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Designated according to Article 29 of Regulation (EU) No 305/2011

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European Technical Assessment

ETA-14/0089 of 05/05/2014

General part

Technical Assessment Body issuing the ETA	Austrian Institute of Construction Engineering (OIB)
Trade name of the construction product **Product family to which the construction product belongs**	PROMASTOP®-FC Fire Stopping and Fire Sealing Product: Penetration seal
Manufacturer	Promat GmbH St.-Peter-Strasse 25 4021 Linz Austria
Manufacturing plant	Production plant 15
This European Technical Assessment contains	120 pages including Annexes 1 to 3 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	Guideline for European technical approval (ETAG) No. 026-2 Fire Stopping and Fire Sealing Products – Part 2: Penetration Seals, edition August 2011, used as European Assessment Document (EAD)

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Specific parts

1. Technical description of the product

1.1 Definition of the construction product

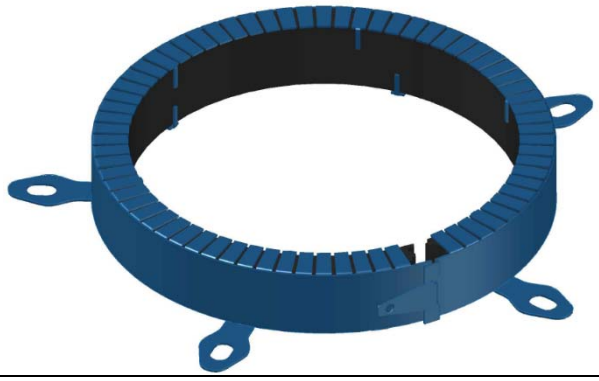
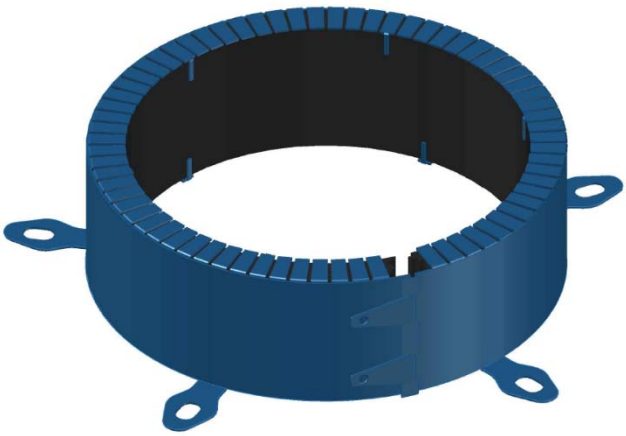
PROMASTOP®-FC (on market also sold as Intumex®-RS10) is a closure device installed around pipe insulation and plastic pipes to form a penetration seal to reinstate the fire resistance performance of floor and wall constructions, where they have been provided with apertures for the penetration of different installations. It is also applicable for sloped pipes, sockets and sound decoupling strips.

PROMASTOP®-FC – type of penetration seal (in acc. to ETAG 026-2, clause 1.1, table 1-1): Pipe closure device – collar.

The PROMASTOP®-FC consists of a steel housing with fixed fastening hooks and a special intumescent inlay. It is installed underneath floors, or on both sides of a wall, or one sided in shaft walls. In penetration seals made of mineral wool slabs, underneath floors or on both sides in wall application and in special cases in the mineral wool slab penetration seal.

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

The collar is supplied in several sizes and two heights:

Height	Type
30 mm 	PROMASTOP®-FC3
60 mm 	PROMASTOP®-FC6

Type of firestop collar PROMASTOP®-FC FC3/… or FC6/…	Number of fastening hooks	Installation outside diameter [mm]	Firestop collar outside diameter [mm]
32	2	32	53
40	2	40	61
50	3	50	76
56	3	56	82
63	3	63	89
75	3	75	106
90	3	90	121,6
100	4	100	131,6
110	4	110	141,6
125	4	125	156,6
140	5	140	176,6
160	5	160	201,6
200	5	200	241,6
225	6	225	275,6
250	6	250	311,6
315	6	315	376,6

Gap sealing in rigid wall and rigid floor constructions:
The gap between the installations and the opening edge has to be sealed by gypsum plaster, firestop mortar, cementitious mortar or firestop acrylic optionally in combination with mineral wool as backfilling material.

Gap sealing in flexible wall constructions:
The gap between the installations and the opening edge has to be sealed by gypsum plaster or firestop acrylic, optionally in combination with mineral wool as backfilling material.

It is possible to seal a sound decoupling foam strip made of PE (reaction to fire classification minimum E, in acc. to EN 13501-1, maximum thickness 5 mm) in conjunction with plastic pipes.
For further details see Annex 3.

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 is to reinstate the fire resistance performance of flexible wall constructions, rigid wall constructions, rigid floor constructions and penetration seals made of mineral wool slabs where they are penetrated by different installations.

In the following specified constructions PROMASTOP®-FC is also used in conjunction with the mineral wool slab penetration seal PROMASTOP®-CC and PROMASTOP®-I, and the penetration seal made of firestop pillows PROMASTOP®-S and PROMASTOP®-L.

(1) The specific elements of construction that PROMASTOP®-FC 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 or 150 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 450 kg/m³.
D) Shaft walls: The minimum thickness of the board(s) has to be 50 mm. Details are given in Annex 3.

The supporting construction must be classified in accordance to EN 13501-2 for the required fire resistance period. This ETA does not cover the use of this product as a penetration seal in sandwich panel constructions.

(2) PROMASTOP®-FC may be used as a penetration seal with the following specific installations:
PP-H and PP-R pipes: For further details see Annex 3.
PE pipes: For further details see Annex 3.
PVC pipes: For further details see Annex 3.
Multilayer pipes, e.g. Rehau, Poloplast, Geberit, Friatec, Pipelife pipes: For further details see Annex 3.

(3) Distances:

Specimen	Minimum distance [mm]
Firestop collar – firestop collar (housings)	0
Firestop collar – PROMASTOP®-W	30
Firestop collar – combustible Insulation	0
Firestop collar – non-combustible Insulation	0
Firestop collar – PROMASTOP®-IM CJ21	0
Firestop collar – cabletray, cableladder,…	20

To all other installations: minimum 100 mm
For further details see Annex 3.

(4) Supporting distance on both faces of wall constructions: 250 mm
Supporting distance on the upper face of floor constructions: 250 mm

2.2 Use category

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

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 Z1, excluding temperatures below 0°C, without exposure to rain or UV.

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

2.3 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 aperture lining within a flexible wall is supported by the studs (transoms and mullions) in such a way that the mechanical load imposed to the aperture lining by the penetration seal does not affect the stability of the aperture lining and the flexible wall,
e) the thermal movement in the pipe work will be accommodated in such way that it does not impose a load on the penetration seal,
f) 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,
g) the support of the installations is maintained for the required period of fire resistance and
h) pneumatic dispatch systems, compressed air systems, etc. are switched off by additional means in case of fire (for sealing off plastic composite 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 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.

2.4 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.

2.5 Installation

The product shall be installed and used as described in this European Technical Assessment. Additional marking of the penetration seal shall be done in case of national requirements.

The arrangement and installation of The PROMASTOP®-FC shall be done in accordance with the details given here and in Annex 2 and 3 for the penetration seal(s).

The installation of PROMASTOP®-FC should be conducted according to the installation manuals as follows:

- Compare the installations with the installations manual if the type is sealable
- Fill the gap around the pipe with gypsum plaster, cementitious mortar, firestop mortar over the full thickness of the wall/floor (in flexible walls, concrete walls/floors). Or use PROMASEAL®-A (thickness 10 mm) which is backfilled with mineral wool. In mineral wool penetration seals covered with PROMASTOP®-CC firestop coating use also PROMASEAL®-A (thickness 5 mm) with mineral wool backfilling material.
- Now clean the plastic pipe where the PROMASTOP®-FC should be applied, and close the collar.
- Mark the positions of the hooks on the wall/floor/mineral wool slab penetration seal and drill the holes. Use the supplied metal screws to fix the collar in the rigid walls and floors. There is no additional dowel needed.

To fix the collar at the mineral wool slab penetration seal, use threaded rods trough the boards and fix them on both sites with washers and nuts. There is a special possibility to use the PROMASTOP®-FC in the mineral wool slab penetration seal, where the collar are placed in the boards, without additional fixing (see “the built in situation”).

For fixing the PROMASTOP®-FC collar in a shaft wall, just turn the around, put it into the circular hole, and fix the hooks with ordinary drywall screws into the gypsum- or silicate boards. Fill the gap between the collar and the opening with gypsum or PROMASEAL®-A.

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	
	Resistance to fire	EN 13501-2:2007+A1:2009	
BWR 3	Air permeability (material property)	No Performance Determined (NPD)	
	Water permeability (material property)	No Performance Determined (NPD)	
	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 Determined (NPD)	
	Resistance to impact / movement	No Performance Determined (NPD)	
	Adhesion	No Performance Determined (NPD)	
BWR 5	Airborne sound insulation	No Performance Determined (NPD)	
BWR 6	Thermal properties	No Performance Determined (NPD)	
	Water vapour permeability	No Performance Determined (NPD)	
BWR 7	No Performance Determined (NPD)		

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 “xxx” were assessed according to ETAG 026-Part 2 used as EAD clause 2.4.1 and classified according to EN 13501-1.

Component	Class according to EN 13501-1:2007+A1
PROMASTOP®-FC	E
PROMASTOP®-CC firestop coating	E
PROMASTOP®-I firestop coating	C-s2, d0
PROMASTOP®-S /-L firestop pillows	E
PROMASEAL®-A firestop acrylic sealant	E

3.2.2 Resistance to fire

The penetration seal PROMASTOP®-FC has been tested in accordance with EN 1366-3:2009 installed within apertures in flexible walls, rigid walls and floors, mineral wool slab penetration seals PROMASTOP®-CC/ PROMASTOP®-I and PROMASTOP®-S /-L pillows penetrations seals. The apertures were penetrated by different installations listed in Annex 3.

As shown in Annex 3, the test results and the direct field of application (in acc. to EN 1366-3:2009) PROMASTOP®-FC has been classified in accordance with EN 13501-2:2007+A1.

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

Appropriate wall and floor constructions for penetration seals see 1.2.

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.

Specific considerations:

- Pipes can be installed sloped or perpendicular to the seal surface.
- It is assumed that compressed air systems are switched off by other means in the case of fire.
- The function of the pipe seal in case of pneumatic dispatch systems, pressurised air systems etc. is guaranteed only when the systems are shut off in case of fire.
- The assessment does not address any risks associated with leakage of dangerous liquids or gases caused by failure of the pipe(s) in case of fire.
- The durability assessment does not take account of the possible effect of substances permeating through the pipe on the penetration seal.
- The classifications relate to U/U (uncapped on both sides) and U/C (uncapped inside the furnace/capped outside).
- The risk of spread of fire downwards caused by burning material, which drips through a pipe downwards to floors below, cannot be assessed with tests according to EN 1366-3 and is therefore not part of the assessment of this ETA.

3.3 Hygiene, health and environment (BWR 3)

3.3.1 Air permeability

No performance determined.

3.3.2 Water permeability

No performance determined.

3.3.3 Release of dangerous substances

According to the manufacturer's declaration "Rockwool 800" does not contain dangerous substances detailed in Council Directive 67/548/EEC and Regulation (EC) no 1272/2008.

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

3.4 Safety and accessibility in use (BWR 4)

3.4.1 Mechanical resistance and stability

No performance determined.

3.4.2 Resistance to impact / movement

No performance determined.

3.4.3 Adhesion

No performance determined.

3.5 Protection against noise (BWR 5)

3.5.1 Airborne sound insulation

No performance determined.

3.6 Energy economy and heat retention (BWR 6)

3.6.1 Thermal properties

No performance determined.

3.6.2 Water vapour permeability

No performance determined.

3.7 Sustainable use of natural resources (BWR 7)

No performance determined.

3.8 General aspects relating to fitness for use

3.8.1 Durability

PROMASTOP®-FC has been tested in acc. to EOTA TR 024, Table 4.2.4 for the Y_1 use category specified in EOTA ETAG 026-2 and the results of the test have demonstrated suitability for penetration seals intended for use ate temperatures between -20°C and +70°C with exposure to UV but without exposure to rain ($Y_{1\ (-20/+70)°C}$).

3.8.2 Serviceability

No performance determined.

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 1.

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

5.1 Tasks of the manufacturer

5.1.1 Factory production control

The manufacturer shall exercise permanent internal control of production. All the elements, requirements and provisions adopted by the manufacturer shall be documented in a systematic manner in the form of written policies and procedures, including records of results performed. This production control system shall insure that the product is in conformity with this European Technical Assessment.

The manufacturer may only use initial/raw/constituent materials stated in the Technical documentation[4] of this European Technical Assessment

For the components, which the ETA-holder does not manufacture by himself, he shall make sure that factory production control carried out by the other manufacturers gives the guarantee of the components compliance with the European Technical Assessment.

The factory production control and the provisions taken by the ETA-holder for components not produced by himself shall be in accordance with the control plan[5] relating to this European Technical Assessment, which is a confidential part of the Technical documentation of this European Technical Assessment.

The results and details of the extent, nature and frequency of controls be performed within the factory production control shall be recorded and evaluated in accordance with the provisions of the control plan.

[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

[4] The technical documentation of this European Technical Assessment has been deposited at the Österreichisches Institut für Bautechnik and, as far as relevant for the tasks of the notified product certification body involved in the assessment and verification of constancy of performance, is handed over to the notified product certification body.

[5] The control plan has been deposited at Österreichisches Institut für Bautechnik and is handed over only to the notified product certification body involved in the assessment and verification of constancy of performance.

5.1.2 Other tasks of the manufacturer

The manufacturer shall provide a Technical data sheet and an installation instruction with the following minimum information:

Technical data sheet:

a) Field of application:
   1) Building elements for which the penetration seal is suitable, type and properties of the building elements like minimum thickness, density, and – in case of lightweight constructions – the construction requirements
   2) Services which may pass through the penetration seal, type and properties of the services like material, diameter, thickness etc. in case of pipes including insulation materials; necessary/allowed supports/fixings
   3) Limits in size, minimum thickness etc. of the penetration seal
   4) Environmental conditions covered by this European Technical Assessment
b) Construction of the penetration seal including the necessary components and additional products (e.g. backfilling material) with clear indication whether they are generic or specific.

Installation instruction:

a) Steps to be followed
b) Stipulations on maintenance, repair and replacement

The manufacturer shall, based on a contract, involve a notified product certification body, which is notified for the tasks referred to in clause 4.1 of the ETA in the field of Assessment product. For this purpose, the control plan referred to in clause 5.1 and 5.2 of the ETA shall be handed over by the manufacturer to the notified product certification body involved.

The manufacturer shall make a declaration of conformity, stating that the construction product is in conformity with the provisions of this European Technical Assessment.

5.1.3 Further testing of samples taken at the factory

Testing of samples taken at the factory by the manufacturer is not required.

5.2 Tasks of notified product certification body

The notified product certification body shall retain the essential points of its actions referred to clause 5.2.1 to 5.2.3, state the results obtained and conclusions drawn in written report.

These tasks shall be performed in accordance with the provisions laid down in the control plan of this European Technical Assessment.

5.2.1 Determination of the product type

Notified product certification bodies undertaking tasks under Systems 1 shall consider the European Technical Assessment issued for the construction product in question as the assessment of the performance of that product. Notified bodies shall therefore not undertake the tasks referred to in point 1.2 (b)(i), in Annex V of Regulation (EU) No 305/2011, unless there are changes in the manufacture or manufacturing plant. In such cases, the necessary initial type testing has to be agreed between the Österreichisches Institut für Bautechnik and notified product certification body involved.

5.2.2 Initial inspection of the manufacturing plant and of factory production control

The notified product certification body shall ascertain that, in accordance with the control plan, the manufacturing plant, in particular personnel and equipment, and the factory production control are suitable to ensure a continuous and orderly manufacturing of the kit according to the specifications given in clause 2 and in the Annexes of the European Technical Assessment.

5.2.3 Continuous surveillance, assessment and evaluation of factory production control

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

It has to be verified that the system of factory production control and the specified manufacturing process are maintained taking into account the control plan.

Continuous surveillance and assessment of factory production control have to be performed according to the control plan.

The results of continuous surveillance shall be made available on demand by the notified product certification body or the Österreichisches Institut für Bautechnik. In cases where the provisions of the European Technical Assessment and the control plan are no longer fulfilled, the certificate of constancy of performance shall be withdrawn.

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by Österreichisches Institut für Bautechnik

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Managing Director

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ANNEX 1

Reference documents and list of abbreviations

1.1 Reference to standards mentioned in this ETA:

ETAG 026-2 (2011)	Fire stopping and fire sealing products - Part 2: Penetration Seals
EN 13501-1:2007+A1	Fire classification of construction products and building elements - Part 1: Classification using test data from reaction to fire tests
EN 13501-2: 2007+A1	Fire classification of construction products and building elements - Part 2: Classification using data from fire resistance tests, excluding ventilation
EN 1363-1:1999	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:

EOTA TR 024 (2009)	Characterisation, Aspects of Durability and Factory Production Control for Reactive Materials, Components and Products

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ANNEX 2

DESCRIPTION OF PRODUCT(S) & PRODUCT LITERATURE

2.1 Product:

Product name	
PROMASTOP®-FC	firestop collar
PROMASTOP®-CC	firestop coating
PROMASTOP®-I	firestop coating
PROMASTOP®-S /-L	firestop pillows

Suitable mineral wool products used for mineral wool slab penetration seal	
Manufacturer	**Product designation**
Rockwool	RP-XV, Hardrock II
Knauf Insulations	Heralan DP-15
Paroc OY AB	Pyrotech slab 140 - 180
Isover	Orsil T-N

For backfilling mineral wool with a melting point ≥ 1000 °C and a classification to A1 in accordance to EN 13501-1.

2.2 Fixing details:

Threaded rods M6 or M8 for fixing the collars through penetration seals made of mineral wool slabs.
Drywall screws to fix the PROMASTOP®-FC collar into shaft walls.
Special screws are enclosed to the PROMASTOP®-FC collar package, to fix it to rigid constructions.
Promat SPC (Sloped Pipe Clip – a special metal clip) for additional fixing to the collar.

PROMASEAL®-A firestop acrylic for gap sealing.

The control plan is a non-public part of this European technical approval, and laid down in the Österreichisches Institut für Bautechnik.

2.3 Technical product literature:

Product data sheets for PROMASTOP®-FC, PROMASTOP®-CC, PROMASTOP®-I, PROMASTOP®-S /-L and PROMASEAL®-A.

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ANNEX 3

RESISTANCE TO FIRE CLASSIFICATION OF PROMASTOP®-FC

3.1 Mineral wool slab penetration seal with PROMASTOP®-CC firestop coating in combination with the PROMASTOP®-FC firestop collar

There are three possible mineral wool slab penetration seals with firestop coating:

Mineral wool slabs (thickness)	1 x 50 mm	1 x 80 mm	2 x 50 mm

Seal sizes in dependence with the supporting construction:

Mineral wool slabs (thickness) ► Supporting construction ▼	1 x 50 mm	1 x 80 mm	2 x 50 mm
Flexible walls ≥ 100 mm	≤ 1,80 m²	≤ 1,80 m²	≤ 3,75 m²
Rigid walls ≥ 100 mm	≤ 1,80 m²	≤ 1,80 m²	≤ 3,75 m²
Rigid floors ≥ 150 mm	≤ 1,95 m²	≤ 1,95 m²	≤ 3,75 m²

Mineral wool boards/slabs (thickness see table above, minimum density 140 kg/m³, melting point ≥ 1000°C).

Minimum distance between the two mineral wool slabs: ≥ 0 mm

In flexible wall constructions the penetration seal can be built in without casing the opening with gypsum boards if there is a metal or wood stud.

PROMASTOP®-CC firestop coating has to be applied on the outer surface of the penetration seal with thickness about 0,7 mm. Cutting edges and the opening frame should be also painted with PROMASTOP®-CC firestop coating. PROMASTOP®-CC firestop coating on the supporting construction: 0 mm

Distances:

Specimen	Minimum distance [mm]
Firestop collar – firestop collar	0
Firestop collar – PROMASTOP®-W	30
Firestop collar – combustible Insulation	0
Firestop collar – non-combustible Insulation	0
Firestop collar – PROMASTOP®-IM CJ21	0
Firestop collar – cabletray, cableladder, cables	20

To all other installations: minimum 100 mm

To seal the opening around the pipe and the mineral wool slab penetration seal with PROMASEAL®-A (thickness 5 mm, in wall orientation on both sides, in floor orientation only underneath) with mineral wool backfilling material (melting point ≥ 1000°C).

Pipe end configuration: Results with U/U covers C/U, U/C and C/C, but not vice versa.

Sound decupling based on PE (foam, minimum class E in acc. to EN 13501-1:2007+A1, or equal products) may be used to a maximum thickness of 5 mm.

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Sockets:
The diameter of the tested sockets can be reduced, but not increased. For this application the PROMASTOP®-FC6 collar is needed.

Classification in acc. to EN 13501-2 for the PROMASTOP®-FC in mineral wool slab penetration seal PROMASTOP®-CC:

Name	Dimension scope Ø…Diameter [mm] t_D…pipe wall thickness [mm]	Mineral wool slab seal [mm]	Orien-tation Wall…W Floor…F	Collar type [mm]	Classification
Friatec Friaphon	Ø 52 / t_D 2,8 - Ø 110 / t_D 5,3	1 x 50	F	FC3	EI60-U/U
Friatec Friaphon	Ø 52 / t_D 2,8 - Ø 110 / t_D 5,3	1 x 80	F	FC3	EI90-U/U
Friatec Friaphon	Ø 52 / t_D 2,8 - Ø 110 / t_D 5,3	2 x 50	F	FC3	EI90-U/U
Friatec dBlue	Ø 50 / t_D 1,8 - Ø 125 / t_D 3,9	1 x 50	F	FC3	EI60-U/U
Friatec dBlue	Ø 50 / t_D 1,8 - Ø 125 / t_D 3,9	1 x 80	F	FC3	EI90-U/U
Friatec dBlue	Ø 50 / t_D 1,8 - Ø 125 / t_D 3,9	2 x 50	F	FC3	EI90-U/U
Geberit Silent dB20	Ø 56 / t_D 3,2 - Ø 160 / t_D 7,0	1 x 50	F	FC3	EI60-U/U
Geberit Silent dB20	Ø 56 / t_D 3,2 - Ø 160 / t_D 7,0	1 x 80	F	FC3	EI90-U/U
Geberit Silent dB20	Ø 56 / t_D 3,2 - Ø 160 / t_D 7,0	2 x 50	F	FC3	EI90-U/U
Geberit Silent dB20	Ø 56 / t_D 3,2 - Ø 135 / t_D 6,0	1 x 50	W	FC3	EI60-U/U
Geberit Silent dB20	Ø 56 / t_D 3,2 - Ø 135 / t_D 6,0	1 x 80	W	FC3	EI90-U/U
Geberit Silent dB20	Ø 56 / t_D 3,2 - Ø 135 / t_D 6,0	2 x 50	W	FC3	EI90-U/U
Pipelife Master3	Ø 75 / t_D 2,1 - Ø 125 / t_D 3,5	1 x 50	F	FC3	EI60-U/U
Pipelife Master3	Ø 75 / t_D 2,1 - Ø 125 / t_D 3,5	1 x 80	F	FC3	EI90-U/U
Pipelife Master3	Ø 75 / t_D 2,1 - Ø 125 / t_D 3,5	2 x 50	F	FC3	EI90-U/U
Pipelife Master3	Ø 75 / t_D 2,1 - Ø 125 / t_D 3,5	1 x 50	W	FC3	EI60-U/U
Pipelife Master3	Ø 75 / t_D 2,1 - Ø 125 / t_D 3,5	1 x 80	W	FC3	EI90-U/U
Pipelife Master3	Ø 75 / t_D 2,1 - Ø 125 / t_D 3,5	2 x 50	W	FC3	EI120-U/U
Poloplast PoloKal NG	Ø 32 / t_D 1,8 - Ø 250 / t_D 8,6	1 x 50	F	FC3/6	EI60-U/U
Poloplast PoloKal NG	Ø 32 / t_D 1,8 - Ø 250 / t_D 8,6	1 x 80	F	FC3/6	EI90-U/U
Poloplast PoloKal NG	Ø 32 / t_D 1,8 - Ø 250 / t_D 8,6	2 x 50	F	FC3/6	EI90-U/U
Poloplast PoloKal NG	Ø 32 / t_D 1,8 - Ø 160 / t_D 4,9	2 x 50	W	FC3	EI120-U/U
Poloplast PoloKal NG	Ø 32 / t_D 1,8 - Ø 250 / t_D 8,6	1 x 50	W	FC3/6	EI60-U/U
Poloplast PoloKal NG	Ø 32 / t_D 1,8 - Ø 250 / t_D 8,6	1 x 80	W	FC3/6	EI90-U/U
Poloplast PoloKal NG	Ø 32 / t_D 1,8 - Ø 250 / t_D 8,6	2 x 50	W	FC3/6	EI90-U/U
Poloplast PoloKal XS	Ø 32 / t_D 1,8 - Ø 250 / t_D 8,6	1 x 50	F	FC3/6	EI60-U/U
Poloplast PoloKal XS	Ø 32 / t_D 1,8 - Ø 250 / t_D 8,6	1 x 80	F	FC3/6	EI90-U/U
Poloplast PoloKal XS	Ø 32 / t_D 1,8 - Ø 250 / t_D 8,6	2 x 50	F	FC3/6	EI90-U/U
Poloplast PoloKal XS	Ø 32 / t_D 1,8 - Ø 160 / t_D 4,9	2 x 50	W	FC3	EI120-U/U
Poloplast PoloKal XS	Ø 32 / t_D 1,8 - Ø 250 / t_D 8,6	1 x 50	W	FC3/6	EI60-U/U
Poloplast PoloKal XS	Ø 32 / t_D 1,8 - Ø 250 / t_D 8,6	1 x 80	W	FC3/6	EI90-U/U
Poloplast PoloKal XS	Ø 32 / t_D 1,8 - Ø 250 / t_D 8,6	2 x 50	W	FC3/6	EI90-U/U
Poloplast PoloKal 3S	Ø 75 / t_D 3,8 - Ø 160 / t_D 7,5	1 x 50	F	FC3	EI60-U/U
Poloplast PoloKal 3S	Ø 75 / t_D 3,8 - Ø 160 / t_D 7,5	1 x 80	F	FC3	EI90-U/U
Poloplast PoloKal 3S	Ø 75 / t_D 3,8 - Ø 160 / t_D 7,5	2 x 50	F	FC3	EI90-U/U
Poloplast PoloKal 3S	Ø 75 / t_D 3,8 - Ø 160 / t_D 7,5	1 x 50	W	FC3	EI60-U/U
Poloplast PoloKal 3S	Ø 75 / t_D 3,8 - Ø 160 / t_D 7,5	1 x 80	W	FC3	EI90-U/U
Poloplast PoloKal 3S	Ø 75 / t_D 3,8 - Ø 160 / t_D 7,5	2 x 50	W	FC3	EI120-U/U
PVC-U	Ø 32 / t_D 1,8 - Ø 250 / t_D 4,9	1 x 50	F	FC3/6	EI60-U/U
PVC-U	Ø 32 / t_D 1,8 - Ø 250 / t_D 4,9	1 x 80	F	FC3/6	EI90-U/U
PVC-U	Ø 32 / t_D 1,8 - Ø 250 / t_D 4,9	2 x 50	F	FC3/6	EI90-U/U
PE	Ø 32 / t_D 1,8 - Ø 200 / t_D 11,4	1 x 50	F	FC3/6	EI60-U/U
PE	Ø 32 / t_D 1,8 - Ø 200 / t_D 11,4	1 x 80	F	FC3/6	EI90-U/U
PE	Ø 32 / t_D 1,8 - Ø 200 / t_D 11,4	2 x 50	F	FC3/6	EI90-U/U
PE	Ø 40 / t_D 1,8 - Ø 200 / t_D 11,4	1 x 50	W	FC3/6	EI60-U/U
PE	Ø 40 / t_D 1,8 - Ø 200 / t_D 11,4	1 x 80	W	FC3/6	EI90-U/U
PE	Ø 40 / t_D 1,8 - Ø 200 / t_D 11,4	2 x 50	W	FC3/6	EI90-U/U
PP-H / PP-R	Ø 32 / t_D 1,8 - Ø 200 / t_D 11,4	1 x 50	F	FC3/6	EI60-U/U

PP-H / PP-R	Ø 32 / t_D 1,8 - Ø 200 / t_D 11,4	1 x 80	F	FC3/6	EI90-U/U
PP-H / PP-R	Ø 32 / t_D 1,8 - Ø 200 / t_D 11,4	2 x 50	F	FC3/6	EI90-U/U
PP-H / PP-R	Ø 40 / t_D 1,8 - Ø 250 / t_D 14,2	1 x 50	W	FC3/6	EI60-U/U
PP-H / PP-R	Ø 40 / t_D 1,8 - Ø 250 / t_D 14,2	1 x 80	W	FC3/6	EI90-U/U
PP-H / PP-R	Ø 40 / t_D 1,8 - Ø 250 / t_D 14,2	2 x 50	W	FC3/6	EI90-U/U
Rehau Raupiano Plus	Ø 40 / t_D 1,8 - Ø 200 / t_D 6,2	1 x 50	F	FC6	EI60-U/U
Rehau Raupiano Plus	Ø 40 / t_D 1,8 - Ø 200 / t_D 6,2	1 x 80	F	FC6	EI90-U/U
Rehau Raupiano Plus	Ø 40 / t_D 1,8 - Ø 200 / t_D 6,2	2 x 50	F	FC6	EI90-U/U
Rehau Raupiano Plus (+socket)	Ø 40 / t_D 1,8 - Ø 125 / t_D 3,1	1 x 50	F	FC6	EI60-U/U
Rehau Raupiano Plus (+socket)	Ø 40 / t_D 1,8 - Ø 125 / t_D 3,1	1 x 80	F	FC6	EI90-U/U
Rehau Raupiano Plus (+socket)	Ø 40 / t_D 1,8 - Ø 125 / t_D 3,1	2 x 50	F	FC6	EI90-U/U
Rehau Raupiano Plus (+socket)	Ø 40 / t_D 1,8 - Ø 125 / t_D 3,1	1 x 50	W	FC6	EI60-U/U
Rehau Raupiano Plus (+socket)	Ø 40 / t_D 1,8 - Ø 125 / t_D 3,1	1 x 80	W	FC6	EI90-U/U
Rehau Raupiano Plus (+socket)	Ø 40 / t_D 1,8 - Ø 125 / t_D 3,1	2 x 50	W	FC6	EI120-U/U

(Table 1, Annex 3)

Details are shown in the following diagrams.

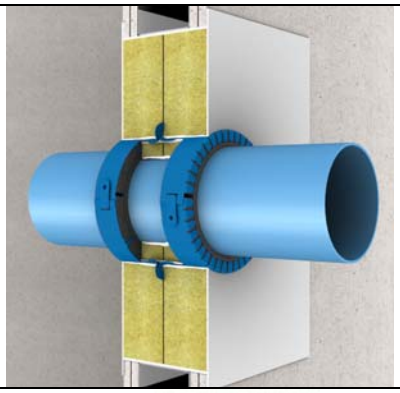
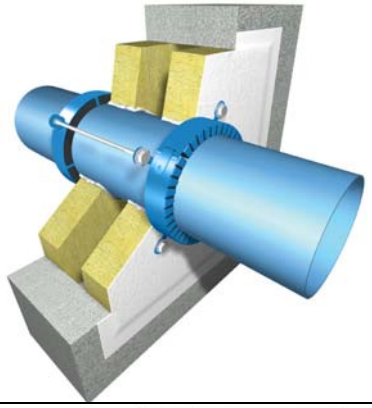
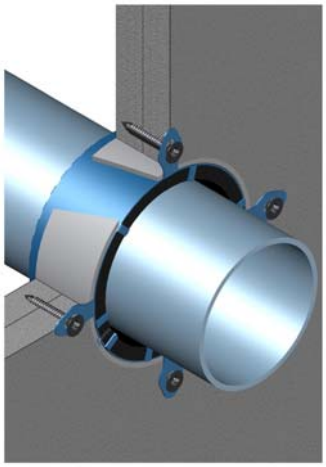
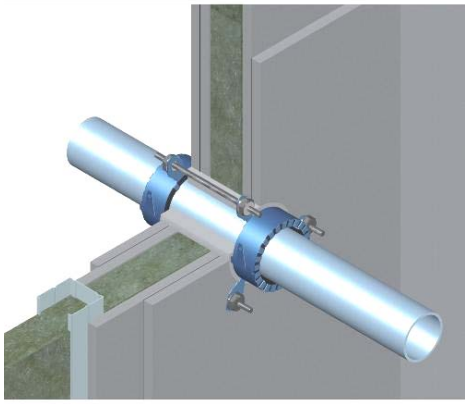
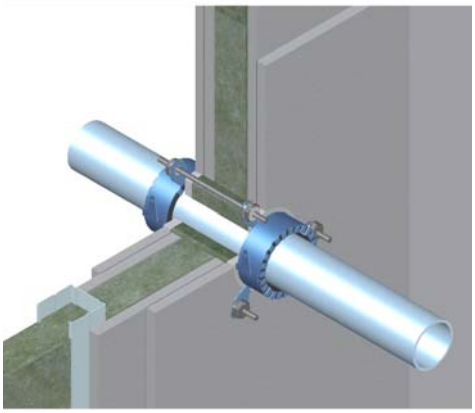
The classifications for PVC-U pipes are applicable for pipes in acc. to EN 1452-1, DIN 8061, DIN 8062, EN 1329-1, EN 1453-1 and PVC-C pipes in acc. to EN 1566-1.

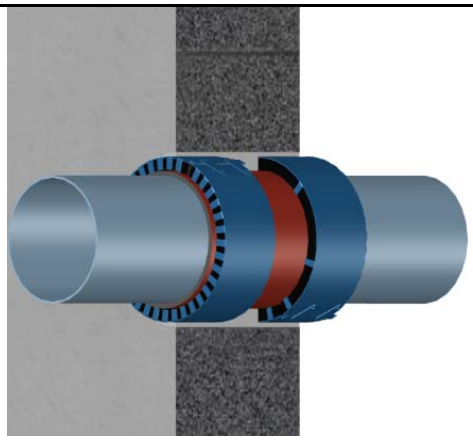
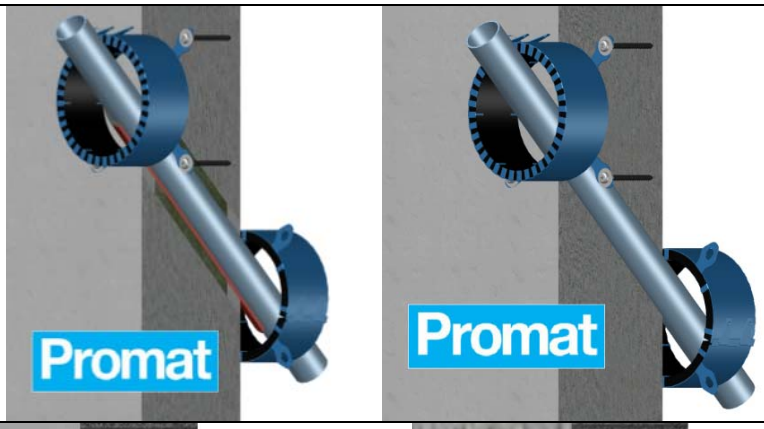
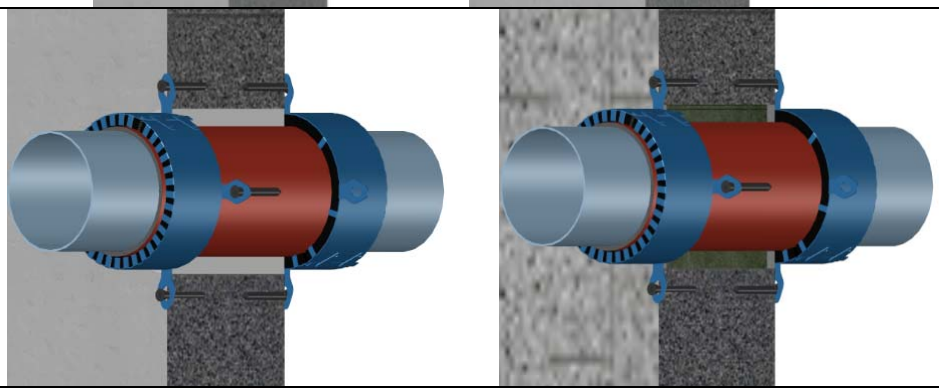
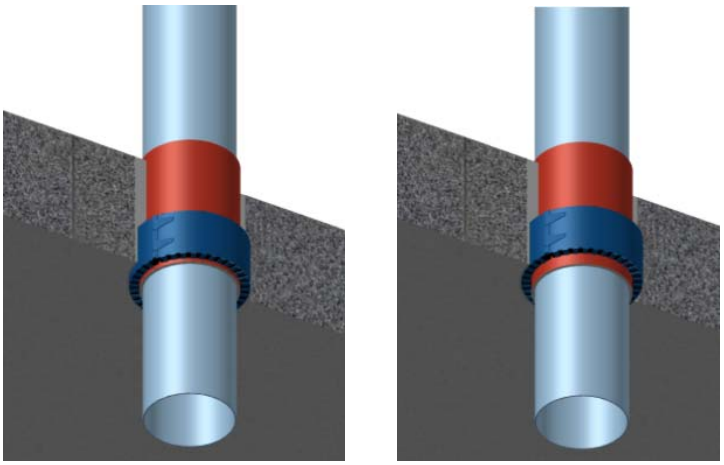
The classifications for PE pipes are applicable for pipes in acc. to EN 12201-2, EN 1519-1, EN 12666-1, DIN 8074, DIN 8075 and ABS-pipes in acc. to EN 1455-1 and SAN + PVC-pipes in acc. to EN 1565-1.

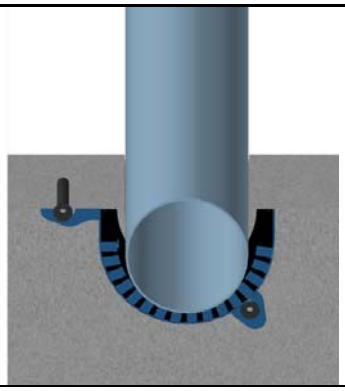
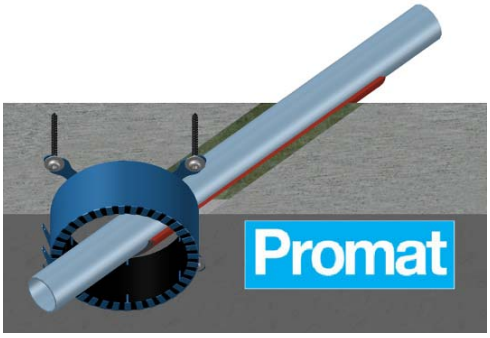
The classifications for PP-H and PP-R pipes are applicable for pipes in acc. e.g. to DIN 8077, DIN 8078 or equal products.

The classifications for all stated multilayer pipes (see Table 1, Annex 3) are applicable on equal products.

Possible assemblies of the PROMASTOP®-FC firestop collar

The built **in** situation in a penetration seal made of mineral wool slabs	
The built **on** situation in a penetration seal made of mineral wool slabs	
The built **in** situation in shaft walls. Gap sealing with PROMASEAL®-A or gypsum.	
The built **on** situation on flexible walls. Gap sealing with gypsum or mineral wool and PROMASEAL®-A, fixing with threaded rods trough the wall.	 

The PROMASTOP®-FC collar, mortared in the rigid wall. **For -U/U application:** The collar shall be mounted minimum 10 mm out of the surface of the wall. **For -U/C, -C/U, -C/C:** The collar may be mortared flat to the wall.	
The PROMASTOP®-FC collar, mounted on the rigid wall, for sloped pipes. Gap sealing with gypsum, mortar, firestop mortar or mineral wool and PROMASEAL®-A.	
The PROMASTOP®-FC collar, mounted on the rigid wall. Gap sealing with gypsum, mortar, firestop mortar or mineral wool and PROMASEAL®-A.	
The PROMASTOP®-FC collar, mortared in the rigid floor. **For -U/U application:** (left picture) The collar shall be mounted minimum 10 mm out of the surface of the floor. **For -U/C, -C/U, -C/C:** (right picture) The collar may be mortared flat to the floor.	

The PROMASTOP®-FC collar, mounted under the rigid floor.	
The PROMASTOP®-FC collar, mounted under the rigid floor for sloped pipes. Gap sealing with gypsum, mortar, firestop mortar or mineral wool and PROMASEAL®-A.	 

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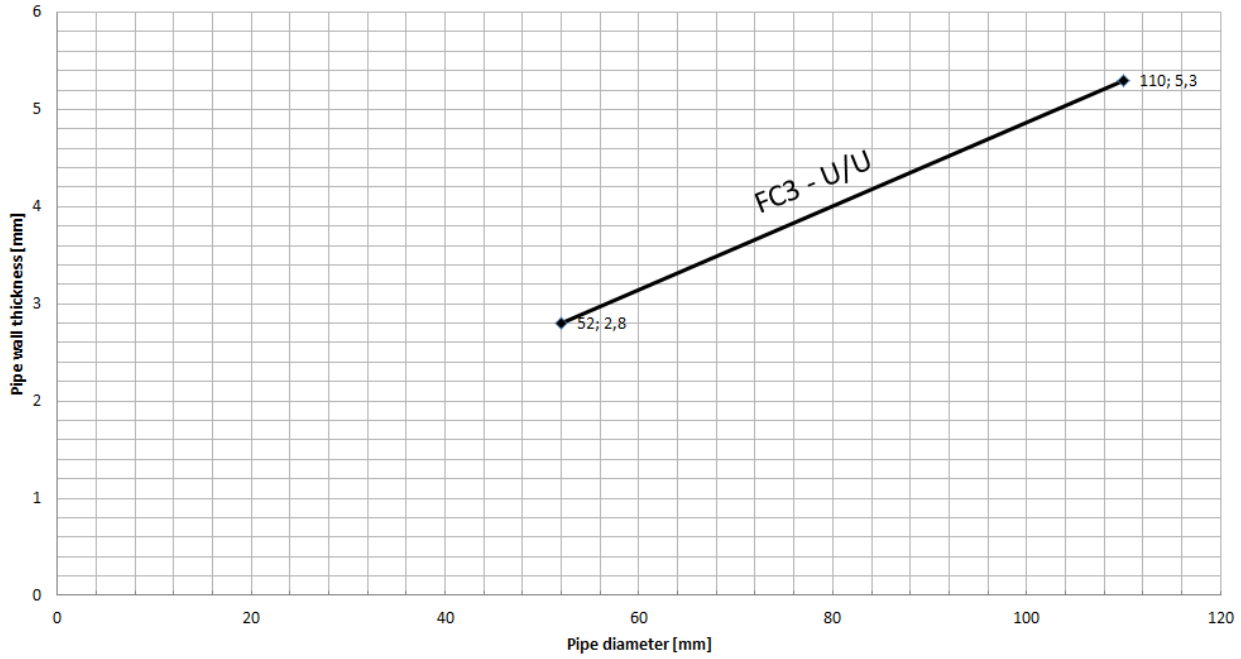
Classification details (from Table 1, Annex 3)

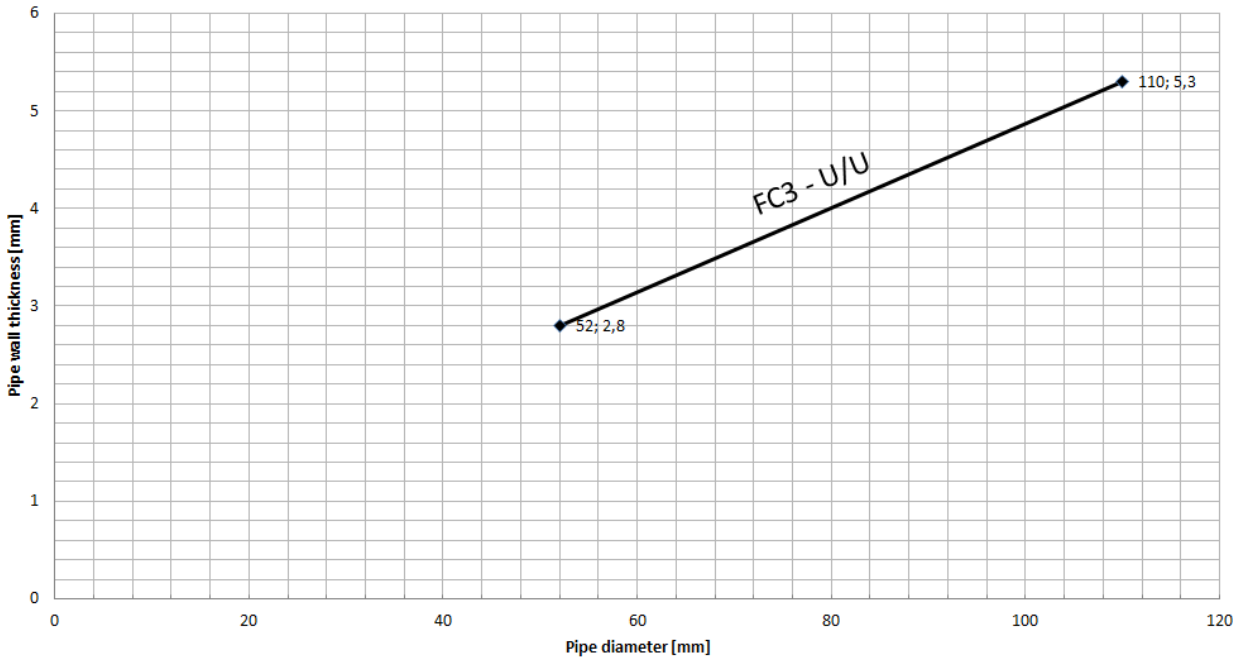
Friatec Friaphon	Ø 52 / t_D 2,8 - Ø 110 / t_D 5,3	1 x 50	Floor	FC3	EI60-U/U

**Friatec Friaphon pipes with or without sound decoupling
with PROMASTOP-FC collar on penetration seal PROMASTOP-CC (1 x 50 mm)
in rigid floor construction (density ≥ 450 kg/m³, thickness ≥ 150 mm)
EI60-U/U**



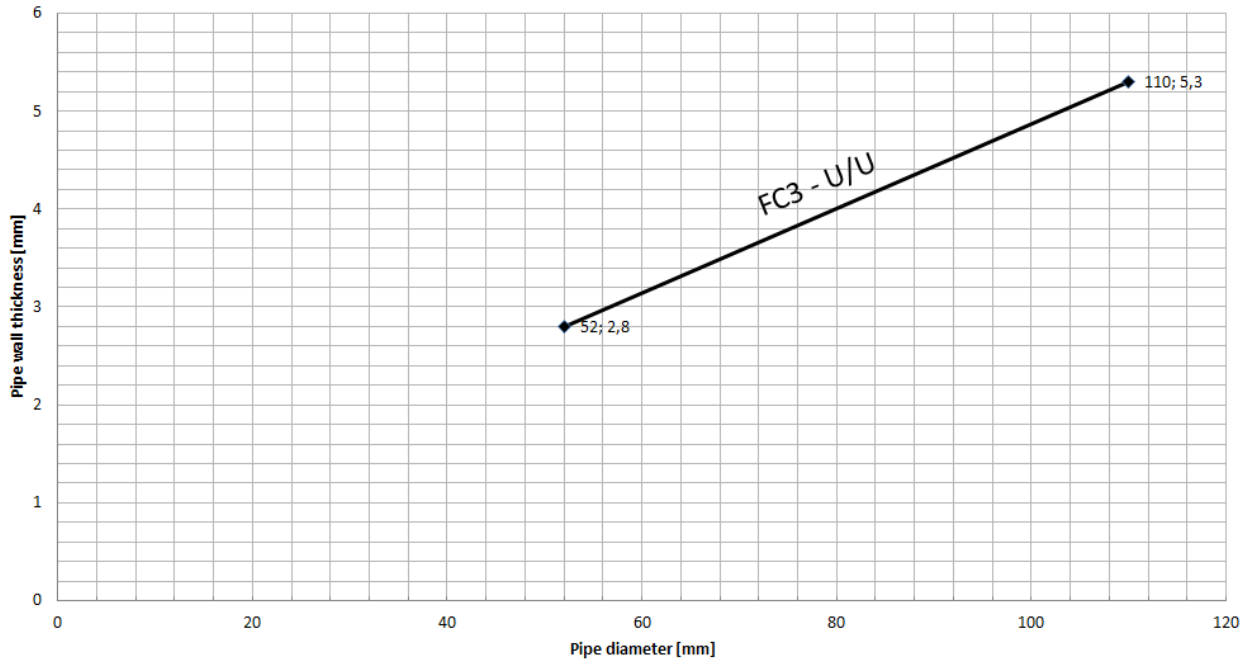
Friatec Friaphon	Ø 52 / t_D 2,8 - Ø 110 / t_D 5,3	1 x 80	Floor	FC3	EI90-U/U

**Friatec Friaphon pipes with or without sound decoupling
with PROMASTOP-FC collar on penetration seal PROMASTOP-CC (1 x 80 mm)
in rigid floor construction (density ≥ 450 kg/m³, thickness ≥ 150 mm)
EI90-U/U**



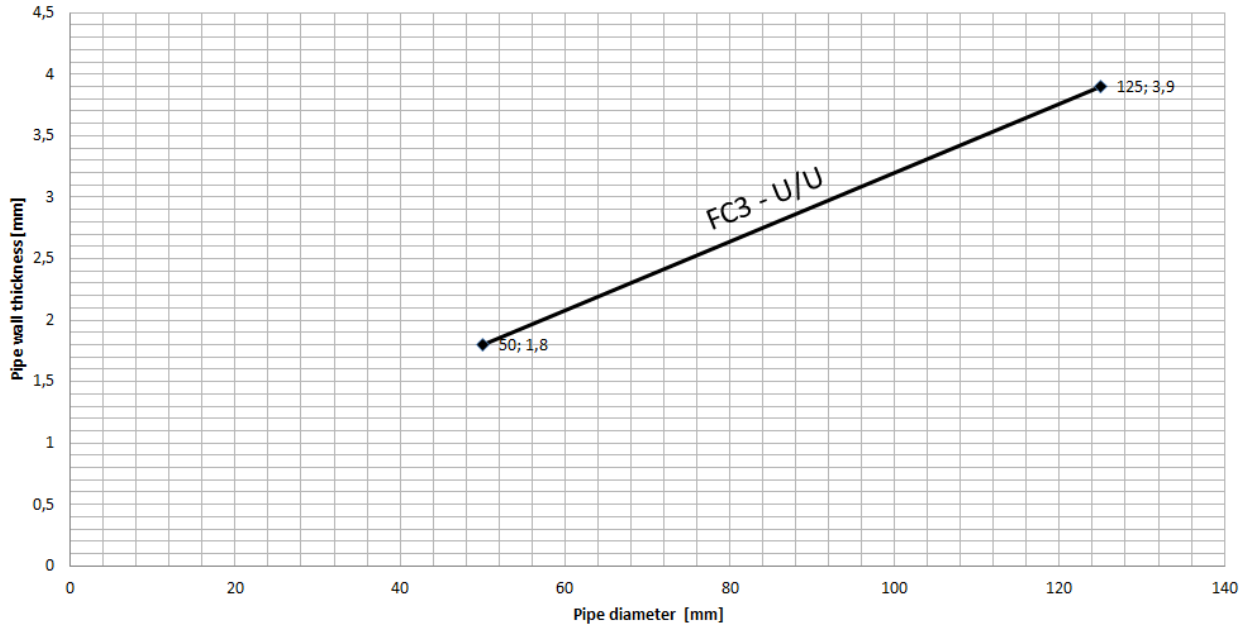
Friatec Friaphon	Ø 52 / t_D 2,8 - Ø 110 / t_D 5,3	2 x 50	Floor	FC3	EI90-U/U

**Friatec Friaphon pipes with or without sound decoupling
with PROMASTOP-FC collar on penetration seal PROMASTOP-CC (2 x 50 mm)
in rigid floor construction (density ≥ 450 kg/m³, thickness ≥ 150 mm)
EI90-U/U**



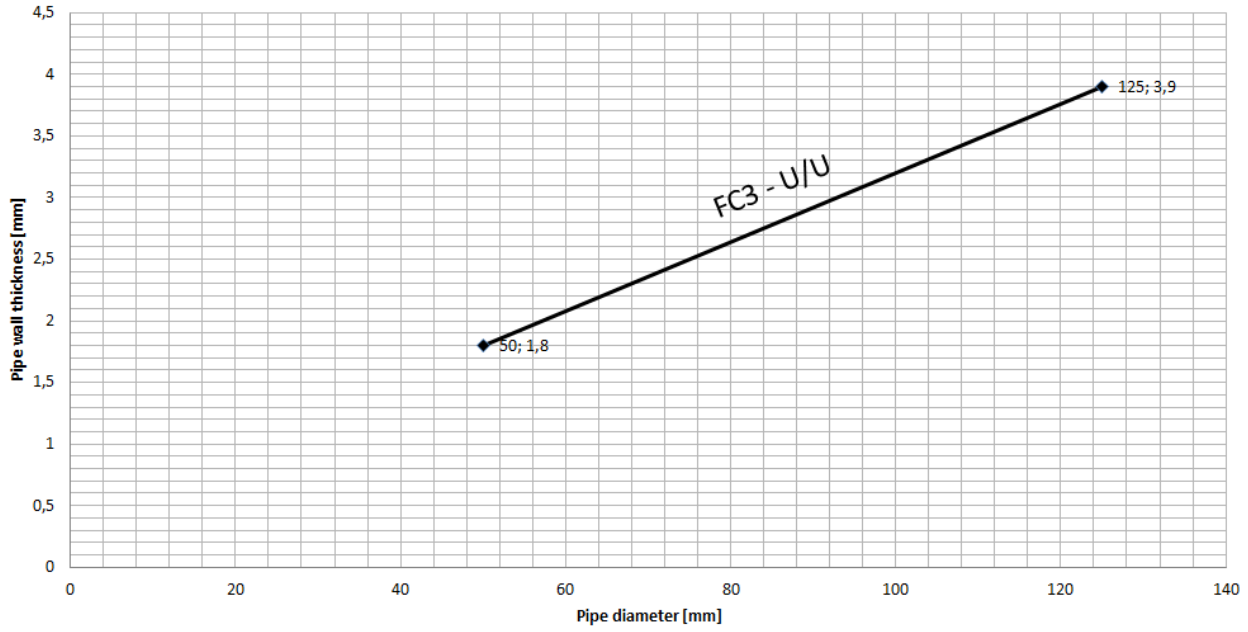
Friatec dBlue	Ø 50 / t_D 1,8 - Ø 125 / t_D 3,9	1 x 50	Floor	FC3	EI60-U/U

**Friatec dBlue pipes with or without sound decoupling
with PROMASTOP-FC collar on penetration seal PROMASTOP-CC (1 x 50 mm)
in rigid floor construction (density ≥ 450 kg/m³, thickness ≥ 150 mm)
EI60-U/U**



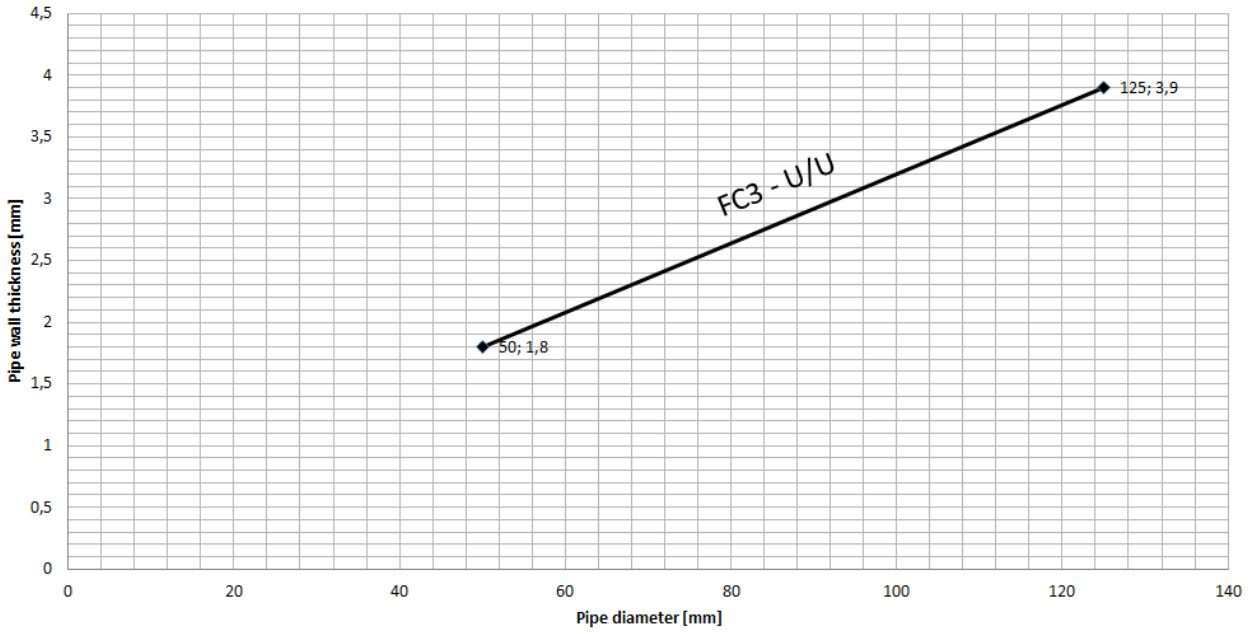
Friatec dBlue	Ø 50 / t_D 1,8 - Ø 125 / t_D 3,9	1 x 80	Floor	FC3	EI90-U/U

Friatec dBlue pipes with or without sound decoupling
with PROMASTOP-FC collar on penetration seal PROMASTOP-CC (1 x 80 mm)
in rigid floor construction (density ≥ 450 kg/m³, thickness ≥ 150 mm)
EI90-U/U



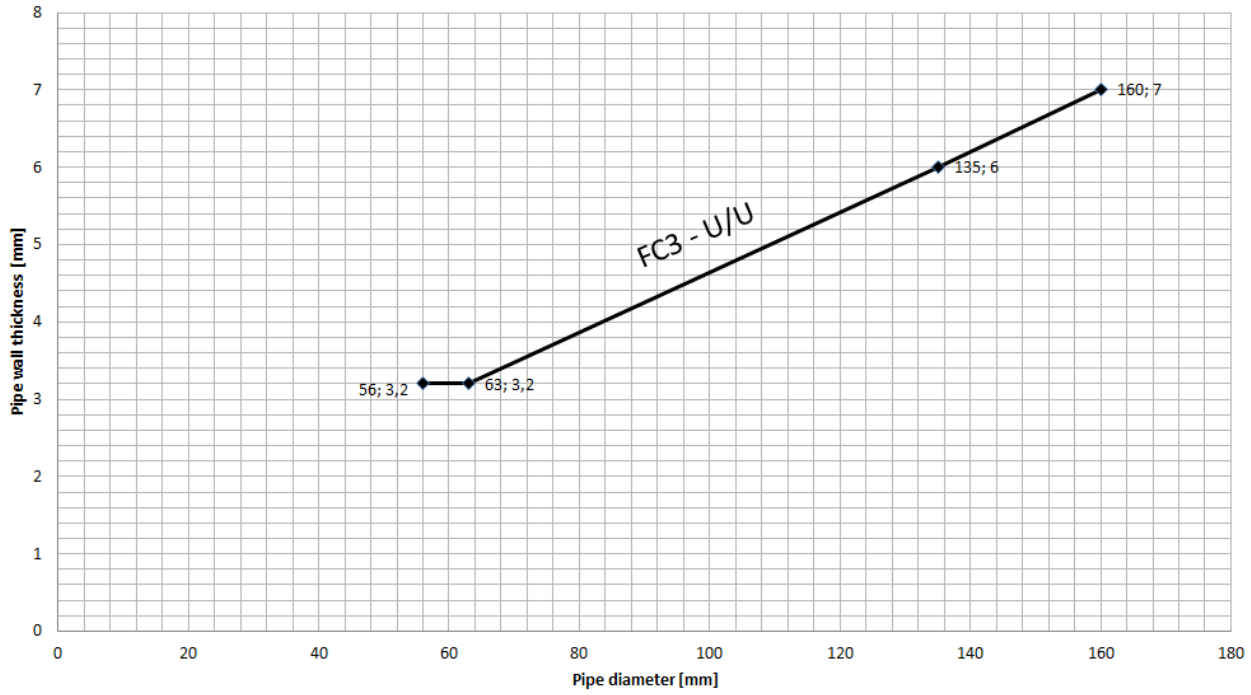
Friatec dBlue	Ø 50 / t_D 1,8 - Ø 125 / t_D 3,9	2 x 50	Floor	FC3	EI90-U/U

Friatec dBlue pipes with or without sound decoupling
with PROMASTOP-FC collar on penetration seal PROMASTOP-CC (2 x 50 mm)
in rigid floor construction (density ≥ 450 kg/m³, thickness ≥ 150 mm)
EI90-U/U



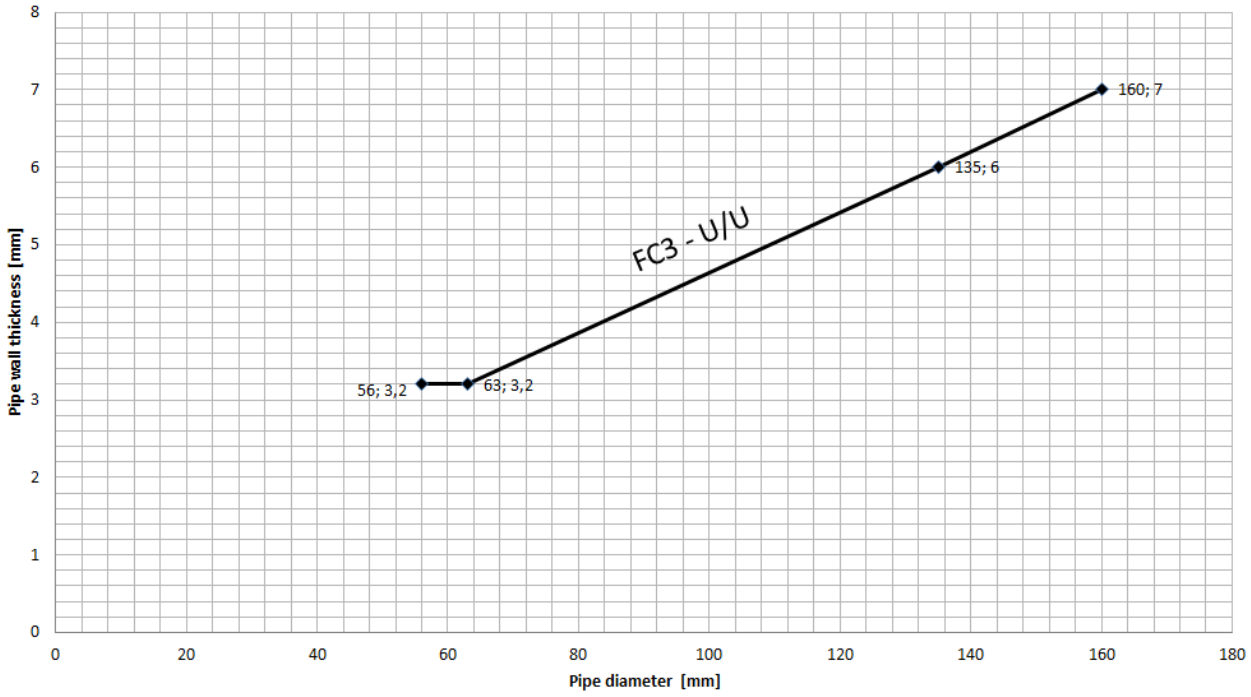
Geberit Silent dB20	Ø 56 / t_D 3,2 - Ø 160 / t_D 7,0	1 x 50	Floor	FC3	EI60-U/U

Geberit Silent dB20 pipes with PROMASTOP-FC collar on penetration seal PROMASTOP-CC (1 x 50 mm) in rigid floor construction (density ≥ 450 kg/m³, thickness ≥ 150 mm)
EI60-U/U



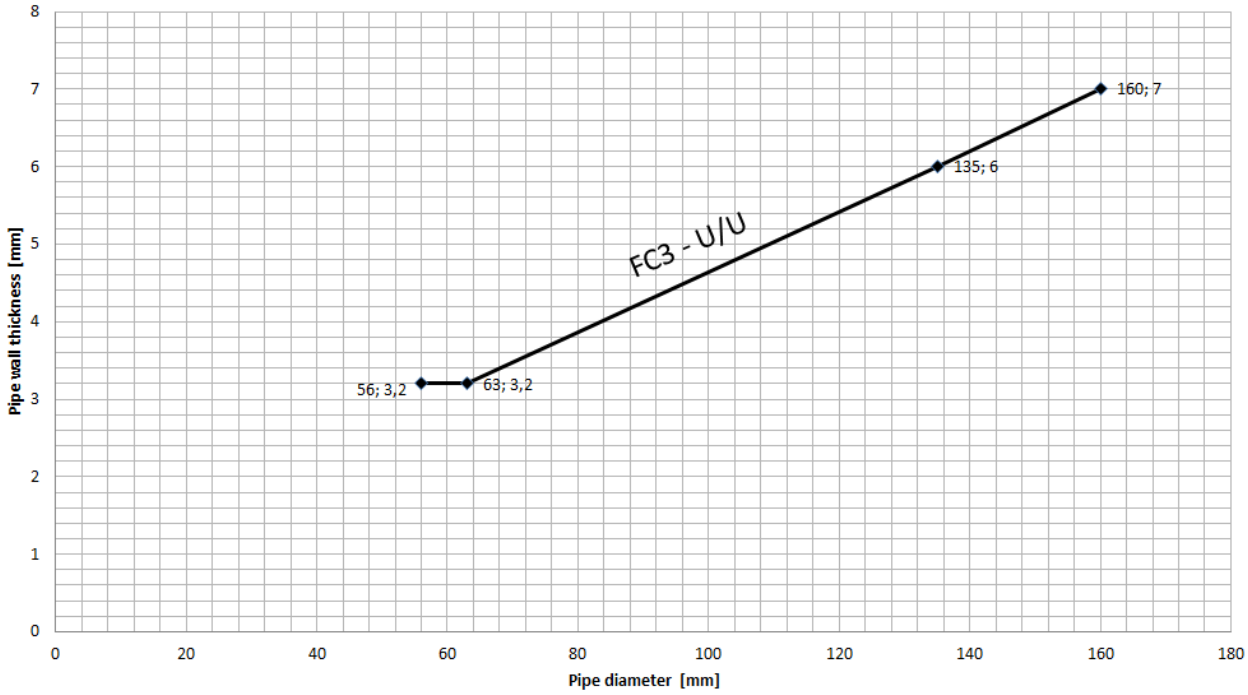
Geberit Silent dB20	Ø 56 / t_D 3,2 - Ø 160 / t_D 7,0	1 x 80	Floor	FC3	EI90-U/U

Geberit Silent dB20 pipes with PROMASTOP-FC collar on penetration seal PROMASTOP-CC (1 x 80 mm) in rigid floor construction (density ≥ 450 kg/m³, thickness ≥ 150 mm)
EI90-U/U



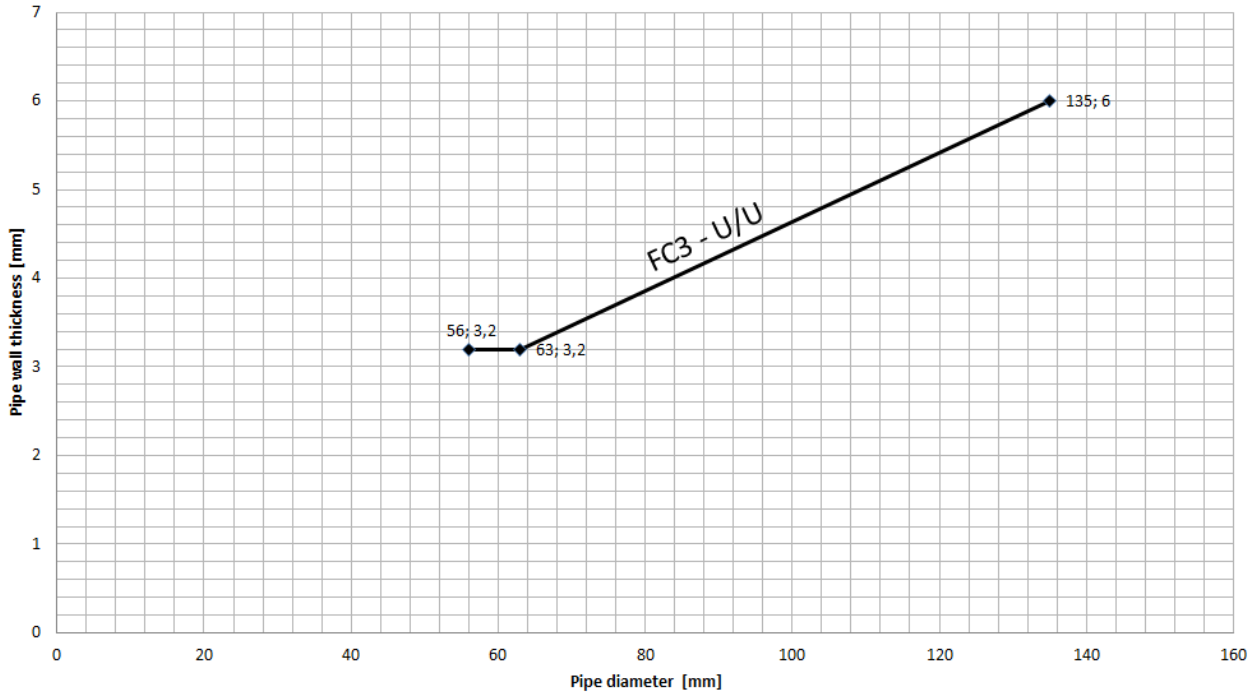
Geberit Silent dB20	Ø 56 / t_D 3,2 - Ø 160 / t_D 7,0	2 x 50	Floor	FC3	EI90-U/U

Geberit Silent dB20 pipes with PROMASTOP-FC collar on penetration seal PROMASTOP-CC (2 x 50 mm) in rigid floor construction (density ≥ 450 kg/m³, thickness ≥ 150 mm)
EI90-U/U



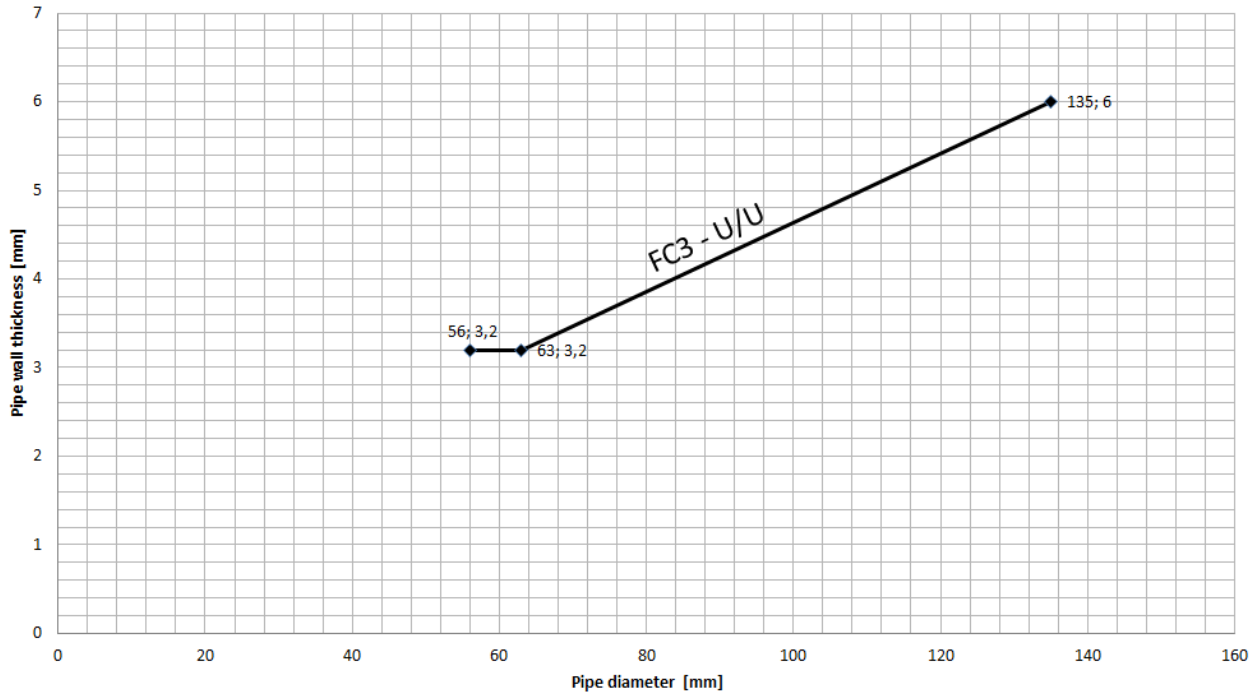
Geberit Silent dB20	Ø 56 / t_D 3,2 - Ø 135 / t_D 6,0	1 x 50	Wall	FC3	EI60-U/U

Geberit Silent dB20 pipes with PROMASTOP-FC collar on penetration seal PROMASTOP-CC (1 x 50 mm) in flexible wall and rigid wall construction (thickness ≥ 100 mm)
EI60-U/U



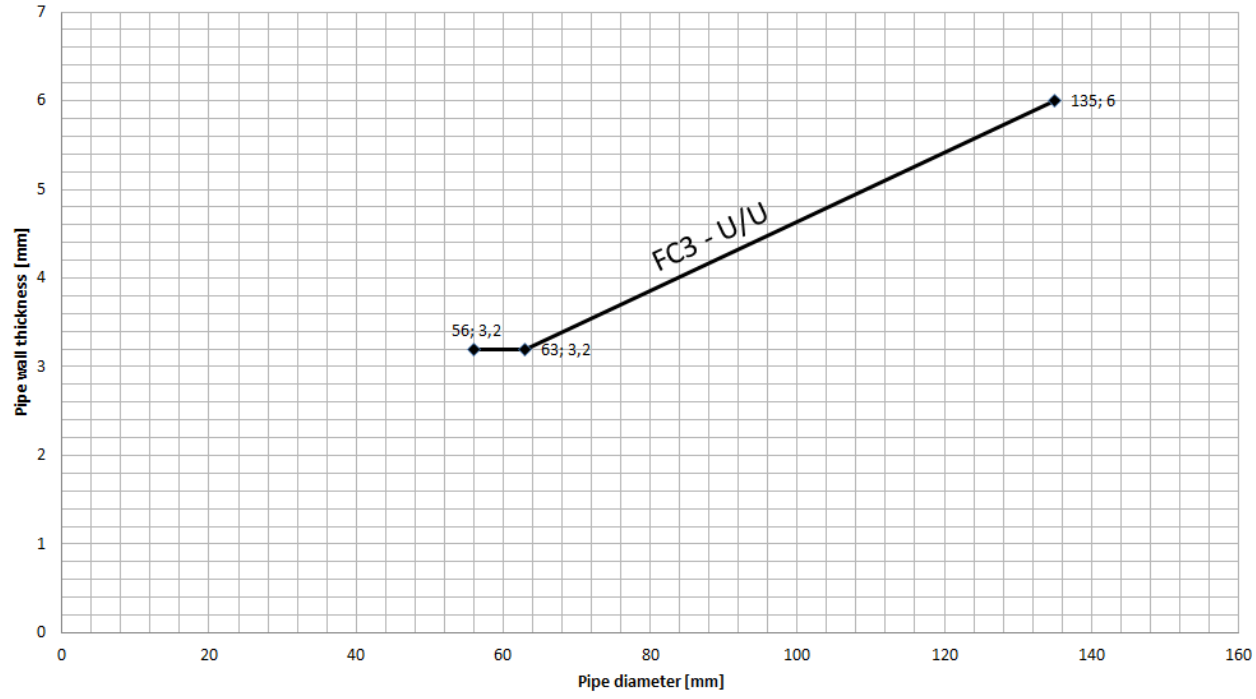
Geberit Silent dB20	Ø 56 / t_D 3,2 - Ø 135 / t_D 6,0	1 x 80	Wall	FC3	EI90-U/U

Geberit Silent dB20 pipes with PROMASTOP-FC collar on penetration seal PROMASTOP-CC (1 x 80 mm) in flexible wall and rigid wall construction (thickness ≥ 100 mm)
EI90-U/U



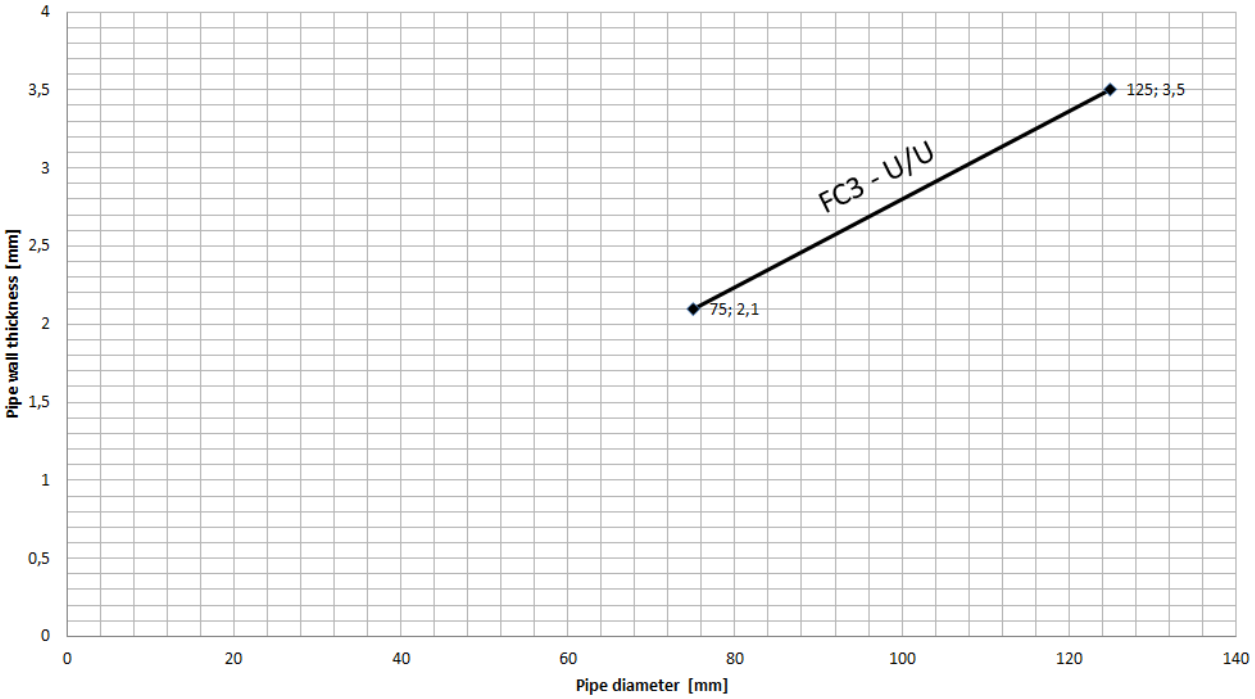
Geberit Silent dB20	Ø 56 / t_D 3,2 - Ø 135 / t_D 6,0	2 x 50	Wall	FC3	EI90-U/U

Geberit Silent dB20 pipes with PROMASTOP-FC collar on penetration seal PROMASTOP-CC (2 x 50 mm) in flexible wall and rigid wall construction (thickness ≥ 100 mm)
EI120-U/U



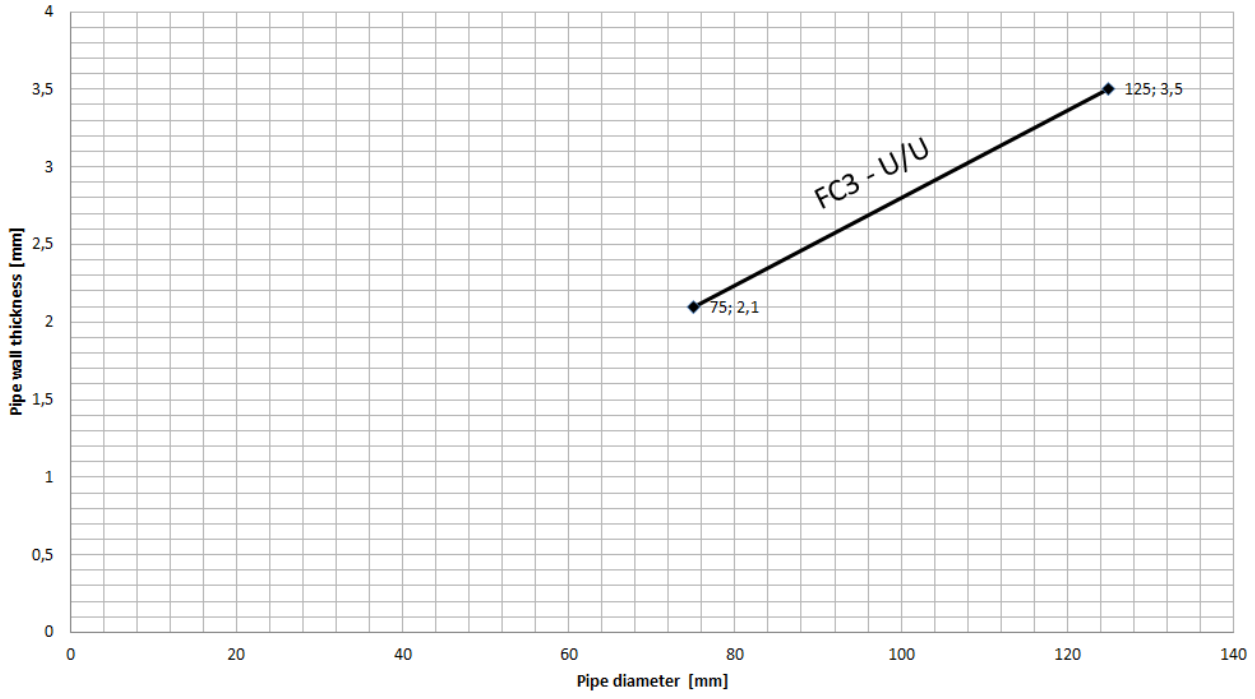
Pipelife Master3	Ø 75 / t_D 2,1 - Ø 125 / t_D 3,5	1 x 50	Floor	FC3	EI60-U/U

**Pipelife Master3 pipes with PROMASTOP-FC collar on penetration seal PROMASTOP-CC (1 x 50 mm)
in rigid floor construction (density ≥ 450 kg/m³, thickness ≥ 150 mm)
EI60-U/U**



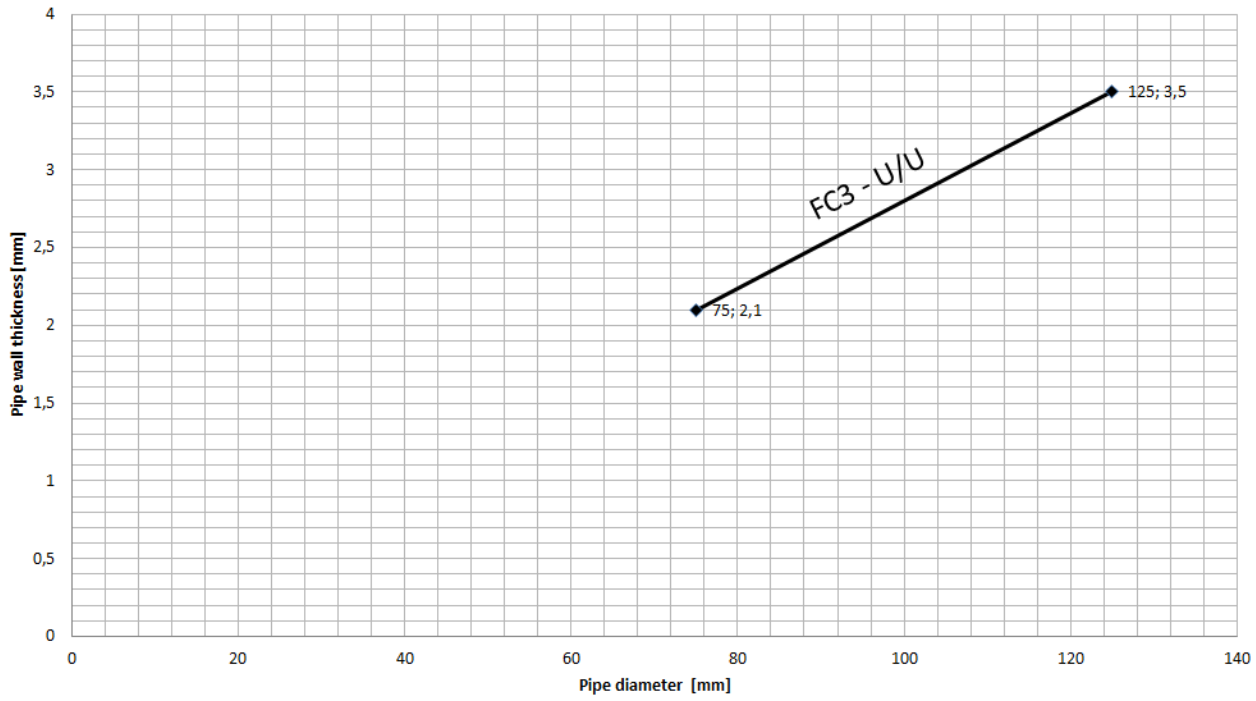
Pipelife Master3	Ø 75 / t_D 2,1 - Ø 125 / t_D 3,5	1 x 80	Floor	FC3	EI90-U/U

**Pipelife Master3 pipes with PROMASTOP-FC collar on penetration seal PROMASTOP-CC (1 x 80 mm)
in rigid floor construction (density ≥ 450 kg/m³, thickness ≥ 150 mm)
EI90-U/U**



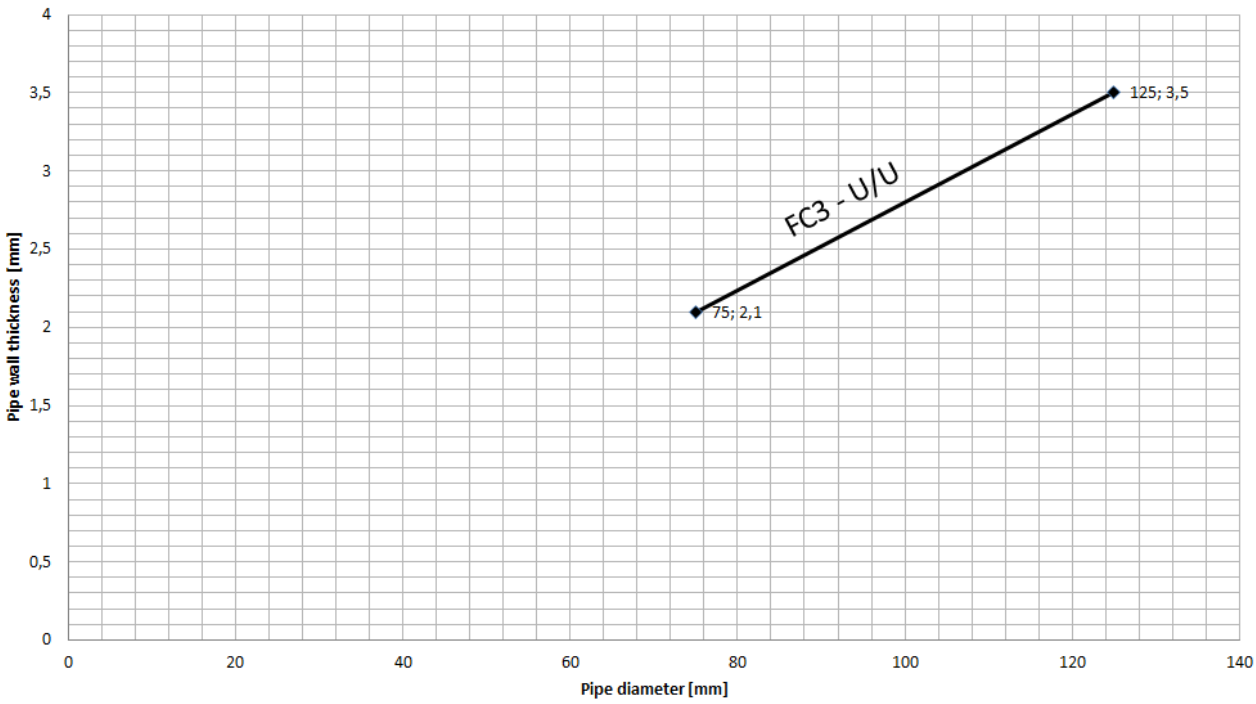
Pipelife Master3	Ø 75 / t_D 2,1 - Ø 125 / t_D 3,5	2 x 50	Floor	FC3	EI90-U/U

Pipelife Master3 pipes with PROMASTOP-FC collar on penetration seal PROMASTOP-CC (2 x 50 mm) in rigid floor construction (density ≥ 450 kg/m³, thickness ≥ 150 mm)
EI90-U/U



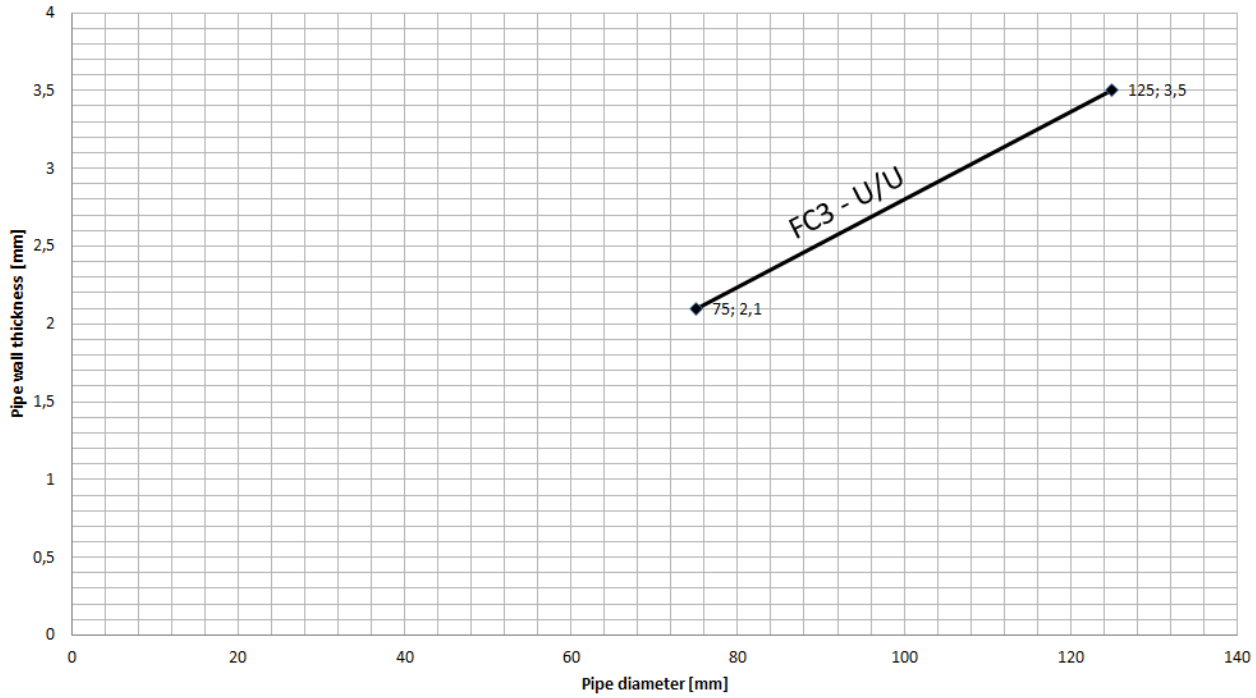
Pipelife Master3	Ø 75 / t_D 2,1 - Ø 125 / t_D 3,5	1 x 50	Wall	FC3	EI60-U/U

Pipelife Master3 dB20 pipes with PROMASTOP-FC collar on penetration seal PROMASTOP-CC (1 x 50 mm) in flexible wall and rigid wall construction (thickness ≥ 100 mm)
EI60-U/U



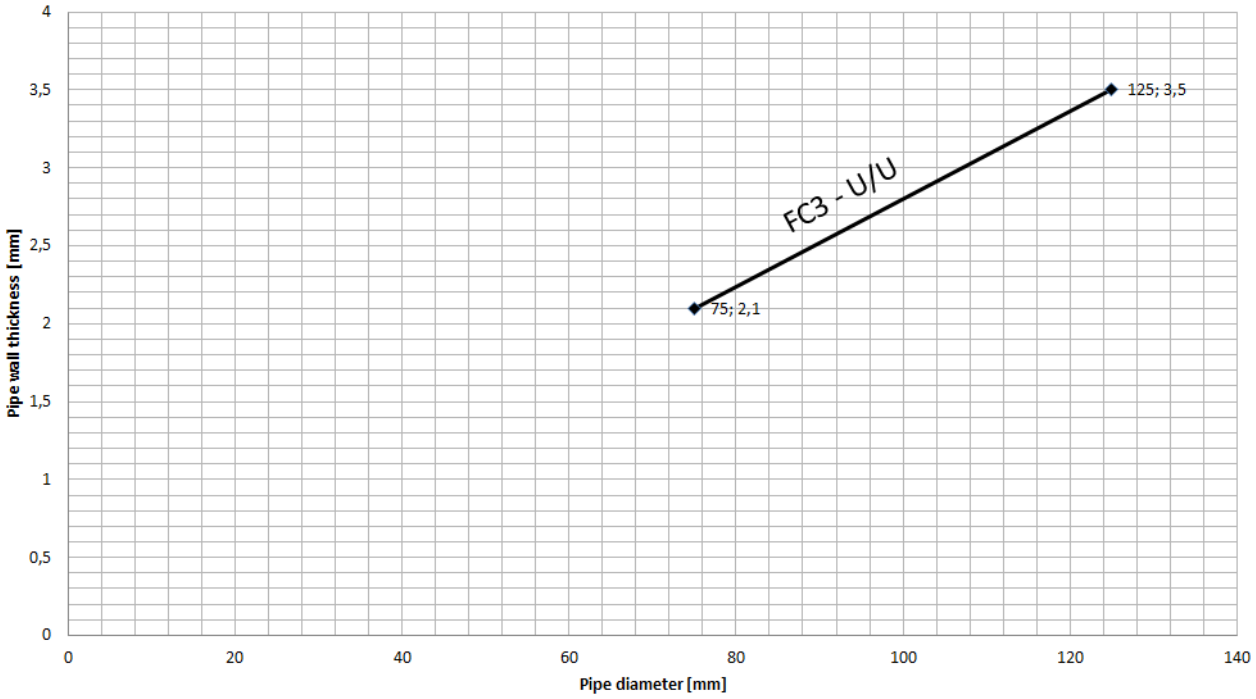
Pipelife Master3	Ø 75 / t_D 2,1 - Ø 125 / t_D 3,5	1 x 80	Wall	FC3	EI90-U/U

Pipelife Master3 dB20 pipes with PROMASTOP-FC collar on penetration seal PROMASTOP-CC (1 x 80 mm) in flexible wall and rigid wall construction (thickness ≥ 100 mm)
EI90-U/U



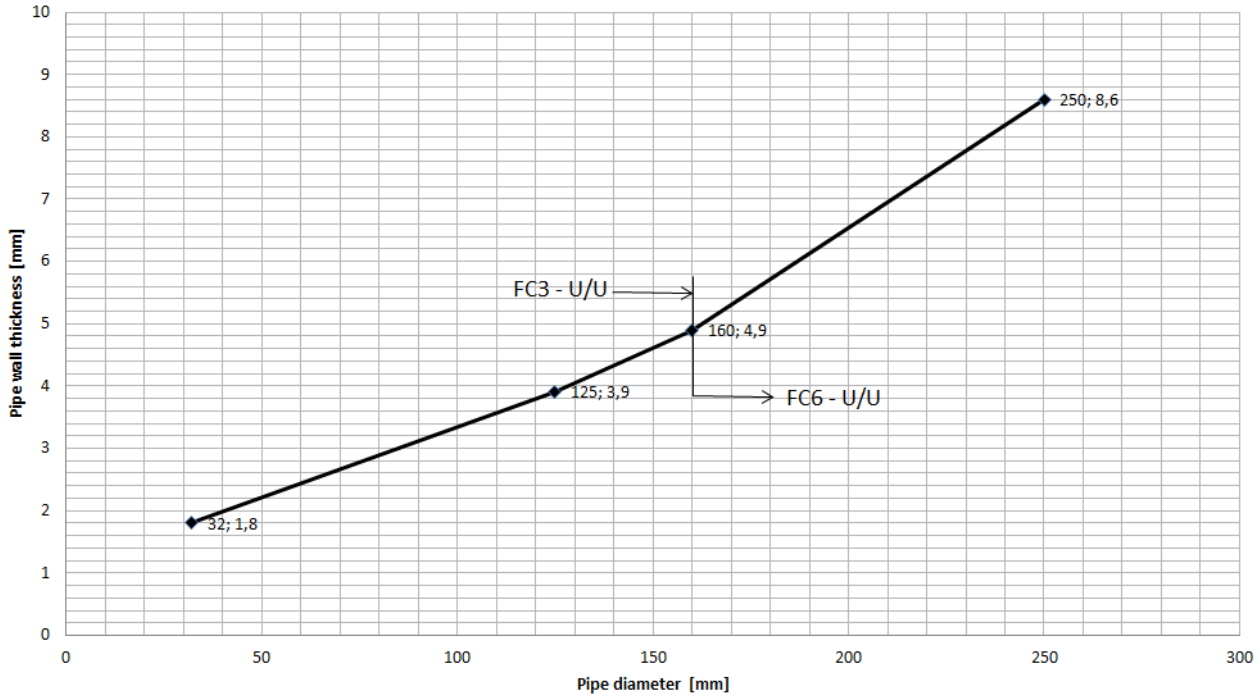
Pipelife Master3	Ø 75 / t_D 2,1 - Ø 125 / t_D 3,5	2 x 50	Wall	FC3	EI120-U/U

Pipelife Master3 pipes with PROMASTOP-FC collar on penetration seal PROMASTOP-CC (2 x 50 mm) in flexible wall and rigid wall construction (thickness ≥ 100 mm)
EI120-U/U



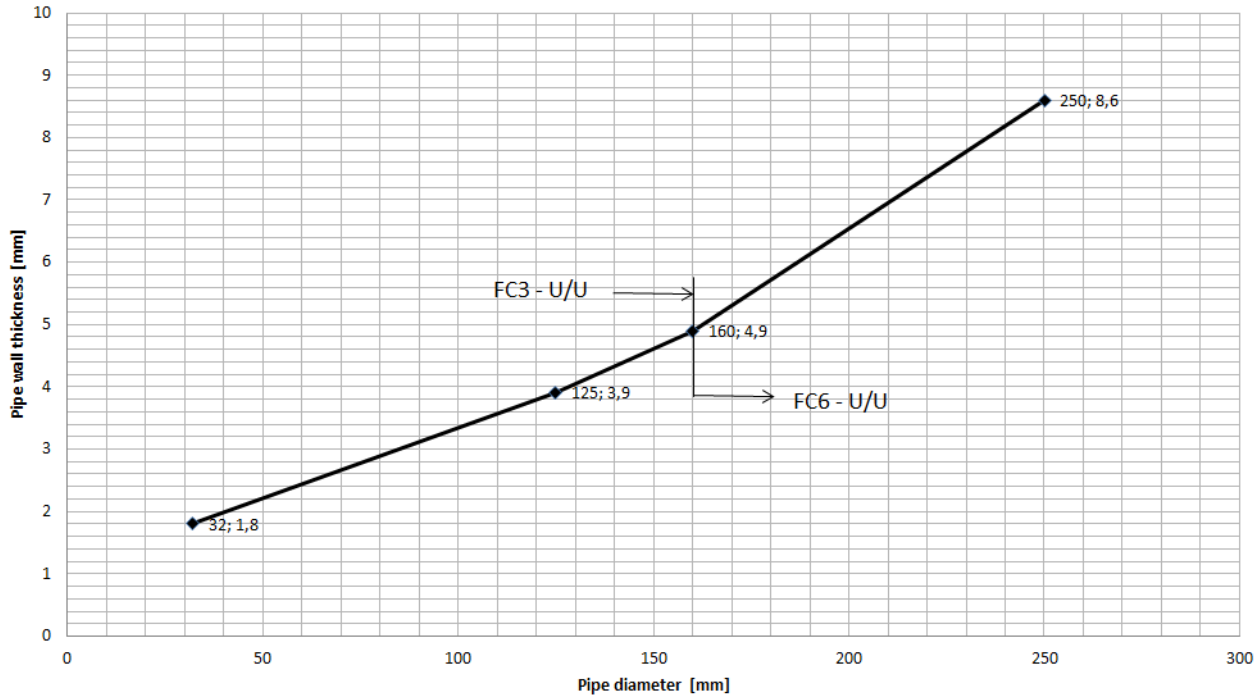
Poloplast PoloKal NG	Ø 32 / t_D 1,8 - Ø 250 / t_D 8,6	1 x 50	Floor	FC3/6	EI60-U/U

Poloplast PoloKal NG and XS pipes with PROMASTOP-FC collar on penetration seal PROMASTOP-CC (1 x 50 mm) in rigid floor construction (density ≥ 450 kg/m³, thickness ≥ 150 mm) EI60-U/U



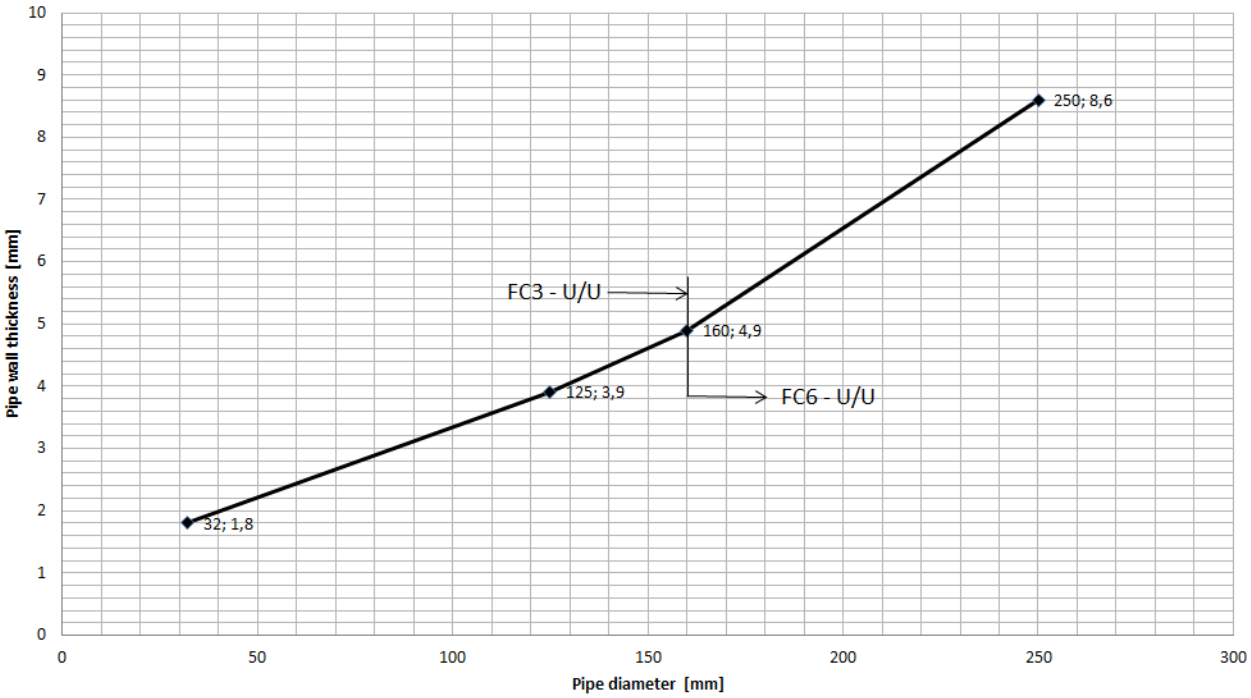
Poloplast PoloKal NG	Ø 32 / t_D 1,8 - Ø 250 / t_D 8,6	1 x 80	Floor	FC3/6	EI90-U/U

Poloplast PoloKal NG and XS pipes with PROMASTOP-FC collar on penetration seal PROMASTOP-CC (1 x 80 mm) in rigid floor construction (density ≥ 450 kg/m³, thickness ≥ 150 mm) EI90-U/U



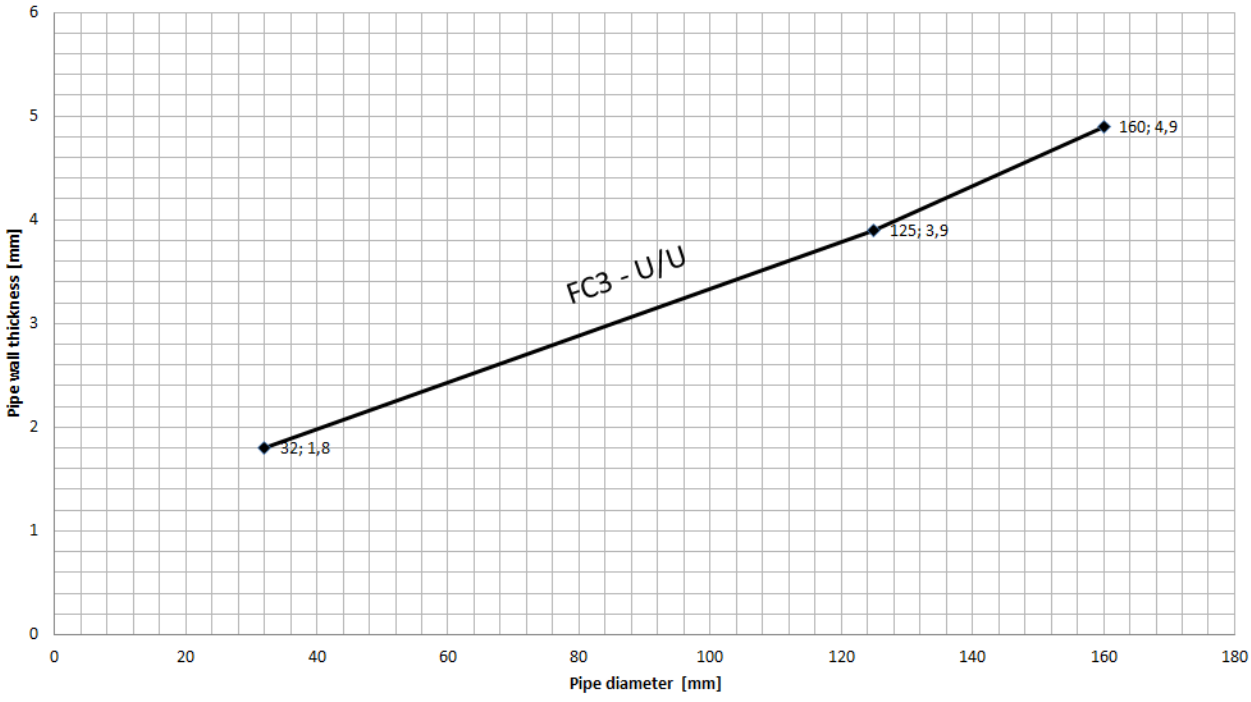
Poloplast PoloKal NG	Ø 32 / t_D 1,8 - Ø 250 / t_D 8,6	2 x 50	Floor	FC3/6	EI90-U/U

Poloplast PoloKal NG and XS pipes with PROMASTOP-FC collar on penetration seal PROMASTOP-CC (2 x 50 mm) in rigid floor construction (density ≥ 450 kg/m³, thickness ≥ 150 mm) EI90-U/U



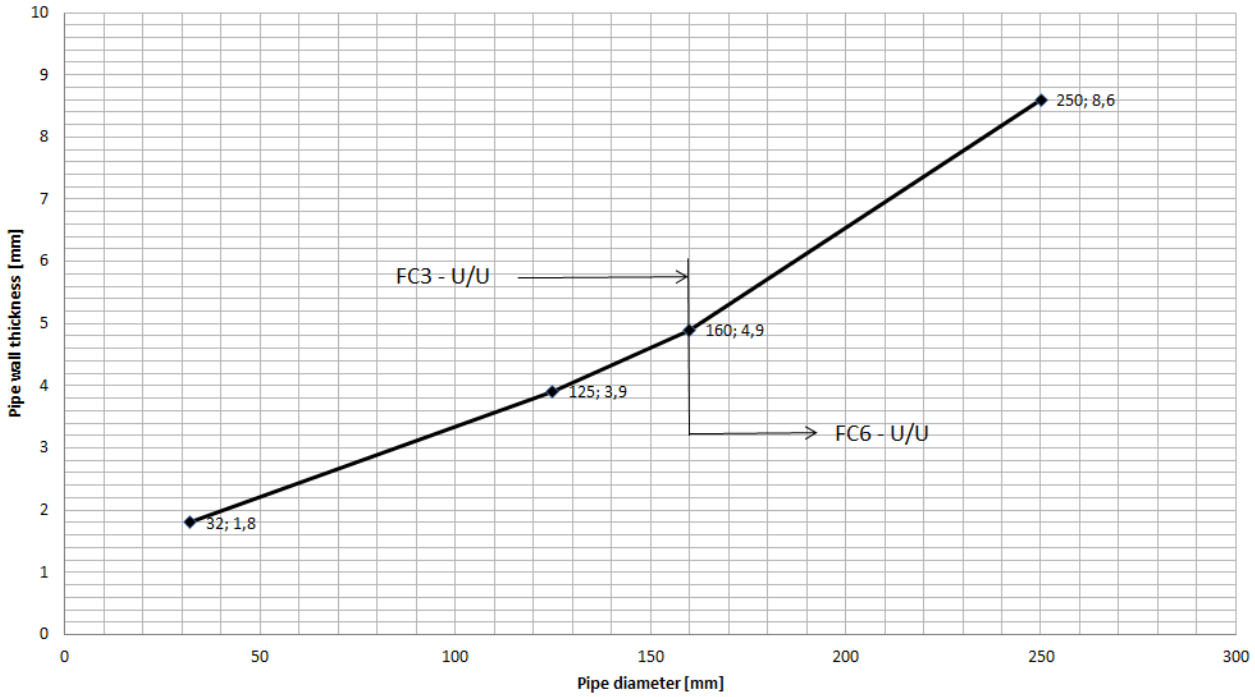
Poloplast PoloKal NG	Ø 32 / t_D 1,8 - Ø 160 / t_D 4,9	2 x 50	Wall	FC3	EI120-U/U

Poloplast PoloKal NG and XS pipes with PROMASTOP-FC collar on penetration seal PROMASTOP-CC (2 x 50 mm) in flexible wall and rigid wall construction (thickness ≥ 100 mm) EI120-U/U



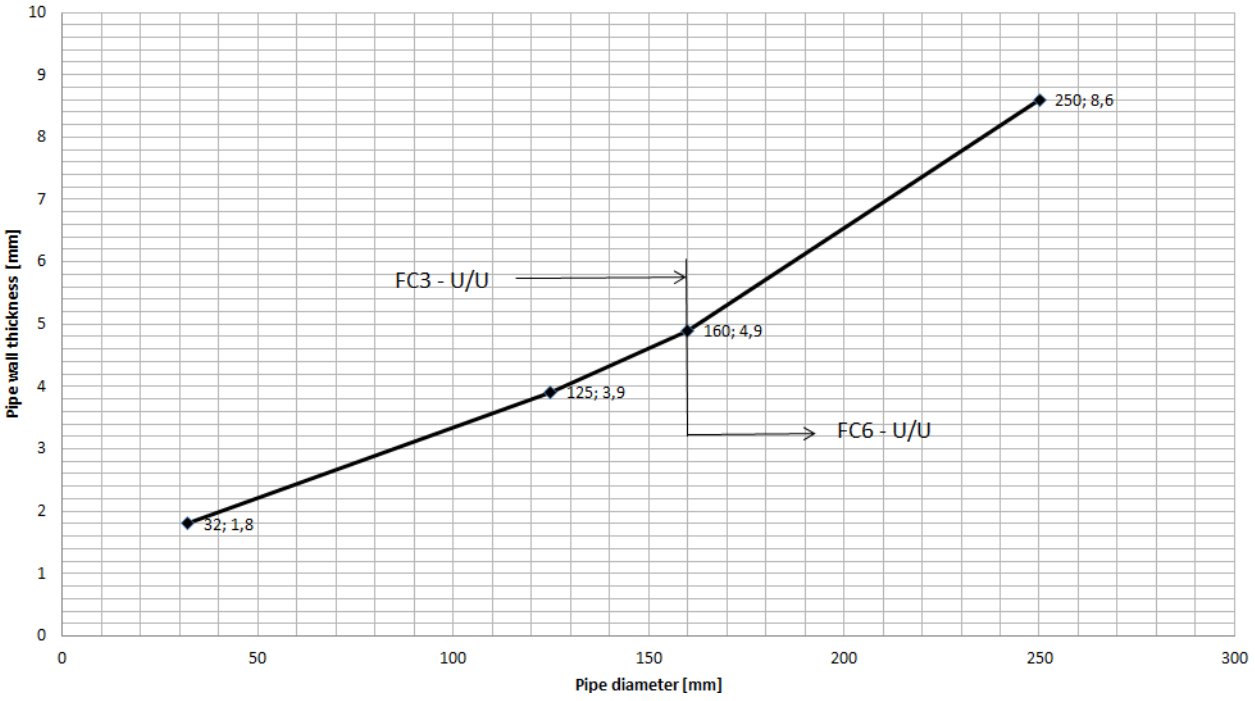
Poloplast PoloKal NG	Ø 32 / t_D 1,8 - Ø 250 / t_D 8,6	1 x 50	Wall	FC3/6	EI60-U/U

Poloplast PoloKal NG and XS pipes with PROMASTOP-FC collar on penetration seal PROMASTOP-CC (1 x 50 mm) in flexible wall and rigid wall construction (thickness ≥ 100 mm) EI60-U/U



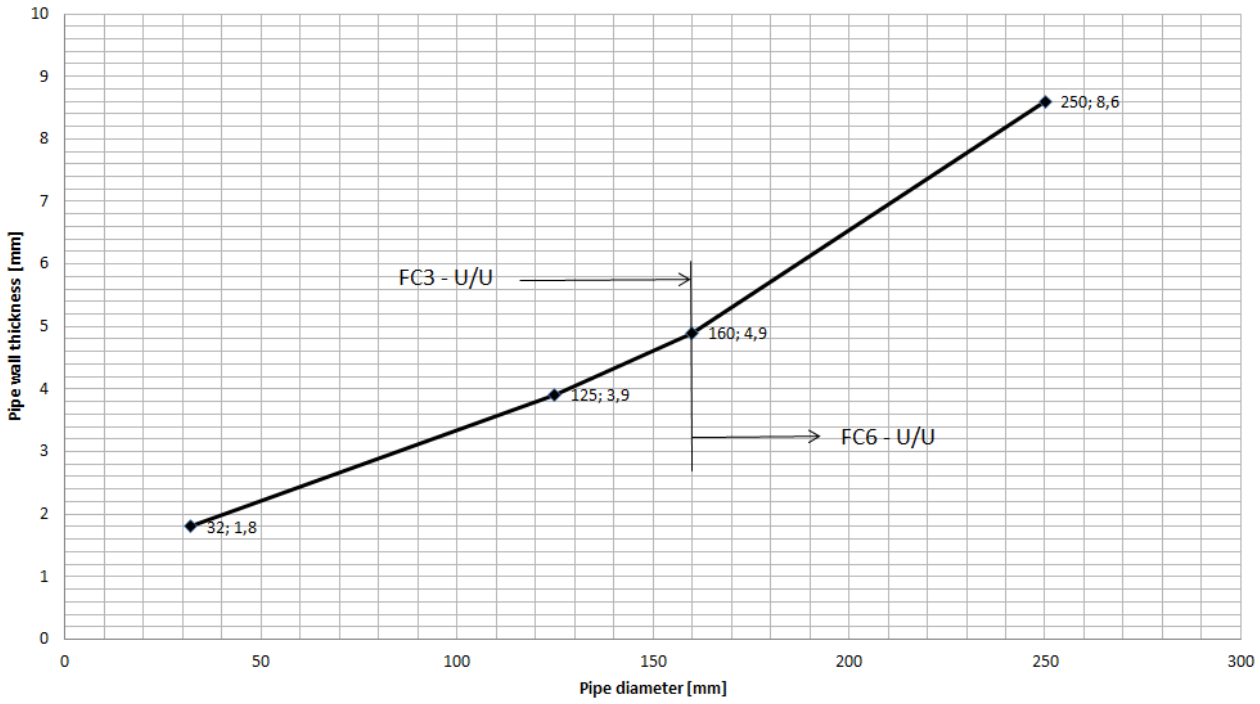
Poloplast PoloKal NG	Ø 32 / t_D 1,8 - Ø 250 / t_D 8,6	1 x 80	Wall	FC3/6	EI90-U/U

Poloplast PoloKal NG and XS pipes with PROMASTOP-FC collar on penetration seal PROMASTOP-CC (1 x 80 mm) in flexible wall and rigid wall construction (thickness ≥ 100 mm) EI90-U/U



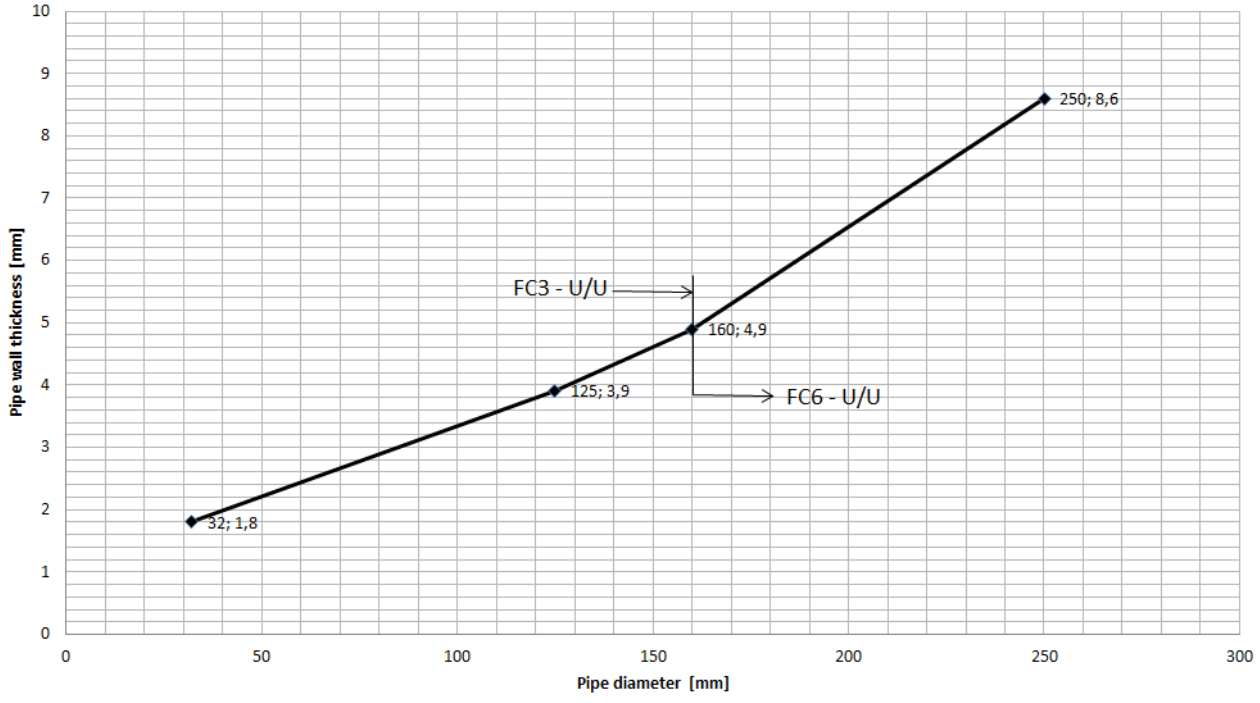
Poloplast PoloKal NG	Ø 32 / t_D 1,8 - Ø 250 / t_D 8,6	2 x 50	Wall	FC3/6	EI90-U/U

Poloplast PoloKal NG and XS pipes with PROMASTOP-FC collar on penetration seal PROMASTOP-CC (2 x 50 mm) in flexible wall and rigid wall construction (thickness ≥ 100 mm) EI90-U/U



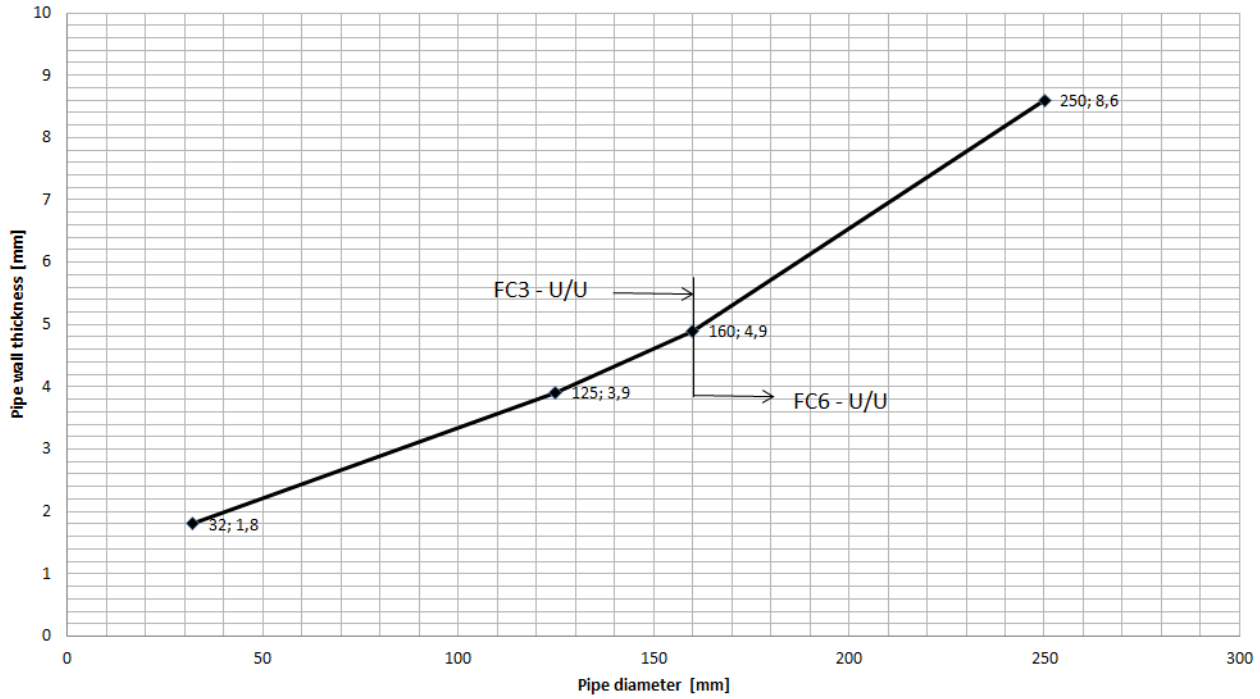
Poloplast PoloKal XS	Ø 32 / t_D 1,8 - Ø 250 / t_D 8,6	1 x 50	Floor	FC3/6	EI60-U/U

Poloplast PoloKal NG and XS pipes with PROMASTOP-FC collar on penetration seal PROMASTOP-CC (1 x 50 mm) in rigid floor construction (density ≥ 450 kg/m³, thickness ≥ 150 mm) EI60-U/U



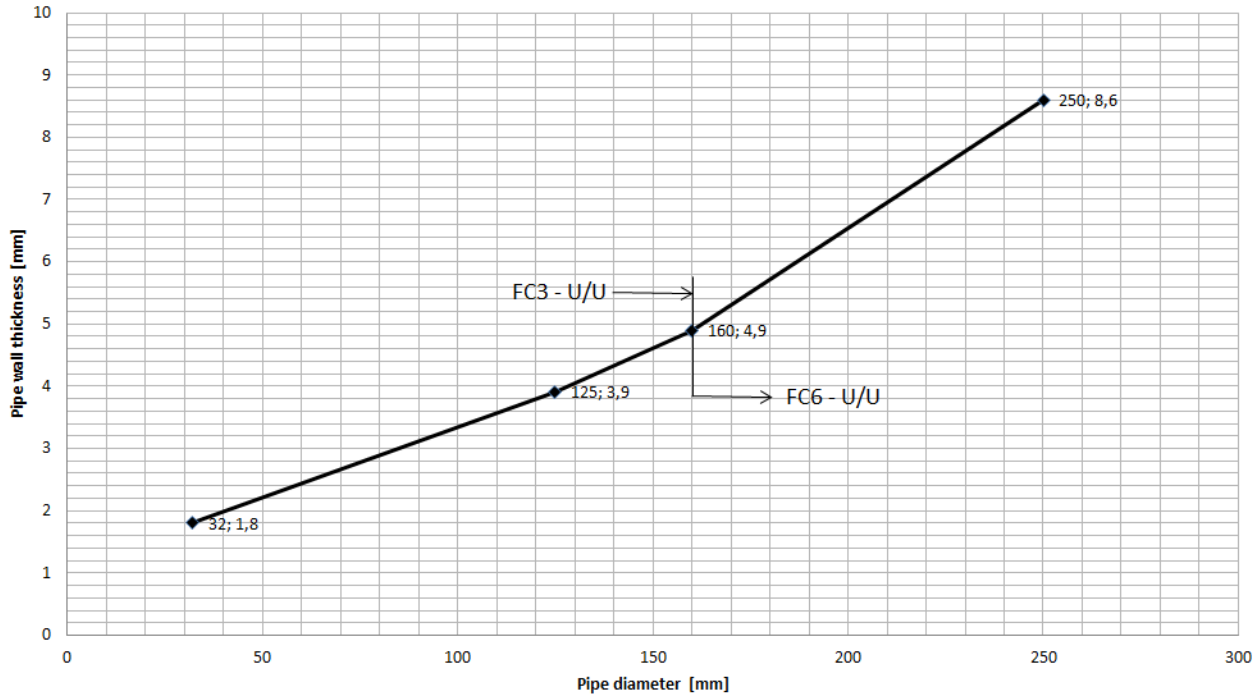
Poloplast PoloKal XS	Ø 32 / t_D 1,8 - Ø 250 / t_D 8,6	1 x 80	Floor	FC3/6	EI90-U/U

Poloplast PoloKal NG and XS pipes with PROMASTOP-FC collar on penetration seal PROMASTOP-CC (1 x 80 mm) in rigid floor construction (density ≥ 450 kg/m³, thickness ≥ 150 mm) EI90-U/U



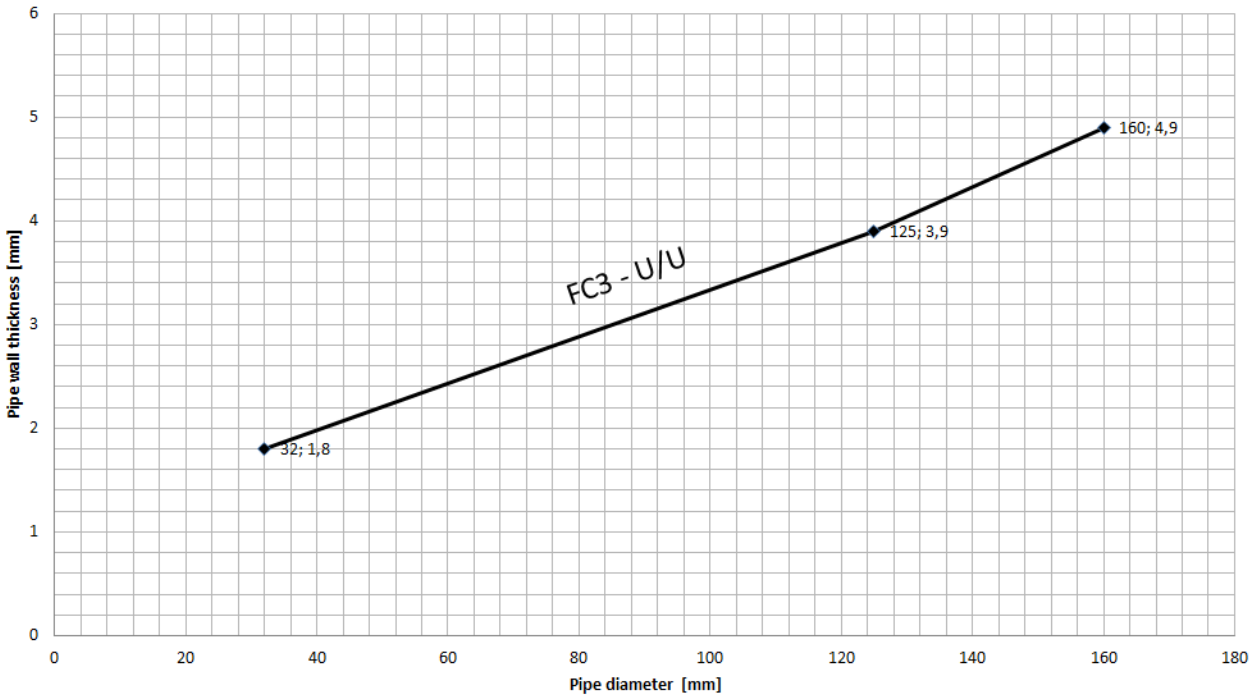
Poloplast PoloKal XS	Ø 32 / t_D 1,8 - Ø 250 / t_D 8,6	2 x 50	Floor	FC3/6	EI90-U/U

Poloplast PoloKal NG and XS pipes with PROMASTOP-FC collar on penetration seal PROMASTOP-CC (2 x 50 mm) in rigid floor construction (density ≥ 450 kg/m³, thickness ≥ 150 mm) EI90-U/U



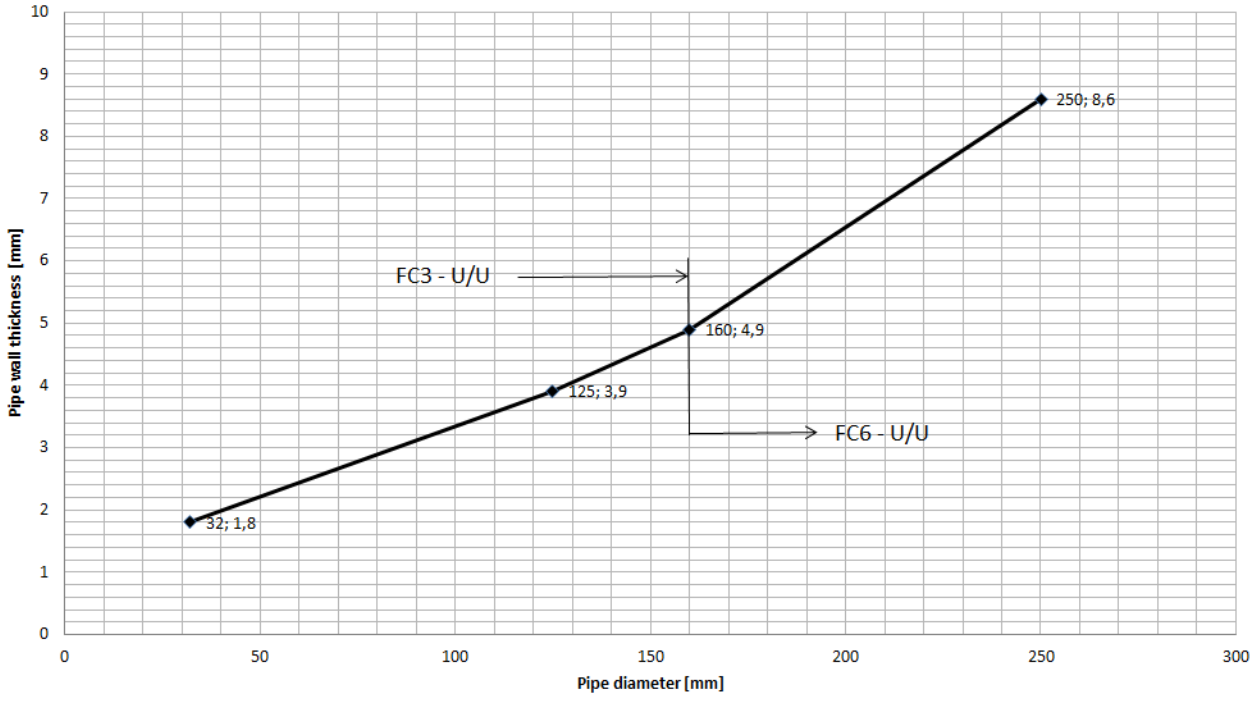
Poloplast PoloKal XS	Ø 32 / t_D 1,8 - Ø 160 / t_D 4,9	2 x 50	Wall	FC3	EI120-U/U

Poloplast PoloKal NG and XS pipes with PROMASTOP-FC collar on penetration seal PROMASTOP-CC (2 x 50 mm) in flexible wall and rigid wall construction (thickness ≥ 100 mm) EI120-U/U



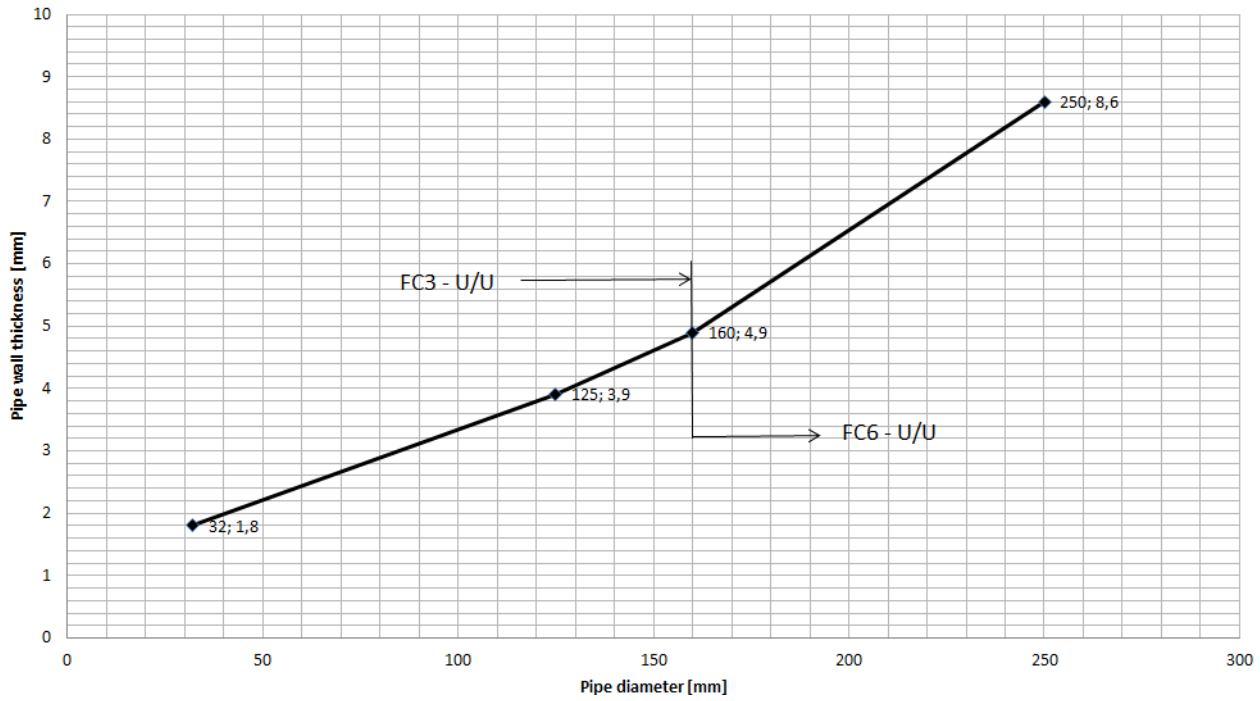
Poloplast PoloKal XS	Ø 32 / t_D 1,8 - Ø 250 / t_D 8,6	1 x 50	Wall	FC3/6	EI60-U/U

Poloplast PoloKal NG and XS pipes with PROMASTOP-FC collar on penetration seal PROMASTOP-CC (1 x 50 mm) in flexible wall and rigid wall construction (thickness ≥ 100 mm) EI60-U/U



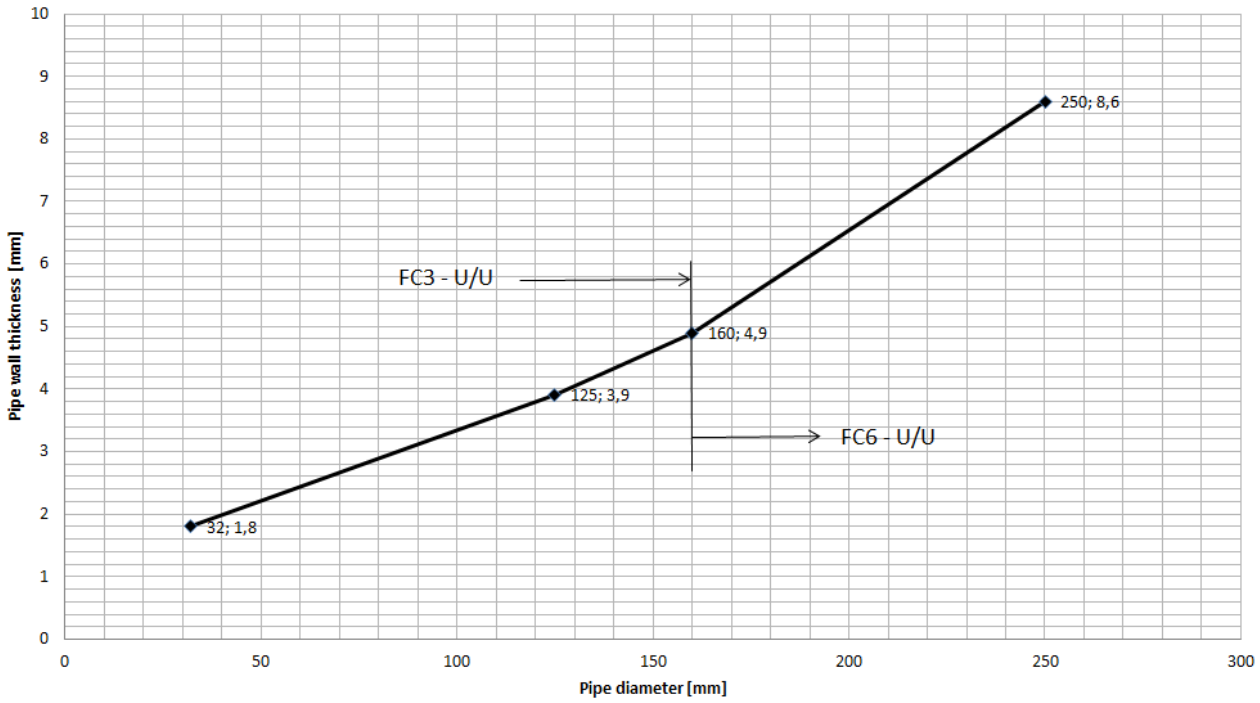
Poloplast PoloKal XS	Ø 32 / t_D 1,8 - Ø 250 / t_D 8,6	1 x 80	Wall	FC3/6	EI90-U/U

Poloplast PoloKal NG and XS pipes with PROMASTOP-FC collar on penetration seal PROMASTOP-CC (1 x 80 mm) in flexible wall and rigid wall construction (thickness ≥ 100 mm) EI90-U/U



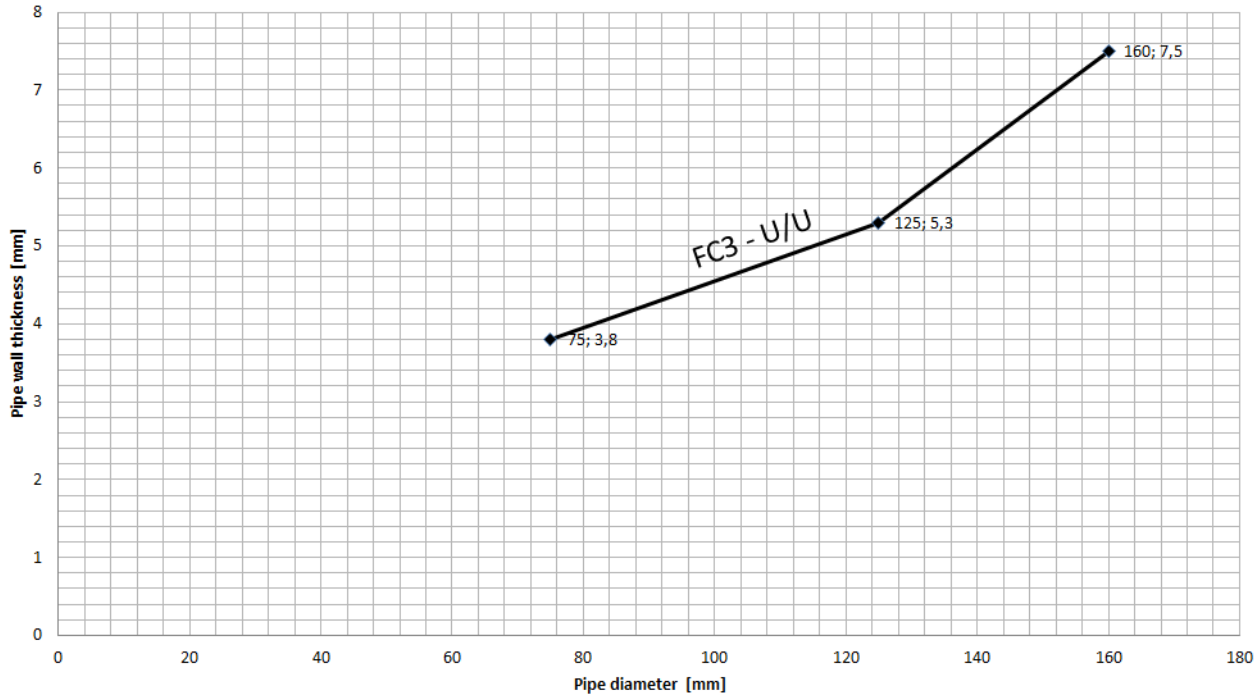
Poloplast PoloKal XS	Ø 32 / t_D 1,8 - Ø 250 / t_D 8,6	2 x 50	Wall	FC3/6	EI90-U/U

Poloplast PoloKal NG and XS pipes with PROMASTOP-FC collar on penetration seal PROMASTOP-CC (2 x 50 mm) in flexible wall and rigid wall construction (thickness ≥ 100 mm) EI90-U/U



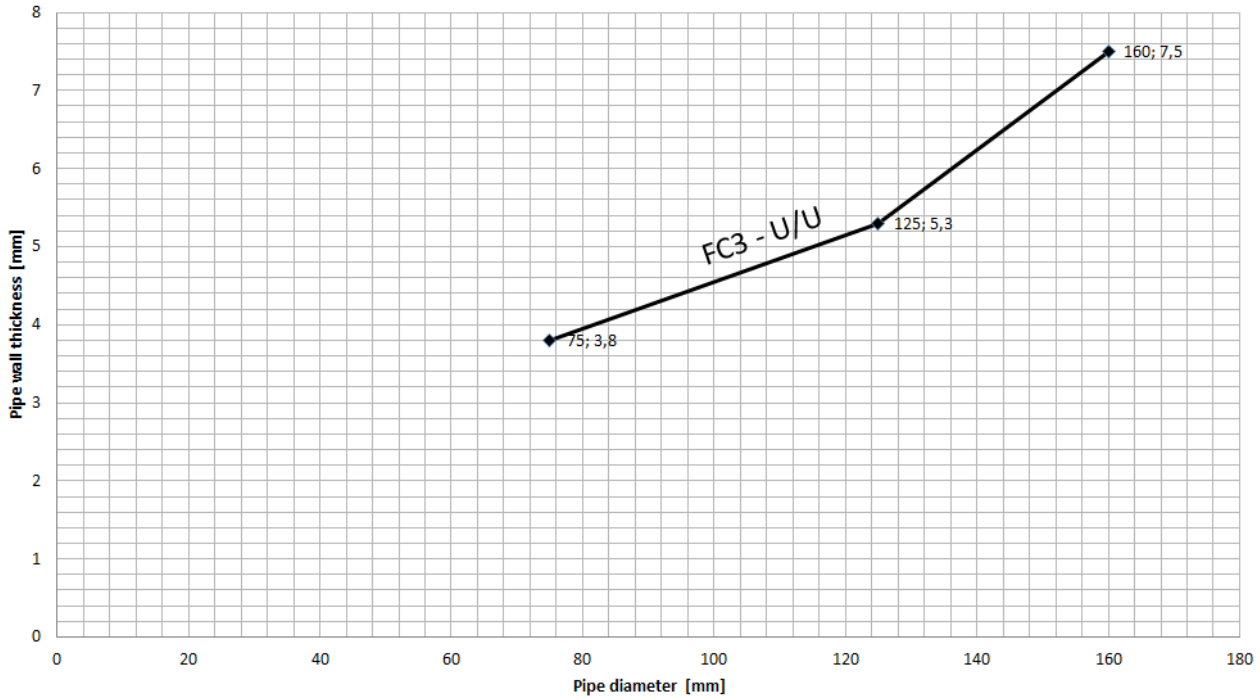
Poloplast PoloKal 3S	Ø 75 / t_D 3,8 - Ø 160 / t_D 7,5	1 x 50	Floor	FC3	EI60-U/U

Poloplast PoloKal 3S pipes with PROMASTOP-FC collar on penetration seal PROMASTOP-CC (1 x 50 mm) in rigid floor construction (density ≥ 450 kg/m³, thickness ≥ 150 mm)
EI60-U/U



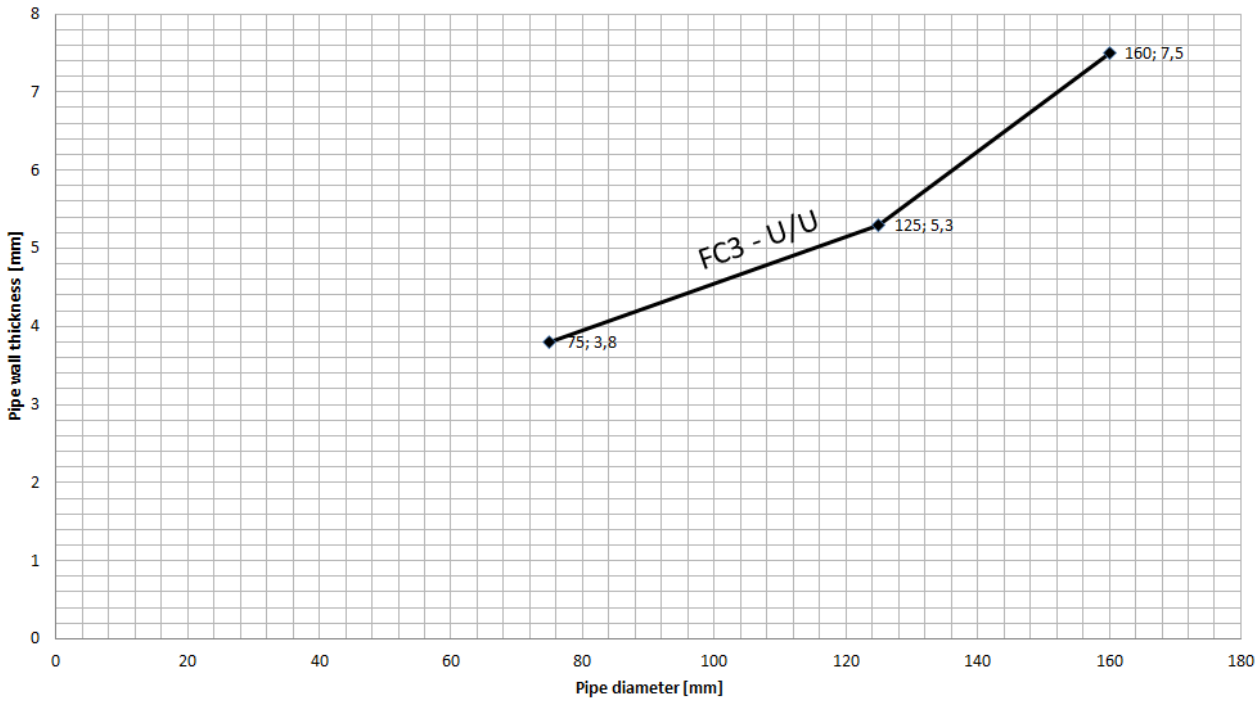
Poloplast PoloKal 3S	Ø 75 / t_D 3,8 - Ø 160 / t_D 7,5	1 x 80	Floor	FC3	EI90-U/U

Poloplast PoloKal 3S pipes with PROMASTOP-FC collar on penetration seal PROMASTOP-CC (1 x 80 mm) in rigid floor construction (density ≥ 450 kg/m³, thickness ≥ 150 mm)
EI90-U/U



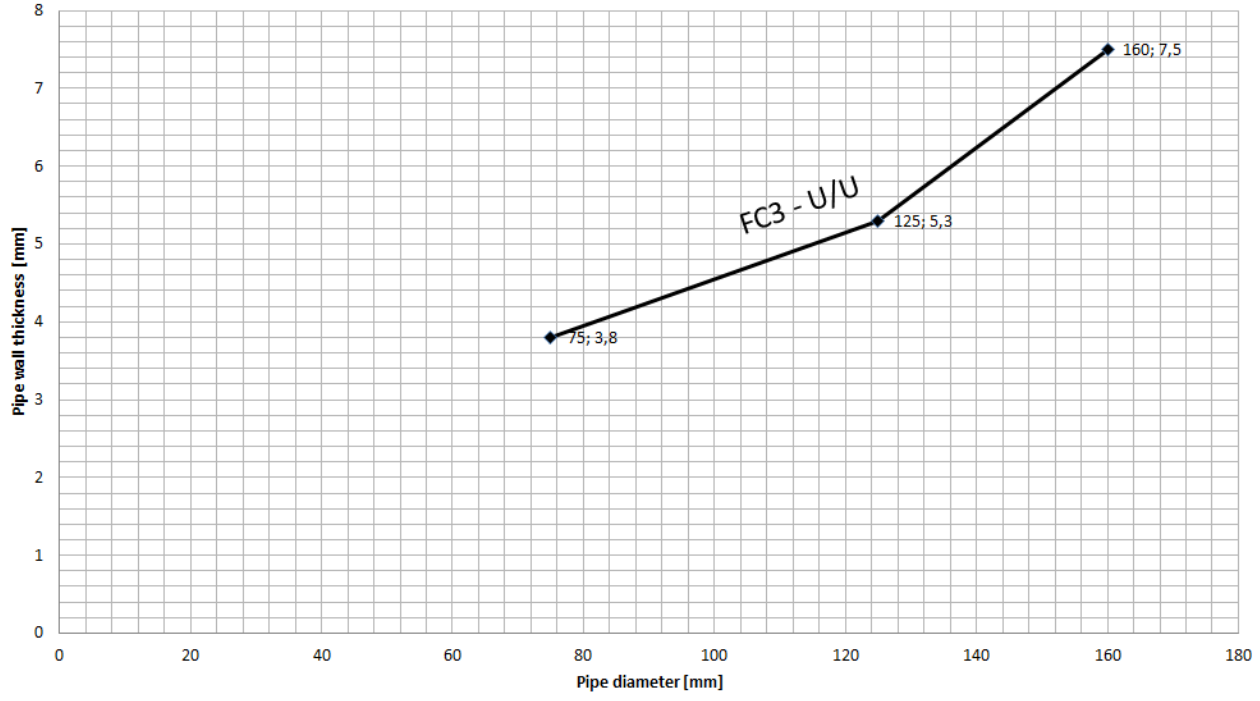
Poloplast PoloKal 3S	Ø 75 / t_D 3,8 - Ø 160 / t_D 7,5	2 x 50	Floor	FC3	EI90-U/U

Poloplast PoloKal 3S pipes with PROMASTOP-FC collar on penetration seal PROMASTOP-CC (2 x 50 mm) in rigid floor construction (density ≥ 450 kg/m³, thickness ≥ 150 mm)
EI90-U/U



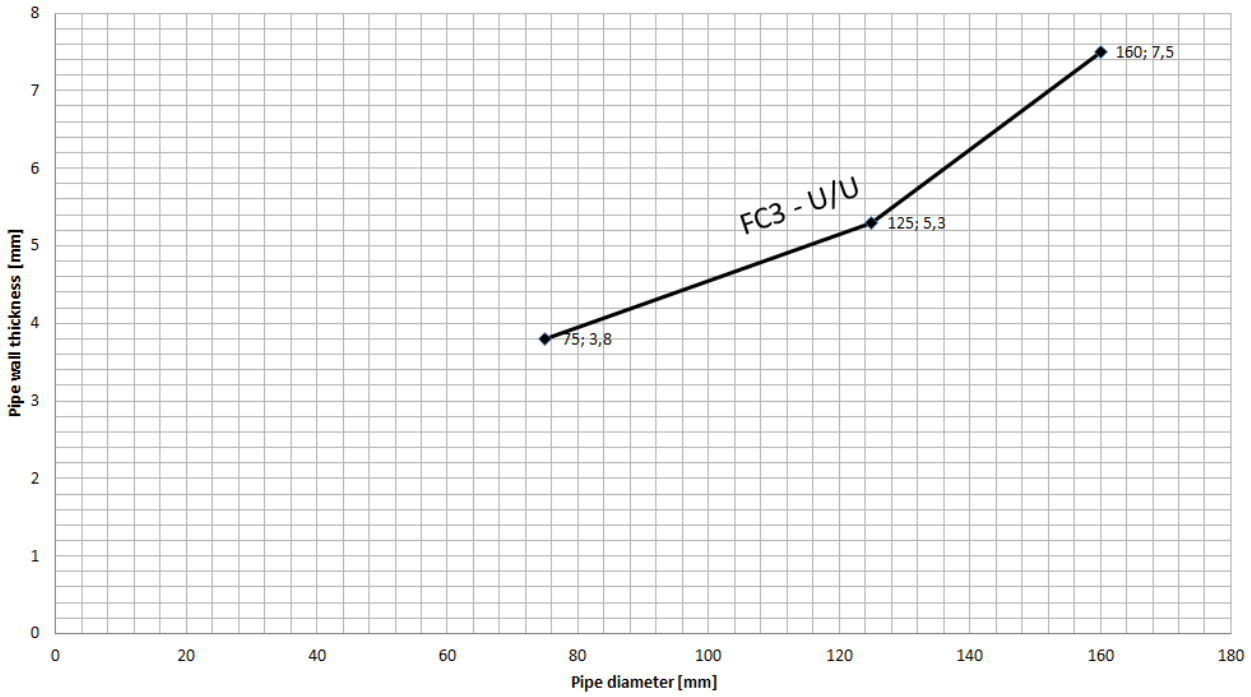
Poloplast PoloKal 3S	Ø 75 / t_D 3,8 - Ø 160 / t_D 7,5	1 x 50	Wall	FC3	EI60-U/U

Poloplast PoloKal 3S pipes with PROMASTOP-FC collar on penetration seal PROMASTOP-CC (1 x 50 mm) in flexible wall and rigid wall construction (thickness ≥ 100 mm)
EI60-U/U



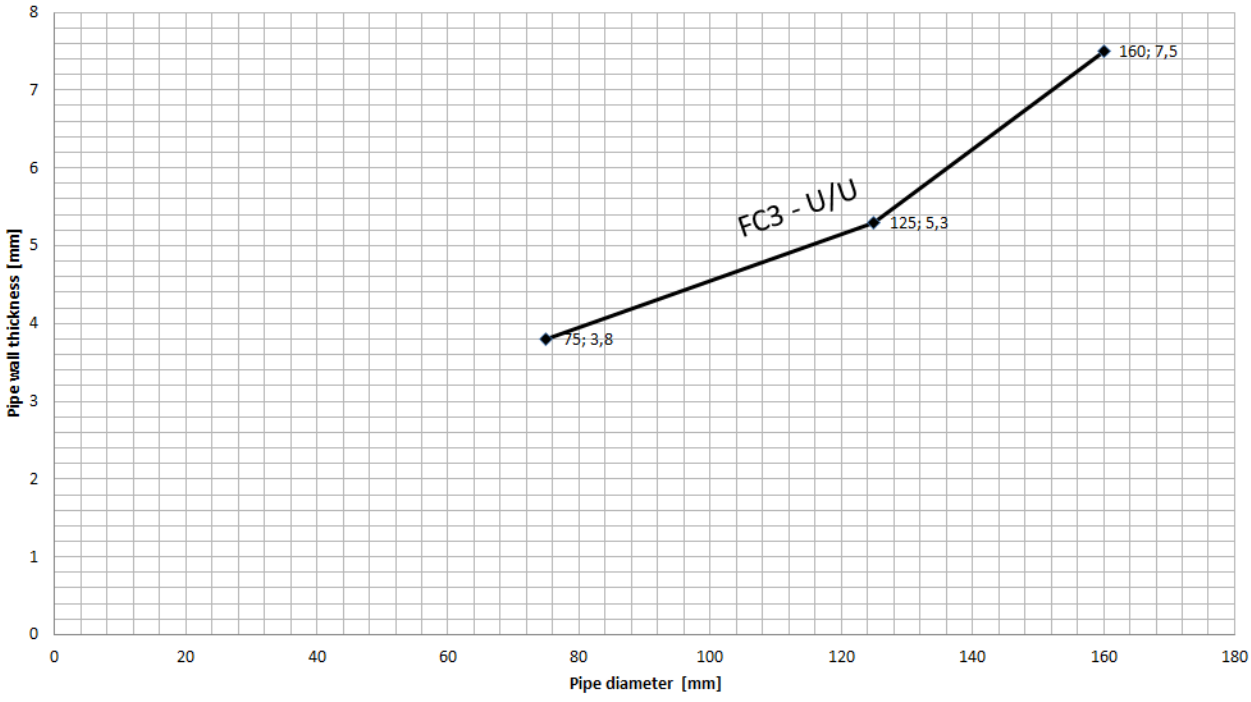
Poloplast PoloKal 3S	Ø 75 / t_D 3,8 - Ø 160 / t_D 7,5	1 x 80	Wall	FC3	EI90-U/U

Poloplast PoloKal 3S pipes with PROMASTOP-FC collar on penetration seal PROMASTOP-CC (1 x 80 mm) in flexible wall and rigid wall construction (thickness ≥ 100 mm)
EI90-U/U



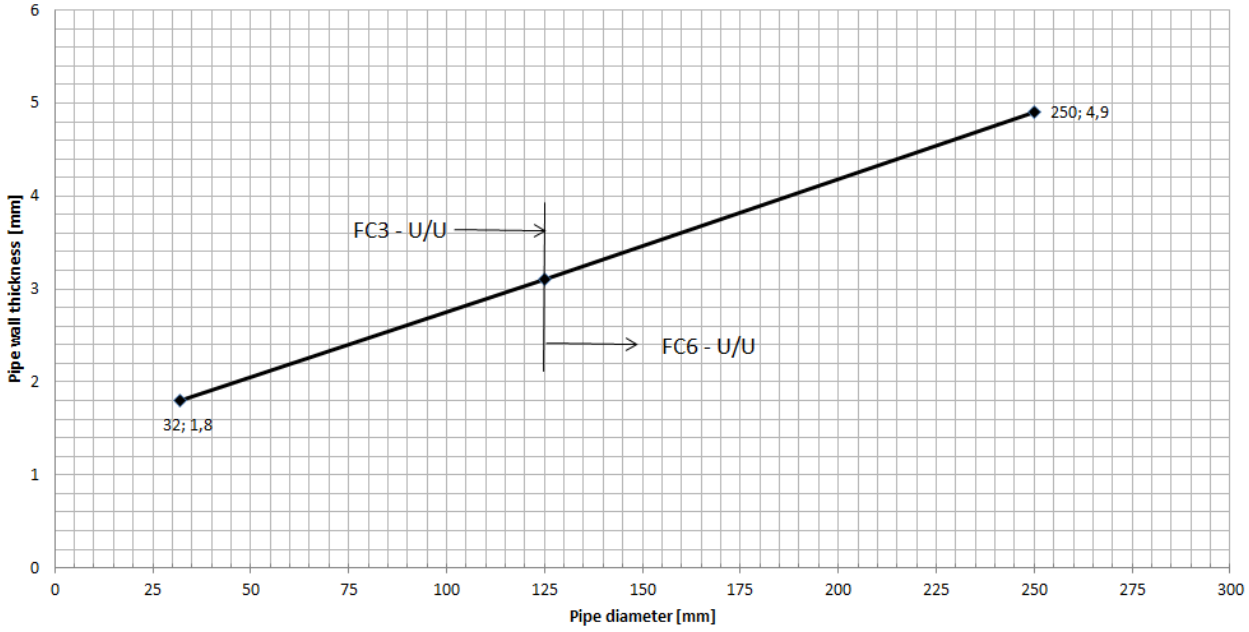
Poloplast PoloKal 3S	Ø 75 / t_D 3,8 - Ø 160 / t_D 7,5	2 x 50	Wall	FC3	EI120-U/U

Poloplast PoloKal 3S pipes with PROMASTOP-FC collar on penetration seal PROMASTOP-CC (2 x 50 mm) in flexible wall and rigid wall construction (thickness ≥ 100 mm)
EI120-U/U



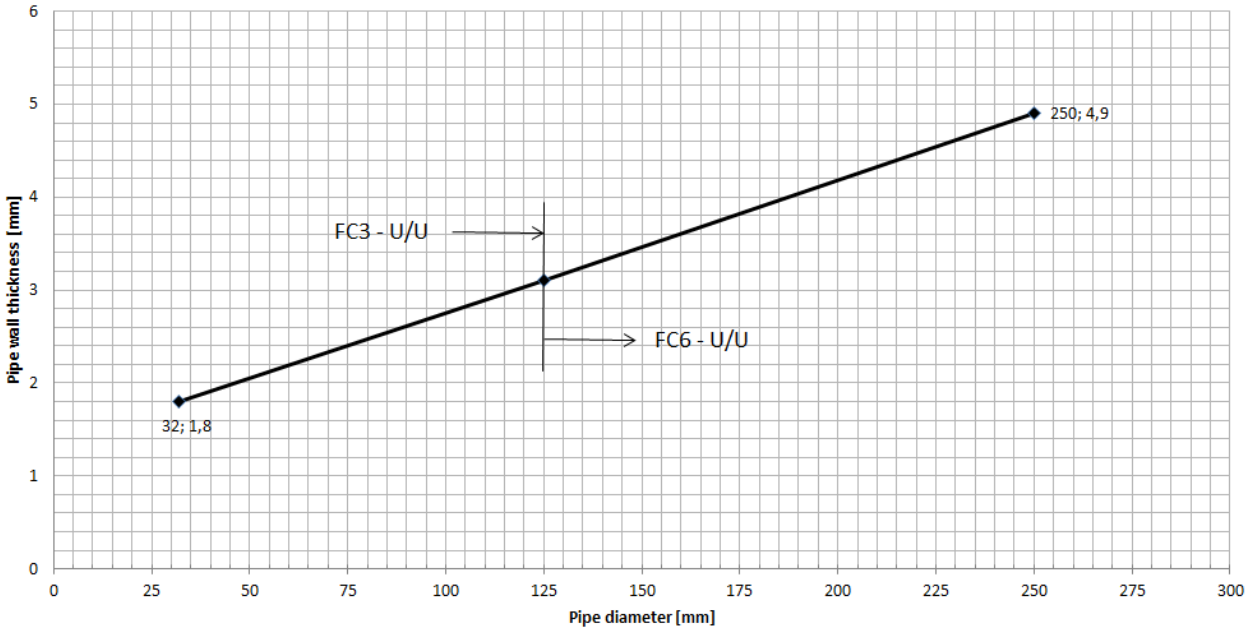
PVC-U	Ø 32 / t_D 1,8 - Ø 250 / t_D 4,9	1 x 50	Floor	FC3/6	EI60-U/U

PVC-U pipes with PROMASTOP-FC collar on penetration seal PROMASTOP-CC (1 x 50 mm) in rigid floor construction (density ≥ 450 kg/m³, thickness ≥ 150 mm)
EI60-U/U



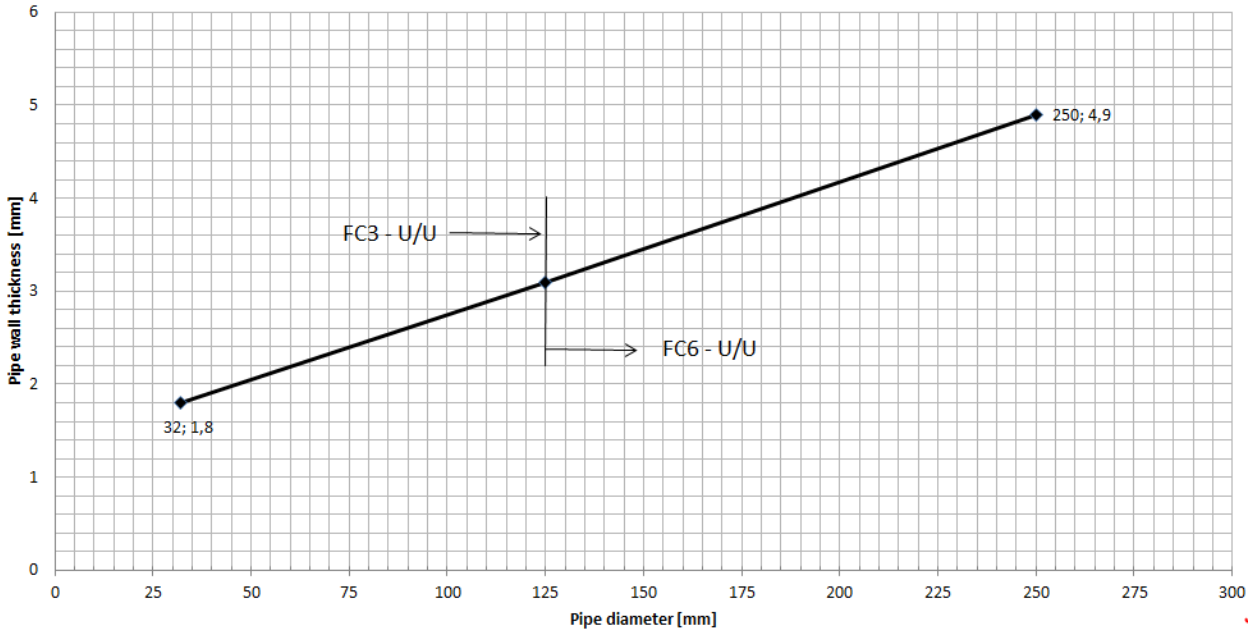
PVC-U	Ø 32 / t_D 1,8 - Ø 250 / t_D 4,9	1 x 80	Floor	FC3/6	EI90-U/U

PVC-U pipes with PROMASTOP-FC collar on penetration seal PROMASTOP-CC (1 x 80 mm) in rigid floor construction (density ≥ 450 kg/m³, thickness ≥ 150 mm)
EI90-U/U



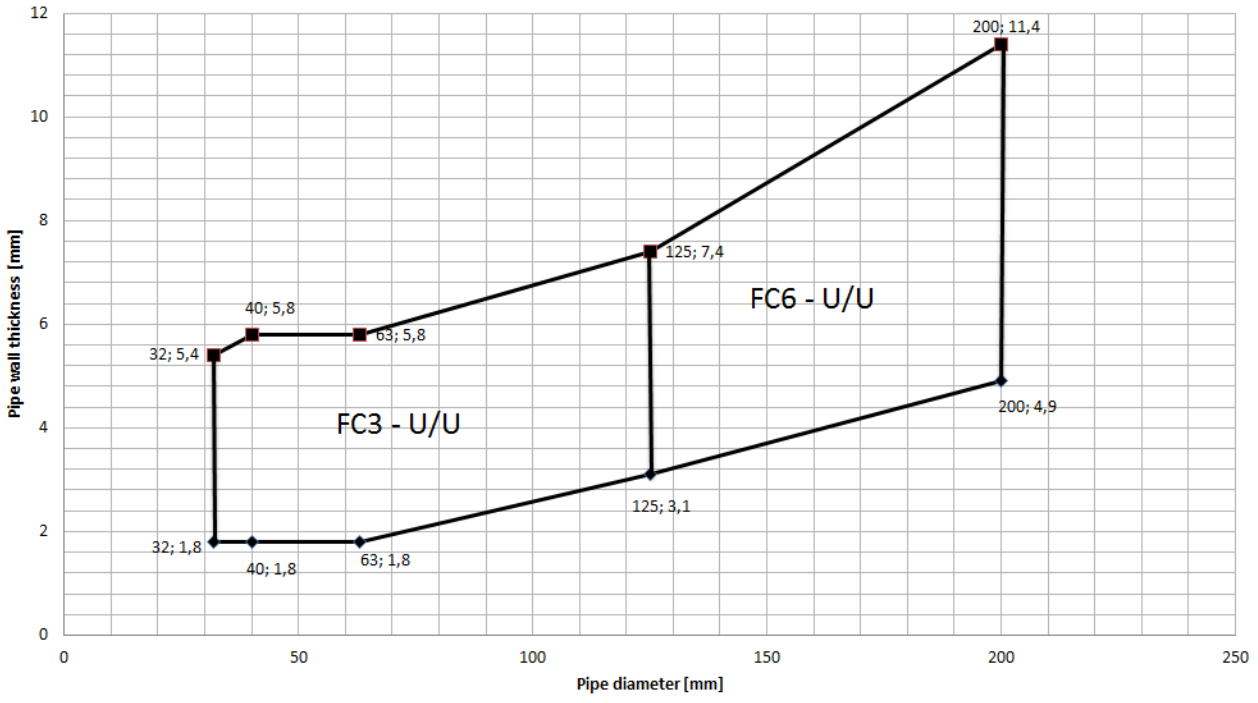
PVC-U	Ø 32 / t_D 1,8 - Ø 250 / t_D 4,9	2 x 50	Floor	FC3/6	EI90-U/U

PVC-U pipes with PROMASTOP-FC collar on penetration seal PROMASTOP-CC (2 x 50 mm) in rigid floor construction (density ≥ 450 kg/m³, thickness ≥ 150 mm)
EI90-U/U



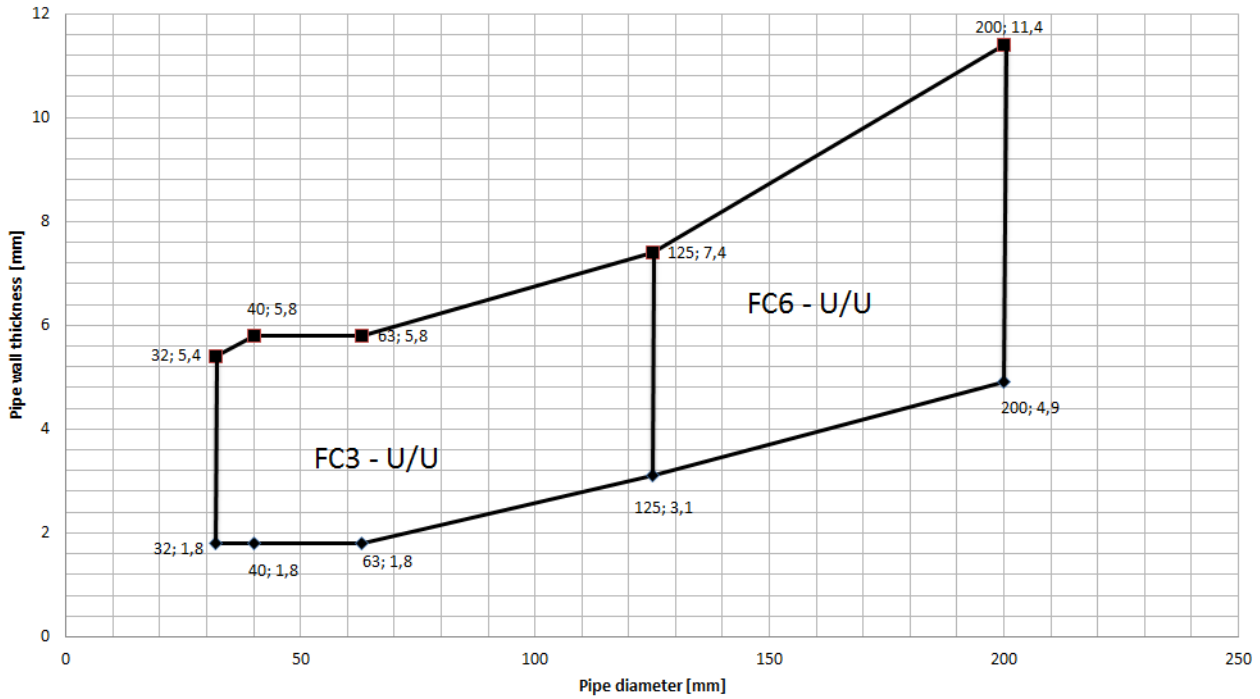
PE	Ø 32 / t_D 1,8 - Ø 200 / t_D 11,4	1 x 50	Floor	FC3/6	EI60-U/U

PE-HD pipes with PROMASTOP-FC collar on penetration seal PROMASTOP-CC (1 x 50 mm) in rigid floor construction (density ≥ 450 kg/m³, thickness ≥ 150 mm)
EI60-U/U



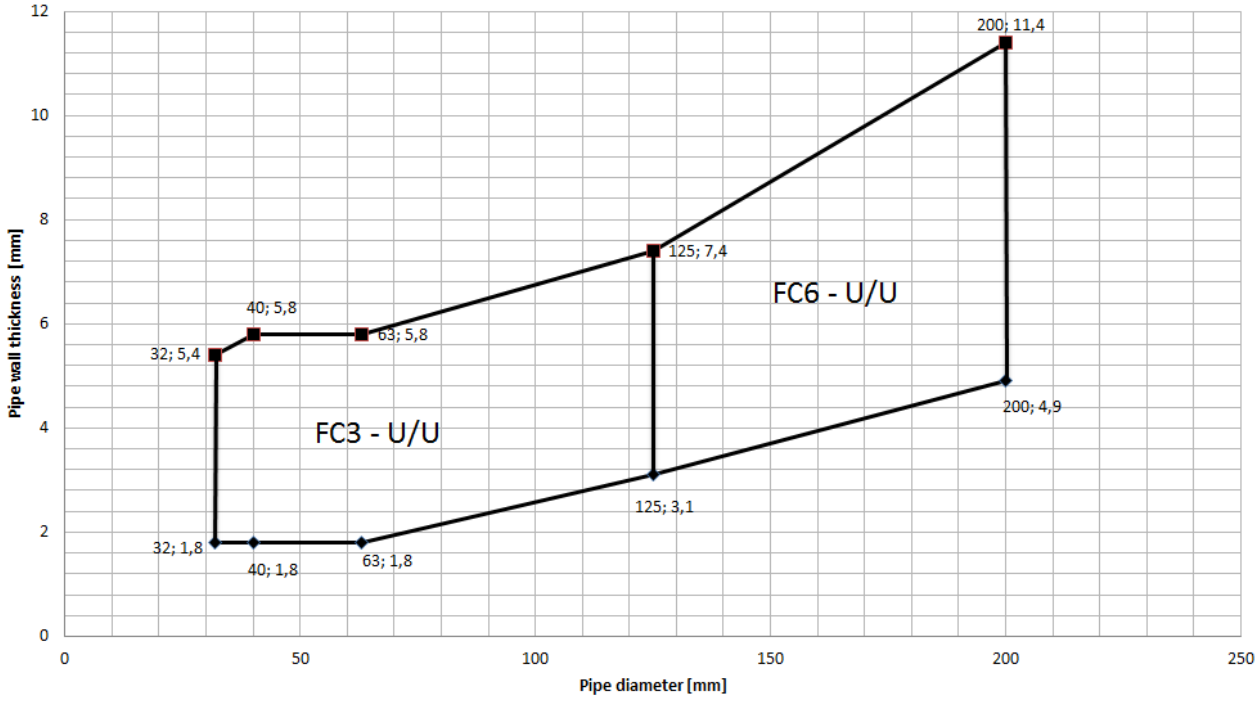
PE	Ø 32 / t_D 1,8 - Ø 200 / t_D 11,4	1 x 80	Floor	FC3/6	EI90-U/U

PE-HD pipes with PROMASTOP-FC collar on penetration seal PROMASTOP-CC (1 x 80 mm) in rigid floor construction (density ≥ 450 kg/m³, thickness ≥ 150 mm)
EI90-U/U



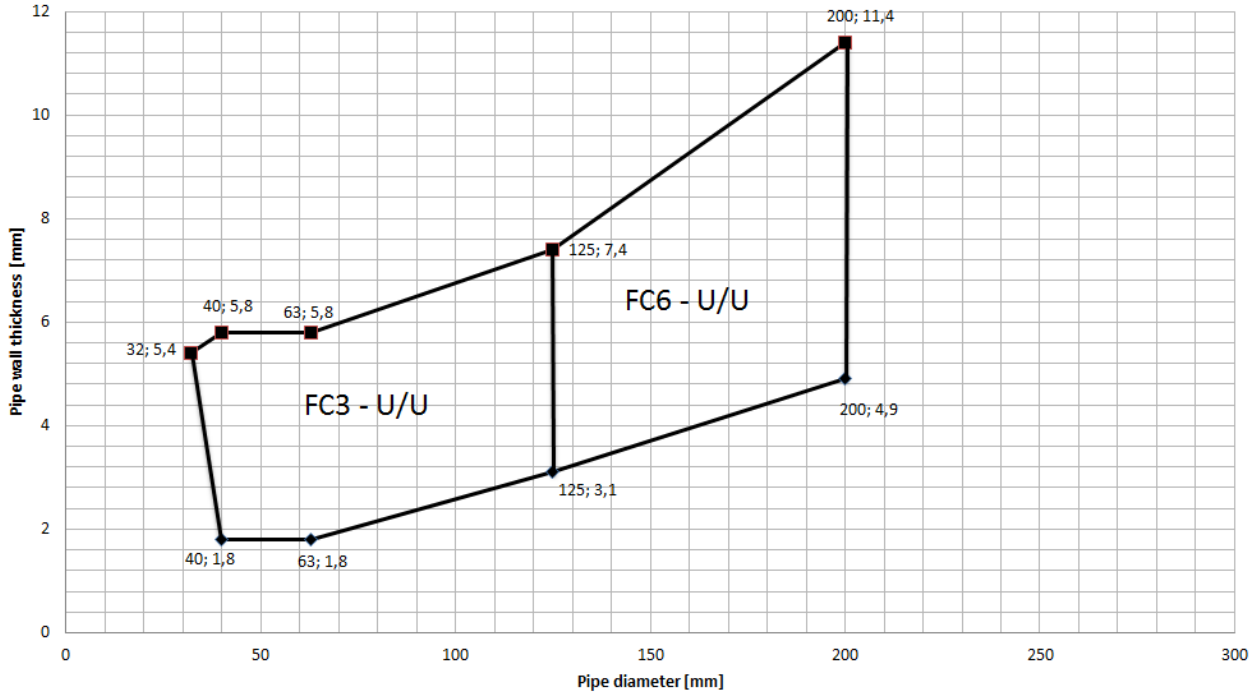
PE	Ø 32 / t_D 1,8 - Ø 200 / t_D 11,4	2 x 50	Floor	FC3/6	EI90-U/U

PE-HD pipes with PROMASTOP-FC collar on penetration seal PROMASTOP-CC (2 x 50 mm) in rigid floor construction (density ≥ 450 kg/m³, thickness ≥ 150 mm)
EI90-U/U



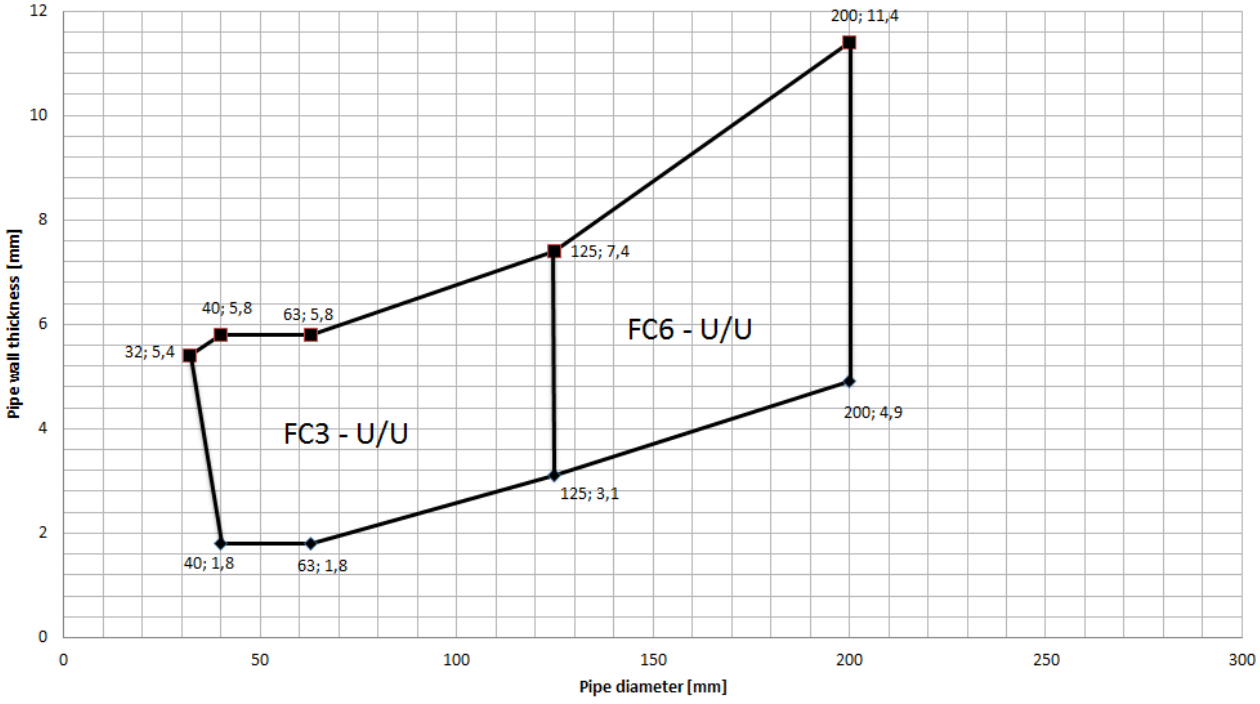
PE	Ø 40 / t_D 1,8 - Ø 200 / t_D 11,4	1 x 50	Wall	FC3/6	EI60-U/U

PE-HD pipes with PROMASTOP-FC collar on penetration seal PROMASTOP-CC (1 x 50 mm) in flexible wall and rigid wall construction (thickness ≥ 100 mm)
EI60-U/U



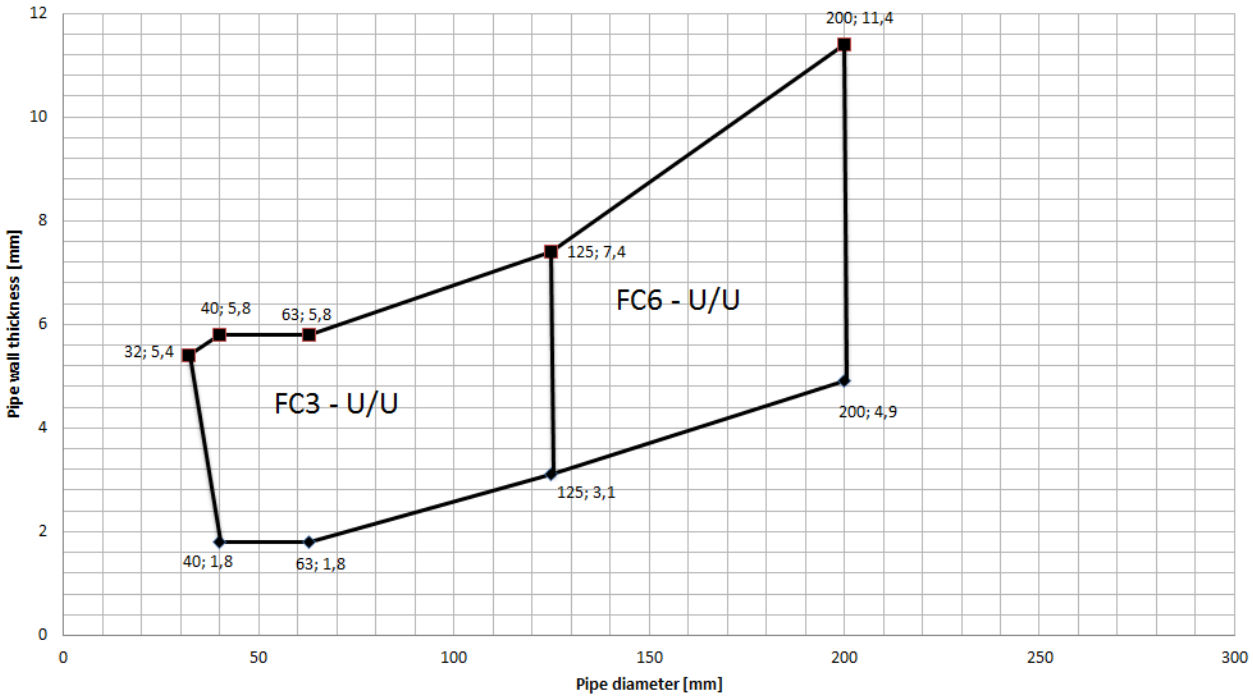
PE	Ø 40 / t_D 1,8 - Ø 200 / t_D 11,4	1 x 80	Wall	FC3/6	EI90-U/U

PE-HD pipes with PROMASTOP-FC collar on penetration seal PROMASTOP-CC (1 x 80 mm) in flexible wall and rigid wall construction (thickness ≥ 100 mm)
EI90-U/U



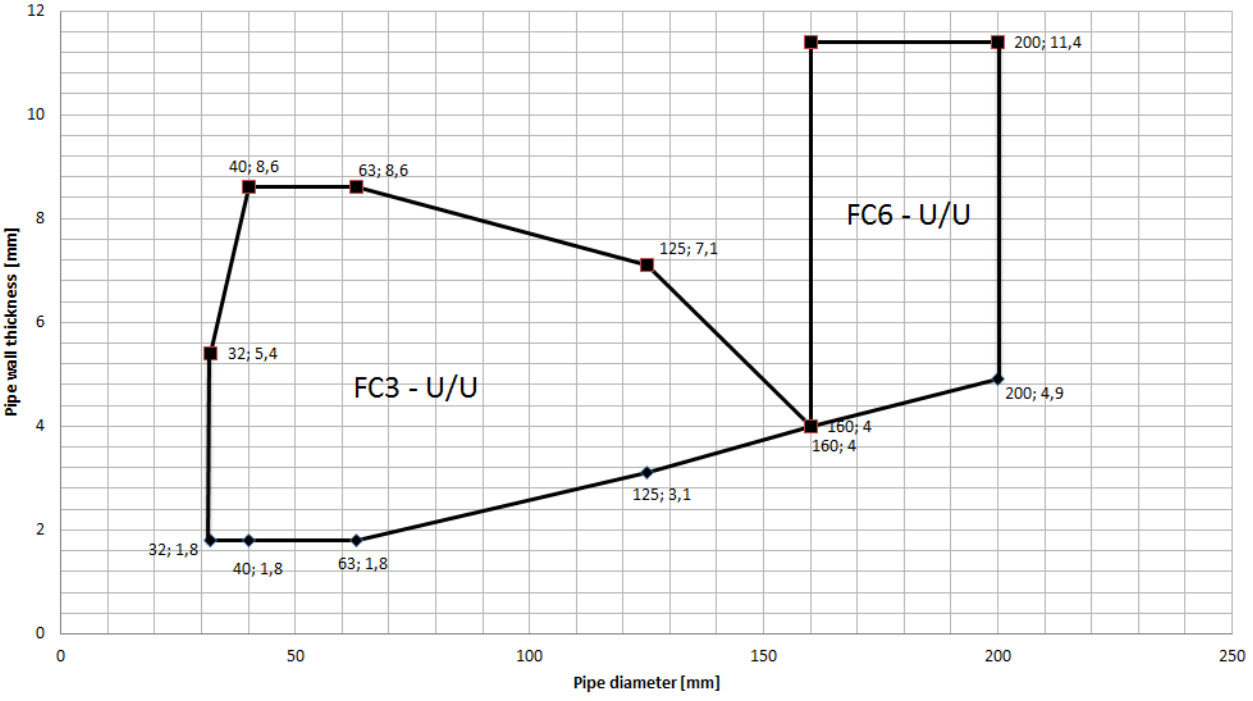
PE	Ø 40 / t_D 1,8 - Ø 200 / t_D 11,4	2 x 50	Wall	FC3/6	EI90-U/U

PE-HD pipes with PROMASTOP-FC collar on penetration seal PROMASTOP-CC (2 x 50 mm) in flexible wall and rigid wall construction (thickness ≥ 100 mm)
EI90-U/U



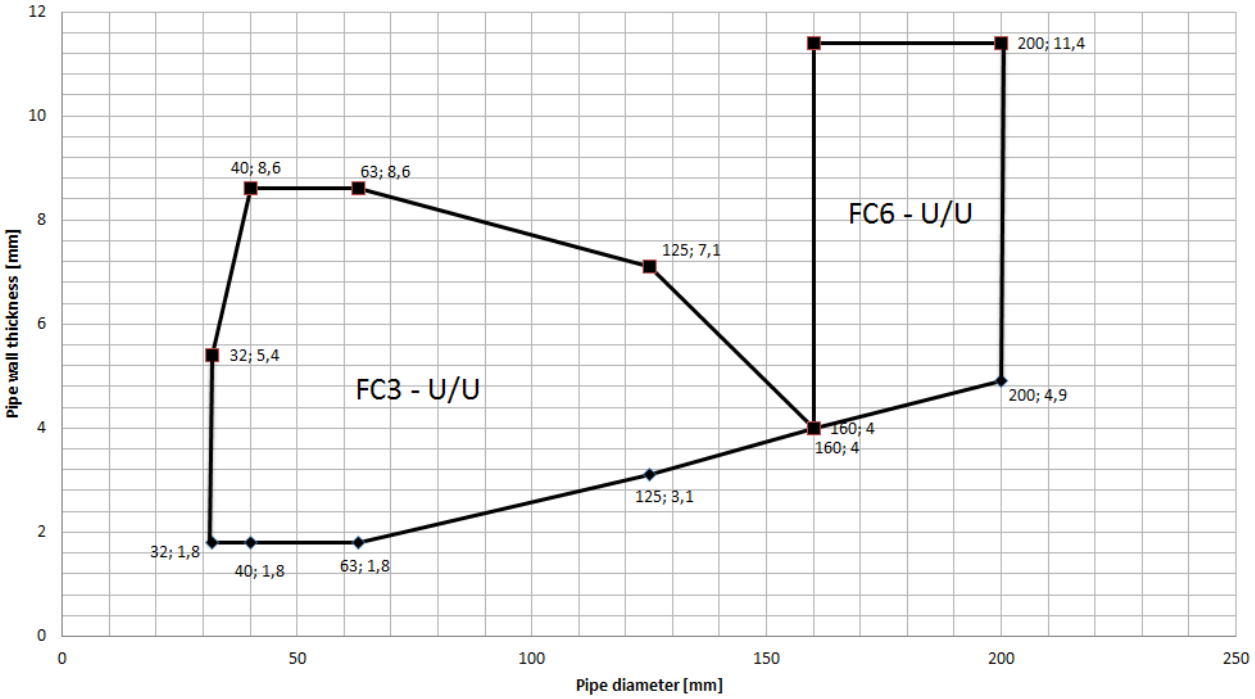
PP-H / PP-R	Ø 32 / t_D 1,8 - Ø 200 / t_D 11,4	1 x 50	Floor	FC3/6	EI60-U/U

PP-H and PP-R pipes with PROMASTOP-FC collar on penetration seal PROMASTOP-CC (1 x 50 mm) in rigid floor construction (density ≥ 450 kg/m³, thickness ≥ 150 mm)
EI60-U/U



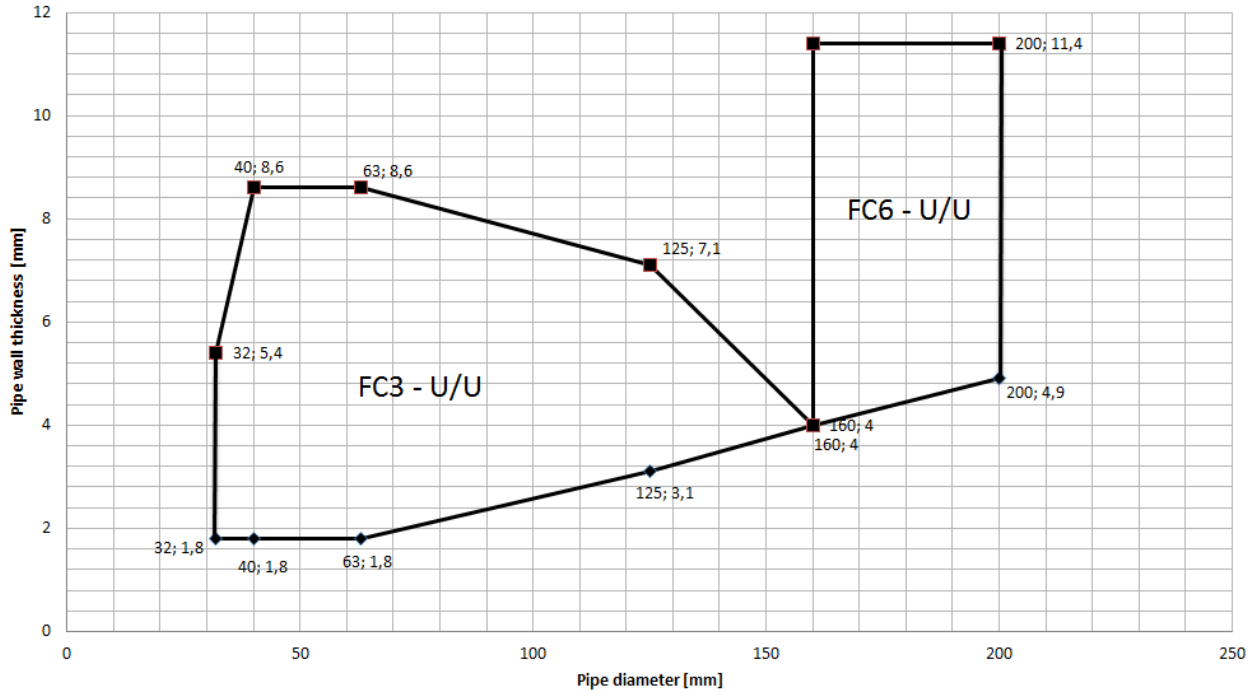
PP-H / PP-R	Ø 32 / t_D 1,8 - Ø 200 / t_D 11,4	1 x 80	Floor	FC3/6	EI90-U/U

PP-H and PP-R pipes with PROMASTOP-FC collar on penetration seal PROMASTOP-CC (1 x 80 mm) in rigid floor construction (density ≥ 450 kg/m³, thickness ≥ 150 mm)
EI90-U/U



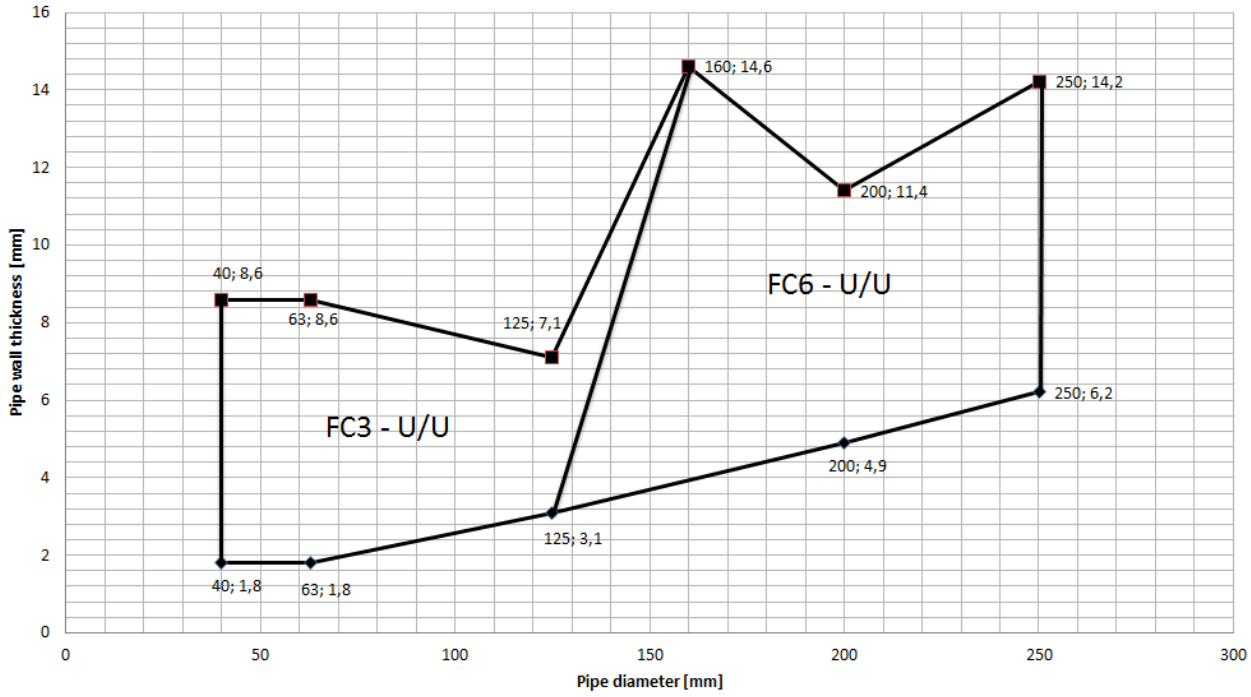
PP-H / PP-R	Ø 32 / t_D 1,8 - Ø 200 / t_D 11,4	2 x 50	Floor	FC3/6	EI90-U/U

PP-H and PP-R pipes with PROMASTOP-FC collar on penetration seal PROMASTOP-CC (2 x 50 mm) in rigid floor construction (density ≥ 450 kg/m³, thickness ≥ 150 mm)
EI90-U/U



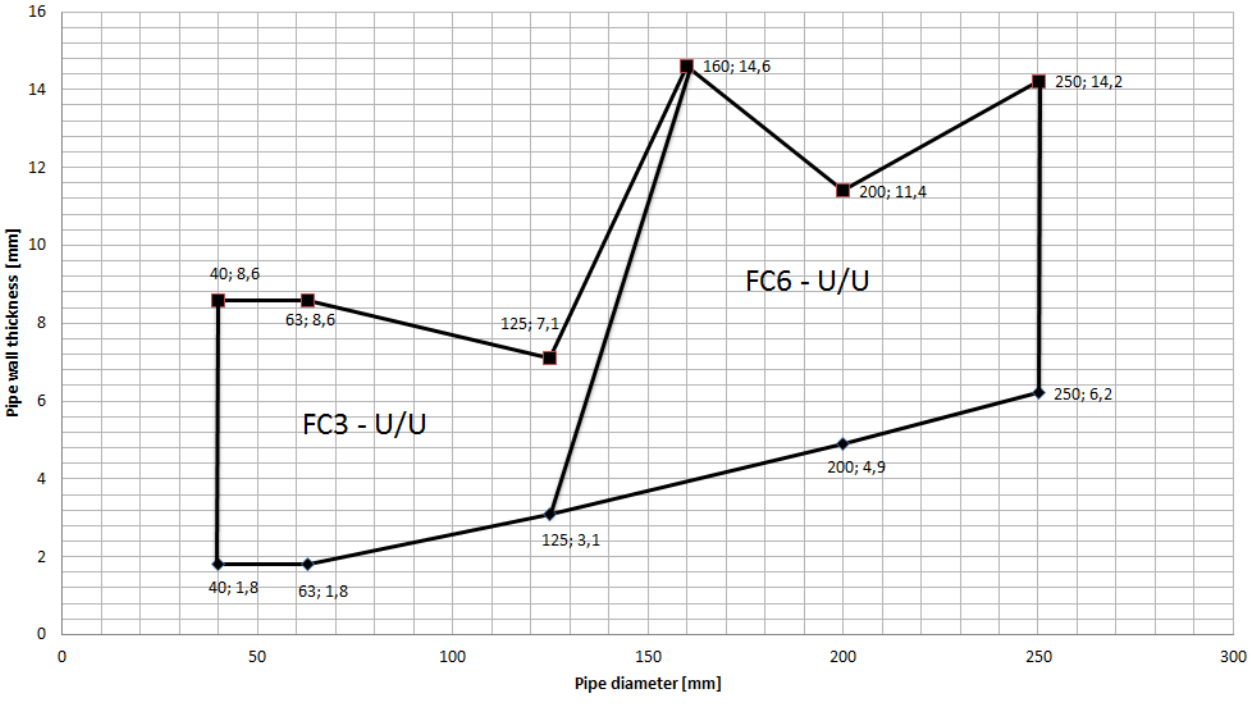
PP-H / PP-R	Ø 40 / t_D 1,8 - Ø 250 / t_D 14,2	1 x 50	Wall	FC3/6	EI60-U/U

PP-H and PP-R pipes with PROMASTOP-FC collar on penetration seal PROMASTOP-CC (1 x 50 mm) in flexible wall and rigid wall construction (thickness ≥ 100 mm)
EI60-U/U



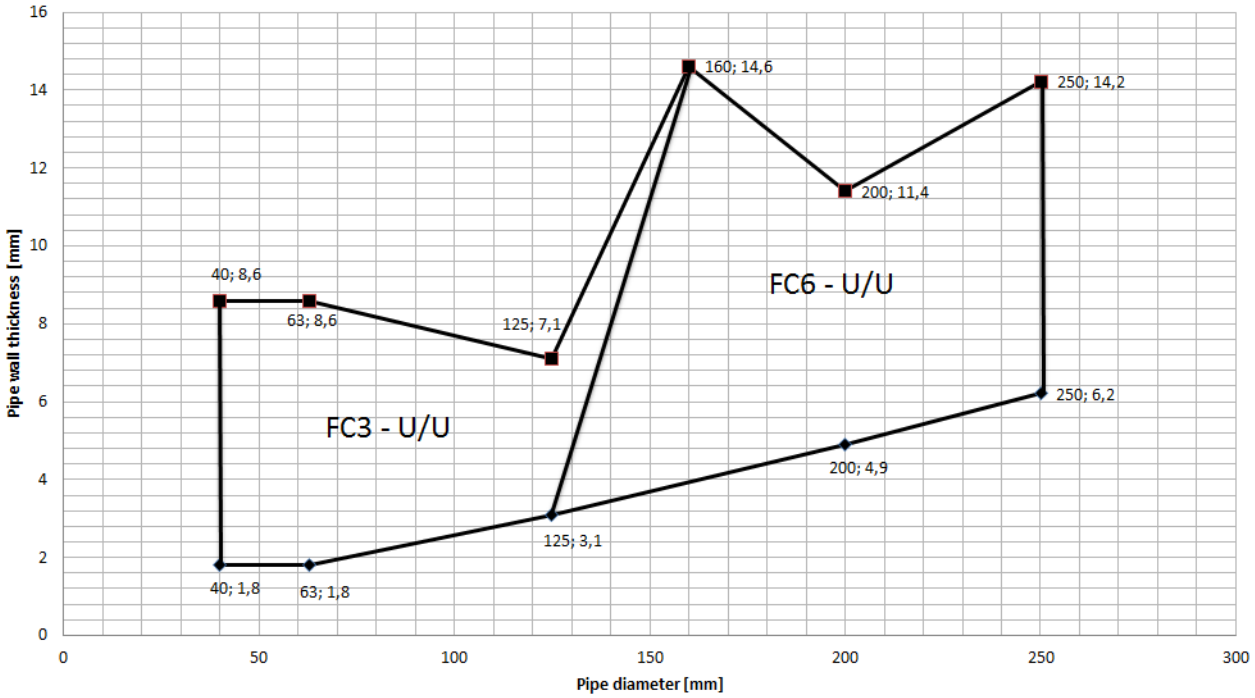
PP-H / PP-R	Ø 40 / t_D 1,8 - Ø 250 / t_D 14,2	1 x 80	Wall	FC3/6	EI90-U/U

PP-H and PP-R pipes with PROMASTOP-FC collar on penetration seal PROMASTOP-CC (1 x 80 mm) in flexible wall and rigid wall construction (thickness ≥ 100 mm)
EI90-U/U



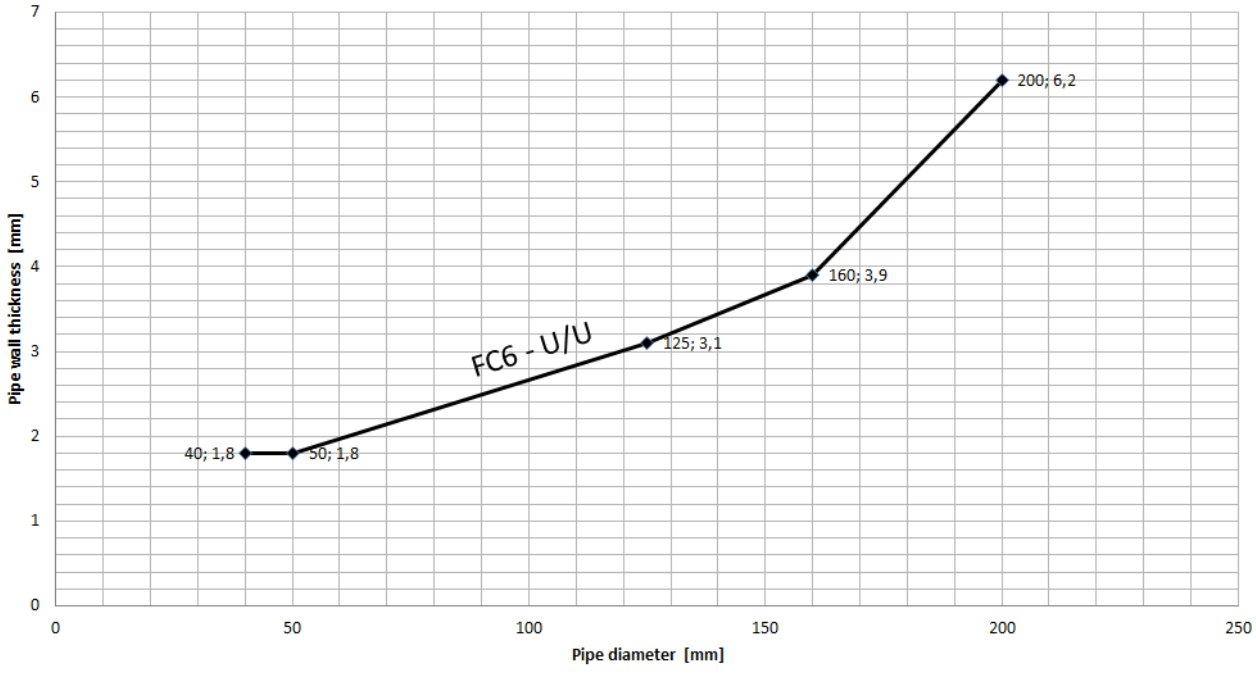
PP-H / PP-R	Ø 40 / t_D 1,8 - Ø 250 / t_D 14,2	2 x 50	Wall	FC3/6	EI90-U/U

PP-H and PP-R pipes with PROMASTOP-FC collar on penetration seal PROMASTOP-CC (2 x 50 mm) in flexible wall and rigid wall construction (thickness ≥ 100 mm)
EI90-U/U



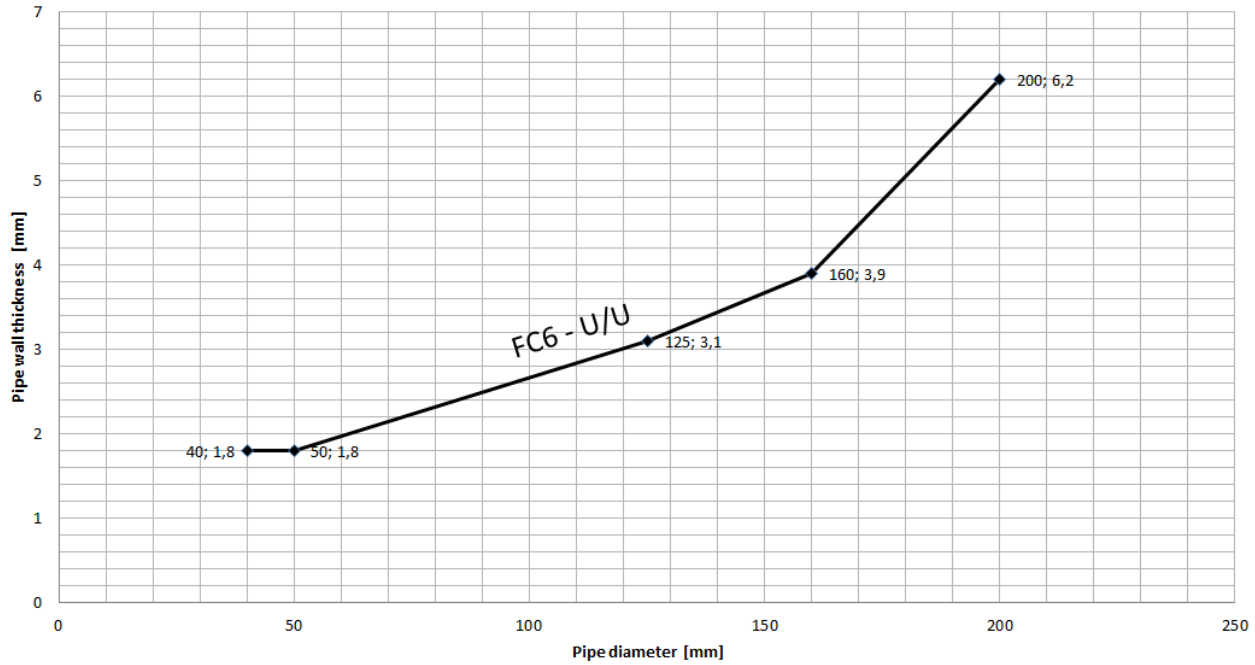
Rehau Raupiano Plus	Ø 40 / t_D 1,8 - Ø 200 / t_D 6,2	1 x 50	Floor	FC6	EI60-U/U

Rehau Raupiano Plus pipes with or without sound decoupling with PROMASTOP-FC collar on penetration seal PROMASTOP-CC (1 x 50 mm) in rigid floor construction (density ≥ 450 kg/m³, thickness ≥ 150 mm)
EI60-U/U



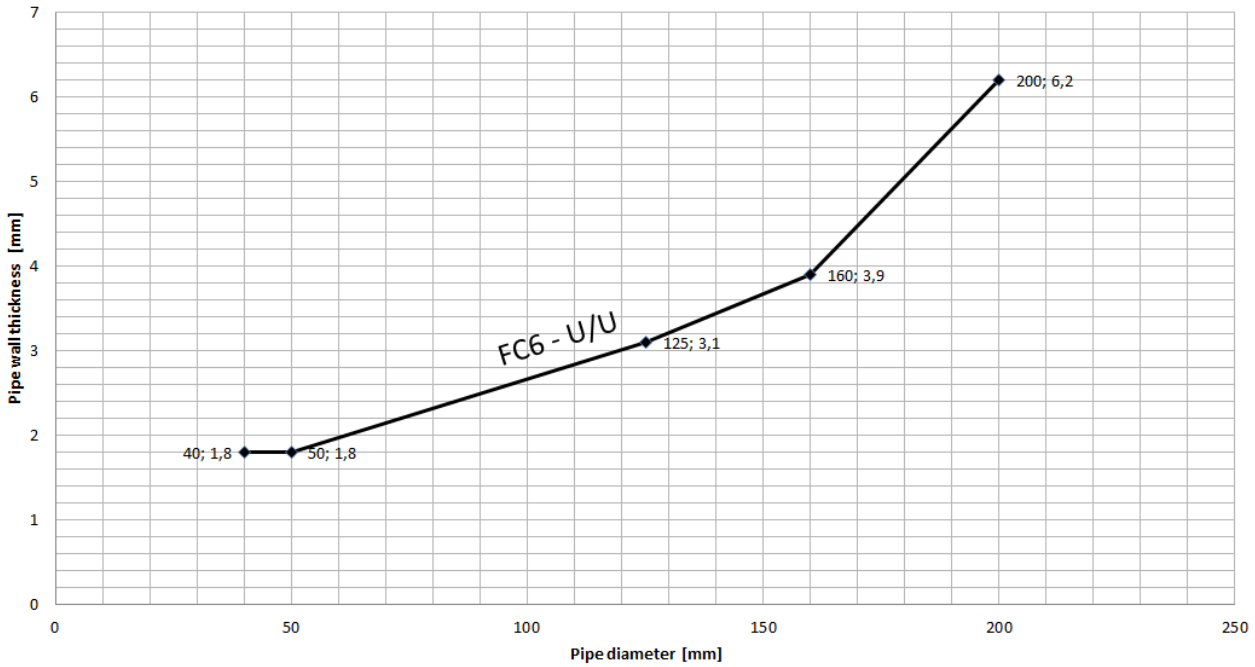
Rehau Raupiano Plus	Ø 40 / t_D 1,8 - Ø 200 / t_D 6,2	1 x 80	Floor	FC6	EI90-U/U

**Rehau Raupiano Plus pipes with or without sound decoupling
with PROMASTOP-FC collar on penetration seal PROMASTOP-CC (1 x 80 mm)
in rigid floor construction (density ≥ 450 kg/m³, thickness ≥ 150 mm)
EI90-U/U**



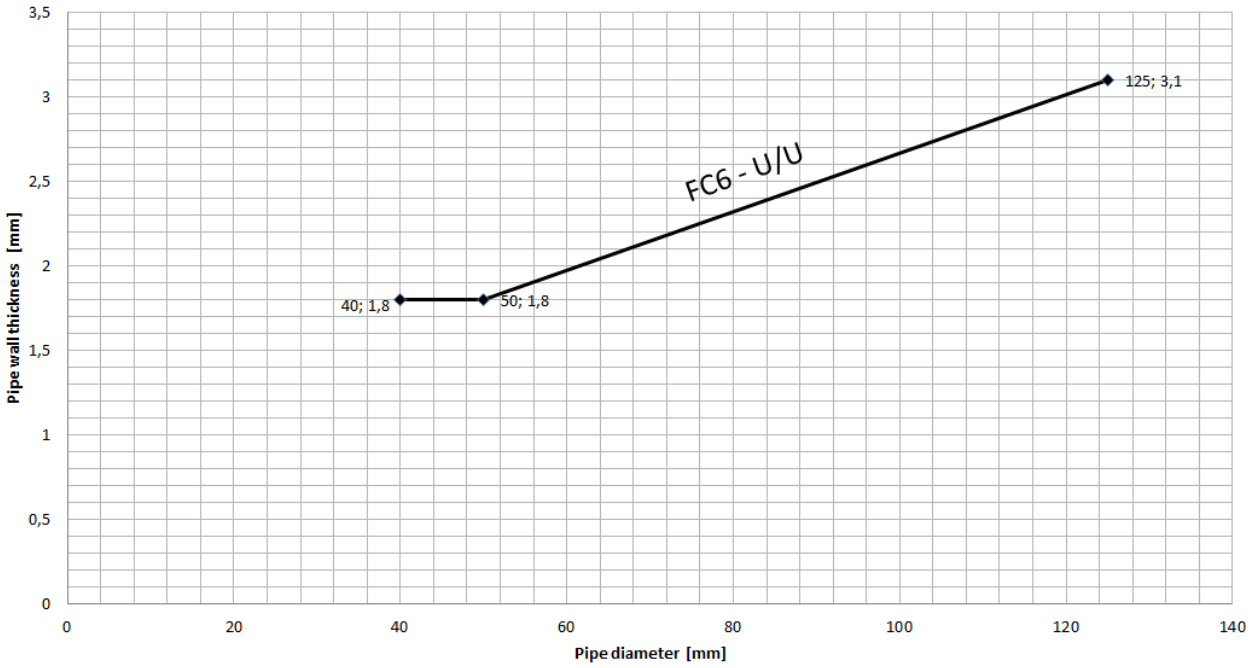
Rehau Raupiano Plus	Ø 40 / t_D 1,8 - Ø 200 / t_D 6,2	2 x 50	Floor	FC6	EI90-U/U

**Rehau Raupiano Plus pipes with or without sound decoupling
with PROMASTOP-FC collar on penetration seal PROMASTOP-CC (2 x 50 mm)
in rigid floor construction (density ≥ 450 kg/m³, thickness ≥ 150 mm)
EI90-U/U**



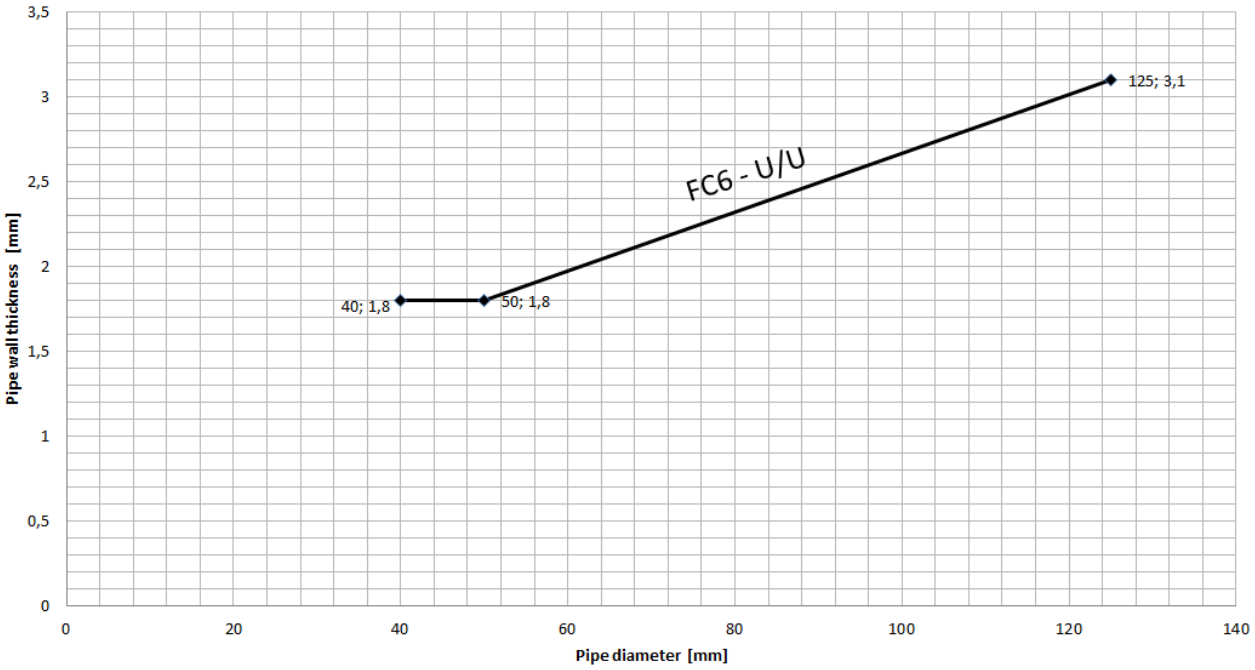
Rehau Raupiano Plus (+socket)	Ø 40 / t_D 1,8 - Ø 125 / t_D 3,1	1 x 50	Floor	FC6	EI60-U/U

Rehau Raupiano Plus pipes with socket and with or without sound decoupling with PROMASTOP-FC collar on penetration seal PROMASTOP-CC (1 x 50 mm) in rigid floor construction (density ≥ 450 kg/m³, thickness ≥ 150 mm) EI60-U/U



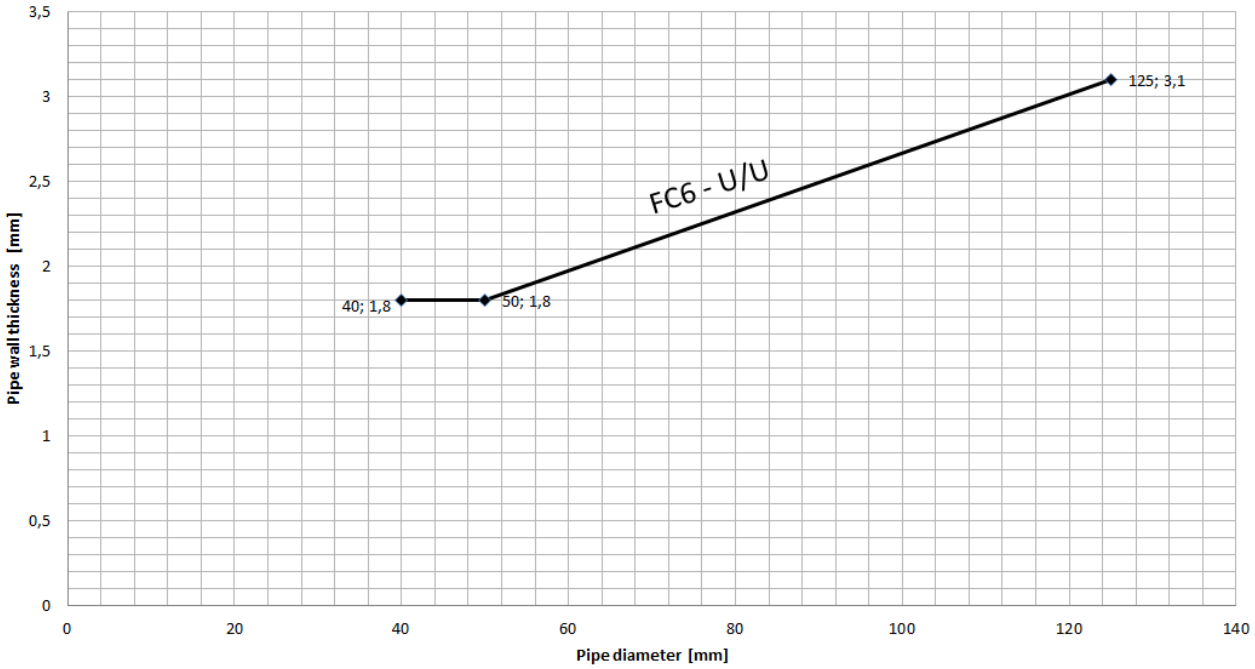
Rehau Raupiano Plus (+socket)	Ø 40 / t_D 1,8 - Ø 125 / t_D 3,1	1 x 80	Floor	FC6	EI90-U/U

Rehau Raupiano Plus pipes with socket and with or without sound decoupling with PROMASTOP-FC collar on penetration seal PROMASTOP-CC (1 x 80 mm) in rigid floor construction (density ≥ 450 kg/m³, thickness ≥ 150 mm) EI90-U/U



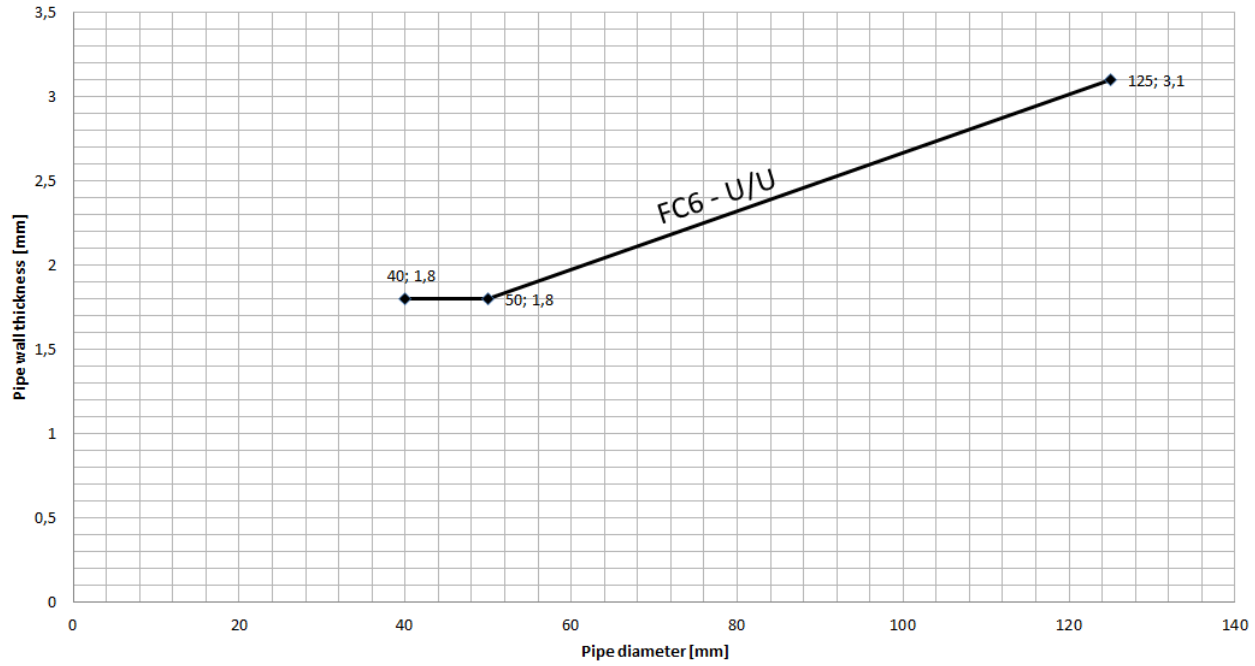
Rehau Raupiano Plus (+socket)	Ø 40 / t_D 1,8 - Ø 125 / t_D 3,1	2 x 50	Floor	FC6	EI90-U/U

Rehau Raupiano Plus pipes with socket and with or without sound decoupling with PROMASTOP-FC collar on penetration seal PROMASTOP-CC (2 x 50 mm) in rigid floor construction (density ≥ 450 kg/m³, thickness ≥ 150 mm) EI90-U/U



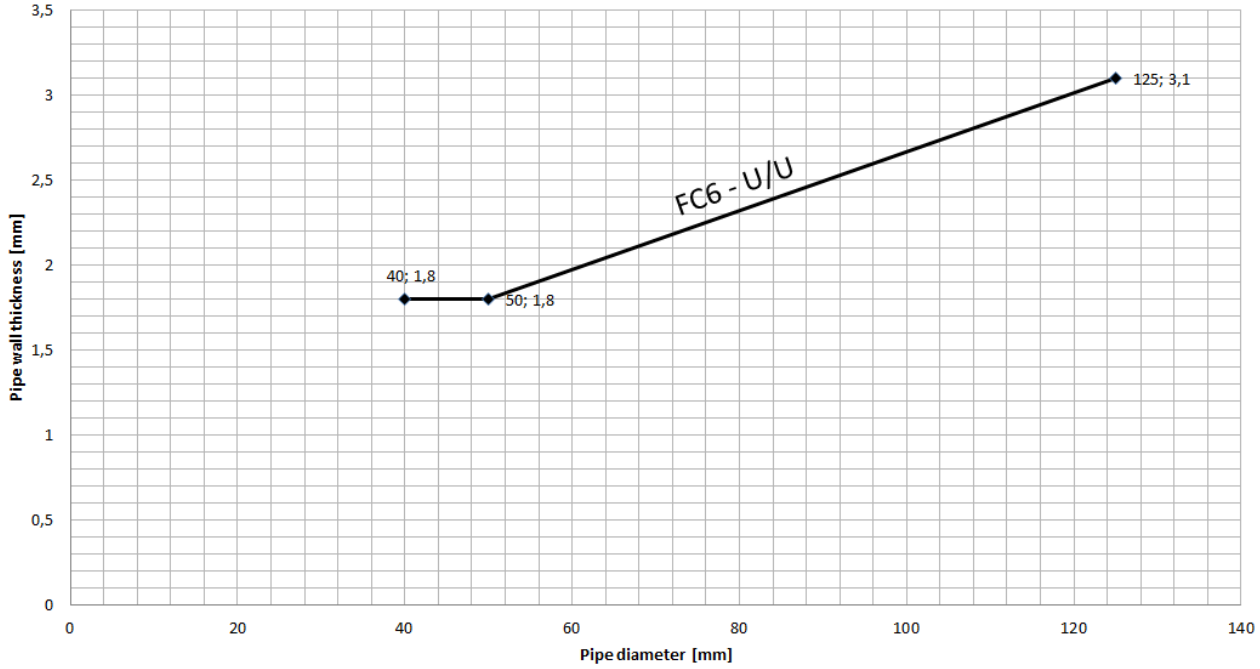
Rehau Raupiano Plus (+socket)	Ø 40 / t_D 1,8 - Ø 125 / t_D 3,1	1 x 50	Wall	FC6	EI60-U/U

Rehau Raupiano Plus pipes with or without socket / sound decoupling with PROMASTOP-FC collar on penetration seal PROMASTOP-CC (1 x 50 mm) in flexible wall and rigid wall construction (thickness ≥ 100 mm) EI60-U/U



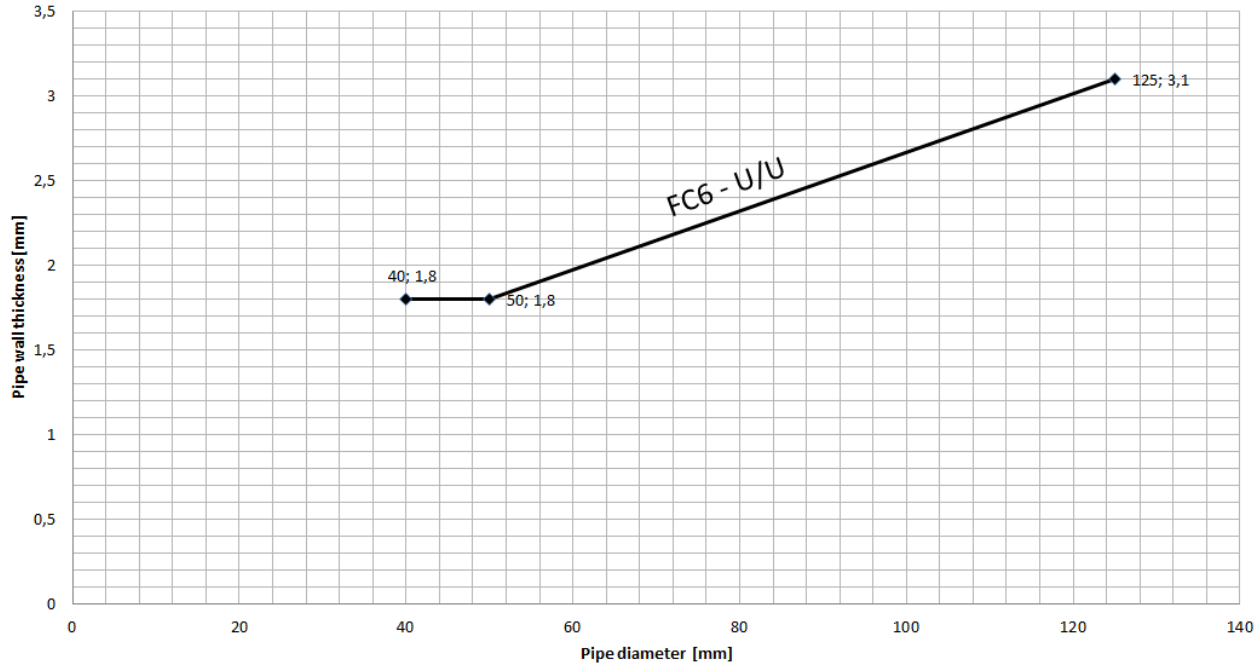
Rehau Raupiano Plus (+socket)	Ø 40 / t_D 1,8 - Ø 125 / t_D 3,1	1 x 80	Wall	FC6	EI90-U/U

Rehau Raupiano Plus pipes with or without socket / sound decoupling with PROMASTOP-FC collar on penetration seal PROMASTOP-CC (1 x 80 mm) in flexible wall and rigid wall construction (thickness ≥ 100 mm)
EI90-U/U



Rehau Raupiano Plus (+socket)	Ø 40 / t_D 1,8 - Ø 125 / t_D 3,1	2 x 50	Wall	FC6	EI120-U/U

Rehau Raupiano Plus pipes with or without socket / sound decoupling with PROMASTOP-FC collar on penetration seal PROMASTOP-CC (2 x 50 mm) in flexible wall and rigid wall construction (thickness ≥ 100 mm)
EI120-U/U



3.1 PROMASTOP®-FC firestop collar, in flexible-, rigid wall constructions and rigid floor constructions

Compartments/supporting constructions:

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. Details are given in the specific classifications below.
B) Rigid walls: The wall must have a minimum thickness of 100 mm or 150 mm and consist of concrete, aerated concrete or masonry, with a minimum density of 450 kg/m³. Details are given in the specific classifications below.
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 450 kg/m³. Details are given in the specific classifications below.
D) Shaft walls: The minimum thickness of the board(s) has to be ≥ 50 mm. Details are given in the specific classifications below.

Distances for PROMASTOP®-FC firestop collar in compartments 3.2 A/B/C/D:

Specimen	Minimum distance [mm]
Firestop collar – firestop collar	0
Firestop collar – combustible Insulation	0
Firestop collar – non-combustible Insulation	0
Firestop collar – cabletray, cableladder, cables	0

To all other installations: minimum 100 mm

To seal the gap around the pipe and the supporting construction with PROMASEAL®-A (thickness 5 mm, in wall orientation on both sides, in floor orientation only underneath) with mineral wool backfilling material (melting point ≥ 1000°C).

Distances for PROMASTOP®-FC firestop collar for the build in and build on situation in Mineral wool slab penetration seal with PROMASTOP®-I firestop coating in compartments 3.2 A/B/C:

Specimen	Minimum distance [mm]
Firestop collar – firestop collar (housings)	0
Firestop collar – PROMASTOP®-W	30
Firestop collar – combustible Insulation	0
Firestop collar – non-combustible Insulation	0
Firestop collar – cabletray, cableladder,…	20

Maximum seals size of PROMASTOP®-I: 1,4 m²

To all other installations: minimum 100 mm

To seal the gap around the pipe and the mineral wool slab penetration seal with PROMASEAL®-A (thickness 5 mm, in wall orientation on both sides, in floor orientation only underneath) with mineral wool backfilling material (melting point ≥ 1000°C).

Pipe end configuration: Results with U/U covers C/U, U/C and C/C, but not vice versa.

Sound decupling based on PE (foam, minimum class E in acc. to EN 13501-1:2007+A1, or equal products) may be used to a maximum thickness of 5 mm.

Sockets:
The diameter of the tested sockets can be reduced, but not increased. For this application the PROMASTOP®-FC6 collar is needed.

Sloped pipes:
This application is possible with the PROMASTOP®-FC6 collar, between perpendicular to the surface of the compartment and an angle to 45 degrees. The diameter of the tested sloped pipe can be reduced, but not increased.

Classification in acc. to EN 13501-2 for the PROMASTOP®-FC in different compartments:

Geberit silent dB20 or equal products					
Compartment	Compart-ment thickness [mm]	Dimension scope Ø…Diameter [mm] t_D…pipe wall thickness [mm]	Collar type [mm]	Collar position	Classification
Flexible wall	≥ 100	Ø 56 / t_D 3,2 - Ø 135 / t_D 6,0	FC3	on the wall	EI90-U/U
Rigid wall	≥ 100	Ø 56 / t_D 3,2 - Ø 135 / t_D 6,0	FC3	on the wall	EI120-U/U
Rigid wall	≥ 100	Pipe with socket, max. Ø 135	FC6	on the wall	EI120-U/U
Rigid wall	≥ 150	Ø 56 / t_D 3,2 - Ø 135 / t_D 6,0	FC3	mortared in	EI120-U/U
Rigid floor	≥ 150	Ø 56 / t_D 3,2 - Ø 160 / t_D 7,0	FC3	mortared in	EI120-U/U
Rigid floor	≥ 150	Ø 56 / t_D 3,2 - Ø 160 / t_D 7,0	FC3	under the floor	EI120-U/U
Rigid floor	≥ 150	Pipe with socket, max. Ø 135	FC6	under the floor	EI120-U/U
Geberit Mepla or equal products					
Compartment	Compart-ment thickness [mm]	Dimension scope Ø…Diameter [mm] t_D…pipe wall thickness [mm]	Collar type [mm]	Collar position	Classification
Rigid wall	≥ 150	Ø 16 / t_D 2,25 - Ø 75 / t_D 4,7	FC3	mortared in	EI90-U/C
Rigid wall	≥ 150	Ø 16 / t_D 2,25 - Ø 63 / t_D 4,5	FC3	mortared in	EI120-U/C
Rigid wall	≥ 150	Ø 16 / t_D 2,25 - Ø 75 / t_D 4,7 + combustible insulation (B-s3,d0; thickness 6 – 32 mm; Configuration: LS/LI/CS or CI)	FC3	mortared in	EI90-U/C
Rigid wall	≥ 150	Ø 16 / t_D 2,25 - Ø 75 / t_D 4,7 + combustible insulation (B-s3,d0; thickness 6 – 32 mm; Configuration: LS/LI/CS or CI)	FC3	mortared in	EI120-U/C
Rigid floor	≥ 150	Ø 16 / t_D 2,25 - Ø 75 / t_D 4,7	FC3	mortared in	EI120-U/C
Rigid floor	≥ 150	Ø 16 / t_D 2,25 - Ø 63 / t_D 4,5 + combustible insulation (B-s3,d0; thickness 6 – 32 mm; Configuration: LS/LI/CS or CI)	FC3	mortared in	EI90-U/C
Friatec dBlue or equal products					
Compartment	Compart-ment thickness [mm]	Dimension scope Ø…Diameter [mm] t_D…pipe wall thickness [mm]	Collar type [mm]	Collar position	Classification
Rigid floor	≥ 150	Ø 50 / t_D 1,8 - Ø 125 / t_D 3,9	FC3	mortared in	EI120-U/U
Rigid floor	≥ 150	Ø 50 / t_D 1,8 - Ø 125 / t_D 3,9	FC3	under the floor	EI120-U/U
Friatec Friaphon or equal products					
Compartment	Compart-ment thickness [mm]	Dimension scope Ø…Diameter [mm] t_D…pipe wall thickness [mm]	Collar type [mm]	Collar position	Classification
Rigid floor	≥ 150	Ø 52 / t_D 2,8 - Ø 110 / t_D 5,3	FC3	mortared in	EI120-U/U
Rigid floor	≥ 150	Ø 52 / t_D 2,8 - Ø 110 / t_D 5,3	FC3	under the floor	EI120-U/U

Friatec uni/multi or equal products

Compartment	Compartment thickness [mm]	Dimension scope Ø…Diameter [mm] t_D…pipe wall thickness [mm]	Collar type [mm]	Collar position	Classification
Rigid floor	≥ 150	Ø 16 / t_D 2,0 - Ø 63 / t_D 4,5	FC3	mortared in	EI120-U/C
Rigid floor	≥ 150	Ø 16 / t_D 2,0 - Ø 63 / t_D 4,5 + combustible insulation (B-s3,d0; thickness 6 – 32 mm; Configuration: LS/LI/CS or CI)	FC3	mortared in	EI120-U/C
Rigid floor	≥ 150	Ø 16 / t_D 2,0 - Ø 63 / t_D 4,5	FC3	under the floor	EI60-U/C
Rigid floor	≥ 150	Ø 16 / t_D 2,0 - Ø 32 / t_D 3,0	FC3	under the floor	EI120-U/C
Rigid floor	≥ 150	Ø 16 / t_D 2,0 - Ø 63 / t_D 4,5 + combustible insulation (B-s3,d0; thickness 6 – 32 mm; Configuration: LS/LI/CS or CI	FC3	under the floor	EI90-U/C
Rigid floor	≥ 150	Ø 16 / t_D 2,0 - Ø 63 / t_D 4,5 + combustible insulation (B-s3,d0; thickness 6 – 32 mm; Configuration: LS/LI/CS or CI	FC3	under the floor	EI120-U/C

Friatec Friatherm starr or equal products

Compartment	Compartment thickness [mm]	Dimension scope Ø…Diameter [mm] t_D…pipe wall thickness [mm]	Collar type [mm]	Collar position	Classification
Rigid floor	≥ 150	Ø 16 / t_D 2,0 - Ø 160 / t_D 12,5 + combustible insulation (B-s3,d0; thickness 6 – 32 mm; Configuration: LS/LI/CS or CI)	FC3	mortared in	EI120-U/C
Rigid floor	≥ 150	Ø 16 / t_D 2,0 - Ø 160 / t_D 12,5	FC3	under the floor	EI120-U/C
Rigid floor	≥ 150	Ø 16 / t_D 2,0 - Ø 160 / t_D 12,5	FC3	mortared in	EI120-U/C
Rigid floor	≥ 150	Ø 16 / t_D 2,0 - Ø 160 / t_D 12,5 + combustible insulation (B-s3,d0; thickness 6 – 32 mm; Configuration: LS/LI/CS or CI)	FC3	under the floor	EI120-U/C

Pipelife Master3 or equal products

Compartment	Compartment thickness [mm]	Dimension scope Ø…Diameter [mm] t_D…pipe wall thickness [mm]	Collar type [mm]	Collar position	Classification
Flexible wall	≥ 100	Ø 75 / t_D 2,1 - Ø 125 / t_D 3,5	FC3	on the wall	EI90-U/U
Rigid wall	≥ 100	Ø 75 / t_D 2,1 - Ø 125 / t_D 3,5	FC3	on the wall	EI120-U/U
Rigid wall	≥ 100	Pipe with socket, max. Ø 125	FC6	on the wall	EI120-U/U
Rigid wall	≥ 150	Ø 75 / t_D 2,1 - Ø 125 / t_D 3,5	FC3	mortared in	EI120-U/U
Rigid floor	≥ 150	Ø 75 / t_D 2,1 - Ø 125 / t_D 3,5	FC3	mortared in	EI120-U/U
Rigid floor	≥ 150	Ø 75 / t_D 2,1 - Ø 125 / t_D 3,5	FC3	under the floor	EI120-U/U
Rigid floor	≥ 150	Pipe with socket, max. Ø 125	FC6	under the floor	EI120-U/U

Poloplast PoloKal NG or equal products

Compartment	Compartment thickness [mm]	Dimension scope Ø…Diameter [mm] t_D…pipe wall thickness [mm]	Collar type [mm]	Collar position	Classification
Flexible wall	≥ 100	Ø 32 / t_D 1,8 - Ø 250 / t_D 8,6	FC3/6	on the wall	EI90-U/U
Rigid wall	≥ 100	Ø 32 / t_D 1,8 - Ø 250 / t_D 8,6	FC3/6	on the wall	EI90-U/U
Rigid wall	≥ 100	Ø 32 / t_D 1,8 - Ø 160 / t_D 4,9	FC3	on the wall	EI120-U/U
Rigid wall	≥ 100	Sloped pipe (to 45°), max. Ø 125	FC6	on the wall	EI90-U/U
Rigid wall	≥ 100	Pipe with socket, max. Ø 125	FC6	on the wall	EI120-U/U
Rigid wall	≥ 150	Ø 32 / t_D 1,8 - Ø 250 / t_D 8,6	FC3/6	mortared in	EI90-U/U
Rigid wall	≥ 150	Ø 32 / t_D 1,8 - Ø 160 / t_D 4,9	FC3	mortared in	EI120-U/U
Rigid floor	≥ 150	Ø 32 / t_D 1,8 - Ø 250 / t_D 8,6	FC3/6	mortared in	EI120-U/U
Rigid floor	≥ 150	Ø 32 / t_D 1,8 - Ø 250 / t_D 8,6	FC3/6	under the floor	EI120-U/U

Rigid floor	≥ 150	Sloped pipe (to 45°), max. Ø 125	FC6	under the floor	EI120-U/U
Rigid floor	≥ 150	Pipe with socket, max. Ø 125	FC6	under the floor	EI120-U/U
Poloplast PoloKal XS or equal products					
Compartment	Compart-ment thickness [mm]	Dimension scope Ø…Diameter [mm] t_D…pipe wall thickness [mm]	Collar type [mm]	Collar position	Classification
Flexible wall	≥ 100	Ø 32 / t_D 1,8 - Ø 250 / t_D 8,6	FC3/6	on the wall	EI90-U/U
Rigid wall	≥ 100	Ø 32 / t_D 1,8 - Ø 250 / t_D 8,6	FC3/6	on the wall	EI90-U/U
Rigid wall	≥ 100	Ø 32 / t_D 1,8 - Ø 160 / t_D 4,9	FC3	on the wall	EI120-U/U
Rigid wall	≥ 100	Sloped pipe (to 45°), max. Ø 125	FC6	on the wall	EI90-U/U
Rigid wall	≥ 100	Pipe with socket, max. Ø 125	FC6	on the wall	EI120-U/U
Rigid wall	≥ 150	Ø 32 / t_D 1,8 - Ø 250 / t_D 8,6	FC3/6	mortared in	EI90-U/U
Rigid wall	≥ 150	Ø 32 / t_D 1,8 - Ø 160 / t_D 4,9	FC3	mortared in	EI120-U/U
Rigid floor	≥ 150	Ø 32 / t_D 1,8 - Ø 250 / t_D 8,6	FC3/6	mortared in	EI120-U/U
Rigid floor	≥ 150	Ø 32 / t_D 1,8 - Ø 250 / t_D 8,6	FC3/6	under the floor	EI120-U/U
Rigid floor	≥ 150	Sloped pipe (to 45°), max. Ø 125	FC6	under the floor	EI120-U/U
Rigid floor	≥ 150	Pipe with socket, max. Ø 125	FC6	under the floor	EI120-U/U
Poloplast PoloKal 3S or equal products					
Compartment	Compart-ment thickness [mm]	Dimension scope Ø…Diameter [mm] t_D…pipe wall thickness [mm]	Collar type [mm]	Collar position	Classification
Flexible wall	≥ 100	Ø 75 / t_D 3,8 - Ø 160 / t_D 7,5	FC3	on the wall	EI90-U/U
Rigid wall	≥ 100	Ø 75 / t_D 3,8 - Ø 160 / t_D 7,5	FC3	on the wall	EI120-U/U
Rigid wall	≥ 100	Pipe with socket, max. Ø 125	FC6	on the wall	EI120-U/U
Rigid wall	≥ 100	Sloped pipe (to 45°), max. Ø 125	FC6	on the wall	EI120-U/U
Rigid wall	≥ 150	Ø 75 / t_D 3,8 - Ø 160 / t_D 7,5	FC3	mortared in	EI120-U/U
Rigid floor	≥ 150	Ø 75 / t_D 3,8 - Ø 160 / t_D 7,5	FC3	mortared in	EI120-U/U
Rigid floor	≥ 150	Ø 75 / t_D 3,8 - Ø 160 / t_D 7,5	FC3	under the floor	EI120-U/U
Rigid floor	≥ 150	Pipe with socket, max. Ø 125	FC6	under the floor	EI120-U/U
Rigid floor	≥ 150	Sloped pipe (to 45°), max. Ø 125	FC6	under the floor	EI120-U/U
PE-HD					
Compartment	Compart-ment thickness [mm]	Dimension scope Ø…Diameter [mm] t_D…pipe wall thickness [mm]	Collar type [mm]	Collar position	Classification
Shaft wall without insulation	≥ 50	Ø 50 / t_D 1,8 - Ø 125 / t_D 11,4	FC6	inverse in the wall	EI90-U/U EI90-U/C
Shaft wall without insulation	≥ 50	Ø 50 / t_D 5,8 - Ø 125 / t_D 3,1	FC6	inverse in the wall	EI120-U/U EI120-U/C
Flexible wall + PROMASTOP-I (1 x 50 mm) seal	≥ 100	Ø 32 / t_D 1,8 - Ø 110 / t_D 10,0	FC3	on the seal	EI45-U/U
Flexible wall	≥ 100	Ø 40 / t_D 1,8 - Ø 200 / t_D 11,4	FC3/6	on the wall	EI90-U/U
Rigid wall + PROMASTOP-I (1 x 50 mm) seal	≥ 100	Ø 32 / t_D 1,8 - Ø 110 / t_D 10,0	FC3	on the seal	EI45-U/U
Rigid wall	≥ 100	Ø 40 / t_D 1,8 - Ø 200 / t_D 11,4	FC3/6	on the wall	EI90-U/U
Rigid wall	≥ 100	Ø 32 / t_D 1,8 - Ø 315 / t_D 15,0	FC3/6	on the wall	EI90-U/U EI90-U/C
Rigid wall	≥ 100	Ø 32 / t_D 1,8 - Ø 250 / t_D 22,7	FC3/6	on the wall	EI120-U/U EI120-U/C
Rigid wall	≥ 100	Sloped pipe (to 45°), max. Ø 125	FC6	on the wall	EI120-U/U
Rigid wall	≥ 150	Ø 40 / t_D 1,8 - Ø 315 / t_D 15,0	FC3/6	mortared in	EI90-U/U

					EI90-U/C
Rigid wall	≥ 150	Ø 40 / t_D 1,8 - Ø 250 / t_D 22,7	FC3/6	mortared in	EI120-U/U EI120-U/C
Rigid floor	≥ 150	Ø 32 / t_D 1,8 - Ø 250 / t_D 22,7	FC3/6	mortared in	EI120-U/U EI120-U/C
Rigid floor	≥ 150	Ø 32 / t_D 1,8 - Ø 315 / t_D 15,0	FC3/6	under the floor	EI90-U/U EI90-U/C
Rigid floor	≥ 150	Ø 32 / t_D 1,8 - Ø 250 / t_D 22,7	FC3/6	under the floor	EI120-U/U EI120-U/C
Rigid floor	≥ 150	Sloped pipe (to 45°), max. Ø 125	FC6	under the floor	EI120-U/U
Rigid floor + PROMASTOP-I (1 x 50 mm) seal	≥ 150	Ø 32 / t_D 1,8 - Ø 110 / t_D 10,0	FC3	under the seal	EI90-U/U

PP-H / PP-R

Compartment	Compart-ment thickness [mm]	Dimension scope Ø…Diameter [mm] t_D…pipe wall thickness [mm]	Collar type [mm]	Collar position	Classification
Shaft wall without insulation	≥ 50	Ø 50 / t_D 1,8 - Ø 125 / t_D 17,1	FC6	inverse in the wall	EI90-U/U EI90-U/C
Flexible wall + PROMASTOP-I (1 x 50 mm) seal	≥ 100	Ø 32 / t_D 1,8 - Ø 110 / t_D 10,0	FC3	on the seal	EI45-U/U
Rigid wall + PROMASTOP-I (1 x 50 mm) seal	≥ 100	Ø 32 / t_D 1,8 - Ø 110 / t_D 10,0	FC3	on the seal	EI45-U/U
Flexible wall	≥ 100	Ø 40 / t_D 1,8 - Ø 250 / t_D 14,2	FC3/6	on the wall	EI90-U/U
Flexible wall	≥ 100	Ø 40 / t_D 1,8 - Ø 250 / t_D 14,2	FC3/6	on the wall	EI120-U/U
Rigid wall	≥ 100	Ø 40 / t_D 1,8 - Ø 250 / t_D 14,2	FC3/6	on the wall	EI90-U/U
Rigid wall	≥ 100	Ø 40 / t_D 1,8 - Ø 250 / t_D 14,2	FC3/6	on the wall	EI120-U/U
Rigid wall	≥ 100	Ø 32 / t_D 1,8 - Ø 315 / t_D 15,0	FC3/6	on the wall	EI120-U/U EI120-U/C
Rigid wall	≥ 100	Sloped pipe (to 45°), max. Ø 125	FC6	on the wall	EI90-U/U
Rigid wall	≥ 100	Sloped pipe (to 45°), max. Ø 125	FC6	on the wall	EI120-U/U
Rigid wall + PROMASTOP-I (2 x 50 mm) seal	≥ 100	Ø 75 / t_D 2,6 - Ø 90 / t_D 3,0	FC3	in the seal	EI120-U/U
Rigid wall	≥ 150	Ø 40 / t_D 1,8 - Ø 250 / t_D 22,7	FC3/6	mortared in	EI90-U/U EI90-U/C
Rigid wall	≥ 150	Ø 40 / t_D 1,8 - Ø 250 / t_D 22,7	FC3/6	mortared in	EI120-U/U EI120-U/C
Rigid floor	≥ 150	Ø 32 / t_D 1,8 - Ø 250 / t_D 22,7	FC3/6	mortared in	EI90-U/U EI90-U/C
Rigid floor	≥ 150	Ø 32 / t_D 1,8 - Ø 250 / t_D 22,7	FC3/6	mortared in	EI120-U/U EI120-U/C
Rigid floor	≥ 150	Ø 32 / t_D 1,8 - Ø 315 / t_D 15,0	FC3/6	under the floor	EI90-U/U EI90-U/C
Rigid floor	≥ 150	Ø 32 / t_D 1,8 - Ø 315 / t_D 15,0	FC3/6	under the floor	EI120-U/U EI120-U/C
Rigid floor	≥ 150	Sloped pipe (to 45°), max. Ø 125	FC6	under the floor	EI120-U/U
Rigid floor + PROMASTOP-I (2 x 50 mm) seal	≥ 150	Ø 75 / t_D 2,6 - Ø 90 / t_D 3,0	FC3	in the seal	EI120-U/U
Rigid floor + PROMASTOP-I (1 x 50 mm) seal	≥ 150	Ø 32 / t_D 1,8 - Ø 110 / t_D 10,0	FC3	under the seal	EI90-U/U

PVC-U

Compartment	Compart-ment thickness	Dimension scope Ø…Diameter [mm] t_D…pipe wall thickness [mm]	Collar type [mm]	Collar position	Classification

	[mm]				
Rigid wall	≥ 100	Ø 40 / t_D 1,9 - Ø 315 / t_D 18,7	FC3/6	on the wall	EI90-U/U EI90-U/C
Rigid wall	≥ 100	Ø 40 / t_D 1,9 - Ø 250 / t_D 11,9	FC3/6	on the wall	EI120-U/U EI120-U/C
Rigid wall	≥ 100	Sloped pipe (to 45°), max. Ø 125	FC6	on the wall	EI120-U/U
Rigid wall	≥ 100	Pipe with socket, max. Ø 125	FC6	on the wall	EI120-U/U
Rigid wall + PROMASTOP-I (2 x 50 mm) seal	≥ 100	Ø 75 / t_D 2,2 - Ø 160 / t_D 3,6	FC3	in the seal	EI120-U/U
Rigid wall	≥ 150	Ø 110 / t_D 2,7 - Ø 315 / t_D 7,7	FC6	on the wall	EI180-U/U
Rigid floor	≥ 150	Ø 32 / t_D 1,8 - Ø 315 / t_D 18,7	FC3/6	mortared in	EI90-U/U EI90-U/C
Rigid floor	≥ 150	Ø 32 / t_D 1,8 - Ø 315 / t_D 18,7	FC3/6	under the floor	EI90-U/U EI90-U/C
Rigid floor	≥ 150	Sloped pipe (to 45°), max. Ø 125	FC6	under the floor	EI120-U/U
Rigid floor	≥ 150	Pipe with socket, max. Ø 125	FC6	under the floor	EI120-U/U
Rigid floor + PROMASTOP-I (2 x 50 mm) seal	≥ 150	Ø 75 / t_D 2,2 - Ø 160 / t_D 3,6	FC3	in the seal	EI120-U/U

Rehau Raupiano Plus or equal products

Compartment	Compart-ment thickness [mm]	Dimension scope Ø…Diameter [mm] t_D…pipe wall thickness [mm]	Collar type [mm]	Collar position	Classification
Rigid wall	≥ 100	Ø 40 / t_D 1,8 - Ø 160 / t_D 3,9	FC3	on the wall	EI120-U/U
Rigid wall	≥ 100	Ø 40 / t_D 1,8 - Ø 125 / t_D 3,1 Pipe with socket, max. Ø 125	FC6	on the wall	EI120-U/U
Rigid wall	≥ 150	Ø 40 / t_D 1,8 - Ø 125 / t_D 3,1 Pipe with socket, max. Ø 125	FC6	mortared in	EI120-U/U
Rigid floor	≥ 150	Ø 40 / t_D 1,8 - Ø 200 / t_D 6,2	FC6	mortared in	EI120-U/U
Rigid floor	≥ 150	Ø 40 / t_D 1,8 - Ø 125 / t_D 3,1 Pipe with socket, max. Ø 125	FC6	mortared in	EI120-U/U
Rigid floor	≥ 150	Ø 40 / t_D 1,8 - Ø 200 / t_D 6,2	FC6	under the floor	EI90-U/U
Rigid floor	≥ 150	Ø 40 / t_D 1,8 - Ø 160 / t_D 3,9	FC6	under the floor	EI120-U/U
Rigid floor	≥ 150	Ø 40 / t_D 1,8 - Ø 125 / t_D 3,1 Pipe with socket, max. Ø 125	FC6	under the floor	EI120-U/U
Rigid floor	≥ 150	Ø 40 / t_D 1,8 - Ø 160 / t_D 3,9 Pipe with socket, max. Ø 125	FC6 +SPC	under the floor	EI120-U/U

PVC-U, PE, PP-H and PP-R in PROMASTOP®-S/L firestop pillow seal

Compartment	Compart-ment thickness [mm]	Dimension scope Ø…Diameter [mm] t_D…pipe wall thickness [mm]	Collar type [mm]	Collar position	Classification
Rigid wall + PROMASTOP-S/L	≥ 150	Ø 32 / t_D 1,8 - Ø 125 / t_D 3,1	FC3	on the seal	EI120-U/U
Rigid floor + PROMASTOP-S/L	≥ 150	Ø 32 / t_D 1,8 - Ø 125 / t_D 3,1	FC3	under the seal	EI120-U/U

(Table 2, Annex 3)

Details are shown in the following diagrams.

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

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

The classifications for PP-H and PP-R pipes are applicable for pipes in acc. e.g. to DIN 8077 and DIN 8078.

The classifications for all stated multilayer pipes (see Table 2, Annex 3) are applicable on equal products.

Flexible conduits:
Flexible conduits (made of PVC-U ($Ø_{max}$ ≤ 50 mm) or PE ($Ø_{max}$ ≤ 50 mm)) with or without cables can be sealed with the PROMASTOP®-FC firestop collar. The max. applicable collar is the FC3/50 or the FC6/50 and the application is possible in flexible walls, rigid walls and rigid floor (see Annex 3.2 A/B/C).
The classification in acc. to EN 13501-2:2007+A1 is EI 90-u/u.

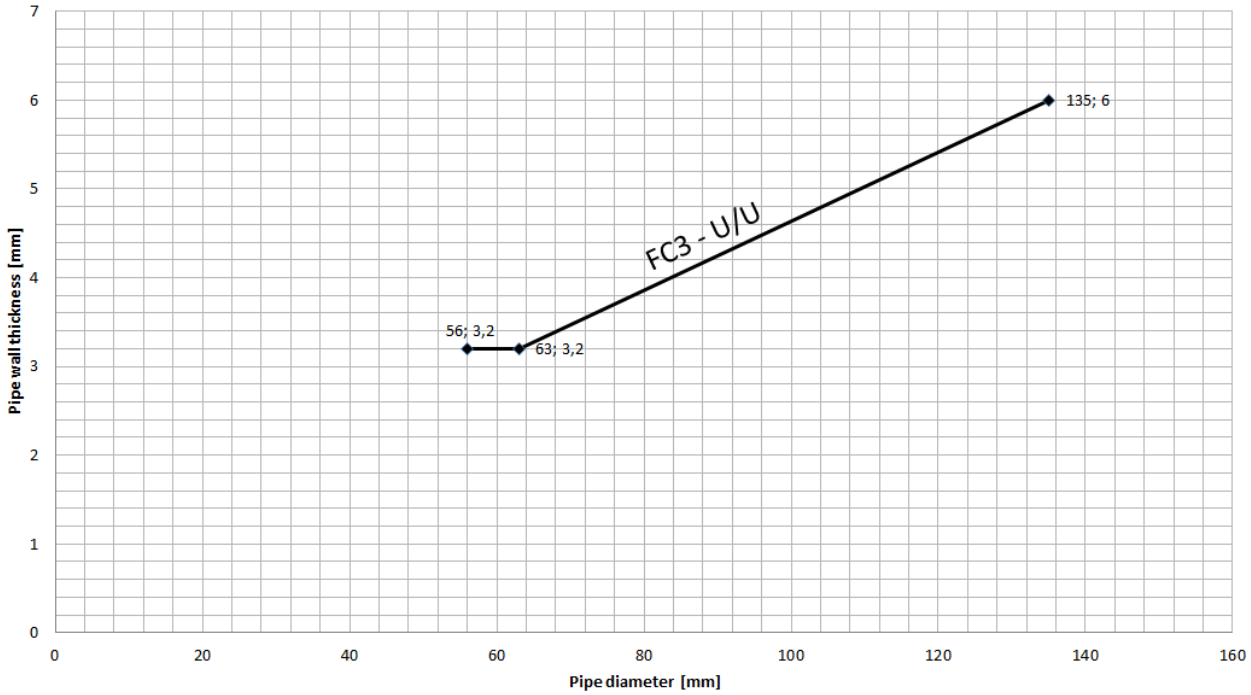
Pneumatic delivery systems:
Pipes made of PVC with a diameter ≤ 110 mm and a pipe wall thickness ≤ 3 mm can be sealed with the PROMASTOP®-FC firestop collar. 2 control cables (cable cross-section 5 x 1,5 mm²) can be included in the collar. This application is possible in flexible walls, rigid walls and rigid floors (see Annex 3.2 A/B/C).
The classification in walls in acc. to EN 13501-2:2007+A1 is EI 45-u/u, and EI 90-u/u in floor orientation.

Pellet tubes:
Pellet tube (NOVIATOX standard or equal product) with a diameter ≤ 60 mm with our without pellets (PROMASTOP®-FC firestop collar also in zero distance). This application is possible in rigid walls with a thickness ≥ 150 mm and a density ≥ 450 kg/m³. Classified in accordance to EN 13501-2:2007+A1 to EI 120-u/u

Classification details (from Table 2, Annex 3)

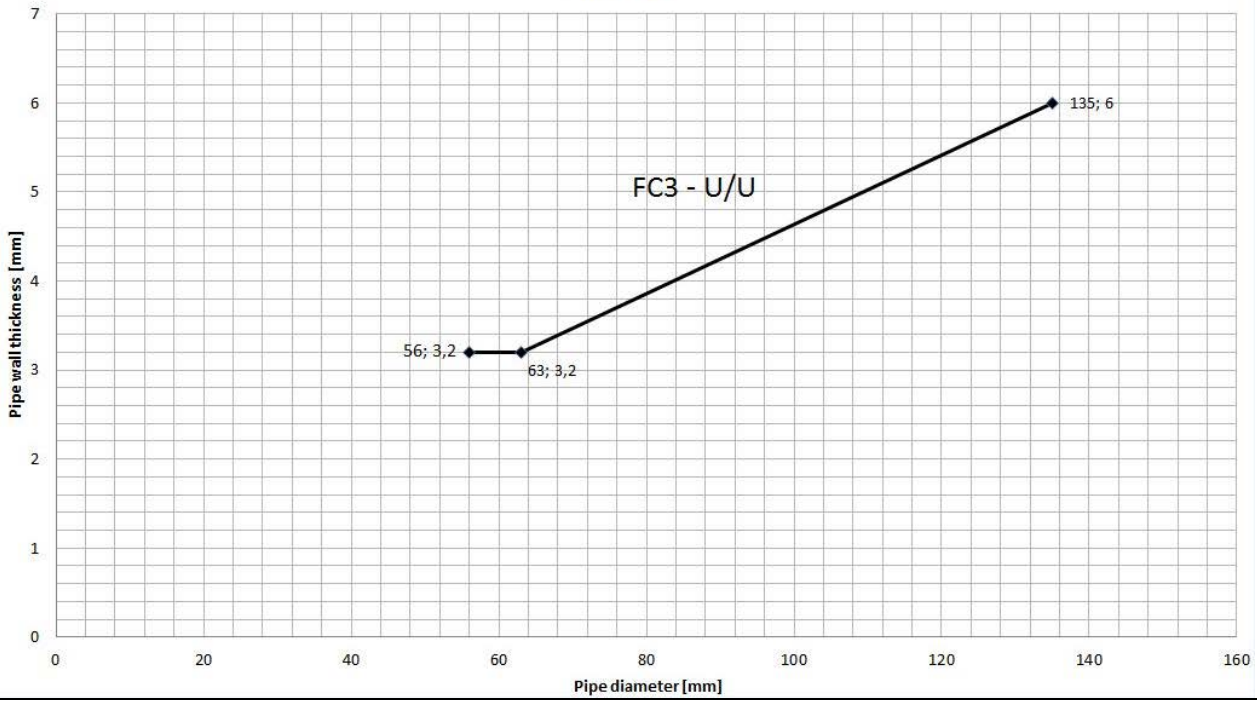
Geberit silent dB20 or equal products					
Flexible wall	≥ 100	Ø 56 / t_D 3,2 - Ø 135 / t_D 6,0	FC3	on the wall	EI90-U/U

Geberit Silent dB20 pipes with PROMASTOP-FC collar on flexible wall and rigid wall construction (thickness ≥ 100 mm)
EI90-U/U



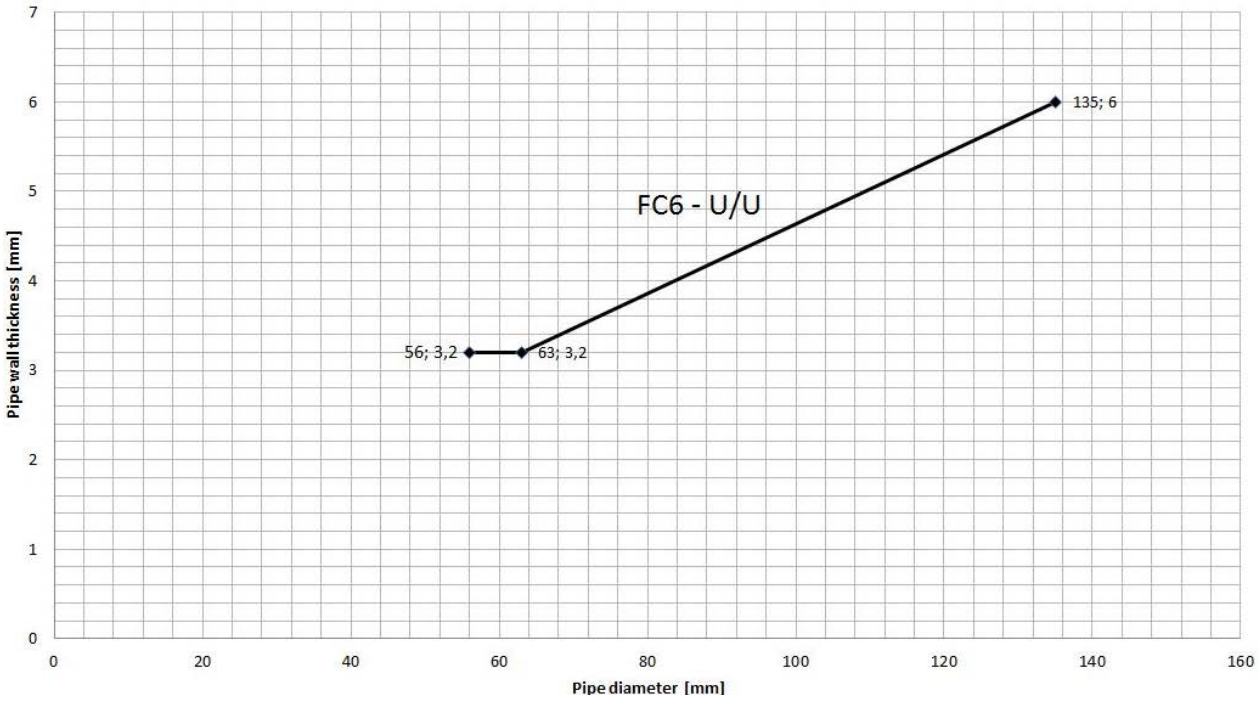
Geberit silent dB20 or equal products					
Rigid wall	≥ 100	Ø 56 / t_D 3,2 - Ø 135 / t_D 6,0	FC3	on the wall	EI120-U/U

Geberit Silent dB20 pipes with PROMASTOP-FC collar placed on rigid wall construction (thickness ≥ 100 mm, density ≥ 450 kg/m³)
EI120-U/U



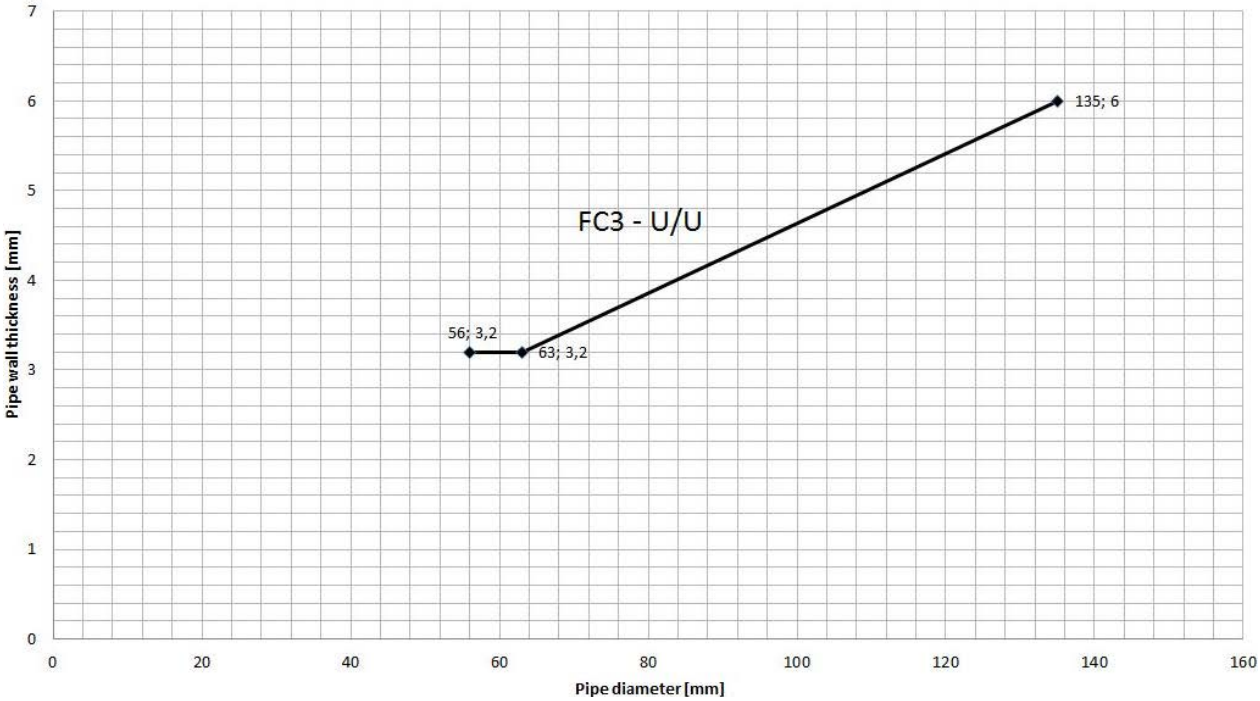
Geberit silent dB20 or equal products					
Rigid wall	≥ 100	Pipe with socket, max. Ø 135	FC6	on the wall	EI120-U/U

Geberit Silent dB20 pipes with sockets with PROMASTOP-FC collar placed on rigid wall construction (thickness ≥ 100 mm, density ≥ 450 kg/m³)
EI120-U/U



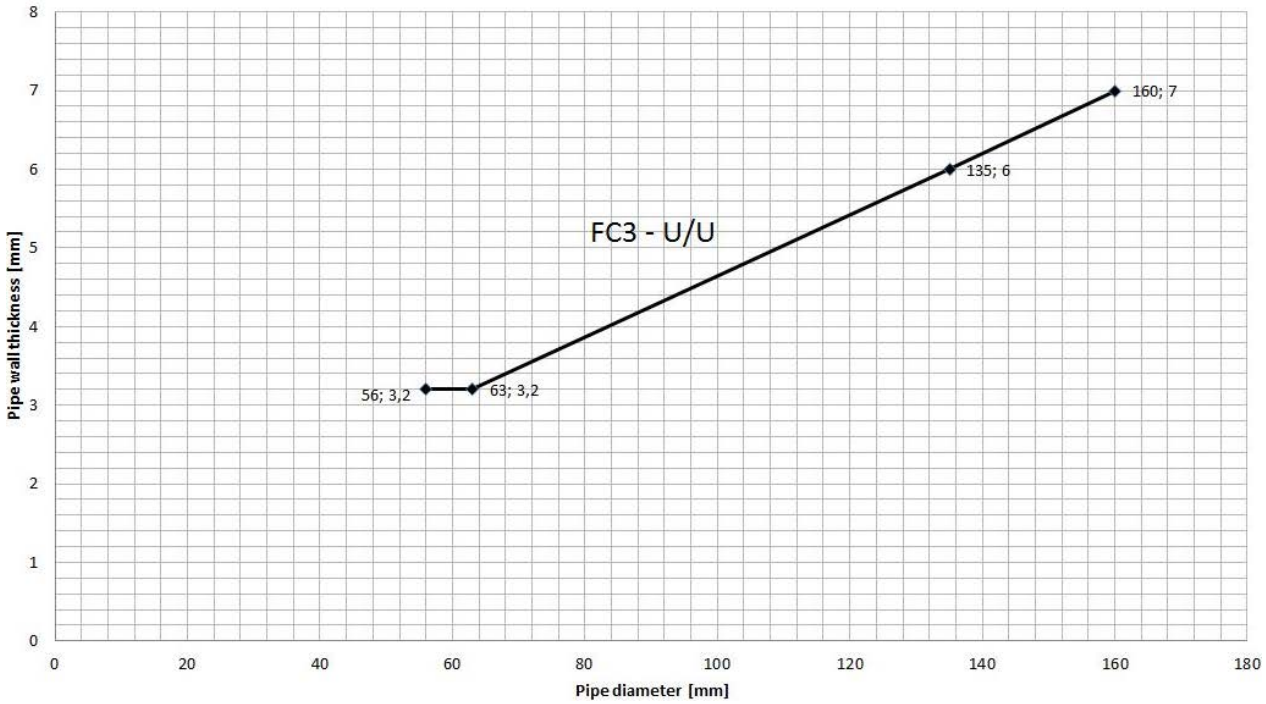
Geberit silent dB20 or equal products					
Rigid wall	≥ 150	Ø 56 / t_D 3,2 - Ø 135 / t_D 6,0	FC3	mortared in	EI120-U/U

Geberit Silent dB20 pipes with PROMASTOP-FC collar, mortared in rigid wall construction (thickness ≥ 150 mm, density ≥ 450 kg/m³)
EI120-U/U



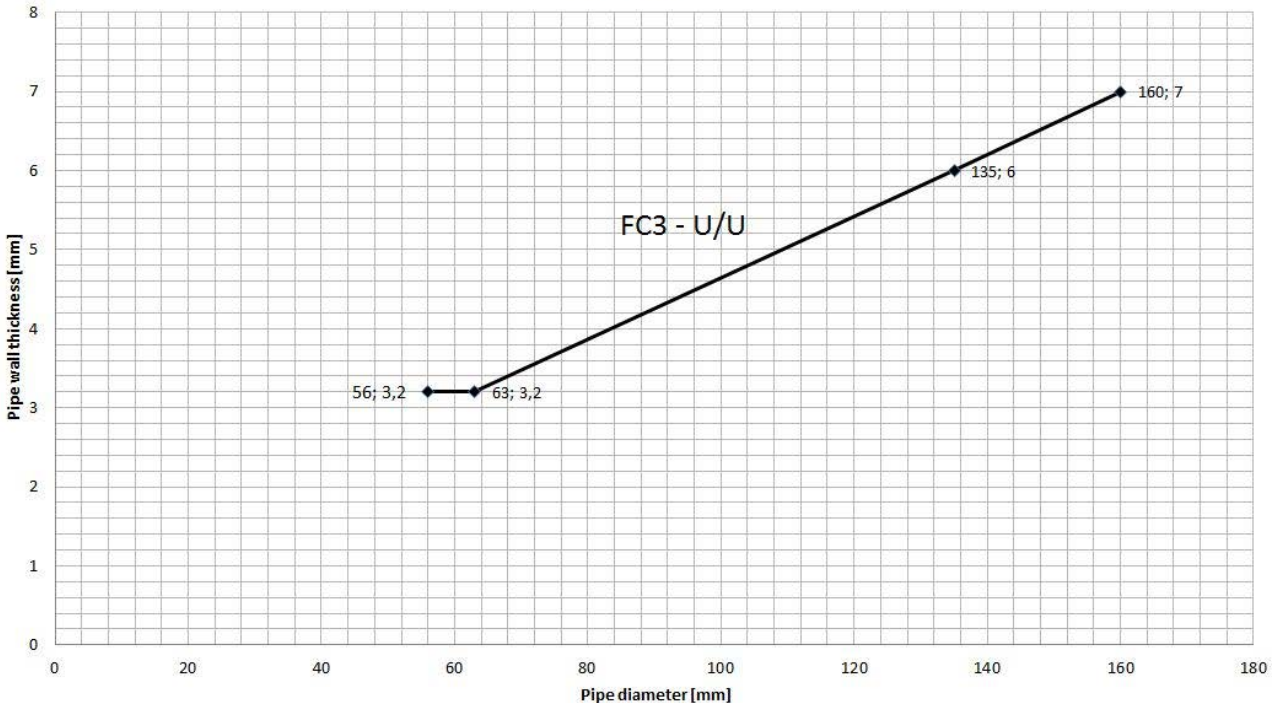
Geberit silent dB20 or equal products					
Rigid floor	≥ 150	Ø 56 / t_D 3,2 - Ø 160 / t_D 7,0	FC3	mortared in	EI120-U/U

Geberit Silent dB20 pipes with PROMASTOP-FC collar, mortared in rigid floor construction (thickness ≥ 150 mm, density ≥ 450 kg/m³)
EI120-U/U



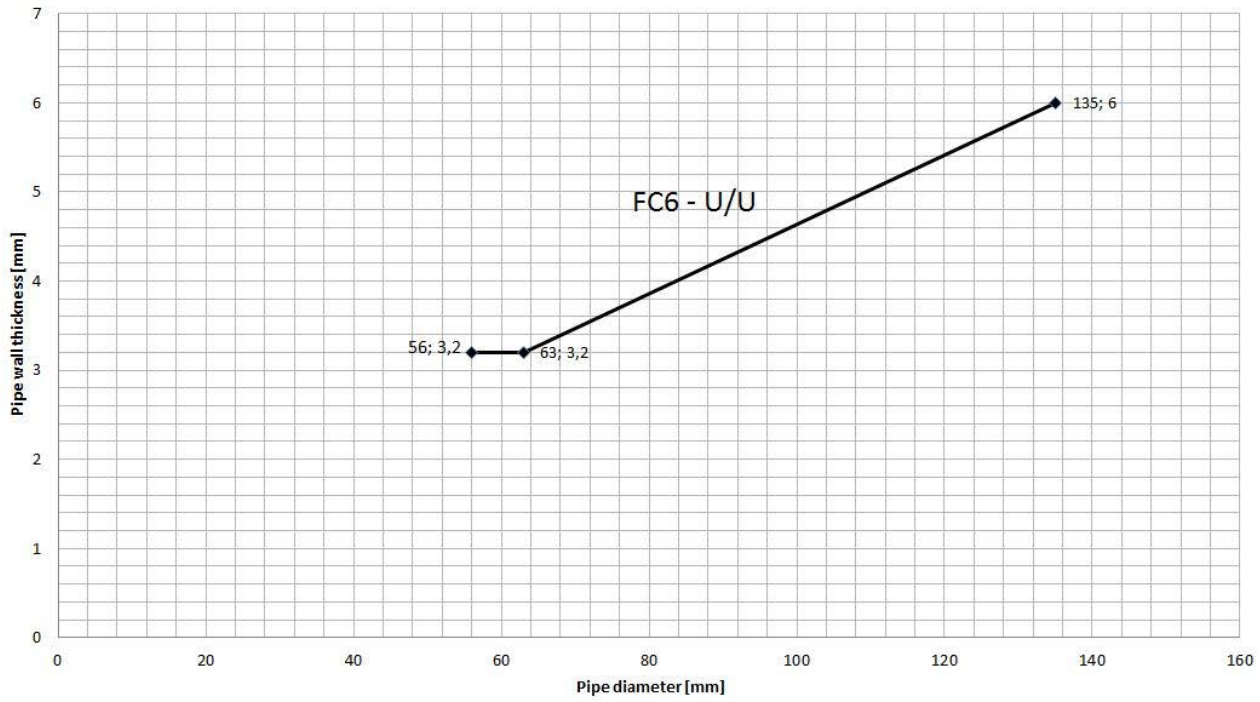
Geberit silent dB20 or equal products					
Rigid floor	≥ 150	Ø 56 / t_D 3,2 - Ø 160 / t_D 7,0	FC3	under the floor	EI120-U/U

Geberit Silent dB20 pipes with PROMASTOP-FC collar, placed on rigid floor construction (thickness ≥ 150 mm, density ≥ 450 kg/m³)
EI120-U/U



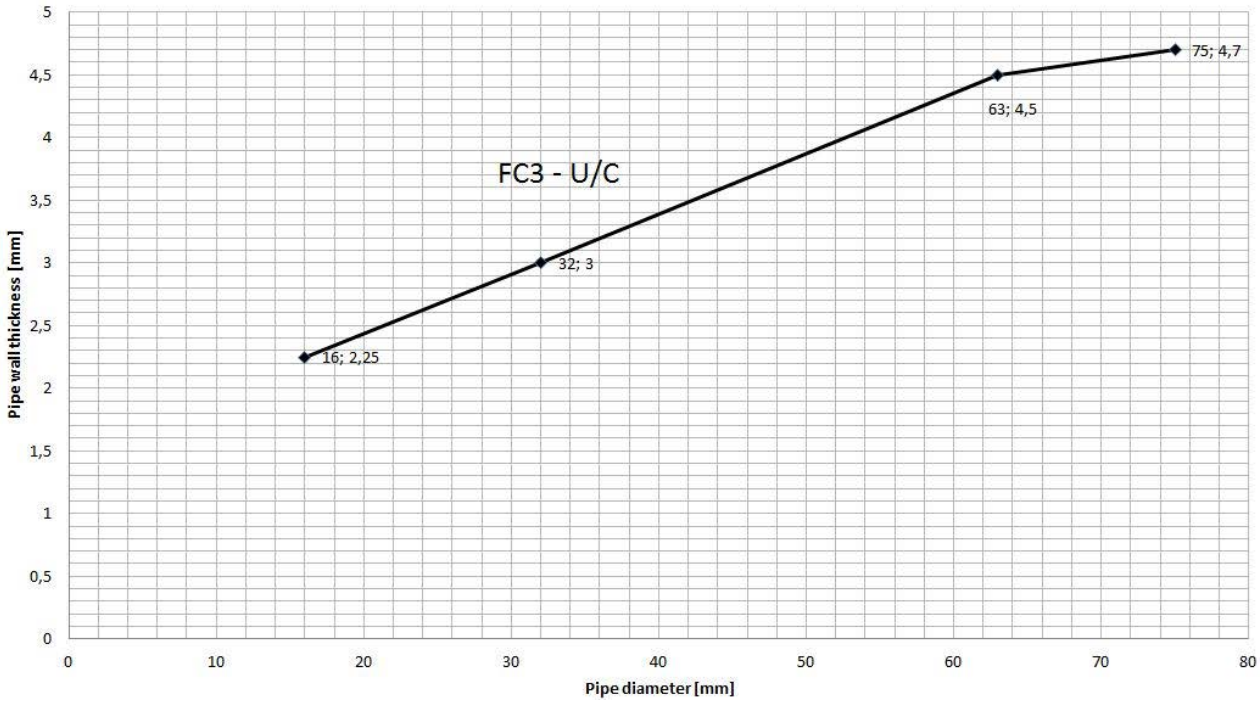
Geberit silent dB20 or equal products					
Rigid floor	≥ 150	Pipe with socket, max. Ø 135	FC6	under the floor	EI120-U/U

Geberit Silent dB20 pipes with sockets with PROMASTOP-FC collar placed on rigid floor construction (thickness ≥ 150 mm, density ≥ 450 kg/m³)
EI120-U/U



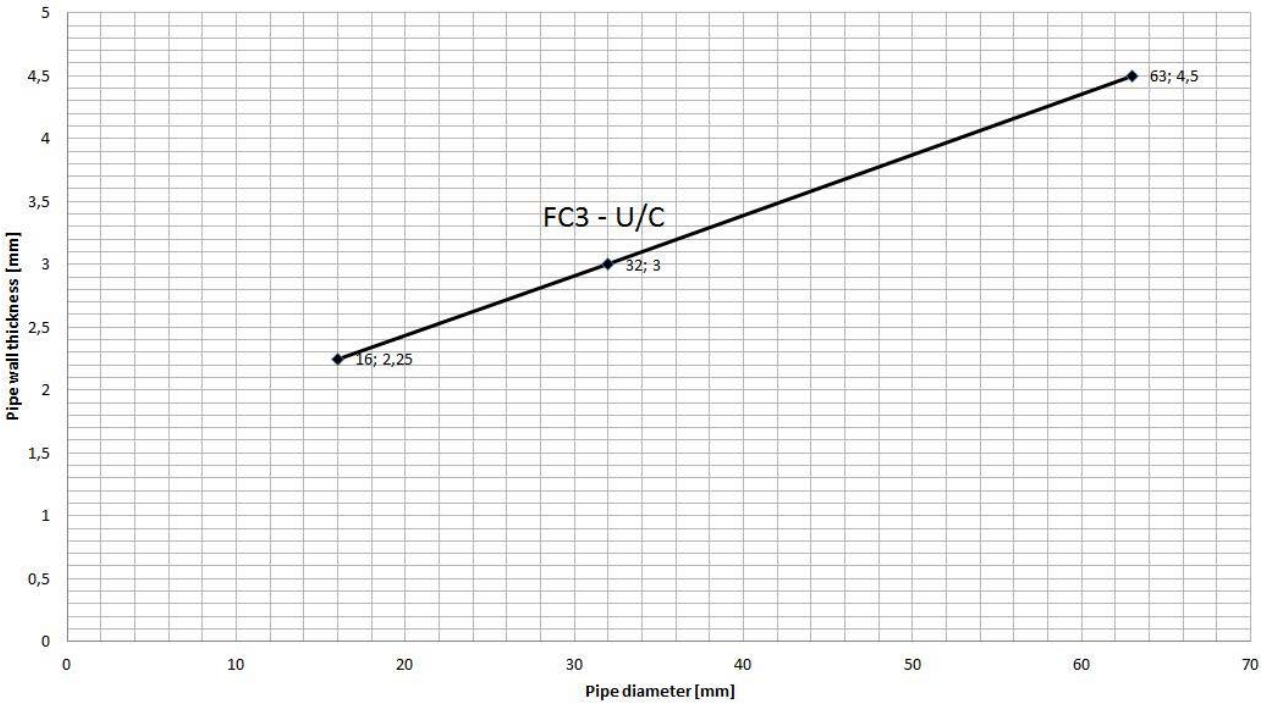
Geberit MePla or equal products					
Rigid wall	≥ 150	Ø 16 / t_D 2,25 - Ø 75 / t_D 4,7	FC3	mortared in	EI90-U/C

Geberit MePla pipes with sound decoupling, with PROMASTOP-FC collar, mortared in rigid wall construction (thickness ≥ 150 mm, density ≥ 450 kg/m³)
EI90-U/C



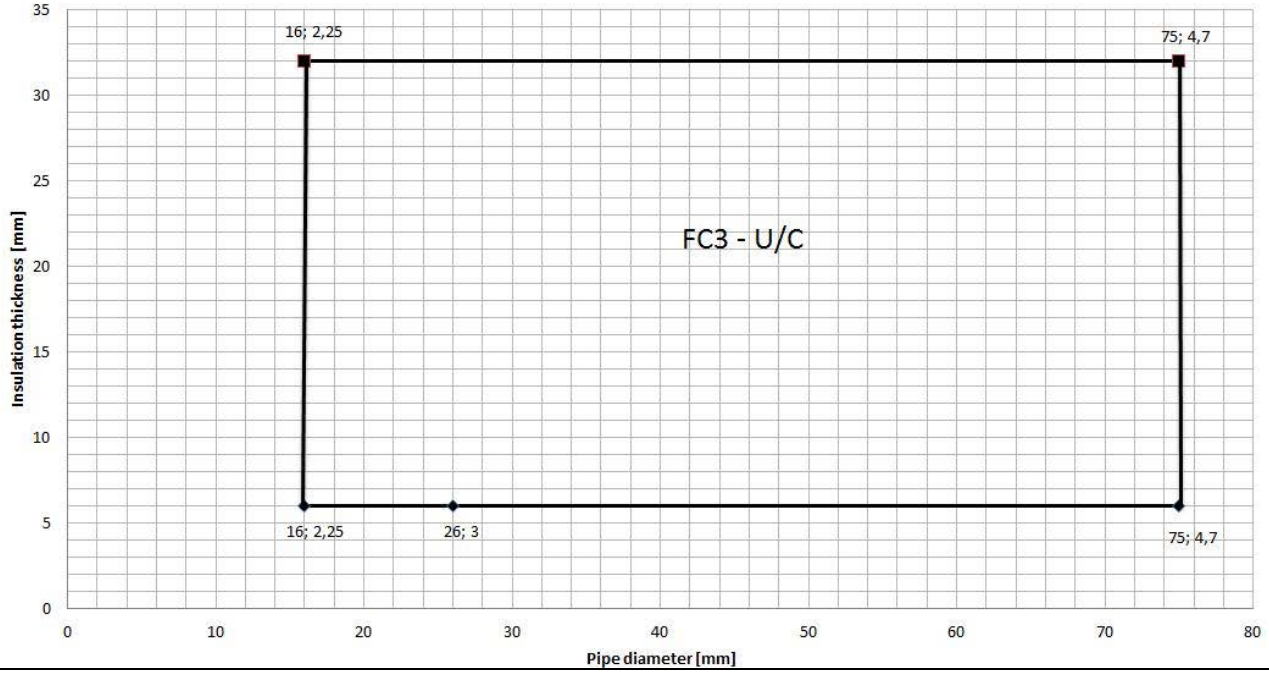
Geberit MePla or equal products					
Rigid wall	≥ 150	Ø 16 / t_D 2,25 - Ø 63 / t_D 4,5	FC3	mortared in	EI120-U/C

Geberit MePla pipes with sound decoupling, with PROMASTOP-FC collar, mortared in rigid wall construction (thickness ≥ 150 mm, density ≥ 450 kg/m³)
EI120-U/C



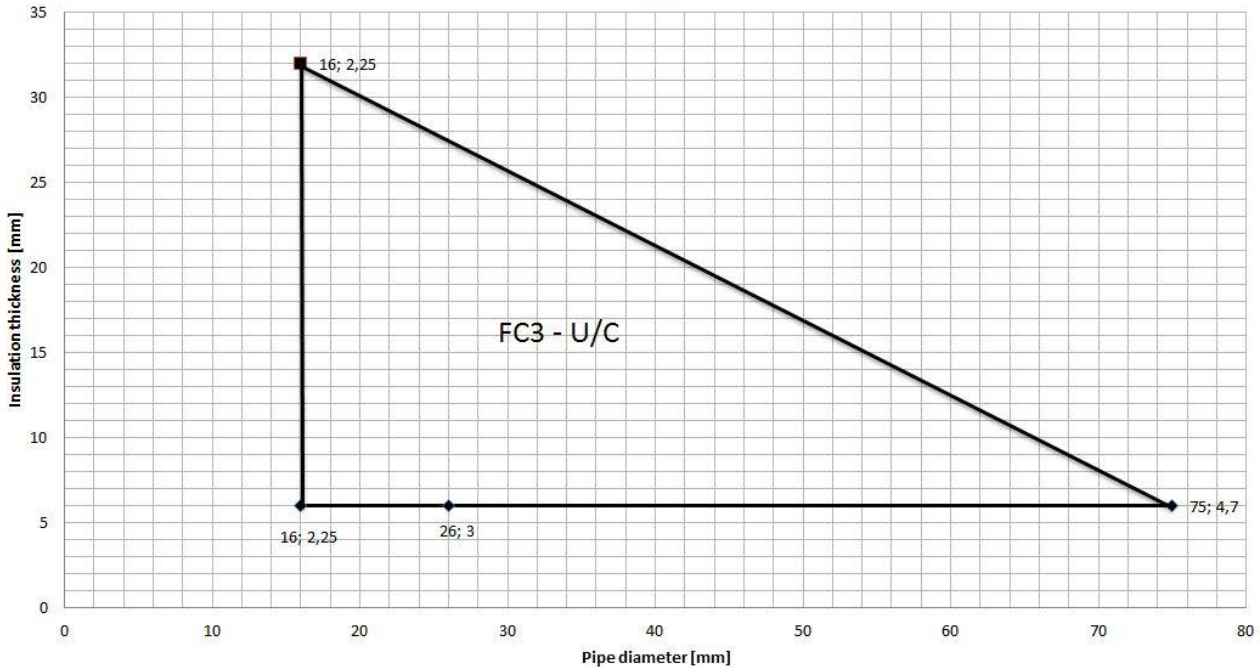
Geberit MePla or equal products					
Rigid wall	≥ 150	Ø 16 / t_D 2,25 - Ø 75 / t_D 4,7 + combustible insulation (B-s3,d0; thickness 6 – 32 mm; Configuration: LS/LI/CS or CI)	FC3	mortared in	EI90-U/C

Geberit MePla pipes with combustible insulation (B-s3,d0; in LS, LI, CS or CI configuration) with PROMASTOP-FC collar, mortared in rigid wall construction (thickness ≥ 150 mm, density ≥ 450 kg/m³)
EI90-U/C



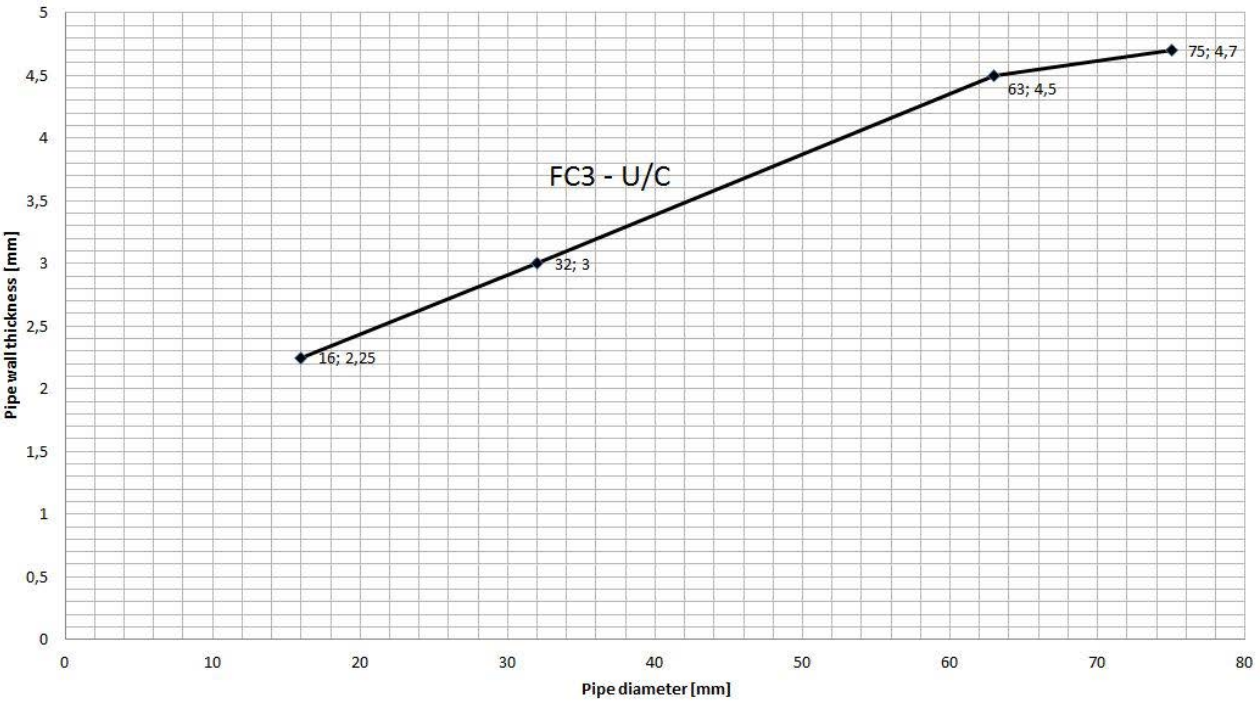
Geberit MePla or equal products					
Rigid wall	≥ 150	Ø 16 / t_D 2,25 - Ø 75 / t_D 4,7 + combustible insulation (B-s3,d0; thickness 6 – 32 mm; Configuration: LS/LI/CS or CI)	FC3	mortared in	EI120-U/C

Geberit MePla pipes with combustible insulation (B-s3,d0; in LS, LI, CS or CI configuration) with PROMASTOP-FC collar, mortared in rigid wall construction (thickness ≥ 150 mm, density ≥ 450 kg/m³)
EI120-U/C



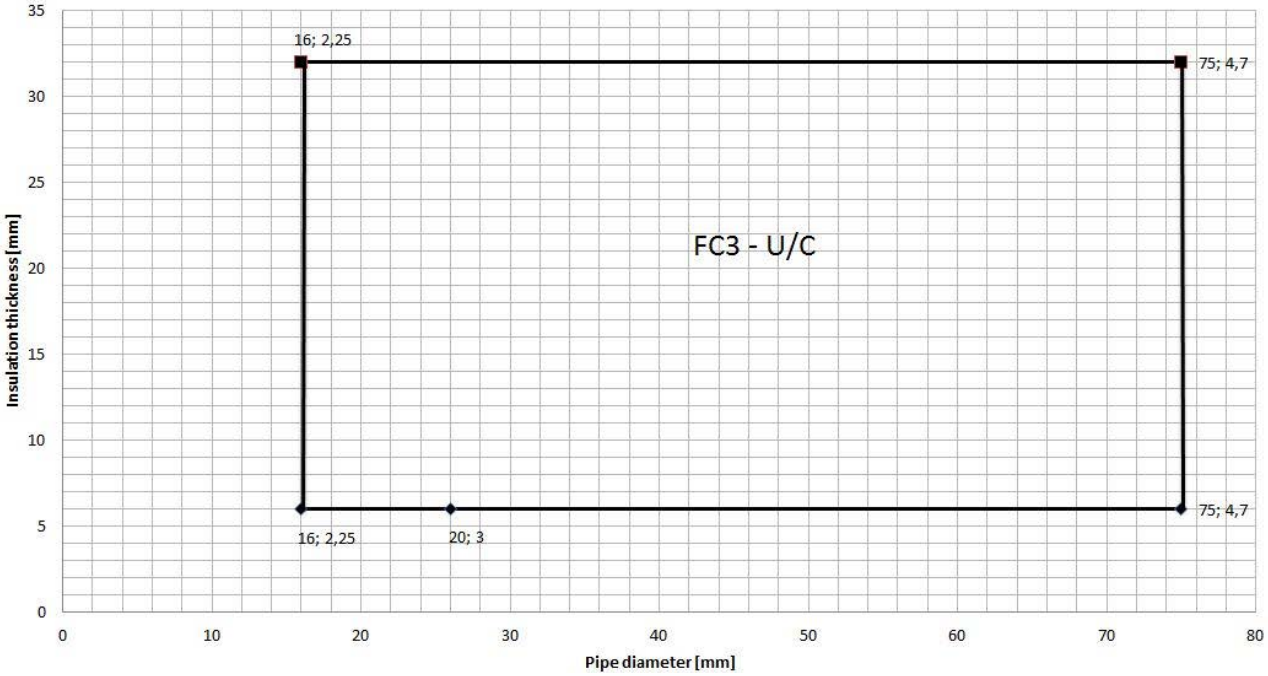
Geberit MePla or equal products					
Rigid floor	≥ 150	Ø 16 / t_D 2,25 - Ø 75 / t_D 4,7	FC3	mortared in	EI120-U/C

Geberit MePla pipes with or without sound decoupling, with PROMASTOP-FC collar, mortared in rigid floor construction (thickness ≥ 150 mm, density ≥ 450 kg/m³)
EI120-U/C



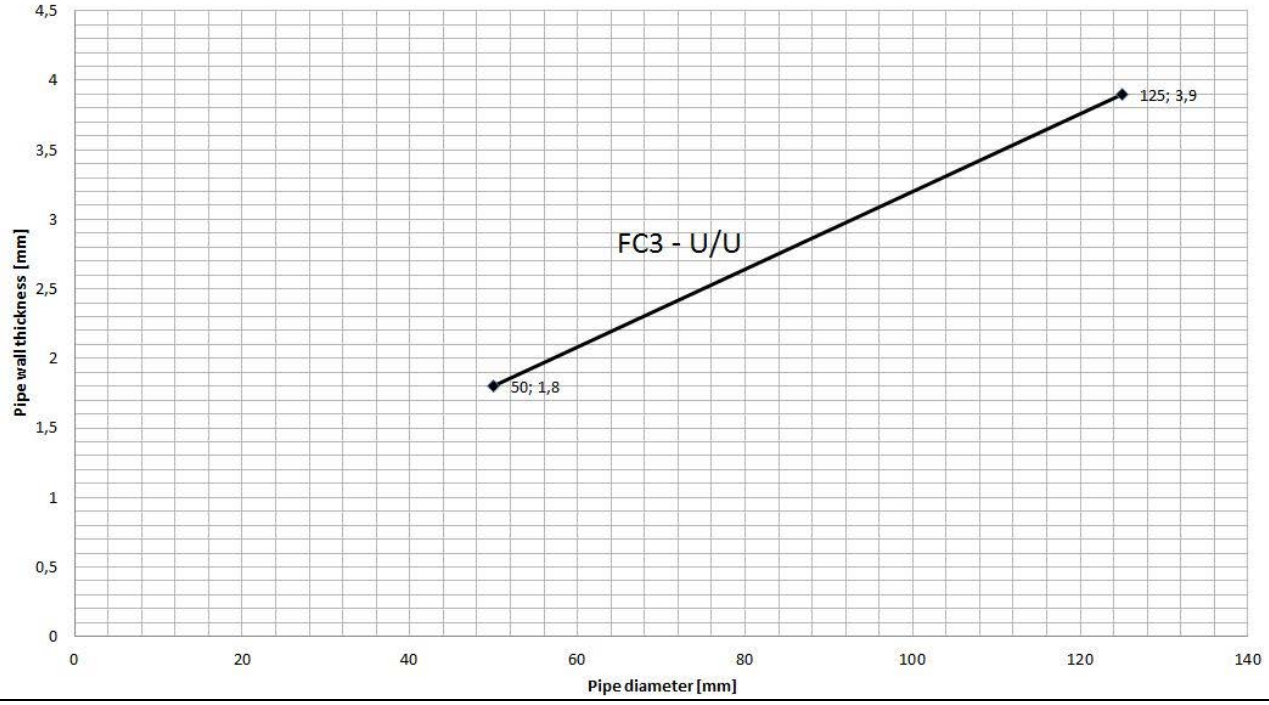
Geberit MePla or equal products					
Rigid floor	≥ 150	Ø 16 / t_D 2,25 - Ø 63 / t_D 4,5 + combustible insulation (B-s3,d0; thickness 6 – 32 mm; Configuration: LS/LI/CS or CI)	FC3	mortared in	EI90-U/C

Geberit MePla pipes with combustible insulation (B-s3,d0; in LS, LI, CS or CI configuration) with PROMASTOP-FC collar, mortared in rigid floor construction (thickness ≥ 150 mm, density ≥ 450 kg/m³)
EI90-U/C



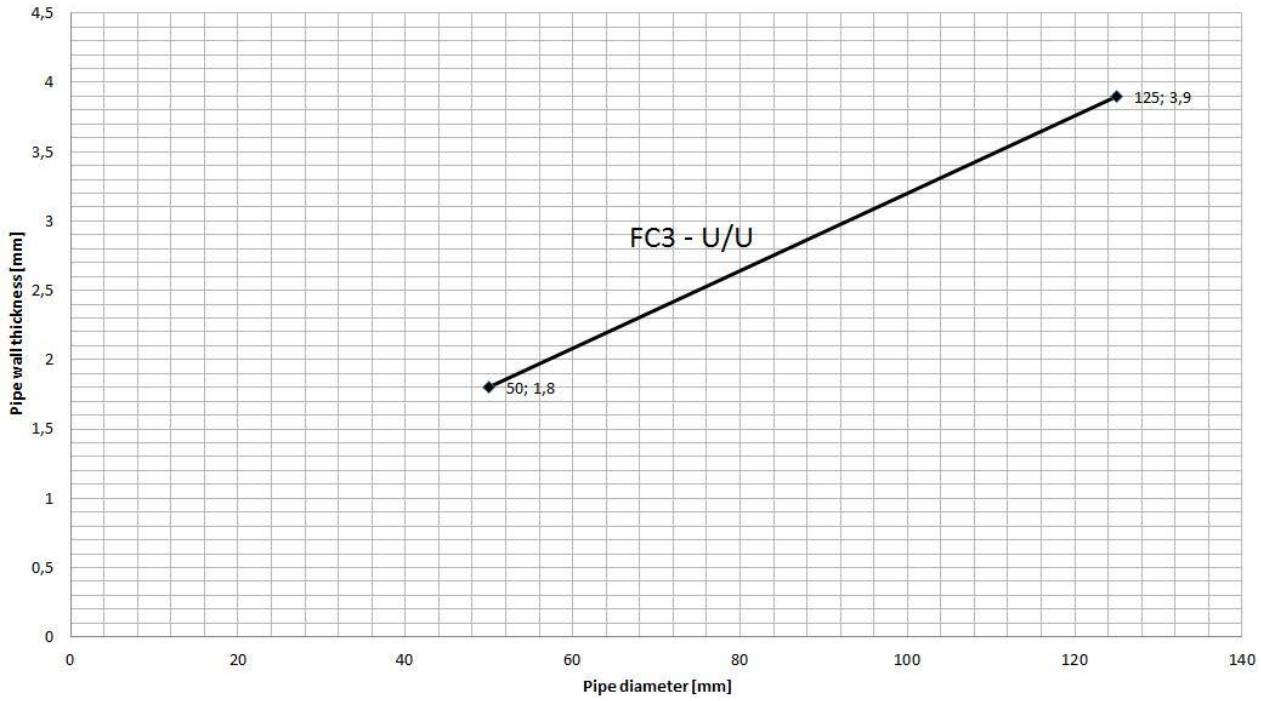
Friatec dBlue or equal products					
Rigid floor	≥ 150	Ø 50 / t_D 1,8 - Ø 125 / t_D 3,9	FC3	mortared in	EI120-U/U

Friatec dBlue pipes with or without sound decoupling, with PROMASTOP-FC collar, mortared in rigid floor construction (thickness ≥ 150 mm, density ≥ 450 kg/m³)
EI120-U/U



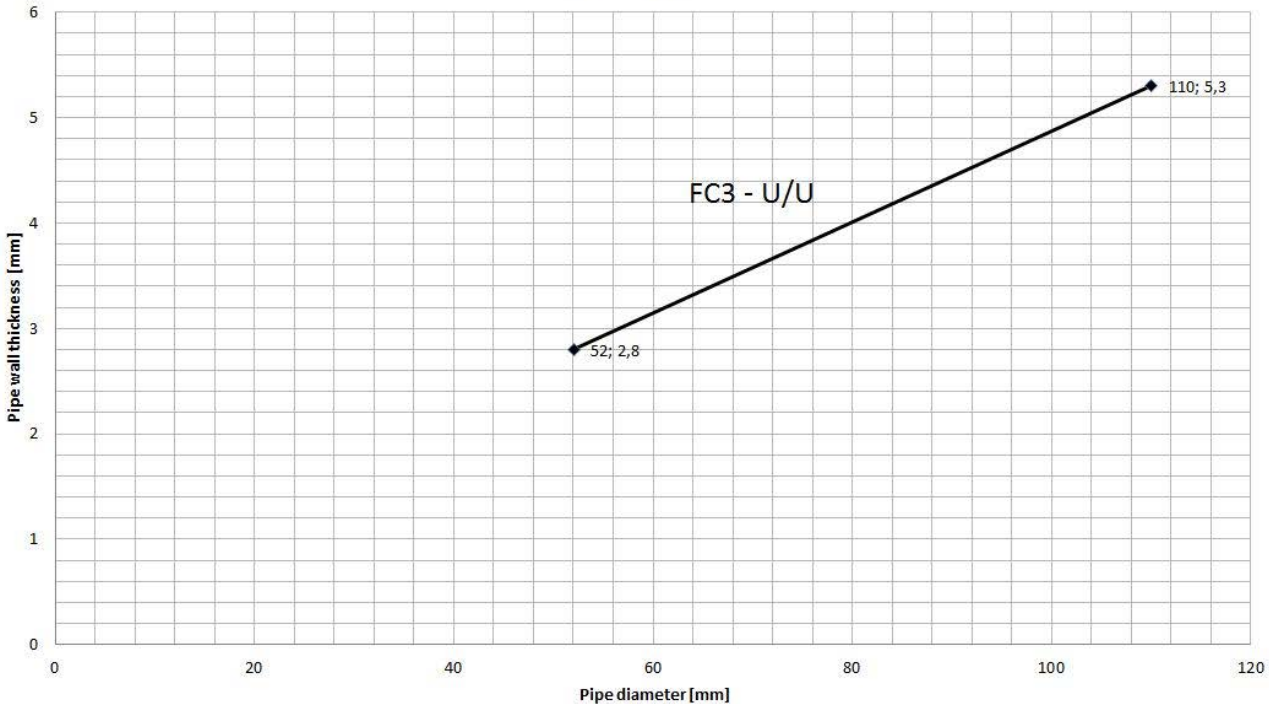
Friatec dBlue or equal products					
Rigid floor	≥ 150	Ø 50 / t_D 1,8 - Ø 125 / t_D 3,9	FC3	under the floor	EI120-U/U

Friatec dBlue pipes with our without sound decoupling, with PROMASTOP-FC collar placed on rigid floor construction (thickness ≥ 150 mm, density ≥ 450 kg/m³)
EI120-U/U



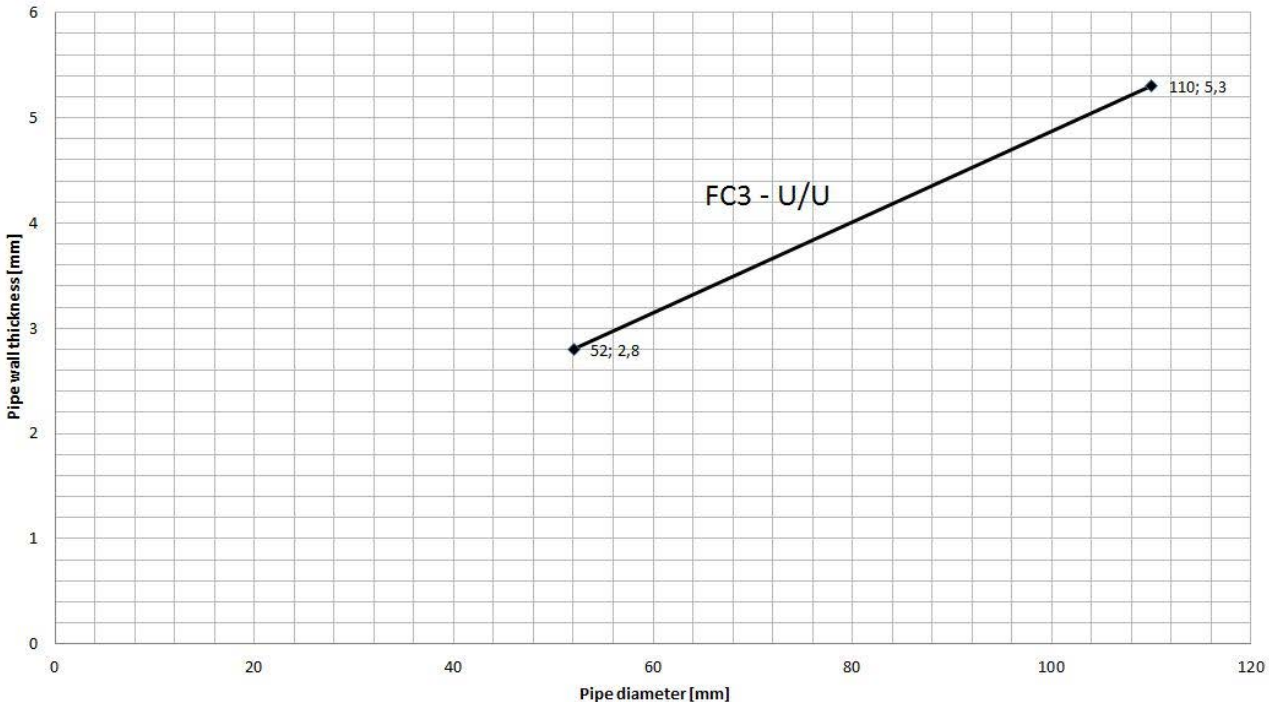
Friatec Friaphon or equal products					
Rigid floor	≥ 150	Ø 52 / t_D 2,8 - Ø 110 / t_D 5,3	FC3	mortared in	EI120-U/U

Friatec Friaphon pipes with or without sound decoupling, with PROMASTOP-FC collar, mortared in rigid floor construction (thickness ≥ 150 mm, density ≥ 450 kg/m³)
EI120-U/U



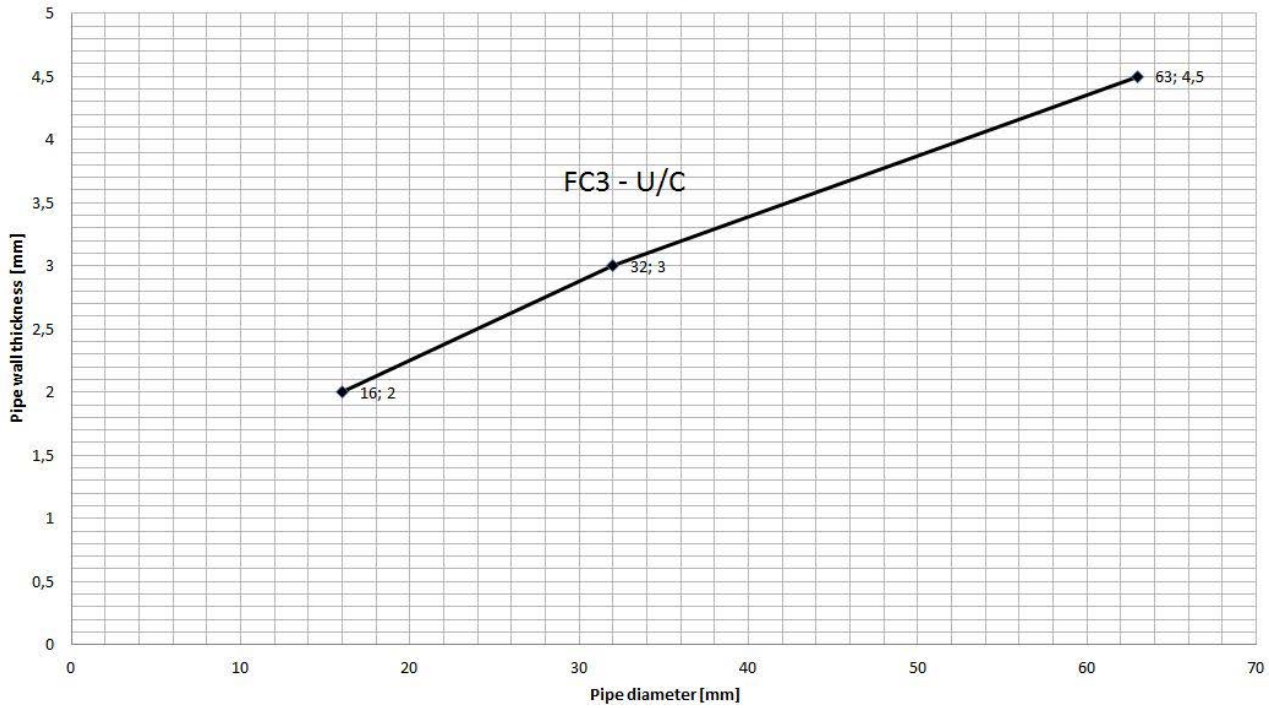
Friatec Friaphon or equal products					
Rigid floor	≥ 150	Ø 52 / t_D 2,8 - Ø 110 / t_D 5,3	FC3	under the floor	EI120-U/U

Friatec Friaphon pipes with our without sound decoupling, with PROMASTOP-FC collar placed on rigid floor construction (thickness ≥ 150 mm, density ≥ 450 kg/m³)
EI120-U/U



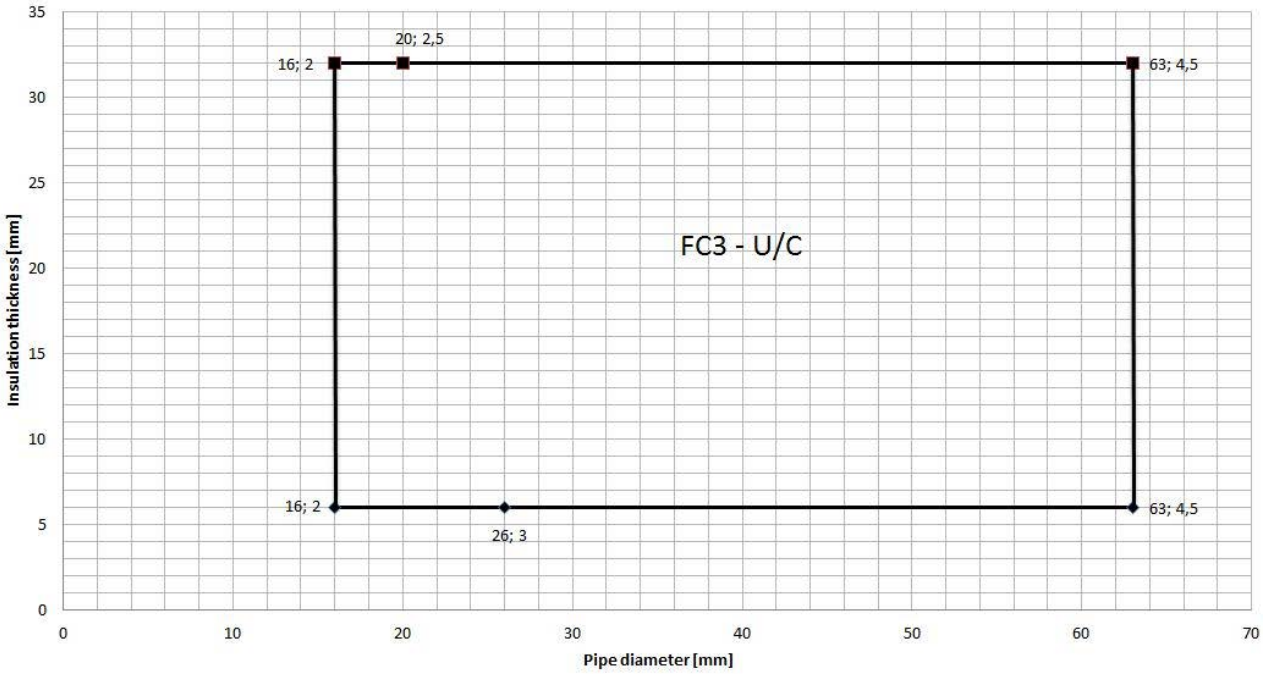
Friatec uni/multi or equal products					
Rigid floor	≥ 150	Ø 16 / t_D 2,0 - Ø 63 / t_D 4,5	FC3	mortared in	EI120-U/C

Friatec Friatherm uni / multi pipes with or without sound decoupling, with PROMASTOP-FC collar, mortared in rigid floor construction (thickness ≥ 150 mm, density ≥ 450 kg/m³)
EI120-U/C



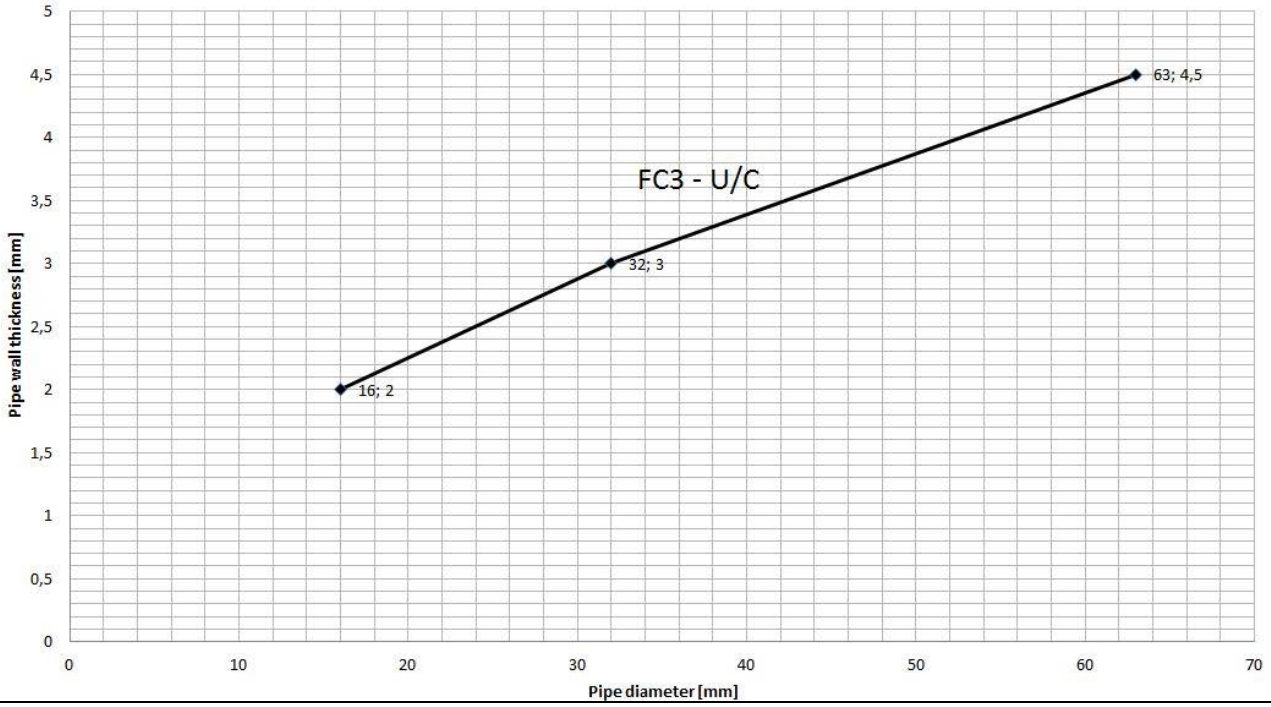
Friatec uni/multi or equal products					
Rigid floor	≥ 150	Ø 16 / t_D 2,0 - Ø 63 / t_D 4,5 + combustible insulation (B-s3,d0; thickness 6 – 32 mm; Configuration: LS/LI/CS or CI)	FC3	mortared in	EI120-U/C

Friatec Friatherm uni / multi pipes with combustible insulation (B-s3,d0; in LS, LI, CS or CI configuration) with PROMASTOP-FC collar, mortared in rigid floor construction (thickness ≥ 150 mm, density ≥ 450 kg/m³)
EI120-U/C



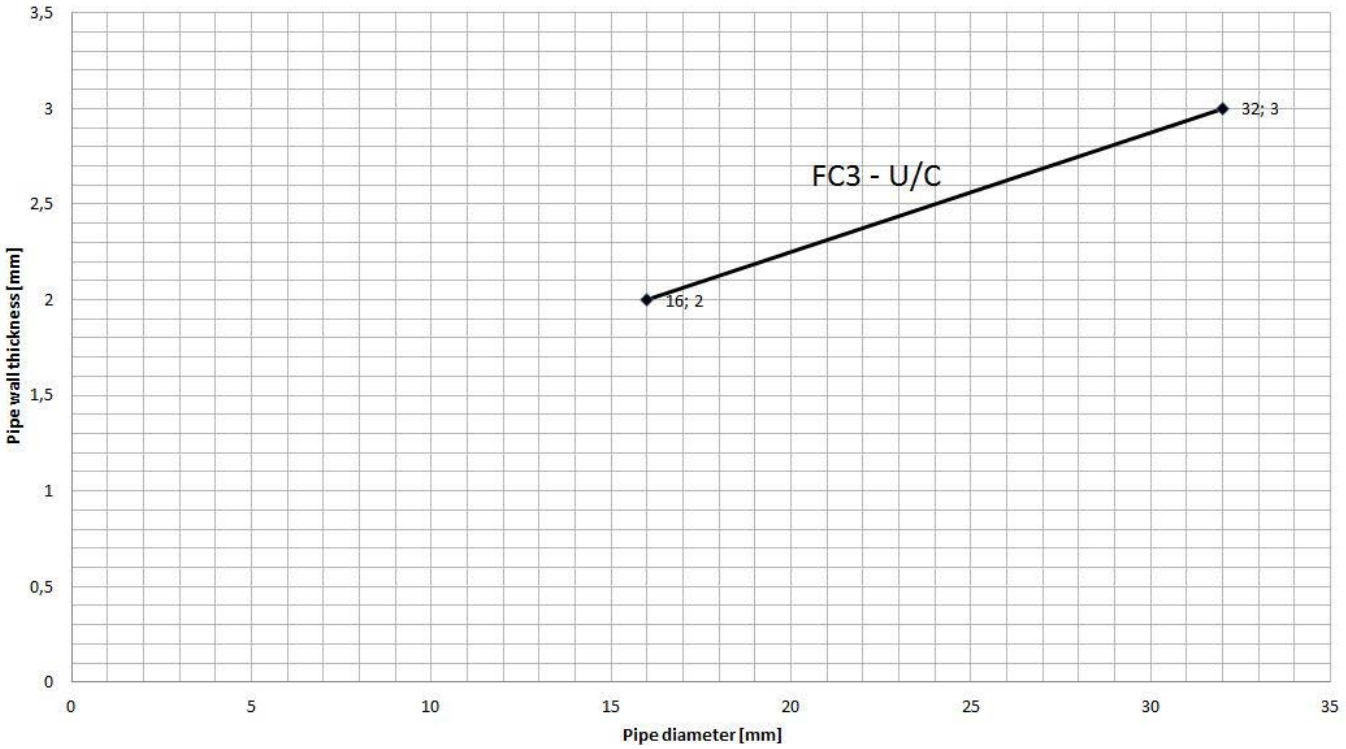
Friatec uni/multi or equal products					
Rigid floor	≥ 150	Ø 16 / t_D 2,0 - Ø 63 / t_D 4,5	FC3	under the floor	EI60-U/C

Friatec Friatherm uni/multi pipes with our without sound decoupling, with PROMASTOP-FC collar placed on rigid floor construction (thickness ≥ 150 mm, density ≥ 450 kg/m³)
EI60-U/C



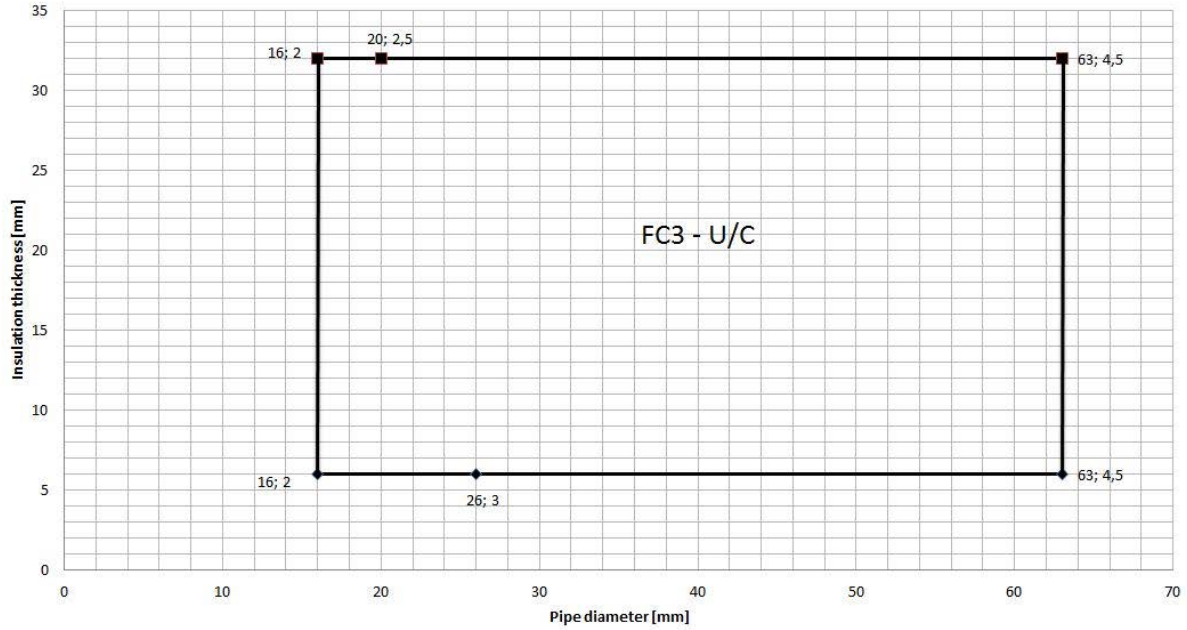
Friatec uni/multi or equal products					
Rigid floor	≥ 150	Ø 16 / t_D 2,0 - Ø 32 / t_D 3,0	FC3	under the floor	EI120-U/C

Friatec Friatherm uni/multi pipes with our without sound decoupling, with PROMASTOP-FC collar placed on rigid floor construction (thickness ≥ 150 mm, density ≥ 450 kg/m³)
EI120-U/C



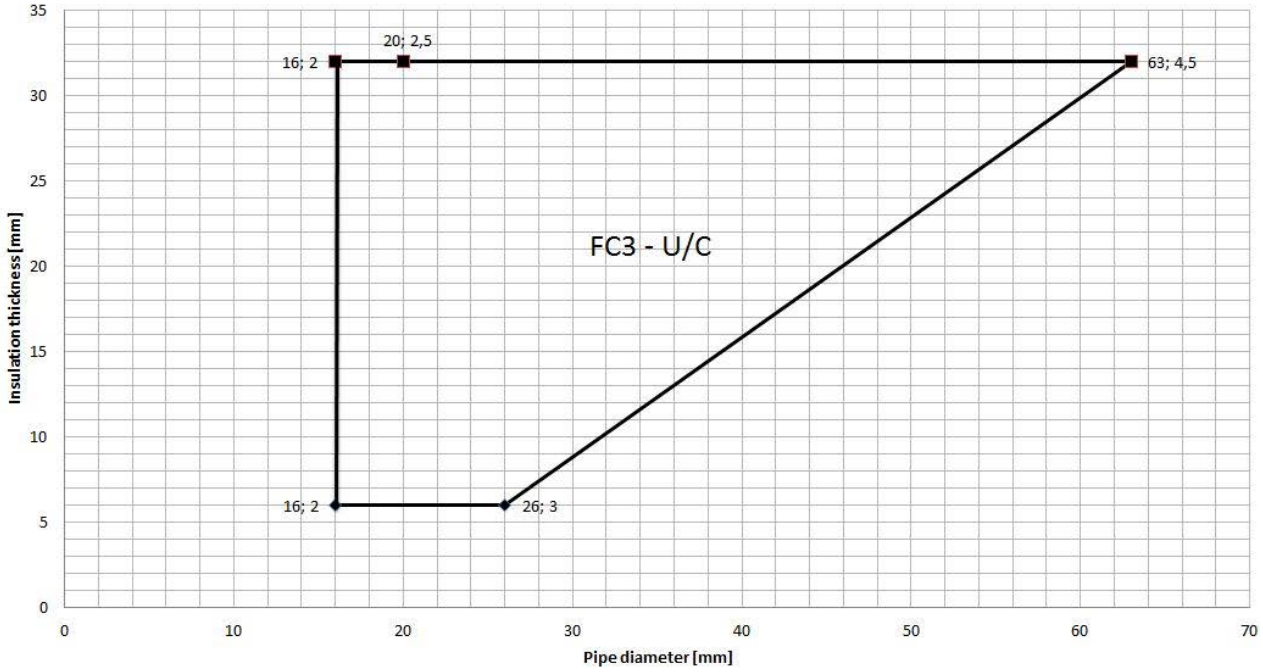
Friatec uni/multi or equal products					
Rigid floor	≥ 150	Ø 16 / t_D 2,0 - Ø 63 / t_D 4,5 + combustible insulation (B-s3,d0; thickness 6 – 32 mm; Configuration: LS/LI/CS or CI	FC3	under the floor	EI90-U/C

Friatec Friatherm uni/multi pipes with combustible insulation (B-s3,d0; in LS, LI, CS or CI configuration), with PROMASTOP-FC collar placed on rigid floor construction (thickness ≥ 150 mm, density ≥ 450 kg/m³)
EI90-U/C



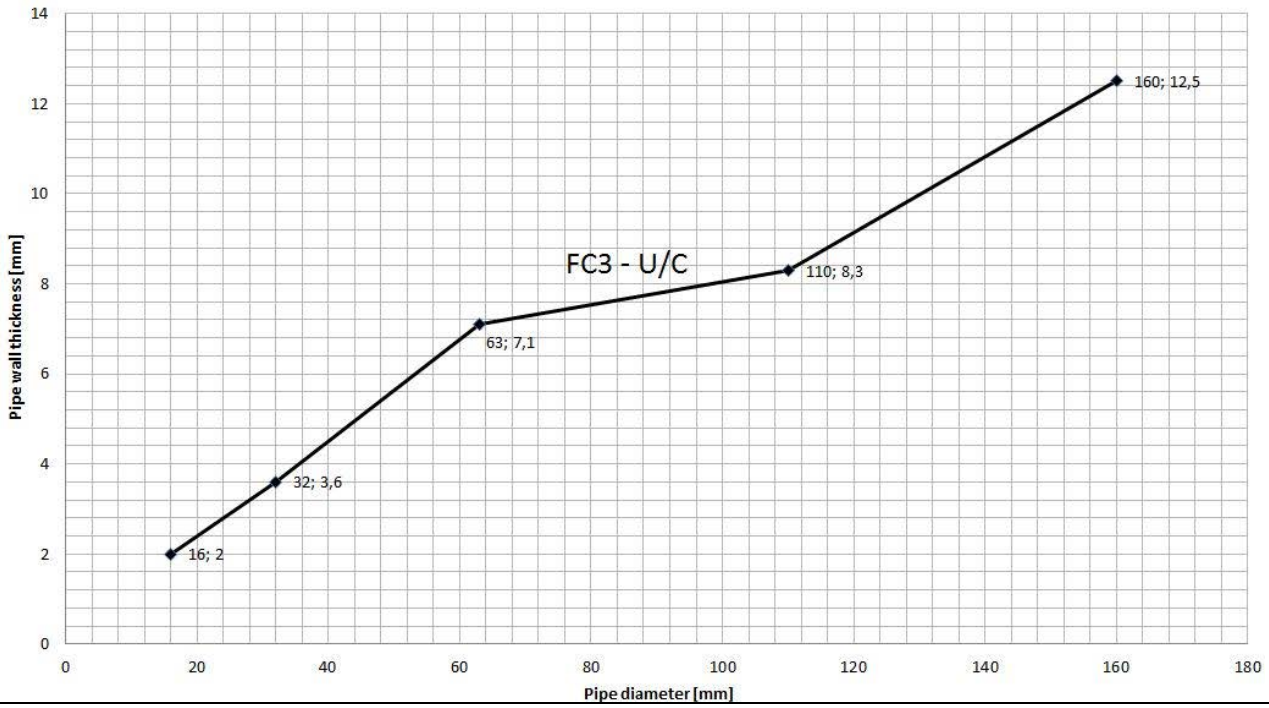
Friatec uni/multi or equal products					
Rigid floor	≥ 150	Ø 16 / t_D 2,0 - Ø 63 / t_D 4,5 + combustible insulation (B-s3,d0; thickness 6 – 32 mm; Configuration: LS/LI/CS or CI	FC3	under the floor	EI120-U/C

Friatec Friatherm uni/multi pipes with combustible insulation (B-s3,d0; in LS, LI, CS or CI configuration), with PROMASTOP-FC collar placed on rigid floor construction (thickness ≥ 150 mm, density ≥ 450 kg/m³)
EI120-U/C



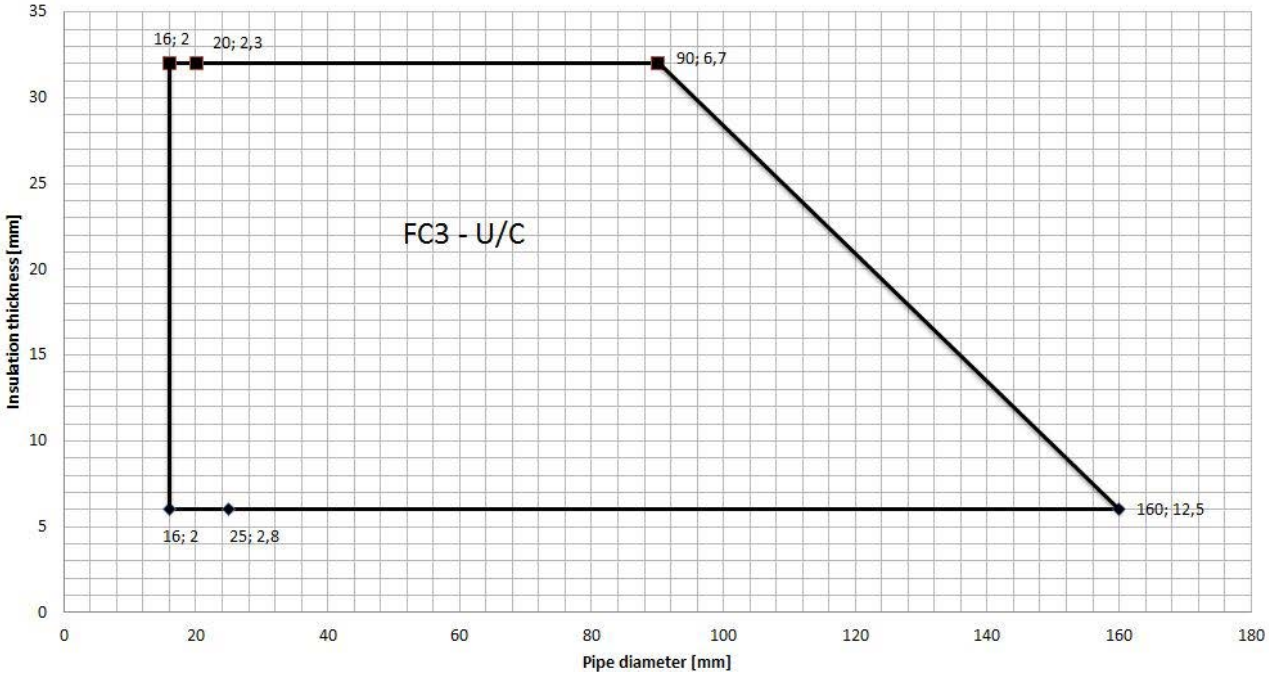
Friatec Friatherm starr or equal products					
Rigid floor	≥ 150	Ø 16 / t_D 2,0 - Ø 160 / t_D 12,5	FC3	under the floor	EI120-U/C

Friatec Friatherm starr pipes with our without sound decoupling, with PROMASTOP-FC collar placed on rigid floor construction (thickness ≥ 150 mm, density ≥ 450 kg/m³)
EI120-U/C



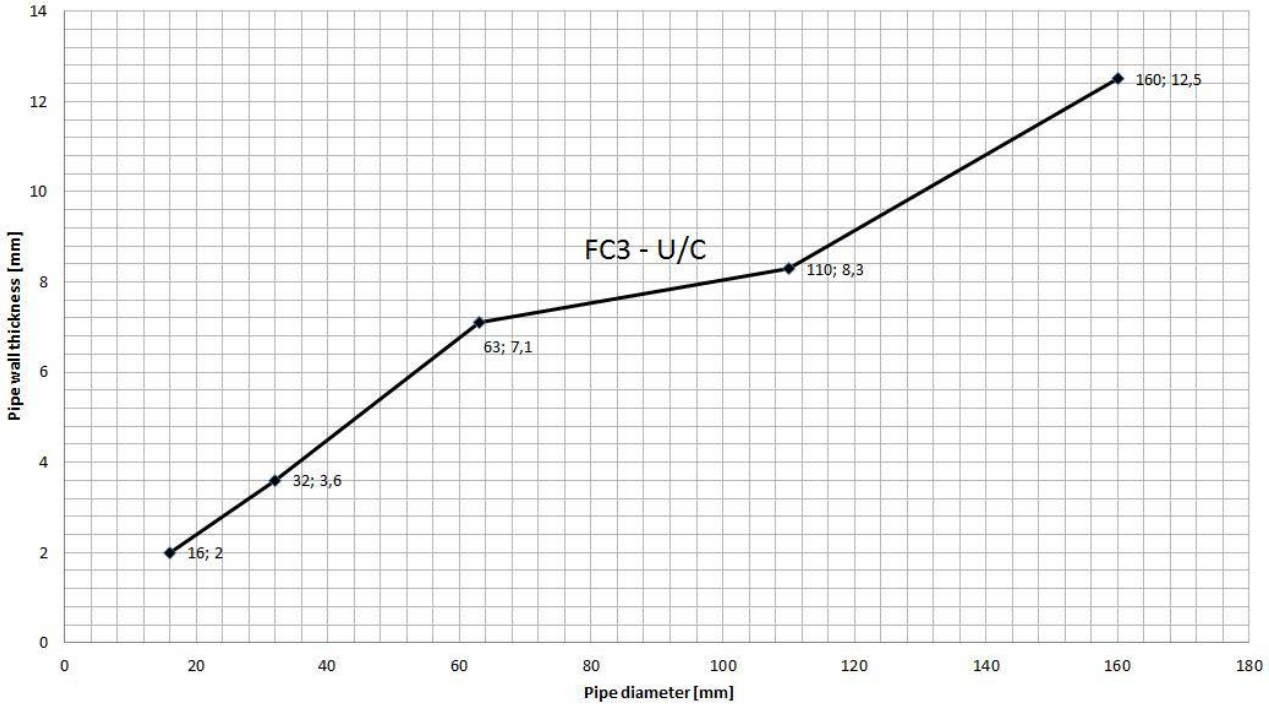
Friatec Friatherm starr or equal products					
Rigid floor	≥ 150	Ø 16 / t_D 2,0 - Ø 160 / t_D 12,5 + combustible insulation (B-s3,d0; thickness 6 – 32 mm; Configuration: LS/LI/CS or CI)	FC3	mortared in	EI120-U/C

Friatec Friatherm starr pipes with combustible insulation (B-s3,d0; in LS, LI, CS or CI configuration) with PROMASTOP-FC collar, mortared in rigid floor construction (thickness ≥ 150 mm, density ≥ 450 kg/m³)
EI120-U/C



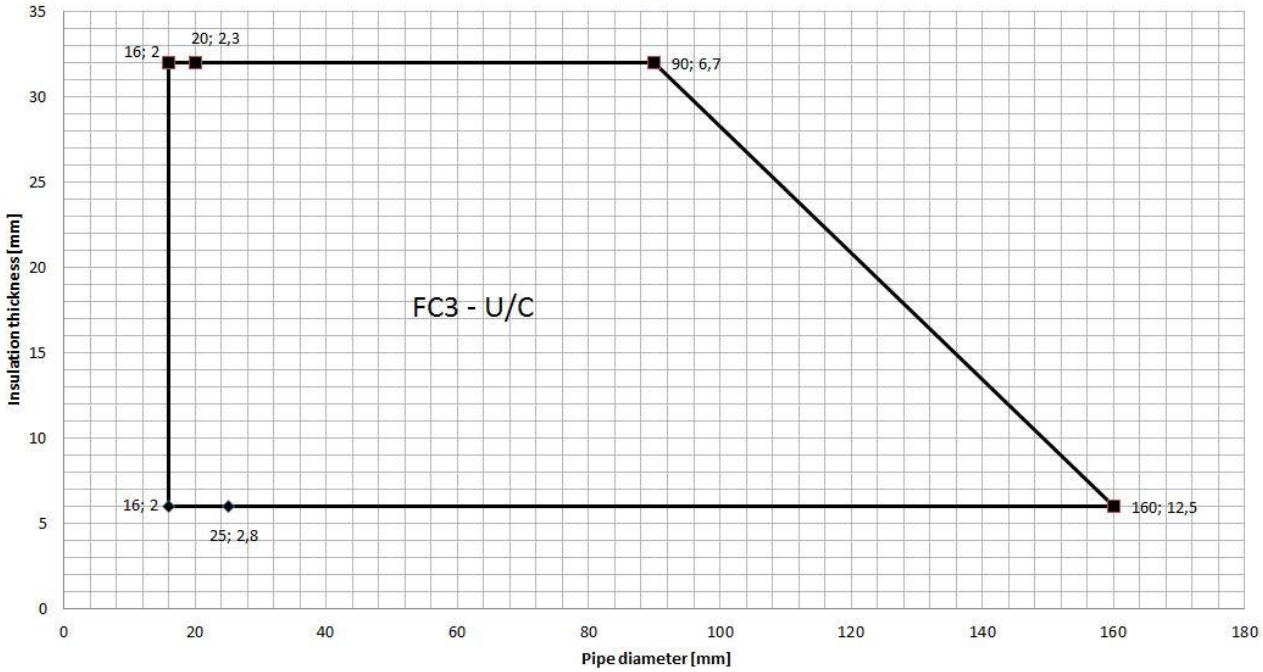
Friatec Friatherm starr or equal products					
Rigid floor	≥ 150	Ø 16 / t_D 2,0 - Ø 160 / t_D 12,5	FC3	mortared in	EI120-U/C

Friatec Friatherm starr pipes with or without sound decoupling, with PROMASTOP-FC collar, mortared in rigid floor construction (thickness ≥ 150 mm, density ≥ 450 kg/m³)
EI120-U/C



Friatec Friatherm starr or equal products					
Rigid floor	≥ 150	Ø 16 / t_D 2,0 - Ø 160 / t_D 12,5 + combustible insulation (B-s3,d0; thickness 6 – 32 mm; Configuration: LS/LI/CS or CI)	FC3	under the floor	EI120-U/C

Friatec Friatherm starr pipes with combustible insulation (B-s3,d0; in LS, LI, CS or CI configuration), with PROMASTOP-FC collar placed on rigid floor construction (thickness ≥ 150 mm, density ≥ 450 kg/m³)
EI120-U/C

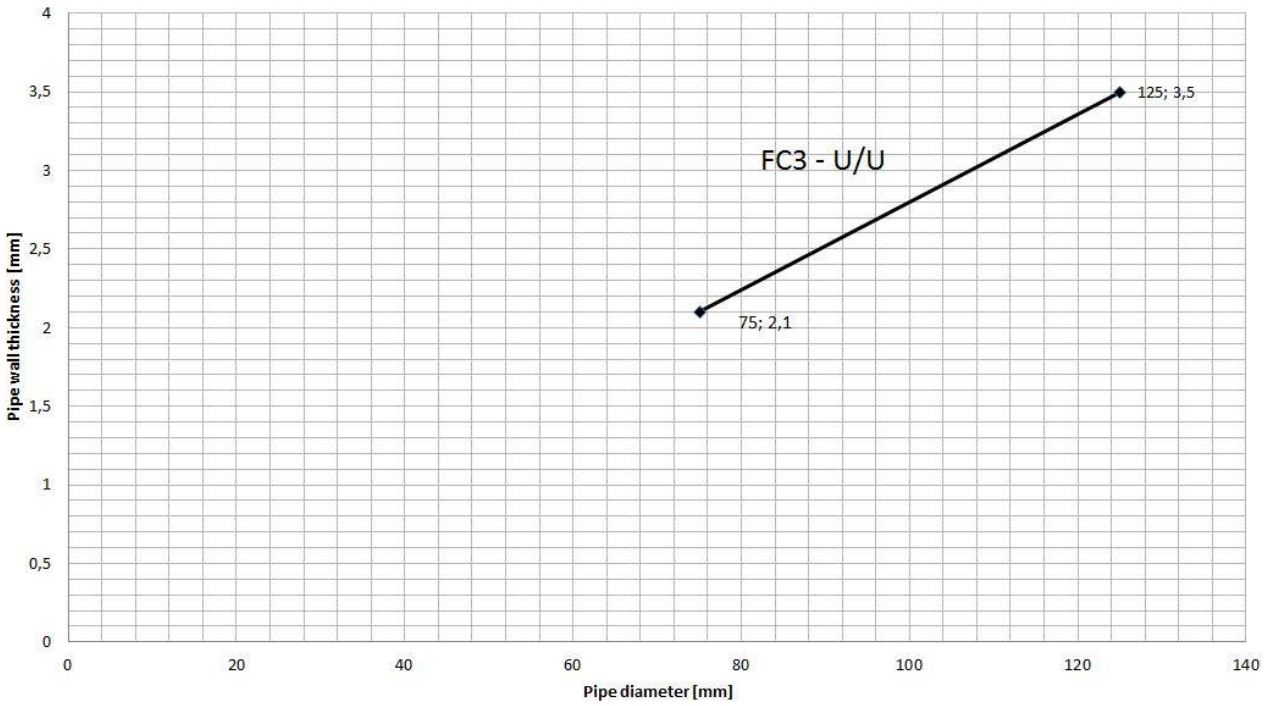


Pipelife Master3 or equal products					
Flexible wall	≥ 100	Ø 75 / t_D 2,1 - Ø 125 / t_D 3,5	FC3	on the wall	EI90-U/U

Pipelife Master3 pipes with PROMASTOP-FC collar on flexible wall and rigid wall construction (thickness ≥ 100 mm)
EI90-U/U

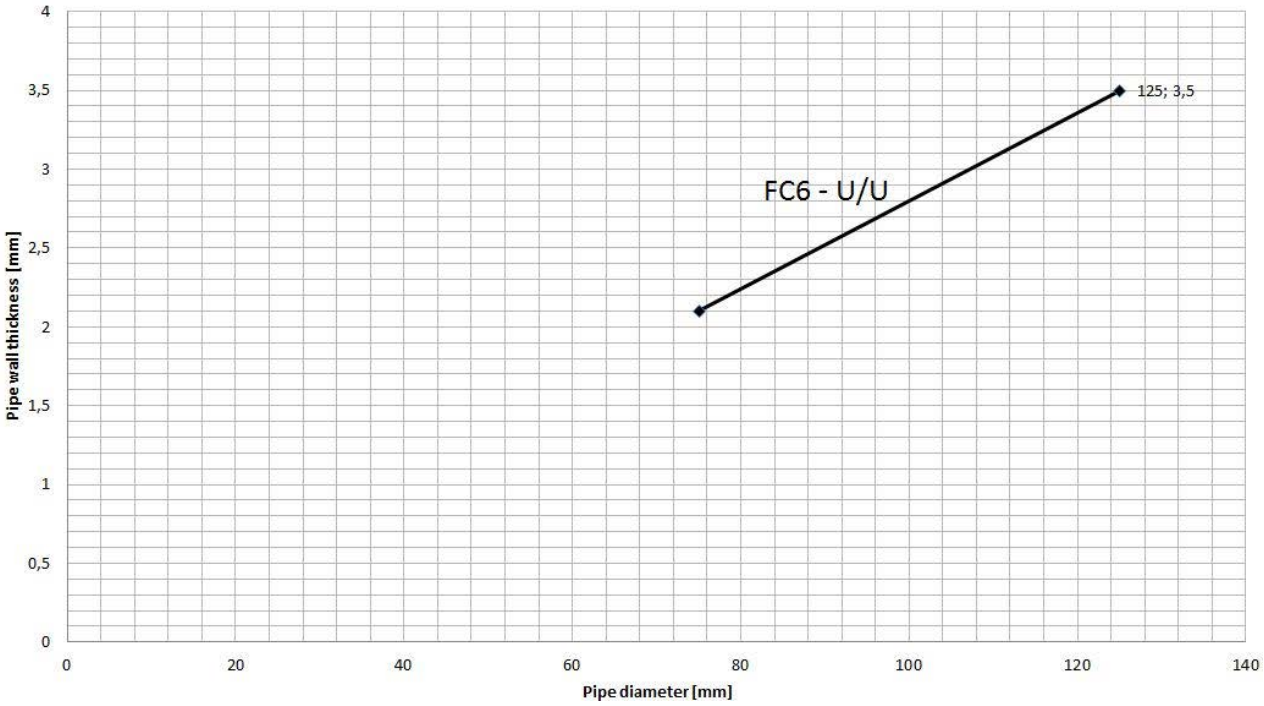
Pipelife Master3 or equal products					
Rigid wall	≥ 100	Ø 75 / t_D 2,1 - Ø 125 / t_D 3,5	FC3	on the wall	EI120-U/U

Pipelife Master3 pipes with PROMASTOP-FC collar placed on rigid wall construction (thickness ≥ 100 mm, density ≥ 450 kg/m³)
EI120-U/U



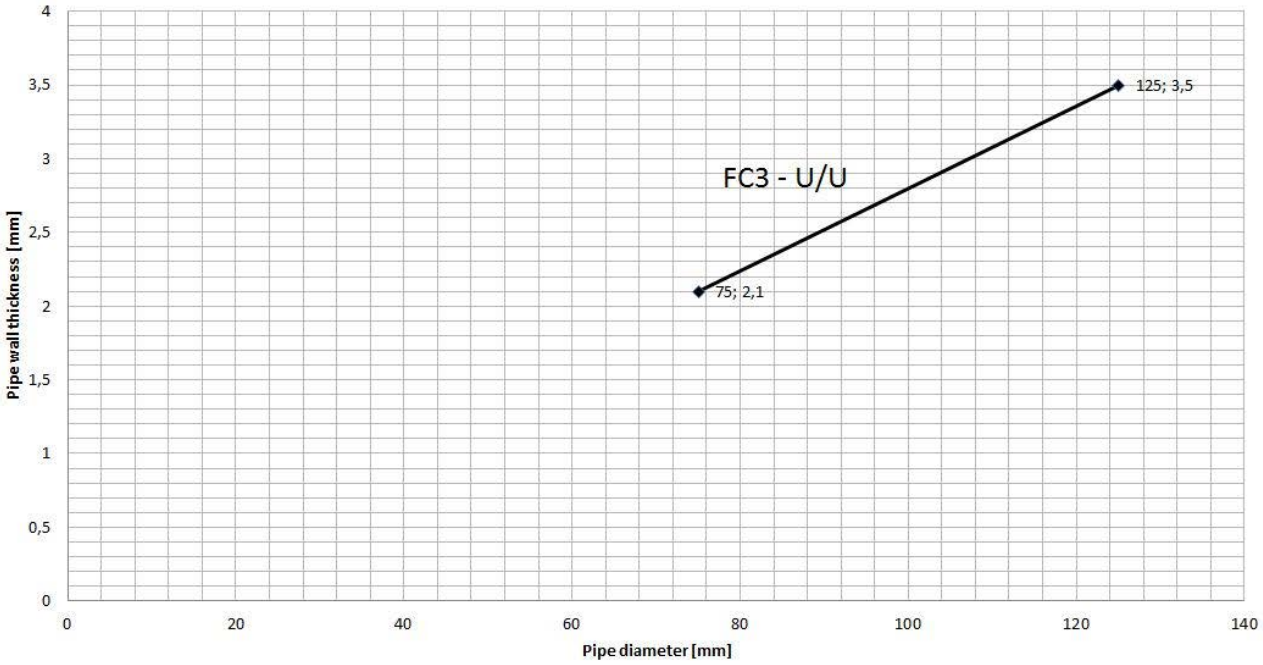
Pipelife Master3 or equal products					
Rigid wall	≥ 100	Pipe with socket, max. Ø 125	FC6	on the wall	EI120-U/U

Pipelife Master3 pipes with sockets with PROMASTOP-FC collar placed on rigid wall construction (thickness ≥ 100 mm, density ≥ 450 kg/m³)
EI120-U/U



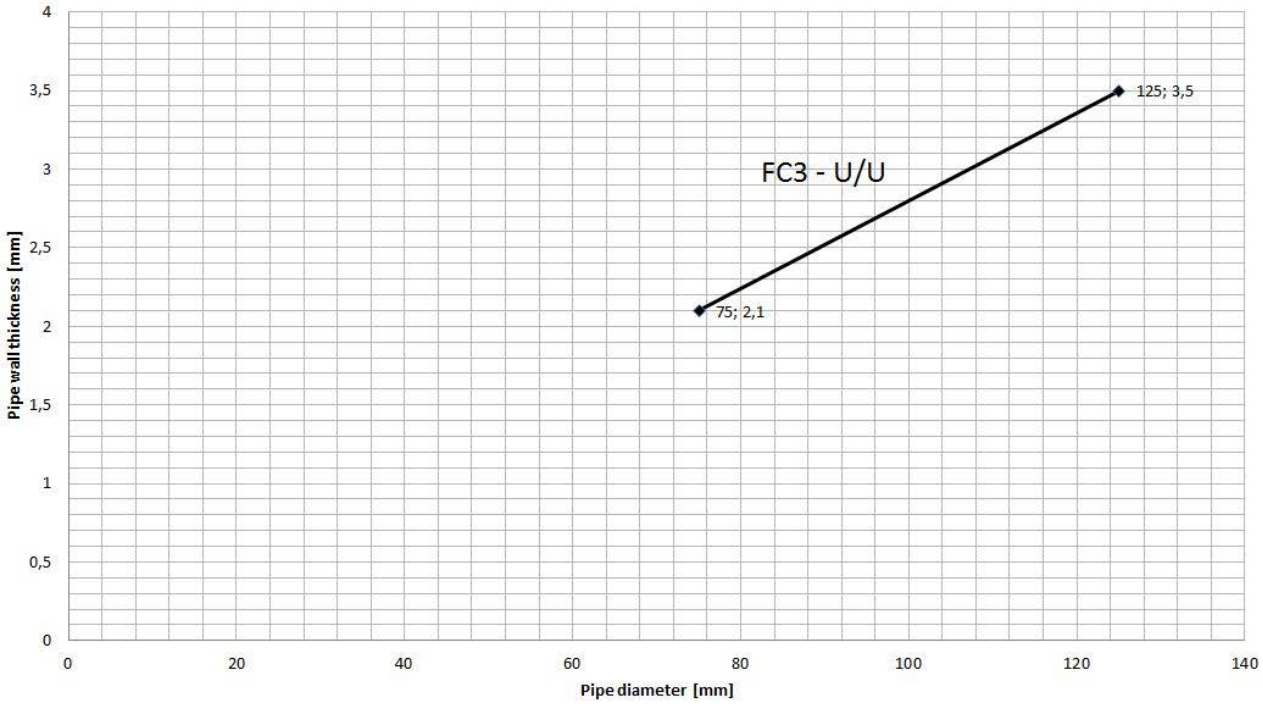
Pipelife Master3 or equal products					
Rigid wall	≥ 150	Ø 75 / t_D 2,1 - Ø 125 / t_D 3,5	FC3	mortared in	EI120-U/U

Pipelife Master3 pipes with PROMASTOP-FC collar, mortared in rigid wall construction (thickness ≥ 150 mm, density ≥ 450 kg/m³)
EI120-U/U



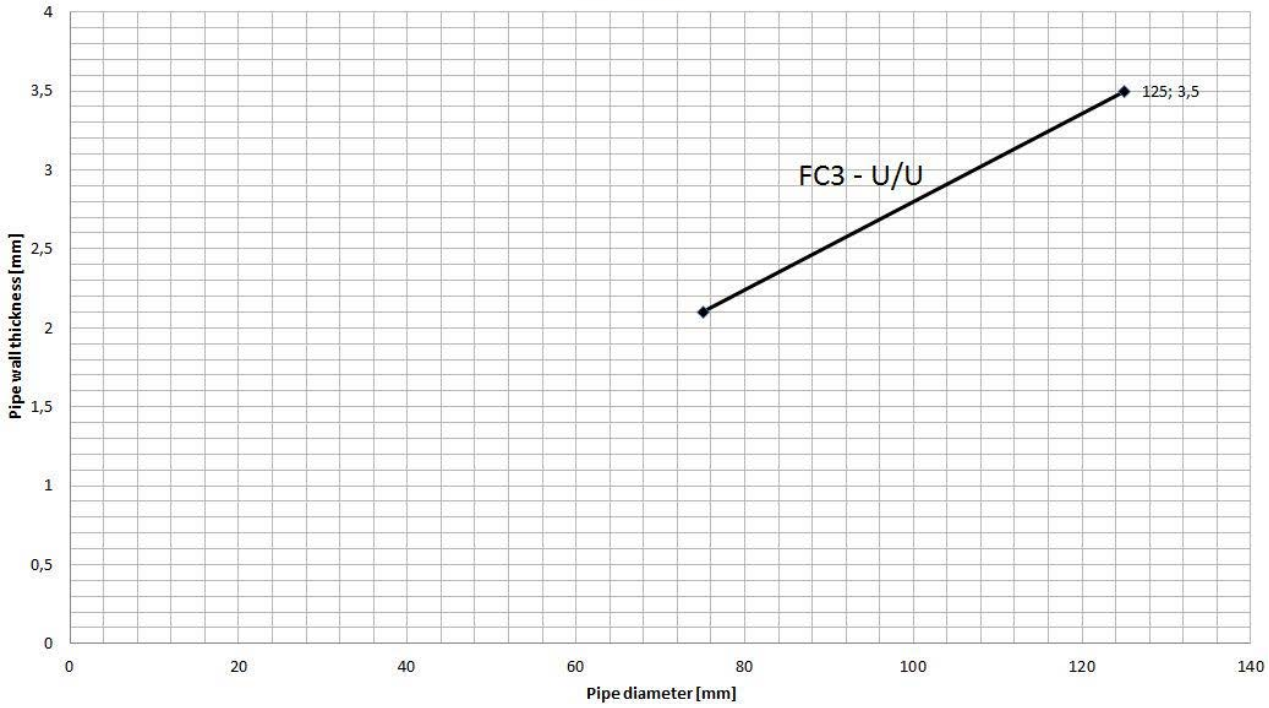
Pipelife Master3 or equal products					
Rigid floor	≥ 150	Ø 75 / t_D 2,1 - Ø 125 / t_D 3,5	FC3	mortared in	EI120-U/U

Pipelife Master3 pipes with PROMASTOP-FC collar, mortared in rigid floor construction (thickness ≥ 150 mm, density ≥ 450 kg/m³)
EI120-U/U



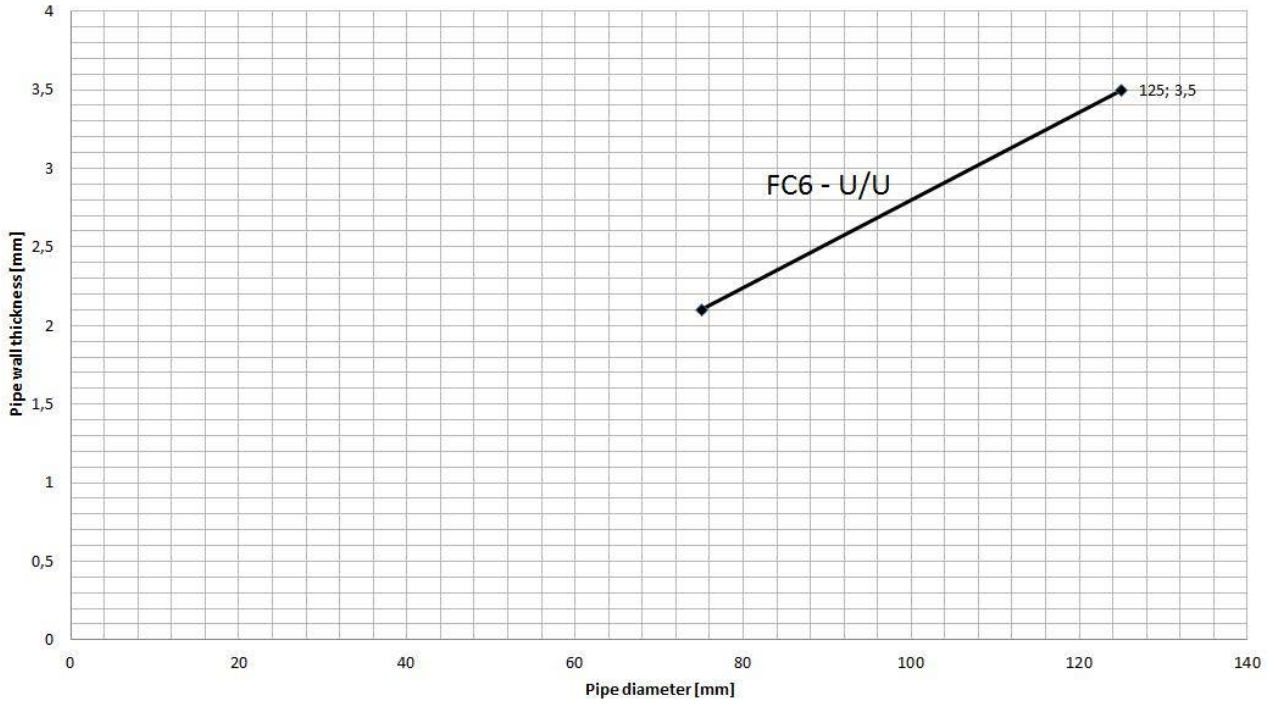
Pipelife Master3 or equal products					
Rigid floor	≥ 150	Ø 75 / t_D 2,1 - Ø 125 / t_D 3,5	FC3	under the floor	EI120-U/U

Pipelife Master3 pipes with PROMASTOP-FC collar, placed on rigid floor construction (thickness ≥ 150 mm, density ≥ 450 kg/m³)
EI120-U/U



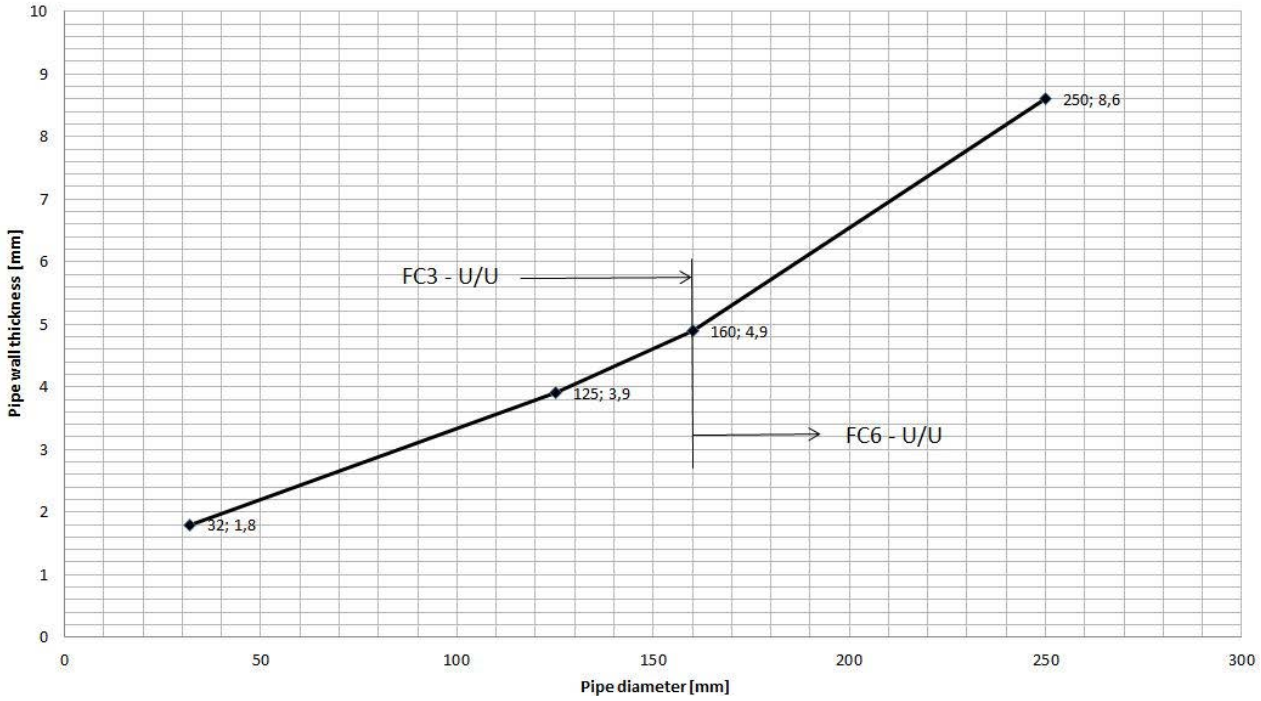
Pipelife Master3 or equal products					
Rigid floor	≥ 150	Pipe with socket, max. Ø 125	FC6	under the floor	EI120-U/U

Pipelife Master3 pipes with sockets with PROMASTOP-FC collar placed on rigid floor construction (thickness ≥ 150 mm, density ≥ 450 kg/m³)
EI120-U/U



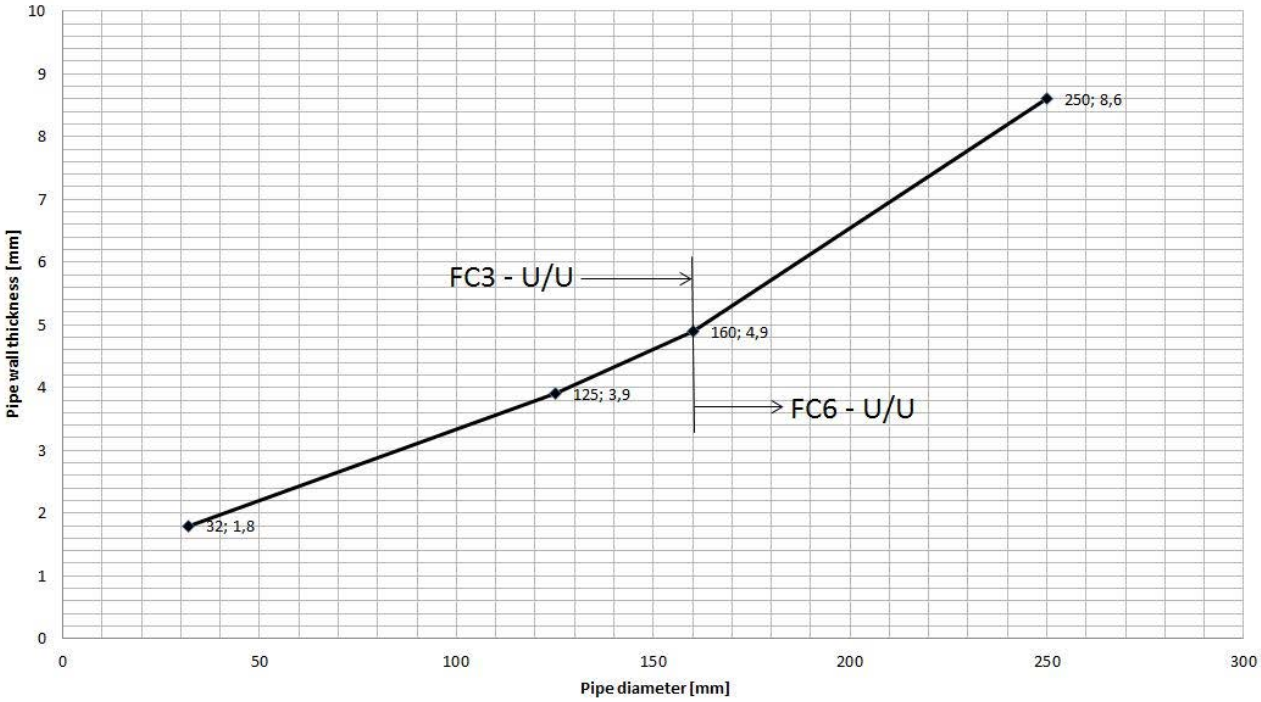
Poloplast PoloKal NG or equal products					
Flexible wall	≥ 100	Ø 32 / t_D 1,8 - Ø 250 / t_D 8,6	FC3/6	on the wall	EI90-U/U

Poloplast PoloKal NG and XS pipes with PROMASTOP-FC collar on flexible wall and rigid wall construction (thickness ≥ 100 mm)
EI90-U/U



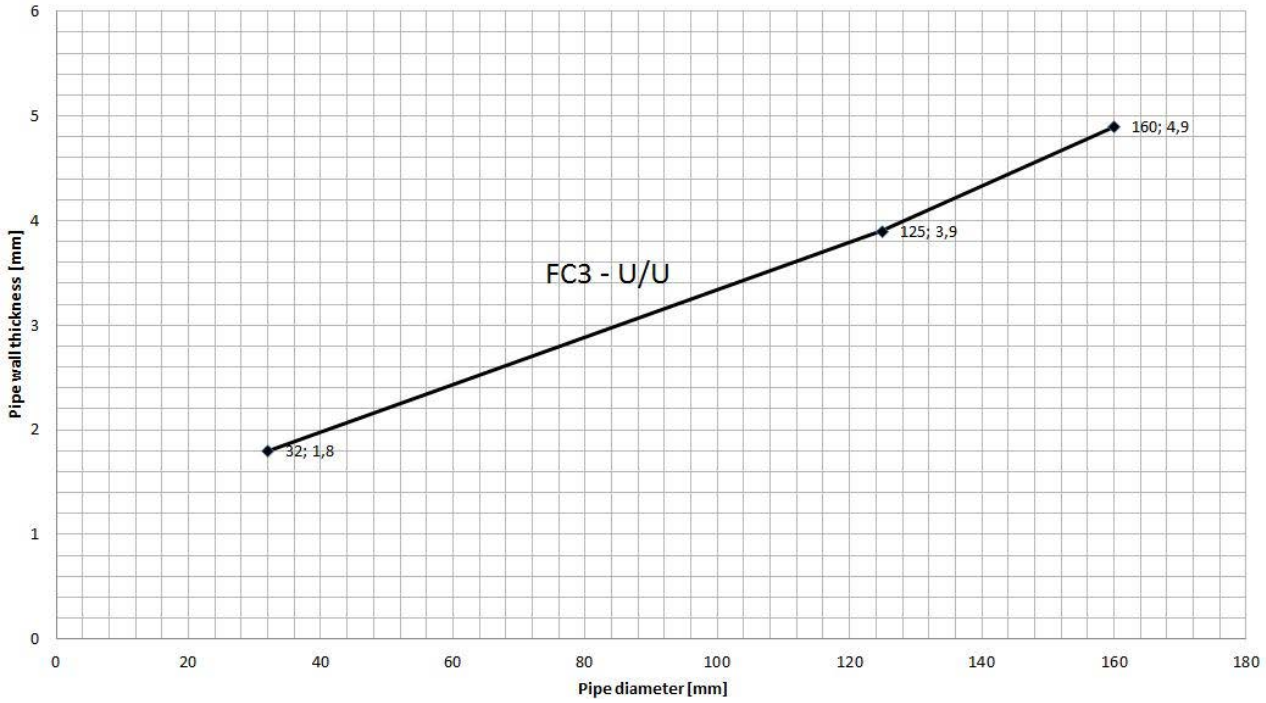
Poloplast PoloKal NG or equal products					
Rigid wall	≥ 100	Ø 32 / t_D 1,8 - Ø 250 / t_D 8,6	FC3/6	on the wall	EI90-U/U

Poloplast PoloKal NG and XS pipes with PROMASTOP-FC collar placed on rigid wall construction (thickness ≥ 100 mm, density ≥ 450 kg/m³)
EI90-U/U



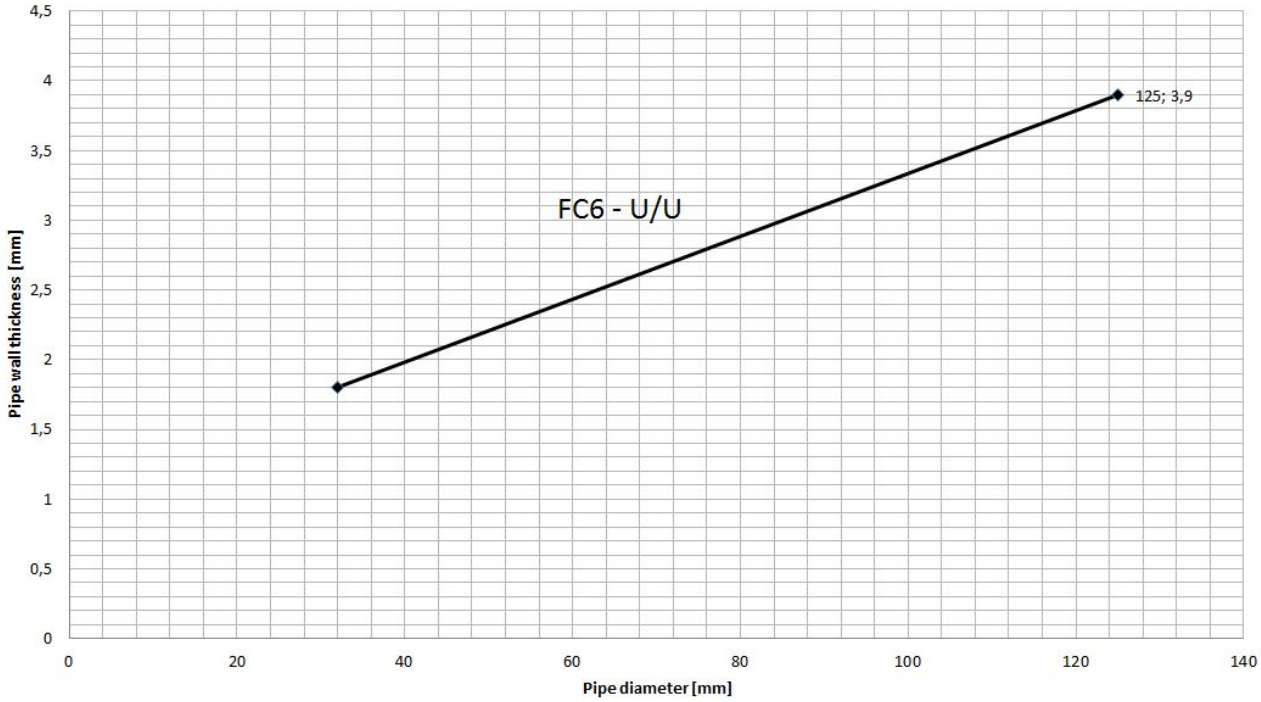
Poloplast PoloKal NG or equal products					
Rigid wall	≥ 100	Ø 32 / t_D 1,8 - Ø 160 / t_D 4,9	FC3	on the wall	EI120-U/U

Poloplast PoloKal NG and XS pipes with PROMASTOP-FC collar placed on rigid wall construction (thickness ≥ 100 mm, density ≥ 450 kg/m³) EI120-U/U



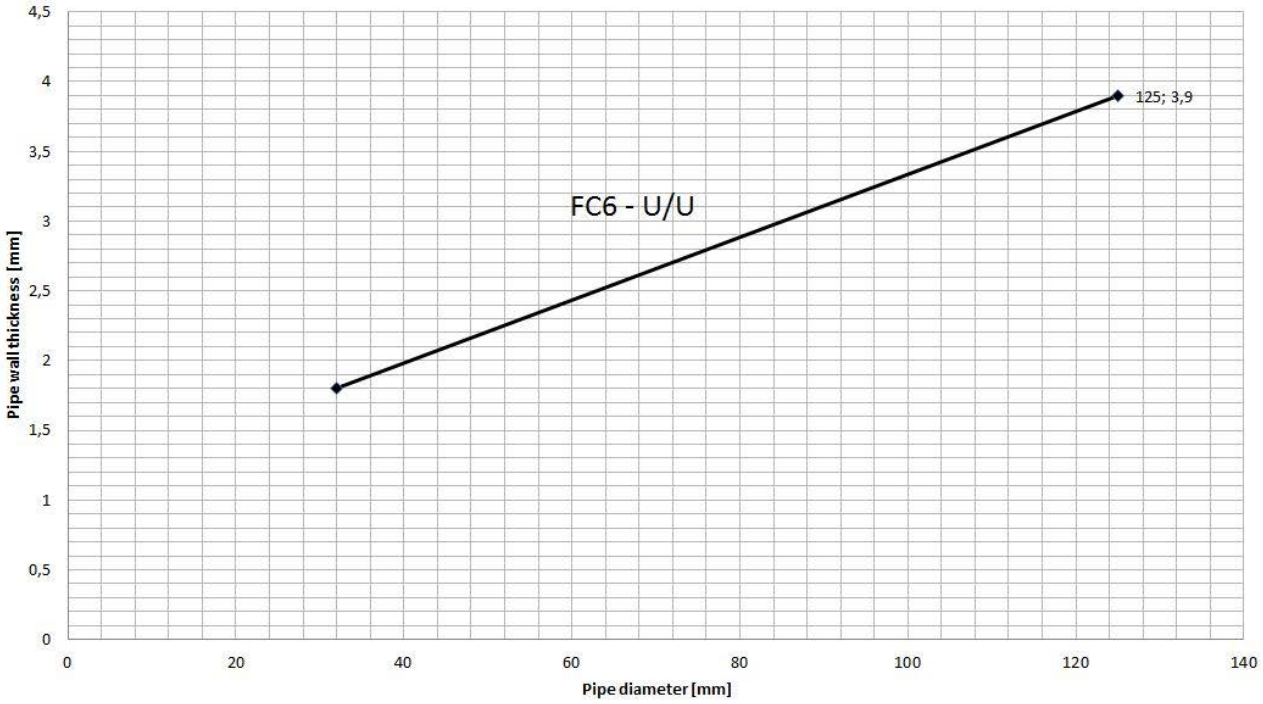
Poloplast PoloKal NG or equal products					
Rigid wall	≥ 100	Sloped pipe (to 45°), max. Ø 125	FC6	on the wall	EI90-U/U

Poloplast PoloKal NG and XS pipes (sloped to 45°) with PROMASTOP-FC collar placed on rigid wall construction (thickness ≥ 100 mm, density ≥ 450 kg/m³) EI90-U/U



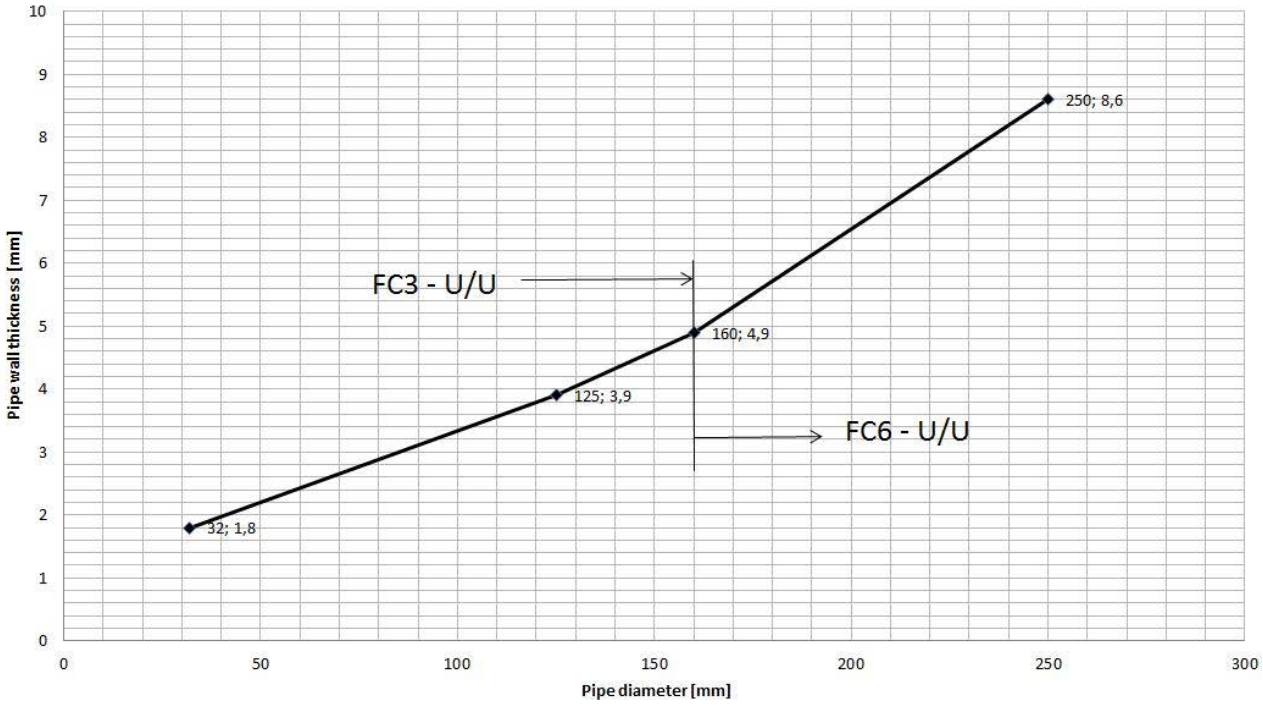
Poloplast PoloKal NG or equal products					
Rigid wall	≥ 100	Pipe with socket, max. Ø 125	FC6	on the wall	EI120-U/U

Poloplast PoloKal NG and XS pipes with sockets with PROMASTOP-FC collar placed on rigid wall construction (thickness ≥ 100 mm, density ≥ 450 kg/m³)
EI120-U/U



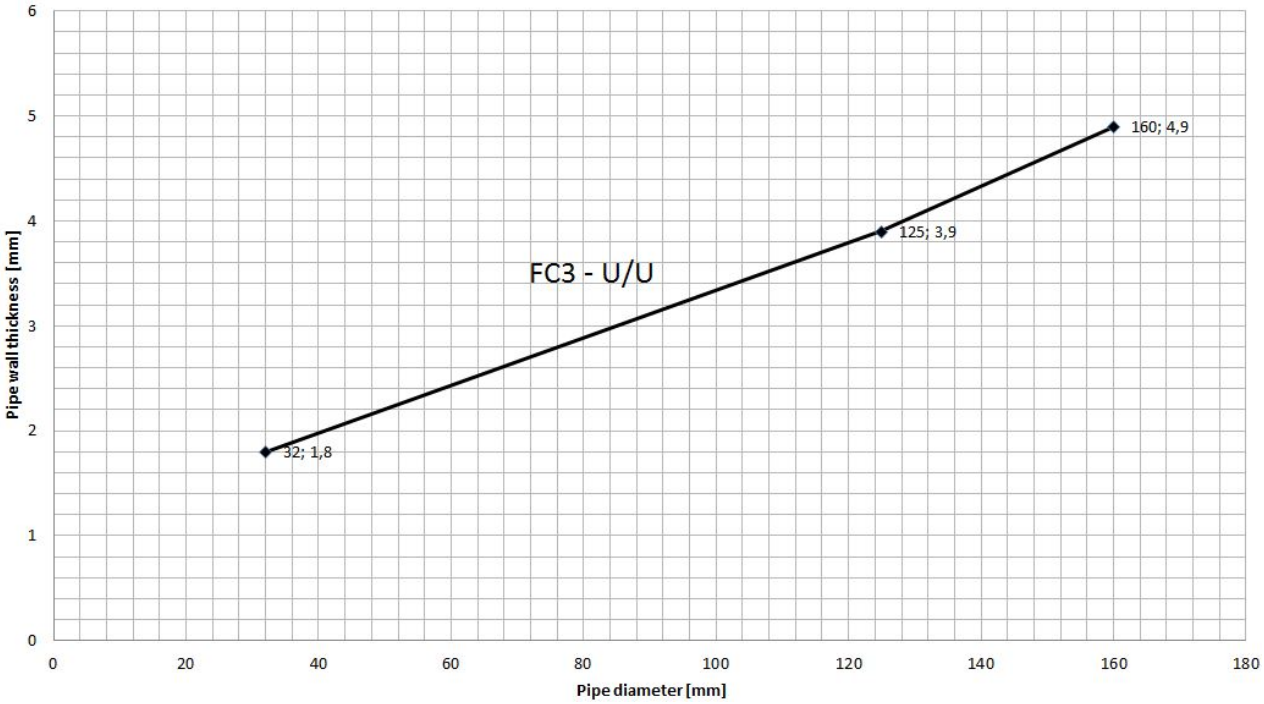
Poloplast PoloKal NG or equal products					
Rigid wall	≥ 150	Ø 32 / t_D 1,8 - Ø 250 / t_D 8,6	FC3/6	mortared in	EI90-U/U

Poloplast PoloKal NG and XS pipes with PROMASTOP-FC collar, mortared in rigid wall construction (thickness ≥ 150 mm, density ≥ 450 kg/m³)
EI90-U/U



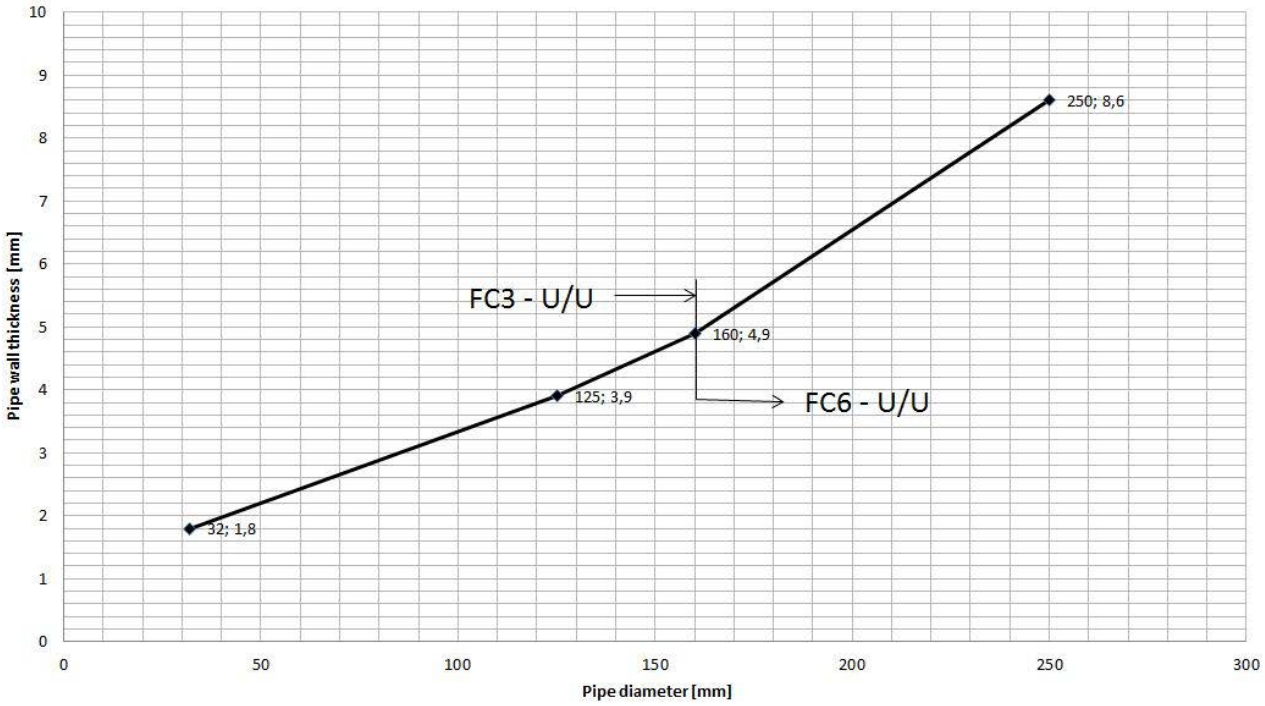
Poloplast PoloKal NG or equal products					
Rigid wall	≥ 150	Ø 32 / t_D 1,8 - Ø 160 / t_D 4,9	FC3	mortared in	EI120-U/U

Poloplast PoloKal NG and XS pipes with PROMASTOP-FC collar, mortared in rigid wall construction (thickness ≥ 150 mm, density ≥ 450 kg/m³)
EI120-U/U



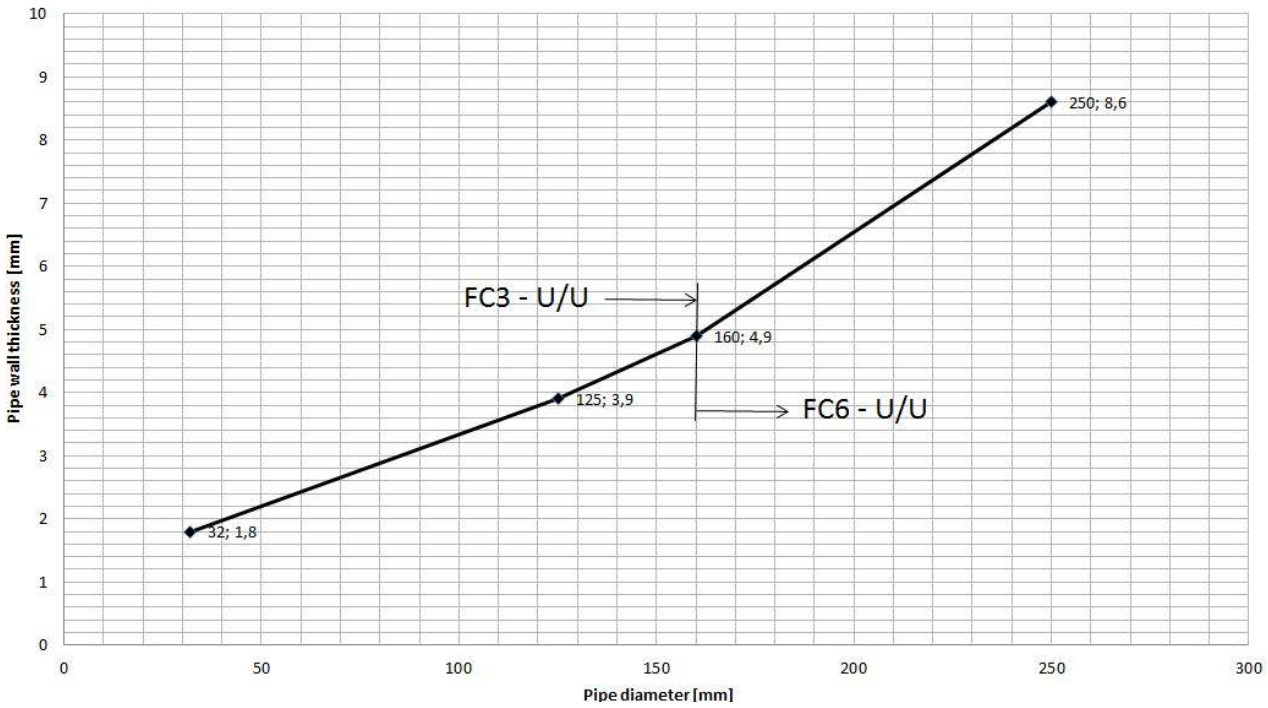
Poloplast PoloKal NG or equal products					
Rigid floor	≥ 150	Ø 32 / t_D 1,8 - Ø 250 / t_D 8,6	FC3/6	mortared in	EI120-U/U

Poloplast PoloKal NG and XS pipes with PROMASTOP-FC collar, mortared in rigid floor construction (thickness ≥ 150 mm, density ≥ 450 kg/m³)
EI120-U/U



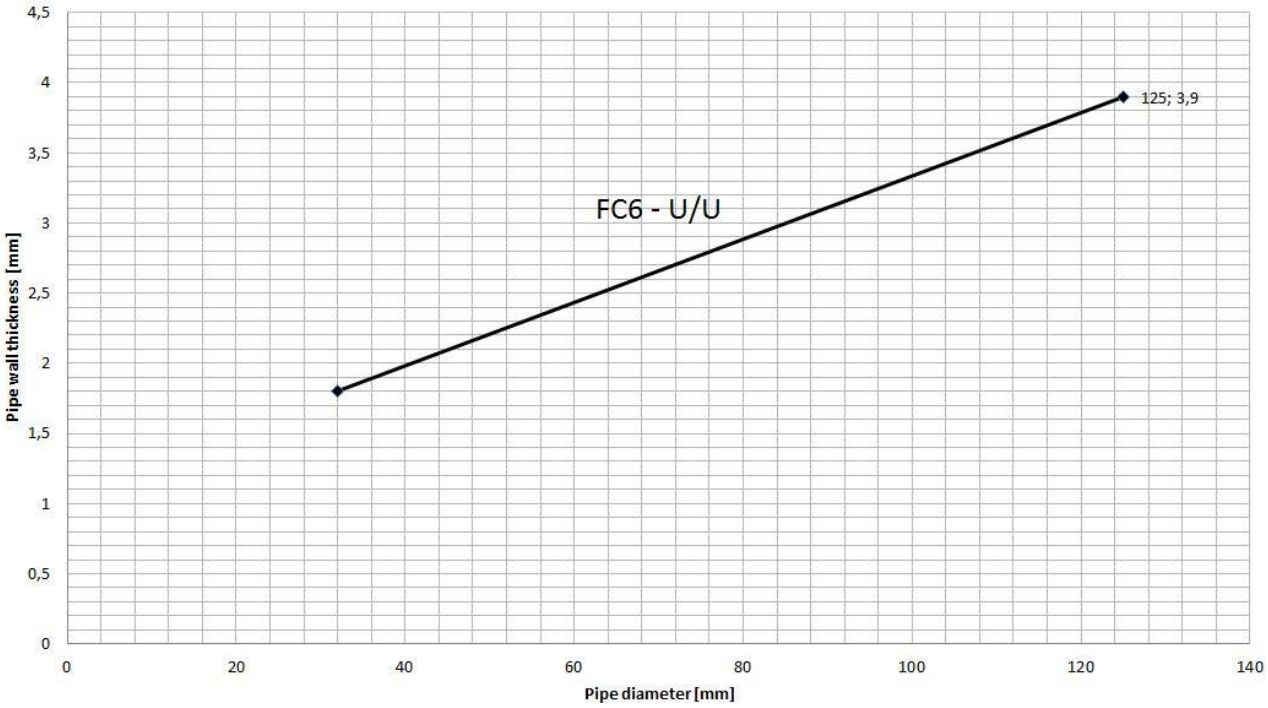
Poloplast PoloKal NG or equal products					
Rigid floor	≥ 150	Ø 32 / t_D 1,8 - Ø 250 / t_D 8,6	FC3/6	under the floor	EI120-U/U

Poloplast PoloKal NG and XS pipes with PROMASTOP-FC collar, placed on rigid floor construction (thickness ≥ 150 mm, density ≥ 450 kg/m³)
EI120-U/U



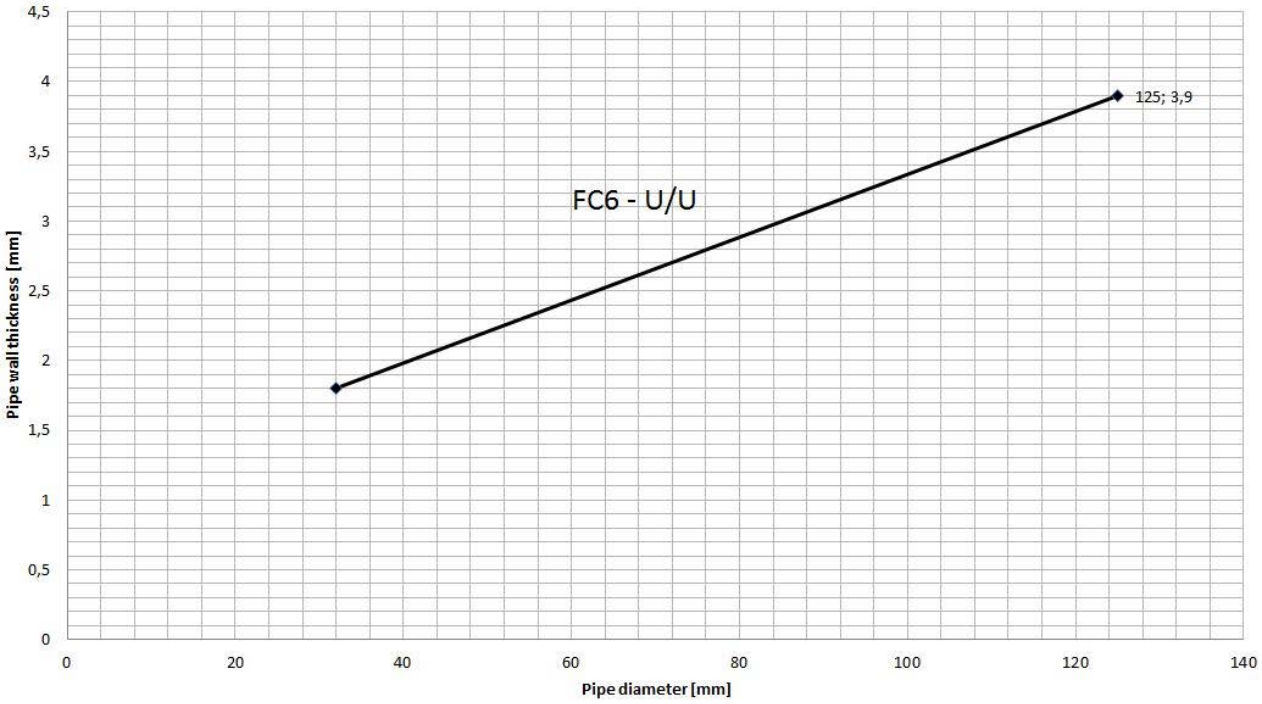
Poloplast PoloKal NG or equal products					
Rigid floor	≥ 150	Sloped pipe (to 45°), max. Ø 125	FC6	under the floor	EI120-U/U

Poloplast PoloKal NG and XS pipes (sloped to 45°) with PROMASTOP-FC collar placed on rigid floor construction (thickness ≥ 150 mm, density ≥ 450 kg/m³)
EI120-U/U



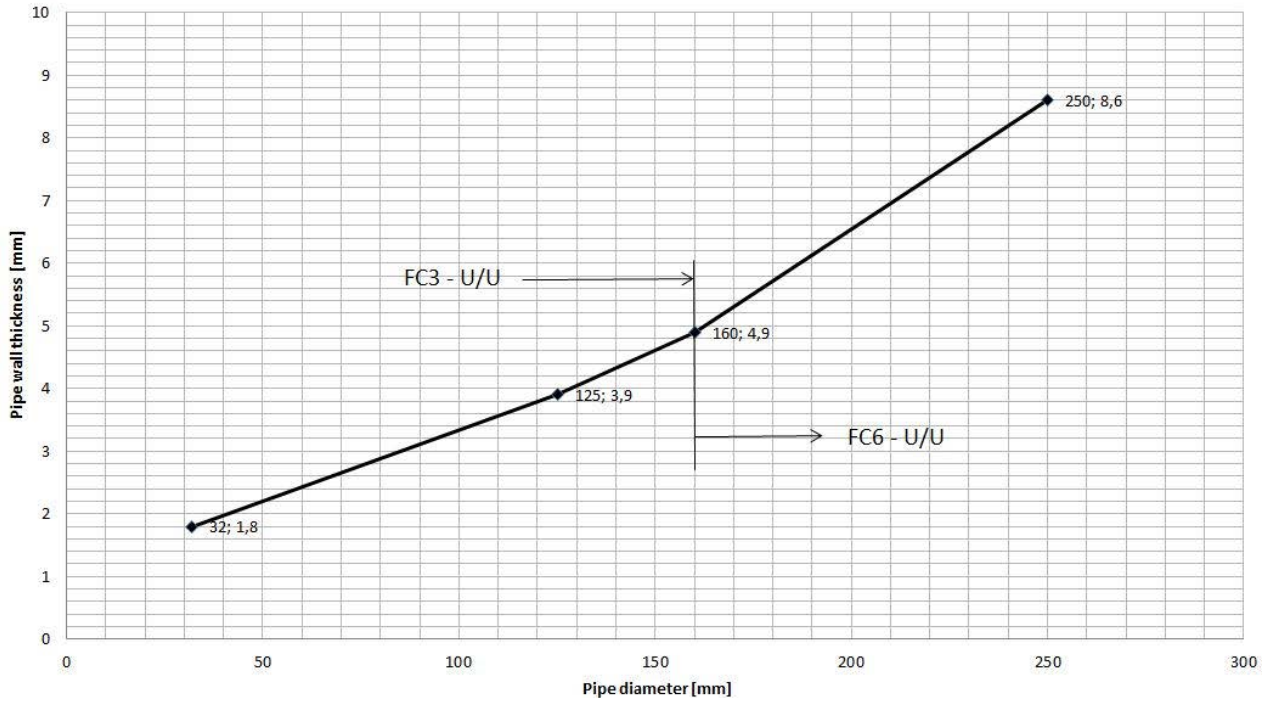
Poloplast PoloKal NG or equal products					
Rigid floor	≥ 150	Pipe with socket, max. Ø 125	FC6	under the floor	EI120-U/U

Poloplast PoloKal NG and XS pipes with sockets with PROMASTOP-FC collar placed on rigid floor construction (thickness ≥ 150 mm, density ≥ 450 kg/m³)
EI120-U/U



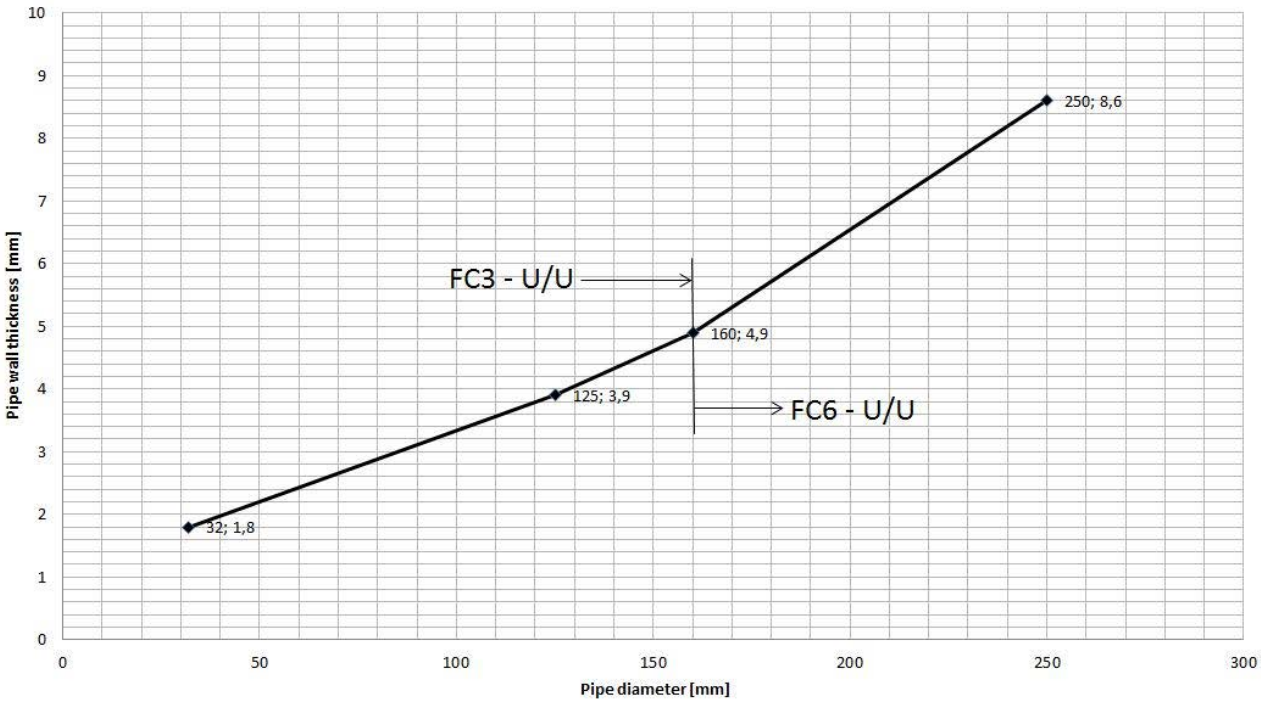
Poloplast PoloKal XS or equal products					
Flexible wall	≥ 100	Ø 32 / t_D 1,8 - Ø 250 / t_D 8,6	FC3/6	on the wall	EI90-U/U

Poloplast PoloKal NG and XS pipes with PROMASTOP-FC collar on flexible wall and rigid wall construction (thickness ≥ 100 mm)
EI90-U/U



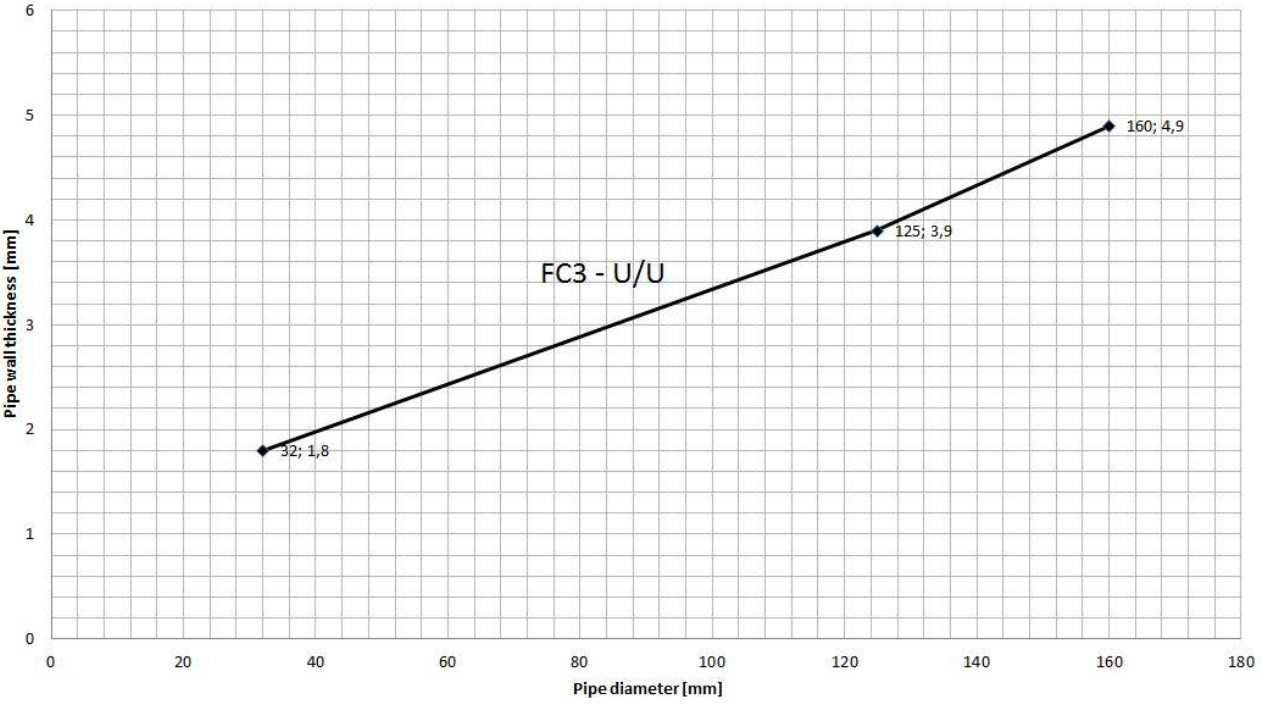
Poloplast PoloKal XS or equal products					
Rigid wall	≥ 100	Ø 32 / t_D 1,8 - Ø 250 / t_D 8,6	FC3/6	on the wall	EI90-U/U

Poloplast PoloKal NG and XS pipes with PROMASTOP-FC collar placed on rigid wall construction (thickness ≥ 100 mm, density ≥ 450 kg/m³) EI90-U/U



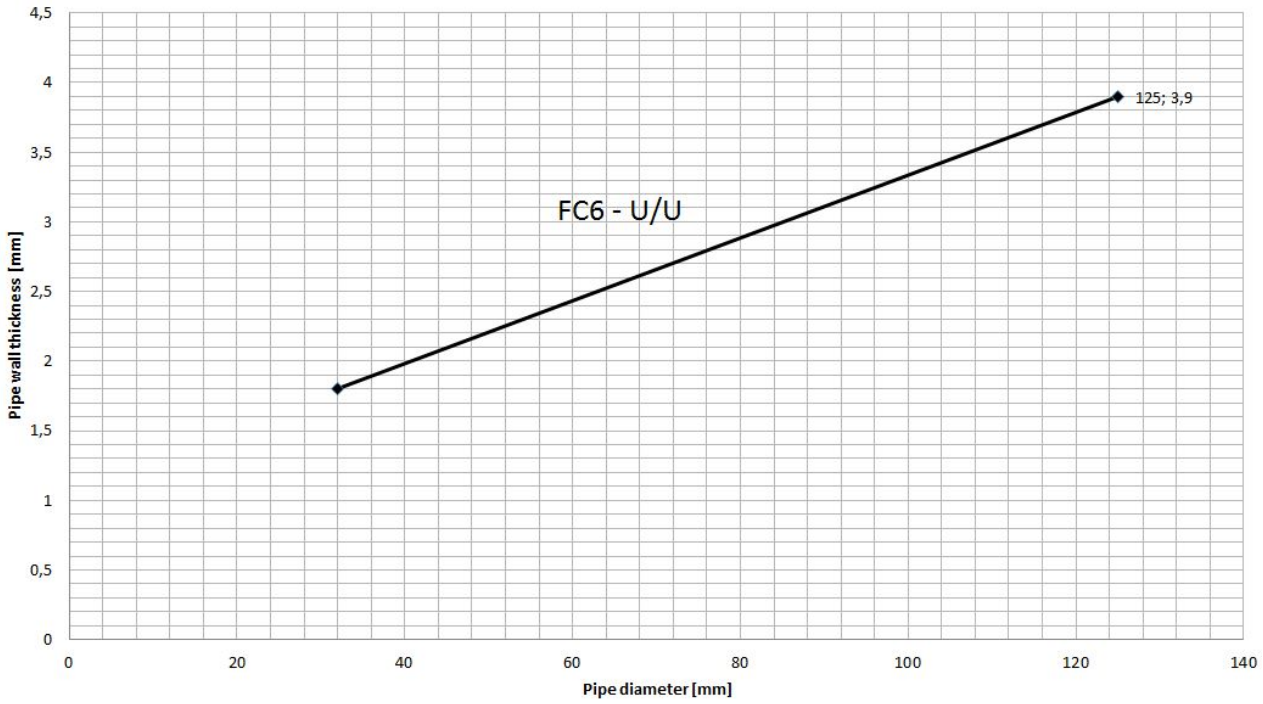
Poloplast PoloKal XS or equal products					
Rigid wall	≥ 100	Ø 32 / t_D 1,8 - Ø 160 / t_D 4,9	FC3	on the wall	EI120-U/U

Poloplast PoloKal NG and XS pipes with PROMASTOP-FC collar placed on rigid wall construction (thickness ≥ 100 mm, density ≥ 450 kg/m³) EI120-U/U



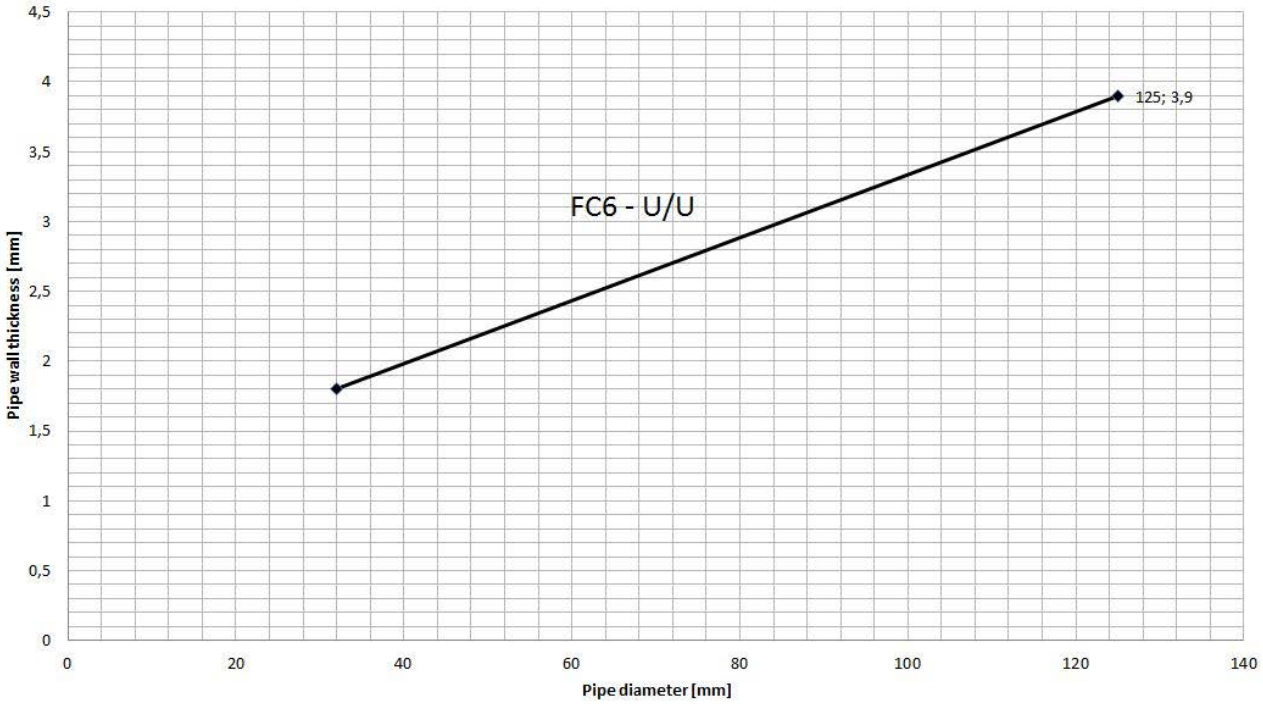
Poloplast PoloKal XS or equal products					
Rigid wall	≥ 100	Sloped pipe (to 45°), max. Ø 125	FC6	on the wall	EI90-U/U

Poloplast PoloKal NG and XS pipes (sloped to 45°) with PROMASTOP-FC collar placed on rigid wall construction (thickness ≥ 100 mm, density ≥ 450 kg/m³)
EI90-U/U



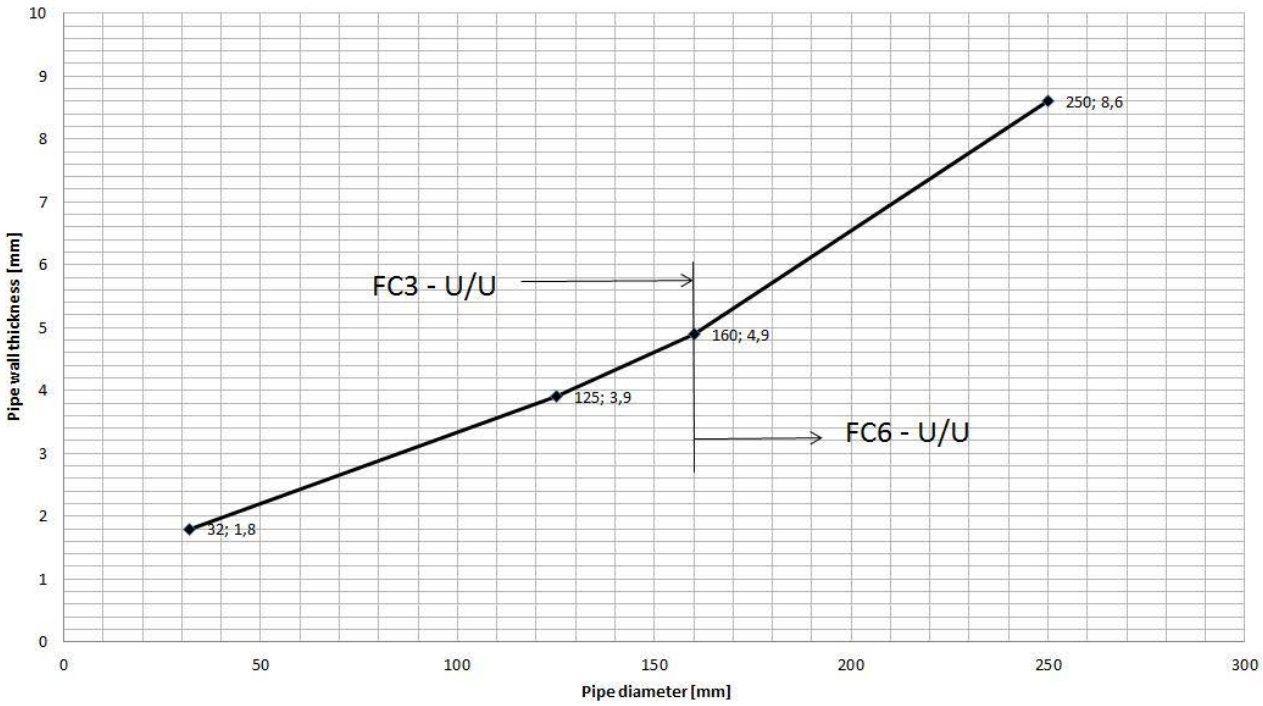
Poloplast PoloKal XS or equal products					
Rigid wall	≥ 100	Pipe with socket, max. Ø 125	FC6	on the wall	EI120-U/U

Poloplast PoloKal NG and XS pipes with sockets with PROMASTOP-FC collar placed on rigid wall construction (thickness ≥ 100 mm, density ≥ 450 kg/m³)
EI120-U/U



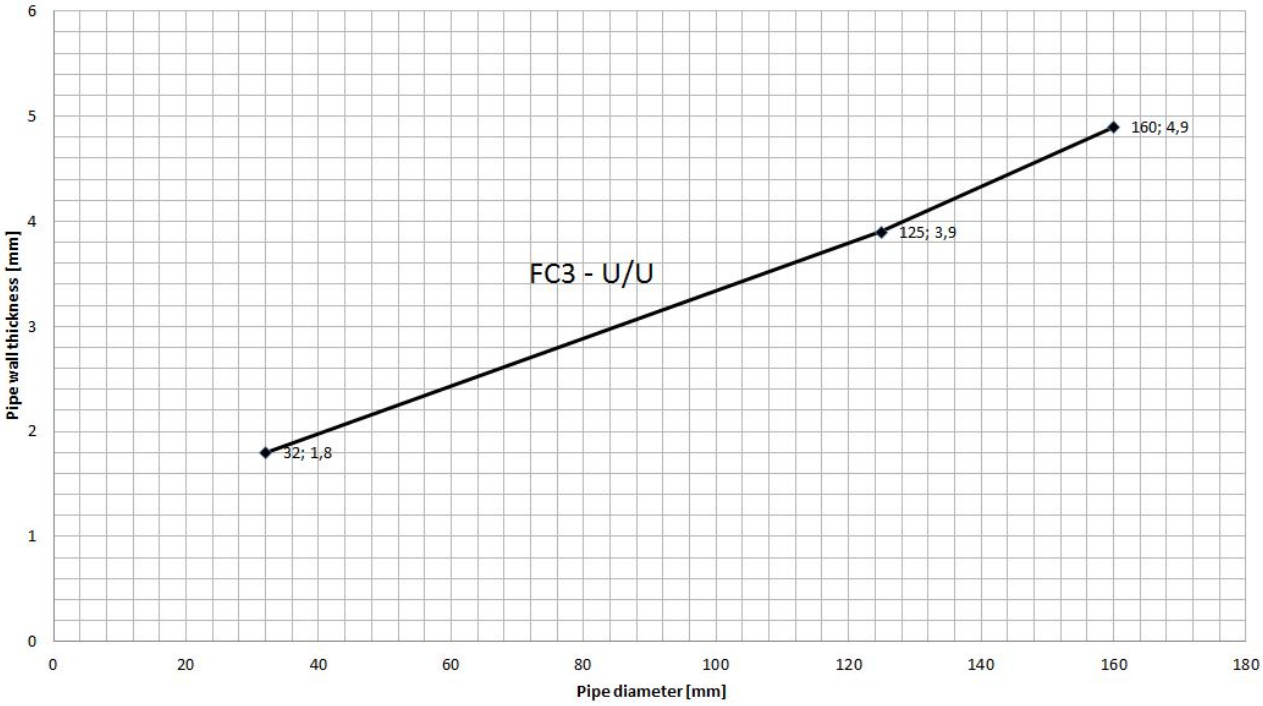
Poloplast PoloKal XS or equal products					
Rigid wall	≥ 150	Ø 32 / t_D 1,8 - Ø 250 / t_D 8,6	FC3/6	mortared in	EI90-U/U

Poloplast PoloKal NG and XS pipes with PROMASTOP-FC collar, mortared in rigid wall construction (thickness ≥ 150 mm, density ≥ 450 kg/m³)
EI90-U/U



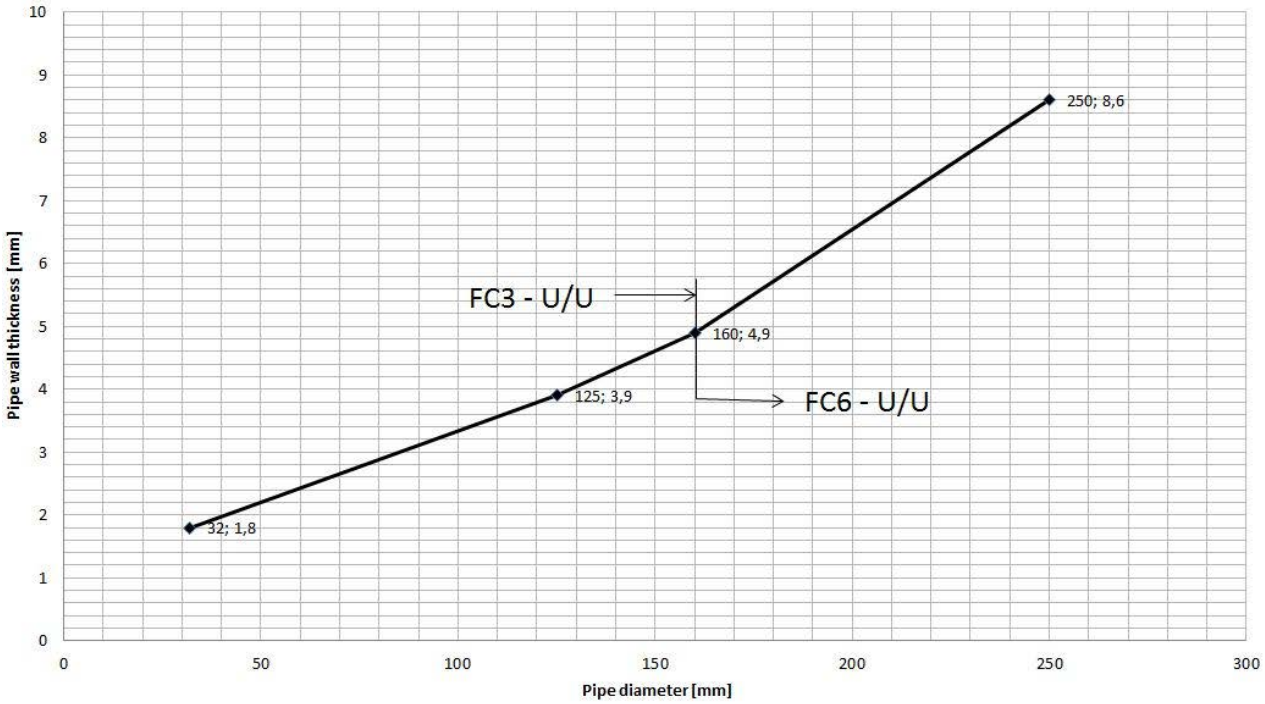
Poloplast PoloKal XS or equal products					
Rigid wall	≥ 150	Ø 32 / t_D 1,8 - Ø 160 / t_D 4,9	FC3	mortared in	EI120-U/U

Poloplast PoloKal NG and XS pipes with PROMASTOP-FC collar, mortared in rigid wall construction (thickness ≥ 150 mm, density ≥ 450 kg/m³)
EI120-U/U



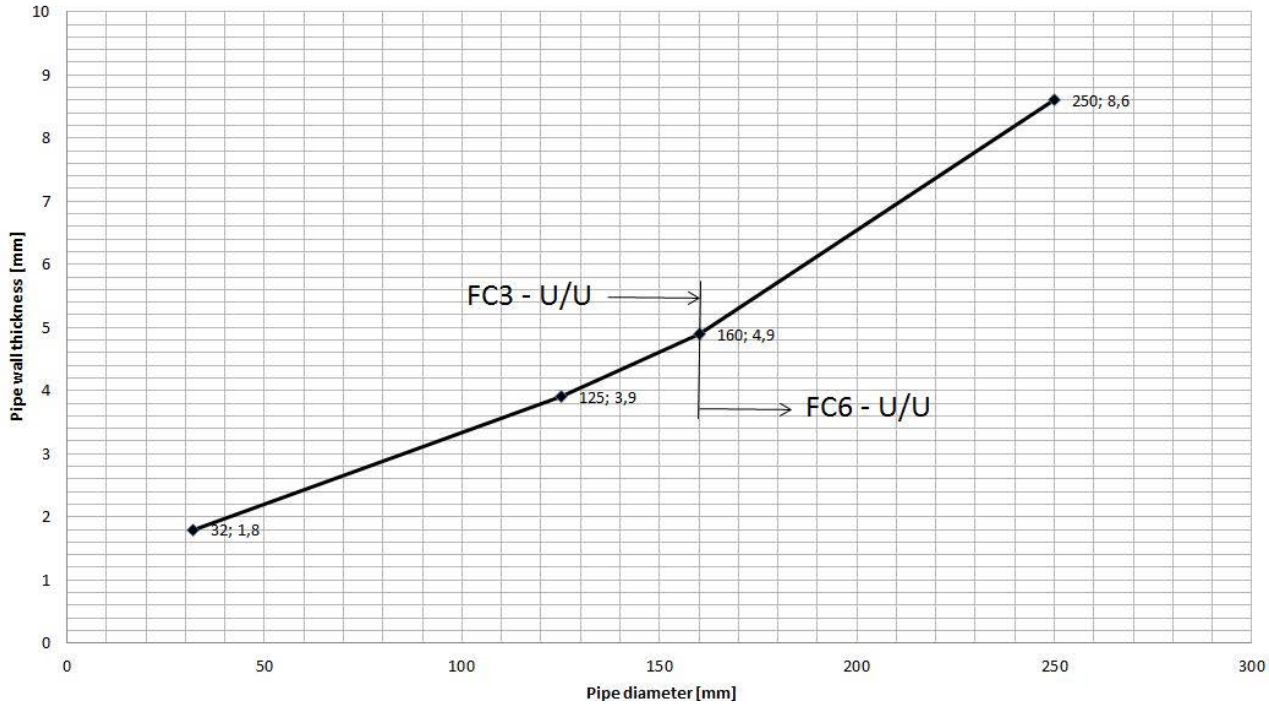
Poloplast PoloKal XS or equal products					
Rigid floor	≥ 150	Ø 32 / t_D 1,8 - Ø 250 / t_D 8,6	FC3/6	mortared in	EI120-U/U

Poloplast PoloKal NG and XS pipes with PROMASTOP-FC collar, mortared in rigid floor construction (thickness ≥ 150 mm, density ≥ 450 kg/m³) EI120-U/U



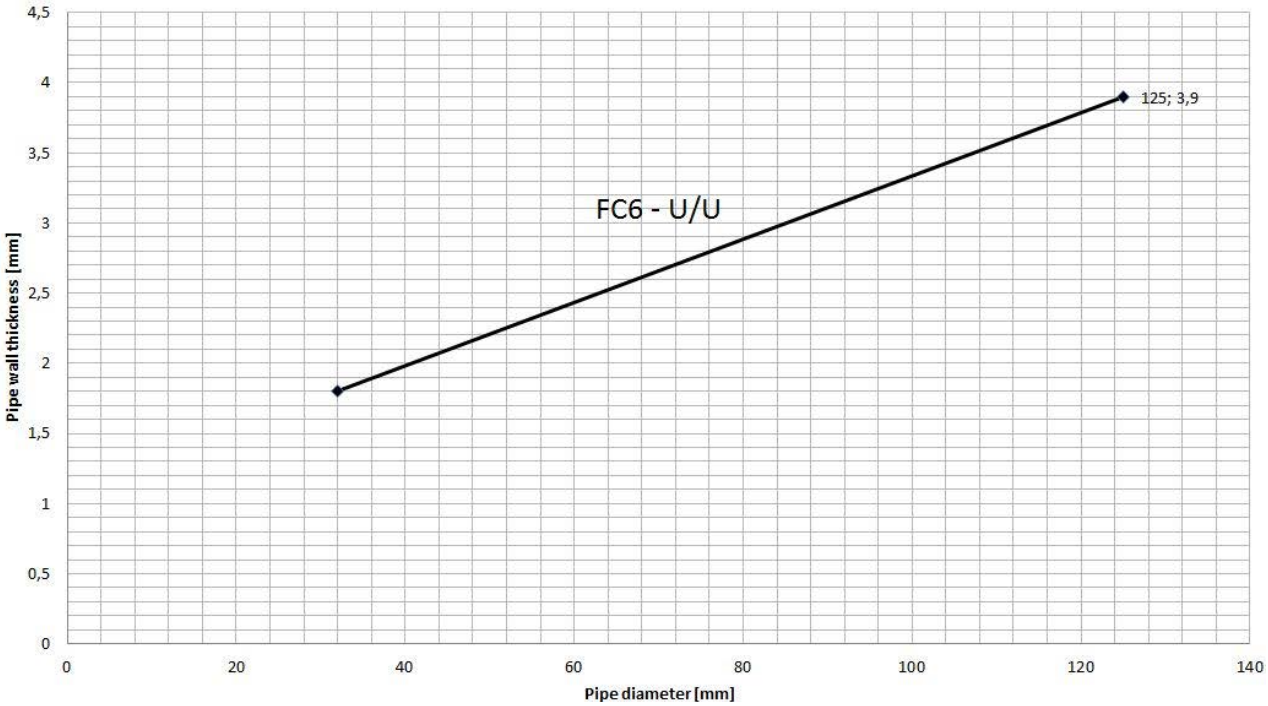
Poloplast PoloKal XS or equal products					
Rigid floor	≥ 150	Ø 32 / t_D 1,8 - Ø 250 / t_D 8,6	FC3/6	under the floor	EI120-U/U

Poloplast PoloKal NG and XS pipes with PROMASTOP-FC collar, placed on rigid floor construction (thickness ≥ 150 mm, density ≥ 450 kg/m³) EI120-U/U



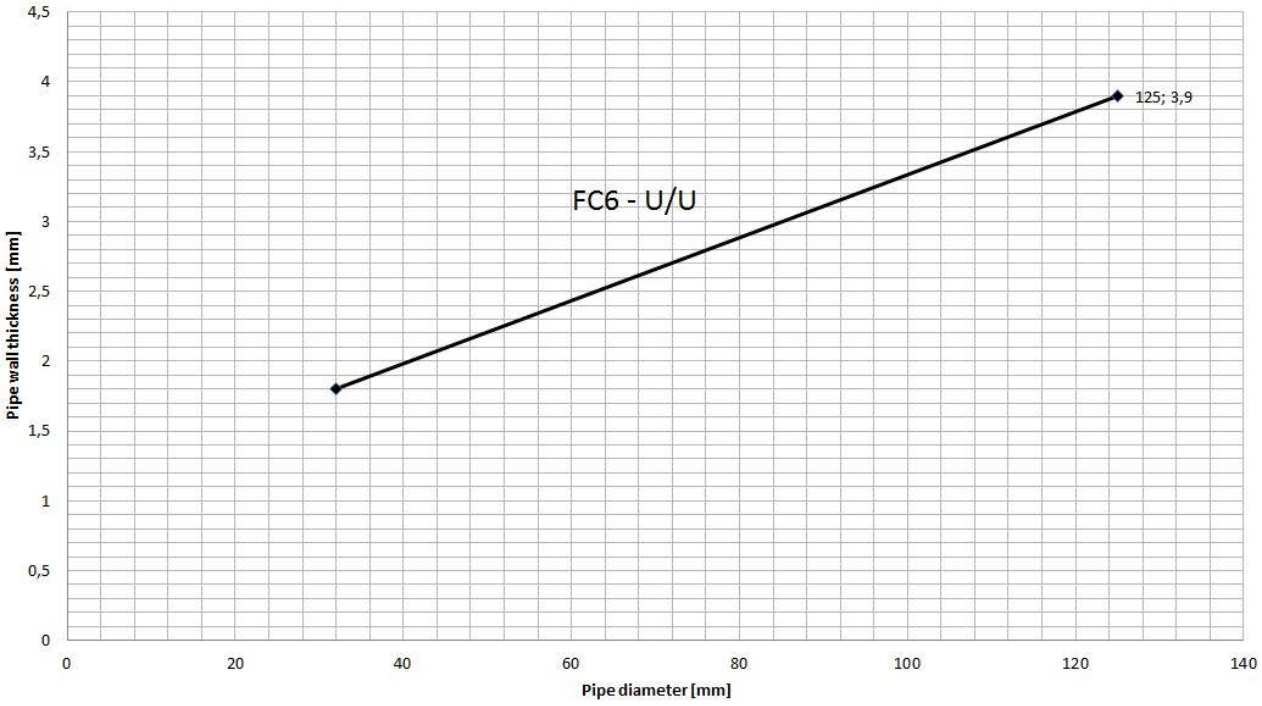
Poloplast PoloKal XS or equal products					
Rigid floor	≥ 150	Sloped pipe (to 45°), max. Ø 125	FC6	under the floor	EI120-U/U

Poloplast PoloKal NG and XS pipes (sloped to 45°) with PROMASTOP-FC collar placed on rigid floor construction (thickness ≥ 150 mm, density ≥ 450 kg/m³)
EI120-U/U



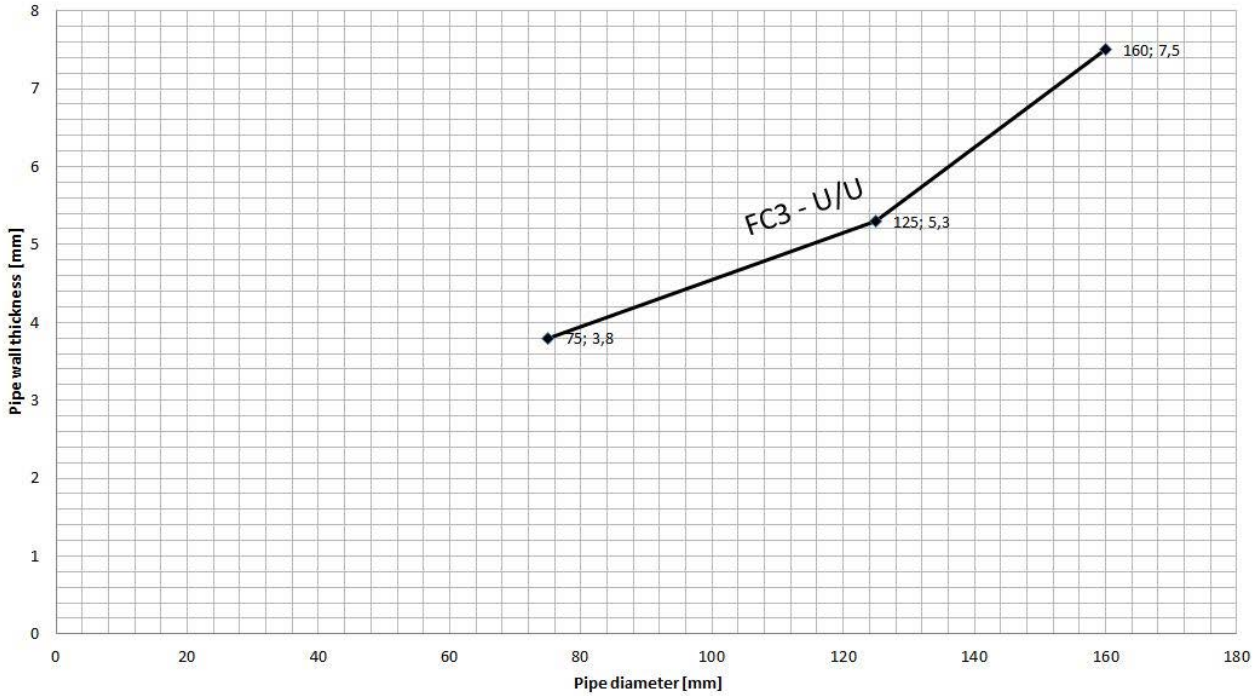
Poloplast PoloKal XS or equal products					
Rigid floor	≥ 150	Pipe with socket, max. Ø 125	FC6	under the floor	EI120-U/U

Poloplast PoloKal NG and XS pipes with sockets with PROMASTOP-FC collar placed on rigid floor construction (thickness ≥ 150 mm, density ≥ 450 kg/m³)
EI120-U/U



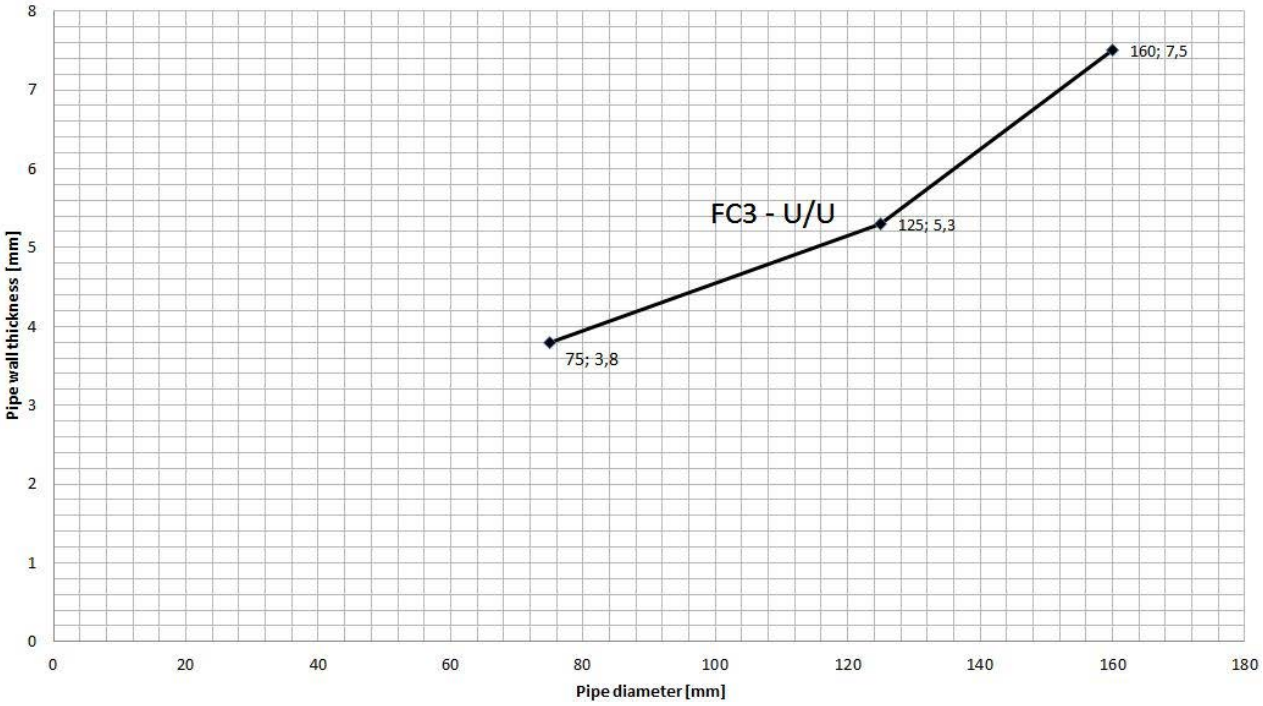
Poloplast PoloKal 3S or equal products					
Flexible wall	≥ 100	Ø 75 / t_D 3,8 - Ø 160 / t_D 7,5	FC3	on the wall	EI90-U/U

Poloplast PoloKal 3S pipes with PROMASTOP-FC collar on flexible wall and rigid wall construction (thickness ≥ 100 mm)
EI90-U/U



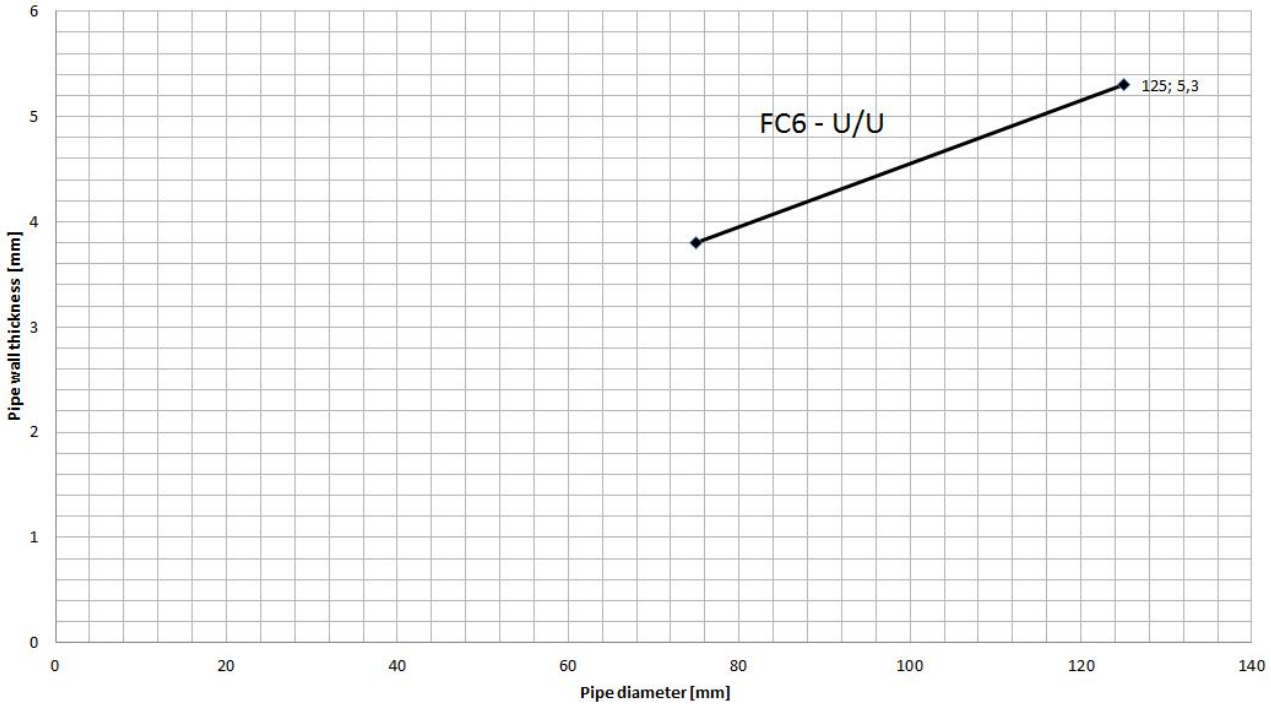
Poloplast PoloKal 3S or equal products					
Rigid wall	≥ 100	Ø 75 / t_D 3,8 - Ø 160 / t_D 7,5	FC3	on the wall	EI120-U/U

Poloplast PoloKal 3S pipes with PROMASTOP-FC collar placed on rigid wall construction (thickness ≥ 100 mm, density ≥ 450 kg/m³)
EI120-U/U



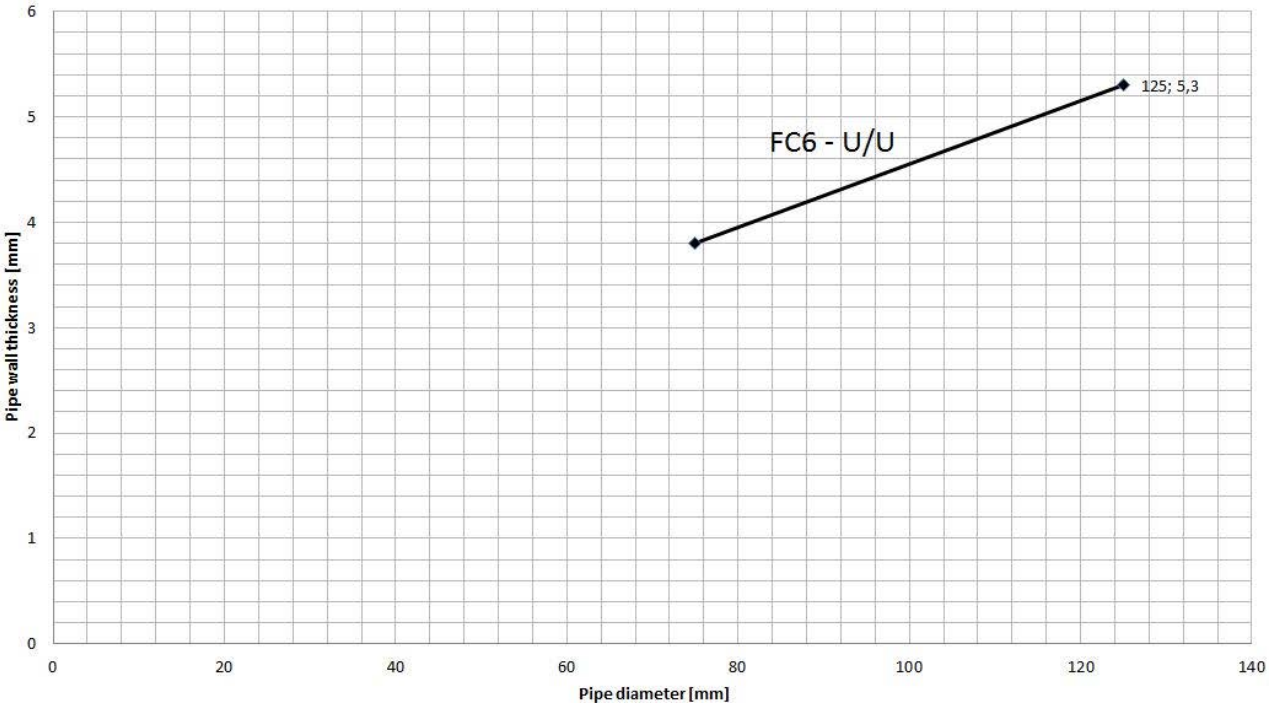
Poloplast PoloKal 3S or equal products					
Rigid wall	≥ 100	Pipe with socket, max. Ø 125	FC6	on the wall	EI120-U/U

Poloplast PoloKal 3S pipes with sockets with PROMASTOP-FC collar placed on rigid wall construction (thickness ≥ 100 mm, density ≥ 450 kg/m³)
EI120-U/U



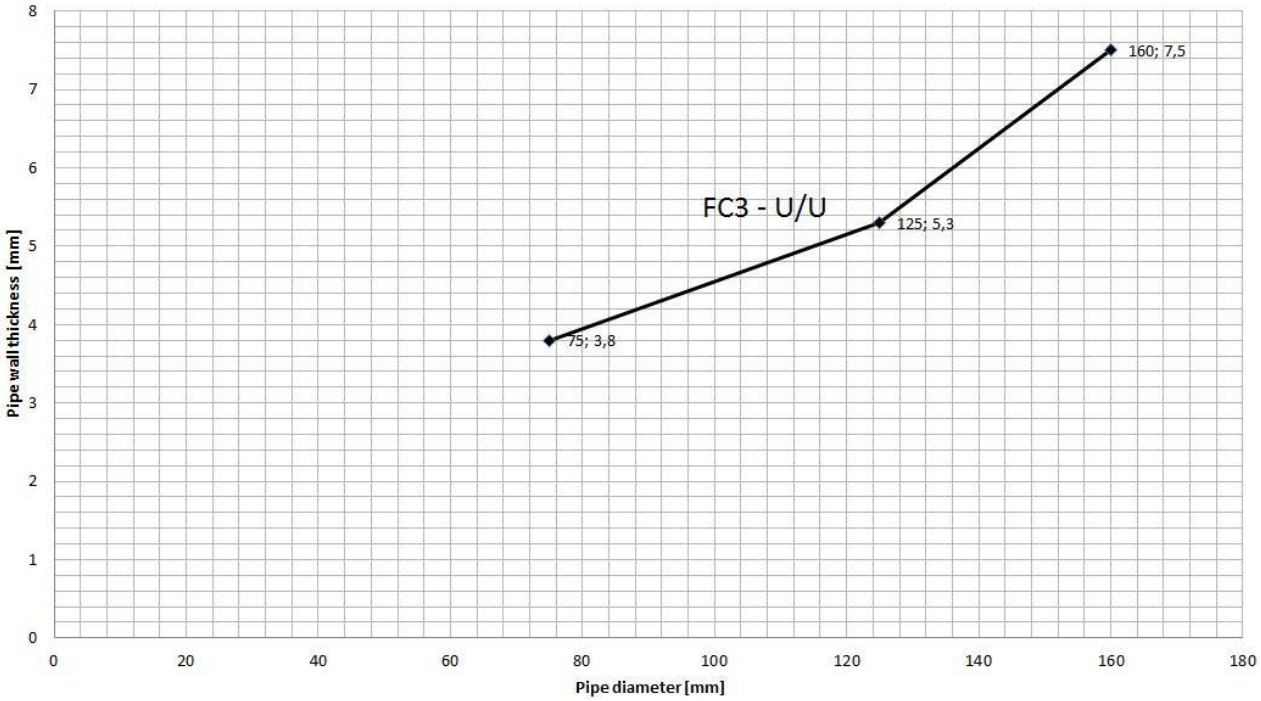
Poloplast PoloKal 3S or equal products					
Rigid wall	≥ 100	Sloped pipe (to 45°), max. Ø 125	FC6	on the wall	EI120-U/U

Poloplast PoloKal 3S pipes (sloped to 45°) with PROMASTOP-FC collar placed on rigid wall construction (thickness ≥ 100 mm, density ≥ 450 kg/m³)
EI120-U/U



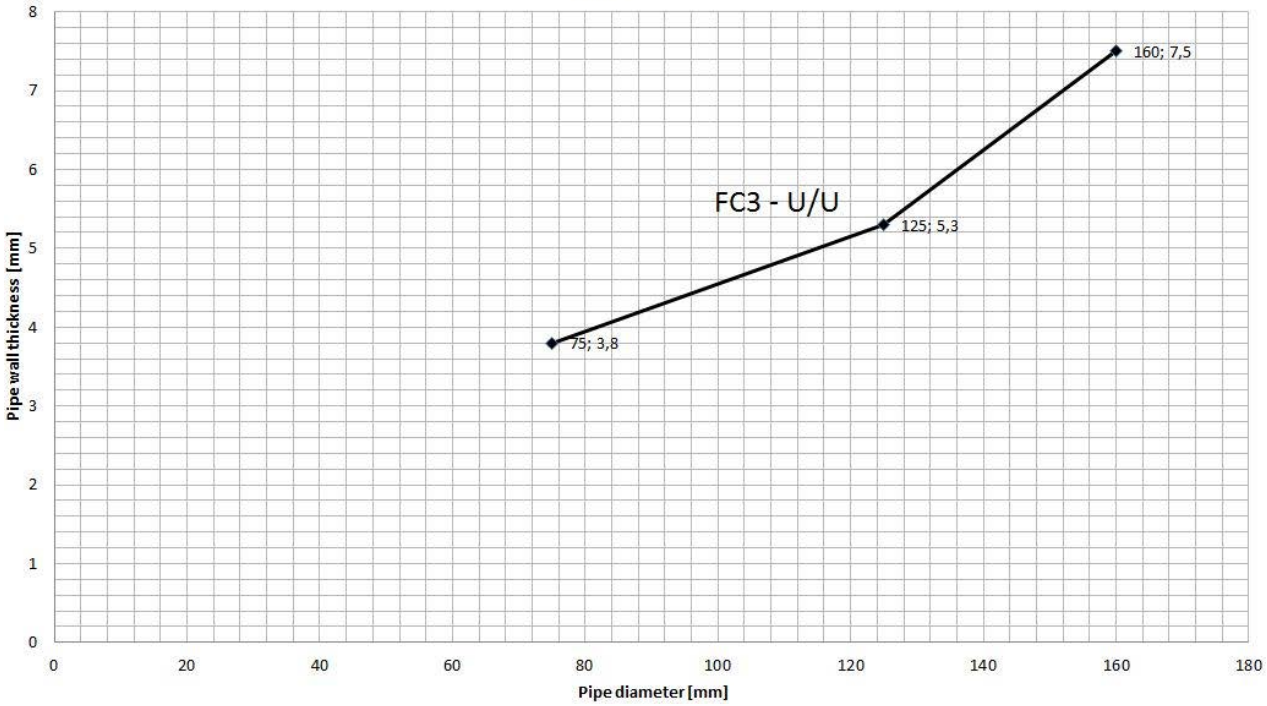
Poloplast PoloKal 3S or equal products					
Rigid wall	≥ 150	Ø 75 / t_D 3,8 - Ø 160 / t_D 7,5	FC3	mortared in	EI120-U/U

Poloplast PoloKal 3S pipes with PROMASTOP-FC collar, mortared in rigid wall construction (thickness ≥ 150 mm, density ≥ 450 kg/m³)
EI120-U/U



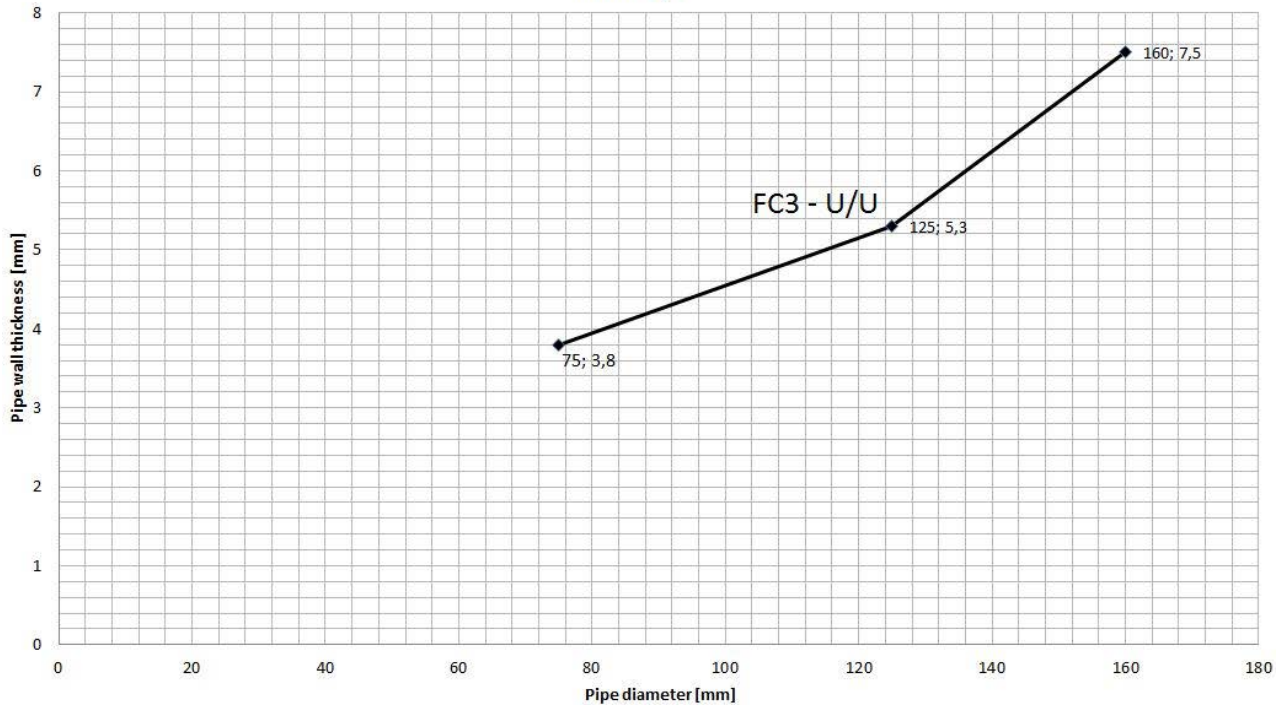
Poloplast PoloKal 3S or equal products					
Rigid floor	≥ 150	Ø 75 / t_D 3,8 - Ø 160 / t_D 7,5	FC3	mortared in	EI120-U/U

Poloplast PoloKal 3S pipes with PROMASTOP-FC collar, mortared in rigid floor construction (thickness ≥ 150 mm, density ≥ 450 kg/m³)
EI120-U/U



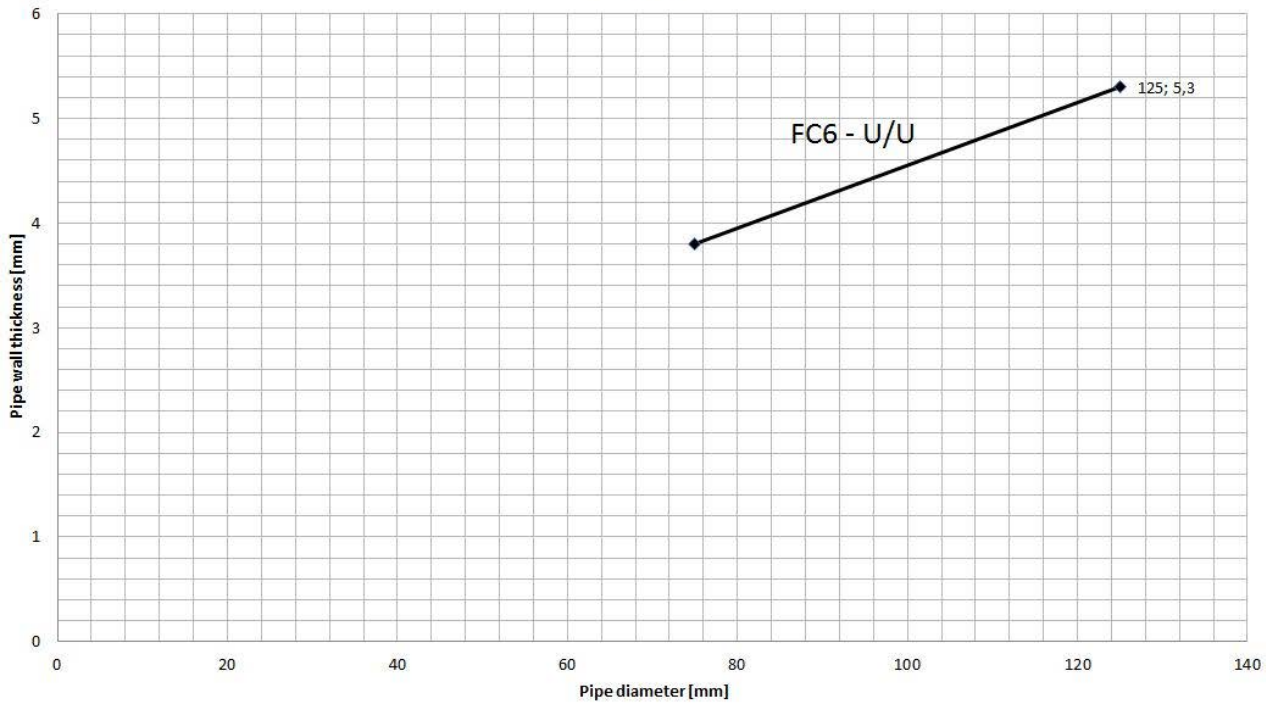
Poloplast PoloKal 3S or equal products					
Rigid floor	≥ 150	Ø 75 / t_D 3,8 - Ø 160 / t_D 7,5	FC3	under the floor	EI120-U/U

Poloplast PoloKal 3S pipes with PROMASTOP-FC collar, placed on rigid floor construction (thickness ≥ 150 mm, density ≥ 450 kg/m³)
EI120-U/U



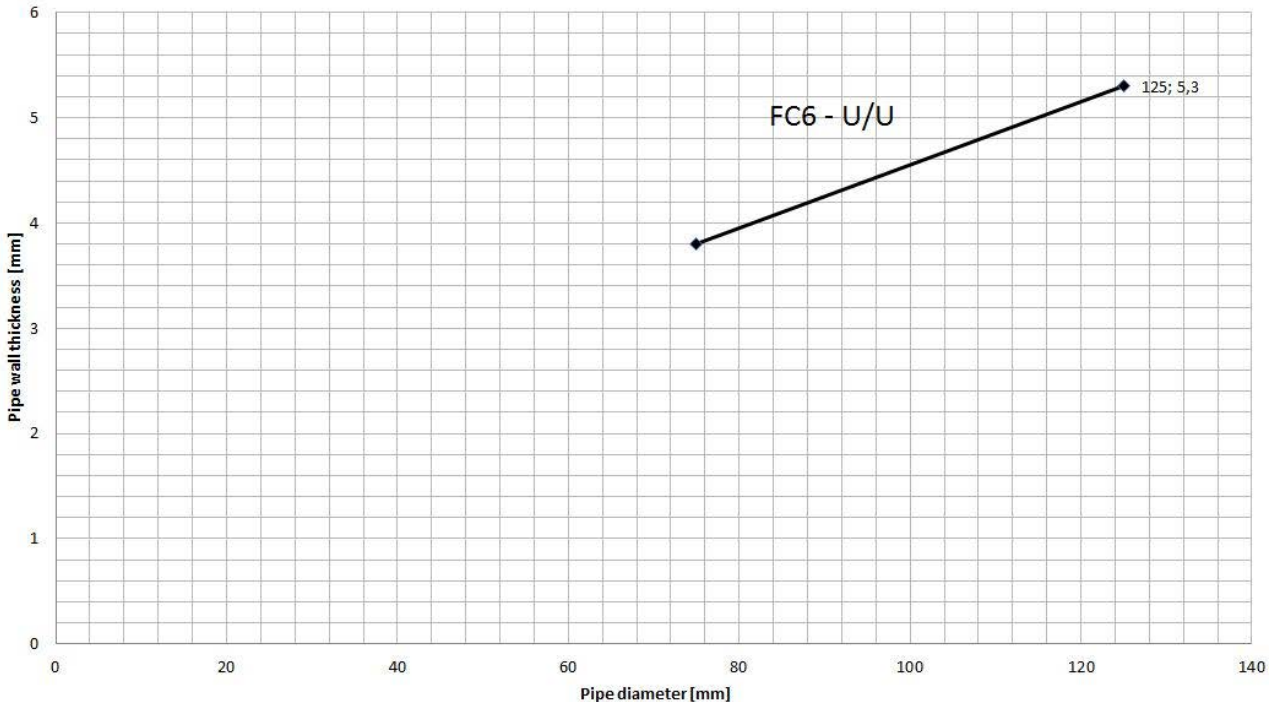
Poloplast PoloKal 3S or equal products					
Rigid floor	≥ 150	Pipe with socket, max. Ø 125	FC6	under the floor	EI120-U/U

Poloplast PoloKal 3S pipes with sockets with PROMASTOP-FC collar placed on rigid floor construction (thickness ≥ 150 mm, density ≥ 450 kg/m³)
EI120-U/U



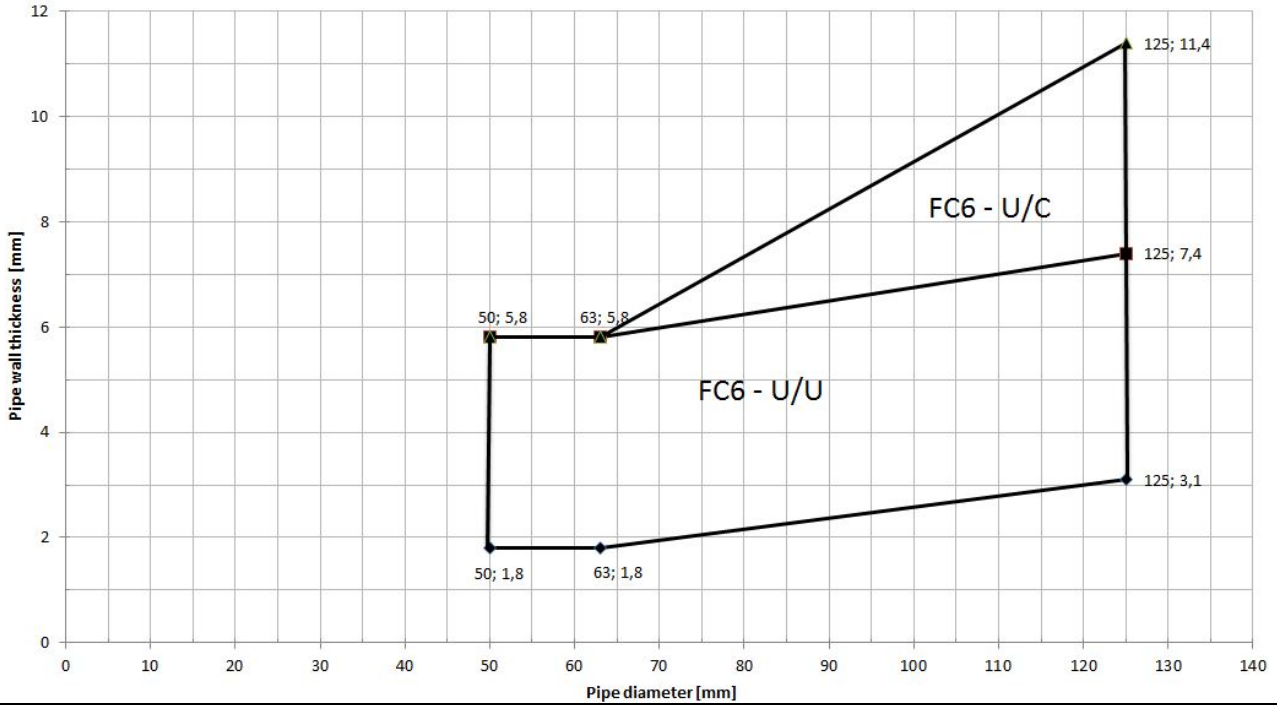
Poloplast PoloKal 3S or equal products					
Rigid floor	≥ 150	Sloped pipe (to 45°), max. Ø 125	FC6	under the floor	EI120-U/U

Poloplast PoloKal 3S pipes (sloped to 45°) with PROMASTOP-FC collar placed on rigid floor construction (thickness ≥ 150 mm, density ≥ 450 kg/m³)
EI120-U/U



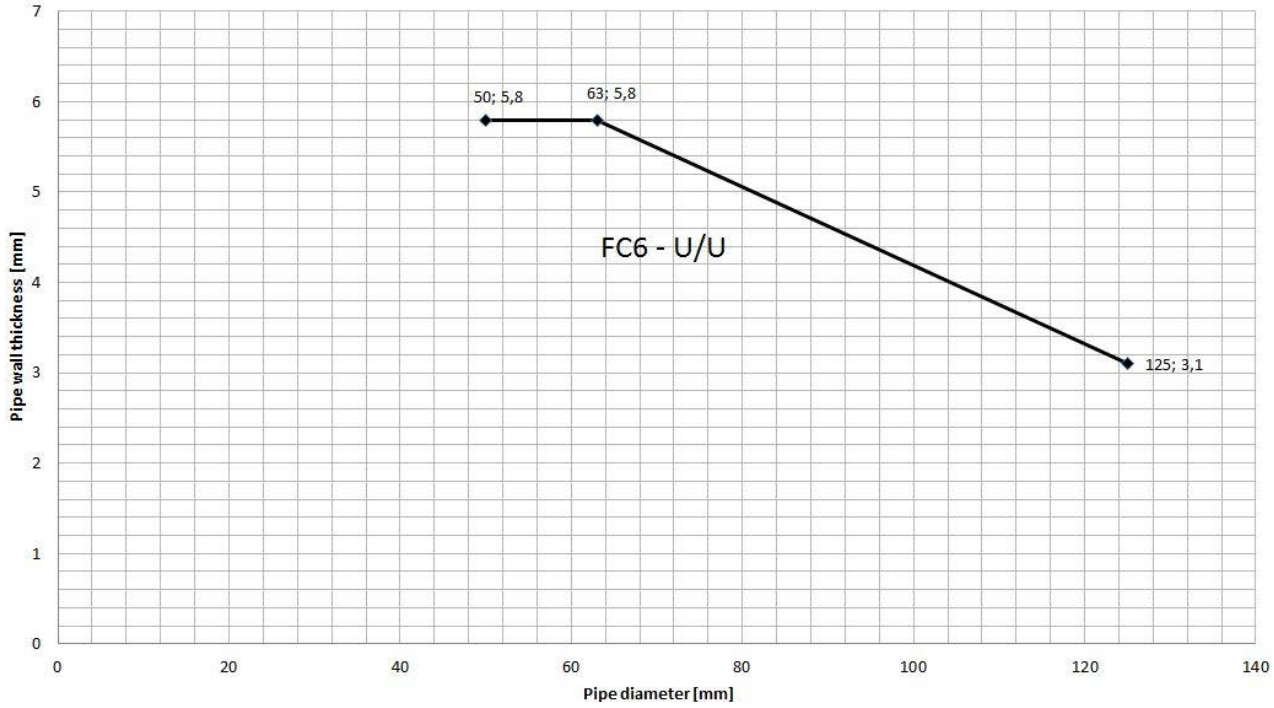
PE-HD					
Shaft wall without insulation	≥ 50	Ø 50 / t_D 1,8 - Ø 125 / t_D 11,4	FC6	inverse in the wall	EI90-U/U EI90-U/C

PE-HD pipes with one PROMASTOP-FC6 collar in a shaft wall (thickness boards ≥ 50 mm), tested from both sides
EI90-U/U or -U/C



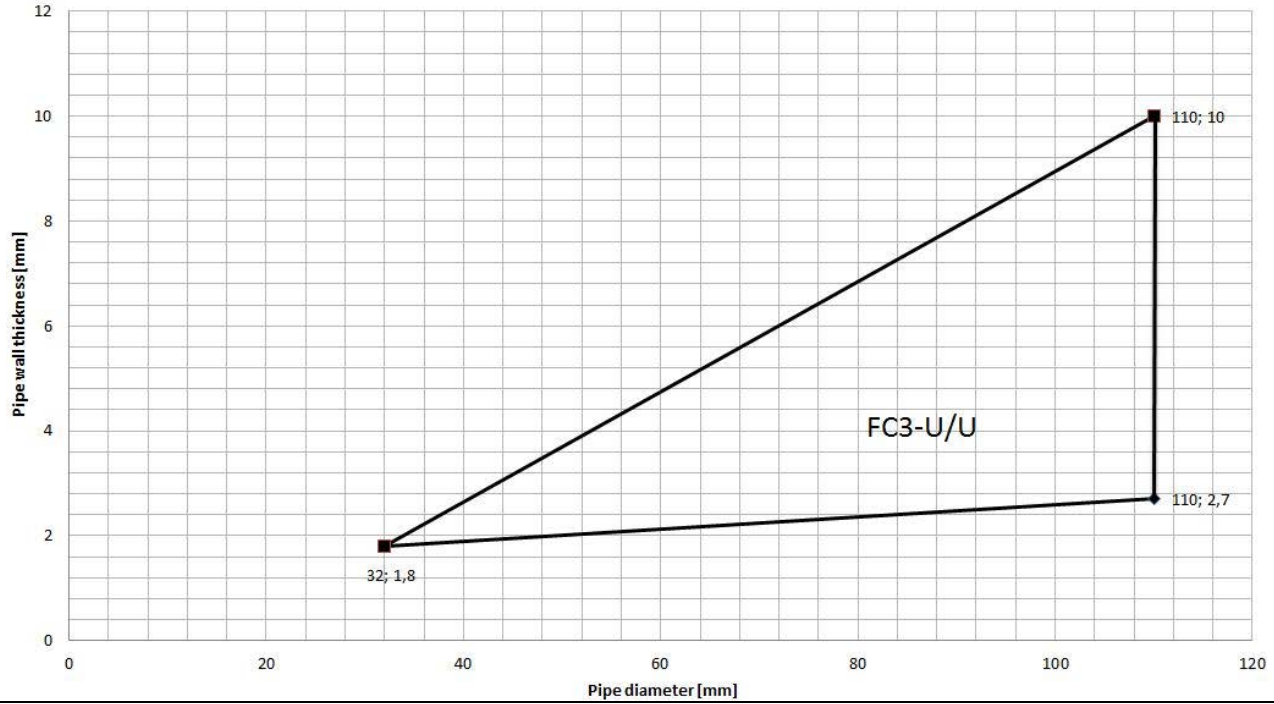
PE-HD					
Shaft wall without insulation	≥ 50	Ø 50 / t_D 5,8 - Ø 125 / t_D 3,1	FC6	inverse in the wall	EI120-U/U EI120-U/C

PE-HD pipes with one PROMASTOP-FC6 collar in a shaft wall (thickness boards ≥ 50 mm), tested from both sides
EI120-U/U



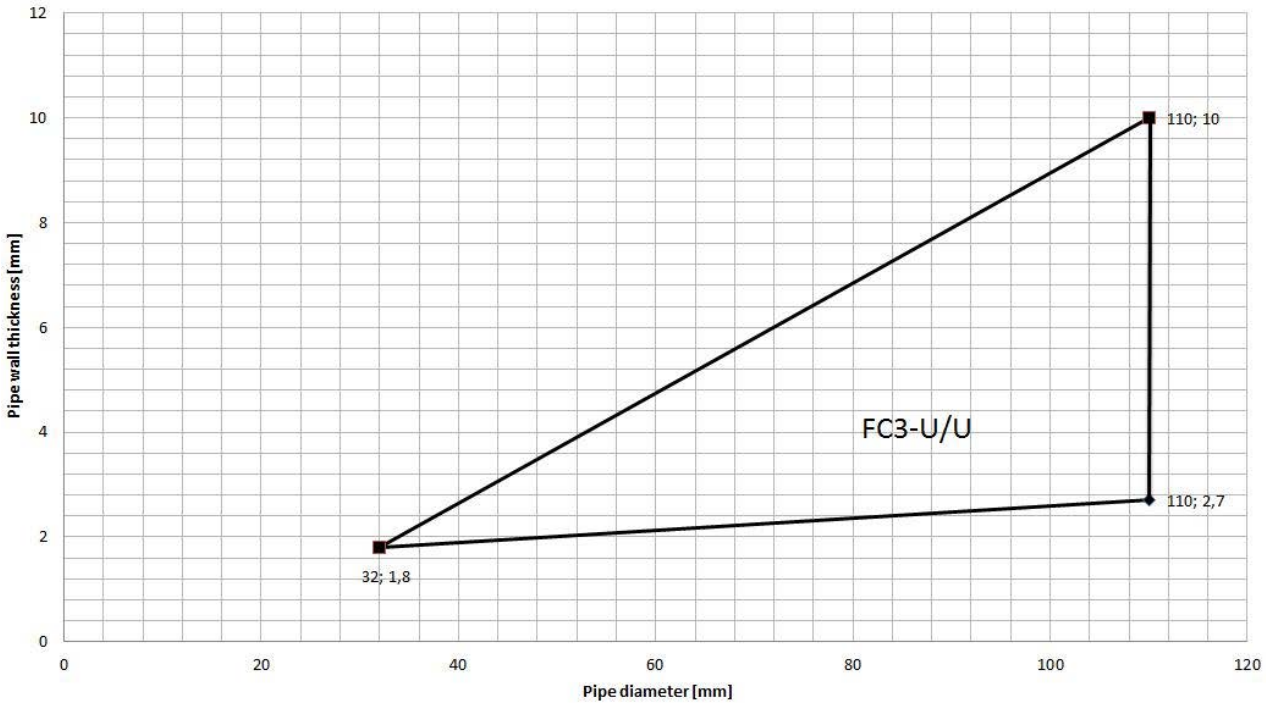
PE-HD					
Flexible wall + PROMASTOP-I (1 x 50 mm) seal	≥ 100	Ø 32 / t_D 1,8 - Ø 110 / t_D 10,0	FC3	on the seal	EI45-U/U

PP-H, PP-R and PE-HD pipes with PROMASTOP-FC collar on penetration seal PROMASTOP-I (1 x 50 mm) in flexible wall and rigid wall construction (thickness ≥ 100 mm)
EI45-U/U



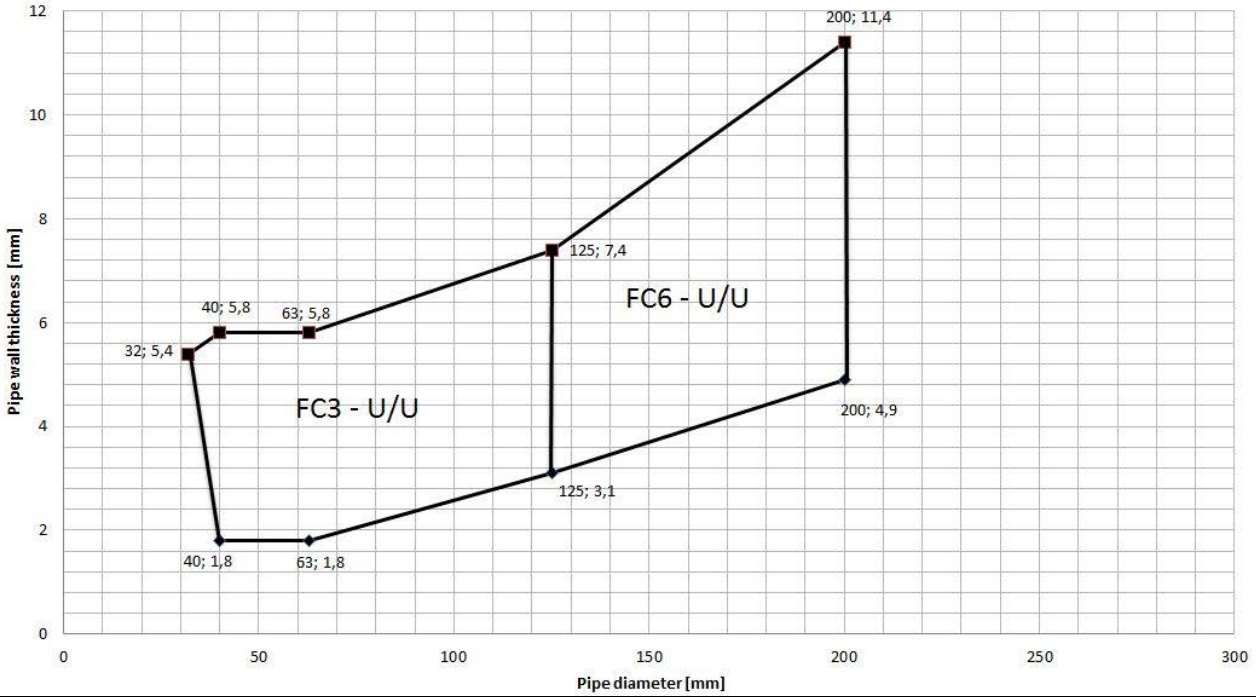
PE-HD					
Rigid wall + PROMASTOP-I (1 x 50 mm) seal	≥ 100	Ø 32 / t_D 1,8 - Ø 110 / t_D 10,0	FC3	on the seal	EI45-U/U

PP-H, PP-R and PE-HD pipes with PROMASTOP-FC collar on penetration seal PROMASTOP-I (1 x 50 mm) in flexible wall and rigid wall construction (thickness ≥ 100 mm)
EI45-U/U



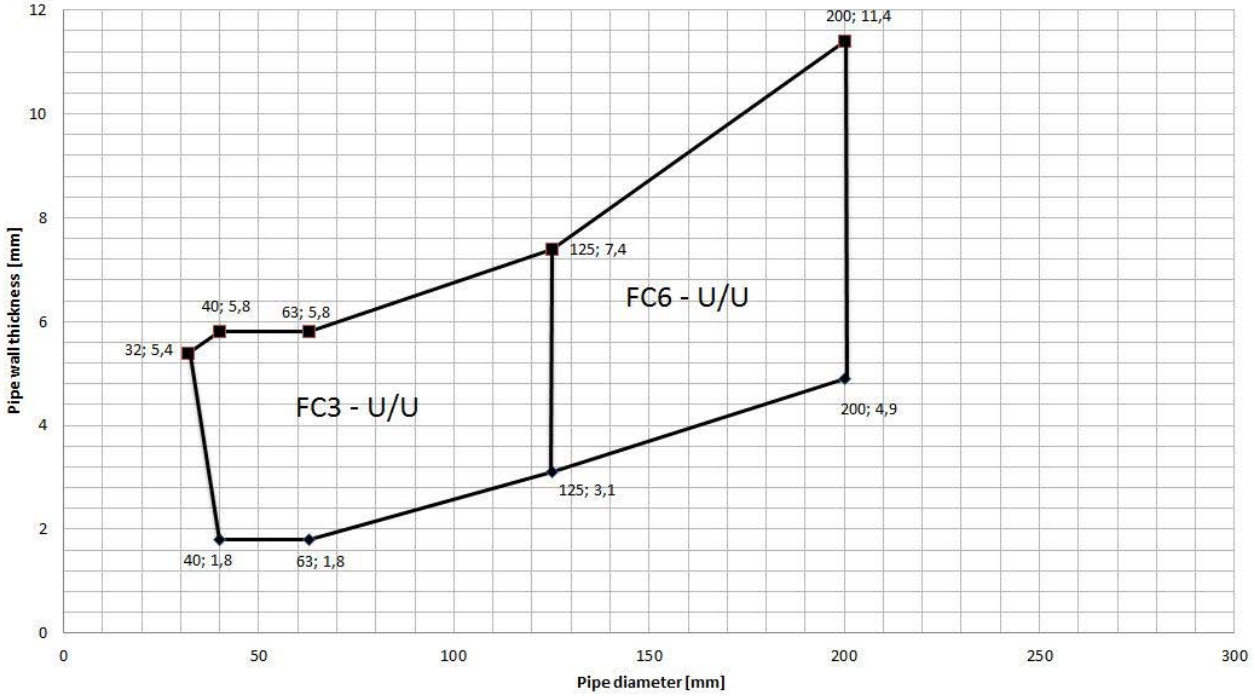
PE-HD					
Flexible wall	≥ 100	Ø 40 / t_D 1,8 - Ø 200 / t_D 11,4	FC3/6	on the wall	EI90-U/U

PE-HD pipes with PROMASTOP-FC collar on flexible wall and rigid wall construction (thickness ≥ 100 mm)
EI90-U/U



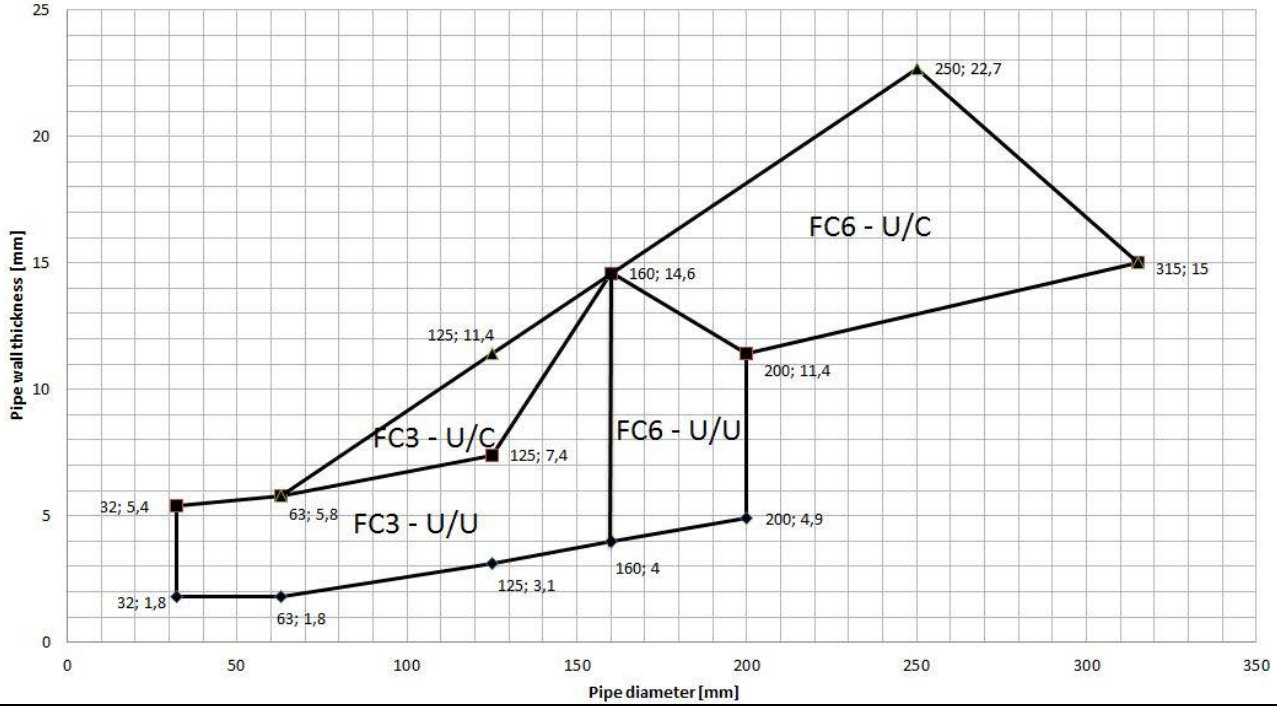
PE-HD					
Rigid wall	≥ 100	Ø 40 / t_D 1,8 - Ø 200 / t_D 11,4	FC3/6	on the wall	EI90-U/U

PE-HD pipes with PROMASTOP-FC collar on flexible wall and rigid wall construction (thickness ≥ 100 mm)
EI90-U/U



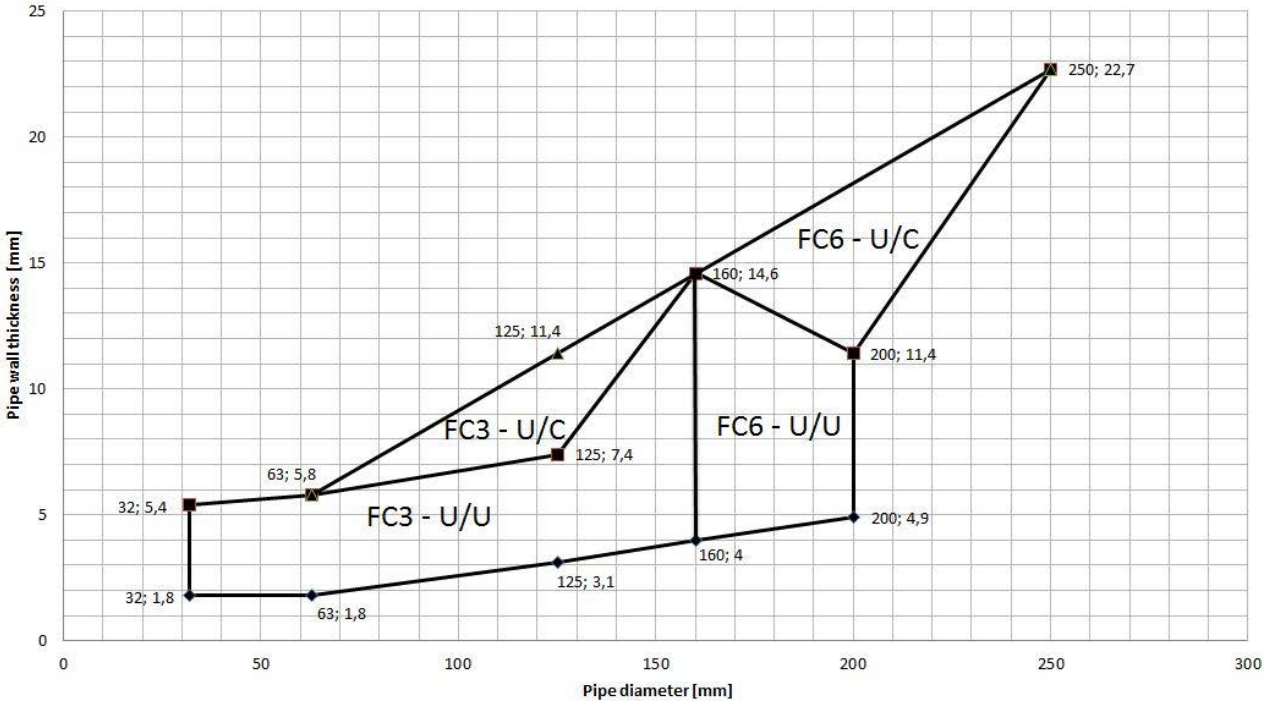
PE-HD					
Rigid wall	≥ 100	Ø 32 / t_D 1,8 - Ø 315 / t_D 15,0	FC3/6	on the wall	EI90-U/U EI90-U/C

PE-HD pipes with PROMASTOP-FC collar placed on rigid wall construction (thickness ≥ 100 mm, density ≥ 450 kg/m³)
EI90-U/U or -U/C



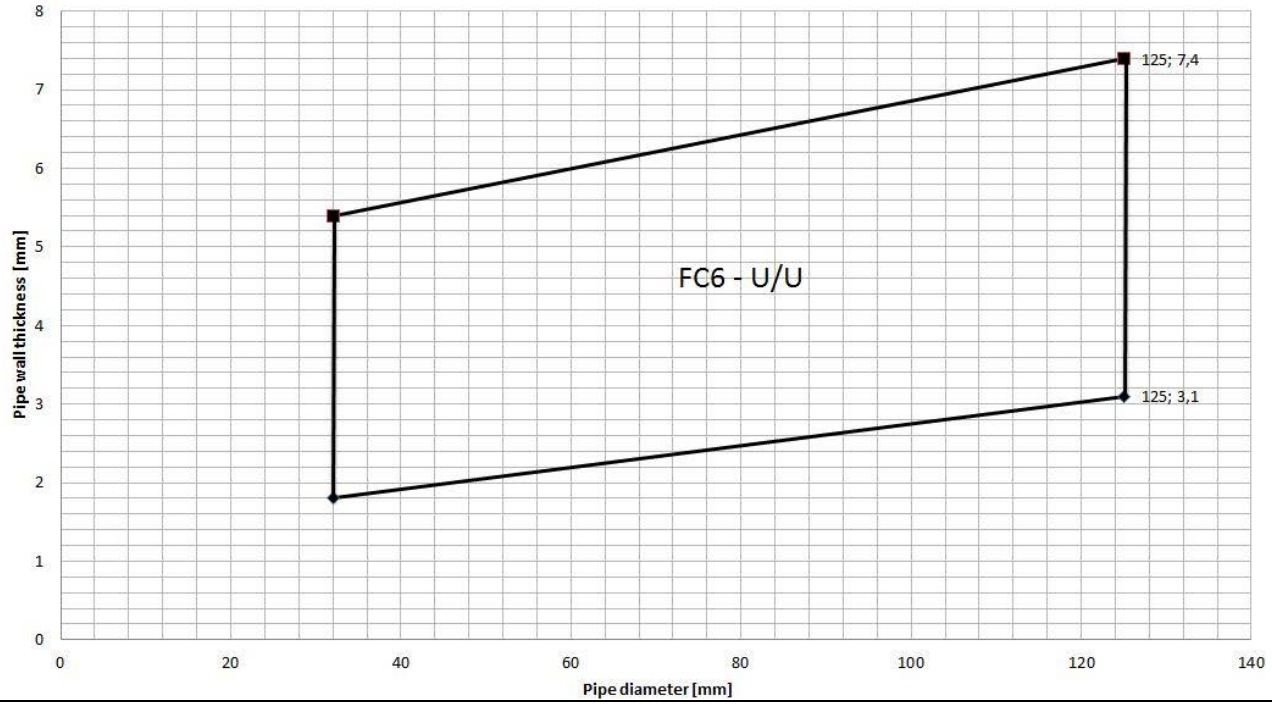
PE-HD					
Rigid wall	≥ 100	Ø 32 / t_D 1,8 - Ø 250 / t_D 22,7	FC3/6	on the wall	EI120-U/U EI120-U/C

PE-HD pipes with PROMASTOP-FC collar placed on rigid wall construction (thickness ≥ 100 mm, density ≥ 450 kg/m³)
EI120-U/U or -U/C



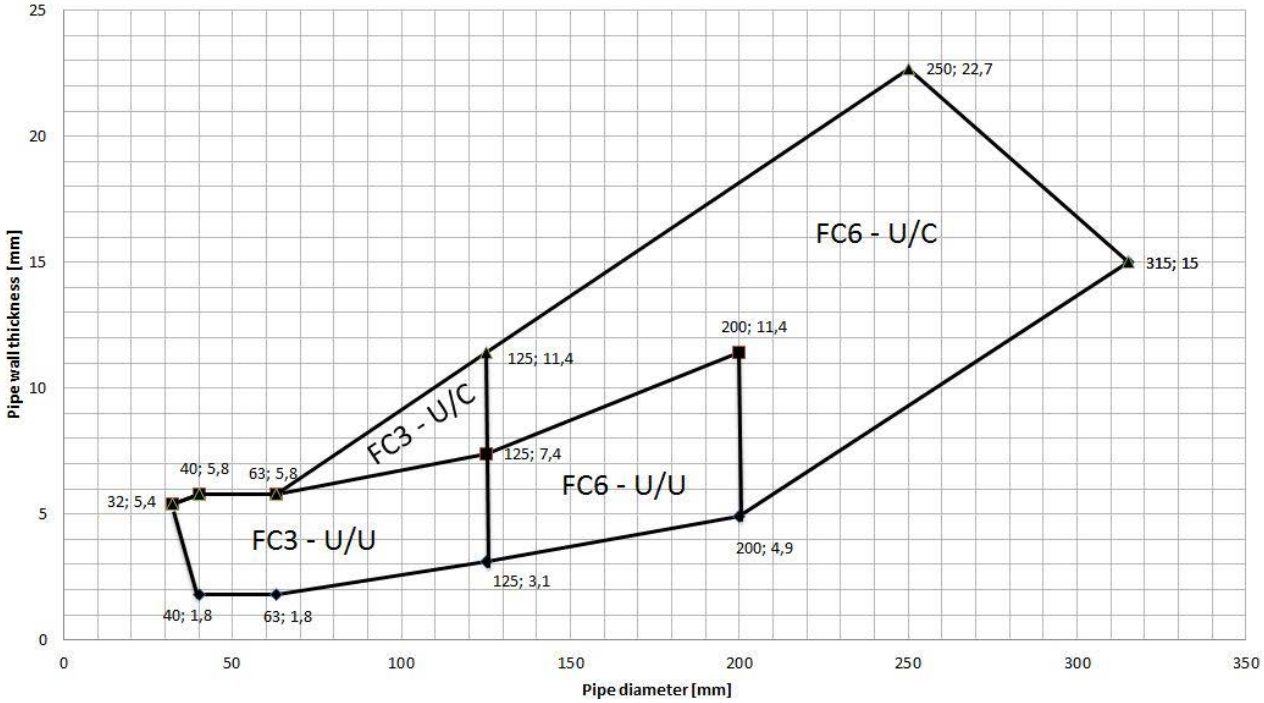
PE-HD					
Rigid wall	≥ 100	Sloped pipe (to 45°), max. Ø 125	FC6	on the wall	EI120-U/U

PE-HD pipes (sloped to 45°) with PROMASTOP-FC collar placed on rigid wall construction (thickness ≥ 100 mm, density ≥ 450 kg/m³)
EI120-U/U



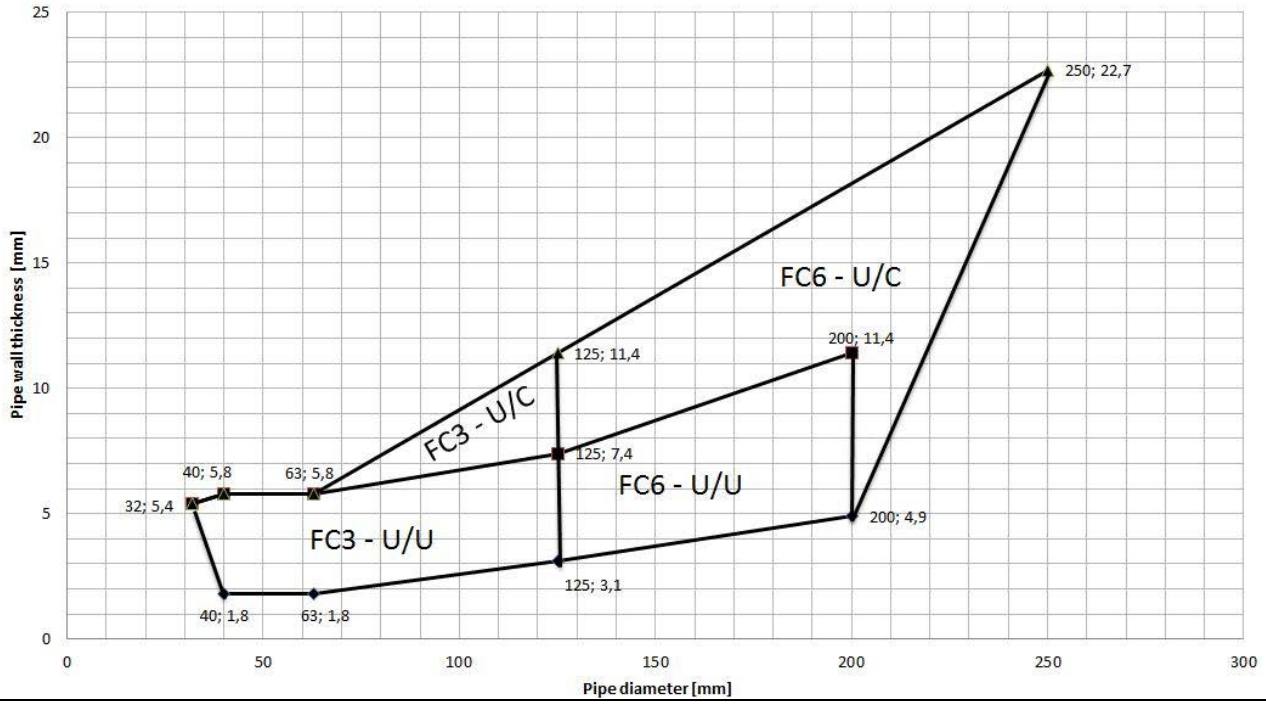
PE-HD					
Rigid wall	≥ 150	Ø 40 / t_D 1,8 - Ø 315 / t_D 15,0	FC3/6	mortared in	EI90-U/U EI90-U/C

PE-HD pipes with PROMASTOP-FC collar, mortared in rigid wall construction (thickness ≥ 150 mm, density ≥ 450 kg/m³) EI90-U/U or -U/C



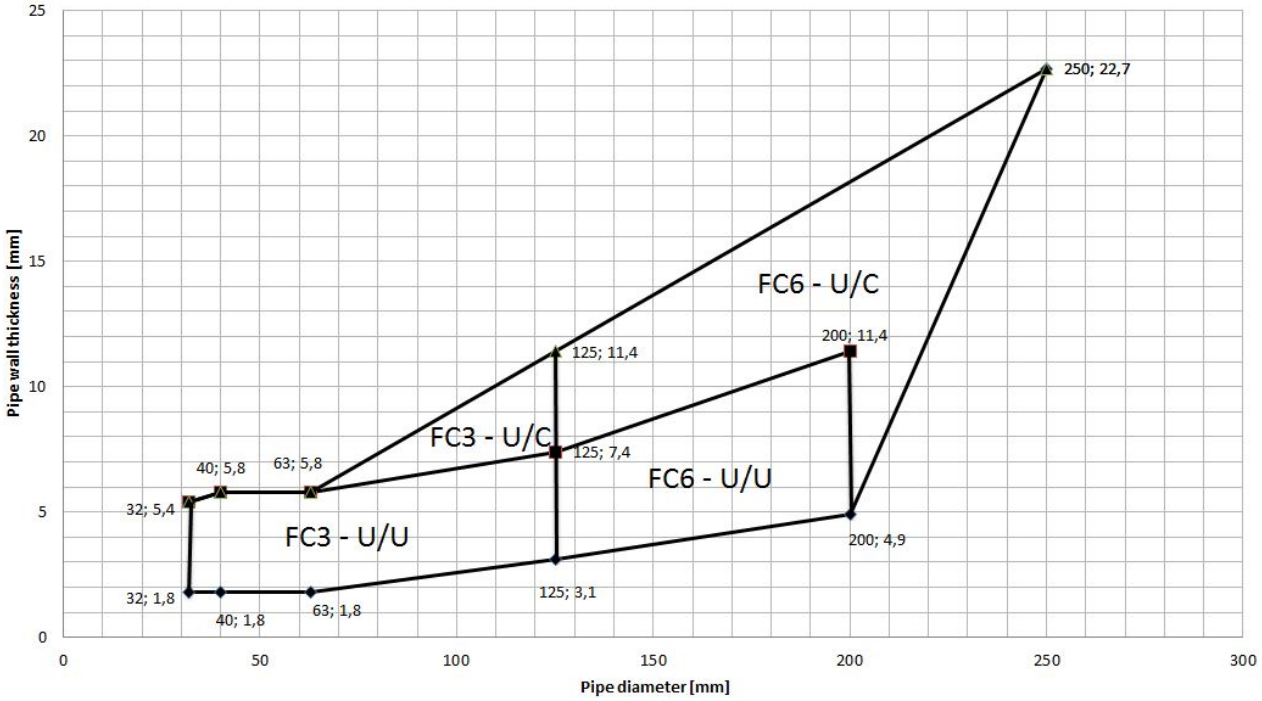
PE-HD					
Rigid wall	≥ 150	Ø 40 / t_D 1,8 - Ø 250 / t_D 22,7	FC3/6	mortared in	EI120-U/U EI120-U/C

PE-HD pipes with PROMASTOP-FC collar, mortared in rigid wall construction (thickness ≥ 150 mm, density ≥ 450 kg/m³) EI120-U/U or -U/C



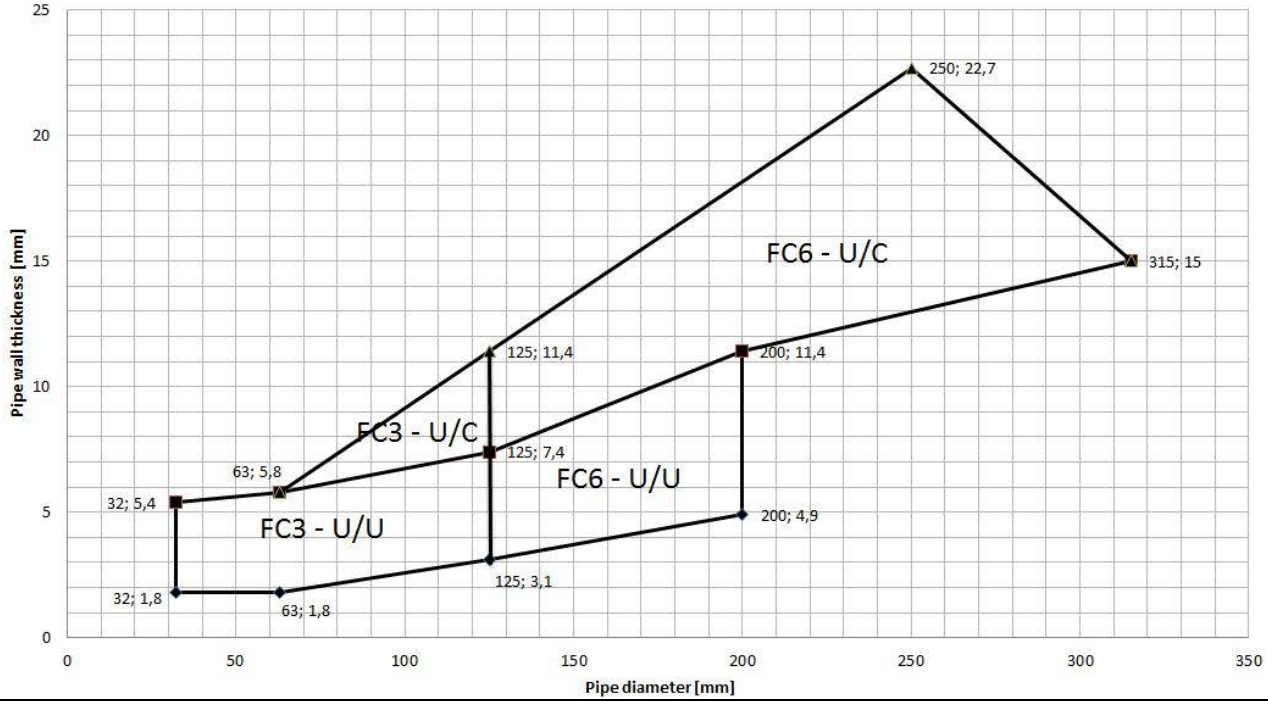
PE-HD					
Rigid floor	≥ 150	Ø 32 / t_D 1,8 - Ø 250 / t_D 22,7	FC3/6	mortared in	EI120-U/U EI120-U/C

PE-HD pipes with PROMASTOP-FC collar, mortared in rigid floor construction (thickness ≥ 150 mm, density ≥ 450 kg/m³)
EI120-U/U or -U/C



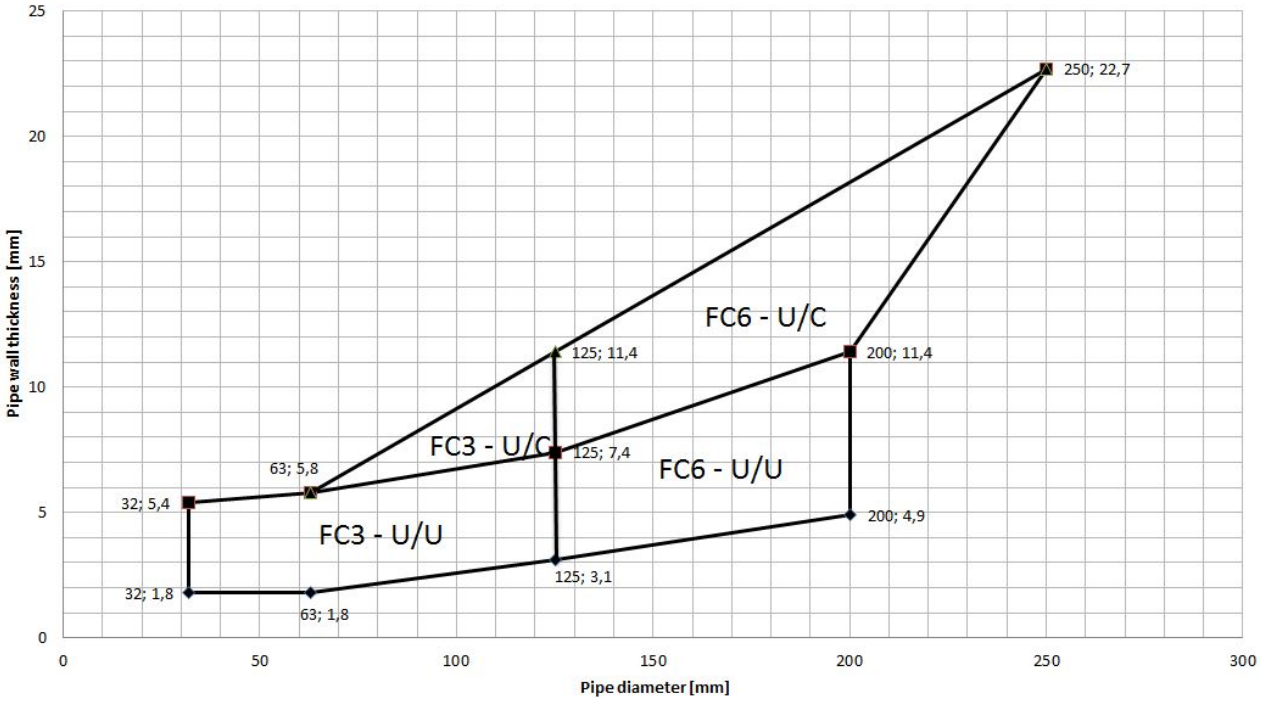
PE-HD					
Rigid floor	≥ 150	Ø 32 / t_D 1,8 - Ø 315 / t_D 15,0	FC3/6	under the floor	EI90-U/U EI90-U/C

PE-HD pipes with PROMASTOP-FC collar, placed on rigid floor construction (thickness ≥ 150 mm, density ≥ 450 kg/m³)
EI90-U/U



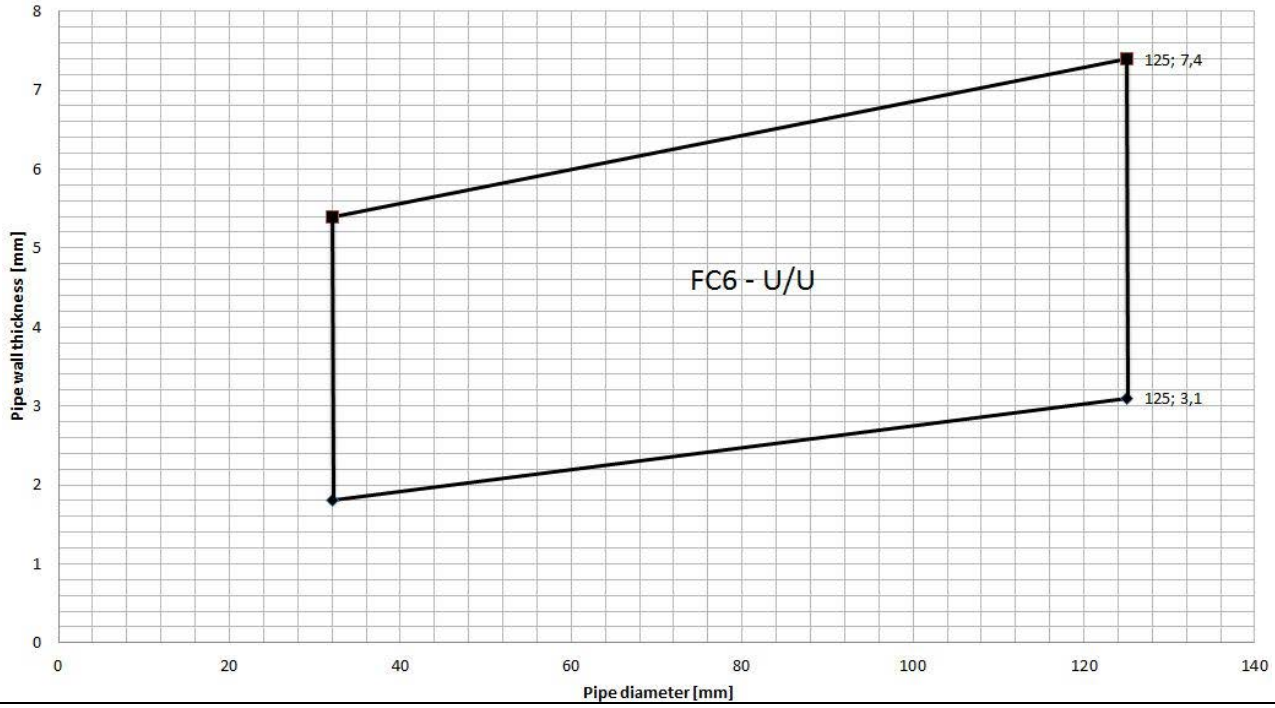
PE-HD					
Rigid floor	≥ 150	Ø 32 / t_D 1,8 - Ø 250 / t_D 22,7	FC3/6	under the floor	EI120-U/U EI120-U/C

PE-HD pipes with PROMASTOP-FC collar, placed on rigid floor construction (thickness ≥ 150 mm, density ≥ 450 kg/m³)
EI120-U/U



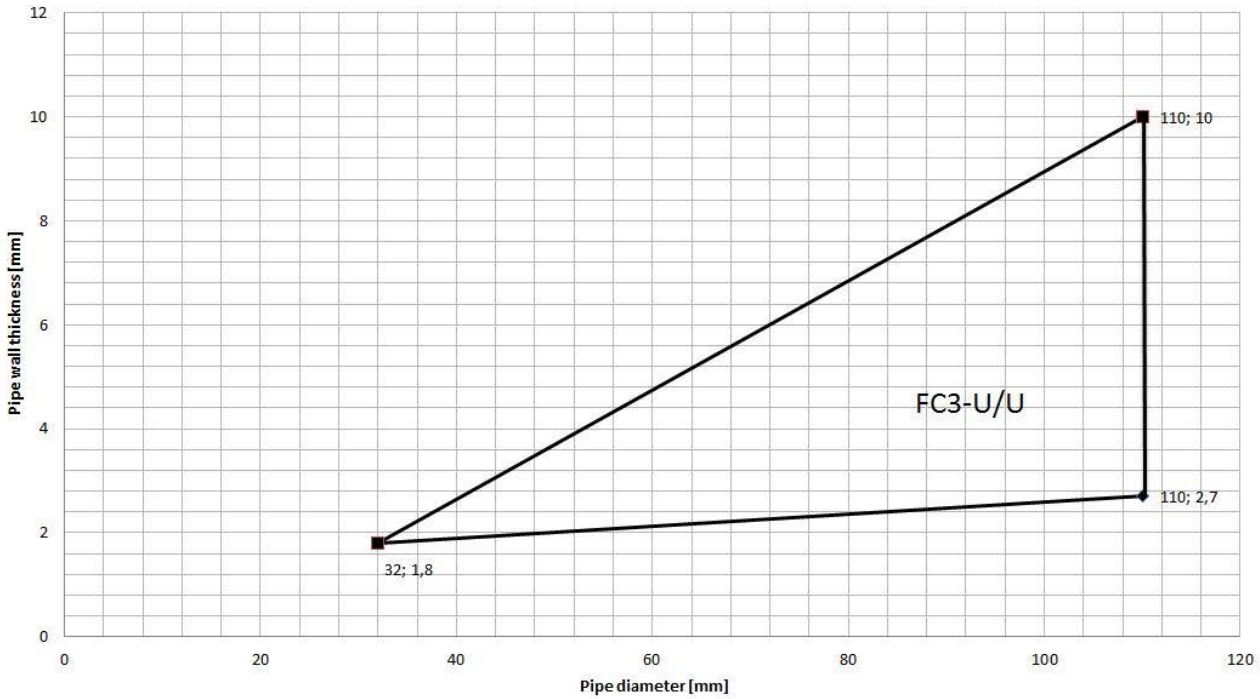
PE-HD					
Rigid floor	≥ 150	Sloped pipe (to 45°), max. Ø 125	FC6	under the floor	EI120-U/U

PE-HD pipes (sloped to 45°) with PROMASTOP-FC collar placed on rigid floor construction (thickness ≥ 150 mm, density ≥ 450 kg/m³)
EI120-U/U



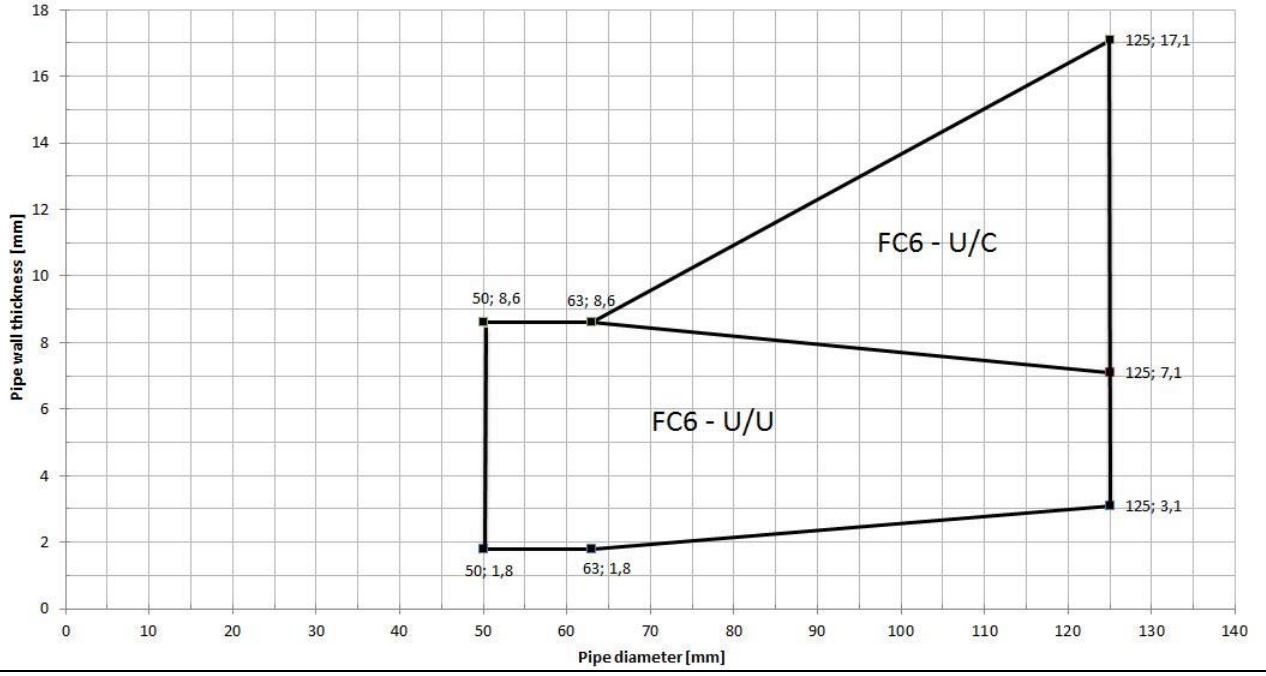
PE-HD					
Rigid floor + PROMASTOP-I (1 x 50 mm) seal	≥ 150	Ø 32 / t_D 1,8 - Ø 110 / t_D 10,0	FC3	under the seal	EI90-U/U

PP-H, PP-R and PE-HD pipes with PROMASTOP-FC collar on penetration seal PROMASTOP-I (1 x 50 mm) in rigid floor construction (thickness ≥ 150 mm, density ≥ 450 kg/m³)
EI90-U/U



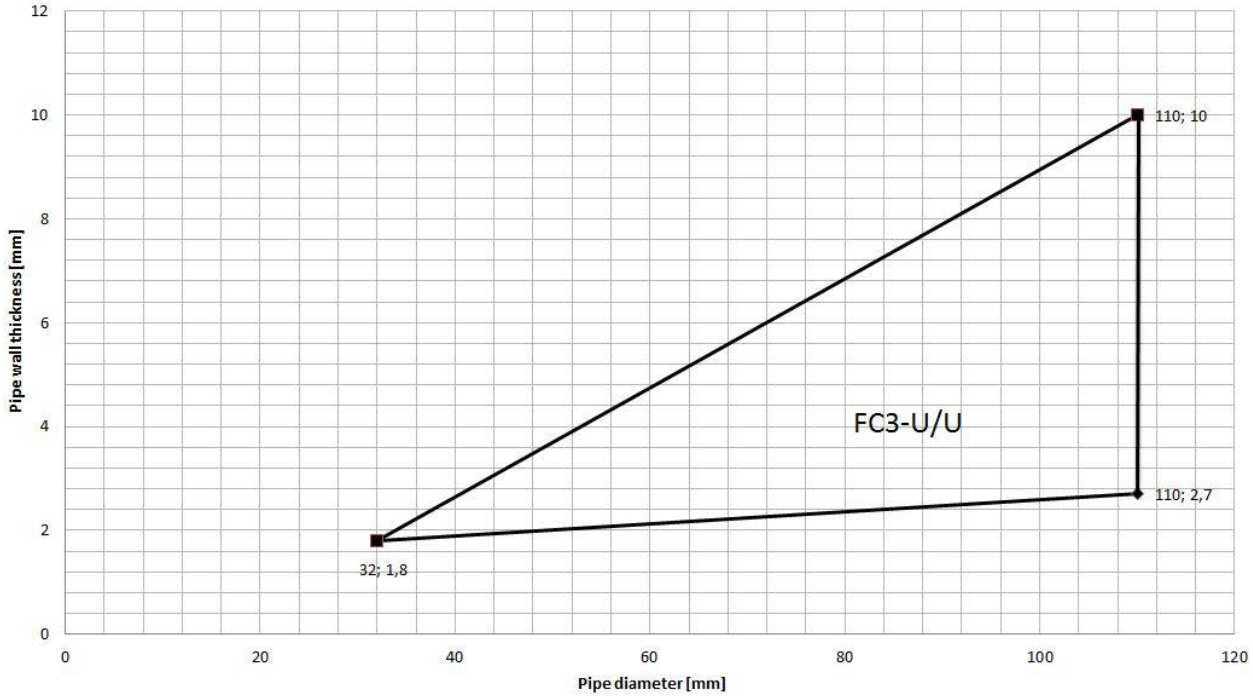
PP-H / PP-R					
Shaft wall without insulation	≥ 50	Ø 50 / t_D 1,8 - Ø 125 / t_D 17,1	FC6	inverse in the wall	EI90-U/U EI90-U/C

PP-H and PP-R pipes with one PROMASTOP-FC6 collar in a shaft wall (thickness boards ≥ 50 mm), tested from both sides
EI90-U/U or -U/C



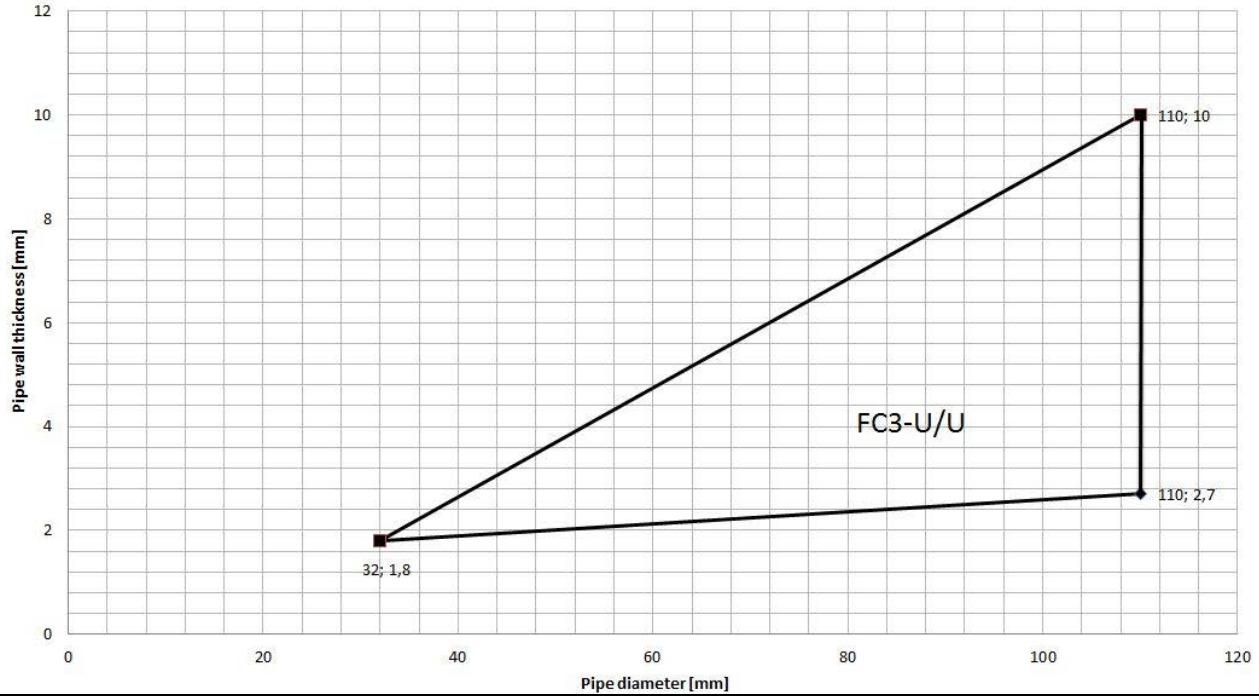
PP-H / PP-R					
Flexible wall + PROMASTOP-I (1 x 50 mm) seal	≥ 100	Ø 32 / t_D 1,8 - Ø 110 / t_D 10,0	FC3	on the seal	EI45-U/U

PP-H, PP-R and PE-HD pipes with PROMASTOP-FC collar on penetration seal PROMASTOP-I (1 x 50 mm) in flexible wall and rigid wall construction (thickness ≥ 100 mm)
EI45-U/U



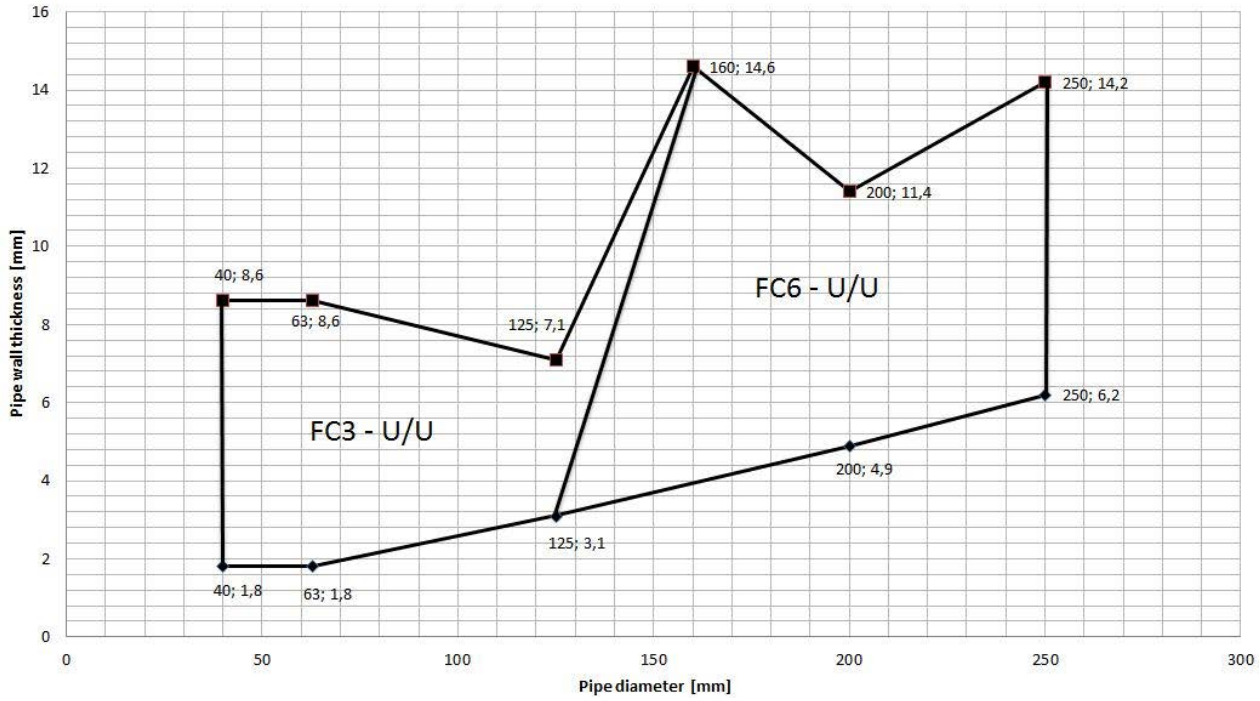
PP-H / PP-R					
Rigid wall + PROMASTOP-I (1 x 50 mm) seal	≥ 100	Ø 32 / t_D 1,8 - Ø 110 / t_D 10,0	FC3	on the seal	EI45-U/U

PP-H, PP-R and PE-HD pipes with PROMASTOP-FC collar on penetration seal PROMASTOP-I (1 x 50 mm) in flexible wall and rigid wall construction (thickness ≥ 100 mm)
EI45-U/U



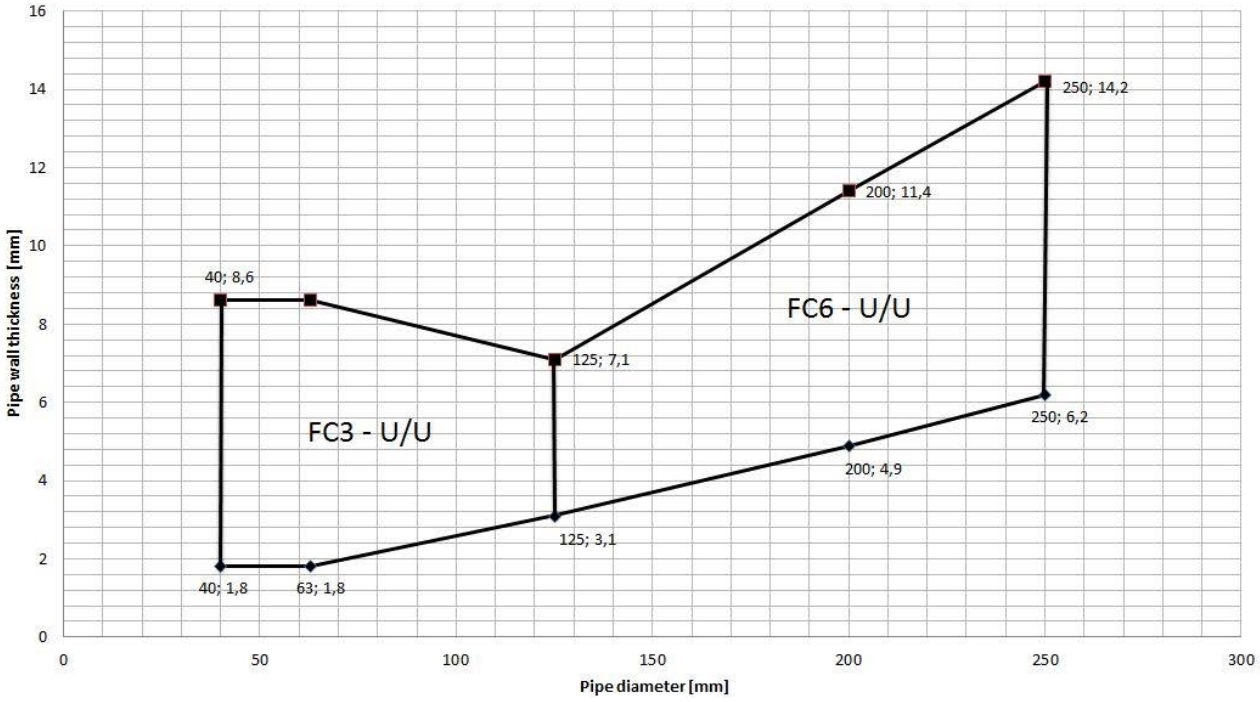
PP-H / PP-R					
Flexible wall	≥ 100	Ø 40 / t_D 1,8 - Ø 250 / t_D 14,2	FC3/6	on the wall	EI90-U/U

PP-H and PP-R pipes with PROMASTOP-FC collar on flexible wall and rigid wall construction (thickness ≥ 100 mm) EI90-U/U



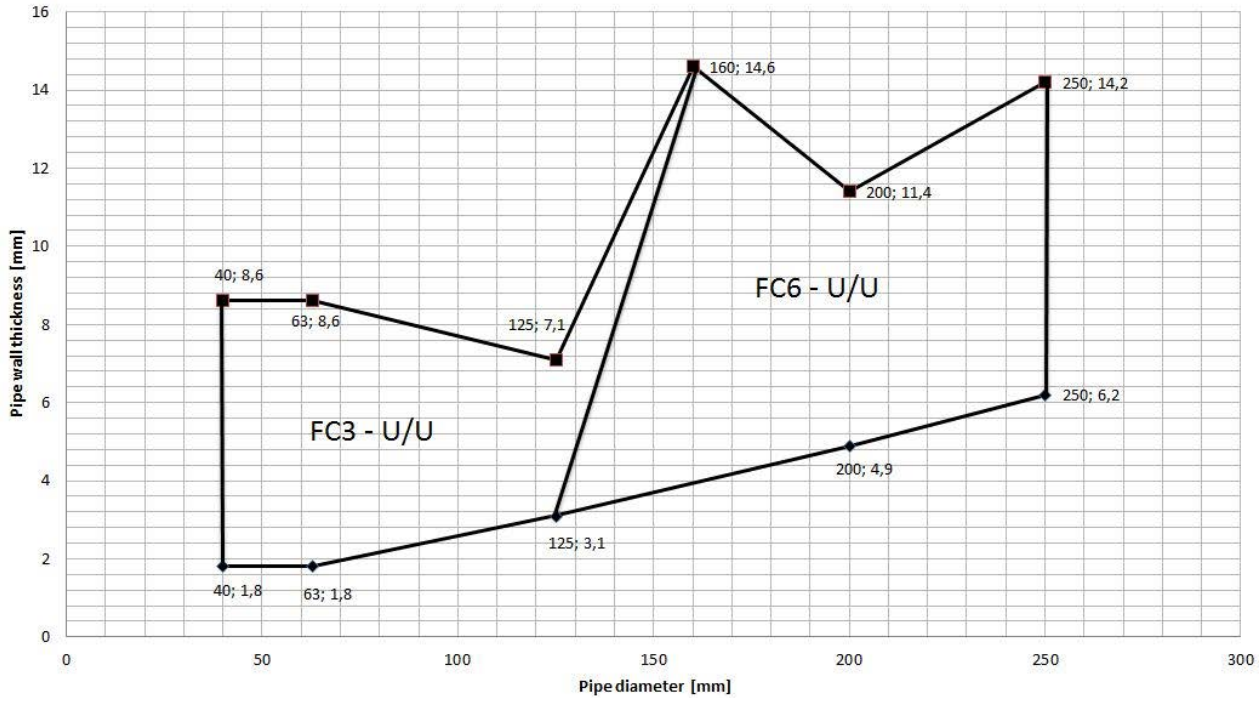
PP-H / PP-R					
Flexible wall	≥ 100	Ø 40 / t_D 1,8 - Ø 250 / t_D 14,2	FC3/6	on the wall	EI120-U/U

PP-H and PP-R pipes with PROMASTOP-FC collar on flexible wall and rigid wall construction (thickness ≥ 100 mm) EI120-U/U



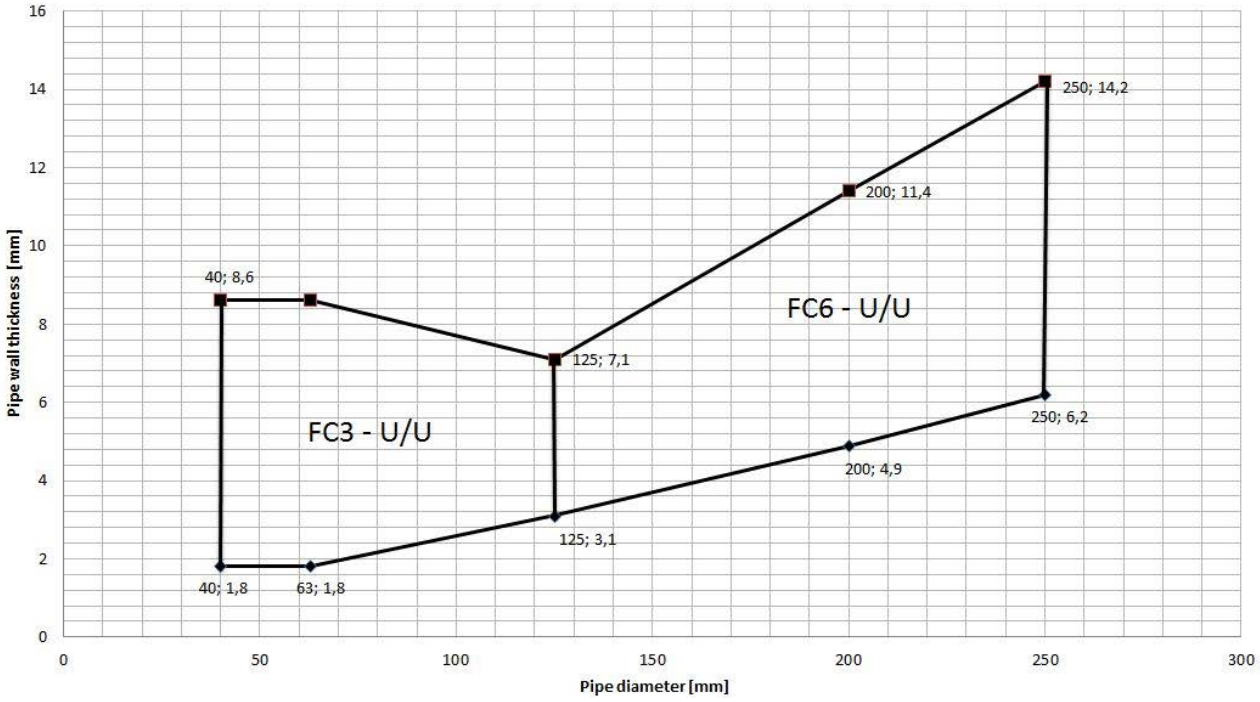
PP-H / PP-R					
Rigid wall	≥ 100	Ø 40 / t_D 1,8 - Ø 250 / t_D 14,2	FC3/6	on the wall	EI90-U/U

PP-H and PP-R pipes with PROMASTOP-FC collar on flexible wall and rigid wall construction (thickness ≥ 100 mm) EI90-U/U



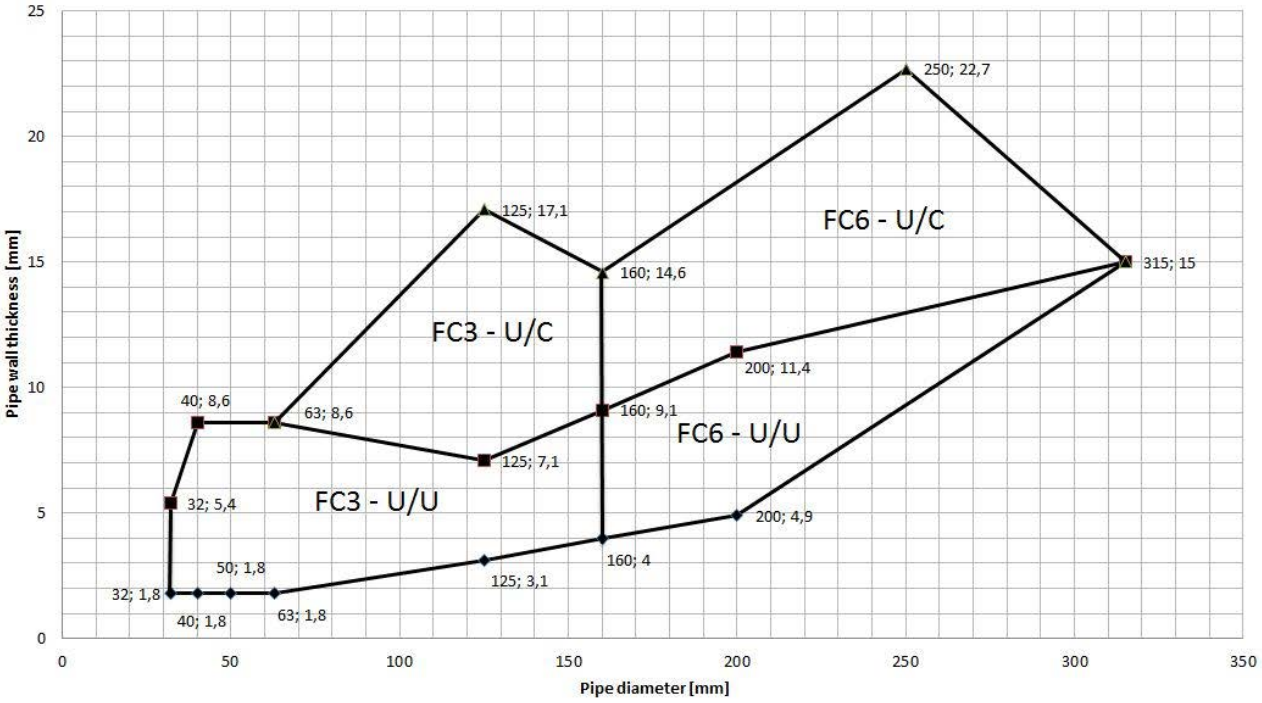
PP-H / PP-R					
Rigid wall	≥ 100	Ø 40 / t_D 1,8 - Ø 250 / t_D 14,2	FC3/6	on the wall	EI120-U/U

PP-H and PP-R pipes with PROMASTOP-FC collar on flexible wall and rigid wall construction (thickness ≥ 100 mm) EI120-U/U



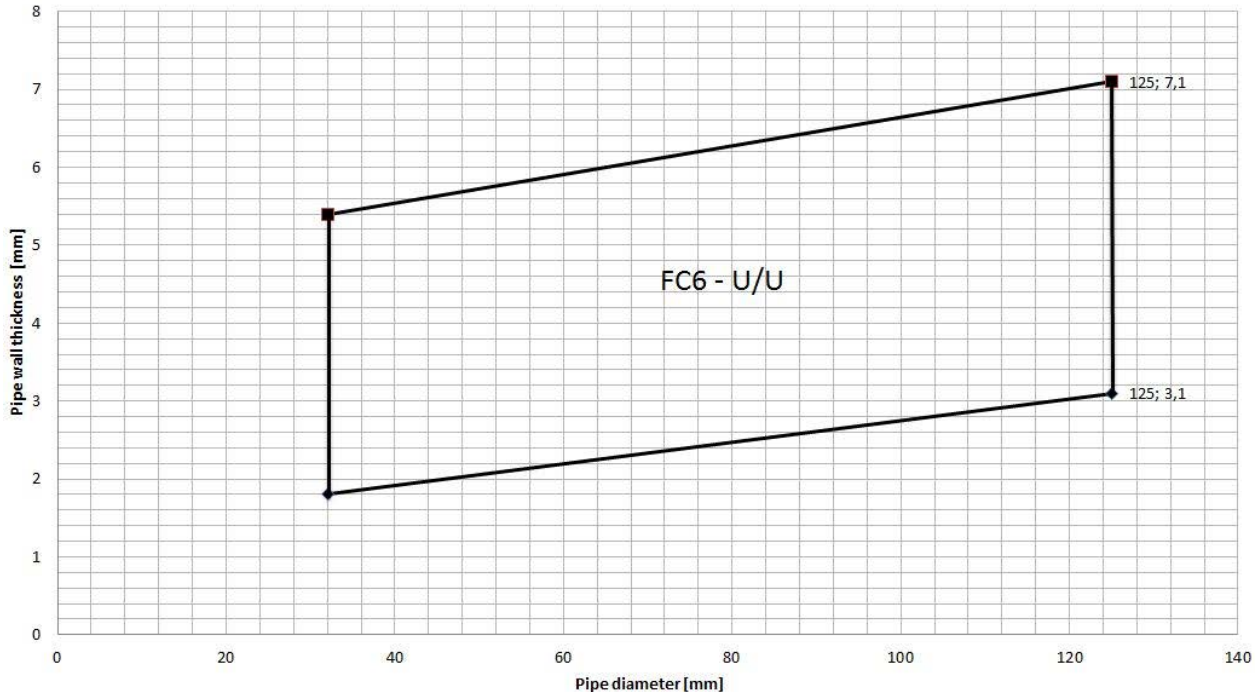
PP-H / PP-R					
Rigid wall	≥ 100	Ø 32 / t_D 1,8 - Ø 315 / t_D 15,0	FC3/6	on the wall	EI120-U/U EI120-U/C

PP-H and PP-R pipes with PROMASTOP-FC collar placed on rigid wall construction (thickness ≥ 100 mm, density ≥ 450 kg/m³)
EI120-U/U or -U/C



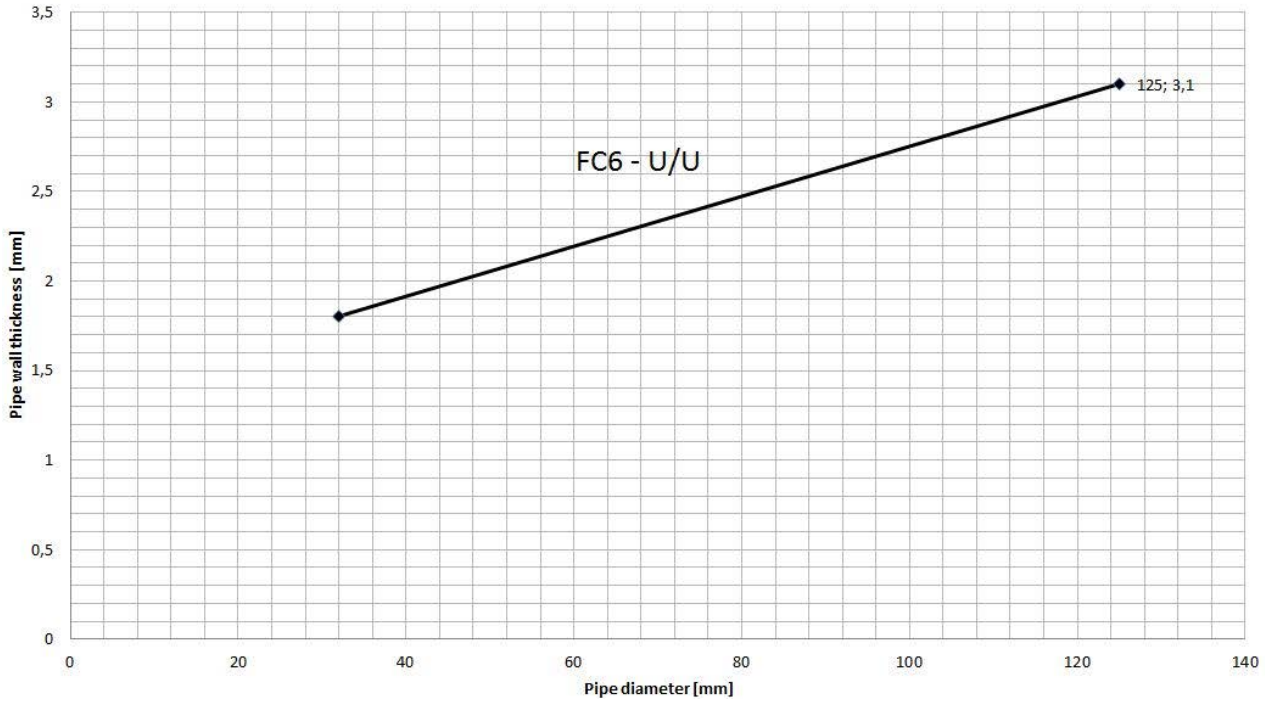
PP-H / PP-R					
Rigid wall	≥ 100	Sloped pipe (to 45°), max. Ø 125	FC6	on the wall	EI90-U/U

PP-H and PP-R pipes (sloped to 45°) with PROMASTOP-FC collar placed on rigid wall construction (thickness ≥ 100 mm, density ≥ 450 kg/m³)
EI90-U/U



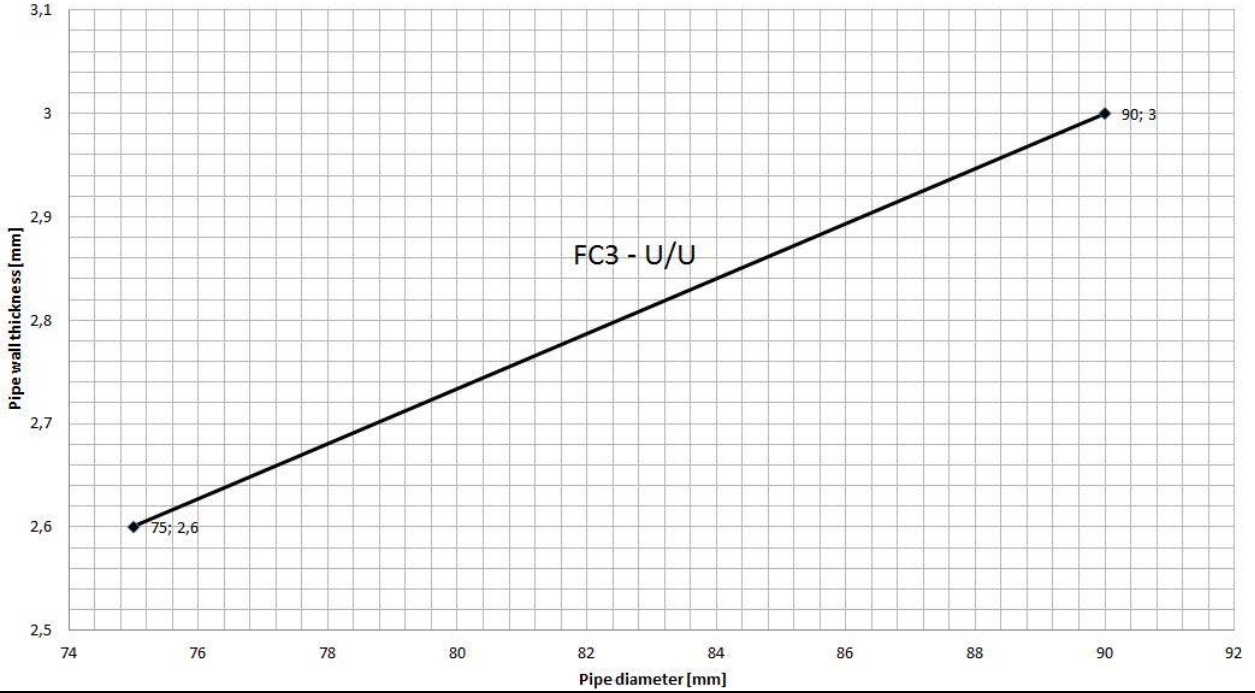
PP-H / PP-R					
Rigid wall	≥ 100	Sloped pipe (to 45°), max. Ø 125	FC6	on the wall	EI120-U/U

PP-H and PP-R pipes (sloped to 45°) with PROMASTOP-FC collar placed on rigid wall construction (thickness ≥ 100 mm, density ≥ 450 kg/m³) EI120-U/U



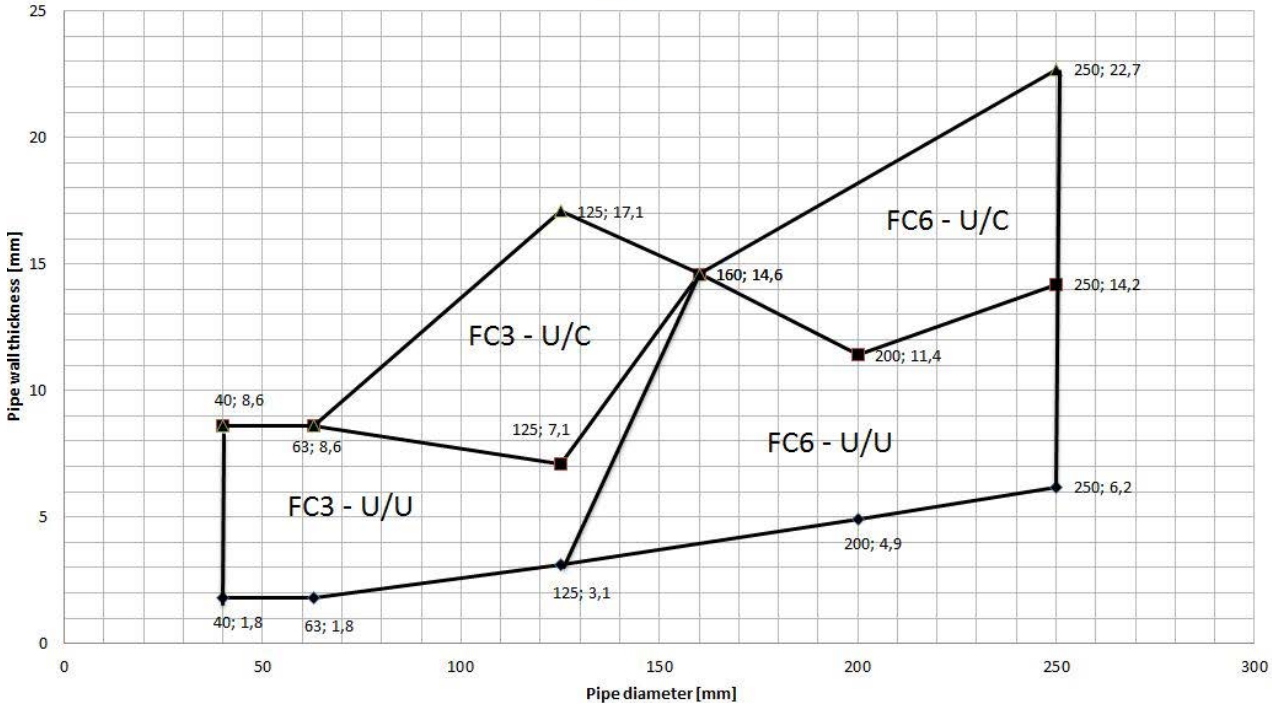
PP-H / PP-R					
Rigid wall + PROMASTOP-I (2 x 50 mm) seal	≥ 100	Ø 75 / t_D 2,6 - Ø 90 / t_D 3,0	FC3	in the seal	EI120-U/U

PP-H and PP-R pipes with PROMASTOP-FC collar in penetration seal PROMASTOP-I (2 x 50 mm) in rigid wall construction (thickness ≥ 100 mm, density ≥ 450 kg/m³) or rigid floor construction (thickness ≥ 150 mm, density ≥ 450 kg/m³) EI120-U/U



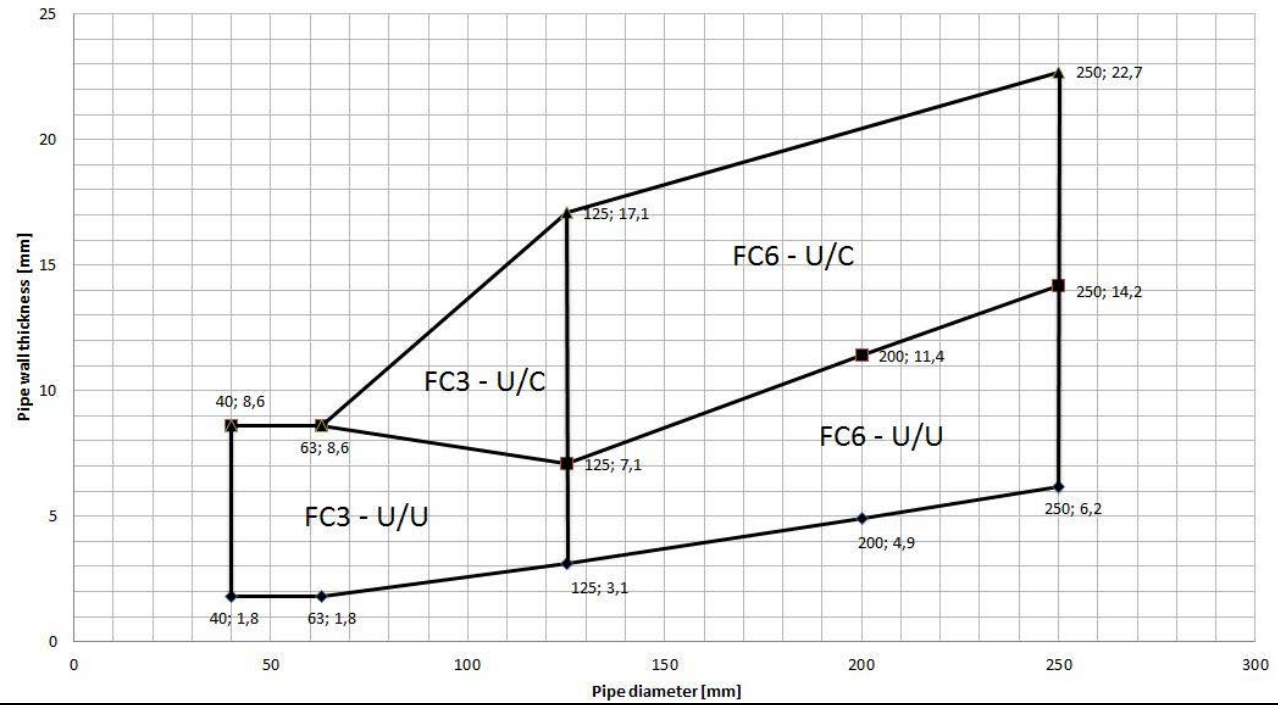
PP-H / PP-R					
Rigid wall	≥ 150	Ø 40 / t_D 1,8 - Ø 250 / t_D 22,7	FC3/6	mortared in	EI90-U/U EI90-U/C

PP-H and PP-R pipes with PROMASTOP-FC collar, mortared in rigid wall construction (thickness ≥ 150 mm, density ≥ 450 kg/m³) EI90-U/U or -U/C



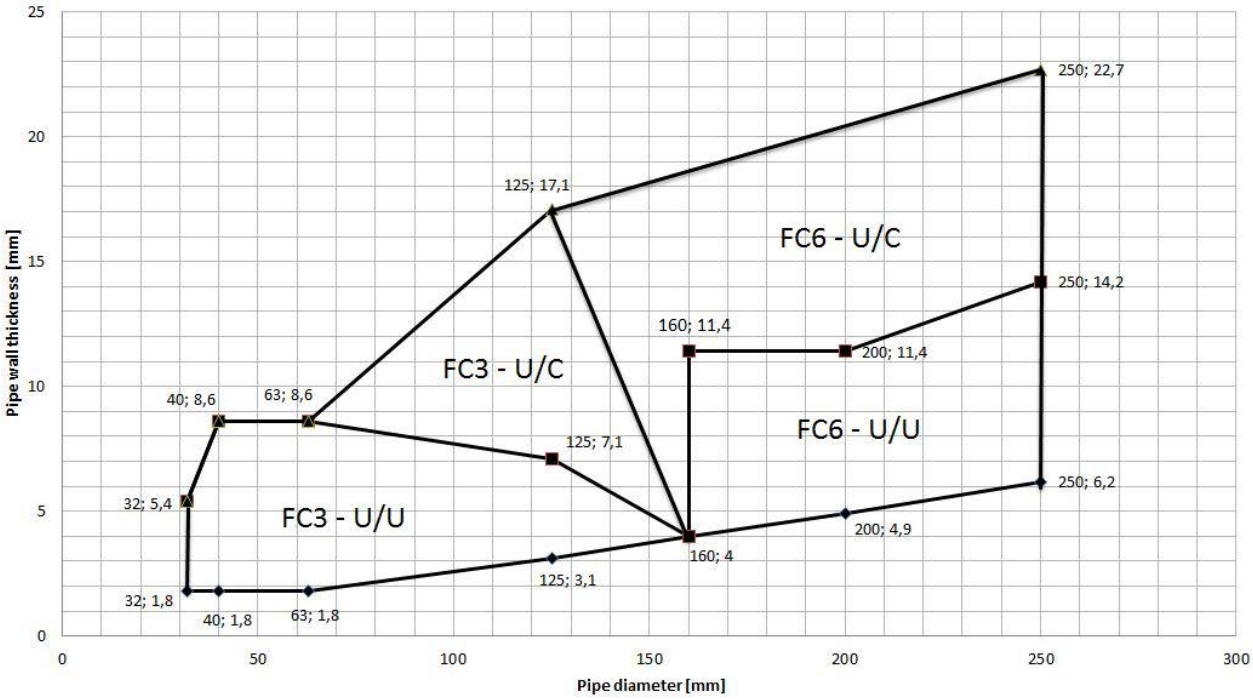
PP-H / PP-R					
Rigid wall	≥ 150	Ø 40 / t_D 1,8 - Ø 250 / t_D 22,7	FC3/6	mortared in	EI120-U/U EI120-U/C

PP-H and PP-R pipes with PROMASTOP-FC collar, mortared in rigid wall construction (thickness ≥ 150 mm, density ≥ 450 kg/m³) EI120-U/U or -U/C



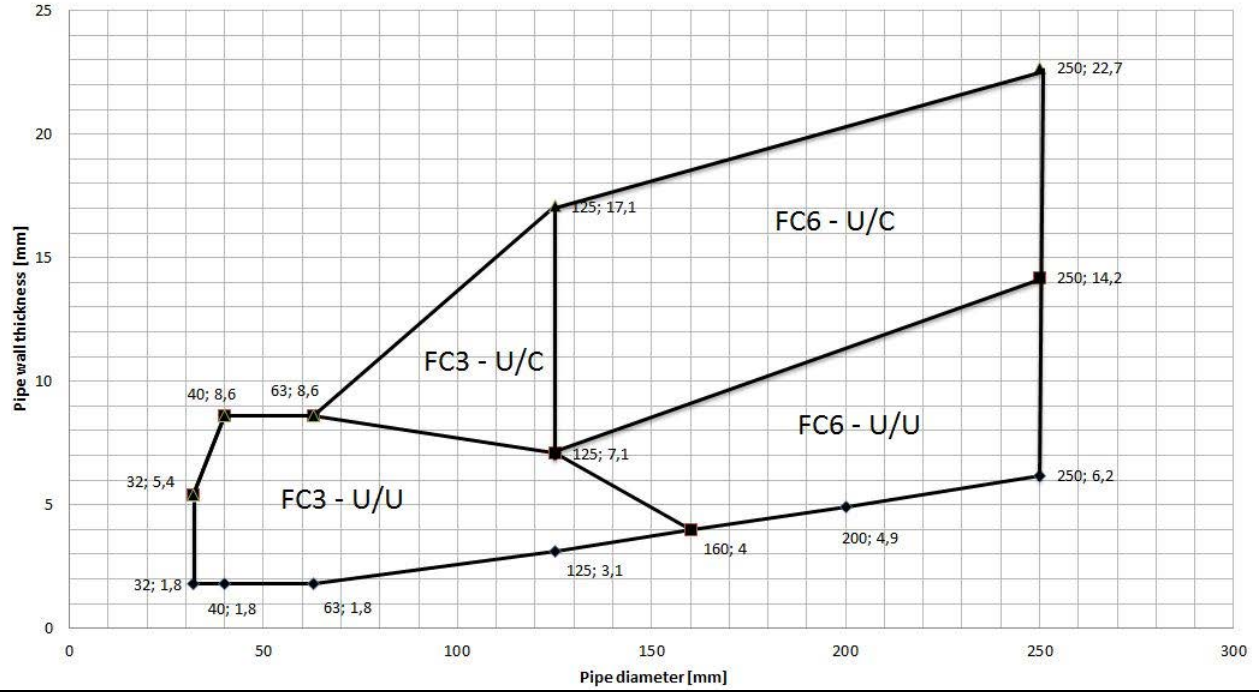
PP-H / PP-R					
Rigid floor	≥ 150	Ø 32 / t_D 1,8 - Ø 250 / t_D 22,7	FC3/6	mortared in	EI90-U/U EI90-U/C

PP-H and PP-R pipes with PROMASTOP-FC collar, mortared in rigid floor construction (thickness ≥ 150 mm, density ≥ 450 kg/m³)
EI90-U/U or -U/C



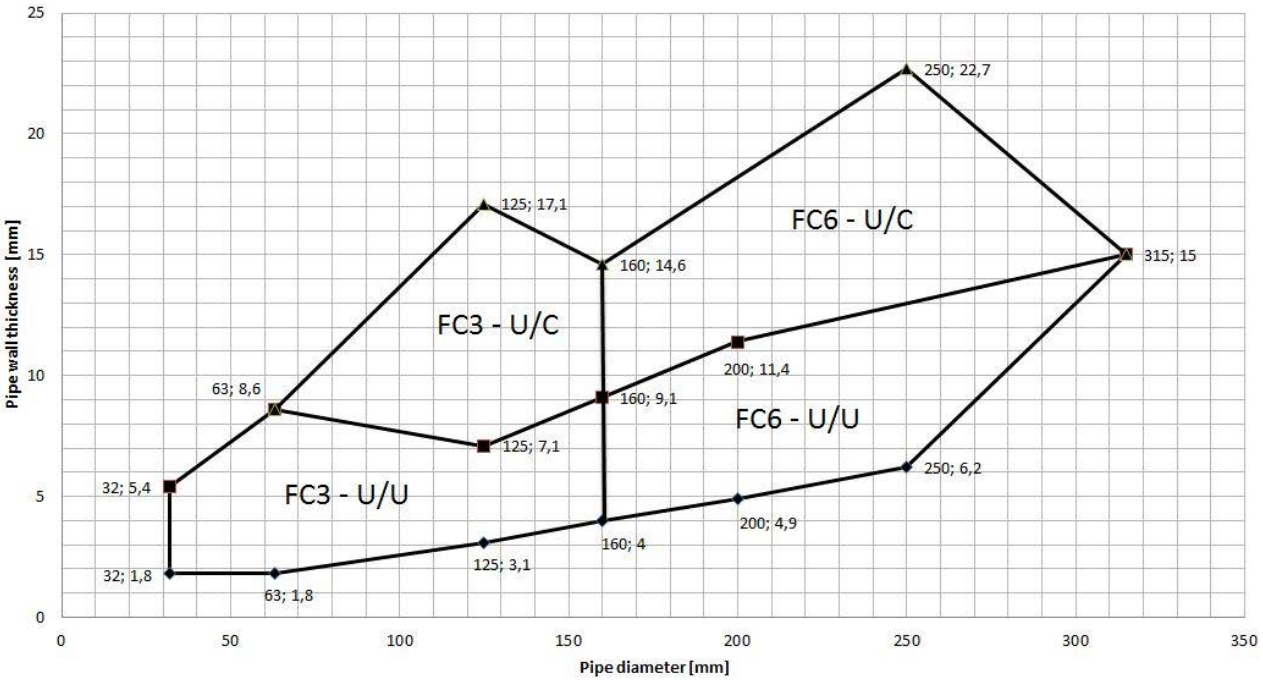
PP-H / PP-R					
Rigid floor	≥ 150	Ø 32 / t_D 1,8 - Ø 250 / t_D 22,7	FC3/6	mortared in	EI120-U/U EI120-U/C

PP-H and PP-R pipes with PROMASTOP-FC collar, mortared in rigid floor construction (thickness ≥ 150 mm, density ≥ 450 kg/m³)
EI120-U/U or -U/C



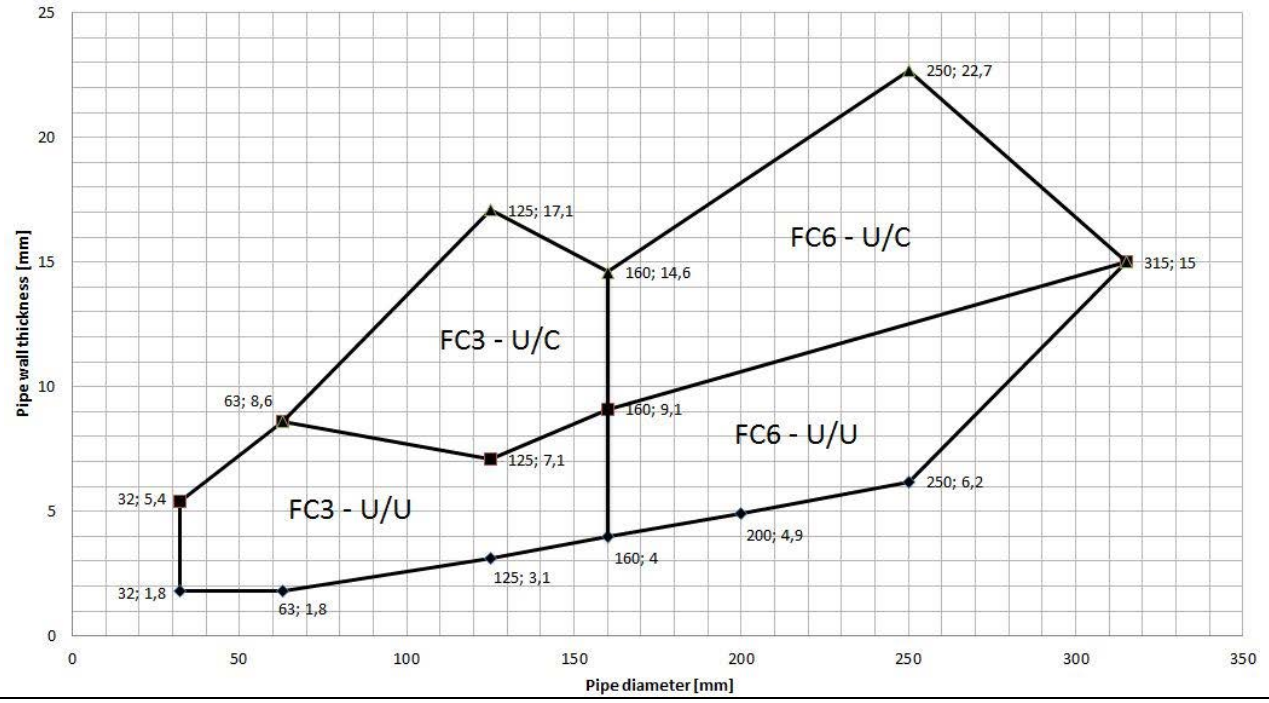
PP-H / PP-R					
Rigid floor	≥ 150	Ø 32 / t_D 1,8 - Ø 315 / t_D 15,0	FC3/6	under the floor	EI90-U/U EI90-U/C

PP-H and PP-R pipes with PROMASTOP-FC collar, placed on rigid floor construction (thickness ≥ 150 mm, density ≥ 450 kg/m³)
EI90-U/U



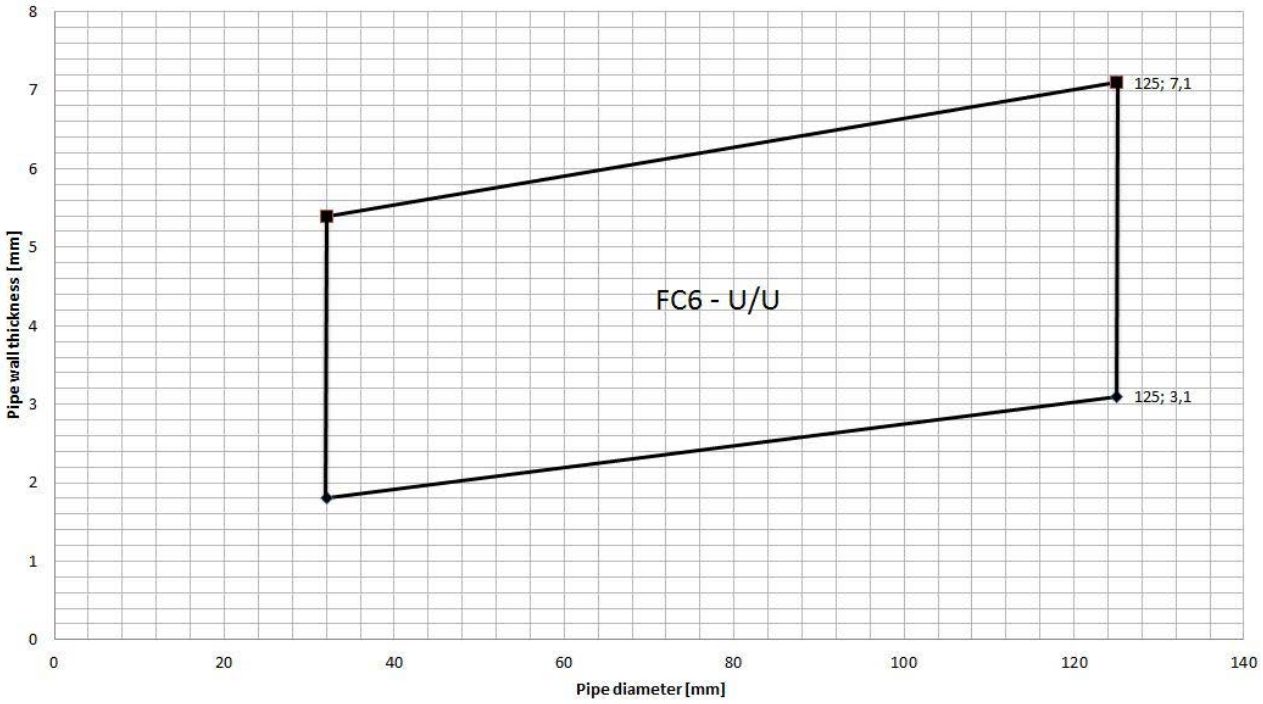
PP-H / PP-R					
Rigid floor	≥ 150	Ø 32 / t_D 1,8 - Ø 315 / t_D 15,0	FC3/6	under the floor	EI120-U/U EI120-U/C

PP-H and PP-R pipes with PROMASTOP-FC collar, placed on rigid floor construction (thickness ≥ 150 mm, density ≥ 450 kg/m³)
EI120-U/U



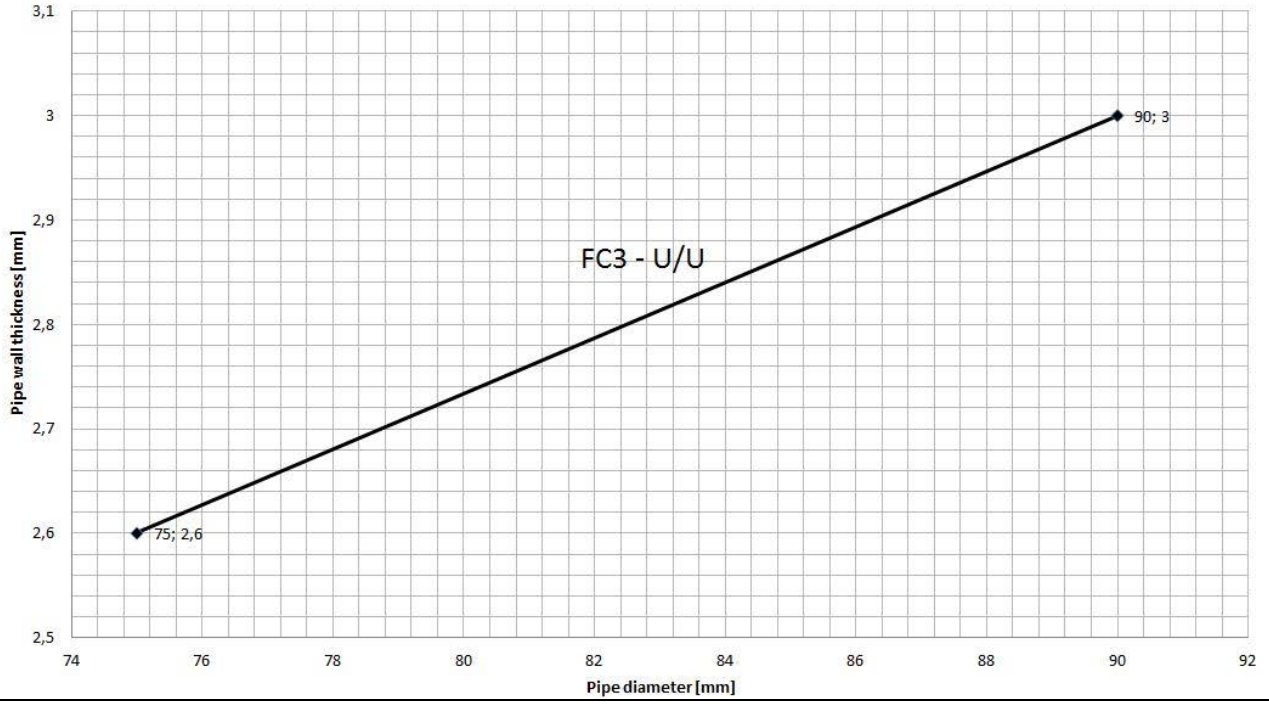
PP-H / PP-R					
Rigid floor	≥ 150	Sloped pipe (to 45°), max. Ø 125	FC6	under the floor	EI120-U/U

PP-H and PP-R pipes (sloped to 45°) with PROMASTOP-FC collar placed on rigid floor construction (thickness ≥ 150 mm, density ≥ 450 kg/m³) EI120-U/U



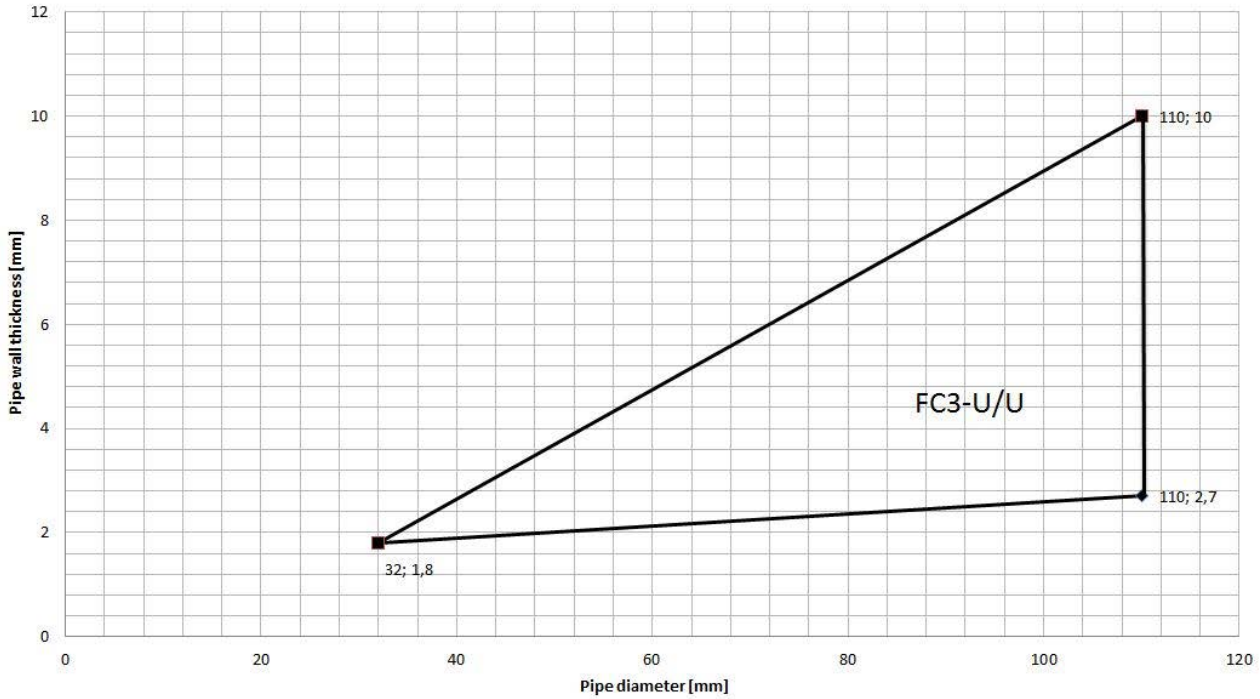
PP-H / PP-R					
Rigid floor + PROMASTOP-I (2 x 50 mm) seal	≥ 150	Ø 75 / t_D 2,6 - Ø 90 / t_D 3,0	FC3	in the seal	EI120-U/U

PP-H and PP-R pipes with PROMASTOP-FC collar in penetration seal PROMASTOP-I (2 x 50 mm) in rigid wall construction (thickness ≥ 100 mm, density ≥ 450 kg/m³) or rigid floor construction (thickness ≥ 150 mm, density ≥ 450 kg/m³) EI120-U/U



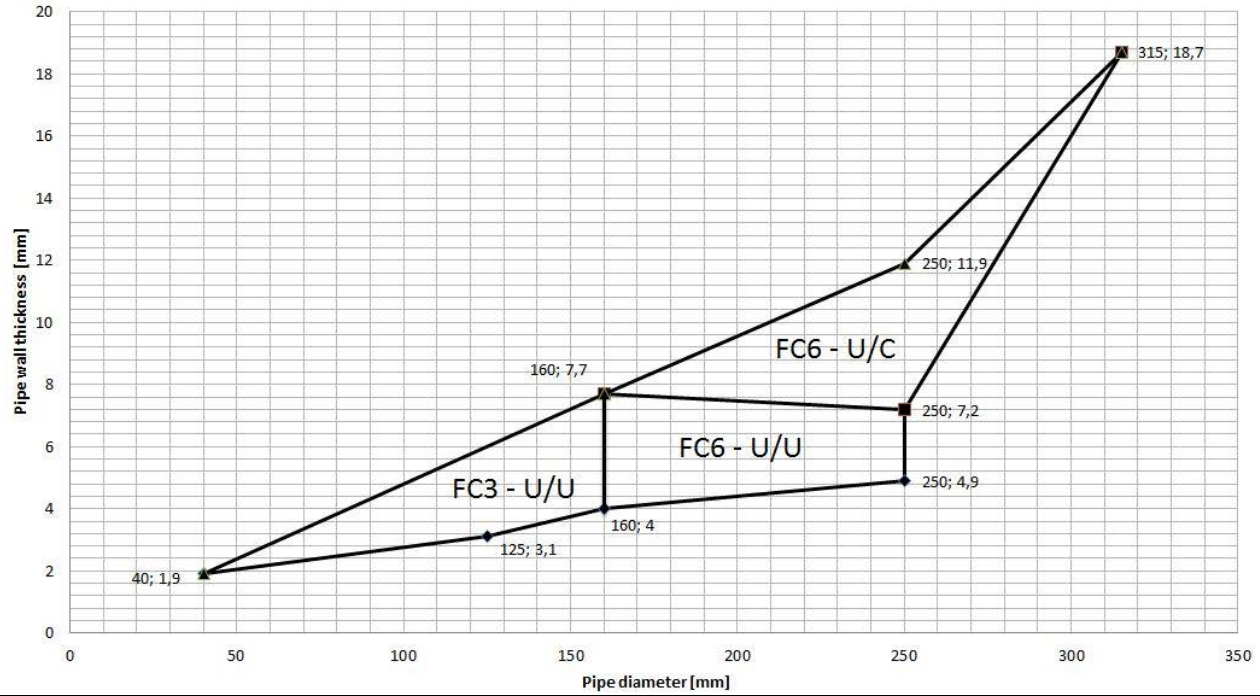
PP-H / PP-R					
Rigid floor + PROMASTOP-I (1 x 50 mm) seal	≥ 150	Ø 32 / t_D 1,8 - Ø 110 / t_D 10,0	FC3	under the seal	EI90-U/U

PP-H, PP-R and PE-HD pipes with PROMASTOP-FC collar on penetration seal PROMASTOP-I (1 x 50 mm) in rigid floor construction (thickness ≥ 150 mm, density ≥ 450 kg/m³)
EI90-U/U



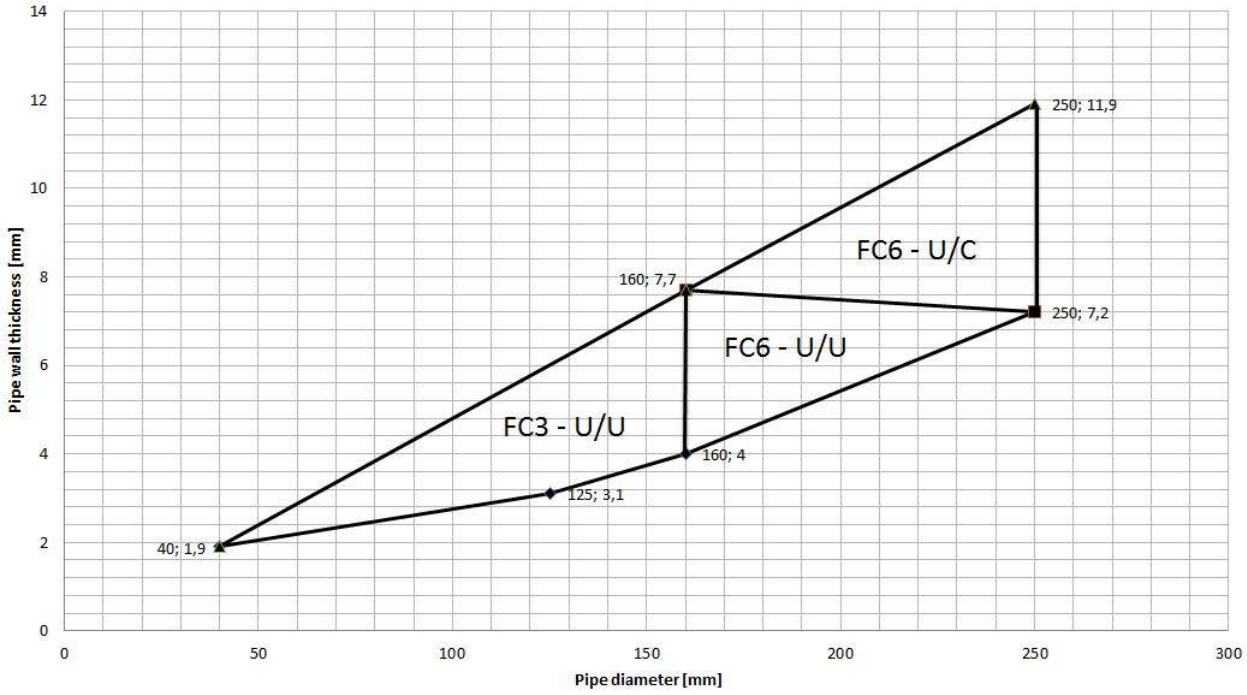
PVC-U					
Rigid wall	≥ 100	Ø 40 / t_D 1,9 - Ø 315 / t_D 18,7	FC3/6	on the wall	EI90-U/U EI90-U/C

PVC-u pipes with PROMASTOP-FC collar placed on rigid wall construction (thickness ≥ 100 mm, density ≥ 450 kg/m³)
EI90-U/U or -U/C



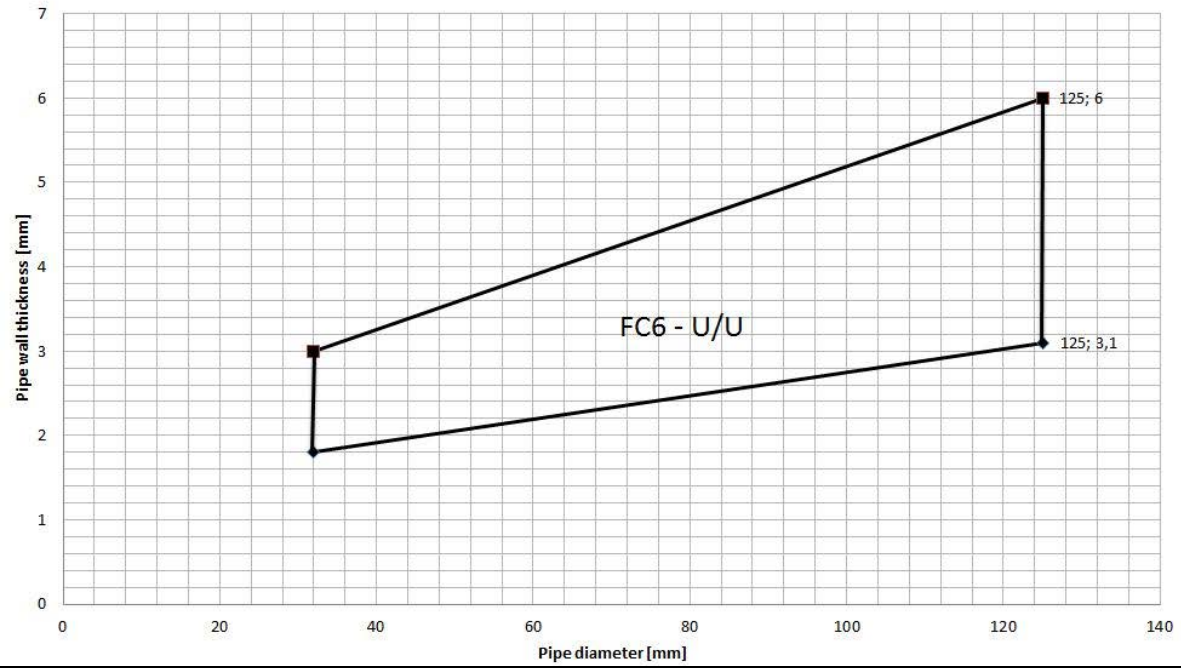
PVC-U					
Rigid wall	≥ 100	Ø 40 / t_D 1,9 - Ø 250 / t_D 11,9	FC3/6	on the wall	EI120-U/U EI120-U/C

PVC-u pipes with PROMASTOP-FC collar placed on rigid wall construction (thickness ≥ 100 mm, density ≥ 450 kg/m³)
EI120-U/U or -U/C



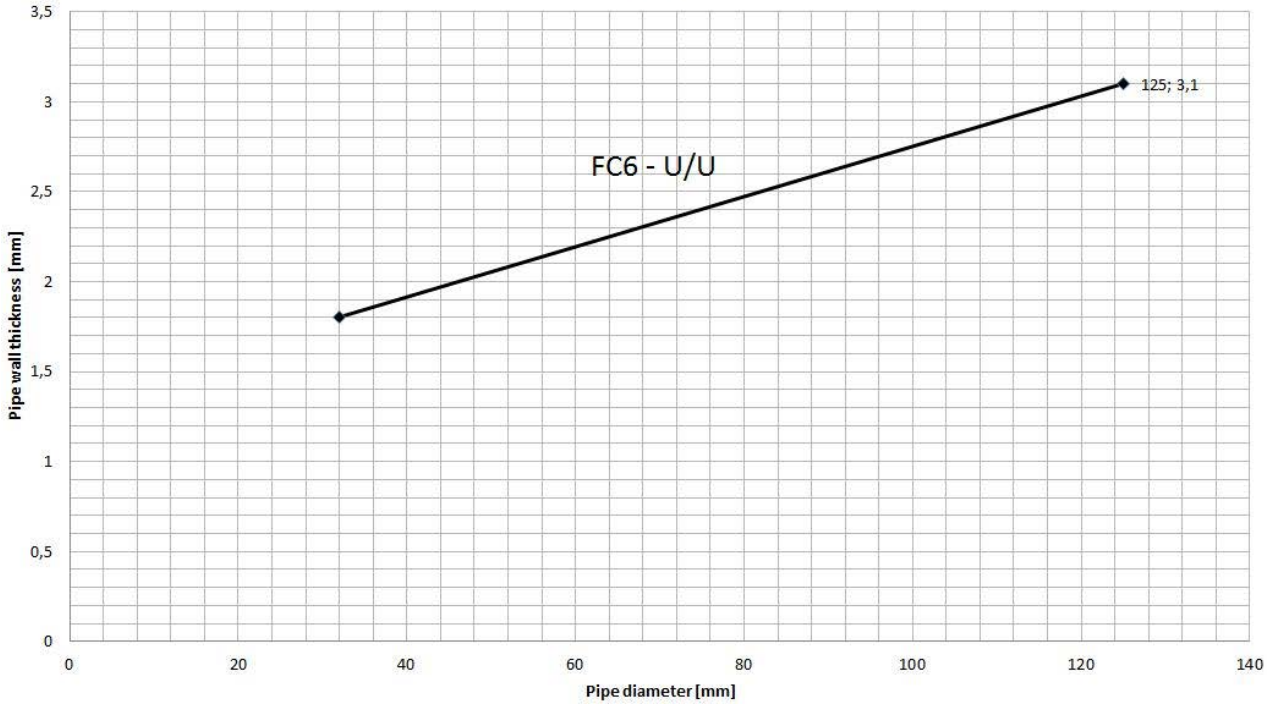
PVC-U					
Rigid wall	≥ 100	Sloped pipe (to 45°), max. Ø 125	FC6	on the wall	EI120-U/U

PVC-u pipes (sloped to 45°) with PROMASTOP-FC collar placed on rigid wall construction (thickness ≥ 100 mm, density ≥ 450 kg/m³)
EI120-U/U



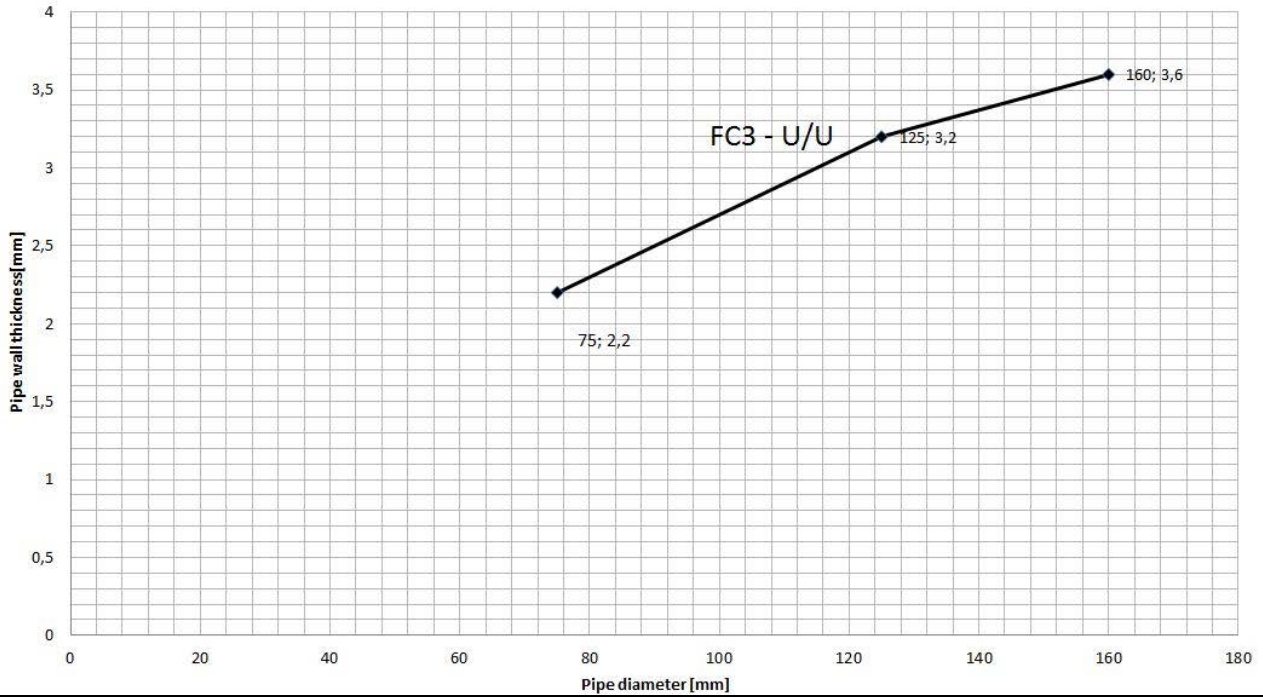
PVC-U					
Rigid wall	≥ 100	Pipe with socket, max. Ø 125	FC6	on the wall	EI120-U/U

PVC-u pipes with sockets with PROMASTOP-FC collar placed on rigid wall construction (thickness ≥ 100 mm, density ≥ 450 kg/m³)
EI120-U/U



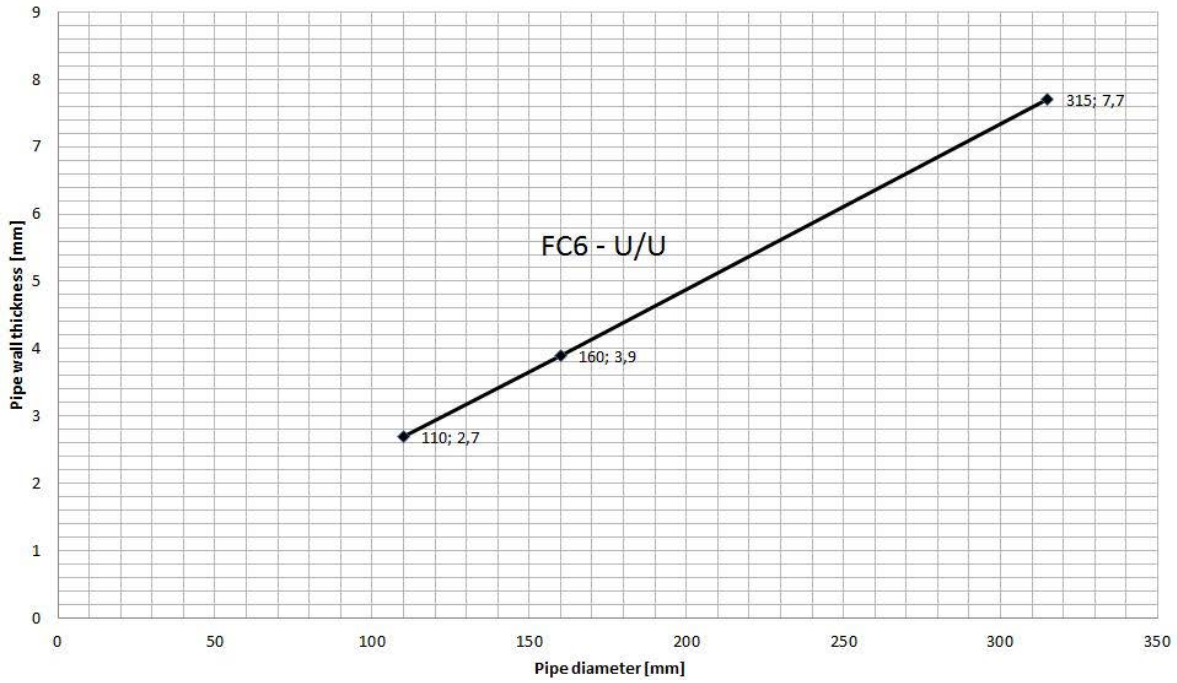
PVC-U					
Rigid wall + PROMASTOP-I (2 x 50 mm) seal	≥ 100	Ø 75 / t_D 2,2 - Ø 160 / t_D 3,6	FC3	in the seal	EI120-U/U

PVC-u pipes with PROMASTOP-FC collar <u>in</u> penetration seal PROMASTOP-I (2 x 50 mm) in rigid wall construction (thickness ≥ 100 mm, density ≥ 450 kg/m³) or rigid floor construction (thickness ≥ 150 mm, density ≥ 450 kg/m³) EI120-U/U



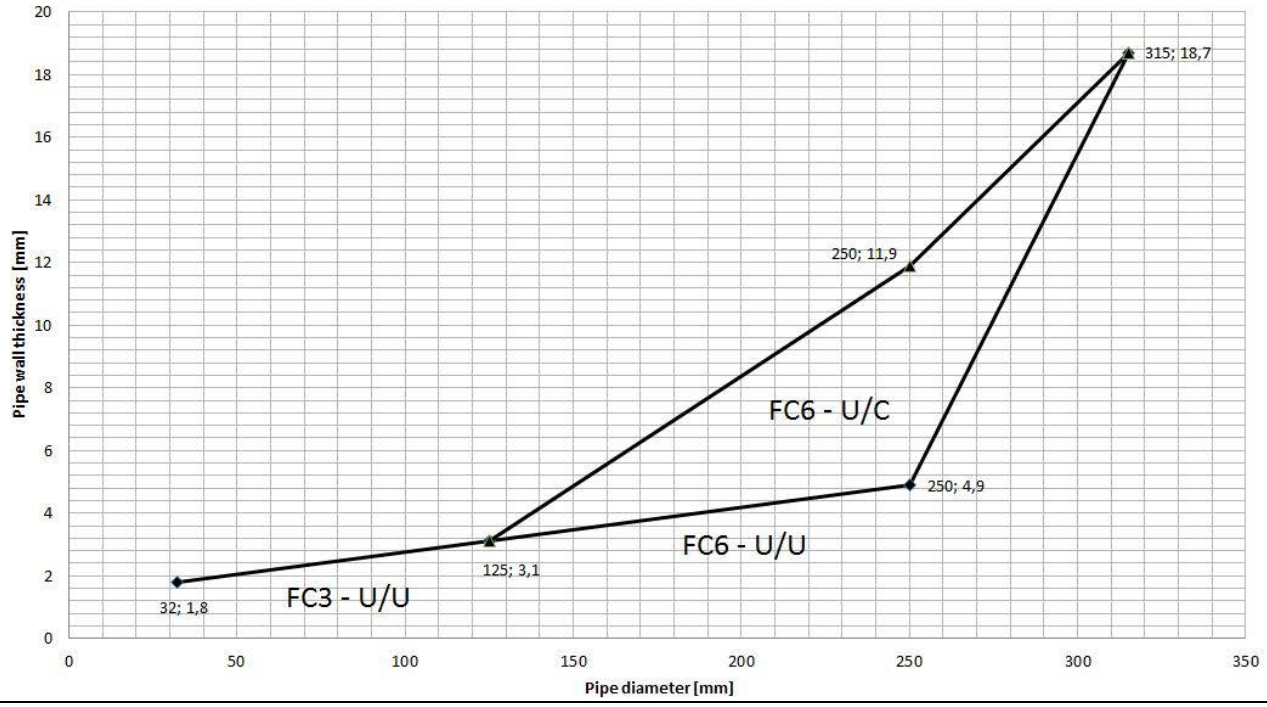
PVC-U					
Rigid wall	≥ 150	Ø 110 / t_D 2,7 - Ø 315 / t_D 7,7	FC6	on the wall	EI180-U/U

PVC-u pipes with PROMASTOP-FC collar placed on rigid wall construction (thickness ≥ 150 mm, density ≥ 450 kg/m³)
EI180-U/U



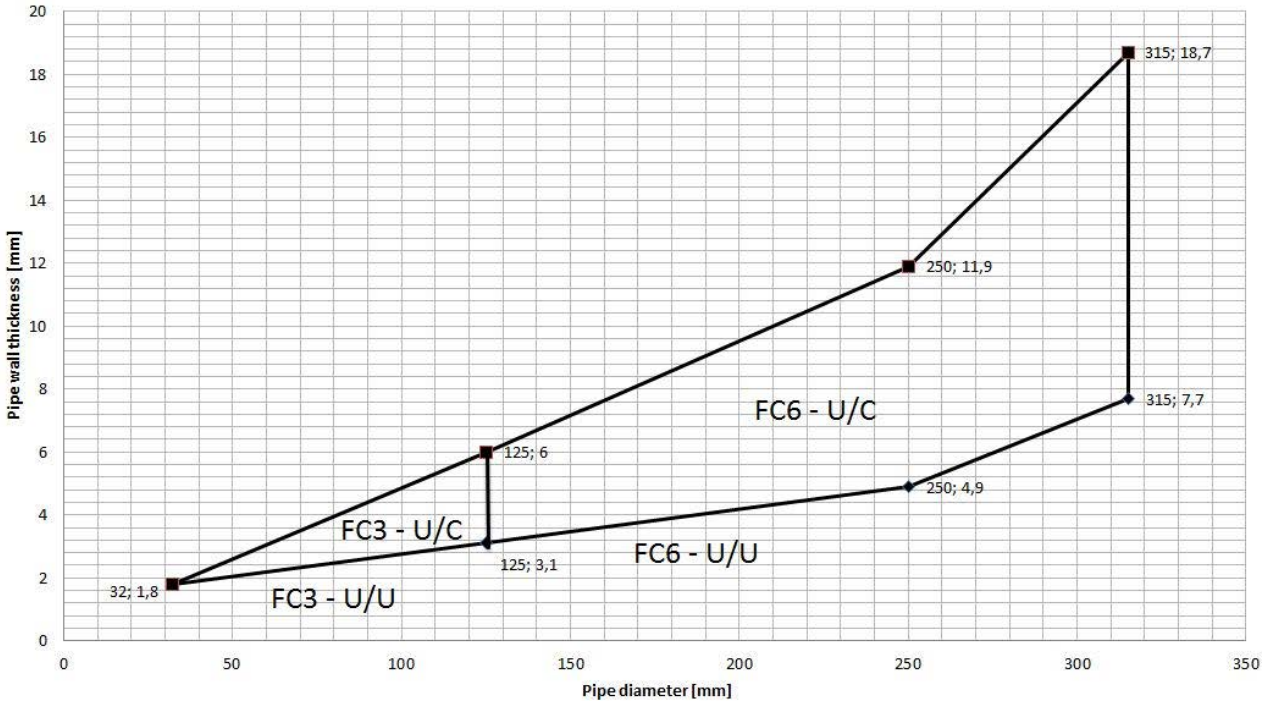
PVC-U					
Rigid floor	≥ 150	Ø 32 / t_D 1,8 - Ø 315 / t_D 18,7	FC3/6	mortared in	EI90-U/U EI90-U/C

PVC-u pipes with PROMASTOP-FC collar, mortared in rigid floor construction (thickness ≥ 150 mm, density ≥ 450 kg/m³)
EI90-U/U or -U/C



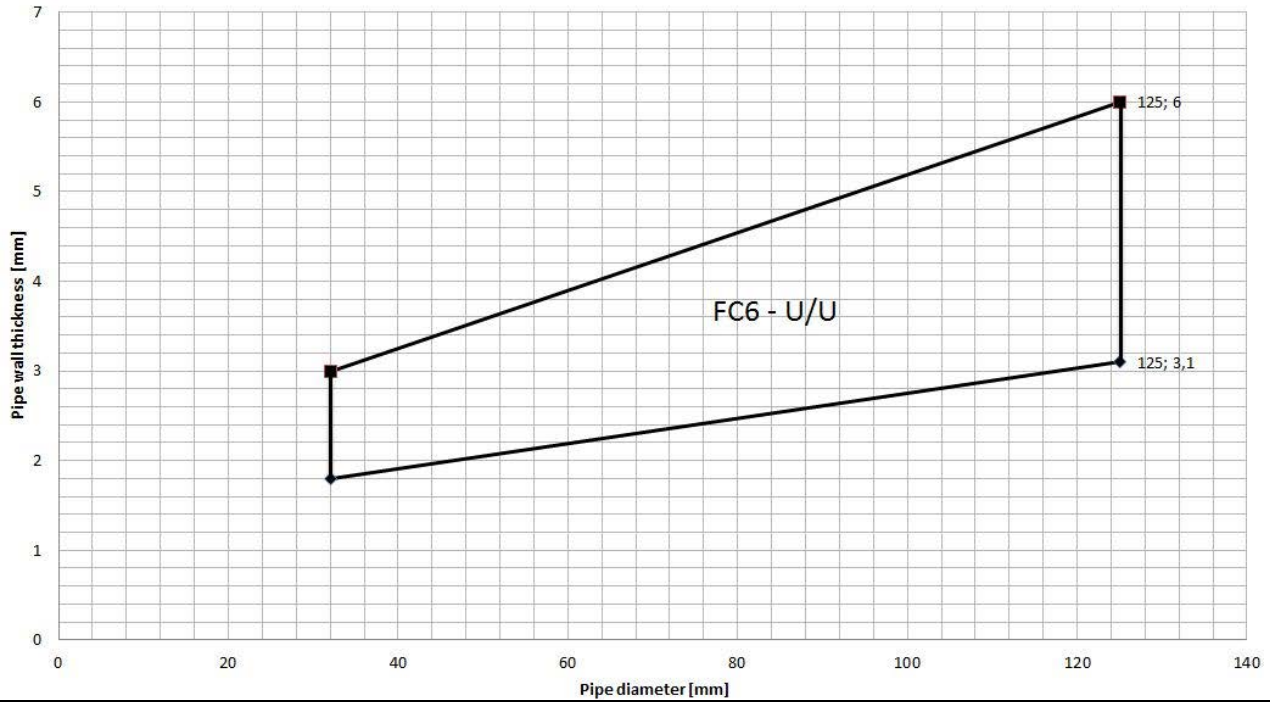
PVC-U					
Rigid floor	≥ 150	Ø 32 / t_D 1,8 - Ø 315 / t_D 18,7	FC3/6	under the floor	EI90-U/U EI90-U/C

PVC-u pipes with PROMASTOP-FC collar, placed on rigid floor construction (thickness ≥ 150 mm, density ≥ 450 kg/m³)
EI90-U/U



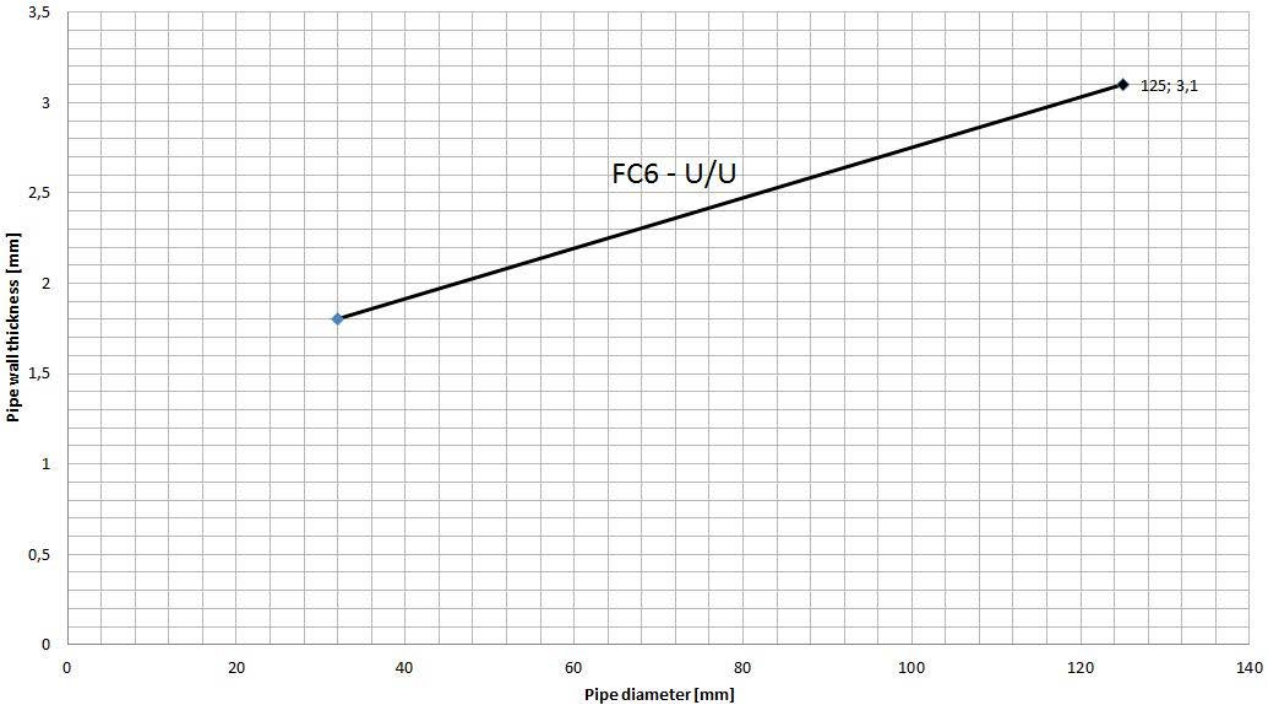
PVC-U					
Rigid floor	≥ 150	Sloped pipe (to 45°), max. Ø 125	FC6	under the floor	EI120-U/U

PVC-u pipes (sloped to 45°) with PROMASTOP-FC collar placed on rigid floor construction (thickness ≥ 150 mm, density ≥ 450 kg/m³)
EI120-U/U



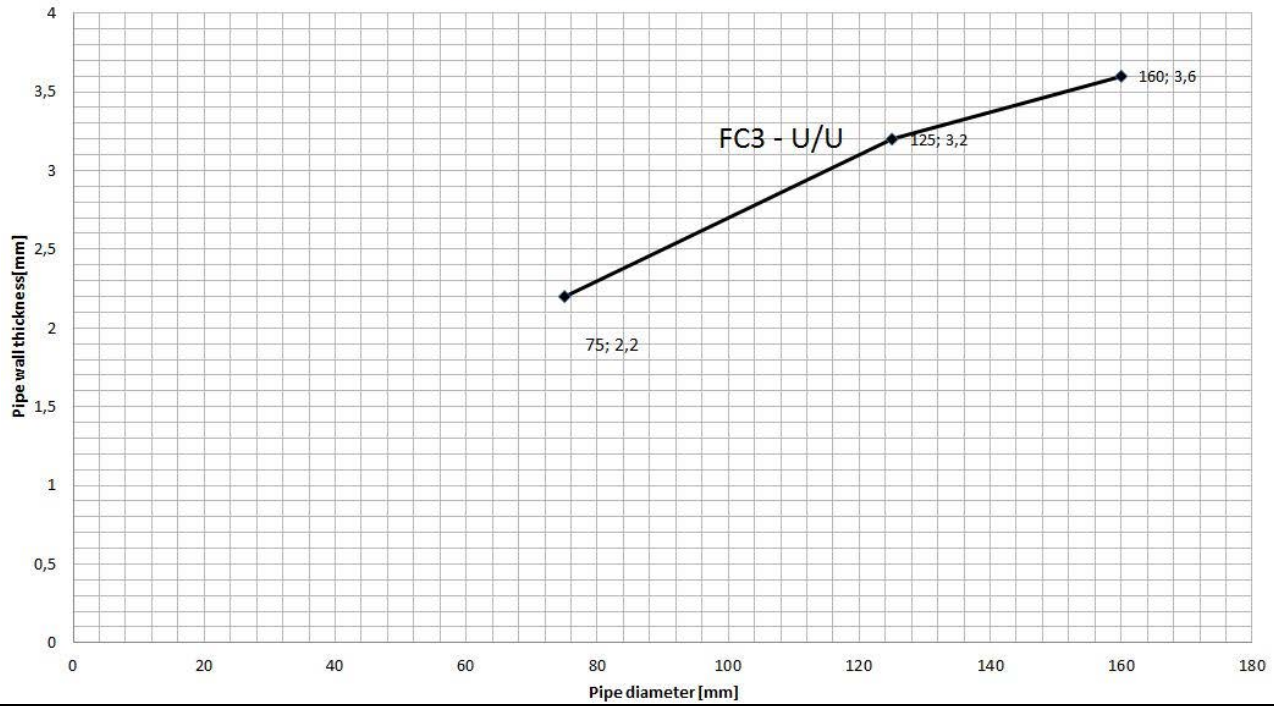
PVC-U					
Rigid floor	≥ 150	Pipe with socket, max. Ø 125	FC6	under the floor	EI120-U/U

PVC-u pipes with sockets with PROMASTOP-FC collar placed on rigid floor construction (thickness ≥ 150 mm, density ≥ 450 kg/m³)
EI120-U/U



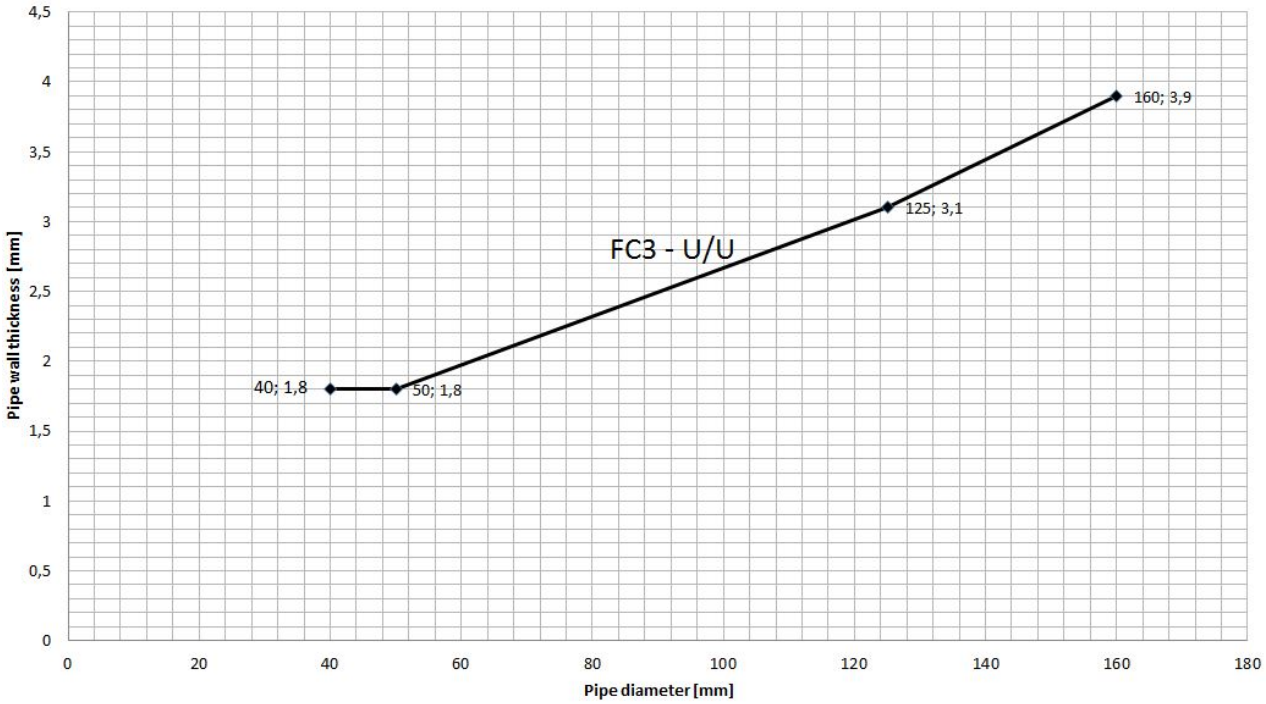
PVC-U					
Rigid floor + PROMASTOP-I (2 x 50 mm) seal	≥ 150	Ø 75 / t_D 2,2 - Ø 160 / t_D 3,6	FC3	in the seal	EI120-U/U

PVC-u pipes with PROMASTOP-FC collar <u>in</u> penetration seal PROMASTOP-I (2 x 50 mm) in rigid wall construction (thickness ≥ 100 mm, density ≥ 450 kg/m³) or rigid floor construction (thickness ≥ 150 mm, density ≥ 450 kg/m³) EI120-U/U



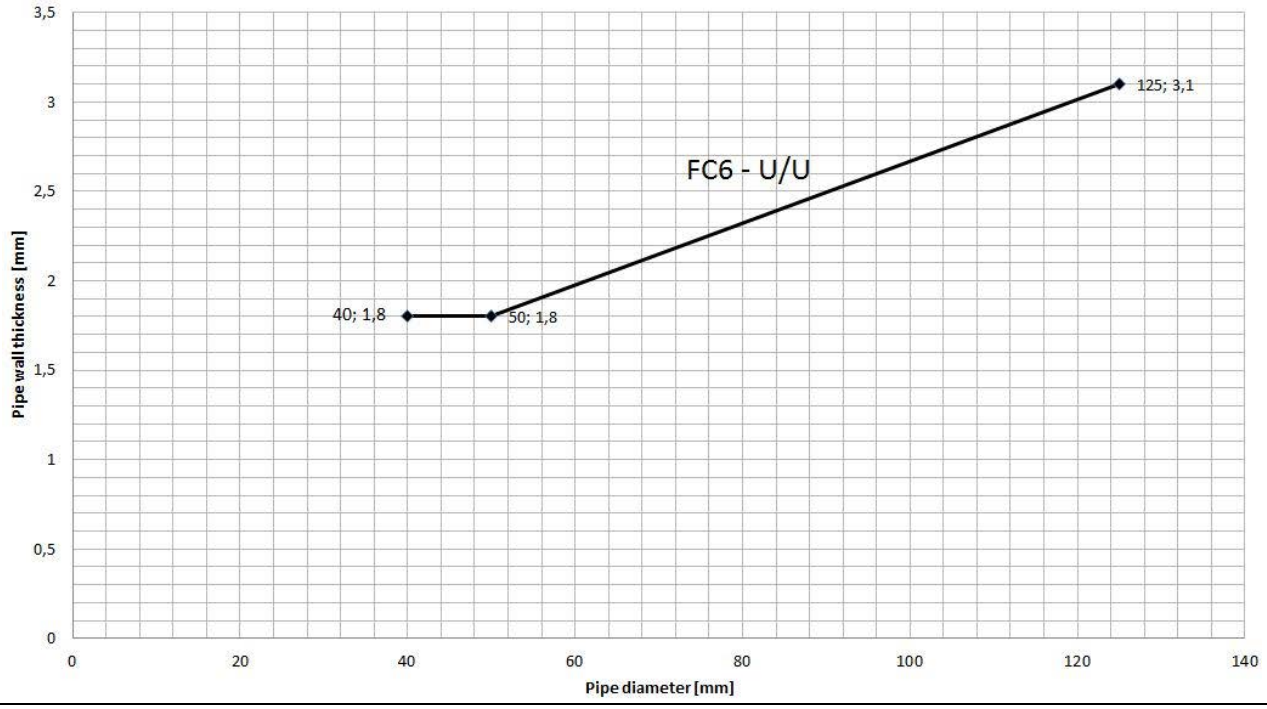
Rehau Raupiano Plus or equal products					
Rigid wall	≥ 100	Ø 40 / t_D 1,8 - Ø 160 / t_D 3,9	FC3	on the wall	EI120-U/U

Rehau Raupiano Plus pipes with or without sound decoupling, with PROMASTOP-FC collar placed on rigid wall construction (thickness ≥ 100 mm, density ≥ 450 kg/m³)
EI120-U/U



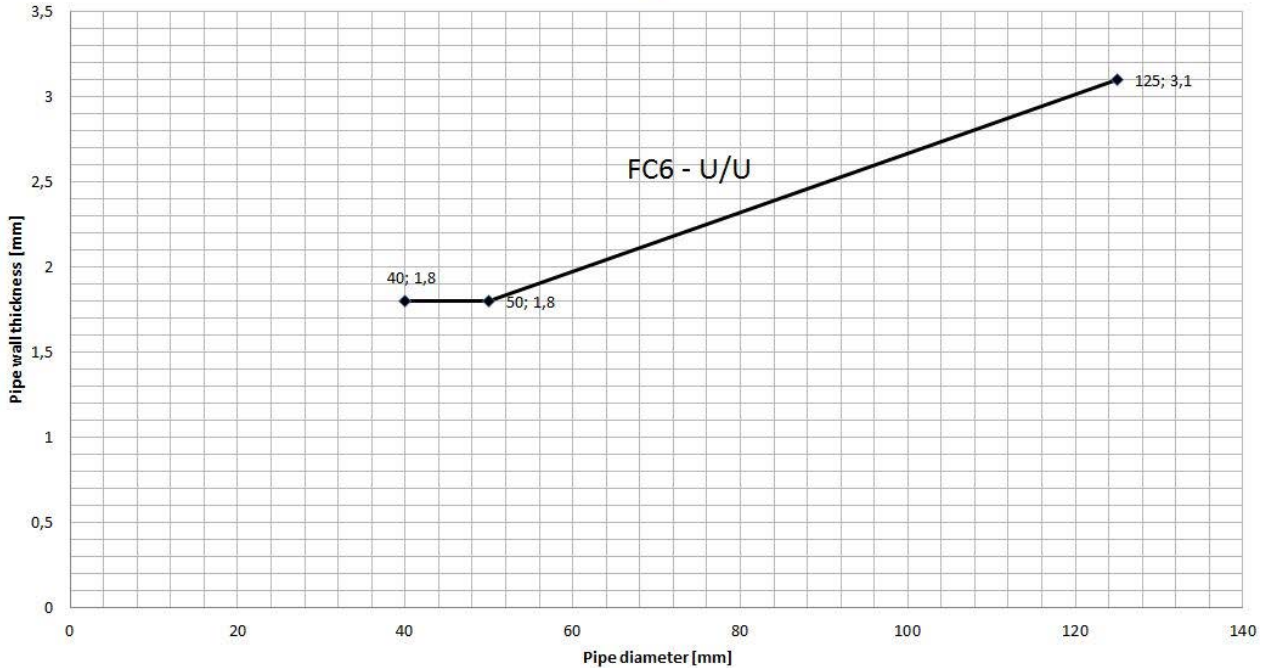
Rehau Raupiano Plus or equal products					
Rigid wall	≥ 100	Ø 40 / t_D 1,8 - Ø 125 / t_D 3,1 Pipe with socket, max. Ø 125	FC6	on the wall	EI120-U/U

Rehau Raupiano Plus pipes with or without sockets and with or without sound decoupling, with PROMASTOP-FC collar placed on rigid wall construction (thickness ≥ 100 mm, density ≥ 450 kg/m³)
EI120-U/U



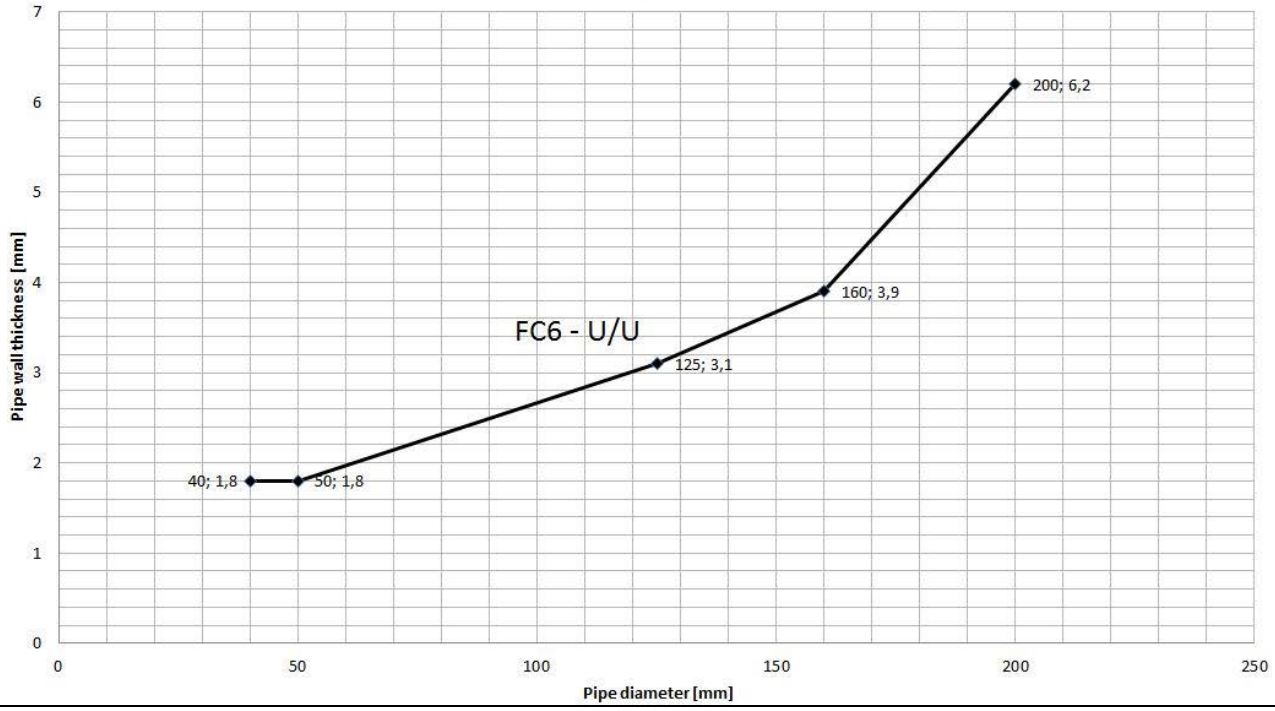
Rehau Raupiano Plus or equal products					
Rigid wall	≥ 150	Ø 40 / t_D 1,8 - Ø 125 / t_D 3,1 Pipe with socket, max. Ø 125	FC6	mortared in	EI120-U/U

Rehau Raupiano Plus pipes with or without sockets and with or without sound decoupling, with PROMASTOP-FC collar, mortared in rigid wall construction (thickness ≥ 150 mm, density ≥ 450 kg/m³)
EI120-U/U



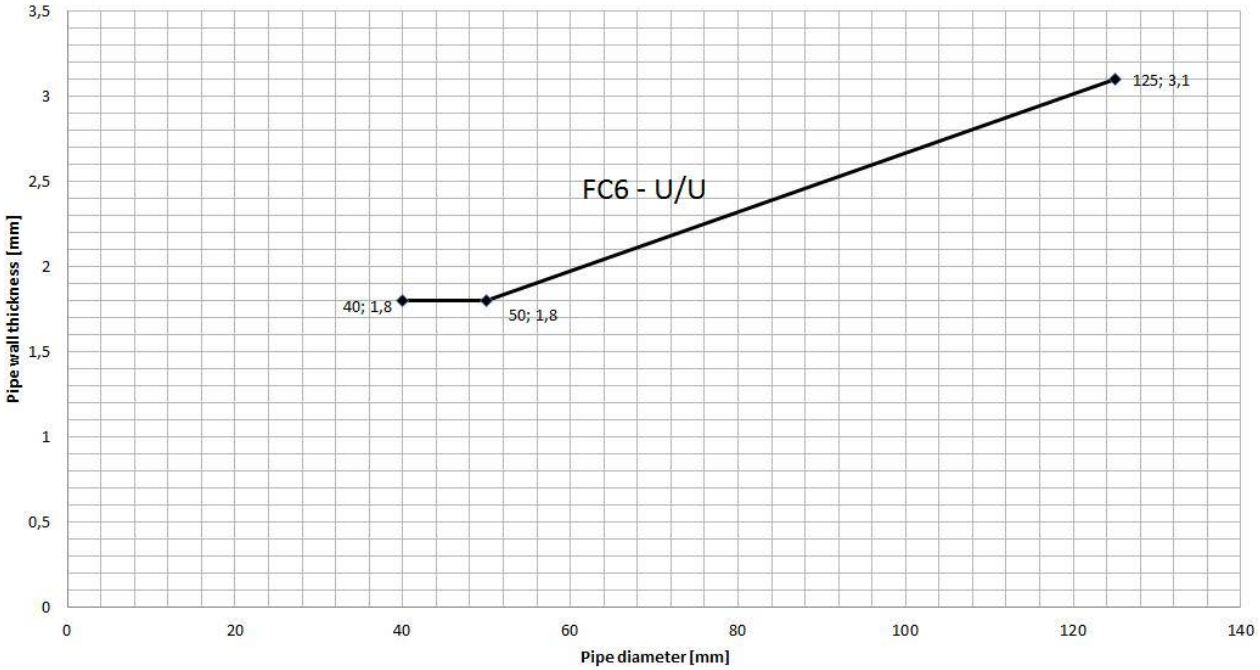
Rehau Raupiano Plus or equal products					
Rigid floor	≥ 150	Ø 40 / t_D 1,8 - Ø 200 / t_D 6,2	FC6	mortared in	EI120-U/U

Rehau Raupiano Plus pipes with or without sound decoupling with PROMASTOP-FC collar, mortared in rigid floor construction (thickness ≥ 150 mm, density ≥ 450 kg/m³)
EI120-U/U



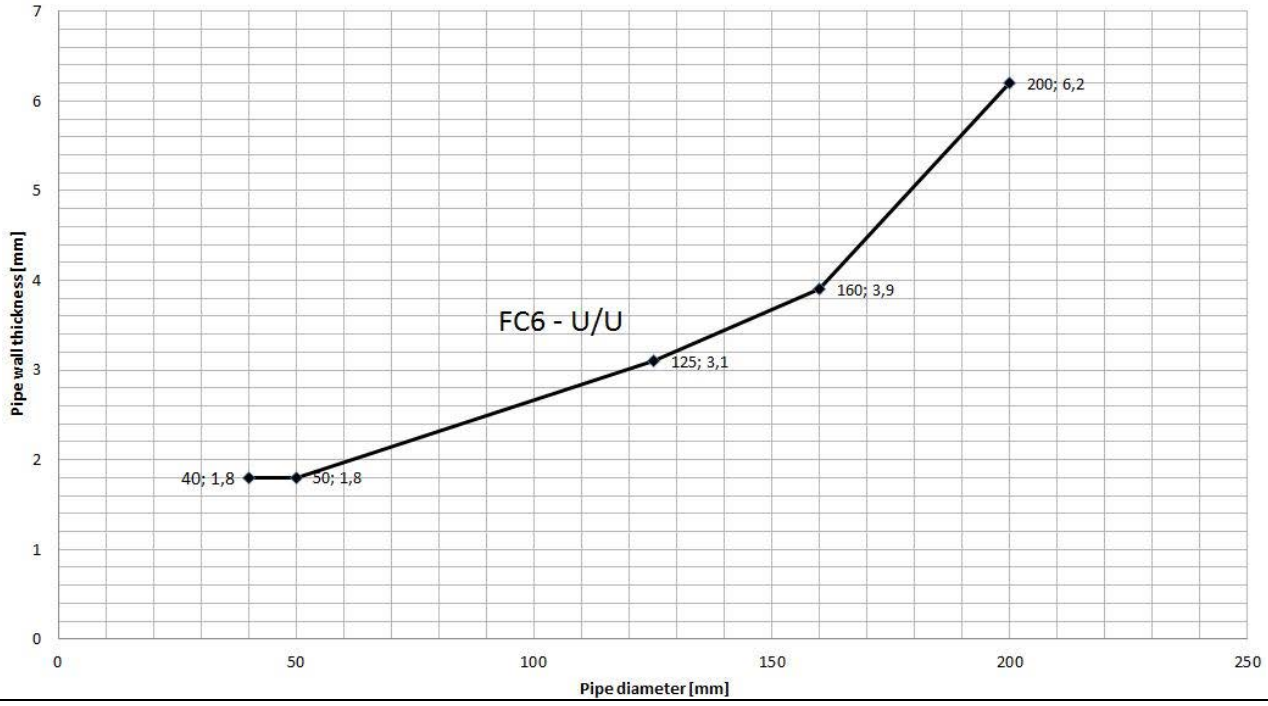
Rehau Raupiano Plus or equal products					
Rigid floor	≥ 150	Ø 40 / t_D 1,8 - Ø 125 / t_D 3,1 Pipe with socket, max. Ø 125	FC6	mortared in	EI120-U/U

Rehau Raupiano Plus pipes with or without sockets and with or without sound decoupling, with PROMASTOP-FC collar, mortared in rigid floor construction (thickness ≥ 150 mm, density ≥ 450 kg/m³)
EI120-U/U



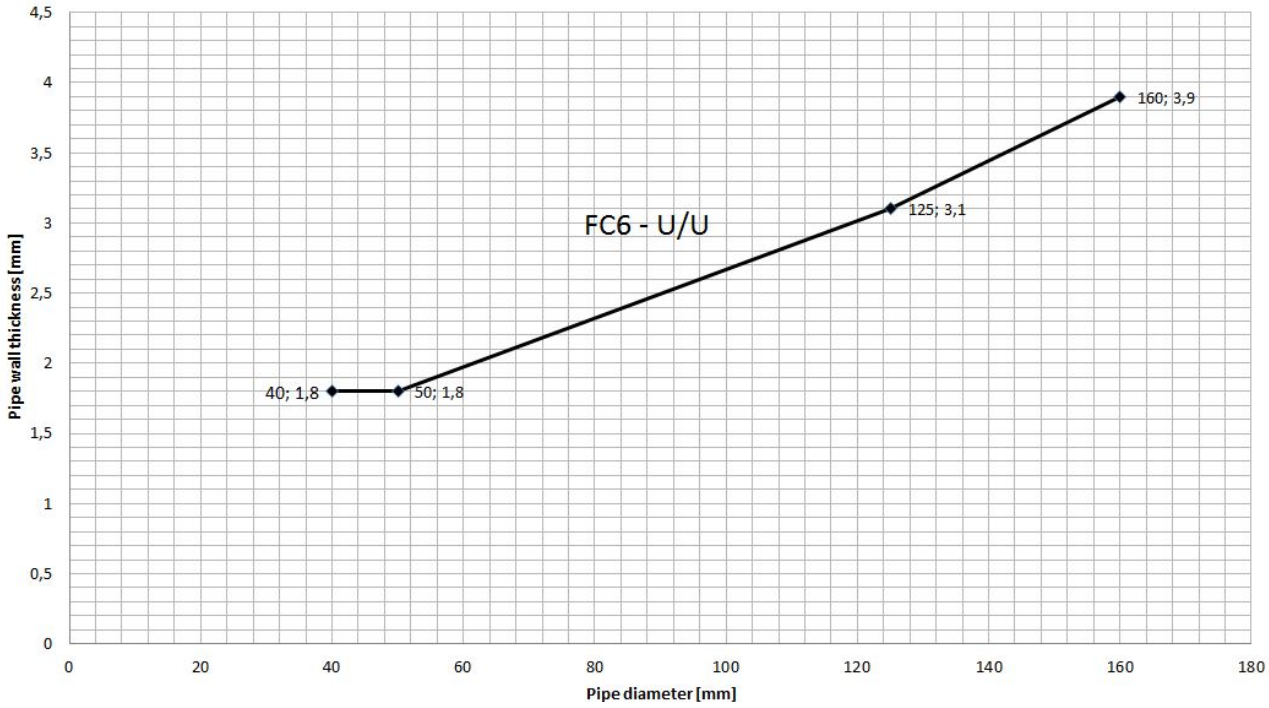
Rehau Raupiano Plus or equal products					
Rigid floor	≥ 150	Ø 40 / t_D 1,8 - Ø 200 / t_D 6,2	FC6	under the floor	EI90-U/U

Rehau Raupiano Plus pipes with our without sound decoupling with PROMASTOP-FC collar, placed on rigid floor construction (thickness ≥ 150 mm, density ≥ 450 kg/m³)
EI90-U/U



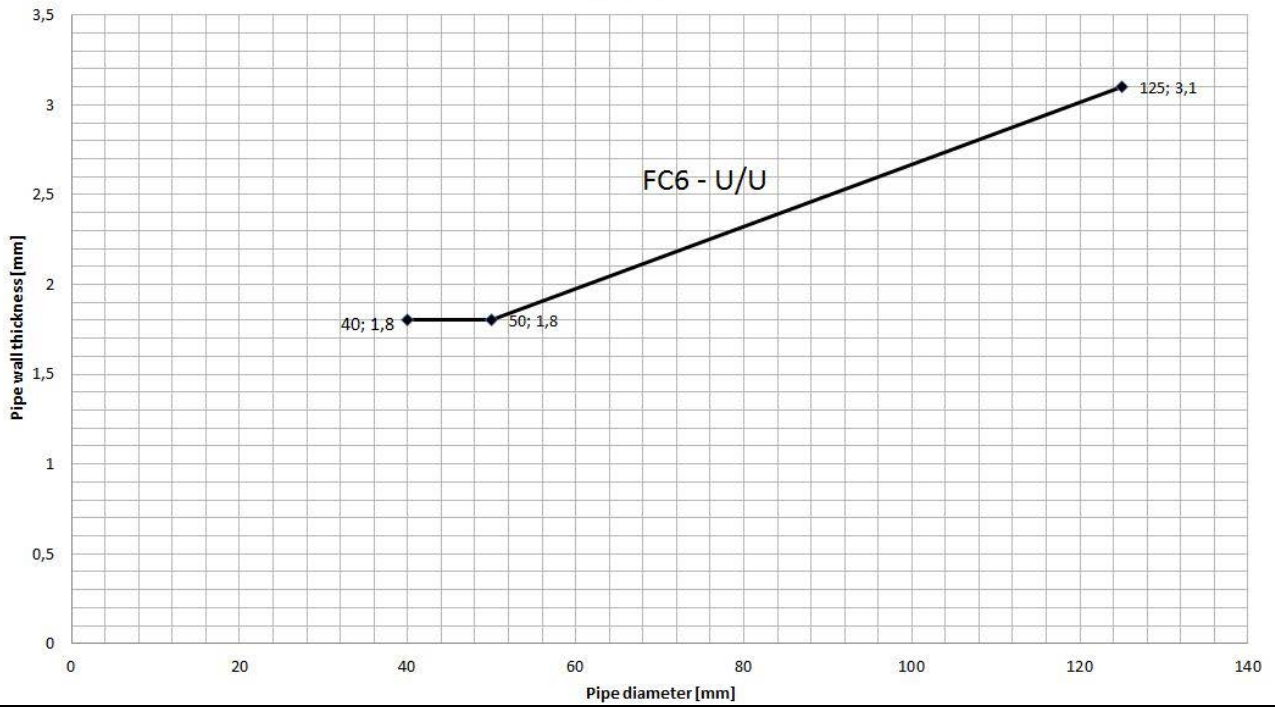
Rehau Raupiano Plus or equal products					
Rigid floor	≥ 150	Ø 40 / t_D 1,8 - Ø 160 / t_D 3,9	FC6	under the floor	EI120-U/U

Rehau Raupiano Plus pipes with our without sound decoupling with PROMASTOP-FC collar, placed on rigid floor construction (thickness ≥ 150 mm, density ≥ 450 kg/m³)
EI120-U/U



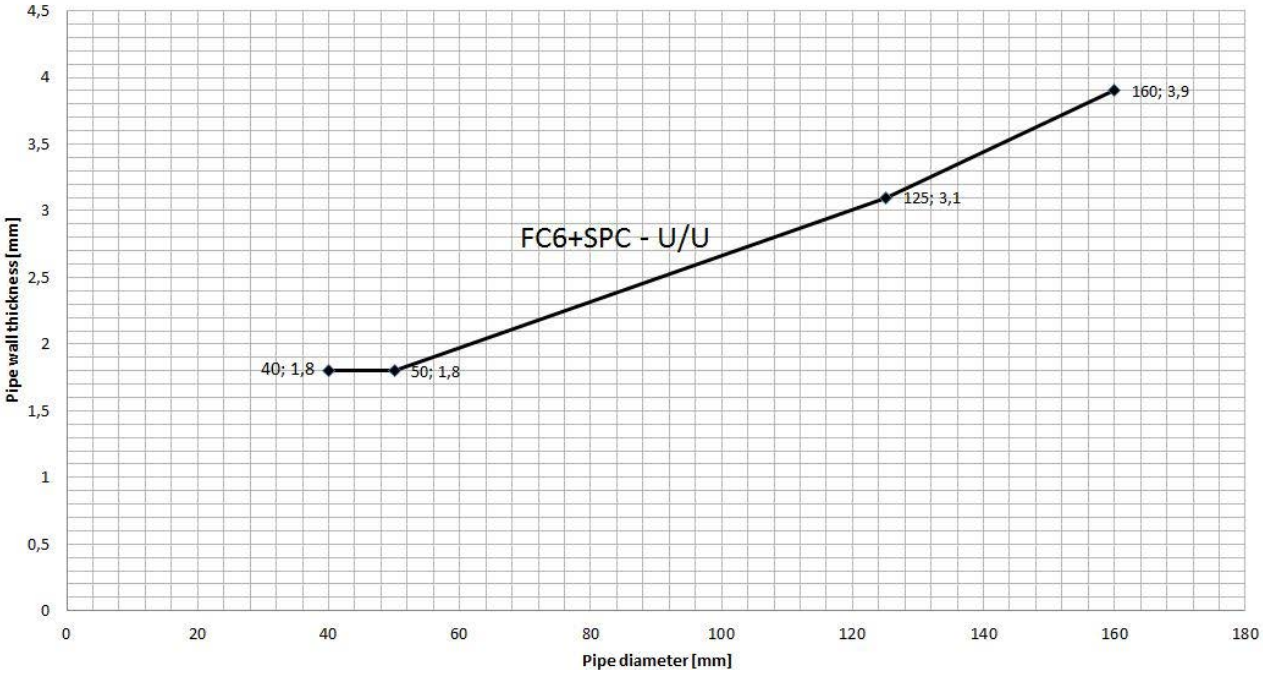
Rehau Raupiano Plus or equal products					
Rigid floor	≥ 150	Ø 40 / t_D 1,8 - Ø 125 / t_D 3,1 Pipe with socket, max. Ø 125	FC6	under the floor	EI120-U/U

Rehau Raupiano Plus pipes with or without sockets and with or without sound decoupling, with PROMASTOP-FC collar, placed on rigid floor construction (thickness ≥ 150 mm, density ≥ 450 kg/m³)
EI120-U/U



Rehau Raupiano Plus or equal products					
Rigid floor	≥ 150	Ø 40 / t_D 1,8 - Ø 160 / t_D 3,9 Pipe with socket, max. Ø 125	FC6 +SPC	under the floor	EI120-U/U

Rehau Raupiano Plus pipes (sloped to 45°) with our without sound decoupling with PROMASTOP-FC collar (including Promat SPC), placed on rigid floor construction (thickness ≥ 150 mm, density ≥ 450 kg/m³)
EI120-U/U



PVC-U, PE, PP-H and PP-R in PROMASTOP®-S/L firestop pillow seal					
Rigid wall + PROMASTOP-S/L	≥ 150	Ø 32 / t_D 1,8 - Ø 125 / t_D 3,1	FC3	on the seal	EI120-U/U
Rigid floor + PROMASTOP-S/L	≥ 150	Ø 32 / t_D 1,8 - Ø 125 / t_D 3,1	FC3	under the seal	EI120-U/U

Maximum seal size made of PROMASTOP®-S/L firestop pillows: 1,44 m²

PP-H, PP-R, PE-HD und PVC-u pipes with PROMASTOP-FC collar placed on PROMASTOP-S/L pillows penetration seal, in rigid wall or rigid floor construction (thickness ≥ 150 mm, density ≥ 450 kg/m³)
EI120-U/U