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European Technical Assessment

ETA-16/0001
of 20.09.2021

General part

Technical Assessment Body issuing the European Technical Assessment

Österreichisches Institut für Bautechnik (OIB)
Austrian Institute of Construction Engineering

Trade name of the construction product

Rohrschott90 Plus EN

Product family to which the construction product belongs

Fire Stopping and Fire Sealing Products:
Penetration Seals

Manufacturer

Geberit International AG
Schachenstrasse 77
8645 Jona
SWITZERLAND

Manufacturing plant

Geberit International AG
Schachenstrasse 77
8645 Jona
SWITZERLAND

This European Technical Assessment contains

143 pages including Annexes A-1 to F-45 which
form an integral part of this assessment

This European Technical Assessment is issued in accordance with Regulation (EU) No 305/2011, on the basis of

European Assessment Document
(EAD) 350454-00-1104 "Fire stopping and fire
sealing products – Penetration seals"

This European Technical Assessment replaces

European Technical Assessment ETA-16/0001 of
13.11.2017

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Specific parts

1 Technical description of the product

“Rohrschott90 Plus EN” is a pipe collar to be used as pipe penetration seal in combination with gap fillers and insulations (additional components).

Pipe collar	Characteristics
Rohrschott90 Plus EN	Pipe collar according to Annex B of the ETA with stainless sheet steel housing (thickness of steel sheet 0,5 mm, alloy 1.4510 according to EN 10088-2) and an inlay made of intumescent material

Additional components	Characteristics
Gap filler	Non-combustible material with classification A1 or A2-s1,d0 according to EN 13501-1 which is dimensionally stable as e.g. mortar, cement or gypsum joint filler or “CP611A” from manufacturer “Hilti AG” (only to be used for shaft walls)
Polyethylene sound insulation (tube)	Closed cell, flexible polyethylene foam insulation according to EN 14313 in form of tubes, faced with an outside PE foil, with a nominal thickness of 4 mm, a nominal density of 54 kg/m ³ and classification E according to EN 13501-1 (e.g. “Geberit Dämmschlauch” resp. “Geberit insulation hose” from manufacturer “Geberit International AG”, or “Tubolit AR Fonoblok” from manufacturer “Armacell GmbH”)
Polyethylene sound insulation (tape)	Closed cell, flexible polyethylene foam insulation according to EN 14313 in form of tapes, faced with an outside PE foil, with a self-adhesive device, with a nominal thickness of 3 mm, a nominal density of 54 kg/m ³ and classification E according to EN 13501-1 (e.g. “Geberit Dämmbandage” resp. “Geberit sound insulation tape” from manufacturer “Geberit International AG”)

Additional components	Characteristics
Sound insulation mat	Open cell polyurethane foam insulation in form of mats, faced with an outside heavy foil made of EPDM (ethylene propylene diene monomer) with a mineral filler and a flame retardant, with a nominal thickness of 17 mm, a nominal density of 30 kg/m ³ (foam), a nominal density of 2033 kg/m ³ (foil) and classification E according to EN 13501-1 ("Geberit Schalldämmmatte Isol Flex" resp. "Geberit sound insulation mat Isol Flex" from manufacturer "Geberit International AG")
AF/Armaflex	Closed cell, flexible elastomeric foam (FEF) insulation in form of (slotted) tubes with classification B _L -s3,d0 – including "Armaflex 520" – according to EN 13501-1 from manufacturer "Armacell GmbH" (for details about thickness see Annex A-8 of the ETA)
AF/Armaflex Band selbstklebend (AF/Armaflex self-adhesive tape)	Closed cell, flexible elastomeric foam (FEF) insulation in form of tapes with a self-adhesive device with classification B-s3,d0 according to EN 13501-1 from manufacturer "Armacell GmbH"
Armaflex 520	Polychlorene-based adhesive, free from aromatic compounds (special adhesive for processing of all flexible Armaflex insulating material – except "HT/Armaflex") from manufacturer "Armacell GmbH"

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

2.1 Intended use

"Rohrschott90 Plus EN" is intended to be used as a pipe penetration seal to temporarily or permanently reinstate the fire resistance performance of flexible wall constructions, rigid wall constructions, shaft walls and rigid floor constructions where they have been provided with apertures which are penetrated by various plastic pipes.

"Rohrschott90 Plus EN" can only be installed in the types of separating elements as specified in the following table.

Separating element	Construction
Flexible walls	> Steel studs or timber studs lined on both faces with minimum 2 layer of boards (minimum thickness 12,5 mm) with classification A2-s1,d0 or A1 according to EN 13501-1 > For timber stud walls there shall be a minimum distance of 100 mm of the penetration seal to any timber stud. The cavity between the penetration seal and the timber stud has to be closed with minimum 100 mm of insulation with classification A1 or A2 according to EN 13501-1 > Minimum thickness 100 mm > Classification according to EN 13501-2: $\geq EI 90$ > This European Technical Assessment does not cover sandwich panel constructions and flexible walls where the lining does not cover studs on both sides. Penetrations in such constructions shall be tested on a case by case basis
Rigid walls	> Aerated concrete, concrete, masonry > Minimum thickness 100 mm > The rigid wall shall be classified in accordance with EN 13501-2 for the required fire resistance period
Shaft walls	> Steel studs according to EN 14195 lined on one face > Thickness (number of layers x thickness of board) and type of board: 3 x 15 mm, gypsum plasterboards type DF acc. to EN 520 with minimum reaction to fire class A2-s1,d0 according to EN 13501-1 > Between the profiles stone wool according to EN 13162 (reaction to fire class A1 according to EN 13501-1) with a density of 40 kg/m³ and a melting point > 1000 °C according to DIN 4102-17 and a thickness of 40 mm has to be installed > Nominal width of profiles: 50 mm (e.g. CW 50) > Maximum distance between steel studs: 625 mm > The mechanical resistance and stability has to be given for the required fire resistance period > Classification according to EN 13501-2: $\geq EI 90$
Rigid floors ¹	> Aerated concrete, concrete > Minimum density 550 kg/m³ > Minimum thickness 150 mm > The rigid floor shall be classified in accordance with EN 13501-2 for the required fire resistance period
	> Reinforced concrete > Minimum compressive strength 57 N/mm² > Minimum thickness 100 mm > The rigid floor shall be classified in accordance with EN 13501-2 for the required fire resistance period

¹ This European Technical Assessment refers to rigid floors with a minimum thickness of 150 mm, if not stated otherwise (see Annex E-14, E-20 and Annex F-24, F-40 to F-43 of the ETA).

“Rohrschott90 Plus EN” can only be configured as specified in the following tables. Other parts or service support constructions shall not penetrate the penetration seal.

Penetrating element	Construction characteristics for installation of the penetrating element in flexible walls and rigid walls
Plastic pipes	> “Geberit PE” pipes from manufacturer “Geberit International AG” with diameters and wall thicknesses as defined in Annex D-1 to D-7 of the ETA > “Geberit Silent-PP” pipes from manufacturer “Geberit International AG” with diameters and wall thicknesses as defined in Annex D-8 to D-17 of the ETA > “Geberit Silent-db20” pipes from manufacturer “Geberit International AG” with diameters and wall thicknesses as defined in Annex D-19 to D-25 of the ETA > “Geberit Silent-Pro” pipes from manufacturer “Geberit International AG” with diameters and wall thicknesses as defined in Annex D-26 to D-36 of the ETA

Penetrating element	Construction characteristics for installation of the penetrating element in shaft walls
Plastic pipes	> “Geberit Silent-PP” pipes from manufacturer “Geberit International AG” with diameters and wall thicknesses as defined in Annex D-18 of the ETA

Penetrating element	Construction characteristics for installation of the penetrating element in rigid floors
Plastic pipes	> “Geberit PE” pipes from manufacturer “Geberit International AG” with diameters and wall thicknesses as defined in Annex F-1 to F-6 and Annex F-40 of the ETA > “Geberit Silent-PP” pipes from manufacturer “Geberit International AG” with diameters and wall thicknesses as defined in Annex F-7 to F-16 and Annex F-41 of the ETA > “Geberit Silent-db20” pipes from manufacturer “Geberit International AG” with diameters and wall thicknesses as defined in Annex F-17 to F-25 and Annex F-42 of the ETA > “Geberit Silent-Pro” pipes from manufacturer “Geberit International AG” with diameters and wall thicknesses as defined in Annex F-26 to F-39 and Annex F-43 of the ETA

Penetrating element	Construction characteristics for installation of the penetrating element in rigid floors
Shower floor drain, cross floor	> “Geberit Duschrinne CleanLine” with “Geberit Rohbauset für Duschrinnen der Reihe CleanLine, stockwerksdurchdringende Installation” resp “Geberit shower channel CleanLine” with “Geberit installation set for shower channels of the CleanLine series, cross-floor installation” (including the corresponding “Geberit PE” pipe and a PE-HD siphon according to EN 1519-1 or EN 12666-1) from manufacturer “Geberit International AG” with a diameter and a wall thickness as defined in Annex F-44 of the ETA
	> “Geberit Duschbodenablauf stockwerksdurchdringend” resp. “Geberit shower floor drain, cross floor” (including the corresponding “Geberit PE” pipe and a PE-HD siphon according to EN 1519-1 or EN 12666-1) from manufacturer “Geberit International AG” a with diameter and a wall thickness as defined in Annex F-44 of the ETA
	> “Geberit Duschfläche Setaplano” resp. “Geberit shower surface Setaplano” (including the corresponding “Geberit PE” pipe and a PE-HD siphon according to EN 1519-1 or EN 12666-1) from manufacturer “Geberit International AG” with a diameter and a wall thickness as defined in Annex F-45 of the ETA

2.2 Use condition

“Rohrschott90 Plus EN” is intended for use at temperatures below 0 °C and with exposure to UV, but with no exposure to rain, and can therefore – according to EAD 350454-00-1104 clause 2.2.9.3.1 – be categorized as Type Y₁. Since the requirements for Type Y₁ are met, also the requirements for Type Y₂, Z₁ and Z₂ are fulfilled.

Although a penetration seal is intended for indoor applications only, the construction process may result in it being subjected to more exposed conditions for a period before the building envelope is closed. For this case provisions shall be made to protect temporarily exposed penetration seals according to the ETA-holder’s installation instructions.

2.3 Working life

The provisions made in this European Technical Assessment are based on an assumed working life of “Rohrschott90 Plus EN” of 10 years, provided the conditions laid down in the technical literature of the manufacturer relating to packaging, transport, storage, installation, use and repair are met.

The indications given on the intended working life cannot be interpreted as a guarantee given by the producer or the Technical Assessment Body, but are to be regarded only as a means for selecting the appropriate product in relation to the expected economically reasonable working life of the works.

The real working life might be, in normal use conditions, considerably longer without major degradation affecting the Basic requirements for construction works.

2.4 General assumptions

2.4.1 It is assumed that

- > damages to the penetration seal are repaired accordingly,
- > the installation of the penetration seal does not affect the stability of the adjacent building element – even in case of fire,
- > 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,
- > the thermal movement in the pipe work will be accommodated in such way that it does not impose a load on the penetration seal,
- > 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,
- > the support of the installations is maintained for the required period of fire resistance and
- > pneumatic dispatch systems, compressed air systems, etc. are switched off by additional means in case of fire.

2.4.2 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.

2.4.3 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.

2.4.4 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 (see EN 1366-3:2009, clause 1).

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

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

2.5 Manufacturing

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

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

Basic requirements for construction works	Essential characteristic	Method of verification	Performance
BWR 2	Reaction to fire	EN 13501-1:2018	Clause 3.1.1 of the ETA
	Resistance to fire	EN 13501-2:2016	Clause 3.1.2 of the ETA and Annex D-1 to D-36 and Annex F-1 to F-45 of the ETA
BWR 3	Air permeability	No performance assessed	
	Water permeability	No performance assessed	
	Content, emission and/or release of dangerous substances	No performance assessed	
BWR 4	Mechanical resistance and stability	No performance assessed	
	Resistance to impact / movement	No performance assessed	
	Adhesion	No performance assessed	
	Durability	EAD 350454-00-1104 clause 2.2.9	Clause 3.3.4 of the ETA
BWR 5	Airborne sound insulation	No performance assessed	
BWR 6	Thermal properties	No performance assessed	
	Water vapour permeability	No performance assessed	

3.1 Safety in case of fire (BWR 2)

3.1.1 Reaction to fire

The components of "Rohrschott90 Plus EN" were assessed according to EAD 350454-00-1104 clause 2.2.1 and classified according to EN 13501-1:2018

Pipe collar	Class according to EN 13501-1:2018
Intumescent inlay of Rohrschott90 Plus EN	E
Sheet steel housing of Rohrschott90 Plus EN	A1

3.1.2 Resistance to fire

“Rohrschott90 Plus EN” was tested according to EAD 350454-00-1104 clause 2.2.2, prEN 1366-3.2:N185:2007-07 and EN 1366-3:2009 in conjunction with EN 1363-1:1999.

Based upon the gained test results and the field of application specified within prEN 1366-3.2:N185:2007-07 and EN 1366-3:2009 the pipe penetration seal “Rohrschott90 Plus EN” has been classified according to EN 13501-2:2016.

The fire resistance classes of the pipe penetration seal “Rohrschott90 Plus EN” in the relevant separating elements are listed in Annex D-1 to D-36 and Annex F-1 to F-45 of the ETA.

The resistance to fire classification of the pipe penetration seal “Rohrschott90 Plus EN” in shaft walls listed in Annex D-18 of the ETA is only valid in case of fires outside the shaft. This European Technical Assessment does not cover the case of fires within shafts.

The resistance to fire classification listed in Annex D-1 to D-36 and Annex F-1 to F-45 of the ETA is only valid if “Rohrschott90 Plus EN” is installed according to Annex A-1 to A-12 of the ETA.

3.2 Hygiene, health and the environment (BWR 3)

3.2.1 Air permeability

No performance assessed.

3.2.2 Water permeability

No performance assessed.

3.2.3 Content, emission and/or release of dangerous substances

No performance assessed.

3.3 Safety and accessibility in use (BWR 4)

3.3.1 Mechanical resistance and stability

No performance assessed.

3.3.2 Resistance to impact / movement

No performance assessed.

3.3.3 Adhesion

No performance assessed.

3.3.4 Durability

The metal housing of “Rohrschott90 Plus EN” is made of ferritic stainless steel (alloy 1.4510) according to EN 10088-2.

According to EAD 350454-00-1104 clause 2.2.9.2.5 and Annex B of EN 10088-1 ferritic stainless steels have relatively low corrosion resistance and their use should normally be restricted to mild indoor or similarly protected environments. This type of stainless steel is appropriate for use in use conditions Y₁, Y₂, Z₁ and Z₂.

The intumescent inlay of “Rohrschott90 Plus EN” fulfils the requirements for use at temperatures below 0 °C and with exposure to UV, but with no exposure to rain and can – according to EAD 350454-00-1104 clause 2.2.9.3.1 – be categorized as Type Y₁.

“Rohrschott90 Plus EN” fulfils the requirements for the intended use condition.

“Rohrschott90 Plus EN” is therefore appropriate for use at temperatures below 0 °C and with exposure to UV, but with no exposure to rain, and can – according to EAD 350454-00-1104 clause 2.2.9.3.1 – be categorized as Type Y₁. Since the requirements for Type Y₁ are met, also the requirements for Type Y₂, Z₁ and Z₂ are fulfilled.

3.4 Protection against noise (BWR 5)

3.4.1 Airborne sound insulation

No performance assessed.

3.5 Energy economy and heat retention (BWR 6)

3.5.1 Thermal properties

No performance assessed.

3.5.2 Water vapour permeability

No performance assessed.

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

4.1 **AVCP system**

According to the Decision 1999/454/EC², amended by Decision 2001/596/EC³ of the European Commission the system(s) of assessment and verification of constancy of performance (see Annex V of Regulation (EU) No 305/2011) is given in the following table.

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

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

Product(s)	Intended use(s)	Level(s) or class(es) (reaction to fire)	System of assessment and verification of constancy of performance
Fire Stopping and Fire Sealing Products	for uses subject to regulations on reaction to fire	A1*, A2*, B*, C*	1
		A1**, A2**, B**, C**, D, E	3
		(A1 to E)***, F	4
* Products/materials for which a clearly identifiable stage in the production process results in an improvement of the reaction to fire classification (e.g. an addition of fire retardants or a limiting of organic material) ** Products/materials not covered by footnote (*) *** Products/materials that do not require to be tested for reaction to fire (e.g. products/materials of class A1 according to Commission Decision 96/603/EC, as amended)			

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

5 Technical details necessary for the implementation of the AVCP system, as provided for the applicable European Assessment Document

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

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

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The original document is signed by:

Rainer Mikulits
Managing Director

1 General

- > "Rohrschott90 Plus EN" can be used on plastic pipes and shower floor drain, cross floor (including the corresponding "Geberit PE" pipe and a PE-HD siphon according to EN 1519-1 or EN 12666-1) according to clause 2.1 of the ETA in walls (vertical separating element) and floors (horizontal separating element) according to clause 2.1 of the ETA.
- > Each plastic pipe (and shower floor drain, cross floor (including the corresponding "Geberit PE" pipe and a PE-HD siphon according to EN 1519-1 or EN 12666-1)) which is to be sealed off has to be equipped separately with "Rohrschott90 Plus EN". For details see Annex C-1 to C-13 and Annex E-1 to E-23 of the ETA.

1.1 Pipe end configuration

- > For plastic pipes and shower floor drain, cross floor (including the corresponding "Geberit PE" pipe and a PE-HD siphon according to EN 1519-1 or EN 12666-1) classified with pipe end configuration U/U the pipe end configuration can be U/U, C/U, U/C, C/C.

1.2 Orientation of the penetrating elements

- > Plastic pipes in flexible walls, rigid walls and rigid floors can be installed perpendicular to the surface of the separating element or in all angles between 90° and 45°. For details see Annex D-1 to D-3, D-6 to D-10, D-13 to D-17, D-19 to D-21, D-24 to D-28, D-31 to D-36 and F-1 to F-3, F-6 to F-9, F-11 to F-19, F-25 to F-28, F-33 to F-39 of the ETA.
- > Plastic pipes with Sound insulation mat according to clause 1 of the ETA or "AF/Armaflex" in flexible walls, rigid walls and rigid floors, shower floor drain, cross floor (including the corresponding "Geberit PE" pipe and a PE-HD siphon according to EN 1519-1 or EN 12666-1) in rigid floors and "Geberit Silent-db20" pipes with a diameter of 110 mm in concrete floors (rigid floors; see Annex E-14 and Annex F-24 of the ETA) with pipe collars fixed to the integrated fastenings of "Geberit Schalungsschoner mit integrierter Befestigung" (Geberit formwork guard with integrated fastening) have to be installed perpendicular to the surface of the separating element. For details see Annex D-4, D-5, D-11, D-12, D-22, D-23, D-29, D-30 and F-4, F-5, F-10, F-20 to F-24, F-29 to F-32, F-40 to F-45 of the ETA.
- > Plastic pipes in shaft walls have to be installed perpendicular to the surface of the shaft wall. For details see Annex D-18 of the ETA.

Rohrschott90 Plus EN
- Details for installation -

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1.3 Service support constructions

- > All plastic pipes (except for shower floor drain, cross floor (including the corresponding “Geberit PE” pipe and a PE-HD siphon according to EN 1519-1 or EN 12666-1)) have to be supported by service support constructions (e.g. pipe hangers) made of metal with a melting or decomposition point greater or equal than 1006 °C for EI 90 (e.g. stainless steel or galvanized steel) according to the ETA-holder’s installation instructions.
- > In rigid walls, flexible walls and shaft walls the pipes have to be supported on both sides of the separating element.
- > In rigid floors the pipes have to be supported on the top side of the separating element.
- > In case of shower floor drain, cross floor (including the corresponding “Geberit PE” pipe and a PE-HD siphon according to EN 1519-1 or EN 12666-1) the corresponding “Geberit PE” pipes and the PE-HD siphon according to EN 1519-1 or EN 12666-1 have to be supported resp. fixed according to the technical literature of the manufacturer.
- > The first support (service support construction) for plastic pipes – installed perpendicular to the surface of the separating element – in flexible walls and rigid walls has to be at the distance as given in the following table (measured from the surface of the separating element).

Nominal diameter pipe	Geberit PE	Geberit Silent-PP	Geberit Silent-db20	Geberit Silent-Pro
	Distance (mm)			
DN 50/56	700	700	450	700
DN 75	700	700	650	700
DN 90	800	800	800	800
DN 100	1000	1000	1000	1000
DN 125	1200	1200	1200	1200
DN 150	1500	1500	1500	1500
DN 200	1900	---	---	---

- > The first support (service support construction) for plastic pipes – installed in an angle between 90° and 45° – in flexible walls and rigid walls has to be at maximum 500 mm (measured from the surface of the separating element).
- > The first support (service support construction) for “Geberit Silent-PP” pipes – installed perpendicular to the surface of the separating element – in shaft walls has to be at maximum 830 mm (measured from the surface of the separating element).
- > The first support (service support construction) for plastic pipes – installed perpendicular to the surface of the separating element or in an angle between 90° and 45° – in rigid floors has to be at maximum 500 mm (measured from the surface of the separating element).
- > All plastic pipes have to be fixed according to the ETA-holder’s installation instructions to the service support construction.

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ANNEX A-2

2 Details for installation of “Rohrschott90 Plus EN” (see Annex B to F-45 of the ETA)

- > “Rohrschott90 Plus EN” has to be installed according to the ETA-holder’s installation instructions.
- > The smallest pipe collar corresponding to the relevant outer diameter of the pipe and shower floor drain, cross floor (including the corresponding “Geberit PE” pipe and a PE-HD siphon according to EN 1519-1 or EN 12666-1) to be sealed off has to be used (see Annex B of the ETA).
- > In case of pipe collars on connection sleeves and “Geberit Elektroschweißmuffe” (Geberit electrofusion sleeve coupling) from manufacturer “Geberit International AG”, the next available dimension (type) of the pipe collar corresponding to the pipe diameter of the relevant pipe to be sealed off has to be used (e.g. for pipes with an outer diameter of 110 mm where in standard cases a pipe collar of type DN 100 has to be used, a pipe collar of type DN 125 has to be used).
- > In case of pipe collars on Sound insulation mat according to clause 1 of the ETA, the next available dimension (type) of the pipe collar corresponding to the pipe diameter of the relevant pipe to be sealed off (except for pipes with an outer diameter of 75 mm) has to be used (e.g. for pipes with an outer diameter of 110 mm where in standard cases a pipe collar of type DN 100 has to be used, a pipe collar of type DN 125 has to be used). For pipes with an outer diameter of 75 mm a pipe collar of type DN 100 has to be used.
- > In case of pipe collars on “AF/Armaflex”, the next available dimension (type) of the pipe collar corresponding to the pipe diameter of the relevant pipe to be sealed off has to be used (e.g. for pipes with an outer diameter of 110 mm where in standard cases a pipe collar of type DN 100 has to be used, a pipe collar of type DN 125 has to be used).
- > In case of “Geberit Silent-db20” pipes with a diameter of 110 mm in rigid floors (see Annex E-14 and Annex F-24 of the ETA) with pipe collars (optionally on “Geberit Elektroschweißmuffe” (Geberit electrofusion sleeve coupling)) fixed to the integrated fastenings of “Geberit Schalungsschoner mit integrierter Befestigung” (Geberit formwork guard with integrated fastening) a pipe collar of type DN 125 has to be used.
- > For vertical separating elements (except shaft walls) the pipe collars have to be installed on both sides of the separating element.
- > For shaft walls the pipe collars have to be installed outside the shaft.
- > For horizontal separating elements the pipe collars have to be installed at the bottom side of the separating element.

Rohrschott90 Plus EN
- Details for installation -

ANNEX A-3

- > In case of pipe collars installed partially within the separating element or flushed within the separating element the distance between the front face bottom side of the pipe collar and the separating element has to be as given in the following table (measured from the surface of the separating element).

Pipe collar type	Flexible wall / Rigid wall		Rigid floor
	Distance (mm)	Minimum thickness in case of pipe collars installed flushed within the separating element (mm)	Distance (mm)
DN 32-56	0* to 40	100	0* to 40
DN 60 / 70	0* to 40	100	0* to 40
DN 90	0* to 40	100	0* to 40
DN 100	0* to 40	100	0* to 40
DN 125	20 to 60	---	0* to 60
DN 125**	45 to 60***	---	0* to 60
DN 125**	0* to 60	140	0* to 60
DN 150	30 to 55	---	0* to 50
DN 150**	55***	---	0* to 50
DN 150**	0* to 55	160	0* to 50
DN 200	40 to 65	---	0* to 60

* in these cases the pipe collar is installed flushed within the separating element

** only for plastic pipes "Geberit Silent-Pro"

*** the distance between the two pipe collars within the separating element has to be minimum 50 mm

- > In case of pipe collars installed flushed within the separating element (flexible wall and rigid wall) the distance between the front face top side of the two pipe collars has to be 0 mm.
- > In case of pipe collars on connection sleeves of "Geberit Silent-PP" pipes installed partially within the separating element (flexible wall and rigid wall) the distance between the front face bottom side of the pipe collar and the separating element has to be 10 mm.

Rohrschott90 Plus EN
- Details for installation -

ANNEX A-4

> In case of pipe collars installed partially within the separating element (flexible wall, rigid wall or rigid floor) the pipe collars type DN 32-56 to DN 125 have to be installed to a depth of minimum 10 mm (measured from the surface of the separating element). > In case of pipe collars installed partially within the separating element (flexible wall and rigid wall) the pipe collars type DN 150 and DN 200 have to be installed to a depth of minimum 25 mm (measured from the surface of the separating element). > In case of pipe collars installed partially within the separating element (rigid floor) the pipe collars type DN 150 and DN 200 have to be installed to a depth of minimum 30 mm (measured from the surface of the separating element). > In case of pipe collars on “Geberit Silent-PP” pipes in horizontal separating elements – installed flushed within the separating element – each pipe collar has to be wrapped with 6 layers of Polyethylene sound insulation (tape) according to clause 1 of the ETA with a length of 40 mm (measured from the front face bottom side of the pipe collar on the bottom side of the horizontal separating element). > In case of pipe collars on connection sleeves of “Geberit Silent-PP” pipes in horizontal separating elements – installed flushed within the separating element – each pipe collar has to be wrapped with 6 layers of Polyethylene sound insulation (tape) according to clause 1 of the ETA with a length of 40 mm (measured from the front face bottom side of the pipe collar on the bottom side of the horizontal separating element). > In case of pipe collars type DN 150 on “Geberit Silent-Pro” pipes in horizontal separating elements – installed flushed within the separating element – each pipe collar has to be wrapped with 6 layers of Polyethylene sound insulation (tape) according to clause 1 of the ETA with a length of 40 mm (measured from the front face bottom side of the pipe collar on the bottom side of the horizontal separating element).	
Rohrschott90 Plus EN - Details for installation -	ANNEX A-5

2.1 Fixing > For flexible walls the pipe collars have to be fixed by threaded steel bolts (thread size M6 for type DN 32-56 to DN 200; length ≥ thickness of the separating element) and on both sides of the separating element with washers and nuts (corresponding to the outer diameter of the threaded steel bolts). > For shaft walls the pipe collars have to be fixed by appropriate steel screw anchors (outer diameter 6 mm; length 45 mm). > For rigid walls and rigid floors (except pipe collars type DN 150 and DN 200 for aerated concrete floors) the pipe collars have to be fixed by threaded steel bolts (thread size M6 for type DN 32-56 to DN 200; length ≥ thickness of the separating element) and on both sides of the separating element with washers and nuts (corresponding to the outer diameter of the threaded steel bolts) or self-drilling screws (outer diameter 7,5 mm; length 60 mm; only for rigid floors with a thickness of minimum 150 mm). > For aerated concrete floors the pipe collars type DN 150 and DN 200 have to be fixed by threaded steel bolts (thread size M6; length ≥ thickness of the separating element) and on both sides of the separating element with washers and nuts (corresponding to the outer diameter of the threaded steel bolts). > In case of “Geberit Silent-db20” pipes with a diameter of 110 mm in concrete floors (rigid floors; see Annex E-14 and Annex F-24 of the ETA) the pipe collars can alternatively be fixed to the four threads of the integrated fastenings (thread size M8) of “Geberit Schalungsschoner mit integrierter Befestigung” (Geberit formwork guard with integrated fastening) with washers and nuts (corresponding to the outer diameter of the threads of the integrated fastening). > In case of pipe collars installed partially within the separating element or flushed within the separating element no additional mechanical fixing (e.g. threaded steel bolts) is required. In these cases the fixing lugs have to be bended outwards at the axis of the bores in an angle of 90° so that an “L” is formed. > In case of two adjoining pipe collars (back to back) in flexible walls or rigid walls, installed partially within the separating element or flushed within the separating element, the pipe collars can be optionally fixed together by threaded steel bolts (thread size M6) and nuts (corresponding to the outer diameter of the threaded steel bolts) or hexagonal steel bolts (thread size M6) and nuts (corresponding to the outer diameter of the hexagonal steel bolts). The number of fixing lugs shall not be reduced.
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2.2 Insulation 2.2.1 Polyethylene sound insulation (tube or tape) > Polyethylene sound insulation (tube or tape) according to clause 1 of the ETA can be used. > In case of shower floor drain, cross floor (including the corresponding “Geberit PE” pipe and a PE-HD siphon according to EN 1519-1 or EN 12666-1) Polyethylene sound insulation (tube or tape) according to clause 1 of the ETA has to be used. > The pipes and the shower floor drain, cross floor (including the corresponding “Geberit PE” pipe and a PE-HD siphon according to EN 1519-1 or EN 12666-1) can be insulated in the penetration area exclusively as well as at their complete length. > The polyethylene sound insulation with an overall thickness of 4 mm has to project the pipe collar on both sides of the separating element by minimum 50 mm (except for shower floor drain, cross floor (including the corresponding “Geberit PE” pipe and a PE-HD siphon according to EN 1519-1 or EN 12666-1) where in some cases the Polyethylene sound insulation can end at the top side of the floor (see Annex E-21 to E-23 of the ETA)). > The polyethylene sound insulation in form of tubes can either be pushed tightly onto the pipe or slotted and wrapped tightly around the pipe or the shower floor drain, cross floor (including the corresponding “Geberit PE” pipe and a PE-HD siphon according to EN 1519-1 or EN 12666-1) and has to be additionally fixed by adhesive tape. > The polyethylene sound insulation in form of tapes has to be wrapped tightly around the pipe or the shower floor drain, cross floor (including the corresponding “Geberit PE” pipe and a PE-HD siphon according to EN 1519-1 or EN 12666-1). > For further details see technical literature of the manufacturer. 2.2.2 Sound insulation mat > In some cases (see Annex C-4, D-4, D-11, D-22, D-29, E-5 to E-7, F-20 and F-29 to F-31 of the ETA) Sound insulation mat according to clause 1 of the ETA can be used. > The pipes can be insulated in the penetration area exclusively as well as at their complete length. > The sound insulation mat with a thickness of 17 mm has to project the separating element on both sides of the separating element by minimum 500 mm. > The sound insulation mat has to be wrapped tightly around the pipe and additionally fixed by adhesive tape. > For further details see technical literature of the manufacturer.	
Rohrschott90 Plus EN - Details for installation -	ANNEX A-7

2.2.3 AF/Armaflex

- > In some cases (see Annex C-5, D-5, D-12, D-23, D-30 and E-8, F-4, F-10, F-21, F-32 of the ETA) plastic pipes can be insulated (local-sustained or continued-sustained) with "AF/Armaflex".
- > The tube of "AF/Armaflex" has to be installed centred in the opening of the separating element so that it protrudes the separating element on both sides by ≥ 500 mm (measured from the surface of the separating element) and that it is continuous (without butt joints) along the required minimum insulation length.
- > The tube of "AF/Armaflex" can be either pushed onto the pipe or slotted and glued at the longitudinal joint.
- > When installing "AF/Armaflex" all longitudinal joints have to be glued with "Armaflex 520" and covered with "AF/Armaflex Band selbstklebend" (AF/Armaflex self-adhesive tape).
- > The amount of "Armaflex 520" shall not be more than 300 g/m^2 .
- > The strip of "AF/Armaflex Band selbstklebend" (AF/Armaflex self-adhesive tape) has to be $50 \text{ mm} \times 3 \text{ mm}$ (width $\times$ thickness).
- > The thickness of the tube of "AF/Armaflex" (in accordance with the outer diameter of the pipe to be sealed off) has to be as given in the following table resp. Annex D-5, D-12, D-23, D-30 and F-4, F-10, F-21, F-32 of the ETA.

Outer diameter of the pipe (mm)	Thickness of AF/Armaflex (mm)
50	13,5
56 / 63 / 75	14
90	14,5
110	15 to 18*
125	15 to 23,5
135	15 to 24
160	15 to 25

* in case of "Geberit PE" pipes and "Geberit Silent-db20" pipes in rigid floors the thickness of "AF/Armaflex" can be 15 mm to 23,5 mm

- > For further details see technical literature of the manufacturer.

Rohrschott90 Plus EN
- Details for installation -

ANNEX A-8

2.3 Annular gap

- > The annular gap (width 10 mm to 30 mm) between the pipe and shower floor drain, cross floor (including the corresponding "Geberit PE" pipe and a PE-HD siphon according to EN 1519-1 or EN 12666-1) to be sealed off and the flexible wall, rigid wall or the rigid floor (vertical separating element or horizontal separating element) has to be completely (over the entire thickness of the separating element) filled with Gap filler according to clause 1 of the ETA on both sides of the separating element.
- > In case of "Geberit Silent-db20" pipes with a diameter of 110 mm in rigid floors (see Annex E-14 and Annex F-24 of the ETA) with pipe collars fixed to the integrated fastenings of "Geberit Schalungsschoner mit integrierter Befestigung" (Geberit formwork guard with integrated fastening) no annular gap is permitted. The "Geberit Schalungsschoner mit integrierter Befestigung" (Geberit formwork guard with integrated fastening) has to be directly embedded in the concrete floor (rigid floor), whereas the covering has to be ≥ 108 mm. In the area of the "Geberit Schalungsschoner mit integrierter Befestigung" (Geberit formwork guard, with integrated fastening) which is to be removed after the installation of the "Geberit Silent-dB20" pipe, a hole on the bottom side of the floor of dimension 200 mm x 200 mm x 42 mm (length x with x height) remains. For further details about installation see technical literature of the manufacturer resp. Annex E-14 of the ETA.
- > The annular gap (width 10 mm to 50 mm) – in case of pipe collars installed partially within the separating element – between the pipe to be sealed off resp. the pipe collar and the flexible wall, rigid wall or the rigid floor (vertical separating element or horizontal separating element) has to be completely (over the entire thickness of the separating element) filled with Gap filler according to clause 1 of the ETA on both sides of the separating element.
- > The annular gap (width 20 mm to 50 mm) – in case of pipe collars installed flushed within the separating element – between the pipe to be sealed off resp. the pipe collar and the flexible wall, rigid wall or the rigid floor (vertical separating element or horizontal separating element) has to be completely (over the entire thickness of the separating element) filled with Gap filler according to clause 1 of the ETA on both sides of the separating element.
- > In case of pipe collars type DN 32-56, DN 60 / DN 70 and DN 125 – installed partially within the separating element or flushed within the separating element – the gap between the pipe to be sealed off and the intumescent inlay of the pipe collar has to be completely closed with Polyethylene sound insulation (tube or tape) according to clause 1 of the ETA to ensure that no Gap filler according to clause 1 of the ETA runs into the gap.

Rohrschott90 Plus EN
- Details for installation -

ANNEX A-9

- > In case of pipe collars on connection sleeves and “Geberit Elektroschweißmuffe” (Geberit electrofusion sleeve coupling) from manufacturer “Geberit International AG” – installed partially within the separating element or flushed within the separating element – the gap between the pipe to be sealed off and the intumescent inlay of the pipe collar has to be completely closed with Polyethylene sound insulation (tube or tape) according to clause 1 of the ETA to ensure that no Gap filler according to clause 1 of the ETA runs into the gap.
- > The annular gap (width 10 mm to 20 mm) between the pipe to be sealed off and the shaft wall (vertical separating element) has to be completely (over the entire thickness of the separating element) filled with gap filler “CP611A” according to clause 1 of the ETA on both sides of the separating element.
- > In case of non-insulated flexible walls it has to be ensured that the cavity of the flexible wall around the annular gap is filled with stone wool with classification A2-s1,d0 or A1 according to EN 13501-1.

- 2.4 Installation of pipe collar on pipes in an angle between 90° and 45° in flexible walls and rigid walls (additional information) (see Annex C-8 to C-11 of the ETA)**
- > The pipe collars can only be installed partially within the separating element or flushed within the separating element.
 - > In these cases, one side (front face bottom side or front face top side) of the housing of each pipe collar has to be in contact with the surface of the separating element (see Annex C-8 to C-11, D-6, D-7, D-15 to D-17, D-24, D-25 and D-33 to D-36 of the ETA).
 - > The distance between the two pipe collars within the separating element has to be minimum 50 mm.
 - > The two pipe collars shall not be fixed together or fixed to the separating element.
 - > If these provisions cannot be fulfilled due to the thickness of the separating element, the thickness of the separating element has to be increased by installing a board frame of minimum dimension 100 mm x 100 mm (width x height; measured from the surface of the pipe) made of boards (gypsum boards or silicate- or calcium silicate boards) with a thickness of minimum 12,5 mm and classification A2-s1,d0 or A1 according to EN 13501-1 around the pipe. The board frame has to be installed and fixed according to the ETA-holder’s installation instructions.
 - > The cavity within the separating element around the pipe resp. the pipe collar has to be completely (over the entire thickness of the separating element) filled with Gap filler according to clause 1 of the ETA on both sides of the separating element.
 - > The front face bottom side of the pipe collars on both sides of the separating element shall not be covered by Gap filler according to clause 1 of the ETA.

Rohrschott90 Plus EN - Details for installation -	ANNEX A-10
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2.5 Installation of pipe collar on pipes in an angle between 90° and 45° in rigid floors (additional information) (see Annex E-15 to E-18 of the ETA) > The pipe collars can only be installed partially within the separating element or flushed within the separating element. > In these cases, one side (front face bottom side or front face top side) of the housing of the pipe collar has to be in contact with the surface of the separating element (see Annex E-15 to E-18, F-6, F-14 to F-16, F-25 and F-36 to F-39 of the ETA). > The pipe collar has to be installed in such a way, that the highest point of the housing is covered by minimum 50 mm (see Annex E-15 to E-18 of the ETA). > The pipe collar shall not be fixed to the separating element. > If these provisions cannot be fulfilled due to the thickness of the separating element, the thickness of the separating element has to be increased by installing a partial doubling of minimum dimension 100 mm x 100 mm (width x height; measured from the surface of the pipe) made of mortar with classification A1 according to EN 13501-1. The partial doubling has to be realised according to the ETA-holder's installation instructions. > The cavity within the separating element around the pipe resp. the pipe collar has to be completely filled with mortar with classification A1 according to EN 13501-1 to clause 1 of the ETA on both sides of the separating element. > The front face bottom side of the pipe collar on the bottom side of the horizontal separating element shall not be covered by Gap filler according to clause 1 of the ETA.	
Rohrschott90 Plus EN - Details for installation -	ANNEX A-11

3 Minimum working clearances

- > The minimum distance between two pipes (linear arrangement, no clusters) in flexible walls, rigid walls and rigid floors is 100 mm (measured from the surface of the pipe collar).
- > In some cases (see Annex C-13 and E-19 of the ETA as well as Annex D-1 to D-3, D-8 to D-10, D-19 to D-21, D-26 to 28, F-1 to F-3, F-7 to F-9, F-17 to F-19, F-26 to F-28 and F-33 to F-35 of the ETA) the minimum distance between two pipes (linear arrangement, no clusters) in flexible walls, rigid walls and rigid floors can be 0 mm (measured from the surface of the pipe collar).
- > The minimum distance between two pipes (linear arrangement, no clusters) in shaft walls is 100 mm (measured from the surface of the pipe collar).
- > The minimum distance to other installations or penetration seals in flexible walls, rigid walls shaft walls or rigid floors is 100 mm.

4 Transport and storage

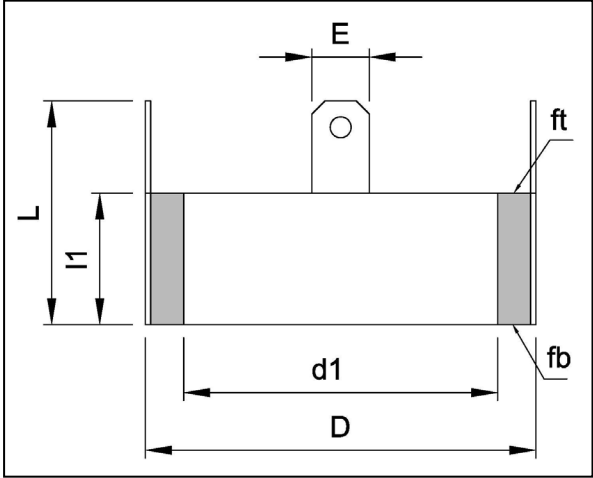
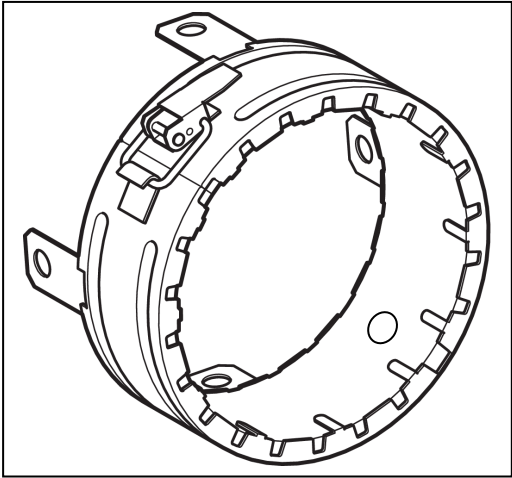
- > The indications of the manufacturer regarding transport and storage (minimum and maximum storing temperature, maximum duration of storage) have to be followed.

5 Use, maintenance and repair

- > The fire resistance of the penetration seal shall not be negatively affected by future changes to buildings or building elements.
- > The assessment of the fitness for use is based on the assumption that necessary maintenance and repair if required is carried out in accordance with the manufacturer's instructions during the assumed intended working life.

Rohrschott90 Plus EN
- Details for installation -

ANNEX A-12

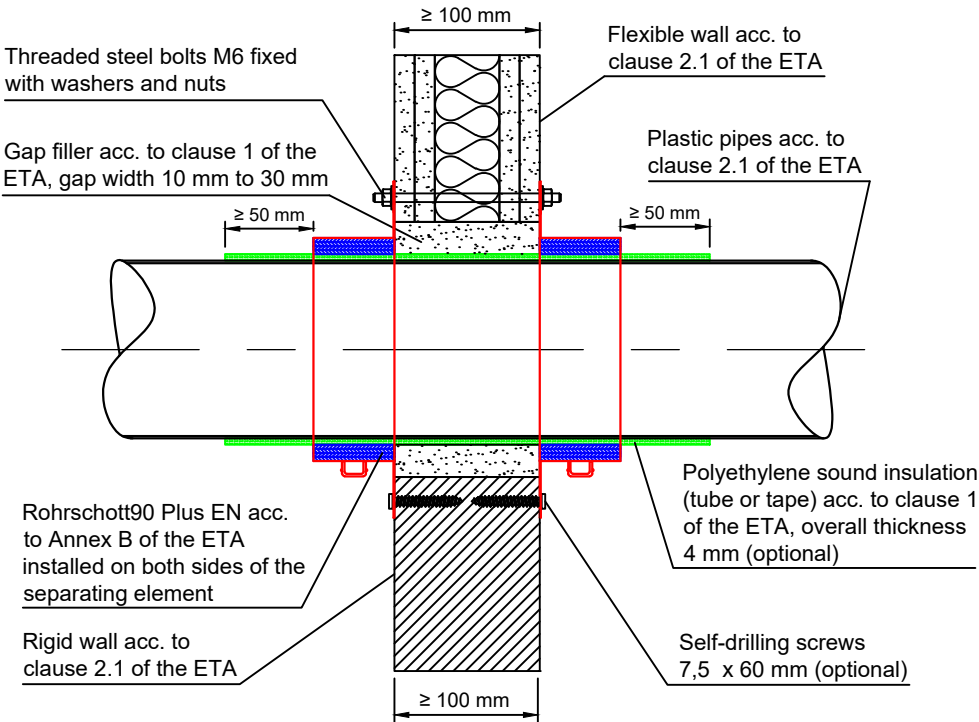


thickness of sheet steel of pipe collar 0,50 mm
thickness of sheet steel of fixing lugs 0,80 mm

collar					active component		fixing lugs			fastener
type (---)	d1 (mm)	D (mm)	I1 (mm)	L (mm)	C (---)	I1 (mm)	E (mm)	P (pcs)	F (mm)	Q (pcs)
DN 32-56	63,4	78,0 ± 1,5	50	85	2	48 ± 0,5	22	3	8	1
DN 60 / 70	82,5	102,1 ± 1,5	50	85	3	48 ± 0,5	22	3	8	1
DN 90	97,7	119,0 ± 1,7	50	85	4	48 ± 0,5	22	3	8	1
DN 100	117,8	145,2 ± 1,7	50	85	5	48 ± 0,5	22	4	8	1
DN 125	141,4	170,1 ± 1,9	70	105	5	68 ± 0,5	22	4	8	2
DN 150	169,2	206,3 ± 2,1	80	115	8	78 ± 0,5	22	5	8	2
DN 200	207,2	272,1 ± 2,3	90	125	13	88 ± 0,5	22	6	8	2

- d1... inner diameter of collar
- I1.... height of collar / active component
- L..... height of collar including fixing lugs
- C..... number of layers (thickness of active component 2,2 mm - 0 mm / + 0,30 mm)
- D..... outer diameter of collar
- E..... width of fixing lugs
- F.... diameter of bores
- P.... number of fixing lugs
- Q.... number of fastener
- fb.... front face bottom side
- ft..... front face top side

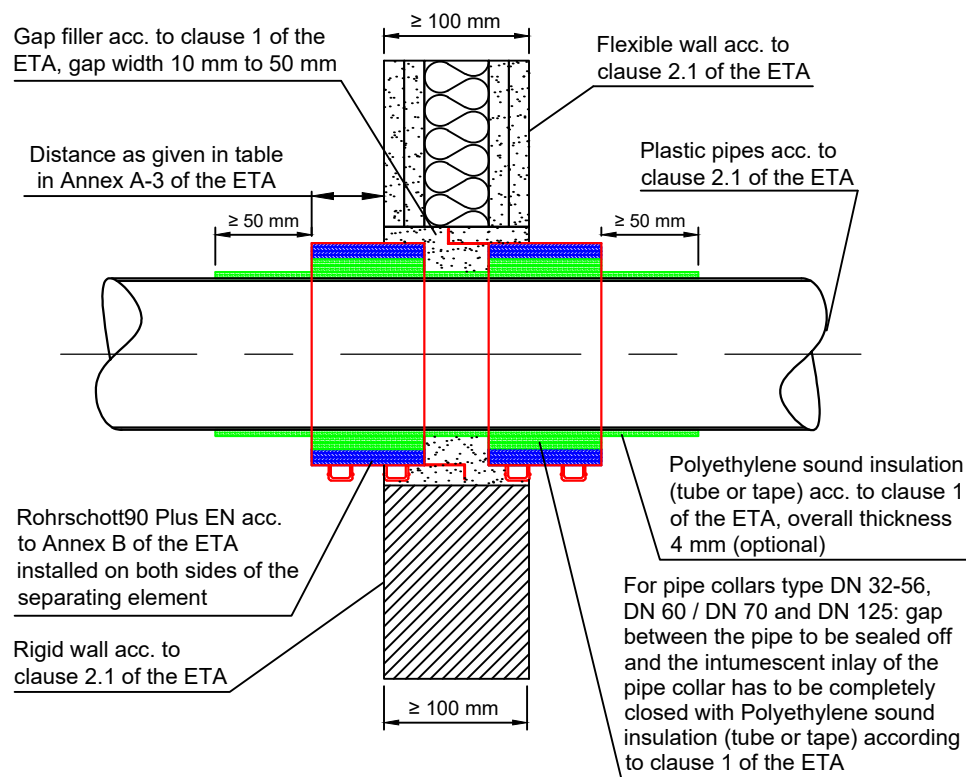
Plastic pipes acc. to cl. 2.1 of the ETA – in flexible walls and rigid walls acc. to cl. 2.1 of the ETA
– Rohrschott90 Plus EN installed on both sides to the surface of the separating element –
Installation drawing – sectional view



Rohrschott90 Plus EN
- Installation in flexible wall and rigid wall -

ANNEX C-1

Plastic pipes acc. to cl. 2.1 of the ETA – in flexible walls and rigid walls acc. to cl. 2.1 of the ETA
– Rohrschott90 Plus EN installed on both sides partially within the separating element –
Installation drawing – sectional view



Rohrschott90 Plus EN
- Installation in flexible wall and rigid wall -

ANNEX C-2

Gap filler acc. to clause 1 of the ETA, gap width 20 mm to 50 mm

Distance as given in table in Annex A-3 of the ETA

≥ 100 mm

Flexible wall acc. to clause 2.1 of the ETA

Plastic pipes acc. to clause 2.1 of the ETA

≥ 50 mm

≥ 50 mm

Rohrschott90 Plus EN acc. to Annex B of the ETA installed on both sides of the separating element

optional fixing lugs can be screwed together

Rigid wall acc. to clause 2.1 of the ETA

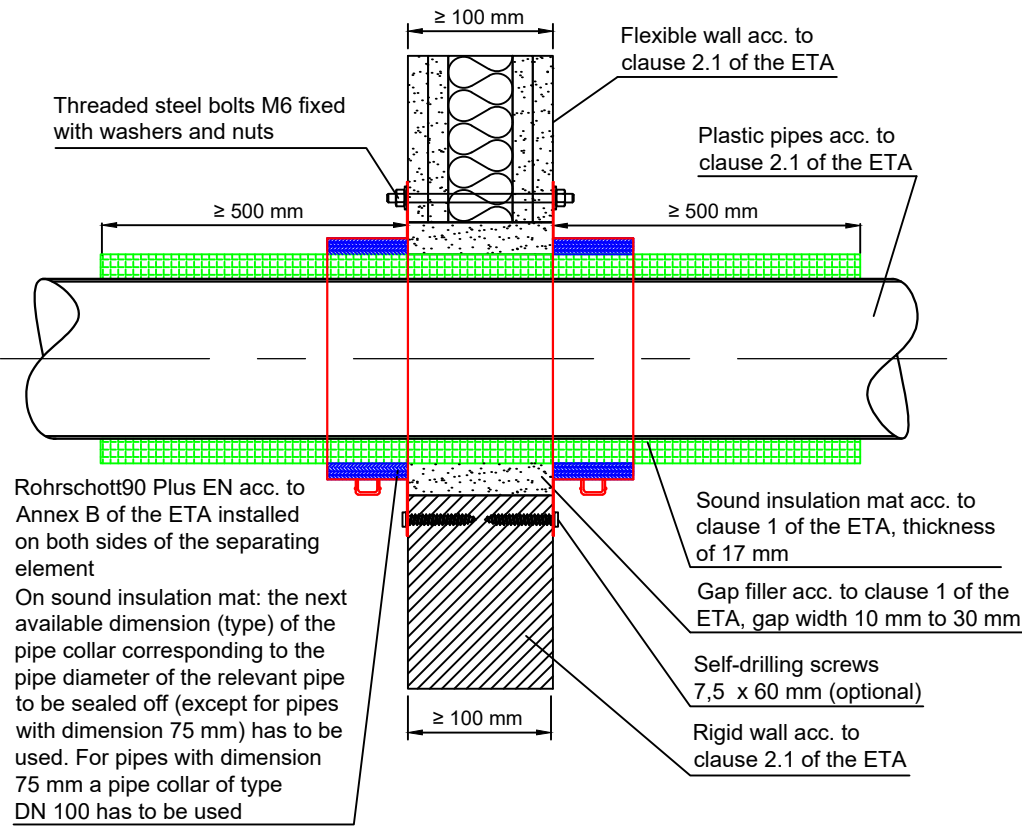
Polyethylene sound insulation (tube or tape) acc. to clause 1 of the ETA, overall thickness 4 mm (optional)

For pipe collars type DN 32-56, DN 60 / DN 70 and DN 125: gap between the pipe to be sealed off and the intumescent inlay of the pipe collar has to be completely closed with Polyethylene sound insulation (tube or tape) according to clause 1 of the ETA

≥ 100 mm

ANNEX C-3

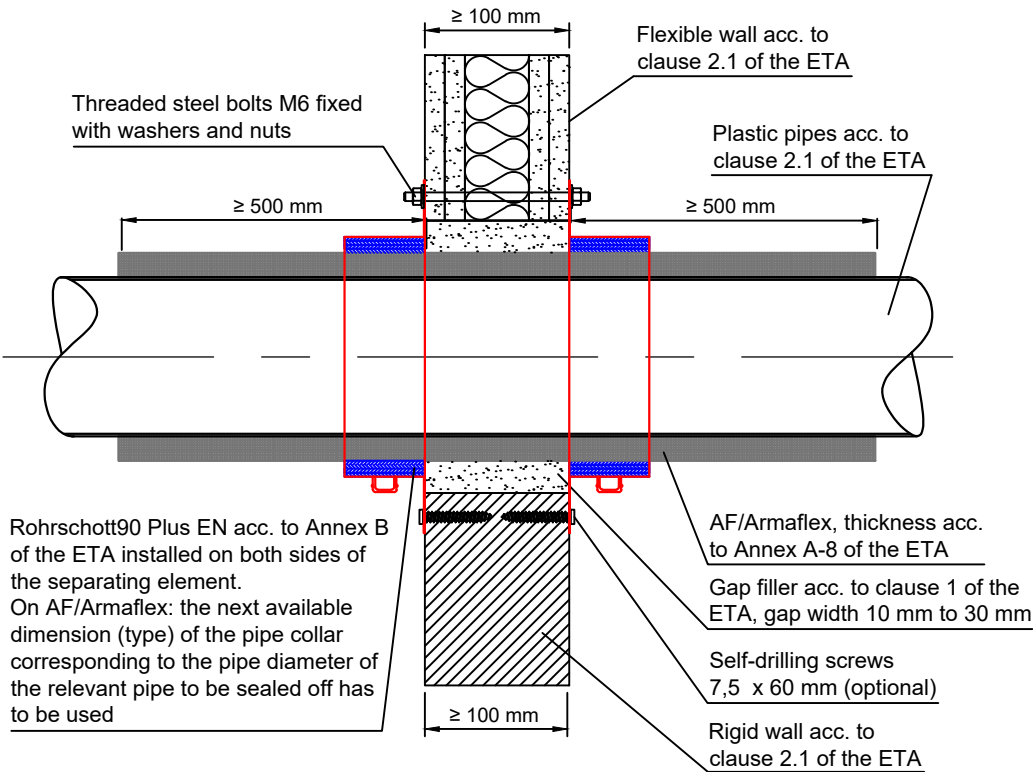
Plastic pipes acc. to cl. 2.1 of the ETA with Sound insulation mat acc. to cl. 1 of the ETA – in flexible walls and rigid walls acc. to cl. 2.1 of the ETA – Rohrschott90 Plus EN installed on both sides to the surface of the separating element – Installation drawing – sectional view



Rohrschott90 Plus EN
- Installation in flexible wall and rigid wall -

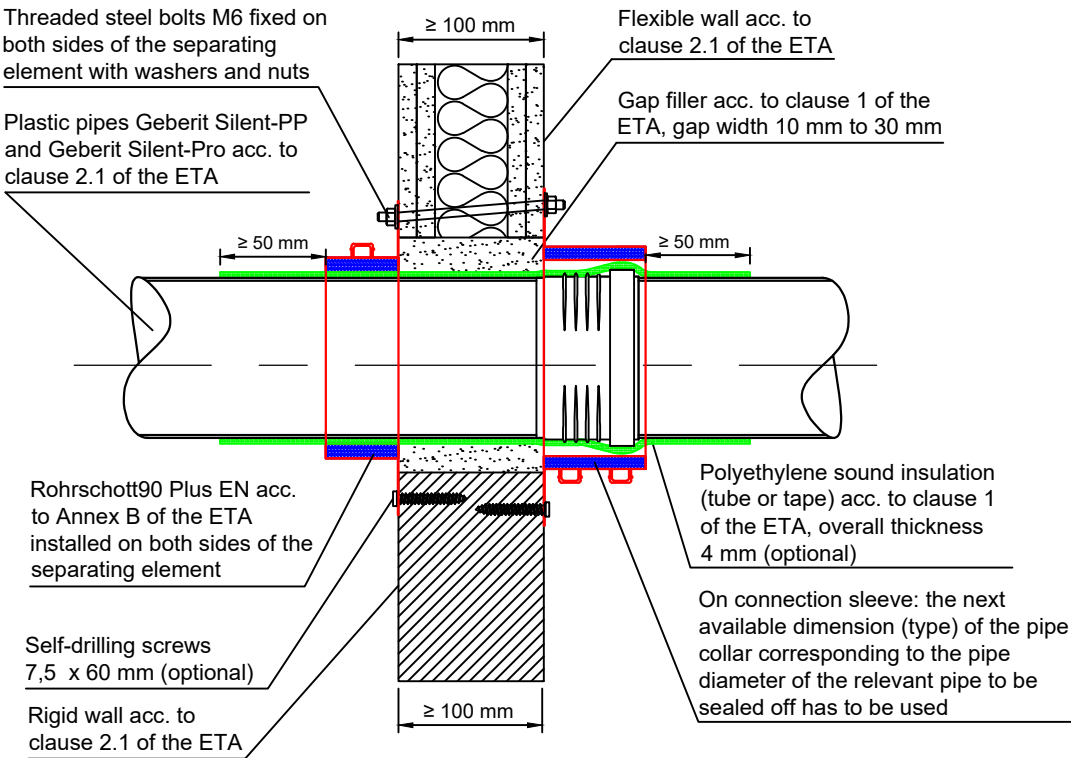
ANNEX C-4

Plastic pipes acc. to cl. 2.1 of the ETA with “AF/Armaflex” – in flexible walls and rigid walls acc. to cl. 2.1 of the ETA – Rohrschott90 Plus EN installed on both sides to the surface of the separating element – Installation drawing – sectional view



Rohrschott90 Plus EN - Installation in flexible wall and rigid wall -	ANNEX C-5
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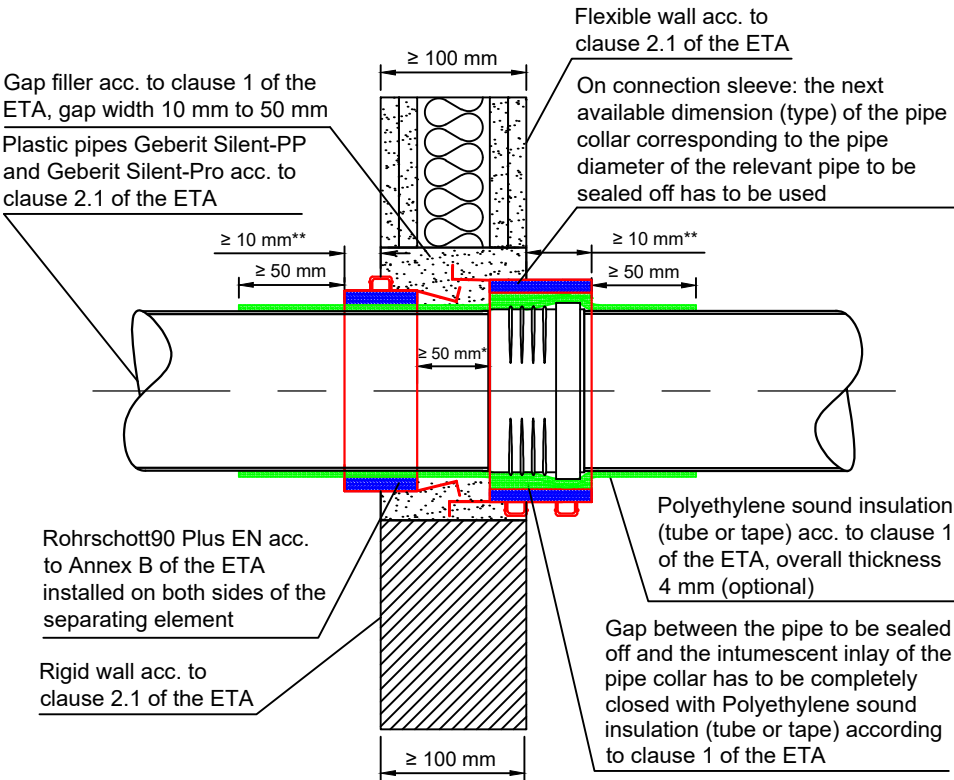
Plastic pipes Geberit Silent-PP and Geberit Silent-Pro acc. to cl. 2.1 of the ETA – in flexible walls and rigid walls acc. to cl. 2.1 of the ETA – Rohrschott90 Plus EN installed on connection sleeve on both sides to the surface of the separating element – Installation drawing – sectional view



Rohrschott90 Plus EN
 - Installation in flexible wall and rigid wall -

ANNEX C-6

Plastic pipes Geberit Silent-PP and Geberit Silent-Pro acc. to cl. 2.1 of the ETA – in flexible walls and rigid walls acc. to cl. 2.1 of the ETA – Rohrschott90 Plus EN installed on connection sleeve on both sides partially within the separating element – Installation drawing – sectional view

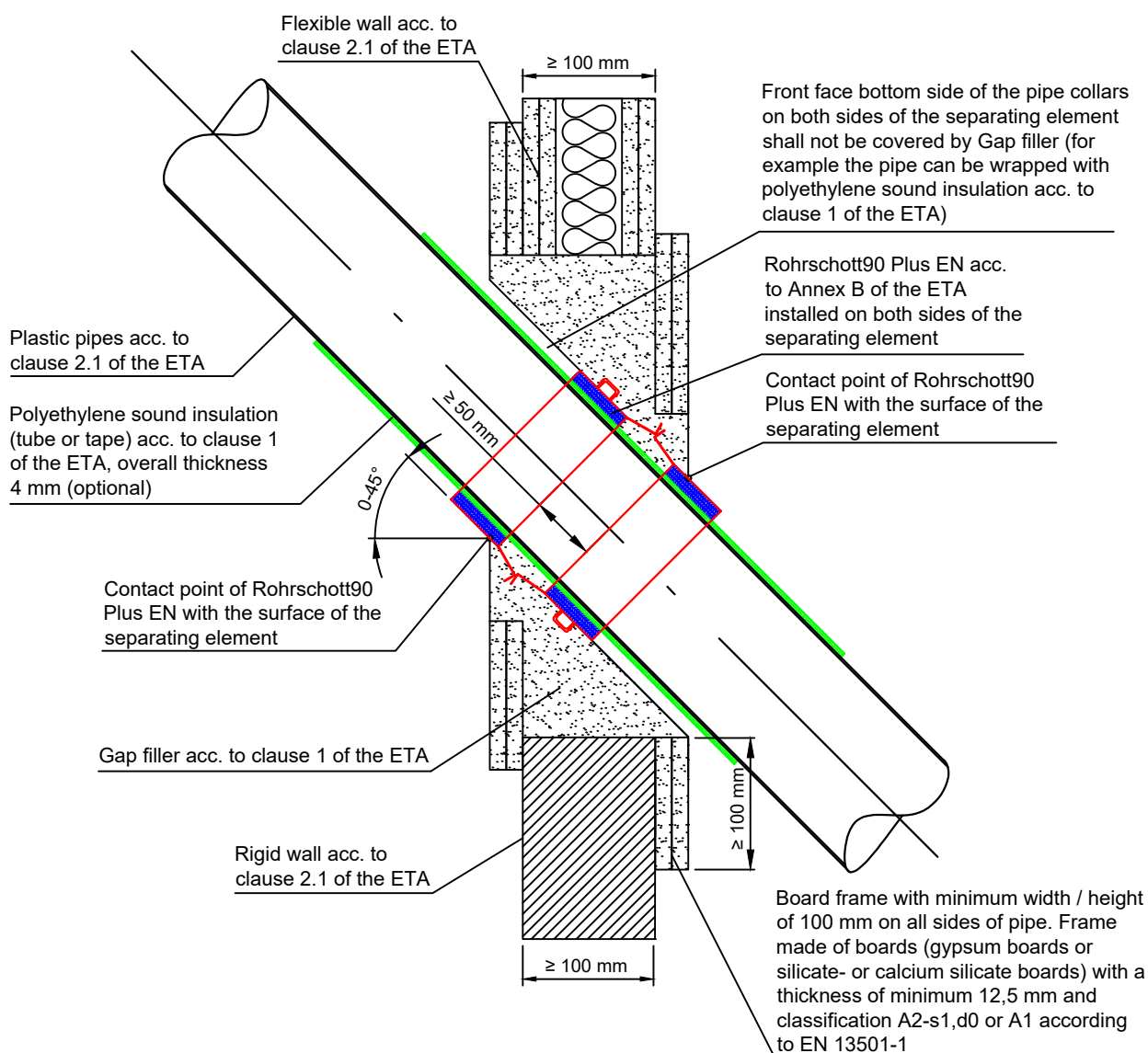


* only valid for plastic pipes Geberit Silent-Pro
** only valid for plastic pipes Geberit Silent-PP

Rohrschott90 Plus EN
- Installation in flexible wall and rigid wall -

ANNEX C-7

Plastic pipes acc. to cl. 2.1 of the ETA installed in an angle between 90° and 45° – in flexible walls and rigid walls acc. to cl. 2.1 of the ETA – Rohrschott90 Plus EN installed on both sides partially within the separating element – Installation drawing – sectional view

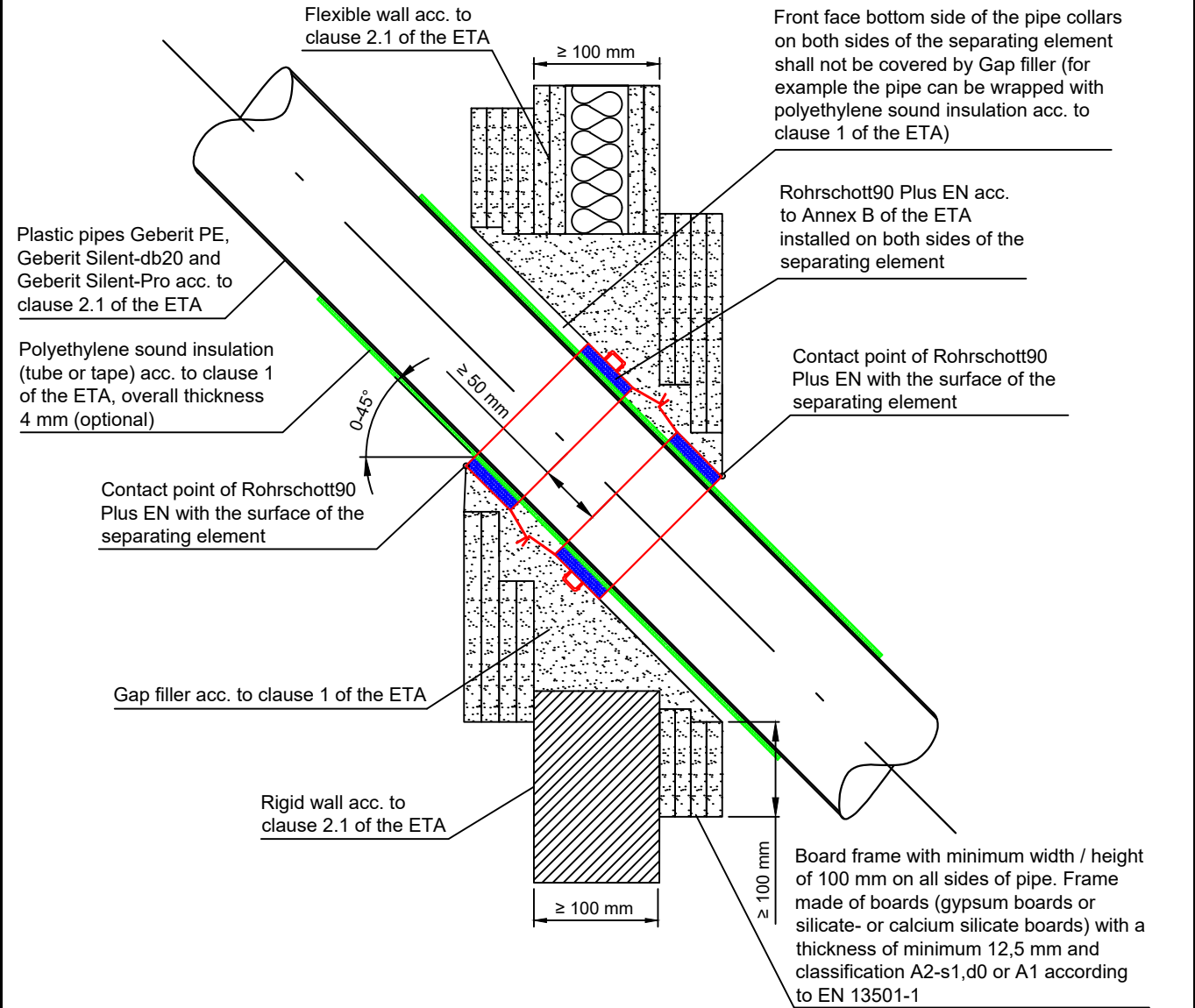


Rohrschott90 Plus EN
- Installation in flexible wall and rigid wall -

ANNEX C-8

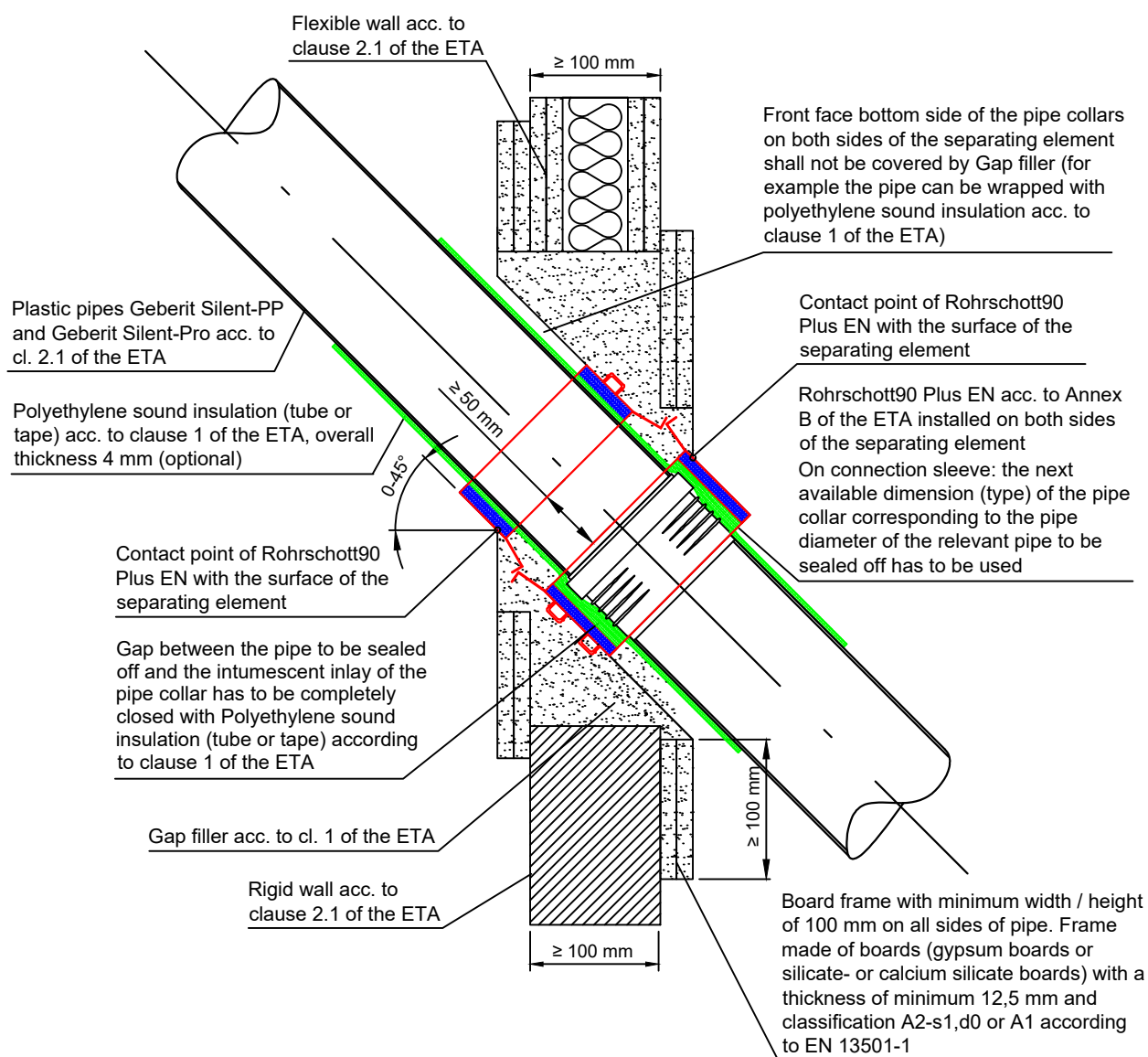
Plastic pipes Geberit PE, Geberit Silent-db20 and Geberit Silent-Pro acc. to cl. 2.1 of the ETA installed in an angle between 90° and 45° – in flexible walls and rigid walls acc. to cl. 2.1 of the ETA – Rohrschott90 Plus EN installed on both sides flushed within the separating element –

Installation drawing – sectional view



Rohrschott90 Plus EN - Installation in flexible wall and rigid wall -	ANNEX C-9
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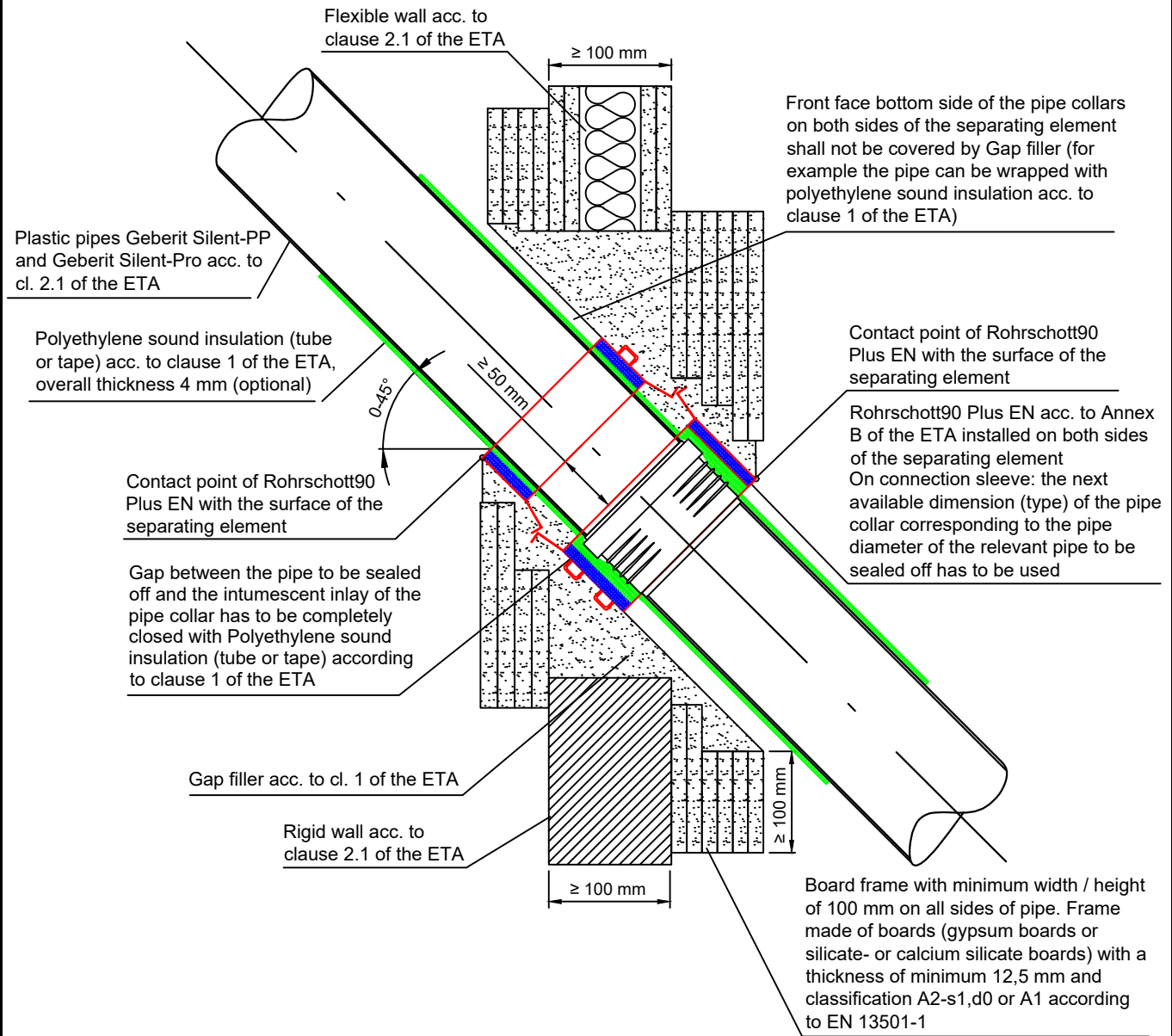
Plastic pipes Geberit Silent-PP and Geberit Silent-Pro acc. to cl. 2.1 of the ETA installed in an angle between 90° and 45° – in flexible walls and rigid walls acc. to cl. 2.1 of the ETA – Rohrschott90 Plus EN installed on connection sleeve on both sides partially within the separating element – Installation drawing – sectional view



Rohrschott90 Plus EN
- Installation in flexible wall and rigid wall -

ANNEX C-10

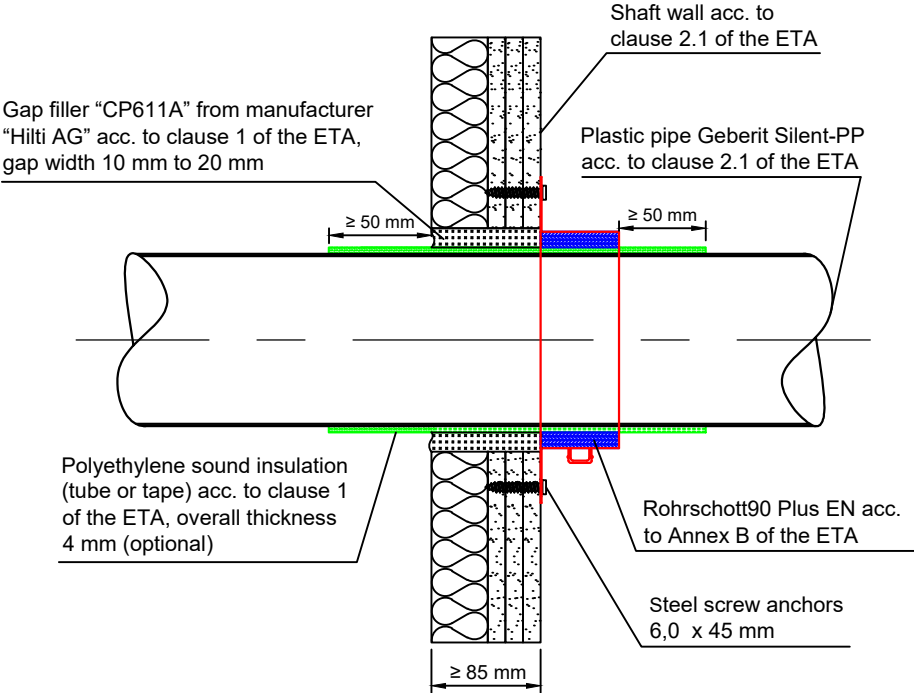
Plastic pipes Geberit Silent-PP and Geberit Silent-Pro acc. to cl. 2.1 of the ETA installed in an angle between 90° and 45° – in flexible walls and rigid walls acc. to cl. 2.1 of the ETA – Rohrschott90 Plus EN installed on connection sleeve on both sides flushed within the separating element – Installation drawing – sectional view



Rohrschott90 Plus EN
- Installation in flexible wall and rigid wall -

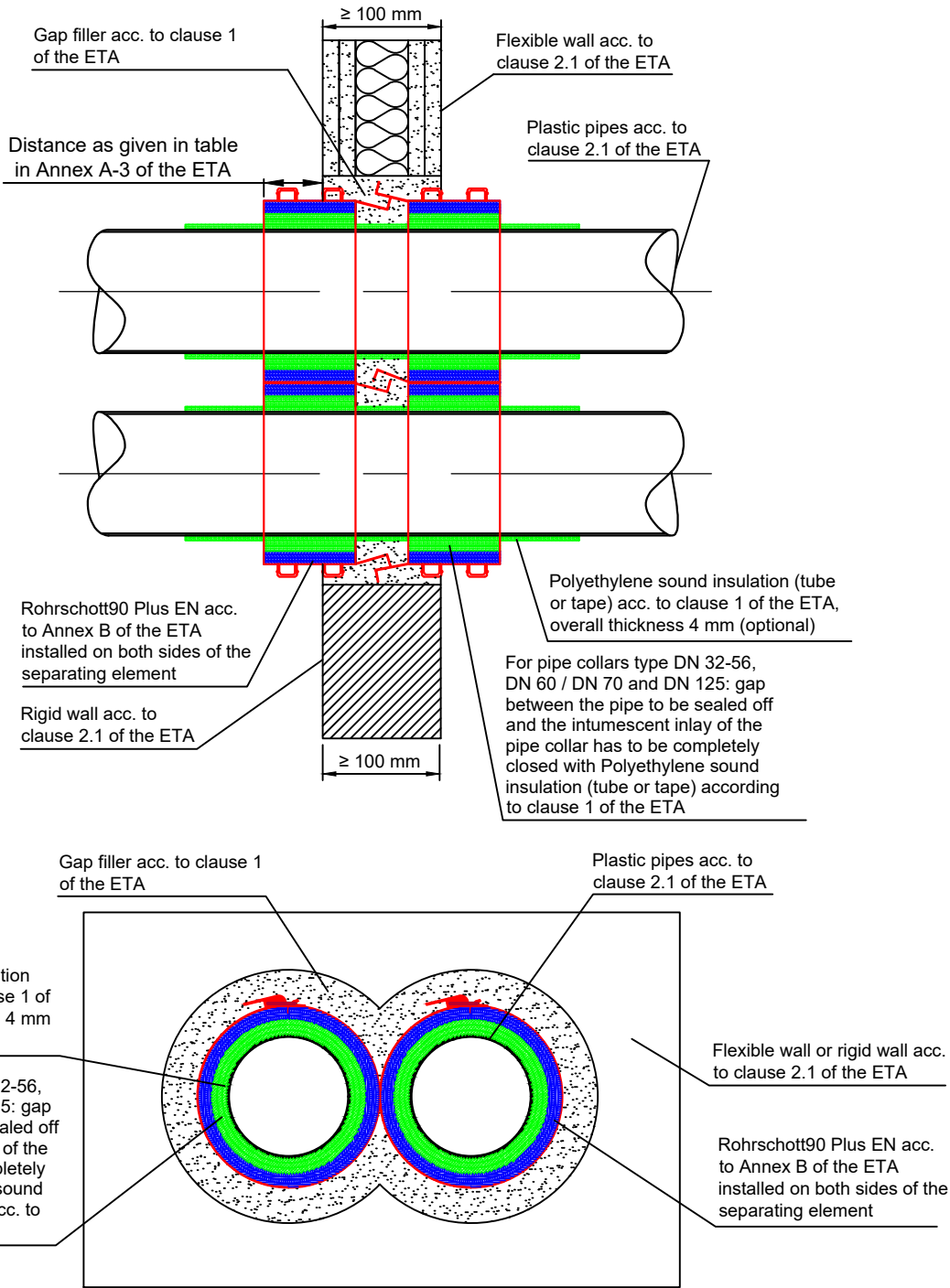
ANNEX C-11

Plastic pipes Geberit Silent-PP acc. to cl. 2.1 of the ETA – in shaft walls acc. to cl. 2.1 of the ETA – Rohrschott90 Plus EN installed outside the shaft to the surface of the shaft wall –
Installation drawing – sectional view



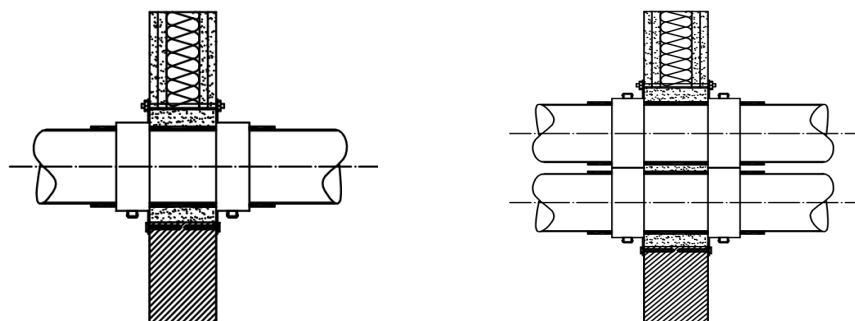
Rohrschott90 Plus EN - Installation in shaft wall -	ANNEX C-12
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Plastic pipes acc. to cl. 2.1 of the ETA – in in flexible walls and rigid walls acc. to cl. 2.1 of the ETA – Minimum distance between two pipe collars (0 mm) – Installation drawing – sectional view / front view



Rohrschott90 Plus EN - Installation in flexible wall and rigid wall -	ANNEX C-13
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PE



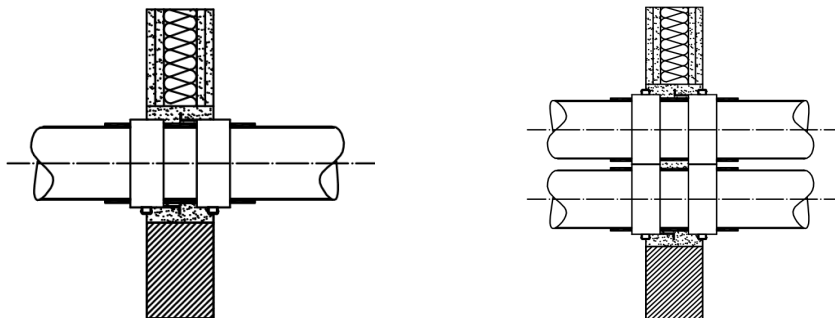
**Plastic pipes Geberit PE acc. to cl. 2.1 of the ETA (optionally with Polyethylene sound insulation (tube or tape) acc. to cl. 1 of the ETA)
– in flexible walls and rigid walls acc. to cl. 2.1 of the ETA
– Rohrschott90 Plus EN installed on both sides to the surface of the separating element**

Pipe dimensions (mm)		Fire resistance classification	
Outer diameter	Wall thickness	Single pipe	Minimum distance between two pipe collars (0 mm)
32	3,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
40	3,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
50	3,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
56	3,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
63	3,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
75	3,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
90	3,5	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
110	4,3	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
125	4,9	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
160	6,2	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
200	6,2	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U

Rohrschott90 Plus EN
- Fire resistance classification -

ANNEX D-1

PE



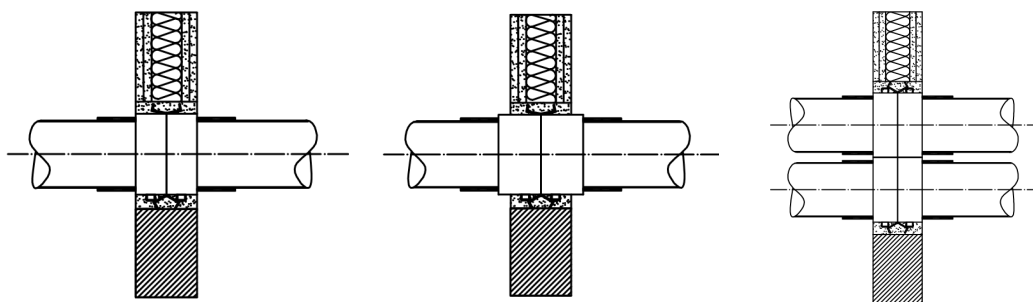
Plastic pipes Geberit PE acc. to cl. 2.1 of the ETA (optionally with Polyethylene sound insulation (tube or tape) acc. to cl. 1 of the ETA)
– in flexible walls and rigid walls acc. to cl. 2.1 of the ETA
– Rohrschott90 Plus EN installed on both sides partially within the separating element

Pipe dimensions (mm)		Fire resistance classification	
Outer diameter	Wall thickness	Single pipe	Minimum distance between two pipe collars (0 mm)
32	3,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
40	3,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
50	3,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
56	3,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
63	3,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
75	3,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
90	3,5	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
110	4,3	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
125	4,9	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
160	6,2	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
200	6,2	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U

Rohrschott90 Plus EN
- Fire resistance classification -

ANNEX D-2

PE



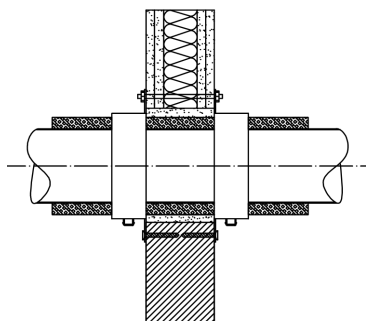
Plastic pipes Geberit PE acc. to cl. 2.1 of the ETA (optionally with Polyethylene sound insulation (tube or tape) acc. to cl. 1 of the ETA)
– in flexible walls and rigid walls acc. to cl. 2.1 of the ETA
– Rohrschott90 Plus EN installed on both sides flushed within the separating element

Pipe dimensions (mm)		Fire resistance classification	
Outer diameter	Wall thickness	Single pipe	Minimum distance between two pipe collars (0 mm)
32	3,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
40	3,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
50	3,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
56	3,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
63	3,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
75	3,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
90	3,5	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
110	4,3	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
125	4,9	EI 90-U/U E 90-U/U	-----
160	6,2	-----	-----
200	6,2	EI 90-U/U E 90-U/U	-----

Rohrschott90 Plus EN
- Fire resistance classification -

ANNEX D-3

PE



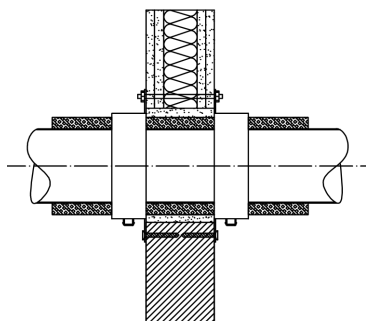
**Plastic pipes Geberit PE acc. to cl. 2.1 of the ETA with Sound insulation mat acc. to cl. 1 of the ETA
– in flexible walls and rigid walls acc. to cl. 2.1 of the ETA
– Rohrschott90 Plus EN installed on both sides to the surface of the separating element**

Pipe dimensions (mm)		Sound insulation mat Symmetrical insulation (mm)		Fire resistance classification
Outer diameter	Wall thickness	Thickness	Length on both sides of the separating element	
32	3,0	-----	-----	-----
40	3,0	-----	-----	-----
50	3,0	-----	-----	-----
56	3,0	-----	-----	-----
63	3,0	-----	-----	-----
75	3,0	17	≥ 500	EI 90-U/U E 90-U/U
90	3,5	17	≥ 500	EI 90-U/U E 90-U/U
110	4,3	17	≥ 500	EI 90-U/U E 90-U/U
125	4,9	17	≥ 500	EI 90-U/U E 90-U/U
160	6,2	17	≥ 500	EI 90-U/U E 90-U/U
200	6,2	-----	-----	-----

Rohrschott90 Plus EN
- Fire resistance classification -

ANNEX D-4

PE

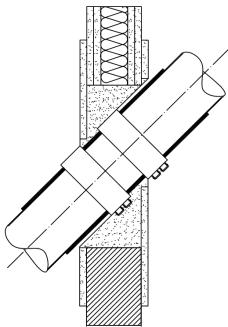


Plastic pipes Geberit PE acc. to cl. 2.1 of the ETA with AF/Armaflex (local-sustained LS or continued-sustained CS) – in flexible walls and rigid walls acc. to cl. 2.1 of the ETA – Rohrschott90 Plus EN installed on both sides to the surface of the separating element				
Pipe dimensions (mm)		AF/Armaflex Symmetrical insulation (mm)		Fire resistance classification
Outer diameter	Wall thickness	Thickness	Length on both sides of the separating element	
32	3,0	-----	-----	-----
40	3,0	-----	-----	-----
50	3,0	13,5	≥ 500	EI 90-U/U E 90-U/U
56	3,0	14	≥ 500	EI 90-U/U E 90-U/U
63	3,0	14	≥ 500	EI 90-U/U E 90-U/U
75	3,0	14	≥ 500	EI 90-U/U E 90-U/U
90	3,5	14,5	≥ 500	EI 90-U/U E 90-U/U
110	4,3	15 to 18	≥ 500	EI 90-U/U E 90-U/U
125	4,9	15 to 23,5	≥ 500	EI 90-U/U E 90-U/U
160	6,2	16 to 25	≥ 500	EI 90-U/U E 90-U/U
200	6,2	-----	-----	-----

Rohrschott90 Plus EN
- Fire resistance classification -

ANNEX D-5

PE



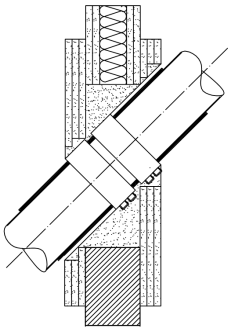
Plastic pipes Geberit PE acc. to cl. 2.1 of the ETA (optionally with Polyethylene sound insulation (tube or tape) acc. to cl. 1 of the ETA) installed in an angle between 90° and 45°
 – in flexible walls and rigid walls acc. to cl. 2.1 of the ETA
 – Rohrschott90 Plus EN installed on both sides partially within the separating element

Pipe dimensions (mm)		Fire resistance classification
Outer diameter	Wall thickness	
56	3,0	-----
63	3,0	-----
75	3,0	-----
90	3,5	-----
110	4,3	-----
125	4,9	EI 90-U/U E 90-U/U

Rohrschott90 Plus EN
 - Fire resistance classification -

ANNEX D-6

PE



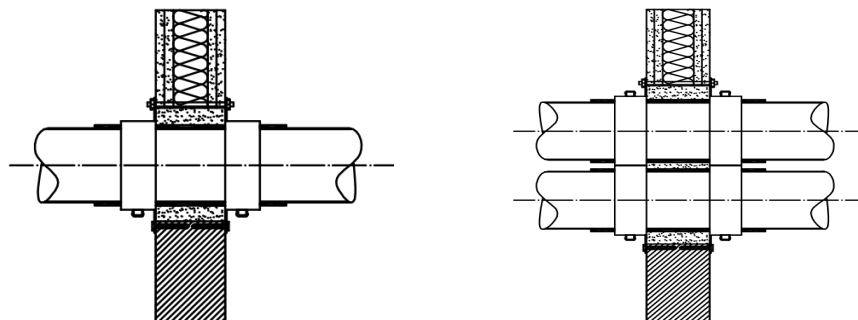
Plastic pipes Geberit PE acc. to cl. 2.1 of the ETA (optionally with Polyethylene sound insulation (tube or tape) acc. to cl. 1 of the ETA) installed in an angle between 90° and 45°
 – in flexible walls and rigid walls acc. to cl. 2.1 of the ETA
 – Rohrschott90 Plus EN installed on both sides flushed within the separating element

Pipe dimensions (mm)		Fire resistance classification
Outer diameter	Wall thickness	
56	3,0	-----
63	3,0	-----
75	3,0	-----
90	3,5	-----
110	4,3	EI 90-U/U E 90-U/U

Rohrschott90 Plus EN
 - Fire resistance classification -

ANNEX D-7

Silent-PP



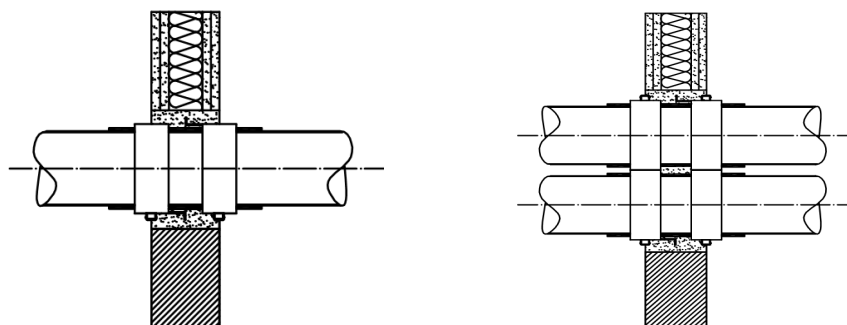
Plastic pipes Geberit Silent-PP acc. to cl. 2.1 of the ETA (optionally with Polyethylene sound insulation (tube or tape) acc. to cl. 1 of the ETA)
– in flexible walls and rigid walls acc. to cl. 2.1 of the ETA
– Rohrschott90 Plus EN installed on both sides to the surface of the separating element

Pipe dimensions (mm)		Fire resistance classification	
Outer diameter	Wall thickness	Single pipe	Minimum distance between two pipe collars (0 mm)
32	2,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
40	2,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
50	2,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
75	2,6	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
90	3,1	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
110	3,6	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
125	4,2	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
160	5,2	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U

Rohrschott90 Plus EN
- Fire resistance classification -

ANNEX D-8

Silent-PP



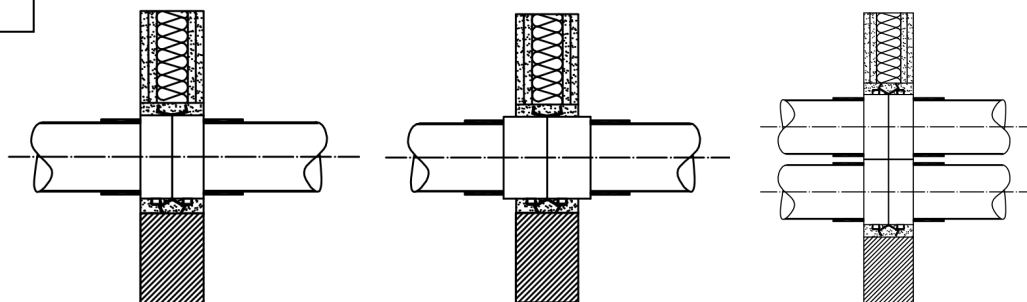
Plastic pipes Geberit Silent-PP acc. to cl. 2.1 of the ETA (optionally with Polyethylene sound insulation (tube or tape) acc. to cl. 1 of the ETA)
– in flexible walls and rigid walls acc. to cl. 2.1 of the ETA
– Rohrschott90 Plus EN installed on both sides partially within the separating element

Pipe dimensions (mm)		Fire resistance classification	
Outer diameter	Wall thickness	Single pipe	Minimum distance between two pipe collars (0 mm)
32	2,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
40	2,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
50	2,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
75	2,6	EI 90-U/U E 90-U/U	-----
90	3,1	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
110	3,6	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
125	4,2	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
160	5,2	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U

Rohrschott90 Plus EN
- Fire resistance classification -

ANNEX D-9

Silent-PP



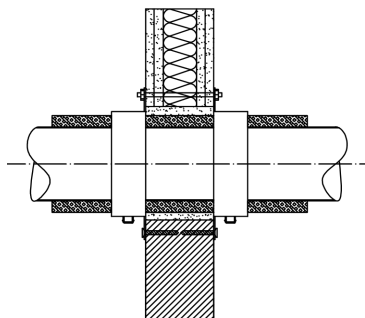
Plastic pipes Geberit Silent-PP acc. to cl. 2.1 of the ETA (optionally with Polyethylene sound insulation (tube or tape) acc. to cl. 1 of the ETA)
– in flexible walls and rigid walls acc. to cl. 2.1 of the ETA
– Rohrschott90 Plus EN installed on both sides flushed within the separating element

Pipe dimensions (mm)		Fire resistance classification	
Outer diameter	Wall thickness	Single pipe	Minimum distance between two pipe collars (0 mm)
32	2,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
40	2,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
50	2,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
75	2,6	EI 90-U/U E 90-U/U	-----
90	3,1	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
110	3,6	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
125	4,2	-----	-----
160	5,2	EI 90-U/U E 90-U/U	-----

Rohrschott90 Plus EN
- Fire resistance classification -

ANNEX D-10

Silent-PP



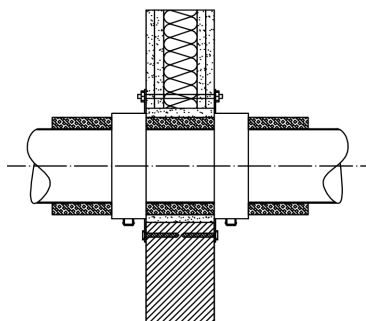
**Plastic pipes Geberit Silent-PP acc. to cl. 2.1 of the ETA with Sound insulation mat acc. to cl. 1 of the ETA – in flexible walls and rigid walls acc. to cl. 2.1 of the ETA
– Rohrschott90 Plus EN installed on both sides to the surface of the separating element**

Pipe dimensions (mm)		Sound insulation mat Symmetrical insulation (mm)		Fire resistance classification
Outer diameter	Wall thickness	Thickness	Length on both sides of the separating element	
32	2,0	-----	-----	-----
40	2,0	17	≥ 500	EI 90-U/U E 90-U/U
50	2,0	17	≥ 500	EI 90-U/U E 90-U/U
75	2,6	17	≥ 500	EI 90-U/U E 90-U/U
90	3,1	17	≥ 500	EI 90-U/U E 90-U/U
110	3,6	17	≥ 500	EI 90-U/U E 90-U/U
125	4,2	-----	-----	-----
160	5,2	-----	-----	-----

Rohrschott90 Plus EN
- Fire resistance classification -

ANNEX D-11

Silent-PP

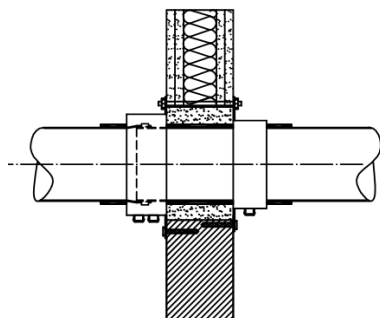


Plastic pipes Geberit Silent-PP acc. to cl. 2.1 of the ETA with AF/Armaflex (local-sustained LS or continued-sustained CS) – in flexible walls and rigid walls acc. to cl. 2.1 of the ETA – Rohrschott90 Plus EN installed on both sides to the surface of the separating element				
Pipe dimensions (mm)		AF/Armaflex Symmetrical insulation (mm)		Fire resistance classification
Outer diameter	Wall thickness	Thickness	Length on both sides of the separating element	
32	2,0	-----	-----	-----
40	2,0	-----	-----	-----
50	2,0	13,5	≥ 500	EI 90-U/U E 90-U/U
75	2,6	14	≥ 500	EI 90-U/U E 90-U/U
90	3,1	14,5	≥ 500	EI 90-U/U E 90-U/U
110	3,6	15 to 18	≥ 500	EI 90-U/U E 90-U/U
125	4,2	15 to 23,5	≥ 500	EI 90-U/U E 90-U/U
160	5,2	16 to 25	≥ 500	EI 90-U/U E 90-U/U

Rohrschott90 Plus EN
- Fire resistance classification -

ANNEX D-12

Silent-PP



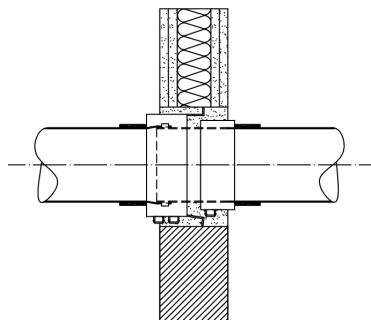
Plastic pipes Geberit Silent-PP acc. to cl. 2.1 of the ETA (optionally with Polyethylene sound insulation (tube or tape) acc. to cl. 1 of the ETA)
– in flexible walls and rigid walls acc. to cl. 2.1 of the ETA
– Rohrschott90 Plus EN installed on connection sleeve on both sides to the surface of the separating element

Pipe dimensions (mm)		Fire resistance classification
Outer diameter	Wall thickness	
32	2,0	EI 90-U/U E 90-U/U
40	2,0	EI 90-U/U E 90-U/U
50	2,0	EI 90-U/U E 90-U/U
75	2,6	EI 90-U/U E 90-U/U
90	3,1	EI 90-U/U E 90-U/U
110	3,6	EI 90-U/U E 90-U/U
125	4,2	EI 90-U/U E 90-U/U
160	5,2	EI 90-U/U E 90-U/U

Rohrschott90 Plus EN
- Fire resistance classification -

ANNEX D-13

Silent-PP

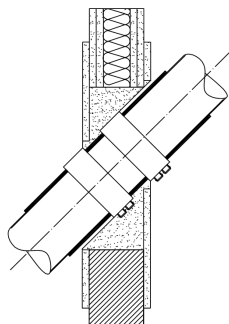


Plastic pipes Geberit Silent-PP acc. to cl. 2.1 of the ETA (optionally with Polyethylene sound insulation (tube or tape) acc. to cl. 1 of the ETA) – in flexible walls and rigid walls acc. to cl. 2.1 of the ETA – Rohrschott90 Plus EN installed on connection sleeve on both sides partially within the separating element		
Pipe dimensions (mm)		Fire resistance classification
Outer diameter	Wall thickness	
32	2,0	EI 90-U/U E 90-U/U
40	2,0	EI 90-U/U E 90-U/U
50	2,0	EI 90-U/U E 90-U/U
75	2,6	EI 90-U/U E 90-U/U
90	3,1	EI 90-U/U E 90-U/U
110	3,6	EI 90-U/U E 90-U/U
125	4,2	-----
160	5,2	-----

Rohrschott90 Plus EN
- Fire resistance classification -

ANNEX D-14

Silent-PP



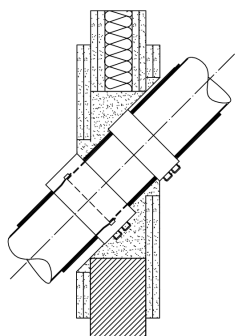
Plastic pipes Geberit Silent-PP acc. to cl. 2.1 of the ETA (optionally with Polyethylene sound insulation (tube or tape) acc. to cl. 1 of the ETA) installed in an angle between 90° and 45°
– in flexible walls and rigid walls acc. to cl. 2.1 of the ETA
– Rohrschott90 Plus EN installed on both sides partially within the separating element

Pipe dimensions (mm)		Fire resistance classification
Outer diameter	Wall thickness	
32	2,0	-----
40	2,0	-----
50	2,0	-----
75	2,6	-----
90	3,1	-----
110	3,6	-----
125	4,2	EI 90-U/U E 90-U/U
160	5,2	-----

Rohrschott90 Plus EN
- Fire resistance classification -

ANNEX D-15

Silent-PP



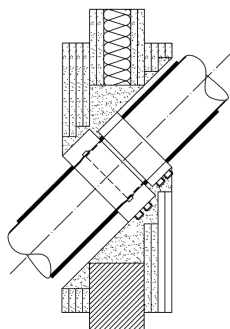
**Plastic pipes Geberit Silent-PP acc. to cl. 2.1 of the ETA (optionally with Polyethylene sound insulation (tube or tape) acc. to cl. 1 of the ETA) installed in an angle between 90° and 45°
– in flexible walls and rigid walls acc. to cl. 2.1 of the ETA
– Rohrschott90 Plus EN installed on connection sleeve on both sides partially within the separating element**

Pipe dimensions (mm)		Fire resistance classification
Outer diameter	Wall thickness	
32	2,0	-----
40	2,0	-----
50	2,0	-----
75	2,6	-----
90	3,1	-----
110	3,6	-----
125	4,2	EI 90-U/U E 90-U/U
160	5,2	-----

Rohrschott90 Plus EN
- Fire resistance classification -

ANNEX D-16

Silent-PP



Plastic pipes Geberit Silent-PP acc. to cl. 2.1 of the ETA (optionally with Polyethylene sound insulation (tube or tape) acc. to cl. 1 of the ETA) installed in an angle between 90° and 45°
– in flexible walls and rigid walls acc. to cl. 2.1 of the ETA

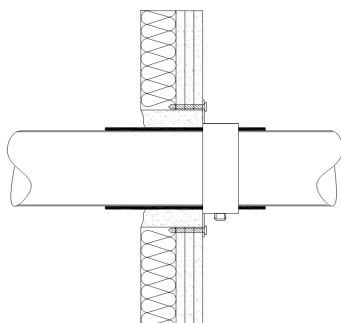
– Rohrschott90 Plus EN installed on connection sleeve on both sides flushed within the separating element

Pipe dimensions (mm)		Fire resistance classification
Outer diameter	Wall thickness	
32	2,0	-----
40	2,0	-----
50	2,0	-----
75	2,6	-----
90	3,1	-----
110	3,6	EI 90-U/U E 90-U/U
125	4,2	-----
160	5,2	-----

Rohrschott90 Plus EN
- Fire resistance classification -

ANNEX D-17

Silent-PP



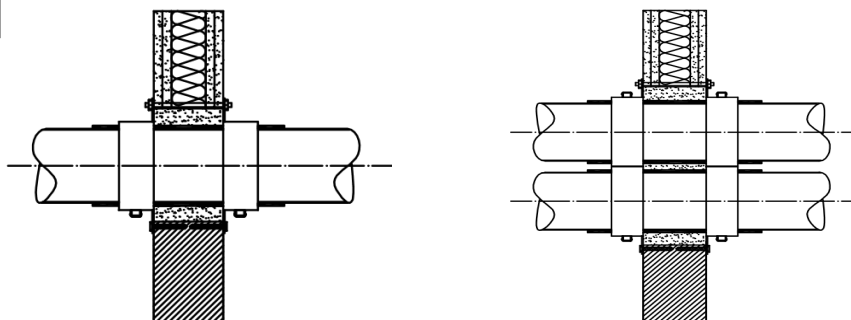
**Plastic pipes Geberit Silent-PP acc. to cl. 2.1 of the ETA (optionally with Polyethylene sound insulation (tube or tape) acc. to cl. 1 of the ETA)
– in shaft walls acc. to cl. 2.1 of the ETA
– Rohrschott90 Plus EN installed outside the shaft to the surface of the shaft wall**

Pipe dimensions (mm)		Fire resistance classification
Outer diameter	Wall thickness	
32	2,0	-----
40	2,0	-----
50	2,0	EI 90-U/U E 90-U/U
75	2,6	EI 90-U/U E 90-U/U
90	3,1	EI 90-U/U E 90-U/U
110	3,6	EI 90-U/U E 90-U/U
125	4,2	-----
160	5,2	-----

Rohrschott90 Plus EN
- Fire resistance classification -

ANNEX D-18

Silent-db20



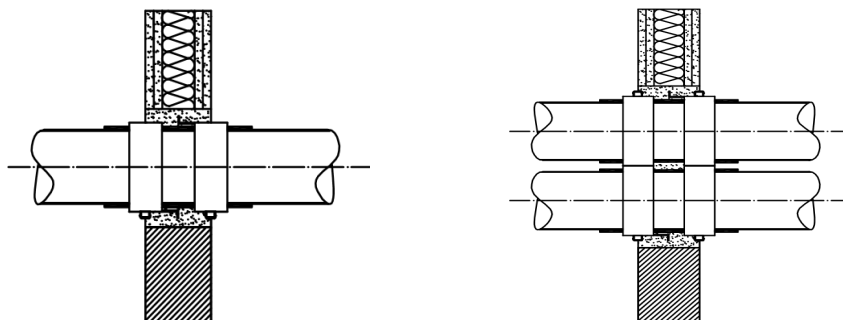
Plastic pipes Geberit Silent-db20 acc. to cl. 2.1 of the ETA (optionally with Polyethylene sound insulation (tube or tape) acc. to cl. 1 of the ETA)
– in flexible walls and rigid walls acc. to cl. 2.1 of the ETA
– Rohrschott90 Plus EN installed on both sides to the surface of the separating element

Pipe dimensions (mm)		Fire resistance classification	
Outer diameter	Wall thickness	Single pipe	Minimum distance between two pipe collars (0 mm)
56	3,2	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
63	3,2	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
75	3,6	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
90	5,5	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
110	6,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
135	6,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
160	7,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U

Rohrschott90 Plus EN
- Fire resistance classification -

ANNEX D-19

Silent-db20



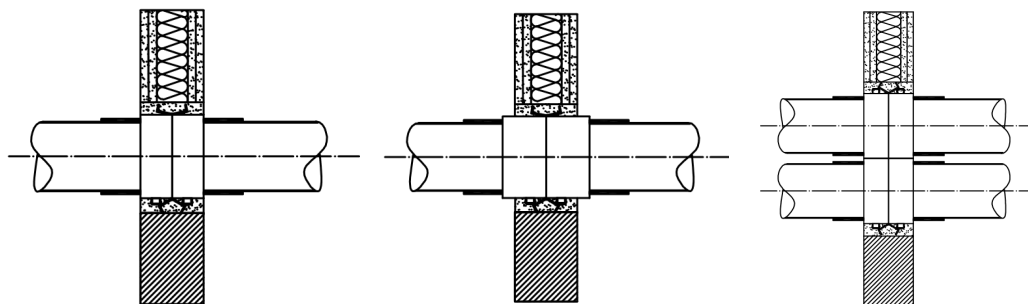
Plastic pipes Geberit Silent-db20 acc. to cl. 2.1 of the ETA (optionally with Polyethylene sound insulation (tube or tape) acc. to cl. 1 of the ETA)
– in flexible walls and rigid walls acc. to cl. 2.1 of the ETA
– Rohrschott90 Plus EN installed on both sides partially within the separating element

Pipe dimensions (mm)		Fire resistance classification	
Outer diameter	Wall thickness	Single pipe	Minimum distance between two pipe collars (0 mm)
56	3,2	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
63	3,2	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
75	3,6	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
90	5,5	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
110	6,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
135	6,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
160	7,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U

Rohrschott90 Plus EN
- Fire resistance classification -

ANNEX D-20

Silent-db20



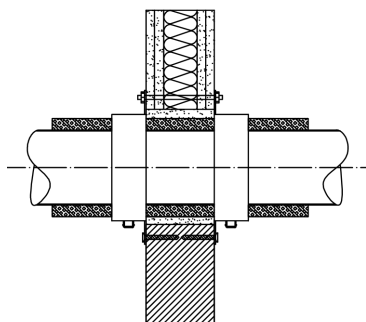
Plastic pipes Geberit Silent-db20 acc. to cl. 2.1 of the ETA (optionally with Polyethylene sound insulation (tube or tape) acc. to cl. 1 of the ETA)
– in flexible walls and rigid walls acc. to cl. 2.1 of the ETA
– Rohrschott90 Plus EN installed on both sides flushed within the separating element

Pipe dimensions (mm)		Fire resistance classification	
Outer diameter	Wall thickness	Single pipe	Minimum distance between two pipe collars (0 mm)
56	3,2	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
63	3,2	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
75	3,6	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
90	5,5	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
110	6,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
135	6,0	-----	-----
160	7,0	EI 90-U/U E 90-U/U	-----

Rohrschott90 Plus EN
- Fire resistance classification -

ANNEX D-21

Silent-db20



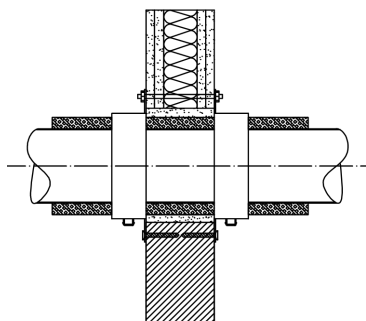
**Plastic pipes Geberit Silent-db20 acc. to cl. 2.1 of the ETA with Sound insulation mat acc. to cl. 1 of the ETA – in flexible walls and rigid walls acc. to cl. 2.1 of the ETA
– Rohrschott90 Plus EN installed on both sides to the surface of the separating element**

Pipe dimensions (mm)		Sound insulation mat Symmetrical insulation (mm)		Fire resistance classification
Outer diameter	Wall thickness	Thickness	Length on both sides of the separating element	
56	3,2	-----	-----	-----
63	3,2	-----	-----	-----
75	3,6	17	≥ 500	EI 90-U/U E 90-U/U
90	5,5	17	≥ 500	EI 90-U/U E 90-U/U
110	6,0	17	≥ 500	EI 90-U/U E 90-U/U
135	6,0	17	≥ 500	EI 90-U/U E 90-U/U
160	7,0	17	≥ 500	EI 90-U/U E 90-U/U

Rohrschott90 Plus EN
- Fire resistance classification -

ANNEX D-22

Silent-db20

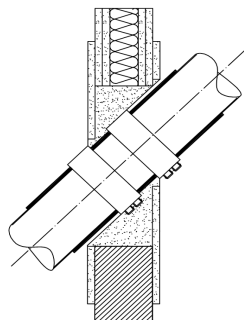


Plastic pipes Geberit Silent-db20 acc. to cl. 2.1 of the ETA with AF/Armaflex (local-sustained LS or continued-sustained CS) – in flexible walls and rigid walls acc. to cl. 2.1 of the ETA – Rohrschott90 Plus EN installed on both sides to the surface of the separating element				
Pipe dimensions (mm)		AF/Armaflex Symmetrical insulation (mm)		Fire resistance classification
Outer diameter	Wall thickness	Thickness	Length on both sides of the separating element	
56	3,2	14	≥ 500	EI 90-U/U E 90-U/U
63	3,2	14	≥ 500	EI 90-U/U E 90-U/U
75	3,6	14	≥ 500	EI 90-U/U E 90-U/U
90	5,5	14,5	≥ 500	EI 90-U/U E 90-U/U
110	6,0	15 to 18	≥ 500	EI 90-U/U E 90-U/U
135	6,0	15,5 to 24	≥ 500	EI 90-U/U E 90-U/U
160	7,0	16 to 25	≥ 500	EI 90-U/U E 90-U/U

Rohrschott90 Plus EN
- Fire resistance classification -

ANNEX D-23

Silent-db20



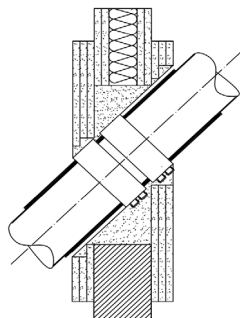
Plastic pipes Geberit Silent-db20 acc. to cl. 2.1 of the ETA (optionally with Polyethylene sound insulation (tube or tape) acc. to cl. 1 of the ETA) installed in an angle between 90° and 45°
– in flexible walls and rigid walls acc. to cl. 2.1 of the ETA
– Rohrschott90 Plus EN installed on both sides partially within the separating element

Pipe dimensions (mm)		Fire resistance classification
Outer diameter	Wall thickness	
56	3,2	-----
63	3,2	-----
75	3,6	-----
90	5,5	-----
110	6,0	-----
135	6,0	EI 90-U/U E 90-U/U
160	7,0	-----

Rohrschott90 Plus EN
- Fire resistance classification -

ANNEX D-24

Silent-db20



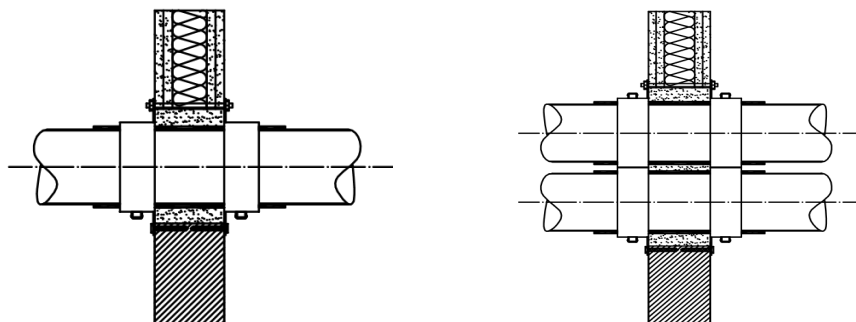
Plastic pipes Geberit Silent-db20 acc. to cl. 2.1 of the ETA (optionally with Polyethylene sound insulation (tube or tape) acc. to cl. 1 of the ETA) installed in an angle between 90° and 45°
– in flexible walls and rigid walls acc. to cl. 2.1 of the ETA
– Rohrschott90 Plus EN installed on both sides flushed within the separating element

Pipe dimensions (mm)		Fire resistance classification
Outer diameter	Wall thickness	
56	3,2	-----
63	3,2	-----
75	3,6	-----
90	5,5	-----
110	6,0	EI 90-U/U E 90-U/U
135	6,0	-----
160	7,0	-----

Rohrschott90 Plus EN
- Fire resistance classification -

ANNEX D-25

Silent-Pro



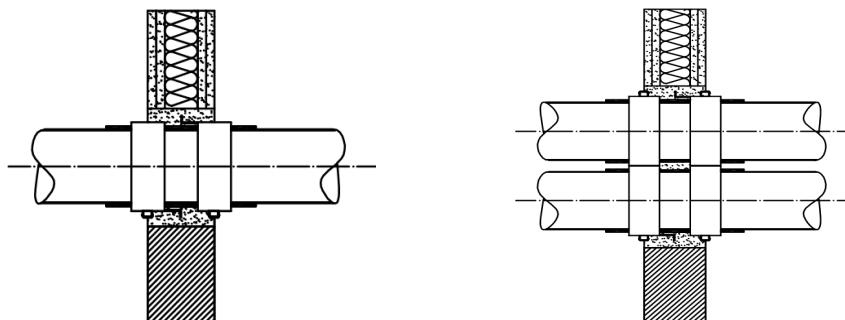
Plastic pipes Geberit Silent-Pro acc. to cl. 2.1 of the ETA (optionally with Polyethylene sound insulation (tube or tape) acc. to cl. 1 of the ETA)
– in flexible walls and rigid walls acc. to cl. 2.1 of the ETA
– Rohrschott90 Plus EN installed on both sides to the surface of the separating element

Pipe dimensions (mm)		Fire resistance classification	
Outer diameter	Wall thickness	Single pipe	Minimum distance between two pipe collars (0 mm)
50	3,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
75	3,8	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
90	4,3	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
110	4,5	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
125	5,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
160	6,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U

Rohrschott90 Plus EN
- Fire resistance classification -

ANNEX D-26

Silent-Pro



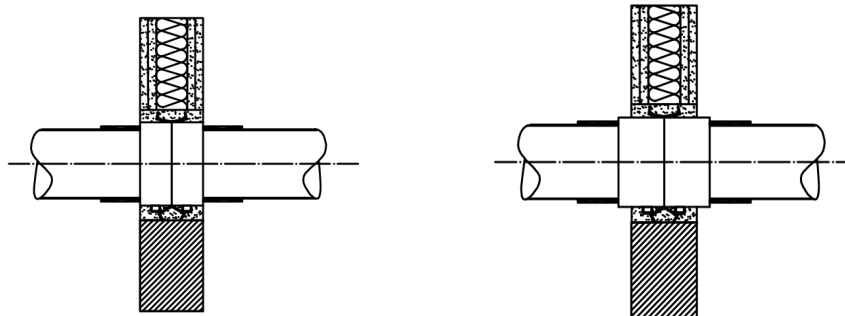
Plastic pipes Geberit Silent-Pro acc. to cl. 2.1 of the ETA (optionally with Polyethylene sound insulation (tube or tape) acc. to cl. 1 of the ETA)
– in flexible walls and rigid walls acc. to cl. 2.1 of the ETA
– Rohrschott90 Plus EN installed on both sides partially within the separating element

Pipe dimensions (mm)		Fire resistance classification	
Outer diameter	Wall thickness	Single pipe	Minimum distance between two pipe collars (0 mm)
50	3,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
75	3,8	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
90	4,3	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
110	4,5	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
125	5,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
160	6,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U

Rohrschott90 Plus EN
- Fire resistance classification -

ANNEX D-27

Silent-Pro



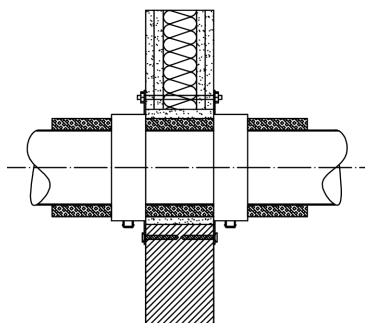
Plastic pipes Geberit Silent-Pro acc. to cl. 2.1 of the ETA (optionally with Polyethylene sound insulation (tube or tape) acc. to cl. 1 of the ETA)
– in flexible walls and rigid walls acc. to cl. 2.1 of the ETA
– Rohrschott90 Plus EN installed on both sides flushed within the separating element

Pipe dimensions (mm)		Fire resistance classification
Outer diameter	Wall thickness	
50	3,0	EI 90-U/U E 90-U/U
75	3,8	EI 90-U/U E 90-U/U
90	4,3	EI 90-U/U E 90-U/U
110	4,5	EI 90-U/U E 90-U/U
125	5,0	EI 90-U/U E 90-U/U
160	6,0	EI 90-U/U E 90-U/U

Rohrschott90 Plus EN
- Fire resistance classification -

ANNEX D-28

Silent-Pro



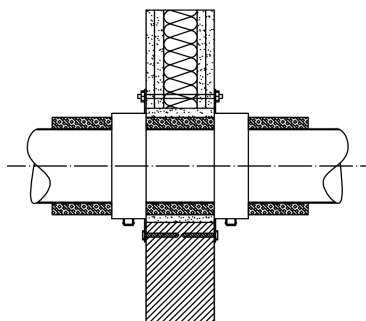
**Plastic pipes Geberit Silent-Pro acc. to cl. 2.1 of the ETA with Sound insulation mat acc. to cl. 1 of the ETA – in flexible walls and rigid walls acc. to cl. 2.1 of the ETA
– Rohrschott90 Plus EN installed on both sides to the surface of the separating element**

Pipe dimensions (mm)		Sound insulation mat Symmetrical insulation (mm)		Fire resistance classification
Outer diameter	Wall thickness	Thickness	Length on both sides of the separating element	
50	3,0	17	≥ 500	EI 90-U/U E 90-U/U
75	3,8	17	≥ 500	EI 90-U/U E 90-U/U
90	4,3	17	≥ 500	EI 90-U/U E 90-U/U
110	4,5	17	≥ 500	EI 90-U/U E 90-U/U
125	5,0	17	≥ 500	EI 90-U/U E 90-U/U
160	6,0	17	≥ 500	EI 90-U/U E 90-U/U

Rohrschott90 Plus EN
- Fire resistance classification -

ANNEX D-29

Silent-Pro

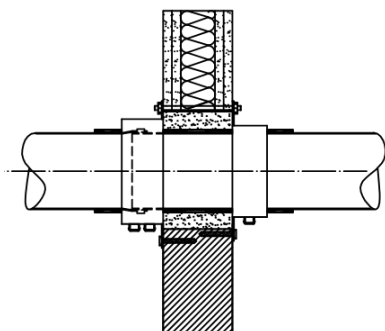


Plastic pipes Geberit Silent-Pro acc. to cl. 2.1 of the ETA with AF/Armaflex (local-sustained LS or continued-sustained CS) – in flexible walls and rigid walls acc. to cl. 2.1 of the ETA – Rohrschott90 Plus EN installed on both sides to the surface of the separating element				
Pipe dimensions (mm)		AF/Armaflex Symmetrical insulation (mm)		Fire resistance classification
Outer diameter	Wall thickness	Thickness	Length on both sides of the separating element	
50	3,0	13,5	≥ 500	EI 90-U/U E 90-U/U
75	3,8	14	≥ 500	EI 90-U/U E 90-U/U
90	4,3	14,5	≥ 500	EI 90-U/U E 90-U/U
110	4,5	15 to 18	≥ 500	EI 90-U/U E 90-U/U
125	5,0	15,5 to 23,5	≥ 500	EI 90-U/U E 90-U/U
160	6,0	16 to 25	≥ 500	EI 90-U/U E 90-U/U

Rohrschott90 Plus EN
- Fire resistance classification -

ANNEX D-30

Silent-Pro



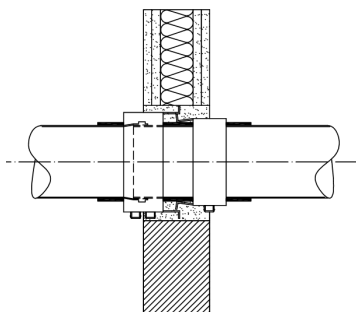
Plastic pipes Geberit Silent-Pro acc. to cl. 2.1 of the ETA (optionally with Polyethylene sound insulation (tube or tape) acc. to cl. 1 of the ETA)
– in flexible walls and rigid walls acc. to cl. 2.1 of the ETA
– Rohrschott90 Plus EN installed on connection sleeve on both sides to the surface of the separating element

Pipe dimensions (mm)		Fire resistance classification
Outer diameter	Wall thickness	
50	3,0	EI 90-U/U E 90-U/U
75	3,8	EI 90-U/U E 90-U/U
90	4,3	EI 90-U/U E 90-U/U
110	4,5	EI 90-U/U E 90-U/U
125	5,0	EI 90-U/U E 90-U/U
160	6,0	EI 90-U/U E 90-U/U

Rohrschott90 Plus EN
- Fire resistance classification -

ANNEX D-31

Silent-Pro



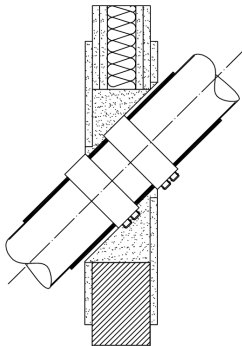
Plastic pipes Geberit Silent-Pro acc. to cl. 2.1 of the ETA (optionally with Polyethylene sound insulation (tube or tape) acc. to cl. 1 of the ETA)
– in flexible walls and rigid walls acc. to cl. 2.1 of the ETA
– Rohrschott90 Plus EN installed on connection sleeve on both sides partially within the separating element

Pipe dimensions (mm)		Fire resistance classification
Outer diameter	Wall thickness	
50	3,0	EI 90-U/U E 90-U/U
75	3,8	EI 90-U/U E 90-U/U
90	4,3	EI 90-U/U E 90-U/U
110	4,5	EI 90-U/U E 90-U/U
125	5,0	EI 90-U/U E 90-U/U
160	6,0	-----

Rohrschott90 Plus EN
- Fire resistance classification -

ANNEX D-32

Silent-Pro



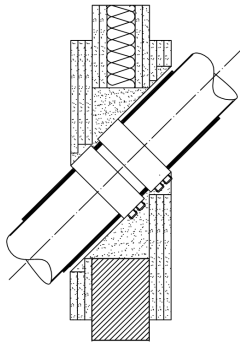
Plastic pipes Geberit Silent-Pro acc. to cl. 2.1 of the ETA (optionally with Polyethylene sound insulation (tube or tape) acc. to cl. 1 of the ETA) installed in an angle between 90° and 45°
– in flexible walls and rigid walls acc. to cl. 2.1 of the ETA
– Rohrschott90 Plus EN installed on both sides partially within the separating element

Pipe dimensions (mm)		Fire resistance classification
Outer diameter	Wall thickness	
50	3,0	EI 90-U/U E 90-U/U
75	3,8	EI 90-U/U E 90-U/U
90	4,3	EI 90-U/U E 90-U/U
110	4,5	EI 90-U/U E 90-U/U
125	5,0	EI 90-U/U E 90-U/U
160	6,0	-----

Rohrschott90 Plus EN
- Fire resistance classification -

ANNEX D-33

Silent-Pro



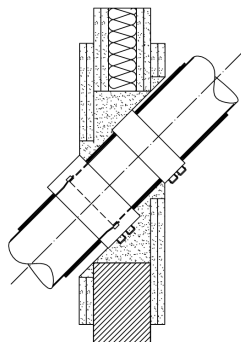
Plastic pipes Geberit Silent-Pro acc. to cl. 2.1 of the ETA (optionally with Polyethylene sound insulation (tube or tape) acc. to cl. 1 of the ETA) installed in an angle between 90° and 45°
 – in flexible walls and rigid walls acc. to cl. 2.1 of the ETA
 – Rohrschott90 Plus EN installed on both sides flushed within the separating element

Pipe dimensions (mm)		Fire resistance classification
Outer diameter	Wall thickness	
50	3,0	EI 90-U/U E 90-U/U
75	3,8	EI 90-U/U E 90-U/U
90	4,3	EI 90-U/U E 90-U/U
110	4,5	EI 90-U/U E 90-U/U
125	5,0	EI 90-U/U E 90-U/U
160	6,0	-----

Rohrschott90 Plus EN
 - Fire resistance classification -

ANNEX D-34

Silent-Pro



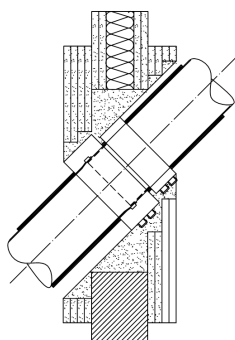
**Plastic pipes Geberit Silent-Pro acc. to cl. 2.1 of the ETA (optionally with Polyethylene sound insulation (tube or tape) acc. to cl. 1 of the ETA) installed in an angle between 90° and 45°
– in flexible walls and rigid walls acc. to cl. 2.1 of the ETA
– Rohrschott90 Plus EN installed on connection sleeve on both sides partially within the separating element**

Pipe dimensions (mm)		Fire resistance classification
Outer diameter	Wall thickness	
50	3,0	-----
75	3,8	EI 90-U/U E 90-U/U
90	4,3	-----
110	4,5	EI 90-U/U E 90-U/U
125	5,0	-----
160	6,0	-----

Rohrschott90 Plus EN
- Fire resistance classification -

ANNEX D-35

Silent-Pro



**Plastic pipes Geberit Silent-Pro acc. to cl. 2.1 of the ETA (optionally with Polyethylene sound insulation (tube or tape) acc. to cl. 1 of the ETA) installed in an angle between 90° and 45°
– in flexible walls and rigid walls acc. to cl. 2.1 of the ETA**

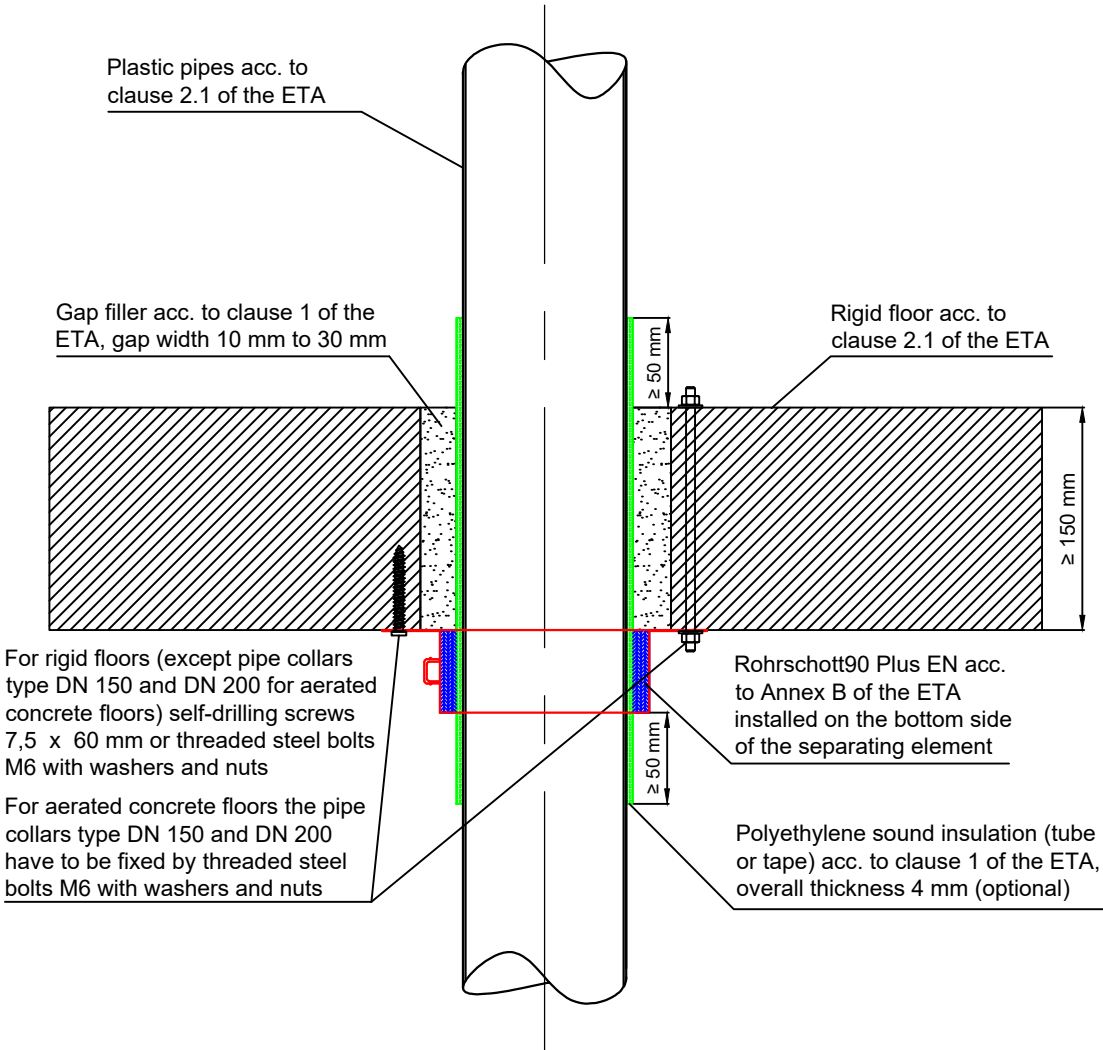
– Rohrschott90 Plus EN installed on connection sleeve on both sides flushed within the separating element

Pipe dimensions (mm)		Fire resistance classification
Outer diameter	Wall thickness	
50	3,0	-----
75	3,8	EI 90-U/U E 90-U/U
90	4,3	-----
110	4,5	EI 90-U/U E 90-U/U
125	5,0	-----
160	6,0	-----

Rohrschott90 Plus EN
- Fire resistance classification -

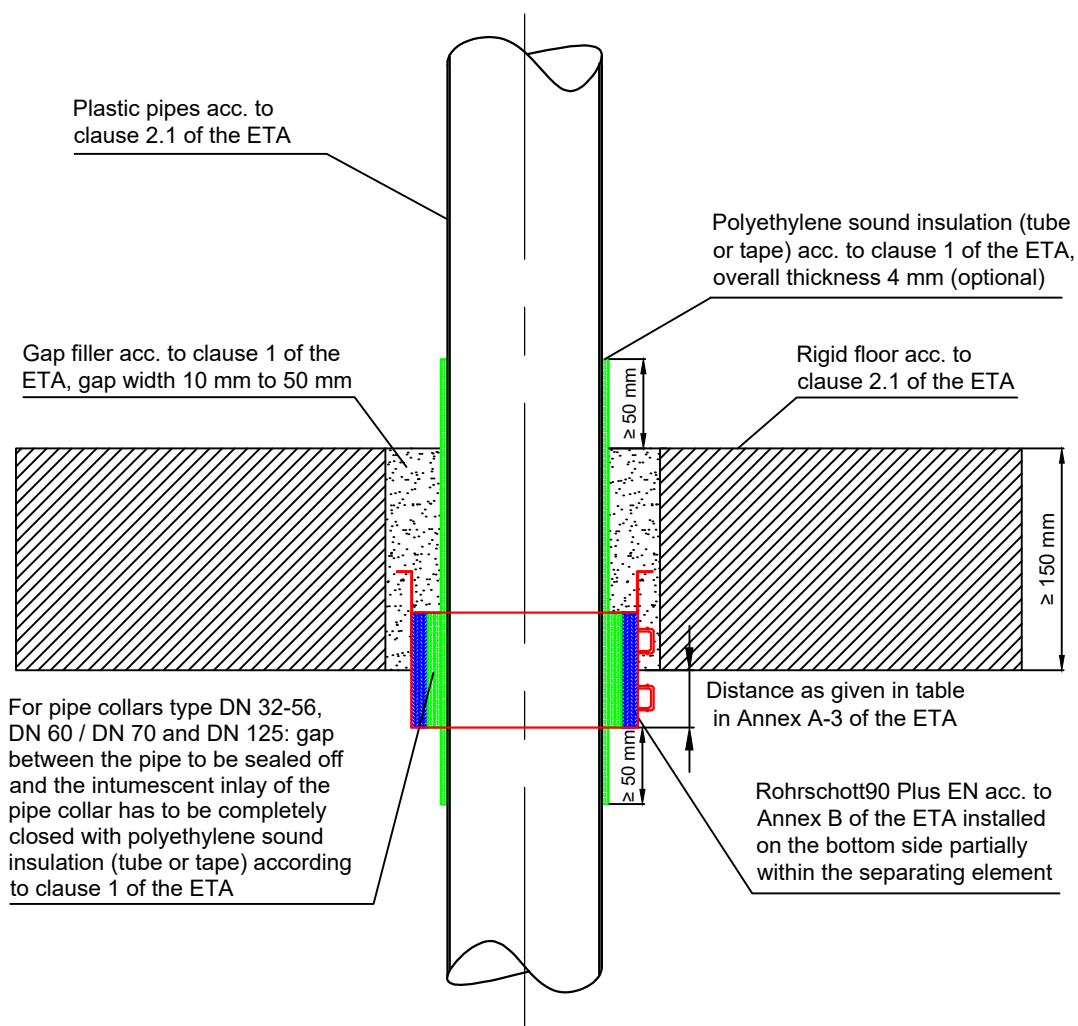
ANNEX D-36

Plastic pipes acc. to cl. 2.1 of the ETA – in rigid floors acc. to cl. 2.1 of the ETA – Rohrschott90 Plus EN installed on the bottom side to the surface of the separating element – Installation drawing – sectional view



Rohrschott90 Plus EN - Installation in rigid floor-	ANNEX E-1
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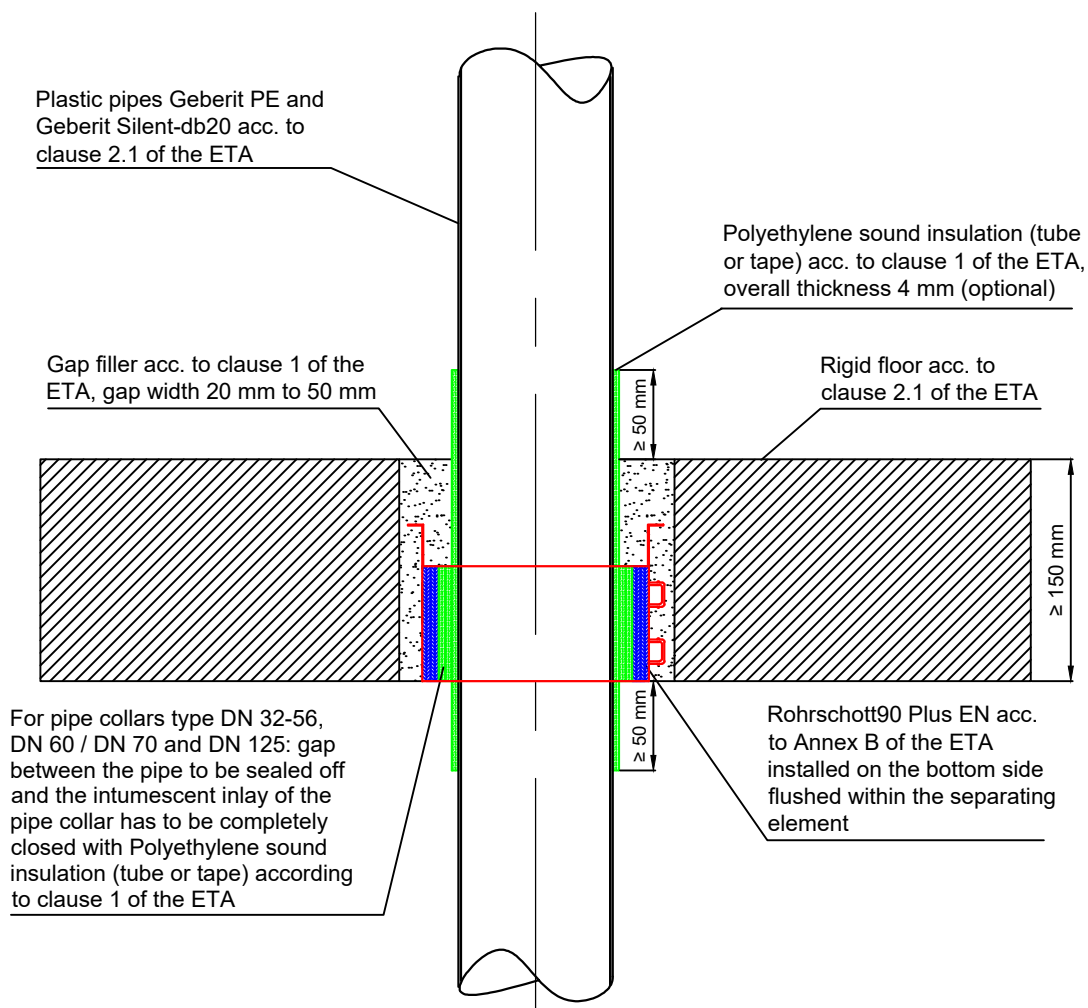
Plastic pipes acc. to cl. 2.1 of the ETA – in rigid floors acc. to cl. 2.1 of the ETA – Rohrschott90 Plus EN installed on the bottom side partially within the separating element – Installation drawing – sectional view



Rohrschott90 Plus EN
- Installation in rigid floor-

ANNEX E-2

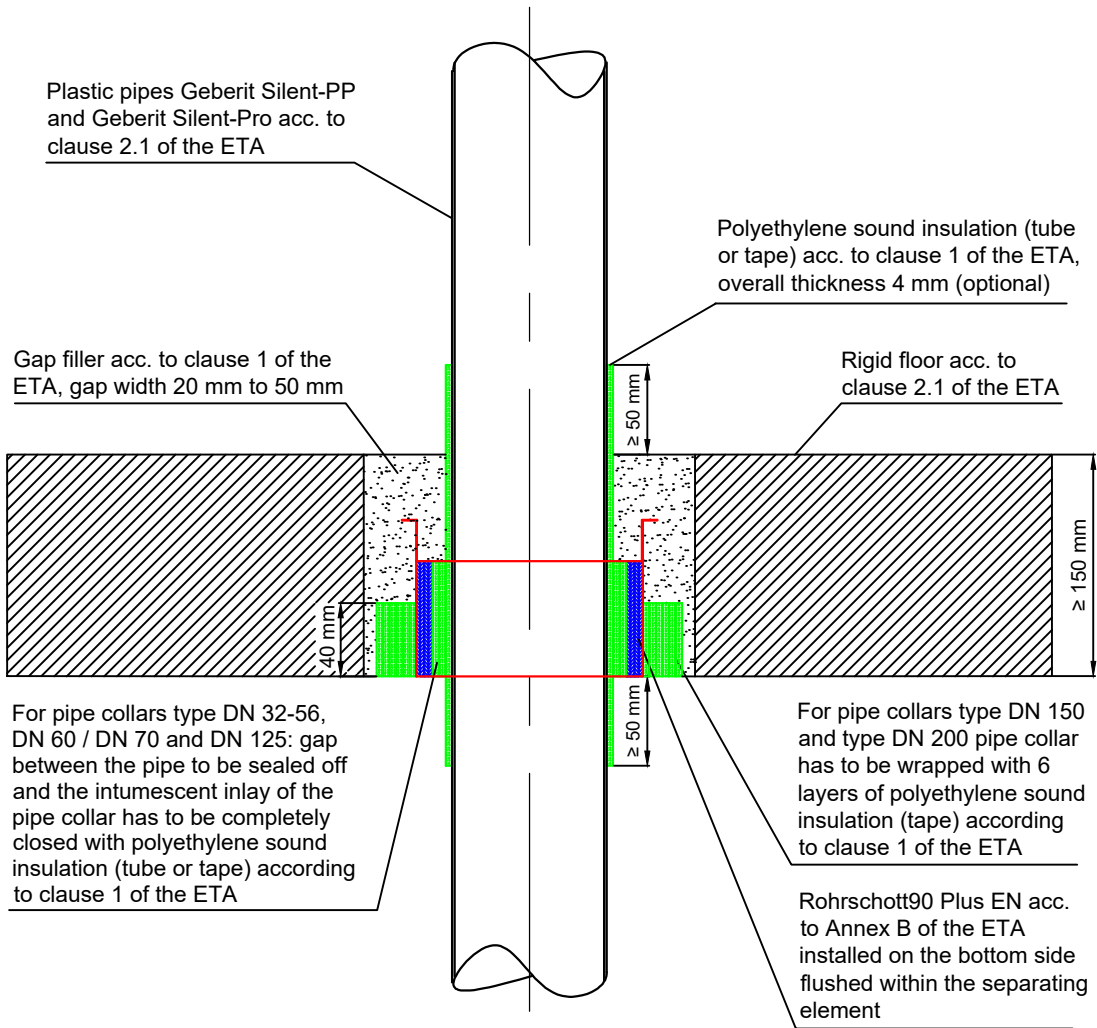
Plastic pipes Geberit PE and Geberit Silent-db20 acc. to cl. 2.1 of the ETA – in rigid floors acc. to cl. 2.1 of the ETA – Rohrschott90 Plus EN installed on the bottom side flushed within the separating element – Installation drawing – sectional view



Rohrschott90 Plus EN
- Installation in rigid floor-

ANNEX E-3

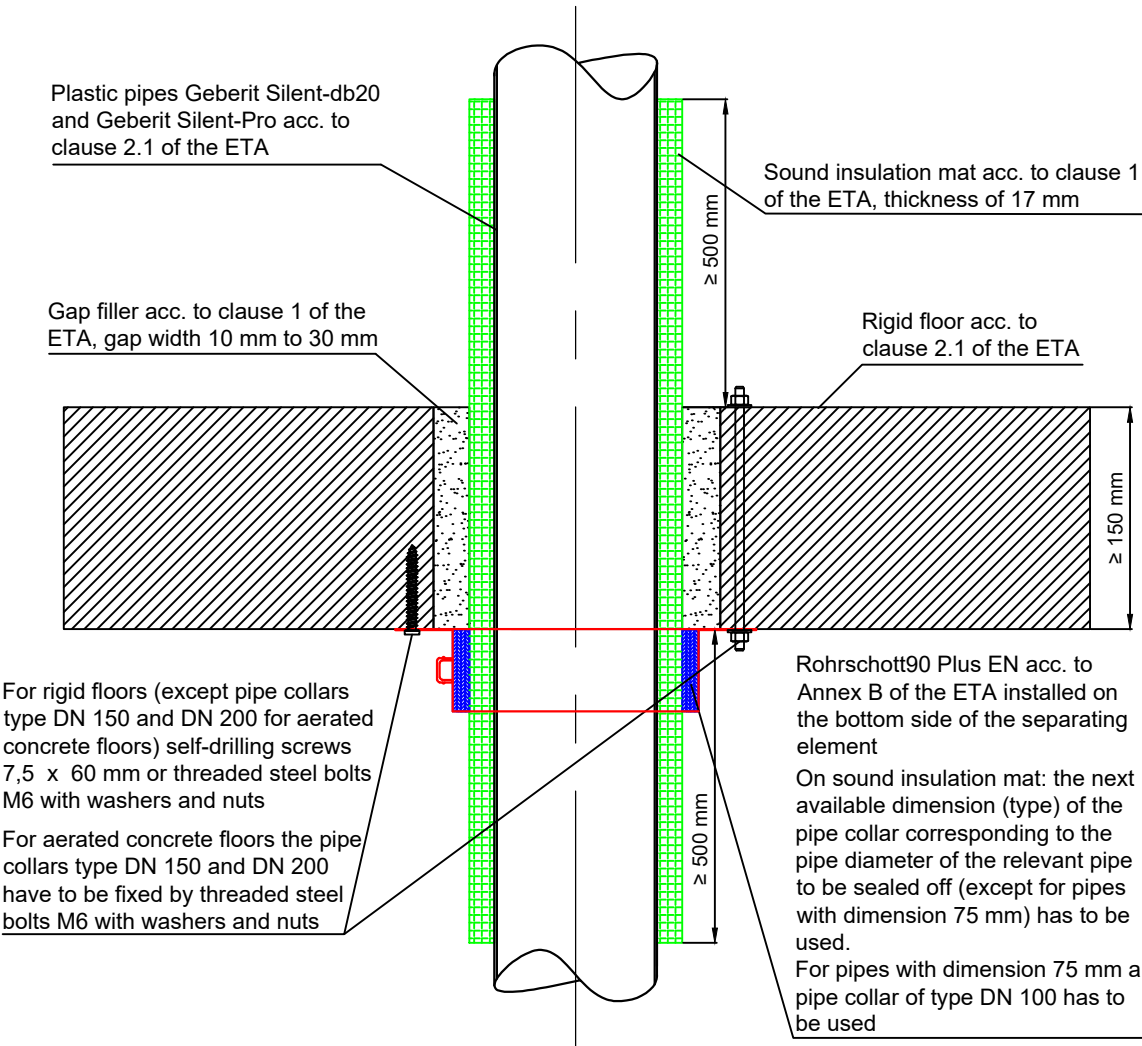
Plastic pipes Geberit Silent-PP and Geberit Silent-Pro acc. to cl. 2.1 of the ETA – in rigid floors acc. to cl. 2.1 of the ETA – Rohrschott90 Plus EN installed on the bottom side flushed within the separating element – Installation drawing – sectional view



Rohrschott90 Plus EN
- Installation in rigid floor-

ANNEX E-4

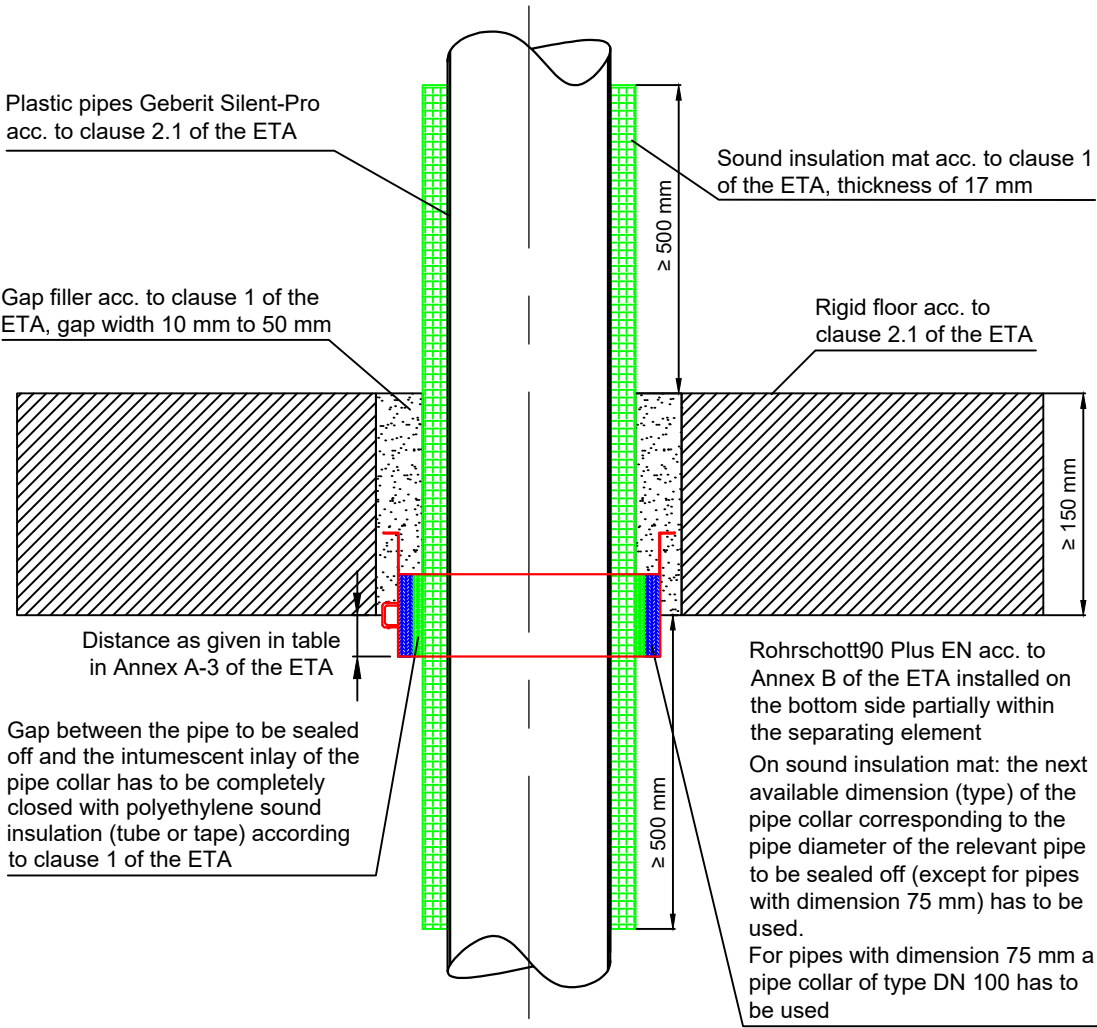
Plastic pipes Geberit Silent-db20 and Geberit Silent-Pro acc. to cl. 2.1 of the ETA with Sound insulation mat acc. to cl. 1 of the ETA – in rigid floors acc. to cl. 2.1 of the ETA – Rohrschott90 Plus EN installed on the bottom side to the surface of the separating element – Installation drawing – sectional view



Rohrschott90 Plus EN
- Installation in rigid floor-

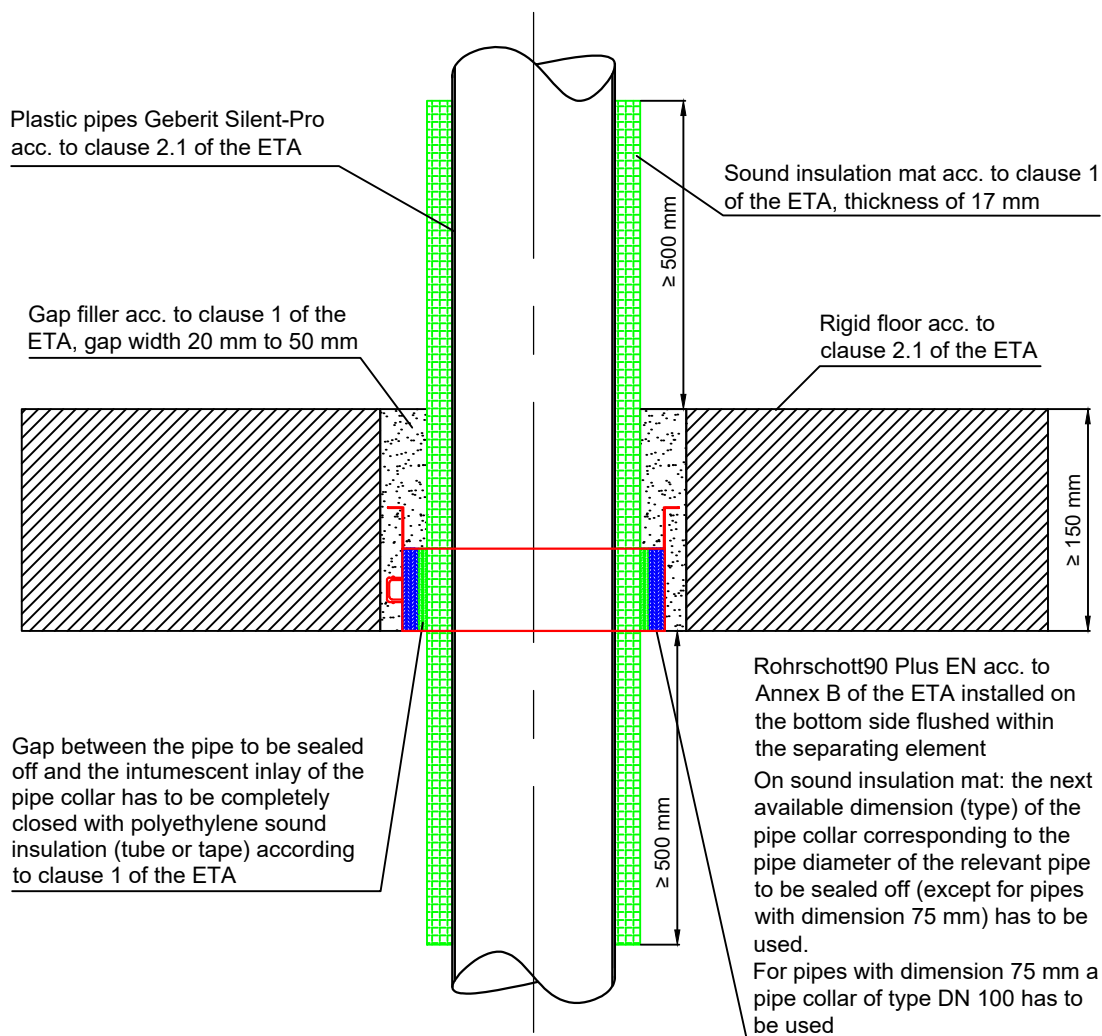
ANNEX E-5

Plastic pipes Geberit Silent-Pro acc. to cl. 2.1 of the ETA with Sound insulation mat acc. to cl. 1 of the ETA – in rigid floors acc. to cl. 2.1 of the ETA – Rohrschott90 Plus EN installed on the bottom side partially within the separating element – Installation drawing – sectional view



Rohrschott90 Plus EN - Installation in rigid floor-	ANNEX E-6
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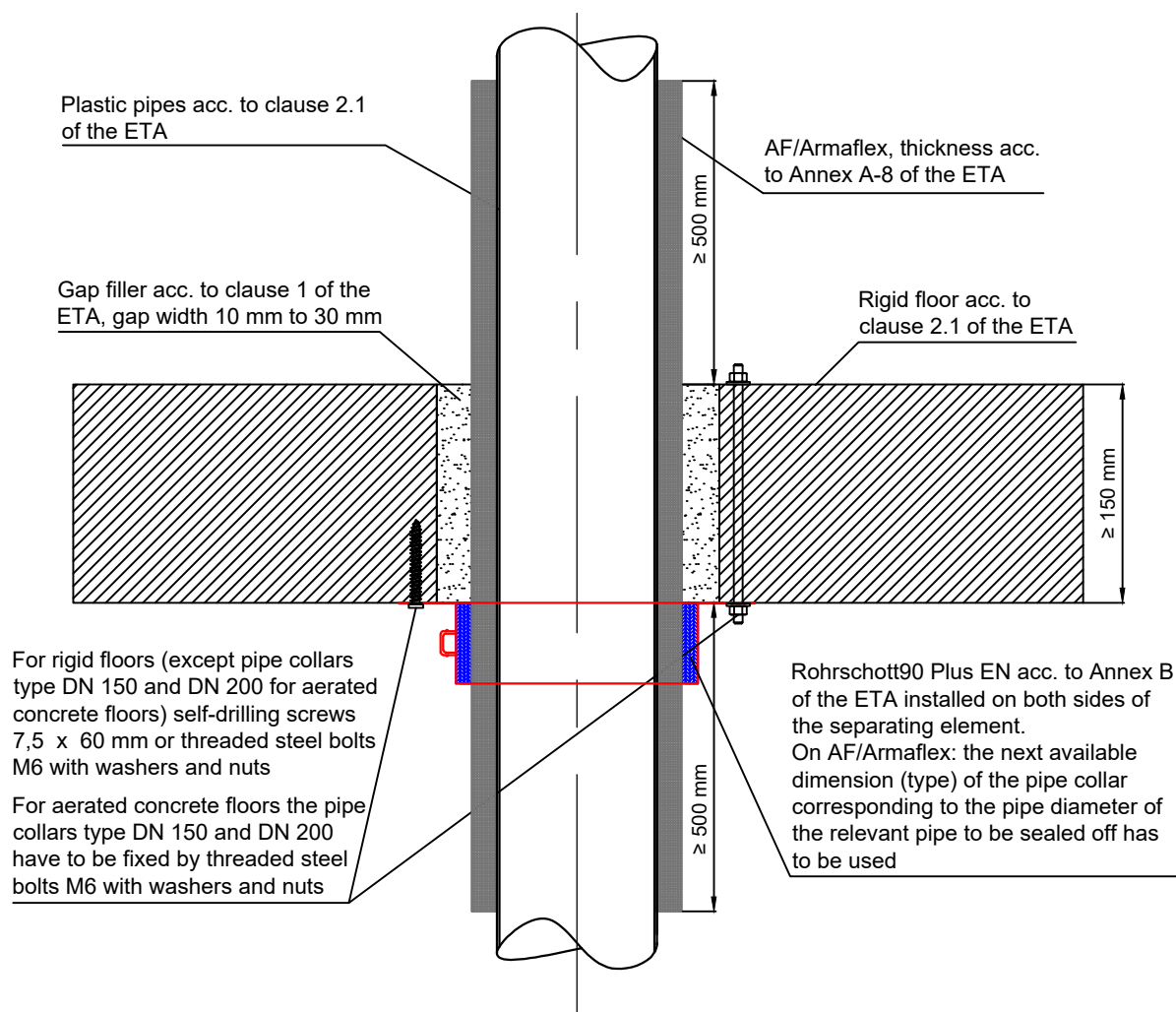
Plastic pipes Geberit Silent-Pro acc. to cl. 2.1 of the ETA with Sound insulation mat acc. to cl. 1 of the ETA – in rigid floors acc. to cl. 2.1 of the ETA – Rohrschott90 Plus EN installed on the bottom side flushed within the separating element – Installation drawing – sectional view



Rohrschott90 Plus EN
- Installation in rigid floor-

ANNEX E-7

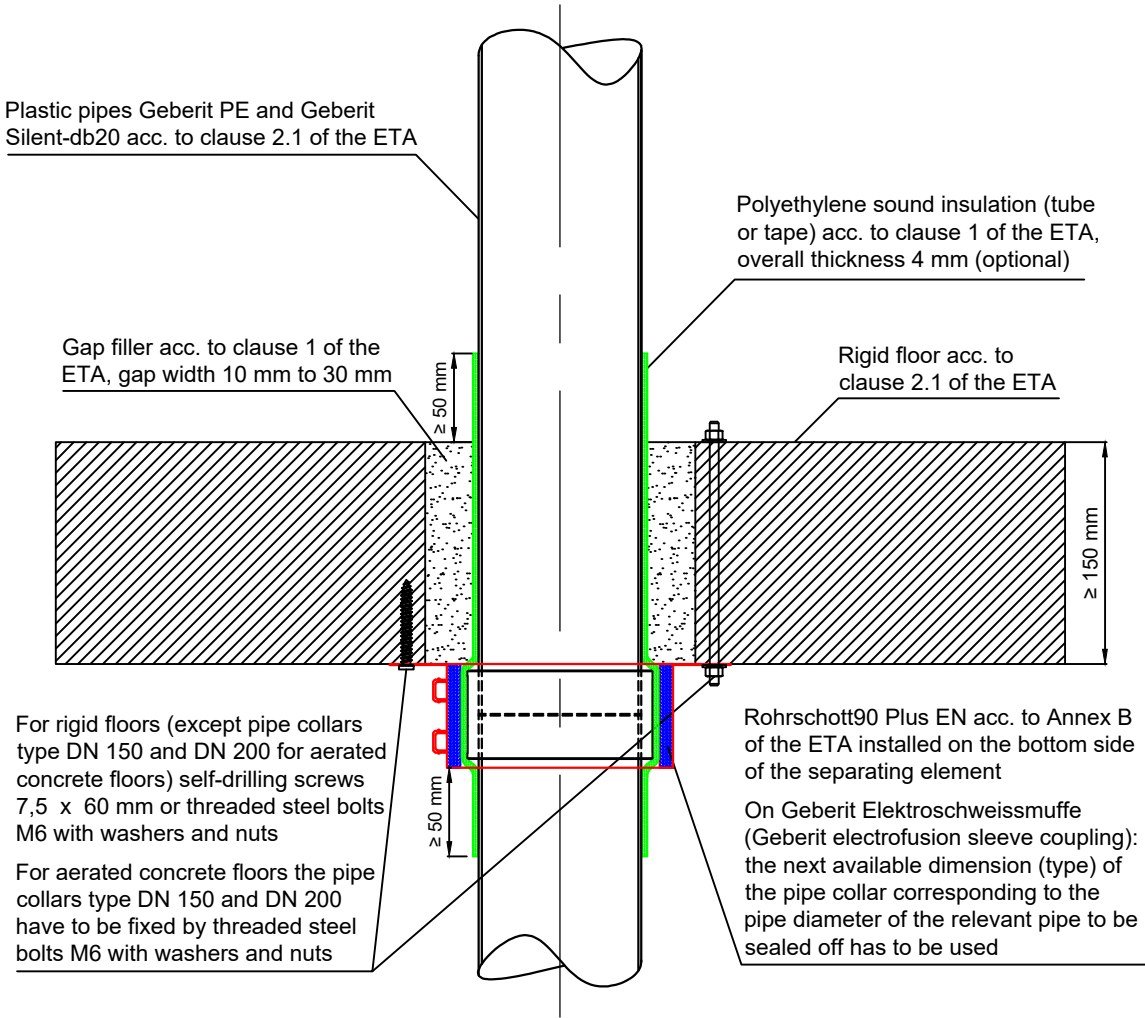
Plastic pipes acc. to cl. 2.1 of the ETA with “AF/Armaflex” – in rigid floors acc. to cl. 2.1 of the ETA – Rohrschott90 Plus EN installed on the bottom side to the surface of the separating element – Installation drawing – sectional view



Rohrschott90 Plus EN
- Installation in rigid floor-

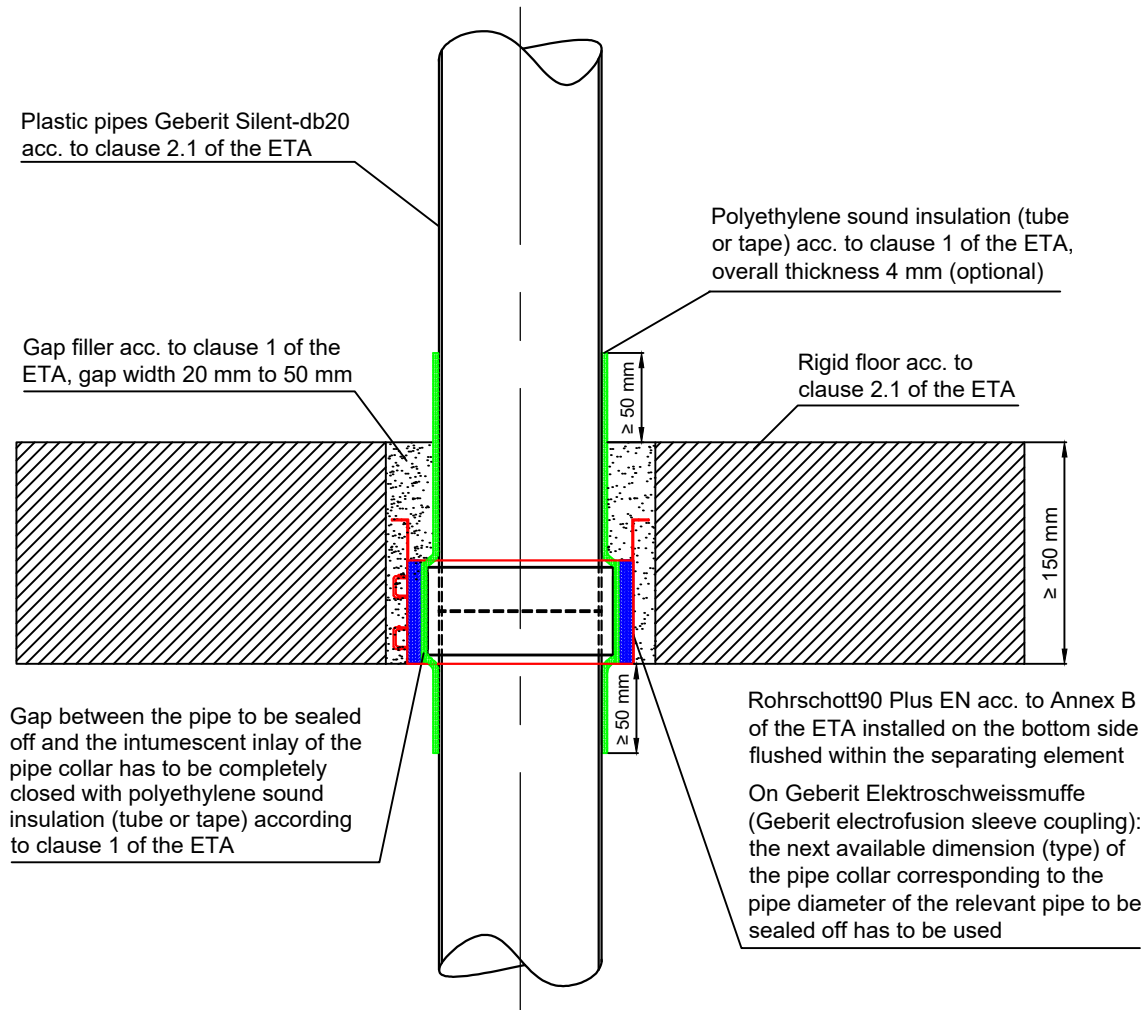
ANNEX E-8

Plastic pipes Geberit Silent-db20 acc. to cl. 2.1 of the ETA – in rigid floors acc. to cl. 2.1 of the ETA – Rohrschott90 Plus EN installed on Geberit Elektroschweißmuffe (Geberit electrofusion sleeve coupling) on the bottom side to the surface of the separating element – Installation drawing – sectional view



Rohrschott90 Plus EN - Installation in rigid floor-	ANNEX E-9
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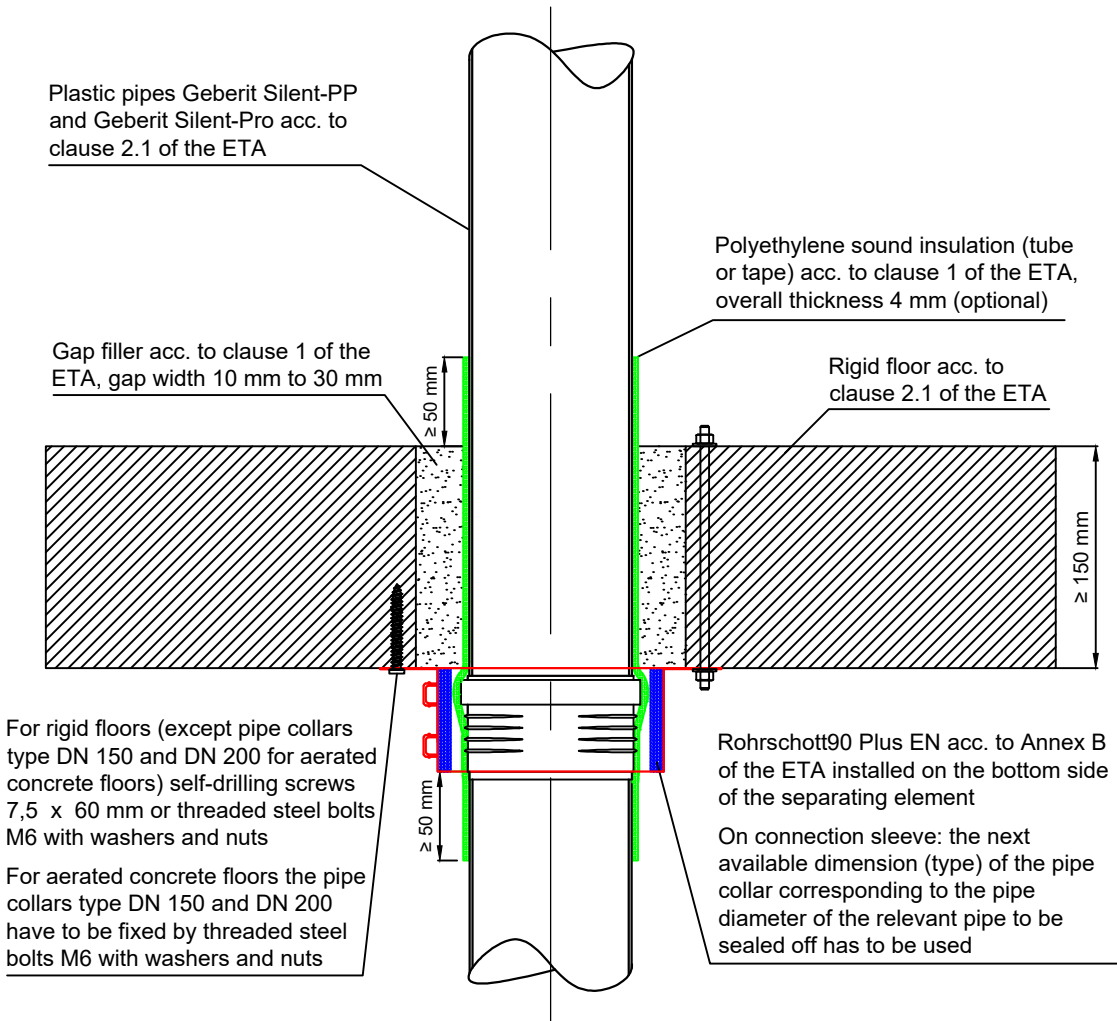
Plastic pipes Geberit Silent-db20 acc. to cl. 2.1 of the ETA – in rigid floors acc. to cl. 2.1 of the ETA – Rohrschott90 Plus EN installed on Geberit Elektroschweißmuffe (Geberit electrofusion sleeve coupling) on the bottom side flushed within the separating element – Installation drawing – sectional view



Rohrschott90 Plus EN
- Installation in rigid floor-

ANNEX E-10

Plastic pipes Geberit Silent-PP and Geberit Silent-Pro acc. to cl. 2.1 of the ETA – in rigid floors acc. to cl. 2.1 of the ETA – Rohrschott90 Plus EN installed on connection sleeve on the bottom side to the surface of the separating element – Installation drawing – sectional view



Rohrschott90 Plus EN - Installation in rigid floor-	ANNEX E-11
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Plastic pipe Geberit Silent-PP and Geberit Silent-Pro acc. to clause 2.1 of the ETA

Polyethylene sound insulation (tube or tape) acc. to clause 1 of the ETA, overall thickness 4 mm (optional)

Gap filler acc. to clause 1 of the ETA, gap width 10 mm to 50 mm

Rigid floor acc. to clause 2.1 of the ETA

Distance as given in table in Annex A-3 of the ETA

Rohrschott90 Plus EN acc. to Annex B of the ETA installed on the bottom side partially within the separating element

On Geberit Elektroschweissmuffe (Geberit electrofusion sleeve coupling): the next available dimension (type) of the pipe collar corresponding to the pipe diameter of the relevant pipe to be sealed off has to be used

≥ 50 mm

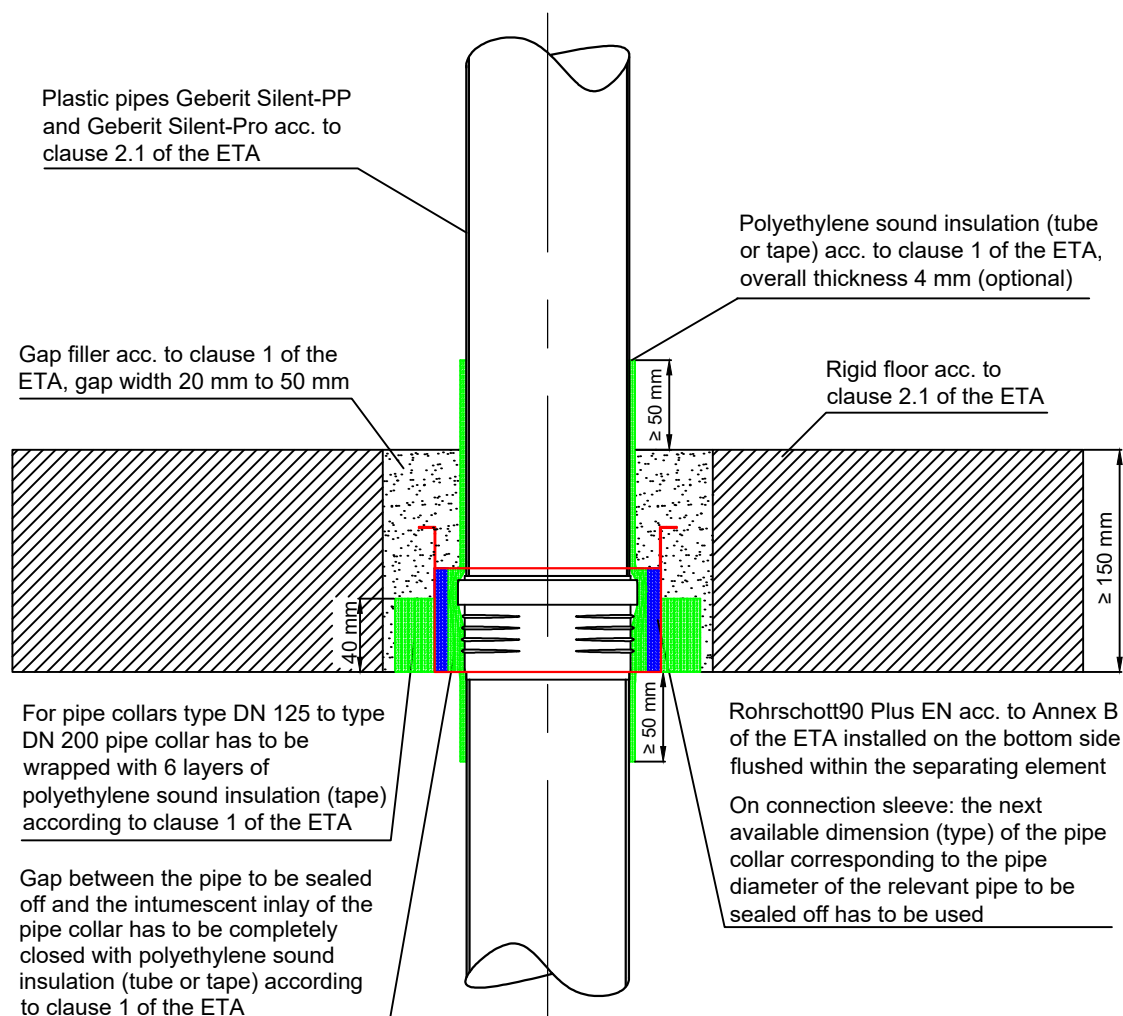
≥ 50 mm

≥ 150 mm

≥ 50 mm

ANNEX E-12

Plastic pipes Geberit Silent-PP and Geberit Silent-Pro acc. to cl. 2.1 of the ETA – in rigid floors acc. to cl. 2.1 of the ETA – Rohrschott90 Plus EN installed on connection sleeve on the bottom side flushed within the separating element – Installation drawing – sectional view

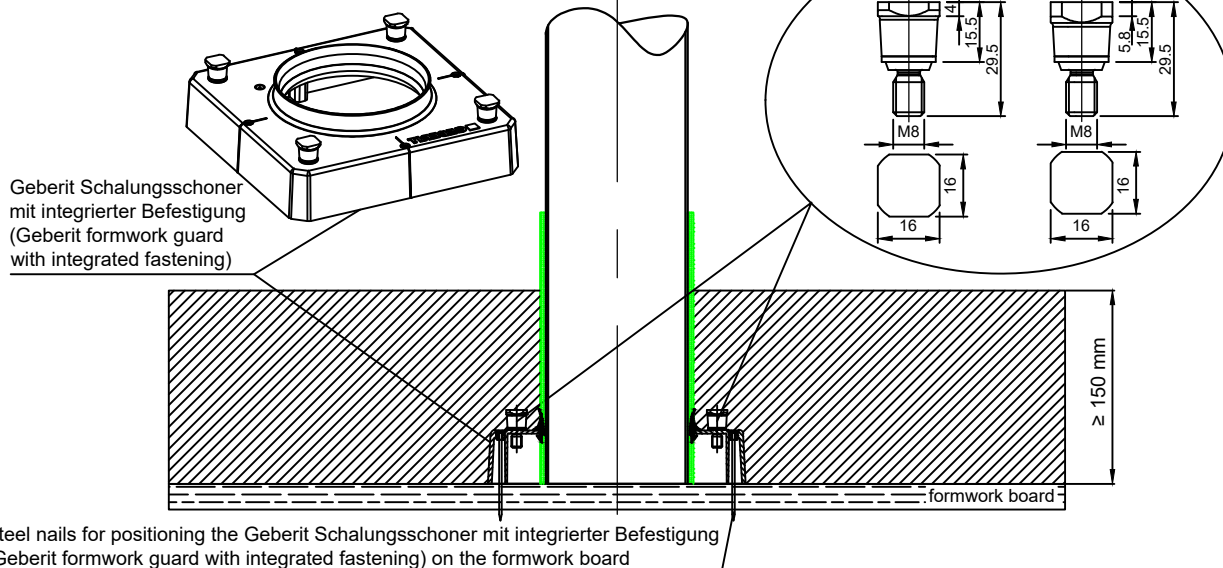


Rohrschott90 Plus EN
- Installation in rigid floor-

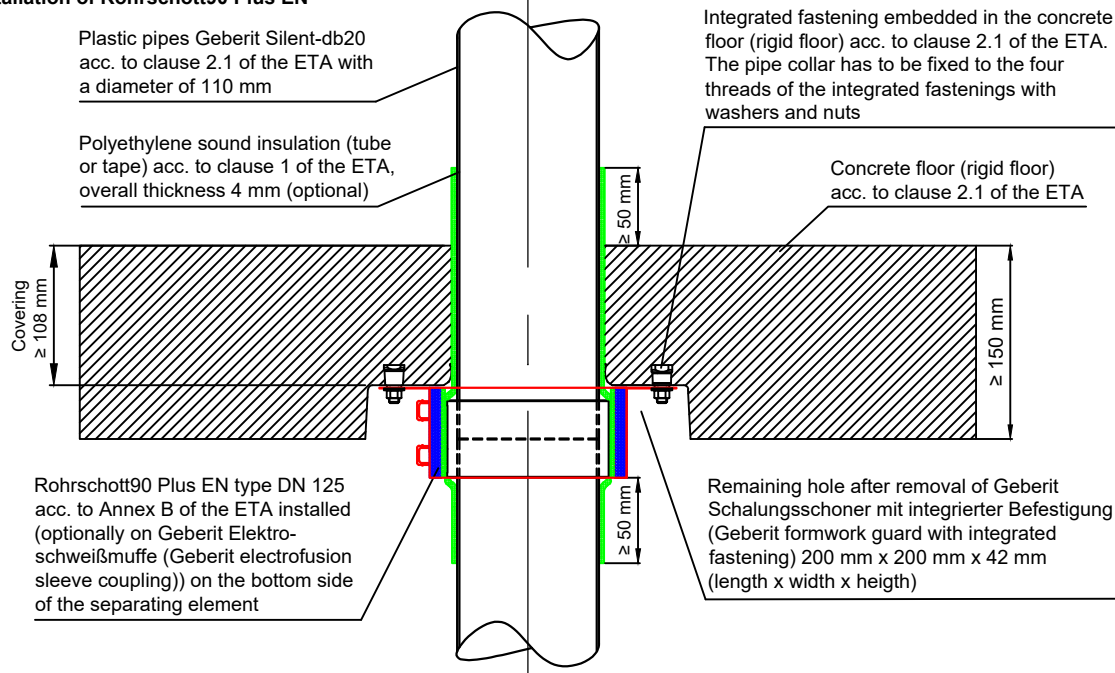
ANNEX E-13

Plastic pipes Geberit Silent-db20 acc. to cl. 2.1 of the ETA – in concrete floors (rigid floors) acc. to cl. 2.1 of the ETA – Rohrschott90 Plus EN installed (optionally on Geberit Elektroschweißmuffe (Geberit electrofusion sleeve coupling)) on the bottom side to the surface of the separating element and fixed to the integrated fastenings of Geberit Schalungsschoner mit integrierter Befestigung (Geberit formwork guard with integrated fastening) – Installation drawing – sectional view

Step 1: Installation of Geberit Schalungsschoner mit integrierter Befestigung (Geberit formwork guard with integrated fastening)



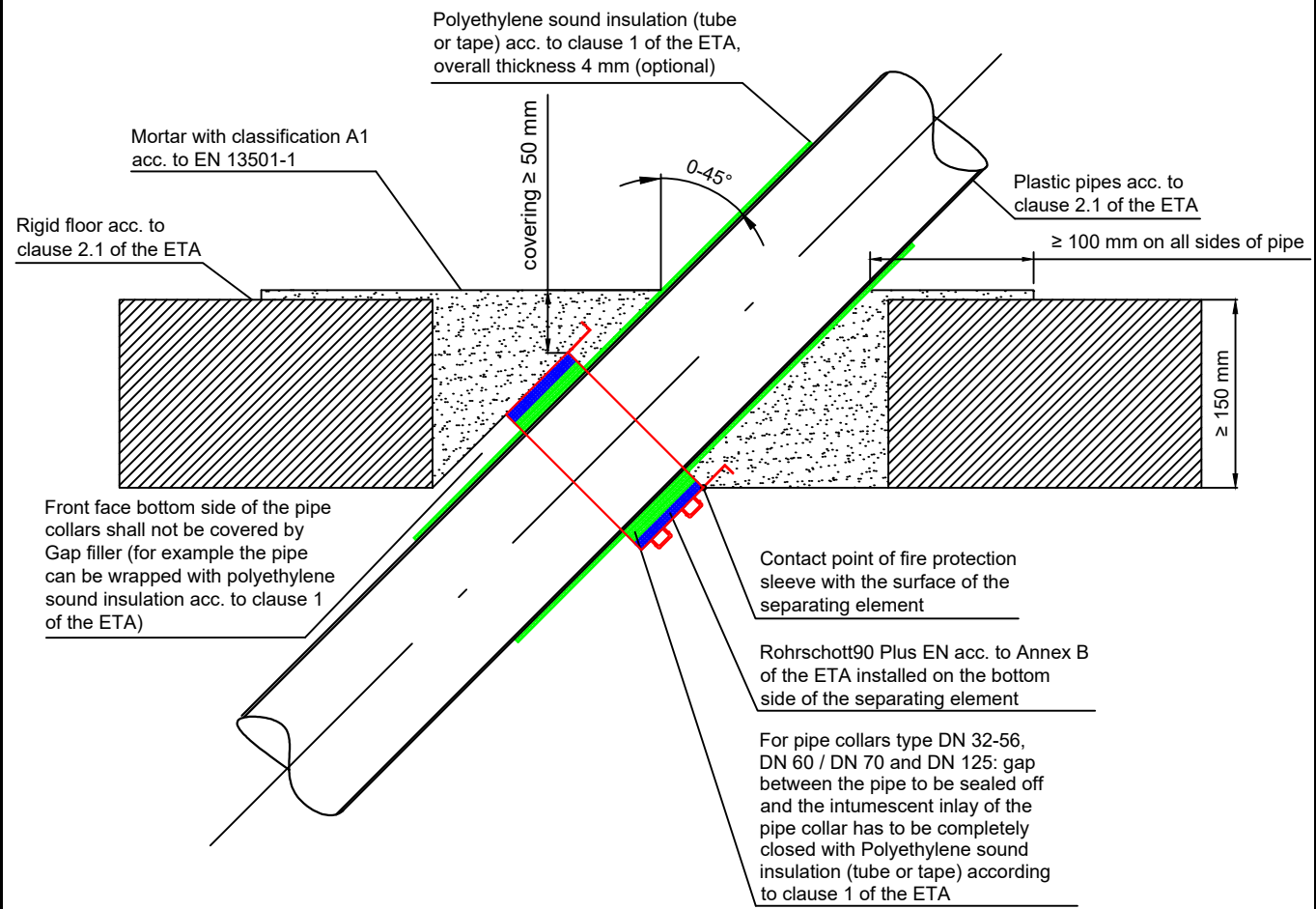
Step 2: Removal of Geberit Schalungsschoner mit integrierter Befestigung (Geberit formwork guard with integrated fastening) and installation of Rohrschott90 Plus EN



Rohrschott90 Plus EN
- Installation in rigid floor-

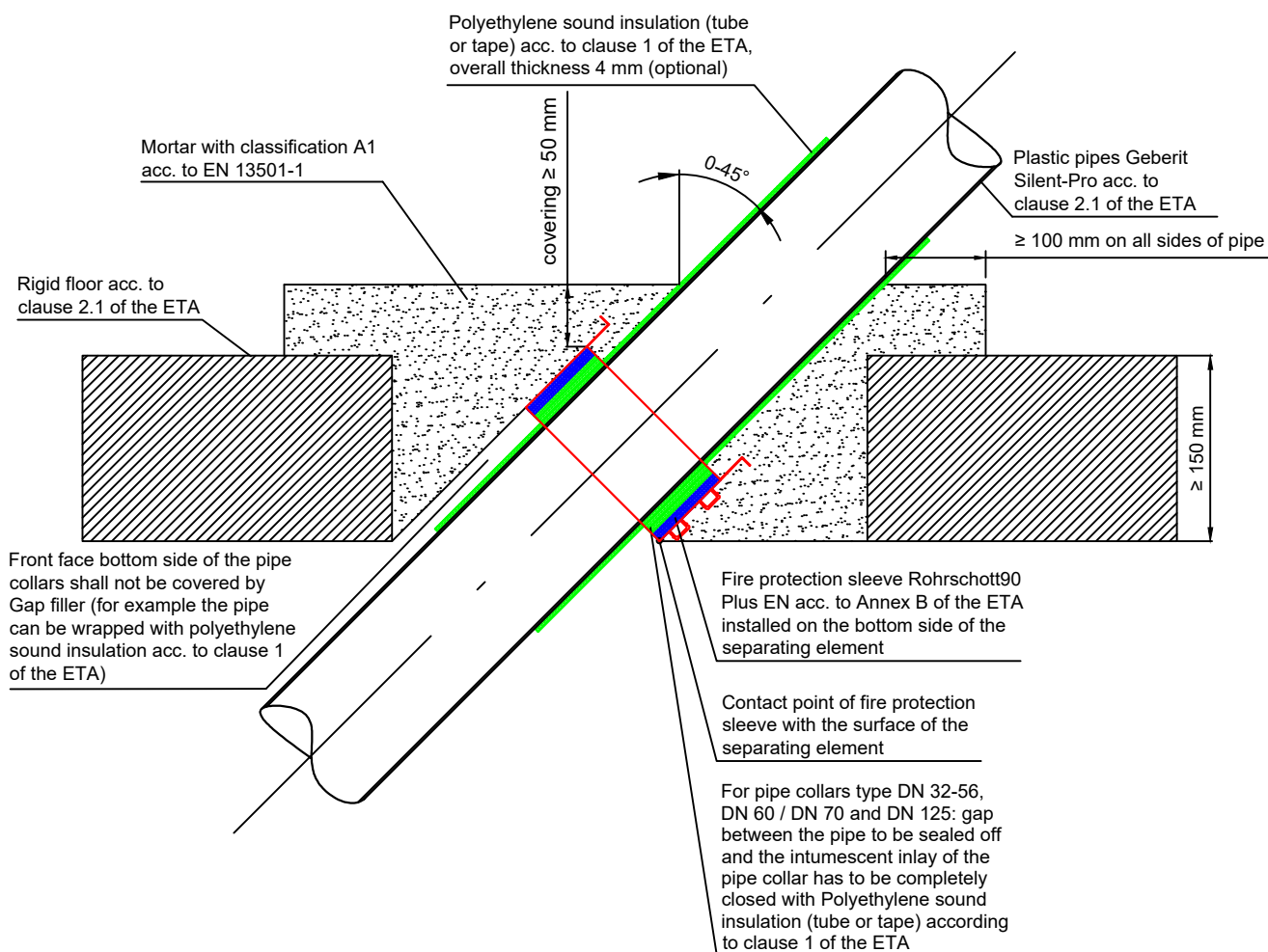
ANNEX E-14

Plastic pipes acc. to cl. 2.1 of the ETA installed in an angle between 90° and 45° – in rigid floors acc. to cl. 2.1 of the ETA – Rohrschott90 Plus EN installed on the bottom side partially within the separating element – Installation drawing – sectional view



Rohrschott90 Plus EN - Installation in rigid floor-	ANNEX E-15
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Plastic pipes Geberit Silent-Pro acc. to cl. 2.1 of the ETA installed in an angle between 90° and 45° – in rigid floors acc. to cl. 2.1 of the ETA – Rohrschott90 Plus EN installed on the bottom side flushed within the separating element – Installation drawing – sectional view

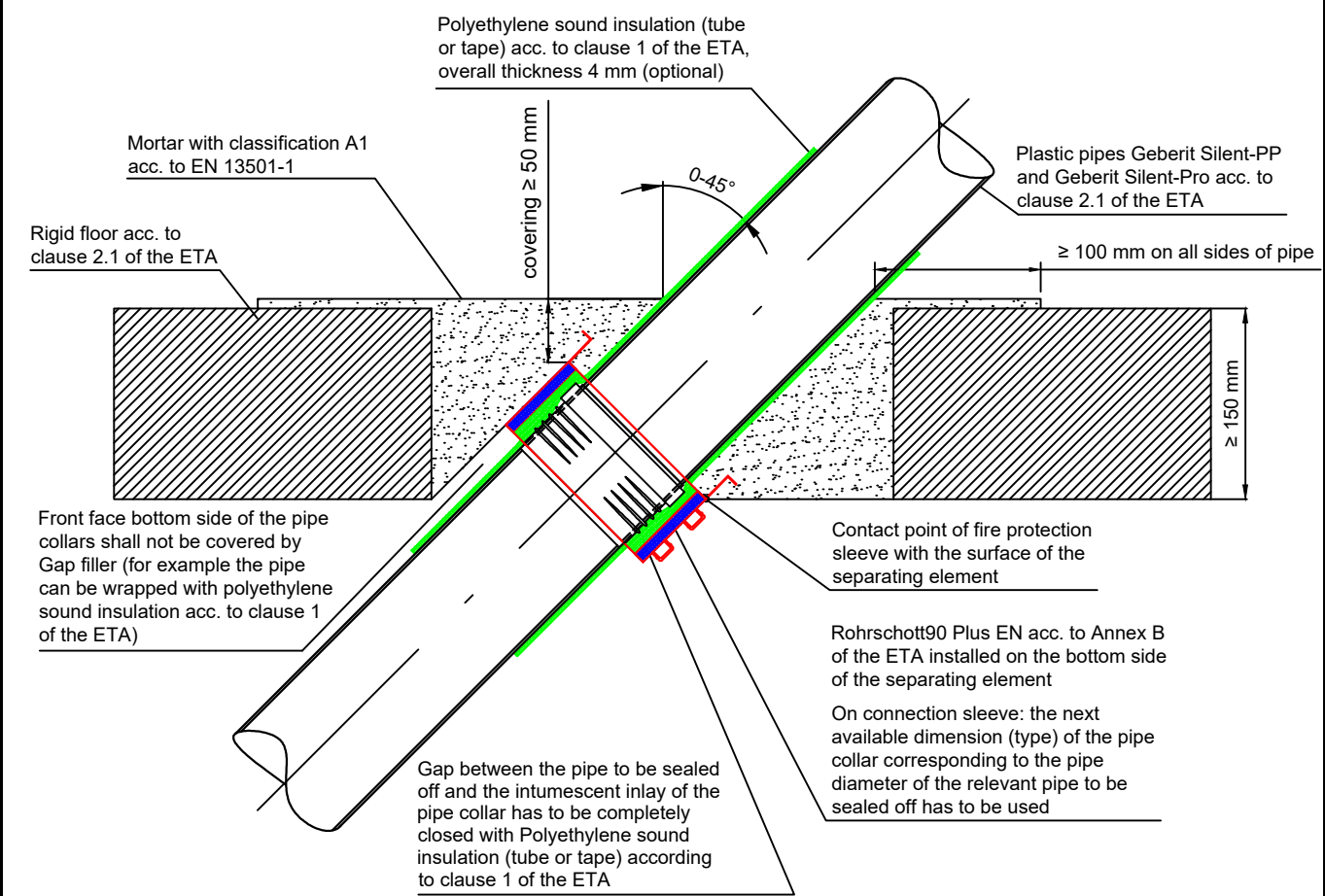


Rohrschott90 Plus EN
- Installation in rigid floor-

ANNEX E-16

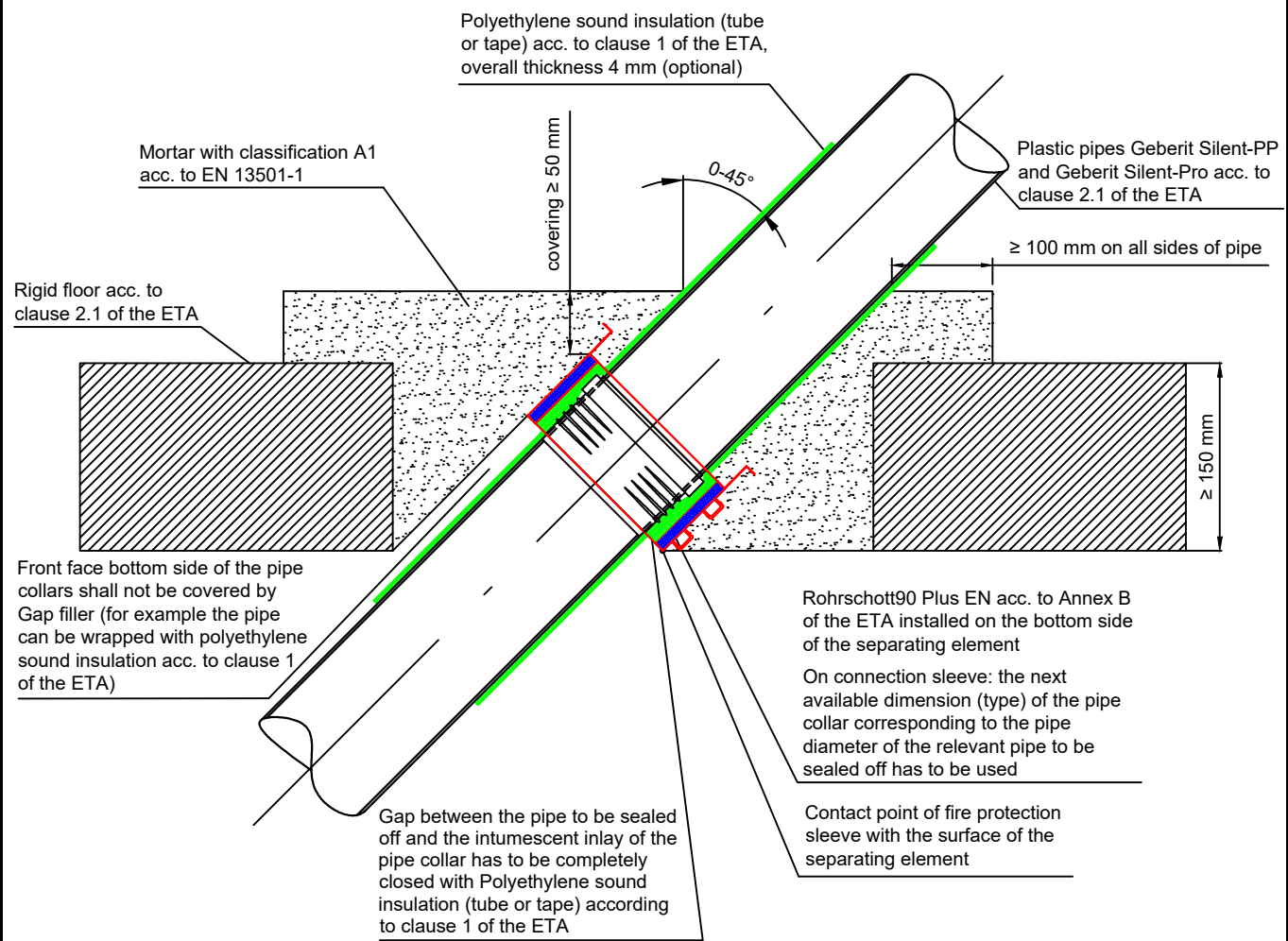
Plastic pipes Geberit Silent-PP and Geberit Silent-Pro acc. to cl. 2.1 of the ETA installed in an angle between 90° and 45° – in rigid floors acc. to cl. 2.1 of the ETA – Rohrschott90 Plus EN installed on connection sleeve on the bottom side partially within the separating element –

Installation drawing – sectional view



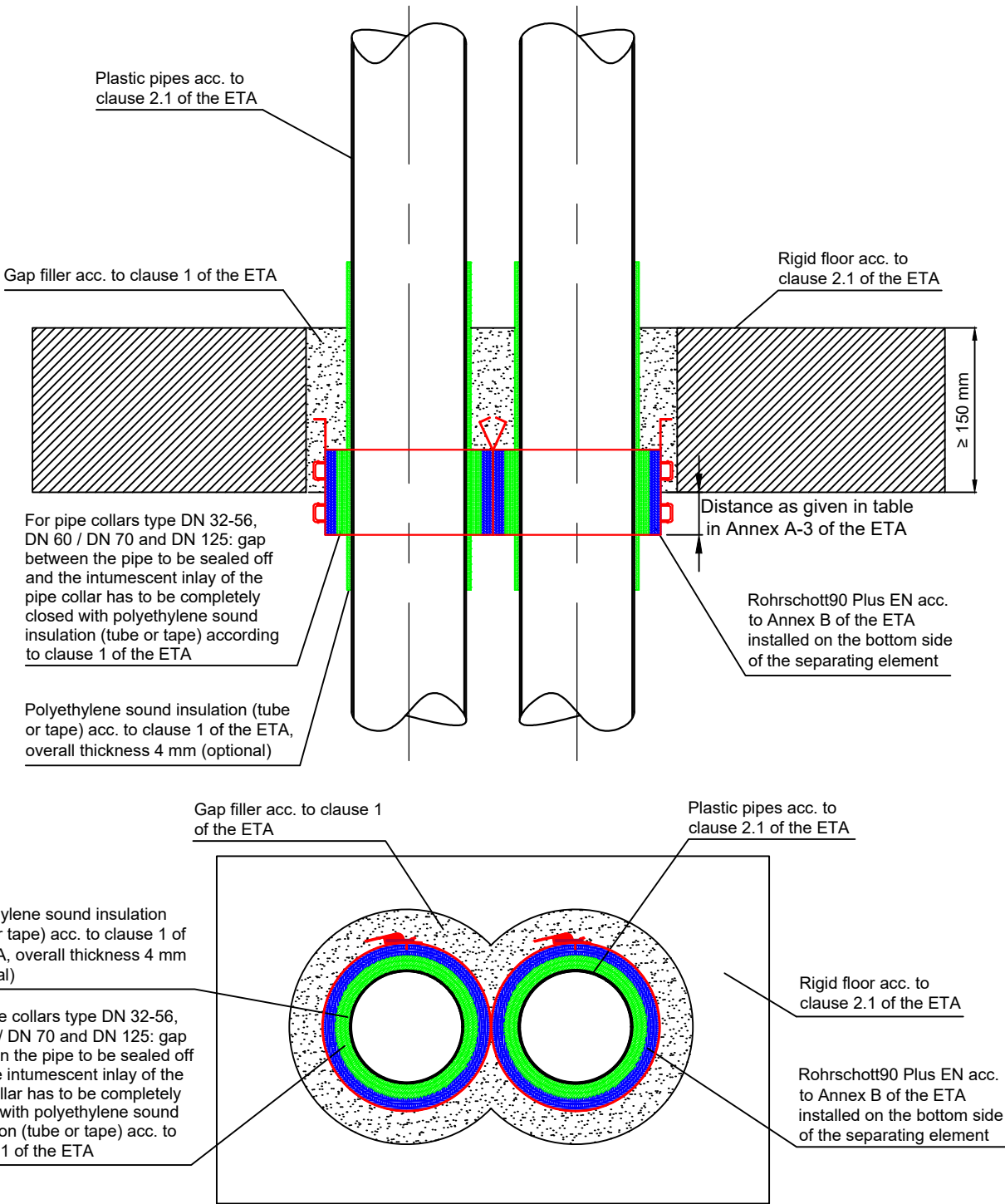
Rohrschott90 Plus EN - Installation in rigid floor-	ANNEX E-17
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Plastic pipes Geberit Silent-PP and Geberit Silent-Pro acc. to cl. 2.1 of the ETA installed in an angle between 90° and 45° – in rigid floors acc. to cl. 2.1 of the ETA – Rohrschott90 Plus EN installed on connection sleeve on the bottom side flushed within the separating element – Installation drawing – sectional view



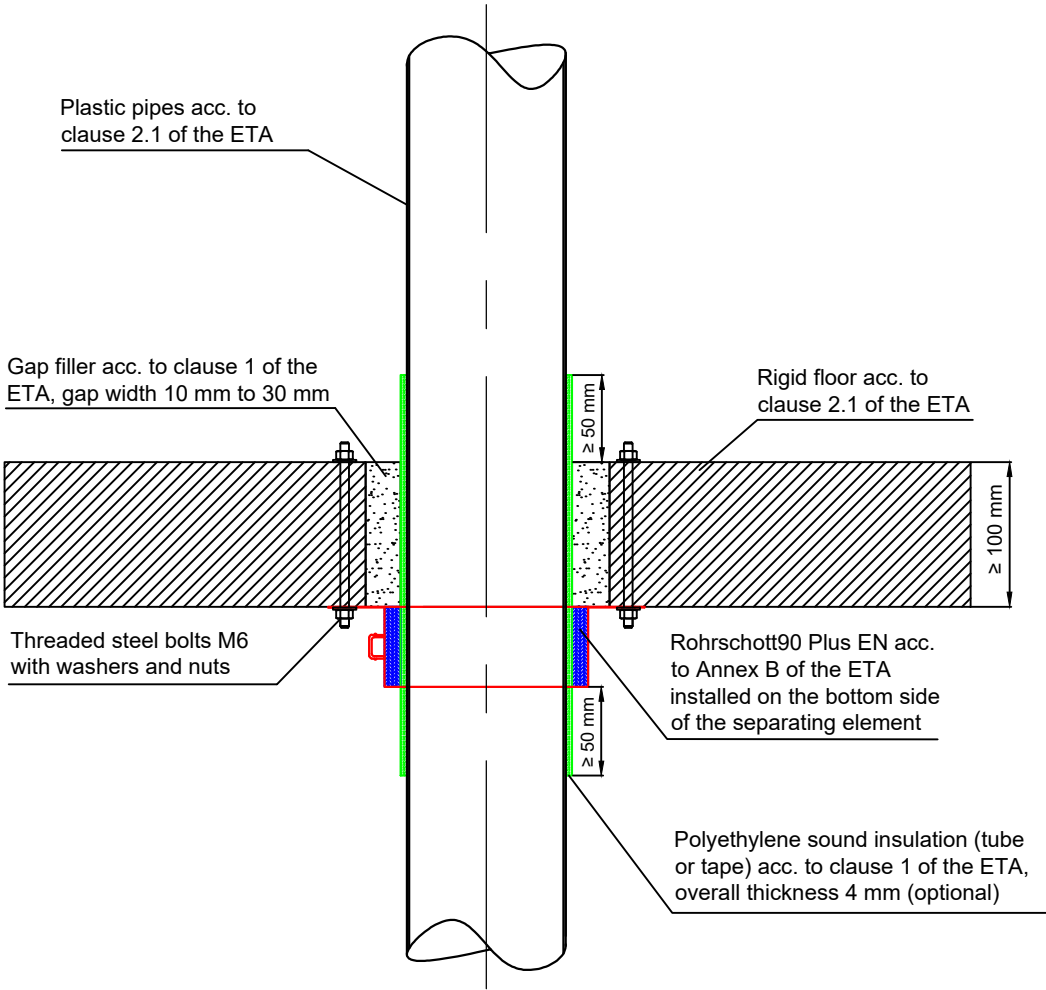
Rohrschott90 Plus EN - Installation in rigid floor-	ANNEX E-18
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Plastic pipes acc. to cl. 2.1 of the ETA – in in flexible walls and rigid walls acc. to cl. 2.1 of the ETA – Minimum distance between two pipe collars (0 mm) – Installation drawing – sectional view



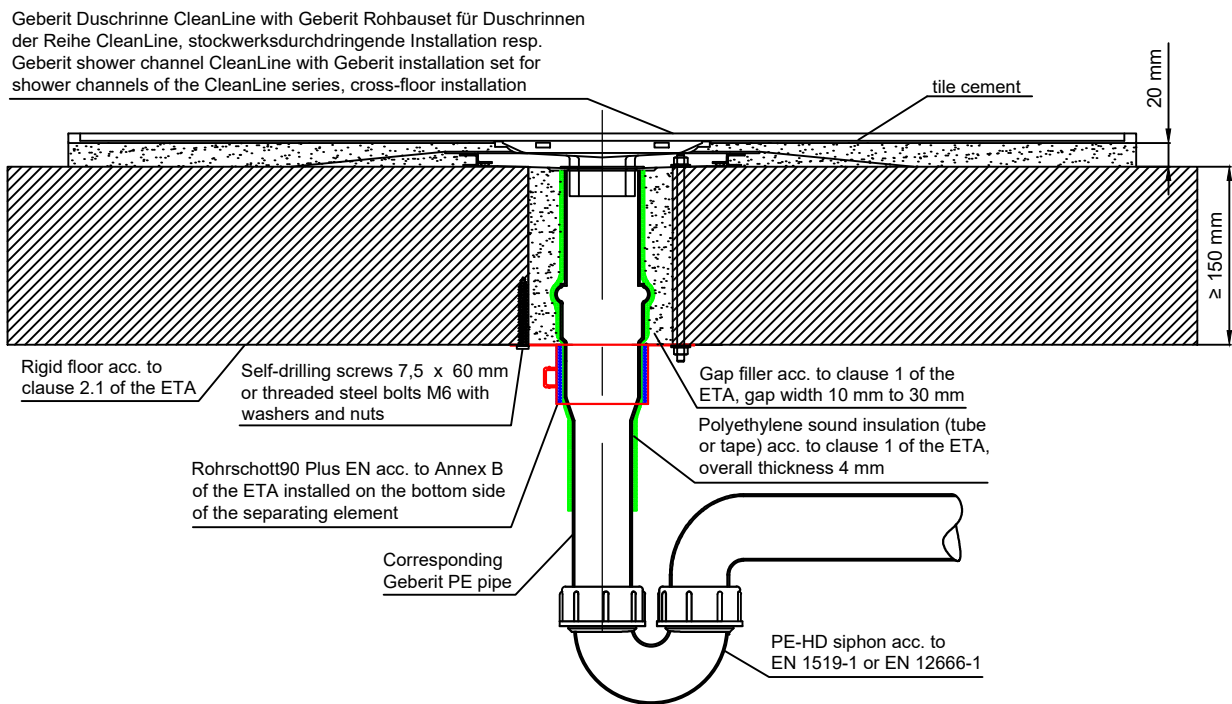
Rohrschott90 Plus EN - Installation in rigid floor-	ANNEX E-19
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Plastic pipes acc. to cl. 2.1 of the ETA – in rigid floors with a thickness of minimum 100 mm
acc. to cl. 2.1 of the ETA – Rohrschott90 Plus EN installed on the bottom side to the surface of
the separating element – Installation drawing – sectional view



Rohrschott90 Plus EN - Installation in rigid floor-	ANNEX E-20
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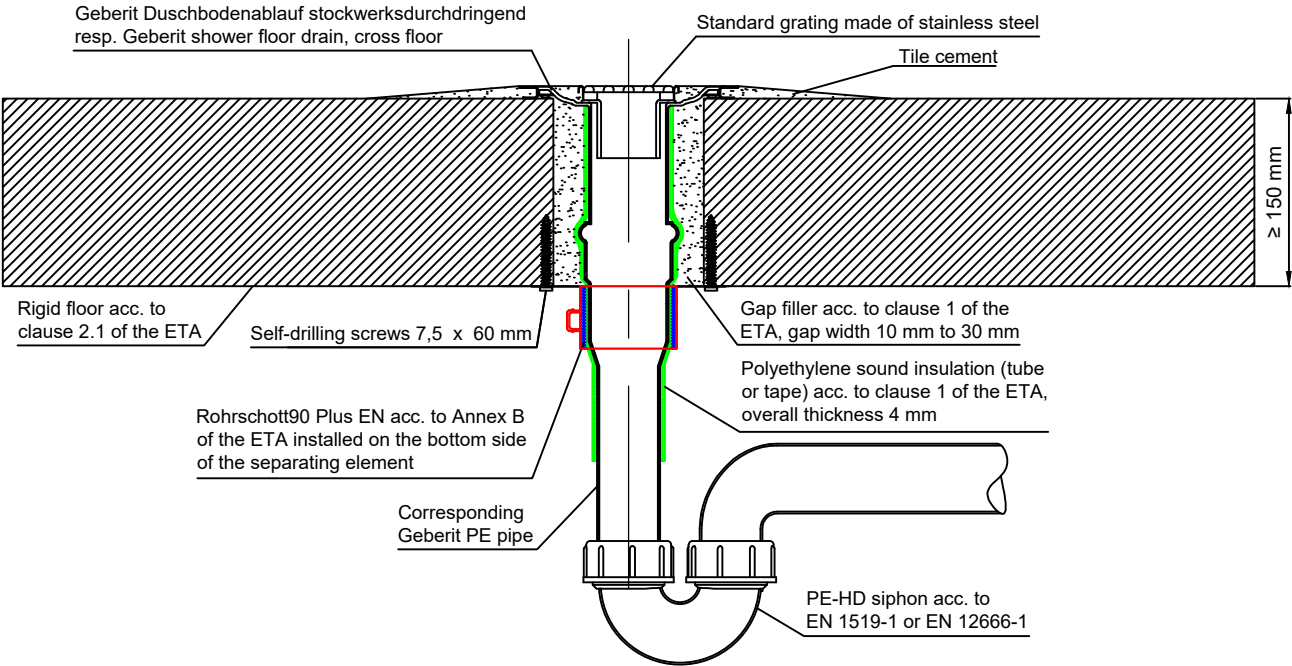
Shower floor drain, cross floor “Geberit Duschrinne CleanLine” with “Geberit Rohbauset für Duschrinnen der Reihe CleanLine, stockwerksdurchdringende Installation” resp “Geberit shower channel CleanLine” with “Geberit installation set for shower channels of the CleanLine series, cross-floor installation” (including the corresponding “Geberit PE” pipe and a PE-HD siphon according to EN 1519-1 or EN 12666-1) acc. to cl. 2.1 of the ETA – in rigid floors acc. to cl. 2.1 of the ETA – Rohrschott90 Plus EN installed on the bottom side to the surface of the separating element – Installation drawing – sectional view



Rohrschott90 Plus EN
- Installation in rigid floor-

ANNEX E-21

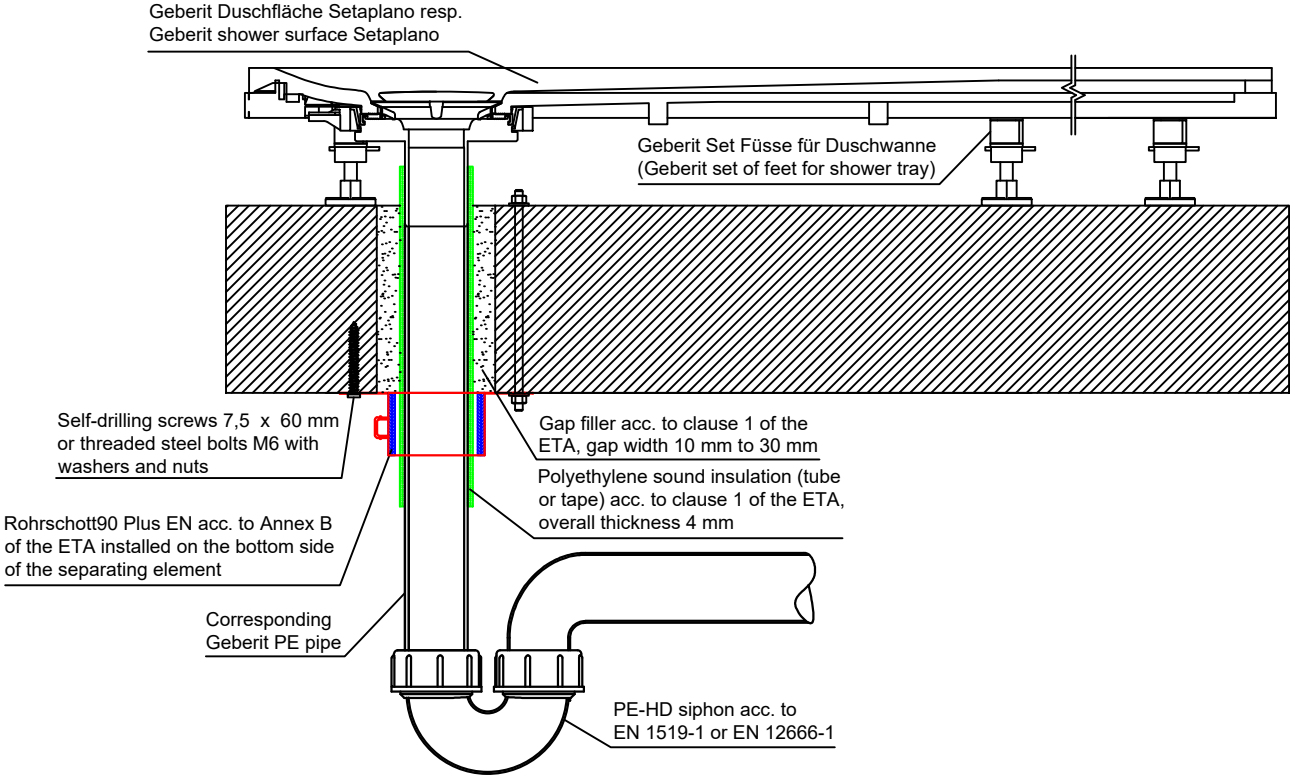
Shower floor drain, cross floor “Geberit Duschbodenablauf stockwerksdurchdringend” resp. “Geberit shower floor drain, cross floor” (including the corresponding “Geberit PE” pipe and a PE-HD siphon according to EN 1519-1 or EN 12666-1) acc. to cl. 2.1 of the ETA – in rigid floors acc. to cl. 2.1 of the ETA – Rohrschott90 Plus EN installed on the bottom side to the surface of the separating element – Installation drawing – sectional view



Rohrschott90 Plus EN
- Installation in rigid floor-

ANNEX E-22

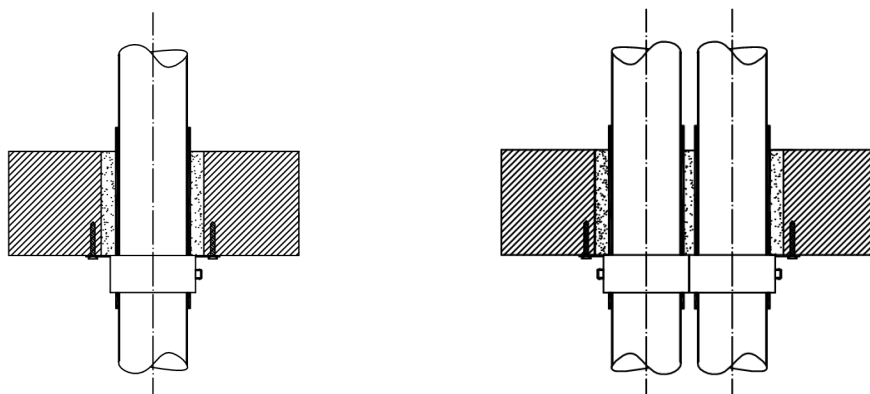
Shower floor drain, cross floor “Geberit Duschfläche Setaplano” resp. “Geberit shower surface Setaplano” (including the corresponding “Geberit PE” pipe and a PE-HD siphon according to EN 1519-1 or EN 12666-1) acc. to cl. 2.1 of the ETA – in rigid floors acc. to cl. 2.1 of the ETA – Rohrschott90 Plus EN installed on the bottom side to the surface of the separating element – Installation drawing – sectional view



Rohrschott90 Plus EN
- Installation in rigid floor-

ANNEX E-23

PE



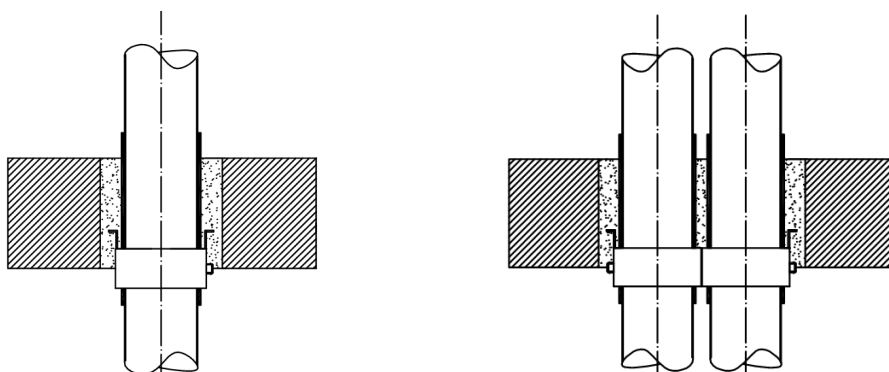
Plastic pipes Geberit PE acc. to cl. 2.1 of the ETA (optionally with Polyethylene sound insulation (tube or tape) acc. to cl. 1 of the ETA)
– in rigid floors acc. to cl. 2.1 of the ETA
– Rohrschott90 Plus EN installed on the bottom side to the surface of the separating element

Pipe dimensions (mm)		Fire resistance classification	
Outer diameter	Wall thickness	Single pipe	Minimum distance between two pipe collars (0 mm)
32	3,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
40	3,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
50	3,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
56	3,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
63	3,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
75	3,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
90	3,5	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
110	4,3	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
125	4,9	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
160	6,2	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
200	6,2	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U

Rohrschott90 Plus EN
- Fire resistance classification -

ANNEX F-1

PE



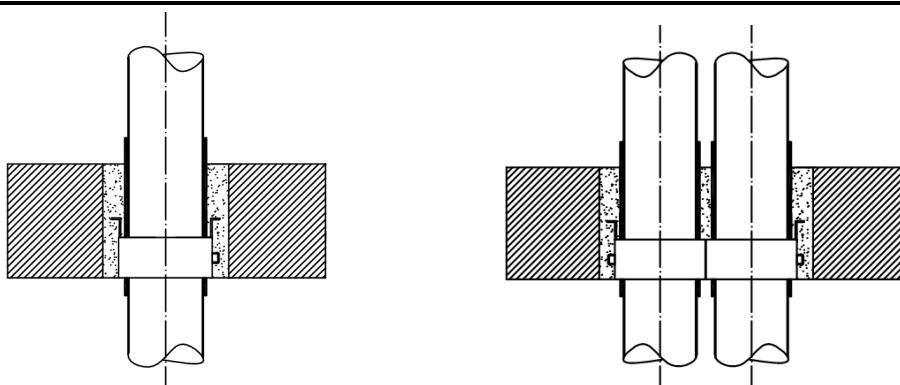
**Plastic pipes Geberit PE acc. to cl. 2.1 of the ETA (optionally with Polyethylene sound insulation (tube or tape) acc. to cl. 1 of the ETA)
– in rigid floors acc. to cl. 2.1 of the ETA
– Rohrschott90 Plus EN installed on the bottom side partially within the separating element**

Pipe dimensions (mm)		Fire resistance classification	
Outer diameter	Wall thickness	Single pipe	Minimum distance between two pipe collars (0 mm)
32	3,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
40	3,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
50	3,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
56	3,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
63	3,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
75	3,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
90	3,5	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
110	4,3	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
125	4,9	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
160	6,2	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
200	6,2	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U

Rohrschott90 Plus EN
- Fire resistance classification -

ANNEX F-2

PE



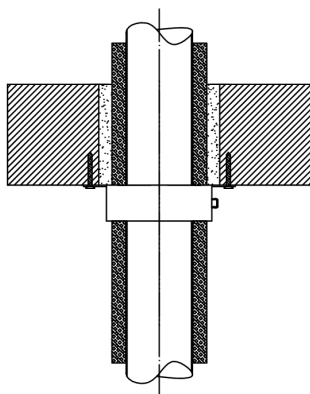
**Plastic pipes Geberit PE acc. to cl. 2.1 of the ETA (optionally with Polyethylene sound insulation (tube or tape) acc. to cl. 1 of the ETA)
– in rigid floors acc. to cl. 2.1 of the ETA
– Rohrschott90 Plus EN installed on the bottom side flushed within the separating element**

Pipe dimensions (mm)		Fire resistance classification	
Outer diameter	Wall thickness	Single pipe	Minimum distance between two pipe collars (0 mm)
32	3,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
40	3,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
50	3,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
56	3,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
63	3,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
75	3,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
90	3,5	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
110	4,3	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
135	4,9	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
160	6,2	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
200	6,2	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U

Rohrschott90 Plus EN
- Fire resistance classification -

ANNEX F-3

PE

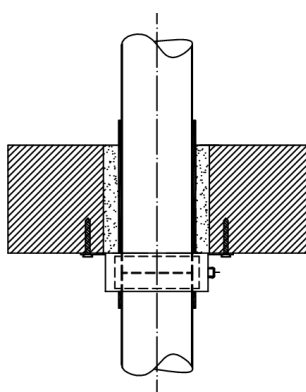


Plastic pipes Geberit PE acc. to cl. 2.1 of the ETA with AF/Armaflex (local-sustained LS or continued-sustained CS) – in rigid floors acc. to cl. 2.1 of the ETA – Rohrschott90 Plus EN installed on the bottom side to the surface of the separating element				
Pipe dimensions (mm)		AF/Armaflex Symmetrical insulation (mm)		Fire resistance classification
Outer diameter	Thickness	Thickness	Length on both sides of the separating element	
32	3,0	-----	-----	-----
40	3,0	-----	-----	-----
50	3,0	13,5	≥ 500	EI 90-U/U E 90-U/U
56	3,0	14	≥ 500	EI 90-U/U E 90-U/U
63	3,0	14	≥ 500	EI 90-U/U E 90-U/U
75	3,0	14	≥ 500	EI 90-U/U E 90-U/U
90	3,5	14,5	≥ 500	EI 90-U/U E 90-U/U
110	4,3	15 to 23,5	≥ 500	EI 90-U/U E 90-U/U
135	4,9	15 to 23,5	≥ 500	EI 90-U/U E 90-U/U
160	6,2	16 to 25	≥ 500	EI 90-U/U E 90-U/U
200	6,2	-----	-----	-----

Rohrschott90 Plus EN
- Fire resistance classification -

ANNEX F-4

PE



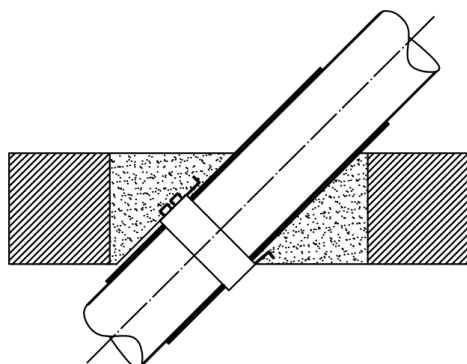
Plastic pipes Geberit PE acc. to cl. 2.1 of the ETA (optionally with Polyethylene sound insulation (tube or tape) acc. to cl. 1 of the ETA)
– rigid floors acc. to cl. 2.1 of the ETA
– Rohrschott90 Plus EN installed on Geberit Elektroschweißmuffe (Geberit electrofusion sleeve coupling) on the bottom side to the surface of the separating element

Pipe dimensions (mm)		Fire resistance classification
Outer diameter	Wall thickness	
32	3,0	-----
40	3,0	-----
50	3,0	-----
56	3,0	-----
63	3,0	-----
75	3,0	-----
90	3,5	-----
110	4,3	EI 90-U/U E 90-U/U
125	4,9	EI 90-U/U E 90-U/U
160	6,2	-----
200	6,2	-----

Rohrschott90 Plus EN
- Fire resistance classification -

ANNEX F-5

PE



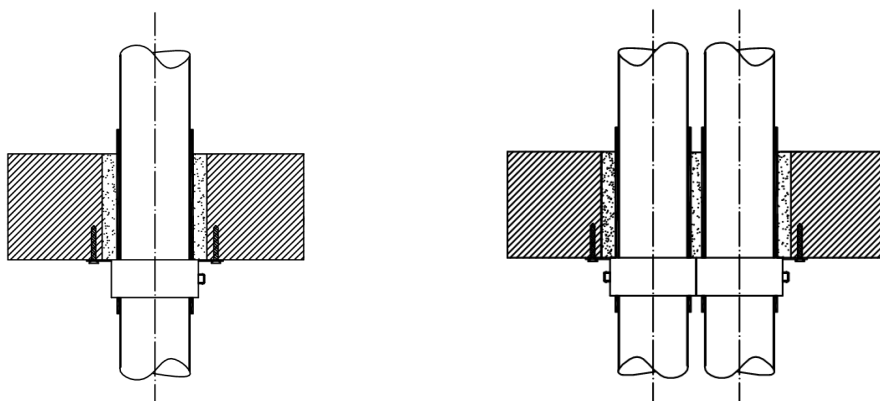
**Plastic pipes Geberit PE acc. to cl. 2.1 of the ETA (optionally with Polyethylene sound insulation (tube or tape) acc. to cl. 1 of the ETA) installed in an angle between 90° and 45°
– in rigid floors acc. to cl. 2.1 of the ETA
– Rohrschott90 Plus EN installed on the bottom side partially within the separating element**

Pipe dimensions (mm)		Fire resistance classification
Outer diameter	Wall thickness	
32	3,0	-----
40	3,0	-----
50	3,0	-----
56	3,0	-----
63	3,0	-----
75	3,0	-----
90	3,5	-----
110	4,3	-----
125	4,9	EI 90-U/U E 90-U/U
160	6,2	-----
200	6,2	-----

Rohrschott90 Plus EN
- Fire resistance classification -

ANNEX F-6

Silent-PP



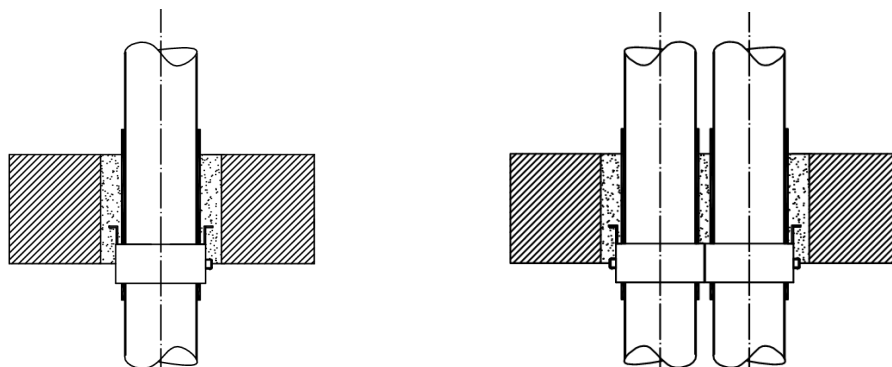
Plastic pipes Geberit Silent-PP acc. to cl. 2.1 of the ETA (optionally with Polyethylene sound insulation (tube or tape) acc. to cl. 1 of the ETA)
– in rigid floors acc. to cl. 2.1 of the ETA
– Rohrschott90 Plus EN installed on the bottom side to the surface of the separating element

Pipe dimensions (mm)		Fire resistance classification	
Outer diameter	Wall thickness	Single pipe	Minimum distance between two pipe collars (0 mm)
32	2,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
40	2,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
50	2,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
75	2,6	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
90	3,1	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
110	3,6	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
125	4,2	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
160	5,2	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U

Rohrschott90 Plus EN
- Fire resistance classification -

ANNEX F-7

Silent-PP



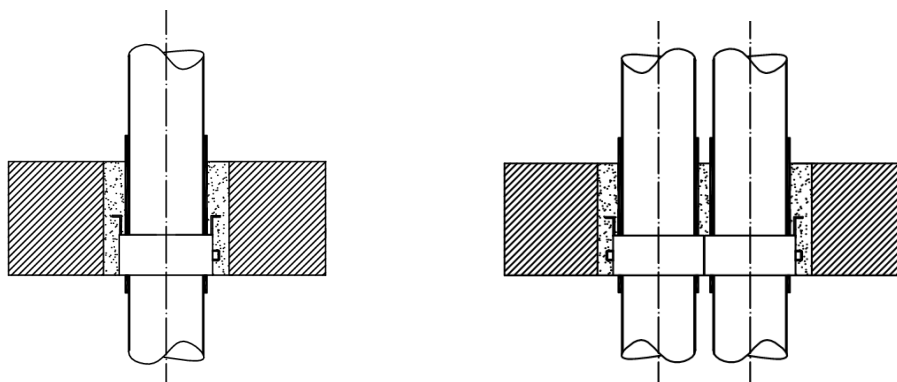
Plastic pipes Geberit Silent-PP acc. to cl. 2.1 of the ETA (optionally with Polyethylene sound insulation (tube or tape) acc. to cl. 1 of the ETA)
– in rigid floors acc. to cl. 2.1 of the ETA
– Rohrschott90 Plus EN installed on the bottom side partially within the separating element

Pipe dimensions (mm)		Fire resistance classification	
Outer diameter	Wall thickness	Single pipe	Minimum distance between two pipe collars (0 mm)
32	2,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
40	2,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
50	2,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
75	2,6	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
90	3,1	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
110	3,6	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
125	4,2	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
160	5,2	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U

Rohrschott90 Plus EN
- Fire resistance classification -

ANNEX F-8

Silent-PP



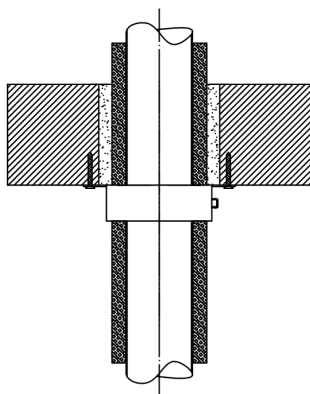
Plastic pipes Geberit Silent-PP acc. to cl. 2.1 of the ETA (optionally with Polyethylene sound insulation (tube or tape) acc. to cl. 1 of the ETA)
– in rigid floors acc. to cl. 2.1 of the ETA
– Rohrschott90 Plus EN installed on the bottom side flushed within the separating element

Pipe dimensions (mm)		Fire resistance classification	
Outer diameter	Wall thickness	Single pipe	Minimum distance between two pipe collars (0 mm)
32	2,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
40	2,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
50	2,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
75	2,6	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
90	3,1	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
110	3,6	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
125	4,2	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
160	5,2	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U

Rohrschott90 Plus EN
- Fire resistance classification -

ANNEX F-9

Silent-PP

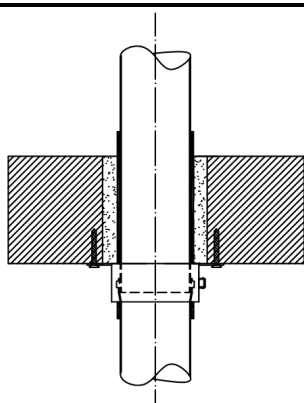


Plastic pipes Geberit Silent-PP acc. to cl. 2.1 of the ETA with AF/Armaflex (local-sustained LS or continued-sustained CS) – in rigid floors acc. to cl. 2.1 of the ETA – Rohrschott90 Plus EN installed on the bottom side to the surface of the separating element				
Pipe dimensions (mm)		AF/Armaflex Symmetrical insulation (mm)		Fire resistance classification
Outer diameter	Thickness	Thickness	Length on both sides of the separating element	
32	2,0	-----	-----	-----
40	2,0	-----	-----	-----
50	2,0	13,5	≥ 500	EI 90-U/U E 90-U/U
75	2,6	14	≥ 500	EI 90-U/U E 90-U/U
90	3,1	14,5	≥ 500	EI 90-U/U E 90-U/U
110	3,6	15 to 18	≥ 500	EI 90-U/U E 90-U/U
125	4,2	15 to 23,5	≥ 500	EI 90-U/U E 90-U/U
160	5,2	16 to 25	≥ 500	EI 90-U/U E 90-U/U

Rohrschott90 Plus EN
- Fire resistance classification -

ANNEX F-10

Silent-PP



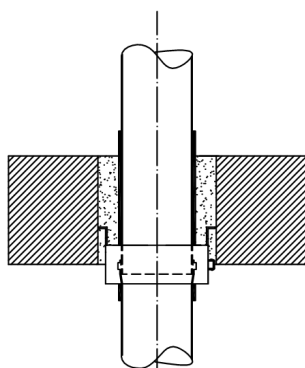
Plastic pipes Geberit Silent-PP acc. to cl. 2.1 of the ETA (optionally with Polyethylene sound insulation (tube or tape) acc. to cl. 1 of the ETA)
– in rigid floors acc. to cl. 2.1 of the ETA
– Rohrschott90 Plus EN installed on connection sleeve on the bottom side to the surface of the separating element

Pipe dimensions (mm)		Fire resistance classification
Outer diameter	Wall thickness	
32	2,0	EI 90-U/U E 90-U/U
40	2,0	EI 90-U/U E 90-U/U
50	2,0	EI 90-U/U E 90-U/U
75	2,6	EI 90-U/U E 90-U/U
90	3,1	EI 90-U/U E 90-U/U
110	3,6	EI 90-U/U E 90-U/U
125	4,2	EI 90-U/U E 90-U/U
160	5,2	EI 90-U/U E 90-U/U

Rohrschott90 Plus EN
- Fire resistance classification -

ANNEX F-11

Silent-PP



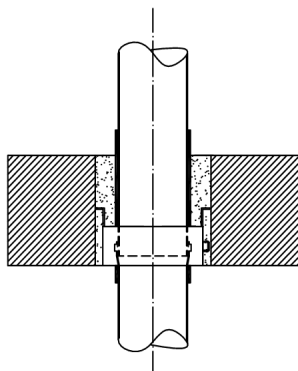
Plastic pipes Geberit Silent-PP acc. to cl. 2.1 of the ETA (optionally with Polyethylene sound insulation (tube or tape) acc. to cl. 1 of the ETA)
– in rigid floors acc. to cl. 2.1 of the ETA
– Rohrschott90 Plus EN installed on connection sleeve on the bottom side partially within the separating element

Pipe dimensions (mm)		Fire resistance classification
Outer diameter	Wall thickness	
32	2,0	EI 90-U/U E 90-U/U
40	2,0	EI 90-U/U E 90-U/U
50	2,0	EI 90-U/U E 90-U/U
75	2,6	EI 90-U/U E 90-U/U
90	3,1	EI 90-U/U E 90-U/U
110	3,6	EI 90-U/U E 90-U/U
125	4,2	EI 90-U/U E 90-U/U
160	5,2	-----

Rohrschott90 Plus EN
- Fire resistance classification -

ANNEX F-12

Silent-PP



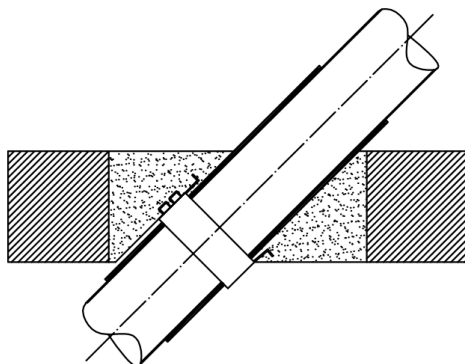
Plastic pipes Geberit Silent-PP acc. to cl. 2.1 of the ETA (optionally with Polyethylene sound insulation (tube or tape) acc. to cl. 1 of the ETA)
– in rigid floors acc. to cl. 2.1 of the ETA
– Rohrschott90 Plus EN installed on connection sleeve on the bottom side flushed within the separating element

Pipe dimensions (mm)		Fire resistance classification
Outer diameter	Wall thickness	
32	2,0	EI 90-U/U E 90-U/U
40	2,0	EI 90-U/U E 90-U/U
50	2,0	EI 90-U/U E 90-U/U
75	2,6	EI 90-U/U E 90-U/U
90	3,1	EI 90-U/U E 90-U/U
110	3,6	EI 90-U/U E 90-U/U
125	4,2	EI 90-U/U E 90-U/U
160	5,2	EI 90-U/U E 90-U/U

Rohrschott90 Plus EN
- Fire resistance classification -

ANNEX F-13

Silent-PP



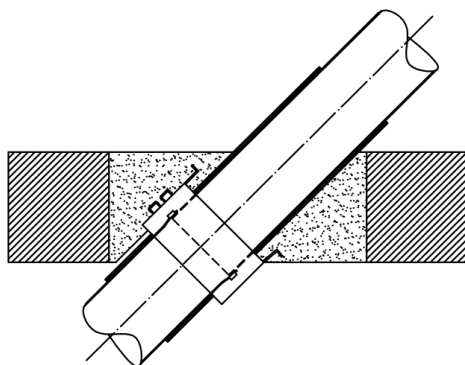
Plastic pipes Geberit Silent-PP acc. to cl. 2.1 of the ETA (optionally with Polyethylene sound insulation (tube or tape) acc. to cl. 1 of the ETA) installed in an angle between 90° and 45°
– in rigid floors acc. to cl. 2.1 of the ETA
– Rohrschott90 Plus EN installed on the bottom side partially within the separating element

Pipe dimensions (mm)		Fire resistance classification
Outer diameter	Wall thickness	
32	2,0	-----
40	2,0	-----
50	2,0	-----
75	2,6	-----
90	3,1	-----
110	3,6	-----
125	4,2	EI 90-U/U E 90-U/U
160	5,2	-----

Rohrschott90 Plus EN
- Fire resistance classification -

ANNEX F-14

Silent-PP



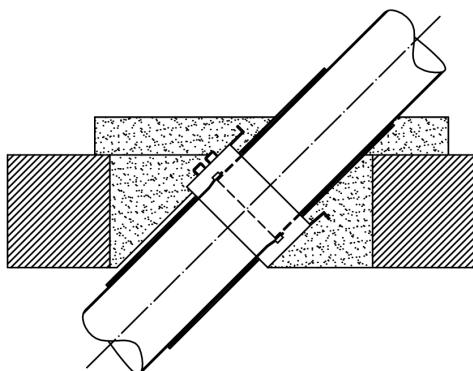
Plastic pipes Geberit Silent-PP acc. to cl. 2.1 of the ETA (optionally with Polyethylene sound insulation (tube or tape) acc. to cl. 1 of the ETA) installed in an angle between 90° and 45°
– in rigid floors acc. to cl. 2.1 of the ETA
– Rohrschott90 Plus EN installed on connection sleeve on the bottom side partially within the separating element

Pipe dimensions (mm)		Fire resistance classification
Outer diameter	Wall thickness	
32	2,0	-----
40	2,0	-----
50	2,0	-----
75	2,6	-----
90	3,1	-----
110	3,6	EI 90-U/U E 90-U/U
125	4,2	EI 90-U/U E 90-U/U
160	5,2	-----

Rohrschott90 Plus EN
- Fire resistance classification -

ANNEX F-15

Silent-PP



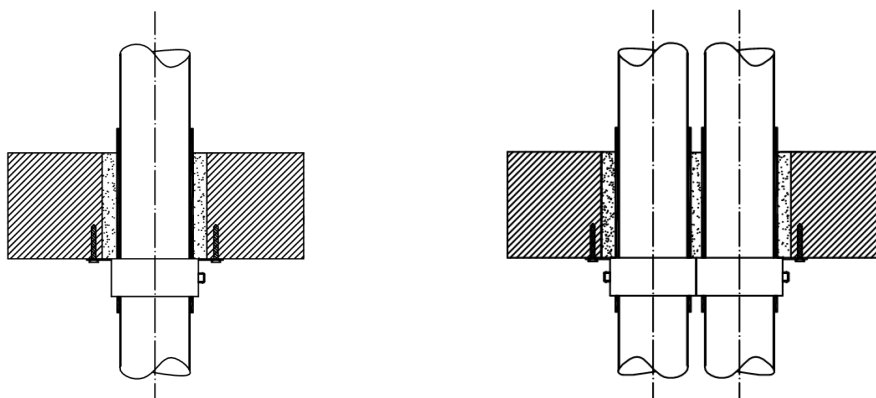
Plastic pipes Geberit Silent-PP acc. to cl. 2.1 of the ETA (optionally with Polyethylene sound insulation (tube or tape) acc. to cl. 1 of the ETA) installed in an angle between 90° and 45°
– in rigid floors acc. to cl. 2.1 of the ETA
– Rohrschott90 Plus EN installed on connection sleeve on the bottom side flushed within the separating element

Pipe dimensions (mm)		Fire resistance classification
Outer diameter	Wall thickness	
32	2,0	-----
40	2,0	-----
50	2,0	-----
75	2,6	-----
90	3,1	-----
110	3,6	EI 90-U/U E 90-U/U
125	4,2	EI 90-U/U E 90-U/U
160	5,2	-----

Rohrschott90 Plus EN
- Fire resistance classification -

ANNEX F-16

Silent-db20



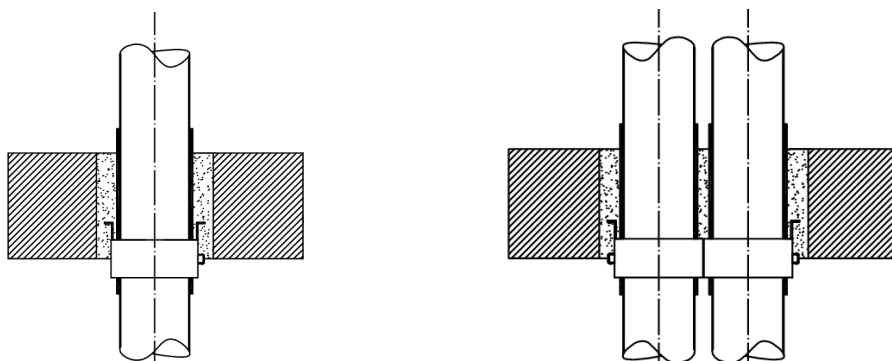
Plastic pipes Geberit Silent-db20 acc. to cl. 2.1 of the ETA (optionally with Polyethylene sound insulation (tube or tape) acc. to cl. 1 of the ETA)
– in rigid floors acc. to cl. 2.1 of the ETA
– Rohrschott90 Plus EN installed on the bottom side to the surface of the separating element

Pipe dimensions (mm)		Fire resistance classification	
Outer diameter	Wall thickness	Single pipe	Minimum distance between two pipe collars (0 mm)
56	3,2	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
63	3,2	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
75	3,6	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
90	5,5	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
110	6,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
135	6,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
160	7,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U

Rohrschott90 Plus EN
- Fire resistance classification -

ANNEX F-17

Silent-db20



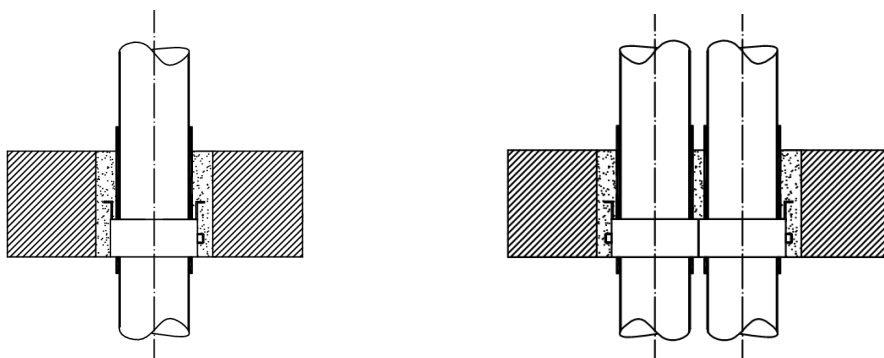
Plastic pipes Geberit Silent-db20 acc. to cl. 2.1 of the ETA (optionally with Polyethylene sound insulation (tube or tape) acc. to cl. 1 of the ETA)
– in rigid floors acc. to cl. 2.1 of the ETA
– Rohrschott90 Plus EN installed on the bottom side partially within the separating element

Pipe dimensions (mm)		Fire resistance classification	
Outer diameter	Wall thickness	Single pipe	Minimum distance between two pipe collars (0 mm)
56	3,2	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
63	3,2	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
75	3,6	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
90	5,5	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
110	6,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
135	6,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
160	7,0	EI 90-U/U E 90-U/U	-----

Rohrschott90 Plus EN
- Fire resistance classification -

ANNEX F-18

Silent-db20



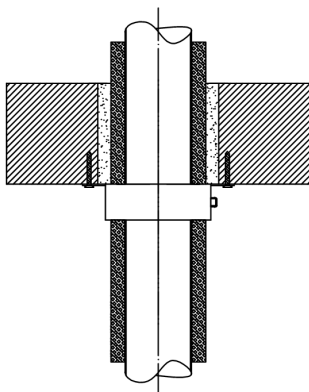
Plastic pipes Geberit Silent-db20 acc. to cl. 2.1 of the ETA (optionally with Polyethylene sound insulation (tube or tape) acc. to cl. 1 of the ETA)
– in rigid floors acc. to cl. 2.1 of the ETA
– Rohrschott90 Plus EN installed on the bottom side flushed within the separating element

Pipe dimensions (mm)		Fire resistance classification	
Outer diameter	Wall thickness	Single pipe	Minimum distance between two pipe collars (0 mm)
56	3,2	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
63	3,2	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
75	3,6	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
90	5,5	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
110	6,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
135	6,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
160	7,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U

Rohrschott90 Plus EN
- Fire resistance classification -

ANNEX F-19

Silent-db20



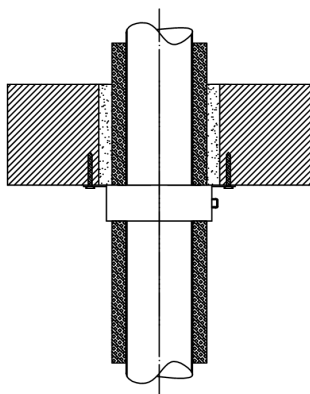
**Plastic pipes Geberit Silent-db20 acc. to cl. 2.1 of the ETA with Sound insulation mat acc. to cl. 1 of the ETA – in rigid floors acc. to cl. 2.1 of the ETA
– Rohrschott90 Plus EN installed on the bottom side to the surface of the separating element**

Pipe dimensions (mm)		Sound insulation mat Symmetrical insulation (mm)		Fire resistance classification
Outer diameter	Thickness	Thickness	Length on both sides of the separating element	
56	3,2	17	≥ 500	EI 90-U/U E 90-U/U
63	3,2	17	≥ 500	EI 90-U/U E 90-U/U
75	3,6	17	≥ 500	EI 90-U/U E 90-U/U
90	5,5	17	≥ 500	EI 90-U/U E 90-U/U
110	6,0	17	≥ 500	EI 90-U/U E 90-U/U
135	6,0	17	≥ 500	EI 90-U/U E 90-U/U
160	7,0	17	≥ 500	EI 90-U/U E 90-U/U

Rohrschott90 Plus EN
- Fire resistance classification -

ANNEX F-20

Silent-db20



**Plastic pipes Geberit Silent-db20 acc. to cl. 2.1 of the ETA with AF/Armaflex
(local-sustained LS or continued-sustained CS)**

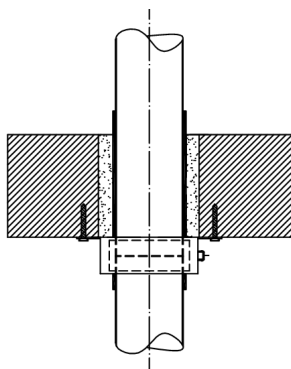
**– in rigid floors acc. to cl. 2.1 of the ETA
– Rohrschott90 Plus EN installed on the bottom side to the surface of the separating element**

Pipe dimensions (mm)		AF/Armaflex Symmetrical insulation (mm)		Fire resistance classification
Outer diameter	Thickness	Thickness	Length on both sides of the separating element	
56	3,2	14	≥ 500	EI 90-U/U E 90-U/U
63	3,2	14	≥ 500	EI 90-U/U E 90-U/U
75	3,6	14	≥ 500	EI 90-U/U E 90-U/U
90	5,5	14,5	≥ 500	EI 90-U/U E 90-U/U
110	6,0	15 to 23,5	≥ 500	EI 90-U/U E 90-U/U
135	6,0	15,5 to 24	≥ 500	EI 90-U/U E 90-U/U
160	7,0	16 to 25	≥ 500	EI 90-U/U E 90-U/U

Rohrschott90 Plus EN
- Fire resistance classification -

ANNEX F-21

Silent-db20



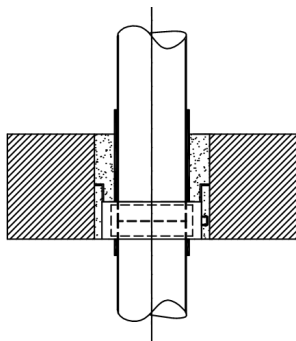
Plastic pipes Geberit Silent-db20 acc. to cl. 2.1 of the ETA (optionally with Polyethylene sound insulation (tube or tape) acc. to cl. 1 of the ETA)
– in rigid floors acc. to cl. 2.1 of the ETA
– Rohrschott90 Plus EN installed on Geberit Elektroschweißmuffe (Geberit electrofusion sleeve coupling) on the bottom side to the surface of the separating element

Pipe dimensions (mm)		Fire resistance classification
Outer diameter	Wall thickness	
56	3,2	-----
63	3,2	-----
75	3,6	-----
90	5,5	EI 90-U/U E 90-U/U
110	6,0	EI 90-U/U E 90-U/U
135	6,0	-----
160	7,0	-----

Rohrschott90 Plus EN
- Fire resistance classification -

ANNEX F-22

Silent-db20



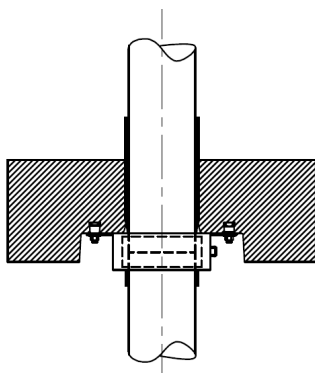
Plastic pipes Geberit Silent-db20 acc. to cl. 2.1 of the ETA (optionally with Polyethylene sound insulation (tube or tape) acc. to cl. 1 of the ETA)
– in rigid floors acc. to cl. 2.1 of the ETA
– Rohrschott90 Plus EN installed on Geberit Elektroschweißmuffe (Geberit electrofusion sleeve coupling) on the bottom side flushed within the separating element

Pipe dimensions (mm)		Fire resistance classification
Outer diameter	Wall thickness	
56	3,2	-----
63	3,2	-----
75	3,6	-----
90	5,5	EI 90-U/U E 90-U/U
110	6,0	EI 90-U/U E 90-U/U
135	6,0	EI 90-U/U E 90-U/U
160	7,0	-----

Rohrschott90 Plus EN
- Fire resistance classification -

ANNEX F-23

Silent-db20



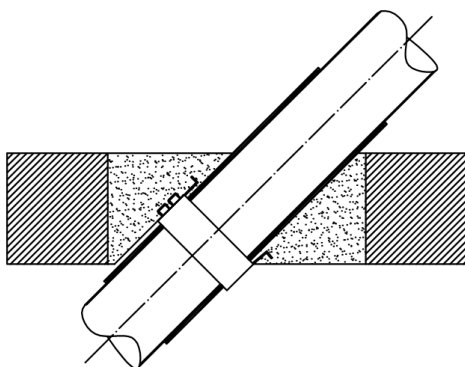
Plastic pipes Geberit Silent-db20 acc. to cl. 2.1 of the ETA (optionally with Polyethylene sound insulation (tube or tape) acc. to cl. 1 of the ETA)
– in concrete floors (rigid floors) acc. to cl. 2.1 of the ETA
– Rohrschott90 Plus EN installed (optionally on Geberit Elektroschweißmuffe (Geberit electrofusion sleeve coupling)) on the bottom side to the surface of the separating element and fixed to the integrated fastenings of Geberit Schalungsschoner mit integrierter Befestigung (Geberit formwork guard with integrated fastening)

Pipe dimensions (mm)		Fire resistance classification
Outer diameter	Wall thickness	
56	3,2	-----
63	3,2	-----
75	3,6	-----
90	5,5	-----
110	6,0	EI 90-U/U E 90-U/U
135	6,0	-----
160	7,0	-----

Rohrschott90 Plus EN
- Fire resistance classification -

ANNEX F-24

Silent-db20



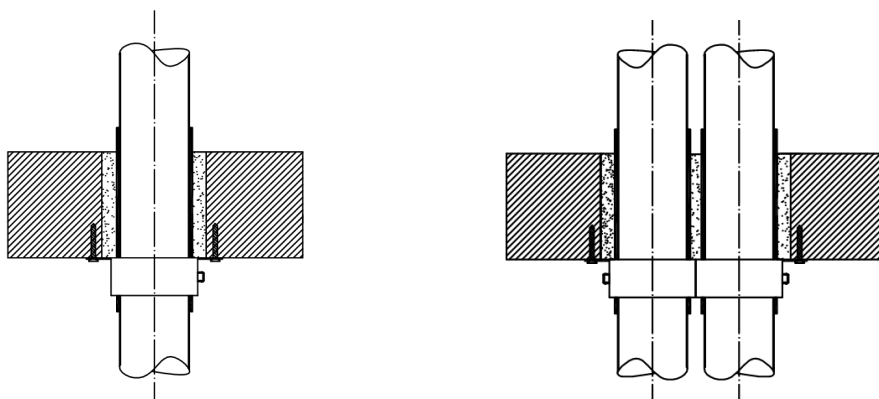
Plastic pipes Geberit Silent-db20 acc. to cl. 2.1 of the ETA (optionally with Polyethylene sound insulation (tube or tape) acc. to cl. 1 of the ETA) installed in an angle between 90° and 45°
– in rigid floors acc. to cl. 2.1 of the ETA
– Rohrschott90 Plus EN installed on the bottom side partially within the separating element

Pipe dimensions (mm)		Fire resistance classification
Outer diameter	Wall thickness	
56	3,2	-----
63	3,2	-----
75	3,6	-----
90	5,5	-----
110	6,0	-----
135	6,0	EI 90-U/U E 90-U/U
160	7,0	-----

Rohrschott90 Plus EN
- Fire resistance classification -

ANNEX F-25

Silent-Pro



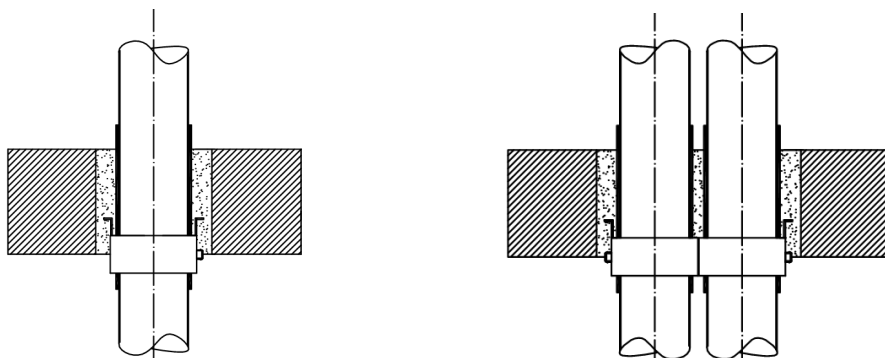
Plastic pipes Geberit Silent-Pro acc. to cl. 2.1 of the ETA (optionally with Polyethylene sound insulation (tube or tape) acc. to cl. 1 of the ETA)
– in rigid floors acc. to cl. 2.1 of the ETA
– Rohrschott90 Plus EN installed on the bottom side to the surface of the separating element

Pipe dimensions (mm)		Fire resistance classification	
Outer diameter	Wall thickness	Single pipe	Minimum distance between two pipe collars (0 mm)
50	3,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
75	3,8	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
90	4,3	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
110	4,5	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
125	5,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
160	6,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U

Rohrschott90 Plus EN
- Fire resistance classification -

ANNEX F-26

Silent-Pro



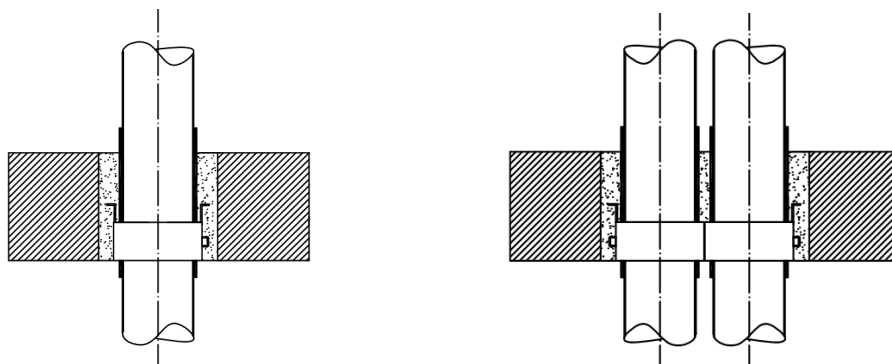
Plastic pipes Geberit Silent-Pro acc. to cl. 2.1 of the ETA (optionally with Polyethylene sound insulation (tube or tape) acc. to cl. 1 of the ETA)
– in rigid floors acc. to cl. 2.1 of the ETA
– Rohrschott90 Plus EN installed on the bottom side partially within the separating element

Pipe dimensions (mm)		Fire resistance classification	
Outer diameter	Wall thickness	Single pipe	Minimum distance between two pipe collars (0 mm)
50	3,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
75	3,8	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
90	4,3	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
110	4,5	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
125	5,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
160	6,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U

Rohrschott90 Plus EN
- Fire resistance classification -

ANNEX F-27

Silent-Pro



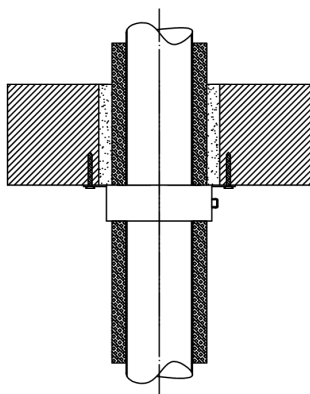
Plastic pipes Geberit Silent-Pro acc. to cl. 2.1 of the ETA (optionally with Polyethylene sound insulation (tube or tape) acc. to cl. 1 of the ETA)
– in rigid floors acc. to cl. 2.1 of the ETA
– Rohrschott90 Plus EN installed on the bottom side flushed within the separating element

Pipe dimensions (mm)		Fire resistance classification	
Outer diameter	Wall thickness	Single pipe	Minimum distance between two pipe collars (0 mm)
50	3,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
75	3,8	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
90	4,3	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
110	4,5	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
125	5,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
160	6,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U

Rohrschott90 Plus EN
- Fire resistance classification -

ANNEX F-28

Silent-Pro



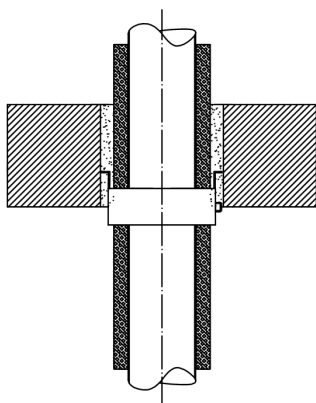
Plastic pipes Geberit Silent-Pro acc. to cl. 2.1 of the ETA with Sound insulation mat acc. to cl. 1 of the ETA – in rigid floors acc. to cl. 2.1 of the ETA
– Rohrschott90 Plus EN installed on the bottom side to the surface of the separating element

Pipe dimensions (mm)		Sound insulation mat Symmetrical insulation (mm)		Fire resistance classification
Outer diameter	Wall thickness	Thickness	Length on both sides of the separating element	
50	3,0	17	≥ 500	EI 90-U/U E 90-U/U
75	3,8	17	≥ 500	EI 90-U/U E 90-U/U
90	4,3	17	≥ 500	EI 90-U/U E 90-U/U
110	4,5	17	≥ 500	EI 90-U/U E 90-U/U
125	5,0	17	≥ 500	EI 90-U/U E 90-U/U
160	6,0	17	≥ 500	EI 90-U/U E 90-U/U

Rohrschott90 Plus EN
- Fire resistance classification -

ANNEX F-29

Silent-Pro



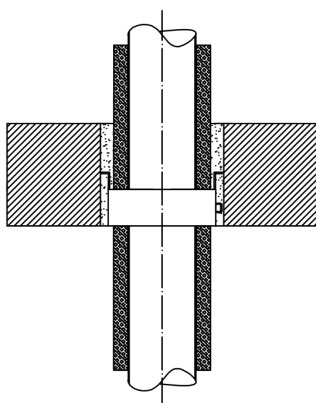
**Plastic pipes Geberit Silent-Pro acc. to cl. 2.1 of the ETA with Sound insulation mat acc. to cl. 1 of the ETA – in rigid floors acc. to cl. 2.1 of the ETA
– Rohrschott90 Plus EN installed on the bottom side partially within the separating element**

Pipe dimensions (mm)		Sound insulation mat Symmetrical insulation (mm)		Fire resistance classification
Outer diameter	Wall thickness	Thickness	Length on both sides of the separating element	
50	3,0	17	≥ 500	EI 90-U/U E 90-U/U
75	3,8	17	≥ 500	EI 90-U/U E 90-U/U
90	4,3	17	≥ 500	EI 90-U/U E 90-U/U
110	4,5	17	≥ 500	EI 90-U/U E 90-U/U
125	5,0	17	≥ 500	EI 90-U/U E 90-U/U
160	6,0	17	≥ 500	EI 90-U/U E 90-U/U

Rohrschott90 Plus EN
- Fire resistance classification -

ANNEX F-30

Silent-Pro



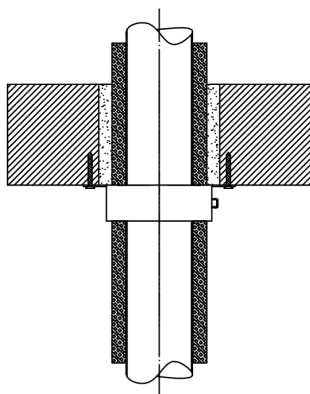
**Plastic pipes Geberit Silent-Pro acc. to cl. 2.1 of the ETA with Sound insulation mat acc. to cl. 1 of the ETA – in rigid floors acc. to cl. 2.1 of the ETA
– Rohrschott90 Plus EN installed on the bottom side flushed within the separating element**

Pipe dimensions (mm)		Sound insulation mat Symmetrical insulation (mm)		Fire resistance classification
Outer diameter	Wall thickness	Thickness	Length on both sides of the separating element	
50	3,0	17	≥ 500	EI 90-U/U E 90-U/U
75	3,8	17	≥ 500	EI 90-U/U E 90-U/U
90	4,3	17	≥ 500	EI 90-U/U E 90-U/U
110	4,5	17	≥ 500	EI 90-U/U E 90-U/U
125	5,0	17	≥ 500	EI 90-U/U E 90-U/U
160	6,0	17	≥ 500	EI 90-U/U E 90-U/U

Rohrschott90 Plus EN
- Fire resistance classification -

ANNEX F-31

Silent-Pro

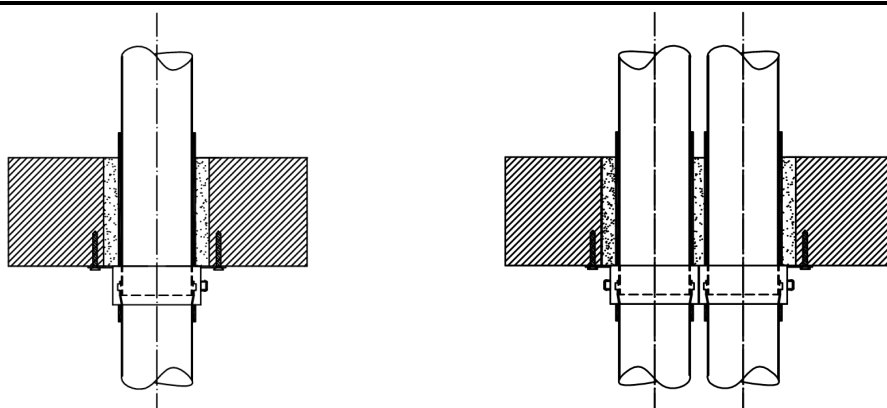


Plastic pipes Geberit Silent-Pro acc. to cl. 2.1 of the ETA with AF/Armaflex (local-sustained LS or continued-sustained CS) – in rigid floors acc. to cl. 2.1 of the ETA – Rohrschott90 Plus EN installed on the bottom side to the surface of the separating element				
Pipe dimensions (mm)		AF/Armaflex Symmetrical insulation (mm)		Fire resistance classification
Outer diameter	Wall thickness	Thickness	Length on both sides of the separating element	
50	3,0	13,5	≥ 500	EI 90-U/U E 90-U/U
75	3,8	14	≥ 500	EI 90-U/U E 90-U/U
90	4,3	14,5	≥ 500	EI 90-U/U E 90-U/U
110	4,5	15 to 18	≥ 500	EI 90-U/U E 90-U/U
125	5,0	15 to 23,5	≥ 500	EI 90-U/U E 90-U/U
160	6,0	16 to 25	≥ 500	EI 90-U/U E 90-U/U

Rohrschott90 Plus EN
- Fire resistance classification -

ANNEX F-32

Silent-Pro



Plastic pipes Geberit Silent-Pro acc. to cl. 2.1 of the ETA (optionally with Polyethylene sound insulation (tube or tape) acc. to cl. 1 of the ETA)

– in rigid floors acc. to cl. 2.1 of the ETA

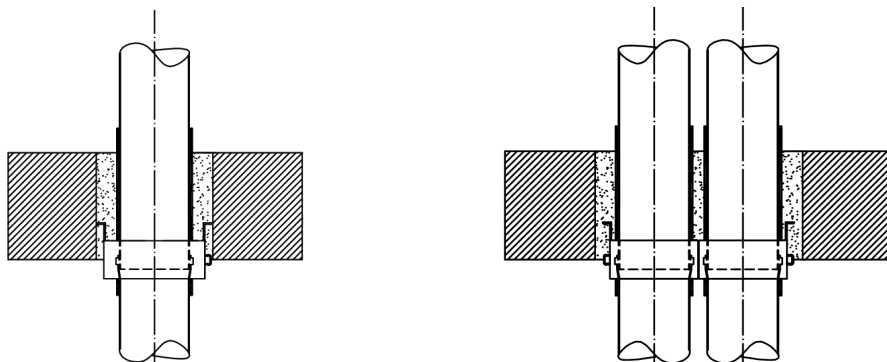
– Rohrschott90 Plus EN installed on connection sleeve on the bottom side to the surface of the separating element

Pipe dimensions (mm)		Fire resistance classification	
Outer diameter	Wall thickness	Single pipe	Minimum distance between two pipe collars (0 mm)
50	3,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
75	3,8	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
90	4,3	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
110	4,5	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
125	5,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
160	6,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U

Rohrschott90 Plus EN
- Fire resistance classification -

ANNEX F-33

Silent-Pro



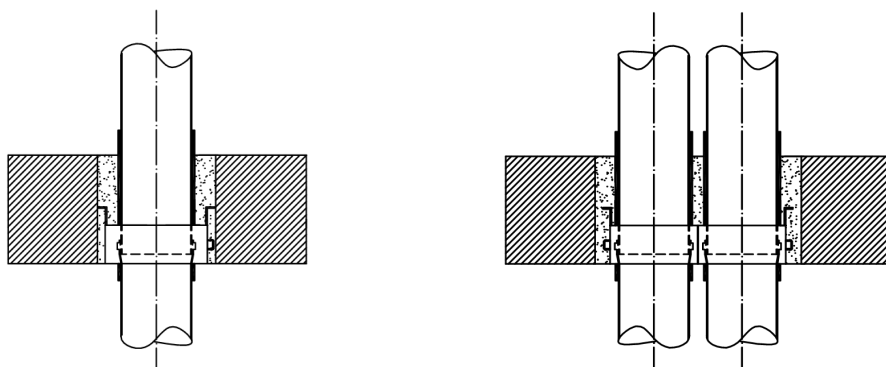
Plastic pipes Geberit Silent-Pro acc. to cl. 2.1 of the ETA (optionally with Polyethylene sound insulation (tube or tape) acc. to cl. 1 of the ETA)
– in rigid floors acc. to cl. 2.1 of the ETA
– Rohrschott90 Plus EN installed on connection sleeve on the bottom side partially within the separating element

Pipe dimensions (mm)		Fire resistance classification	
Outer diameter	Wall thickness	Single pipe	Minimum distance between two pipe collars (0 mm)
50	3,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
75	3,8	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
90	4,3	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
110	4,5	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
125	5,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
160	6,0	-----	-----

Rohrschott90 Plus EN
- Fire resistance classification -

ANNEX F-34

Silent-Pro



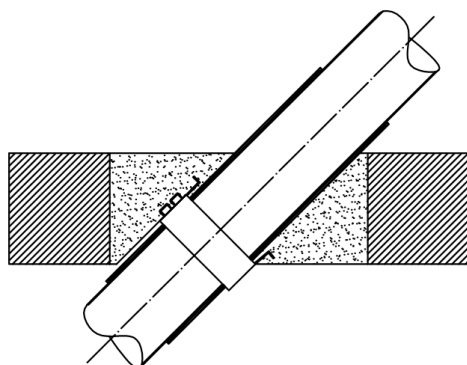
Plastic pipes Geberit Silent-Pro acc. to cl. 2.1 of the ETA (optionally with Polyethylene sound insulation (tube or tape) acc. to cl. 1 of the ETA)
– in rigid floors acc. to cl. 2.1 of the ETA
– Rohrschott90 Plus EN installed on connection sleeve on the bottom side flushed within the separating element

Pipe dimensions (mm)		Fire resistance classification	
Outer diameter	Wall thickness	Single pipe	Minimum distance between two pipe collars (0 mm)
50	3,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
75	3,8	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
90	4,3	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
110	4,5	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
125	5,0	EI 90-U/U E 90-U/U	EI 90-U/U E 90-U/U
160	6,0	-----	-----

Rohrschott90 Plus EN
- Fire resistance classification -

ANNEX F-35

Silent-Pro



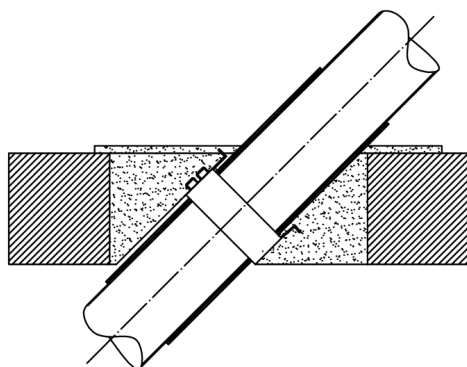
Plastic pipes Geberit Silent-Pro acc. to cl. 2.1 of the ETA (optionally with Polyethylene sound insulation (tube or tape) acc. to cl. 1 of the ETA) installed in an angle between 90° and 45°
– in rigid floors acc. to cl. 2.1 of the ETA
– Rohrschott90 Plus EN installed on the bottom side partially within the separating element

Pipe dimensions (mm)		Fire resistance classification
Outer diameter	Wall thickness	
50	3,0	EI 90-U/U E 90-U/U
75	3,8	EI 90-U/U E 90-U/U
90	4,3	EI 90-U/U E 90-U/U
110	4,5	EI 90-U/U E 90-U/U
125	5,0	EI 90-U/U E 90-U/U
160	6,0	EI 90-U/U E 90-U/U

Rohrschott90 Plus EN
- Fire resistance classification -

ANNEX F-36

Silent-Pro



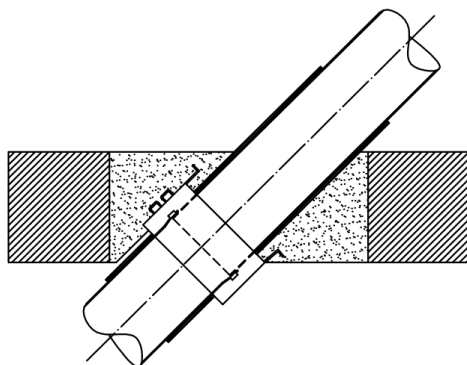
Plastic pipes Geberit Silent-Pro acc. to cl. 2.1 of the ETA (optionally with Polyethylene sound insulation (tube or tape) acc. to cl. 1 of the ETA) installed in an angle between 90° and 45°
– in rigid floors acc. to cl. 2.1 of the ETA
– Rohrschott90 Plus EN installed on the bottom side flushed within the separating element

Pipe dimensions (mm)		Fire resistance classification
Outer diameter	Wall thickness	
50	3,0	EI 90-U/U E 90-U/U
75	3,8	EI 90-U/U E 90-U/U
90	4,3	EI 90-U/U E 90-U/U
110	4,5	EI 90-U/U E 90-U/U
125	5,0	EI 90-U/U E 90-U/U
160	6,0	EI 90-U/U E 90-U/U

Rohrschott90 Plus EN
- Fire resistance classification -

ANNEX F-37

Silent-Pro



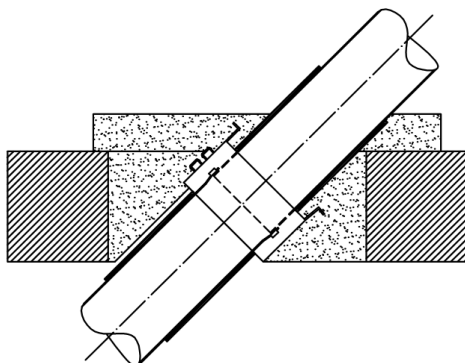
Plastic pipes Geberit Silent-Pro acc. to cl. 2.1 of the ETA (optionally with Polyethylene sound insulation (tube or tape) acc. to cl. 1 of the ETA) installed in an angle between 90° and 45°
– in rigid floors acc. to cl. 2.1 of the ETA
– Rohrschott90 Plus EN installed on connection sleeve on the bottom side partially within the separating element

Pipe dimensions (mm)		Fire resistance classification
Outer diameter	Wall thickness	
50	3,0	EI 90-U/U E 90-U/U
75	3,8	EI 90-U/U E 90-U/U
90	4,3	EI 90-U/U E 90-U/U
110	4,5	EI 90-U/U E 90-U/U
125	5,0	EI 90-U/U E 90-U/U
160	6,0	EI 90-U/U E 90-U/U

Rohrschott90 Plus EN
- Fire resistance classification -

ANNEX F-38

Silent-Pro



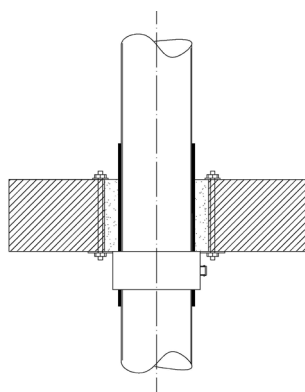
**Plastic pipes Geberit Silent-Pro acc. to cl. 2.1 of the ETA (optionally with Polyethylene sound insulation (tube or tape) acc. to cl. 1 of the ETA) installed in an angle between 90° and 45°
– in rigid floors acc. to cl. 2.1 of the ETA
– Rohrschott90 Plus EN installed on connection sleeve on the bottom side flushed within the separating element**

Pipe dimensions (mm)		Fire resistance classification
Outer diameter	Wall thickness	
50	3,0	EI 90-U/U E 90-U/U
75	3,8	EI 90-U/U E 90-U/U
90	4,3	EI 90-U/U E 90-U/U
110	4,5	EI 90-U/U E 90-U/U
125	5,0	EI 90-U/U E 90-U/U
160	6,0	EI 90-U/U E 90-U/U

Rohrschott90 Plus EN
- Fire resistance classification -

ANNEX F-39

PE



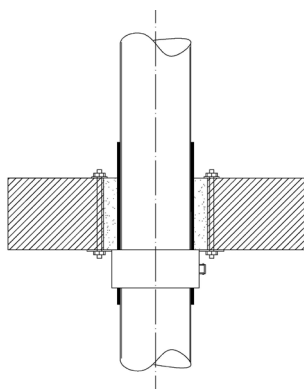
Plastic pipes Geberit PE acc. to cl. 2.1 of the ETA (optionally with Polyethylene sound insulation (tube or tape) acc. to cl. 1 of the ETA)
– in rigid floors with a thickness of minimum 100 mm acc. to cl. 2.1 of the ETA
– Rohrschott90 Plus EN installed on the bottom side to the surface of the separating element

Pipe dimensions (mm)		Fire resistance classification
Outer diameter	Wall thickness	
32	3,0	-----
40	3,0	-----
50	3,0	-----
56	3,0	-----
63	3,0	-----
75	3,0	-----
90	3,5	-----
110	4,3	-----
135	4,9	-----
160	6,2	EI 90-U/U E 90-U/U

Rohrschott90 Plus EN
- Fire resistance classification -

ANNEX F-40

Silent-PP



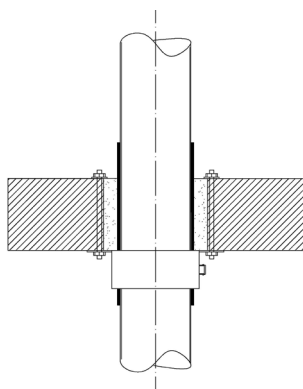
Plastic pipes Geberit Silent-PP acc. to cl. 2.1 of the ETA (optionally with Polyethylene sound insulation (tube or tape) according to clause 1 of the ETA)
– in rigid floors with a thickness of minimum 100 mm acc. to cl. 2.1 of the ETA
– Rohrschott90 Plus EN installed on the bottom side to the surface of the separating element

Pipe dimensions (mm)		Fire resistance classification
Outer diameter	Wall thickness	
50	2,0	-----
75	2,6	-----
90	3,1	-----
110	3,6	-----
125	4,2	-----
160	5,2	EI 90-U/U E 90-U/U

Rohrschott90 Plus EN
- Fire resistance classification -

ANNEX F-41

Silent-db20



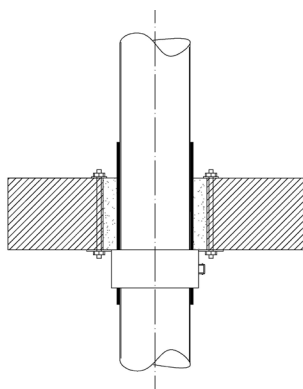
Plastic pipes Geberit Silent-db20 acc. to cl. 2.1 of the ETA (optionally with Polyethylene sound insulation (tube or tape) acc. to cl. 1 of the ETA)
– in rigid floors with a thickness of minimum 100 mm acc. to cl. 2.1 of the ETA
– Rohrschott90 Plus EN installed on the bottom side to the surface of the separating element

Pipe dimensions (mm)		Fire resistance classification
Outer diameter	Wall thickness	
56	3,2	-----
63	3,2	-----
75	3,6	-----
90	5,5	-----
110	6,0	-----
135	6,0	-----
160	7,0	EI 90-U/U E 90-U/U

Rohrschott90 Plus EN
- Fire resistance classification -

ANNEX F-42

Silent-Pro



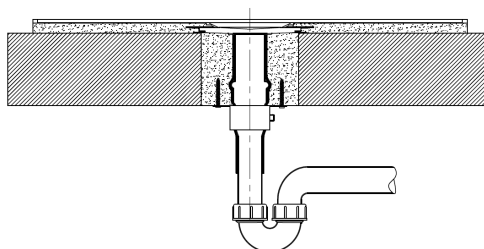
Plastic pipes Geberit Silent-Pro acc. to cl. 2.1 of the ETA (optionally with Polyethylene sound insulation (tube or tape) according to clause 1 of the ETA)
– in rigid floors with a thickness of minimum 100 mm acc. to cl. 2.1 of the ETA
– Rohrschott90 Plus EN installed on the bottom side to the surface of the separating element

Pipe dimensions (mm)		Fire resistance classification
Outer diameter	Wall thickness	
50	3,0	EI 90-U/U E 90-U/U
75	3,8	EI 90-U/U E 90-U/U
90	4,3	EI 90-U/U E 90-U/U
110	4,5	EI 90-U/U E 90-U/U
125	5,0	EI 90-U/U E 90-U/U
160	6,0	EI 90-U/U E 90-U/U

Rohrschott90 Plus EN
- Fire resistance classification -

ANNEX F-43

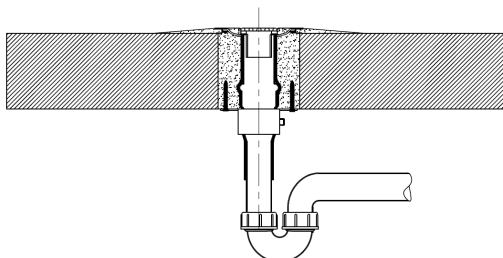
Shower floor drain, cross floor



Geberit Duschrinne CleanLine with Geberit Rohbauset für Duschrinnen der Reihe CleanLine, stockwerksdurchdringende Installation resp. Geberit shower channel CleanLine with Geberit installation set for shower channels of the CleanLine series, cross-floor installation (including the corresponding Geberit PE pipe and a PE-HD siphon according to EN 1519-1 or EN 12666-1) acc. to cl. 2.1 of the ETA with Polyethylene sound insulation (tube or tape) according to clause 1 of the ETA

- in rigid floors with a thickness of minimum 150 mm acc. to cl. 2.1 of the ETA
- Rohrschott90 Plus EN installed on the bottom side to the surface of the separating element

Pipe dimensions (mm)		Fire resistance classification
Outer diameter	Wall thickness	
50	3,0	EI 90-U/U E 90-U/U



Geberit Duschbodenablauf stockwerksdurchdringend resp. Geberit shower floor drain, cross floor (including the corresponding Geberit PE pipe and a PE-HD siphon according to EN 1519-1 or EN 12666-1) acc. to cl. 2.1 of the ETA with Polyethylene sound insulation (tube or tape) according to clause 1 of the ETA

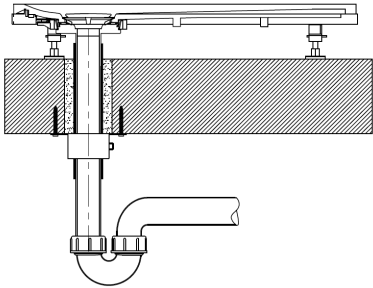
- in rigid floors with a thickness of minimum 150 mm acc. to cl. 2.1 of the ETA
- Rohrschott90 Plus EN installed on the bottom side to the surface of the separating element

Pipe dimensions (mm)		Fire resistance classification
Outer diameter	Wall thickness	
50	3,0	EI 60-U/U E 60-U/U

Rohrschott90 Plus EN
- Fire resistance classification -

ANNEX F-44

Shower floor drain, cross floor



Geberit Duschfläche Setaplano resp. Geberit shower surface Setaplano (including the corresponding Geberit PE pipe and a PE-HD siphon according to EN 1519-1 or EN 12666-1) acc. to cl. 2.1 of the ETA with Polyethylene sound insulation (tube or tape) according to clause 1 of the ETA
– in rigid floors with a thickness of minimum 150 mm acc. to cl. 2.1 of the ETA
– Rohrschott90 Plus EN installed on the bottom side to the surface of the separating element

Pipe dimensions (mm)		Fire resistance classification
Outer diameter	Wall thickness	
50	3,0	EI 90-U/U E 90-U/U

Rohrschott90 Plus EN
- Fire resistance classification -

ANNEX F-45