Promat

Konstruktionsnachweis 715

PROMASTOP®-FC MD-Brandschutzendlosmanschette

Bautechnischer Brandschutz

Stand 20.06.2023

www.promat.com/de-at/brandschutz

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Inhaltsverzeichnis zum Promat-Konstruktionsnachweis 715

LEISTUNGSERKLÄRUNG

Datum der Ausstellung: 03/09/2019

Ersetzt: Nr. --- - CPR --/---- - JJJJ/# vom: TT/MM/JJJJ

Nr. 0761-CPR-19/0215-2019/9

1 **Eindeutiger Kenncode des Produkttyps:** **PROMASTOP®-FC MD**

2 **Typen- oder Chargennummer:** wie auf der Verpackung des Produkts angegeben

3 **Vorgesehene Verwendungszwecke:** wie angegeben in der ETA-19/0215:
3.1 – PROMASTOP®-FC MD ist ein Brandschutzmanschettenband, welches abgelängt als Brandschutzmanschette als Abschottung von brennbaren Rohrleitungen in feuerwiderstandsfähigen Decken und Wänden verwendet wird.
3.2 – Das Produkt ist vorgesehen für:
- Verwendung in Innenbereichen mit anderen Feuchtigkeitsklassen als der Z_1, ohne Temperaturen unter 0°C (TR 024:2009, Klasse Z_2).
- Verwendung in Innenbereichen mit hoher Luftfeuchtigkeit, ohne Temperaturen unter 0°C (TR 024:2009, Klasse Z_1)
- Verwendung bei Temperaturen zwischen -20°C und +70°C, ohne UV-Einwirkung und Regen (TR 024:2009, Klasse Y_2)
- Verwendung bei Temperaturen zwischen -20°C und +70°C, mit UV-Einwirkung aber ohne Einwirkung von Regen (TR 024:2009, Klasse Y_1)
- Verwendung in Bereichen mit Bewitterung (TR 024:2009, Klasse X)

4 **Name und Kontaktanschrift des Herstellers:**
Etex Building Performance NV
Bormstraat 24
B-2830 Tisselt
Belgium
Werk: 21
www.etexgroup.com

5 **Bevollmächtigte:** nicht anwendbar.

6 **System oder Systeme zur Bewertung und Überprüfung der Leistungsbeständigkeit (BÜLB):** siehe Tabelle unter Abschnitt 9.

7 **Das Bauprodukt ist nicht durch eine harmonisierte Produktnorm abgedeckt.**

8 **Die Leistungserklärung betrifft ein Bauprodukt, für das eine Europäische Technische Bewertung (ETA) ausgestellt worden ist.**
Das Österreichische Institut für Bautechnik (OIB, Österreich) hat eine Europäische Technische Bewertung mit der Nummer ETA-19/0215 für dieses Produkt auf Basis des EAD 350454-00-1104 ausgestellt.

Notifizierte Zertifizierungsstelle: 0761 (MPA Braunschweig)
Zertifikat / Bescheinigung der Leistungsbeständigkeit
0761 - CPR - 0799

9 **Erklärte Leistung**

Wesentliche Merkmale	BÜLB Systeme	Leistung	Harmonisierte technische Spezifikation
GA1: Mechanische Festigkeit und Standsicherheit: nicht relevant.			
GA2: Brandschutz			
Brandverhalten:	1	E.	ETA-19/0215 EAD 350454-00-1104
Feuerwiderstand:	1	Diese Eigenschaft hängt vom geprüften System ab. Die Leistung des Produkts in jeder einzelnen geprüften Bauart wird vom Hersteller in Abhängigkeit von der geplanten Verwendung nach Abschnitt 3.1. dieser Leistungserklärung nachgewiesen und als Nachweis zur Verfügung gestellt. Die Leistungsklassen sind in einem Klassifizierungsbericht nach dem entsprechend anwendbaren Teil der EN 13501 angegeben und erklärt.	
GA3: Hygiene, Gesundheit und Umweltschutz:			
Wasserundurchlässigkeit:	-	KLB (Keine Leistung bewertet).	ETA-19/0215 EAD 350454-00-1104
Freisetzung gefährlicher Stoffe:	-	Deklaration / Erklärung	
GA4: Sicherheit und Barrierefreiheit bei der Nutzung: nicht relevant.			

	GA5: Schallschutz: nicht relevant.			
	GA6: Energieeinsparung und Wärmeschutz: nicht relevant.			
	Dauerhaftigkeit:			
	Grundlegender Nachweis der Dauerhaftigkeit:	1	Bei der vorgesehenen Anwendung, Klasse X nach EOTA TR024 und in Übereinstimmung mit EAD 350454-00-1104.	ETA-19/0215 EAD 350454-00-1104

Die Leistung des Produkts gemäß den Nummern 1 und 2 entspricht der erklärten Leistung nach Nummer 9.

Verantwortlich für die Erstellung dieser Leistungserklärung ist allein der Hersteller gemäß Nummer 4.

Die jeweils aktuellste Version dieser Leistungserklärung finden Sie unter “www.promat-ce.eu”.

Die Produktinformation in Anlehnung an das Sicherheitsdatenblatt gem. REACH-VO (EG) 1907/2006 und GHS-VO (EG) 1272/2008 von PROMASTOP®-FC MD ist auf Anfrage erhältlich.

Unterzeichnet für den Hersteller und im Namen des Herstellers von:

Name: Matthias Wagner
Funktion: Leitung Entwicklungstechnik, Etex Building Performance GmbH

Linz, 03. September 2019 Unterschrift:

i.A.

PAVUS, a.s.
AUTHORISED BODY 216
NOTIFIED BODY 1391
Accredited Certification Body for Products 3041

Branch: FIRE TESTING LABORATORY
IN VESELÍ NAD LUŽNICÍ
čtvrť J. Hybeše 879
CZ 391 81 Veselí nad Lužnicí
Czech Republic

Address:
Prosecká 412/74, CZ 190 00 Praha 9 – Prosek
Tel.: +420 286 019 587 Fax: +420 286 019 590
E-mail: mail@pavus.cz, http://www.pavus.cz

Tel.: +420 381 477 418
Fax: +420 381 477 419
E-mail: veseli@pavus.cz

FIRE RESISTANCE CLASSIFICATION REPORT

The object of classification:	*Penetration seals* *in accordance with EN 13501-2:2016: 7.5.8*
Classification report number:	***PK2-11-19-002-E-1***
Product name and type:	***PROMASTOP®-FC MD*** *- pipe closure device*
Sponsor:	*Promat Research and Technology Centre NV* *Bormstraat 24* *B-2830 Willebroek* *Belgium*
Issuing organization:	*PAVUS, a.s.* *Accredited Certification body for products 3041* *- Accreditation issued by the Czech Accreditation Institute, Certificate of Accreditation No. 314/2021* *Prosecká 412/74* *190 00 Praha 9* *Czech Republic* *Fire testing Laboratory Veselí nad Lužnicí* *Order reference: Z210210148 (Z210190053)*
Date of issue:	*16th June 2021*
Copies in total:	*4*
Issue number:	*1*
Pages in total:	*91*

1 Introduction

1.1 This classification report defines fire resistance assigned to

PROMASTOP®-FC MD *- pipe closure device* in accordance with the procedures given in EN 13501-2:2016.

1.2 This classification report consists of 91 pages and may only be used or reproduced in its entirety.

1.3 The classification report No PK2-11-19-002-E-0 issued on 2019-02-21 is substituted and canceled by this classification report.

2 Details of classified element

2.1 Type of function

The classified elements are defined as penetration seals.

2.2 Description

Description given by the sponsor is in Annex A of this report and in the Test reports mentioned in 3.1.

Description of material used in this report:

- PE-HD - polyethylene pipe according DIN 8074 / 8075, EN 1519-1,
- PP-H, PP-R, PP-C - polypropylene pipe according DIN 8077 / 8078, EN 1451-1,
- PE-S2 - plastic compound pipe made by Geberit (type Silent-db20),
- PP-C / PP-MD / PP-C - plastic compound pipe made by Geberit (type Silent-PP),
- PP-MX - plastic compound pipe made by Geberit (type Silent-Pro),
- PP-MD - plastic compound pipe made by Rehau (type Raupiano plus),
- PVC-U - plastic compound pipe made by Dyka (type Sono blue),
- PP/PP-MV/PP - plastic compound pipe made by POLOPLAST (type POLO-KAL NG),
- PP/PP-MV/PP - plastic compound pipe made by POLOPLAST (type POLO-KAL 3S),
- PP/PP-MV/PP - plastic compound pipe made by POLOPLAST (type POLO-KAL XS),
- PE-Xc/Al/PE-Xc - plastic aluminum compound pipe made by Henco (type Standard).

All pipes (except Henco) have PE sound decoupling strip, max. thickness 4 mm, class E according to EN 13501-1, cut with the edge of collar PROMASTOP®-FC MD (for details see Annex A).

3 Test reports / extended application reports and test results in support of the classification

3.1 Test reports / extended application reports

Name of laboratory **Address** **Accreditation**	**Name of sponsor**	**Test report No** **Date of issue**	**Test method**
PAVUS, a. s. *Veselí nad Lužnicí* *ATL No. 1026*	*Promat Research and Technology Centre NV*	*Pr-17-2.110-En* *2017-09-14*	*EN 1366-3:2009*
PAVUS, a. s. *Veselí nad Lužnicí* *ATL No. 1026*	*Promat Research and Technology Centre NV*	*Pr-17-2.192-En* *2018-01-23*	*EN 1366-3:2009*
PAVUS, a. s. *Veselí nad Lužnicí* *ATL No. 1026*	*Promat Research and Technology Centre NV*	*Pr-17-2.193-En* *2018-01-31*	*EN 1366-3:2009*
PAVUS, a. s. *Veselí nad Lužnicí* *ATL No. 1026*	*Promat Research and Technology Centre NV*	*Pr-17-2.228-En* *2018-07-31*	*EN 1366-3:2009*
PAVUS, a. s. *Veselí nad Lužnicí* *ATL No. 1026*	*Promat Research and Technology Centre NV*	*Pr-18-2.031-En* *2018-10-18*	*EN 1366-3:2009*
PAVUS, a. s. *Veselí nad Lužnicí* *ATL No. 1026*	*Promat Research and Technology Centre NV*	*Pr-18-2.045-En* *2018-05-10*	*EN 1366-3:2009*
PAVUS, a. s. *Veselí nad Lužnicí* *ATL No. 1026*	*Promat Research and Technology Centre NV*	*Pr-18-2.249-En* *2021-01-28*	*EN 1366-3:2009*
WFRGENT NV *Ottergemsesteenweg-Zuid 711* *B-9000 Gent* *BPV-RPC 1173*	*Etex Building Performance NV*	*20381A* *2020-10-02*	*EN 1366-3:2009*
PAVUS, a. s. *Veselí nad Lužnicí* *ATL No. 1026*	*Promat Research and Technology Centre NV*	*Pr-18-2.250-En* *2021-01-28*	*EN 1366-3:2009*
PAVUS, a. s. *Veselí nad Lužnicí* *ATL No. 1026*	*Promat Research and Technology Centre NV*	*Pr-18-2.251-En* *2021-01-28*	*EN 1366-3:2009*
PAVUS, a. s. *Veselí nad Lužnicí* *ATL No. 1026*	*Promat Research and Technology Centre NV*	*Pr-18-2.180-En* *2021-01-28*	*EN 1366-3:2009*
PAVUS, a. s. *Veselí nad Lužnicí* *ATL No. 1026*	*Promat Research and Technology Centre NV*	*Pr-18-2.114-En* *2019-09-25*	*EN 1366-3:2009*
WFRGENT NV *Ottergemsesteenweg-Zuid 711* *B-9000 Gent* *BPV-RPC 1173*	*Etex Building Performance NV*	*20164A* *2020-08-25*	*EN 1366-3:2009*

3.2 Test results

For description of the tested specimens see above mentioned Test reports.

Test method, Test report No Date of issue	**Parameter**	
EN 1366-3 Pr-17-2.110-En 2017-09-14	***PROMASTOP®-FC MD with PP pipe in annular space made of PROMASTOP®-M (specimens No 1, 2)***	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from underside*
	Supporting construction	*rigid floor with low density ≥ 650 kg/m³ made of YTONG panels th. 150 mm*
	Pipe end configuration inside/outside the furnace	*uncapped/uncapped (U/U)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E) - cracks or openings - cotton pad - sustained flaming **Insulation (I)**	 *132 min, no failure* *132 min, no failure* *132 min, no failure* *132 min, no failure*
	PROMASTOP®-FC MD with PP pipe in annular space made of PROMASTOP®-M (specimen No 3)	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from underside*
	Supporting construction	*rigid floor with low density ≥ 650 kg/m³ made of YTONG panels th. 150 mm*
	Pipe end configuration inside/outside the furnace	*uncapped/capped (U/C)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E) - cracks or openings - cotton pad - sustained flaming **Insulation (I)**	 *121 min* *121 min* *121 min* *121 min*

EN 1366-3 *Pr-17-2.110-En* *2017-09-14*	***PROMASTOP®-FC MD with PE pipe in annular space made of PROMASTOP®-M (specimens No 4, 5)***	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from underside*
	Supporting construction	*rigid floor with low density ≥ 650 kg/m³ made of YTONG panels th. 150 mm*
	Pipe end configuration inside/outside the furnace	*uncapped/uncapped (U/U)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E)	
	- cracks or openings	*132 min, no failure*
	- cotton pad	*132 min, no failure*
	- sustained flaming	*132 min, no failure*
	Insulation (I)	*132 min, no failure*
	PROMASTOP®-FC MD with PE pipe in annular space made of PROMASTOP®-M (specimen No 6)	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from underside*
	Supporting construction	*rigid floor with low density ≥ 650 kg/m³ made of YTONG panels th. 150 mm*
	Pipe end configuration inside/outside the furnace	*uncapped/capped (U/C)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E)	
	- cracks or openings	*132 min, no failure*
	- cotton pad	*132 min, no failure*
	- sustained flaming	*132 min, no failure*
	Insulation (I)	*132 min, no failure*

EN 1366-3 *Pr-17-2.192-En* *2018-01-23*	***PROMASTOP®-FC MD with PP pipe in annular space made of gypsum filler (specimens No 9 to 14)***	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from one side*
	Supporting construction	*flexible wall th. 100 mm, made of gypsum plasterboards, 2 x 12.5 mm on each side, steel studs 50 mm x 50 mm, mineral wool insulation th. 40 mm, density 100 kg.m^{-3}*
	Pipe end configuration inside/outside the furnace	*uncapped/uncapped (U/U)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E) - cracks or openings - cotton pad - sustained flaming	 *132 min, no failure* *132 min, no failure* *132 min, no failure*
	Insulation (I)	*132 min, no failure*
	PROMASTOP®-FC MD with PP pipe in annular space made of gypsum filler (specimens No 16, 17)	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from one side*
	Supporting construction	*flexible wall th. 100 mm, made of gypsum plasterboards, 2 x 12.5 mm on each side, steel studs 50 mm x 50 mm, mineral wool insulation th. 40 mm, density 100 kg.m^{-3}*
	Pipe end configuration inside/outside the furnace	*uncapped/capped (U/C)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E) - cracks or openings - cotton pad - sustained flaming	 *132 min, no failure* *132 min, no failure* *132 min, no failure*
	Insulation (I)	*132 min, no failure*

EN 1366-3 *Pr-17-2.192-En* *2018-01-23*	***PROMASTOP®-FC MD with PE pipe in annular space made of gypsum filler (specimens No 1 to 6)***	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from one side*
	Supporting construction	*flexible wall th. 100 mm, made of gypsum plasterboards, 2 x 12.5 mm on each side, steel studs 50 mm x 50 mm, mineral wool insulation th. 40 mm, density 100 kg.m^{-3}*
	Pipe end configuration inside/outside the furnace	*uncapped/capped (U/U)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E) - cracks or openings - cotton pad - sustained flaming	 *132 min, no failure* *132 min, no failure* *132 min, no failure*
	Insulation (I)	*132 min, no failure*
EN 1366-3 *Pr-17-2.193-En* *2018-01-31*	***PROMASTOP®-FC MD with PP pipe in annular space made of gypsum filler (specimens No 11, 12)***	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from one side*
	Supporting construction	*flexible wall th. 100 mm, made of gypsum plasterboards, 2 x 12.5 mm on each side, steel studs 50 mm x 50 mm, mineral wool insulation th. 40 mm, density 100 kg.m^{-3}*
	Pipe end configuration inside/outside the furnace	*uncapped/uncapped (U/U)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E) - cracks or openings - cotton pad - sustained flaming	 *133 min, no failure* *133 min, no failure* *133 min, no failure*
	Insulation (I)	*133 min, no failure*

EN 1366-3 *Pr-17-2.193-En* *2018-01-31*	***PROMASTOP®-FC MD with PE pipe in annular space made of gypsum filler (specimen No 13)***	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from one side*
	Supporting construction	*flexible wall th. 100 mm, made of gypsum plasterboards, 2 x 12.5 mm on each side, steel studs 50 mm x 50 mm, mineral wool insulation th. 40 mm, density 100 kg.m^{-3}*
	Pipe end configuration inside/outside the furnace	*uncapped/capped (U/C)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E)	
	- cracks or openings	*133 min, no failure*
	- cotton pad	*133 min, no failure*
	- sustained flaming	*133 min, no failure*
	Insulation (I)	*128 min*
	PROMASTOP®-FC MD with PE pipe in annular space made of gypsum filler (specimen No 14)	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from one side*
	Supporting construction	*flexible wall th. 100 mm, made of gypsum plasterboards, 2 x 12.5 mm on each side, steel studs 50 mm x 50 mm, mineral wool insulation th. 40 mm, density 100 kg.m^{-3}*
	Pipe end configuration inside/outside the furnace	*uncapped/capped (U/C)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E)	
	- cracks or openings	*133 min, no failure*
	- cotton pad	*133 min, no failure*
	- sustained flaming	*133 min, no failure*
	Insulation (I)	*103 min*

EN 1366-3 *Pr-17-2.193-En* *2018-01-31*	***PROMASTOP®-FC MD with Geberit Silent-PP (PP-C / PP-MD / PP-C) compound pipe in annular space made of gypsum filler (specimen No 3)***	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from one side*
	Supporting construction	*flexible wall th. 100 mm, made of gypsum plasterboards, 2 x 12.5 mm on each side, steel studs 50 mm x 50 mm, mineral wool insulation th. 40 mm, density 100 kg.m^{-3}*
	Pipe end configuration inside/outside the furnace	*uncapped/uncapped (U/U)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E)	
	- cracks or openings	*133 min, no failure*
	- cotton pad	*133 min, no failure*
	- sustained flaming	*133 min, no failure*
	Insulation (I)	*133 min, no failure*
	PROMASTOP®-FC MD with Geberit Silent-PP (PP-C / PP-MD / PP-C) compound pipe in annular space made of gypsum filler (specimen No 4)	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from one side*
	Supporting construction	*flexible wall th. 100 mm, made of gypsum plasterboards, 2 x 12.5 mm on each side, steel studs 50 mm x 50 mm, mineral wool insulation th. 40 mm, density 100 kg.m^{-3}*
	Pipe end configuration inside/outside the furnace	*uncapped/uncapped (U/U)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E)	
	- cracks or openings	*133 min, no failure*
	- cotton pad	*133 min, no failure*
	- sustained flaming	*133 min, no failure*
	Insulation (I)	*121 min*

EN 1366-3 *Pr-17-2.193-En* *2018-01-31*	***PROMASTOP®-FC MD with Geberit Silent-Pro (PP-MX) compound pipe in annular space made of gypsum filler (specimen No 5)***	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from one side*
	Supporting construction	*flexible wall th. 100 mm, made of gypsum plasterboards, 2 x 12.5 mm on each side, steel studs 50 mm x 50 mm, mineral wool insulation th. 40 mm, density 100 kg.m^{-3}*
	Pipe end configuration inside/outside the furnace	*uncapped/uncapped (U/U)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E)	
	- cracks or openings	*133 min, no failure*
	- cotton pad	*133 min, no failure*
	- sustained flaming	*133 min, no failure*
	Insulation (I)	*133 min, no failure*
	PROMASTOP®-FC MD with Geberit Silent-Pro (PP-MX) compound pipe in annular space made of gypsum filler (specimen No 6)	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from one side*
	Supporting construction	*flexible wall th. 100 mm, made of gypsum plasterboards, 2 x 12.5 mm on each side, steel studs 50 mm x 50 mm, mineral wool insulation th. 40 mm, density 100 kg.m^{-3}*
	Pipe end configuration inside/outside the furnace	*uncapped/uncapped (U/U)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E)	
	- cracks or openings	*133 min, no failure*
	- cotton pad	*133 min, no failure*
	- sustained flaming	*133 min, no failure*
	Insulation (I)	*102 min*

EN 1366-3 *Pr-17-2.193-En* *2018-01-31*	***PROMASTOP®-FC MD with Rehau Raupiano Plus (PP-MD) compound pipe in annular space made of gypsum filler (specimens No 7, 8)***	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from one side*
	Supporting construction	*flexible wall th. 100 mm, made of gypsum plasterboards, 2 x 12.5 mm on each side, steel studs 50 mm x 50 mm, mineral wool insulation th. 40 mm, density 100 kg.m^{-3}*
	Pipe end configuration inside/outside the furnace	*uncapped/uncapped (U/U)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E)	
	- cracks or openings	*133 min, no failure*
	- cotton pad	*133 min, no failure*
	- sustained flaming	*133 min, no failure*
	Insulation (I)	*133 min, no failure*
	PROMASTOP®-FC MD with Geberit Silent-db20 (PE-S2) compound pipe in annular space made of gypsum filler (specimens No 1, 2)	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from one side*
	Supporting construction	*flexible wall th. 100 mm, made of gypsum plasterboards, 2 x 12.5 mm on each side, steel studs 50 mm x 50 mm, mineral wool insulation th. 40 mm, density 100 kg.m^{-3}*
	Pipe end configuration inside/outside the furnace	*uncapped/uncapped (U/U)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E)	
	- cracks or openings	*133 min, no failure*
	- cotton pad	*133 min, no failure*
	- sustained flaming	*133 min, no failure*
	Insulation (I)	*133 min, no failure*

EN 1366-3 *Pr-17-2.193-En* *2018-01-31*	***PROMASTOP®-FC MD with PVC-U compound pipe in annular space made of gypsum filler (specimen No 9)***	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from one side*
	Supporting construction	*flexible wall th. 100 mm, made of gypsum plasterboards, 2 x 12.5 mm on each side, steel studs 50 mm x 50 mm, mineral wool insulation th. 40 mm, density 100 kg.m^{-3}*
	Pipe end configuration inside/outside the furnace	*uncapped/uncapped (U/U)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E)	
	- cracks or openings	*133 min, no failure*
	- cotton pad	*133 min, no failure*
	- sustained flaming	*133 min, no failure*
	Insulation (I)	*133 min, no failure*
	PROMASTOP®-FC MD with PVC-U compound pipe in annular space made of gypsum filler (specimen No 10)	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from one side*
	Supporting construction	*flexible wall th. 100 mm, made of gypsum plasterboards, 2 x 12.5 mm on each side, steel studs 50 mm x 50 mm, mineral wool insulation th. 40 mm, density 100 kg.m^{-3}*
	Pipe end configuration inside/outside the furnace	*uncapped/uncapped (U/U)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E)	
	- cracks or openings	*122 min, no failure*
	- cotton pad	*122 min, no failure*
	- sustained flaming	*122 min, no failure*
	Insulation (I)	*122 min, no failure*

EN 1366-3 *Pr-18-2.045-En* *2018-05-10*	***PROMASTOP®-FC MD with PVC compound pipe in annular space made of gypsum filler (specimen No 10)***	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from one side*
	Supporting construction	*flexible wall th. 100 mm, made of gypsum plasterboards, 2 x 12.5 mm on each side, steel studs 50 mm x 50 mm, mineral wool insulation th. 40 mm, density 100 kg.m^{-3}*
	Pipe end configuration inside/outside the furnace	*uncapped/uncapped (U/U)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E)	
	- cracks or openings	*133 min, no failure*
	- cotton pad	*133 min, no failure*
	- sustained flaming	*133 min, no failure*
	Insulation (I)	*133 min, no failure*
EN 1366-3 *Pr-17-2.228-En* *2018-07-31*	***PROMASTOP®-FC MD with PP pipe in annular space made of PROMASTOP®-M (specimens No 7 to 10, 13, 16)***	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from underside*
	Supporting construction	*rigid floor with low density ≥ 650 kg/m^3 made of YTONG panels th. 150 mm*
	Pipe end configuration inside/outside the furnace	*uncapped/uncapped (U/U)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E)	
	- cracks or openings	*132 min, no failure*
	- cotton pad	*132 min, no failure*
	- sustained flaming	*132 min, no failure*
	Insulation (I)	*132 min, no failure*

EN 1366-3 *Pr-17-2.228-En* *2018-07-31*	***PROMASTOP®-FC MD with PP pipe in annular space made of PROMASTOP®-M (specimen No 11)***	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from underside*
	Supporting construction	*rigid floor with low density ≥ 650 kg/m³ made of YTONG panels th. 150 mm*
	Pipe end configuration inside/outside the furnace	*uncapped/uncapped (U/U)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E)	
	- cracks or openings	*129 min*
	- cotton pad	*129 min*
	- sustained flaming	*129 min*
	Insulation (I)	*127 min*
	PROMASTOP®-FC MD with PE pipe in annular space made of PROMASTOP®-M (specimens No 1, 2, 4, 5, 6)	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from underside*
	Supporting construction	*rigid floor with low density ≥ 650 kg/m³ made of YTONG panels th. 150 mm*
	Pipe end configuration inside/outside the furnace	*uncapped/uncapped (U/U)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E)	
	- cracks or openings	*132 min, no failure*
	- cotton pad	*132 min, no failure*
	- sustained flaming	*132 min, no failure*
	Insulation (I)	*132 min, no failure*
	PROMASTOP®-FC MD with PE pipe in annular space made of PROMASTOP®-M (specimen No 15)	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from underside*
	Supporting construction	*rigid floor with low density ≥ 650 kg/m³ made of YTONG panels th. 150 mm*
	Pipe end configuration inside/outside the furnace	*uncapped/capped (U/C)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E)	
	- cracks or openings	*120 min*
	- cotton pad	*120 min*
	- sustained flaming	*120 min*
	Insulation (I)	*120 min*

EN 1366-3 *Pr-17-2.228-En* *2018-07-31*	***PROMASTOP®-FC MD with Geberit Silent-PP (PP-C / PP-MD / PP-C) compound pipe in annular space made of PROMASTOP®-M (specimens No 21, 22)***	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from underside*
	Supporting construction	*rigid floor with low density ≥ 650 kg/m³ made of YTONG panels th. 150 mm*
	Pipe end configuration inside/outside the furnace	*uncapped/uncapped (U/U)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E)	
	- cracks or openings	*132 min, no failure*
	- cotton pad	*132 min, no failure*
	- sustained flaming	*132 min, no failure*
	Insulation (I)	*132 min, no failure*
	PROMASTOP®-FC MD with Geberit Silent-Pro (PP-MX) compound pipe in annular space made of PROMASTOP®-M (specimens No 23, 24)	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from underside*
	Supporting construction	*rigid floor with low density ≥ 650 kg/m³ made of YTONG panels th. 150 mm*
	Pipe end configuration inside/outside the furnace	*uncapped/uncapped (U/U)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E)	
	- cracks or openings	*132 min, no failure*
	- cotton pad	*132 min, no failure*
	- sustained flaming	*132 min, no failure*
	Insulation (I)	*132 min, no failure*
	PROMASTOP®-FC MD with Rehau Raupiano Plus (PP-MD) compound pipe in annular space made of PROMASTOP®-M (specimen No 25)	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from underside*
	Supporting construction	*rigid floor with low density ≥ 650 kg/m³ made of YTONG panels th. 150 mm*
	Pipe end configuration inside/outside the furnace	*uncapped/uncapped (U/U)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E)	
	- cracks or openings	*132 min, no failure*
	- cotton pad	*132 min, no failure*
	- sustained flaming	*132 min, no failure*
	Insulation (I)	*132 min, no failure*

EN 1366-3 *Pr-17-2.228-En* *2018-07-31*	***PROMASTOP®-FC MD with Rehau Raupiano Plus (PP-MD) compound pipe in annular space made of PROMASTOP®-M (specimen No 26)***	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from underside*
	Supporting construction	*rigid floor with low density ≥ 650 kg/m³ made of YTONG panels th. 150 mm*
	Pipe end configuration inside/outside the furnace	*uncapped/uncapped (U/U)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E)	
	- cracks or openings	*120 min*
	- cotton pad	*120 min*
	- sustained flaming	*120 min*
	Insulation (I)	*120 min*
	PROMASTOP®-FC MD with Geberit Silent-db20 (PE-S2) compound pipe in annular space made of PROMASTOP®-M (specimens No 19, 20)	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from underside*
	Supporting construction	*rigid floor with low density ≥ 650 kg/m³ made of YTONG panels th. 150 mm*
	Pipe end configuration inside/outside the furnace	*uncapped/uncapped (U/U)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E)	
	- cracks or openings	*132 min, no failure*
	- cotton pad	*132 min, no failure*
	- sustained flaming	*132 min, no failure*
	Insulation (I)	*132 min, no failure*
	PROMASTOP®-FC MD with PVC-U compound pipe in annular space made of PROMASTOP®-M (specimen No 27)	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from underside*
	Supporting construction	*rigid floor with low density ≥ 650 kg/m³ made of YTONG panels th. 150 mm*
	Pipe end configuration inside/outside the furnace	*uncapped/uncapped (U/U)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E)	
	- cracks or openings	*132 min, no failure*
	- cotton pad	*132 min, no failure*
	- sustained flaming	*132 min, no failure*
	Insulation (I)	*132 min, no failure*

EN 1366-3 *Pr-17-2.228-En* *2018-07-31*	***PROMASTOP®-FC MD with PVC-U compound pipe in annular space made of PROMASTOP®-M (specimen No 28)***	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from underside*
	Supporting construction	*rigid floor with low density ≥ 650 kg/m³ made of YTONG panels th. 150 mm*
	Pipe end configuration inside/outside the furnace	*uncapped/uncapped (U/U)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E) - cracks or openings - cotton pad - sustained flaming	 *99 min* *99 min* *99 min*
	Insulation (I)	*91 min*
EN 1366-3 *Pr-18-2.031-En* *2018-10-18*	***PROMASTOP®-FC MD with PP pipe in annular space made of PROMASTOP®-M (specimen No 8)***	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from underside*
	Supporting construction	*rigid floor with low density ≥ 650 kg/m³ made of YTONG panels th. 150 mm*
	Pipe end configuration inside/outside the furnace	*uncapped/uncapped (U/U)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E) - cracks or openings - cotton pad - sustained flaming	 *90 min, no failure* *90 min, no failure* *90 min, no failure*
	Insulation (I)	*90 min, no failure*
	PROMASTOP®-FC MD with PP pipe in annular space made of PROMASTOP®-M (specimen No 9)	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from underside*
	Supporting construction	*rigid floor with low density ≥ 650 kg/m³ made of YTONG panels th. 150 mm*
	Pipe end configuration inside/outside the furnace	*uncapped/capped (U/C)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E) - cracks or openings - cotton pad - sustained flaming	 *90 min, no failure* *90 min, no failure* *90 min, no failure*
	Insulation (I)	*90 min, no failure*

EN 1366-3 *Pr-18-2.031-En* *2018-10-18*	***PROMASTOP®-FC MD with Rehau Raupiano Plus (PP-MD) compound pipe in annular space made of PROMASTOP®-M (specimen No 10)***	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from underside*
	Supporting construction	*rigid floor with low density ≥ 650 kg/m³ made of YTONG panels th. 150 mm*
	Pipe end configuration inside/outside the furnace	*uncapped/uncapped (U/U)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E)	
	- cracks or openings	*90 min, no failure*
	- cotton pad	*90 min, no failure*
	- sustained flaming	*90 min, no failure*
	Insulation (I)	*90 min, no failure*
	PROMASTOP®-FC MD with PVC-U compound pipe in annular space made of PROMASTOP®-M (specimen No 11)	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from underside*
	Supporting construction	*rigid floor with low density ≥ 650 kg/m³ made of YTONG panels th. 150 mm*
	Pipe end configuration inside/outside the furnace	*uncapped/capped (U/U)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E)	
	- cracks or openings	*90 min, no failure*
	- cotton pad	*90 min, no failure*
	- sustained flaming	*90 min, no failure*
	Insulation (I)	*90 min, no failure*

EN 1366-3 *Pr-18-2.249-En* *2021-01-28*	***PROMASTOP®-FC MD with PE pipe in annular space made of PROMASEAL®-A and stone wool (specimen No 4)***	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from one side*
	Supporting construction	*flexible wall th. 100 mm, made of gypsum plasterboards, 2 x 12.5 mm on each side, steel studs 50 mm x 50 mm, mineral wool insulation th. 40 mm, density 100 kg.m^{-3}*
	Pipe end configuration inside/outside the furnace	*uncapped/uncapped (U/U)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E)	
	- cracks or openings	*132 min*
	- cotton pad	*132 min*
	- sustained flaming	*132 min*
	Insulation (I)	*120 min*
	PROMASTOP®-FC MD with PP-H pipe in annular space made of PROMASEAL®-A and stone wool (specimen No 5)	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from one side*
	Supporting construction	*flexible wall th. 100 mm, made of gypsum plasterboards, 2 x 12.5 mm on each side, steel studs 50 mm x 50 mm, mineral wool insulation th. 40 mm, density 100 kg.m^{-3}*
	Pipe end configuration inside/outside the furnace	*uncapped/uncapped (U/U)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E)	
	- cracks or openings	*132 min*
	- cotton pad	*132 min*
	- sustained flaming	*132 min*
	Insulation (I)	*132 min*

EN 1366-3 *Pr-18-2.249-En* *2021-01-28*	***PROMASTOP®-FC MD with PP-H pipe in annular space made of PROMASEAL®-A and stone wool (specimen No 6)***	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from one side*
	Supporting construction	*flexible wall th. 100 mm, made of gypsum plasterboards, 2 x 12.5 mm on each side, steel studs 50 mm x 50 mm, mineral wool insulation th. 40 mm, density 100 kg.m^{-3}*
	Pipe end configuration inside/outside the furnace	*uncapped/uncapped (U/U)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E)	
	- cracks or openings	*132 min*
	- cotton pad	*132 min*
	- sustained flaming	*132 min*
	Insulation (I)	*100 min*
	PROMASTOP®-FC MD with PE pipes in annular space made of gypsum filler (specimens No 11, 12)	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from one side*
	Supporting construction	*flexible wall th. 100 mm, made of gypsum plasterboards, 2 x 12.5 mm on each side, steel studs 50 mm x 50 mm, mineral wool insulation th. 40 mm, density 100 kg.m^{-3}*
	Pipe end configuration inside/outside the furnace	*uncapped/uncapped (U/U)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E)	
	- cracks or openings	*132 min*
	- cotton pad	*132 min*
	- sustained flaming	*132 min*
	Insulation (I)	*132 min*

EN 1366-3 *Pr-18-2.249-En* *2021-01-28*	***PROMASTOP®-FC MD with PP-H pipes in annular space made of gypsum filler (specimens No 13, 14)***	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from one side*
	Supporting construction	*flexible wall th. 100 mm, made of gypsum plasterboards, 2 x 12.5 mm on each side, steel studs 50 mm x 50 mm, mineral wool insulation th. 40 mm, density 100 kg.m^{-3}*
	Pipe end configuration inside/outside the furnace	*uncapped/uncapped (U/U)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E)	
	- cracks or openings	*132 min*
	- cotton pad	*132 min*
	- sustained flaming	*132 min*
	Insulation (I)	*132 min*
EN 1366-3 *20381A* *2020-10-02*	***PROMASTOP®-FC MD with Henco Standard (PE-Xc/Al/PE-Xc) pipes in annular space made of PROMASEAL®-AG (specimen No 1a) with additional protection***	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from one side*
	Supporting construction	*flexible wall th. 100 mm, made of gypsum plasterboards, 2 x 12.5 mm on each side, steel studs 50 mm x 50 mm, mineral wool insulation th. 40 mm, density 45 kg.m^{-3}*
	Pipe end configuration inside/outside the furnace	*uncapped/capped (U/C)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E)	
	- cracks or openings	*132 min*
	- cotton pad	*132 min*
	- sustained flaming	*132 min*
	Insulation (I)	*132 min*

EN 1366-3 *20381A* *2020-10-02*	***PROMASTOP®-FC MD with Henco Standard (PE-Xc/Al/PE-Xc) pipes with covering in annular space made of PROMASEAL®-AG (specimen No 1b) with PE corrugated jacket and additional protection***	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from one side*
	Supporting construction	*flexible wall th. 100 mm, made of gypsum plasterboards, 2 x 12.5 mm on each side, steel studs 50 mm x 50 mm, mineral wool insulation th. 40 mm, density 45 kg.m^{-3}*
	Pipe end configuration inside/outside the furnace	*uncapped/capped (U/C)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E)	
	- cracks or openings	*132 min*
	- cotton pad	*132 min*
	- sustained flaming	*132 min*
	Insulation (I)	*132 min*
	PROMASTOP®-FC MD with Henco Standard (PE-Xc/Al/PE-Xc) pipes in annular space made of PROMASEAL®-AG (specimens No 1c, 1d) with PE insulation and additional protection	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from one side*
	Supporting construction	*flexible wall th. 100 mm, made of gypsum plasterboards, 2 x 12.5 mm on each side, steel studs 50 mm x 50 mm, mineral wool insulation th. 40 mm, density 45 kg.m^{-3}*
	Pipe end configuration inside/outside the furnace	*uncapped/capped (U/C)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E)	
	- cracks or openings	*132 min*
	- cotton pad	*132 min*
	- sustained flaming	*132 min*
	Insulation (I)	*132 min*

EN 1366-3 *20381A* *2020-10-02*	***PROMASTOP®-FC MD with Henco Standard (PE-Xc/Al/PE-Xc) pipes in annular space made of PROMASEAL®-AG (specimen No 2a)***	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from one side*
	Supporting construction	*flexible wall th. 100 mm, made of gypsum plasterboards, 2 x 12.5 mm on each side, steel studs 50 mm x 50 mm, mineral wool insulation th. 40 mm, density 45 kg.m^{-3}*
	Pipe end configuration inside/outside the furnace	*uncapped/capped (U/C)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E) - cracks or openings - cotton pad - sustained flaming	 *132 min* *132 min* *132 min*
	Insulation (I)	*99 min*
	PROMASTOP®-FC MD with Henco Standard (PE-Xc/Al/PE-Xc) pipes with covering in annular space made of PROMASEAL®-AG (specimen No 2b) with PE corrugated jacket	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from one side*
	Supporting construction	*flexible wall th. 100 mm, made of gypsum plasterboards, 2 x 12.5 mm on each side, steel studs 50 mm x 50 mm, mineral wool insulation th. 40 mm, density 45 kg.m^{-3}*
	Pipe end configuration inside/outside the furnace	*uncapped/capped (U/C)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E) - cracks or openings - cotton pad - sustained flaming	 *132 min* *132 min* *132 min*
	Insulation (I)	*132 min*

EN 1366-3 *20381A* *2020-10-02*	***PROMASTOP®-FC MD with Henco Standard (PE-Xc/Al/PE-Xc) pipes in annular space made of PROMASEAL®-AG (specimens No 2c, 2d) with PE insulation***	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from one side*
	Supporting construction	*flexible wall th. 100 mm, made of gypsum plasterboards, 2 x 12.5 mm on each side, steel studs 50 mm x 50 mm, mineral wool insulation th. 40 mm, density 45 kg.m^{-3}*
	Pipe end configuration inside/outside the furnace	*uncapped/capped (U/C)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E)	
	- cracks or openings	*132 min*
	- cotton pad	*132 min*
	- sustained flaming	*132 min*
	Insulation (I)	*132 min*
EN 1366-3 *Pr-18-2.114-En* *2018-09-25*	***PROMASTOP®-FC MD with pipe bundle made of PVC-U pipes in annular space made of PROMASTOP®-M (specimen No 27)***	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from underside*
	Supporting construction	*rigid floor with low density ≥ 650 kg/m^3 made of YTONG panels th. 150 mm*
	Pipe end configuration inside/outside the furnace	*uncapped/uncapped (U/U)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E)	
	- cracks or openings	*90 min*
	- cotton pad	*90 min*
	- sustained flaming	*90 min*
	Insulation (I)	*90 min*

EN 1366-3 *Pr-18-2.250-En* *2021-01-28*	***PROMASTOP®-FC MD with pipe bundle made of PP-H pipes in annular space made of PROMASTOP®-M (specimen No 2)***	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from underside*
	Supporting construction	*rigid floor with low density ≥ 650 kg/m³ made of YTONG panels th. 150 mm*
	Pipe end configuration inside/outside the furnace	*uncapped/uncapped (U/U)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E)	
	- cracks or openings	*133 min*
	- cotton pad	*133 min*
	- sustained flaming	*133 min*
	Insulation (I)	*133 min*
	PROMASTOP®-FC MD with pipe bundle made of PE pipes in annular space made of PROMASTOP®-M (specimen No 3)	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from underside*
	Supporting construction	*rigid floor with low density ≥ 650 kg/m³ made of YTONG panels th. 150 mm*
	Pipe end configuration inside/outside the furnace	*uncapped/uncapped (U/U)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E)	
	- cracks or openings	*133 min*
	- cotton pad	*133 min*
	- sustained flaming	*133 min*
	Insulation (I)	*133 min*

EN 1366-3 *Pr-18-2.250-En* *2021-01-28*	***PROMASTOP®-FC MD with pipe bundle made of PE, PVC-U and PP-H pipes in annular space made of PROMASTOP®-M (specimen No 4)***	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from underside*
	Supporting construction	*rigid floor with low density ≥ 650 kg/m³ made of YTONG panels th. 150 mm*
	Pipe end configuration inside/outside the furnace	*uncapped/uncapped (U/U)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E)	
	- cracks or openings	*117 min*
	- cotton pad	*117 min*
	- sustained flaming	*117 min*
	Insulation (I)	*117 min*
EN 1366-3 *Pr-18-2.251-En* *2021-01-28*	***PROMASTOP®-FC MD with POLOPLAST POLO-KAL NG (PP/PP-MV/PP) pipes in annular space made of PROMASTOP®-M (specimen No 2)***	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from underside*
	Supporting construction	*rigid floor with low density ≥ 650 kg/m³ made of YTONG panels th. 150 mm*
	Pipe end configuration inside/outside the furnace	*uncapped/uncapped (U/U)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E)	
	- cracks or openings	*120 min*
	- cotton pad	*120 min*
	- sustained flaming	*120 min*
	Insulation (I)	*120 min*
	PROMASTOP®-FC MD with POLOPLAST POLO-KAL 3S (PP/PP-MV/PP) pipes in annular space made of PROMASTOP®-M (specimen No 3)	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from underside*
	Supporting construction	*rigid floor with low density ≥ 650 kg/m³ made of YTONG panels th. 150 mm*
	Pipe end configuration inside/outside the furnace	*uncapped/uncapped (U/U)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E)	
	- cracks or openings	*120 min*
	- cotton pad	*120 min*
	- sustained flaming	*120 min*
	Insulation (I)	*120 min*

EN 1366-3 *Pr-18-2.251-En* *2021-01-28*	***PROMASTOP®-FC MD with PE pipe with coupling in annular space made of PROMASTOP®-M (specimen No 9)***	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from underside*
	Supporting construction	*rigid floor with low density ≥ 650 kg/m³ made of YTONG panels th. 150 mm*
	Pipe end configuration inside/outside the furnace	*uncapped/uncapped (U/U)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E) - cracks or openings - cotton pad - sustained flaming	 *120 min* *120 min* *120 min*
	Insulation (I)	*111 min*
	PROMASTOP®-FC MD with PP-H pipe with coupling in annular space made of PROMASTOP®-M (specimens No 10, 11)	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from underside*
	Supporting construction	*rigid floor with low density ≥ 650 kg/m³ made of YTONG panels th. 150 mm*
	Pipe end configuration inside/outside the furnace	*uncapped/uncapped (U/U)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E) - cracks or openings - cotton pad - sustained flaming	 *120 min* *120 min* *120 min*
	Insulation (I)	*120 min*
	PROMASTOP®-FC MD with PE pipe in coated batt seal made of 2x50 mm PROMASTOP®-CC (specimen No D1)	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from underside*
	Supporting construction	*rigid floor with low density ≥ 650 kg/m³ made of YTONG panels th. 150 mm*
	Pipe end configuration inside/outside the furnace	*uncapped/uncapped (U/U)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E) - cracks or openings - cotton pad - sustained flaming	 *120 min* *120 min* *120 min*
	Insulation (I)	*120 min*

EN 1366-3 *Pr-18-2.251-En* *2021-01-28*	***PROMASTOP®-FC MD with PP-H pipe in coated batt seal made of 2x50 mm PROMASTOP®-CC (specimens No D2, D3)***	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from underside*
	Supporting construction	*rigid floor with low density ≥ 650 kg/m³ made of YTONG panels th. 150 mm*
	Pipe end configuration inside/outside the furnace	*uncapped/uncapped (U/U)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E) - cracks or openings - cotton pad - sustained flaming	 *120 min* *120 min* *120 min*
	Insulation (I)	*120 min*
	PROMASTOP®-FC MD with PE pipe in coated batt seal made of 2x50 mm PROMASTOP®-I (specimen No E1)	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from underside*
	Supporting construction	*rigid floor with low density ≥ 650 kg/m³ made of YTONG panels th. 150 mm*
	Pipe end configuration inside/outside the furnace	*uncapped/uncapped (U/U)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E) - cracks or openings - cotton pad - sustained flaming	 *120 min* *120 min* *120 min*
	Insulation (I)	*120 min*
	PROMASTOP®-FC MD with PP-H pipe in coated batt seal made of 2x50 mm PROMASTOP®-I (specimen No E2)	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from underside*
	Supporting construction	*rigid floor with low density ≥ 650 kg/m³ made of YTONG panels th. 150 mm*
	Pipe end configuration inside/outside the furnace	*uncapped/uncapped (U/U)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E) - cracks or openings - cotton pad - sustained flaming	 *120 min* *120 min* *120 min*
	Insulation (I)	*120 min*

EN 1366-3 *Pr-18-2.251-En* *2021-01-28*	***PROMASTOP®-FC MD with PP-H pipe in coated batt seal made of 2x50 mm PROMASTOP®-I (specimen No E3)***	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from underside*
	Supporting construction	*rigid floor with low density ≥ 650 kg/m³ made of YTONG panels th. 150 mm*
	Pipe end configuration inside/outside the furnace	*uncapped/uncapped (U/U)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E) - cracks or openings - cotton pad - sustained flaming	 *116 min* *116 min* *116 min*
	Insulation (I)	*116 min*
	PROMASTOP®-FC MD with Geberit Silent-PP (PP-C/PP-MD/PP-C) pipe in coated batt seal made of 2x50 mm PROMASTOP®-CC (specimen No C1)	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from underside*
	Supporting construction	*rigid floor with low density ≥ 650 kg/m³ made of YTONG panels th. 150 mm*
	Pipe end configuration inside/outside the furnace	*uncapped/uncapped (U/U)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E) - cracks or openings - cotton pad - sustained flaming	 *120 min* *120 min* *120 min*
	Insulation (I)	*115 min*
	PROMASTOP®-FC MD with Rehau Raupiano Plus (PP/PP-MD/PP) pipe in coated batt seal made of 2x50 mm PROMASTOP®-CC (specimen No C2)	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from underside*
	Supporting construction	*rigid floor with low density ≥ 650 kg/m³ made of YTONG panels th. 150 mm*
	Pipe end configuration inside/outside the furnace	*uncapped/uncapped (U/U)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E) - cracks or openings - cotton pad - sustained flaming	 *98 min* *98 min* *98 min*
	Insulation (I)	*98 min*

EN 1366-3 *Pr-18-2.251-En* *2021-01-28*	***PROMASTOP®-FC MD with Dyka Sono Blue (PVC-U) pipe in coated batt seal made of 2x50 mm PROMASTOP®-CC (specimen No C3)***	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from underside*
	Supporting construction	*rigid floor with low density ≥ 650 kg/m³ made of YTONG panels th. 150 mm*
	Pipe end configuration inside/outside the furnace	*uncapped/uncapped (U/U)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E)	
	- cracks or openings	*120 min*
	- cotton pad	*120 min*
	- sustained flaming	*120 min*
	Insulation (I)	*120 min*
	PROMASTOP®-FC MD with PE pipe in coated batt seal made of 2x50 mm PROMASTOP®-CC (specimen No A1)	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from underside*
	Supporting construction	*rigid floor with low density ≥ 650 kg/m³ made of YTONG panels th. 150 mm*
	Pipe end configuration inside/outside the furnace	*uncapped/uncapped (U/U)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E)	
	- cracks or openings	*120 min*
	- cotton pad	*120 min*
	- sustained flaming	*120 min*
	Insulation (I)	*116 min*
	PROMASTOP®-FC MD with PP-H pipe in coated batt seal made of 2x50 mm PROMASTOP®-CC (specimen No A2)	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from underside*
	Supporting construction	*rigid floor with low density ≥ 650 kg/m³ made of YTONG panels th. 150 mm*
	Pipe end configuration inside/outside the furnace	*uncapped/uncapped (U/U)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E)	
	- cracks or openings	*102 min*
	- cotton pad	*102 min*
	- sustained flaming	*102 min*
	Insulation (I)	*102 min*

EN 1366-3 *Pr-18-2.250-En* *2021-01-28*	***PROMASTOP®-FC MD with PP-H pipe in coated batt seal made of 2x50 mm PROMASTOP®-CC (specimen No 18)***	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from underside*
	Supporting construction	*rigid floor with low density ≥ 650 kg/m³ made of YTONG panels th. 150 mm*
	Pipe end configuration inside/outside the furnace	*uncapped/uncapped (U/U)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E)	
	- cracks or openings	*90 min*
	- cotton pad	*90 min*
	- sustained flaming	*90 min*
	Insulation (I)	*90 min*
EN 1366-3 *20164A* *2021-08-25*	***PROMASTOP®-FC MD corner application with PE pipe in annular space made of PROMASEAL®-AG (specimen No 10)***	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from underside*
	Supporting construction	*rigid floor with low density ≥ 650 kg/m³ made of YTONG panels th. 150 mm*
	Pipe end configuration inside/outside the furnace	*uncapped/uncapped (U/U)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E)	
	- cracks or openings	*132 min*
	- cotton pad	*132 min*
	- sustained flaming	*132 min*
	Insulation (I)	*132 min*
	PROMASTOP®-FC MD corner application with PE pipe in annular space made of mortar (specimens No 11, 12)	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from underside*
	Supporting construction	*rigid floor with low density ≥ 650 kg/m³ made of YTONG panels th. 150 mm*
	Pipe end configuration inside/outside the furnace	*uncapped/uncapped (U/U)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E)	
	- cracks or openings	*132 min*
	- cotton pad	*132 min*
	- sustained flaming	*132 min*
	Insulation (I)	*132 min*

EN 1366-3 *20164A* *2021-08-25*	***PROMASTOP®-FC MD corner application with PP pipe in annular space made of PROMASEAL®-AG (specimen No 13)***	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from underside*
	Supporting construction	*rigid floor with low density ≥ 650 kg/m³ made of YTONG panels th. 150 mm*
	Pipe end configuration inside/outside the furnace	*uncapped/uncapped (U/U)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E)	
	- cracks or openings	*132 min*
	- cotton pad	*132 min*
	- sustained flaming	*132 min*
	Insulation (I)	*132 min*
	PROMASTOP®-FC MD corner application with PP-C pipe in annular space made of mortar (specimens No 14, 15)	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from underside*
	Supporting construction	*rigid floor with low density ≥ 650 kg/m³ made of YTONG panels th. 150 mm*
	Pipe end configuration inside/outside the furnace	*uncapped/uncapped (U/U)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E)	
	- cracks or openings	*132 min*
	- cotton pad	*132 min*
	- sustained flaming	*132 min*
	Insulation (I)	*132 min*
	PROMASTOP®-FC MD corner application with PVC-U pipe in annular space made of PROMASEAL®-AG (specimen No 16)	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from underside*
	Supporting construction	*rigid floor with low density ≥ 650 kg/m³ made of YTONG panels th. 150 mm*
	Pipe end configuration inside/outside the furnace	*uncapped/uncapped (U/U)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E)	
	- cracks or openings	*132 min*
	- cotton pad	*132 min*
	- sustained flaming	*132 min*
	Insulation (I)	*132 min*

EN 1366-3 *20164A* *2021-08-25*	***PROMASTOP®-FC MD corner application with PVC-U pipe in annular space made of mortar (specimen No 17)***	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from underside*
	Supporting construction	*rigid floor with low density ≥ 650 kg/m³ made of YTONG panels th. 150 mm*
	Pipe end configuration inside/outside the furnace	*uncapped/uncapped (U/U)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E) - cracks or openings - cotton pad - sustained flaming	 *132 min* *132 min* *132 min*
	Insulation (I)	*126 min*
	PROMASTOP®-FC MD corner application with PVC-U pipe in annular space made of mortar (specimen No 18)	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from underside*
	Supporting construction	*rigid floor with low density ≥ 650 kg/m³ made of YTONG panels th. 150 mm*
	Pipe end configuration inside/outside the furnace	*uncapped/uncapped (U/U)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E) - cracks or openings - cotton pad - sustained flaming	 *109 min* *109 min* *109 min*
	Insulation (I)	*109 min*
	PROMASTOP®-FC MD with Henco Standard (PE-Xc/Al/PE-Xc) pipes in coated batt seal made of 2x50 mm PROMASTOP®-CC and PROMASEAL®-AG annular space (specimen No 19a) with additional protection	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from one side*
	Supporting construction	*rigid floor with low density ≥ 650 kg/m³ made of YTONG panels th. 150 mm*
	Pipe end configuration inside/outside the furnace	*uncapped/capped (U/C)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E) - cracks or openings - cotton pad - sustained flaming	 *132 min* *132 min* *132 min*
	Insulation (I)	*103 min*

EN 1366-3 *20164A* *2020-08-25*	***PROMASTOP®-FC MD with Henco Standard (PE-Xc/Al/PE-Xc) pipes with covering in coated batt seal made of 2x50 mm PROMASTOP®-CC and PROMASEAL®-AG annular space (specimen No 19b) with additional protection***	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from one side*
	Supporting construction	*rigid floor with low density ≥ 650 kg/m³ made of YTONG panels th. 150 mm*
	Pipe end configuration inside/outside the furnace	*uncapped/capped (U/C)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E) - cracks or openings - cotton pad - sustained flaming	 *132 min* *132 min* *132 min*
	Insulation (I)	*132 min*
	PROMASTOP®-FC MD with Henco Standard (PE-Xc/Al/PE-Xc) pipes with PE insulation in coated batt seal made of 2x50 mm PROMASTOP®-CC and PROMASEAL®-AG annular space (specimens No 19c, 19d) with additional protection	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from one side*
	Supporting construction	*rigid floor with low density ≥ 650 kg/m³ made of YTONG panels th. 150 mm*
	Pipe end configuration inside/outside the furnace	*uncapped/capped (U/C)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E) - cracks or openings - cotton pad - sustained flaming	 *132 min* *132 min* *132 min*
	Insulation (I)	*132 min*

EN 1366-3 *20164A* *2020-08-25*	***PROMASTOP®-FC MD with Henco Standard (PE-Xc/Al/PE-Xc) pipes in coated batt seal made of 2x50 mm PROMASTOP®-CC and PROMASEAL®-AG annular space (specimen No 20a)***	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from one side*
	Supporting construction	*rigid floor with low density ≥ 650 kg/m³ made of YTONG panels th. 150 mm*
	Pipe end configuration inside/outside the furnace	*uncapped/capped (U/C)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E) - cracks or openings - cotton pad - sustained flaming	 *132 min* *132 min* *132 min*
	Insulation (I)	*44 min*
	PROMASTOP®-FC MD with Henco Standard (PE-Xc/Al/PE-Xc) pipes with covering in coated batt seal made of 2x50 mm PROMASTOP®-CC and PROMASEAL®-AG annular space (specimen No 20b)	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from one side*
	Supporting construction	*rigid floor with low density ≥ 650 kg/m³ made of YTONG panels th. 150 mm*
	Pipe end configuration inside/outside the furnace	*uncapped/capped (U/C)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E) - cracks or openings - cotton pad - sustained flaming	 *132 min* *132 min* *132 min*
	Insulation (I)	*132 min*

EN 1366-3 *20164A* *2020-08-25*	***PROMASTOP®-FC MD with Henco Standard (PE-Xc/Al/PE-Xc) pipes with PE insulation in coated batt seal made of 2x50 mm PROMASTOP®-CC and PROMASEAL®-AG annular space (specimens No 20c, 20d)***	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from one side*
	Supporting construction	*rigid floor with low density ≥ 650 kg/m³ made of YTONG panels th. 150 mm*
	Pipe end configuration inside/outside the furnace	*uncapped/capped (U/C)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E) - cracks or openings - cotton pad - sustained flaming	 *132 min* *132 min* *132 min*
	Insulation (I)	*132 min*
	PROMASTOP®-FC MD with Henco Standard (PE-Xc/Al/PE-Xc) pipes in coated batt seal made of 2x50 mm PROMASTOP®-CC and PROMASEAL®-AG annular space (specimen No 22b)	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from one side*
	Supporting construction	*rigid floor with low density ≥ 650 kg/m³ made of YTONG panels th. 150 mm*
	Pipe end configuration inside/outside the furnace	*uncapped/capped (U/C)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E) - cracks or openings - cotton pad - sustained flaming	 *132 min* *132 min* *132 min*
	Insulation (I)	*46 min*

EN 1366-3 *20164A* *2020-08-25*	***PROMASTOP®-FC MD with Henco Standard (PE-Xc/Al/PE-Xc) pipes in coated batt seal made of 2x50 mm PROMASTOP®-CC and PROMASEAL®-AG annular space (specimen No 22c) with additional protection***	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from one side*
	Supporting construction	*rigid floor with low density ≥ 650 kg/m³ made of YTONG panels th. 150 mm*
	Pipe end configuration inside/outside the furnace	*uncapped/capped (U/C)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E) - cracks or openings - cotton pad - sustained flaming	 *132 min* *132 min* *132 min*
	Insulation (I)	*115 min*
EN 1366-3 *Pr-18-2.180-En* *2021-01-28*	***PROMASTOP®-FC MD with PP-H pipes in annular space made of PROMASTOP®-M (specimens No 4, 5)***	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from one side*
	Supporting construction	*rigid floor with low density ≥ 650 kg/m³ made of YTONG panels th. 150 mm*
	Pipe end configuration inside/outside the furnace	*uncapped/capped (U/U)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E) - cracks or openings - cotton pad - sustained flaming	 *132 min* *132 min* *132 min*
	Insulation (I)	*132 min*
	PROMASTOP®-FC MD with PP-H pipe in annular space made of PROMASTOP®-M (specimen No 6)	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from one side*
	Supporting construction	*rigid floor with low density ≥ 650 kg/m³ made of YTONG panels th. 150 mm*
	Pipe end configuration inside/outside the furnace	*uncapped/capped (U/C)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E) - cracks or openings - cotton pad - sustained flaming	 *109 min* *109 min* *109 min*
	Insulation (I)	*109 min*

EN 1366-3 *Pr-18-2.250-En* *2021-01-28*	***PROMASTOP®-FC MD with PP-H pipe in annular space made of PROMASTOP®-M (specimen No 14)***	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from one side*
	Supporting construction	*rigid floor with low density ≥ 650 kg/m³ made of YTONG panels th. 150 mm*
	Pipe end configuration inside/outside the furnace	*uncapped/capped (U/U)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E) - cracks or openings - cotton pad - sustained flaming	 *133 min* *133 min* *133 min*
	Insulation (I)	*133 min*
	PROMASTOP®-FC MD with PE pipes in annular space made of PROMASTOP®-M (specimens No 12, 13)	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from one side*
	Supporting construction	*rigid floor with low density ≥ 650 kg/m³ made of YTONG panels th. 150 mm*
	Pipe end configuration inside/outside the furnace	*uncapped/capped (U/U)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E) - cracks or openings - cotton pad - sustained flaming	 *133 min* *133 min* *133 min*
	Insulation (I)	*133 min*
EN 1366-3 *Pr-18-2.251-En* *2021-01-28*	***PROMASTOP®-FC MD with PP-H pipe in annular space made of PROMASTOP®-M (specimen No 1)***	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from one side*
	Supporting construction	*rigid floor with low density ≥ 650 kg/m³ made of YTONG panels th. 150 mm*
	Pipe end configuration inside/outside the furnace	*uncapped/capped (U/U)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E) - cracks or openings - cotton pad - sustained flaming	 *74 min* *74 min* *74 min*
	Insulation (I)	*74 min*

EN 1366-3 *Pr-18-2.251-En* *2021-01-28*	***PROMASTOP®-FC MD with PP-H pipe in annular space made of PROMASTOP®-M (specimen No 15)***	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from one side*
	Supporting construction	*rigid floor with low density ≥ 650 kg/m³ made of YTONG panels th. 150 mm*
	Pipe end configuration inside/outside the furnace	*uncapped/capped (U/U)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E)	
	- cracks or openings	*120 min*
	- cotton pad	*120 min*
	- sustained flaming	*120 min*
	Insulation (I)	*114 min*
	PROMASTOP®-FC MD with PE pipe in annular space made of PROMASTOP®-M (specimens No 4, 14)	
	Fire scenario	*standard temperature / time curve*
	Direction of exposure	*from one side*
	Supporting construction	*rigid floor with low density ≥ 650 kg/m³ made of YTONG panels th. 150 mm*
	Pipe end configuration inside/outside the furnace	*uncapped/capped (U/U)*
	Pipe orientation	*90°(perpendicular to the seal)*
	Integrity (E)	
	- cracks or openings	*120 min*
	- cotton pad	*120 min*
	- sustained flaming	*120 min*
	Insulation (I)	*120 min*

4 Classification and field of application

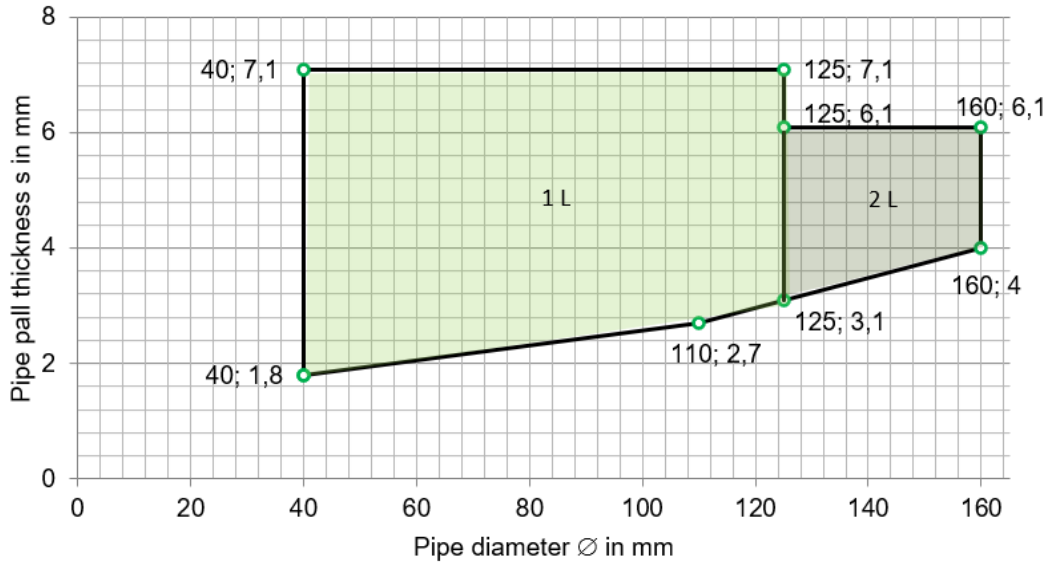
4.1 Reference of classification

This classification has been carried out in accordance with clauses 7 of EN 13501-2:2016.

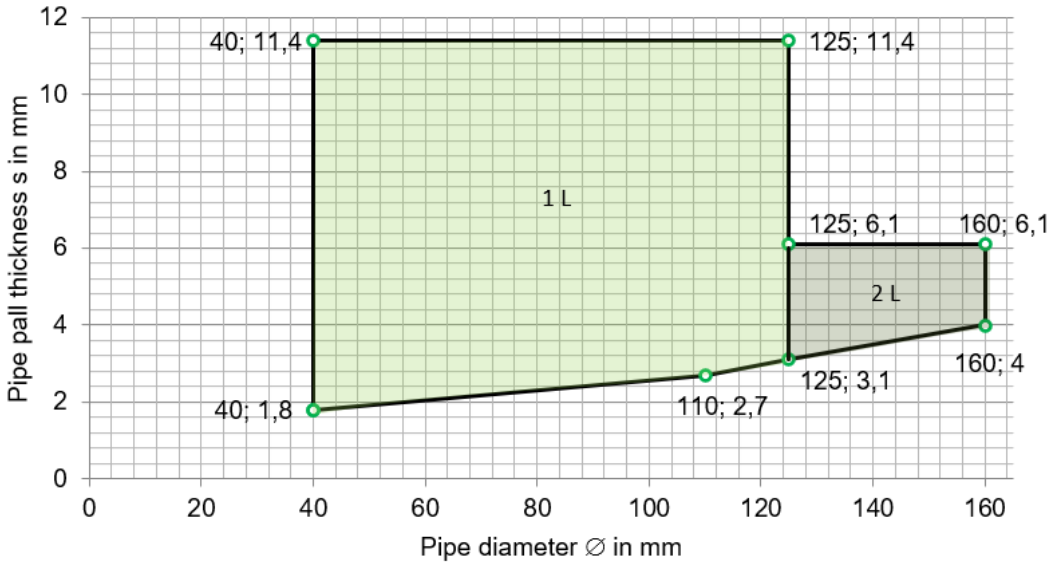
4.2 Classification

4.2.1 PROMASTOP®-FC MD, pipe closure device **used for PP pipes mounted on both sides on flexible wall construction 100 mm,** is classified according to the following combinations of performance parameters and class, in range shown in the graphs below.

EI 120 – U/U

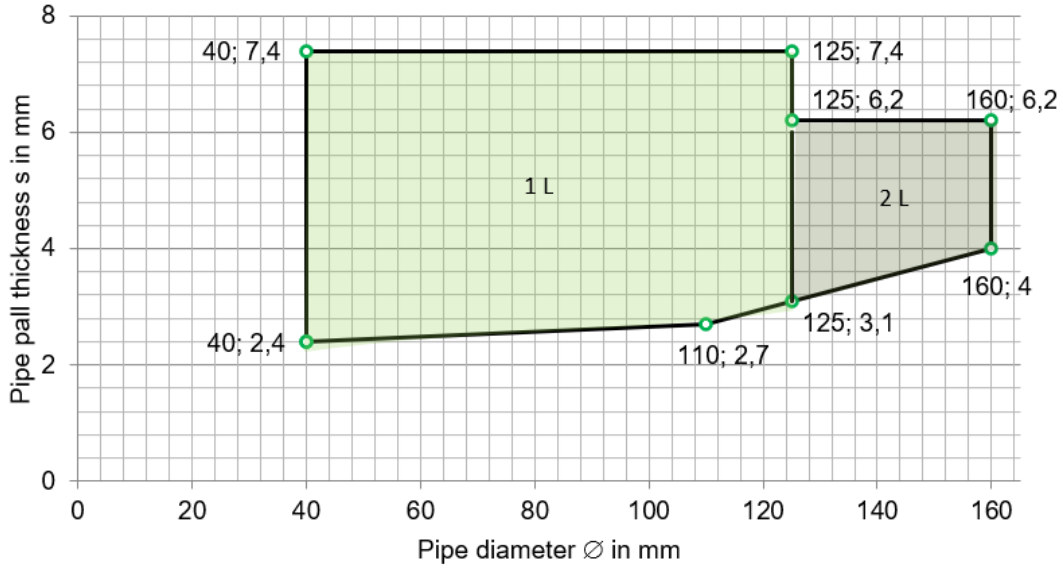


EI 120 – U/C

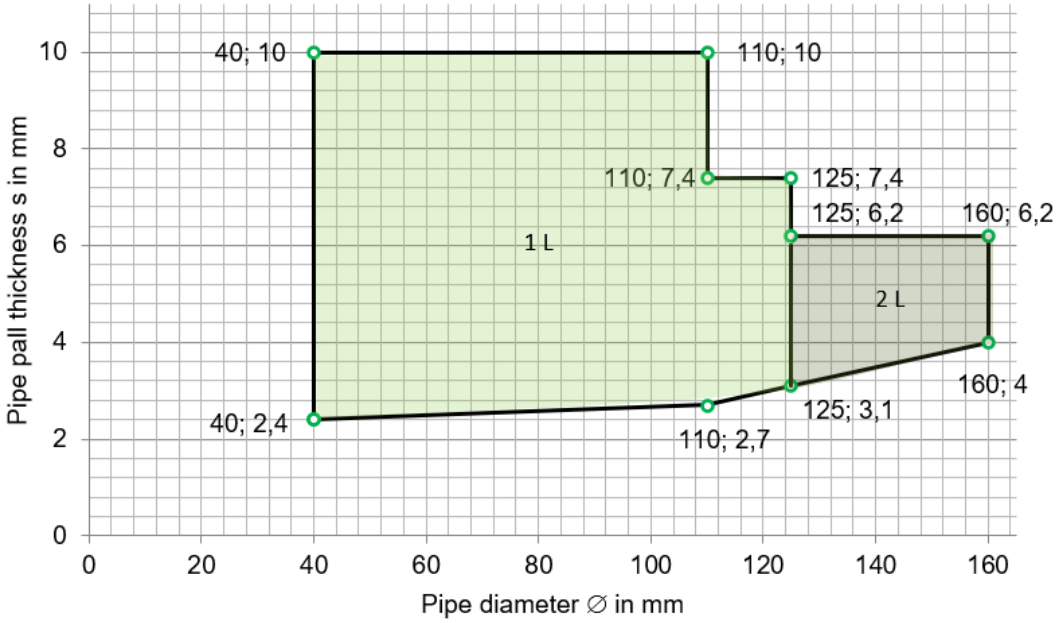


4.2.2 PROMASTOP®-FC MD, pipe closure device **used for PE pipes mounted on both sides on flexible wall construction 100 mm**, is classified according to the following combinations of performance parameters and class, in range shown in the graphs below.

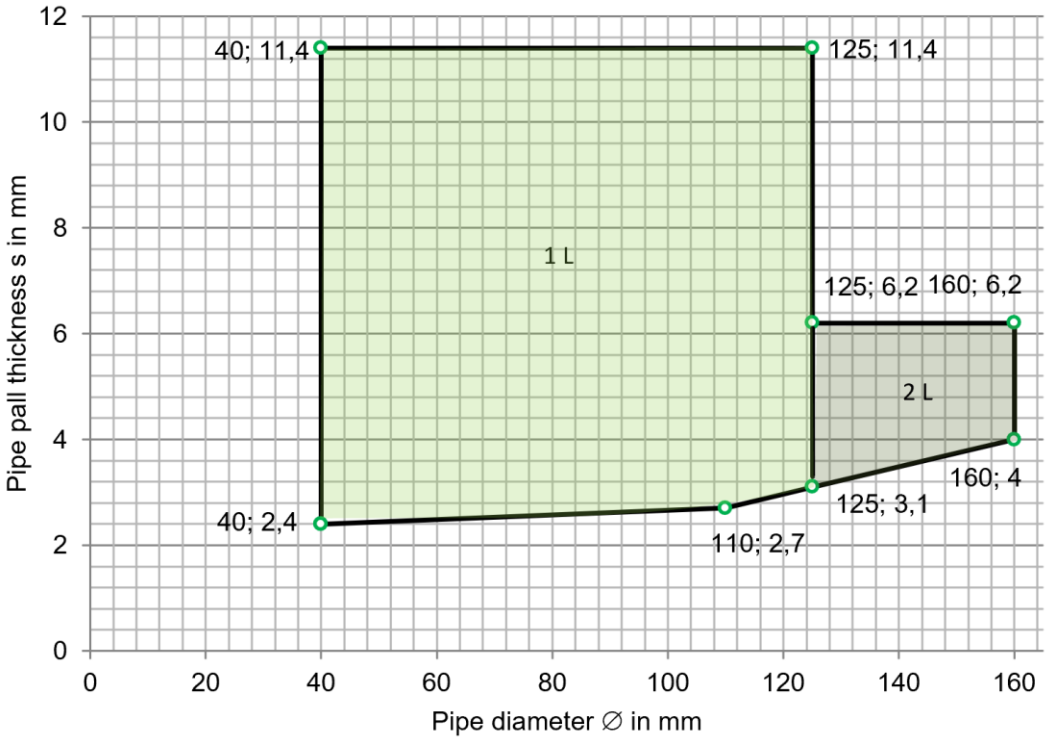
EI 120 – U/U



EI 120 – U/C

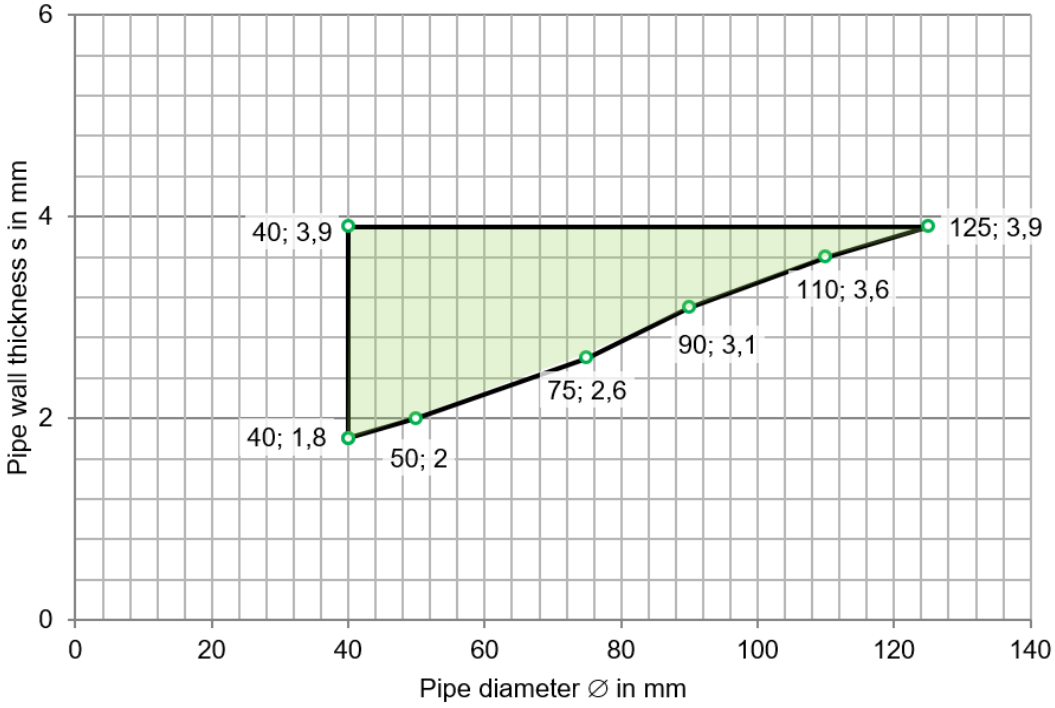


EI 90 – U/C



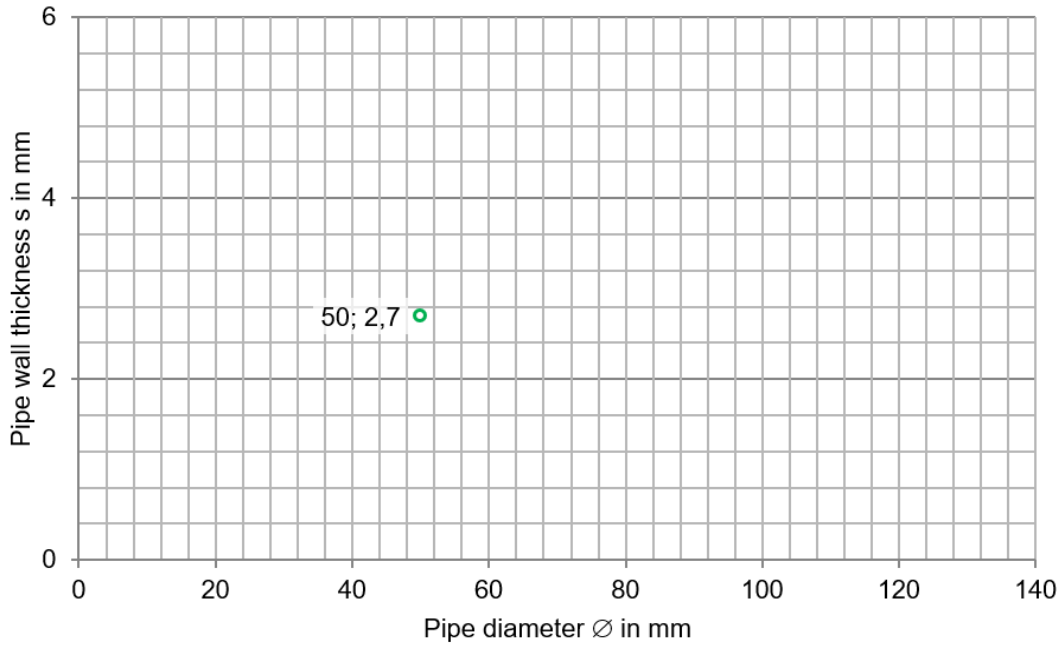
4.2.3 PROMASTOP®-FC MD, pipe closure device **used for Geberit Silent-PP (PP-C / PP-MD / PP-C) pipes mounted on both sides on flexible wall construction 100 mm**, is classified according to the following combinations of performance parameters and class, in range shown in the graph below.

EI 120 – U/U

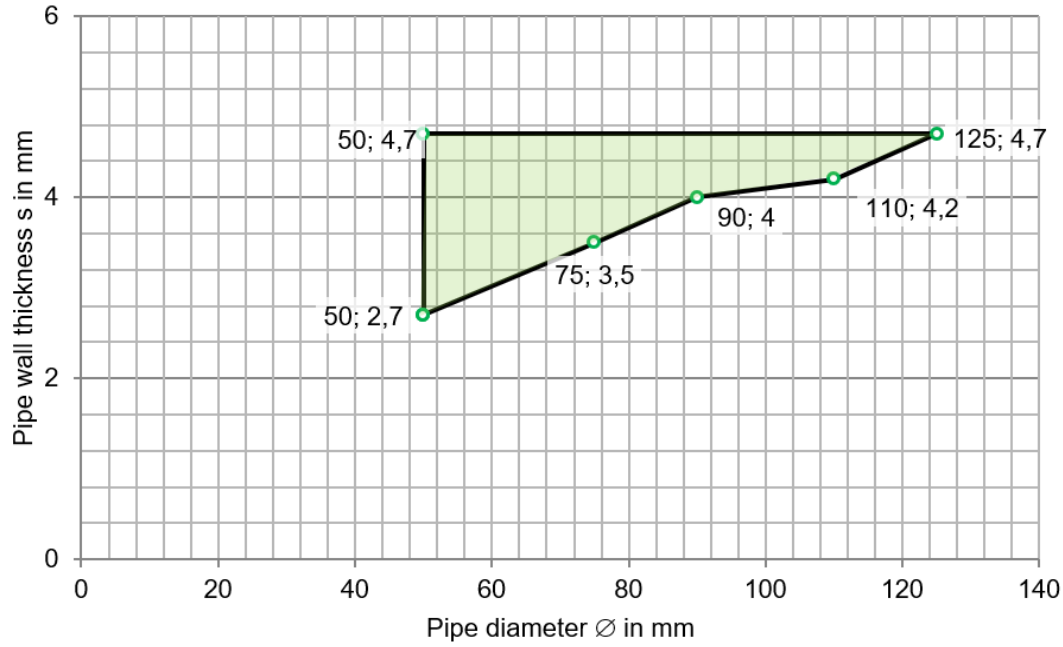


4.2.4 PROMASTOP®-FC MD, pipe closure device **used for Geberit Silent-Pro (PP-MX) pipes mounted on both sides on flexible wall construction 100 mm**, is classified according to the following combinations of performance parameters and class, in range shown in the graphs below.

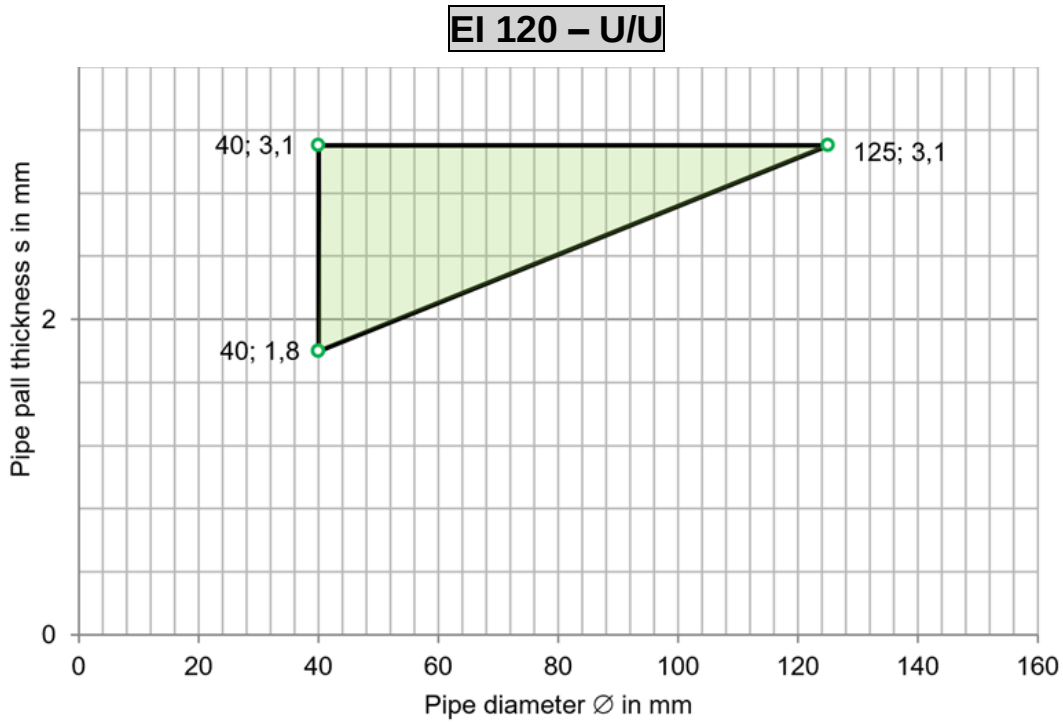
EI 120 – U/U



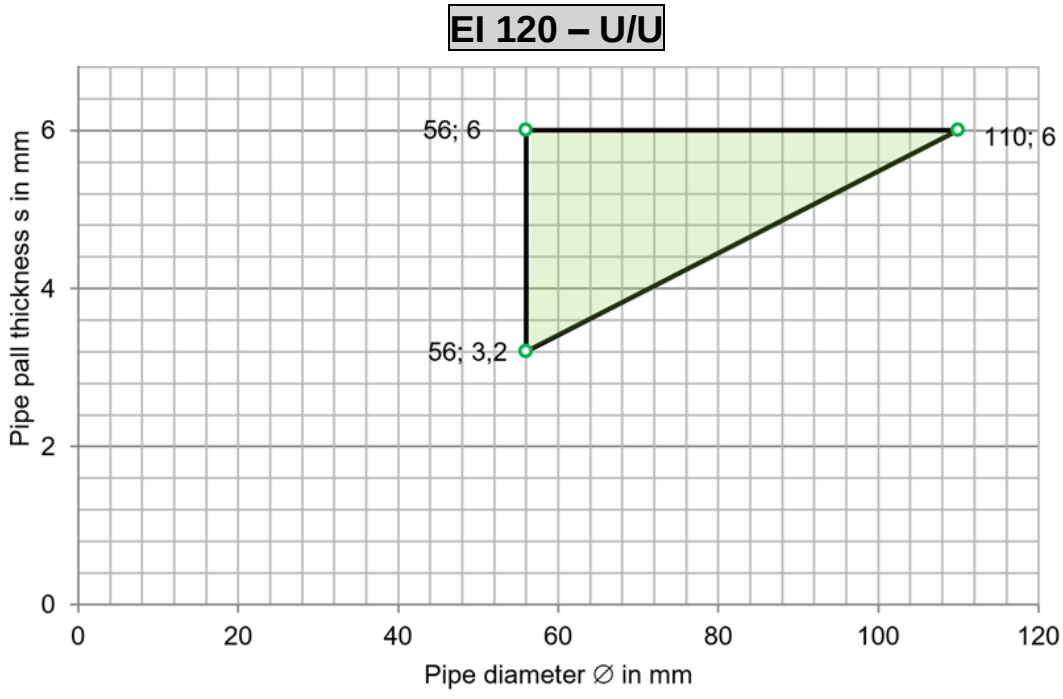
EI 90 – U/U



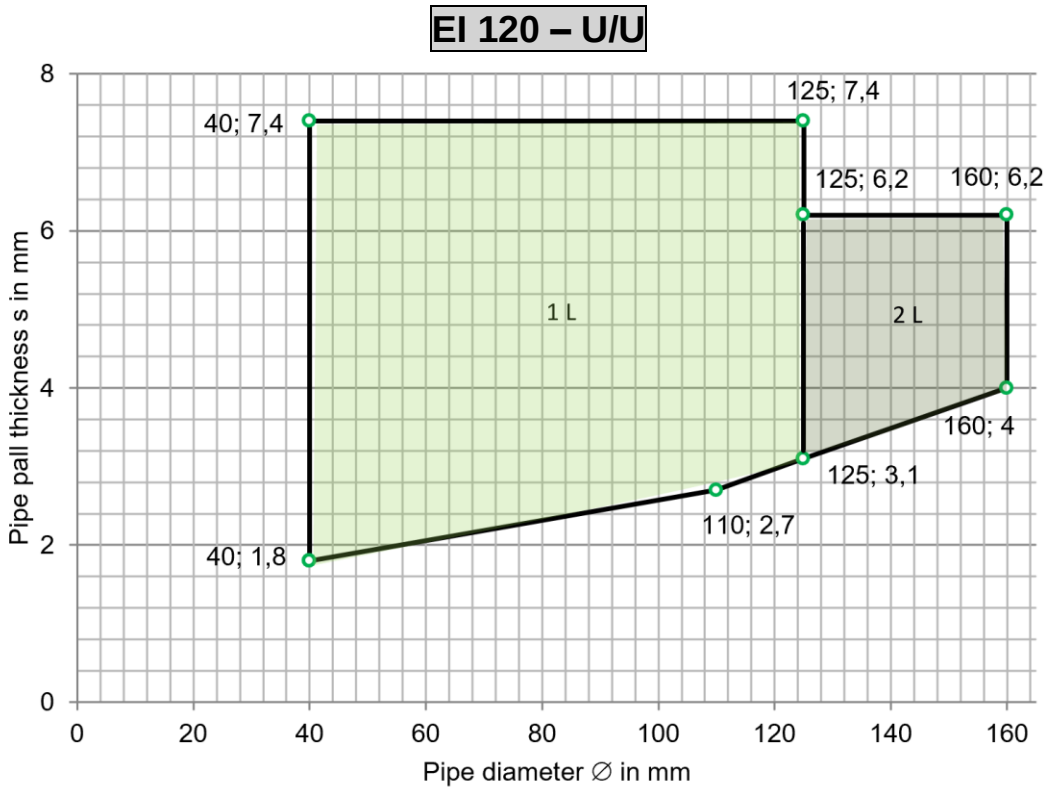
4.2.5 PROMASTOP®-FC MD, pipe closure device **used for REHAU Raupiano Plus (PP-MD) pipes mounted on both sides on flexible wall construction 100 mm**, is classified according to the following combinations of performance parameters and class, in range shown in the graph below.



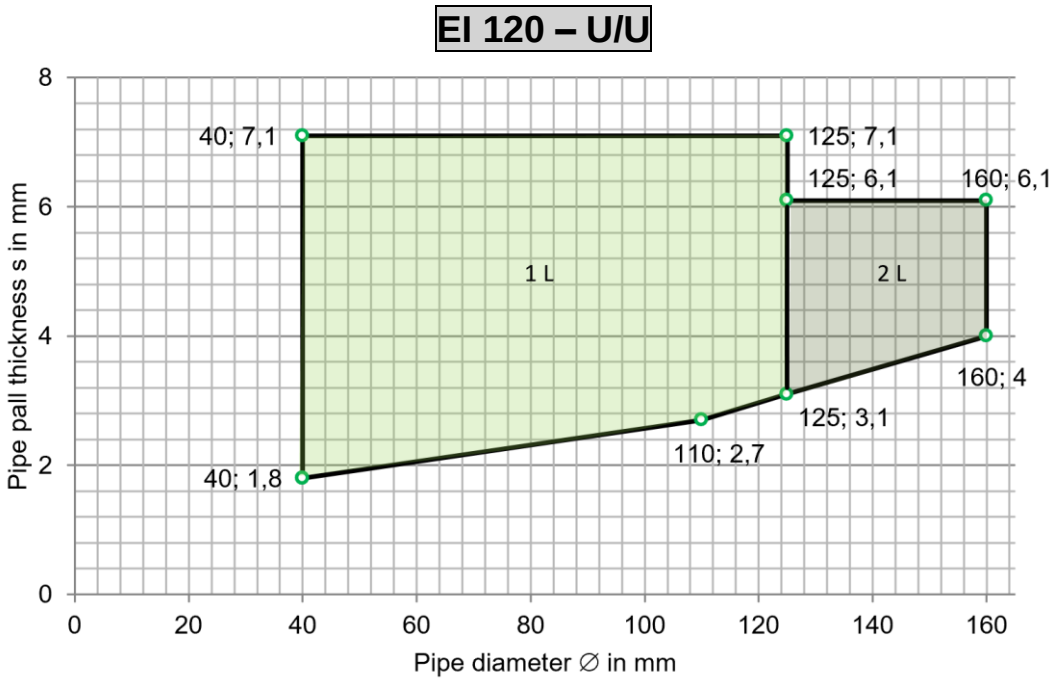
4.2.6 PROMASTOP®-FC MD, pipe closure device **used for Geberit Silent-db20 (PE-S2) pipes mounted on both sides on flexible wall construction 100 mm**, is classified according to the following combinations of performance parameters and class, in range shown in the graph below.



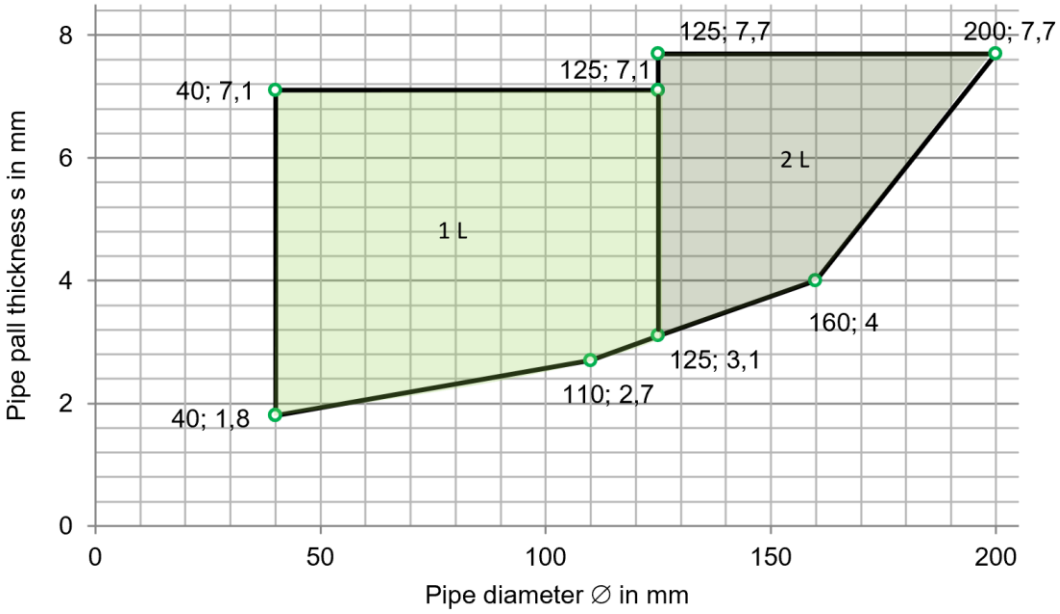
4.2.7 PROMASTOP®-FC MD, pipe closure device **used for PVC-U (e.g. DYKA Sono blue) pipes mounted on both sides on flexible wall construction 100 mm**, is classified according to the following combinations of performance parameters and class, in range shown in the graph below (with rules according Table 5 of EN 15882-3:2009).



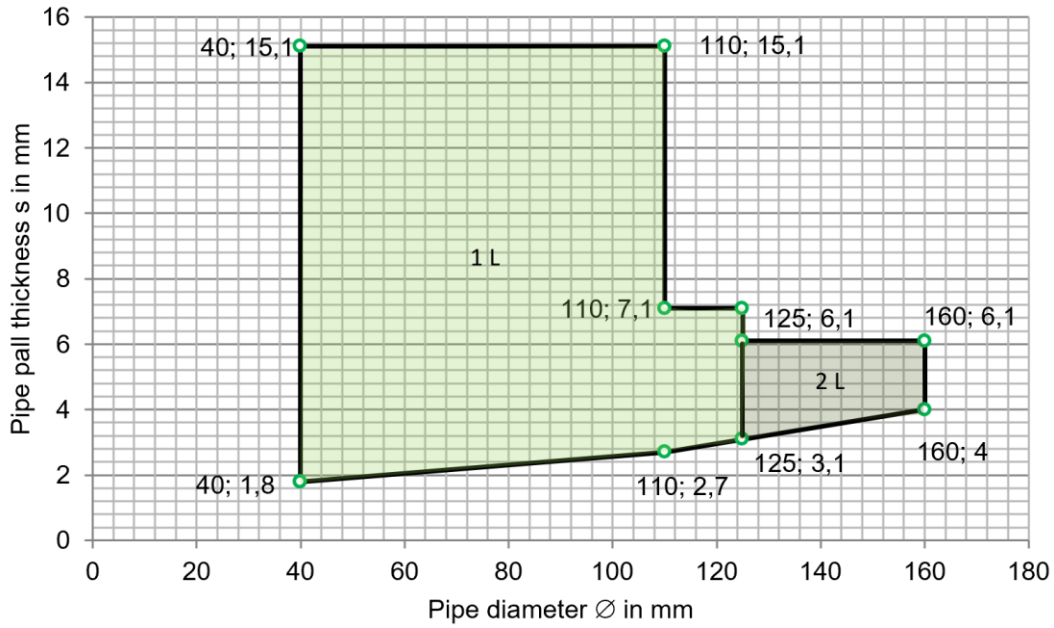
4.2.8 PROMASTOP®-FC MD, pipe closure device **used for PP pipes mounted on the bottom side of the rigid floor construction 150 mm,** is classified according to the following combinations of performance parameters and class, in range shown in the graphs below.



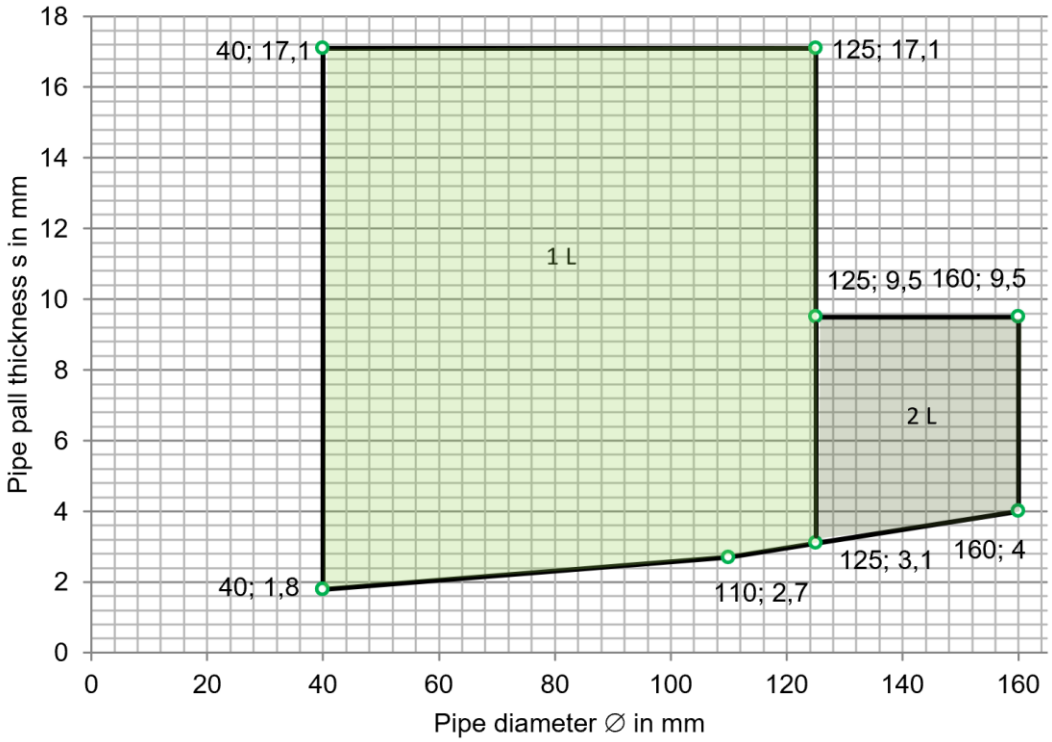
EI 60 – U/U



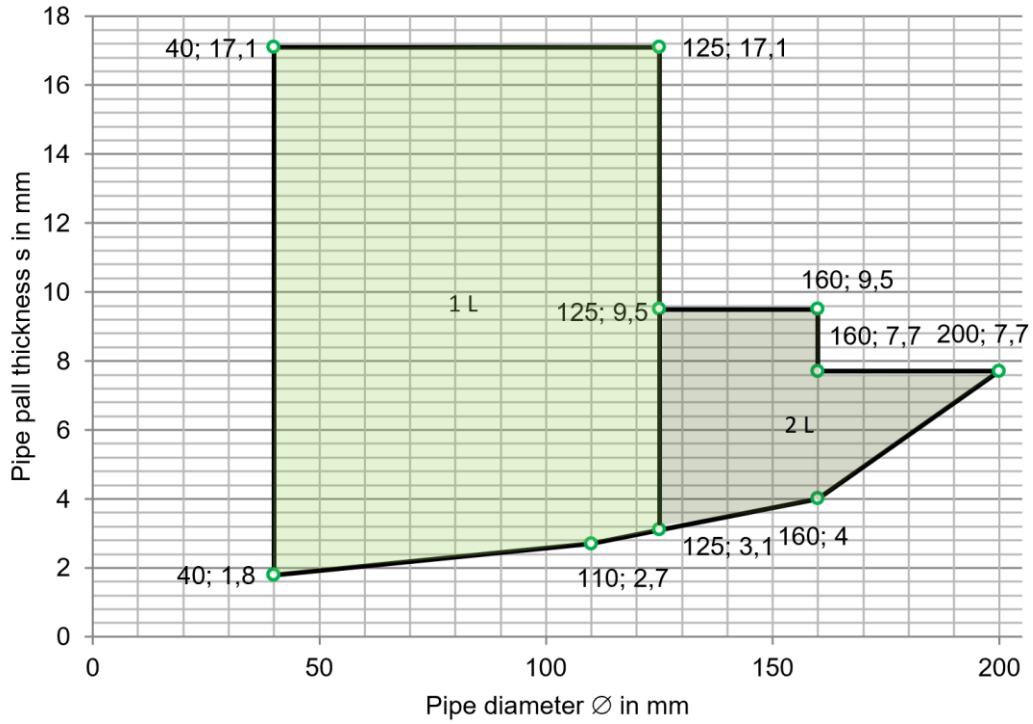
EI 120 – U/C



EI 90 – U/C

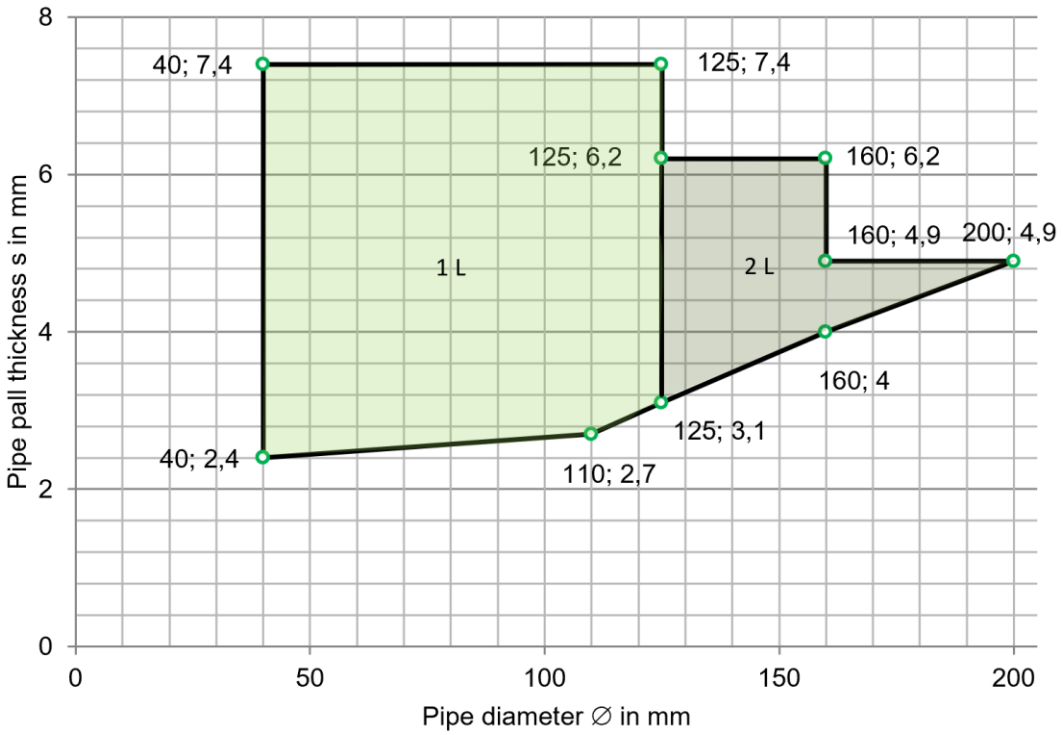


EI 60 – U/C

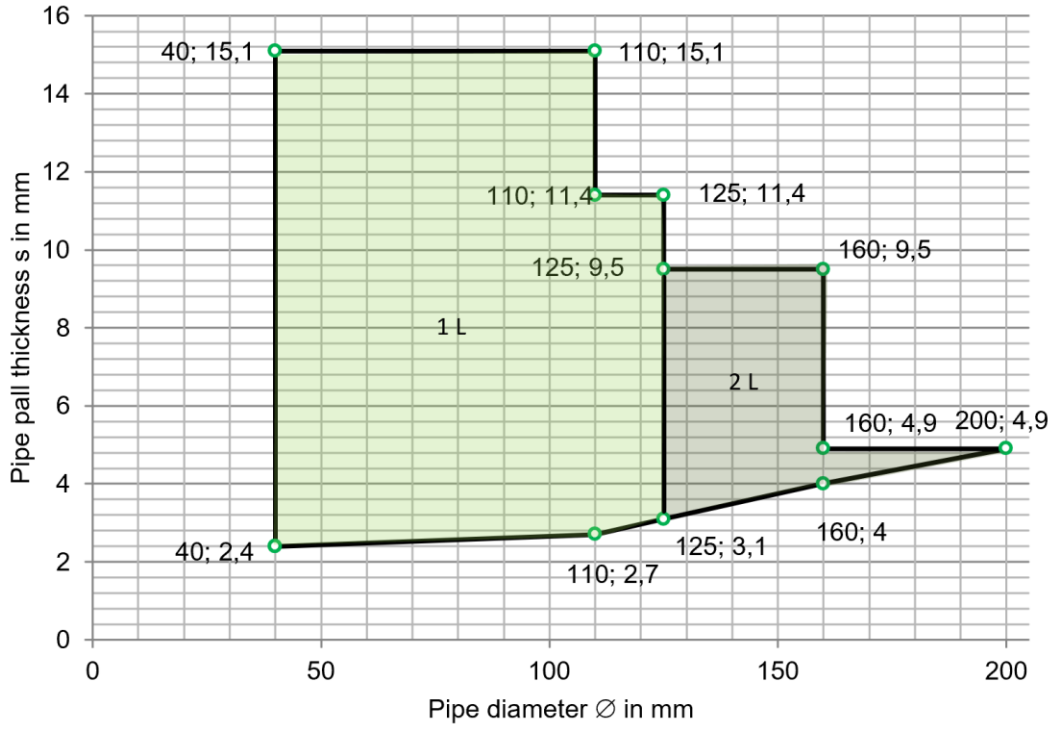


4.2.9 PROMASTOP®-FC MD, pipe closure device **used for PE pipes mounted on the bottom side of the rigid floor construction 150 mm,** is classified according to the following combinations of performance parameters and class, in range shown in the graphs below.

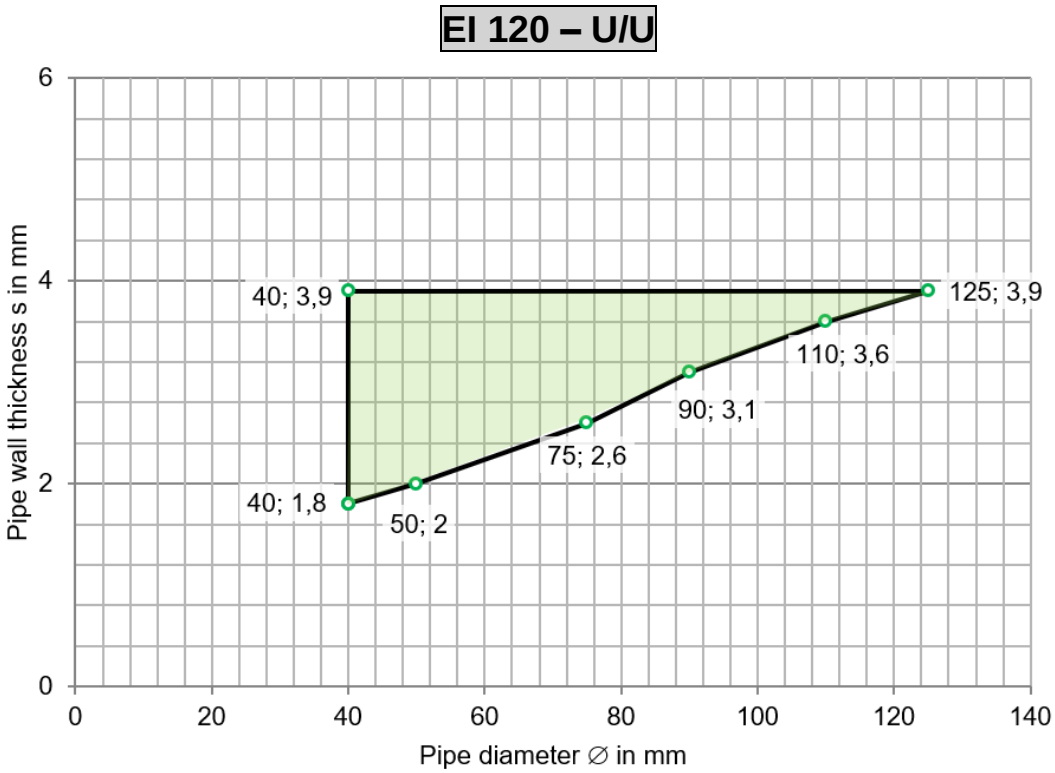
EI 120 – U/U



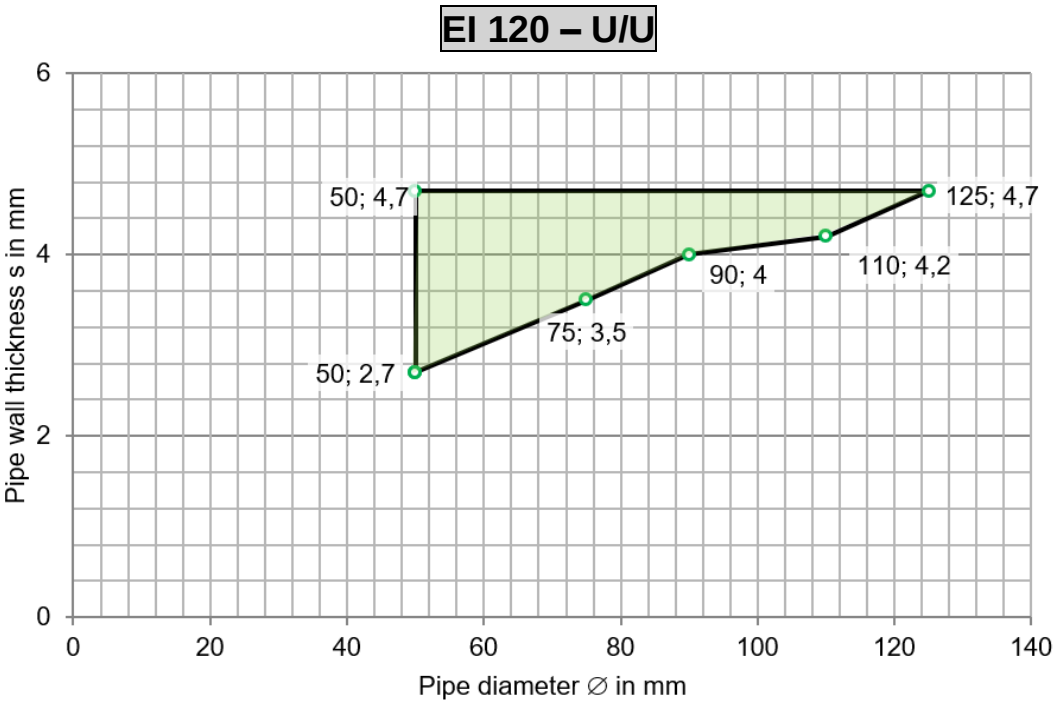
EI 120 – U/C



4.2.10 PROMASTOP®-FC MD, pipe closure device **used for Geberit Silent-PP (PP-C / PP-MD / PP-C) pipes mounted on the bottom side of the rigid floor construction 150 mm,** is classified according to the following combinations of performance parameters and class, in range shown in the graph below.

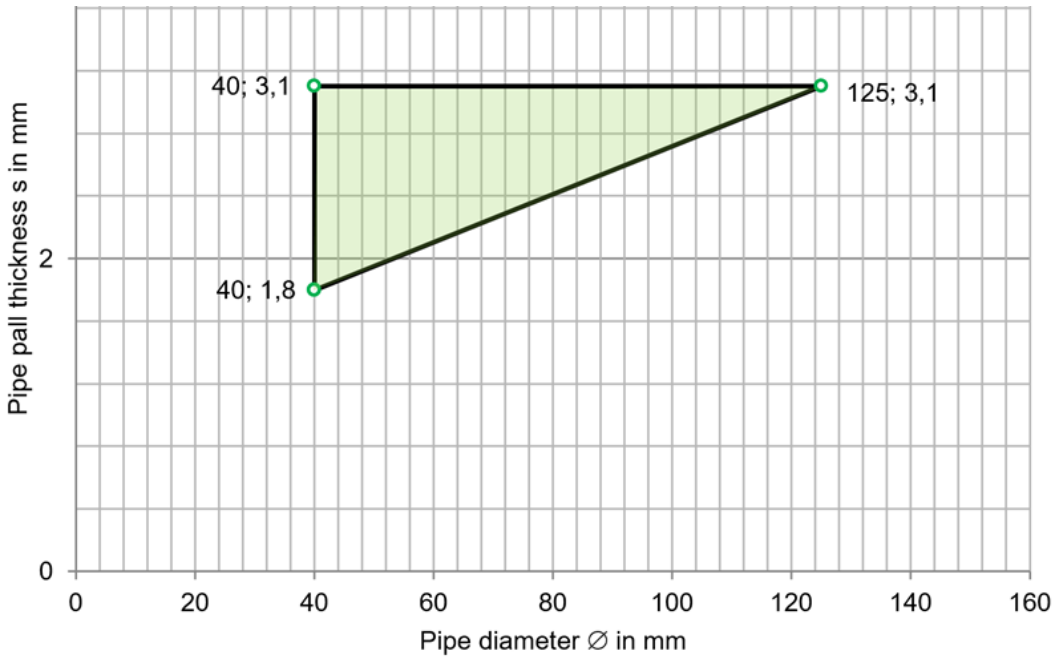


4.2.11 PROMASTOP®-FC MD, pipe closure device **used for Geberit Silent-Pro (PP-MX) pipes mounted on the bottom side of the rigid floor construction 150 mm,** is classified according to the following combinations of performance parameters and class, in range shown in the graph below.



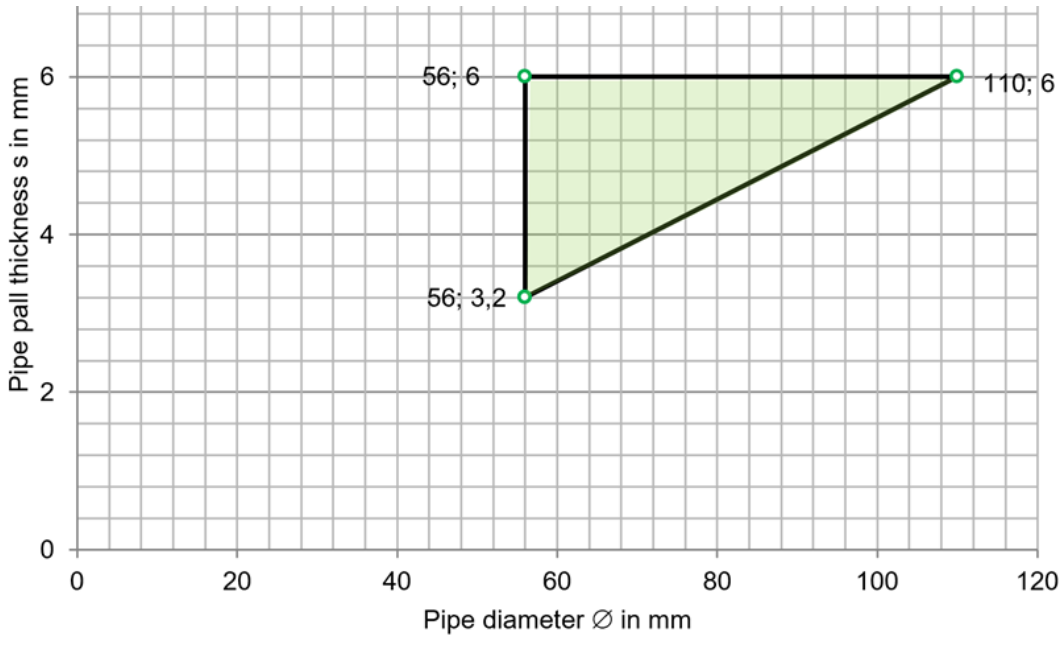
4.2.12 PROMASTOP®-FC MD, pipe closure device **used for Rehau Raupiano plus (PP-MD) pipes mounted on the bottom side of the rigid floor construction 150 mm,** is classified according to the following combinations of performance parameters and class, in range shown in the graphs below.

EI 120 – U/U

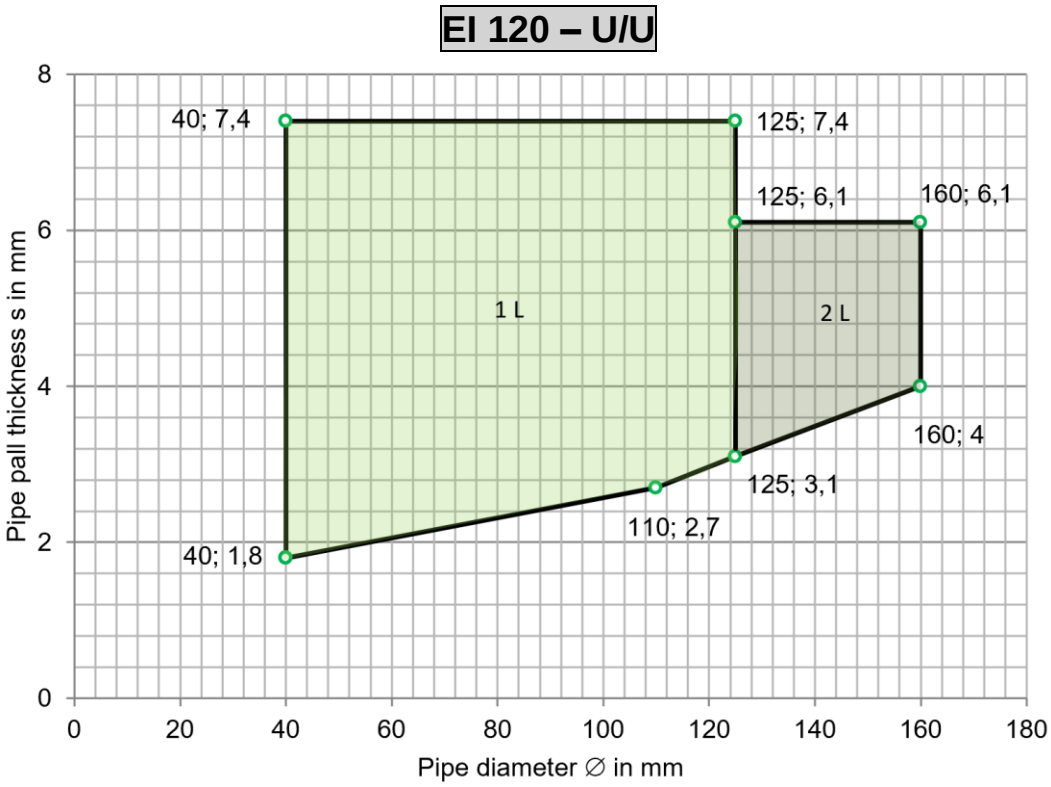


4.2.13 PROMASTOP®-FC MD, pipe closure device **used for Geberit Silent-db20 (PE-S2) pipes mounted on the bottom side of the rigid floor construction 150 mm,** is classified according to the following combinations of performance parameters and class, in range shown in the graph below.

EI 120 – U/U



4.2.14 PROMASTOP®-FC MD, pipe closure device **used for PVC-U pipes mounted on the bottom side of the rigid floor construction 150 mm,** is classified according to the following combinations of performance parameters and class, in range shown in the graphs below (with rules according Table 5 of EN 15882-3:2009).



Graphs were made in accordance with EN 1366-3:2009 and EN 15882-3:2009.

4.2.15 PROMASTOP®-FC MD, pipe closure device **used for plastic aluminum compound pipes Henco Standard (PE-Xc/Al/PE-Xc) mounted on both sides on flexible wall construction 100 mm**, is classified according to the following combinations of performance parameters and class, in range shown in the table below.

Bundles made of Henco standard pipes (with or without insulation, with and without additional protection), or single pipe penetration seals (the amount of pipe may be decreased):

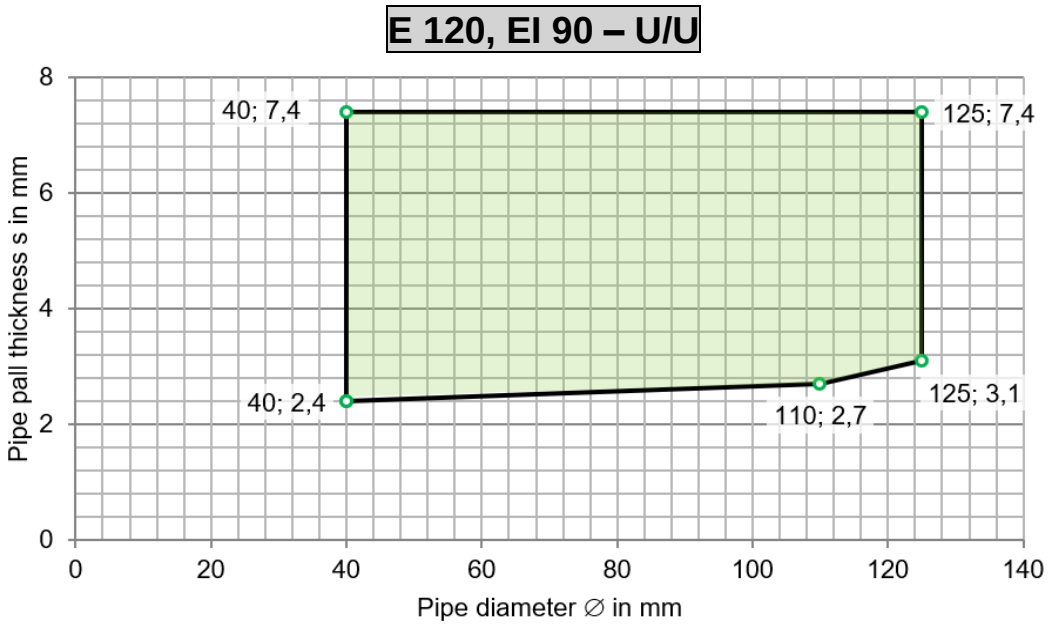
PROMASEAL®-AG shall be used in the gussets of the pipes in the wall at any time.

Pipes (max. bundle)	Insulation	Annular space	Additional protection	Classification
1x Ø 16 x 2 mm 1x Ø 18 x 2 mm 1x Ø 20 x 2 mm 1x Ø 32 x 3 mm 1x Ø 40 x 3.5 mm 1x Ø 50 x 4 mm	-	Without backfilling possible. Covering depth: ≥ 25 mm PROMASEAL®-AG on both sides in the wall Annular space width: 5 - 20 mm	Stone wool (class A1 acc. EN 13501-1, density ≥ 35 kg/m³), thickness 50 mm, 150 mm length on each side of the wall around the pipe bundle, in the collar.	**EI 120 – U/C**
1x Ø 14 x 2 mm 2x Ø 16 x 2 mm 1x Ø 18 x 2 mm 1x Ø 20 x 2 mm 1x Ø 26 x 3 mm 1x Ø 32 x 3 mm	Corrugated cover made of PE. Case: CS	Without backfilling possible. Covering depth: ≥ 25 mm PROMASEAL®-AG on both sides in the wall Annular space width: 5 - 20 mm	Stone wool (class A1 acc. EN 13501-1, density ≥ 35 kg/m³), thickness 50 mm, 150 mm length on each side of the wall around the pipe bundle, in the collar.	**EI 120 – U/C**
1x Ø 14 x 2 mm 1x Ø 16 x 2 mm 1x Ø 18 x 2 mm 1x Ø 20 x 2 mm 1x Ø 26 x 3 mm 1x Ø 32 x 3 mm	PE foam (class E acc. EN 13501-1) Thickness: 6 mm Case: CS	Without backfilling possible. Covering depth: ≥ 25 mm PROMASEAL®-AG on both sides in the wall Annular space width: 5 - 20 mm	Stone wool (class A1 acc. EN 13501-1, density ≥ 35 kg/m³), thickness 20 mm, 150 mm length on each side of the wall around the pipe bundle, in the collar.	**EI 120 – U/C**
1x Ø 16 x 2 mm 1x Ø 20 x 2 mm 1x Ø 32 x 3 mm	PE foam (class E acc. EN 13501-1) Thickness: 13 mm Case: CS	Without backfilling possible. Covering depth: ≥ 25 mm PROMASEAL®-AG on both sides in the wall Annular space width: 5 - 20 mm	Stone wool (class A1 acc. EN 13501-1, density ≥ 35 kg/m³), thickness 20 mm, 150 mm length on each side of the wall around the pipe bundle, in the collar.	**EI 120 – U/C**
1x Ø 16 x 2 mm 1x Ø 20 x 2 mm 1x Ø 32 x 3 mm	PE foam (class E acc. EN 13501-1) Thickness: 6 - 13 mm Case: CS	Without backfilling possible. Covering depth: ≥ 25 mm PROMASEAL®-AG on both sides in the wall Annular space width: 5 - 20 mm	Stone wool (class A1 acc. EN 13501-1, density ≥ 35 kg/m³), thickness 20 mm, 150 mm length on each side of the wall around the pipe bundle, in the collar.	**EI 120 – U/C**

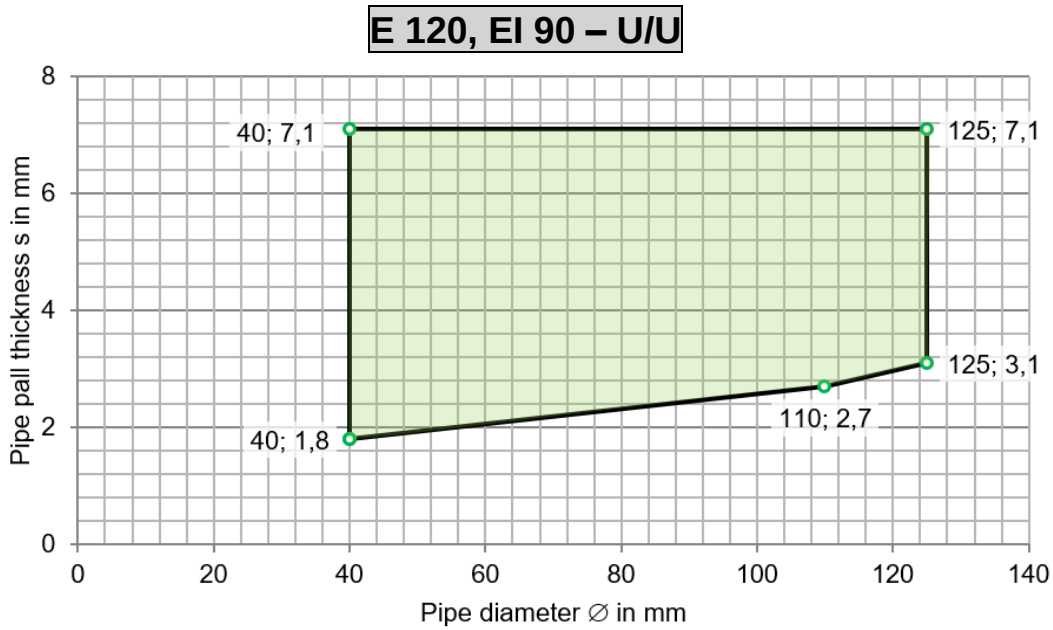
Pipes (max. bundle)	Insulation	Annular space	Additional protection	Classification
1x Ø 16 x 2 mm 1x Ø 18 x 2 mm 1x Ø 20 x 2 mm 1x Ø 32 x 3 mm 1x Ø 40 x 3.5 mm 1x Ø 50 x 4 mm	without	Without backfilling possible. Covering depth: ≥ 25 mm PROMASEAL®-AG on both sides in the wall Annular space width: 5 - 20 mm	-	**E 120 – U/C** **EI 90 – U/C**
1x Ø 14 x 2 mm 2x Ø 16 x 2 mm 1x Ø 18 x 2 mm 1x Ø 20 x 2 mm 1x Ø 26 x 3 mm 1x Ø 32 x 3 mm	Corrugated cover made of PE. Case: CS	Without backfilling possible. Covering depth: ≥ 25 mm PROMASEAL®-AG on both sides in the wall Annular space width: 5 - 20 mm	-	**EI 120 – U/C**
1x Ø 14 x 2 mm 1x Ø 16 x 2 mm 1x Ø 18 x 2 mm 1x Ø 20 x 2 mm 1x Ø 26 x 3 mm 1x Ø 32 x 3 mm	PE foam (class E acc. EN 13501-1) Thickness: 6 mm Case: CS	Without backfilling possible. Covering depth: ≥ 25 mm PROMASEAL®-AG on both sides in the wall Annular space width: 5 - 20 mm	-	**EI 120 – U/C**
1x Ø 16 x 2 mm 1x Ø 20 x 2 mm 1x Ø 32 x 3 mm	PE foam (class E acc. EN 13501-1) Thickness: 13 mm Case: CS	Without backfilling possible. Covering depth: ≥ 25 mm PROMASEAL®-AG on both sides in the wall Annular space width: 5 - 20 mm	-	**EI 120 – U/C**
1x Ø 16 x 2 mm 1x Ø 20 x 2 mm 1x Ø 32 x 3 mm	PE foam (class E acc. EN 13501-1) Thickness: 6 - 13 mm Case: CS	Without backfilling possible. Covering depth: ≥ 25 mm PROMASEAL®-AG on both sides in the wall Annular space width: 5 - 20 mm	-	**EI 120 – U/C**

CS…Insulation case acc. EN 1366:3

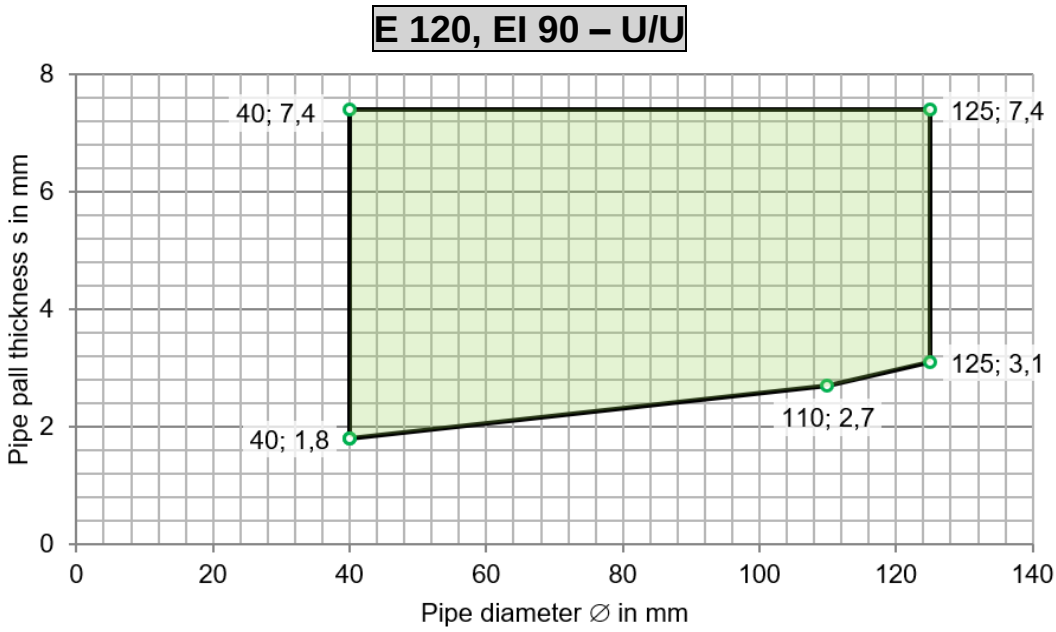
4.2.16 PROMASTOP®-FC MD pipe closure device **used for PE pipes couplings mounted on the bottom side of the rigid floor construction 150 mm,** is classified according to the following combinations of performance parameters and class, in range shown in the graph below.



4.2.17 PROMASTOP®-FC MD pipe closure device **used for PP pipes couplings mounted on the bottom side of the rigid floor construction 150 mm,** is classified according to the following combinations of performance parameters and class, in range shown in the graph below.



4.2.18 PROMASTOP®-FC MD pipe closure device **used for PVC pipes couplings mounted on the bottom side of the rigid floor construction 150 mm,** is classified according to the following combinations of performance parameters and class, in range shown in the graph below (with rules according Table 5 of EN 15882-3:2009).



4.2.19 PROMASTOP®-FC MD pipe closure device **used for PVC-U pipe bundles mounted on the bottom side of the rigid floor construction 150 mm,** is classified according to the following combinations of performance parameters and class, in range shown in the table below.

Bundles made of PVC-U pipes (the amount of pipes may be decreased):

Pipes (max. bundle)	Annular space	Classification
1x Ø 32 x 3.6 mm 1x Ø 50 x 1.8 mm 1x Ø 75 x 1.8 mm	PROMASTOP®-M firestop mortar Covering depth: ≤ 150 mm Annular space width: ≤ 40 mm	**EI 90 – U/U**

4.2.20 PROMASTOP®-FC MD pipe closure device **used for PP-H pipe bundles mounted on the bottom side of the rigid floor construction 150 mm,** is classified according to the following combinations of performance parameters and class, in range shown in the table below.

Bundles made of PP-H pipes (the amount of pipes may be decreased):

Pipes (max. bundle)	Annular space	Classification
1x Ø 32 x 2.9 mm 1x Ø 50 x 2.9 mm 1x Ø 75 x 4.3 mm	PROMASTOP®-M firestop mortar Covering depth: ≤ 150 mm Annular space width: ≤ 40 mm	**EI 120 – U/U**

4.2.21 PROMASTOP®-FC MD pipe closure device **used for PE pipe bundles mounted on the bottom side of the rigid floor construction 150 mm,** is classified according to the following combinations of performance parameters and class, in range shown in the table below.

Bundles made of PE pipes (the amount of pipes may be decreased):

Pipes (max. bundle)	Annular space	Classification
1x Ø 32 x 2 mm 1x Ø 50 x 3 mm 1x Ø 75 x 2,3 mm	PROMASTOP®-M firestop mortar Covering depth: ≤ 150 mm Annular space width: ≤ 40 mm	**EI 120 – U/U**

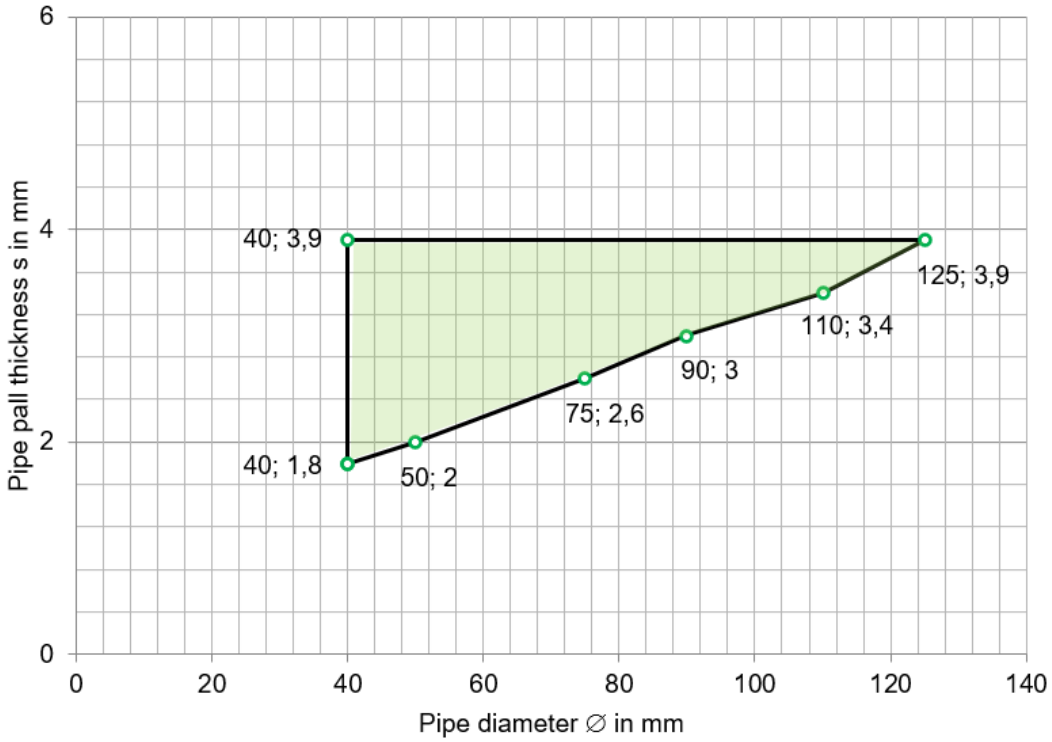
4.2.22 PROMASTOP®-FC MD pipe closure device **used for PE, PVC-U and PP-H pipe bundles mounted on the bottom side of the rigid floor construction 150 mm,** is classified according to the following combinations of performance parameters and class, in range shown in the table below.

Bundles made of PE, PP-H and PVC-U pipes (the amount of pipe may be decreased):

Pipes (max. bundle)	Annular space	Classification
PVC-U 1x Ø 32 x 3.6 mm PP-H 1x Ø 50 x 2 mm PE 1x Ø 75 x 2.3 mm	PROMASTOP®-M firestop mortar Covering depth: ≤ 150 mm Annular space width: ≤ 40 mm	**EI 90 – U/U**

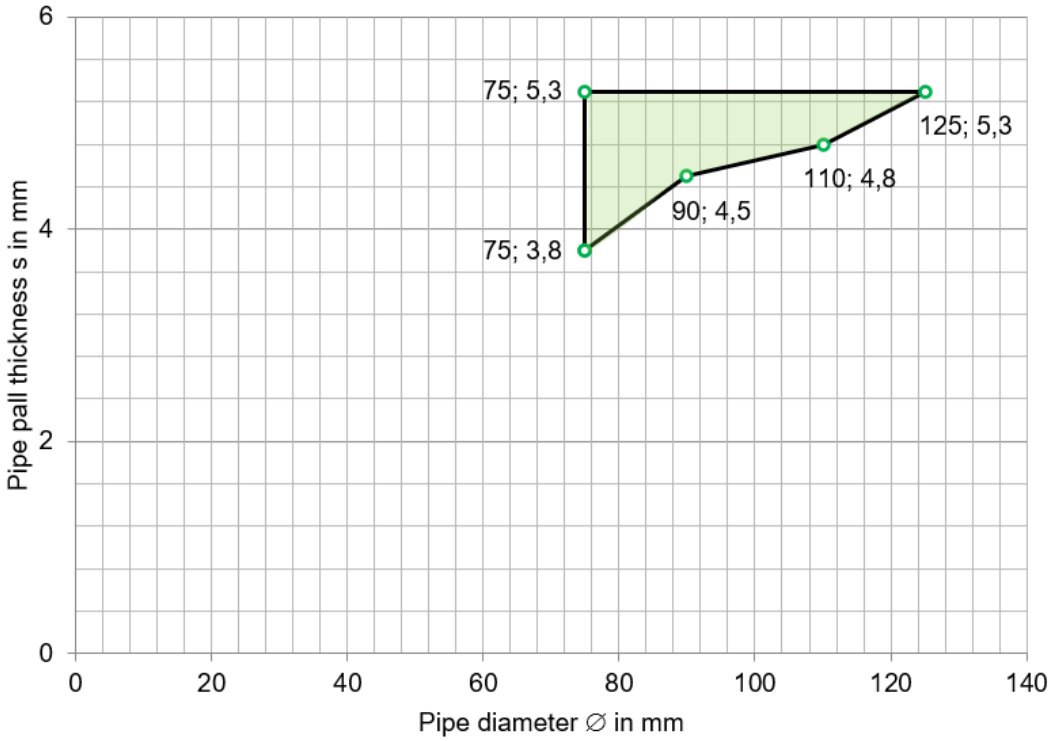
4.2.23 PROMASTOP®-FC MD, pipe closure device **used for POLOPLAST POLO-KAL NG pipes mounted on the bottom side of the rigid floor construction 150 mm,** is classified according to the following combinations of performance parameters and class, in range shown in the graphs below.

EI 120 – U/U



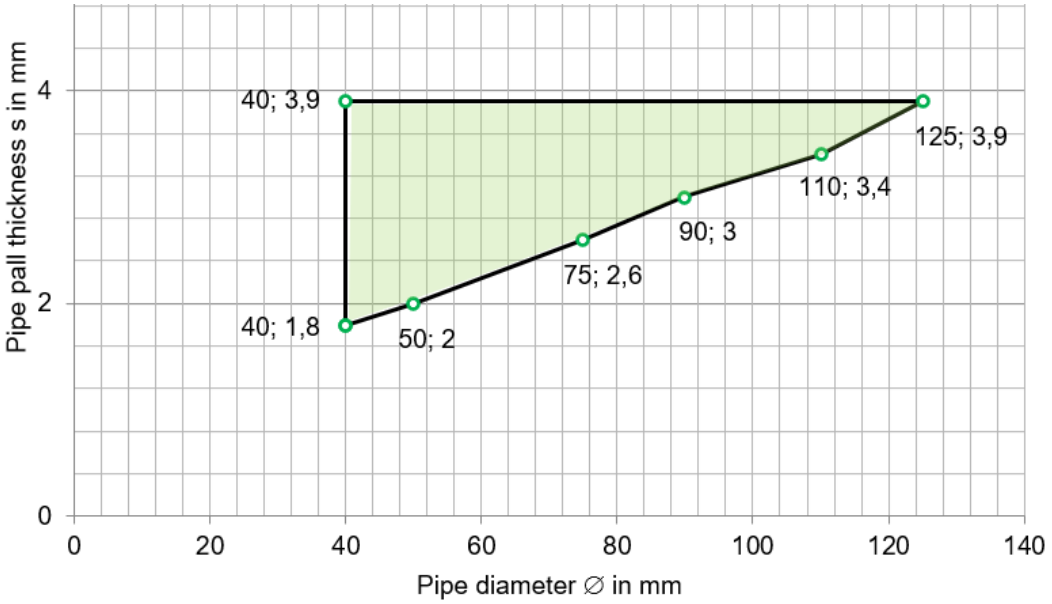
4.2.24 PROMASTOP®-FC MD, pipe closure device **used for POLOPLAST POLO-KAL 3S pipes mounted on the bottom side of the rigid floor construction 150 mm,** is classified according to the following combinations of performance parameters and class, in range shown in the graphs below.

EI 120 – U/U

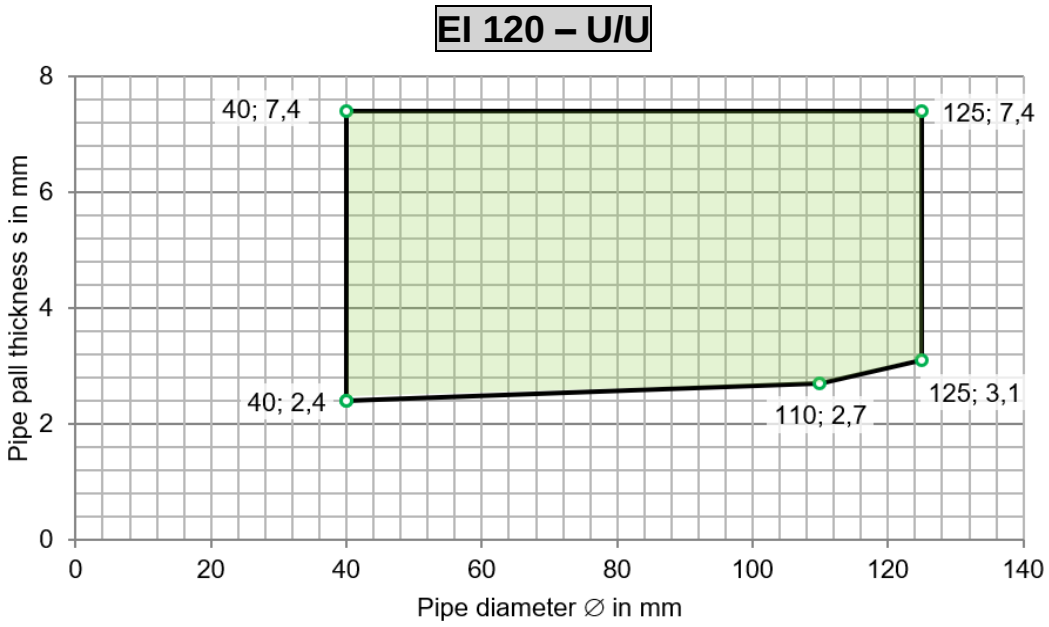


4.2.25 PROMASTOP®-FC MD, pipe closure device **used for POLOPLAST POLO-KAL XS pipes mounted on the bottom side of the rigid floor construction 150 mm,** is classified according to the following combinations of performance parameters and class, in range shown in the graphs below.

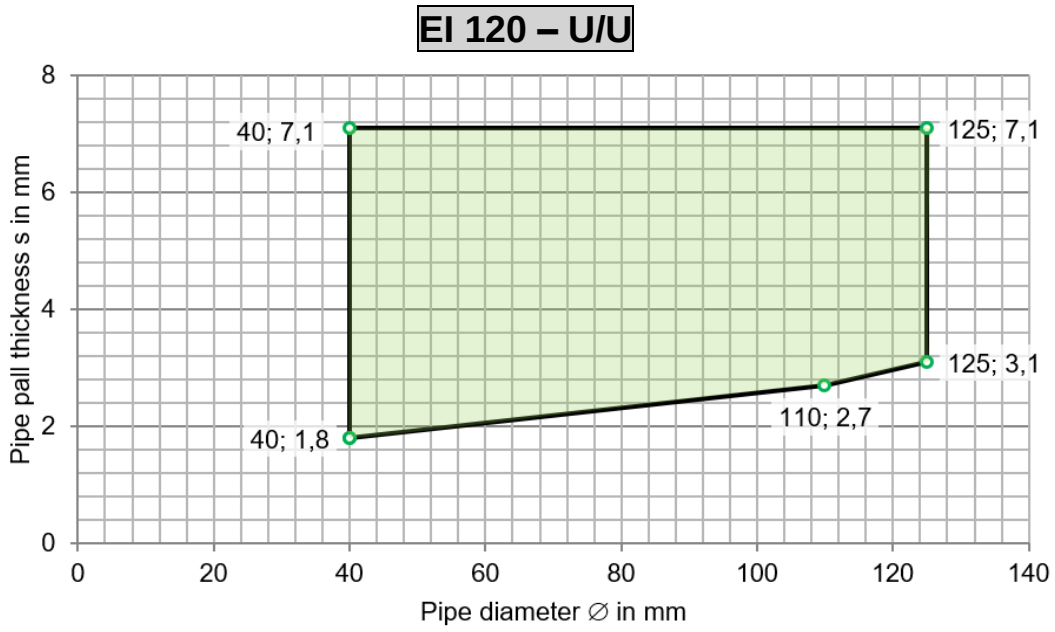
EI 120 – U/U



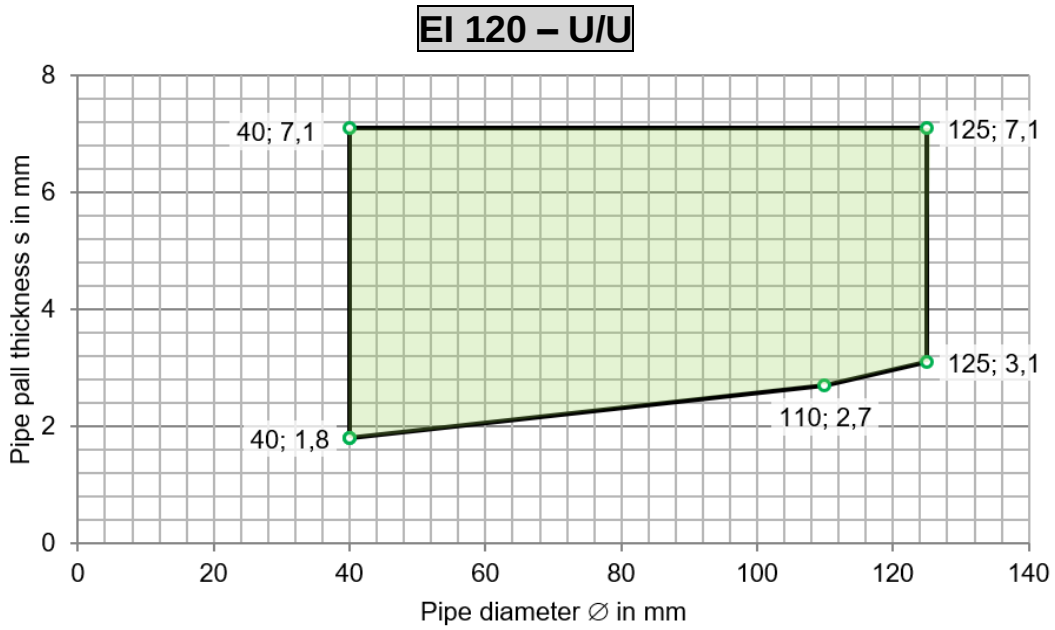
4.2.26 PROMASTOP®-FC MD pipe closure device **used for PE pipes mounted on the bottom side of the rigid floor construction 150 mm in coated batt seal 2x50 mm PROMASTOP®-CC,** is classified according to the following combinations of performance parameters and class, in range shown in the graph below. Fixing material, threaded rods ≥ M6 with nuts and washers.



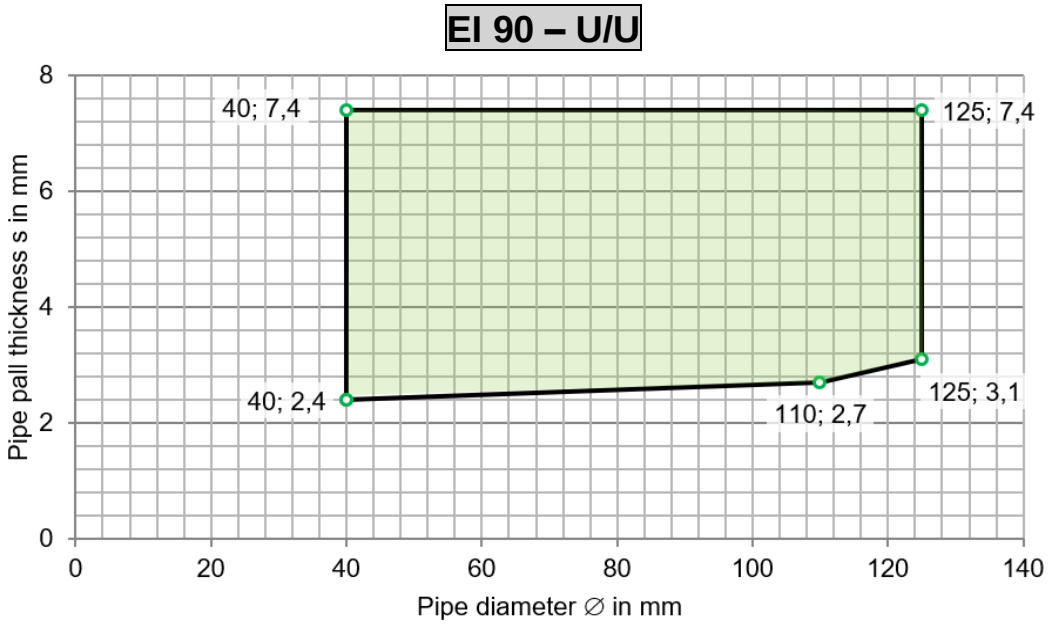
4.2.27 PROMASTOP®-FC MD pipe closure device **used for PP pipes mounted on the bottom side of the rigid floor construction 150 mm in coated batt seal 2x50 mm PROMASTOP®-CC,** is classified according to the following combinations of performance parameters and class, in range shown in the graph below. Fixing material, threaded rods ≥ M6 with nuts and washers.



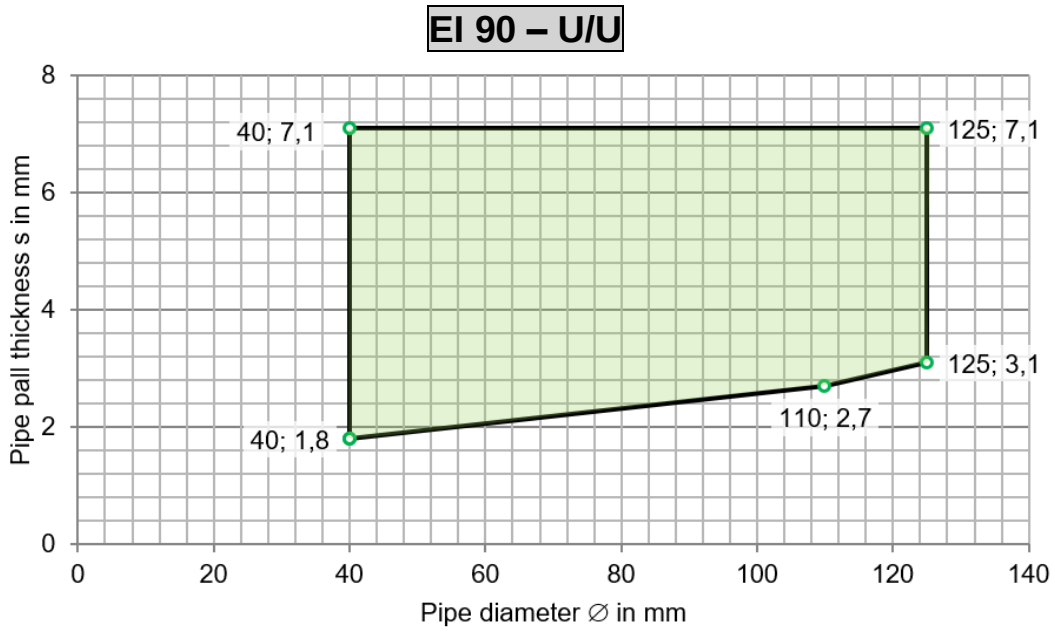
4.2.28 PROMASTOP®-FC MD pipe closure device **used for PVC pipes mounted on the bottom side of the rigid floor construction 150 mm in coated batt seal 2x50 mm PROMASTOP®-CC,** is classified according to the following combinations of performance parameters and class, in range shown in the graph below (with rules according Table 5 of EN 15882-3:2009). Fixing material, threaded rods ≥ M6 with nuts and washers.



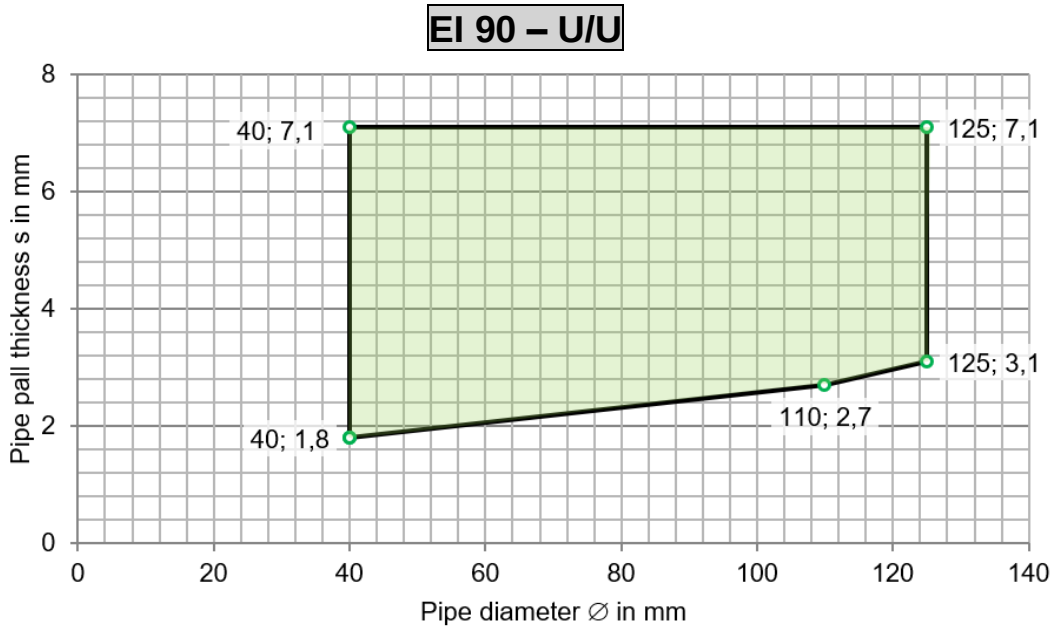
4.2.29 PROMASTOP®-FC MD pipe closure device **used for PE pipes mounted on the bottom side of the rigid floor construction 150 mm in coated batt seal 2x50 mm PROMASTOP®-I,** is classified according to the following combinations of performance parameters and class, in range shown in the graph below. Fixing material, spiral screws, ≥ 8 x 100 mm.



4.2.30 PROMASTOP®-FC MD pipe closure device **used for PP pipes mounted on the bottom side of the rigid floor construction 150 mm in coated batt seal 2x50 mm PROMASTOP®-I,** is classified according to the following combinations of performance parameters and class, in range shown in the graph below. Fixing material, spiral screws, ≥ 8 x 100 mm.

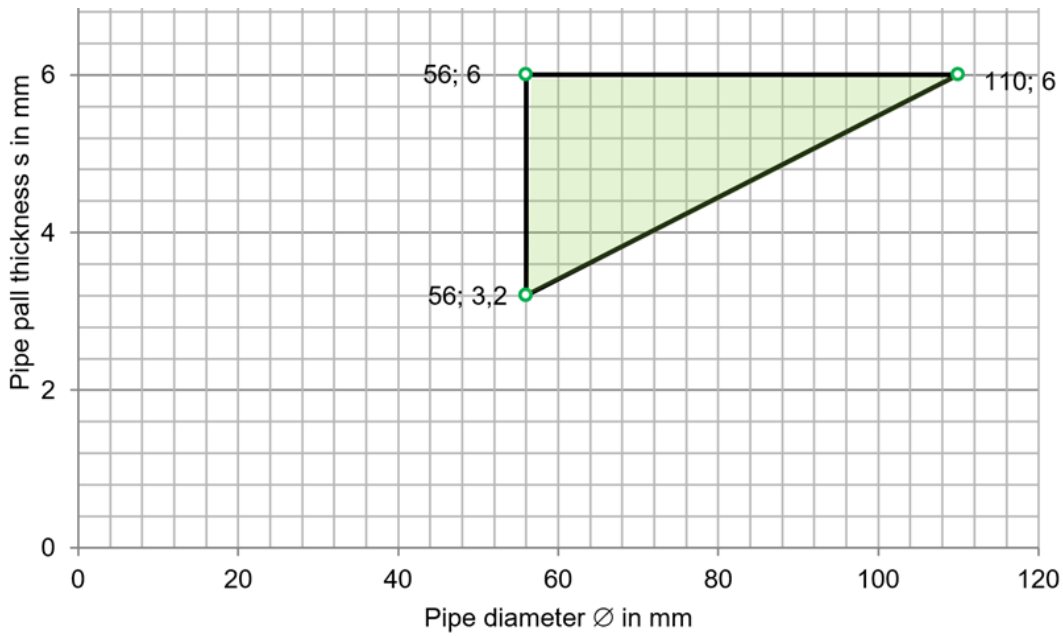


4.2.31 PROMASTOP®-FC MD pipe closure device **used for PVC pipes mounted on the bottom side of the rigid floor construction 150 mm in coated batt seal 2x50 mm PROMASTOP®-I,** is classified according to the following combinations of performance parameters and class, in range shown in the graph below (with rules according Table 5 of EN 15882-3:2009). Fixing material, spiral screws, ≥ 8 x 100 mm.



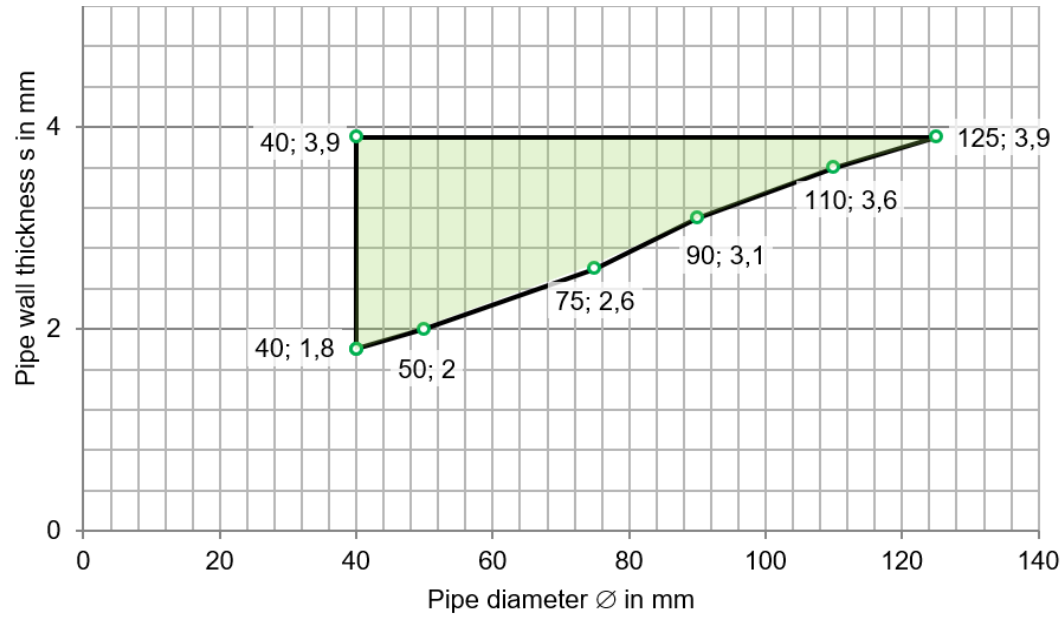
4.2.32 PROMASTOP®-FC MD pipe closure device **used for Geberit Silent-db20 (PE-S2) pipes mounted on the bottom side of the rigid floor construction 150 mm in coated batt seal 2x50 mm PROMASTOP®-CC,** is classified according to the following combinations of performance parameters and class, in range shown in the graph below. Fixing material, threaded rods ≥ M6 with nuts and washers.

EI 90 – U/U



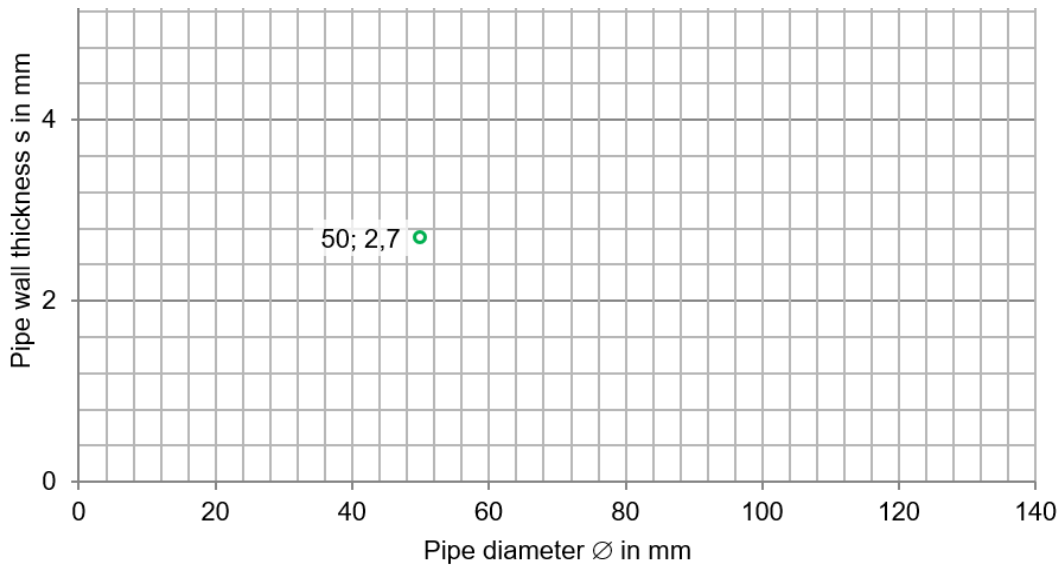
4.2.33 PROMASTOP®-FC MD pipe closure device **used for Geberit Silent-PP (PP-C/PP-MD/PP-C) pipes mounted on the bottom side of the rigid floor construction 150 mm in coated batt seal 2x50 mm PROMASTOP®-CC,** is classified according to the following combinations of performance parameters and class, in range shown in the graph below. Fixing material, threaded rods ≥ M6 with nuts and washers.

EI 90 – U/U



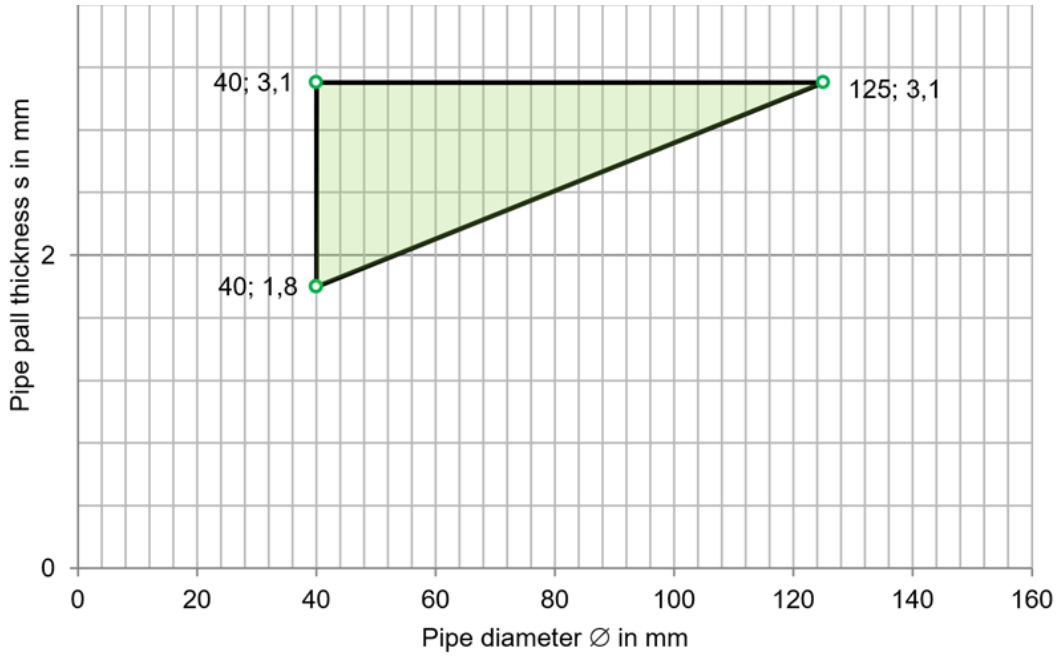
4.2.34 PROMASTOP®-FC MD pipe closure device **used for Geberit Silent-Pro (PP-MX) pipes mounted on the bottom side of the rigid floor construction 150 mm in coated batt seal 2x50 mm PROMASTOP®-CC,** is classified according to the following combinations of performance parameters and class, in range shown in the graph below. Fixing material, threaded rods ≥ M6 with nuts and washers.

EI 90 – U/U

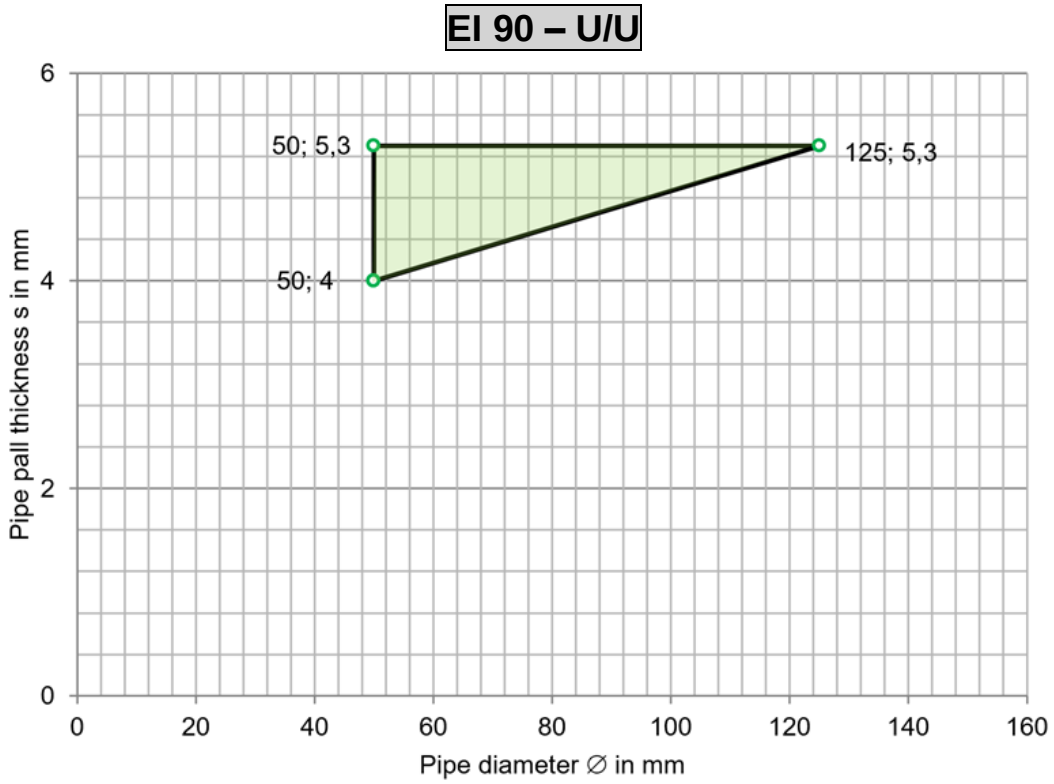


4.2.35 PROMASTOP®-FC MD pipe closure device **used for Rehau Raupiano Plus (PP-MD) pipes mounted on the bottom side of the rigid floor construction 150 mm in coated batt seal 2x50 mm PROMASTOP®-CC,** is classified according to the following combinations of performance parameters and class, in range shown in the graph below. Fixing material, threaded rods ≥ M6 with nuts and washers.

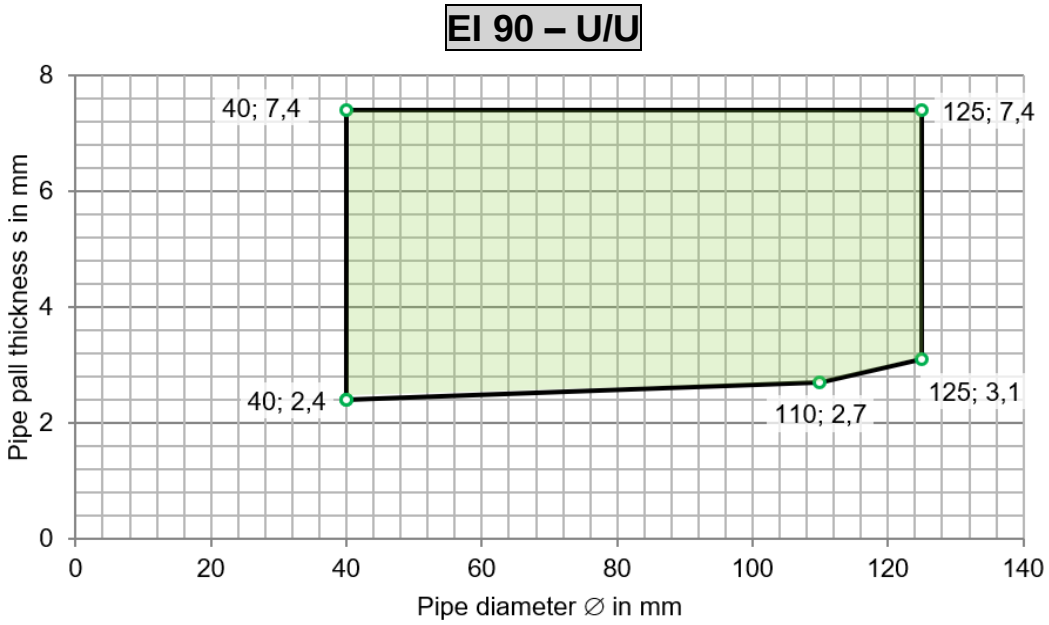
EI 90 – U/U



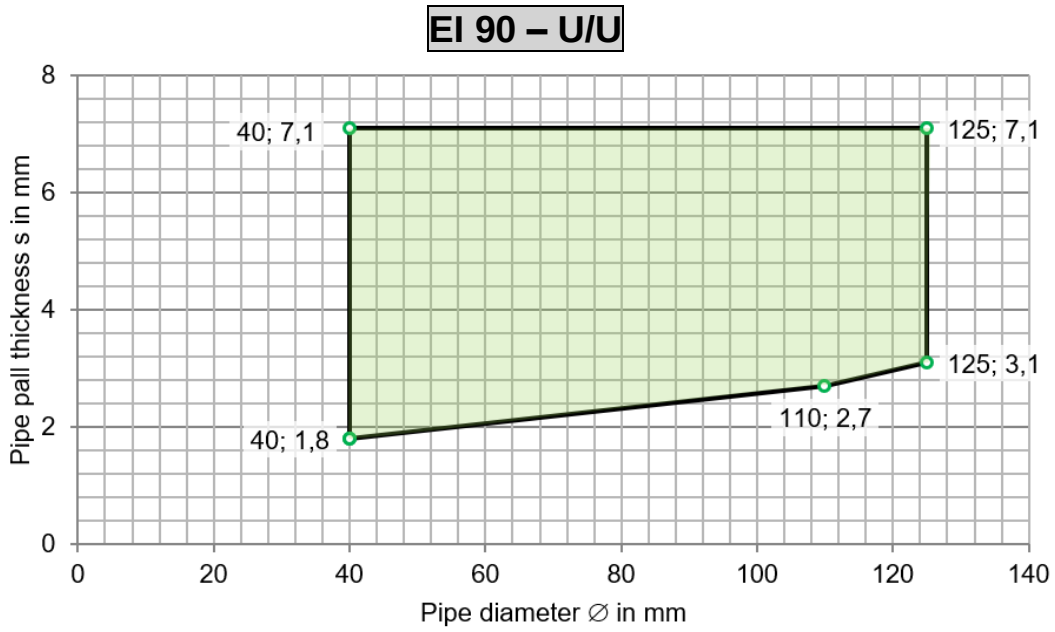
4.2.36 PROMASTOP®-FC MD pipe closure device **used for Dyka Sono Blue (PVC-U) pipes mounted on the bottom side of the rigid floor construction 150 mm in coated batt seal 2x50 mm PROMASTOP®-CC,** is classified according to the following combinations of performance parameters and class, in range shown in the graph below. Fixing material, threaded rods ≥ M6 with nuts and washers.



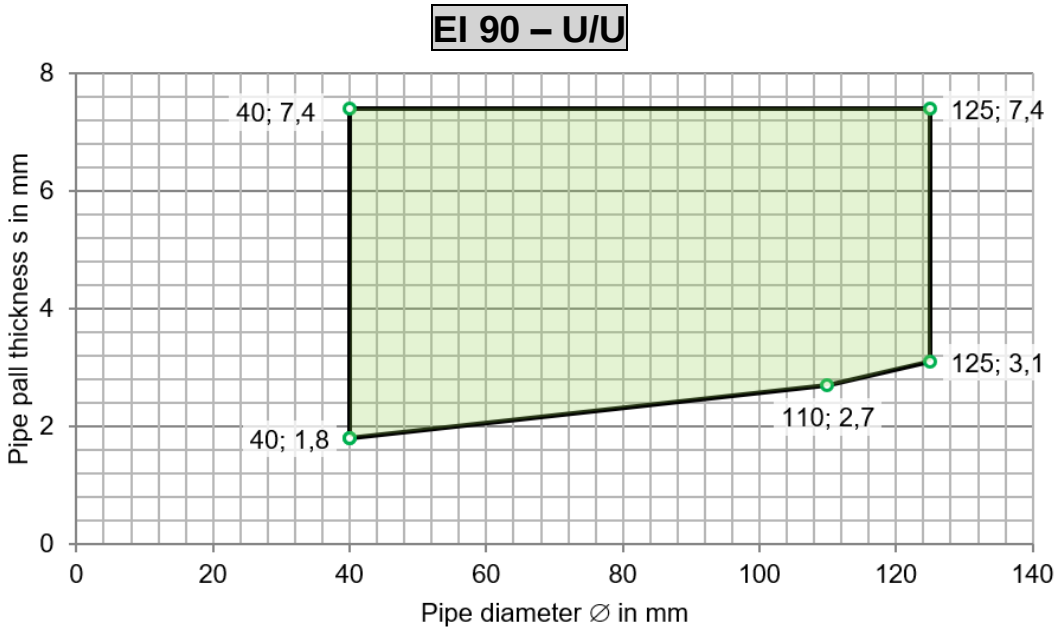
4.2.37 PROMASTOP®-FC MD pipe closure device **used for PE pipes mounted on the bottom side of the rigid floor construction 150 mm in coated batt seal 2x50 mm PROMASTOP®-CC,** is classified according to the following combinations of performance parameters and class, in range shown in the graph below. Fixing material, spiral screws, ≥ 8 x 100 mm.



4.2.38 PROMASTOP®-FC MD pipe closure device **used for PP pipes mounted on the bottom side of the rigid floor construction 150 mm in coated batt seal 2x50 mm PROMASTOP®-CC,** is classified according to the following combinations of performance parameters and class, in range shown in the graph below. Fixing material, spiral screws, ≥ 8 x 100 mm.

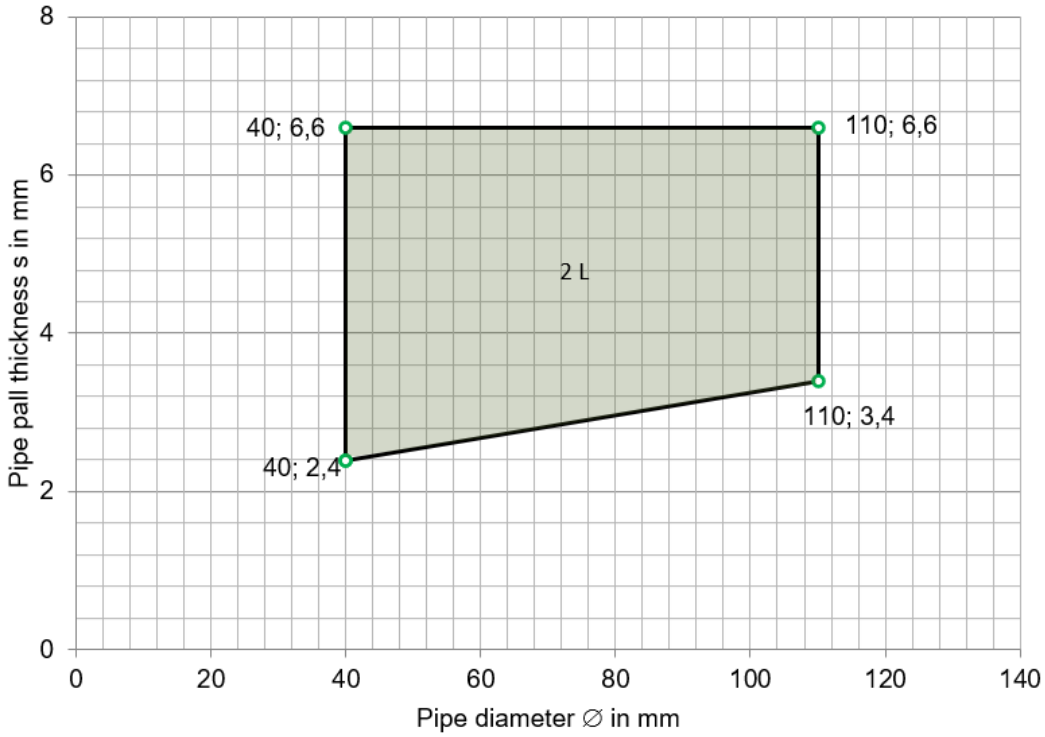


4.2.39 PROMASTOP®-FC MD pipe closure device **used for PVC pipes mounted on the bottom side of the rigid floor construction 150 mm in coated batt seal 2x50 mm PROMASTOP®-CC,** is classified according to the following combinations of performance parameters and class, in range shown in the graph below (with rules according Table 5 of EN 15882-3:2009). Fixing material, spiral screws, ≥ 8 x 100 mm.



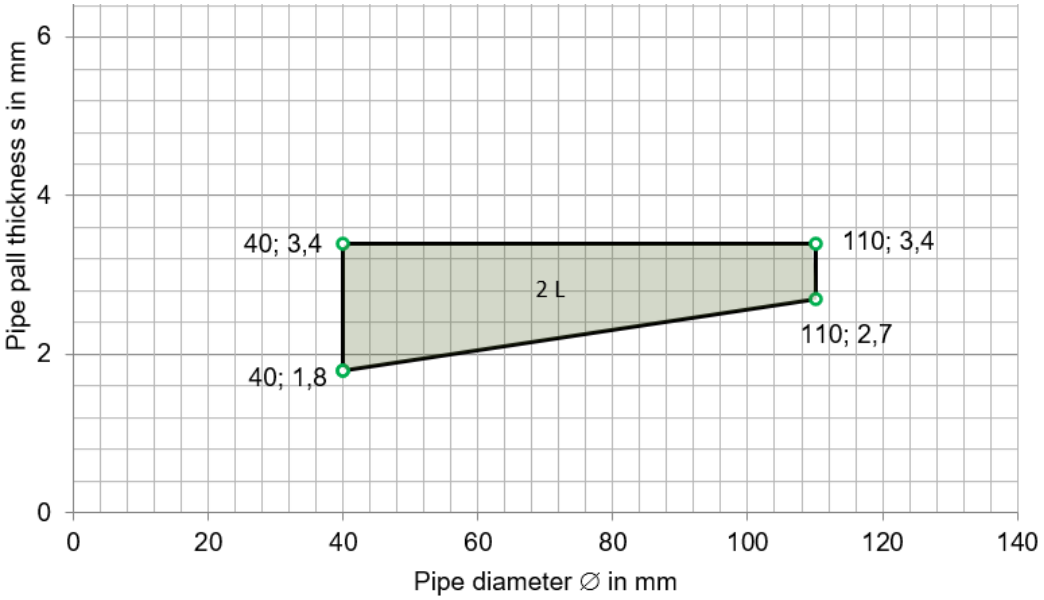
4.2.40 PROMASTOP®-FC MD pipe closure device **used for PE pipes mounted on the bottom side of the rigid floor construction 150 mm in the corners of two walls (corner application),** is classified according to the following combinations of performance parameters and class, in range shown in the graph below.

EI 120 – U/U



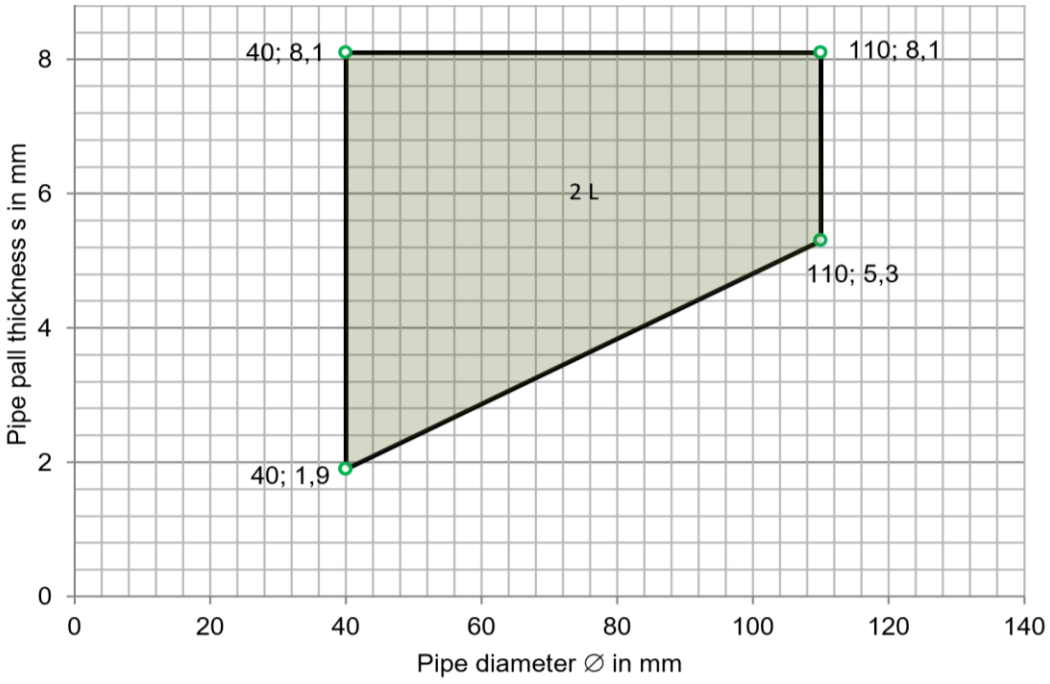
4.2.41 PROMASTOP®-FC MD pipe closure device **used for PP pipes mounted on the bottom side of the rigid floor construction 150 mm in the corners of two walls (corner application),** is classified according to the following combinations of performance parameters and class, in range shown in the graph below.

EI 120 – U/U



4.2.42 PROMASTOP®-FC MD pipe closure device **used for PVC pipes mounted on the bottom side of the rigid floor construction 150 mm in the corners of two walls (corner application),** is classified according to the following combinations of performance parameters and class, in range shown in the graph below.

EI 90 – U/U



4.2.43 PROMASTOP®-FC MD, pipe closure device **used for plastic aluminum compound pipes Henco Standard (PE-Xc/Al/PE-Xc) mounted on the bottom side of the rigid floor construction 150 mm in coated batt seal 2x50 mm PROMASTOP®-CC**, is classified according to the following combinations of performance parameters and class, in range shown in the table below.

Bundles made of Henco standard pipes (with or without insulation, with and without additional protection), or single pipe penetration seals (the amount of pipe may be decreased):

PROMASEAL®-AG shall be used in the gussets of the pipes in the PROMASTOP®-CC coated batt seal at any time.

Pipes (max. bundle)	Insulation	Annular space	Additional protection	Classification
1x Ø 16 x 2 mm 1x Ø 18 x 2 mm 1x Ø 20 x 2 mm 1x Ø 26 x 3 mm 1x Ø 32 x 3 mm 1x Ø 40 x 3.5 mm 1x Ø 63 x 4.5 mm	-	Covering depth: 100 mm PROMASEAL®-AG in the coated batt seal Annular space width: 10 mm	Stone wool (class A1 acc. EN 13501-1, density ≥ 30 kg/m³), thickness 50 mm, 150 mm length on the unexposed side around pipe bundle.	**E 120 – U/C** **EI 90 – U/C**
1x Ø 14 x 2 mm 1x Ø 16 x 2 mm 3x Ø 18 x 2 mm 1x Ø 20 x 2 mm 1x Ø 26 x 3 mm 1x Ø 32 x 3 mm	Corrugated cover made of PE. Case: CS	Covering depth: 100 mm PROMASEAL®-AG in the coated batt seal Annular space width: 10 mm	Stone wool (class A1 acc. EN 13501-1, density ≥ 30 kg/m³), thickness 50 mm, 150 mm length on the unexposed side around pipe bundle.	**EI 120 – U/C**

Pipes (max. bundle)	Insulation	Annular space	Additional protection	Classification
1x Ø 14 x 2 mm 1x Ø 16 x 2 mm 1x Ø 18 x 2 mm 1x Ø 20 x 2 mm 1x Ø 26 x 3 mm 1x Ø 32 x 3 mm	PE foam (class E acc. EN 13501-1) Thickness: 6 mm Case: CS	Covering depth: 100 mm PROMASEAL®-AG in the coated batt seal Annular space width: 10 mm	Stone wool (class A1 acc. EN 13501-1, density ≥ 30 kg/m³), thickness 50 mm, 150 mm length on the unexposed side around the pipe bundle.	**EI 120 – U/C**
1x Ø 18 x 2 mm 1x Ø 20 x 2 mm 1x Ø 26 x 3 mm 1x Ø 32 x 3 mm	PE foam (class E acc. EN 13501-1) Thickness: 13 mm Case: CS	Covering depth: 100 mm PROMASEAL®-AG in the coated batt seal Annular space width: 10 mm	Stone wool (class A1 acc. EN 13501-1, density ≥ 30 kg/m³), thickness 50 mm, 150 mm length on the unexposed side around the pipe bundle.	**EI 120 – U/C**
1x Ø 16 x 2 mm 1x Ø 18 x 2 mm 1x Ø 20 x 2 mm 1x Ø 26 x 3 mm 1x Ø 32 x 3 mm 1x Ø 40 x 3.5 mm 1x Ø 63 x 4.5 mm	-	Covering depth: 100 mm PROMASEAL®-AG in the coated batt seal Annular space width: 10 mm	-	**E 120 – U/C** **EI 30 – U/C**
1x Ø 14 x 2 mm 1x Ø 16 x 2 mm 3x Ø 18 x 2 mm 1x Ø 20 x 2 mm 1x Ø 26 x 3 mm 1x Ø 32 x 3 mm	Corrugated cover made of PE. Case: CS	Covering depth: 100 mm PROMASEAL®-AG in the coated batt seal Annular space width: 10 mm	-	**EI 120 – U/C**
1x Ø 14 x 2 mm 1x Ø 16 x 2 mm 1x Ø 18 x 2 mm 1x Ø 20 x 2 mm 1x Ø 26 x 3 mm 1x Ø 32 x 3 mm	PE foam (class E acc. EN 13501-1) Thickness: 6 mm Case: CS	Covering depth: 100 mm PROMASEAL®-AG in the coated batt seal Annular space width: 10 mm	-	**EI 120 – U/C**
1x Ø 18 x 2 mm 1x Ø 20 x 2 mm 1x Ø 26 x 3 mm 1x Ø 32 x 3 mm	PE foam (class E acc. EN 13501-1) Thickness: 13 mm Case: CS	Covering depth: 100 mm PROMASEAL®-AG in the coated batt seal Annular space width: 10 mm	-	**EI 120 – U/C**
3x Ø 16 x 2 mm 1x Ø 18 x 2 mm 1x Ø 20 x 2 mm 1x Ø 26 x 3 mm 1x Ø 32 x 3 mm 1x Ø 40 x 3.5 mm 1x Ø 50 x 4 mm	-	Covering depth: 100 mm PROMASEAL®-AG in the coated batt seal Annular space width: 10 mm	-	**E 120 – U/C** **EI 45 – U/C**

Pipes (max. bundle)	Insulation	Annular space	Additional protection	Classification
3x Ø 16 x 2 mm 1x Ø 18 x 2 mm 1x Ø 20 x 2 mm 1x Ø 26 x 3 mm 1x Ø 32 x 3 mm 1x Ø 40 x 3.5 mm 1x Ø 50 x 4 mm	-	Covering depth: 100 mm PROMASEAL®-AG in the coated batt seal Annular space width: 10 mm	Stone wool (class A1 acc. EN 13501-1, density ≥ 30 kg/m³), thickness 50 mm, 150 mm length on the unexposed side around the pipe bundle.	**E 120 – U/C** **EI 90 – U/C**

CS…Insulation case acc. EN 1366-3

For more details of classified systems, see Annex A of this report.

4.3 Field of application

This classification is valid for the following end use applications, where relevant rules of EN 1366-3:2009: 13 were used.

4.3.1 Test results are applicable to the orientation in which the penetration sealing systems were tested. Only for mortar seal (PROMASTOP®-M), results of the floor tests may be used as supporting evidence for a wall mounted application, because floor seal generally more onerous than wall (Table A.1 of EN 15882-3).

4.3.2 Test results obtained with rigid floor standard supporting constructions may be applied to concrete or masonry separating elements of a thickness equal to or greater than 150 mm that of the supporting construction used in the test and density equal to or greater than 650 kg/m^3 that of the supporting construction used in the test. This rule does not apply to pipe closure devices positioned within the supporting construction in case of higher thickness of the supporting construction unless the length of the seal is increased by an equal amount and the distance from the surface of the supporting construction remains the same on both sides.

4.3.3 Test results obtained with the standard flexible wall constructions cover all flexible wall constructions of the same fire resistance classification provided:

- the construction is classified in accordance with EN 13501-2;
- the construction has an overall thickness not less than the minimum thickness of the range given in Table 3 of EN 1366-3:2009 for the standard flexible wall used in the test. This rule does not apply to pipe closure devices positioned within the supporting construction unless the length of the seal is increased by an equal amount and the distance from the surface of the supporting construction remains the same on both sides;
- in the case of penetration seals installed within the wall and where a flexible wall with insulation was used in the test an aperture framing shall be used in practice. The aperture frame and aperture lining shall be made from studs and boards of the same specification as those used in the wall in practice. The thickness of the aperture lining shall be minimum 12.5 mm;
- the number of board layers and the overall board layer thickness is equal or greater than that tested when no aperture framing is used;
- flexible wall constructions with timber studs are constructed with at least the same number of layers as given in Table 3 of EN 1366-3:2009, no part of the penetration seal is closer than 100 mm to a stud, the cavity is 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.

4.3.4 The standard flexible wall construction does not cover sandwich panel constructions and flexible walls where the lining does not cover the studs on both sides.

4.3.5 Test results obtained with flexible supporting walls may be applied to concrete or masonry elements of an overall thickness equal to or greater than that of the element used in the tests. This rule does not apply to pipe closure devices positioned within the supporting construction unless the length of

the seal is increased by an equal amount and the distance from the surface of the supporting construction remains the same on both sides.

4.3.6 Test results obtained from tests with plastic pipes having both ends uncapped (test condition U/U) are valid for all other test conditions of table below. Test results obtained from tests with plastic pipes and plastic aluminum compound pipes having test condition U/C are valid for test conditions U/C and C/C.

		Tested			
		U/U	*C/U*	*U/C*	*C/C*
Covered	*U/U*	Y	N	N	N
	C/U	Y	Y	N	N
	U/C	Y	Y	Y	N
	C/C	Y	Y	Y	Y
Y = acceptable, N = not acceptable					

4.3.7 Where single pipes penetrate directly through the structural associated construction (masonry walls, flexible walls, concrete floors) the annular space between the pipe and the supporting construction shall remain within the tested range (10 to 47 mm). Separation a_2 (between penetration seals) may be increased (relevant distances are given in the Test reports described in cl. 3 of this Classification report).

4.3.8 The pipes must be suspended in supporting distance ≤ 335 mm on both sides from walls and ≤ 525 mm on top of floor constructions.

4.3.9 Sound decoupling strips based on PE-foam (class E according to EN 13501-1 or higher rated) with a max. thickness of 4 mm may be used.

4.3.10 Filling of annular space

In flexible and rigid walls:

For all pipes* Ø ≤ 160 mm	For up to EI 120: gypsum filler, width ≤ 31 mm,
For PP, PE and PVC pipes Ø ≤ 125 mm	For up to EI 90: gypsum filler, width ≤ 31 mm
	For up to EI 90: Backfilling: Stone wool (class A1 acc. EN 13501-1) Covering depth: ≥ 10 mm PROMASEAL®-A on both sides in the wall Annular space width: ≤ 10 mm
For Henco Standard pipes (plastic aluminum compound pipes)	Without backfilling possible. Covering depth: ≥ 25 mm PROMASEAL®-AG on both sides in the wall Annular space width: 5 - 20 mm

**no plastic aluminum compound pipes*

In rigid floors:

For pipes with coupling	For up to EI 90: PROMASTOP®-M or mortar with min. class M5 acc. EN 998-2, width ≤ 31 mm
For pipes and pipe bundles	For up to EI 120: PROMASTOP®-M or mortar with min. class M5 acc. EN 998-2, width ≤ 47 mm
For corner application	For up to EI 120 and pipe Ø 40 mm: PROMASTOP®-M or mortar with min. class M5 acc. EN 998-2, width ≤ 30 mm or: Backfilling: Stone wool (class A1 acc. EN 13501-1) Covering depth: ≥ 10 mm PROMASEAL®-AG on the bottom side of the floor Annular space width: ≤ 10 mm
	For up to EI 120 and pipe > Ø 40 mm and ≤ Ø 110 mm: PROMASTOP®-M or mortar with min. class M5 acc. EN 998-2, width ≤ 30 mm

In coated batt seals:

PROMASTOP®-CC (2x50 mm) coated batt seal For plastic aluminum compound pipes	PROMASEAL®-AG over complete depth of the coated batt seal and inbetween the pipe gussets
PROMASTOP®-CC (2x50 mm) coated batt seal	Stone wool backfilling, and covering with PROMASTOP®-CC firestop coating
PROMASTOP®-I (2x50 mm) coated batt seal	Stone wool backfilling, and covering with PROMASTOP®-I firestop coating

4.3.11 Fixing material

Flexible walls	For up to EI 120: Threaded rods ≥ M6 with nuts and washers
Rigid walls	For up to EI 120: Appropriate fixing material, e.g. screws min. 7.5x42 mm
For Henco Standard pipes (plastic aluminum compound pipes) in flexible walls	Screws min. 7.5x42 mm
	Threaded rods ≥ M6 with nuts and washers
Rigid floors	For up to EI 120: Appropriate fixing material, e.g. screws min. 7.5x72 mm
PROMASTOP®-CC (2x50 mm) coated batt seal	For up to EI90: Spiral screws made of steel, ≥ 8 x 100 mm, for PP, PE and PVC pipes Ø ≤ 125 mm
	For up to EI 120: Threaded rods ≥ M6 with nuts and washers
PROMASTOP®-I (2x50 mm) coated batt seal	For up to EI 90: threaded rods ≥ M6 with nuts and washers or spiral screws made of steel, ≥ 8 x 100 mm, for PP, PE and PVC pipes Ø ≤ 125 mm
For Henco Standard pipes (plastic aluminum compound pipes) PROMASTOP®-CC (2x50 mm) coated batt seal (rigid floor only)	Spiral screws made of steel, ≥ 8 x 45 mm
	Threaded rods ≥ M6 with nuts and washers
Additional protection	Using of steel wire (minimum thickness 0.6 mm)

4.3.12 Distances

Flexible and rigid wall	
PROMASTOP®-FC MD – PROMASTOP®-FC MD	≥ 60 mm
Flexible and rigid wall, PROMASTOP®-CC coated batt seal	
PROMASTOP®-FC MD – PROMASTOP®-FC MD	≥ 100 mm
PROMASTOP®-FC MD – horizontal aperture on top	≥ 60 mm
PROMASTOP®-FC MD – lateral aperture	≥ 60 mm
Rigid floor	
PROMASTOP®-FC MD – PROMASTOP®-FC MD	≥ 88 mm
Rigid floor, PROMASTOP®-CC coated batt seal	
PROMASTOP®-FC MD – PROMASTOP®-FC MD	≥ 70 mm
PROMASTOP®-FC MD – lateral aperture	≥ 50 mm
Rigid floor, PROMASTOP®-I coated batt seal	
PROMASTOP®-FC MD – PROMASTOP®-FC MD	≥ 95 mm
PROMASTOP®-FC MD – lateral aperture	≥ 50 mm

Any other distance: ≥ 100 mm

4.3.13 Pipe couplings

PROMASTOP®-FC MD can be used to seal plastic pipe couplings under the following conditions:

- Horizontal compartmentation
- Pipe orientation 90° to the compartmentation
- Pipe material PE-HD, PP-H, PP-R, and PVC, see clause 4.2.16, 4.2.17, 4.2.18
- Maximum pipe diameter 125 mm
- Classification **E 120, EI 90 – U/U**
- The number of “C” brackets must be increased by one acc. the standard application, see clause 4.3.17
- Sound decoupling strips based on PE-foam (class E according to EN 13501-1 or higher rated) with a max. thickness of 4 mm may be used.

4.3.14 PROMASTOP®-FC MD corner application

- Horizontal compartmentation
- Two walls or columns are forming the corner (90°)
- Pipe orientation 90° to the compartmentation
- Pipe material PE-HD, PP-H, PP-R, PP-C and PVC, see clause 4.2.40, 4.2.41, 4.2.42
- Pipe directly mounted in the corner
- 2 layers of PROMASTOP®-FC MD shall be used at any time
- For pipe diameter Ø 40 mm, 1 “C” bracket for the first collar and 2 “D” brackets for the second collar shall be used
- For pipe diameter > Ø 40 mm and ≤ Ø 110 mm, 2 “C” brackets for the first collar and 3 “D” brackets for the second collar shall be used
- No “A” and “B” brackets are required
- Distance of the PROMASTOP®-FC MD collar around the pipe, about 10 mm
- PROMASTOP®-FC MD collar does not completely cover the circumference (about three quarters circumferential) of the pipe

4.3.15 Available brackets for PROMASTOP®-FC MD

Type A	Closing bracket for the one end of the PROMASTOP®-FC MD, used together with type B bracket
Type B	Closing bracket for the one end of the PROMASTOP®-FC MD, used together with type A bracket
Type C	Fixing bracket for one or the first collar of PROMASTOP®-FC MD
Type D	Fixing bracket for the second collar on top of the first collar of PROMASTOP®-FC MD

4.3.16 PROMASTOP®-FC MD collar and brackets consumption table – perpendicular pipes or bundles* made of plastic aluminum compound pipes

Pipe outer diameter (mm)	Number of collars	Number of “C” brackets	Number of “D” brackets
40 – 50	1	2	-
64 – 110	1	3	-
125	1	4	-
> 125 – 200	2	2 (first collar)	4 (second collar)

** max. bundle diameter, 110 mm, plastic aluminum compound pipes made by Henco, type Standard.*

The number of brackets may be increased.

4.3.17 PROMASTOP®-FC MD collar and brackets consumption table – pipes with couplings (4.2.16, 4.2.17, 4.2.18)

Pipe outer diameter (mm)	Number of collars	Number of “C” brackets	Number of “D” brackets
40 – 50	1	3	-
64 – 110	1	4	-
125	1	5	-

The number of brackets may be increased.

4.3.18 PROMASTOP®-FC MD collar and brackets consumption table – pipes in corners of walls/columns (4.2.40, 4.2.41, 4.2.42)

Pipe outer diameter (mm)	Number of layers	Number of “C” brackets	Number of “D” brackets
40	2	1 (first collar)	2 (second collar)
> 40 – 110	2	2 (first collar)	3 (second collar)

For corner application, no Type “A” and Type “B” bracket may be used. 2 layers of PROMASTOP®-FC MD shall be used at any time. The number of brackets may be increased.

5 Limitations

This classification is valid unless the conditions, under which it was issued, have been changed (i.e., until the materials used, the composition or design of the product or the technical regulations relating to the product change).

The sponsor may request the issuing authority to review the influence of changes on the classification validity.

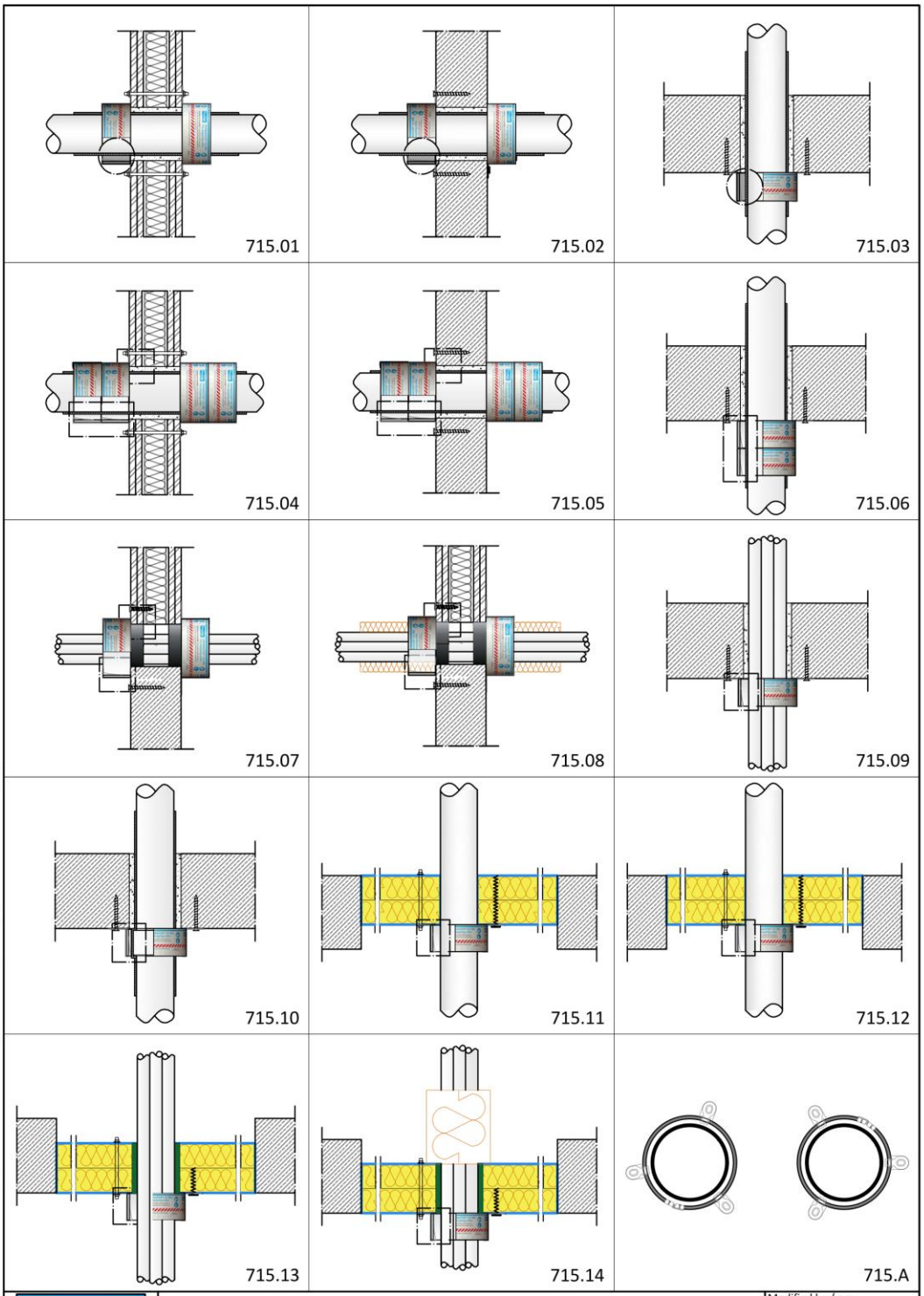
This classification document does not represent type approval or certification of the product.

Prepared by:	*Reviewed by:*	*Approved by:*
Jiří VANĚK Fire Testing Laboratory	Magdaléna CHARVÁTOVÁ	Jan TRIPES

PAVUS, a.s.
Čtvrť J. Hybeše 879
391 81 Veselí nad Lužnicí
IČ: 60193174; DIČ: CZ60193174
(9)

AKREDITOVANÝ CERTIFIKAČNÍ ORGÁN Č. 3041 PRO CERTIFIKACI VÝROBKŮ
PAVUS, a.s.

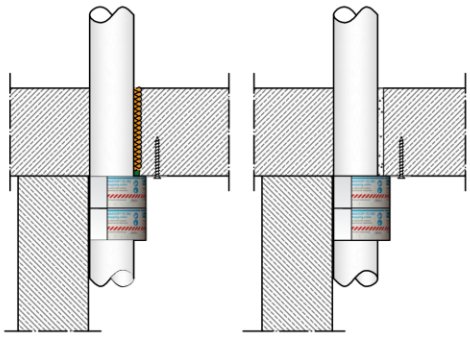
Annex A - Documentation given by the sponsor



Promat
Etex Building Performance GmbH
St.-Peter-Strasse 25 | Bau 39
4021 Linz | Austria
T +43 (0) 732 6912 3621
F +43 (0) 732 6912 3740
E technik.at@etexgroup.com
www.promat.at

PROMASTOP®-FC MD Firestop Collar
Overview of the constructions

Scale:	Drawing format:	Date:	Department:	Modified by / on:	Drawn by:	Drawing number:
none	A4	2021/06/08	Technical appl.		M.DZIKI	715.001



715.15

Promat
Etex Building Performance GmbH
St.-Peter-Strasse 25 | Bau 39
4021 Linz | Austria
T +43 (0) 732 6912 3621
F +43 (0) 732 6912 3740
E technik.at@etexgroup.com
www.promat.at

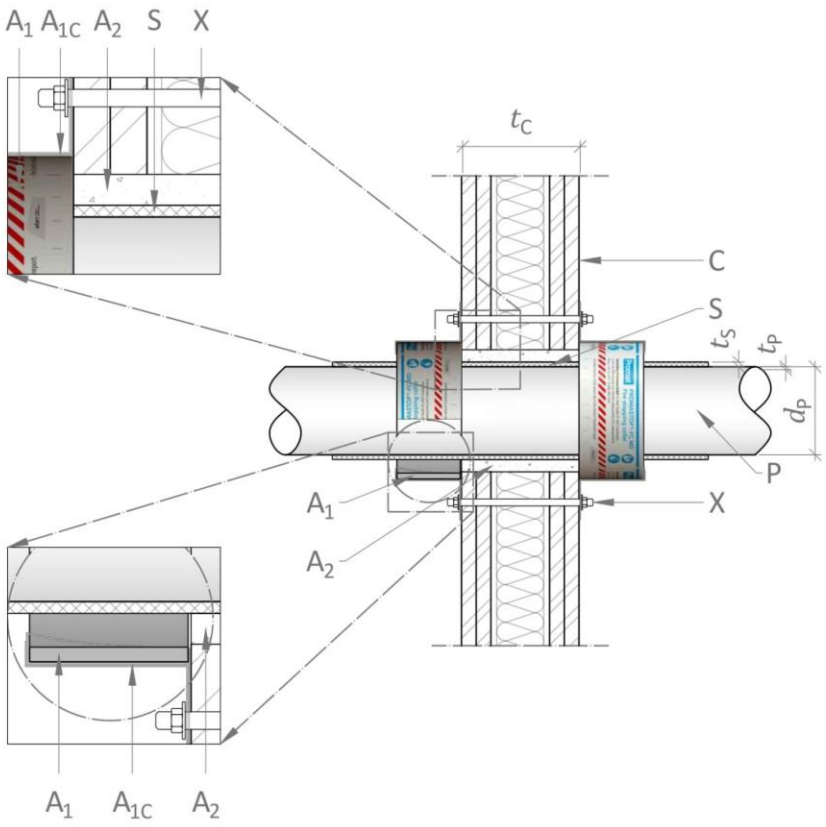
PROMASTOP®-FC MD Firestop Collar
Overview of the constructions

Scale:	Drawing format:	Date:	Department:
none	A4	2021/06/08	Technical appl.

Modified by / on:

Drawn by: M.DZIKI

Drawing number: 715.002



Legend:

- A_1 - Firestop Collar PROMASTOP®-FC MD
- A_{1C} - Fixing bracket type C
- A_2 - Annular gap sealing, e.g. using Promat®-Filler
- C - Flexible wall construction with thickness $t_C \geq 100$ mm
- P - Plastic pipe with diameter d_P and wall thickness t_P
- S - Sound-decoupling strip with thickness $t_S \leq 4$ mm (optional)
- X - Fixing material, threaded bars ≥ M6

Promat
Etex Building Performance GmbH
St.-Peter-Strasse 25 | Bau 39
4021 Linz | Austria
T +43 (0) 732 6912 3621
F +43 (0) 732 6912 3740
E technik.at@etexgroup.com
www.promat.at

PROMASTOP®-FC MD Firestop Collar
Seal penetrated by plastic pipes
in flexible wall constructions

Scale:	Drawing format:	Date:	Department:
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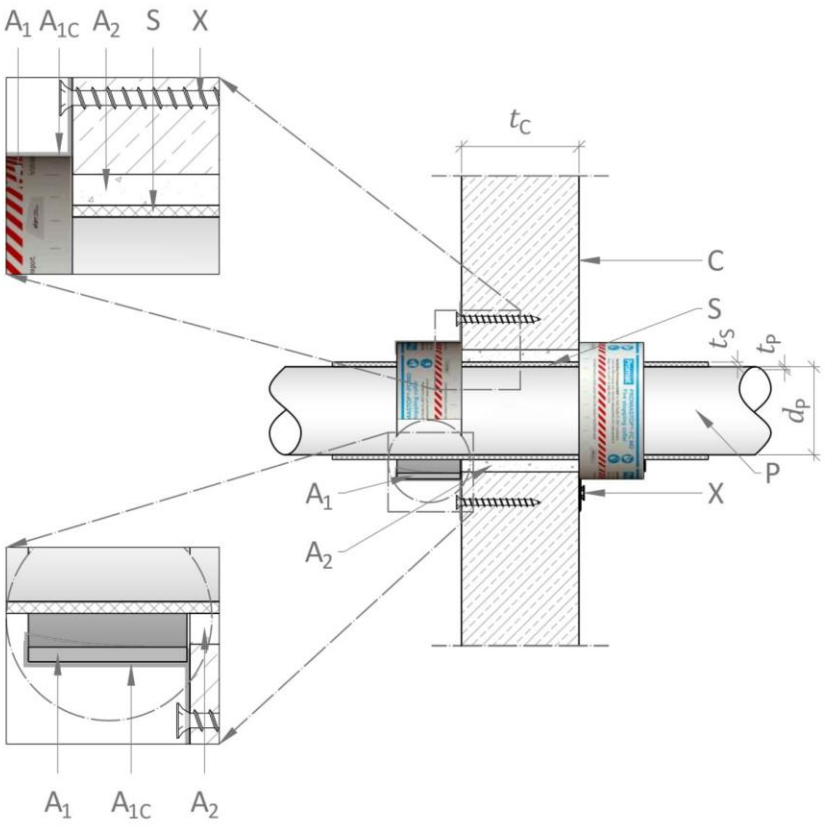
Modified by / on:

Drawn by: P. Erasim

Drawing number: 715.01



Legend:

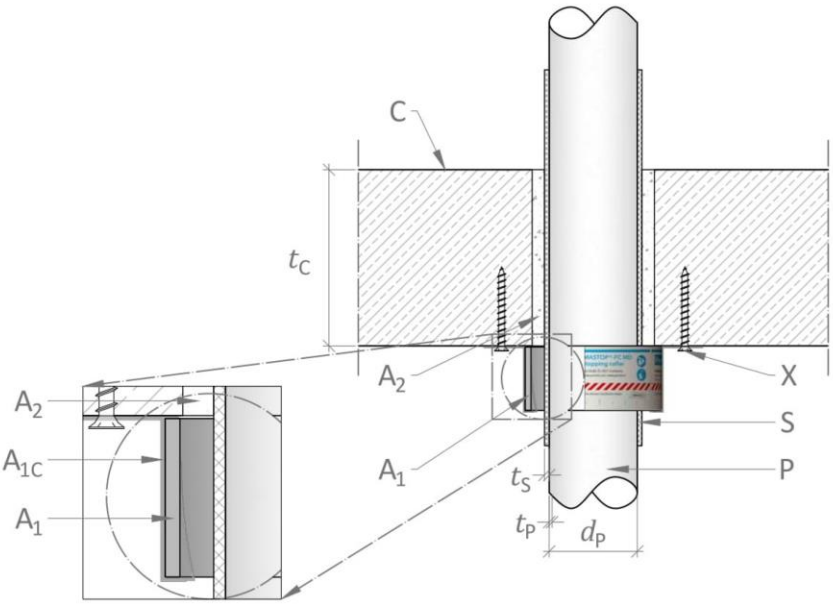
- A_1 - Firestop Collar PROMASTOP®-FC MD
- A_{1C} - Fixing bracket type C
- A_2 - Annular gap sealing, e.g. using Firestop Mortar PROMASTOP®-M
- C - Rigid wall construction with thickness $t_C \geq 100$ mm
- P - Plastic pipe with diameter d_P and wall thickness t_P
- S - Sound-decoupling strip with thickness $t_S \leq 4$ mm (optional)
- X - Appropriate fixing material, e.g. screws 7,5 × 72 mm

Promat
Etex Building Performance GmbH
St.-Peter-Strasse 25 | Bau 39
4021 Linz | Austria
T +43 (0) 732 6912 3621
F +43 (0) 732 6912 3740
E technik.at@etexgroup.com
www.promat.at

PROMASTOP®-FC MD Firestop Collar
Seal penetrated by plastic pipes
in rigid wall constructions

Modified by / on:	
Drawn by:	P. Erasim
Drawing number:	715.02

Scale:	Drawing format:	Date:	Department:
none	A4	2019/04/05	Technical appl.



Legend:

- A_1 - Firestop Collar PROMASTOP®-FC MD
- A_{1C} - Fixing bracket type C
- A_2 - Annular gap sealing, e.g. using Firestop Mortar PROMASTOP®-M
- C - Rigid floor construction with thickness $t_C \geq 150$ mm
- P - Plastic pipe with diameter d_P and wall thickness t_P
- S - Sound-decoupling strip with thickness $t_S \leq 4$ mm (optional)
- X - Appropriate fixing material, e.g. screws 7,5 × 72 mm

Promat
Etex Building Performance GmbH
St.-Peter-Strasse 25 | Bau 39
4021 Linz | Austria
T +43 (0) 732 6912 3621
F +43 (0) 732 6912 3740
E technik.at@etexgroup.com
www.promat.at

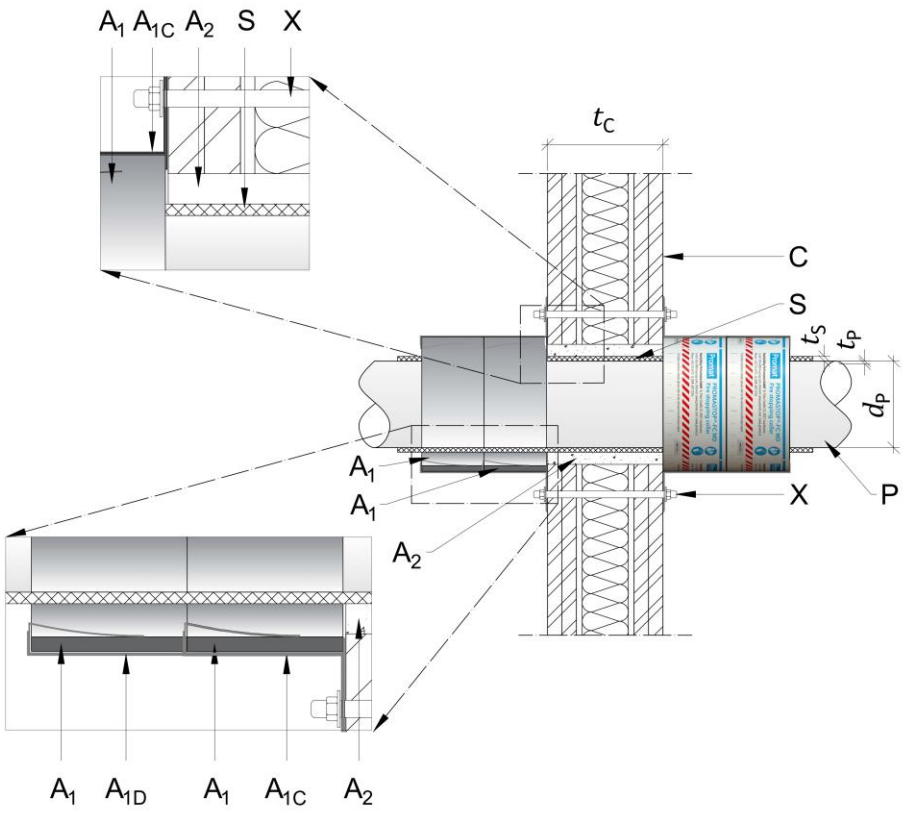
PROMASTOP®-FC MD Firestop Collar
Seal penetrated by plastic pipes
in rigid floor constructions

Scale:	Drawing format:	Date:	Department:
none	A4	2019/04/05	Technical appl.

Modified by / on:

Drawn by: P. Erasim

Drawing number: 715.03



Legend:

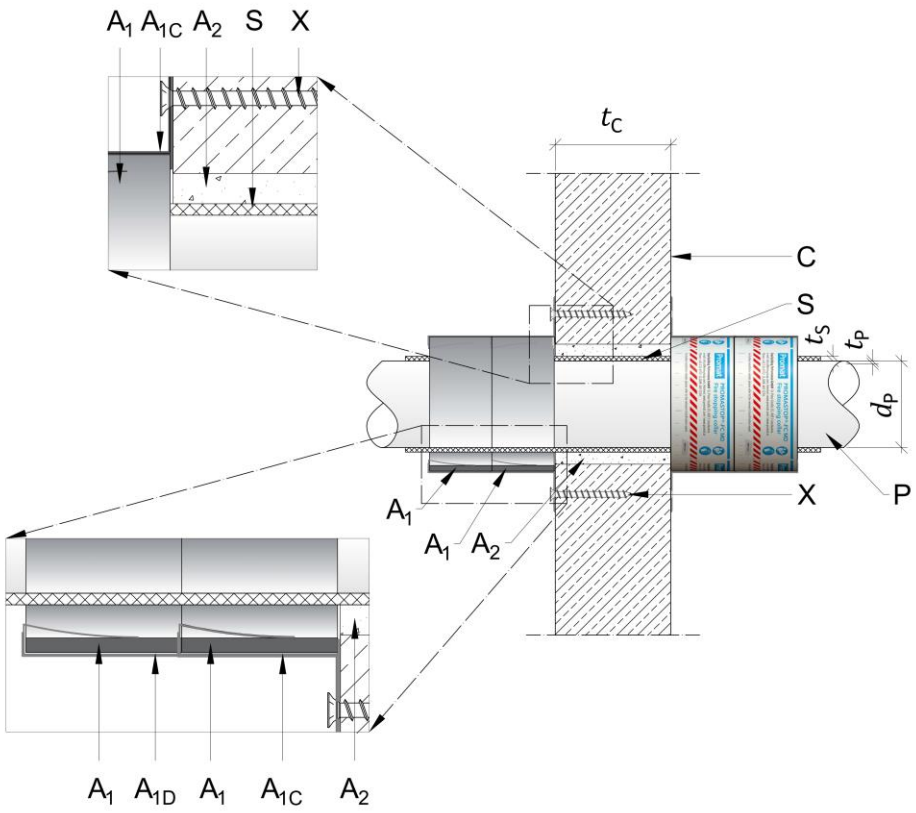
A_1 - Firestop Collar PROMASTOP®-FC MD
A_{1C} - Fixing bracket type C
A_{1D} - Fixing bracket type D
A_2 - Annular gap sealing, e.g. using Promat®-Filler, gypsum
C - Flexible wall construction with thickness $t_C \geq 100$ mm
P - Plastic pipe with diameter d_P and wall thickness t_P
S - Sound-decoupling strip with thickness $t_S \leq 4$ mm (optional)
X - Fixing material, threaded bars ≥ M6

Promat
Etex Building Performance GmbH
St.-Peter-Strasse 25 | Bau 39
4021 Linz | Austria
T +43 (0) 732 6912 3621
F +43 (0) 732 6912 3740
E technik.at@etexgroup.com
www.promat.at

PROMASTOP®-FC MD Firestop Collar
Seal penetrated by plastic pipes
in flexible wall constructions,
pipe diameter > 125 mm

Scale:	Drawing format:	Date:	Department:
none	A4	2021/05/20	Technical appl.

Modified by / on:
Drawn by: M.Andruszkiewicz
Drawing number: 715.04



Legend:

A_1 - Firestop Collar PROMASTOP®-FC MD
A_{1C} - Fixing bracket type C
A_{1D} - Fixing bracket type D
A_2 - Annular gap sealing, e.g. using Firestop Mortar PROMASTOP®-M
C - Rigid wall construction with thickness $t_C \geq 100$ mm
P - Plastic pipe with diameter d_P and wall thickness t_P
S - Sound-decoupling strip with thickness $t_S \leq 4$ mm (optional)
X - Appropriate fixing material, e.g. screws 7,5 × 72 mm

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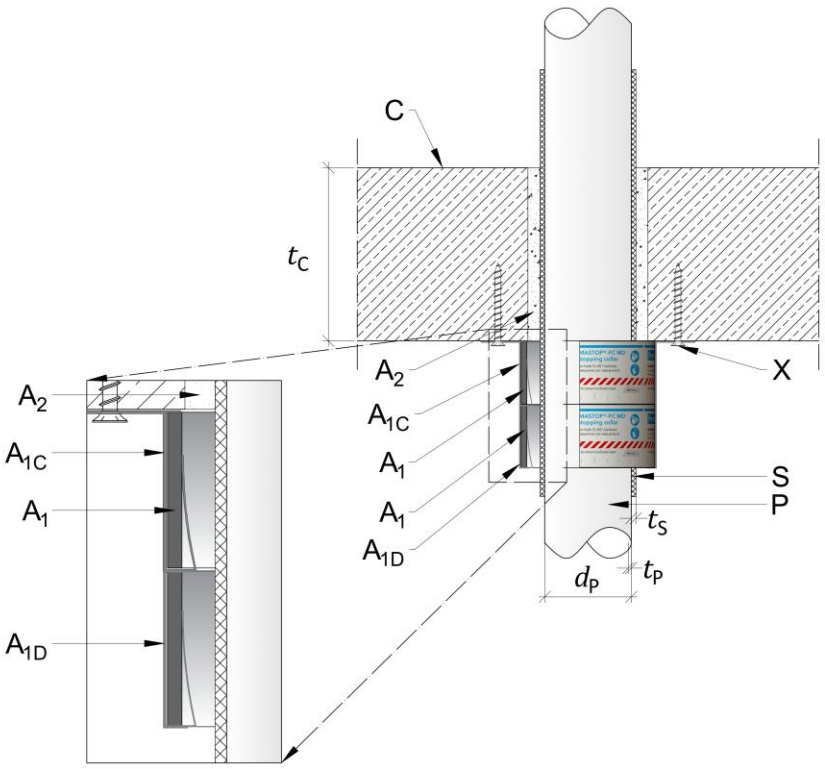
Scale:	Drawing format:	Date:	Department:
none	A4	2021/05/20	Technical appl.



Legend:

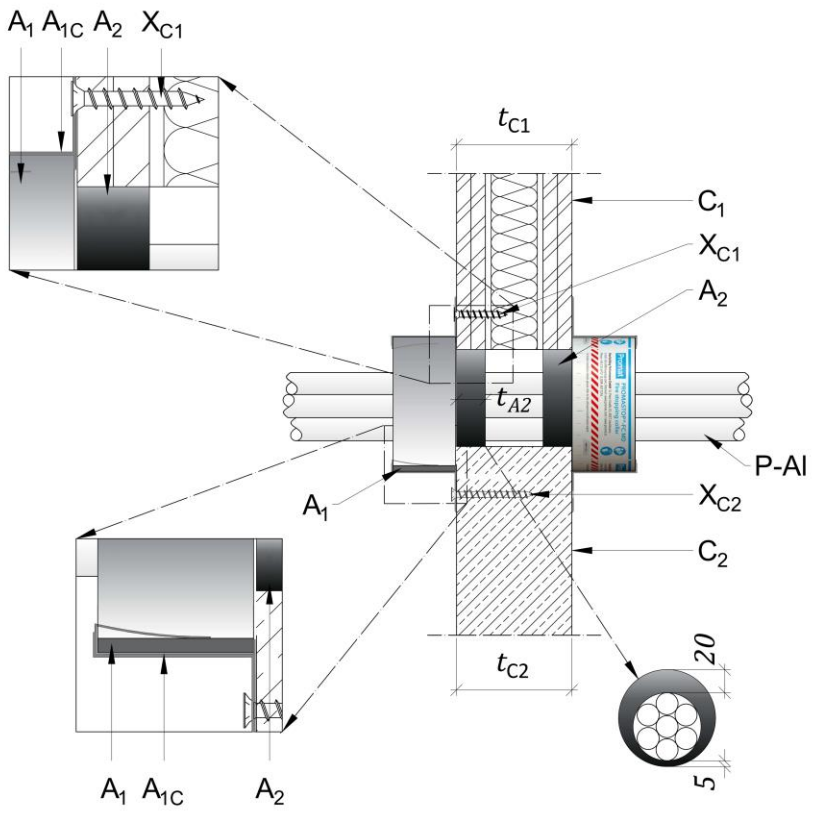
A_1 - Firestop Collar PROMASTOP®-FC MD
A_{1C} - Fixing bracket type C
A_{1D} - Fixing bracket type D
A_2 - Annular gap sealing, e.g. using Firestop Mortar PROMASTOP®-M
C - Rigid floor construction with thickness $t_C \geq 150$ mm
P - Plastic pipe with diameter d_P and wall thickness t_P
S - Sound-decoupling strip with thickness $t_S \leq 4$ mm (optional)
X - Appropriate fixing material, e.g. screws 7,5 × 72 mm

Promat
Etex Building Performance GmbH
St.-Peter-Strasse 25 | Bau 39
4021 Linz | Austria
T +43 (0) 732 6912 3621
F +43 (0) 732 6912 3740
E technik.at@etexgroup.com
www.promat.at

PROMASTOP®-FC MD Firestop Collar
Seal penetrated by plastic pipes
in rigid floor constructions
pipe diameter > 125 mm

Scale:	Drawing format:	Date:	Department:
none	A4	2021/05/20	Technical appl.

Modified by / on:
Drawn by: M.Andruszkiewicz
Drawing number: 715.06



Legend:

A_1 - Firestop Collar PROMASTOP®-FC MD
A_{1C} - Fixing bracket type C
A_{1D} - Fixing bracket type D
A_2 - Firestop Sealant PROMASEAL(R)-AG with thickness $t_{A2} \geq 25$ mm and width w_{A2} 5-20 mm
C_1 - Flexible wall construction with thickness $t_{c1} \geq 100$ mm
C_2- Rigid wall construction with thickness $t_{c2} \geq 100$ mm
P-Al - Plastic pipe with diameter d_P and wall thickness t_P
X_{C1}- Fixing material, e.g. screws ≥ 7,5x42 mm or threaded rods ≥ M6
X_{C2}- Appropriate fixing material, e.g. screws ≥ 7,5x42 mm

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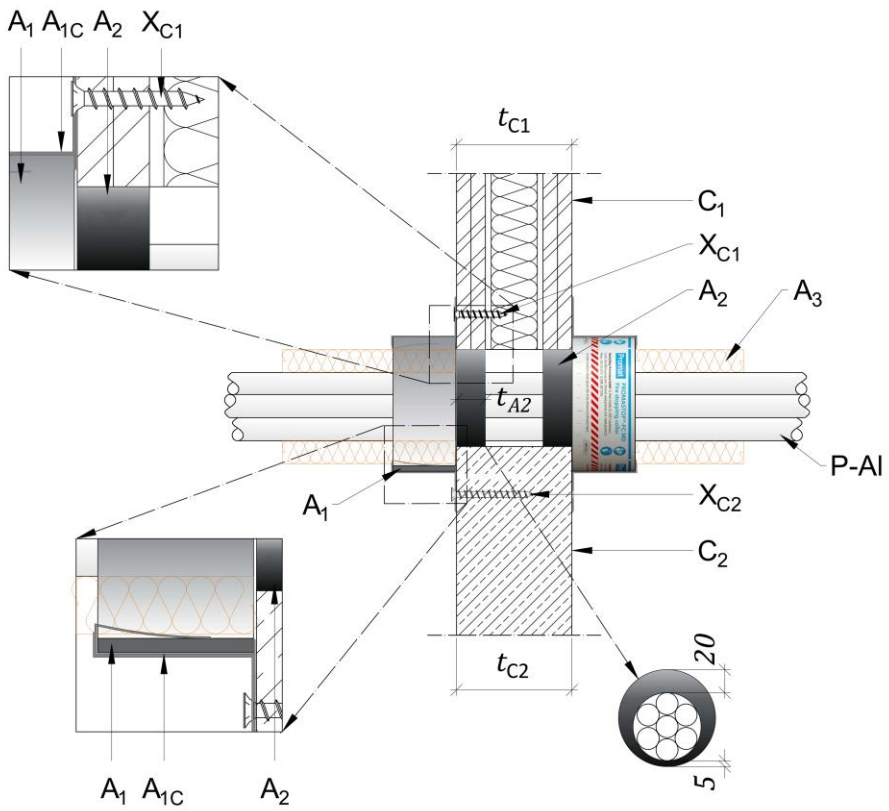
	Scale: none | Drawing format: A4 | Date: 2021/05/25 | Department: Technical appl.	



Legend:

A_1 - Firestop Collar PROMASTOP®-FC MD
A_{1C} - Fixing bracket type C
A_{1D} - Fixing bracket type D
A_2 - Firestop Sealant PROMASEAL(R)-AG with thickness $t_{A2} \geq 25$ mm and width w_{A2} 5-20 mm
A_3 - Additional protection, stone wool, length ≥ 150 mm, thickness see CR or ETA
C_1 - Flexible wall construction with thickness $t_{c1} \geq 100$ mm
C_2- Rigid wall construction with thickness $t_{c2} \geq 100$ mm
P-Al - Plastic pipe with diameter d_P and wall thickness t_P
X_{C1}- Fixing material, e.g. screws ≥ 7,5x42 mm or threaded rods ≥ M6
X_{C2}- Appropriate fixing material, e.g. screws ≥ 7,5x42 mm

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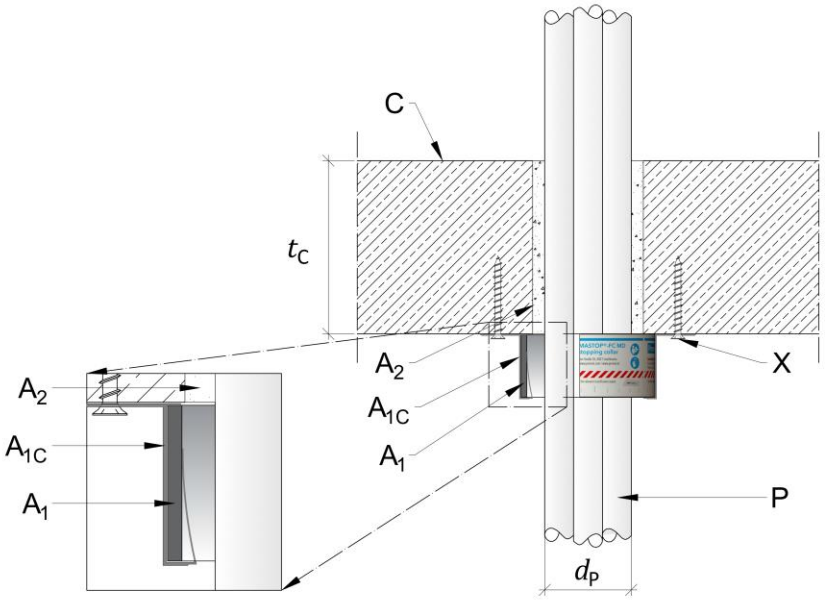
Scale:	Drawing format:	Date:	Department:
none	A4	2021/05/25	Technical appl.



Legend:

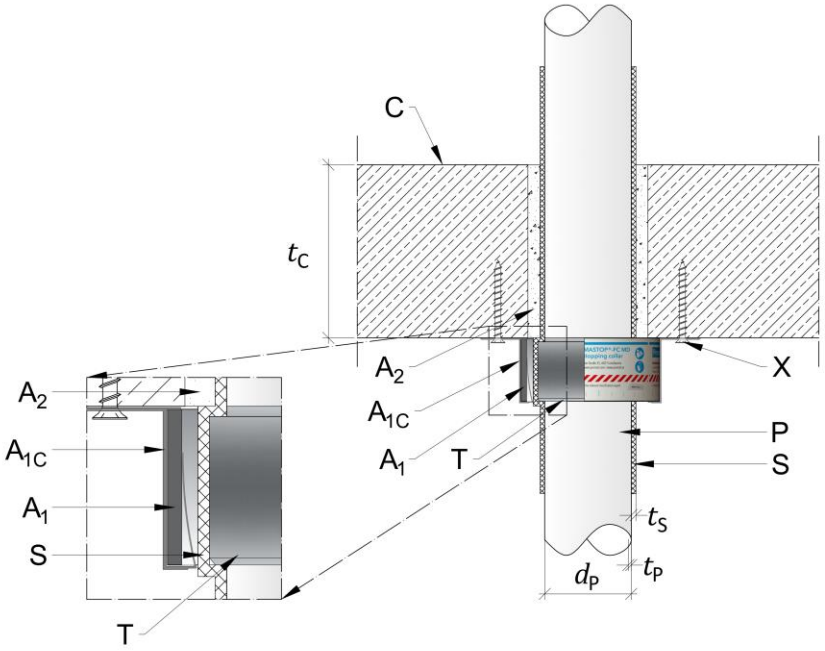
A_1 - Firestop Collar PROMASTOP®-FC MD
A_{1C} - Fixing bracket type C
A_2 - Annular gap sealing, e.g. using Firestop Mortar PROMASTOP®-M
C - Rigid floor construction with thickness $t_C \geq 150$ mm
P - Plastic pipe(bundle) with diameter d_P and wall thickness t_P
X - Appropriate fixing material, e.g. screws 7,5 × 72 mm

Promat
Etex Building Performance GmbH
St.-Peter-Strasse 25 | Bau 39
4021 Linz | Austria
T +43 (0) 732 6912 3621
F +43 (0) 732 6912 3740
E technik.at@etexgroup.com
www.promat.at

PROMASTOP®-FC MD Firestop Collar
Seal penetrated by plastic pipes (bundle)
in rigid floor constructions

Modified by / on:
Drawn by: M.Andruszkiewicz
Drawing number: 715.09

Scale:	Drawing format:	Date:	Department:
none	A4	2021/05/25	Technical appl.



Legend:

A_1 - Firestop Collar PROMASTOP®-FC MD
A_{1C} - Fixing bracket type C
A_2 - Annular gap sealing, e.g. using Firestop Mortar PROMASTOP®-M
C - Rigid floor construction with thickness $t_C \geq 150$ mm
P - Plastic pipe with diameter d_P and wall thickness t_P
S - Sound-decoupling strip with thickness $t_S \leq 4$ mm (optional)
X - Appropriate fixing material, e.g. screws 7,5 × 72 mm
T- Coupling

For pipe materials, dimensions and application, please see ETA or classification report.

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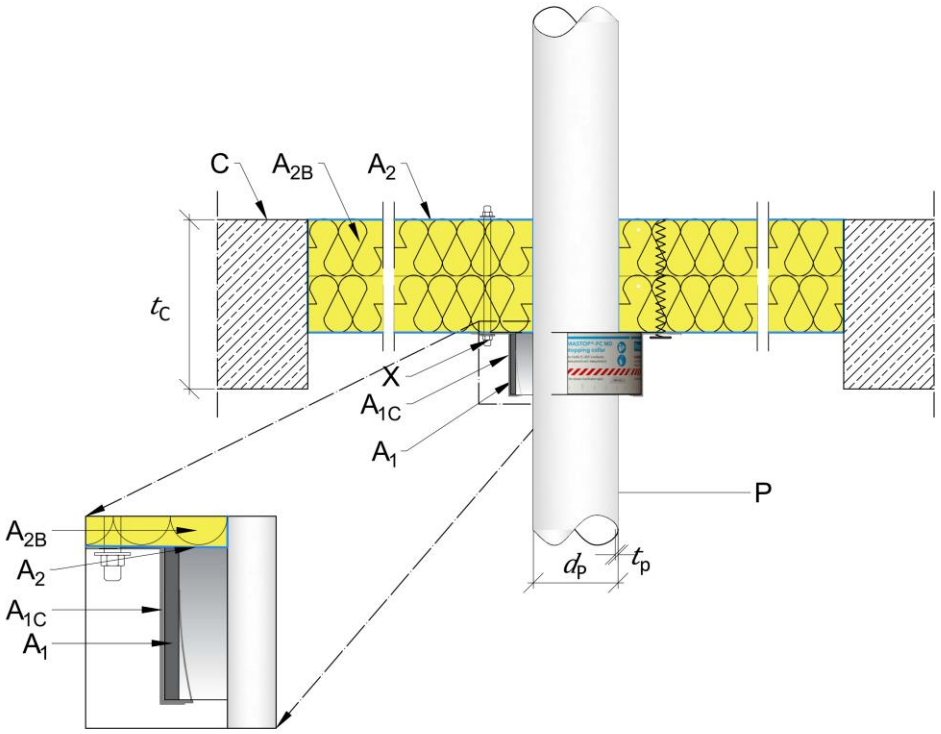
Scale:	Drawing format:	Date:	Department:
none	A4	2021/05/25	Technical appl.



Legend:
C - Rigid floor construction with thickness $t_C \geq 150$ mm
A_1 - Firestop Collar PROMASTOP®-FC MD
A_{1C} - Fixing bracket type C
A_2 - Coated batt seal PROMASTOP®- CC
A_{2B} - Stone wool boards
P - Plastic pipe with diameter d_p and wall thickness t_p
X - Fixing material, e.g. threaded rods ≥ M6 (EI120) or spiral screws made of steel, ≥ 8x100mm (EI90)

For pipe materials, dimensions and application, please see ETA or classification report.

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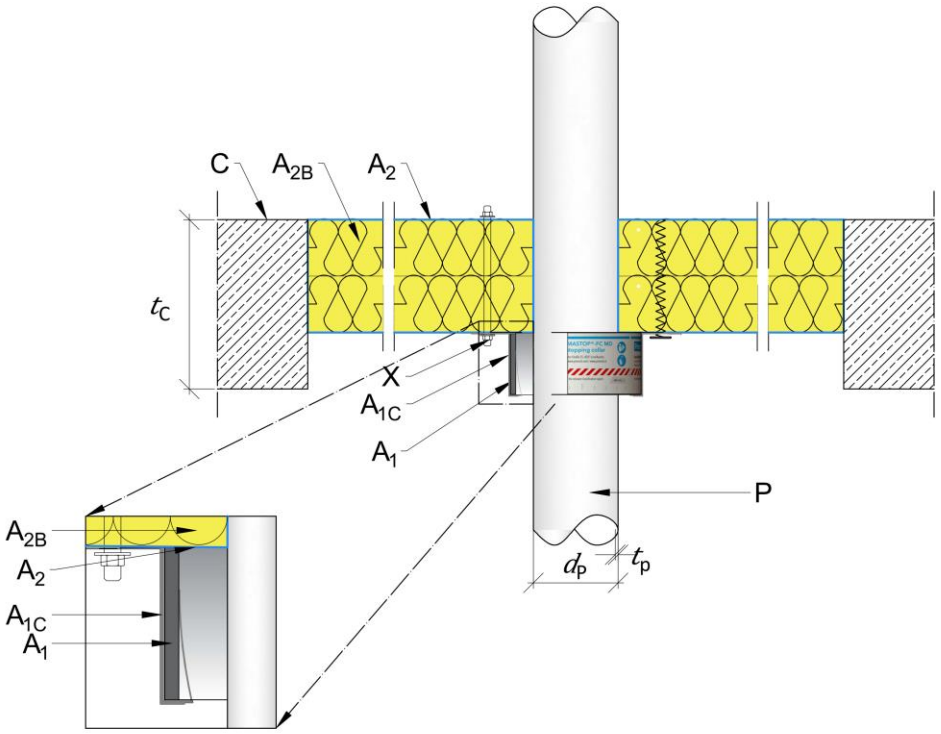
	Scale: none | Drawing format: A4 | Date: 2021/05/28 | Department: Technical appl.	



Legend:
C - Rigid floor construction with thickness $t_C \geq 150$ mm
A_1 - Firestop Collar PROMASTOP®-FC MD
A_{1C} - Fixing bracket type C
A_2 - Coated batt seal PROMASTOP(R)-I
A_{2B} - Stone wool boards
P - Plastic pipe with diameter d_p and wall thickness t_p
X - Fixing material, e.g. threaded rods ≥ M6 (EI120) or spiral screws made of steel, ≥ 8x100mm (EI90)

For pipe materials, dimensions and application, please see ETA or classification report.

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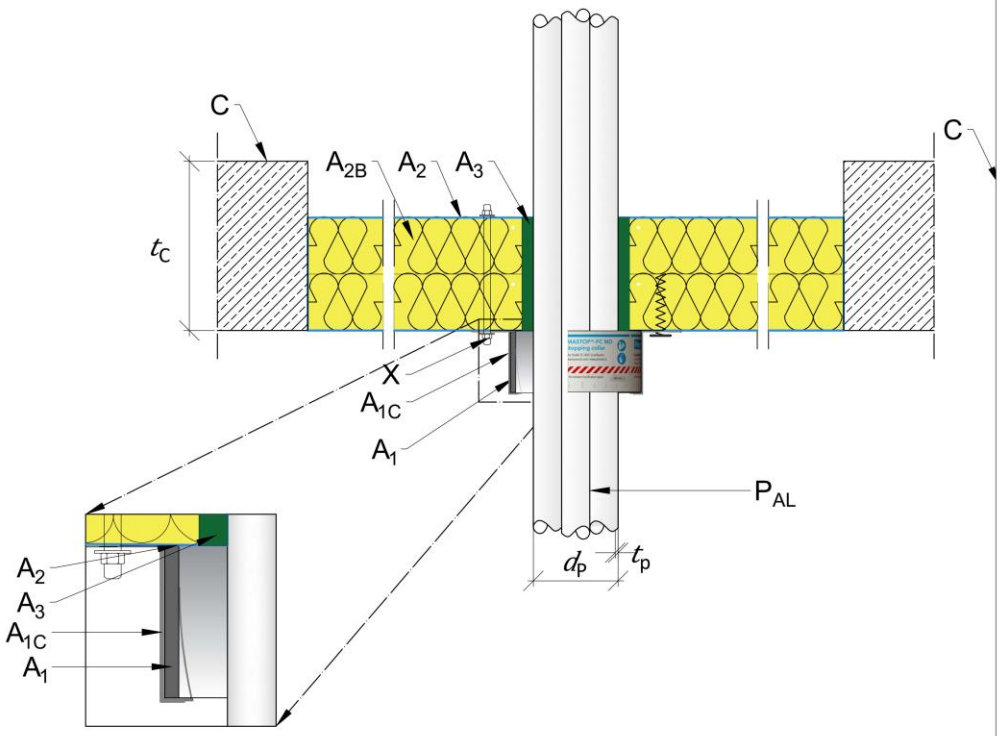
Scale:	Drawing format:	Date:	Department:
none	A4	2021/05/28	Technical appl.



Legend:
C - Rigid floor construction with thickness $t_C \geq 150$ mm
A_1 - Firestop Collar PROMASTOP®-FC MD
A_{1C} - Fixing bracket type C
A_2 - Coated batt seal PROMASTOP®- CC
A_{2B} - Stone wool boards
A_3 - Firestop Sealant PROMASEAL(R)-AG
P_{AL} - Plastic aluminum compound pipes (with or without insulation or PE corrugated cover)
X - Fixing material, e.g. threaded rods ≥ M6 or spiral screws made of steel, ≥ 8x45 mm

For pipe materials, dimensions and application, please see ETA or classification report.

Promat
Etex Building Performance GmbH
St.-Peter-Strasse 25 | Bau 39
4021 Linz | Austria
T +43 (0) 732 6912 3621
F +43 (0) 732 6912 3740
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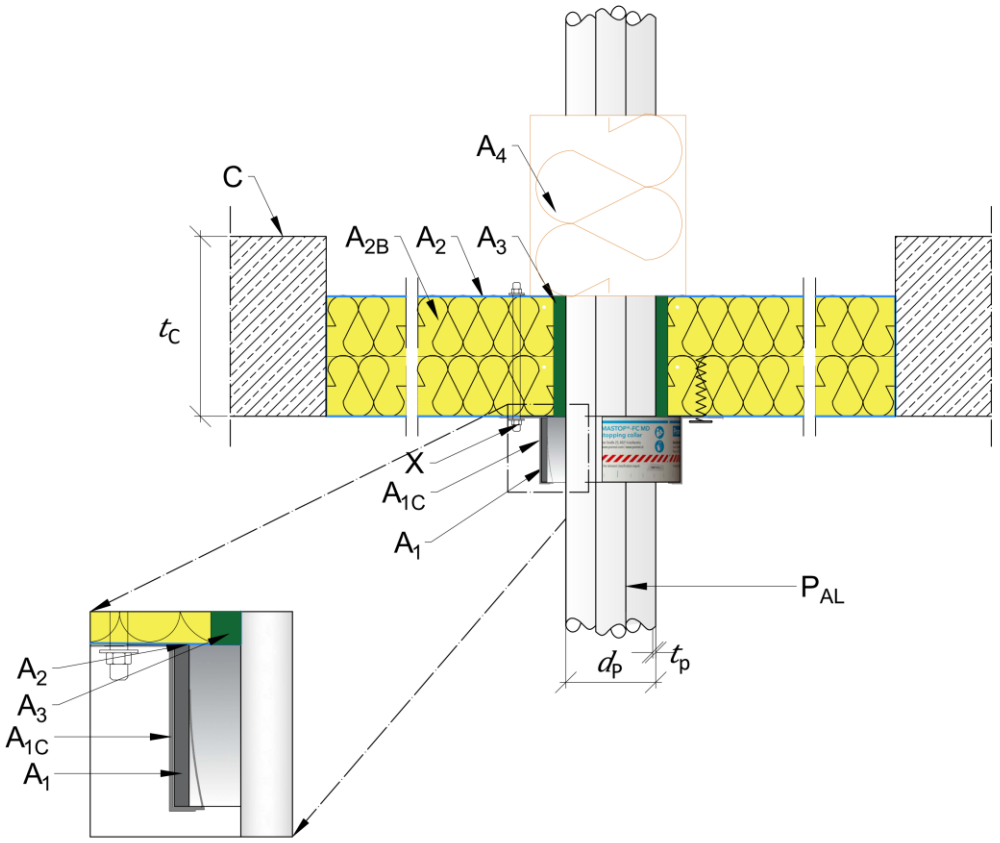
PROMASTOP®-FC MD Firestop Collar
seal penetrated by plastic aluminum compound pipes (single or bundle) in a 2x50 mm PROMASTOP®-CC coated batt seal in rigid floor constructions

Scale:	Drawing format:	Date:	Department:
none	A4	2021/05/28	Technical appl.

Modified by / on:
Drawn by: M.DZIKI
Drawing number: 715.13



Legend:
C - Rigid floor construction with thickness t_C ≥ 150 mm
A_1 - Firestop Collar PROMASTOP®-FC MD
A_{1C} - Fixing bracket type C
A_2 - Coated batt seal PROMASTOP(R)-CC
A_{2B} - Stone wool boards
A_3 - Firestop Sealant PROMASEAL(R)-AG
A_4 - Additional protection,stone wool,length ≥ 150 mm, thickness see CR or ETA
P_{AL} - Plastic aluminum compound pipes (with or without insulation or PE corrugated cover)
X - Fixing material, e.g. threaded rods ≥ M6 or spiral screws made of steel, ≥ 8x45 mm

For pipe materials, dimensions and application, please see ETA or classification report.

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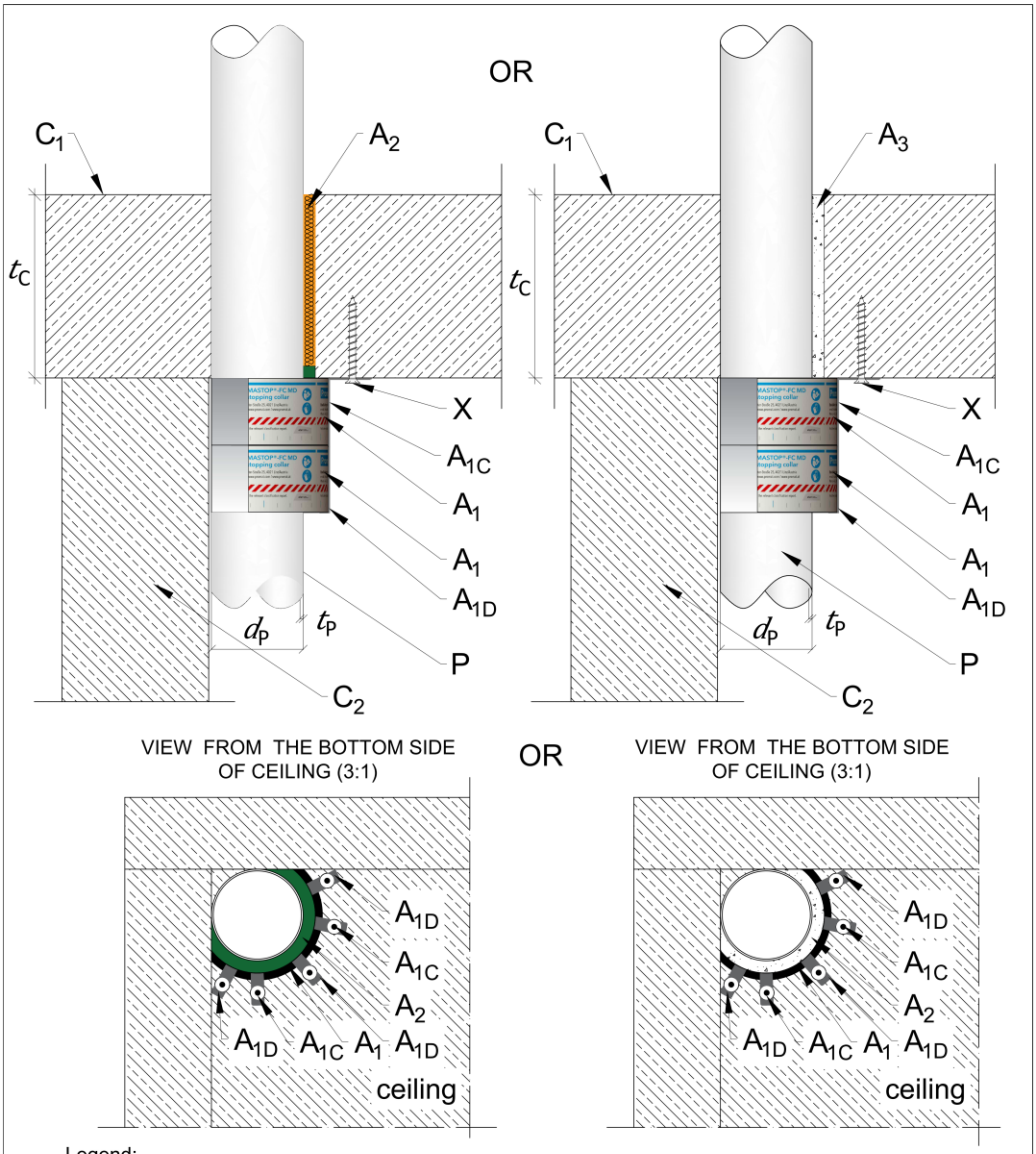
Scale: none	Drawing format: A4	Date: 2021/05/29
Department: Technical appl.		



Legend:
C1 - Rigid floor construction with thickness tc ≥ 150 mm
C2 - Wall construction
A1 - Firestop Collar PROMASTOP(R)-FC MD
A1c - Fixing bracket type C (number of brackets see CR or ETA)
A1D- Fixing bracket type D (number of brackets see CR or ETA)
A2 - Annular space sealing, PROMASEAL(R)-AG and stone wool backfilling (see CR or ETA)
A3 - Annular space sealing, e.g. PROMASTOP(R)-M or mortar class M5 (acc. EN 998-2)
P - Plastic pipes with pipe diameter dp and pipe wall thickness tp
X - Appropriate fixing material, e.g. screw, ≥ 7,5x72 mm

For pipe materials, dimensions and application, please see ETA or classification report.

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Etex Building Performance GmbH
St.-Peter-Strasse 25 | Bau 39
4021 Linz | Austria
T +43 (0) 732 6912 3621
F +43 (0) 732 6912 3740
E technik.at@etexgroup.com
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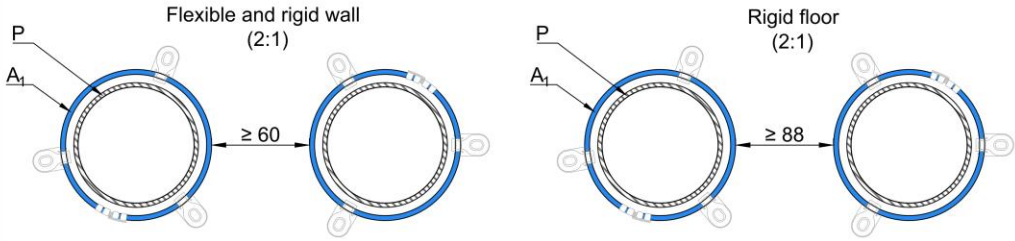
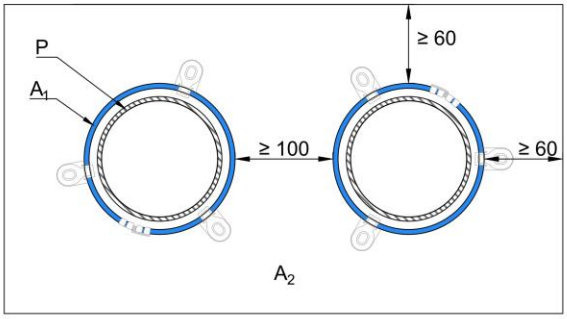
PROMASTOP®-FC MD Firestop Collar
seal penetrated by plastic pipes in rigid floor constructions, corner application

Scale:	Drawing format:	Date:	Department:
none	A3	2021/29/05	Technical

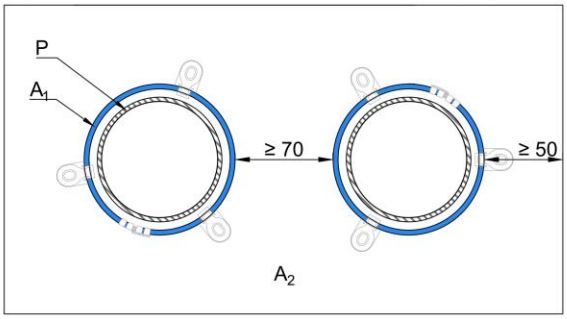
Modified by/ on:
Drawn by: M. Dziki
Drawing number: 715.15



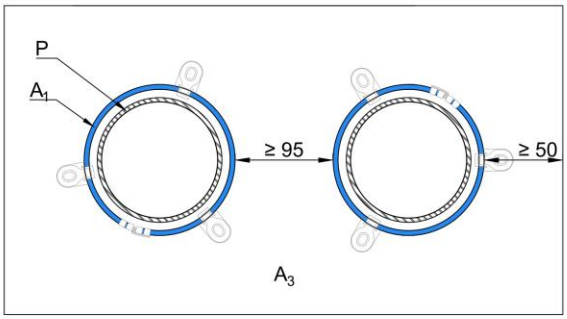
Flexible and rigid wall - PROMASTOP®- CC coated batt seal (2:1)



Rigid floor - PROMASTOP®- CC coated batt seal (2:1)



Rigid floor - PROMASTOP®- I coated batt seal (2:1)



Legend:
A_1 - Firestop Collar PROMASTOP®-FC MD
A_2 - PROMASTOP(R)-CC coated batt seal
A_3 - PROMASTOP(R)-I coated batt seal
P - Plastic pipe

Dimensions in mm

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Etex Building Performance GmbH
St.-Peter-Strasse 25 | Bau 39
4021 Linz | Austria
T +43 (0) 732 6912 3621
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www.promat.at

PROMASTOP®-FC MD Firestop Collar Distances

Scale:	Drawing format:	Date:	Department:
1:10	A3	2021/09/05	Technical

Modified by/ on:
Drawn by: M. Dziki
Drawing number: 715.A

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Austria
Etex Building Performance GmbH

St.-Peter-Straße 25
4021 Linz
T +43 732 69 12-0
F +43 732 69 12-37 40
E info.at@etexgroup.com
www.promat.at

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