

## Index for Detailed Drawings

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

## General Product Description

Protecta® FR IPT is a high performance, professional quality, one part ready to use sealant and adhesive. Based on an innovative new Inert Polymer Technology it is suitable for a wide variety of building trade applications including decorating, fire sealing, flooring, joinery, plumbing and tiling and out-performs conventional water based products as a sealant and adhesive – free from dangerous emissions.

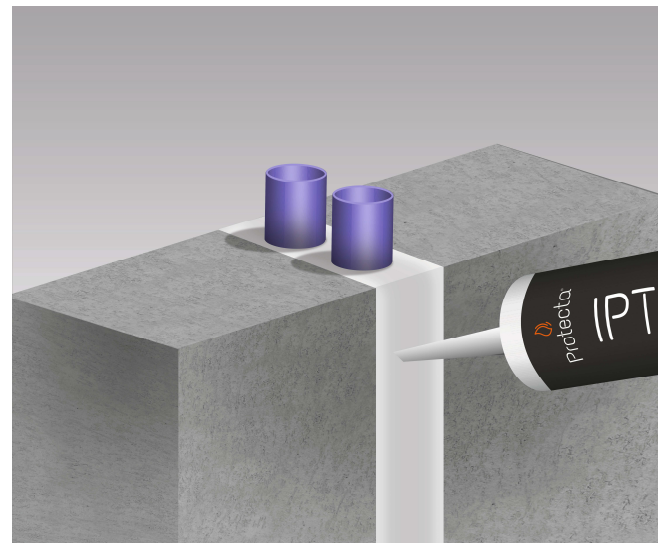
## General Guide

**Minimum separations and limitations:** Services can be sealed as specified in the detailed drawings. Minimum separation between services and the edge of the seal within each aperture should be 10 mm to allow for correct fitting of backing and seal depth. Minimum separation between apertures should be at least 30 mm. For larger joint dimensions or apertures other than described in the detailed drawings, Protecta® FR Board or EX Mortar should be used.

**Supporting constructions:** Flexible walls must have a minimum thickness of 75 mm and comprise steel studs or timber studs lined on both faces with minimum 1 layer of 12.5 mm thick boards. Rigid walls must have a minimum thickness of 75 mm and comprise concrete, aerated concrete or masonry, with a minimum density of 350 kg/m<sup>3</sup> (650 kg/m<sup>3</sup> in rigid wall details). Rigid floors must have a minimum thickness of 150 mm and comprise aerated concrete or concrete with a minimum density of 650 kg/m<sup>3</sup>. The supporting construction must be classified in accordance with EN 13501-2 for the required fire resistance period. Services shall be supported at maximum 250 mm away from both faces of the wall constructions and 450 mm from the upper face of floor constructions.

**Services:** Metallic pipes through Protecta® FR IPT may be used in all angles between 90° and 45° in all directions.

Where steel pipes are mentioned, this includes iron pipes. Where PVC pipes are mentioned, this includes PVC-U, PVC-C and similar if the pipe is according to EN 1329-1, EN 1452-2, EN 1453-1 and EN 1566-1. Where PP pipes are mentioned, this includes PP-MV, PP-H, PP-R and similar if the pipe is according to EN 1451-1 or DIN 8077/8078. Where PE pipes are mentioned, this includes PE-LD, PE-MD, PE-HD, PE-X and similar according to EN 1519-1, EN 12201-2 or EN 12666-1, ABS according to EN 1455-1 and pipes made from SAN+PVC according to EN 1565-1.



## Installation

1. All surfaces must be clean and sound, free from dirt, grease and other contaminants. The surfaces may be damp but not running wet. Use a wet brush to clean surfaces before application to remove loose material and to ensure good contact for adhesion. Primers are not usually required.
2. As Protecta® FR IPT contains some water, 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.
3. When installing Protecta® FR IPT in hollow floor slabs, top sided seals should be completed double sided without reduction of the seal depth on either side. There must be sufficient thickness of concrete below and above the void for the depth of the fire seal. Where this is not the case, tubular voids should be plugged with stone wool backing material before sealing the aperture.
4. Where single sided top face seals are described, these can also be used in composite floors (e.g., concrete filled, steel trapezoidal decking).
5. Refer to the drawings on following pages 2 to 14 for guidance on joint design/dimensions for fire sealing. If installation does not have to meet any specific fire specification, the depth of the joint should be at least half the width and not less than 6 mm in order to obtain maximum performance as a sealant.
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. The use of backing material is strongly recommended.
7. Cut nozzle to the desired angle and gun firmly into the joint to give a good solid fill. Strike off the sealant flush with the joint sides within ten minutes of application, before surface skinning occurs. The sealant will have medium shrinkage during cure and if a flush surface is required it is recommended to leave the sealant proud.
8. The sealant can be tooled to a smooth finish using a moist plastic stick or similar within 30 minutes of application.
9. Do not spray the sealant with water or other fluids before skin formation (<60 min). Uncured sealant is soluble in water prior to skinning due to its environmentally friendly IPT chemistry that uses water instead of solvents.
10. Protecta® FR IPT can be over-painted.

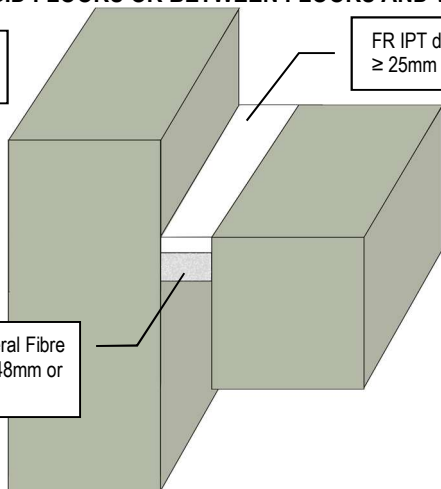
### LINEAR SEALS FIRE RESISTANCE EI 180 (E 240)

#### IN RIGID FLOORS OR BETWEEN FLOORS AND WALLS

Maximum seal width 30mm

FR IPT depth  $\geq 25\text{mm}$  any position

Protecta Mineral Fibre BIO depth  $\geq 48\text{mm}$  or similar



22/0751-A.4.1-2

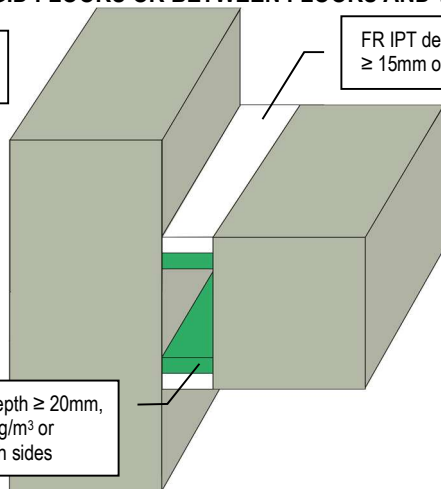
### LINEAR SEALS FIRE RESISTANCE EI 240

#### IN RIGID FLOORS OR BETWEEN FLOORS AND WALLS

Maximum seal width 30mm

FR IPT depth  $\geq 15\text{mm}$  on both sides

Stone wool depth  $\geq 20\text{mm}$ , density  $\geq 33\text{kg/m}^3$  or similar on both sides



22/0751-A.4.1-1

### LINEAR SEALS FIRE RESISTANCE EI 20 (E 240)

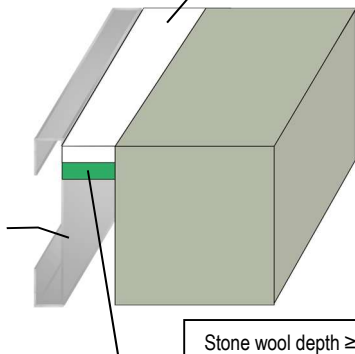
#### IN RIGID FLOORS OR BETWEEN FLOORS AND WALLS

Maximum seal width 30mm

FR IPT depth  $\geq 25\text{mm}$  top face

Steel substrate on one or both sides of the fire seal

Stone wool depth  $\geq 50\text{mm}$ , density  $\geq 33\text{kg/m}^3$  or similar



22/0751-A.4.1-3

### LINEAR SEALS FIRE RESISTANCE EI 60 (E 240)

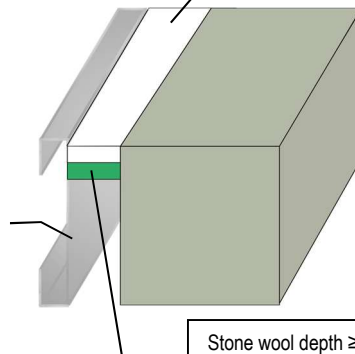
#### IN RIGID FLOORS OR BETWEEN FLOORS AND WALLS

Maximum seal width 30mm

FR IPT depth  $\geq 25\text{mm}$  top face

Steel construction classified to EI 60 or higher on one or both sides of the fire seal

Stone wool depth  $\geq 50\text{mm}$ , density  $\geq 33\text{kg/m}^3$  or similar



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### LINEAR SEALS FIRE RESISTANCE EI 45 (E 180)

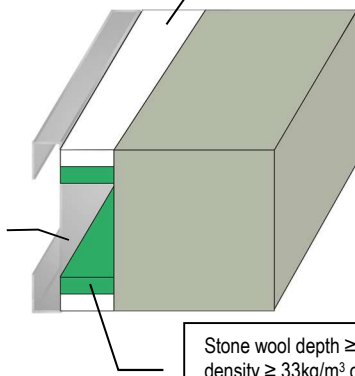
#### IN RIGID FLOORS OR BETWEEN FLOORS AND WALLS

Maximum seal width 30mm

FR IPT depth  $\geq 15\text{mm}$  on both sides

Steel substrate on one or both sides of the fire seal

Stone wool depth  $\geq 25\text{mm}$ , density  $\geq 33\text{kg/m}^3$  or similar on both sides



22/0751-A.4.1-5

### LINEAR SEALS FIRE RESISTANCE EI 120 (E 180)

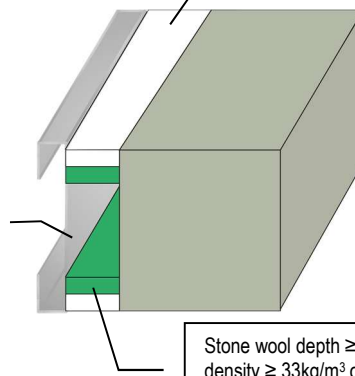
#### IN RIGID FLOORS OR BETWEEN FLOORS AND WALLS

Maximum seal width 30mm

FR IPT depth  $\geq 15\text{mm}$  on both sides

Steel construction classified to EI 120 or higher on one or both sides of the fire seal

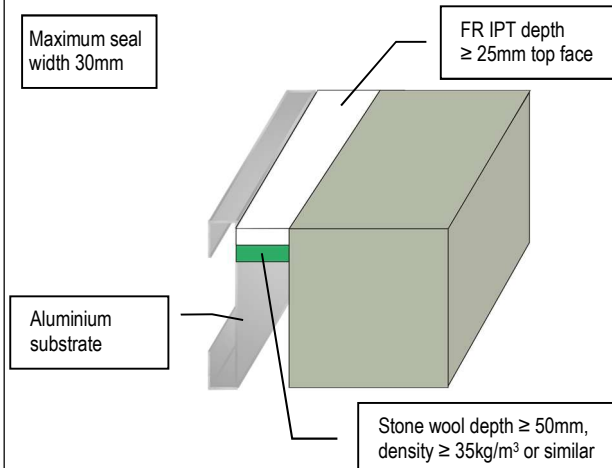
Stone wool depth  $\geq 25\text{mm}$ , density  $\geq 33\text{kg/m}^3$  or similar on both sides



22/0751-A.4.1-6

### LINEAR SEALS FIRE RESISTANCE EI 15 (E 240)

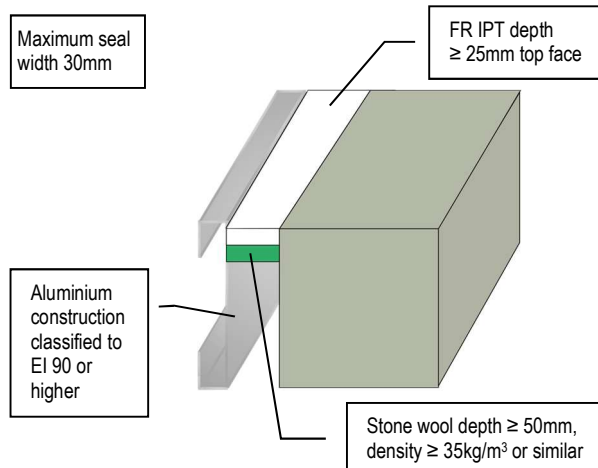
#### IN RIGID FLOORS OR BETWEEN FLOORS AND WALLS



22/0751-A.4.1-7

### LINEAR SEALS FIRE RESISTANCE EI 90 (E 240)

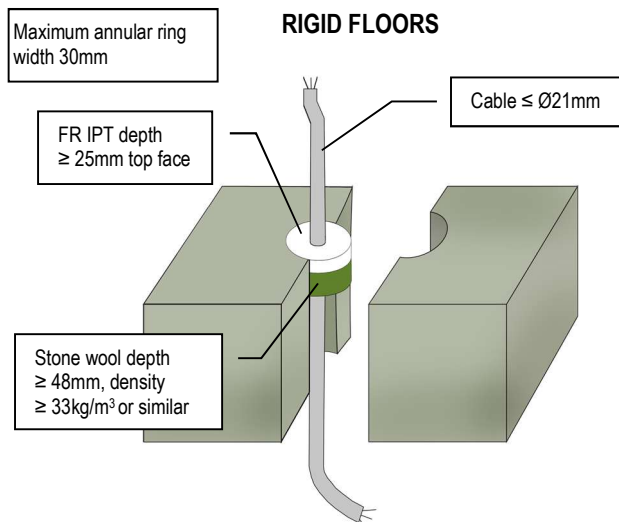
#### IN RIGID FLOORS OR BETWEEN FLOORS AND WALLS



22/0751-A.4.1-8

### CABLE FIRE RESISTANCE EI 240 (E 240)

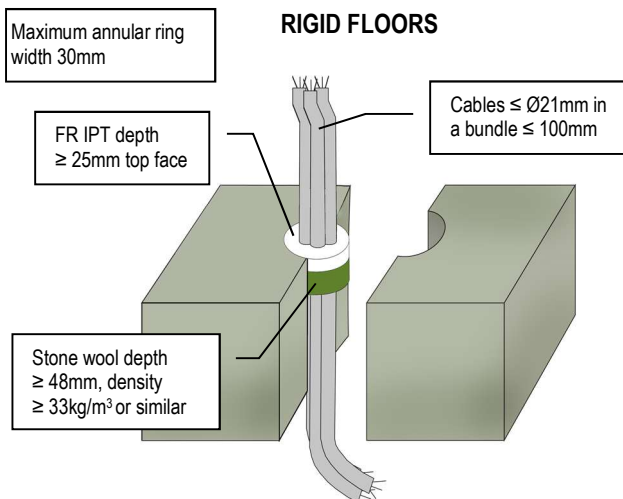
#### RIGID FLOORS



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### CABLE FIRE RESISTANCE EI 120 (E 120)

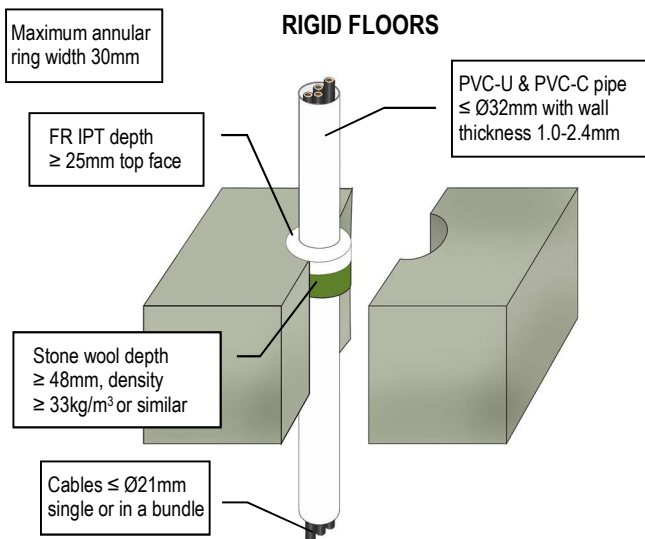
#### RIGID FLOORS



22/0750-A.3.1-2

### PVC CONDUIT FIRE RESISTANCE EI 60 C/C (E 180)

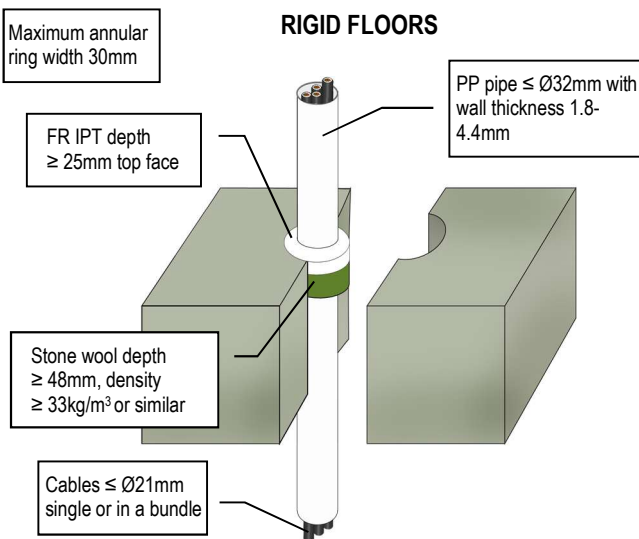
#### RIGID FLOORS



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### PP CONDUIT FIRE RESISTANCE EI 120 C/C (E 120)

#### RIGID FLOORS



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

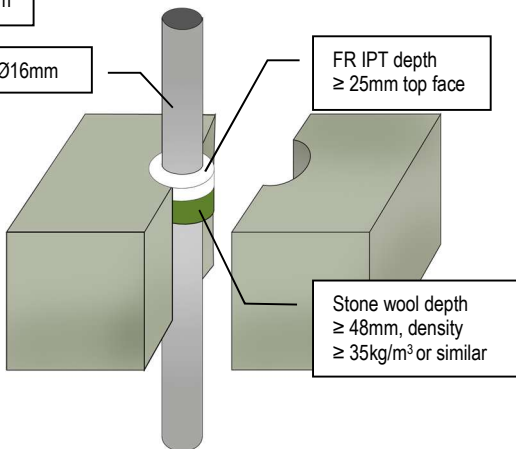
Maximum annular ring width 30mm

#### RIGID FLOORS

Steel pipe  $\leq \varnothing 16\text{mm}$

FR IPT depth  $\geq 25\text{mm}$  top face

Stone wool depth  $\geq 48\text{mm}$ , density  $\geq 35\text{kg/m}^3$  or similar



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

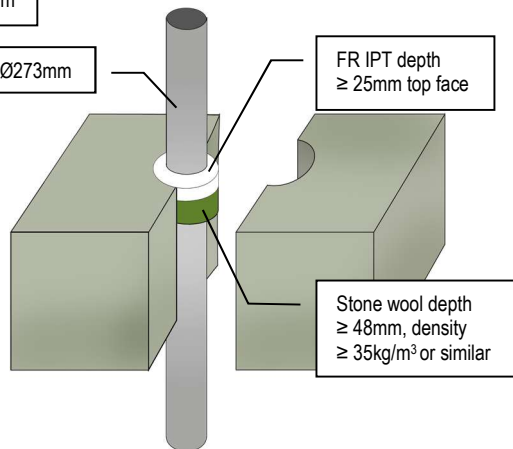
Maximum annular ring width 30mm

#### RIGID FLOORS

Steel pipe  $\leq \varnothing 273\text{mm}$

FR IPT depth  $\geq 25\text{mm}$  top face

Stone wool depth  $\geq 48\text{mm}$ , density  $\geq 35\text{kg/m}^3$  or similar



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

Maximum annular ring width 30mm

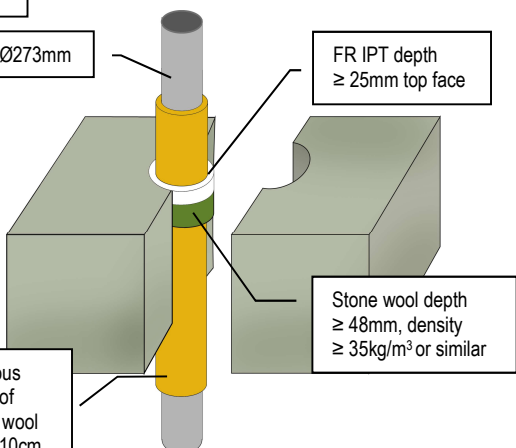
#### RIGID FLOORS

Steel pipe  $\leq \varnothing 273\text{mm}$

FR IPT depth  $\geq 25\text{mm}$  top face

Stone wool depth  $\geq 48\text{mm}$ , density  $\geq 35\text{kg/m}^3$  or similar

30mm continuous pipe insulation of glass- or stone wool  $\geq 75\text{kg/m}^3$ ,  $\geq 110\text{cm}$  on both sides



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

Maximum annular ring width 30mm

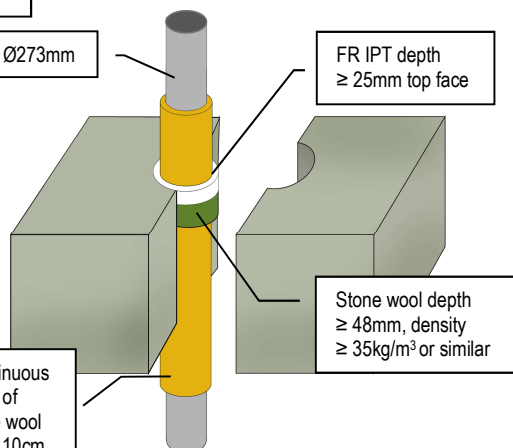
#### RIGID FLOORS

Steel pipe  $\leq \varnothing 273\text{mm}$

FR IPT depth  $\geq 25\text{mm}$  top face

Stone wool depth  $\geq 48\text{mm}$ , density  $\geq 35\text{kg/m}^3$  or similar

40-60mm continuous pipe insulation of glass- or stone wool  $\geq 75\text{kg/m}^3$ ,  $\geq 110\text{cm}$  on both sides



22/0750-A.3.3-6

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

Maximum annular ring width 30mm

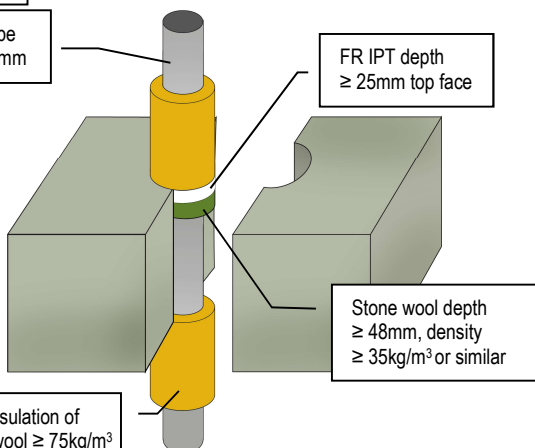
#### RIGID FLOORS

Steel pipe  $\leq \varnothing 273\text{mm}$

FR IPT depth  $\geq 25\text{mm}$  top face

Stone wool depth  $\geq 48\text{mm}$ , density  $\geq 35\text{kg/m}^3$  or similar

$\geq 30\text{mm}$  pipe insulation of glass or stone wool  $\geq 75\text{kg/m}^3$   $\geq 50\text{cm}$  on both sides



22/0750-A.3.4-2

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

Maximum annular ring width 30mm

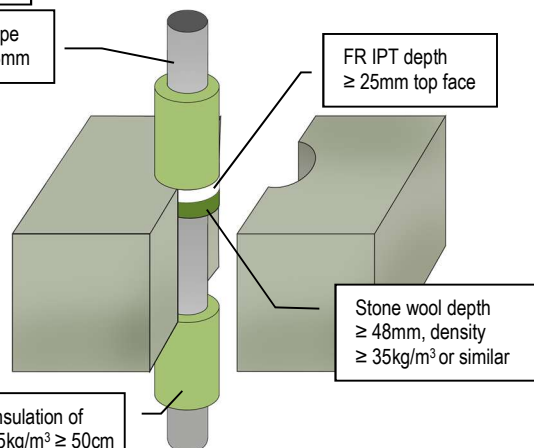
#### RIGID FLOORS

Steel pipe  $\leq \varnothing 273\text{mm}$

FR IPT depth  $\geq 25\text{mm}$  top face

Stone wool depth  $\geq 48\text{mm}$ , density  $\geq 35\text{kg/m}^3$  or similar

$\geq 30\text{mm}$  pipe insulation of stone wool  $\geq 85\text{kg/m}^3$   $\geq 50\text{cm}$  on both sides



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

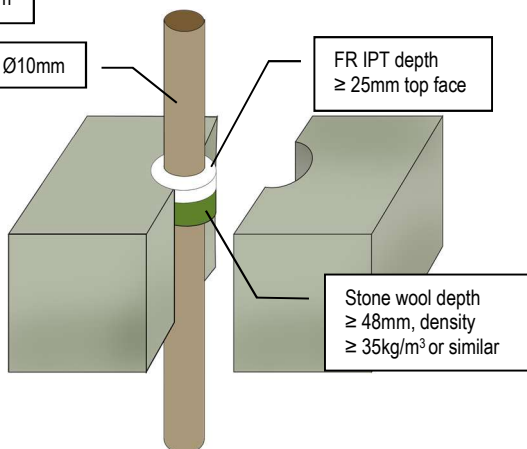
Maximum annular ring width 30mm

#### RIGID FLOORS

Copper pipe  $\leq \varnothing 10\text{mm}$

FR IPT depth  $\geq 25\text{mm}$  top face

Stone wool depth  $\geq 48\text{mm}$ , density  $\geq 35\text{kg/m}^3$  or similar



22/0750-A.3.2-3

### COPPER PIPE FIRE RESISTANCE E 240 C/C

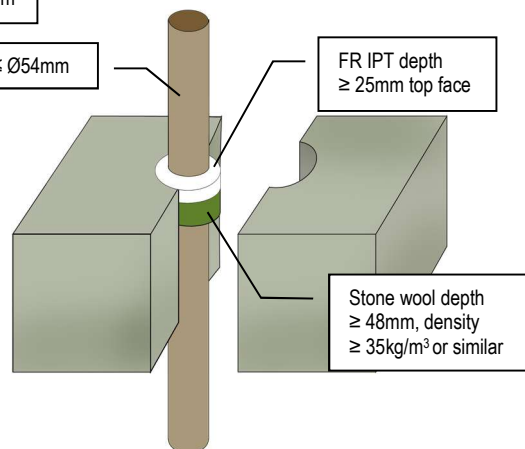
Maximum annular ring width 30mm

#### RIGID FLOORS

Copper pipe  $\leq \varnothing 54\text{mm}$

FR IPT depth  $\geq 25\text{mm}$  top face

Stone wool depth  $\geq 48\text{mm}$ , density  $\geq 35\text{kg/m}^3$  or similar



22/0750-A.3.2-4

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

Maximum annular ring width 30mm

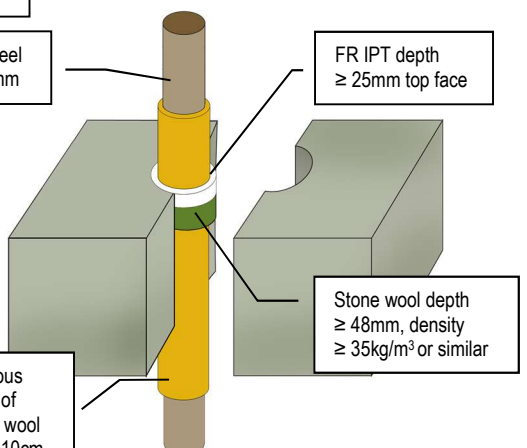
#### RIGID FLOORS

Copper or steel pipe  $\leq \varnothing 12\text{mm}$

FR IPT depth  $\geq 25\text{mm}$  top face

Stone wool depth  $\geq 48\text{mm}$ , density  $\geq 35\text{kg/m}^3$  or similar

20mm continuous pipe insulation of glass- or stone wool  $\geq 75\text{kg/m}^3$ ,  $\geq 110\text{cm}$  on both sides



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

Maximum annular ring width 30mm

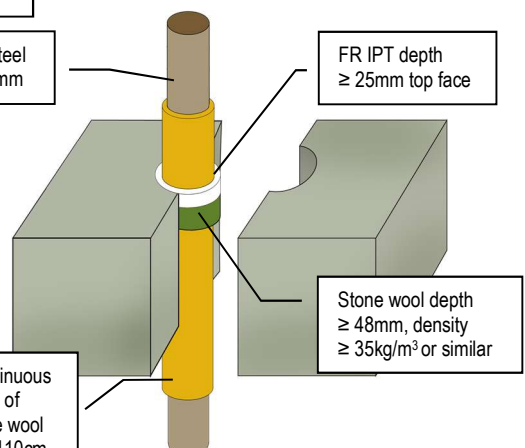
#### RIGID FLOORS

Copper or steel pipe  $\leq \varnothing 54\text{mm}$

FR IPT depth  $\geq 25\text{mm}$  top face

Stone wool depth  $\geq 48\text{mm}$ , density  $\geq 35\text{kg/m}^3$  or similar

20-60mm continuous pipe insulation of glass- or stone wool  $\geq 75\text{kg/m}^3$ ,  $\geq 110\text{cm}$  on both sides



22/0750-A.3.3-2

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

Maximum annular ring width 30mm

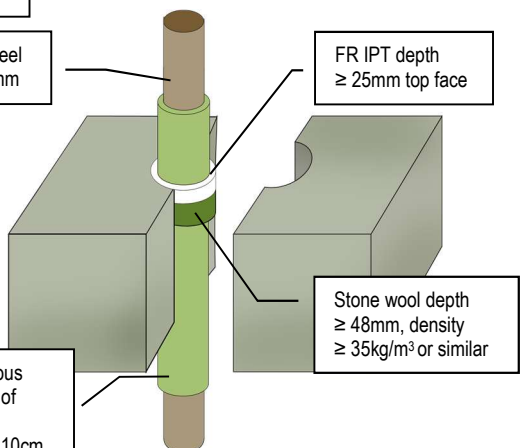
#### RIGID FLOORS

Copper or steel pipe  $\leq \varnothing 54\text{mm}$

FR IPT depth  $\geq 25\text{mm}$  top face

Stone wool depth  $\geq 48\text{mm}$ , density  $\geq 35\text{kg/m}^3$  or similar

20mm continuous pipe insulation of stone wool  $\geq 80\text{kg/m}^3$ ,  $\geq 110\text{cm}$  on both sides



22/0750-A.3.3-3

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

Maximum annular ring width 30mm

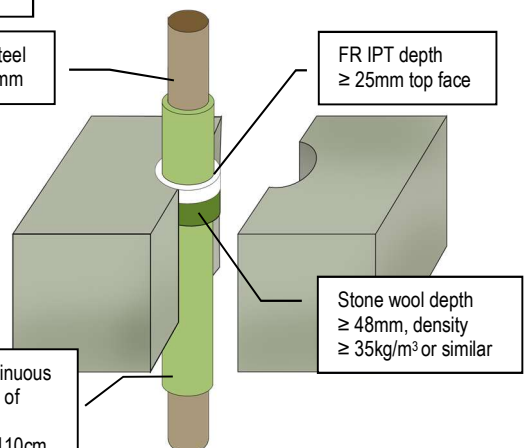
#### RIGID FLOORS

Copper or steel pipe  $\leq \varnothing 54\text{mm}$

FR IPT depth  $\geq 25\text{mm}$  top face

Stone wool depth  $\geq 48\text{mm}$ , density  $\geq 35\text{kg/m}^3$  or similar

25-60mm continuous pipe insulation of stone wool  $\geq 80\text{kg/m}^3$ ,  $\geq 110\text{cm}$  on both sides



22/0750-A.3.3-4

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

Maximum annular ring width 30mm

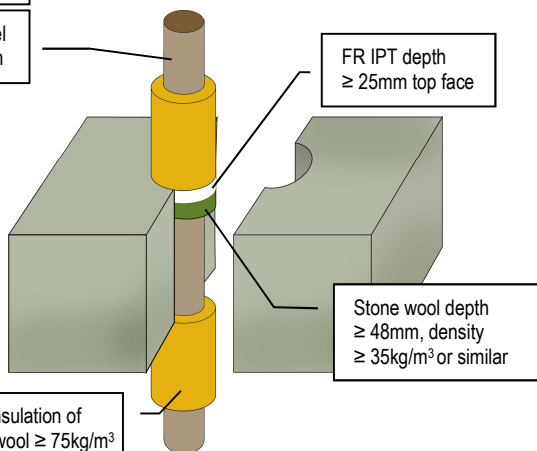
#### RIGID FLOORS

Copper or steel pipe  $\leq \varnothing 54\text{mm}$

FR IPT depth  $\geq 25\text{mm}$  top face

Stone wool depth  $\geq 48\text{mm}$ , density  $\geq 35\text{kg/m}^3$  or similar

$\geq 20\text{mm}$  pipe insulation of glass or stone wool  $\geq 75\text{kg/m}^3$   $\geq 50\text{cm}$  on both sides



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

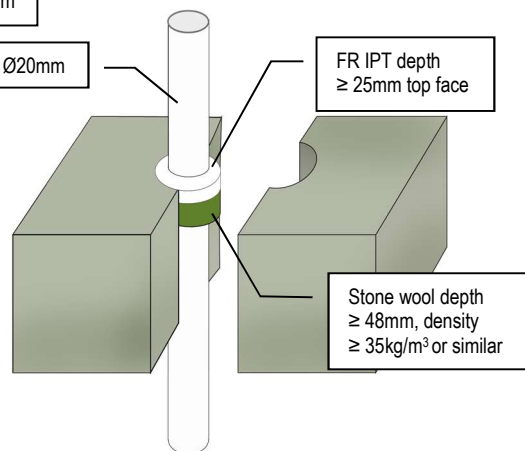
Maximum annular ring width 30mm

#### RIGID FLOORS

Alupex pipe  $\leq \varnothing 20\text{mm}$

FR IPT depth  $\geq 25\text{mm}$  top face

Stone wool depth  $\geq 48\text{mm}$ , density  $\geq 35\text{kg/m}^3$  or similar



22/0750-A.3.2-5

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

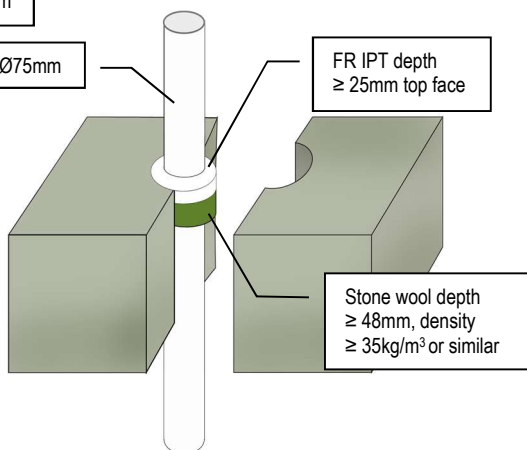
Maximum annular ring width 30mm

#### RIGID FLOORS

Alupex pipe  $\leq \varnothing 75\text{mm}$

FR IPT depth  $\geq 25\text{mm}$  top face

Stone wool depth  $\geq 48\text{mm}$ , density  $\geq 35\text{kg/m}^3$  or similar



22/0750-A.3.2-6

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

Maximum annular ring width 30mm

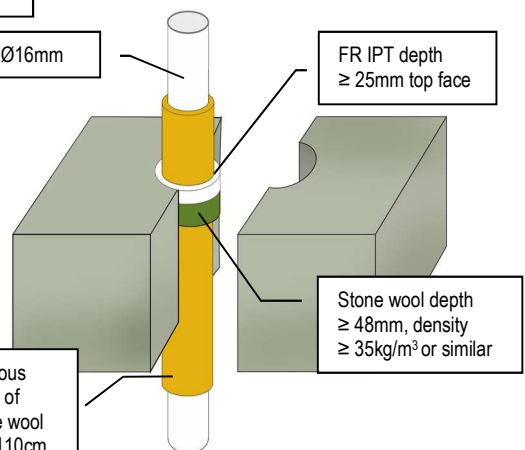
#### RIGID FLOORS

Alupex pipe  $\leq \varnothing 16\text{mm}$

FR IPT depth  $\geq 25\text{mm}$  top face

Stone wool depth  $\geq 48\text{mm}$ , density  $\geq 35\text{kg/m}^3$  or similar

20mm continuous pipe insulation of glass- or stone wool  $\geq 75\text{kg/m}^3$ ,  $\geq 110\text{cm}$  on both sides



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

Maximum annular ring width 30mm

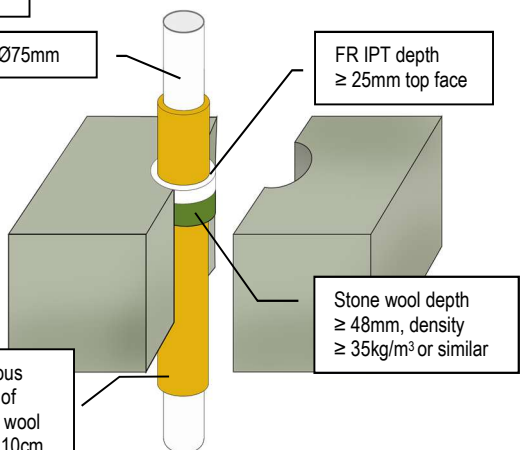
#### RIGID FLOORS

Alupex pipe  $\leq \varnothing 75\text{mm}$

FR IPT depth  $\geq 25\text{mm}$  top face

Stone wool depth  $\geq 48\text{mm}$ , density  $\geq 35\text{kg/m}^3$  or similar

25mm continuous pipe insulation of glass- or stone wool  $\geq 75\text{kg/m}^3$ ,  $\geq 110\text{cm}$  on both sides



22/0750-A.3.3-8

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

Maximum annular ring width 30mm

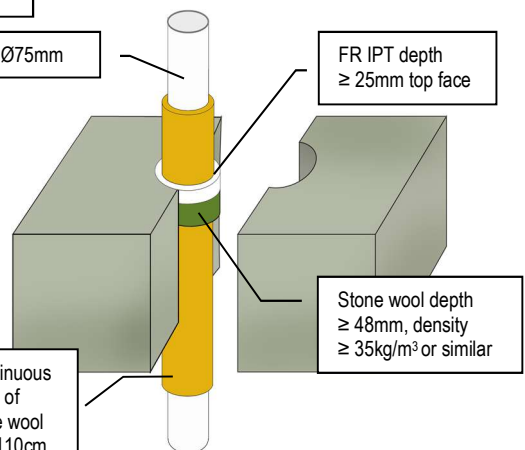
#### RIGID FLOORS

Alupex pipe  $\leq \varnothing 75\text{mm}$

FR IPT depth  $\geq 25\text{mm}$  top face

Stone wool depth  $\geq 48\text{mm}$ , density  $\geq 35\text{kg/m}^3$  or similar

30-60mm continuous pipe insulation of glass- or stone wool  $\geq 75\text{kg/m}^3$ ,  $\geq 110\text{cm}$  on both sides



22/0750-A.3.3-9

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

Maximum annular ring width 30mm

#### RIGID FLOORS

Alupex pipe  $\leq \varnothing 16\text{mm}$

FR IPT depth  $\geq 25\text{mm}$  top face

Stone wool depth  $\geq 48\text{mm}$ , density  $\geq 35\text{kg/m}^3$  or similar

$\geq 20\text{mm}$  pipe insulation of glass or stone wool  $\geq 75\text{kg/m}^3$   $\geq 50\text{cm}$  on both sides

22/0750-A.3.4-4

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

Maximum annular ring width 30mm

#### RIGID FLOORS

Alupex pipe  $\leq \varnothing 75\text{mm}$

FR IPT depth  $\geq 25\text{mm}$  top face

Stone wool depth  $\geq 48\text{mm}$ , density  $\geq 35\text{kg/m}^3$  or similar

$\geq 25\text{mm}$  pipe insulation of glass or stone wool  $\geq 75\text{kg/m}^3$   $\geq 50\text{cm}$  on both sides

22/0750-A.3.4-5

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

Maximum annular ring width 30mm

#### RIGID FLOORS

PVC-U or PVC-C pipe  $\leq \varnothing 32\text{mm}$  with wall thickness 1.0-2.4mm

FR IPT depth  $\geq 25\text{mm}$  top face

Stone wool depth  $\geq 48\text{mm}$ , density  $\geq 35\text{kg/m}^3$  or similar

22/0750-A.3.2-7

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

Maximum annular ring width 30mm

#### RIGID FLOORS

PE, ABS or SAN+PVC pipe  $\leq \varnothing 32\text{mm}$  with wall thickness 2.0-3.0mm

FR IPT depth  $\geq 25\text{mm}$  top face

Stone wool depth  $\geq 48\text{mm}$ , density  $\geq 35\text{kg/m}^3$  or similar

22/0750-A.3.2-9

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

Maximum annular ring width 30mm

#### RIGID FLOORS

PP pipe  $\leq \varnothing 32\text{mm}$  with wall thickness 1.8-4.4mm

FR IPT depth  $\geq 25\text{mm}$  top face

Stone wool depth  $\geq 48\text{mm}$ , density  $\geq 35\text{kg/m}^3$  or similar

22/0750-A.3.2-8

### HORIZONTAL LINEAR SEALS FIRE RESISTANCE EI 45 (E 60)

#### BETWEEN $\geq 75\text{MM}$ DRYWALLS AND FLOORS

Maximum seal width 25mm

Steel partition track

FR IPT depth  $\geq 12.5\text{mm}$  on both sides

22/0751-A.1.1-1

### HORIZONTAL LINEAR SEALS FIRE RESISTANCE EI 60 (E 90)

BETWEEN  $\geq 100$ MM DRYWALLS AND FLOORS

Maximum seal width 25mm

Steel partition track

FR IPT depth  $\geq 12.5$ mm on both sides

22/0751-A.2.1-2

### HORIZONTAL LINEAR SEALS FIRE RESISTANCE EI 120 (E 120)

BETWEEN  $\geq 100$ MM DRYWALLS AND FLOORS

Maximum seal width 30mm

Stone wool depth  $\geq 12.5$ mm, density  $\geq 35\text{kg/m}^3$  or similar against steel partition track

FR IPT depth  $\geq 12.5$ mm on both sides

22/0751-A.2.1-1

### VERTICAL LINEAR SEALS FIRE RESISTANCE EI 120 (E 120)

BETWEEN  $\geq 100$ MM DRYWALLS AND WALLS

Maximum seal width 15mm

Steel partition track

FR IPT depth  $\geq 12.5$ mm on both sides

22/0751-A.2.1-3

### HORIZONTAL LINEAR SEALS FIRE RESISTANCE EI 120 (E 120)

$\geq 100$ MM DRYWALLS, MASONRY OR CONCRETE WALLS

Maximum seal width 30mm

Stone wool depth  $\geq 12.5$ mm, density  $\geq 35\text{kg/m}^3$  or similar

FR IPT depth  $\geq 12.5$ mm on both sides

22/0751-A.2.2-1

### VERTICAL LINEAR SEALS FIRE RESISTANCE EI 120 (E 120)

$\geq 100$ MM DRYWALLS, MASONRY OR CONCRETE WALLS

Maximum seal width 30mm

Stone wool depth  $\geq 12.5$ mm, density  $\geq 35\text{kg/m}^3$  or similar

FR IPT depth  $\geq 12.5$ mm on both sides

22/0751-A.2.2-2

### HORIZONTAL SEALS FIRE RESISTANCE EI 30 (E 30)

$\geq 100$ MM DRYWALLS, MASONRY OR CONCRETE WALLS

Maximum seal width 30mm

FR IPT depth  $\geq 12.5$ mm

Stone wool depth  $\geq 12.5$ mm, density  $\geq 33\text{kg/m}^3$  or similar

$\geq 12$ mm thick architrave fixed with  $\geq 27$ mm steel pins, nails or screws at nominal 280mm centres

Timber frame

22/0751-A.2.3-1

### HORIZONTAL SEALS FIRE RESISTANCE EI 90 (E 90)

≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS

Maximum seal width 30mm

Stone wool depth ≥ 12.5mm, density ≥ 33kg/m³ or similar on both sides

FR IPT depth ≥ 12.5mm on both sides

Timber frame

22/0751-A.2.4-2

### VERTICAL LINEAR SEALS FIRE RESISTANCE EI 60 (E 60)

≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS

Maximum seal width 30mm

Stone wool depth ≥ 12.5mm, density ≥ 33kg/m³ or similar on both sides

Timber frame

FR IPT depth ≥ 12.5mm on both sides

22/0751-A.2.4-1

### HORIZONTAL SEALS FIRE RESISTANCE EI 30 (E 120)

≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS

Maximum seal width 30mm

Stone wool depth ≥ 12.5mm, density ≥ 33kg/m³ or similar on both sides

FR IPT depth ≥ 12.5mm on both sides

Steel substrates in walls, on one side

22/0751-A.2.3-3

### HORIZONTAL SEALS FIRE RESISTANCE EI 30 (E 120)

≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS

Maximum seal width 30mm

Stone wool depth ≥ 12.5mm, density ≥ 33kg/m³ or similar

FR IPT depth ≥ 12.5mm

Steel substrates in walls, on both sides

22/0751-A.2.3-2

### CABLE FIRE RESISTANCE EI 60 (E 90)

≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS

Maximum annular ring width 30mm

Cable ≤ Ø21mm

Stone wool depth ≥ 12.5mm, density ≥ 33kg/m³ or similar on both sides

FR IPT depth ≥ 12.5mm on both sides

22/0750-A.2.1-1

### CABLES FIRE RESISTANCE EI 60 (E 60)

≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS

Maximum annular ring width 30mm

Cables ≤ Ø21mm in a bundle ≤ Ø50mm

Stone wool depth ≥ 12.5mm, density ≥ 33kg/m³ or similar on both sides

FR IPT depth ≥ 12.5mm on both sides

22/0750-A.2.1-2

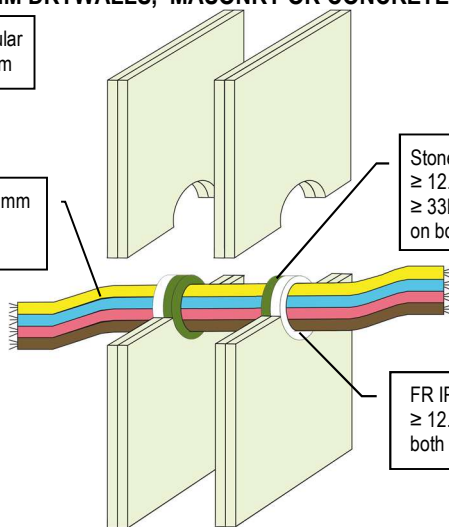
**CABLES FIRE RESISTANCE EI 45 (E 60)**
**≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS**

Maximum annular ring width 30mm

Cables ≤ Ø21mm in a bundle ≤ 100mm

Stone wool depth ≥ 12.5mm, density ≥ 33kg/m³ or similar on both sides

FR IPT depth ≥ 12.5mm on both sides



22/0750-A.2.1-3

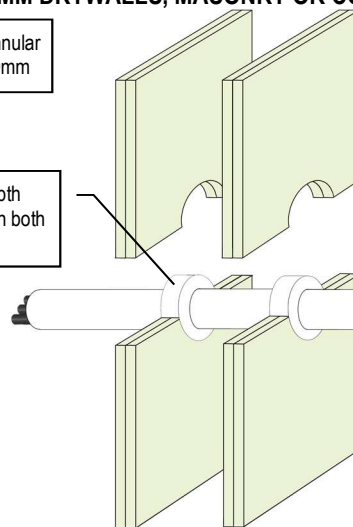
**PVC CONDUIT FIRE RESISTANCE EI 60 C/C (E 90)**
**≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS**

Maximum annular ring width 30mm

FR IPT depth ≥ 25mm on both sides

Cables ≤ Ø21mm single or in a bundle

PVC-U &amp; PVC-C pipe ≤ Ø32mm with wall thickness 1.0-2.4mm



22/0750-A.2.1-4

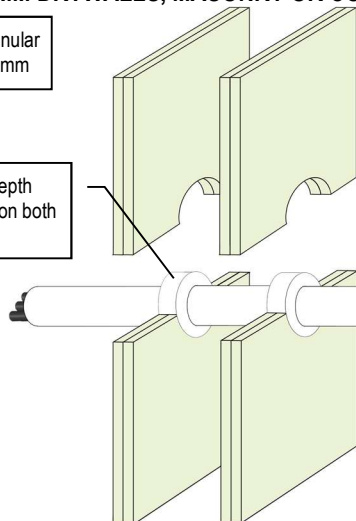
**PP CONDUIT FIRE RESISTANCE EI 60 C/C (E 90)**
**≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS**

Maximum annular ring width 30mm

FR IPT depth ≥ 25mm on both sides

Cables ≤ Ø21mm single or in a bundle

PP pipe ≤ Ø32mm with wall thickness 1.8-4.4mm



22/0750-A.2.1-5

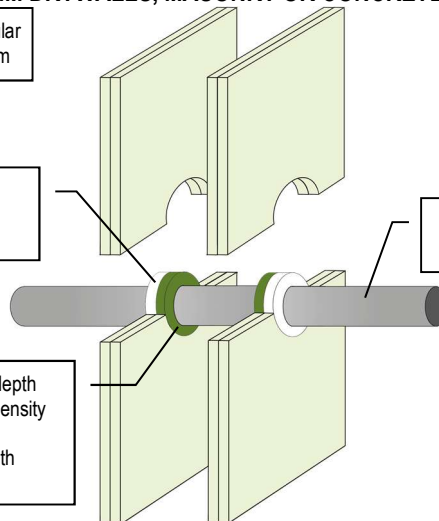
**STEEL PIPE FIRE RESISTANCE EI 120 C/U (E 120)**
**≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS**

Maximum annular ring width 30mm

FR IPT depth ≥ 12.5mm on both sides

Steel pipe ≤ Ø22mm

Stone wool depth ≥ 12.5mm, density ≥ 33kg/m³ or similar on both sides



22/0750-A.2.2-3

**STEEL PIPE FIRE RESISTANCE EI 60 C/U (E 90)**
**≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS**

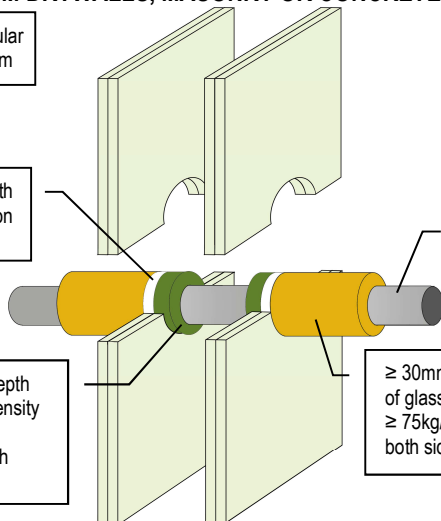
Maximum annular ring width 30mm

FR IPT depth ≥ 12.5mm on both sides

Steel pipe ≤ Ø273mm

Stone wool depth ≥ 12.5mm, density ≥ 33kg/m³ or similar on both sides

≥ 30mm pipe insulation of glass or stone wool ≥ 75kg/m³ ≥ 50cm on both sides



22/0750-A.2.4-2

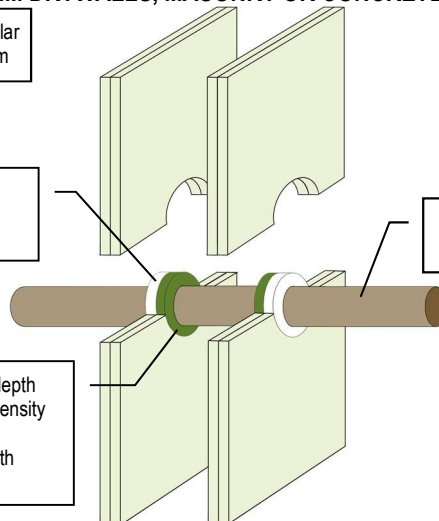
**COPPER PIPE FIRE RESISTANCE EI 60 C/C (E 120)**
**≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS**

Maximum annular ring width 30mm

FR IPT depth ≥ 12.5mm on both sides

Copper pipe ≤ Ø12mm

Stone wool depth ≥ 12.5mm, density ≥ 33kg/m³ or similar on both sides



22/0750-A.2.2-4

### COPPER PIPE FIRE RESISTANCE E 90 C/C

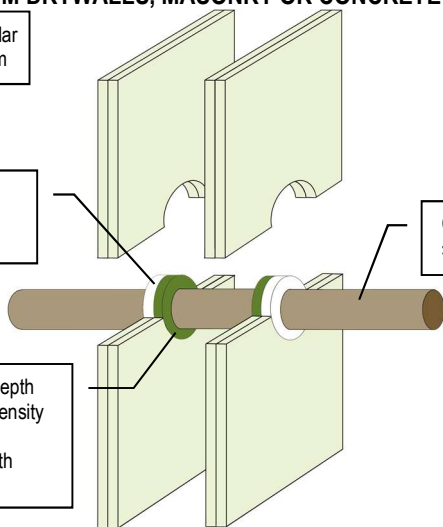
≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS

Maximum annular ring width 30mm

FR IPT depth ≥ 12.5mm on both sides

Copper pipe ≤ Ø54mm

Stone wool depth ≥ 12.5mm, density ≥ 33kg/m³ or similar on both sides



22/0750-A.2.2-5

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

≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS

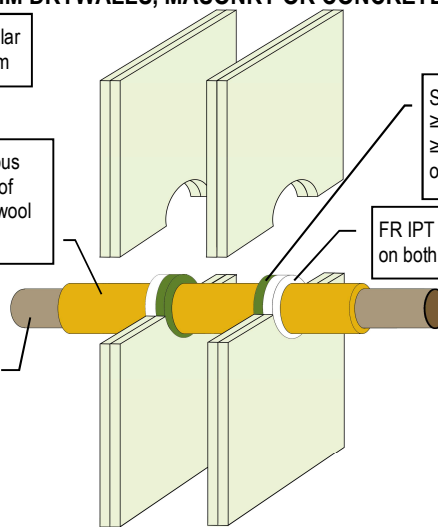
Maximum annular ring width 30mm

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

Stone wool depth ≥ 12.5mm, density ≥ 33kg/m³ or similar on both sides

FR IPT depth ≥ 12.5mm on both sides

Copper or steel pipe ≤ Ø54mm



22/0750-A.2.3-1

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

≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS

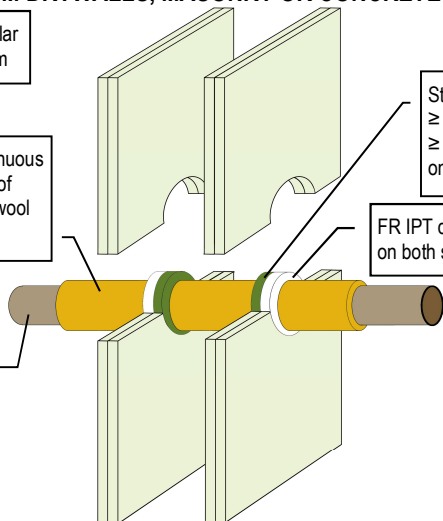
Maximum annular ring width 30mm

25-40mm continuous pipe insulation of glass or stone wool ≥ 75kg/m³

Stone wool depth ≥ 12.5mm, density ≥ 33kg/m³ or similar on both sides

FR IPT depth ≥ 12.5mm on both sides

Copper or steel pipe ≤ Ø54mm



22/0750-A.2.3-2

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

≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS

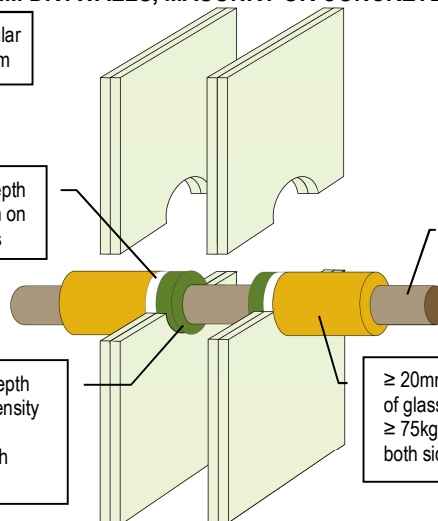
Maximum annular ring width 30mm

FR IPT depth ≥ 12.5mm on both sides

Copper or steel pipe ≤ Ø54mm

Stone wool depth ≥ 12.5mm, density ≥ 33kg/m³ or similar on both sides

≥ 20mm pipe insulation of glass or stone wool ≥ 75kg/m³ ≥ 50cm on both sides



22/0750-A.2.4-1

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

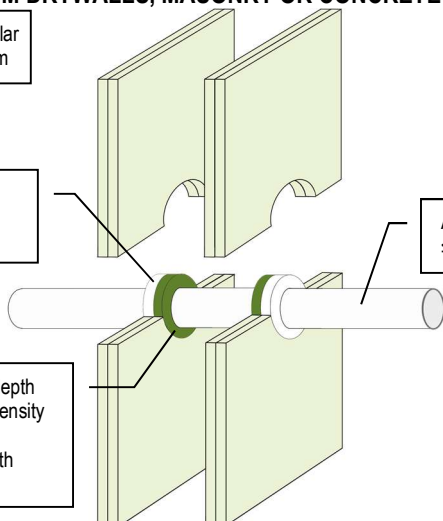
≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS

Maximum annular ring width 30mm

FR IPT depth ≥ 12.5mm on both sides

Alupex pipe ≤ Ø20mm

Stone wool depth ≥ 12.5mm, density ≥ 33kg/m³ or similar on both sides



22/0750-A.2.2-1

### ALUPEX PIPE FIRE RESISTANCE EI 15 C/C (E 90)

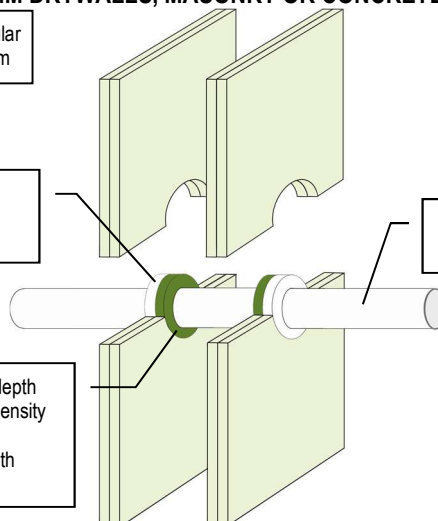
≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS

Maximum annular ring width 30mm

FR IPT depth ≥ 12.5mm on both sides

Alupex pipe ≤ Ø75mm

Stone wool depth ≥ 12.5mm, density ≥ 33kg/m³ or similar on both sides



22/0750-A.2.2-2

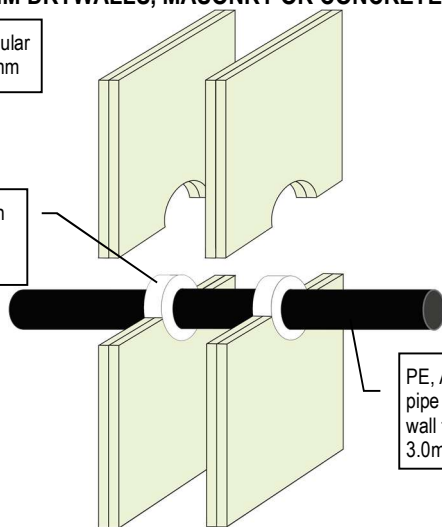
|                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>INSULATED ALUPEX PIPE FIRE RESISTANCE EI 90 C/C (E 90)</b></p> <p><b>≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS</b></p> <p>Maximum annular ring width 30mm</p> <p>20-50mm continuous pipe insulation of glass or stone wool ≥ 75kg/m³</p> <p>Stone wool depth ≥ 12.5mm, density ≥ 33kg/m³ or similar on both sides</p> <p>FR IPT depth ≥ 12.5mm on both sides</p> <p>Alupex pipe ≤ Ø75mm</p> <p>22/0750-A.2.3-4</p>  | <p><b>INSULATED ALUPEX PIPE FIRE RESISTANCE EI 120 C/C (E 120)</b></p> <p><b>≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS</b></p> <p>Maximum annular ring width 30mm</p> <p>60mm continuous pipe insulation of glass or stone wool ≥ 75kg/m³</p> <p>Stone wool depth ≥ 12.5mm, density ≥ 33kg/m³ or similar on both sides</p> <p>FR IPT depth ≥ 12.5mm on both sides</p> <p>Alupex pipe ≤ Ø75mm</p> <p>22/0750-A.2.3-3</p>  |
| <p><b>ALUPEX PIPE FIRE RESISTANCE EI 120 C/C (E 120)</b></p> <p><b>≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS</b></p> <p>Maximum annular ring width 30mm</p> <p>FR IPT depth ≥ 12.5mm on both sides</p> <p>Alupex pipe ≤ Ø16mm</p> <p>Stone wool depth ≥ 12.5mm, density ≥ 33kg/m³ or similar on both sides</p> <p>≥ 20mm pipe insulation of glass or stone wool ≥ 75kg/m³ ≥ 50cm on both sides</p> <p>22/0750-A.2.4-3</p> | <p><b>ALUPEX PIPE FIRE RESISTANCE EI 90 C/C (E 120)</b></p> <p><b>≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS</b></p> <p>Maximum annular ring width 30mm</p> <p>FR IPT depth ≥ 12.5mm on both sides</p> <p>Alupex pipe ≤ Ø75mm</p> <p>Stone wool depth ≥ 12.5mm, density ≥ 33kg/m³ or similar on both sides</p> <p>≥ 25mm pipe insulation of glass or stone wool ≥ 75kg/m³ ≥ 50cm on both sides</p> <p>22/0750-A.2.4-4</p> |
| <p><b>PVC PLASTIC PIPE FIRE RESISTANCE EI 60 C/C (E 90)</b></p> <p><b>≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS</b></p> <p>Maximum annular ring width 30mm</p> <p>FR IPT depth ≥ 12.5mm on both sides</p> <p>Stone wool depth ≥ 12.5mm, density ≥ 33kg/m³ or similar on both sides</p> <p>PVC-U &amp; PVC-C pipe ≤ Ø32mm with wall thickness 1.6mm</p> <p>22/0750-A.2.5-1</p>                                             | <p><b>PVC PLASTIC PIPE FIRE RESISTANCE EI 90 C/C (E 90)</b></p> <p><b>≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS</b></p> <p>Maximum annular ring width 30mm</p> <p>FR IPT depth ≥ 25mm on both sides</p> <p>PVC-U &amp; PVC-C pipe ≤ Ø32mm with wall thickness 1.0-2.4mm</p> <p>22/0750-A.2.5-2</p>                                                                                                                       |

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

≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS

Maximum annular ring width 30mm

FR IPT depth ≥ 25mm on both sides



PE, ABS & SAN+PVC pipe ≤ Ø32mm with wall thickness 2.0-3.0mm

22/0750-A.2.5-5

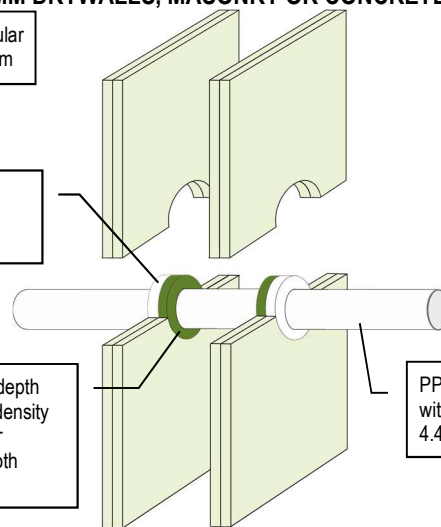
### PP PLASTIC PIPE FIRE RESISTANCE EI 60 C/C (E 90)

≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS

Maximum annular ring width 30mm

FR IPT depth ≥ 12.5mm on both sides

Stone wool depth ≥ 12.5mm, density ≥ 33kg/m³ or similar on both sides



PP pipe ≤ Ø32mm with wall thickness 4.4mm

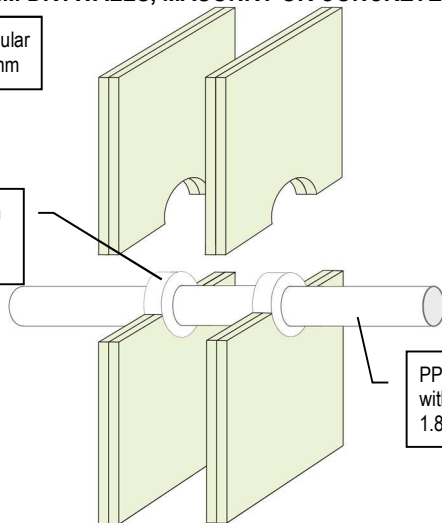
22/0750-A.2.5-3

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

≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS

Maximum annular ring width 30mm

FR IPT depth ≥ 25mm on both sides



PP pipe ≤ Ø32mm with wall thickness 1.8-4.4mm

22/0750-A.2.5-4

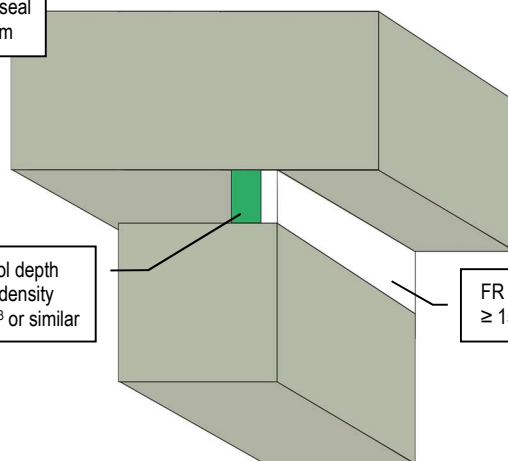
### HORIZONTAL LINEAR SEALS FIRE RESISTANCE EI 60 (E 240)

≥ 150MM MASONRY OR CONCRETE WALLS

Maximum seal width 30mm

Stone wool depth ≥ 45mm, density ≥ 33kg/m³ or similar

FR IPT depth ≥ 15mm



22/0751-A.3.1-1

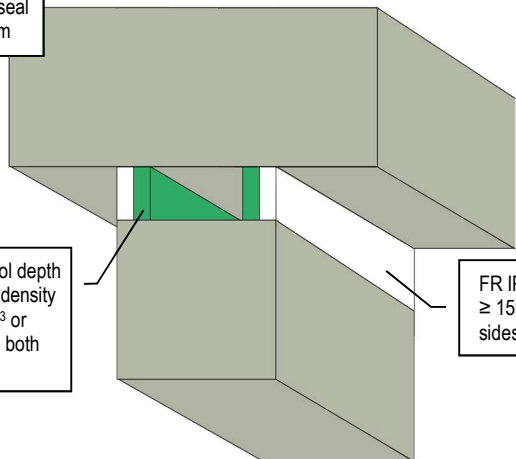
### HORIZONTAL SEALS FIRE RESISTANCE EI 240

≥ 150MM MASONRY OR CONCRETE WALLS

Maximum seal width 30mm

Stone wool depth ≥ 45mm, density ≥ 33kg/m³ or similar on both sides

FR IPT depth ≥ 15mm on both sides



22/0751-A.3.1-2

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

≥ 150MM MASONRY OR CONCRETE WALLS

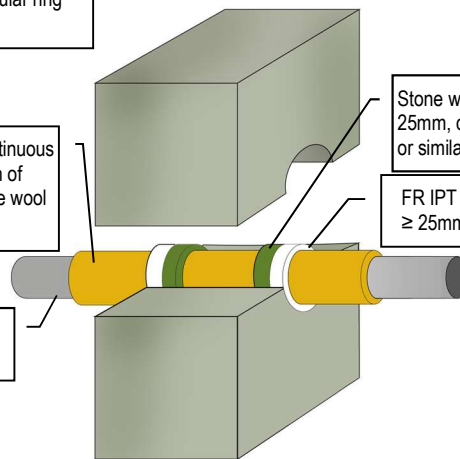
Maximum annular ring width 30mm

30-60mm continuous pipe insulation of glass- or stone wool ≥ 75kg/m³

Steel pipe ≤ Ø273mm

Stone wool depth ≥ 25mm, density ≥ 33kg/m³ or similar on both sides

FR IPT depth ≥ 25mm on both sides



22/0750-A.1.1-2

