

INDEX FOR DETAILED DRAWINGS

| | |
|--|----------|
| Cables and cable trays in floors..... | P. 2-3 |
| Steel pipes in floors..... | P. 3-6 |
| Copper pipes in floors..... | P. 6-7 |
| Alupex pipes in floors..... | P. 7-8 |
| Plastic pipes in floors..... | P. 9 |
| Plastic pipes with cables in floors..... | P. 10 |
| Cables and cable trays in masonry or concrete walls..... | P. 10-11 |
| Steel pipes in masonry or concrete walls..... | P. 11-12 |
| Copper pipes in masonry or concrete walls..... | P. 12-13 |
| Alupex pipes in masonry or concrete walls..... | P. 13 |
| Plastic pipes in masonry or concrete walls..... | P. 13 |
| Cables and trays in gypsum, masonry or concrete walls..... | P. 13-14 |
| Steel pipes in gypsum, masonry or concrete walls..... | P. 14 |
| Copper pipes in gypsum, masonry or concrete walls..... | P. 15 |
| Alupex pipes in gypsum, masonry or concrete walls..... | P. 15 |
| Plastic pipes in gypsum, masonry or concrete walls..... | P. 15-16 |

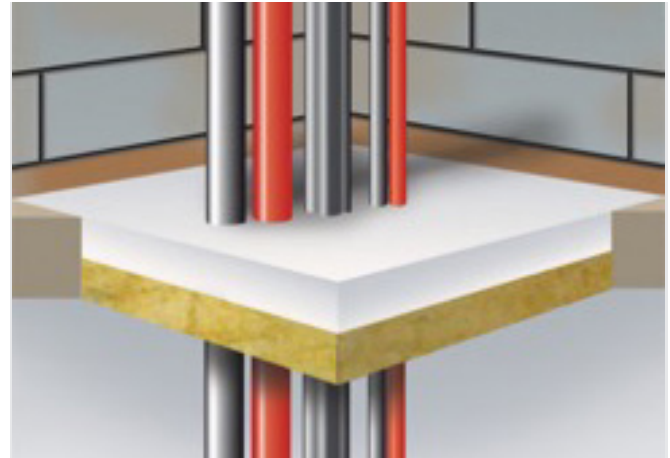
PRODUCT DESCRIPTION

iPASSIVE EX Mortar is a dry white powder consisting of inorganic compounds and perlite. When mixed with water the compounds form a highly thermally insulating fire seal to prevent the spread of fire and smoke through openings in fire rated walls and floors, including openings formed to accommodate building service penetrations. iPASSIVE EX Mortar expands by up to 1% by hydraulic action during curing ensuring a very tight seal around service penetrations and the surrounding construction. iPASSIVE EX Mortar has a rapid setting time and is easy to sand or drill after cure. The compound dries to an off-white colour which may be painted if required.

GENERAL GUIDE

Minimum separations and limitations: Services can be sealed as specified in the detailed drawings. An aperture can include several services, and they may also be different. The minimum permitted separation between adjacent seals/apertures is 200mm. Services should be a minimum of 30mm from seal edges. Services within the system iPASSIVE EX Mortar seal do not require a minimum separation, except pipes where combustible pipe insulation penetrates the seal and plastic pipe penetrations, which should be a minimum of 30mm from other services in the aperture. The total amount of cross sections of services (including insulation) should not exceed 60% of the penetration area.

Supporting constructions: Flexible walls must have a minimum thickness of 100 mm and comprise steel studs or timber studs* lined on both faces with minimum 2 layers of 12.5 mm thick boards. Rigid walls must have a minimum thickness of 100 mm and comprise concrete, aerated concrete or masonry, with a minimum density of 650 kg/m³. Rigid floors must have a minimum thickness of 150 mm and comprise aerated concrete or concrete with a minimum density of 650 kg/m³. The supporting construction must be otherwise tested or assessed to achieve the required FRL of the penetration seal in accordance with AS1530.4 -2014.



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. If the mortar seal is required to be load bearing, please see instructions in the Technical Data Sheet.
3. Bare metal pipes passing through the seal must be protected against corrosion using a suitable primer/ protection system.
4. When sealing gypsum walls the mortar should be flush with the surface of the gypsum on both sides.
5. When sealing masonry or concrete constructions, the seal can be positioned to either side of the construction or anywhere in between.
6. When installing iPASSIVE EX Mortar in hollow floor slabs or boards, level the fire seal with the soffit side. Ensure there is sufficient thickness of concrete below the void for the depth of mortar. 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.
7. Install a stone wool shutter board where is necessary to achieve the required thickness of mortar (see the drawings on pages 2-16). Make sure that this achieves a very tight seal - any small openings should be sealed with iPASSIVE FR Acrylic
8. 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. For different mix ratios and drying times, please refer to the Technical Data Sheet.
9. 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.

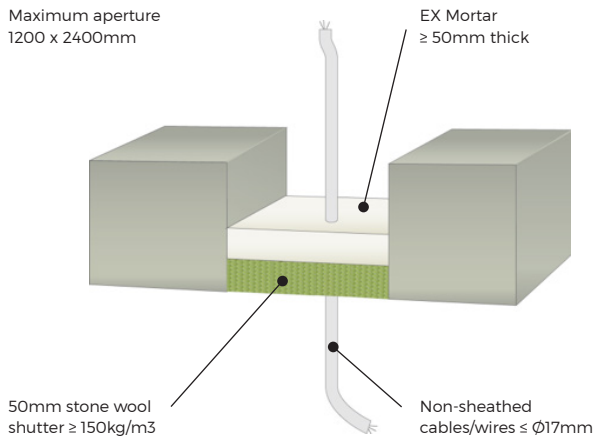
*Timber studs: no part of the penetration seal may be closer than 100 mm to a stud, and minimum 100 mm of insulation must be provided within the cavity between the penetration seal and the stud.

DETAIL DRAWINGS | IPASSIVE EX MORTAR | FLOORS

CABLES FIRE RESISTANCE -/180/60

Rigid Floors

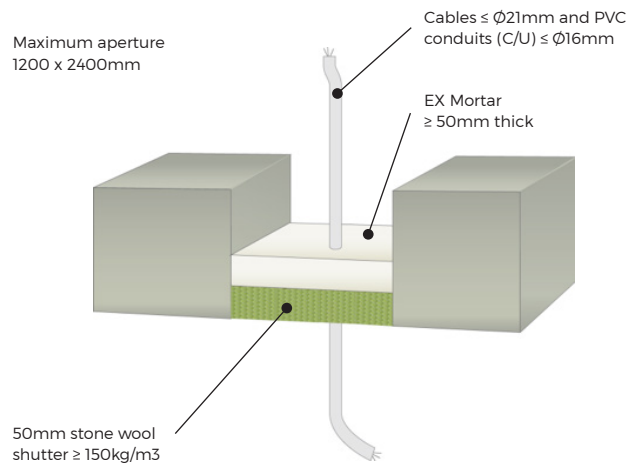
Maximum aperture
1200 x 2400mm



CABLES FIRE RESISTANCE -/180/90

Rigid Floors

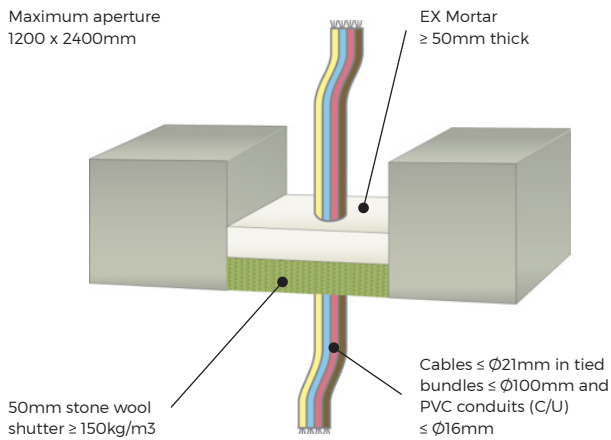
Maximum aperture
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CABLES FIRE RESISTANCE -/180/180

Rigid Floors

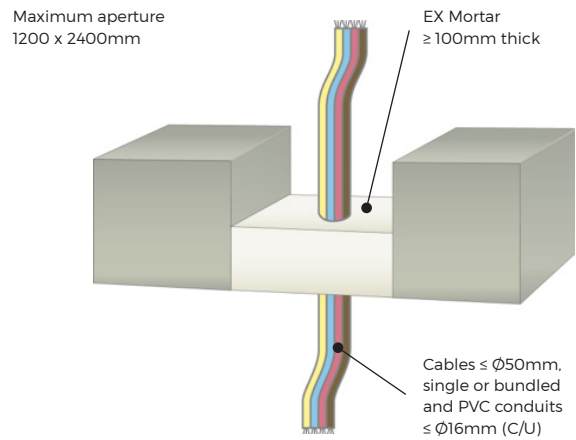
Maximum aperture
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CABLES FIRE RESISTANCE -/180/60

Rigid Floors

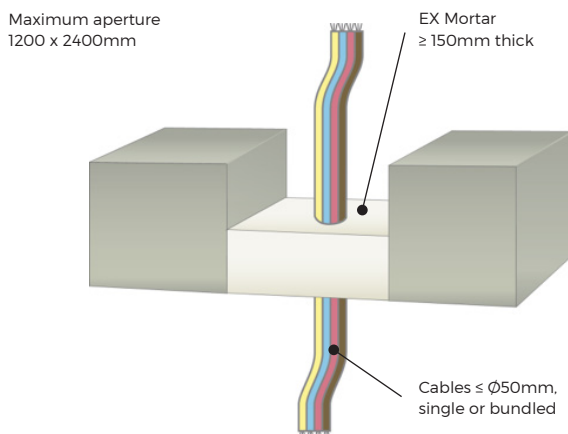
Maximum aperture
1200 x 2400mm



CABLES FIRE RESISTANCE -/240/90

Rigid Floors

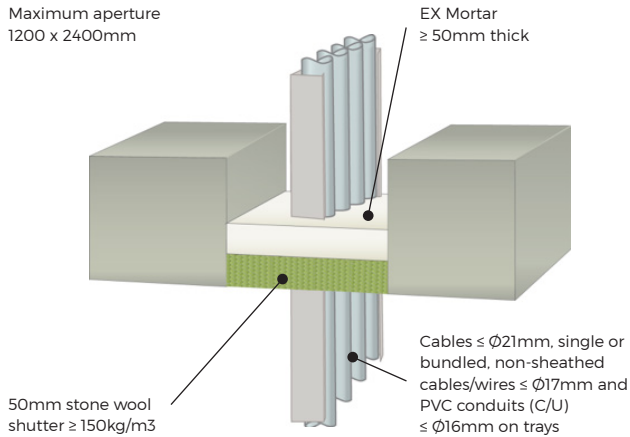
Maximum aperture
1200 x 2400mm



DETAIL DRAWINGS | IPASSIVE EX MORTAR | FLOORS

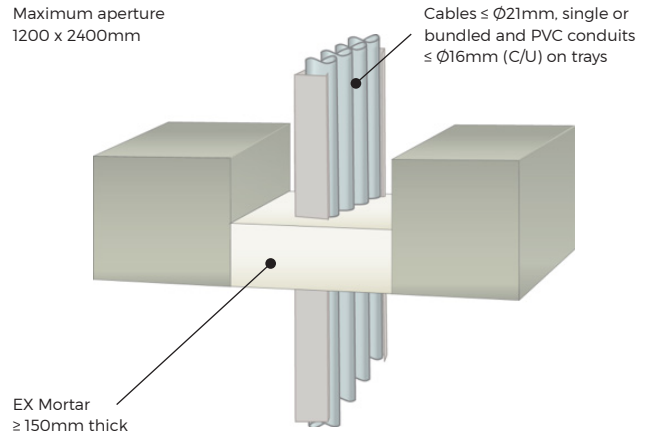
CABLES AND CABLE TRAYS FIRE RESISTANCE -/90/60 Rigid Floors

Maximum aperture
1200 x 2400mm



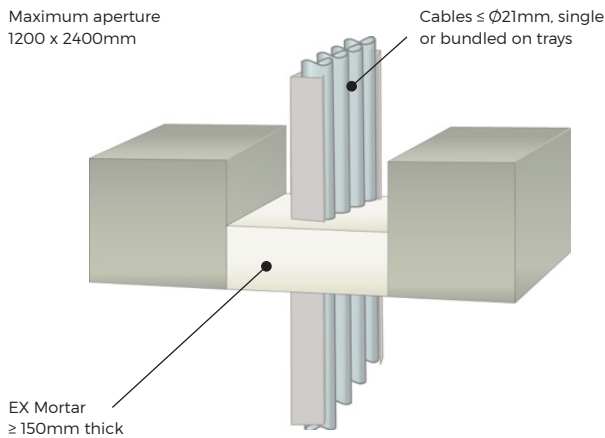
CABLES AND CABLE TRAYS FIRE RESISTANCE -/180/120 Rigid Floors

Maximum aperture
1200 x 2400mm



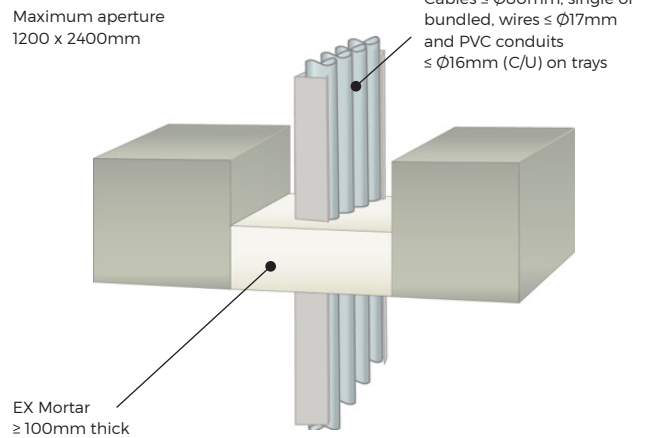
CABLES AND CABLE TRAYS FIRE RESISTANCE -/240/120 Rigid Floors

Maximum aperture
1200 x 2400mm



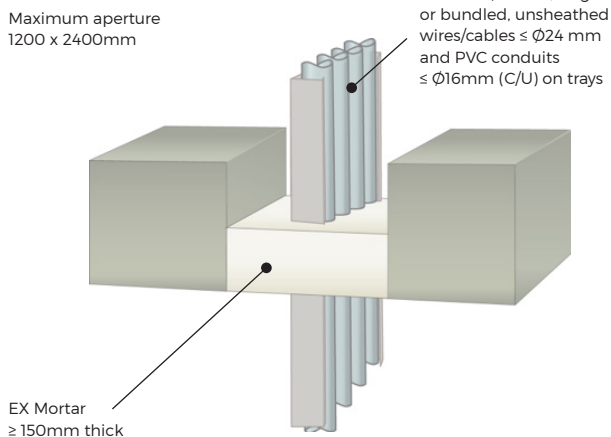
CABLES AND CABLE TRAYS FIRE RESISTANCE -/120/60 Rigid Floors

Maximum aperture
1200 x 2400mm



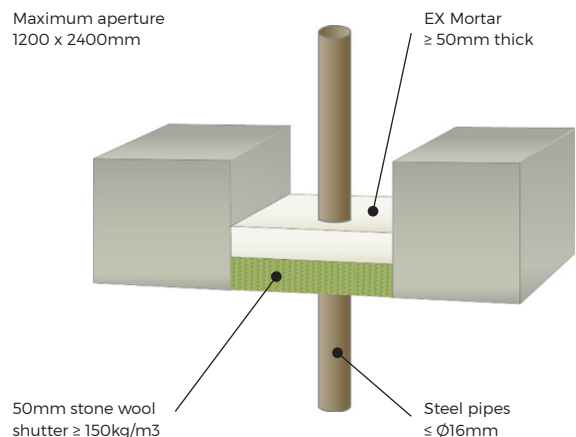
CABLES AND CABLE TRAYS FIRE RESISTANCE -/120/120 Rigid Floors

Maximum aperture
1200 x 2400mm



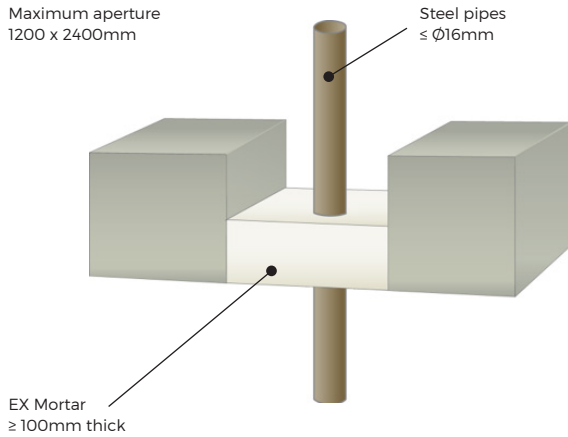
STEEL PIPES FIRE RESISTANCE -/180/180 C/U Rigid Floors

Maximum aperture
1200 x 2400mm

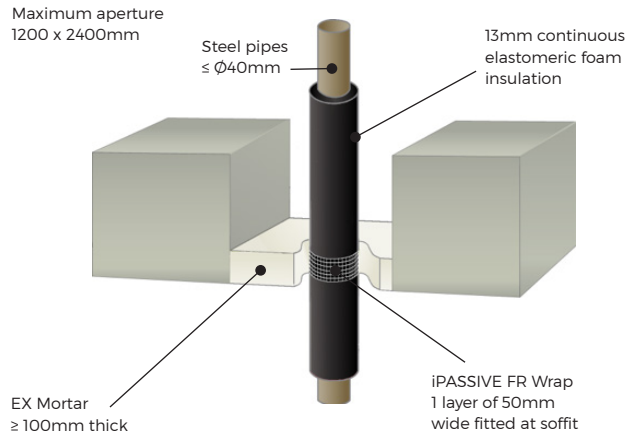


DETAIL DRAWINGS | IPASSIVE EX MORTAR | FLOORS

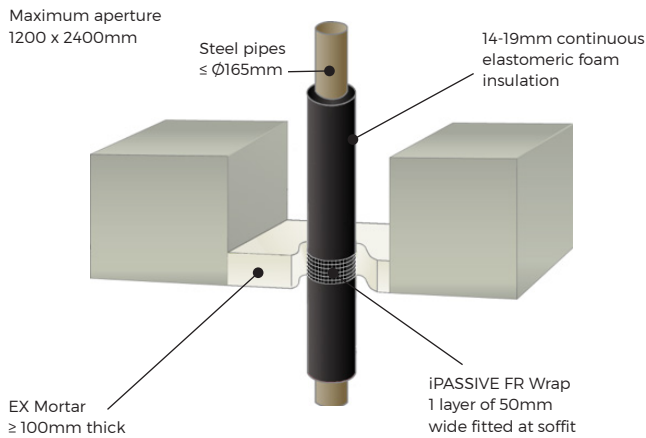
STEEL PIPES FIRE RESISTANCE -/240/240 C/U Rigid Floors



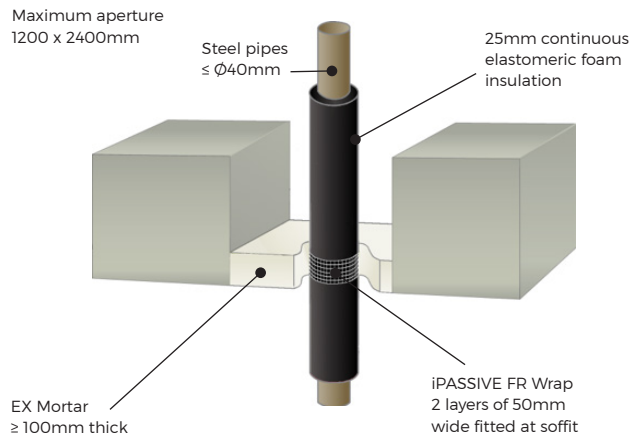
INSULATED STEEL PIPES FIRE RESISTANCE -/180/180 C/U Rigid Floors



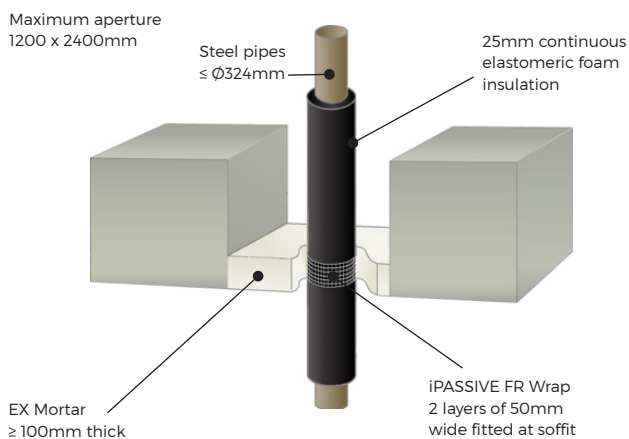
INSULATED STEEL PIPES FIRE RESISTANCE -/180/120 C/U Rigid Floors



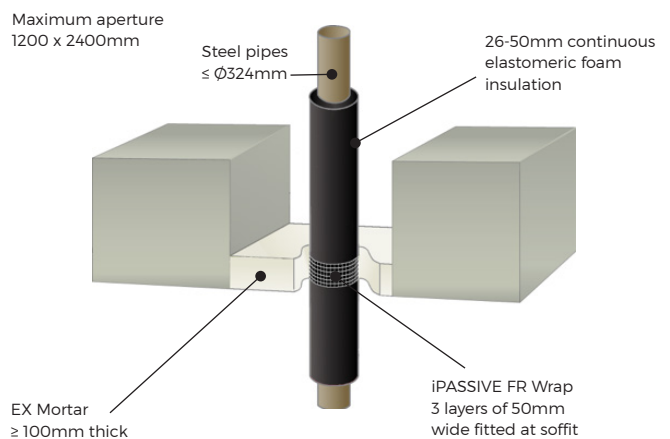
INSULATED STEEL PIPES FIRE RESISTANCE -/180/180 C/U Rigid Floors



INSULATED STEEL PIPES FIRE RESISTANCE -/180/120 C/U Rigid Floors

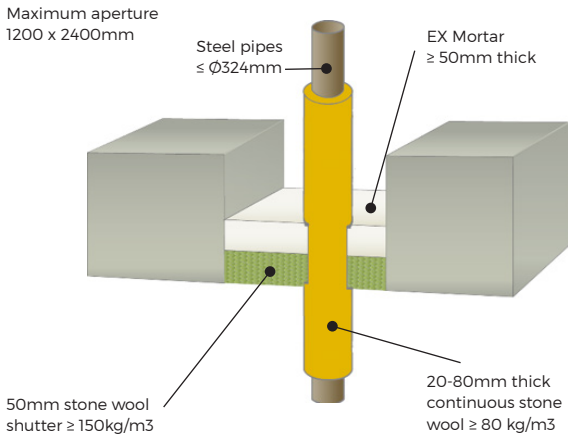


INSULATED STEEL PIPES FIRE RESISTANCE -/120/120 C/U Rigid Floors

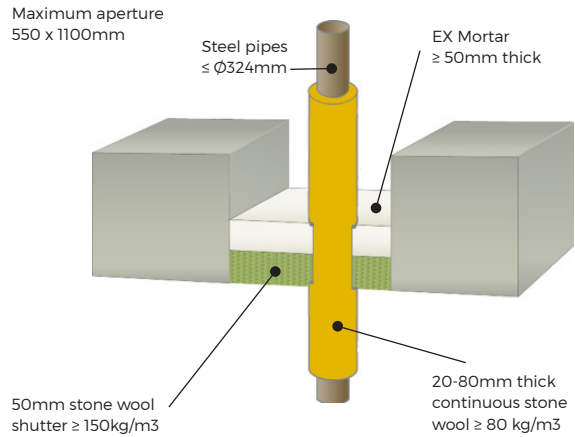


DETAIL DRAWINGS | IPASSIVE EX MORTAR | FLOORS

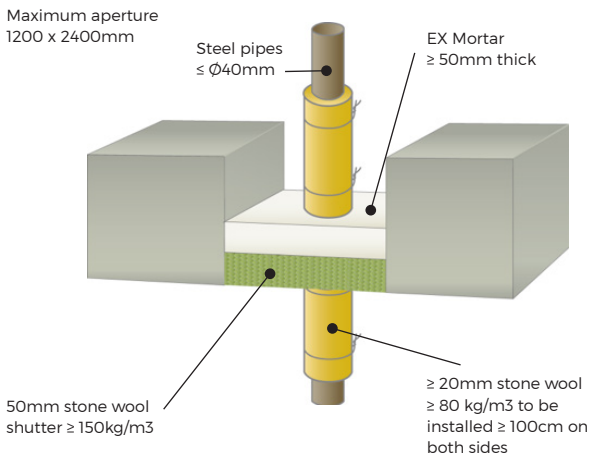
INSULATED STEEL PIPES FIRE RESISTANCE -/180/180 C/U Rigid Floors



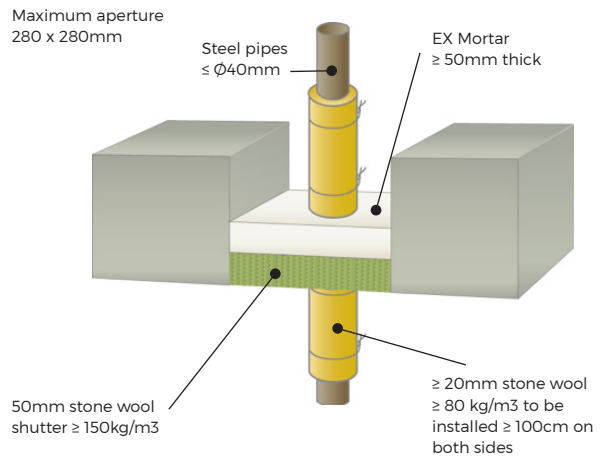
INSULATED STEEL PIPES FIRE RESISTANCE -/240/240 C/U Rigid Floors



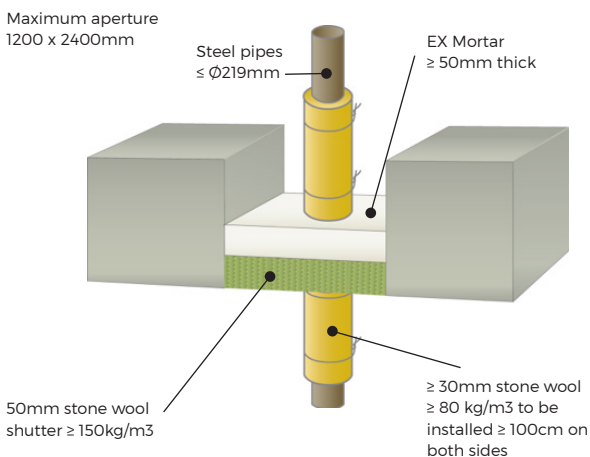
STEEL PIPES FIRE RESISTANCE -/180/180 C/U Rigid Floors



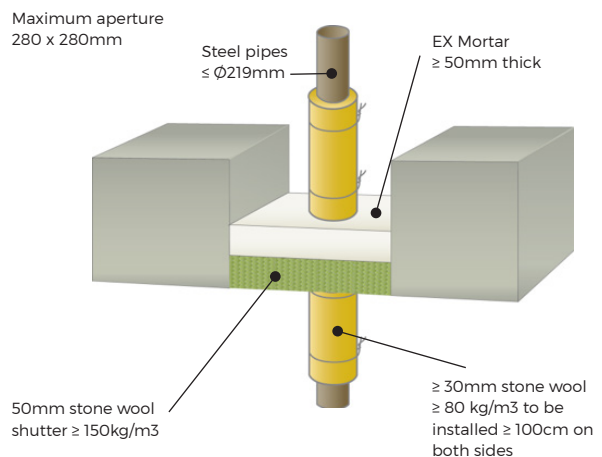
STEEL PIPES FIRE RESISTANCE -/240/240 C/U Rigid Floors



STEEL PIPES FIRE RESISTANCE -/180/90 C/U Rigid Floors

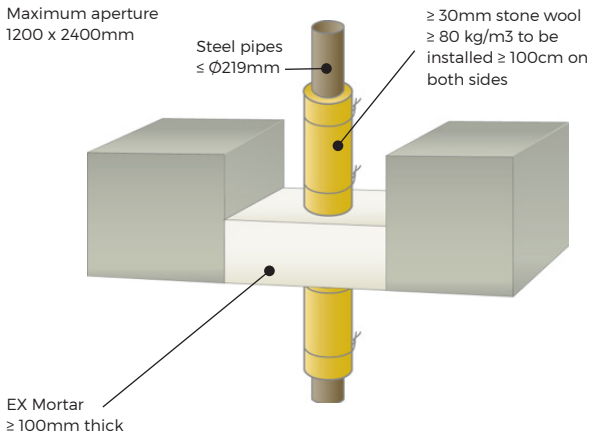


STEEL PIPES FIRE RESISTANCE -/240/90 C/U Rigid Floors

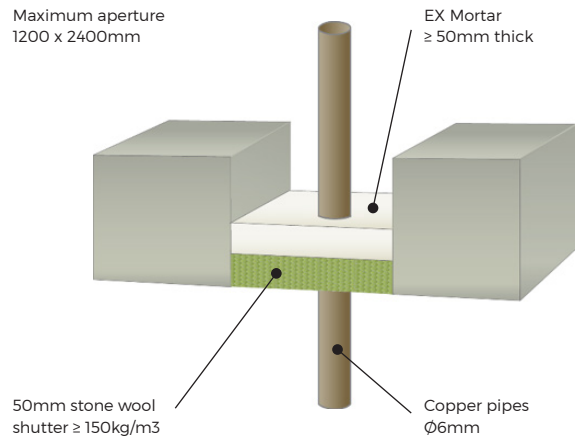


DETAIL DRAWINGS | IPASSIVE EX MORTAR | FLOORS

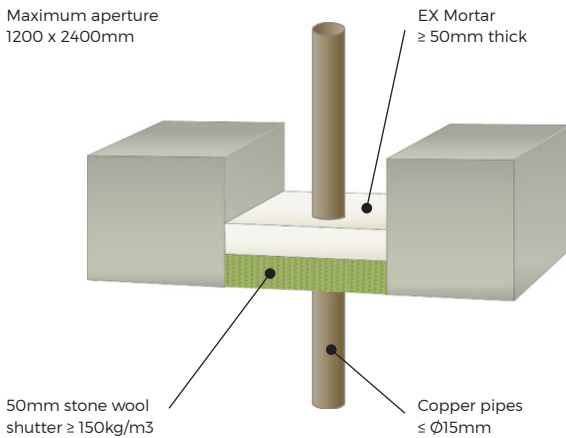
STEEL PIPES FIRE RESISTANCE -/240/120 C/U Rigid Floors



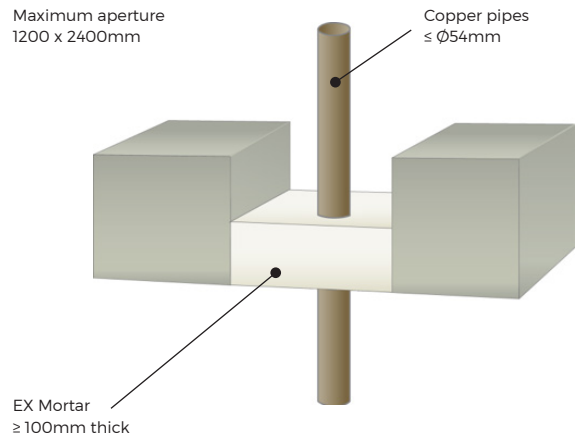
COPPER PIPES FIRE RESISTANCE -/180/120 C/C Rigid Floors



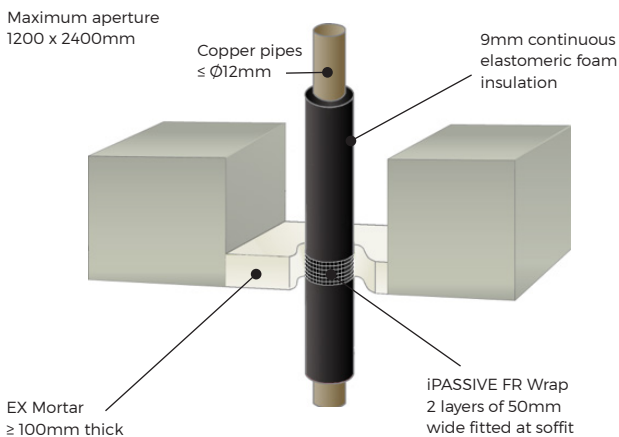
COPPER PIPES FIRE RESISTANCE -/180/30 C/C Rigid Floors



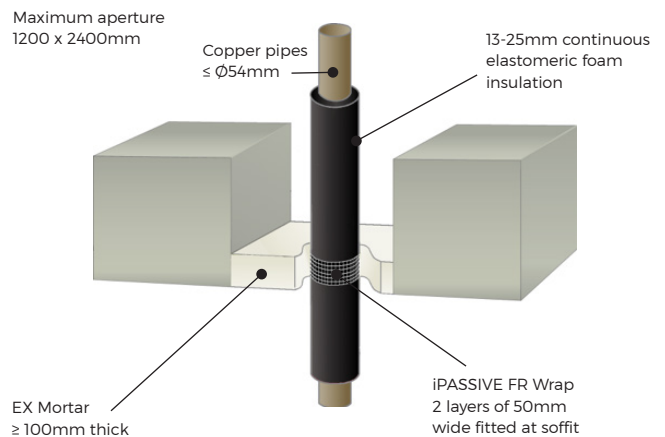
COPPER PIPES FIRE RESISTANCE -/120/- C/C Rigid Floors



INSULATED COPPER PIPES FIRE RESISTANCE -/240/240 C/C Rigid Floors

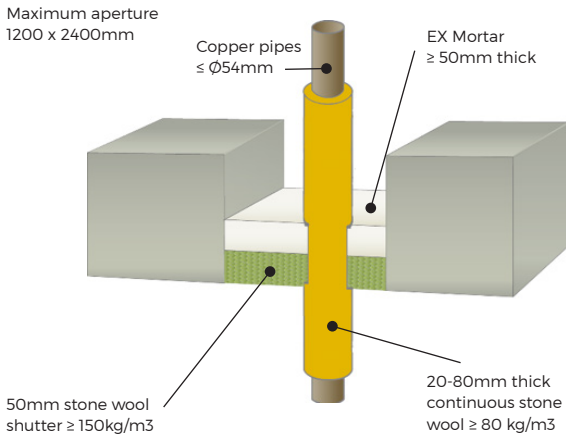


INSULATED COPPER PIPES FIRE RESISTANCE -/240/60 C/C Rigid Floors

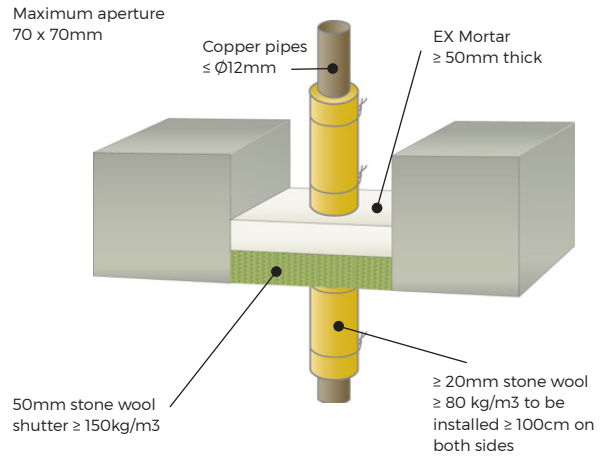


DETAIL DRAWINGS | IPASSIVE EX MORTAR | FLOORS

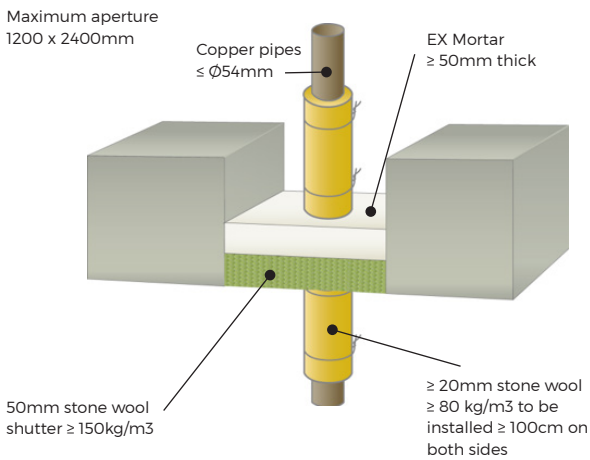
INSULATED COPPER PIPES FIRE RESISTANCE -/180/120 C/C Rigid Floors



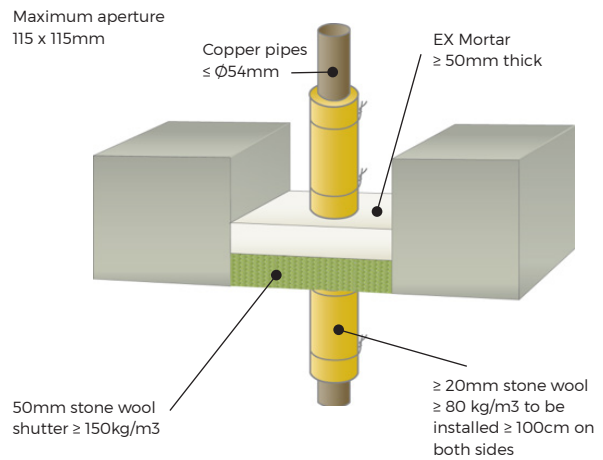
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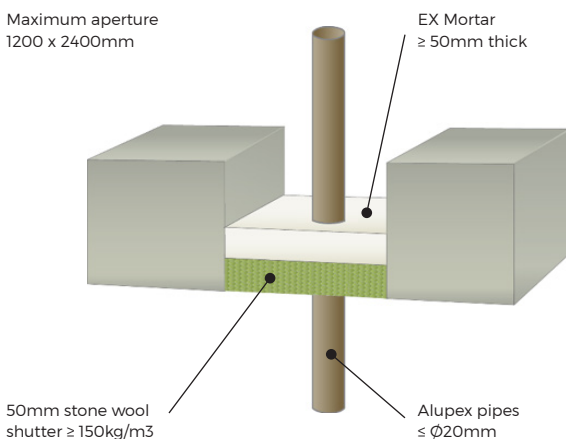
COPPER PIPES FIRE RESISTANCE -/180/180 C/C Rigid Floors



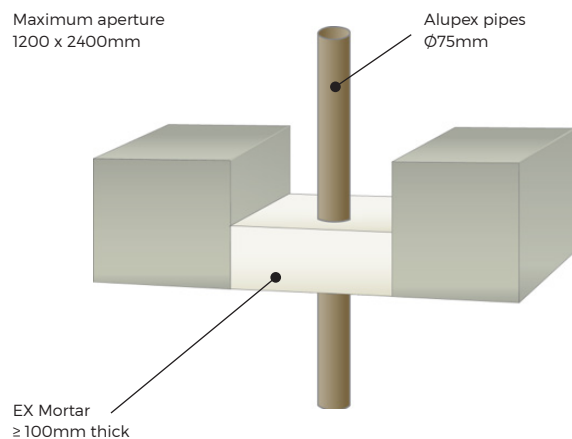
COPPER PIPES FIRE RESISTANCE -/240/180 C/C Rigid Floors



ALUPEX PIPES FIRE RESISTANCE -/180/180 C/C Rigid Floors

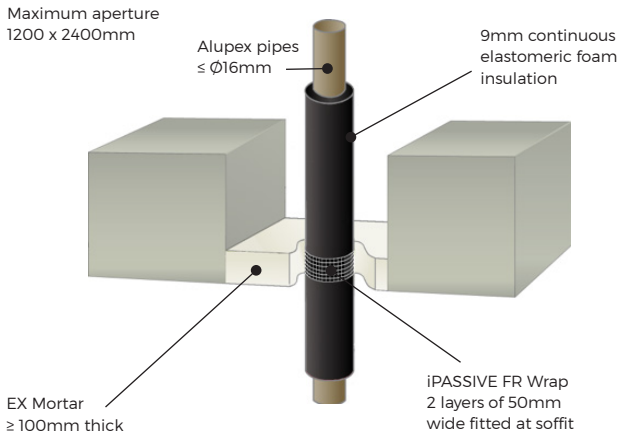


ALUPEX PIPES FIRE RESISTANCE -/240/- C/U Rigid Floors

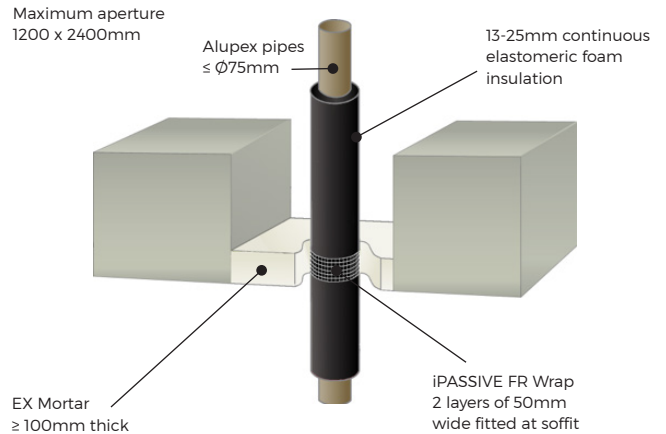


DETAIL DRAWINGS | IPASSIVE EX MORTAR | FLOORS

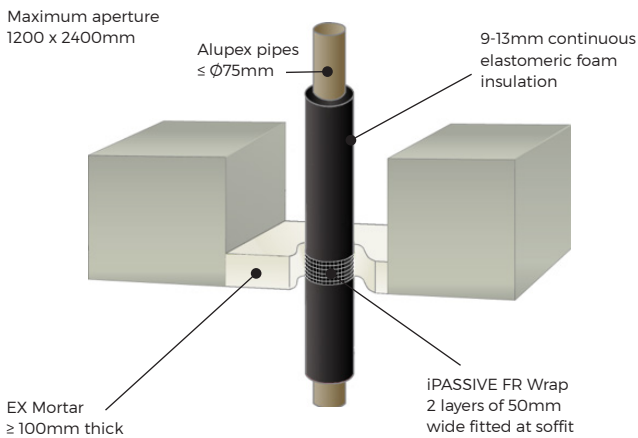
INSULATED ALUPEX PIPES FIRE RESISTANCE -/240/240 C/C Rigid Floors



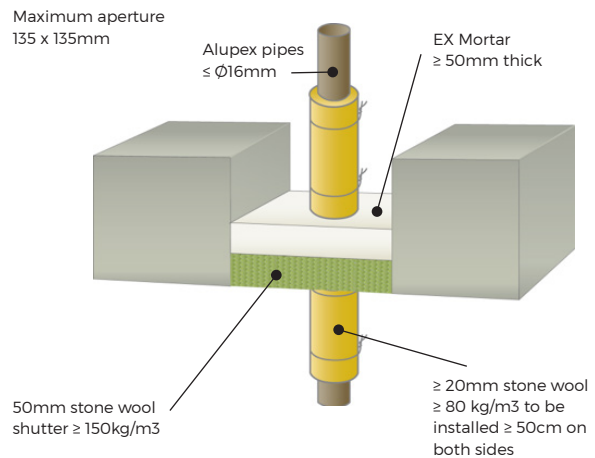
INSULATED ALUPEX PIPES FIRE RESISTANCE -/180/90 C/C Rigid Floors



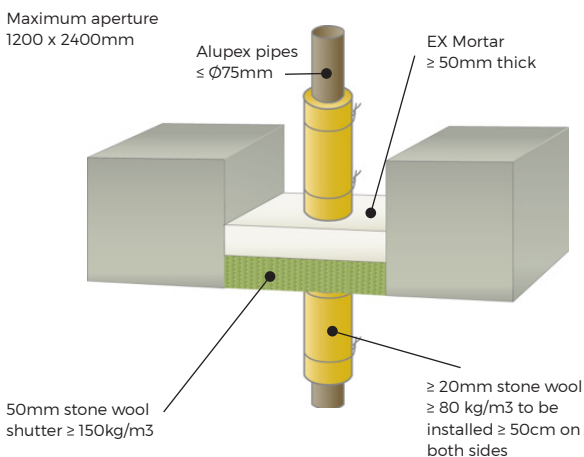
INSULATED ALUPEX PIPES FIRE RESISTANCE -/240/90 C/C Rigid Floors



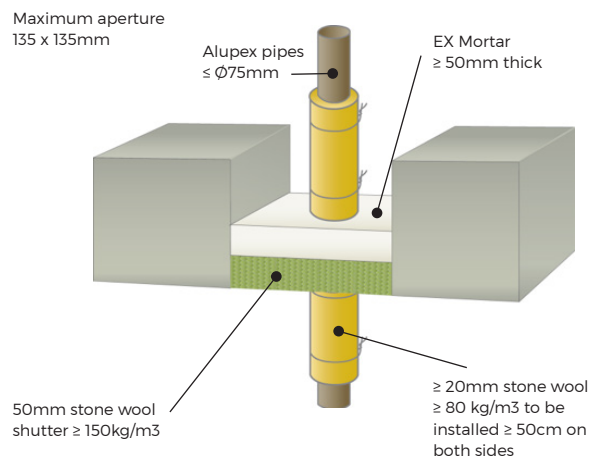
ALUPEX PIPES FIRE RESISTANCE -/240/240 C/C Rigid Floors



ALUPEX PIPES FIRE RESISTANCE -/180/180 C/C Rigid Floors



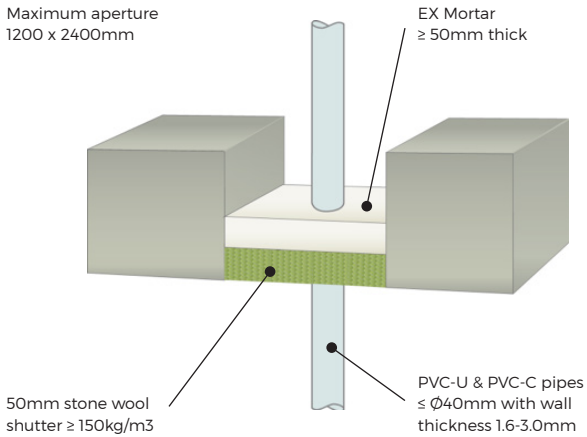
ALUPEX PIPES FIRE RESISTANCE -/240/180 C/C Rigid Floors



DETAIL DRAWINGS | IPASSIVE EX MORTAR | FLOORS

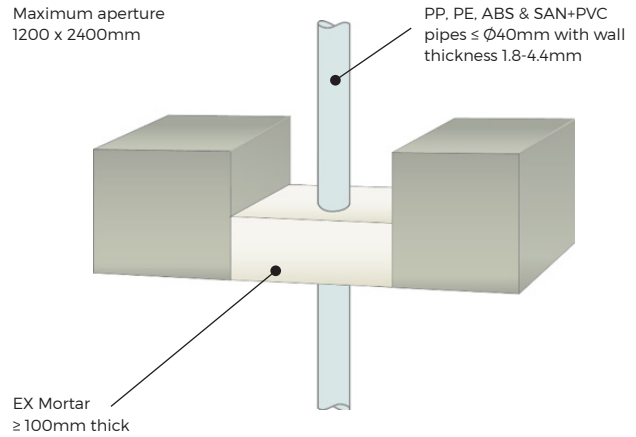
PLASTIC PIPES FIRE RESISTANCE -/120/120 U/C Rigid Floors

Maximum aperture
1200 x 2400mm



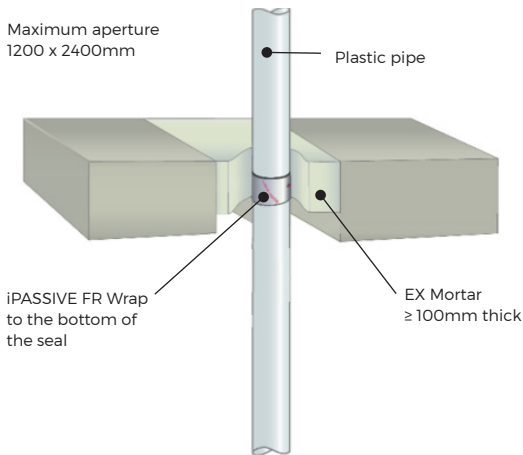
PLASTIC PIPES FIRE RESISTANCE -/120/120 U/C Rigid Floors

Maximum aperture
1200 x 2400mm



PLASTIC PIPES FIRE RESISTANCE -/120/120 TO -/240/240 Rigid Floors

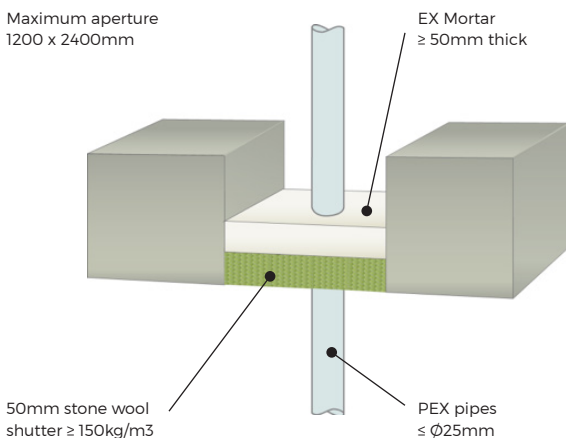
Maximum aperture
1200 x 2400mm



| Services | Pipe Wall Thickness | Pipe Wrap | Classification |
|---|---------------------|------------------------|----------------|
| $\leq \varnothing 40\text{mm}$ PVC-U & PVC-C | 1.8 – 3.7mm | 50 x 1.8mm (1 layer) | -/180/120 U/U |
| $\leq \varnothing 40\text{mm}$ PE, ABS & SAN+PVC | 2.4 – 3.7mm | 50 x 1.8mm (1 layer) | -/240/240 U/U |
| $\leq \varnothing 40\text{mm}$ PP | 1.8 – 5.5mm | 50 x 1.8mm (1 layer) | -/120/120 U/U |
| $\leq \varnothing 110\text{mm}$ PVC-U & PVC-C | 3.0 – 6.6mm | 50 x 3.6mm (2 layers) | -/240/240 U/C |
| $\leq \varnothing 110\text{mm}$ PE, ABS & SAN+PVC | 3.4 – 10.0mm | 50 x 3.6mm (2 layers) | -/120/120 U/C |
| $\leq \varnothing 110\text{mm}$ PP | 2.7 – 6.3mm | 50 x 3.6mm (2 layers) | -/240/240 U/C |
| $\leq \varnothing 125\text{mm}$ PVC-U & PVC-C | 3.5 – 7.4mm | 50 x 7.2mm (4 layers) | -/120/120 U/C |
| $\leq \varnothing 125\text{mm}$ PE, ABS & SAN+PVC | 3.9 – 11.4mm | 50 x 7.2mm (4 layers) | -/240/240 U/C |
| $\leq \varnothing 125\text{mm}$ PP | 3.4 – 11.4mm | 50 x 7.2mm (4 layers) | -/240/240 U/C |
| $\leq \varnothing 160\text{mm}$ PVC-U & PVC-C | 4.5mm | 50 x 10.8mm (6 layers) | -/240/240 C/C |
| $\leq \varnothing 160\text{mm}$ PE, ABS & SAN+PVC | 4.9 – 14.6mm | 50 x 10.8mm (6 layers) | -/120/120 U/C |
| $\leq \varnothing 160\text{mm}$ PP | 4.9 – 14.6mm | 50 x 10.8mm (6 layers) | -/240/240 U/C |
| $\leq \varnothing 250\text{mm}$ PE, ABS & SAN+PVC | 7.8mm | 75 x 12.6mm (7 layers) | -/180/180 C/C |

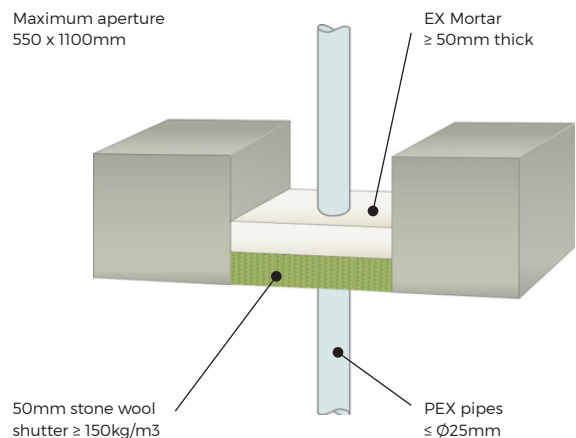
PEX PIPE-IN-PIPE SYSTEM FIRE RESISTANCE -/180/180 C/C Rigid Floors

Maximum aperture
1200 x 2400mm



PEX PIPE-IN-PIPE SYSTEM FIRE RESISTANCE -/240/240 C/C Rigid Floors

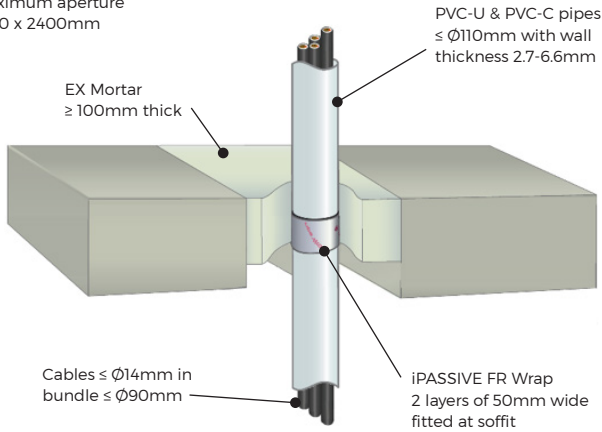
Maximum aperture
550 x 1100mm



DETAIL DRAWINGS | IPASSIVE EX MORTAR | FLOORS & WALLS

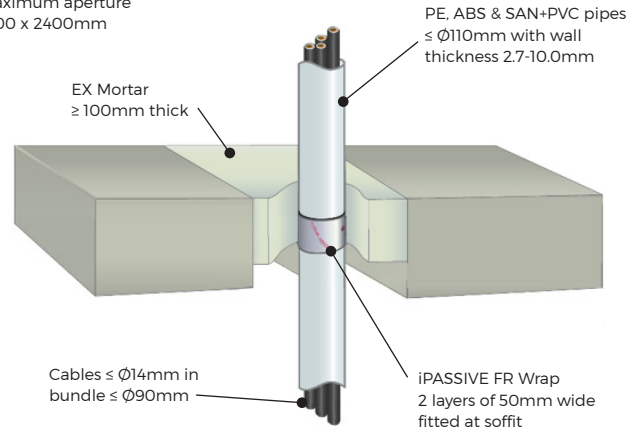
PLASTIC PIPES W/CABLES FIRE RESISTANCE -/120/120 U/C Rigid Floors

Maximum aperture
1200 x 2400mm



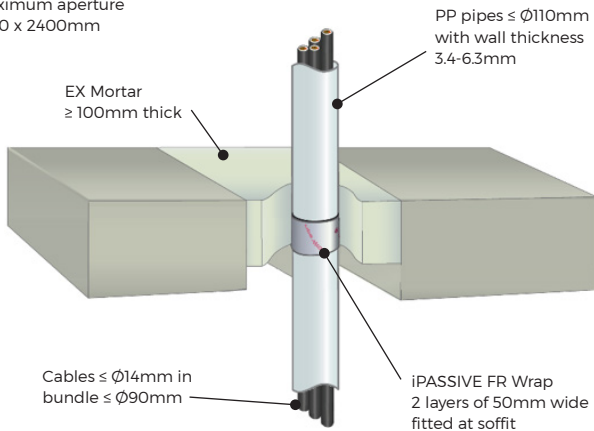
PLASTIC PIPES W/CABLES FIRE RESISTANCE -/120/60 U/C Rigid Floors

Maximum aperture
1200 x 2400mm



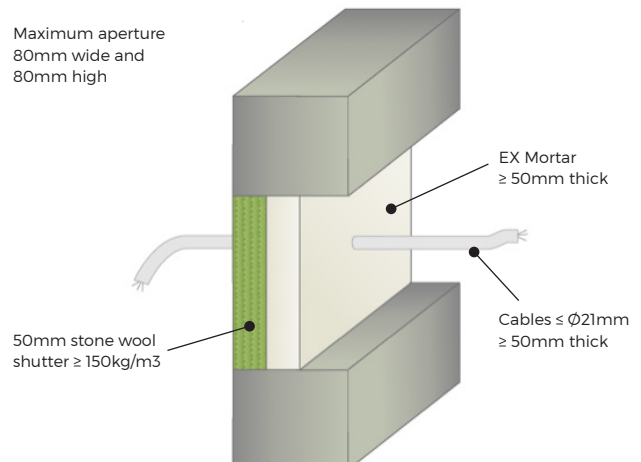
PLASTIC PIPES W/CABLES FIRE RESISTANCE -/60/60 U/C Rigid Floors

Maximum aperture
1200 x 2400mm



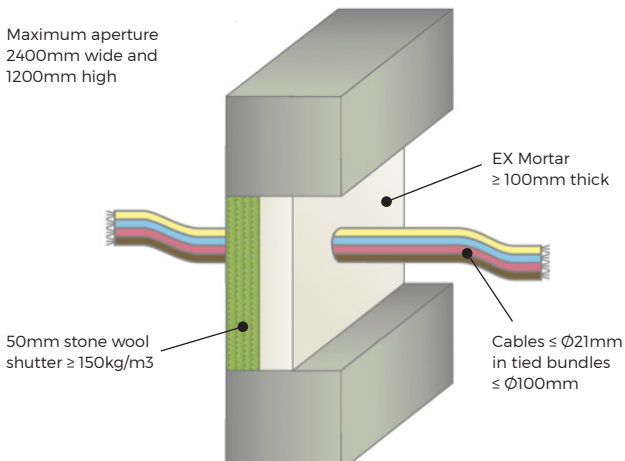
CABLES FIRE RESISTANCE -/240/60 Masonry or Concrete - Walls

Maximum aperture
80mm wide and
80mm high



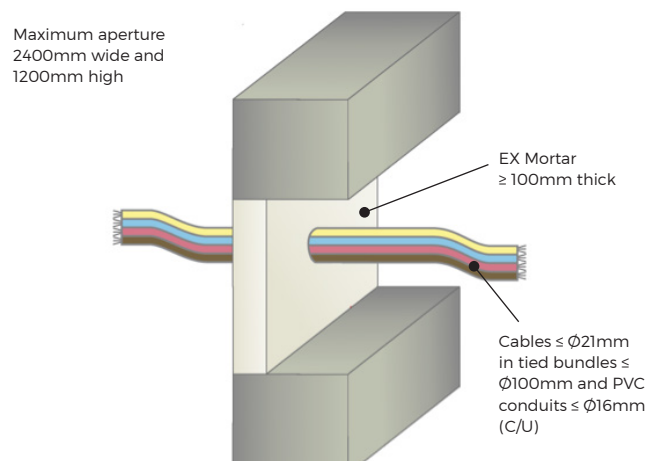
CABLES FIRE RESISTANCE -/180/90 Masonry or Concrete - Walls

Maximum aperture
2400mm wide and
1200mm high



CABLES FIRE RESISTANCE -/120/120 Masonry or Concrete - Walls

Maximum aperture
2400mm wide and
1200mm high

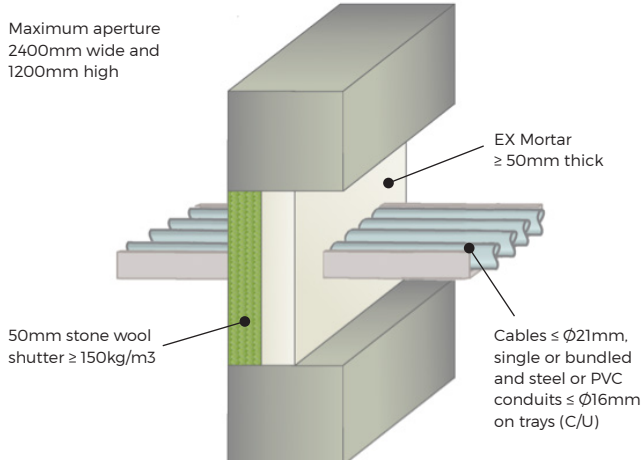


DETAIL DRAWINGS | IPASSIVE EX MORTAR | WALLS

CABLES AND CABLE TRAYS FIRE RESISTANCE -/180/60

Masonry or Concrete - Walls

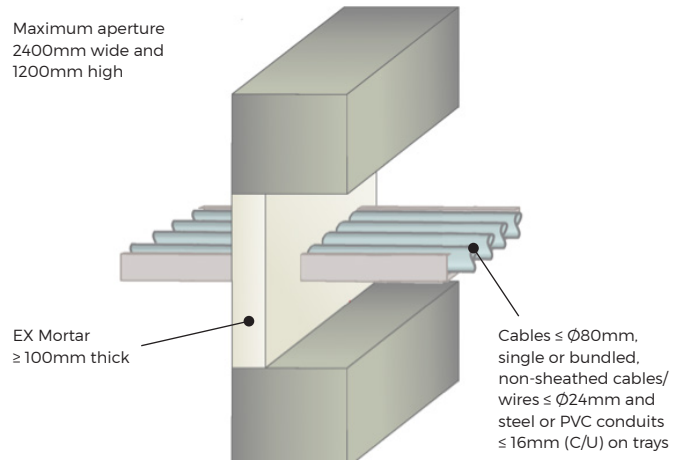
Maximum aperture
2400mm wide and
1200mm high



CABLES AND CABLE TRAYS FIRE RESISTANCE -/120/60

Masonry or Concrete - Walls

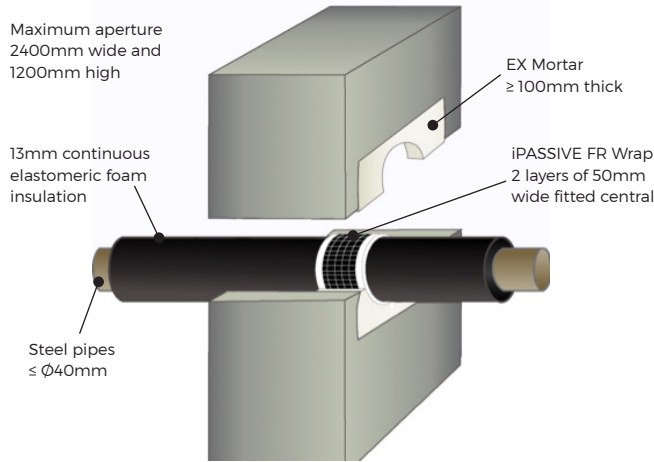
Maximum aperture
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1200mm high



INSULATED STEEL PIPES FIRE RESISTANCE -/240/240 C/U

Masonry or Concrete - Walls

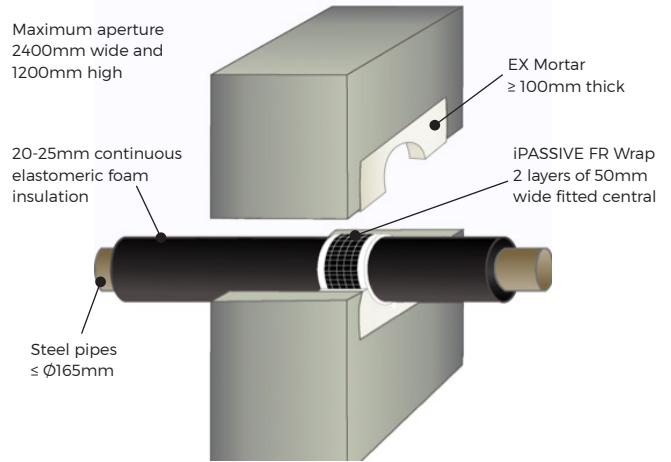
Maximum aperture
2400mm wide and
1200mm high



INSULATED STEEL PIPES FIRE RESISTANCE -/180/60 C/U

Masonry or Concrete - Walls

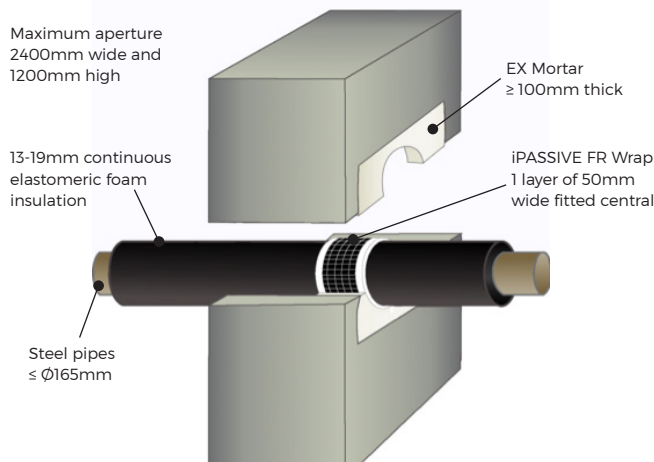
Maximum aperture
2400mm wide and
1200mm high



INSULATED STEEL PIPES FIRE RESISTANCE -/240/60 C/U

Masonry or Concrete - Walls

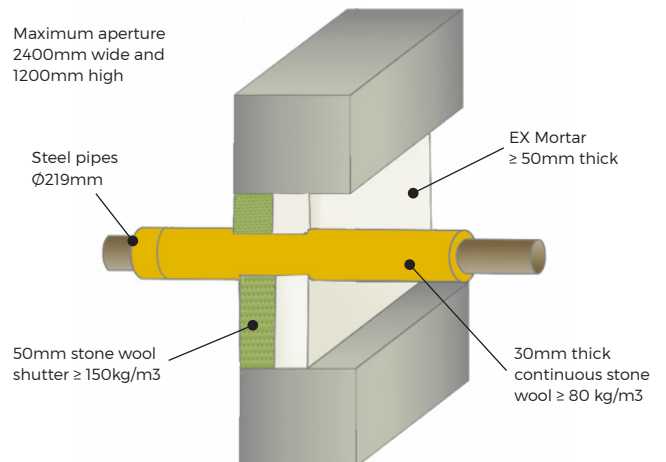
Maximum aperture
2400mm wide and
1200mm high



INSULATED STEEL PIPES FIRE RESISTANCE -/120/90 C/U

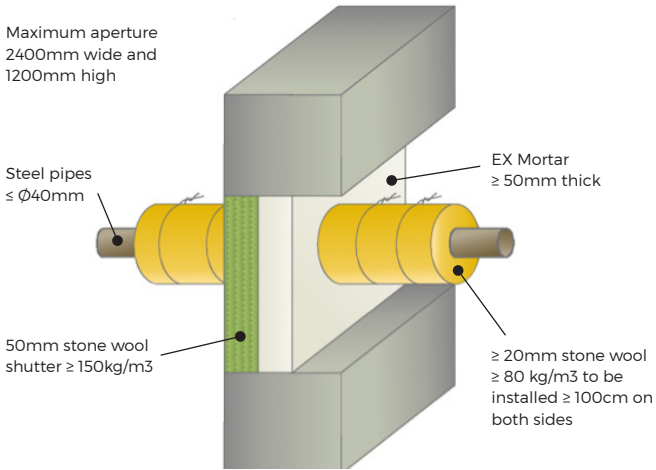
Masonry or Concrete - Walls

Maximum aperture
2400mm wide and
1200mm high

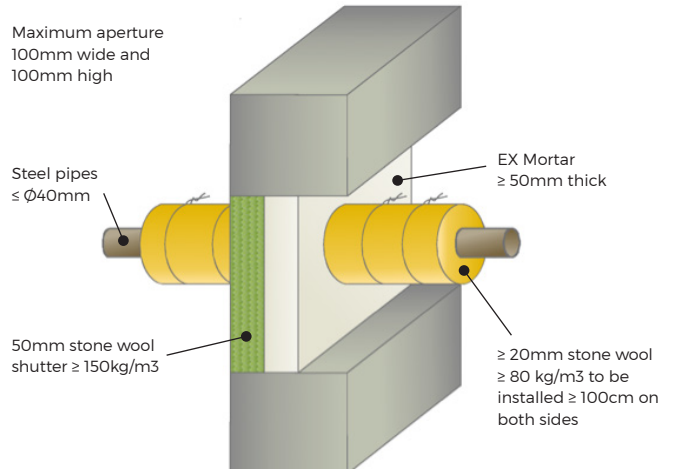


DETAIL DRAWINGS | IPASSIVE EX MORTAR | WALLS

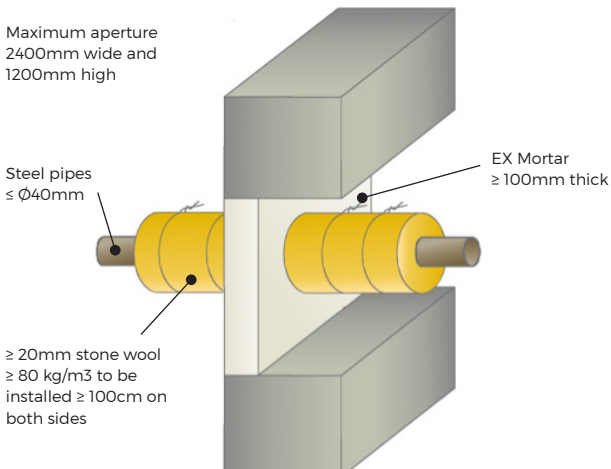
STEEL PIPES FIRE RESISTANCE -/180/120 C/U
Masonry or Concrete - Walls



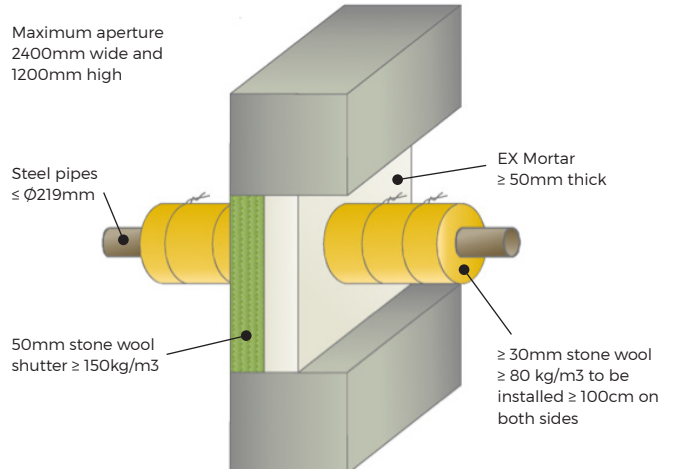
STEEL PIPES FIRE RESISTANCE -/240/240 C/U
Masonry or Concrete - Walls



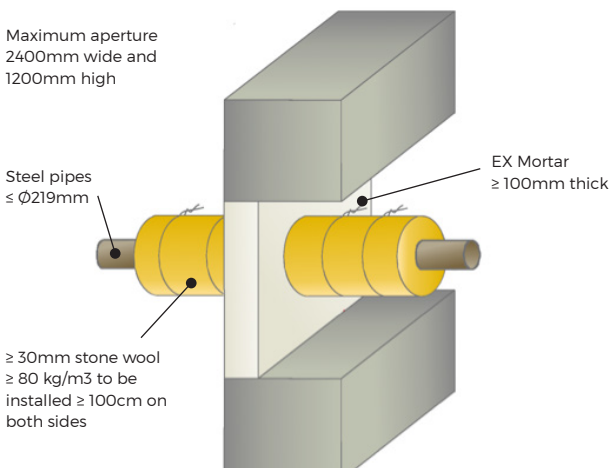
STEEL PIPES FIRE RESISTANCE -/240/240 C/U
Masonry or Concrete - Walls



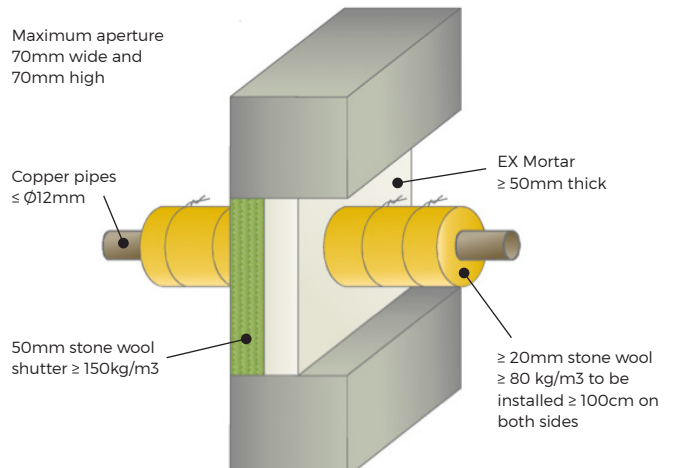
STEEL PIPES FIRE RESISTANCE -/120/90 C/U
Masonry or Concrete - Walls



STEEL PIPES FIRE RESISTANCE -/240/120 C/U
Masonry or Concrete - Walls



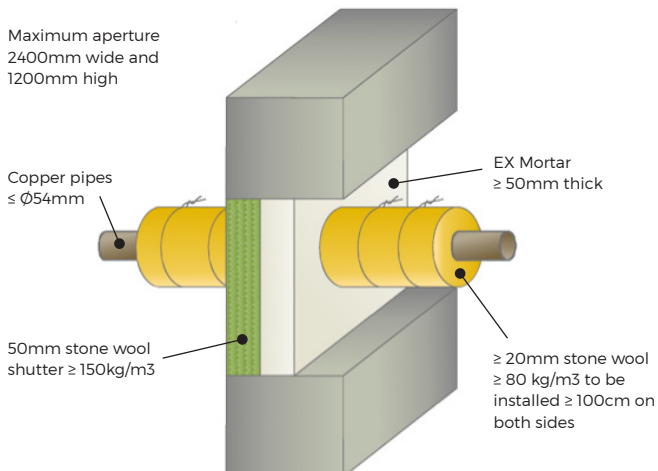
COPPER PIPES FIRE RESISTANCE -/240/240 C/C
Masonry or Concrete - Walls



DETAIL DRAWINGS | IPASSIVE EX MORTAR | WALLS

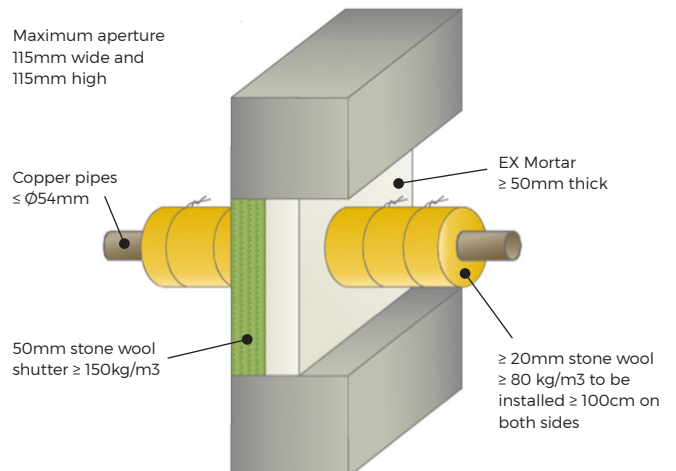
COPPER PIPES FIRE RESISTANCE -/180/120 C/C

Masonry or Concrete - Walls



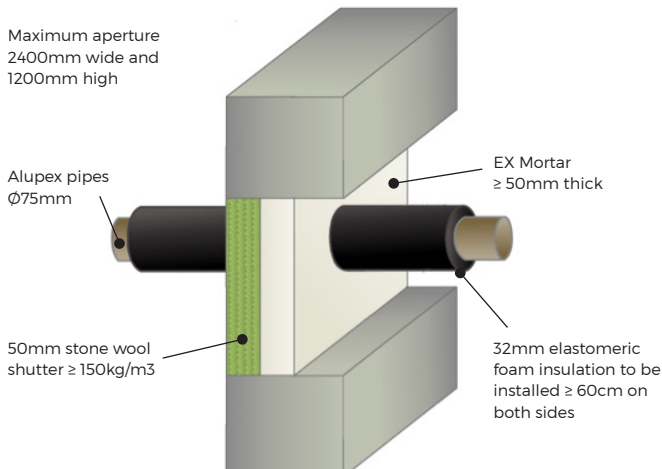
COPPER PIPES FIRE RESISTANCE -/240/120 C/C

Masonry or Concrete - Walls



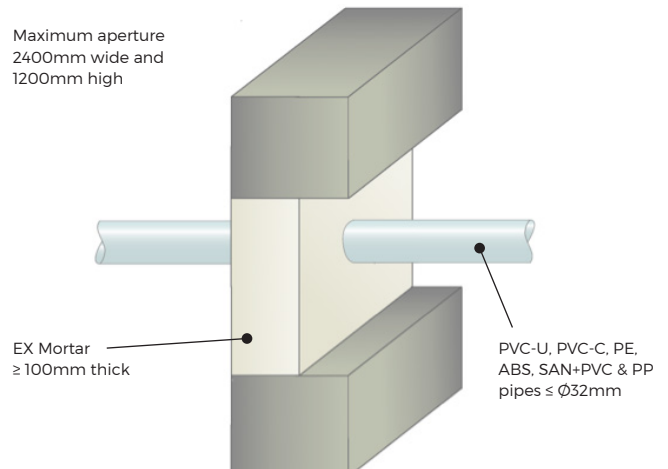
ALUPEX PIPES FIRE RESISTANCE -/60/60 C/C

Masonry or Concrete - Walls



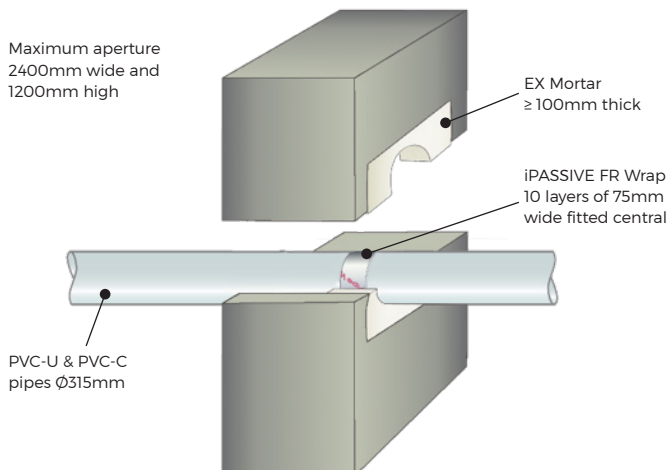
PLASTIC PIPES FIRE RESISTANCE -/120/120 U/C

Masonry or Concrete - Walls



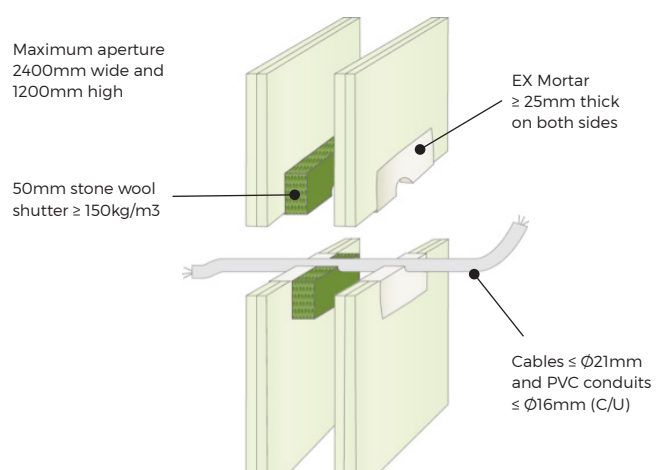
PLASTIC PIPES FIRE RESISTANCE -/120/120 C/C

Masonry or Concrete - Walls



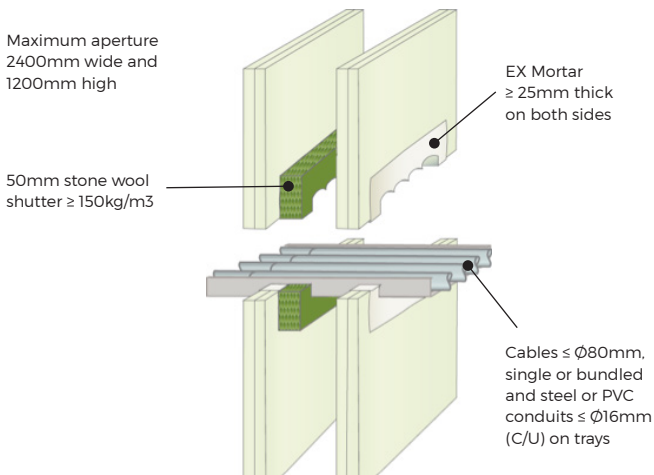
CABLES FIRE RESISTANCE -/120/90

Gypsum, Masonry or Concrete - Walls

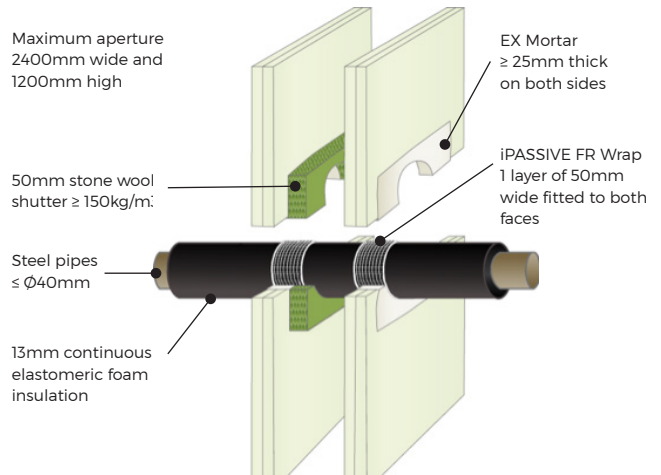


DETAIL DRAWINGS | IPASSIVE EX MORTAR | WALLS

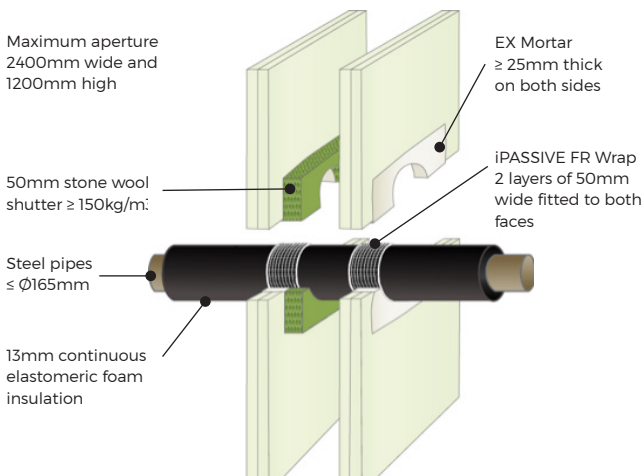
CABLES AND CABLE TRAYS FIRE RESISTANCE -/120/60 Gypsum, Masonry or Concrete - Walls



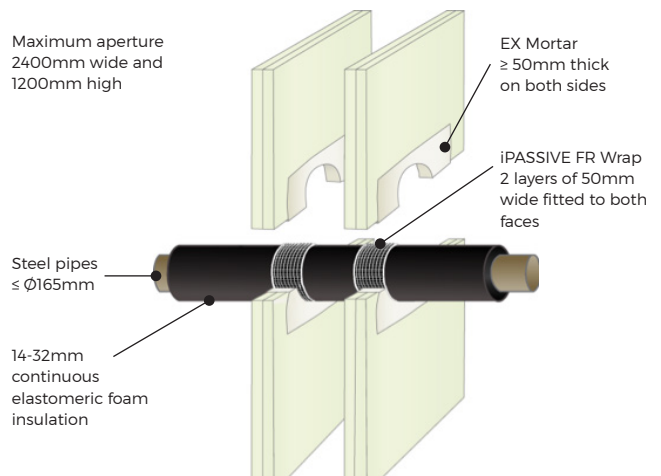
INSULATED STEEL PIPES FIRE RESISTANCE -/120/120 C/U Gypsum, Masonry or Concrete - Walls



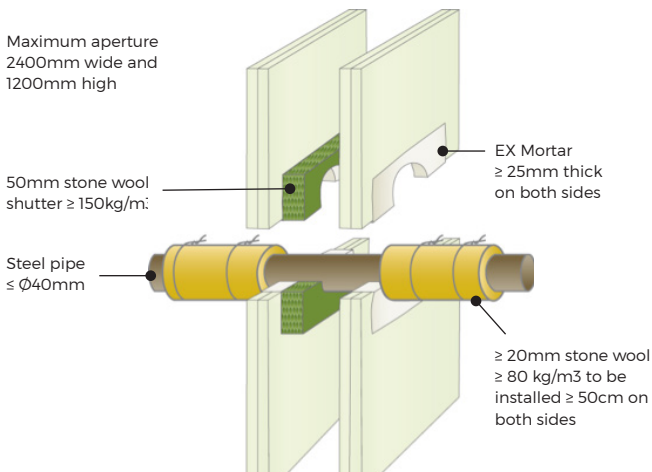
INSULATED STEEL PIPES FIRE RESISTANCE -/120/60 C/U Gypsum, Masonry or Concrete - Walls



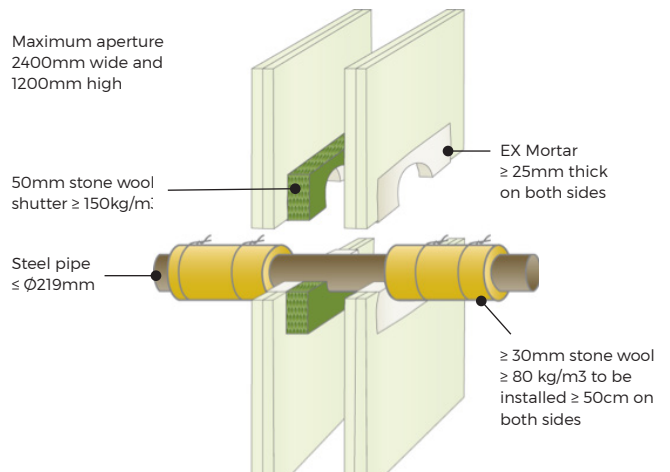
INSULATED STEEL PIPES FIRE RESISTANCE -/120/60 C/U Gypsum, Masonry or Concrete - Walls



STEEL PIPES FIRE RESISTANCE -/120/120 C/U Gypsum, Masonry or Concrete - Walls

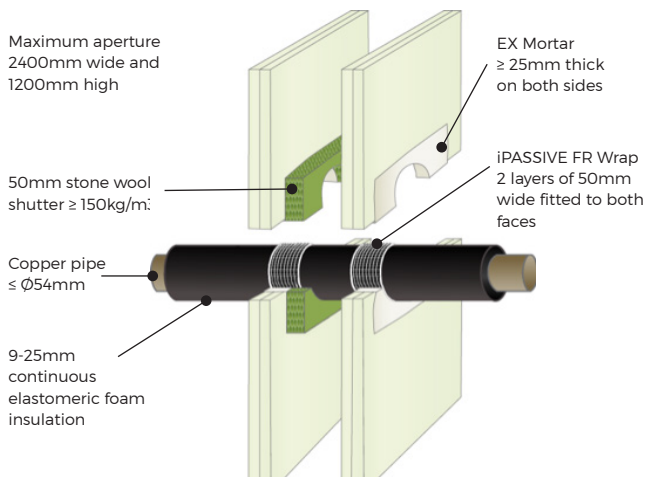


STEEL PIPES FIRE RESISTANCE -/120/90 C/U Gypsum, Masonry or Concrete - Walls

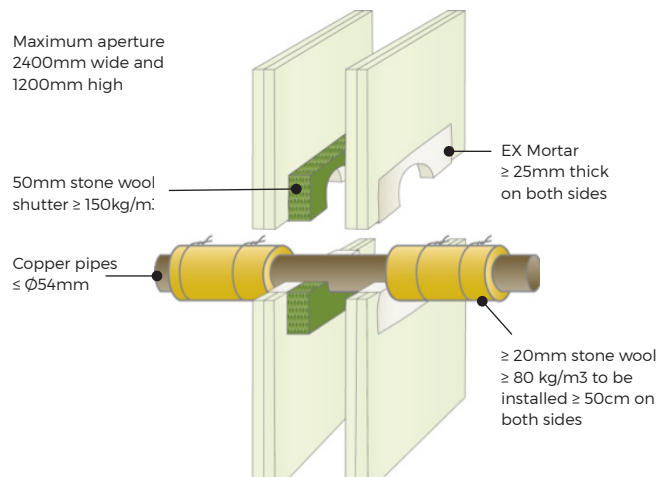


DETAIL DRAWINGS | iPASSIVE EX MORTAR | WALLS

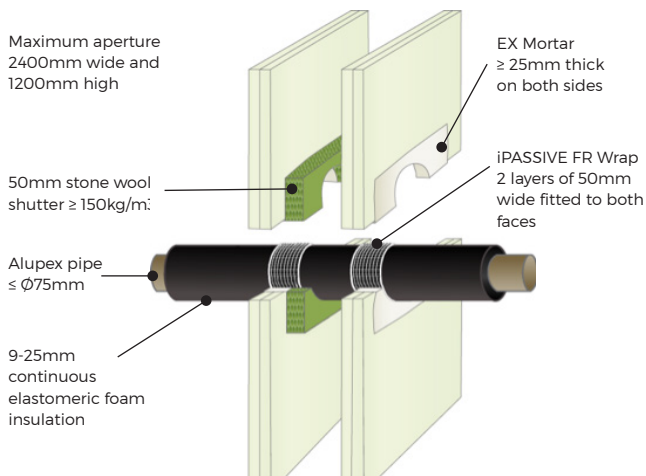
INSULATED COPPER PIPES FIRE RESISTANCE -/120/120 C/C Gypsum, Masonry or Concrete - Walls



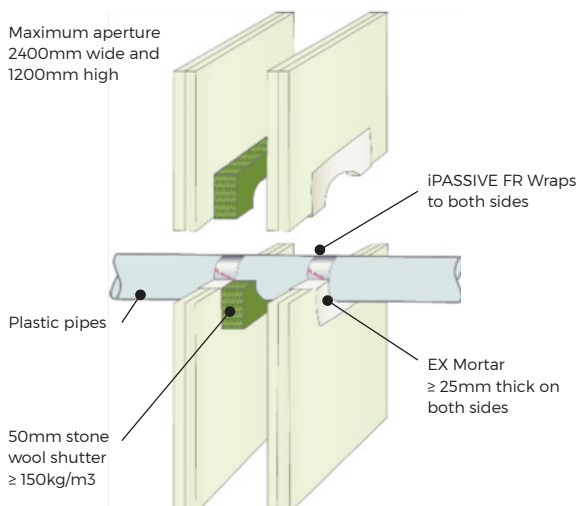
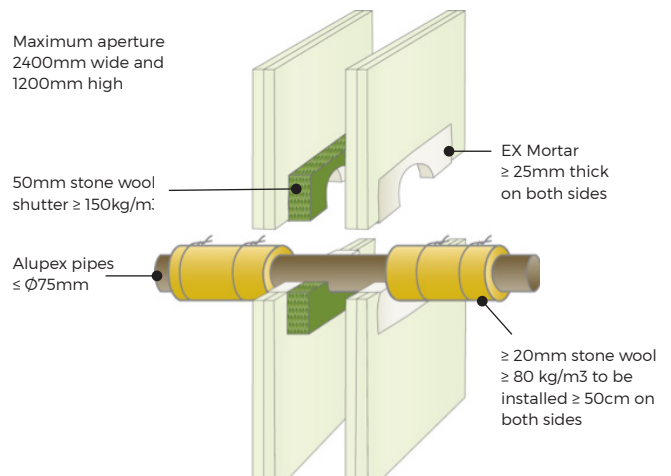
COPPER PIPES FIRE RESISTANCE -/120/120 C/C Gypsum, Masonry or Concrete - Walls



INSULATED ALUPEX PIPES FIRE RESISTANCE -/120/120 C/C Gypsum, Masonry or Concrete - Walls



ALUPEX PIPES FIRE RESISTANCE -/120/120 C/C Gypsum, Masonry or Concrete - Walls

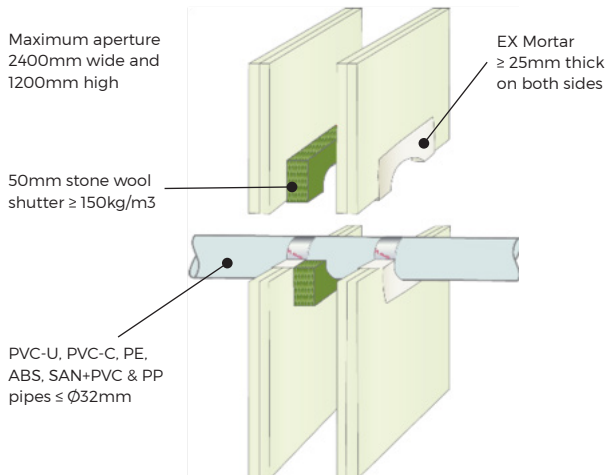


PLASTIC PIPES FIRE RESISTANCE -/60/60 TO -/120/120 Gypsum, Masonry Or Concrete - Walls

| Services | Pipe Wall Thickness | Pipe Wrap | Classification |
|---|---------------------|-----------------------|----------------|
| $\leq \text{Ø}40\text{mm}$ PVC-U & PVC-C | 3.0 – 4.3mm | 50 x 1.8mm (1 layer) | -/120/60 U/C |
| $\leq \text{Ø}40\text{mm}$ PE, ABS & SAN+PVC | 3.2 – 3.7mm | 50 x 1.8mm (1 layer) | -/120/120 U/C |
| $\leq \text{Ø}40\text{mm}$ PP | 4.0 – 5.5mm | 50 x 1.8mm (1 layer) | -/120/120 U/C |
| $\leq \text{Ø}110\text{mm}$ PVC-U & PVC-C | 2.7 – 6.6mm | 50 x 3.6mm (2 layers) | -/120/90 U/C |
| $\leq \text{Ø}110\text{mm}$ PE, ABS & SAN+PVC | 4.2 – 10.0mm | 50 x 3.6mm (2 layers) | -/60/60 U/C |
| $\leq \text{Ø}110\text{mm}$ PP | 6.6mm | 50 x 3.6mm (2 layers) | -/120/90 U/C |
| $\leq \text{Ø}125\text{mm}$ PVC-U & PVC-C | 3.7 – 7.4mm | 50 x 5.4mm (3 layers) | -/120/120 U/C |
| $\leq \text{Ø}125\text{mm}$ PE, ABS & SAN+PVC | 12.0mm | 50 x 5.4mm (3 layers) | -/120/120 U/C |
| $\leq \text{Ø}125\text{mm}$ PP | 17.1mm | 50 x 5.4mm (3 layers) | -/120/90 U/C |
| $\leq \text{Ø}160\text{mm}$ PVC-U & PVC-C | 3.2 – 9.5mm | 50 x 7.2mm (4 layers) | -/60/60 U/C |
| $\leq \text{Ø}160\text{mm}$ PE, ABS & SAN+PVC | 12.0mm | 50 x 7.2mm (4 layers) | -/120/90 U/C |
| $\leq \text{Ø}160\text{mm}$ PP | 4.0 – 21.9mm | 50 x 7.2mm (4 layers) | -/120/60 U/C |

DETAIL DRAWINGS | IPASSIVE EX MORTAR | WALLS

PLASTIC PIPES FIRE RESISTANCE -/120/120 U/C Gypsum, Masonry or Concrete - Walls



DISCLAIMER:

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