Promat



PROMASTOP®-FC MD Fire protective collar









REFERENCE DOCUMENTATION

European Technical Assessment: ETA-19/0215 Declaration of Performance: 0761-CPR-19/0215-2019/9

Classification: 01633/22/R181NZP Classification: 01633.1/21/R164NZP



Technical data and characteristics			
Width	about 55 mm		
Thickness	about 5.5 mm		
Length	3.2 m		
Storage	Store in dry conditions		
Class of reaction to fire	Е		
Packaging	Stable, cardboard packaging		
Use category	Туре Х		
Swelling temperature	About 190°C		

Length of collars depending on installation diameter					
Installation diameter [mm]	Collar length [mm]	Number of collars from one packaging [pcs.]	Number of brackets [pcs.]		
40	225	14	2		
50	255	12	2		
64	300	10	3		
75	3350	9	3		
90	380	8	3		
110	445	7	3		
125	490	6	4		
160	600*	5	2 + 4**		
200	725*	4	2 + 4**		

^{*} Two collars serially above Ø160 mm.

PRODUCT DESCRIPTION

The PROMASTOP®-FC MD are firestop collars with a special material which expands when heated. The collars are equipped with fixing holders and locking brackets.

APPLICATION

The collar was tested according to EN 1366-3 for the U/U configuration up to the diameter of 200 mm. The collars are intended for protection of penetrations of plastic and metal pipes in flammable insulation in walls and ceilings. It stops spread of fire and smoke to any adjacent areas, floors, staircases, corridors, etc.

INSTALLATION

The collars can be trimmed to the appropriate length depending on the pipe circumference. The provided mounting brackets should be placed on the ends of the trimmed collars, then bend the fastening hooks and press the serrated edges to the collar. Attach the holders symmetrically to the collars, subsequently fix the PROMASTOP®-FC MD on the pipe by bending the locking hook 180°. Finally, the metal holders must be fixed with utilisation of appropriate steel fasteners to a wall, or ceiling.

ADVANTAGES OF THE SYSTEM/BENEFITS FOR INSTALLERS

- flexible collar.
- fast and easy installation,
- can be trimmed according to the installation diameter,
- tested with various types of plastics, e.g. PP, PE, PVC, insulated installations, and other,
- owing to their small thickness, they are easy to fix in hard to reach places,
- single collar for pipes up to Ø125 mm,
- use category type X.

PACKAGING

- collar 3200 mm (= 7 collars for Ø110 mm),
- 7 locking brackets A***,
- 7 locking brackets B***,
- 21 fixing brackets C***.

Store in a dry, closed area.

*** Purchase of additional packages of brackets is possible.

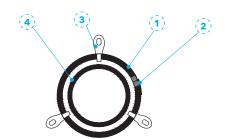
^{**} Long brackets type D.





FIRE RESISTANCE: EI120





Detail A - View of collar

APPLICATION

The minimum thickness of the partitions in which penetrations can be protected with the PROMASTOP®-FC MD (1) collar is:

- Flexible wall min. thickness 100 mm
- Rigid wall min. thickness 100 mm
- Rigid wall min. thickness 150 mm

The pipe diameter range is presented in the table below.

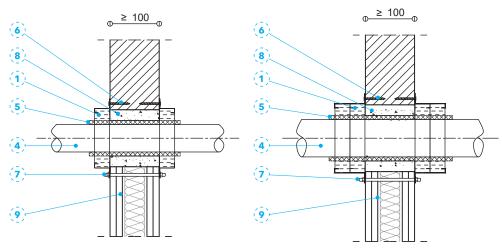
Type of pipe	Pipe diameter [mm]	
PE-HD	Ø32 ÷ Ø160	
PP-H/PP-R	Ø20 ÷ Ø160	
PVC-U	Ø32 ÷ Ø160	
PE-S2 e.g. Geberit Silent-db20	Ø56 ÷ Ø110	
PP-C/PP-MD/PP-C e.g. Geberit Silent-PP	Ø40 ÷ Ø125	
PP-MD e.g. Rehau Raupiano plus	Ø40 ÷ Ø125	

DETAIL A

The drawing presents a view of a collar fixed to a pipe at the penetration through the partition. Depending on the collar length, it is necessary to provide an appropriate number of the Type C fixing brackets. The gap around the pipe, of the max. width 31 mm must be filled with the Promat joint filler or cement mortar, e.g. PROMASTOP-M 8 throughout the partition thickness.

DETAIL B

In order to protect the penetrations of pipes going through walls it is necessary to install the collars on both the partition sides. The collars are fixed to the rigid walls with utilisation of the provided steel screws or steel anchors (6) for flexible walls installation takes place with utilisation of threaded rods. (7).

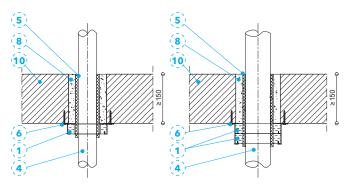


Detail B - Collars fixed to walls

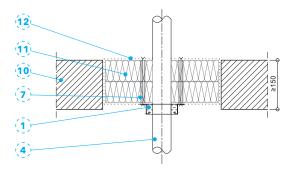
- 1 PROMASTOP®-FC MD fire protective collar
- 2 Locking brackets
- (3) Fixing holders
- (4) Plastic pipe
- (5) Flammable insulation maximum thickness 4 mm (optionally)
- Steel fasteners, e.g. screws or anchors
- 7 Fixing material, threaded rod min. M6
- (8) Seal of peripheral gap, e.g. Promat® joint filler (≤31 mm)
- (9) Wall

- 10 Floor
- 11 Mineral rock wool
- 12 PROMASTOP®-CC firestop compound

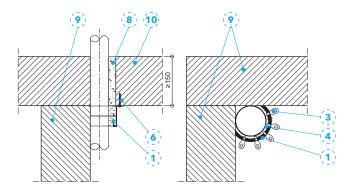




Detail C - Collars fixed under floorsy



Detail D - Installation of collars under floor sealed with mineral wool and firestop compound



Detail E - Installation of collars under floors in wall corners

For the pipes with the outer diameters exceeding 125 mm it is necessary to apply double collars, i.e. two collars placed adjacently per side. In such cases, special double-length fixing brackets are utilised (available on request).

DETAIL C

In the case of the penetrations through floors one collar should be provided from the bottom side of the floor only. The installation procedure is the same as for the penetrations through walls. The pipes can be provided with flammable insulation (5) (minimum reaction to fire class E) of maximum thickness 4 mm.

DETAIL D

For big openings in floors penetrated by a plastic pipe the penetrations can be protected by filling the openings with mineral wool min. thickness 100 mm clearance. Each surface of the mineral wool should be covered with the PROMASTOP®-CC fighterstop compound, min. layer thickness 0.7 mm. The collars installed within the mineral wool should be fixed with utilisation of threaded rods 7, or spiral fixings.

DETAIL D

The PROMASTOP®-FC MD 1 collar can be also utilised for protection of penetrations of the plastic pipes, diameter from 40 to 1100 mm, through floors, located in wall corners. In this case, it is necessary to provide double collars, i.e. one collar under another, for all the diameters The collars are fixed to a partition with utilisation of 2 short C brackets and 2 long D brackets.

- PROMASTOP®-FC MD collar
- Locking brackets
- (3) Fixing holders
- 4 Plastic pipe

- 5 Flammable insulation maximum thickness 4 mm (optional)
- (6) Steel fasteners, e.g. screws or anchors
- (7) Fastener, e.g. threaded rod min. M6
- (8) Seal of peripheral gap, e.g. Promat® joint filler (≤31 mm)
- (9) Wall
- 10 Floor

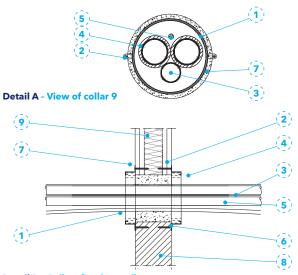
- Mineral rock wool min. thickness 100 kg/m³
- PROMASTOP®-CC fire protection compound



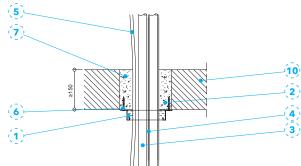


FIRE RESISTANCE: EI120





Detail B - Collars fixed to walls



Detail C - Collars fixed under floors

APPLICATION

The minimum thickness of the partitions in which penetrations of air conditioning installations can be protected with utilisation of the PROMASTOP®-FC MD (1) collars is:

- Flexible wall min. thickness 100 mm,
- Rigid wall min. thickness 100 mm,
- Rigid wall min. thickness 150 mm

The diameter range of the installations is:

- 2x copper pipes with diameter within the range
 6.35÷22.3 mm in flammable insulation, thickness 6÷9 mm,
- PVC-U pipe, max. diameter 42 mm,
- Cable 5x1.5 mm².

The installations mentioned above constitute the maximum package which can be run through one individual service penetration. It means that the number of individual elements, or their diameter/cross-section area can be reduced.

DETAIL A

This drawing presents a view of a collar (1) fixed to the installations at their penetration point through a partition. The collar trimmed to the correct size is locked with utilisation of the locking brackets. Installation of a collar to a partition (8) (9) is performed with utilisation of the steel fixing holders (2) and appropriate fastening materials.

DETAIL B AND C

In order to protect the penetration through walls (8) it is necessary to fix the collars (1) on both the sides of the partitions. The collars are fixed to the walls with utilisation of steel anchors, or threaded rods, and in the case of flexible walls, and masonry walls of aerated concrete - with utilisation of steel screws 6x100 mm. The collars should be fixed around the installations with max. 10 mm clearance. The gap around the pipes of max. 31 mm width must be filled with a gypsum based joint filler, cement mortar, the Promat joint filler, PROMASTOP®-M mortar (7) throughout the whole thickness of the walls.

In the case of the penetrations going through floors (9) the collars (1) should be applied only from the bottom floor side. The installation procedure is the same as for the penetrations constructed in the case of walls. The collars are fixed to the floors with utilisation of steel anchors, or threaded rods.

Description of drawings

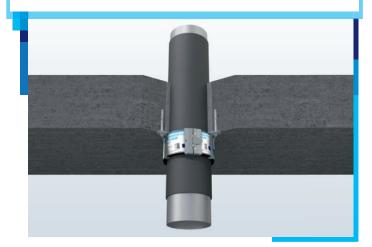
- 1) PROMASTOP®-FC MD collar
- Fixing holders type C
- (3) Plastic pipe
- 4) 2x copper pipe in flam. insulation
- 5 Cable 5x1.5 mm²
- 6 Steel fastener
- Cement mortar of gypsum putty
- (8) Rigid wall
- (9) Flexible wall

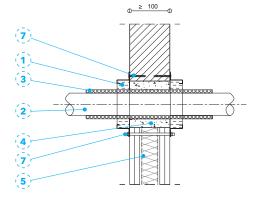
10 Rigid floor.



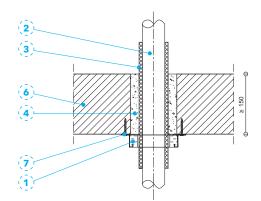


FIRE RESISTANCE: EI120





Detail A - Installation of collars on walls



Detail B - Installation of collars under floors

APPLICATION

The minimum thickness of the partitions in which penetrations can be protected with utilisation of the PROMASTOP®-FC MD (1) collars is:

- Flexible wall min. thickness 100 mm,
- Rigid wall min. thickness 100 mm,
- Rigid wall min. thickness 150 mm.

The PROMASTOP®-FC MD 1 collar can be utilised for providing protection to copper pipes, steel and cast iron pipes in flammable insulation B-s1,d0 (e.g. armaflex), and steel and cast iron pipes in insulation with the reaction to fire class E (e.g. tubolit). The pipe diameter and insulation range is presented in table 1.

Type of pipe	Diameter [mm]	Insulation thickness [mm]	Type of insulation	Type of partition
Copper	Ø6 ÷ Ø21	6 ÷ 9	B-s1,d0	Wall/ Floor
	Ø22 ÷ Ø42	6 ÷ 50	B-s1,d0	Wall/ Floor
	Ø15 ÷ Ø76.1	6 ÷ 75	B-s1,d0	Wall
Steel and	Ø21.7 ÷ Ø108	6 ÷ 75	B-s1,d0	Floor
cast iron	Ø15 ÷ Ø108	9 ÷ 25	Е	Wall
	Ø21.7 ÷ Ø108	9 ÷ 25	Е	Floor

TABLE 1 Pipe diameter range and insulation.

DETAIL A AND B

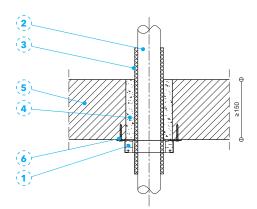
In order to protect penetrations installed in walls (5) it is necessary to fix the collars (1) on both the sides of those partitions. The collars are fixed to the walls with utilisation of steel anchors, or threaded rods, and in the case of a flexible wall, and a masonry wall of aerated concrete – with utilisation of steel screws 6x100 mm. The collars should be fixed around the penetrating installations with max. clearance of 10 mm. The clearance around the pipes, width max. 31 mm, must be filled with a gypsum based joint filler, cement mortar, the Promat joint filler, or the PROMASTOP®-M (4) mortar throughout the wall thickness.

For the penetrations constructed in floors (6) the collars (1) should be installed from the bottom floor side only. The installation procedure in this case is the same as for the penetrations running through walls. The collars are fixed to the floor with utilisation of steel anchors, or threaded rods.

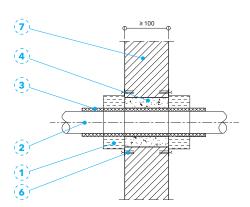
- 1 PROMASTOP®-FC MD collar
- 2 Steel or copper pipe
- 3 Flammable insulation
- Cement mortar of gypsum putty
- (5) Rigid or flexible wall
- 6 Rigid floor.
- (7) Steel fastener







Detail A - Installation of collars under floors



Detail B - Installation of collars in rigid walls

APPLICATION

The minimum thickness of the partitions in which penetrations can be protected with utilisation of the PROMASTOP®-FC MD (1) collars is:

- Rigid wall min. thickness 150 mm
- Rigid wall min. thickness 100 mm

The PROMASTOP®-FC MD collar can be utilised for providing protection for PP-R pipes in flammable insulation B-s1,d0 (e.g. armaflex) and in the insulation types with the reaction to fire class E (e.g. tubolit). The pipe diameter and insulation range is presented in table 1.

Type of pipe	Diameter [mm]	Insulation thickness [mm]	Type of insulation	Type of partition
PP-R	Ø20 ÷ Ø110	13 ÷ 30	Е	Strop
	Ø20 ÷ Ø110	9 ÷ 25	B-s1,d0	Strop
	Ø20 ÷ Ø110	9 ÷ 25	B-s1,d0	Ściana

TABLE 1 Pipe diameter range and insulation.

DETAIL A AND B

In order to protect penetrations through floors (5) it is necessary to install a collar (1) from the bottom floor side, and the case of walls (7) - on both the sides of such partition. The collars are fixed to rigid floors or walls with utilisation of steel anchors, or threaded rods. The collars should be installed around the installations with max. 10 mm clearance. The gaps around the pipes of max. 31 mm width must be filled with a cement mortar (4) located throughout the partition thickness.

Description of drawings

- 1 PROMASTOP®-FC MD collar
- 2 Plastic pipe
- 3 Flammable insulation
- Cement mortar
- (5) Rigid floor
- 6 Steel fastener

7 Rigid wall



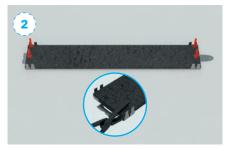
Guidelines for installation of single collars



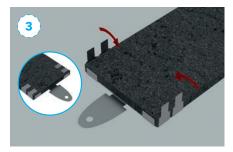
- 1) PROMASTOP®-FC MD firestop collar
- 2 Locking bracket A
- Locking bracket B
- Fixing holder C



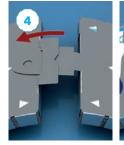
Trim the collar to the appropriate length using the table from the first page.



Place the trimmed collar on the surface with the intumescent material facing up. Place and fix the locking brackets A and B on both the sides of the collar with utilisation of an appropriate tool (a click means proper locking of the brackets to the collars).



Bend small tabs 90° towards the middle of the collar using pliers, or a different set of tools.



Fix the collar around the pipe with the metal strip facing outwards. Run the bracket A through the bracket B and then bend the fixing hook 180° towards the back.



Attach the fixing holders C.



Fix to walls or floors with utilisation of appropriate steel fasteners.



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