

PROTECTA® FR ACRYLIC 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 Dampers' 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.

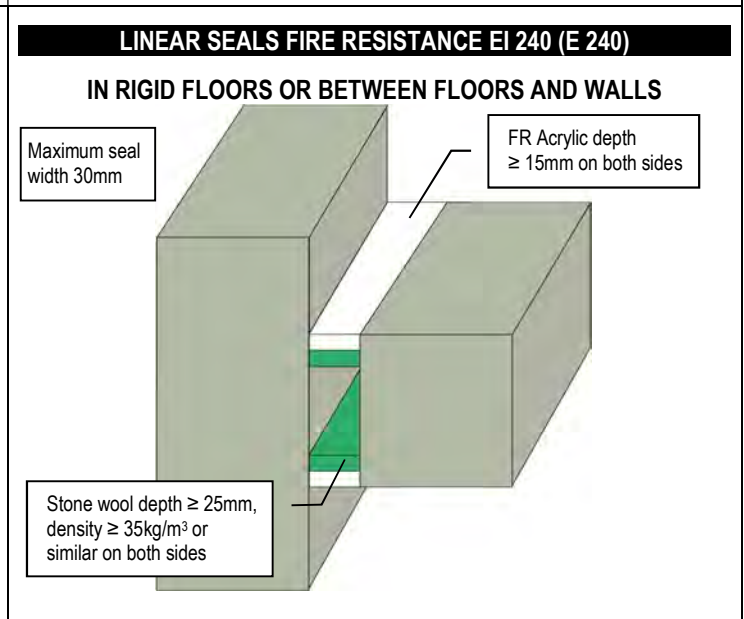
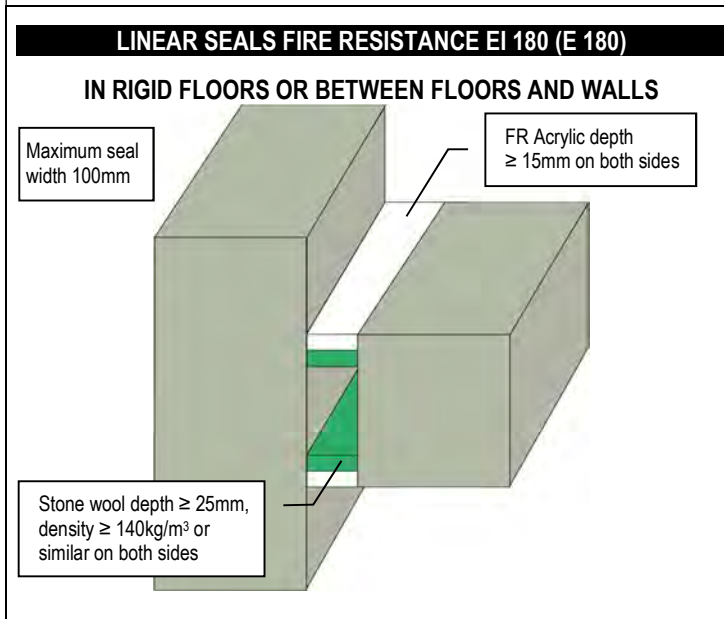
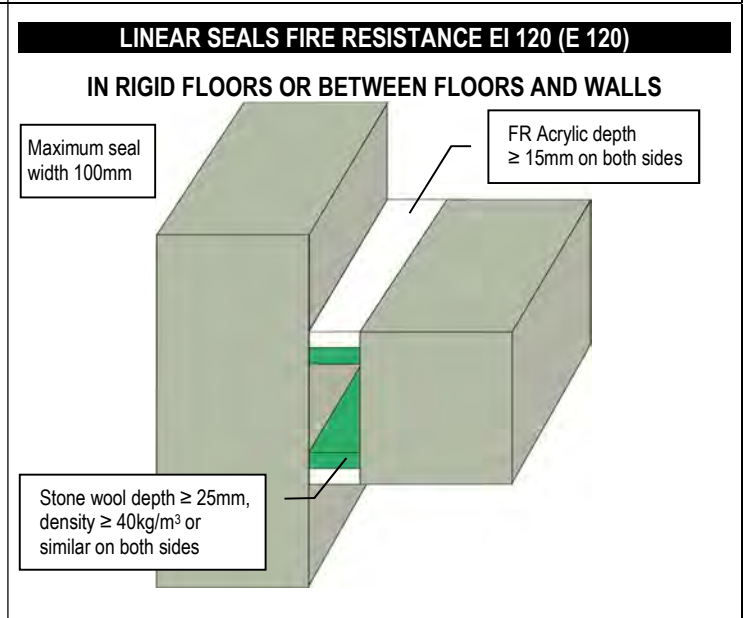
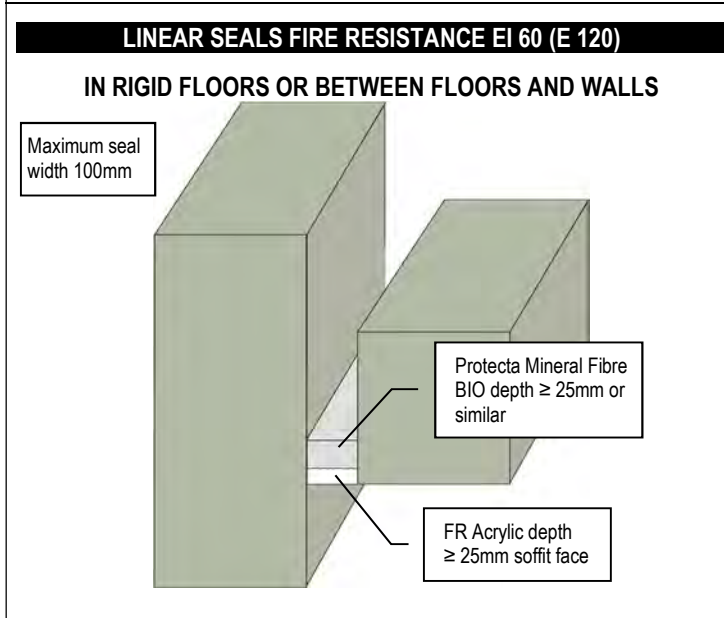
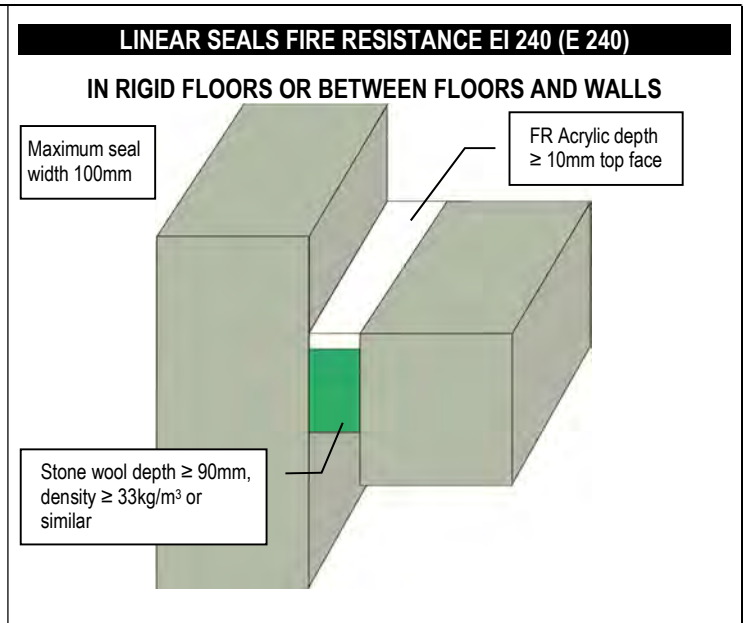
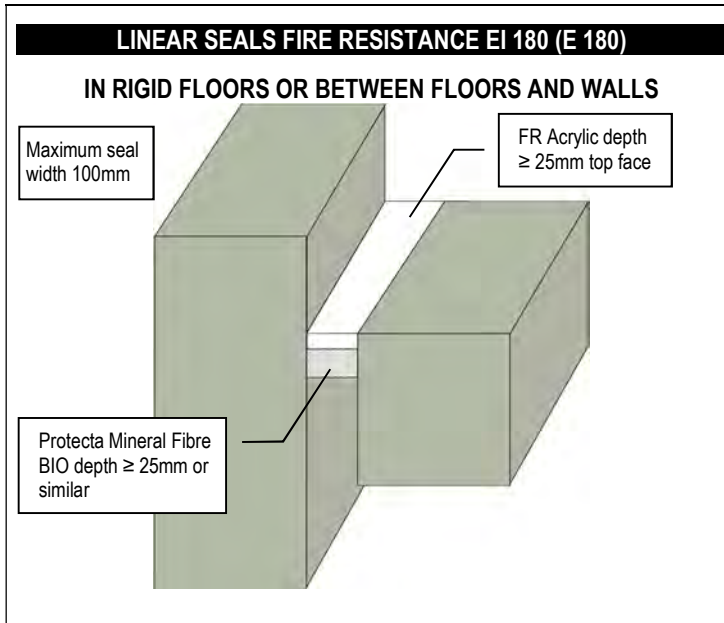
Supporting constructions: Flexible walls must have a minimum thickness of 75mm and comprise steel studs or timber studs*) lined on both faces with minimum 1 layer of 12.5mm thick boards. Timber walls must have a minimum thickness of 100mm and comprise solid wood or cross-laminated timber. Rigid walls must have a minimum thickness of 75mm and comprise concrete, aerated concrete or masonry, with a minimum density of 650 kg/m³. 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/m³. 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.

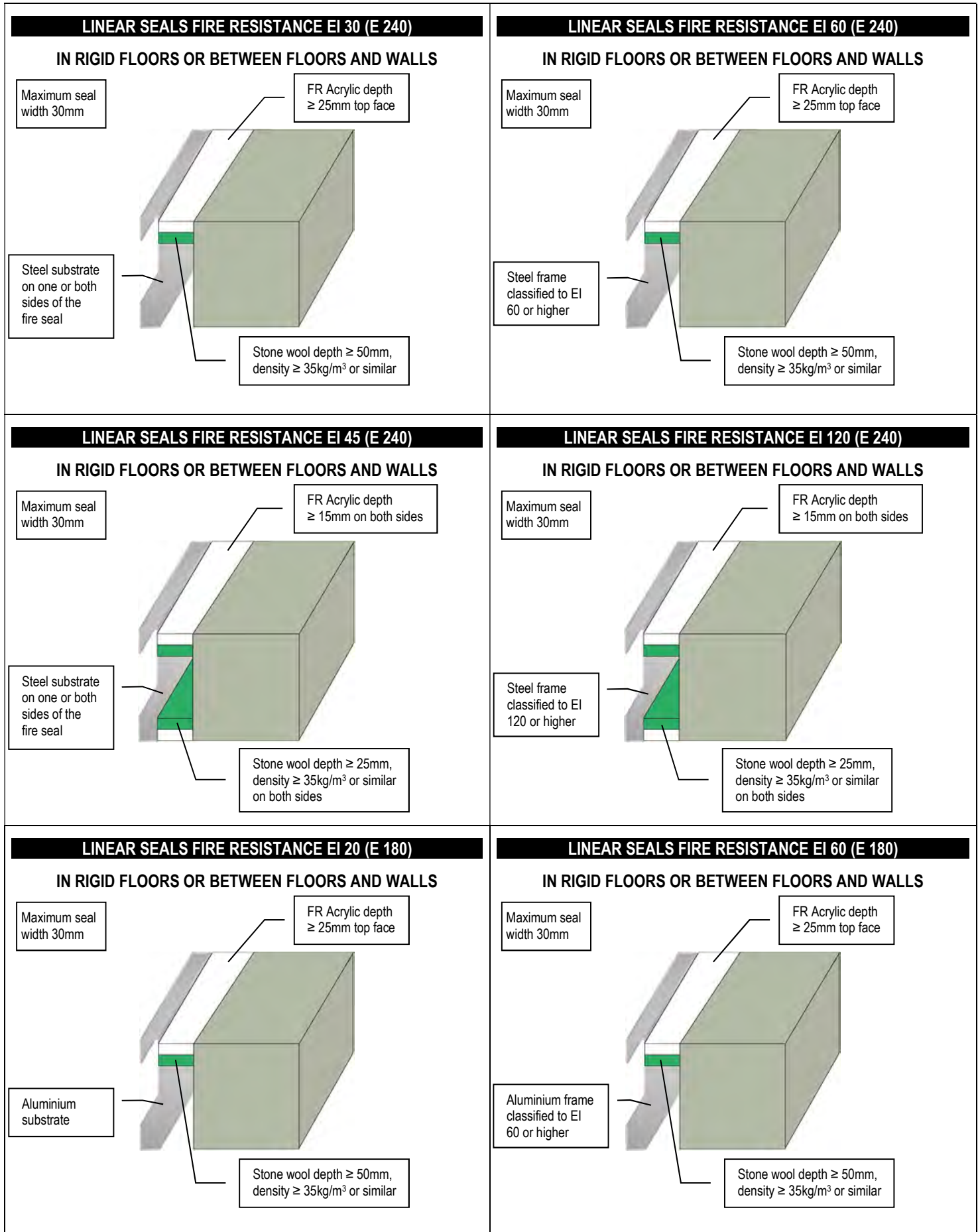
*) Timber studs: no part of the penetration seal may be closer than 100mm to a stud, and minimum 100mm of insulation of class A1 or A2 according to EN 13501-1 must be provided within the cavity between the penetration seal and the stud. In linear seals, there is no minimum distance and insulation required.

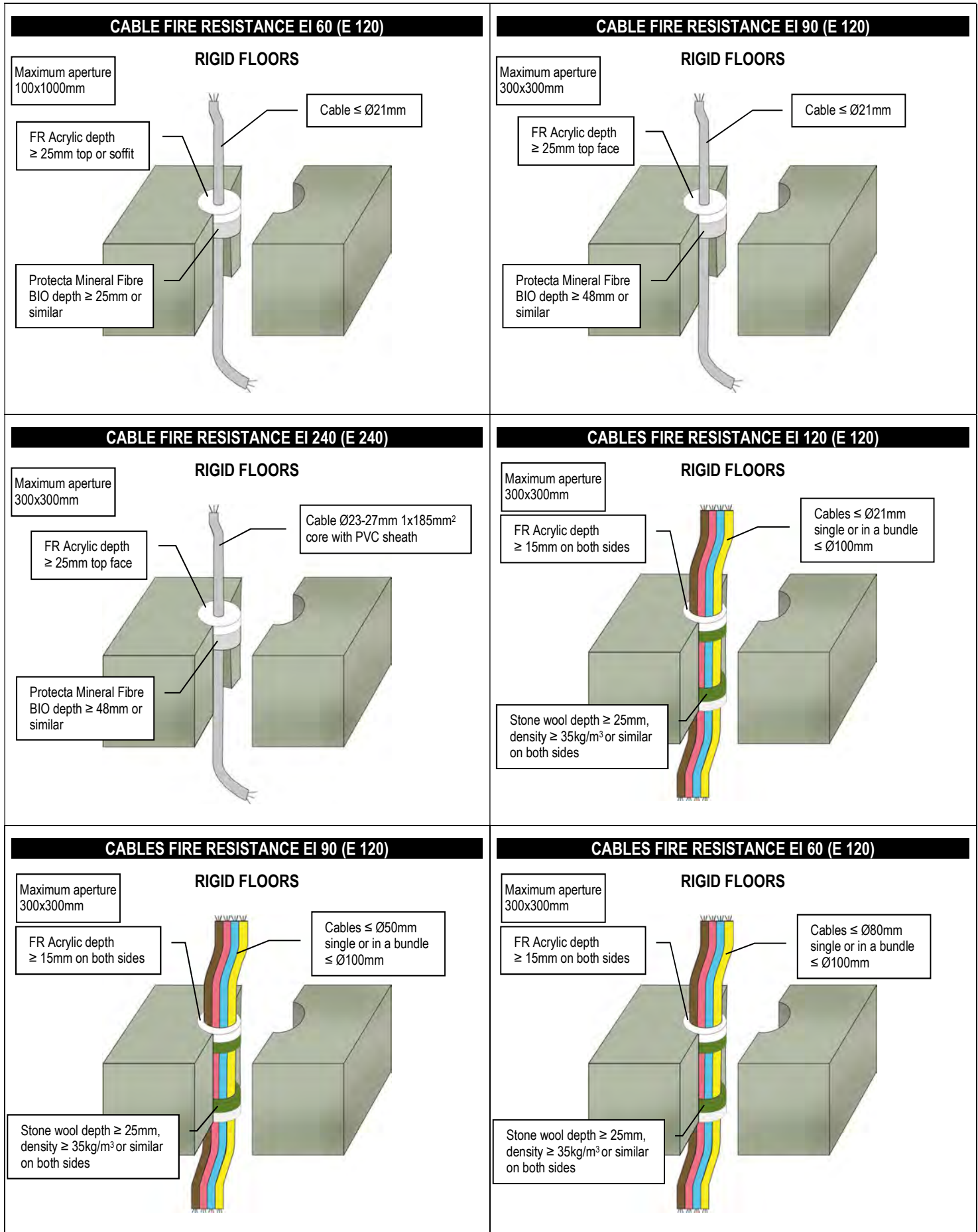


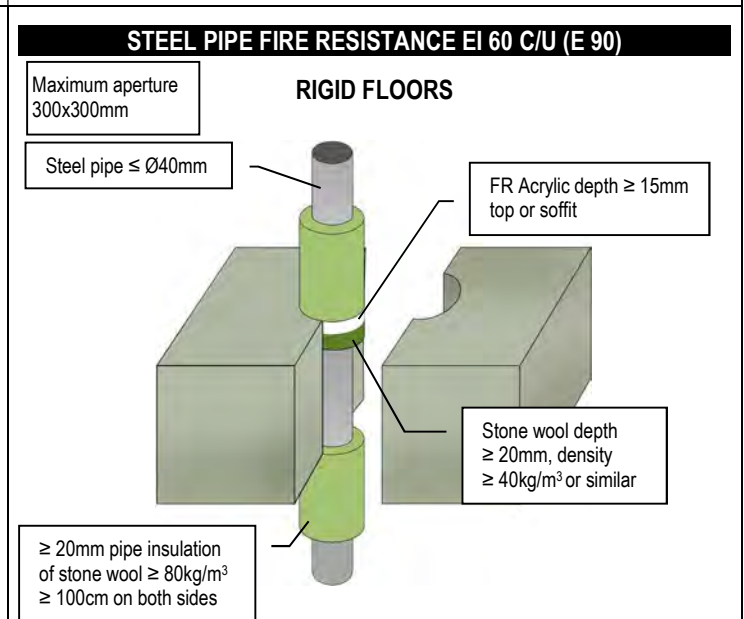
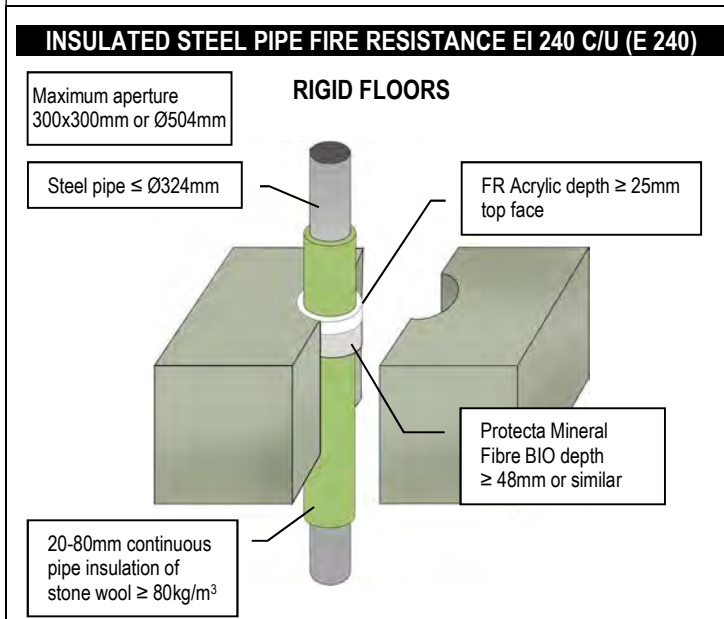
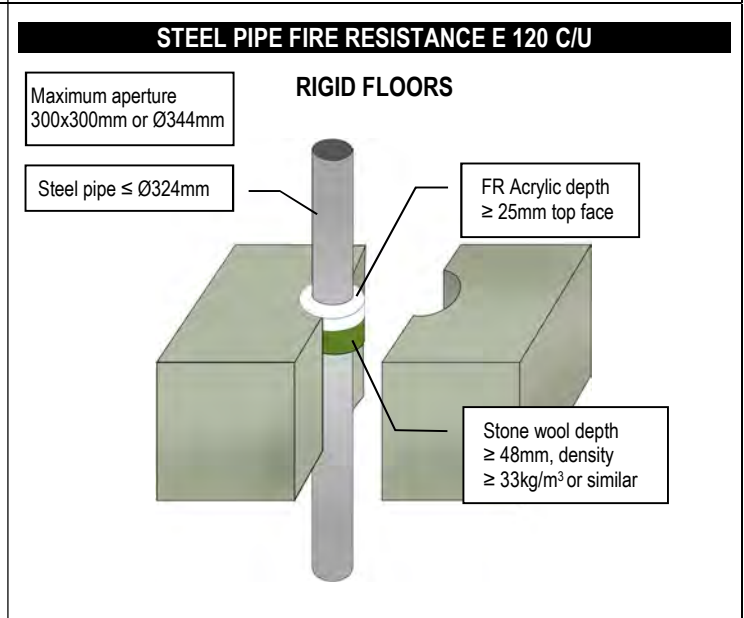
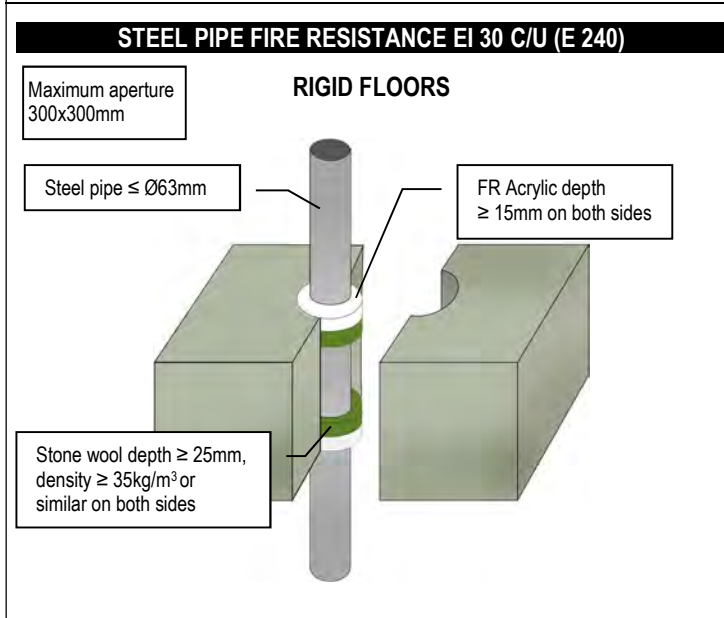
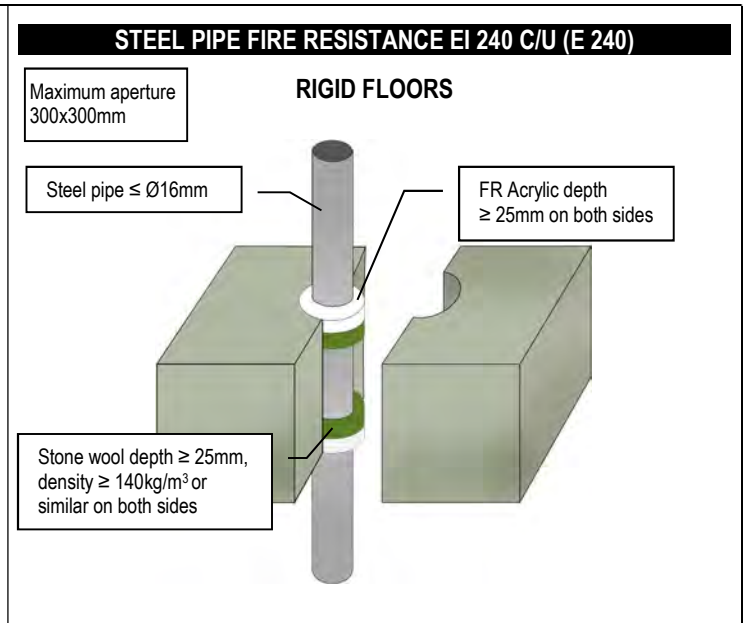
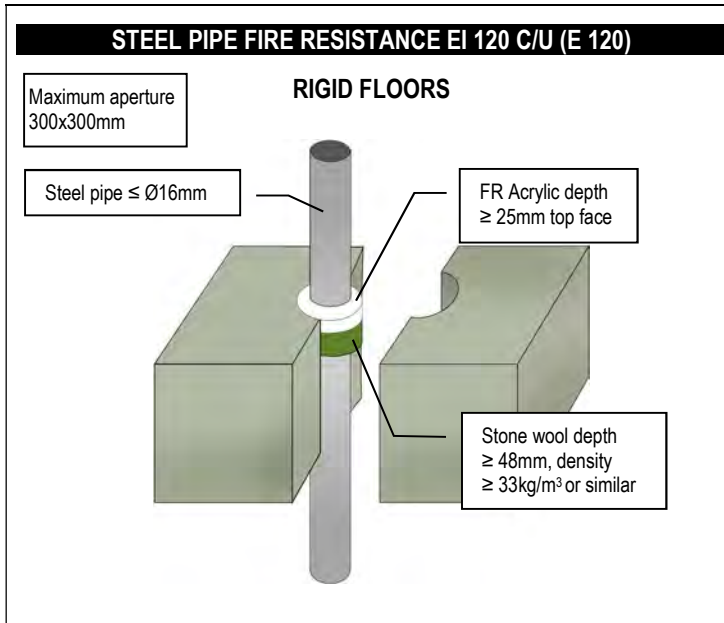
INSTALLATION

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. Where single sided top face seals are described, these can also be used in composite floors (e.g., concrete filled, steel trapezoidal decking).
7. An aperture with or without penetrating services, can include a steel or plastic sleeve casted or friction fitted within rigid constructions. Plastic sleeves should have a maximum wall thickness of 14.6 mm.
8. When installing any backing material, cut this slightly oversize and insert into the gap ensuring a tight friction fit. Ensure correct depth is achieved.
9. 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.
10. Apply the sealant generously to prevent air bubbles. Finish the bead with a moist spatula, pallet knife or brush.
11. Protecta® FR Acrylic can be over-painted with most emulsion or alkyd (gloss) paints.

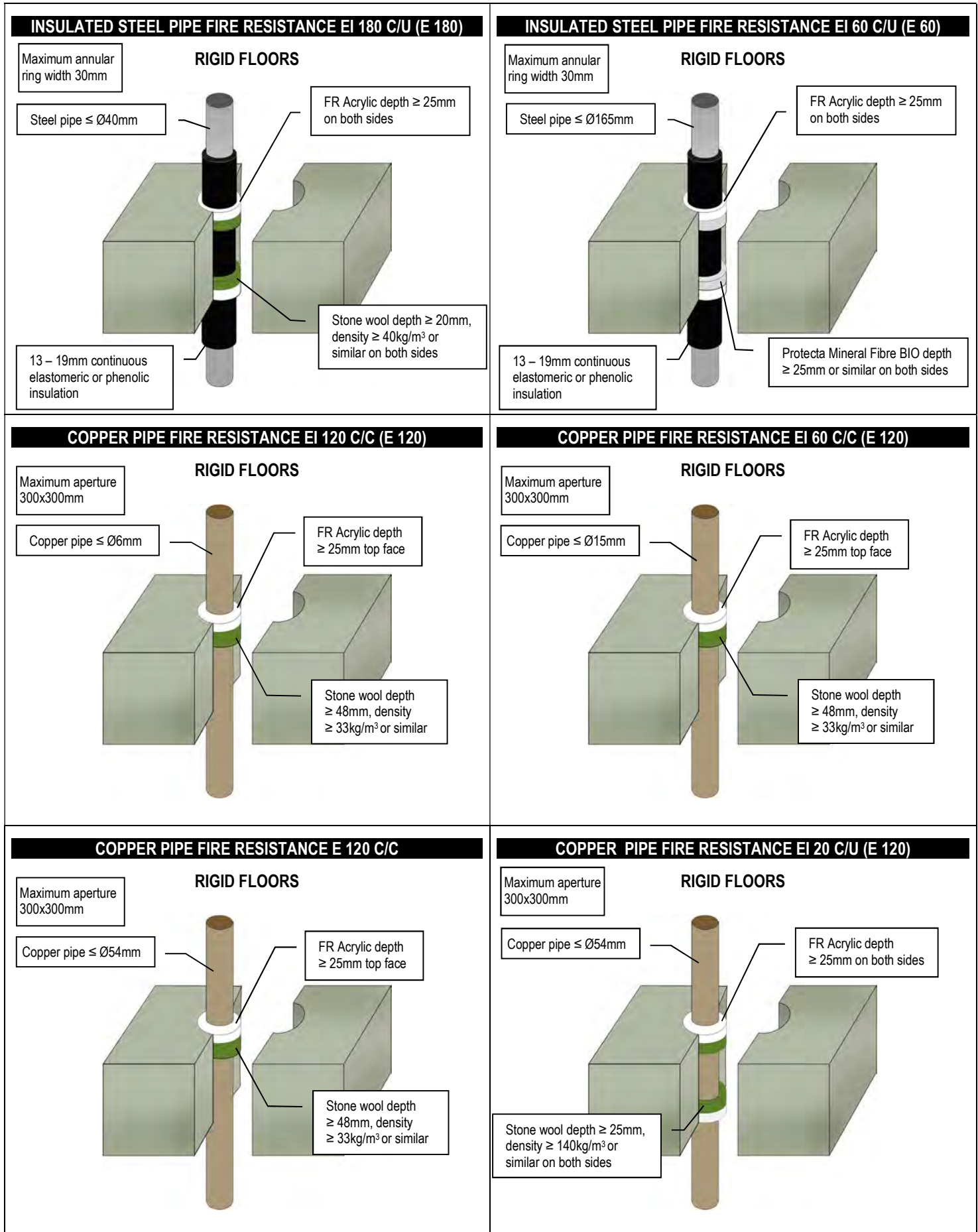


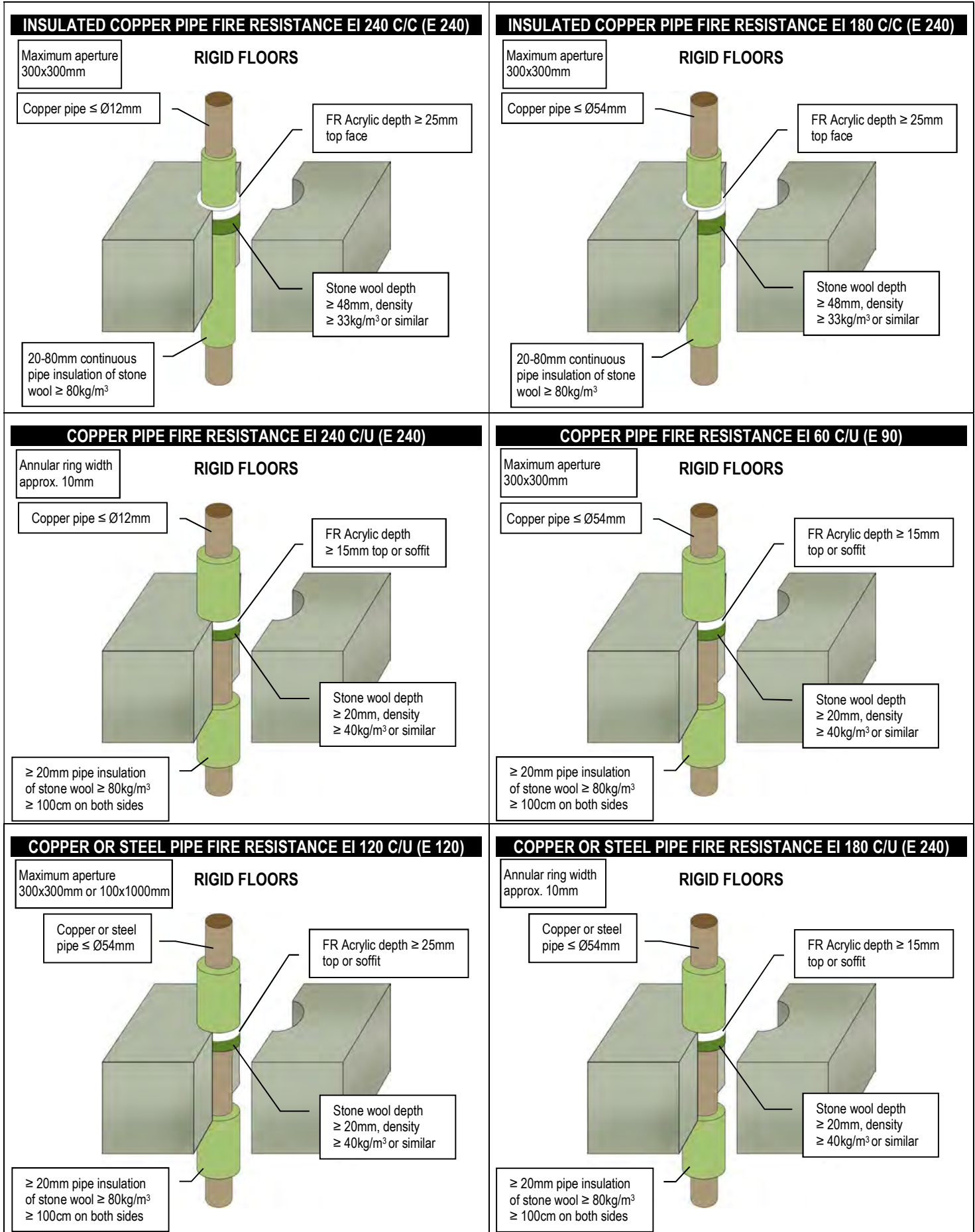


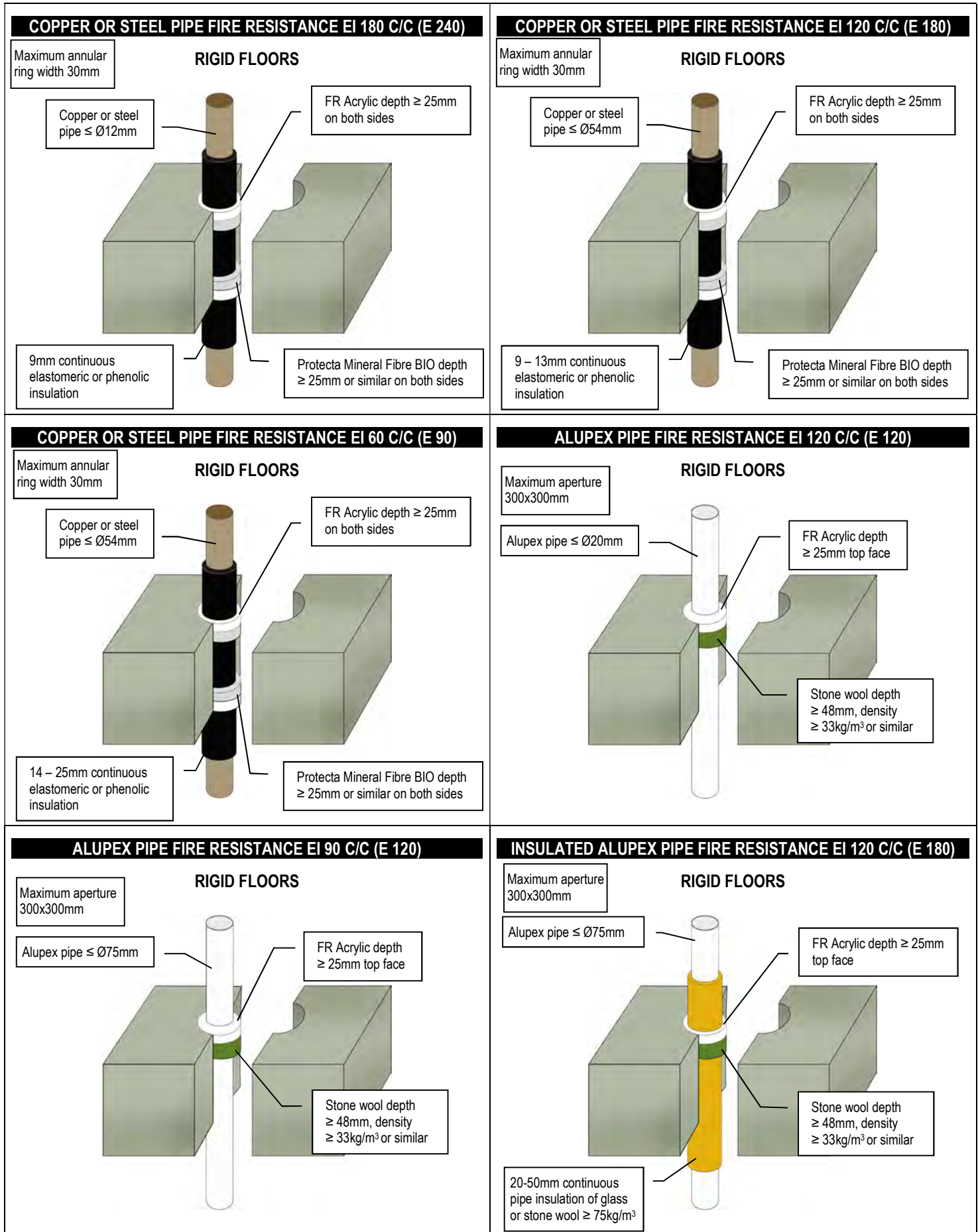


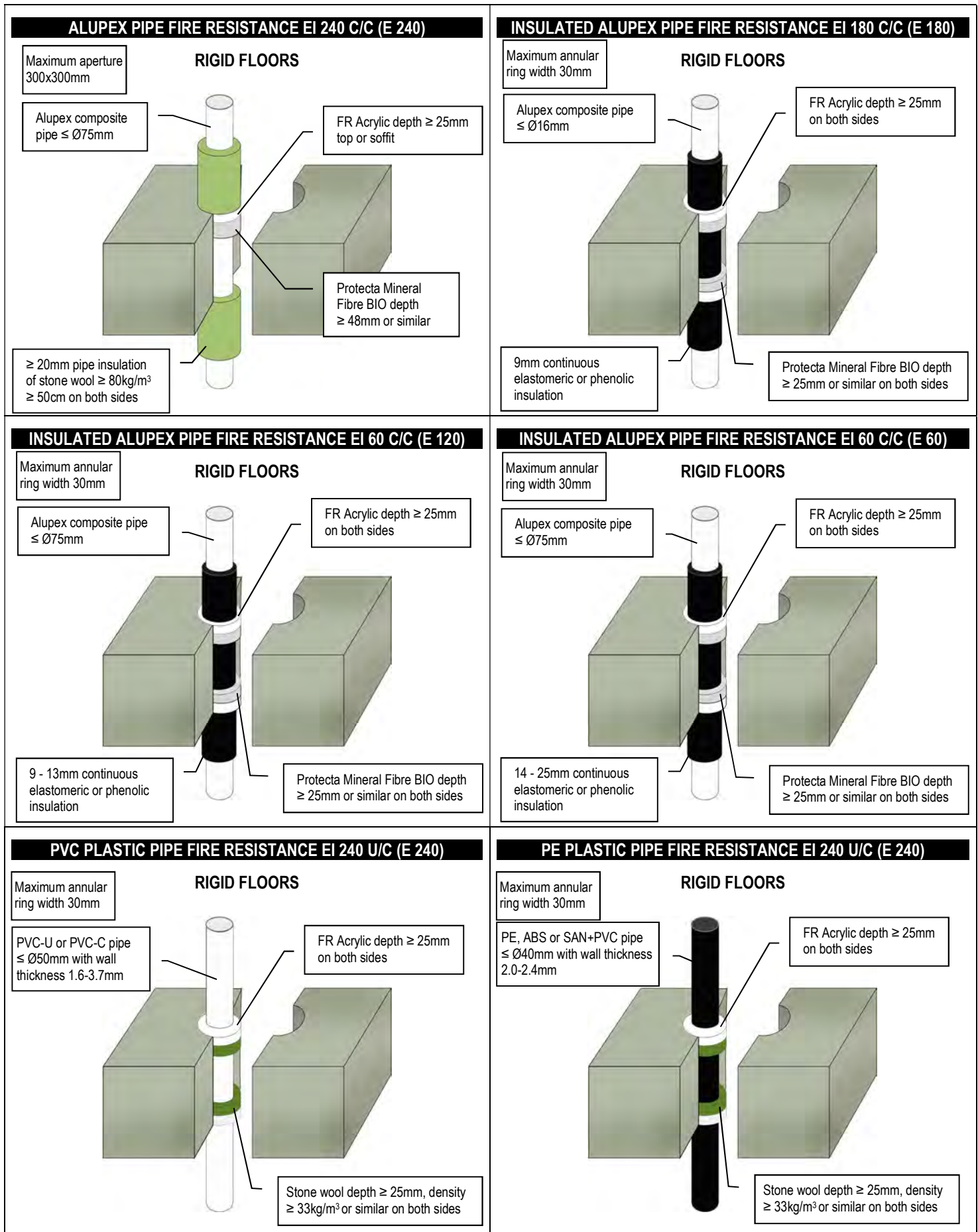


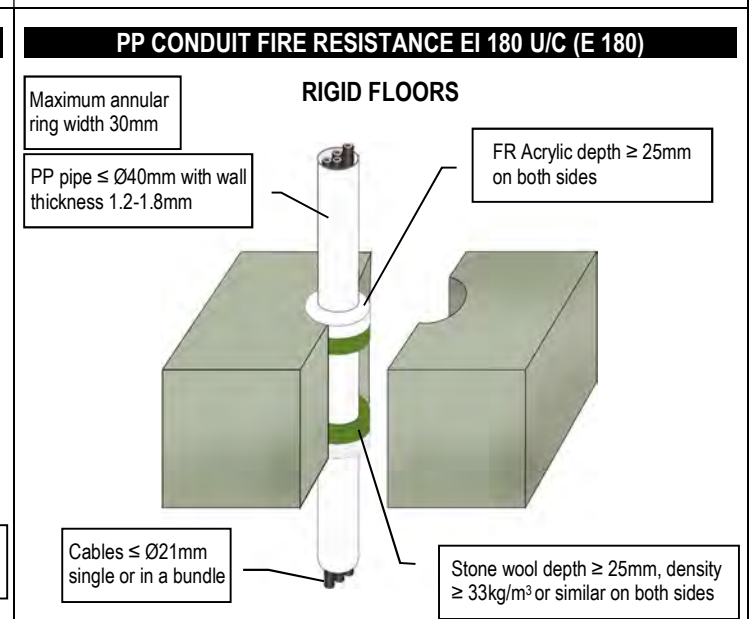
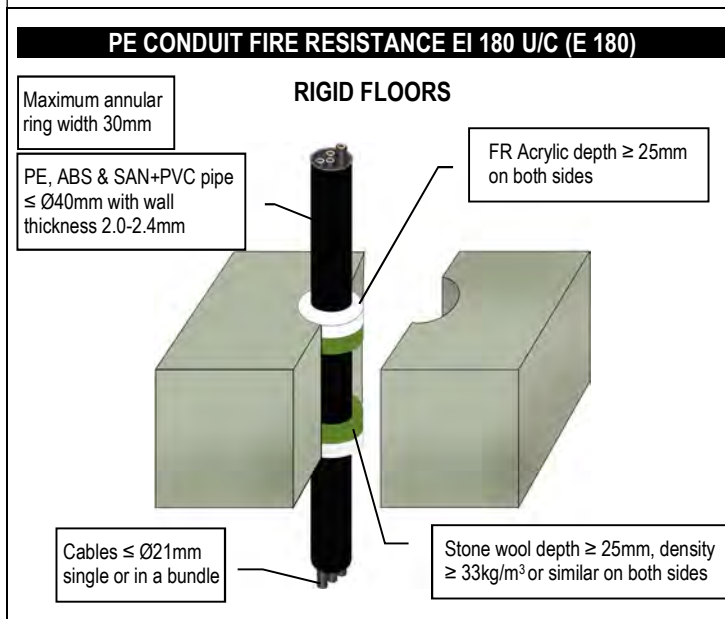
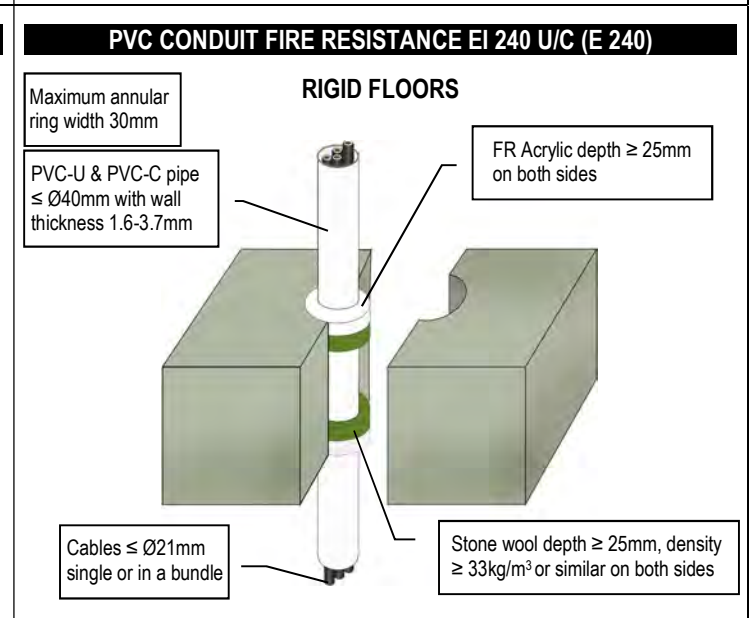
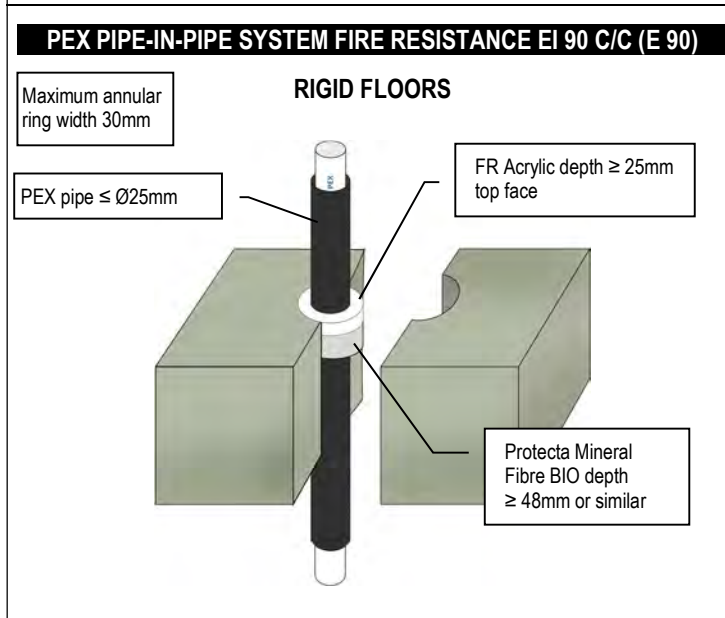
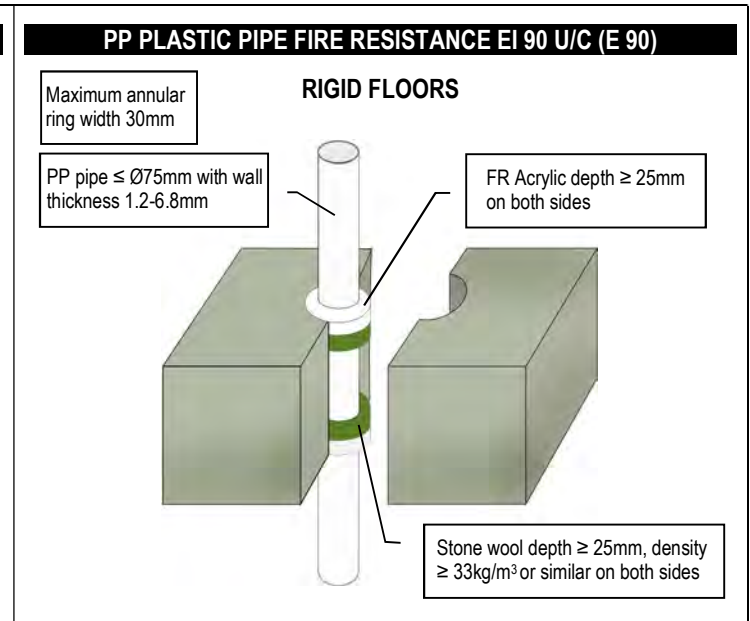
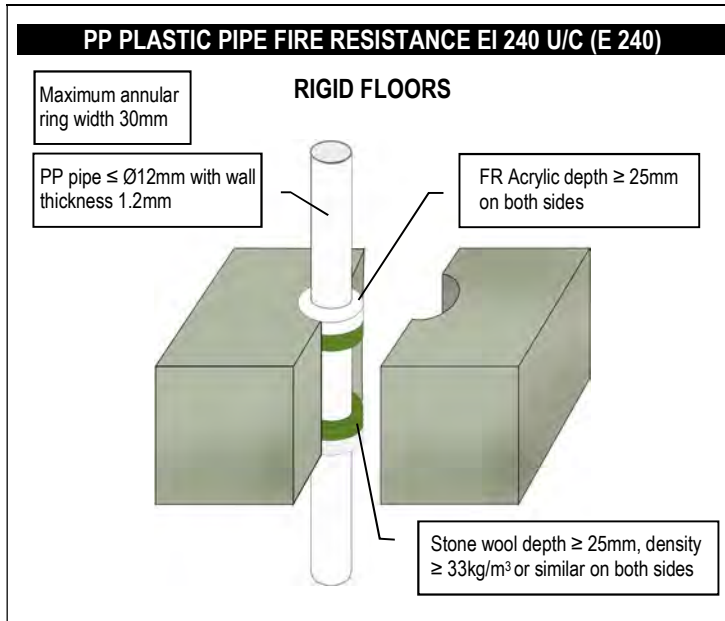
<p>STEEL PIPE FIRE RESISTANCE EI 90 C/U (E 120)</p> <p>Maximum aperture 300x300mm or 100x1000mm</p> <p>RIGID FLOORS</p> <p>Steel pipe ≤ Ø40mm</p> <p>FR Acrylic depth ≥ 25mm top or soffit</p> <p>Stone wool depth ≥ 20mm, density ≥ 40kg/m³ or similar</p> <p>≥ 20mm pipe insulation of stone wool ≥ 80kg/m³ ≥ 100cm on both sides</p>	<p>STEEL PIPE FIRE RESISTANCE EI 240 C/U (E 240)</p> <p>Annular ring width approx. 10mm</p> <p>RIGID FLOORS</p> <p>Steel pipe ≤ Ø40mm</p> <p>FR Acrylic depth ≥ 15mm top or soffit</p> <p>Stone wool depth ≥ 20mm, density ≥ 40kg/m³ or similar</p> <p>≥ 20mm pipe insulation of stone wool ≥ 80kg/m³ ≥ 100cm on both sides</p>
<p>STEEL PIPE FIRE RESISTANCE EI 60 C/U (E 90)</p> <p>Maximum aperture 300x300mm</p> <p>RIGID FLOORS</p> <p>Steel pipe ≤ Ø219mm</p> <p>FR Acrylic depth ≥ 15mm top or soffit</p> <p>Stone wool depth ≥ 20mm, density ≥ 40kg/m³ or similar</p> <p>≥ 30mm pipe insulation of stone wool ≥ 80kg/m³ ≥ 100cm on both sides</p>	<p>STEEL PIPE FIRE RESISTANCE EI 90 C/U (E 120)</p> <p>Maximum aperture 300x300mm or 100x1000mm</p> <p>RIGID FLOORS</p> <p>Steel pipe ≤ Ø219mm</p> <p>FR Acrylic depth ≥ 25mm top or soffit</p> <p>Stone wool depth ≥ 20mm, density ≥ 40kg/m³ or similar</p> <p>≥ 30mm pipe insulation of stone wool ≥ 80kg/m³ ≥ 100cm on both sides</p>
<p>STEEL PIPE FIRE RESISTANCE EI 90 C/U (E 240)</p> <p>Annular ring width approx. 10mm</p> <p>RIGID FLOORS</p> <p>Steel pipe ≤ Ø219mm</p> <p>FR Acrylic depth ≥ 15mm top or soffit</p> <p>Stone wool depth ≥ 20mm, density ≥ 40kg/m³ or similar</p> <p>≥ 30mm pipe insulation of stone wool ≥ 80kg/m³ ≥ 100cm on both sides</p>	<p>STEEL PIPE FIRE RESISTANCE EI 120 C/U (E 240)</p> <p>Maximum aperture 300x300mm or 100x1000mm</p> <p>RIGID FLOORS</p> <p>Steel pipe ≤ Ø219mm</p> <p>FR Acrylic depth ≥ 15mm on both sides</p> <p>Stone wool depth ≥ 20mm, density ≥ 40kg/m³ or similar on both sides</p> <p>≥ 30mm pipe insulation of stone wool ≥ 80kg/m³ or similar, ≥ 100cm on both sides</p>

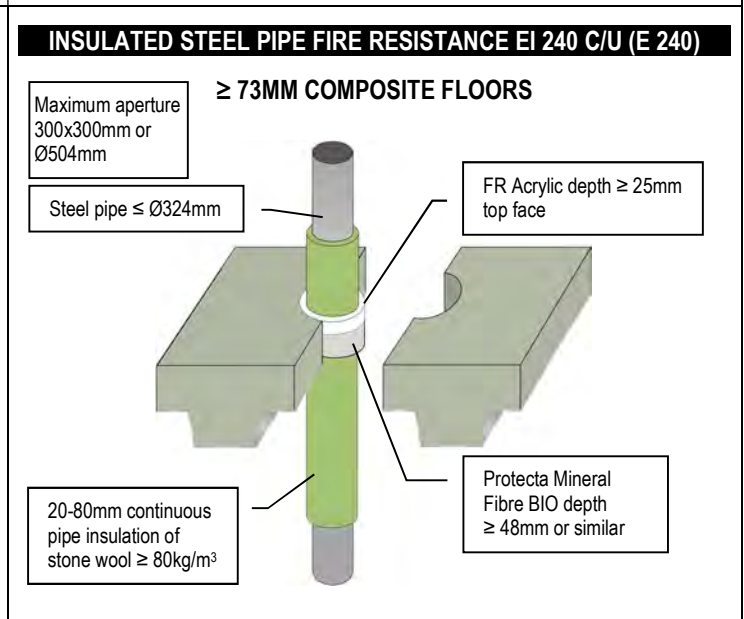
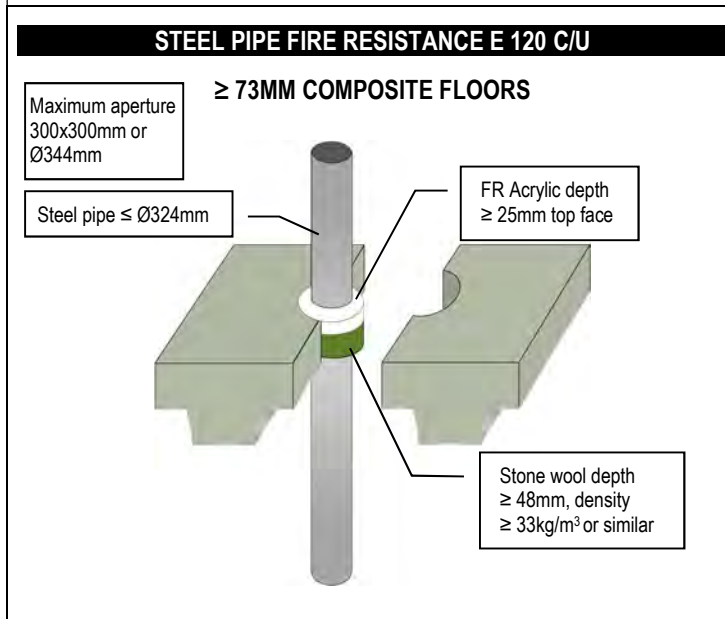
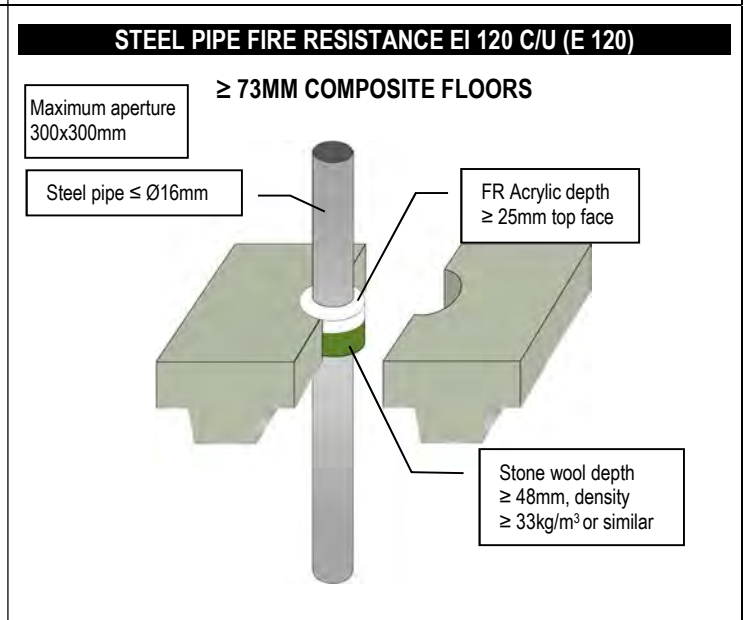
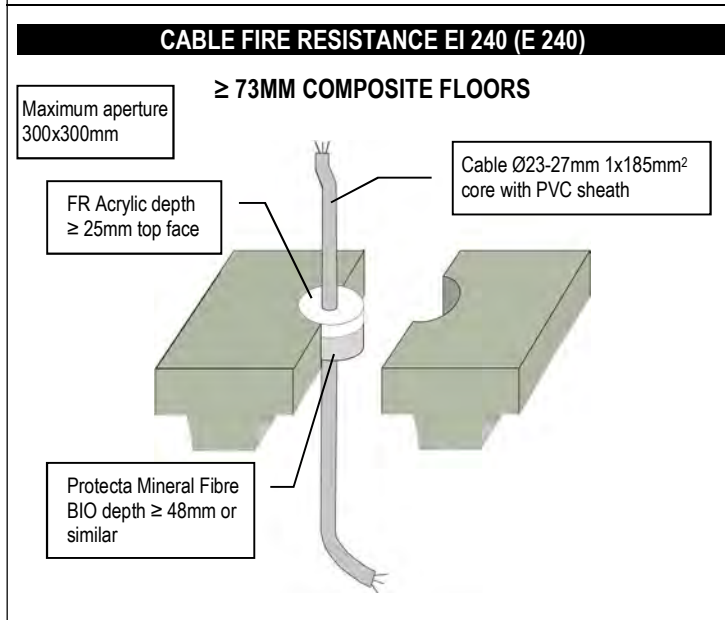
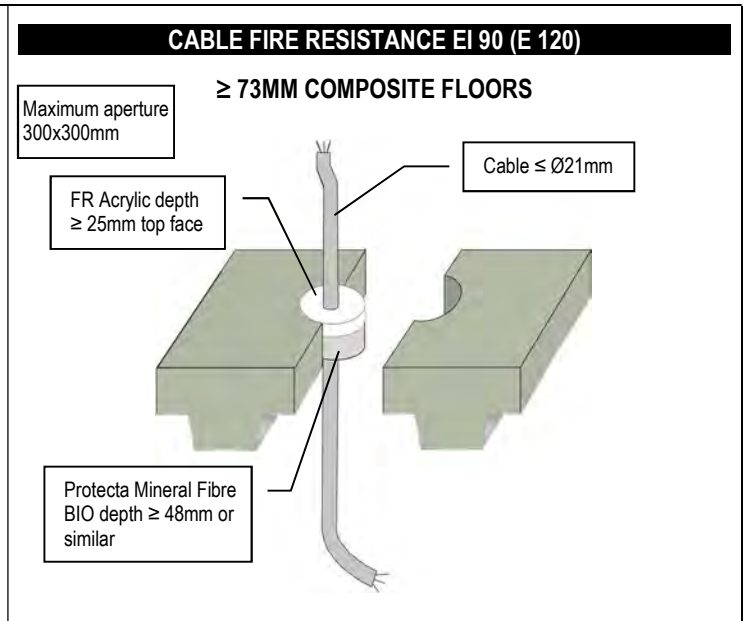
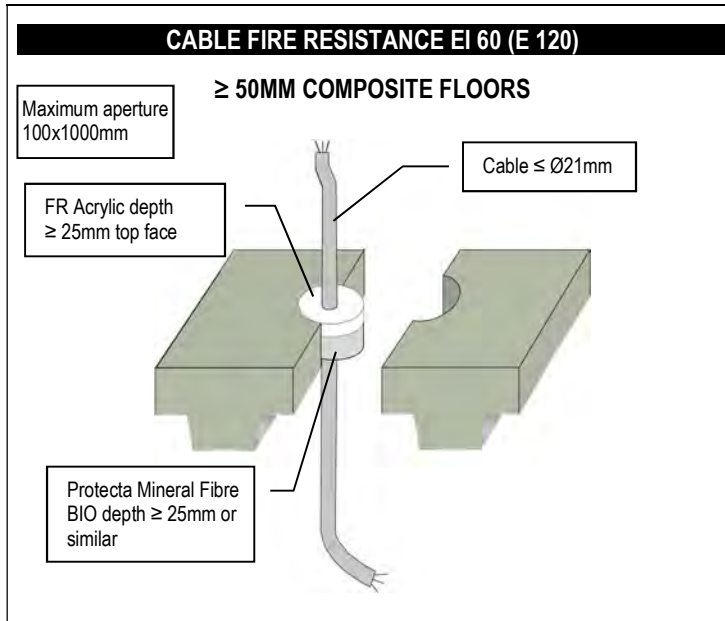


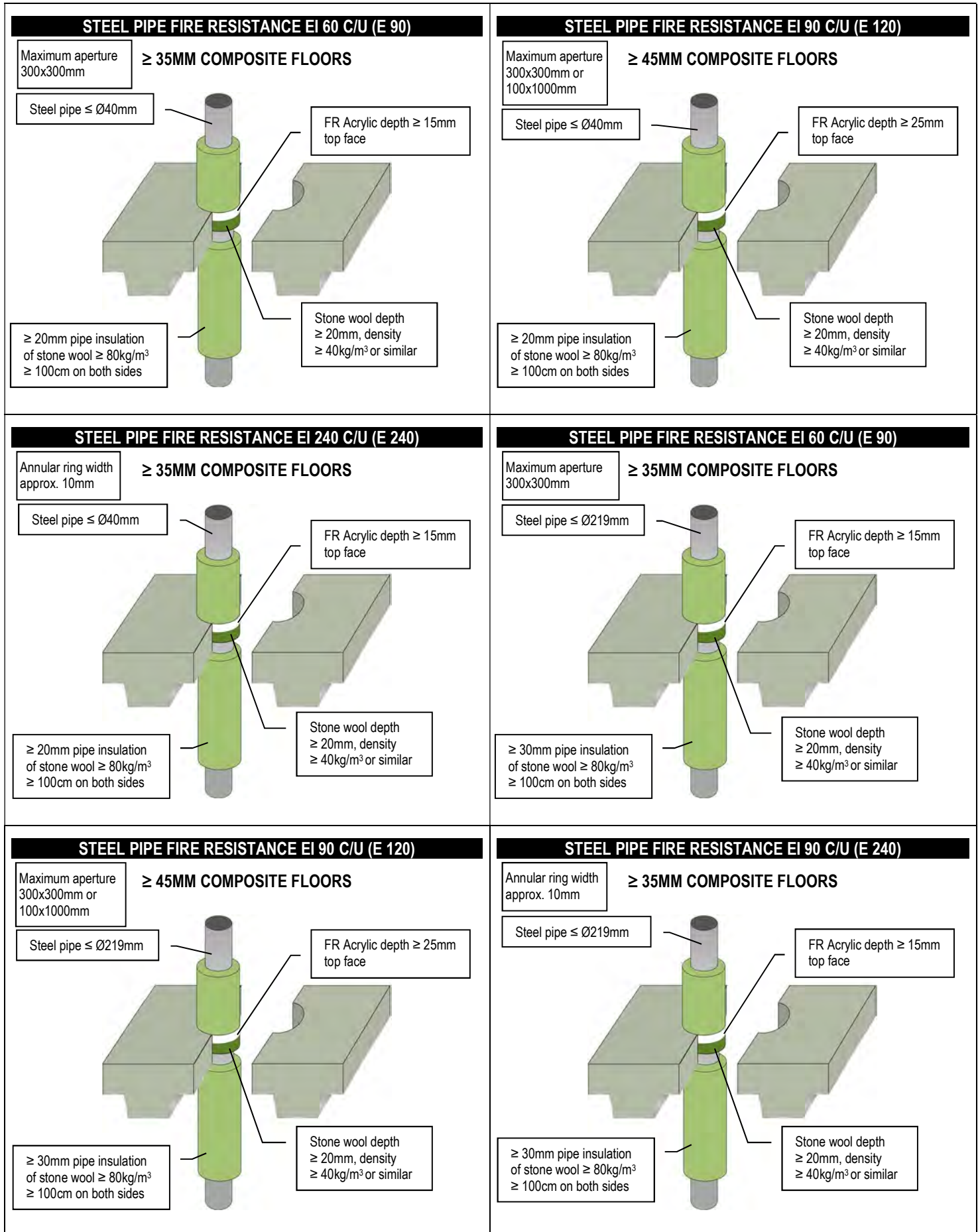


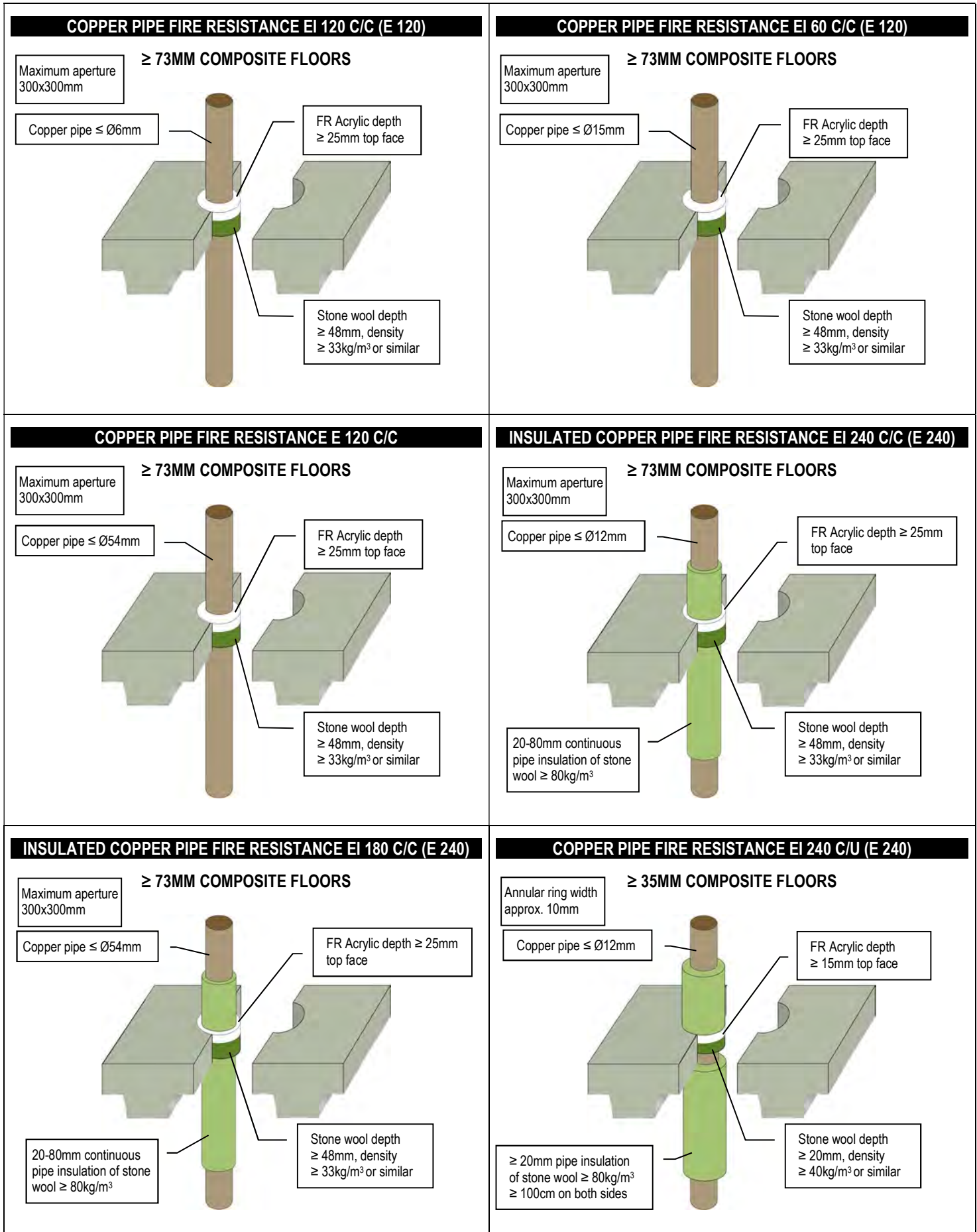












COPPER PIPE FIRE RESISTANCE EI 60 C/U (E 90)

Maximum aperture
300x300mm

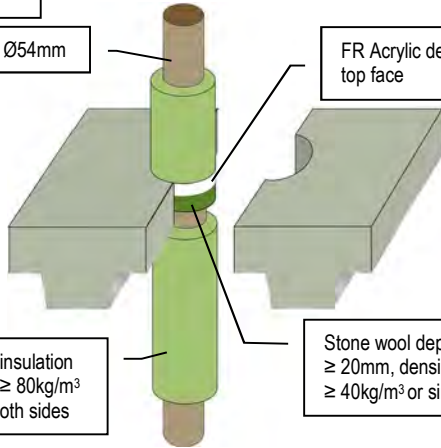
≥ 35MM COMPOSITE FLOORS

Copper pipe ≤ Ø54mm

FR Acrylic depth ≥ 15mm
top face

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

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



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

Maximum aperture
300x300mm or
100x1000mm

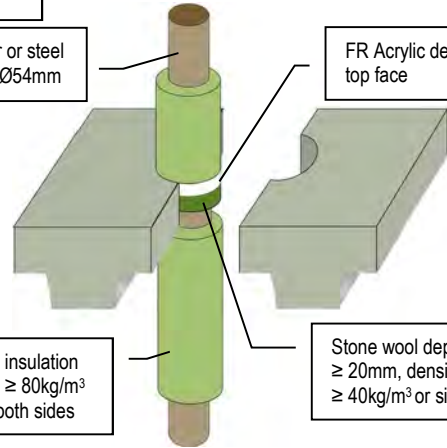
≥ 45MM COMPOSITE FLOORS

Copper or steel
pipe ≤ Ø54mm

FR Acrylic depth ≥ 25mm
top face

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

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



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

Annular ring width
approx. 10mm

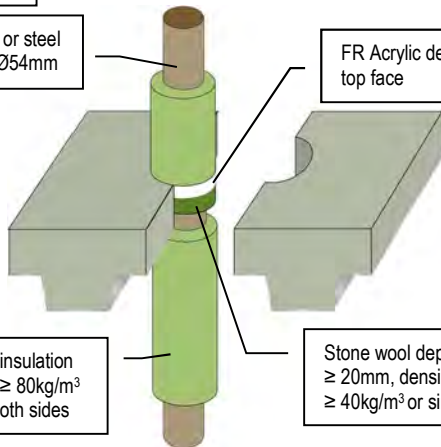
≥ 35MM COMPOSITE FLOORS

Copper or steel
pipe ≤ Ø54mm

FR Acrylic depth ≥ 15mm
top face

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

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



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

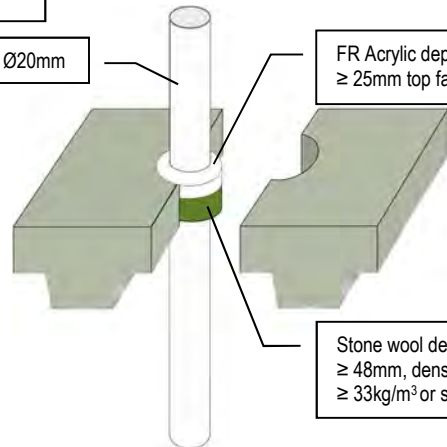
Maximum aperture
300x300mm

≥ 73MM COMPOSITE FLOORS

Alupez pipe ≤ Ø20mm

FR Acrylic depth
≥ 25mm top face

Stone wool depth
≥ 48mm, density
≥ 33kg/m³ or similar



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

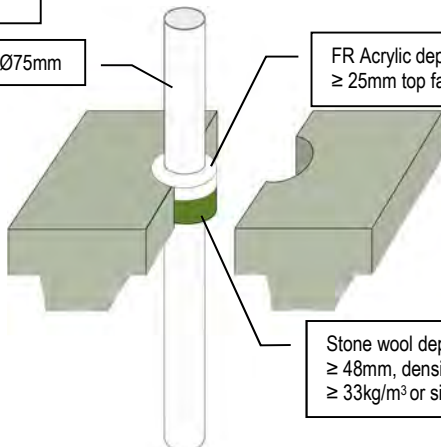
Maximum aperture
300x300mm

≥ 73MM COMPOSITE FLOORS

Alupez pipe ≤ Ø75mm

FR Acrylic depth
≥ 25mm top face

Stone wool depth
≥ 48mm, density
≥ 33kg/m³ or similar



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

Maximum aperture
300x300mm

≥ 73MM COMPOSITE FLOORS

Alupez pipe ≤ Ø75mm

FR Acrylic depth ≥ 25mm
top face

20-50mm continuous
pipe insulation of glass
or stone wool ≥ 75kg/m³

Stone wool depth
≥ 48mm, density
≥ 33kg/m³ or similar

