Fire Barrier EN Contractor's Guide

Installation of ROCKWOOL Fire Barrier EN

ROCKWOOL®

Introduction

ROCKWOOL Fire Barrier EN is a high density wire-reinforced roll designed to inhibit the passage of fire and smoke through extensive cavities within buildings.

This Contractor's Guide provides general installation tips and advice in addition to step-by-step instructions.

For any installation queries not answered by this guide, please contact the ROCKWOOL Technical Team.

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Cable bunch	60	60	
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* For full details please see UL Classification Reports: 4791215614.1 and 4791215614.3
1. Fire Barrier EN foil faced one side
2. Fire Barrier EN foil faced both sides
3. Insulated with ROCKWOOL H&V Pipe Section

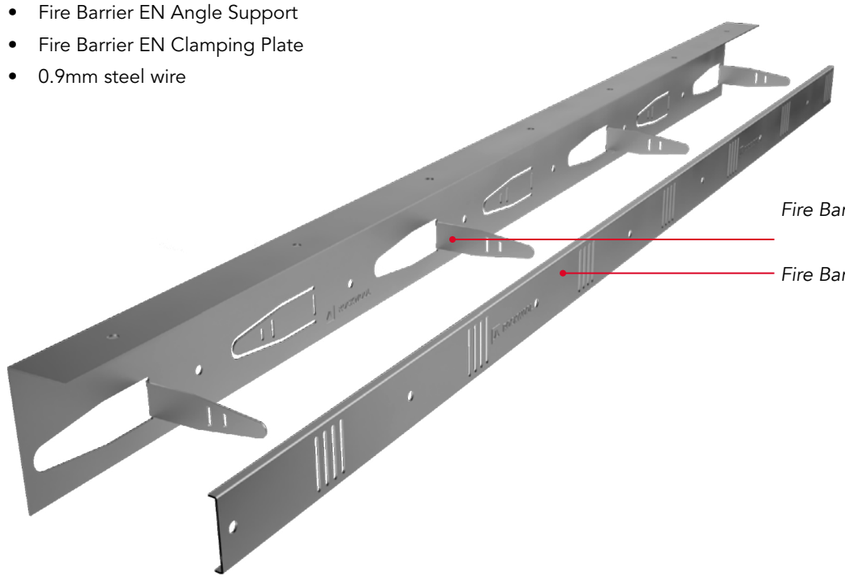
Tools required

- Insulation knife/saw
- Electric screwdriver/drill
- Wire cutters
- Stitching needle

Materials

The materials listed below are required for all installations, and are in addition to the substrate-specific materials prefacing the installation instructions for each detail.

- Fire Barrier EN Angle Support
- Fire Barrier EN Clamping Plate
- 0.9mm steel wire



Fixings

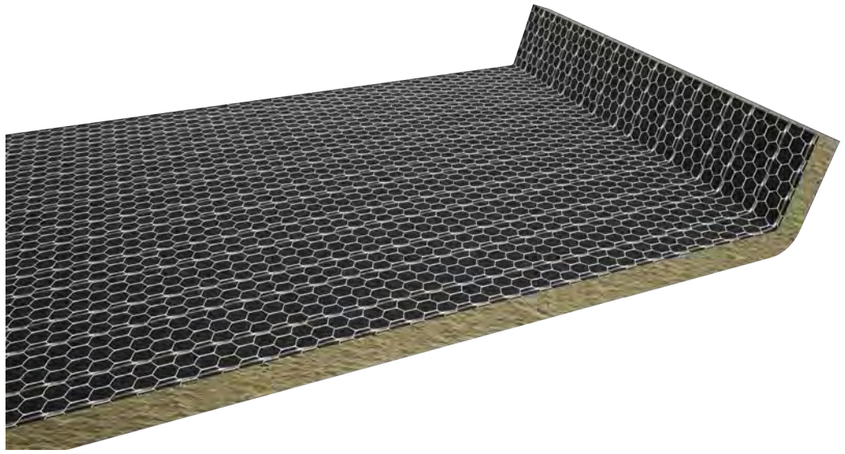
Where fixings are required, the guidance within this document suggests an appropriate fixing type - however please note that any substrate-appropriate metal fixing can be used.

Please consult with a fixing manufacturer for further advice.

Installation tips

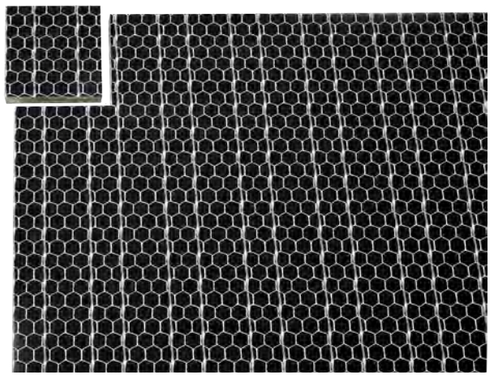
Overlaps

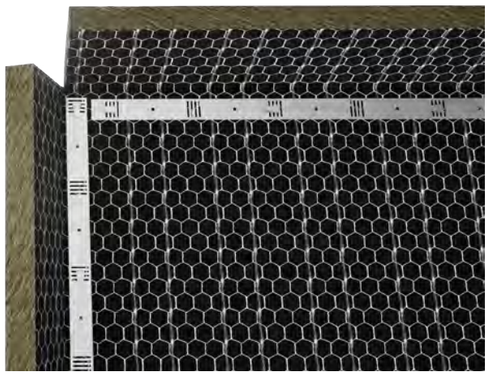
Where an overlap is required, lay Fire Barrier EN flat and pre-bend the material at the required dimension before fitting.



Corners

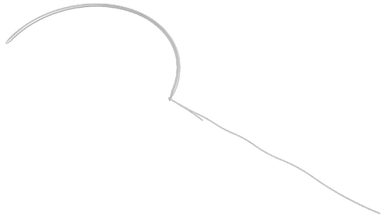
To ensure a neat and continuous fit at corners, cut out an appropriately sized notch from Fire Barrier EN.



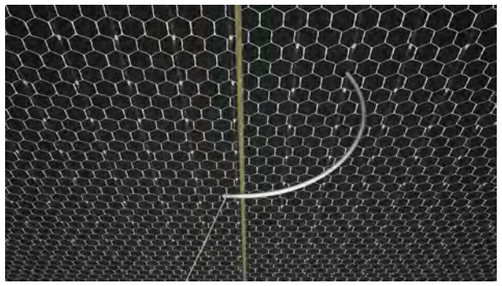


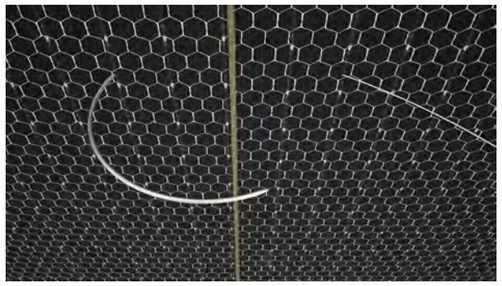
Stitching

1. Carefully bend a large solid metal knitting needle (approx. 35cm; 4mm gauge) into a 'C' shape.
2. Hammer the non-sharp end to flatten it.
3. Drill into the flattened end to create a small hole >1mm in diameter.
4. Thread the 0.9mm steel wire through the hole and bend/tie to secure.

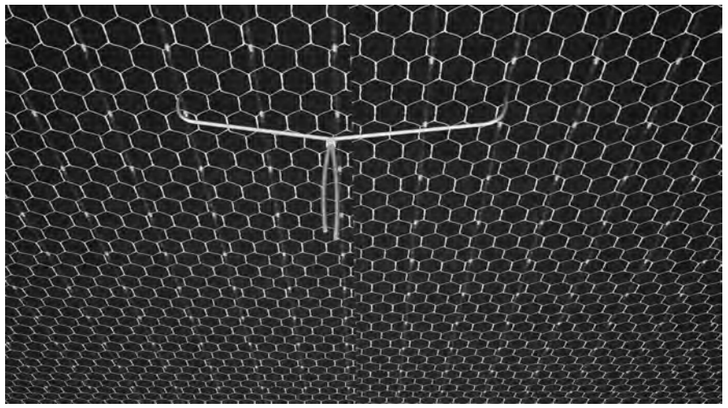


5. Insert the needle through Fire Barrier EN at one side of a joint, then using the curve, re-insert the needle through the rear of the adjacent section of Fire Barrier EN, and back out through the front.





6. Pull the wire through and crop appropriately so that the ends can be twisted together and tautly secured.



Concrete

Single layer installation

Classification	E 60 | EI 20[1] / 30[2]
Max. drop	3050mm
Materials required	• [1]Fire Barrier EN foil faced one side • [2]Fire Barrier EN foil faced both sides • Knock-in steel anchor fixings

1. Fix Angle Support:

1.1. Fix a continuous run of Fire Barrier EN Angle Supports to the concrete soffit and side walls, using knock-in steel anchor fixings at 600mm centres.

1.2. Bend the Angle Support tabs outward, alternating each side.

2. Fit cover strips:

2.1. Cut sections of Fire Barrier EN to form cover strips with a depth of 150mm.

2.2. Impale the strips along the outside of the Angle Support, flush with the substrate, then fix in place with a continuous run of Fire Barrier EN Clamping Plate.

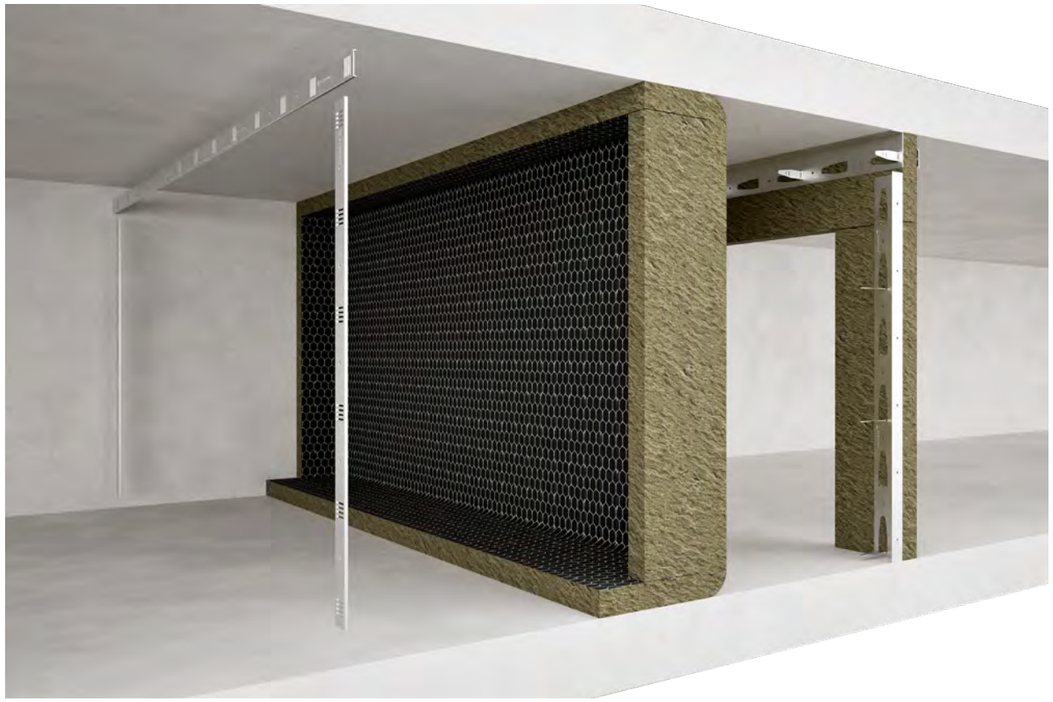
2.3. Bend tabs to secure the Clamping Plates.

3. Install barrier:

3.1. Impale Fire Barrier EN onto the Angle Support tabs, ensuring a 200mm overlap at the head and sides, and a 300mm overlap at the base.

3.2. Fix in place with Clamping Plates, bending tabs to secure.

3.3. Tightly butt all joints and stitch together using 0.9mm steel wire at max. 150mm centres.



Concrete

Double layer installation

Classification	EI 120
Max. drop	3050mm
Materials required	• Fire Barrier EN foil faced one side • Knock-in steel anchor fixings

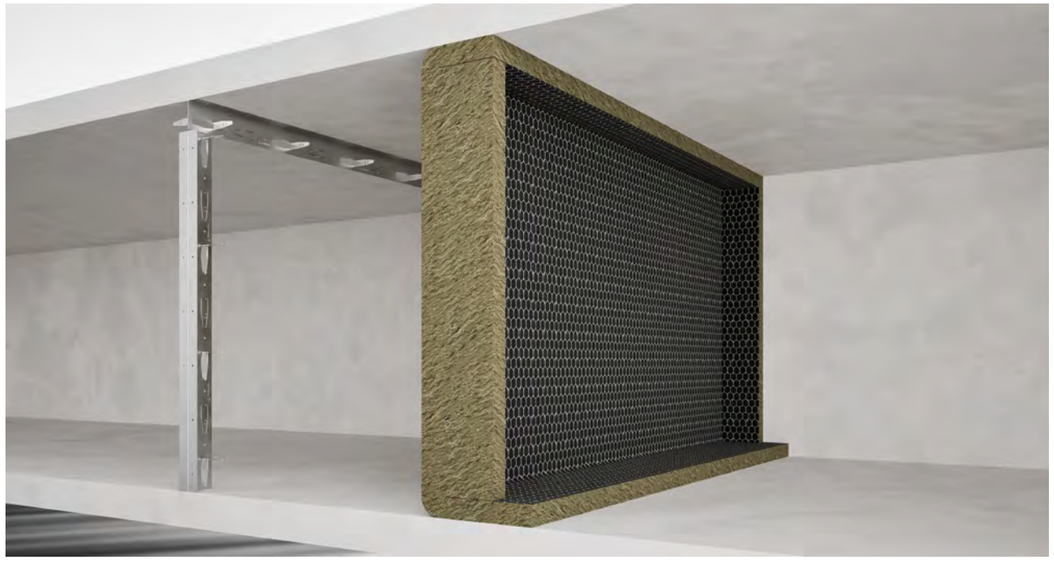
1. Fix Angle Support:

1.1. Fix continuous runs of back-to-back Fire Barrier EN Angle Supports to the concrete soffit and side walls, using knock-in steel anchor fixings at 600mm centres.

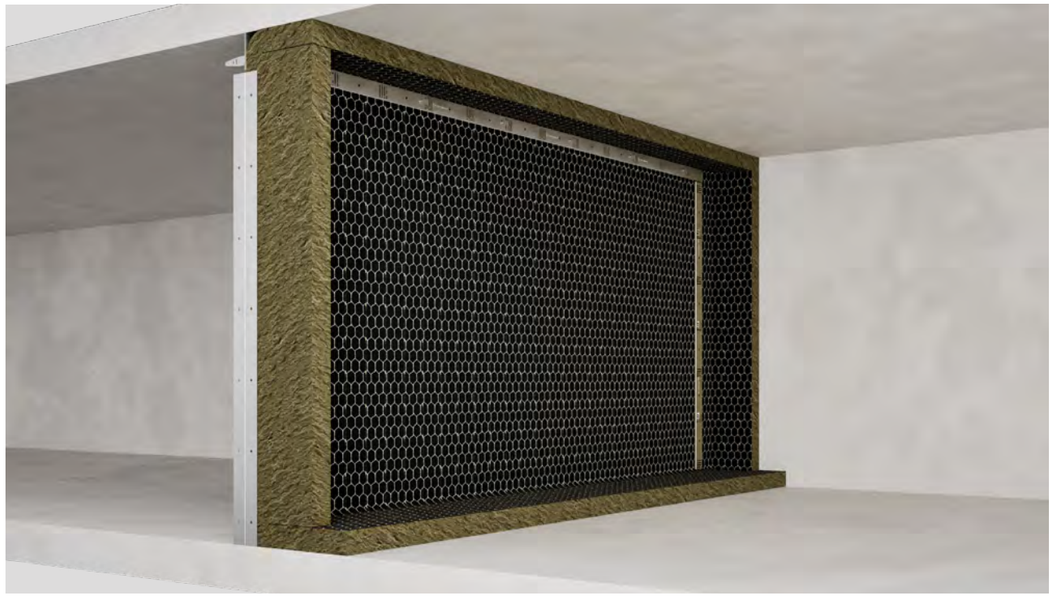
1.2. Bend every other Angle Support tab outward on each side.

2. Install barrier:

2.1. Impale Fire Barrier EN onto each side of the back-to-back Angle Supports, ensuring a 200mm overlap at the head and sides, and a 300mm overlap at the base.



2.2. Fix both sides in place with Fire Barrier EN Clamping Plate, bending tabs to secure.



2.3. Vertical joints are tightly butted; horizontal joints are overlapped by 100mm. All joints stitched with 0.9mm steel wire at max. 150mm centres.

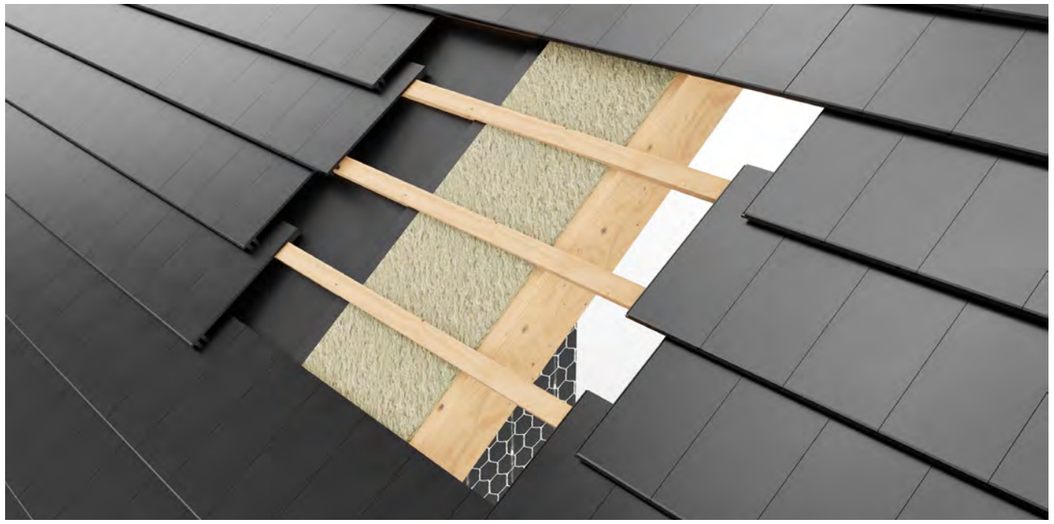
Parallel timber rafters

Single layer installation

Classification	E 60 | EI 20
Max. drop	3050mm
Substrate requirements	Min. 172x47mm timbers at min. 450mm centres
Materials required	• Fire Barrier EN foil faced one side • 25mm ROCKWOOL RWA45 • Min. 45mm woodscrews • Min. 80mm woodscrews

1. Treat tile battens:

1.1. In line with where the barrier is to be installed, pack the 25x50mm tile battens above with ROCKWOOL RWA45. The RWA45 should extend min. 200mm from the face of the rafter.



2. Fix Angle Support:

2.1. Fix continuous runs of Fire Barrier EN Angle Support to each side of the rafter, using min. 45mm long woodscrews at max. 450mm centres.

2.2. Bend every other Angle Support tab outward.

3. Install barrier:

3.1. Impale Fire Barrier EN onto the Angle Support tabs, ensuring a 200mm overlap at the head and sides, and 300mm at the base. Ensure a neat and continuous fit by pre-cutting notches into the product where it meets each timber truss.

3.2. Fix in place with Fire Barrier EN Clamping Plate, bending tabs to secure.

3.3. Tightly butt all joints and stitch together using 0.9mm steel wire at max. 150mm centres.

4. Fit cover strips:

4.1. Cut sections of Fire Barrier EN to form cover strips with a depth of 300mm.

4.2. Fit the strips to the other side of the rafter, flush with the substrate, then secure with Clamping Plates fixed in place with min 80mm long woodscrews at 300mm centres.

4.3. Stitch the cover strip back to the main barrier using 0.9mm steel wire at max. 150mm centres.

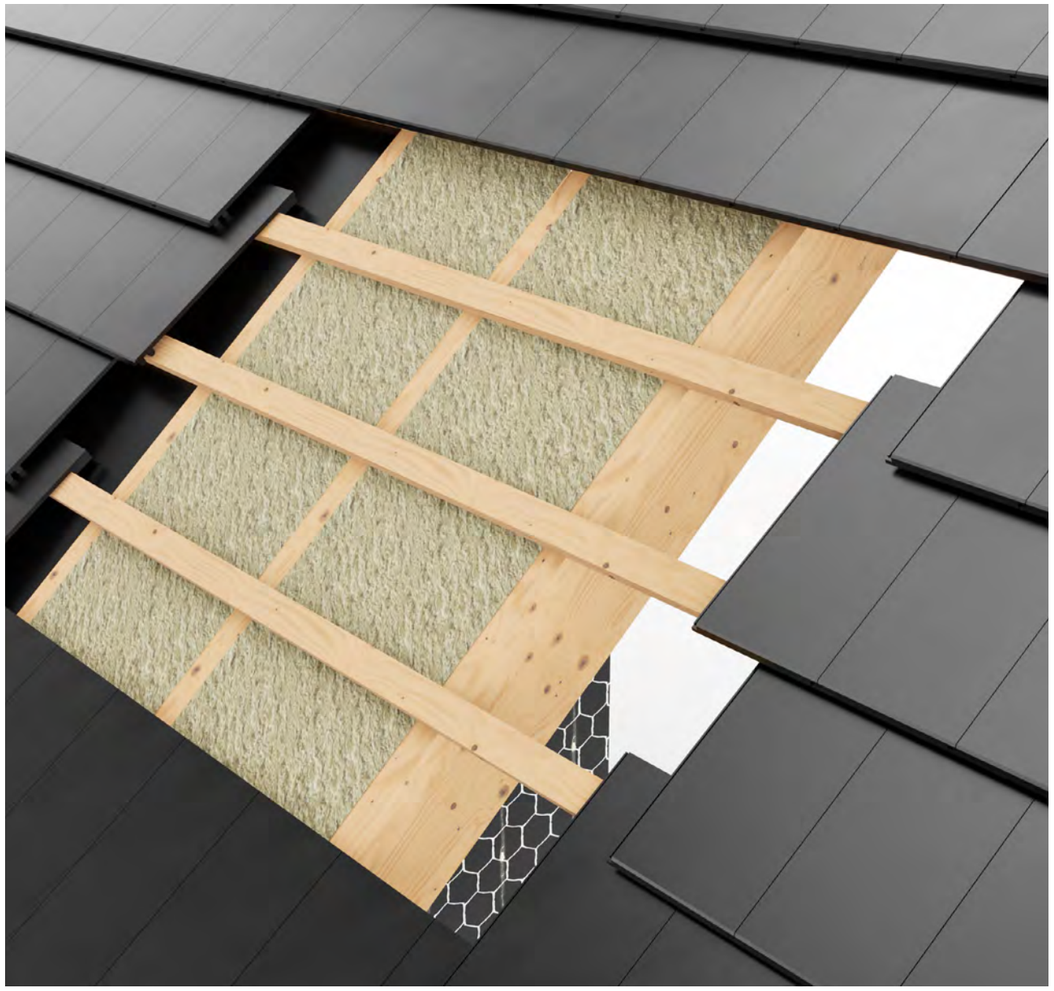
Parallel timber rafters

Double layer installation

Classification	EI 120
Max. drop	3050mm
Substrate requirements	Min. 172x47mm timbers at min. 450mm centres
Materials required	• Fire Barrier EN foil faced one side • 25mm ROCKWOOL RWA45 • Min. 45mm woodscrews • Min. 80mm woodscrews

1. Treat tile battens:

1.1. In line with where the barrier is to be installed, pack the 25x50mm tile battens above with ROCKWOOL RWA45. The RWA45 should extend min. 200mm from the face of the rafter.



2. Fix Angle Support:

2.1. Fix continuous runs of Fire Barrier EN Angle Support to each side of the rafter, using min. 45mm long woodscrews at max. 450mm centres.

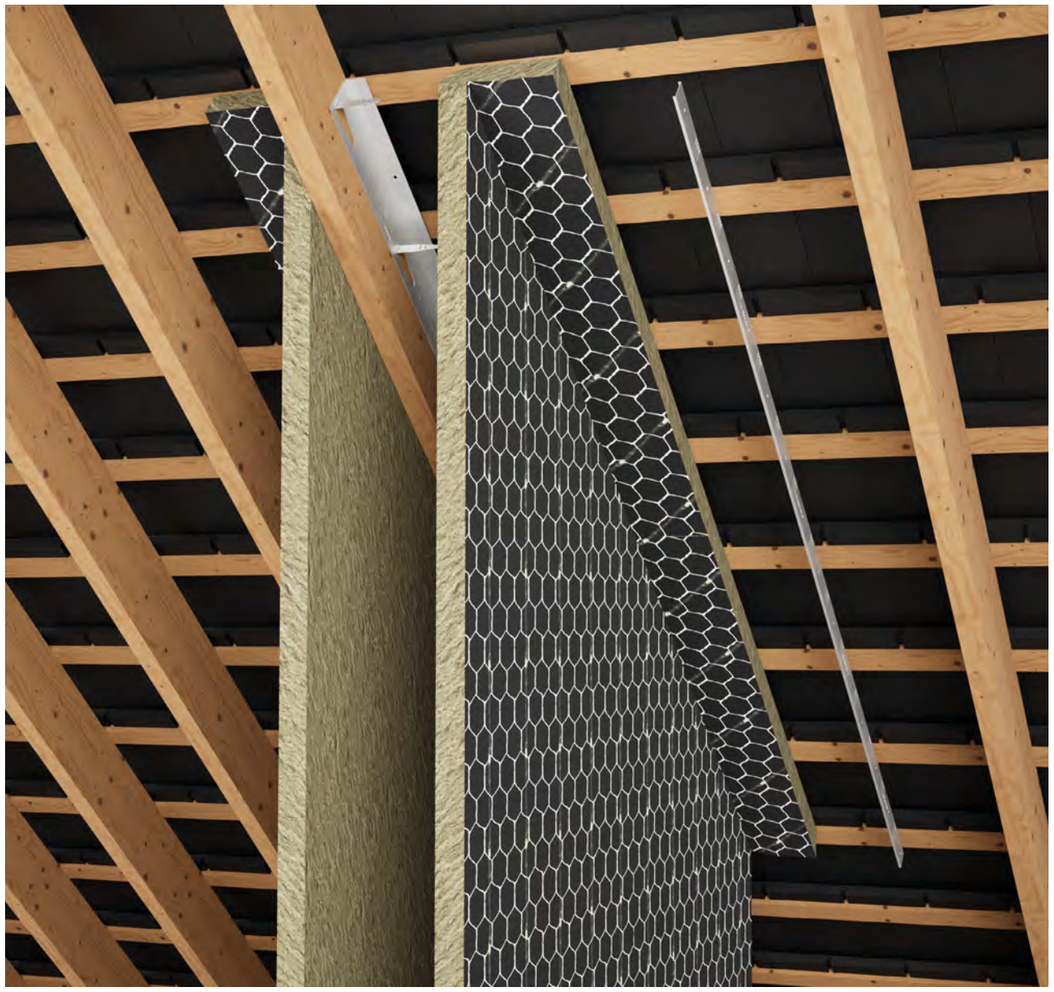
2.2. Bend every other Angle Support tab outward.

3. Install barrier:

3.1. Impale Fire Barrier EN onto the Angle Support tabs, ensuring a 200mm overlap at the head and sides, and 300mm at the base. Ensure a neat and continuous fit by pre-cutting notches into the product where it meets each timber truss.

3.2. Fix in place with Fire Barrier EN Clamping Plate, bending tabs to secure.

3.3. Tightly butt all joints and stitch together using 0.9mm steel wire at max. 150mm centres.



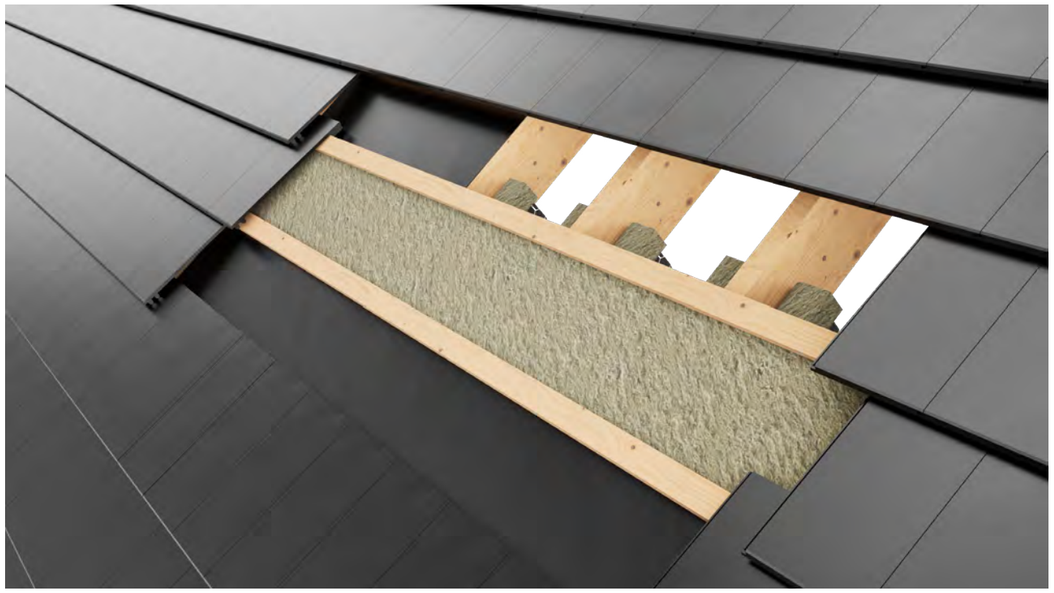
Perpendicular timber rafters

Single layer installation

Classification	E 60 | EI 20
Max. drop	3050mm
Substrate requirements	Min. 172x47mm timbers at min. 450mm centres
Materials required	• Fire Barrier EN foil faced one side • 25mm ROCKWOOL RWA45 • Min. 45mm woodscrews • Min. 80mm woodscrews

1. Treat tile battens:

1.1. In line with where the barrier is to be installed, pack the 25x50mm tile battens above with ROCKWOOL RWA45.



2. Fix Angle Support:

2.1. Fix a continuous run of Fire Barrier EN Angle Support to the underside of min. 172x47mm timber rafters, using min. 45mm long woodscrews at max. 450mm centres.

2.2. Bend every other Angle Support tab outward.

3. Install barrier:

3.1. Impale Fire Barrier EN onto the Angle Support tabs, ensuring a 200mm overlap at the head and sides, and 300mm at the base. Ensure a neat and continuous fit by pre-cutting notches into the product where it meets each timber truss.

3.2. Fix in place with Fire Barrier EN Clamping Plate, bending tabs to secure.

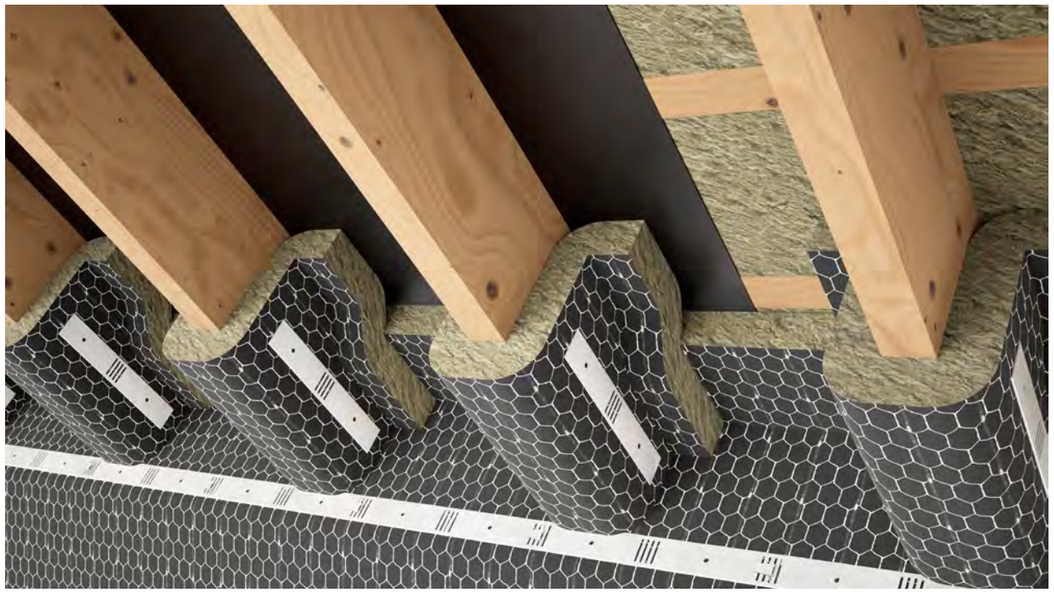
3.3. Tightly butt all joints and stitch together using 0.9mm steel wire at max. 150mm centres.

4. Sleeve timbers:

4.1. Cut a section of Fire Barrier EN, 300mm deep, to a length that will wrap the underside of the rafter with min. 50mm overlap on each side.

4.2. Wrap the section of Fire Barrier EN around the timber truss and secure on each side with a cut section of Clamping Plate, fixed in place with min 80mm long woodscrews at max. 150mm centres.

4.3. Stitch the sleeve back to the main barrier with 0.9mm steel wire.



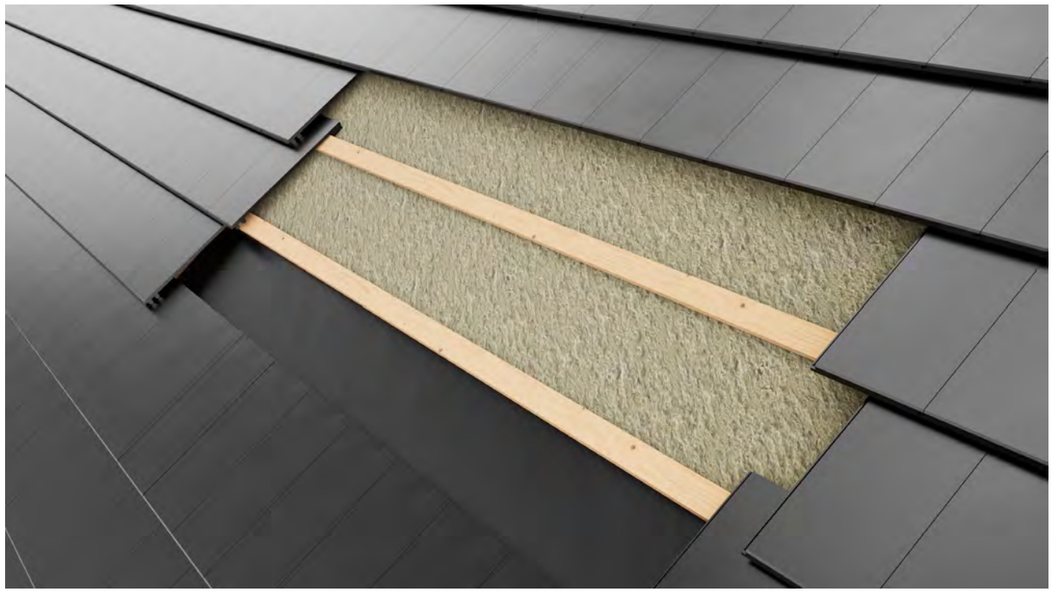
Perpendicular timber rafters

Double layer installation

Classification	E 120 | EI 90
Max. drop	3050mm
Substrate requirements	Min. 172x47mm timbers at min. 450mm centres
Materials required	• Fire Barrier EN foil faced one side • 25mm ROCKWOOL RWA45 • Min. 45mm woodscrews • Min. 80mm woodscrews

1. Treat tile battens:

1.1. In line with where the barrier is to be installed, pack the 25x50mm tile battens above with ROCKWOOL RWA45.



2. Fix Angle Support:

2.1. Fix continuous back-to-back runs of Fire Barrier EN Angle Support to the underside of min. 172x47mm timber rafters, using min. 45mm long woodscrews at max. 450mm centres.

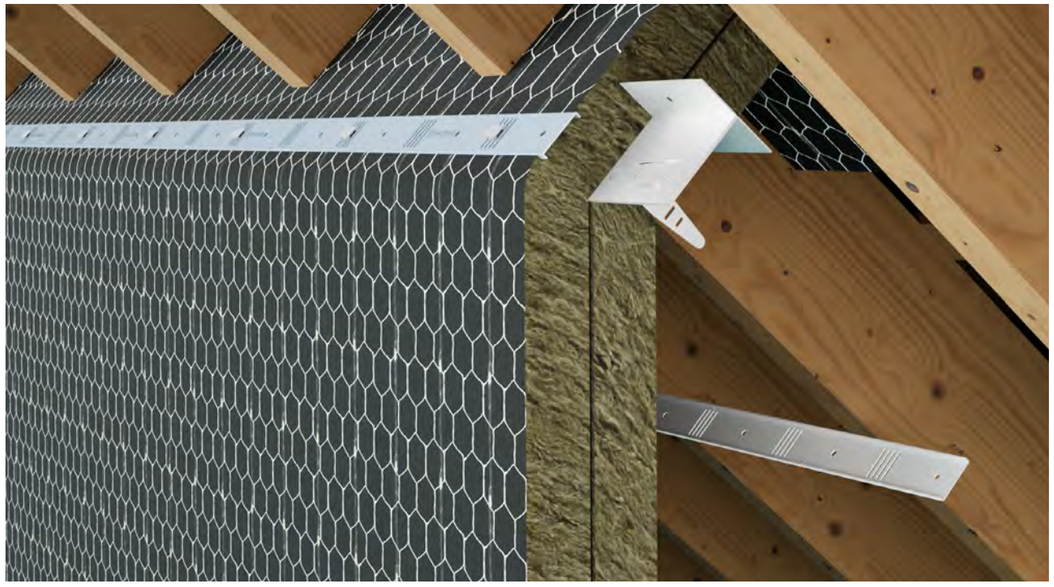
2.2. Bend every other Angle Support tab outward.

3. Install barrier:

3.1. Impale Fire Barrier EN onto the Angle Support tabs, ensuring a 200mm overlap at the head and sides, and 300mm at the base. Ensure a neat and continuous fit by pre-cutting notches into the product where it meets each timber truss.

3.2. Fix in place with Fire Barrier EN Clamping Plate, bending tabs to secure.

3.3. Tightly butt all joints and stitch together using 0.9mm steel wire at max. 150mm centres.

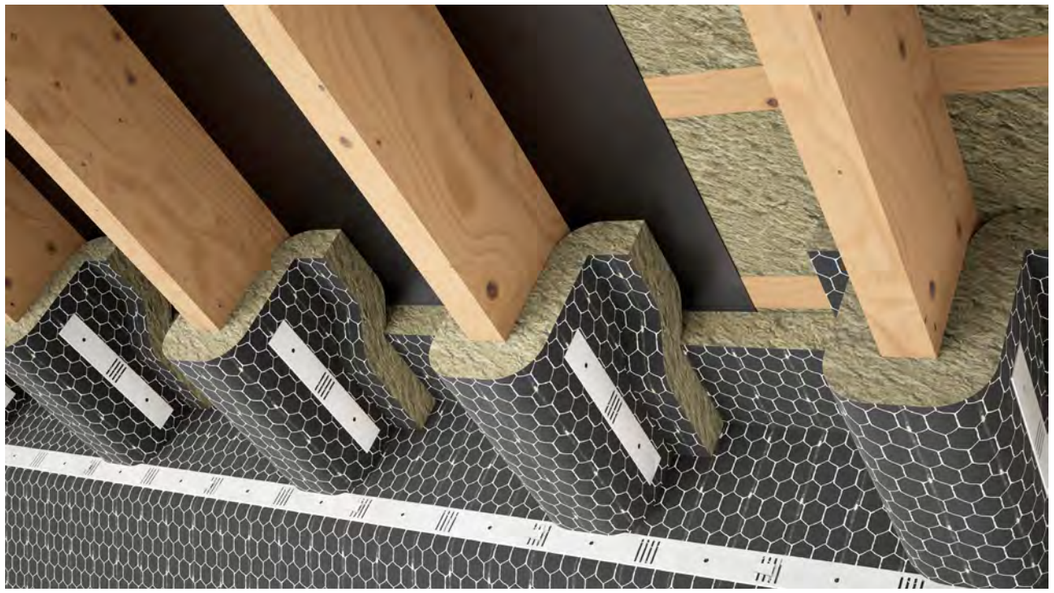


4. Sleeve timbers:

4.1. Cut a section of Fire Barrier EN, 300mm deep, to a length that will wrap the underside of the rafter with min. 50mm overlap on each side.

4.2. Wrap the section of Fire Barrier EN around the timber truss and secure on each side with a cut section of Clamping Plate, fixed in place with min 80mm long woodscrews at max. 150mm centres.

4.3. Stitch the sleeve back to the main barrier with 0.9mm steel wire.



Head of flexible wall

Double layer installation

Classification	E 120 | EI 90 *If partition height >1500mm, classification is limited to that of the partition or the barrier, whichever is lowest.*
Max. drop	1620mm
Substrate requirements	Min. 75mm flexible wall: • Min. 12.5mm plasterboard • Min. 50mm galvanised steel studs • Incomplete boarding at head
Materials required	• Fire Barrier EN foil faced one side • Substrate-dependent fixings for Fire Barrier EN Angle Support

1. Fix Angle Support:

1.1. Fix continuous runs of Fire Barrier EN Angle Support to the soffit and sides, either side of the head track, and secure with substrate-appropriate fixings at max. 600mm centres.

1.2. Bend every other Angle Support tab outward.

2. Install barrier:

2.1. Impale Fire Barrier EN onto the Angle Support tabs, ensuring a 200mm overlap at the head and sides, and a min. 100mm overlap with the boarded section of wall.

2.2. Fix in place at the head and sides with Fire Barrier EN Clamping Plate, bending tabs to secure.

2.3. Secure the clamping plate through with self-drilling screws into the vertical studs.

2.4. Tightly butt all joints and stitch together using 0.9mm steel wire at max. 150mm centres.

Penetrations

For full classification information on penetrations, including sizing and spacing, please see UL Classification Report 4791215614.3.

General approach

With the exception of uninsulated combustible pipes, all penetrations are treated on both sides of the barrier as follows.

1. Cut a section of Fire Barrier EN, 300mm deep, to a length that will wrap the penetration with min. 50mm overlap.
2. Wrap the cut section of Fire Barrier EN around the penetration, tightly butting the barrier, then fix in place with two bands of 0.9mm steel wire, each pulled taut then twisted to secure.
3. Secure with sleeve to the main barrier with a minimum of two stitches, typically at the top and bottom.

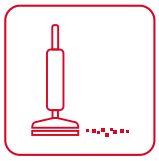
Combustible pipes (PVC / HDPE / PP)

1. Fit a 300mm length of ROCKWOOL Insulated Fire Sleeve to the pipe, centralised and tightly butted to the barrier.
2. Cut sections of Fire Barrier EN, 100mm deep, to a length that will wrap the Insulated Fire Sleeve on each side of the barrier with min. 50mm overlap.
3. Wrap the cut sections of Fire Barrier EN around the Insulated Fire Sleeve, tightly butting the barrier, then fix in place with two bands of 0.9mm steel wire, each pulled taut then twisted to secure.
4. Stitch the top and bottom of the wraps back to the main barrier.

Health & safety

The mechanical effect of fibres in contact with skin may cause temporary itching.

Cover exposed skin.
When working in unventilated area wear disposable face mask.



Clean area using vacuum equipment.

Waste should be disposed of according to local regulations.

Rinse in cold water before washing.

Ventilate working area if possible.

Wear goggles when working overhead.