

PROTECTA® FR SERVICE TRANSIT INSTALLATION INSTRUCTIONS



INDEX FOR DETAILED DRAWINGS

Empty ST's in drywalls, masonry or concrete walls	page 2
ST's with cables in drywalls, masonry or concrete walls	pages 2-4
ST's with pipes etc. in drywalls, masonry or concrete walls	pages 4-5
ST's with ducts in drywalls, masonry or concrete walls	page 5
Empty ST's in masonry or concrete walls	page 5
ST's with cables in masonry or concrete walls	pages 6-7
ST's with pipes etc. in masonry or concrete walls	page 7
ST's in timber walls	pages 7-8
Empty ST's in floors	pages 8-9
ST's with cables in floors	pages 9-11
ST's with pipes and conduits in floors	pages 11-13
ST's in timber floors	pages 13-15

GENERAL PRODUCT DESCRIPTION

The Protecta® Service Transit has been designed to maintain the fire resistance of walls and floors when these are breached by continuous cables, pipes or ducts. After installation of the Service Transit, service penetrations can be retrofitted without having to install a new fire seal. The Service Transit is available in three different lengths, 150mm, 250mm and 400mm. The selection of which to use depends on the thickness of the supporting construction and the required use.

GENERAL GUIDE

Minimum separations and limitations: Service Transits can be fitted as specified in the detailed drawings from page 2.

Friction fitted: Minimum separation between Service Transits should be at least 30mm, except for steel pipes which does not require a minimum separation (linear arrangements).

Fitted with Protecta® FR Acrylic: Minimum separation between a Service Transit and the edge of the seal should be 10mm and minimum separation between apertures should be 30mm. In timber walls, apertures within a group should be placed horizontally, with minimum 100mm distance to the next group.

Fitted within Protecta® FR Board or EX Mortar: An aperture can include several services, and they may also be different. Minimum separation between Service Transits and also between Service Transits and the edge of the aperture should be 30mm. The minimum permitted separation between adjacent apertures is 100mm.

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 350 kg/m³ (650 kg/m³ in rigid wall details). Rigid floors must have a minimum thickness of 150mm 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. Services shall be supported at maximum 250mm away from both faces of the wall constructions and 450mm from the upper face of floor constructions.

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

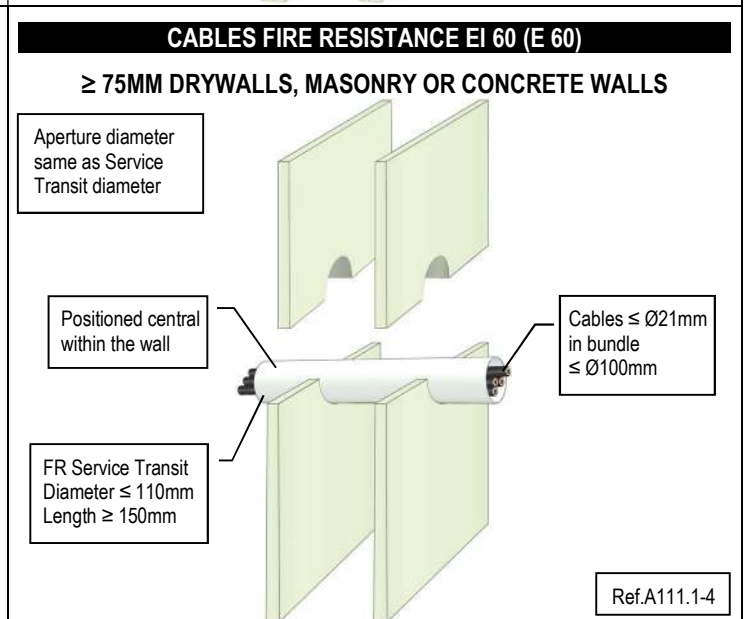
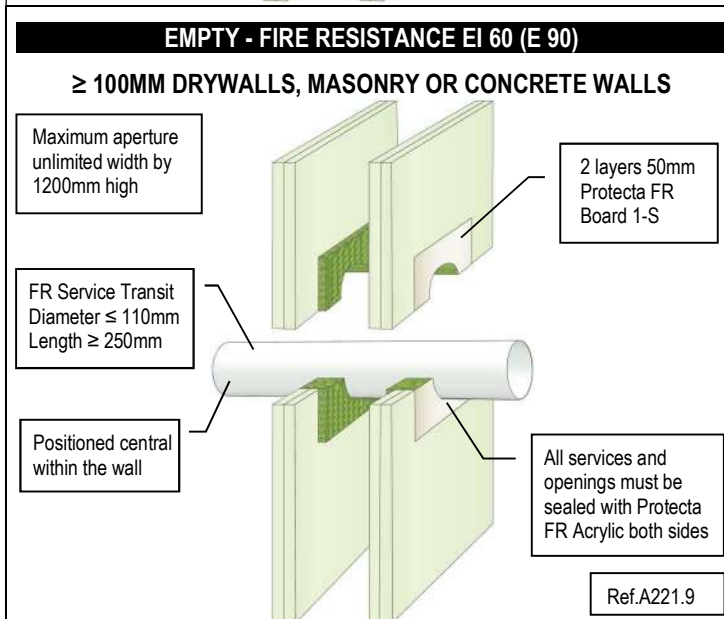
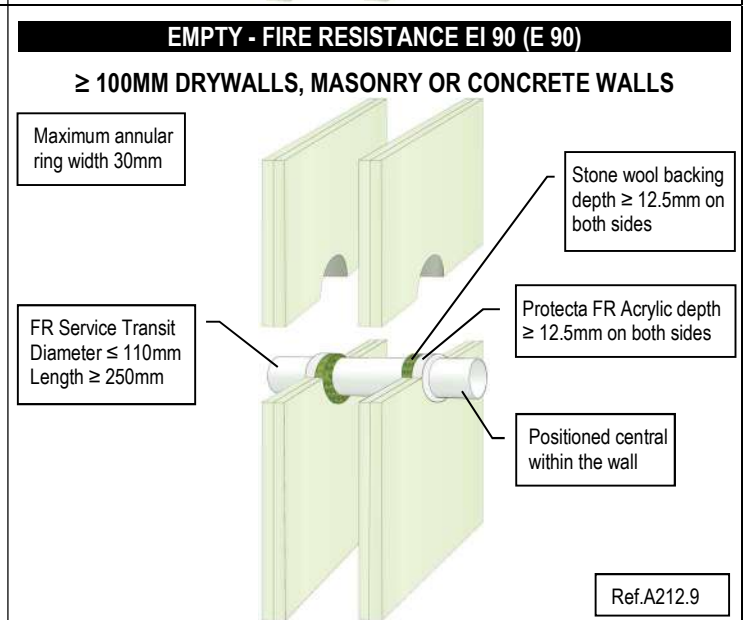
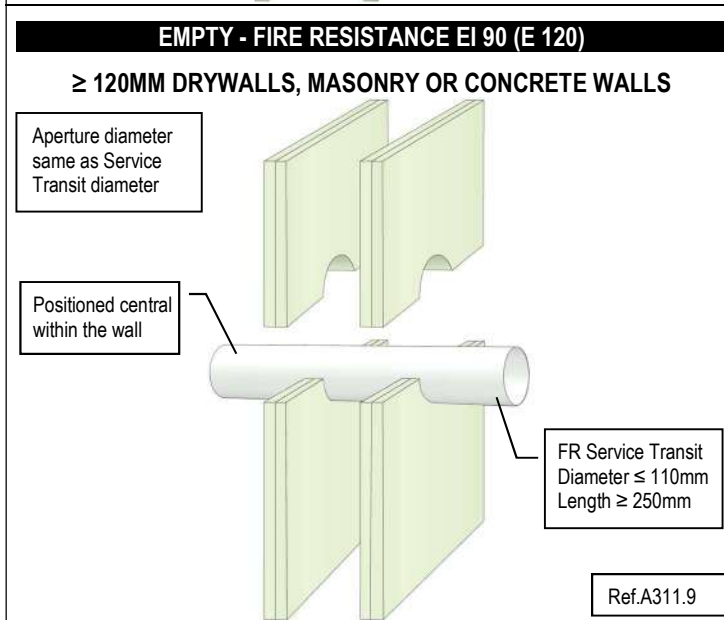
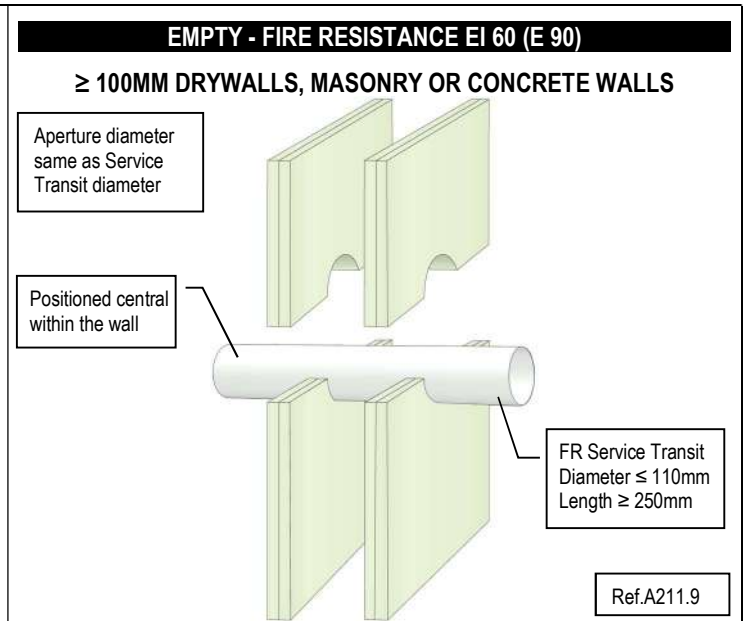
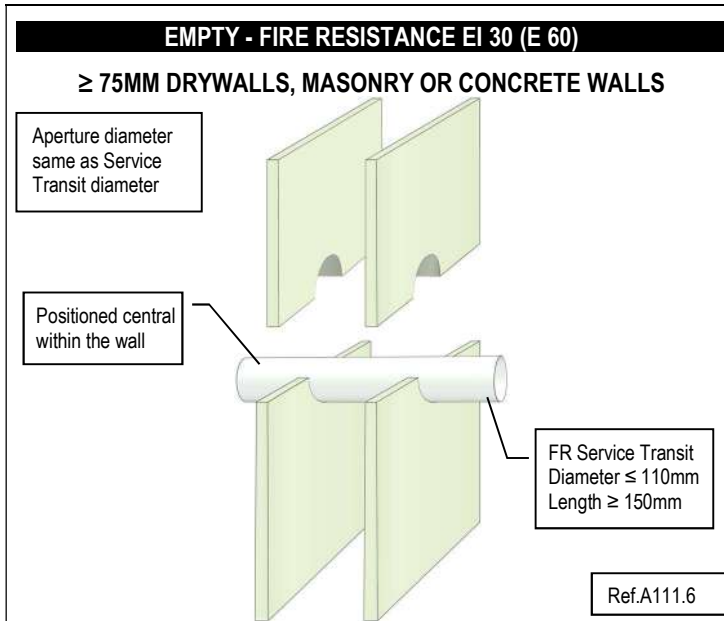


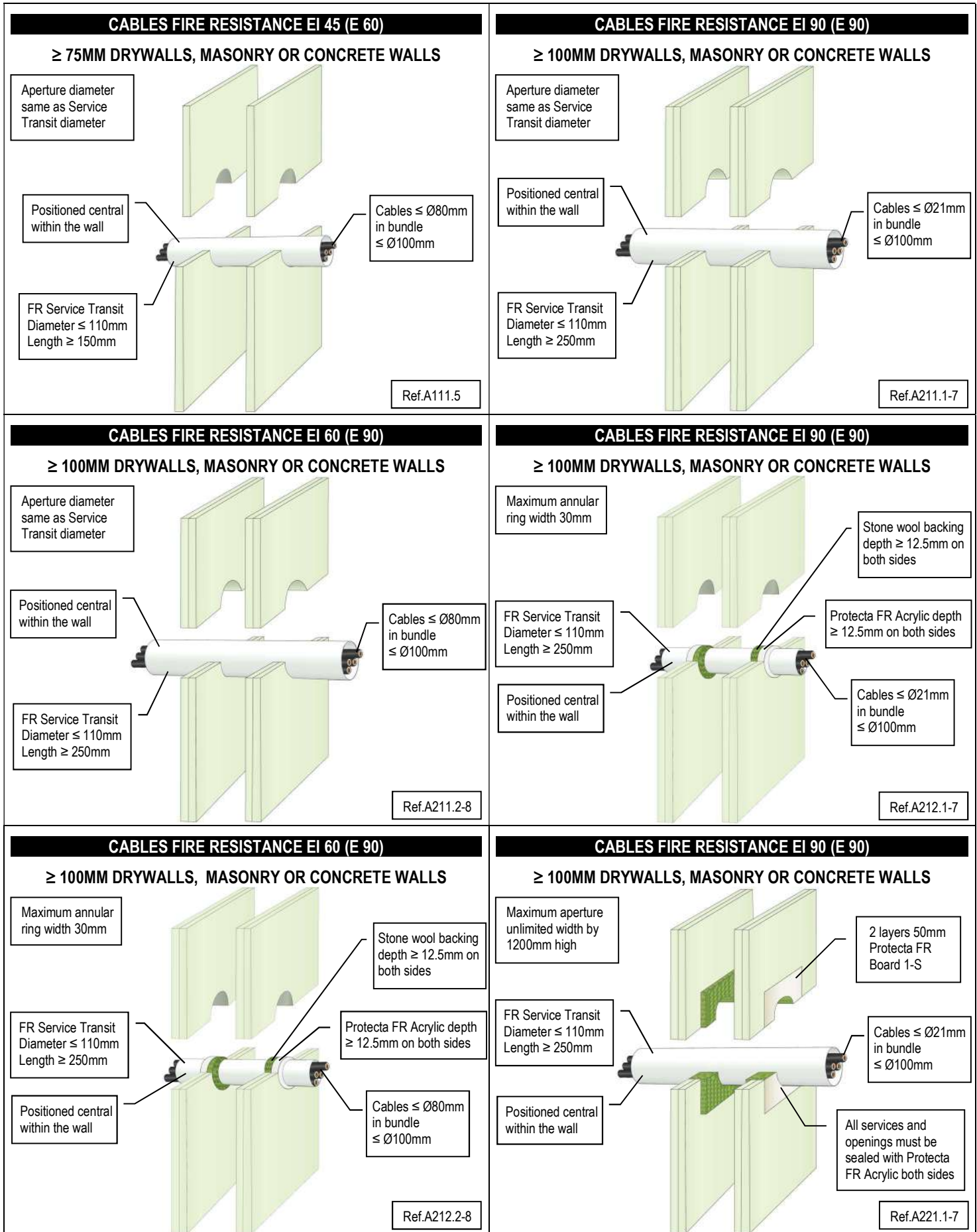
INSTALLATION

1. The type of Service Transit is identified with a code; FR (Wall & Floor), FF (Floor only) or FD (Duct) which is stated in the technical drawings from page 2.
2. **Friction fitted or cast installation:**
Make sure there is a tight seal with no gaps around the Service Transit and that it is securely locked in position. If this is not the case, simply apply a bead of Protecta® FR Acrylic on both sides.
Installation with Protecta® FR Acrylic, FR Board or EX Mortar:
Follow the Technical Data Sheet and Installation Instructions supplied with the product selected together with installation instructions and detailed drawings in this document.
3. Before service penetrations are inserted through the Service Transit, remove the fiber plug from the middle of the Service Transit. After the insertion of services is completed, ensure that the fiber plug is refitted and positioned correctly around the services in the middle of the Service Transit, leaving no openings so a cold smoke barrier is achieved. This is not applicable for the FD transits which does not require a fiber plug.
4. Make sure labels with retrofit instructions are placed near the Service Transit on both sides after installation, so future service installations are completed correctly by reinstating the fiber plug (except the FD transits).

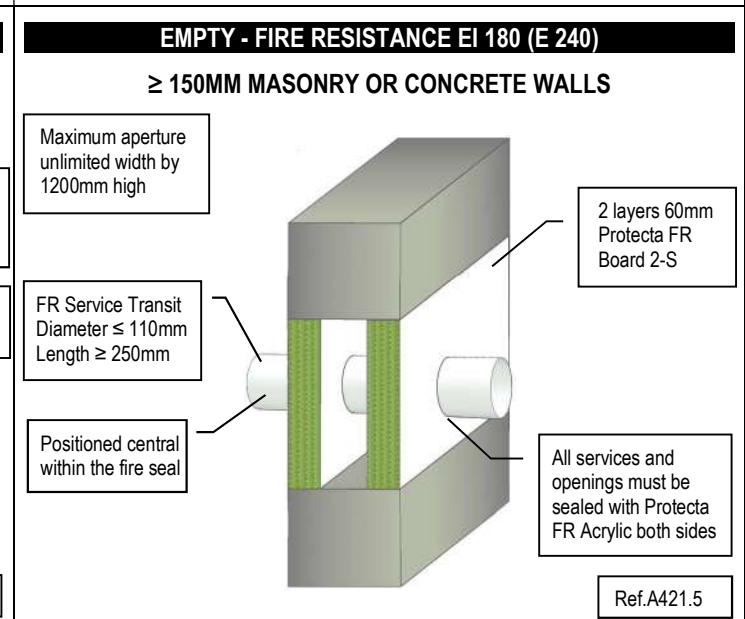
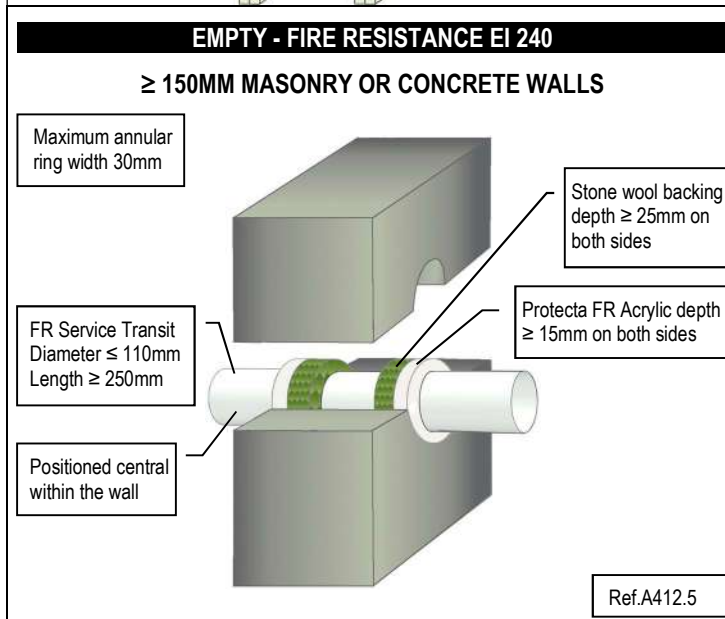
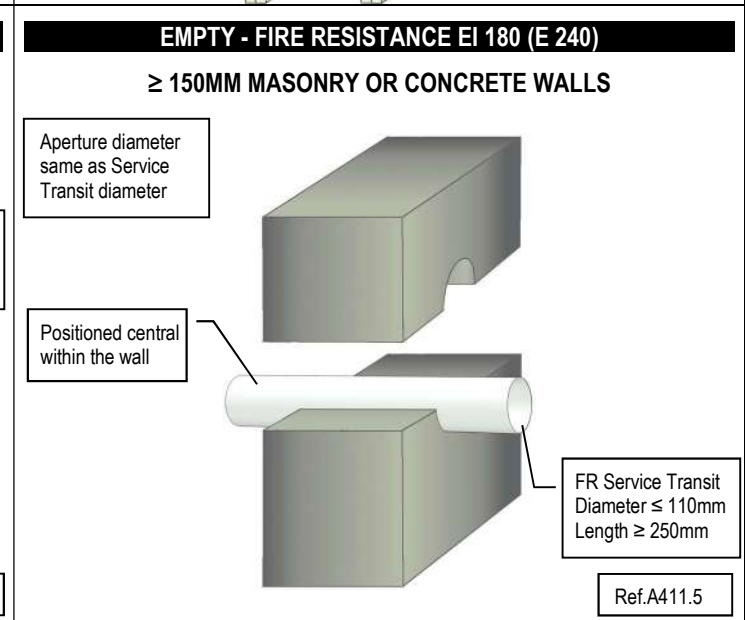
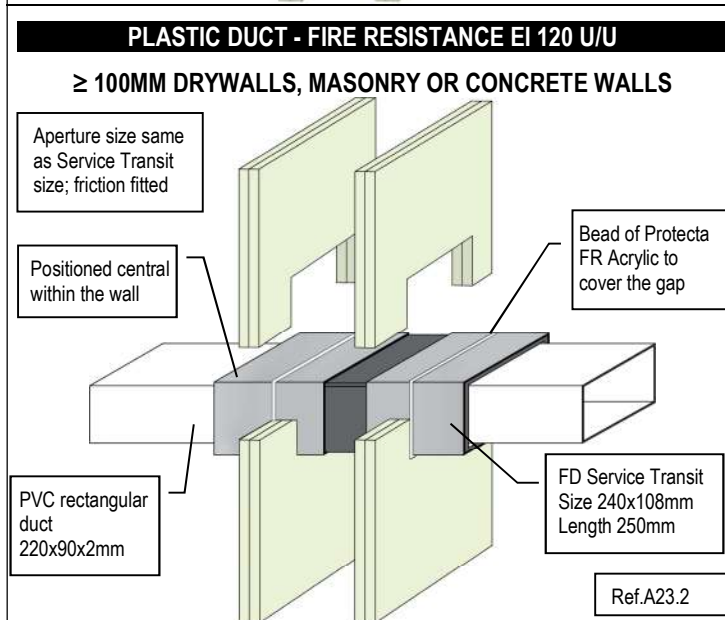
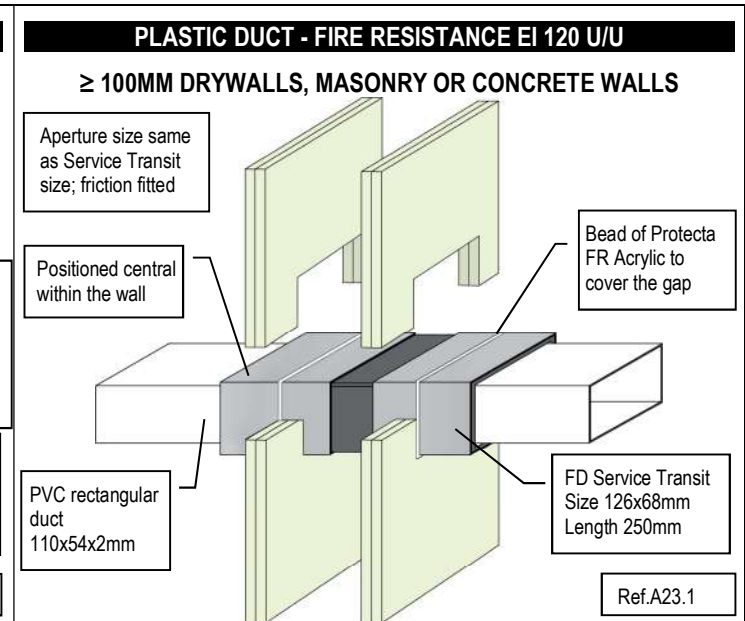
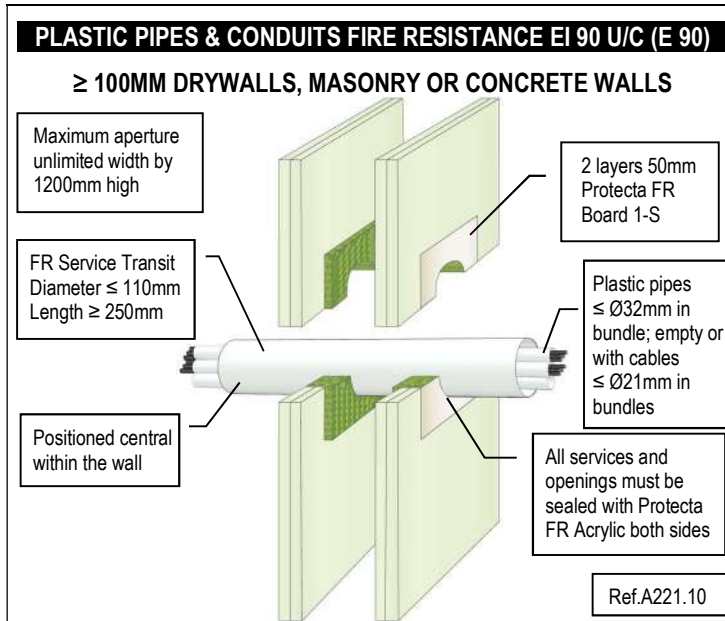
TEST STANDARDS

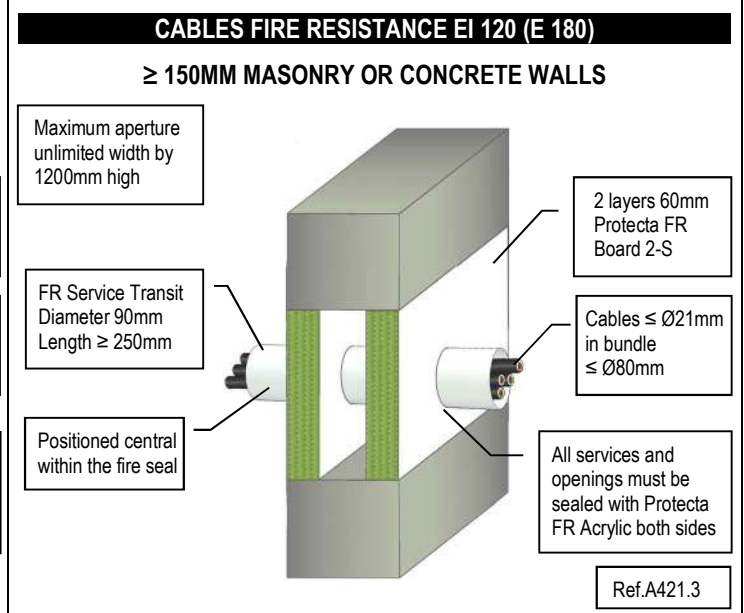
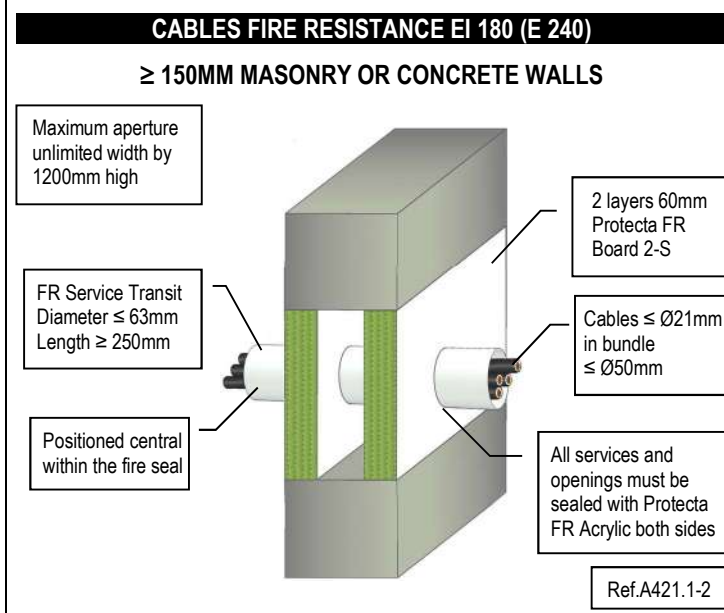
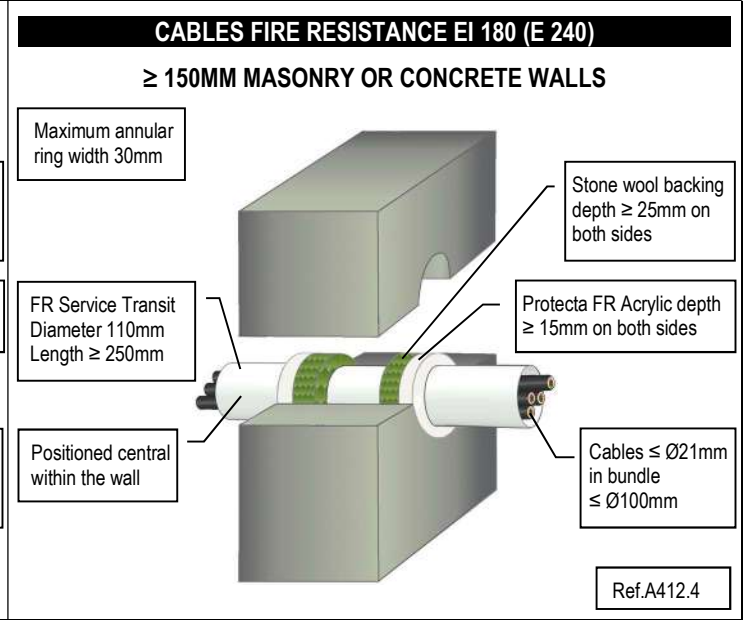
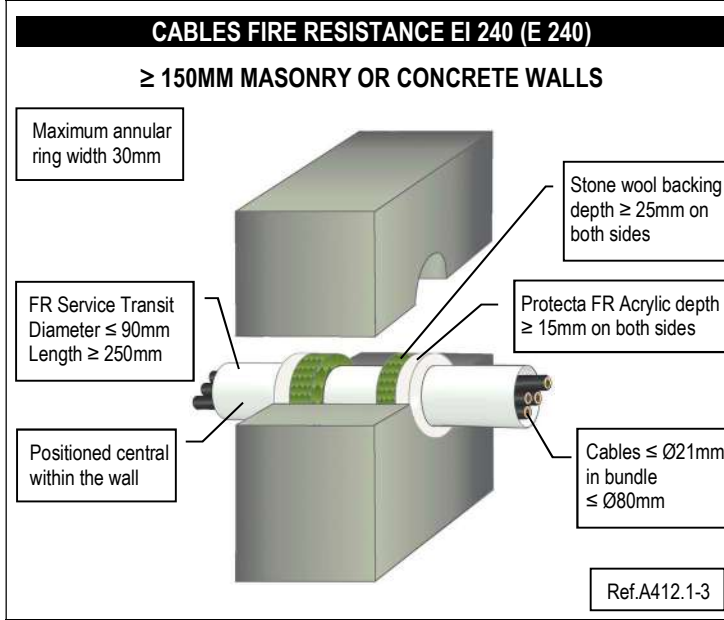
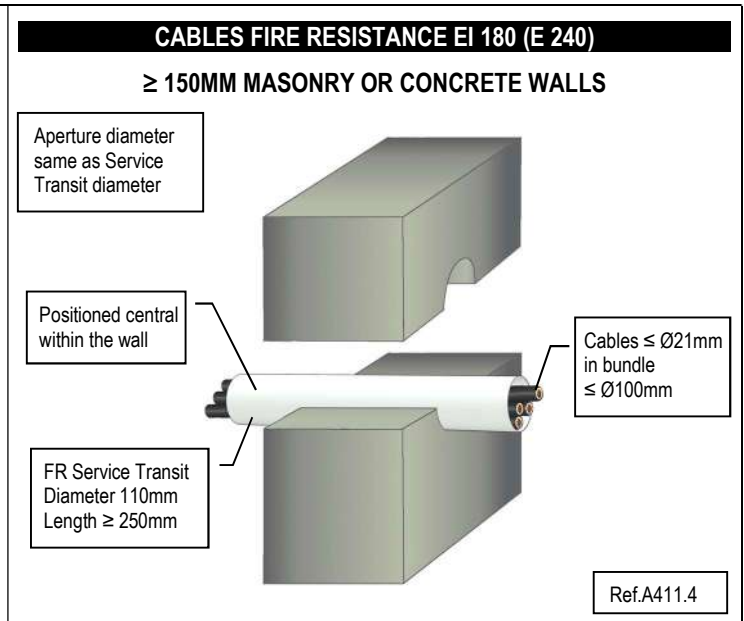
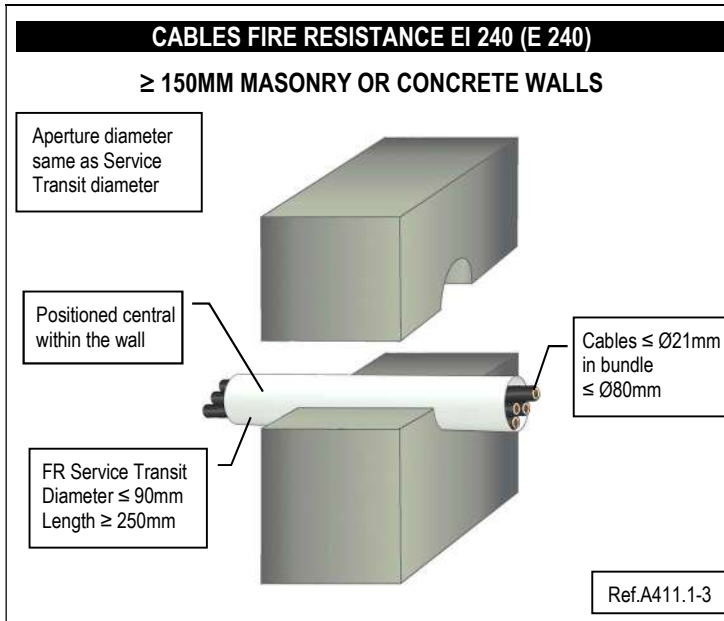
The Technical Data Sheet and Installation Instructions are based on the product's ETA and UKTA issued in accordance with regulation (EU) No 305/2011 on the basis of EAD 350454-00-1104, September 2017, tested to EN 1366-3 in conjunction with EN 1363-1. The product hold the following approval marks; CE-mark for Europe, UKCA-mark for UK, UL-EU Certificate Internationally & UAE Certificate of Compliance.

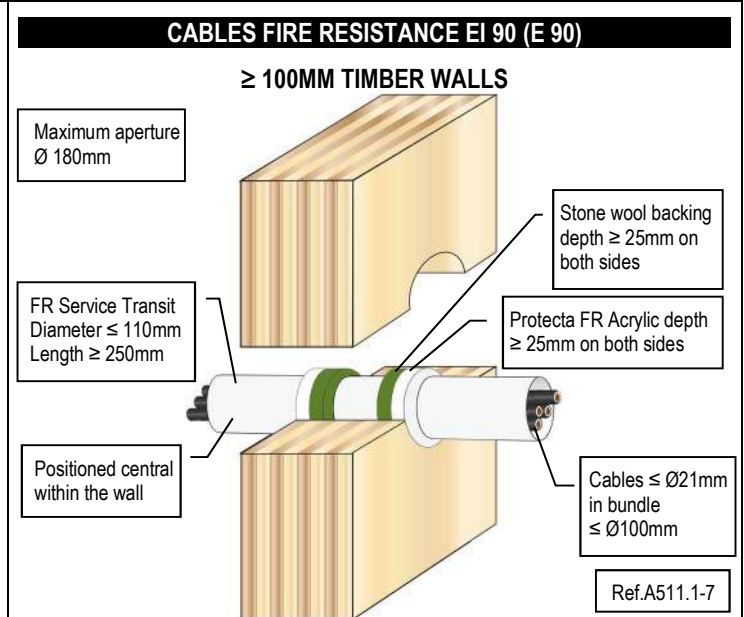
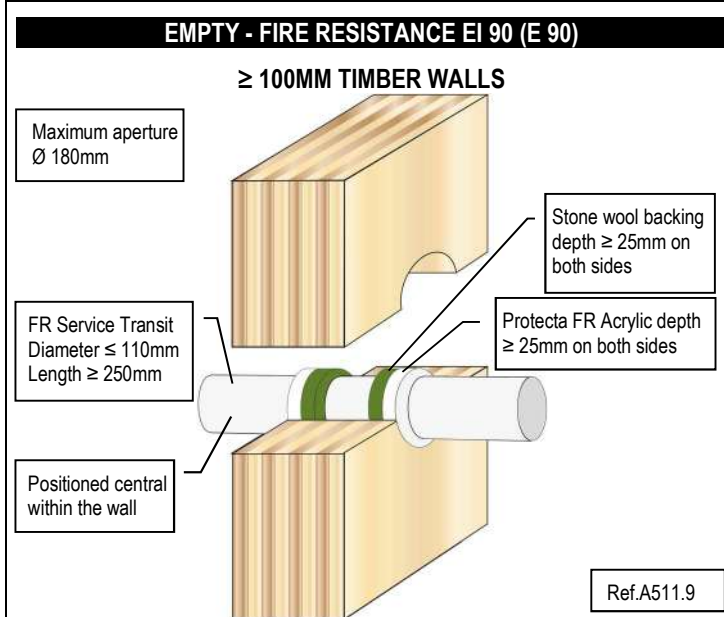
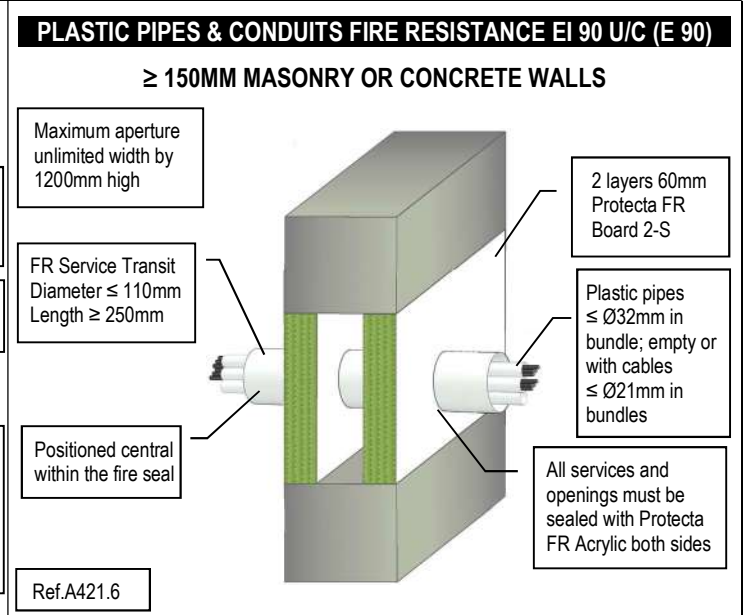
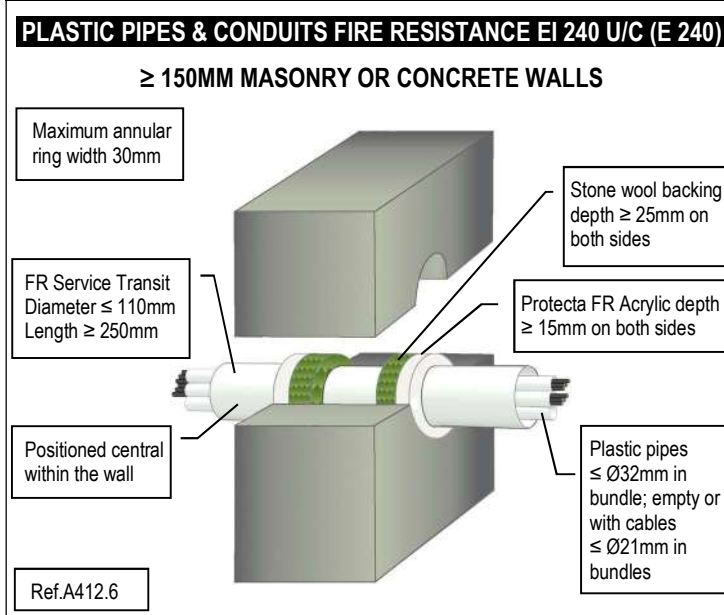
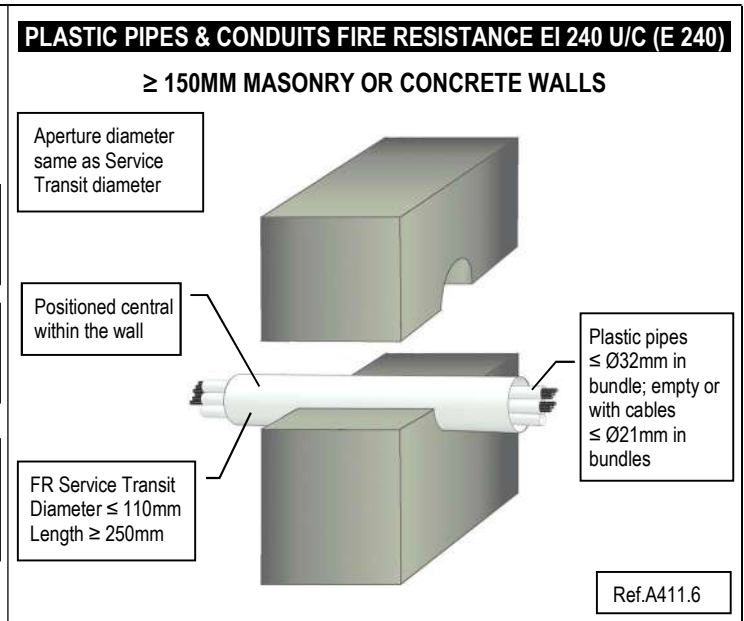
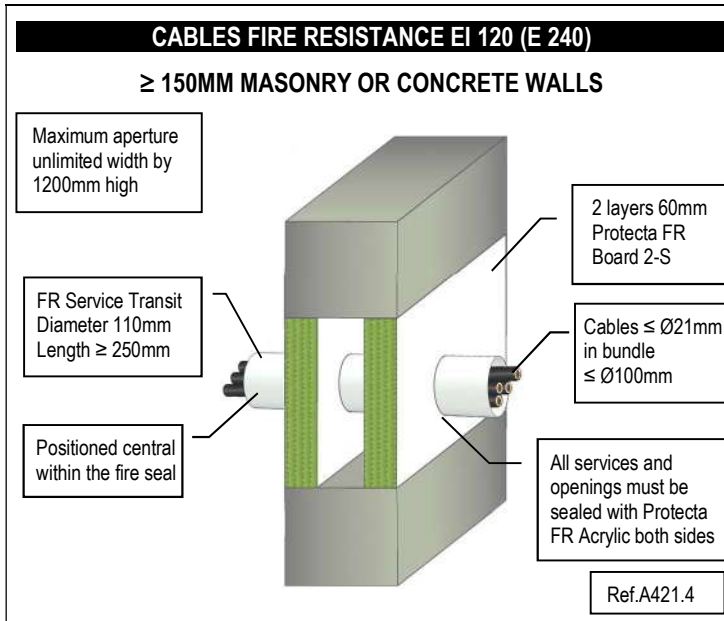


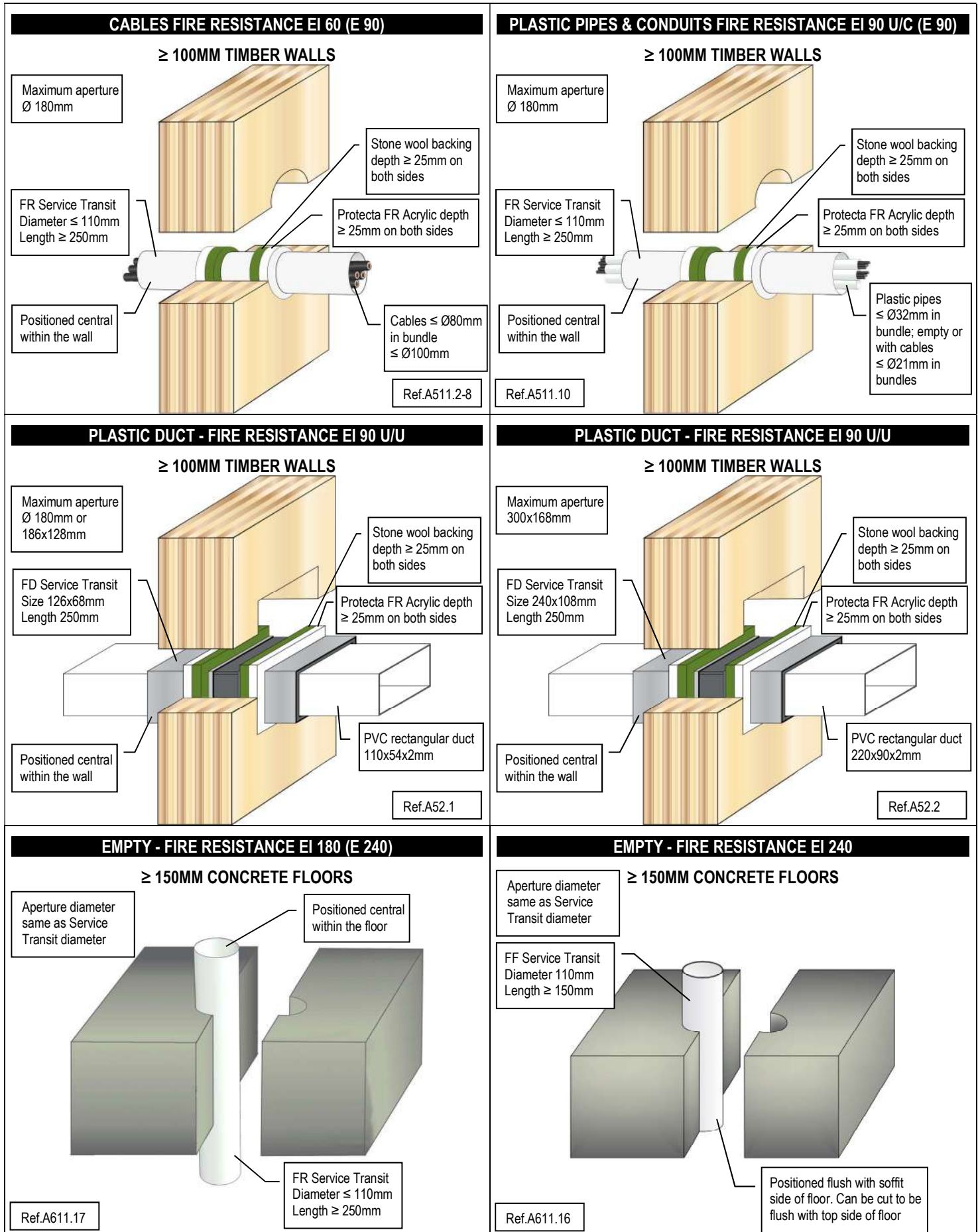


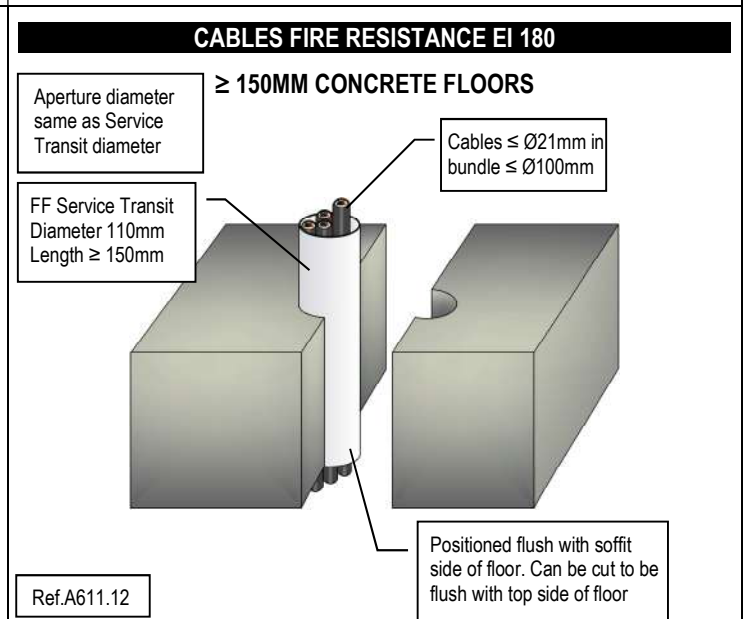
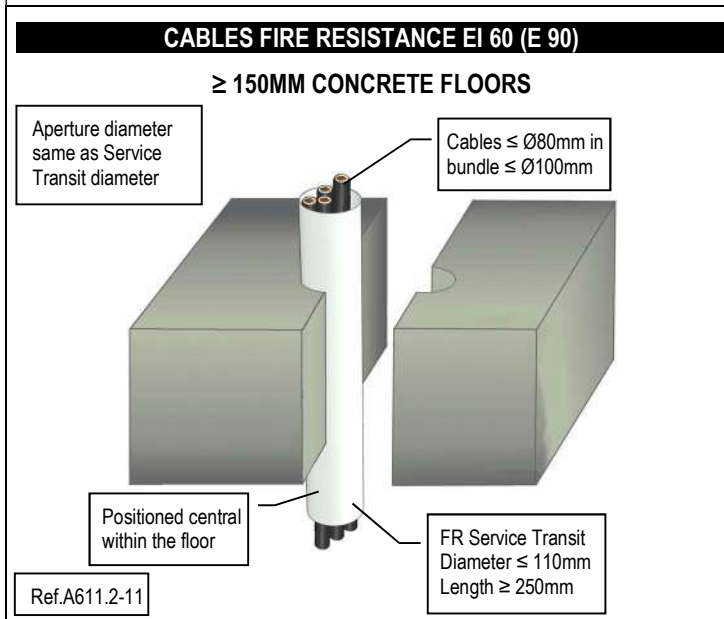
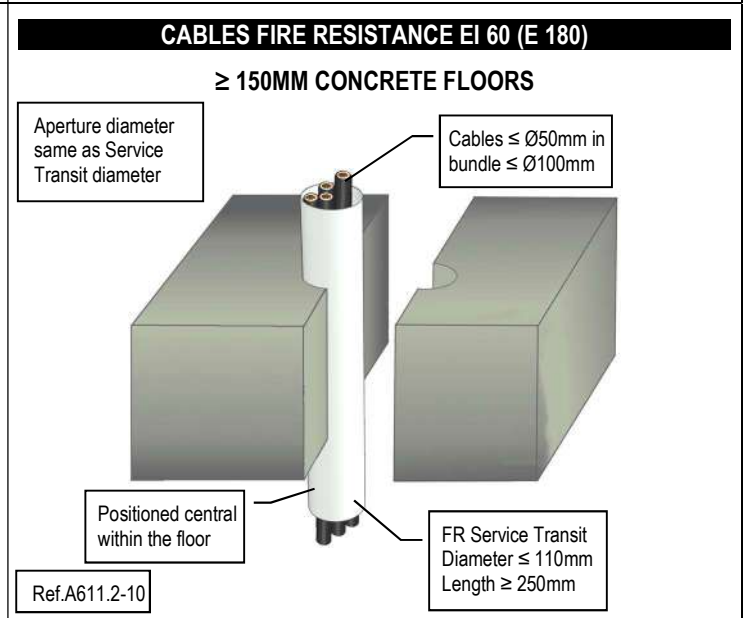
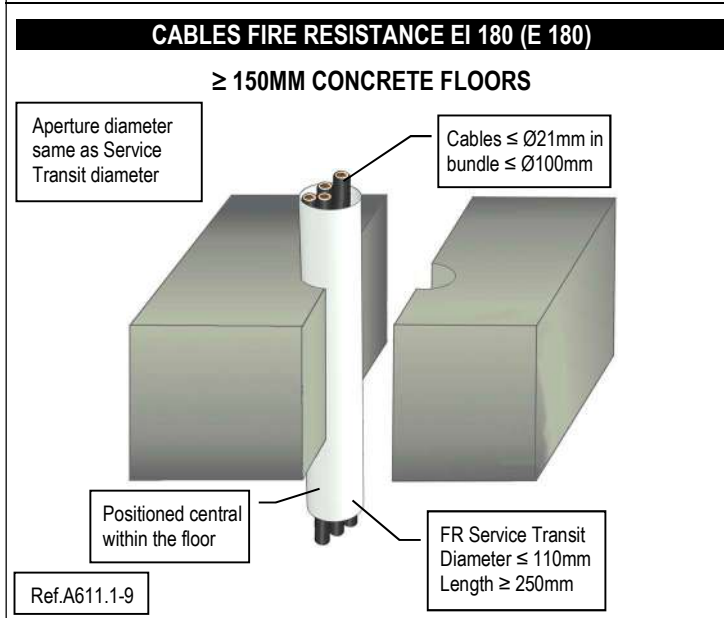
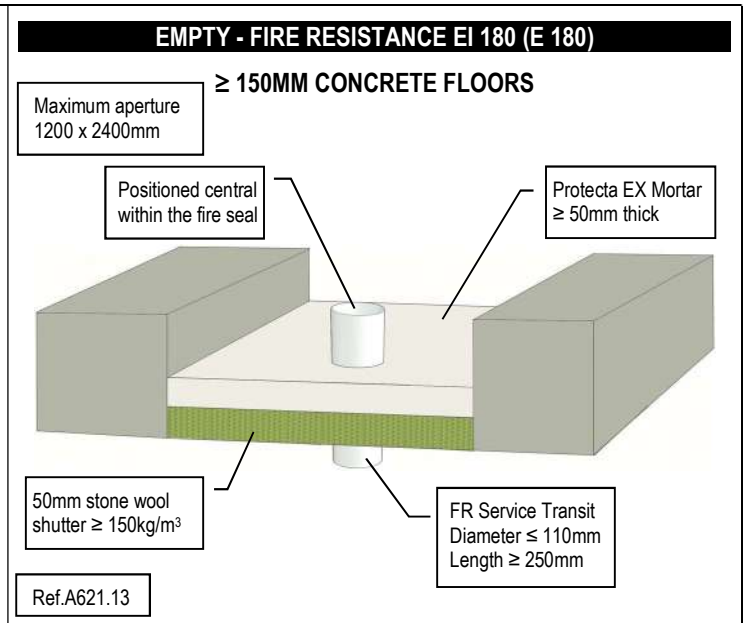
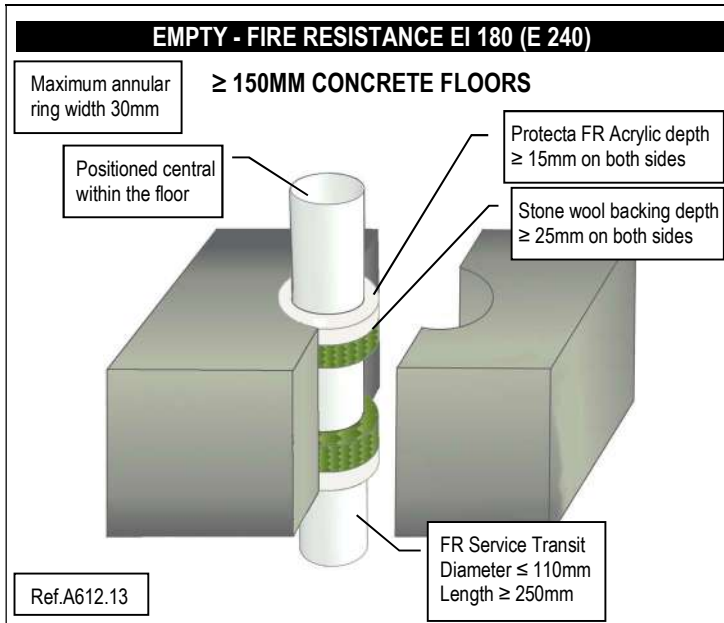
<p>CABLES FIRE RESISTANCE EI 60 (E 90)</p> <p>≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS</p> <p>Maximum aperture unlimited width by 1200mm high</p> <p>FR Service Transit Diameter ≤ 110mm Length ≥ 250mm</p> <p>Positioned central within the wall</p> <p>2 layers 50mm Protecta FR Board 1-S</p> <p>Cables ≤ Ø80mm in bundle ≤ Ø100mm</p> <p>All services and openings must be sealed with Protecta FR Acrylic both sides</p> <p>Ref.A221.2-8</p>	<p>CABLES FIRE RESISTANCE EI 120 (E 120)</p> <p>≥ 120MM DRYWALLS, MASONRY OR CONCRETE WALLS</p> <p>Aperture diameter same as Service Transit diameter</p> <p>Positioned central within the wall</p> <p>FR Service Transit Diameter ≤ 110mm Length ≥ 250mm</p> <p>Cables ≤ Ø21mm in bundle ≤ Ø100mm</p> <p>Ref.A311.1-7</p>
<p>CABLES FIRE RESISTANCE EI 90 (E 120)</p> <p>≥ 120MM DRYWALLS, MASONRY OR CONCRETE WALLS</p> <p>Aperture diameter same as Service Transit diameter</p> <p>Positioned central within the wall</p> <p>FR Service Transit Diameter ≤ 110mm Length ≥ 250mm</p> <p>Cables ≤ Ø50mm in bundle ≤ Ø100mm</p> <p>Ref.A311.2-8</p>	<p>PLASTIC PIPES & CONDUITS FIRE RESISTANCE EI 60 U/C (E 60)</p> <p>≥ 75MM DRYWALLS, MASONRY OR CONCRETE WALLS</p> <p>Aperture diameter same as Service Transit diameter</p> <p>Positioned central within the wall</p> <p>FR Service Transit Diameter ≤ 110mm Length ≥ 150mm</p> <p>Plastic pipes ≤ Ø32mm in bundle; empty or with cables ≤ Ø14mm in bundles</p> <p>Ref.A111.7</p>
<p>PLASTIC PIPES & CONDUITS FIRE RESISTANCE EI 90 U/C (E 90)</p> <p>≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS</p> <p>Aperture diameter same as Service Transit diameter</p> <p>Positioned central within the wall</p> <p>FR Service Transit Diameter ≤ 110mm Length ≥ 250mm</p> <p>Plastic pipes ≤ Ø32mm in bundle; empty or with cables ≤ Ø21mm in bundles</p> <p>Ref.A211.10</p>	<p>PLASTIC PIPES & CONDUITS FIRE RESISTANCE EI 90 U/C (E 90)</p> <p>≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS</p> <p>Maximum annular ring width 30mm</p> <p>Stone wool backing depth ≥ 12.5mm on both sides</p> <p>Protecta FR Acrylic depth ≥ 12.5mm on both sides</p> <p>FR Service Transit Diameter ≤ 110mm Length ≥ 250mm</p> <p>Positioned central within the wall</p> <p>Plastic pipes ≤ Ø32mm in bundle; empty or with cables ≤ Ø21mm in bundles</p> <p>Ref.A212.10</p>

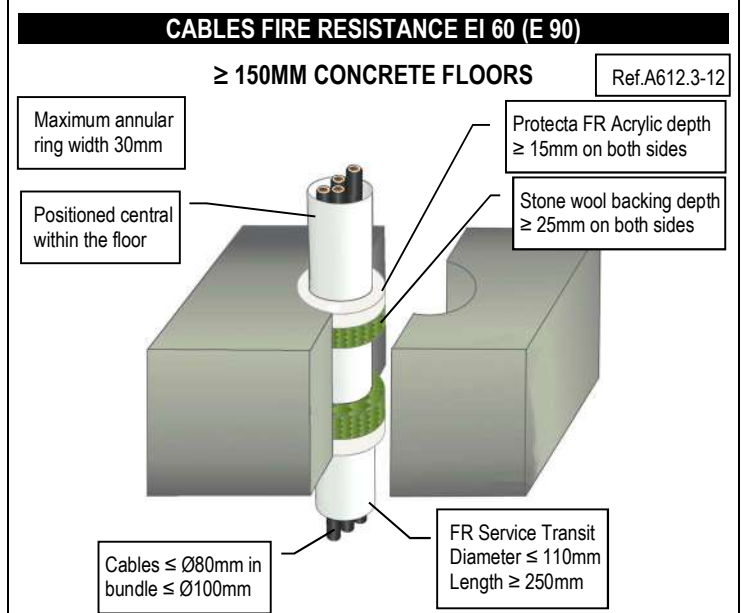
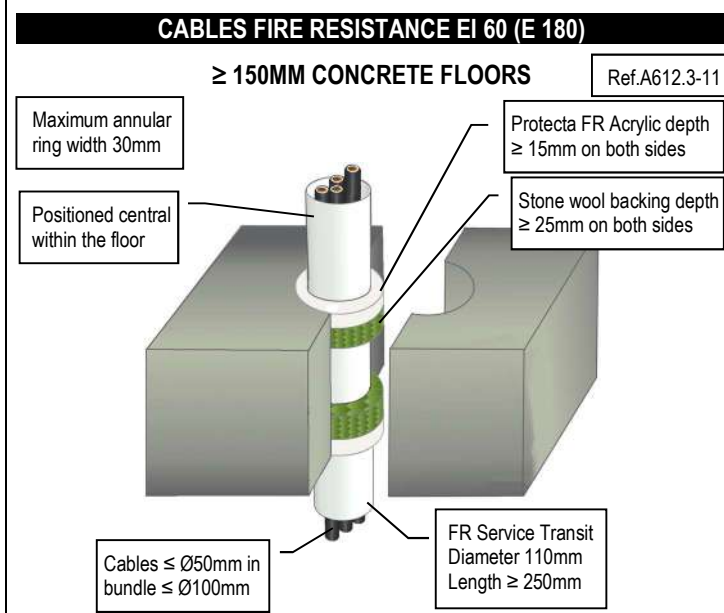
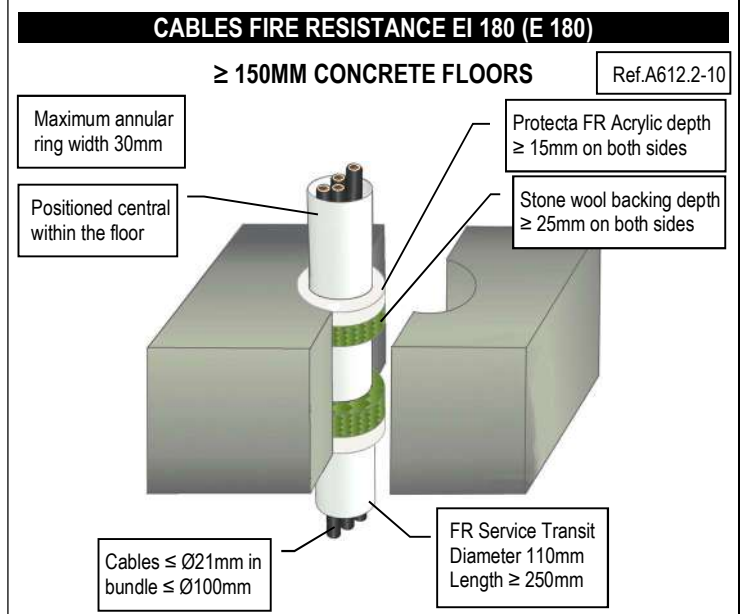
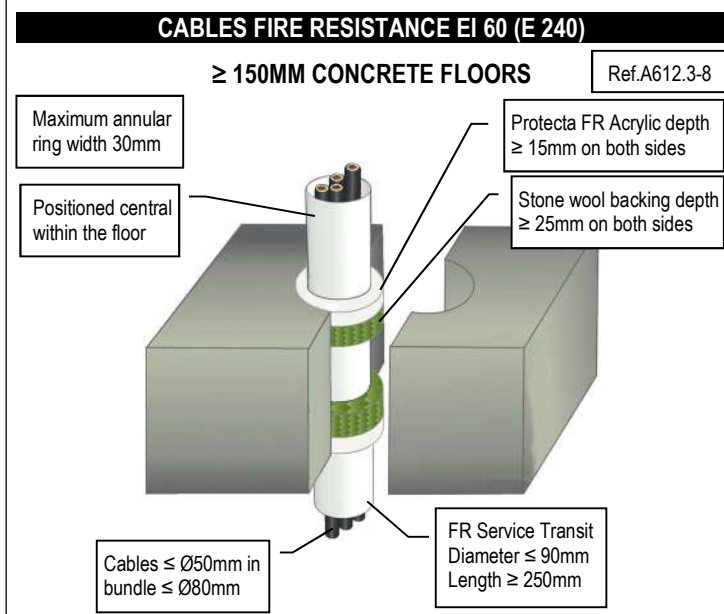
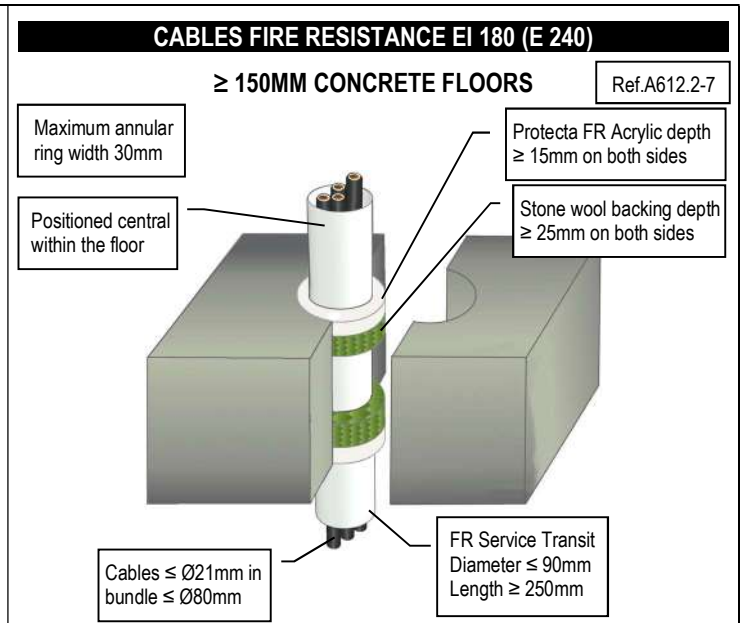
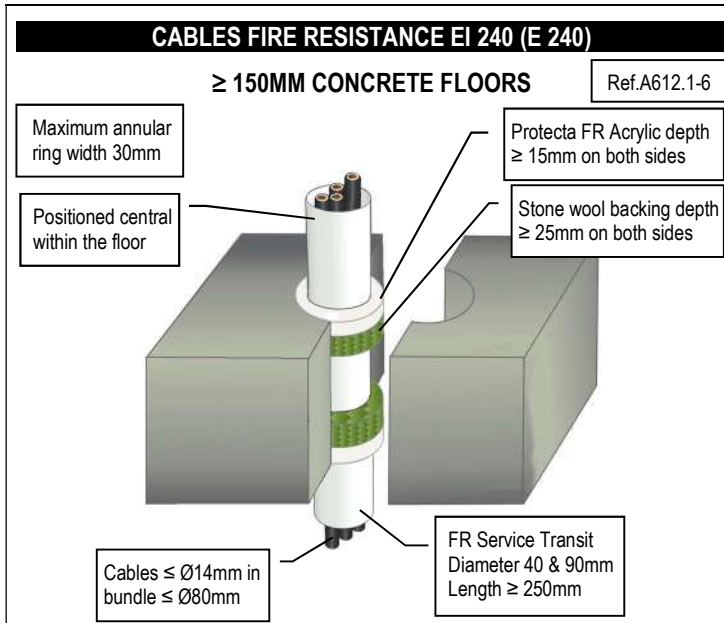


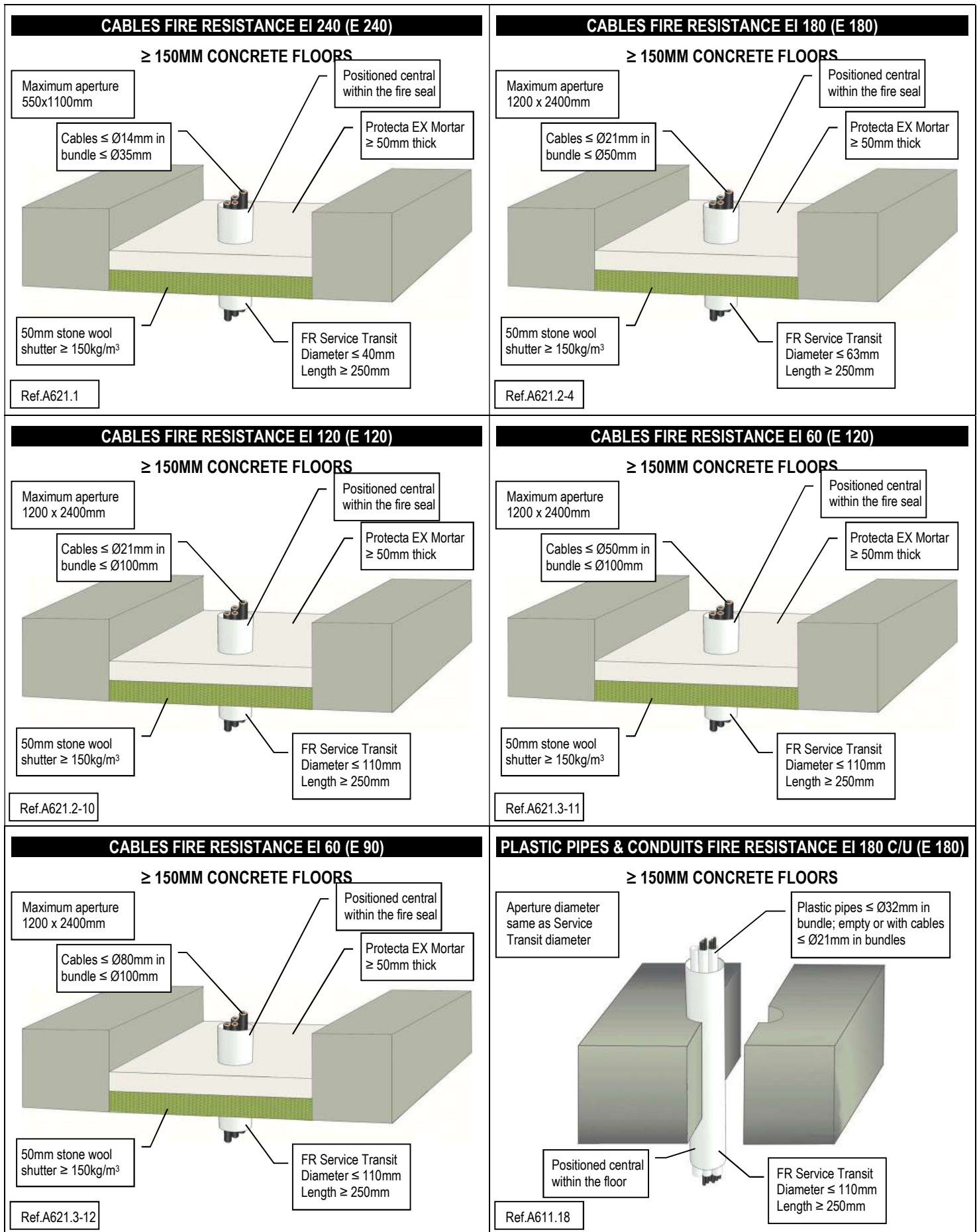












<p>PLASTIC PIPES & CONDUITS FIRE RESISTANCE EI 240 U/C</p> <p>≥ 150MM CONCRETE FLOORS</p> <p>Aperture diameter same as Service Transit diameter</p> <p>FF Service Transit Diameter 110mm Length ≥ 150mm</p> <p>Plastic pipes ≤ Ø32mm in bundle; empty or with cables ≤ Ø21mm in bundles</p> <p>Positioned flush with soffit side of floor. Can be cut to be flush with top side of floor</p> <p>Ref.A611.19</p>	<p>PLASTIC PIPES & CONDUITS FIRE RESISTANCE EI 180 C/U (E 180)</p> <p>≥ 150MM CONCRETE FLOORS</p> <p>Ref.A612.15</p> <p>Maximum annular ring width 30mm</p> <p>Positioned central within the floor</p> <p>Protecta FR Acrylic depth ≥ 15mm on both sides</p> <p>Stone wool backing depth ≥ 25mm on both sides</p> <p>Plastic pipes ≤ Ø32mm in bundle; empty or with cables ≤ Ø21mm in bundles</p> <p>FR Service Transit Diameter ≤ 110mm Length ≥ 250mm</p>
<p>PLASTIC PIPES & CONDUITS FIRE RESISTANCE EI 120 C/U (E 120)</p> <p>≥ 150MM CONCRETE FLOORS</p> <p>Maximum aperture 1200 x 2400mm</p> <p>Plastic pipes ≤ Ø32mm in bundle; empty or with cables ≤ Ø21mm in bundles</p> <p>Positioned central within the fire seal</p> <p>Protecta EX Mortar ≥ 50mm thick</p> <p>50mm stone wool shutter ≥ 150kg/m³</p> <p>FR Service Transit Diameter ≤ 110mm Length ≥ 250mm</p> <p>Ref.A621.15</p>	<p>STEEL PIPE FIRE RESISTANCE EI 240 C/U</p> <p>≥ 150MM CONCRETE FLOORS</p> <p>Aperture diameter same as Service Transit diameter</p> <p>Steel pipe ≤ Ø28mm</p> <p>FF Service Transit Diameter 40mm Length ≥ 150mm</p> <p>Positioned flush with soffit side of floor. Can be cut to be flush with top side of floor</p> <p>Ref.A611.3</p>
<p>PVC PLASTIC PIPE FIRE RESISTANCE EI 240 U/C</p> <p>≥ 150MM CONCRETE FLOORS</p> <p>Aperture diameter same as Service Transit diameter</p> <p>FF Service Transit Diameter 110mm Length ≥ 150mm</p> <p>PVC pipe ≤ Ø90mm with wall thickness 1.6-6.7mm</p> <p>Positioned flush with soffit side of floor. Can be cut to be flush with top side of floor</p> <p>Ref.A611.13</p>	<p>PE PLASTIC PIPE FIRE RESISTANCE EI 180 U/C</p> <p>≥ 150MM CONCRETE FLOORS</p> <p>Aperture diameter same as Service Transit diameter</p> <p>FF Service Transit Diameter 110mm Length ≥ 150mm</p> <p>PE pipe ≤ Ø90mm with wall thickness 2.8-8.2mm</p> <p>Positioned flush with soffit side of floor. Can be cut to be flush with top side of floor</p> <p>Ref.A611.14</p>

