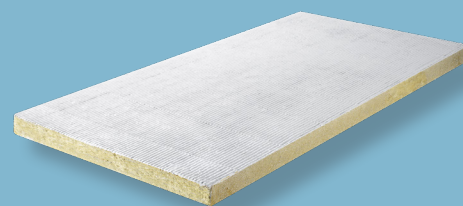


**E502e-A01.pl**  
Installation Instructions



Firewin

2018-12

## Knauf FPC Panel

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## Product description

Knauf FPC Panel has been designed to maintain the fire resistance of separating walls and floors where they are breached by single or multiple building services. The panel consists of a stone wool core, sealed with Knauf FPC Coating on 1 or both faces.

Selection of the panel coated on 1 or both faces is determined by installation considerations and fire resistance requirements. When installed on site, Knauf FPC Panel should be used with Knauf FPA Acrylic for sealing around service penetrations and the adjacent separating construction.

## General Guide

Minimum separations and limitations: Services can be sealed as specified in the detailed drawings. An aperture can include several services, and they may also be different. The minimum permitted separation between adjacent seals/apertures is 200mm. Services should be a minimum of 25mm from seal edges. Services within the system Knauf FPC Panel seal do not require a minimum separation, except pipes where combustible pipe insulation penetrates the seal and plastic pipe penetrations which should be a minimum of 30 mm from other services in the aperture. The total amount of cross sections of services (including insulation) should not exceed 60% of the penetration area.

Supporting constructions: Flexible walls must have a minimum thickness of 75 mm and comprise steel studs or timber studs\*) lined on both faces with minimum 1 layer of 12.5 mm thick boards. Rigid walls must have a minimum thickness of 75 mm and comprise concrete, aerated concrete or masonry, with a minimum density of 650kg/m<sup>3</sup>. Rigid floors must have a minimum thickness of 150 mm and comprise aerated concrete or concrete with a minimum density of 650kg/m<sup>3</sup>. The supporting construction must be classified in accordance with EN 13501-2 for the required fire resistance period.

## Properties

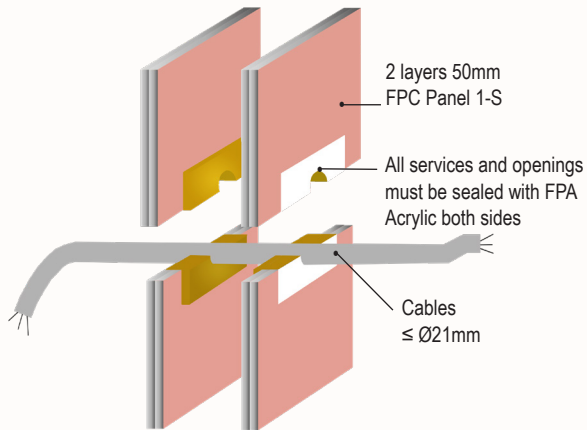
- Classified for all types of constructions with or without building service penetrations
- Simple and very quick to install
- Permanently flexible - will accommodate movements during fire and smaller movements in the construction it has been fitted within
- Halogen free with added fungicides
- Fire resistance up to EI240
- ETA 18/0928
- EAD 350141-00-1104

**Note:** \*) Timber studs: no part of the penetration seal may be closer than 100 mm to a stud, and minimum 100 mm of insulation of class A1 or A2 according to EN 13501-1 must be provided within the cavity between the penetration seal and the stud.

## Installation Guide

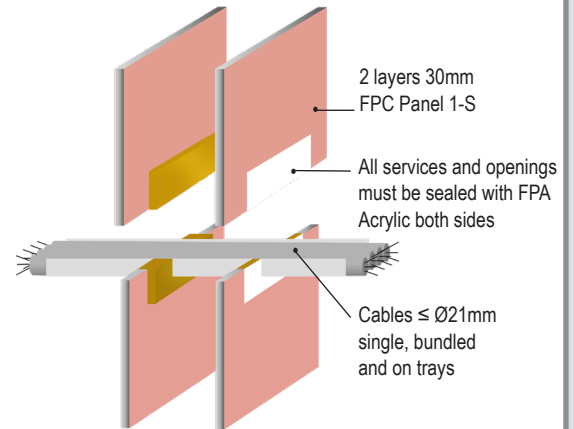
1. Before installing Knauf FPC Panel ensure that the surface of all service penetrations and surrounding construction is free from all loose contaminants, dust and grease.
2. Knauf FPC Coating and Knauf FPA Acrylic are water based, so in cases where corrosion protection is a problem, some metals may require a barrier between the seal and the surface prior to this installation.
3. Select the type and number of panels to meet the required fire classification using the drawings on this document.
4. When fitting panels into drywalls the coated side of the panel should be flush with the surface of the wall on both sides. In seals wider than 2400mm, uninterrupted separating studs will be required at 2400mm centers or less.
5. When fitting double layer 60mm thick panels in masonry or concrete constructions, the panels should be flush with the surface of the construction on both sides to maximize the fire resistance. If this is not possible, there should be an air gap of at least 30mm between the panels.
6. When fitting single layer panels in masonry or concrete constructions, the panel can be positioned to either side of the construction or anywhere in between.
7. When installing Knauf FPC Panel in hollow floor slabs or boards, fire seals specified as single layer panels should be installed from the soffit side of the floor assuming there is sufficient thickness of concrete below the void to follow the installation guide. Where this is not the case, tubular voids should be filled with stone wool normally the same thickness as the depth of the floor slab. Alternatively, simply fire seal on both sides.
8. Cut the required panel(s) to suit the aperture dimensions and type and size of service penetration(s). All exposed and cut edges of the panels can be sealed with Knauf FPC Coating or Knauf FPA Acrylic prior to fitting which will act as an adhesive and ensure a smoke tight seal.
9. All joints, gaps or imperfections in the installed seal must be filled with Knauf FPA Acrylic on both sides.
10. Knauf FPC Panel can be over-painted with most emulsion or alkyd (gloss) paints.

**≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS  
- CABLES FIRE RESISTANCE EI 60 (E 120)**



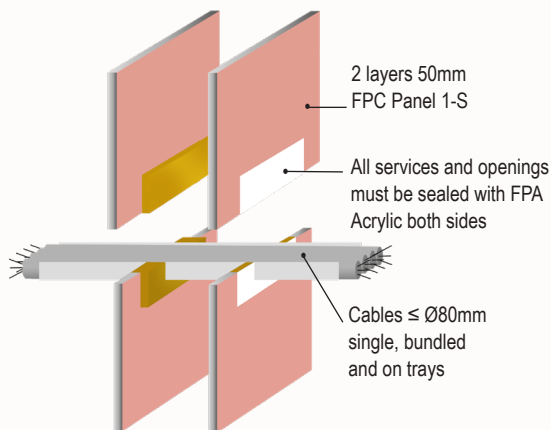
Maximum aperture unlimited width by 1200mm high

**≥ 75MM DRYWALLS, MASONRY OR CONCRETE WALLS  
- CABLES AND CABLE TRAYS FIRE RESISTANCE EI 45 (E 45)**



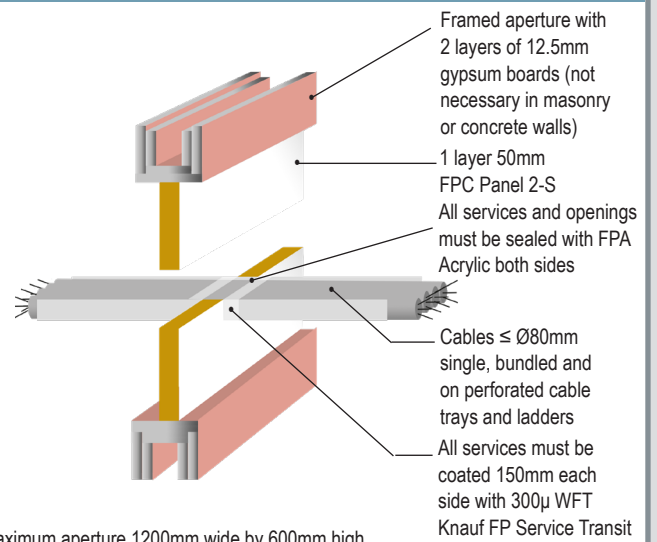
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- CABLES AND CABLE TRAYS FIRE RESISTANCE EI 30 (E 45)**



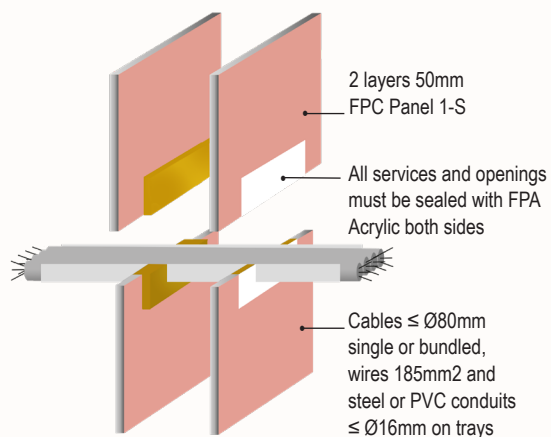
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- CABLES AND CABLE TRAYS FIRE RESISTANCE EI 60 (E 60)**



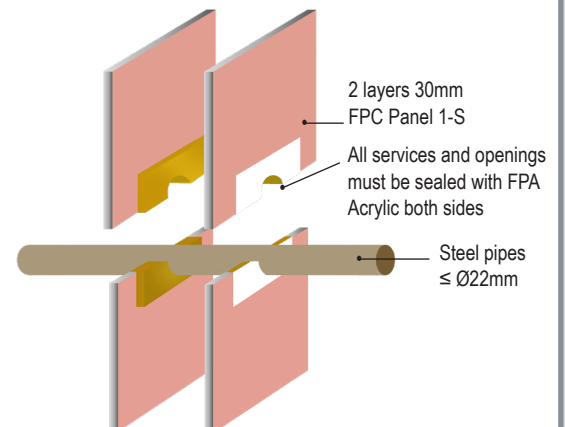
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- CABLES AND CABLE TRAYS FIRE RESISTANCE EI 60 (E 60)**



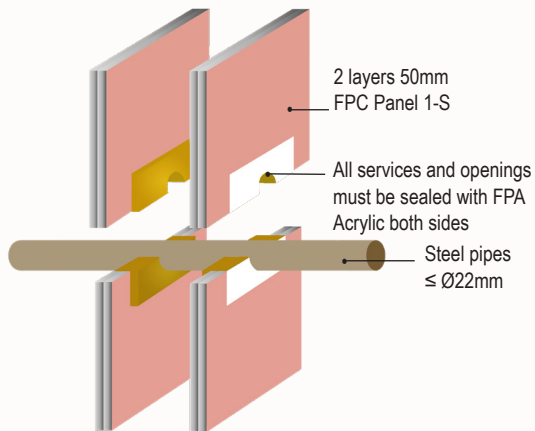
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**≥ 75MM DRYWALLS, MASONRY OR CONCRETE WALLS  
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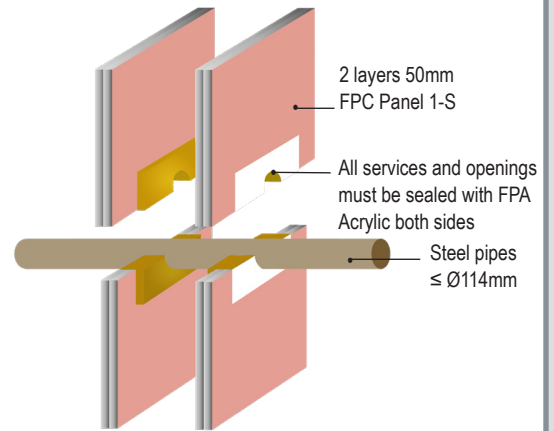
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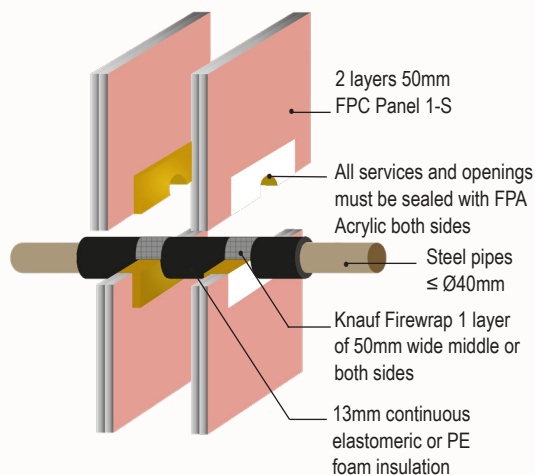
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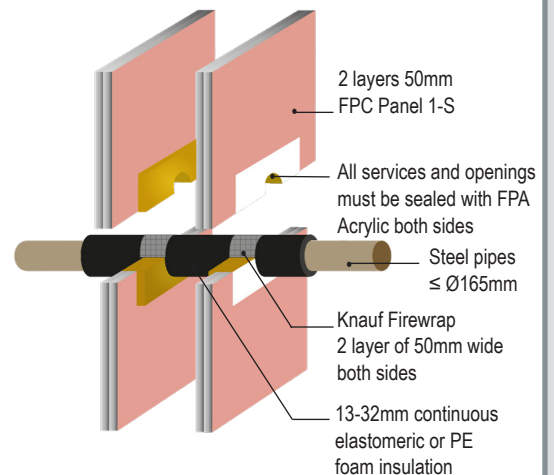
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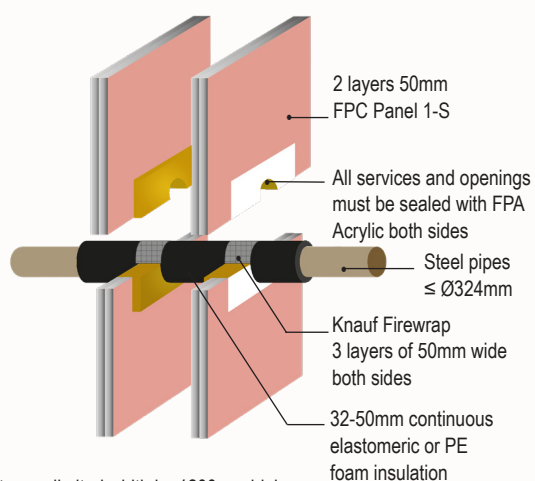
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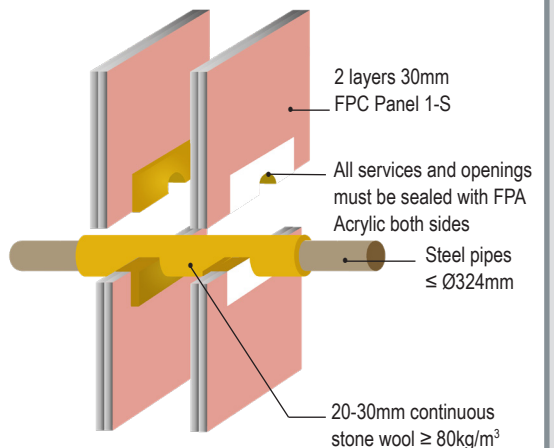
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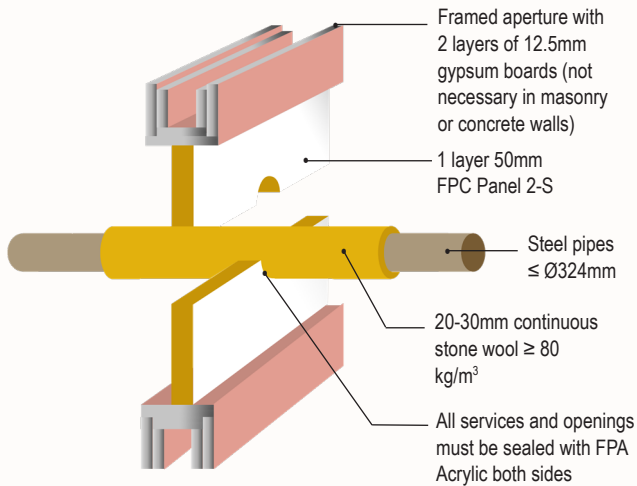
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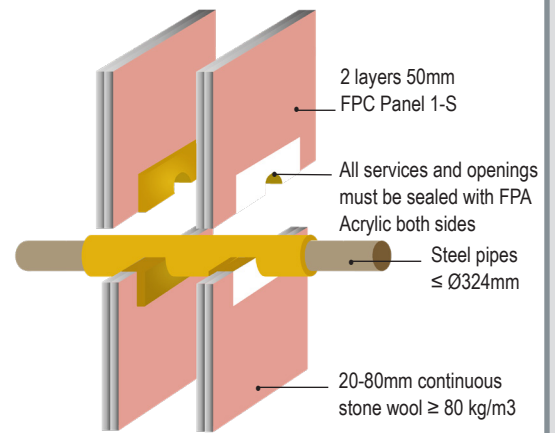
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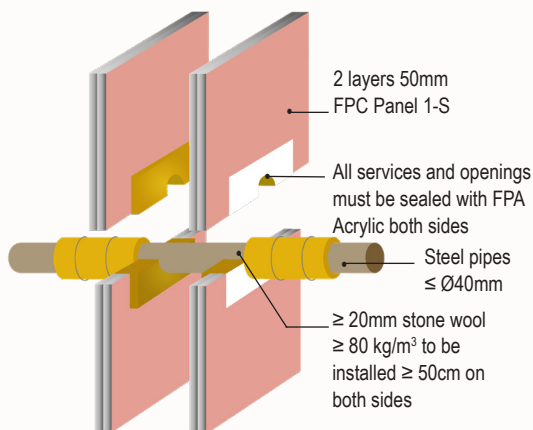
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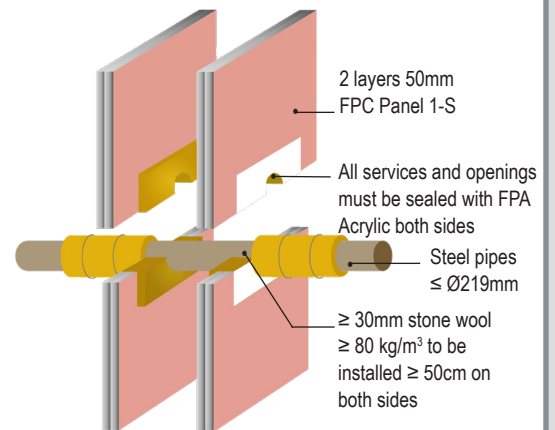
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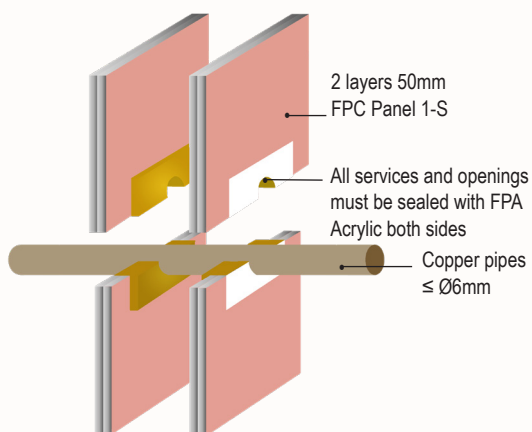
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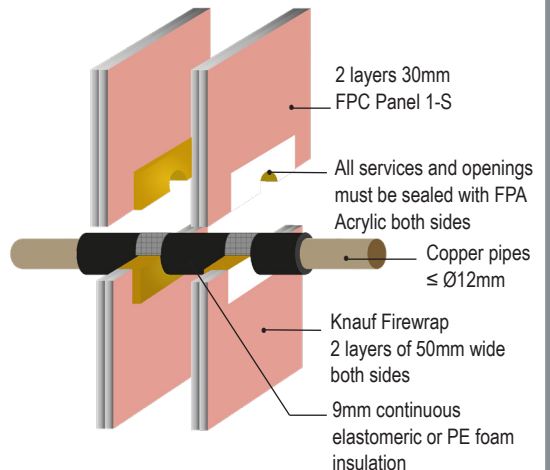
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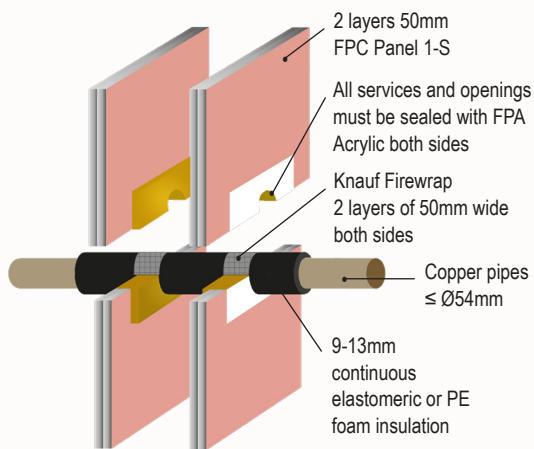
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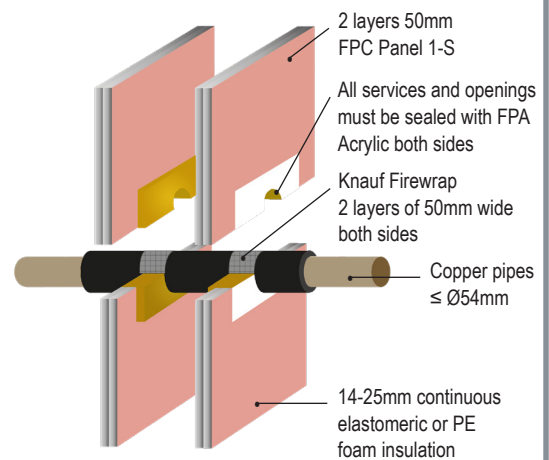
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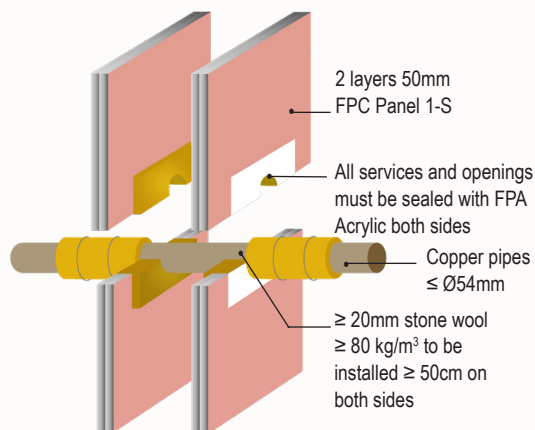
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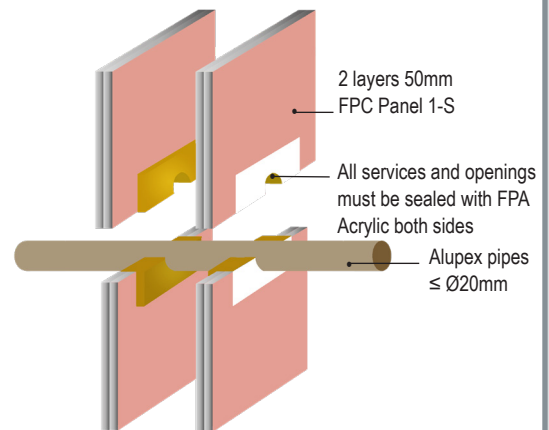
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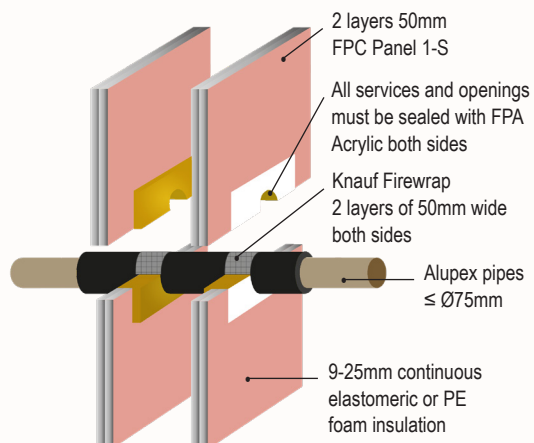
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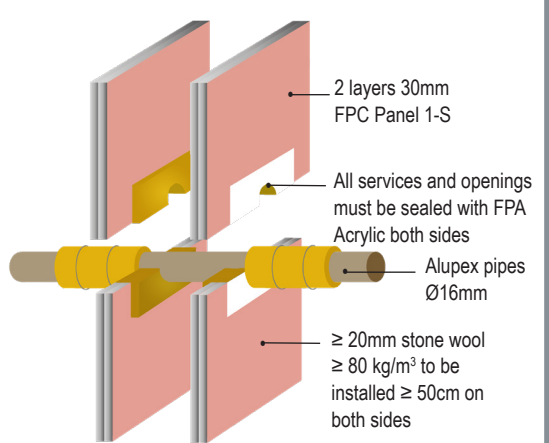
Maximum aperture unlimited width by 1200mm high

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Maximum aperture unlimited width by 1200mm high

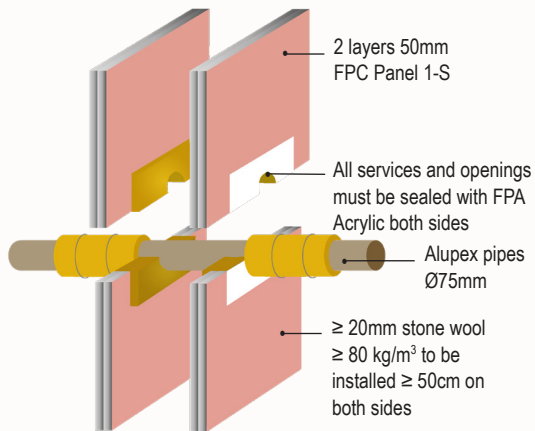
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Maximum aperture unlimited width by 1200mm high

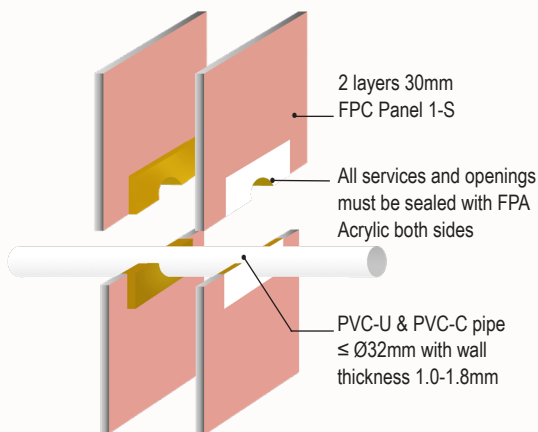


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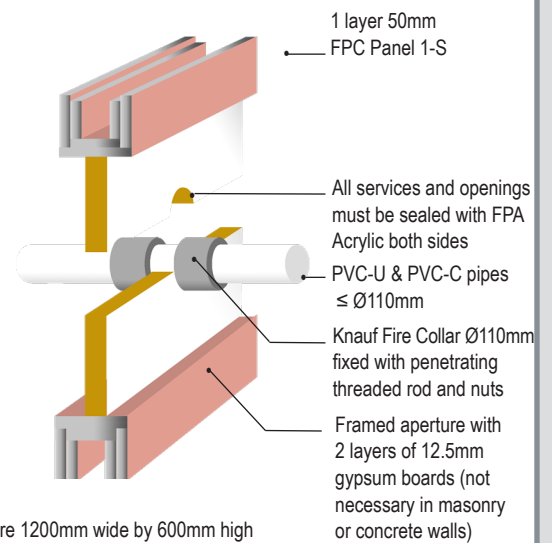
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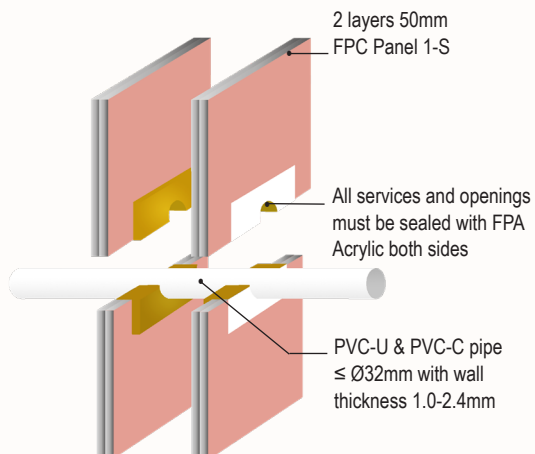
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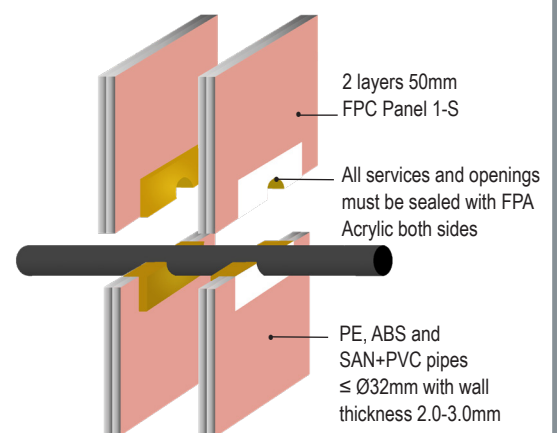
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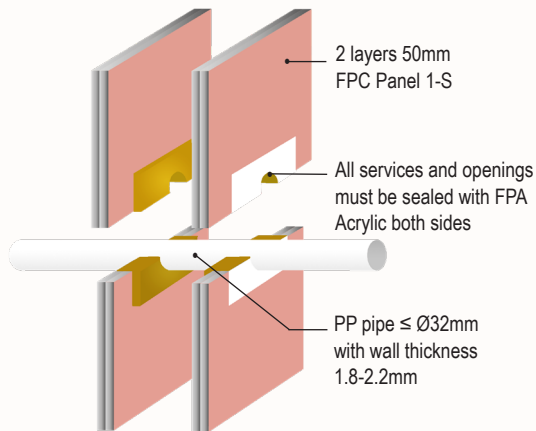
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Maximum aperture unlimited width by 1200mm high

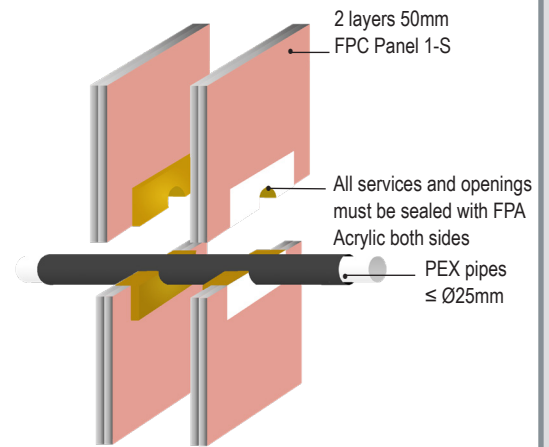


### ≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS - PP PIPES FIRE RESISTANCE EI 60 U/C (E 120)



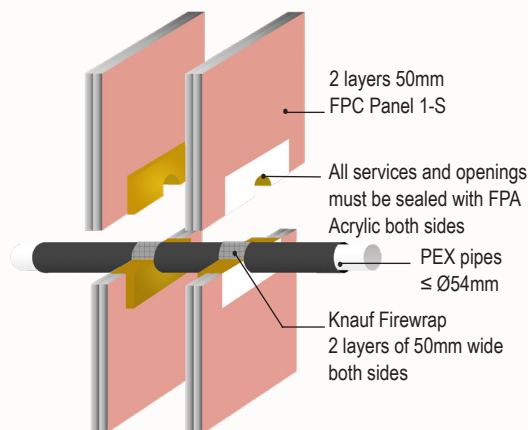
Maximum aperture unlimited width by 1200mm high

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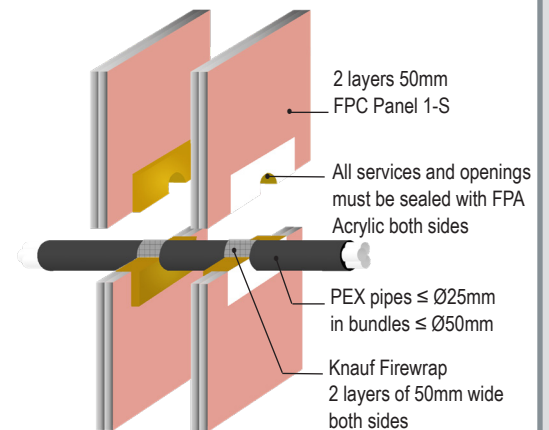
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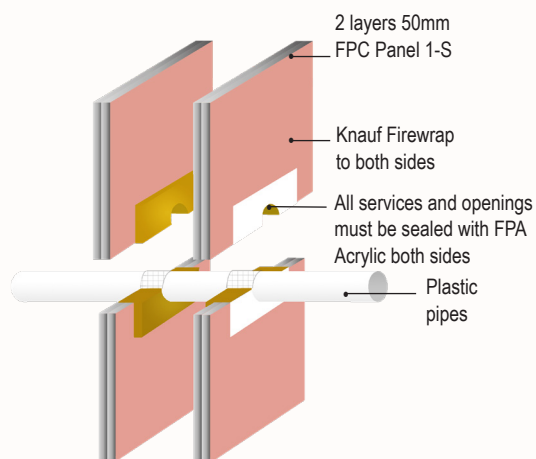
Maximum aperture unlimited width by 1200mm high

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Maximum aperture unlimited width by 1200mm high

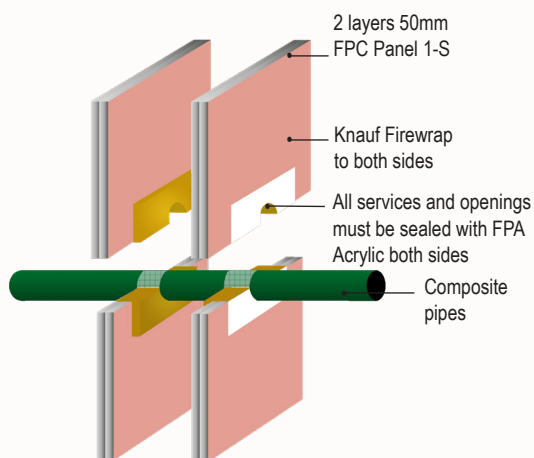
### ≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS - PLASTIC PIPES FIRE RESISTANCE EI 90-120



Maximum aperture unlimited width by 1200mm high

SERVICES	PIPE WALL THICKNESS	KNAUF FIREWRAP	CLASSIFICATION
≤ Ø 40mm PVC-U & PVC-C	1.9-3.0mm	50 x 1.8mm (1 layer)	EI 120 U/U (E 120 U/U)
≤ Ø 40mm PE, ABS & SAN+PVC	2.4-3.7mm	50 x 1.8mm (1 layer)	EI 120 U/U (E 120 U/U)
≤ Ø 40mm PP	1.8-5.5mm	50 x 1.8mm (1 layer)	EI 120 U/U (E 120 U/U)
≤ Ø 110mm PVC-U & PVC-C	2.7-6.6mm	50 x 3.6mm (2 layers)	EI 90 U/C (E 120 U/C)
≤ Ø 110mm PE, ABS & SAN+PVC	4.2-10.0mm	50 x 3.6mm (2 layers)	EI 90 U/C (E 120 U/C)
≤ Ø 110mm PP	2.7-15.1mm	50 x 3.6mm (2 layers)	EI 90 U/U (E 90 U/U)
≤ Ø 125mm PVC-U & PVC-C	3.7-7.4mm	50 x 5.4mm (3 layers)	EI 90 U/C (E 120 U/C)
≤ Ø 125mm PE, ABS & SAN+PVC	4.8-12.0mm	50 x 5.4mm (3 layers)	EI 90 U/C (E 120 U/C)
≤ Ø 125mm PP	3.1-17.1mm	50 x 5.4mm (3 layers)	EI 90 U/C (E 120 U/C)
≤ Ø 160mm PVC-U & PVC-C	9.5mm	50 x 7.2mm (4 layers)	EI 90 U/C (E 120 U/C)
≤ Ø 160mm PE, ABS & SAN+PVC	14.6mm	50 x 7.2mm (4 layers)	EI 90 U/C (E 120 U/C)
≤ Ø 160mm PP	21.9mm	50 x 7.2mm (4 layers)	EI 90 U/C (E 120 U/C)
≤ Ø 200mm PVC-U & PVC-C	9.0-10.2mm	50 x 18.0mm (10 layers)	EI 90 C/C (E 90 C/C)
≤ Ø 250mm PVC-U & PVC-C	8.5-11.0mm	50 x 18.0mm (10 layers)	EI 90 C/C (E 90 C/C)
≤ Ø 315mm PVC-U & PVC-C	7.7-12.1mm	50 x 18.0mm (10 layers)	EI 90 C/C (E 90 C/C)
≤ Ø 400mm PVC-U & PVC-C	9.8-15.3mm	50 x 28.8mm (16 layers)	EI 90 C/C (E 90 C/C)

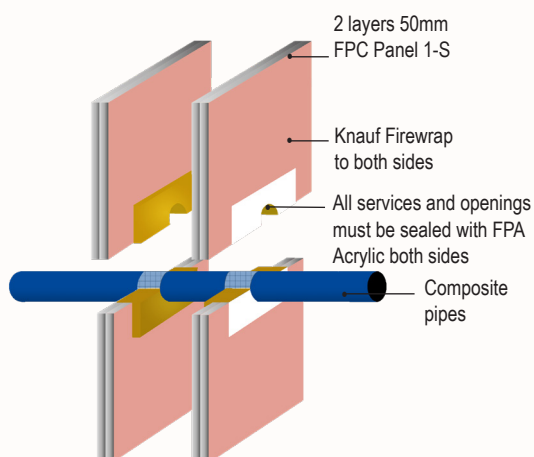
### ≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS - COMPOSITE AQUATHERM GREEN SDR9 PLASTIC PIPES FIRE RESISTANCE EI 90



SERVICES	KNAUF FIREWRAP	CLASSIFICATION
Ø 32mm Aquatherm Green SDR9 pipes	50 x 1.8mm (1 layer)	EI 90 C/C (E 120 C/C)
Ø 40mm Aquatherm Green SDR9 pipes	50 x 3.6mm (2 layers)	EI 90 C/C (E 120 C/C)
Ø 50mm Aquatherm Green SDR9 pipes	50 x 3.6mm (2 layers)	EI 90 C/C (E 120 C/C)
Ø 63mm Aquatherm Green SDR9 pipes	50 x 3.6mm (2 layers)	EI 90 C/C (E 120 C/C)
Ø 75mm Aquatherm Green SDR9 pipes	50 x 3.6mm (2 layers)	EI 90 C/C (E 120 C/C)
Ø 90mm Aquatherm Green SDR9 pipes	50 x 3.6mm (2 layers)	EI 90 C/C (E 120 C/C)
Ø 110mm Aquatherm Green SDR9 pipes	50 x 5.4mm (3 layers)	EI 90 C/C (E 120 C/C)

Maximum aperture unlimited width by 1200mm high

### ≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS - COMPOSITE BLUEPOWER PLASTIC PIPES FIRE RESISTANCE EI 90

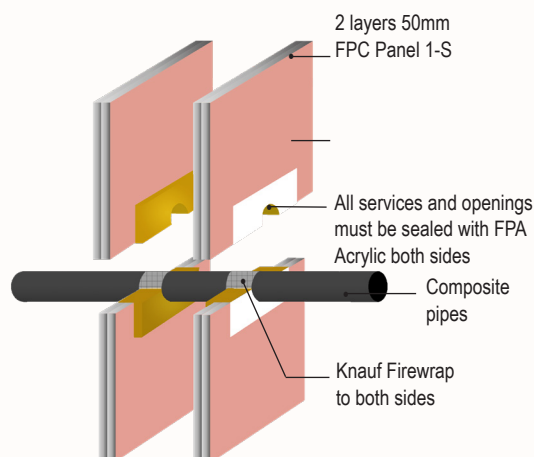


SERVICES	KNAUF FIREWRAP	CLASSIFICATION
Ø 32mm BluePower pipes	50 x 3.6mm (2 layers)	EI 90 U/U (E 90 U/U)
Ø 40mm BluePower pipes	50 x 3.6mm (2 layers)	EI 90 U/U (E 90 U/U)
Ø 50mm BluePower pipes	50 x 3.6mm (2 layers)	EI 90 U/U (E 90 U/U)
Ø 75mm BluePower pipes	50 x 3.6mm (2 layers)	EI 90 U/U (E 90 U/U)
Ø 90mm BluePower pipes	50 x 3.6mm (2 layers)	EI 90 U/U (E 90 U/U)
Ø 110mm BluePower pipes	50 x 3.6mm (2 layers)	EI 90 U/U (E 90 U/U)

Maximum aperture unlimited width by 1200mm high

### ≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS - COMPOSITE GEBERIT SILENT-PP PIPES FIRE RESISTANCE EI 120

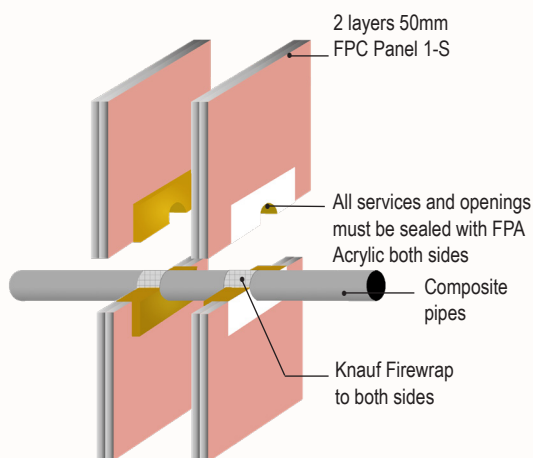
5



SERVICES	KNAUF FIREWRAP	CLASSIFICATION
Ø 32mm Geberit Silent-PP pipes	50 x 3.6mm (2 layers)	EI 120 U/U (E 120 U/U)
Ø 40mm Geberit Silent-PP pipes	50 x 3.6mm (2 layers)	EI 120 U/U (E 120 U/U)
Ø 50mm Geberit Silent-PP pipes	50 x 3.6mm (2 layers)	EI 120 U/U (E 120 U/U)
Ø 75mm Geberit Silent-PP pipes	50 x 3.6mm (2 layers)	EI 120 U/U (E 120 U/U)
Ø 90mm Geberit Silent-PP pipes	50 x 3.6mm (2 layers)	EI 120 U/U (E 120 U/U)
Ø 110mm Geberit Silent-PP pipes	50 x 3.6mm (2 layers)	EI 120 U/U (E 120 U/U)

Maximum aperture unlimited width by 1200mm high

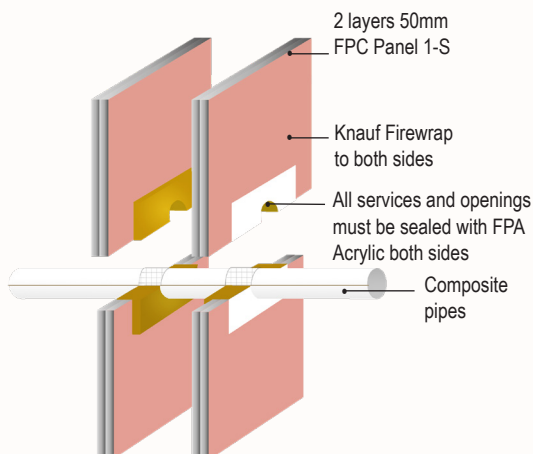
### ≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS - COMPOSITE POLO-KAL NG PLASTIC PIPES FIRE RESISTANCE EI 120



Maximum aperture unlimited width by 1200mm high

SERVICES	KNAUF FIREWRAP	CLASSIFICATION
Ø 32mm Polo-Kal NG pipes	50 x 3.6mm (2 layers)	EI 120 U/U (E 120 U/U)
Ø 40mm Polo-Kal NG pipes	50 x 3.6mm (2 layers)	EI 120 U/U (E 120 U/U)
Ø 50mm Polo-Kal NG pipes	50 x 3.6mm (2 layers)	EI 120 U/U (E 120 U/U)
Ø 75mm Polo-Kal NG pipes	50 x 3.6mm (2 layers)	EI 120 U/C (E 120 U/C)
Ø 90mm Polo-Kal NG pipes	50 x 3.6mm (2 layers)	EI 120 U/C (E 120 U/C)
Ø 110mm Polo-Kal NG pipes	50 x 3.6mm (2 layers)	EI 120 U/C (E 120 U/C)
Ø 125mm Polo-Kal NG pipes	50 x 7.2mm (4 layers)	EI 120 U/C (E 120 U/C)
Ø 160mm Polo-Kal NG pipes	50 x 10.8mm (6 layers)	EI 120 U/C (E 120 U/C)

### ≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS - COMPOSITE BLUEPOWER PLASTIC PIPES FIRE RESISTANCE EI 90

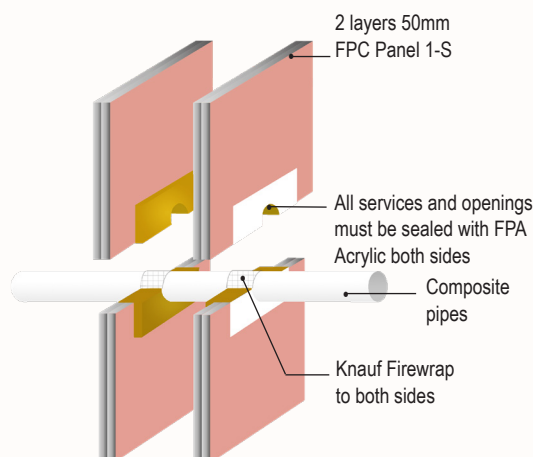


Maximum aperture unlimited width by 1200mm high

SERVICES	KNAUF FIREWRAP	CLASSIFICATION
Ø 40mm Rehau Raupiano Plus pipes	50 x 3.6mm (2 layers)	EI 120 U/U (E 120 U/U)
Ø 50mm Rehau Raupiano Plus pipes	50 x 3.6mm (2 layers)	EI 120 U/U (E 120 U/U)
Ø 75mm Rehau Raupiano Plus pipes	50 x 3.6mm (2 layers)	EI 120 U/C (E 120 U/C)
Ø 90mm Rehau Raupiano Plus pipes	50 x 3.6mm (2 layers)	EI 120 U/C (E 120 U/C)
Ø 110mm Rehau Raupiano Plus pipes	50 x 3.6mm (2 layers)	EI 120 U/C (E 120 U/C)
Ø 125mm Rehau Raupiano Plus pipes	50 x 7.2mm (4 layers)	EI 120 U/C (E 120 U/C)
Ø 160mm Rehau Raupiano Plus pipes	50 x 10.8mm (6 layers)	EI 120 U/C (E 120 U/C)

### ≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS - COMPOSITE GEBERIT SILENT-PP PIPES FIRE RESISTANCE EI 120

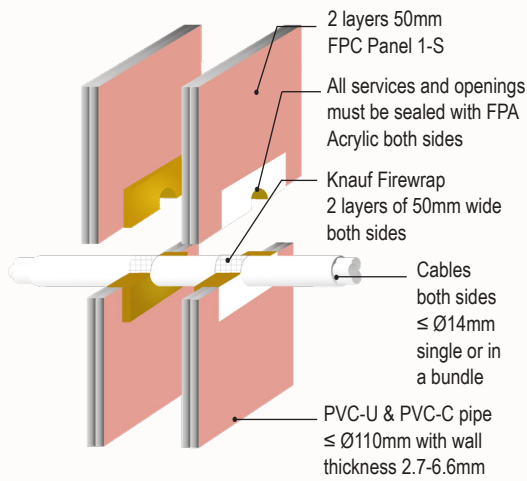
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Maximum aperture unlimited width by 1200mm high

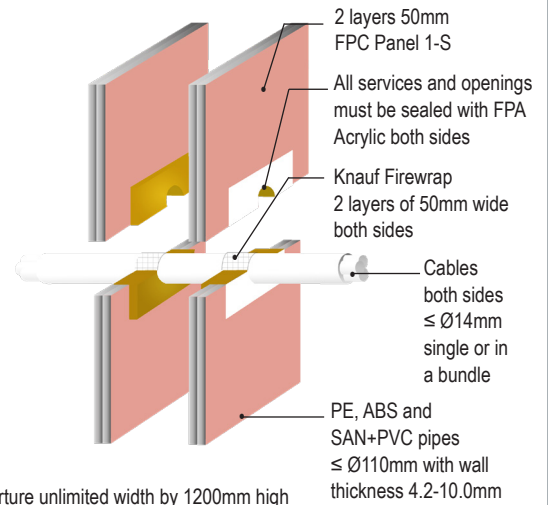
SERVICES	KNAUF FIREWRAP	CLASSIFICATION
Ø 32mm Wavin SiTech pipes	50 x 3.6mm (2 layers)	EI 120 U/U (E 120 U/U)
Ø 40mm Wavin SiTech pipes	50 x 3.6mm (2 layers)	EI 120 U/U (E 120 U/U)
Ø 50mm Wavin SiTech pipes	50 x 3.6mm (2 layers)	EI 120 U/U (E 120 U/U)
Ø 75mm Wavin SiTech pipes	50 x 3.6mm (2 layers)	EI 120 U/C (E 120 U/C)
Ø 90mm Wavin SiTech pipes	50 x 3.6mm (2 layers)	EI 120 U/C (E 120 U/C)
Ø 110mm Wavin SiTech pipes	50 x 3.6mm (2 layers)	EI 120 U/C (E 120 U/C)

### ≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS - PVC CONDUIT FIRE RESISTANCE EI 90 U/C (E 120)



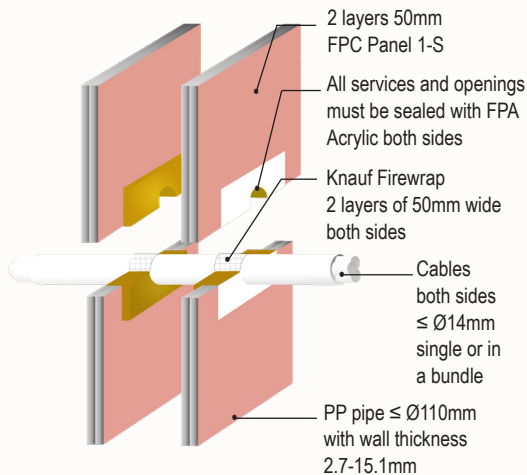
Maximum aperture unlimited width by 1200mm high

### ≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS - PE CONDUIT FIRE RESISTANCE EI 90 U/C (E 120)



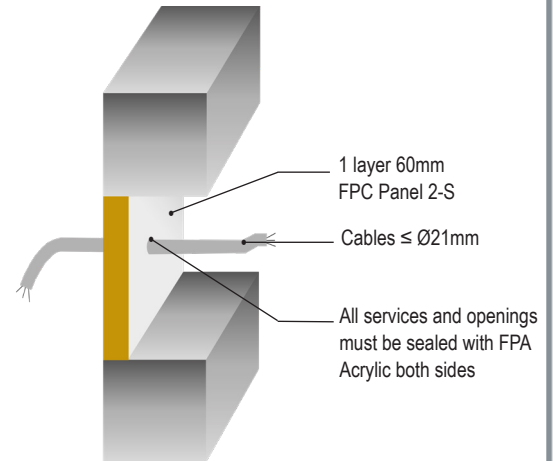
Maximum aperture unlimited width by 1200mm high

### ≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS - PP CONDUIT FIRE RESISTANCE EI 90 U/C (E 120)



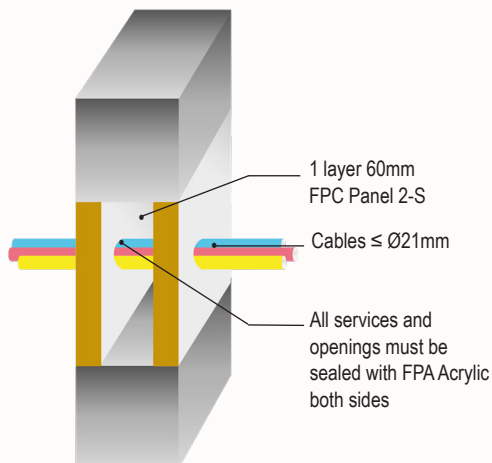
Maximum aperture unlimited width by 1200mm high

### MASONRY OR CONCRETE – WALLS - CABLES FIRE RESISTANCE EI 90 (E 240)



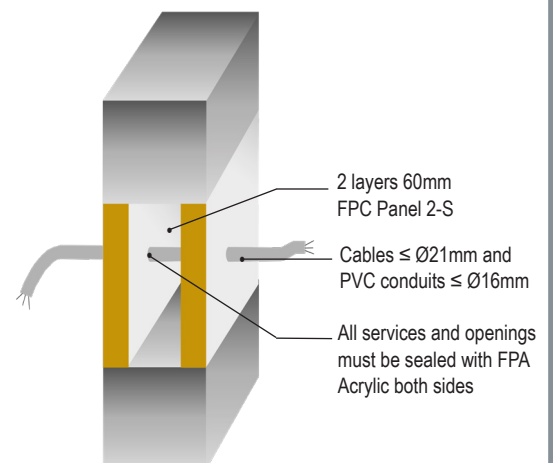
Maximum aperture unlimited width by 1200mm high

### MASONRY OR CONCRETE – WALLS - CABLES FIRE RESISTANCE EI 120 (E 240)

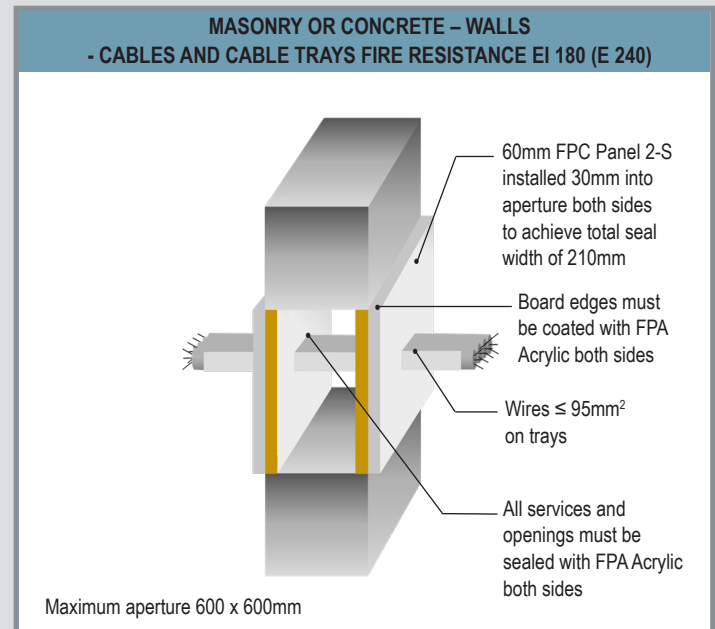
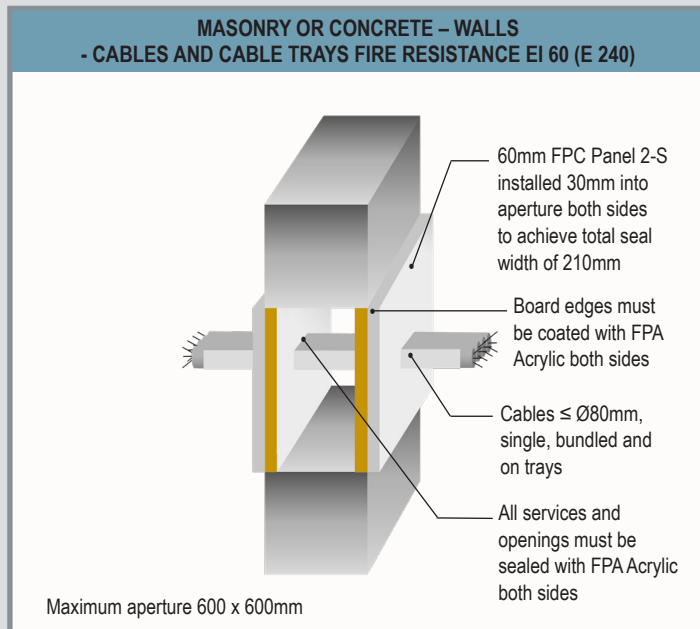
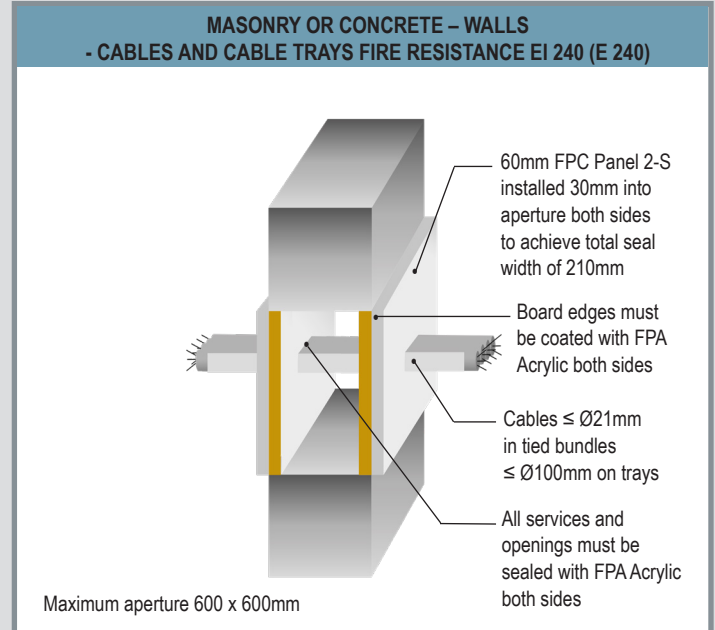
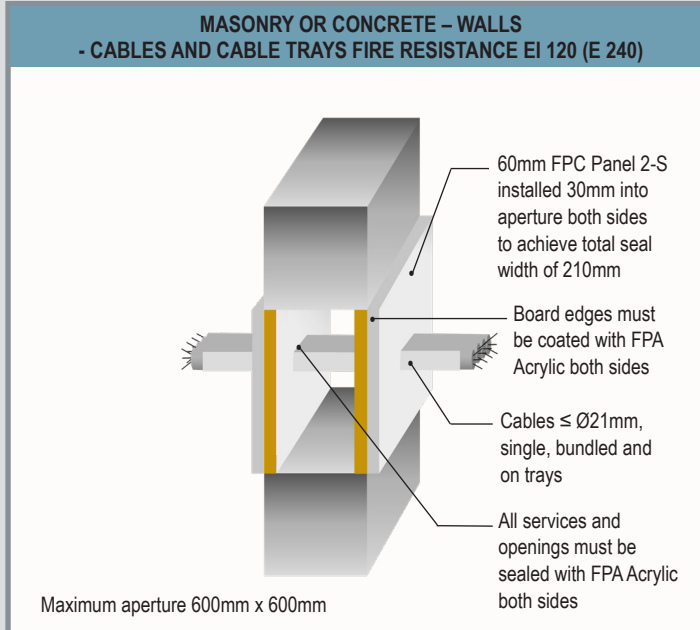
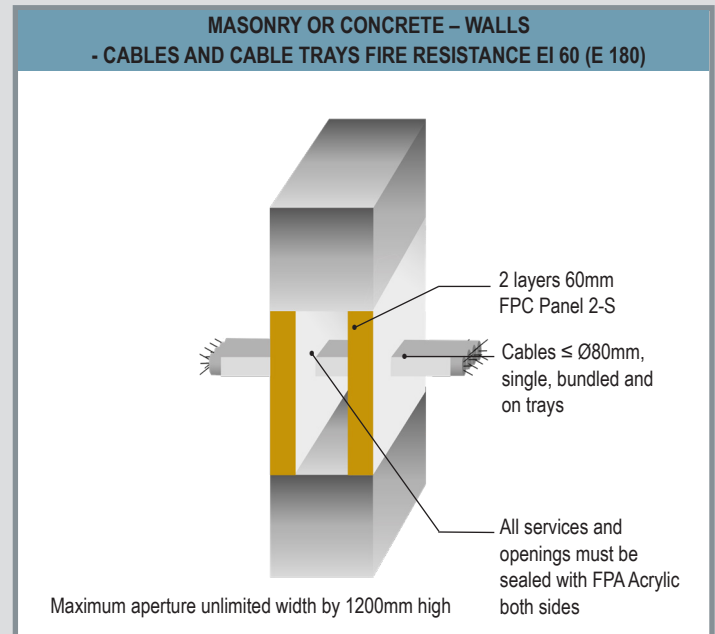
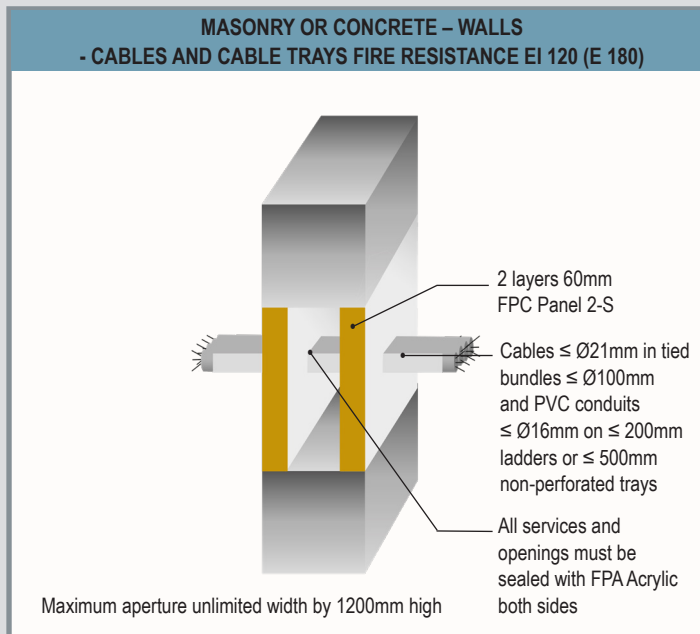


Maximum aperture unlimited width by 1200mm high

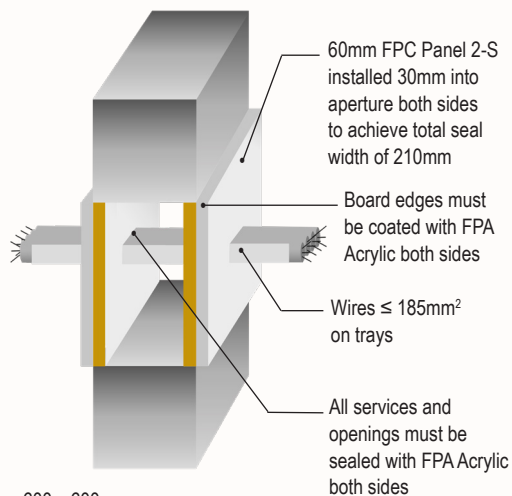
### MASONRY OR CONCRETE – WALLS - CABLES AND PVC CONDUITS FIRE RESISTANCE EI 180 (E 240)



Maximum aperture unlimited width by 1200mm high

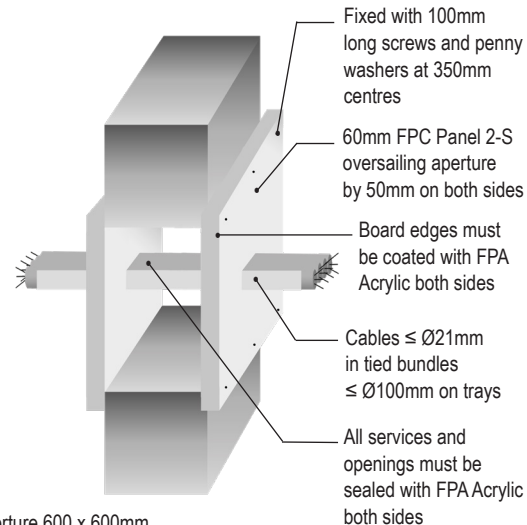


### MASONRY OR CONCRETE – WALLS - CABLES AND CABLE TRAYS FIRE RESISTANCE EI 90 (E 240)



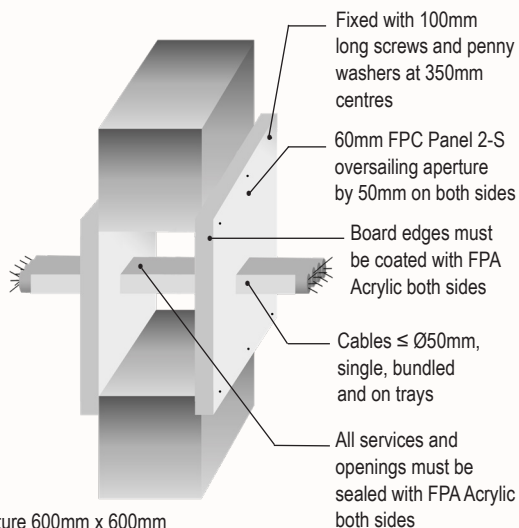
Maximum aperture 600 x 600mm

### MASONRY OR CONCRETE – WALLS - CABLES AND CABLE TRAYS FIRE RESISTANCE EI 240 (E 240)



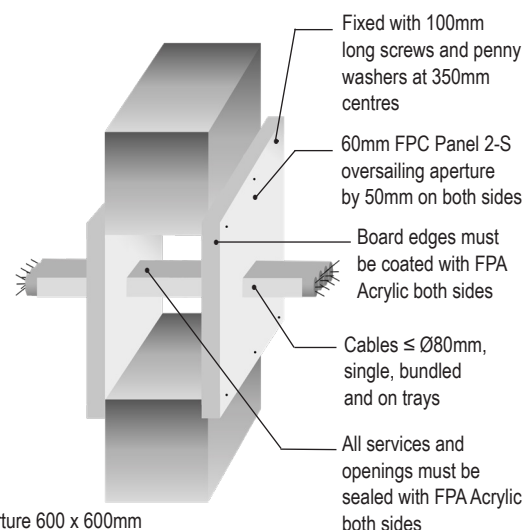
Maximum aperture 600 x 600mm

### MASONRY OR CONCRETE – WALLS - CABLES AND CABLE TRAYS FIRE RESISTANCE EI 90 (E 240)



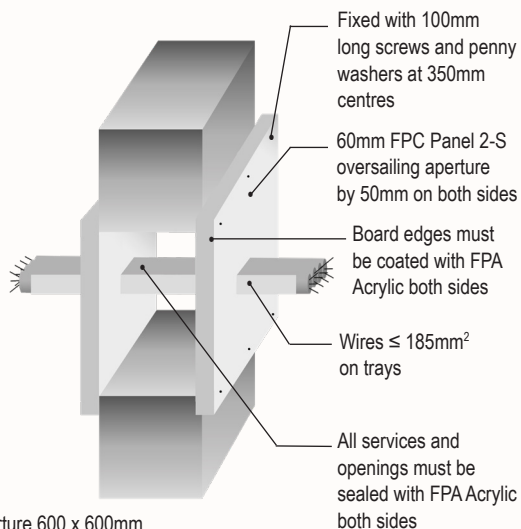
Maximum aperture 600mm x 600mm

### MASONRY OR CONCRETE – WALLS - CABLES AND CABLE TRAYS FIRE RESISTANCE EI 240 (E 240)



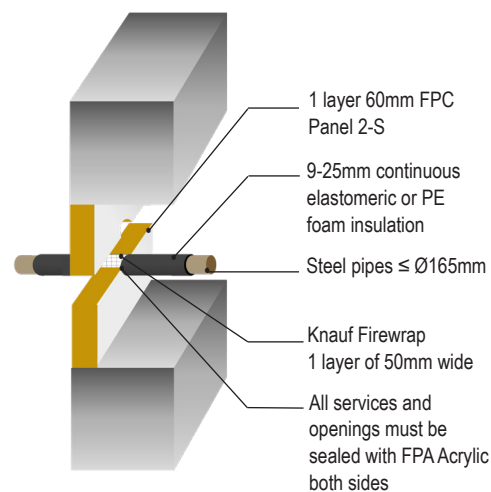
Maximum aperture 600 x 600mm

### MASONRY OR CONCRETE – WALLS - CABLES AND CABLE TRAYS FIRE RESISTANCE EI 180 (E 240)

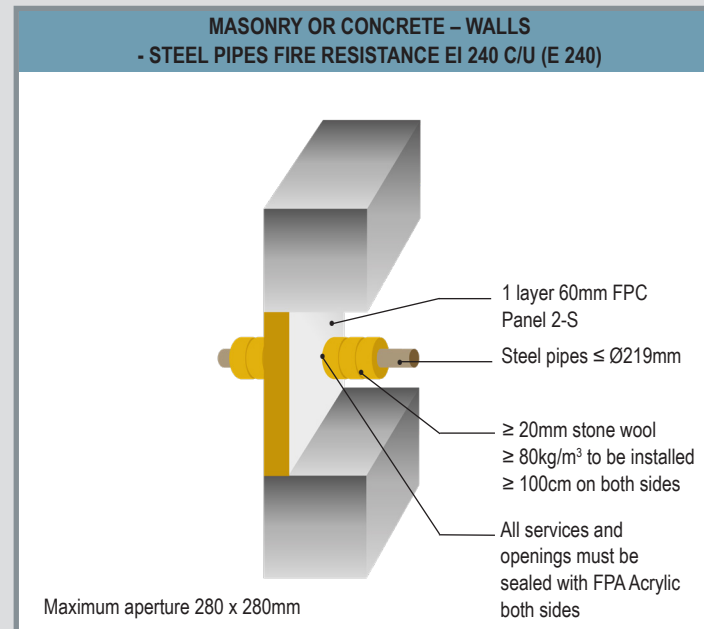
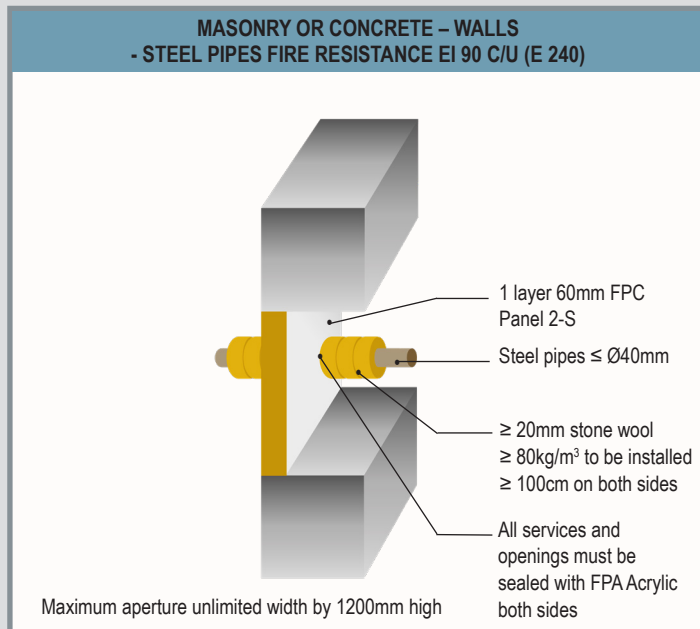
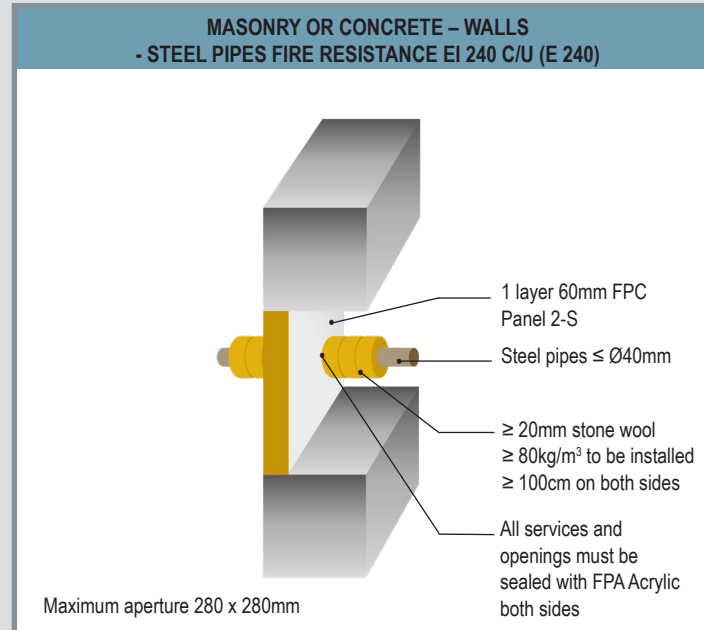
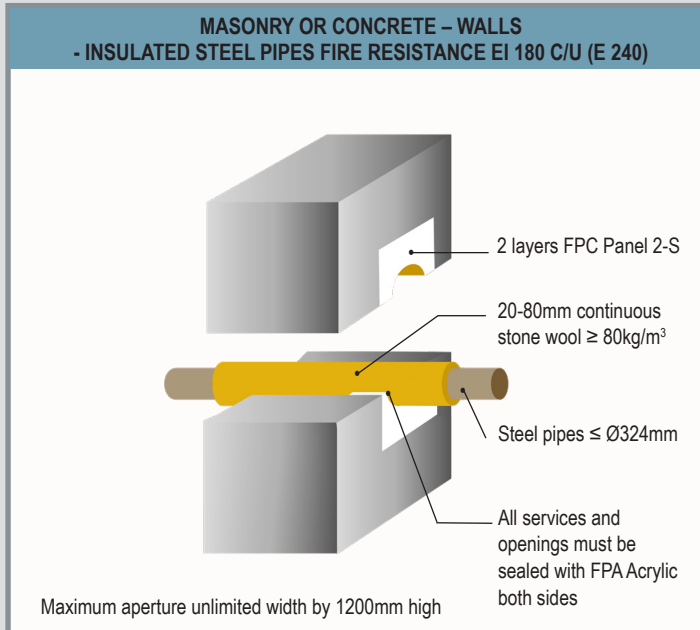
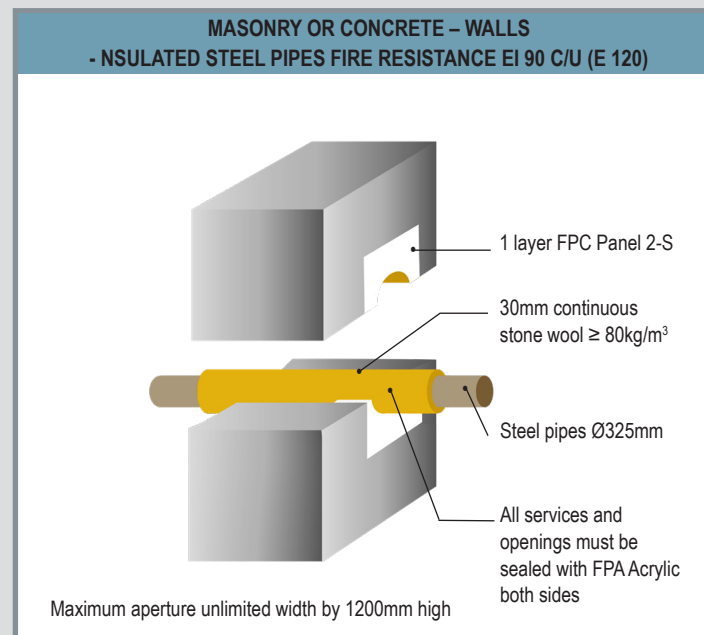
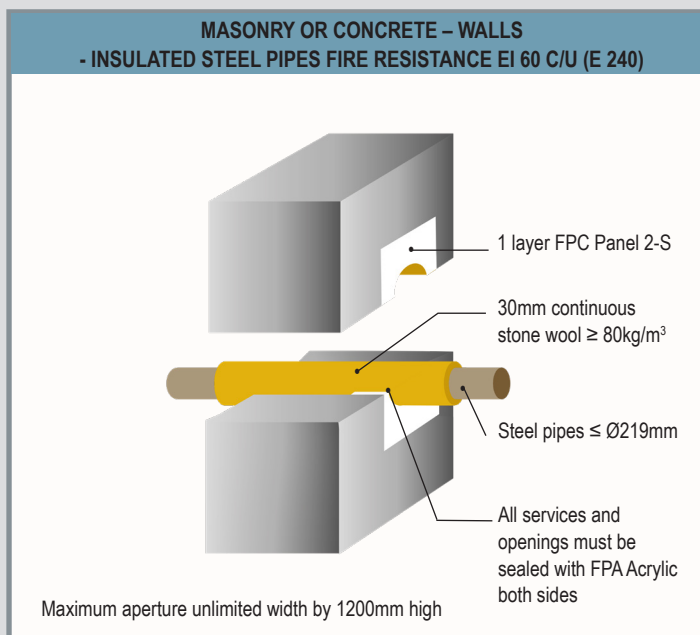


Maximum aperture 600 x 600mm

### MASONRY OR CONCRETE – WALLS - INSULATED STEEL PIPES FIRE RESISTANCE EI 45 C/U (E 120)

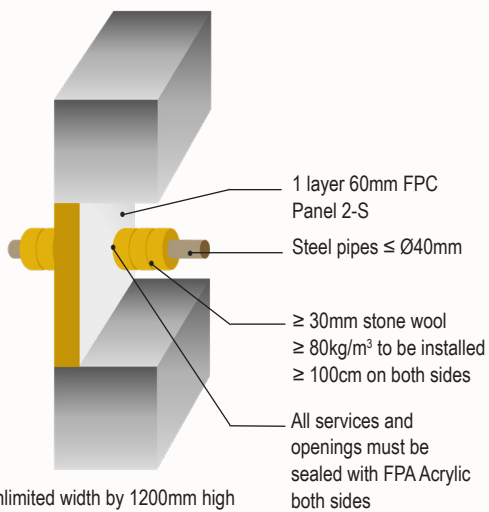


Maximum aperture unlimited width by 1200mm high

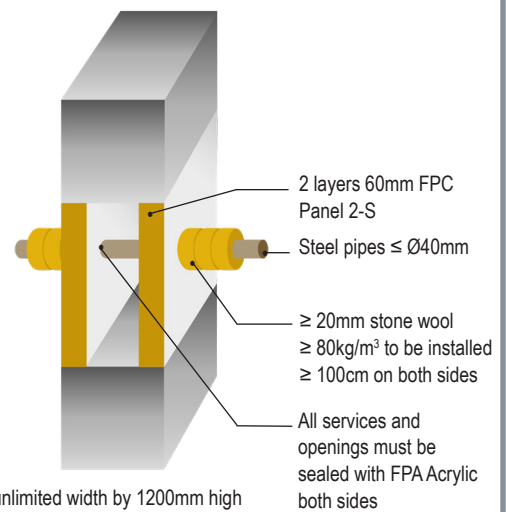




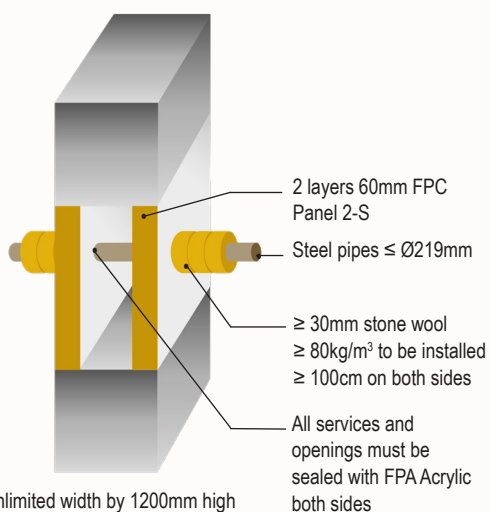
**MASONRY OR CONCRETE – WALLS**  
- STEEL PIPES FIRE RESISTANCE EI 90 C/U (E 240)



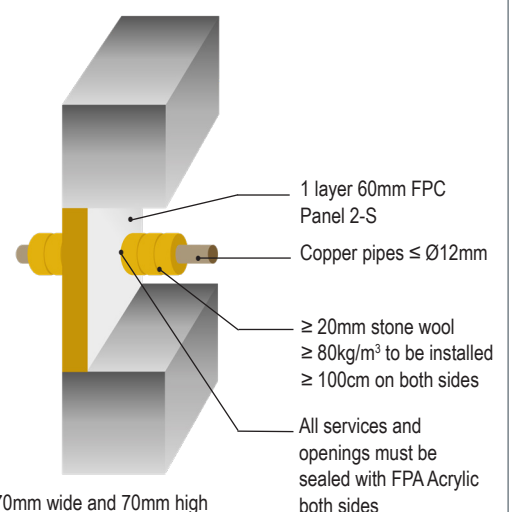
**MASONRY OR CONCRETE – WALLS**  
- STEEL PIPES FIRE RESISTANCE EI 180 C/U (E 240)



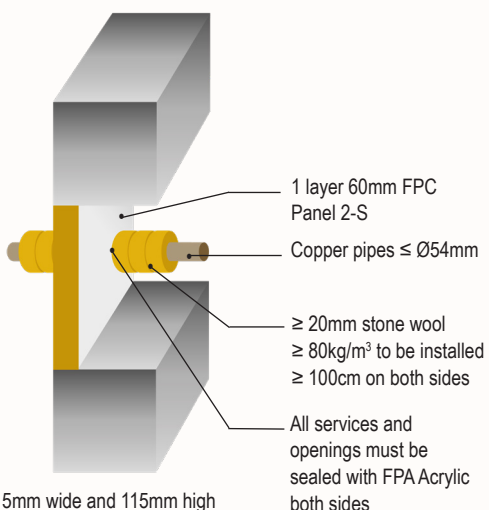
**MASONRY OR CONCRETE – WALLS**  
- STEEL PIPES FIRE RESISTANCE EI 180 C/U (E 240)



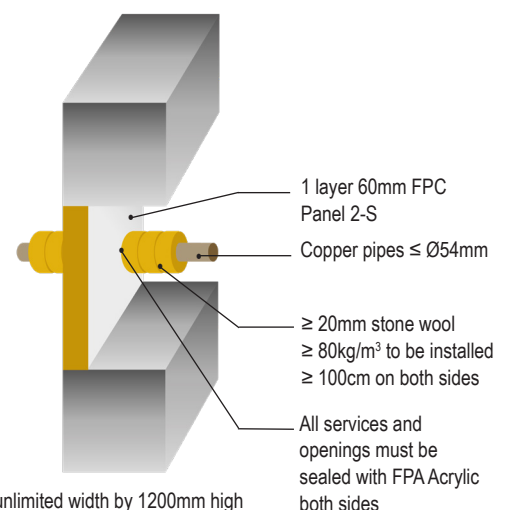
**MASONRY OR CONCRETE – WALLS**  
- COPPER PIPES FIRE RESISTANCE EI 240 C/U (E 240)



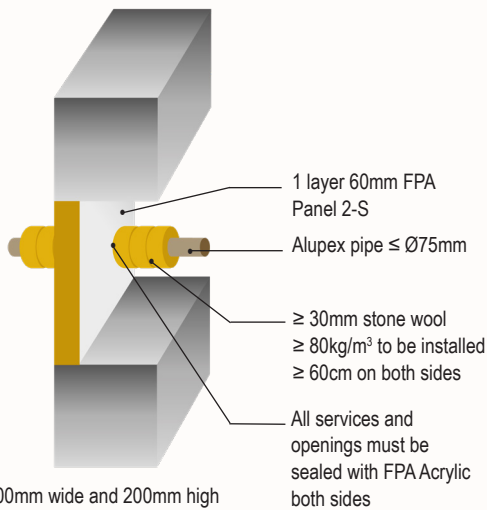
**MASONRY OR CONCRETE – WALLS**  
- COPPER PIPES FIRE RESISTANCE EI 120 C/U (E 240)



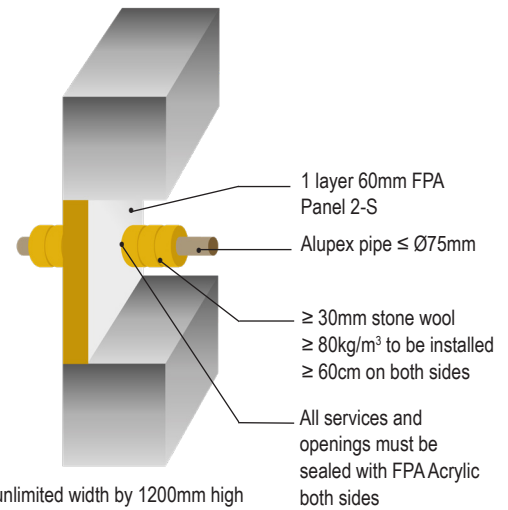
**MASONRY OR CONCRETE – WALLS**  
- COPPER PIPES FIRE RESISTANCE EI 90 C/U (E 240)



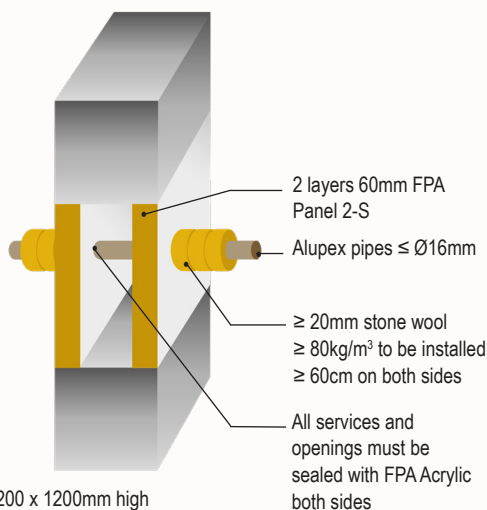
### MASONRY OR CONCRETE – WALLS - ALUPEX PIPES FIRE RESISTANCE EI 120 C/C (E 120)



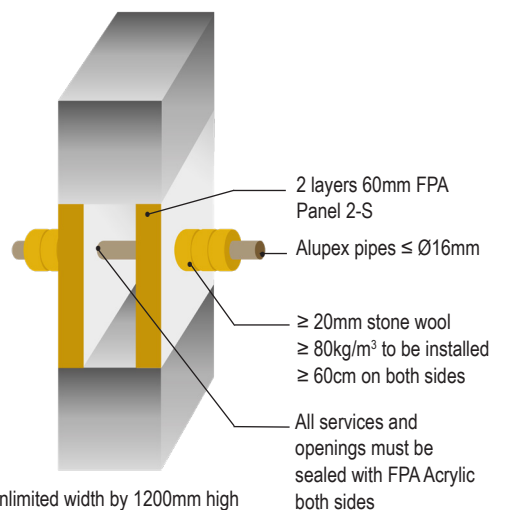
### MASONRY OR CONCRETE – WALLS - ALUPEX PIPES FIRE RESISTANCE EI 90 C/C (E 120)



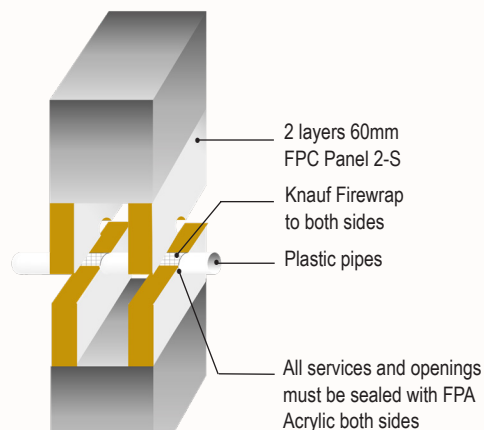
### MASONRY OR CONCRETE – WALLS - ALUPEX PIPES FIRE RESISTANCE EI 240 U/C (E 240)



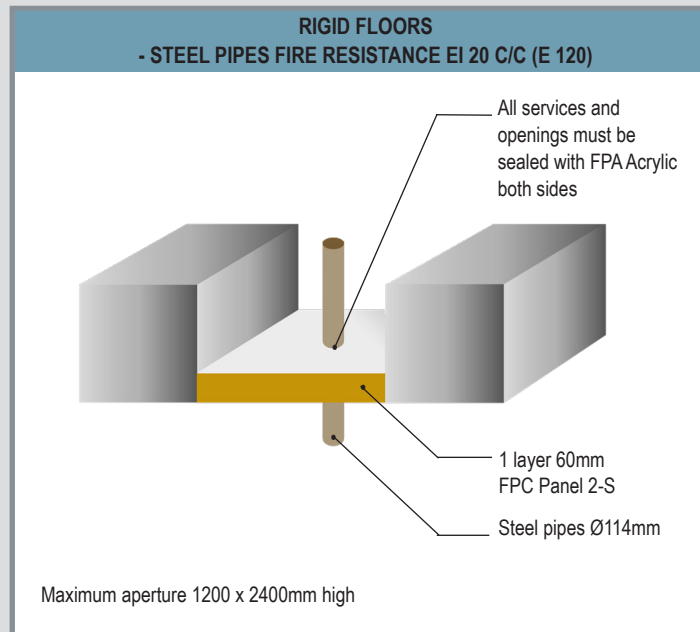
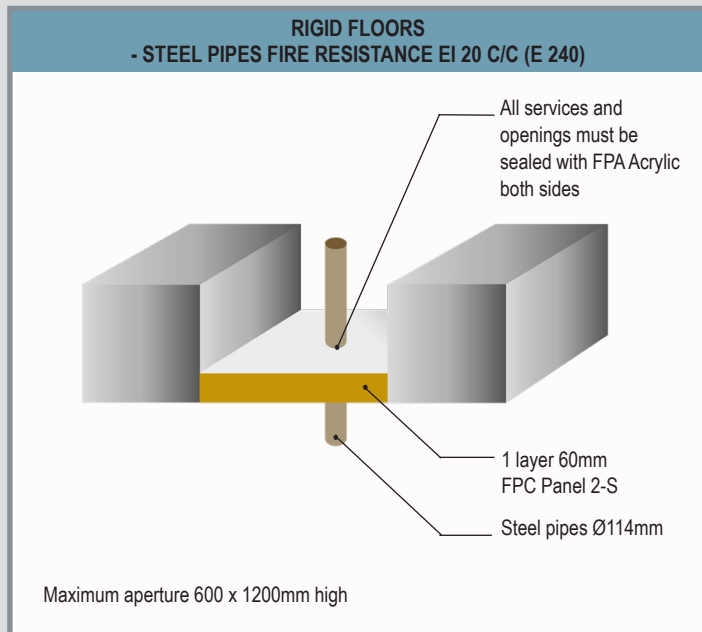
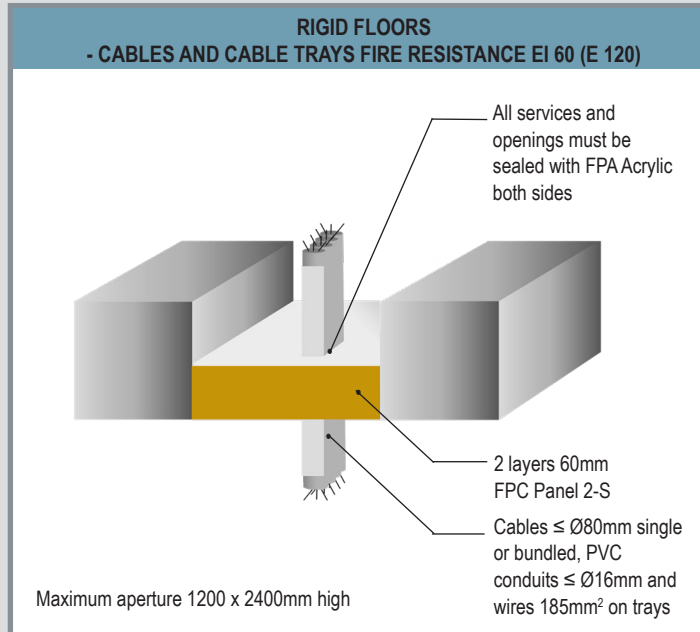
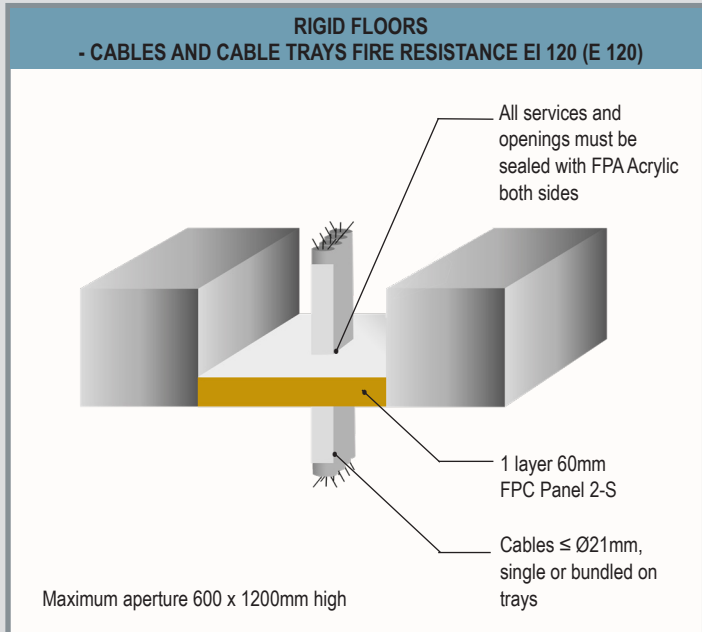
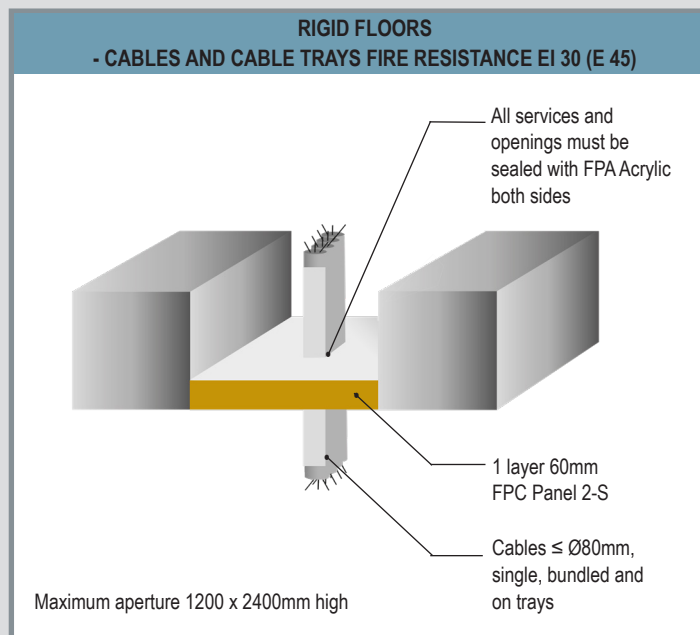
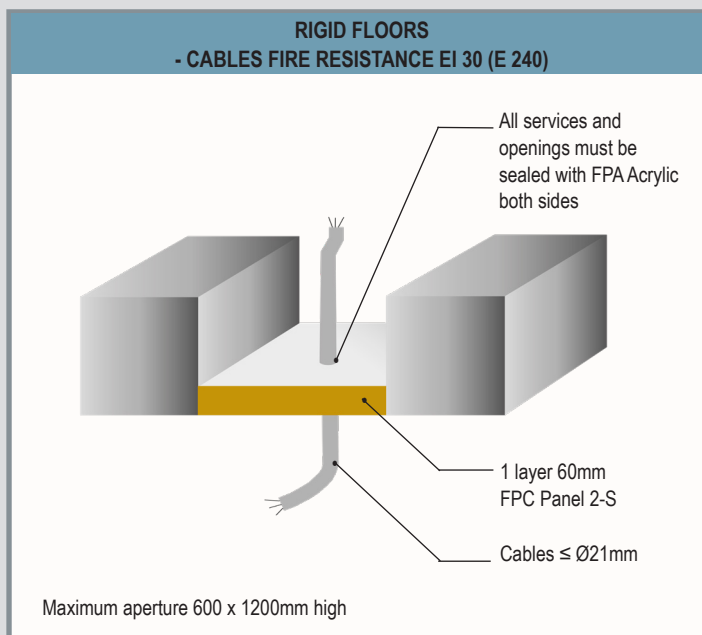
### MASONRY OR CONCRETE – WALLS - ALUPEX PIPES FIRE RESISTANCE EI 180 U/C (E 240)

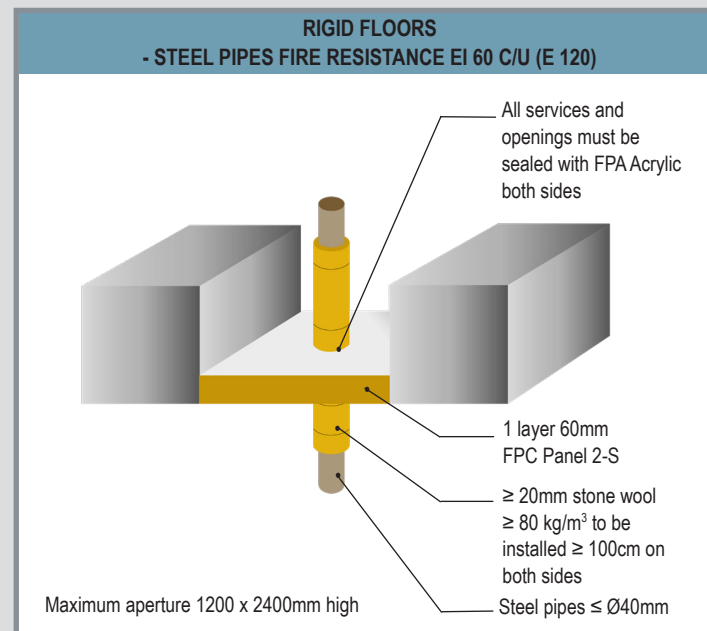
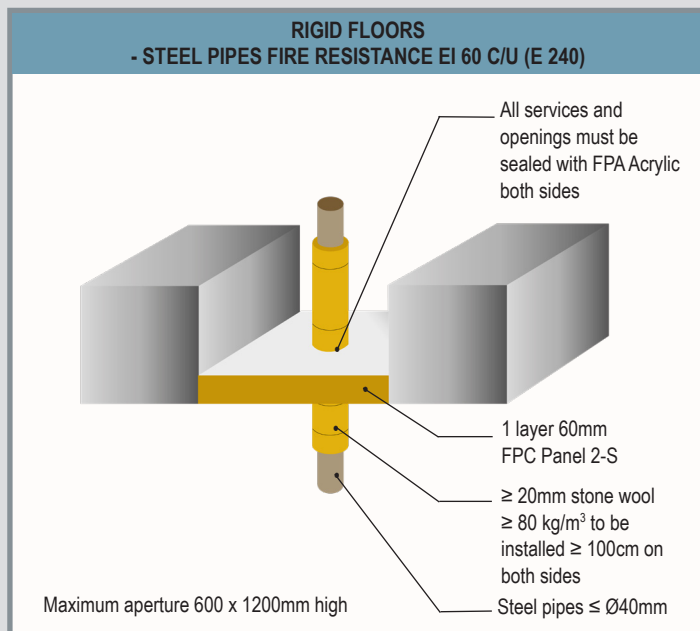
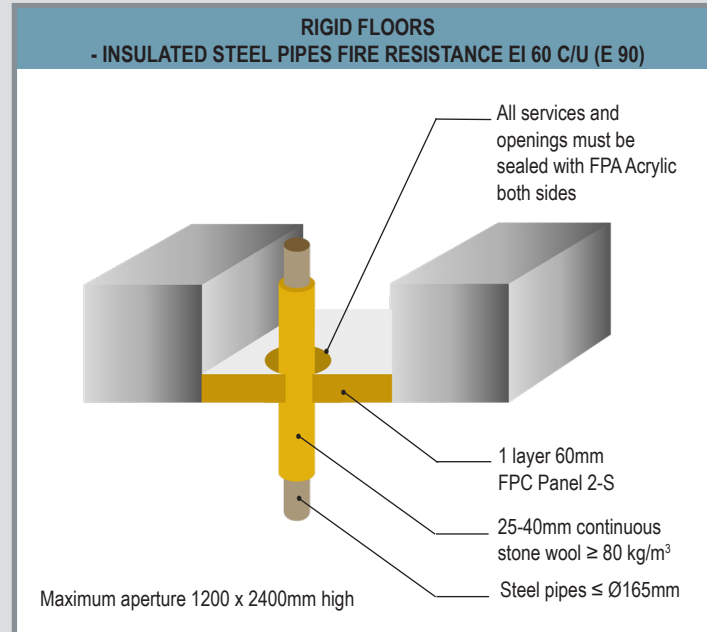
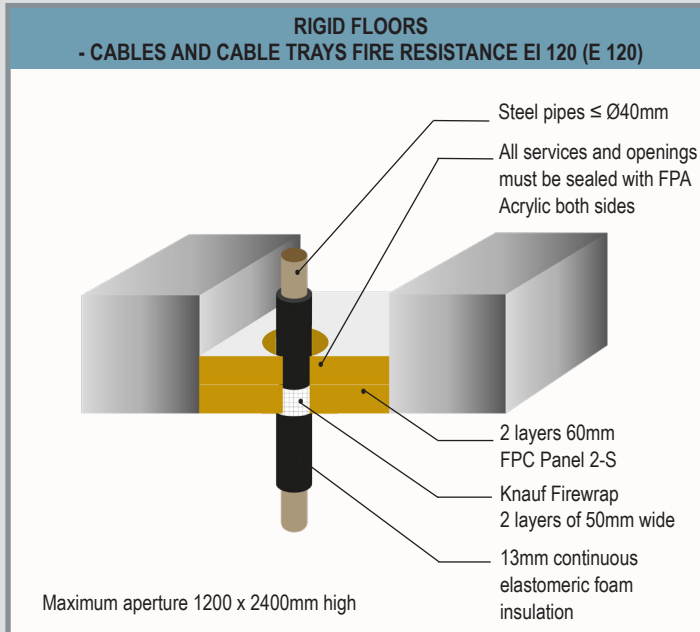
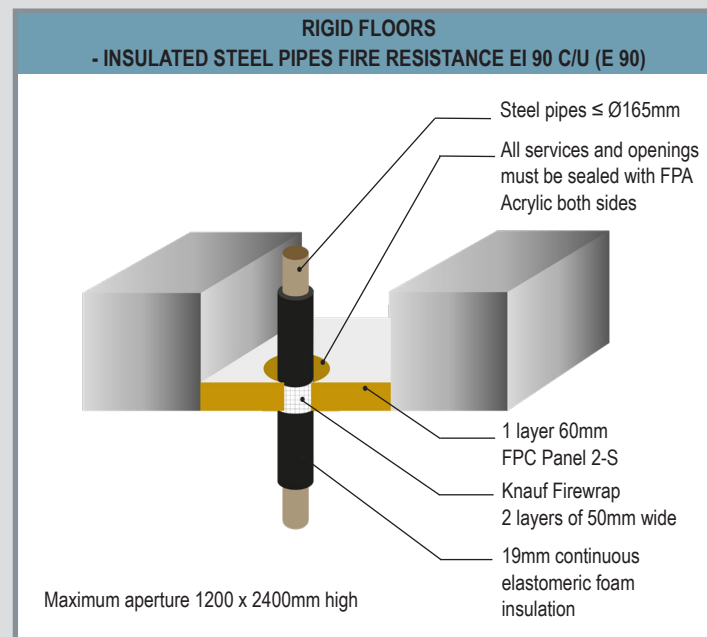
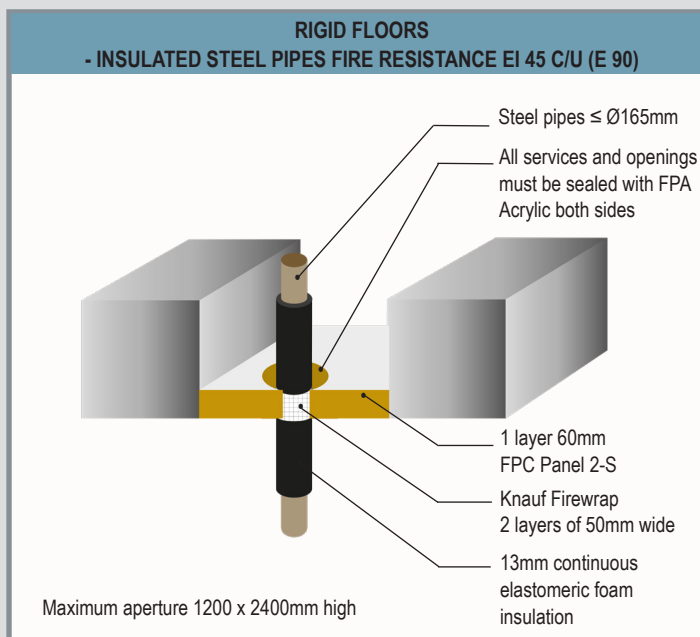


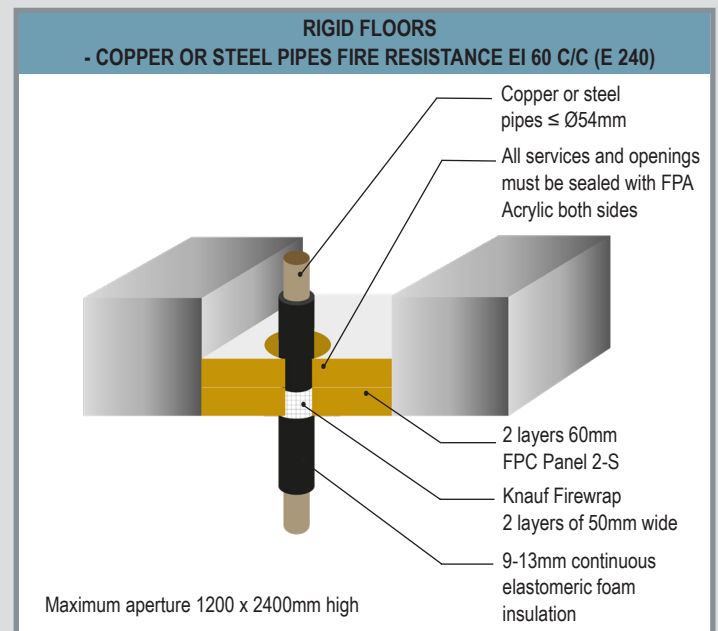
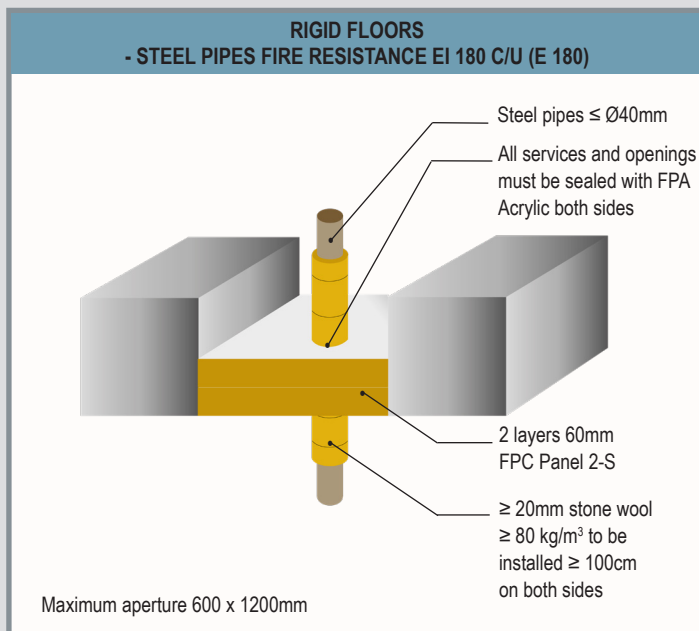
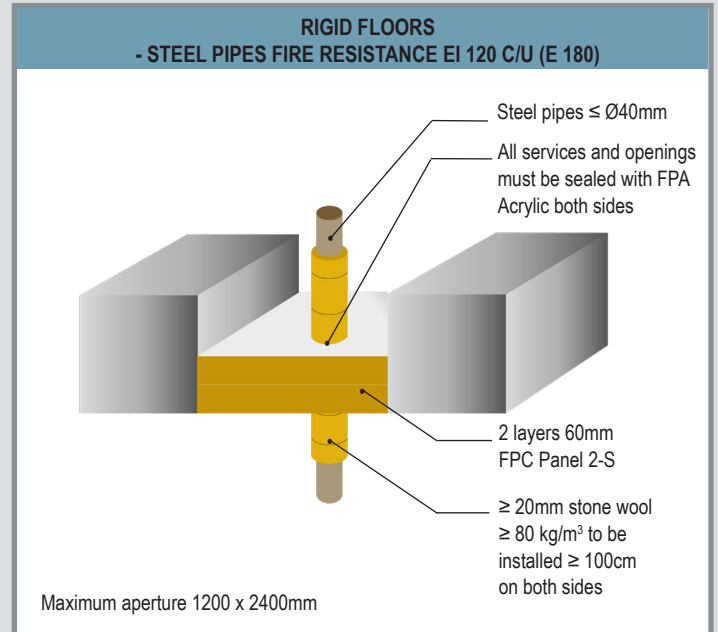
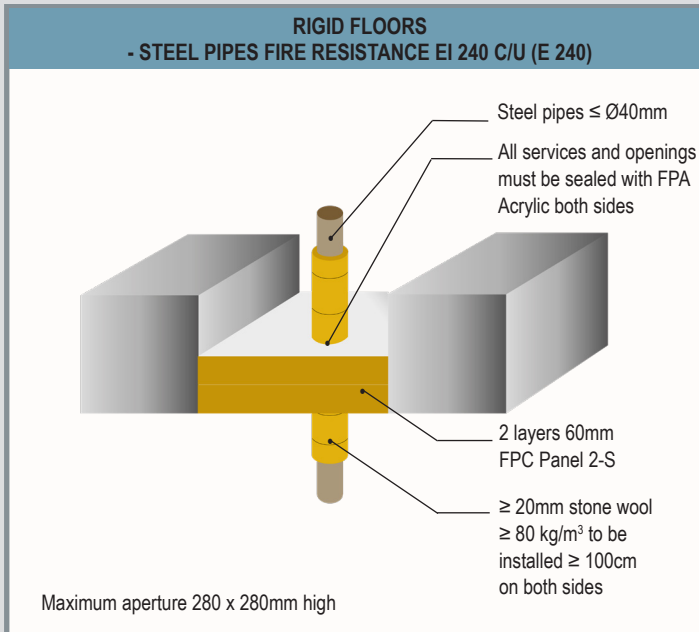
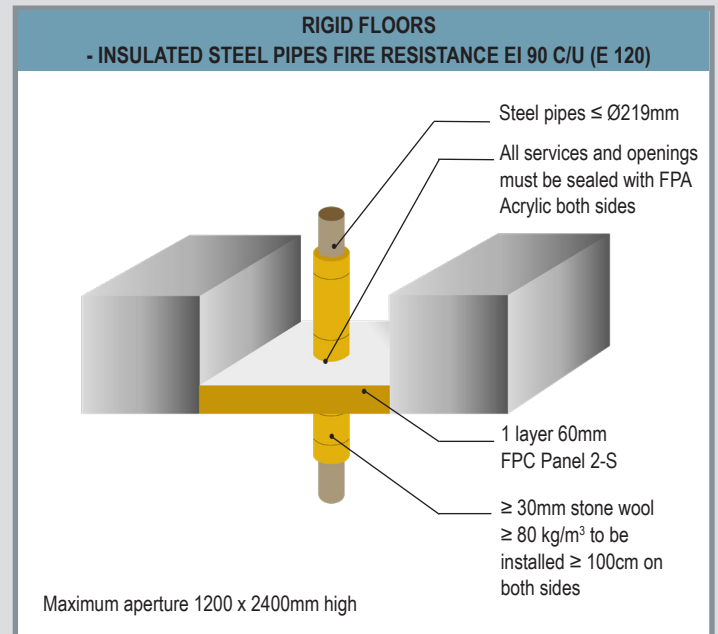
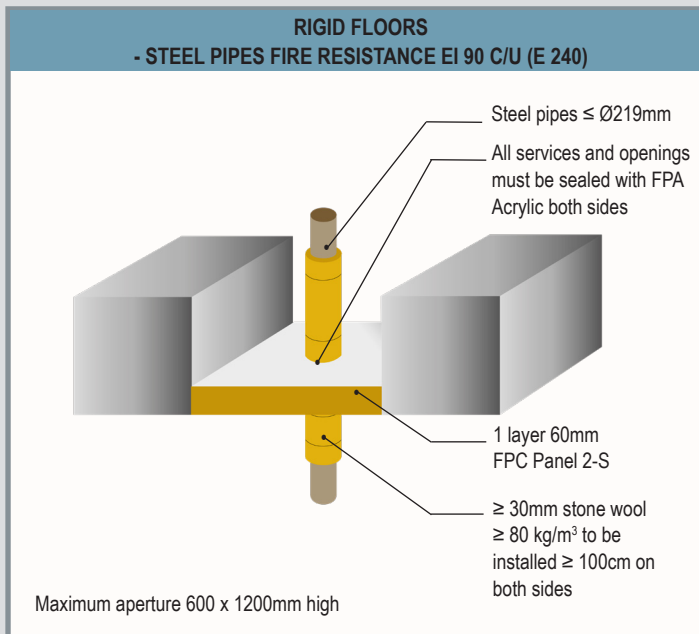
### MASONRY OR CONCRETE – WALLS - PLASTIC PIPES FIRE RESISTANCE EI 120-240

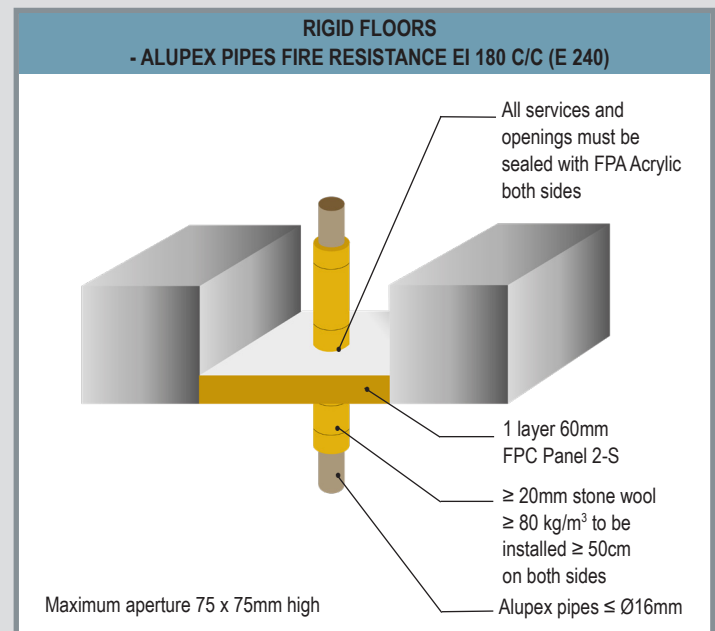
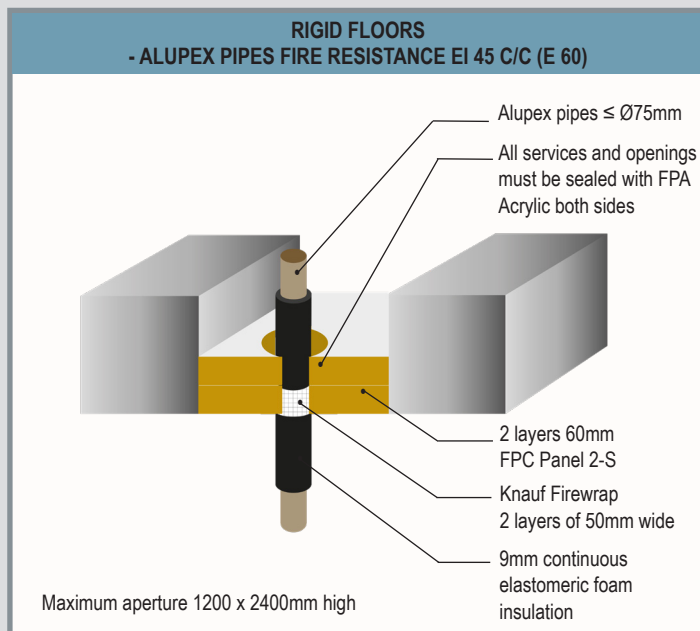
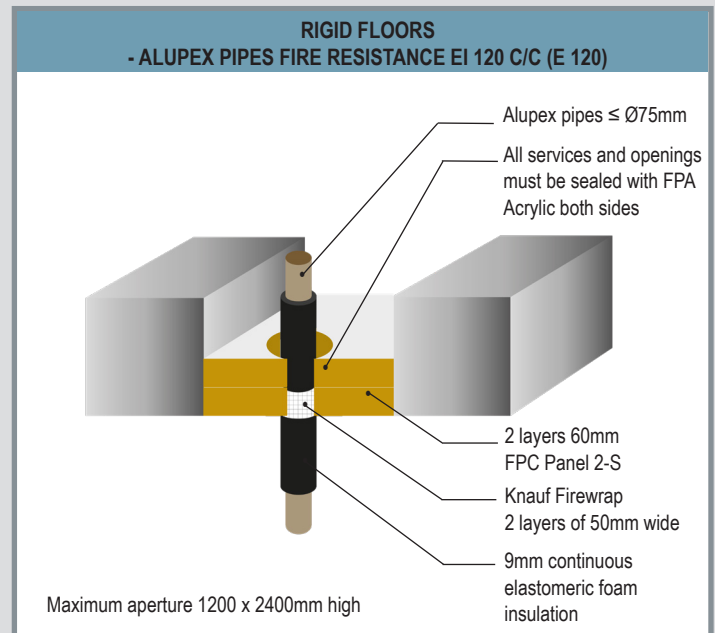
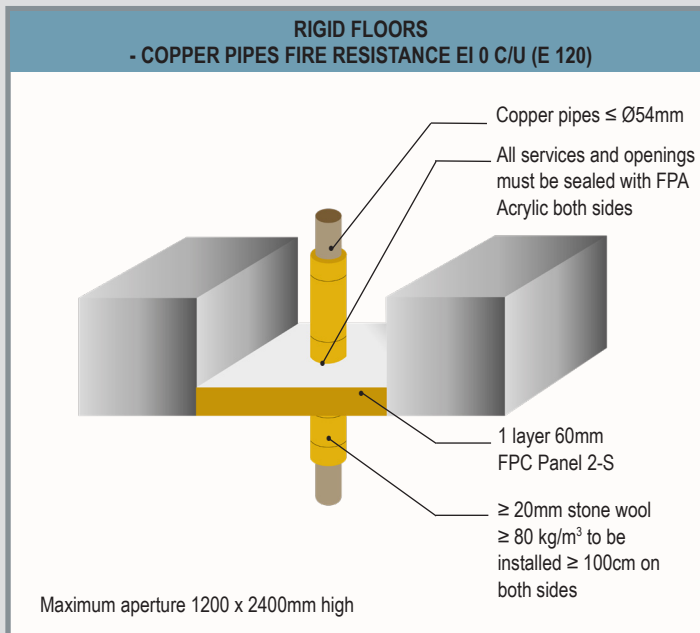
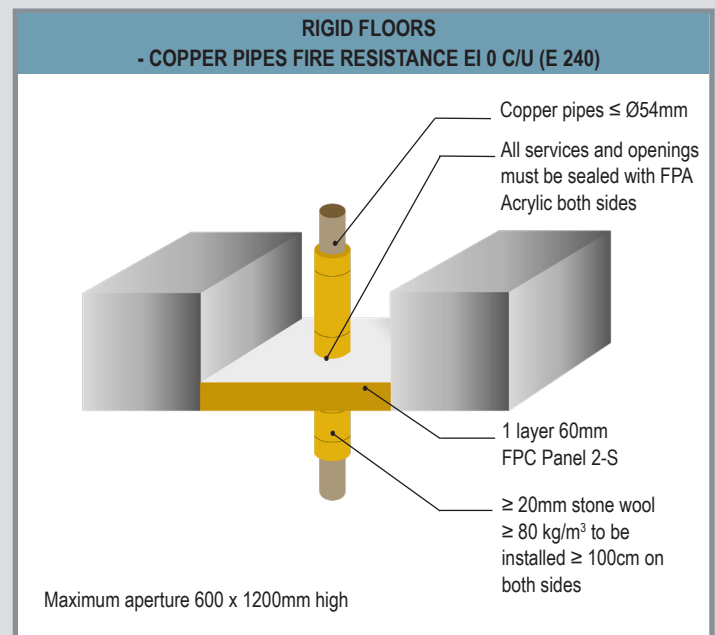
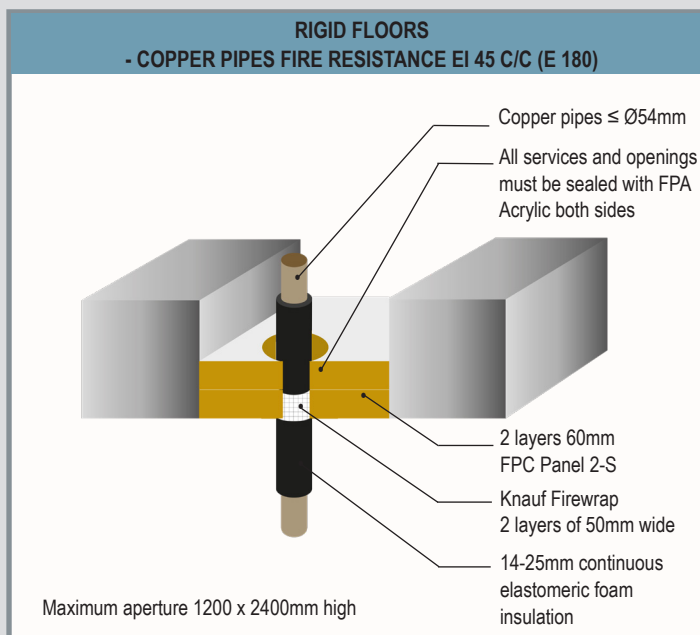


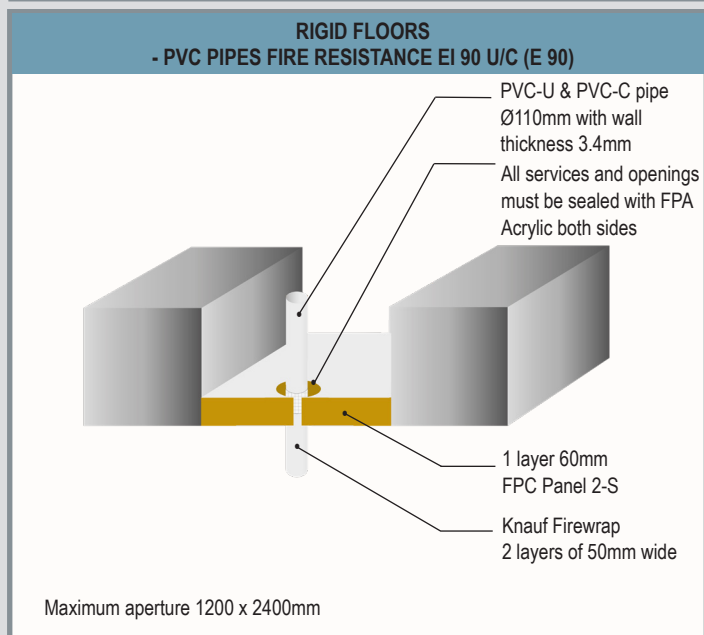
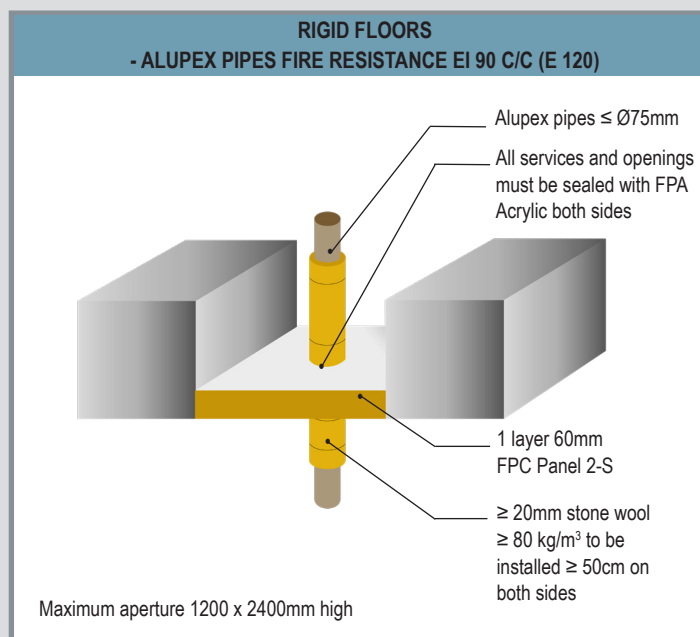
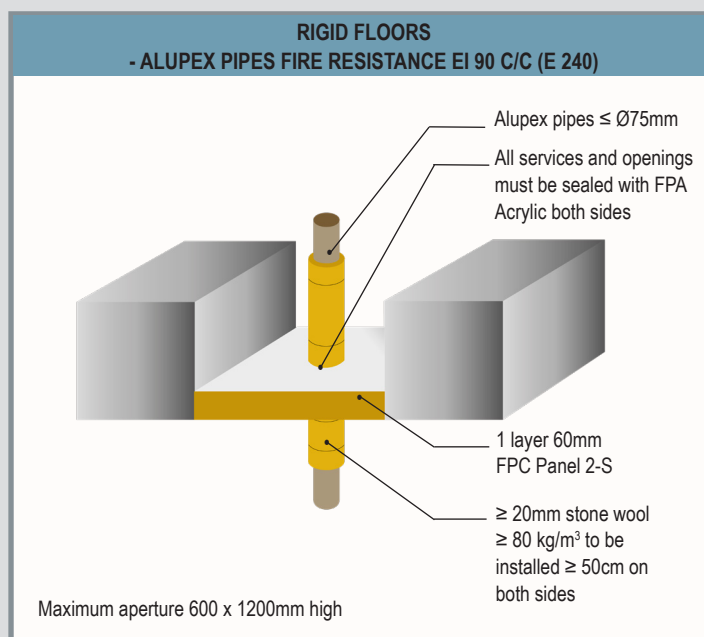
SERVICES	PIPE WALL THICKNESS	KNAUF FIREWRAP	CLASSIFICATION
$\leq \text{Ø} 40\text{mm}$ PVC-U & PVC-C	1.9-3.0mm	50 x 1.8mm (1 layer)	EI 240 U/C (E 240 U/C)
$\leq \text{Ø} 40\text{mm}$ PE, ABS & SAN+PVC	2.4-4.6mm	50 x 1.8mm (1 layer)	EI 240 U/C (E 240 U/C)
$\leq \text{Ø} 40\text{mm}$ PP	1.8-5.5mm	50 x 1.8mm (1 layer)	EI 240 U/C (E 240 U/C)
$\leq \text{Ø} 110\text{mm}$ PVC-U & PVC-C	2.7-6.6mm	50 x 3.6mm (2 layers)	EI 240 U/C (E 240 U/C)
$\leq \text{Ø} 110\text{mm}$ PE, ABS & SAN+PVC	3.4-10.0mm	50 x 3.6mm (2 layers)	EI 240 U/C (E 240 U/C)
$\leq \text{Ø} 110\text{mm}$ PP	2.7-10.0mm	50 x 3.6mm (2 layers)	EEI 240 C/C (E 240 C/C)
$\leq \text{Ø} 125\text{mm}$ PVC-U & PVC-C	4.7-7.4mm	50 x 7.2mm (4 layers)	EI 240 U/C (E 240 U/C)
$\leq \text{Ø} 125\text{mm}$ PE, ABS & SAN+PVC	3.9-7.4mm	50 x 7.2mm (4 layers)	EI 240 U/C (E 240 U/C)
$\leq \text{Ø} 125\text{mm}$ PP	3.1-11.4mm	50 x 7.2mm (4 layers)	EI 240 C/C (E 240 C/C)
$\leq \text{Ø} 160\text{mm}$ PVC-U & PVC-C	4.0-9.5mm	50 x 10.8mm (6 layers)	EI 240 U/C (E 240 U/C)
$\leq \text{Ø} 160\text{mm}$ PE, ABS & SAN+PVC	4.9-9.5mm	50 x 10.8mm (6 layers)	EI 240 U/C (E 240 U/C)
$\leq \text{Ø} 160\text{mm}$ PP	4.9-14.6mm	50 x 10.8mm (6 layers)	EI 240 C/C (E 240 C/C)
$\leq \text{Ø} 200\text{mm}$ PVC-U & PVC-C	5.0-10.2mm	50 x 18.0mm (10 layers)	EI 120 C/C (E 120 C/C)
$\leq \text{Ø} 250\text{mm}$ PVC-U & PVC-C	6.0-11.0mm	50 x 18.0mm (10 layers)	EI 120 C/C (E 120 C/C)
$\leq \text{Ø} 315\text{mm}$ PVC-U & PVC-C	7.7-12.1mm	50 x 18.0mm (10 layers)	EI 120 C/C (E 120 C/C)
$\leq \text{Ø} 400\text{mm}$ PVC-U & PVC-C	9.8-15.3mm	50 x 28.8mm (16 layers)	EI 120 C/C (E 120 C/C)














Notes

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