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Authorised and notified according to Article 29 of the Regulation (EU) No 305/2011 of the European Parliament and of the Council of 9 March 2011

European Technical Assessment ETA-20/1026 of 2021/05/10

I General Part

Technical Assessment Body issuing the ETA and designated according to Article 29 of the Regulation (EU) No 305/2011: ETA-Danmark A/S

Trade name of the construction product:	Stopseal Coated Batt
Product family to which the above construction product belongs:	Fire Stopping, Fire Sealing & Fire Protective Products. Fire Retardant Products
Manufacturer:	FSi Ltd Westminster Industrial Estate Tamworth Rd Measham GB-Swadlincote DE12 7DS Telephone: +44 1530 515130 www.FSiltd.com
Manufacturing plant:	FSi Ltd Westminster Industrial Estate Tamworth Rd Measham GB-Swadlincote DE12 7DS Telephone: +44 1530 515130 www.FSiltd.com
This European Technical Assessment contains:	178 pages including 2 annexes which form an integral part of the document
This European Technical Assessment is issued in accordance with Regulation (EU) No 305/2011, on the basis of:	EAD 350454-00-1104 Firestopping and fire sealing products, Penetration Seals
This version replaces:	The previous ETA with the same number and issued on 2020-12-08

II SPECIFIC PART OF THE EUROPEAN TECHNICAL ASSESSMENT

1 Technical description of the product

Stopseal Coated Batt is a coated mineral wool batt used to reinstate the fire resistance performance of wall constructions where they have been provided with apertures for the penetration of single or multiple services.

Stopseal Coated Batt is supplied coated on both faces. The batt is then cut, and friction fit into the aperture, prior to being inserted into the aperture in the wall.

Stopseal Coated Batt are either 50mm thick and supplied in overall dimensions 1200mm x 600mm with a density of 140kg.m^3 or 60 mm thick and supplied in overall dimensions 1200mm x 600mm with a density of 140kg.m^3 and are coated to one face only.

FSi Pyrocoustic Sealant is required to seal all joints and junctions during the sealing process. Pyrocoustic Sealant is subject to a separate ETA referenced 20/1029 & 20/1028.

FSi Pyropro HPE Sealant is required to seal around specific services (See Annex B). Pyropro HPE Sealant is subject to a separate ETA referenced ETA 20/1011.

2 Specification of the intended use in accordance with the applicable European Assessment Document (hereinafter EAD)

The intended use of Stopseal Coated Batt is to reinstate the fire resistance performance of rigid and flexible wall constructions where they are penetrated by various cables and metallic pipes.

The specific elements of construction that the system Stopseal Coated Batt may be used to provide a penetration seal in, are as follows:

Rigid Walls:
The wall must have a minimum thickness of 150 mm and comprise concrete, aerated concrete or masonry, with a minimum density of 650 kg/m^3.

The wall must have a minimum thickness of 100 mm and comprise concrete, aerated concrete or masonry, with a minimum density of 650 kg/m^3.

Flexible Walls:

The wall must have a minimum thickness of 75 mm and comprise timber or steel studs lined on both faces with minimum 2 layers of 12.5 mm thick, 'Type F' Gypsum boards according to EN 520. In timber stud walls, the cavity must be closed between the penetration seal and the stud and minimum 100 mm of insulation of class A1 or A2 according to EN 13501-1, is provided within the cavity between the penetration seal and the stud.

The supporting construction must be classified in accordance with EN 13501-2 for the required fire resistance period.

The Stopseal Coated Batt may be used to provide a penetration seal with pipes and cables, and cable trays and ladders (for details see Annex B).

The total amount of cross section of services (including insulation) should not exceed 60% of the penetration area.

The minimum permitted separation between adjacent seals/apertures is 200 mm.

Pipes and cables do not have to be installed singular.

The use category of the Stopseal Coated Batt is Type Z_1: Intended for use in internal conditions with humidity equal to or higher than 85% RH excluding temperatures below 0^{o}C, without exposure to rain or UV.

The provisions made in this European Technical Assessment are based on an assumed intended working life of the batts of 25 years, provided that the conditions laid down in the product data sheet for the packaging/transport/storage/installation/use/repair are met.

The indications given on the intended working life cannot be interpreted as a guarantee given by the producer or the Technical Assessment Body but are to be regarded only as a means for selecting the appropriate products in relation to the expected economically reasonable working life of the works.

3 Performance of the product and references to the methods used for its assessment.

Characteristic	Assessment of characteristic
3.1 Safety in case of fire (BWR 2)	
Reaction to fire	No performance assessed
Resistance to fire	See Annex B
3.2 Safety in case of fire (BWR 2)	
Air permeability	

Product tested			Stopseal Batt (50mm)	
	Results under positive chamber pressure		Results under negative chamber pressure	
Pressure (Pa)	Leakage (m^3/h)	Leakage ($m^3/m^2/h$)	Leakage (m^3/h)	Leakage ($m^3/m^2/h$)
50	0.6	0.8	1.1	1.5
100	1.0	1.4	1.3	1.8
150	2.8	3.9	1.5	2.1
200	3.8	5.3	1.9	2.6
250	4.5	6.3	2.0	2.8
300	5.0	6.9	2.4	3.3
450	5.1	7.1	1.9	2.6
600	6.7	9.3	2.2	3.1

Water permeability	No performance assessed
Content, emission and/or release of dangerous substances	All dangerous chemical substances are below the classification limits of 67/548/EEC*
3.3 Safety and accessibility in use (BWR4)	
Mechanical resistance and stability	No performance assessed
Resistance to impact/movement	No performance assessed
Adhesion	No performance assessed
Durability	Use category: Type Z_1
3.4 Protection against noise (BWR5)	
Airborne sound insulation	Rw (C; Ctr) = 24(-2; -3) dB
3.5 Energy economy and heat retention (BWR6)	
Thermal properties	No performance assessed
Water vapour permeability	No performance assessed

See additional information in section 3.6-3.7

*) In addition to the specific clauses relating to dangerous substances contained in this European technical Assessment, there may be other requirements applicable to the products falling within its scope (e.g., transposed European legislation and national laws, regulations and administrative provisions). In order to meet the provisions of the Construction Products Regulation, these requirements need also to be complied with, when and where they apply.

3.6 Methods of verification

The assessment of Stopseal Coated Batt for the declared intended use has been made in accordance with EAD 350454-00-1104 Firestopping and fire sealing products, Penetration Seals.

3.7 General aspects related to the fitness for use of the product.

The European Technical Assessment is issued for the product based on agreed data/information, deposited with ETA-Danmark, which identifies the product that has been assessed and judged. Changes to the product or production process, which could result in this deposited data/information being incorrect, should be notified to ETA-Danmark before the changes are introduced. ETA-Danmark will decide if such changes affect the ETA and consequently the validity of the CE marking based on the ETA and if so whether further assessment or alterations to the ETA, shall be necessary.

The Stopseal Coated Batt for firestopping and fire sealing purposes are manufactured in accordance with the provisions of this European Technical Assessment using the manufacturing processes as identified in the inspection of the plant by the notified inspection body and laid down in the technical documentation.

4 Attestation and verification of constancy of performance (hereinafter AVCP) system applied, with reference to its legal base.

4.1 AVCP system

According to the decision 1999/454/EC of the European Commission, the system of assessment and verification of constancy of performance (see Annex V to Regulation (EU) No 305/2011) is: **1.**

5 Technical details necessary for the implementation of the AVCP system, as foreseen in the applicable EAD.

Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited at ETA-Danmark prior to CE marking.

Issued in Copenhagen on 2021-05-10 by

Thomas Bruun
Managing Director, ETA-Danmark

Annex A

Description of Product and Product Literature

Stopseal Coated Batt

A detailed specification of the product is contained in document "Evaluation Report" relating to the European Technical Assessment ETA – 20/1026, of Stopseal Coated Batt which is a non-public part of this ETA.

FSi DEVELOP MANUFACTURE PROTECT

PRODUCT DATA SHEET

STOPSEAL® FIRE BATT

Product name	Stopseal® Fire Batt
Product Code	T1250DP
Revision Date	01/11/2013
Revision number	01
Ref	PDS SSBATT

INTRODUCTION

Annex B

Resistance to Fire Classification of Stopseal Fire Batt

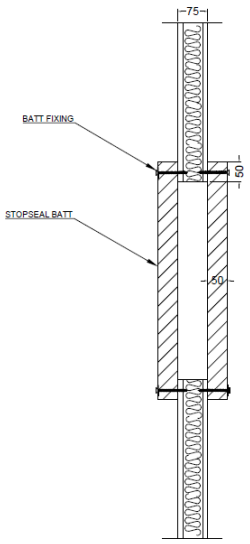
B1 FSi Stopseal Fire Batt Penetration Seal in Flexible or Rigid Walls min. 70 mm thick

B1.1 FSi Single Layer (50mm both sides) Stopseal Fire Batt Pattress Install Penetration Seal

B1.1.1 Cables and Conduits Penetrations

Construction details:

- Single layer of Stopseal Fire Batt pattress installed both sides of the wall.
- Max. Aperture size 570mm wide x 200mm high
- Pattress installation of Stopseal Fire Batt.
- The Stopseal Fire Batt are installed in horizontal rows and fixed in minimum two vertical edges. Overlap of batts to substrate min 50mm. Batts mechanically fixed to substrate with min 6mm x 80mm steel screws and steel retaining washer. Fixings installed at max 300mm centers.
- First service support 1025mm from both faces of the substrate

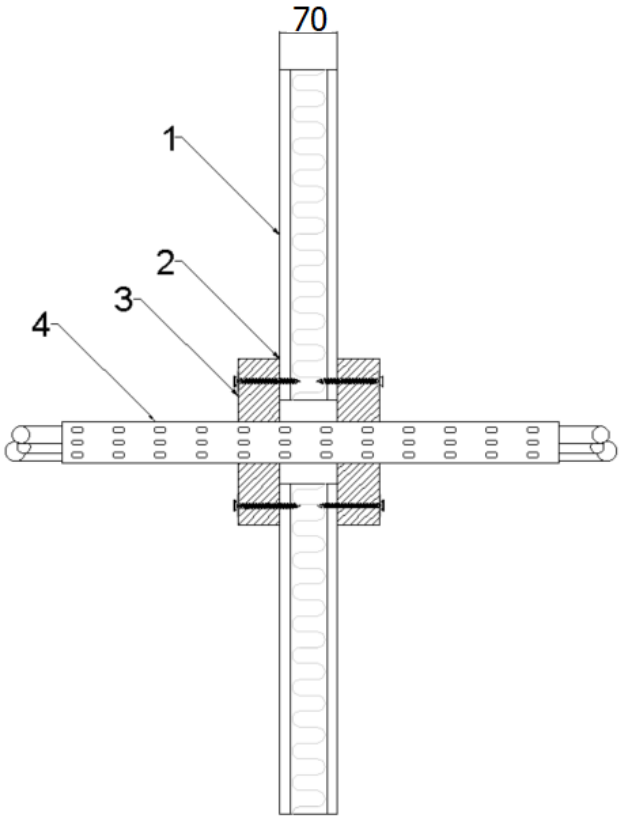


Service(s)	Classification
500mm wide x 60mm deep steel cable basket containing 3 x type 'B' cable and 20 x bundle of telecoms cables	**EI90**
500mm wide x 60mm deep steel cable tray containing 1 x type 'B' cable, 3 x type 'A1' cable, 3 x type 'A2' cable, and 3 x type 'A3' cable	

Service(s)	Classification
20mm dia Adaptaflex SPL20 flexible conduit	**EI90** **EI60**
20mm dia Kopex KSU 316 stainless steel flexible conduit	
150mm wide x 60mm deep steel cable tray containing 4 x FP200 Gold (Firealarm cable 7mm dia red) Cables	

Construction details:

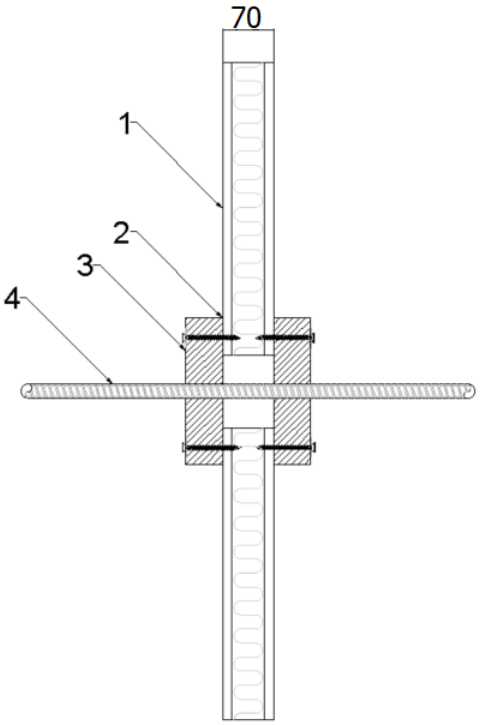
- Single layer of Stopseal Fire Batt pattress installed both sides of the wall.
- Max. Aperture size 570mm wide x 200mm high
- Pattress installation of Stopseal Fire Batt.
- The Batts are installed in horizontal rows and fixed on all edges.
- Overlap of batts to substrate min 50mm.
- Batts mechanically fixed to substrate with min 6mm x 80mm steel screws and steel retaining washer.
- Fixings installed at max 300mm centers.



Service(s)	Classification
500mm wide x 60mm deep steel cable basket containing 3 x type 'B' cable and 20 x bundle of telecoms cables	**EI90**
500mm wide x 60mm deep steel cable tray containing 1 x type 'B' cable, 3 x type 'A1' cable, 3 x type 'A2' cable, and 3 x type 'A3' cable	

Construction details:

- Single layer of Stopseal Fire Batt pattress installed both sides of the wall.
- Max. Aperture size 570mm wide x 200mm high
- Pattress installation of Stopseal Fire Batt.
- The Batts are installed in horizontal rows and fixed on all edges.
- Overlap of batts to substrate min 50mm.
- Batts mechanically fixed to substrate with min 6mm x 80mm steel screws and steel retaining washer.
- Fixings installed at max 300mm centers.



Service(s)	Classification
20mm dia Adaptaflex SPL20 flexible conduit	**EI90**
20mm dia Kopex KSU 316 stainless steel flexible conduit	
150mm wide x 60mm deep steel cable tray containing 4 x FP200 Gold (Firealarm cable 7mm dia red) Cables	**E 90** **EI 60**

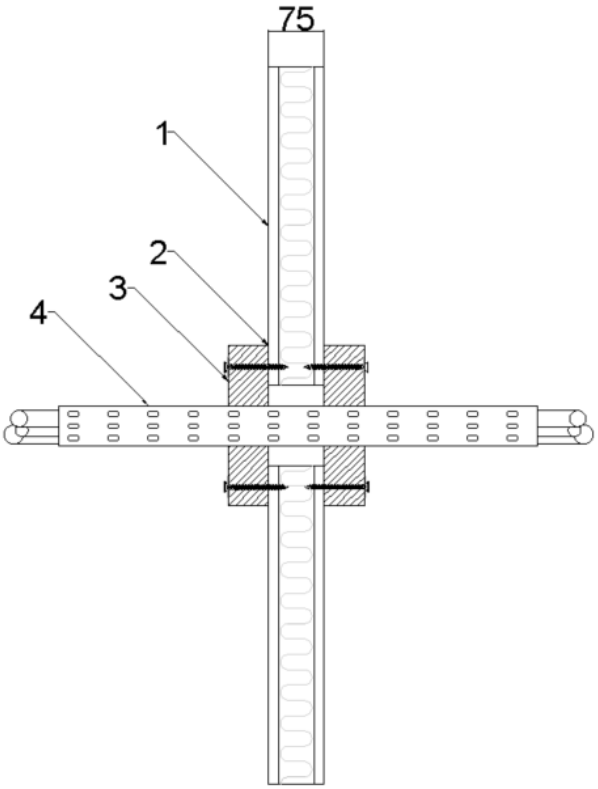
B2 FSi Stopseal Fire Batt Penetration Seal in Flexible Walls 75 mm thick

B2.1 FSi Single Layer (50mm) Stopseal Fire Batt Penetration Seal

B 2.1.1 Electrical Cables

Construction details:

- Single layer of Stopseal Fire Batt (50mm) installed internally within the wall.
- Max. Aperture size 570mm wide x 200mm high
- First service support 250mm from both faces of the substrate.
- Pattress installation of Stopseal Coated Batt.
- The Batts are installed in horizontal rows and fixed in minimum two vertical edges.
- Overlap of batts to substrate min 50mm.
- Batts mechanically fixed to substrate with min 6mm x 80mm steel screws and steel retaining washer.
- Fixings installed at max 300mm centers



Service(s)	Classification
500mm wide x 60mm deep steel cable basket containing 3 x type 'B' cable and 20 x bundle of telecoms cables	**EI 90**
500mm wide x 60mm deep steel cable tray containing 1 x type 'B' cable, 3 x type 'A1' cable, 3 x type 'A2' cable, and 3 x type 'A3' cable	

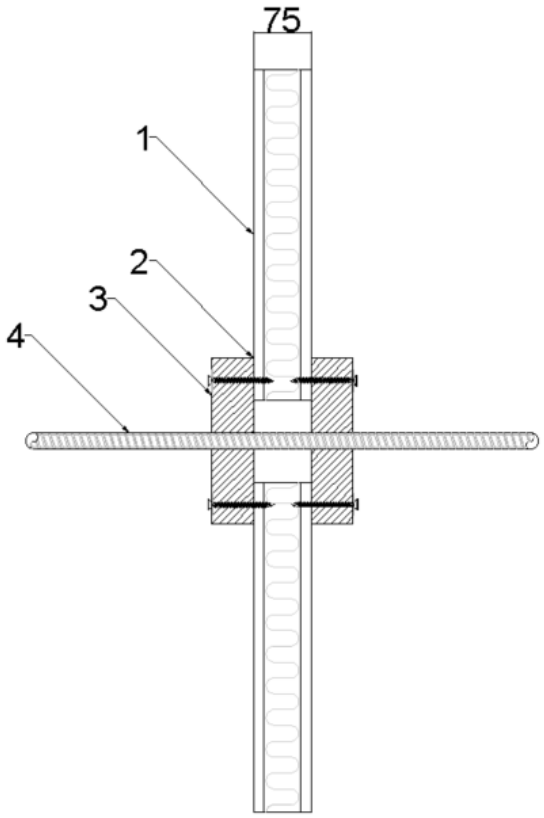
B3 FSi Stopseal Fire Batt Penetration Seal in Flexible Walls 75 mm thick

B3.1 FSi Single Layer (50mm) Stopseal Fire Batt Penetration Seal

B 3.1.1 Electrical Cables and Conduits

Construction details:

- Single layer of Stopseal Fire Batt (50mm) installed internally within the wall.
- Max. Aperture size 200mm wide x 200mm high
- Pattress installation of Stopseal Coated Batt.
- The Batts are installed in horizontal rows and fixed in minimum two vertical edges.
- Overlap of batts to substrate min 50mm.
- Batts mechanically fixed to substrate with min 6mm x 80mm steel screws and steel retaining washer.
- Fixings installed at max 300mm centers



Service(s)	Classification
20mm dia Adaptaflex SPL20 flexible conduit	**EI 90**
20mm dia Kopex KSU 316 stainless steel flexible conduit	
150mm wide x 60mm deep steel cable tray	
4x FP200 Gold (Firealarm cable 7mm dia red) Cables	**E90** **EI 60**

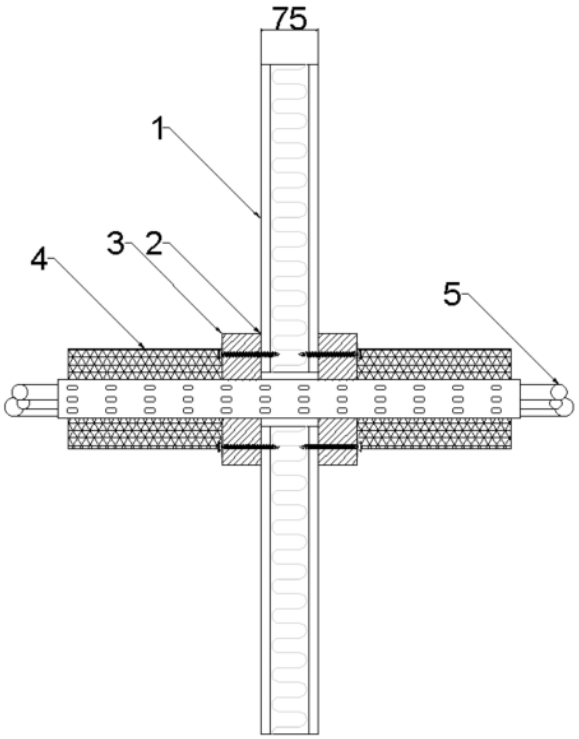
B4 FSi Stopseal Fire Batt Penetration Seal in Flexible Walls 75 mm thick

B4.1 FSi Single Layer (50mm) Stopseal Fire Batt Penetration Seal

B 4.1.1 Electrical Cables and Cable Trunking

Construction details:

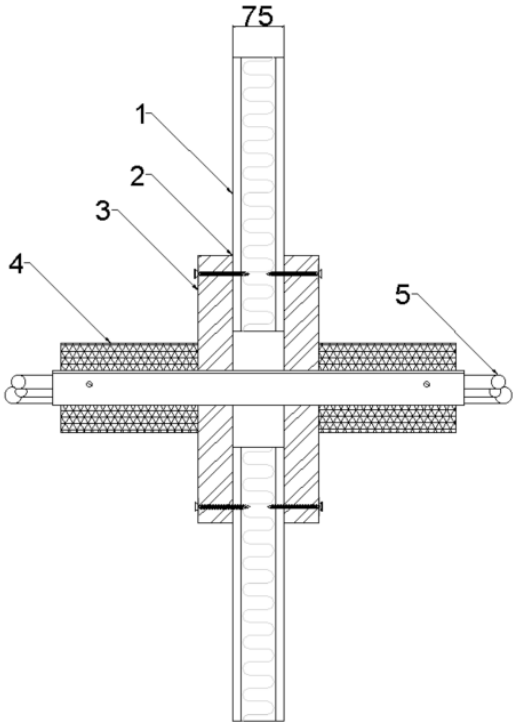
- Single layer of Stopseal Fire Batt (50mm) installed internally within the wall.
- Max. Aperture size 70mm wide x 70mm high
- Pattress installation of Stopseal Coated Batt.
- The Batts are installed in horizontal rows and fixed in minimum two vertical edges.
- Overlap of batts to substrate min 50mm.
- Batts mechanically fixed to substrate with min 6mm x 80mm steel screws and steel retaining washer.
- Fixings installed at max 300mm centers



Service(s)	Classification
50mm x 50mm Insulated steel cable trunking, Stone Wool 40mm thick, 45kg/m^3 (LI 400mm). S-Line Pillow tightly fitted around the cables in the section of trunking within the depth of the partition.	**EI 60 U/U**
Cables 1xA1, 1xA2, 1xA3	**EI 60**
Cables 1xA1	
Cables 1xA2	
Cables 1xA3	

Construction details:

- Single layer of Stopseal Fire Batt (50mm) installed internally within the wall.
- Max. Aperture size 170mm wide x 170mm high
- Pattress installation of Stopseal Coated Batt.
- The Batts are installed in horizontal rows and fixed in minimum two vertical edges.
- Overlap of batts to substrate min 50mm.
- Batts mechanically fixed to substrate with min 6mm x 80mm steel screws and steel retaining washer.
- Fixings installed at max 300mm centers



Service(s)	Classification
150mm x 150mm Insulated steel cable trunking, Stone Wool 40mm thick, 45kg/m^3 (LI 400mm). S-Line Pillow tightly fitted around the cables in the section of trunking within the depth of the partition.	**EI 60 U/U**
Cables 1xB1, 1xC1, 1xG1, 1xG2	**EI 60**
Cables 1xB1	
Cables 1xC1	
Uncheathed electrical cables 0-24 mm dia	

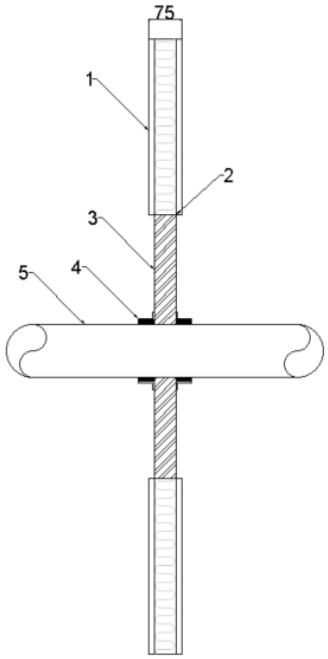
B5 FSi Stopseal Fire Batt Penetration Seal in Flexible Walls 75 mm thick

B5.1 FSi Single Layer (50mm) Stopseal Fire Batt Penetration Seal

B 5.1.1 Plastic Pipes

Construction details:

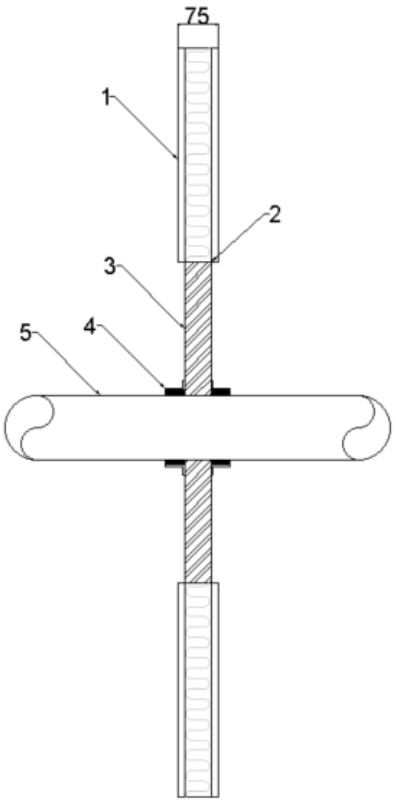
- Single layer of Stopseal Fire Batt (50mm) Plastic Pipes
- Max. Aperture size 600mm wide x 600mm high
- Penetrations positioned as per option 1 or 2 below, 0 mm distance between services and 50 mm to edge of seal.
- Collars secured both faces of the substrate utilizing 80mm long steel pig tail screw through to Stopseal Fire Batt



Penetration Specification	PipeBloc PCP Ref	Classification
PVC Pipe 32mm Ø, 1.8mm wall thickness	32 mm	**EI 60 U/C**
PVC Pipe 40mm Ø, 1.8mm wall thickness	40 mm	
PVC Pipe 50mm Ø, 1.8mm wall thickness	50 mm	
PVC Pipe 55mm Ø, 1.8-2.3mm wall thickness	55 mm	
PVC Pipe 63mm Ø, 2.3-3mm wall thickness	63 mm	
PVC Pipe 75mm Ø, 3.1-4.8mm wall thickness	75 mm	
PVC Pipe 82mm Ø, 3.1-4.8mm wall thickness	82 mm	
PVC Pipe 90mm Ø, 4.2-7.4mm wall thickness	90 mm	
PVC Pipe 100mm Ø, 4.2-7.4mm wall thickness	100 mm	
PVC Pipe 110mm Ø, 4.2-7.4mm wall thickness	110 mm	
PVC Pipe 125mm Ø, 6mm wall thickness	125 mm	
PVC Pipe 140mm Ø, 6.1-7.5mm wall thickness	140 mm	

Construction details:

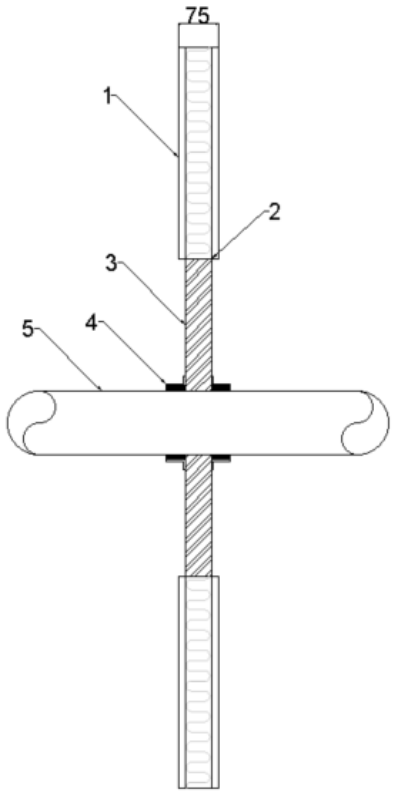
- Single layer of Stopseal Fire Batt (50mm) Plastic Pipes
- Max. Aperture size 600mm wide x 600mm high
- Penetrations positioned as per option 1 or 2 below, 0 mm distance between services and 50 mm to edge of seal.
- Collars secured both faces of the substrate utilizing 80mm long steel pig tail screw through to Stopseal Fire Batt



Penetration Specification	PipeBloc PCP Ref	Classification
PVC Pipe 32mm Ø, 2.9mm wall thickness	32 mm	**EI 60 U/C**
PVC Pipe 40mm Ø, 2.9mm wall thickness	40 mm	
PVC Pipe 50mm Ø, 2.9mm wall thickness	50 mm	
PVC Pipe 55mm Ø, 2.9-4.4mm wall thickness	55 mm	
PVC Pipe 63mm Ø, 2.9-4.4mm wall thickness	63 mm	
PVC Pipe 75mm Ø, 2.8-6.7mm wall thickness	75 mm	
PVC Pipe 82mm Ø, 2.8-6.7mm wall thickness	82 mm	
PVC Pipe 90mm Ø, 2.7-10mm wall thickness	90 mm	
PVC Pipe 100mm Ø, 2.7-10mm wall thickness	100 mm	
PVC Pipe 110mm Ø, 2.7-10mm wall thickness	110 mm	
PVC Pipe 125mm Ø, 3.1mm wall thickness	125 mm	
PVC Pipe 140mm Ø, 3.9-5.8mm wall thickness	140 mm	
PVC Pipe 160mm Ø, 4.9-9.5mm wall thickness	160 mm	

Construction details:

- Single layer of Stopseal Fire Batt (50mm) Plastic Pipes
- Max. Aperture size 600mm wide x 600mm high
- Penetrations positioned as per option 1 or 2 below, 0 mm distance between services and 50 mm to edge of seal.
- Collars secured both faces of the substrate utilizing 80mm long steel pig tail screw through to Stopseal Fire Batt



Penetration Specification	PipeBloc PCP Ref	Classification
PVC Pipe 32mm Ø, 2.9mm wall thickness	32 mm	**EI 60 U/C**
PVC Pipe 40mm Ø, 2.9mm wall thickness	40 mm	
PVC Pipe 50mm Ø, 2.9mm wall thickness	50 mm	
PVC Pipe 55mm Ø, 2.9-4.4mm wall thickness	55 mm	
PVC Pipe 63mm Ø, 2.9-4.4mm wall thickness	63 mm	
PVC Pipe 75mm Ø, 2.8-6.7mm wall thickness	75 mm	
PVC Pipe 82mm Ø, 2.8-6.7mm wall thickness	82 mm	
PVC Pipe 90mm Ø, 2.7-10mm wall thickness	90 mm	
PVC Pipe 100mm Ø, 2.7-10mm wall thickness	100 mm	
PVC Pipe 110mm Ø, 2.7-10mm wall thickness	110 mm	
PVC Pipe 125mm Ø, 3.1mm wall thickness	125 mm	
PVC Pipe 140mm Ø, 3.5-8mm wall thickness	140 mm	
PVC Pipe 160mm Ø, 4-14.6mm wall thickness	160 mm	

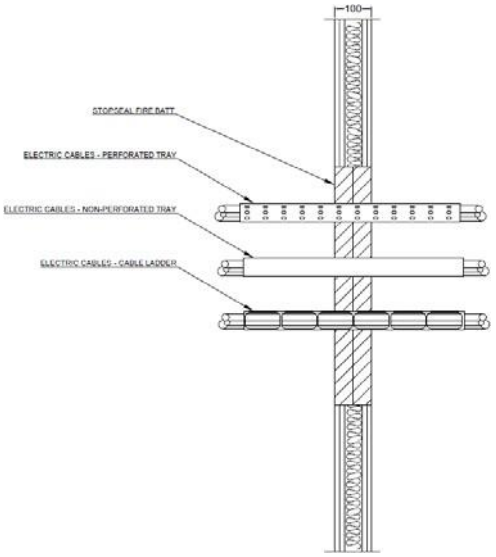
B6 FSi Stopseal Fire Batt Penetration Seal in Flexible or Rigid Walls min. 100 mm thick

B6.1 FSi Double Layer (50mm) Stopseal Fire Batt Penetration Seal B

6.1.1 Cable Penetrations

Construction details:

- Double layer of Stopseal Fire Batt (50mm) installed internally within the wall.
- Max. Aperture size 730mm wide x 1200mm high
- First service support 250mm from both faces of the substrate



Service(s)	Classification
Electrical cables up to 21mm dia	**EI 60**
Electrical cables 22mm to 80mm dia	**E 60** **EI 45**
Cable Trays and Ladders	**EI 60**
100 mm diameter bundle telecommunication cable type "F"	**EI 60**
Unsheathed electrical cables up to 17mm dia	**E 60** **EI 30**
Unsheathed electrical cables 18-24mm dia	**E 60** **EI 15**
Steel or Copper Conduits up to 16mm	**E 60** **EI 15**
Plastic conduits up to 16mm	**EI 60**

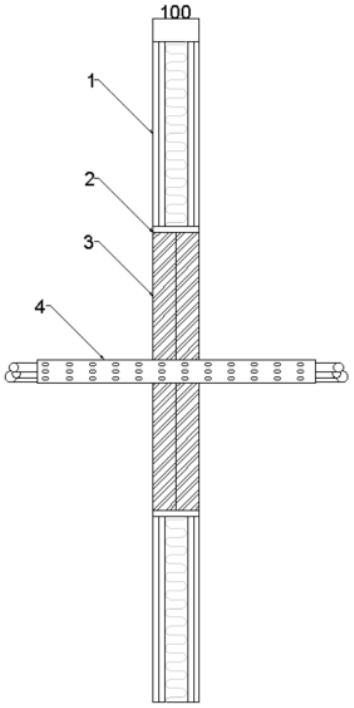
B7FSi Stopseal Fire Batt Penetration Seal in Flexible or Rigid Walls min. 100 mm thick

B7.1 FSi Double Layer (50mm) Stopseal Fire Batt Penetration Seal B

7.1.1 Electrical Cables and Conduits

Construction details:

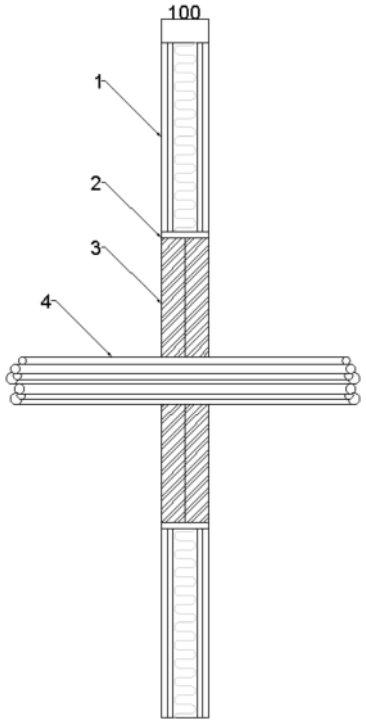
- Double layer of Stopseal Fire Batt (50mm) installed internally within the wall.
- Max. Aperture size 2600mm wide x 2600mm high
- First service support 250mm from both faces of the substrate



Service(s)	Classification
Electrical cables up to 21mm dia	**EI 60**
Electrical cables 22mm to 50mm dia	**E 60** **EI 45**
Electrical cables 51mm to 80mm dia	**E 60** **EI 30**
Cable Trays and Ladders	**E 60** **EI 45**
100 mm diameter bundle telecommunication cable type "F"	**EI 60**
Unsheathed electrical cables up to 0-24mm dia	**EI 60**
Steel or Copper Conduits up to 16mm	**E60 C/U**
Plastic conduits up to 16mm	**EI 60 C/U**

Construction details:

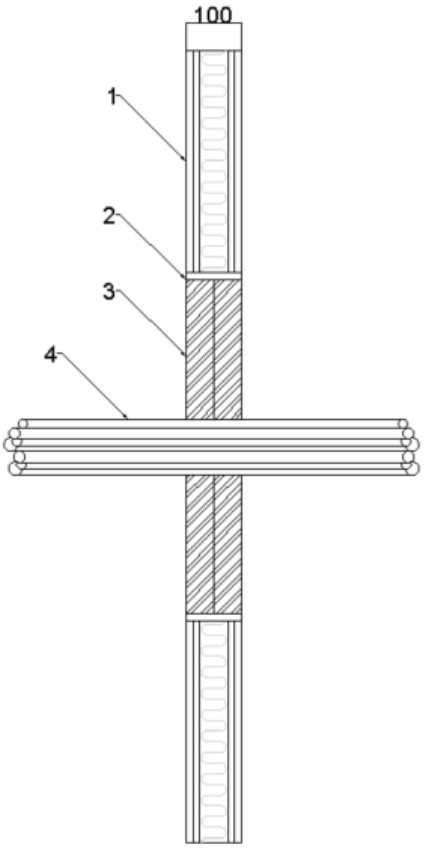
- Double layer of Stopseal Fire Batt (50mm) installed internally within the wall.
- Max. Aperture size 2600mm wide x 2600mm high
- First service support 250mm from both faces of the substrate



Service(s)	Classification
Electrical cables up to 21mm dia	**EI 60**
Electrical cables 22mm to 80mm dia	**E 60** **EI 45**
Cable Trays and Ladders	**EI 60**
100 mm diameter bundle telecommunication cable type "F"	**EI 60**
Unsheathed electrical cables up to 17mm dia	**E 60** **EI 30**
Unsheathed electrical cables up to 18-24mm dia	**E 60** **EI 15**
Steel or Copper Conduits up to 16mm	**E60** **EI 15**
Plastic conduits up to 16mm	**EI 60**

Construction details:

- Double layer of Stopseal Fire Batt (50mm) installed internally within the wall.
- Max. Aperture size 2600mm wide x 2600mm high
- First service support 250mm from both faces of the substrate



Service(s)	Classification
Electrical cables up to 21mm dia	**EI 60**
Electrical cables 22mm to 80mm dia	**E 60** **EI 45**
Cable Trays and Ladders	**EI 60**
100 mm diameter bundle telecommunication cable type "F"	**EI 60**
Unsheathed electrical cables up to 17mm dia	**E 60** **EI 30**
Unsheathed electrical cables up to 18-24mm dia	**E 60** **EI 15**
Steel or Copper Conduits up to 16mm	**E60** **EI 15**
Plastic conduits up to 16mm	**EI 60**

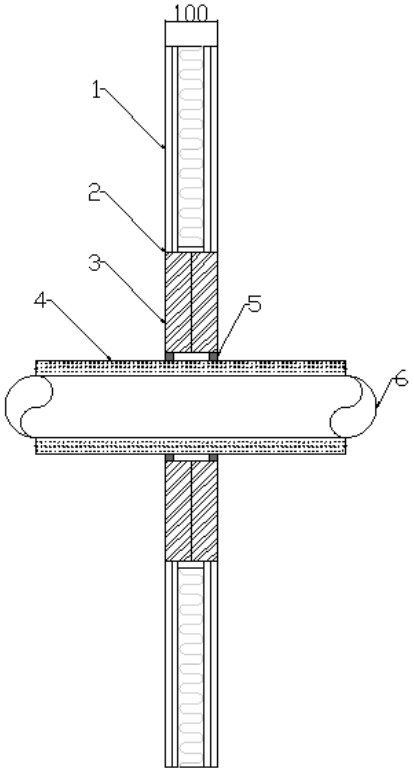
B8 FSi Stopseal Fire Batt Penetration Seal in Flexible or Rigid Walls min. 100 mm thick

B8.1 FSi Double Layer (50mm) Stopseal Fire Batt Penetration Seal

B 8.1.1 Insulated Metallic Pipes

Construction details:

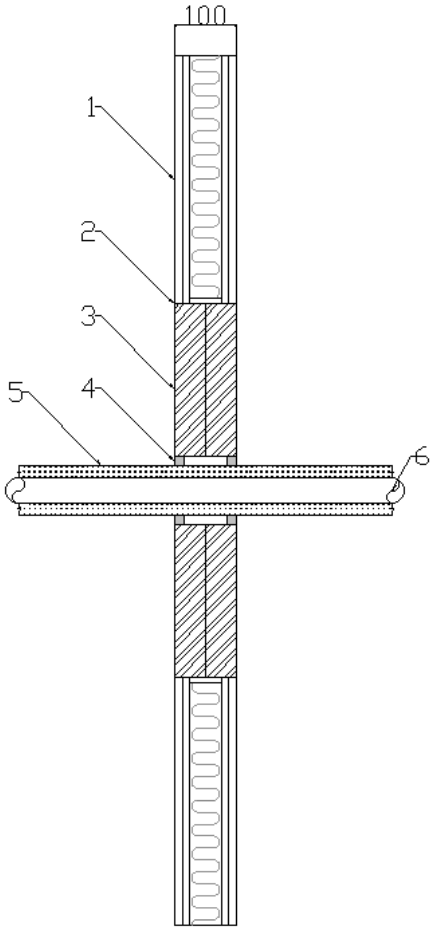
- Double layer of Stopseal Fire Batt (50mm) installed internally within the wall.
- Max. Aperture size 730mm wide x 1200mm high
- First service support 250mm from both faces of the substrate.
- 15mm deep x 15mm wide annulus Pyropro HPE Sealant to both faces of the pipe



Service(s)	Classification
Single copper or mild steel pipe 40mm diameter and 1.5 – 14.2 mm wall with sustained/continuous 20mm thick foil faced glass wool insulation (min 80Kg/m^3)	**E 90 U/C** **EI 60 U/C**
Single copper or mild steel pipe 40-159mm diameter and 2.3 – 14.2 mm wall with sustained/continuous 30mm thick foil faced glass wool insulation (min 80Kg/m^3)	**EI 60 U/C**

Construction details:

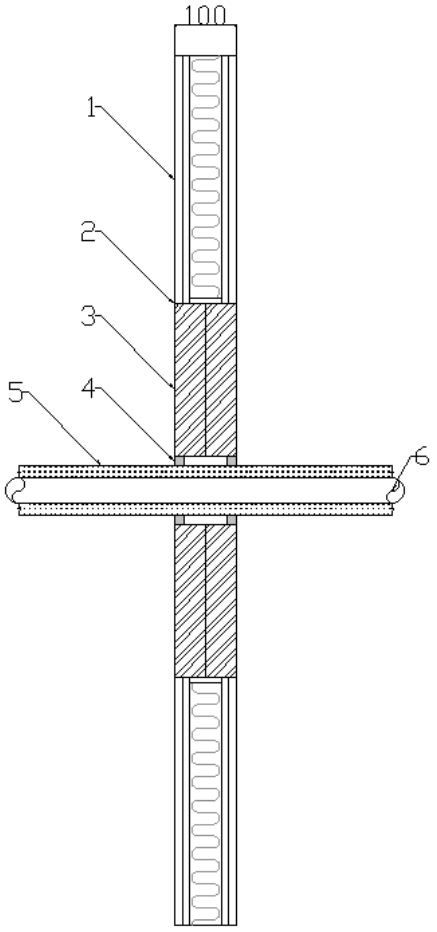
- Double layer of Stopseal Fire Batt (50mm) installed internally within the wall.
- Max. Aperture size 2600mm wide x 2600mm high
- First service support 250mm from both faces of the substrate.
- 15mm deep x 15mm wide annulus Pyropro HPE Sealant to both faces of the pipe



Service(s)	Classification
Single copper or mild steel pipe 40mm diameter and 1.5 – 14.2 mm wall with sustained/continuous 20mm thick foil faced glass wool insulation (min 80Kg/m^3)	**EI 60 U/C**
Single copper or mild steel pipe 40-159mm diameter and 2.3 – 14.2 mm wall with sustained/continuous 30mm thick foil faced glass wool insulation (min 80Kg/m^3)	**EI 60 U/C**

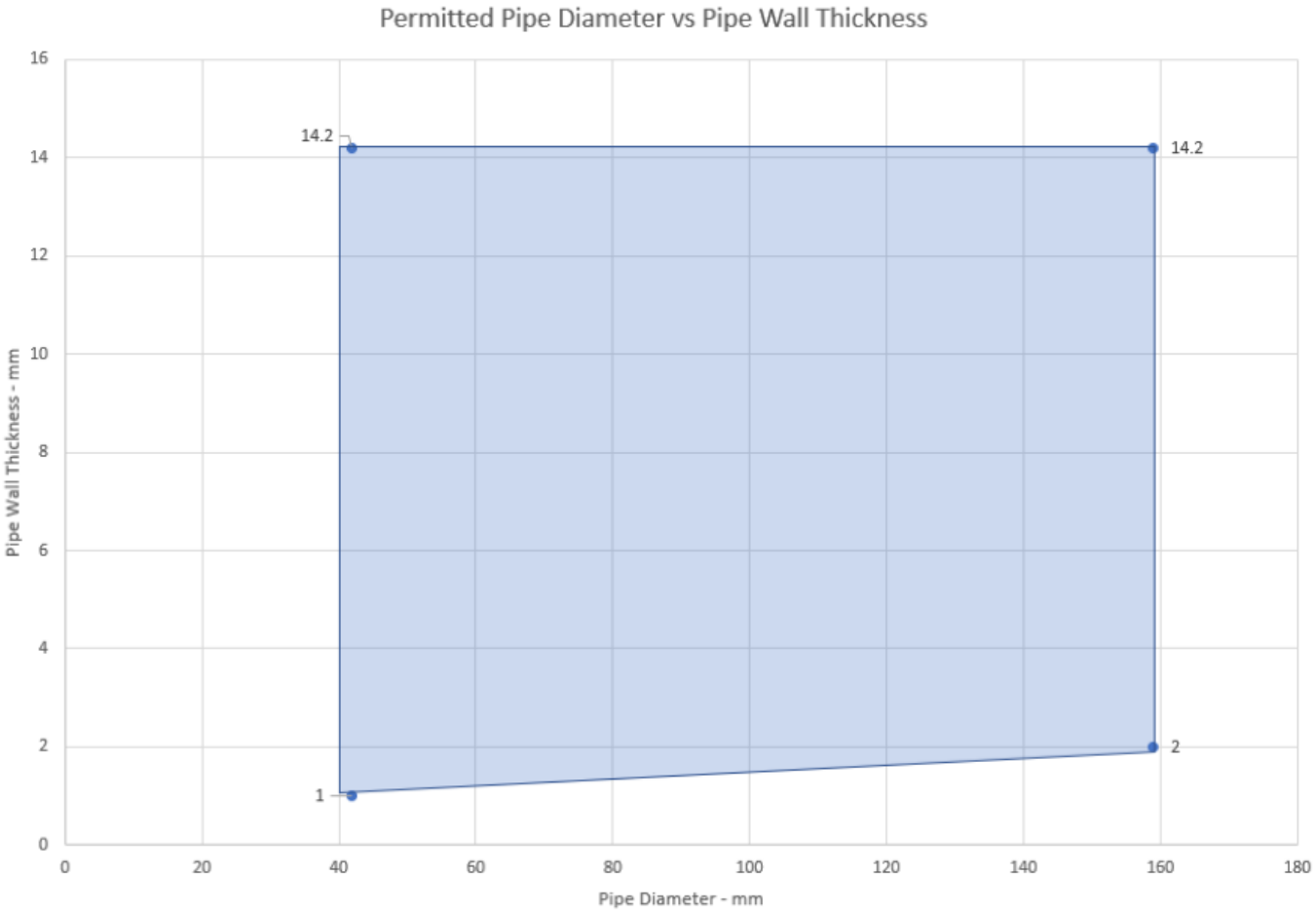
Construction details:

- Double layer of Stopseal Fire Batt (50mm) installed internally within the wall.
- Max. Aperture size 730mm wide x 1200mm high
- First service support 250mm from both faces of the substrate.
- 15mm deep x 15mm wide annulus Pyropro HPE Sealant to both faces of the pipe



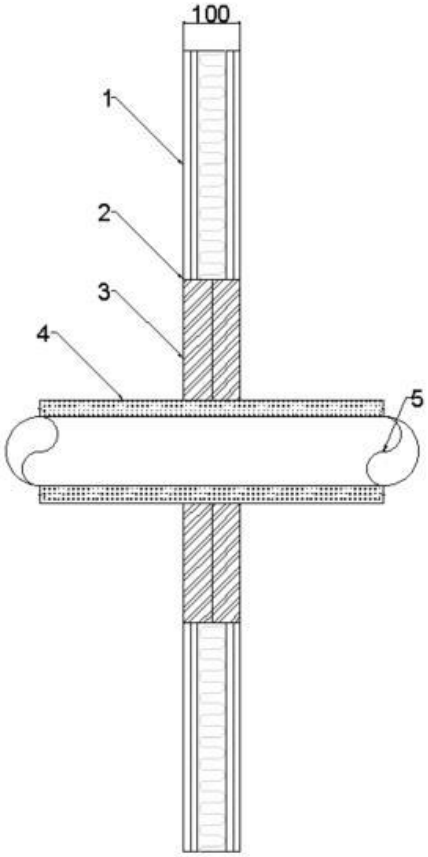
Service(s)	Classification
Steel or Copper Pipe 42-159mm Ø, 1.0mm – 14.2mm wall thickness. 25mm thick foil faced glassfibre insulation min. 30kg/m^3 (C/S)	**E 120 C/U** **EI 45 C/U**
Steel or Copper Pipe 42mm Ø, 1mm – 14.2mm wall thickness. 25mm thick foil faced glassfibre insulation min. 30kg/m^3 (C/S)	**E 120 C/U** **EI 60 C/U**

Permitted Pipe Diameter vs Pipe Wall Thickness as graph below.


Permitted Pipe Diameter vs Pipe Wall Thickness
Pipe Wall Thickness - mm
Pipe Diameter - mm
14.2
14.2
2
1
0
2
4
6
8
10
12
14
16
0
20
40
60
80
100
120
140
160
180

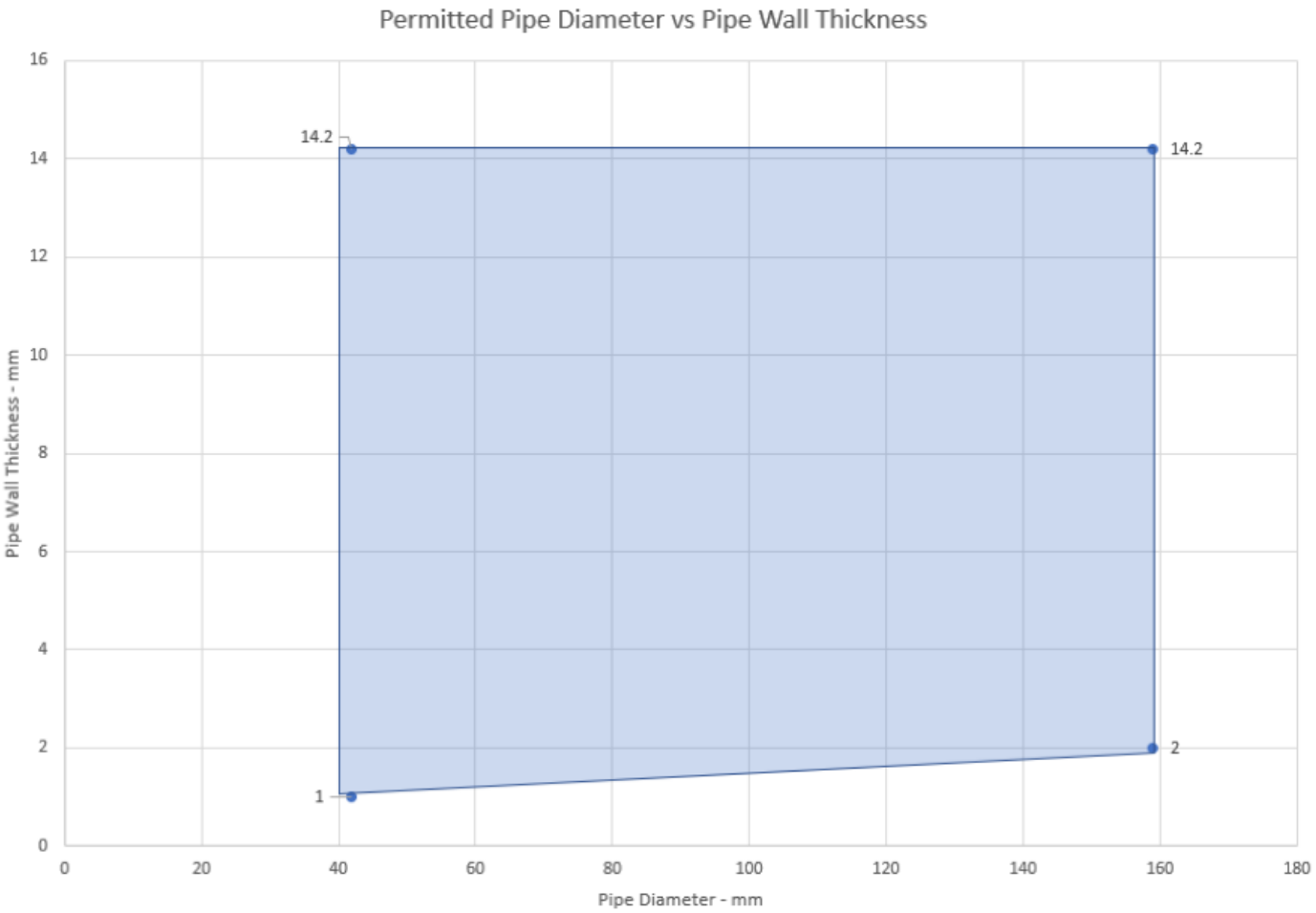
Construction details:

- Double layer of Stopseal Fire Batt (50mm) installed internally within the wall.
- Max. Aperture size 2600mm wide x 2600mm high



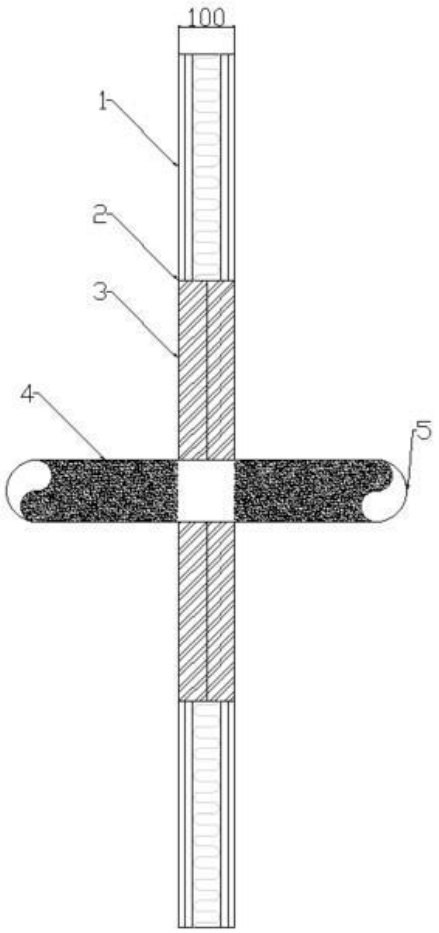
Service(s)	Classification
Steel or Copper Pipe 42-159mm Ø, 1.0mm – 14.2mm wall thickness. 25mm thick foil faced glassfibre insulation min. 30kg/m^3 (C/S)	**E 60 C/U** **EI 45 C/U**
Steel or Copper Pipe 42mm Ø, 1mm – 14.2mm wall thickness. 25mm thick foil faced glassfibre insulation min. 30kg/m^3 (C/S)	**E 60 C/U** **EI 60 C/U**

Permitted Pipe Diameter vs Pipe Wall Thickness as graph below.


Permitted Pipe Diameter vs Pipe Wall Thickness
Pipe Wall Thickness - mm
Pipe Diameter - mm
14.2
14.2
2
1
0
2
4
6
8
10
12
14
16
0
20
40
60
80
100
120
140
160
180

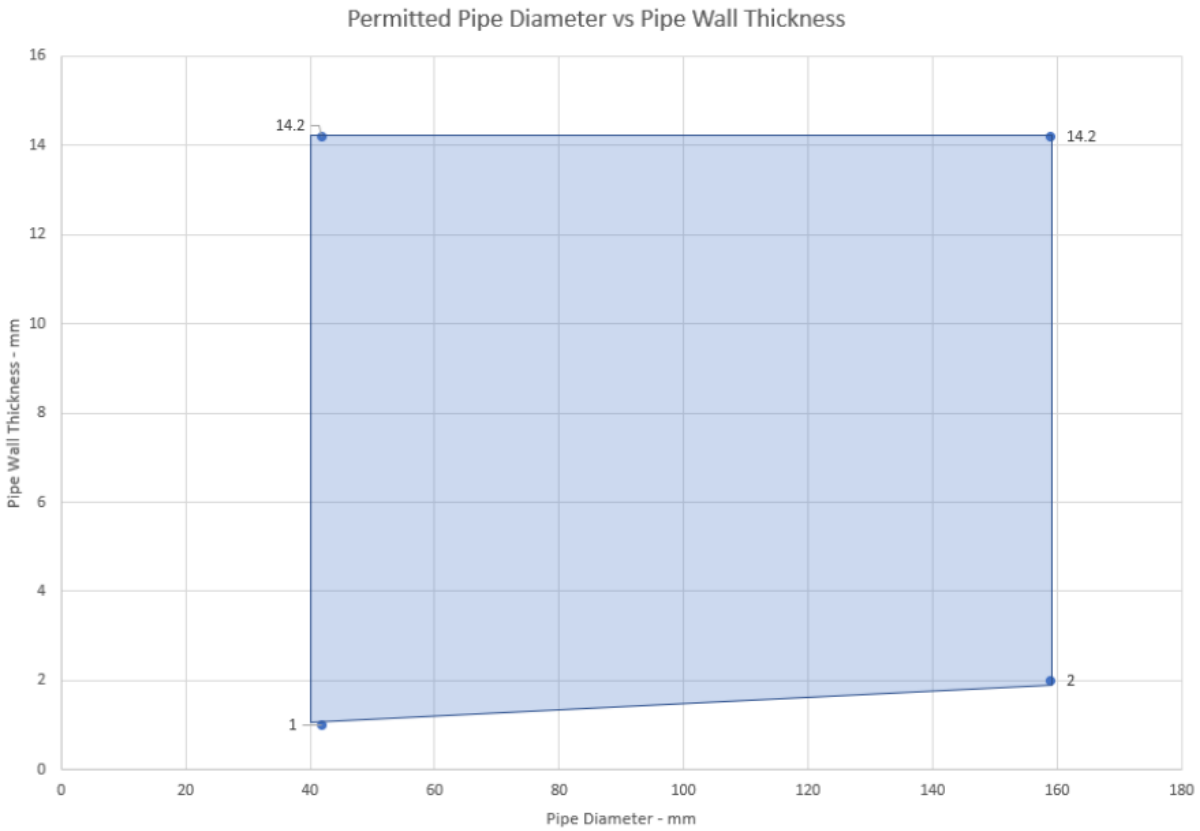
Construction details:

- Double layer of Stopseal Fire Batt (50mm) installed internally within the wall.
- Max. Aperture size 730mm wide x 1200mm high



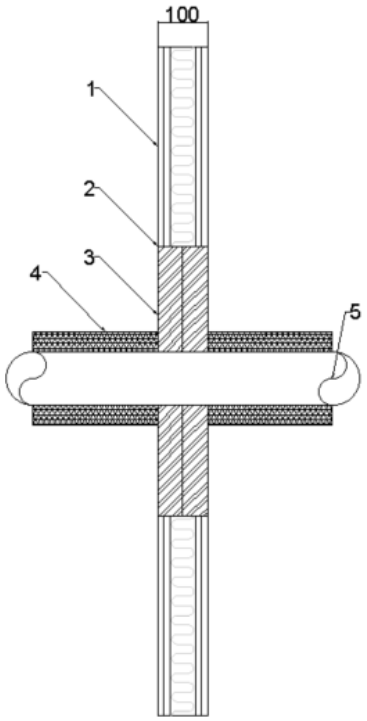
Service(s)	Classification
Steel or Copper Pipe 42-159mm Ø, 1.0mm – 14.2mm wall thickness 40mm thick foil faced stonewool insulation min. 40kg/m^3 (L/I 400mm)	**EI 45 C/U**
Steel 42-324mm Ø, 16mm wall thickness. 40mm thick foil faced stonewool insulation min. 40kg/m^3 (L/I 400mm)	**EI 45 C/U**
Steel 42-324mm Ø, 16mm wall thickness. 40mm thick foil faced stonewool insulation min. 40kg/m^3 (C/I)	**EI 60 C/U**
Steel or Copper Pipe 42mm Ø, 1.0mm – 14.2mm wall thickness FSi PST coating along the penetration 2mm DFT (L/I 300mm)	**E 120 C/U** **EI 45 C/U**
Steel or Copper Pipe 42-159mm Ø, 1.0mm – 14.2mm wall thickness FSi PST coating along the penetration 2mm DFT (L/I 300mm)	**E 120 C/U** **EI 20 C/U**
Steel 42-324mm Ø, 16mm wall thickness. 14.2mm wall thickness FSi PST coating along the penetration 2mm DFT (L/I 300mm)	**E 120 C/U** **EI 45 C/U**

Permitted Pipe Diameter vs Pipe Wall Thickness as graph below.


Permitted Pipe Diameter vs Pipe Wall Thickness
Pipe Wall Thickness - mm
Pipe Diameter - mm
14.2
14.2
2
1
0
2
4
6
8
10
12
14
16
0
20
40
60
80
100
120
140
160
180

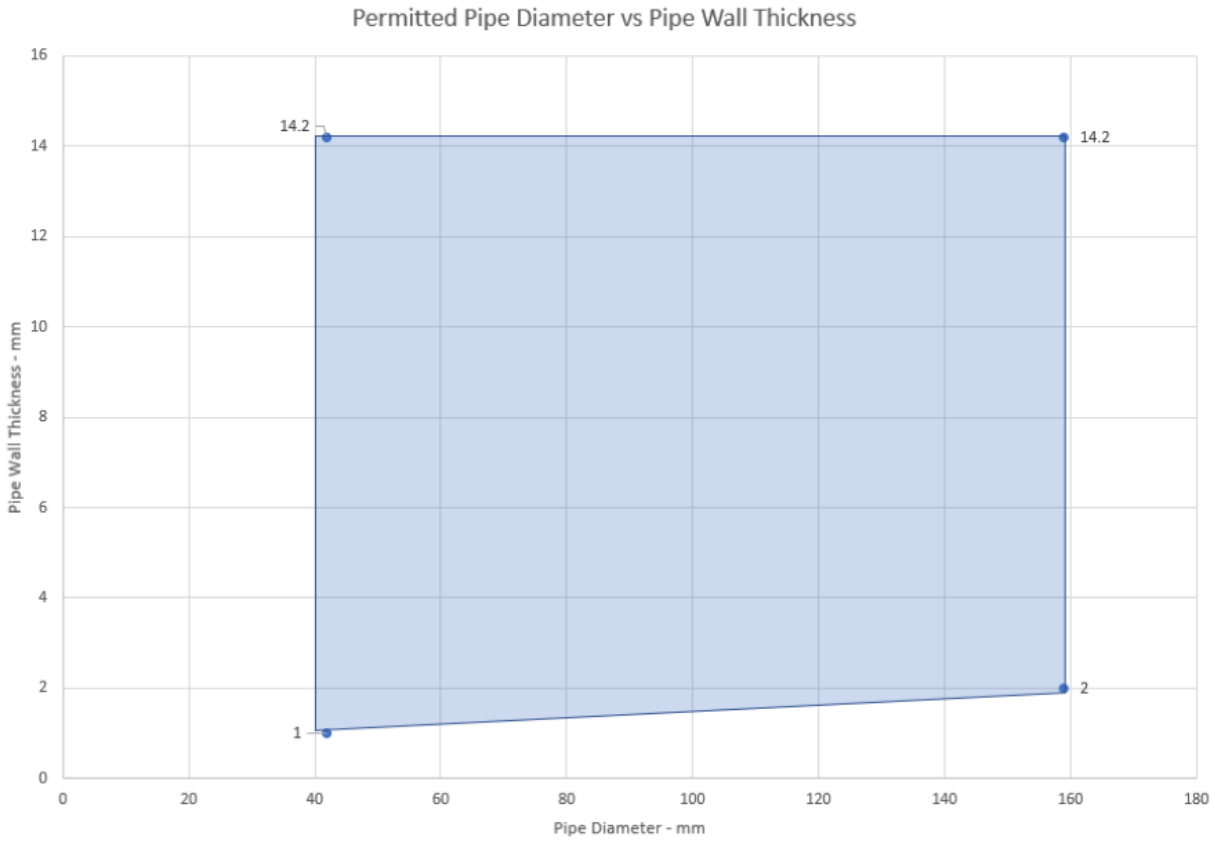
Construction details:

- Double layer of Stopseal Fire Batt (50mm) installed internally within the wall.
- Max. Aperture size 2600mm wide x 2600mm high



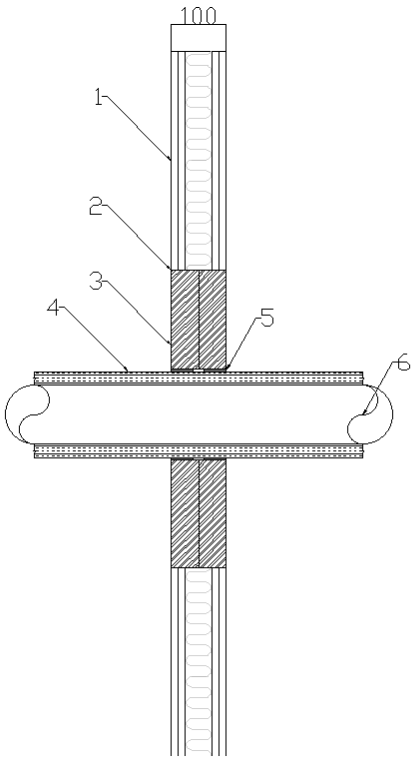
Service(s)	Classification
Steel or Copper Pipe 42-159mm Ø, 1.0mm – 14.2mm wall thickness 40mm thick foil faced stonewool insulation min. 40kg/m^3 (L/I 400mm)	**EI 45 C/U**
Steel 42-324mm Ø, 16mm wall thickness. 40mm thick foil faced stonewool insulation min. 40kg/m^3 (L/I 400mm)	**EI 45 C/U**
Steel 42-324mm Ø, 16mm wall thickness. 40mm thick foil faced stonewool insulation min. 40kg/m^3 (C/I)	**EI 60 C/U**
Steel or Copper Pipe 42mm Ø, 1.0mm – 14.2mm wall thickness FSi PST coating along the penetration 2mm DFT (L/I 300mm)	**E 60 C/U** **EI 45 C/U**
Steel or Copper Pipe 42-159mm Ø, 1.0mm – 14.2mm wall thickness FSi PST coating along the penetration 2mm DFT (L/I 300mm)	**E 60 C/U** **EI 20 C/U**
Steel 42-324mm Ø, 16mm wall thickness. 14.2mm wall thickness FSi PST coating along the penetration 2mm DFT (L/I 300mm)	**E 60 C/U** **EI 45 C/U**

Permitted Pipe Diameter vs Pipe Wall Thickness as graph below.


Permitted Pipe Diameter vs Pipe Wall Thickness
Pipe Wall Thickness - mm
Pipe Diameter - mm
14.2
14.2
2
1
0
2
4
6
8
10
12
14
16
0
20
40
60
80
100
120
140
160
180

Construction details:

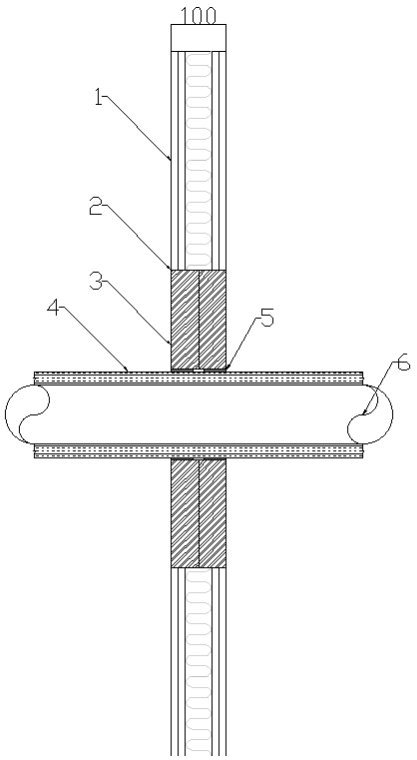
- Double layer of Stopseal Fire Batt (50mm) installed internally within the wall.
- Max. Aperture size 730mm wide x 1200mm high
- 2 x 2mm thick layers of PipeBloc EL / PipeBloc PWP installed both sides of the Stopseal Fire Batt
- Equivalent elastomeric pipe insulation classified BL – s2, d0 or better to EN 13501-1
- Equivalent Phenolic foam pipe insulation classified BL – s1, d0 or better to EN 13501-1



Service(s)	Classification
Steel or Copper Pipe 42-159mm Ø, 1.2mm – 14.2mm wall thickness. 13-25mm thick K Flex ST2 Insulation (C/S)	**E 120 C/U** **EI 60 C/U**
Steel or Copper Pipe 42mm Ø, 1 – 14.2mm wall thickness. 25-13mm thick K Flex ST2 insulation (C/S)	**E 120 C/U** **EI 90 C/U**
Steel or Copper Pipe 42-108mm Ø, 1.2 – 14.2mm wall thickness. 25 -40mm thick Kingspan Kooltherm FM3 insulation (C/S)	**E 120 C/U** **EI 60 C/U**
Steel or Copper Pipe 42mm Ø, 1–14.2mm wall thickness. 25 -40mm thick Kingspan Kooltherm FM insulation (C/S)	**E 120 C/U** **EI 90 C/U**
Steel or Copper Pipe 42mm Ø, 1.0–14.2mm wall thickness. 50mm thick glassfibre insulation (C/S)	**E 120 C/U** **EI 90 C/U**
Steel or Copper Pipe 42-159mm Ø, 1.2mm – 14.2mm wall thickness. 13-25mm thick K Flex ST2 Insulation (C/S)	**E 120 C/U** **EI 60 C/U**

Construction details:

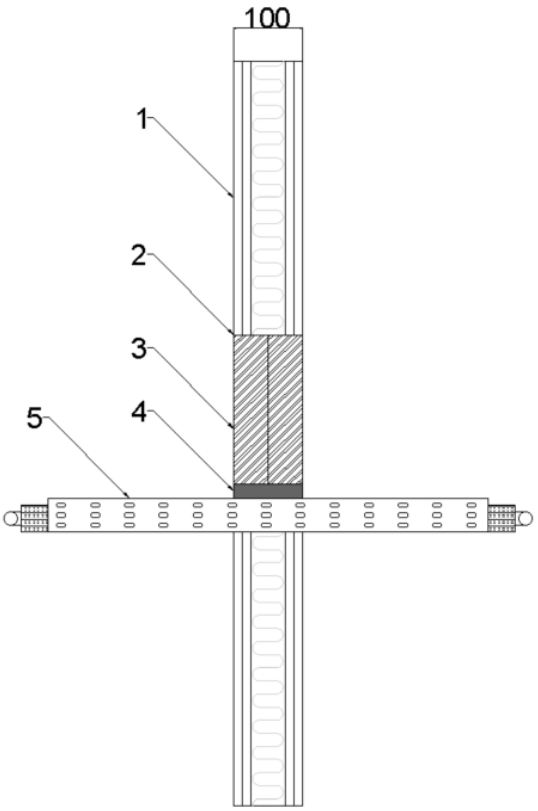
- Double layer of Stopseal Fire Batt (50mm) installed internally within the wall.
- Max. Aperture size 2600mm wide x 2600mm high
- 2 x 2mm thick layers of PipeBloc EL / PipeBloc PWP installed both sides of the Stopseal Fire Batt
- Equivalent elastomeric pipe insulation classified BL – s2, d0 or better to EN 13501-1
- Equivalent Phenolic foam pipe insulation classified BL – s1, d0 or better to EN 13501-1



Service(s)	Classification
Steel or Copper Pipe 42-159mm Ø, 1.2mm – 14.2mm wall thickness. 13-25mm thick K Flex ST2 Insulation (C/S)	**EI 60 C/U**
Steel or Copper Pipe 42mm Ø, 1 – 14.2mm wall thickness. 25-13mm thick K Flex ST2 insulation (C/S)	
Steel or Copper Pipe 42-108mm Ø, 1.2 – 14.2mm wall thickness. 25 -40mm thick Kingspan Kooltherm FM3 insulation (C/S)	
Steel or Copper Pipe 42mm Ø, 1–14.2mm wall thickness. 25 -40mm thick Kingspan Kooltherm FM insulation (C/S)	
Steel or Copper Pipe 42mm Ø, 1.0–14.2mm wall thickness. 50mm thick glassfibre insulation (C/S)	
Steel or Copper Pipe 42-159mm Ø, 1.2mm – 14.2mm wall thickness. 13-25mm thick K Flex ST2 Insulation (C/S)	

Construction details:

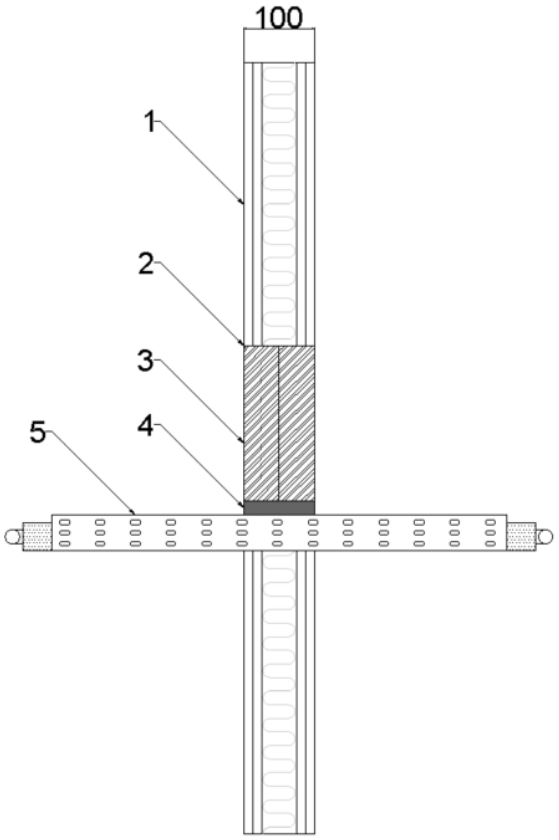
- Double layer of Stopseal Fire Batt (50mm) installed internally within the wall.
- Max. Aperture size 730mm wide x 1200mm high
- Pyropro HPE 20mm annulus full 50mm depth of the Stopseal Coated Batt
- Equivalent elastomeric pipe insulation classified BL – s2, d0 or better to EN 13501-1



Service(s)	Classification
6 off Steel or Copper Pipe 22mm Ø, 0.9mm – 14.2mm wall thickness. 19mm thick Armaflex (L/S 400mm)	**EI 90 C/U**
500 mm cable tray	**E 90 C/U** **EI 15 C/U**

Construction details:

- Double layer of Stopseal Fire Batt (50mm) installed internally within the wall.
- Max. Aperture size 2600mm wide x 2600mm high
- Zero distance to bottom of seal
- Pyropro HPE 20mm annulus full 50mm depth of the Stopseal Coated Batt
- Equivalent elastomeric pipe insulation classified BL – s2, d0 or better to EN 13501-1



Service(s)	Classification
6 off Steel or Copper Pipe 22mm Ø, 0.9mm – 14.2mm wall thickness. 19mm thick Armaflex (L/S 400mm)	**EI 60 C/U**
500 mm cable tray	**E 60** **EI 15**

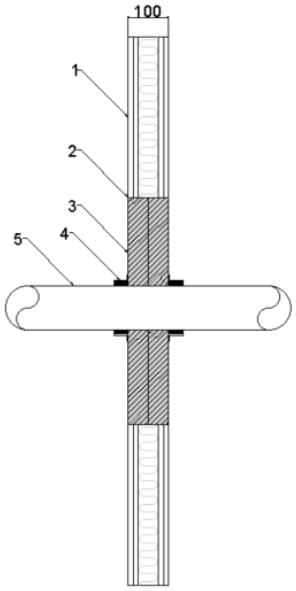
B9 FSi Stopseal Fire Batt Penetration Seal in Flexible or Rigid Walls min. 100 mm thick

B9.1 FSi Double Layer (50mm) Stopseal Fire Batt Penetration Seal

B 9.1.1 Plastic Pipes

Construction details:

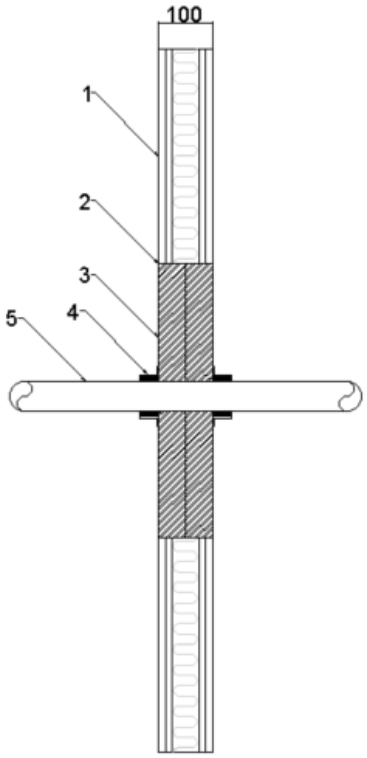
- Double layer of Stopseal Fire Batt (50mm) Plastic Pipes
- Max. Aperture size 730mm wide x 1200mm high
- Penetrations positioned as per option 1 or 2 below, 0 mm distance between services and 50 mm to edge of seal.
- Collars secured both faces of the substrate utilizing 80mm long steel pig tail screw through to Stopseal Fire Batt



Penetration Specification	PipeBloc PCP Ref	Classification
PVC Pipe 32mm Ø, 1.8mm wall thickness	32 mm	**EI 120 U/C**
PVC Pipe 40mm Ø, 1.8mm wall thickness	40 mm	
PVC Pipe 50mm Ø, 1.8mm wall thickness	50 mm	
PVC Pipe 55mm Ø, 1.8-2.3mm wall thickness	55 mm	
PVC Pipe 63mm Ø, 3.1-4.8mm wall thickness	63 mm	
PVC Pipe 75mm Ø, 3.1-4.8mm wall thickness	75 mm	
PVC Pipe 82mm Ø, 4.2-7.4mm wall thickness	82 mm	
PVC Pipe 90mm Ø, 4.2-7.4mm wall thickness	90 mm	
PVC Pipe 100mm Ø, 4.2-7.4mm wall thickness	100 mm	
PVC Pipe 110mm Ø, 6.1-7.5mm wall thickness	110 mm	

Construction details:

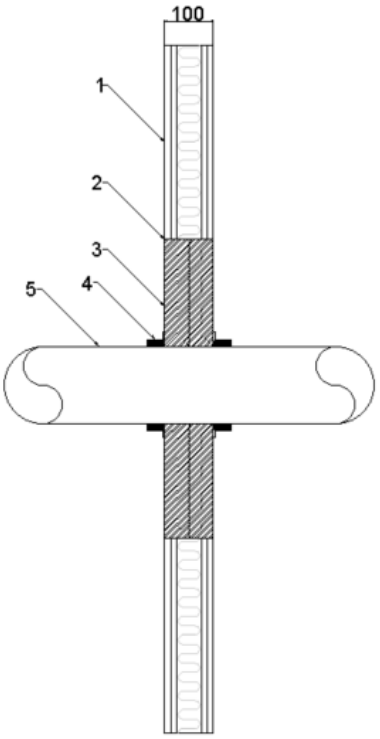
- Double layer of Stopseal Fire Batt (50mm) Plastic Pipes
- Max. Aperture size 2600mm wide x 2600mm high
- Penetrations positioned as per option 1 or 2 below, 0 mm distance between services and 50 mm to edge of seal.
- Collars secured both faces of the substrate utilizing 80mm long steel pig tail screw through to Stopseal Fire Batt



Penetration Specification	PipeBloc PCP Ref	Classification
PVC Pipe 32mm Ø, 1.8mm wall thickness	32 mm	**EI 60 U/C**
PVC Pipe 40mm Ø, 1.8mm wall thickness	40 mm	
PVC Pipe 50mm Ø, 1.8mm wall thickness	50 mm	
PVC Pipe 55mm Ø, 1.8-2.3mm wall thickness	55 mm	
PVC Pipe 63mm Ø, 3.1-4.8mm wall thickness	63 mm	
PVC Pipe 75mm Ø, 3.1-4.8mm wall thickness	75 mm	
PVC Pipe 82mm Ø, 4.2-7.4mm wall thickness	82 mm	
PVC Pipe 90mm Ø, 4.2-7.4mm wall thickness	90 mm	
PVC Pipe 100mm Ø, 4.2-7.4mm wall thickness	100 mm	
PVC Pipe 110mm Ø, 4.2-7.4mm wall thickness	110 mm	
PVC Pipe 125mm Ø, 6mm wall thickness	125 mm	
PVC Pipe 140mm Ø, 6.1-7.5mm wall thickness	140 mm	
PVC Pipe 160mm Ø, 6.2-9.5mm wall thickness	160 mm	

Construction details:

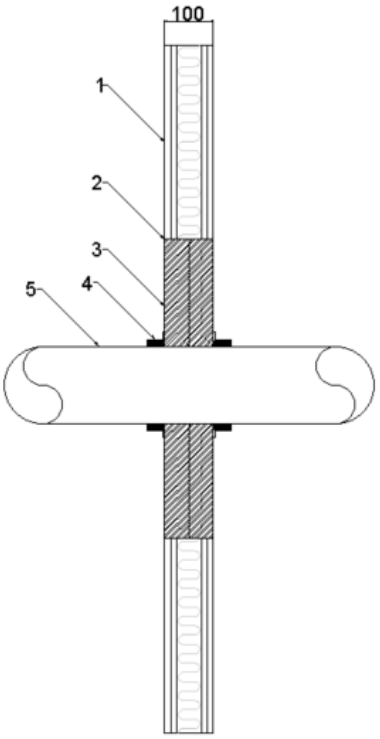
- Double layer of Stopseal Fire Batt (50mm) Plastic Pipes
- Max. Aperture size 730mm wide x 1200mm high
- Penetrations positioned as per option 1 or 2 below, 0 mm distance between services and 50 mm to edge of seal.
- Collars secured both faces of the substrate utilizing 80mm long steel pig tail screw through to Stopseal Fire Batt



Penetration Specification	PipeBloc PCP Ref	Classification
PVC Pipe 32mm Ø, 2.9mm wall thickness	32 mm	**EI 120 U/C**
PVC Pipe 40mm Ø, 2.9mm wall thickness	40 mm	
PVC Pipe 50mm Ø, 2.9mm wall thickness	50 mm	
PVC Pipe 55mm Ø, 2.9-4.4mm wall thickness	55 mm	
PVC Pipe 63mm Ø, 2.9-4.4mm wall thickness	63 mm	
PVC Pipe 75mm Ø, 2.8-6.7mm wall thickness	75 mm	
PVC Pipe 82mm Ø, 2.8-6.7mm wall thickness	82 mm	
PVC Pipe 90mm Ø, 2.7-10mm wall thickness	90 mm	
PVC Pipe 100mm Ø, 2.7-10mm wall thickness	100 mm	
PVC Pipe 110mm Ø, 2.7-10mm wall thickness	110 mm	
PVC Pipe 125mm Ø, 3.1mm wall thickness	125 mm	
PVC Pipe 140mm Ø, 3.5-8mm wall thickness	140 mm	
PVC Pipe 160mm Ø, 4-14.6mm wall thickness	160 mm	

Construction details:

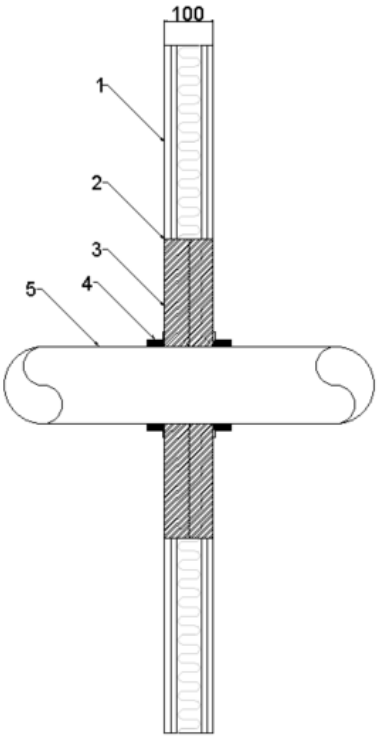
- Double layer of Stopseal Fire Batt (50mm) Plastic Pipes
- Max. Aperture size 2600mm wide x 2600mm high
- Penetrations positioned as per option 1 or 2 below, 0 mm distance between services and 50 mm to edge of seal.
- Collars secured both faces of the substrate utilizing 80mm long steel pig tail screw through to Stopseal Fire Batt



Penetration Specification	PipeBloc PCP Ref	Classification
PVC Pipe 32mm Ø, 2.9mm wall thickness	32 mm	**EI 60 U/C**
PVC Pipe 40mm Ø, 2.9mm wall thickness	40 mm	
PVC Pipe 50mm Ø, 2.9mm wall thickness	50 mm	
PVC Pipe 55mm Ø, 2.9-4.4mm wall thickness	55 mm	
PVC Pipe 63mm Ø, 2.9-4.4mm wall thickness	63 mm	
PVC Pipe 75mm Ø, 2.8-6.7mm wall thickness	75 mm	
PVC Pipe 82mm Ø, 2.8-6.7mm wall thickness	82 mm	
PVC Pipe 90mm Ø, 2.7-10mm wall thickness	90 mm	
PVC Pipe 100mm Ø, 2.7-10mm wall thickness	100 mm	
PVC Pipe 110mm Ø, 2.7-10mm wall thickness	110 mm	
PVC Pipe 125mm Ø, 3.1mm wall thickness	125 mm	
PVC Pipe 140mm Ø, 3.5-8mm wall thickness	140 mm	
PVC Pipe 160mm Ø, 4-14.6mm wall thickness	160 mm	

Construction details:

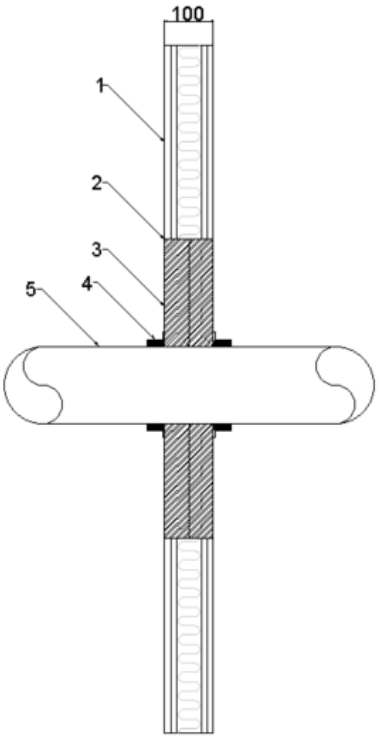
- Double layer of Stopseal Fire Batt (50mm) Plastic Pipes
- Max. Aperture size 730mm wide x 1200mm high
- Penetrations positioned as per option 1 or 2 below, 0 mm distance between services and 50 mm to edge of seal.
- Collars secured both faces of the substrate utilizing 80mm long steel pig tail screw through to Stopseal Fire Batt



Penetration Specification	PipeBloc PCP Ref	Classification
PVC Pipe 32mm Ø, 2.9mm wall thickness	32 mm	**EI 120 U/C**
PVC Pipe 40mm Ø, 2.9mm wall thickness	40 mm	
PVC Pipe 50mm Ø, 2.9mm wall thickness	50 mm	
PVC Pipe 55mm Ø, 2.9-4.4mm wall thickness	55 mm	
PVC Pipe 63mm Ø, 2.9-4.4mm wall thickness	63 mm	
PVC Pipe 75mm Ø, 2.8-6.7mm wall thickness	75 mm	
PVC Pipe 82mm Ø, 2.8-6.7mm wall thickness	82 mm	
PVC Pipe 90mm Ø, 2.7-10mm wall thickness	90 mm	
PVC Pipe 100mm Ø, 2.7-10mm wall thickness	100 mm	
PVC Pipe 110mm Ø, 2.7-10mm wall thickness	110 mm	
PVC Pipe 125mm Ø, 3.1mm wall thickness	125 mm	
PVC Pipe 140mm Ø, 3.5-8mm wall thickness	140 mm	
PVC Pipe 160mm Ø, 4-14.6mm wall thickness	160 mm	

Construction details:

- Double layer of Stopseal Fire Batt (50mm) Plastic Pipes
- Max. Aperture size 2600mm wide x 2600mm high
- Penetrations positioned as per option 1 or 2 below, 0 mm distance between services and 50 mm to edge of seal.
- Collars secured both faces of the substrate utilizing 80mm long steel pig tail screw through to Stopseal Fire Batt



Penetration Specification	PipeBloc PCP Ref	Classification
PVC Pipe 32mm Ø, 2.9mm wall thickness	32 mm	**EI 60 U/C**
PVC Pipe 40mm Ø, 2.9mm wall thickness	40 mm	
PVC Pipe 50mm Ø, 2.9mm wall thickness	50 mm	
PVC Pipe 55mm Ø, 2.9-4.4mm wall thickness	55 mm	
PVC Pipe 63mm Ø, 2.9-4.4mm wall thickness	63 mm	
PVC Pipe 75mm Ø, 2.8-6.7mm wall thickness	75 mm	
PVC Pipe 82mm Ø, 2.8-6.7mm wall thickness	82 mm	
PVC Pipe 90mm Ø, 2.7-10mm wall thickness	90 mm	
PVC Pipe 100mm Ø, 2.7-10mm wall thickness	100 mm	
PVC Pipe 110mm Ø, 2.7-10mm wall thickness	110 mm	
PVC Pipe 125mm Ø, 3.1mm wall thickness	125 mm	
PVC Pipe 140mm Ø, 3.5-8mm wall thickness	140 mm	
PVC Pipe 160mm Ø, 4-14.6mm wall thickness	160 mm	

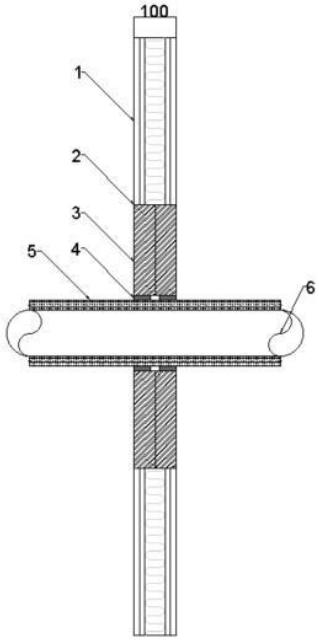
B10 FSi Stopseal Fire Batt Penetration Seal in Flexible or Rigid Walls min. 100 mm thick

B10.1 FSi Double Layer (50mm) Stopseal Fire Batt Penetration Seal

B 10.1.1 Insulated Plastic Pipes

Construction details:

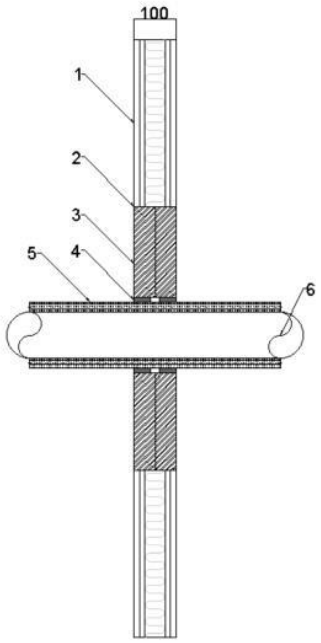
- Double layer of Stopseal Fire Batt (50mm) Plastic Pipes
- Max. Aperture size 730mm wide x 1200mm high
- Penetrations positioned as per option 1 or 2 below, 0 mm distance between services and 50 mm to edge of seal.
- PipeBloc EL / PipeBloc PWP secured internally within both faces of the Stopseal Fire Batt
- Equivalent elastomeric pipe insulation classified BL – s2, d0 or better to EN 13501-1
- Equivalent Phenolic foam pipe insulation classified BL – s1, d0 or better to EN 13501-1



Penetration Specification	PipeBloc EL/PipeBloc PWP Ref	Classification
PVC Pipe 40mm Ø, 1.9mm wall thickness. 25 mm thick Kingspan Kooltherm FM insulation (C/S)	3x2 mm	**E 120 U/C** **EI 90 U/C**
PVC Pipe 40mm Ø, 3mm wall thickness. 15 mm thick Kingspan Kooltherm FM insulation (C/S)	3x2 mm	
PVC Pipe 110mm Ø, 4.2mm wall thickness. 25 mm thick Kingspan Kooltherm FM insulation (C/S)	5x2 mm	**EI 120 U/C**
PVC Pipe 110mm Ø, 6.6mm wall thickness. 20 mm thick Kingspan Kooltherm FM insulation (C/S)	5x2 mm	**E 120 U/C** **EI 90 U/C**
PVC Pipe 40mm Ø, 1.9mm wall thickness. 32 mm thick Armacell Armflex Class O (C/S)	3x2 mm	**EI 120 U/C**
PVC Pipe 40mm Ø, 3mm wall thickness. 9 mm thick Armacell Armflex Class O (C/S)	3x2 mm	
PVC Pipe 110mm Ø, 4.2mm wall thickness. 32 mm thick Armacell Armflex Class O (C/S)	5x2 mm	**EI 120 U/C**
PVC Pipe 110mm Ø, 6.6mm wall thickness. 13mm thick Armacell Armflex Class O (C/S)	5x2 mm	**EI 120 U/C**

Construction details:

- Double layer of Stopseal Fire Batt (50mm) Plastic Pipes
- Max. Aperture size 2600mm wide x 2600mm high
- Penetrations positioned as per option 1 or 2 below, 0 mm distance between services and 50 mm to edge of seal.
- PipeBloc EL / PipeBloc PWP secured internally within both faces of the Stopseal Fire Batt
- Equivalent elastomeric pipe insulation classified BL – s2, d0 or better to EN 13501-1
- Equivalent Phenolic foam pipe insulation classified BL – s1, d0 or better to EN 13501-1



Penetration Specification	PipeBloc EL/PipeBloc PWP Ref	Classification
PVC Pipe 40mm Ø, 1.9mm wall thickness. 25 mm thick Kingspan Kooltherm FM insulation (C/S)	3x2 mm	**EI 60 U/C**
PVC Pipe 40mm Ø, 3mm wall thickness. 15 mm thick Kingspan Kooltherm FM insulation (C/S)	3x2 mm	
PVC Pipe 110mm Ø, 4.2mm wall thickness. 25 mm thick Kingspan Kooltherm FM insulation (C/S)	5x2 mm	
PVC Pipe 110mm Ø, 6.6mm wall thickness. 20 mm thick Kingspan Kooltherm FM insulation (C/S)	5x2 mm	
PVC Pipe 40mm Ø, 1.9mm wall thickness. 32 mm thick Armacell Armflex Class O (C/S)	3x2 mm	
PVC Pipe 40mm Ø, 3mm wall thickness. 9 mm thick Armacell Armflex Class O (C/S)	3x2 mm	
PVC Pipe 110mm Ø, 4.2mm wall thickness. 32 mm thick Armacell Armflex Class O (C/S)	5x2 mm	
PVC Pipe 110mm Ø, 6.6mm wall thickness. 13mm thick Armacell Armflex Class O (C/S)	5x2 mm	

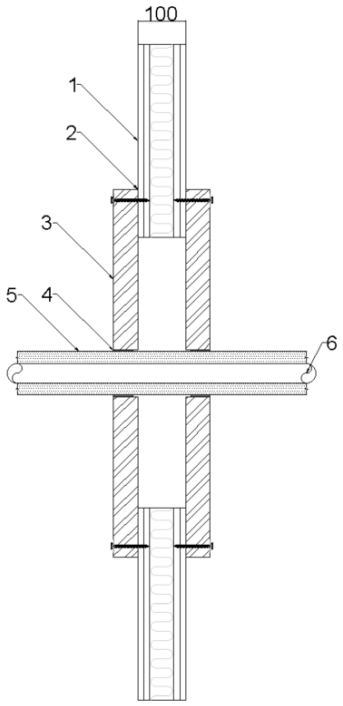
B11 FSi Stopseal Fire Batt Penetration Seal in Flexible or Rigid Walls min. 100 mm thick

B11.1 FSi Single Layer Pattress (50mm) Stopseal Fire Batt Penetration Seal B

11.1.1 Insulated Metallic Pipes

Construction details:

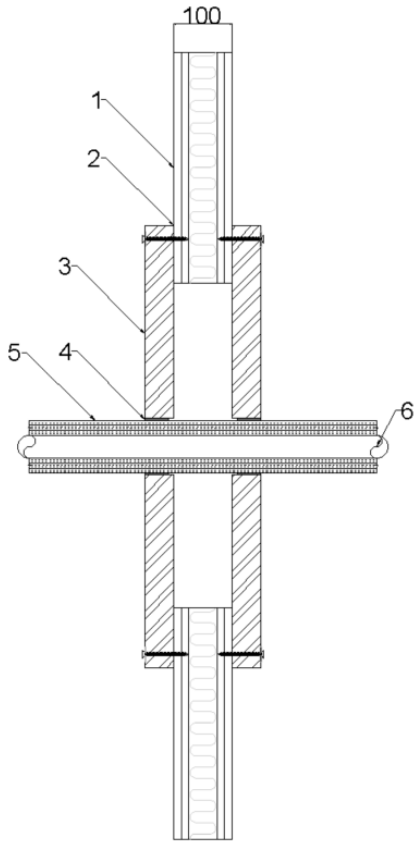
- Single layer of Stopseal Fire Batt (50mm) Single layer pattress
- Max. Aperture size 730mm wide x 1200mm high
- Pattress installation of Stopseal Coated Batt.
- The Batts are installed in horizontal rows and fixed in minimum two vertical edges. Overlap of batts to substrate min 100mm.
- Batts mechanically fixed to substrate with min 6mm x 80mm steel screws and steel retaining washer. Fixings installed at max 300mm centers.
- 2 x 2mm thick layers of PipeBloc EL / PipeBloc PWP installed both sides of the substrate within the pattress installation.
- Equivalent elastomeric pipe insulation classified BL – s2, d0 or better to EN 13501-1
- Equivalent Phenolic foam pipe insulation classified BL – s1, d0 or better to EN 13501-1



Service(s)	Classification
Steel or Copper Pipe 42-159mm Ø, 1.2mm – 14.2mm wall thickness. 13-25mm thick K Flex ST Insulation (C/S)	**E 120 C/U** **EI 60 C/U**
Steel or Copper Pipe 42mm Ø, 1.2 – 14.2mm wall thickness. 13-25mm thick K Flex ST insulation (C/S)	**E 120 C/U** **EI 90 C/U**
Steel or Copper Pipe 42-108mm Ø, 1.2 – 14.2mm wall thickness. 25 -40mm thick Kingspan Kooltherm FM insulation (C/S)	**E 120 C/U** **EI 60 C/U**
Steel or Copper Pipe 42mm Ø, 1.2–14.2mm wall thickness. 25 -40mm thick Kingspan Kooltherm FM insulation (C/S)	**E 120 C/U** **EI 90 C/U**
Steel or Copper Pipe 42mm Ø, 1.2–14.2mm wall thickness. 50mm thick glassfibre insulation min. 30kg/m^3 (C/S)	**E 120 C/U** **EI 90 C/U**

Construction details:

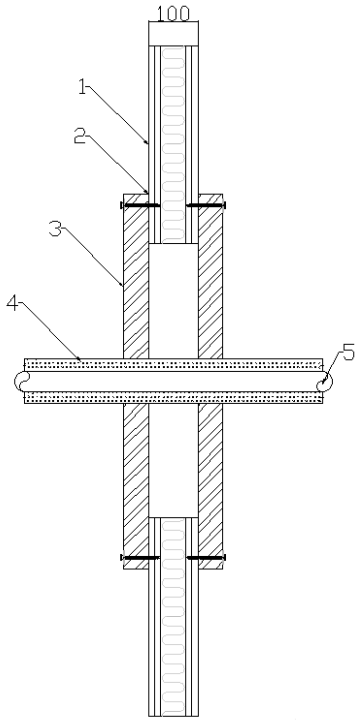
- Single layer of Stopseal Fire Batt (50mm) Single layer pattress
- Max. Aperture size 2600mm wide x 2600mm high
- Pattress installation of Stopseal Coated Batt.
- The Batts are installed in horizontal rows and fixed in minimum two vertical edges. Overlap of batts to substrate min 100mm.
- Batts mechanically fixed to substrate with min 6mm x 80mm steel screws and steel retaining washer. Fixings installed at max 300mm centers.
- 2 x 2mm thick layers of PipeBloc EL / PipeBloc PWP installed both sides of the substrate within the pattress installation.
- Equivalent elastomeric pipe insulation classified BL – s2, d0 or better to EN 13501-1
- Equivalent Phenolic foam pipe insulation classified BL – s1, d0 or better to EN 13501-1



Service(s)	Classification
Steel or Copper Pipe 42-159mm Ø, 1.2mm – 14.2mm wall thickness. 13-25mm thick K Flex ST Insulation (C/S)	**EI 60 C/U**
Steel or Copper Pipe 42mm Ø, 1.2 – 14.2mm wall thickness. 13-25mm thick K Flex ST insulation (C/S)	
Steel or Copper Pipe 42-108mm Ø, 1.2 – 14.2mm wall thickness. 25 -40mm thick Kingspan Kooltherm FM insulation (C/S)	
Steel or Copper Pipe 42mm Ø, 1.2–14.2mm wall thickness. 25 -40mm thick Kingspan Kooltherm FM insulation (C/S)	
Steel or Copper Pipe 42mm Ø, 1.2–14.2mm wall thickness. 50mm thick glassfibre insulation min. 30kg/m^3 (C/S)	

Construction details:

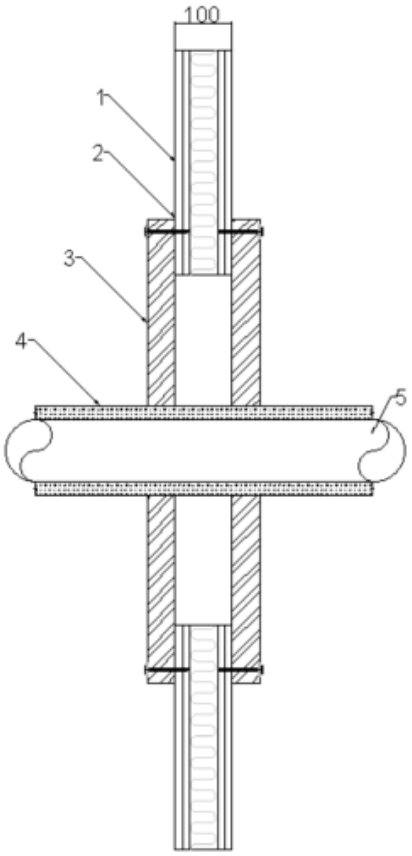
- Single layer of Stopseal Fire Batt (50mm) Single layer pattress
- Max. Aperture size 730mm wide x 1200mm high
- pattress installation of Stopseal Coated Batt.
- The Batts are installed in horizontal rows and fixed in minimum two vertical edges. Overlap of batts to substrate min 100mm.
- Batts mechanically fixed to substrate with min 6mm x 80mm steel screws and steel retaining washer. Fixings installed at max 300mm centers.



Service(s)	Classification
Steel or Copper Pipe 42-159mm Ø, 2mm – 14.2mm 25 mm thick foil faced glassfibre insulation min 30 kg/m^3	**E 120 C/U** **EI 45 C/U**
Steel or Copper Pipe 42mm Ø, 1mm – 14.2mm wall thickness. 25mm thick foil faced glassfibre insulation min. 30kg/m^3 (C/S)	**E 120 C/U** **EI 60 C/U**

Construction details:

- Single layer of Stopseal Fire Batt (50mm) Single layer pattress
- Max. Aperture size 2600mm wide x 2600mm high
- pattress installation of Stopseal Coated Batt.
- The Batts are installed in horizontal rows and fixed in minimum two vertical edges. Overlap of batts to substrate min 100mm.
- Batts mechanically fixed to substrate with min 6mm x 80mm steel screws and steel retaining washer. Fixings installed at max 300mm centers.



Service(s)	Classification
Steel or Copper Pipe 42-159mm Ø, 2mm – 14.2mm 25 mm thick foil faced glassfibre insulation min 30 kg/m^3	**E 60 C/U** **EI 45 C/U**
Steel or Copper Pipe 42mm Ø, 1mm – 14.2mm wall thickness. 25mm thick foil faced glassfibre insulation min. 30kg/m^3 (C/S)	**E 60 C/U** **EI 60 C/U**

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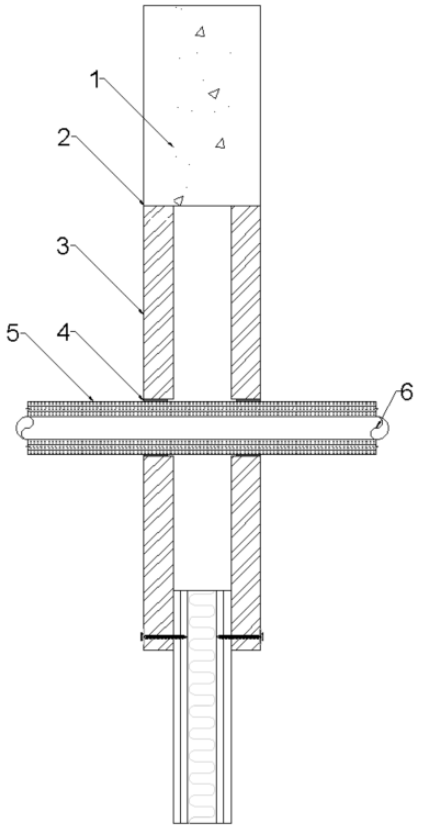
Construction details:

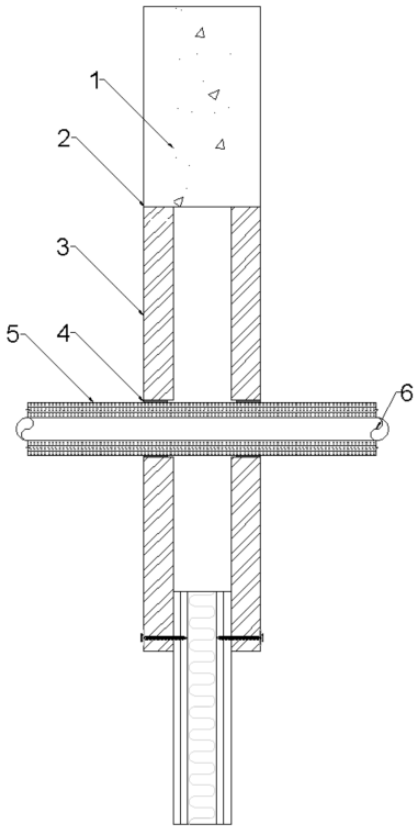
- Single layer of Stopseal Fire Batt (50mm) Single layer pattress
- Max. Aperture size 730mm wide x 1200mm high
- 30 mm overlap pattress installed flush to soffit.
- The Batts are installed in horizontal rows and fixed in minimum two vertical edges. Overlap of batts to substrate min 100mm.
- Batts mechanically fixed to substrate with min 6mm x 80mm steel screws and steel retaining washer. Fixings installed at max 300mm centers.
- 2x 2mm thick layers of PipeBloc EL / PipeBloc PWP installed both sides of the substrate within the pattress installation.
- Equivalent Phenolic foam pipe insulation classified BL – s1, d0 or better to EN 13501-1



Service(s)	Classification
Steel or Copper Pipe 42mm Ø, 1.0mm – 14.2mm wall thickness. 50mm thick Kingspan (C/S 400mm)	**E 60 C/U** **EI 45 C/U**

Construction details:

- Single layer of Stopseal Fire Batt (50mm) Single layer pattress
- Max. Aperture size 2600mm wide x 2600mm high
- 30 mm overlap pattress installed flush to soffit.
- The Batts are installed in horizontal rows and fixed in minimum two vertical edges. Overlap of batts to substrate min 100mm.
- Batts mechanically fixed to substrate with min 6mm x 80mm steel screws and steel retaining washer. Fixings installed at max 300mm centers.
- 2x 2mm thick layers of PipeBloc EL / PipeBloc PWP installed both sides of the substrate within the pattress installation.
- Equivalent Phenolic foam pipe insulation classified BL – s1, d0 or better to EN 13501-1



Service(s)	Classification
Steel or Copper Pipe 42mm Ø, 1.0mm – 14.2mm wall thickness. 50mm thick Kingspan (C/S 400mm)	**EI 60 C/U**

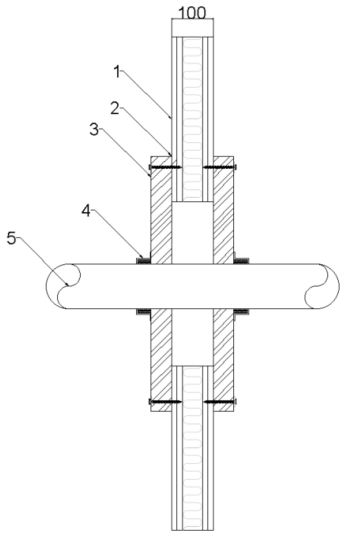
B12 FSi Stopseal Fire Batt Penetration Seal in Flexible or Rigid Walls min. 100 mm thick

B12.1 FSi Single Layer Pattress (50mm) Stopseal Fire Batt Penetration Seal

B 12.1.1 Plastic Pipes

Construction details:

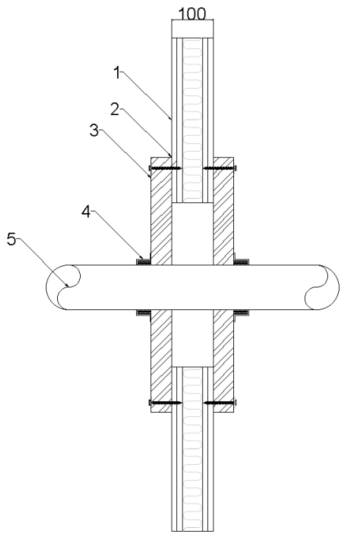
- Single layer of Stopseal Fire Batt (50mm) Plastic Pipes
- Max. Aperture size 2600mm wide x 2600mm high
- Penetrations positioned as per option 1 or 2 below, 0mm distance between services and 50mm to edge of seal.
- pattress installation of Stopseal Coated Batt. The Batts are installed in horizontal rows and fixed in minimum two vertical edges. Overlap of batts to substrate min 100mm. Batts mechanically fixed to substrate with min 6mm x 80mm steel screws and steel retaining washer. Fixings installed at max 300mm centers.
- Collars secured both faces of the substrate utilizing 80mm long pig tail screw through to the Stopseal Fire Batt



Penetration Specification	PipeBloc PCP Ref	Classification
PVC Pipe 32mm Ø, 1.8mm wall thickness	32 mm	**EI 60 U/C**
PVC Pipe 40mm Ø, 1.8mm wall thickness	40 mm	
PVC Pipe 50mm Ø, 1.8mm wall thickness	50 mm	
PVC Pipe 55mm Ø, 1.8-2.3mm wall thickness	55 mm	
PVC Pipe 63mm Ø, 2.3-3mm wall thickness	63 mm	
PVC Pipe 75mm Ø, 3.1-4.8mm wall thickness	75 mm	
PVC Pipe 82mm Ø, 3.1-4.8mm wall thickness	82 mm	
PVC Pipe 90mm Ø, 4.2-7.4mm wall thickness	90 mm	
PVC Pipe 100mm Ø, 4.2-7.4mm wall thickness	100 mm	
PVC Pipe 110mm Ø, 4.2-7.4mm wall thickness	110 mm	
PVC Pipe 125mm Ø, 6mm wall thickness	125 mm	
PVC Pipe 140mm Ø, 6.1-7.5mm wall thickness	140 mm	
PVC Pipe 140mm Ø, 6.2-9.5mm wall thickness	160 mm	

Construction details:

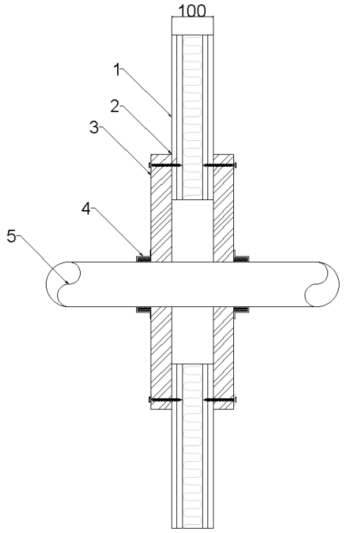
- Single layer of Stopseal Fire Batt (50mm) Plastic Pipes
- Max. Aperture size 730mm wide x 1200mm high
- Penetrations positioned as per option 1 or 2 below, 0mm distance between services and 50mm to edge of seal.
- pattress installation of Stopseal Coated Batt. The Batts are installed in horizontal rows and fixed in minimum two vertical edges. Overlap of batts to substrate min 100mm. Batts mechanically fixed to substrate with min 6mm x 80mm steel screws and steel retaining washer. Fixings installed at max 300mm centers.
- Collars secured both faces of the substrate utilizing 80mm long pig tail screw through to the Stopseal Fire Batt



Penetration Specification	PipeBloc PCP Ref	Classification
PVC Pipe 32mm Ø, 1.8mm wall thickness	32 mm	**EI 120 U/C**
PVC Pipe 40mm Ø, 1.8mm wall thickness	40 mm	
PVC Pipe 50mm Ø, 1.8mm wall thickness	50 mm	
PVC Pipe 55mm Ø, 1.8-2.3mm wall thickness	55 mm	
PVC Pipe 63mm Ø, 2.3-3mm wall thickness	63 mm	
PVC Pipe 75mm Ø, 3.1-4.8mm wall thickness	75 mm	
PVC Pipe 82mm Ø, 3.1-4.8mm wall thickness	82 mm	
PVC Pipe 90mm Ø, 4.2-7.4mm wall thickness	90 mm	
PVC Pipe 100mm Ø, 4.2-7.4mm wall thickness	100 mm	
PVC Pipe 110mm Ø, 4.2-7.4mm wall thickness	110 mm	
PVC Pipe 125mm Ø, 6mm wall thickness	125 mm	
PVC Pipe 140mm Ø, 6.1-7.5mm wall thickness	140 mm	
PVC Pipe 140mm Ø, 6.2-9.5mm wall thickness	160 mm	

Construction details:

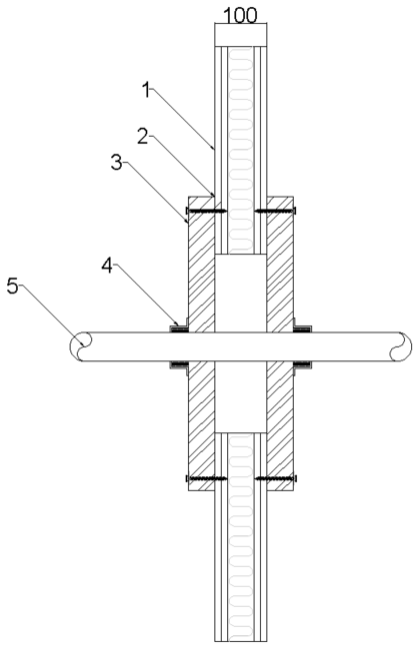
- Single layer of Stopseal Fire Batt (50mm) Plastic Pipes
- Max. Aperture size 730mm wide x 1200mm high
- Penetrations positioned as per option 1 or 2 below, 0mm distance between services and 50mm to edge of seal.
- pattress installation of Stopseal Coated Batt. The Batts are installed in horizontal rows and fixed in minimum two vertical edges. Overlap of batts to substrate min 100mm. Batts mechanically fixed to substrate with min 6mm x 80mm steel screws and steel retaining washer. Fixings installed at max 300mm centers.
- Collars secured both faces of the substrate utilizing 80mm long pig tail screw through to the Stopseal Fire Batt



Penetration Specification	PipeBloc PCP Ref	Classification
PVC Pipe 32mm Ø, 2.9mm wall thickness	32 mm	**EI 120 U/C**
PVC Pipe 40mm Ø, 2.9mm wall thickness	40 mm	
PVC Pipe 50mm Ø, 2.9mm wall thickness	50 mm	
PVC Pipe 55mm Ø, 2.9-4.4mm wall thickness	55 mm	
PVC Pipe 63mm Ø, 2.9-4.4mm wall thickness	63 mm	
PVC Pipe 75mm Ø, 2.8-6.7mm wall thickness	75 mm	
PVC Pipe 82mm Ø, 2.8-6.7mm wall thickness	82 mm	
PVC Pipe 90mm Ø, 2.7-10mm wall thickness	90 mm	
PVC Pipe 100mm Ø, 2.7-10mm wall thickness	100 mm	
PVC Pipe 110mm Ø, 2.7-10mm wall thickness	110 mm	
PVC Pipe 125mm Ø, 3.1mm wall thickness	125 mm	
PVC Pipe 140mm Ø, 3.5-8mm wall thickness	140 mm	
PVC Pipe 140mm Ø, 4-14.6mm wall thickness	160 mm	

Construction details:

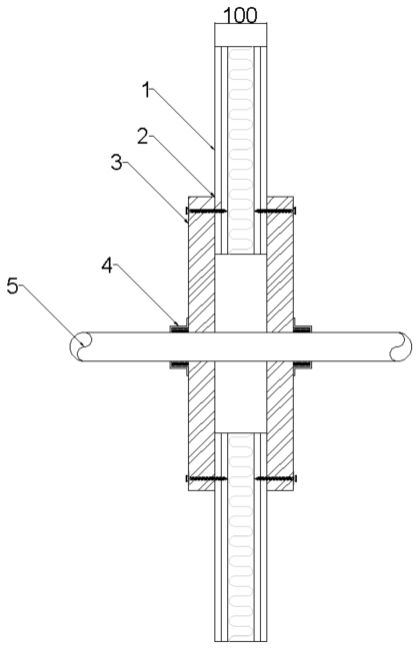
- Single layer of Stopseal Fire Batt (50mm) Plastic Pipes
- Max. Aperture size 2600mm wide x 2600mm high
- Penetrations positioned as per option 1 or 2 below, 0mm distance between services and 50mm to edge of seal.
- pattress installation of Stopseal Coated Batt. The Batts are installed in horizontal rows and fixed in minimum two vertical edges. Overlap of batts to substrate min 100mm. Batts mechanically fixed to substrate with min 6mm x 80mm steel screws and steel retaining washer. Fixings installed at max 300mm centers.
- Collars secured both faces of the substrate utilizing 80mm long pig tail screw through to the Stopseal Fire Batt



Penetration Specification	PipeBloc PCP Ref	Classification
PVC Pipe 32mm Ø, 2.9mm wall thickness	32 mm	**EI 60 U/C**
PVC Pipe 40mm Ø, 2.9mm wall thickness	40 mm	
PVC Pipe 50mm Ø, 2.9mm wall thickness	50 mm	
PVC Pipe 55mm Ø, 2.9-4.4mm wall thickness	55 mm	
PVC Pipe 63mm Ø, 2.9-4.4mm wall thickness	63 mm	
PVC Pipe 75mm Ø, 2.8-6.7mm wall thickness	75 mm	
PVC Pipe 82mm Ø, 2.8-6.7mm wall thickness	82 mm	
PVC Pipe 90mm Ø, 2.7-10mm wall thickness	90 mm	
PVC Pipe 100mm Ø, 2.7-10mm wall thickness	100 mm	
PVC Pipe 110mm Ø, 2.7-10mm wall thickness	110 mm	
PVC Pipe 125mm Ø, 3.1mm wall thickness	125 mm	
PVC Pipe 140mm Ø, 3.5-8mm wall thickness	140 mm	
PVC Pipe 140mm Ø, 4-14.6mm wall thickness	160 mm	

Construction details:

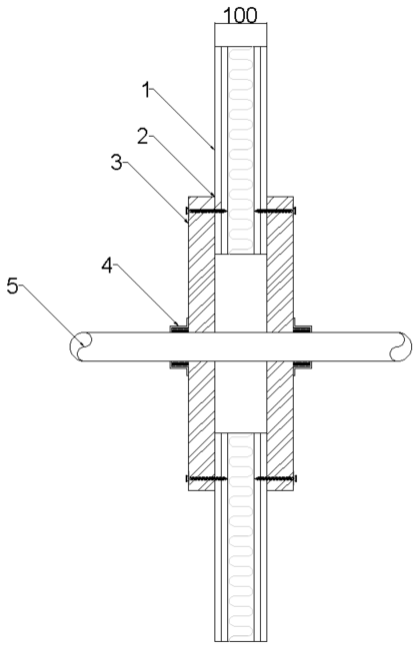
- Single layer of Stopseal Fire Batt (50mm) Plastic Pipes
- Max. Aperture size 730mm wide x 1200mm high
- Penetrations positioned as per option 1 or 2 below, 0mm distance between services and 50mm to edge of seal.
- pattress installation of Stopseal Coated Batt. The Batts are installed in horizontal rows and fixed in minimum two vertical edges. Overlap of batts to substrate min 100mm. Batts mechanically fixed to substrate with min 6mm x 80mm steel screws and steel retaining washer. Fixings installed at max 300mm centers.
- Collars secured both faces of the substrate utilizing 80mm long pig tail screw through to the Stopseal Fire Batt



Penetration Specification	PipeBloc PCP Ref	Classification
PVC Pipe 32mm Ø, 2.9mm wall thickness	32 mm	**EI 120 U/C**
PVC Pipe 40mm Ø, 2.9mm wall thickness	40 mm	
PVC Pipe 50mm Ø, 2.9mm wall thickness	50 mm	
PVC Pipe 55mm Ø, 2.9-4.4mm wall thickness	55 mm	
PVC Pipe 63mm Ø, 2.9-4.4mm wall thickness	63 mm	
PVC Pipe 75mm Ø, 2.8-6.7mm wall thickness	75 mm	
PVC Pipe 82mm Ø, 2.8-6.7mm wall thickness	82 mm	
PVC Pipe 90mm Ø, 2.7-10mm wall thickness	90 mm	
PVC Pipe 100mm Ø, 2.7-10mm wall thickness	100 mm	
PVC Pipe 110mm Ø, 2.7-10mm wall thickness	110 mm	
PVC Pipe 125mm Ø, 3.1mm wall thickness	125 mm	
PVC Pipe 140mm Ø, 3.9-5.8mm wall thickness	140 mm	
PVC Pipe 140mm Ø, 4.9-9.5mm wall thickness	160 mm	

Construction details:

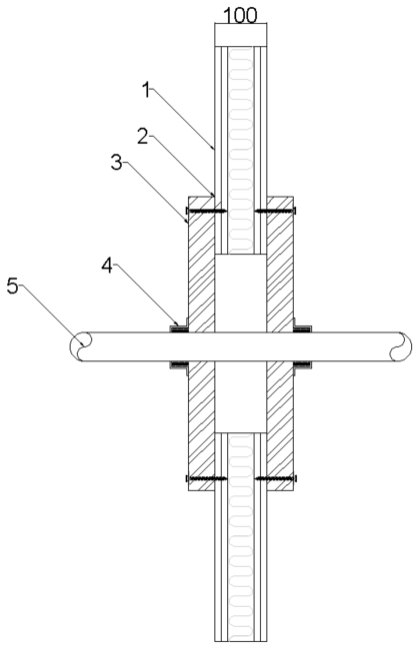
- Single layer of Stopseal Fire Batt (50mm) Plastic Pipes
- Max. Aperture size 2600mm wide x 2600mm high
- Penetrations positioned as per option 1 or 2 below, 0mm distance between services and 50mm to edge of seal.
- pattress installation of Stopseal Coated Batt. The Batts are installed in horizontal rows and fixed in minimum two vertical edges. Overlap of batts to substrate min 100mm. Batts mechanically fixed to substrate with min 6mm x 80mm steel screws and steel retaining washer. Fixings installed at max 300mm centers.
- Collars secured both faces of the substrate utilizing 80mm long pig tail screw through to the Stopseal Fire Batt



Penetration Specification	PipeBloc PCP Ref	Classification
PVC Pipe 32mm Ø, 2.9mm wall thickness	32 mm	EI 60 U/C
PVC Pipe 40mm Ø, 2.9mm wall thickness	40 mm	
PVC Pipe 50mm Ø, 2.9mm wall thickness	50 mm	
PVC Pipe 55mm Ø, 2.9-4.4mm wall thickness	55 mm	
PVC Pipe 63mm Ø, 2.9-4.4mm wall thickness	63 mm	
PVC Pipe 75mm Ø, 2.8-6.7mm wall thickness	75 mm	
PVC Pipe 82mm Ø, 2.8-6.7mm wall thickness	82 mm	
PVC Pipe 90mm Ø, 2.7-10mm wall thickness	90 mm	
PVC Pipe 100mm Ø, 2.7-10mm wall thickness	100 mm	
PVC Pipe 110mm Ø, 2.7-10mm wall thickness	110 mm	
PVC Pipe 125mm Ø, 3.1mm wall thickness	125 mm	
PVC Pipe 140mm Ø, 3.9-5.8mm wall thickness	140 mm	
PVC Pipe 140mm Ø, 4.9-9.5mm wall thickness	160 mm	

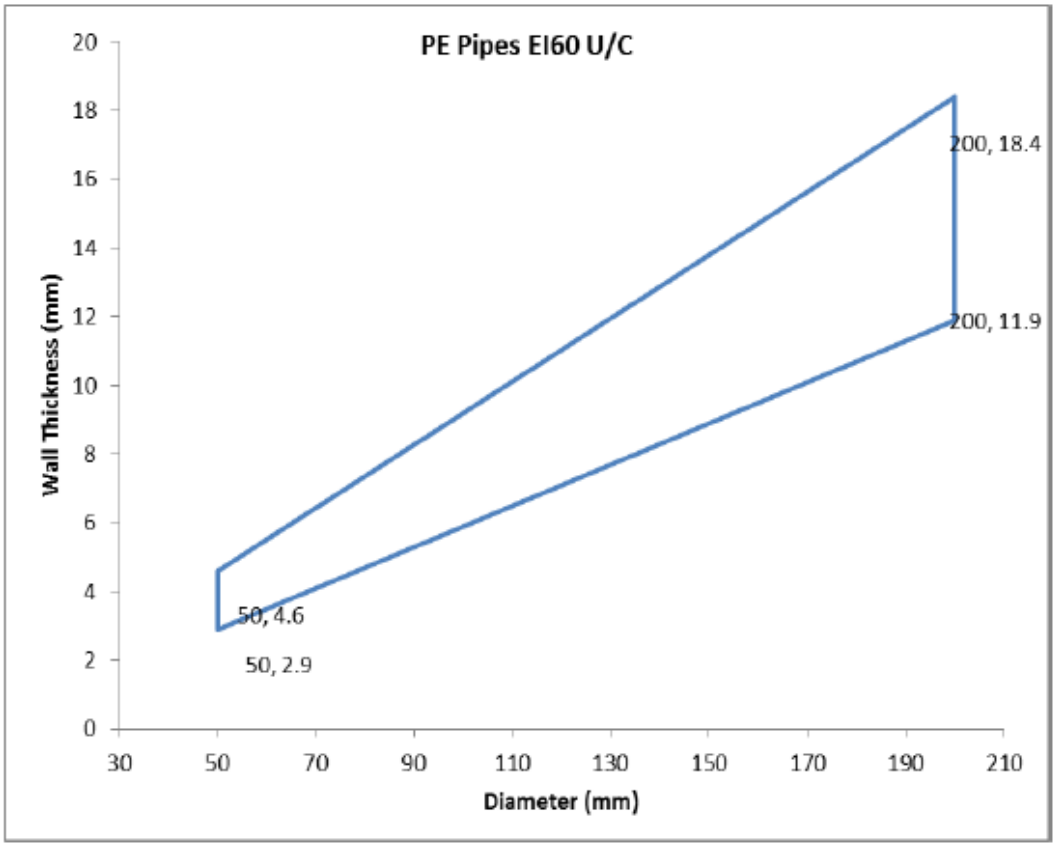
Construction details:

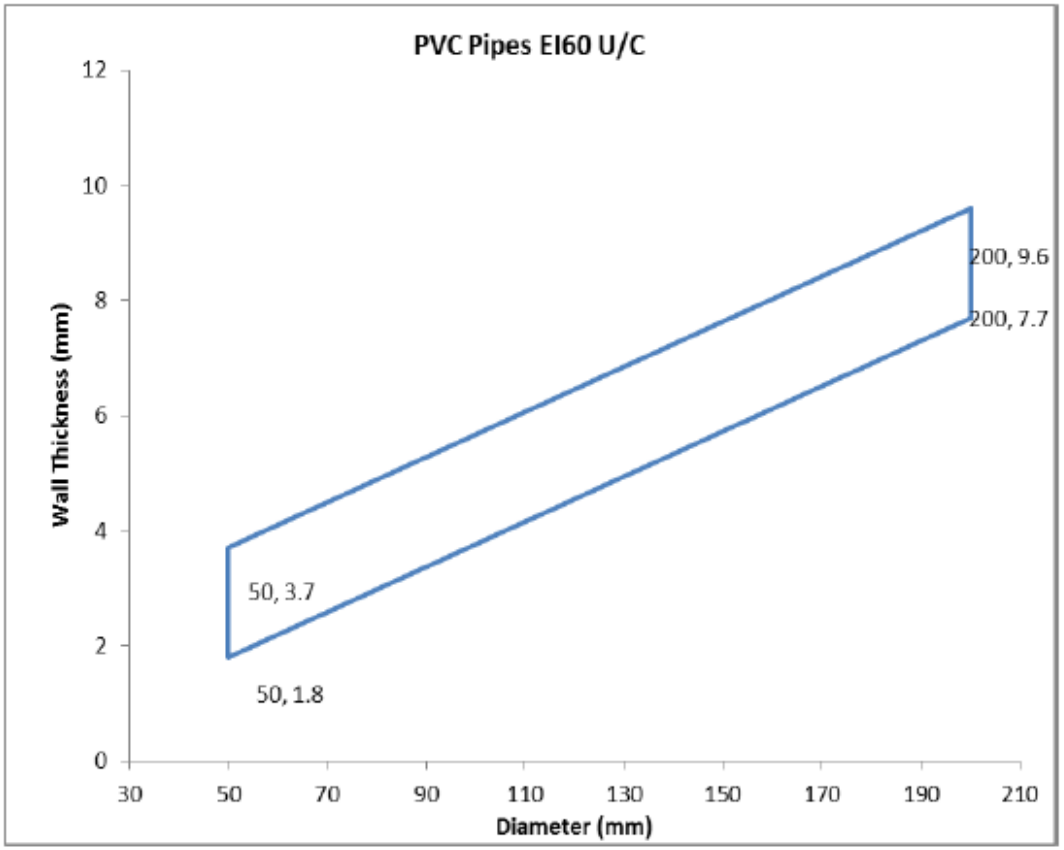
- Single layer of Stopseal Fire Batt (50mm) Plastic Pipes
- Max. Aperture size 2600mm wide x 2600mm high
- Penetrations positioned as per option 1 or 2 below, 0mm distance between services and 50mm to edge of seal.
- pattress installation of Stopseal Coated Batt. The Batts are installed in horizontal rows and fixed in minimum two vertical edges. Overlap of batts to substrate min 100mm. Batts mechanically fixed to substrate with min 6mm x 80mm steel screws and steel retaining washer. Fixings installed at max 300mm centers.
- Collars secured both faces of the substrate utilizing 80mm long pig tail screw through to the Stopseal Fire Batt

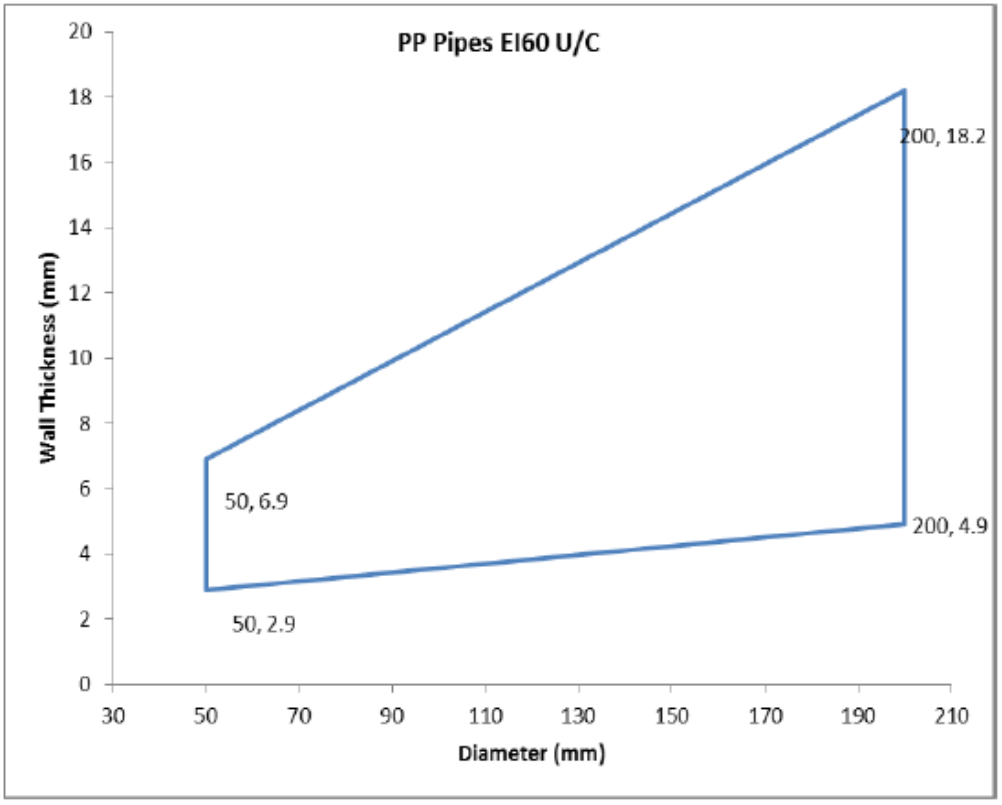


Scope and classification as below

Intumescent Thickness	
Pipe Diameter	**Intumescent Material**
ø 32 mm - ø 50 mm	40 mm (W) x 2 mm (T)
ø 51 mm - ø 82 mm	40 mm (W) x 4 mm (T)
ø 83 mm - ø 115 mm	40 mm (W) x 6 mm (T)
ø 116 mm - ø 160 mm	40 mm (W) x 8 mm (T)
ø 161 mm - ø 200 mm	40 mm (W) x 10 mm (T)
ø 201 mm - ø 250 mm	40 mm (W) x 12 mm (T)

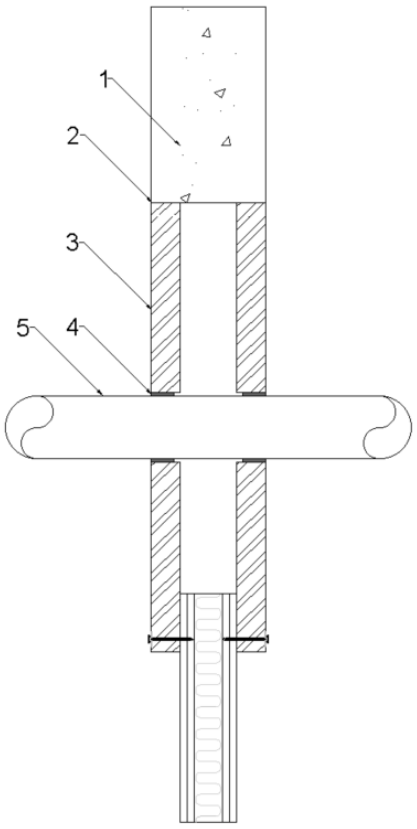

PE Pipes EI60 U/C
Wall Thickness (mm)
Diameter (mm)
200, 18.4
200, 11.9
50, 4.6
50, 2.9
0
2
4
6
8
10
12
14
16
18
20
30
50
70
90
110
130
150
170
190
210


PVC Pipes EI60 U/C
Wall Thickness (mm)
Diameter (mm)
200, 9.6
200, 7.7
50, 3.7
50, 1.8
0
2
4
6
8
10
12
30
50
70
90
110
130
150
170
190
210


PP Pipes EI60 U/C
Wall Thickness (mm)
Diameter (mm)
0
2
4
6
8
10
12
14
16
18
20
30
50
70
90
110
130
150
170
190
210
50, 6.9
50, 2.9
200, 18.2
200, 4.9

Construction details:

- Single layer of Stopseal Fire Batt (50mm) Plastic Pipes
- Max. Aperture size 2600mm wide x 2600mm high
- 30 mm overlap pattress installed flush to soffit.
- Penetrations positioned as per option 1 or 2 below, 0mm distance between services and 50mm to edge of seal.
- pattress installation of Stopseal Coated Batt. The Batts are installed in horizontal rows and fixed in minimum two vertical edges. Overlap of batts to substrate min 100mm. Batts mechanically fixed to substrate with min 6mm x 80mm steel screws and steel retaining washer. Fixings installed at max 300mm centers.
- Collars secured both faces of the substrate utilizing 80mm long pig tail screw through to the Stopseal Fire Batt



Service(s)	Classification
PVC Pipe 110mm Ø, 4.2mm wall thickness	**EI 60 C/U**

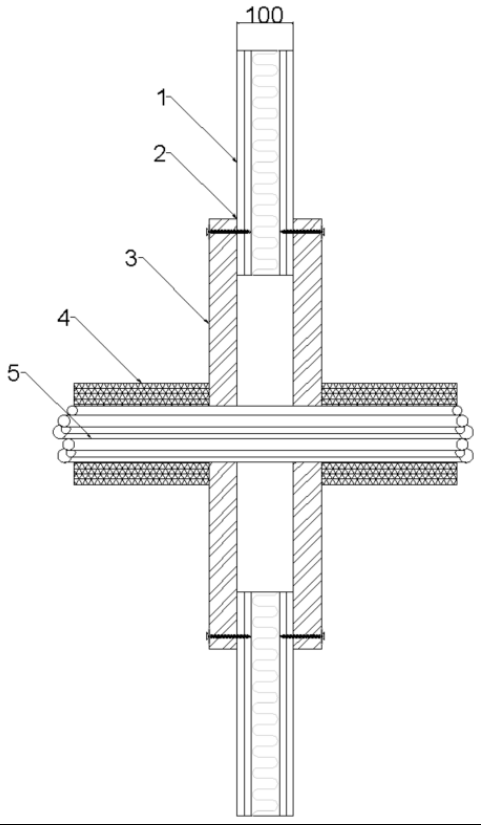
B13 FSi Stopseal Fire Batt Penetration Seal in Flexible or Rigid Walls min. 150 mm thick

B13.1 FSi Single Layer Pattress (50mm) Stopseal Fire Batt Penetration Seal

B 13.1.1 Electrical Cables and Conduits

Construction details:

- Single layer of Stopseal Fire Batt (50mm) Single layer pattress
- Max. Aperture size 750mm wide x 1200mm high
- pattress installation of Stopseal Coated Batt.
- The Batts are installed in horizontal rows and fixed in minimum two vertical edges. Overlap of batts to substrate min 100mm.
- Batts mechanically fixed to substrate with min 6mm x 80mm steel screws and steel retaining washer. Fixings installed at max 300mm centers.
- Cables and cable trays wrapped with a single layer of 40mm thick, 40kg/m^3 Stone wool (L/I 300mm)



Service(s)	Classification
Electrical cables up to 80mm dia	**EI 120**
Cable Tray and Ladders	
100 mm diameter bundle telecommunication cable type "F"	
Unsheathed electrical cables up to 24mm dia	
Steel or cupper conduits up to 16 mm dia	
Plastic Conduits up to 16 mm dia	

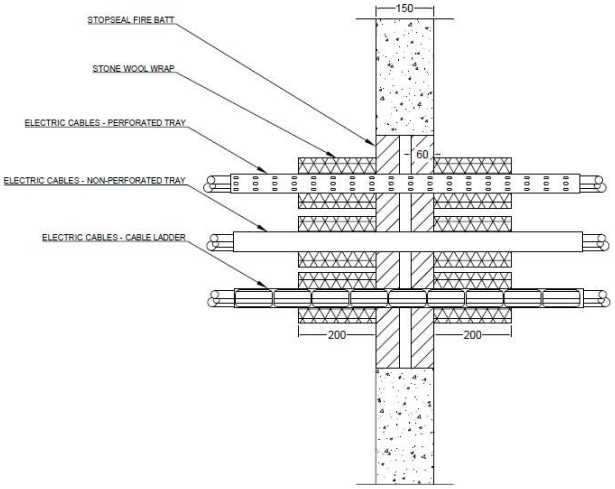
B14 FSi Stopseal Fire Batt Penetration Seal in Rigid Walls min. 150 mm thick

B14.1 FSi Double Layer (50mm) Stopseal Fire Batt Penetration Seal

B14.1.1 Cable Penetrations

Construction details:

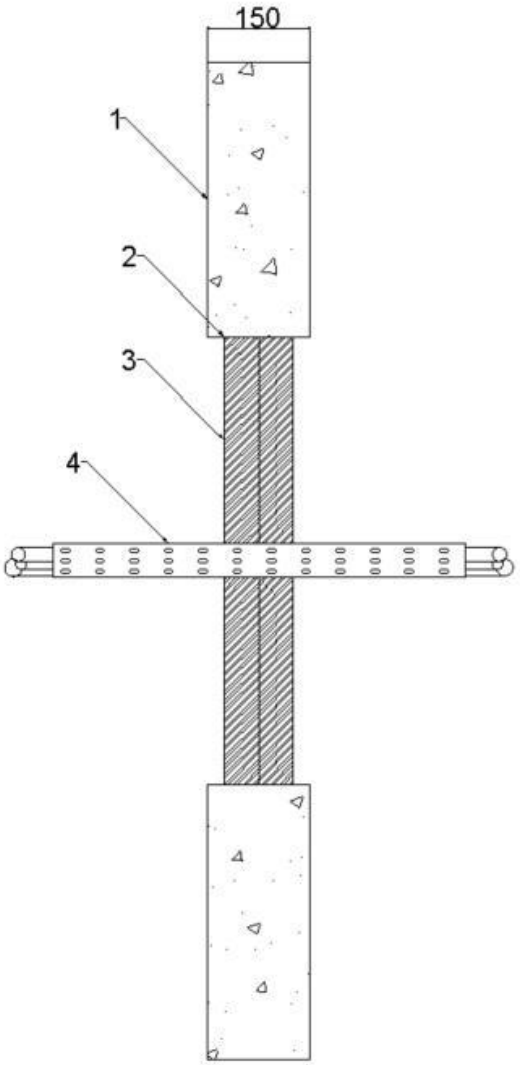
- Double layer of Stopseal Fire Batt (50mm) installed internally within the wall.
- Max. Aperture size 700mm wide x 1100mm high
- Cables and cable trays wrapped with Stone Wool Insulation 45mm thick, 40Kg/m3 (L/I 200mm)
- First service support 400mm from both faces of the substrate



Service(s)	Classification
Electrical cables up to 21mm dia	**EI 120**
Electrical cables 22mm – 80mm dia	**E120** **EI90**
Cable Trays and Ladders	**EI 120**
100 mm diameter bundle telecommunication cable type "F"	**EI 120**
Unsheathed electrical cables up to 24mm dia	**EI 120**

Construction details:

- Double layer of Stopseal Fire Batt (50mm) installed internally within the wall.
- Max. Aperture size 750mm wide x 1100mm high
- First service support 250mm from both faces of the substrate



Service(s)	Classification
Electrical cables up to 21mm dia	**E120** **EI 90**
Cable Tray	**EI 60**

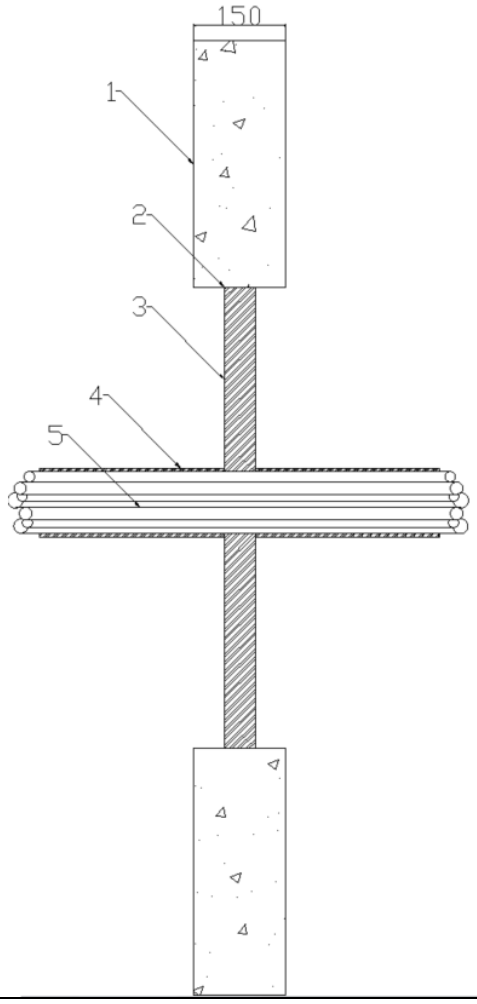
B15 FSi Stopseal Fire Batt Penetration Seal in Flexible or Rigid Walls min. 150 mm thick

B15.1 FSi single Layer (50mm) Stopseal Fire Batt Penetration

Seal B 15.1.1 Cable Penetrations

Construction details:

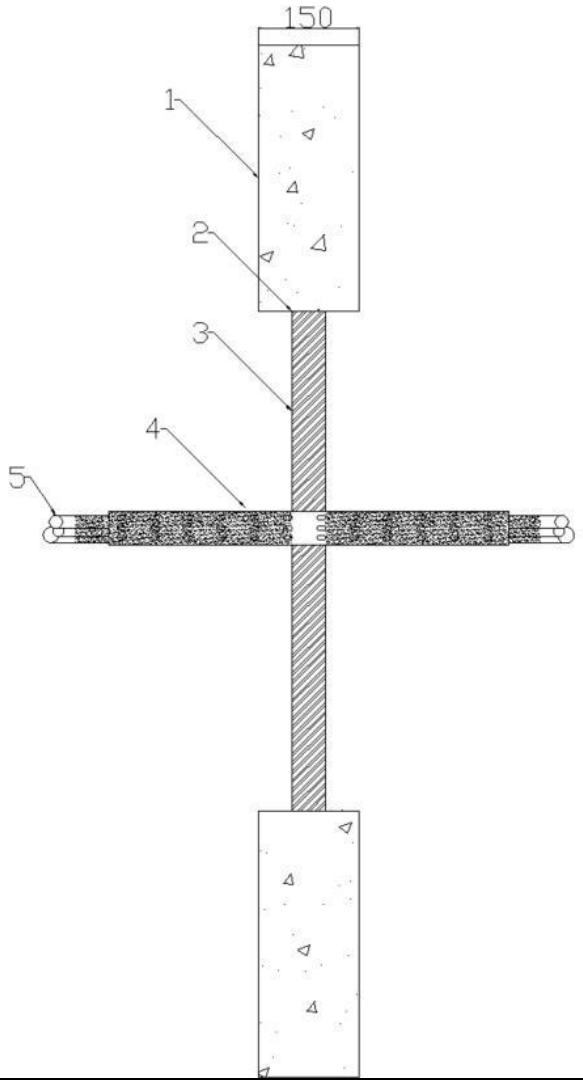
- Single layer of Stopseal Fire Batt (50mm) installed internally within the wall.
- Max. Aperture size 750mm wide x 1100mm high
- Cables and cable trays wrapped with a single layer of 6mm thick FSi Thermal Defense Wrap (L/I 300mm)



Service(s)	Classification
Electrical cables up to 80mm dia	**EI 60**
Cable Tray and Ladders	
100 mm diameter bundle telecommunication cable type "F"	
Unsheathed electrical cables up to 24mm dia	

Construction details:

- Single layer of Stopseal Fire Batt (50mm) installed internally within the wall.
- Max. Aperture size 750mm wide x 1100mm high
- All cables coated with 2mm DFT PST Coating 300mm along the cables both sides of the seal



Service(s)	Classification
500 mm perforated cable tray	**EI 30**
Electrical cables up to 21mm dia	**EI 45**
1 off "C1"Cable	
1 off "C2"Cable	
1 off "C3"Cable	

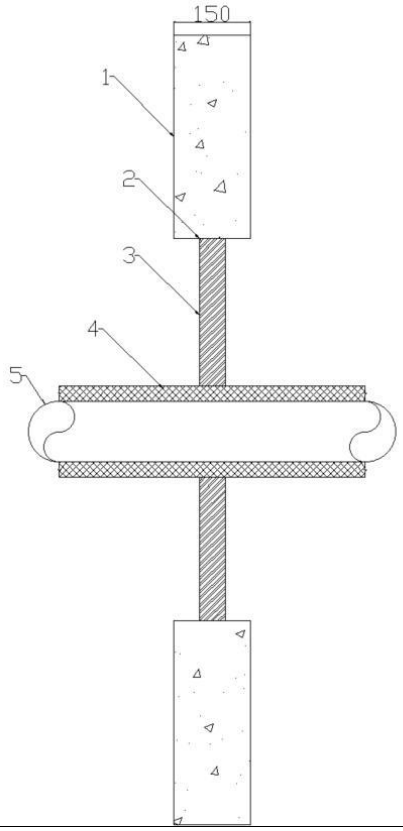
B16 FSi Stopseal Fire Batt Penetration Seal in Flexible or Rigid Walls min. 150 mm thick

B16.1 FSi Single Layer (50mm) Stopseal Fire Batt Penetration

Seal B 16.1.1 Insulated Metallic Pipes

Construction details:

- Single layer of Stopseal Fire Batt (50mm) installed internally within the wall.
- Max. Aperture size 750mm wide x 1100mm high



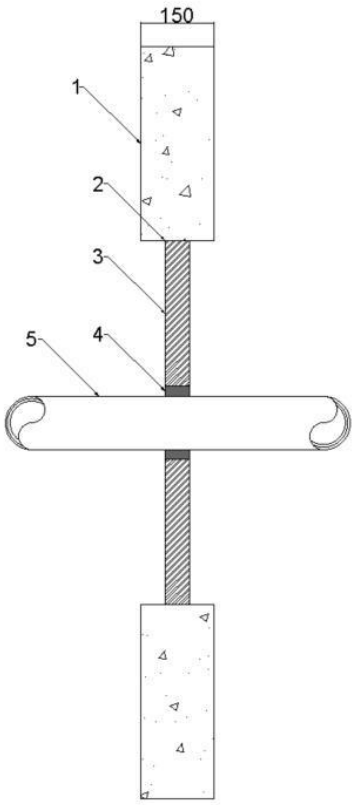
Service(s)	Classification
Steel or Copper Pipe 108mm Ø, 1.5mm – 14.2mm Wall Thickness. (C/S) 40mm stone wool insulation (min 140Kg/m^3)	**E60 C/U EI45 C/U**
Steel or Copper Pipe 42mm Ø, 1.2mm – 14.2mm wall thickness. (L/I 300mm) 40mm stone wool insulation (min 40Kg/m3)	**EI45 C/U**
Steel or Copper Pipe 42mm – 159mm Ø, 2mm – 14.2mm wall thickness. (L/I 300mm) 40mm stone wool insulation (min 40Kg/m^3)	**E45 C/U EI20 C/U**
Steel or Copper Pipe 42mm – 159mm Ø, 2mm – 14.2mm wall thickness. (C/I) 40mm stone wool insulation (min 40Kg/m^3)	**E45 C/U EI30 C/U**

B17 FSi Stopseal Fire Batt Penetration Seal in Flexible or Rigid Walls min. 150 mm thick

B17.1 FSi Single Layer (50mm) Stopseal Fire Batt Penetration Seal
B 17.1.1 Plastic

Construction details:

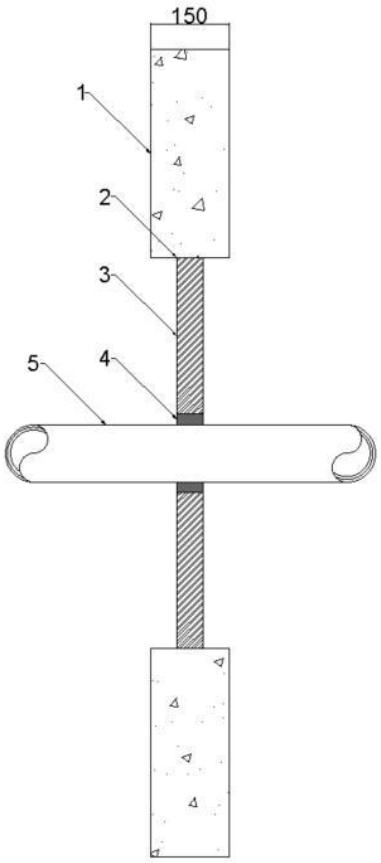
- Single layer of Stopseal Fire Batt (50mm) installed internally within the wall.
- Max. Aperture size 750mm wide x 1100mm high
- Pyropro HPE 20mm annulus full 50mm depth of the Stopseal Coated Batt



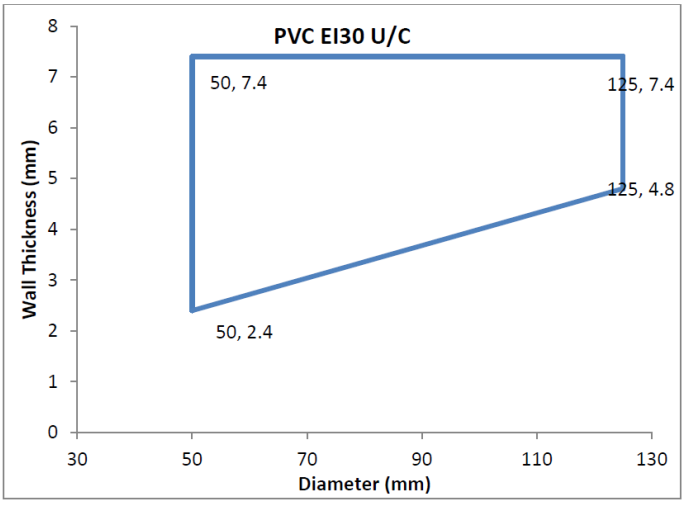
Service(s)	Classification
Uponor MLC (Multi-Layer Composite) Pipe 40mm ø 4mm wall thickness	**E 45 U/C** **EI 30 U/C**
Uponor MLC (Multi-Layer Composite) Pipe 50mm ø 4.5mm wall thickness	
Uponor MLC (Multi-Layer Composite) Pipe 63mm ø 6mm wall thickness	
Uponor MLC (Multi-Layer Composite) Pipe 75mm ø 7.5mm wall thickness	
Uponor MLC (Multi-Layer Composite) Pipe 90mm ø 8.5mm wall thickness	
Uponor MLC (Multi-Layer Composite) Pipe 110mm ø 10mm wall thickness	

Construction details:

- Single layer of Stopseal Fire Batt (50mm) installed internally within the wall.
- Max. Aperture size 750mm wide x 1100mm high
- Pyropro HPE 20mm annulus full 50mm depth of the Stopseal Coated Batt



Service(s)	Classification
PVC Pipe 50mm ø 2.4mm wall thickness	**EI 45 U/C**
Also scope as per graphs below	

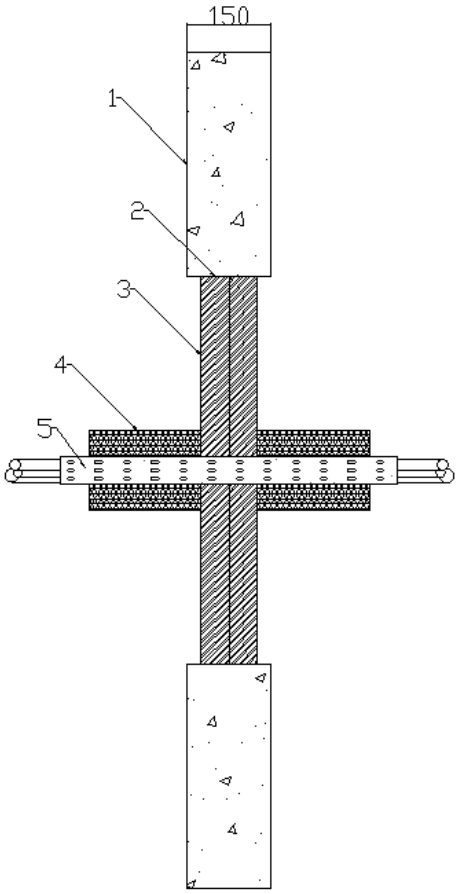


B18 FSi Stopseal Fire Batt Penetration Seal in Flexible or Rigid Walls min. 150 mm thick

B18.1 FSi Double Layer (50mm) Stopseal Fire Batt Penetration Seal
B 18.1.1 Electrical Cables

Construction details:

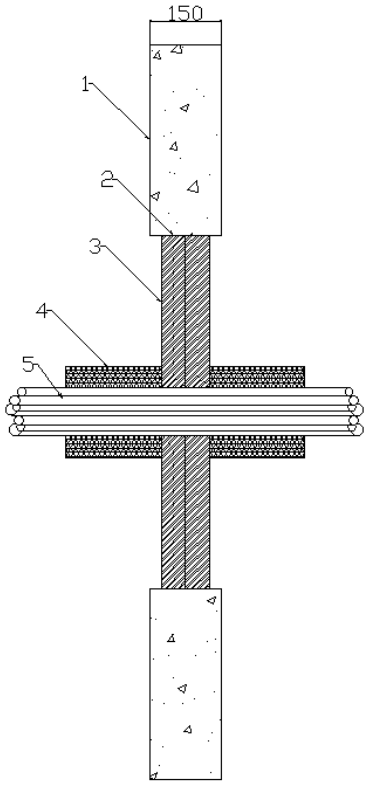
- Double layer of Stopseal Fire Batt (50mm) installed internally within the wall.
- Max. Aperture size 730mm wide x 1200mm high
- Cables and cable trays wrapped with Stone Wool Insulation 45mm thick, 40Kg/m^3 (L/I 200mm)



Service(s)	Classification
Electrical cables up to 21mm dia	**EI 120**
Electrical cables 22mm – 80mm dia	**E 120** **EI 90**
Cable Trays and Ladders	**EI 120**
100 mm diameter bundle telecommunication cable type "F"	**EI 120**
Unsheathed electrical cables up to 24mm dia	**EI 120**

Construction details:

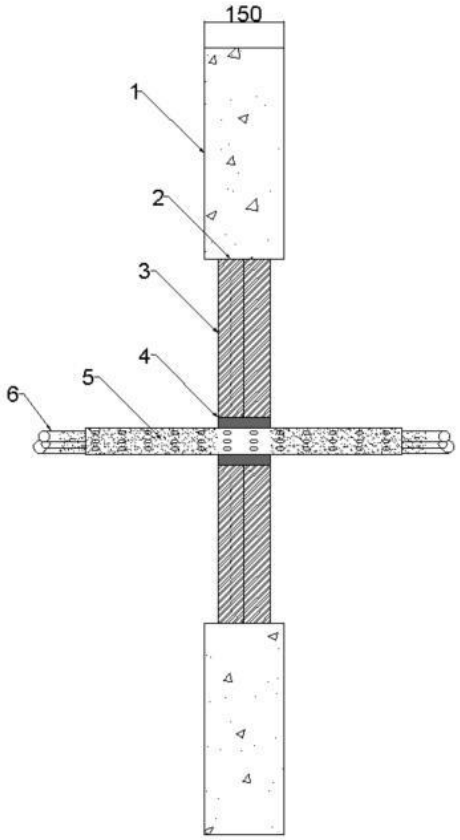
- Double layer of Stopseal Fire Batt (50mm) installed internally within the wall.
- Max. Aperture size 2600mm wide x 2600mm high
- Cables and cable trays wrapped with Stone Wool Insulation 45mm thick, 40Kg/m^3 (L/I 200mm)



Service(s)	Classification
Electrical cables up to 21mm dia	**EI 60**
Electrical cables 22mm – 80mm dia	
Cable Trays and Ladders	
100 mm diameter bundle telecommunication cable type "F"	
Unsheathed electrical cables up to 24mm dia	

Construction details:

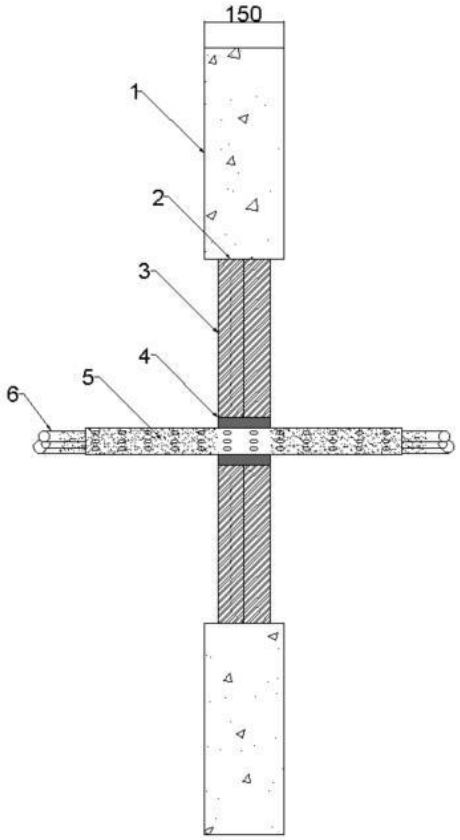
- Double layer of Stopseal Fire Batt (50mm) installed internally within the wall.
- Max. Aperture size 750mm wide x 1100mm high
- All cables coated with 2mm DFT PST Coating 300mm along the cables both sides of the seal.
- Pyropro HPE 20mm annulus full 50mm depth of the Stopseal Coated Batt



Service(s)	Classification
500 mm perforated cable tray	**EI 120**
Electrical cables up to 21mm dia	
1 off "C1" Cable	
1 off "C2" Cable	**E 120** **EI 90**
1 off "C3" Cable	**EI 120**

Construction details:

- Double layer of Stopseal Fire Batt (50mm) installed internally within the wall.
- Max. Aperture size 2600mm wide x 2600mm high
- All cables coated with 2mm DFT PST Coating 300mm along the cables both sides of the seal.
- Pyropro HPE 20mm annulus full 50mm depth of the Stopseal Coated Batt



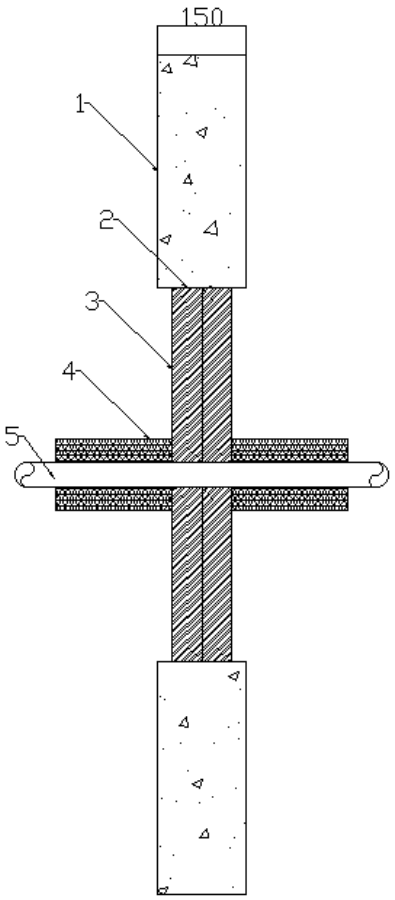
Service(s)	Classification
500 mm perforated cable tray	**EI 60**
Electrical cables up to 21mm dia	
1 off "C1"Cable	
1 off "C2"Cable	
1 off "C3"Cable	

B19 FSi Stopseal Fire Batt Penetration Seal in Flexible or Rigid Walls min. 150 mm thick

B19.1 FSi Double Layer (50mm) Stopseal Fire Batt Penetration Seal
B 19.1.1 Insulated Metallic Pipes

Construction details:

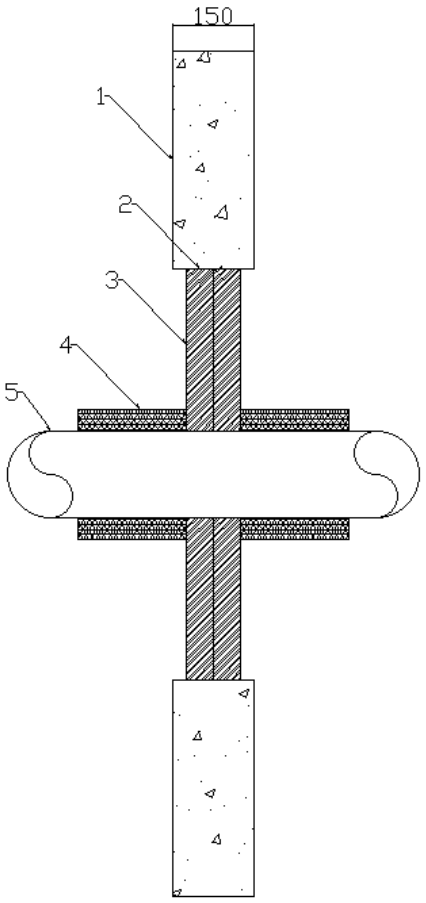
- Double layer of Stopseal Fire Batt (50mm) installed internally within the wall.
- Max. Aperture size 730mm wide x 1200mm high
- Cables and cable trays wrapped with Stone Wool Insulation 45mm thick, 40Kg/m^3 (L/I 200mm)



Service(s)	Classification
Steel or Copper Pipe 42mm Ø, 1.2mm – 14.2mm wall thickness. (L/I 300mm) 40mm stone wool insulation (min 40Kg/m^3)	**E 120 C/U** **EI 60 C/U**
Steel or Copper Pipe 42mm – 159mm Ø, 2mm – 14.2mm wall thickness. (L/I 300mm) 40mm stone wool insulation (min 40Kg/m^3)	**E 120 C/U** **EI 30 C/U**

Construction details:

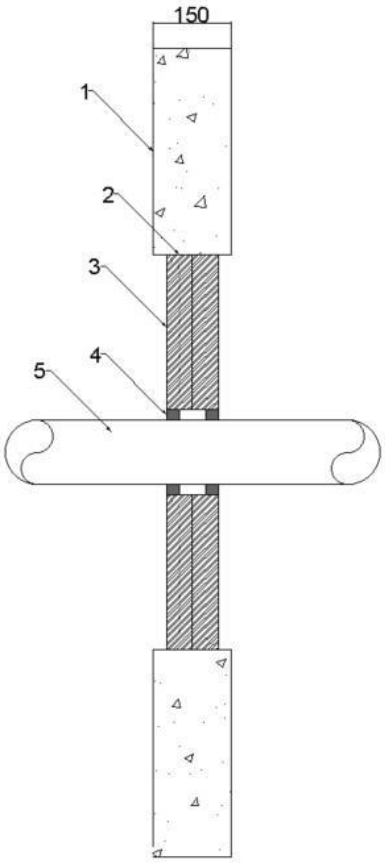
- Double layer of Stopseal Fire Batt (50mm) installed internally within the wall.
- Max. Aperture size 2600mm wide x 2600mm high
- Cables and cable trays wrapped with Stone Wool Insulation 45mm thick, 40Kg/m^3 (L/I 200mm)



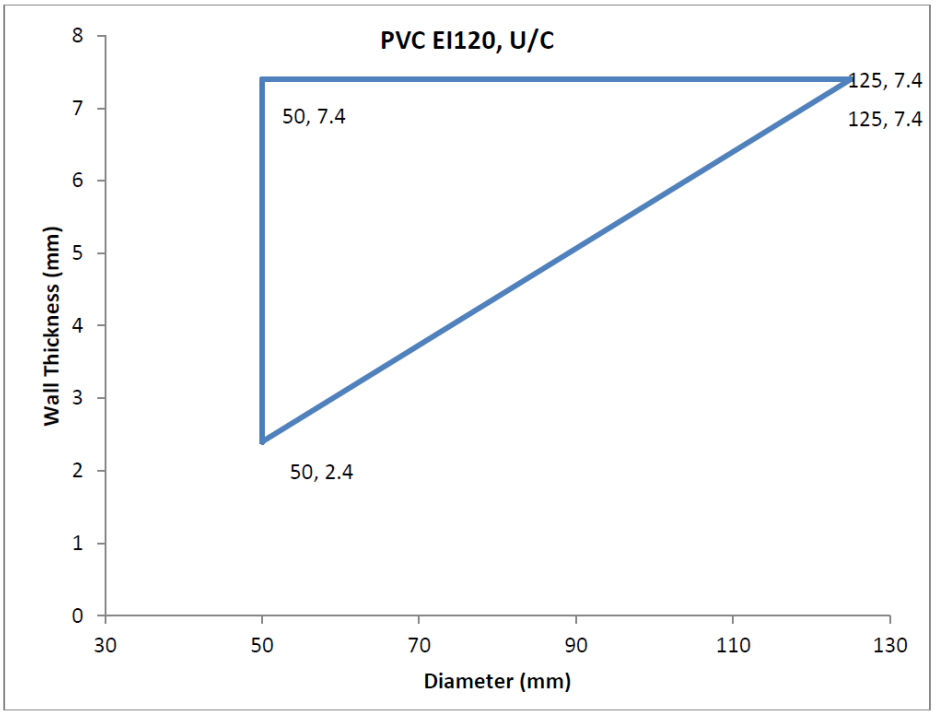
Service(s)	Classification
Steel or Copper Pipe 42mm Ø, 1.2mm – 14.2mm wall thickness. (L/I 300mm) 40mm stone wool insulation (min 40Kg/m^3)	**EI 60 C/U**
Steel or Copper Pipe 42mm – 159mm Ø, 2mm – 14.2mm wall thickness. (L/I 300mm) 40mm stone wool insulation (min 40Kg/m^3)	**E 60 C/U** **EI 30 C/U**

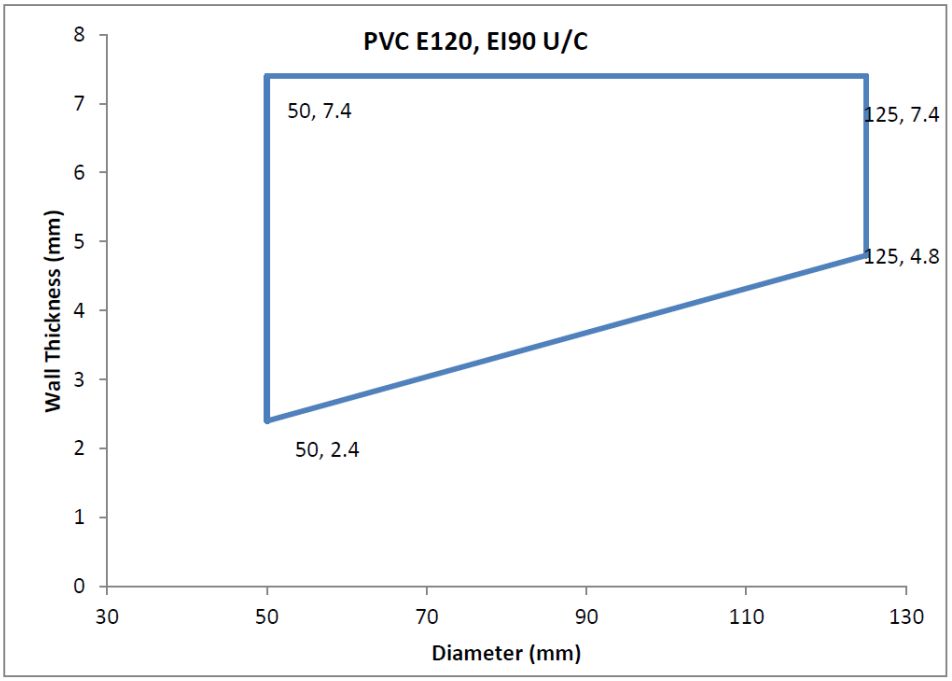
Construction details:

- Double layer of Stopseal Fire Batt (50mm) installed internally within the wall.
- Max. Aperture size 750mm wide x 1100mm high
- Cables and cable trays wrapped with Stone Wool Insulation 45mm thick, 40Kg/m^3 (L/I 200mm)



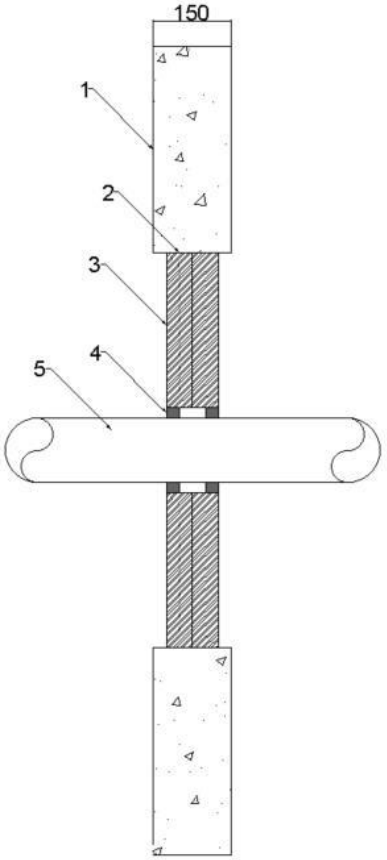
Service(s)	Pyropro HPE	Classification
Pipe diameters as below	20 mm annulus, 25 mm deep both faces of the Stopseal Coated Batt	See graphs below


PVC EI120, U/C
Wall Thickness (mm)
Diameter (mm)
50, 7.4
125, 7.4
125, 7.4
50, 2.4
0
1
2
3
4
5
6
7
8
30
50
70
90
110
130

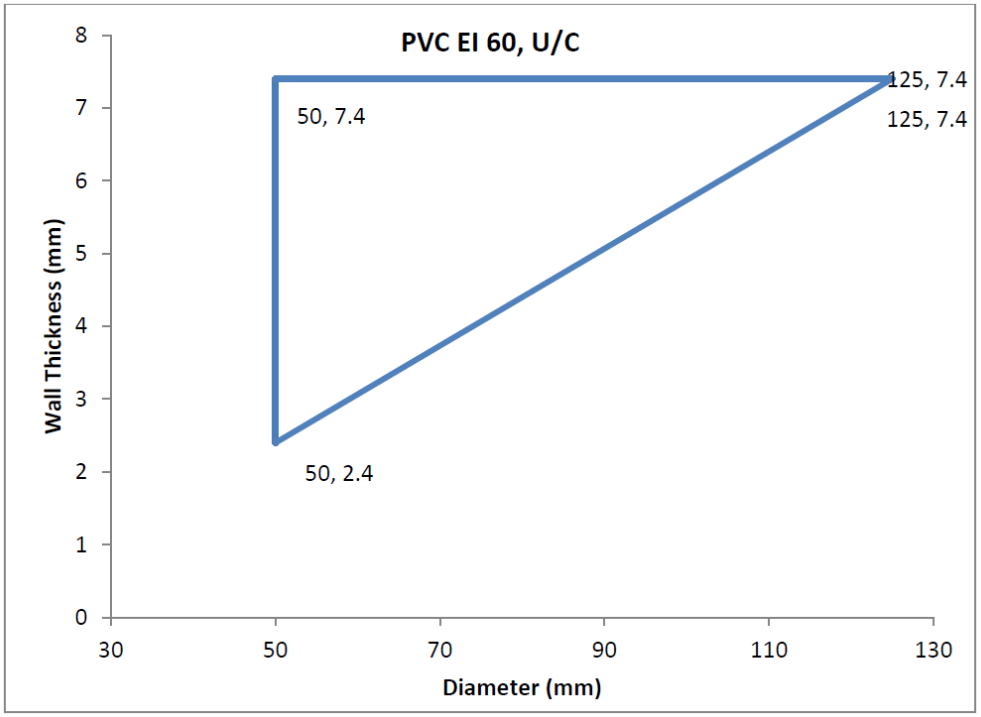

PVC E120, EI90 U/C
Wall Thickness (mm)
Diameter (mm)
50, 7.4
125, 7.4
125, 4.8
50, 2.4
0
1
2
3
4
5
6
7
8
30
50
70
90
110
130

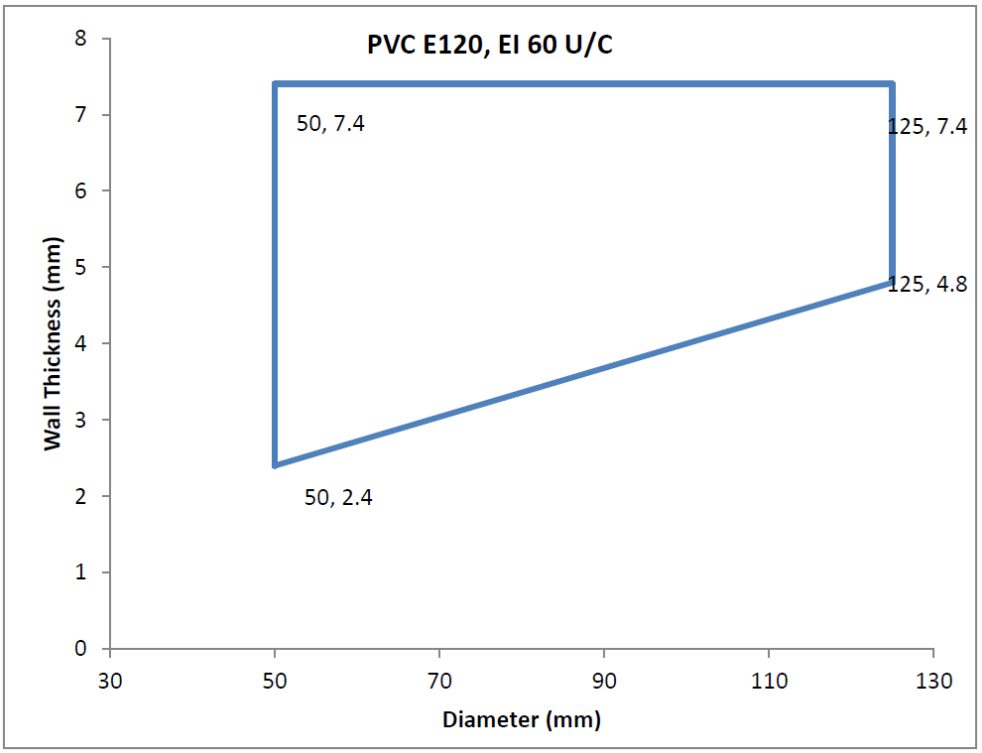
Construction details:

- Double layer of Stopseal Fire Batt (50mm) installed internally within the wall.
- Max. Aperture size 2600mm wide x 2600mm high
- Cables and cable trays wrapped with Stone Wool Insulation 45mm thick, 40Kg/m^3 (L/I 200mm)



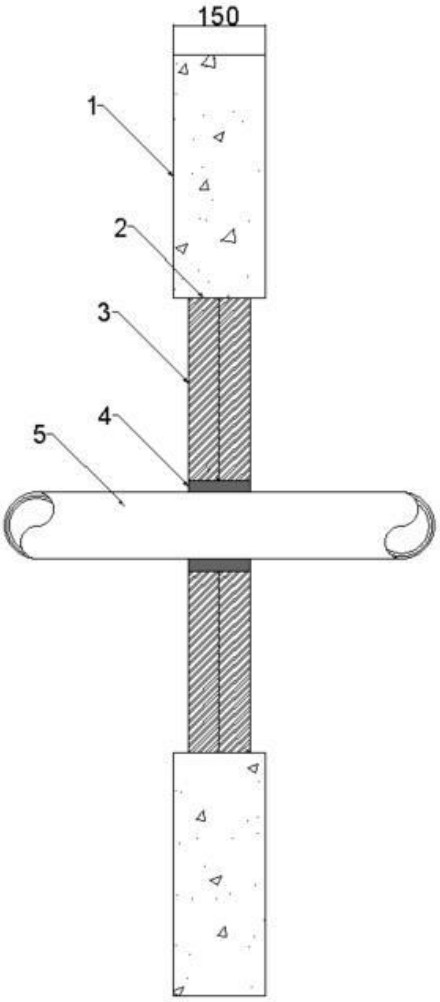
Service(s)	Pyropro HPE	Classification
Pipe diameters as below	20 mm annulus, 25 mm deep both faces of the Stopseal Coated Batt	EI 60


PVC EI 60, U/C
Wall Thickness (mm)
Diameter (mm)
50, 7.4
125, 7.4
125, 7.4
50, 2.4
0
1
2
3
4
5
6
7
8
30
50
70
90
110
130


PVC E120, EI 60 U/C
Wall Thickness (mm)
Diameter (mm)
50, 7.4
125, 7.4
125, 4.8
50, 2.4
0
1
2
3
4
5
6
7
8
30
50
70
90
110
130

Construction details:

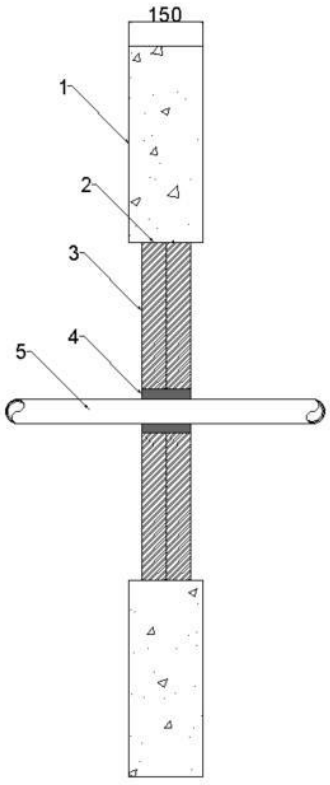
- Double layer of Stopseal Fire Batt (50mm) installed internally within the wall.
- Max. Aperture size 750mm wide x 1100mm high
- Pyropro HPE 20mm annulus full 50mm depth of the Stopseal Coated Batt



Service(s)	Classification
Uponor MLC (Multi-Layer Composite) Pipe 40mm ø 4mm wall thickness	**EI 120 U/C**
Uponor MLC (Multi-Layer Composite) Pipe 50mm ø 4.5mm wall thickness	
Uponor MLC (Multi-Layer Composite) Pipe 63mm ø 6mm wall thickness	
Uponor MLC (Multi-Layer Composite) Pipe 75mm ø 7.5mm wall thickness	
Uponor MLC (Multi-Layer Composite) Pipe 90mm ø 8.5mm wall thickness	
Uponor MLC (Multi-Layer Composite) Pipe 110mm ø 10mm wall thickness	

Construction details:

- Double layer of Stopseal Fire Batt (50mm) installed internally within the wall.
- Max. Aperture size 2600mm wide x 2600mm high
- Pyropro HPE 20mm annulus full 50mm depth of the Stopseal Coated Batt



Service(s)	Classification
Uponor MLC (Multi-Layer Composite) Pipe 40mm ø 4mm wall thickness	**EI 60 U/C**
Uponor MLC (Multi-Layer Composite) Pipe 50mm ø 4.5mm wall thickness	
Uponor MLC (Multi-Layer Composite) Pipe 63mm ø 6mm wall thickness	
Uponor MLC (Multi-Layer Composite) Pipe 75mm ø 7.5mm wall thickness	
Uponor MLC (Multi-Layer Composite) Pipe 90mm ø 8.5mm wall thickness	
Uponor MLC (Multi-Layer Composite) Pipe 110mm ø 10mm wall thickness	

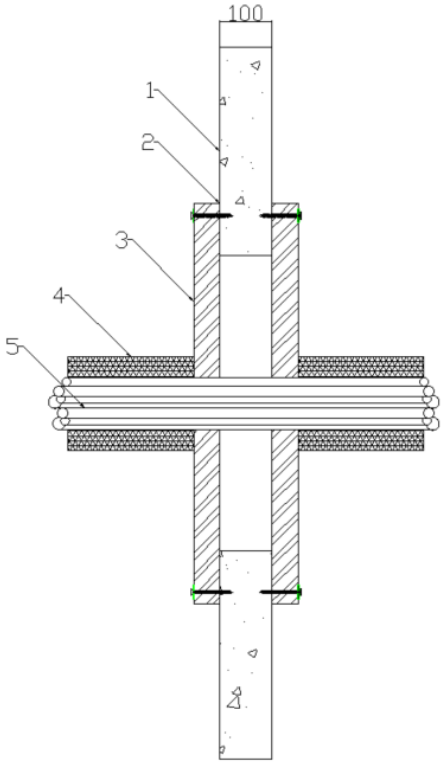
B20 FSi Stopseal Fire Batt Single layer Pattress

B20.1 FSi Single Layer (50mm) Stopseal Fire Batt Penetration Seal B

20.1.1 Electrical Cables and Conduits

Construction details:

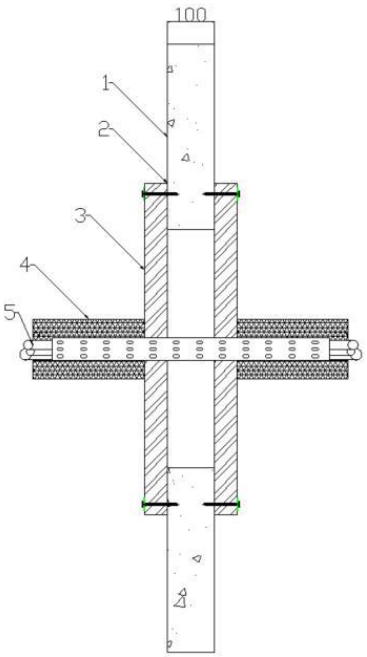
- Single layer of Stopseal Fire Batt (50mm) installed internally within the wall.
- Max. Aperture size 750mm wide x 1200mm high
- Pattress installation of Stopseal Coated Batt. The Batts are installed in horizontal rows and fixed in minimum two vertical edges. Overlap of batts to substrate min 100mm. Batts mechanically fixed to substrate with min 6mm x 80mm steel screws and steel retaining washer. Fixings installed at max 300mm centers.
- Cables and cable trays wrapped with a single layer of 40mm thick, 40kg/m^3 Stone wool (L/I 300mm)



Service(s)	Classification
Electrical cables up to 80mm dia	**EI 120**
Cable Trays and Ladders	
100 mm diameter bundle telecommunication cable type "F"	
Unsheathed electrical cables up to 24mm dia	
Steel or Copper Conduits up to 16mm	
Plastic conduits up to 16mm	

Construction details:

- Single layer of Stopseal Fire Batt (50mm) installed internally within the wall.
- Max. Aperture size 750mm wide x 1200mm high
- Pattress installation of Stopseal Coated Batt. The Batts are installed in horizontal rows and fixed in minimum two vertical edges. Overlap of batts to substrate min 100mm. Batts mechanically fixed to substrate with min 6mm x 80mm steel screws and steel retaining washer. Fixings installed at max 300mm centers.
- Cables and cable trays wrapped with a single layer of 40mm thick, 40kg/m^3 Stone wool (L/I 300mm)



Service(s)	Classification
Electrical cables up to 80mm dia	**EI 60**
Cable Trays and Ladders	
100 mm diameter bundle telecommunication cable type "F"	
Unsheathed electrical cables up to 24mm dia	
Steel or Copper Conduits up to 16mm	
Plastic conduits up to 16mm	

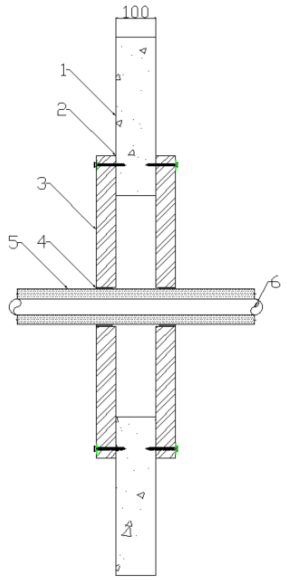
B21 FSi Stopseal Fire Batt Single layer Pattress

B21.1 FSi Single Layer (50mm) Stopseal Fire Batt Penetration Seal B

21.1.1 Insulated Metallic Pipes

Construction details:

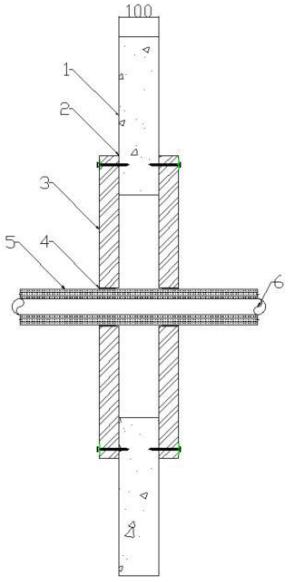
- Single layer of Stopseal Fire Batt (50mm) installed internally within the wall.
- Max. Aperture size 750mm wide x 1200mm high
- Pattress installation of Stopseal Coated Batt. The Batts are installed in horizontal rows and fixed in minimum two vertical edges. Overlap of batts to substrate min 100mm. Batts mechanically fixed to substrate with min 6mm x 80mm steel screws and steel retaining washer. Fixings installed at max 300mm centers.
- 2 x 2mm thick layers of PipeBloc EL / PipeBloc PWP installed both sides of the substrate within the pattress installation.
- equivalent elastomeric pipe insulation classified BL – s2, d0 or better to EN 13501-1
- equivalent Phenolic foam pipe insulation classified BL – s1, d0 or better to EN 13501-1



Service(s)	Classification
Steel or Copper Pipe 42-159mm Ø, 1.2mm – 14.2mm wall thickness. 13-25mm thick K Flex ST Insulation (C/S)	**E 120 C/U** **EI 60 C/U**
Steel or Copper Pipe 42-159mm Ø, 1.2 – 14.2mm wall thickness. 25mm thick K Flex ST insulation3 (C/S)	**E 120 C/U** **EI 90 C/U**
Steel or Copper Pipe 42mm Ø, 1 – 14.2mm wall thickness. 25-13mm thick K Flex ST insulation3 (C/S)	**EI 120 C/U**
Steel or Copper Pipe 42-108mm Ø, 1.2 – 14.2mm wall thickness. 25 -40mm thick Kingspan Kooltherm FM insulation (C/S)	**E 120 C/U** **EI 90 C/U**
Steel or Copper Pipe 42mm Ø, 1–14.2mm wall thickness. 25 -40mm thick Kingspan Kooltherm FM insulation4 (C/S)	**EI 120 C/U**
Steel or Copper Pipe 42mm Ø, 1.2–14.2mm wall thickness. 50mm thick glassfibre insulation min. 30kg/m (C/S)	**E 120 C/U** **EI 90 C/U**

Construction details:

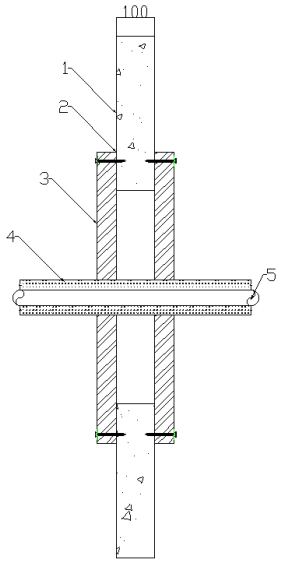
- Single layer of Stopseal Fire Batt (50mm) installed internally within the wall.
- Max. Aperture size 2600mm wide x 2600mm high
- Pattress installation of Stopseal Coated Batt. The Batts are installed in horizontal rows and fixed in minimum two vertical edges. Overlap of batts to substrate min 100mm. Batts mechanically fixed to substrate with min 6mm x 80mm steel screws and steel retaining washer. Fixings installed at max 300mm centers.
- 2 x 2mm thick layers of PipeBloc EL / PipeBloc PWP installed both sides of the substrate within the pattress installation.
- equivalent elastomeric pipe insulation classified BL – s2, d0 or better to EN 13501-1
- equivalent Phenolic foam pipe insulation classified BL – s1, d0 or better to EN 13501-1



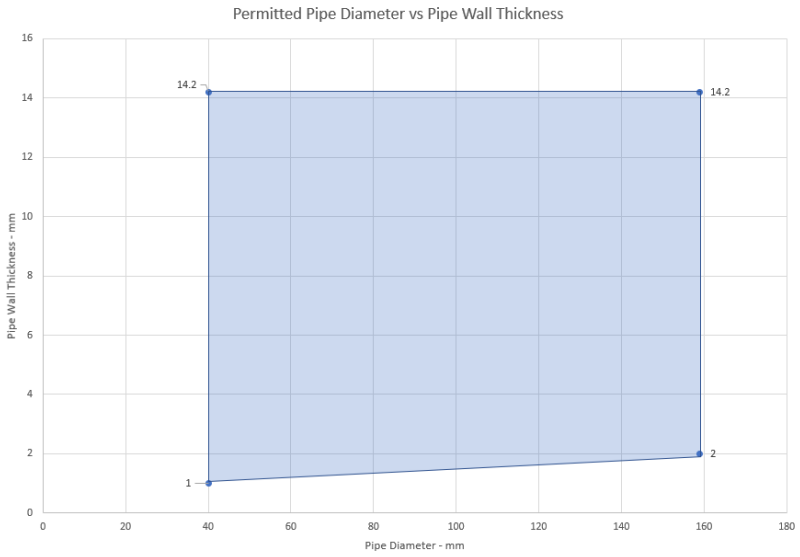
Service(s)	Classification
Steel or Copper Pipe 42-159mm Ø, 1.2mm – 14.2mm wall thickness. 13-25mm thick K Flex ST Insulation (C/S)	**EI 60 C/U**
Steel or Copper Pipe 42-159mm Ø, 1.2 – 14.2mm wall thickness. 25mm thick K Flex ST insulation3 (C/S)	
Steel or Copper Pipe 42mm Ø, 1 – 14.2mm wall thickness. 25-13mm thick K Flex ST insulation3 (C/S)	
Steel or Copper Pipe 42-108mm Ø, 1.2 – 14.2mm wall thickness. 25 -40mm thick Kingspan Kooltherm FM insulation (C/S)	
Steel or Copper Pipe 42mm Ø, 1–14.2mm wall thickness. 25 -40mm thick Kingspan Kooltherm FM insulation4 (C/S)	
Steel or Copper Pipe 42mm Ø, 1.2–14.2mm wall thickness. 50mm thick glassfibre insulation min. 30kg/m (C/S)	

Construction details:

- Single layer of Stopseal Fire Batt (50mm) installed internally within the wall.
- Max. Aperture size 750mm wide x 1200mm high
- Pattress installation of Stopseal Coated Batt. The Batts are installed in horizontal rows and fixed in minimum two vertical edges. Overlap of batts to substrate min 100mm. Batts mechanically fixed to substrate with min 6mm x 80mm steel screws and steel retaining washer. Fixings installed at max 300mm centers.

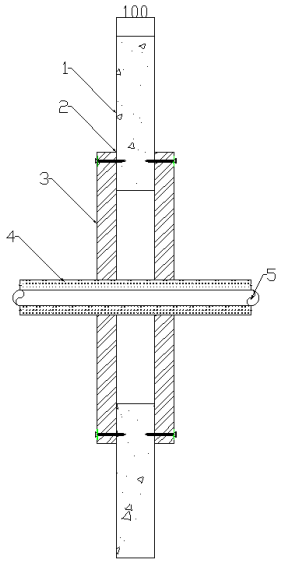


Service(s)	Classification
Steel or Copper Pipe 42-159mm Ø, 1.0mm – 14.2mm wall thickness (see graph below). 25mm thick foil faced glassfibre insulation min. 30kg/m^3 (C/S)	**E 120 C/U** **EI 90 C/U**
Steel or Copper Pipe 42mm Ø, 1mm – 14.2mm wall thickness. 25mm thick foil faced glassfibre insulation min. 30kg/m^3 (C/S)	**EI 120 C/U**

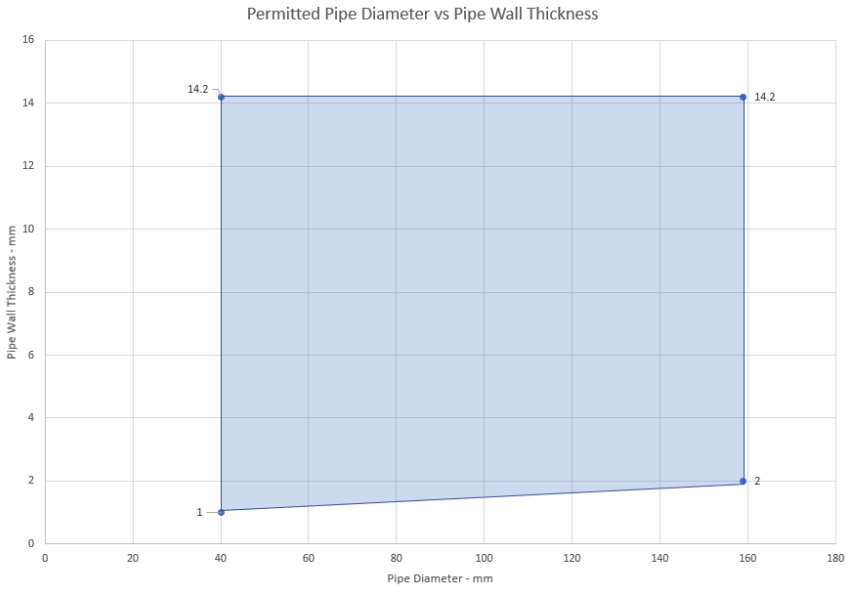


Construction details:

- Single layer of Stopseal Fire Batt (50mm) installed internally within the wall.
- Max. Aperture size 2600mm wide x 2600mm high
- Pattress installation of Stopseal Coated Batt. The Batts are installed in horizontal rows and fixed in minimum two vertical edges. Overlap of batts to substrate min 100mm. Batts mechanically fixed to substrate with min 6mm x 80mm steel screws and steel retaining washer. Fixings installed at max 300mm centers.



Service(s)	Classification
Steel or Copper Pipe 42-159mm Ø, 1.0mm – 14.2mm wall thickness (see graph below). 25mm thick foil faced glassfibre insulation min. 30kg/m^3 (C/S)	**EI 60 C/U**
Steel or Copper Pipe 42mm Ø, 1mm – 14.2mm wall thickness. 25mm thick foil faced glassfibre insulation min. 30kg/m^3 (C/S)	**EI 60 C/U**



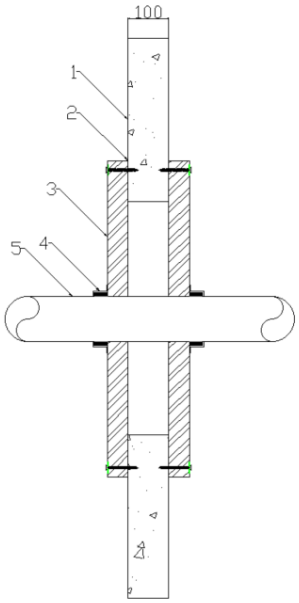
B22 FSi Stopseal Fire Batt Single layer Pattress

B22.1 FSi Single Layer (50mm) Stopseal Fire Batt Penetration B

22.1.1 Plastic Pipes

Construction details:

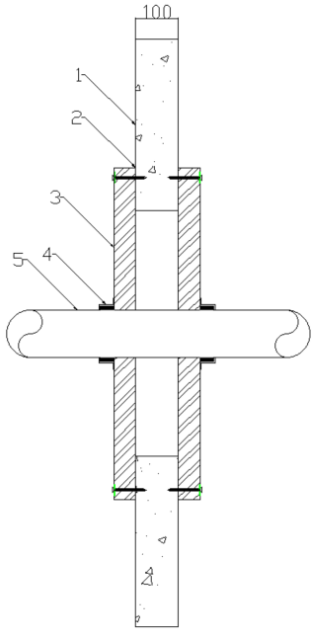
- Single layer of Stopseal Fire Batt (50mm) Plastic Pipes
- Max. Aperture size 730mm wide x 1200mm high
- Pattress installation of Stopseal Coated Batt. The Batts are installed in horizontal rows and fixed in minimum two vertical edges. Overlap of batts to substrate min 100mm. Batts mechanically fixed to substrate with min 6mm x 80mm steel screws and steel retaining washer. Fixings installed at max 300mm centers.
- Collars secured both faces of the substrate utilizing 80mm long pig tail screw through to the Stopseal Fire Batt



Penetration Specification	PipeBloc PCP Ref	Classification
PVC Pipe 32mm Ø, 1.8mm wall thickness	32 mm	**EI 120 U/C**
PVC Pipe 40mm Ø, 1.8mm wall thickness	40 mm	
PVC Pipe 50mm Ø, 1.8mm wall thickness	50 mm	
PVC Pipe 55mm Ø, 1.8-2.3mm wall thickness	55 mm	
PVC Pipe 63mm Ø, 2.3-3mm wall thickness	63 mm	
PVC Pipe 75mm Ø, 3.1-4.8mm wall thickness	75 mm	
PVC Pipe 82mm Ø, 3.1-4.8mm wall thickness	82 mm	
PVC Pipe 90mm Ø, 4.2-7.4mm wall thickness	90 mm	
PVC Pipe 100mm Ø, 4.2-7.4mm wall thickness	100 mm	
PVC Pipe 110mm Ø, 4.2-7.4mm wall thickness	110 mm	
PVC Pipe 125mm Ø, 6mm wall thickness	125 mm	
PVC Pipe 140mm Ø, 6.1-7.5mm wall thickness	140 mm	
PVC Pipe 140mm Ø, 6.2-9.5mm wall thickness	160 mm	

Construction details:

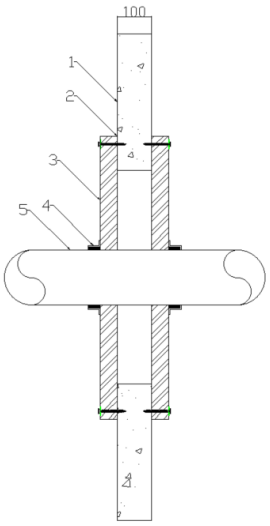
- Single layer of Stopseal Fire Batt (50mm) Plastic Pipes
- Max. Aperture size 2600mm wide x 2600mm high
- Pattress installation of Stopseal Coated Batt. The Batts are installed in horizontal rows and fixed in minimum two vertical edges. Overlap of batts to substrate min 100mm. Batts mechanically fixed to substrate with min 6mm x 80mm steel screws and steel retaining washer. Fixings installed at max 300mm centers.
- Collars secured both faces of the substrate utilizing 80mm long pig tail screw through to the Stopseal Fire Batt



Penetration Specification	PipeBloc PCP Ref	Classification
PVC Pipe 32mm Ø, 1.8mm wall thickness	32 mm	**EI 60 U/C**
PVC Pipe 40mm Ø, 1.8mm wall thickness	40 mm	
PVC Pipe 50mm Ø, 1.8mm wall thickness	50 mm	
PVC Pipe 55mm Ø, 1.8-2.3mm wall thickness	55 mm	
PVC Pipe 63mm Ø, 2.3-3mm wall thickness	63 mm	
PVC Pipe 75mm Ø, 3.1-4.8mm wall thickness	75 mm	
PVC Pipe 82mm Ø, 3.1-4.8mm wall thickness	82 mm	
PVC Pipe 90mm Ø, 4.2-7.4mm wall thickness	90 mm	
PVC Pipe 100mm Ø, 4.2-7.4mm wall thickness	100 mm	
PVC Pipe 110mm Ø, 4.2-7.4mm wall thickness	110 mm	
PVC Pipe 125mm Ø, 6mm wall thickness	125 mm	
PVC Pipe 140mm Ø, 6.1-7.5mm wall thickness	140 mm	
PVC Pipe 140mm Ø, 6.2-9.5mm wall thickness	160 mm	

Construction details:

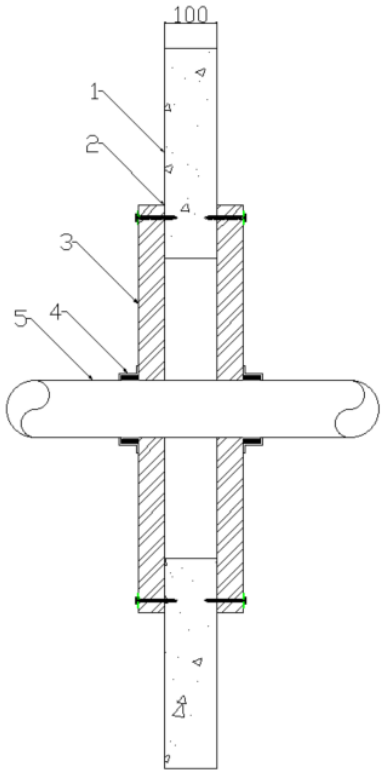
- Single layer of Stopseal Fire Batt (50mm) Plastic Pipes
- Max. Aperture size 730mm wide x 1200mm high
- Pattress installation of Stopseal Coated Batt. The Batts are installed in horizontal rows and fixed in minimum two vertical edges. Overlap of batts to substrate min 100mm. Batts mechanically fixed to substrate with min 6mm x 80mm steel screws and steel retaining washer. Fixings installed at max 300mm centers.
- Collars secured both faces of the substrate utilizing 80mm long pig tail screw through to the Stopseal Fire Batt
- Penetrations positioned as per option 1 or 2 below. 0 mm distance between services and 50 mm to edge of seal.



Penetration Specification	PipeBloc PCP Ref	Classification
PVC Pipe 32mm Ø, 2.9mm wall thickness	32 mm	**EI 120 U/C**
PVC Pipe 40mm Ø, 2.9mm wall thickness	40 mm	
PVC Pipe 50mm Ø, 2.9mm wall thickness	50 mm	
PVC Pipe 55mm Ø, 2.9-4.4mm wall thickness	55 mm	
PVC Pipe 63mm Ø, 2.9-4.4mm wall thickness	63 mm	
PVC Pipe 75mm Ø, 2.8-6.7mm wall thickness	75 mm	
PVC Pipe 82mm Ø, 2.8-6.7mm wall thickness	82 mm	
PVC Pipe 90mm Ø, 2.7-10mm wall thickness	90 mm	
PVC Pipe 100mm Ø, 2.7-10mm wall thickness	100 mm	
PVC Pipe 110mm Ø, 2.7-10mm wall thickness	110 mm	
PVC Pipe 125mm Ø, 3.1mm wall thickness	125 mm	
PVC Pipe 140mm Ø, 3.5-8mm wall thickness	140 mm	
PVC Pipe 140mm Ø, 4-14.6mm wall thickness	160 mm	

Construction details:

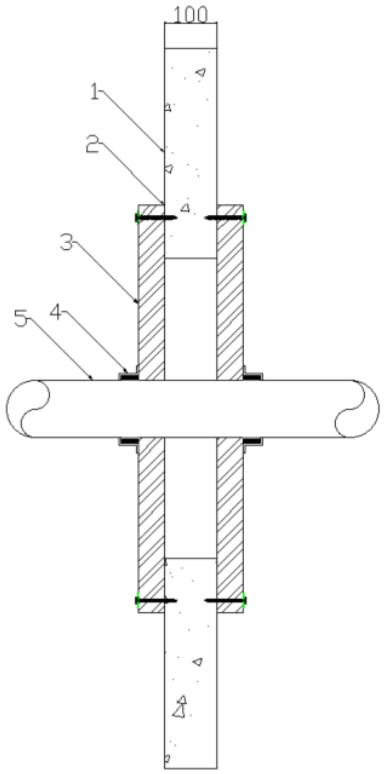
- Single layer of Stopseal Fire Batt (50mm) Plastic Pipes
- Max. Aperture size 2600mm wide x 2600mm high
- Pattress installation of Stopseal Coated Batt. The Batts are installed in horizontal rows and fixed in minimum two vertical edges. Overlap of batts to substrate min 100mm. Batts mechanically fixed to substrate with min 6mm x 80mm steel screws and steel retaining washer. Fixings installed at max 300mm centers.
- Collars secured both faces of the substrate utilizing 80mm long pig tail screw through to the Stopseal Fire Batt
- Penetrations positioned as per option 1 or 2 below. 0 mm distance between services and 50 mm to edge of seal.



Penetration Specification	PipeBloc PCP Ref	Classification
PVC Pipe 32mm Ø, 2.9mm wall thickness	32 mm	EI 60 U/C
PVC Pipe 40mm Ø, 2.9mm wall thickness	40 mm	
PVC Pipe 50mm Ø, 2.9mm wall thickness	50 mm	
PVC Pipe 55mm Ø, 2.9-4.4mm wall thickness	55 mm	
PVC Pipe 63mm Ø, 2.9-4.4mm wall thickness	63 mm	
PVC Pipe 75mm Ø, 2.8-6.7mm wall thickness	75 mm	
PVC Pipe 82mm Ø, 2.8-6.7mm wall thickness	82 mm	
PVC Pipe 90mm Ø, 2.7-10mm wall thickness	90 mm	
PVC Pipe 100mm Ø, 2.7-10mm wall thickness	100 mm	
PVC Pipe 110mm Ø, 2.7-10mm wall thickness	110 mm	
PVC Pipe 125mm Ø, 3.1mm wall thickness	125 mm	
PVC Pipe 140mm Ø, 3.5-8mm wall thickness	140 mm	
PVC Pipe 140mm Ø, 4-14.6mm wall thickness	160 mm	

Construction details:

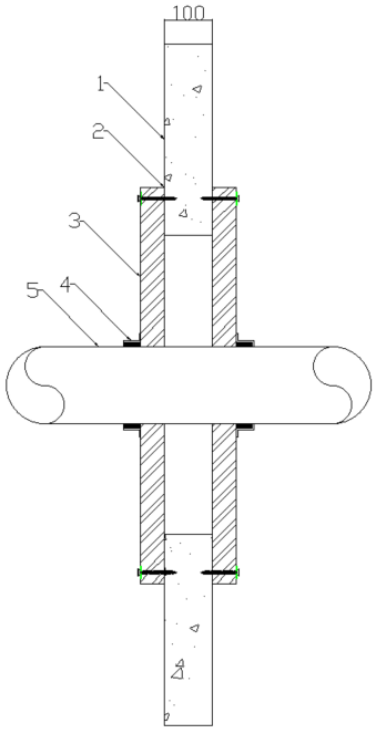
- Single layer of Stopseal Fire Batt (50mm) Plastic Pipes
- Max. Aperture size 730mm wide x 1200mm high
- Pattress installation of Stopseal Coated Batt. The Batts are installed in horizontal rows and fixed in minimum two vertical edges. Overlap of batts to substrate min 100mm. Batts mechanically fixed to substrate with min 6mm x 80mm steel screws and steel retaining washer. Fixings installed at max 300mm centers.
- Collars secured both faces of the substrate utilizing 80mm long pig tail screw through to the Stopseal Fire Batt
- Penetrations positioned as per option 1 or 2 below. 0 mm distance between services and 50 mm to edge of seal.



Penetration Specification	PipeBloc PCP Ref	Classification
PVC Pipe 32mm Ø, 2.9mm wall thickness	32 mm	**EI 120 U/C**
PVC Pipe 40mm Ø, 2.9mm wall thickness	40 mm	
PVC Pipe 50mm Ø, 2.9mm wall thickness	50 mm	
PVC Pipe 55mm Ø, 2.9-4.4mm wall thickness	55 mm	
PVC Pipe 63mm Ø, 2.9-4.4mm wall thickness	63 mm	
PVC Pipe 75mm Ø, 2.8-6.7mm wall thickness	75 mm	
PVC Pipe 82mm Ø, 2.8-6.7mm wall thickness	82 mm	
PVC Pipe 90mm Ø, 2.7-10mm wall thickness	90 mm	
PVC Pipe 100mm Ø, 2.7-10mm wall thickness	100 mm	
PVC Pipe 110mm Ø, 2.7-10mm wall thickness	110 mm	
PVC Pipe 125mm Ø, 3.1mm wall thickness	125 mm	
PVC Pipe 140mm Ø, 3.9-5.8mm wall thickness	140 mm	
PVC Pipe 140mm Ø, 4.9-9.5mm wall thickness	160 mm	

Construction details:

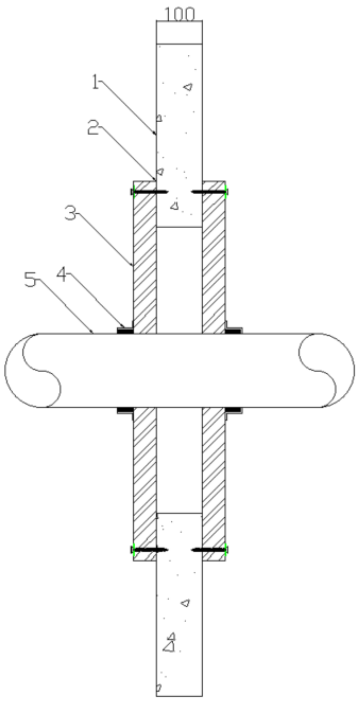
- Single layer of Stopseal Fire Batt (50mm) Plastic Pipes
- Max. Aperture size 2600mm wide x 2600mm high
- Pattress installation of Stopseal Coated Batt. The Batts are installed in horizontal rows and fixed in minimum two vertical edges. Overlap of batts to substrate min 100mm. Batts mechanically fixed to substrate with min 6mm x 80mm steel screws and steel retaining washer. Fixings installed at max 300mm centers.
- Collars secured both faces of the substrate utilizing 80mm long pig tail screw through to the Stopseal Fire Batt
- Penetrations positioned as per option 1 or 2 below. 0 mm distance between services and 50 mm to edge of seal.



Penetration Specification	PipeBloc PCP Ref	Classification
PVC Pipe 32mm Ø, 2.9mm wall thickness	32 mm	**EI 60 U/C**
PVC Pipe 40mm Ø, 2.9mm wall thickness	40 mm	
PVC Pipe 50mm Ø, 2.9mm wall thickness	50 mm	
PVC Pipe 55mm Ø, 2.9-4.4mm wall thickness	55 mm	
PVC Pipe 63mm Ø, 2.9-4.4mm wall thickness	63 mm	
PVC Pipe 75mm Ø, 2.8-6.7mm wall thickness	75 mm	
PVC Pipe 82mm Ø, 2.8-6.7mm wall thickness	82 mm	
PVC Pipe 90mm Ø, 2.7-10mm wall thickness	90 mm	
PVC Pipe 100mm Ø, 2.7-10mm wall thickness	100 mm	
PVC Pipe 110mm Ø, 2.7-10mm wall thickness	110 mm	
PVC Pipe 125mm Ø, 3.1mm wall thickness	125 mm	
PVC Pipe 140mm Ø, 3.9-5.8mm wall thickness	140 mm	
PVC Pipe 140mm Ø, 4.9-9.5mm wall thickness	160 mm	

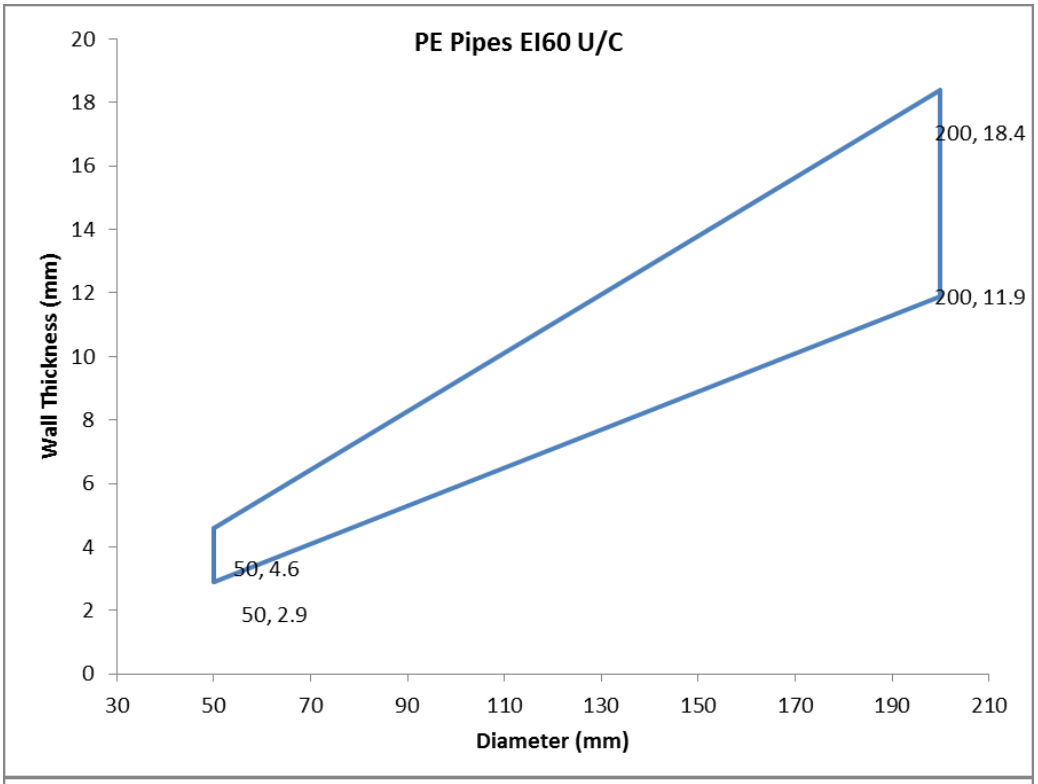
Construction details:

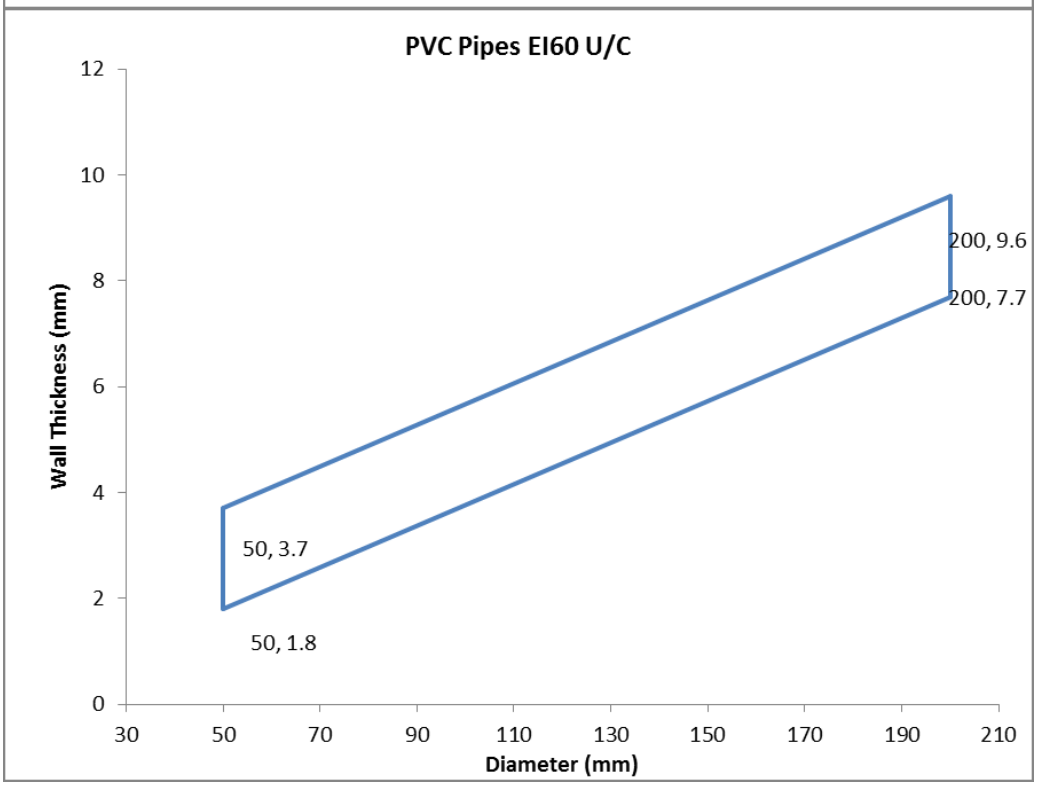
- Single layer of Stopseal Fire Batt (50mm) Plastic Pipes
- Max. Aperture size 2600mm wide x 2600mm high
- Pattress installation of Stopseal Coated Batt. The Batts are installed in horizontal rows and fixed in minimum two vertical edges. Overlap of batts to substrate min 100mm. Batts mechanically fixed to substrate with min 6mm x 80mm steel screws and steel retaining washer. Fixings installed at max 300mm centers.
- Collars secured both faces of the substrate utilizing 80mm long pig tail screw through to the Stopseal Fire Batt
- Penetrations positioned as per option 1 or 2 below. 0 mm distance between services and 50 mm to edge of seal.

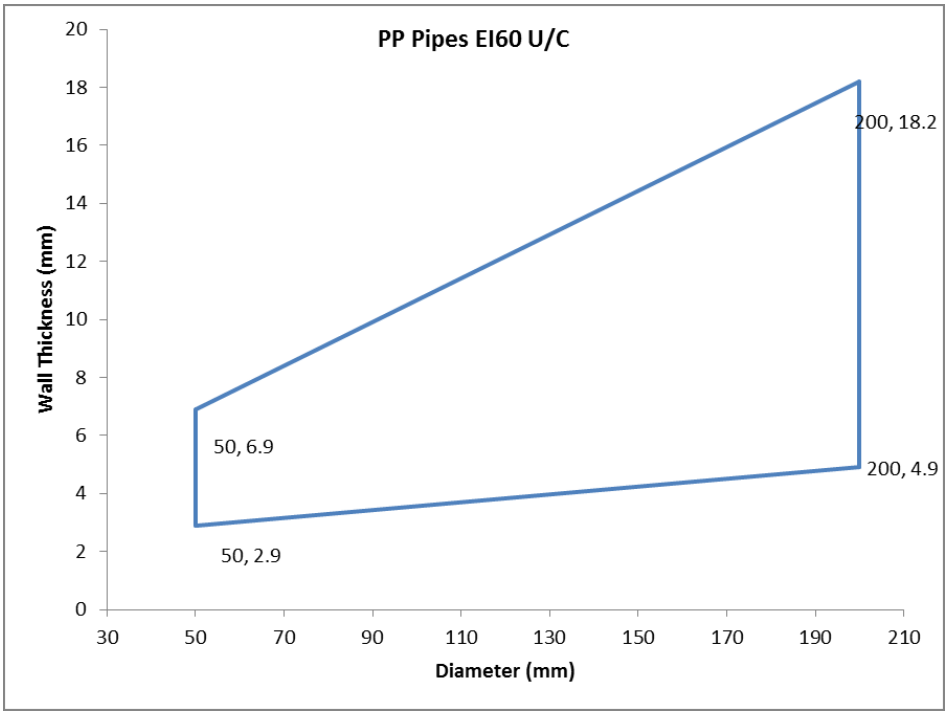


Scope and Classifications as below

Intumescent Thickness	
Pipe Diameter	**Intumescent Material**
ø 32 mm - ø 50 mm	40 mm (W) x 2 mm (T)
ø 51 mm - ø 82 mm	40 mm (W) x 4 mm (T)
ø 83 mm - ø 115 mm	40 mm (W) x 6 mm (T)
ø 116 mm - ø 160 mm	40 mm (W) x 8 mm (T)
ø 161 mm - ø 200 mm	40 mm (W) x 10 mm (T)
ø 201 mm - ø 250 mm	40 mm (W) x 12 mm (T)


PE Pipes EI60 U/C
Wall Thickness (mm)
Diameter (mm)
200, 18.4
200, 11.9
50, 4.6
50, 2.9
0
2
4
6
8
10
12
14
16
18
20
30
50
70
90
110
130
150
170
190
210


PVC Pipes EI60 U/C
Wall Thickness (mm)
Diameter (mm)
200, 9.6
200, 7.7
50, 3.7
50, 1.8
0
2
4
6
8
10
12
30
50
70
90
110
130
150
170
190
210


PP Pipes EI60 U/C
Wall Thickness (mm)
Diameter (mm)
0
2
4
6
8
10
12
14
16
18
20
30
50
70
90
110
130
150
170
190
210
50, 6.9
50, 2.9
200, 18.2
200, 4.9

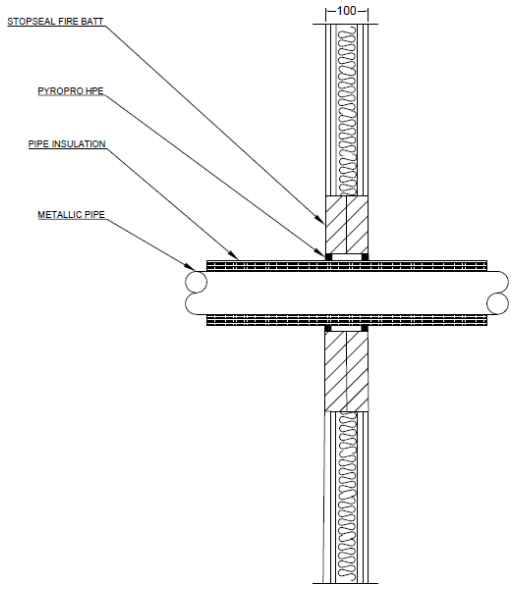
B23 Metallic Pipe Penetrations

B23.1 FSi Double Layer (50mm) Stopseal Fire Batt Penetration

23.1.1 Metallic Pipes

Construction details:

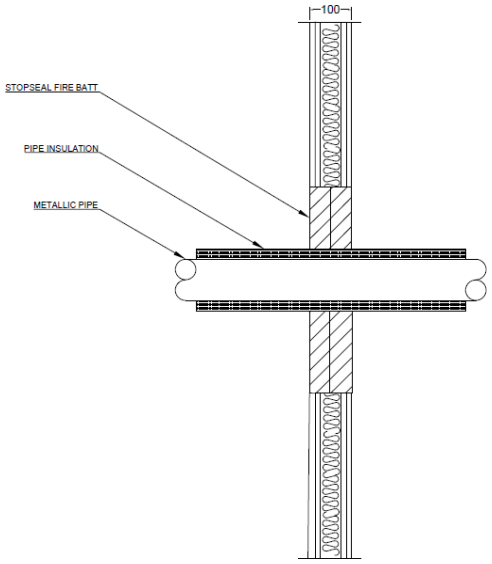
- Double layer of Stopseal Fire Batt (50mm) installed internally within the wall.
- Max. Aperture size 730mm wide x 1200mm high
- Continuous / Sustained CS insulated metallic pipes
- 15mm deep x 15mm wide anulus FSi Pyropro HPE Sealant to both faces
- First service support 250mm from both faces of the substrate



Service(s)	Classification
Single copper or mild steel pipe 40mm diameter and 1.5 – 14.2 mm wall with sustained/continuous 20mm thick foil faced glass wool insulation (min 80Kg/m^3)	**E 90 U/C** **EI 60 U/C**
Single copper or mild steel pipe 40-159mm diameter and 2.3 – 14.2 mm wall with sustained/continuous 30mm thick foil faced glass wool insulation (min 80Kg/m^3)	**EI 60 U/C**

Construction details:

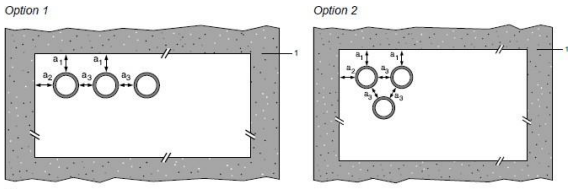
- Double layer of Stopseal Fire Batt (50mm) installed internally within the wall.
- Max. Aperture size 600mm wide x 600mm high
- Continuous / Sustained CS insulated metallic pipes
- First service support 400mm from both faces of the substrate

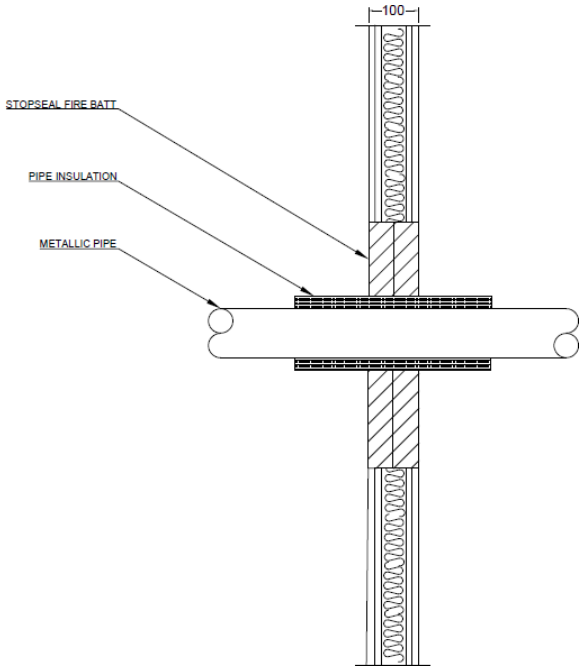


Service(s)	Classification
Steel or Copper Pipe 42-159mm Ø, 1.2mm – 14.2mm wall thickness. 25mm thick foil faced glassfibre insulation min. 30kg/m^3 (C/S)	**E 120 C/U** **EI 45 C/U**
Steel or Copper Pipe 42mm Ø, 1mm – 14.2mm wall thickness. 25mm thick foil faced glassfibre insulation min. 30kg/m^3 (C/S)	**E 120 C/U** **EI 60 C/U**

Construction details:

- Double layer of Stopseal Fire Batt (50mm) installed internally within the wall.
- Max. Aperture size 730mm wide x 1200mm high
- Continuous / Sustained CS insulated metallic pipes.
- Penetrations positioned as per option 1 or 2 below, 0mm distance between services and 50mm to edge of seal.
- First service support 400mm from both faces of the substrate.

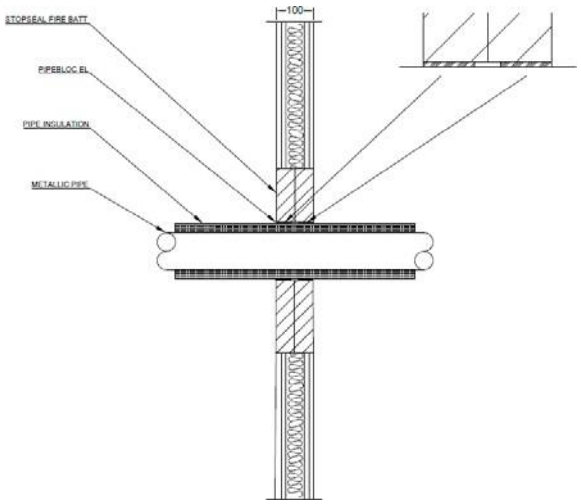




Service(s)	Classification
Steel or Copper Pipe 42-159mm Ø, 1.2mm – 14.2mm wall thickness 40mm thick stone wool insulation min. 40kg/m^3 (L/I 400mm)	**EI 45 C/U**
Steel 42-324mm Ø, 16mm wall thickness. 40mm thick stone wool insulation min. 40kg/m^3 (L/I 400mm)	**EI 45 C/U**
Steel or Copper Pipe 42-159mm Ø, 1.2mm – 14.2mm wall thickness PST coating along the penetration 2mm DFT (L/I 400mm)	**E 120 C/U** **EI 45 C/U**
Steel 42-324mm Ø, 16mm wall thickness. 14.2mm wall thickness PST coating along the penetration 2mm DFT (L/I 400mm)	**E 120 C/U** **EI 45 C/U**

Construction details:

- Double layer of Stopseal Fire Batt (50mm) installed internally within the wall.
- Max. Aperture size 750mm wide x 1200mm high
- Continuous / Sustained CS insulated metallic pipes
- 2 x 2mm thick layers of PipeBloc EL installed both sides of the Stopseal Fire Batt
- First service support 400mm from both faces of the substrate



Service(s)	Classification
Steel or Copper Pipe 42-159mm Ø, 1.2mm – 14.2mm wall thickness. 13-25mm thick K Flex ST Insulation (C/S)	**E 120 C/U** **EI 60 C/U**
Steel or Copper Pipe 42mm Ø, 1 – 14.2mm wall thickness. 25-13mm thick K Flex ST insulation (C/S)	**E 120 C/U** **EI 90 C/U**
[1]Steel or Copper Pipe 42-108mm Ø, 1.2 – 14.2mm wall thickness. 25 -40mm thick Kingspan Kooltherm FM insulation (C/S)	**E 120 C/U** **EI 60 C/U**
Steel or Copper Pipe 42mm Ø, 1–14.2mm wall thickness. 25 -40mm thick Kingspan Kooltherm FM insulation (C/S)	**E 120 C/U** **EI 90 C/U**
[1]Steel or Copper Pipe 42mm Ø, 1.2–14.2mm wall thickness. 50mm thick glassfibre insulation (C/S)	**E 120 C/U** **EI 90 C/U**

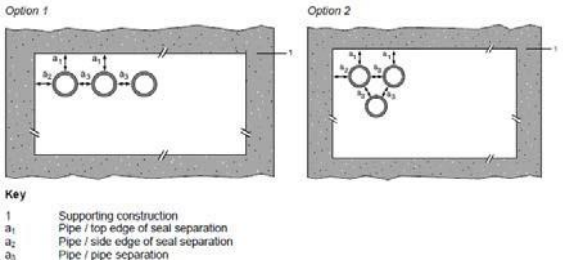
B24 Plastic Pipe Penetrations

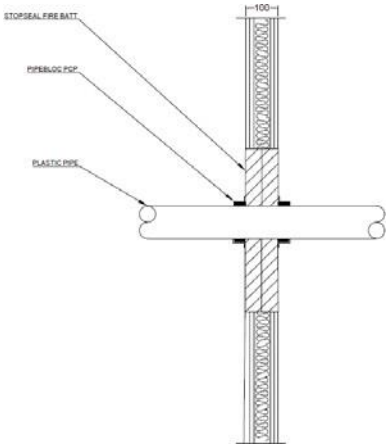
B24.1 FSi Double Layer (50mm) Stopseal Fire Batt Penetration Seal B

24.1.1 Plastic Pipes

Construction details:

- Double layer of Stopseal Fire Batt (50mm) installed internally within the wall.
- Max. Aperture size 730mm wide x 1200mm high
- PipeBloc PCP secured both faces of the substrate utilizing 80mm long steel pig tail screw through to Stopseal Fire Batt
- Penetrations positioned as per option 1 or 2 below, 0mm distance between services and 50mm to edge of seal.
- First service support 400mm from both faces of the substrate.





Service(s)	PipeBloc PCP Ref	Classification
PVC Pipe 32mm Ø, 1.8mm wall thickness	32mm	**EI 120 U/C**
PVC Pipe 40mm Ø, 1.8mm wall thickness	40mm	
PVC Pipe 50mm Ø, 1.8mm wall thickness	50mm	
PVC Pipe 55mm Ø, 1.8-2.3mm wall thickness	55mm	
PVC Pipe 63mm Ø, 2.3-3mm wall thickness	63mm	
PVC Pipe 75mm Ø, 3.1-4.8mm wall thickness	75mm	
PVC Pipe 82mm Ø, 3.1-4.8mm wall thickness	82mm	
PVC Pipe 90mm Ø, 4.2-7.4mm wall thickness	90mm	
PVC Pipe 100mm Ø, 4.2-7.4mm wall thickness	100mm	
PVC Pipe 110mm Ø, 4.2-7.4mm wall thickness	110mm	
PVC Pipe 125mm Ø, 6mm wall thickness	125mm	
PVC Pipe 140mm Ø, 6.1-7.5mm wall thickness	140mm	
PVC Pipe 160mm Ø, 6.2-9.5mm wall thickness	160mm	

Service(s)	PipeBloc PCP Ref	Classification
PP Pipe 32mm Ø, 2.9mm wall thickness	32mm	**EI 120 U/C**
PP Pipe 40mm Ø, 2.9mm wall thickness	40mm	
PP Pipe 50mm Ø, 2.9mm wall thickness	50mm	
PP Pipe 55mm Ø, 2.9-4.4mm wall thickness	55mm	
PP Pipe 63mm Ø, 2.9-4.4mm wall thickness	63mm	
PP Pipe 75mm Ø, 2.8-6.7mm wall thickness	75mm	
PP Pipe 82mm Ø, 2.8-6.7mm wall thickness	82mm	
PP Pipe 90mm Ø, 2.7-10mm wall thickness	90mm	
PP Pipe 100mm Ø, 2.7-10mm wall thickness	100mm	
PP Pipe 110mm Ø, 2.7-10mm wall thickness	110mm	
PP Pipe 125mm Ø, 3.1mm wall thickness	125mm	
PP Pipe 140mm Ø, 3.5-8mm wall thickness	140mm	

Service(s)	PipeBloc PCP Ref	Classification
PE Pipe 32mm Ø, 2.9mm wall thickness	32mm	**EI 120 U/C**
PE Pipe 40mm Ø, 2.9mm wall thickness	40mm	
PE Pipe 50mm Ø, 2.9mm wall thickness	50mm	
PE Pipe 55mm Ø, 2.9-4.4mm wall thickness	55mm	
PE Pipe 63mm Ø, 2.9-4.4mm wall thickness	63mm	
PE Pipe 75mm Ø, 2.8-6.7mm wall thickness	75mm	
PE Pipe 82mm Ø, 2.8-6.7mm wall thickness	82mm	
PE Pipe 90mm Ø, 2.7-10mm wall thickness	90mm	
PE Pipe 100mm Ø, 2.7-10mm wall thickness	100mm	
PE Pipe 110mm Ø, 2.7-10mm wall thickness	110mm	
PE Pipe 125mm Ø, 3.1mm wall thickness	125mm	
PE Pipe 140mm Ø, 3.9-5.8mm wall thickness	140mm	
PE Pipe 160mm Ø, 4.9-9.5mm wall thickness	160mm	

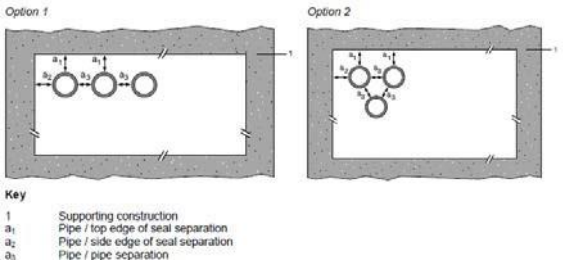
B25 Insulated Plastic Pipe Penetrations

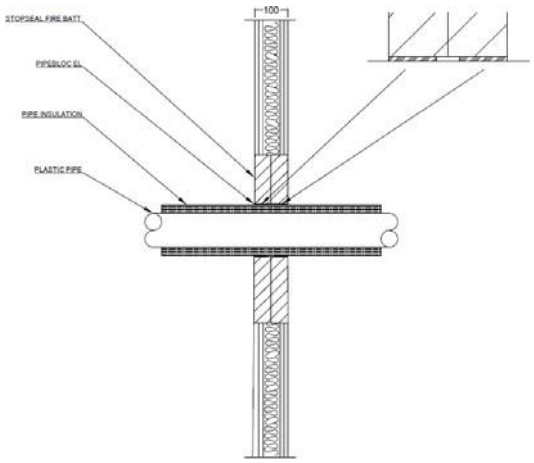
B25.1 FSi Double Layer (50mm) Stopseal Fire Batt Penetration Seal B

25.1.1 Insulated Plastic Pipes

Construction details:

- Double layer of Stopseal Fire Batt (50mm) installed internally within the wall.
- Max. Aperture size 730mm wide x 1200mm high
- PipeBloc EL secured internally within both faces of the Stopseal Fire Batt
- Penetrations positioned as per option 1 or 2 below, 0mm distance between services and 50mm to edge of seal.
- First service support 400mm from both faces of the substrate.





Service(s)	PipeBloc EL Ref	Classification
PVC Pipe 40mm Ø, 1.9mm wall thickness. 25 mm thick Kingspan Kooltherm FM insulation (C/S)	3 x 2mm thickness	**E 120 U/C EI 90 U/C**
PVC Pipe 40mm Ø, 3mm wall thickness. 15 mm thick Kingspan Kooltherm FM insulation (C/S)	3 x 2mm thickness	
PVC Pipe 110mm Ø, 4.2mm wall thickness. 25 mm thick Kingspan Kooltherm FM insulation (C/S)	5 x 2mm thickness	**EI 120 U/C**
PVC Pipe 110mm Ø, 6.6mm wall thickness. 20 mm thick Kingspan Kooltherm FM insulation (C/S)	5 x 2mm thickness	**E 120 U/C EI 90 U/C**
PVC Pipe 40mm Ø, 1.9mm wall thickness. 32 mm thick Armacell Armaflex Class O (C/S)	3 x 2mm thickness	**E 120 U/C EI 90 U/C**
PVC Pipe 40mm Ø, 3mm wall thickness. 9 mm thick Armacell Armaflex Class O (C/S)	3 x 2mm thickness	
PVC Pipe 110mm Ø, 4.2mm wall thickness. 32 mm thick Armacell Armaflex Class O (C/S)	5 x 2mm thickness	**EI 120 U/C**
PVC Pipe 110mm Ø, 6.6mm wall thickness. 13 mm thick Armacell Armaflex Class O (C/S)	5 x 2mm thickness	**E 120 U/C EI 90 U/C**

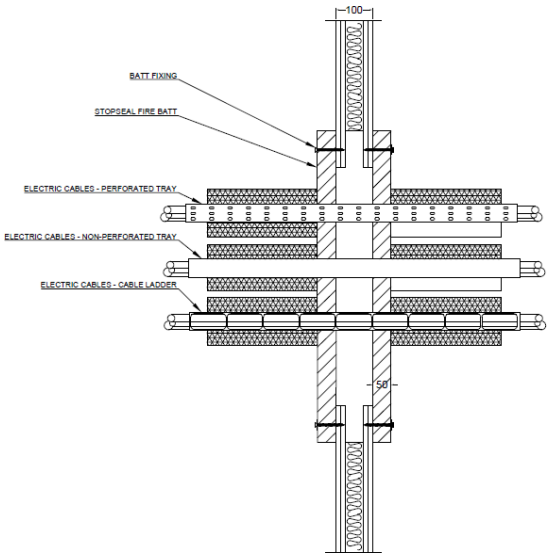
B26 Single Layer (50mm) Stopseal Fire Batt Pattress Installed Both Faces Penetration Seal

B26.1 FSi Double Layer (50mm) Stopseal Fire Batt Penetration both faces of the wall

26.1.1 Cable Penetrations

Construction details:

- Single layer of Stopseal Fire Batt (50mm) installed both faces of the wall.
- Pattress installation of Stopseal Fire Batt. The Batts are installed in horizontal rows and fixed in minimum two vertical edges. Overlap of batts to substrate min 100mm. Batts mechanically fixed to substrate with min 6mm x 80mm steel screws and steel retaining washer. Fixings installed at max 300mm centers.
- Max. Aperture size 750mm wide x 1200mm high
- Cables and cable trays wrapped with a single layer of 40mm thick, 40kg/m3 Stone wool (L/I 300mm)
- First service support 400mm from both faces of the substrate



Service(s)	Classification
Electrical cables up to 80mm Ø	**EI 120**
Cable Trays and Ladders	
100 mm diameter bundle telecommunication cable type "F"	
Unsheathed electrical cables up to 24mm Ø	
Steel or Copper Conduits up to 16mm Ø	
Plastic conduits up to 16mm Ø	

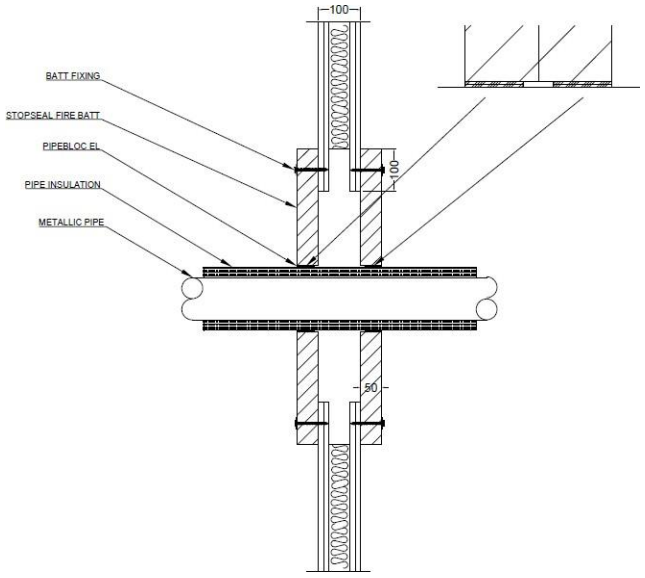
B27 Single Layer (50mm) Stopseal Fire Batt Pattress Installed Both Faces Penetration Seal

B27.1 FSi Double Layer (50mm) Stopseal Fire Batt Penetration both faces of the wall

B27.1.1 Metallic Pipe Penetrations

Construction details:

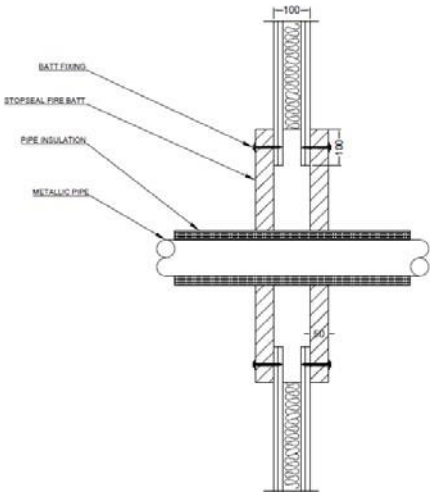
- Single layer of Stopseal Fire Batt (50mm) installed both faces of the wall.
- Pattress installation of Stopseal Fire Batt. The Batts are installed in horizontal rows and fixed in minimum two vertical edges. Overlap of batts to substrate min 100mm. Batts mechanically fixed to substrate with min 6mm x 80mm steel screws and steel retaining washer. Fixings installed at max 300mm centers.
- Max. Aperture size 750mm wide x 1200mm high
- Continuous / Sustained CS insulated metallic pipes.
- 2 x 2mm thick layers of PipeBloc EL installed both sides of the Stopseal Fire Batt
- First service support 400mm from both faces of the substrate



Service(s)	Classification
[2]Steel or Copper Pipe 42-159mm Ø, 1.2mm – 14.2mm wall thickness. 13-25mm thick K Flex ST Insulation (C/S)	**E 120 C/U** **EI 60 C/U**
[2]Steel or Copper Pipe 42-159mm Ø, 1.2 – 14.2mm wall thickness. 25mm thick K Flex ST insulation (C/S)	**E 120 C/U** **EI 90 C/U**
[2]Steel or Copper Pipe 42mm Ø, 1 – 14.2mm wall thickness. 25-13mm thick K Flex ST insulation (C/S)	**EI 120 C/U**
[2]Steel or Copper Pipe 42-108mm Ø, 1.2 – 14.2mm wall thickness. 25 -40mm thick Kingspan Kooltherm FM insulation (C/S)	**E 120 C/U** **EI 90 C/U**
[2]Steel or Copper Pipe 42mm Ø, 1–14.2mm wall thickness. 25 -40mm thick Kingspan Kooltherm FM insulation (C/S)	**EI 120 C/U**
[2]Steel or Copper Pipe 42mm Ø, 1.2–14.2mm wall thickness. 50mm thick glassfibre insulation min. 30kg/m^3 (C/S)	**E 120 C/U** **EI 90 C/U**

Construction details:

- Single layer of Stopseal Fire Batt (50mm) installed both faces of the wall.
- Pattress installation of Stopseal Fire Batt. The Batts are installed in horizontal rows and fixed in minimum two vertical edges. Overlap of batts to substrate min 100mm. Batts mechanically fixed to substrate with min 6mm x 80mm steel screws and steel retaining washer. Fixings installed at max 300mm centers.
- Max. Aperture size 600mm wide x 600mm high
- Continuous / Sustained CS insulated metallic pipes.
- First service support 400mm from both faces of the substrate



Service(s)	Classification
Steel or Copper Pipe 42-159mm Ø, 1.2mm – 14.2mm wall thickness. 25mm thick foil faced glassfibre insulation min. 30kg/m^3 (C/S)	**E 120 C/U** **EI 90 C/U**
Steel or Copper Pipe 42mm Ø, 1mm – 14.2mm wall thickness. 25mm thick foil faced glassfibre insulation min. 30kg/m^3 (C/S)	**EI 120 C/U**

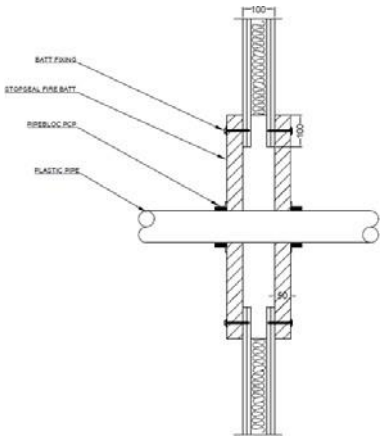
B28 Single Layer (50mm) Stopseal Fire Batt Pattress Installed Both Faces Penetration Seal

B28.1 FSi Double Layer (50mm) Stopseal Fire Batt Penetration both faces of the wall

B28.1.1 Plastic Pipe Penetrations

Construction details:

- Single layer of Stopseal Fire Batt (50mm) installed both faces of the wall.
- Pattress installation of Stopseal Fire Batt. The Batts are installed in horizontal rows and fixed in minimum two vertical edges. Overlap of batts to substrate min 100mm. Batts mechanically fixed to substrate with min 6mm x 80mm steel screws and steel retaining washer. Fixings installed at max 300mm centers.
- Max. Aperture size 730mm wide x 1200mm high
- PipeBloc PCP secured both faces of the substrate utilizing 80mm long steel pig tail screw through to Stopseal Fire Batt
- Penetrations positioned as per option 1 or 2 below, 0mm distance between services and 50mm to edge of seal.
- First service support 400mm from both faces of the substrate.



Service(s)	PipeBloc PCP Ref	Classification
PVC Pipe 32mm Ø, 1.8mm wall thickness	32mm	**EI 120 U/C**
PVC Pipe 40mm Ø, 1.8mm wall thickness	40mm	
PVC Pipe 50mm Ø, 1.8mm wall thickness	50mm	
PVC Pipe 55mm Ø, 1.8-2.3mm wall thickness	55mm	
PVC Pipe 63mm Ø, 2.3-3mm wall thickness	63mm	
PVC Pipe 75mm Ø, 3.1-4.8mm wall thickness	75mm	
PVC Pipe 82mm Ø, 3.1-4.8mm wall thickness	82mm	
PVC Pipe 90mm Ø, 4.2-7.4mm wall thickness	90mm	
PVC Pipe 100mm Ø, 4.2-7.4mm wall thickness	100mm	
PVC Pipe 110mm Ø, 4.2-7.4mm wall thickness	110mm	
PVC Pipe 125mm Ø, 6mm wall thickness	125mm	
PVC Pipe 140mm Ø, 6.1-7.5mm wall thickness	140mm	
PVC Pipe 160mm Ø, 6.2-9.5mm wall thickness	160mm	

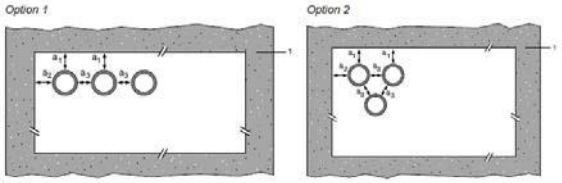
Service(s)	PipeBloc PCP Ref	Classification
PP Pipe 32mm Ø, 2.9mm wall thickness	32mm	EI 120 U/C
PP Pipe 40mm Ø, 2.9mm wall thickness	40mm	
PP Pipe 50mm Ø, 2.9mm wall thickness	50mm	
PP Pipe 55mm Ø, 2.9-4.4mm wall thickness	55mm	
PP Pipe 63mm Ø, 2.9-4.4mm wall thickness	63mm	
PP Pipe 75mm Ø, 2.8-6.7mm wall thickness	75mm	
PP Pipe 82mm Ø, 2.8-6.7mm wall thickness	82mm	
PP Pipe 90mm Ø, 2.7-10mm wall thickness	90mm	
PP Pipe 100mm Ø, 2.7-10mm wall thickness	100mm	
PP Pipe 110mm Ø, 2.7-10mm wall thickness	110mm	
PP Pipe 125mm Ø, 3.1mm wall thickness	125mm	
PP Pipe 140mm Ø, 3.5-8mm wall thickness	140mm	
PP Pipe 160mm Ø, 4-14.6mm wall thickness	160mm	

Service(s)	PipeBloc PCP Ref	Classification
PE Pipe 32mm Ø, 2.9mm wall thickness	32mm	EI 120 U/C
PE Pipe 40mm Ø, 2.9mm wall thickness	40mm	
PE Pipe 50mm Ø, 2.9mm wall thickness	50mm	
PE Pipe 55mm Ø, 2.9-4.4mm wall thickness	55mm	
PE Pipe 63mm Ø, 2.9-4.4mm wall thickness	63mm	
PE Pipe 75mm Ø, 2.8-6.7mm wall thickness	75mm	
PE Pipe 82mm Ø, 2.8-6.7mm wall thickness	82mm	
PE Pipe 90mm Ø, 2.7-10mm wall thickness	90mm	
PE Pipe 100mm Ø, 2.7-10mm wall thickness	100mm	
PE Pipe 110mm Ø, 2.7-10mm wall thickness	110mm	
PE Pipe 125mm Ø, 3.1mm wall thickness	125mm	
PE Pipe 140mm Ø, 3.9-5.8mm wall thickness	140mm	
PE Pipe 160mm Ø, 4.9-9.5mm wall thickness	160mm	

Construction details:

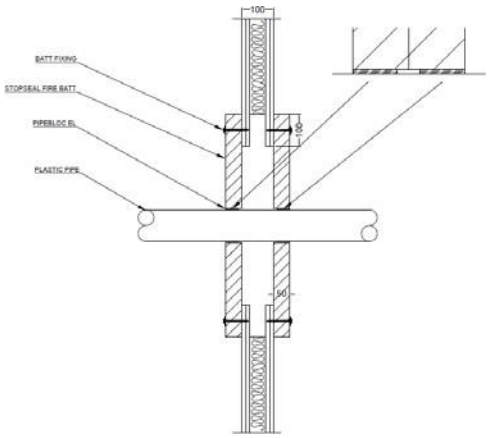
- Single layer of Stopseal Fire Batt (50mm) installed both faces of the wall.
- Pattress installation of Stopseal Fire Batt. The Batts are installed in horizontal rows and fixed in minimum two vertical edges. Overlap of batts to substrate min 100mm. Batts mechanically fixed to substrate with min 6mm x 80mm steel screws and steel retaining washer. Fixings installed at max 300mm centers.
- Max. Aperture size 730mm wide x 1200mm high
- PipeBloc PWP Fire Wrap secured internally within both faces of the Stopseal Fire Batt
- Penetrations positioned as per option 1 or 2 below, 0mm distance between services and 50mm to edge of seal.
- First service support 400mm from both faces of the substrate

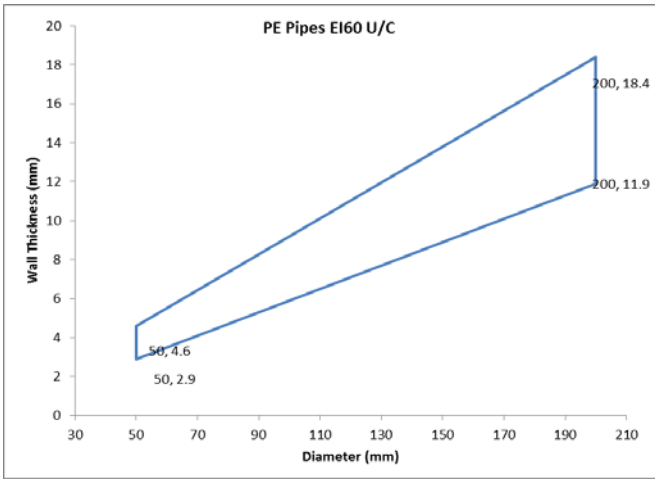
Intumescent Thickness	
Pipe Diameter	**Intumescent Material**
ø 32 mm - ø 50 mm	40 mm (W) x 2 mm (T)
ø 51 mm - ø 82 mm	40 mm (W) x 4 mm (T)
ø 83 mm - ø 115 mm	40 mm (W) x 6 mm (T)
ø 116 mm - ø 160 mm	40 mm (W) x 8 mm (T)
ø 161 mm - ø 200 mm	40 mm (W) x 10 mm (T)
ø 201 mm - ø 250 mm	40 mm (W) x 12 mm (T)

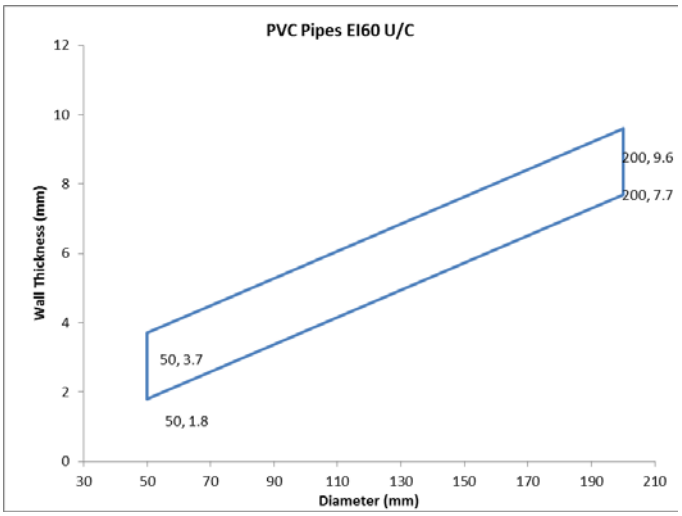


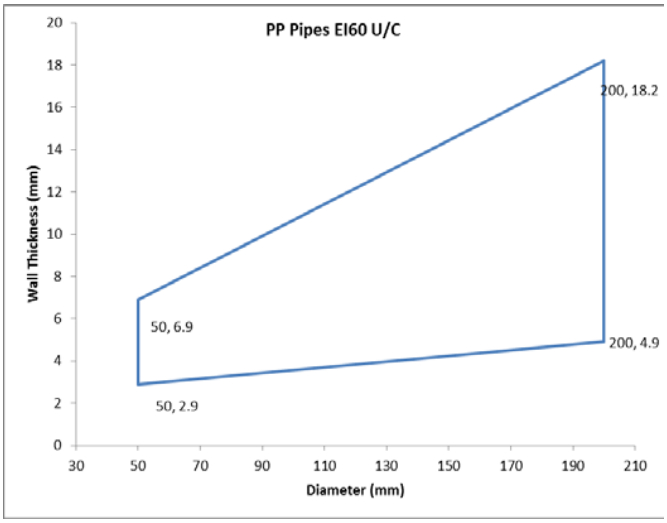
Key

1 Supporting construction
a_1 Pipe / top edge of seal separation
a_2 Pipe / side edge of seal separation
a_3 Pipe / pipe separation




PE Pipes EI60 U/C
Wall Thickness (mm)
Diameter (mm)
200, 18.4
200, 11.9
50, 4.6
50, 2.9


PVC Pipes EI60 U/C
Wall Thickness (mm)
Diameter (mm)
200, 9.6
200, 7.7
50, 3.7
50, 1.8


PP Pipes EI60 U/C
Wall Thickness (mm)
Diameter (mm)
200, 18.2
200, 4.9
50, 6.9
50, 2.9

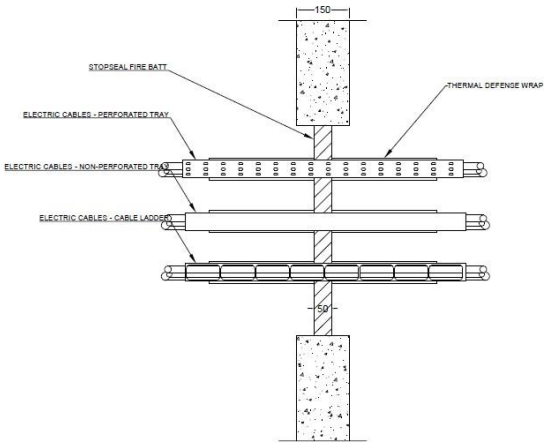
B29 FSi Stopseal Fire Batt Penetration Seal in Rigid Walls min. 150 mm thick

B29.1 FSi Single Layer (50mm) Stopseal Fire Batt Penetration Seal B

29.1.1 Cable Penetrations

Construction details:

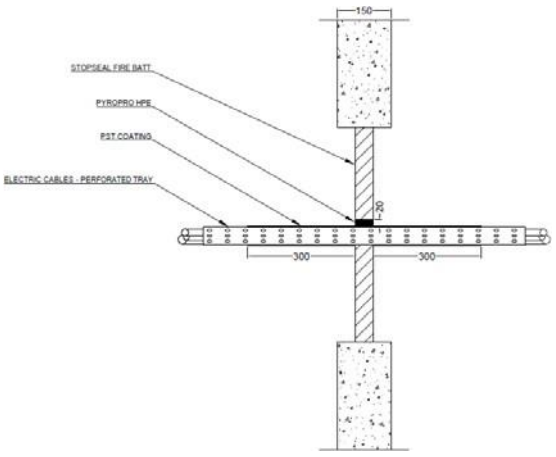
- Single layer of Stopseal Fire Batt (50mm) installed internally within the wall.
- Max. Aperture size 600mm wide x 600mm high
- Cables and cable trays wrapped with a single layer of 6mm thick FSi Thermal Defense Wrap (L/I 300mm)
- First service support 250mm from both faces of the substrate



Service(s)	Classification
Electrical cables up to 80mm Ø	**EI 60**
Cable Trays and Ladders	**EI 60**
100 mm diameter bundle telecommunication cable type "F"	**EI 60**
Unsheathed electrical cables up to 24mmØ	**EI 60**

Construction details:

- Single layer of Stopseal Fire Batt (50mm) installed internally within the wall.
- Max. Aperture size 750mm wide x 1100mm high
- All cables coated with 2mm DFT PST Coating 300mm along the cables both sides of the seal.
- 50mm deep x 20mm wide anulus Pyropro HPE Sealant
- First service support 400mm from both faces of the substrate



Service(s)	Classification
500mm perforated cable tray	**EI 30**
Electrical cables up to 21mm ø	**EI 45**
1 off 'C1' Cable	
1 off 'C2' Cable	
1 off 'C3' Cable	

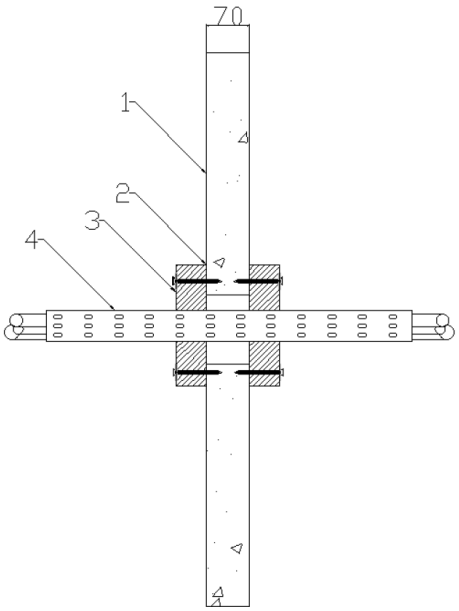
B30 FSi Stopseal Fire Batt Penetration Seal in Rigid Walls min. 70 mm thick

B30.1 FSi Single Layer (50mm) Stopseal Fire Batt Penetration Seal

B30.1.1 Cable Penetrations

Construction details:

- Single layer Pattress Stopseal Fire Batt (50mm), Electrical cables.
- Max. Aperture size 730mm wide x 1200 mm high
- Pyrocoustic Sealant (2)
- Stopseal Batt (3)

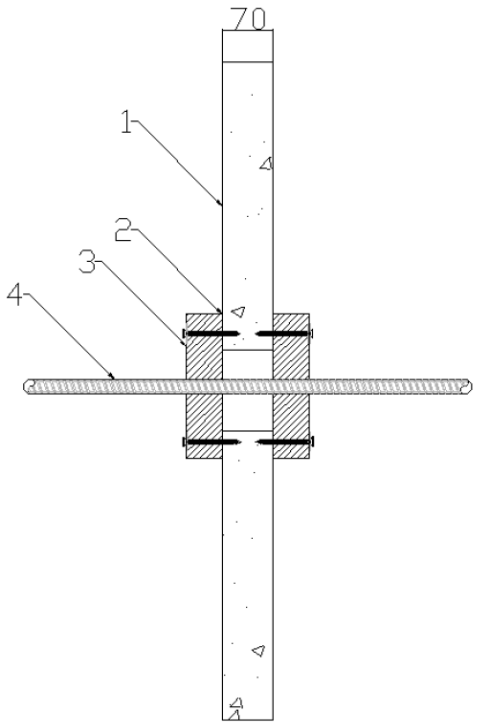


Penetration Specification	Classification
500mm wide x 60mm deep steel cable basket containing 3 x type 'B' cable and 20 x bundle of telecoms cables	**EI 90**
500mm wide x 60mm deep steel cable tray containing 1 x type 'B' cable, 3 x type 'A1' cable, 3 x type 'A2' cable, and 3 x type 'A3' cable	

Pattress installation of Stopseal Coated Batt. The Batts are installed in horizontal rows and fixed on all edges. Overlap of batts to substrate min 50mm. Batts mechanically fixed to substrate with min 6mm x 80mm steel screws and steel retaining washer. Fixings installed at max 300mm centers

Construction details:

- Single layer Pattress Stopseal Fire Batt (50mm), Electrical cables and Conduits.
- Max. Aperture size 730mm wide x 1200 mm high
- Pyrocoustic Sealant (2)
- Stopseal Batt (3)

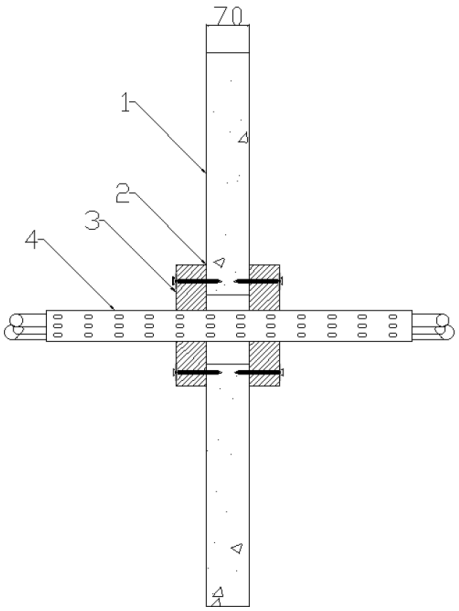


Penetration Specification	Classification
20mm dia Adaptaflex SPL20 flexible conduit	**EI 90**
20mm dia Kopex KSU 316 stainless steel flexible conduit	
150mm wide x 60mm deep steel cable tray containing 4 x FP200 Gold (Firealarm cable 7mm dia red) Cables	**EI 90 EI 60**

Pattress installation of Stopseal Coated Batt. The Batts are installed in horizontal rows and fixed on all edges. Overlap of batts to substrate min 50mm. Batts mechanically fixed to substrate with min 6mm x 80mm steel screws and steel retaining washer. Fixings installed at max 300mm centres

Construction details:

- Single layer Pattress Stopseal Fire Batt (50mm), Electrical cables.
- Max. Aperture size 2600mm wide x 2600 mm high
- Cables and cable trays wrapped with Stone Wool Insulation 45mm thick, 40Kg/m3 (L/I 200mm)
- Pyrocoustic Sealant (2)
- Stopseal Batt (3)

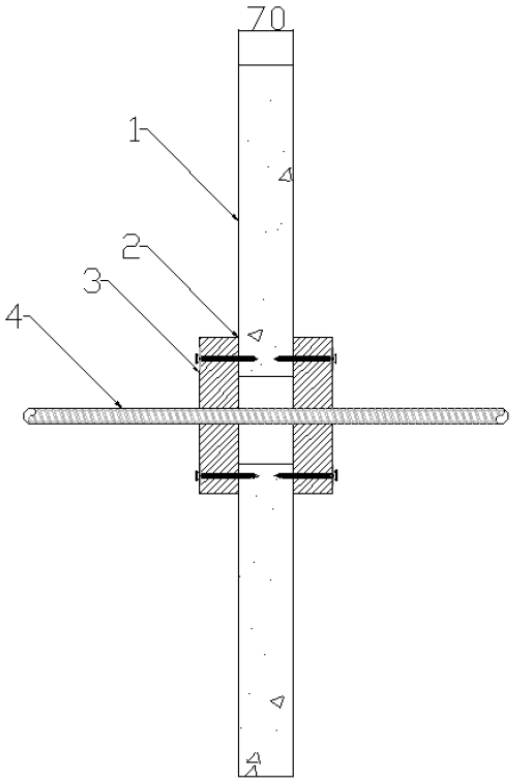


Penetration Specification	Classification
500mm wide x 60mm deep steel cable basket containing 3 x type 'B' cable and 20 x bundle of telecoms cables	**EI 60**
500mm wide x 60mm deep steel cable tray containing 1 x type 'B' cable, 3 x type 'A1' cable, 3 x type 'A2' cable, and 3 x type 'A3' cable	

Pattress installation of Stopseal Coated Batt. The Batts are installed in horizontal rows and fixed on all edges. Overlap of batts to substrate min 50mm. Batts mechanically fixed to substrate with min 6mm x 80mm steel screws and steel retaining washer. Fixings installed at max 300mm centers.

Construction details:

- Single layer Pattress Stopseal Fire Batt (50mm), Electrical cables and Conduits.
- Max. Aperture size 2600mm wide x 2600 mm high
- Pyrocoustic Sealant (2)
- Stopseal Batt (3)



Penetration Specification	Classification
20mm dia Adaptaflex SPL20 flexible conduit	**EI 60**
20mm dia Kopex KSU 316 stainless steel flexible conduit	
150mm wide x 60mm deep steel cable tray containing 4 x FP200 Gold (Firealarm cable 7mm dia red) Cables	

Pattress installation of Stopseal Coated Batt. The Batts are installed in horizontal rows and fixed on all edges. Overlap of batts to substrate min 50mm. Batts mechanically fixed to substrate with min 6mm x 80mm steel screws and steel retaining washer. Fixings installed at max 300mm centers

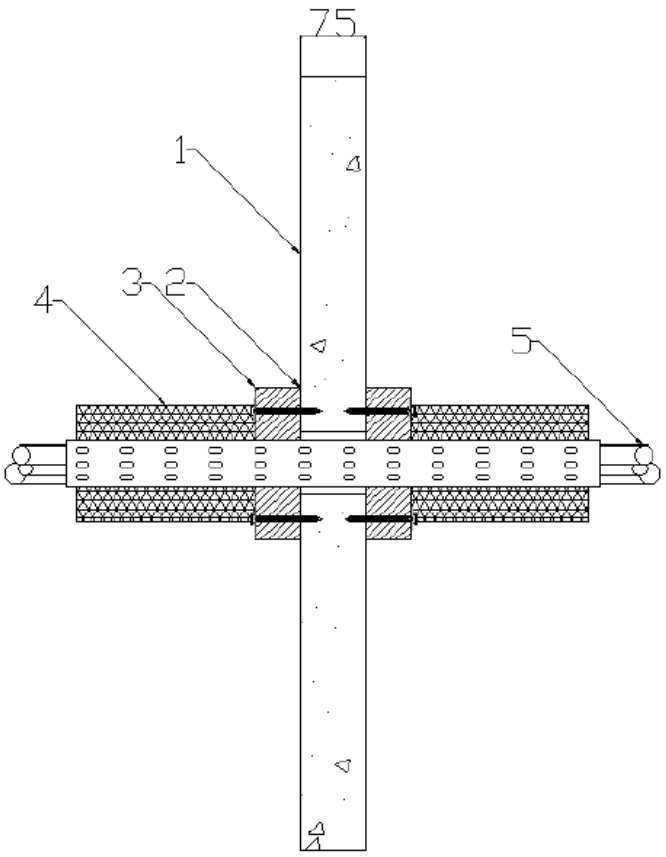
B31 FSi Stopseal Fire Batt Penetration Seal in Rigid Walls min. 75 mm thick

B31.1 FSi Single Layer (50mm) Stopseal Fire Batt Penetration Seal

B31.1.1 Cable Penetrations

Construction details:

- Single layer Pattress Stopseal Fire Batt (50mm), Electrical cables and Cable Trunking
- Max. Aperture size 2600mm wide x 2600 mm high
- Pyrocoustic Sealant (2)
- Stopseal Batt (3)
- Insulation (4)

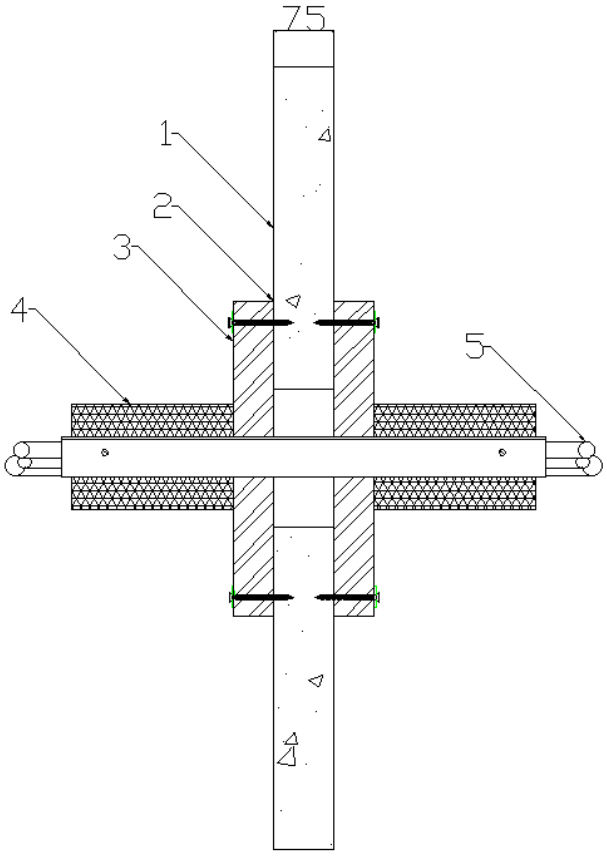


Penetration Specification	Classification
50mm x 50mm Insulated steel cable trunking, Stone Wool 40mm thick, 45kg/m3 (LI 400mm). FSi S-Line Pillows tightly fitted around the cables in the section of trunking within the depth of the partition	**EI 60 U/U**
Cables 1xA1, 1xA2, 1xA3	**EI 60**
Cables 1xA1	
Cables 1xA2	
Cables 1xA3	

Pattress installation of Stopseal Coated Batt. The Batts are installed in horizontal rows and fixed in minimum two vertical edges. Overlap of batts to substrate min 50mm. Batts mechanically fixed to substrate with min 6mm x 80mm steel screws and steel retaining washer.
Fixings installed at max 300mm centers.

Construction details:

- Single layer Pattress Stopseal Fire Batt (50mm), Electrical cables and Cable Trunking
- Max. Aperture size 2600mm wide x 2600 mm high
- Pyrocoustic Sealant (2)
- Stopseal Batt (3)
- Insulation (4)



Penetration Specification	Classification
150mm x 150mm Insulated steel cable trunking, Stone Wool 40mm thick, 45kg/m3 (LI 400mm). FSi S-Line Pillows tightly fitted around the cables in the section of trunking within the depth of the partition	**EI 60 U/U**
Cables 1xB1, 1xC1, 1xG1, 1xG2	**EI 60**
Cables 1xB1	
Cables 1xB1	
Cables 1xC1	
Unsheathed electrical cables 0-24 mm dia	

Pattress installation of Stopseal Coated Batt. The Batts are installed in horizontal rows and fixed in minimum two vertical edges. Overlap of batts to substrate min 50mm. Batts mechanically fixed to substrate with min 6mm x 80mm steel screws and steel retaining washer.
Fixings installed at max 300mm centers.

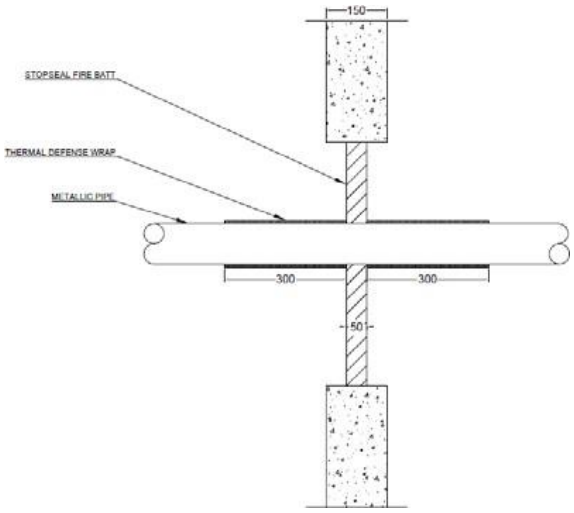
B32 FSi Stopseal Fire Batt Penetration Seal in Rigid Walls min. 150 mm thick

B32.1 FSi Single Layer (50mm) Stopseal Fire Batt Penetration Seal

B32.1.1 Metallic Pipe Penetrations

Construction details:

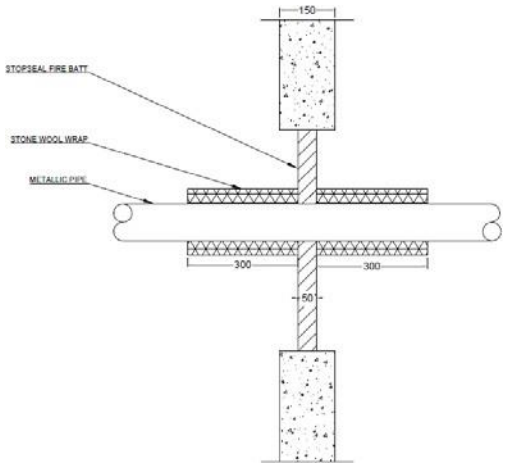
- Single layer of Stopseal Fire Batt (50mm) installed internally within the wall.
- Max. Aperture size 600mm wide x 600mm high
- Metallic pipes wrapped with a single layer of 6mm thick FSi Thermal Defense Wrap (L/I 300mm)
- First service support 250mm from both faces of the substrate



Service(s)	Classification
Steel or Copper Pipe 108mm Ø, 1.5mm – 14.2mm Wall Thickness. (C/S) 40mm stone wool insulation (min 140Kg/m^3)	**E 60 C/U** **EI 45 C/U**

Construction details:

- Single layer of Stopseal Fire Batt (50mm) installed internally within the wall.
- Max. Aperture size 730mm wide x 1100mm high
- First service support 400mm from both faces of the substrate



Service(s)	Classification
Steel or Copper Pipe 42mm Ø, 1.2mm – 14.2mm wall thickness. (L/I 300mm) 40mm stone wool insulation (min 40Kg/m^3)	**EI 45 C/U**
Steel or Copper Pipe 42mm – 159mm Ø, 2mm – 14.2mm wall thickness. (L/I 300mm) 40mm stone wool insulation (min 40Kg/m^3)	**E 45 C/U** **EI 15 C/U**

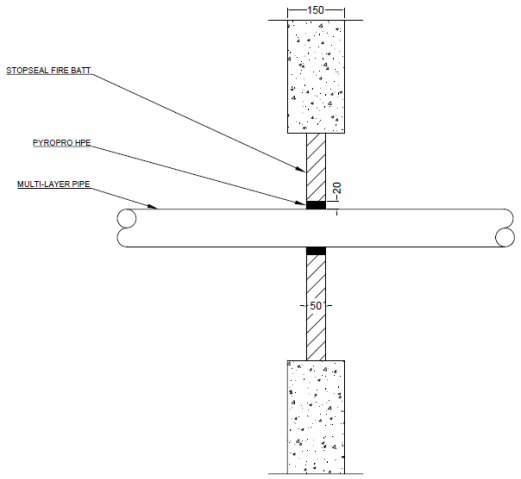
B33 FSi Stopseal Fire Batt Penetration Seal in Rigid Walls min. 150 mm thick

B33.1 FSi Single Layer (50mm) Stopseal Fire Batt Penetration Seal

B33.1.1 Plastic Pipe Penetrations

Construction details:

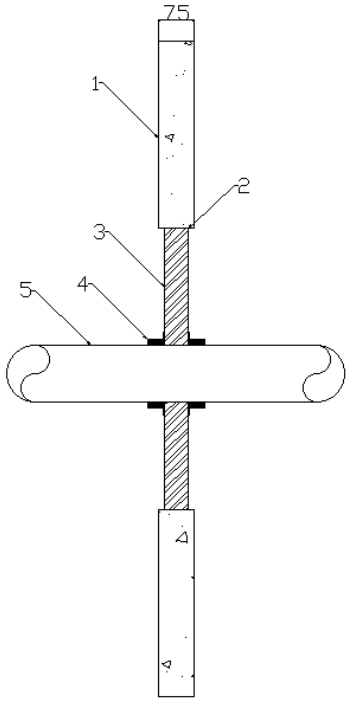
- Single layer of Stopseal Fire Batt (50mm) installed internally within the wall.
- Max. Aperture size 750mm wide x 1100mm high
- Pyropro HPE 20mm annulus full 50mm depth of the Stopseal Coated Batt
- First service support 400mm from both faces of the substrate



Penetration Specification	Classification
Uponor MLC (Multi-Layer Composite) Pipe 40mm ø 4mm wall thickness	**E 45 U/C** **EI 30 U/C**
Uponor MLC (Multi-Layer Composite) Pipe 50mm ø 4.5mm wall thickness	
Uponor MLC (Multi-Layer Composite) Pipe 63mm ø 6mm wall thickness	
Uponor MLC (Multi-Layer Composite) Pipe 75mm ø 7.5mm wall thickness	
Uponor MLC (Multi-Layer Composite) Pipe 90mm ø 8.5mm wall thickness	
Uponor MLC (Multi-Layer Composite) Pipe 110mm ø 10mm wall thickness	

Construction details:

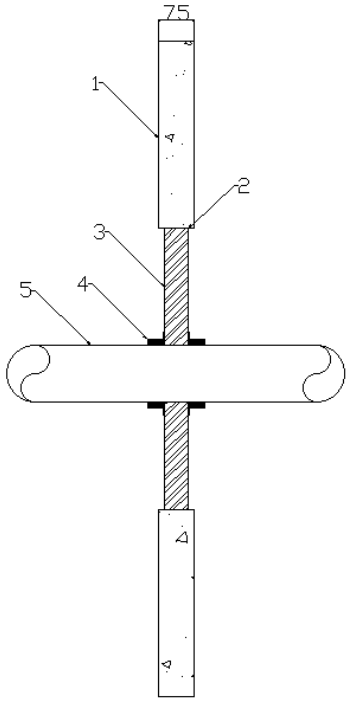
- Single layer of Stopseal Fire Batt (50mm) Plastic Pipes
- Max. Aperture size 600mm wide x 600mm high
- Penetrations positioned as per option 1 or 2 below, 0 mm distance between services and 50 mm to edge of seal
- Collars secured both faces of the substrate utilizing 80 mm long steel pig tail screw through to Stopseal Fire Batt
- Pyrocoustic Sealant (2)
- Stopseal Batt (3)
- PipeBloc PCP (4)
- First service support 400mm from both faces of the substrate



Penetration Specification	PipeBloc PCP Ref	Classification
PVC Pipe 32mm Ø, 1.8mm wall thickness	32 mm	**EI 60 U/C**
PVC Pipe 40mm Ø, 1.8mm wall thickness	40 mm	
PVC Pipe 50mm Ø, 1.8mm wall thickness	50 mm	
PVC Pipe 55mm Ø, 1.8-2.3mm wall thickness	55 mm	
PVC Pipe 63mm Ø, 2.3-3mm wall thickness	63 mm	
PVC Pipe 75mm Ø, 3.1-4.8mm wall thickness	75 mm	
PVC Pipe 82mm Ø, 3.1-4.8mm wall thickness	82 mm	
PVC Pipe 90mm Ø, 4.2-7.4mm wall thickness	90 mm	
PVC Pipe 100mm Ø, 4.2-7.4mm wall thickness	100 mm	
PVC Pipe 110mm Ø, 4.2-7.4mm wall thickness	110 mm	
PVC Pipe 125mm Ø, 6mm wall thickness	125 mm	
PVC Pipe 140mm Ø, 6.1-7.5mm wall thickness	140 mm	

Construction details:

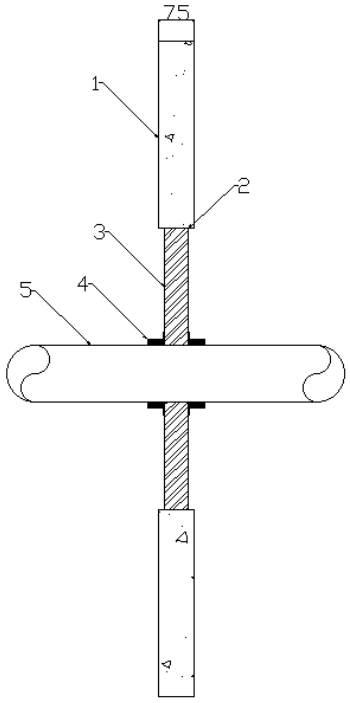
- Single layer of Stopseal Fire Batt (50mm) Plastic Pipes
- Max. Aperture size 600mm wide x 600mm high
- Penetrations positioned as per option 1 or 2 below, 0 mm distance between services and 50 mm to edge of seal
- Collars secured both faces of the substrate utilizing 80 mm long steel pig tail screw through to Stopseal Fire Batt
- Pyrocoustic Sealant (2)
- Stopseal Batt (3)
- PipeBloc PCP (4)
- First service support 400mm from both faces of the substrate



Penetration Specification	PipeBloc PCP Ref	Classification
PVC Pipe 32mm Ø, 2.9mm wall thickness	32 mm	**EI 60 U/C**
PVC Pipe 40mm Ø, 2.9mm wall thickness	40 mm	
PVC Pipe 50mm Ø, 2.9mm wall thickness	50 mm	
PVC Pipe 55mm Ø, 2.9-4.4mm wall thickness	55 mm	
PVC Pipe 63mm Ø, 2.9-4.4mm wall thickness	63 mm	
PVC Pipe 75mm Ø, 2.8-6.7mm wall thickness	75 mm	
PVC Pipe 82mm Ø, 2.8-6.7mm wall thickness	82 mm	
PVC Pipe 90mm Ø,2.7-10mm wall thickness	90 mm	
PVC Pipe 100mm Ø, 2.7-10mm wall thickness	100 mm	
PVC Pipe 110mm Ø, 2.7-10mm wall thickness	110 mm	
PVC Pipe 125mm Ø, 3.1mm wall thickness	125 mm	
PVC Pipe 140mm Ø, 3.9-8mm wall thickness	140 mm	
PVC Pipe 160mm Ø, 4.9-9.5mm wall thickness	160 mm	

Construction details:

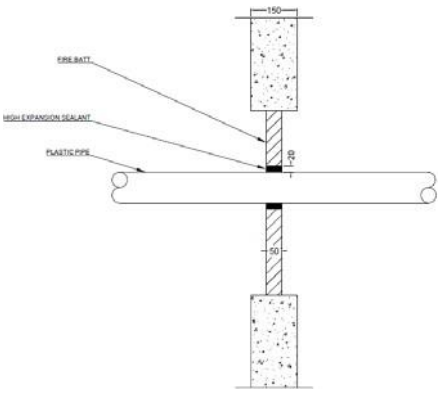
- Single layer of Stopseal Fire Batt (50mm) Plastic Pipes
- Max. Aperture size 600mm wide x 600mm high
- Penetrations positioned as per option 1 or 2 below, 0 mm distance between services and 50 mm to edge of seal
- Collars secured both faces of the substrate utilizing 80 mm long steel pig tail screw through to Stopseal Fire Batt
- Pyrocoustic Sealant (2)
- Stopseal Batt (3)
- PipeBloc PCP (4)
- First service support 400mm from both faces of the substrate



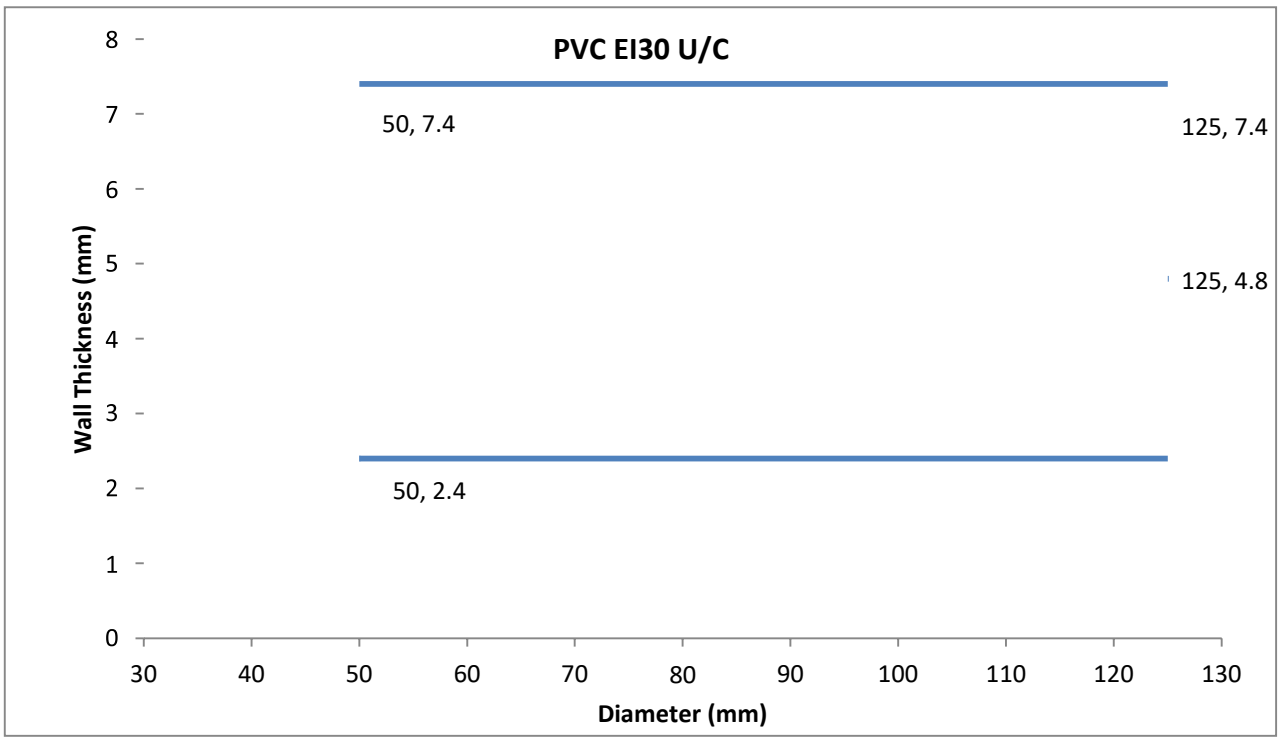
Penetration Specification	PipeBloc PCP Ref	Classification
PVC Pipe 32mm Ø, 2.9mm wall thickness	32 mm	**EI 60 U/C**
PVC Pipe 40mm Ø, 2.9mm wall thickness	40 mm	
PVC Pipe 50mm Ø, 2.9mm wall thickness	50 mm	
PVC Pipe 55mm Ø, 2.9-4.4mm wall thickness	55 mm	
PVC Pipe 63mm Ø, 2.9-4.4mm wall thickness	63 mm	
PVC Pipe 75mm Ø, 2.8-6.7mm wall thickness	75 mm	
PVC Pipe 82mm Ø, 2.8-6.7mm wall thickness	82 mm	
PVC Pipe 90mm Ø,2.7-10mm wall thickness	90 mm	
PVC Pipe 100mm Ø, 2.7-10mm wall thickness	100 mm	
PVC Pipe 110mm Ø, 2.7-10mm wall thickness	110 mm	
PVC Pipe 125mm Ø, 3.1mm wall thickness	125 mm	
PVC Pipe 140mm Ø, 3.9-8mm wall thickness	140 mm	
PVC Pipe 160mm Ø, 4-14.6mm wall thickness	160 mm	

Construction details:

- Single layer of Stopseal Fire Batt (50mm) installed internally within the wall.
- Max. Aperture size 750mm wide x 1100mm high
- Pyropro HPE 20mm annulus full 50mm depth of the Stopseal Coated Batt
- First service support 400mm from both faces of the substrate



Penetration Specification	Classification
PVC Pipe 50mm ø 2.4-7.4mm wall thickness	**EI 45 U/C**
Also scope as per graphs below	



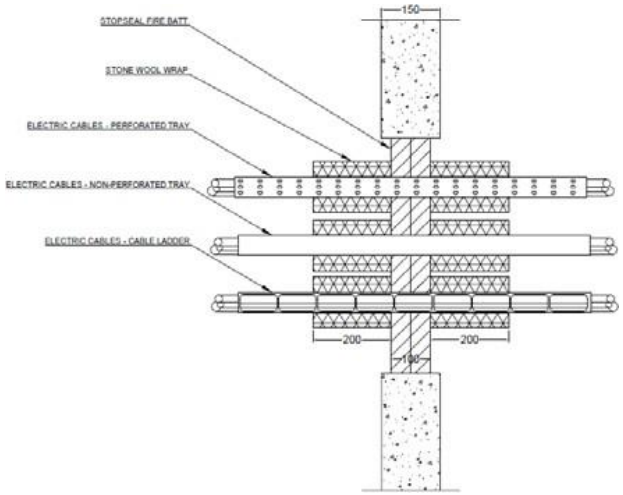
B33 FSi Stopseal Fire Batt Penetration Seal in Rigid Walls min. 150 mm thick

B34.1 FSi double Layer (50mm) Stopseal Fire Batt Penetration Seal

B34.1.1 Cable Penetrations

Construction details:

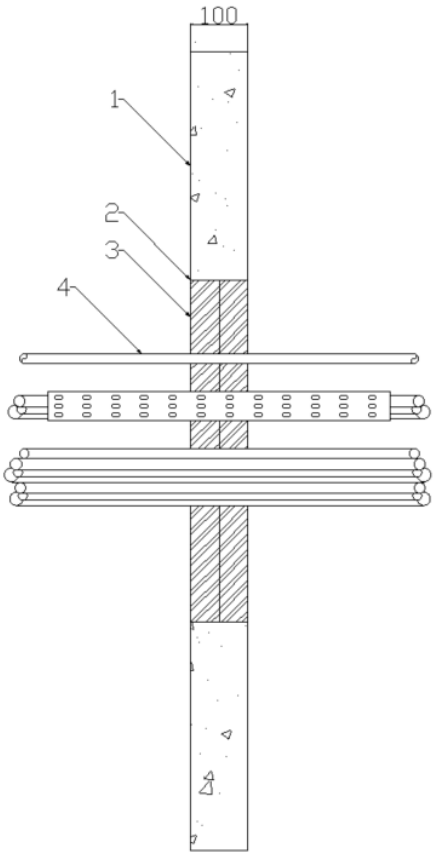
- Double layer of Stopseal Fire Batt (50mm) installed internally within the wall.
- Max. Aperture size 700mm wide x 1100mm high
- Cables and cable trays wrapped with Stone Wool Insulation 45mm thick, 40Kg/m3 (L/I 200mm)
- First service support 400mm from both faces of the substrate



Service(s)	Classification
Electrical cables up to 21mm dia	**EI 120**
Electrical cables 22mm – 80mm dia	**E 120, EI 90**
Cable Trays and Ladders	**EI 120**
100 mm diameter bundle telecommunication cable type "F"	**EI 120**
Unsheathed electrical cables up to 24mm dia	**EI 120**

Construction details:

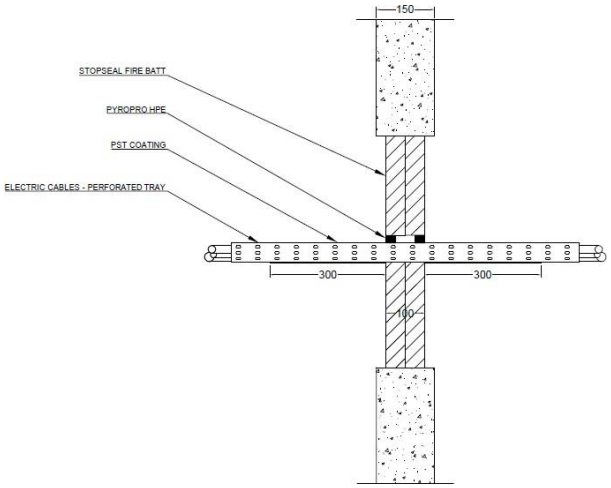
- Double layer of Stopseal Fire Batt (50mm) Electrical Cables and Conduits.
- Max. Aperture size 2600mm wide x 2600mm high
- Pyrocoustic Sealant (2)
- Stopseal Batt (3)



Service(s)	Classification
Electrical cables up to 21mm dia	**EI 60**
Electrical cables 22mm – 50mm dia	**E 60** **EI 45**
Electrical cables 22mm – 80mm dia	**E 60** **EI 30**
Cable Trays and Ladders	**E 60** **EI 45**
100 mm diameter bundle telecommunication cable type "F"	**EI 60**
Unsheathed electrical cables up to 24mm dia	**EI 60**
Steel or Copper Conduits up to 16 mm	**E 60 C/U**
Plastic Conduits up to 16 mm	**E 60 C/U**

Construction details:

- Double layer of Stopseal Fire Batt (50mm) installed internally within the wall.
- Max. Aperture size 750mm wide x 1200mm high
- Cables and cable trays wrapped with Stone Wool Insulation 45mm thick, 40Kg/m3 (L/I 200mm)
- Pyropro HPE 20mm annulus full 50mm depth of the Stopseal Coated Batt
- First service support 400mm from both faces of the substrate



Penetration Specification	Classification
500mm perforated cable tray	**EI 120**
Electrical cables up to 21mm ø	
1 off 'C1' Cable	
1 off 'C2' Cable	**E 120 EI 90**
1 off 'C3' Cable	**EI 120**

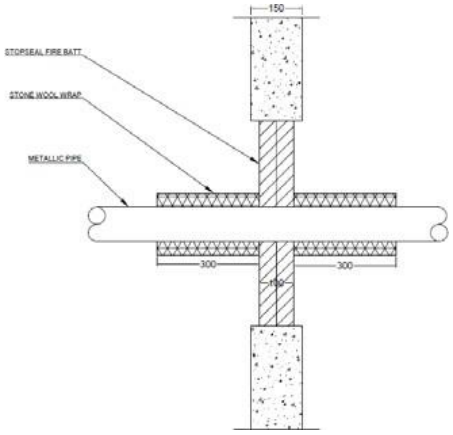
B35 FSi Stopseal Fire Batt Penetration Seal in Rigid Walls min. 150 mm thick

B35.1 FSi Double Layer (50mm) Stopseal Fire Batt Penetration Seal

B35.1.1 Metallic Pipe Penetrations

Construction details:

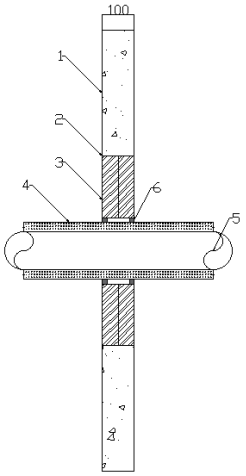
- Double layer of Stopseal Fire Batt (50mm) installed internally within the wall.
- Max. Aperture size 700mm wide x 1100mm high
- Cables and cable trays wrapped with 40mm stone wool insulation (min 40Kg/m^3) (L/I 300mm)
- First service support 400mm from both faces of the substrate

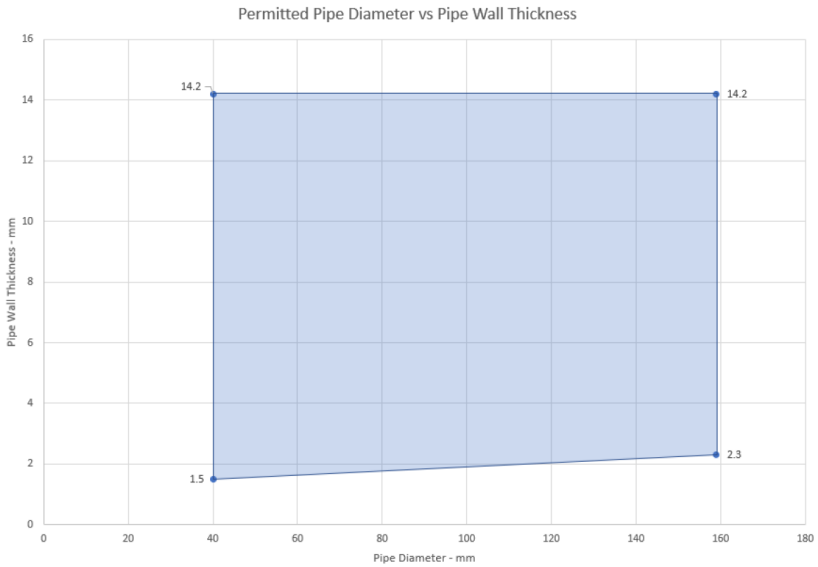


Service(s)	Classification
Steel or Copper Pipe 42mm Ø, 1.2mm – 14.2mm wall thickness. (L/I 300mm) 40mm stone wool insulation (min 40Kg/m^3)	**E 120 C/U** **EI 60 C/U**
Steel or Copper Pipe 42mm – 159mm Ø, 2mm – 14.2mm wall thickness. (L/I 300mm) 40mm stone wool insulation (min 40Kg/m^3)	**E 120 C/U** **EI 30 C/U**

Construction details:

- Double layer of Stopseal Fire Batt (50mm) Insulated Metallic Pipes
- Max. Aperture size 730mm wide x 1200mm high
- Cables and cable trays wrapped with 40mm stone wool insulation (min 40Kg/m^3) (L/I 300mm)
- 15mm deep x 15mm wide annulus Pyropro HPE Sealant to both faces of the pipe

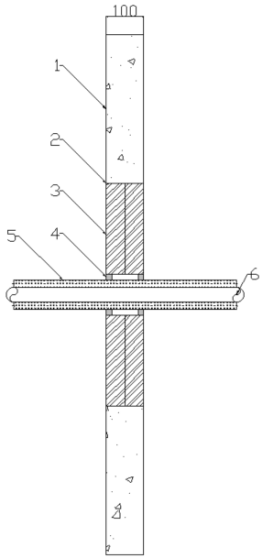


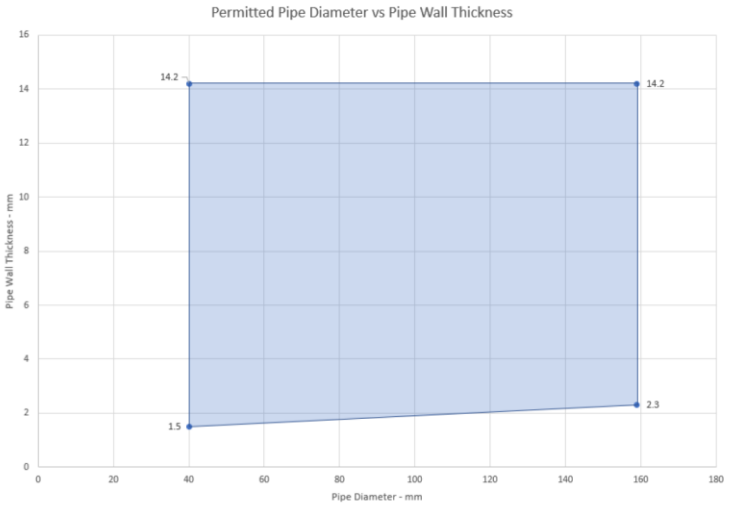


Service(s)	Classification
Single copper or mild steel pipe 40mm diameter and 1.5 – 14.2 mm wall with sustained/continuous 20mm thick foil faced glass wool insulation (min 80Kg/m^3)	**E 90 U/C** **EI 60 U/C**
Single copper or mild steel pipe 40-159mm diameter and 1.5 – 14.2 mm wall (see graph above) with sustained/continuous 30mm thick foil faced glass wool insulation (min 80Kg/m^3)	**EI 60 U/C**

Construction details:

- Double layer of Stopseal Fire Batt (50mm) Insulated Metallic Pipes
- Max. Aperture size 2600mm wide x 2600mm high
- Cables and cable trays wrapped with 40mm stone wool insulation (min 40Kg/m^3) (L/I 300mm)
- 15mm deep x 15mm wide annulus Pyropro HPE Sealant to both faces of the pipe

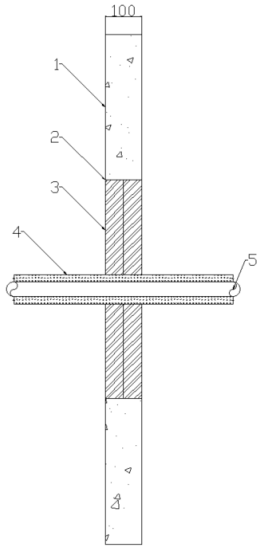


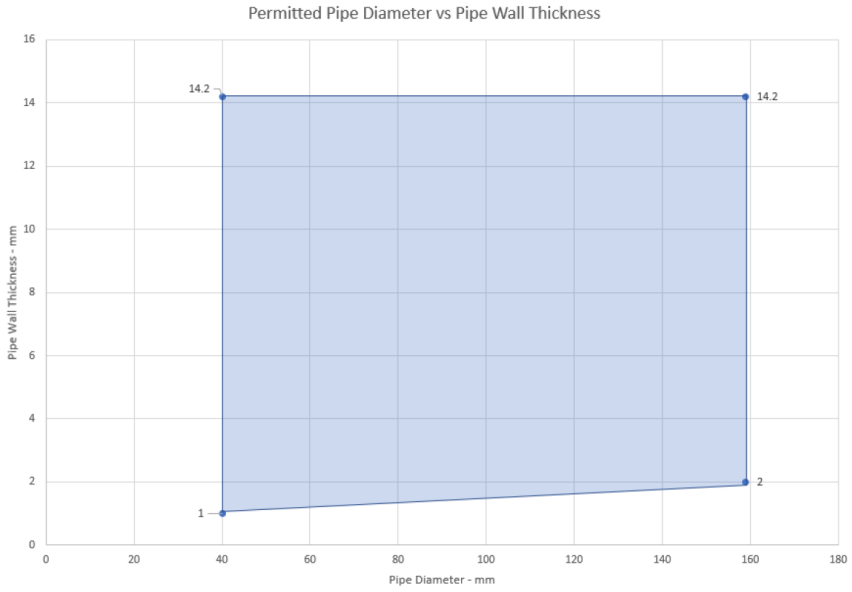


Service(s)	Classification
Single copper or mild steel pipe 40mm diameter and 1.5 – 14.2 mm wall with sustained/continuous 20mm thick foil faced glass wool insulation (min 80Kg/m^3)	**E 90 U/C** **EI 60 U/C**
Single copper or mild steel pipe 40-159mm diameter and 1.5 – 14.2 mm wall (see graph above) with sustained/continuous 30mm thick foil faced glass wool insulation (min 80Kg/m^3)	**EI 60 U/C**

Construction details:

- Double layer of Stopseal Fire Batt (50mm) Insulated Metallic Pipes
- Max. Aperture size 730mm wide x 1200mm high

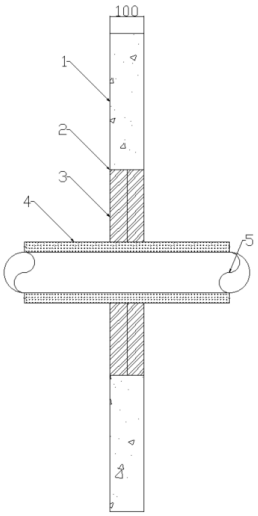


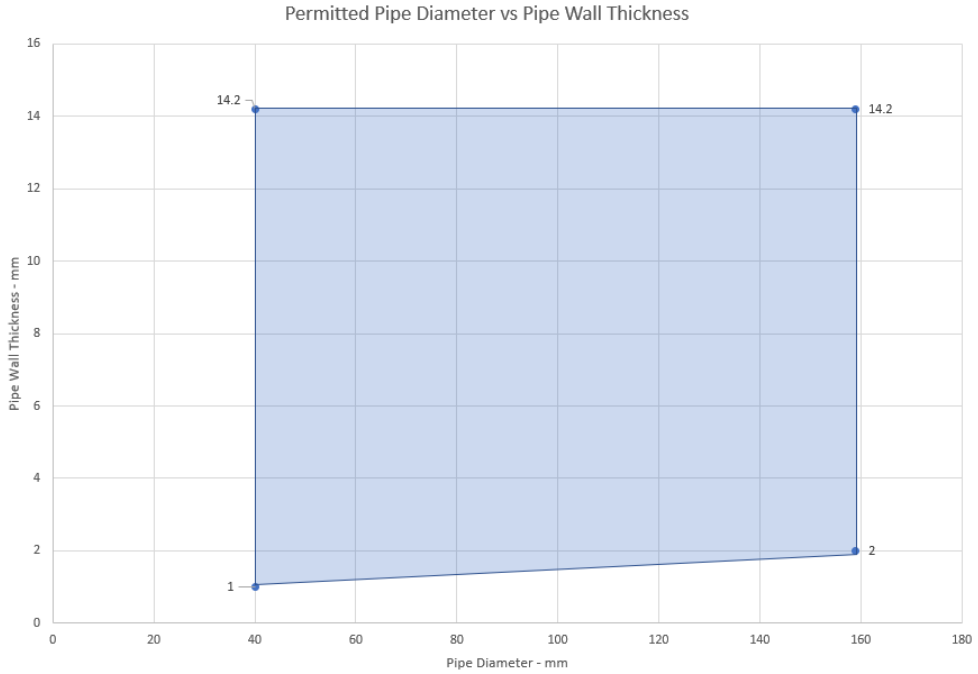


Service(s)	Classification
Steel or Copper Pipe 42-159mm Ø, 1.0mm – 14.2mm wall thickness (see graph above). 25mm thick foil faced glassfibre insulation min. 30kg/m^3 (C/S)	**E 120 C/U** **EI 45 C/U**
Steel or Copper Pipe 42mm Ø, 1mm – 14.2mm wall thickness. 25mm thick foil faced glassfibre insulation min. 30kg/m^3 (C/S)	**E 120 C/U** **EI 60 C/U**

Construction details:

- Double layer of Stopseal Fire Batt (50mm) Insulated Metallic Pipes
- Max. Aperture size 2600mm wide x 2600mm high

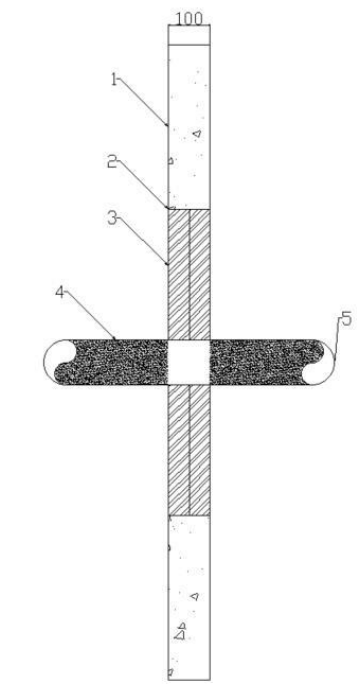




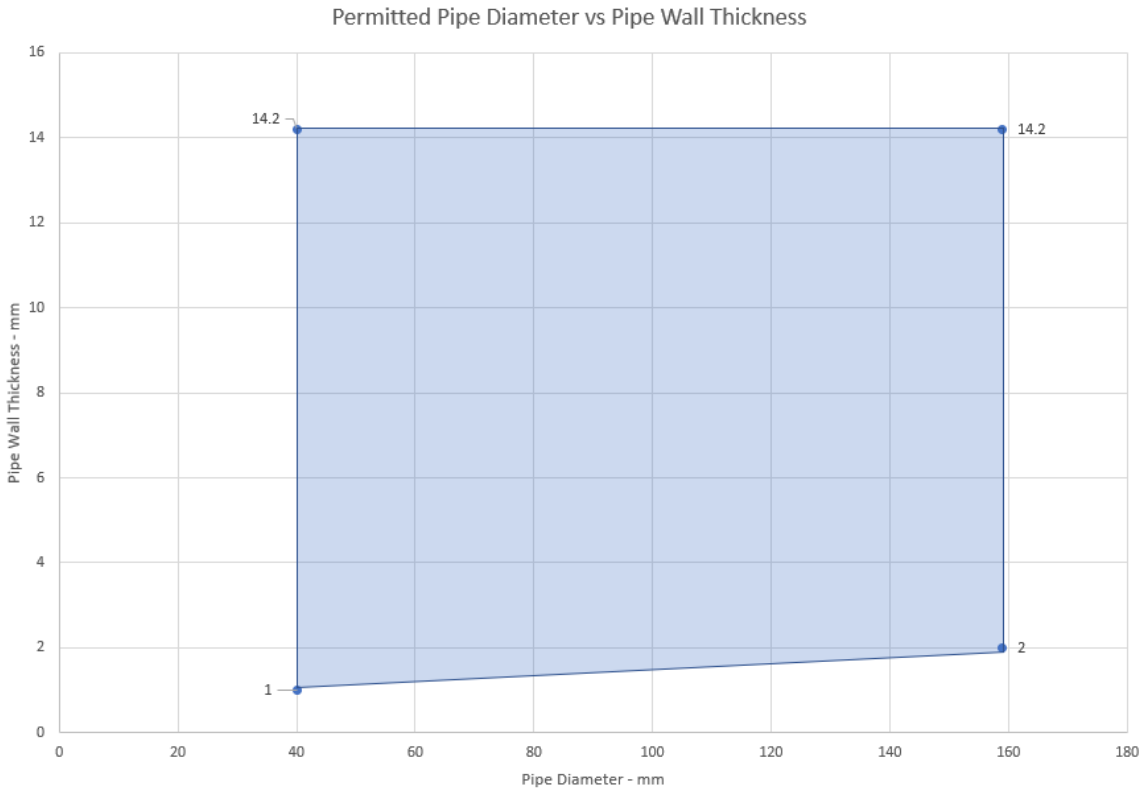
Service(s)	Classification
Steel or Copper Pipe 42-159mm Ø, 1.0mm – 14.2mm wall thickness (see graph above). 25mm thick foil faced glassfibre insulation min. 30kg/m3 (C/S)	**E 60 C/U** **EI 45 C/U**
Steel or Copper Pipe 42mm Ø, 1mm – 14.2mm wall thickness. 25mm thick foil faced glassfibre insulation min. 30kg/m3 (C/S)	**E 60 C/U** **EI 60 C/U**

Construction details:

- Double layer of Stopseal Fire Batt (50mm) Insulated Metallic Pipes
- Max. Aperture size 730mm wide x 1200mm high
- Penetrations positioned as per option 1 or 2 below, 0 mm distance between services and 50 mm to edge of seal.

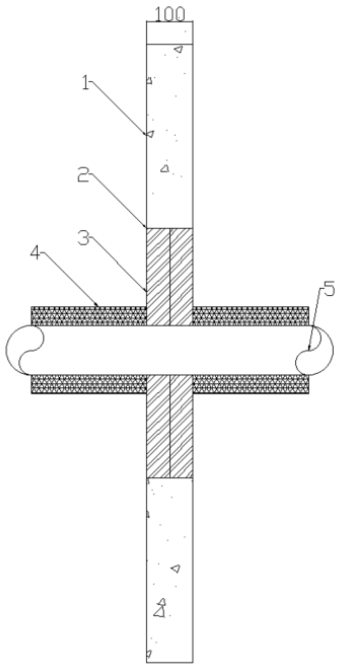


Service(s)	Classification
Steel or Copper Pipe 108mm Ø, 1.5mm – 14.2mm wall thickness, 50mm thick foil faced stone wool insulation min. 100kg/m^3 (L/I 500mm)	**E 120 C/U** **EI 45 C/U**
Steel or Copper Pipe 108mm Ø, 1.5mm – 14.2mm wall thickness, 50mm thick foil faced stone wool insulation min. 100kg/m^3 (C/I)	**E 120 C/U** **EI 60 C/U**
Steel or Copper Pipe 42-159mm Ø, 1.0mm – 14.2mm wall thickness (see graph below), 40mm thick foil faced stonewool insulation min. 40kg/m^3 (L/I 400mm)	**EI 45 C/U**
Steel 42-324mm Ø, 16mm wall thickness. 40mm thick foil faced stonewool insulation min. 40kg/m^3 (L/I 400mm)	**EI 45 C/U**
Steel or Copper Pipe 42mm Ø, 1.0mm – 14.2mm wall thickness , FSi PST coating along the penetration 2mm DFT (L/I 300mm)	**E 120 C/U** **EI 45 C/U**
Steel or Copper Pipe 42-159mm Ø, 1.0mm – 14.2mm wall thickness (see graph below), FSi PST coating along the penetration 2mm DFT (L/I 300mm)	**E 120 C/U** **EI 20 C/U**
Steel 42-324mm Ø, 16mm wall thickness. 14.2mm wall thickness FSi PST coating along the penetration 2mm DFT (L/I 300mm)	**E 120 C/U** **EI 45 C/U**

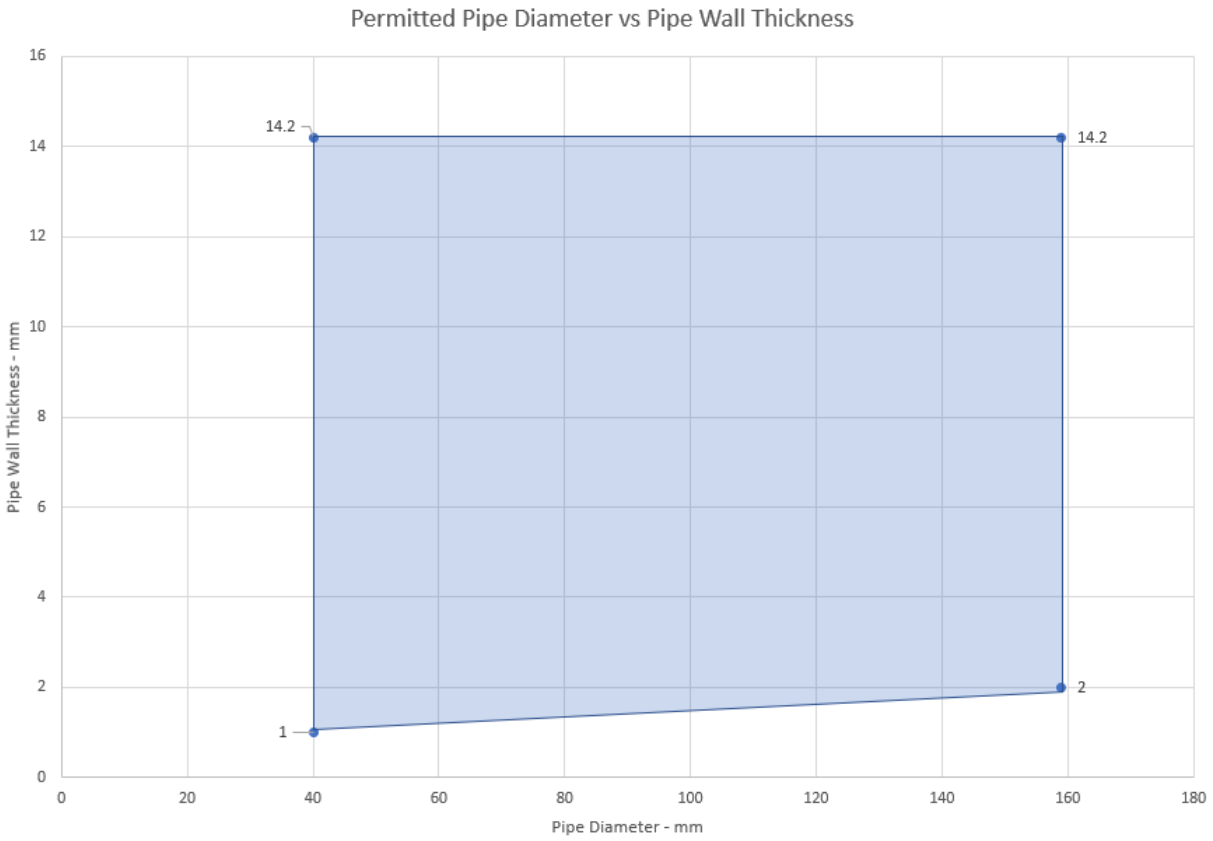

Permitted Pipe Diameter vs Pipe Wall Thickness
Pipe Wall Thickness - mm
Pipe Diameter - mm
14.2
14.2
2
1
0
2
4
6
8
10
12
14
16
0
20
40
60
80
100
120
140
160
180

Construction details:

- Double layer of Stopseal Fire Batt (50mm) Insulated Metallic Pipes
- Max. Aperture size 730mm wide x 1200mm high
- Penetrations positioned as per option 1 or 2 below, 0 mm distance between services and 50 mm to edge of seal.

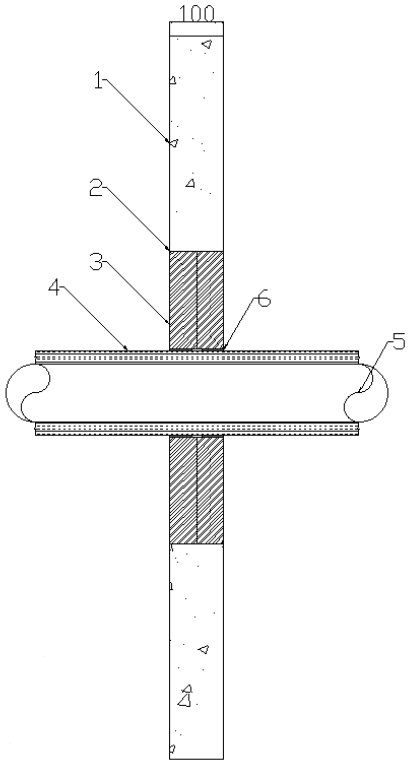


Service(s)	Classification
Steel or Copper Pipe 108mm Ø, 1.5mm – 14.2mm wall thickness, 50mm thick foil faced stone wool insulation min. 100kg/m^3 (L/I 500mm)	**E 60 C/U** **EI 45 C/U**
Steel or Copper Pipe 108mm Ø, 1.5mm – 14.2mm wall thickness, 50mm thick foil faced stone wool insulation min. 100kg/m^3 (C/I)	**EI 60 C/U**
Steel or Copper Pipe 42-159mm Ø, 1.0mm – 14.2mm wall thickness (see graph below), 40mm thick foil faced stonewool insulation min. 40kg/m^3 (L/I 400mm)	**EI 45 C/U**
Steel 42-324mm Ø, 16mm wall thickness. 40mm thick foil faced stonewool insulation min. 40kg/m^3 (L/I 400mm)	**EI 45 C/U**
Steel or Copper Pipe 42mm Ø, 1.0mm – 14.2mm wall thickness , FSi PST coating along the penetration 2mm DFT (L/I 300mm)	**E 60 C/U** **EI 45 C/U**
Steel or Copper Pipe 42-159mm Ø, 1.0mm – 14.2mm wall thickness (see graph below), FSi PST coating along the penetration 2mm DFT (L/I 300mm)	**E 60 C/U** **EI 20 C/U**
Steel 42-324mm Ø, 16mm wall thickness. 14.2mm wall thickness FSi PST coating along the penetration 2mm DFT (L/I 300mm)	**E 160 C/U** **EI 45 C/U**


Permitted Pipe Diameter vs Pipe Wall Thickness
Pipe Wall Thickness - mm
Pipe Diameter - mm
14.2
14.2
2
1
0
2
4
6
8
10
12
14
16
0
20
40
60
80
100
120
140
160
180

Construction details:

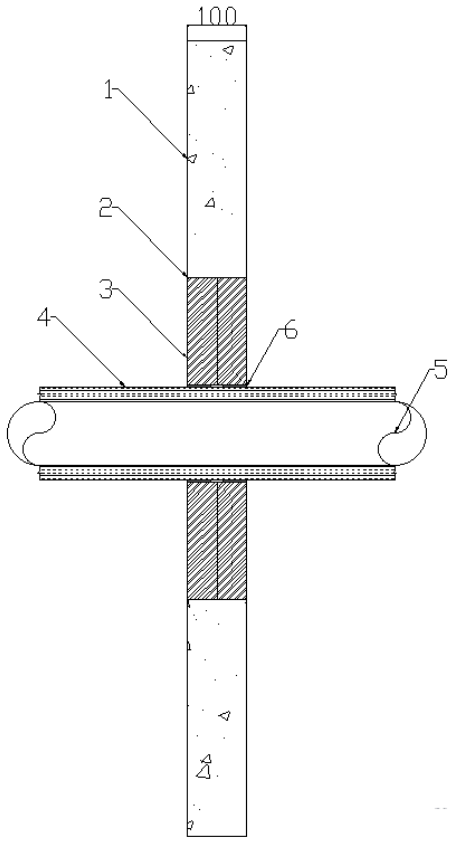
- Double layer of Stopseal Fire Batt (50mm) Insulated Metallic Pipes
- Max. Aperture size 750mm wide x 1200mm high
- 2x2 mm thick layers of PipeBloc EL/PipeBloc PWP installed on both sides of the Stopseal Fire Batt
- Equivalent elastomeric pipe insulation classified BL-s2,d0 or better to EN 13501-1
- Equivalent Phenolic foam pipe insulation classified BL-S1, d0 or better to EN 13501-1



Service(s)	Classification
Steel or Copper Pipe 42-159mm Ø, 1.2mm – 14.2mm wall thickness. 13-25mm thick K Flex ST Insulation (C/S)	**E 120 C/U EI 60 C/U**
Steel or Copper Pipe 42mm Ø, 1 – 14.2mm wall thickness. 25-13mm thick K Flex ST insulation (C/S)	**E 120 C/U EI 90 C/U**
Steel or Copper Pipe 42-108mm Ø, 1.2 – 14.2mm wall thickness. 25 -40mm thick Kingspan Kooltherm FM insulation (C/S)	**E 120 C/U EI 60 C/U**
Steel or Copper Pipe 42mm Ø, 1–14.2mm wall thickness. 25 -40mm thick Kingspan Kooltherm FM insulation3 (C/S)	**E 120 C/U EI 90 C/U**
Steel or Copper Pipe 42mm Ø, 1.0–14.2mm wall thickness. 50mm thick glassfibre insulation (C/S)	**E 120 C/U EI 90 C/U**
Steel or Copper Pipe 42-159mm Ø, 1.2mm – 14.2mm wall thickness. 13-25mm thick K Flex ST Insulation (C/S)	**E 120 C/U EI 60 C/U**

Construction details:

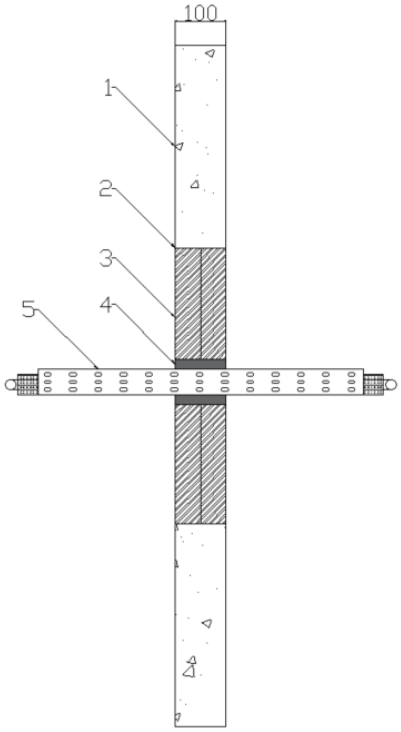
- Double layer of Stopseal Fire Batt (50mm) Insulated Metallic Pipes
- Max. Aperture size 2600mm wide x 2600mm high
- 2x2 mm thick layers of PipeBloc EL/PipeBloc PWP installed on both sides of the Stopseal Fire Batt
- Equivalent elastomeric pipe insulation classified BL-s2,d0 or better to EN 13501-1
- Equivalent Phenolic foam pipe insulation classified BL-S1, d0 or better to EN 13501-1



Service(s)	Classification
Steel or Copper Pipe 42-159mm Ø, 1.2mm – 14.2mm wall thickness. 13-25mm thick K Flex ST Insulation (C/S)	**EI 60 C/U**
Steel or Copper Pipe 42mm Ø, 1 – 14.2mm wall thickness. 25-13mm thick K Flex ST insulation (C/S)	**EI 60 C/U**
Steel or Copper Pipe 42-108mm Ø, 1.2 – 14.2mm wall thickness. 25 -40mm thick Kingspan Kooltherm FM insulation (C/S)	**EI 60 C/U**
Steel or Copper Pipe 42mm Ø, 1–14.2mm wall thickness. 25 -40mm thick Kingspan ooltherm FM insulation (C/S)	**EI 60 C/U**
Steel or Copper Pipe 42mm Ø, 1.02–14.2mm wall thickness. 50mm thick glassfibre insulation (C/S)	**EI 60 C/U**
Steel or Copper Pipe 42-159mm Ø, 1.2mm – 14.2mm wall thickness. 13-25mm thick K Flex ST Insulation (C/S)	**EI 60 C/U**

Construction details:

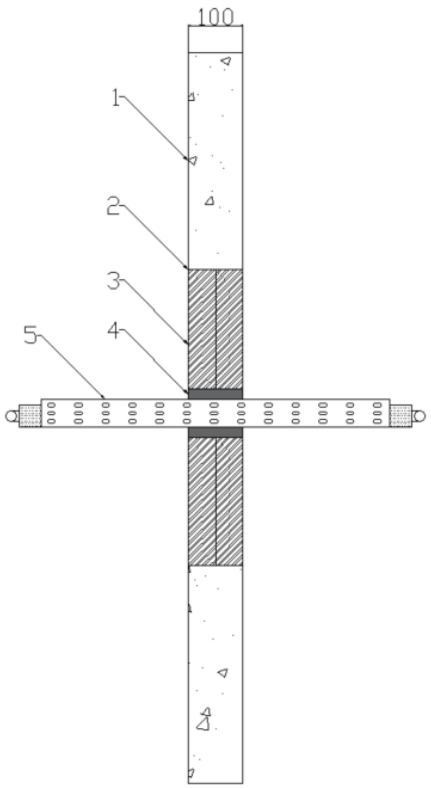
- Double layer of Stopseal Fire Batt (50mm) Insulated Metallic Pipes
- Max. Aperture size 730mm wide x 1200mm high
- Pyropro HPE 20 mm annulus full 50mm depth of the Stopseal Coated Batt
- Equivalent elastomeric pipe insulation classified BL-s2,d0 or better to EN 13501-1



Service(s)	Classification
6 off Steel or Copper Pipe 22mm Ø, 0.9mm – 14.2mm wall thickness. 19mm thick Armaflex (L/S 400mm)	**EI 90 C/U**
1500mm steel cable tray	**E 90** **EI 15**

Construction details:

- Double layer of Stopseal Fire Batt (50mm) Insulated Metallic Pipes
- Max. Aperture size 2600mm wide x 2600mm high
- Pyropro HPE 20 mm annulus full 50mm depth of the Stopseal Coated Batt
- Equivalent elastomeric pipe insulation classified BL-s2,d0 or better to EN 13501-1



Service(s)	Classification
6 off Steel or Copper Pipe 22mm Ø, 0.9mm – 14.2mm wall thickness. 19mm thick Armaflex (L/S 400mm)	**EI 60 C/U**
1500mm steel cable tray	**E 60** **EI 15**

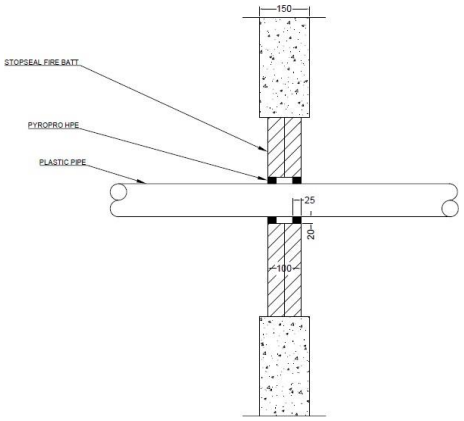
B36 FSi Stopseal Fire Batt Penetration Seal in Rigid Walls min. 150 mm thick

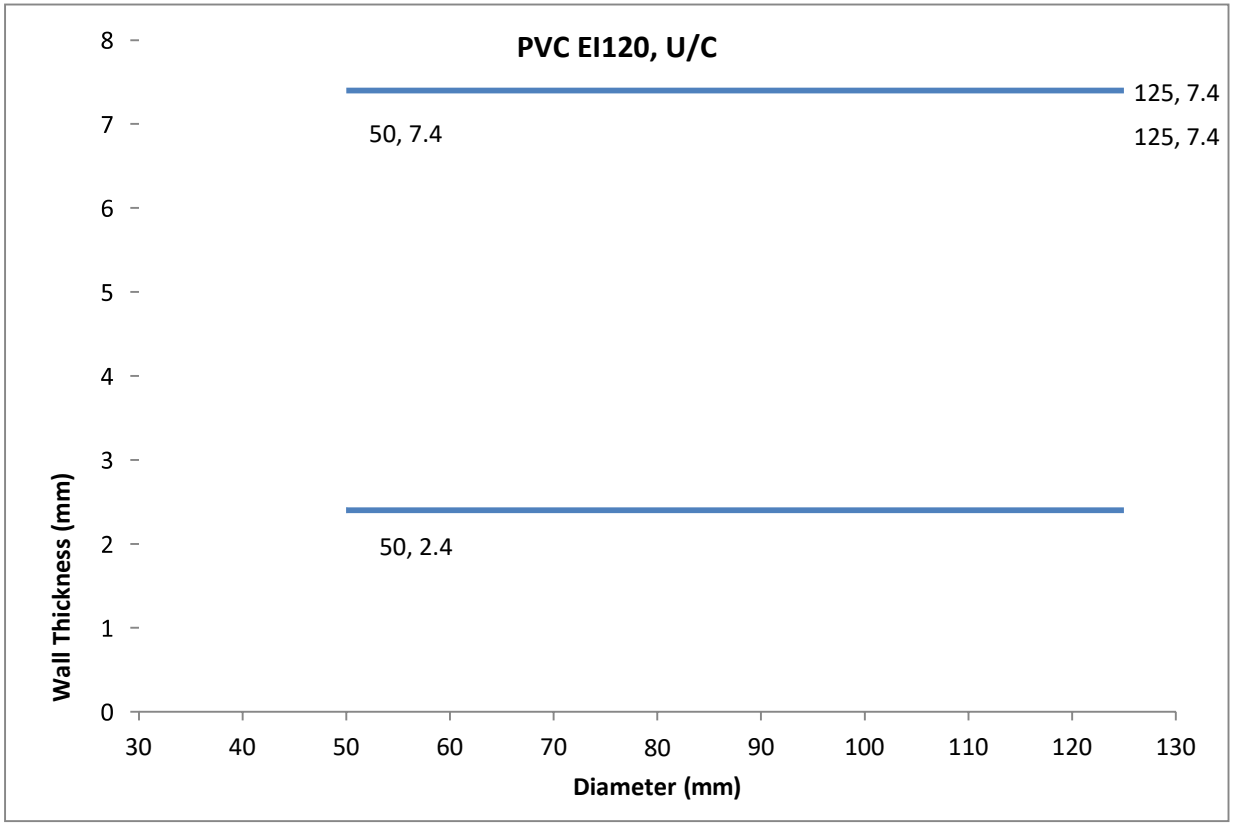
B36.1 FSi double Layer (50mm) Stopseal Fire Batt Penetration Seal

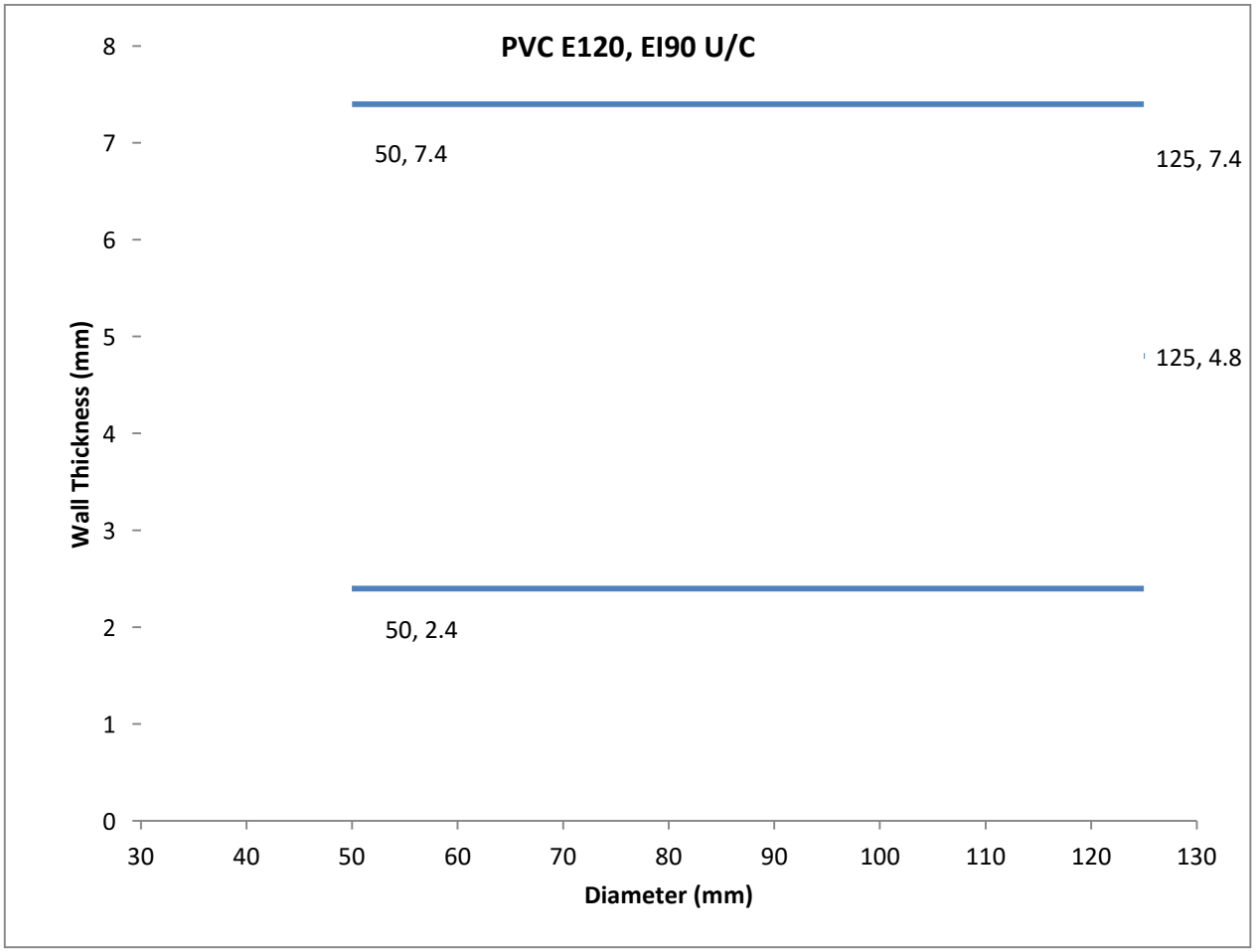
B36.1.1 Plastic Pipe Penetrations

Construction details:

- Double layer of Stopseal Fire Batt (50mm) installed internally within the wall.
- Max. Aperture size 750mm wide x 1100mm high
- PyroPro HPE 20mm annulus, 25mm deep both faces of the Stopseal Coated Batt
- First service support 400mm from both faces of the substrate

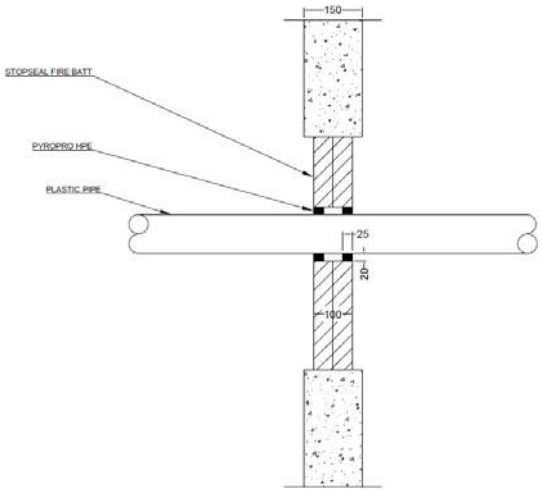





PVC E120, EI90 U/C
Wall Thickness (mm)
Diameter (mm)
50, 7.4
125, 7.4
125, 4.8
50, 2.4
0
1
2
3
4
5
6
7
8
30
40
50
60
70
80
90
100
110
120
130

Construction details:

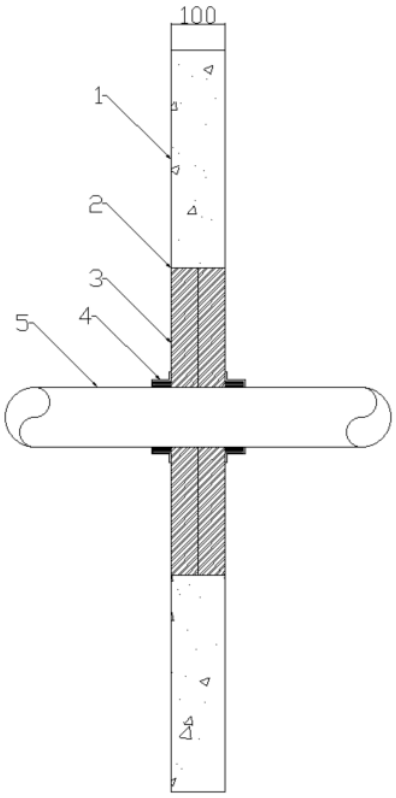
- Double layer of Stopseal Fire Batt (50mm) installed internally within the wall.
- Max. Aperture size 750mm wide x 1100mm high
- PyroPro HPE 20mm annulus, 25mm deep both faces of the Stopseal Coated Batt
- First service support 400mm from both faces of the substrate



Penetration Specification	Classification
Uponor MLC (Multi-Layer Composite) Pipe 40mm ø 4mm wall thickness	**EI 120 U/C**
Uponor MLC (Multi-Layer Composite) Pipe 50mm ø 4.5mm wall thickness	
Uponor MLC (Multi-Layer Composite) Pipe 63mm ø 6mm wall thickness	
Uponor MLC (Multi-Layer Composite) Pipe 75mm ø 7.5mm wall thickness	
Uponor MLC (Multi-Layer Composite) Pipe 90mm ø 8.5mm wall thickness	
Uponor MLC (Multi-Layer Composite) Pipe 110mm ø 10mm wall thickness	

Construction details:

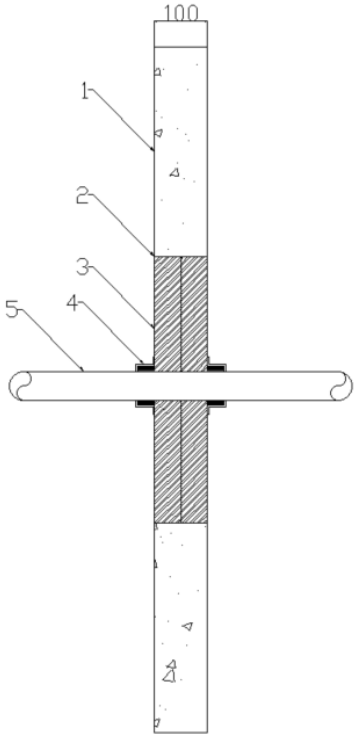
- Double layer of Stopseal Fire Batt (50mm) installed internally within the wall.
- Max. Aperture size 730mm wide x 1200mm high
- Penetration positioned as per option 1 or 2 below, 0mm distance between services and 50mm to edge of seal.
- Collars secured both faces of the substrate utilizing 80mm long steel pig tail screw through to Stopseal Fire Batt



Service(s)	PipeBloc PCP Ref	Classification
PVC Pipe 32mm Ø, 1.8mm wall thickness	32mm	**EI 120 U/C**
PVC Pipe 40mm Ø, 1.8mm wall thickness	40mm	
PVC Pipe 50mm Ø, 1.8mm wall thickness	50mm	
PVC Pipe 55mm Ø, 1.8-2.3mm wall thickness	55mm	
PVC Pipe 63mm Ø, 2.3-3mm wall thickness	63mm	
PVC Pipe 75mm Ø, 3.1-4.8mm wall thickness	75mm	
PVC Pipe 82mm Ø, 3.1-4.8mm wall thickness	82mm	
PVC Pipe 90mm Ø, 4.2-7.4mm wall thickness	90mm	
PVC Pipe 100mm Ø, 4.2-7.2mm wall thickness	100mm	
PVC Pipe 110mm Ø, 4.2-7.4mm wall thickness	110mm	
PVC Pipe 125mm Ø, 6mm wall thickness	125mm	
PVC Pipe 140mm Ø, 6.1-7.5mm wall thickness	140mm	

Construction details:

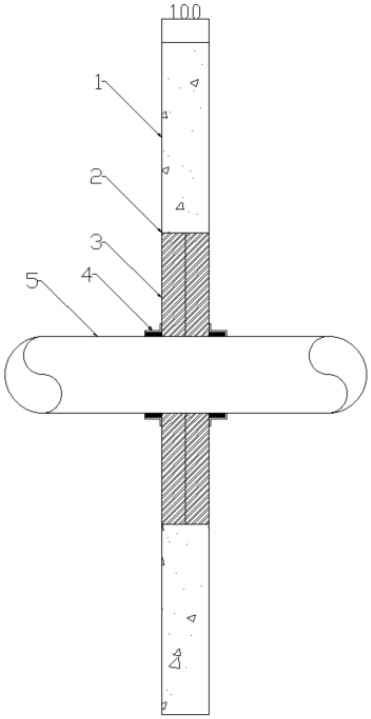
- Double layer of Stopseal Fire Batt (50mm) installed internally within the wall.
- Max. Aperture size 2600mm wide x 2600mm high
- Penetration positioned as per option 1 or 2 below, 0mm distance between services and 50mm to edge of seal.
- Collars secured both faces of the substrate utilizing 80mm long steel pig tail screw through to Stopseal Fire Batt



Service(s)	PipeBloc PCP Ref	Classification
PVC Pipe 32mm Ø, 1.8mm wall thickness	32mm	**EI 60 U/C**
PVC Pipe 40mm Ø, 1.8mm wall thickness	40mm	
PVC Pipe 50mm Ø, 1.8mm wall thickness	50mm	
PVC Pipe 55mm Ø, 1.8-2.3mm wall thickness	55mm	
PVC Pipe 63mm Ø, 2.3-3mm wall thickness	63mm	
PVC Pipe 75mm Ø, 3.1-4.8mm wall thickness	75mm	
PVC Pipe 82mm Ø, 3.1-4.8mm wall thickness	82mm	
PVC Pipe 90mm Ø, 4.2-7.4mm wall thickness	90mm	
PVC Pipe 100mm Ø, 4.2-7.2mm wall thickness	100mm	
PVC Pipe 110mm Ø, 4.2-7.4mm wall thickness	110mm	
PVC Pipe 125mm Ø, 6mm wall thickness	125mm	
PVC Pipe 140mm Ø, 6.1-7.5mm wall thickness	140mm	
PVC Pipe 160mm Ø, 6.2-9.5mm wall thickness	160 mm	

Construction details:

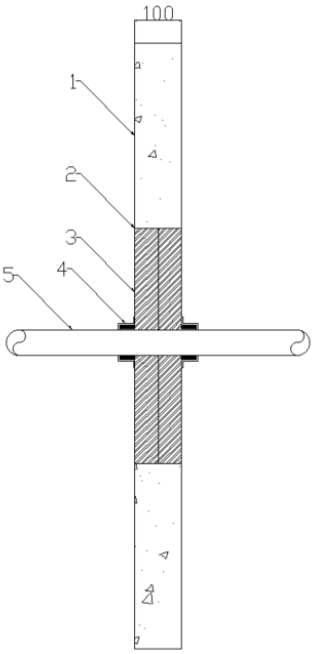
- Double layer of Stopseal Fire Batt (50mm) installed internally within the wall.
- Max. Aperture size 730mm wide x 1200mm high
- Penetration positioned as per option 1 or 2 below, 0mm distance between services and 50mm to edge of seal.
- Collars secured both faces of the substrate utilizing 80mm long steel pig tail screw through to Stopseal Fire Batt



Service(s)	PipeBloc PCP Ref	Classification
PVC Pipe 32mm Ø, 2.9mm wall thickness	32mm	**EI 120 U/C**
PVC Pipe 40mm Ø, 2.9mm wall thickness	40mm	
PVC Pipe 50mm Ø, 2.9mm wall thickness	50mm	
PVC Pipe 55mm Ø, 2.9-4.4mm wall thickness	55mm	
PVC Pipe 63mm Ø, 2.9-4.4mm wall thickness	63mm	
PVC Pipe 75mm Ø, 2.8-6.7mm wall thickness	75mm	
PVC Pipe 82mm Ø, 2.8-6.7mm wall thickness	82mm	
PVC Pipe 90mm Ø, 2.7-10mm wall thickness	90mm	
PVC Pipe 100mm Ø, 2.7-10mm wall thickness	100mm	
PVC Pipe 110mm Ø, 2.7-10mm wall thickness	110mm	
PVC Pipe 125mm Ø, 3.1mm wall thickness	125mm	
PVC Pipe 140mm Ø, 3.5-8mm wall thickness	140mm	
PVC Pipe 160mm Ø, 4-14.6mm wall thickness	160 mm	

Construction details:

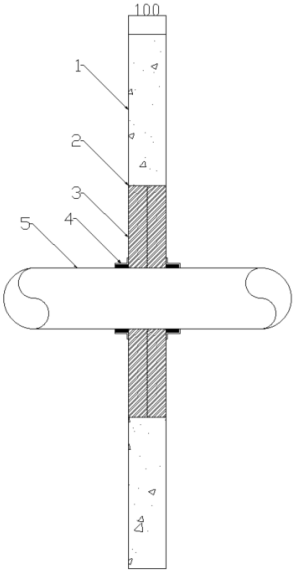
- Double layer of Stopseal Fire Batt (50mm) installed internally within the wall.
- Max. Aperture size 2600mm wide x 2600mm high
- Penetration positioned as per option 1 or 2 below, 0mm distance between services and 50mm to edge of seal.
- Collars secured both faces of the substrate utilizing 80mm long steel pig tail screw through to Stopseal Fire Batt



Service(s)	PipeBloc PCP Ref	Classification
PVC Pipe 32mm Ø, 2.9mm wall thickness	32mm	**EI 60U/C**
PVC Pipe 40mm Ø, 2.9mm wall thickness	40mm	
PVC Pipe 50mm Ø, 2.9mm wall thickness	50mm	
PVC Pipe 55mm Ø, 2.9-4.4mm wall thickness	55mm	
PVC Pipe 63mm Ø, 2.9-4.4mm wall thickness	63mm	
PVC Pipe 75mm Ø, 2.8-6.7mm wall thickness	75mm	
PVC Pipe 82mm Ø, 2.8-6.7mm wall thickness	82mm	
PVC Pipe 90mm Ø, 2.7-10mm wall thickness	90mm	
PVC Pipe 100mm Ø, 2.7-10mm wall thickness	100mm	
PVC Pipe 110mm Ø, 2.7-10mm wall thickness	110mm	
PVC Pipe 125mm Ø, 3.1mm wall thickness	125mm	
PVC Pipe 140mm Ø, 3.5-8mm wall thickness	140mm	
PVC Pipe 160mm Ø, 4-14.6mm wall thickness	160 mm	

Construction details:

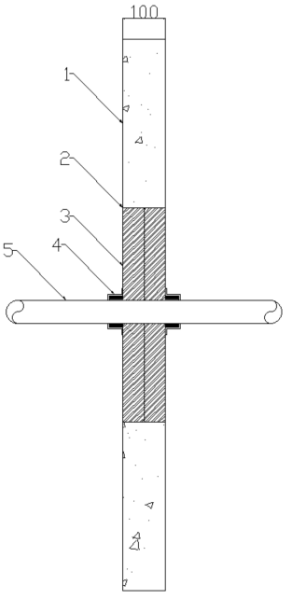
- Double layer of Stopseal Fire Batt (50mm) installed internally within the wall.
- Max. Aperture size 730mm wide x 1200mm high
- Penetration positioned as per option 1 or 2 below, 0mm distance between services and 50mm to edge of seal.
- Collars secured both faces of the substrate utilizing 80mm long steel pig tail screw through to Stopseal Fire Batt



Service(s)	PipeBloc PCP Ref	Classification
PVC Pipe 32mm Ø, 2.9mm wall thickness	32mm	**EI 120U/C**
PVC Pipe 40mm Ø, 2.9mm wall thickness	40mm	
PVC Pipe 50mm Ø, 2.9mm wall thickness	50mm	
PVC Pipe 55mm Ø, 2.9-4.4mm wall thickness	55mm	
PVC Pipe 63mm Ø, 2.9-4.4mm wall thickness	63mm	
PVC Pipe 75mm Ø, 2.8-6.7mm wall thickness	75mm	
PVC Pipe 82mm Ø, 2.8-6.7mm wall thickness	82mm	
PVC Pipe 90mm Ø, 2.7-10mm wall thickness	90mm	
PVC Pipe 100mm Ø, 2.7-10mm wall thickness	100mm	
PVC Pipe 110mm Ø, 2.7-10mm wall thickness	110mm	
PVC Pipe 125mm Ø, 3.1mm wall thickness	125mm	
PVC Pipe 140mm Ø, 3.5-8mm wall thickness	140mm	
PVC Pipe 160mm Ø, 4-9.5mm wall thickness	160 mm	

Construction details:

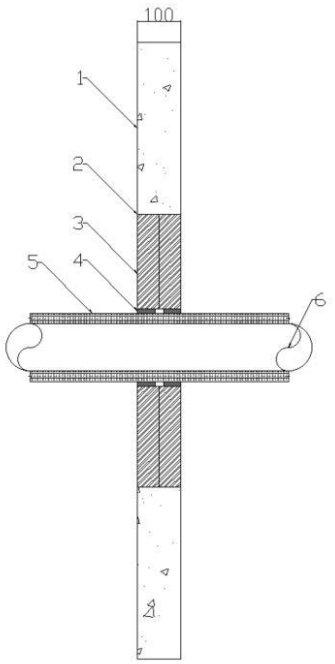
- Double layer of Stopseal Fire Batt (50mm) installed internally within the wall.
- Max. Aperture size 2600mm wide x 2600mm high
- Penetration positioned as per option 1 or 2 below, 0mm distance between services and 50mm to edge of seal.
- Collars secured both faces of the substrate utilizing 80mm long steel pig tail screw through to Stopseal Fire Batt



Service(s)	PipeBloc PCP Ref	Classification
PVC Pipe 32mm Ø, 2.9mm wall thickness	32mm	EI 60U/C
PVC Pipe 40mm Ø, 2.9mm wall thickness	40mm	
PVC Pipe 50mm Ø, 2.9mm wall thickness	50mm	
PVC Pipe 55mm Ø, 2.9-4.4mm wall thickness	55mm	
PVC Pipe 63mm Ø, 2.9-4.4mm wall thickness	63mm	
PVC Pipe 75mm Ø, 2.8-6.7mm wall thickness	75mm	
PVC Pipe 82mm Ø, 2.8-6.7mm wall thickness	82mm	
PVC Pipe 90mm Ø, 2.7-10mm wall thickness	90mm	
PVC Pipe 100mm Ø, 2.7-10mm wall thickness	100mm	
PVC Pipe 110mm Ø, 2.7-10mm wall thickness	110mm	
PVC Pipe 125mm Ø, 3.1mm wall thickness	125mm	
PVC Pipe 140mm Ø, 3.9-5.8mm wall thickness	140mm	
PVC Pipe 160mm Ø, 4.9-9.5mm wall thickness	160 mm	

Construction details:

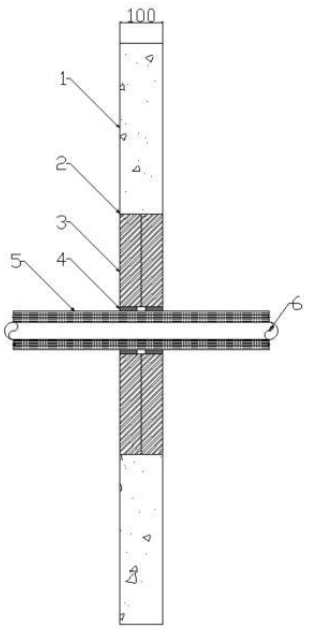
- Double layer of Stopseal Fire Batt (50mm) installed internally within the wall.
- Max. Aperture size 730mm wide x 1200mm high
- Penetration positioned as per option 1 or 2 below, 0mm distance between services and 50mm to edge of seal.
- PipeBloc EL / PipeBloc PWP secured internally within both faces of the Stopseal Fire Batt
- equivalent elastomeric pipe insulation classified BL – s2, d0 or better to EN 13501-1
- equivalent Phenolic foam pipe insulation classified BL – s1, d0 or better to EN 13501-1



Service(s)	PipeBloc EL/ PipeBloc PWP Ref	Classification
PVC Pipe 40mm Ø, 1.9mm wall thickness. 25 mm thick Kingspan Kooltherm FM3 insulation (C/S)	3x2mm thickness	**E 120 U/C EI 90 U/C**
PVC Pipe 40mm Ø, 3mm wall thickness. 15 mm thick Kingspan Kooltherm FM3 insulation (C/S)	3x2mm thickness	
PVC Pipe 110mm Ø, 4.2mm wall thickness. 25 mm thick Kingspan Kooltherm FM3 insulation (C/S)	5x2mm thickness	**EI 120 U/C**
PVC Pipe 110mm Ø, 6.6mm wall thickness. 20 mm thick Kingspan Kooltherm FM3 insulation (C/S)	5x2mm thickness	**E 120 U/C EI 90 U/C**
PVC Pipe 40mm Ø, 1.9mm wall thickness. 32 mm thick Armacell Armaflex Class O2 (C/S)	5x2mm thickness	**E 120 U/C EI 90 U/C**
PVC Pipe 40mm Ø, 3mm wall thickness. 9 mm thick Armacell Armaflex Class O2 (C/S)	5x2mm thickness	
PVC Pipe 110mm Ø, 4.2mm wall thickness. 32 mm thick Armacell Armaflex Class O2 (C/S)	5x2mm thickness	**EI 120 U/C**
PVC Pipe 110mm Ø, 6.6mm wall thickness. 13 mm thick Armacell Armaflex Class O2 (C/S)	5x2mm thickness	**E 120 U/C EI 90 U/C**

Construction details:

- Double layer of Stopseal Fire Batt (50mm) installed internally within the wall.
- Max. Aperture size 2600mm wide x 2600mm high
- Penetration positioned as per option 1 or 2 below, 0mm distance between services and 50mm to edge of seal.
- PipeBloc EL / PipeBloc PWP secured internally within both faces of the Stopseal Fire Batt
- equivalent elastomeric pipe insulation classified BL – s2, d0 or better to EN 13501-1
- equivalent Phenolic foam pipe insulation classified BL – s1, d0 or better to EN 13501-1



Service(s)	PipeBloc EL/ PipeBloc PWP Ref	Classification
PVC Pipe 40mm Ø, 1.9mm wall thickness. 25 mm thick Kingspan Kooltherm FM3 insulation (C/S)	3x2mm thickness	**EI 60 U/C**
PVC Pipe 40mm Ø, 3mm wall thickness. 15 mm thick Kingspan Kooltherm FM3 insulation (C/S)	3x2mm thickness	
PVC Pipe 110mm Ø, 4.2mm wall thickness. 25 mm thick Kingspan Kooltherm FM3 insulation (C/S)	5x2mm thickness	
PVC Pipe 110mm Ø, 6.6mm wall thickness. 20 mm thick Kingspan Kooltherm FM3 insulation (C/S)	5x2mm thickness	
PVC Pipe 40mm Ø, 1.9mm wall thickness. 32 mm thick Armacell Armaflex Class O2 (C/S)	3x2mm thickness	
PVC Pipe 40mm Ø, 3mm wall thickness. 9 mm thick Armacell Armaflex Class O2 (C/S)	3x2mm thickness	
PVC Pipe 110mm Ø, 4.2mm wall thickness. 32 mm thick Armacell Armaflex Class O2 (C/S)	5x2mm thickness	
PVC Pipe 110mm Ø, 6.6mm wall thickness. 13 mm thick Armacell Armaflex Class O2 (C/S)	5x2mm thickness	

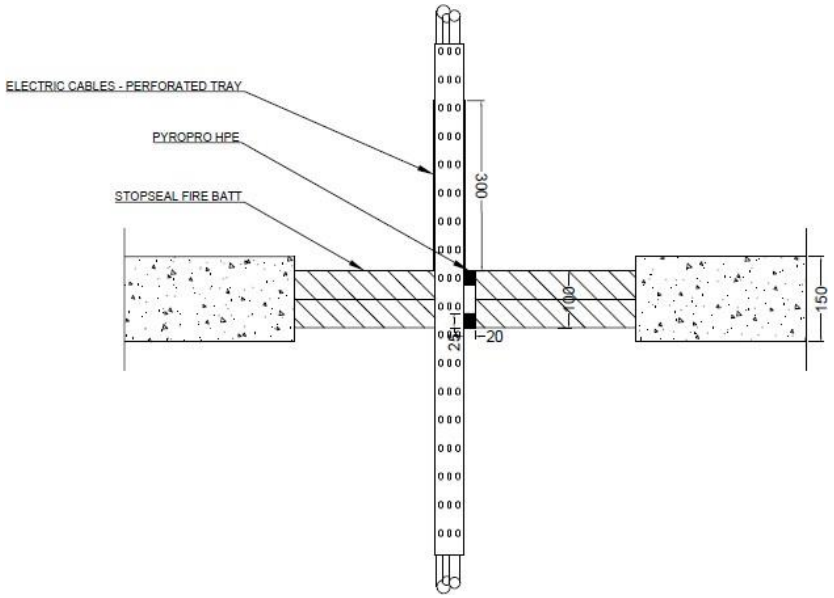
B37 FSi Stopseal Fire Batt Penetration Seal in Rigid Floors min. 150 mm thick

B37.1 FSi Double Layer (50mm) Stopseal Fire Batt Penetration Seal

B37.1.1 Cable Penetrations

Construction details:

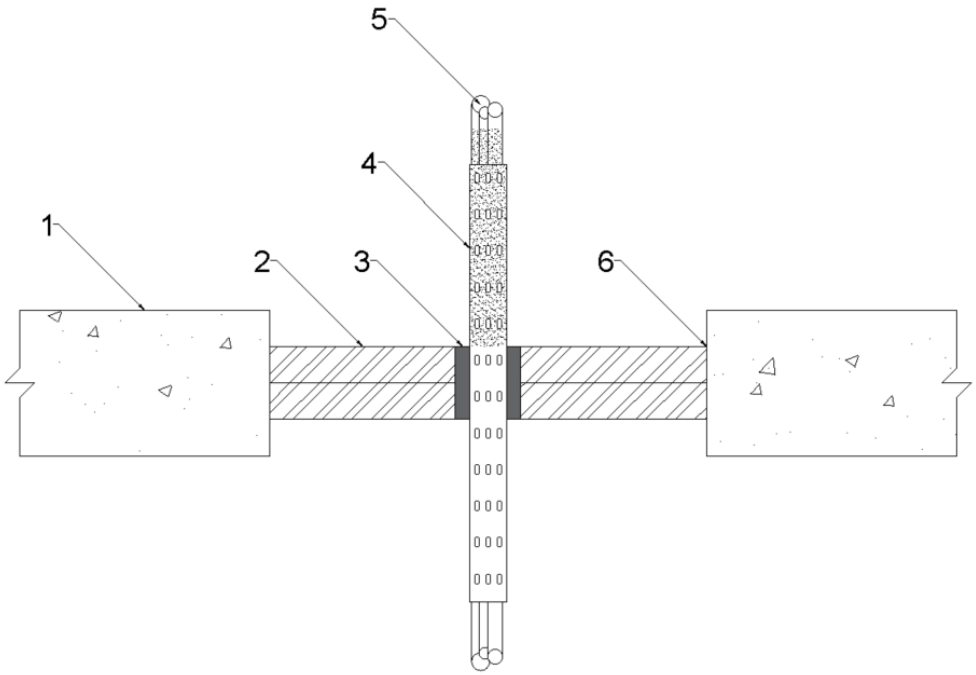
- Double layer of Stopseal Fire Batt (50mm) installed internally within the floor.
- Max. Aperture size 700mm wide x 1100mm high
- All cables coated with 2mm DFT PST Coating 300mm along the cables upper side of the seal.
- Pyropro HPE 20mm annulus full 25mm depth both sides of the floor
- First service support 400mm from both faces of the substrate



Penetration Specification	Classification
500mm perforated cable tray	**EI 60**
Electrical cables up to 21mm ø	
1 off 'C1' Cable	
1 off 'C2' Cable	
1 off 'C3' Cable	

Construction details:

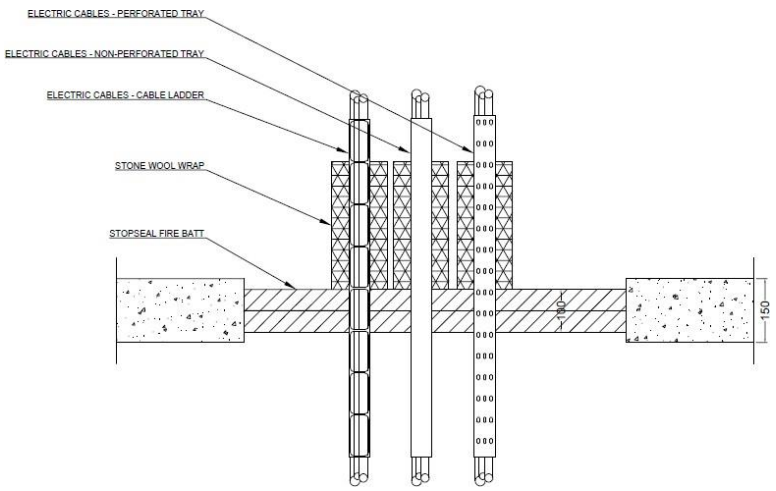
- Double layer of Stopseal Fire Batt (50mm) installed internally within the floor.
- Max. Aperture size 1100mm wide x 1500mm high
- All cables coated with 2mm DFT PST Coating 300mm along the cables upper side of the seal.
- Pyropro HPE 20mm annulus full 25mm depth both sides of the floor
- First service support 400mm from both faces of the substrate



Penetration Specification	Classification
500mm perforated cable tray	**EI 60**
Electrical cables up to 21mm ø	
1 off 'C1' Cable	
1 off 'C2' Cable	
1 off 'C3' Cable	

Construction details:

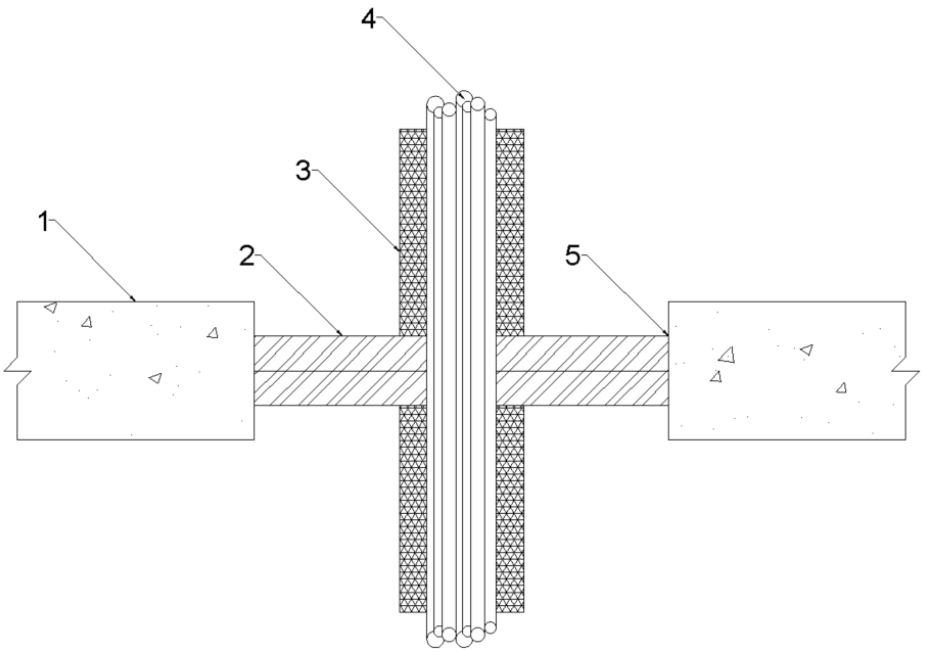
- Double layer of Stopseal Fire Batt (50mm) installed internally within the floor.
- Max. Aperture size 700mm wide x 1100mm high
- Cables and cable trays wrapped with a single layer of 40mm thick stone wool, min 40kg/m3 (L/I 300mm)
- First service support 400mm from both faces of the substrate



Service(s)	Classification
Electrical cables up to 80mm dia	**EI 60**
Cable Trays and Ladders	
100 mm diameter bundle telecommunication cable type "F"	
Unsheathed electrical cables up to 17mm dia	
Unsheathed electrical cables 18-24mm dia	
Steel or Copper Conduits up to 16mm	
Plastic conduits up to 16mm	

Construction details:

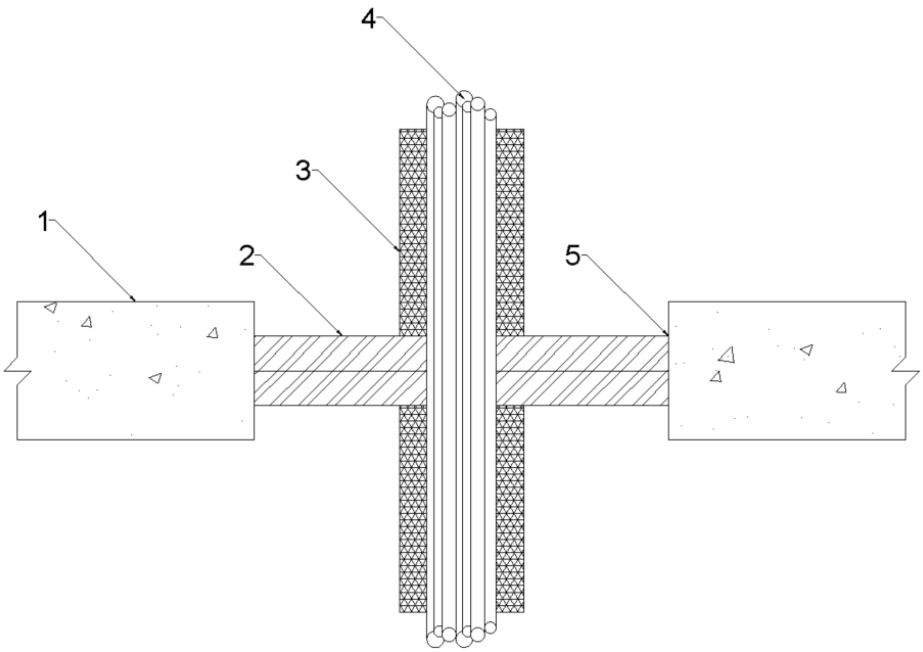
- Double layer of Stopseal Fire Batt (50mm) installed internally within the floor.
- Max. Aperture size 1100mm wide x 1500mm high
- Cables and cable trays wrapped with a single layer of 40mm thick stone wool, min 40kg/m3 (L/I 300mm)
- First service support 400mm from both faces of the substrate



Service(s)	Classification
Electrical cables up to 80mm dia	**EI 60**
Cable Trays and Ladders	
100 mm diameter bundle telecommunication cable type "F"	
Unsheathed electrical cables up to 17mm dia	
Unsheathed electrical cables 18-24mm dia	
Steel or Copper Conduits up to 16mm	
Plastic conduits up to 16mm	

Construction details:

- Double layer of Stopseal Fire Batt (50mm) installed internally within the floor.
- Max. Aperture size 700mm wide x 1100mm high
- First service support 400mm from both faces of the substrate



Service(s)	Classification
Steel or Copper Pipe 42mm Ø, 1.2mm – 14.2mm wall thickness. (L/I 300mm) 40mm stone wool insulation (min 40Kg/m^3)	**EI 120 C/U**
Steel or Copper Pipe 42mm – 159mm Ø, 2mm – 14.2mm wall thickness. (L/I 300mm) 40mm stone wool insulation (min 40Kg/m^3)	**EI 120 C/U** **EI 30 C/U**

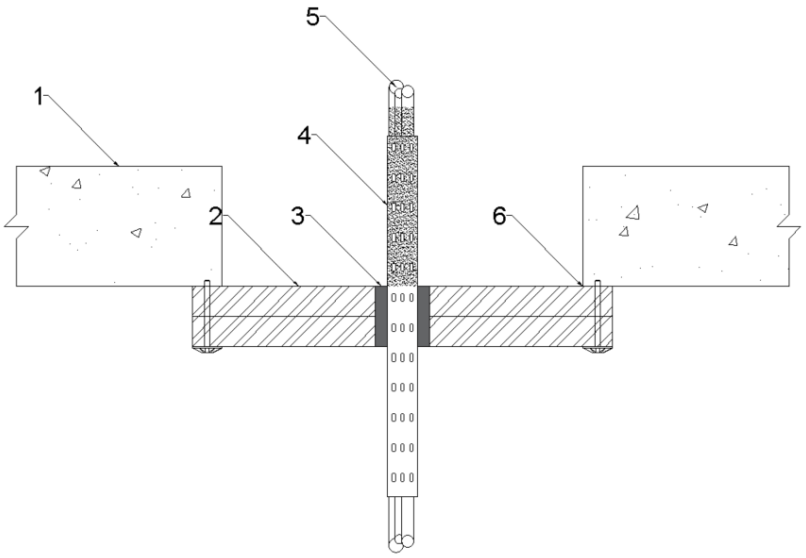
B38 FSi Stopseal Fire Batt Penetration Seal in Rigid Floors min. 150 mm thick

B38.1 FSi Double Layer (50mm) Stopseal Fire Batt Penetration Seal

B38.1.1 Pattress Installed Electrical Cables

Construction details:

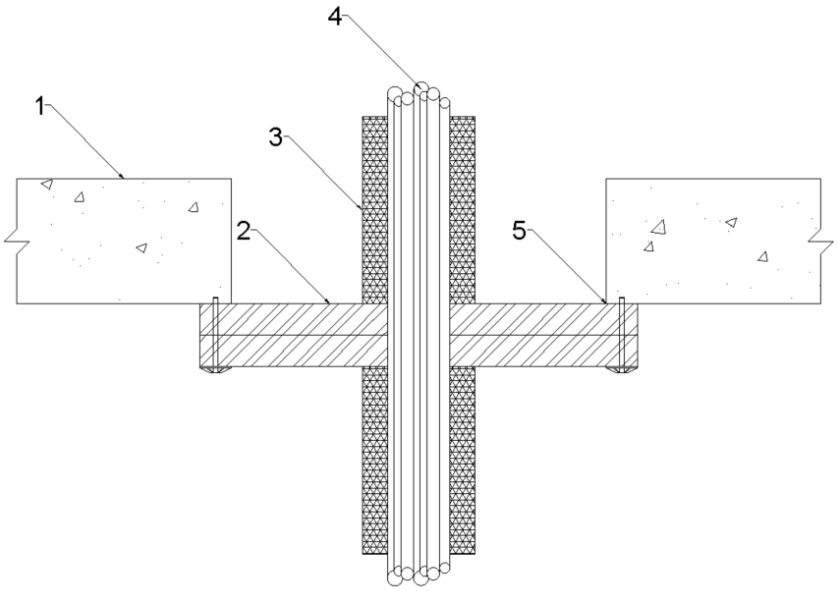
- Single layer of Stopseal Fire Batt (50mm) installed internally within the wall.
- Max. Aperture size 1000mm wide x 1300mm high
- All cables coated with 2mm DFT PST Coating 300mm along the cables both sides of the seal.
- Pyropro HPE 20mm annulus full 50mm depth of the Stopseal Coated Batt



Service(s)	Classification
500 mm perforated cable tray	**EI 60**
Electrical cables up to 21mm dia	
1 off "C1"Cable	
1 off "C2"Cable	
1 off "C3"Cable	

Construction details:

- Double layer of Stopseal Fire Batt (50mm) installed internally within the wall.
- Max. Aperture size 1000mm wide x 1300mm high
- Cables and cable trays wrapped with a single layer of 40mm thick stone wool, min 40kg/m^3 (L/I 300mm)



Service(s)	Classification
Electrical cables up to 80mm dia	**EI 60**
Cable Trays and Ladders	
100 mm diameter bundle telecommunication cable type "F"	
Unsheathed electrical cables up to 17mm dia	
Unsheathed electrical cables 18-24mm dia	
Steel or Copper Conduits up to 16mm	
Plastic conduits up to 16mm	

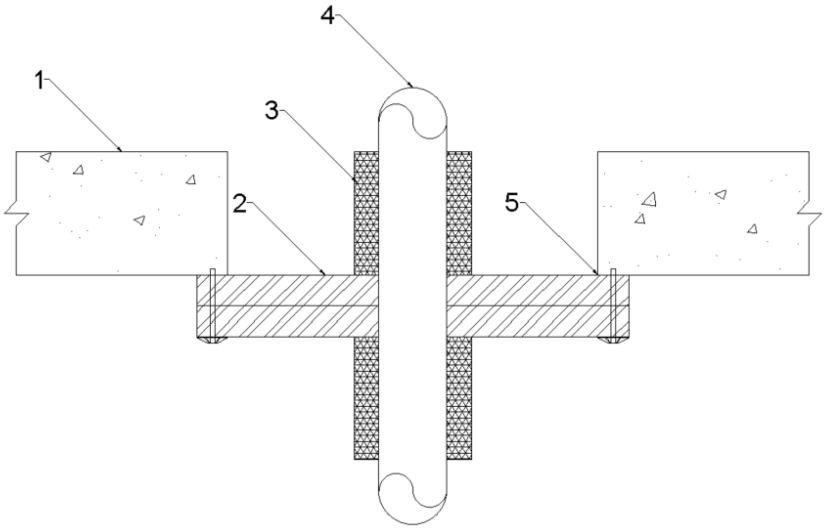
B39 FSi Stopseal Fire Batt Penetration Seal in Rigid Floors min. 150 mm thick

B39.1 FSi Double Layer (50mm) Stopseal Fire Batt Penetration Seal

B39.1.1 Pattress Installed Metallic Pipes

Construction details:

- Double layer of Stopseal Fire Batt (50mm) installed internally within the wall.
- Max. Aperture size 1000mm wide x 1300mm high
- Cables and cable trays wrapped with a single layer of 40mm thick stone wool, min 40kg/m^3 (L/I 300mm)



Service(s)	Classification
Steel or Copper Pipe 42mm Ø, 1.2mm – 14.2mm wall thickness. (L/I 300mm) 40mm stone wool insulation (min 40Kg/m^3)	**EI 60 C/U**
Steel or Copper Pipe 42mm – 159mm Ø, 2mm – 14.2mm wall thickness. (L/I 300mm) 40mm stone wool insulation (min 40Kg/m^3)	**E60 C/U** **EI 30 C/U**

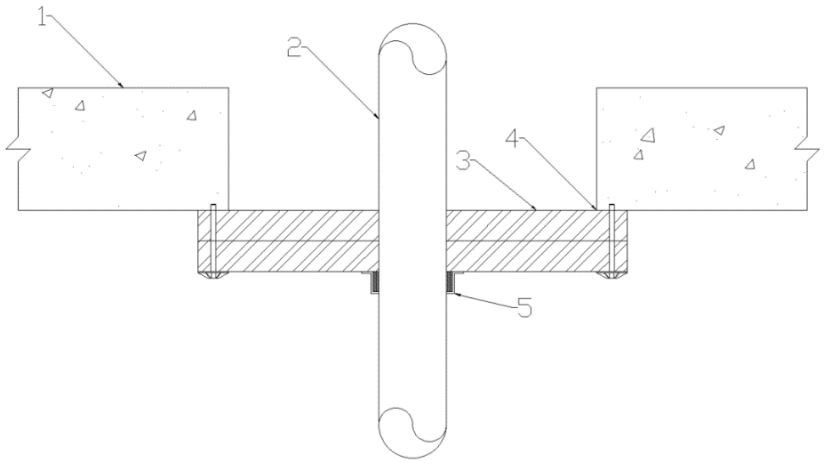
B40 FSi Stopseal Fire Batt Penetration Seal in Rigid Floors min. 150 mm thick

B40.1 FSi Double Layer (50mm) Stopseal Fire Batt Penetration Seal

B40.1.1 Pattress Installed Plastic Pipes

Construction details:

- Double layer of Stopseal Fire Batt (50mm) installed internally within the floor.
- Max. Aperture size 1000mm wide x 1300mm high



Penetration Specification	Pipe Bloc PCP Collars	Classification
Pipe diameters as below Zero distance	Fixed to the underside of the Stopseal Coated Batt utilizing steel pig tail fixings	**EI 60 U/C**

Penetration Specification	Collar Reference	Intumescent Material
PVC Pipe 32mm Ø 1.8mm wall thickness	32mm PipeBloc PCP	30mm (W) x 4mm (T)
PVC Pipe 40mm Ø 1.8mm wall thickness	40mm PipeBloc PCP	
PVC Pipe 50mm Ø 1.8mm wall thickness	50mm PipeBloc PCP	
PVC Pipe 55mm Ø 2.3-2.8mm wall thickness	55mm PipeBloc PCP	30mm (W) x 6mm (T)
PVC Pipe 63mm Ø 2.3-2.8mm wall thickness	63mm PipeBloc PCP	
PVC Pipe 75mm Ø 3.1-4.4mm wall thickness	75mm PipeBloc PCP	30mm (W) x 8mm (T)
PVC Pipe 82mm Ø 3.1-4.4mm wall thickness	82mm PipeBloc PCP	
PVC Pipe 90mm Ø 4.2-6.6mm wall thickness	90mm PipeBloc PCP	30mm (W) x 10mm (T)
PVC Pipe 100mm Ø 4.2-6.6mm wall thickness	100mm PipeBloc PCP	
PVC Pipe 110mm Ø 4.2-6.6mm wall thickness	110mm PipeBloc PCP	
PVC Pipe 125mm Ø 6.0mm wall thickness	125mm PipeBloc PCP	40mm (W) x 12mm (T)
PVC Pipe 140mm Ø 6.1-7.5mm wall thickness	140mm PipeBloc PCP	
PVC Pipe 160mm Ø 6.2-9.5mm wall thickness	160mm PipeBloc PCP	

Penetration Specification	Collar Reference	Intumescent Material
PP Pipe 32mm Ø 2.9mm wall thickness	32mm PipeBloc PCP	30mm (W) x 4mm (T)
PP Pipe 40mm Ø 2.9mm wall thickness	40mm PipeBloc PCP	
PP Pipe 50mm Ø 2.9mm wall thickness	50mm PipeBloc PCP	
PP Pipe 55mm Ø 2.9-4.4mm wall thickness	55mm PipeBloc PCP	30mm (W) x 6mm (T)
PP Pipe 63mm Ø 2.9-4.4mm wall thickness	63mm PipeBloc PCP	
PP Pipe 75mm Ø 2.8-6.7mm wall thickness	75mm PipeBloc PCP	30mm (W) x 8mm (T)
PP Pipe 82mm Ø 2.8-6.7mm wall thickness	82mm PipeBloc PCP	
PP Pipe 90mm Ø 2.7-10.0mm wall thickness	90mm PipeBloc PCP	30mm (W) x 10mm (T)
PP Pipe 100mm Ø 2.7-10.0mm wall thickness	100mm PipeBloc PCP	
PP Pipe 110mm Ø 2.7-10.0mm wall thickness	110mm PipeBloc PCP	
PP Pipe 125mm Ø 3.1mm wall thickness	125mm PipeBloc PCP	40mm (W) x 12mm (T)
PP Pipe 140mm Ø 3.5-8.0mm wall thickness	140mm PipeBloc PCP	
PP Pipe 160mm Ø 4.0-14.6mm wall thickness	160mm PipeBloc PCP	

Penetration Specification	Collar Reference	Intumescent Material
PE Pipe 32mm Ø 2.9mm wall thickness	32mm PipeBloc PCP	30mm (W) x 4mm (T)
PE Pipe 40mm Ø 2.9mm wall thickness	40mm PipeBloc PCP	
PE Pipe 50mm Ø 2.9mm wall thickness	50mm PipeBloc PCP	
PE Pipe 55mm Ø 2.9-4.4mm wall thickness	55mm PipeBloc PCP	30mm (W) x 6mm (T)
PE Pipe 63mm Ø 2.9-4.4mm wall thickness	63mm PipeBloc PCP	
PE Pipe 75mm Ø 2.8-6.7mm wall thickness	75mm PipeBloc PCP	30mm (W) x 8mm (T)
PE Pipe 82mm Ø 2.8-6.7mm wall thickness	82mm PipeBloc PCP	
PE Pipe 90mm Ø 2.7-10.0mm wall thickness	90mm PipeBloc PCP	30mm (W) x 10mm (T)
PE Pipe 100mm Ø 2.7-10.0mm wall thickness	100mm PipeBloc PCP	
PE Pipe 110mm Ø 2.7-10.0mm wall thickness	110mm PipeBloc PCP	
PE Pipe 125mm Ø 3.1mm wall thickness	125mm PipeBloc PCP	40mm (W) x 12mm (T)
PE Pipe 140mm Ø 3.9-5.8mm wall thickness	140mm PipeBloc PCP	
PE Pipe 160mm Ø 4.9-9.5mm wall thickness	160mm PipeBloc PCP	

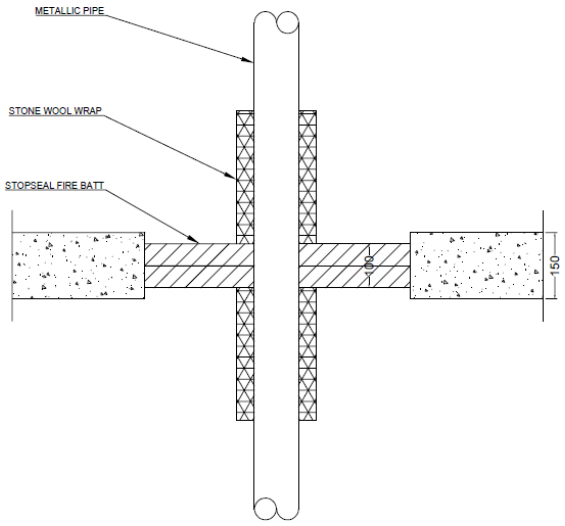
B41 FSi Stopseal Fire Batt Penetration Seal in Rigid Floors min. 150 mm thick

B41.1 FSi Double Layer (50mm) Stopseal Fire Batt Penetration Seal

B41.1.1 Metallic pipe penetrations

Construction details:

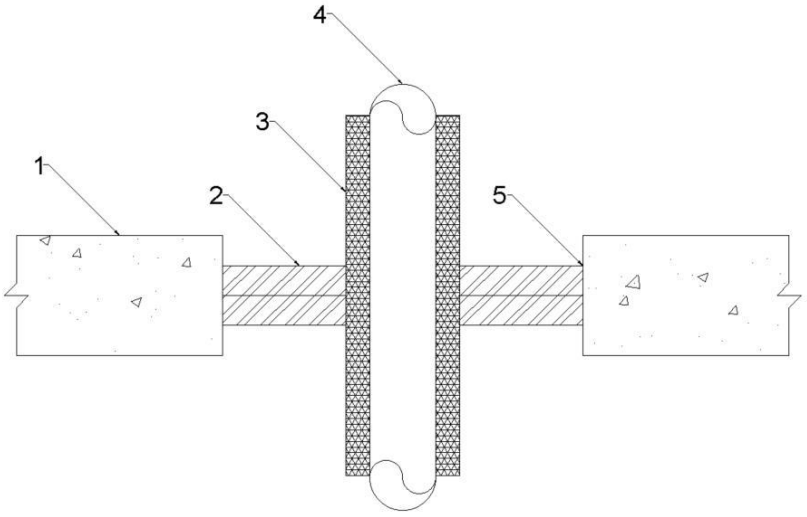
- Double layer of Stopseal Fire Batt (50mm) installed internally within the wall.
- Max. Aperture size 700mm wide x 1100mm high
- Cables and cable trays wrapped with 40mm stone wool insulation (min 40Kg/m^3) (L/I 300mm)
- First service support 400mm from both faces of the substrate



Service(s)	Classification
Steel or Copper Pipe 42mm Ø, 1.2mm – 14.2mm wall thickness.	**EI 120 C/U**
Steel or Copper Pipe 42mm – 159mm Ø, 2mm – 14.2mm wall thickness.	**E 120 C/U** **EI 30 C/U**

Construction details:

- Double layer of Stopseal Fire Batt (50mm) installed internally within the wall.
- Max. Aperture size 1100mm wide x 1500mm high
- Cables and cable trays wrapped with 40mm stone wool insulation (min 40Kg/m^3) (L/I 300mm)
- First service support 400mm from both faces of the substrate



Service(s)	Classification
Steel or Copper Pipe 42mm Ø, 1.2mm – 14.2mm wall thickness. (L/I 300mm) 40mm stone wool insulation (min 40Kg/m^3)	**E 90 C/U** **EI 60 C/U**
Steel or Copper Pipe 42mm Ø, 2mm – 14.2mm wall thickness. (L/I 300mm) 40mm stone wool insulation (min 40Kg/m^3)	**E 90 C/U** **EI 30 C/U**

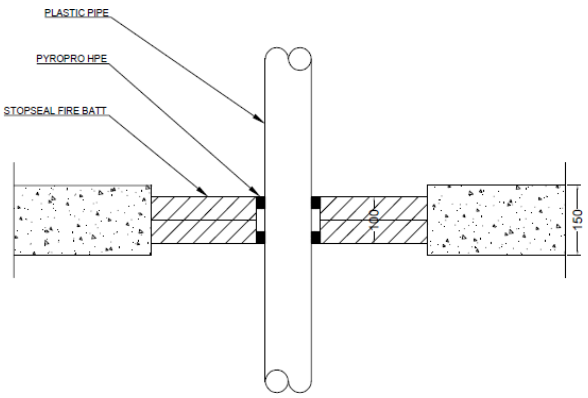
B42 FSi Stopseal Fire Batt Penetration Seal in Rigid Floors min. 150 mm thick

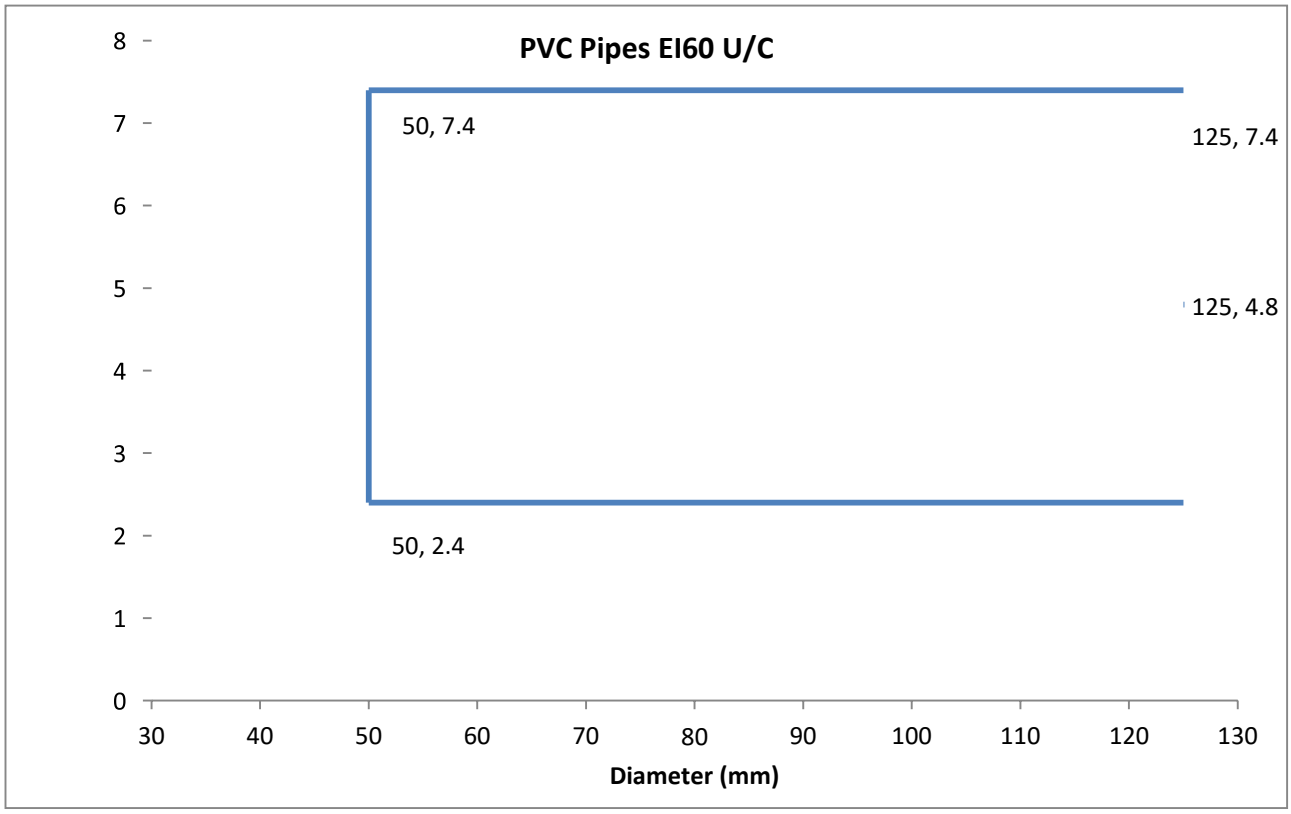
B42.1 FSi Double Layer (50mm) Stopseal Fire Batt Penetration Seal

B42.1.1 Plastic pipe penetrations

Construction details:

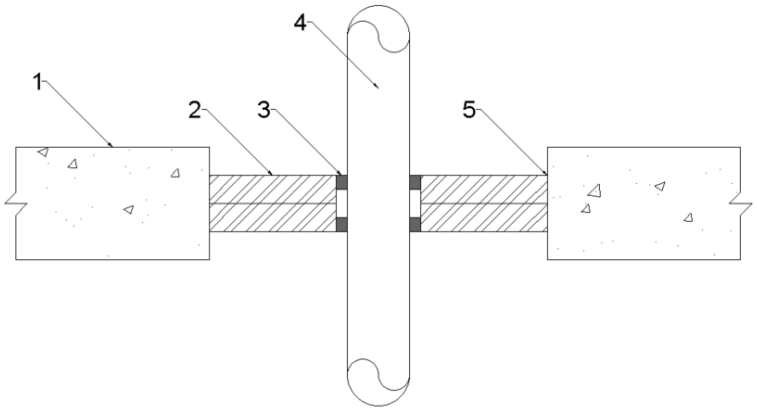
- Double layer of Stopseal Fire Batt (50mm) installed internally within the floor.
- Max. Aperture size 750mm wide x 1100mm high
- PyroPro HPE 20mm annulus, 25mm deep both faces of the Stopseal Coated Batt
- First service support 400mm from both faces of the substrate



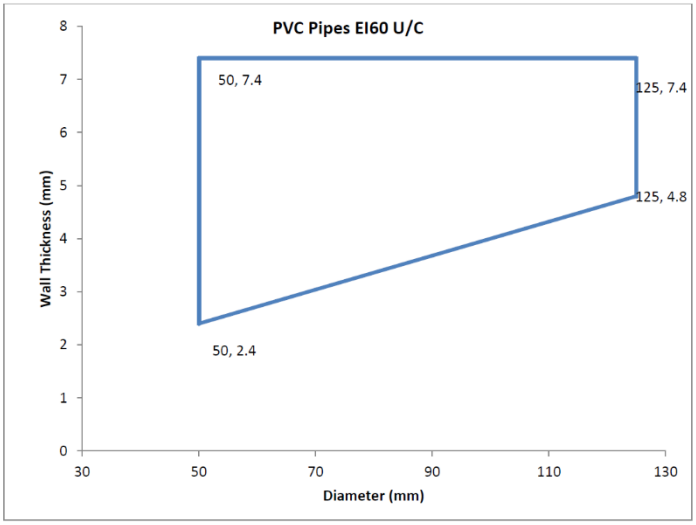


Construction details:

- Double layer of Stopseal Fire Batt (50mm) installed internally within the floor.
- Max. Aperture size 1000mm wide x 1300mm high

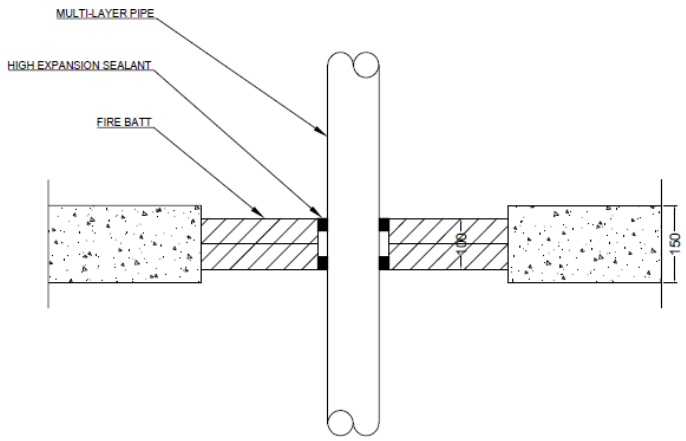


Service(s)	Pyropro HPE	Classification
Pipe diameters as below	20mm annulus, 25mm deep both faces of the Stopseal Coated Batt	**See graphs below**



Construction details:

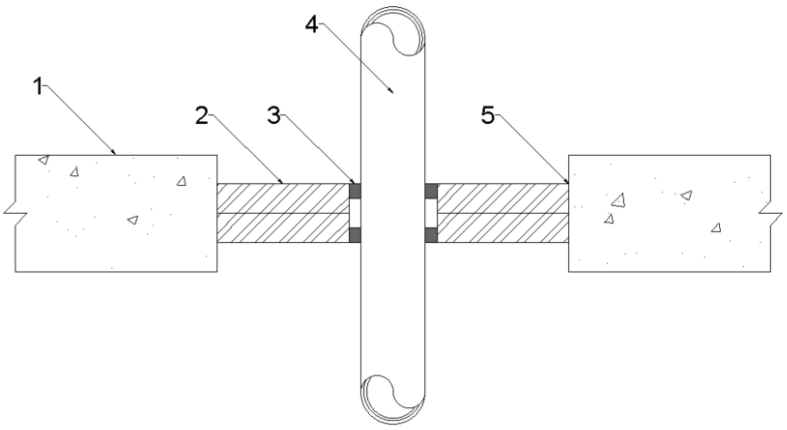
- Double layer of Stopseal Fire Batt (50mm) installed internally within the floor.
- Max. Aperture size 750mm wide x 1100mm high
- PyroPro HPE 20mm annulus, 25mm deep both faces of the Stopseal Coated Batt
- First service support 400mm from both faces of the substrate



Penetration Specification	Classification
Uponor MLC (Multi-Layer Composite) Pipe 40mm ø 4mm wall thickness	**EI 60 U/C**
Uponor MLC (Multi-Layer Composite) Pipe 50mm ø 4.5mm wall thickness	
Uponor MLC (Multi-Layer Composite) Pipe 63mm ø 6mm wall thickness	
Uponor MLC (Multi-Layer Composite) Pipe 75mm ø 7.5mm wall thickness	
Uponor MLC (Multi-Layer Composite) Pipe 90mm ø 8.5mm wall thickness	
Uponor MLC (Multi-Layer Composite) Pipe 110mm ø 10mm wall thickness	

Construction details:

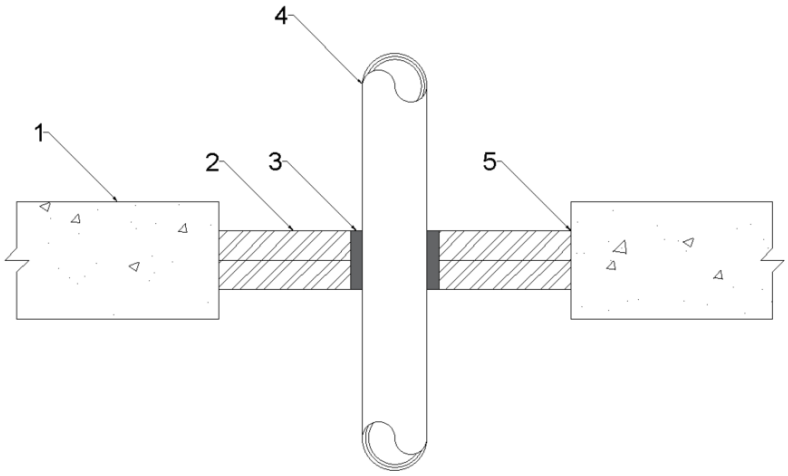
- Double layer of Stopseal Fire Batt (50mm) installed internally within the floor.
- Max. Aperture size 1000mm wide x 1300mm high
- PyroPro HPE 20mm annulus, 50mm depth of the Stopseal Coated Batt



Penetration Specification	Classification
Uponor MLC (Multi-Layer Composite) Pipe 40mm ø 4mm wall thickness	**EI 60 U/C**
Uponor MLC (Multi-Layer Composite) Pipe 50mm ø 4.5mm wall thickness	
Uponor MLC (Multi-Layer Composite) Pipe 63mm ø 6mm wall thickness	
Uponor MLC (Multi-Layer Composite) Pipe 75mm ø 7.5mm wall thickness	
Uponor MLC (Multi-Layer Composite) Pipe 90mm ø 8.5mm wall thickness	
Uponor MLC (Multi-Layer Composite) Pipe 110mm ø 10mm wall thickness	

Construction details:

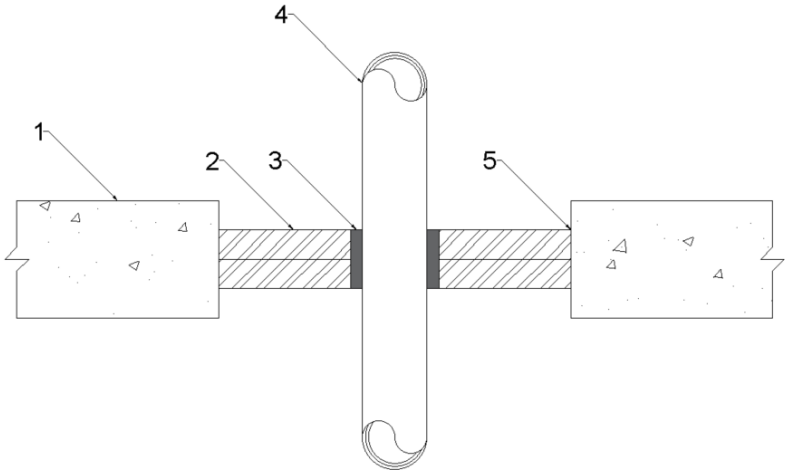
- Double layer of Stopseal Fire Batt (50mm) installed internally within the floor.
- Max. Aperture size 750mm wide x 1100mm high
- PyroPro HPE 20mm annulus, 25mm deep both faces of the Stopseal Coated Batt
- First service support 400mm from both faces of the substrate



Penetration Specification	Classification
Uponor MLC (Multi-Layer Composite) Pipe 40mm ø 4mm wall thickness	**EI 60 U/C**
Uponor MLC (Multi-Layer Composite) Pipe 50mm ø 4.5mm wall thickness	
Uponor MLC (Multi-Layer Composite) Pipe 63mm ø 6mm wall thickness	
Uponor MLC (Multi-Layer Composite) Pipe 75mm ø 7.5mm wall thickness	
Uponor MLC (Multi-Layer Composite) Pipe 90mm ø 8.5mm wall thickness	
Uponor MLC (Multi-Layer Composite) Pipe 110mm ø 10mm wall thickness	

Construction details:

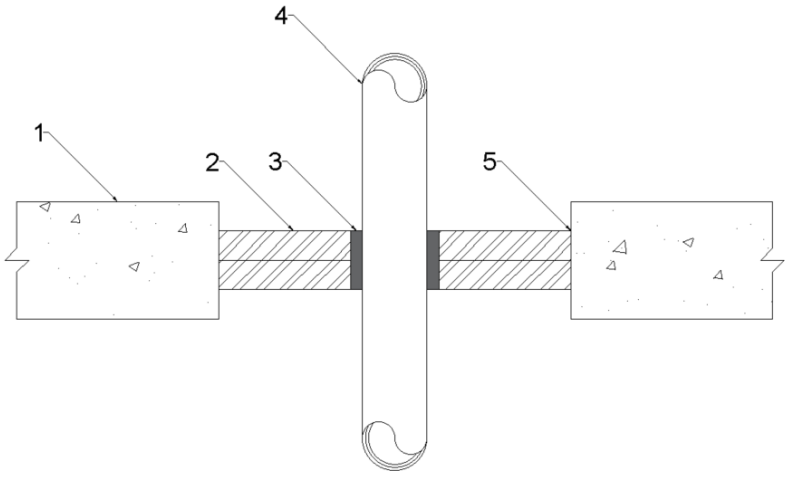
- Double layer of Stopseal Fire Batt (50mm) installed internally within the floor.
- Max. Aperture size 1100mm wide x 1500mm high
- PyroPro HPE 20mm annulus, 25mm deep both faces of the Stopseal Coated Batt
- First service support 400mm from both faces of the substrate



Penetration Specification	Classification
Uponor MLC (Multi-Layer Composite) Pipe 40mm ø 4mm wall thickness	**EI 60 U/C**
Uponor MLC (Multi-Layer Composite) Pipe 50mm ø 4.5mm wall thickness	
Uponor MLC (Multi-Layer Composite) Pipe 63mm ø 6mm wall thickness	
Uponor MLC (Multi-Layer Composite) Pipe 75mm ø 7.5mm wall thickness	
Uponor MLC (Multi-Layer Composite) Pipe 90mm ø 8.5mm wall thickness	
Uponor MLC (Multi-Layer Composite) Pipe 110mm ø 10mm wall thickness	

Construction details:

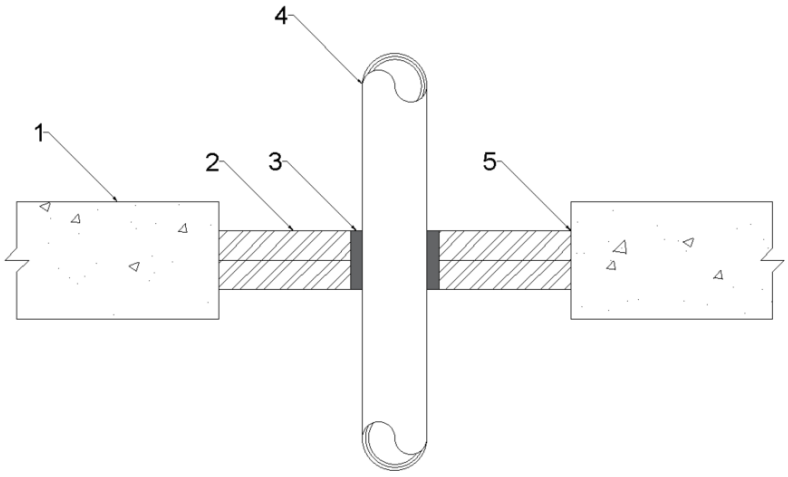
- Double layer of Stopseal Fire Batt (50mm) installed internally within the floor.
- Max. Aperture size 350mm wide x 1000mm high
- PyroPro HPE 20mm annulus, 25mm deep both faces of the Stopseal Coated Batt
- First service support 400mm from both faces of the substrate



Penetration Specification	PipeBloc EL/ PipeBloc PWP Ref	Classification
PVC Pipe up to 125mm Ø, 4.8-7.4mm wall thickness.	2 mm thickness	**EI 120 U/C**
PVC Pipe up to 40mm Ø, 3.1-17.1mm wall thickness.	2 mm thickness	
PVC Pipe up to 125mm Ø, 11.4mm wall thickness.	2 mm thickness	
PVC Pipe up to 125mm Ø, 3.1-11.4mm wall thickness.	2 mm thickness	**E120 U/C** **EI 90 U/C**

Construction details:

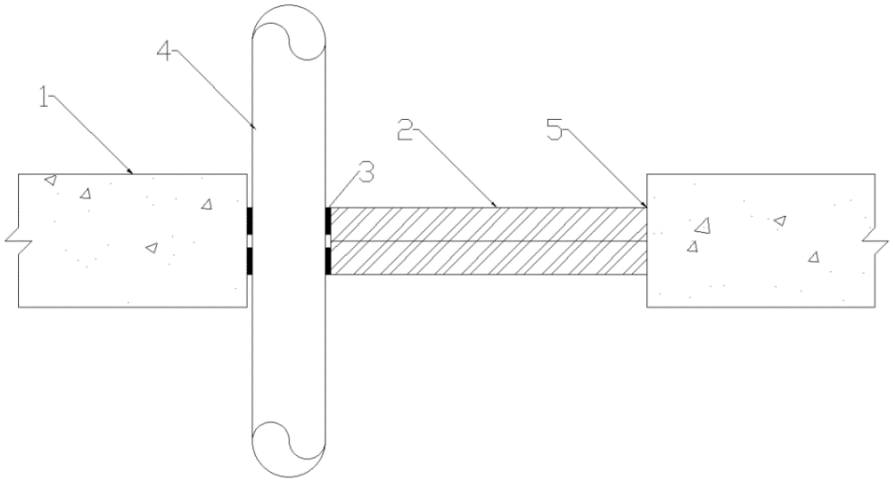
- Double layer of Stopseal Fire Batt (50mm) installed internally within the floor.
- Max. Aperture size 110mm wide x 1500mm high
- PyroPro HPE 20mm annulus, 25mm deep both faces of the Stopseal Coated Batt
- First service support 400mm from both faces of the substrate



Penetration Specification	PipeBloc EL/ PipeBloc PWP Ref	Classification
PVC Pipe up to 125mm Ø, 4.8-7.4mm wall thickness.	2 mm thickness	**EI 60 U/C**
PVC Pipe up to 40mm Ø, 3.1-17.1mm wall thickness.	2 mm thickness	
PVC Pipe up to 125mm Ø, 11.4mm wall thickness.	2 mm thickness	
PVC Pipe up to 125mm Ø, 3.1-11.4mm wall thickness.	2 mm thickness	

Construction details:

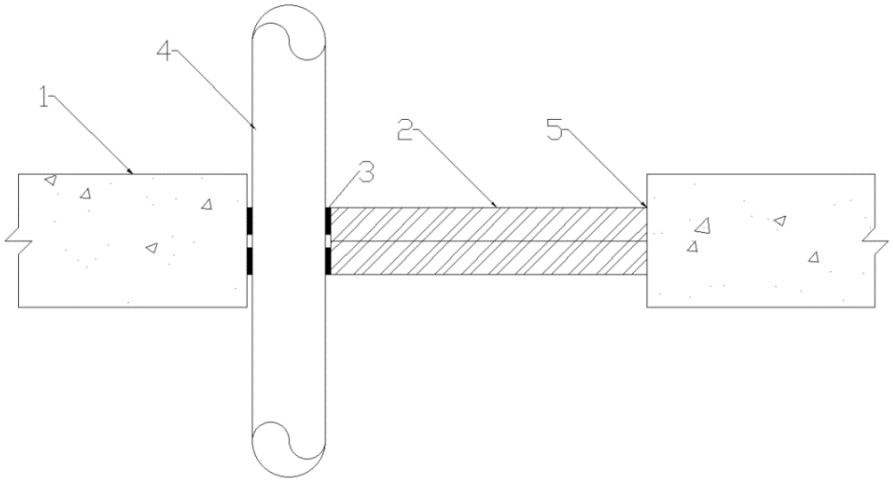
- Double layer of Stopseal Fire Batt (50mm) installed internally within the floor.
- Max. Aperture size 350mm wide x 1000mm high
- PipeBloc EL / PipeBloc PWP secured internally within both faces of the Stopseal Fire Batt



Penetration Specification	PipeBloc EL/ PipeBloc PWP Ref	Classification
PVC Pipe up to 125mm Ø, 4.8-7.4mm wall thickness.	2 mm thickness	**EI 120 U/C**
PVC Pipe up to 40mm Ø, 3.1-17.1mm wall thickness.	2 mm thickness	
PVC Pipe up to 125mm Ø, 11.4mm wall thickness.	2 mm thickness	
PVC Pipe up to 125mm Ø, 3.1-11.4mm wall thickness.	2 mm thickness	**E 120 U/C** **EI 90 U/C**

Construction details:

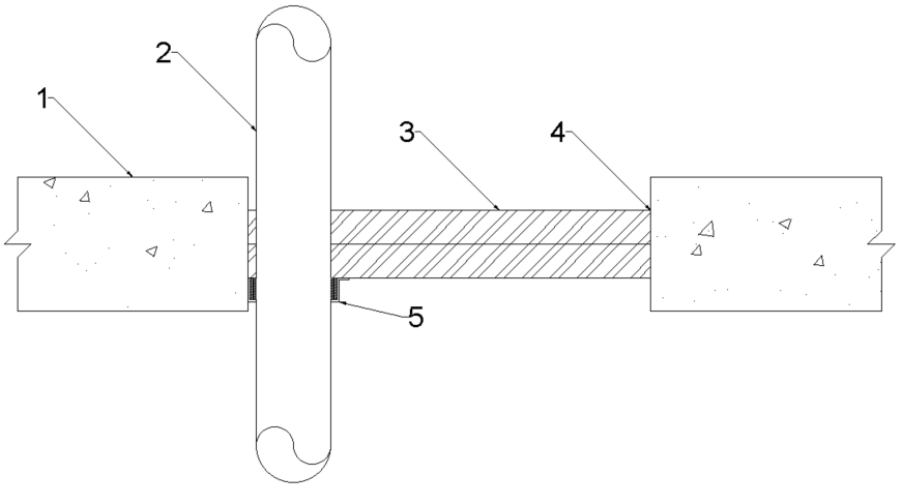
- Double layer of Stopseal Fire Batt (50mm) installed internally within the floor.
- Max. Aperture size 350mm wide x 1000mm high
- PipeBloc EL / PipeBloc PWP secured internally within both faces of the Stopseal Fire Batt



Penetration Specification	PipeBloc EL/ PipeBloc PWP Ref	Classification
PVC Pipe up to 125mm Ø, 4.8-7.4mm wall thickness.	2 mm thickness	**EI 60 U/C**
PVC Pipe up to 40mm Ø, 3.1-17.1mm wall thickness.	2 mm thickness	
PVC Pipe up to 125mm Ø, 11.4mm wall thickness.	2 mm thickness	
PVC Pipe up to 125mm Ø, 3.1-11.4mm wall thickness.	2 mm thickness	

Construction details:

- Double layer of Stopseal Fire Batt (50mm) installed internally within the floor.
- Max. Aperture size 350mm wide x 1000mm high
- PipeBloc EL / PipeBloc PWP secured internally within both faces of the Stopseal Fire Batt



Penetration Specification	Pipe Bloc PCP Collars	Classification
Pipe diameters as below Zero distance	Fixed to the underside of the Stopseal Coated Batt utilizing steel pig tail fixings	**EI 120 U/C**

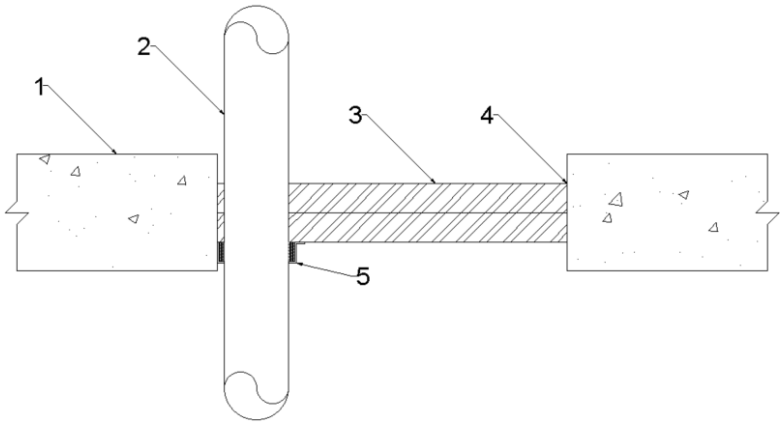
Penetration Specification	Collar Reference	Intumescent Material
PVC Pipe 32mm Ø 1.8mm wall thickness	32mm PipeBloc PCP	30mm (W) x 4mm (T)
PVC Pipe 40mm Ø 1.8mm wall thickness	40mm PipeBloc PCP	
PVC Pipe 50mm Ø 1.8mm wall thickness	50mm PipeBloc PCP	
PVC Pipe 55mm Ø 2.3-2.8mm wall thickness	55mm PipeBloc PCP	30mm (W) x 6mm (T)
PVC Pipe 63mm Ø 2.3-2.8mm wall thickness	63mm PipeBloc PCP	
PVC Pipe 75mm Ø 3.1-4.4mm wall thickness	75mm PipeBloc PCP	30mm (W) x 8mm (T)
PVC Pipe 82mm Ø 3.1-4.4mm wall thickness	82mm PipeBloc PCP	
PVC Pipe 90mm Ø 4.2-6.6mm wall thickness	90mm PipeBloc PCP	30mm (W) x 10mm (T)
PVC Pipe 100mm Ø 4.2-6.6mm wall thickness	100mm PipeBloc PCP	
PVC Pipe 110mm Ø 4.2-6.6mm wall thickness	110mm PipeBloc PCP	
PVC Pipe 125mm Ø 6.0mm wall thickness	125mm PipeBloc PCP	40mm (W) x 12mm (T)
PVC Pipe 140mm Ø 6.1-7.5mm wall thickness	140mm PipeBloc PCP	
PVC Pipe 160mm Ø 6.2-9.5mm wall thickness	160mm PipeBloc PCP	

Penetration Specification	Collar Reference	Intumescent Material
PP Pipe 32mm Ø 2.9mm wall thickness	32mm PipeBloc PCP	30mm (W) x 4mm (T)
PP Pipe 40mm Ø 2.9mm wall thickness	40mm PipeBloc PCP	
PP Pipe 50mm Ø 2.9mm wall thickness	50mm PipeBloc PCP	
PP Pipe 55mm Ø 2.9-4.4mm wall thickness	55mm PipeBloc PCP	30mm (W) x 6mm (T)
PP Pipe 63mm Ø 2.9-4.4mm wall thickness	63mm PipeBloc PCP	
PP Pipe 75mm Ø 2.8-6.7mm wall thickness	75mm PipeBloc PCP	30mm (W) x 8mm (T)
PP Pipe 82mm Ø 2.8-6.7mm wall thickness	82mm PipeBloc PCP	
PP Pipe 90mm Ø 2.7-10.0mm wall thickness	90mm PipeBloc PCP	30mm (W) x 10mm (T)
PP Pipe 100mm Ø 2.7-10.0mm wall thickness	100mm PipeBloc PCP	
PP Pipe 110mm Ø 2.7-10.0mm wall thickness	110mm PipeBloc PCP	
PP Pipe 125mm Ø 3.1mm wall thickness	125mm PipeBloc PCP	40mm (W) x 12mm (T)
PP Pipe 140mm Ø 3.5-8.0mm wall thickness	140mm PipeBloc PCP	
PP Pipe 160mm Ø 4.0-14.6mm wall thickness	160mm PipeBloc PCP	

Penetration Specification	Collar Reference	Intumescent Material
PE Pipe 32mm Ø 2.9mm wall thickness	32mm PipeBloc PCP	30mm (W) x 4mm (T)
PE Pipe 40mm Ø 2.9mm wall thickness	40mm PipeBloc PCP	
PE Pipe 50mm Ø 2.9mm wall thickness	50mm PipeBloc PCP	
PE Pipe 55mm Ø 2.9-4.4mm wall thickness	55mm PipeBloc PCP	30mm (W) x 6mm (T)
PE Pipe 63mm Ø 2.9-4.4mm wall thickness	63mm PipeBloc PCP	
PE Pipe 75mm Ø 2.8-6.7mm wall thickness	75mm PipeBloc PCP	30mm (W) x 8mm (T)
PE Pipe 82mm Ø 2.8-6.7mm wall thickness	82mm PipeBloc PCP	
PE Pipe 90mm Ø 2.7-10.0mm wall thickness	90mm PipeBloc PCP	30mm (W) x 10mm (T)
PE Pipe 100mm Ø 2.7-10.0mm wall thickness	100mm PipeBloc PCP	
PE Pipe 110mm Ø 2.7-10.0mm wall thickness	110mm PipeBloc PCP	
PE Pipe 125mm Ø 3.1mm wall thickness	125mm PipeBloc PCP	40mm (W) x 12mm (T)
PE Pipe 140mm Ø 3.9-5.8mm wall thickness	140mm PipeBloc PCP	
PE Pipe 160mm Ø 4.9-9.5mm wall thickness	160mm PipeBloc PCP	

Construction details:

- Double layer of Stopseal Fire Batt (50mm) installed internally within the floor.
- Max. Aperture size 1000mm wide x 1300mm high
- PipeBloc EL / PipeBloc PWP secured internally within both faces of the Stopseal Fire Batt



Penetration Specification	Pipe Bloc PCP Collars	Classification
Pipe diameters as below Zero distance	Fixed to the underside of the Stopseal Coated Batt utilizing steel pig tail fixings	**EI 60 U/C**

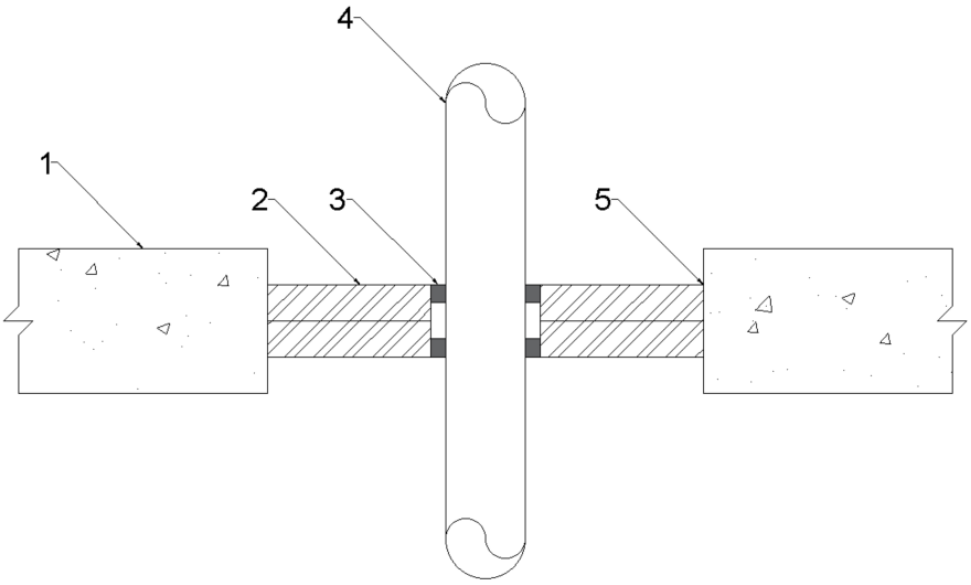
Penetration Specification	Collar Reference	Intumescent Material
PVC Pipe 32mm Ø 1.8mm wall thickness	32mm PipeBloc PCP	30mm (W) x 4mm (T)
PVC Pipe 40mm Ø 1.8mm wall thickness	40mm PipeBloc PCP	
PVC Pipe 50mm Ø 1.8mm wall thickness	50mm PipeBloc PCP	
PVC Pipe 55mm Ø 2.3-2.8mm wall thickness	55mm PipeBloc PCP	30mm (W) x 6mm (T)
PVC Pipe 63mm Ø 2.3-2.8mm wall thickness	63mm PipeBloc PCP	
PVC Pipe 75mm Ø 3.1-4.4mm wall thickness	75mm PipeBloc PCP	30mm (W) x 8mm (T)
PVC Pipe 82mm Ø 3.1-4.4mm wall thickness	82mm PipeBloc PCP	
PVC Pipe 90mm Ø 4.2-6.6mm wall thickness	90mm PipeBloc PCP	30mm (W) x 10mm (T)
PVC Pipe 100mm Ø 4.2-6.6mm wall thickness	100mm PipeBloc PCP	
PVC Pipe 110mm Ø 4.2-6.6mm wall thickness	110mm PipeBloc PCP	
PVC Pipe 125mm Ø 6.0mm wall thickness	125mm PipeBloc PCP	40mm (W) x 12mm (T)
PVC Pipe 140mm Ø 6.1-7.5mm wall thickness	140mm PipeBloc PCP	
PVC Pipe 160mm Ø 6.2-9.5mm wall thickness	160mm PipeBloc PCP	

Penetration Specification	Collar Reference	Intumescent Material
PP Pipe 32mm Ø 2.9mm wall thickness	32mm PipeBloc PCP	30mm (W) x 4mm (T)
PP Pipe 40mm Ø 2.9mm wall thickness	40mm PipeBloc PCP	
PP Pipe 50mm Ø 2.9mm wall thickness	50mm PipeBloc PCP	
PP Pipe 55mm Ø 2.9-4.4mm wall thickness	55mm PipeBloc PCP	30mm (W) x 6mm (T)
PP Pipe 63mm Ø 2.9-4.4mm wall thickness	63mm PipeBloc PCP	
PP Pipe 75mm Ø 2.8-6.7mm wall thickness	75mm PipeBloc PCP	30mm (W) x 8mm (T)
PP Pipe 82mm Ø 2.8-6.7mm wall thickness	82mm PipeBloc PCP	
PP Pipe 90mm Ø 2.7-10.0mm wall thickness	90mm PipeBloc PCP	30mm (W) x 10mm (T)
PP Pipe 100mm Ø 2.7-10.0mm wall thickness	100mm PipeBloc PCP	
PP Pipe 110mm Ø 2.7-10.0mm wall thickness	110mm PipeBloc PCP	
PP Pipe 125mm Ø 3.1mm wall thickness	125mm PipeBloc PCP	40mm (W) x 12mm (T)
PP Pipe 140mm Ø 3.5-8.0mm wall thickness	140mm PipeBloc PCP	
PP Pipe 160mm Ø 4.0-14.6mm wall thickness	160mm PipeBloc PCP	

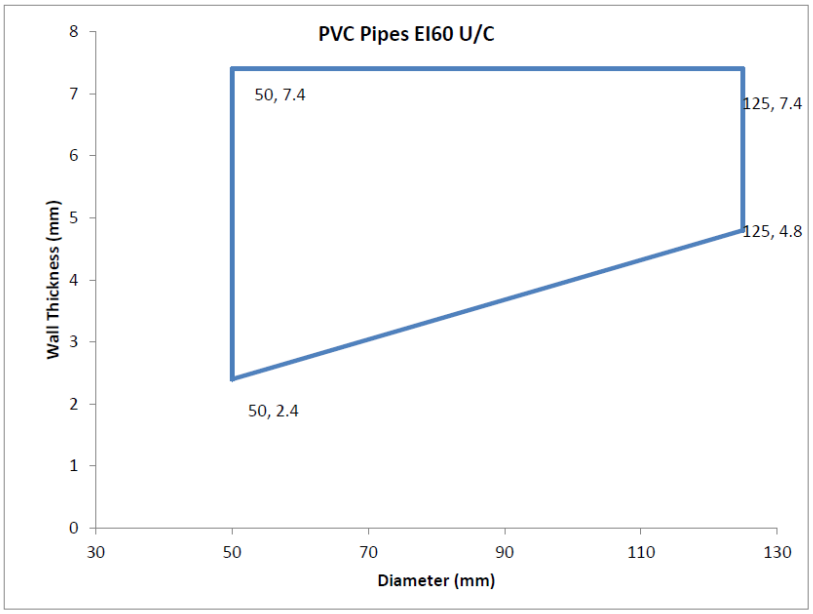
Penetration Specification	Collar Reference	Intumescent Material
PE Pipe 32mm Ø 2.9mm wall thickness	32mm PipeBloc PCP	30mm (W) x 4mm (T)
PE Pipe 40mm Ø 2.9mm wall thickness	40mm PipeBloc PCP	
PE Pipe 50mm Ø 2.9mm wall thickness	50mm PipeBloc PCP	
PE Pipe 55mm Ø 2.9-4.4mm wall thickness	55mm PipeBloc PCP	30mm (W) x 6mm (T)
PE Pipe 63mm Ø 2.9-4.4mm wall thickness	63mm PipeBloc PCP	
PE Pipe 75mm Ø 2.8-6.7mm wall thickness	75mm PipeBloc PCP	30mm (W) x 8mm (T)
PE Pipe 82mm Ø 2.8-6.7mm wall thickness	82mm PipeBloc PCP	
PE Pipe 90mm Ø 2.7-10.0mm wall thickness	90mm PipeBloc PCP	30mm (W) x 10mm (T)
PE Pipe 100mm Ø 2.7-10.0mm wall thickness	100mm PipeBloc PCP	
PE Pipe 110mm Ø 2.7-10.0mm wall thickness	110mm PipeBloc PCP	
PE Pipe 125mm Ø 3.1mm wall thickness	125mm PipeBloc PCP	40mm (W) x 12mm (T)
PE Pipe 140mm Ø 3.9-5.8mm wall thickness	140mm PipeBloc PCP	
PE Pipe 160mm Ø 4.9-9.5mm wall thickness	160mm PipeBloc PCP	

Construction details:

- Double layer of Stopseal Fire Batt (50mm) installed internally within the wall.
- Max. Aperture size 750mm wide x 1100mm high
- First service support 400mm from both faces of the substrate

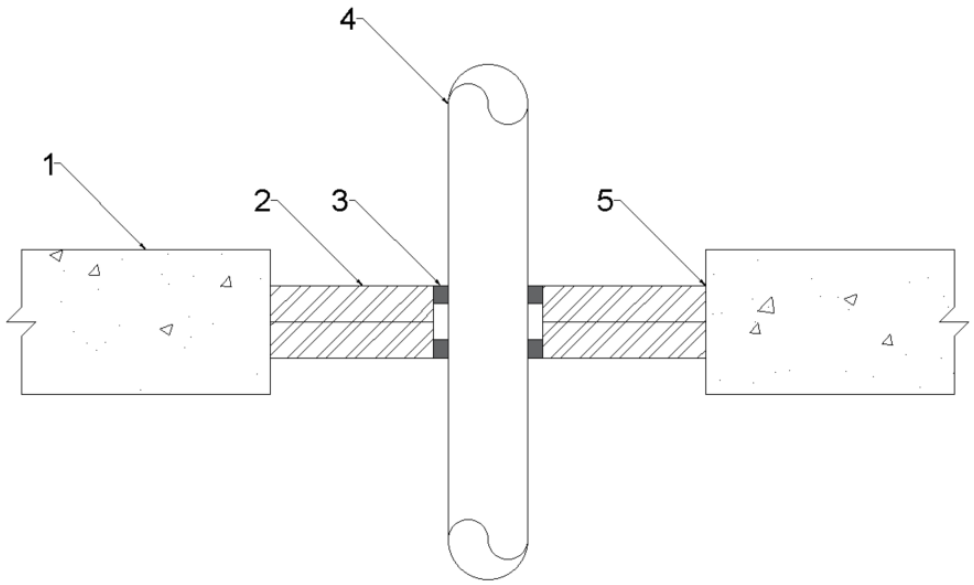


Service(s)	Pyropro HPE	Classification
Pipe diameters as below	20mm annulus, 25mm deep both faces of the Stopseal Coated Batt	**See graphs below**



Construction details:

- Double layer of Stopseal Fire Batt (50mm) installed internally within the wall.
- Max. Aperture size 1000mm wide x 1500mm high
- First service support 400mm from both faces of the substrate



Service(s)	Pyropro HPE	Classification
Pipe diameters as below	20mm annulus, 25mm deep both faces of the Stopseal Coated Batt	**See graphs below**