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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

MEMBER OF EOTA



European Technical Assessment ETA-20/1067 of 2020/12/11

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:

fischer FCPS Coated Panel System

Product family to which the above construction product belongs:

Fire Stopping, Fire Sealing & Fire Protective Products.
Fire Retardant Products

Manufacturer:

fischerwerke GmbH & Co. KG
Klaus-Fischer-Straße 1
72178 Waldachtal
Germany

Manufacturing plant:

fischerwerke GmbH & Co. KG

This European Technical Assessment contains:

42 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, Issued September 2017

This version replaces:

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1 Technical Description of the Product

- 1) fischer FCPS Coated Panel System is a coated mineral wool board 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.
- 2) fischer FCPS Coated Panel System is supplied coated on both faces. The board is then cut and friction fit into the aperture, prior to being inserted into the aperture in the wall.
- 3) fischer FCPS Coated Panel System Coated Boards are 50 mm thick and supplied in overall dimensions 1200 mm x 600 mm with a density of 140 kg/m³.
- 4) fischer FCPS Coated Panel System 60 Coated Boards are 60 mm thick and supplied in overall dimensions 1200 mm x 600 mm with a density of 160 kg/m³ and are coated to one face only.
- 5) fischer FiAM Intumescent Acoustic Mastic is required to seal all joints and junctions during the sealing process. fischer FiAM Intumescent Acoustic Mastic is subject to a separate ETA referenced ETA-20/1064 and ETA-20/1065.
- 6) fischer FiGM Intumescent Graphite Mastic is required to seal around specific services(See Annex B). Fischer FiGM Intumescent Graphite Mastic is subject to a separate ETA referenced ETA-20/1105.

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

The intended use of fischer FCPS Coated Panel System is to reinstate the fire resistance performance of rigid and flexible wall constructions where they are penetrated by various cables and metallic pipes

- 1) The specific elements of construction that the system fischer FCPS Coated Panel System 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 .
Rigid walls:	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 100 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, no part of the penetration shall be closer than 100 mm to a stud, 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.

- 2) The fischer FCPS Coated Panel System may be used to provide a penetration seal with pipes and cables, and cable trays and ladders (for details see Annex B).
- 3) The total amount of cross sections of services (including insulation) should not exceed 60% of the penetration area.

- 4) The fischer FCPS Coated Panel System may be used to seal apertures in the separating element up to 730mm wide by 1200mm high or 600mm x 600mm dependant on the configuration. The minimum permitted separation between adjacent seals/apertures is 200mm.
- 5) Pipes must be installed singular cables require no minimum separation.
- 6) The provisions made in this European Technical Assessment are based on an assumed working life of the fischer FCPS Coated Panel System of 10 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 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 choosing the right products in relation to the expected economically reasonable working life of the works.

Use Category

Type Z₁: Intended for use in internal conditions with humidity equal to or higher than 85% RH excluding temperatures below 0°C, without exposure to rain or UV.

3 Performance of The Product And References To The Methods Used For Its Assessment

BWR	Characteristic	Assessment of characteristic
2	Safety in case of fire	
	Reaction to fire	See Clause 1.1
	Resistance to fire	See clause 1.2
3	Hygiene, Health and the Environment	
	Air permeability	See clause 2.1
	Content and release of Dangerous substances	See clause 2.2
4	Safety in use	
	Durability and Serviceability	see clause 3.1
5	Protection against noise	
	Airborne sound insulation	See clause 4.1

3.1 Safety in case of fire

3.1.1 Reaction to fire

No performance assessed

3.1.2 Resistance to fire

fischer FCPS Coated Panel System has been tested in accordance with BS EN 1366-3: 2009 based upon the test results and the field of direct application specified within EN 1366-3: 2009, the fischer FCPS Coated Panel System has been classified in accordance with EN 13501-2, as given in Annex B:

The seals may only be penetrated by the services described in Annex B; other parts or support constructions must not penetrate the seal.

The service support construction must be fixed to the building element containing the penetration seal or a suitable adjacent building element, in such a manner that in the case of fire, no additional load is imposed on the seal. Furthermore, it is assumed that the unexposed face support is maintained for the required period of fire resistance.

Pipes must be perpendicular to the seal surface.

It is assumed that compressed air systems are switched off by other means in the case of fire.

The function of the pipe seal in case of pneumatic dispatch systems, pressurised air systems etc. is guaranteed only when the systems are shut off in case of fire.

The assessment does not cover the avoidance of destruction of the seal or of the abutting building element(s) by forces caused by temperature changes in case of fire. This has to be considered when designing the piping system.

The assessment does not address any risks associated with leakage of dangerous liquids or gases caused by failure of the pipe(s) in case of fire.

The durability assessment does not take account of the possible effect of substances permeating through the pipe on the penetration seal.

3.2 Hygiene, Health and the environment.

3.2.1. Air permeability

FCPS Coated Panel System has been tested in accordance with EN 1314-1 to provide the following results:

Product tested				
Pressure (Pa)	Results under positive chamber pressure		Results under negative chamber pressure	
	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

3.2.2. Content and release of Dangerous Substances

The applicant have presented a declaration that fischer FCPS Coated Panel System and Coating is in compliance with Council Directive 76/769/EEC of 27th July 1976 on the approximation of the laws, regulations and administrative provisions of the Member States relating to restrictions on the marketing and use of certain dangerous substances and preparations (incl. all amendments and adaptations).

Confirmation has further been declared that all dangerous chemical substances ≥ 1.0 % w/w as well as all toxic, carcinogenic, toxic for reproduction and mutagenic chemical substances ≥ 0.1 % w/w (Status: 29. adaption – 2004/73/EG – of the EU directive 67/548/EEC - classification, packaging and labelling of dangerous substances) are stated in the fischer FCPS Coated Panel System and Coating material safety data sheets (according to 91/155/EEC including amendments) and have been considered for the classification of the products according to the directive 1999/45/EG (classification of preparations, including amendments).

All dangerous chemical substances are below the classification limits of 67/548/EEC.

In addition to the specific clauses relating to dangerous substances contained in this European technical approval, 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.

3.1 Safety and accessibility in use

3.1.1 Durability

fischer FCPS Coated Panel System has been tested in accordance with EOTA Technical Report - TR024 – Edition November 2006, for the type Z₁ use category specified in EAD 350454-00-1104 – Fire stopping and fire sealing products, penetration seals, and the results of the tests have demonstrated suitability for penetration seals

intended for use in internal conditions with humidity equal to or higher than 85% RH excluding temperatures below 0°C, without exposure to rain or UV.

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

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 the Regulation (EU) No 305/2011) given in the following table apply:

Products	Intended use/s	AVCP System
Fire stopping and fire sealing products	For fire compartmentation and / or fire protection or fire performance	System 1

5 Technical details necessary for the implementation of the AVCP system, as provided for 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 A/S prior to CE marking

Issued in Copenhagen on 2020-12-11 by



Thomas Bruun

Managing Director, ETA-Danmark

Annex A

Reference Documents

EN 13501-1	Fire classification of construction products and building elements – Part 1: Classification using test data from reaction to fire tests
EN 13501-2	Fire classification of construction products and building elements – Part 2: Classification using test data from fire resistance tests
EOTA TR 024	Characterisation, Aspects of Durability and Factory Production Control for Reactive Materials, Components and Products

Annex B

Resistance to Fire Classification of fischer FCPS Coated Panel System

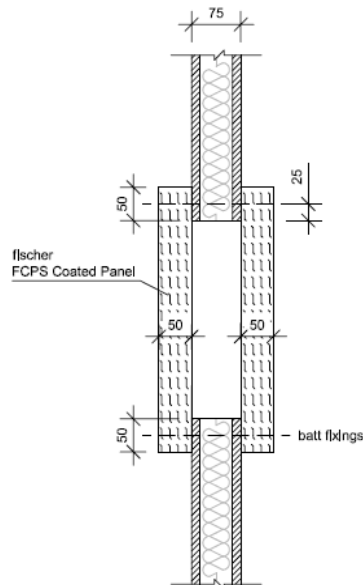
B1 fischer FCPS Coated Panel System Penetration Seal in Flexible or Rigid Walls min. 70 mm thick

B1.1 Single Layer (50 mm both sides) fischer FCPS Coated Panel System Patress Install Penetration Seal

B1.1.1 Cables and Conduits Penetrations

Construction details:

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



Service(s)	Classification
500 mm wide x 60 mm deep steel cable basket containing 3 x type 'B' cable and 20 x bundle of telecommunication cables	EI90
500 mm wide x 60 mm 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
20 mm dia Adaptaflex SPL20 flexible conduit	EI90
20 mm dia Kopex KSU 316 stainless steel flexible conduit	
150 mm wide x 60 mm deep steel cable tray containing 4 x FP200 Gold (Firealarm cable 7 mm dia red) Cables	

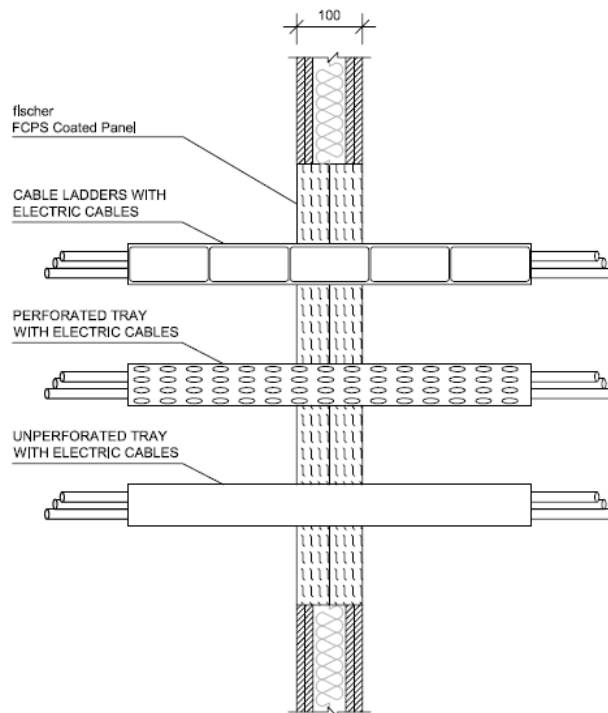
B2 fischer FCPS Coated Panel System Penetration Seal in Flexible or Rigid Walls min. 100 mm thick

B2.1 Double Layer (50 mm) fischer FCPS Coated Panel System Penetration Seal

B2.1.1 Cable Penetrations

Construction details:

- Double layer of fischer FCPS Coated Panel System (50 mm) installed internally within the wall.
- Max. Aperture size 730 mm wide x 1200 mm high.
- First service support 250 mm from both faces of the substrate.

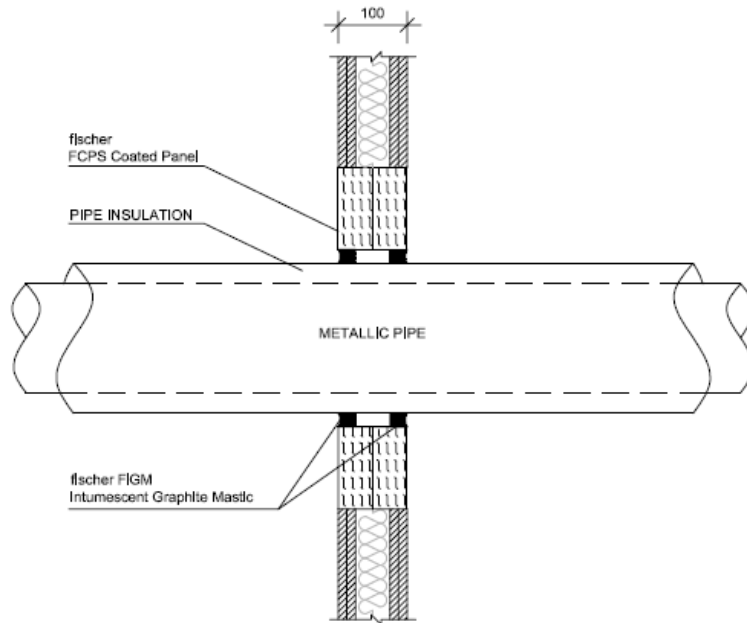


Service(s)	Classification
Electrical cables up to 21 mm dia	EI 60
Electrical cables 22 mm to 80 mm dia	E 60 EI 45
Cable Trays and Ladders	EI 60
100 mm diameter bundle telecommunication cable type "F"	EI 60
Unsheathed electrical cables up to 17 mm dia	E 60 EI 30
Unsheathed electrical cables 18-24 mm dia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

B2.1.2 Metallic Pipe Penetrations

Construction details:

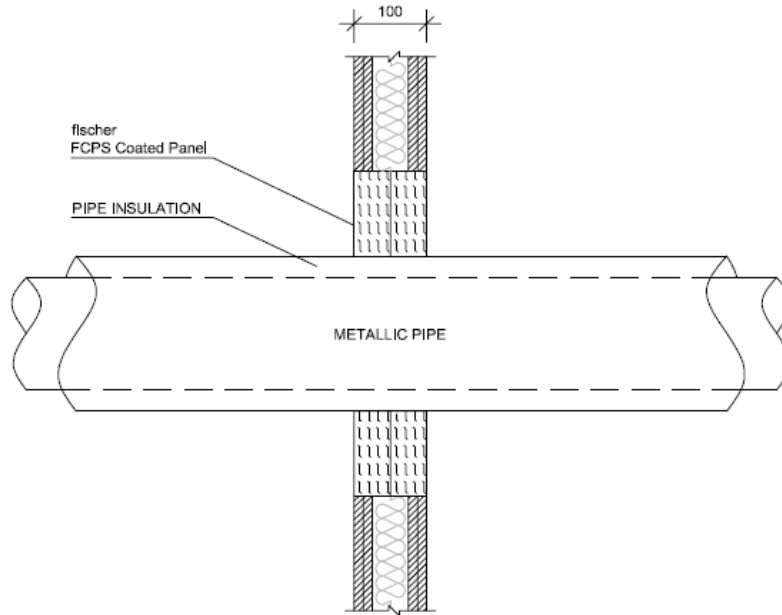
- Double layer of fischer FCPS Coated Panel System (50 mm) installed internally within the wall.
- Max. Aperture size 730 mm wide x 1200 mm high.
- Continuous / Sustained CS insulated metallic pipes.
- 15 mm deep x 15 mm wide annulus fischer FiGM Intumescent Graphite Mastic to both faces.
- First service support 250 mm from both faces of the substrate.



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

Construction details:

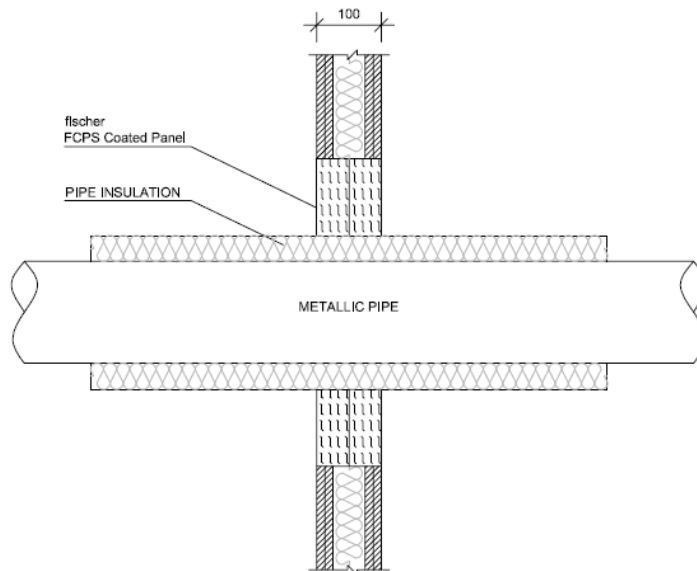
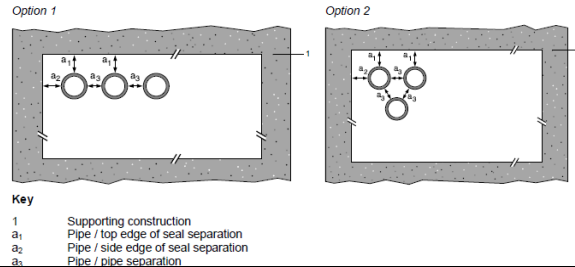
- Double layer of fischer FCPS Coated Panel System (50 mm) installed internally within the wall.
- Max. Aperture size 600 mm wide x 600 mm high.
- Continuous / Sustained CS insulated metallic pipes.
- First service support 400 mm from both faces of the substrate.



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

Construction details:

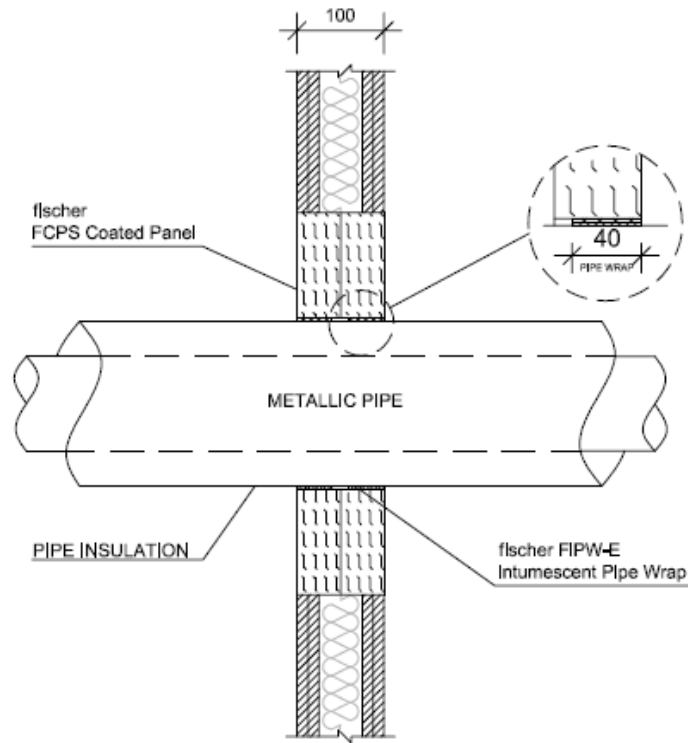
- Double layer of fischer FCPS Coated Panel System (50 mm) installed internally within the wall.
- Max. Aperture size 730 mm wide x 1200 mm high.
- Locally / Sustained (LS) insulated metallic pipes.
- Penetrations positioned as per option 1 or 2 below, 0 mm distance between services and 50 mm to edge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



Service(s)	Classification
Steel or Copper Pipe 42-159 mm Ø, 1.2 mm – 14.2 mm wall thickness 40 mm thick Stonewool insulation min. 40 kg/m ³ (LS 400 mm)	EI 45 C/U
Steel 42-324 mm Ø, 16 mm wall thickness. 40 mm thick Stonewool insulation min. 40 kg/m ³ (LS 400 mm)	EI 45 C/U
Steel or Copper Pipe 42-159 mm Ø, 1.2 mm – 14.2 mm wall thickness fischer FPC Panel Coating along the penetration 2 mm DFT (LS 400 mm)	E 120 C/U EI 45 C/U
Steel 42-324 mm Ø, 16 mm wall thickness. 14.2 mm wall thickness fischer FPC Panel Coating along the penetration 2 mm DFT (LS 400 mm)	E 120 C/U EI 45 C/U

Construction details:

- Double layer of fischer FCPS Coated Panel System (50 mm) installed internally within the wall.
- Max. Aperture size 750 mm wide x 1200 mm high.
- Continuous / Sustained CS insulated metallic pipes.
- 2 x 2 mm thick layers of fischer FiPW-E Intumescent Pipe Wrap Endless installed both sides of the fischer FCPS Coated Panel System.
- First service support 400 mm from both faces of the substrate.

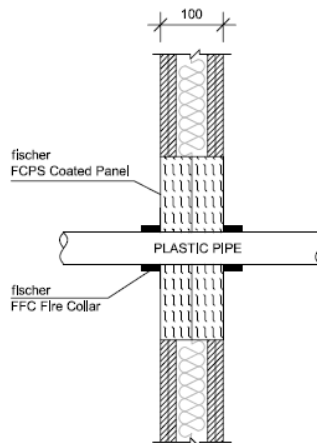
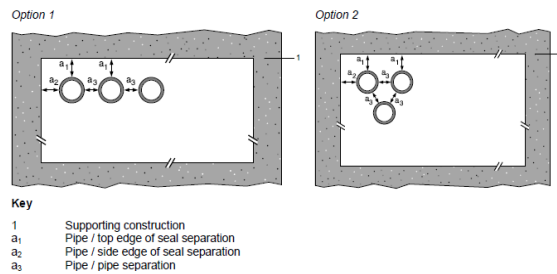


Service(s)	Classification
Steel or Copper Pipe 42-159 mm Ø, 1.2 mm – 14.2 mm wall thickness. 13-25 mm thick K Flex ST Insulation (C/S)	E 120 C/U EI 60 C/U
Steel or Copper Pipe 42 mm Ø, 1 – 14.2 mm wall thickness. 25-13 mm thick K Flex ST insulation (C/S)	E 120 C/U EI 90 C/U
Steel or Copper Pipe 42-108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

B2.1.3 Plastic Pipe Penetrations

Construction details:

- Double layer of fischer FCPS Coated Panel System (50 mm) installed internally within the wall.
- Max. Aperture size 730 mm wide x 1200 mm high.
- fischer FFC Firestop Collar secured both faces of the substrate utilising 80 mm long steel pig tail screw through to fischer FCPS Coated Panel System.
- Penetrations positioned as per option 1 or 2 below, 0 mm distance between services and 50 mm to edge of seal.
- First service support 400 mm from both faces of the substrate.



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

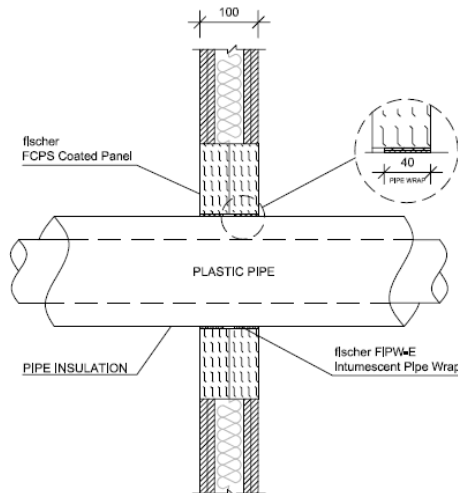
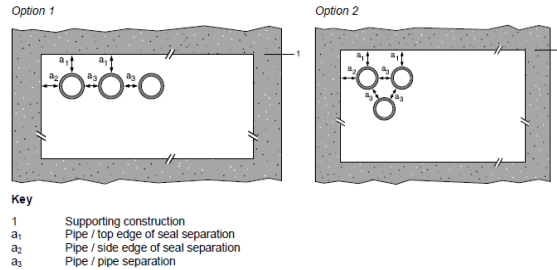
Service(s)	fischer FFC Firestop Collar Ref	Classification
PP Pipe 32 mm Ø, 2.9 mm wall thickness	32 mm	EI 120 U/C
PP Pipe 40 mm Ø, 2.9 mm wall thickness	40 mm	
PP Pipe 50 mm Ø, 2.9 mm wall thickness	50 mm	
PP Pipe 55 mm Ø, 2.9-4.4 mm wall thickness	55 mm	
PP Pipe 63 mm Ø, 2.9-4.4 mm wall thickness	63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

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

B2.1.4 Insulated Plastic Pipe Penetrations

Construction details:

- Double layer of fischer FCPS Coated Panel System (50 mm) installed internally within the wall.
- Max. Aperture size 730 mm wide x 1200 mm high.
- fischer FiPW-E Intumescent Pipe Wrap Endless secured internally within both faces of the fischer FCPS Coated Panel System.
- Penetrations positioned as per option 1 or 2 below, 0 mm distance between services and 50 mm to edge of seal.
- First service support 400 mm from both faces of the substrate.



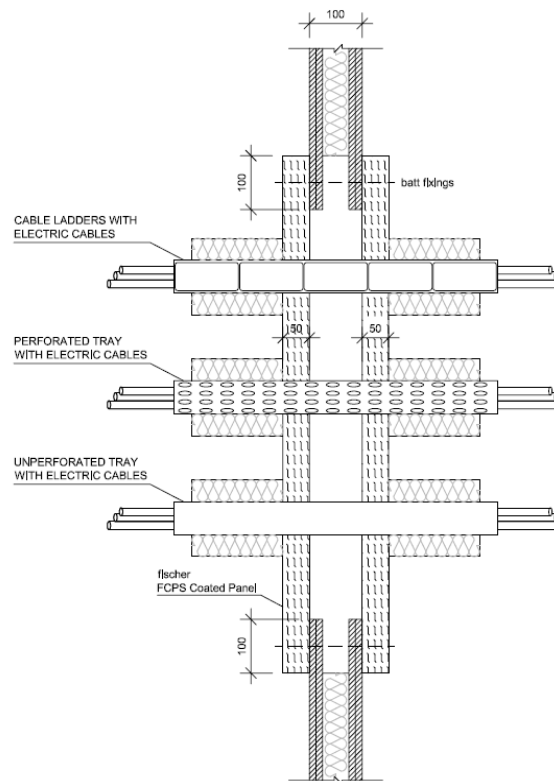
Service(s)	fischer FiPW-E Pipe Wrap Ref	Classification
PVC Pipe 40 mm Ø, 1.9 mm wall thickness. 25 mm thick Kingspan Kooltherm FM insulation (C/S)	3 x 2 mm thickness	E 120 U/C EI 90 U/C
PVC Pipe 40 mm Ø, 3 mm wall thickness. 15 mm thick Kingspan Kooltherm FM insulation (C/S)	3 x 2 mm thickness	
PVC Pipe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

B2.2 Single Layer (50 mm) fischer FCPS Coated Panel System Patress Installed Both Faces Penetration Seal

B2.2.1 Cable Penetrations

Construction details:

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

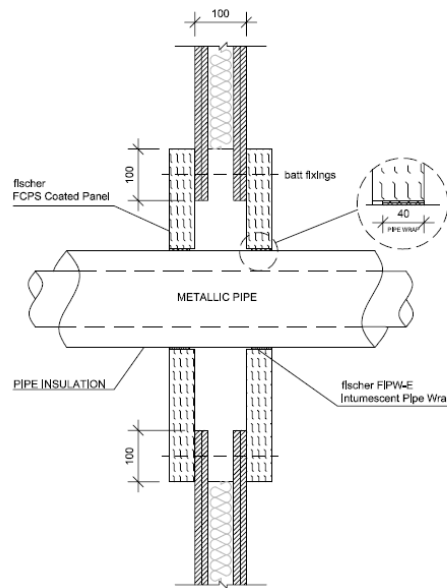


Service(s)	Classification
Electrical cables up to 80 mm Ø	EI120
Cable Trays and Ladders	
100 mm diameter bundle telecommunication cable type "F"	
Unsheathed electrical cables up to 24 mm Ø	
Steel or Copper Conduits up to 16 mm Ø	
Plastic conduits up to 16 mm Ø	

B2.2.2 Metallic Pipe Penetrations

Construction details:

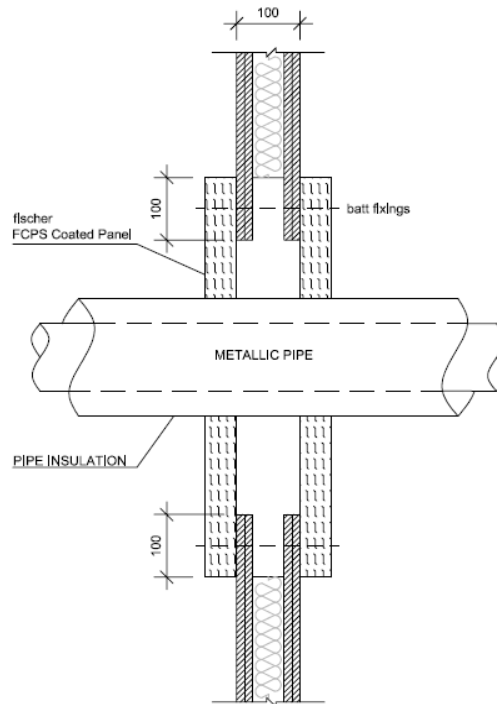
- Single layer of fischer FCPS Coated Panel System (50 mm) installed both faces of the wall.
 - Patress installation of fischer FCPS Coated Panel System. The Batts are installed in horizontal rows and fixed in minimum two vertical edges. Overlap of batts to substrate min 100 mm. Batts mechanically fixed to substrate with min 6 mm x 80 mm steel screws and steel retaining washer. Fixings installed at max 300 mm centres.
- Max. Aperture size 750 mm wide x 1200 mm high.
- Continuous / Sustained CS insulated metallic pipes.
- 2 x 2 mm thick layers of fischer FiPW-E Intumescent Pipe Wrap Endless installed both sides of the fischer FCPS Coated Panel System.
- First service support 400 mm from both faces of the substrate.



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

Construction details:

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

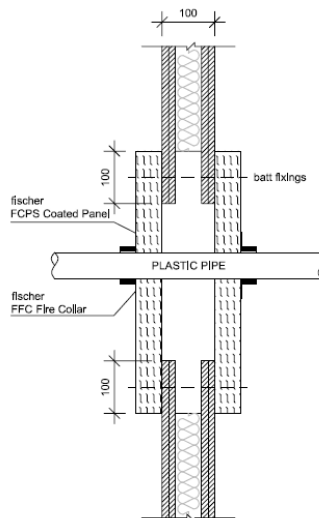
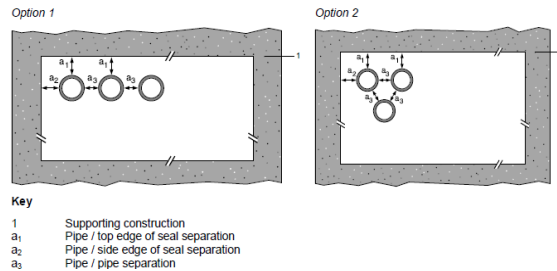


Service(s)	Classification
Steel or Copper Pipe 42-159 mm Ø, 1.2 mm – 14.2 mm wall thickness. 25 mm thick foil faced glass fibre insulation min. 30kg/m ³ (C/S)	E 120 C/U EI 90 C/U
Steel or Copper Pipe 42 mm Ø, 1 mm – 14.2 mm wall thickness. 25 mm thick foil faced glass fibre insulation min. 30kg/m ³ (C/S)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

B2.2.2 Plastic Pipe Penetrations

Construction details:

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



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

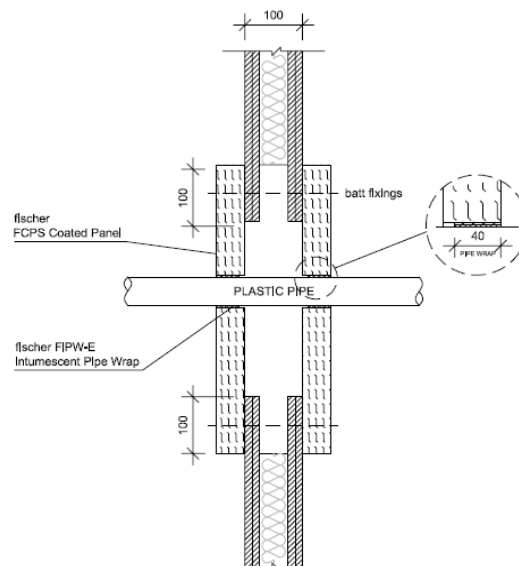
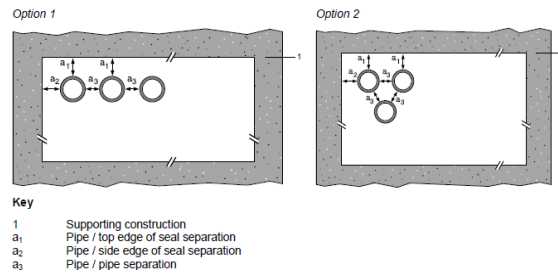
Service(s)	fischer FFC Firestop Collar Ref	Classification
PP Pipe 32 mm Ø, 2.9 mm wall thickness	32 mm	EI 120 U/C
PP Pipe 40 mm Ø, 2.9 mm wall thickness	40 mm	
PP Pipe 50 mm Ø, 2.9 mm wall thickness	50 mm	
PP Pipe 55 mm Ø, 2.9-4.4 mm wall thickness	55 mm	
PP Pipe 63 mm Ø, 2.9-4.4 mm wall thickness	63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

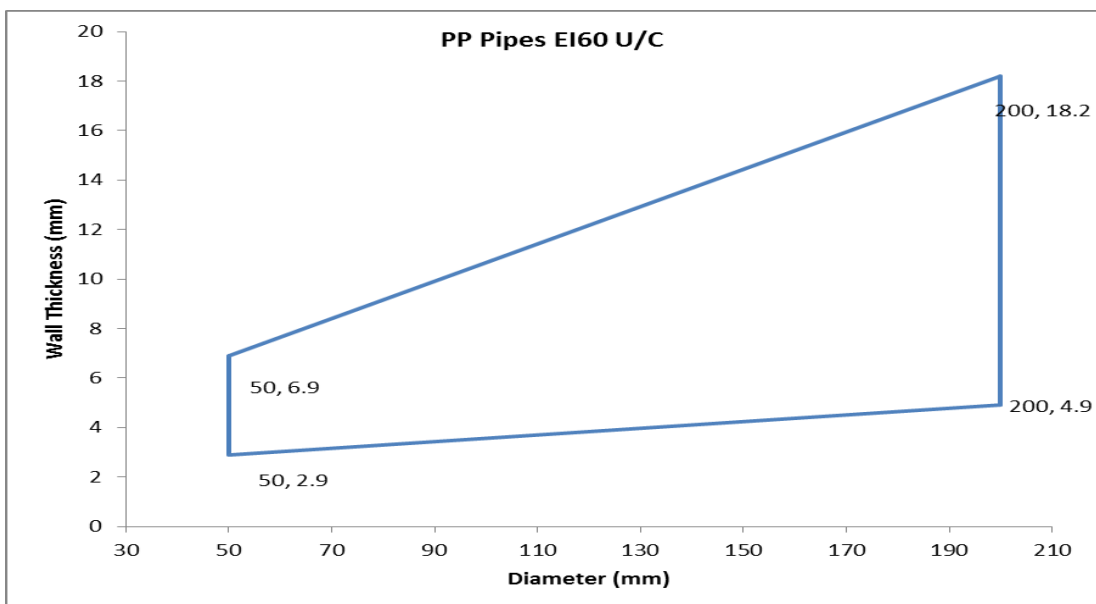
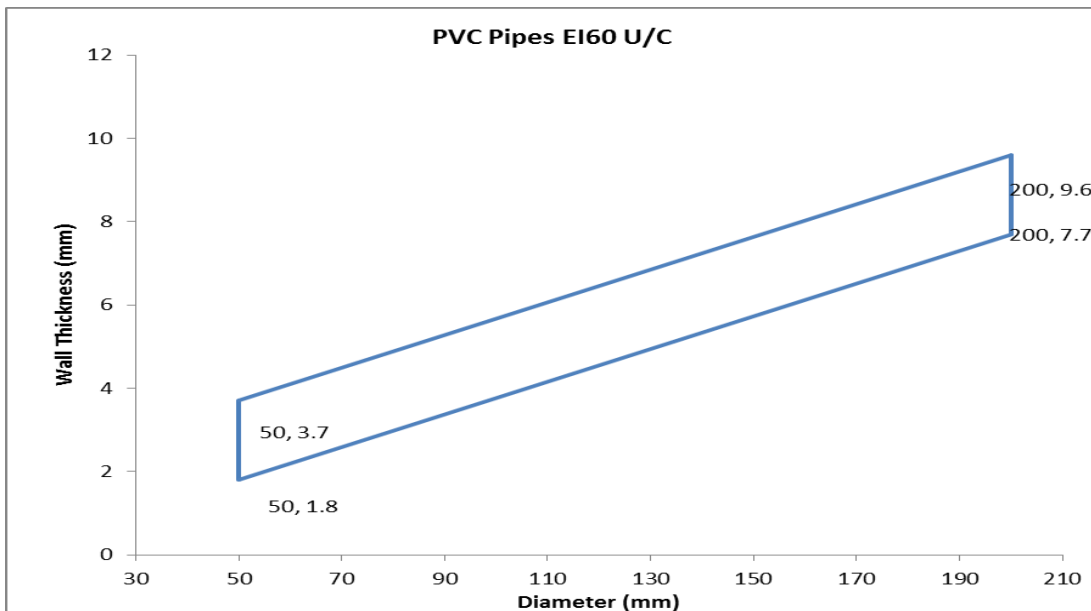
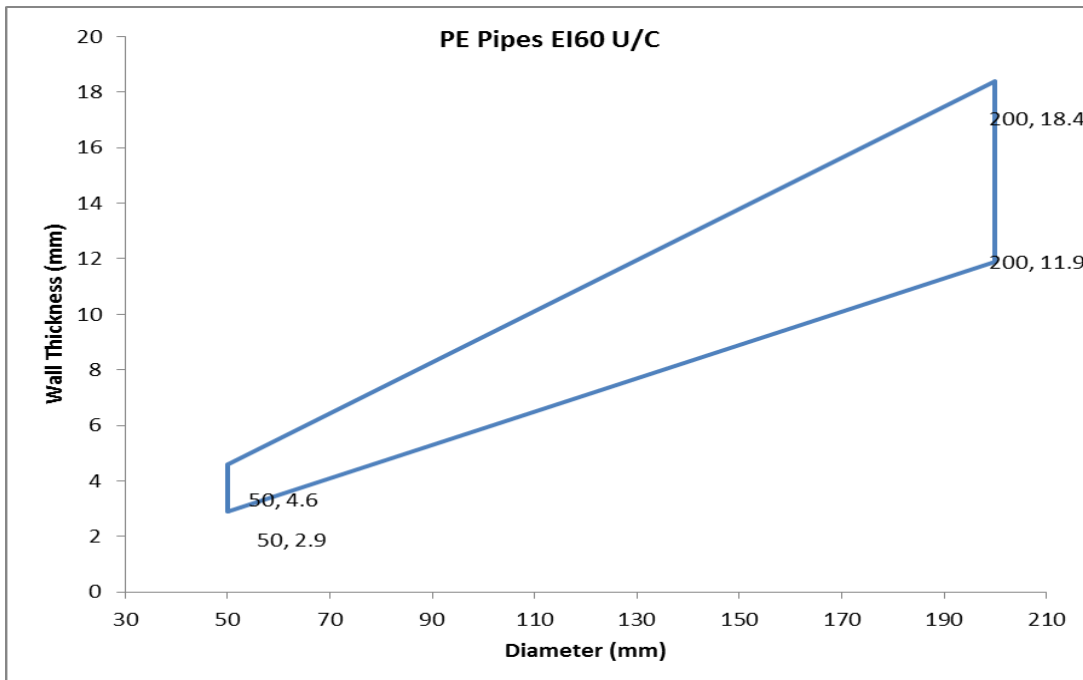
Service(s)	fischer FFC Firestop Collar Ref	Classification
PE Pipe 32 mm Ø, 2.9 mm wall thickness	32 mm	EI 120 U/C
PE Pipe 40 mm Ø, 2.9 mm wall thickness	40 mm	
PE Pipe 50 mm Ø, 2.9 mm wall thickness	50 mm	
PE Pipe 55 mm Ø, 2.9-4.4 mm wall thickness	55 mm	
PE Pipe 63 mm Ø, 2.9-4.4 mm wall thickness	63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

Construction details:

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

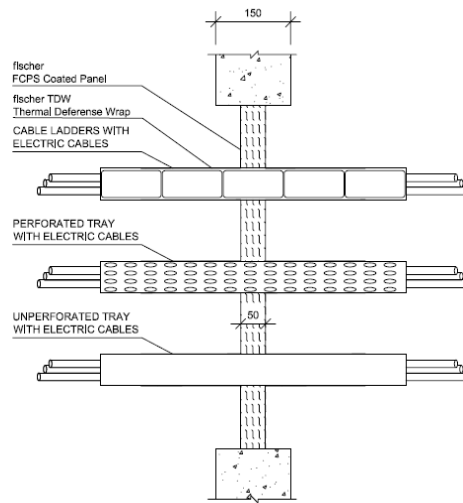
Intumescent Thickness	
Pipe Diameter	Intumescent Material
ø 32 mm - ø 50 mm	40 mm (W) x 2 mm (T)
ø 51 mm - ø 82 mm	40 mm (W) x 4 mm (T)
ø 83 mm - ø 115 mm	40 mm (W) x 6 mm (T)
ø 116 mm - ø 160 mm	40 mm (W) x 8 mm (T)
ø 161 mm - ø 200 mm	40 mm (W) x 10 mm (T)
ø 201 mm - ø 250 mm	40 mm (W) x 12 mm (T)





B3 fischer FCPS Coated Panel System Penetration Seal in Rigid Walls min. 150 mm thick**B3.1 Single Layer (50 mm) fischer FCPS Coated Panel System Penetration Seal****B3.1.1 Cable Penetrations****Construction details:**

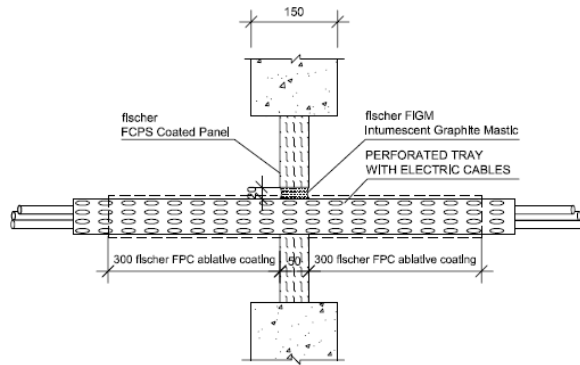
- Single layer of fischer FCPS Coated Panel System (50 mm) installed internally within the wall.
- Max. Aperture size 600 mm wide x 600 mm high.
- Cables and cable trays wrapped with a single layer of 6 mm thick fischer Thermal Defense Wrap (L/I 300 mm).
- First service support 250 mm from both faces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



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

Construction details:

- Single layer of fischer FCPS Coated Panel System (50 mm) installed internally within the wall.
- Max. Aperture size 750 mm wide x 1100 mm high.
- All cables coated with 2 mm DFT fischer FPC Panel Coating 300 mm along the cables both sides of the seal.
- 50 mm deep x 20 mm wide anulus fischer FiGM Intumescent Graphite Mastic.
- First service support 400 mm from both faces of the substrate.

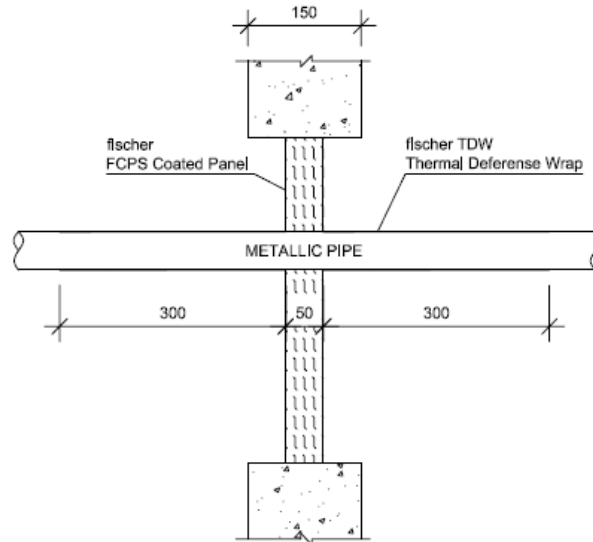


Service(s)	Classification
500 mm perforated cable tray	EI30
Electrical cables up to 21 mm \varnothing	EI45
1 off 'C1' Cable	
1 off 'C2' Cable	
1 off 'C3' Cable	

B3.1.2 Metallic Pipe Penetrations

Construction details:

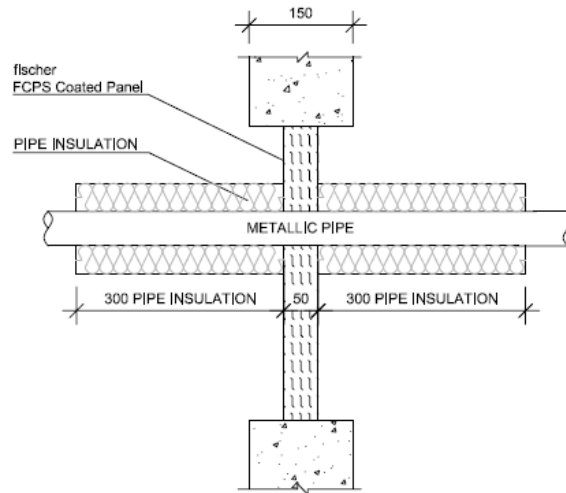
- Single layer of fischer FCPS Coated Panel System (50 mm) installed internally within the wall.
- Max. Aperture size 600 mm wide x 600 mm high.
- Metallic pipes wrapped with a single layer of 6 mm thick fischer Thermal Defense Wrap (L/I 300 mm).
- First service support 250 mm from both faces of the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



Service(s)	Classification
Steel or Copper Pipe 108 mm Ø, 1.5 mm – 14.2 mm Wall Thickness. (LI) 40 mm stone wool insulation (min 140Kg/m ³)	E60 C/U EI45 C/U

Construction details:

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

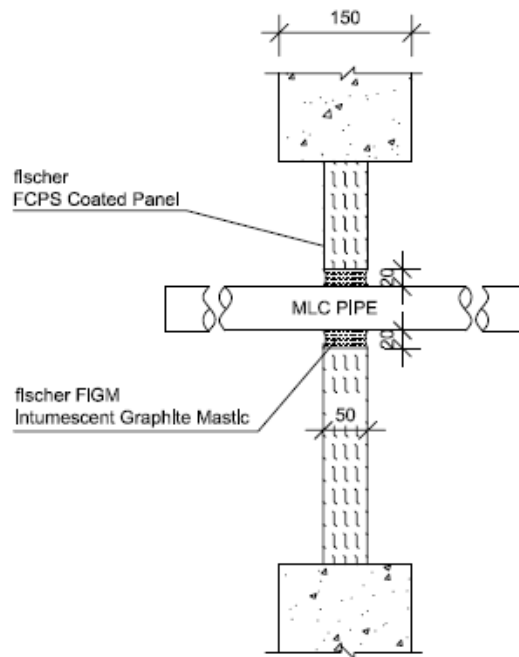


Service(s)	Classification
Steel or Copper Pipe 42 mm Ø, 1.2 mm – 14.2 mm wall thickness. (L/I 300 mm) 40 mm stone wool insulation (min 40Kg/m ³)	EI45 C/U
Steel or Copper Pipe 42 mm – 159 mm Ø, 2 mm – 14.2 mm wall thickness. (L/I 300 mm) 40 mm stone wool insulation (min 40Kg/m ³)	E45 C/U EI15 C/U

B3.1.3 MLC Pipe Penetrations

Construction details:

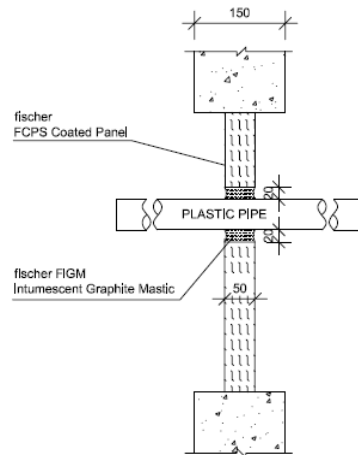
- Single layer of fischer FCPS Coated Panel System (50 mm) installed internally within the wall.
- Max. Aperture size 750 mm wide x 1100 mm high.
- fischer FIGM Intumescent Graphite Mastic 20 mm annulus full 50 mm depth of the fischer FCPS Coated Panel System.
- First service support 400 mm from both faces of the substrate.



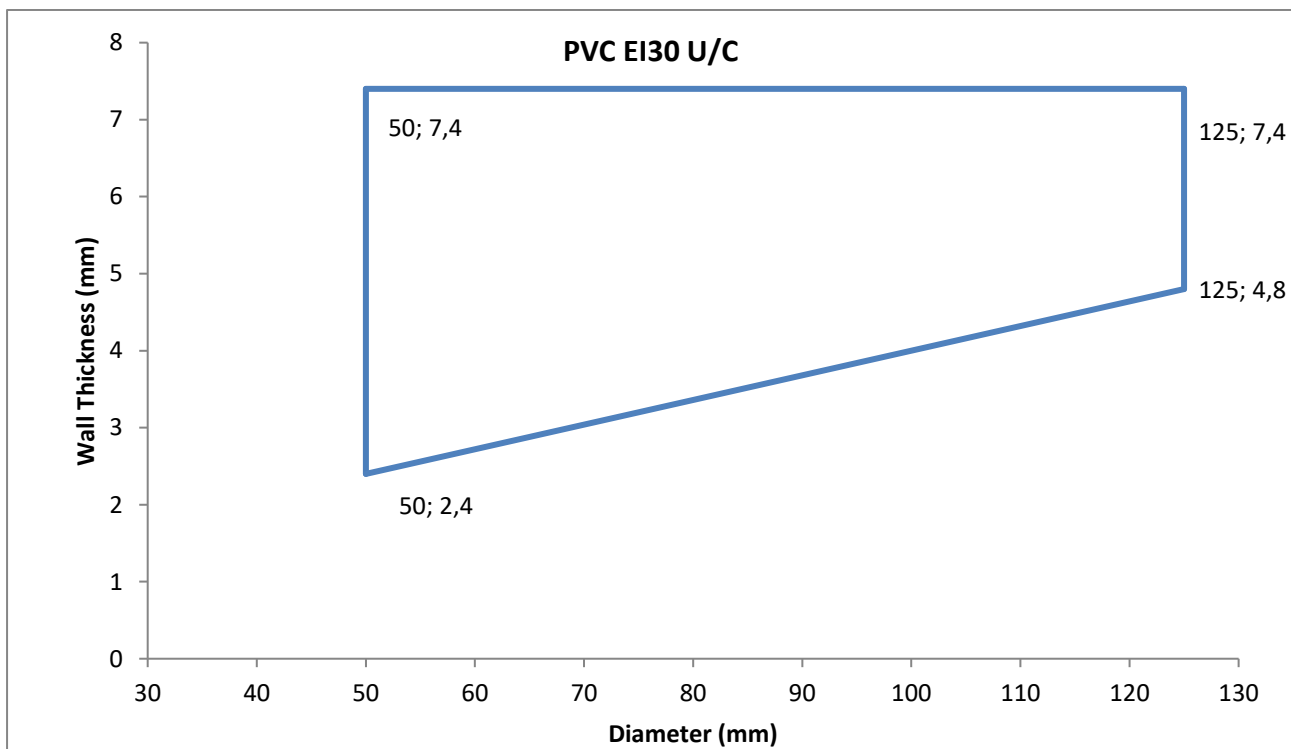
Penetration Specification	Classification
Uponor MLC (Multi-Layer Composite) Pipe 40 mm \varnothing 4 mm wall thickness	E45 U/C EI30 U/C
Uponor MLC (Multi-Layer Composite) Pipe 50 mm \varnothing 4.5 mm wall thickness	
Uponor MLC (Multi-Layer Composite) Pipe 63 mm \varnothing 6 mm wall thickness	
Uponor MLC (Multi-Layer Composite) Pipe 75 mm \varnothing 7.5 mm wall thickness	
Uponor MLC (Multi-Layer Composite) Pipe 90 mm \varnothing 8.5 mm wall thickness	
Uponor MLC (Multi-Layer Composite) Pipe 110 mm \varnothing 10 mm wall thickness	

Construction details:

- Single layer of fischer FCPS Coated Panel System (50 mm) installed internally within the wall.
- Max. Aperture size 750 mm wide x 1100 mm high.
- fischer FiGM Intumescent Graphite Mastic 20 mm annulus full 50 mm depth of the fischer FCPS Coated Panel System.
- First service support 400 mm from both faces of the substrate.



Penetration Specification	Classification
PVC Pipe 50 mm \varnothing 2.4-7.4 mm wall thickness	EI45 U/C
Also scope as per graphs below	

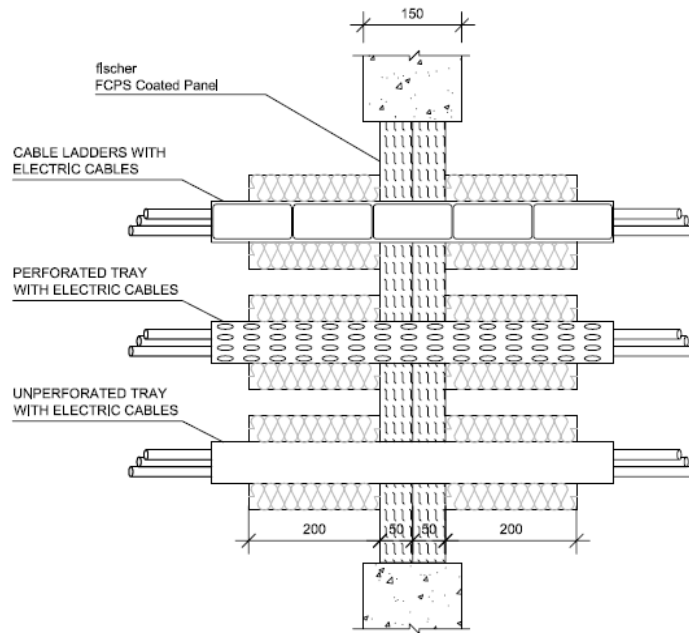


B3.2 Double Layer (50 mm) fischer FCPS Coated Panel System Penetration Seal

B3.2.1 Cable Penetrations

Construction details:

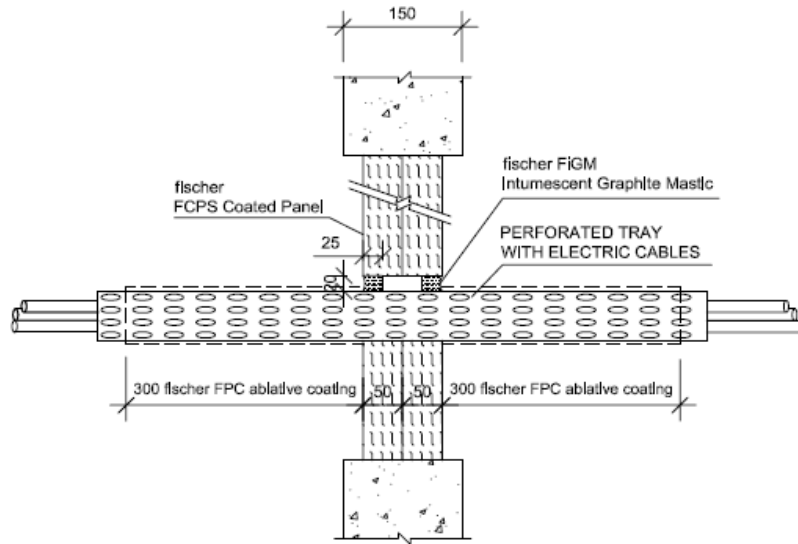
- Double layer of fischer FCPS Coated Panel System (50 mm) installed internally within the wall.
- Max. Aperture size 700 mm wide x 1100 mm high.
- Cables and cable trays wrapped with Stone Wool Insulation 45 mm thick, 40 kg/m³ (L/I 200 mm).
- First service support 400 mm from both faces of the substrate.



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

Construction details:

- Double layer of fischer FCPS Coated Panel System (50 mm) installed internally within the wall.
- Max. Aperture size 750 mm wide x 1200 mm high.
- Cables and cable trays wrapped with Stone Wool Insulation 45 mm thick, 40 kg/m³ (L/I 200 mm).
- fischer FiGM Intumescent Graphite Mastic 20 mm annulus full 50 mm depth of the fischer FCPS Coated Panel System.
- First service support 400 mm from both faces of the substrate.

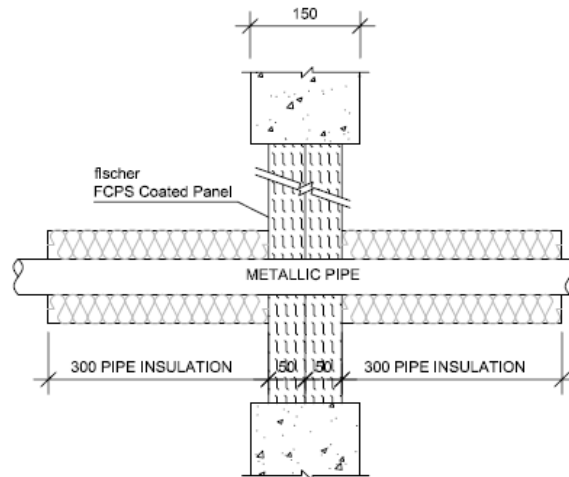


Penetration Specification	Classification
500 mm perforated cable tray	EI120
Electrical cables up to 21 mm ø	
1 off 'C1' Cable	
1 off 'C2' Cable	E120 EI90
1 off 'C3' Cable	EI120

B3.2.2 Metallic Pipe Penetrations

Construction details:

- Double layer of fischer FCPS Coated Panel System (50 mm) installed internally within the wall.
- Max. Aperture size 700 mm wide x 1100 mm high.
- Cables and cable trays wrapped with 40 mm stone wool insulation (min 40 kg/m³) (L/I 300 mm).
- First service support 400 mm from both faces of the substrate.

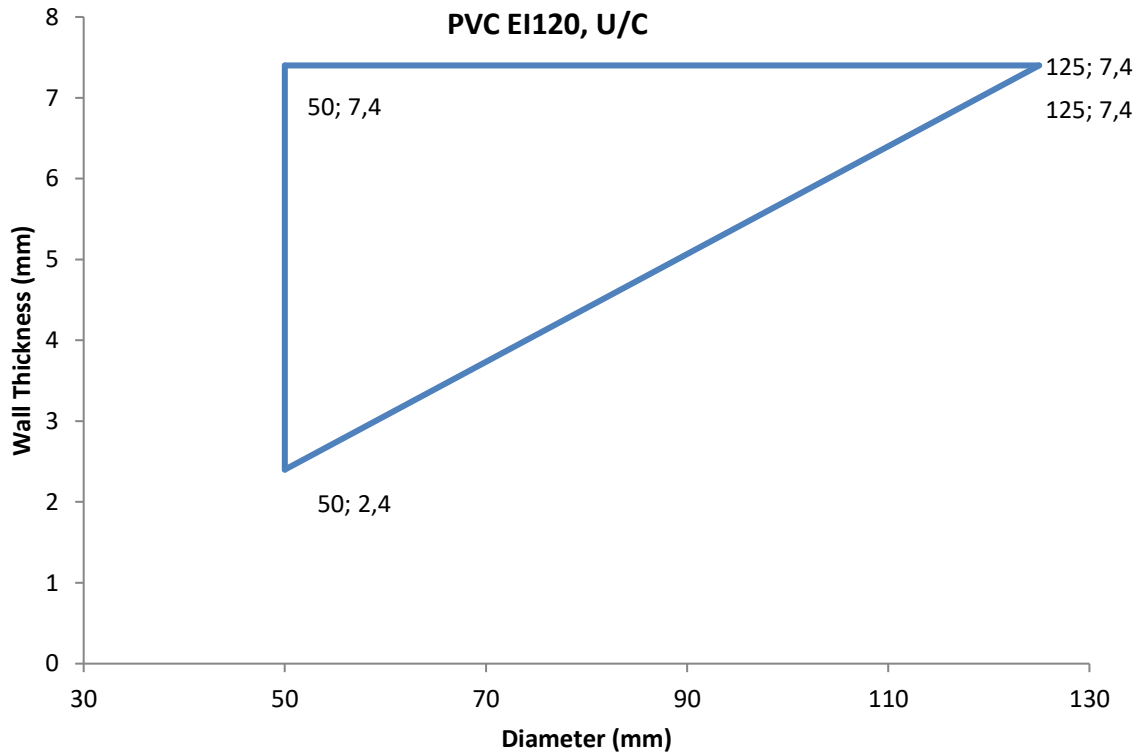
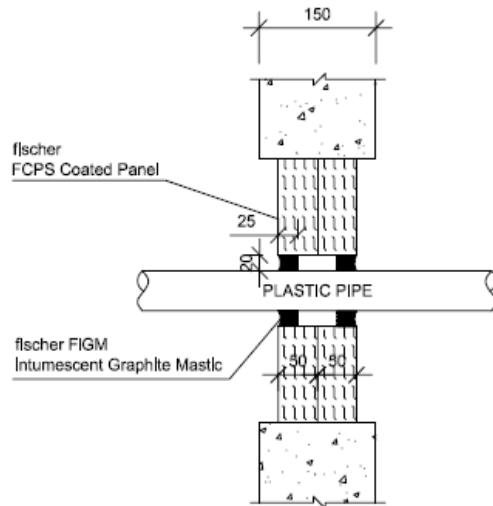


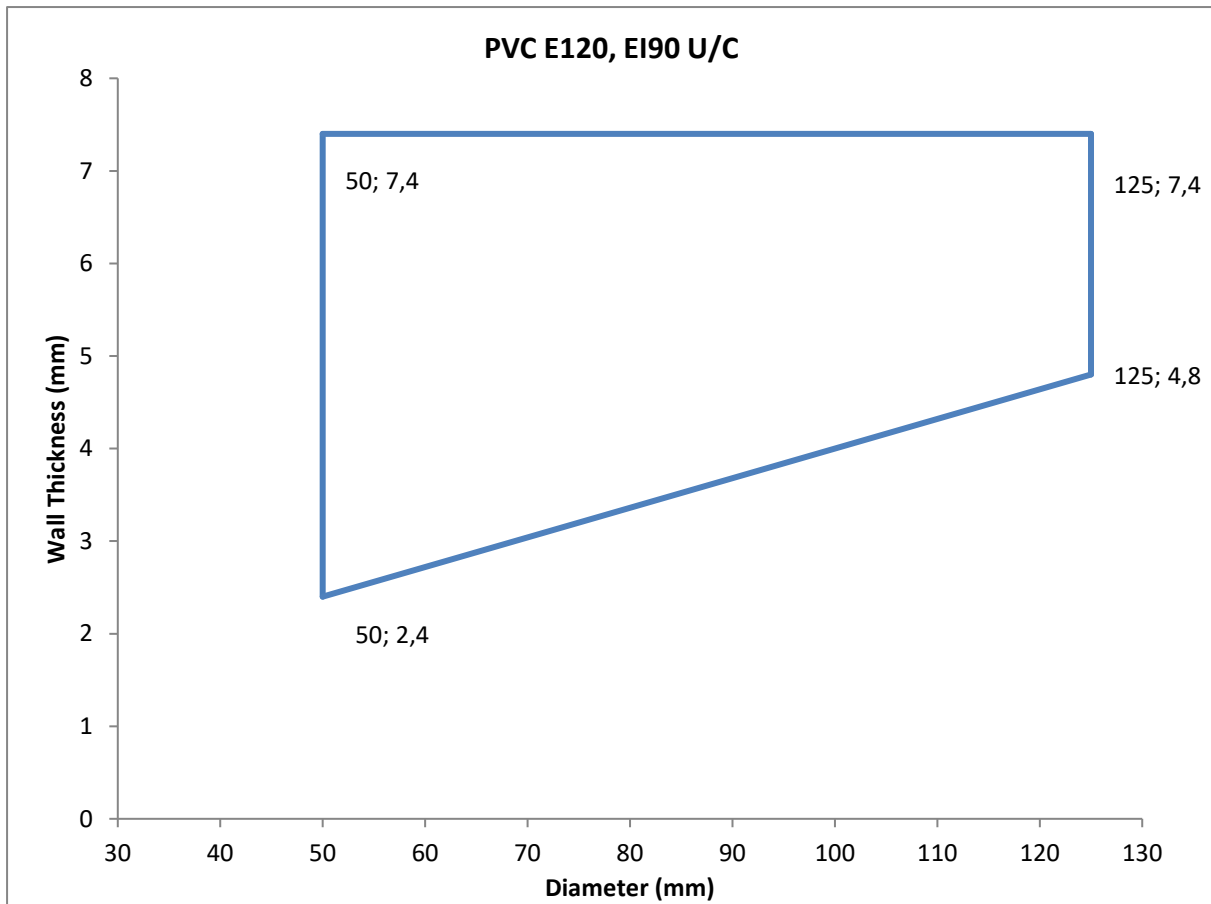
Service(s)	Classification
Steel or Copper Pipe 42 mm Ø, 1.2 mm – 14.2 mm wall thickness. (L/I 300 mm) 40 mm stone wool insulation (min 40 kg/m ³)	E120 C/U EI60 C/U
Steel or Copper Pipe 42 mm – 159 mm Ø, 2 mm – 14.2 mm wall thickness. (L/I 300 mm) 40 mm stone wool insulation (min 40 kg/m ³)	E120 C/U EI30 C/U

B3.2.3 Plastic Pipe Penetrations

Construction details:

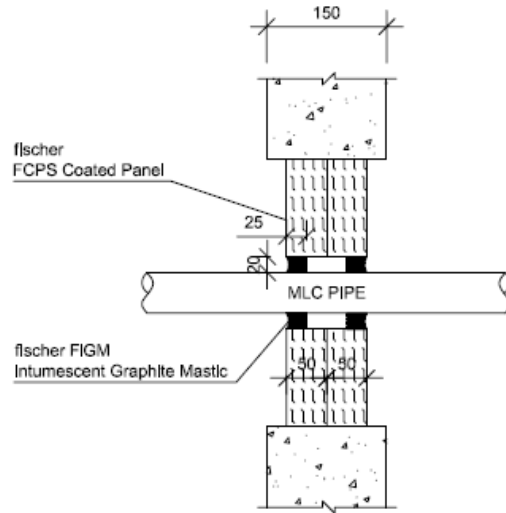
- Double layer of fischer FCPS Coated Panel System (50 mm) installed internally within the wall.
- Max. Aperture size 750 mm wide x 1100 mm high.
- fischer FIGM Intumescent Graphite Mastic 20 mm annulus, 25 mm deep both faces of the fischer FCPS Coated Panel System.
- First service support 400 mm from both faces of the substrate.





Construction details:

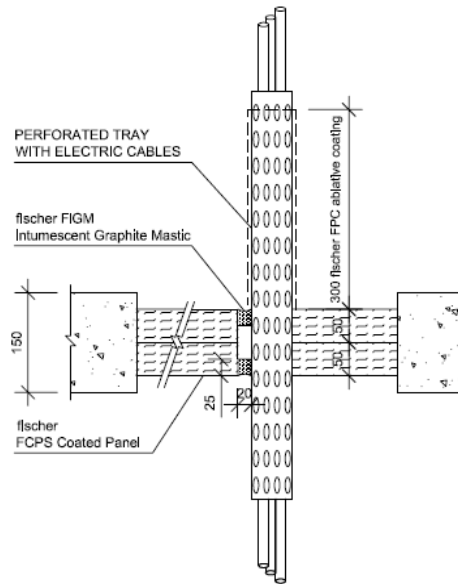
- Double layer of fischer FCPS Coated Panel System (50 mm) installed internally within the wall.
- Max. Aperture size 750 mm wide x 1100 mm high.
- fischer FIGM Intumescent Graphite Sealant 20 mm annulus, 25 mm deep both faces of the fischer FCPS Coated Panel System.
- First service support 400 mm from both faces of the substrate.



Penetration Specification	Classification
Uponor MLC (Multi-Layer Composite) Pipe 40 mm \varnothing 4 mm wall thickness	EI120 U/C
Uponor MLC (Multi-Layer Composite) Pipe 50 mm \varnothing 4.5 mm wall thickness	
Uponor MLC (Multi-Layer Composite) Pipe 63 mm \varnothing 6 mm wall thickness	
Uponor MLC (Multi-Layer Composite) Pipe 75 mm \varnothing 7.5 mm wall thickness	
Uponor MLC (Multi-Layer Composite) Pipe 90 mm \varnothing 8.5 mm wall thickness	
Uponor MLC (Multi-Layer Composite) Pipe 110 mm \varnothing 10 mm wall thickness	

B3 fischer FCPS Coated Panel System Penetration Seal in Rigid Floors min. 150 mm thick**B3.1 Double Layer (50 mm) fischer FCPS Coated Panel System Penetration Seal****B3.1.1 Cable Penetrations****Construction details:**

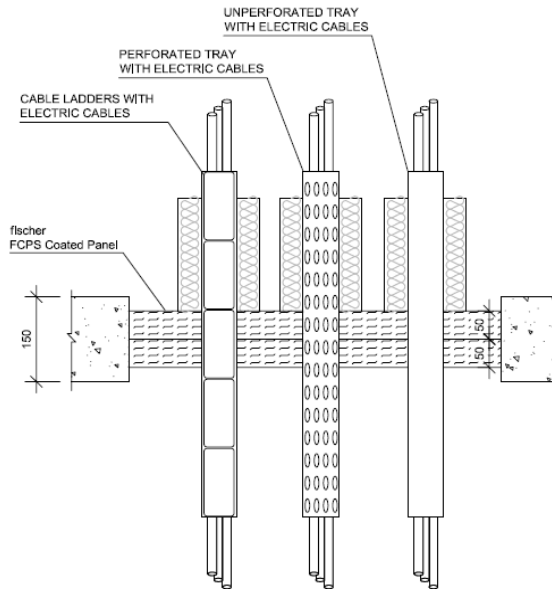
- Double layer of fischer FCPS Coated Panel System (50 mm) installed internally within the floor.
- Max. Aperture size 700 mm wide x 1100 mm high.
- All cables coated with 2 mm FPC Panel Coating 300 mm along the cables upper side of the seal
- fischer FiGM Intumescent Graphite Mastic 20 mm annulus full 25 mm depth both sides of the floor.
- First service support 400 mm from both faces of the substrate.



Penetration Specification	Classification
500 mm perforated cable tray	EI60
Electrical cables up to 21 mm ϕ	
1 off 'C1' Cable	
1 off 'C2' Cable	
1 off 'C3' Cable	

Construction details:

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

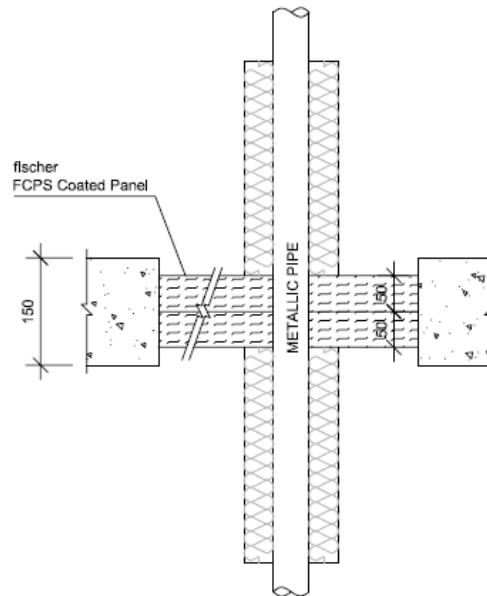


Service(s)	Classification
Electrical cables up to 80 mm dia	EI60
Cable Trays and Ladders	
100 mm diameter bundle telecommunication cable type "F"	
Unsheathed electrical cables up to 17 mm dia	
Unsheathed electrical cables 18-24 mm dia	
Steel or Copper Conduits up to 16 mm	
Plastic conduits up to 16 mm	

B3.1.2 Metallic Pipe Penetrations

Construction details:

- Double layer of fischer FCPS Coated Panel System (50 mm) installed internally within the wall.
- Max. Aperture size 700 mm wide x 1100 mm high.
- Cables and cable trays wrapped with 40 mm stone wool insulation (min 40 kg/m³) (L/I 300 mm).
- First service support 400 mm from both faces of the substrate.

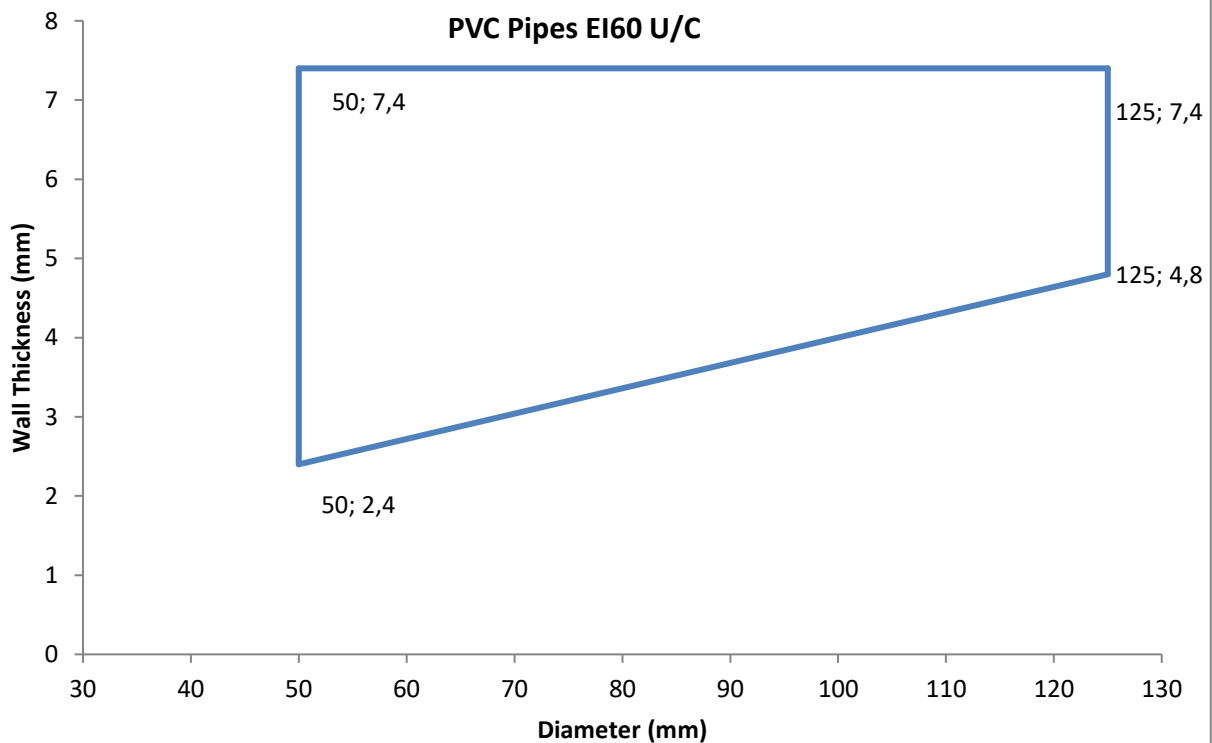
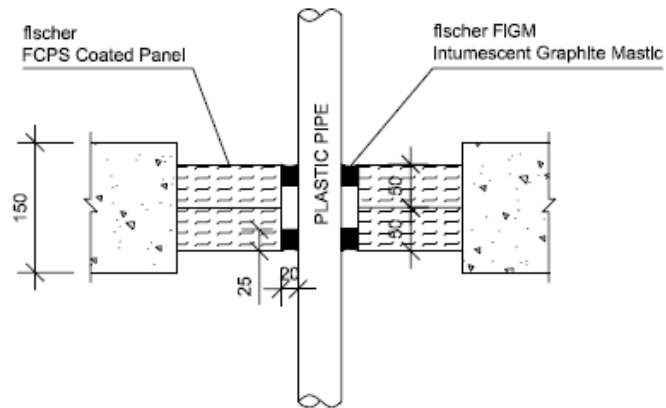


Service(s)	Classification
Steel or Copper Pipe 42 mm Ø, 1.2 mm – 14.2 mm wall thickness.	EI120 C/U
Steel or Copper Pipe 42 mm – 159 mm Ø, 2 mm – 14.2 mm wall thickness.	E120 C/U EI30 C/U

B3.1.3 Plastic Pipe Penetrations

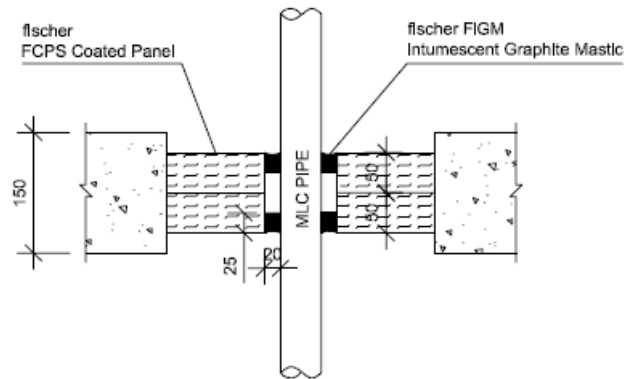
Construction details:

- Double layer of fischer FCPS Coated Panel System (50 mm) installed internally within the floor.
- Max. Aperture size 750 mm wide x 1100 mm high.
- fischer FIGM Intumescent Graphite Mastic 20 mm annulus, 25 mm deep both faces of the fischer FCPS Coated Panel System.
- First service support 400 mm from both faces of the substrate.



Construction details:

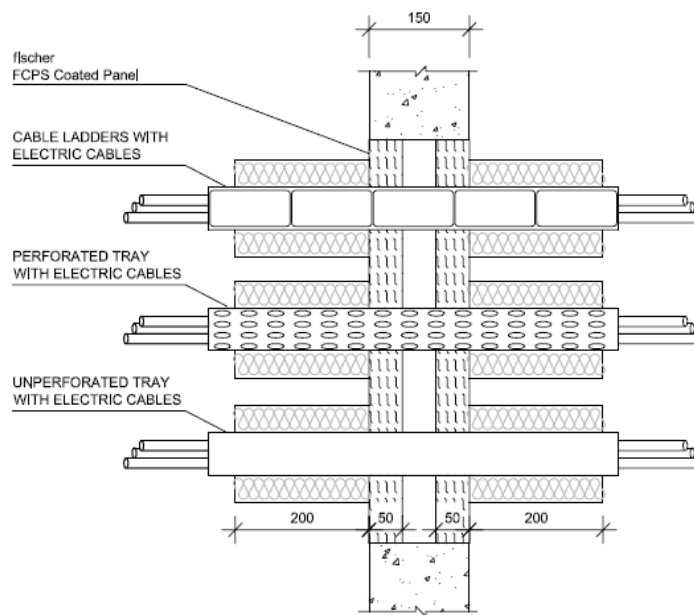
- Double layer of fischer FCPS Coated Panel System (50 mm) installed internally within the floor.
- Max. Aperture size 750 mm wide x 1100 mm high.
- fischer FIGM Intumescent Graphite Mastic 20 mm annulus, 25 mm deep both faces of the fischer FCPS Coated Panel System.
- First service support 400 mm from both faces of the substrate.



Penetration Specification	Classification
Uponor MLC (Multi-Layer Composite) Pipe 40 mm \varnothing 4 mm wall thickness	EI60 U/C
Uponor MLC (Multi-Layer Composite) Pipe 50 mm \varnothing 4.5 mm wall thickness	
Uponor MLC (Multi-Layer Composite) Pipe 63 mm \varnothing 6 mm wall thickness	
Uponor MLC (Multi-Layer Composite) Pipe 75 mm \varnothing 7.5 mm wall thickness	
Uponor MLC (Multi-Layer Composite) Pipe 90 mm \varnothing 8.5 mm wall thickness	
Uponor MLC (Multi-Layer Composite) Pipe 110 mm \varnothing 10 mm wall thickness	

B3 fischer FCPS Coated Panel System Penetration Seal in Rigid Walls min. 150 mm thick**B3.1 Double Layer (50 mm) fischer FCPS Coated Panel System Penetration Seal****B3.1.1 Cable Penetrations****Construction details:**

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



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