NEUROCK
PASSIVE FIRE

PROTECTING PEOPLE & PROPERTY

INSTALLATION INSTRUCTIONS

INDEX FOR DETAILED DRAWINGS

Linear seals in floors ..... pages 2-3
Cables in floors ..... page 4
Metal pipes in floors ..... pages 5-10
Plastic pipes in floors ..... pages 10-11
Cables in composite floors ..... page 12
Pipes in composite floors ..... pages 12-16
Cables in timber floors ..... page 16
Metal pipes in timber floors ..... pages 16-17
Plastic pipes in timber floors ..... pages 17-18
Linear seals in masonry or concrete walls ..... page 18
Cables in masonry or concrete walls ..... pages 19-20
Metal pipes in masonry or concrete walls ..... pages 20-22
Plastic pipes in masonry or concrete walls ..... pages 22-23
Linear seals in drywalls, masonry or concrete walls ..... pages 23-25
Cables in drywalls, masonry or concrete walls ..... pages 25-26
Metal pipes in drywalls, masonry or concrete walls ..... pages 26-31
Plastic pipes in drywalls, masonry or concrete walls ..... pages 32-34
Cables in timber walls ..... pages 34-35
Metal pipes in timber walls ..... pages 35-36
Plastic pipes in timber walls ..... page 37

For guidance on fire sealing ventilation ducts, please refer to Protecta FR Damper's Technical Data Sheet.

GENERAL PRODUCT DESCRIPTION

Protecta® FR Acrylic is a high specification formulation designed to prevent the spread of fire, smoke and gases through openings in fire rated walls and floors. FR Acrylic should be applied over suitable backing materials to ensure correct width to depth ratio, and to reduce shrinkage of the joint during hardening.

GENERAL GUIDE

Minimum separations and limitations: Services (single) can be sealed as specified in the detailed drawings. Minimum separation between services and the edge of the seal within each aperture should be 10mm to allow for correct fitting of backing and seal depth. Minimum separation between apertures should be at least 30mm, except in timber constructions where apertures can be placed linear (horizontally in walls) with no required separation. For larger joint dimensions or apertures other than described in the detailed drawings, Protecta® FR Board or EX Mortar should be used. In areas with a high degree of humidity and/or in joints with excessive movement, Protecta® FR IPT should be used.

Supporting constructions: Flexible walls must have a minimum thickness of 75mm and comprise steel studs or timber studs*) lined on both faces with minimum 1 layer of 12.5mm thick boards. Timber walls must have a minimum thickness of 100mm and comprise solid wood or cross-laminated timber. Rigid walls must have a minimum thickness of 75mm and comprise concrete, aerated concrete or masonry, with a minimum density of 650 kg/m^3. Rigid floors must have a minimum thickness of 150mm (except composite floors) and comprise aerated concrete or concrete with a minimum density of 650 kg/m^3. Timber floors must have a minimum thickness of 150mm 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.

*) Timber studs: no part of the penetration seal may be closer than 100mm to a stud, and minimum 100mm 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. In linear seals, there is no minimum distance and insulation required.

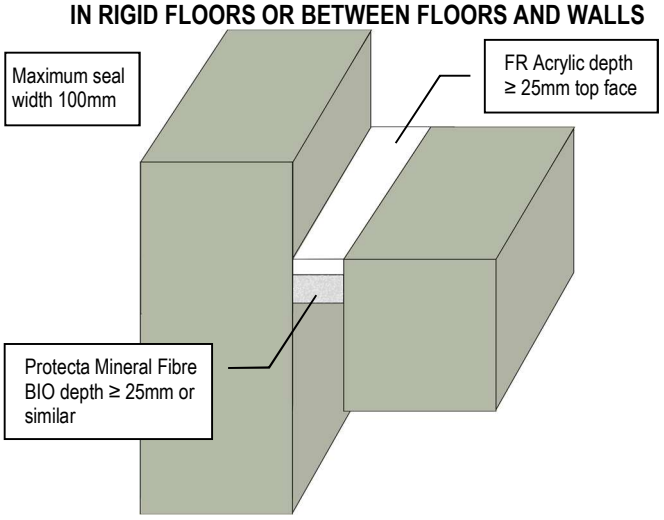
INSTALLATION

1. Before installing Protecta® FR Acrylic, ensure that the surface of all service penetrations and surrounding construction is free from all loose contaminants, dust and grease.
2. Where Protecta® FR Acrylic is to be installed against surfaces that cannot tolerate direct contact; appropriate surface preparation should be made (contact Polyseam for guidance in these cases). For paints sensitive to sealing compounds, priming with a PVA primer is recommended.
3. As Protecta® FR Acrylic is water based, in cases where corrosion protection is a problem; some metals may require a barrier between the sealant and the metal surface prior to this installation.
4. When installing the sealant in gypsum boards, the exposed edges of the board can be wetted with water, or Protecta® FR Acrylic diluted with water to prime the surfaces, helping adhesion and preventing excessive joint shrinkage.
5. When installing Protecta® FR Acrylic in hollow floor slabs or boards, fire seals specified as single sided should be installed from the soffit side of the floor assuming there is sufficient thickness of concrete below the void to follow the installation guide. Where this is not the case, tubular voids should be filled with stone wool, normally the same thickness as the depth of the floor slab. Alternatively, simply fire seal on both sides.
6. When installing any backing material, cut this slightly oversize and insert into the gap ensuring a tight friction fit. Ensure correct depth is achieved.
7. Fill the gap or joint with Protecta® FR Acrylic to the required depth. Refer to the drawings on following pages 2 to 37 for guidance on joint design/dimensions. If installation does not have to meet any specific fire specification, it is recommended that a width to depth ratio of 2:1 is utilized, with a minimum depth of 12mm of sealant.
8. Apply the sealant generously to prevent air bubbles. Finish the bead with a moist spatula, pallet knife or brush.
9. Protecta® FR Acrylic can be over-painted with most emulsion or alkyd (gloss) paints.

Detail Drawings

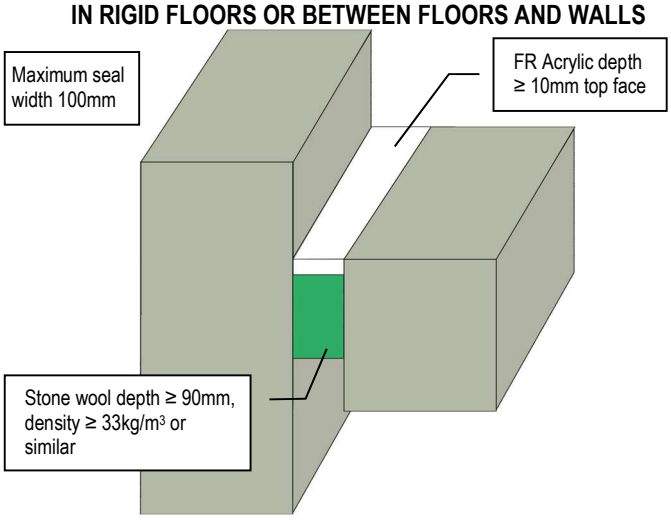
LINEAR SEALS FIRE RESISTANCE EI 180 (E 180)

IN RIGID FLOORS OR BETWEEN FLOORS AND WALLS



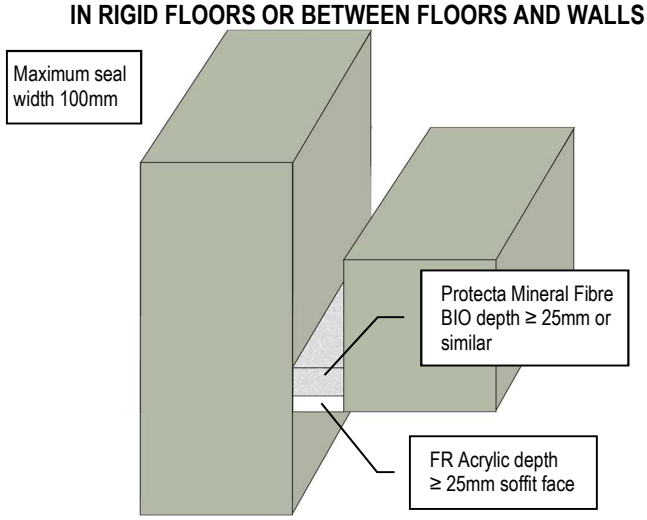
LINEAR SEALS FIRE RESISTANCE EI 240 (E 240)

IN RIGID FLOORS OR BETWEEN FLOORS AND WALLS



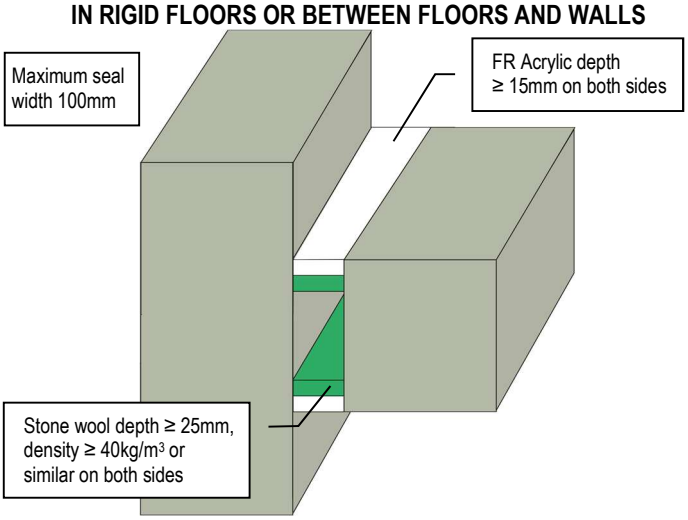
LINEAR SEALS FIRE RESISTANCE EI 60 (E 120)

IN RIGID FLOORS OR BETWEEN FLOORS AND WALLS



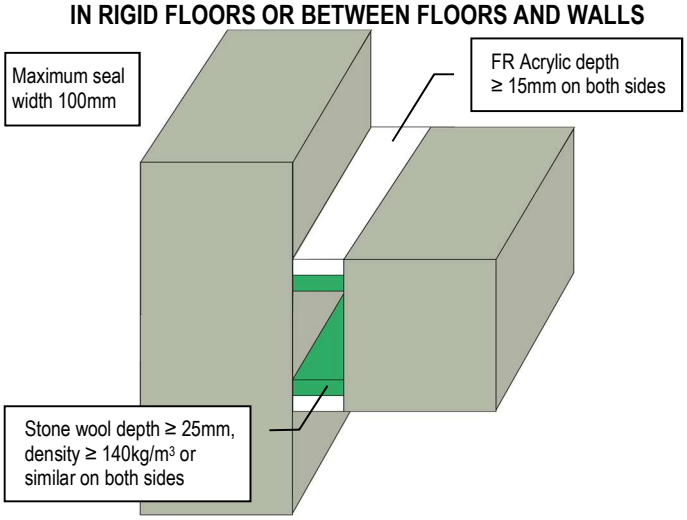
LINEAR SEALS FIRE RESISTANCE EI 120 (E 120)

IN RIGID FLOORS OR BETWEEN FLOORS AND WALLS



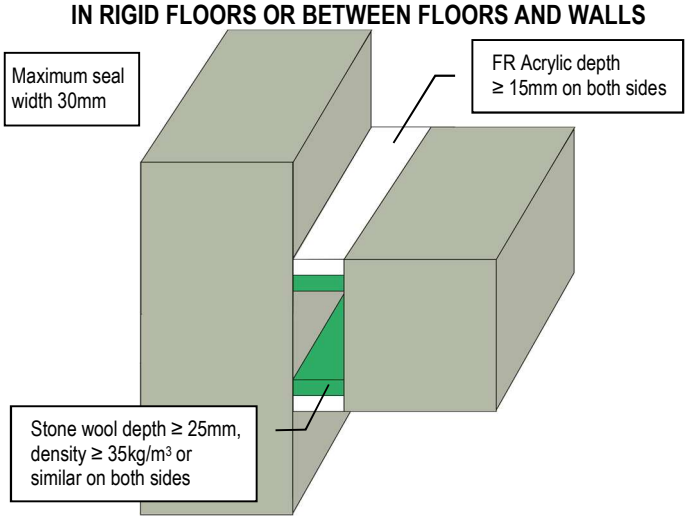
LINEAR SEALS FIRE RESISTANCE EI 180 (E 180)

IN RIGID FLOORS OR BETWEEN FLOORS AND WALLS



LINEAR SEALS FIRE RESISTANCE EI 240 (E 240)

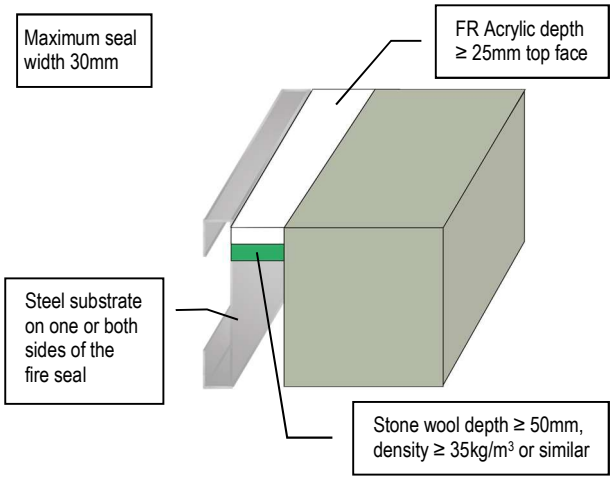
IN RIGID FLOORS OR BETWEEN FLOORS AND WALLS



Detail Drawings

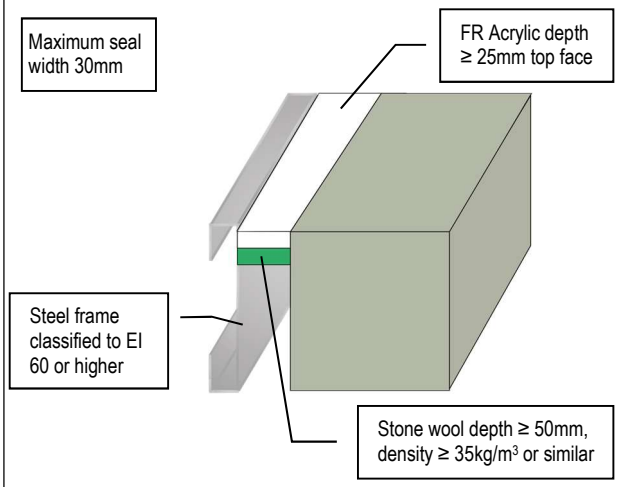
LINEAR SEALS FIRE RESISTANCE EI 30 (E 240)

IN RIGID FLOORS OR BETWEEN FLOORS AND WALLS



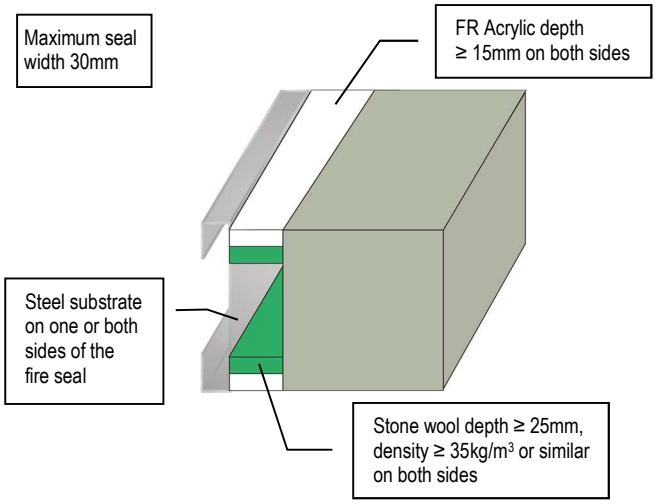
LINEAR SEALS FIRE RESISTANCE EI 60 (E 240)

IN RIGID FLOORS OR BETWEEN FLOORS AND WALLS



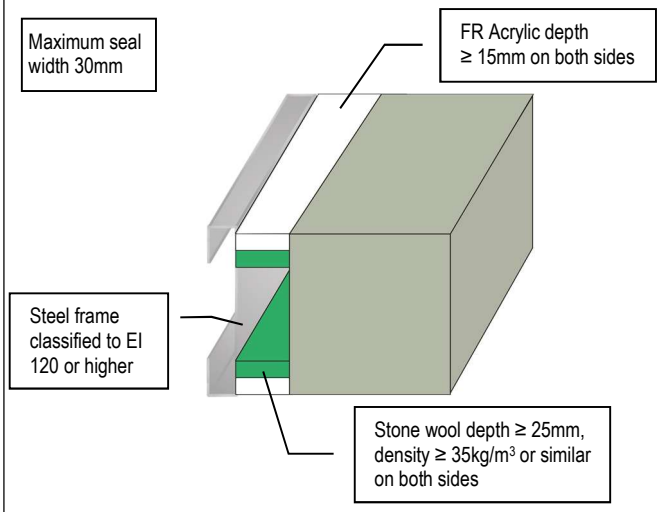
LINEAR SEALS FIRE RESISTANCE EI 45 (E 240)

IN RIGID FLOORS OR BETWEEN FLOORS AND WALLS



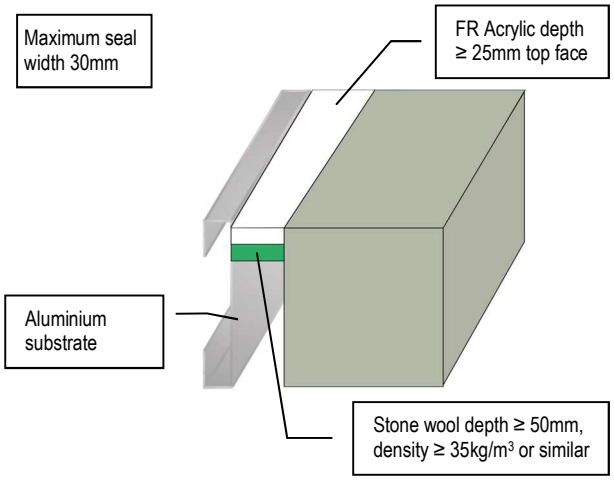
LINEAR SEALS FIRE RESISTANCE EI 120 (E 240)

IN RIGID FLOORS OR BETWEEN FLOORS AND WALLS



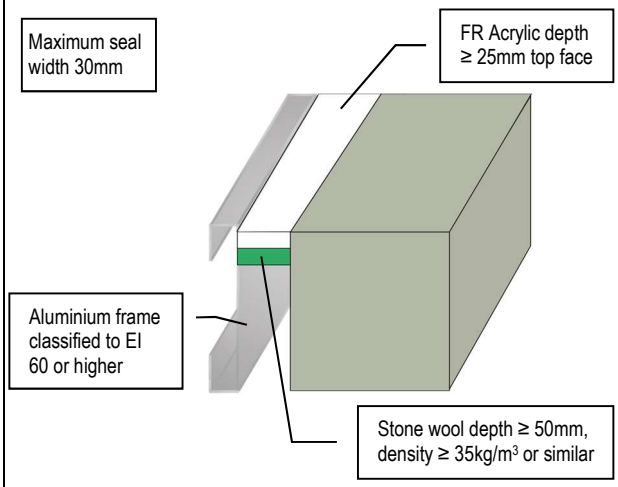
LINEAR SEALS FIRE RESISTANCE EI 20 (E 180)

IN RIGID FLOORS OR BETWEEN FLOORS AND WALLS



LINEAR SEALS FIRE RESISTANCE EI 60 (E 180)

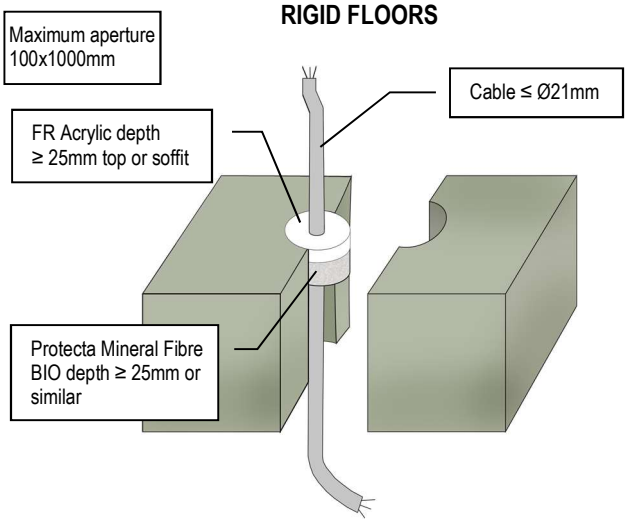
IN RIGID FLOORS OR BETWEEN FLOORS AND WALLS



Detail Drawings

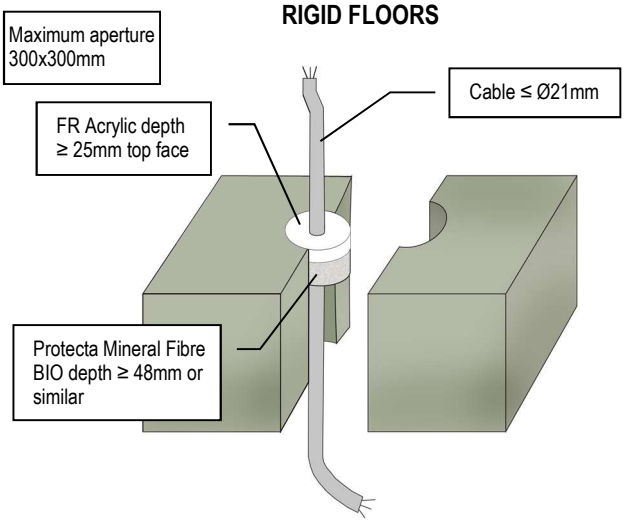
CABLE FIRE RESISTANCE EI 60 (E 120)

RIGID FLOORS



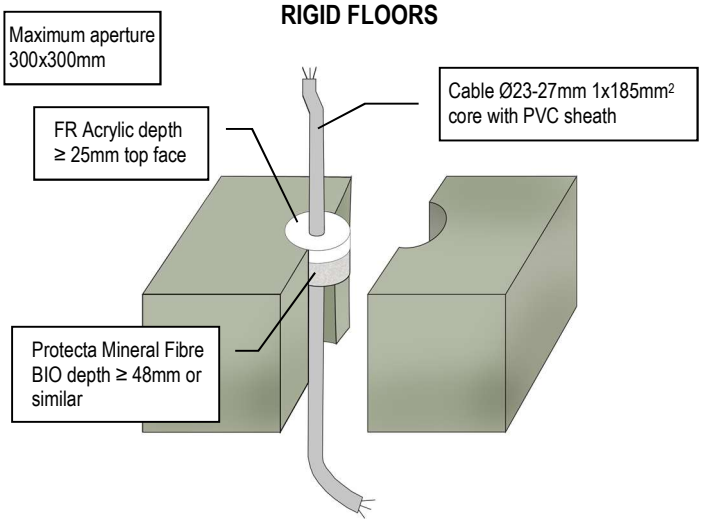
CABLE FIRE RESISTANCE EI 90 (E 120)

RIGID FLOORS



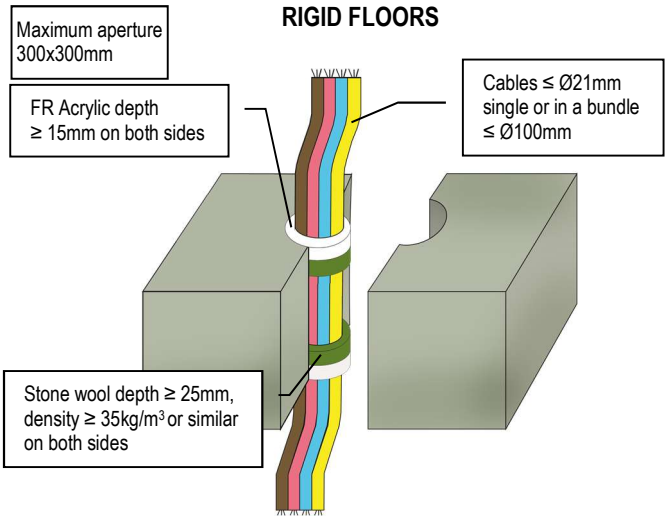
CABLE FIRE RESISTANCE EI 240 (E 240)

RIGID FLOORS



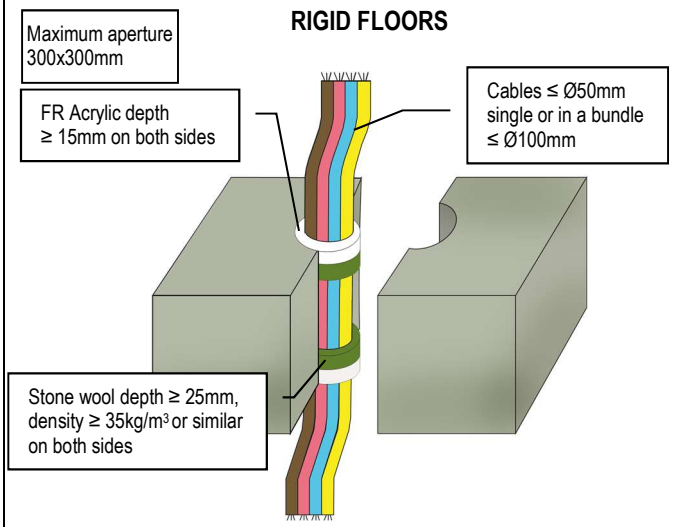
CABLES FIRE RESISTANCE EI 120 (E 120)

RIGID FLOORS



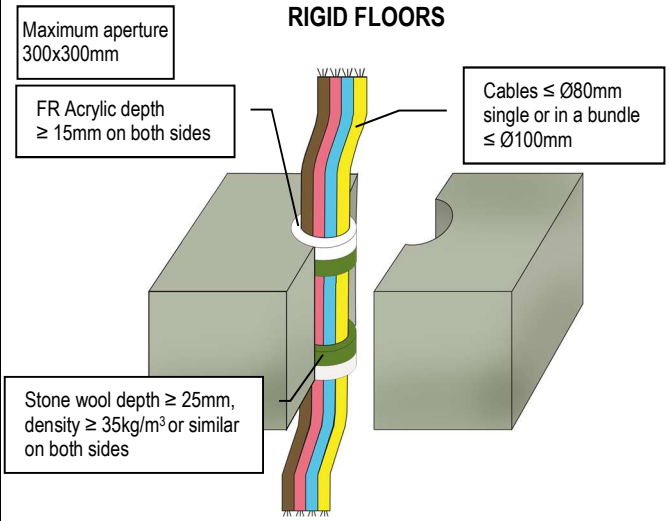
CABLES FIRE RESISTANCE EI 90 (E 120)

RIGID FLOORS



CABLES FIRE RESISTANCE EI 60 (E 120)

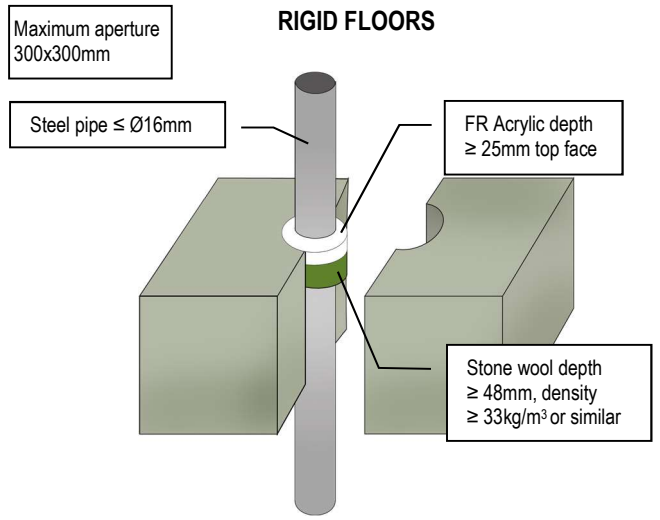
RIGID FLOORS



Detail Drawings

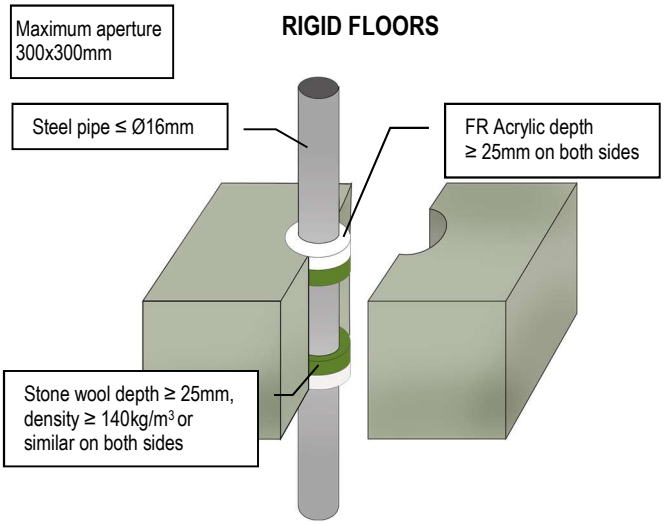
STEEL PIPE FIRE RESISTANCE EI 120 C/U (E 120)

RIGID FLOORS



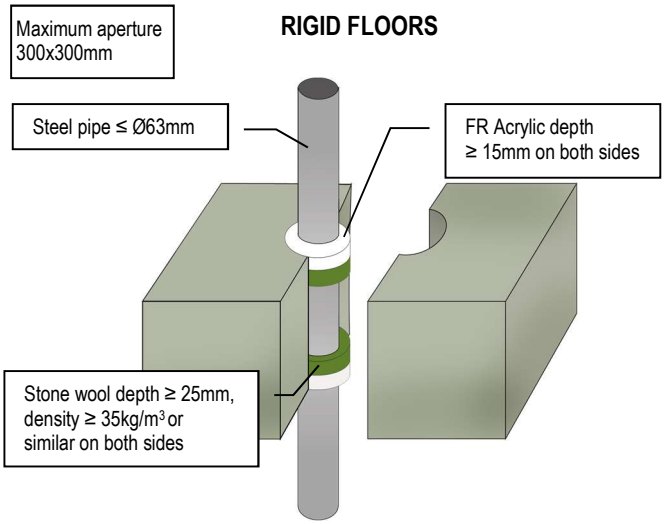
STEEL PIPE FIRE RESISTANCE EI 240 C/U (E 240)

RIGID FLOORS



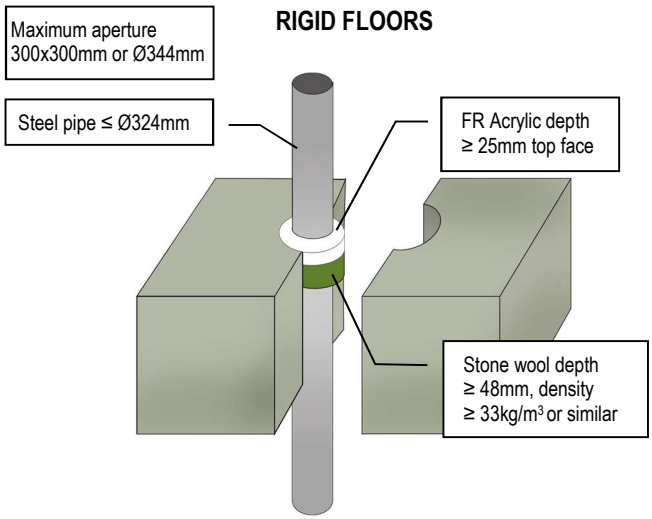
STEEL PIPE FIRE RESISTANCE EI 30 C/U (E 240)

RIGID FLOORS



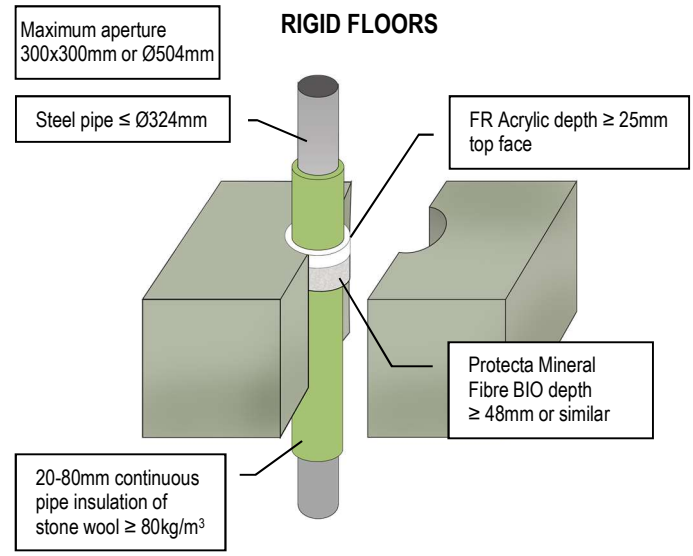
STEEL PIPE FIRE RESISTANCE E 120 C/U

RIGID FLOORS



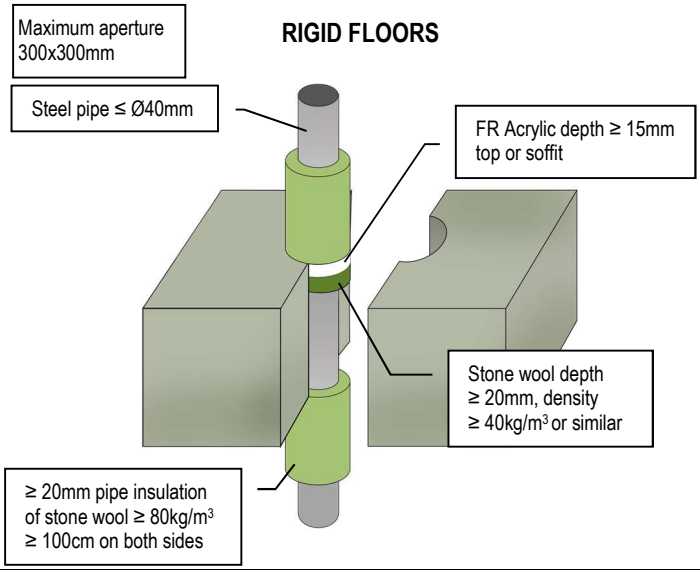
INSULATED STEEL PIPE FIRE RESISTANCE EI 240 C/U (E 240)

RIGID FLOORS



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

RIGID FLOORS



Detail Drawings

STEEL PIPE FIRE RESISTANCE EI 90 C/U (E 120)

RIGID FLOORS

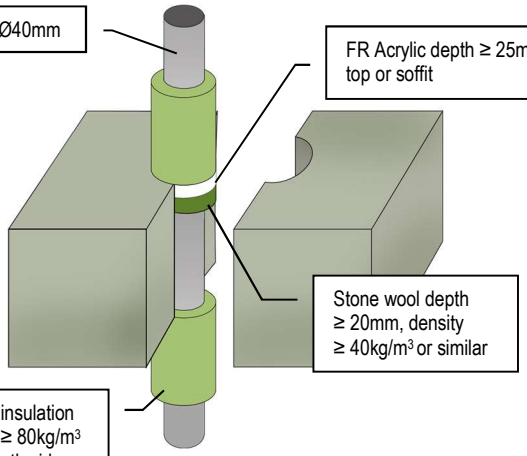
Maximum aperture 300x300mm or 100x1000mm

Steel pipe ≤ Ø40mm

FR Acrylic depth ≥ 25mm top or soffit

Stone wool depth ≥ 20mm, density ≥ 40kg/m³ or similar

≥ 20mm pipe insulation of stone wool ≥ 80kg/m³ ≥ 100cm on both sides



STEEL PIPE FIRE RESISTANCE EI 240 C/U (E 240)

RIGID FLOORS

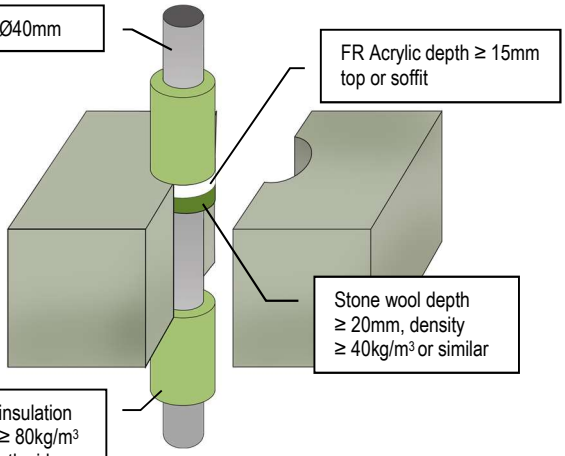
Annular ring width approx. 10mm

Steel pipe ≤ Ø40mm

FR Acrylic depth ≥ 15mm top or soffit

Stone wool depth ≥ 20mm, density ≥ 40kg/m³ or similar

≥ 20mm pipe insulation of stone wool ≥ 80kg/m³ ≥ 100cm on both sides



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

RIGID FLOORS

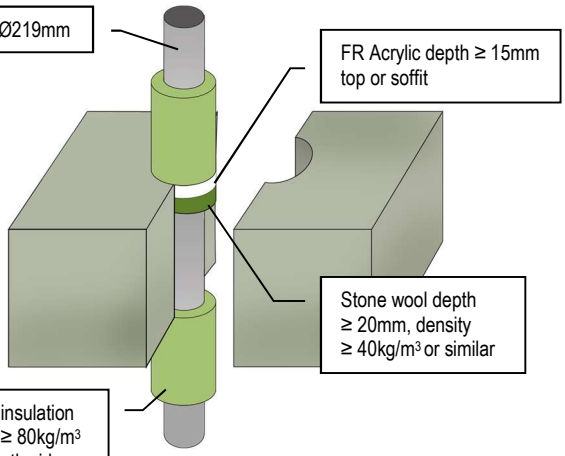
Maximum aperture 300x300mm

Steel pipe ≤ Ø219mm

FR Acrylic depth ≥ 15mm top or soffit

Stone wool depth ≥ 20mm, density ≥ 40kg/m³ or similar

≥ 30mm pipe insulation of stone wool ≥ 80kg/m³ ≥ 100cm on both sides



STEEL PIPE FIRE RESISTANCE EI 90 C/U (E 120)

RIGID FLOORS

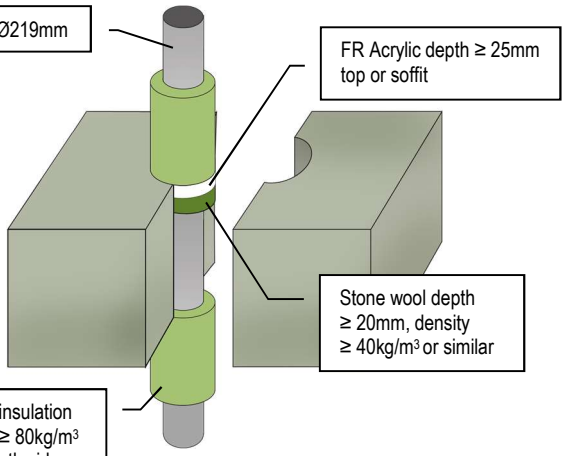
Maximum aperture 300x300mm or 100x1000mm

Steel pipe ≤ Ø219mm

FR Acrylic depth ≥ 25mm top or soffit

Stone wool depth ≥ 20mm, density ≥ 40kg/m³ or similar

≥ 30mm pipe insulation of stone wool ≥ 80kg/m³ ≥ 100cm on both sides



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

RIGID FLOORS

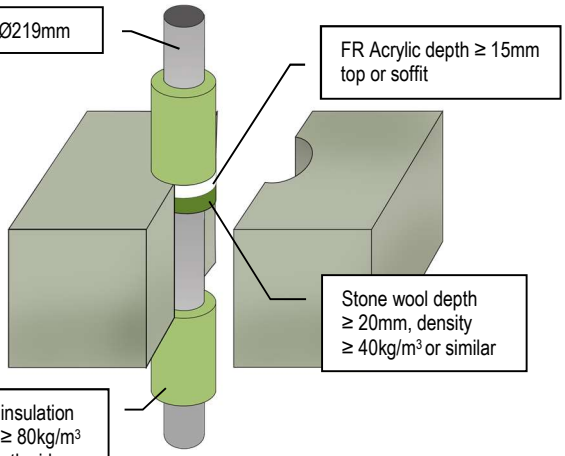
Annular ring width approx. 10mm

Steel pipe ≤ Ø219mm

FR Acrylic depth ≥ 15mm top or soffit

Stone wool depth ≥ 20mm, density ≥ 40kg/m³ or similar

≥ 30mm pipe insulation of stone wool ≥ 80kg/m³ ≥ 100cm on both sides



STEEL PIPE FIRE RESISTANCE EI 120 C/U (E 240)

RIGID FLOORS

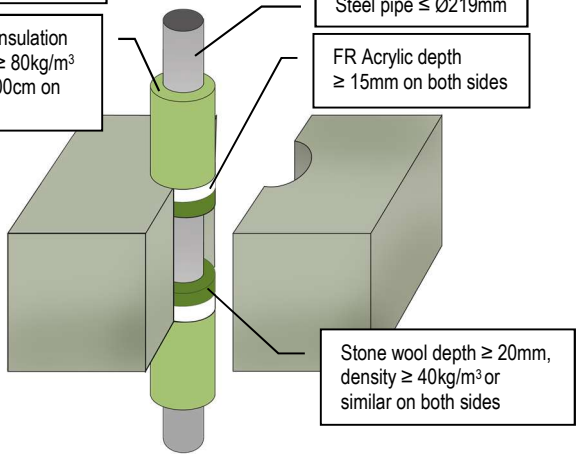
Maximum aperture 300x300mm or 100x1000mm

≥ 30mm pipe insulation of stone wool ≥ 80kg/m³ or similar, ≥ 100cm on both sides

Steel pipe ≤ Ø219mm

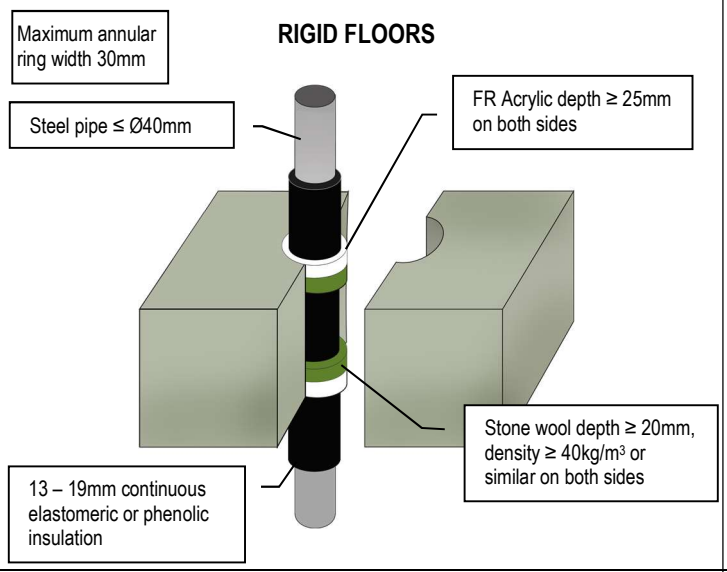
FR Acrylic depth ≥ 15mm on both sides

Stone wool depth ≥ 20mm, density ≥ 40kg/m³ or similar on both sides

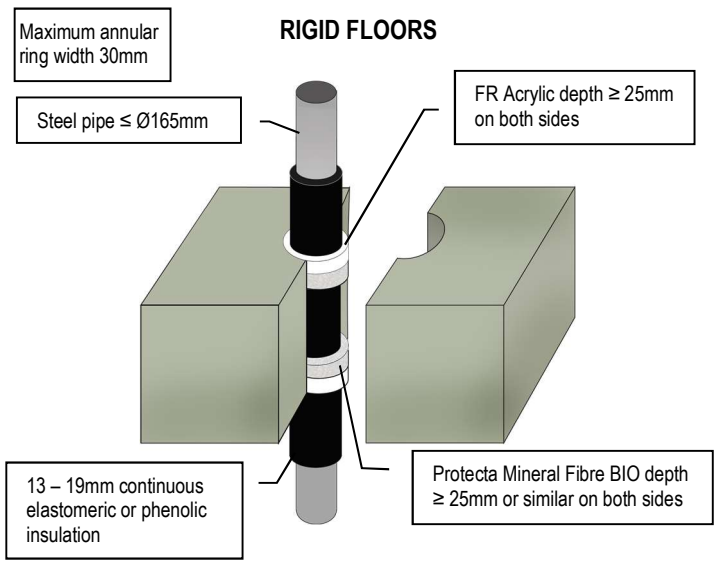


Detail Drawings

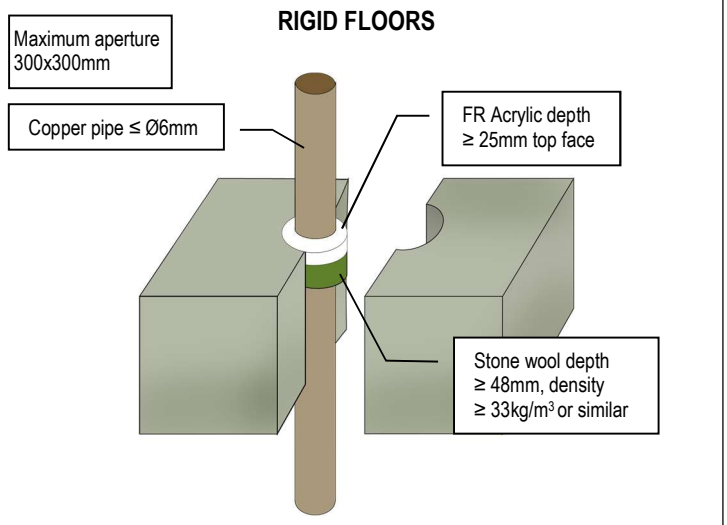
INSULATED STEEL PIPE FIRE RESISTANCE EI 180 C/U (E 180)



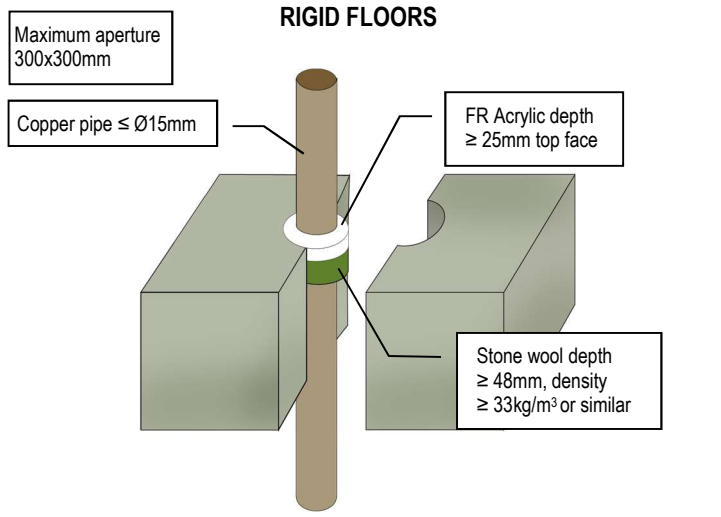
INSULATED STEEL PIPE FIRE RESISTANCE EI 60 C/U (E 60)



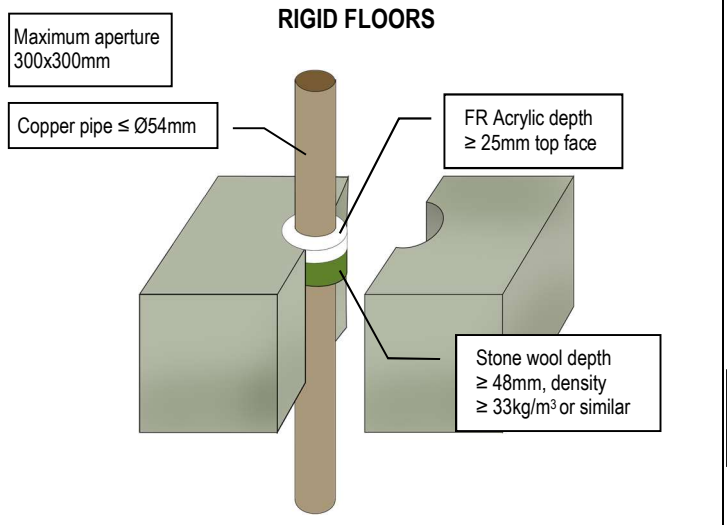
COPPER PIPE FIRE RESISTANCE EI 120 C/C (E 120)



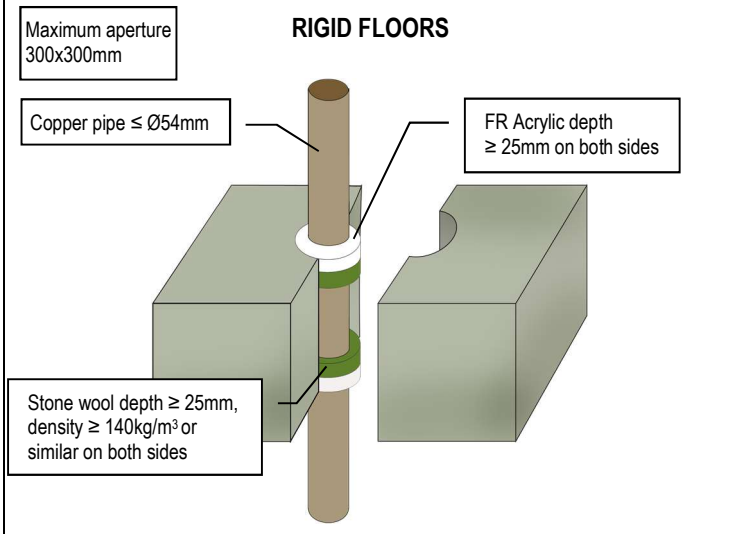
COPPER PIPE FIRE RESISTANCE EI 60 C/C (E 120)



COPPER PIPE FIRE RESISTANCE E 120 C/C



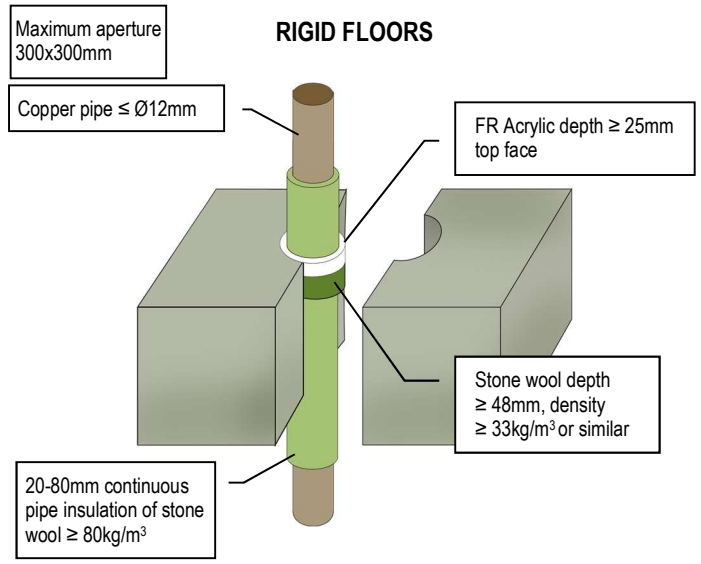
COPPER PIPE FIRE RESISTANCE EI 20 C/U (E 120)



Detail Drawings

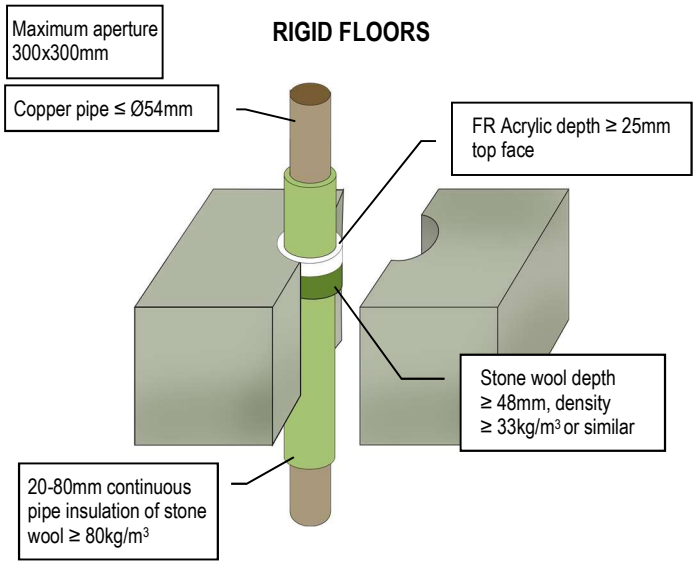
INSULATED COPPER PIPE FIRE RESISTANCE EI 240 C/C (E 240)

RIGID FLOORS



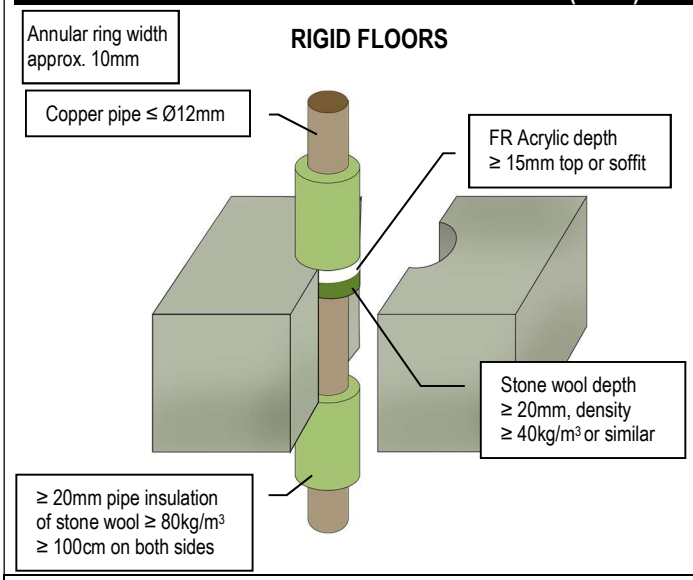
INSULATED COPPER PIPE FIRE RESISTANCE EI 180 C/C (E 240)

RIGID FLOORS



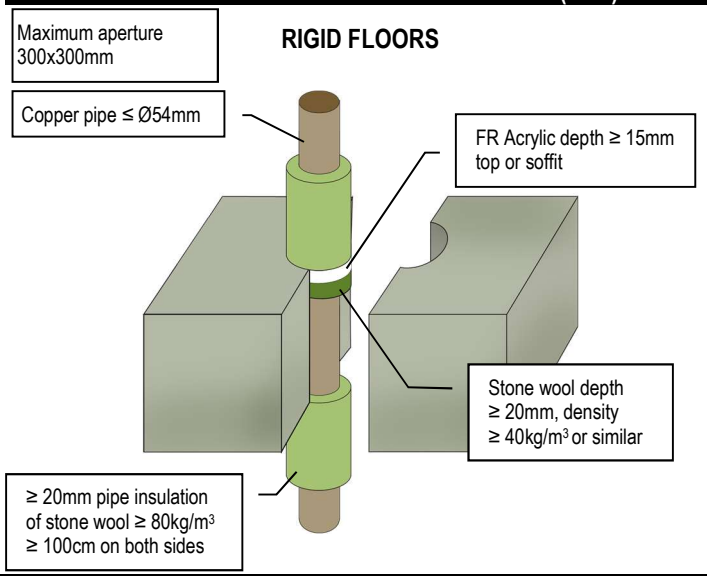
COPPER PIPE FIRE RESISTANCE EI 240 C/U (E 240)

RIGID FLOORS



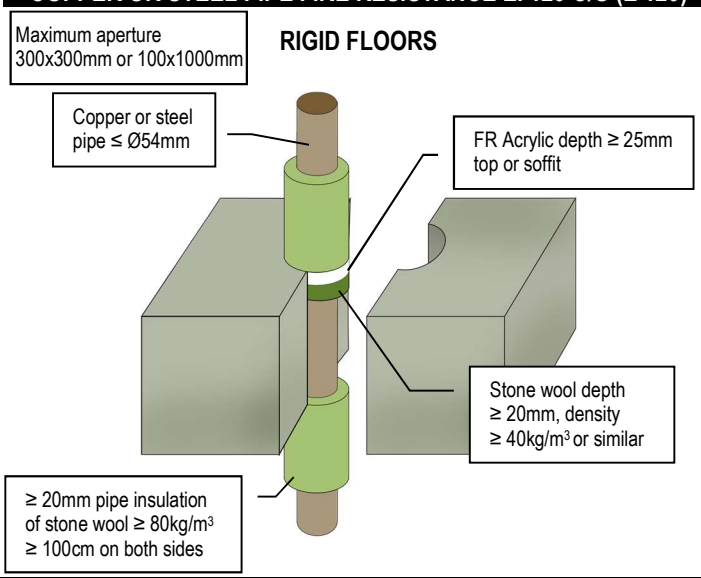
COPPER PIPE FIRE RESISTANCE EI 60 C/U (E 90)

RIGID FLOORS



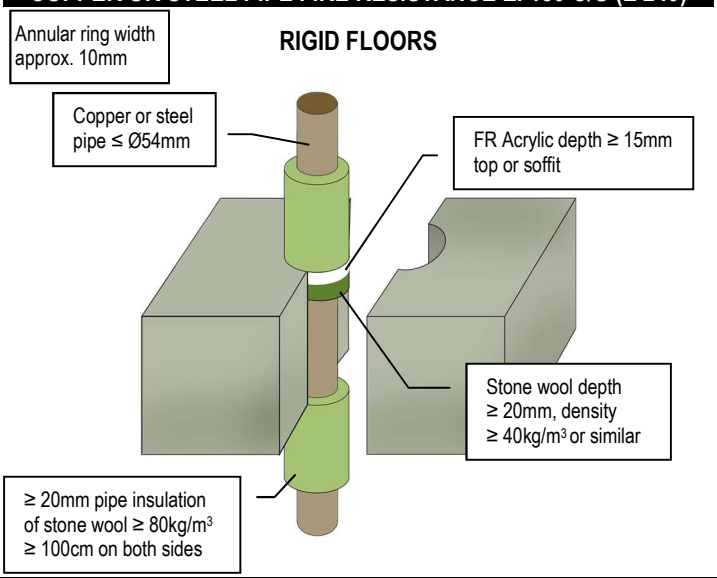
COPPER OR STEEL PIPE FIRE RESISTANCE EI 120 C/U (E 120)

RIGID FLOORS



COPPER OR STEEL PIPE FIRE RESISTANCE EI 180 C/U (E 240)

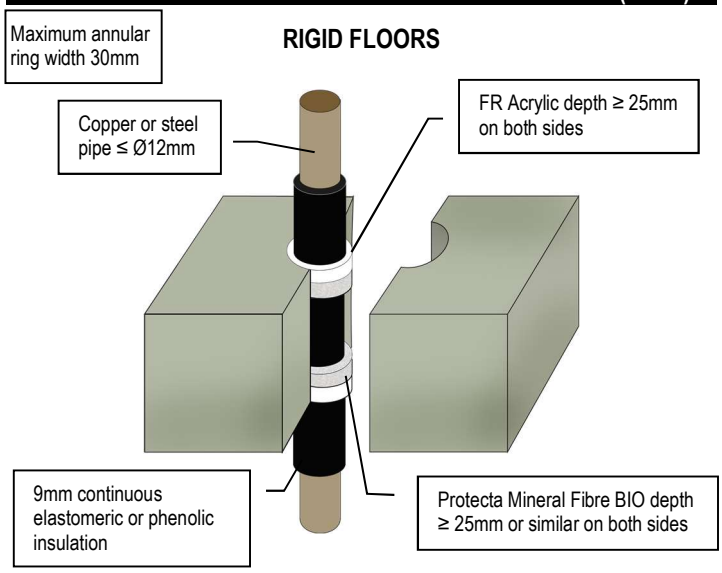
RIGID FLOORS



Detail Drawings

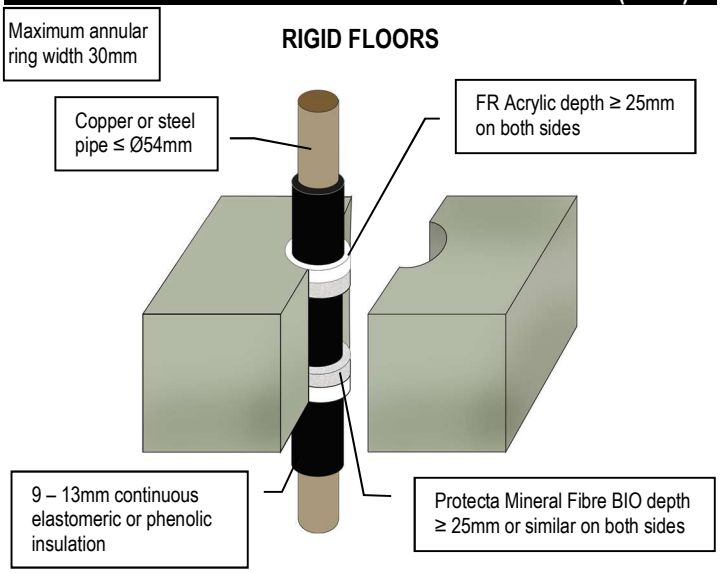
COPPER OR STEEL PIPE FIRE RESISTANCE EI 180 C/C (E 240)

RIGID FLOORS



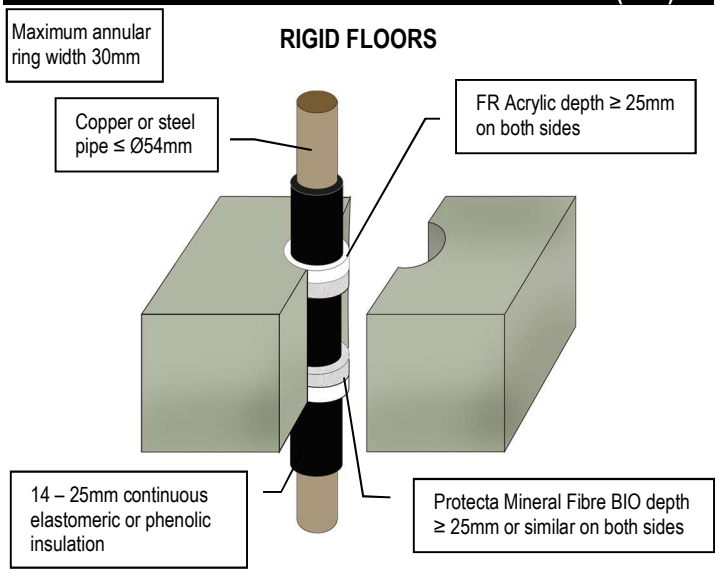
COPPER OR STEEL PIPE FIRE RESISTANCE EI 120 C/C (E 180)

RIGID FLOORS



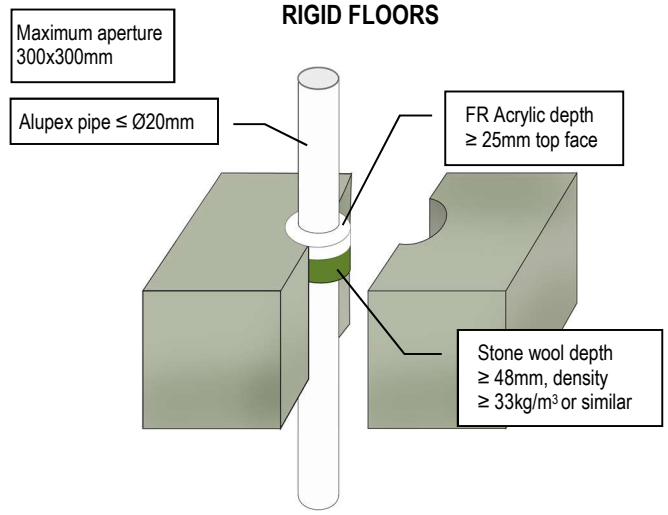
COPPER OR STEEL PIPE FIRE RESISTANCE EI 60 C/C (E 90)

RIGID FLOORS



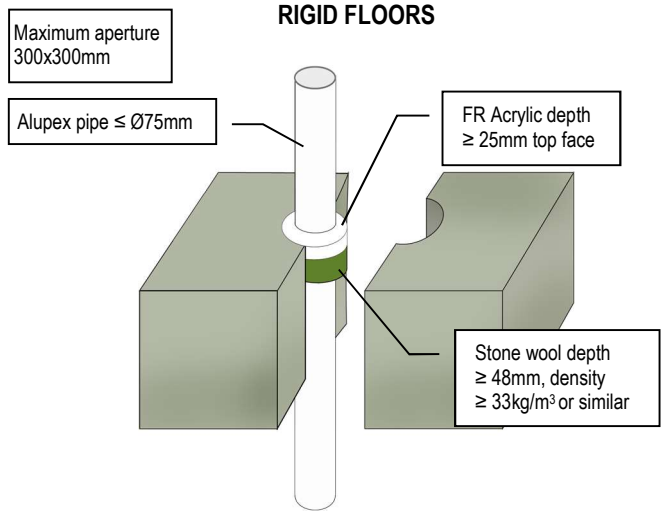
ALUPEX PIPE FIRE RESISTANCE EI 120 C/C (E 120)

RIGID FLOORS



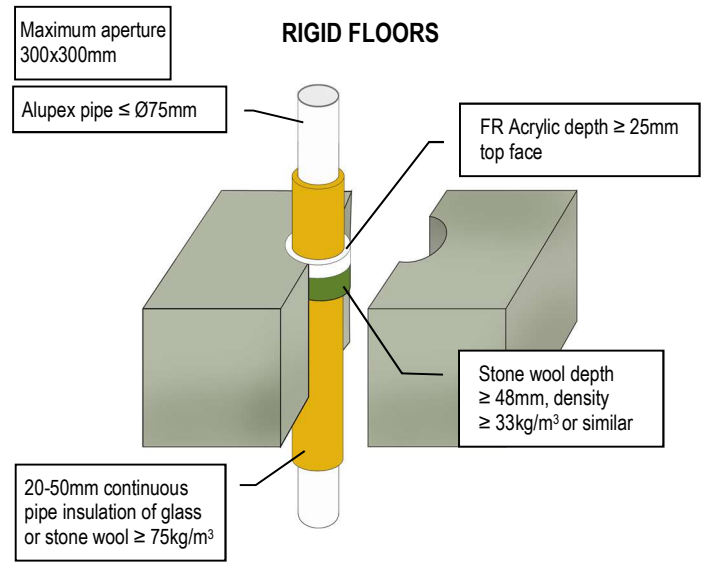
ALUPEX PIPE FIRE RESISTANCE EI 90 C/C (E 120)

RIGID FLOORS



INSULATED ALUPEX PIPE FIRE RESISTANCE EI 120 C/C (E 180)

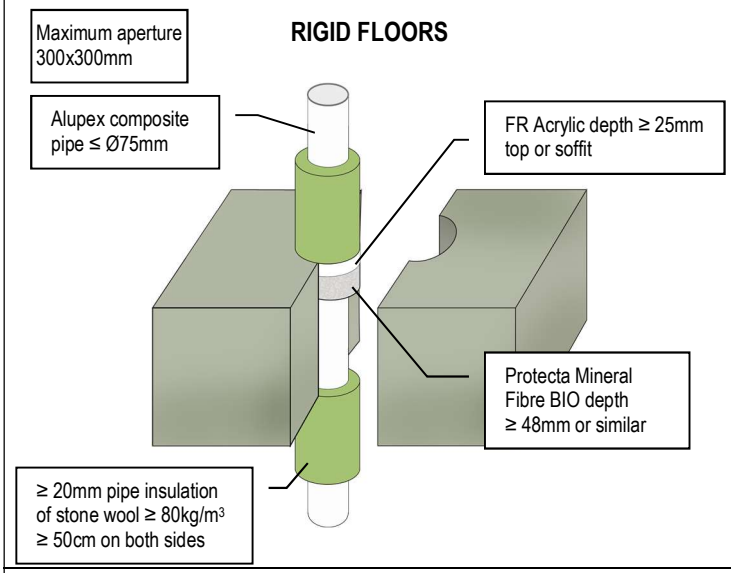
RIGID FLOORS



Detail Drawings

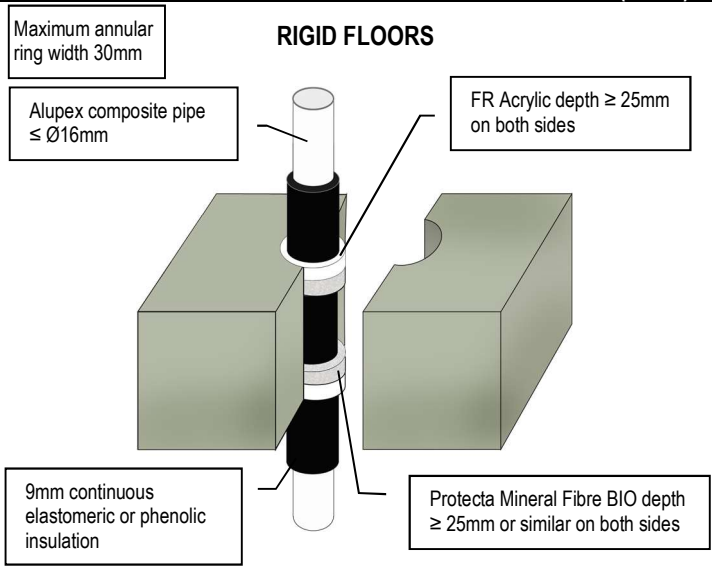
ALUPEX PIPE FIRE RESISTANCE EI 240 C/C (E 240)

RIGID FLOORS



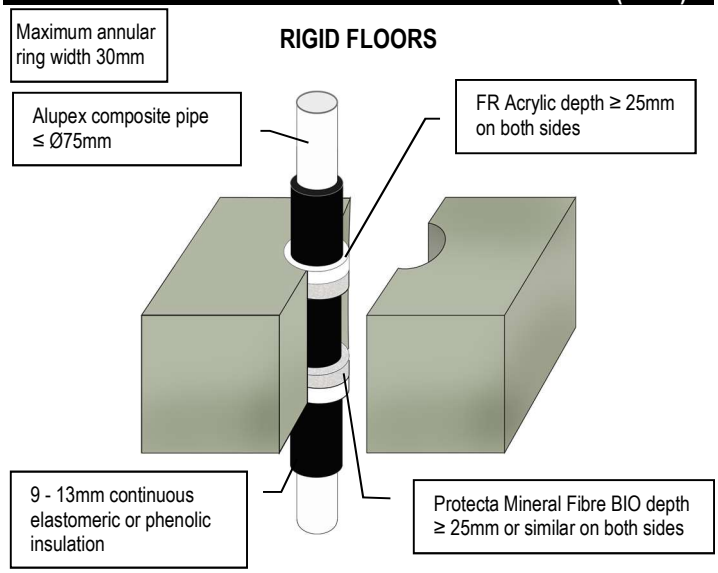
INSULATED ALUPEX PIPE FIRE RESISTANCE EI 180 C/C (E 180)

RIGID FLOORS



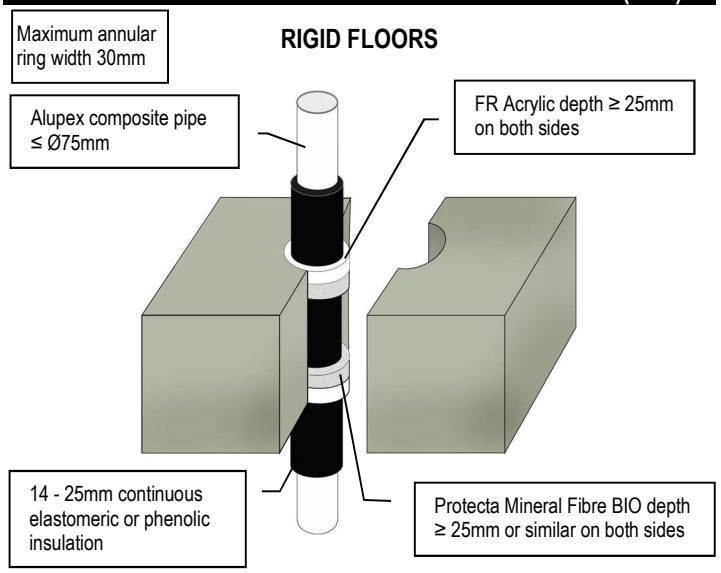
INSULATED ALUPEX PIPE FIRE RESISTANCE EI 60 C/C (E 120)

RIGID FLOORS



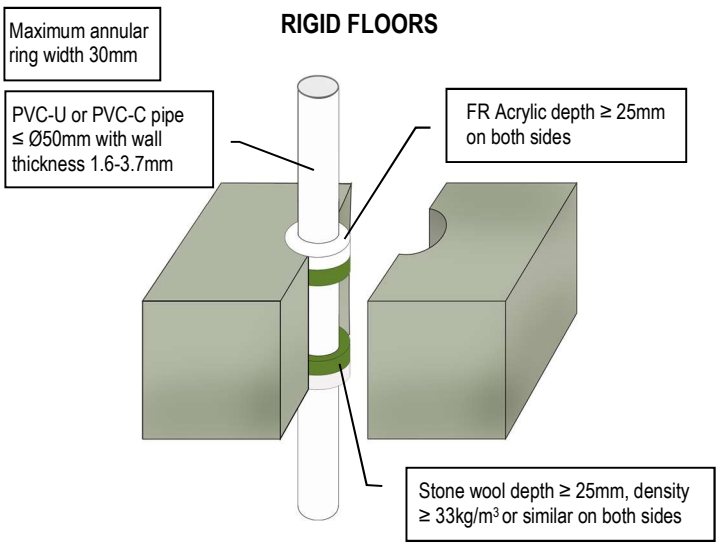
INSULATED ALUPEX PIPE FIRE RESISTANCE EI 60 C/C (E 60)

RIGID FLOORS



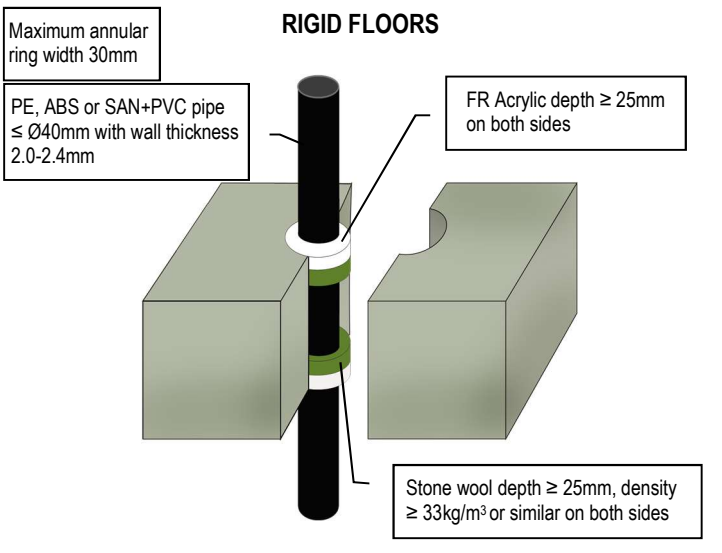
PVC PLASTIC PIPE FIRE RESISTANCE EI 240 U/C (E 240)

RIGID FLOORS



PE PLASTIC PIPE FIRE RESISTANCE EI 240 U/C (E 240)

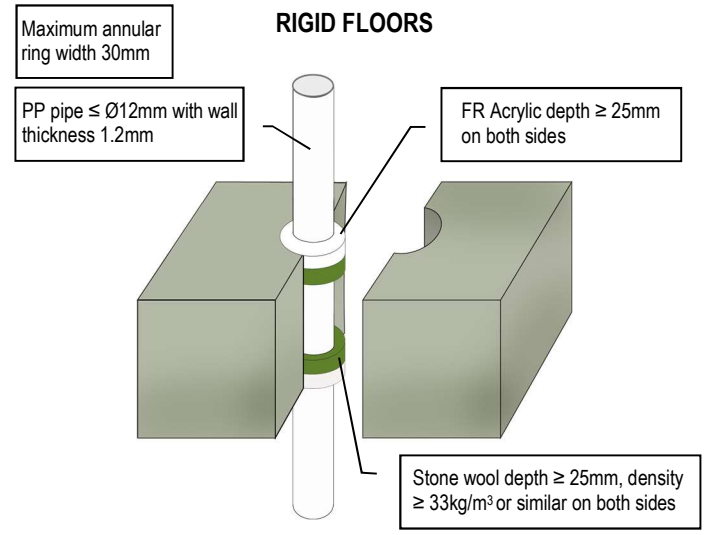
RIGID FLOORS



Detail Drawings

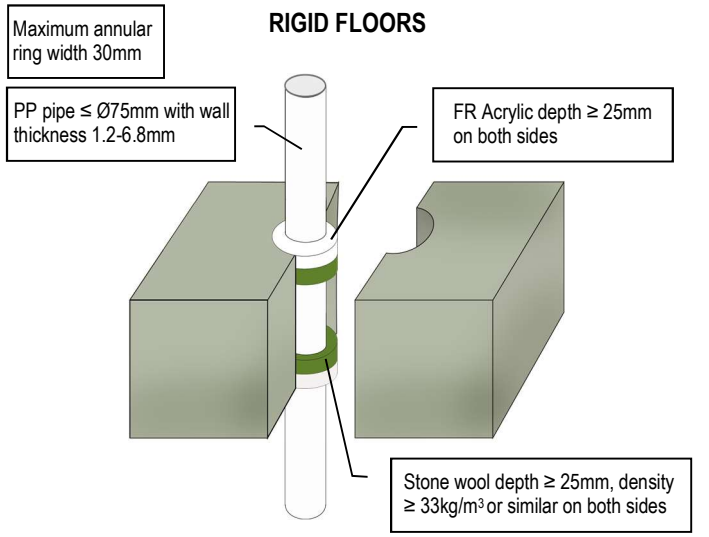
PP PLASTIC PIPE FIRE RESISTANCE EI 240 U/C (E 240)

RIGID FLOORS



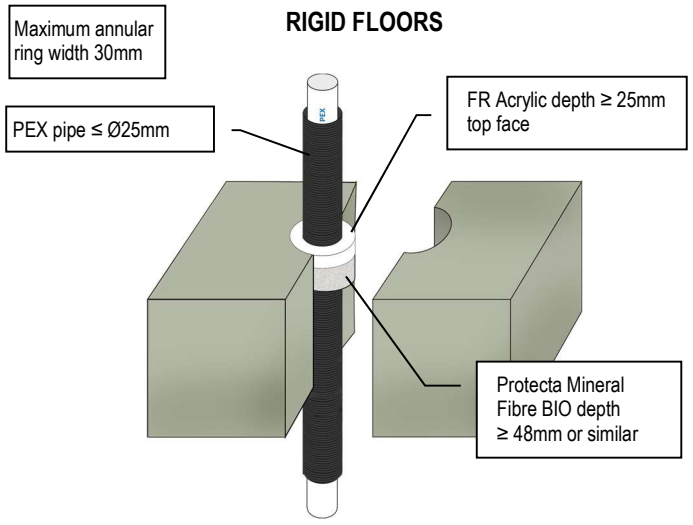
PP PLASTIC PIPE FIRE RESISTANCE EI 90 U/C (E 90)

RIGID FLOORS



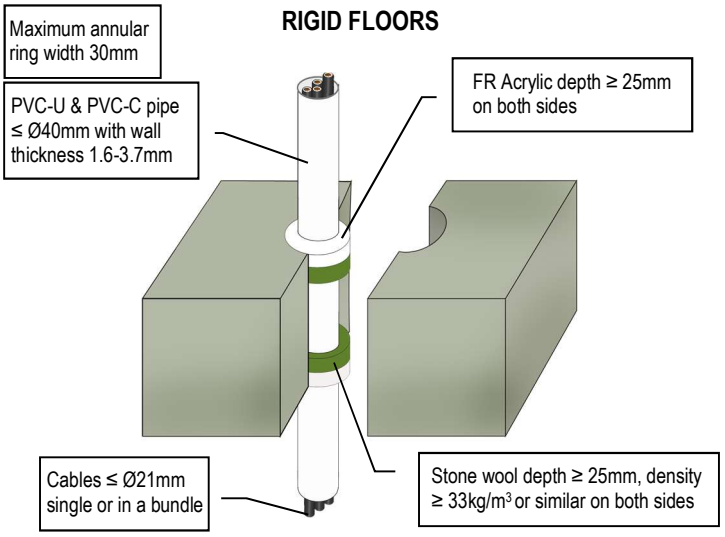
PEX PIPE-IN-PIPE SYSTEM FIRE RESISTANCE EI 90 C/C (E 90)

RIGID FLOORS



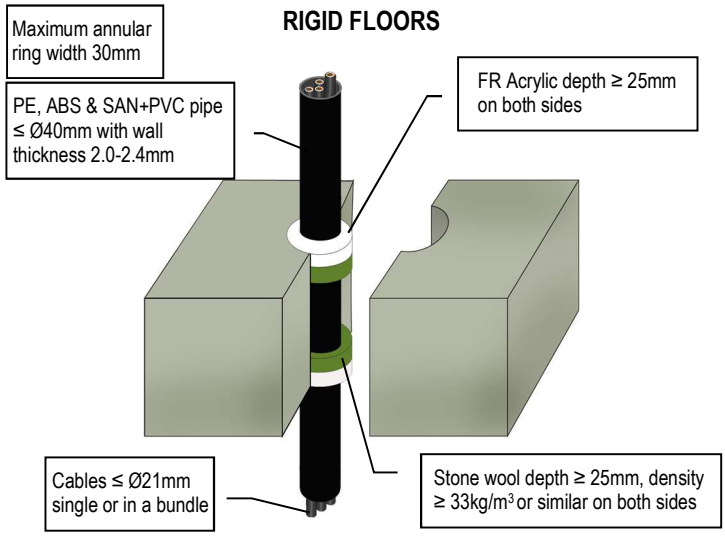
PVC CONDUIT FIRE RESISTANCE EI 240 U/C (E 240)

RIGID FLOORS



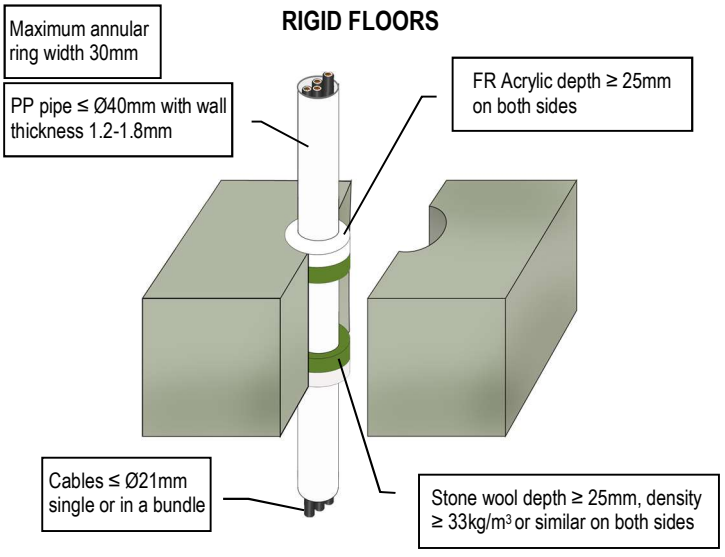
PE CONDUIT FIRE RESISTANCE EI 180 U/C (E 180)

RIGID FLOORS



PP CONDUIT FIRE RESISTANCE EI 180 U/C (E 180)

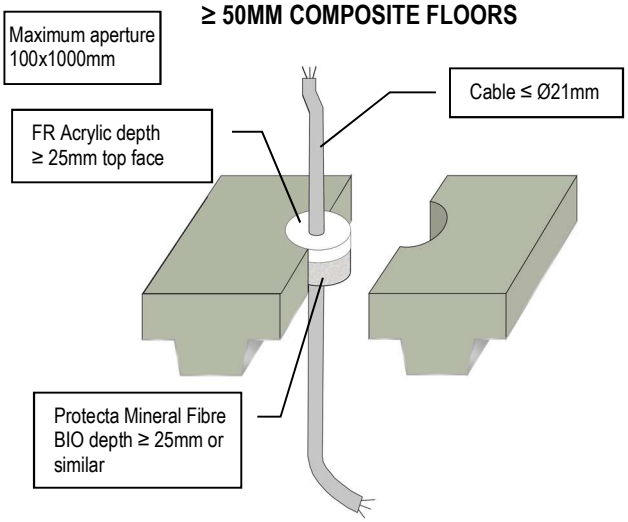
RIGID FLOORS



Detail Drawings

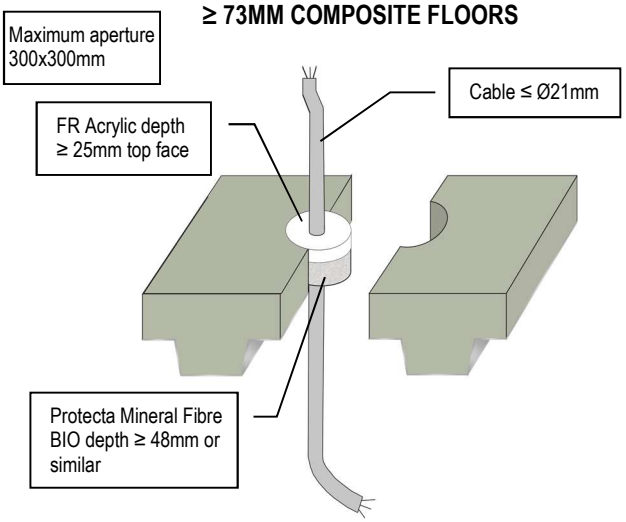
CABLE FIRE RESISTANCE EI 60 (E 120)

≥ 50MM COMPOSITE FLOORS



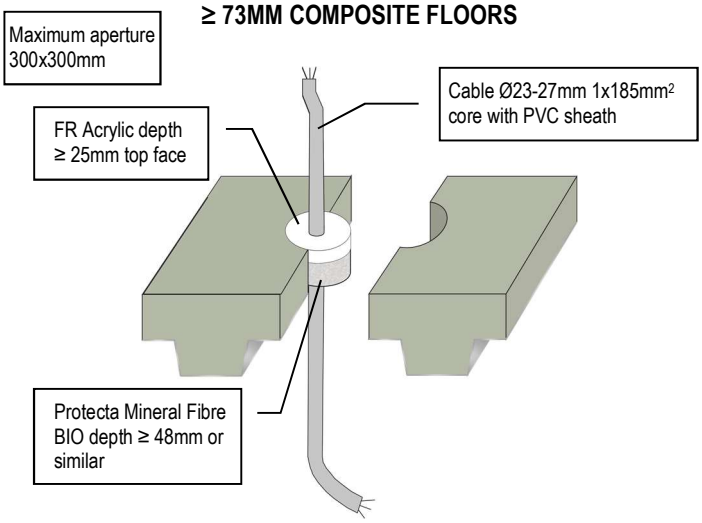
CABLE FIRE RESISTANCE EI 90 (E 120)

≥ 73MM COMPOSITE FLOORS



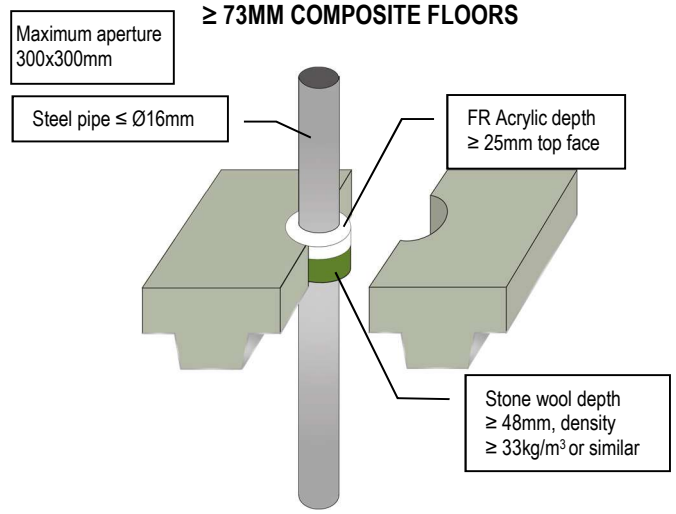
CABLE FIRE RESISTANCE EI 240 (E 240)

≥ 73MM COMPOSITE FLOORS



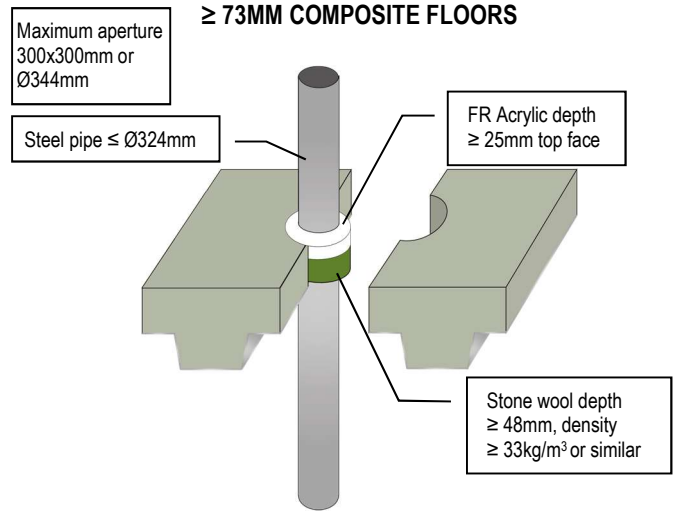
STEEL PIPE FIRE RESISTANCE EI 120 C/U (E 120)

≥ 73MM COMPOSITE FLOORS



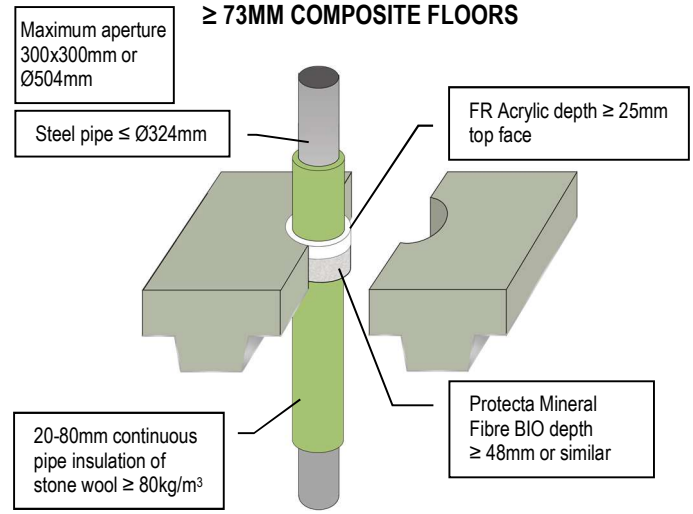
STEEL PIPE FIRE RESISTANCE E 120 C/U

≥ 73MM COMPOSITE FLOORS



INSULATED STEEL PIPE FIRE RESISTANCE EI 240 C/U (E 240)

≥ 73MM COMPOSITE FLOORS

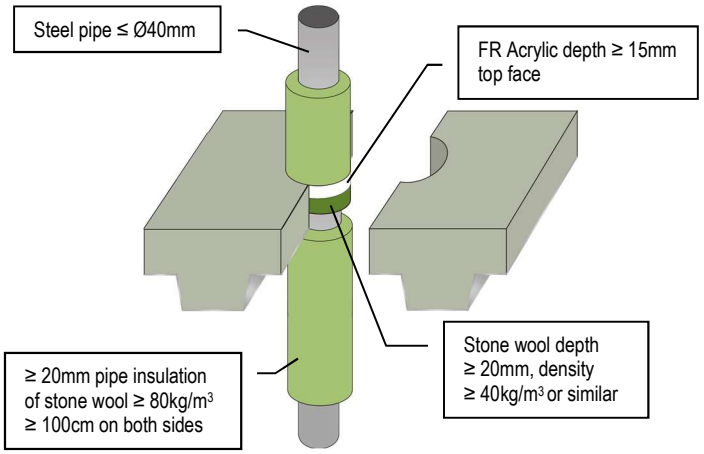


Detail Drawings

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

Maximum aperture 300x300mm

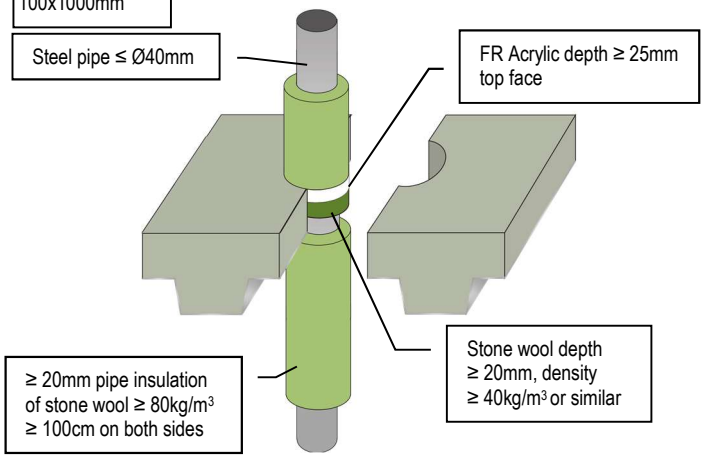
≥ 35MM COMPOSITE FLOORS



STEEL PIPE FIRE RESISTANCE EI 90 C/U (E 120)

Maximum aperture 300x300mm or 100x1000mm

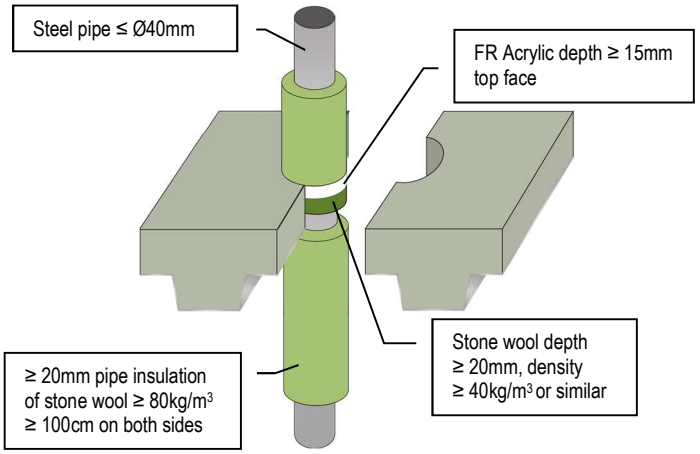
≥ 45MM COMPOSITE FLOORS



STEEL PIPE FIRE RESISTANCE EI 240 C/U (E 240)

Annular ring width approx. 10mm

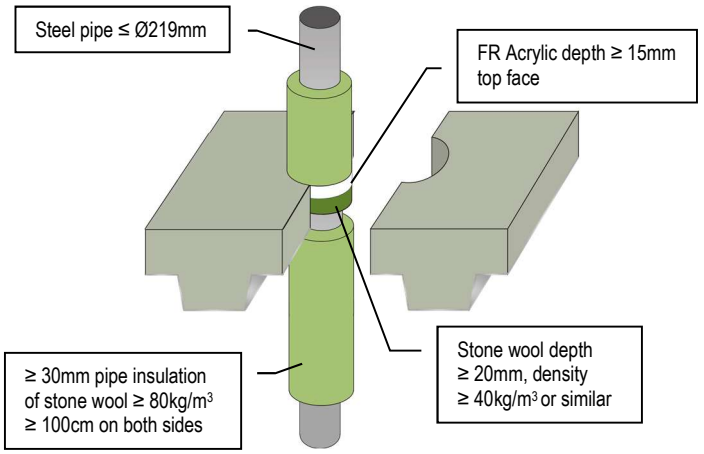
≥ 35MM COMPOSITE FLOORS



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

Maximum aperture 300x300mm

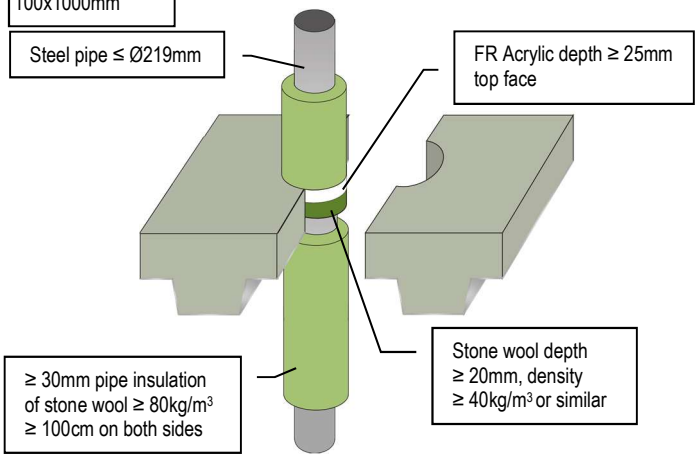
≥ 35MM COMPOSITE FLOORS



STEEL PIPE FIRE RESISTANCE EI 90 C/U (E 120)

Maximum aperture 300x300mm or 100x1000mm

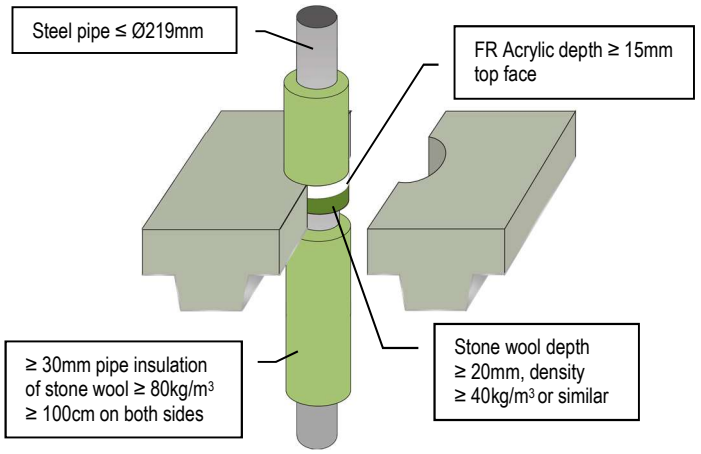
≥ 45MM COMPOSITE FLOORS



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

Annular ring width approx. 10mm

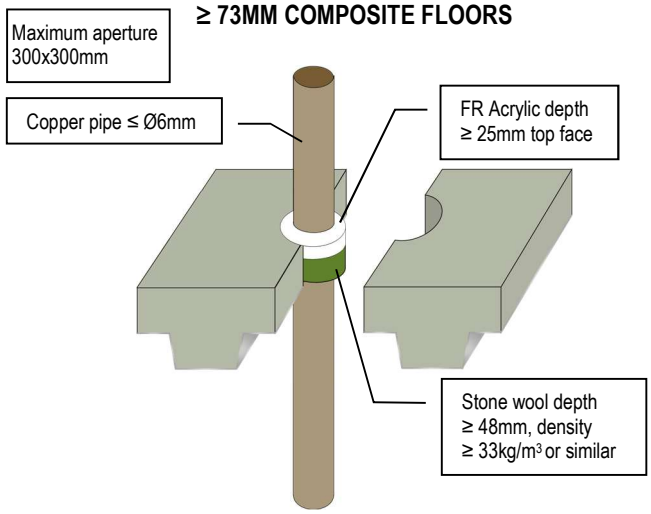
≥ 35MM COMPOSITE FLOORS



Detail Drawings

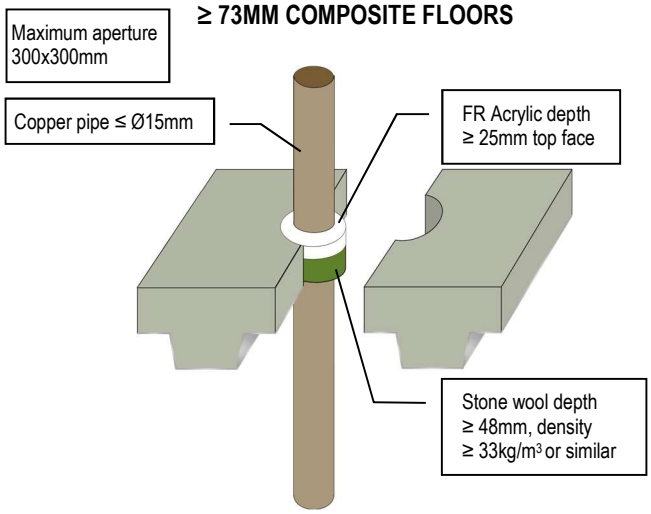
COPPER PIPE FIRE RESISTANCE EI 120 C/C (E 120)

≥ 73MM COMPOSITE FLOORS



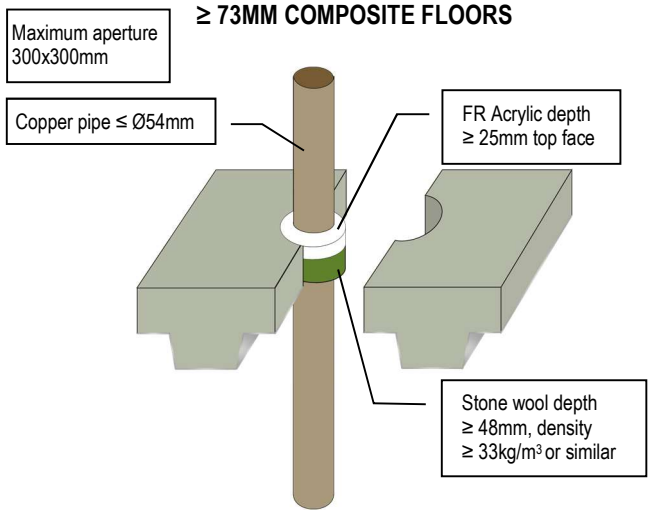
COPPER PIPE FIRE RESISTANCE EI 60 C/C (E 120)

≥ 73MM COMPOSITE FLOORS



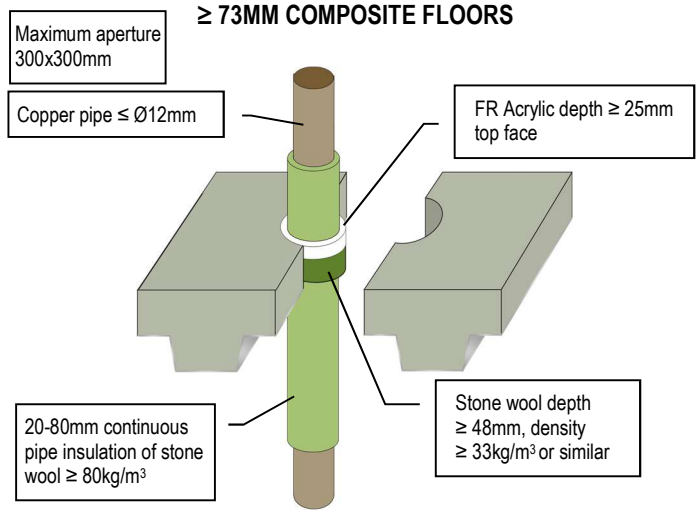
COPPER PIPE FIRE RESISTANCE E 120 C/C

≥ 73MM COMPOSITE FLOORS



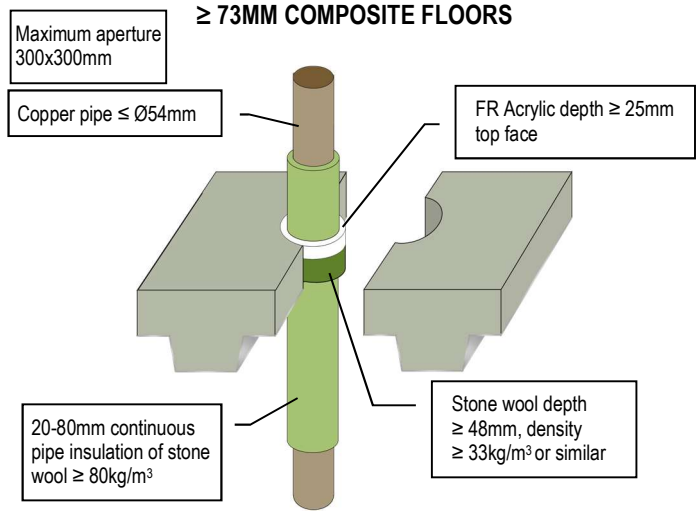
INSULATED COPPER PIPE FIRE RESISTANCE EI 240 C/C (E 240)

≥ 73MM COMPOSITE FLOORS



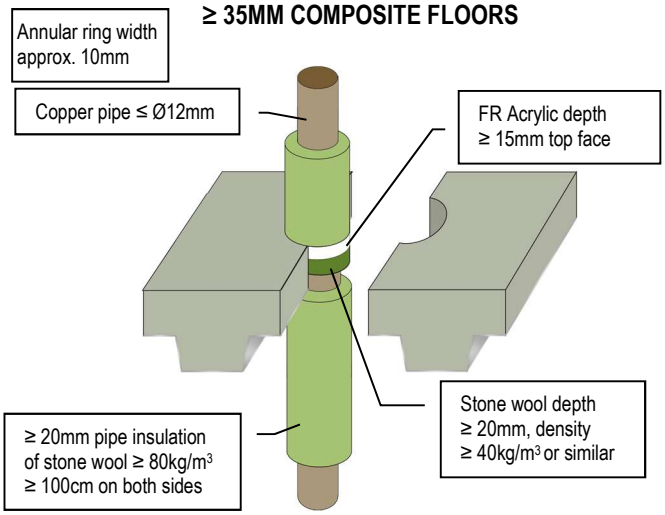
INSULATED COPPER PIPE FIRE RESISTANCE EI 180 C/C (E 240)

≥ 73MM COMPOSITE FLOORS



COPPER PIPE FIRE RESISTANCE EI 240 C/U (E 240)

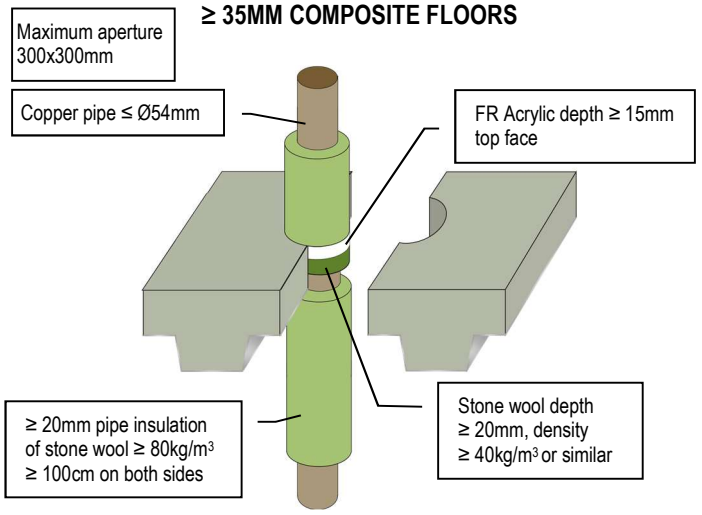
≥ 35MM COMPOSITE FLOORS



Detail Drawings

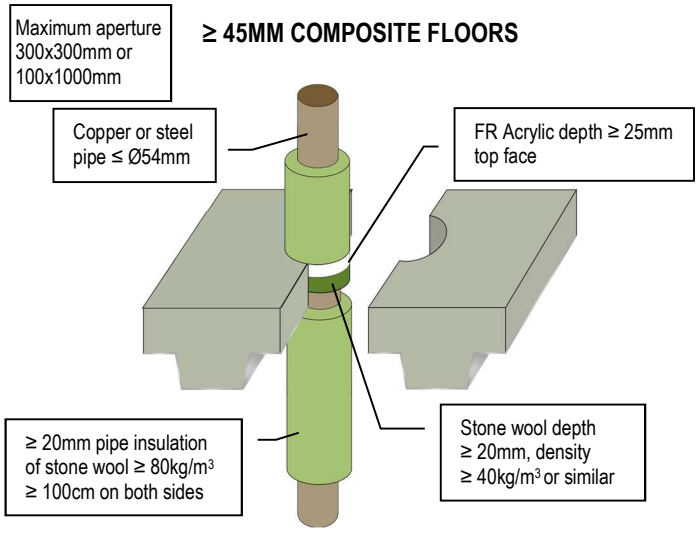
COPPER PIPE FIRE RESISTANCE EI 60 C/U (E 90)

≥ 35MM COMPOSITE FLOORS



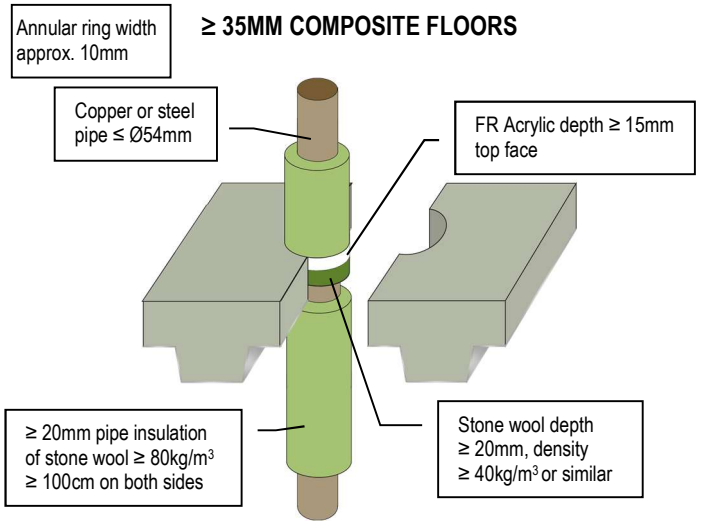
COPPER OR STEEL PIPE FIRE RESISTANCE EI 120 C/U (E 120)

≥ 45MM COMPOSITE FLOORS



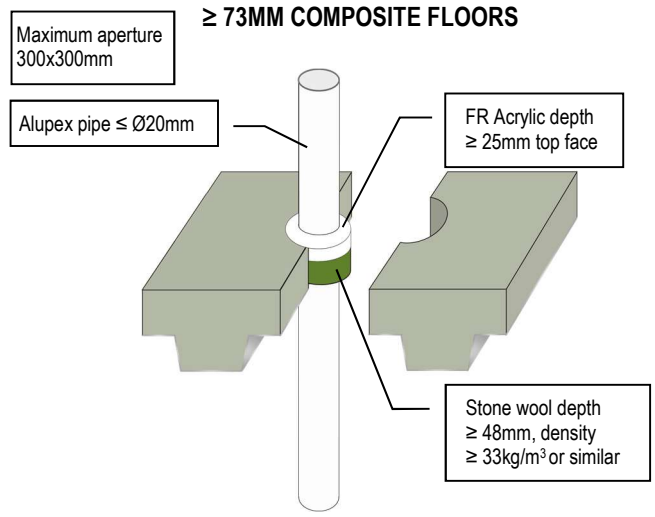
COPPER OR STEEL PIPE FIRE RESISTANCE EI 180 C/U (E 240)

≥ 35MM COMPOSITE FLOORS



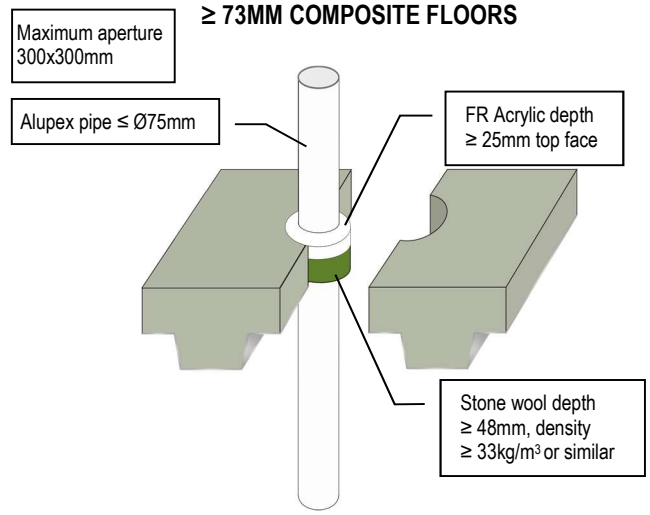
ALUPEX PIPE FIRE RESISTANCE EI 120 C/C (E 120 C/C)

≥ 73MM COMPOSITE FLOORS



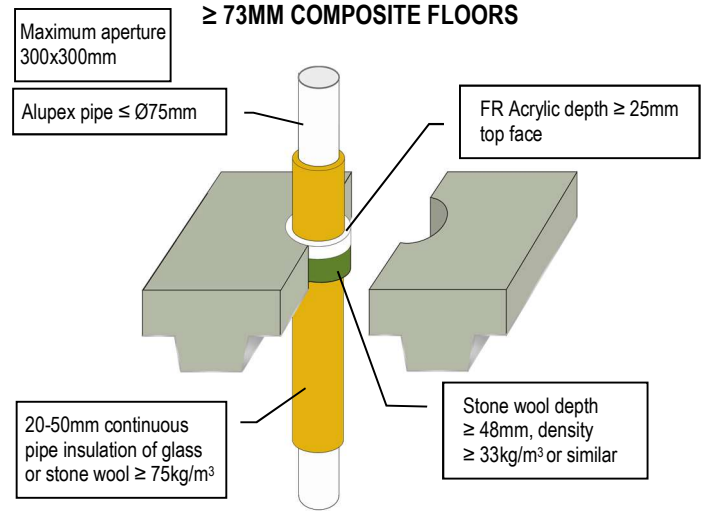
ALUPEX PIPE FIRE RESISTANCE EI 90 C/C (E 120 C/C)

≥ 73MM COMPOSITE FLOORS



INSULATED ALUPEX PIPE FIRE RESISTANCE EI 120 C/C (E 180)

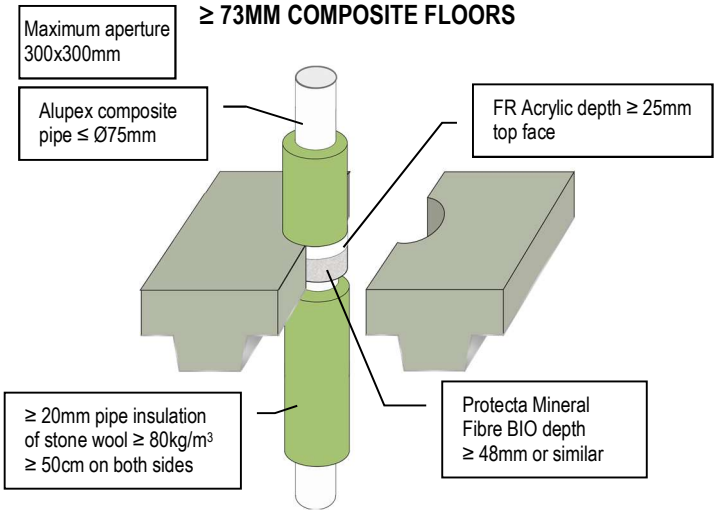
≥ 73MM COMPOSITE FLOORS



Detail Drawings

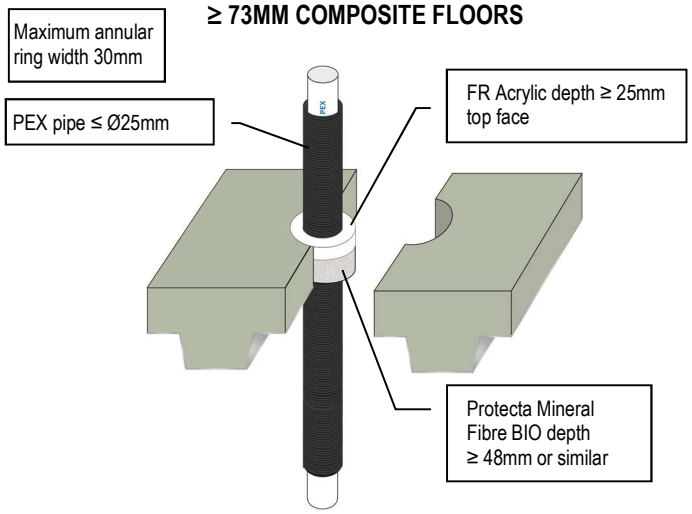
ALUPEX PIPE FIRE RESISTANCE EI 240 C/C (E 240 C/C)

≥ 73MM COMPOSITE FLOORS



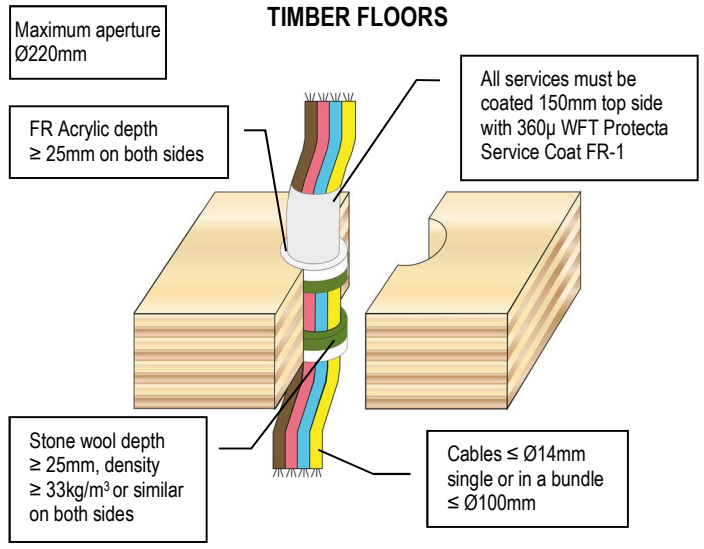
PEX PIPE-IN-PIPE SYSTEM FIRE RESISTANCE EI 90 C/C (E 90)

≥ 73MM COMPOSITE FLOORS



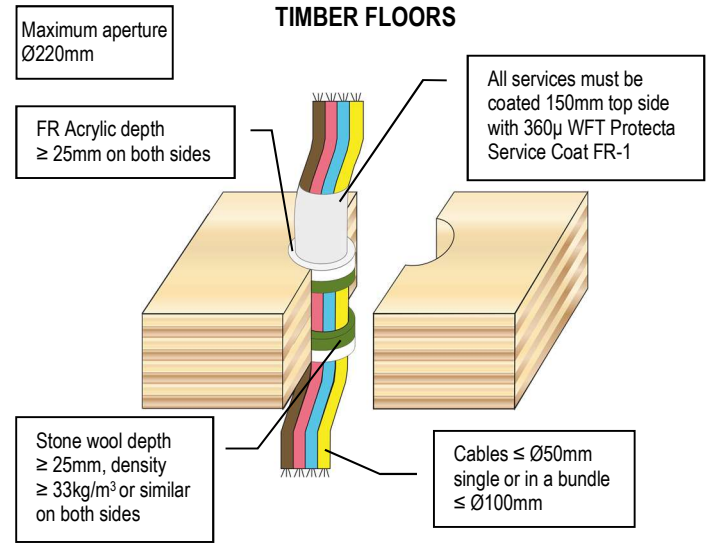
CABLES FIRE RESISTANCE EI 120 (E 120)

TIMBER FLOORS



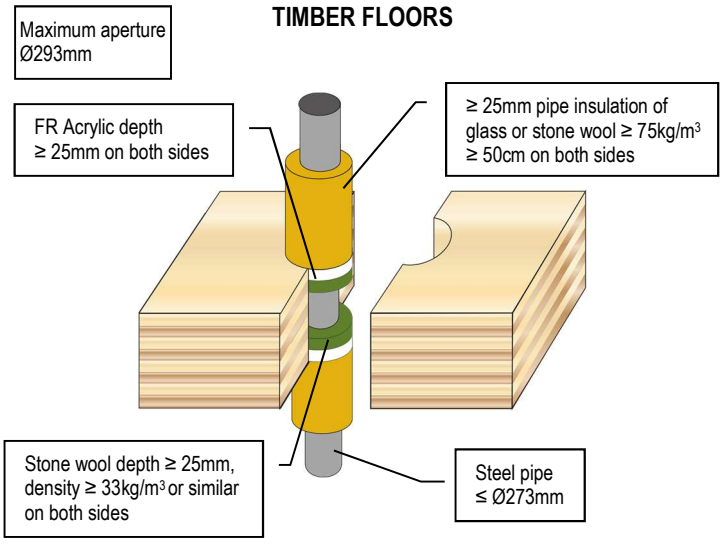
CABLES FIRE RESISTANCE EI 90 (E 120)

TIMBER FLOORS



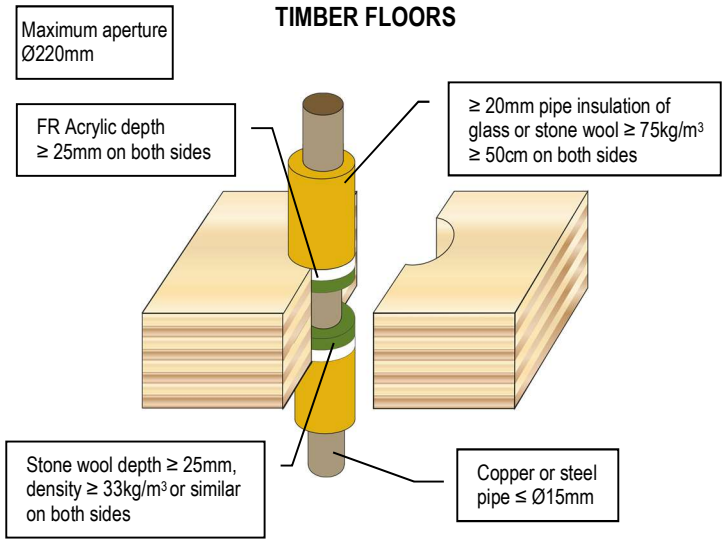
STEEL PIPE FIRE RESISTANCE EI 60 C/C (E 120)

TIMBER FLOORS



COPPER OR STEEL PIPE FIRE RESISTANCE EI 120 C/C (E 120)

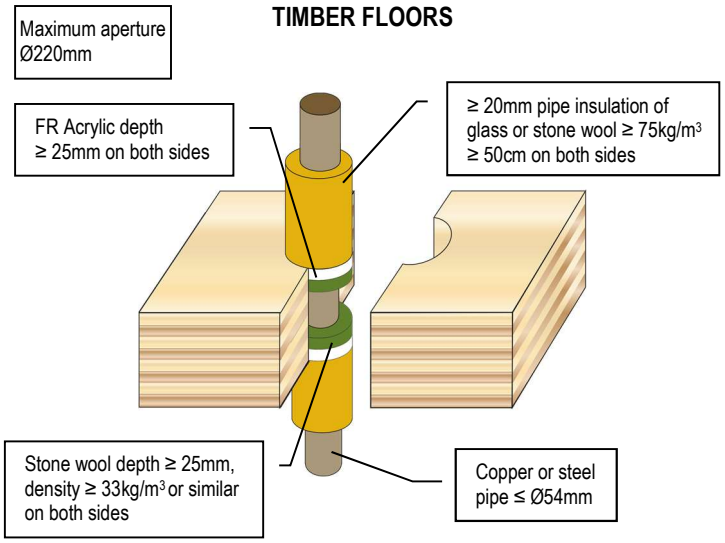
TIMBER FLOORS



Detail Drawings

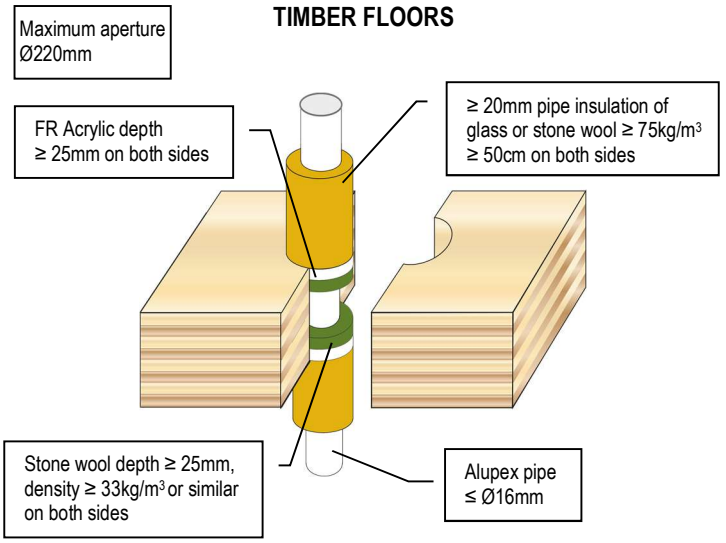
COPPER OR STEEL PIPE FIRE RESISTANCE EI 90 C/C (E 120)

TIMBER FLOORS



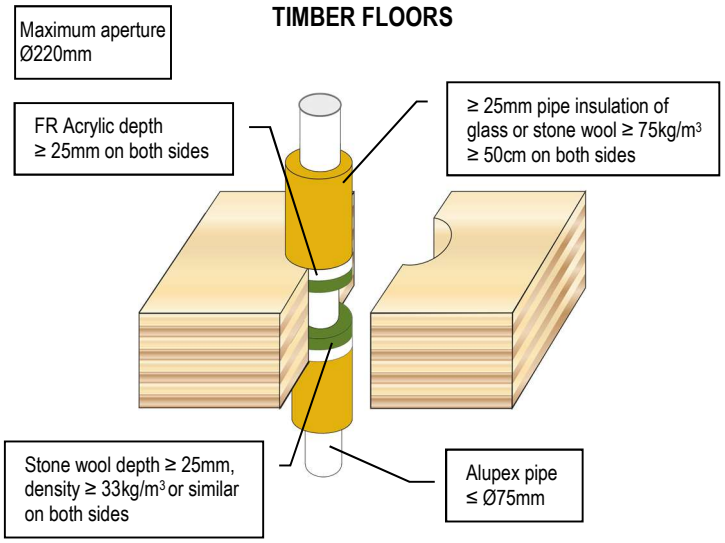
ALUPEX PIPE FIRE RESISTANCE EI 120 C/C (E 120)

TIMBER FLOORS



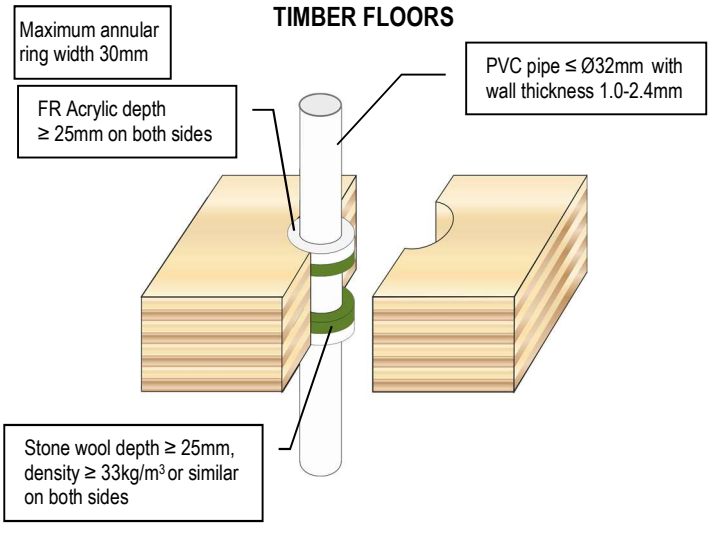
ALUPEX PIPE FIRE RESISTANCE EI 90 C/C (E 120)

TIMBER FLOORS



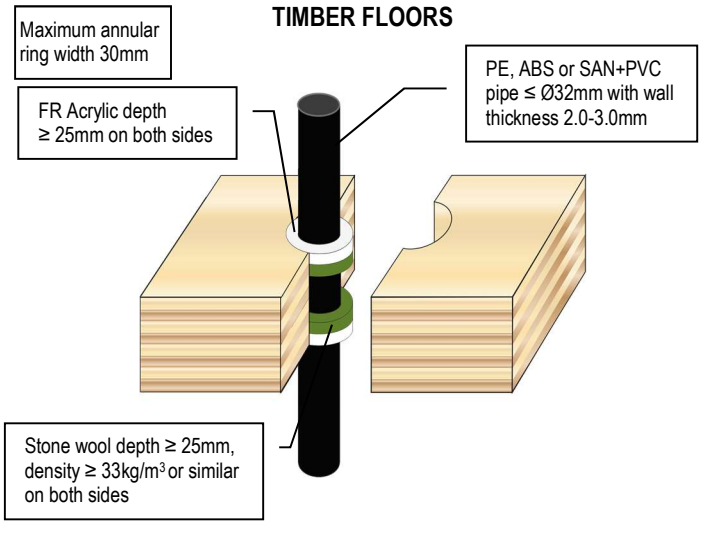
PVC PIPE FIRE RESISTANCE EI 120 U/C (E 120)

TIMBER FLOORS



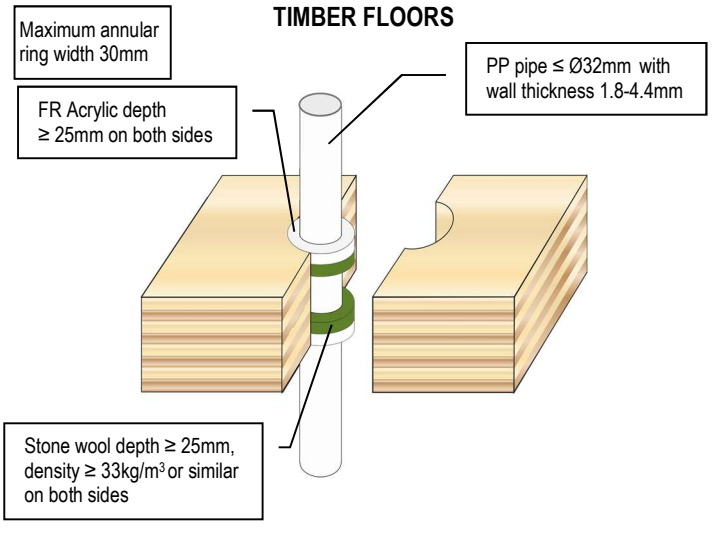
PE PIPE FIRE RESISTANCE EI 120 U/C (E 120)

TIMBER FLOORS



PP PIPE FIRE RESISTANCE EI 120 U/C (E 120)

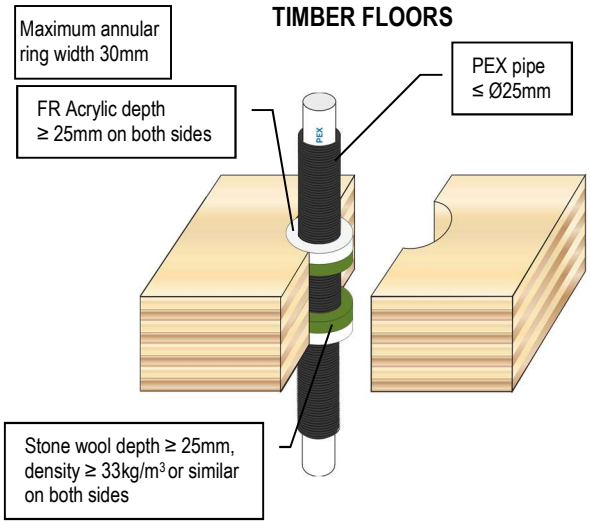
TIMBER FLOORS



Detail Drawings

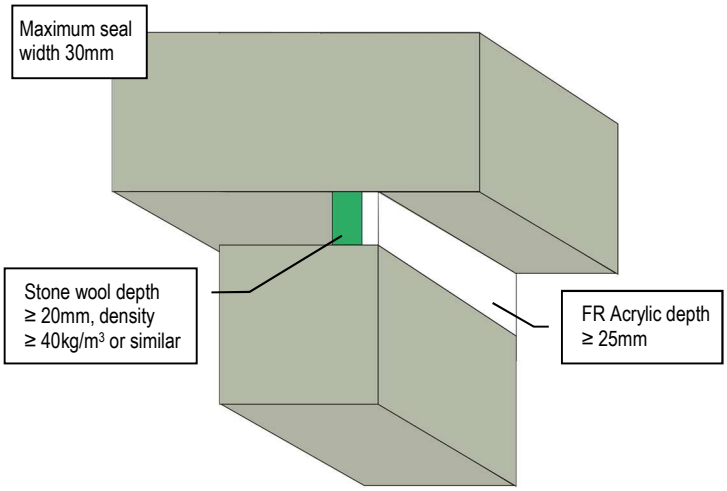
PEX PIPE-IN-PIPE SYSTEM FIRE RESISTANCE EI 120 C/C (E 120)

TIMBER FLOORS



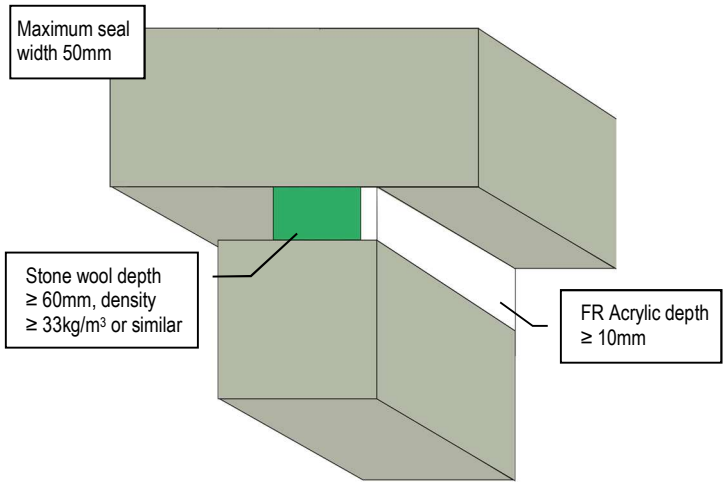
HORIZONTAL LINEAR SEALS FIRE RESISTANCE EI 60 (E 240)

IN ≥ 150MM RIGID WALLS OR BETWEEN WALLS AND FLOORS



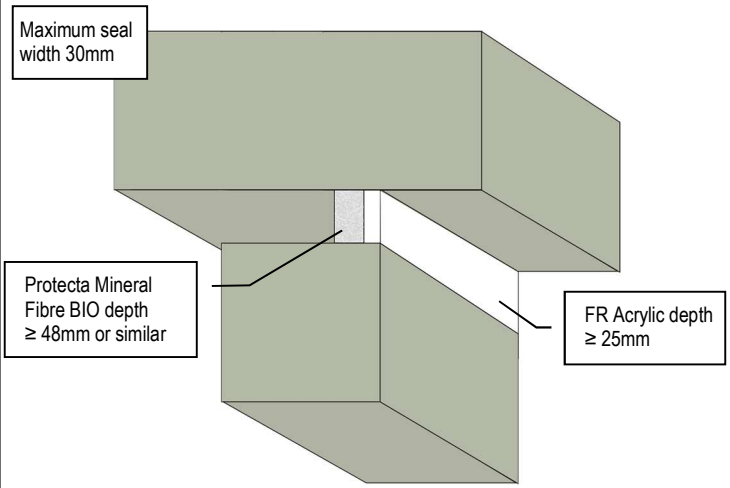
HORIZONTAL LINEAR SEALS FIRE RESISTANCE EI 60 (E 240)

IN ≥ 150MM RIGID WALLS OR BETWEEN WALLS AND FLOORS



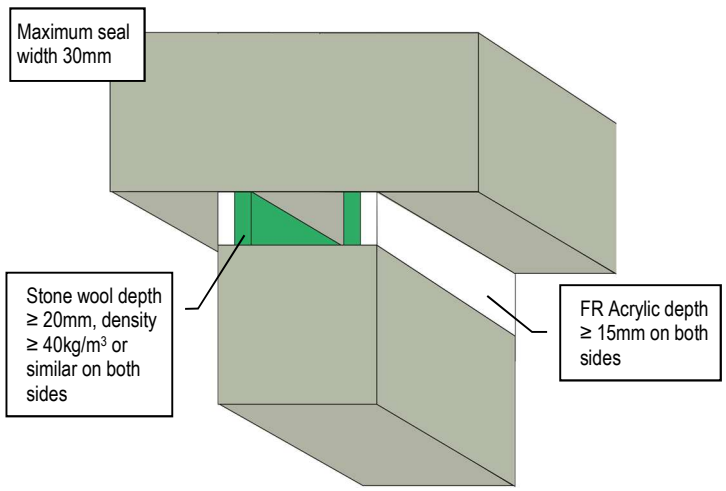
HORIZONTAL LINEAR SEALS FIRE RESISTANCE EI 120 (E 240)

IN ≥ 150MM RIGID WALLS OR BETWEEN WALLS AND FLOORS



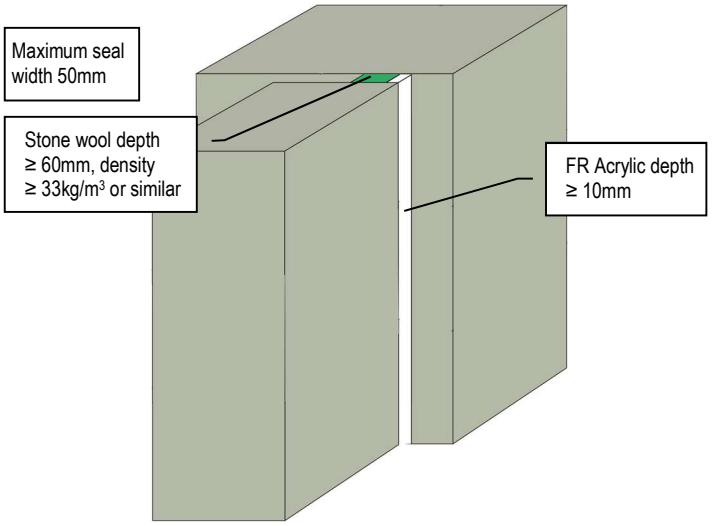
HORIZONTAL & VERTICAL SEALS FIRE RESISTANCE EI 240

IN ≥ 150MM RIGID WALLS TOWARDS WALLS AND FLOORS



VERTICAL LINEAR SEALS FIRE RESISTANCE EI 120 (E 120)

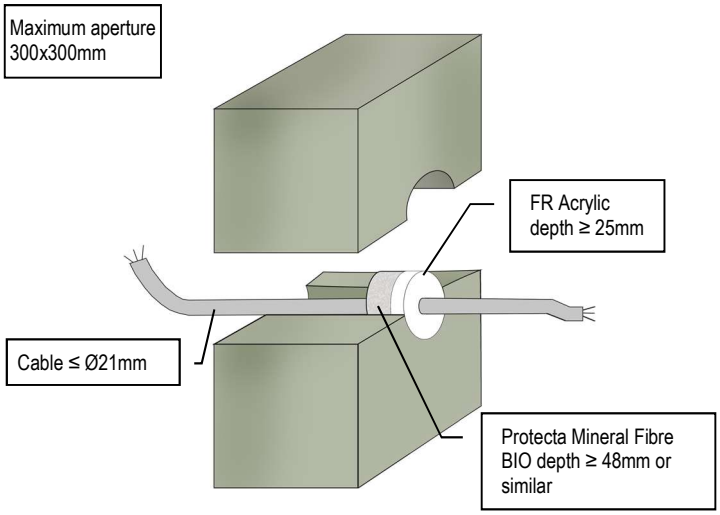
IN ≥ 150MM RIGID WALLS OR BETWEEN WALLS



Detail Drawings

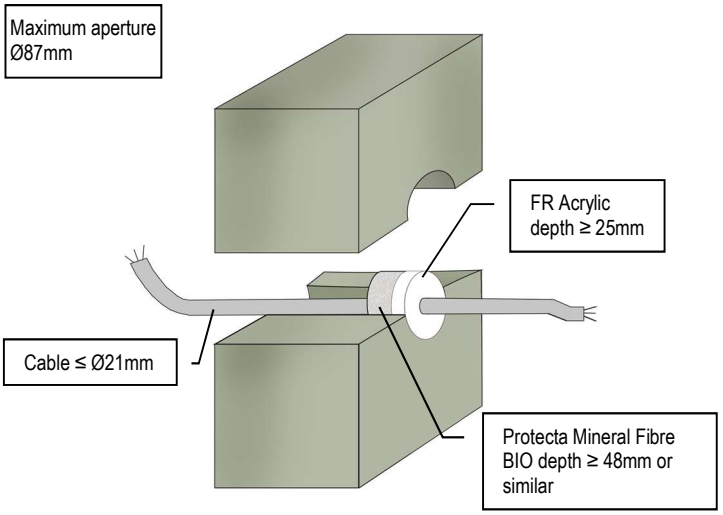
CABLE FIRE RESISTANCE EI 60 (E 240)

≥ 150MM MASONRY OR CONCRETE WALLS



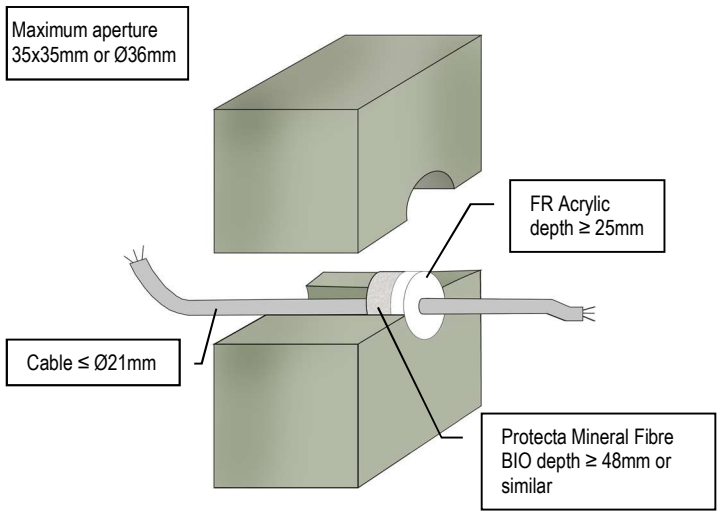
CABLE FIRE RESISTANCE EI 90 (E 240)

≥ 150MM MASONRY OR CONCRETE WALLS



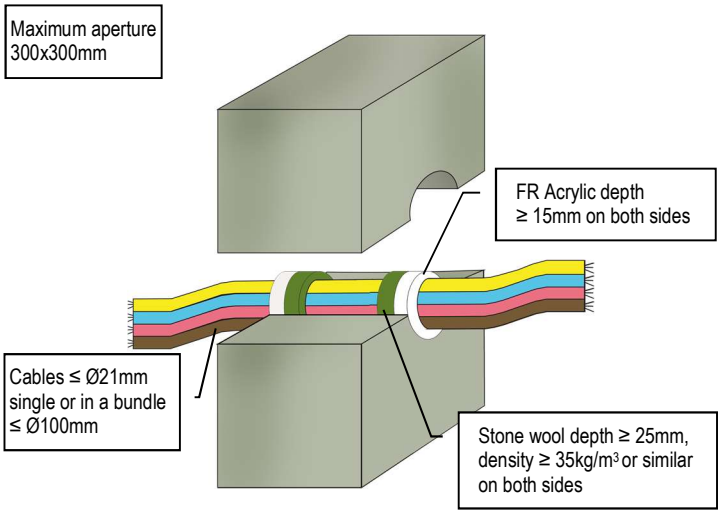
CABLE FIRE RESISTANCE EI 120 (E 240)

≥ 150MM MASONRY OR CONCRETE WALLS



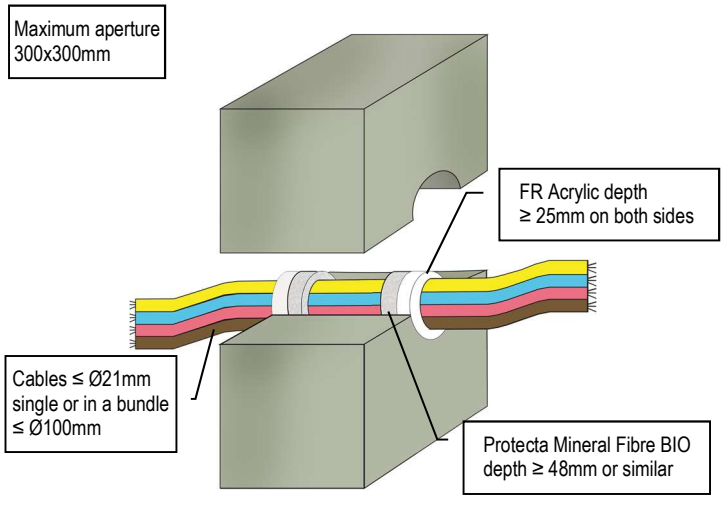
CABLES FIRE RESISTANCE EI 120 (E 240)

≥ 150MM MASONRY OR CONCRETE WALLS



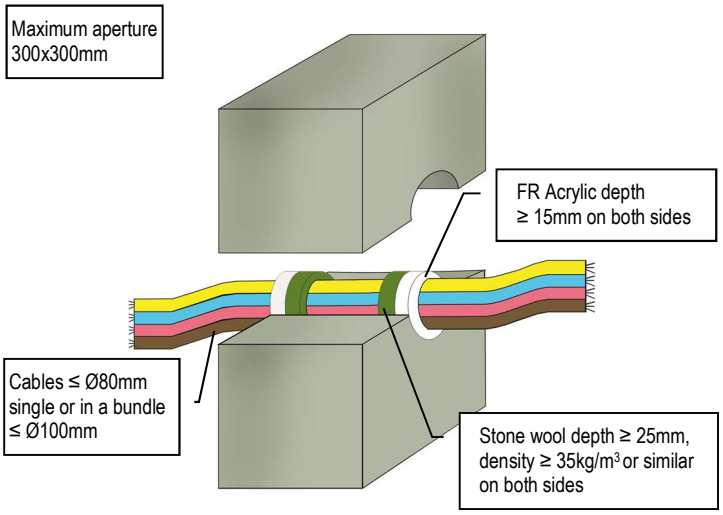
CABLES FIRE RESISTANCE EI 240 (E 240)

≥ 150MM MASONRY OR CONCRETE WALLS



CABLES FIRE RESISTANCE EI 60 (E 120)

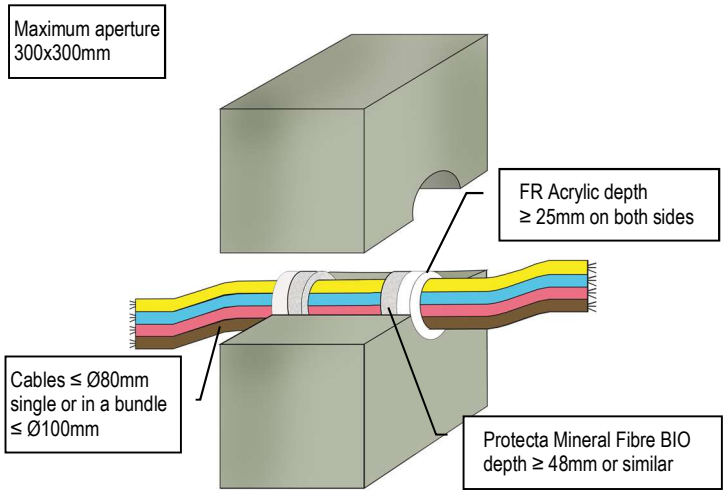
≥ 150MM MASONRY OR CONCRETE WALLS



Detail Drawings

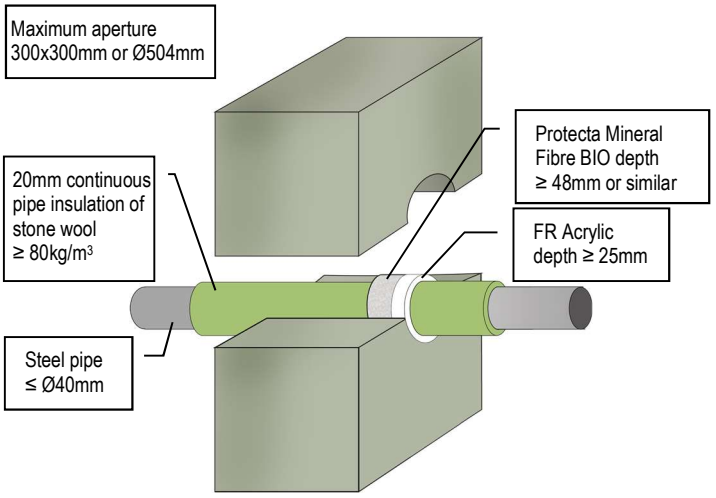
CABLES FIRE RESISTANCE EI 60 (E 240)

≥ 150MM MASONRY OR CONCRETE WALLS



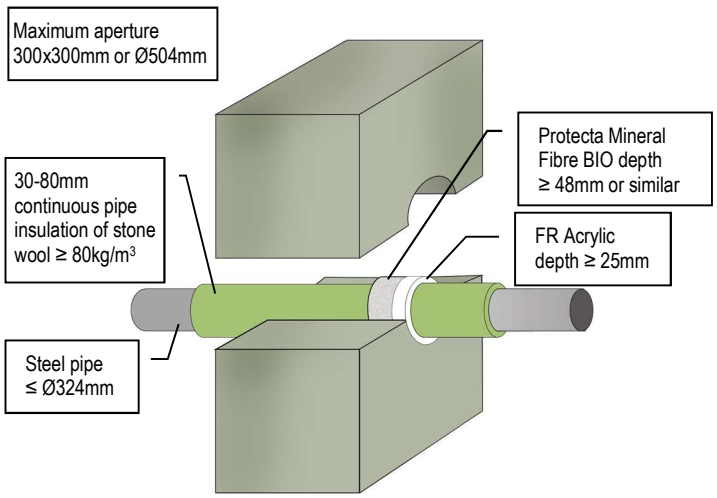
INSULATED STEEL PIPE FIRE RESISTANCE EI 240 C/U (E 240)

≥ 150MM MASONRY OR CONCRETE WALLS



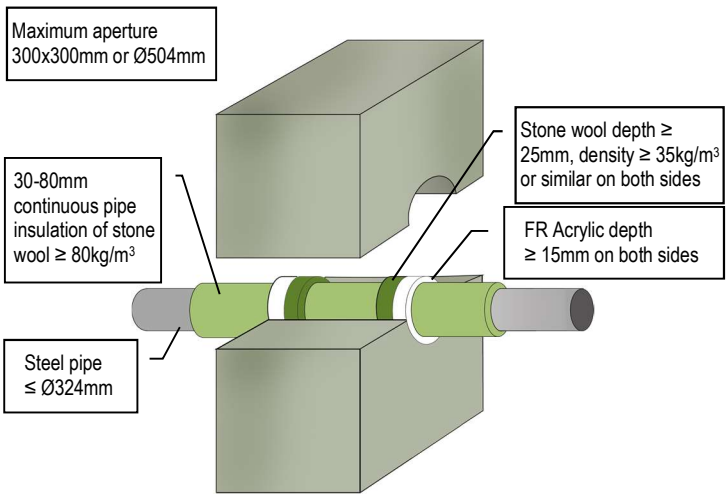
INSULATED STEEL PIPE FIRE RESISTANCE EI 180 C/U (E 180)

≥ 150MM MASONRY OR CONCRETE WALLS



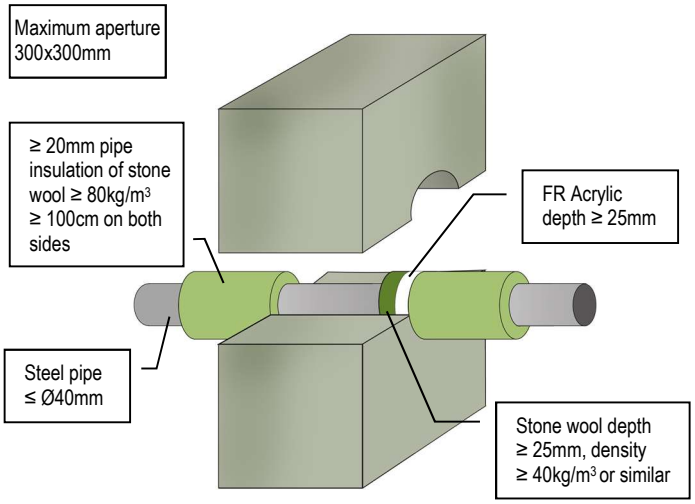
INSULATED STEEL PIPE FIRE RESISTANCE EI 240 C/U (E 240)

≥ 150MM MASONRY OR CONCRETE WALLS



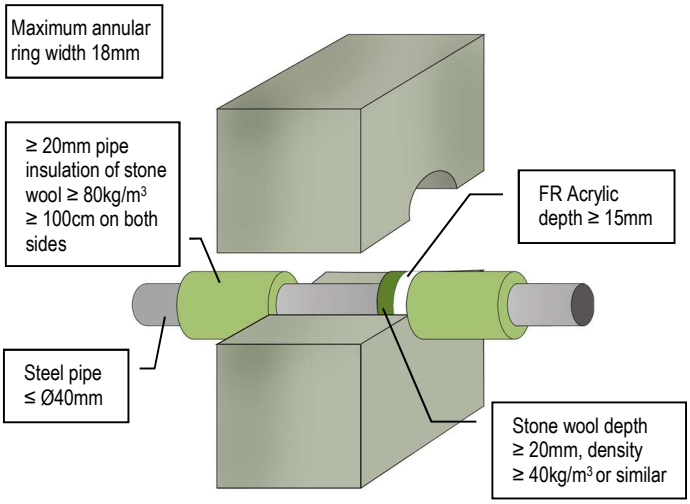
STEEL PIPE FIRE RESISTANCE EI 60 C/U (E 240)

≥ 150MM MASONRY OR CONCRETE WALLS



STEEL PIPE FIRE RESISTANCE EI 240 C/U (E 240)

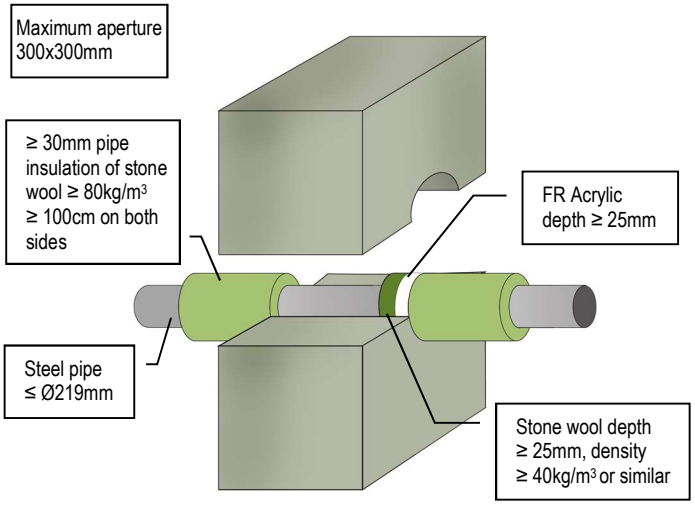
≥ 150MM MASONRY OR CONCRETE WALLS



Detail Drawings

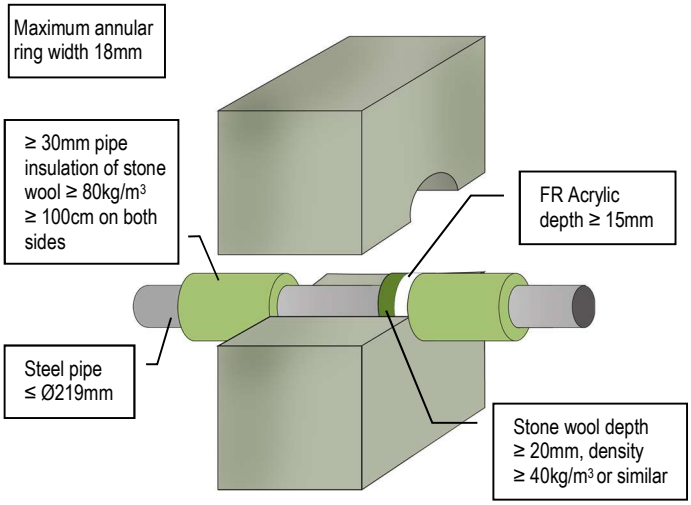
STEEL PIPE FIRE RESISTANCE EI 60 C/U (E 240)

≥ 150MM MASONRY OR CONCRETE WALLS



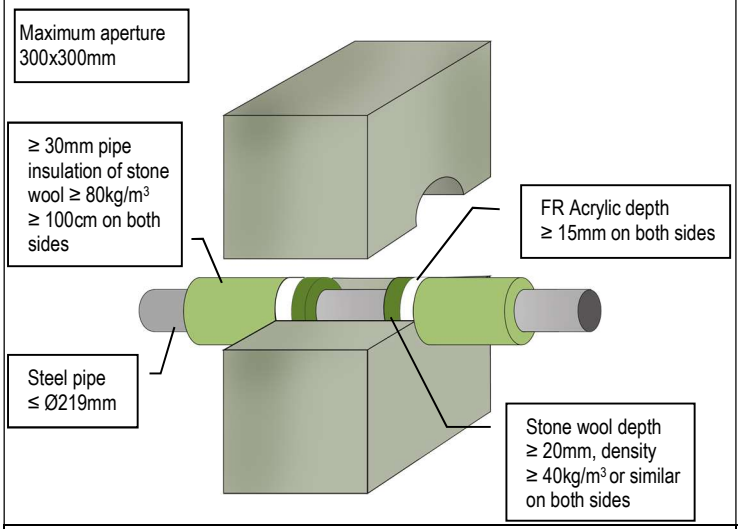
STEEL PIPE FIRE RESISTANCE EI 90 C/U (E 180)

≥ 150MM MASONRY OR CONCRETE WALLS



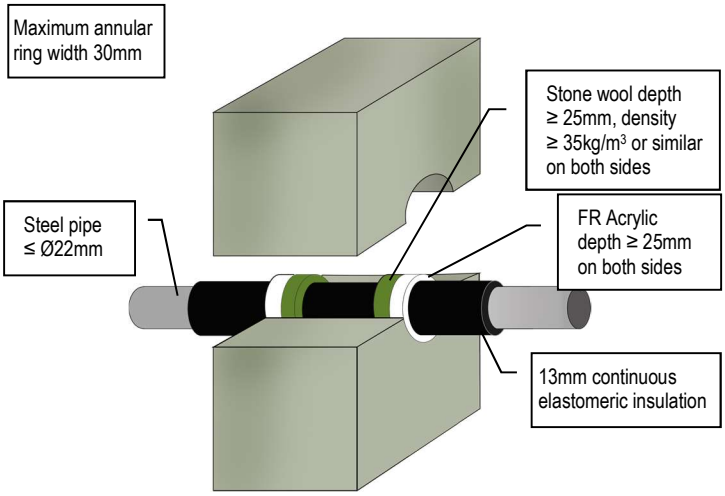
STEEL PIPE FIRE RESISTANCE EI 120 C/U (E 240)

≥ 150MM MASONRY OR CONCRETE WALLS



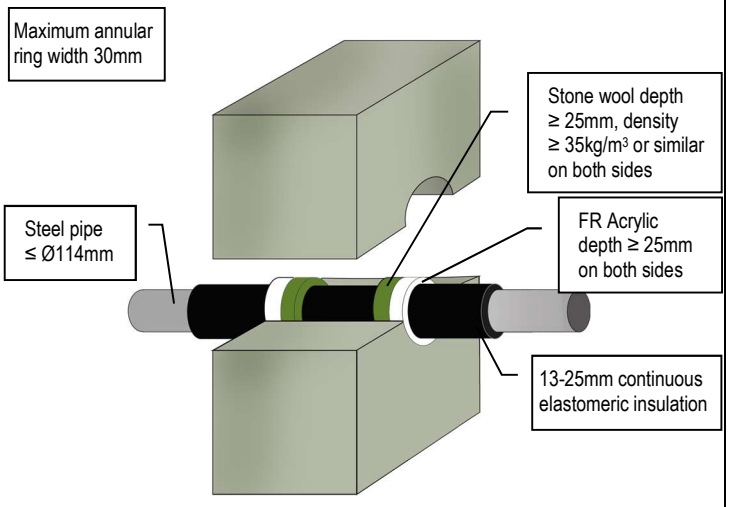
STEEL PIPE FIRE RESISTANCE EI 180 C/U (E 240)

≥ 150MM MASONRY OR CONCRETE WALLS



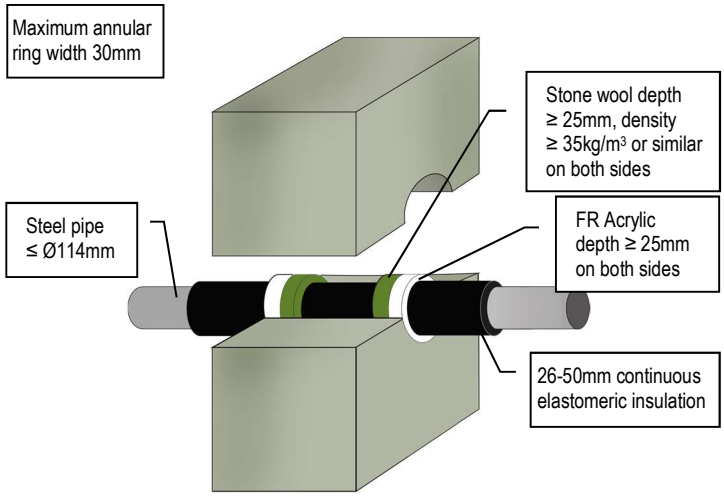
STEEL PIPE FIRE RESISTANCE EI 90 C/U (E 120)

≥ 150MM MASONRY OR CONCRETE WALLS



STEEL PIPE FIRE RESISTANCE EI 60 C/U (E 60)

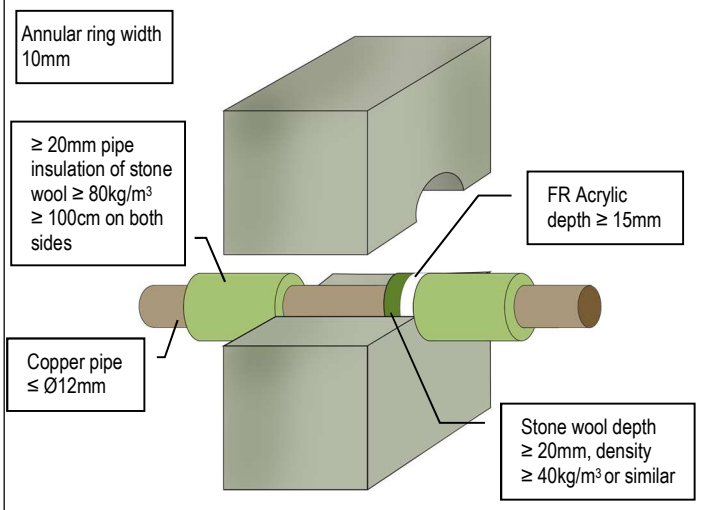
≥ 150MM MASONRY OR CONCRETE WALLS



Detail Drawings

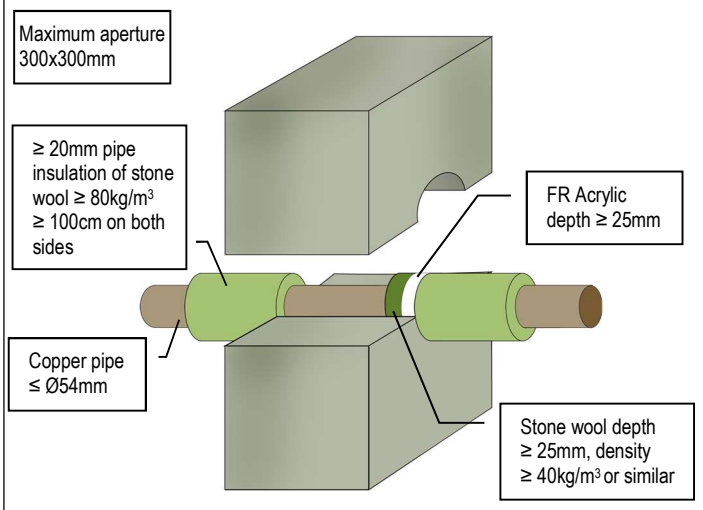
COPPER PIPE FIRE RESISTANCE EI 240 C/U (E 240)

≥ 150MM MASONRY OR CONCRETE WALLS



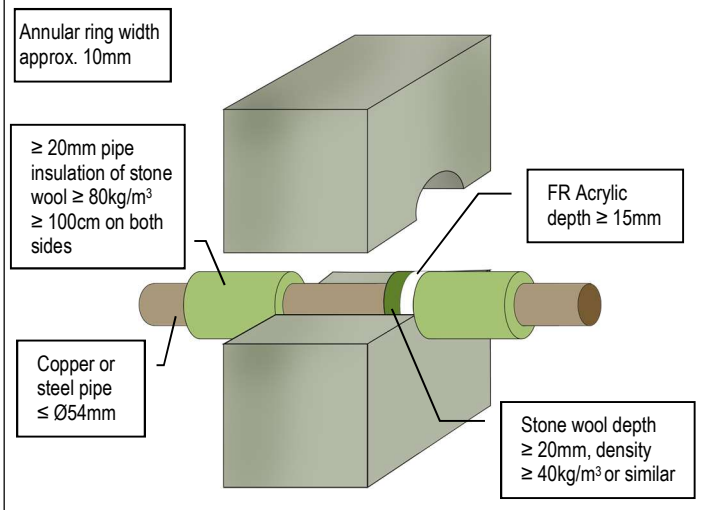
COPPER PIPE FIRE RESISTANCE EI 60 C/U (E 240)

≥ 150MM MASONRY OR CONCRETE WALLS



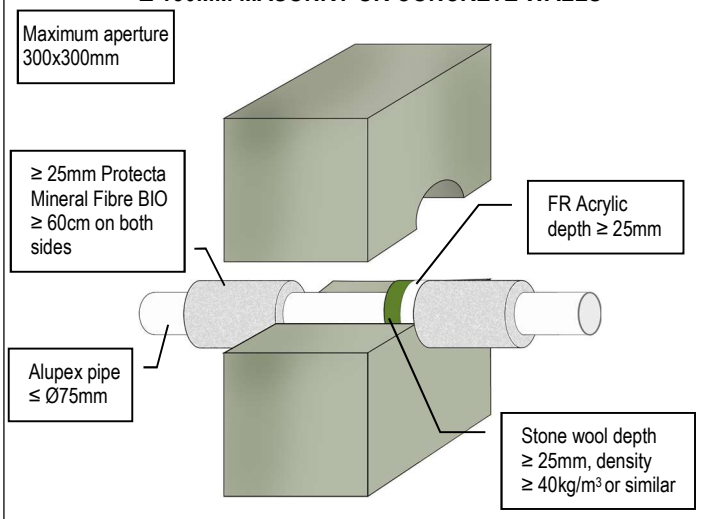
COPPER OR STEEL PIPE FIRE RESISTANCE EI 180 C/U (E 240)

≥ 150MM MASONRY OR CONCRETE WALLS



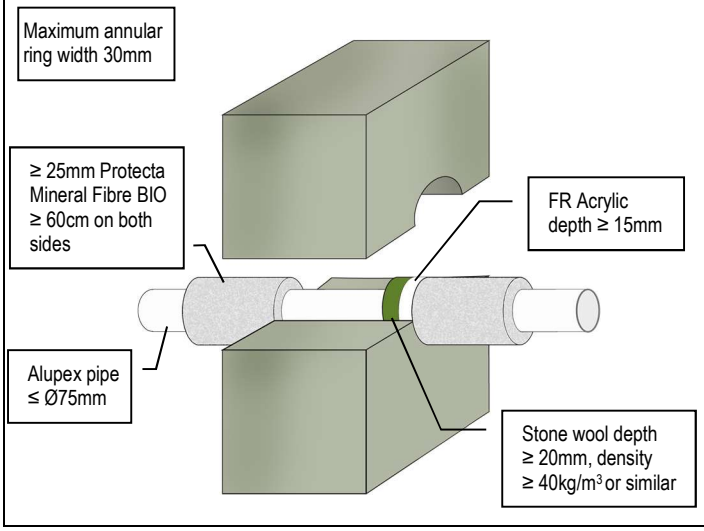
ALUPEX PIPE FIRE RESISTANCE EI 60 C/U (E 240)

≥ 150MM MASONRY OR CONCRETE WALLS



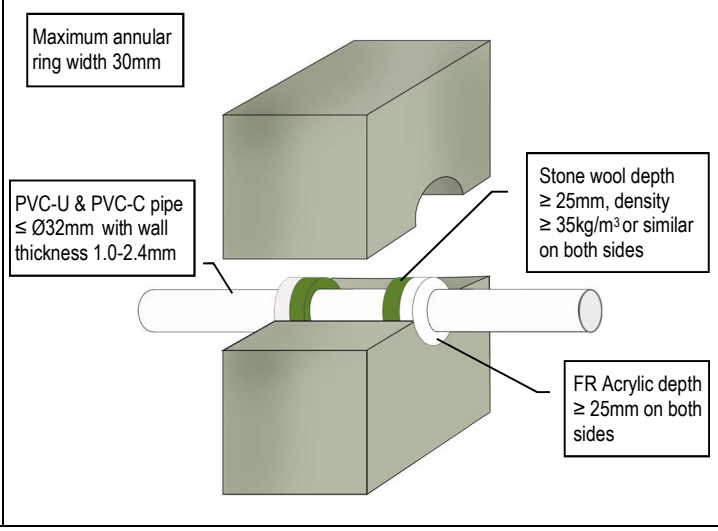
ALUPEX PIPE FIRE RESISTANCE EI 120 C/U (E 120)

≥ 150MM MASONRY OR CONCRETE WALLS



PVC PLASTIC PIPE FIRE RESISTANCE EI 240 U/C (E 240)

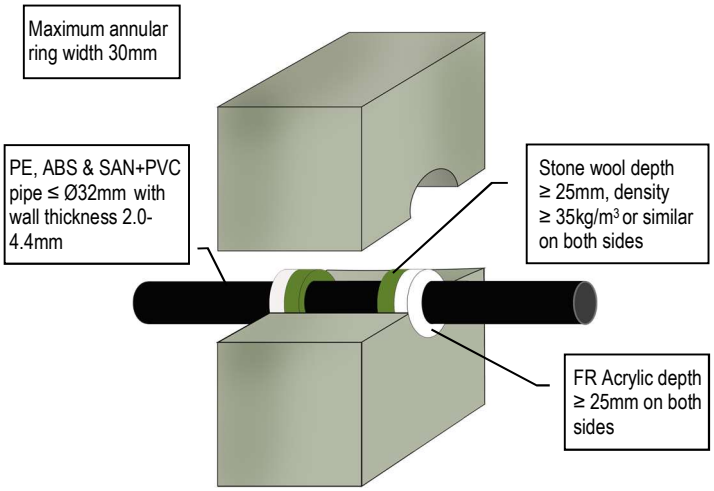
≥ 150MM MASONRY OR CONCRETE WALLS



Detail Drawings

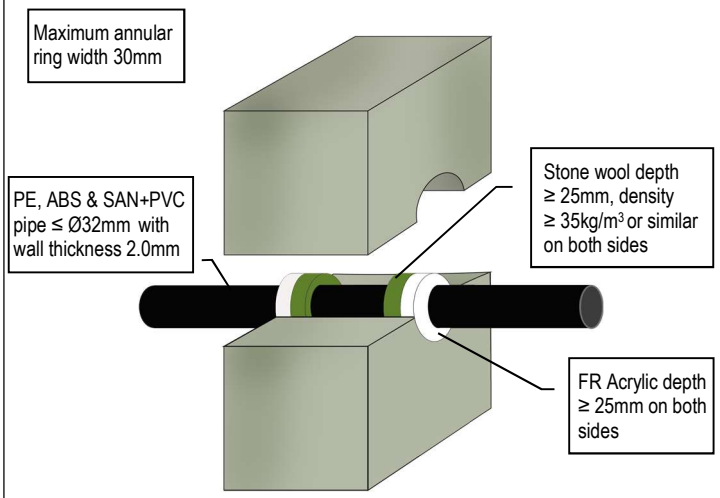
PE PLASTIC PIPE FIRE RESISTANCE EI 120 C/U (E 120)

≥ 150MM MASONRY OR CONCRETE WALLS



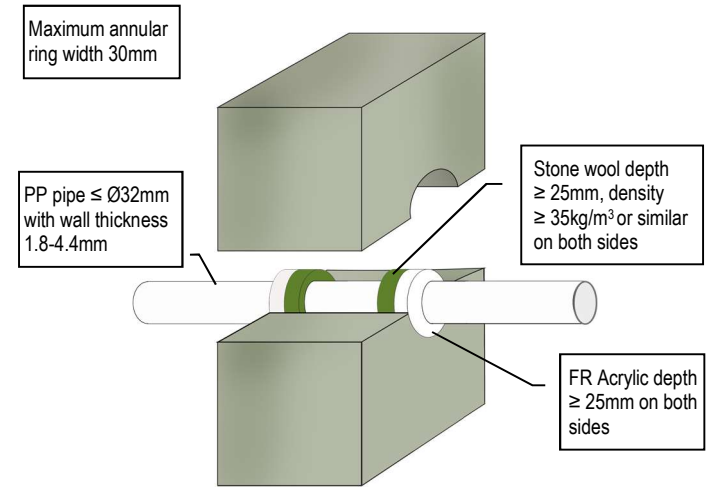
PE PLASTIC PIPE FIRE RESISTANCE EI 240 C/U (E 240)

≥ 150MM MASONRY OR CONCRETE WALLS



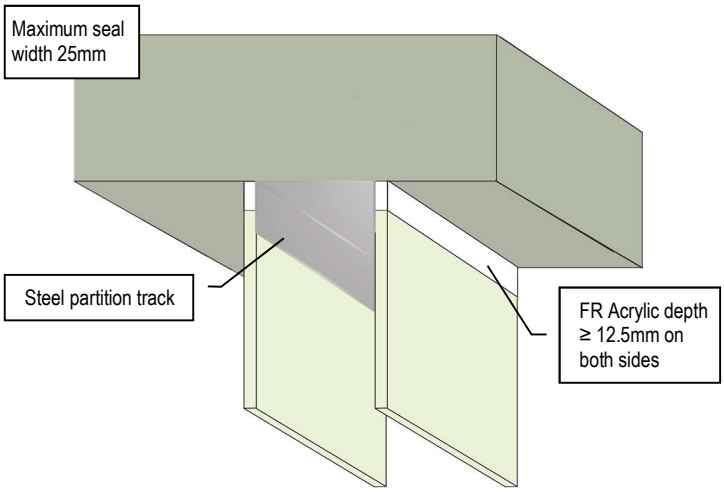
PP PLASTIC PIPE FIRE RESISTANCE EI 240 C/U (E 240)

≥ 150MM MASONRY OR CONCRETE WALLS



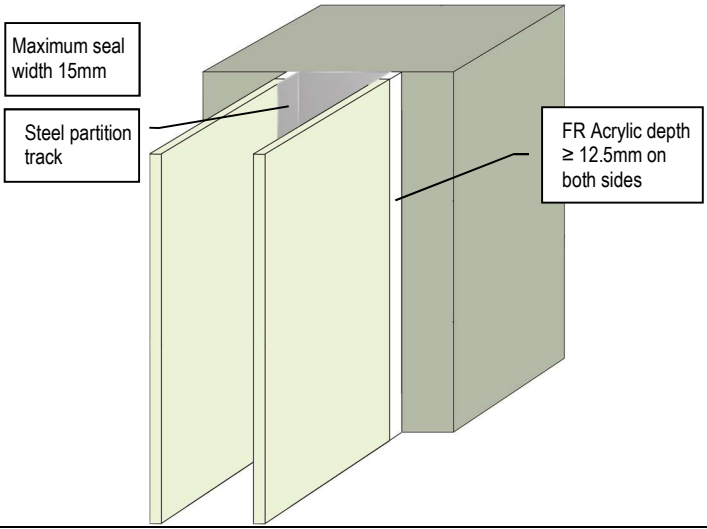
HORIZONTAL LINEAR SEALS FIRE RESISTANCE EI 45 (E 60)

BETWEEN ≥ 75MM DRYWALLS AND FLOORS



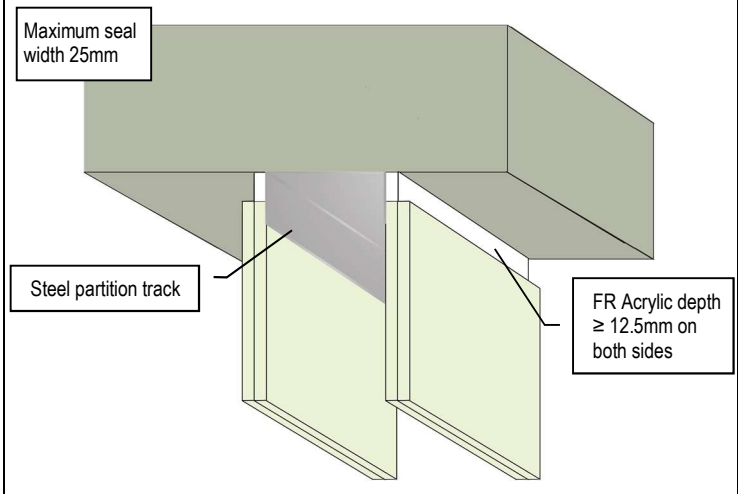
VERTICAL LINEAR SEALS FIRE RESISTANCE EI 45 (E 60)

IN ≥ 75MM DRYWALLS OR BETWEEN WALLS



HORIZONTAL LINEAR SEALS FIRE RESISTANCE EI 90 (E 90)

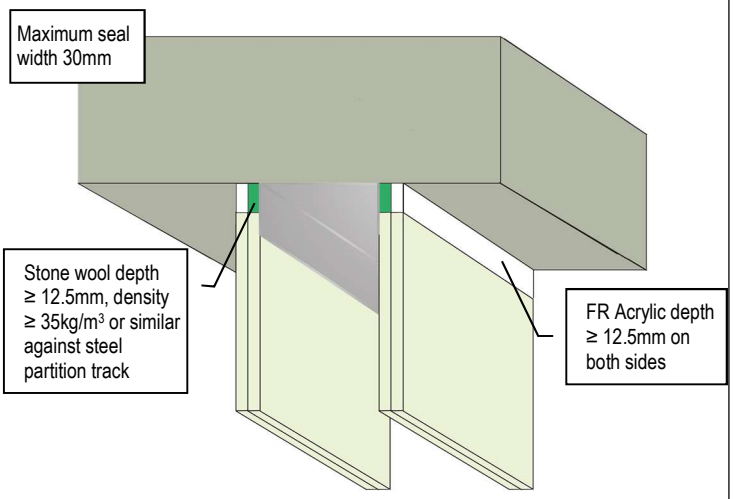
BETWEEN ≥ 100MM DRYWALLS AND FLOORS



Detail Drawings

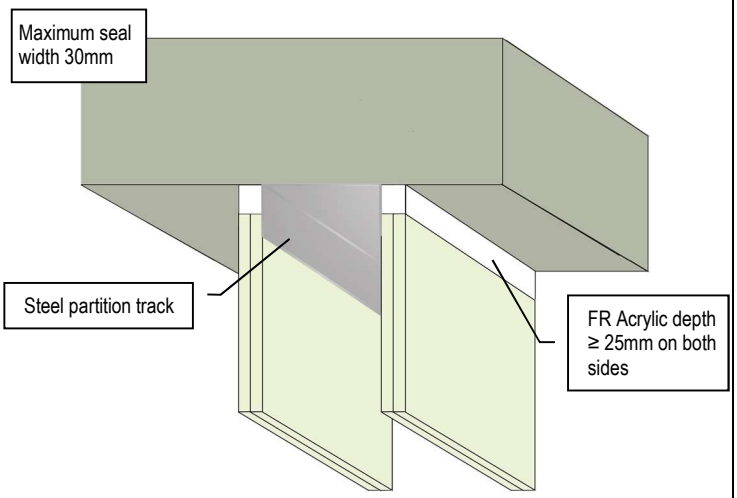
HORIZONTAL LINEAR SEALS FIRE RESISTANCE EI 120 (E 120)

BETWEEN ≥ 100MM DRYWALLS AND FLOORS



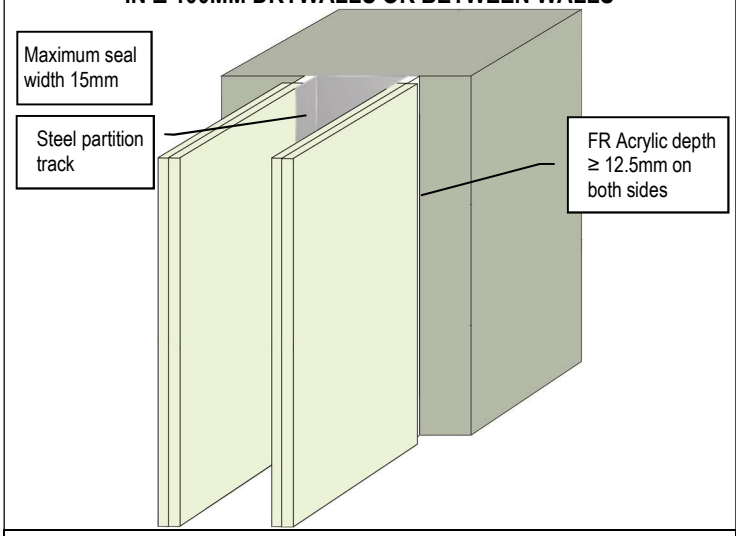
HORIZONTAL LINEAR SEALS FIRE RESISTANCE EI 120 (E 120)

BETWEEN ≥ 100MM DRYWALLS AND FLOORS



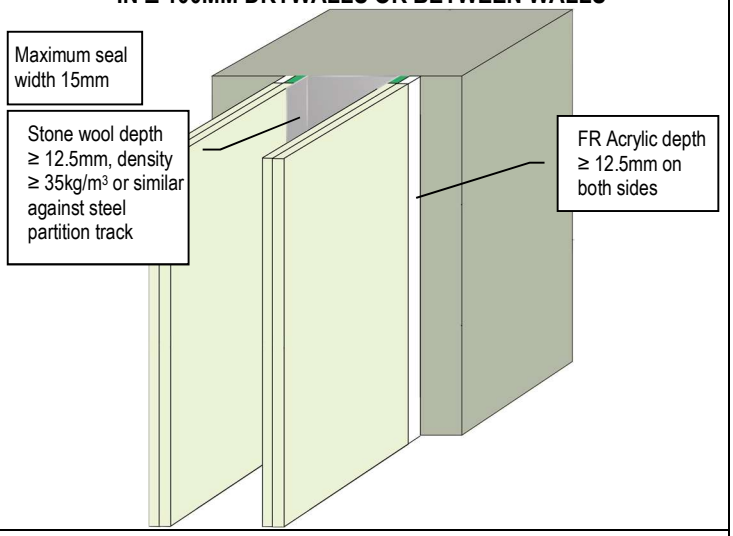
VERTICAL LINEAR SEALS FIRE RESISTANCE EI 90 (E 90)

IN ≥ 100MM DRYWALLS OR BETWEEN WALLS



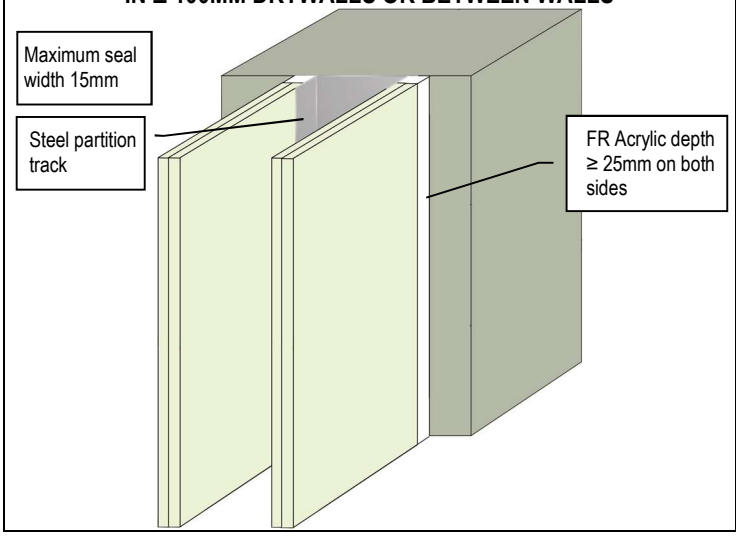
VERTICAL LINEAR SEALS FIRE RESISTANCE EI 90 (E 90)

IN ≥ 100MM DRYWALLS OR BETWEEN WALLS



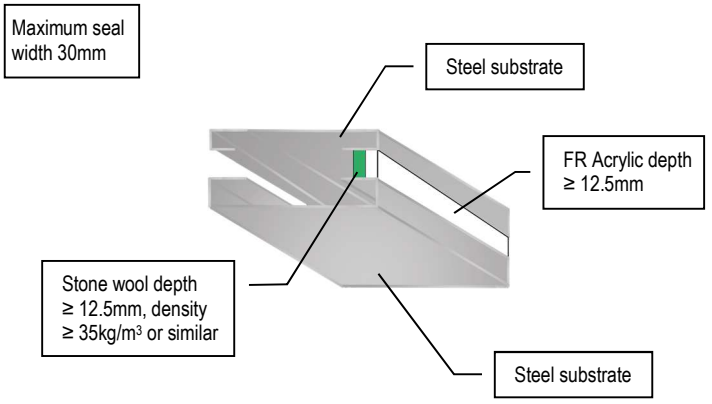
VERTICAL LINEAR SEALS FIRE RESISTANCE EI 90 (E 90)

IN ≥ 100MM DRYWALLS OR BETWEEN WALLS



HORIZONTAL & VERTICAL SEALS FIRE RESISTANCE EI 30 (E 120)

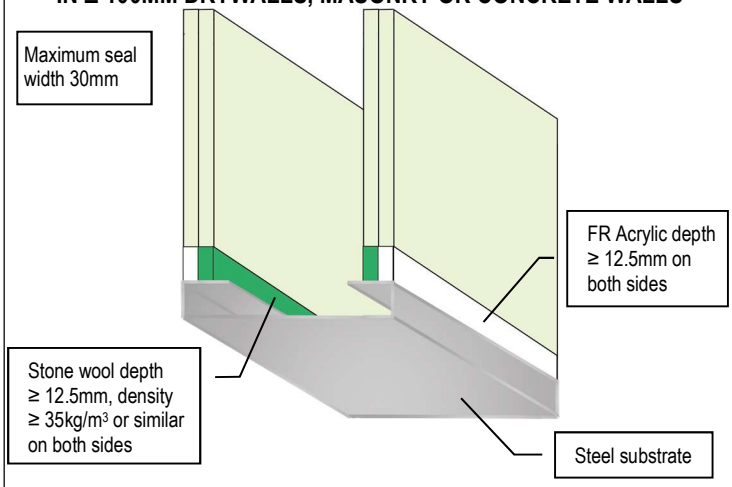
IN ≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS



Detail Drawings

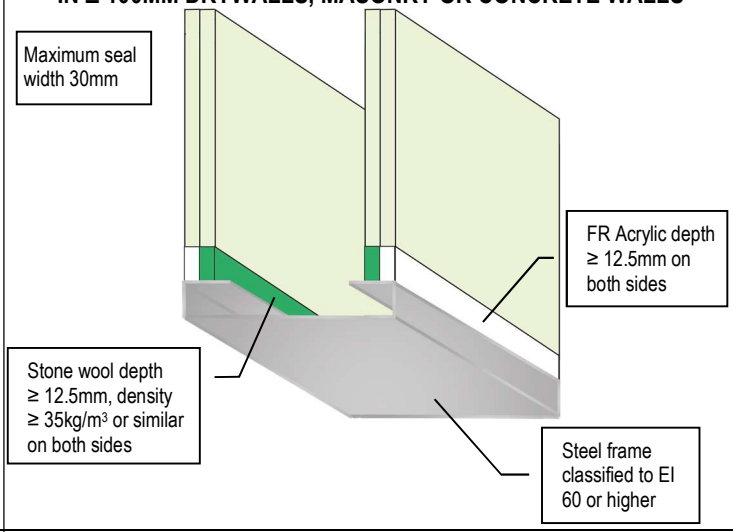
HORIZONTAL LINEAR SEALS FIRE RESISTANCE EI 45 (E 120)

IN ≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS



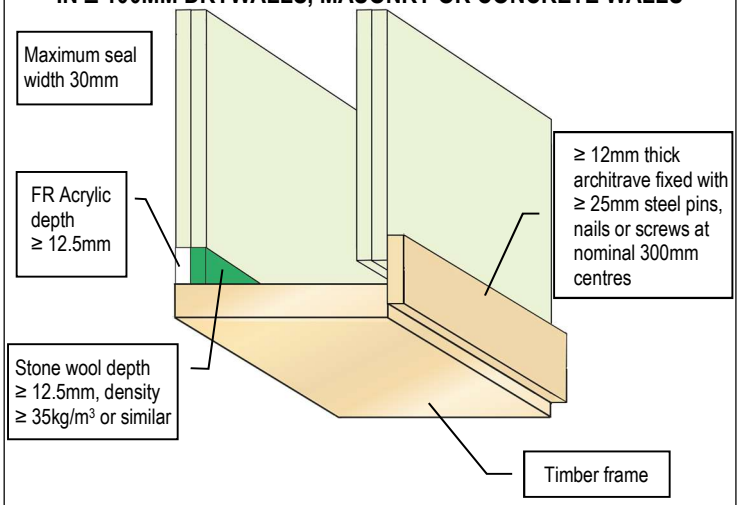
HORIZONTAL & VERTICAL SEALS FIRE RESISTANCE EI 60 (E 120)

IN ≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS



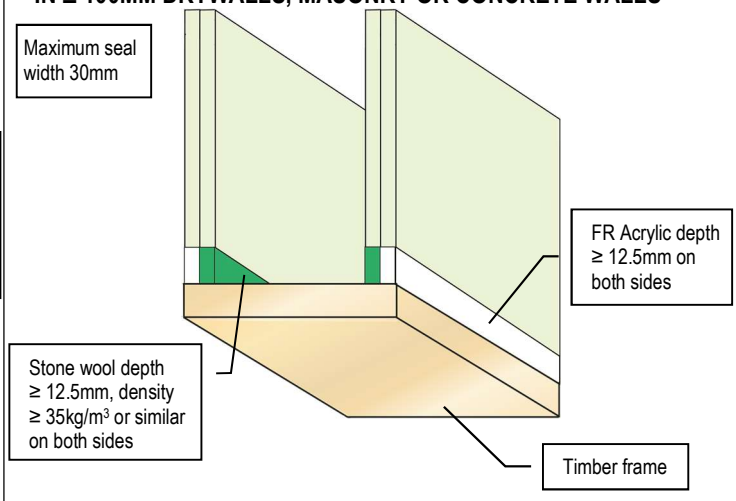
HORIZONTAL & VERTICAL SEALS FIRE RESISTANCE EI 60 (E 60)

IN ≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS



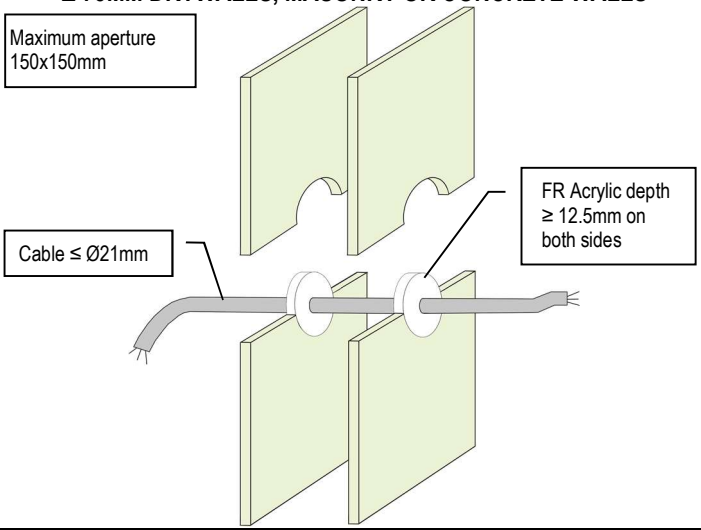
HORIZONTAL & VERTICAL SEALS FIRE RESISTANCE EI 60 (E 90)

IN ≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS



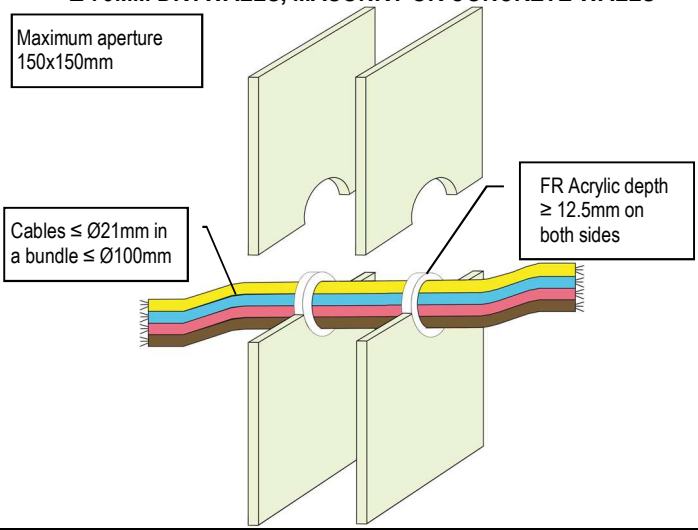
CABLE FIRE RESISTANCE EI 45 (E 60)

≥ 75MM DRYWALLS, MASONRY OR CONCRETE WALLS



CABLES FIRE RESISTANCE EI 30 (E 45)

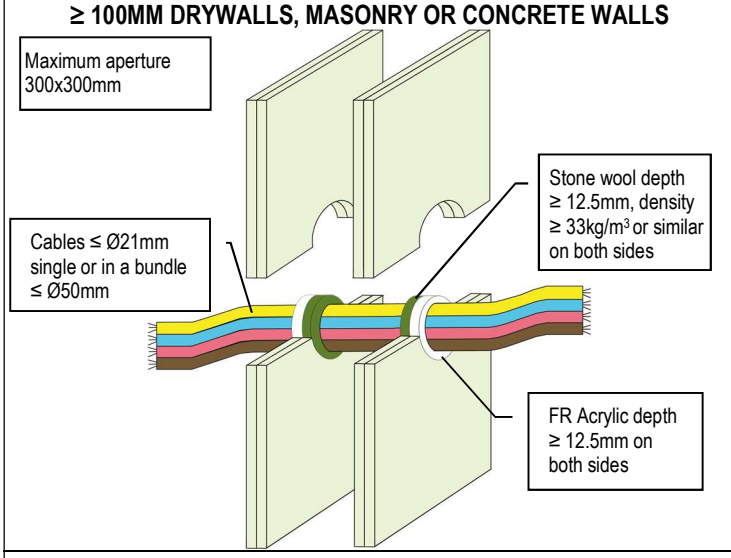
≥ 75MM DRYWALLS, MASONRY OR CONCRETE WALLS



Detail Drawings

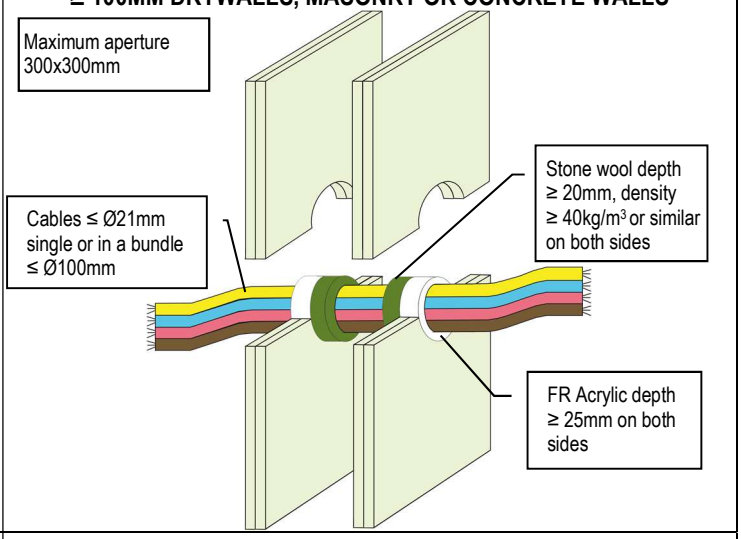
CABLES FIRE RESISTANCE EI 90 (E 120)

≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS



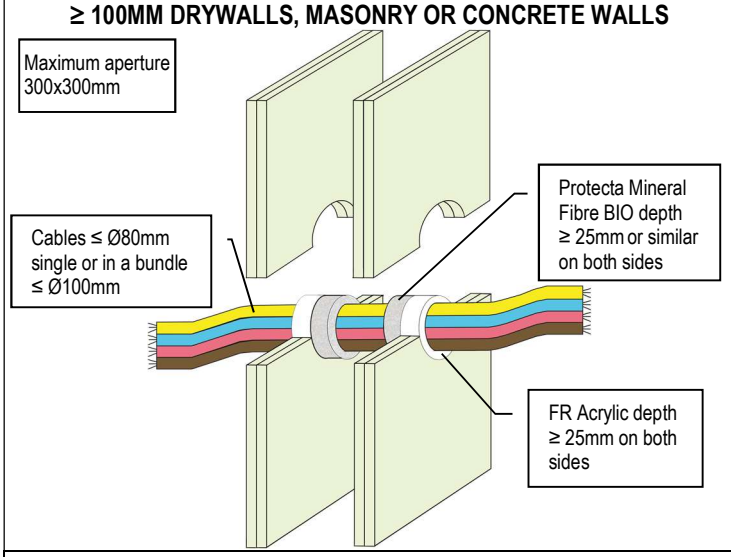
CABLES FIRE RESISTANCE EI 120 (E 120)

≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS



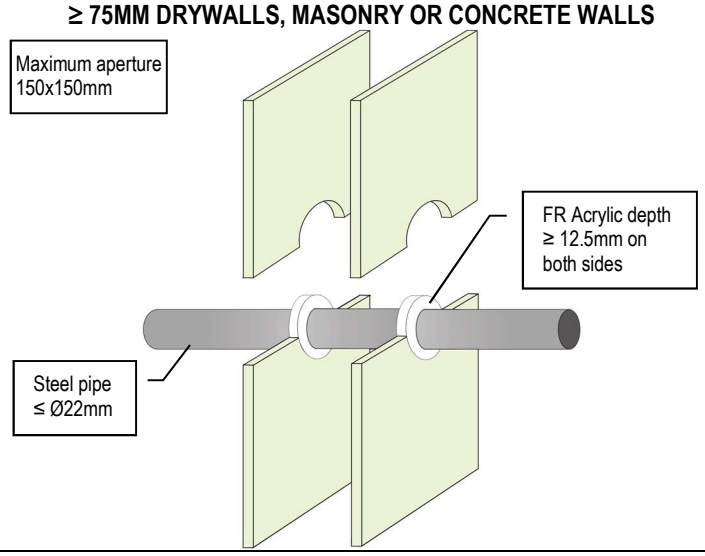
CABLES FIRE RESISTANCE EI 60 (E 120)

≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS



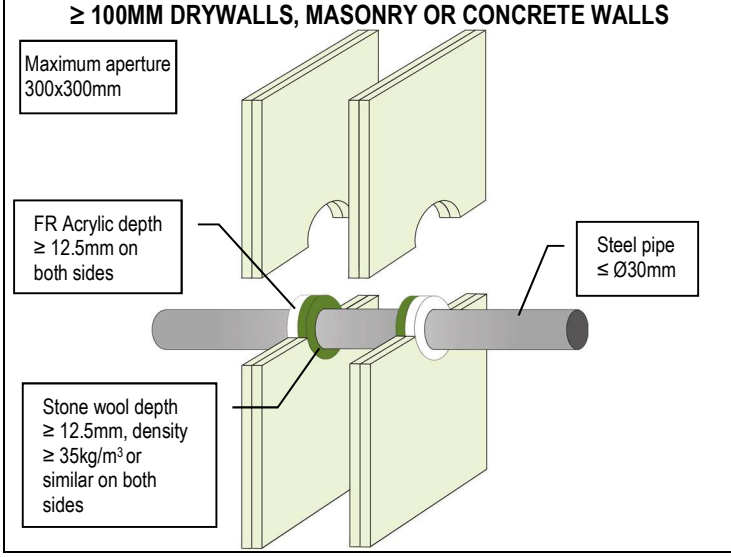
STEEL PIPE FIRE RESISTANCE EI 30 C/U (E 60)

≥ 75MM DRYWALLS, MASONRY OR CONCRETE WALLS



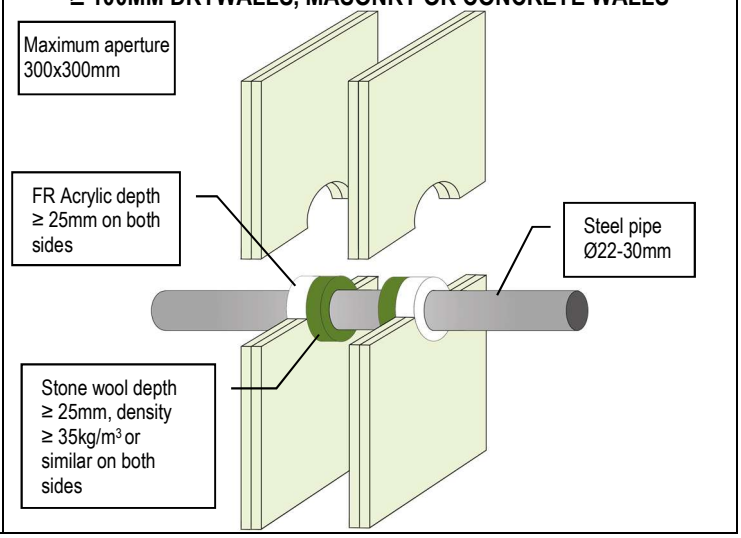
STEEL PIPE FIRE RESISTANCE EI 90 C/C (E 90)

≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS



STEEL PIPE FIRE RESISTANCE EI 120 C/C (E 120)

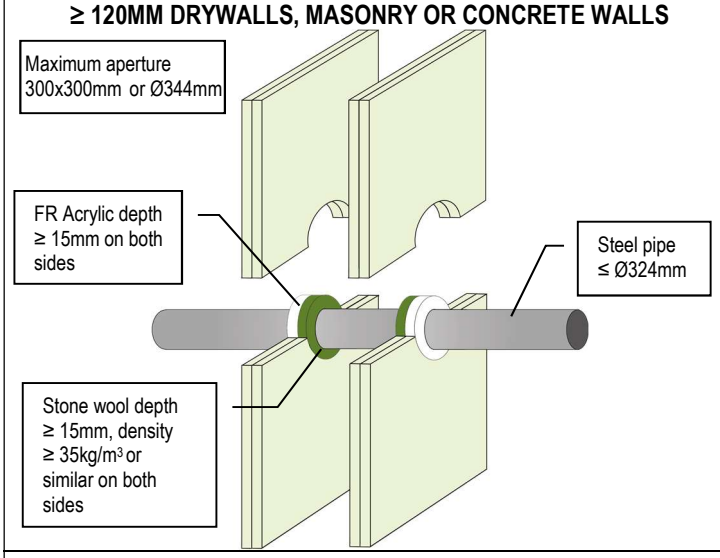
≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS



Detail Drawings

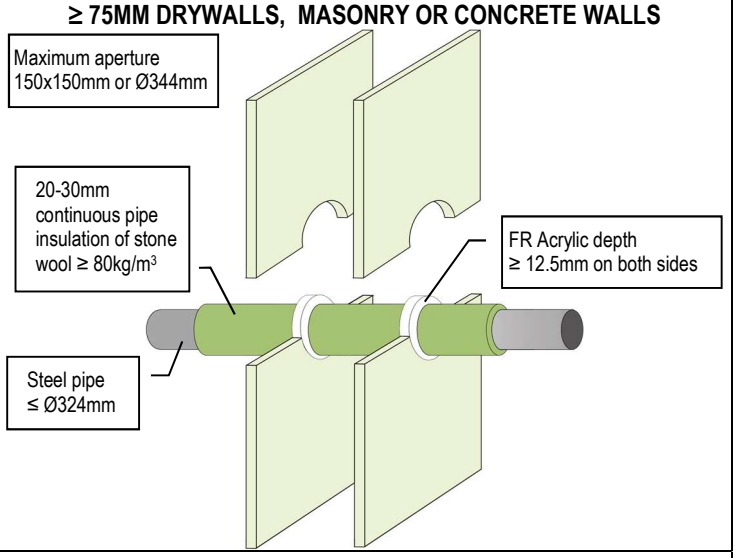
STEEL PIPE FIRE RESISTANCE E 120 C/U

≥ 120MM DRYWALLS, MASONRY OR CONCRETE WALLS



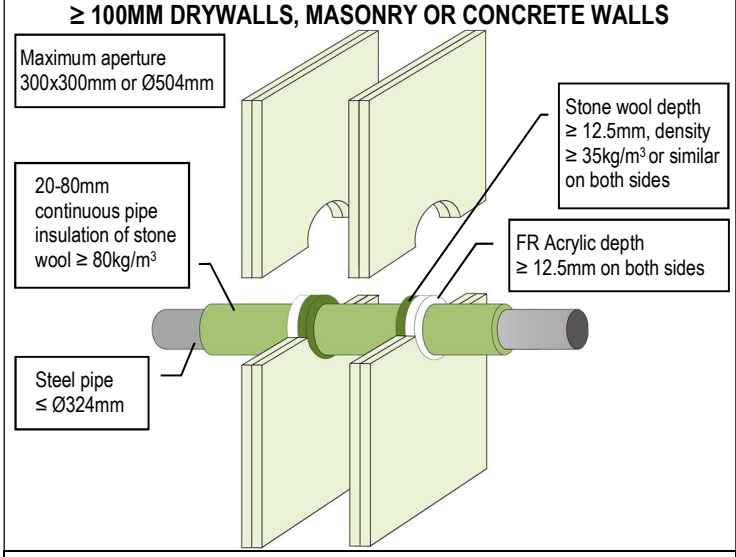
INSULATED STEEL PIPE FIRE RESISTANCE EI 45 C/U (E 60)

≥ 75MM DRYWALLS, MASONRY OR CONCRETE WALLS



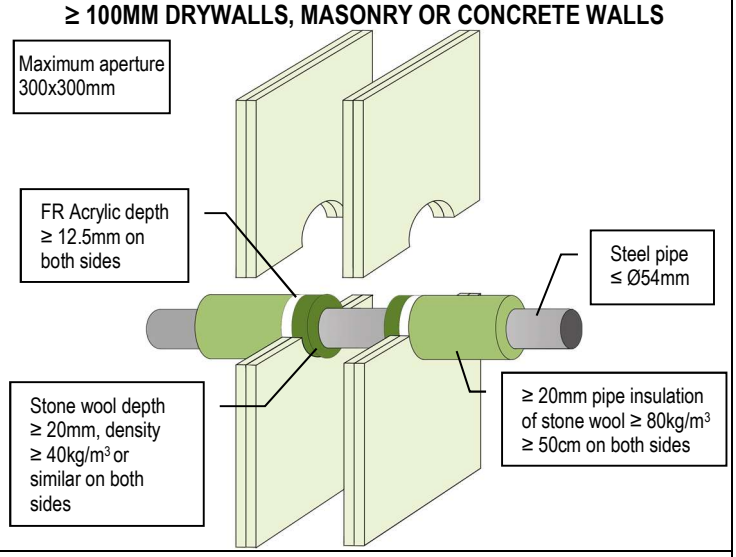
INSULATED STEEL PIPE FIRE RESISTANCE EI 90 C/U (E 120)

≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS



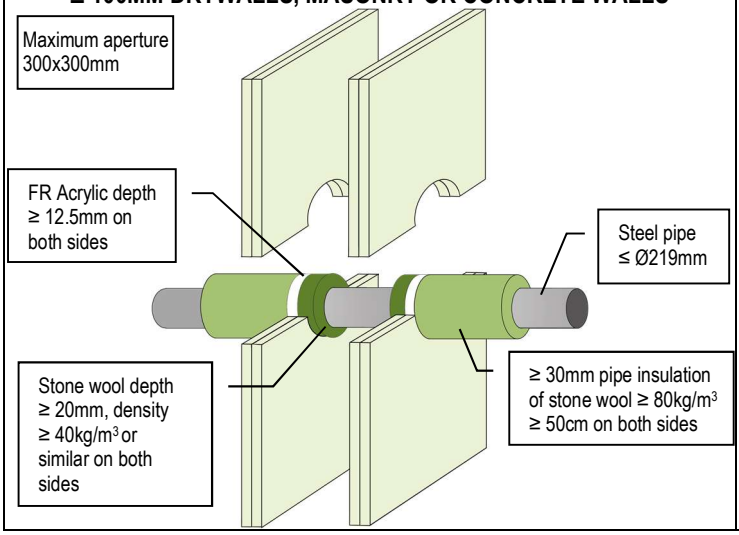
STEEL PIPE FIRE RESISTANCE EI 120 C/U (E 120)

≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS



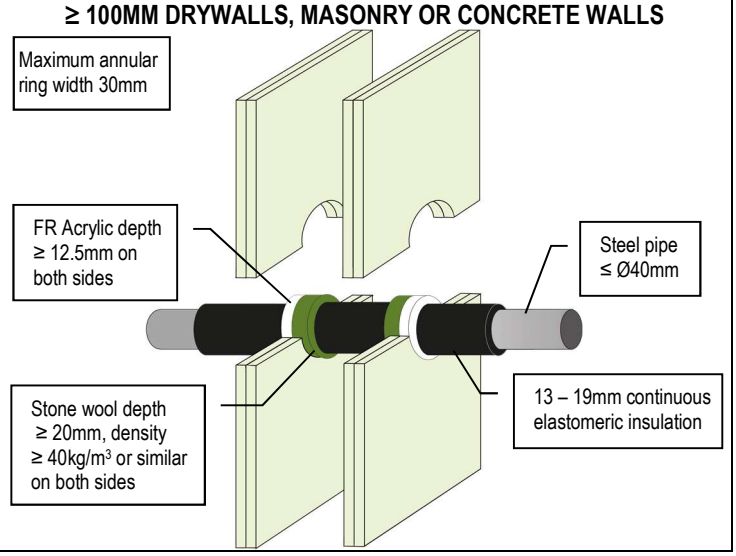
STEEL PIPE FIRE RESISTANCE EI 90 C/U (E 120)

≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS



STEEL PIPE FIRE RESISTANCE EI 120 C/C (E 120)

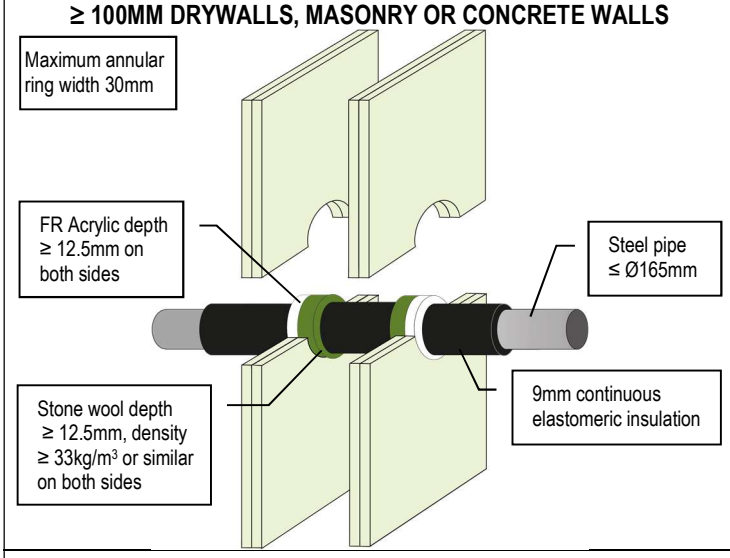
≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS



Detail Drawings

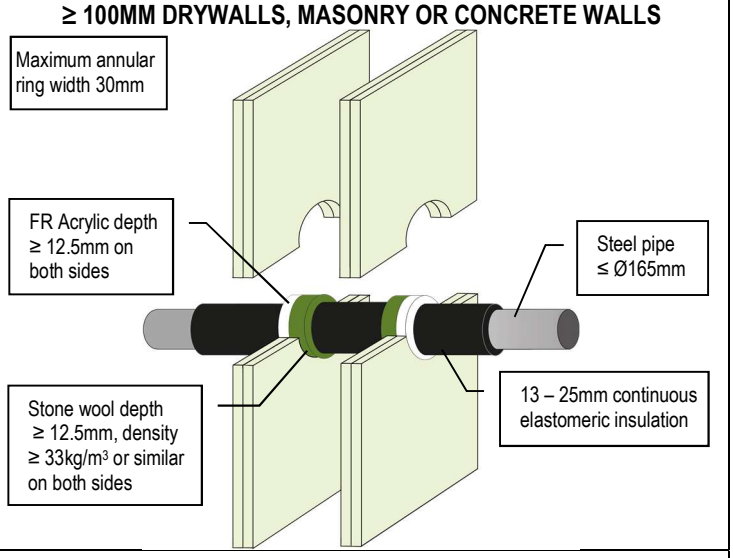
STEEL PIPE FIRE RESISTANCE EI 45 C/U (E 90)

≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS



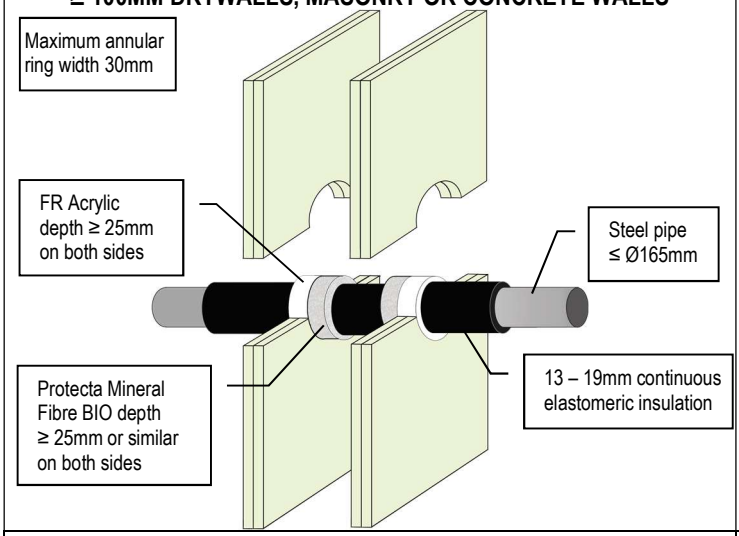
STEEL PIPE FIRE RESISTANCE EI 60 C/U (E 60)

≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS



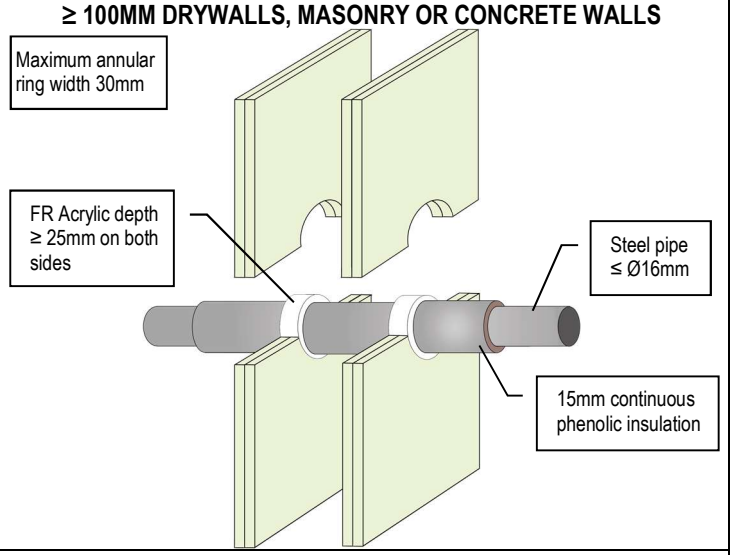
STEEL PIPE FIRE RESISTANCE EI 60 C/C (E 120)

≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS



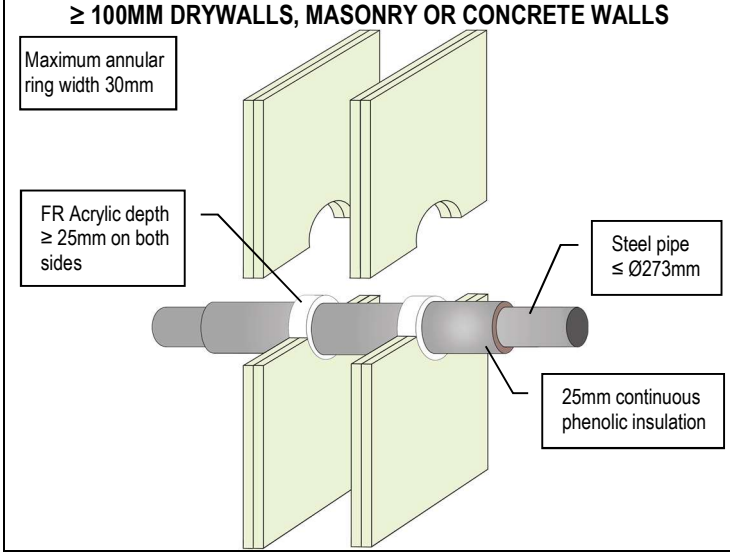
STEEL PIPE FIRE RESISTANCE EI 90 C/U (E 90)

≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS



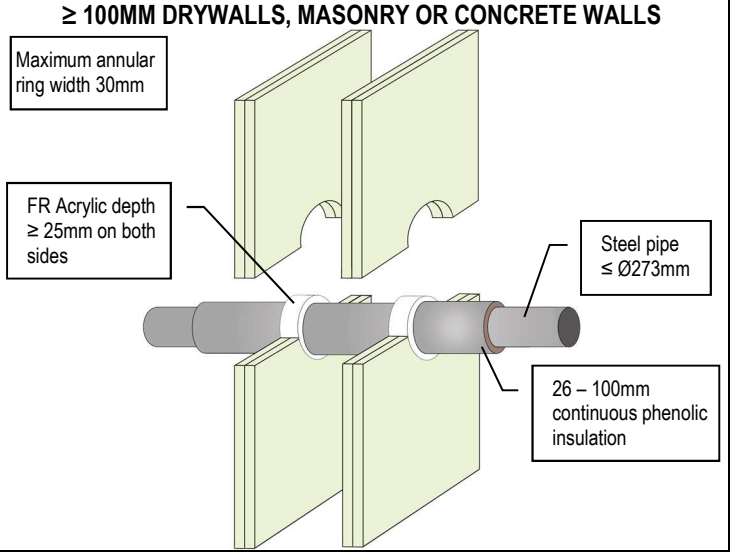
STEEL PIPE FIRE RESISTANCE EI 60 C/U (E 90)

≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS



STEEL PIPE FIRE RESISTANCE EI 60 C/U (E 60)

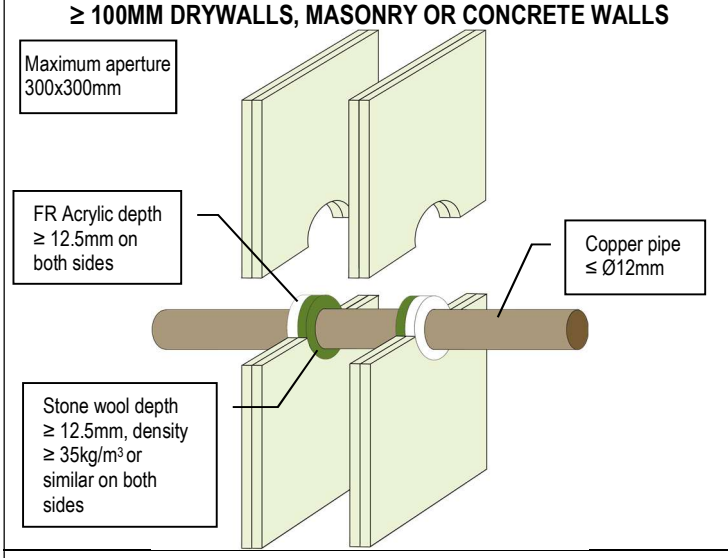
≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS



Detail Drawings

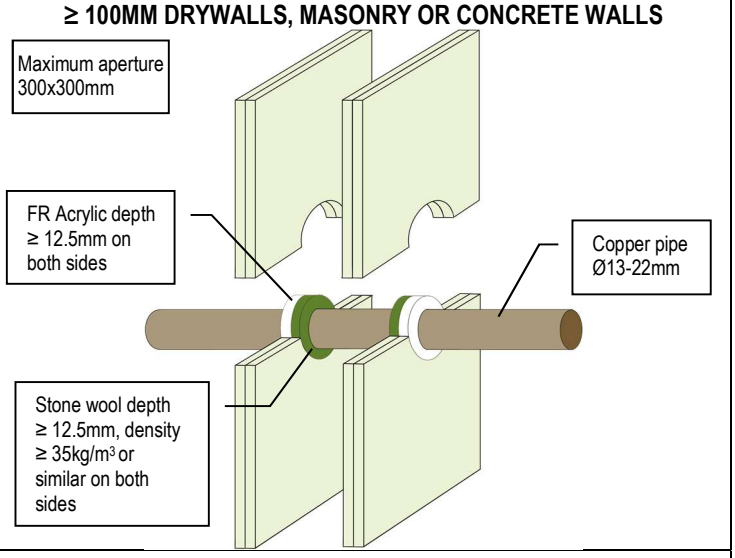
COPPER PIPE FIRE RESISTANCE EI 60 C/C (E 90)

≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS



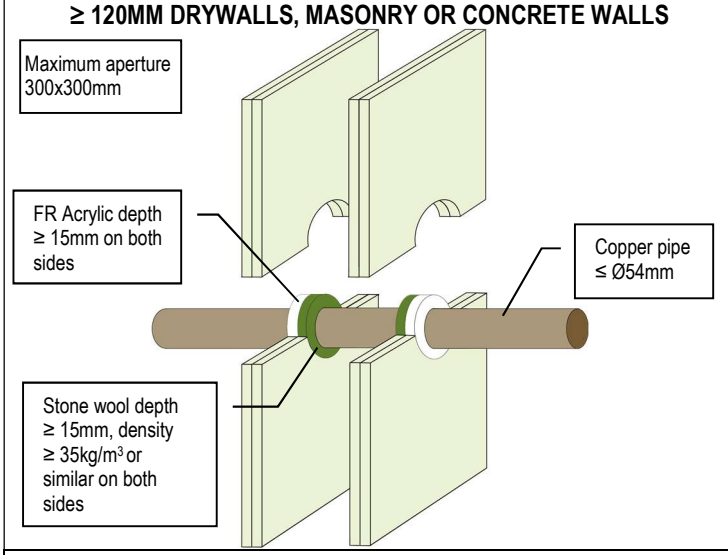
COPPER PIPE FIRE RESISTANCE EI 30 C/C (E 90)

≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS



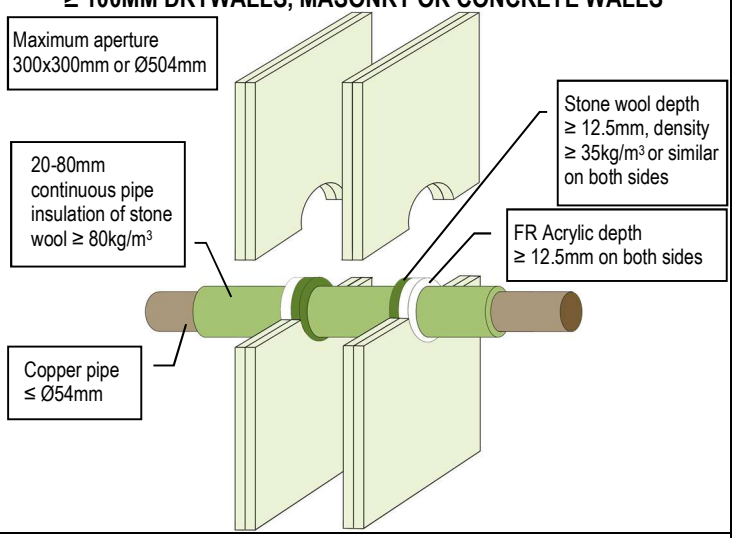
COPPER PIPE FIRE RESISTANCE E 120 C/C

≥ 120MM DRYWALLS, MASONRY OR CONCRETE WALLS



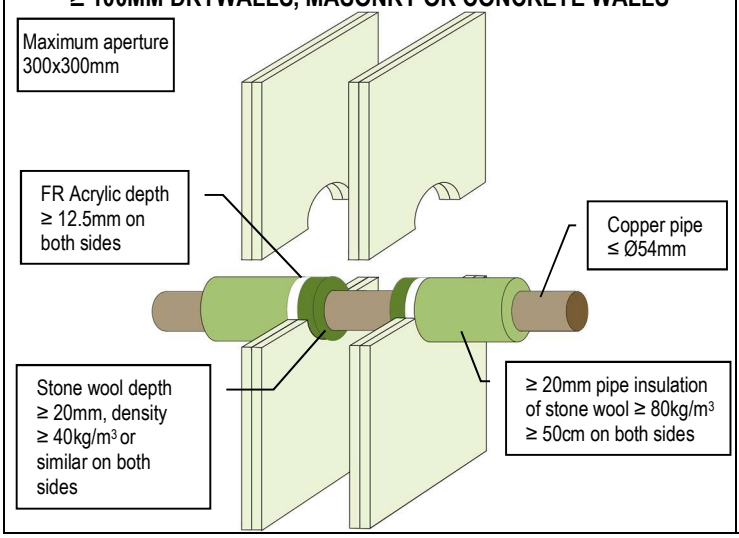
INSULATED COPPER PIPE FIRE RESISTANCE EI 60 C/C (E 120)

≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS



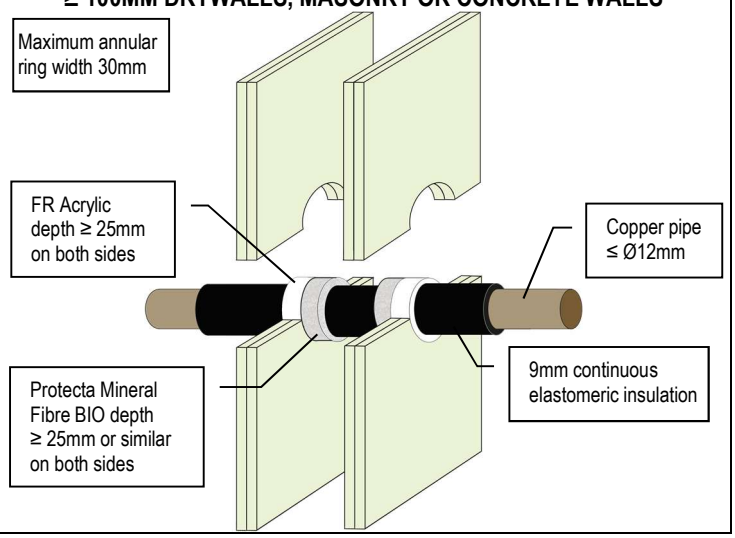
COPPER PIPE FIRE RESISTANCE EI 120 C/U (E 120)

≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS



COPPER PIPE FIRE RESISTANCE EI 120 C/C (E 120)

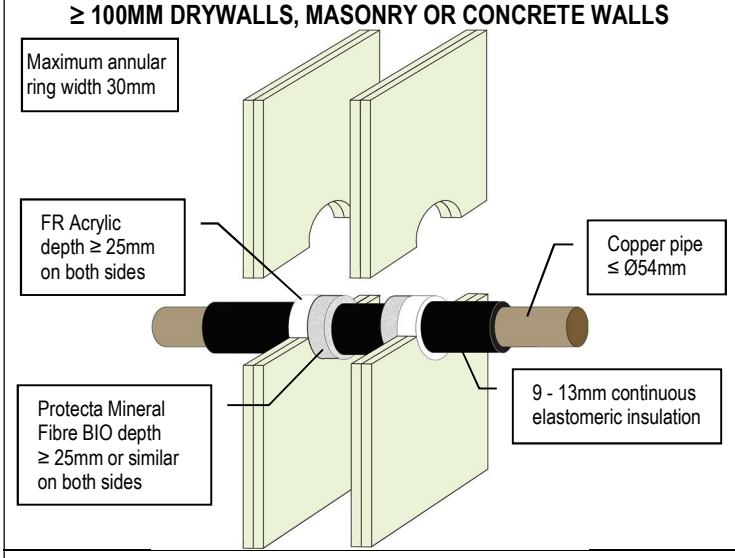
≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS



Detail Drawings

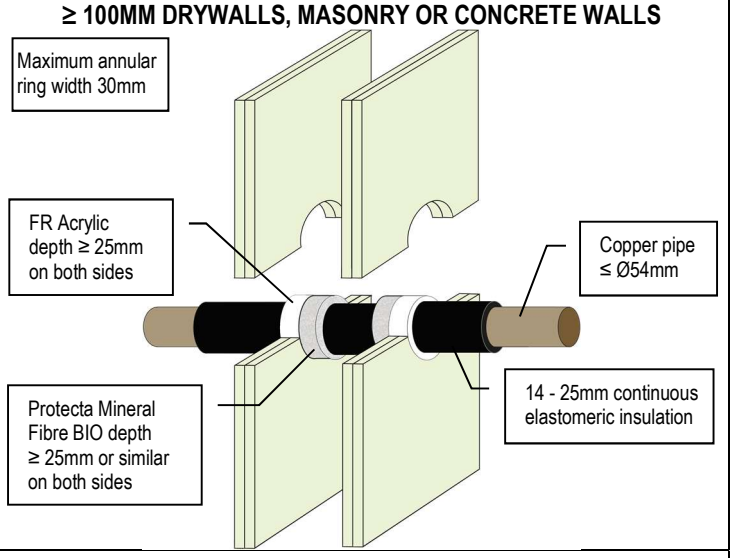
COPPER PIPE FIRE RESISTANCE EI 60 C/C (E 120)

≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS



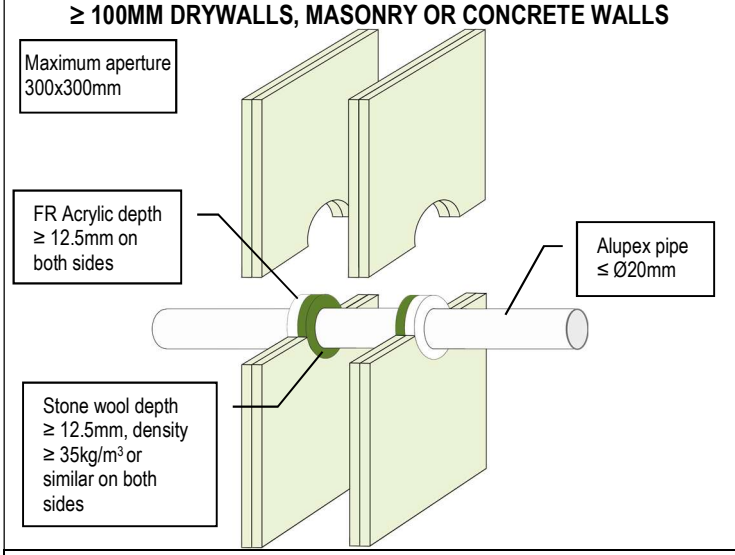
COPPER PIPE FIRE RESISTANCE EI 60 C/C (E 60)

≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS



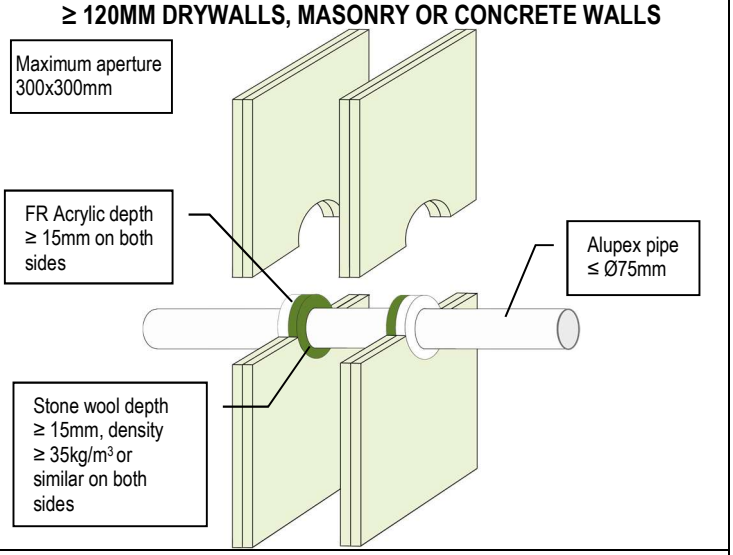
ALUPEX PIPE FIRE RESISTANCE EI 120 C/C (E 120)

≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS



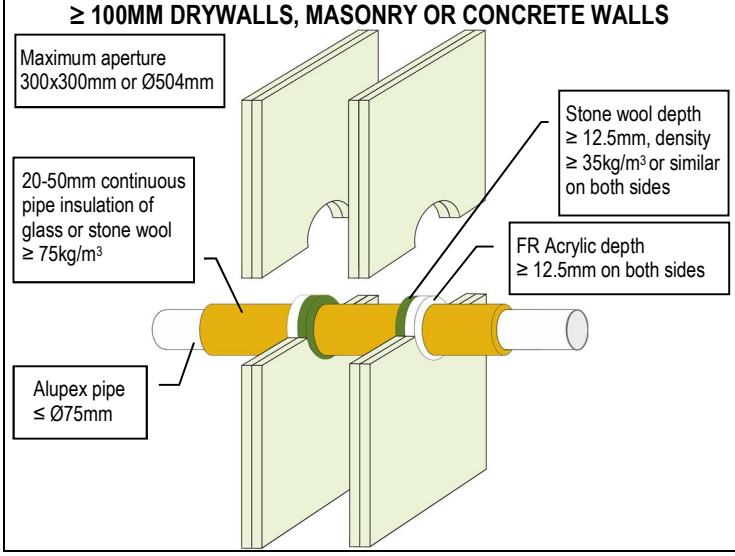
ALUPEX PIPE FIRE RESISTANCE EI 30 C/C (E 120)

≥ 120MM DRYWALLS, MASONRY OR CONCRETE WALLS



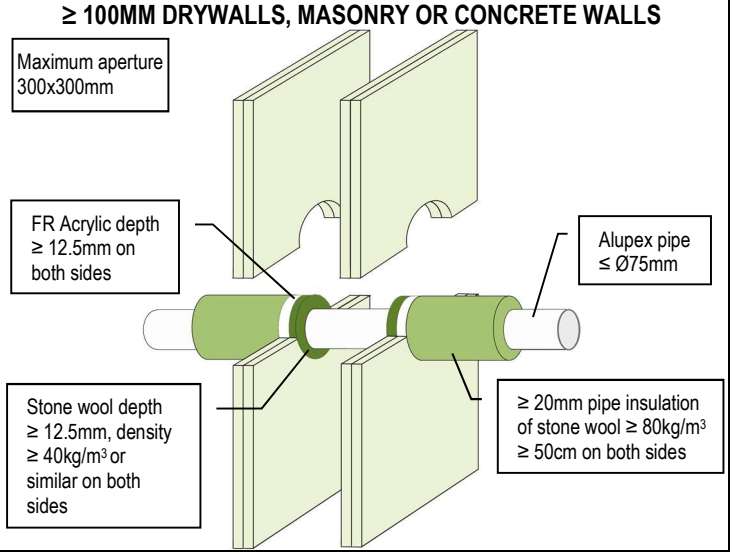
INSULATED ALUPEX PIPE FIRE RESISTANCE EI 120 C/C (E 120)

≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS



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

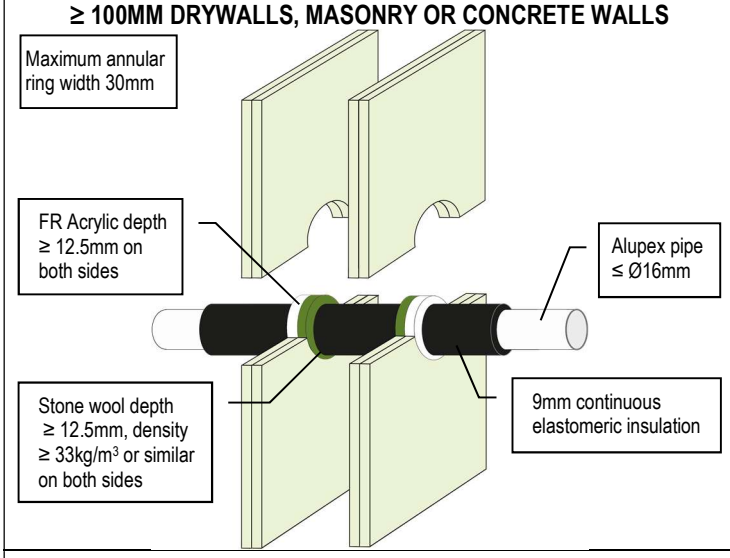
≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS



Detail Drawings

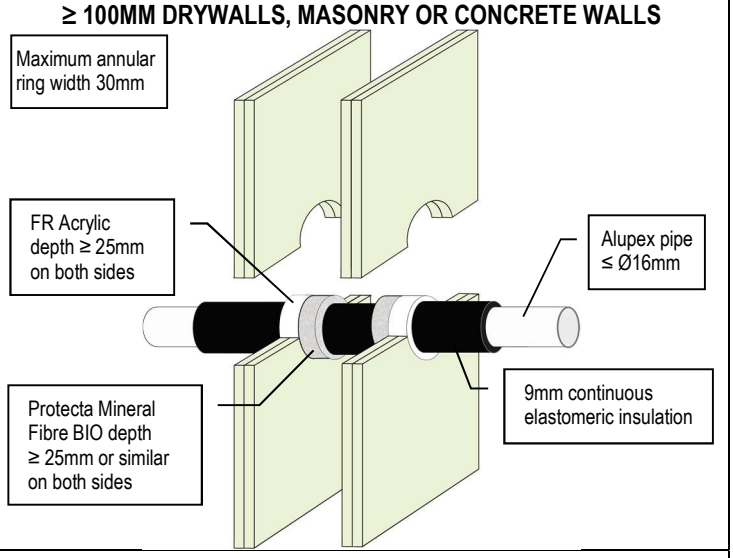
ALUPEX PIPE FIRE RESISTANCE EI 90 C/C (E 120)

≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS



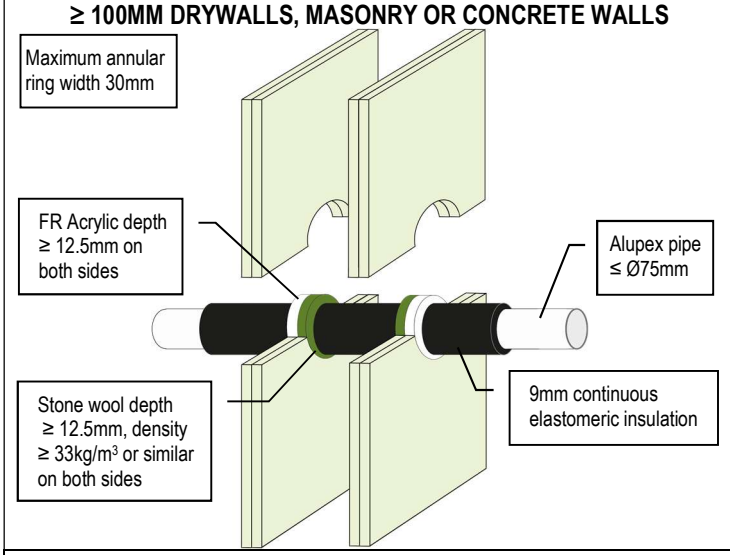
ALUPEX PIPE FIRE RESISTANCE EI 120 C/C (E 120)

≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS



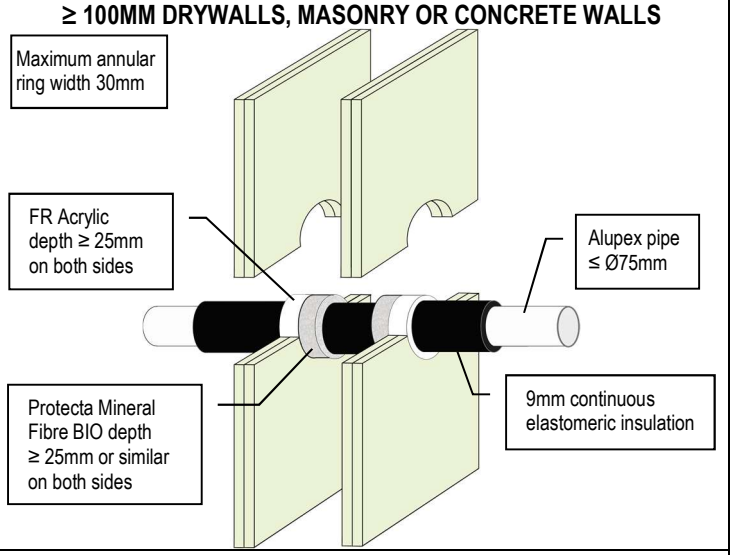
ALUPEX PIPE FIRE RESISTANCE EI 45 C/C (E 60)

≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS



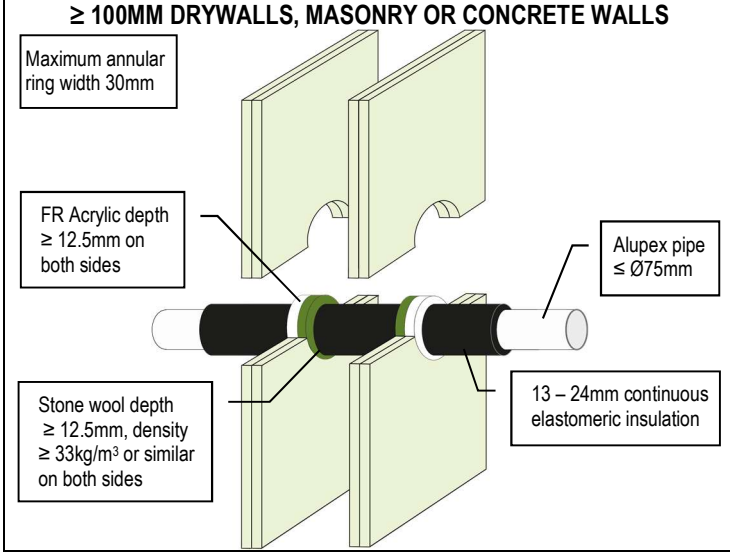
ALUPEX PIPE FIRE RESISTANCE EI 60 C/C (E 60)

≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS



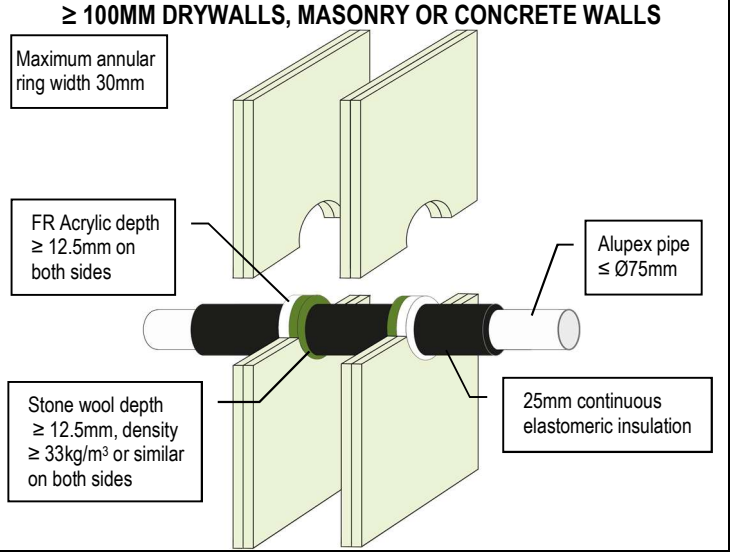
ALUPEX PIPE FIRE RESISTANCE EI 60 C/C (E 90)

≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS



ALUPEX PIPE FIRE RESISTANCE EI 90 C/C (E 90)

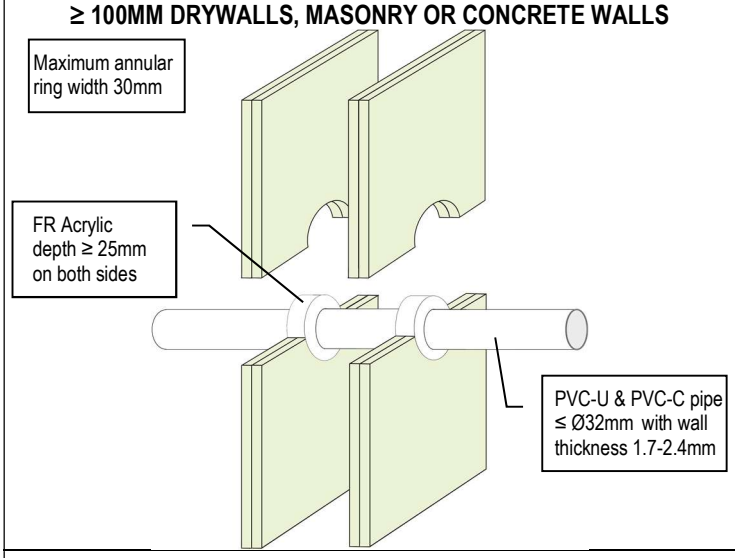
≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS



Detail Drawings

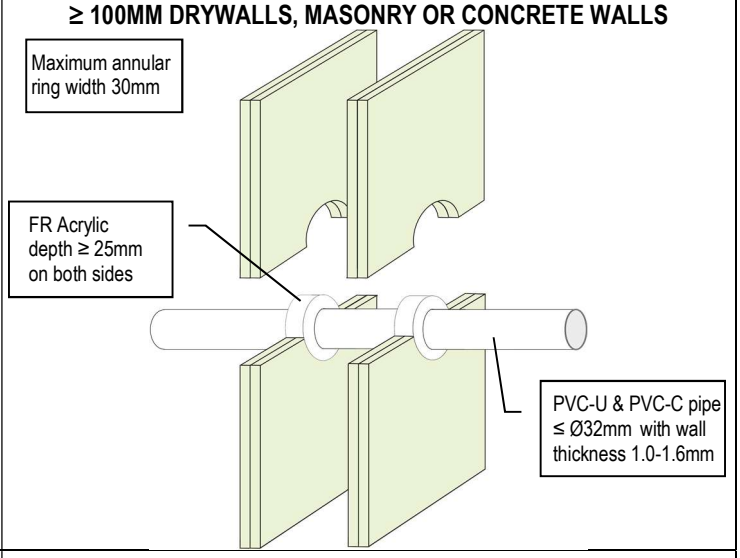
PVC PLASTIC PIPE FIRE RESISTANCE EI 90 U/C (E 120)

≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS



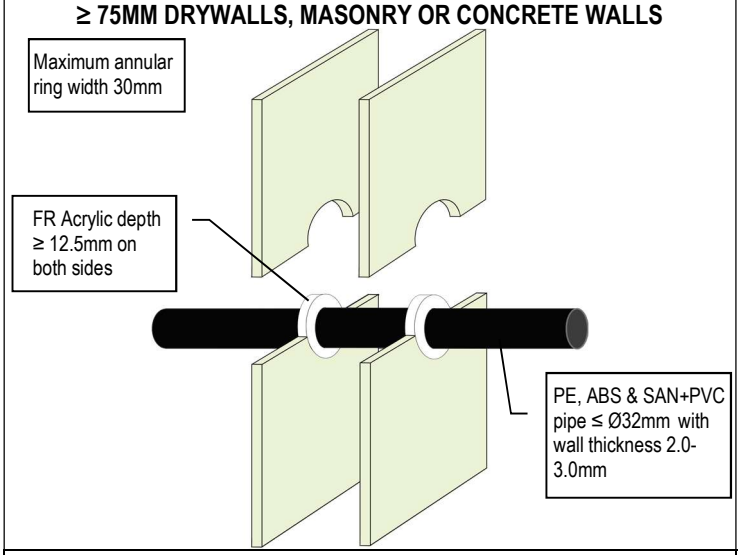
PVC PLASTIC PIPE FIRE RESISTANCE EI 120 C/C (E 120)

≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS



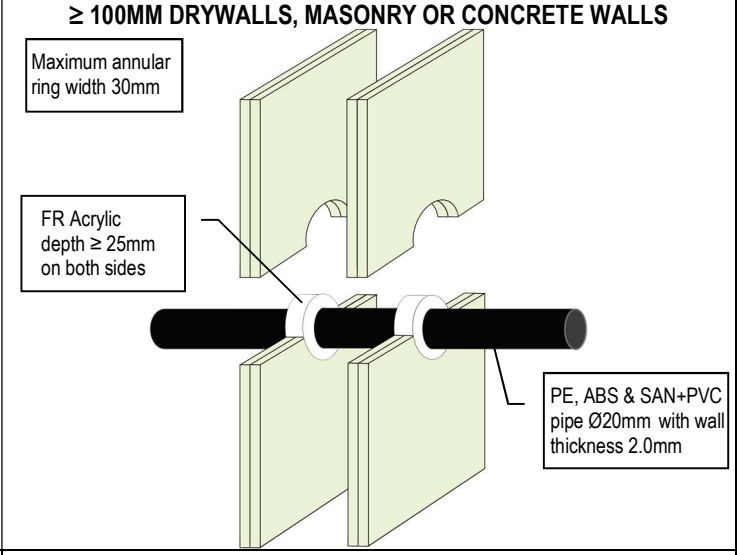
PE PLASTIC PIPE FIRE RESISTANCE EI 30 U/C (E 30)

≥ 75MM DRYWALLS, MASONRY OR CONCRETE WALLS



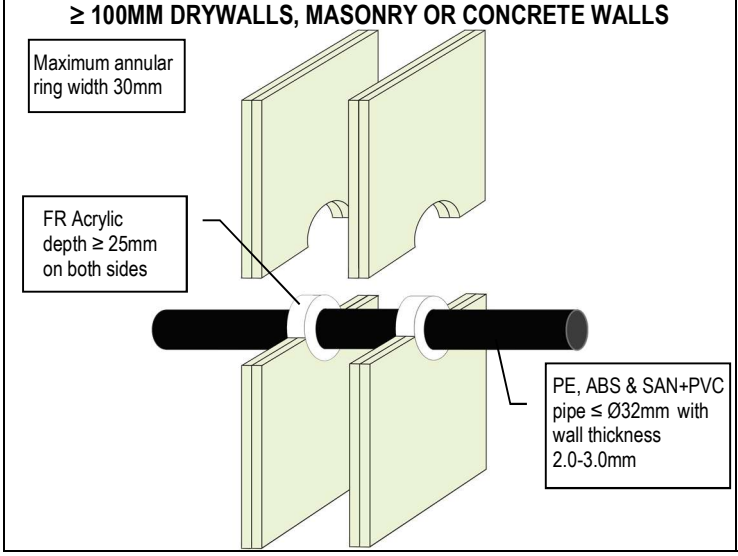
PE PLASTIC PIPE FIRE RESISTANCE EI 120 U/C (E 120)

≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS



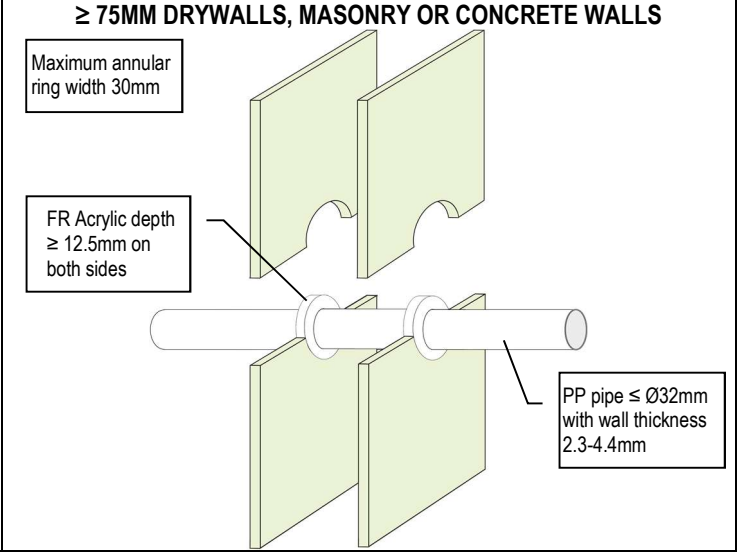
PE PLASTIC PIPE FIRE RESISTANCE EI 90 C/C (E 90)

≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS



PP PLASTIC PIPE FIRE RESISTANCE EI 30 U/C (E 30)

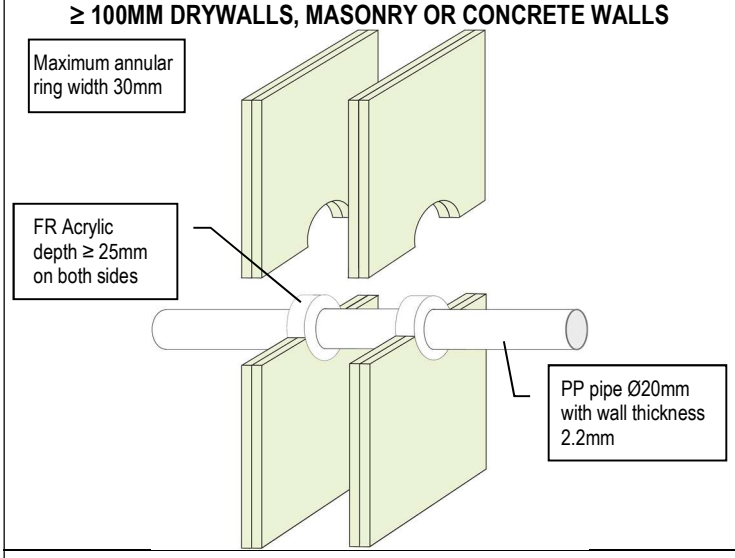
≥ 75MM DRYWALLS, MASONRY OR CONCRETE WALLS



Detail Drawings

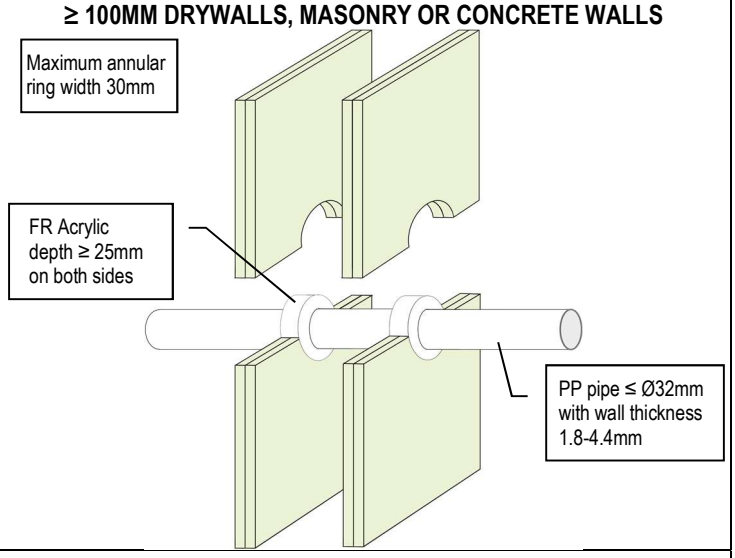
PP PLASTIC PIPE FIRE RESISTANCE EI 120 U/C (E 120)

≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS



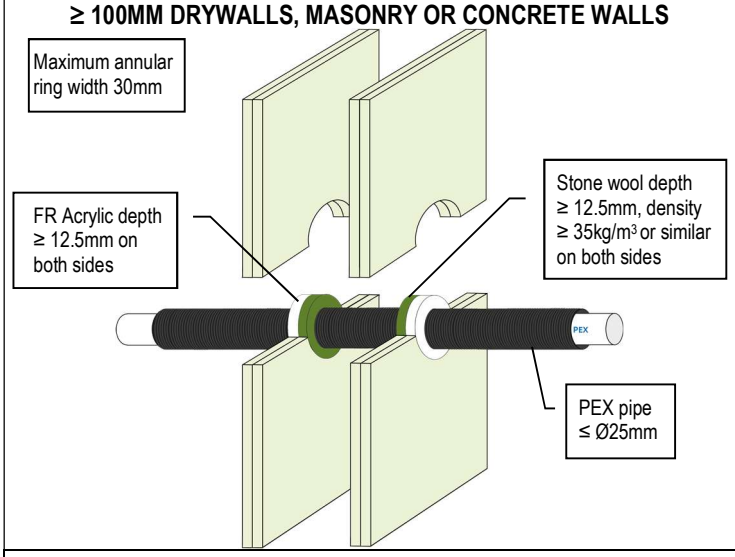
PP PLASTIC PIPE FIRE RESISTANCE EI 60 C/C (E 60)

≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS



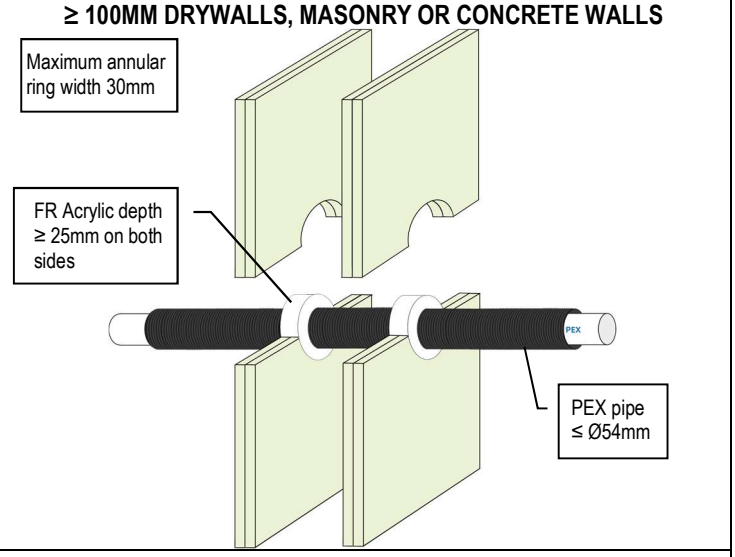
PEX PIPE-IN-PIPE SYSTEM FIRE RESISTANCE EI 120 C/C (E 120)

≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS



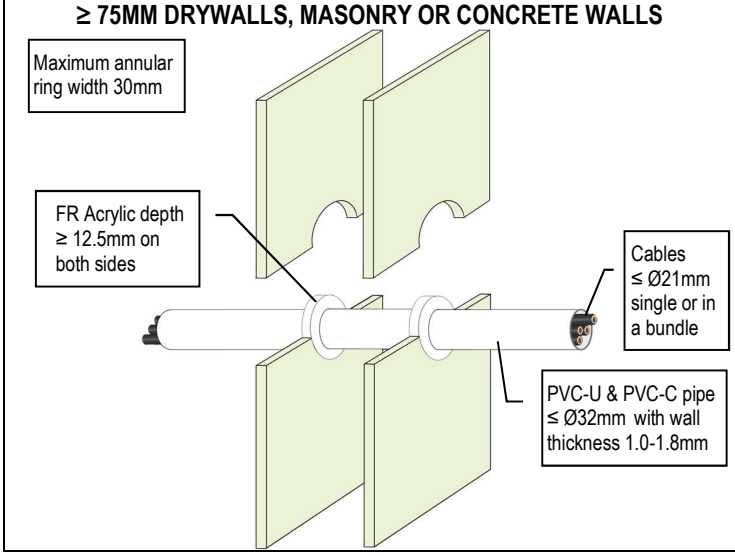
PEX PIPE-IN-PIPE SYSTEM FIRE RESISTANCE EI 45 C/C (E 60)

≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS



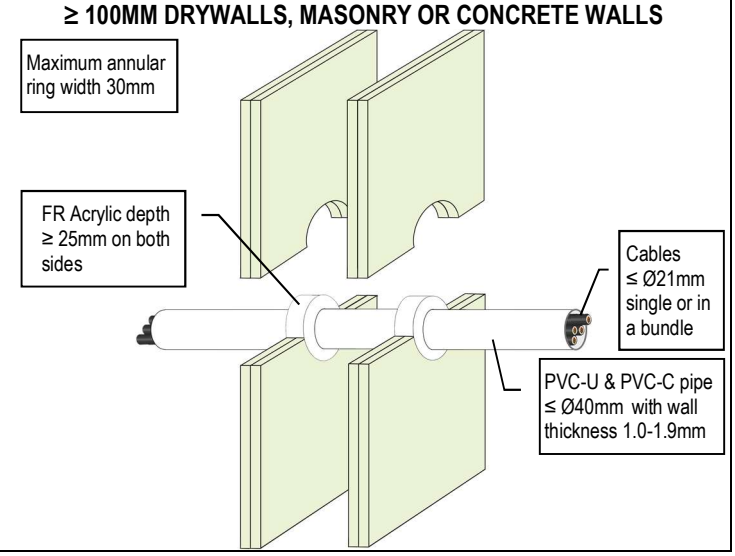
PVC CONDUIT FIRE RESISTANCE EI 45 U/C (E 60)

≥ 75MM DRYWALLS, MASONRY OR CONCRETE WALLS



PVC CONDUIT FIRE RESISTANCE EI 120 U/C (E 120)

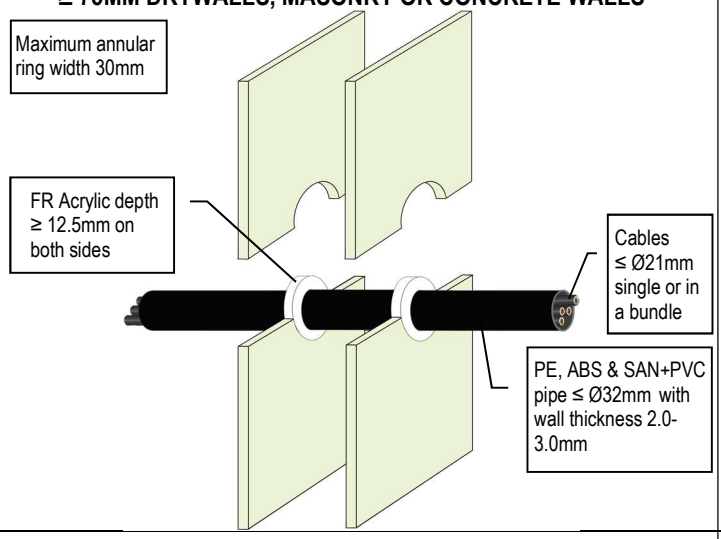
≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS



Detail Drawings

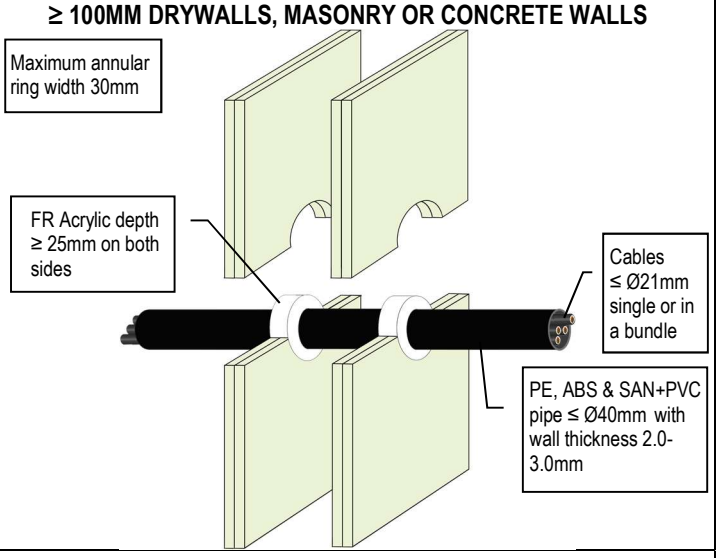
PE CONDUIT FIRE RESISTANCE EI 30 U/C (E 45)

≥ 75MM DRYWALLS, MASONRY OR CONCRETE WALLS



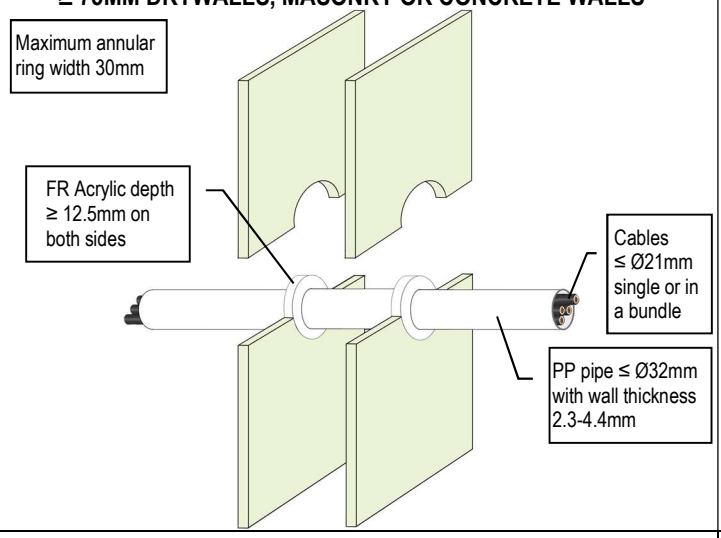
PE CONDUIT FIRE RESISTANCE EI 90 U/C (E 90)

≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS



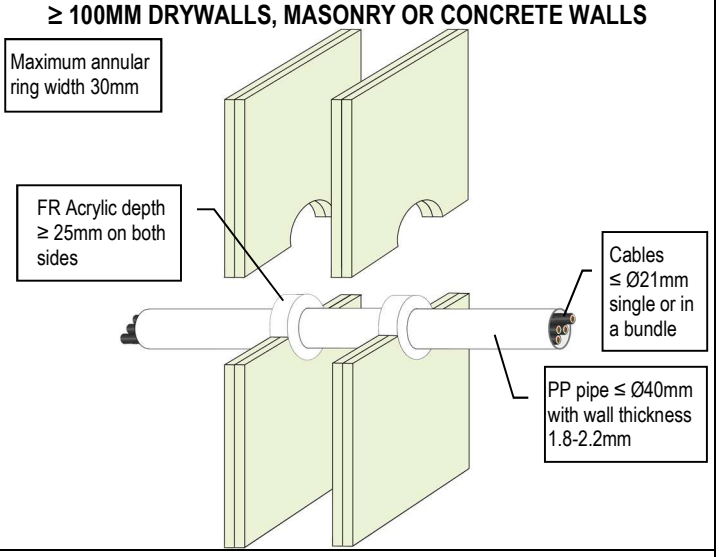
PP CONDUIT FIRE RESISTANCE EI 30 U/C (E 45)

≥ 75MM DRYWALLS, MASONRY OR CONCRETE WALLS



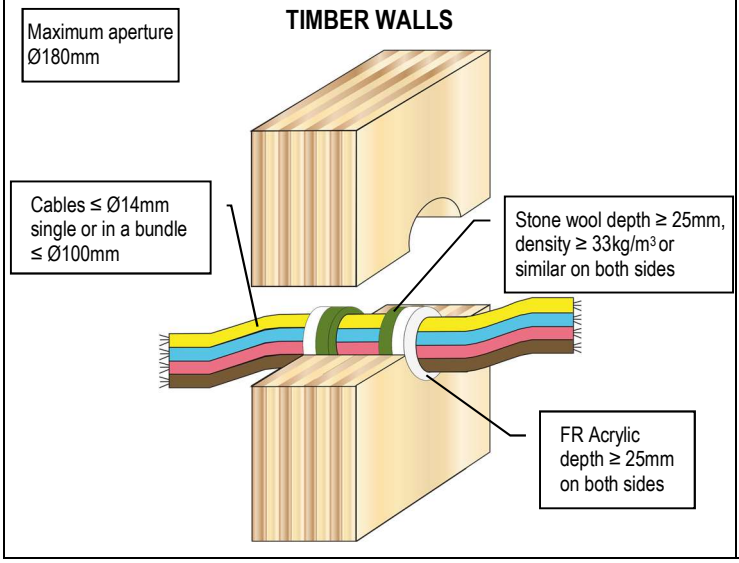
PP CONDUIT FIRE RESISTANCE EI 90 U/C (E 90)

≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS



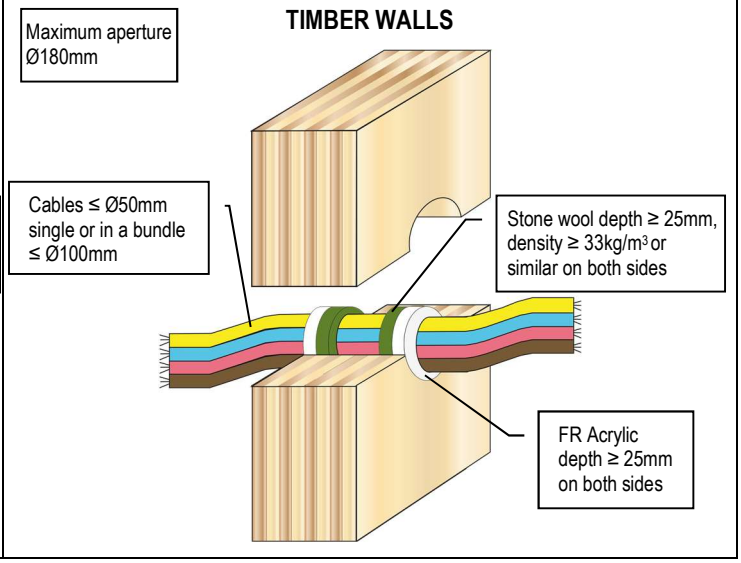
CABLES FIRE RESISTANCE EI 90 (E 90)

TIMBER WALLS



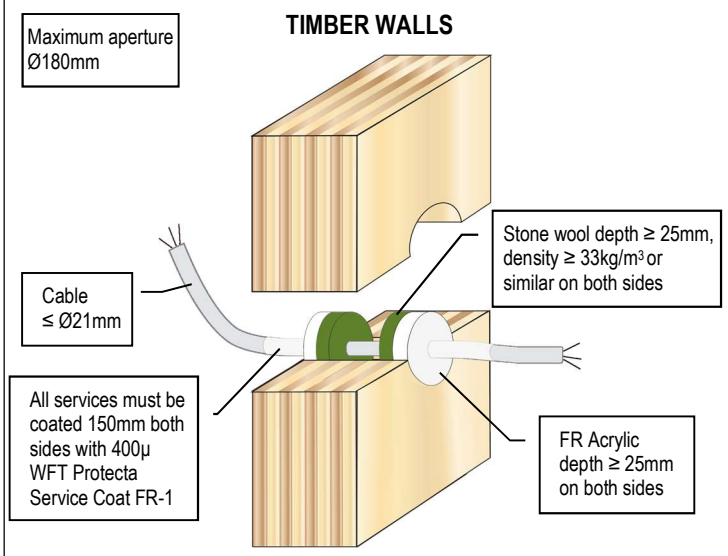
CABLES FIRE RESISTANCE EI 30 (E 90)

TIMBER WALLS

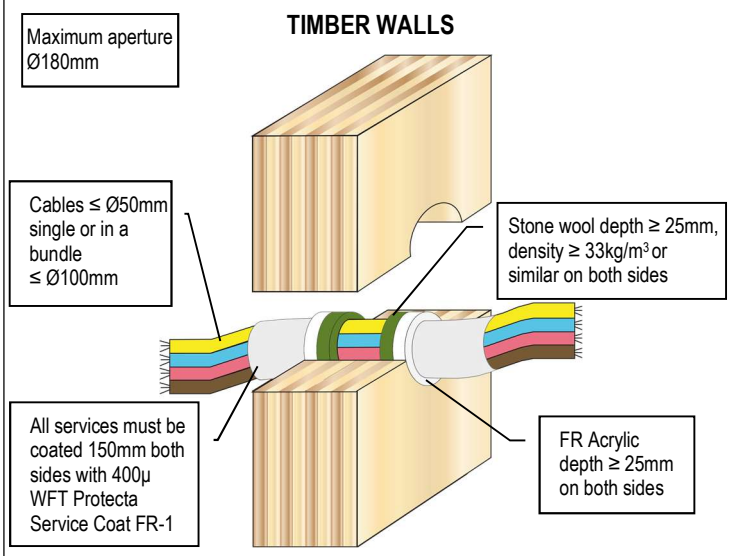


Detail Drawings

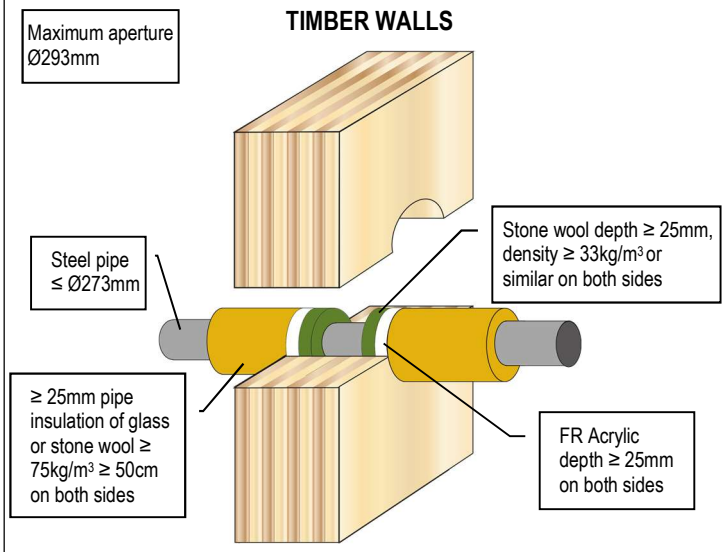
CABLE FIRE RESISTANCE EI 90 (E 90)



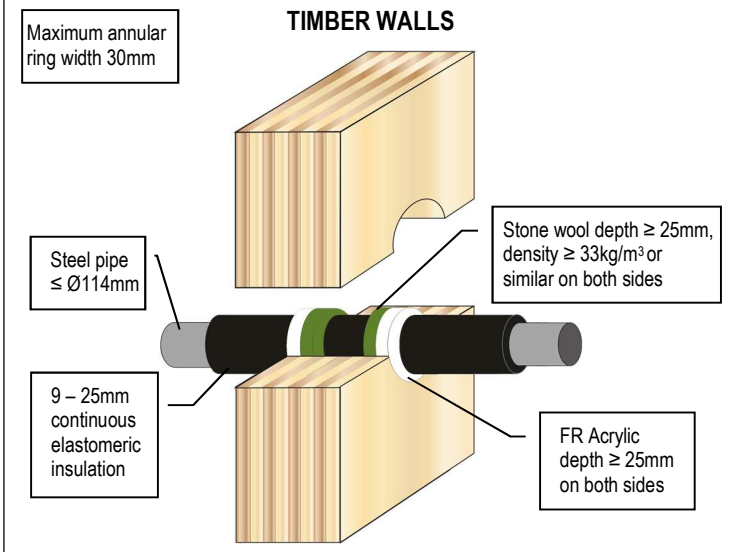
CABLES FIRE RESISTANCE EI 60 (E 90)



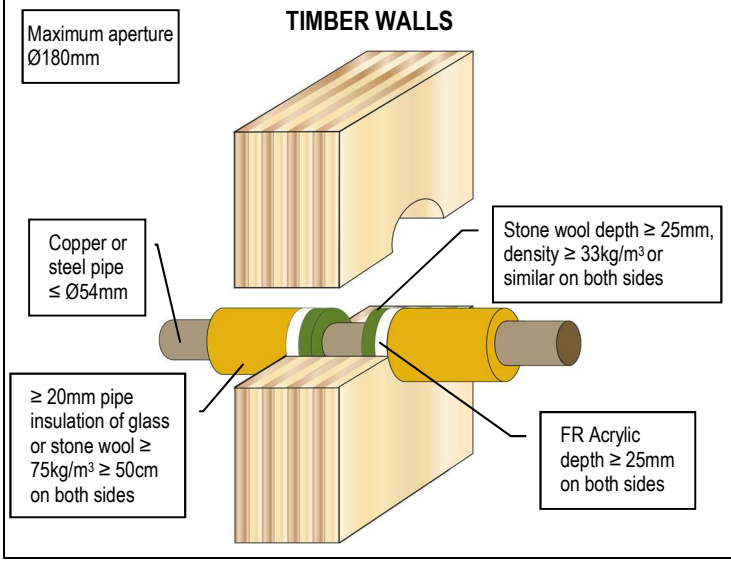
STEEL PIPE FIRE RESISTANCE EI 60 C/C (E 90)



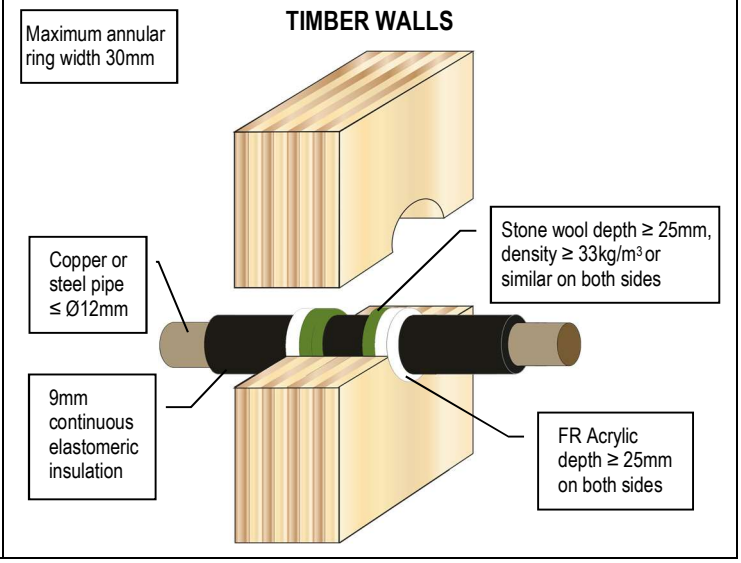
STEEL PIPE FIRE RESISTANCE EI 30 C/U (E 30)



COPPER OR STEEL PIPE FIRE RESISTANCE EI 60 C/C (E 90)

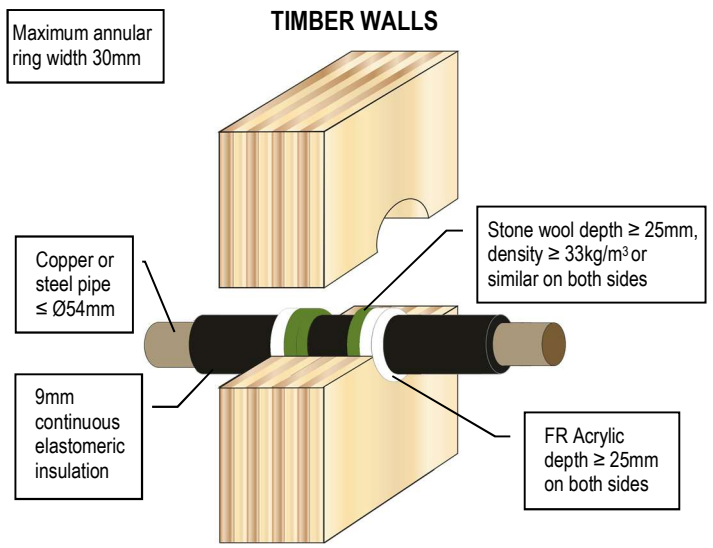


COPPER OR STEEL PIPE FIRE RESISTANCE EI 60 C/C (E 90)

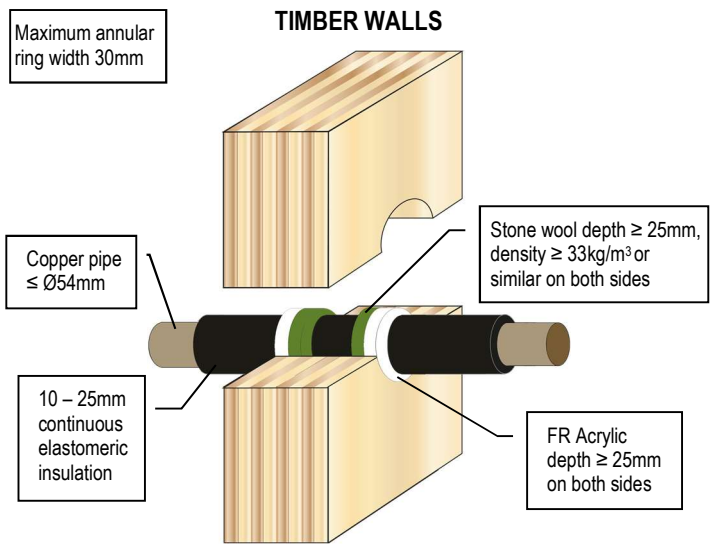


Detail Drawings

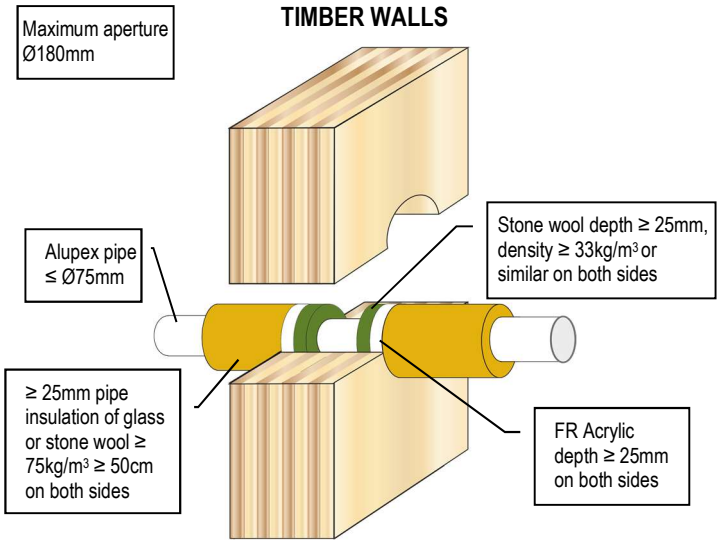
COPPER OR STEEL PIPE FIRE RESISTANCE EI 30 C/C (E 60)



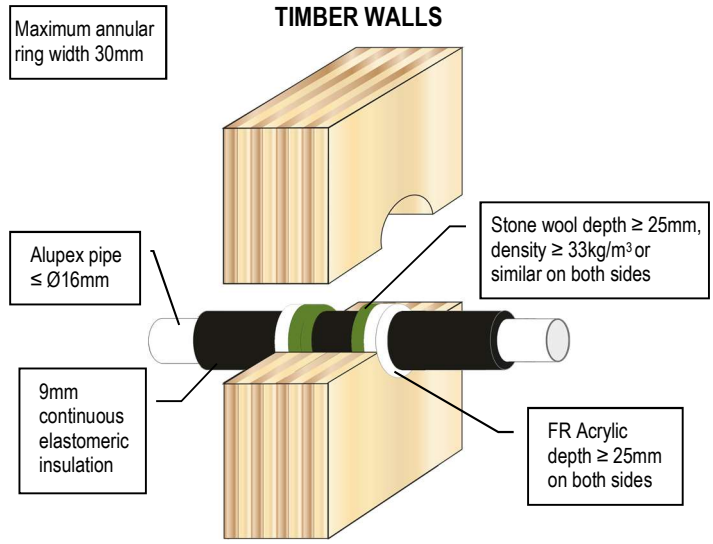
COPPER PIPE FIRE RESISTANCE EI 20 C/C (E 30)



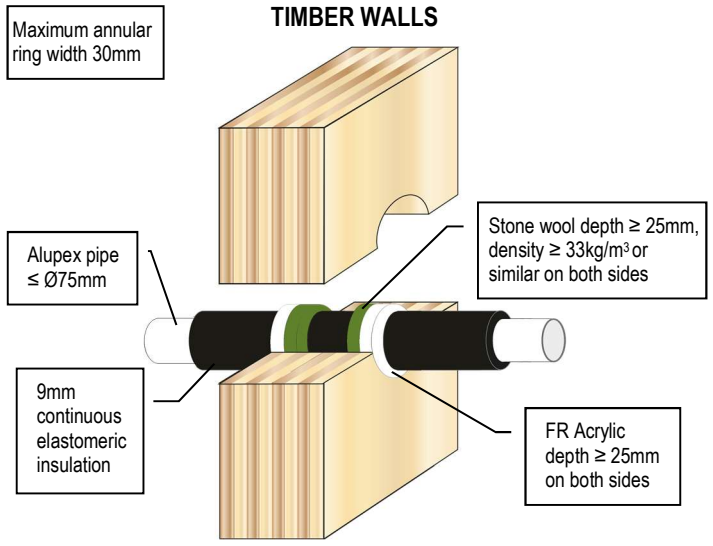
ALUPEX PIPE FIRE RESISTANCE EI 90 C/C (E 90)



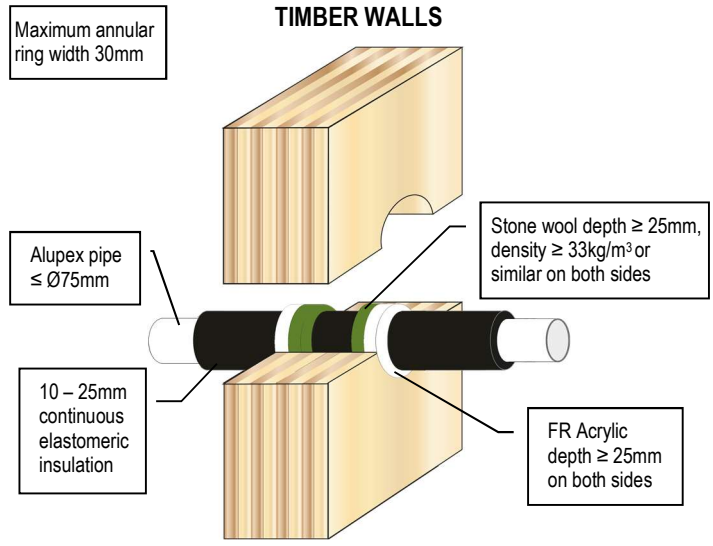
ALUPEX PIPE FIRE RESISTANCE EI 90 C/C (E 90)



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

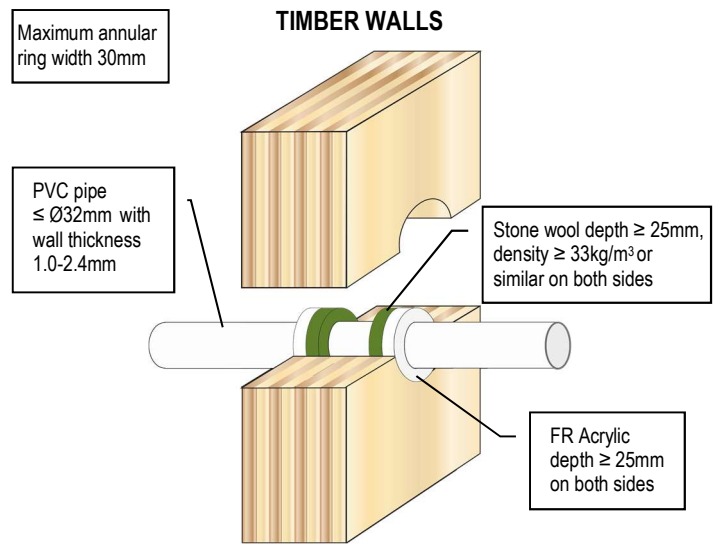


ALUPEX PIPE FIRE RESISTANCE EI 45 C/C (E 45)

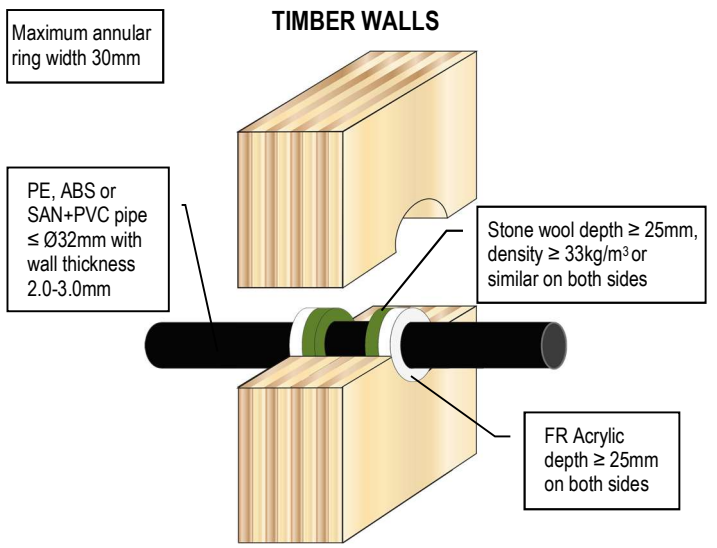


Detail Drawings

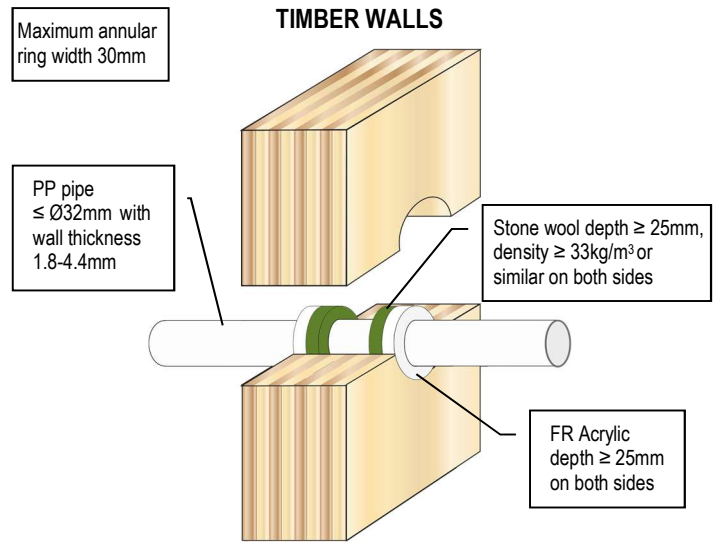
PVC PIPE FIRE RESISTANCE EI 90 U/C (E 90)



PE PIPE FIRE RESISTANCE EI 90 U/C (E 90)



PP PIPE FIRE RESISTANCE EI 90 U/C (E 90)



PEX PIPE-IN-PIPE SYSTEM FIRE RESISTANCE EI 90 C/C (E 90)