

EUROPEAN TECHNICAL ASSESSMENT

ETA 21/0375
Version 01
Date of issue: 2021-09-09



UBAtc Assessment Operator:
Belgian Construction Certification Association
Rue d'Arlon 53 - 1040 Brussels
www.bcca.be - info@bcca.be



Technical Assessment Body issuing the European Technical Assessment: UBAtc.
UBAtc has been designated according to Article 29 of Regulation (EU) No 305/2011
and is member of EOTA (European Organisation for Technical Assessment)

**Trade name of the
construction product:**

MG-U

**Product family to which the
construction product belongs:**

35 - Fire Protective collar

Manufacturer:

Rf-technologies
Lange Ambachtstraat 40
9860 Oosterzele
Belgium

Manufacturing plant:

CESAM (Slovakia)

Website:

www.rft.be

**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

**This European Technical
Assessment contains:**

30 pages, including 2 Annexes, which form an integral part
of the document.



**European Organisation
for Technical Assessment**

Legal bases and general conditions

- 1 This European Technical Assessment is issued by UBAtc (Union belge pour l'Agrément technique de la construction, i.e. Belgian Union for technical Approval in construction), in accordance with:
 - Regulation (EU) No 305/2011 ⁽¹⁾ of the European Parliament and of the Council of 9 March 2011 laying down harmonised conditions for the marketing of construction products and repealing Council Directive 89/106/EEC
 - Commission Implementing Regulation (EU) No 1062/2013 ⁽²⁾ of 30 October 2013 on the format of the European Technical Assessment for construction products
 - European Assessment Document (EAD) 350454-00-1104
- 2 Under the provisions of Regulation (EU) No 305/2011, UBAtc is not authorized to check whether the provisions of this European Technical Assessment are met once the ETA has been issued.
- 3 The responsibility for the conformity of the performances of the products with this European Technical Assessment and the suitability of the products for the intended use remains with the holder of the European Technical Assessment.
- 4 Depending on the applicable Assessment and verification of constancy of performance (AVCP) system, (a) notified body(ies) may carry out third-party tasks in the process of assessment and verification of constancy of performance under this Regulation once the European Technical Assessment has been issued.
- 5 This European Technical Assessment allows the manufacturer of the construction product covered by this ETA to draw up a declaration of performance for the construction product.
- 6 CE marking should be affixed to all construction products for which the manufacturer has drawn up a declaration of performance.
- 7 This European Technical Assessment is not to be transferred to other manufacturers, agents of manufacturers, or manufacturing plants other than those indicated on page 1 of this European Technical Assessment.
- 8 The European Technical Assessment holder confirms to guarantee that the product(-s) to which this assessment relates, is/are produced and marketed in accordance with and comply with all applicable legal and regulatory provisions, including, without limitation, national and European legislation on the safety of products and services. The ETA-holder shall notify the UBAtc immediately in writing of any circumstance affecting the aforementioned guarantee. This assessment is issued under the condition that the aforementioned guarantee by the ETA-holder will be continuously observed.
- 9 According to Article 11(6) of Regulation (EU) No 305/2011, when making a construction product available on the market, the manufacturer shall ensure that the product is accompanied by instructions and safety information in a language determined by the Member State concerned which can be easily understood by users. These instructions and safety information should fully correspond with the technical information about the product and its intended use which the manufacturer has submitted to the responsible Technical Assessment Body for the issuing of the European Technical Assessment.
- 10 Pursuant to Article 11(3) of Regulation (EU) No 305/2011, manufacturers shall adequately take into account changes in the product-type and in the applicable harmonised technical specifications. Therefore, when the contents of the issued European Technical Assessment do not any longer correspond to the product-type, the manufacturer should refrain from using this European Technical Assessment as the basis for their declaration of performance.
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- 13 Subject to the application introduced, this European Technical Assessment is issued in English and may be issued by the UBAtc in its official languages. The translations correspond fully to the English reference version circulated in EOTA.
- 14 This European Technical Assessment was first issued by UBAtc on 2021-09-09.

⁽¹⁾: OJEU, L 88 of 2011/04/04

⁽²⁾: OJEU, L 289 of 2013/10/31

Technical Provisions

1 Technical description of the product

1.1 General

MG-U is a fire stopping and fire sealing penetration seal in the form of a fire stopping collar.

The MG-U fire stopping pipe closure device is intended for uses in environmental conditions type Y₂ according to EAD 350454-00-1104, i.e. for uses in conditions exposed to weathering and all other exposures indoor and outdoor, but not exposed to rain nor UV.

The MG-U fire resistant pipe closure device is affixed around plastic pipes (see annex 1) and in the construction element to prevent propagation of fire. The collar can be fixed with screws or mounted without screws. The mounting method affects the fire resistance of the installation. The intumescent strips expand through heat thus closing off the openings and making them fire resistant and thereby prevents the spread of smoke and fire.

The MG-U is a pipe closure device in the form of a fire stopping collar, supplied in a flat form. It is composed of a galvanised steel casing, a reactive inlay (Rf-Expand 147) (see 2A Figure 1 and Table 1) and a reactive strip of 40 mm x 2 mm centred on the outer surface of the collar (see 2B Figure 1).

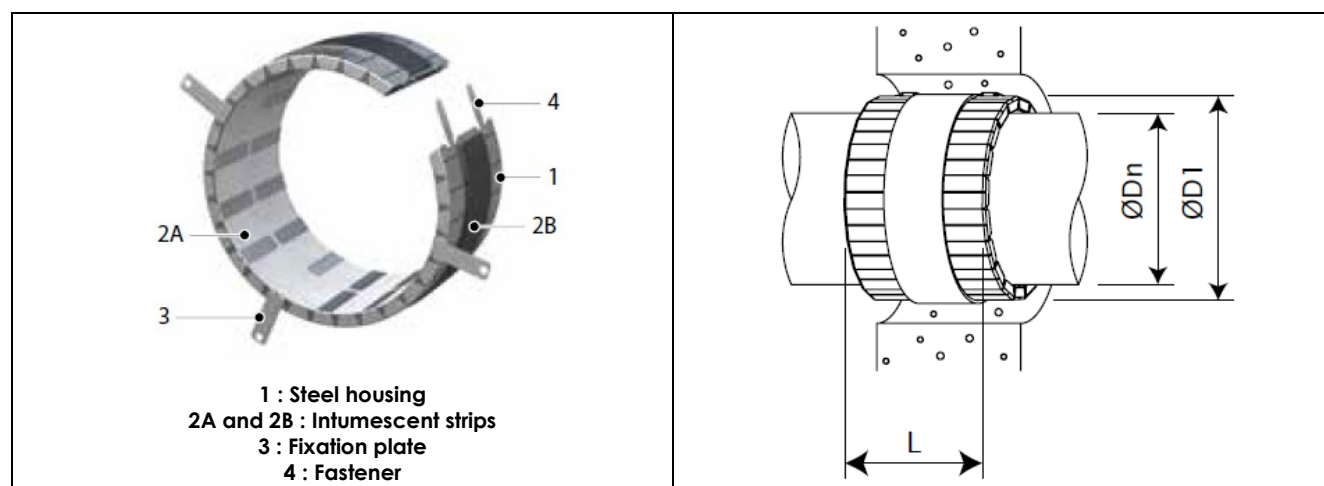


Figure 1 : MG-U

Table 2 – Dimensions of MG-U

ØDn	32	40	50	56	63	75	80	90	100	110	125	140	160
ØD1 (mm)	49	57	67	73	90	82	101	111	121	131	150	165	185
L (mm)	96	96	96	96	96	96	96	96	96	96	96	96	96
Flat L (mm)	187	212	243	262	284	322	350	381	413	444	504	551	614
Weight (kg)	0,2	0,2	0,2	0,3	0,3	0,4	0,5	0,5	0,5	0,6	0,7	0,8	0,9

Table 1 – Dimension of inlay

Pipe diameter	Dimensions of the active compound
(mm)	(mm x mm)
32 – 75	94 x 6
80 – 110	94 x 8
125 – 160	94 x 10

The assumed working life of the MG-U fire stopping pipe closure device is minimum 25 years, provided that the fire stopping pipe closure device is subject to appropriate use and maintenance, in accordance with the manufacturer recommendations.

MG-U fire stopping pipe closure devices are manufactured at the Rf-technologie's production plant in CESAM (Slovakia)

1.2 Dimensions

MG-U collars are identified by their internal diameters and are available in sizes between 32 mm and 160 mm as shown in Table 2. The nominal width (L) of the collar is 100 mm. Collars with a nominal width (L) of 125 mm and 150 mm are also available (resp. MG-U L125 and MG-U L150).

Installation of MG-U: see clause 2.3

2 Specification of the intended use(s) in accordance with the applicable EAD 350454-00-1104

2.1 Intended uses

MG-U is a penetration seal for services penetrating walls and floors. MG-U is designed for use with plastic (PVC, PE, ABS and PP) pipes to seal pipe penetrations with diameters between 32 mm and 160 mm against the spread of smoke and fire.

The through-elements are installed in drilled holes made through aerated concrete floors, 150 mm thick with a bulk density greater than 600 kg/m³ or through aerated concrete walls, with a minimum thickness of 100 mm and a bulk density greater than 500 kg/m³. They can also be used in lightweight plasterboard partitions with a minimum thickness of 100 mm

The collar is to be affixed around the pipe and in the wall or in the floor. The collars may be fixed with screws or not, depending on the required fire resistance of the penetration. A detailed description of these construction elements is given in Annex 1 of this ETA.

This ETA covers assemblies installed in accordance with the provisions given in Annex 1. Other intended uses may be supported by other means at national level but are not covered by this ETA.

2.2 Use Categories

The MG-U fire stopping pipe closure device is intended for uses in environmental conditions type Y₂ according to EAD 350454-00-1104, i.e. for uses at conditions exposed to weathering and all other exposures indoor and outdoor but not exposed to rain nor UV.

The provisions made in this European Technical Assessment are based on an assumed intended working life of 25 years.

Indications given regarding the working life cannot be interpreted as a guarantee given by the producer or the UBAtc, but are to be regarded only as a means for choosing the appropriate product(s) in relation to the expected economically reasonable working life of the construction works.

2.3 Assumptions under which the product was favourably assessed

2.3.1 Manufacturing directives

This European Technical Assessment is being issued for MG-U fire stopping pipe closure device on the basis of agreed data/information, deposited with the UBAtc, which characterises the product that has been assessed. Changes to the product/production process, which could result in the deposited data/information being incorrect, should be notified to the UBAtc before the changes are introduced. The UBAtc will decide whether or not such changes affect the ETA and consequently the validity of the CE marking on the basis of the ETA and if so whether further assessment/alterations to the ETA, shall be necessary.

2.3.2 Installation

2.3.2.1 General information for creating a pipe penetration

The area to be sealed requires the same fire resistance as the complete wall construction. In order to ensure that the stability of the services is maintained under fire conditions, all services should be adequately supported at maximum 400 mm and from the non-exposed surface of the floor or at 200 mm to 400 mm either side of the supporting structures for walls. More precise instructions for the installation of MG-U fire stopping pipe closure device can be found in Annex 1 of this ETA and the technical instructions of the manufacturer.

Products may only be applied by trained professionals with adequate knowledge of and experience in the use of fire stopping products.

2.3.2.2 General information about MG-U

- MG-U collar is suitable for built-in installation;
- MG-U shall be installed in the wall or in the floor;
- MG-U is suitable for PVC-U pipes according to EN 1329-1, EN ISO 1452-1 or EN 1453-1 and PVC-C pipes according to EN 1566-1;
- MG-U is suitable for PE-HD pipes according to EN 1519-1, EN 12666-1 or EN 12201-2 and for ABS pipes according to EN 1455-1;
- MG-U is suitable PP pipes according to EN 1451-1;
- The MG-U should be installed in a wall or floor with a fire resistance at least equal to that of the fire stopping pipe closure device;
- The MG-U collar is suitable for pipe diameters of 32 mm to 160 mm according to the field of application, given in this ETA;
- The collar may be fixed to the wall or floor with screws, depending on the intended fire resistance as indicated in Annex 1
- The gap between the collar and the wall or floor shall be sealed with classic, non fire resistant PUR-Foam
- The diameter of the holes is given in Table 3. See annex 1 for the influence of this hole diameter on the fire resistance.

Table 3 – Dimensions of the holes

Installation method	Dn = Pipe Diameter	Diameter hole wall	Diameter hole floor
	(mm)	(mm)	(mm)
With screws	32 – 75	Min Dn + 27 Max Dn + 50	Dn + 50
	80 – 110	Min Dn + 36 Max Dn + 50	
	125 – 160	Min Dn + 40 Max Dn + 50	
Without screws	32 – 160	Dn + 50	Dn + 50

2.3.2.3 Conditions for the application

The product is classified as type Y₂.

2.4 Recommendations

2.4.1 Recommendations on packaging, transport and storage

MG-U should be stored in dry conditions.

2.4.2 Recommendations on use, maintenance and repair

The addition of new services is permissible if distances between the pipes are respected.

Any default of the collar should be immediately repaired by replacement.

2.4.3 Regarding safety instructions

MG-U should be handled and fixed with protective gloves to avoid hand injuries by the steel housing.

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

3.1 Mechanical resistance and stability

Not relevant.

3.2 Safety in case of Fire

3.2.1 Reaction to fire

The MG-U fire stopping pipe closure device has a reaction to fire classification class E according to EN 13501-1.

3.2.2 Fire resistance

The fire resistance classification of the MG-U fire stopping pipe closure device according to EN 13501-2 and according to the field of direct application of test results described in EN 1366-3:2009 is given in Annex 1. The mentioned fire resistance classes however can never be higher than the fire resistance class of the penetrated structure.

This ETA includes:

- PVC pipes penetrating aerated concrete floors, lightweight partitions, aerated concrete or masonry walls, see Annex 1.1;
- PE-HD pipes penetrating aerated concrete floors, lightweight partitions, aerated concrete or masonry walls, see Annex 1.2;
- PP pipes penetrating aerated concrete floors, lightweight partitions, aerated concrete or masonry walls, see Annex 1.1.

Hygiene, Health and the environment

3.2.3 Air permeability

No performance assessed.

3.2.4 Water permeability

No performance assessed.

3.2.5 Release of dangerous substances

No performance assessed.

3.3 Safety in Use

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.

3.4 Protection against noise

3.4.1 Airborne sound insulation

No performance assessed.

3.5 Energy economy and heat retention

3.5.1 Thermal resistance

No performance assessed.

3.5.2 Water vapour permeability

No performance assessed.

3.6 Aspects of durability and serviceability

The MG-U fire stopping pipe closure device fulfils the environmental conditions type Y₂ requirements.

3.7 Characterisation of the product

3.7.1 General

A general description of MG-U fire stopping pipe closure device is given in clause 1.1 of the ETA. The formulation of the inlay of MG-U fire stopping pipe closure device has been disclosed to the Assessment Operator BCCA.

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

In accordance with Regulation (EU) N° 305/2011, Article 65, Directive 89/106/EEC is repealed, but references to the repealed Directive shall be construed as references to the Regulation.

The system of assessment and verification of constancy of performance, specified in the Decision of the Commission 1999/454/EC ⁽³⁾, as amended, is specified in Table 4.

Table 4 – System of assessment and verification of constancy of performance applicable to MG-U

Product(s)	Intended use(s)	Level(s) or class(es)	Assessment and verification of constancy of performance system(s) ^(*)
Fire Stopping and Fire Sealing Products	For fire compartmentation and/or fire protection or fire performance	Any	1
(*) See Annex V to Regulation (EU) N° 305/2011			

In addition, according to the decision 1999/454/EC of the European Commission, as amended, and Commission Delegated Regulation (EU) 2016/364 ⁽⁴⁾, the systems of assessment and verification of constancy of performance specified in Table 5 apply to fire stopping and fire sealing products with regard to reaction to fire.

Table 5 – Systems of assessment and verification of constancy of performance with respect to the reaction to fire

Product(s)	Intended use(s)	Level(s) or class(es) (reaction to fire)	Assessment and verification of constancy of performance system(s) ^(a)
Fire Stopping and Fire Sealing Products	For uses subject to regulations on reaction to fire	(A1, A2, B, C) ^(b)	1
		(A1, A2, B, C) ^(c) , D, E, F	3
		(A1 to F) ^(d) , NPD ^(e)	4
^(a) : Systems 1, 3 and 4: See Regulation (EU) N° 305/2011, Annex V			
^(b) : 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)			
^(c) : Products/materials not covered by footnote ^(b)			
^(d) : 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 ⁽⁵⁾ , as amended)			
^(e) : 'No Performance Declared' in accordance with Regulation (EU) N° 305/2011, Article 6(f)			

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

5.1 Tasks for the ETA-holder

5.1.1 General

The manufacturer exercises permanent internal control of production. All the elements, requirements and provisions adopted by the manufacturer are documented in a systematic manner in the form of written policies and procedures, including records of results obtained in accordance with the test plan. This production control system ensures that the product is in conformity with this ETA.

5.1.2 Personnel and equipment

The personnel involved in the production process is identified, sufficiently qualified and trained to operate and maintain the production equipment. Machinery and equipment are regularly maintained and this is documented. All processes and procedures of production are recorded at regular intervals.

5.1.3 Traceability of processes

The manufacturer maintains a traceable documentation of the production process from purchasing or delivery of raw or basic raw materials up to the storage and delivery of finished products.

5.1.4 Non-conforming products

Products that do not comply with requirements as specified in this ETA are separated from the conforming products and marked as such. The manufacturer registers non-compliant production and action(s) taken to prevent further non-conformities. External complaints are also documented, as well as actions taken.

5.1.5 Control of monitoring and measuring devices

Where necessary, measuring equipment is:

- Calibrated or verified at specific intervals, or prior to use, against measurement standards traceable to international or national measurement standards; where no standards exist, the basis used for calibration is recorded;
- Adjusted or re-adjusted as necessary;
- Identified to enable calibration to be determined.

When the equipment is found not to conform to requirements, the validity of previous measuring results is assessed and recorded. Appropriate actions are taken on the equipment and any product affected.

5.1.6 Control plan for the manufacturer

The manufacturer exercises permanent internal control of production according to the prescribed plan.

⁽³⁾: see OJEU L178/52 of 1999/07/14

⁽⁴⁾: see OJEU L68/4 of 2016/03/15

⁽⁵⁾: see OJEU L267 of 1996/10/19

5.2 Tasks of notified bodies

5.2.1 For fire compartmentation and/or fire protection or fire performance uses

Assessment of the performance

For the assessment of the performance of the product (see Annex V of Regulation (EU) N° 305/2011) the tasks for the approved body are limited to the following characteristics, where relevant:

- Resistance to fire;
- Mechanical resistance and stability;
- Adhesion;
- Resistance to impact/movement;
- Release of dangerous substances.

Assessment tests are conducted by the assessment body or under its responsibility (which may include a portion conducted by an indicated laboratory or by the manufacturer, witnessed by the assessment body) in accordance with EAD 350454-00-1104, clause 2.2, unless the ETA-holder has opted to make use of the possibility not to have the product's performance assessed. The assessment body assessed the results of these tests in accordance with EAD 350454-00-1104, clause 2.2, as part of the ETA issuing procedure.

Initial inspection of the factory and of the factory production control and continuing surveillance, judgment and assessment of factory production control

For the initial inspection of the factory and of the factory production control (see Annex V of Regulation (EU) N° 305/2011), and for the continuing surveillance, judgement and assessment of the factory production control (see Annex V of Regulation (EU) N° 305/2011), parameters related to the following characteristics are of interest to the approved body, where relevant:

- Resistance to fire;
- Mechanical resistance and stability;
- Adhesion;
- Resistance to impact/movement.

Surveillance inspections are conducted at least twice per year.

5.2.2 For uses subject to reaction to fire regulations

Assessment of the performance

For fire stopping and fire sealing products under systems 1 and 3, regarding the initial type testing of the product (see Annex V of Regulation (EU) N° 305/2011), the task of the approved laboratory is limited to the assessment of the reaction to fire class, as indicated in the Commission Delegated Regulation (EU) 2016/364.

Initial inspection of the factory and of the factory production control and continuing surveillance, judgment and assessment of factory production control

For fire stopping and fire sealing products under system 1, for the initial inspection of the factory and of the factory production control (see Annex V of Regulation (EU) N° 305/2011), and for the continuing surveillance, judgement and assessment of the factory production control (see Annex V of Regulation (EU) N° 305/2011), parameters related to the reaction to fire class, as indicated in the Commission Delegated Regulation (EU) 2016/364, are of interest of the notified body.

Surveillance inspections are conducted at least twice per year.

UBAtc asbl is a non-profit organization according to Belgian law. It is a Technical Assessment Body notified by the Belgian notifying authority, the Federal Public Services Economy, SMEs, Self-Employed and Energy, on 17 July 2013 in the framework of Regulation (EU) No 305/2011 of the European Parliament and of the Council of 9 March 2011 laying down harmonised conditions for the marketing of construction products and repealing Council Directive 89/106/EEC and is member of the European Organisation for Technical Assessment, EOTA (www.eota.eu).

This European Technical Assessment has been issued by UBAtc asbl, in Sint-Stevens-Woluwe, on the basis of the technical work carried out by the Assessment Operator, BCCA.

On behalf of UBAtc asbl,

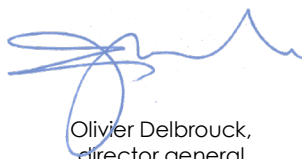
On behalf of the Assessment Operator, BCCA,
responsible for the technical content of the
ETA,



Eric Winnepenninckx
secretary general



Benny De Blaere,
director



Olivier Delbrouck,
director general

The most recent version of this European Technical Assessment may be consulted on the UBAtc website (www.ubatc.be).

ANNEX 1.1: MG-U FIRE STOPPING PIPE CLOSURE DEVICE USED WITH PVC-PIPES**1.1.1 MG-U collar used with plastic pipes, made of PVC, in aerated concrete floors, mounting with screws required or without screws****Sealing system**

The MG-U fire stopping pipe closure device is mounted around the plastic pipes. The collar is completely integrated in the floor. When the collar is fixed with screws, it is positioned at the bottom side of the floor (the side that is directly exposed to fire). When it is not fixed to the floor, the collar is positioned in the middle of the floor. The floor is made of aerated concrete, has a minimum thickness of 150 mm and a density of $650 \pm 200 \text{ kg/m}^3$. The classification is also applicable for aerated concrete floors with a higher density or a greater thickness. The dimensions of the hole in the floor can be read in Table 3. (Figures in Annex 1.4)

The penetrating pipe shall be adequately supported at maximum 400 mm from both surfaces of the floor by appropriate fire-resistant support systems.

The minimum distance between the pipes in normal applications is not less than 500 mm. The gap between the collar and the floor is filled with a sealing material with a density of approximately 25 kg/m^3 and with a reaction to fire class F or higher (EN 13501-1).

When fixed with screws, screws 5 x 100 mm are used. For pipes up to 75 mm 2 screws are required, pipes bigger than 75 mm require 3 screws.

Characteristics of the services

Plastic type	PVC-U according to EN 1329-1, EN ISO 1452-1 or EN 1453-1 and PVC-C according to EN 1566-1
Pipe diameter ($\varnothing$)	See fire resistance class hereafter
Pipe wall thickness (e)	See fire resistance class hereafter

Installation specifications

Pipe arrangement	Single penetration, distances between pipes not less than 500 mm
Number of pipes	1 pipe per collar
Pipe end configuration	Tested end configurations U/U; covering configurations C/U, U/C and C/C
Pipe insulation	Non-insulated pipes
Angle of the pipe	Standard (90°)

MG-U Collar (Internal diameter)	Pipe diameter [mm]	Pipe thickness [mm]	configuration	Pipe configuration	Fire resistance
32 – 75	32 – 75	1,8 – 3,6	standard	U/U – C/U – U/C – C/C	EI 120
80	80	1,8 – 5,3	standard	U/U – C/U – U/C – C/C	EI 120
90	90	1,9 – 5,3	standard	U/U – C/U – U/C – C/C	EI 120
100	100	2,0 – 5,3	standard	U/U – C/U – U/C – C/C	EI 120
110	110	2,2 – 5,3	standard	U/U – C/U – U/C – C/C	EI 120
125	125	2,4 – 7,7	standard	U/U – C/U – U/C – C/C	EI 120
140	140	2,7 – 7,7	standard	U/U – C/U – U/C – C/C	EI 120
160	160	3,2 – 7,7	standard	U/U – C/U – U/C – C/C	EI 120

1.1.2 MG-U collar used with plastic pipes, made of PVC, in 100 mm thick lightweight plasterboard partitions, mounting with screws required

Sealing system

The MG-U fire stopping pipe closure device is mounted around the plastic pipes. The collar is completely integrated in the partition. The lightweight plasterboard partition is made of 2 gypsum boards type DF (each board 12,5 mm thick with a density of 820 kg/m³) + a 40 mm cavity filled with rock wool with a density of 45 kg/m³ + 2 gypsum boards type DF (each board 12,5 mm thick with a density of 820 kg/m³). The boards are fixed to metal studs and channels with dimensions of 50x50x0,8 mm. The distance between studs is 400 mm. The first layer of boards is fixed with screws Ø 3,5 x 35 mm spaced 300 mm apart. The second layer of boards is fixed with screws Ø 3,5 x 45 mm spaced 200 mm apart. The classification is also applicable for all flexible wall constructions of the same or better fire resistance classification. The dimensions of the hole in the flexible wall can be read in Table 3. (Figures in Annex 1.4)

The penetrating pipe shall be adequately supported at maximum 400 mm from both surfaces of the partition by appropriate fire-resistant support systems.

The minimum distance between pipes in normal applications is not less than 500 mm. The gap between the collar and the partition is filled with a sealing material with a density of approximately 25 kg/m³ and a reaction to fire class F or higher (EN 13501-1).

The collars are fixed with screws, screws 5 x 100 mm. For pipes up to 75 mm 2 screws are required, pipes bigger than 75 mm require 3 screws.

Characteristics of the services

Plastic type	PVC-U according to EN 1329-1, EN ISO 1452-1 or EN 1453-1 and PVC-C according to EN 1566-1
Pipe diameter (Ø)	See fire resistance class hereafter
Pipe wall thickness (e)	See fire resistance class hereafter

Installation specifications

Pipe arrangement	Single penetration, distances between pipes not less than 500 mm
Number of pipes	1 pipe per collar
Pipe end configuration	Tested end configurations U/U; covering configurations C/U, U/C and C/C
Pipe insulation	Non-insulated pipes
Angle of the pipe	Standard (90°)

MG-U Collar (Internal diameter)	Pipe diameter [mm]	Pipe thickness [mm]	configuration	Pipe configuration	Fire resistance
32 – 75	32 – 75	1,8 – 3,6	standard	U/U – C/U – U/C – C/C	EI 120
80	80	1,8 – 5,3	standard	U/U – C/U – U/C – C/C	EI 120
90	90	1,9 – 5,3	standard	U/U – C/U – U/C – C/C	EI 120
100	100	2,0 – 5,3	standard	U/U – C/U – U/C – C/C	EI 120
110	110	2,2 – 5,3	standard	U/U – C/U – U/C – C/C	EI 120
125	125	2,4 – 7,7	standard	U/U – C/U – U/C – C/C	EI 120
140	140	2,7 – 7,7	standard	U/U – C/U – U/C – C/C	EI 120
160	160	3,2 – 7,7	standard	U/U – C/U – U/C – C/C	EI 120

1.1.3 MG-U collar used with plastic pipes, made of PVC, in 100 mm thick lightweight plasterboard partitions, mounting without screws

Sealing system

The MG-U fire stopping pipe closure device is mounted around the plastic pipes. The collar is completely integrated in the partition. The lightweight plasterboard partition is made of 2 gypsum boards type DF (each board 12,5 mm thick with a density of 820 kg/m³) + a 40 mm cavity filled with rock wool with a density of 45 kg/m³ + 2 gypsum boards type DF (each board 12,5 mm thick with a density of 820 kg/m³). The boards are fixed to metal studs and channels with dimensions of 50x50x0,8 mm. The distance between studs is 400 mm. The first layer of boards is fixed with screws Ø 3,5 x 35 mm spaced 300 mm apart. The second layer of boards is fixed with screws Ø 3,5 x 45 mm spaced 200 mm apart. The classification is also applicable for all flexible wall constructions of the same or better fire resistance classification. The dimensions of the hole in the flexible wall can be read in Table 3. (Figures in Annex 1.4)

The penetrating pipe shall be adequately supported at maximum 400 mm from both surfaces of the partition by appropriate fire-resistant support systems.

The minimum distance between pipes in normal applications is not less than 500 mm. The gap between the collar and the partition is filled with a sealing material with a density of approximately 25 kg/m³ and with a reaction to fire class F or higher (EN 13501-1).

Characteristics of the services

Plastic type	PVC-U according to EN 1329-1, EN ISO 1452-1 or EN 1453-1 and PVC-C according to EN 1566-1
Pipe diameter (Ø)	See fire resistance class hereafter
Pipe wall thickness (e)	See fire resistance class hereafter

Installation specifications

Pipe arrangement	Single penetration, distances between pipes not less than 500 mm
Number of pipes	1 pipe per collar
Pipe end configuration	Tested end configurations U/U; covering configurations C/U, U/C and C/C
Pipe insulation	Non-insulated pipes
Angle of the pipe	Standard (90°)
Service support construction	Fire resistant support element at 200 mm to 400 mm at both sides of the partition

Fire resistance class

MG-U Collar (Internal diameter)	Pipe diameter [mm]	Pipe thickness [mm]	configuration	Pipe configuration	Fire resistance
32 – 75	32 – 75	1,8 – 3,6	standard	U/U – C/U – U/C – C/C	EI 120
80	80	1,8 – 5,3	standard	U/U – C/U – U/C – C/C	EI 120
90	90	1,9 – 5,3	standard	U/U – C/U – U/C – C/C	EI 120
100	100	2,0 – 5,3	standard	U/U – C/U – U/C – C/C	EI 120
110	110	2,2 – 5,3	standard	U/U – C/U – U/C – C/C	EI 120

1.1.4 MG-U collar used with plastic pipes, made of PVC, in 100 mm thick rigid wall, mounting with screws required or without screws

Sealing system

The MG-U fire stopping pipe closure device is mounted around the plastic pipes. The collar is completely integrated in the partition. The rigid low density rigid wall made of aerated concrete slab, 100 mm thick and density 550 kg/m³. The dimensions of the hole in the rigid wall can be read in Table 3. (Figures in Annex 1.4).

The classification is also applicable for all 100 mm thick rigid wall constructions made of concrete or masonry elements of an overall density equal or greater 550 kg/m³.

The penetrating pipe shall be adequately supported at maximum 400 mm from both surfaces of the partition by appropriate fire-resistant support systems.

The minimum distance between the pipes in normal applications is not less than 500 mm. The gap between the collar and the partition is filled with a sealing material with a density of approximately 25 kg/m³ and with a reaction to fire class F or higher (EN 13501-1).

When mounting with screws, the collars are fixed with screws 5 x 100 mm. For pipes up to 75 mm 2 screws are required, pipes bigger than 75 mm require 3 screws. When mounting without screws, the collar is centred in the wall.

Characteristics of the services

Plastic type	PVC-U according to EN 1329-1, EN ISO 1452-1 or EN 1453-1 and PVC-C according to EN 1566-1
Pipe diameter (Ø)	See fire resistance class hereafter
Pipe wall thickness (e)	See fire resistance class hereafter

Installation specifications

Pipe arrangement	Single penetration, distances between pipes not less than 500 mm
Number of pipes	1 pipe per collar
Pipe end configuration	Tested end configurations U/U; covering configurations C/U, U/C and C/C
Pipe insulation	Non-insulated pipes
Angle of the pipe	Standard (90°)
Service support construction	Fire resistant support element at 200 mm to 400 mm at both sides of the partition

Fire resistance class

MG-U Collar (Internal diameter)	Pipe diameter [mm]	Pipe thickness [mm]	configuration	Pipe configuration	Fire resistance
32 – 75	32 – 75	1,8 – 3,6	standard	U/U – C/U – U/C – C/C	EI 120
80	80	1,8 – 5,3	standard	U/U – C/U – U/C – C/C	EI 120
90	90	1,9 – 5,3	standard	U/U – C/U – U/C – C/C	EI 120
100	100	2,0 – 5,3	standard	U/U – C/U – U/C – C/C	EI 120
110	110	2,2 – 5,3	standard	U/U – C/U – U/C – C/C	EI 120
125	125	2,4 – 7,7	standard	U/U – C/U – U/C – C/C	EI 120
140	140	2,7 – 7,7	standard	U/U – C/U – U/C – C/C	EI 120
160	160	3,2 – 7,7	standard	U/U – C/U – U/C – C/C	EI 120

1.1.5 MG-U collar used with plastic pipes, made of PVC, in rigid walls with thickness between 100 mm and 200 mm, mounting without screws

Sealing system

The MG-U fire stopping pipe closure device is mounted around the plastic pipes. The collar is completely integrated in the partition. The low-density rigid wall is made of aerated concrete slab, of a thickness between 100 mm and 200 mm and a density of 500 kg/m³. The dimensions of the hole in the rigid wall can be read in Table 3. (Figures in Annex 1.4).

The classification is also applicable for all rigid wall constructions with a thickness between 100 mm and 200 mm made of concrete or masonry elements of an overall density equal or greater 500 kg/m³.

The penetrating pipe shall be adequately supported at maximum 400 mm from both surfaces of the partition by appropriate fire-resistant support systems.

The minimum distance between the pipes in normal applications is not less than 500 mm. The gap between the collar and the partition is filled with a sealing material with a density of approximately 25 kg/m³ and with a reaction to fire class F or higher (EN 13501-1)

The collar is installed centrally in the rigid wall.

Characteristics of the services

Plastic type	PVC-U according to EN 1329-1, EN ISO 1452-1 or EN 1453-1 and PVC-C according to EN 1566-1
Pipe diameter (Ø)	See fire resistance class hereafter
Pipe wall thickness (e)	See fire resistance class hereafter

Installation specifications

Pipe arrangement	Single penetration, distances between pipes not less than 500 mm
Number of pipes	1 pipe per collar
Pipe end configuration	Tested end configurations U/U; covering configurations C/U, U/C and C/C
Pipe insulation	Non-insulated pipes
Angle of the pipe	Standard (90°)
Service support construction	Fire resistant support element at 200 mm to 400 mm at both sides of the partition

Fire resistance class

MG-U Collar (Internal diameter)	Pipe diameter [mm]	Pipe thickness [mm]	configuration	Pipe configuration	Fire resistance
32 – 75	32 – 75	1,8 – 3,6	standard	U/U – C/U – U/C – C/C	EI 120
80	80	1,8 – 5,3	standard	U/U – C/U – U/C – C/C	EI 120
90	90	1,9 – 5,3	standard	U/U – C/U – U/C – C/C	EI 120
100	100	2,0 – 5,3	standard	U/U – C/U – U/C – C/C	EI 120
110	110	2,2 – 5,3	standard	U/U – C/U – U/C – C/C	EI 120
125	125	2,4 – 7,7	standard	U/U – C/U – U/C – C/C	EI 120
140	140	2,7 – 7,7	standard	U/U – C/U – U/C – C/C	EI 120
160	160	3,2 – 7,7	standard	U/U – C/U – U/C – C/C	EI 120

ANNEX 1.2: MG-U FIRE STOPPING PIPE CLOSURE DEVICE USED WITH PP PIPES

1.2.1 MG-U collar used with plastic pipes, made of PP, in aerated concrete floors, mounting with screws required or without screws

Sealing system

The MG-U fire stopping pipe closure device is mounted around the plastic pipes. The collar is completely integrated in the floor. When the collar is fixed with screws, it is positioned at the bottom side of the floor (the side that is directly exposed to fire). When it is not fixed to the floor, the collar is positioned in the middle of the floor. The floor is made of aerated concrete with a minimum thickness 150 mm and a density of $650 \pm 200 \text{ kg/m}^3$. The classification is also applicable for aerated concrete floors with a higher density or a greater thickness. The dimensions of the hole in the floor can be read in Table 3.

The penetrating pipe shall be adequately supported at maximum 400 mm from both surfaces of the floor by appropriate fire-resistant support systems.

The minimum distance between the pipes in normal applications is not less than 400 mm. The hole in the floor equals the diameter of the pipe + 50 mm. The gap between the collar and the floor is filled with a sealing material with a density of approximately 25 kg/m^3 and with a reaction to fire class F or higher (EN 13501-1)

When fixed with screws, screws 5 x 70 mm are used. For pipes up to 75 mm 2 screws are required, pipes bigger than 75 mm require 3 screws.

Characteristics of the services

Plastic type	PP according to EN 1451-1
Pipe diameter ($\varnothing$)	See fire resistance class hereafter
Pipe wall thickness (e)	See fire resistance class hereafter

Installation specifications

Pipe arrangement	Single penetration, distances between pipes not less than 500 mm
Number of pipes	1 pipe per collar
Pipe end configuration	Tested end configurations U/U; covering configurations C/U, U/C and C/C
Pipe insulation	Non-insulated pipes
Angle of the pipe	Standard (90°)

Fire resistance class

MG-U Collar (Internal diameter)	Pipe diameter [mm]	Pipe thickness [mm]	configuration	Pipe configuration	Fire resistance
32 – 40	32 – 40	1,8	standard	U/U – C/U – U/C – C/C	EI 120
50	50	2,1	standard	U/U – C/U – U/C – C/C	EI 120
56	56	2,2	standard	U/U – C/U – U/C – C/C	EI 120
63	63	2,5	standard	U/U – C/U – U/C – C/C	EI 120
75	75	3,0	standard	U/U – C/U – U/C – C/C	EI 120
80	80	3,1	standard	U/U – C/U – U/C – C/C	EI 120
90	90	3,2	standard	U/U – C/U – U/C – C/C	EI 120
100	100	3,3	standard	U/U – C/U – U/C – C/C	EI 120
110	110	3,4	standard	U/U – C/U – U/C – C/C	EI 120

1.2.2 MG-U collar used with plastic pipes, made of PP, in 100 mm thick lightweight plasterboard partitions, mounting with screws required

Sealing system

The MG-U fire stopping pipe closure device is mounted around the plastic pipes. The collar is completely integrated in the partition. The lightweight plasterboard partition is made of 2 gypsum boards type DF (each board 12,5 mm thick with a density of 820 kg/m³) + a 40 mm cavity filled with rock wool with a density of 45 kg/m³ + 2 gypsum boards type DF (each board 12,5 mm thick with a density of 820 kg/m³). The boards are fixed to metal studs and channels with dimensions of 50x50x0,8 mm. The distance between studs is 400 mm. The first layer of boards is fixed with screws Ø 3,5 x 35 mm spaced 300 mm apart. The second layer of boards is fixed with screws Ø 3,5 x 45 mm spaced 200 mm apart. The classification is also applicable for all flexible wall constructions of the same or better fire resistance classification. The dimensions of the hole in the flexible wall can be read in Table 3. (Figures in Annex 1.4).

The penetrating pipe shall be adequately supported at maximum 400 mm from both surfaces of the partition by appropriate fire-resistant support systems.

The minimum distance between the pipes in normal applications is not less than 500 mm. The gap between the collar and the partition is filled with a sealing material with a density of approximately 25 kg/m³ and a reaction to fire class F or higher (EN 13501-1)

The collars are fixed with screws 5 x 100 mm. For pipes up to 75 mm 2 screws are required, pipes bigger than 75 mm require 3 screws.

Characteristics of the services

Plastic type	PP according to EN 1451-1
Pipe diameter (Ø)	See fire resistance class hereafter
Pipe wall thickness (e)	See fire resistance class hereafter

Installation specifications

Pipe arrangement	Single penetration, distances between pipes not less than 500 mm
Number of pipes	1 pipe per collar
Pipe end configuration	Tested end configurations U/U; covering configurations C/U, U/C and C/C
Pipe insulation	Non-insulated pipes
Angle of the pipe	Standard (90°)

Fire resistance class

MG-U Collar (Internal diameter)	Pipe diameter [mm]	Pipe thickness [mm]	configuration	Pipe configuration	Fire resistance
32 – 40	32 – 40	1,8	standard	U/U – C/U – U/C – C/C	EI 90
50	50	2,1	standard	U/U – C/U – U/C – C/C	EI 90
56	56	2,2	standard	U/U – C/U – U/C – C/C	EI 90
63	63	2,5	standard	U/U – C/U – U/C – C/C	EI 90
75	75	3,0	standard	U/U – C/U – U/C – C/C	EI 90 / EI 120 *
80	80	3,1	standard	U/U – C/U – U/C – C/C	EI 90
90	90	3,2	standard	U/U – C/U – U/C – C/C	EI 90
100	100	3,3	standard	U/U – C/U – U/C – C/C	EI 90
110	110	3,4	standard	U/U – C/U – U/C – C/C	EI 90
125	125	3,9	standard	U/U – C/U – U/C – C/C	EI 90
140	140	4,3	standard	U/U – C/U – U/C – C/C	EI 90
160	160	4,9	standard	U/U – C/U – U/C – C/C	EI 90 / EI 120 *

* EI 120 only when the hole diameter equals the nominal pipe diameter +50 mm

1.2.3 MG-U collar used with plastic pipes, made of PP, in 100 mm thick rigid wall, mounting with screws required

Sealing system

The MG-U fire stopping pipe closure device is mounted around the plastic pipes. The collar is completely integrated in the partition. The low density rigid wall made of aerated concrete slab, 100 mm thick and with a density of 550 kg/m³. The dimensions of the hole in the rigid wall can be read in Table 3. (Figures in Annex 1.4).

The classification is also applicable for all 100 mm thick rigid wall constructions made of concrete or masonry elements of an overall density equal to or greater than 550 kg/m³.

The penetrating pipe shall be adequately supported at maximum 400 mm from both surfaces of the partition by appropriate fire-resistant support systems.

The minimum distance between the pipes in normal applications is not less than 500 mm. The gap between the collar and the partition is filled with a sealing material with a density of approximately 25 kg/m³ and with a reaction to fire class F or higher (EN 13501-1).

When mounting screws are required. The collars are fixed with screws 5 x 100 mm. For pipes up to 75 mm 2 screws are required, pipes bigger than 75 mm require 3 screws.

Characteristics of the services

Plastic type	PP according to EN 1451-1
Pipe diameter (Ø)	See fire resistance class hereafter
Pipe wall thickness (e)	See fire resistance class hereafter

Installation specifications

Pipe arrangement	Single penetration, distances between pipes not less than 500 mm
Number of pipes	1 pipe per collar
Pipe end configuration	Tested end configurations U/U; covering configurations C/U, U/C and C/C
Pipe insulation	Non-insulated pipes
Angle of the pipe	Standard (90°)

Fire resistance class

MG-U Collar (Internal diameter)	Pipe diameter [mm]	Pipe thickness [mm]	configuration	Pipe configuration	Fire resistance
32 – 40	32 – 40	1,8	standard	U/U – C/U – U/C – C/C	EI 90
50	50	2,1	standard	U/U – C/U – U/C – C/C	EI 90
56	56	2,2	standard	U/U – C/U – U/C – C/C	EI 90
63	63	2,5	standard	U/U – C/U – U/C – C/C	EI 90
75	75	3,0	standard	U/U – C/U – U/C – C/C	EI 90 / EI 120 *
80	80	3,1	standard	U/U – C/U – U/C – C/C	EI 90
90	90	3,2	standard	U/U – C/U – U/C – C/C	EI 90
100	100	3,3	standard	U/U – C/U – U/C – C/C	EI 90
110	110	3,4	standard	U/U – C/U – U/C – C/C	EI 90
125	125	3,9	standard	U/U – C/U – U/C – C/C	EI 90
140	140	4,3	standard	U/U – C/U – U/C – C/C	EI 90
160	160	4,9	standard	U/U – C/U – U/C – C/C	EI 90 / EI 120 *

* EI 120 only when the hole diameter equals the nominal pipe diameter +50 mm

1.2.4 MG-U collar used with plastic pipes, made of PP, in rigid walls with thickness between 100 mm and 200 mm, mounting without screws

Sealing system

The MG-U fire stopping pipe closure device is mounted around the plastic pipes. The collar is completely integrated in the partition. The low-density rigid wall is made of aerated concrete slab, with a thickness between 100 mm and 200 mm and a density of 500 kg/m³. The dimensions of the hole in the rigid wall can be read in Table 3. (Figures in Annex 1.4).

The classification is also applicable for all rigid wall constructions with a thickness between 100 mm and 200 mm made of concrete or masonry elements of an overall density equal to or greater than 500 kg/m³.

The penetrating pipe shall be adequately supported at maximum 400 mm from both surfaces of the partition by appropriate fire-resistant support systems.

The minimum distance between the pipes in normal applications is not less than 500 mm. The gap between the collar and the partition is filled with a sealing material with a density of approximately 25 kg/m³ and with a reaction to fire class F or higher (EN 13501-1)

The collar is installed centrally in the rigid wall.

Characteristics of the services

Plastic type	PP according to EN 1451-1
Pipe diameter (Ø)	See fire resistance class hereafter
Pipe wall thickness (e)	See fire resistance class hereafter

Installation specifications

Pipe arrangement	Single penetration, distances between pipes not less than 500 mm
Number of pipes	1 pipe per collar
Pipe end configuration	Tested end configurations U/U; covering configurations C/U, U/C and C/C
Pipe insulation	Non-insulated pipes
Angle of the pipe	Standard (90°)

Fire resistance class

MG-U Collar (Internal diameter)	Pipe diameter [mm]	Pipe thickness [mm]	configuration	Pipe configuration	Fire resistance
32 – 40	32 – 40	1,8	standard	U/U – C/U – U/C – C/C	EI 90
50	50	2,1	standard	U/U – C/U – U/C – C/C	EI 90
56	56	2,2	standard	U/U – C/U – U/C – C/C	EI 90
63	63	2,5	standard	U/U – C/U – U/C – C/C	EI 90
75	75	3,0	standard	U/U – C/U – U/C – C/C	EI 90
80	80	3,1	standard	U/U – C/U – U/C – C/C	EI 90
90	90	3,2	standard	U/U – C/U – U/C – C/C	EI 90
100	100	3,3	standard	U/U – C/U – U/C – C/C	EI 90
110	110	3,4	standard	U/U – C/U – U/C – C/C	EI 90
125	125	3,9	standard	U/U – C/U – U/C – C/C	EI 90
140	140	4,3	standard	U/U – C/U – U/C – C/C	EI 90
160	160	4,9	standard	U/U – C/U – U/C – C/C	EI 90

ANNEX 1.3: MG-U FIRE STOPPING PIPE CLOSURE DEVICE USED WITH PE PIPES

1.3.1 MG-U collar used with plastic pipes, made of PE, in aerated concrete floors, mounting with screws required or without screws

Sealing system

The MG-U fire stopping pipe closure device is mounted around the plastic pipes. The collar is completely integrated in the floor. When the collar is fixed with screws, it is positioned at the bottom side of the floor (the side that is directly exposed to fire). When it is not fixed to the floor, the collar is positioned in the middle of the floor. The floor made of aerated concrete has a minimum thickness 150 mm and a minimum density of $650 \pm 200 \text{ kg/m}^3$. The classification is also applicable for aerated concrete floors with a higher density or a greater thickness. The dimensions of the hole in the floor can be read in Table 3.

The penetrating pipe shall be adequately supported at maximum 400 mm from both surfaces of the floor by appropriate fire-resistant support systems.

The minimum distance between the pipes in normal applications is not less than 400 mm. The hole in the floor equals the diameter of the pipe + 50 mm. The gap between the collar and the floor is filled with a sealing material with a density of approximately 25 kg/m^3 and with a reaction to fire class F or higher (EN 13501-1)

When fixed with screws, screws 5 x 70 mm are used. For pipes up to 75 mm 2 screws are required, pipes bigger than 75 mm require 3 screws.

Characteristics of the services

Plastic type	PE according to EN 12201-2, EN 1519-1 or EN 12666-1, ABS according to EN 1455-1 and SAN+PVC according to EN 1565-1
Pipe diameter ($\varnothing$)	See fire resistance class hereafter
Pipe wall thickness (e)	See fire resistance class hereafter

Installation specifications

Pipe arrangement	Single penetration, distances between pipes not less than 500 mm
Number of pipes	1 pipe per collar
Pipe end configuration	Tested end configurations U/U; covering configurations C/U, U/C and C/C
Pipe insulation	Non-insulated pipes
Angle of the pipe	Standard (90°)

Fire resistance class

MG-U Collar (Internal diameter)	Pipe diameter [mm]	Pipe thickness [mm]	configuration	Pipe configuration	Fire resistance
32 – 75	32 – 40	2,3 – 4,5	standard	U/U – C/U – U/C – C/C	EI 120
80	80	2,4 – 6,6	standard	U/U – C/U – U/C – C/C	EI 120
90	90	2,5 – 6,6	standard	U/U – C/U – U/C – C/C	EI 120
100	100	2,6 – 6,6	standard	U/U – C/U – U/C – C/C	EI 120
110	110	2,7 – 6,6	standard	U/U – C/U – U/C – C/C	EI 120
125	125	3,4 – 9,5	standard	U/U – C/U – U/C – C/C	EI 120
140	140	4,1 – 9,5	standard	U/U – C/U – U/C – C/C	EI 120
160	160	5,0 – 9,5	standard	U/U – C/U – U/C – C/C	EI 120

1.3.2 MG-U collar used with plastic pipes, made of PE, in 100 mm thick lightweight plasterboard partitions, mounting with screws required

Sealing system

The MG-U fire stopping pipe closure device is mounted around the plastic pipes. The collar is completely integrated in the partition. The lightweight plasterboard partition is made of 2 gypsum boards type DF (each board 12,5 mm thick with a density of 820 kg/m³) + a 40 mm cavity filled with rock wool with a density of 45 kg/m³ + 2 gypsum boards type DF (each board 12,5 mm thick with a density of 820 kg/m³). The boards are fixed to metal studs and channels with dimensions of 50x50x0,8 mm. The distance between studs is 400 mm. The first layer of boards is fixed with screws Ø 3,5 x 35 mm spaced 300 mm apart. The second layer of boards is fixed with screws Ø 3,5 x 45 mm spaced 200 mm apart. The classification is also applicable for all flexible wall constructions of the same or better fire resistance classification. The dimensions of the hole in the flexible wall can be read in Table 3. (Figures in Annex 1.4)

The penetrating pipe shall be adequately supported at maximum 400 mm from both surfaces of the partition by appropriate fire-resistant support systems.

The minimum distance between the pipes in normal applications is not less than 500 mm. The gap between the collar and the partition is filled with a sealing material with a density of approximately 25 kg/m³ and with a reaction to fire class F or higher (EN 13501-1)

The collars are fixed with screws 5 x 100 mm. For pipes up to 75 mm 2 screws are required, pipes bigger than 75 mm require 3 screws.

Characteristics of the services

Plastic type	PE according to EN 12201-2, EN 1519-1 or EN 12666-1, ABS according to EN 1455-1 and SAN+PVC according to EN 1565-1
Pipe diameter (Ø)	See fire resistance class hereafter
Pipe wall thickness (e)	See fire resistance class hereafter

Installation specifications

Pipe arrangement	Single penetration, distances between pipes not less than 500 mm
Number of pipes	1 pipe per collar
Pipe end configuration	Tested end configurations U/U; covering configurations C/U, U/C and C/C
Pipe insulation	Non-insulated pipes
Angle of the pipe	Standard (90°)

Fire resistance class

MG-U Collar (Internal diameter)	Pipe diameter [mm]	Pipe thickness [mm]	configuration	Pipe configuration	Fire resistance
32 – 75	32 – 40	2,3 – 4,5	standard	U/U – C/U – U/C – C/C	EI 120
80	80	2,4 – 6,6	standard	U/U – C/U – U/C – C/C	EI 120
90	90	2,5 – 6,6	standard	U/U – C/U – U/C – C/C	EI 120
100	100	2,6 – 6,6	standard	U/U – C/U – U/C – C/C	EI 120
110	110	2,7 – 6,6	standard	U/U – C/U – U/C – C/C	EI 120
125	125	3,4 – 9,5	standard	U/U – C/U – U/C – C/C	EI 120
140	140	4,1 – 9,5	standard	U/U – C/U – U/C – C/C	EI 120
160	160	5,0 – 9,5	standard	U/U – C/U – U/C – C/C	EI 120

1.3.3 MG-U collar used with plastic pipes, made of PE, in 100 mm thick lightweight plasterboard partitions, mounting without screws

Sealing system

The MG-U fire stopping pipe closure device is mounted around the plastic pipes. The collar is completely integrated in the partition. The lightweight plasterboard partition is made of 2 gypsum boards type DF (each board 12,5 mm thick with a density of 820 kg/m³) + a 40 mm cavity filled with rock wool with a density of 45 kg/m³ + 2 gypsum boards type DF (each board 12,5 mm thick with a density of 820 kg/m³). The boards are fixed to metal studs and channels with dimensions of 50x50x0,8 mm. The distance between studs is 400 mm. The first layer of boards is fixed with screws Ø 3,5 x 35 mm spaced 300 mm apart. The second layer of boards is fixed with screws Ø 3,5 x 45 mm spaced 200 mm apart. The classification is also applicable for all flexible wall constructions of the same or better fire resistance classification. The dimensions of the hole in the flexible wall can be read in Table 3. (Figures in Annex 1.4)

The penetrating pipe shall be adequately supported at maximum 400 mm from both surfaces of the partition by appropriate fire-resistant support systems.

The minimum distance between the pipes in normal applications is not less than 500 mm. The gap between the collar and the partition is filled with a sealing material with a density of approximately 25 kg/m³ and with a reaction to fire class F or higher (EN 13501-1).

Characteristics of the services

Plastic type	PE according to EN 12201-2, EN 1519-1 or EN 12666-1, ABS according to EN 1455-1 and SAN+PVC according to EN 1565-1
Pipe diameter (Ø)	See fire resistance class hereafter
Pipe wall thickness (e)	See fire resistance class hereafter

Installation specifications

Pipe arrangement	Single penetration, distances between pipes not less than 500 mm
Number of pipes	1 pipe per collar
Pipe end configuration	Tested end configurations U/U; covering configurations C/U, U/C and C/C
Pipe insulation	Non-insulated pipes
Angle of the pipe	Standard (90°)

Fire resistance class

MG-U Collar (Internal diameter)	Pipe diameter [mm]	Pipe thickness [mm]	configuration	Pipe configuration	Fire resistance
32 – 75	32 – 40	2,3 – 4,5	standard	U/U – C/U – U/C – C/C	EI 120
80	80	2,4 – 6,6	standard	U/U – C/U – U/C – C/C	EI 120
90	90	2,5 – 6,6	standard	U/U – C/U – U/C – C/C	EI 120
100	100	2,6 – 6,6	standard	U/U – C/U – U/C – C/C	EI 120
110	110	2,7 – 6,6	standard	U/U – C/U – U/C – C/C	EI 120

1.3.4 MG-U collar used with plastic pipes, made of PE, in 100 mm thick rigid wall, mounting with screws required or without screws

Sealing system

The MG-U fire stopping pipe closure device is mounted around the plastic pipes. The collar is completely integrated in the partition. The low density rigid wall consists of aerated concrete slab, 100 mm thick and density 550 kg/m³. The dimensions of the hole in the rigid wall can be read in Table 3. (Figures in Annex 1.4).

The classification is also applicable for all 100 mm thick rigid wall constructions made of concrete or masonry elements of an overall density equal or greater 550 kg/m³.

The penetrating pipe shall be adequately supported at maximum 400 mm from both surfaces of the partition by appropriate fire-resistant support systems.

The minimum distance between the pipes in normal applications is not less than 500 mm. The gap between the collar and the partition is filled with a sealing material with a density of approximately 25 kg/m³ and with a reaction to fire class F or higher (EN 13501-1)

When the mounting with screws is required. The collars are fixed with screws, screws 5 x 100 mm. For pipes up to 75 mm 2 screws are required, Pipes bigger than 75 mm require 3 screws. When mounting happens without screws, the collar is centred in the wall.

Characteristics of the services

Plastic type	PE according to EN 12201-2, EN 1519-1 or EN 12666-1, ABS according to EN 1455-1 and SAN+PVC according to EN 1565-1
Pipe diameter (Ø)	See fire resistance class hereafter
Pipe wall thickness (e)	See fire resistance class hereafter

Installation specifications

Pipe arrangement	Single penetration, distances between pipes not less than 500 mm
Number of pipes	1 pipe per collar
Pipe end configuration	Tested end configurations U/U; covering configurations C/U, U/C and C/C
Pipe insulation	Non-insulated pipes
Angle of the pipe	Standard (90°)

Fire resistance class

MG-U Collar (Internal diameter)	Pipe diameter [mm]	Pipe thickness [mm]	configuration	Pipe configuration	Fire resistance
32 – 75	32 – 40	2,3 – 4,5	standard	U/U – C/U – U/C – C/C	EI 120
80	80	2,4 – 6,6	standard	U/U – C/U – U/C – C/C	EI 120
90	90	2,5 – 6,6	standard	U/U – C/U – U/C – C/C	EI 120
100	100	2,6 – 6,6	standard	U/U – C/U – U/C – C/C	EI 120
110	110	2,7 – 6,6	standard	U/U – C/U – U/C – C/C	EI 120
125	125	3,4 – 9,5	standard	U/U – C/U – U/C – C/C	EI 120
140	140	4,1 – 9,5	standard	U/U – C/U – U/C – C/C	EI 120
160	160	5,0 – 9,5	standard	U/U – C/U – U/C – C/C	EI 120

1.3.5 MG-U collar used with plastic pipes, made of PE, in rigid walls with thickness between 100 mm and 200 mm, mounting without screws

Sealing system

The MG-U fire stopping pipe closure device is mounted around the plastic pipes. The collar is completely integrated in the partition. The low-density rigid wall is made of aerated concrete slab, between 100 mm and 200 mm thick with a density of 500 kg/m³. The dimensions of the hole in the rigid wall can be read in Table 3. (Figures in Annex 1.4).

The classification is also applicable for all rigid wall constructions with a thickness between 100 mm and 200 mm made of concrete or masonry elements of an overall density equal or greater 500 kg/m³.

The penetrating pipe shall be adequately supported at maximum 400 mm from both surfaces of the partition by appropriate fire-resistant support systems.

The minimum distance between the pipes in normal applications is not less than 500 mm. The gap between the collar and the partition is filled with a sealing material with a density of approximately 25 kg/m³ and with a reaction to fire class F or higher (EN 13501-1)

The collar is installed centrally in the rigid wall.

Characteristics of the services

Plastic type	PE according to EN 12201-2, EN 1519-1 or EN 12666-1, ABS according to EN 1455-1 and SAN+PVC according to EN 1565-1
Pipe diameter (Ø)	See fire resistance class hereafter
Pipe wall thickness (e)	See fire resistance class hereafter

Installation specifications

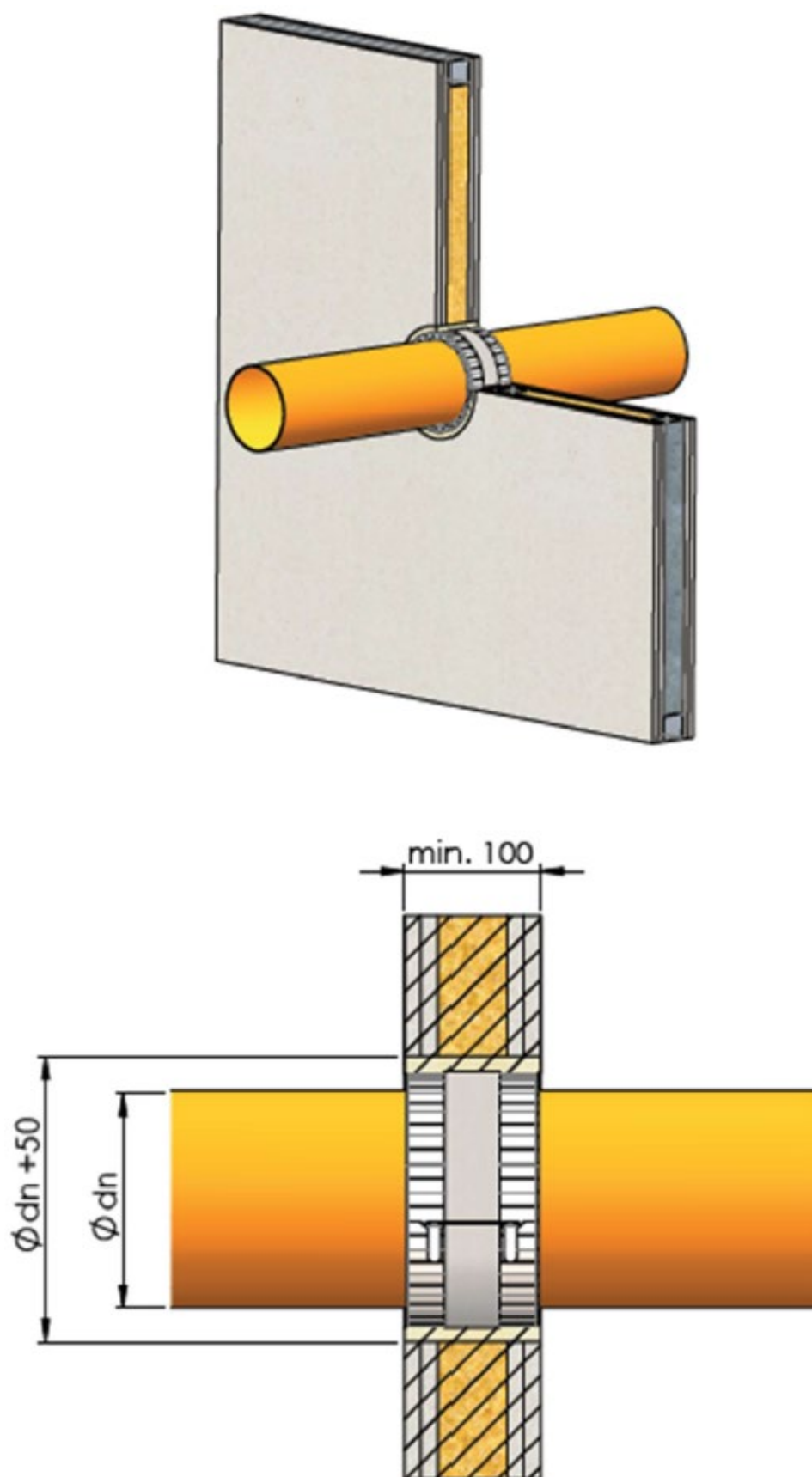
Pipe arrangement	Single penetration, distances between pipes not less than 500 mm
Number of pipes	1 pipe per collar
Pipe end configuration	Tested end configurations U/U; covering configurations C/U, U/C and C/C
Pipe insulation	Non-insulated pipes
Angle of the pipe	Standard (90°)

Fire resistance class

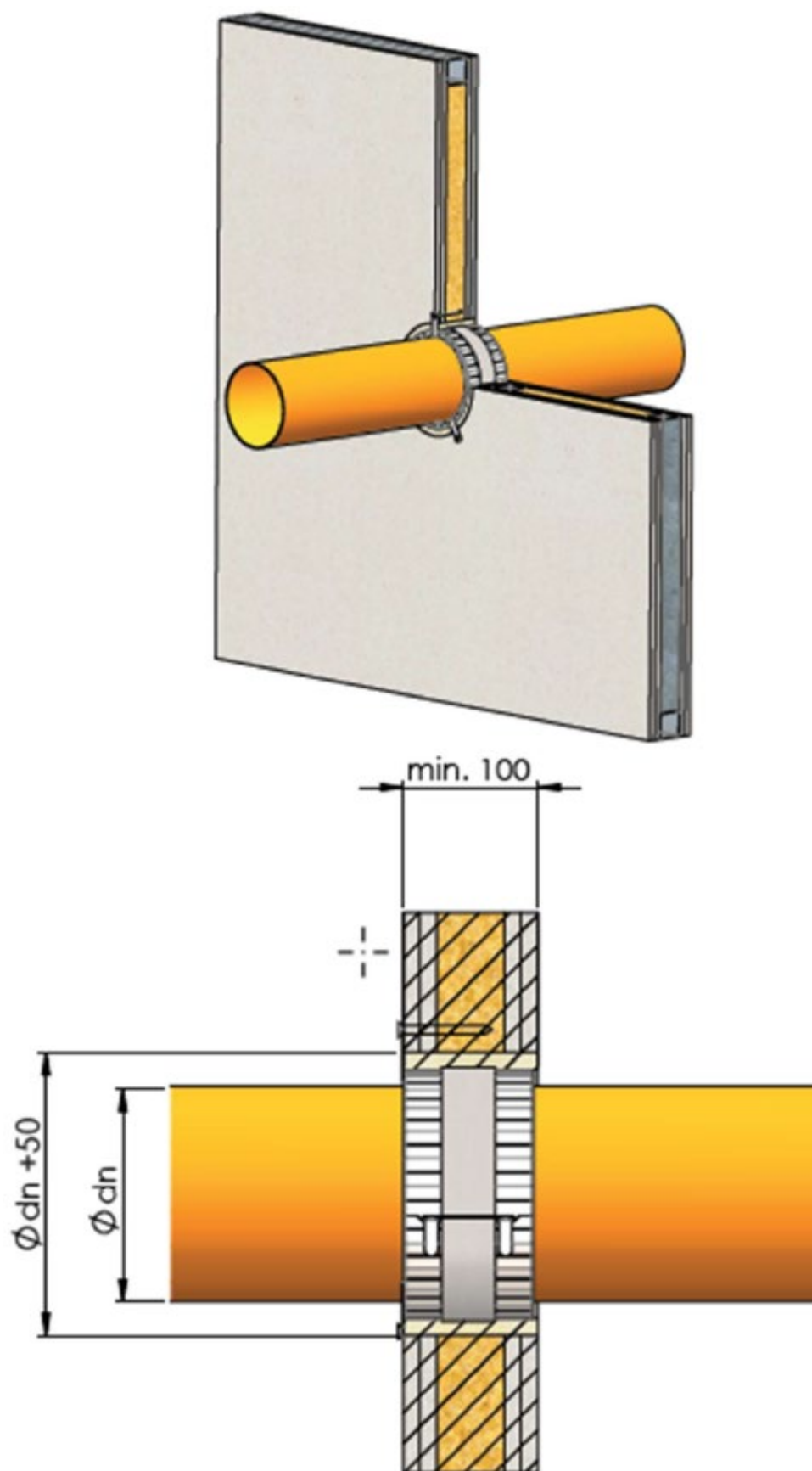
MG-U Collar (Internal diameter)	Pipe diameter [mm]	Pipe thickness [mm]	configuration	Pipe configuration	Fire resistance
32 – 75	32 – 40	2,3 – 4,5	standard	U/U – C/U – U/C – C/C	EI 120
80	80	2,4 – 6,6	standard	U/U – C/U – U/C – C/C	EI 120
90	90	2,5 – 6,6	standard	U/U – C/U – U/C – C/C	EI 120
100	100	2,6 – 6,6	standard	U/U – C/U – U/C – C/C	EI 120
110	110	2,7 – 6,6	standard	U/U – C/U – U/C – C/C	EI 120
125	125	3,4 – 9,5	standard	U/U – C/U – U/C – C/C	EI 120
140	140	4,1 – 9,5	standard	U/U – C/U – U/C – C/C	EI 120
160	160	5,0 – 9,5	standard	U/U – C/U – U/C – C/C	EI 120

ANNEX 1.4: FIGURES

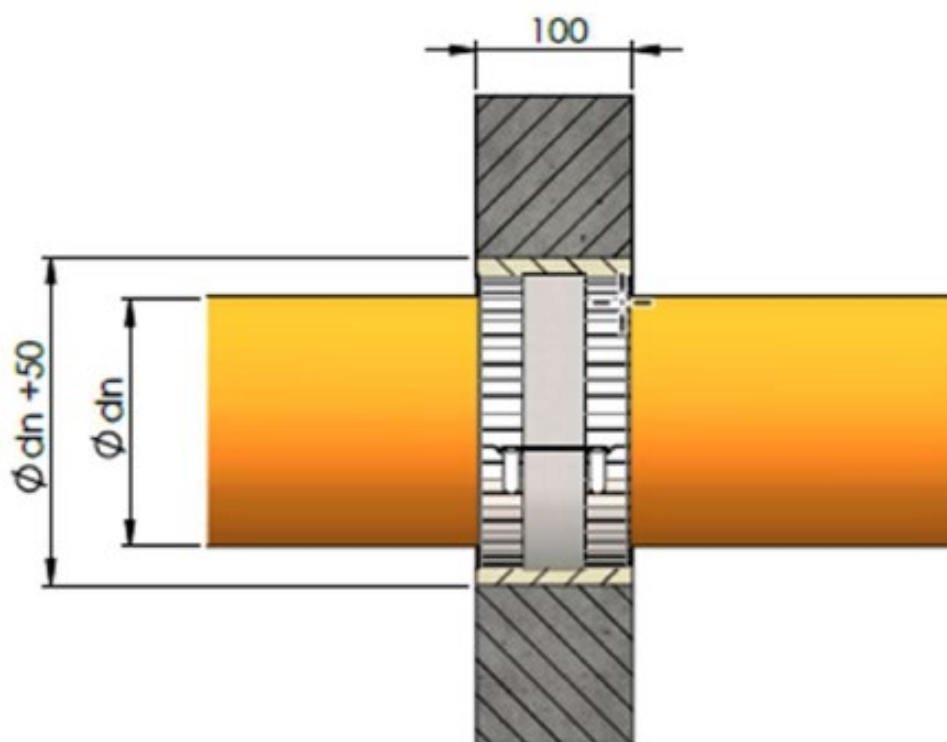
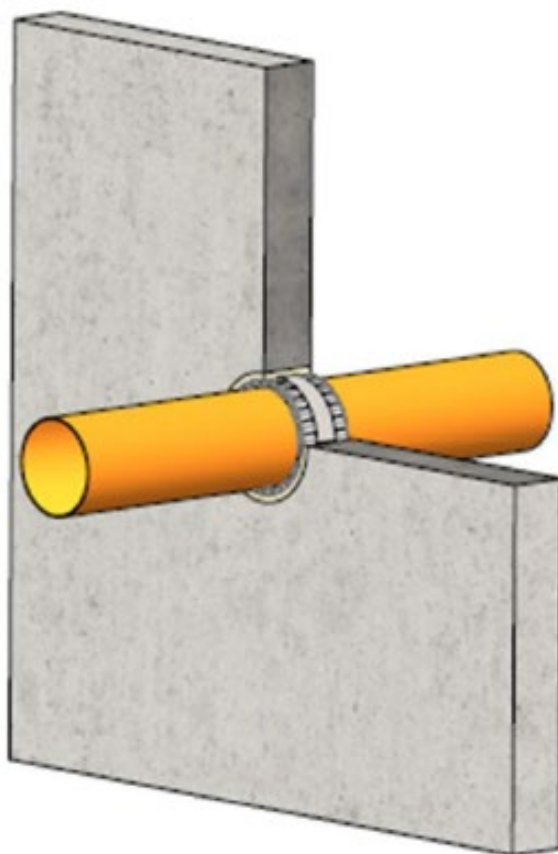
1.4.1 FLEXIBLE WALL – FIXATION WITHOUT SCREWS



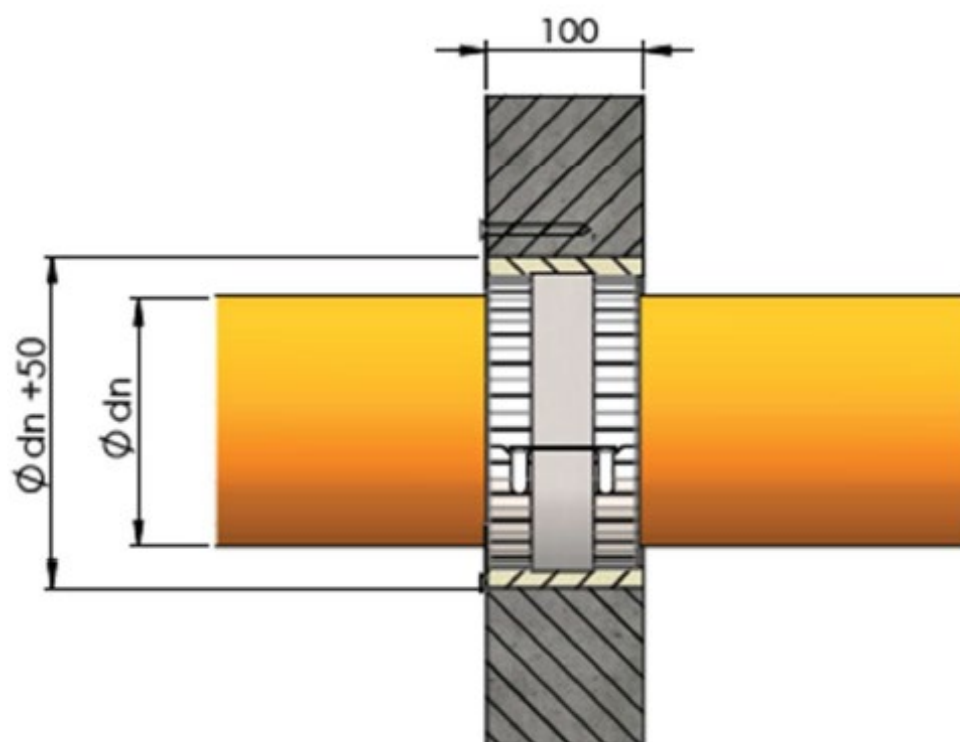
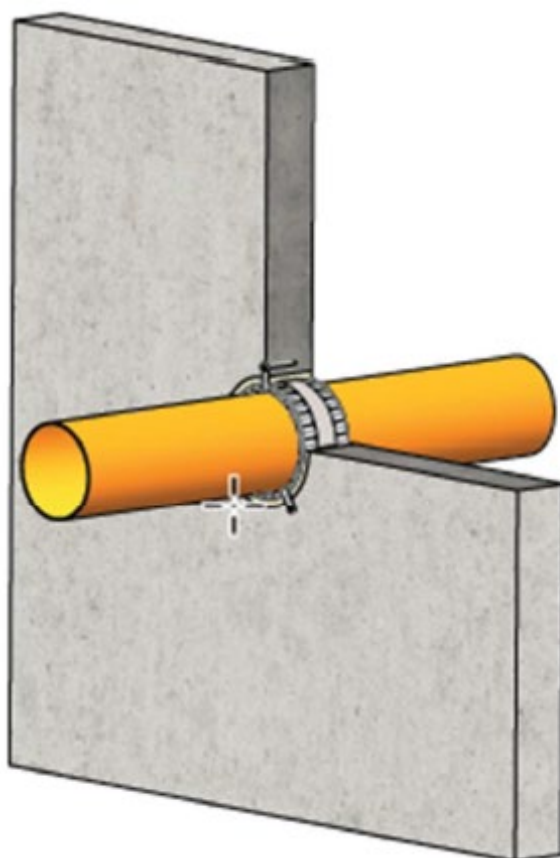
1.4.2 FLEXIBLE WALL – FIXATION WITH SCREWS



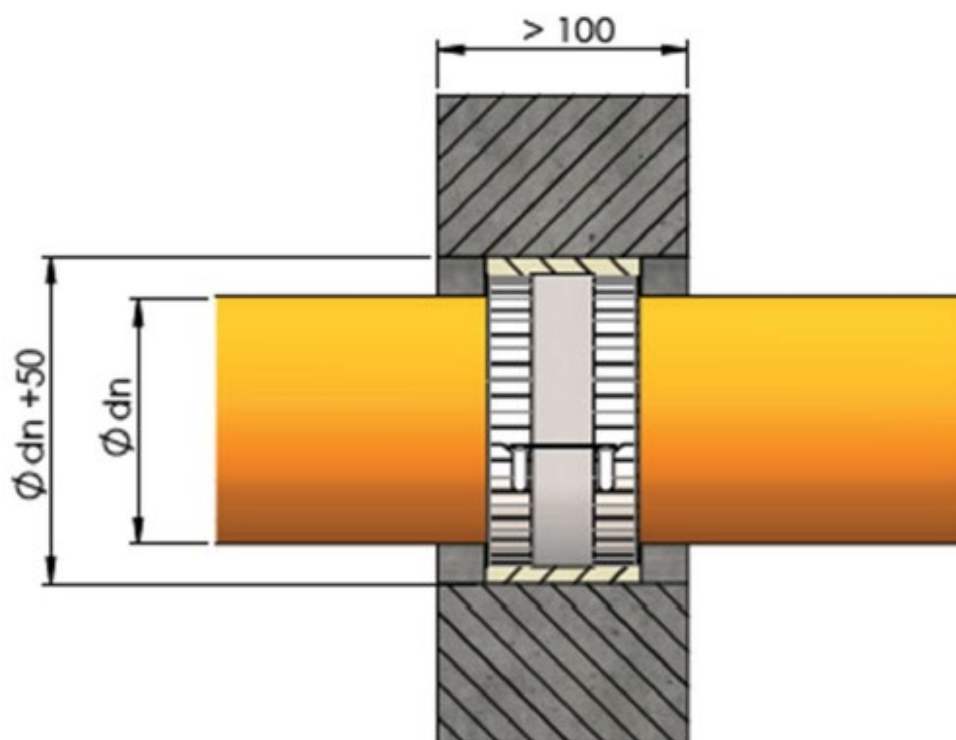
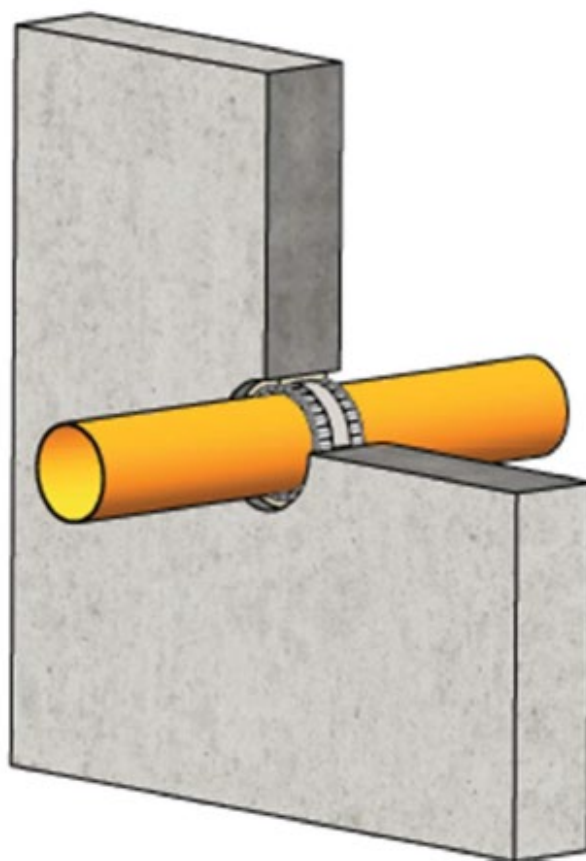
1.4.3 RIGID WALL 100 MM – FIXATION WITHOUT SCREWS



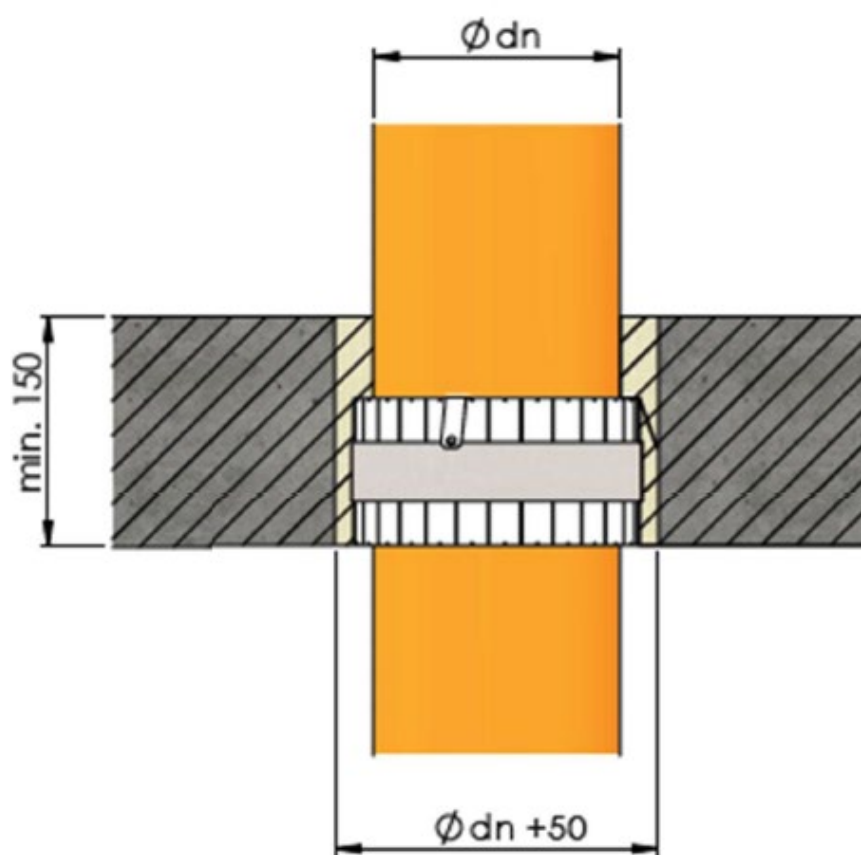
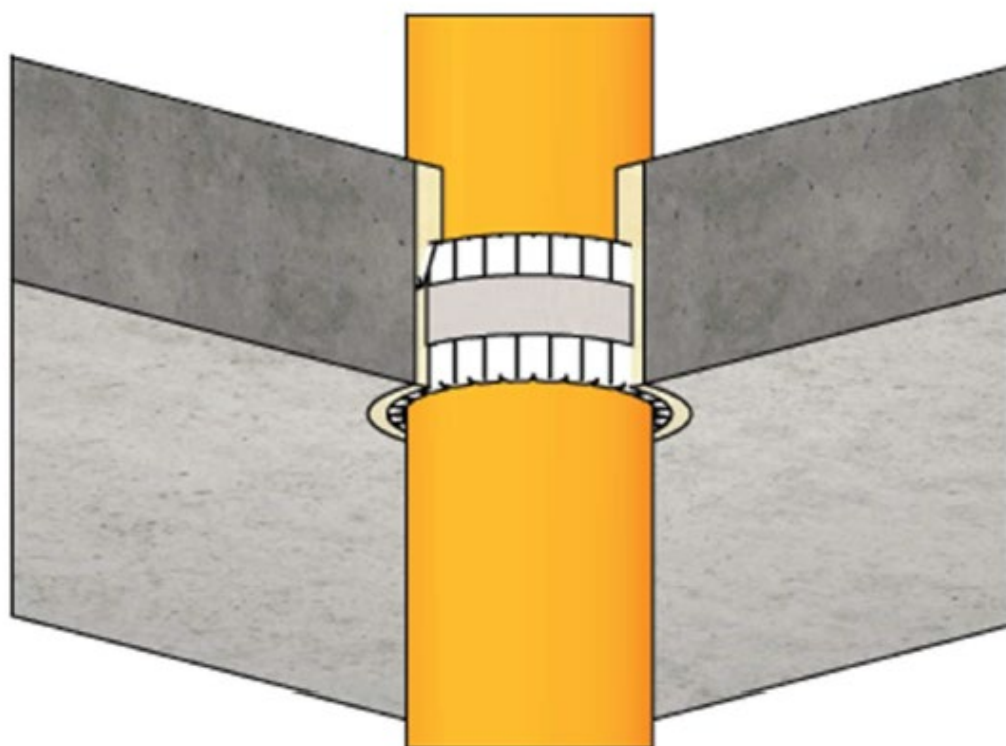
1.4.4 RIGID WALL 100 MM – FIXATION WITH SCREWS



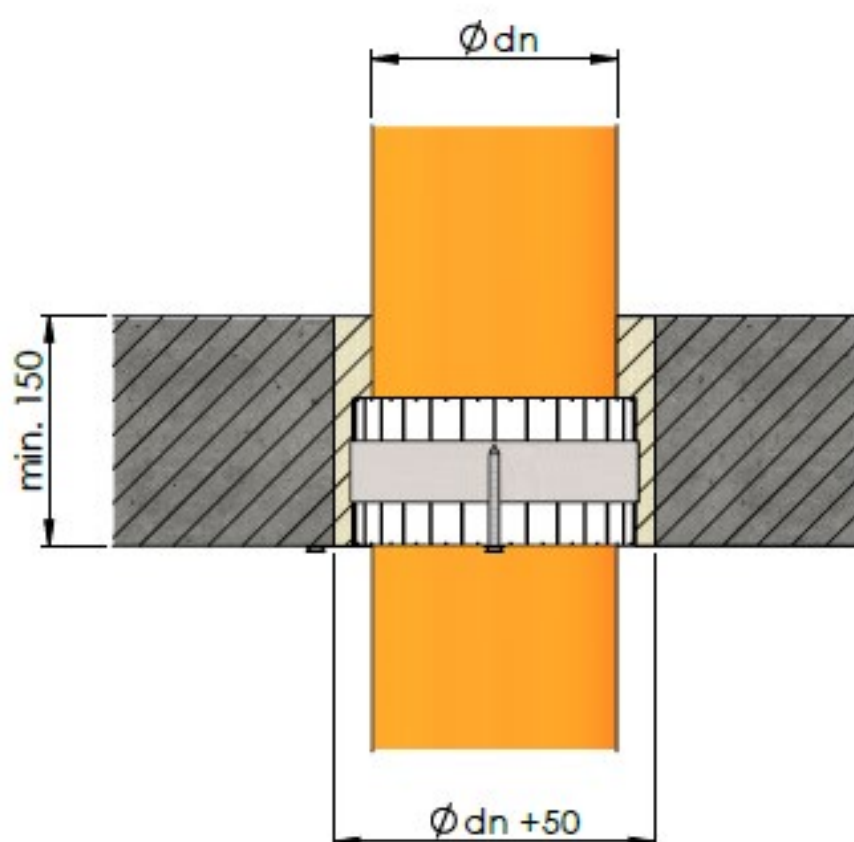
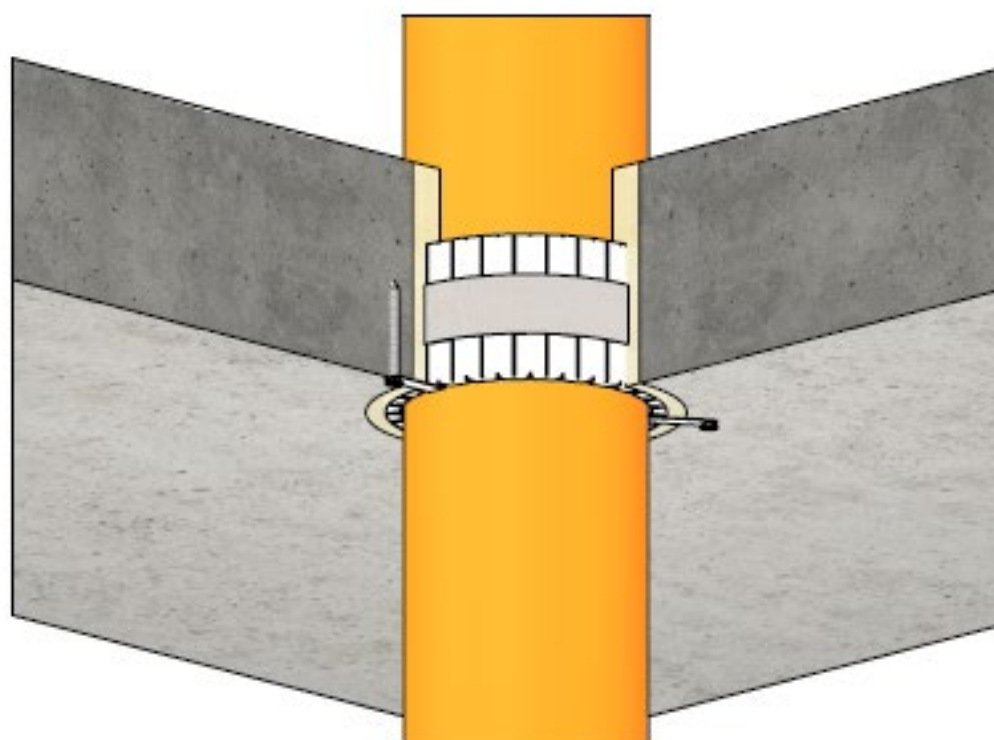
1.4.5 RIGID WALL >100 MM – FIXATION WITHOUT SCREWS



1.4.6 RIGID FLOOR – FIXATION WITHOUT SCREWS



1.4.7 RIGID FLOOR – FIXATION WITH SCREWS



ANNEX 2: REFERENCE DOCUMENTS

EN 1329-1	Plastics piping systems for soil and waste discharge (low and high temperature) within the building structure - Unplasticized poly(vinyl chloride) (PVC-U) - Part 1: Specifications for pipes, fittings and the system
EN 1366-3:2009	Fire resistance tests for service installations – Part 3: Penetration seals
EN 1451-1	Plastics piping systems for soil and waste discharge (low and high temperature) within the building structure - Polypropylene (PP) - Part 1: Specifications for pipes, fittings and the system
EN ISO 1452-1	Plastics piping systems for water supply and for buried and above-ground drainage and sewerage under pressure - Unplasticized poly(vinyl chloride) (PVC-U) - Part 1: General (ISO 1452-1:2009)
EN 1453-1	Plastics piping systems with structured-wall pipes for soil and waste discharge (low and high temperature) inside buildings - Unplasticized poly(vinyl chloride) (PVC-U) - Part 1: Specifications for pipes and the system
EN 1455-1	Plastics piping systems for soil and waste discharge (low and high temperature) within the building structure - Acrylonitrile-butadiene-styrene (ABS) - Part 1: Requirements for pipes, fittings and the system
EN 1519-1	Plastics piping systems for soil and waste discharge (low and high temperature) within the building structure - Polyethylene (PE) - Part 1: Requirements for pipes, fittings and the system
EN 1565-1	Plastics piping systems for soil and waste discharge (low and high temperature) within the building structure - Styrene copolymer blends (SAN+PVC) - Part 1: Specifications for pipes, fittings and the system
EN 1566-1	Plastics piping systems for soil and waste discharge (low and high temperature) within the building structure - Chlorinated poly(vinyl chloride) (PVC-C) - Part 1: Specifications for pipes, fittings and the system
EN 12201-2	Plastics piping systems for water supply, and for drainage and sewerage under pressure - Polyethylene (PE) - Part 2: Pipes
EN 12666-1	Plastics piping systems for non-pressure underground drainage and sewerage - Polyethylene (PE) - Part 1: Specifications for pipes, fittings and the system
EN 13501-1+A1:2010	Fire classification of construction products and building elements - Part 1: Classification using data from reaction to fire tests
EN 13501-2+A1:2010	Fire classification of construction products and building elements - Part 2: Classification using data from fire resistance tests, excluding ventilation services
EOTA TR 024 amended (July 2009)	Characterisation, Aspects of Durability and Factory Production Control for Reactive Materials, Components and Products
EAD 350454-00-1104 (September 2017)	Fire Stopping and Fire Sealing Products – Penetration seals