

PROTECTA® FR BOARD

INSTALLATION INSTRUCTIONS



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Please refer to Protecta® FR Damper for guidance on fire sealing ventilation ducts. Please also refer to the Technical Data Sheet.

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 200 mm. Services should be a minimum of 25 mm from seal edges.

Services within the system Protecta® FR Board seal do not require a minimum separation, except where Protecta® FR Pipe Wraps are used, 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.

Protecta® FR Board seals which involve services penetrating both sides of a flexible wall may also be used in the situation where the services penetrates one side of the wall only and the remaining side of the wall is not penetrated at the same point (i.e. the services continues on the inside of the wall).

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. Timber walls must have a minimum thickness of 100 mm and comprise solid wood or cross-laminated timber. Rigid walls must have a minimum thickness of 75 mm and comprise concrete, aerated concrete or masonry, with a minimum density of 650 kg/m³. Rigid floors must have a minimum thickness of 150 mm and comprise aerated concrete or concrete with a minimum density of 650 kg/m³. Timber floors must have a minimum thickness of 150 mm and comprise solid wood or cross-laminated timber.

The supporting construction must be classified in accordance with EN 13501-2 for the required fire resistance period. Services in floors should be supported at maximum 250 mm from the top face. Services in walls should be supported at maximum 270 mm from both faces of the wall.

*) 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.

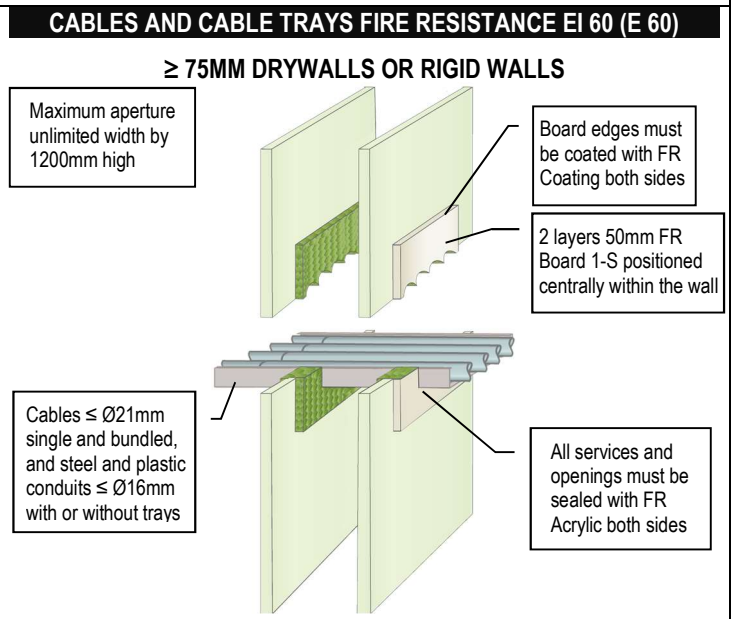
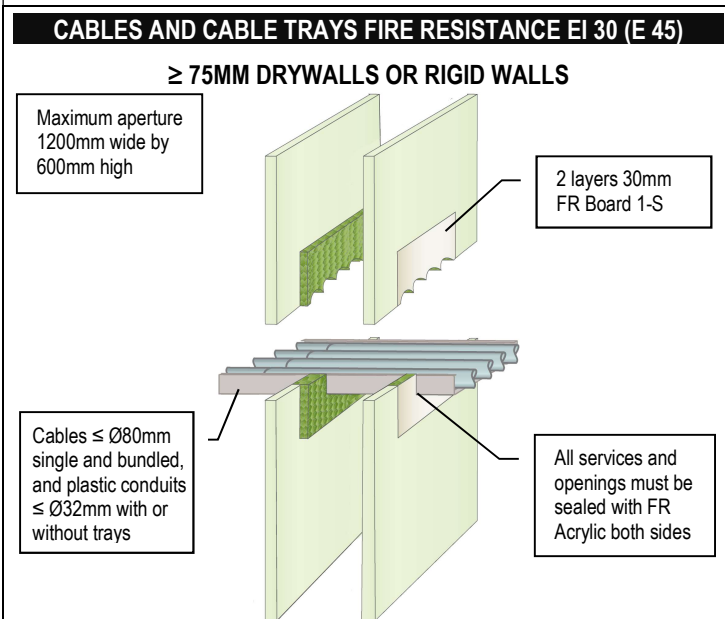
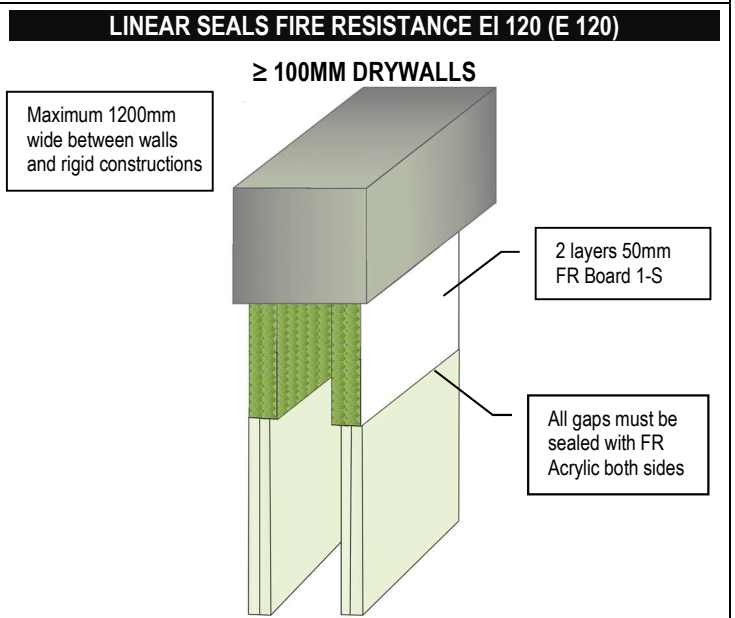
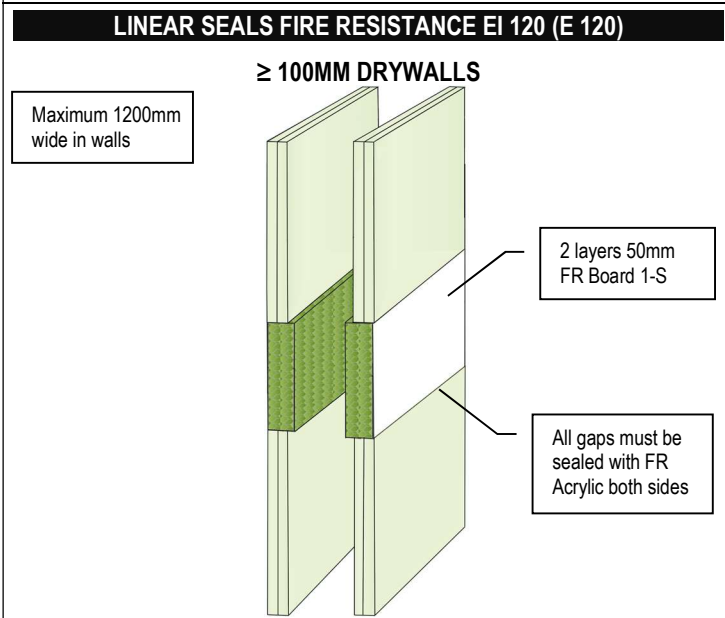
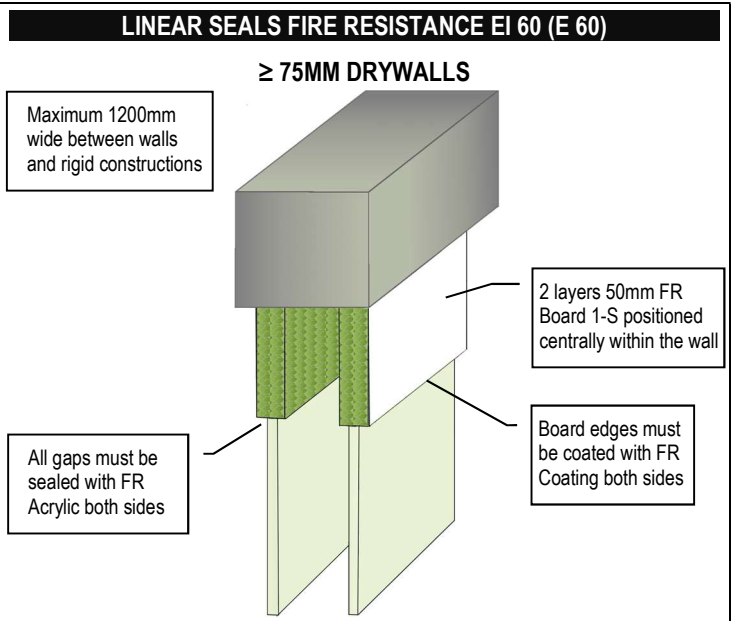
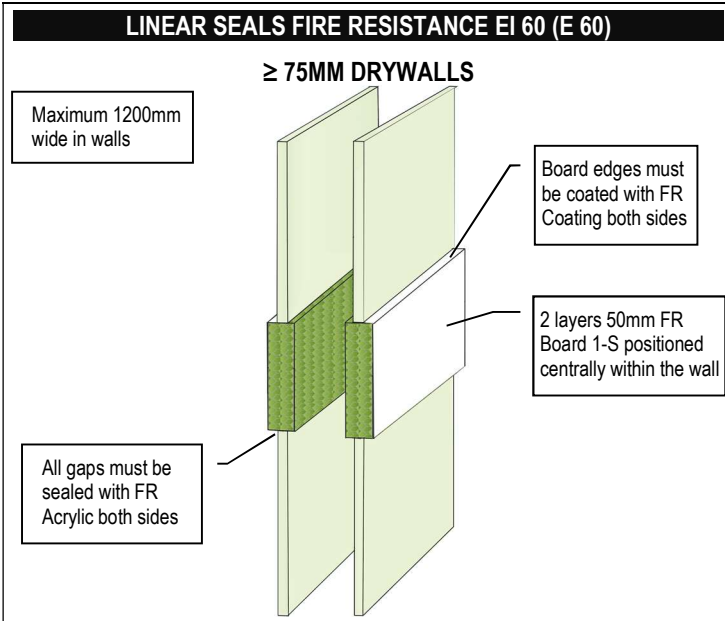
TEST STANDARDS

This Installation Instructions and the Technical Data Sheet are based on the product's European Technical Assessment issued in accordance with regulation (EU) No 305/2011 on the basis of EAD 350454-00-1104, September 2017, tested to EN 1366-3, -4 & -12 in conjunction with EN 1363-1. The product hold the following approval marks: CE-Mark, UL-EU Certificate, UAE Certificate of Compliance and AS Assessment.



INSTALLATION

1. For fire sealing service penetrations and linear seals, installation must be in accordance to the detailed drawings on pages 2 to 61. Where PVC pipes are mentioned, this includes PVC-C and PVC-U. Where PE pipes are mentioned, this includes PE-LD, PE-MD, PE-HD, PE-X and similar according to EN 1519-1, EN 12201-2 or EN 12666-1. Where PP pipes are mentioned, this includes PP-MV, PP-H, PP-R and similar if the pipe is according to EN 1451-1 or DIN 8077/8078.
2. Before installing Protecta® FR Board ensure that the surface of all service penetrations and surrounding construction is free from all loose contaminants, dust and grease.
3. Protecta® FR Coating and Protecta® FR 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.
4. Select the type and number of boards to meet the required fire classification using the detailed drawings. Boards of a greater thickness than stated can be used, and where a single sided coated board is stated, a double sided coated board of the same thickness or greater may be used.
5. When fitting double layer boards into drywalls, the coated side of the board should normally be flush with the surface of the wall on both sides. In seals wider than 2,400 mm, uninterrupted separating studs will be required at 2,400 mm centres or less.
6. When fitting double layer 60 mm thick boards into masonry or concrete constructions, the boards should normally 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 30 mm between the boards.
7. When fitting single layer boards into constructions, the board can be positioned to either side of the construction or anywhere in between.
8. When installing Protecta® FR Board in hollow floor slabs, fire seals specified as single layer boards 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 flush on both sides.
9. Cut the required board(s) to suit the aperture dimensions and type and size of service penetration(s). All exposed and cut edges of the board can be sealed with Protecta® FR Coating or Protecta® FR Acrylic prior to fitting which will act as an adhesive and ensure a smoke tight seal.
10. All joints, gaps or imperfections in the installed seal must be filled with Protecta® FR Acrylic on both sides, and any visible mineral fibres must be coated with Protecta® FR Coating.
11. Protecta® FR Board can be over-painted with most emulsion or alkyd (gloss) paints. For a moisture proof seal protect the cured Protecta® FR Acrylic seals by painting over with Protecta® FR Coating.



CABLES AND CONDUCTORS FIRE RESISTANCE EI 30 (E 60)

≥ 75MM DRYWALLS OR RIGID WALLS

Maximum aperture unlimited width by 1200mm high

Board edges must be coated with FR Coating both sides

2 layers 50mm FR Board 1-S positioned centrally within the wall

Cables ≤ Ø80mm single and bundled, non-sheathed conductors ≤ 185mm² and copper conduits ≤ Ø16mm, with or without trays

All services and openings must be sealed with FR Acrylic both sides

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

≥ 100MM DRYWALLS OR RIGID WALLS

Maximum aperture 1200mm wide by 600mm high

1 layer 50mm FR Board 2-S

Framed aperture with 2 layers of 12.5mm gypsum boards (not necessary in rigid walls)

All services and openings must be sealed with FR Acrylic both sides

Cables ≤ Ø80mm single and bundled, with or without perforated cable trays and ladders

All services must be coated 150mm each side with 300µ WFT Protecta Service Coat FR-1

CONDUCTORS AND CABLE TRAYS FIRE RESISTANCE EI 45 (E 60)

≥ 100MM DRYWALLS OR RIGID WALLS

Maximum aperture 1200mm wide by 600mm high

1 layer 50mm FR Board 2-S

Framed aperture with 2 layers of 12.5mm gypsum boards (not necessary in rigid walls)

All services and openings must be sealed with FR Acrylic both sides

Non-sheathed conductors ≤ 185mm² with or without trays

All services must be coated 150mm each side with 300µ WFT Protecta Service Coat FR-1

CABLES FIRE RESISTANCE EI 60 (E 120)

≥ 100MM DRYWALLS OR RIGID WALLS

Maximum aperture unlimited width by 1200mm high

2 layers 50mm FR Board 1-S

Cables ≤ Ø21mm

All services and openings must be sealed with FR Acrylic both sides

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

≥ 100MM DRYWALLS OR RIGID WALLS

Maximum aperture unlimited width by 1200mm high

2 layers 50mm FR Board 1-S

Cables ≤ Ø80mm single and bundled, and steel and plastic conduits ≤ Ø16mm with or without trays

All services and openings must be sealed with FR Acrylic both sides

CONDUCTORS AND CONDUITS FIRE RESISTANCE EI 30 (E 60)

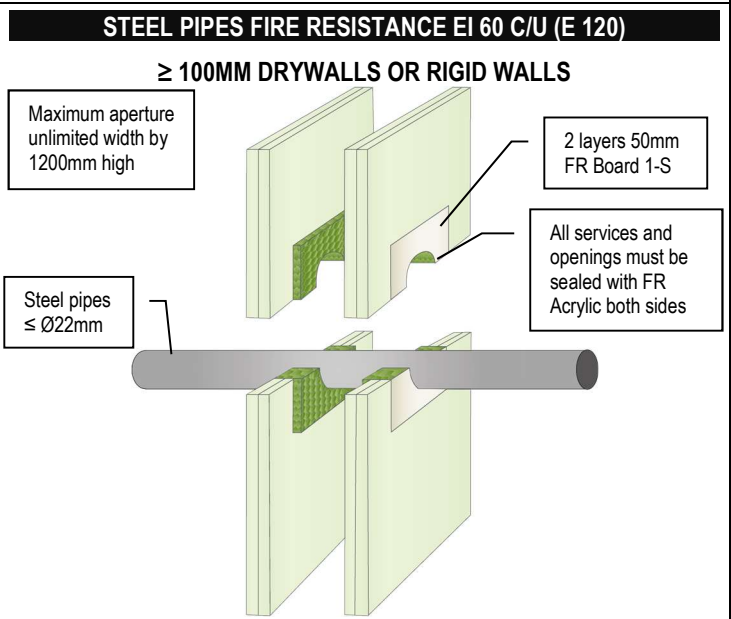
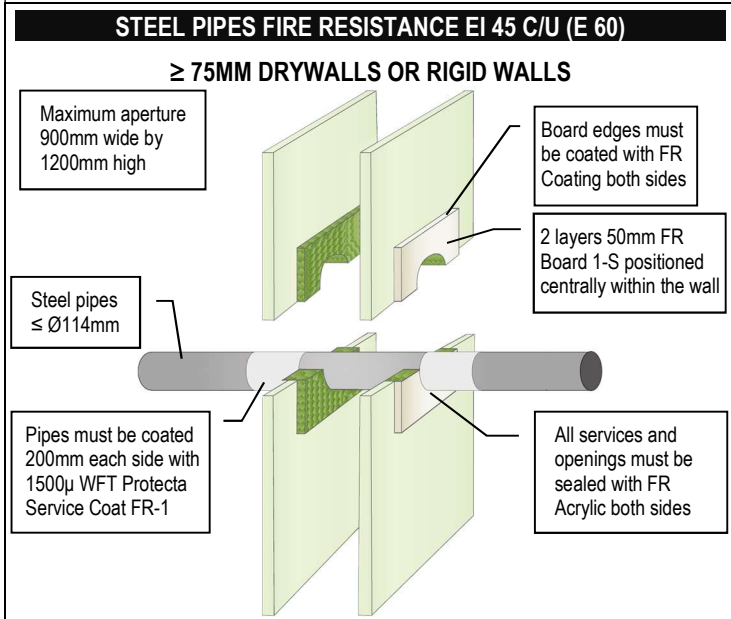
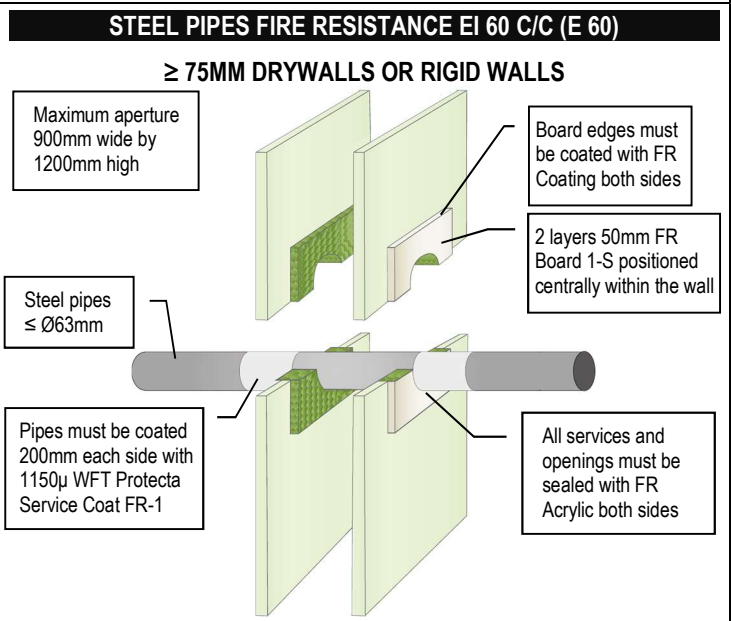
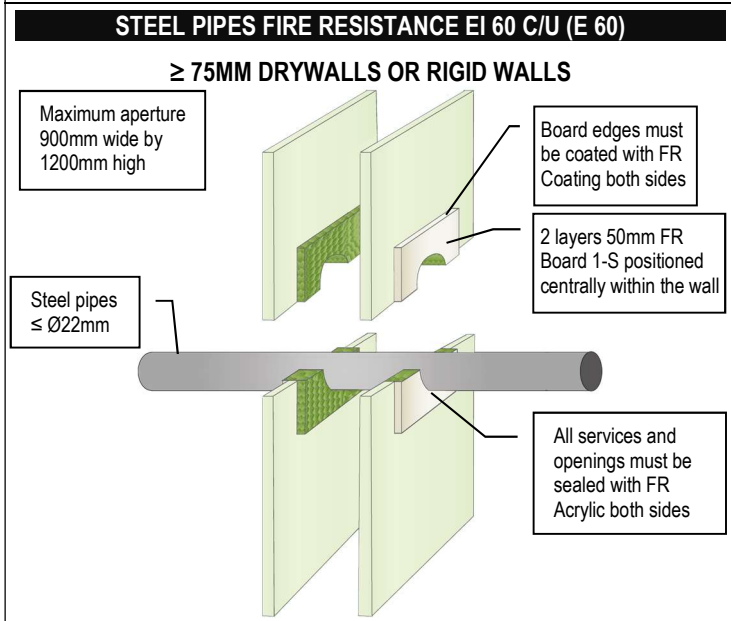
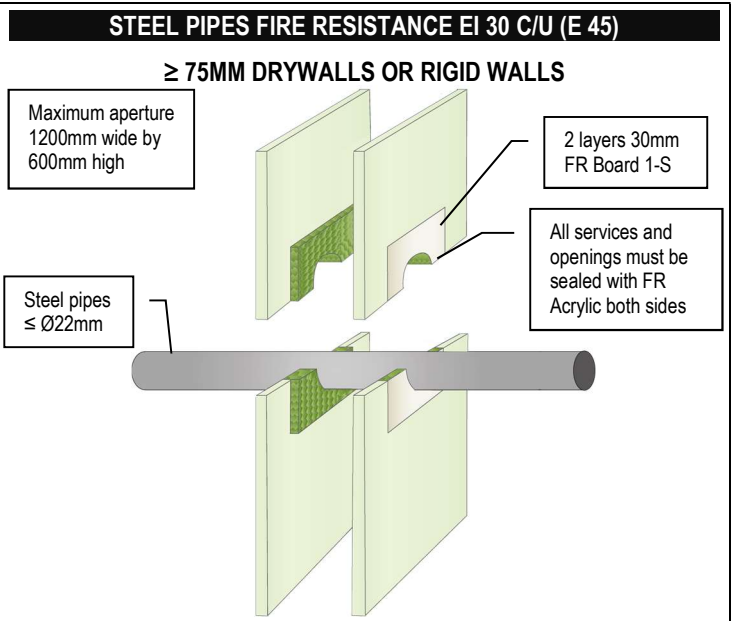
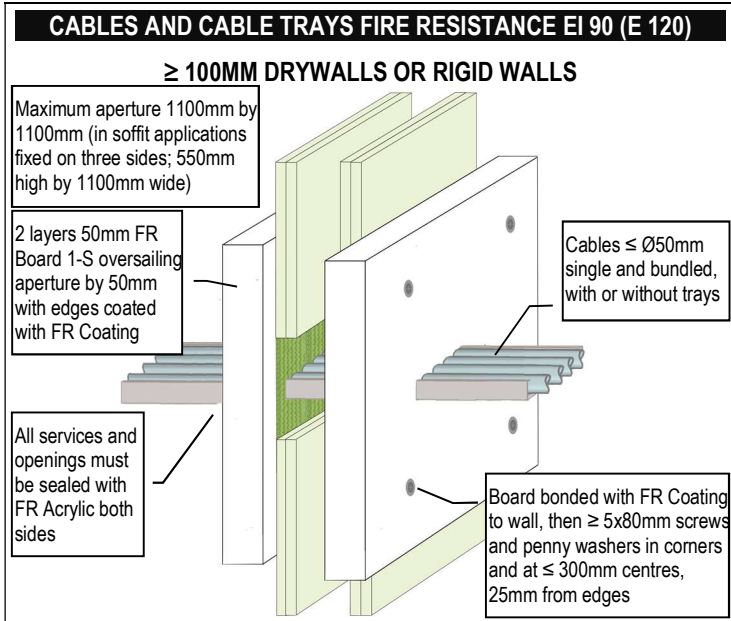
≥ 100MM DRYWALLS OR RIGID WALLS

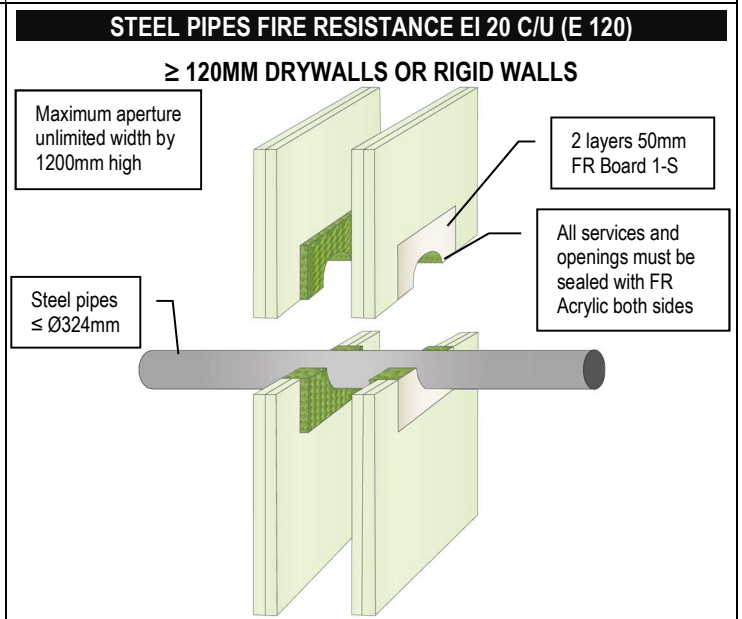
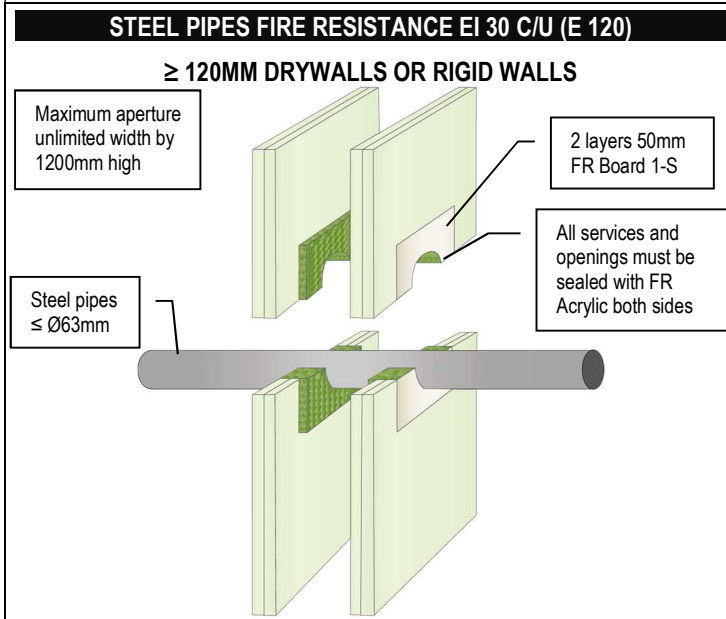
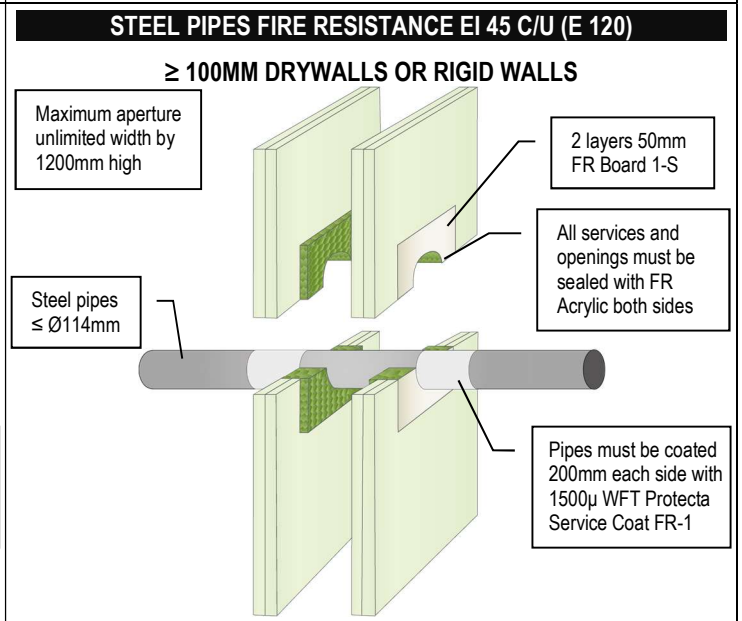
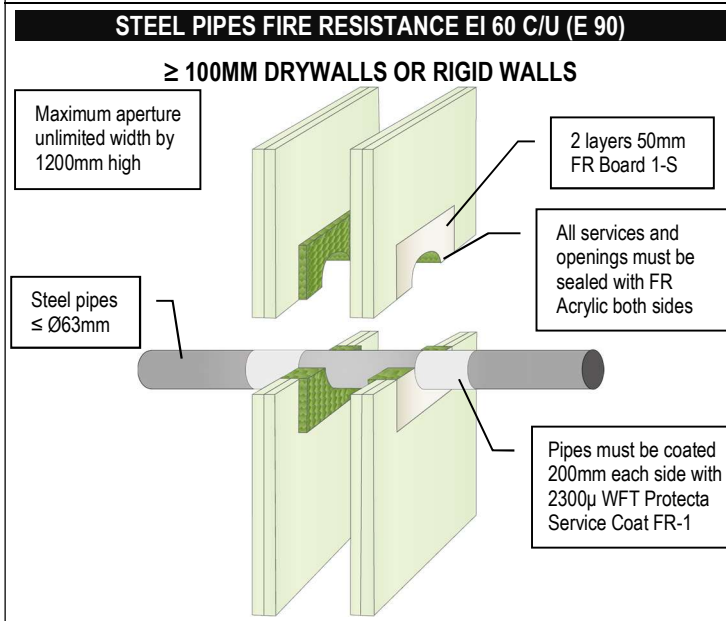
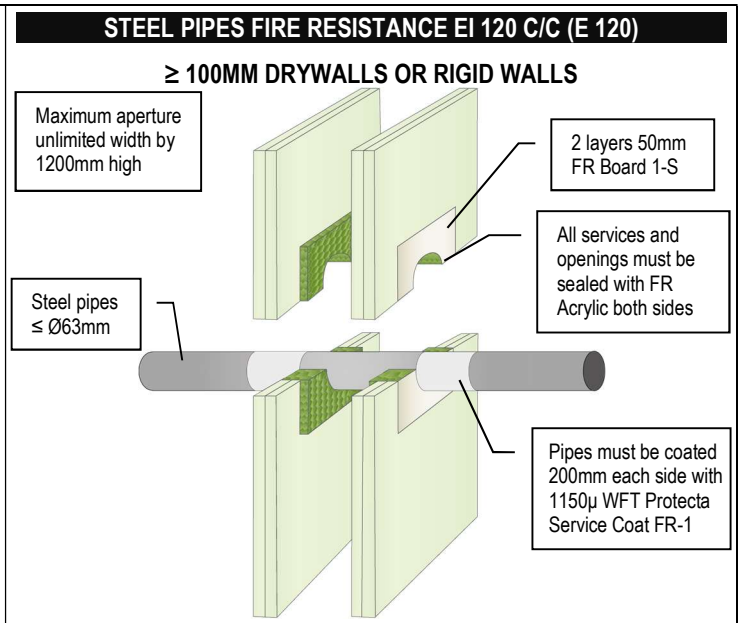
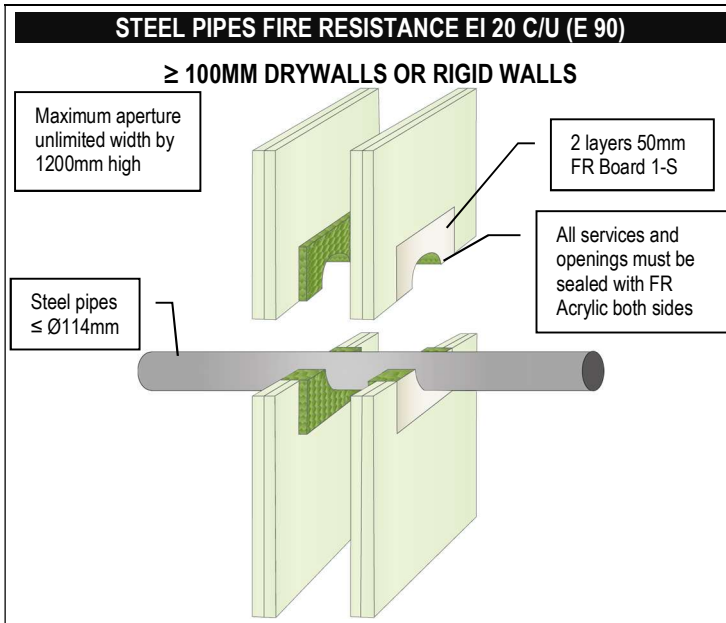
Maximum aperture unlimited width by 1200mm high

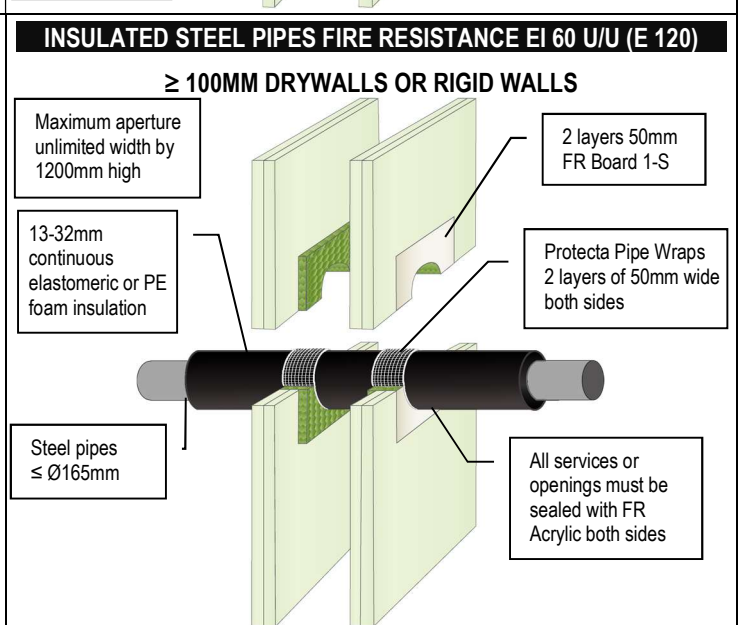
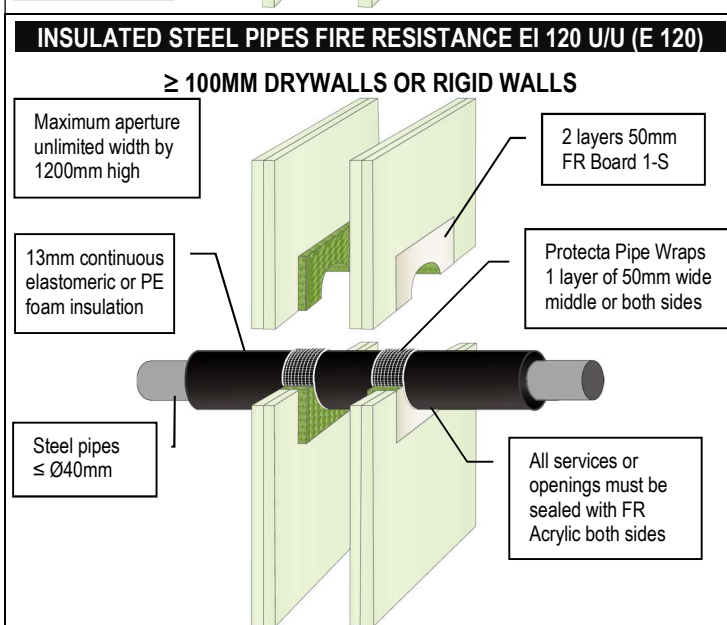
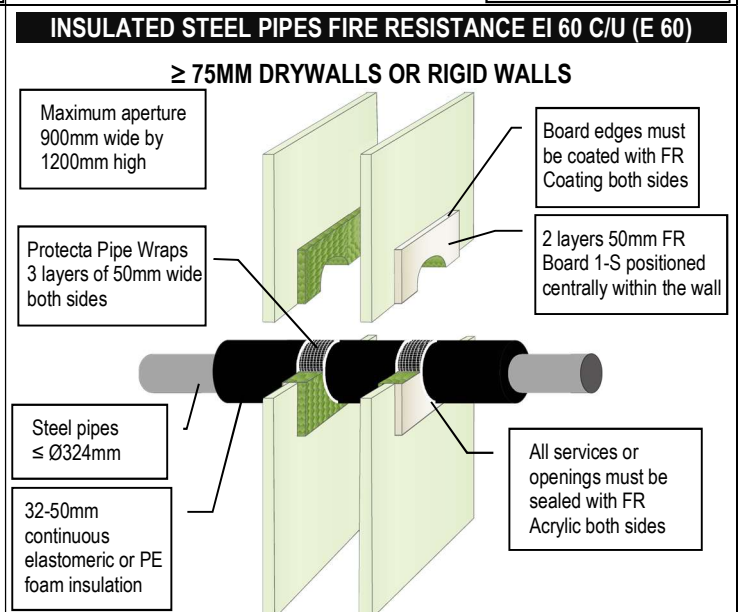
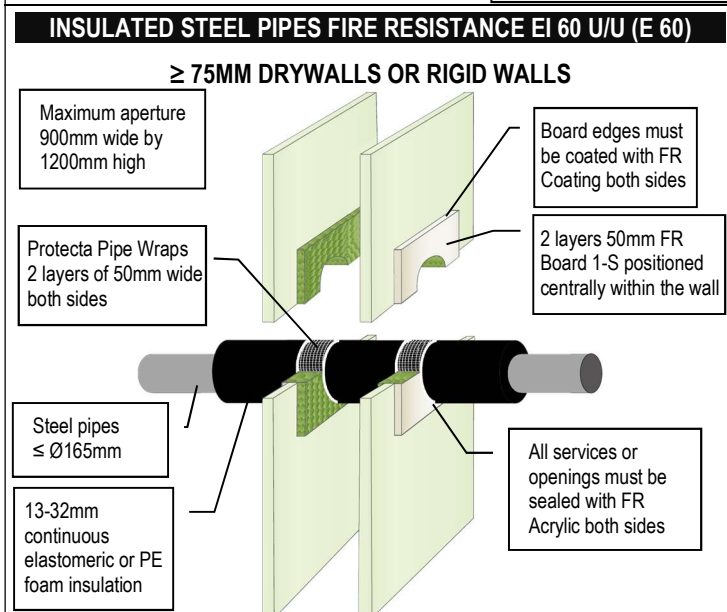
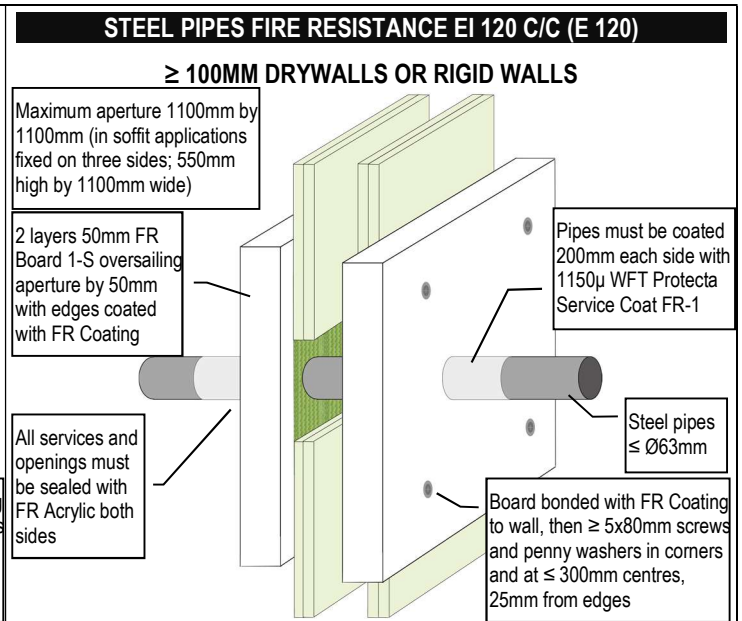
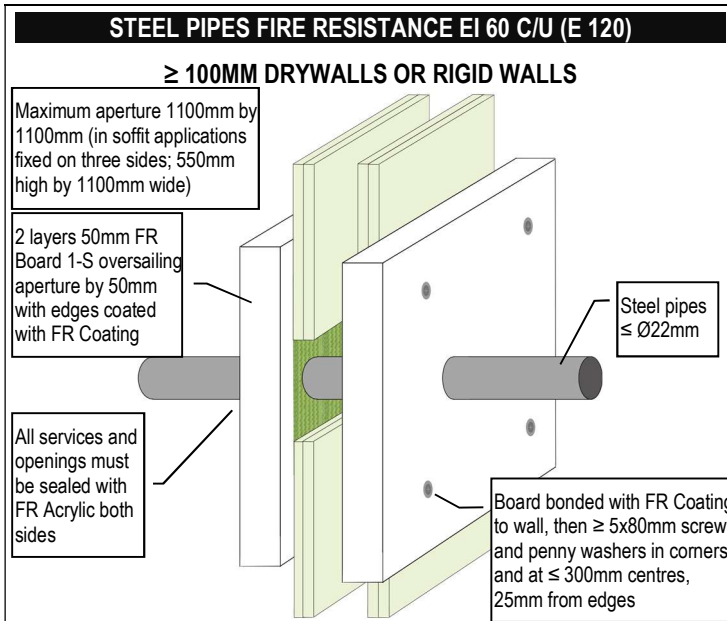
2 layers 50mm FR Board 1-S

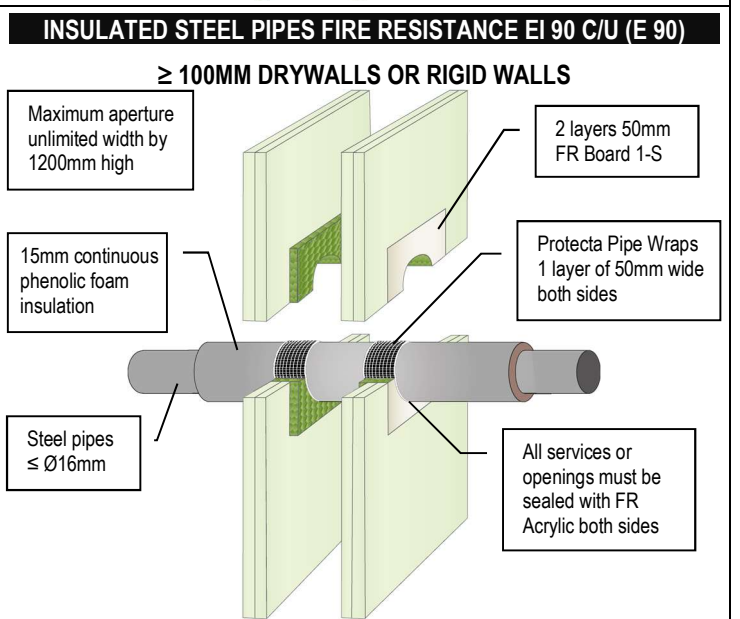
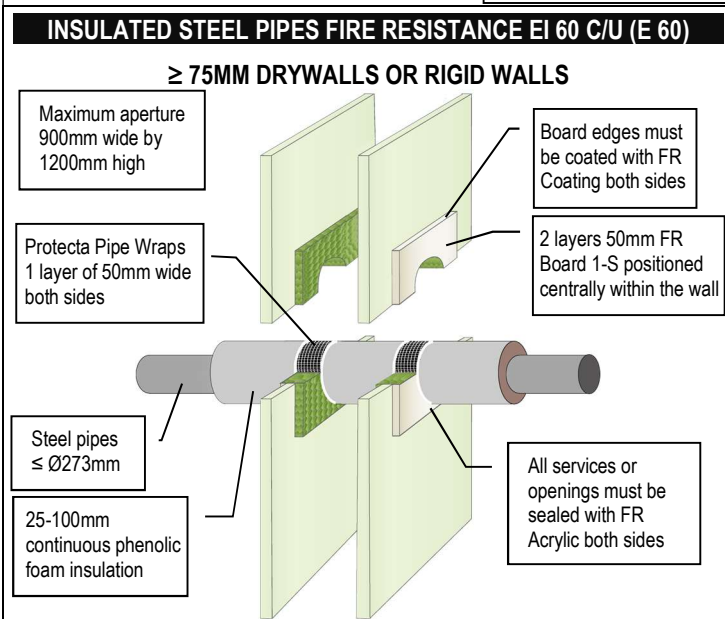
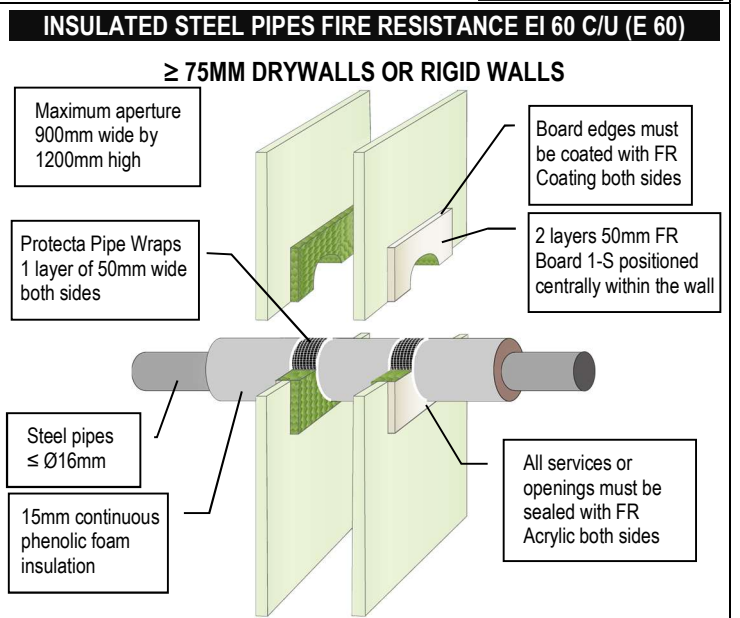
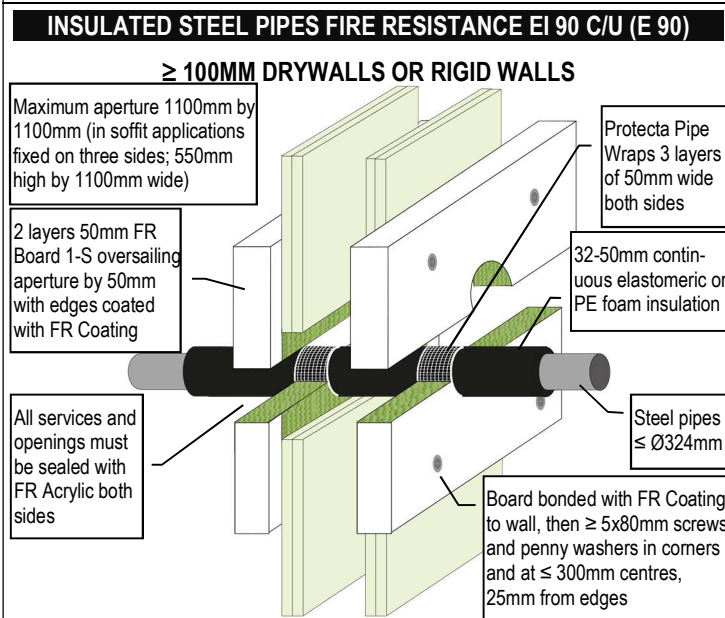
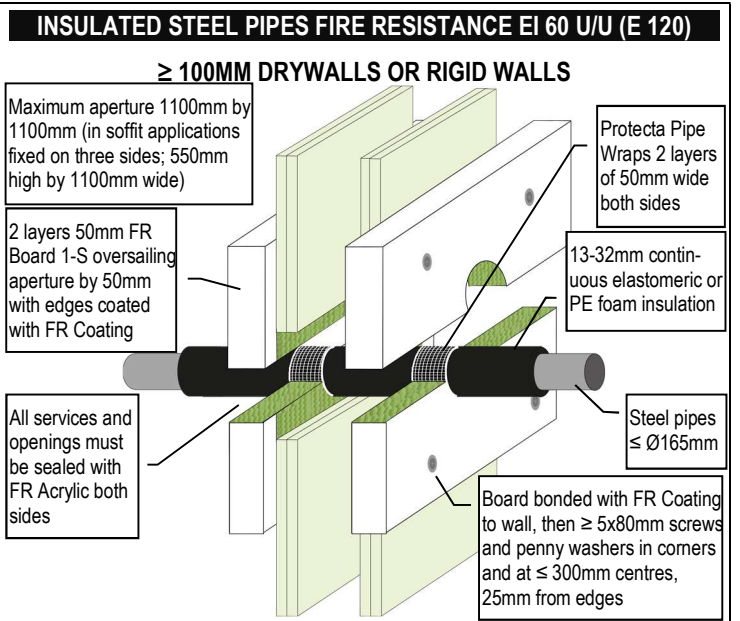
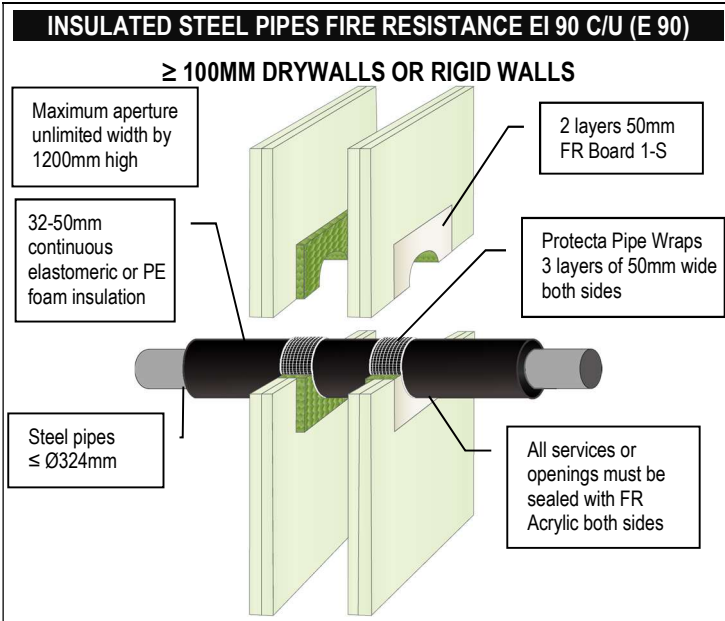
Non-sheathed conductors ≤ 185mm² and copper conduits ≤ Ø16mm, with or without trays

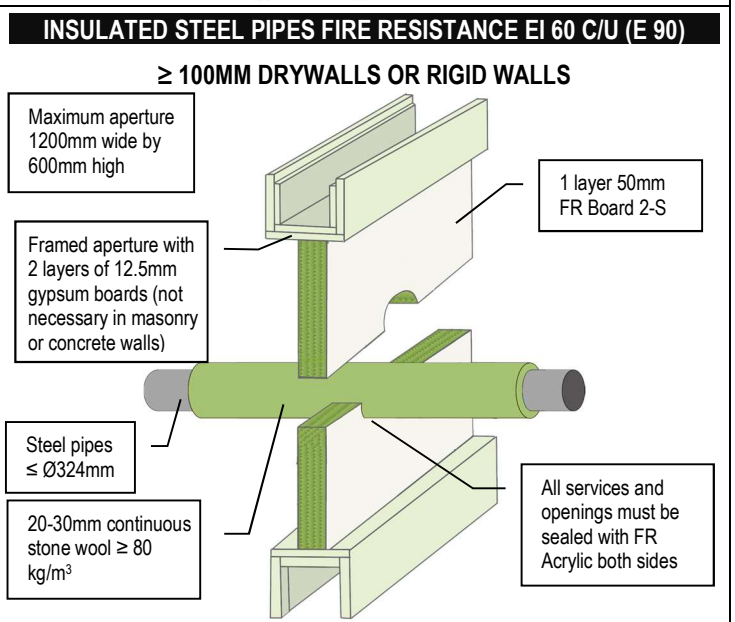
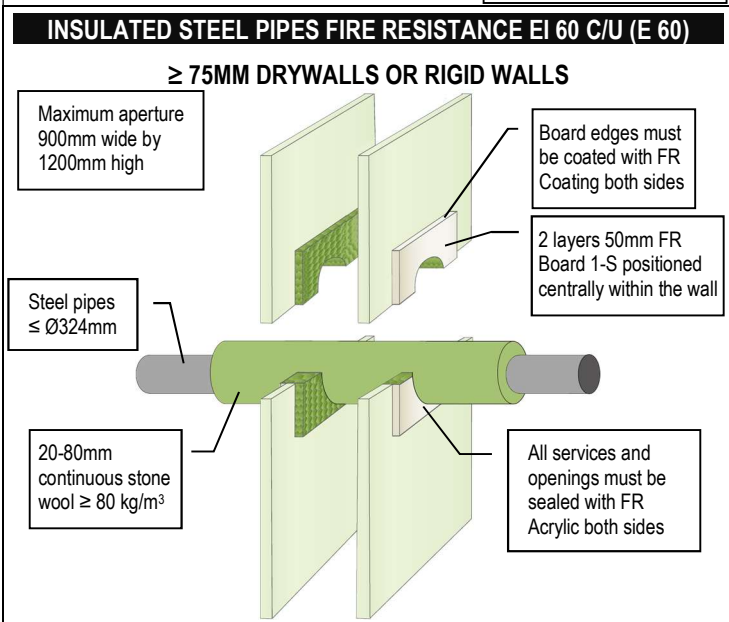
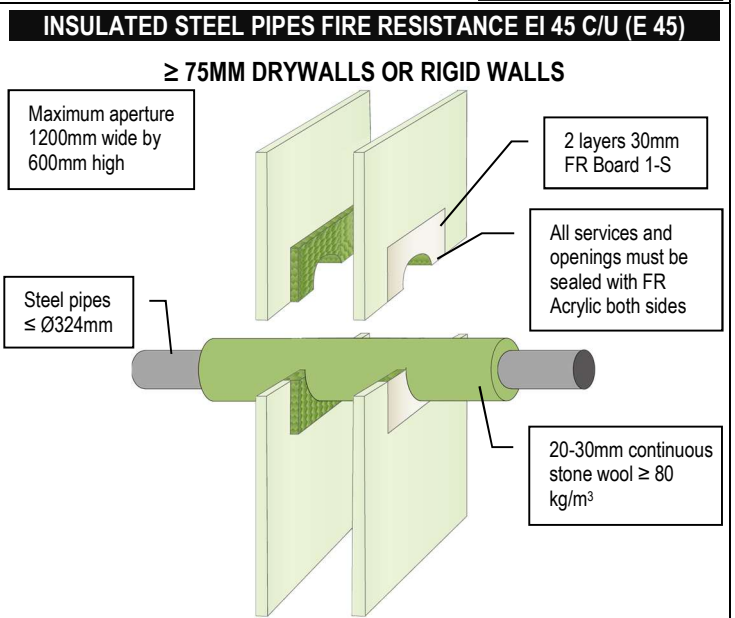
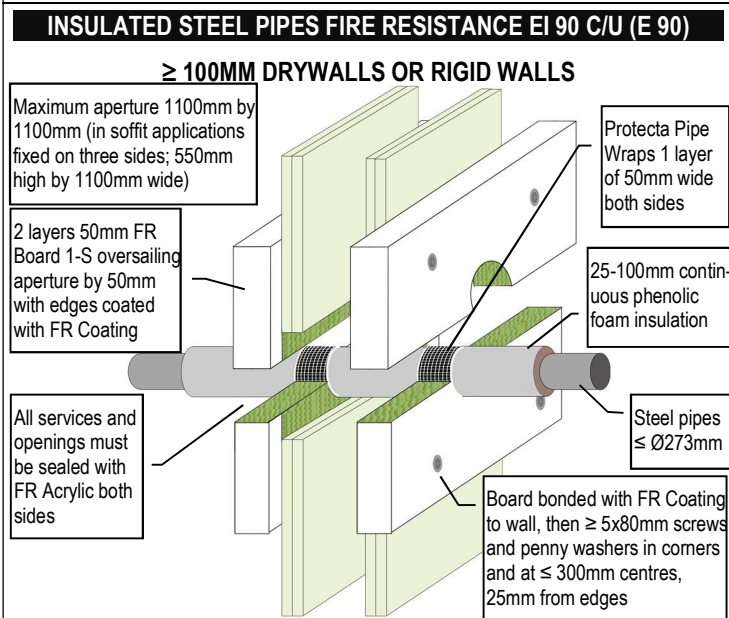
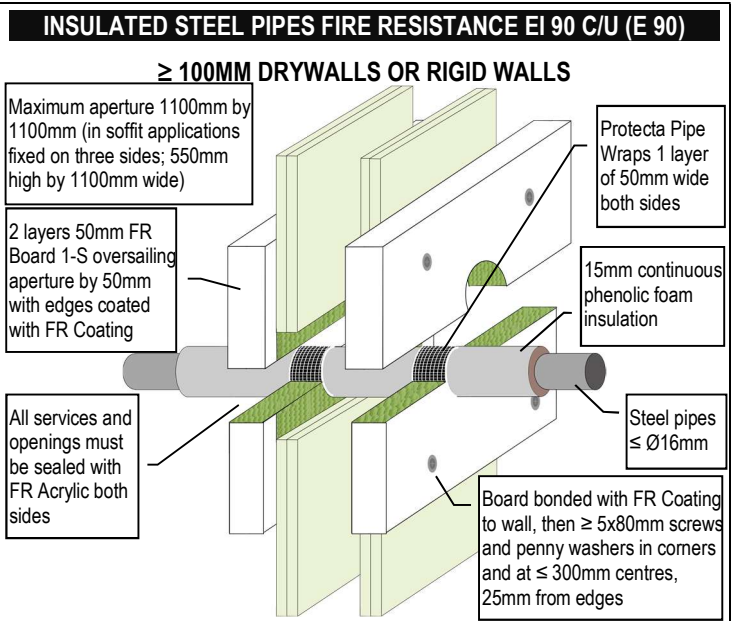
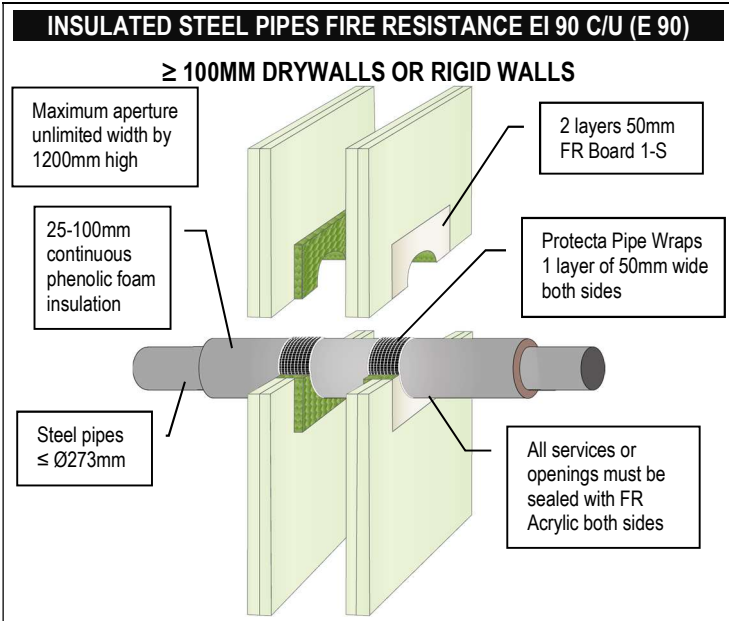
All services and openings must be sealed with FR Acrylic both sides

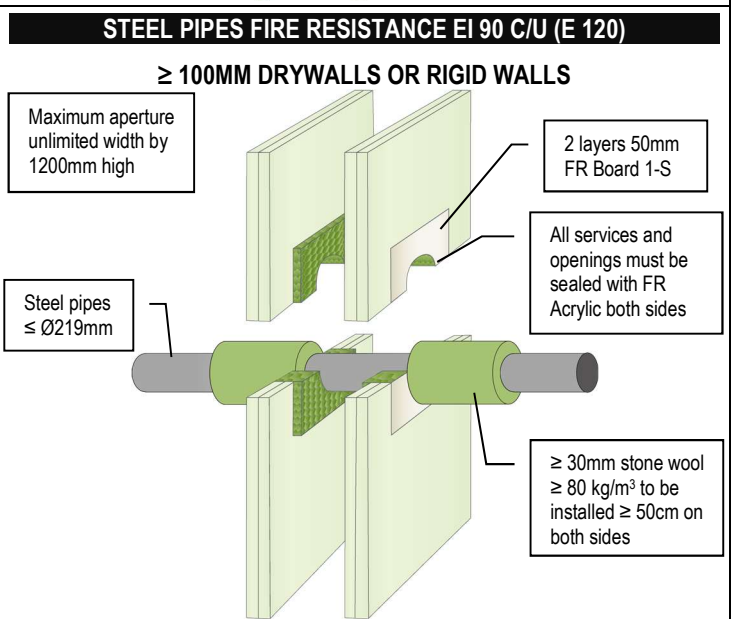
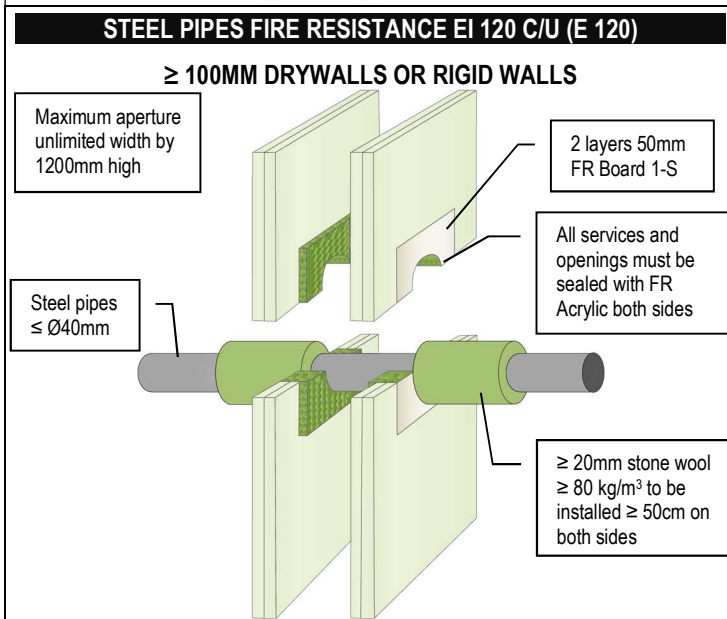
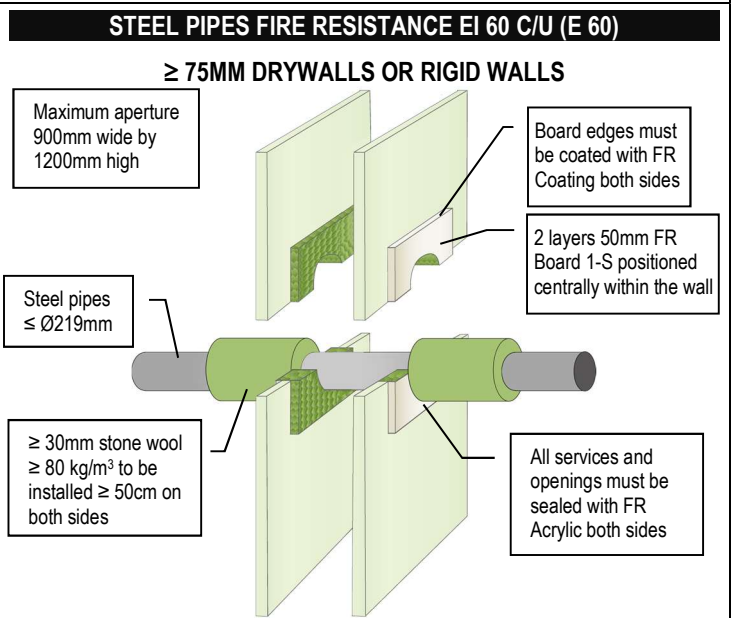
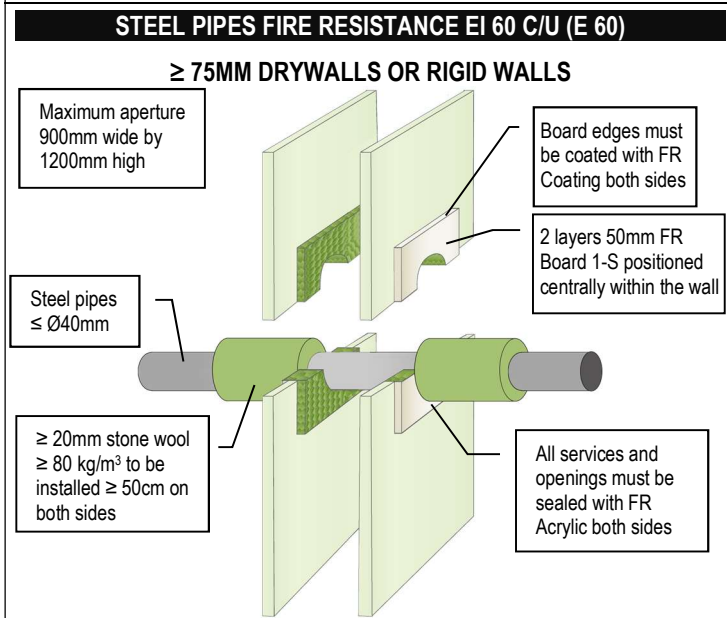
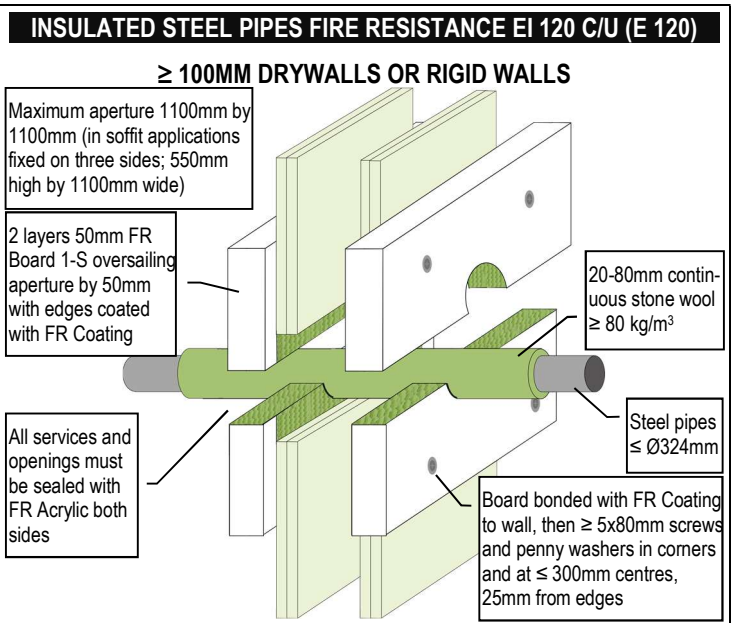
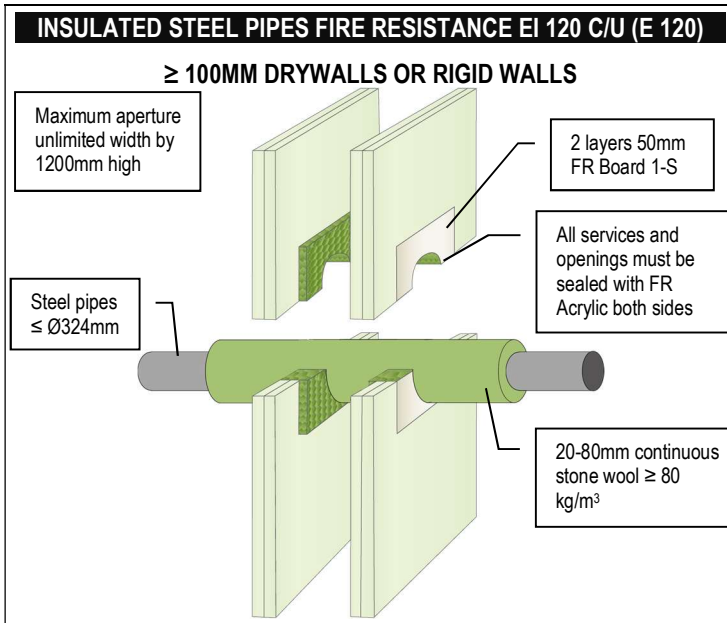


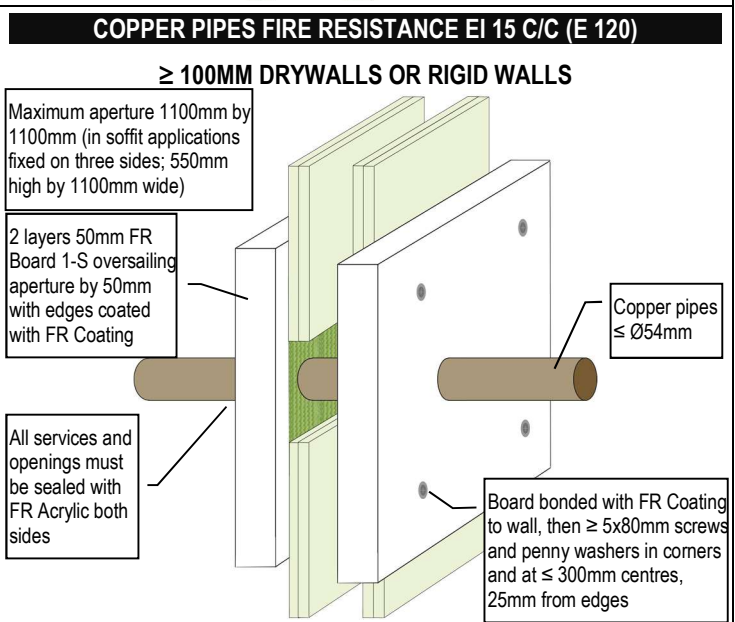
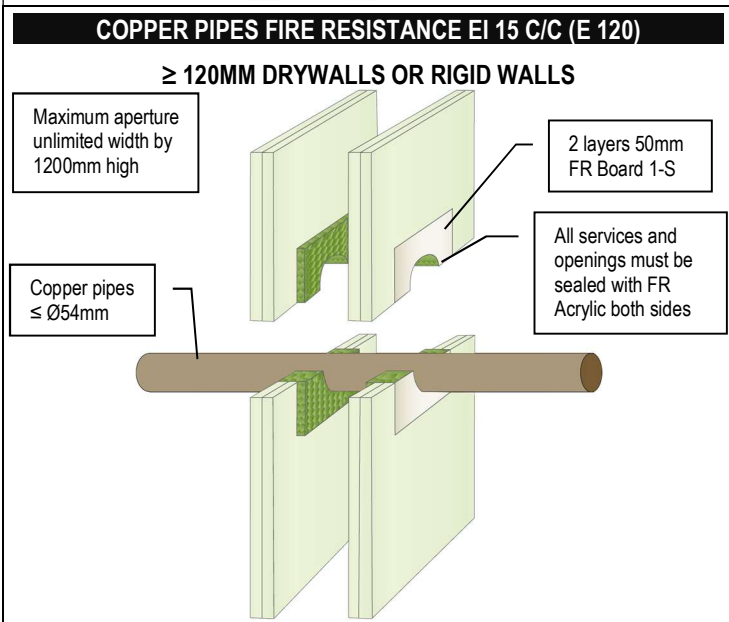
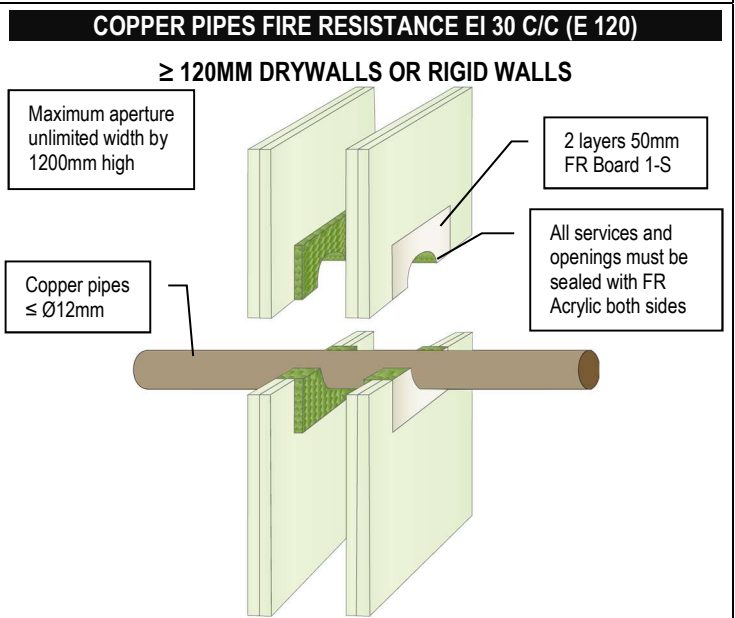
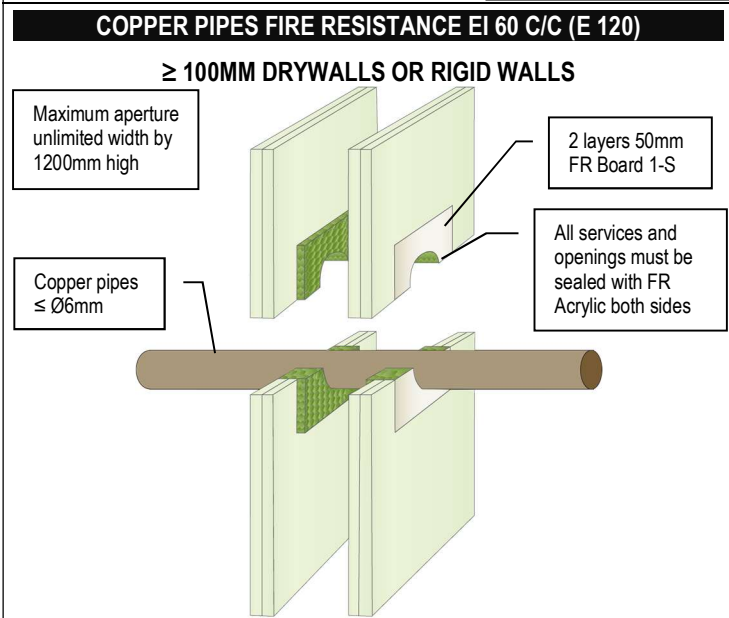
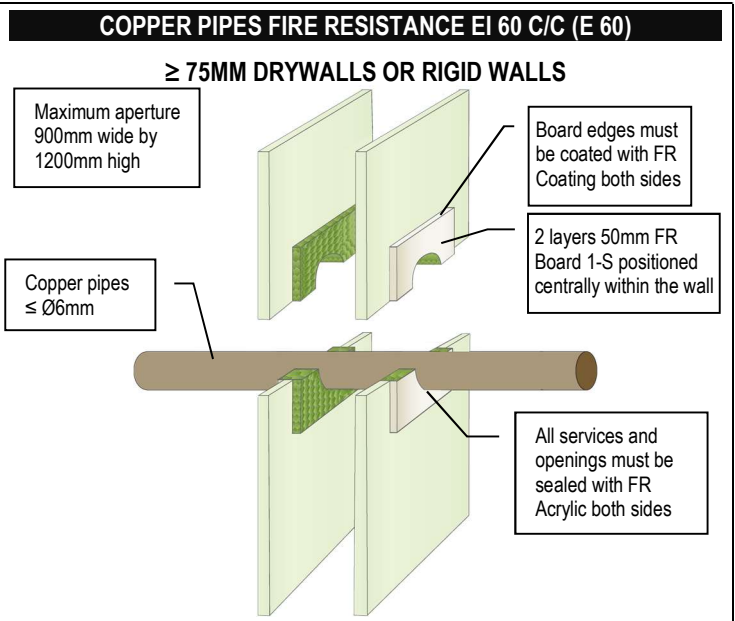
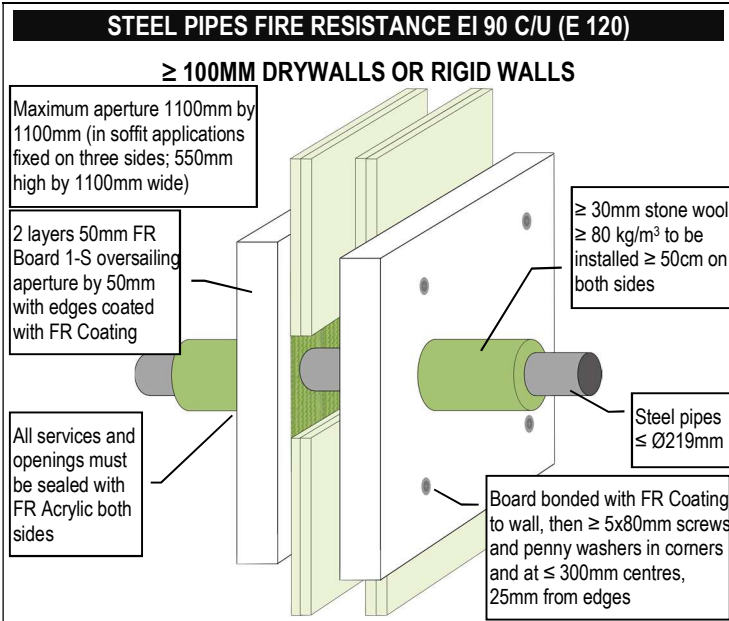


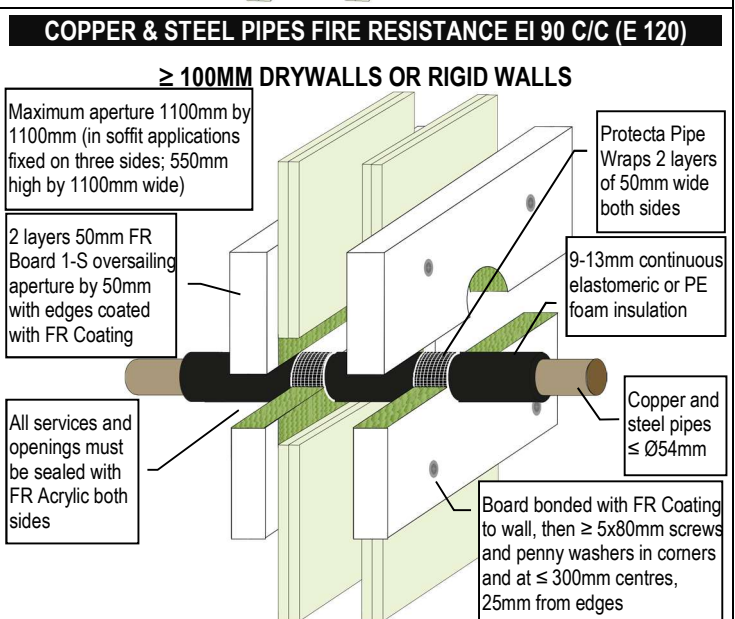
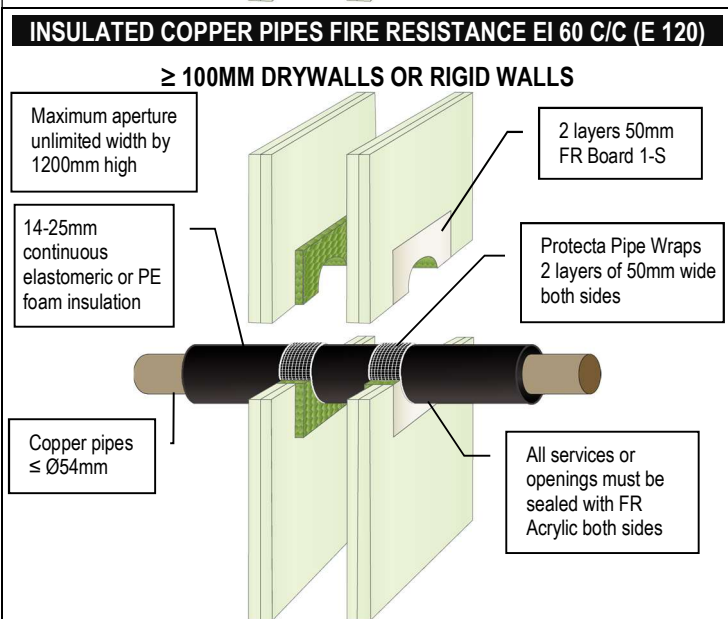
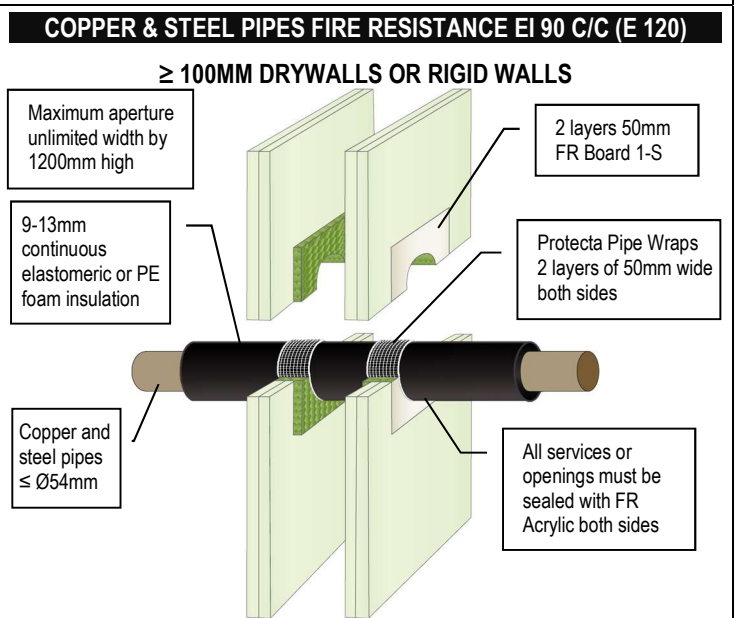
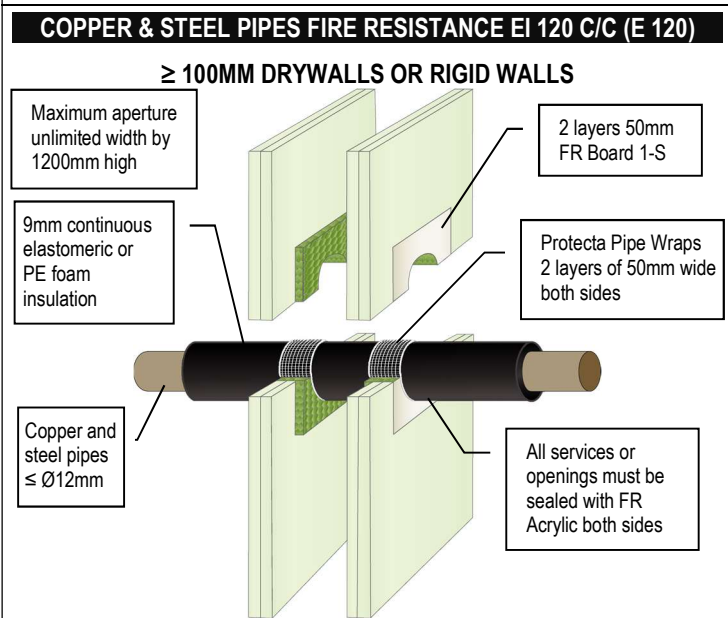
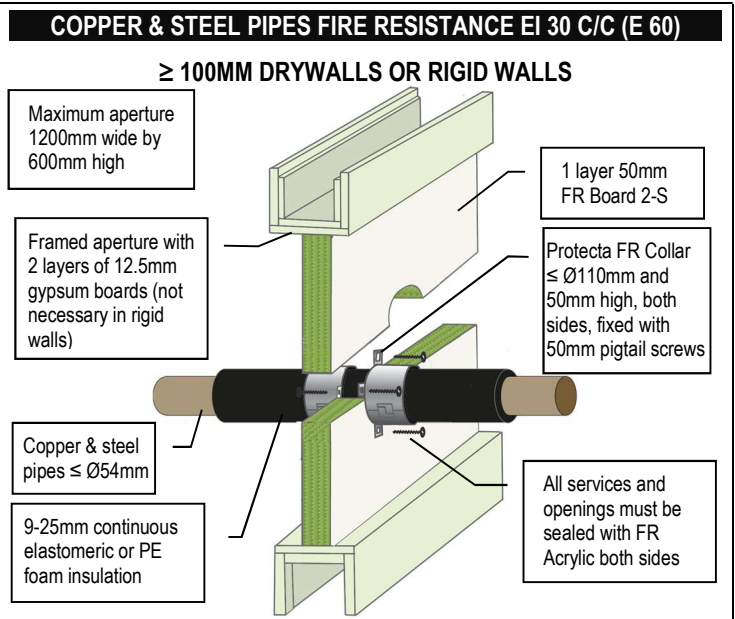
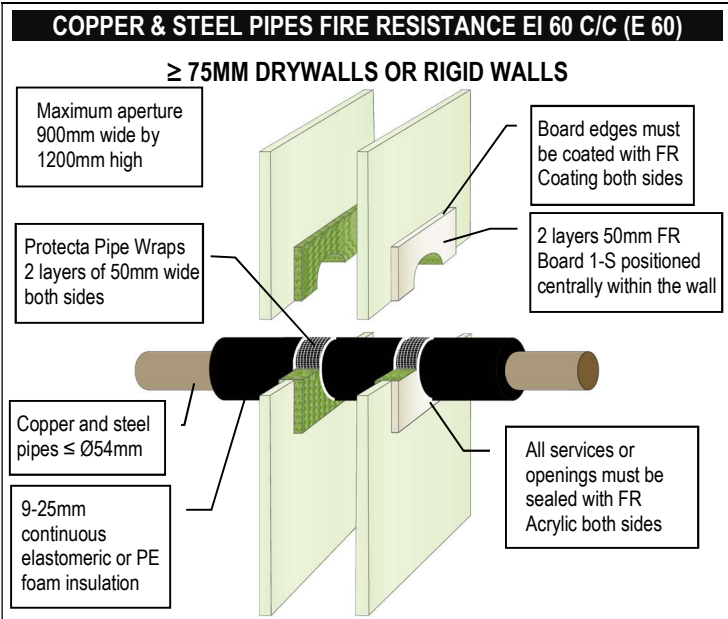


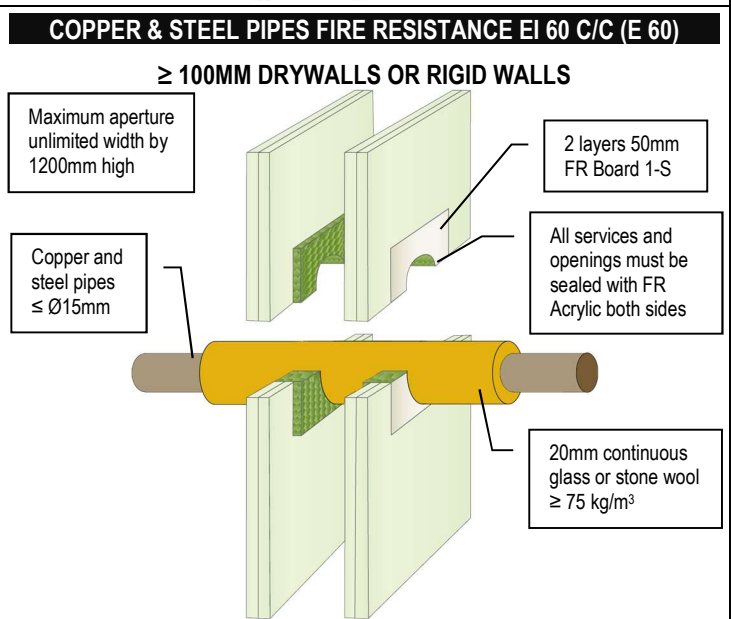
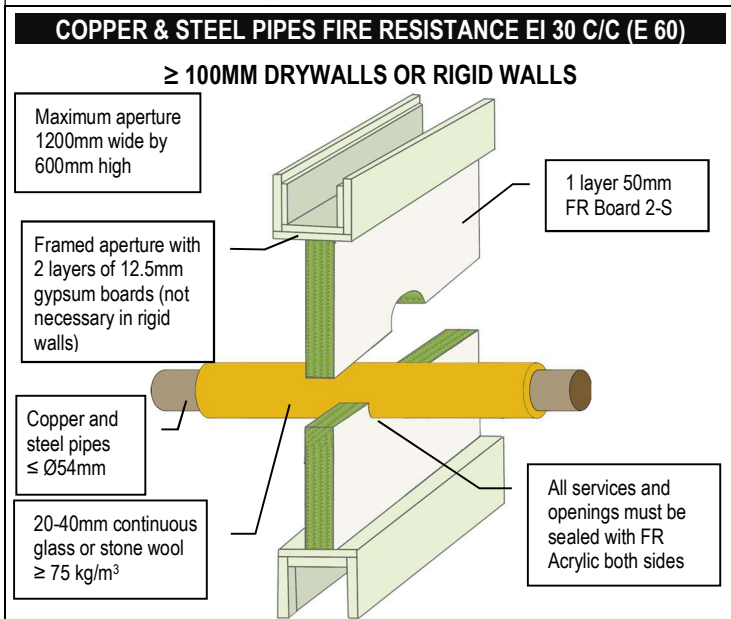
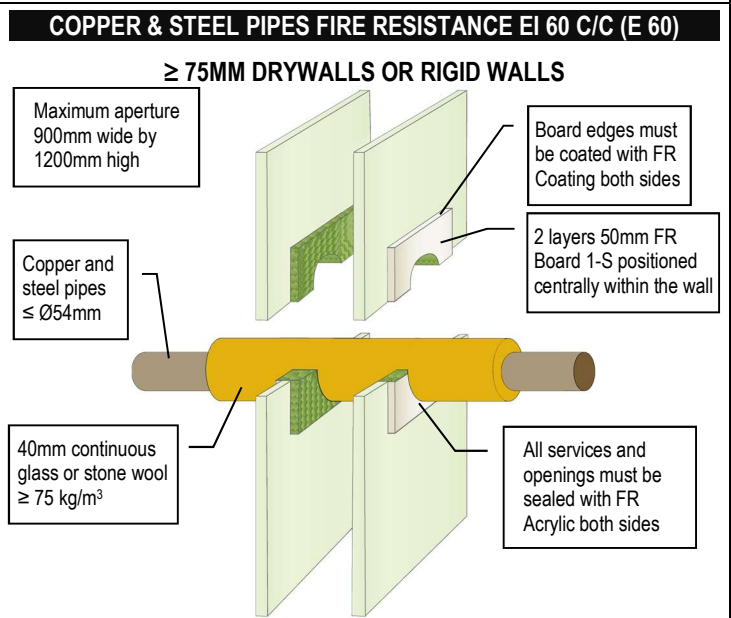
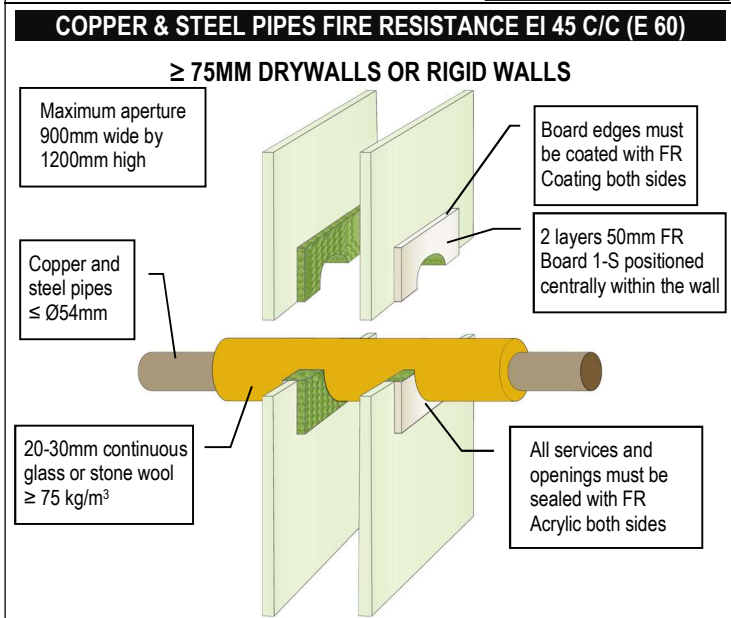
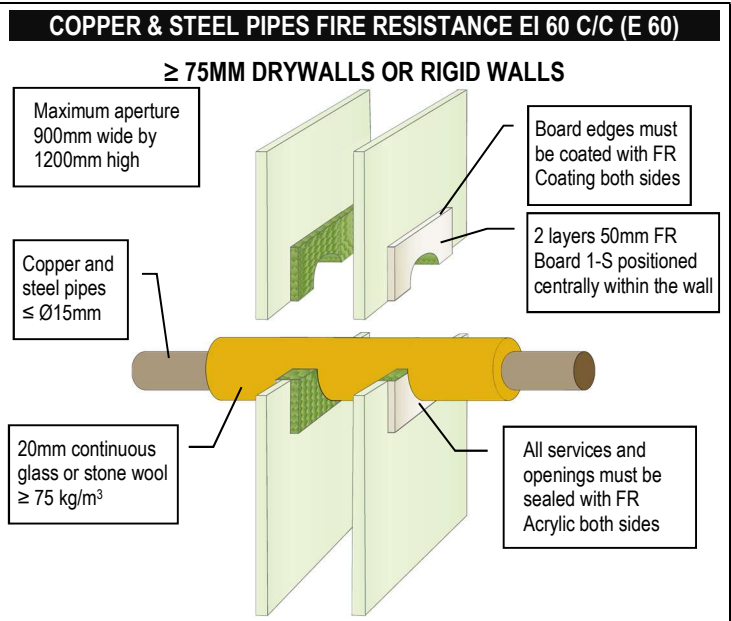
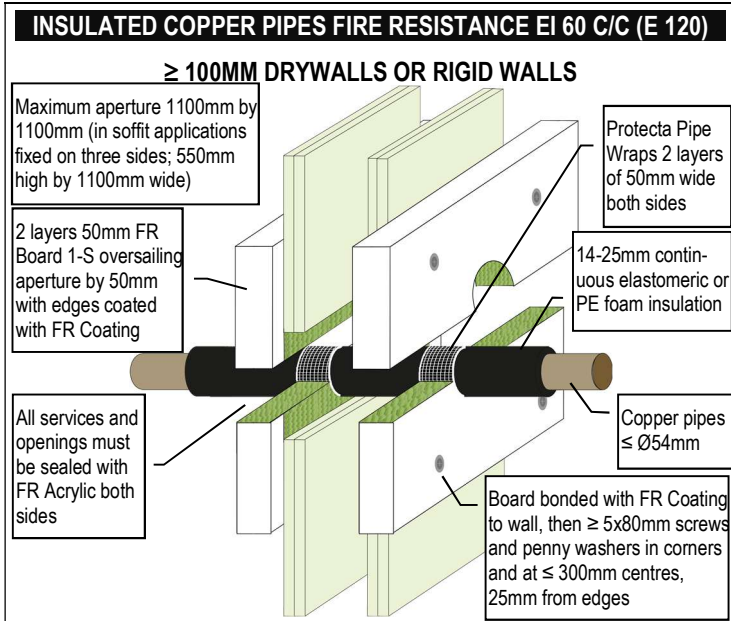


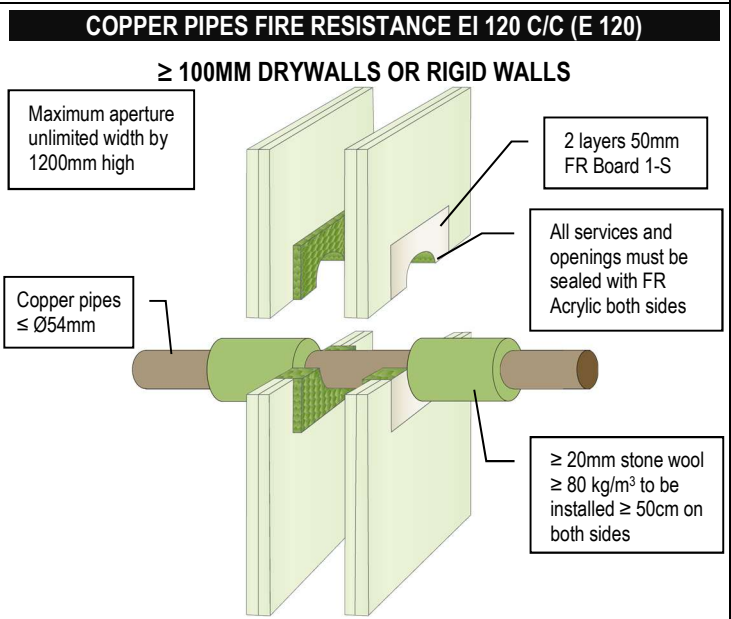
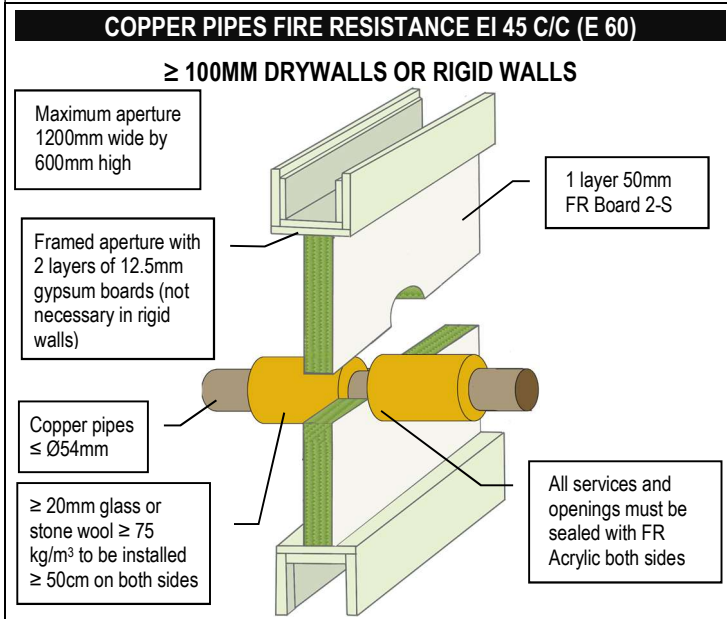
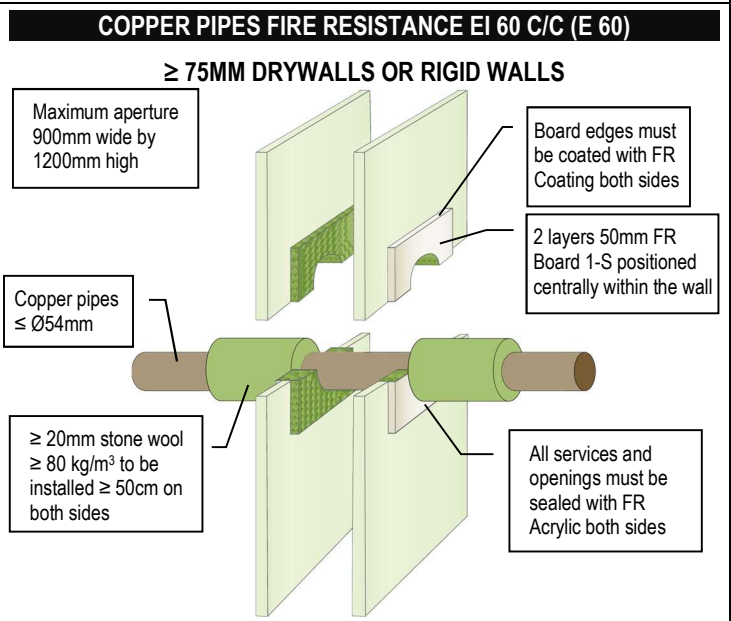
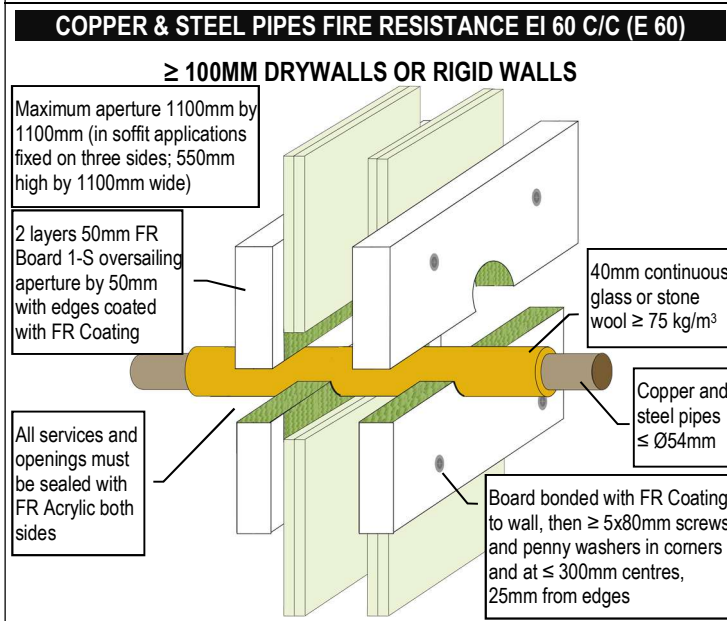
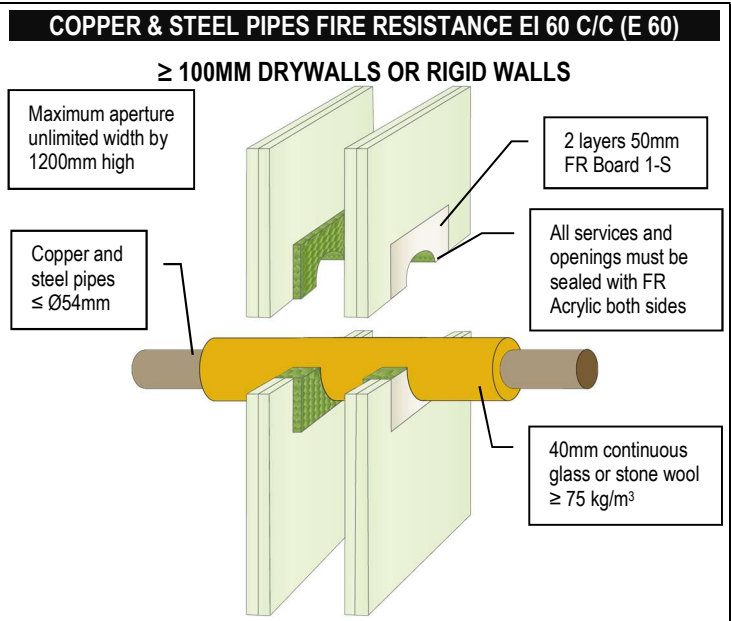
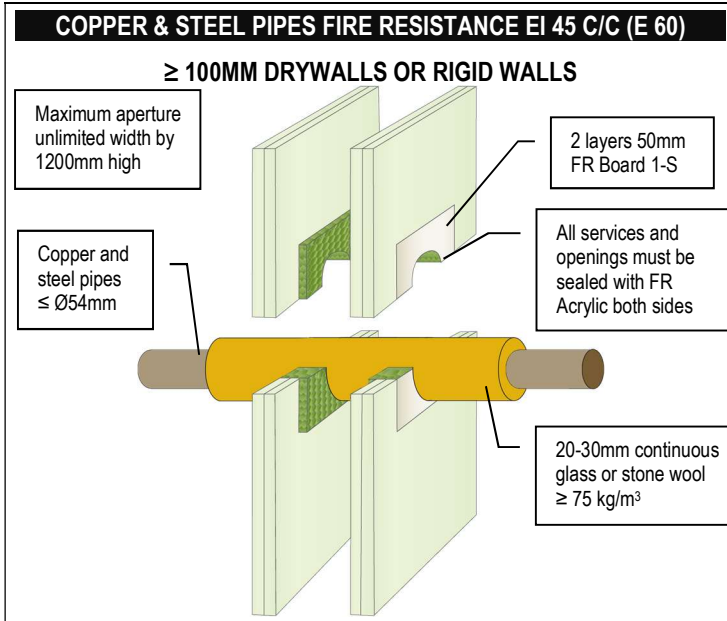


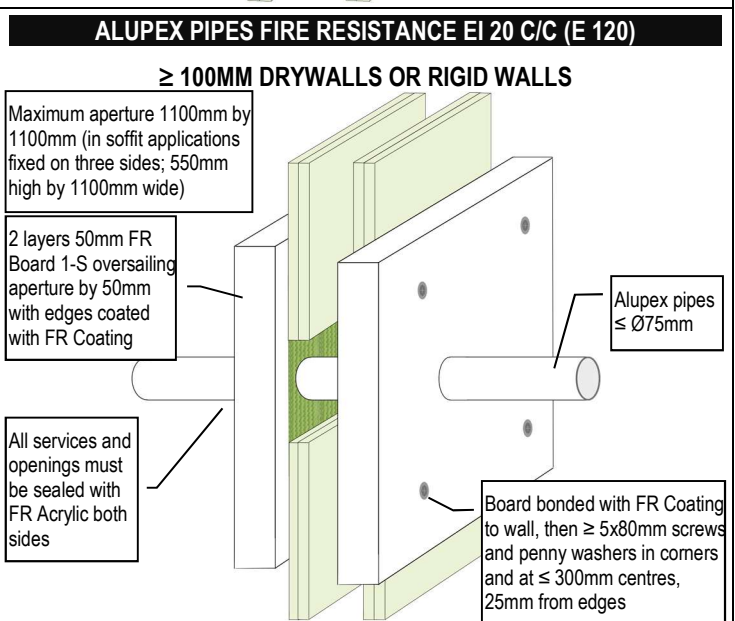
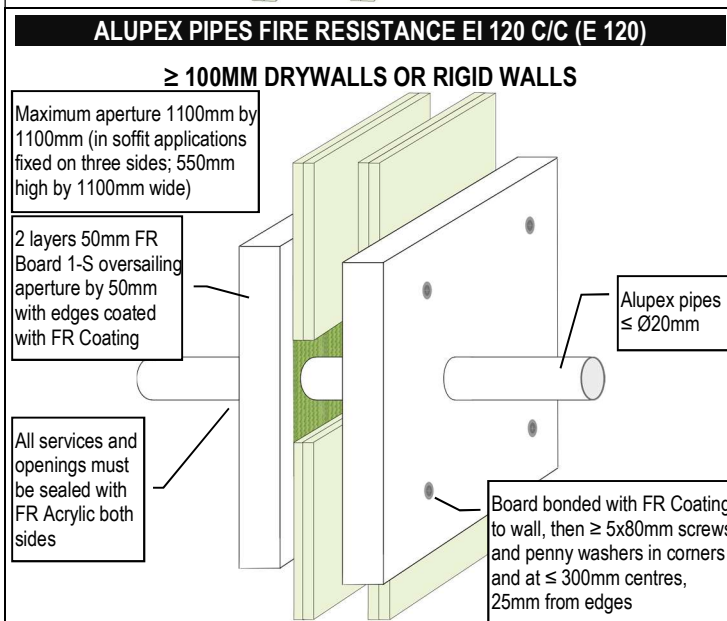
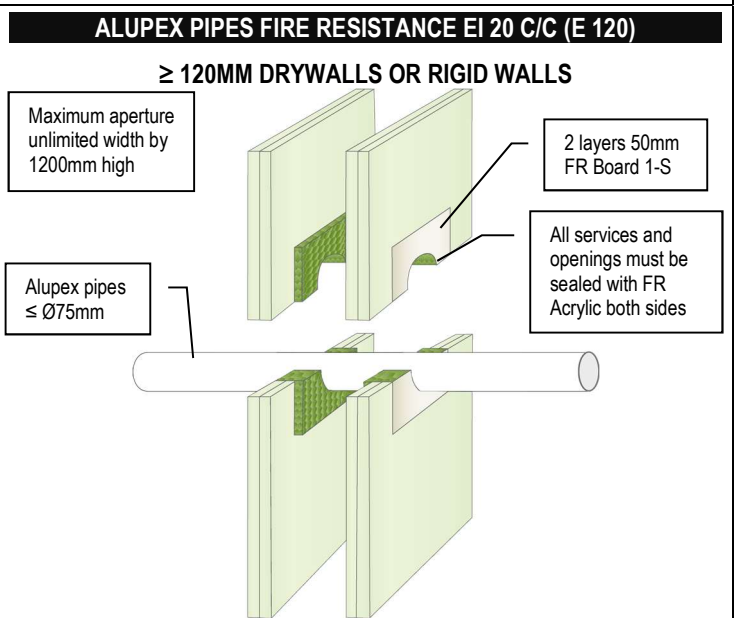
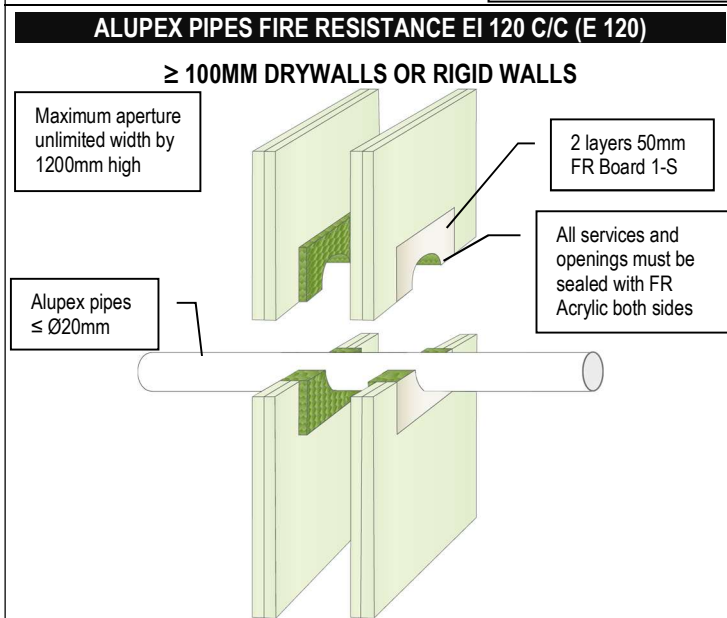
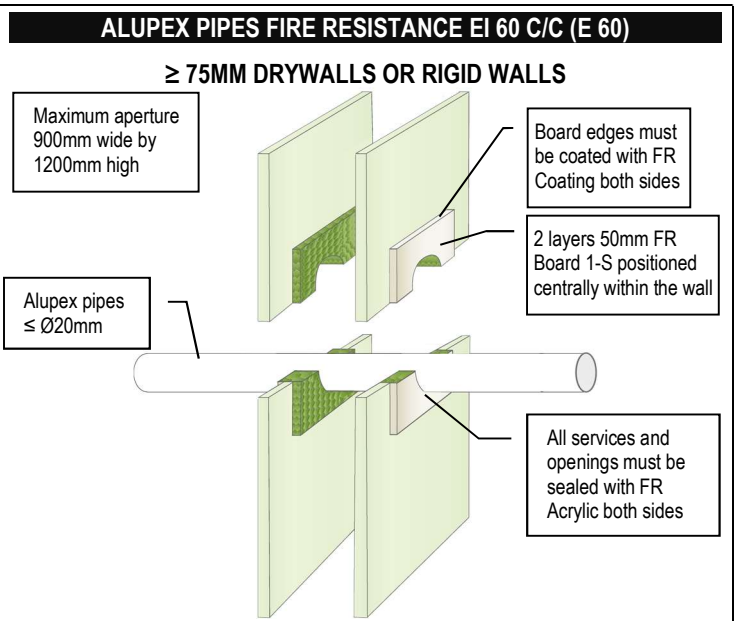
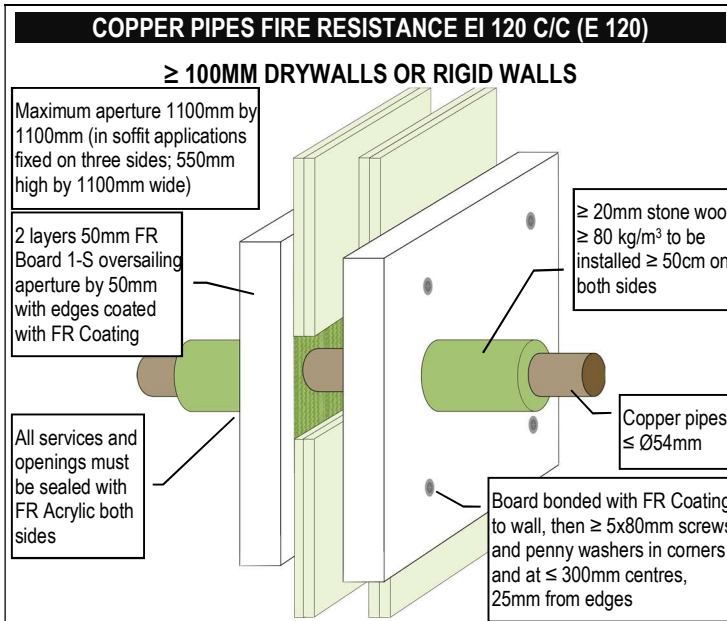


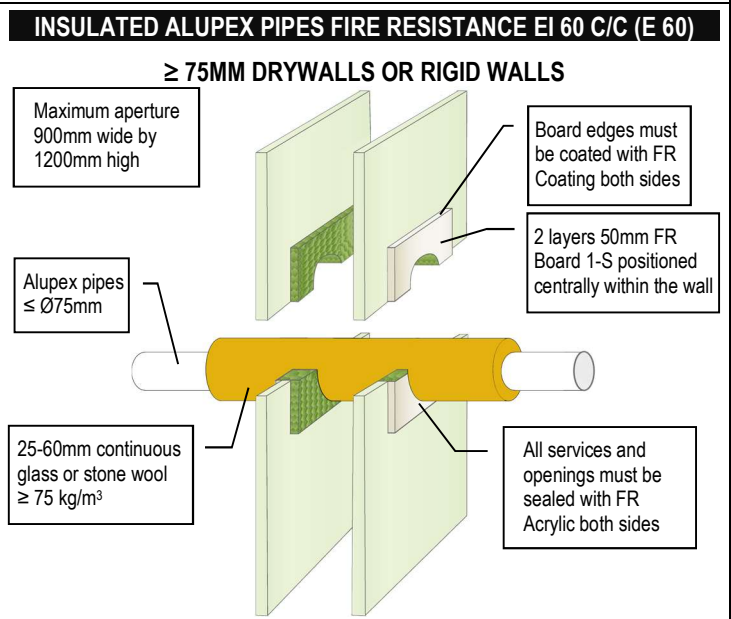
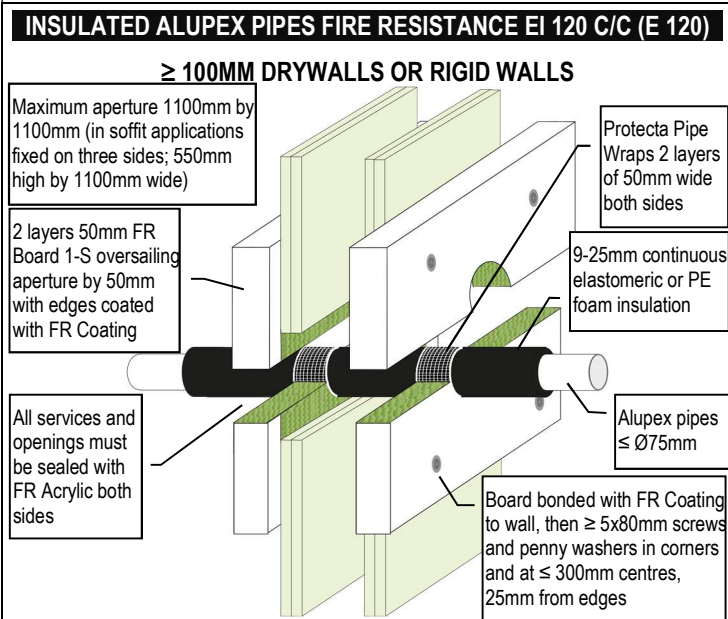
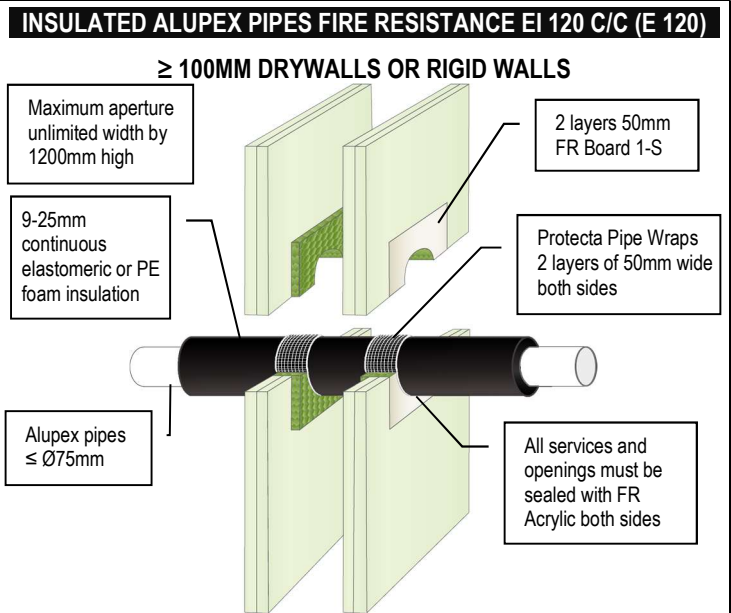
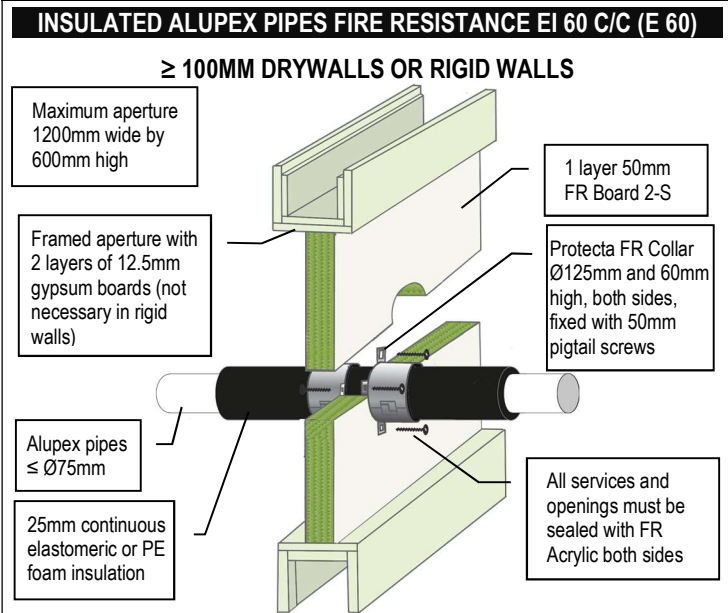
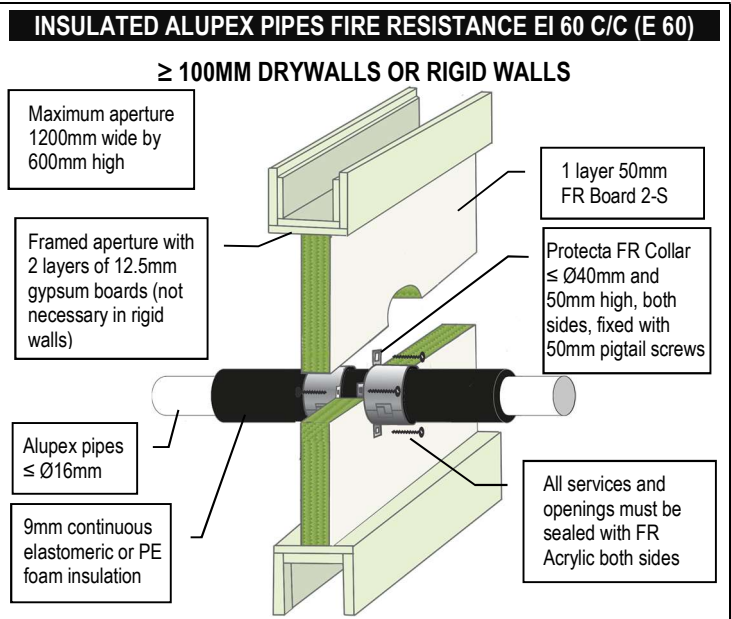
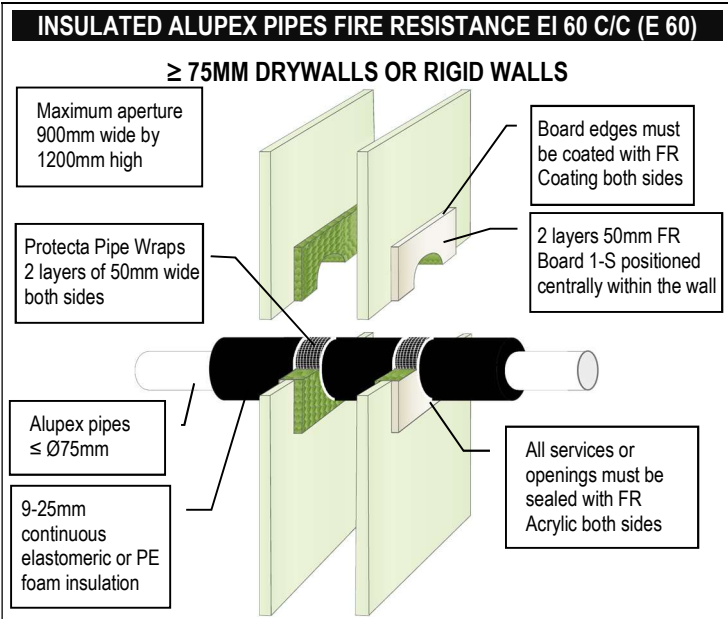


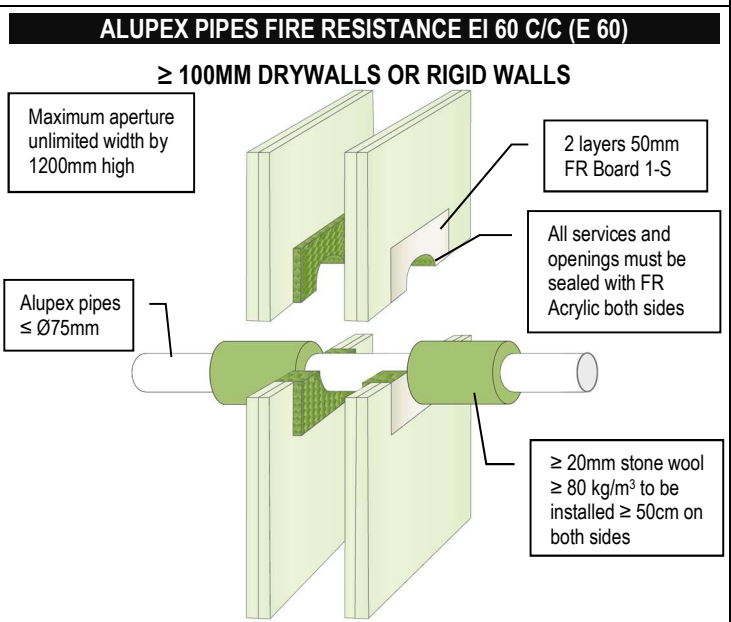
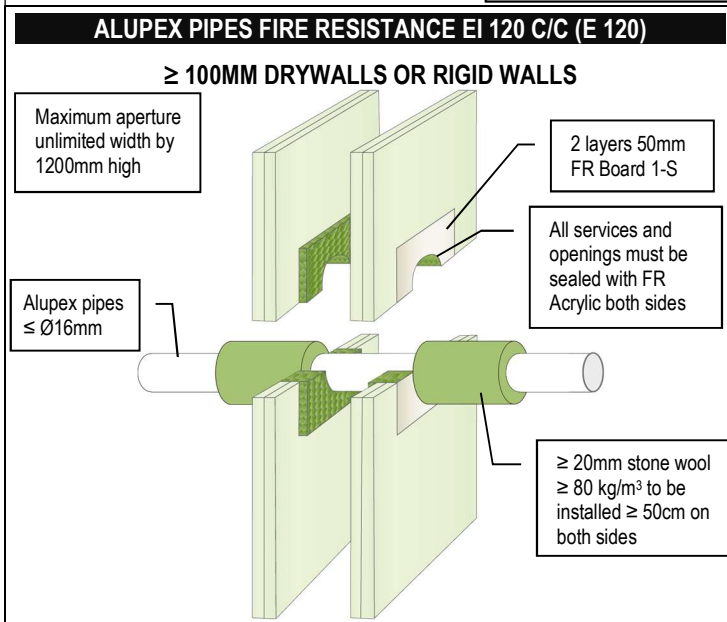
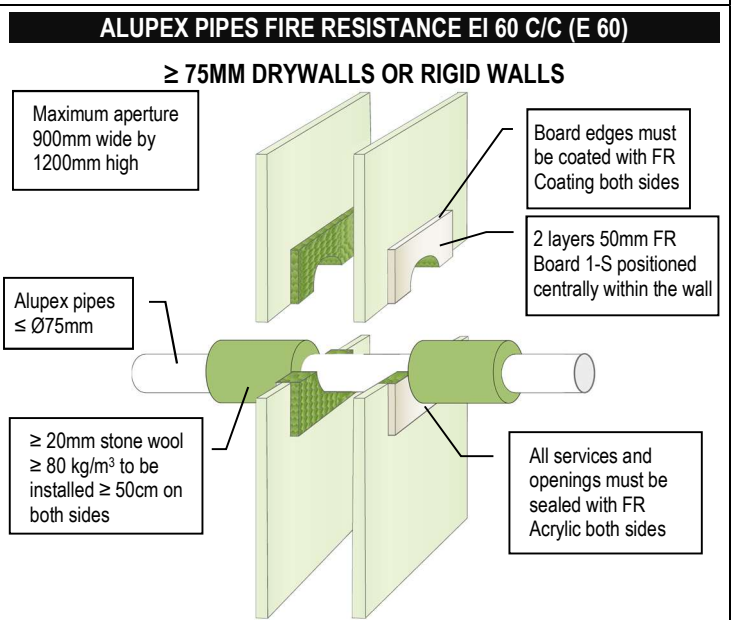
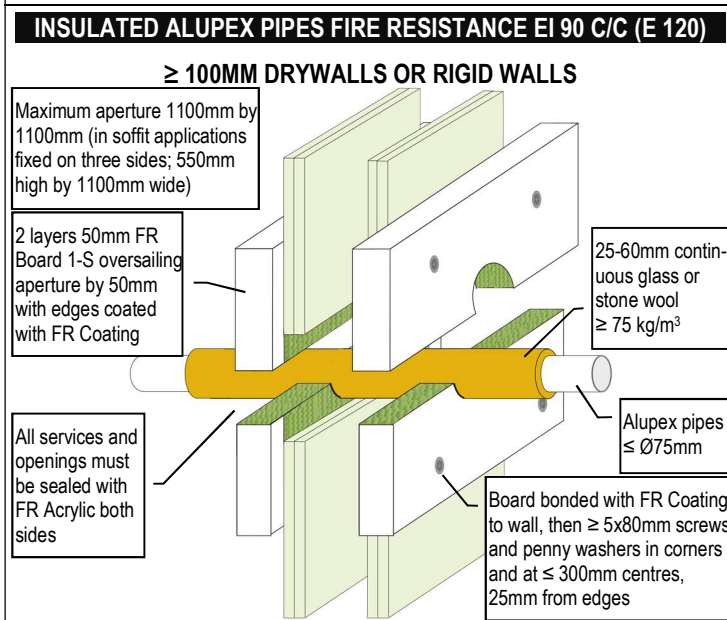
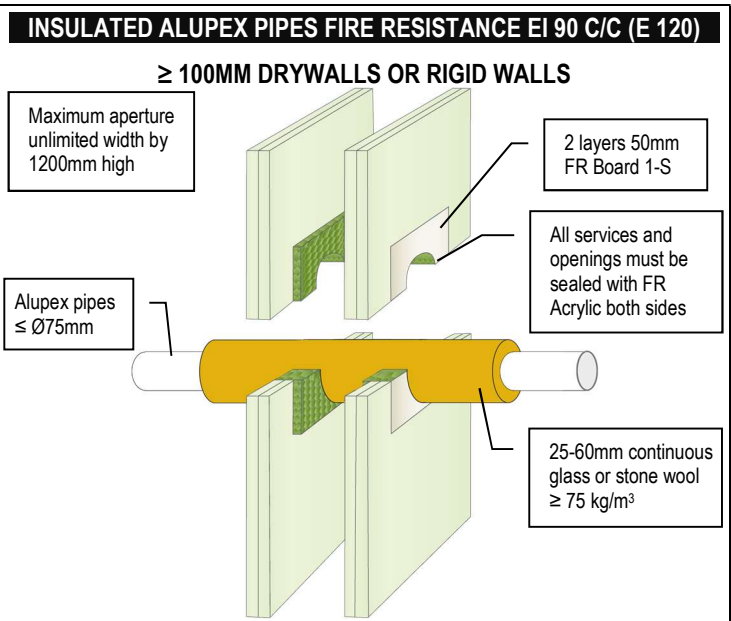
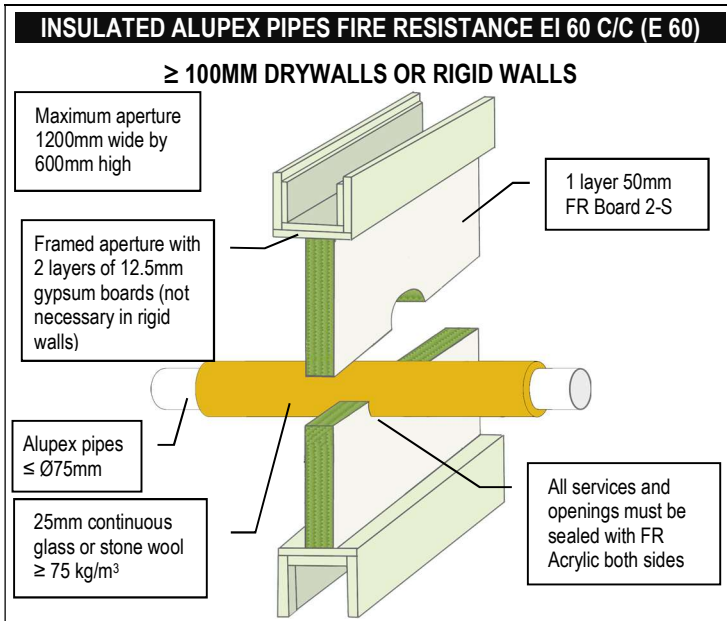


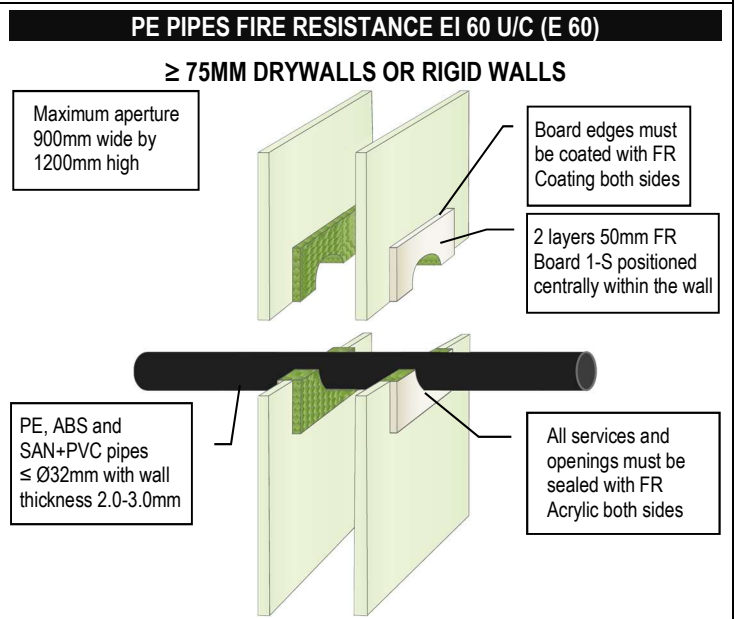
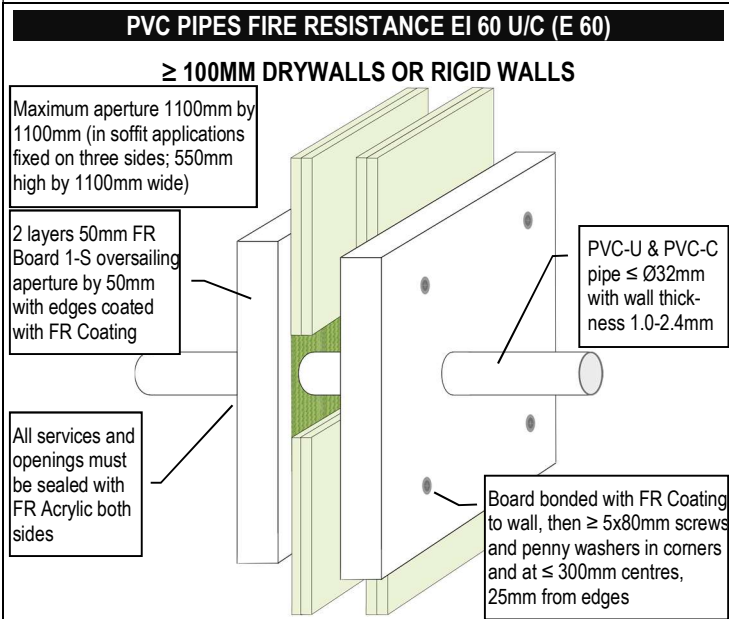
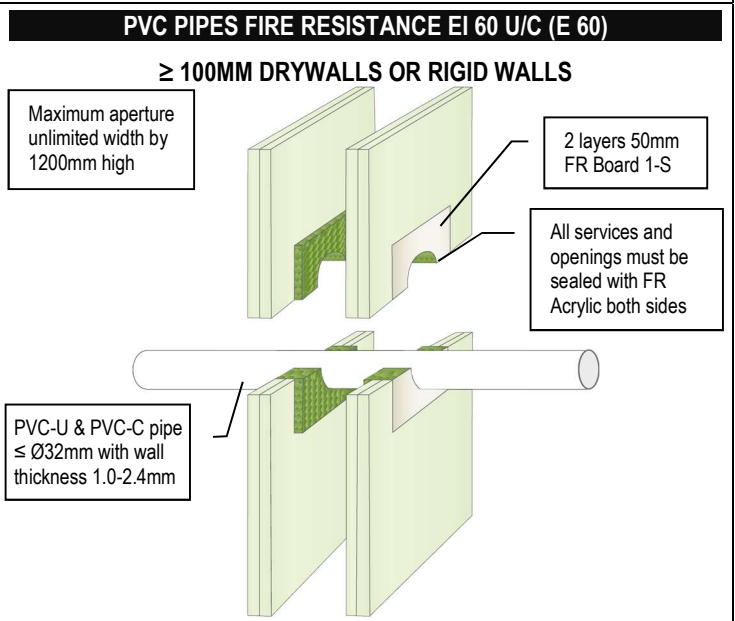
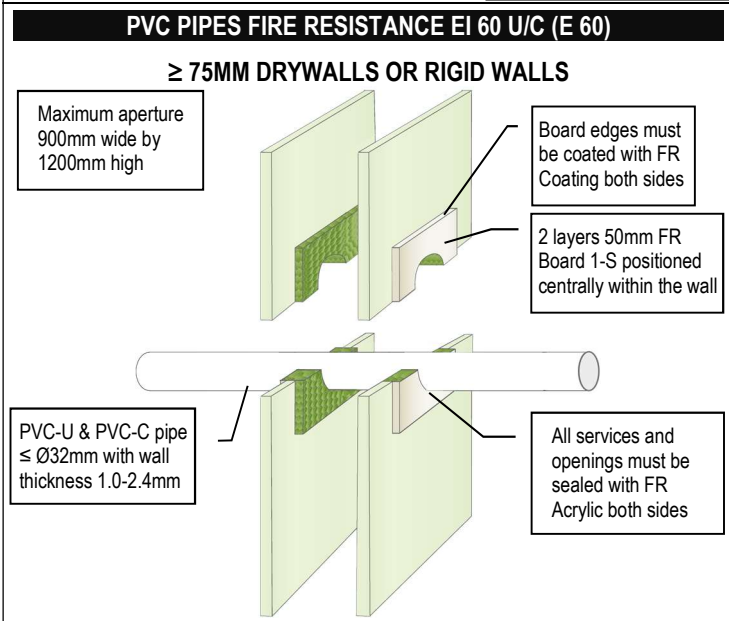
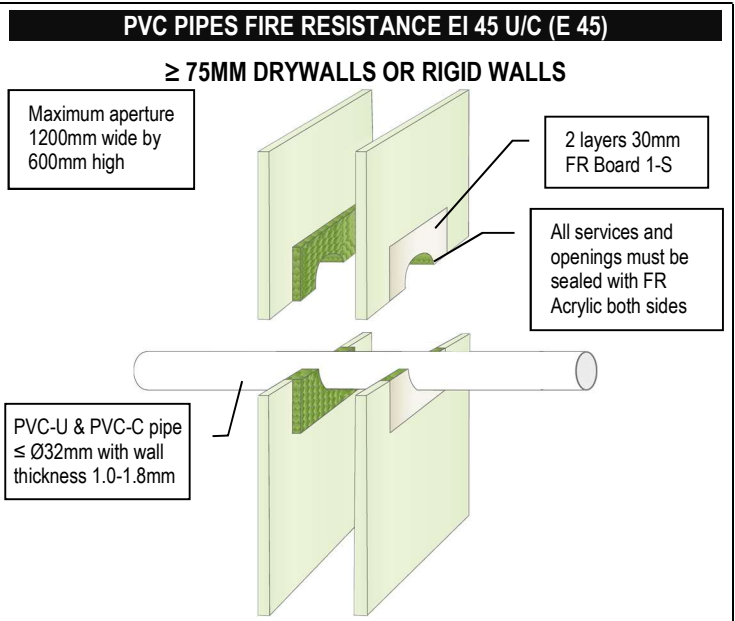
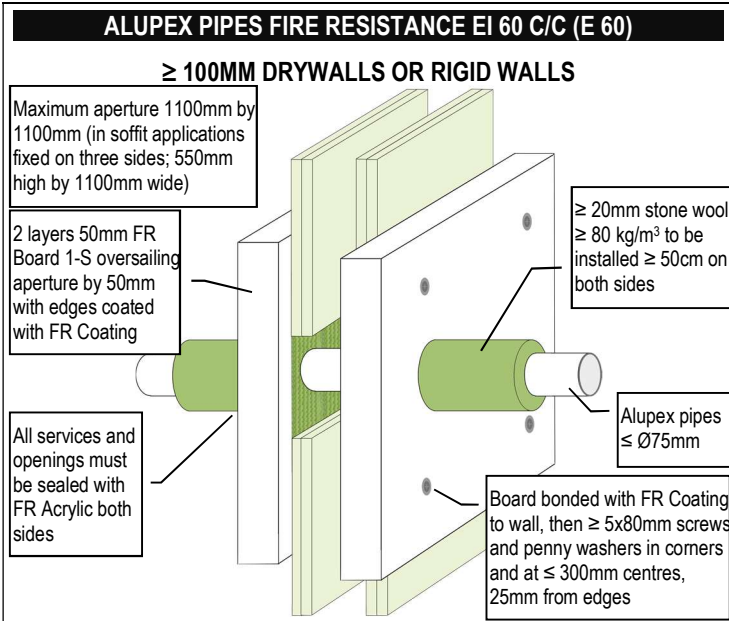


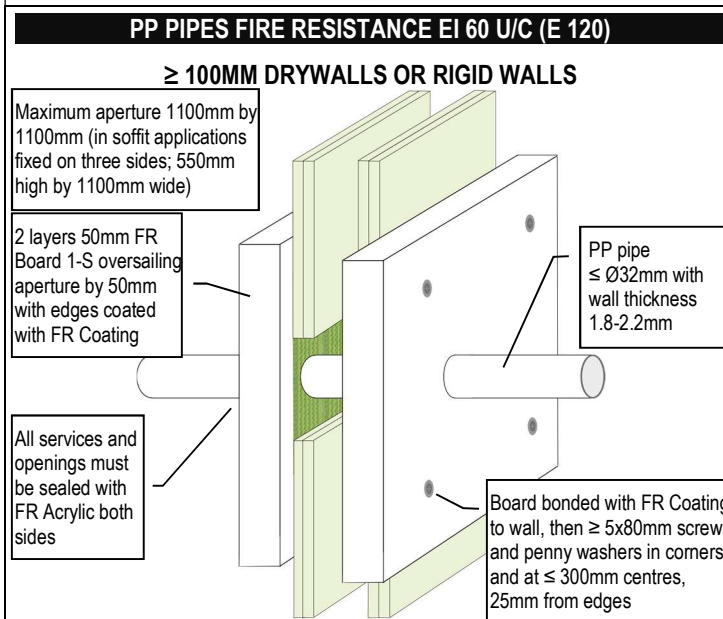
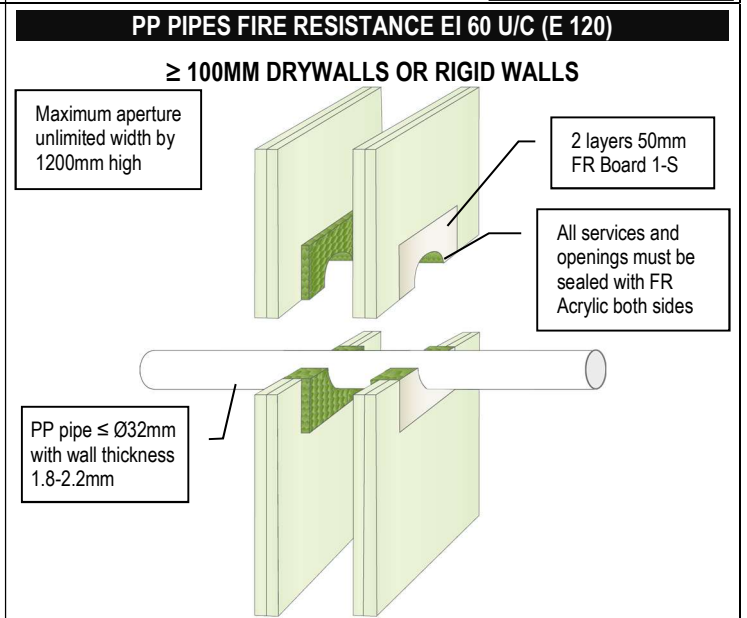
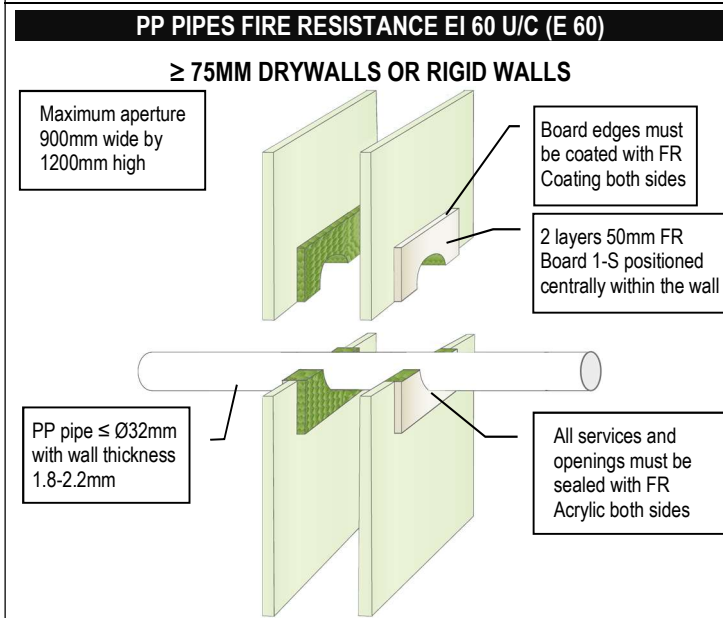
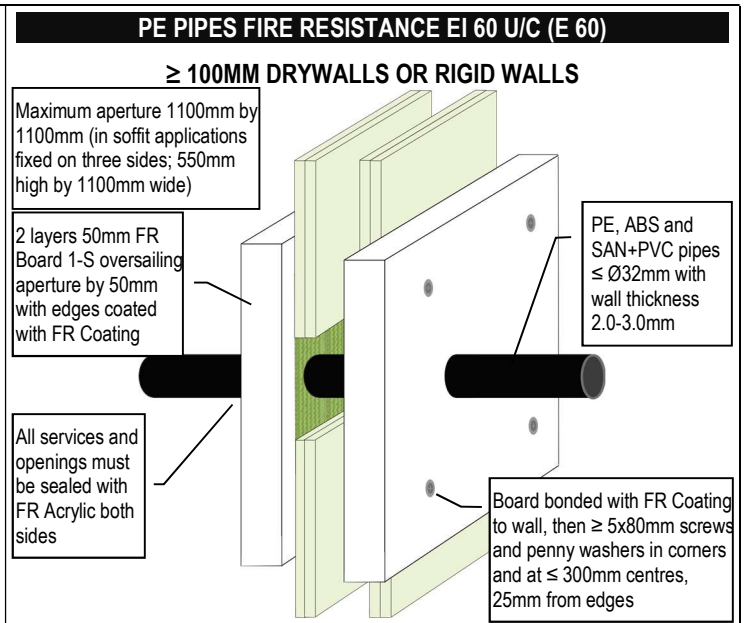
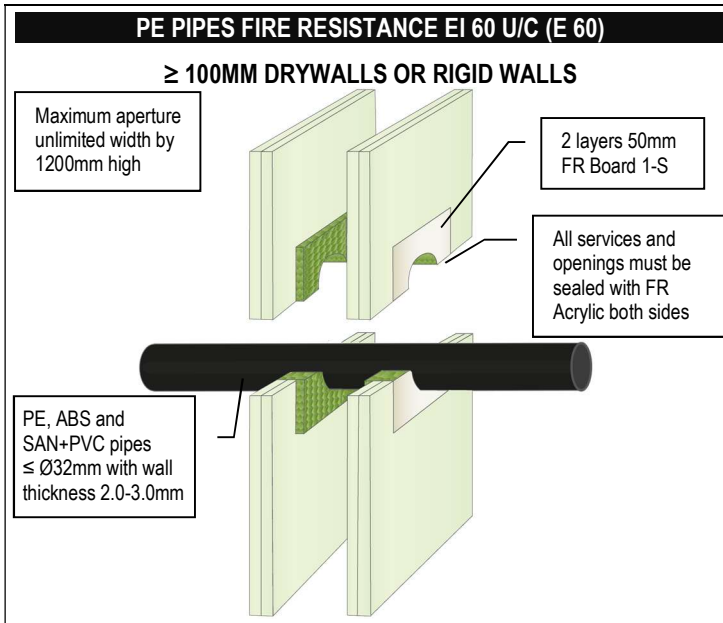




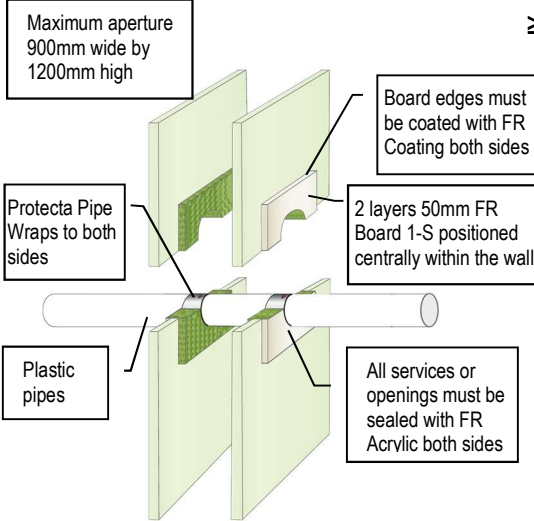








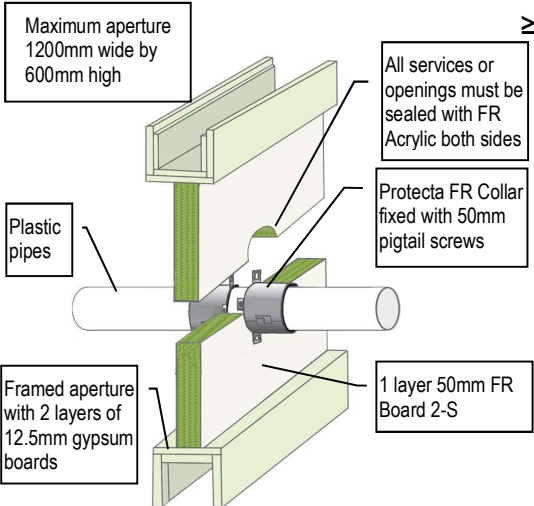
PLASTIC PIPES FIRE RESISTANCE EI 60



≥ 75MM DRYWALLS OR RIGID WALLS

Services	Pipe Wall Thickness	FR Pipe Wrap	Classification
≤ Ø 40mm PVC-U & PVC-C	1.9 – 3.0mm	50 x 1.8mm (1 layer)	EI 60 U/U (E 60 U/U)
≤ Ø 40mm PE, ABS & SAN+PVC	2.4 – 3.7mm	50 x 1.8mm (1 layer)	EI 60 U/U (E 60 U/U)
≤ Ø 40mm PP	1.8 – 5.5mm	50 x 1.8mm (1 layer)	EI 60 U/U (E 60 U/U)
≤ Ø 110mm PVC-U & PVC-C	2.7 – 6.6mm	50 x 3.6mm (2 layers)	EI 60 U/C (E 60 U/C)
≤ Ø 110mm PE, ABS & SAN+PVC	4.2 – 10.0mm	50 x 3.6mm (2 layers)	EI 60 U/C (E 60 U/C)
≤ Ø 110mm PP	2.7 – 15.1mm	50 x 3.6mm (2 layers)	EI 60 U/U (E 60 U/U)
≤ Ø 125mm PVC-U & PVC-C	3.7 – 7.4mm	50 x 5.4mm (3 layers)	EI 60 U/C (E 60 U/C)
≤ Ø 125mm PE, ABS & SAN+PVC	4.8 – 12.0mm	50 x 5.4mm (3 layers)	EI 60 U/C (E 60 U/C)
≤ Ø 125mm PP	3.1 – 17.1mm	50 x 5.4mm (3 layers)	EI 60 U/C (E 60 U/C)
≤ Ø 160mm PVC-U & PVC-C	4.0 – 9.5mm	50 x 10.8mm (6 layers)	EI 60 U/C (E 60 U/C)
≤ Ø 160mm PE, ABS & SAN+PVC	4.9 – 14.6mm	50 x 10.8mm (6 layers)	EI 60 U/C (E 60 U/C)
≤ Ø 160mm PP	4.9 – 21.9mm	50 x 10.8mm (6 layers)	EI 60 U/C (E 60 U/C)
≤ Ø 200mm PVC-U & PVC-C	4.9 – 11.9mm	50 x 10.8mm (6 layers)	EI 60 C/C (E 60 C/C)
≤ Ø 200mm PE, ABS & SAN+PVC	6.2 – 18.2mm	50 x 10.8mm (6 layers)	EI 60 C/C (E 60 C/C)
≤ Ø 200mm PP	4.9 – 18.2mm	50 x 10.8mm (6 layers)	EI 60 C/C (E 60 C/C)
≤ Ø 315mm PVC-U & PVC-C	7.7 – 12.1mm	50 x 18.0mm (10 layers)	EI 60 C/C (E 60 C/C)
≤ Ø 315mm PE, ABS & SAN+PVC	18.7mm	50 x 18.0mm (10 layers)	EI 60 C/C (E 60 C/C)
≤ Ø 315mm PP	28.6mm	50 x 18.0mm (10 layers)	EI 60 C/C (E 60 C/C)
≤ Ø 400mm PVC-U & PVC-C	9.8 – 15.3mm	50 x 28.8mm (16 layers)	EI 60 C/C (E 60 C/C)
≤ Ø 400mm PE, ABS & SAN+PVC	23.7mm	50 x 28.8mm (16 layers)	EI 60 C/C (E 60 C/C)

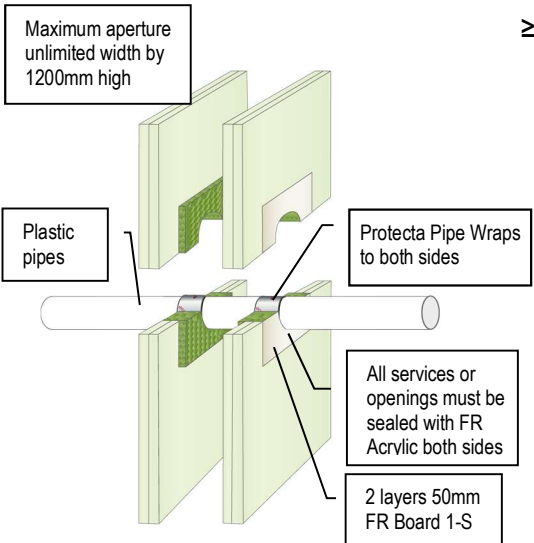
PLASTIC PIPES FIRE RESISTANCE EI 30-60



≥ 100MM DRYWALLS OR RIGID WALLS

Pipe & Collar Descriptions	Pipe Wall Thickness	Min. Collar Height	Classification
≤ Ø 110mm PVC-U & PVC-C	1.9 – 6.6mm	30mm	EI 30 U/C (E 90 U/C)
≤ Ø 50mm PVC-U & PVC-C	1.9 – 3.7mm	50mm	EI 60 U/C (E 120 U/C)
≤ Ø 110mm PVC-U & PVC-C	2.1 – 6.6mm	50mm	EI 60 U/C (E 90 U/C)
≤ Ø 160mm PVC-U & PVC-C	3.1 – 9.5mm	60mm	EI 60 C/C (E 60 C/C)
≤ Ø 110mm PE, ABS & SAN+PVC	3.4 – 10.0mm	30mm	EI 45 U/C (E 60 U/C)
≤ Ø 50mm PE, ABS & SAN+PVC	3.0 – 4.6mm	50mm	EI 60 U/C (E 120 U/C)
≤ Ø 110mm PE, ABS & SAN+PVC	3.0 – 10.0mm	50mm	EI 60 C/C (E 90 C/C)
≤ Ø 160mm PE, ABS & SAN+PVC	3.9 – 9.5mm	60mm	EI 60 C/C (E 60 C/C)
≤ Ø 90mm PP	1.8 – 4.6mm	50mm	EI 60 C/C (E 60 C/C)
≤ Ø 110mm PP	2.7mm	50mm	EI 60 C/C (E 60 C/C)
≤ Ø 160mm PP	3.4 – 9.1mm	60mm	EI 60 C/C (E 60 C/C)

PLASTIC PIPES FIRE RESISTANCE EI 60-120

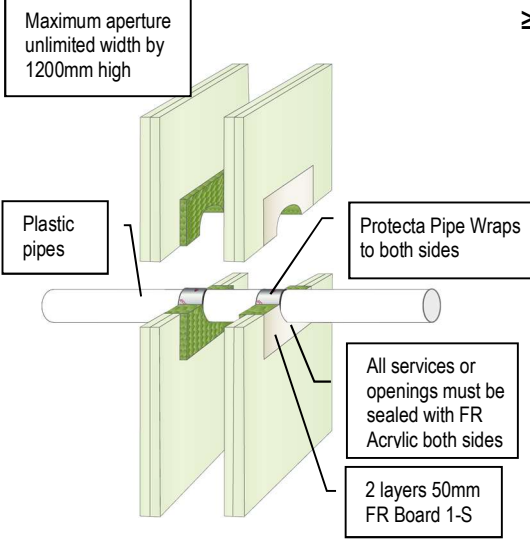


≥ 100MM DRYWALLS OR RIGID WALLS

Services	Pipe Wall Thickness	FR Pipe Wrap	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	4.0 – 9.5mm	50 x 10.8mm (6 layers)	EI 60 U/C (E 90 U/C)
≤ Ø 160mm PE, ABS & SAN+PVC	4.9 – 14.6mm	50 x 10.8mm (6 layers)	EI 60 U/C (E 90 U/C)
≤ Ø 160mm PP	4.9 – 21.9mm	50 x 10.8mm (6 layers)	EI 60 U/C (E 60 U/C)
≤ Ø 200mm PVC-U & PVC-C	4.9 – 11.9mm	50 x 10.8mm (6 layers)	EI 90 C/C (E 90 C/C)
≤ Ø 200mm PE, ABS & SAN+PVC	6.2 – 18.2mm	50 x 10.8mm (6 layers)	EI 90 C/C (E 90 C/C)
≤ Ø 200mm PP	4.9 – 18.2mm	50 x 10.8mm (6 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 315mm PE, ABS & SAN+PVC	18.7mm	50 x 18.0mm (10 layers)	EI 60 C/C (E 60 C/C)
≤ Ø 315mm PP	28.6mm	50 x 18.0mm (10 layers)	EI 60 C/C (E 60 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)
≤ Ø 400mm PE, ABS & SAN+PVC	23.7mm	50 x 28.8mm (16 layers)	EI 60 C/C (E 60 C/C)

PLASTIC PIPES FIRE RESISTANCE EI 120

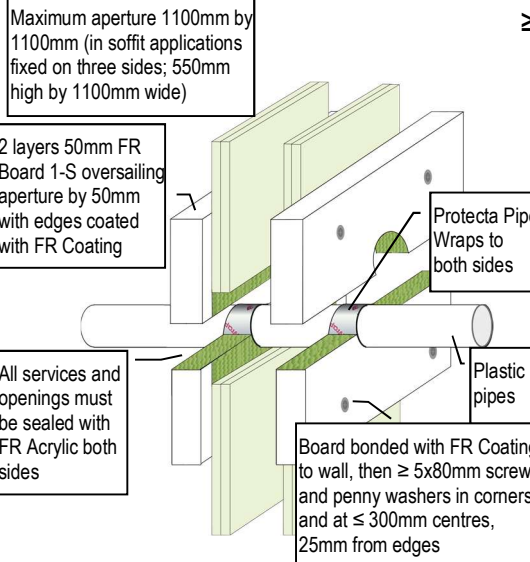
≥ 120MM DRYWALLS OR RIGID WALLS



Services	Pipe Wall Thickness	FR Pipe Wrap	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 PE, ABS & SAN+PVC	3.8 – 4.6mm	50 x 1.8mm (1 layer)	EI 120 C/C (E 120 C/C)
≤ 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 120 C/C (E 120 C/C)
≤ Ø 110mm PE, ABS & SAN+PVC	3.4 – 10.0mm	50 x 3.6mm (2 layers)	EI 120 C/C (E 120 C/C)
≤ Ø 110mm PP	2.7 – 10.0mm	50 x 3.6mm (2 layers)	EI 120 C/C (E 120 C/C)
≤ Ø 160mm PVC-U & PVC-C	4.0 – 9.5mm	50 x 10.8mm (6 layers)	EI 120 C/C (E 120 C/C)
≤ Ø 160mm PE, ABS & SAN+PVC	4.9 – 14.6mm	50 x 10.8mm (6 layers)	EI 120 C/C (E 120 C/C)
≤ Ø 160mm PP	4.9 – 14.6mm	50 x 10.8mm (6 layers)	EI 120 C/C (E 120 C/C)

PVC & PE PIPES FIRE RESISTANCE EI 90-120

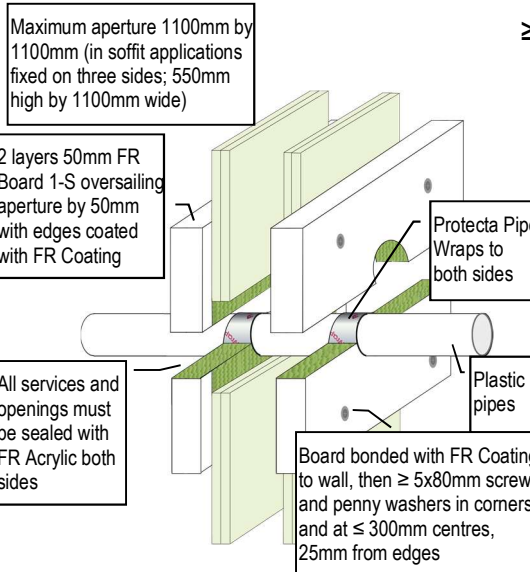
≥ 100MM DRYWALLS OR RIGID WALLS



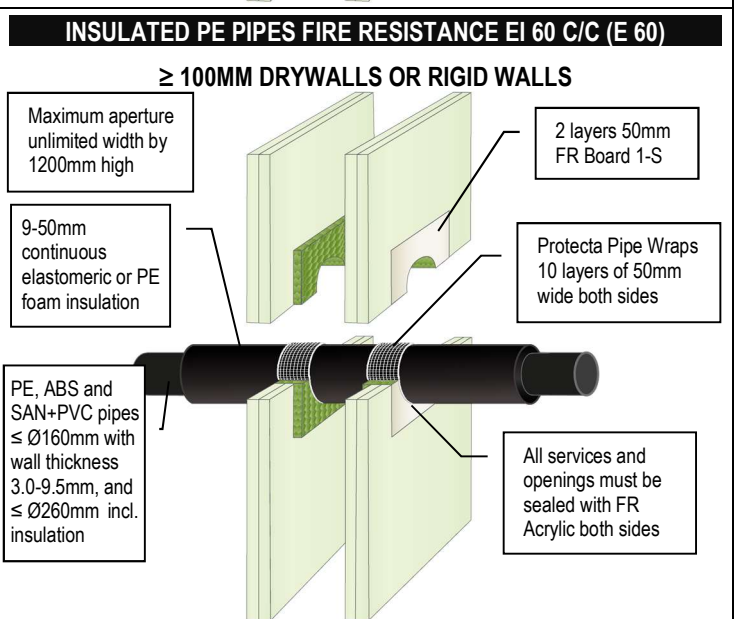
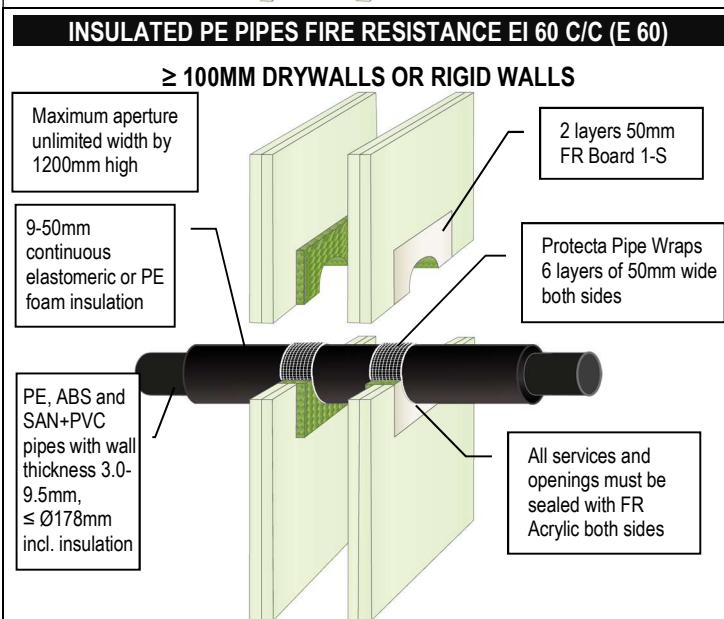
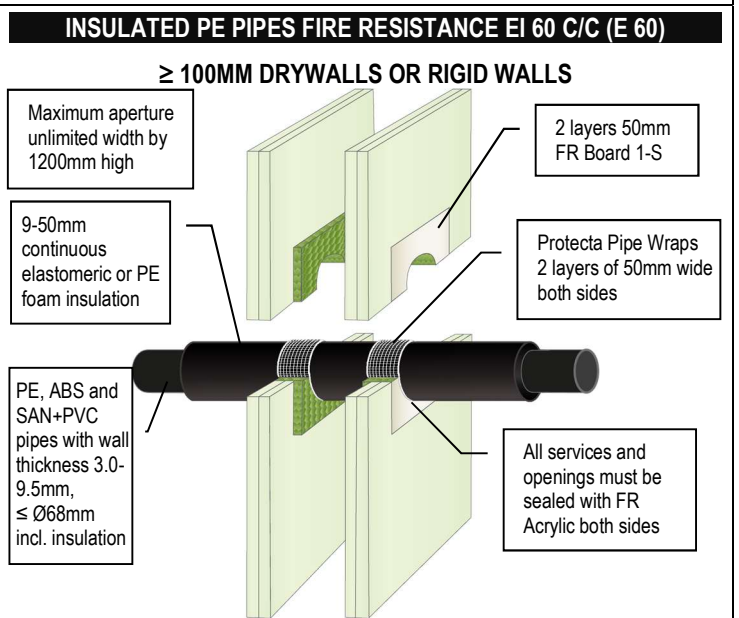
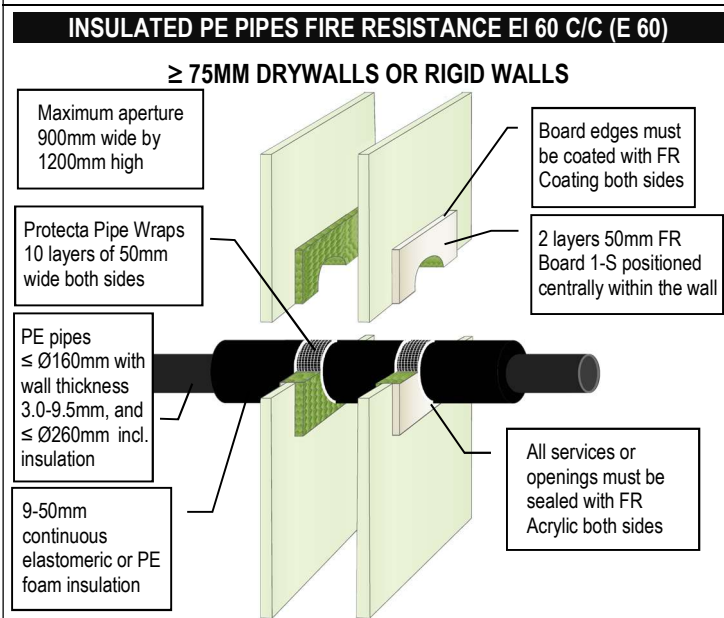
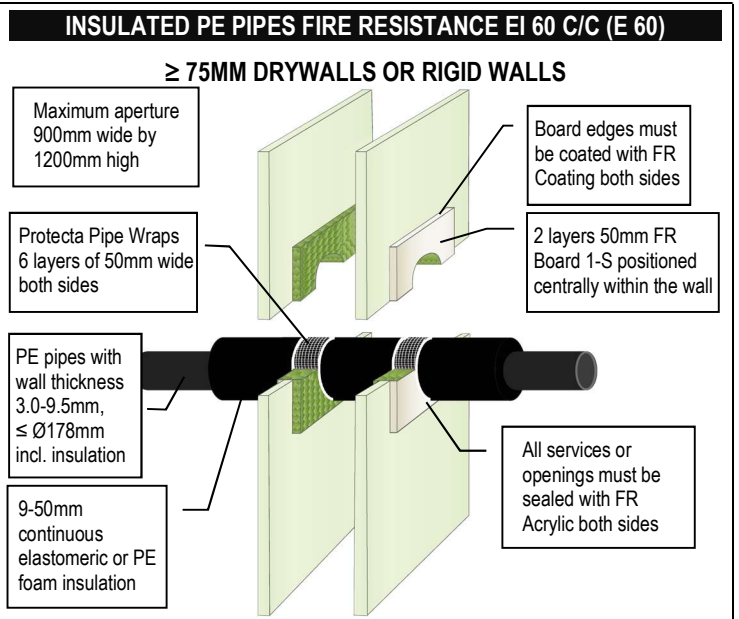
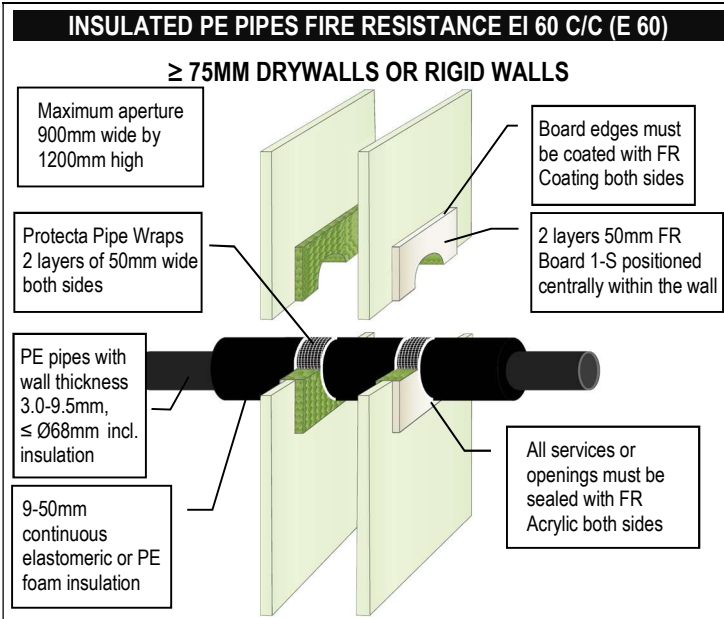
Services	Pipe Wall Thickness	FR Pipe Wrap	Classification
≤ Ø 40mm PVC-U & PVC-C	1.9 – 3.0mm	50 x 1.8mm (1 layer)	EI 120 U/U (E 120 U/U)
≤ Ø 40mm PE, ABS & SAN+PVC	2.4 – 3.7mm	50 x 1.8mm (1 layer)	EI 120 U/U (E 120 U/U)
≤ Ø 40mm PE, ABS & SAN+PVC	3.8 – 4.6mm	50 x 1.8mm (1 layer)	EI 120 C/C (E 120 C/C)
≤ Ø 110mm PVC-U & PVC-C	2.7 – 6.6mm	50 x 3.6mm (2 layers)	EI 120 C/C (E 120 C/C)
≤ Ø 110mm PE, ABS & SAN+PVC	3.4 – 10.0mm	50 x 3.6mm (2 layers)	EI 120 C/C (E 120 C/C)
≤ 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 160mm PVC-U & PVC-C	4.0 – 9.5mm	50 x 10.8mm (6 layers)	EI 120 C/C (E 120 C/C)
≤ Ø 160mm PE, ABS & SAN+PVC	4.9 – 14.6mm	50 x 10.8mm (6 layers)	EI 120 C/C (E 120 C/C)
≤ Ø 200mm PVC-U & PVC-C	4.9 – 11.9mm	50 x 10.8mm (6 layers)	EI 90 C/C (E 90 C/C)
≤ Ø 200mm PE, ABS & SAN+PVC	6.2 – 18.2mm	50 x 10.8mm (6 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 315mm PE, ABS & SAN+PVC	18.7mm	50 x 18.0mm (10 layers)	EI 60 C/C (E 60 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)
≤ Ø 400mm PE, ABS & SAN+PVC	23.7mm	50 x 28.8mm (16 layers)	EI 60 C/C (E 60 C/C)

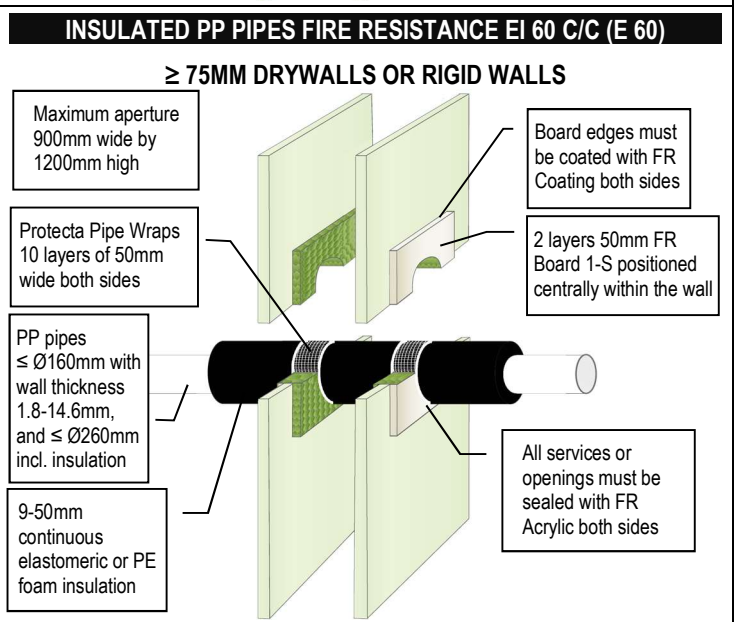
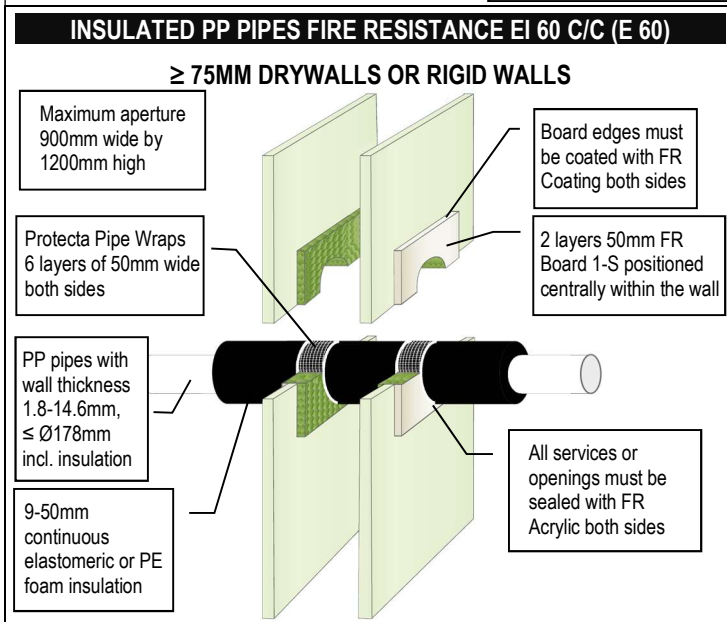
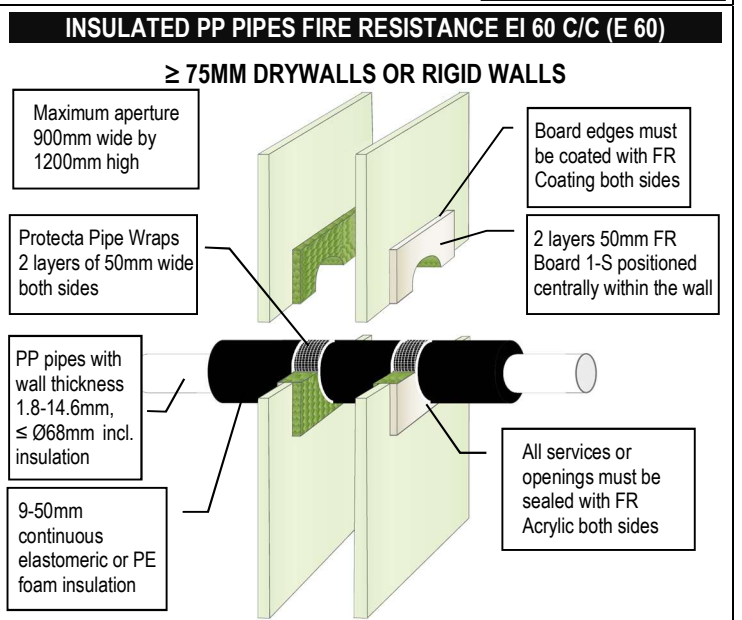
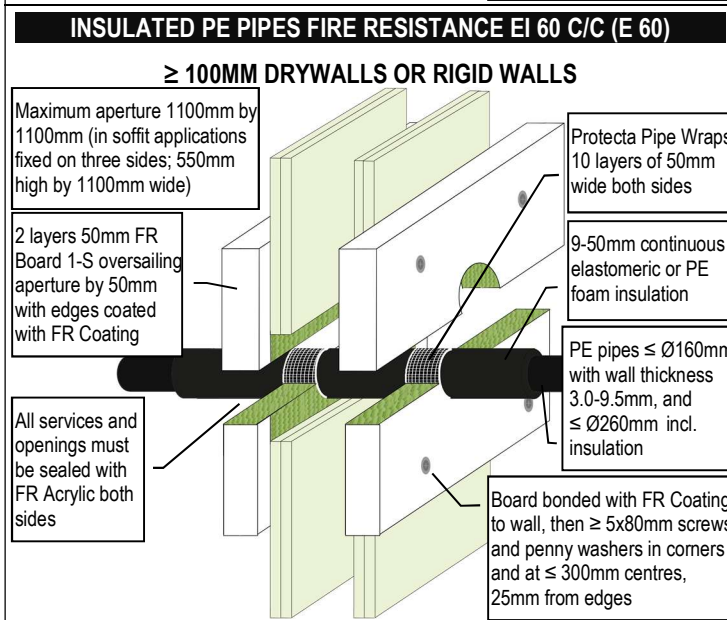
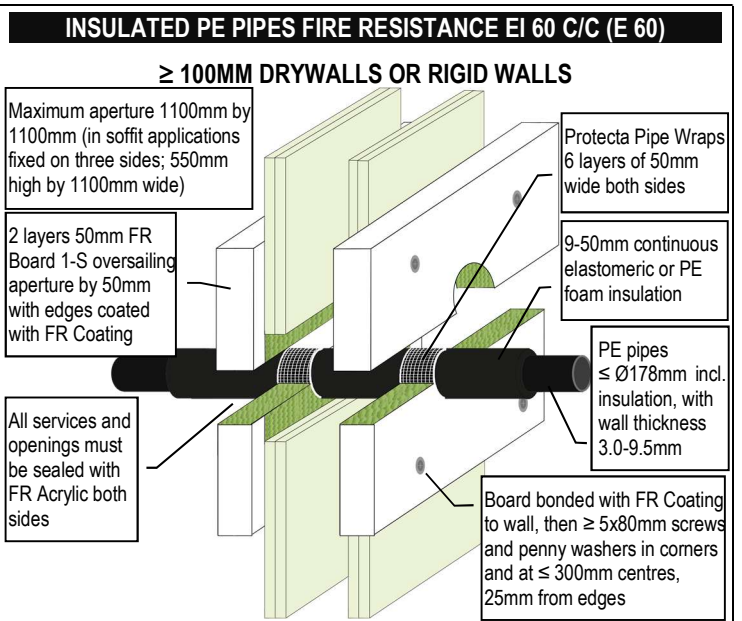
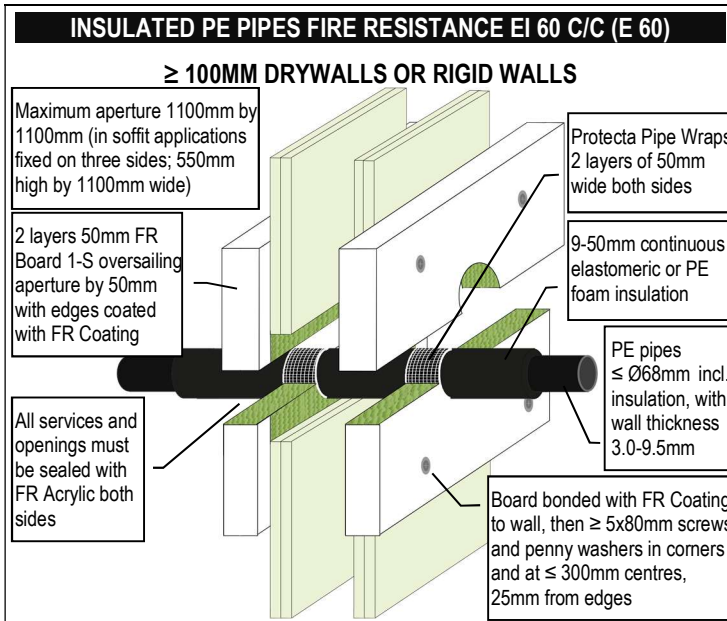
PP PIPES FIRE RESISTANCE EI 90-120

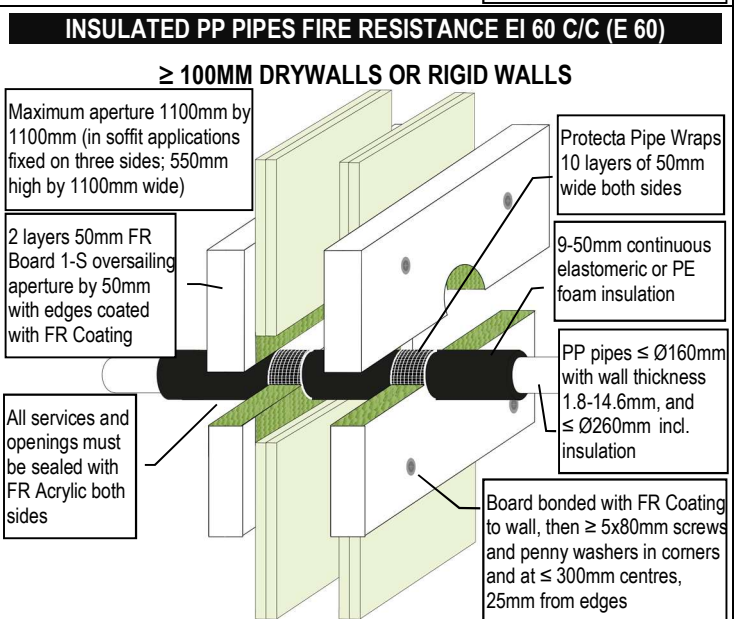
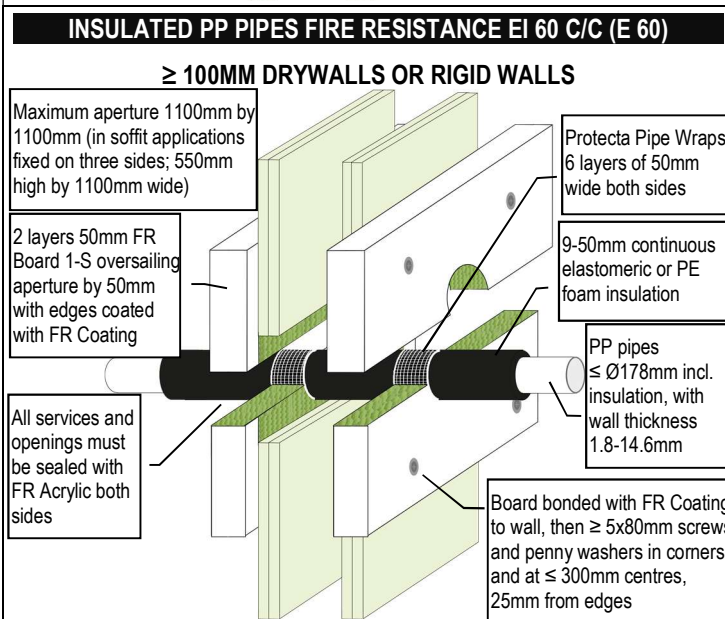
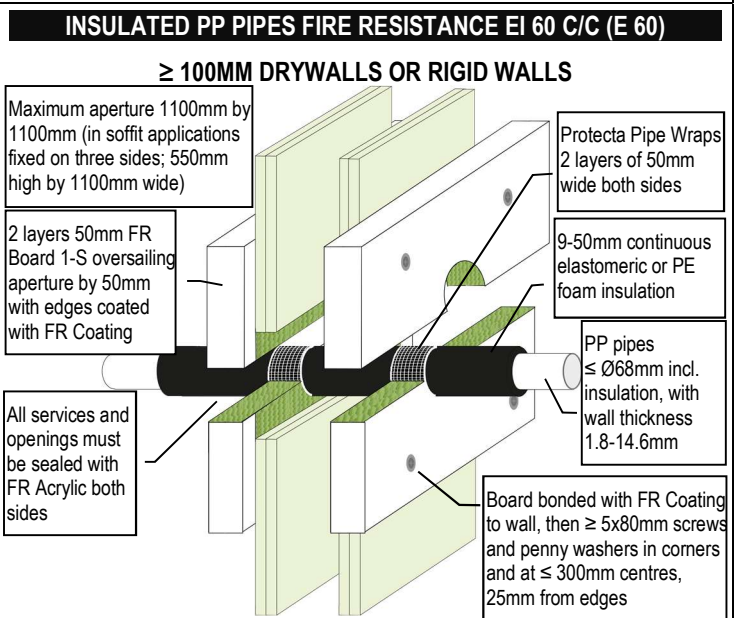
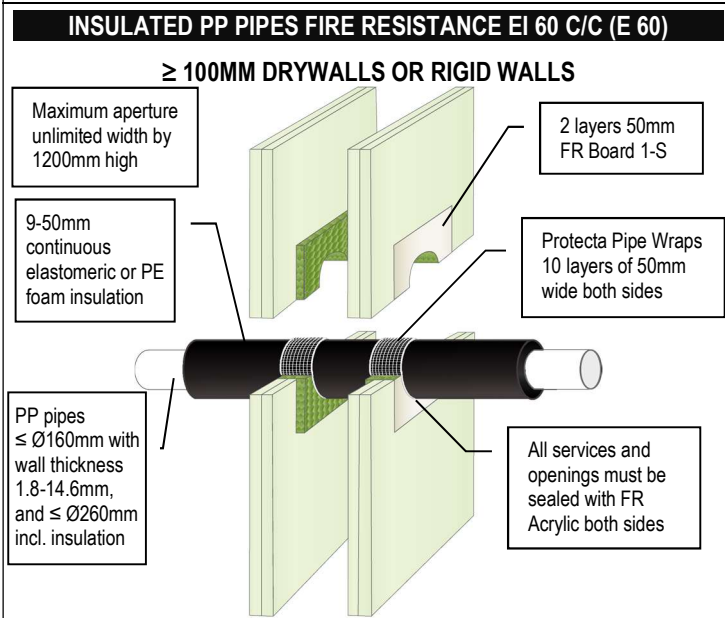
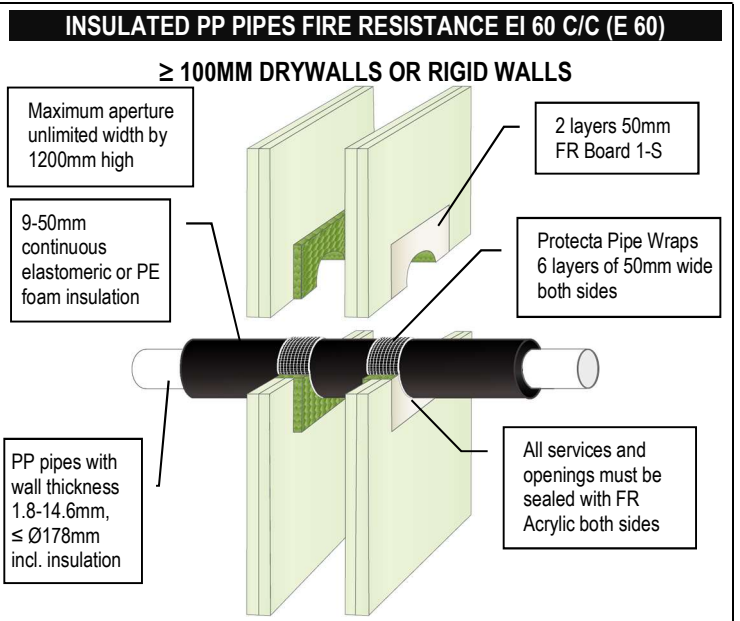
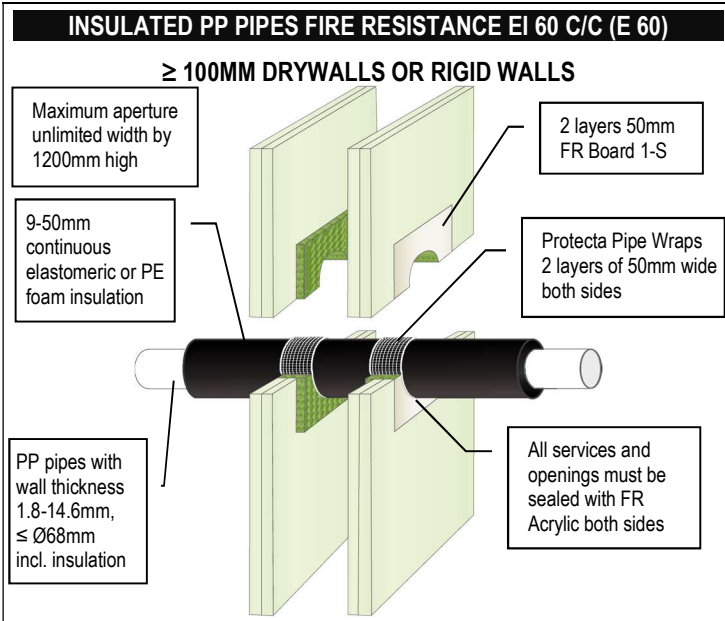
≥ 100MM DRYWALLS OR RIGID WALLS

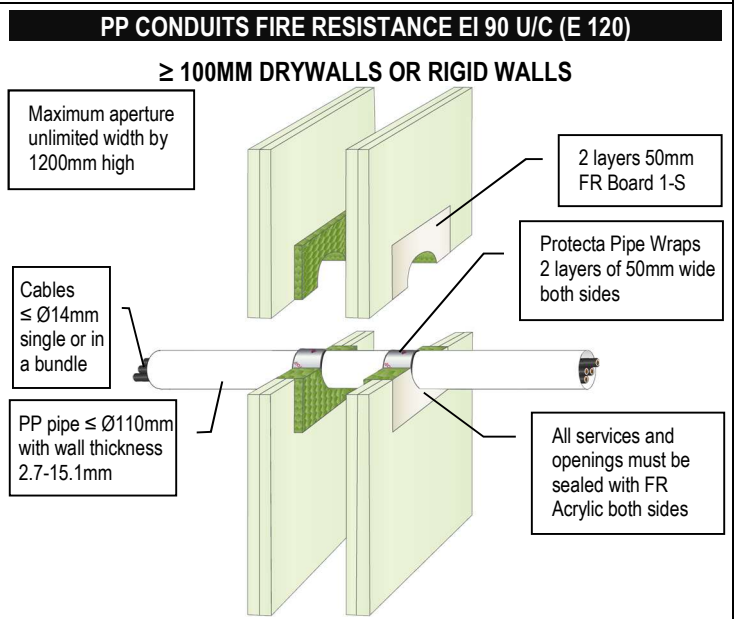
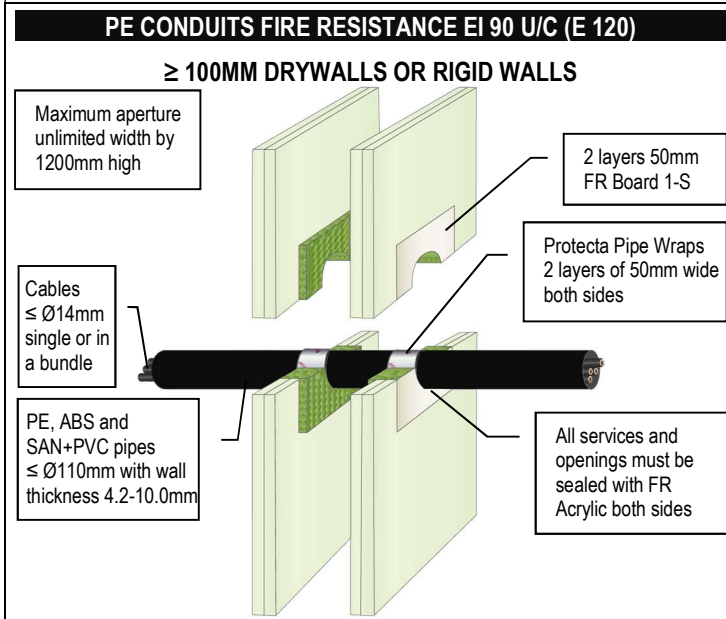
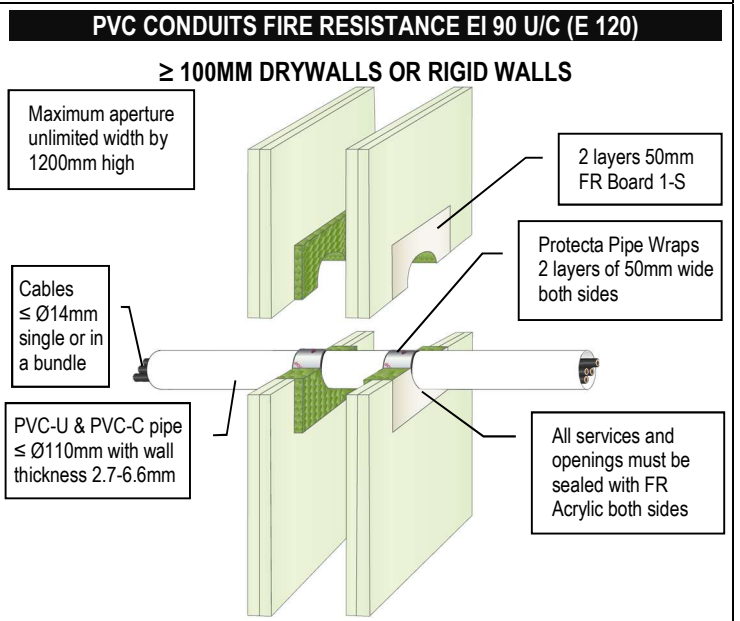
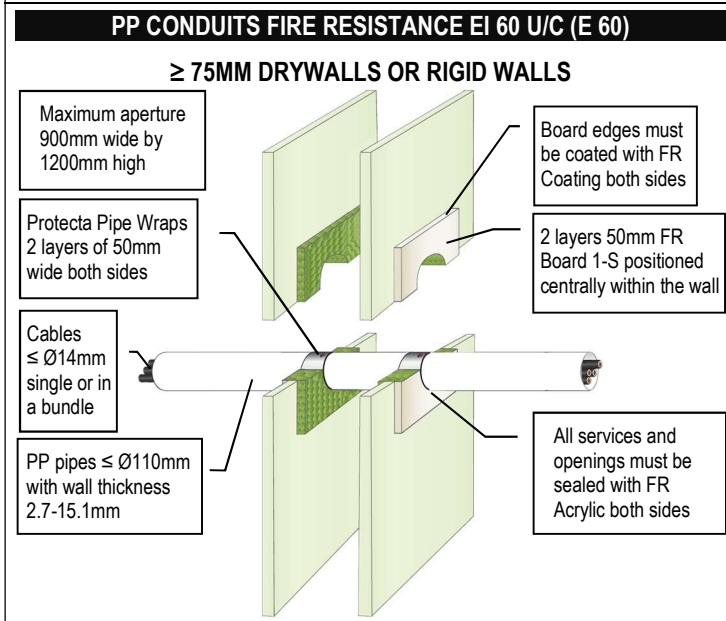
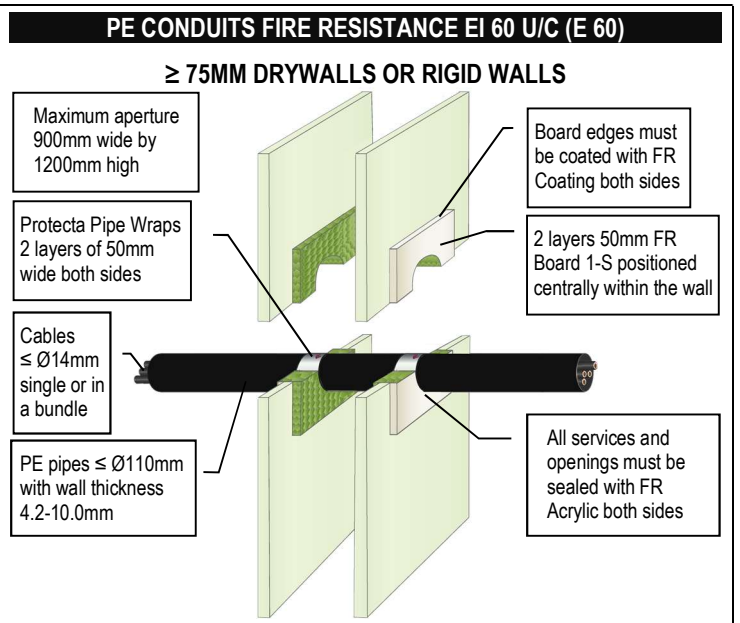
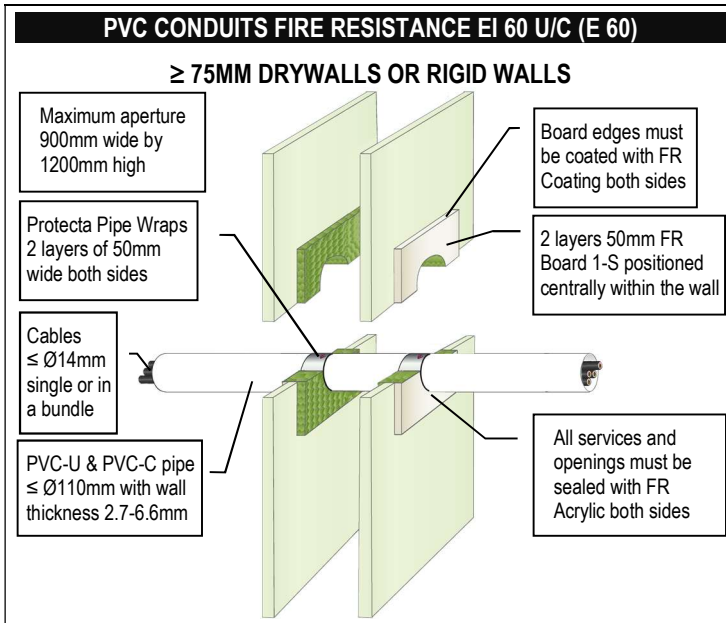


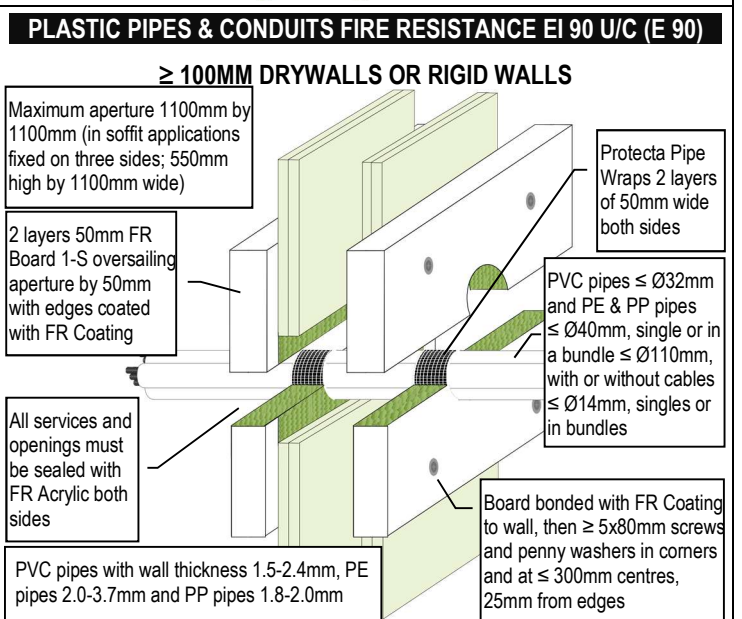
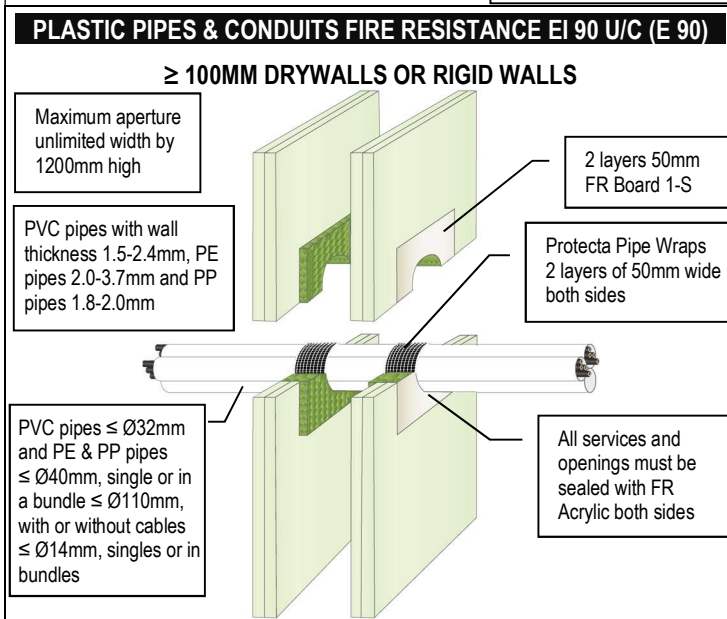
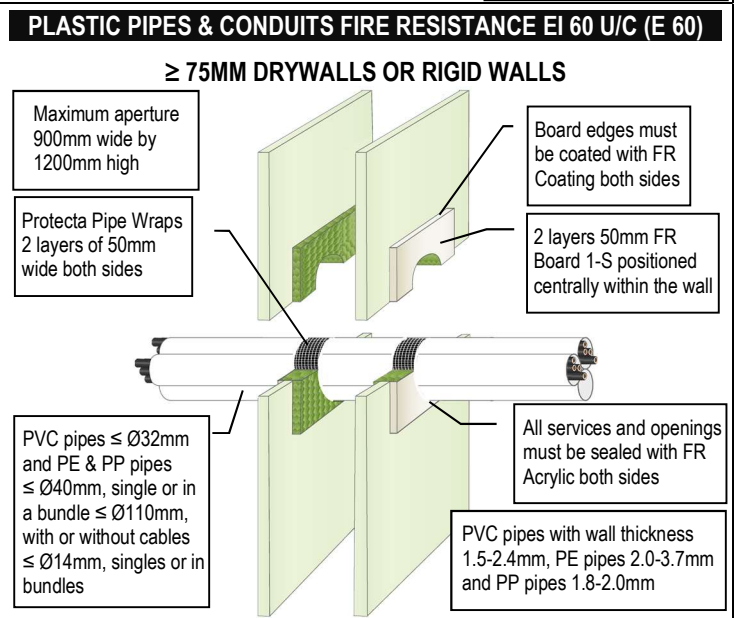
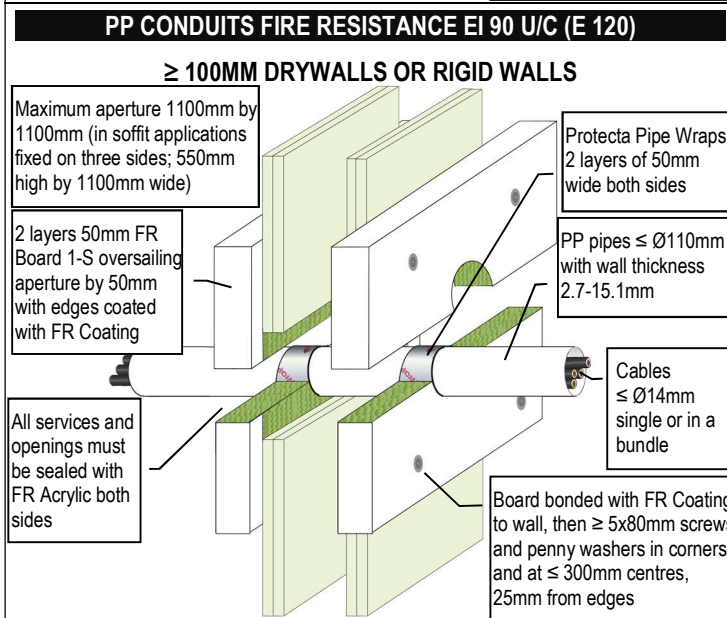
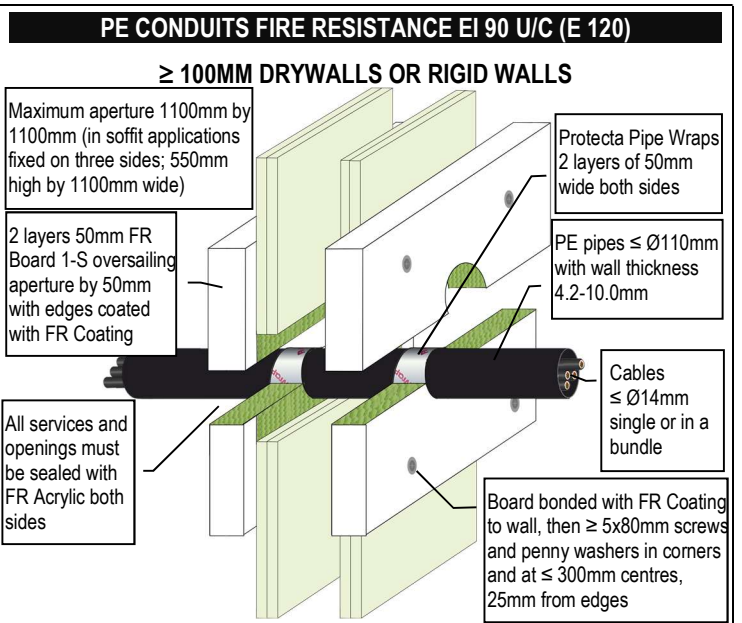
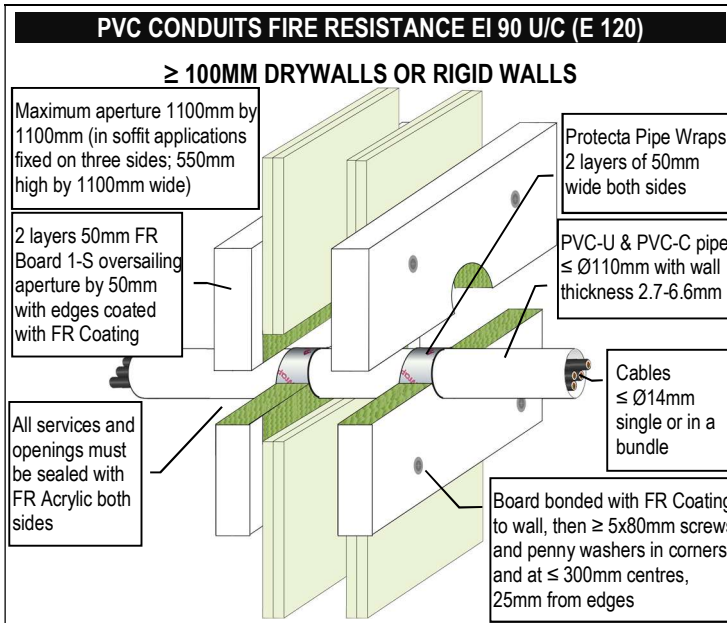
Services	Pipe Wall Thickness	FR Pipe Wrap	Classification
≤ Ø 40mm PP	1.8 – 5.5mm	50 x 1.8mm (1 layer)	EI 120 U/U (E 120 U/U)
≤ Ø 110mm PP	2.7 – 10.0mm	50 x 3.6mm (2 layers)	EI 120 C/C (E 120 C/C)
≤ Ø 125mm PP	3.1 – 17.1mm	50 x 5.4mm (3 layers)	EI 90 U/C (E 120 U/C)
≤ Ø 160mm PP	4.9 – 14.6mm	50 x 10.8mm (6 layers)	EI 120 C/C (E 120 C/C)
≤ Ø 200mm PP	4.9 – 18.2mm	50 x 10.8mm (6 layers)	EI 90 C/C (E 90 C/C)
≤ Ø 315mm PP	28.6mm	50 x 18.0mm (10 layers)	EI 60 C/C (E 60 C/C)

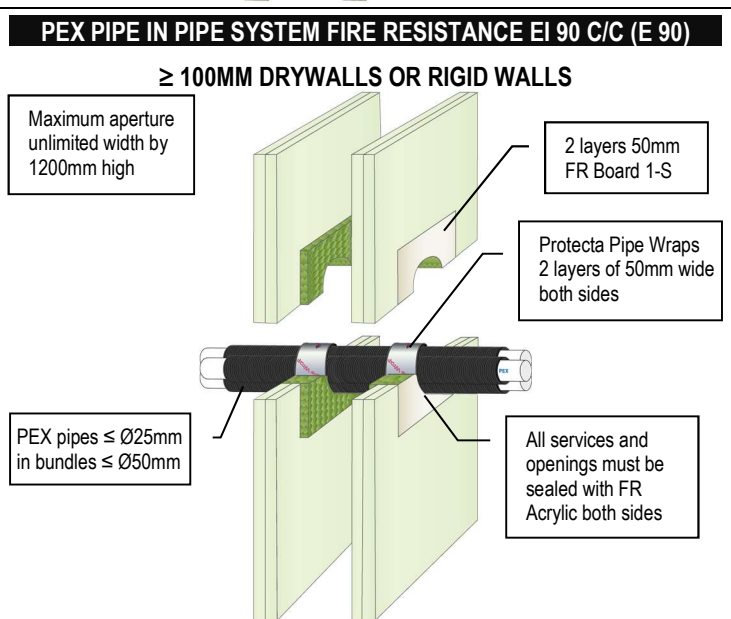
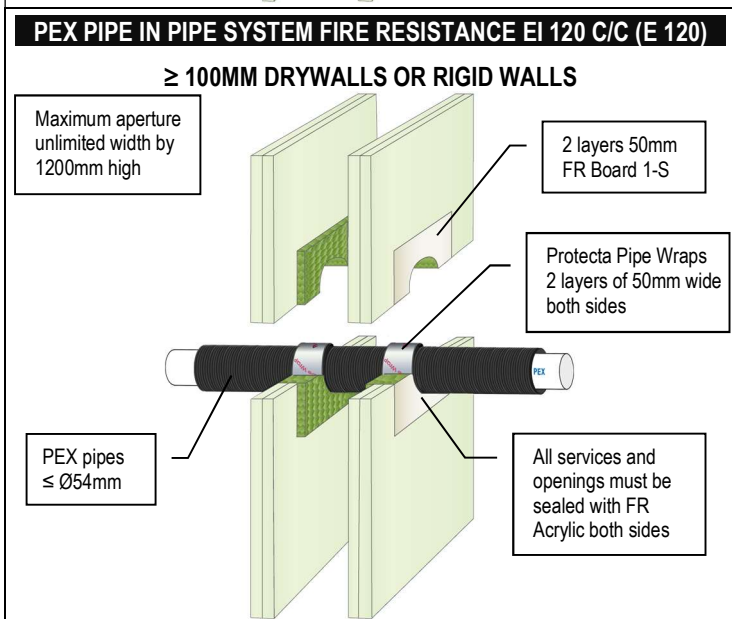
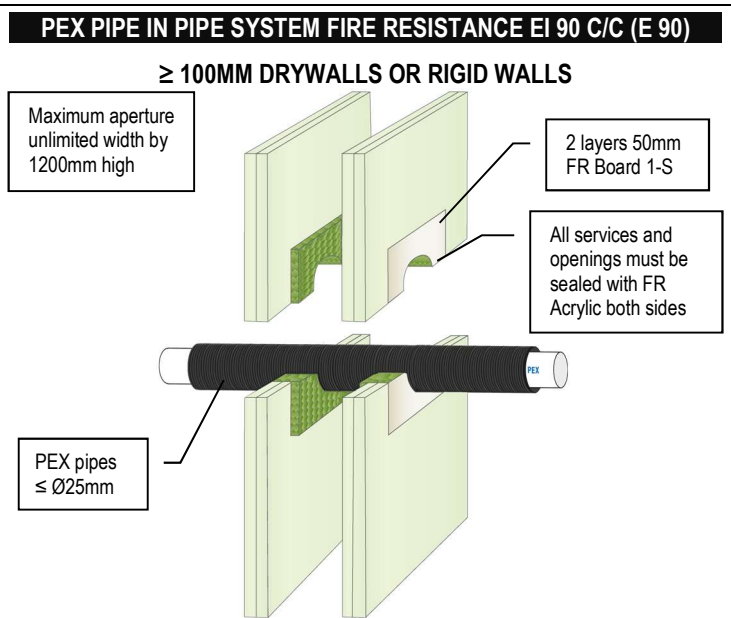
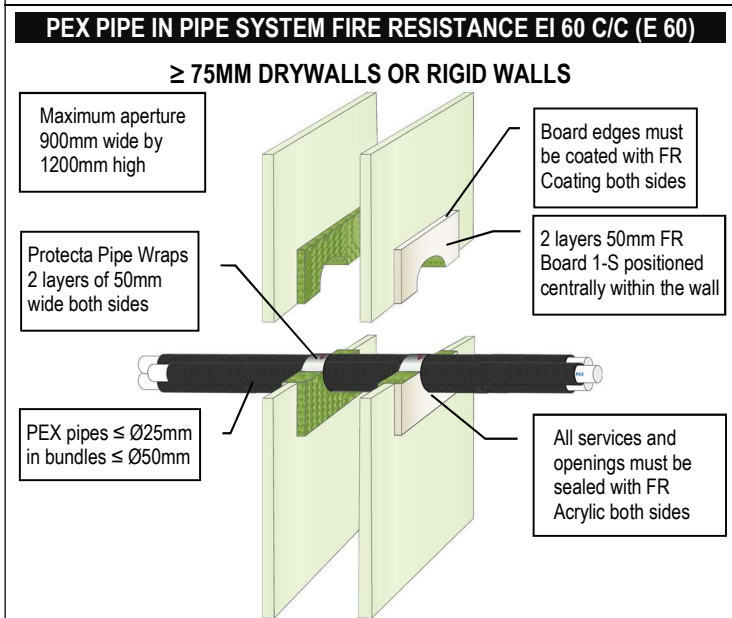
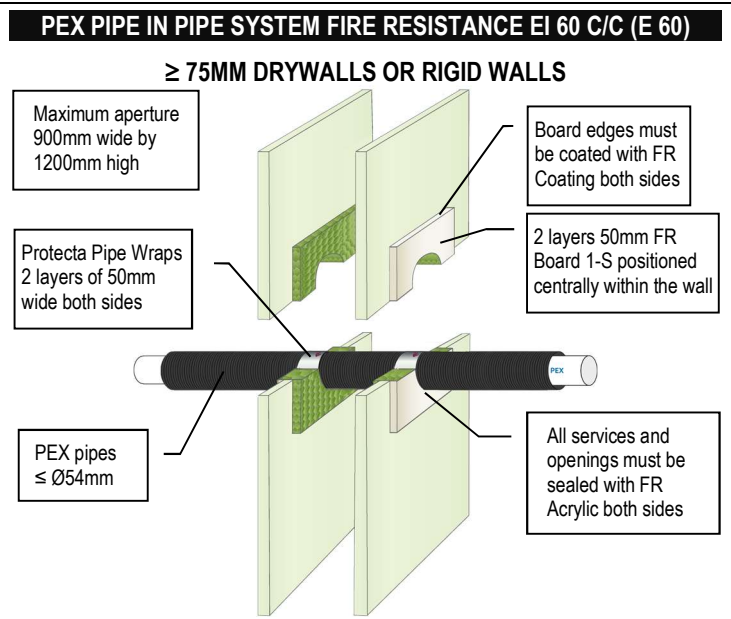
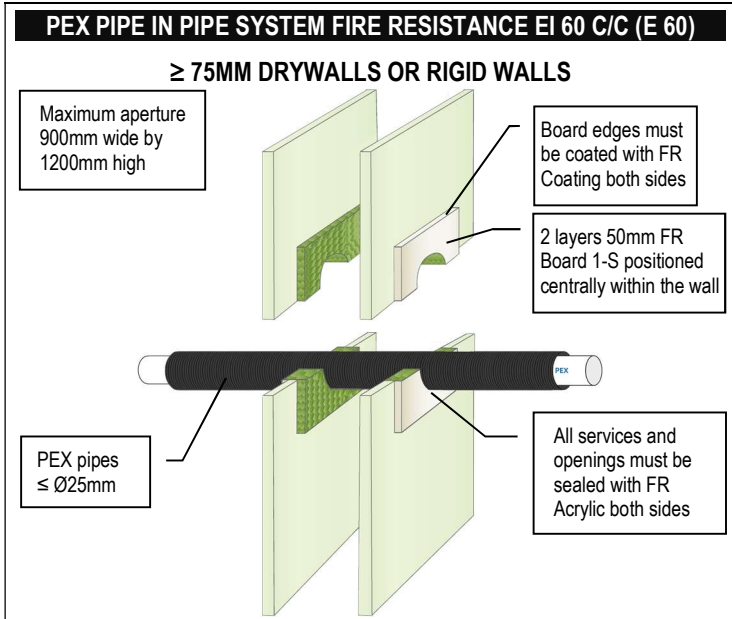


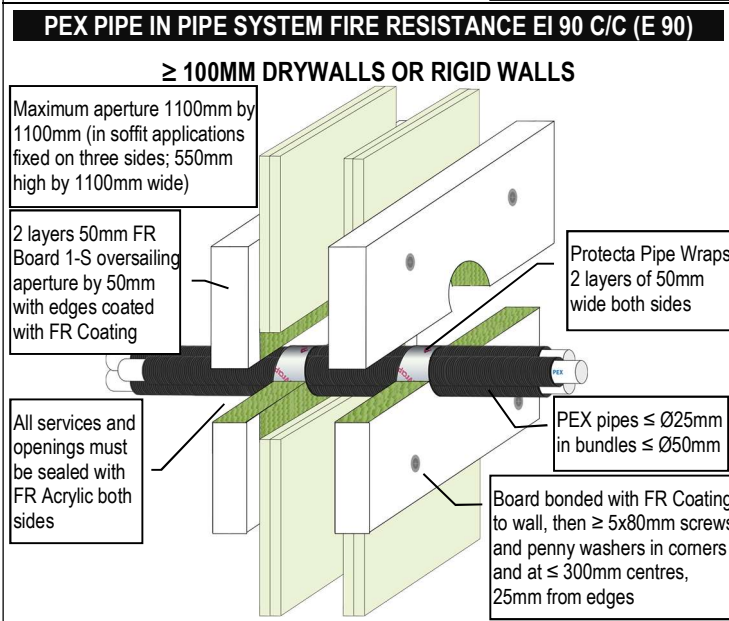
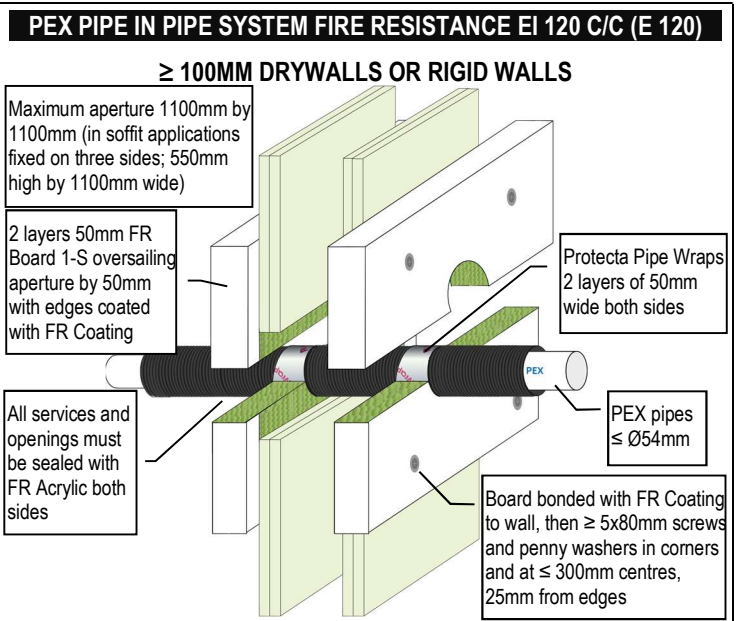
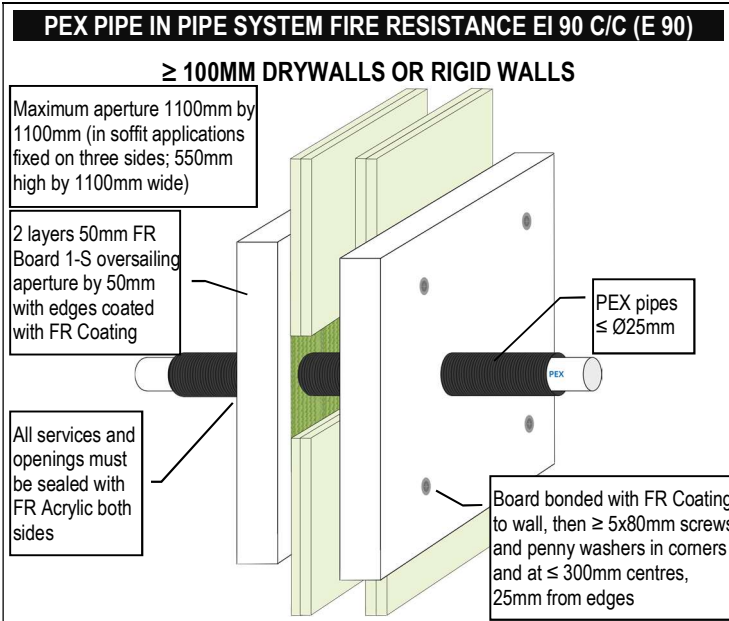












COMPOSITE AQUATHERM GREEN SDR9 PLASTIC PIPES FIRE RESISTANCE EI 60

≥ 75MM DRYWALLS OR RIGID WALLS

Maximum aperture 900mm wide by 1200mm high

Board edges must be coated with FR Coating both sides

2 layers 50mm FR Board 1-S positioned centrally within the wall

Protecta Pipe Wraps to both sides

Composite pipes

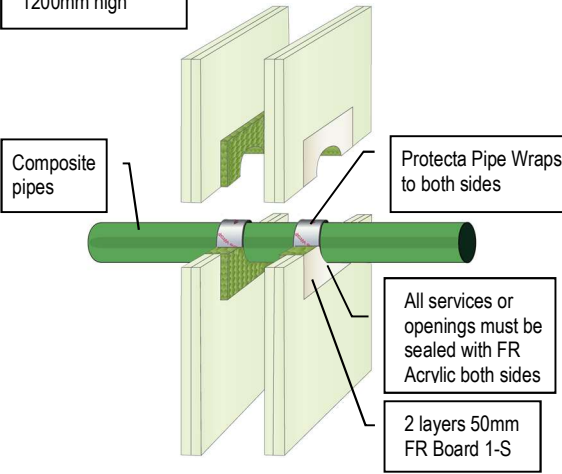
All services or openings must be sealed with FR Acrylic both sides

Services	FR Pipe Wrap	Classification
Ø 32mm Aquatherm Green SDR9 pipes	50 x 1.8mm (1 layer)	EI 60 C/C (E 60 C/C)
Ø 40mm Aquatherm Green SDR9 pipes	50 x 3.6mm (2 layers)	EI 60 C/C (E 60 C/C)
Ø 50mm Aquatherm Green SDR9 pipes	50 x 3.6mm (2 layers)	EI 60 C/C (E 60 C/C)
Ø 63mm Aquatherm Green SDR9 pipes	50 x 3.6mm (2 layers)	EI 60 C/C (E 60 C/C)
Ø 75mm Aquatherm Green SDR9 pipes	50 x 3.6mm (2 layers)	EI 60 C/C (E 60 C/C)
Ø 90mm Aquatherm Green SDR9 pipes	50 x 3.6mm (2 layers)	EI 60 C/C (E 60 C/C)
Ø 110mm Aquatherm Green SDR9 pipes	50 x 3.6mm (2 layers)	EI 60 C/C (E 60 C/C)

COMPOSITE AQUATHERM GREEN SDR9 PLASTIC PIPES FIRE RESISTANCE EI 90

≥ 100MM DRYWALLS OR RIGID WALLS

Maximum aperture unlimited width by 1200mm high

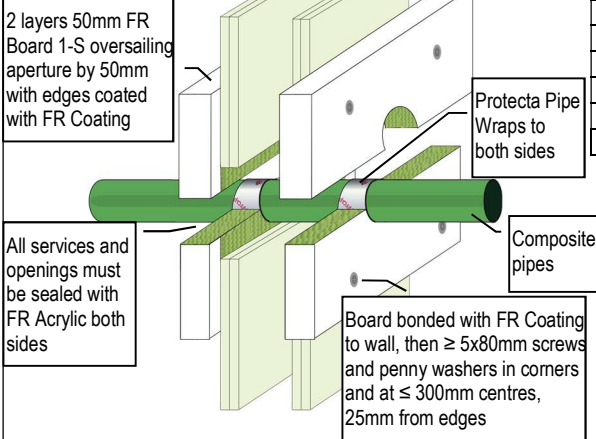


Services	FR Pipe Wrap	Classification
Ø 32mm Aquatherm Green SDR9 pipes	50 x 1.8mm (1 layer)	EI 90 C/C (E 120 C/C)
Ø 40mm Aquatherm Green SDR9 pipes	50 x 3.6mm (2 layers)	EI 90 C/C (E 120 C/C)
Ø 50mm Aquatherm Green SDR9 pipes	50 x 3.6mm (2 layers)	EI 90 C/C (E 120 C/C)
Ø 63mm Aquatherm Green SDR9 pipes	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 3.6mm (2 layers)	EI 90 C/C (E 120 C/C)

COMPOSITE AQUATHERM GREEN SDR9 PLASTIC PIPES FIRE RESISTANCE EI 90

≥ 100MM DRYWALLS OR RIGID WALLS

Maximum aperture 1100mm by 1100mm (in soffit applications fixed on three sides; 550mm high by 1100mm wide)

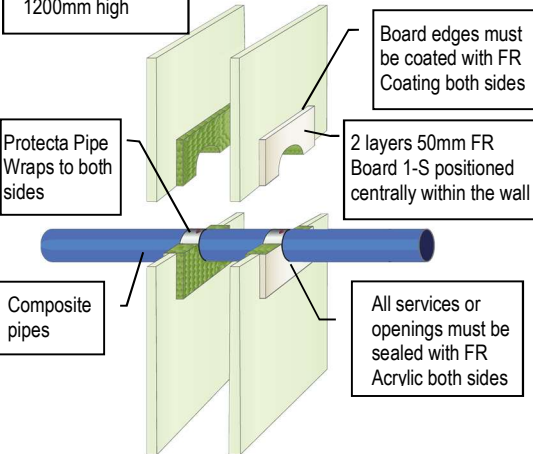


Services	FR Pipe Wrap	Classification
Ø 32mm Aquatherm Green SDR9 pipes	50 x 1.8mm (1 layer)	EI 90 C/C (E 120 C/C)
Ø 40mm Aquatherm Green SDR9 pipes	50 x 3.6mm (2 layers)	EI 90 C/C (E 120 C/C)
Ø 50mm Aquatherm Green SDR9 pipes	50 x 3.6mm (2 layers)	EI 90 C/C (E 120 C/C)
Ø 63mm Aquatherm Green SDR9 pipes	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 3.6mm (2 layers)	EI 90 C/C (E 120 C/C)

COMPOSITE BLUEPOWER PLASTIC PIPES FIRE RESISTANCE EI 60

≥ 75MM DRYWALLS OR RIGID WALLS

Maximum aperture 900mm wide by 1200mm high

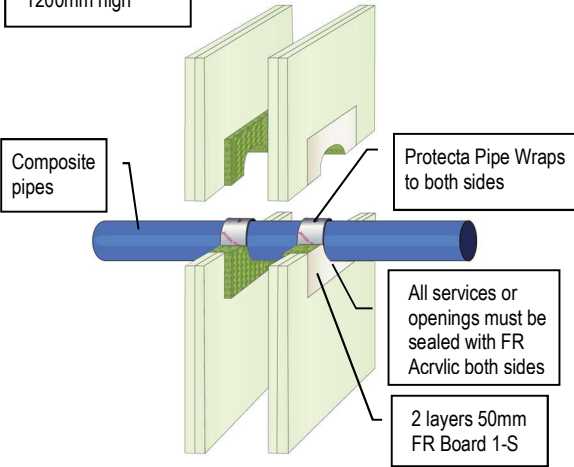


Services	FR Pipe Wrap	Classification
Ø 32mm BluePower pipes	50 x 3.6mm (2 layers)	EI 60 U/U (E 60 U/U)
Ø 40mm BluePower pipes	50 x 3.6mm (2 layers)	EI 60 U/U (E 60 U/U)
Ø 50mm BluePower pipes	50 x 3.6mm (2 layers)	EI 60 U/U (E 60 U/U)
Ø 75mm BluePower pipes	50 x 3.6mm (2 layers)	EI 60 C/U (E 60 C/U)
Ø 90mm BluePower pipes	50 x 3.6mm (2 layers)	EI 60 C/U (E 60 C/U)
Ø 110mm BluePower pipes	50 x 3.6mm (2 layers)	EI 60 C/U (E 60 C/U)
Ø 125mm BluePower pipes	50 x 10.8mm (6 layers)	EI 60 U/C (E 60 U/C)
Ø 160mm BluePower pipes	50 x 10.8mm (6 layers)	EI 60 U/C (E 60 U/C)

COMPOSITE BLUEPOWER PLASTIC PIPES FIRE RESISTANCE EI 90

≥ 100MM DRYWALLS OR RIGID WALLS

Maximum aperture unlimited width by 1200mm high

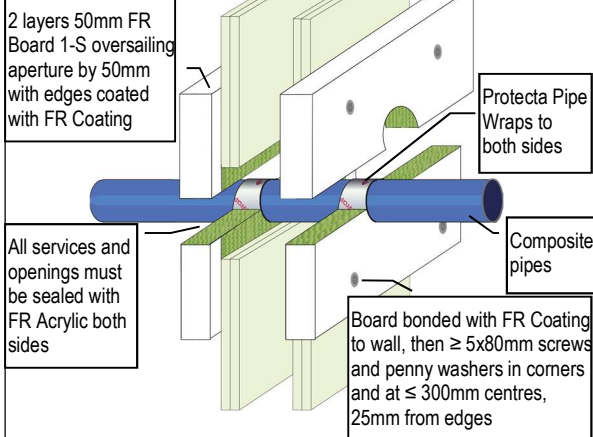


Services	FR Pipe Wrap	Classification
Ø 32mm BluePower pipes	50 x 3.6mm (2 layers)	EI 90 U/U (E 90 U/U)
Ø 40mm BluePower pipes	50 x 3.6mm (2 layers)	EI 90 U/U (E 90 U/U)
Ø 50mm BluePower pipes	50 x 3.6mm (2 layers)	EI 90 U/U (E 90 U/U)
Ø 75mm BluePower pipes	50 x 3.6mm (2 layers)	EI 90 C/U (E 90 C/U)
Ø 90mm BluePower pipes	50 x 3.6mm (2 layers)	EI 90 C/U (E 90 C/U)
Ø 110mm BluePower pipes	50 x 3.6mm (2 layers)	EI 90 C/U (E 90 C/U)
Ø 125mm BluePower pipes	50 x 10.8mm (6 layers)	EI 90 U/C (E 90 U/C)
Ø 160mm BluePower pipes	50 x 10.8mm (6 layers)	EI 90 U/C (E 90 U/C)

COMPOSITE BLUEPOWER PLASTIC PIPES FIRE RESISTANCE EI 90

≥ 100MM DRYWALLS OR RIGID WALLS

Maximum aperture 1100mm by 1100mm (in soffit applications fixed on three sides; 550mm high by 1100mm wide)

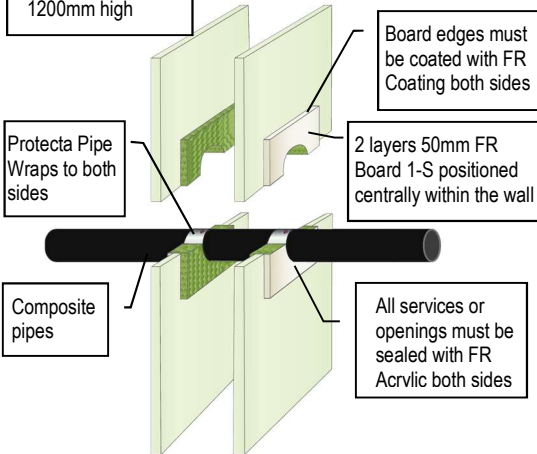


Services	FR Pipe Wrap	Classification
Ø 32mm BluePower pipes	50 x 3.6mm (2 layers)	EI 90 U/U (E 90 U/U)
Ø 40mm BluePower pipes	50 x 3.6mm (2 layers)	EI 90 U/U (E 90 U/U)
Ø 50mm BluePower pipes	50 x 3.6mm (2 layers)	EI 90 U/U (E 90 U/U)
Ø 75mm BluePower pipes	50 x 3.6mm (2 layers)	EI 90 C/U (E 90 C/U)
Ø 90mm BluePower pipes	50 x 3.6mm (2 layers)	EI 90 C/U (E 90 C/U)
Ø 110mm BluePower pipes	50 x 3.6mm (2 layers)	EI 90 C/U (E 90 C/U)
Ø 125mm BluePower pipes	50 x 10.8mm (6 layers)	EI 90 U/C (E 90 U/C)
Ø 160mm BluePower pipes	50 x 10.8mm (6 layers)	EI 90 U/C (E 90 U/C)

COMPOSITE GEBERIT SILENT-PP PIPES FIRE RESISTANCE EI 60

≥ 75MM DRYWALLS OR RIGID WALLS

Maximum aperture 900mm wide by 1200mm high

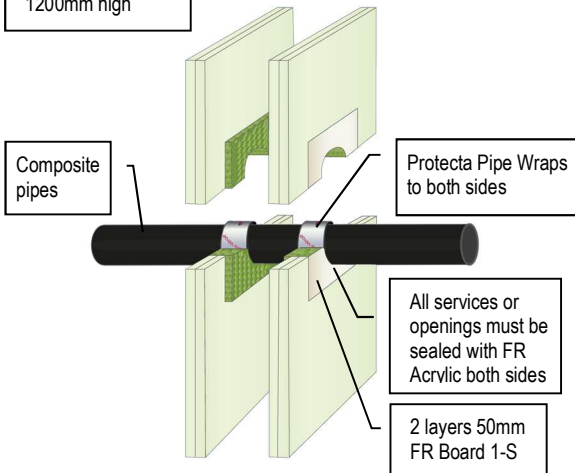


Services	FR Pipe Wrap	Classification
Ø 32mm Geberit Silent-PP pipes	50 x 3.6mm (2 layers)	EI 60 U/U (E 60 U/U)
Ø 40mm Geberit Silent-PP pipes	50 x 3.6mm (2 layers)	EI 60 U/U (E 60 U/U)
Ø 50mm Geberit Silent-PP pipes	50 x 3.6mm (2 layers)	EI 60 U/U (E 60 U/U)
Ø 75mm Geberit Silent-PP pipes	50 x 3.6mm (2 layers)	EI 60 U/C (E 60 U/C)
Ø 90mm Geberit Silent-PP pipes	50 x 3.6mm (2 layers)	EI 60 U/C (E 60 U/C)
Ø 110mm Geberit Silent-PP pipes	50 x 3.6mm (2 layers)	EI 60 U/C (E 60 U/C)

COMPOSITE GEBERIT SILENT-PP PIPES FIRE RESISTANCE EI 120

≥ 100MM DRYWALLS OR RIGID WALLS

Maximum aperture unlimited width by 1200mm high

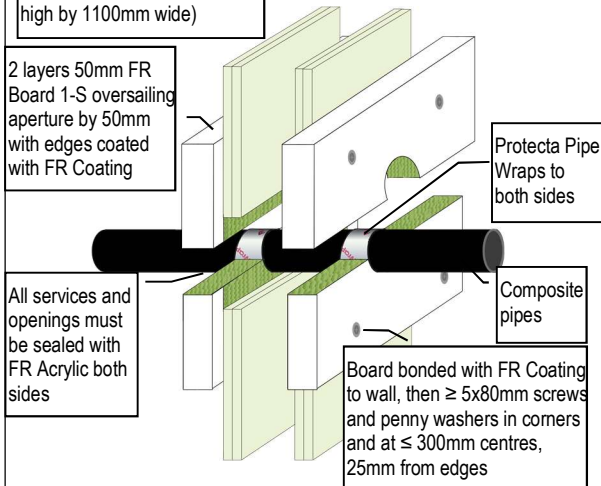


Services	FR Pipe Wrap	Classification
Ø 32mm Geberit Silent-PP pipes	50 x 3.6mm (2 layers)	EI 120 U/U (E 120 U/U)
Ø 40mm Geberit Silent-PP pipes	50 x 3.6mm (2 layers)	EI 120 U/U (E 120 U/U)
Ø 50mm Geberit Silent-PP pipes	50 x 3.6mm (2 layers)	EI 120 U/U (E 120 U/U)
Ø 75mm Geberit Silent-PP pipes	50 x 3.6mm (2 layers)	EI 120 U/C (E 120 U/C)
Ø 90mm Geberit Silent-PP pipes	50 x 3.6mm (2 layers)	EI 120 U/C (E 120 U/C)
Ø 110mm Geberit Silent-PP pipes	50 x 3.6mm (2 layers)	EI 120 U/C (E 120 U/C)

COMPOSITE GEBERIT SILENT-PP PIPES FIRE RESISTANCE EI 120

≥ 100MM DRYWALLS OR RIGID WALLS

Maximum aperture 1100mm by 1100mm (in soffit applications fixed on three sides; 550mm high by 1100mm wide)

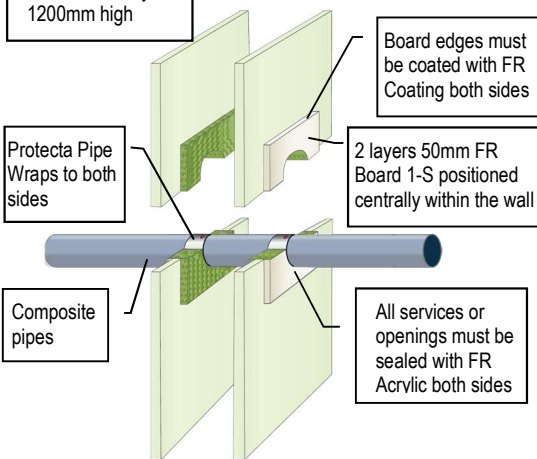


Services	FR Pipe Wrap	Classification
Ø 32mm Geberit Silent-PP pipes	50 x 3.6mm (2 layers)	EI 120 U/U (E 120 U/U)
Ø 40mm Geberit Silent-PP pipes	50 x 3.6mm (2 layers)	EI 120 U/U (E 120 U/U)
Ø 50mm Geberit Silent-PP pipes	50 x 3.6mm (2 layers)	EI 120 U/U (E 120 U/U)
Ø 75mm Geberit Silent-PP pipes	50 x 3.6mm (2 layers)	EI 120 U/C (E 120 U/C)
Ø 90mm Geberit Silent-PP pipes	50 x 3.6mm (2 layers)	EI 120 U/C (E 120 U/C)
Ø 110mm Geberit Silent-PP pipes	50 x 3.6mm (2 layers)	EI 120 U/C (E 120 U/C)

COMPOSITE POLO-KAL NG PLASTIC PIPES FIRE RESISTANCE EI 60

≥ 75MM DRYWALLS OR RIGID WALLS

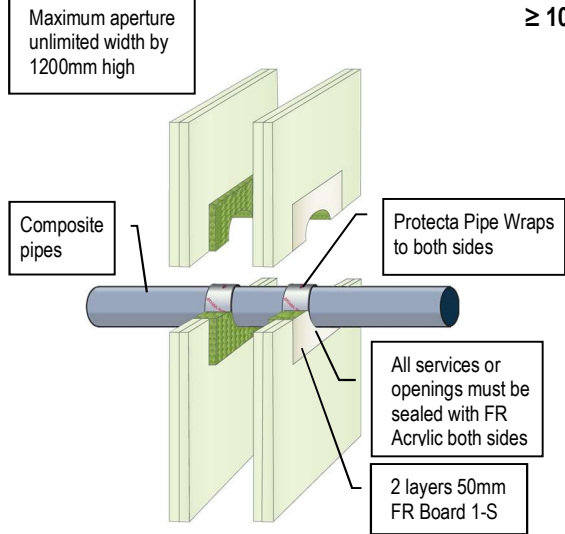
Maximum aperture 900mm wide by 1200mm high



Services	FR Pipe Wrap	Classification
Ø 32mm Polo-Kal NG pipes	50 x 3.6mm (2 layers)	EI 60 U/U (E 60 U/U)
Ø 40mm Polo-Kal NG pipes	50 x 3.6mm (2 layers)	EI 60 U/U (E 60 U/U)
Ø 50mm Polo-Kal NG pipes	50 x 3.6mm (2 layers)	EI 60 U/U (E 60 U/U)
Ø 75mm Polo-Kal NG pipes	50 x 3.6mm (2 layers)	EI 60 U/C (E 60 U/C)
Ø 90mm Polo-Kal NG pipes	50 x 3.6mm (2 layers)	EI 60 U/C (E 60 U/C)
Ø 110mm Polo-Kal NG pipes	50 x 3.6mm (2 layers)	EI 60 U/C (E 60 U/C)
Ø 125mm Polo-Kal NG pipes	50 x 7.2mm (4 layers)	EI 60 U/C (E 60 U/C)
Ø 160mm Polo-Kal NG pipes	50 x 10.8mm (6 layers)	EI 60 U/C (E 60 U/C)

COMPOSITE POLO-KAL NG PLASTIC PIPES FIRE RESISTANCE EI 120

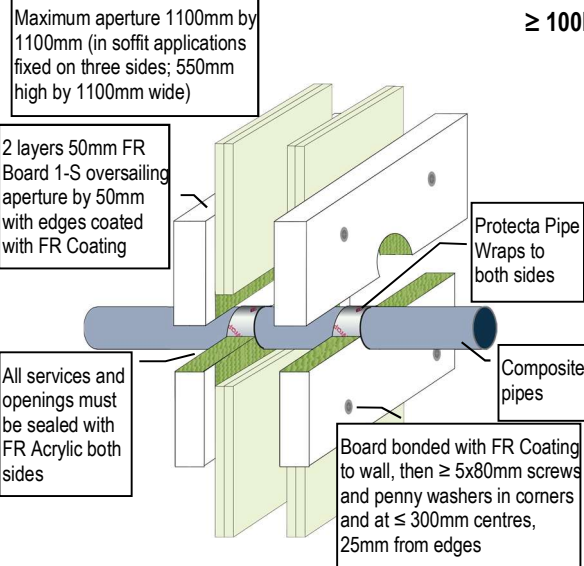
≥ 100MM DRYWALLS OR RIGID WALLS



Services	FR Pipe Wrap	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)

COMPOSITE POLO-KAL NG PLASTIC PIPES FIRE RESISTANCE EI 120

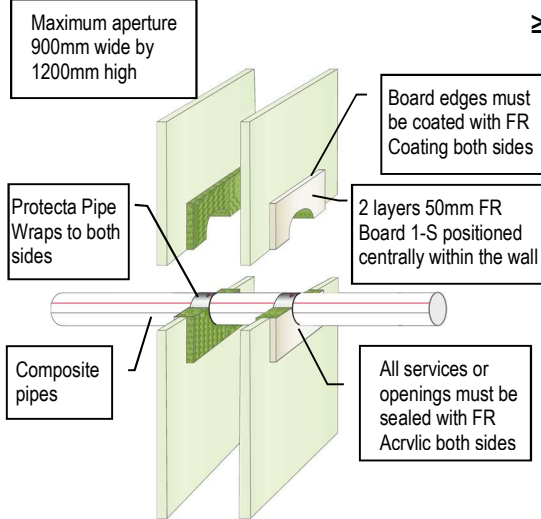
≥ 100MM DRYWALLS OR RIGID WALLS



Services	FR Pipe Wrap	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)

COMPOSITE REHAU RAUPIANO PLUS PLASTIC PIPES FIRE RESISTANCE EI 60

≥ 75MM DRYWALLS OR RIGID WALLS

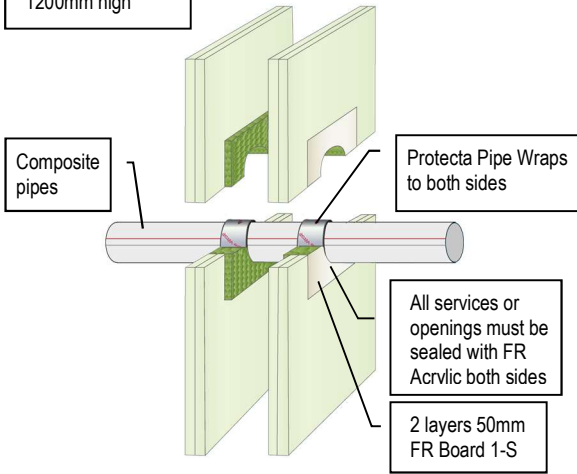


Services	FR Pipe Wrap	Classification
Ø 40mm Rehau Raupiano Plus pipes	50 x 3.6mm (2 layers)	EI 60 U/U (E 60 U/U)
Ø 50mm Rehau Raupiano Plus pipes	50 x 3.6mm (2 layers)	EI 60 U/U (E 60 U/U)
Ø 75mm Rehau Raupiano Plus pipes	50 x 3.6mm (2 layers)	EI 60 U/C (E 60 U/C)
Ø 90mm Rehau Raupiano Plus pipes	50 x 3.6mm (2 layers)	EI 60 U/C (E 60 U/C)
Ø 110mm Rehau Raupiano Plus pipes	50 x 3.6mm (2 layers)	EI 60 U/C (E 60 U/C)
Ø 125mm Rehau Raupiano Plus pipes	50 x 7.2mm (4 layers)	EI 60 U/C (E 60 U/C)
Ø 160mm Rehau Raupiano Plus pipes	50 x 10.8mm (6 layers)	EI 60 U/C (E 60 U/C)

COMPOSITE REHAU RAUPIANO PLUS PLASTIC PIPES FIRE RESISTANCE EI 120

≥ 100MM DRYWALLS OR RIGID WALLS

Maximum aperture unlimited width by 1200mm high

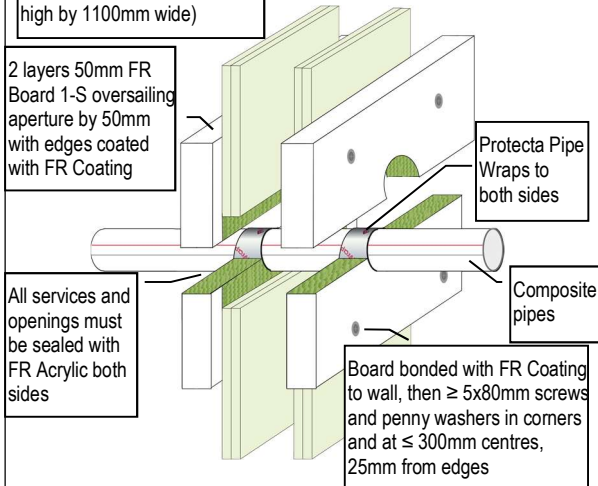


Services	FR Pipe Wrap	Classification
Ø 40mm Rehau Raupiano Plus pipes	50 x 3.6mm (2 layers)	EI 120 U/U (E 120 U/U)
Ø 50mm Rehau Raupiano Plus pipes	50 x 3.6mm (2 layers)	EI 120 U/U (E 120 U/U)
Ø 75mm Rehau Raupiano Plus pipes	50 x 3.6mm (2 layers)	EI 120 U/C (E 120 U/C)
Ø 90mm Rehau Raupiano Plus pipes	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)

COMPOSITE REHAU RAUPIANO PLUS PLASTIC PIPES FIRE RESISTANCE EI 120

≥ 100MM DRYWALLS OR RIGID WALLS

Maximum aperture 1100mm by 1100mm (in soffit applications fixed on three sides; 550mm high by 1100mm wide)

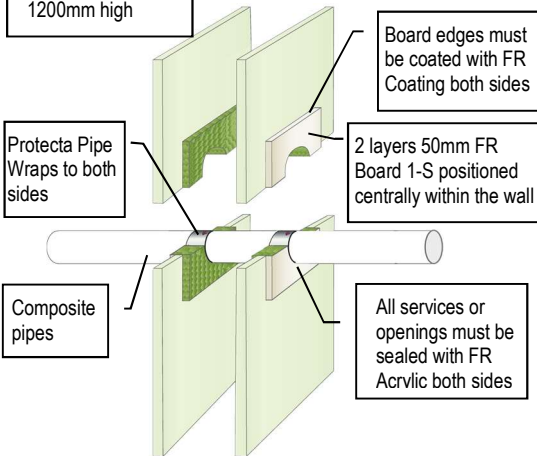


Services	FR Pipe Wrap	Classification
Ø 40mm Rehau Raupiano Plus pipes	50 x 3.6mm (2 layers)	EI 120 U/U (E 120 U/U)
Ø 50mm Rehau Raupiano Plus pipes	50 x 3.6mm (2 layers)	EI 120 U/U (E 120 U/U)
Ø 75mm Rehau Raupiano Plus pipes	50 x 3.6mm (2 layers)	EI 120 U/C (E 120 U/C)
Ø 90mm Rehau Raupiano Plus pipes	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)

COMPOSITE UPONOR DECIBEL PIPES FIRE RESISTANCE EI 60

≥ 75MM DRYWALLS OR RIGID WALLS

Maximum aperture 900mm wide by 1200mm high

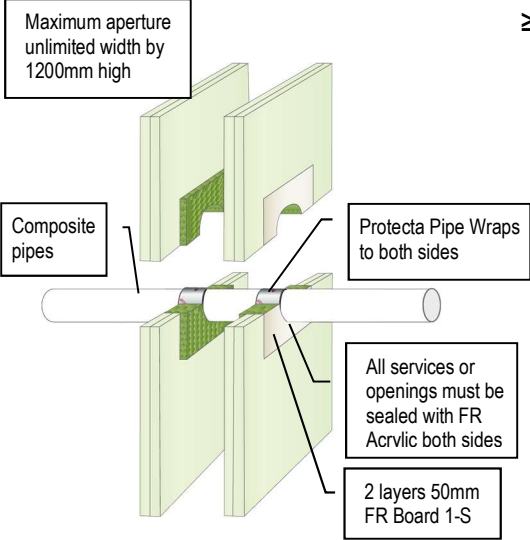


Services	FR Pipe Wrap	Classification
Ø 50mm Uponor Decibel pipes	50 x 3.6mm (2 layers)	EI 60 U/U (E 60 U/U)
Ø 75mm Uponor Decibel pipes	50 x 3.6mm (2 layers)	EI 60 U/C (E 60 U/C)
Ø 110mm Uponor Decibel pipes	50 x 3.6mm (2 layers)	EI 60 U/C (E 60 U/C)

COMPOSITE UPONOR DECIBEL PLASTIC PIPES FIRE RESISTANCE EI 90

≥ 100MM DRYWALLS OR RIGID WALLS

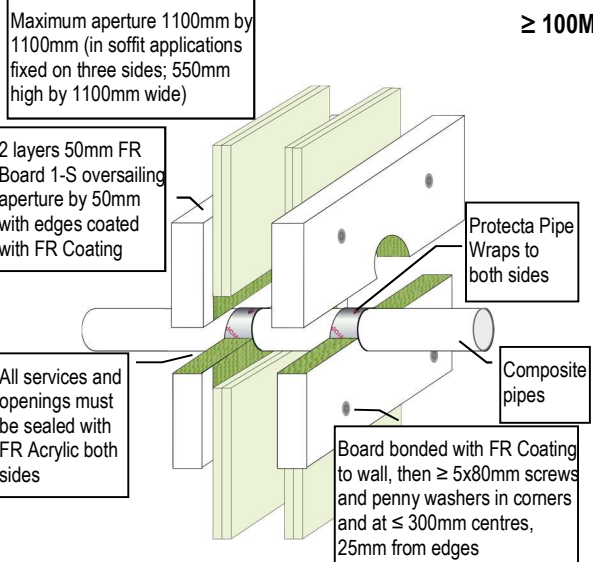
Services	FR Pipe Wrap	Classification
Ø 50mm Uponor Decibel pipes	50 x 3.6mm (2 layers)	EI 90 U/U (E 90 U/U)
Ø 75mm Uponor Decibel pipes	50 x 3.6mm (2 layers)	EI 90 U/C (E 90 U/C)
Ø 110mm Uponor Decibel pipes	50 x 3.6mm (2 layers)	EI 90 U/C (E 90 U/C)



COMPOSITE UPONOR DECIBEL PLASTIC PIPES FIRE RESISTANCE EI 90

≥ 100MM DRYWALLS OR RIGID WALLS

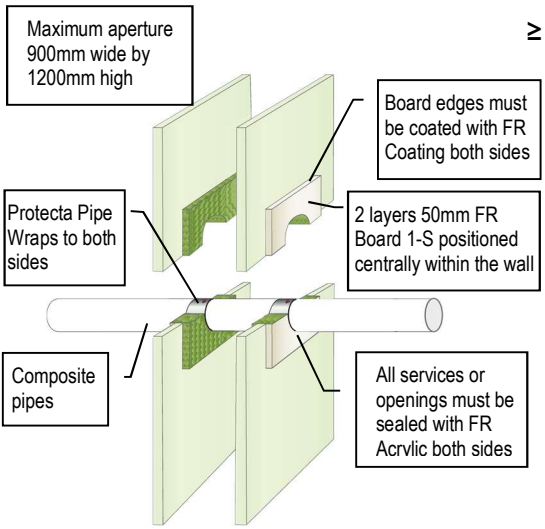
Services	FR Pipe Wrap	Classification
Ø 50mm Uponor Decibel pipes	50 x 3.6mm (2 layers)	EI 90 U/U (E 90 U/U)
Ø 75mm Uponor Decibel pipes	50 x 3.6mm (2 layers)	EI 90 U/C (E 90 U/C)
Ø 110mm Uponor Decibel pipes	50 x 3.6mm (2 layers)	EI 90 U/C (E 90 U/C)



COMPOSITE WAVIN SITECH PIPES FIRE RESISTANCE EI 60

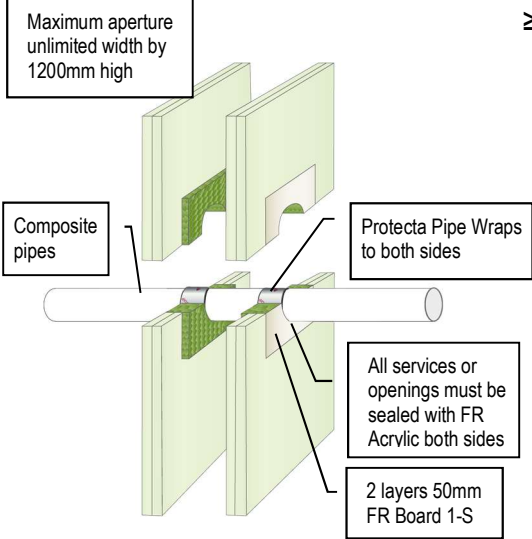
≥ 75MM DRYWALLS OR RIGID WALLS

Services	FR Pipe Wrap	Classification
Ø 32mm Wavin SiTech pipes	50 x 3.6mm (2 layers)	EI 60 U/U (E 60 U/U)
Ø 40mm Wavin SiTech pipes	50 x 3.6mm (2 layers)	EI 60 U/U (E 60 U/U)
Ø 50mm Wavin SiTech pipes	50 x 3.6mm (2 layers)	EI 60 U/U (E 60 U/U)
Ø 75mm Wavin SiTech pipes	50 x 3.6mm (2 layers)	EI 60 U/C (E 60 U/C)
Ø 90mm Wavin SiTech pipes	50 x 3.6mm (2 layers)	EI 60 U/C (E 60 U/C)
Ø 110mm Wavin SiTech pipes	50 x 3.6mm (2 layers)	EI 60 U/C (E 60 U/C)



COMPOSITE WAVIN SITECH PLASTIC PIPES FIRE RESISTANCE EI 60-90

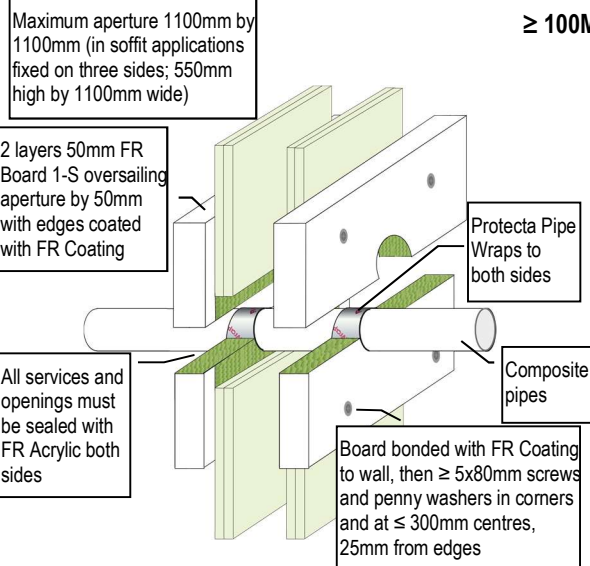
≥ 100MM DRYWALLS OR RIGID WALLS



Services	FR Pipe Wrap	Classification
Ø 32mm Wavin SiTech pipes	50 x 3.6mm (2 layers)	EI 90 U/U (E 120 U/U)
Ø 40mm Wavin SiTech pipes	50 x 3.6mm (2 layers)	EI 90 U/U (E 120 U/U)
Ø 50mm Wavin SiTech pipes	50 x 3.6mm (2 layers)	EI 90 U/U (E 120 U/U)
Ø 75mm Wavin SiTech pipes	50 x 3.6mm (2 layers)	EI 60 U/C (E 120 U/C)
Ø 90mm Wavin SiTech pipes	50 x 3.6mm (2 layers)	EI 60 U/C (E 120 U/C)
Ø 110mm Wavin SiTech pipes	50 x 3.6mm (2 layers)	EI 60 U/C (E 120 U/C)

COMPOSITE WAVIN SITECH PLASTIC PIPES FIRE RESISTANCE EI 60-90

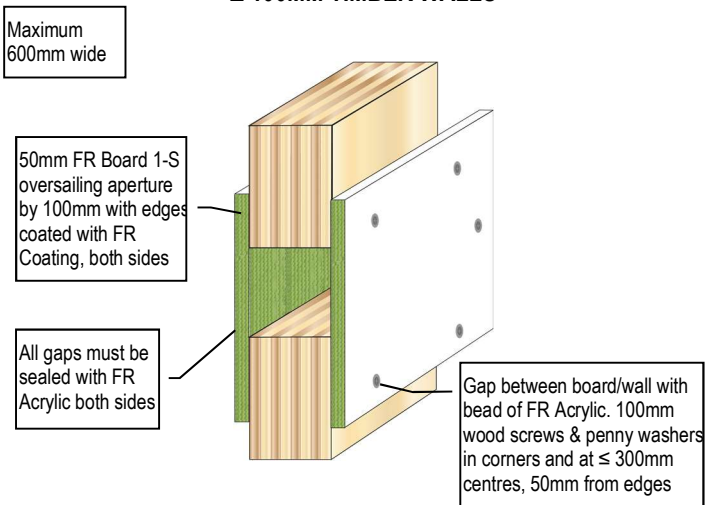
≥ 100MM DRYWALLS OR RIGID WALLS



Services	FR Pipe Wrap	Classification
Ø 32mm Wavin SiTech pipes	50 x 3.6mm (2 layers)	EI 90 U/U (E 120 U/U)
Ø 40mm Wavin SiTech pipes	50 x 3.6mm (2 layers)	EI 90 U/U (E 120 U/U)
Ø 50mm Wavin SiTech pipes	50 x 3.6mm (2 layers)	EI 90 U/U (E 120 U/U)
Ø 75mm Wavin SiTech pipes	50 x 3.6mm (2 layers)	EI 60 U/C (E 120 U/C)
Ø 90mm Wavin SiTech pipes	50 x 3.6mm (2 layers)	EI 60 U/C (E 120 U/C)
Ø 110mm Wavin SiTech pipes	50 x 3.6mm (2 layers)	EI 60 U/C (E 120 U/C)

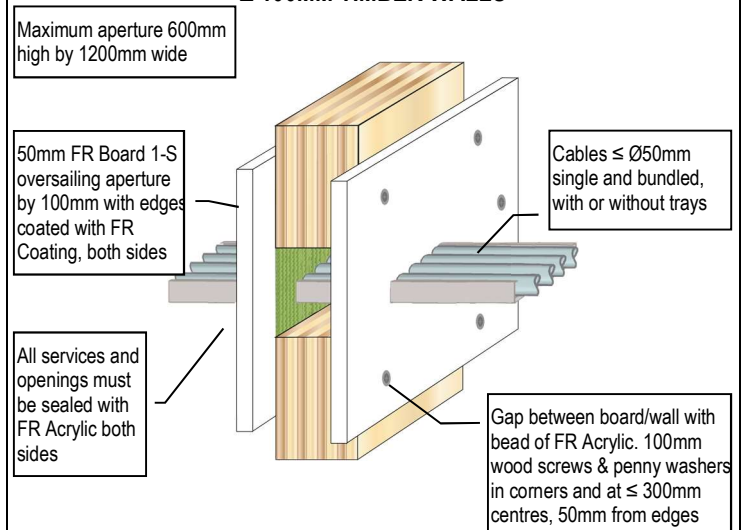
LINEAR SEALS FIRE RESISTANCE EI 60 (E 60)

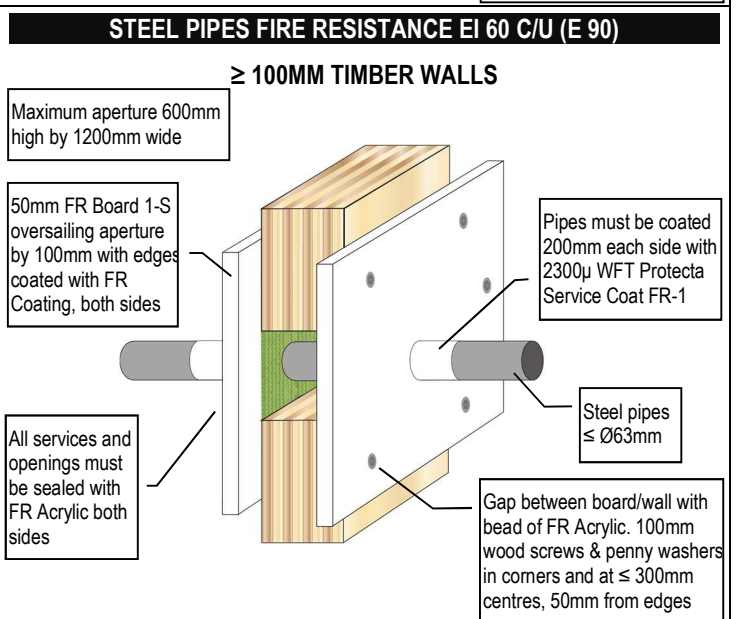
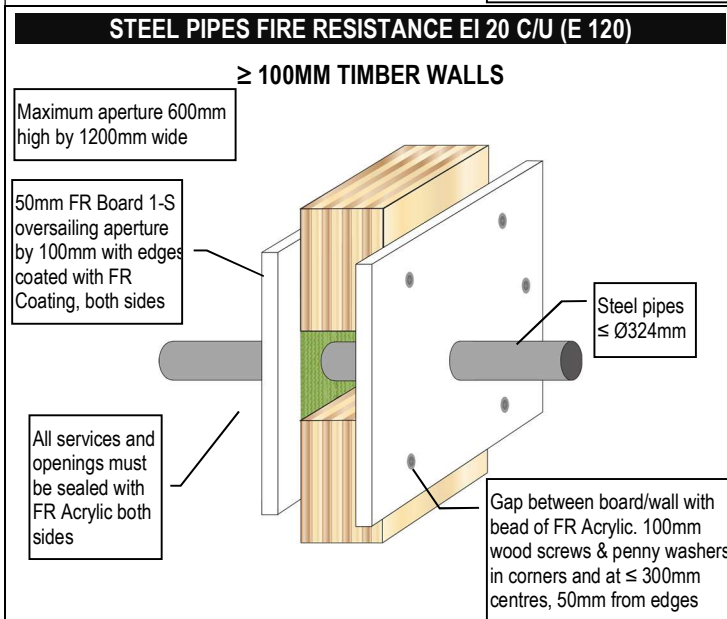
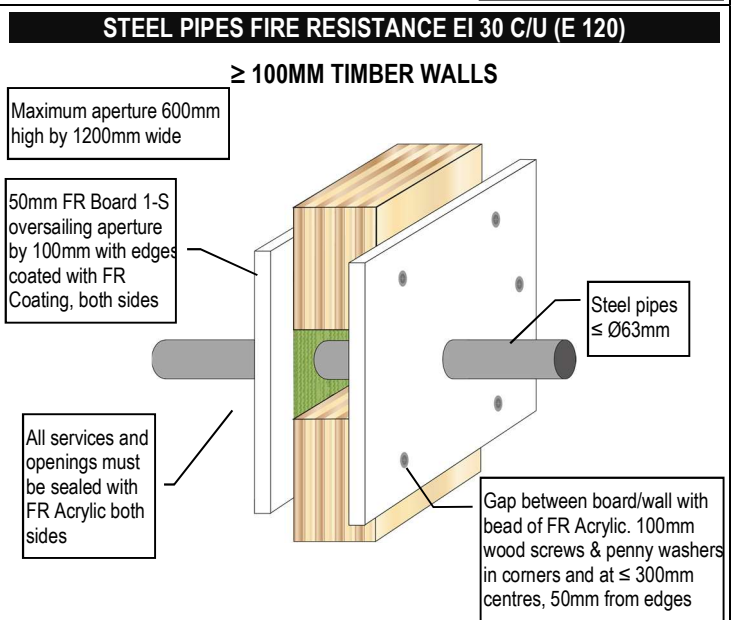
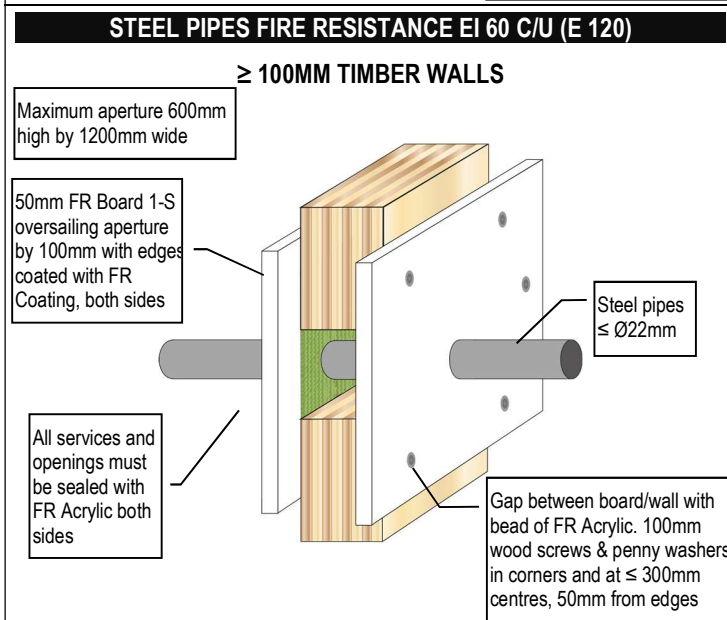
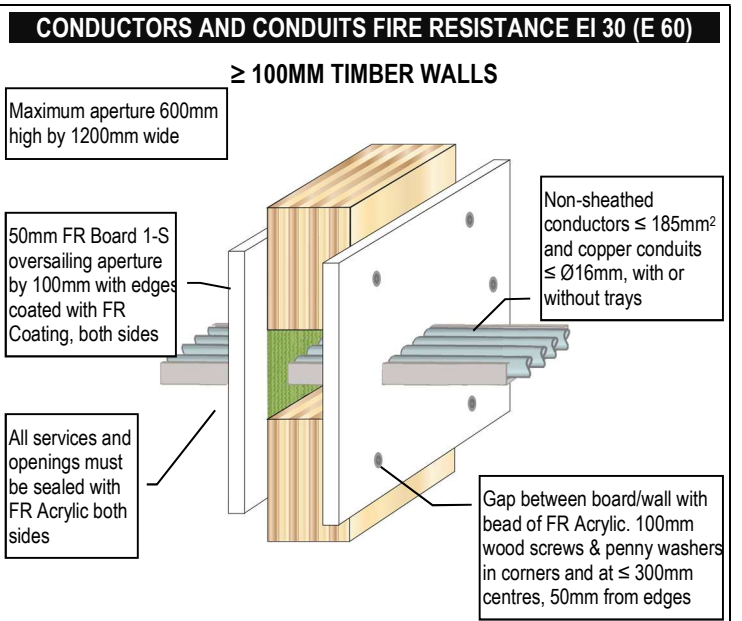
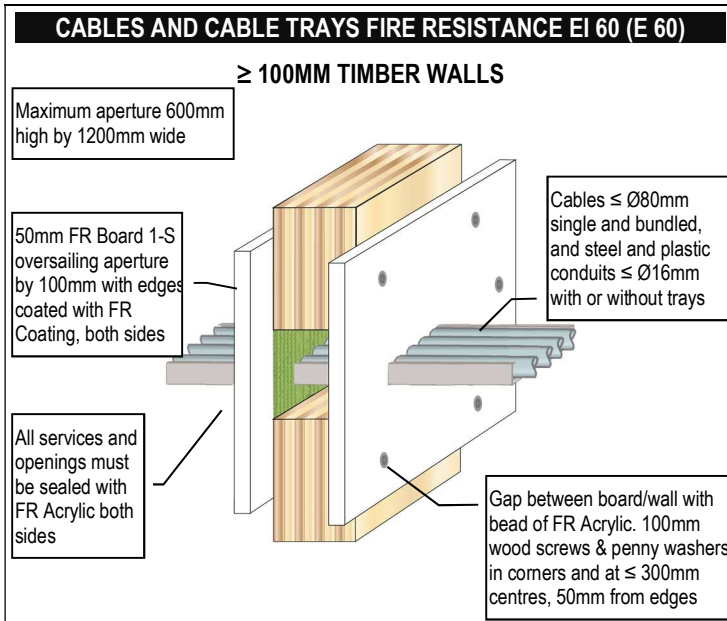
≥ 100MM TIMBER WALLS

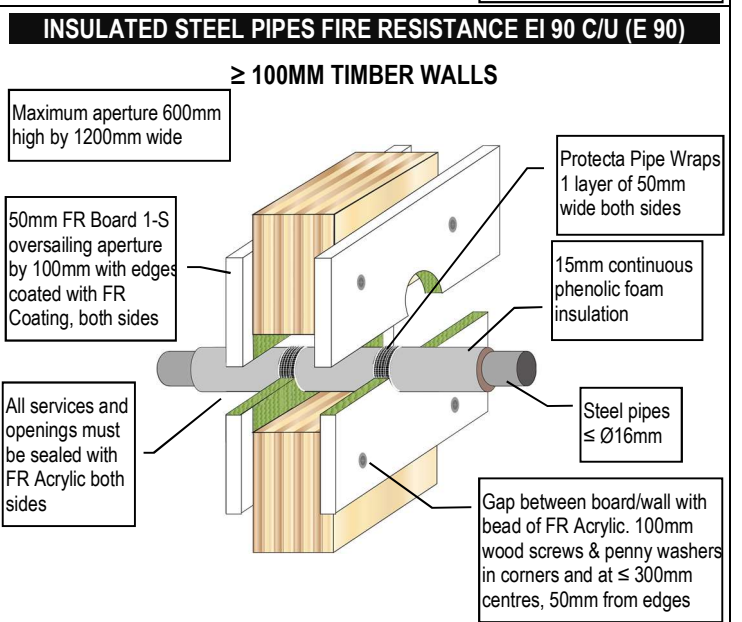
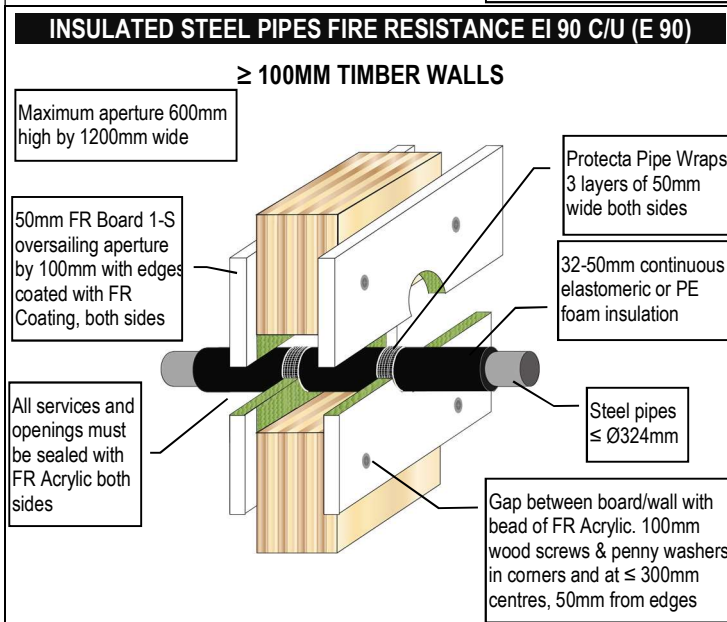
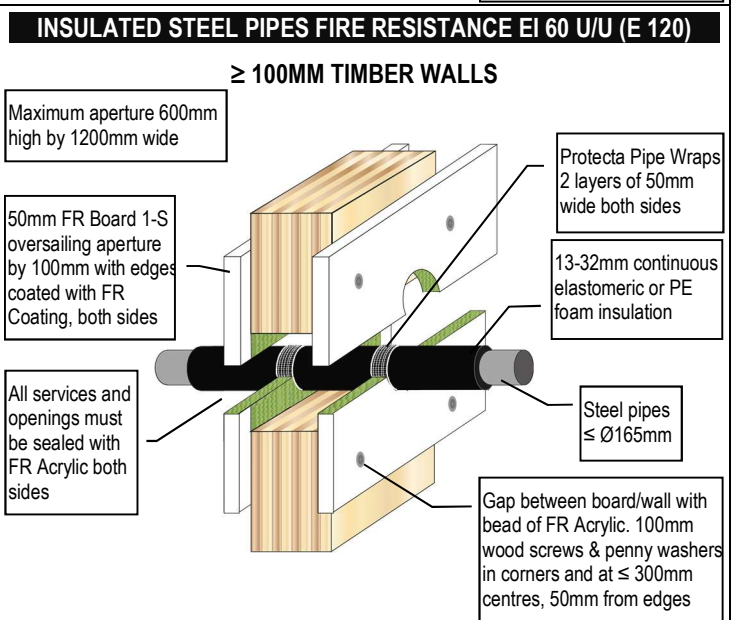
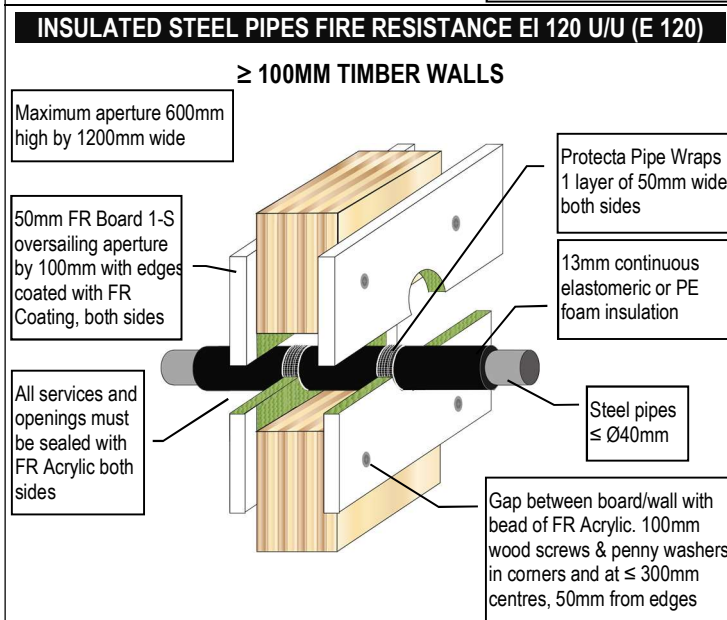
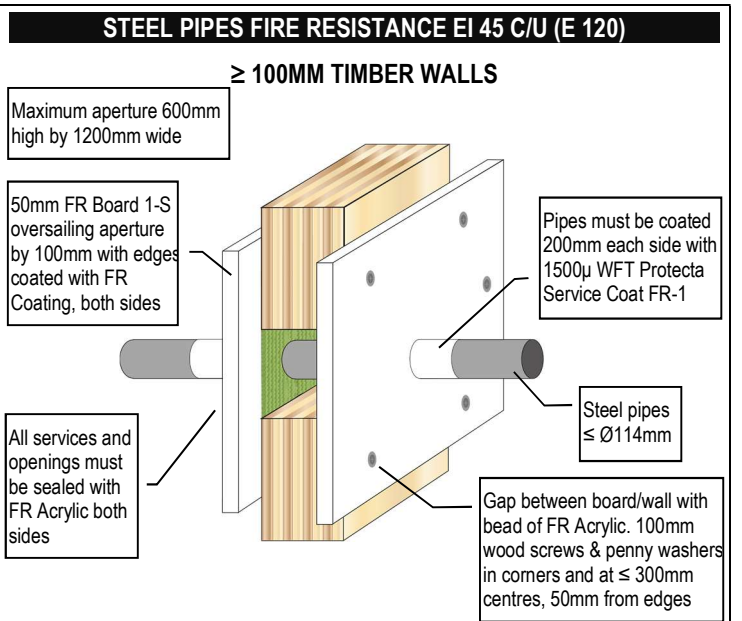
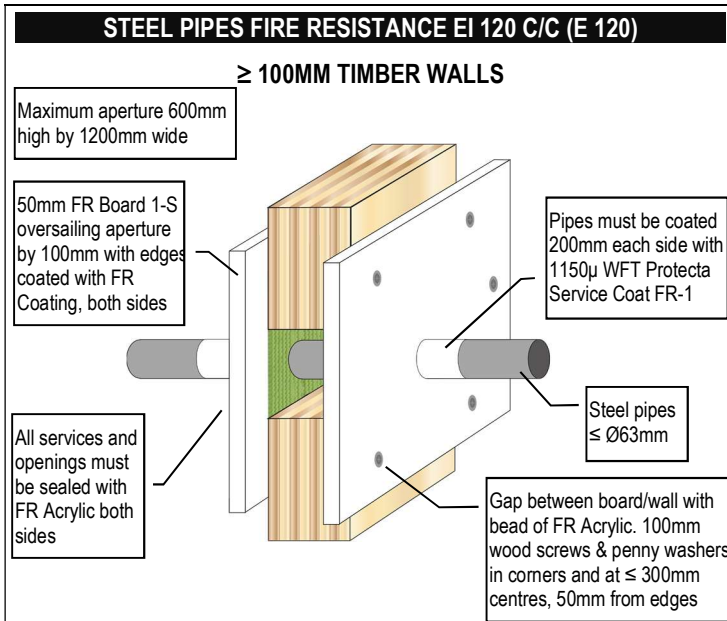


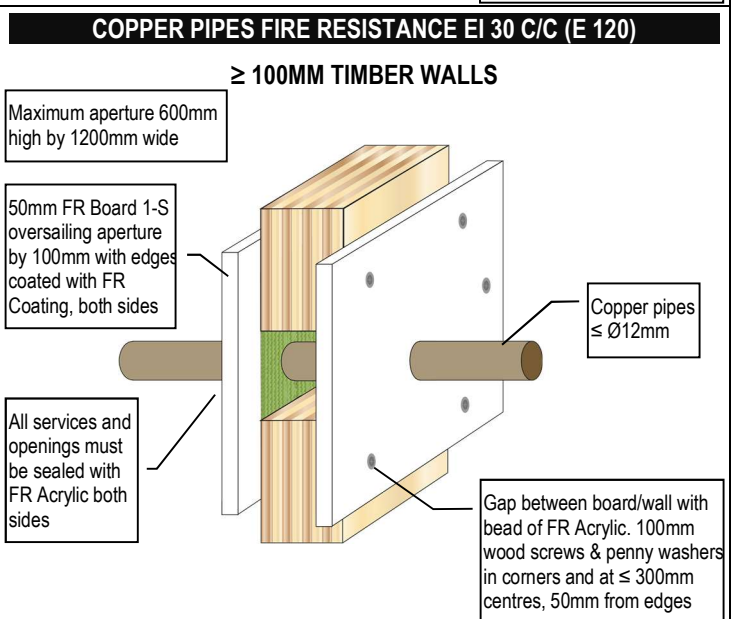
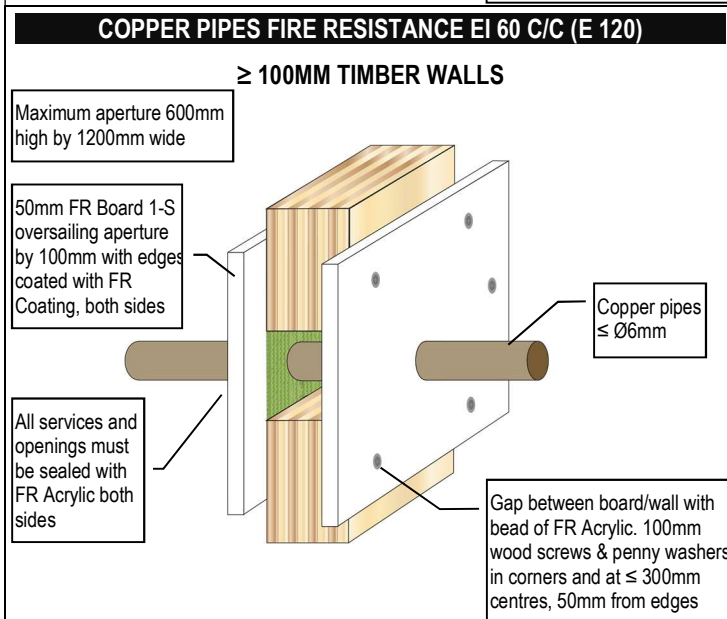
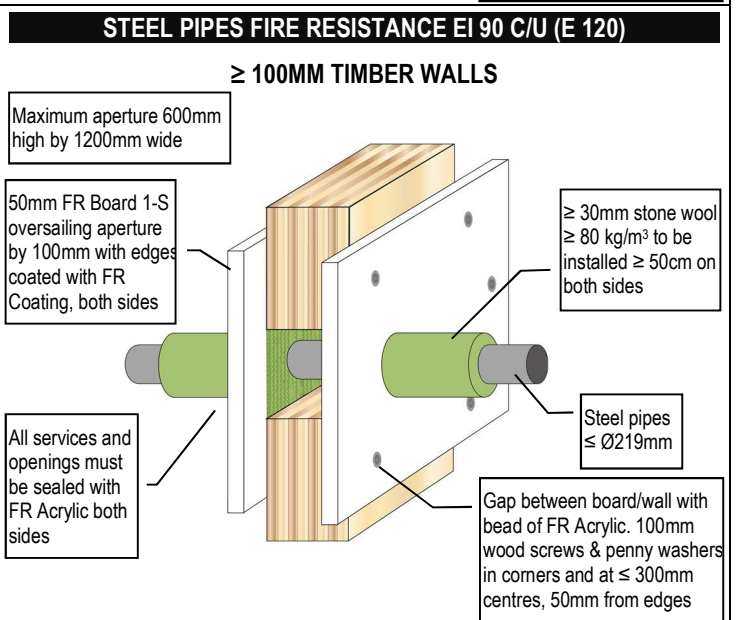
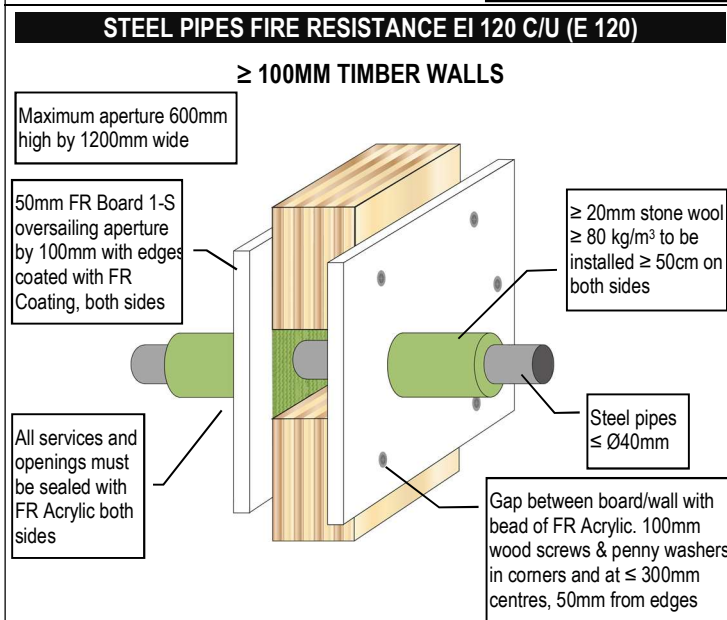
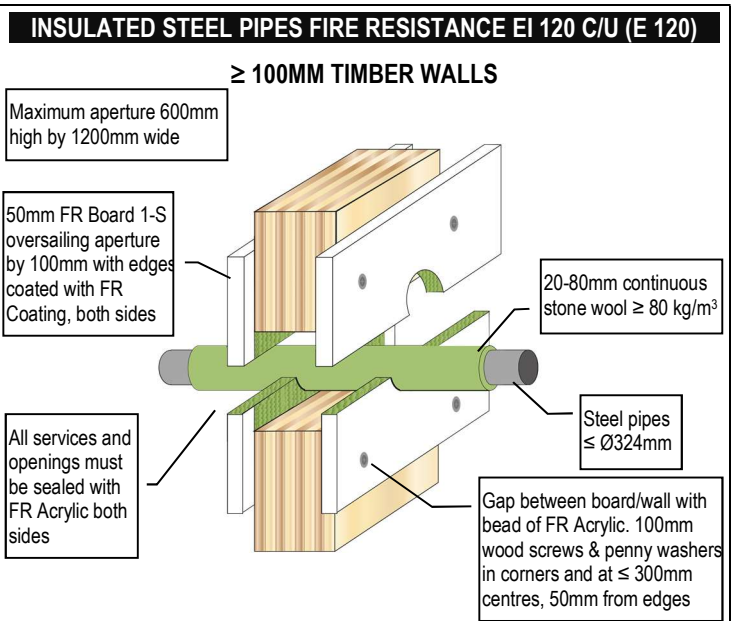
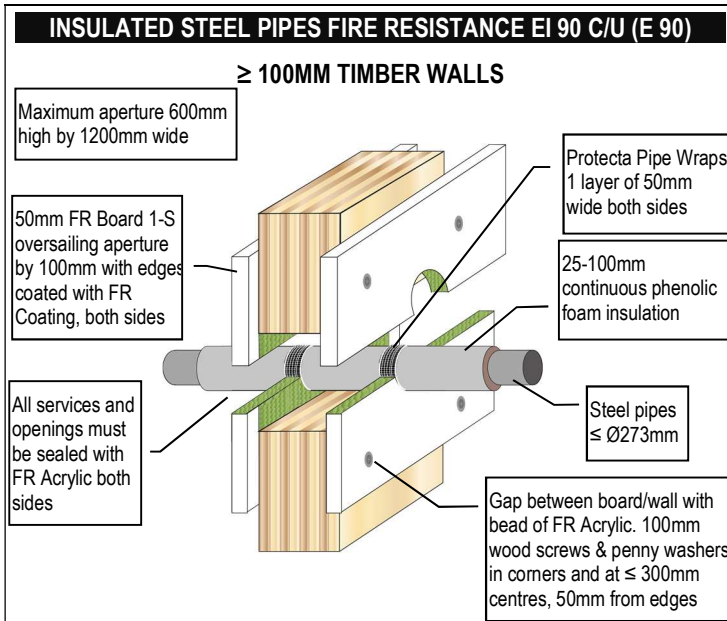
CABLES AND CABLE TRAYS FIRE RESISTANCE EI 90 (E 120)

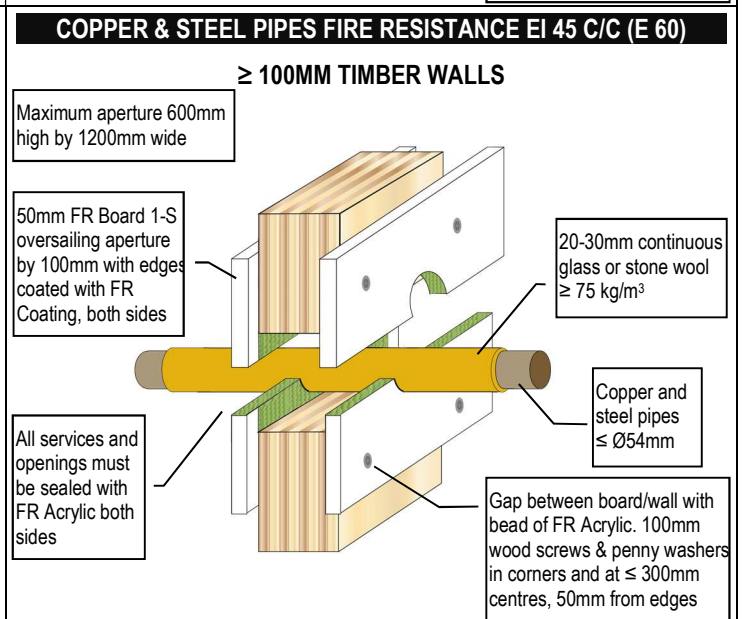
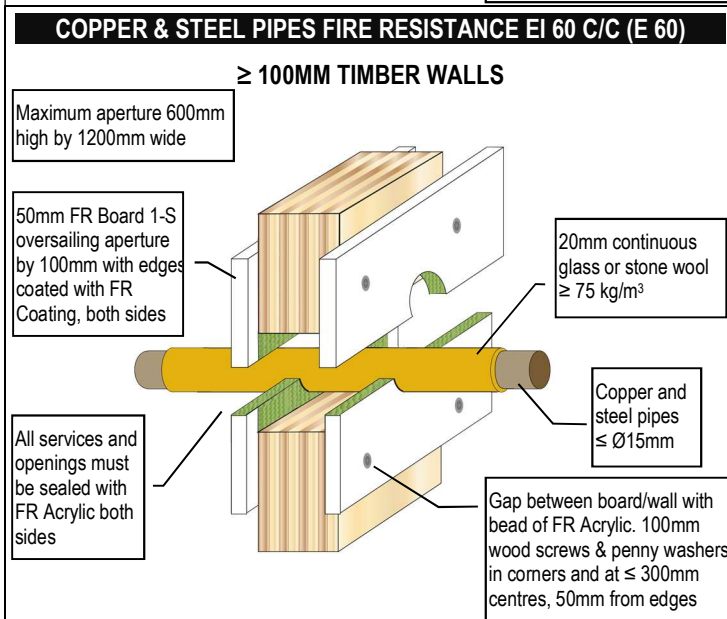
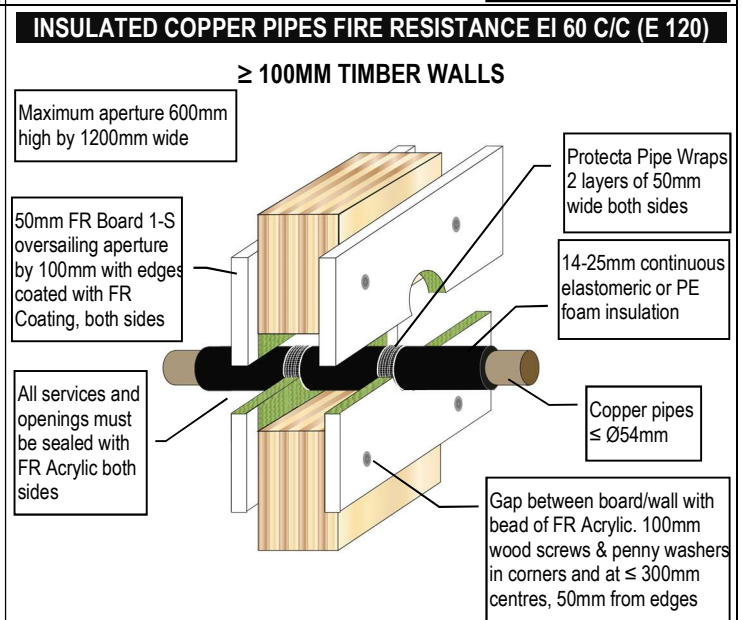
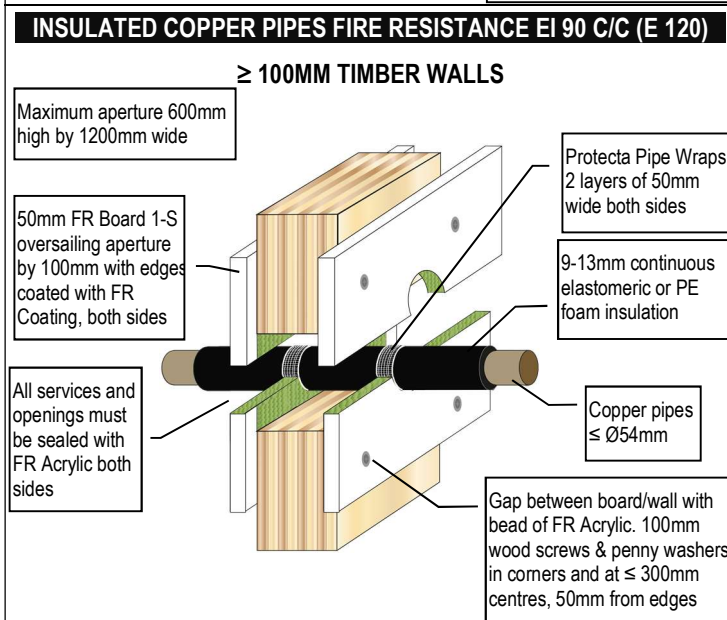
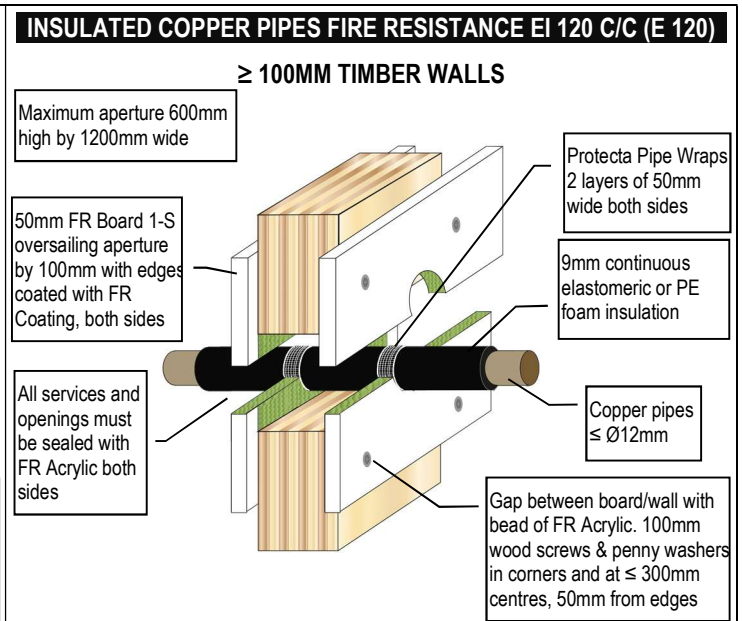
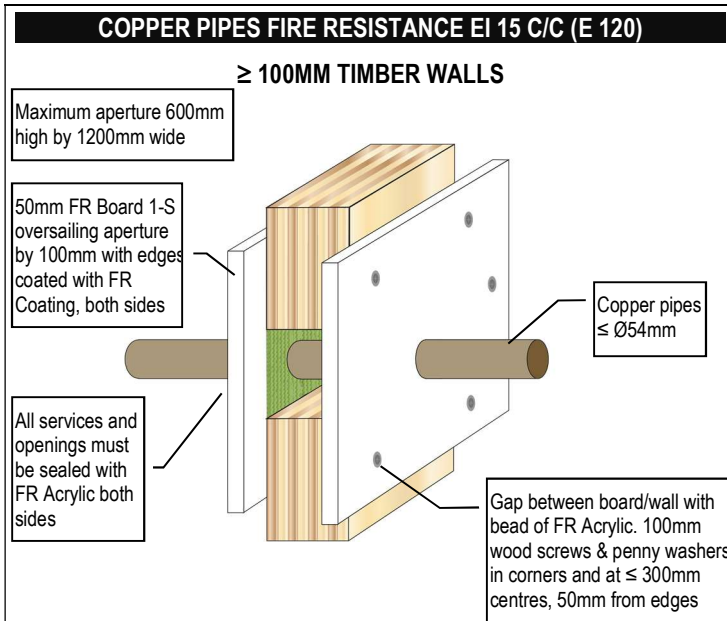
≥ 100MM TIMBER WALLS

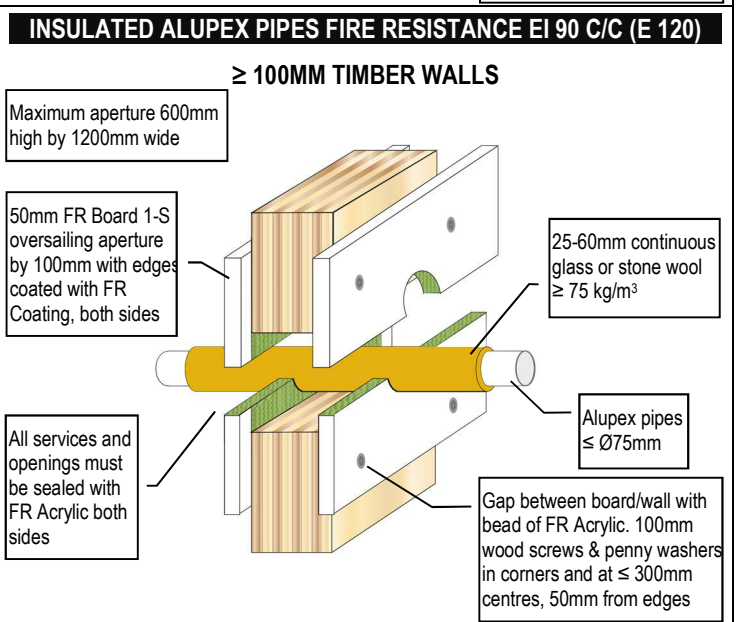
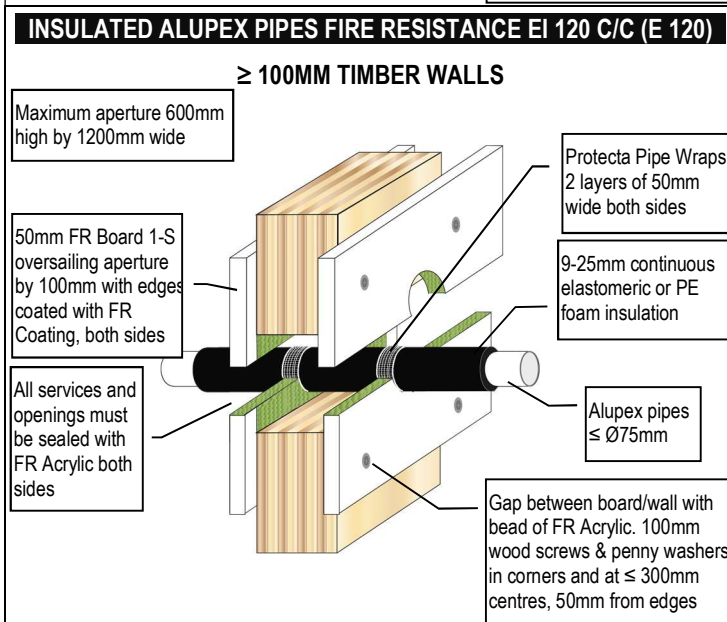
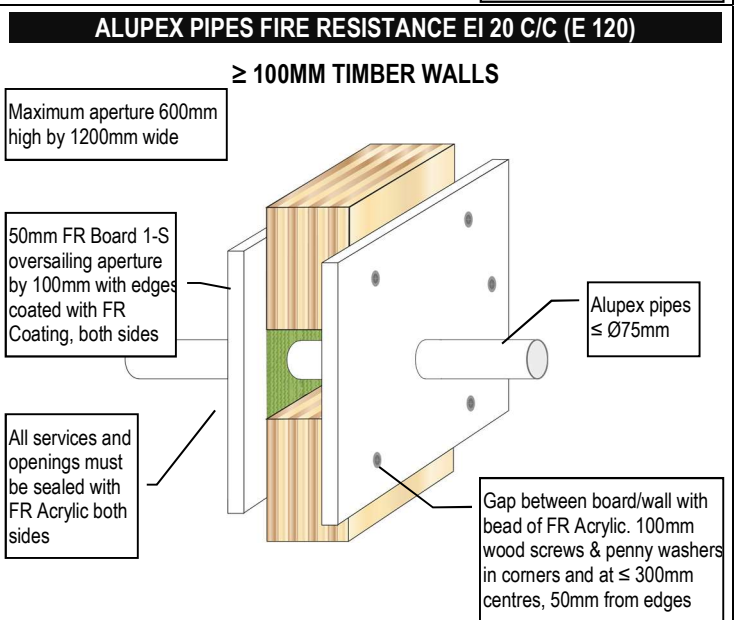
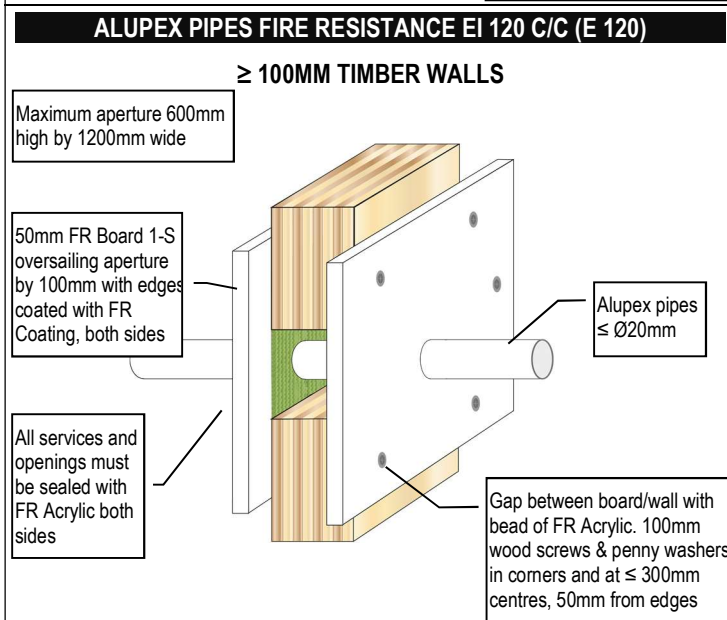
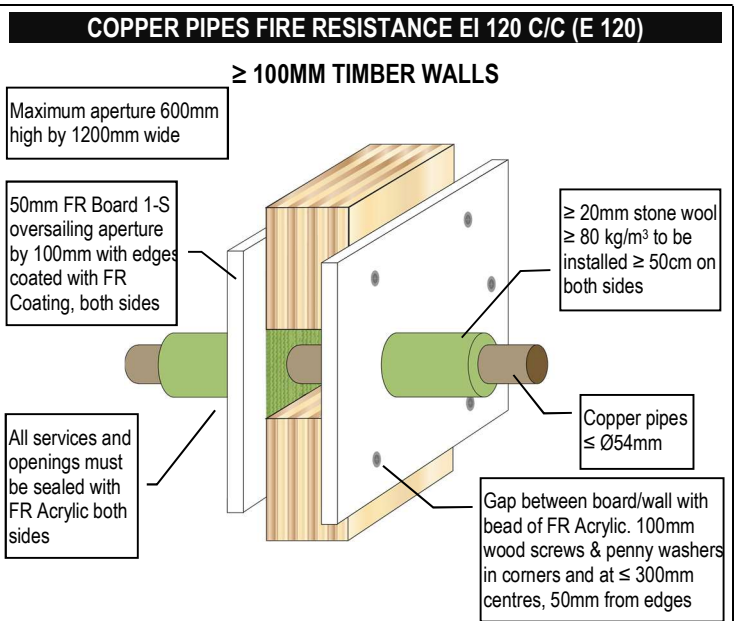
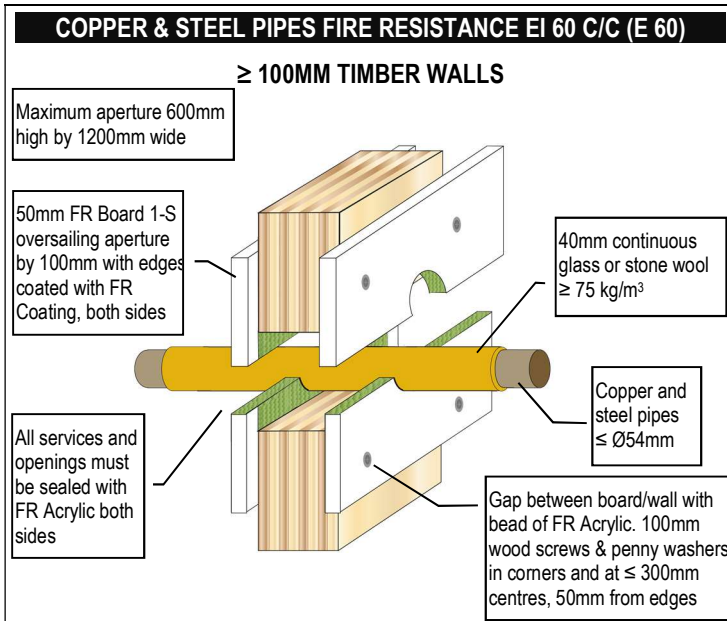


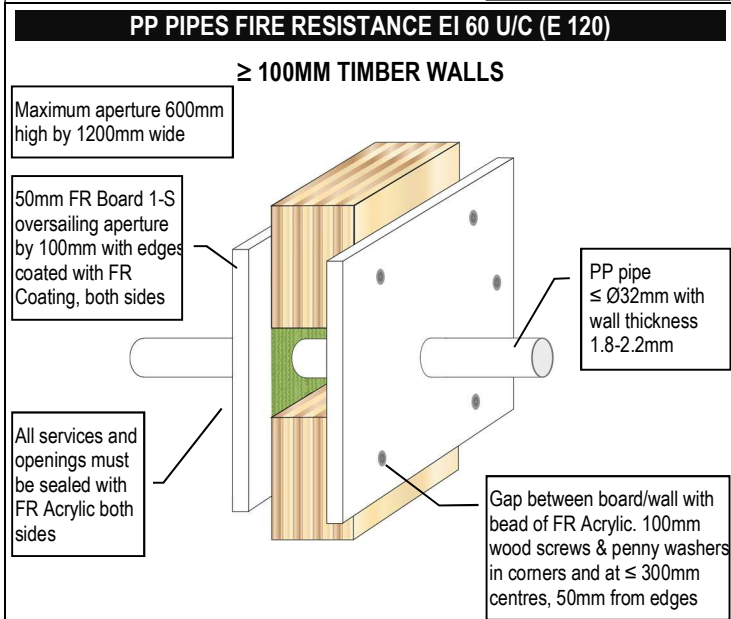
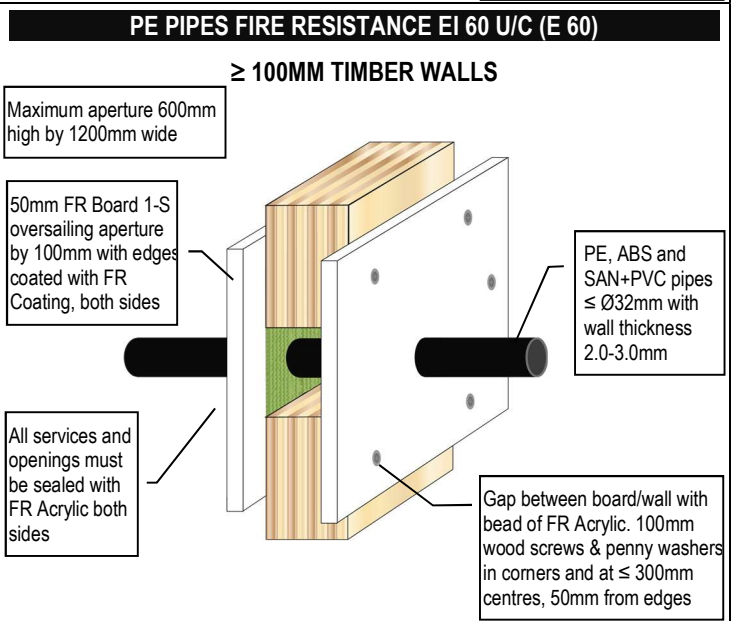
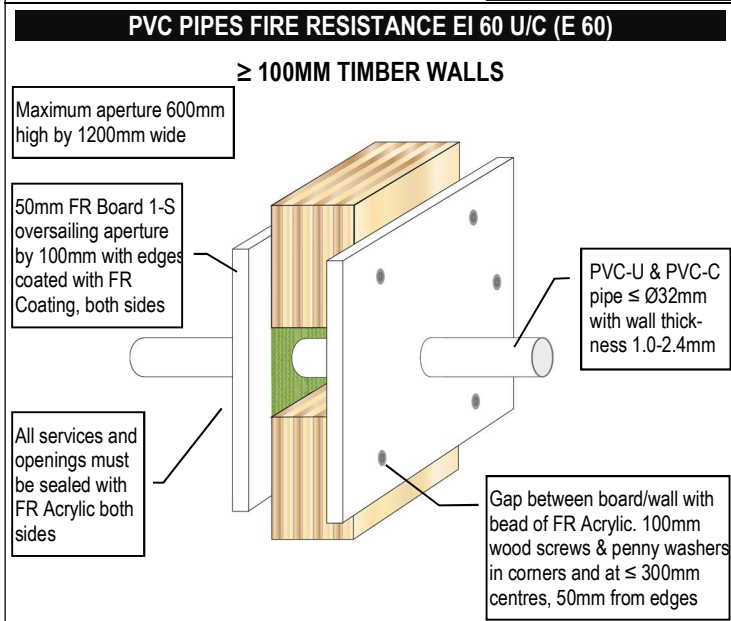
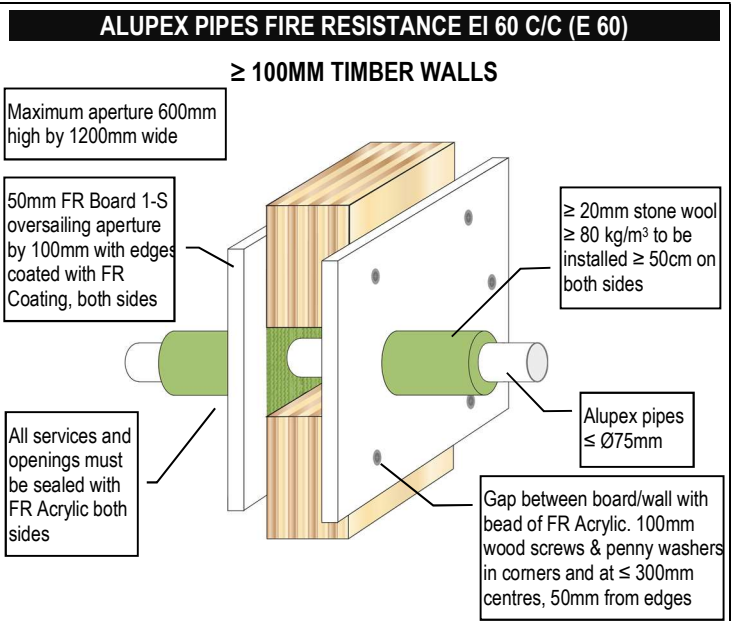
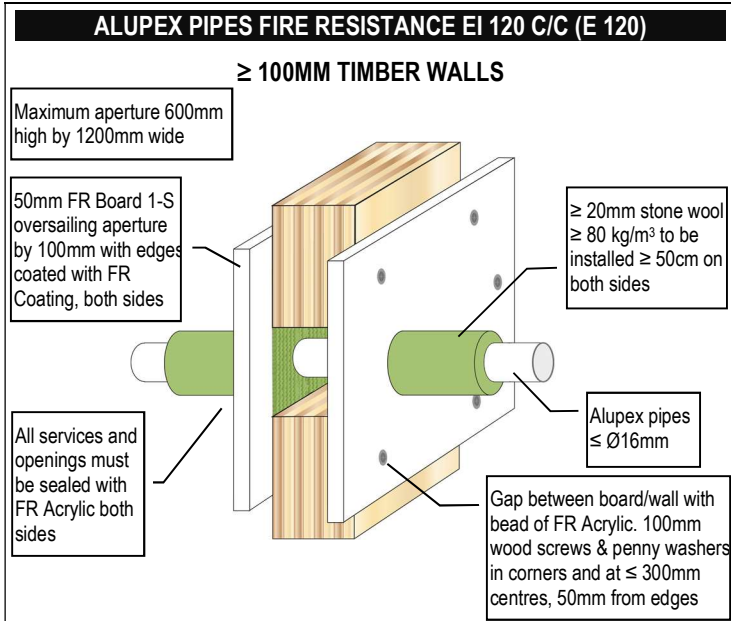












PLASTIC PIPES FIRE RESISTANCE EI 60-120

≥ 100MM TIMBER WALLS

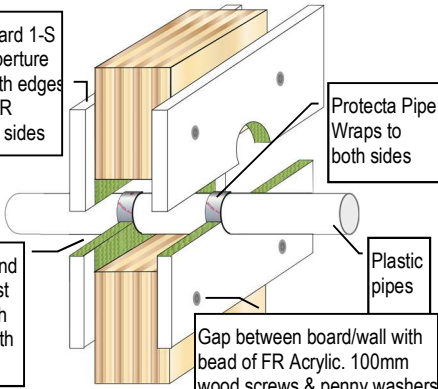
Services	Pipe Wall Thickness	FR Pipe Wrap	Classification
≤ Ø 40mm PVC-U & PVC-C	1.9 – 3.0mm	50 x 1.8mm (1 layer)	EI 120 U/U (E 120 U/U)
≤ Ø 40mm PE, ABS & SAN+PVC	2.4 – 3.7mm	50 x 1.8mm (1 layer)	EI 120 U/U (E 120 U/U)
≤ Ø 40mm PP	1.8 – 5.5mm	50 x 1.8mm (1 layer)	EI 120 U/U (E 120 U/U)
≤ Ø 110mm PVC-U & 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	4.0 – 9.5mm	50 x 10.8mm (6 layers)	EI 60 U/C (E 90 U/C)
≤ Ø 160mm PE, ABS & SAN+PVC	4.9 – 14.6mm	50 x 10.8mm (6 layers)	EI 60 U/C (E 90 U/C)
≤ Ø 160mm PP	4.9 – 21.9mm	50 x 10.8mm (6 layers)	EI 60 U/C (E 90 U/C)
≤ Ø 200mm PVC-U & PVC-C	4.9 – 11.9mm	50 x 10.8mm (6 layers)	EI 90 C/C (E 90 C/C)
≤ Ø 200mm PE, ABS & SAN+PVC	6.2 – 18.2mm	50 x 10.8mm (6 layers)	EI 90 C/C (E 90 C/C)
≤ Ø 200mm PP	4.9 – 18.2mm	50 x 10.8mm (6 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 315mm PE, ABS & SAN+PVC	18.7mm	50 x 18.0mm (10 layers)	EI 60 C/C (E 60 C/C)
≤ Ø 315mm PP	28.6mm	50 x 18.0mm (10 layers)	EI 60 C/C (E 60 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)
≤ Ø 400mm PE, ABS & SAN+PVC	23.7mm	50 x 28.8mm (16 layers)	EI 60 C/C (E 60 C/C)

Maximum aperture 600mm high by 1200mm wide

50mm FR Board 1-S oversailing aperture by 100mm with edges coated with FR Coating, both sides

Protecta Pipe Wraps to both sides

All services and openings must be sealed with FR Acrylic both sides



Gap between board/wall with bead of FR Acrylic. 100mm wood screws & penny washers in corners and at ≤ 300mm centres, 50mm from edges

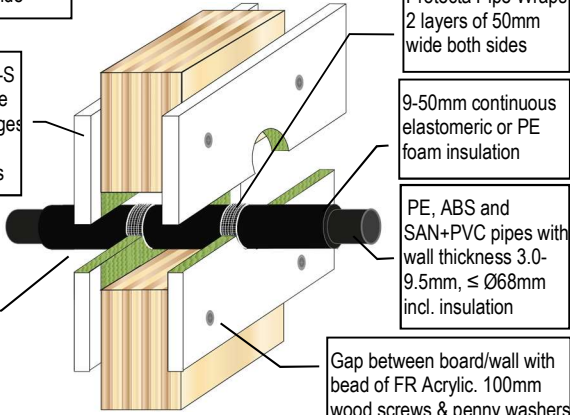
INSULATED PE PIPES FIRE RESISTANCE EI 60 C/C (E 60)

≥ 100MM TIMBER WALLS

Maximum aperture 600mm high by 1200mm wide

50mm FR Board 1-S oversailing aperture by 100mm with edges coated with FR Coating, both sides

All services and openings must be sealed with FR Acrylic both sides



Protecta Pipe Wraps 2 layers of 50mm wide both sides

9-50mm continuous elastomeric or PE foam insulation
PE, ABS and SAN+PVC pipes with wall thickness 3.0-9.5mm, ≤ Ø68mm incl. insulation

Gap between board/wall with bead of FR Acrylic. 100mm wood screws & penny washers in corners and at ≤ 300mm centres, 50mm from edges

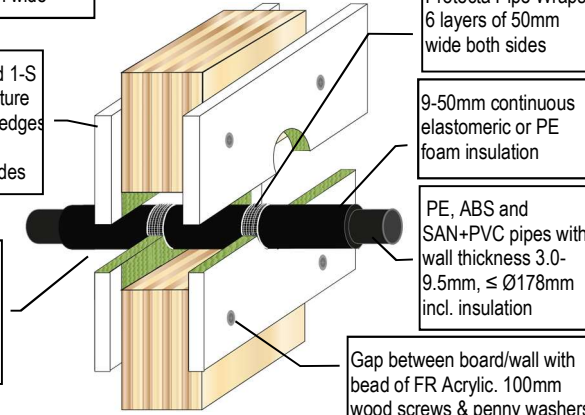
INSULATED PE PIPES FIRE RESISTANCE EI 60 C/C (E 60)

≥ 100MM TIMBER WALLS

Maximum aperture 600mm high by 1200mm wide

50mm FR Board 1-S oversailing aperture by 100mm with edges coated with FR Coating, both sides

All services and openings must be sealed with FR Acrylic both sides



Protecta Pipe Wraps 6 layers of 50mm wide both sides

9-50mm continuous elastomeric or PE foam insulation
PE, ABS and SAN+PVC pipes with wall thickness 3.0-9.5mm, ≤ Ø178mm incl. insulation

Gap between board/wall with bead of FR Acrylic. 100mm wood screws & penny washers in corners and at ≤ 300mm centres, 50mm from edges

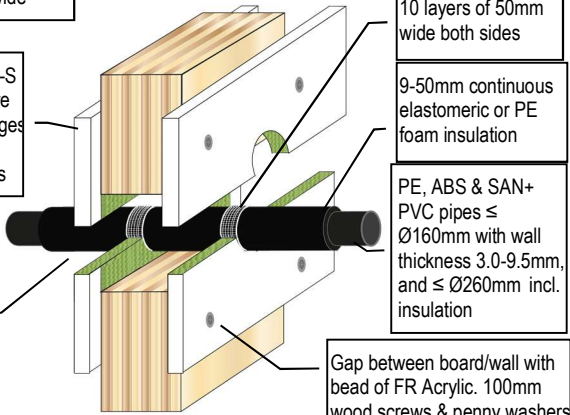
INSULATED PE PIPES FIRE RESISTANCE EI 60 C/C (E 60)

≥ 100MM TIMBER WALLS

Maximum aperture 600mm high by 1200mm wide

50mm FR Board 1-S oversailing aperture by 100mm with edges coated with FR Coating, both sides

All services and openings must be sealed with FR Acrylic both sides



Protecta Pipe Wraps 10 layers of 50mm wide both sides

9-50mm continuous elastomeric or PE foam insulation
PE, ABS & SAN+PVC pipes ≤ Ø160mm with wall thickness 3.0-9.5mm, and ≤ Ø260mm incl. insulation

Gap between board/wall with bead of FR Acrylic. 100mm wood screws & penny washers in corners and at ≤ 300mm centres, 50mm from edges

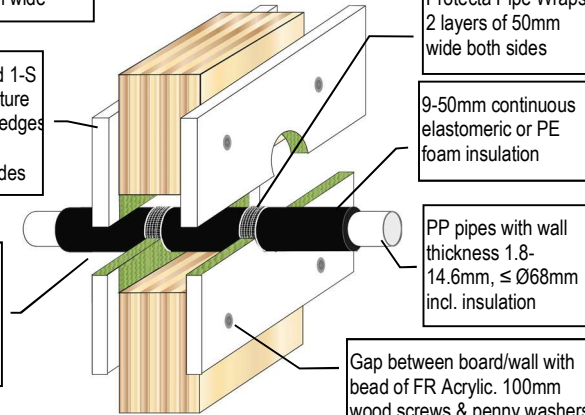
INSULATED PP PIPES FIRE RESISTANCE EI 60 C/C (E 60)

≥ 100MM TIMBER WALLS

Maximum aperture 600mm high by 1200mm wide

50mm FR Board 1-S oversailing aperture by 100mm with edges coated with FR Coating, both sides

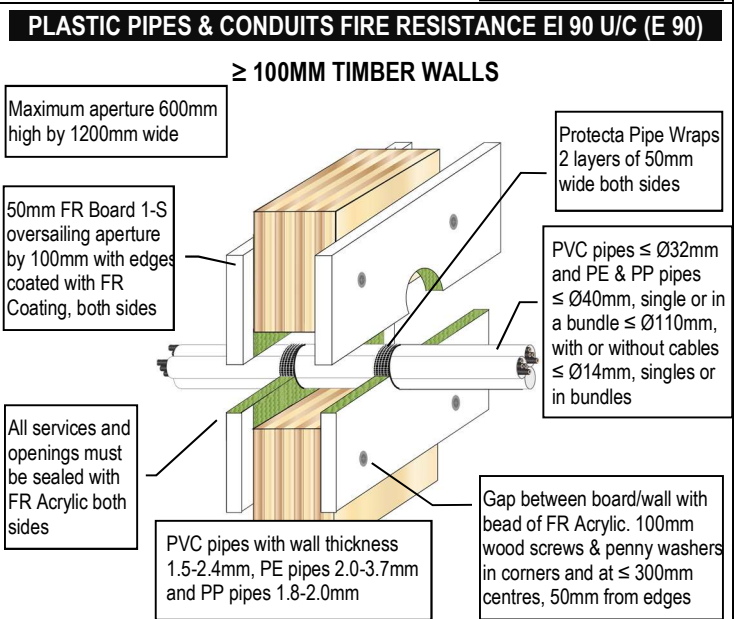
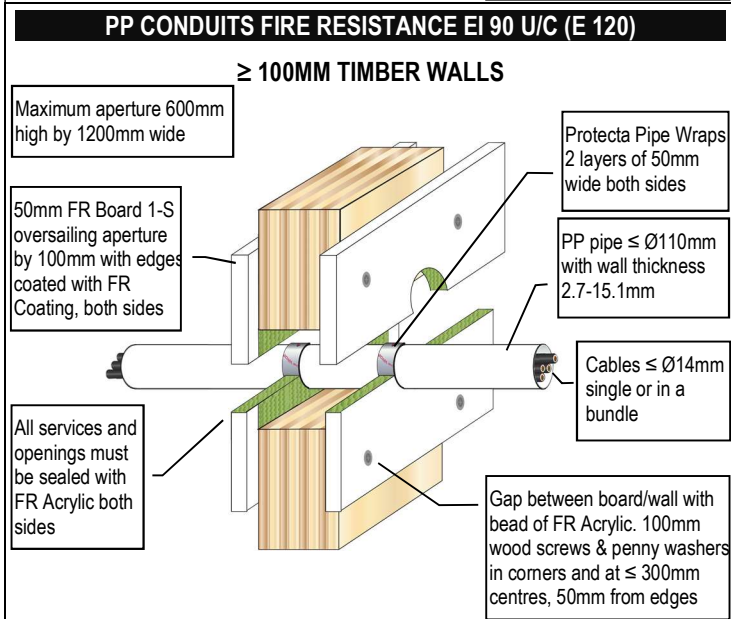
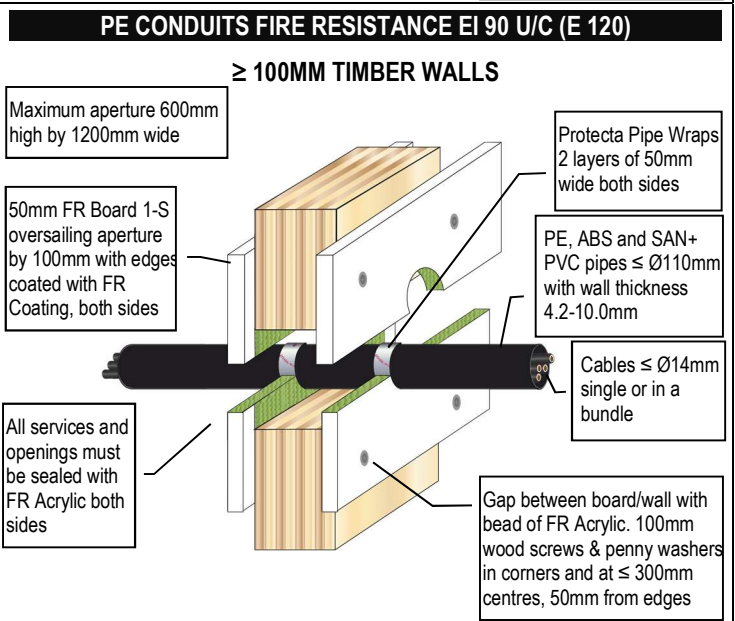
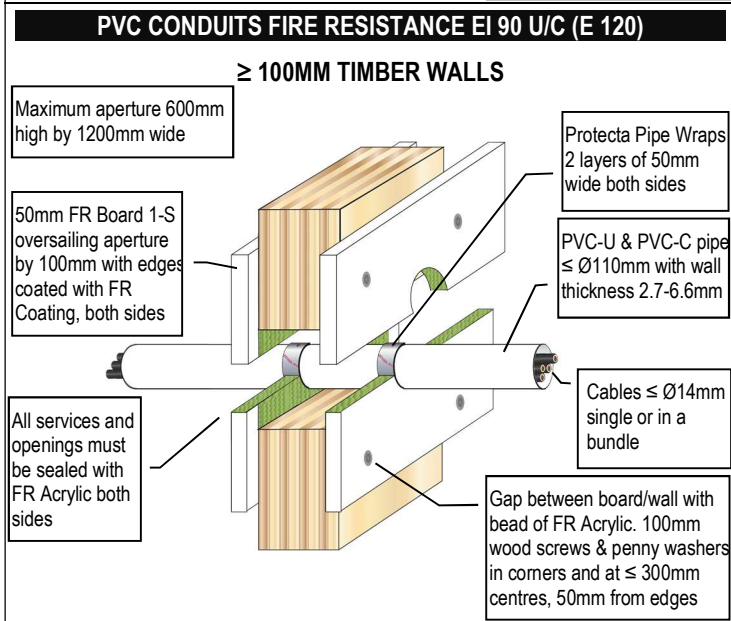
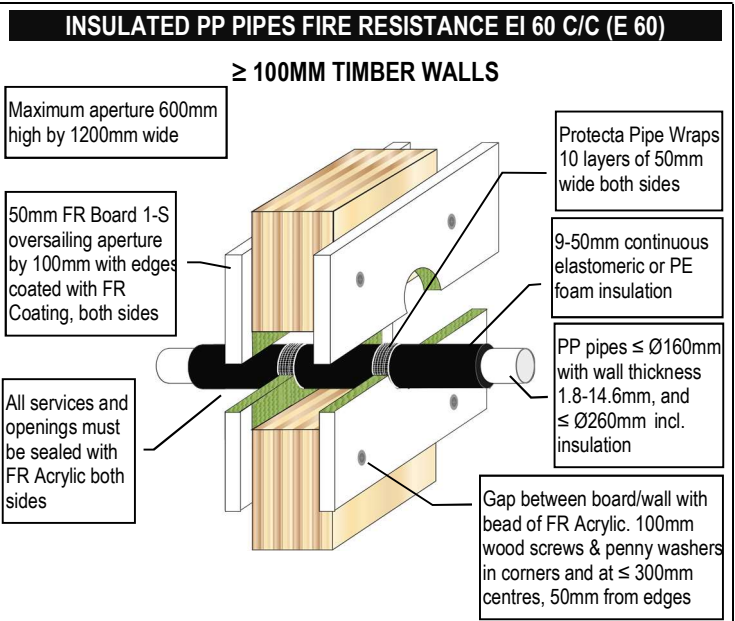
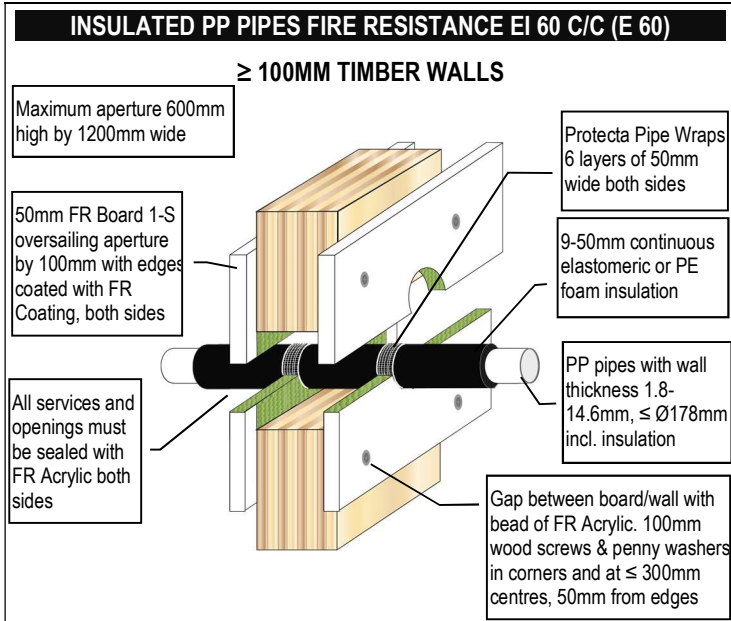
All services and openings must be sealed with FR Acrylic both sides

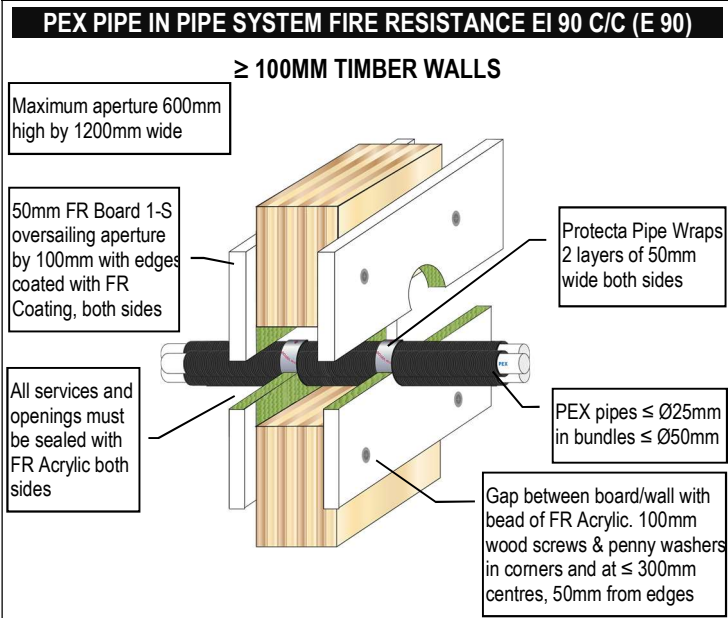
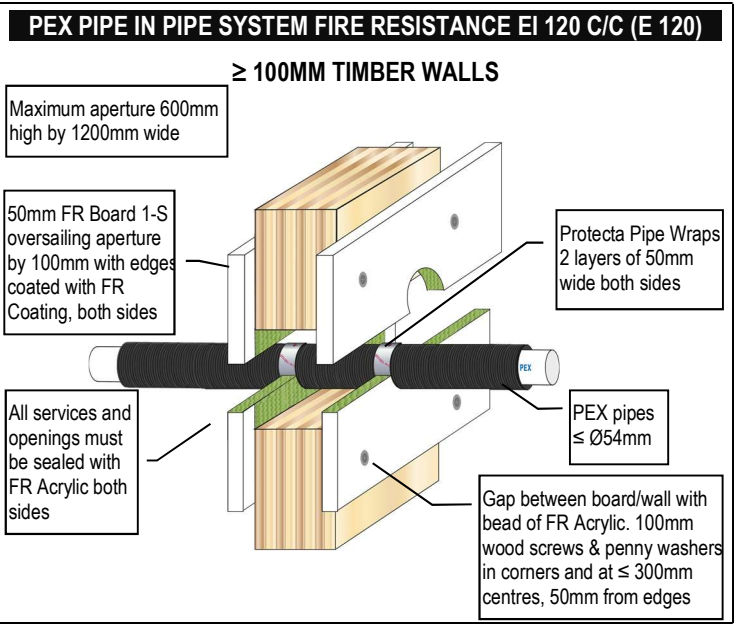
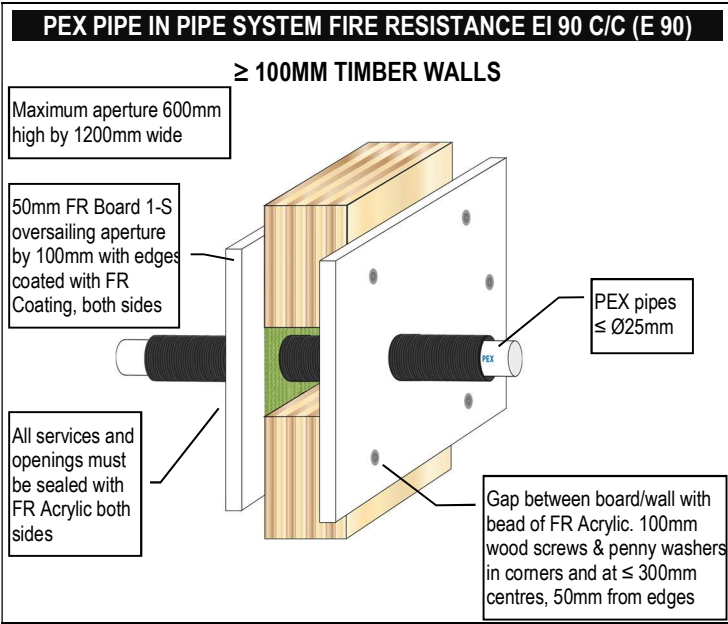


Protecta Pipe Wraps 2 layers of 50mm wide both sides

9-50mm continuous elastomeric or PE foam insulation
PP pipes with wall thickness 1.8-14.6mm, ≤ Ø68mm incl. insulation

Gap between board/wall with bead of FR Acrylic. 100mm wood screws & penny washers in corners and at ≤ 300mm centres, 50mm from edges





COMPOSITE AQUATHERM GREEN SDR9 PLASTIC PIPES FIRE RESISTANCE EI 90

≥ 100MM TIMBER WALLS

Maximum aperture 600mm high by 1200mm wide

50mm FR Board 1-S oversailing aperture by 100mm with edges coated with FR Coating, both sides

Protecta Pipe Wraps to both sides

Composite pipes

All services and openings must be sealed with FR Acrylic both sides

Gap between board/wall with bead of FR Acrylic. 100mm wood screws & penny washers in corners and at ≤ 300mm centres, 50mm from edges

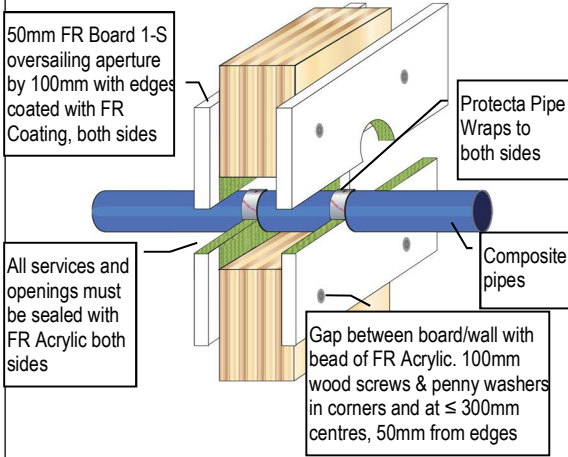
Services	FR Pipe Wrap	Classification
Ø 32mm Aquatherm Green SDR9 pipes	50 x 1.8mm (1 layer)	EI 90 C/C (E 120 C/C)
Ø 40mm Aquatherm Green SDR9 pipes	50 x 3.6mm (2 layers)	EI 90 C/C (E 120 C/C)
Ø 50mm Aquatherm Green SDR9 pipes	50 x 3.6mm (2 layers)	EI 90 C/C (E 120 C/C)
Ø 63mm Aquatherm Green SDR9 pipes	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 3.6mm (2 layers)	EI 90 C/C (E 120 C/C)

COMPOSITE BLUEPOWER PLASTIC PIPES FIRE RESISTANCE EI 90

≥ 100MM TIMBER WALLS

Services	FR Pipe Wrap	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 C/U (E 90 C/U)
Ø 90mm BluePower pipes	50 x 3.6mm (2 layers)	EI 90 C/U (E 90 C/U)
Ø 110mm BluePower pipes	50 x 3.6mm (2 layers)	EI 90 C/U (E 90 C/U)
Ø 125mm BluePower pipes	50 x 10.8mm (6 layers)	EI 90 U/C (E 90 U/C)
Ø 160mm BluePower pipes	50 x 10.8mm (6 layers)	EI 90 U/C (E 90 U/C)

Maximum aperture 600mm high by 1200mm wide

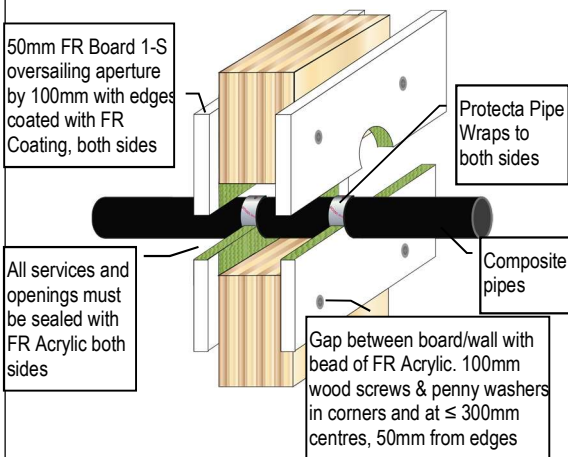


COMPOSITE GEBERIT SILENT-PP PIPES FIRE RESISTANCE EI 120

≥ 100MM TIMBER WALLS

Services	FR Pipe Wrap	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/C (E 120 U/C)
Ø 90mm Geberit Silent-PP pipes	50 x 3.6mm (2 layers)	EI 120 U/C (E 120 U/C)
Ø 110mm Geberit Silent-PP pipes	50 x 3.6mm (2 layers)	EI 120 U/C (E 120 U/C)

Maximum aperture 600mm high by 1200mm wide

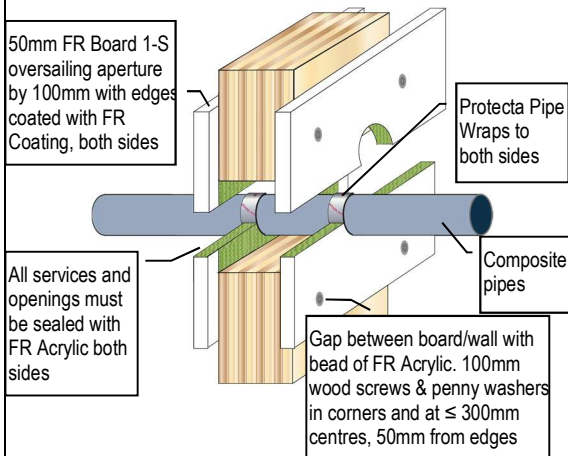


COMPOSITE POLO-KAL NG PLASTIC PIPES FIRE RESISTANCE EI 120

≥ 100MM TIMBER WALLS

Services	FR Pipe Wrap	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)

Maximum aperture 600mm high by 1200mm wide

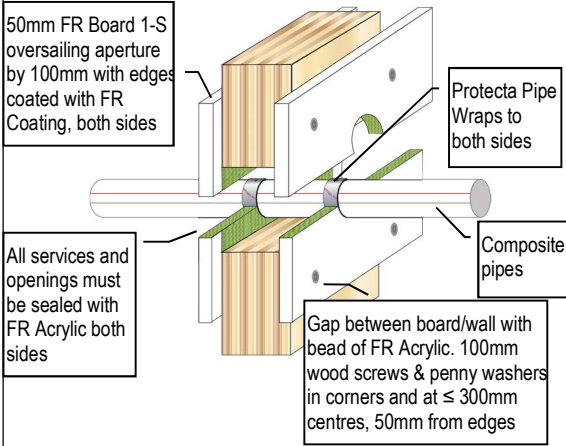


COMPOSITE REHAU RAUPIANO PLUS PLASTIC PIPES FIRE RESISTANCE EI 120

≥ 100MM TIMBER WALLS

Services	FR Pipe Wrap	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)

Maximum aperture 600mm high by 1200mm wide

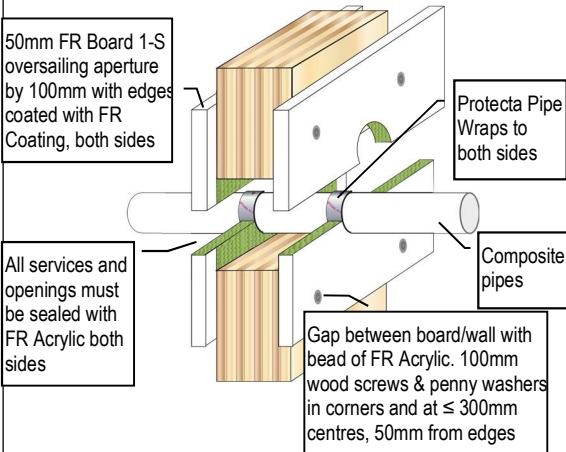


COMPOSITE UPONOR DECIBEL PIPES FIRE RESISTANCE EI 90

≥ 100MM TIMBER WALLS

Services	FR Pipe Wrap	Classification
Ø 50mm Uponor Decibel pipes	50 x 3.6mm (2 layers)	EI 90 U/U (E 90 U/U)
Ø 75mm Uponor Decibel pipes	50 x 3.6mm (2 layers)	EI 90 U/C (E 90 U/C)
Ø 110mm Uponor Decibel pipes	50 x 3.6mm (2 layers)	EI 90 U/C (E 90 U/C)

Maximum aperture 600mm high by 1200mm wide

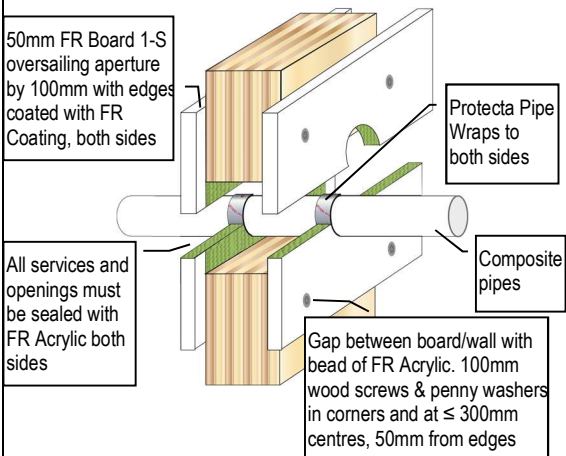


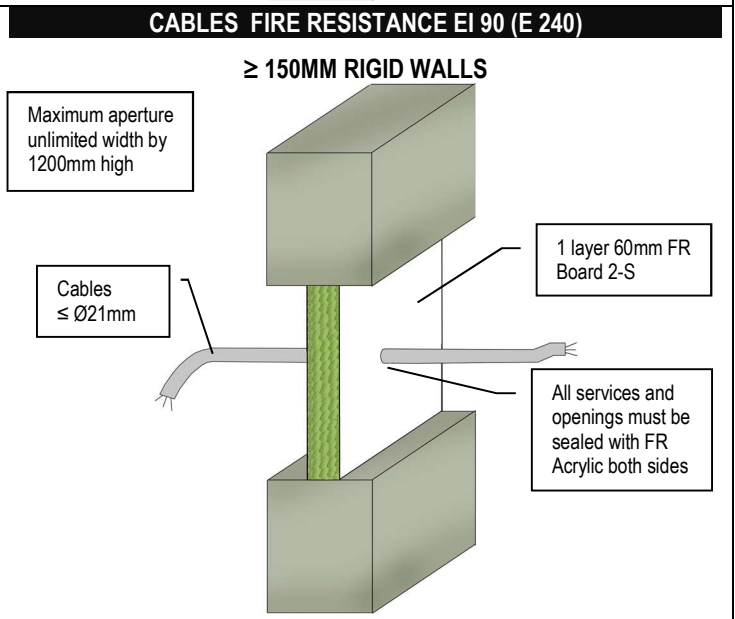
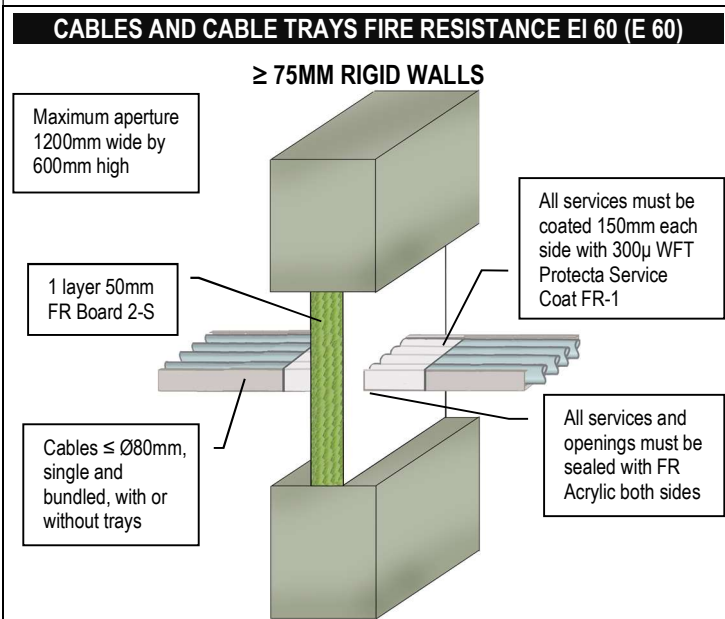
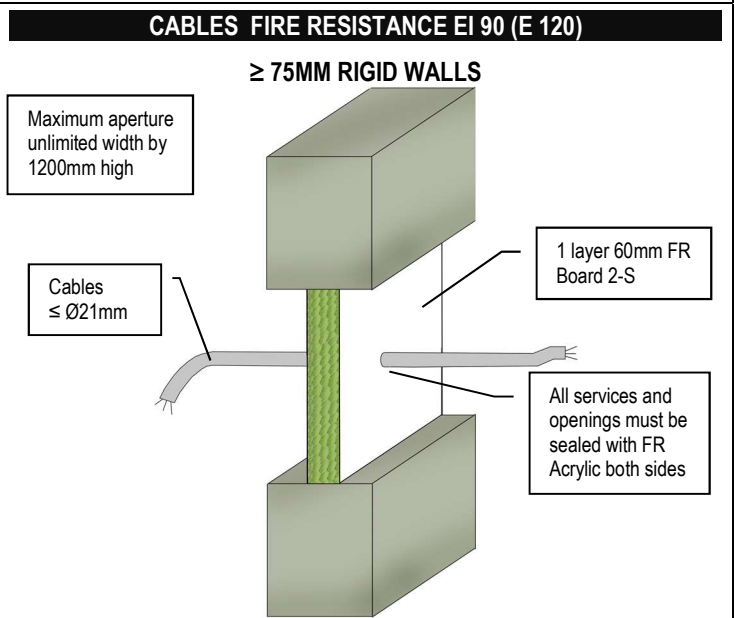
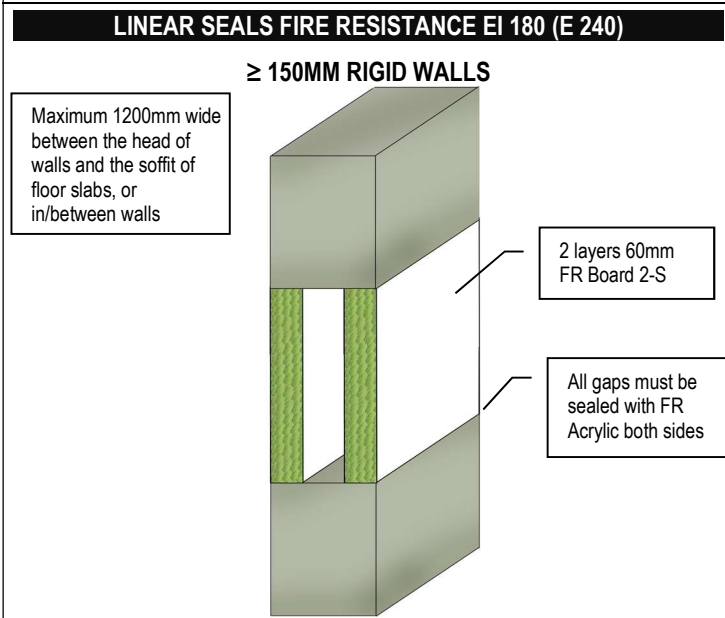
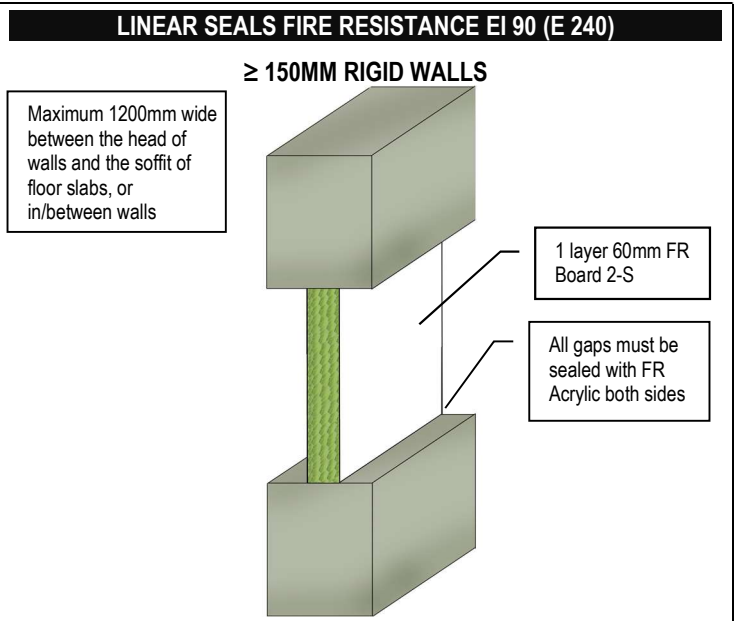
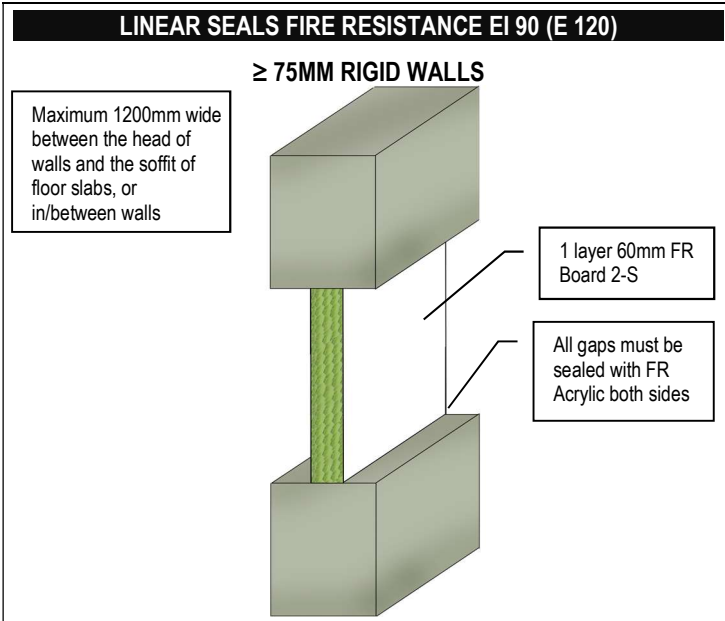
COMPOSITE WAVIN SITTECH PLASTIC PIPES FIRE RESISTANCE EI 60-90

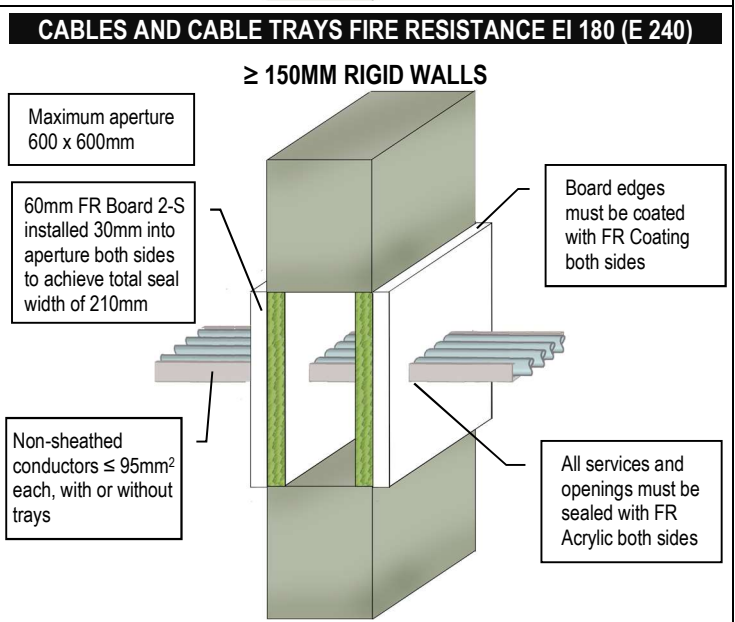
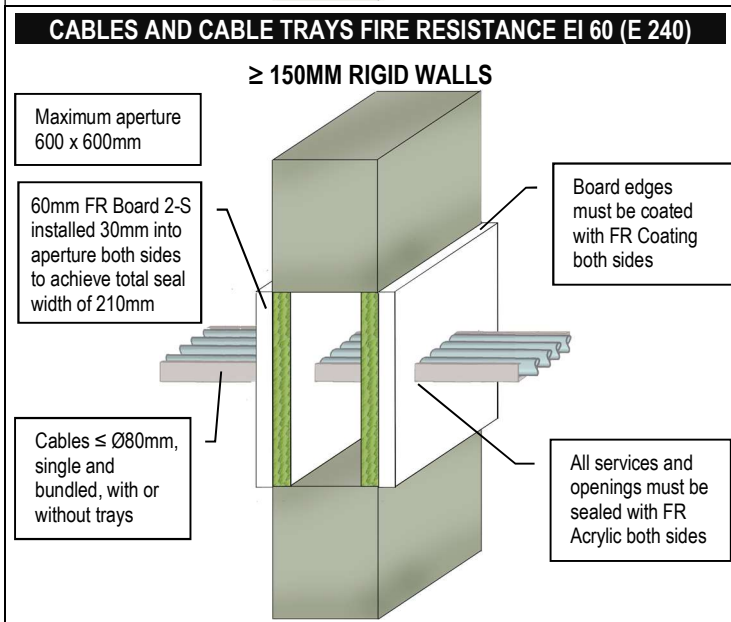
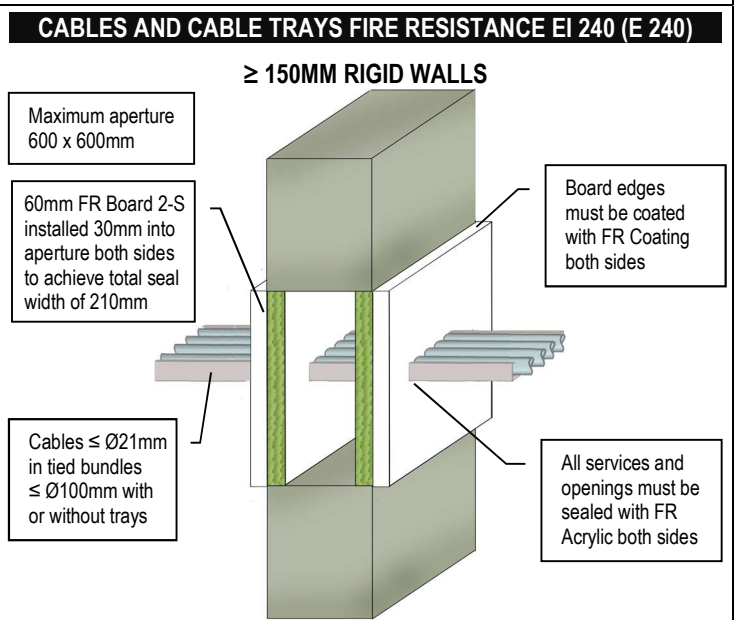
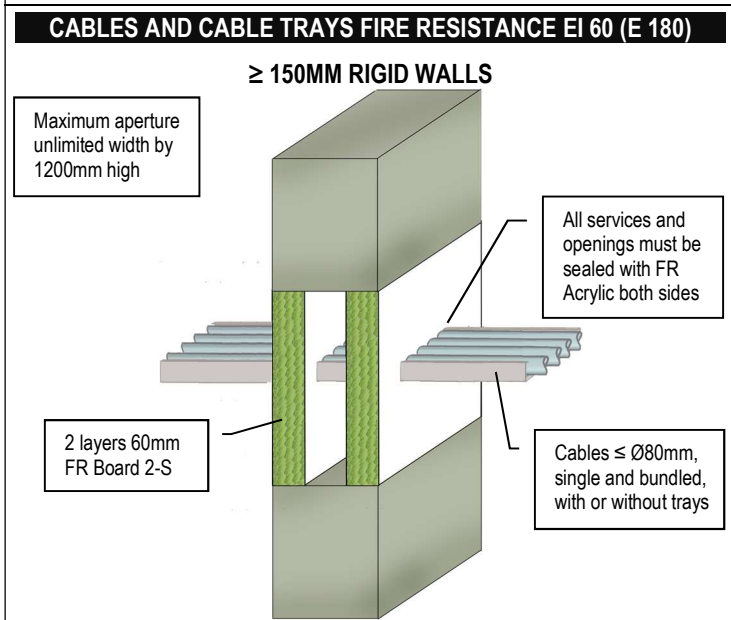
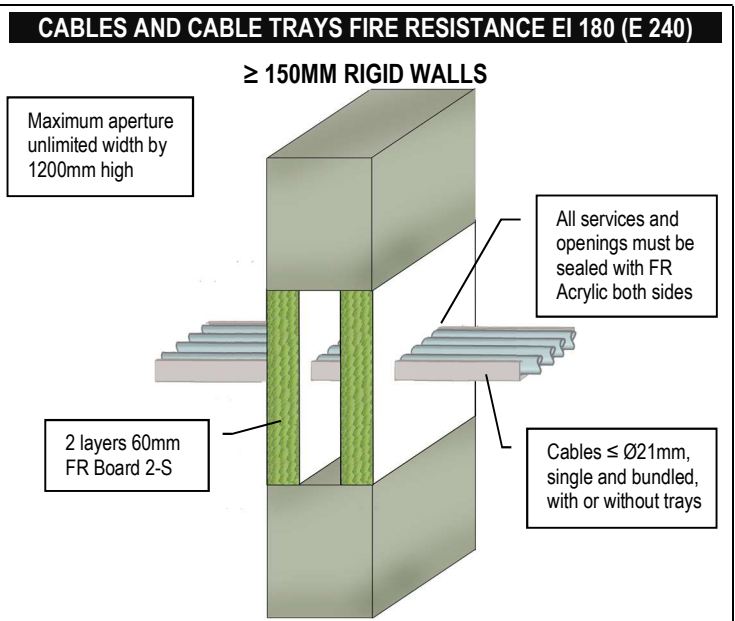
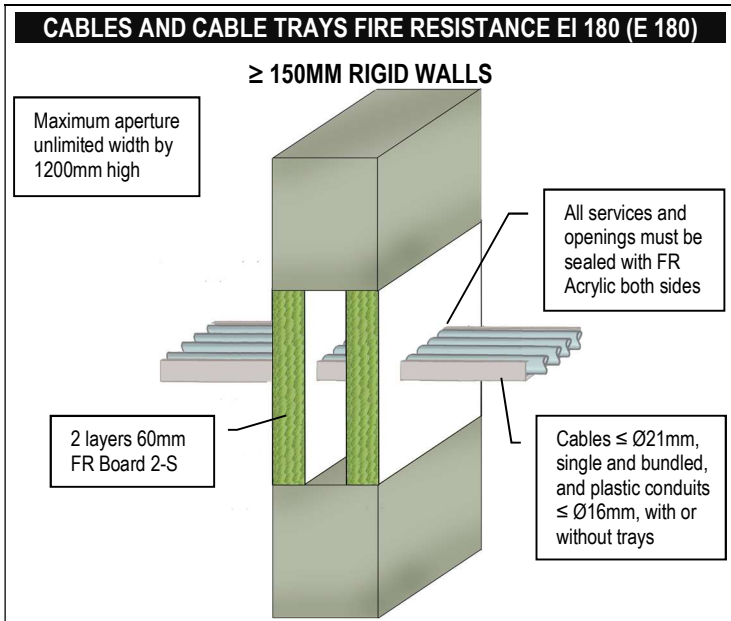
≥ 100MM TIMBER WALLS

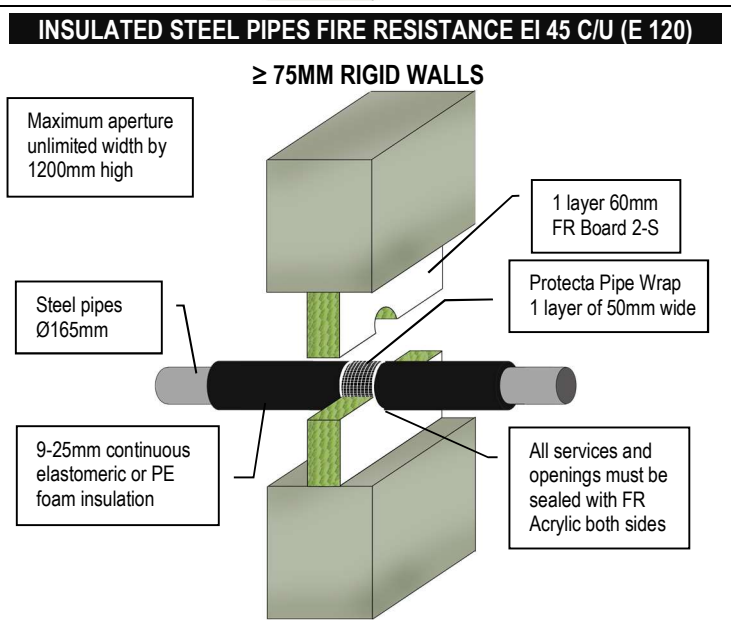
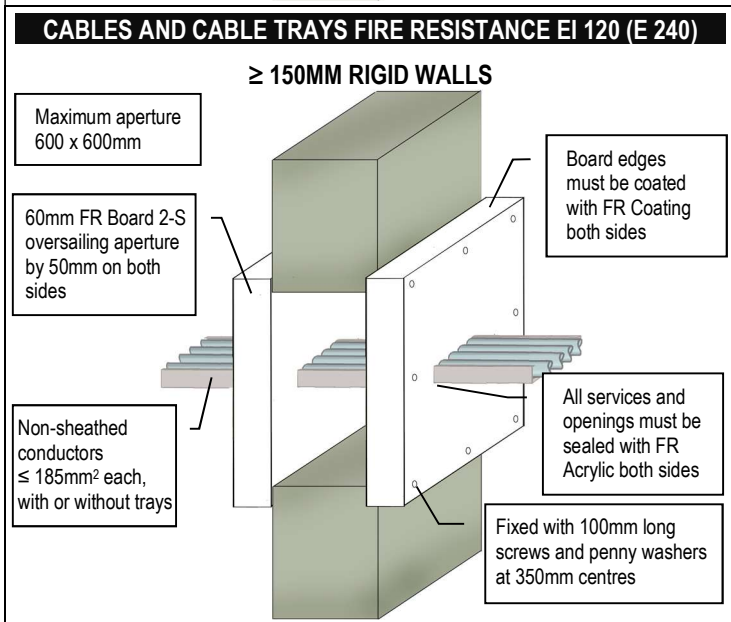
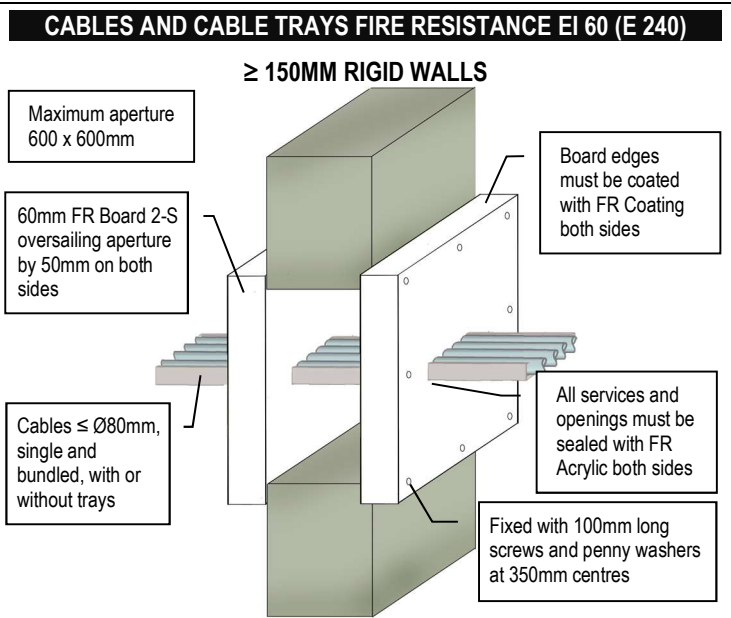
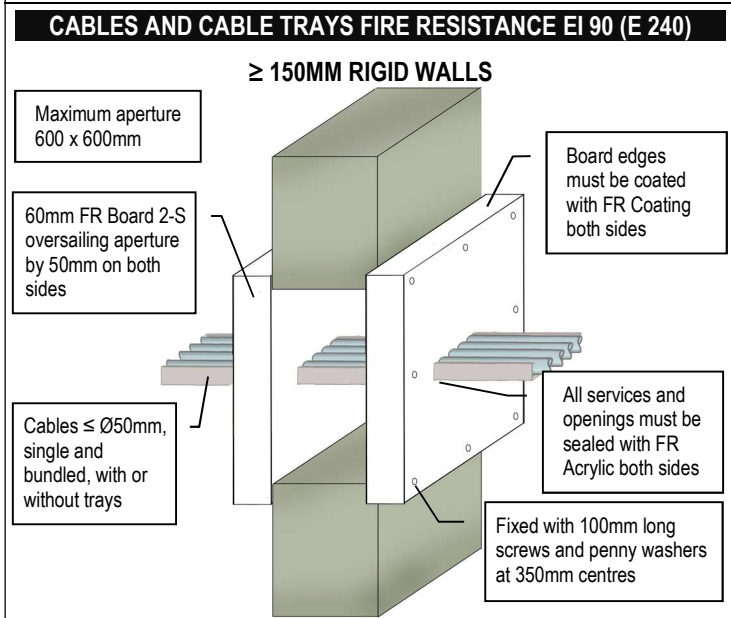
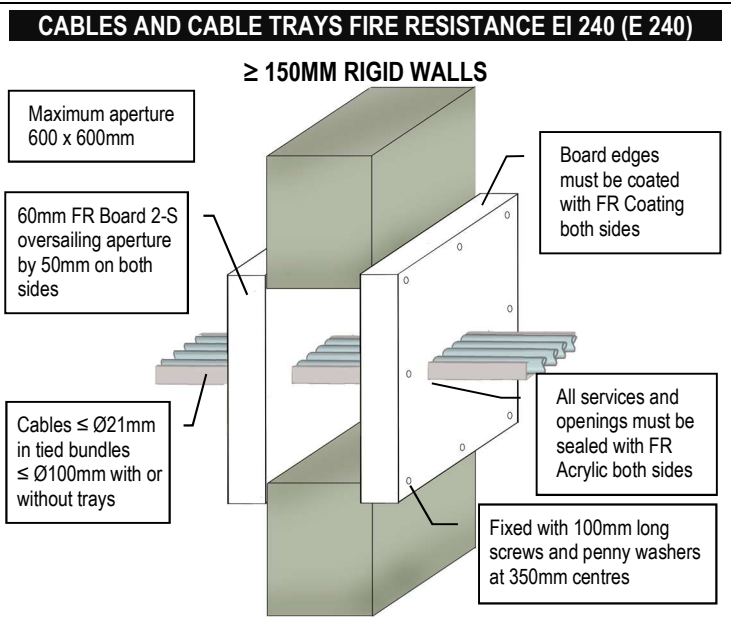
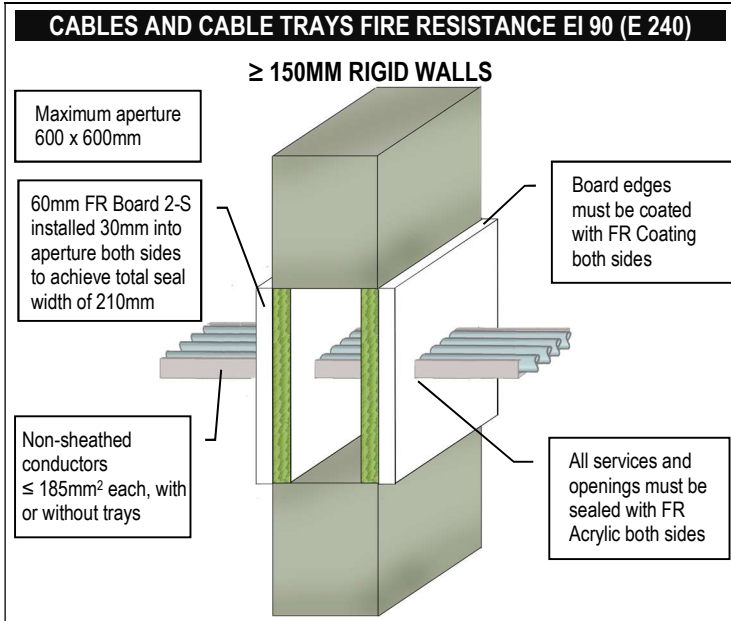
Services	FR Pipe Wrap	Classification
Ø 32mm Wavin SiTech pipes	50 x 3.6mm (2 layers)	EI 90 U/U (E 120 U/U)
Ø 40mm Wavin SiTech pipes	50 x 3.6mm (2 layers)	EI 90 U/U (E 120 U/U)
Ø 50mm Wavin SiTech pipes	50 x 3.6mm (2 layers)	EI 90 U/U (E 120 U/U)
Ø 75mm Wavin SiTech pipes	50 x 3.6mm (2 layers)	EI 60 U/C (E 120 U/C)
Ø 90mm Wavin SiTech pipes	50 x 3.6mm (2 layers)	EI 60 U/C (E 120 U/C)
Ø 110mm Wavin SiTech pipes	50 x 3.6mm (2 layers)	EI 60 U/C (E 120 U/C)

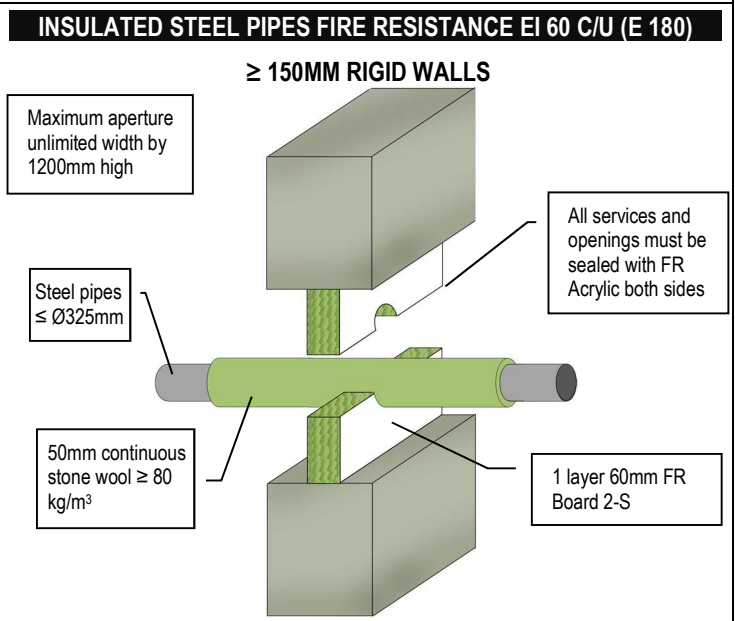
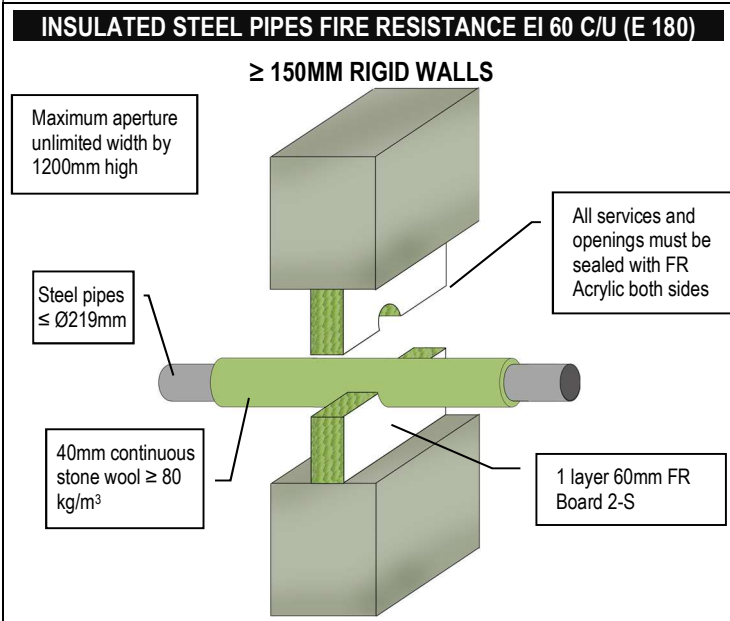
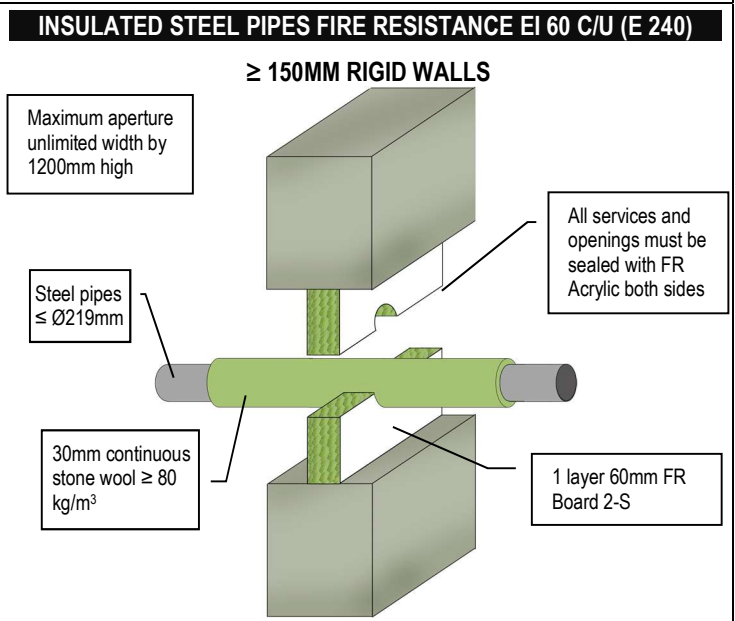
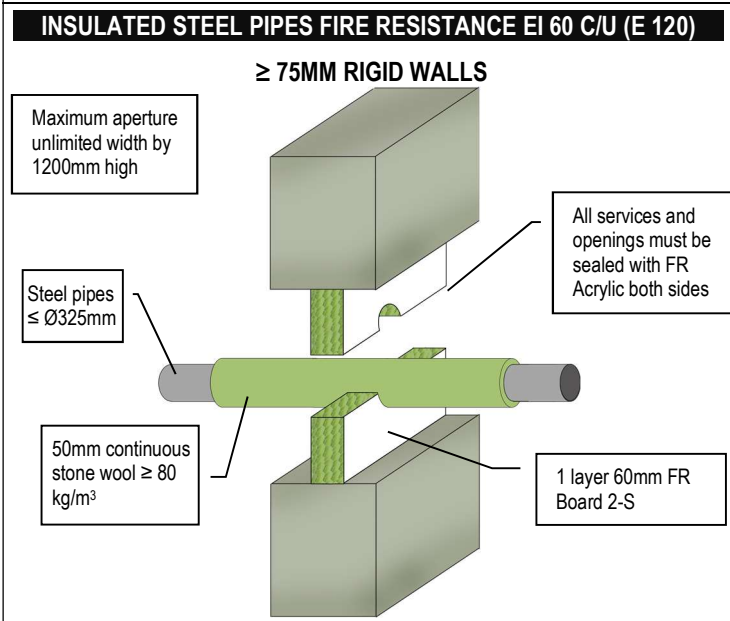
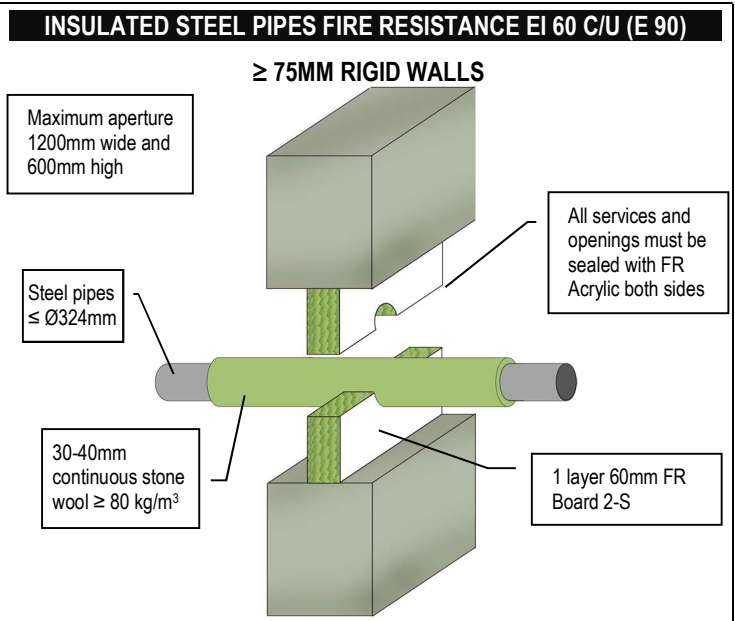
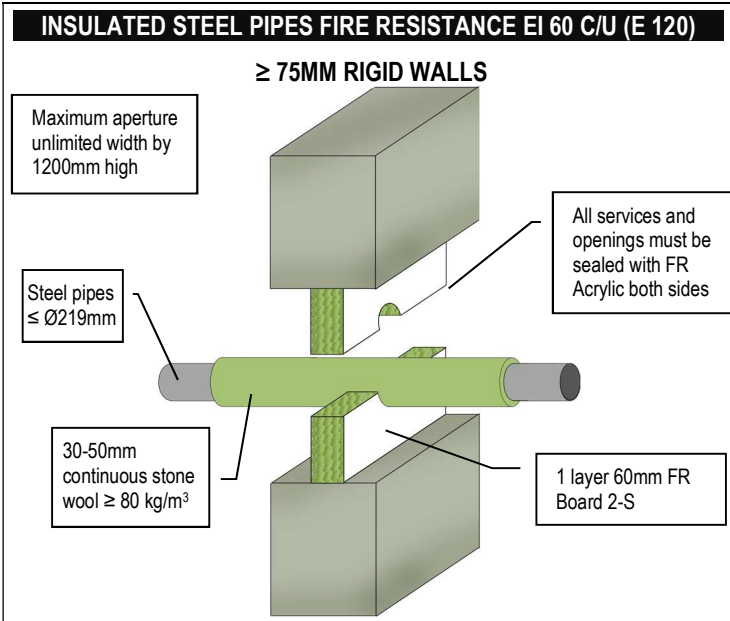
Maximum aperture 600mm high by 1200mm wide

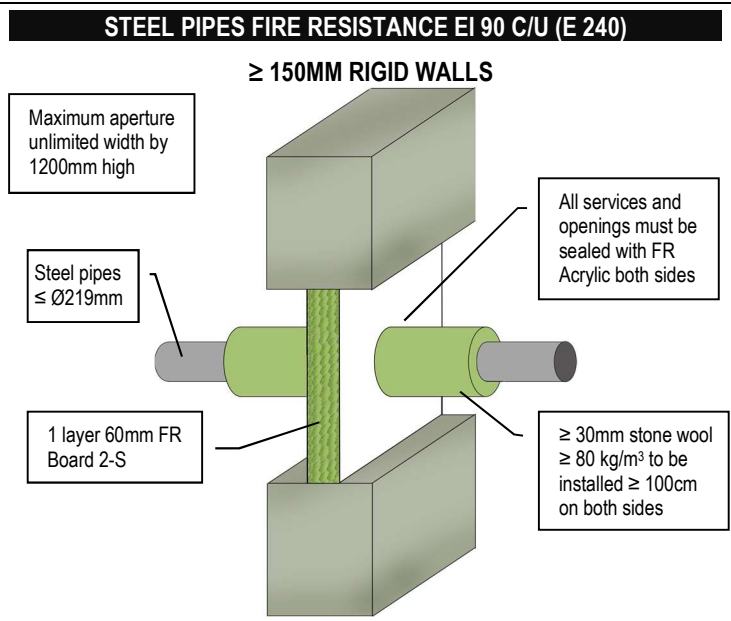
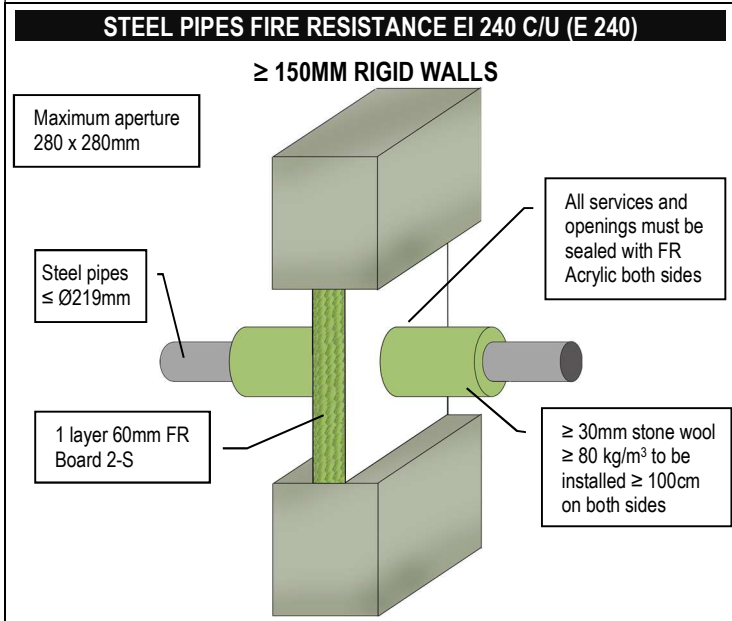
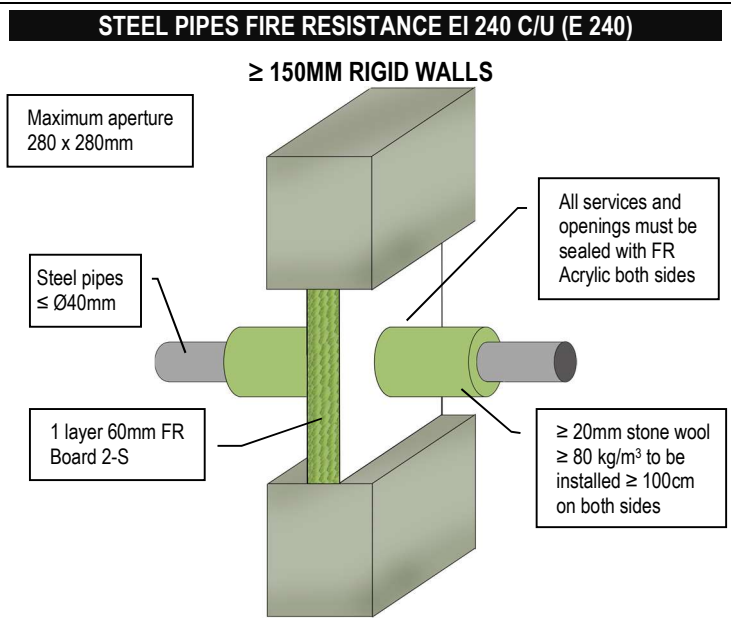
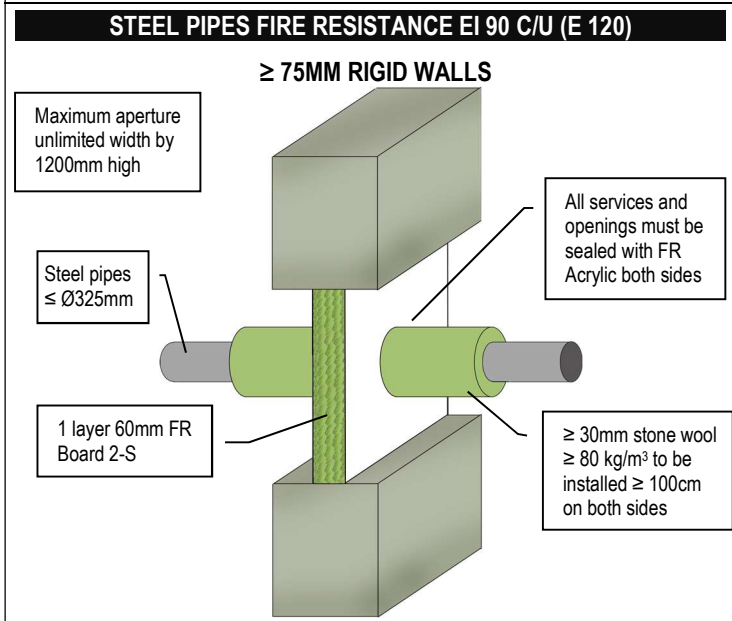
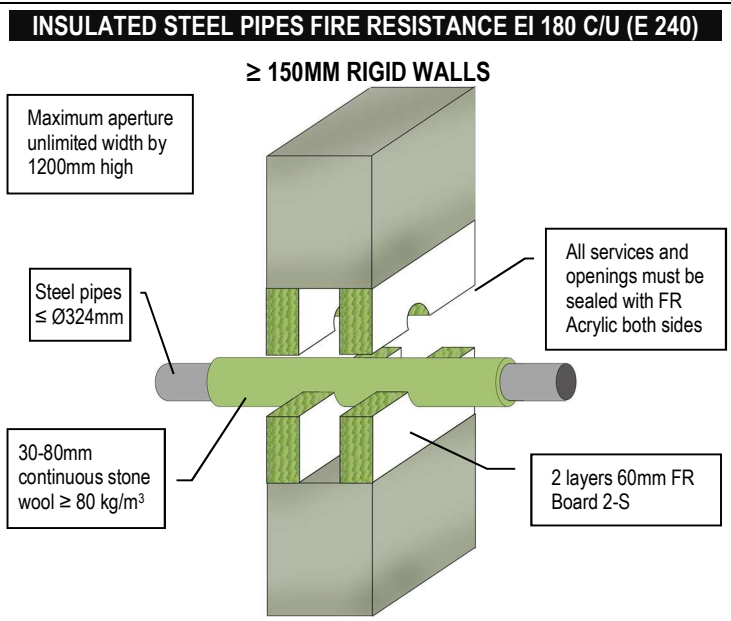
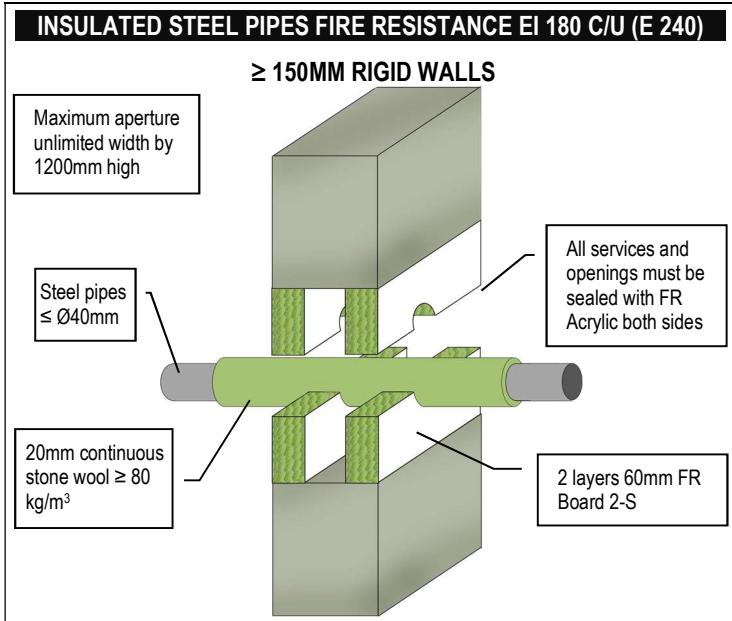


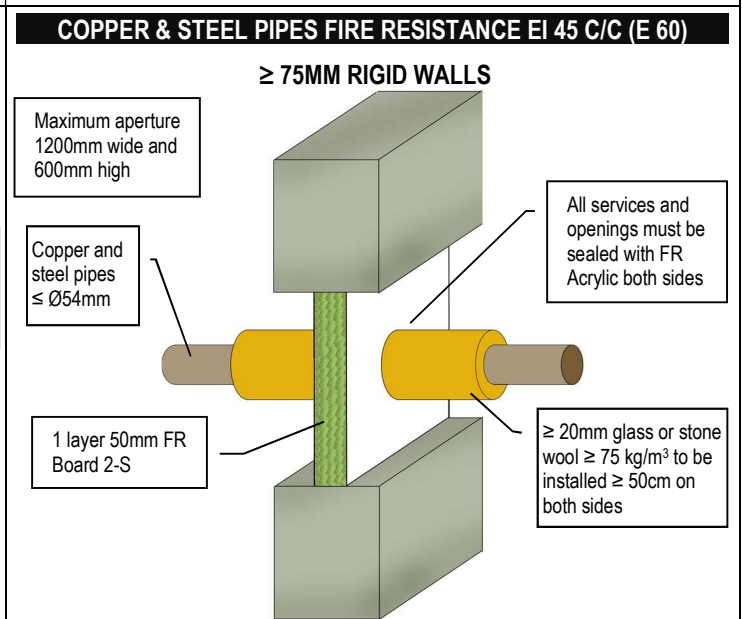
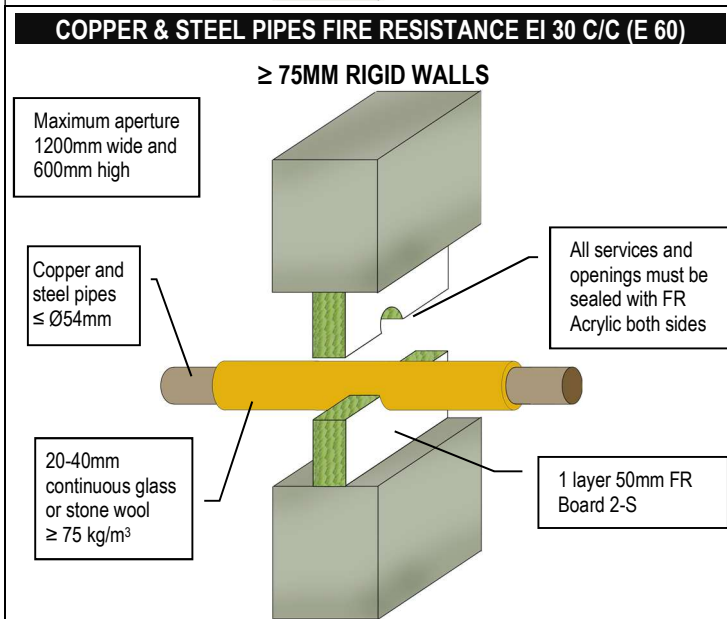
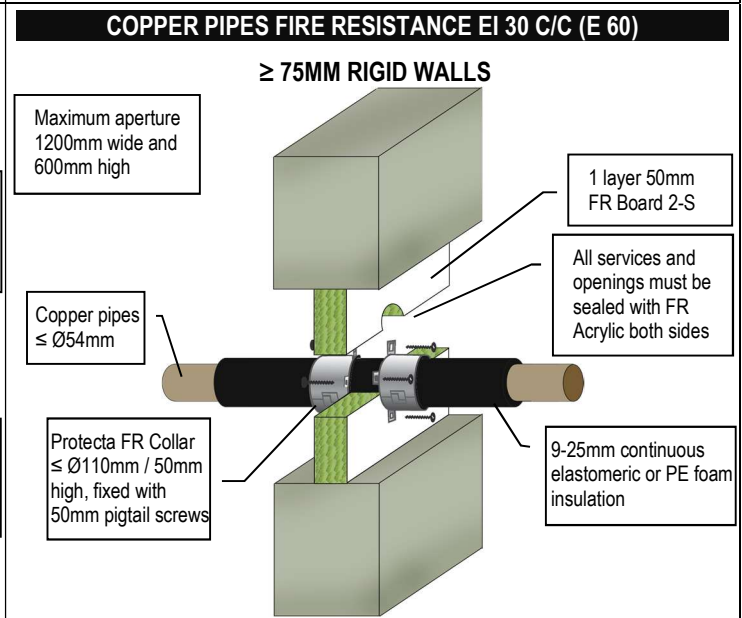
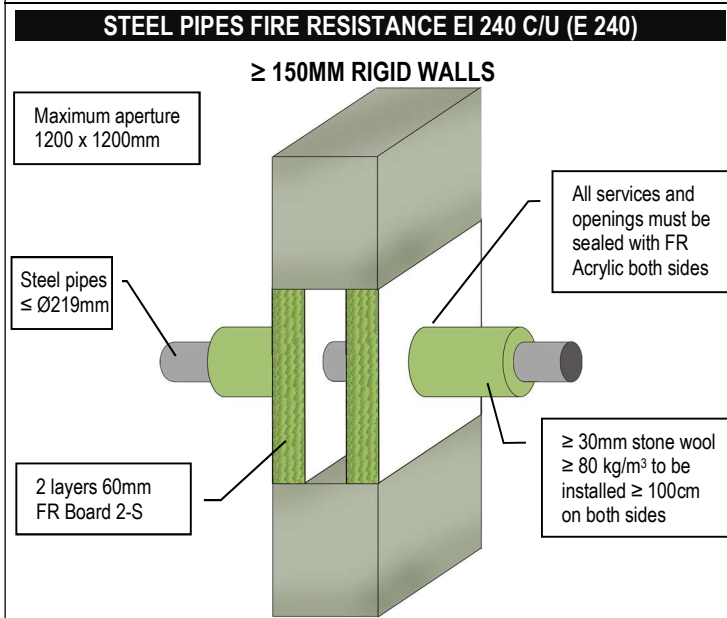
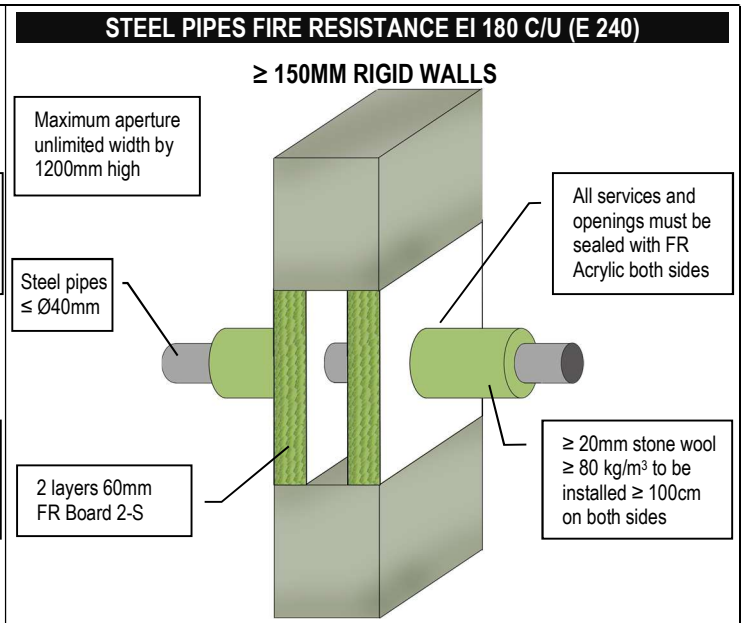
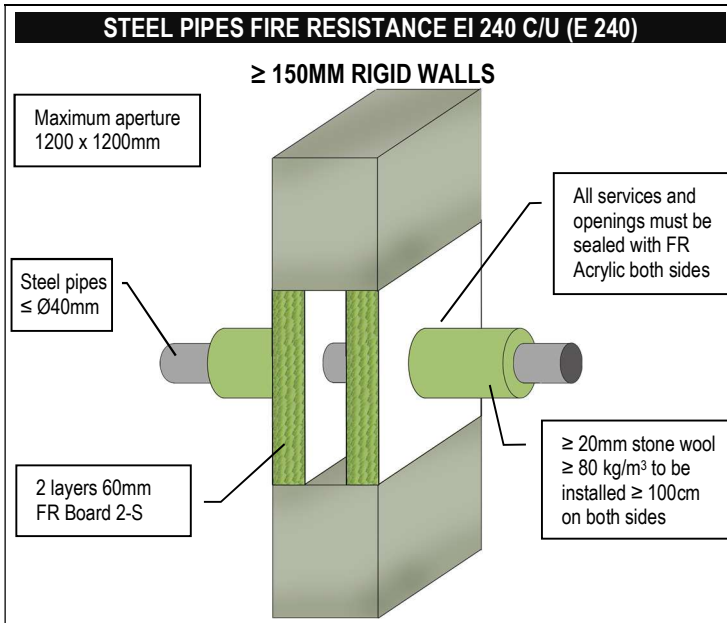


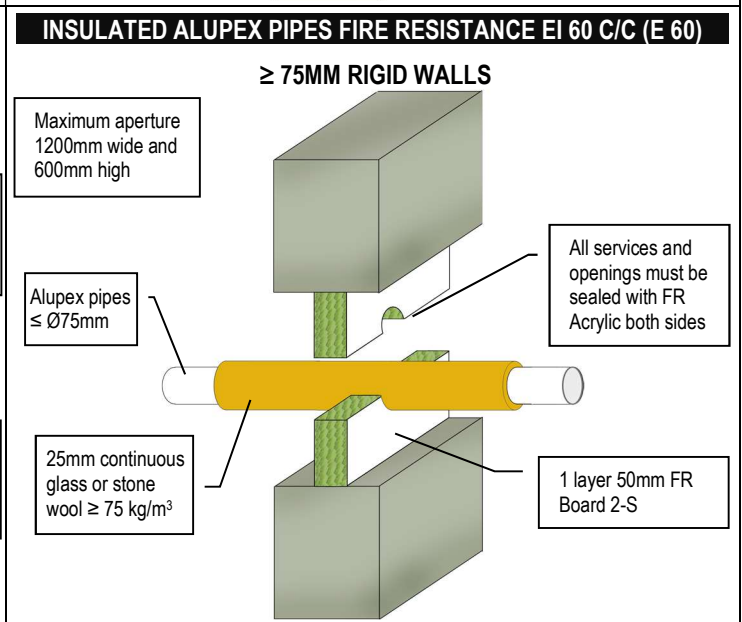
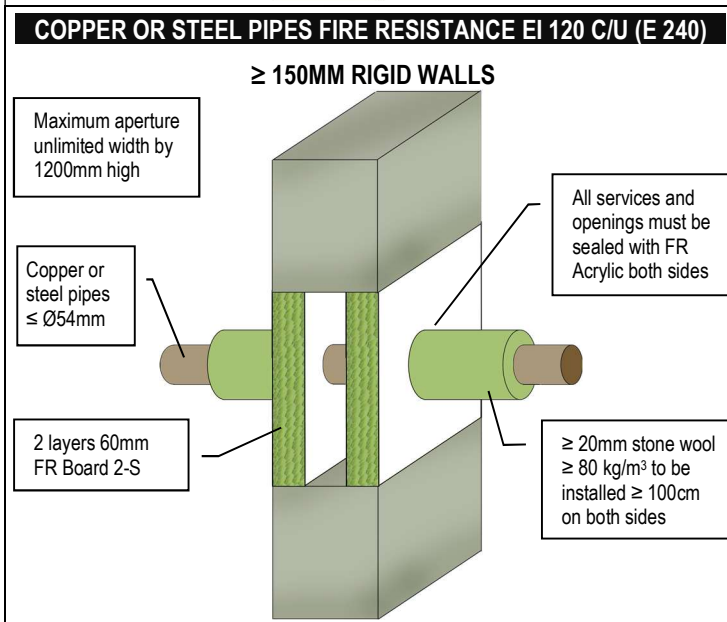
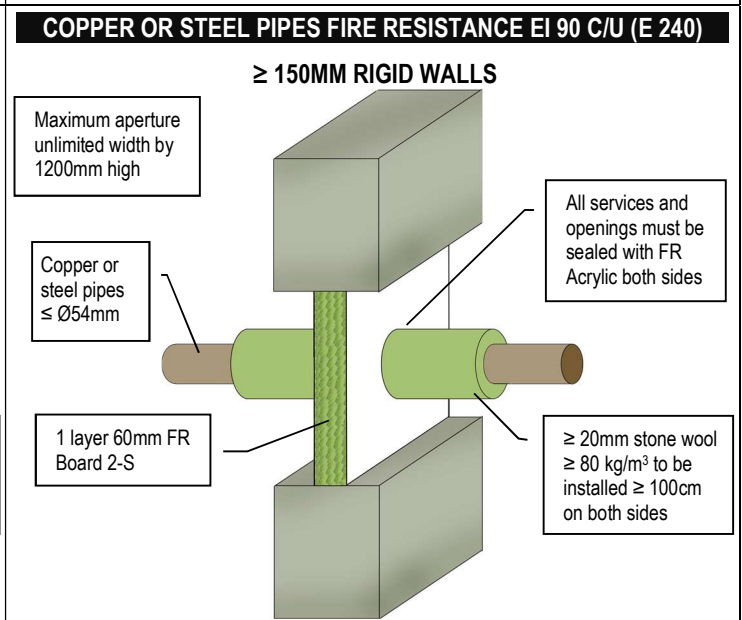
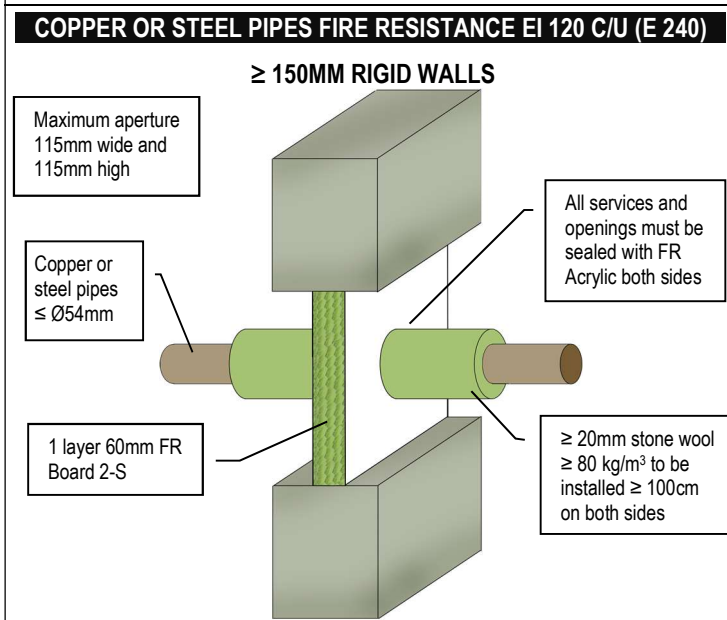
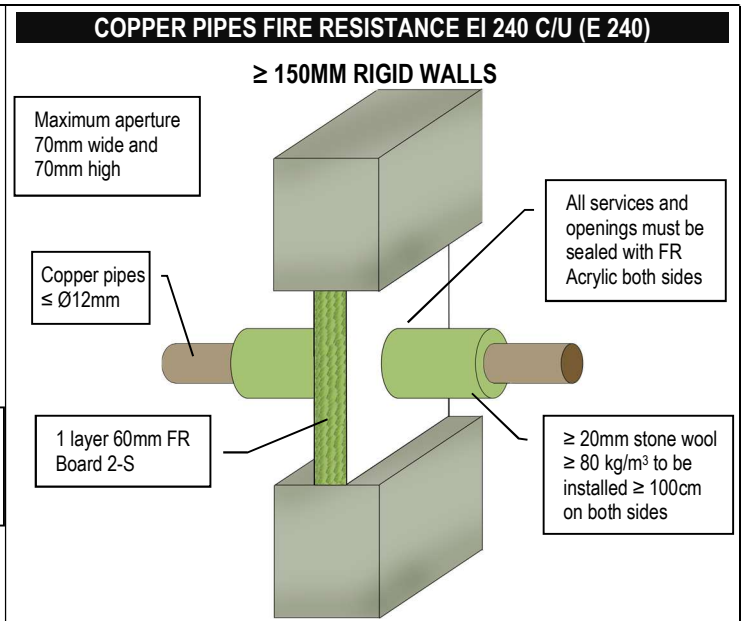
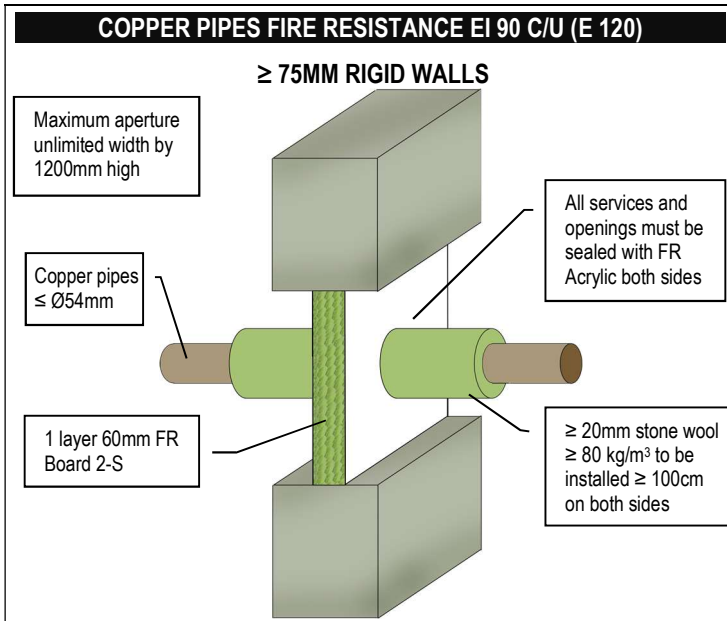


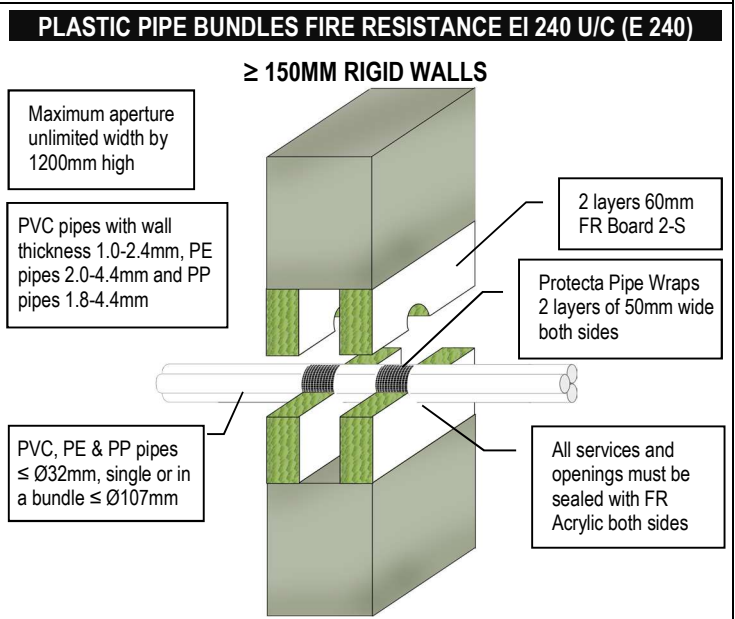
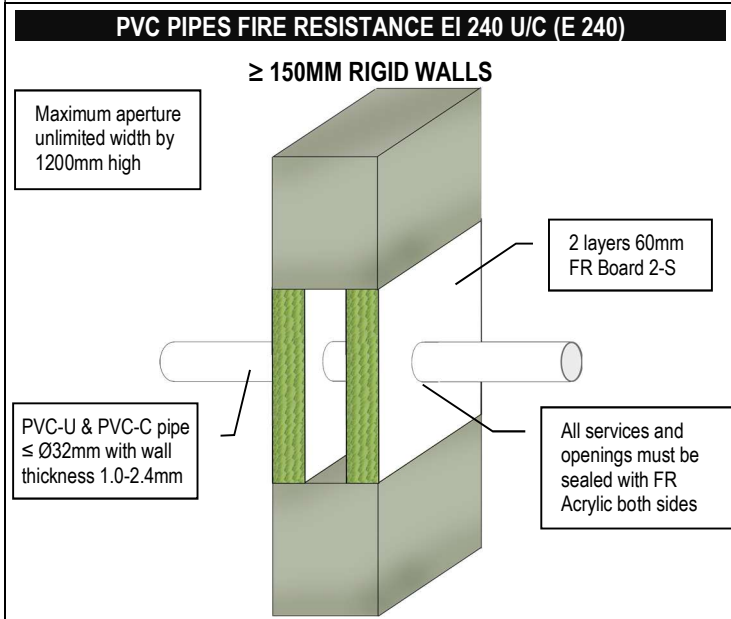
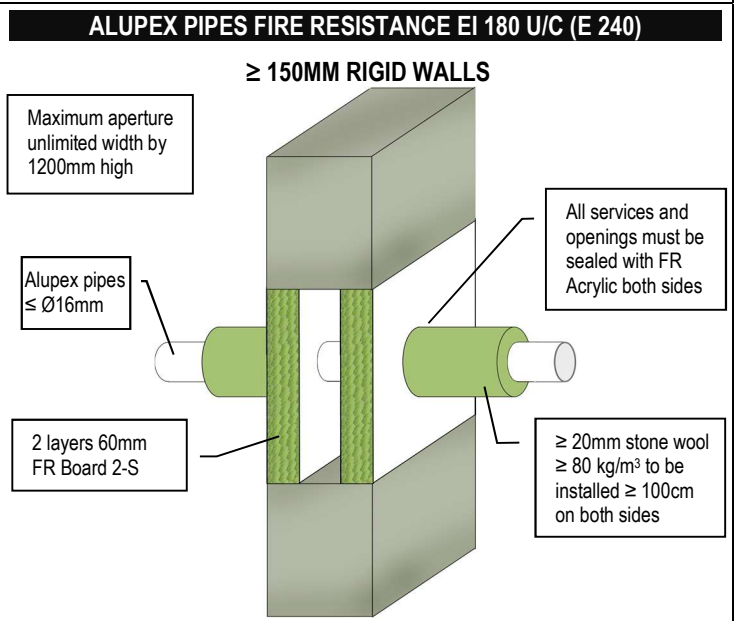
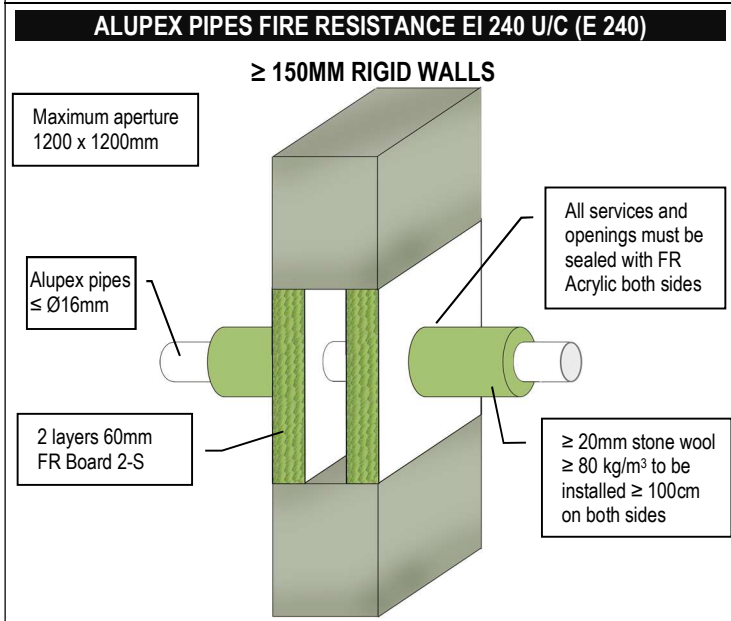
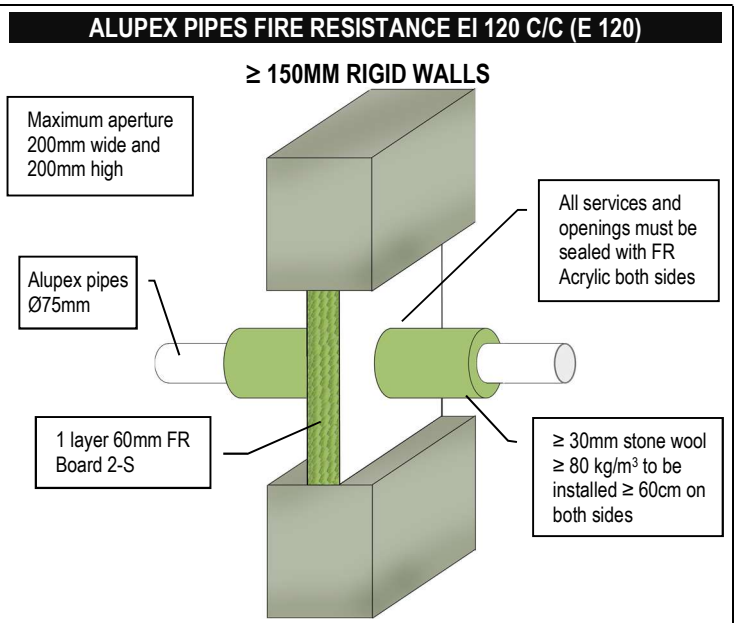
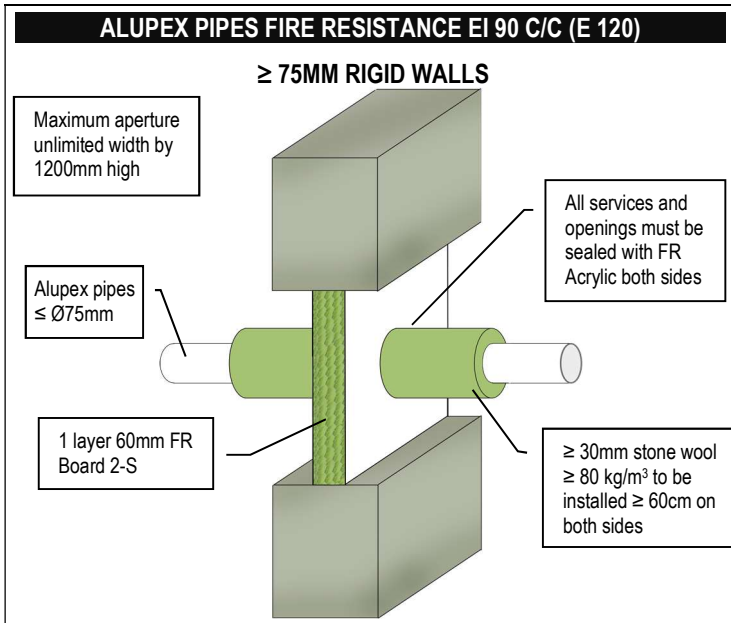








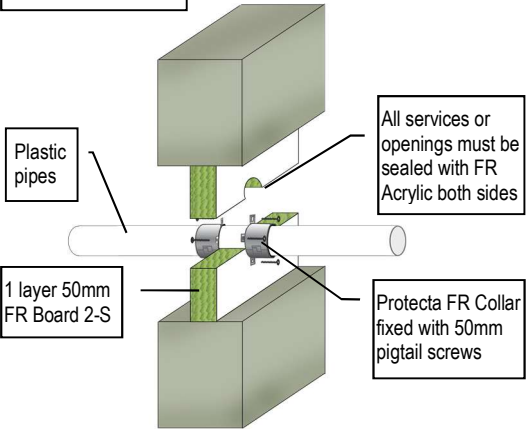




PLASTIC PIPES FIRE RESISTANCE EI 30-60

≥ 75MM RIGID WALLS

Maximum aperture 1200mm wide by 600mm high

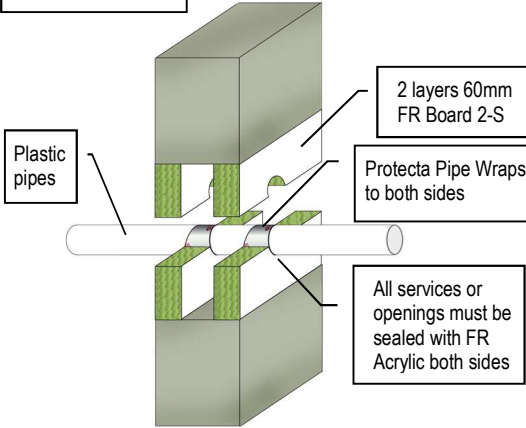


Pipe & Collar Descriptions	Pipe Wall Thickness	Min. Collar Height	Classification
≤ Ø 110mm PVC-U & PVC-C	1.9 – 6.6mm	30mm	EI 30 U/C (E 90 U/C)
≤ Ø 50mm PVC-U & PVC-C	1.9 – 3.7mm	50mm	EI 60 U/C (E 120 U/C)
≤ Ø 110mm PVC-U & PVC-C	2.1 – 6.6mm	50mm	EI 60 U/C (E 90 U/C)
≤ Ø 160mm PVC-U & PVC-C	3.1 – 9.5mm	60mm	EI 60 C/C (E 60 C/C)
≤ Ø 110mm PE, ABS & SAN+PVC	3.4 – 10.0mm	30mm	EI 45 U/C (E 60 U/C)
≤ Ø 50mm PE, ABS & SAN+PVC	3.0 – 4.6mm	50mm	EI 60 U/C (E 120 U/C)
≤ Ø 110mm PE, ABS & SAN+PVC	3.0 – 10.0mm	50mm	EI 60 C/C (E 90 C/C)
≤ Ø 160mm PE, ABS & SAN+PVC	3.9 – 9.5mm	60mm	EI 60 C/C (E 60 C/C)
≤ Ø 90mm PP	1.8 – 4.6mm	50mm	EI 60 C/C (E 60 C/C)
≤ Ø 110mm PP	2.7mm	50mm	EI 60 C/C (E 60 C/C)
≤ Ø 160mm PP	3.4 – 9.1mm	60mm	EI 60 C/C (E 60 C/C)

PLASTIC PIPES FIRE RESISTANCE EI 120-240

≥ 150MM RIGID WALLS

Maximum aperture unlimited width by 1200mm high



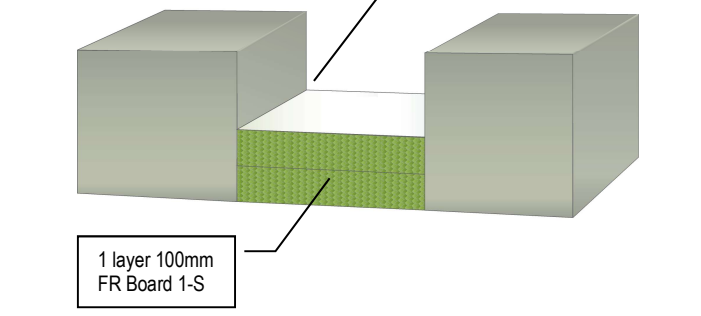
Services	Pipe Wall Thickness	FR Pipe Wrap	Classification
≤ Ø 40mm PVC-U & PVC-C	1.9 – 3.0mm	50 x 1.8mm (1 layer)	EI 240 U/C (E 240 U/C)
≤ Ø 40mm PE, ABS & SAN+PVC	2.4 – 4.6mm	50 x 1.8mm (1 layer)	EI 240 U/C (E 240 U/C)
≤ Ø 40mm PP	1.8 – 5.5mm	50 x 1.8mm (1 layer)	EI 240 U/C (E 240 U/C)
≤ Ø 110mm PVC-U & PVC-C	2.7 – 6.6mm	50 x 3.6mm (2 layers)	EI 240 U/C (E 240 U/C)
≤ Ø 110mm PE, ABS & SAN+PVC	3.4 – 10.0mm	50 x 3.6mm (2 layers)	EI 240 U/C (E 240 U/C)
≤ Ø 110mm PP	2.7 – 10.0mm	50 x 3.6mm (2 layers)	EI 240 C/C (E 240 C/C)
≤ Ø 125mm PVC-U & PVC-C	4.7 – 7.4mm	50 x 7.2mm (4 layers)	EI 240 U/C (E 240 U/C)
≤ Ø 125mm PE, ABS & SAN+PVC	3.9 – 7.4mm	50 x 7.2mm (4 layers)	EI 240 U/C (E 240 U/C)
≤ Ø 125mm PP	3.1 – 11.4mm	50 x 7.2mm (4 layers)	EI 240 C/C (E 240 C/C)
≤ Ø 160mm PVC-U & PVC-C	4.0 – 9.5mm	50 x 10.8mm (6 layers)	EI 240 U/C (E 240 U/C)
≤ Ø 160mm PE, ABS & SAN+PVC	4.9 – 9.5mm	50 x 10.8mm (6 layers)	EI 240 U/C (E 240 U/C)
≤ Ø 160mm PP	4.9 – 14.6mm	50 x 10.8mm (6 layers)	EI 240 C/C (E 240 C/C)
≤ Ø 200mm PVC-U & PVC-C	4.9 – 11.9mm	75 x 10.8mm (6 layers)	EI 180 C/C (E 180 C/C)
≤ Ø 200mm PE, ABS & SAN+PVC	4.9 – 18.2mm	75 x 10.8mm (6 layers)	EI 180 C/C (E 180 C/C)
≤ Ø 200mm PP	4.9 – 18.2mm	75 x 10.8mm (6 layers)	EI 180 C/C (E 180 C/C)
≤ Ø 315mm PVC-U & PVC-C	7.7 – 12.1mm	75 x 18.0mm (10 layers)	EI 120 C/C (E 120 C/C)
≤ Ø 315mm PE, ABS & SAN+PVC	28.6mm	75 x 18.0mm (10 layers)	EI 120 C/C (E 180 C/C)
≤ Ø 400mm PVC-U & PVC-C	9.8 – 15.3mm	75 x 28.8mm (16 layers)	EI 120 C/C (E 120 C/C)
≤ Ø 400mm PE, ABS & SAN+PVC	36.3mm	75 x 28.8mm (16 layers)	EI 120 C/C (E 120 C/C)

LINEAR SEALS FIRE RESISTANCE EI 180 (E 240)

RIGID FLOORS

Maximum 120mm wide between floor slabs or between floor slab and wall

All gaps must be sealed with FR Acrylic or FR Coating, top face

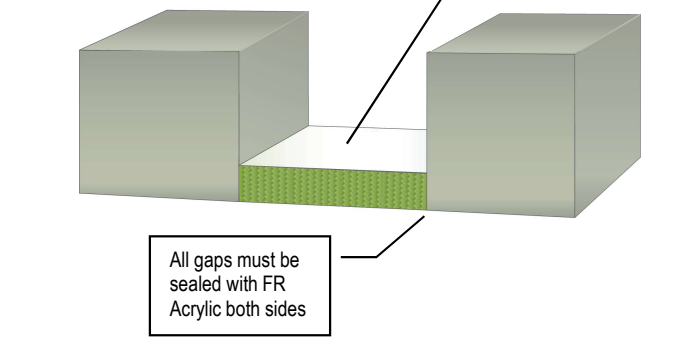


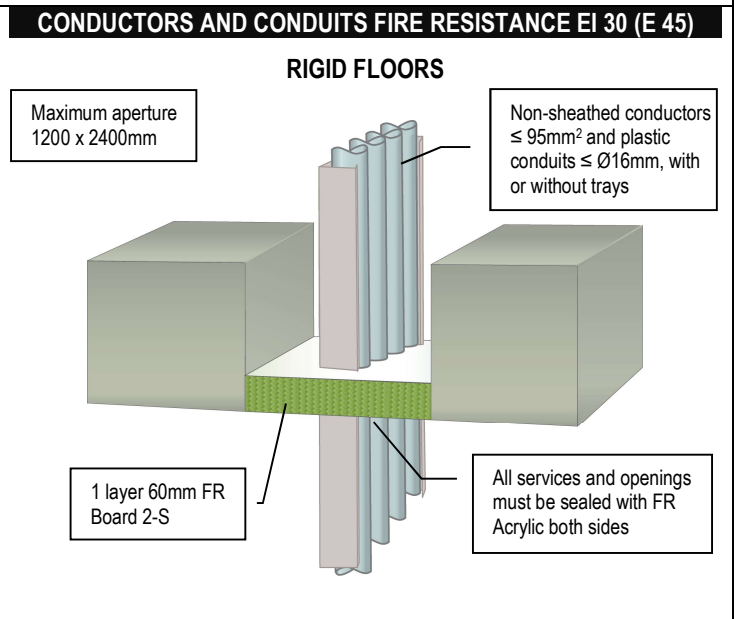
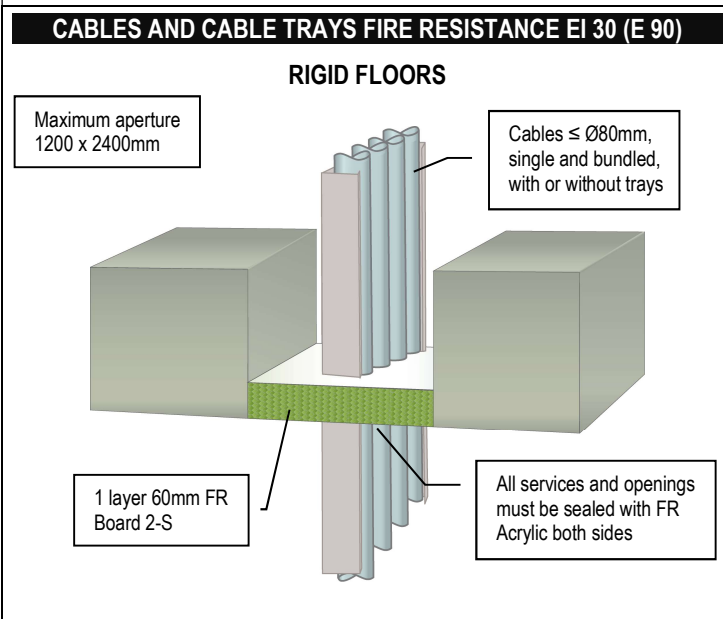
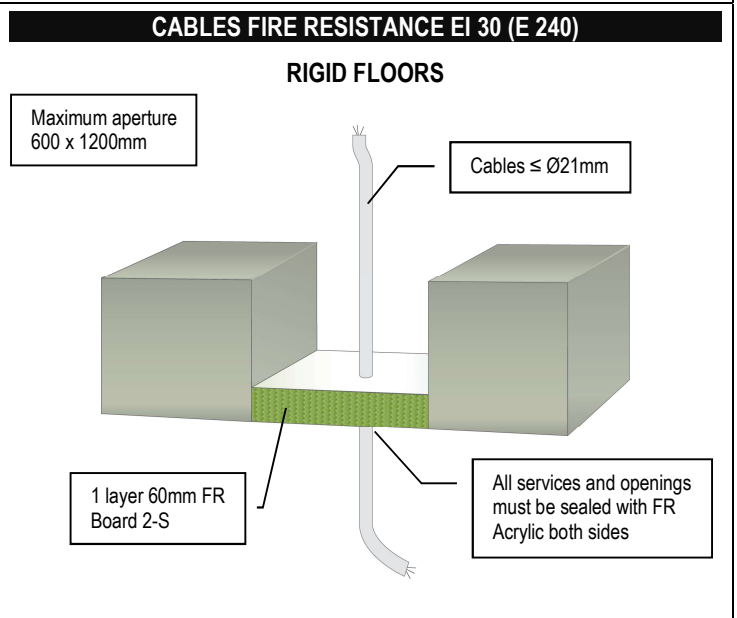
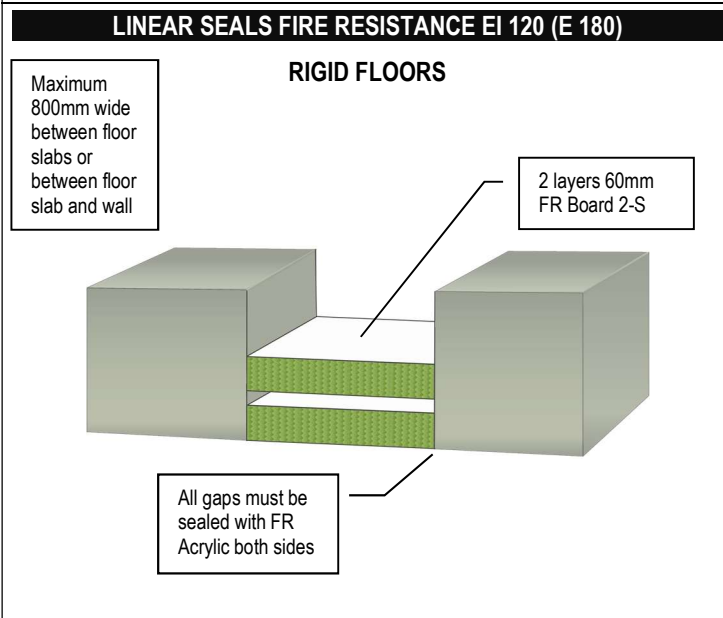
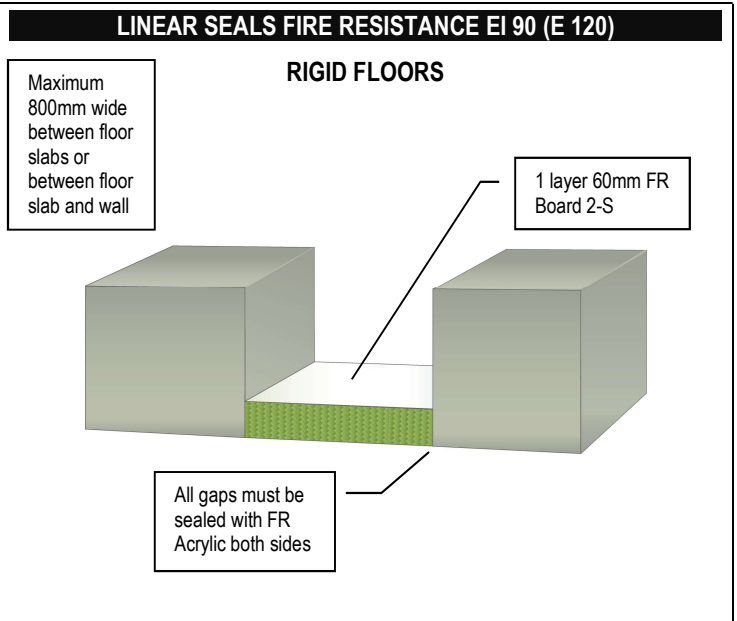
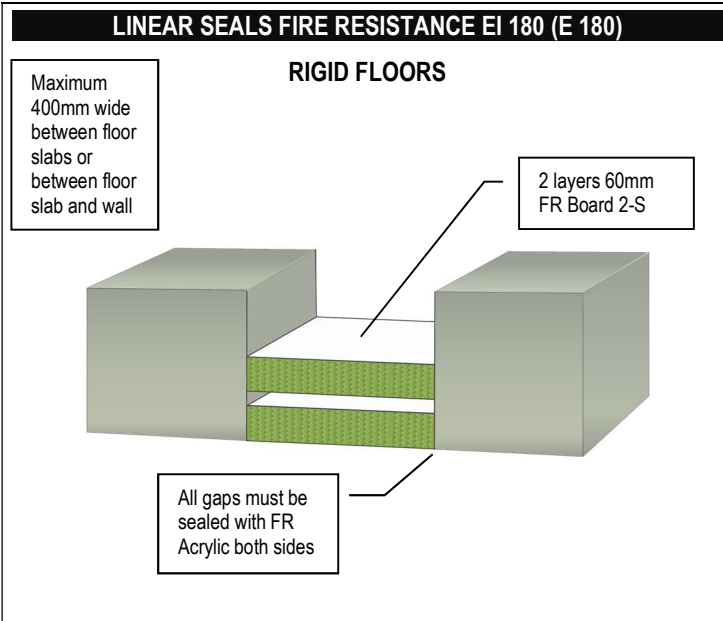
LINEAR SEALS FIRE RESISTANCE EI 120 (E 240)

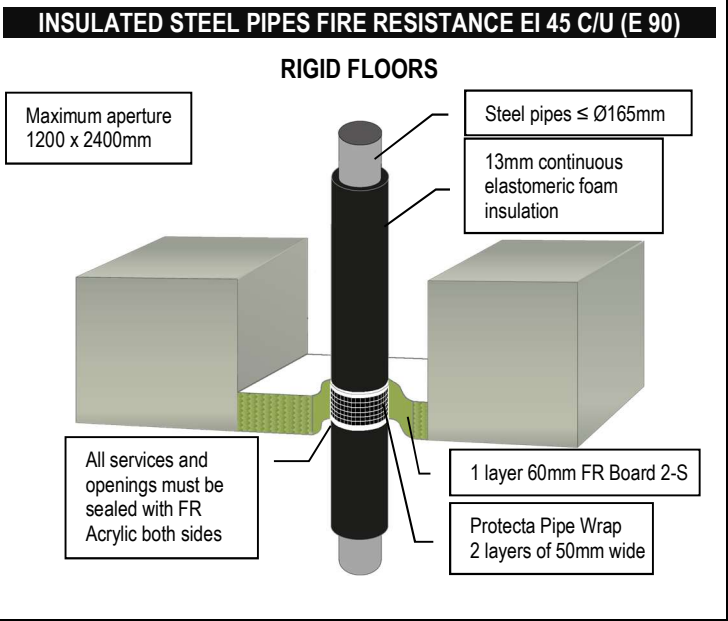
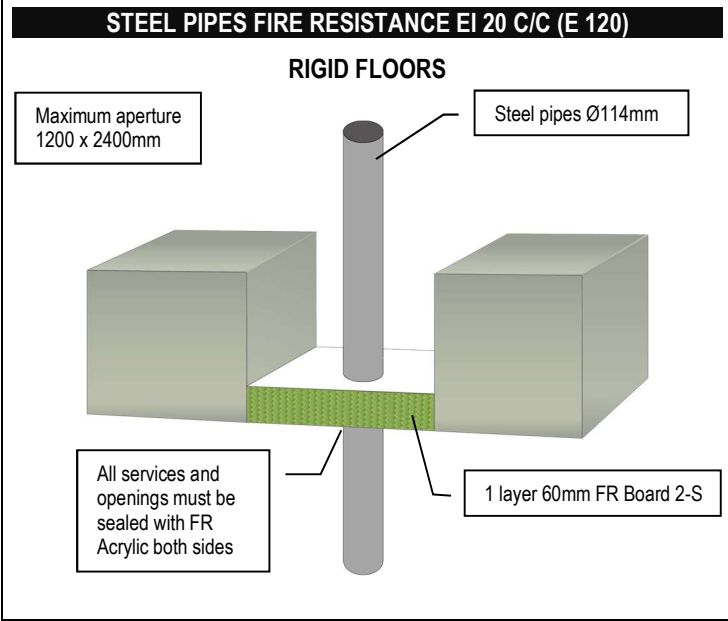
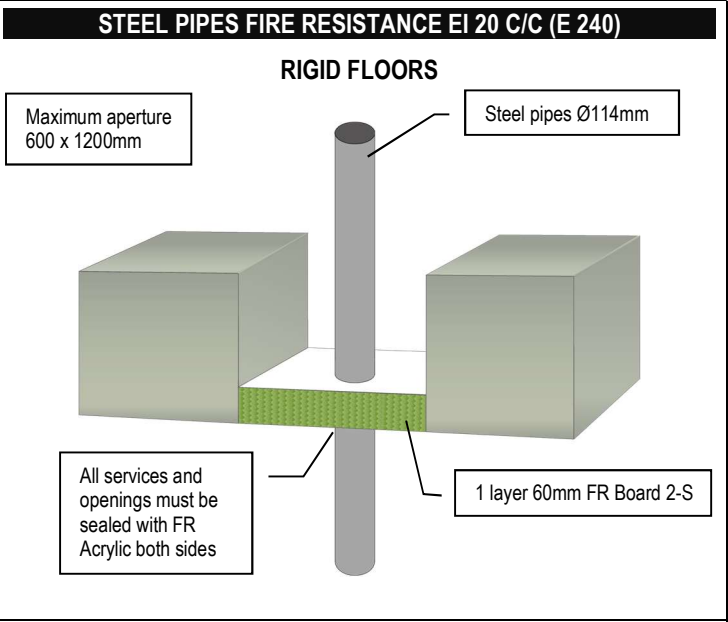
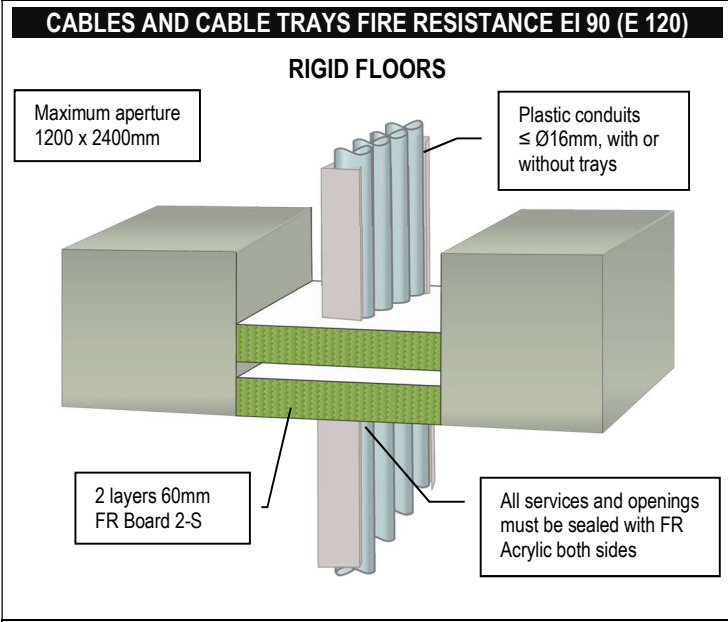
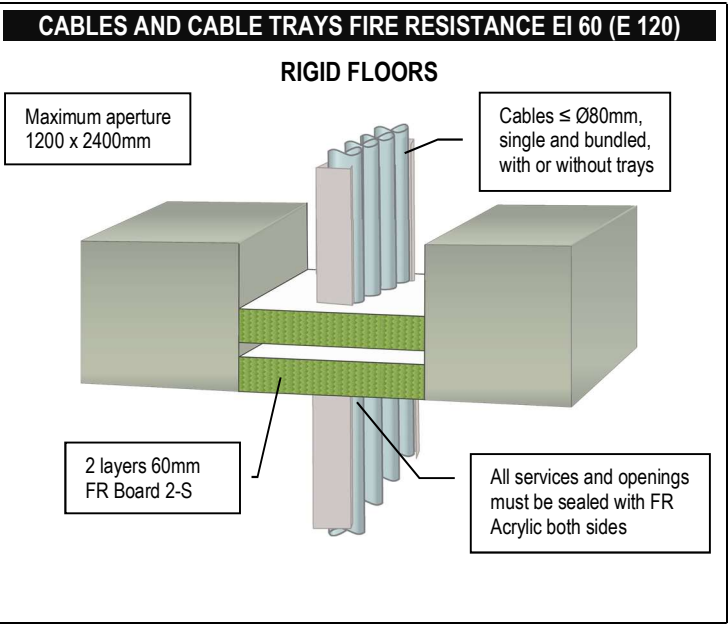
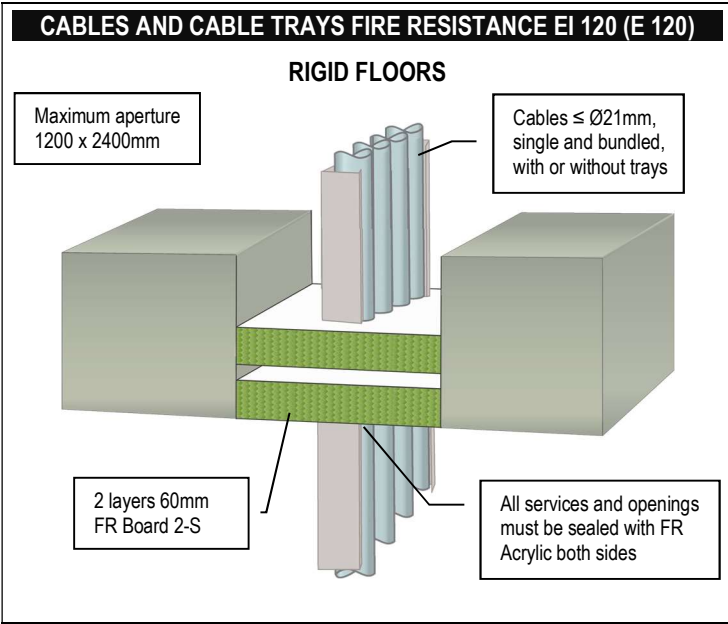
RIGID FLOORS

Maximum 400mm wide between floor slabs or between floor slab and wall

1 layer 60mm FR Board 2-S







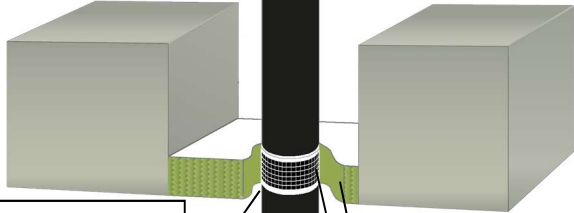
INSULATED STEEL PIPES FIRE RESISTANCE EI 90 C/U (E 90)

RIGID FLOORS

Maximum aperture
1200 x 2400mm

Steel pipes $\leq \text{Ø}165\text{mm}$

19mm continuous
elastomeric foam
insulation



All services and
openings must be
sealed with FR
Acrylic both sides

1 layer 60mm FR Board 2-S

Protecta Pipe Wrap
2 layers of 50mm wide

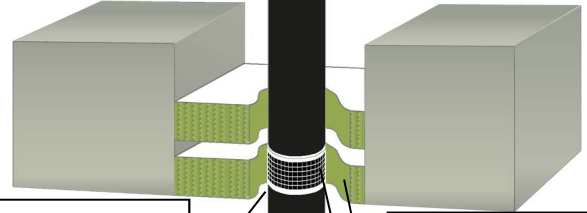
INSULATED STEEL PIPES FIRE RESISTANCE EI 120 C/U (E180)

RIGID FLOORS

Maximum aperture
1200 x 2400mm

Steel pipes $\leq \text{Ø}40\text{mm}$

13mm continuous
elastomeric foam
insulation



All services and
openings must be
sealed with FR
Acrylic both sides

2 layers 60mm FR Board 2-S

Protecta Pipe Wrap
1 layer of 50mm wide

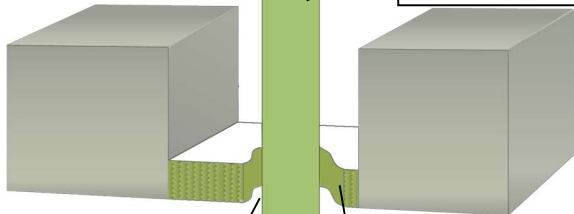
INSULATED STEEL PIPES FIRE RESISTANCE EI 60 C/U (E 90)

RIGID FLOORS

Maximum aperture
1200 x 2400mm

Steel pipes $\leq \text{Ø}165\text{mm}$

25-40mm continuous
stone wool $\geq 80 \text{ kg/m}^3$



All services and
openings must be
sealed with FR
Acrylic both sides

1 layer 60mm FR Board 2-S

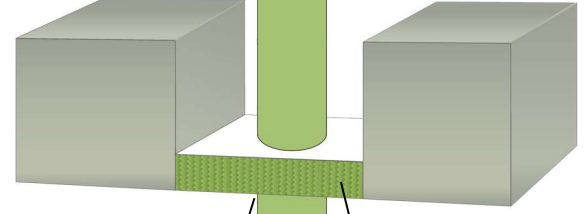
STEEL PIPES FIRE RESISTANCE EI 60 C/U (E 240)

RIGID FLOORS

Maximum aperture
600 x 1200mm

Steel pipes $\leq \text{Ø}40\text{mm}$

$\geq 20\text{mm}$ stone wool
 $\geq 80 \text{ kg/m}^3$ to be installed
 $\geq 100\text{cm}$ on both sides



All services and
openings must be
sealed with FR
Acrylic both sides

1 layer 60mm FR Board 2-S

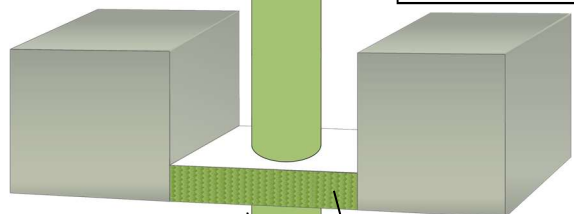
STEEL PIPES FIRE RESISTANCE EI 60 C/U (E 120)

RIGID FLOORS

Maximum aperture
1200 x 2400mm

Steel pipes $\leq \text{Ø}40\text{mm}$

$\geq 20\text{mm}$ stone wool
 $\geq 80 \text{ kg/m}^3$ to be installed
 $\geq 100\text{cm}$ on both sides



All services and
openings must be
sealed with FR
Acrylic both sides

1 layer 60mm FR Board 2-S

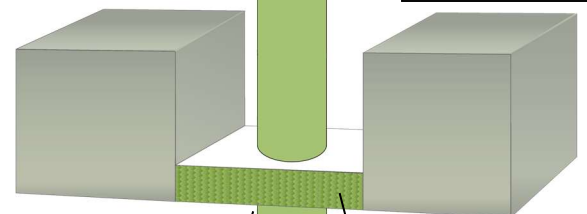
STEEL PIPES FIRE RESISTANCE EI 90 C/U (E 240)

RIGID FLOORS

Maximum aperture
600 x 1200mm

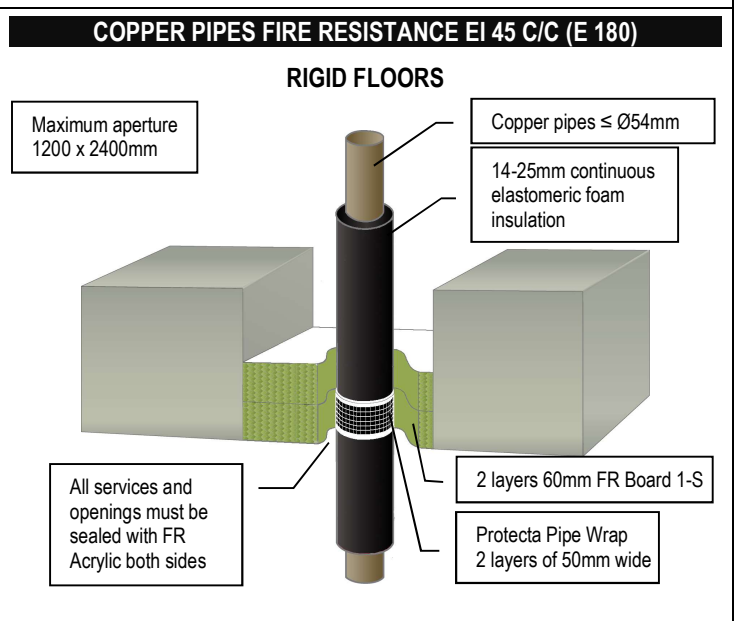
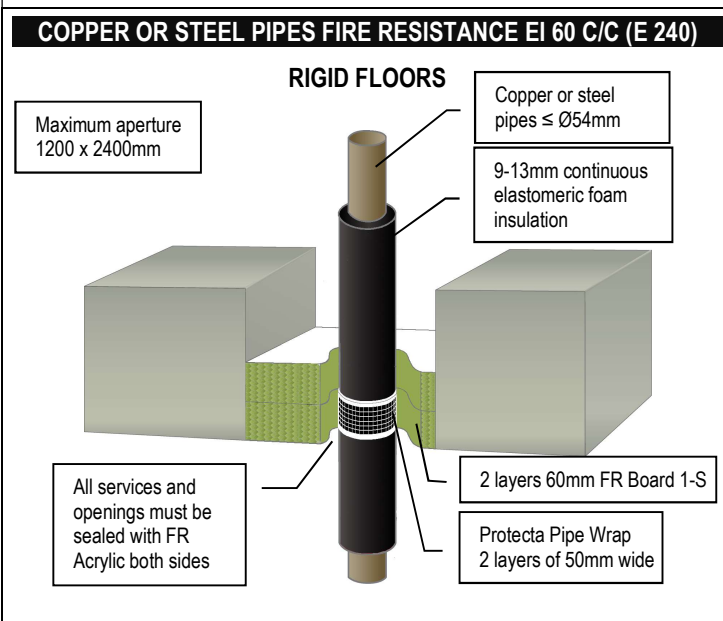
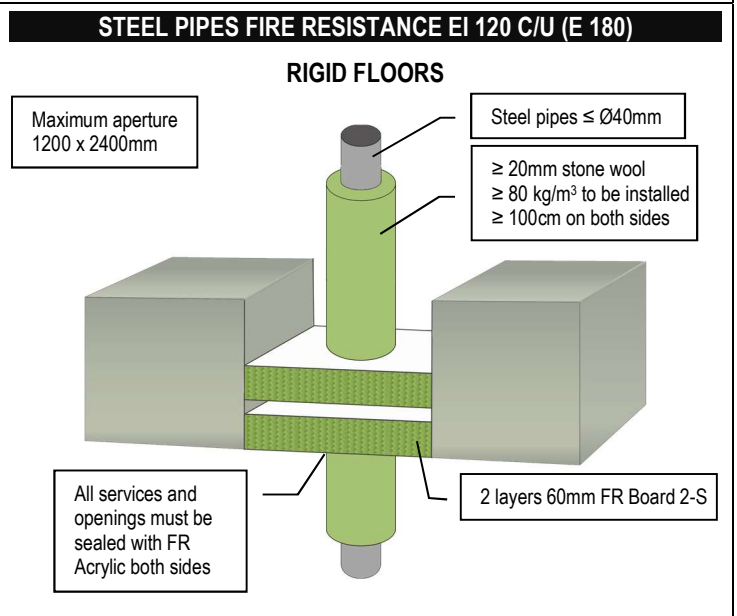
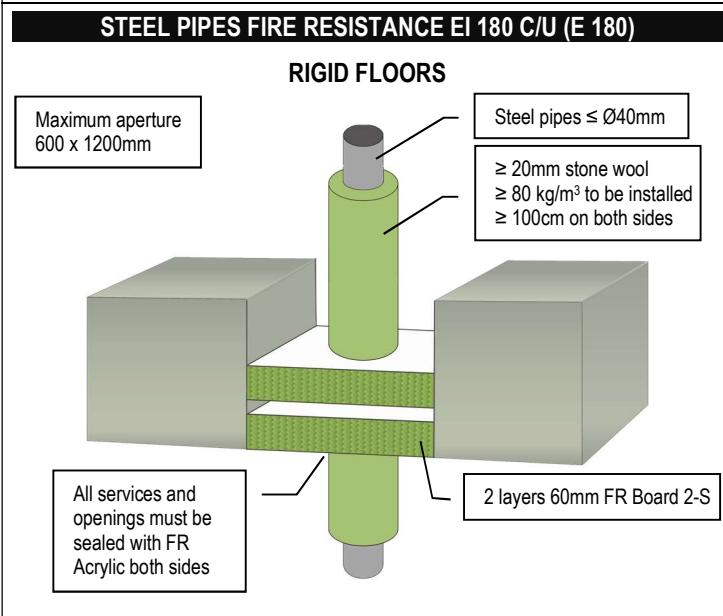
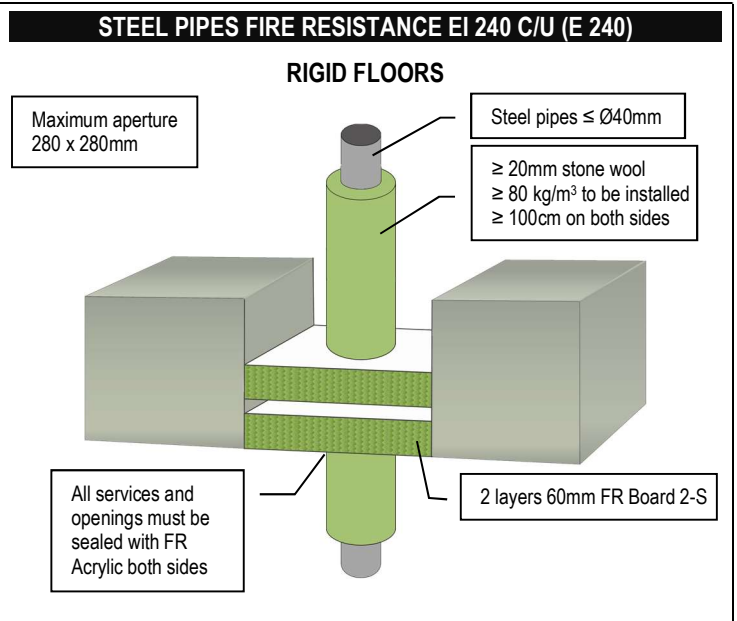
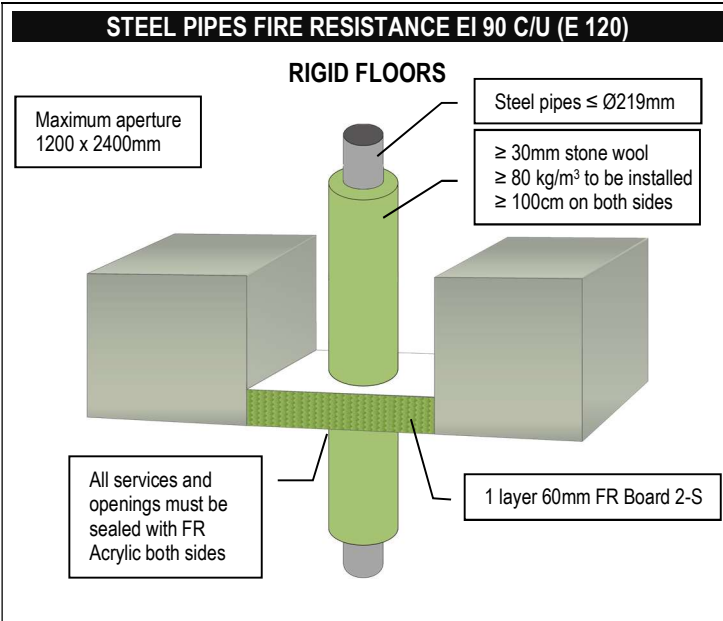
Steel pipes $\leq \text{Ø}219\text{mm}$

$\geq 30\text{mm}$ stone wool
 $\geq 80 \text{ kg/m}^3$ to be installed
 $\geq 100\text{cm}$ on both sides



All services and
openings must be
sealed with FR
Acrylic both sides

1 layer 60mm FR Board 2-S



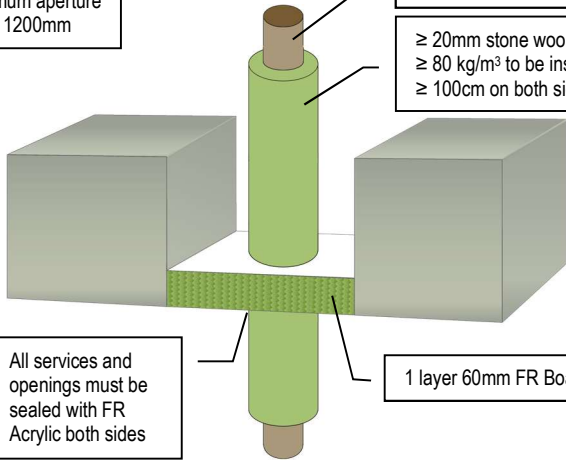
COPPER PIPES FIRE RESISTANCE E 240 C/U

RIGID FLOORS

Maximum aperture
600 x 1200mm

Copper pipes $\leq \varnothing 54\text{mm}$

$\geq 20\text{mm}$ stone wool
 $\geq 80 \text{ kg/m}^3$ to be installed
 $\geq 100\text{cm}$ on both sides



All services and openings must be sealed with FR Acrylic both sides

1 layer 60mm FR Board 2-S

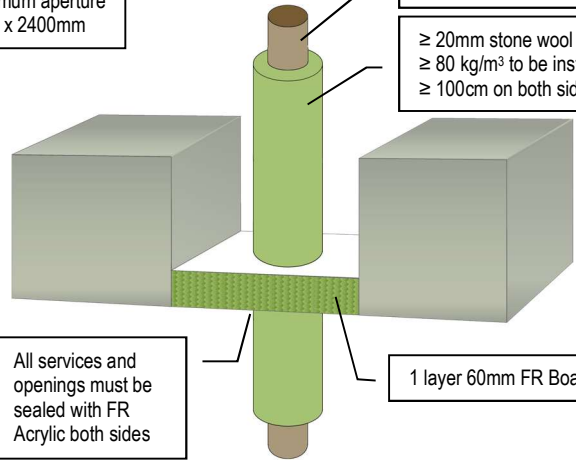
COPPER PIPES FIRE RESISTANCE E 120 C/U

RIGID FLOORS

Maximum aperture
1200 x 2400mm

Copper pipes $\leq \varnothing 54\text{mm}$

$\geq 20\text{mm}$ stone wool
 $\geq 80 \text{ kg/m}^3$ to be installed
 $\geq 100\text{cm}$ on both sides



All services and openings must be sealed with FR Acrylic both sides

1 layer 60mm FR Board 2-S

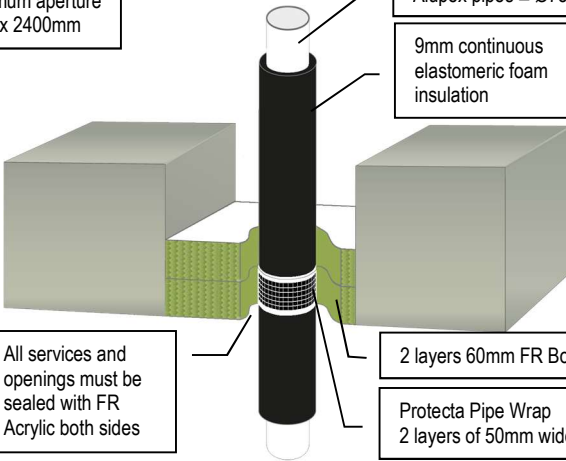
ALUPEX PIPES FIRE RESISTANCE EI 120 C/C (E 120)

RIGID FLOORS

Maximum aperture
1200 x 2400mm

Alupex pipes $\leq \varnothing 75\text{mm}$

9mm continuous elastomeric foam insulation



All services and openings must be sealed with FR Acrylic both sides

2 layers 60mm FR Board 1-S

Protecta Pipe Wrap
2 layers of 50mm wide

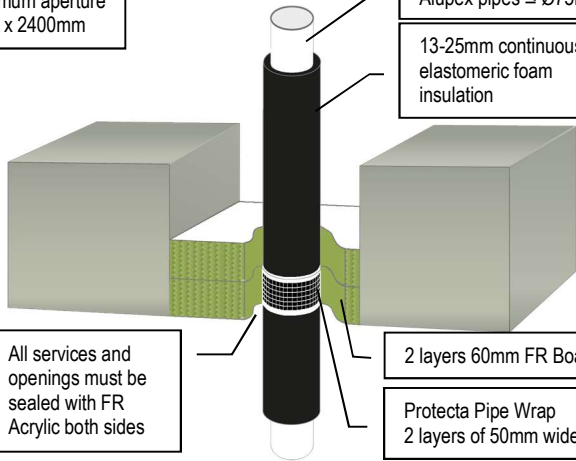
ALUPEX PIPES FIRE RESISTANCE EI 45 C/C (E 60)

RIGID FLOORS

Maximum aperture
1200 x 2400mm

Alupex pipes $\leq \varnothing 75\text{mm}$

13-25mm continuous elastomeric foam insulation



All services and openings must be sealed with FR Acrylic both sides

2 layers 60mm FR Board 1-S

Protecta Pipe Wrap
2 layers of 50mm wide

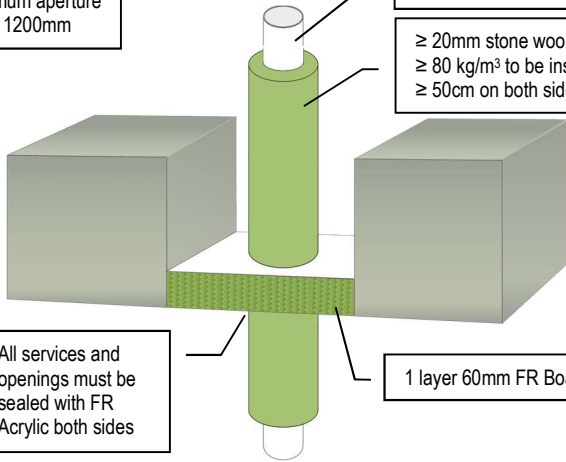
ALUPEX PIPES FIRE RESISTANCE EI 90 C/C (E 240)

RIGID FLOORS

Maximum aperture
600 x 1200mm

Alupex pipes $\leq \varnothing 75\text{mm}$

$\geq 20\text{mm}$ stone wool
 $\geq 80 \text{ kg/m}^3$ to be installed
 $\geq 50\text{cm}$ on both sides



All services and openings must be sealed with FR Acrylic both sides

1 layer 60mm FR Board 2-S

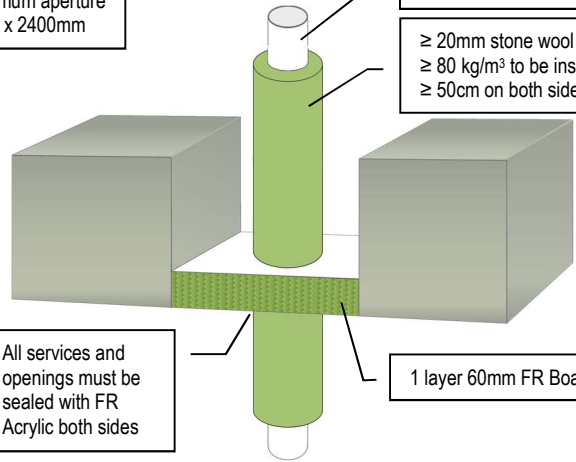
ALUPEX PIPES FIRE RESISTANCE EI 90 C/C (E 120)

RIGID FLOORS

Maximum aperture
1200 x 2400mm

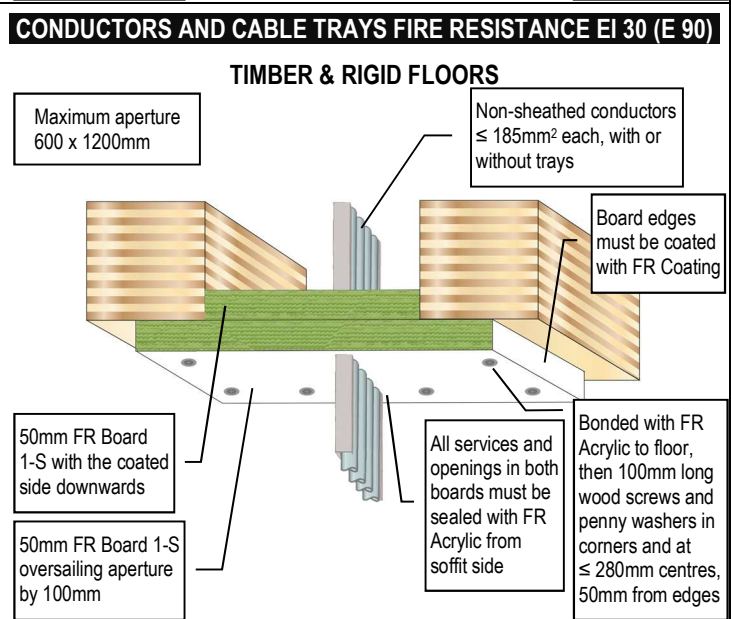
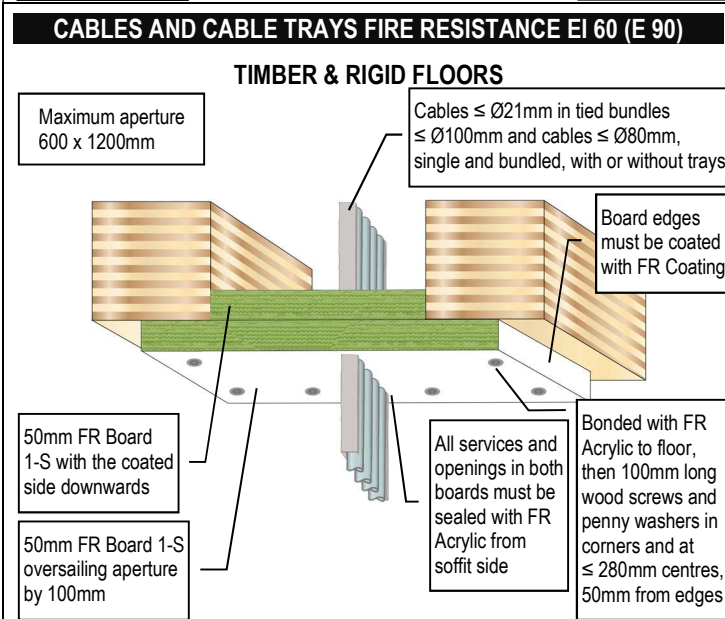
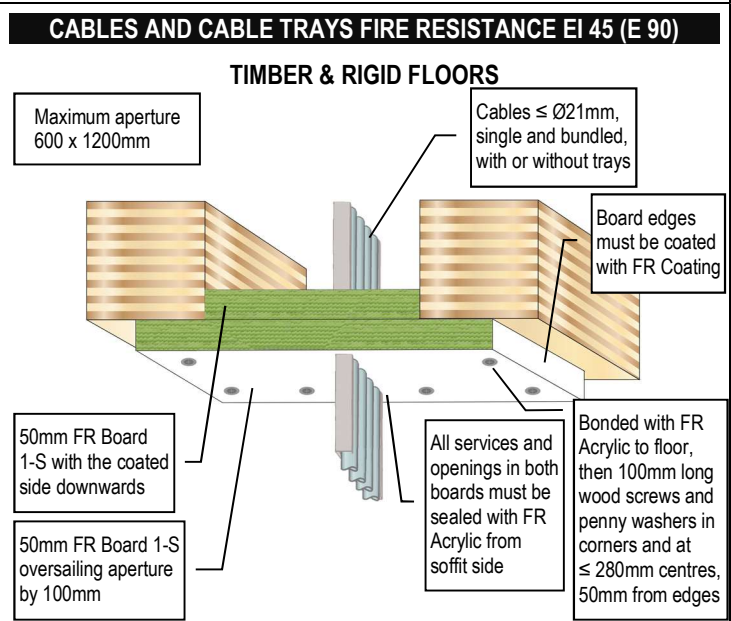
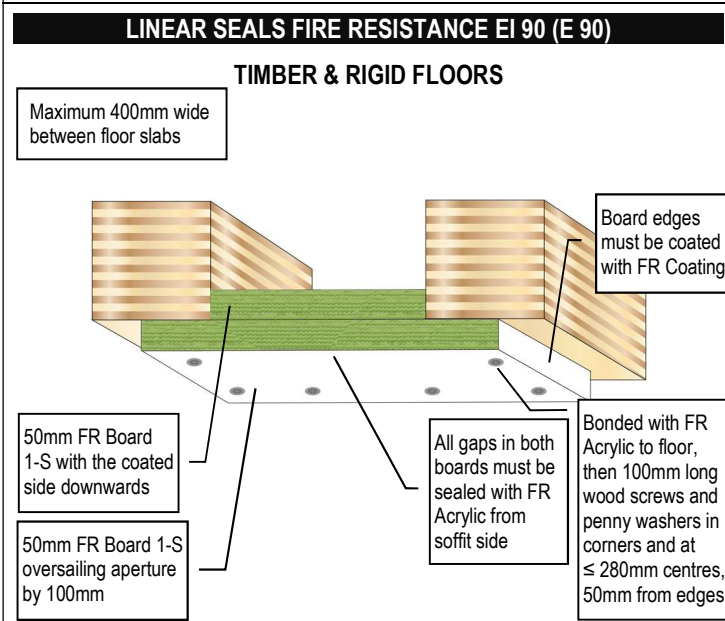
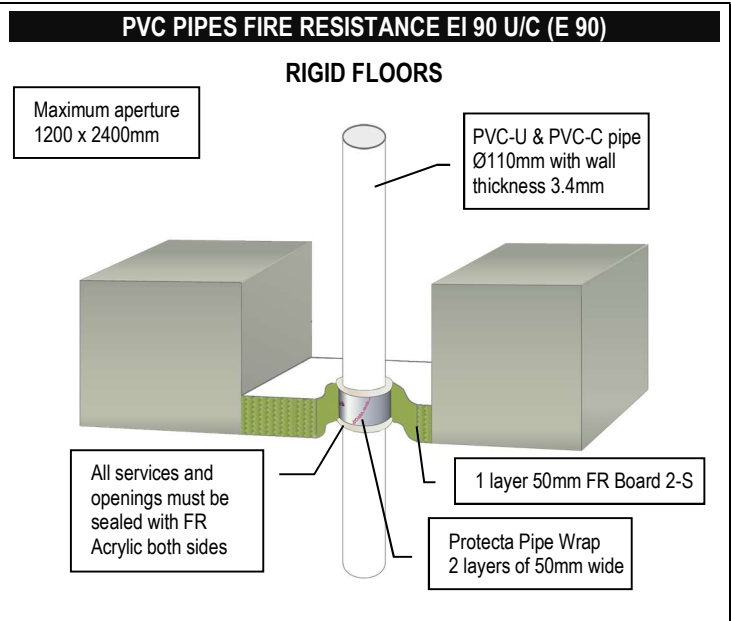
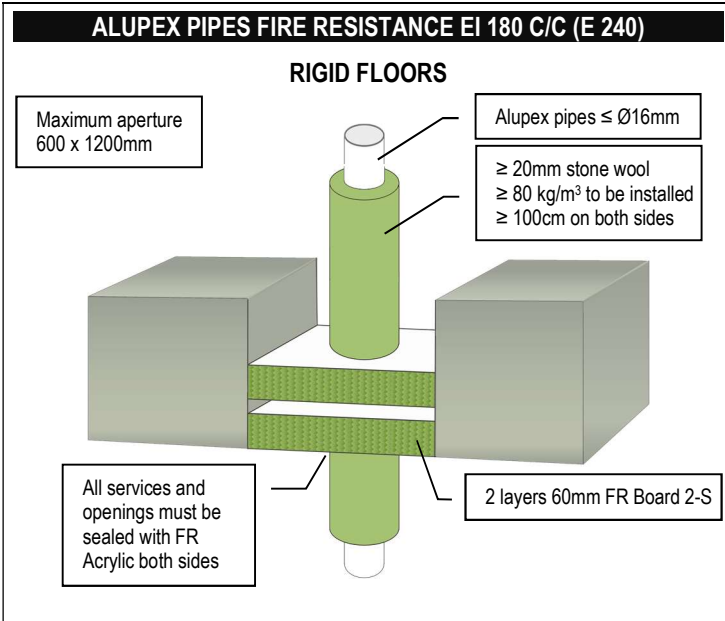
Alupex pipes $\leq \varnothing 75\text{mm}$

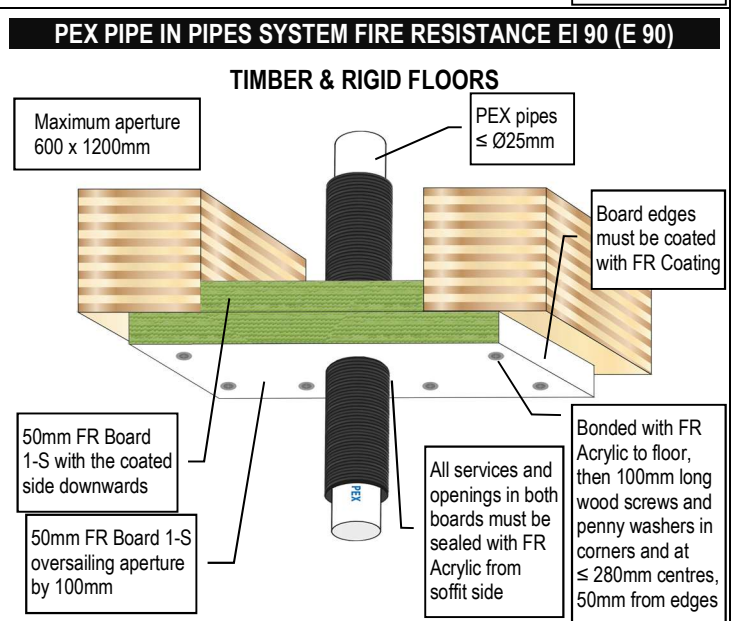
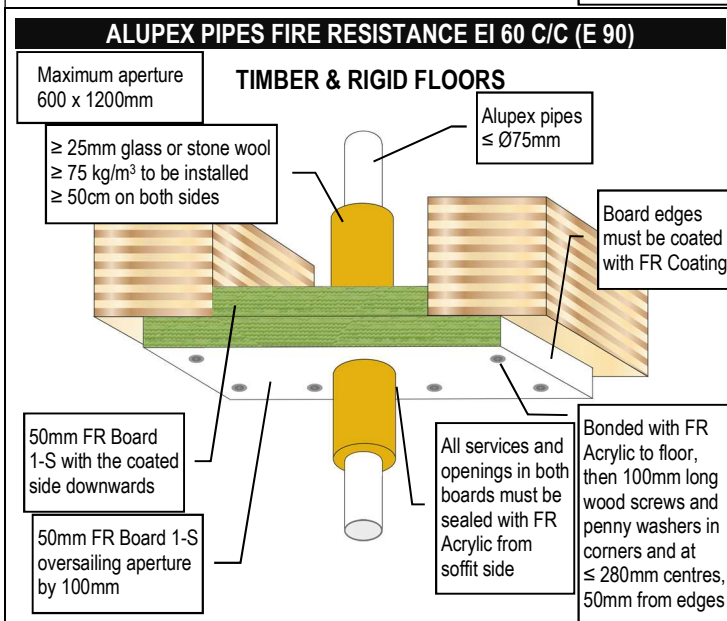
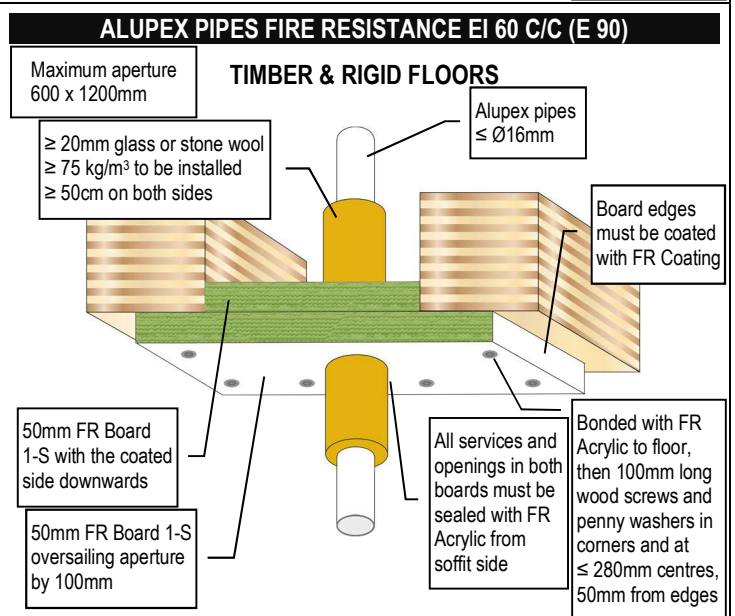
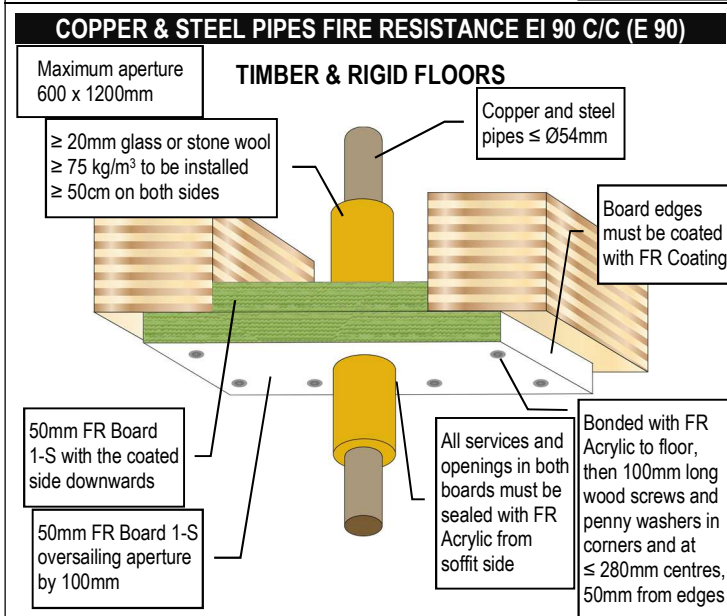
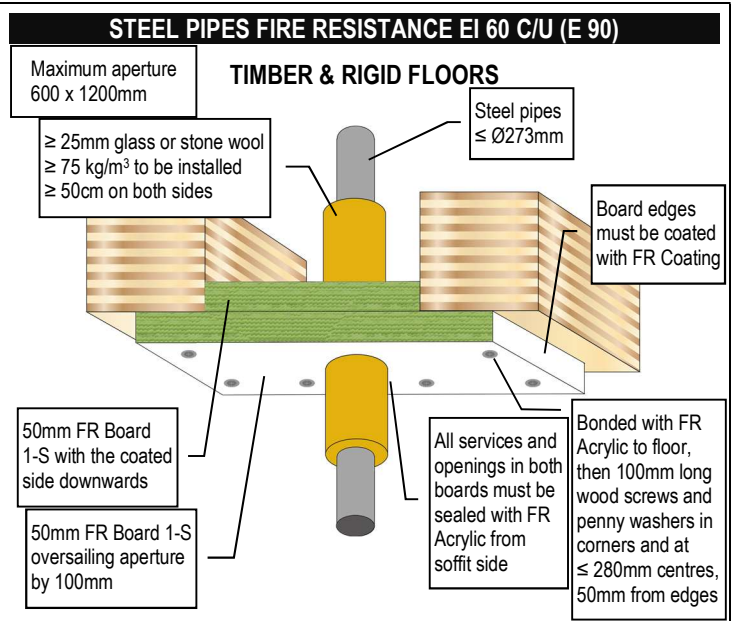
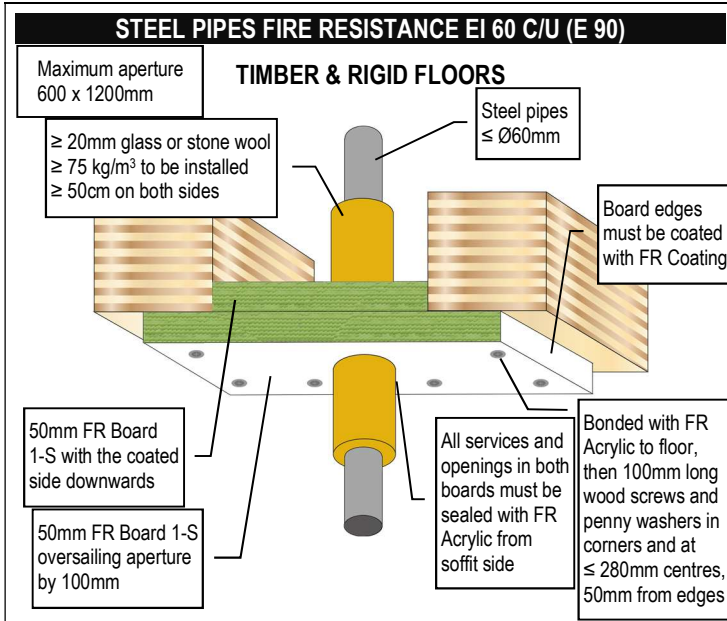
$\geq 20\text{mm}$ stone wool
 $\geq 80 \text{ kg/m}^3$ to be installed
 $\geq 50\text{cm}$ on both sides



All services and openings must be sealed with FR Acrylic both sides

1 layer 60mm FR Board 2-S





INDEX

Drywalls and rigid walls

Services	Wall thickness	Seal type	Service insulation	Page/drawing no.
Linear seals	75mm	Normal	-	2 / 1-2
"	100mm	Normal	-	2 / 3-4
Cables and cable trays	75mm	Normal	-	2 / 5 to 3 / 1
"	100mm	Framed	-	3 / 2-3
"	100mm	Normal	-	3 / 4-6
"	100mm	Pattress	-	4 / 1
Steel pipes	75mm	Normal	-	4 / 2-3
"	75mm	Normal	Coat-back	4 / 4-5
"	100mm	Normal	-	4 / 6 to 5 / 1
"	100mm	Normal	Coat-back	5 / 2 to 5 / 4
"	120mm	Normal	-	5 / 5-6
"	100mm	Pattress	-	6 / 1
"	100mm	Pattress	Coat-back	6 / 2
"	75mm	Normal	Elastomeric & PE, continuous	6 / 3-4
"	100mm	Normal	Elastomeric & PE, continuous	6 / 5 to 7 / 1
"	100mm	Pattress	Elastomeric & PE, continuous	7 / 2-3
"	75mm	Normal	Phenolic, continuous	7 / 4-5
"	100mm	Normal	Phenolic, continuous	7 / 6 to 8 / 1
"	100mm	Pattress	Phenolic, continuous	8 / 2-3
"	75mm	Normal	Stonewool, continuous	8 / 4-5
"	100mm	Framed	Stonewool, continuous	8 / 6
"	100mm	Normal	Stonewool, continuous	9 / 1
"	100mm	Pattress	Stonewool, continuous	9 / 2
"	75mm	Normal	Stonewool, interrupted	9 / 3-4
"	100mm	Normal	Stonewool, interrupted	9 / 5-6
"	100mm	Pattress	Stonewool, interrupted	10 / 1
Copper pipes	75mm	Normal	-	10 / 2
"	100mm	Normal	-	10 / 3
"	120mm	Normal	-	10 / 4-5
"	100mm	Pattress	-	10 / 6
"	75mm	Normal	Elastomeric & PE, continuous	11 / 1
"	100mm	Framed	Elastomeric & PE, continuous	11 / 2
"	100mm	Normal	Elastomeric & PE, continuous	11 / 3-5
"	100mm	Pattress	Elastomeric & PE, continuous	11 / 6 to 12 / 1
"	75mm	Normal	Glass- & stonewool, continuous	12 / 2-4
"	100mm	Framed	Glass- & stonewool, continuous	12 / 5
"	100mm	Normal	Glass- & stonewool, continuous	12 / 6 to 13 / 2
"	100mm	Pattress	Glass- & stonewool, continuous	13 / 3
"	75mm	Normal	Stonewool, interrupted	13 / 4
"	100mm	Framed	Glass- & stonewool, interrupted	13 / 5
"	100mm	Normal	Stonewool, interrupted	13 / 6
"	100mm	Pattress	Stonewool, interrupted	14 / 1
Alupex pipes	75mm	Normal	-	14 / 2
"	100mm	Normal	-	14 / 3
"	120mm	Normal	-	14 / 4
"	100mm	Pattress	-	14 / 5-6
"	75mm	Normal	Elastomeric & PE, continuous	15 / 1
"	100mm	Framed	Elastomeric & PE, continuous	15 / 2-3
"	100mm	Normal	Elastomeric & PE, continuous	15 / 4
"	100mm	Pattress	Elastomeric & PE, continuous	15 / 5

Drywalls and rigid walls continues

Services	Wall thickness	Seal type	Service insulation	Page/drawing no.
Alupex pipes	75mm	Normal	Glass- & stonewool, continuous	15 / 6
"	100mm	Framed	Glass- & stonewool, continuous	16 / 1
"	100mm	Normal	Glass- & stonewool, continuous	16 / 2
"	100mm	Pattress	Glass- & stonewool, continuous	16 / 3
"	75mm	Normal	Stonewool, interrupted	16 / 4
"	100mm	Normal	Stonewool, interrupted	16 / 5-6
"	100mm	Pattress	Stonewool, interrupted	17 / 1
PVC pipes, small, w/o pipe wraps	75mm	Normal	-	17 / 2-3
"	100mm	Normal	-	17 / 4
"	100mm	Pattress	-	17 / 5
PE & ABS pipes, small, w/o wraps	75mm	Normal	-	17 / 6
"	100mm	Normal	-	18 / 1
"	100mm	Pattress	-	18 / 2
PP pipes, small, w/o pipe wraps	75mm	Normal	-	18 / 3
"	100mm	Normal	-	18 / 4
"	100mm	Pattress	-	18 / 5
Plastic pipes, large	75mm	Normal	-	19 / 1
"	100mm	Framed	-	19 / 2
"	100mm	Normal	-	19 / 3
"	120mm	Normal	-	20 / 1
"	100mm	Pattress	-	20 / 2-3
PE & ABS pipes	75mm	Normal	Elastomeric & PE, continuous	21 / 1-3
"	100mm	Normal	Elastomeric & PE, continuous	21 / 4-6
"	100mm	Pattress	Elastomeric & PE, continuous	22 / 1-3
PP pipes	75mm	Normal	Elastomeric & PE, continuous	22 / 4-6
"	100mm	Normal	Elastomeric & PE, continuous	23 / 1-3
"	100mm	Pattress	Elastomeric & PE, continuous	23 / 4-6
Plastic conduits	75mm	Normal	-	24 / 1-3
"	100mm	Normal	-	24 / 4-6
"	100mm	Pattress	-	25 / 1-3
Bundled plastic pipes and conduits	75mm	Normal	-	25 / 4
"	100mm	Normal	-	25 / 5
"	100mm	Pattress	-	25 / 6
PEX pipe-in-pipes	75mm	Normal	-	26 / 1-3
"	100mm	Normal	-	26 / 4-6
"	100mm	Pattress	-	27 / 1-3
Aquatherm Green pipes	75mm	Normal	-	27 / 4
"	100mm	Normal	-	28 / 1
"	100mm	Pattress	-	28 / 2
Bluepower pipes	75mm	Normal	-	28 / 3
"	100mm	Normal	-	29 / 1
"	100mm	Pattress	-	29 / 2
Geberit Silent pipes	75mm	Normal	-	29 / 3
"	100mm	Normal	-	30 / 1
"	100mm	Pattress	-	30 / 2
POLO-KAL NG pipes	75mm	Normal	-	30 / 3
"	100mm	Normal	-	31 / 1
"	100mm	Pattress	-	31 / 2
Rehau Raupiano pipes	75mm	Normal	-	31 / 3
"	100mm	Normal	-	32 / 1
"	100mm	Pattress	-	32 / 2
Uponor Decibel pipes	75mm	Normal	-	32 / 3
"	100mm	Normal	-	33 / 1
"	100mm	Pattress	-	33 / 2

Drywalls and rigid walls continues

Services	Wall thickness	Seal type	Service insulation	Page/drawing no.
Wavin SiTech pipes	75mm	Normal	-	33 / 3
"	100mm	Normal	-	34 / 1
"	100mm	Pattress	-	34 / 2

Timber walls

Services	Wall thickness	Seal type	Service insulation	Page/drawing no.
Linear seals	100mm	Pattress	-	34 / 3
Cables and cable trays	100mm	Pattress	-	34 / 4 to 35 / 2
Steel pipes	100mm	Pattress	-	35 / 3-5
"	100mm	Pattress	Coat-back	35 / 6 to 36 / 2
"	100mm	Pattress	Elastomeric & PE, continuous	36 / 3-5
"	100mm	Pattress	Phenolic, continuous	36 / 6 to 37 / 1
"	100mm	Pattress	Stonewool, continuous	37 / 2
"	100mm	Pattress	Stonewool, interrupted	37 / 3-4
Copper pipes	100mm	Pattress	-	37 / 5 to 38 / 1
"	100mm	Pattress	Elastomeric & PE, continuous	38 / 2-4
"	100mm	Pattress	Glass- & stonewool, continuous	38 / 5 to 39 / 1
"	100mm	Pattress	Stonewool, interrupted	39 / 2
Alupex pipes	100mm	Pattress	-	39 / 3-4
"	100mm	Pattress	Elastomeric & PE, continuous	39 / 5
"	100mm	Pattress	Glass- & stonewool, continuous	39 / 6
"	100mm	Pattress	Stonewool, interrupted	40 / 1-2
Plastic pipes, small, w/o pipe wraps	100mm	Pattress	-	40 / 3-5
Plastic pipes, large	100mm	Pattress	-	41 / 1
PE & ABS pipes	100mm	Pattress	Elastomeric & PE, continuous	41 / 2-4
PP pipes	100mm	Pattress	Elastomeric & PE, continuous	41 / 5 to 42 / 2
Plastic conduits	100mm	Pattress	-	42 / 3-5
Bundled plastic pipes and conduits	100mm	Pattress	-	42 / 6
PEX pipe-in-pipes	100mm	Pattress	-	43 / 1-3
Aquatherm Green pipes	100mm	Pattress	-	43 / 4
Bluepower pipes	100mm	Pattress	-	44 / 1
Geberit Silent pipes	100mm	Pattress	-	44 / 2
POLO-KAL NG pipes	100mm	Pattress	-	44 / 3
Rehau Raupiano pipes	100mm	Pattress	-	45 / 1
Uponor Decibel pipes	100mm	Pattress	-	45 / 2
Wavin SiTech pipes	100mm	Pattress	-	45 / 3

Rigid walls, additional items

Services	Wall thickness	Seal type	Service insulation	Page/drawing no.
Linear seals	75mm	Normal	-	46 / 1
"	150mm	Normal	-	46 / 2-3
Cables and cable trays	75mm	Normal	-	46 / 4-5
"	150mm	Normal	-	46 / 6 to 48 / 1
"	150mm	Pattress		48 / 2 to 48 / 5
Steel pipes	75mm	Normal	Elastomeric & PE, continuous	48 / 6
"	75mm	Normal	Stonewool, continuous	49 / 1-3
"	150mm	Normal	Stonewool, continuous	49 / 4 to 50 / 2
"	75mm	Normal	Stonewool, interrupted	50 / 3
"	150mm	Normal	Stonewool, interrupted	50 / 4 to 51 / 3
Copper pipes	75mm	Normal	Elastomeric & PE, continuous	51 / 4
"	75mm	Normal	Glass- & stonewool, continuous	51 / 5
"	75mm	Normal	Glass- & stonewool, interrupted	51 / 6
"	75mm	Normal	Stonewool, interrupted	52 / 1
"	150mm	Normal	Stonewool, interrupted	52 / 2-5
Alupex pipes	75mm	Normal	Glass- & stonewool, continuous	52 / 6
"	75mm	Normal	Stonewool, interrupted	53 / 1
"	150mm	Normal	Stonewool, interrupted	53 / 2-4
Plastic pipes, small, w/o pipe wraps	150mm	Normal	-	53 / 5
Bundled plastic pipes	150mm	Normal	-	53 / 6
Plastic pipes, large	75mm	Normal	-	54 / 1
"	150mm	Normal	-	54 / 2

Rigid floors

Services	Wall thickness	Seal type	Service insulation	Page/drawing no.
Linear seals	150mm	Normal	-	54 / 3 to 55 / 3
Cables and cable trays	150mm	Normal	-	55 / 4 to 56 / 3
Steel pipes	150mm	Normal	-	56 / 4-5
"	150mm	Normal	Elastomeric, continuous	56 / 6 to 57 / 2
"	150mm	Normal	Stonewool, continuous	57 / 3
"	150mm	Normal	Stonewool, interrupted	57 / 4 to 58 / 4
Copper pipes	150mm	Normal	Elastomeric, continuous	58 / 5-6
"	150mm	Normal	Stonewool, interrupted	59 / 1-2
Alupex pipes	150mm	Normal	Elastomeric, continuous	59 / 3-4
"	150mm	Normal	Stonewool, interrupted	59 / 5 to 60 / 1
Plastic pipes	150mm	Normal	-	60 / 2

Timber & rigid floors

Services	Wall thickness	Seal type	Service insulation	Page/drawing no.
Linear seals	150mm	Pattress	-	60 / 3
Cables and cable trays	150mm	Pattress	-	60 / 4-6
Steel pipes	150mm	Pattress	Glass & stonewool, interrupted	61 / 1-2
Copper pipes	150mm	Pattress	Glass & stonewool, interrupted	61 / 3
Alupex pipes	150mm	Pattress	Glass & stonewool, interrupted	61 / 4-5
PEX pipe-in-pipes	150mm	Pattress	-	61 / 6