used in the past as a single skin weatherproof construction on agricultural and industrial buildings, where it is fixed to horizontal sheeting rails of either steel or timber.

Vertical Sheeting - General

Rail types:
Vertical installation is typically installed onto horizontal 50x75mm timber rails or lightweight metal rails fixed back to the structural wall of masonry or building frame.

Rail Centres:
The maximum rail centres are 1730mm (up to 10m) and maximum 1425mm (above 10m) for Farmtec Sheets.

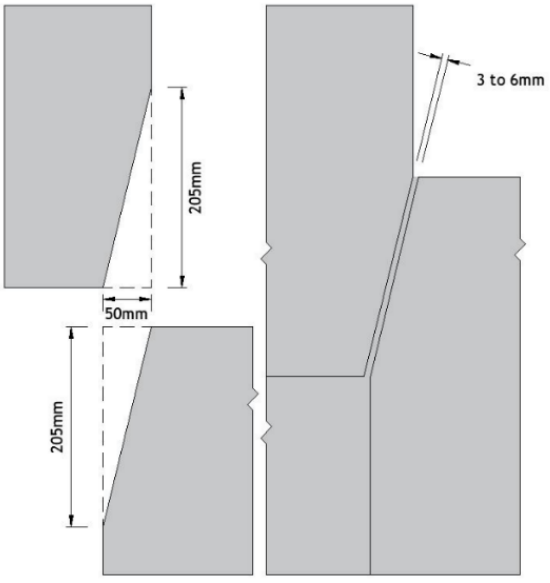
End Laps:
Sheets require a 200mm end lap for vertical installation. We recommend positioning end laps in line with the windows where possible.

Sealing:
There is no requirement for lap sealants on vertical installation.

Mitring:
To avoid four thicknesses of sheeting at the junctions for the side and end laps, it is necessary for two of the sheets at each junction to be mitred at the corners so that they lie in the same plane.

Mitres on FarmTec sheets should be cut from a point 205mm along the vertical edge from the corner (or the amount of the end lap) to a point 50mm along the horizontal edge, i.e., the width of the side lap by the length of the end lap.

The gap between mitres should be a minimum of 3mm to a maximum of 6mm. Box mitres should be avoided. The mitred joint is covered behind and in front by the other two sheets and is weatherproof and unseen.



Fixing with topfix fasteners:
Sheets are normally fixed in the same way as roof sheets with the corrugations aligned vertically using the top fix fasteners in the crest of the corrugation. Two fixings per rail, no more and no less. These fasteners drill through the FarmTec sheet, creating a 3mm oversized hole and self-tap into the rail.

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It is important that the fasteners are installed using the correct power tools, which should have an adjustable depth setting device to ensure the washers are seated correctly.

Checking the profiled sheeting self-drilling fixings for tightness

Fixing position for vertical installation is in the crest of the corrugations 2 & 5, as shown below.

There are 2 fixings per rail, no more and no less.

When Farmtec sheets are fixed vertically with topfix fasteners, support clips are required to support the weight of the sheet, as the fasteners are overstressed and cannot withstand the self-weight of the material, allowing the sheets to move downwards. This is because the load due to the weight of the sheets on the fasteners is applied 50mm away from the rail (the depth of the profile) which flexes the fixing downwards.

To prevent this downward movement, support clips must be used to carry the self-weight of the sheets and the topfix fasteners are only used to withstand wind suctions.

The support clips are positioned in the valley corrugation adjacent to the topfix fastener.

Support clips are typically fabricated from 10 x 3mm steel bar and are galvanised. Their length should be determined by the end lap of the sheeting.
(Drawing – FT-V-002)

The top of each course of sheets should finish 5mm below the top of the rail so the support clip can bear on the top of the rail. The clips are positioned in the valley corrugation adjacent to the fixing.

This method of fixing does mean that the fixings are further up the lap than normal – typically 175mm instead of 125mm, but because the weight of the sheet does not bear on the fixings there is no concern that the fixings are close to the top end of each sheet.

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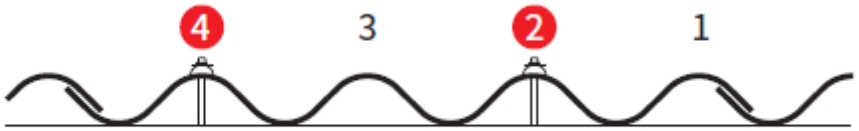
Small width sheets:
Any cut sheets should be at the ends of the building (minimum sheet width is 4 corrugations). The fixing position for a cut sheet would be as per the below image.



If a smaller width sheet is required, we would recommend cutting down two sheets to ensure there is a minimum of 4 corrugations width on any sheet, to allow for adequate fixings.

Detailing

Base detail - *(Drawing number – FT-V-001)*

The sheets must start 150mm up from the ground level, the first fixing must not be any more than 300mm from the bottom end of the sheet.

A comb filler (allows for some ventilation) or profile filler block can be used to block of the corrugations to prevent rodent access if required. The comb fillers are fixed to the top rail prior to laying the sheet and the profile filler blocks are fixed using the same topfix fasteners for the sheet.

Soffit / Top of cladding detail - *(Drawing number –FT-V-006)*

The sheets must be stopped 10mm short of the soffit or flashing.

A comb filler (allows for some ventilation) or profile filler block can be used to block of the corrugations to prevent rodent access if required. The comb fillers are fixed to the top rail prior to laying the sheet and the profile filler blocks are fixed using the same topfix fasteners for the sheet.

Windows & doors - *(Drawing numbers – FT-V-003, FT-V-004 & FT-V-005)*

The appearance of the sheeting is normally enhanced if end laps are aligned with windows or other features on the building, and this also avoids having to do too much cutting around windows.

Where windows are close together, it is sometimes best to use another material between the windows to avoid cutting and fixing narrow strips of profiled sheets. Minimum sheet width for vertical cladding is 4 corrugations.

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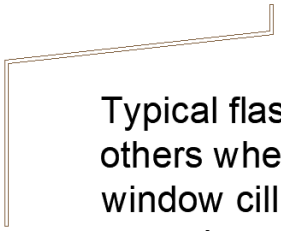
A comb filler (allows for some ventilation) or profile filler block can be used to block of the corrugations to prevent rodent access if required. The comb fillers are fixed to the top rail prior to laying the sheet and the profile filler blocks are fixed using the same topfix fasteners for the sheet.

- Window cill detail – *(Drawing number – FT-V-005)*

The sheets are stopped 10mm below the window cill.

If the window cill does not protrude far enough over the sheets a bespoke flashing will be required, to prevent wind driven rain entering the back of the sheets.



Typical flashing by others when the window cill is not deep enough

- Window and door reveal detail - *(Drawing number – FT-V-004)*

A metal trim can used around window and door openings because they are much thinner and don't push out the corrugated sheet out of place/alignment – typically 1mm thick.

These a fixed by using laplox fixings every 750mm centres.

Metal trims should be designed and installed in accordance with MCRMA (Metal cladding and Roofing manufacturers Association) guidelines. The general minimum thickness for metal trims is 0.7mm for steel and 0.9mm for aluminum.

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Valley Fixed Farmtec Sheets:

An alternative method of fixing that avoids the use of support clips is to fix through the valley corrugations. This method of fixing is not recommended where eaves bend sheets are specified on the project, as all the rainwater from the roof will be channeled down the valley corrugations.

A 3mm oversized hole should always be pre-drilled through the sheets. Fixing position into the valley corrugation is 2 & 5. As per drawing below.

Fasteners from Fixfast are suitable for valley fixing Farmtec sheets. (Please contact Fixfast directly for advice)

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