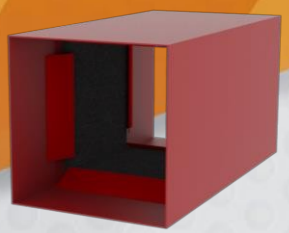
Firepro
Fire Stop Box

TECHNICAL MANUAL



Changing the way we build to improve fire safety.

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The range includes:

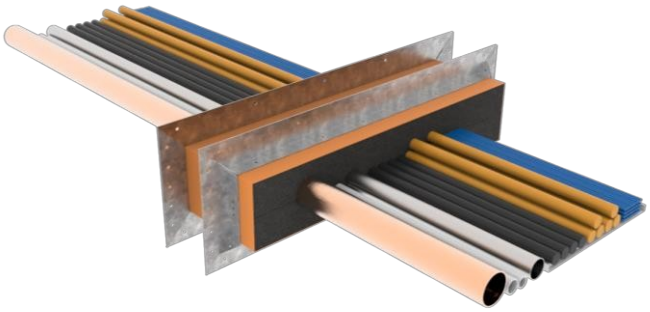
- Slab-Mounted
- Cast-In
- Maxi
- Mini

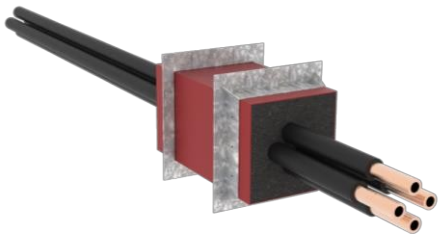
Firepro Fire Stop Boxes

MAXI/MINI

Product Overview

Firepro Maxi are an intumescent type product designed to prevent the spread of fire through service penetrations. Think of Maxi's as fire rated holes. The Maxi has been tested rigorously with a multitude of service types, service configurations, and wall and floor types and is one of the most fire tested products in the world.





The Maxi system allows building designers and service consultants to identify the required location for services and specify the required Maxi configuration, of course, with our assistance and advice.

Construction documentation can then identify these as the only approved path for services in the building for each specific trade. This ensures that all services are adequately fire stopped. The best part is that the system is a permanent system and will not require fire stopping again for the life of the building!

APPLICATION:

Firepro Maxi and Mini's are multiple service transits. They remove the need to separate service penetrations such that all contractors can run their services through the one penetration.

The Maxi comes in various sizes to suit most applications and can be used in conjunction with the Maxilite bulkhead systems.

SUITABLE FOR:

The Maxi is suitable for use in any building where penetrations are made through plasterboard, Hebel and masonry walls and floors for services. They have been tested and approved for the following services:

- Electrical, data and communication cables
- Steel and copper pipes
- Insulated copper pipes
- Typical air-conditioning services
- Small conduits
- Pex and gas pex.

Firepro Fire Stop Boxes
MAXI/MINI

Installation Overview

Pre-Installation: Approved services

Maxi and Mini installed in **2 layer plasterboard walls**			
Trade	Service Type	Service Specifications	**FRL achieved***
Sprinklers	Sprinkler Pipe	Steel pipes up to 54mm	**-/120/60**
Air Conditioning	Air-conditioning pipes	Pair coil	**-/120/60**
	Refrigeration	Insulated copper pipes up to 54mm (plus insulation)	**-/120/60**
Electrical	Power cables	All types of power cables	**-/120/30**
	Data/comms cables	Telecom cables, CAT5/6, fire cable, shielded data, CAT5, CAT6, RG6	**-/120/60**
	Conduits	Up to 25mm PVC Conduit	**-/120/-**
Plumbing	Copper pipes	Copper pipes up to 54mm	**-/120/60**

Maxi and Mini installed in **1 layer (1x16mm) plasterboard walls**			
Trade	Service Type	Service Specifications	**FRL achieved***
Air Conditioning	Air-conditioning pipes	Pair coil (Square mini)	**-/90/30**
Electrical	Power cables	TPS cables	**-/90/30**
	Data/comms cables	CAT5/6 cables	**-/90/30**

Maxi installed in **1 layer (1x13mm) plasterboard walls**			
Trade	Service Type	Service Specifications	**FRL achieved***
Air-conditioning	Air-conditioning pipes	Pair coil	**-/90/30**
	Air-conditioning cables	CAT6 Data cables and 10mm OD Power Cables	**-/90/30**
	Refrigeration	Insulated copper pipes up to 50mm OD (plus insulation)	**-/90/30**
Sprinklers	Sprinkler Pipe	Steel pipes up to 50mm OD	**-/90/30**
Plumbing	Pex Pipes	PEX water and PEX gas up to 25mm OD	**-/90/30**
Electrical	Conduits	PVC Conduit 32mm OD	**-/90/30**

Maxi and Mini installed in **masonry (brick, block and concrete) walls**			
Trade	Service Type	Service Specifications	**FRL achieved***
Sprinklers	Sprinkler Pipe	Steel pipes up to 54mm	**-/240/30**
Air Conditioning	Air-conditioning pipes	Pair coil	**-/240/30**
	Refrigeration	Insulated copper pipes up to 54mm (plus insulation)	**-/240/30**
Electrical	Power cables	All power cables	**-/240/120***
	Data/comms cables	Telecom cables, CAT5/6, fire cable, shielded data, CAT5, CAT6, RG6	**-/240/120***
	Conduits	Up to 25mm PVC Conduit	**-/120/-**
Plumbing	Copper pipes	Copper pipes up to 54mm	**-/240/30**

***FyreWrap** can be used to achieve insulation of 120 minutes **(-/XXX/120)** - see page 3 for details

Firepro Fire Stop Boxes
MAXI/MINI

Installation Overview

Maxi and Mini installed in **Hebel walls**			**FRL Achieved***		
Trade	Service Type	Service Specifications	**75mm wall**	**100mm wall**	**120mm wall**
Sprinklers	Sprinkler Pipe	Steel pipes up to 54mm	**-/60/-**	**-/90/-**	**-/120/-**
Air Conditioning	Air-conditioning pipes	Pair coil	**-/60/30**	**-/90/30**	**-/120/30**
	Refrigeration	Insulated copper pipes up to 54mm (plus insulation)	**-/60/30**	**-/90/30**	**-/120/30**
Electrical	Power cables	All power cables	**-/60/-**	**-/90/-**	**-/120/30**
	Data/comms cables	Telecom cables, CAT5/6, fire cable, shielded data, CAT5, CAT6, RG6	**-/60/30**	**-/90/30**	**-/120/60**
Plumbing	Copper pipes	Copper pipes up to 54mm	**-/60/-**	**-/90/-**	**-/120/-**

Maxi and Mini installed in **Shaft walls**			
Trade	Service Type	Service Specifications	**FRL achieved***
Electrical	Power cables	All power cables	**-/120/-**
	Data/comms cables	Telecom cables, CAT5/6, fire cable, shielded data, CAT5, CAT6, RG6	**-/120/-**

Maxi and Mini installed in **floor slabs**			
Trade	Service Type	Service Specifications	**FRL achieved***
Sprinklers	Sprinkler Pipe	Steel pipes up to 54mm	**-/120/-**
Air Conditioning	Air-conditioning pipes	Pair coil	**-/120/90**
	Refrigeration	Insulated copper pipes up to 54mm (plus insulation)	**-/120/90**
Electrical	Power cables	All power cables	**-/240/-**
	Data/comms cables	Telecom cables, CAT5/6, fire cable, shielded data, CAT5, CAT6, RG6	**-/240/120**
	Conduits	25mm rigid PVC	**-/120/-**
Plumbing	Copper pipes	Copper pipes up to 54mm	**-/120/-**

Installation Overview – FyreWrap for Insulation

Heat transfer via conduction, is one of the common ways in which a fire may spread through openings in fire rated barriers. It is a requirement to stop this heat conduction, just like we stop direct flame transfer and radiant heat transfer by which a fire can spread through an opening in a fire barrier.

*__FyreWrap__ can be applied to all installations to achieve up to 120 minutes of insulation for all the above services and installations. For example, if a steel pipe was installed through a Firepro box in a 2 hour fire wall, the addition of FyreWrap will **increase the FRL to -/120/120.**

Please refer to the FyreWrap technical manual for further details or contact Firepro for more information.

Firepro Fire Stop Boxes
MAXI/MINI

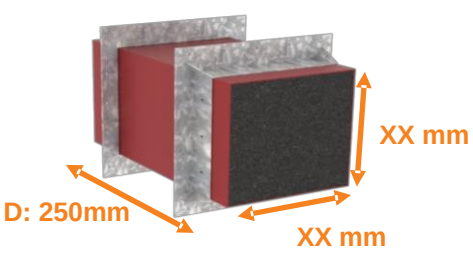
Installation Overview

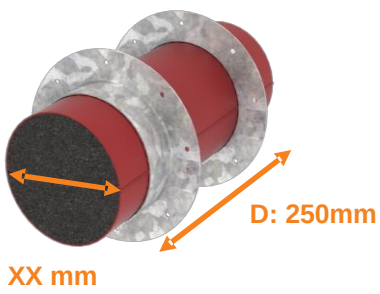
Pre-installation: Sizing

Select the correct size box for your application. The box can be retro fit around already installed services and are supplied with the necessary mounting flanges for installation.

MINI				
Type	**Configuration**	**Available Sizes (internal openings)**	**Product Code**	**Maximum opening size (cut out size)**
Square	Wall or Floor	65 x 65mm	MS-65	90x90mm
	Wall or Floor	100 x 100mm	MS-100	130x130mm
Round	Wall or Floor	50mm internal Diameter	MR-50	80mm diameter
	Wall or Floor	100mm internal Diameter	MR-100	130mm diameter
	Wall or Floor	150mm internal Diameter	MR-150	180mm diameter

MAXI				
Type	**Configuration**	**Available Sizes (internal openings)**	**Product Code**	**Maximum opening size (cut out size)**
Maxi (Rectangle)	Wall or Floor	350 x 125	MAXI-350	380x155mm
	Wall or Floor	550 x 125	MAXI-550	580x155mm
	Wall or Floor	650 x 125	MAXI-650	680x155mm
	Wall or Floor	750 x 125	MAXI-750	780x155mm
	Wall or Floor	1100 x 125	MAXI-1100	1130x155mm
	Wall or Floor	Custom length x 125 x Custom depth (Any length up to 1100)	MAXI-CUSTOM	15mm Annular gaps



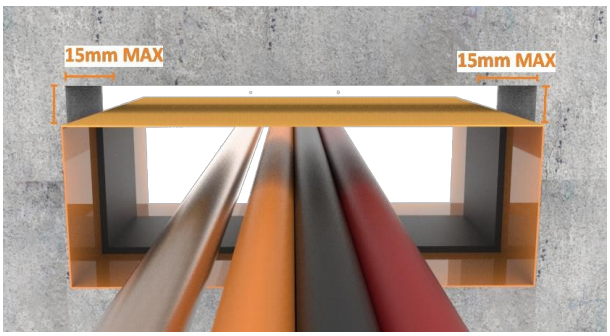


Firepro
Fire Stop Boxes
MAXI/MINI

Installation

Installation:

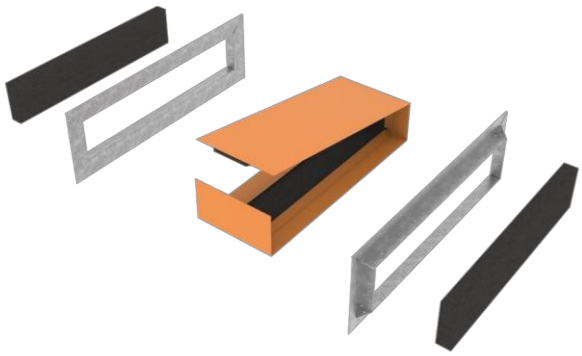
1. Cut out an opening size to suit the box as detailed in the above table, ensuring no more than 15mm annular gaps around the box. NB the **box can be retro-fitted around existing services** provided that the opening sizes are correct*



15mm annular gaps all around the box

2. Remove the foam end plugs and place aside for later use.

3. Place the box nominally into position centrally in the opening, and use foam backing rod to pack out the annular gaps on both sides of the wall to ensure the correct depth of sealant (20mm deep). The backing rod will help hold the box in place whilst the sealant is applied.


components - exploded view

4. Apply Fyreflex sealant to the annular gaps to least 20mm depth on both sides of the penetration.

5. Slide the provided friction fit mounting flanges around the box, hard up against the wall/floor and use steel rivets or screws to secure the last corners of the flanges together.


Sealant to all annular gaps around the box

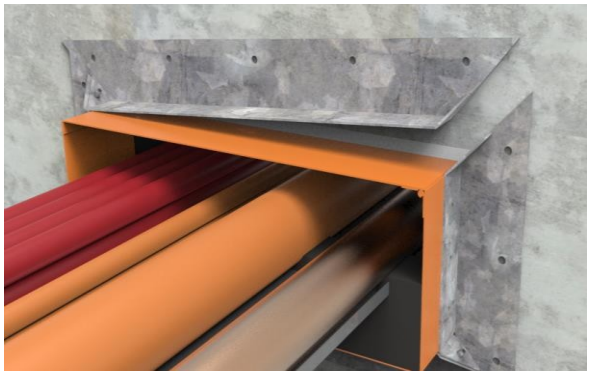
*For oversized openings, the box can be mounted in Maxilite fire-rated board. See page 8 for details.

Firepro
Fire Stop Boxes
MAXI/MINI

Installation

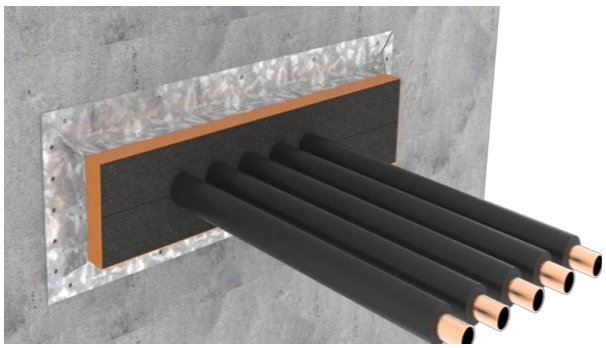
Installation: Continued

6. Using M6 masonry anchors at 400mm centres (or for gyprock 8g screws at 200mm centres) fix the flanges to the wall/floor through the preformed Holes.



Fit the flange over around the box

7. Cut and fit the black foam end plugs to fit snugly around the penetrating services on both sides of the box. This must be done so that there are no visible air gaps through the box. If you can see light through any gaps in the foam plugs, Fyreflex sealant or offcuts of the foam can be used to plug them. The install will not be compliant if this is not done. If there are no services installed the full foam plug should still be installed.



Maxi with foam end plugs installed flush around services

8. If required, FyreWrap can be wrapped around the box/services to increase the insulation rating to 120 minutes. A detailed installation drawing is included on the next page.

Fyrewrap installed to provide 2 hour insulation requirement

Firepro Fire Stop Boxes

MAXI/MINI

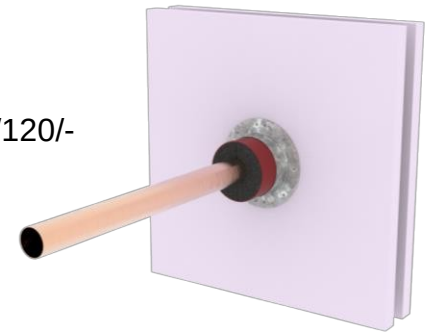
Installation with FyreWrap

Fire Stop Box - FyreWrap installation for services insulation

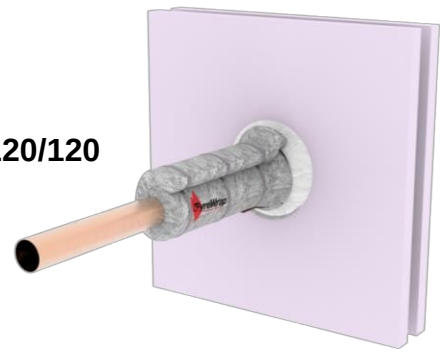
FyreWrap can be applied to all installations to achieve up to 120 minutes of insulation for all the above services and installations. For example, if a steel pipe was installed through a box in a 2 hour fire wall, the addition of FyreWrap will increase the FRL from -/120/- to **-/120/120**.

FyreWrap must be installed to 450mm from the wall on both sides, and on the top side only of a floor installation, fixed around services with 12mm steel strapping in three locations. See the below drawing for installation requirements, and contact Firepro for further details.

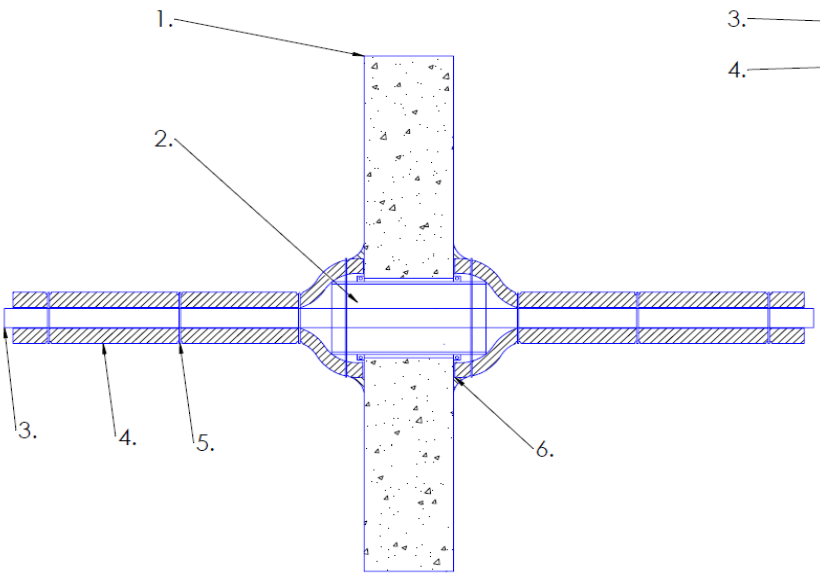
Without FyreWrap: -/120/-

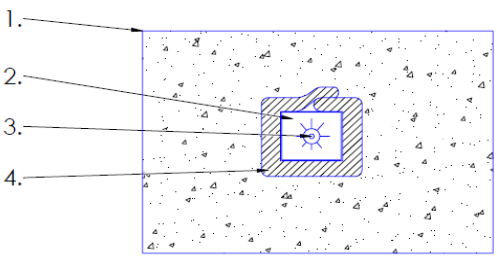


With FyreWrap: -/120/120



FRL: -/120/120





Item Number	Item	Specifications
1.	Seperating Element	Vertical fire rated masonry, aerated concrete and plasterboard walls.
2.	Firestopping System	Approved configurations of box installed to specifications
3.	Service	Ductile and metalic services including steel, copper and brass pipes, pipes with combustible insulation materials, cables with and without cable trays, bus bars etc.
4.	Fyrewrap	Trafalgar Fyrewrap at least 38mm thick for 450mm or longer along the service with a 75mm longitudinal overlap.
5.	Fyrewrap fixing detail	12mm wide x 0.4mm nominal thick steel at mid point and 50mm nominal from each end.
6.	Sealant	25mmx25mm nominal fillet of Trafalgar Fyreflex sealant to entire perimeter extending along the Fyrewrap and the firestopping material.

Notes:
(1) Fire stop the penetration as per Trafalgar tested systems
(2) For multiple services it is acceptable to wrap around all the services rather than wrap them individually.

Drawn/Modified By:	Checked by:	Approved by:	Date:	Modified date:	Scale:
JH	CT		07/12/16		NTS

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Client : Trafalgar

Project: Fyrewrap insulation on services

All dimensions in millimetres [mm] unless specified otherwise.

Version 2

Page 1 of 1

System Number Fyrewrap-120

Title: Insulation for services with Trafalgar Fyrewrap

Firepro Fire Stop Boxes

MAXI/MINI

Installation with Maxilite

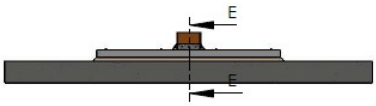
Installation – Oversized Openings

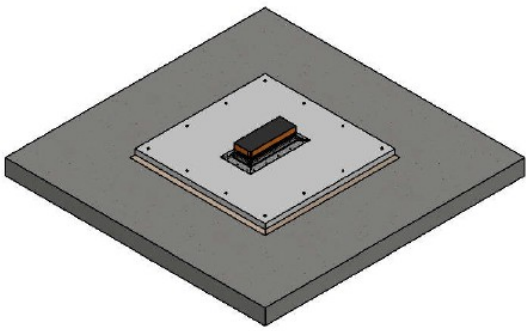
If installing the Maxi or Mini into an opening size that is too large to meet the 15mm annular gap requirements, then the box can be installed into a 60mm thickness of the Maxilite board.

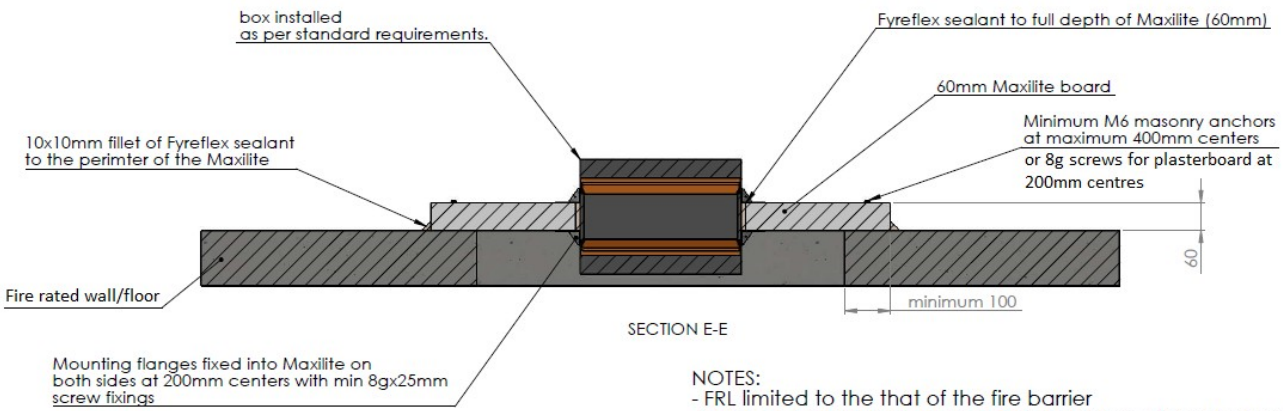
The Maxilite board is face fixed to one side of the fire barrier with minimum 100mm overlaps to the wall/floor and fixings as detailed in the below table.

Contact Firepro for further details.

Fire barrier	Maxilite Minimum Fixing size	Fixing spacing
Masonry floors and walls	M6 Masonry anchors	400mm centres
Plasterboard walls	8G screw fixings into studwork	200mm centres
Flange to Maxilite	8gx25mm screw fixings	200mm centres







SECTION E-E

NOTES:
- FRL limited to the that of the fire barrier
- Services and FRL's as per individual box/Fyreclamp test approvals
- Maxilite board can be face fixed on either side of the slab
- Maximum annular gaps of 15mm around the box/Fyreclamp

Drawing Name:			**Test Standard:** AS1530.4	**Codes:**	**Revision:** / **Date:** / **No.:**	**NOTICE:**
Project Title: Maxilite penetration			**Fire resistance level:**	**Drawn By:** JH		NOTE: ALL DIMENSIONS ARE IN MILLIMETRES (mm)
Drawing No. :	**Sheet:**	**Date:** 12/12/2016	**Scale:**	**Based on Report No.:**	**Checked By:** CT	☐ STANDARD DRAWING ☐ PROJECT DRAWING

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Firepro Fire Stop Box

NEW project – walls and floors yet to be constructed.

Walls/floors with services installed, or about to be installed.

New Residential Walls

Floor

Wall/floor opening size > 150mm

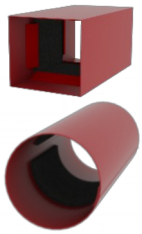
Wall/floor opening size < 150mm

Slab-Mounted

Cast-In

Maxi

Mini



	Slab-Mounted	Cast-In	Maxi	Mini
Fire Barrier	Hebel/Plasterboard Walls	Concrete Slabs	Plaster / Masonry / Hebel / Concrete Walls and Floors	Plaster / Masonry / Hebel / Concrete Walls and Floors
Retrofit	☒	In FyreSet Mortar	☑	☑
Cutting required	During wall construction	None	Pre-formed holes	Pre-formed holes
Power Cables	Residential power	☑	☑	☑
Data Cables	☑	☑	☑	☑
Cable Trays	☒	☑	☑	☒
Metal Pipes	☑	☑	☑	☑
Insulated copper pipes	☑	☑	☑	☑
PEX pipes	☑	☒	☑	☒

For full FRL details please contact Firepro Centabuild Ltd