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European Technical Assessment

ETA-19/0215
of 01.08.2019

General part

Technical Assessment Body issuing the European Technical Assessment	Österreichisches Institut für Bautechnik (OIB) Austrian Institute of Construction Engineering
Trade name of the construction product	PROMASTOP®-FC MD
Product family to which the construction product belongs	Fire Stopping and Fire Sealing Product: Penetration seal
Manufacturer	Etex Building Performance NV Bormstraat 24 2830 Tisselt Belgium
Manufacturing plant	Production plant 21
This European Technical Assessment contains	31 pages including Annexes 1 to 4 which form an integral part of this assessment
This European Technical Assessment is issued in accordance with Regulation (EU) No 305/2011, on the basis of	European Assessment Document, EAD 350454-00-1104 “Fire Stopping and Fire Sealing Products – Penetration Seals, edition September 2017”

Specific parts

1. Technical description of the product

1.1 Definition of the construction product

PROMASTOP®-FC-MD is a firestop collar, it is made of an intumescent strip, equipped with fixing hooks and closure brackets to form a penetration seal to reinstate the fire resistance performance of floor and wall constructions, where they have been provided with apertures for the penetration of different pipes. Depending on the circumference of the pipes, it can be cut to length and is installed on both sides of the walls and on the bottom side of floor constructions. The metal hooks are finally fixed with appropriate fixing material to the wall or floor. For more Details see Annex 3.

PROMASTOP®-FC-MD – type of penetration seal (acc. to EAD 350454-00-1104, cl. 1.1, table 1-1): Collars.

A detailed specification of the product PROMASTOP®-FC MD is a non-public part of this European technical assessment and deposited at the Österreichisches Institut für Bautechnik.

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

2.1 Intended use

The intended use of PROMASTOP®-FC MD firestop collar is to reinstate the fire resistance performance of flexible wall, rigid wall and rigid floor constructions where they are penetrated by different pipes (with or without sound decoupling strips).

(1) The specific elements of construction that PROMASTOP®-FC MD may be used to provide a penetration seal in, are as follows (details see Annex 3):

A) Flexible walls: The wall must have a minimum thickness of 100 mm and comprise timber or steel studs lined on both faces with minimum 2 layers of minimum 12,5 mm thick boards. For timber stud walls there must be a minimum distance of 100 mm of the seal to any stud and the cavity between stud and seal must be closed and minimum 100 mm insulation of class A1 or A2 (in accordance with EN 13501-1) in the cavity between stud and seal.

B) Rigid walls: The wall must have a minimum thickness of 100 mm and consist of concrete, aerated concrete or masonry, with a minimum density of 450 kg/m³.

C) Rigid floors: The floor must have a minimum thickness of 150 mm and consist of aerated concrete or concrete with a minimum density of 650 kg/m³.

This ETA does not cover the use of this product as a penetration seal in sandwich panel constructions.

(2) PROMASTOP®-FC MD firestop collar may be used as a penetration seal with the following specific installations:

PE-HD pipes:	For further details see Annex 3.
PP-H and PP-R pipes:	For further details see Annex 3.
PVC-U pipes:	For further details see Annex 3.
PVC-U pipes (Dyka sono blue):	For further details see Annex 3.
PE-S2 pipes (Geberit Silent-db20):	For further details see Annex 3.
PP-C/PP-MD/PP-C pipes (Geberit Silent-PP):	For further details see Annex 3.
PP-MX pipes (Geberit Silent-Pro):	For further details see Annex 3.
PP-MD pipes (Rehau Raupiano plus):	For further details see Annex 3.

Sound decoupling strips based on PE foam (min. class E acc. to EN 13501-1) with a maximum thickness of 4 mm may be used.

(3) Distances:

Specimen	Minimum distance (mm)
Firestop collar PROMASTOP®-FC MD – Firestop collar PROMASTOP®-FC MD	88

To all other installations: minimum 100 mm
Maximum annular gap: 31 mm

For further details see Annex 3.

(4) Supporting distance on both faces of wall constructions: minimum 335 mm
Supporting distance on the upper face of floor constructions: minimum 525 mm

2.2 Use category

The use category of PROMASTOP®-FC MD is Type X. Since the requirements for type X are met, also the requirements for type Z_2, Z_1, Y_2 and Y_1 are fulfilled.

Type X: Products intended for use in conditions exposed to weathering.
Type Y_1: Products intended for use at temperatures between -20°C and +70°C, with exposure to UV but no exposure to rain.
Type Y_2: Products intended for use at temperatures between -20°C and +70°C, but with no exposure to rain nor UV.
Type Z_1: Products intended for use at internal conditions with high humidity, excluding temperatures below 0°C[1], without exposure to rain or UV.
Type Z_2: Products intended for uses at internal conditions with humidity classes other than Z_1, excluding temperatures below 0°C, without exposure to rain or UV.

2.3 Working life

The provisions made in this European Technical Assessment are based on an assumed working life of PROMASTOP®-FC MD of minimum 25 years, provided the conditions laid down in the technical literature of the manufacturer relating to packaging, transport, storage, installation, use and repair are met.

The indications given on the intended working life cannot be interpreted as a guarantee given by the producer or the Technical Assessment Body, but are to be regarded only as a means for selecting the appropriate product in relation to the expected economically reasonable working life of the works. The real working life might be, in normal use conditions, considerably longer without major degradation affecting the Basic requirements for construction works.

[1] These uses apply for internal humidity class 5 in acc. with EN ISO 13788

2.4 General assumptions

It is assumed that

a) damages to the penetration seal are repaired accordingly,

b) the installation of the penetration seal does not effect the stability of the adjacent building element – even in case of fire,

c) the lintel or floor above the penetration seal is designed structurally and in terms of fire protection such that no additional mechanical load (other than its own weight) is imposed on the penetration seal,

d) the thermal movement in the pipe work will be accommodated in such way that it does not impose a load on the penetration seal,

e) the installations are fixed to the adjacent building element in accordance with the relevant regulations in such a way that, in case of fire, no additional mechanical load is imposed to the penetration seal,

f) the support of the installations is maintained for the required period of fire resistance and

g) pneumatic dispatch systems, compressed air systems, etc. are switched off by additional means in case of fire (for sealing off plastic pipes).

This European Technical Assessment does not address any risks associated with the emission of dangerous liquids or gases caused by failure of the pipe(s) in case of fire nor does it prove the prevention of the transmission of fire through heat transfer via the medium in the pipes.

This European Technical Assessment does not verify the prevention of destruction of adjacent building elements with fire separating function or of the pipes themselves due to distortion forces caused by extreme temperatures. These risks shall be accounted for by taking appropriate measures when designing or installing the pipe work.

The mounting or hanging of the cables/pipes or the layout of the pipe work shall be implemented in such a way that the pipes and the fire resistant building elements shall remain functional within a period of time which corresponds to the fire resistance period required.

The risk of downward spread of fire caused by burning material which drips through a pipe to floors below is not considered in this European Technical Assessment.

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

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

2.5 Manufacturing

The European Technical Assessment is issued for the product on the basis of agreed data / information, deposited with the Österreichisches Institut für Bautechnik, which identifies the product that has been assessed and judged. Changes to the product or production process, which could result in this deposited data / information being incorrect, should be notified to the Österreichisches Institut für Bautechnik before the changes are introduced.

The Österreichisches Institut für Bautechnik will decide whether or not such changes affect the European Technical Assessment and consequently the validity of the CE marking on the basis of the European Technical Assessment and if so whether further assessment or alterations to the European Technical Assessment, shall be necessary.

2.6 Installation

The product shall be arranged, installed and used as described in this European Technical Assessment. Details are given in Annex 2, 3 and 4 of this European Technical Assessment.

Additional marking of the penetration seal shall be done in case of national requirements.

The installation of PROMASTOP®-FC MD should be conducted in accordance with the installation manuals as follows:

- Compare the installations with the installations manual if the type is sealable
- Cut the strip to size
- Fix the closing brackets on the strip
- Place the collar around the pipe and bend the latch of the closing brackets
- Install the fixing brackets (hooks) over the collar
- Fix the hooks on wall or floor with appropriate fixing material

Use threaded rods (≥ M6) with nuts and washers for flexible walls. Appropriate fixing materials for rigid wall and floor constructions are e.g. anchors/screws.

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

Basic requirements for construction works	Essential characteristics	Method of verification	Performance
BWR 1	None	Not relevant	
BWR 2	Reaction to fire	EN 13501-1:2018	See 3.2.1
	Resistance to fire	EN 13501-2:2016	See 3.2.2 and Annex 3
BWR 3	Air permeability (material property)	No Performance Assessed	
	Water permeability (material property)	No Performance Assessed	
	Content and/or release of dangerous substances	European Council Directive 67/548/EEC-Dangerous Substances Directive and Regulation (EC) No 1272/2008	Declaration of conformity by the manufacturer
BWR 4	Mechanical resistance and stability	No Performance Assessed	
	Resistance to impact / movement	No Performance Assessed	
	Adhesion	No Performance Assessed	
BWR 5	Airborne sound insulation	No Performance Assessed	
BWR 6	Thermal properties	No Performance Assessed	
	Water vapour permeability	No Performance Assessed	
BWR 7	No Performance Assessed		

3.1 Mechanical resistance and stability (BWR 1)

Not relevant.

3.2 Safety in case of fire (BWR 2)

3.2.1 Reaction to fire

The components of construction product PROMASTOP®-FC MD were assessed according to EAD 350454-00-1104 clause 2.2.1 and classified according to EN 13501-1:2018.

Component	Class according to EN 13501-1
PROMASTOP®-FC MD firestop collar	E

3.2.2 Resistance to fire

PROMASTOP®-FC MD has been tested according to EAD 350454-00-1104 clause 2.2.2 and EN 1366-3:2009 installed on apertures in flexible walls, rigid walls and floors. For more details of installations see clause 2.1 and Annex 3 of the ETA.

The apertures were penetrated by different pipes listed in Annex 3 of the ETA.

As shown in Annex 3, the test results and the direct field of application (acc. to EN 1366-3:2009) the PROMASTOP®-FC MD firestop collar has been classified in accordance with EN 13501-2:2016.

The seals may only be penetrated by the services described in Annex 3. Other parts must not penetrate the seal.

Appropriate wall and floor constructions for penetration seals see clause 2.1.

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

Information on ancillary products, which were tested within the framework of this European Technical Assessment for evaluating resistance to fire is given in Annex 2.

3.3 Hygiene, health and environment (BWR 3)

3.3.1 Air permeability

No performance assessed.

3.3.2 Water permeability

No performance assessed.

3.3.3 Content, emission and/or release of dangerous substances

The release of semi-volatile organic compounds (SVOC) and volatile organic compounds (VOC) has been determined according to EAD 350454-00-1104 clause 2.2.5.1 and EN 16516:2018. The loading factor used for emission testing was 0,007 m²/m³.

Component	Total emission of SVOC after 3 days in mg/m³	Total emission of SVOC after 28 days in mg/m³
PROMASTOP®-FC MD	0,00	0,00

Component	Total emission of VOC after 3 days in mg/m³	Total emission of VOC after 28 days in mg/m³
PROMASTOP®-FC MD	< 0,005	< 0,005

3.4 Safety and accessibility in use (BWR 4)

3.4.1 Mechanical resistance and stability

No performance assessed.

3.4.2 Resistance to impact / movement

No performance assessed.

3.4.3 Adhesion

No performance assessed.

3.5 Protection against noise (BWR 5)

3.5.1 Airborne sound insulation

No performance assessed.

3.6 Energy economy and heat retention (BWR 6)

3.6.1 Thermal properties

No performance assessed.

3.6.2 Water vapour permeability

No performance assessed.

3.7 Sustainable use of natural resources (BWR 7)

No performance assessed.

3.8 General aspects relating to fitness for use

3.8.1 Durability

PROMASTOP®-FC MD has been tested in acc. to EOTA TR 024, Table 4.2.3 for the X use category specified in EAD 350454-00-1104 clause 2.2.9.3.1 and the results of the test have demonstrated suitability for penetration seals intended for use at external condition. Since the requirements for type X are met, also the requirements for type Z_2, Z_1, Y_2 and Y_1 are fulfilled.

3.8.2 Serviceability

No performance assessed.

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

4.1 AVCP system

According to the Decision 1999/454/EC[2], amended by Decision 2001/596/EC[3] of the European Commission, as amended, the system(s) of assessment and verification of constancy of performance (see Annex V of Regulation (EU) No 305/2011) is given in the following table.

Product(s)	**Intended use(s)**	**Level(s) or class(es)** (resistance to fire)	**System** of assessment and verification of constancy of performance
Fire Stopping and Fire Sealing Products	for fire compartmentation and/or fire protection or fire performance	any	1

In addition, according to the Decision 1999/454/EC, amended by Decision 2001/596/EC of the European Commission the system(s) of assessment and verification of constancy of performance, with regard to reaction to fire, is given in the following table.

[2] Official Journal of the European Communities no. L 178, 14.7.1999, p. 52

[3] Official Journal of the European Communities no. L 209, 2.8.2001, p. 33

Product(s)	Intended use(s)	Level(s) or class(es) (reaction to fire)	System of assessment and verification of constancy of performance
Fire Stopping and Fire Sealing Products	for uses subject to regulations on reaction to fire	A1*, A2*, B*, C*	1
		A1**, A2**, B**, C**, D, E	3
		(A1 to E)***, F	4

* Products/materials for which a clearly identifiable stage in the production process results in an improvement of the reaction to fire classification (e.g. an addition of fire retardants or a limiting of organic material)
** Products/materials not covered by footnote (*)
*** Products/materials that do not require to be tested for reaction to fire (e.g. products/materials of class A1 according to Commission Decision 96/603/EC, as amended)

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

Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited with the Technical Assessment Body Österreichisches Institut für Bautechnik.

The notified product certification body shall visit the factory at least twice a year for surveillance of the manufacturer.

Issued in Vienna on 01.08.2019
by Österreichisches Institut für Bautechnik

Rainer Mikulits
Managing Director

Member of EOTA

ANNEX 1

Reference documents and list of abbreviations

1.1 Reference to standards mentioned in this ETA:

EN 13501-1:2018	Fire classification of construction products and building elements - Part 1: Classification using test data from reaction to fire tests
EN 13501-2:2016	Fire classification of construction products and building elements - Part 2: Classification using data from fire resistance tests, excluding ventilation
EN 1363-1:2012	Fire resistance tests - Part 1: General requirements
EN 1366-3:2009	Fire resistance tests for service installations - Part 3: Penetration seals

1.2 Other reference documents:

EAD 350454-00-1104	European Assessment Document for “Fire stopping and fire sealing products - Penetration Seals”
EOTA TR 024 (2009)	Characterisation, Aspects of Durability and Factory Production Control for Reactive Materials, Components and Products
Technical documentation	Technical Data Sheet and Manual of PROMASTOP®-FC MD

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ANNEX 2

DESCRIPTION OF PRODUCT(S) & PRODUCT LITERATURE

2.1 Product:

Product name	Description
PROMASTOP®-FC MD	Firestop collar

Suitable sound decoupling products – reaction to fire	
Combustible insulation (PE foam based)	minimum E (acc. to EN 13501-1)

2.2 Fixing details:

Use threaded rods (≥ M6) with nuts and washers for flexible walls.
Appropriate fixing materials for rigid wall and floor constructions are e.g. anchors/screws.

2.3 Technical product literature:

- Product data sheet of PROMASTOP®-FC MD
- Installation manual of PROMASTOP®-FC MD
- Detailed sketches for PROMASTOP®-FC MD

ANNEX 3

RESISTANCE TO FIRE CLASSIFICATION OF PROMASTOP®-FC MD

3.1 Fixing and application of PROMASTOP®-FC MD firestop collars

The PROMASTOP®-FC MD firestop collar is used according the handling guideline and shall be fixed against wall or floor constructions with the attached fixing brackets. Both ends of the intumescent strip were connected with the closing brackets.

The number of fixing hooks depends on the diameter of the plastic pipes and is shown in following table.

Pipe outer diameter (mm)	Number of brackets required	Collar length (mm)
40	2	225
50	2	255
64	3	300
75	3	335
90	3	380
110	3	445
125	4	490

Use threaded rods (≥ M6) with nuts and washers for flexible walls.
Appropriate fixing materials for rigid wall and floor constructions are e.g. anchors/screws.

Application of the PROMASTOP®-FC MD:

Orientation	Application
Wall	Two-sided: On both sides on the wall
Floor	One-sided: On the bottom side of the floor

The annular gap with max. width of 31 mm, shall be filled with gypsum-based filler e.g. Promat filler or PROMASTOP®-M firestop mortar.

3.2 Sound decoupling strips

Sound decoupling strips based on PE-foam with a maximum thickness of 4 mm may be used. This sound decoupling strips may penetrate the wall or floor construction as well as the PROMASTOP®-FC MD firestop collar.
The classification of reaction to fire shall be at least Class E according to EN 13501-1, or higher rated.

3.3 Classification acc. to EN 13501-2 for PROMASTOP®-FC MD firestop collars

The following types of plastic pipes may be sealed with PROMASTOP®-FC MD firestop collars.

PE-HD pipes:	For further details see clause 3.3.1.
PP-H and PP-R pipes:	For further details see clause 3.3.2.
PVC-U pipes:	For further details see clause 3.3.3.
PVC-U pipes (DykaSono):	For further details see clause 3.3.4.
PE-S2 pipes (Geberit Silent-db20):	For further details see clause 3.3.5.
PP-C/PP-MD/PP-C pipes (Geberit Silent-PP):	For further details see clause 3.3.6.
PP-MX pipes (Geberit Silent-Pro):	For further details see clause 3.3.7.
PP-MD pipes (Rehau Raupiano plus):	For further details see clause 3.3.8.

Details are shown in the following diagrams.

The classifications for PE pipes are applicable for pipes acc. to EN 12201-2, EN 1519-1, EN 12666-1, DIN 8074, DIN 8075 and ABS-pipes acc. to EN 1455-1 and SAN + PVC-pipes acc. to EN 1565-1.

The classifications for PVC-U pipes are applicable for pipes acc. to EN 1452-1, EN 1329-1, EN 1453-1, DIN 8061, DIN 8062, EN 1329-1, EN 1453-1 and to PVC-C pipes acc. to EN 1566-1.

The classifications for PP-H and PP-R pipes are applicable for pipes in acc. to ÖNORM B 5174-1, DIN 8077, DIN 8078, EN 1451-1 and EN ISO 15494.

Pipe end configuration:

Tested and classified for plastic pipes	Applicable
U/U	U/U, C/U, U/C, C/C
Tested and classified for plastic pipes	Applicable
U/C	U/C, C/C

PE-HD pipes acc. EN 12201-2, EN 1519-1, EN 12666-1, DIN 8074, DIN 8075 and ABS pipes acc. EN 1455-1 and SAN + PVC pipes acc. to EN 1565-1 (Details in clause 3.3.1)				
Compartment	Compartment thickness (mm)	Dimension scope Ø…Diameter (mm) s…pipe wall thickness (mm)	Collar position	Classification
Flexible wall	≥ 100	Ø 40 / s 2,4 - Ø 125 / s 7,4	On the wall	**EI 120-U/U**
Rigid wall	≥ 100	Ø 40 / s 2,4 - Ø 125 / s 7,4	On the wall	**EI 120-U/U**
Flexible wall	≥ 100	Ø 40 / s 2,4 - Ø 125 / s 7,4	On the wall	**EI 120-U/C**
Rigid wall	≥ 100	Ø 40 / s 2,4 - Ø 125 / s 7,4	On the wall	**EI 120-U/C**
Flexible wall	≥ 100	Ø 40 / s 2,4 - Ø 125 / s 11,4	On the wall	**EI 90-U/C**
Rigid wall	≥ 100	Ø 40 / s 2,4 - Ø 125 / s 11,4	On the wall	**EI 90-U/C**
Rigid floor	≥ 150	Ø 40 / s 2,4 - Ø 125 / s 7,4	Under the floor	**EI 120-U/U**
Rigid floor	≥ 150	Ø 40 / s 2,4 - Ø 125 / s 11,4	Under the floor	**EI 120-U/C**

PP-H/PP-R pipes acc. DIN 8077, DIN 8078, EN 1451-1 (Details in clause 3.3.2)				
Compartment	Compartment thickness (mm)	Dimension scope Ø…Diameter (mm) s…pipe wall thickness (mm)	Collar position	Classification
Flexible wall	≥ 100	Ø 40 / s 1,8 - Ø 125 / s 7,1	On the wall	**EI 120-U/U**
Rigid wall	≥ 100	Ø 40 / s 1,8 - Ø 125 / s 7,1	On the wall	**EI 120-U/U**
Flexible wall	≥ 100	Ø 40 / s 1,8 - Ø 125 / s 11,4	On the wall	**EI 120-U/C**
Rigid wall	≥ 100	Ø 40 / s 1,8 - Ø 125 / s 11,4	On the wall	**EI 120-U/C**
Rigid floor	≥ 150	Ø 40 / s 1,8 - Ø 125 / s 7,1	Under the floor	**EI 120-U/U**
Rigid floor	≥ 150	Ø 40 / s 1,8 - Ø 125 / s 7,1	Under the floor	**EI 90-U/U**
Rigid floor	≥ 150	Ø 40 / s 1,8 - Ø 125 / s 7,1	Under the floor	**EI 120-U/C**
Rigid floor	≥ 150	Ø 40 / s 1,8 - Ø 125 / s 11,4	Under the floor	**EI 90-U/C**

PVC-U pipes acc. EN 1452-1, DIN 8061, DIN 8062, EN 1329-1, EN 1453-1 and PVC-C pipes acc. to EN 1566-1 (Details in clause 3.3.3)				
Compartment	Compartment thickness (mm)	Dimension scope Ø…Diameter (mm) s…pipe wall thickness (mm)	Collar position	Classification
Flexible wall	≥ 100	Ø 40 / s 1,8 - Ø 125 / s 7,4	On the wall	**EI 120-U/U**
Rigid wall	≥ 100	Ø 40 / s 1,8 - Ø 125 / s 7,4	On the wall	**EI 120-U/U**
Rigid floor	≥ 150	Ø 40 / s 1,8 - Ø 125 / s 7,4	Under the floor	**EI 120-U/U**
Rigid floor	≥ 150	Ø 40 / s 1,8 - Ø 125 / s 7,4	Under the floor	**EI 90-U/U**

PVC-U pipes (DykaSono) acc. EN 1329-1 (Details in clause 3.3.4)				
Compartment	Compartment thickness (mm)	Dimension scope Ø…Diameter (mm) s…pipe wall thickness (mm)	Collar position	Classification
Flexible wall	≥ 100	Ø 40 / s 1,8 - Ø 125 / s 7,4	On the wall	**EI 120-U/U**
Rigid wall	≥ 100	Ø 40 / s 1,8 - Ø 125 / s 7,4	On the wall	**EI 120-U/U**
Rigid floor	≥ 150	Ø 40 / s 1,8 - Ø 125 / s 7,4	Under the floor	**EI 120-U/U**
Rigid floor	≥ 150	Ø 40 / s 1,8 - Ø 125 / s 7,4	Under the floor	**EI 90-U/U**

PE-S2 pipes (Geberit Silent-db20) (Details in clause 3.3.5)				
Compartment	Compartment thickness (mm)	Dimension scope Ø…Diameter (mm) s…pipe wall thickness (mm)	Collar position	Classification
Flexible wall	≥ 100	Ø 56 / s 3,2 - Ø 110 / s 6	On the wall	**EI 120-U/U**
Rigid wall	≥ 100	Ø 56 / s 3,2 - Ø 110 / s 6	On the wall	**EI 120-U/U**
Rigid floor	≥ 150	Ø 56 / s 3,2 - Ø 110 / s 6	Under the floor	**EI 120-U/U**

PP-C/PP-MD/PP-C pipes (Geberit Silent-PP) (Details in clause 3.3.6)				
Compartment	Compartment thickness (mm)	Dimension scope Ø…Diameter (mm) s…pipe wall thickness (mm)	Collar position	Classification
Flexible wall	≥ 100	Ø 40 / s 1,8 - Ø 125 / s 3,9	On the wall	**EI 120-U/U**
Rigid wall	≥ 100	Ø 40 / s 1,8 - Ø 125 / s 3,9	On the wall	**EI 120-U/U**
Rigid floor	≥ 150	Ø 40 / s 1,8 - Ø 125 / s 3,9	Under the floor	**EI 120-U/U**

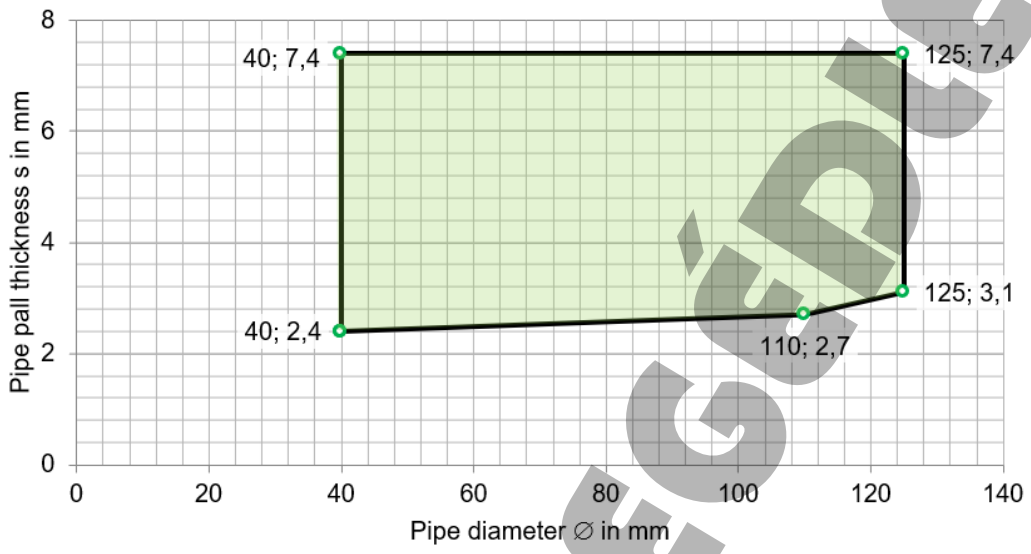
PP-MX pipes (Geberit Silent-Pro) (Details in clause 3.3.7)				
Compartment	Compartment thickness (mm)	Dimension scope Ø…Diameter (mm) s…pipe wall thickness (mm)	Collar position	Classification
Flexible wall	≥ 100	Ø 50 / s 2,7	On the wall	**EI 120-U/U**
Rigid wall	≥ 100	Ø 50 / s 2,7	On the wall	**EI 120-U/U**
Flexible wall	≥ 100	Ø 50 / s 2,7- Ø 125 / s 4,7	On the wall	**EI 90-U/U**
Rigid wall	≥ 100	Ø 50 / s 2,7- Ø 125 / s 4,7	On the wall	**EI 90-U/U**
Rigid floor	≥ 150	Ø 50 / s 2,7- Ø 125 / s 4,7	Under the floor	**EI 120-U/U**

PP-MD pipes (Rehau Raupiano plus) (Details in clause 3.3.8)				
Compartment	Compartment thickness (mm)	Dimension scope Ø…Diameter (mm) s…pipe wall thickness (mm)	Collar position	Classification
Flexible wall	≥ 100	Ø 40 / s 1,8 - Ø 125 / s 3,1	On the wall	**EI 120-U/U**
Rigid wall	≥ 100	Ø 40 / s 1,8 - Ø 125 / s 3,1	On the wall	**EI 120-U/U**
Rigid floor	≥ 150	Ø 40 / s 1,8 - Ø 125 / s 3,1	Under the floor	**EI 120-U/U**

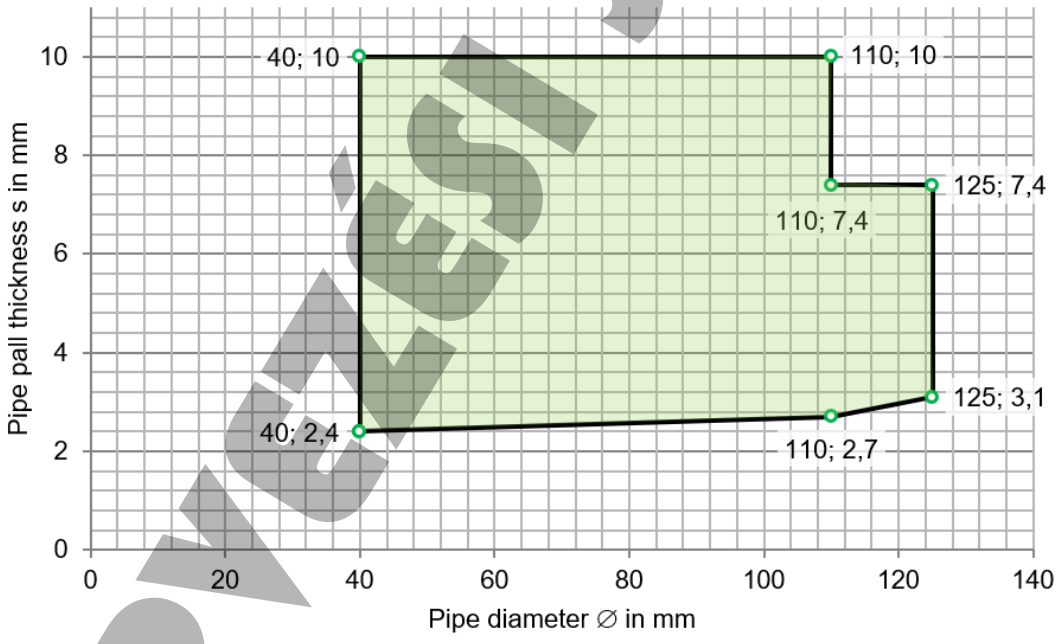
More details are shown in the following diagrams. In the diagrams the pipe outer diameter is stated.

3.3.1 Classification for PE-HD pipes acc. EN 12201-2, EN 1519-1, EN 12666-1, DIN 8074, DIN 8075 and ABS pipes acc. EN 1455-1 and SAN + PVC pipes acc. to EN 1565-1

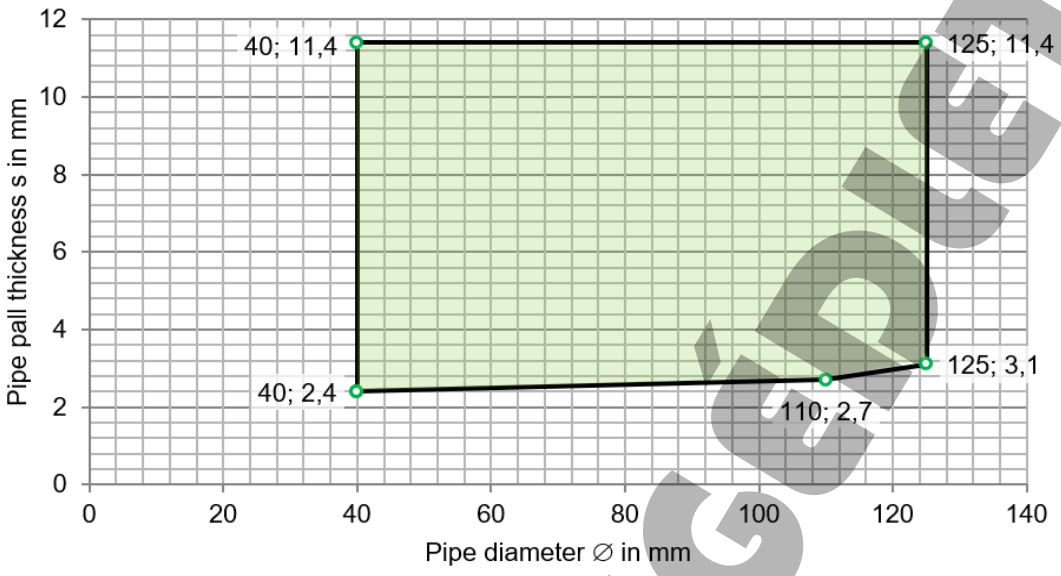
Flexible or rigid wall construction, thickness ≥ 100 mm
Classification EI 120 – U/U



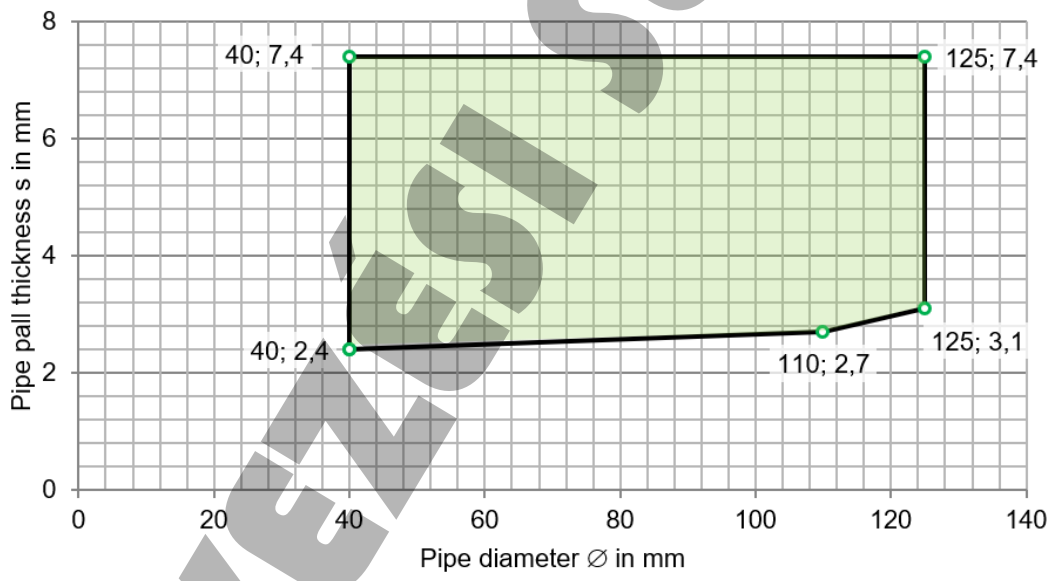
Flexible or rigid wall construction, thickness ≥ 100 mm
Classification EI 120 – U/C



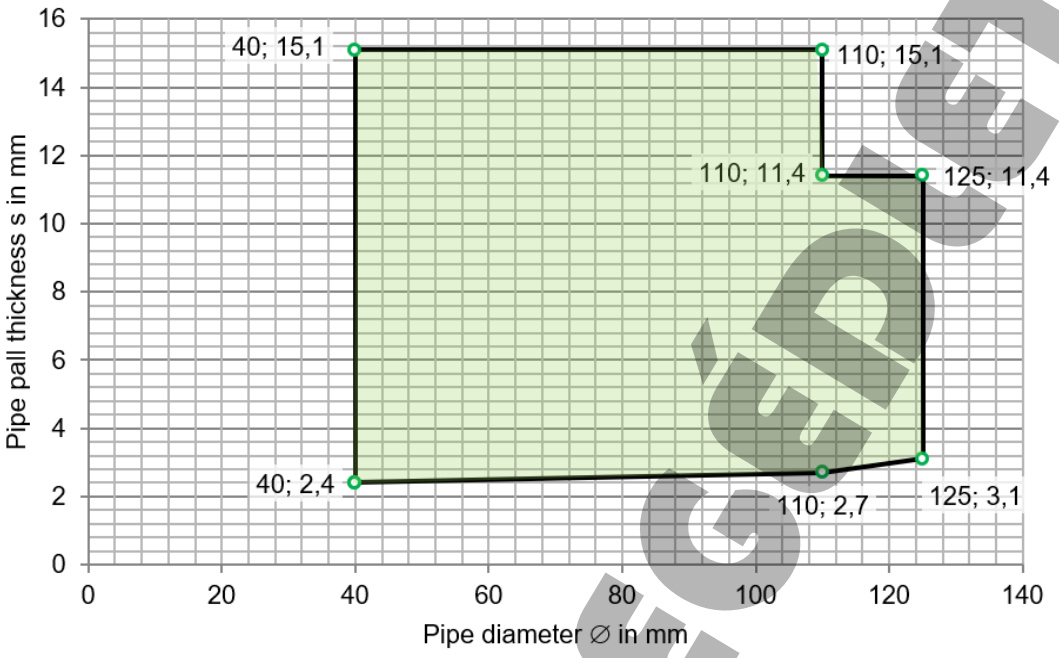
Flexible or rigid wall construction, thickness ≥ 100 mm
Classification EI 90 – U/C



Rigid floor construction, thickness ≥ 150 mm
Classification EI 120 – U/U

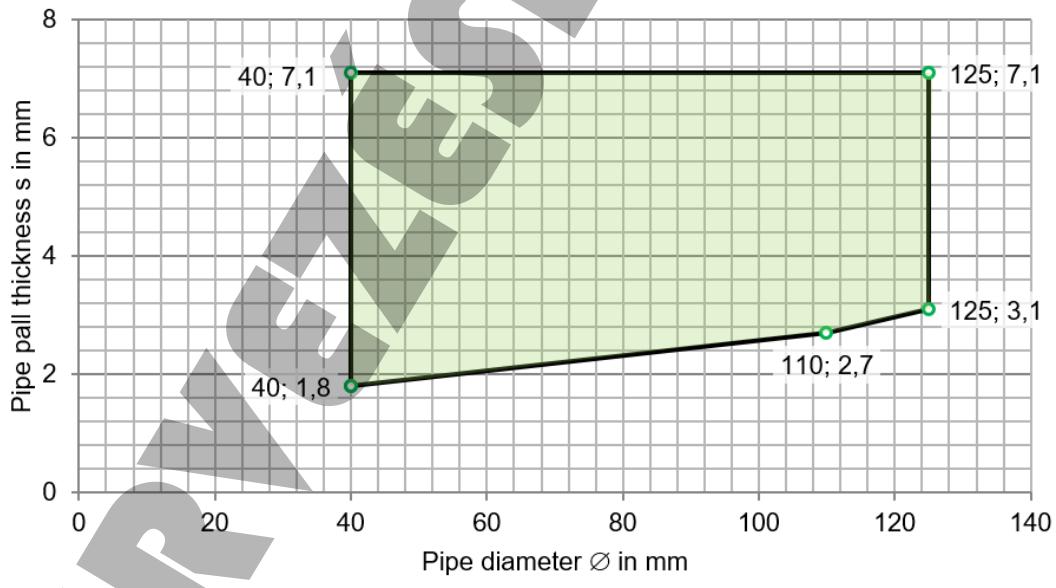


Rigid floor construction, thickness ≥ 150 mm
Classification EI 120 – U/C

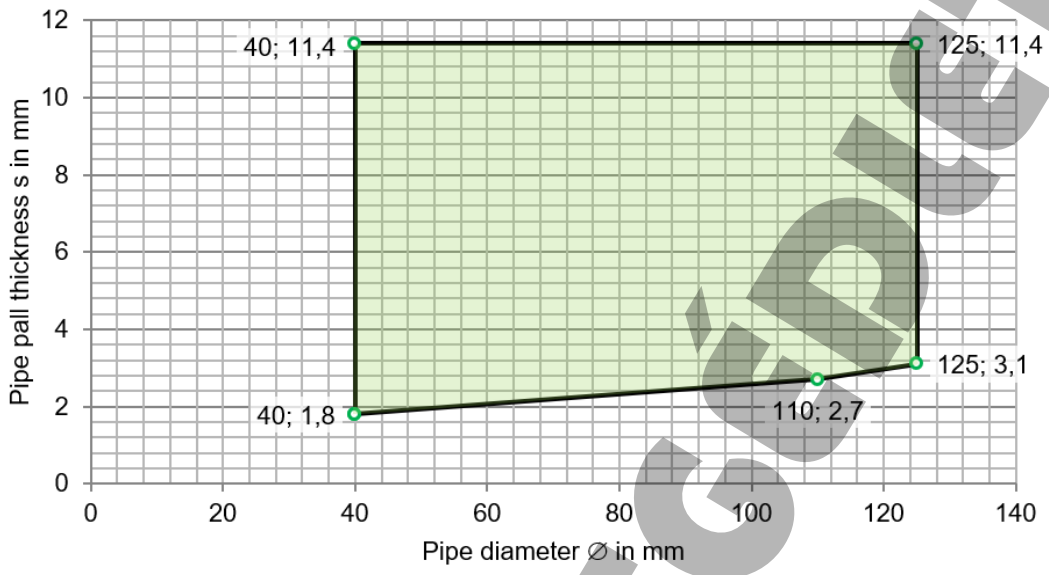


3.3.2 Classification for PP-H/PP-R pipes acc. DIN 8077, DIN 8078, EN 1451-1

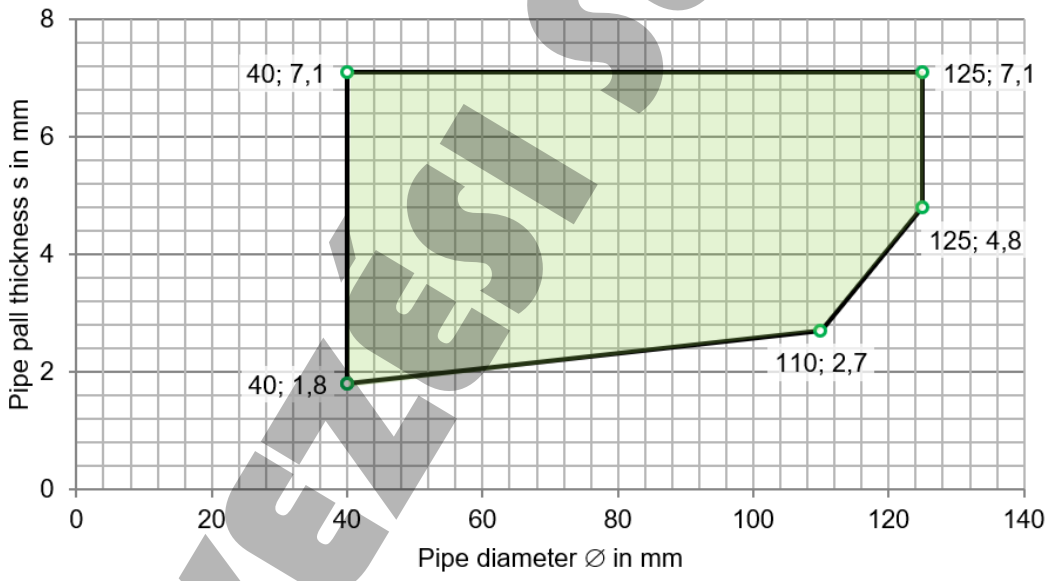
Flexible or rigid wall construction, thickness ≥ 100 mm
Classification EI 120 – U/U



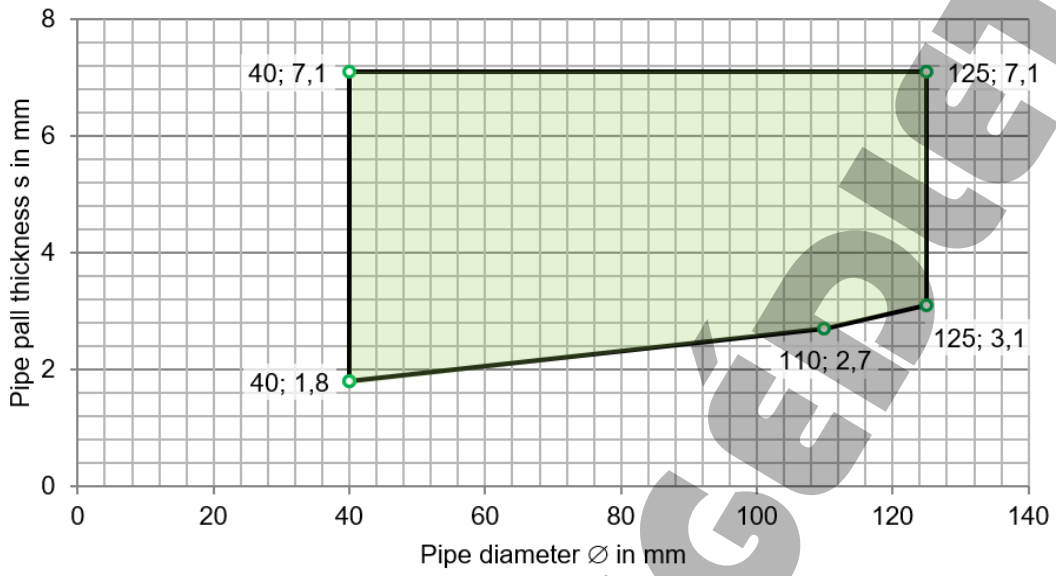
Flexible or rigid wall construction, thickness ≥ 100 mm
Classification EI 120 – U/C



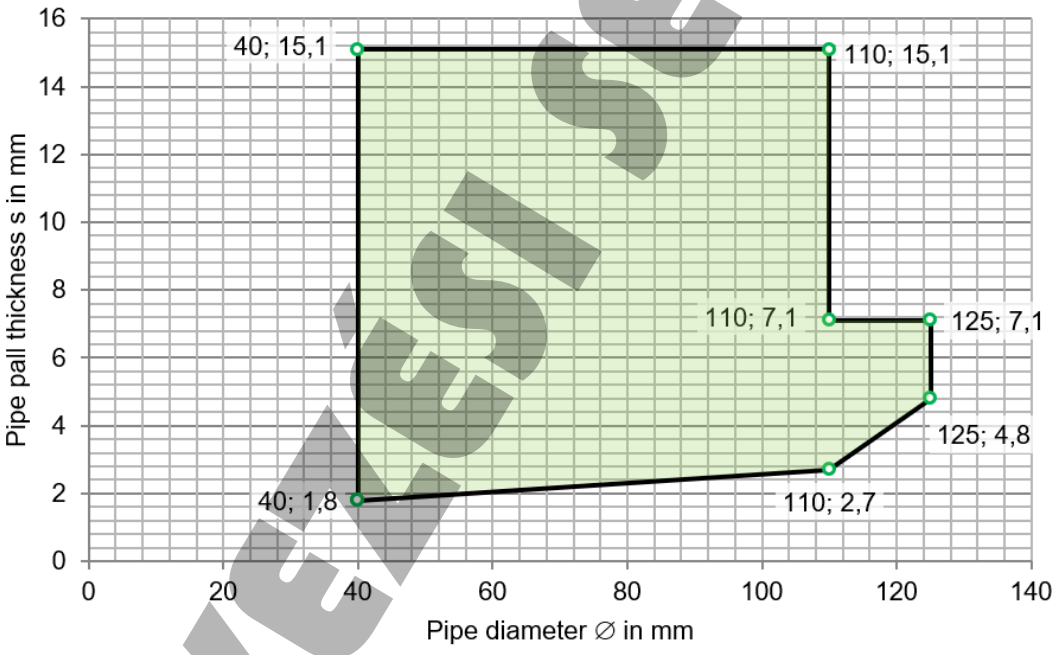
Rigid floor construction, thickness ≥ 150 mm
Classification EI 120 – U/U



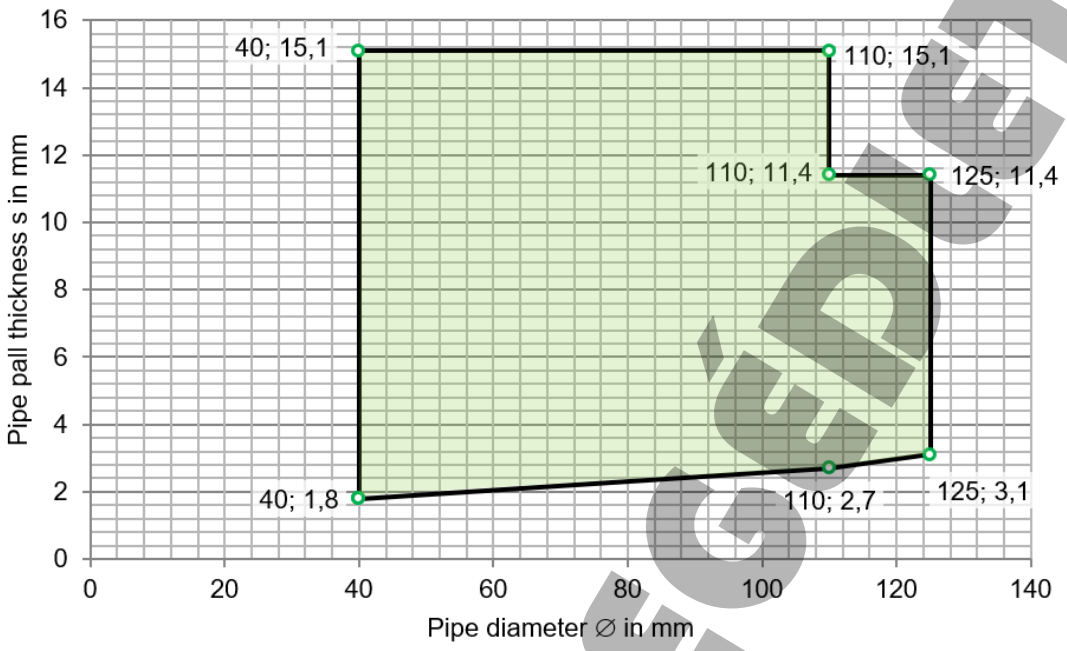
Rigid floor construction, thickness ≥ 150 mm
Classification EI 90 – U/U



Rigid floor construction, thickness ≥ 150 mm
Classification EI 120 – U/C

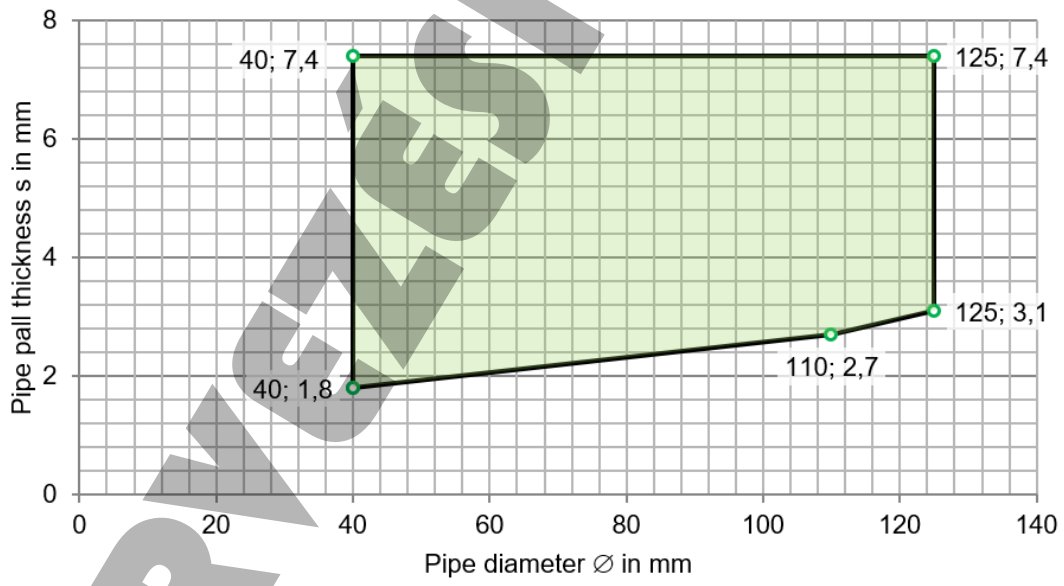


Rigid floor construction, thickness ≥ 150 mm
Classification EI 90 – U/C

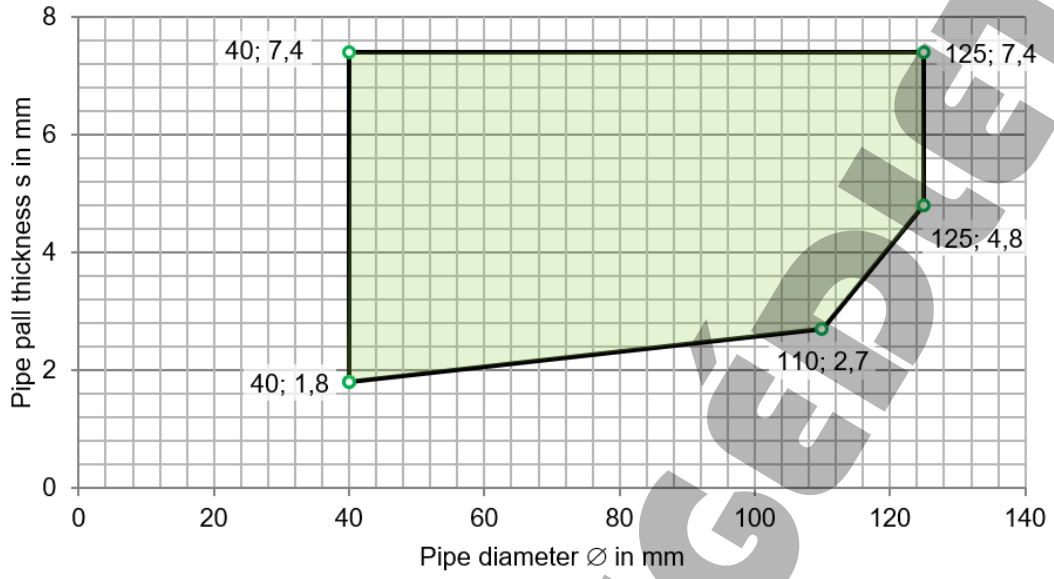


3.3.3 Classification for PVC-U pipes acc. EN 1452-1, DIN 8061, DIN 8062, EN 1329-1, EN 1453-1 and PVC-C pipes acc. to EN 1566-1

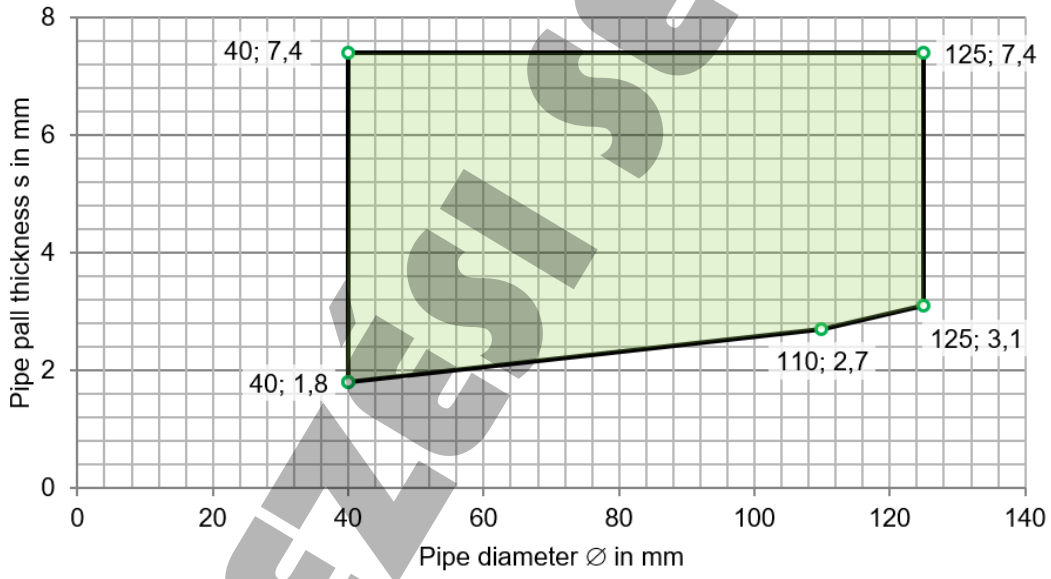
Flexible or rigid wall construction, thickness ≥ 100 mm
Classification EI 120 – U/U



Rigid floor construction, thickness ≥ 150 mm
Classification EI 120 – U/U

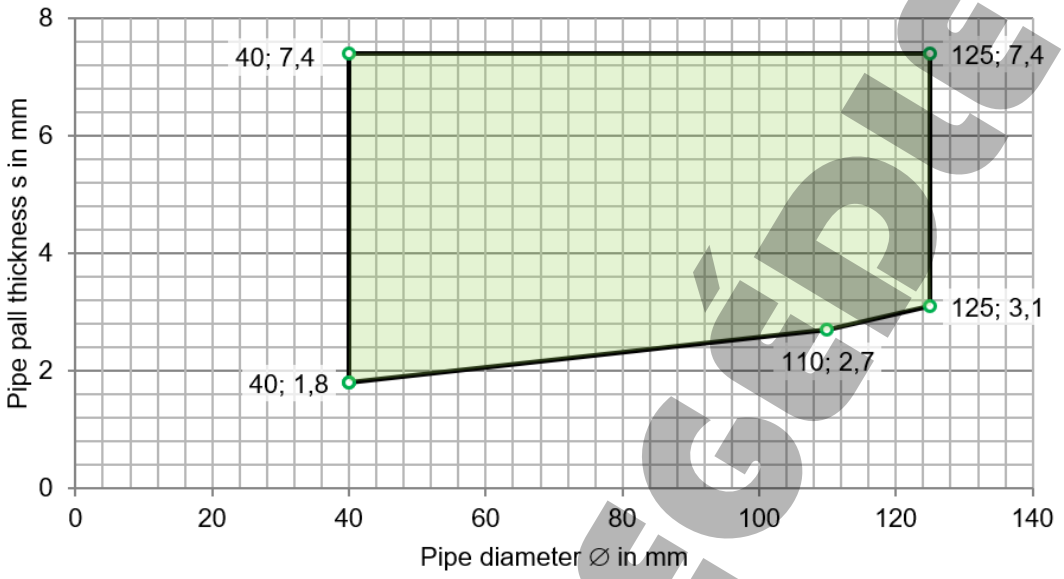


Rigid floor construction, thickness ≥ 150 mm
Classification EI 90 – U/U

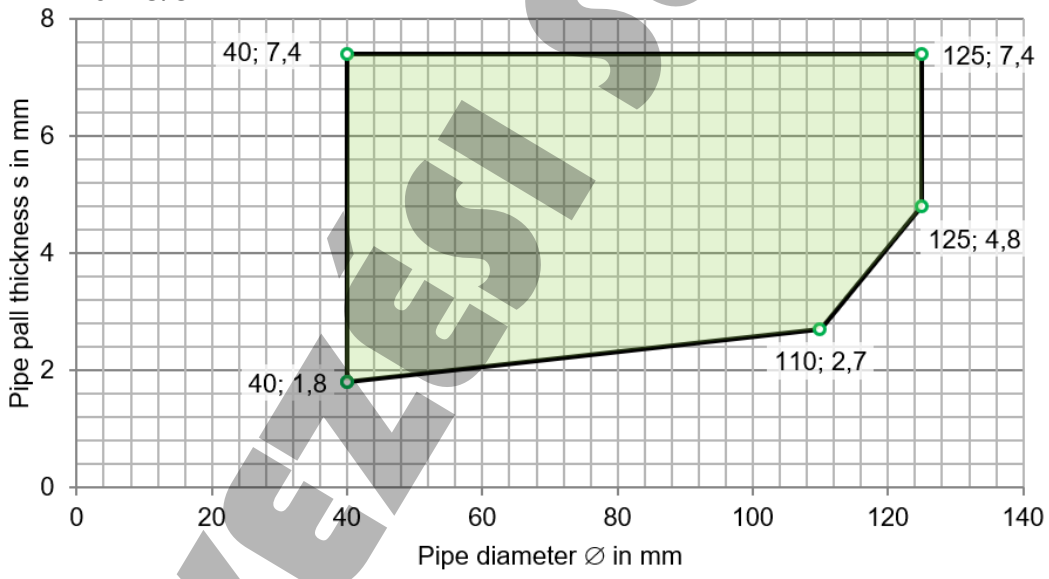


3.3.4 Classification for PVC-U pipes (DykaSono) acc. EN 1329-1

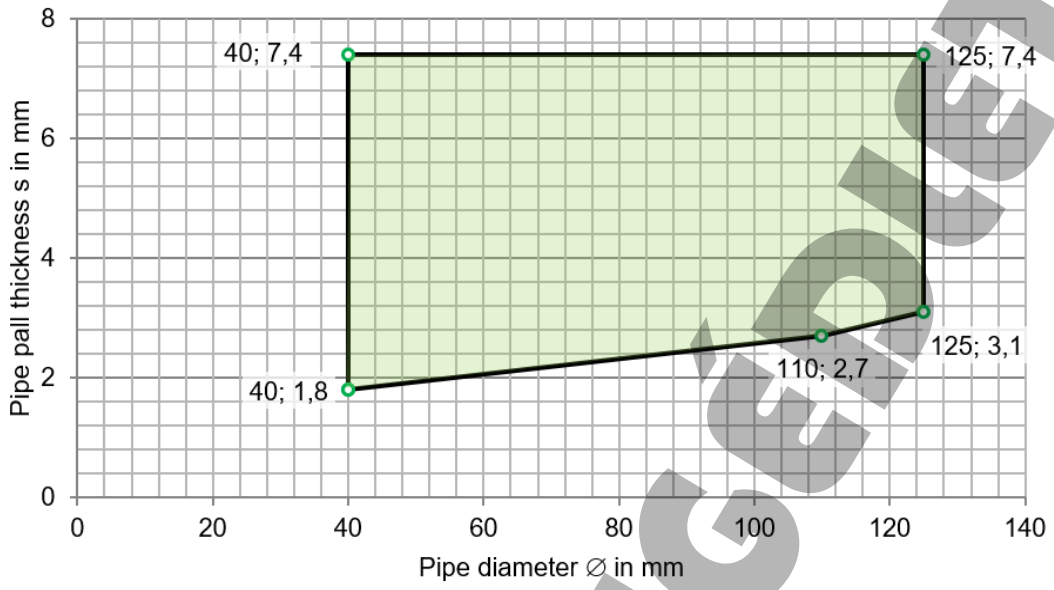
Flexible or rigid wall construction, thickness ≥ 100 mm
Classification EI 120 – U/U



Rigid floor construction, thickness ≥ 150 mm
Classification EI 120 – U/U

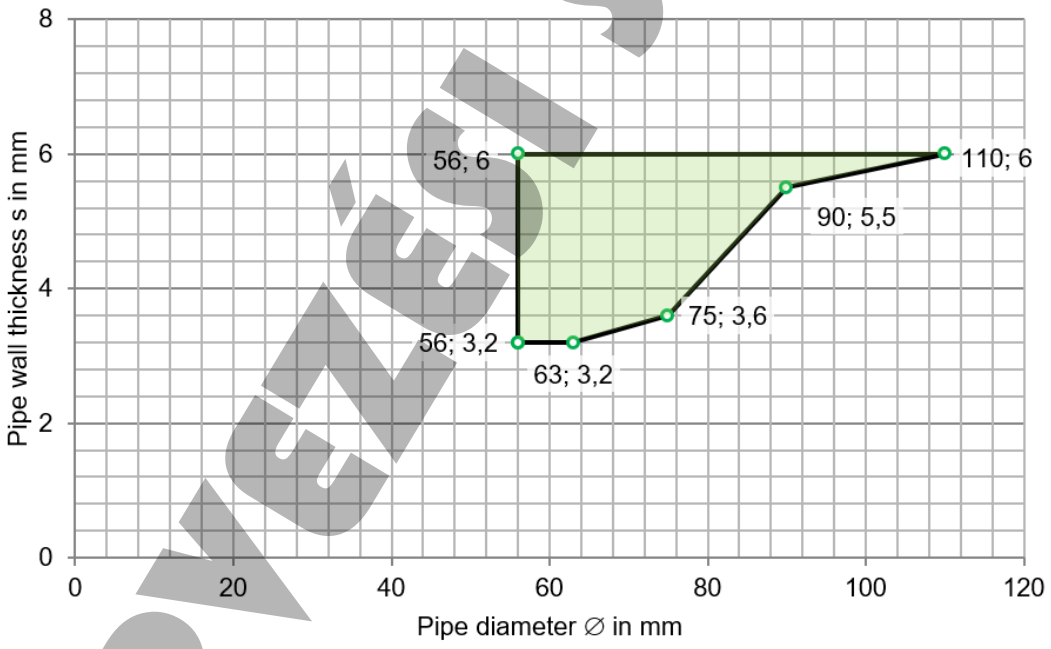


Rigid floor construction, thickness ≥ 150 mm
Classification EI 90 – U/U

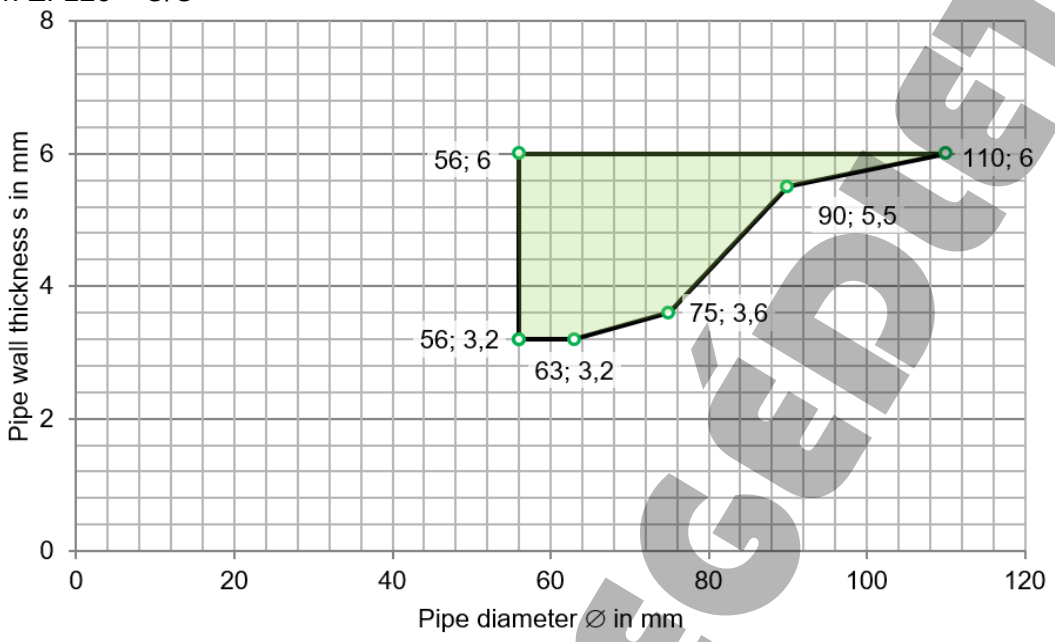


3.3.5 Classification for PE-S2 pipes (Geberit Silent-db20)

Flexible or rigid wall construction, thickness ≥ 100 mm
Classification EI 120 – U/U

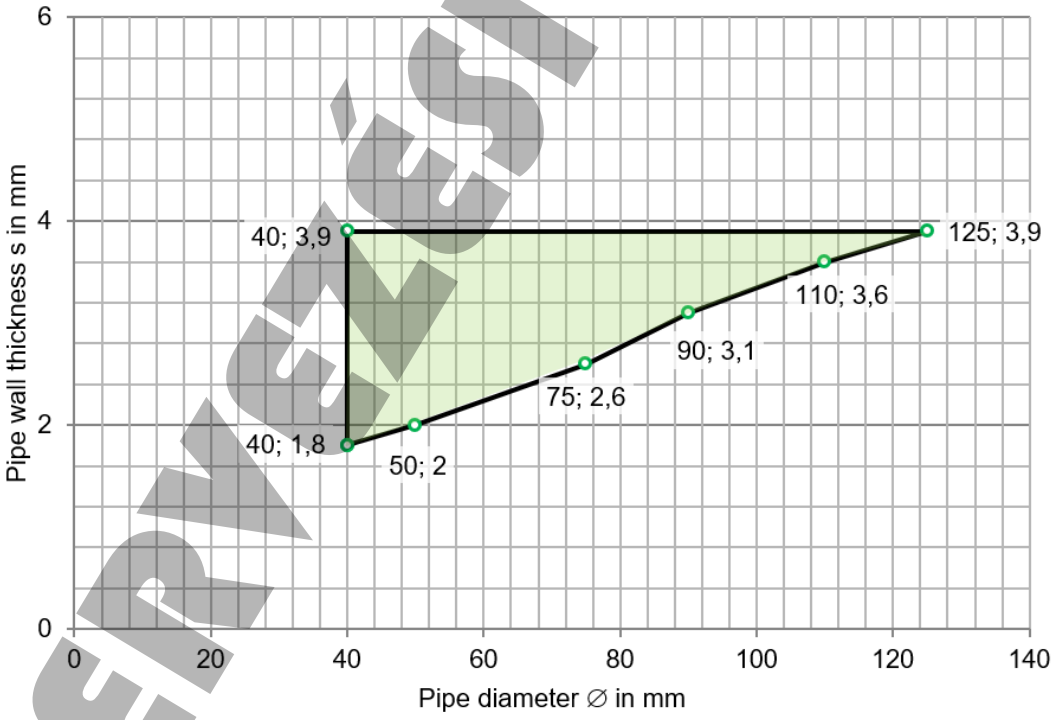


Rigid floor construction, thickness ≥ 150 mm
Classification EI 120 – U/U

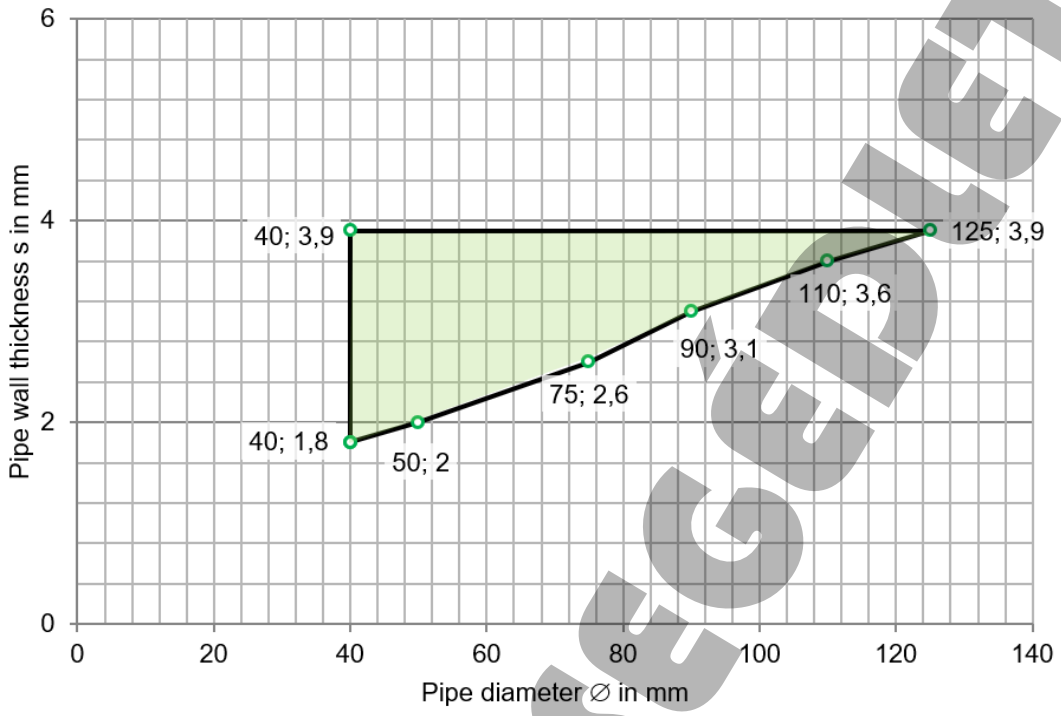


3.3.6 Classification for PP-C/PP-MD/PP-C pipes (Geberit Silent-PP)

Flexible or rigid wall construction, thickness ≥ 100 mm
Classification EI 120 – U/U

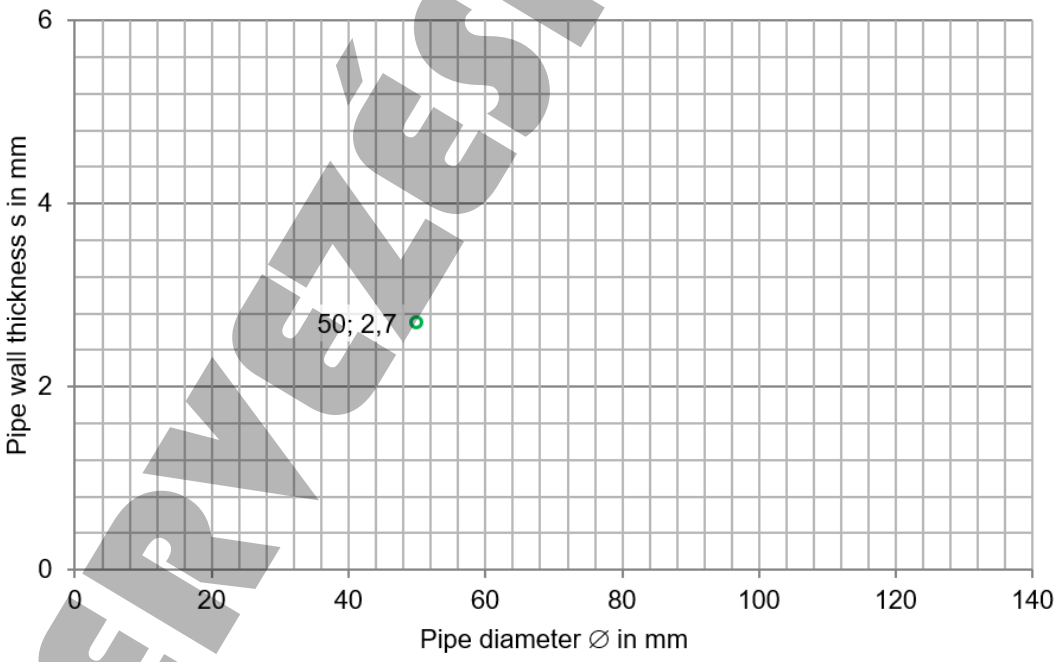


Rigid floor construction, thickness ≥ 150 mm
Classification EI 120 – U/U

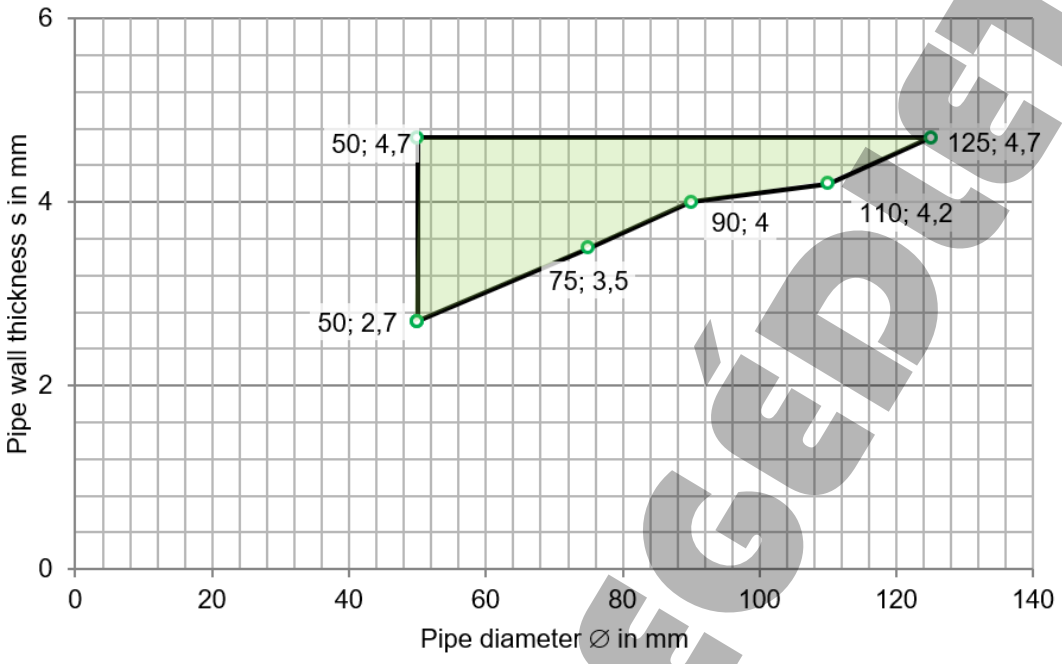


3.3.7 Classification for PP-MX pipes (Geberit Silent-Pro)

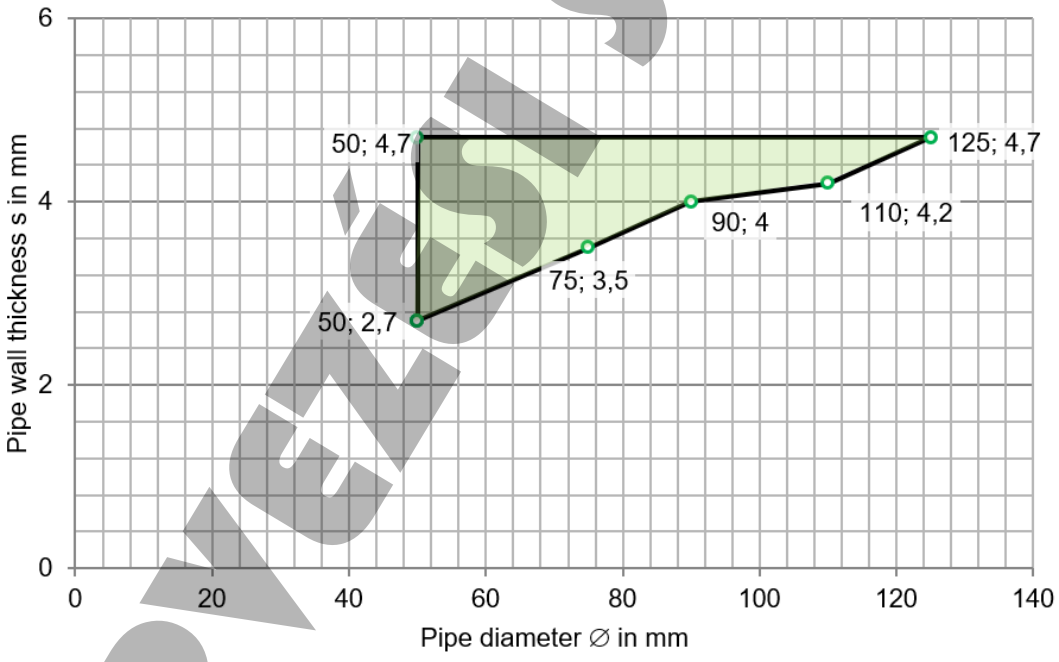
Flexible or rigid wall construction, thickness ≥ 100 mm
Classification EI 120 – U/U



Flexible or rigid wall construction, thickness ≥ 100 mm
Classification EI 90 – U/U

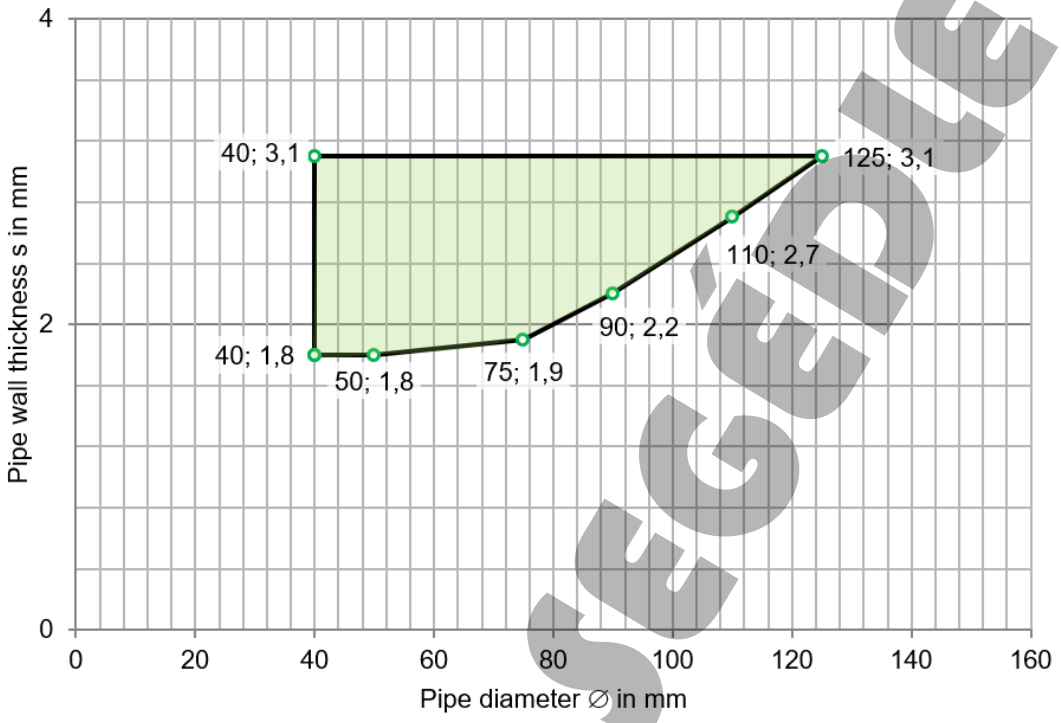


Rigid floor construction, thickness ≥ 150 mm
Classification EI 120 – U/U

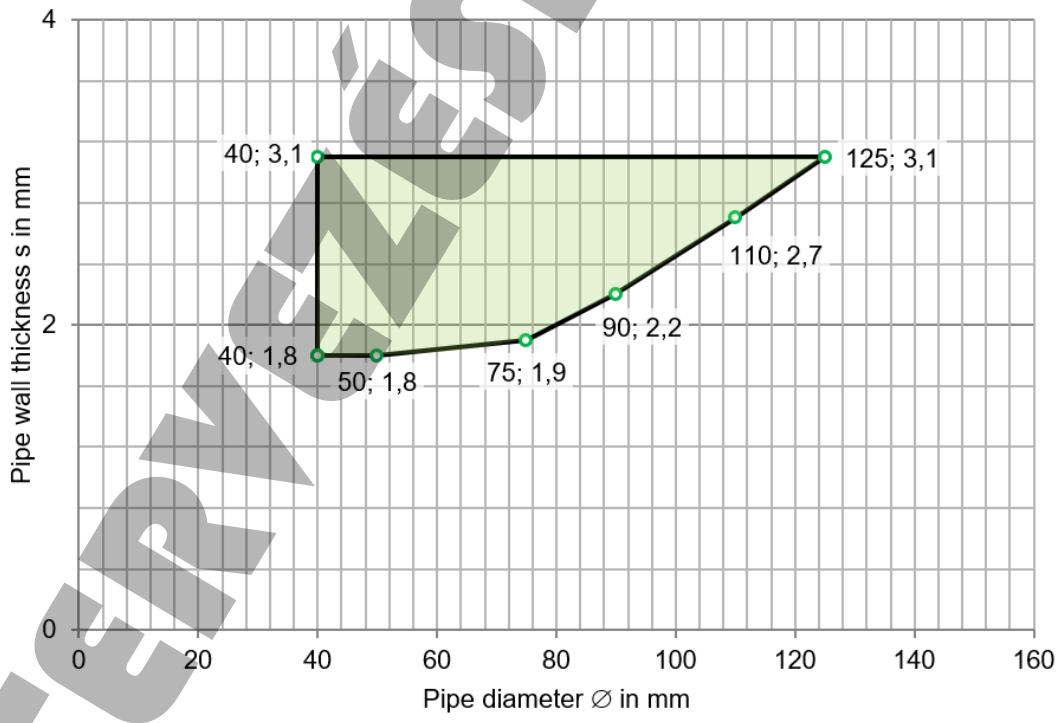


3.3.8 Classification for PP-MD pipes (Rehau Raupiano plus)

Flexible or rigid wall construction, thickness ≥ 100 mm
Classification EI 120 – U/U

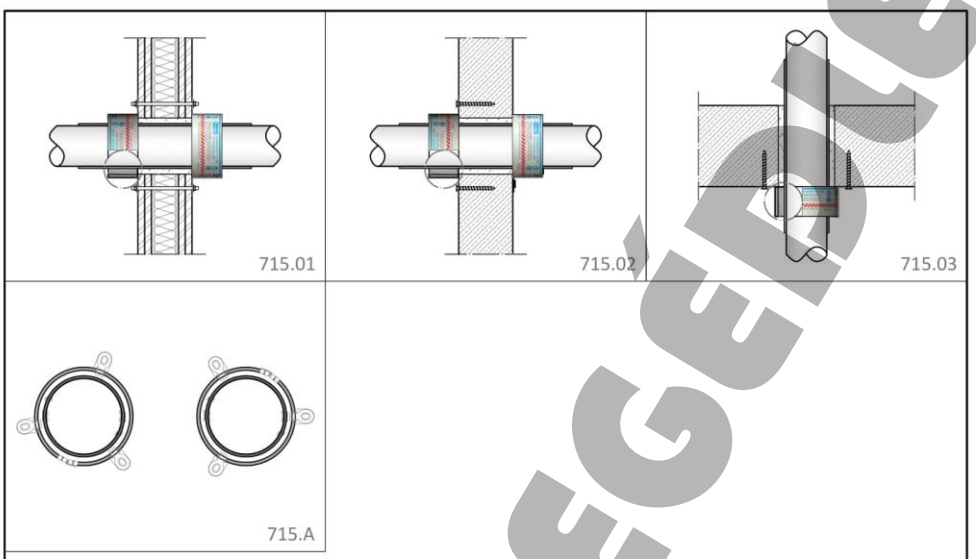


Rigid floor construction, thickness ≥ 150 mm
Classification EI 120 – U/U



Member of EOTA

ANNEX 4
INSTALLATION DRAWINGS



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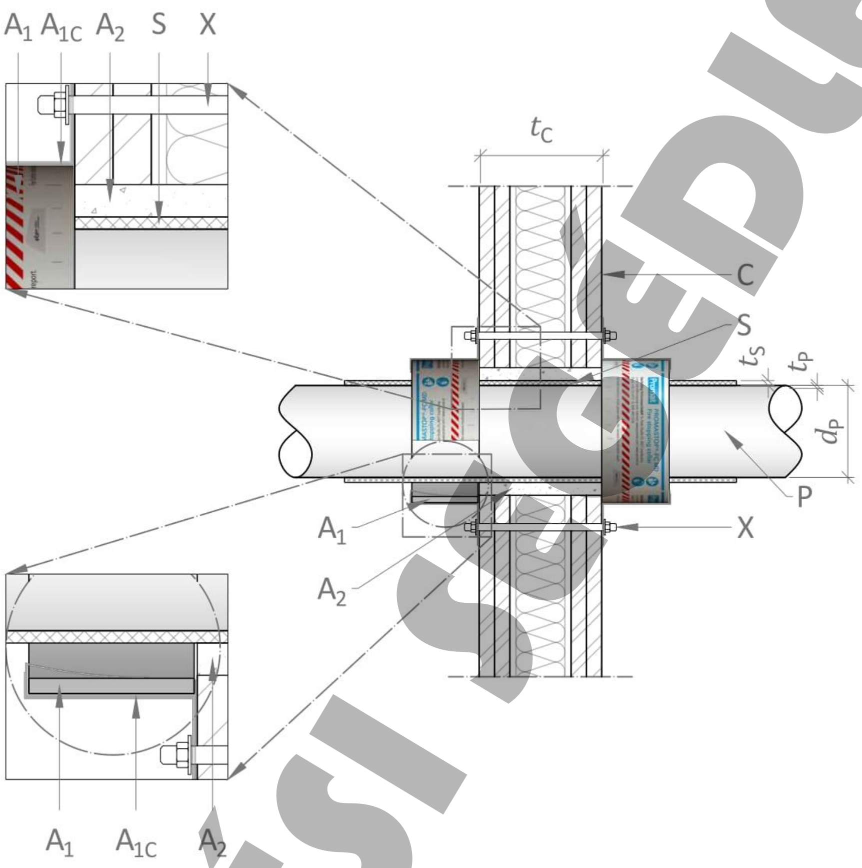
PROMASTOP®-FC MD Firestop Collar
Overview of the constructions

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

Modified by / on:
Drawn by: P. Erasim
Drawing number: 715.001

OiB Member of EOTA



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	PROMASTOP®-FC MD Firestop Collar Seal penetrated by plastic pipes in flexible wall constructions				Modified by / on:
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 © Etex Building Performance GmbH					Drawn by: P. Erasim Drawing number: 715.01
	Scale: none	Drawing format: A4	Date: 2019/04/05	Department: Technical appl.	

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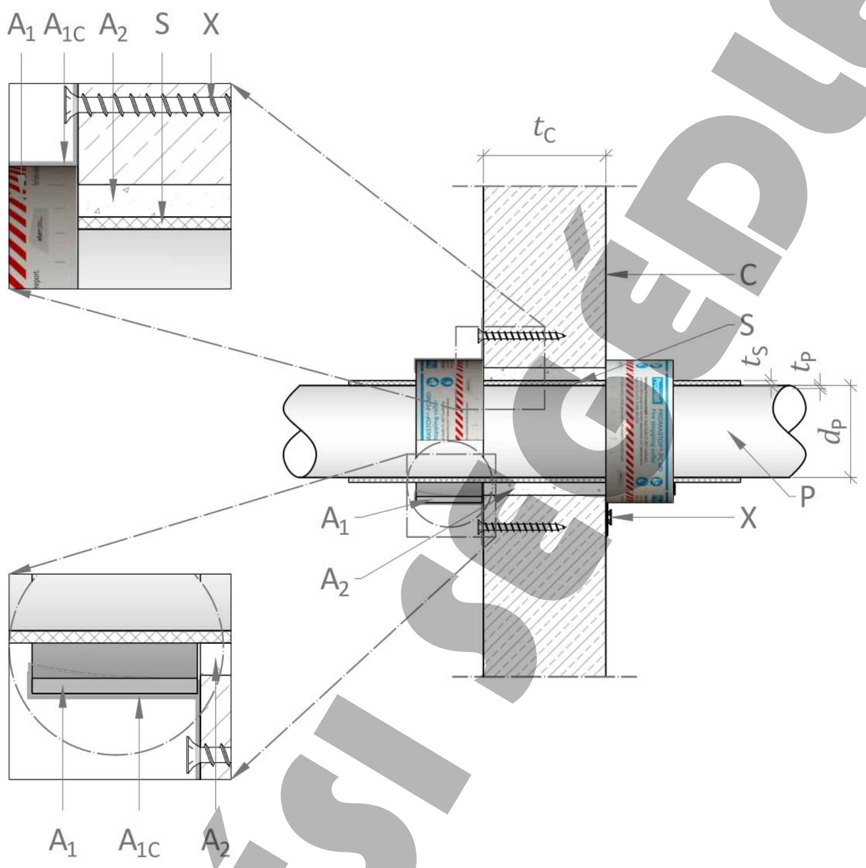
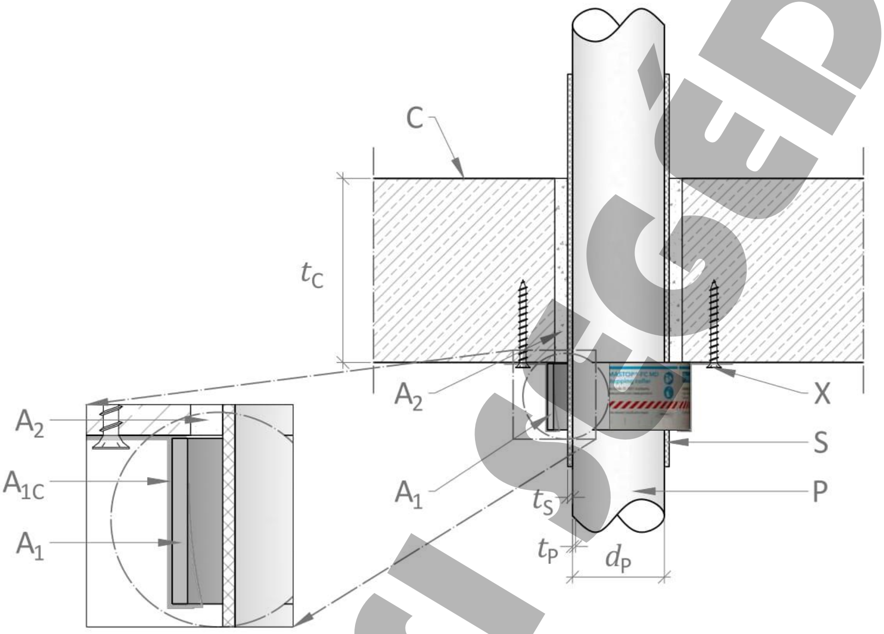


Legend:

- 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

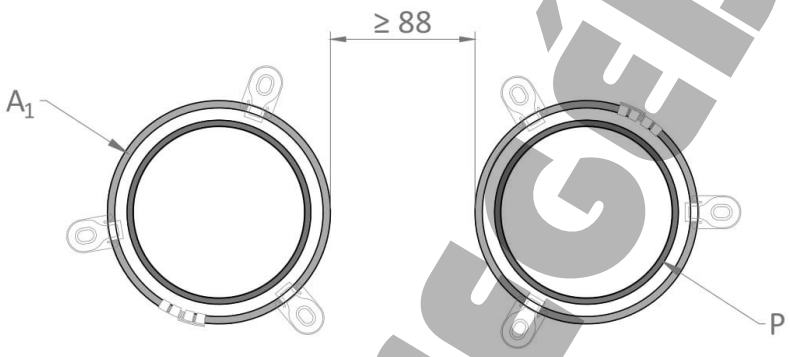
Promat Etex Building Performance GmbH St.-Peter-Strasse 25 | Bau 39 4021 Linz | Austria T +43 (0) 732 6912 3621 F +43 (0) 732 6912 3740 E technik.at@etexgroup.com www.promat.at © Etex Building Performance GmbH	PROMASTOP®-FC MD Firestop Collar Seal penetrated by plastic pipes in rigid wall constructions			Modified by / on:
				Drawn by: P. Erasim
	Scale: none	Drawing format: A4	Date: 2019/04/05	Department: Technical appl.
				Drawing number: 715.02



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 © Etex Building Performance GmbH	PROMASTOP®-FC MD Firestop Collar Seal penetrated by plastic pipes in rigid floor constructions				Modified by / on:
					Drawn by: P. Erasim
	Scale: none	Drawing format: A4	Date: 2019/04/05	Department: Technical appl.	Drawing number: 715.03



Legend:
A_1 - Firestop Collar PROMASTOP®-FC MD
P - Plastic pipe

Dimensions in mm

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PROMASTOP®-FC MD Firestop Collar
Distances

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

Modified by / on:

Drawn by: P. Erasim

Drawing number: 715.A