

UL-EU CERTIFICATE

Certificate No.
UL-EU-00513-EN

Issue date
2014-05-27

Issue No.
3

Re-Issue date
2025-10-22

Expiry date
2035-10-22



4705

This is to acknowledge that:
Neutron Fire Technologies Limited

Address:
Broomfield Industrial Estate,
Broomfield Road,
Montrose
DD10 8SY

Has had the product:
Firebreak Series Collars, Firebreak FX200 Pipe Wrap/
Firebreak FX200 Sealstrip

evaluated and meets the requirements of the standard(s):

EAD 350454-00-1104, September 2017 / EN 13501-2

Places of production:
A/005

Authorised Signatory:

A blue ink signature of Chris Johnson.

Chris Johnson
Issued by UL International (UK) Ltd

This is to certify that representative samples of the Certified Product listed above have been investigated by Underwriters Laboratories to the Standard(s) indicated on this Certificate, in accordance with the UL Global Services Agreement and the UL-EU Mark Service Terms and Conditions ("Agreement"). The Certificate Holder is entitled to use the UL-EU Mark for the Certified Product listed on the certificate and manufactured at the production site(s) listed, in accordance with the terms of the Agreement. Only those products bearing the UL-EU Mark for Europe should be considered as being covered by UL's UL-EU Mark Service. This Certificate shall remain valid through the Expiration date, unless a Standard identified on this Certificate is amended or withdrawn prior to that date or there is a non-compliance with the Agreement.



Appendix UL-EU CERTIFICATE UL-EU-00513-EN

This certificate relates to the use of Firebreak FX Series Collars, Firebreak FX200 Pipe Wrap/Firebreak FX200 Sealstrip for fire stopping where there are service penetrations through floors and walls. The detailed scope is given in pages 3 to 32 of this Certificate. This shows the thickness and acceptable dimensions, substrates and orientations required to provide fire resistance periods of up to 240 minutes for differing services and wall/floor constructions.

The product is certificated on the basis of:

- i) 0843-UKTA-240010
- ii) 0843-UKTA-240011
- iii) UK – CERTIFICATE OF CONSTANCY OF PERFORMANCE 0843 – CPR – 1360
- iv) UK – CERTIFICATE OF CONSTANCY OF PERFORMANCE 0843 – CPR – 1361
- v) Inspection and surveillance of factory production control by UL
- vi) Fire resistance test data in accordance with EN 1366-3: 2009
- vii) Classification in accordance with EN 13501-2
- viii) Durability and Servicability as defined in EAD 350454-00-1104, September 2017

The durability class of Firebreak FX Series Pipe Collars, Firebreak FX200 Pipe Wrap/Firebreak FX200 Sealstrip is Y₂ - intended for use at temperatures below 0°C, but with no exposure to rain nor UV. Includes lower use categories.

Firebreak FX Series Pipe Collars comprise Firebreak FX300, Firebreak FX400, Firebreak FX500 pipe collars and Firebreak FX700 pipe collars.

The Firebreak FX Series Pipe Collars may be supplied with shells of stainless steel or mild steel with either a galvanized or powder coated finish. The body of the collars can be either half shells with slide together fixings; half shells with hinge and toggle latch fixings or a continuous wrap around body with slide through and fold back fixing tabs.

According to EN 1366-3: 2021+A1: 2024, Clause H.4.1.8.6.2, the following end uses are envisaged* based upon the tested pipe end configuration:

Pipe material	Tested pipe end	Envisaged use scenario
Metal	C/U or C/C	Closed pipe systems (e.g. systems under pressure)
	U/U, U/C or C/U	Ventilated pipe systems (e.g. sewage pipes) and for closed pipe systems
Plastic	U/U or C/U	Ventilated pipe systems and for closed pipe systems
	U/U	Ventilated pipe systems, for rainwater systems and for closed pipe systems

* In the case where a national prescription is in conflict with the content of the table above, the national prescriptions prevail.



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Product-type: Pipe closures		Intended use: Penetration Seal
Assessment method	Essential characteristic	Product Performance
BWR 2 Safety in case of fire		
EN 13501-1	Reaction to fire	FX300/FX500 Class E
		FX400/FX700 Class F
		Firebreak FX200 Pipe Wrap / Firebreak FX200 Sealstrip Class F
EN 13501-2	Resistance to fire	See pages 4 to 32
BWR 3 Hygiene, health and environment		
EN 1026	Air permeability	No performance determined
EAD 350454-00-1104, Annex C	Water permeability	No performance determined
Declaration of manufacturer & EN 16516	Content, emission and/or release of dangerous substances	Use categories: IA1, S/W2 Declaration of manufacturer
BWR 4 Safety in use		
EOTA TR 001:2003	Mechanical resistance and stability	No performance determined
EOTA TR 001:2003	Resistance to impact/movement	No performance determined
EOTA TR 001:2003	Adhesion	No performance determined
EAD 350454-00-1104, Clause 2.2.9	Durability	Y ₂
BWR 5 Protection against noise		
EN 10140-1,2,4,5/ EN ISO 717-1	Airborne sound insulation	No performance determined
BWR 6 Energy economy and heat retention		
EN 12664, EN 12667, EN 12939, EN ISO 8990, EN ISO 6946, EN ISO 14683, EN ISO 10211, EN ISO 10456	Thermal properties	No performance determined
EN ISO 12572, EN 12086, EN ISO 10456	Water vapour permeability	No performance determined



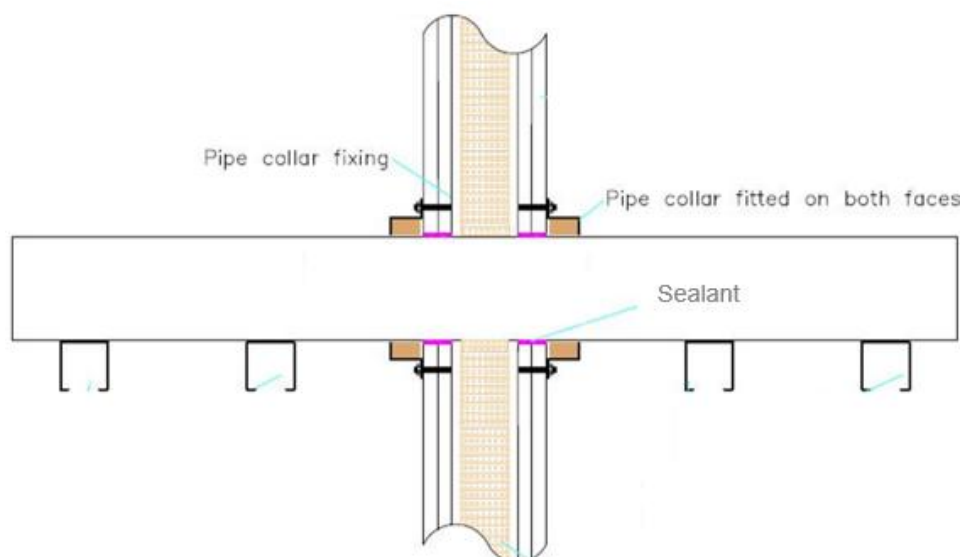
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Flexible or rigid wall constructions (or Firebreak Compound seals) with thickness of minimum 100 mm or 130 mm (as indicated in the tables below) and FX300 Collar

Penetration seals, in drywalls and concrete/masonry walls

Penetration Seal: Combustible pipes fitted with Firebreak FX 300 collar to both sides of the wall.

Construction details:



Services	Collar Inlay	Classification
PVC-U pipe according to EN 1329-1, EN 1452-2 and EN 1453-1		
Diameter 40 mm, wall thickness 2.4-3.2 mm	30 x 6 mm	EI 120 U/U, EI 120 C/U, EI 120 U/C, EI 120 C/C
Diameter 55 mm, wall thickness 2.4-3.2 mm		E 120 U/U, E 120 C/U, E 120 U/C, E 120 C/C
Diameter 65 mm, wall thickness 2.4-3.2 mm		EI 60 U/U, EI 60 C/U, EI 60 U/C, EI 60 C/C
Diameter 75 mm, wall thickness 2.4-3.2 mm		EI 120 U/U, EI 120 C/U, EI 120 U/C, EI 120 C/C
Diameter 82 mm, wall thickness 2.4-3.2 mm		
Diameter 65 mm, wall thickness 2.4-3.2 mm*		
Diameter 75 mm, wall thickness 2.4-3.2 mm*		
Diameter 82 mm, wall thickness 2.4-3.2 mm*	30 x 10 mm	E 120 U/U, E 120 C/U, E 120 U/C, E 120 C/C
Diameter 90 mm, wall thickness 2.7-6.6 mm		EI 90 U/U, EI 90 C/U, EI 90 U/C, EI 90 C/C
Diameter 110 mm, wall thickness 2.7-6.6 mm		
Diameter 90 mm, wall thickness 6.2 mm	45 x 16 mm	EI 120 U/U, EI 120 C/U, EI 120 U/C, EI 120 C/C
Diameter 110 mm, wall thickness 6.2-9.5 mm		
Diameter 125 mm, wall thickness 9.5 mm		E 120 U/U, E 120 C/U, E 120 U/C, E 120 C/C
Diameter 140 mm, wall thickness 9.5 mm		EI 90 U/U, EI 90 C/U, EI 90 U/C, EI 90 C/C
Diameter 160 mm, wall thickness 9.5 mm		
Diameter 125 mm, wall thickness 4-9.5 mm		
Diameter 140 mm, wall thickness 4-9.5 mm		
Diameter 160 mm, wall thickness 4-9.5 mm		
Diameter 125 mm, wall thickness 2.5-9.5 mm*		EI 120 U/U, EI 120 C/U, EI 120 U/C, EI 120 C/C
Diameter 140 mm, wall thickness 2.5-9.5 mm*		
Diameter 160 mm, wall thickness 2.5-9.5 mm *		
Diameter 55 mm, wall thickness 2.0 mm [§]		EI 60 U/U, EI 60 C/U, EI 60 U/C, EI 60 C/C

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Services	Collar Inlay	Classification
PE pipe according to EN 1519-1, EN 12201-2 and EN 1266-1, ABS pipe according to EN 1455-1 and SAN+PVC pipe according to EN 1565-1		
Diameter 40 mm, wall thickness 3.0-4.6 mm	30 x 6 mm	EI 120 U/U, EI 120 C/U, EI 120 U/C, EI 120 C/C
Diameter 50 mm, wall thickness 3.0-4.6 mm		
Diameter 75 mm, wall thickness 4.5-6.8 mm*		E 120 U/U, E 120 C/U, E 120 U/C, E 120 C/C EI 90 U/U, EI 90 C/U, EI 90 U/C, EI 90 C/C
Diameter 75 mm, wall thickness 4.5 mm		EI 90 U/U, EI 90 C/U, EI 90 U/C, EI 90 C/C
Diameter 75 mm, wall thickness 4.5-6.8 mm	30 x 10 mm	EI 120 U/U, EI 120 C/U, EI 120 U/C, EI 120 C/C
Diameter 90 mm, wall thickness 2.7 mm*		E 120 U/U, E 120 C/U, E 120 U/C, E 120 C/C EI 90 U/U, EI 90 C/U, EI 90 U/C, EI 90 C/C
Diameter 90 mm, wall thickness 2.7-6.6 mm		EI 90 U/U, EI 90 C/U, EI 90 U/C, EI 90 C/C
Diameter 90 mm, wall thickness 10 mm*		EI 120 U/U, EI 120 C/U, EI 120 U/C, EI 120 C/C
Diameter 110 mm, wall thickness 2.7 mm*		E 120 U/U, E 120 C/U, E 120 U/C, E 120 C/C EI 90 U/U, EI 90 C/U, EI 90 U/C, EI 90 C/C
Diameter 110 mm, wall thickness 2.7-6.6 mm		EI 90 U/U, EI 90 C/U, EI 90 U/C, EI 90 C/C
Diameter 110 mm, wall thickness 10 mm*	45 x 16 mm	EI 90 U/U, EI 90 C/U, EI 90 U/C, EI 90 C/C
Diameter 125 mm, wall thickness 4.8 mm		EI 60 U/U, EI 60 C/U, EI 60 U/C, EI 60 C/C
Diameter 125 mm, wall thickness 4.9-14.6 mm		EI 120 U/U, EI 120 C/U, EI 120 U/C, EI 120 C/C
Diameter 125 mm, wall thickness 9.5 mm*		EI 60 U/U, EI 60 C/U, EI 60 U/C, EI 60 C/C
Diameter 140 mm, wall thickness 14.6 mm		EI 120 U/U, EI 120 C/U, EI 120 U/C, EI 120 C/C
Diameter 140 mm, wall thickness 9.5 mm*		EI 60 U/U, EI 60 C/U, EI 60 U/C, EI 60 C/C
Diameter 160 mm, wall thickness 14.6 mm		EI 120 U/U, EI 120 C/U, EI 120 U/C, EI 120 C/C
Diameter 160 mm, wall thickness 9.5 mm*		

* Minimum 130 mm wall

\$ 0-45° pipe angle and 160 mm diameter pipe collar over an oval opening 60 x 83 mm with gaps sealed using Firebreak 22 sealant



Solutions

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Services	Collar Inlay	Classification
PP pipe according to EN ISO 15494		
Diameter 40 mm, wall thickness 2 mm	30 x 6 mm	EI 120 U/U, EI 120 C/U, EI 120 U/C, EI 120 C/C
Diameter 40 mm, wall thickness 2.1-4.3 mm		E 120 U/U, E 120 C/U, E 120 U/C, E 120 C/C EI 60 U/U, EI 60 C/U, EI 60 U/C, EI 60 C/C
Diameter 50 mm, wall thickness 2 mm		EI 120 U/U, EI 120 C/U, EI 120 U/C, EI 120 C/C
Diameter 50 mm, wall thickness 2.1-4.3 mm		E 120 U/U, E 120 C/U, E 120 U/C, E 120 C/C EI 60 U/U, EI 60 C/U, EI 60 U/C, EI 60 C/C
Diameter 75 mm, wall thickness 2 mm		EI 120 U/U, EI 120 C/U, EI 120 U/C, EI 120 C/C
Diameter 75 mm, wall thickness 2.1-4.3 mm		E 120 U/U, E 120 C/U, E 120 U/C, E 120 C/C EI 60 U/U, EI 60 C/U, EI 60 U/C, EI 60 C/C
Diameter 80 mm, wall thickness 2 mm		EI 120 U/U, EI 120 C/U, EI 120 U/C, EI 120 C/C
Diameter 80 mm, wall thickness 2.1-4.3 mm		E 120 U/U, E 120 C/U, E 120 U/C, E 120 C/C EI 60 U/U, EI 60 C/U, EI 60 U/C, EI 60 C/C
Diameter 90 mm, wall thickness 2.7 mm	30 x 10 mm	EI 120 U/U, EI 120 C/U, EI 120 U/C, EI 120 C/C
Diameter 110 mm, wall thickness 2.7 mm		
Diameter 140 mm, wall thickness 3.5 mm	45 x 16 mm	E 120 U/U, E 120 C/U, E 120 U/C, I 120 C/C EI 45 U/U, EI 45 C/U, EI 45 U/C, EI 45 C/C
Diameter 140 mm, wall thickness 4.0 mm*		EI 120 U/U, EI 120 C/U, EI 120 U/C, EI 120 C/C
Diameter 160 mm, wall thickness 4.0 mm*		
Diameter 140 mm, wall thickness 4.0-14.6 mm*		E 120 U/U, E 120 C/U, E 120 U/C, I 120 C/C EI 45 U/U, EI 45 C/U, EI 45 U/C, EI 45 C/C
Diameter 160 mm, wall thickness 4.0-14.6 mm*		

* Minimum 130 mm wall



Solutions

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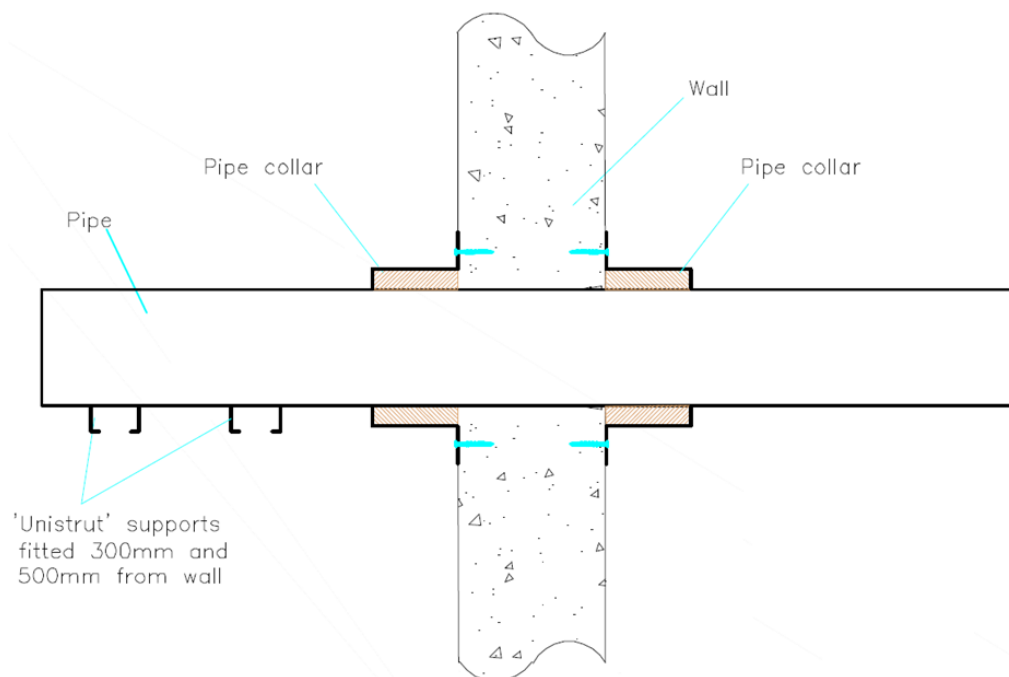
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Rigid wall constructions (or Firebreak Compound seals) with thickness of minimum 100 mm and FX300 pipe collar

Penetration seals, in concrete/masonry walls

Penetration Seal: Insulated metal and combustible pipes fitted with Firebreak FX 300 collar to both sides of the wall.

Construction details:



Services	Collar Inlay	Classification
PVC-U pipe according to EN 1329-1, EN 1452-2 and EN 1453-1		
Diameter 90 mm, wall thickness 1.8-4.2 mm	30 x 10 mm	EI 240 U/U, EI 240 C/U, EI 240 U/C, EI 240 C/C
Diameter 110 mm, wall thickness 1.8-4.2 mm		
Diameter 125mm, wall thickness 2.5 mm	45 x 16 mm	
Diameter 140mm, wall thickness 2.5 mm		
Diameter 160 mm, wall thickness 2.5 mm		
PE pipe according to EN 1519-1, EN 12201-2 and EN 1266-1, ABS pipe according to EN 1455-1 and SAN+PVC pipe according to EN 1565-1		
Diameter 125mm, wall thickness 6.2 mm	45 x 16 mm	EI 240 U/U, EI 240 C/U, EI 240 U/C, EI 240 C/C
Diameter 140mm, wall thickness 6.2 mm		
Diameter 160 mm, wall thickness 6.2 mm		
BevEx Drinks Python		
Diameter 80 mm	30 x 6 mm	EI 240 U/U, EI 240 C/U, EI 240 U/C, EI 240 C/C
Steel pipe, with Continuous Sustained (CS) K-Flex ST or Armaflex insulation		
Diameter 47.6 mm, wall thickness 1.5-14.2 mm with 13 mm insulation	30 x 6 mm	E 240 C/C, EI 180 C/C
Diameter 114.3 mm, wall thickness 2-14.2 mm with 19 mm insulation	45 x 16 mm	E 240 C/C, EI 120 C/C



Solutions

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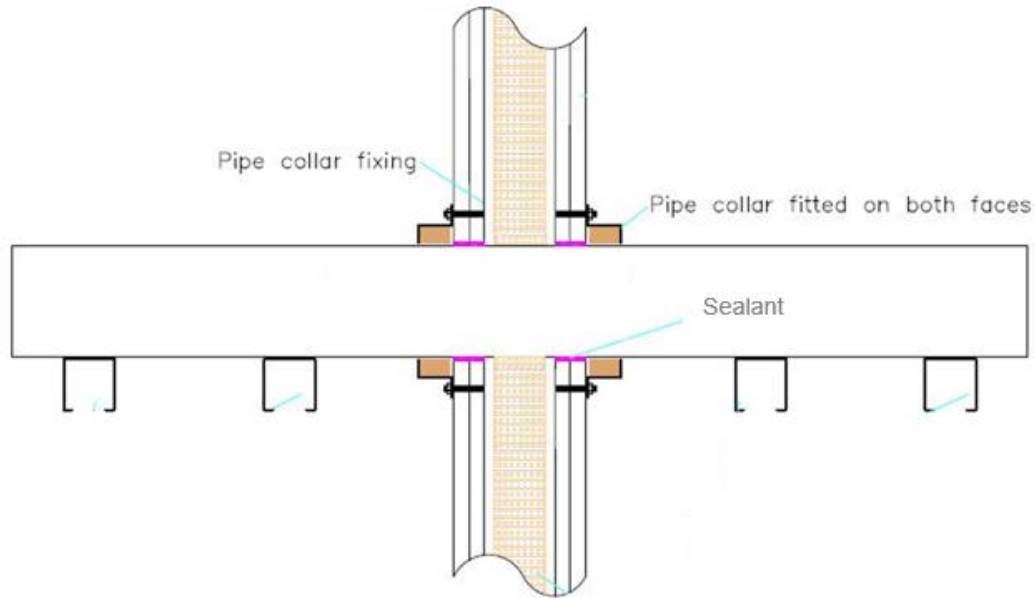
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Flexible or rigid wall constructions (or Firebreak Compound seals) with thickness of minimum 100 mm and FX400 pipe collar

Penetration seals, in drywalls and concrete/masonry walls

Penetration Seal: Insulated metal and combustible pipes and telecoms cables fitted with Firebreak FX 400 collar to both sides of the wall.

Construction details:



Services	Collar Inlay	Classification
PVC-U pipe according to EN 1329-1, EN 1452-2 and EN 1453-1		
Diameter 32 mm, wall thickness 3-3.2 mm	50 x 4 mm	EI 120 U/U, EI 120 C/U, EI 120 U/C, EI 120 C/C
Diameter 38 mm, wall thickness 3-3.2 mm		
Diameter 40 mm, wall thickness 3-3.2 mm		
Diameter 42.2 mm, wall thickness 3.2 mm		
Diameter 46 mm, wall thickness 3.2 mm		
Diameter 48.3 mm, wall thickness 3.2 mm		
Diameter 50 mm, wall thickness 3.2 mm		
Diameter 55 mm, wall thickness 3.2 mm		
Diameter 60.3 mm, wall thickness 3.2 mm	50 x 6 mm	
Diameter 63 mm, wall thickness 3.2 mm		
Diameter 65 mm, wall thickness 3.2 mm		
Diameter 70 mm, wall thickness 3.2 mm		
Diameter 75 mm, wall thickness 3.2 mm		
Diameter 82 mm, wall thickness 3.2 mm		
Diameter 90 mm, wall thickness 6.6 mm	50 x 8 mm	
Diameter 110 mm, wall thickness 6.6 mm		
Diameter 114.3 mm, wall thickness 3.2-9.5 mm	60 x 18 mm	
Diameter 125 mm, wall thickness 3.2-9.5 mm		
Diameter 140 mm, wall thickness 3.2-9.5 mm		
Diameter 160 mm, wall thickness 3.2-9.5 mm		
Diameter 200 mm, wall thickness 3.9 mm	125 x 20 mm	



Solutions

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Services	Collar Inlay	Classification
PVC-U pipe according to EN 1329-1, EN 1452-2 and EN 1453-1 with 19 mm Armaflex or K-Flex-ST insulation Continuous Sustained (CS)		
Diameter 55 mm, wall thickness 2 mm	50 x 8 mm	EI 120 U/U, EI 120 C/U, EI 120 U/C, EI 120 C/C
Services	Collar Inlay	Classification
PE pipe according to EN 1519-1, EN 12201-2 and EN 1266-1, ABS pipe according to EN 1455-1 and SAN+PVC pipe according to EN 1565-1		
Diameter 32 mm, wall thickness 3.7-4.6 mm	50 x 4 mm	EI 120 U/U, EI 120 C/U, EI 120 U/C, EI 120 C/C
Diameter 38 mm, wall thickness 3.7-4.6 mm		
Diameter 40 mm, wall thickness 3.7-4.6 mm		
Diameter 42.2 mm, wall thickness 4.6 mm		
Diameter 46 mm, wall thickness 4.6 mm		
Diameter 48.3 mm, wall thickness 4.6 mm		
Diameter 50 mm, wall thickness 4.6 mm		
Diameter 60.3 mm, wall thickness 3.2 mm	50 x 6 mm	EI 60 U/U, EI 60 C/U, EI 60 U/C, EI 60 C/C
Diameter 63 mm, wall thickness 3.2-6.8 mm		
Diameter 65 mm, wall thickness 3.2-6.8 mm		
Diameter 70 mm, wall thickness 3.2-6.8 mm		
Diameter 75 mm, wall thickness 6.8 mm		
Diameter 90 mm, wall thickness 5.1-6.6 mm	50 x 8 mm	EI 120 U/U, EI 120 C/U, EI 120 U/C, EI 120 C/C
Diameter 110 mm, wall thickness 10 mm		EI 60 U/U, EI 60 C/U, EI 60 U/C, EI 60 C/C
Diameter 110 mm, wall thickness 6.2-6.6		EI 120 U/U, EI 120 C/U, EI 120 U/C, EI 120 C/C
Diameter 114.3 mm, wall thickness 7 mm	60 x 18 mm	EI 120 U/U, EI 120 C/U, EI 120 U/C, EI 120 C/C
Diameter 125 mm, wall thickness 7 mm		
Diameter 140 mm, wall thickness 7 mm		
Diameter 160 mm, wall thickness 7 mm		
PB pipe according to DIN16968/16969 EN ISO15876-2		
Diameter 32 mm, wall thickness 3.7 mm	50 x 4 mm	EI 120 U/U, EI 120 C/U, EI 120 U/C, EI 120 C/C
Diameter 38 mm, wall thickness 3.7 mm		
Diameter 40 mm, wall thickness 3.7 mm		
Diameter 50 mm, wall thickness 6.8 mm		
Diameter 60.3 mm, wall thickness 3.2 mm	50 x 6 mm	E 120 U/U, E 120 C/U, E 120 U/C, E 120 C/C EI 60 U/U, EI 60 C/U, EI 60 U/C, EI 60 C/C
Diameter 63 mm, wall thickness 3.2 mm		
Diameter 65 mm, wall thickness 3.2 mm		
Diameter 70 mm, wall thickness 3.2 mm		
Diameter 75 mm, wall thickness 6.8 mm		
Diameter 90 mm, wall thickness 8.2 mm	50 x 8 mm	EI 45 U/U, EI 45 C/U, EI 45 U/C, EI 45 C/C
Diameter 110 mm, wall thickness 10 mm		E 45 U/U, E 45 C/U, E 45 U/C, E 45 C/C EI 30 U/U, EI 30 C/U, EI 30 U/C, EI 30 C/C



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Services	Collar Inlay	Classification
PP pipe according to DIN 8077/8078, EN ISO 15494	50 x 4 mm	E 120 U/U, E 120 C/U, E 120 U/C, E 120 C/C EI 90 U/U, EI 90 C/U, EI 90 U/C, EI 90 C/C
Diameter 32 mm, wall thickness 3.7 mm		
Diameter 38 mm, wall thickness 3.7 mm		
Diameter 40 mm, wall thickness 3.7 mm		
Diameter 50 mm, wall thickness 6.8 mm		
Diameter 60.3 mm, wall thickness 2.6 mm**	50 x 6 mm	EI 120 U/U, EI 120 C/U, EI 120 U/C, EI 120 C/C
Diameter 63 mm, wall thickness 2.6 mm**		
Diameter 65 mm, wall thickness 2.6 mm**		
Diameter 70 mm, wall thickness 2.6 mm**		
Diameter 75 mm, wall thickness 2.6 mm**		
Diameter 90 mm, wall thickness 3.8 mm**	50 x 8 mm	E 120 U/U, E 120 C/U, E 120 U/C, E 120 C/C EI 60 U/U, EI 60 C/U, EI 60 U/C, EI 60 C/C
Diameter 110 mm, wall thickness 3.8 mm**		
MLCP pipe according to ISO 21003 / DIN16836		
Diameter 16 mm, wall thickness 3 mm	50 x 4 mm	EI 120 C/U, EI 120 U/C, EI 120 C/C E 120 C/U, E 120 U/C, E 120 C/C EI 90 C/U, EI 90 U/C, EI 90 C/C E 90 C/U, E 90 U/C, E 90 C/C EI 45 C/U, EI 45 U/C, EI 45 C/C E 120 C/U, E 120 U/C, E 120 C/C EI 20 C/U, EI 20 U/C, EI 20 C/C
Diameter 32 mm, wall thickness 3 mm		
Diameter 40 mm, wall thickness 4 mm		
Diameter 50 mm, wall thickness 4.5 mm		
Copper with 19 mm thick Armaflex insulation or K-Flex-ST insulation Continuous Sustained (CS)		
Diameter 54 mm, wall thickness 0.8-14.2 mm	50 x 8 mm	E 120 U/U, E 120 C/U, E 120 U/C, E 120 C/C
Telecoms cables up to 21 mm diameter in bundles up to 100 mm diameter^		
Up to 21 mm diameter in bundles up to 100 mm diameter^	50 x 8 mm	E 120, EI 90
Up to 21 mm diameter in bundles up to 100 mm diameter^ wrapped with 300 mm long, single layer of Insulwrap material§		EI 120

^ Collar size must be an intimate fit to the cable bundle size

\$ Only required on non-fire risk side or both sides if fire risk side is unknown

** Uponor Decibel Pipe



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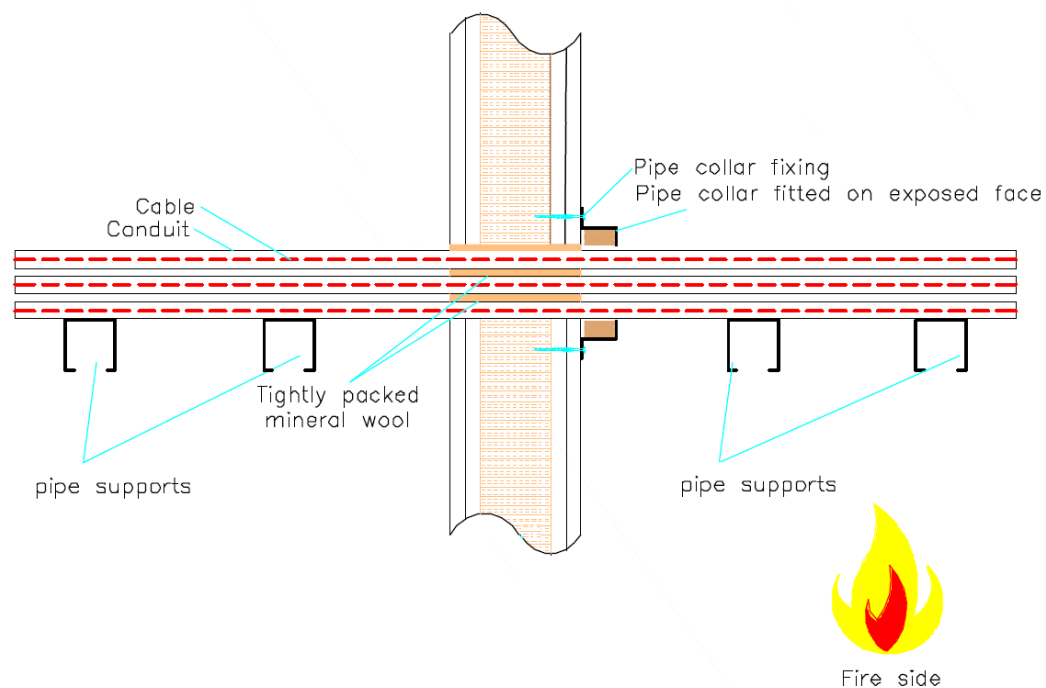
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Flexible or rigid wall constructions (or Firebreak Compound seals) with thickness of minimum 130 mm and FX400 pipe collar

Penetration seals, in drywalls and concrete/masonry walls

Penetration Seal: Conduits with electrical cables fitted with Firebreak FX 400 collar to the exposed side of the wall only. This system shall only be used where the Authority Having Jurisdiction (AHJ) identifies that the fire risk is from the side of the wall that is fitted with the collar, or alternatively collars may be fitted to both sides.

Construction details:



Services	Collar Inlay	Classification
5 off 20 mm diameter PVC conduits, each filled with 1 off 16 mm diameter H624Y 10mm ² cable	50 x 4 mm	EI 120 U/U, EI 120 C/U, EI 120 U/C, EI 120 C/C



Solutions

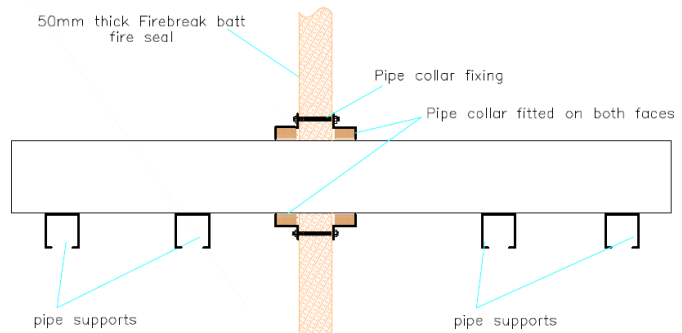
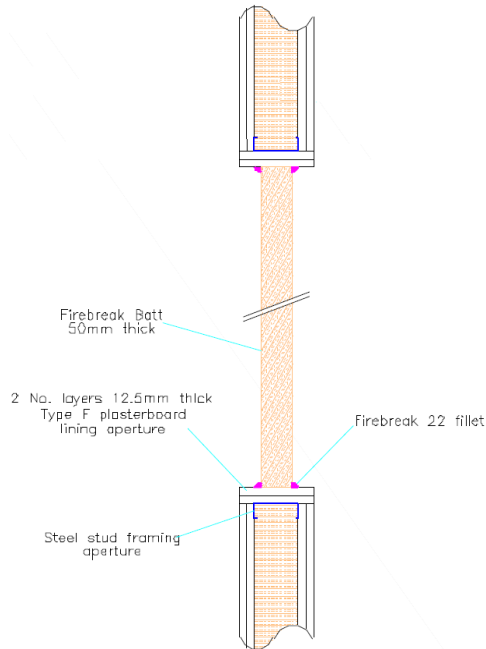
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Penetration seals, in 50 mm Firebreak Batt seals in drywalls and concrete/masonry walls

Penetration Seal: Plastic pipes fitted through Firebreak Batt seals, fitted with Firebreak FX 400 collar to both sides of the batt. Minimum separation between services and between services and the seal edge of 100 mm.

Construction details:



Services	Collar Inlay	Classification
PVC-U pipe according to EN 1329-1, EN 1452-2 and EN 1453-1		
Diameter 200 mm, wall thickness 4.2 mm	125 x 20 mm	EI 60 U/U, EI 60 C/U, EI 60 U/C, EI 60 C/C
PB pipe according to EN ISO15876-2		
Diameter 60.3 mm, wall thickness 6.8 mm	50 x 6 mm	EI 45 U/U, EI 45 C/U, EI 45 U/C, EI 45 C/C
Diameter 63 mm, wall thickness 6.8 mm		
Diameter 65 mm, wall thickness 6.8 mm		
Diameter 70 mm, wall thickness 6.8 mm		
Diameter 75 mm, wall thickness 6.8 mm		
PE pipe according to EN 1519-1, EN 12201-2 and EN 1266-1, ABS pipe according to EN 1455-1 and SAN+PVC pipe according to EN 1565-1		
Diameter 60.3 mm, wall thickness 6.8 mm	50 x 6 mm	EI 30 U/U, EI 30 C/U, EI 30 U/C, EI 30 C/C
Diameter 63 mm, wall thickness 6.8 mm		
Diameter 65 mm, wall thickness 6.8 mm		
Diameter 70 mm, wall thickness 6.8 mm		
Diameter 75 mm, wall thickness 6.8 mm		
Diameter 90 mm, wall thickness 10.0 mm	50 x 8 mm	EI 45 U/U, EI 45 C/U, EI 45 U/C, EI 45 C/C
Diameter 100 mm, wall thickness 10.0 mm		
Diameter 160 mm, wall thickness 7.0 mm	60 x 18 mm	E 120 U/U, E 120 C/U, E 120 U/C, E 120 C/C EI 60 U/U, EI 60 C/U, EI 60 U/C, EI 60 C/C



Solutions

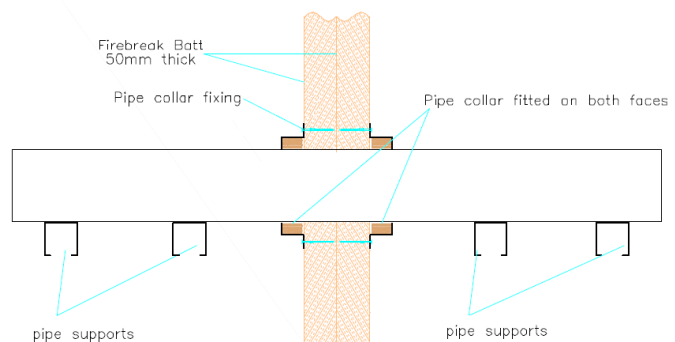
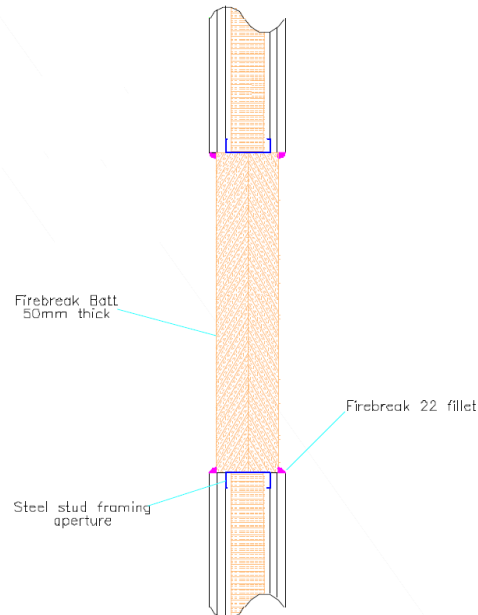
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Appendix UL-EU CERTIFICATE UL-EU-00513-EN

Penetration seals, in 100 mm Firebreak Batt seals in drywalls and concrete/masonry walls

Penetration Seal: Plastic pipes fitted through Firebreak Batt seals, fitted with Firebreak FX 400 collar to both sides of the batt. Minimum separation between services and between services and the seal edge of 100 mm.

Construction details:



Services	Collar Inlay	Classification
PVC-U pipe according to EN 1329-1, EN 1452-2 and EN 1453-1	50 x 6 mm	E 120 U/U, E 120 C/U, E 120 U/C, E 120 C/C EI 60 U/U, EI 60 C/U, EI 60 U/C, EI 60 C/C
Diameter 60.3 mm, wall thickness 3.2 mm		
Diameter 63 mm, wall thickness 3.2 mm		
Diameter 65 mm, wall thickness 3.2 mm		
Diameter 70 mm, wall thickness 3.2 mm		
Diameter 75 mm, wall thickness 3.2 mm		
Diameter 82 mm, wall thickness 3.2 mm		
PB pipe according to EN ISO15876-2	50 x 4 mm	EI 120 U/U, EI 120 C/U, EI 120 U/C, EI 120 C/C
Diameter 32 mm, wall thickness 3.7 mm		
Diameter 38 mm, wall thickness 3.7 mm		
Diameter 40 mm, wall thickness 3.7 mm		
PE pipe according to EN 1519-1, EN 12201-2 and EN 1266-1, ABS pipe according to EN 1455-1 and SAN+PVC pipe according to EN 1565-1	60 x 18 mm	E 120 U/U, E 120 C/U, E 120 U/C, E 120 C/C EI 15 U/U, EI 15 C/U, EI 15 U/C, EI 15 C/C
Diameter 160 mm, wall thickness 6.2 mm		



Solutions

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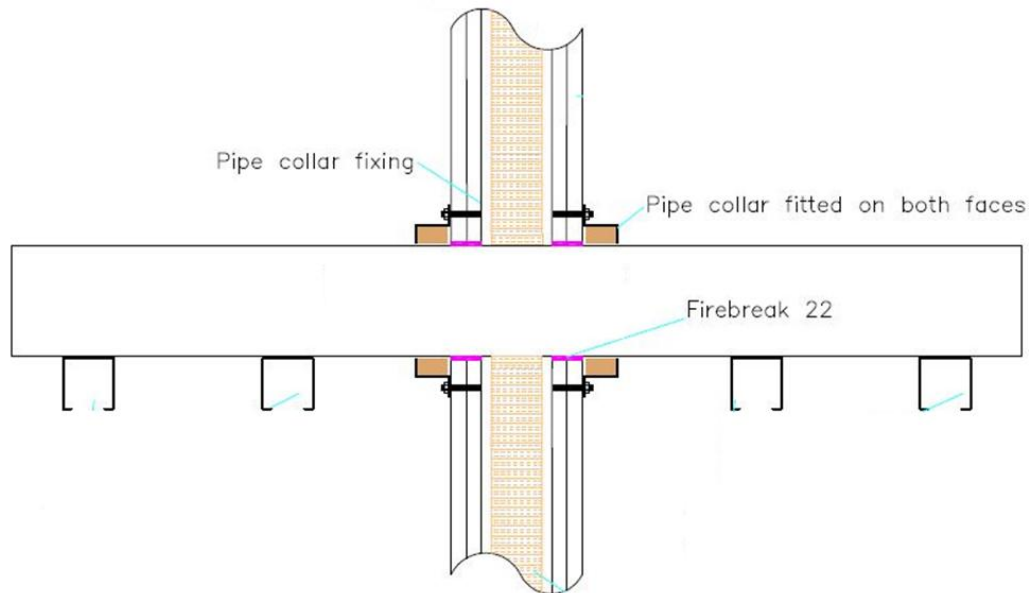
Appendix UL-EU CERTIFICATE UL-EU-00513-EN

Flexible or rigid wall constructions (or Firebreak Compound seals) with thickness of minimum 100 mm and FX500 pipe collar

Penetration seals, in drywalls and concrete/masonry walls

Penetration Seal: Combustible pipes fitted with Firebreak FX 500 collar to both sides of the wall.

Construction details:



Services	Collar Inlay	Classification
PVC-U pipe according to EN 1329-1, EN 1452-2 and EN 1453-1	60 x 26 mm	EI 90 U/U, EI 90 C/U, EI 90 U/C, EI 90 C/C
Diameter 200 mm, wall thickness 10.6 mm		
Diameter 225 mm, wall thickness 10.6 mm		
Diameter 250 mm, wall thickness 10.6 mm		



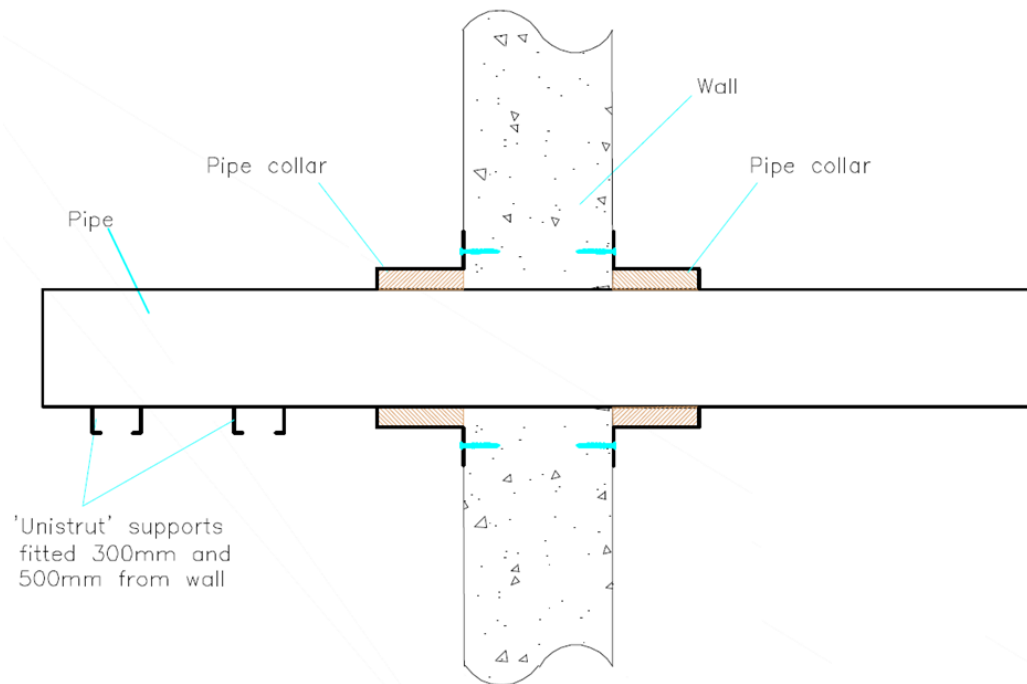
Appendix UL-EU CERTIFICATE UL-EU-00513-EN

Rigid wall constructions (or Firebreak Compound seals) with thickness of minimum 100 mm and FX500 pipe collar

Penetration seals, in drywalls and concrete/masonry walls

Penetration Seal: Insulated metal and combustible pipes fitted with Firebreak FX 500 collar to both sides of the wall.

Construction details:



Services	Collar Inlay	Classification
PVC-U pipe according to EN 1329-1, EN 1452-2 and EN 1453-1		
Diameter 200 mm, wall thickness 10.6 mm	130 x 24 mm	EI 240 U/U, EI 240 C/U, EI 240 U/C, EI 240 C/C
Diameter 225 mm, wall thickness 10.6 mm		
Diameter 250 mm, wall thickness 10.6 mm		
Diameter 315 mm, wall thickness 12.1 mm	130 x 32 mm	EI 120 U/U, EI 120 C/U, EI 120 U/C, EI 120 C/C
Steel pipe, with Continuous Sustained (CS) K-Flex ST or Armaflex insulation		
Diameter 219.1 mm, wall thickness 6.4-14.2 mm with 25 mm insulation	130 x 32 mm	E 240 C/C, EI 90 C/C



Solutions

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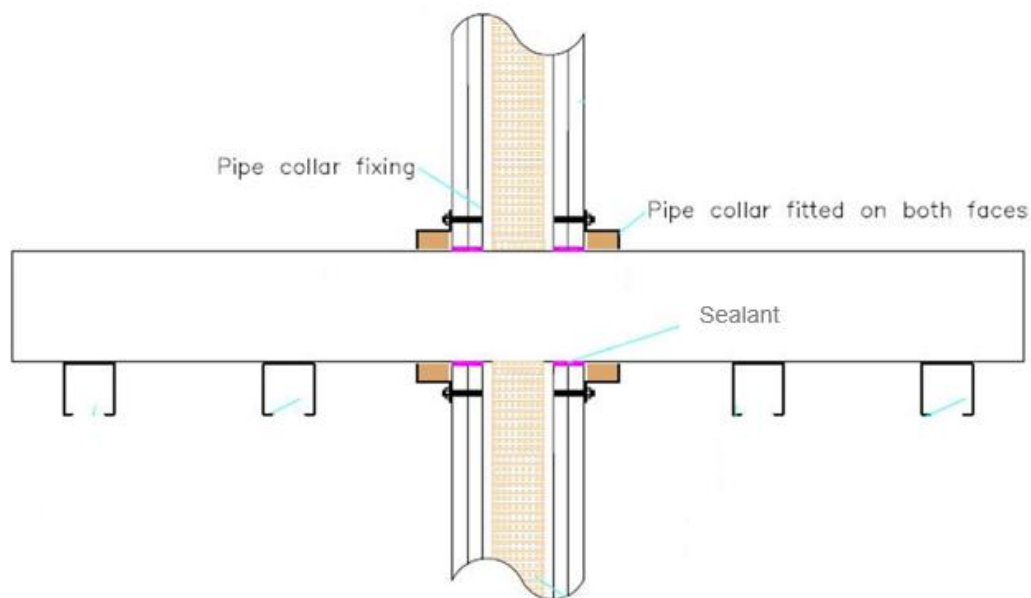
Appendix UL-EU CERTIFICATE UL-EU-00513-EN

Flexible or rigid wall constructions (or Firebreak Compound seals) with thickness of minimum 100 mm and FX700 Continuous Collar

Penetration seals, in drywalls and concrete/masonry walls

Penetration Seal: Combustible pipes fitted with Firebreak FX700 continuous collar to both sides of the wall.

Construction details:



Services	Collar Inlay	Classification
PVC-U pipe according to EN 1329-1, EN 1452-2 and EN 1453-1		
Max. diameter 110 mm, wall thickness 2.2-5.3 mm	45 x 8 mm	EI 120 U/U, EI 120 C/U, EI 120 U/C, EI 120 C/C
Max. diameter 160 mm, wall thickness 2.5-6.2 mm	45 x 16 mm	EI 120 U/U, EI 120 C/U, EI 120 U/C, EI 120 C/C
3 off max. diameter 55 mm, wall thickness 2.0 mm in the same collar	45 x 8 mm	EI 120 U/U, EI 120 C/U, EI 120 U/C, EI 120 C/C
PE pipe according to EN 1519-1, EN 12201-2 and EN 1266-1, ABS pipe according to EN 1455-1 and SAN+PVC pipe according to EN 1565-1		
Max. diameter 110 mm, wall thickness 2.7 mm	45 x 8 mm	EI 120 U/U, EI 120 C/U, EI 120 U/C, EI 120 C/C
Max. diameter 110 mm, wall thickness 2.7-7.1 mm	45 x 8 mm	EI 60 U/U, EI 60 C/U, EI 60 U/C, EI 60 C/C
Max. diameter 160 mm, wall thickness 6.2 mm	45 x 16 mm	EI 120 U/U, EI 120 C/U, EI 120 U/C, EI 120 C/C
PP pipe according to EN ISO 15494		
Max. diameter 110 mm, wall thickness 3.5 mm	45 x 8 mm	EI 120 U/U, EI 120 C/U, EI 120 U/C, EI 120 C/C
Max. diameter 110 mm, wall thickness 3.5-6.3 mm	45 x 8 mm	E 120 U/U, E 120 C/U, E 120 U/C, E 120 C/C EI 90 U/U, EI 90 C/U, EI 90 U/C, EI 90 C/C



Solutions

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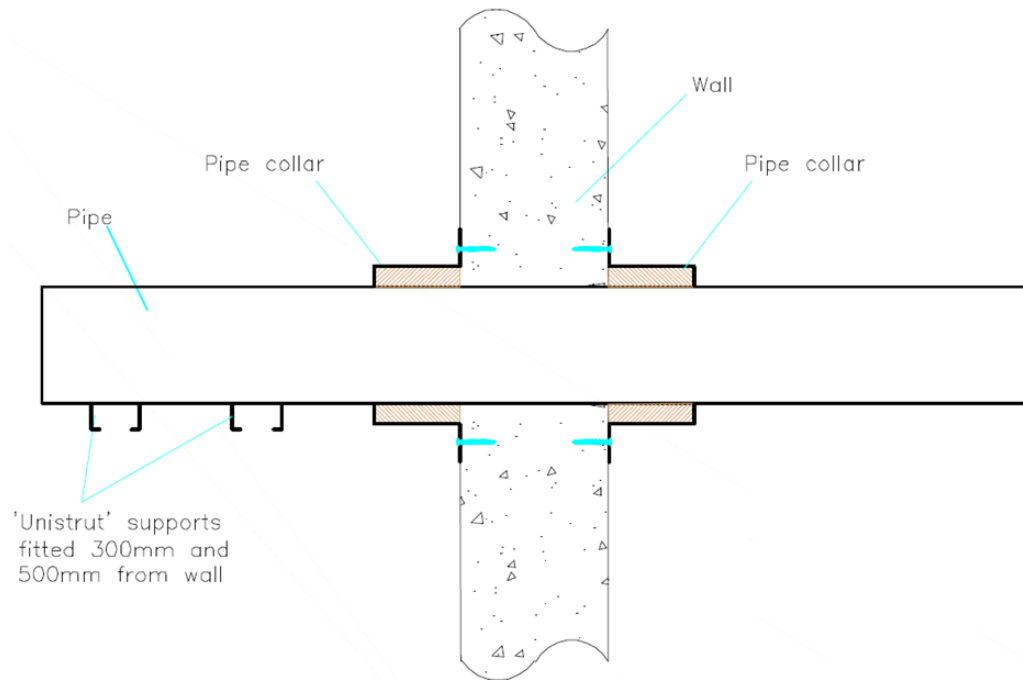
Appendix UL-EU CERTIFICATE UL-EU-00513-EN

Rigid wall constructions (or Firebreak Compound seals) with thickness of minimum 150 mm and FX700 continuous collar

Penetration seals, in concrete/masonry walls

Penetration Seal: Combustible pipes fitted with Firebreak FX700 continuous collar to both sides of the wall.

Construction details:



Services	Collar Inlay	Classification
PVC-U pipe according to EN 1329-1, EN 1452-2 and EN 1453-1		
Max. diameter 160 mm, wall thickness 2.5 mm	45 x 16 mm	E 240 U/U, E 240 C/U, E 240 U/C, E 240 C/C, EI 180 U/U, EI 180 C/U, EI 180 U/C, EI 180 C/C



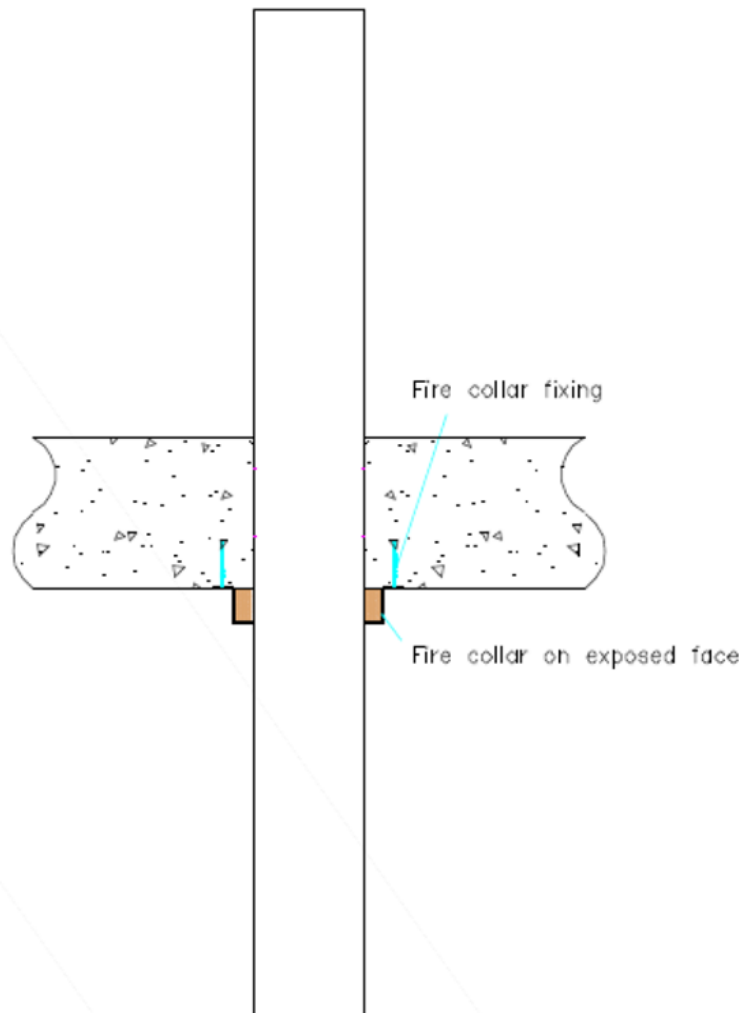
Appendix UL-EU CERTIFICATE UL-EU-00513-EN

Rigid floor constructions with floor thickness of minimum 150 mm and FX300 pipe collar

Penetration seals, in concrete floors

Penetration Seal: Insulated metal and combustible pipes fitted with Firebreak FX 300 collar to the soffit of the floor.

Construction details:



Solutions

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Appendix UL-EU CERTIFICATE UL-EU-00513-EN

Services	Collar Inlay	Classification
PVC-U pipe according to EN 1329-1, EN 1452-2 and EN 1453-1		
Diameter 40 mm, wall thickness 3 mm	30 x 6 mm	EI 240 U/U, EI 240 C/U, EI 240 U/C, EI 240 C/C
Diameter 40 mm, wall thickness 3.1-3.2 mm		EI 120 U/U, EI 120 C/U, EI 120 U/C, EI 120 C/C
Diameter 55 mm, wall thickness 3 mm		EI 240 U/U, EI 240 C/U, EI 240 U/C, EI 240 C/C
Diameter 55 mm, wall thickness 3.1-3.2 mm		EI 120 U/U, EI 120 C/U, EI 120 U/C, EI 120 C/C
Diameter 65 mm, wall thickness 3 mm		EI 240 U/U, EI 240 C/U, EI 240 U/C, EI 240 C/C
Diameter 65 mm, wall thickness 3.1-3.2 mm		EI 120 U/U, EI 120 C/U, EI 120 U/C, EI 120 C/C
Diameter 75 mm, wall thickness 3 mm		EI 240 U/U, EI 240 C/U, EI 240 U/C, EI 240 C/C
Diameter 75 mm, wall thickness 3.1-3.2 mm		EI 120 U/U, EI 120 C/U, EI 120 U/C, EI 120 C/C
Diameter 82 mm, wall thickness 3 mm		EI 240 U/U, EI 240 C/U, EI 240 U/C, EI 240 C/C
Diameter 82 mm, wall thickness 3.1-3.2 mm		EI 120 U/U, EI 120 C/U, EI 120 U/C, EI 120 C/C
Diameter 90 mm, wall thickness 1.8 mm	30 x 10 mm	EI 180 U/U, EI 180 C/U, EI 180 U/C, EI 180 C/C
Diameter 90 mm, wall thickness 1.9-10 mm		EI 120 U/U, EI 120 C/U, EI 120 U/C, EI 120 C/C
Diameter 110 mm, wall thickness 1.8 mm		EI 180 U/U, EI 180 C/U, EI 180 U/C, EI 180 C/C
Diameter 110 mm, wall thickness 1.9-10 mm		EI 120 U/U, EI 120 C/U, EI 120 U/C, EI 120 C/C
Diameter 125 mm, wall thickness 2.5 mm	45 x 16 mm	EI 180 U/U, EI 180 C/U, EI 180 U/C, EI 180 C/C
Diameter 125 mm, wall thickness 2.6-9.5 mm		EI 90 U/U, EI 90 C/U, EI 90 U/C, EI 90 C/C
Diameter 160 mm, wall thickness 2.5 mm		EI 180 U/U, EI 180 C/U, EI 180 U/C, EI 180 C/C
Diameter 160 mm, wall thickness 2.6-9.5 mm		EI 90 U/U, EI 90 C/U, EI 90 U/C, EI 90 C/C
PE pipe according to EN 1519-1, EN 12201-2 and EN 12FX 4006-1, ABS pipe according to EN 1455-1 and SAN+PVC pipe according to EN 1565-1		
Diameter 40 mm, wall thickness 3.7 mm	30 x 6 mm	EI 180 U/U, EI 180 C/U, EI 180 U/C, EI 180 C/C
Diameter 40 mm, wall thickness 3.8-11.6 mm		EI 120 U/U, EI 120 C/U, EI 120 U/C, EI 120 C/C
Diameter 50 mm, wall thickness 3.7 mm		EI 180 U/U, EI 180 C/U, EI 180 U/C, EI 180 C/C
Diameter 50 mm, wall thickness 3.8-11.6 mm		EI 120 U/U, EI 120 C/U, EI 120 U/C, EI 120 C/C
Diameter 90 mm, wall thickness 4.2mm	30 x 10 mm	EI 180 U/U, EI 180 C/U, EI 180 U/C, EI 180 C/C
Diameter 110 mm, wall thickness 4.2 mm		EI 60 U/U, EI 60 C/U, EI 60 U/C, EI 60 C/C
Diameter 90 mm, wall thickness 4.3-10 mm		
Diameter 110 mm, wall thickness 4.3-10 mm		
Diameter 125 mm, wall thickness 6.2 mm	45 x 16 mm	EI 120 U/U, EI 120 C/U, EI 120 U/C, EI 120 C/C
Diameter 160 mm, wall thickness 6.2 mm		EI 120 U/U, EI 120 C/U, EI 120 U/C, EI 120 C/C



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Services	Collar Inlay	Classification
BevEx Drinks Python		
Diameter 80 mm	30 x 6 mm	EI 240 U/U, EI 240 C/U, EI 240 U/C, EI 240 C/C
Steel pipe, with Continuous Sustained (CS) K-Flex ST insulation		
Diameter 114.3 mm, wall thickness 2-14.2 mm with 19 mm insulation	45 x 16 mm	EI 60 C/C
Diameter 47.6 mm, wall thickness 1.5-14.2 mm with 13 mm insulation	30 x 6 mm	EI 120 C/C
PB pipe according to EN ISO15876-2		
Diameter 40 mm, wall thickness 3.7-4.6 mm	30 x 6 mm	EI 240 U/U, EI 240 C/U, EI 240 U/C, EI 240 C/C
Diameter 50 mm, wall thickness 4.6 mm		
Diameter 75 mm, wall thickness 6.8 mm		EI 90 U/U, EI 90 C/U, EI 90 U/C, EI 90 C/C
PP pipe according to DIN 8077/8078, EN ISO 15494		
Diameter 40 mm, wall thickness 1.8-3.7 mm	30 x 6 mm	EI 240 U/U, EI 240 C/U, EI 240 U/C, EI 240 C/C
Diameter 50 mm, wall thickness 1.8 mm		
Diameter 50 mm, wall thickness 1.8-2.8 mm		EI 120 U/U, EI 120 C/U, EI 120 U/C, EI 120 C/C
Diameter 75 mm, wall thickness 1.9 mm	30 x 10 mm	EI 180 U/U, EI 180 C/U, EI 180 U/C, EI 180 C/C
Diameter 90 mm, wall thickness 2.2-2.7 mm		EI 240 U/U, EI 240 C/U, EI 240 U/C, EI 240 C/C
Diameter 110 mm, wall thickness 2.7 mm		



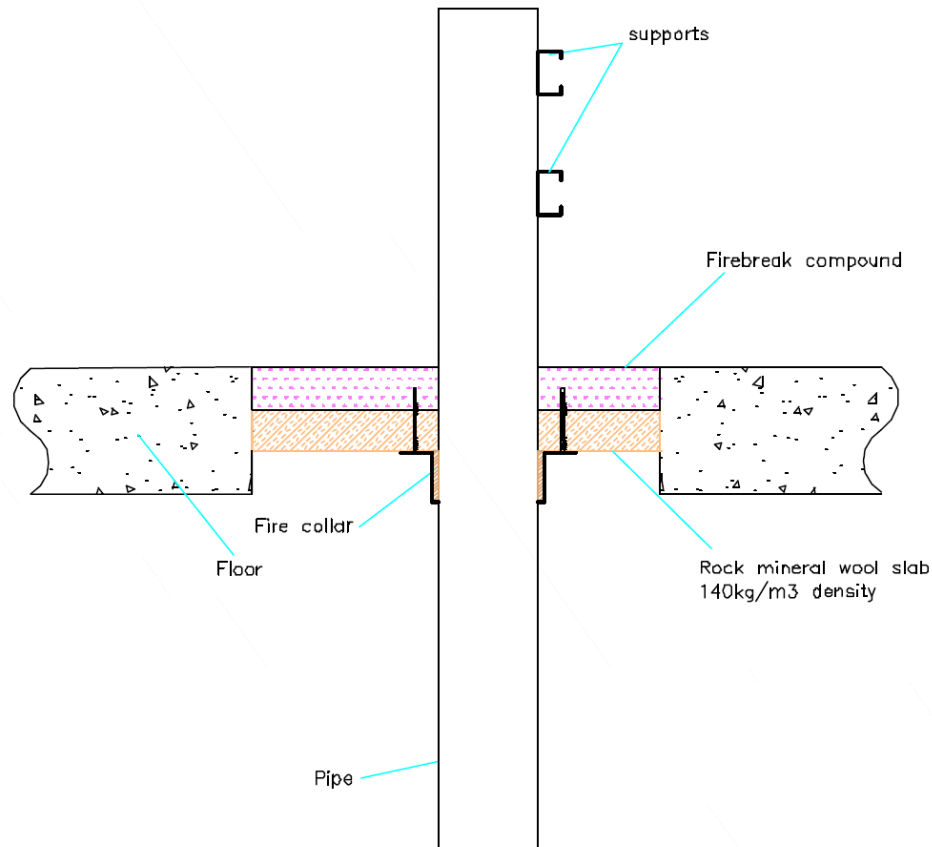
Appendix UL-EU CERTIFICATE UL-EU-00513-EN

Rigid floor constructions with floor thickness of minimum 150 mm and FX300 pipe collar

Penetration seals, in Firebreak Compound seals in concrete floors

Penetration Seal: Combustible pipes fitted through 50 mm deep, 1300 x 500 mm (max.) Firebreak Compound Seal underlay with Stone wool board 140/kg/m³ with Firebreak FX 300 collar to the soffit of the seal. Min. 75 mm long steel fixings to be used to fix the collar through the stone wool board.

Construction details:



Services	Collar Inlay	Classification
PVC-U pipe according to EN 1329-1, EN 1452-2 and EN 1453-1		
Diameter 90 mm, wall thickness 2.0 mm	30 x 10 mm	EI 120 U/U, EI 120 C/U, EI 120 U/C, EI 120 C/C
Diameter 110 mm, wall thickness 2.0 mm	30 x 10 mm	



Solutions

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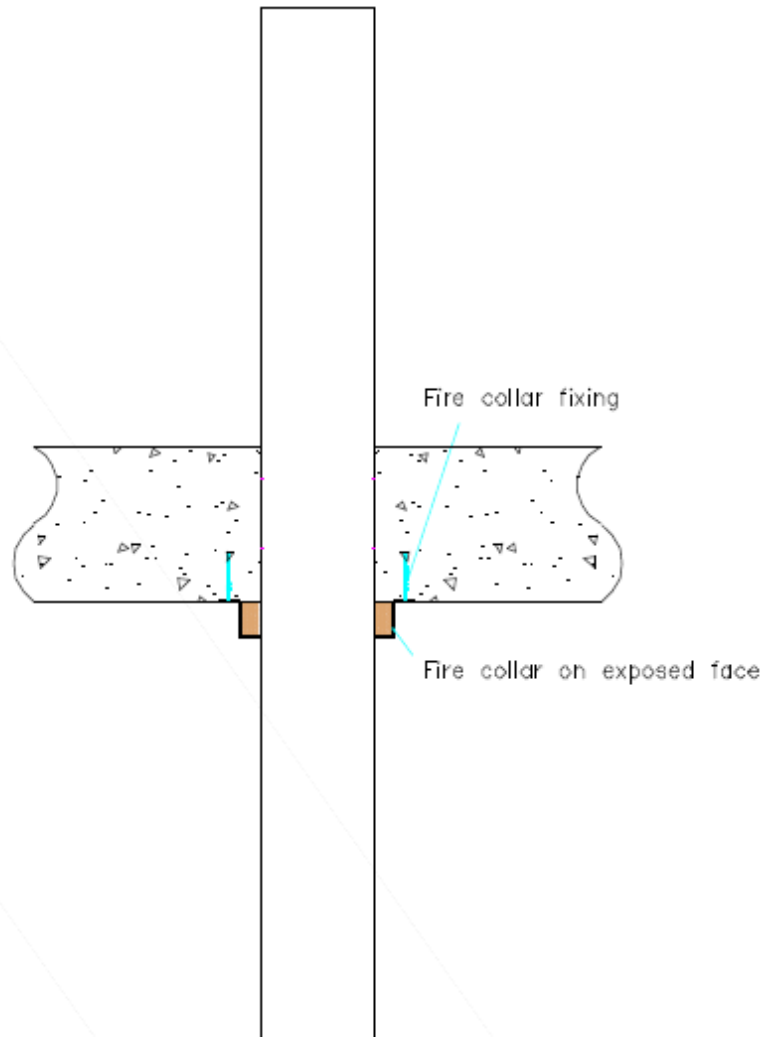
Appendix UL-EU CERTIFICATE UL-EU-00513-EN

Rigid floor constructions with floor thickness of minimum 150 mm and FX400 pipe collar

Penetration seals, in concrete floors

Penetration Seal: Insulated metal and combustible pipes fitted with Firebreak FX 400 collar to the soffit of the floor.

Construction details:



Solutions

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Services	Collar Inlay	Classification
PVC-U pipe according to EN 1329-1, EN 1452-2 and EN 1453-1		
Diameter 32 mm, wall thickness 3 mm	50 x 4 mm	EI 240 U/U, EI 240 C/U, EI 240 U/C, EI 240 C/C
Diameter 38 mm, wall thickness 3 mm		
Diameter 40 mm, wall thickness 3 mm		
Diameter 42.2 mm, wall thickness 2 mm		EI 180 U/U, EI 180 C/U, EI 180 U/C, EI 180 C/C
Diameter 46 mm, wall thickness 2 mm		
Diameter 55 mm, wall thickness 2 mm		
Diameter 82 mm, wall thickness 3.2 mm	50 x 6 mm	
Diameter 110 mm, wall thickness 6.6 mm	50 x 8 mm	
Diameter 160 mm, wall thickness 3.2-9.5 mm	60 x 18 mm	E 180 U/C, E 180 C/C EI 60 U/C, EI 180 C/C
Diameter 160 mm, wall thickness 9.5 mm		EI 180 U/U, EI 180 C/U, EI 180 U/C, EI 180 C/C
Diameter 200 mm, wall thickness 9.5 mm	125 x 20 mm	
PE pipe according to EN 1519-1, EN 12201-2 and EN 12FX 4006-1, ABS pipe according to EN 1455-1 and SAN+PVC pipe according to EN 1565-1		
Diameter 32 mm, wall thickness 3.7 mm	50 x 4 mm	EI 180 U/U, EI 180 C/U, EI 180 U/C, EI 180 C/C
Diameter 38 mm, wall thickness 3.7 mm		
Diameter 40 mm, wall thickness 3.7 mm		
Diameter 75 mm, wall thickness 8.2 mm	50 x 8 mm	EI 240 U/U, EI 240 C/U, EI 240 U/C, EI 240 C/C
Diameter 90 mm, wall thickness 8.2 mm		
Diameter 110 mm, wall thickness 8.2 mm		
Diameter 114.3 mm, wall thickness 6.2 mm	60 x 18 mm	EI 180 U/U, EI 180 C/U, EI 180 U/C, EI 180 C/C
Diameter 125 mm, wall thickness 6.2 mm		
Diameter 140 mm, wall thickness 6.2 mm		
Diameter 160 mm, wall thickness 6.2 mm		
MCLP pipe according to ISO 21003 / DIN16836		
Diameter 16 mm, wall thickness 2 mm	50 x 4 mm	EI 240 C/U, EI 240 U/C, EI 240 C/C
Diameter 40 mm, wall thickness 4 mm		EI 60 C/U, EI 60 U/C, EI 60 C/C

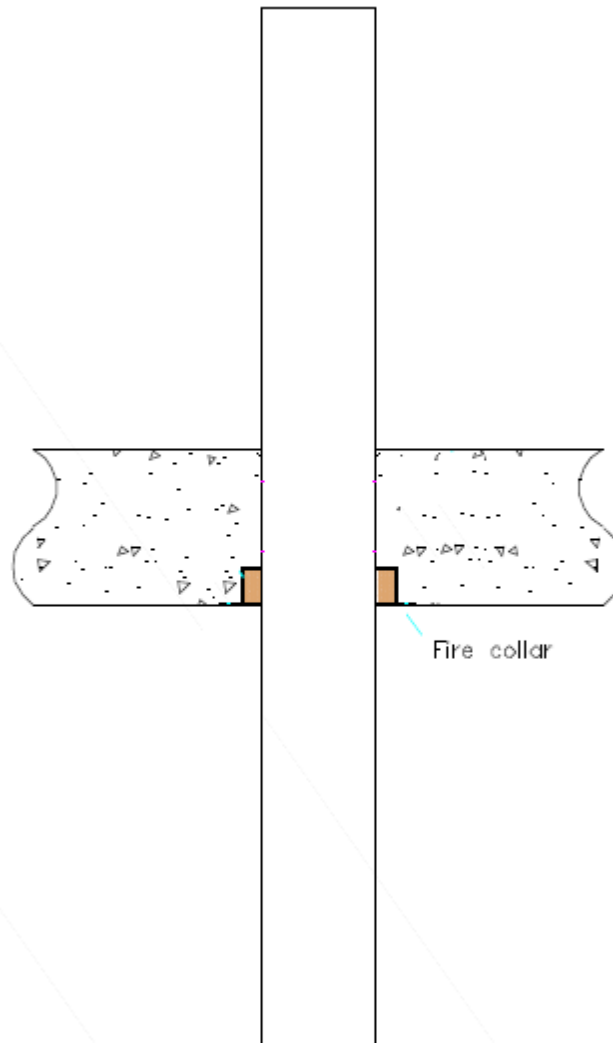


Appendix UL-EU CERTIFICATE UL-EU-00513-EN

Penetration seals, in concrete floors

Penetration Seal: Combustible pipes fitted with Firebreak FX 400 Series Pipe Collar to the recessed/cast in, within the soffit of the floor.

Construction details:



Services	Collar Inlay	Classification
PVC-U pipe according to EN 1329-1, EN 1452-2 and EN 1453-1		
Diameter 110 mm, wall thickness 3.2 mm	50 x 8 mm	EI 90 U/U, EI 90 C/U, EI 90 U/C, EI 90 C/C
Diameter 200 mm, wall thickness 3.9 mm	125 x 20 mm	EI 240 U/U, EI 240 C/U, EI 240 U/C, EI 240 C/C



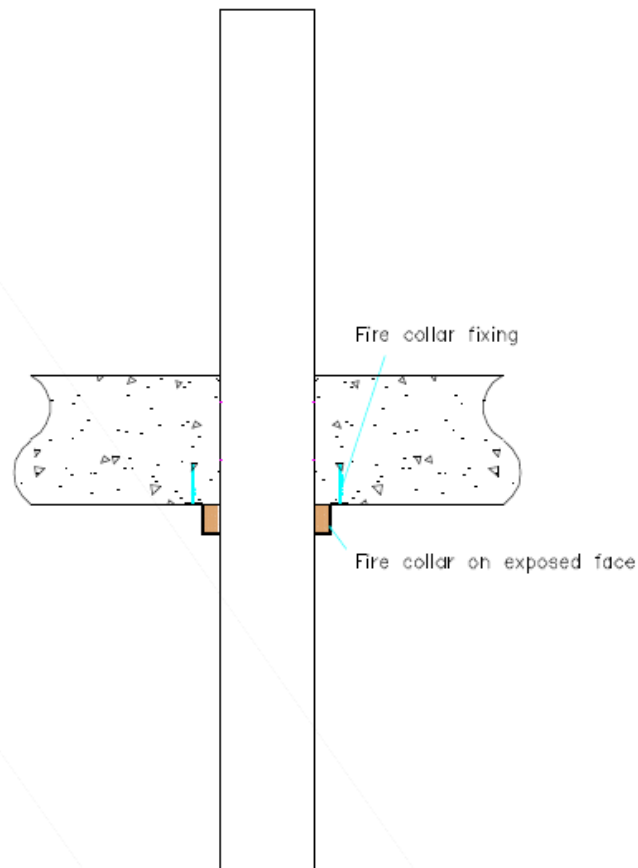
Appendix UL-EU CERTIFICATE UL-EU-00513-EN

Rigid floor constructions with floor thickness of minimum 150 mm and FX500 pipe collar

Penetration seals, in concrete floors

Penetration Seal: Insulated metal and combustible pipes fitted with Firebreak FX 500 collar to the soffit of the floor.

Construction details:



Services	Collar Inlay	Classification
PVC-U pipe according to EN 1329-1, EN 1452-2 and EN 1453-1		
Diameter 200 mm, wall thickness 10.6 mm	60 x 26 mm	EI 60 U/U, EI 60 C/U, EI 60 U/C, EI 60 C/C
Diameter 225 mm, wall thickness 10.6 mm		
Diameter 250 mm, wall thickness 10.6 mm		
Diameter 200 mm, wall thickness 10.6 mm	130 x 24 mm	EI 120 U/U, EI 120 C/U, EI 120 U/C, EI 120 C/C
Diameter 225 mm, wall thickness 10.6 mm		
Diameter 250 mm, wall thickness 10.6 mm		
Diameter 315 mm, wall thickness 12.1 mm	130 x 32 mm	EI 60 U/U, EI 60 C/U, EI 60 U/C, EI 60 C/C
Diameter 400 mm, wall thickness 3.2 mm	130 x 40 mm	EI 240 U/C, EI 240 C/C
Steel pipe, with Continuous Sustained (CS) K-Flex ST insulation		
Diameter 219.1 mm, wall thickness 6.4-14.2 mm with 19 mm insulation	130 x 32 mm	EI 120 C/C



Solutions

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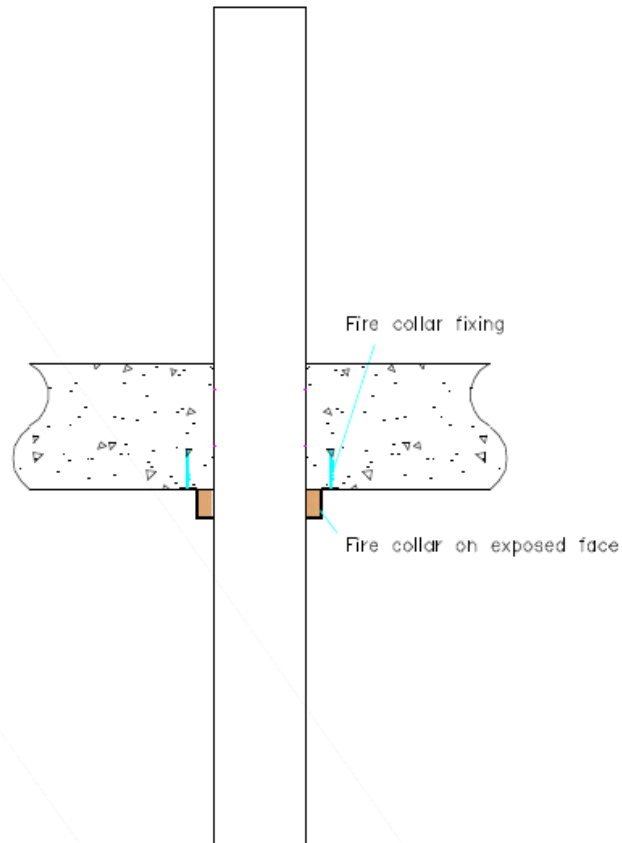
Appendix UL-EU CERTIFICATE UL-EU-00513-EN

Rigid floor constructions with thickness of minimum 150 mm and FX700 Continuous Collar

Penetration seals, in concrete floors

Penetration Seal: Combustible pipes fitted with Firebreak FX700 continuous collar to the soffit of the floor.

Construction details:



Services	Collar Inlay	Classification
PVC-U pipe according to EN 1329-1, EN 1452-2 and EN 1453-1		
Max. diameter 82 mm, wall thickness 2.6-6.5 mm	45 x 8 mm	EI 90 U/U, EI 90 C/U, EI 90 U/C, EI 90 C/C
Max. diameter 82 mm, wall thickness 3.2 mm	45 x 8 mm	EI 120 U/U, EI 120 C/U, EI 120 U/C, EI 120 C/C
Diameter 90-110 mm, wall thickness 2.6-6.5 mm	45 x 8 mm	EI 90 U/U, EI 90 C/U, EI 90 U/C, EI 90 C/C
Max. diameter 110 mm, wall thickness 6.6 mm	45 x 8 mm	EI 120 U/U, EI 120 C/U, EI 120 U/C, EI 120 C/C
Max. diameter 110 mm, wall thickness 2.6 mm	45 x 16 mm	EI 240 U/U, EI 240 C/U, EI 240 U/C, EI 240 C/C
Diameter 125-160 mm, wall thickness 2.5-6.1 mm	45 x 16 mm	EI 120 U/U, EI 120 C/U, EI 120 U/C, EI 120 C/C
Diameter 125-160 mm, wall thickness 6.2 mm	45 x 16 mm	EI 180 U/U, EI 180 C/U, EI 180 U/C, EI 180 C/C



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Services	Collar Inlay	Classification
PE pipe according to EN 1519-1, EN 12201-2 and EN 1266-1, ABS pipe according to EN 1455-1 and SAN+PVC pipe according to EN 1565-1		
Max. diameter 110 mm, wall thickness 2.7-5.5 mm	45 x 8 mm	EI 90 U/U, EI 90 C/U, EI 90 U/C, EI 90 C/C
Max. diameter 110 mm, wall thickness 5.65 mm	45 x 8 mm	EI 240 U/U, EI 240 C/U, EI 240 U/C, EI 240 C/C
Max. diameter 110 mm, wall thickness 2.7 mm	45 x 16 mm	EI 240 U/U, EI 240 C/U, EI 240 U/C, EI 240 C/C
Diameter 125-160 mm, wall thickness 6.2 mm	45 x 16 mm	EI 60 U/U, EI 60 C/U, EI 60 U/C, EI 60 C/C
PP pipe according to EN ISO 15494		
Max. diameter 75 mm, wall thickness 2.6 mm	45 x 8 mm	EI 240 U/U, EI 240 C/U, EI 240 U/C, EI 240 C/C
Max. diameter 75 mm, wall thickness 2.7-6.8 mm	45 x 8 mm	EI 120 U/U, EI 120 C/U, EI 120 U/C, EI 120 C/C
Diameter 76-110 mm, wall thickness 2.7 mm	45 x 8 mm	EI 120 U/U, EI 120 C/U, EI 120 U/C, EI 120 C/C



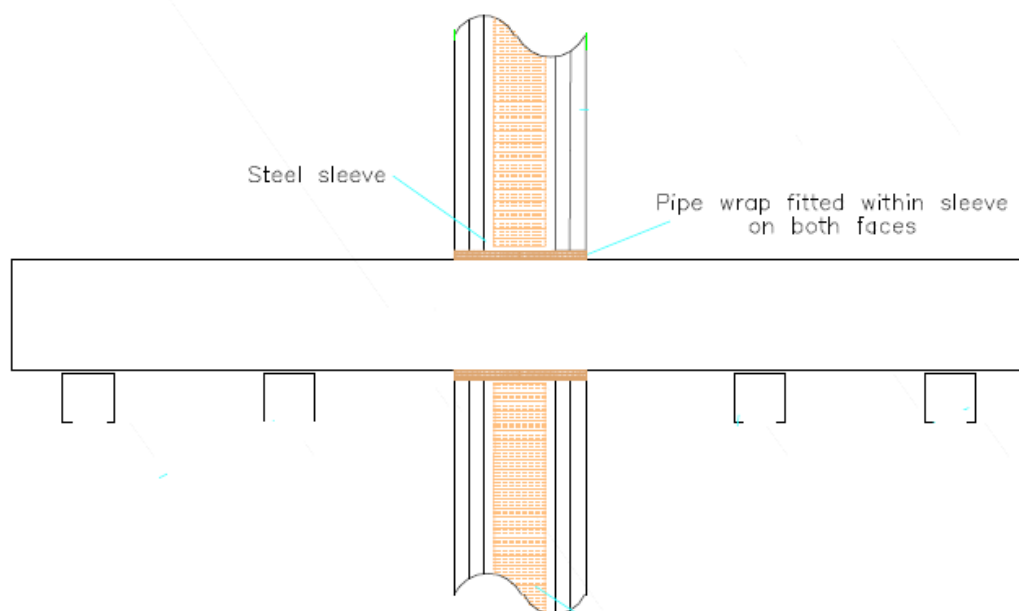
Appendix UL-EU CERTIFICATE UL-EU-00513-EN

Flexible or rigid wall constructions with wall thickness of minimum 100 mm

Penetration seals, in drywalls and concrete/masonry walls

Penetration Seal: Insulated metal and combustible pipes and telecoms cables fitted with Firebreak FX200 Pipe Wrap / Firebreak FX200 Sealstrip, in a steel sleeve, to both sides of the wall.

Construction details:



Services	Wrap size	Classification
PVC-U pipe according to EN 1329-1, EN 1452-2 and EN 1453-1		
Diameter 40 mm, wall thickness 2 mm	50 x 1.8 mm	E 120 U/U, E 120 C/U, E 120 U/C, E 120 C/C EI 90 U/U, EI 90 C/U, EI 90 U/C, EI 90 C/C
Diameter 55 mm, wall thickness 2 mm	50 x 1.8 mm	
Diameter 82 mm, wall thickness 3.7-6.6 mm	50 x 3.6 mm	EI 90 U/U, EI 90 C/U, EI 90 U/C, EI 90 C/C
Diameter 110 mm, wall thickness 3.7-6.6 mm		E 120 U/U, E 120 C/U, E 120 U/C, E 120 C/C EI 90 U/U, EI 90 C/U, EI 90 U/C, EI 90 C/C
Diameter 82 mm, wall thickness 6.6 mm		
Diameter 110 mm, wall thickness 6.6 mm		
Diameter 125 mm, wall thickness 6.6 mm		
Diameter 160 mm, wall thickness 9.5 mm	50 x 7.2 mm	EI 90 U/U, EI 90 C/U, EI 90 U/C, EI 90 C/C
Diameter 200 mm, wall thickness 6.2 mm	50 x 12.6 mm	
Copper with 19 mm thick Armaflex insulation		
Diameter 54 mm, wall thickness 0.8-14.2 mm	50 x 3.6 mm	EI 60 C/U
Telecoms cables up to 21 mm diameter in bundles up to 100 mm diameter [^]		
Up to 21 mm diameter in bundles up to 100 mm diameter [^]	50 x 3.6 mm	E 120, EI 30
Up to 21 mm diameter in bundles up to 100mm diameter [^] wrapped with 300 mm long Insulwrap material [§]		E 120, EI 90

[§] Only required on non-fire risk side or both sides if fires risk side is unknown

[^] Wrap/sealstrip must be an intimate fit to the cable bundle size



Solutions

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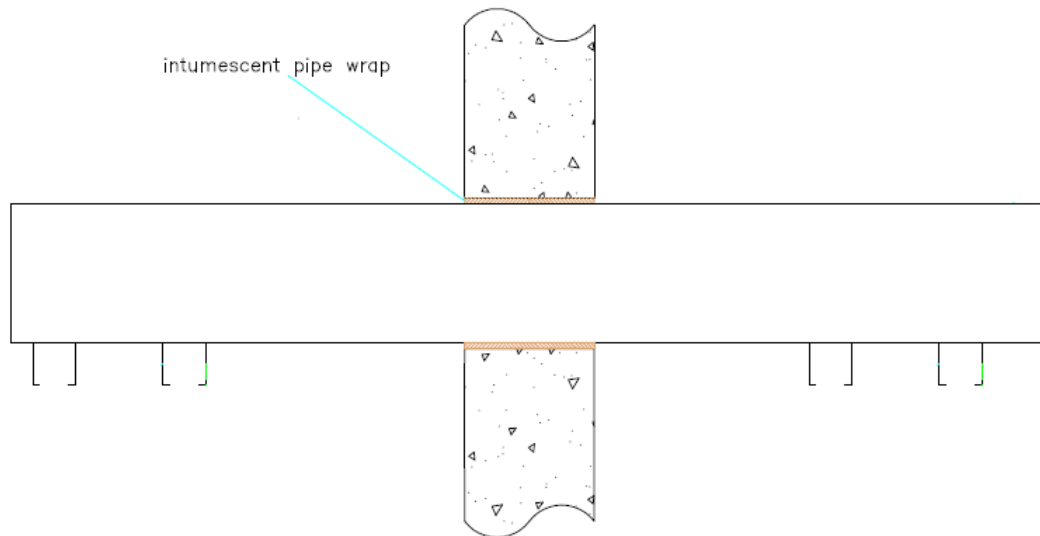
Appendix UL-EU CERTIFICATE UL-EU-00513-EN

Rigid wall constructions with floor thickness of minimum 150 mm

Penetration seals, in rigid walls

Penetration Seal: Insulated metal and combustible pipes fitted with Firebreak FX200 Pipe Wrap / Firebreak FX200 Sealstrip, to both sides of the wall.

Construction details:



Services	Wrap size	Classification
PVC-U pipe according to EN 1329-1, EN 1452-2 and EN 1453-1	50 x 3.6 mm	EI 240 C/U, EI 240 U/C, EI 240 C/C
Diameter 40 mm, wall thickness 2 mm		
Diameter 55 mm, wall thickness 2 mm		
Diameter 40 mm, wall thickness 3.3 mm		EI 120 C/U, EI 120 U/C, EI 120 C/C
Diameter 55 mm, wall thickness 3.3 mm		
Diameter 82 mm, wall thickness 3.3 mm		
PE pipe according to EN 1519-1, EN 12201-2 and EN 12006-1, ABS pipe according to EN 1455-1 and SAN+PVC pipe according to EN 1565-1	50 x 3.6 mm	EI 120 C/U, EI 120 U/C, EI 120 C/C
Diameter 40 mm, wall thickness 3.2 mm		
Diameter 55 mm, wall thickness 3.2 mm		
Copper with 25 mm thick Armaflex insulation	50 x 1.8 mm	EI 120 C/U
Diameter 25 mm, wall thickness 0.8-14.2 mm		



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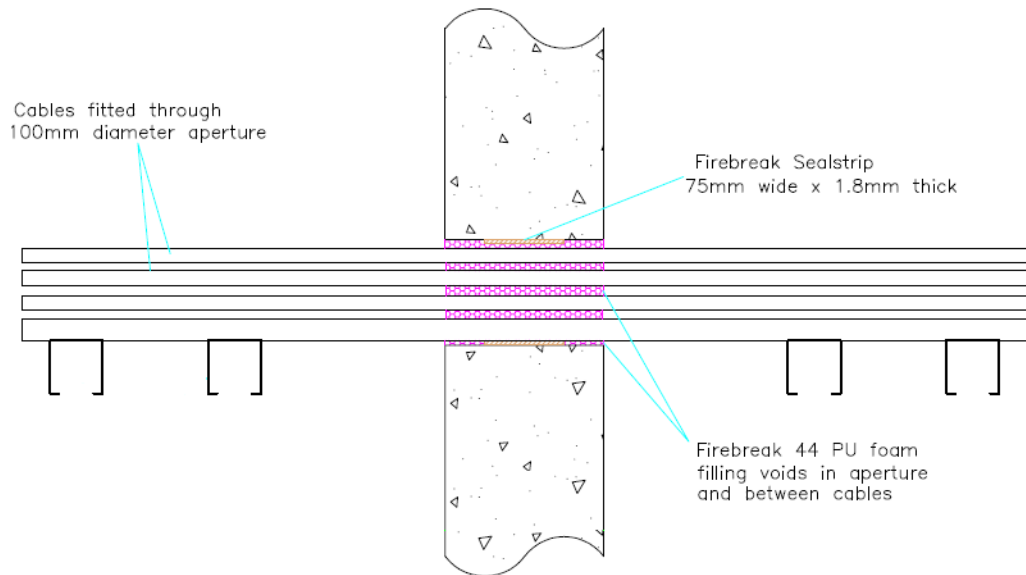
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Appendix UL-EU CERTIFICATE UL-EU-00513-EN

Penetration seals, in rigid walls

Penetration Seal: Electrical cables fitted with Firebreak FX200 Pipe Wrap / Firebreak FX200 Sealstrip, fitted centrally within the wall with Firebreak 44 foam.

Construction details:



Services	Wrap size	Classification
Electrical cables in bundles up to 100 mm diameter [^]	75 x 1.8 mm	EI 120
Up to 20 mm diameter 'C3' electrical cables in accordance with HD 604.5		
Up to 15 mm diameter 'A3' electrical cables in accordance with HD 604.5		

[^] Wrap must be an intimate fit to the cable bundle size

A3 cables – 5 x 1.5 mm² core, XPLE insulation, EVA sheath

C3 cables – 4 x 95 mm² core, XPLE insulation, EVA sheath



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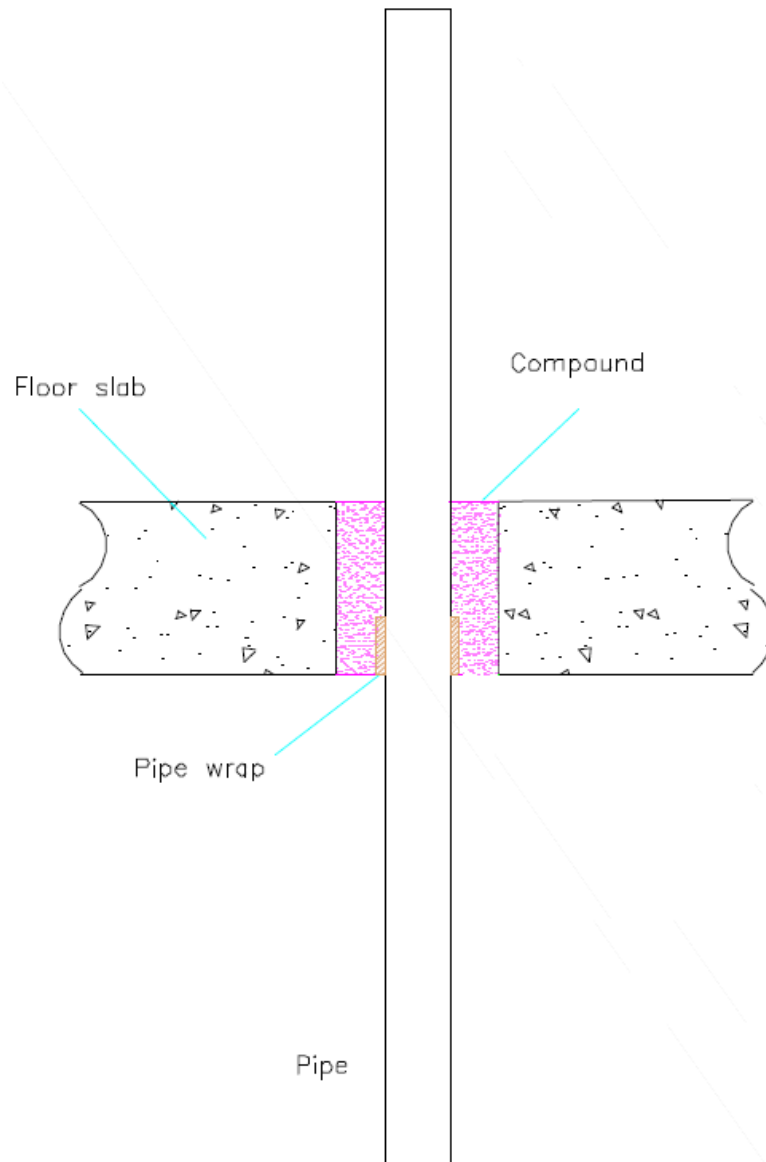
Appendix UL-EU CERTIFICATE UL-EU-00513-EN

Rigid floor constructions with floor thickness of minimum 150 mm

Penetration seals, in concrete floors

Penetration Seal: Insulated metal and combustible pipes fitted with Firebreak FX200 Pipe Wrap / Firebreak FX200 Sealstrip, cast into the soffit of the floor (fire side only).

Construction details:



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Services	Wrap size	Classification
PVC-U pipe according to EN 1329-1, EN 1452-2 and EN 1453-1		
Diameter 40 mm, wall thickness 3 mm	50 x 1.8 mm	EI 240 U/U, EI 240 C/U, EI 240 U/C, EI 240 C/C
Diameter 50 mm, wall thickness 3 mm	50 x 3.6 mm	
Diameter 55 mm, wall thickness 2 mm	50 x 1.8 mm	E 120 U/U, E 120 C/U, E 120 U/C, E 120 C/C
Diameter 82 mm, wall thickness 3.3 mm	50 x 3.6 mm	EI 60 U/U, EI 60 C/U, EI 60 U/C, EI 60 C/C
Diameter 55 mm, wall thickness 3 mm	50 x 5.4 mm	EI 240 C/U, EI 240 U/C, EI 240 C/C
Diameter 82 mm, wall thickness 3 mm		
Diameter 100 mm, wall thickness 3 mm		
Diameter 110 mm, wall thickness 6.6 mm	50 x 3.6 mm	E 30 U/U, E 30 C/U, E 30 U/C, E 30 C/C EI 15 U/U, EI 15 C/U, EI 15 U/C, EI 15 C/C
Diameter 110 mm, wall thickness 3.2 mm	75 x 10.8 mm	EI 240 C/U, EI 240 U/C, EI 240 C/C
Diameter 160 mm, wall thickness 3.2 mm		
Diameter 160 mm, wall thickness 9.5 mm	50 x 7.2 mm	EI 30 U/U, EI 30 C/U, EI 30 U/C, EI 30 C/C
Services	Wrap size	Classification
PE pipe according to EN 1519-1, EN 12201-2 and EN 12006-1, ABS pipe according to EN 1455-1 and SAN+PVC pipe according to EN 1565-1		
Diameter 40 mm, wall thickness 3.7 mm	50 x 1.8 mm	EI 240 U/U, EI 240 C/U, EI 240 U/C, EI 240 C/C
Diameter 55 mm, wall thickness 2 mm		
Diameter 75 mm, wall thickness 3 mm	50 x 3.6 mm	E 240 U/U, E 240 C/U, E 240 U/C, E 240 C/C
Diameter 75 mm, wall thickness 6.6 mm		EI 240 U/U, EI 240 C/U, EI 240 U/C, EI 240 C/C
Diameter 110 mm, wall thickness 6.6 mm		
Diameter 125 mm, wall thickness 4.8 mm		
Copper with 25 mm thick Armaflex insulation		
Diameter 25 mm, wall thickness 2-14.2mm	50 x 1.8 mm	EI 240 C/U



Appendix UL-EU CERTIFICATE UL-EU-00513-EN

The UL-EU Marks, displayed below represent the enhanced and alternate version of the product marking. Either Mark can be used. These Marks shall appear on certified products only. Minimum size is not specified, as long as the Mark is legible. The following is suggested.



*Note: E12345 is an example of the UL file number.

The minimum height of the registered trademark symbol ® shall be 1 mm. When the overall diameter of the UL-EU Mark is less than 9.5 mm, the trademark symbol may be omitted if it is not legible to the naked eye.

The UL-EU Mark may appear on a label, nameplate, or may be cast, stamped or molded into the product. When appearing on a label or nameplate, the Manufacturer's name or trademark along with a model number and UL File number are also required on that same label or nameplate. If cast, stamped or molded, the Manufacturer's name or trademark and model number shall also appear elsewhere on the product.

All content shall be in accordance with the details provided on this UL-EU Certificate.

PROCUREMENT

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