

Installation Guide

Titan Lite - Vertical Fire Barrier

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Installation Guide

Titan Lite 120:60- Vertical Fire Barrier

INTRODUCTION

FIREFLY® Titan Lite 120:60 is a lightweight flexible fire barrier designed to provide fire compartmentalisation of larger concealed spaces and voids within buildings, offering 120 minutes Integrity and 60 minutes Insulation.

FIREFLY® Titan Lite is a 3 layer system and must be installed as such.

FIREFLY® Fire Barriers must be fixed into a substrate with a suitable fire rating.

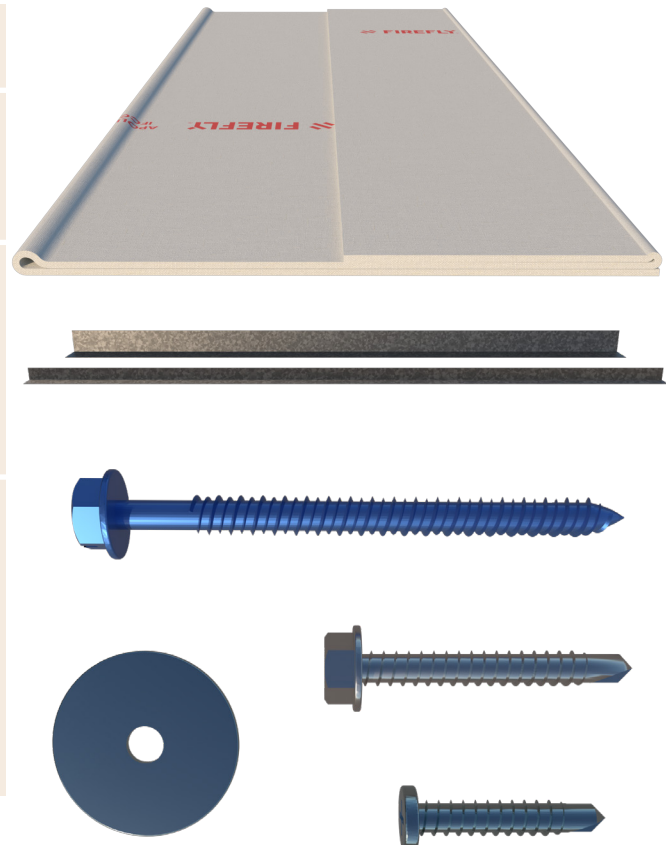
This example was created for the installation guide. FIREFLY® Titan Lite can be installed 8m x 8m maximum, with its standard top, bottom and side fix. Or indefinitely with additional Supporting angles. See details (T-017 & T-018) for more information.

MATERIALS REQUIRED:

FIREFLY® Titan Lite Barrier

FIREFLY® 50 x 50 x 0.7mm Supporting Angle
 FIREFLY® 25 x 25 x 0.7mm Clamping Angle

FIREFLY® 12mm Staples
 FIREFLY® 38mm TEK Screws
 FIREFLY® 25mm Panhead TEK Screws
 FIREFLY® Penny Washers
 Suitable FIREFLY® Fixings for the substrate
 (FIREFLY® 80mm Concrete Screws)



MEASURE & ASSESS

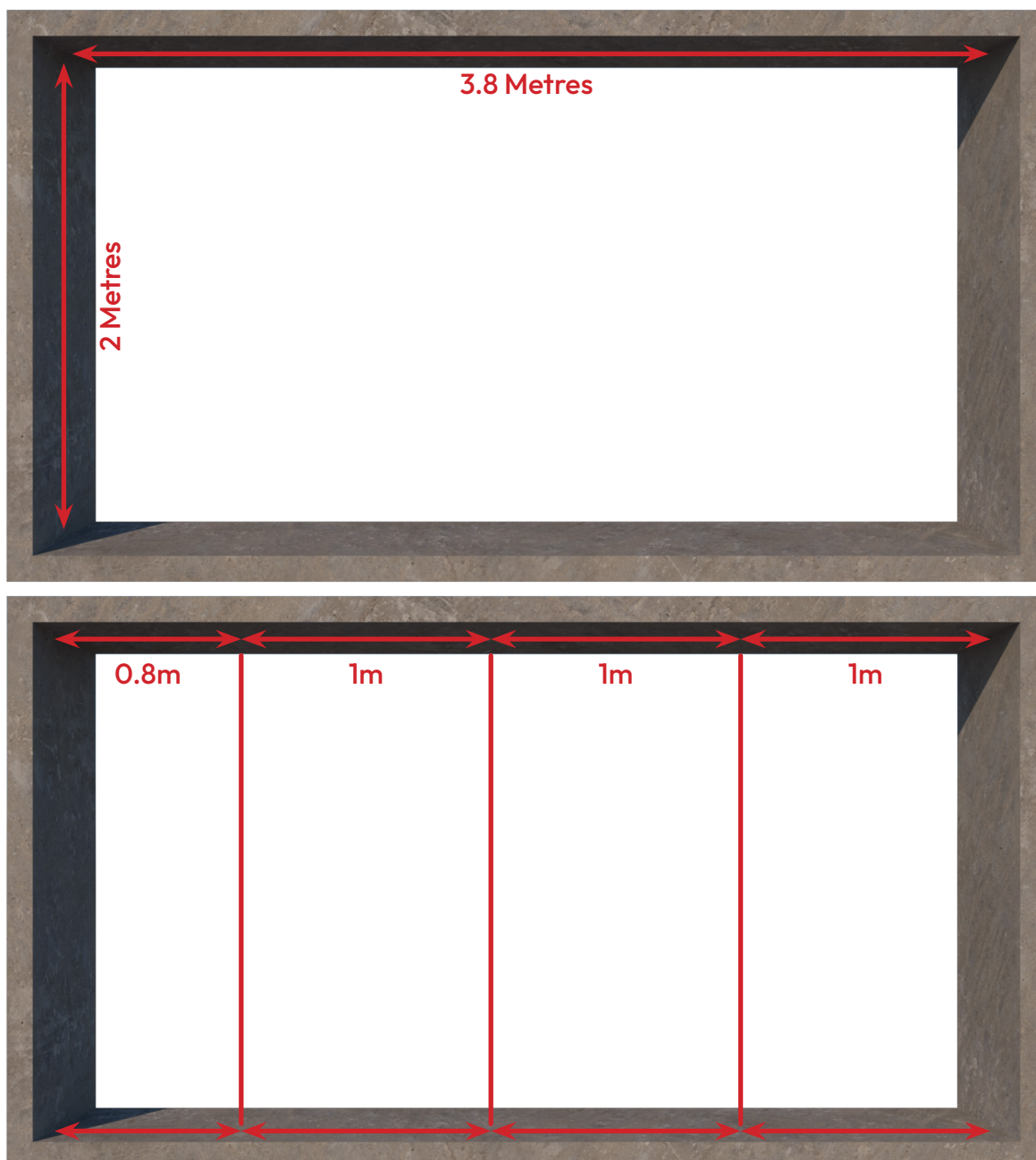
It's important to know the space you're working with.

You will require enough 50 x 50 x 0.7mm Supporting Angle and 25 x 25 x 0.7mm Clamping Angle to completely cover the outer perimeter. (11.6m in this example)

FIREFLY® Titan Lite fire barriers are supplied at 1.3m x 6m and require a 150mm nominal (100mm minimum) overlap on perimeter edges and a 75mm overlap when adjacent to other cuts of barrier to create a Butt joint.

We can subdivide the area into approximately 1m x 2m length.

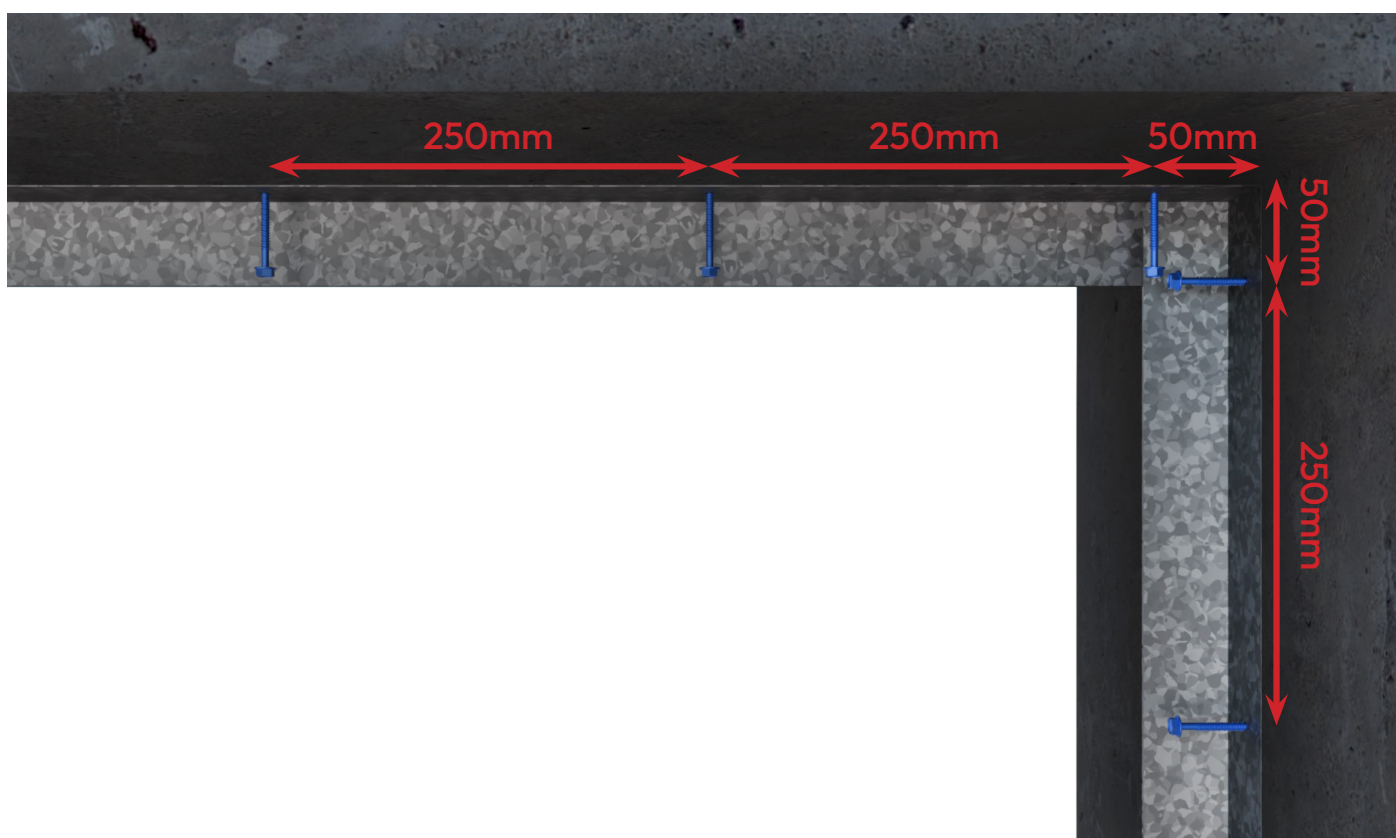
Meaning we'll need 3 cuts of 1.3m x 2.3m Titan Lite barriers and a shorter cut at 1.1m x 2.3m

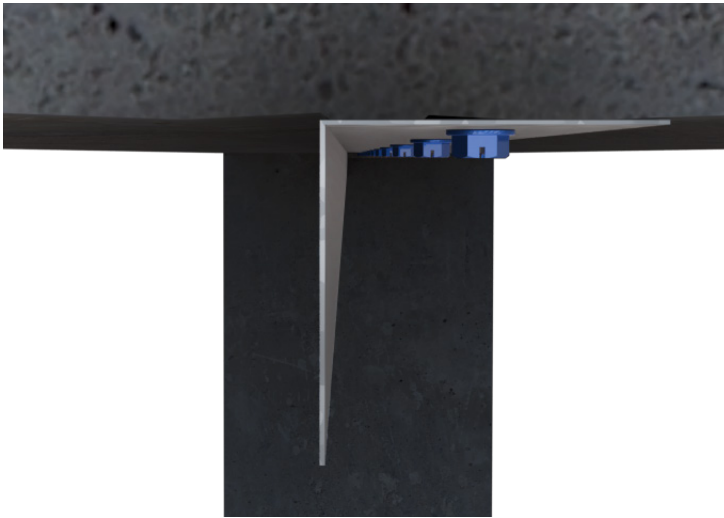


FIXING SUPPORTING ANGLE

FIREFLY® 50 x 50 x 0.7mm Supporting angle is fit around the outer perimeter and fixed with suitable FIREFLY® Fixings for the substrate at 250mm centres and 50mm from the edge of the wall.

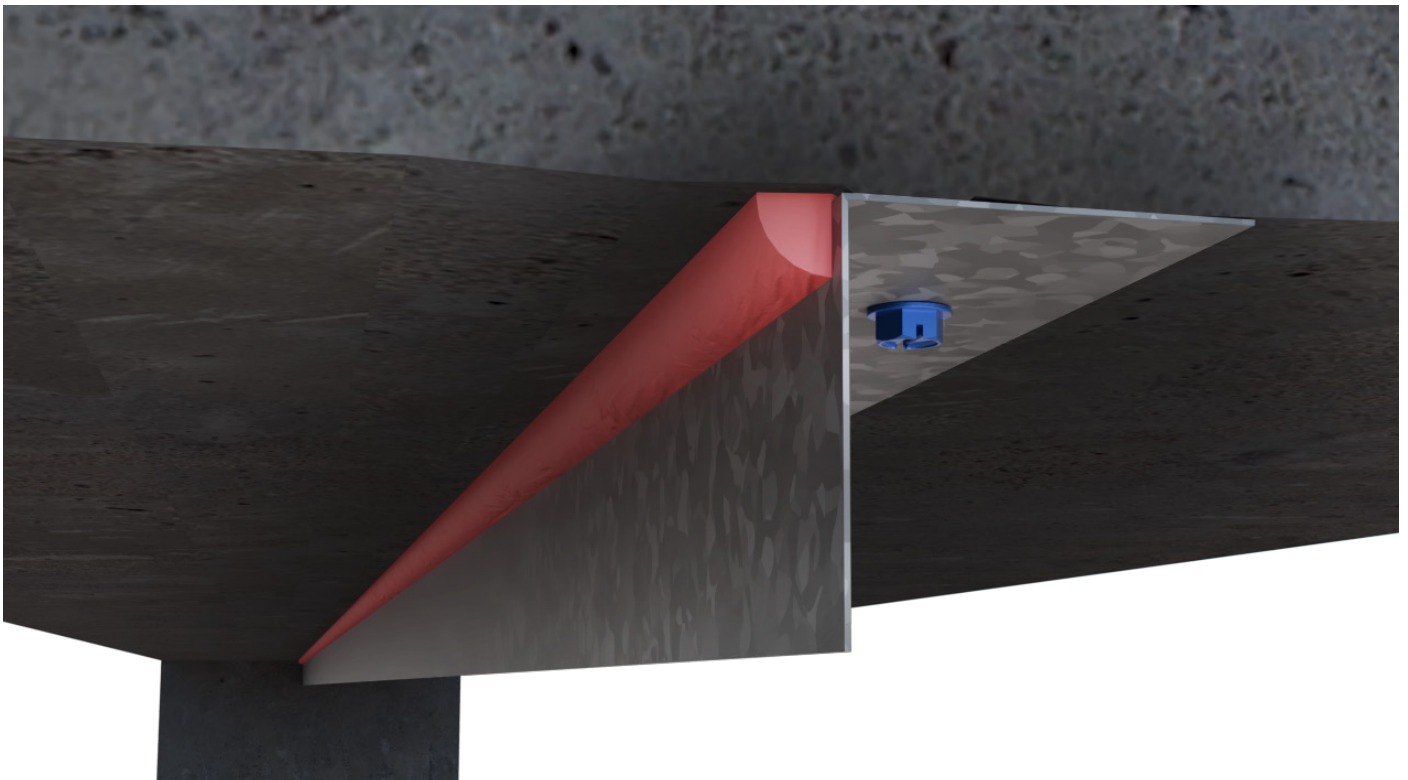
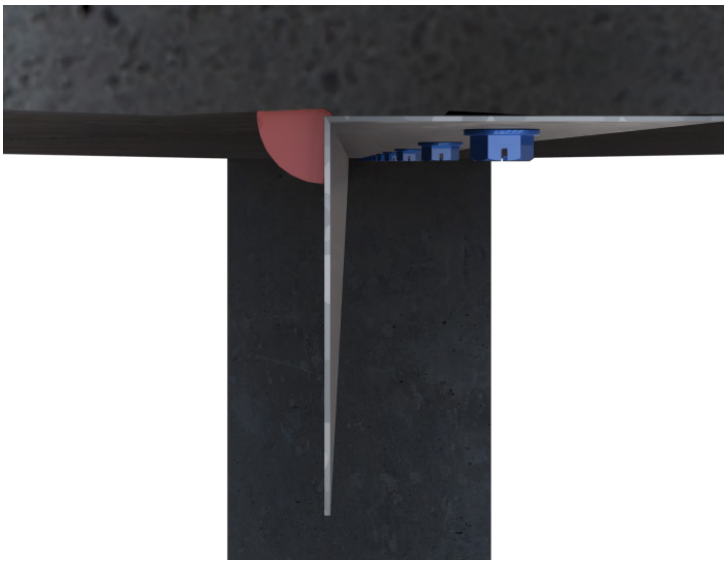
This Detail is repeated around the outer perimeter. Ensuring a tight fit between the Supporting Angle and the Substrate.

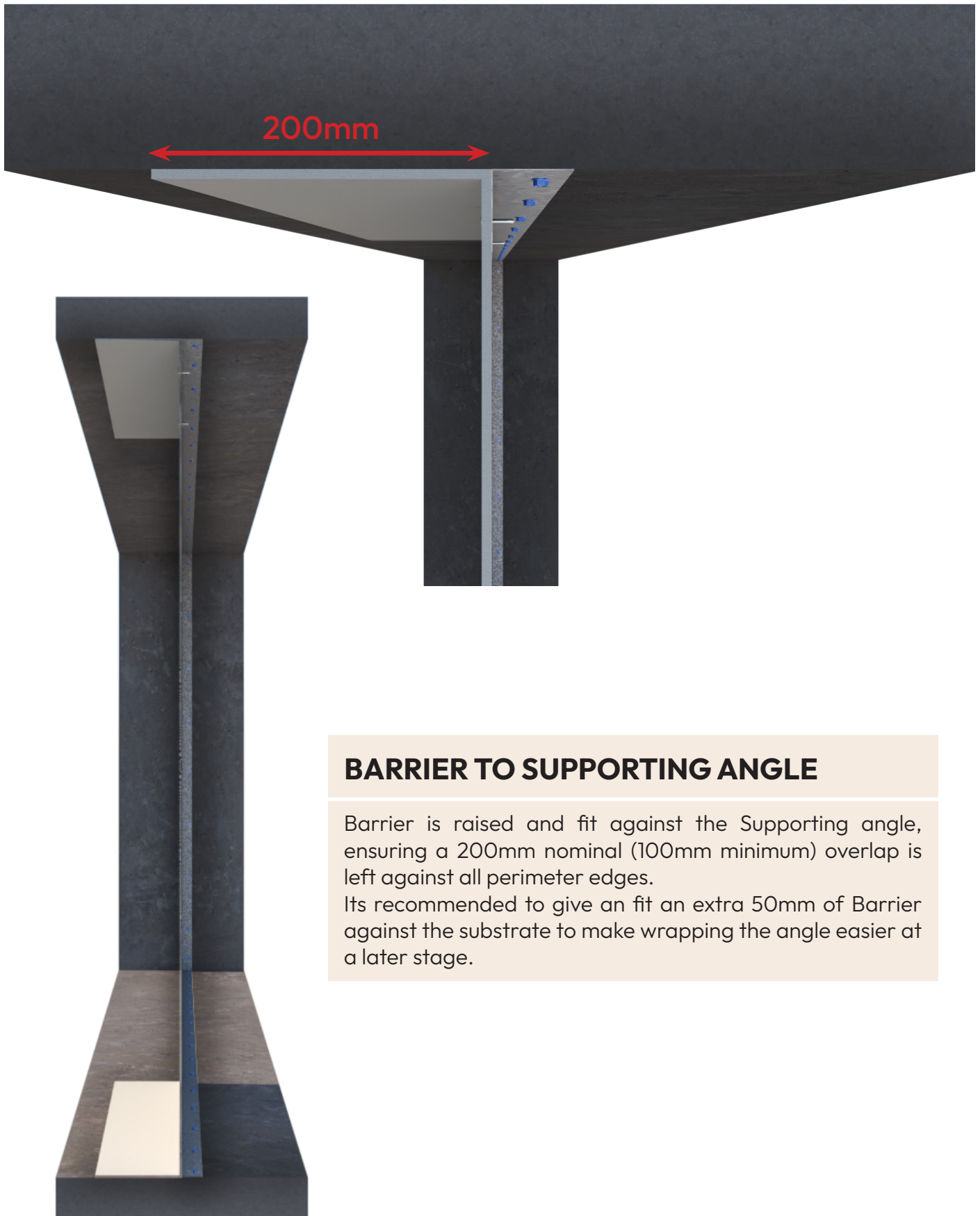




FIXING TO UNEVEN SURFACES

When fixing to uneven surfaces, a 6mm bead of FIREFLY® High Temperature Adhesive is applied at the top fix between the 50 x 50 x 0.7mm Supporting Angle and the uneven substrate to ensure a smoke seal.





BARRIER TO SUPPORTING ANGLE

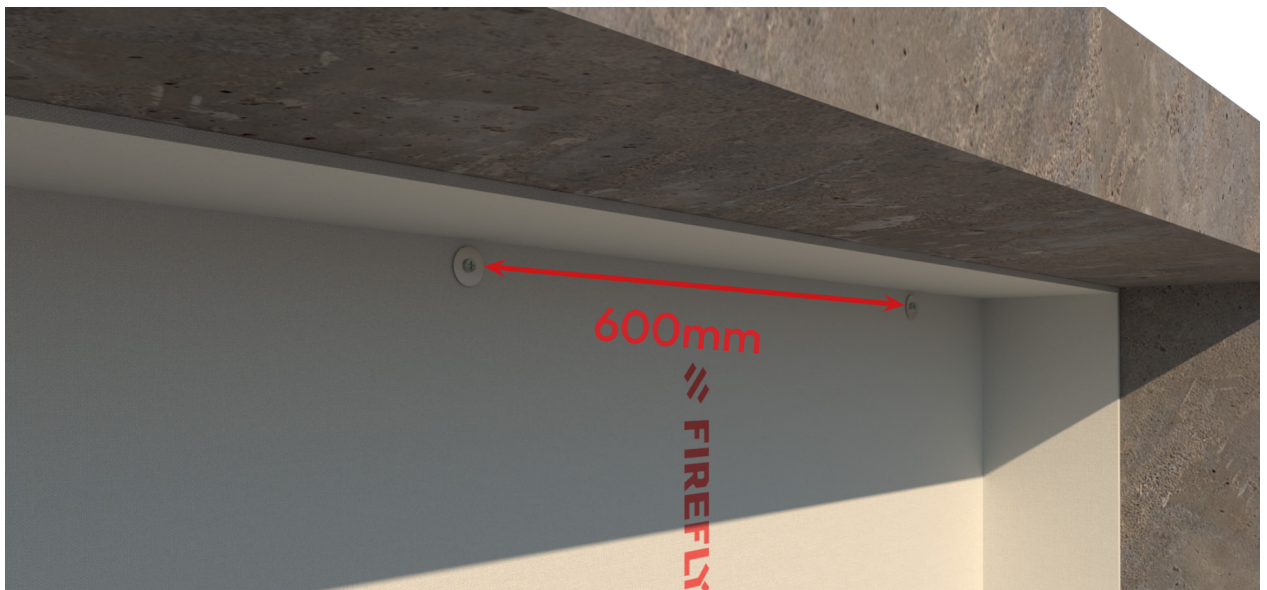
Barrier is raised and fit against the Supporting angle, ensuring a 200mm nominal (100mm minimum) overlap is left against all perimeter edges.

Its recommended to give an fit an extra 50mm of Barrier against the substrate to make wrapping the angle easier at a later stage.

TEMPORARY FIXING BARRIER TO SUPPORTING ANGLE

Barrier is fixed to the Supporting angle with FIREFLY® Panhead Tek Screws at approx 600mm centres. This is typically suitable for a one man installation team.

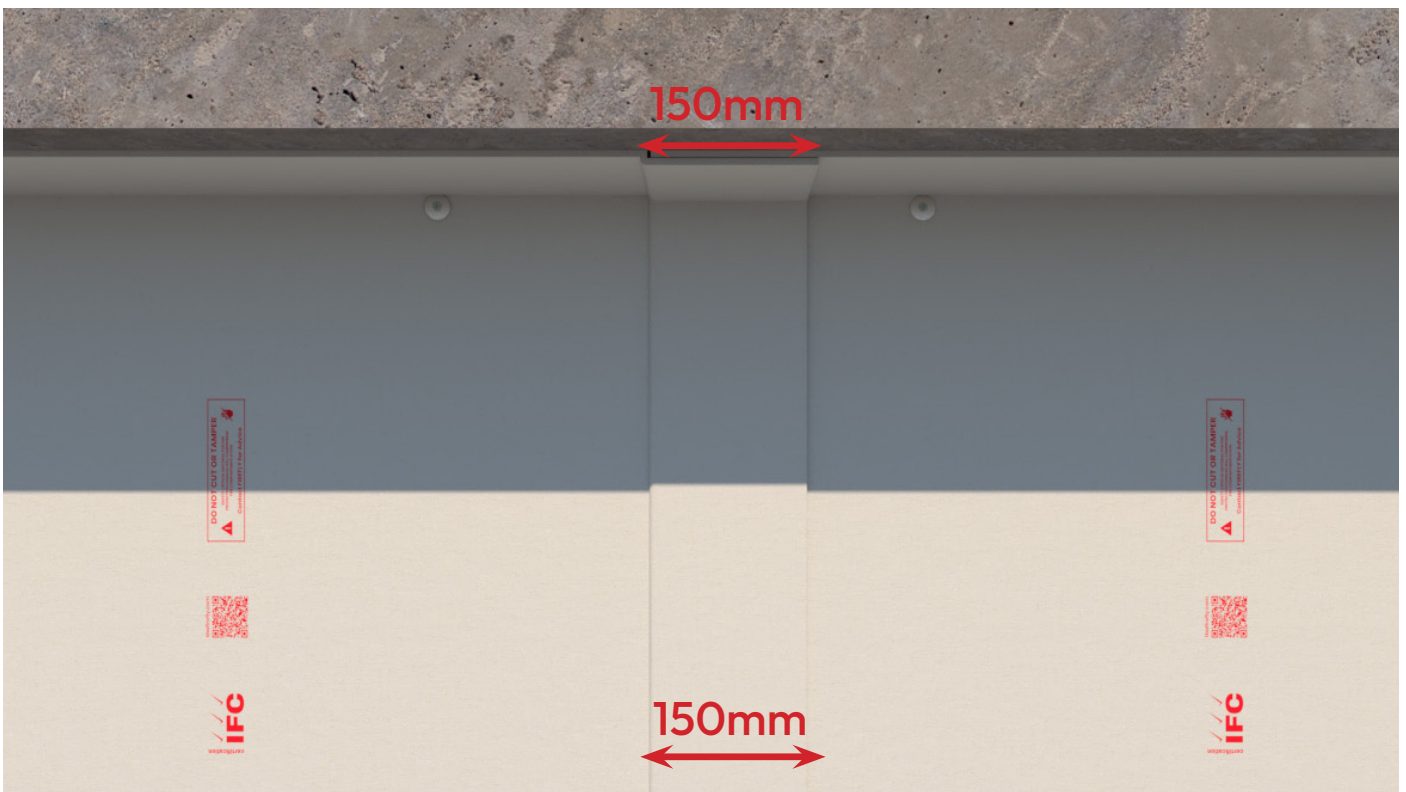
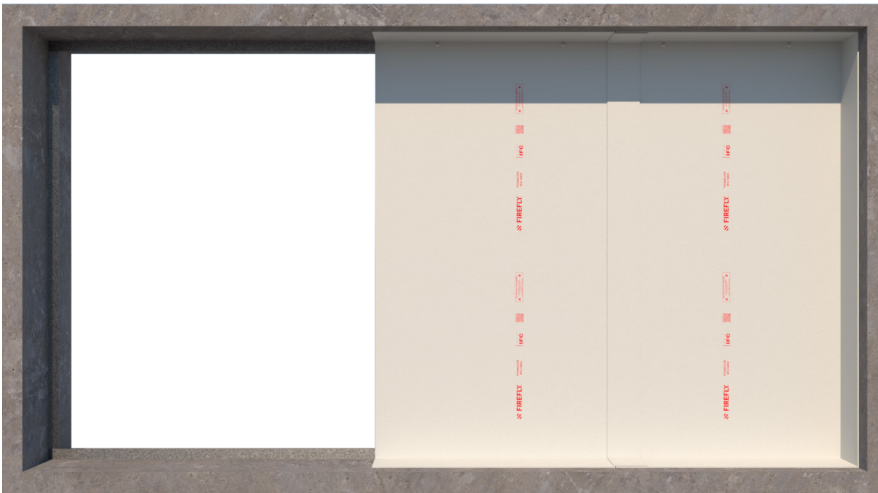
Its worth noting that this step is a temporary fixture and is done to hold the barrier in place until it can be Butt jointed, before being permanently clamped at a later stage.



Alternatively the barrier can be clamped in place with a FIREFLY® 25 x 25 x 0.7mm Clamping angle. Fixed with FIREFLY® Panhead Tek Screws as required. This will typically be easier for a two man installation team.

OVERLAYING BARRIER

Additional barrier is positioned in line with the previous barrier and is temporarily fixed to the Supporting angle. Ensuring 200mm (100mm minimum) overlap is left on all perimeter edges and a 150mm overlap wherever two separate cuts of barrier will join.

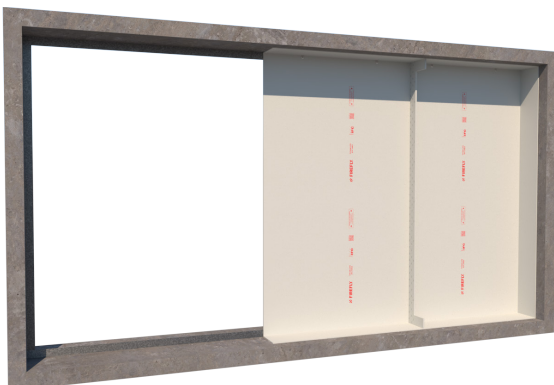
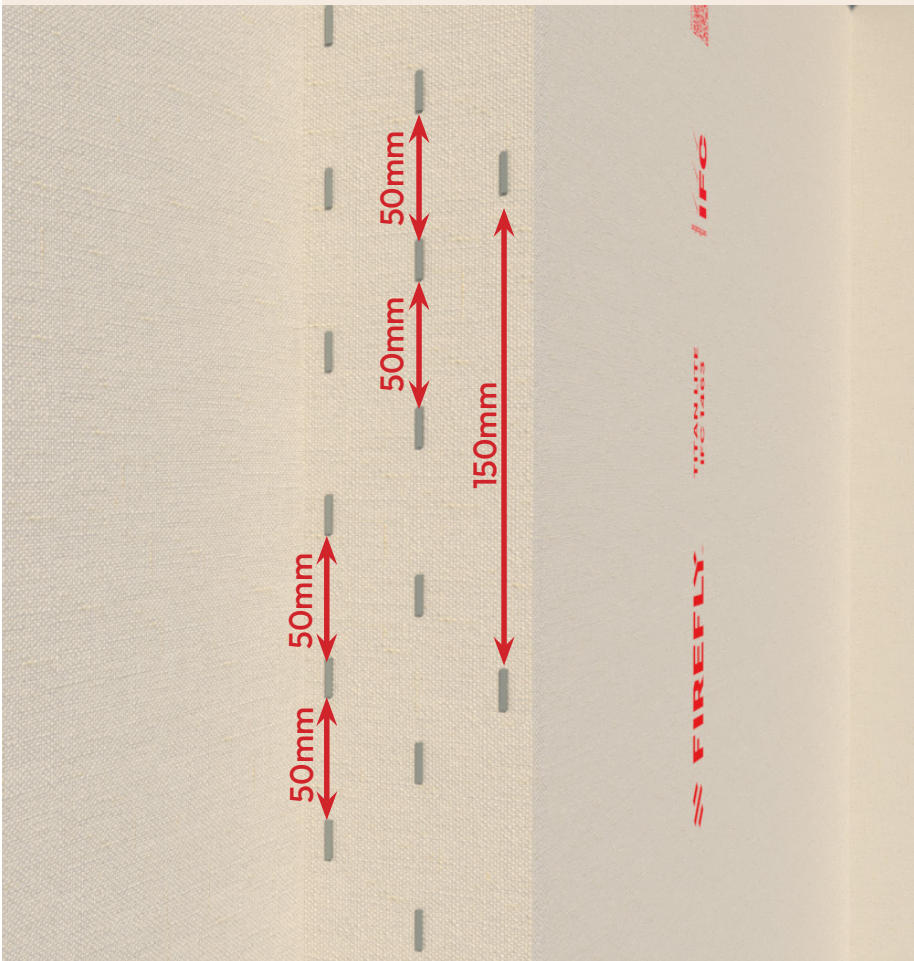


BUTT JOINTS

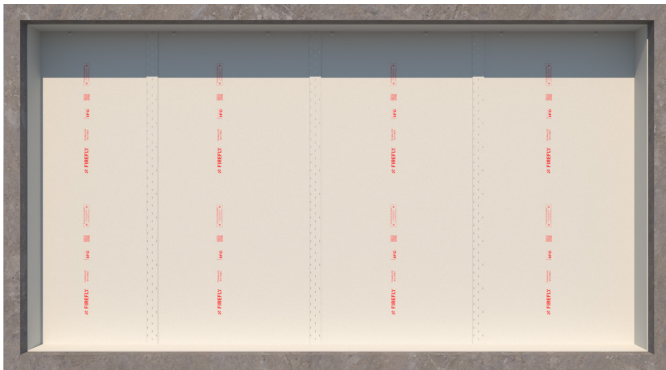
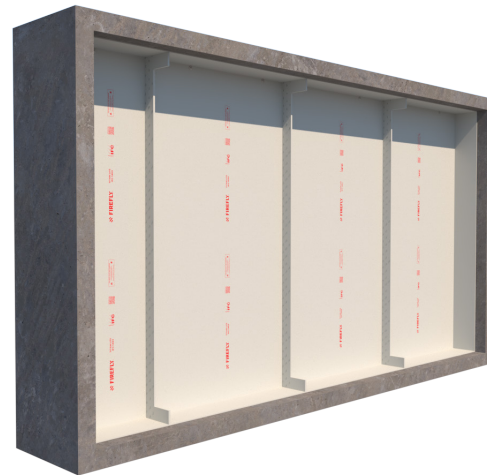
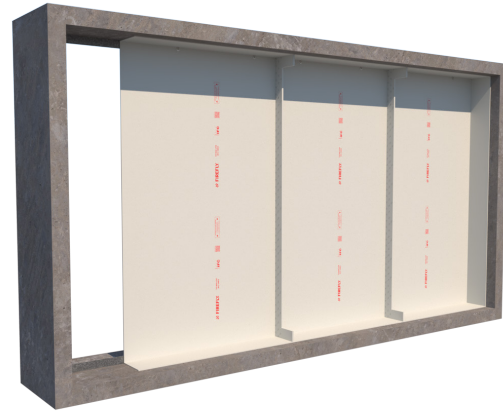
Of the 150mm Overlap between Barriers, 75mm from each barrier is brought forward, centred and stapled along the fold line with FIREFLY® 12mm Staples at 50mm centres.

A second, staggered, row of staples at 50mm centres is fixed 25mm away from the first.

Finally a closing row of staples to seal the Butt joint at 150mm centres.



Stapling off the Butt joint is the most labour intensive part of the installation, the speed of which can be vastly improved with the use of a FIREFLY® B16 Stapler or a FIREFLY® FF Pneumatic Staple Gun.



BUTT JOINTS

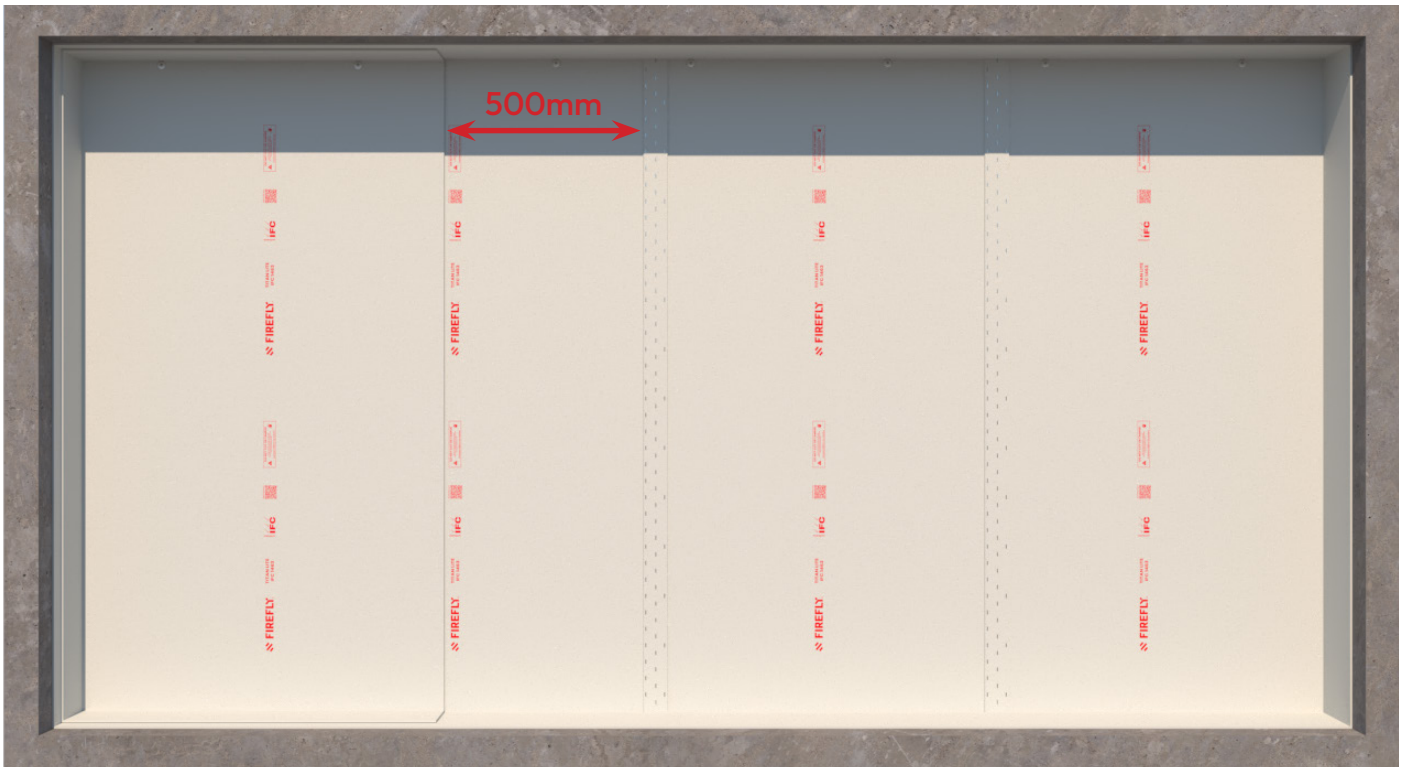
Additional barriers are installed, repeating the previous details until the void is completely filled.

After Stapling is complete the newly formed Butt joints should be flattened, as flush to the body of the barrier as possible.

3 - LAYER SYSTEM

Titan Lite uses a 3 layer system to achieve its respected ratings. The different layers are staggered so their Butt joints are approx 500mm apart. Its recommended to leave 50mm more material on the outer layer than the internal layers for easier fixing at a later stage.

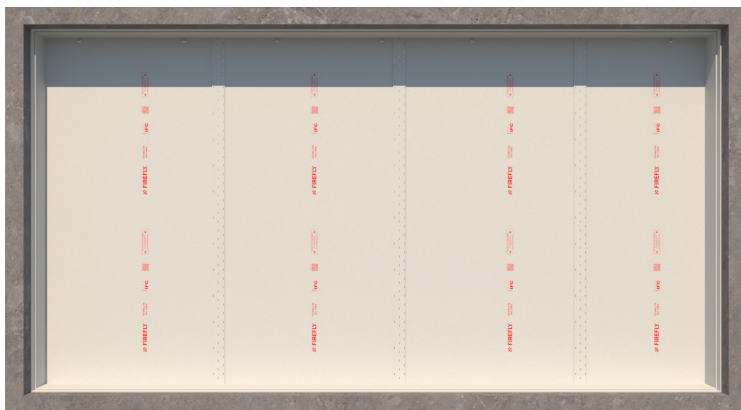
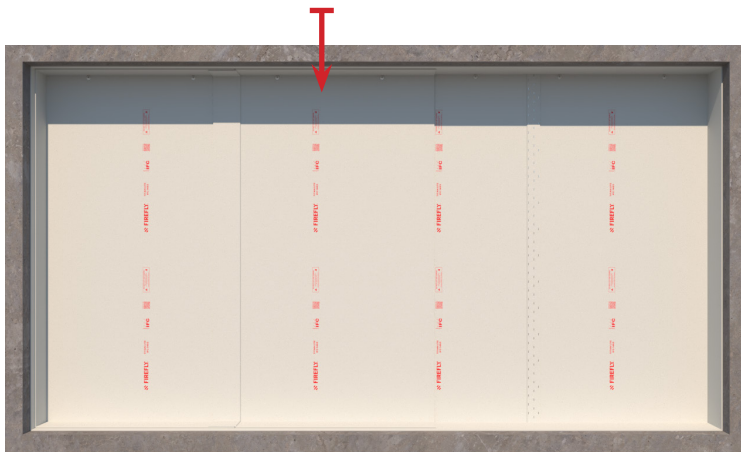




OVERLAYING & STAGGERING BARRIERS

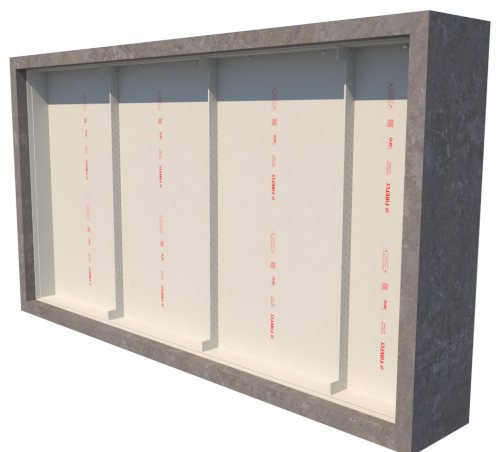
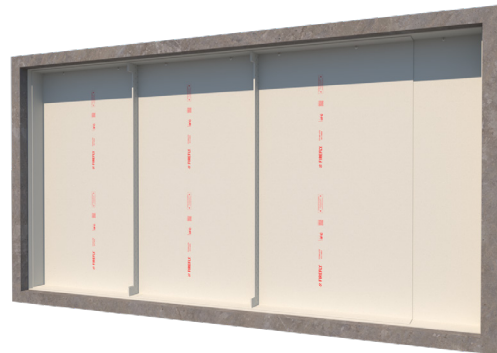
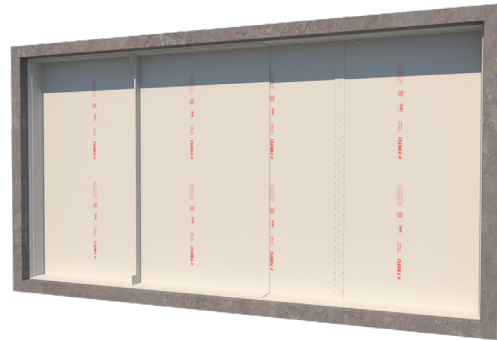
The 2nd layer of Titan Lite is installed as per the previous details, adhering to the same temporary fixes, overlaps and Butt joints.

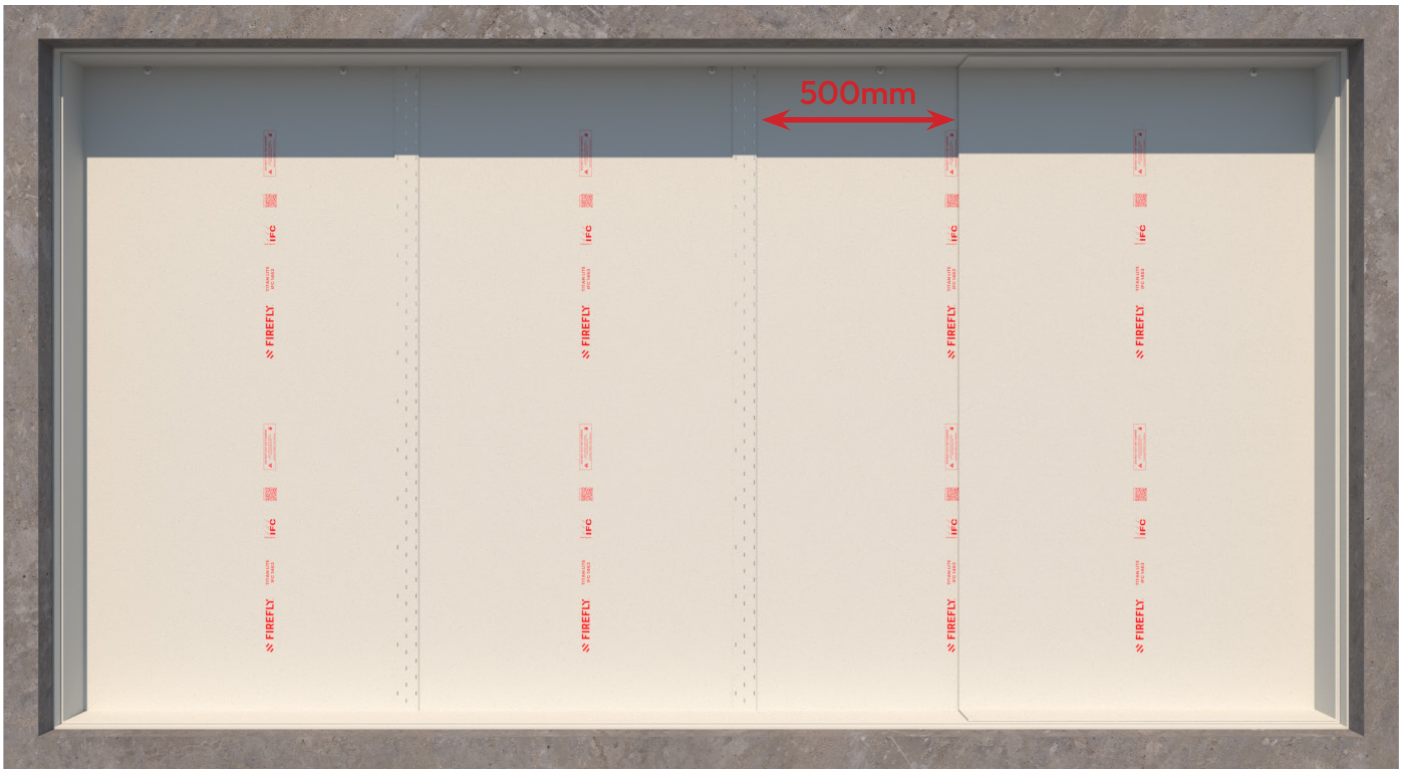
The 2nd layer must be staggered so the Butt joints are offset by approx 500mm.



2ND LAYER

The previous details are repeated until the second layer is complete.





3RD LAYER

The 3rd layer of Titan Lite is installed as per the previous details adhering to the same temporary fixes, overlaps and Butt joints.

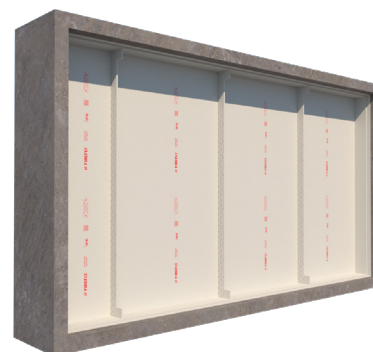
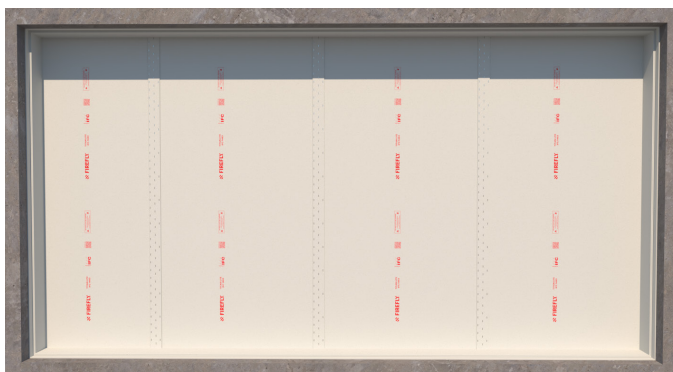
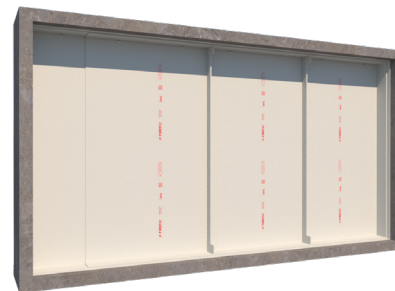
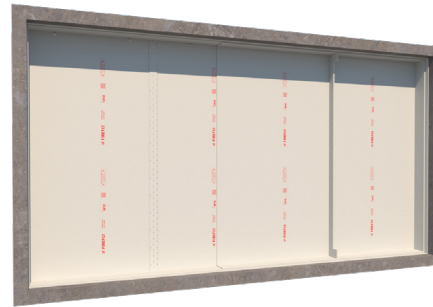
The 2nd layer must be staggered so the Butt joints are offset by approx 500mm.

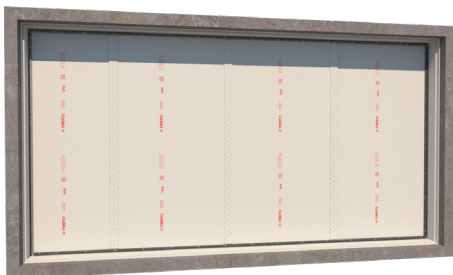
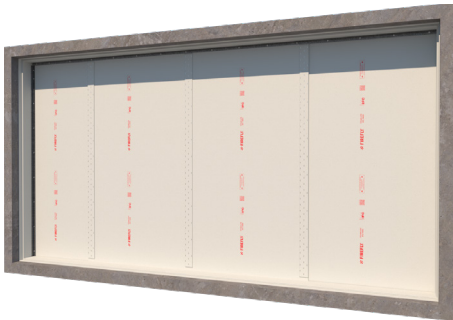
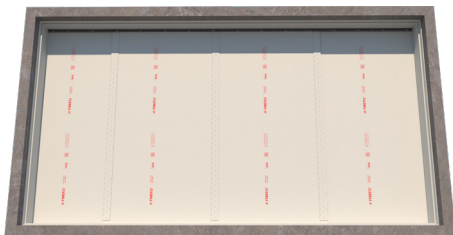
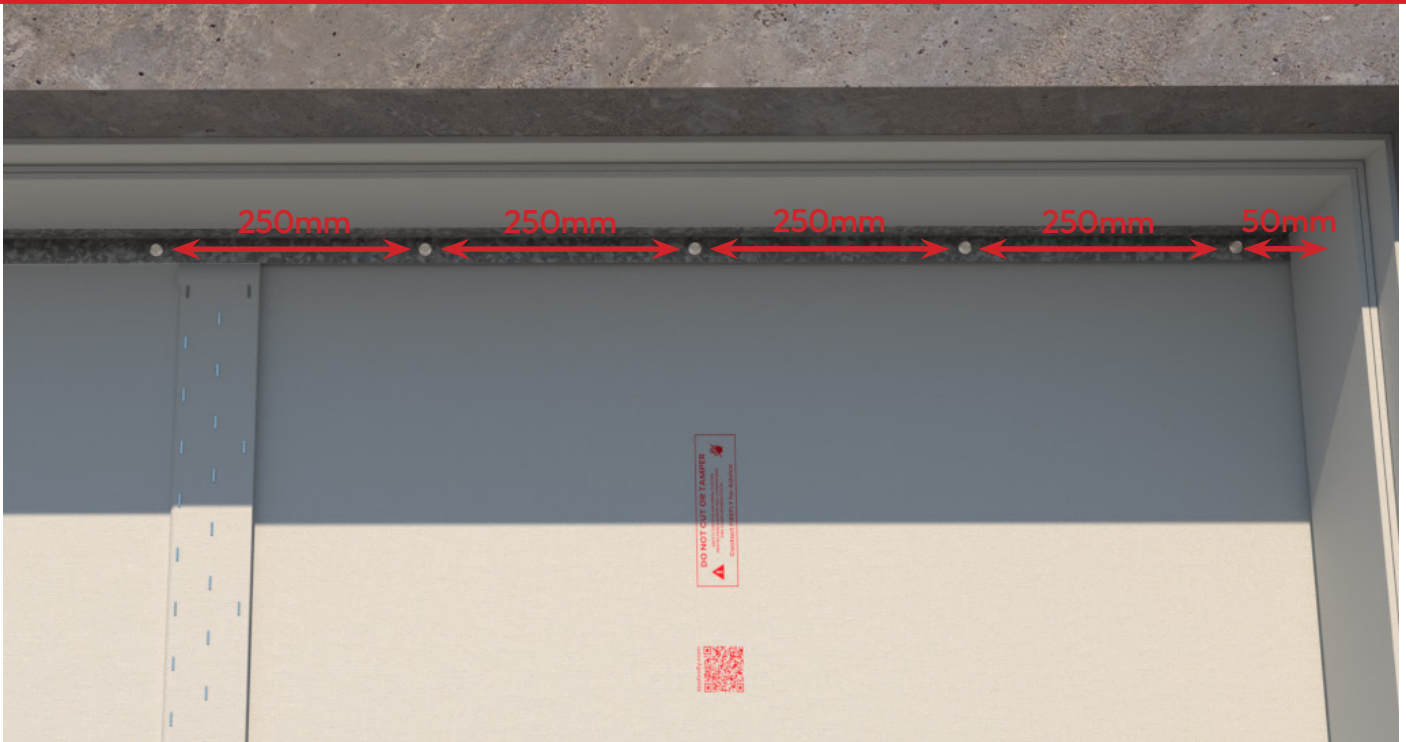
As its the last layer of barrier - it can be clamped with a FIREFLY® 25 x 25 x 0.7mm Clamping Angle rather than being temporarily fixed. (More details in the following stage).



3RD LAYER

The previous details are repeated until the second layer is complete.

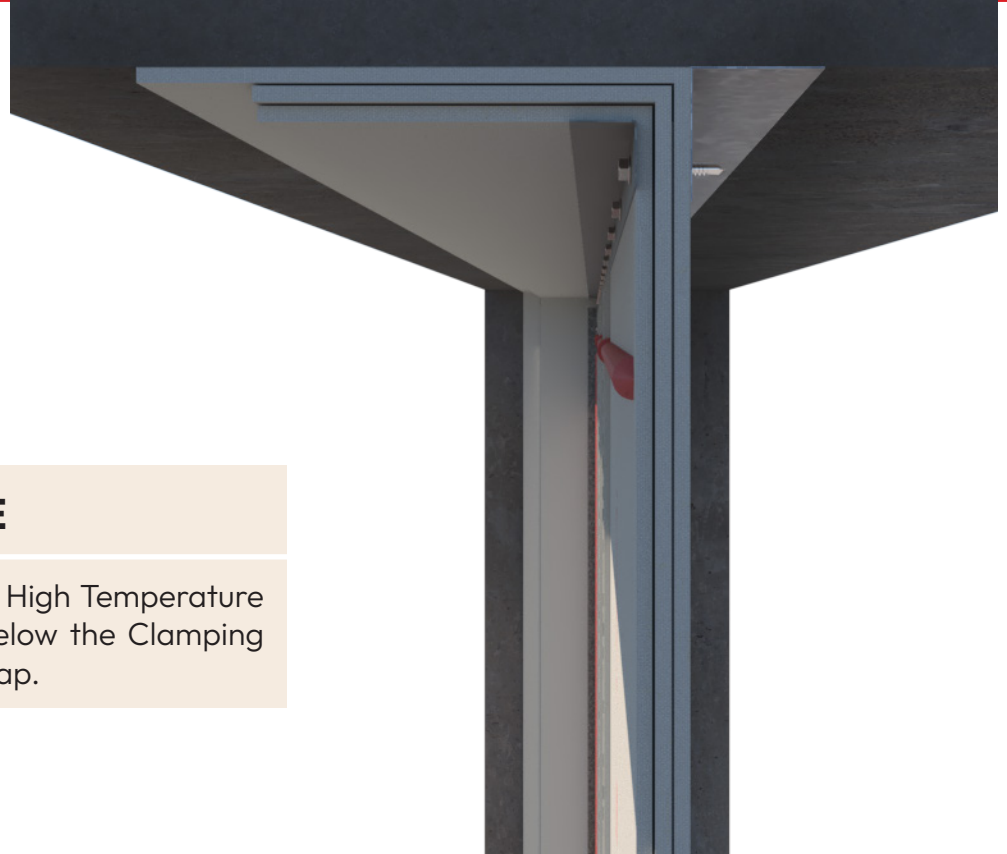




CLAMPING ANGLE

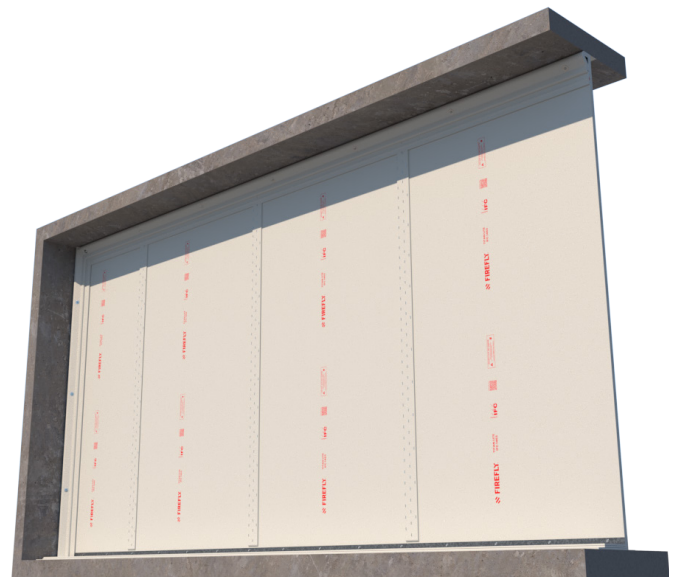
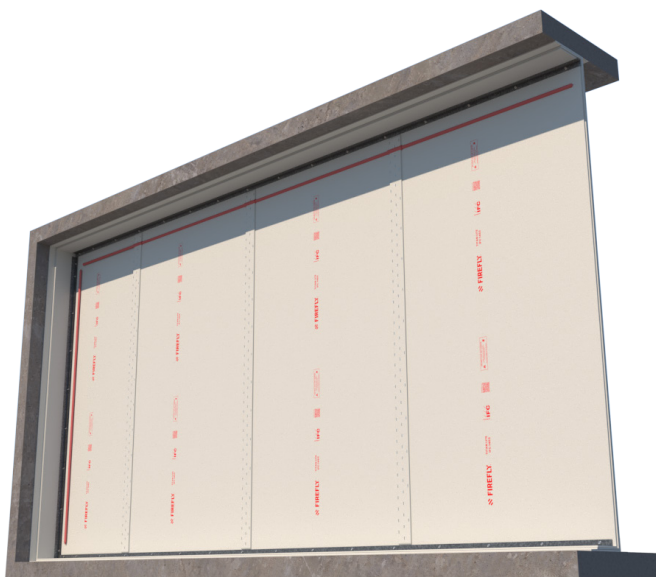
FIREFLY® 25 x 25 x 0.7mm Clamping Angle is used to clamp the barrier as flush to the soffit as possible. Before being fixed into the FIREFLY® 50 x 50 x 0.7mm Supporting Angle with FIREFLY® 38mm TEK Screws at 250mm centres and 50mm from the end of the Angle.

Where two FIREFLY® 25 x 25 x 0.7mm Clamping Angles connect, they should be overlapped by 25mm with a central fixing.



WRAPPING ANGLE

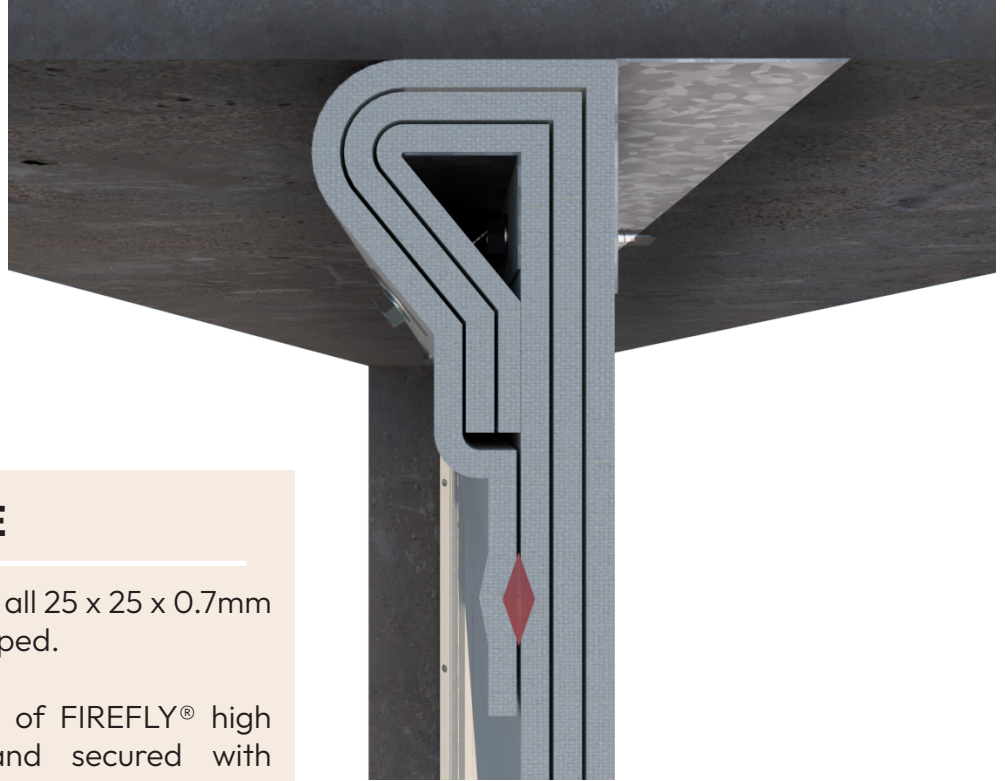
A 6mm bead of FIREFLY® High Temperature Adhesive is applied just below the Clamping angle, in line with the overlap.



The overlap is brought down and bonded to the bead of FIREFLY® high temperature adhesive, securing the overlap to the body of the barrier.

FIREFLY® 38mm TEK Screws and Penny Washers secure the overlap to the Clamping angle at 600mm centres to ensure the High Temperature Adhesive sets properly.

Clamping fixings at 600mm centres is a recommendation to ensure the High Temperature Adhesive sets properly and is not required for certification purposes as long as the High temperature Adhesive is set.



WRAPPING ANGLE

This detail is repeated until all 25 x 25 x 0.7mm Clamping Angles are wrapped.

Sealed with a 6mm bead of FIREFLY® high temperature adhesive and secured with FIREFLY® 38mm TEK Screws at 600mm centres while the high temperature adhesive dries/sets.





INSTALLATION COMPLETE

The Titan Lite Fire Barrier should be clamped flush to its adjoining surfaces. Any torn/damaged barrier must be removed and replaced.

