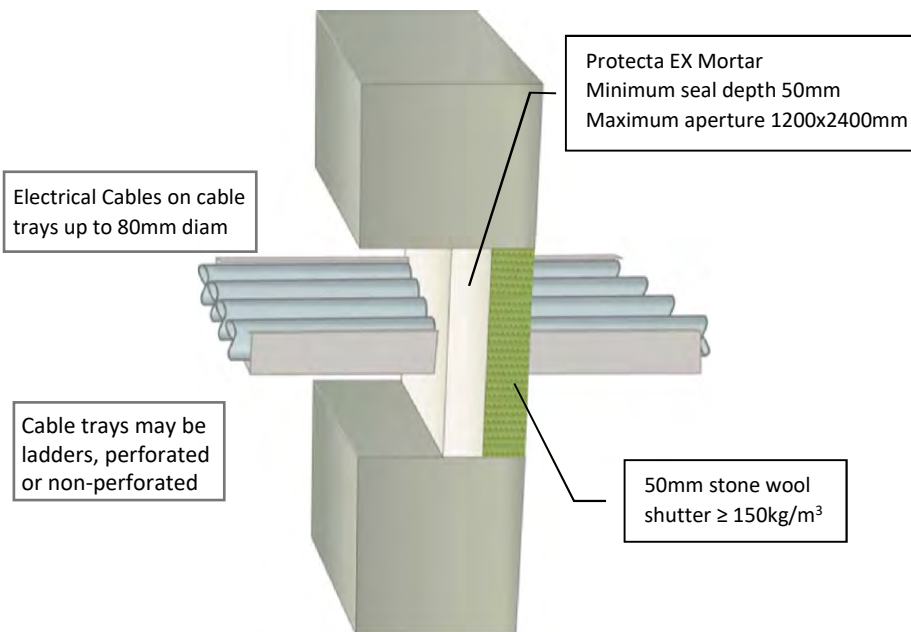


### Installation Instructions

1. Ensure the faces of the aperture opening are free of dust and any other contaminants. The faces may be moistened for better adhesion.
2. Bare metal passing through the seal must be protected against corrosion using a suitable primer/protection system.
3. The seal can be positioned to either side of the construction or anywhere inbetween.
4. Install a stone wool shutter board to achieve the required thickness of mortar. Make sure that this achieves a very tight seal – any small openings should be sealed with Protecta® FR Acrylic
5. Pour clean water into a suitable mixing vessel and pour enough mortar to obtain the required consistency. Mix well to avoid lumps. Always add the mortar to the water, do not reverse this mixing process.
6. Once the desired consistency is achieved pour or trowel the mortar onto the shutter board making sure that it flows into all corners and around services. Apply a firm pressure to the mortar to eliminate any trapped air bubbles. Build up to the required depth.



NOTE: Construction shown is for 150mm wall. For 100mm wall position the 50mm stone wool in the centre of the wall and apply 25mm Protecta EX Mortar to each side of the wall.

### Minimum separations and limitations

An aperture can include several services, and they may also be different. Services within the system Protecta® FR Board seal do not require a minimum separation, except pipes where pipe insulation penetrates the seal and plastic pipe penetrations which should be a minimum of 30 mm from other services in the aperture. Services should be a minimum of 25mm from seal edges. The total amount of cross sections of services (including insulation) should not exceed 60% of the penetration area. The minimum permitted separation between adjacent apertures is 200mm.

<b>Products</b>	Protecta EX Mortar Stone wool shutter
<b>Application</b>	Fire stopping of cables on cable trays in rigid walls
<b>Construction</b>	Minimum wall thickness of 100mm and comprise aerated concrete or concrete with a minimum density of 650kg/m <sup>3</sup> .

### Fire & Sound classification

#### For 150mm walls

Electrical Cables ≤ Ø21mm on trays	FRR -/180/60
Electrical Cables ≤ Ø50mm on trays	FRR -/180/45
Electrical Cables ≤ Ø80mm on trays	FRR -/120/45

#### For 100mm walls

Electrical Cables ≤ Ø80mm on trays	FRR -/120/60
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Sound reduction (seal only)	STC 64
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