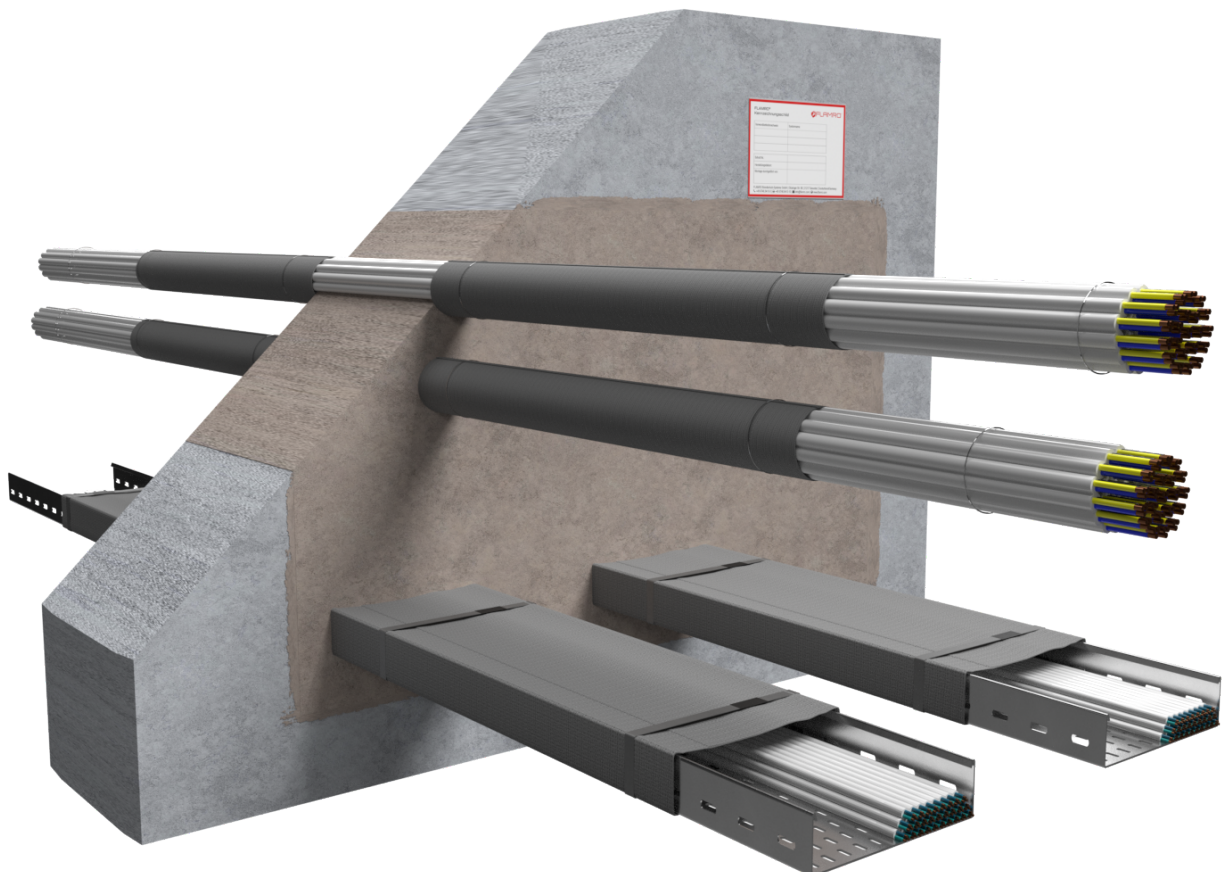


Novasit BM 240

Cable penetration sealing system made of mortar

Fibre-free penetration sealing system made of special mortar. For cables, cable bundles and cable trays.

Fire resistance class EI 240 in accordance with EN 13501-2 as per ETA-16/0132



Novasit BM 240

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Novasit BM 240

1. Preliminary remarks / overview

1.1 Target group

The installation instructions are intended solely for personnel trained in fire protection.

1.2 Use of the instructions

Before starting work, read through these installation instructions completely once. Pay particular attention to the following safety instructions.

The authorisation holder assumes no liability for damage caused by failure to comply with these instructions.

Pictorial representations serve as examples only. Installation results may differ in appearance.

Unless stated otherwise, all lengths are specified in mm.





All information in this document represents the state of the art at the time of writing or the current version of the standard.

Upon request, flamro will be pleased to provide the relevant legal and technical framework and manufacturer specifications for each individual case.



1.2.1 Safety instructions

The safety data sheets must be consulted when processing the penetration seal components.

Personal protective equipment:

	Wear protective clothing and non-slip shoes.
	Use safety goggles, safety glasses.
	Use protective mask with P2 particle filter in case of short-term or low level exposure. For intensive or prolonged exposure use a breathing apparatus with independent air supply. Use breathing protection in compliance with international/national standards.
	Use chemically resistant gloves. Recommended materials: butyl rubber, nitrile rubber, fluorinated rubber, PVC.

Safety instructions for the installation of floor penetration seals

	The area below the floor penetration seal must be cordoned off against entry during penetration seal work (barrier tape and warning sign: warning of possible falling objects, do not enter the area, penetration seal work in floor openings).
	The contractor for the production of floor penetration seals must inform the client in writing (for forwarding to the client or appointed representative) that after the production of the fire penetration seals in floors, these must be secured on site against loads, in particular against being stepped on, by suitable measures (e.g. by fencing or by covering with grating).

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1.3 Field of application

The mixed penetration sealing system Novasit BM 240 using NOVASIT BM mortar in wall and floor openings belongs to the product type „mortar“ in accordance with ETAG 026-2 and is assessed and evaluated accordingly.

The fire protection mortar NOVASIT BM is classified as a product for use in penetration seals in accordance with ETA-16/0132.

Reaction to fire

NOVASIT BM is classified as A1 in accordance with EN 13501-1.

Fire resistance

Novasit BM maximally meets the requirements of class EI 240 for cable penetrations, in accordance with EN 13501-2.

When installed in walls or floors with a lower fire resistance duration, the fire resistance duration of the penetration seal is also reduced to that of the fire resistance class of the wall or floor.

Release of dangerous substances

The components of Novasit BM do not contain any substances identified as dangerous in the list of the European Commission.

Durability and serviceability

The fire protection mortar NOVASIT BM meets the requirements of Z₂ in accordance with EOTA TR 024.

Novasit BM can be subjected to the conditions of interior rooms with and without exposure to moisture without substantial changes to the fire protection characteristics being expected.

1.4 Building elements

Solid walls

Made of masonry, concrete, reinforced concrete, aerated concrete, ceramic bricks, cavity bricks or perforated bricks with a density of $\geq 600 \text{ kg/m}^3$. The walls must be classified for the necessary fire resistance duration according to EN 13501-2.

Solid floors

Of concrete or reinforced concrete with a density of $\geq 1700 \text{ kg/m}^3$.

The floors must be classified for the necessary fire resistance duration according to EN 13501-2.

2. Fire resistance classes

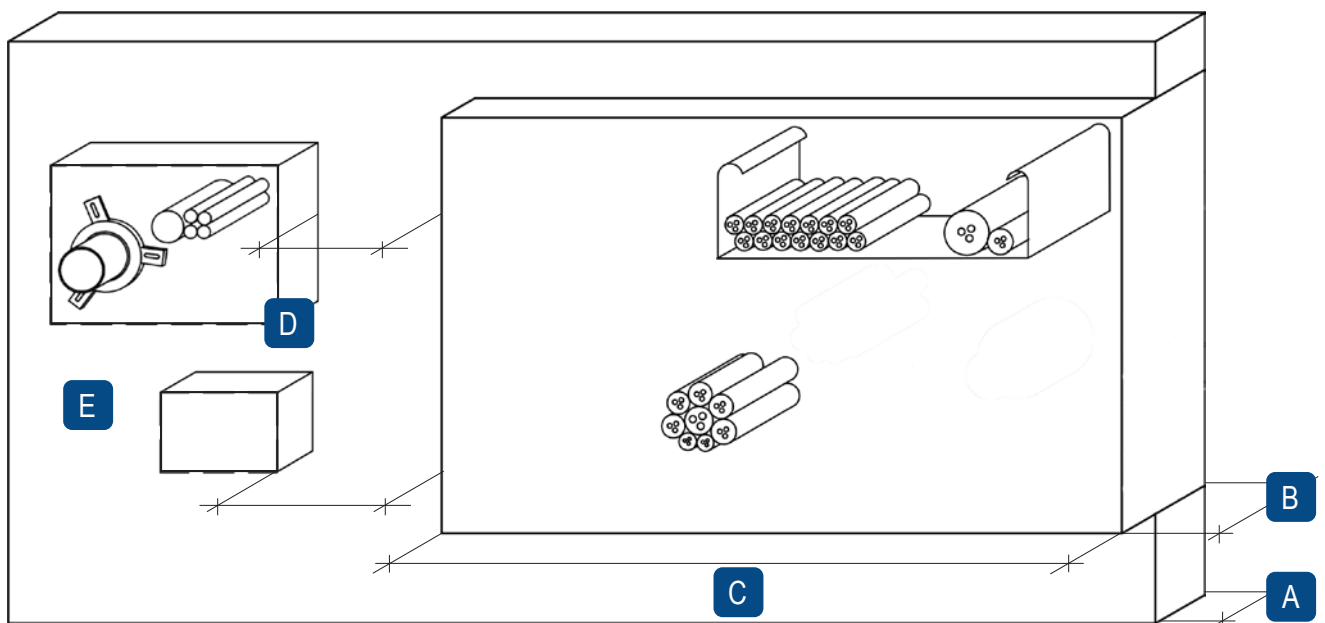
Cables, cable bundles and cable trays with fire protection wrap DG-CR 1.5	Measure	Wall		Floor	
		Fire resistance class	Source	Fire resistance class	Source
Cables $\varnothing \leq 80 \text{ mm}$	2× 2 layers	EI 240	1	EI 240	2
Cable bundles $\varnothing \leq 100 \text{ mm}$ with cables $\varnothing 21 \text{ mm}$	2× 2 layers	EI 240	1	EI 240	2

Classification report Nr.: 1 → 02163/11/Z00NP, 2 → KB 01858.1/12/Z00NP

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2.1 Thicknesses / penetration seal distances

Dimensions		Wall [mm]	Decke [mm]
A	Thickness of building element	≥ 240	≥ 200
B	Thickness of penetration seal	≥ 240	≥ 240
C	Maximum dimensions of the opening (width × height)	600 × 600	600 × 600
D	Distance to other cable or pipe penetration seals one or both openings > 400 × 400 mm	≥ 200	≥ 200
	both openings ≤ 400 × 400 mm	≥ 100	≥ 100
E	Distance to other openings or installations one or both openings > 200 × 200 mm	≥ 200	≥ 200
	both openings ≤ 200 × 200 mm	≥ 100	≥ 100



The total allowable cross section of the installations (outer dimensions) is ≤ 60% of the construction opening.

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3. Allowed services

3.1 Cables / cable bundles / cable trays



Electrical cables and lines of all types (including wave guides)

Overall cross-section of individual cables up to $\varnothing \leq 80$ mm



Cable bundles

Outer $\varnothing \leq 100$ mm with individual cables $\varnothing \leq 21$ mm. No gusset filling necessary for tightly packed, tied cable bundles.



Cable trays

Cable trays and ladders made of steel (with organic coating if applicable) as long as the fire reaction class complies at least with class A2 according to EN 13501-1.

Novasit BM 240

4. Distances

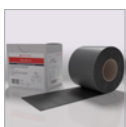
Novasit BM 240 – distances in wall							
					Seal edge		
		Cables	Cable bundles	Cable trays	Upper	Lower	Side
	Cables	≥ 10 (adjacent) ≥ 40 (one above the other)			≥ 30	≥ 20	≥ 20
	Cable bundles	≥ 10 (adjacent) ≥ 40 (one above the other)			≥ 30	≥ 20	≥ 20
	Cable trays	≥ 10 (adjacent) ≥ 40 (one above the other)			≥ 30	≥ 20	≥ 20
All specifications in mm							

Novasit BM 240 – distances in floor							
					Seal edge		
		Cables	Cable bundles	Cable trays	Upper	Lower	Side
	Cables	≥ 10 (adjacent) ≥ 40 (one above the other)			≥ 30	≥ 20	≥ 20
	Cable bundles	≥ 10 (adjacent) ≥ 40 (one above the other)			≥ 30	≥ 20	≥ 20
	Cable trays	≥ 10 (adjacent) ≥ 40 (one above the other)			≥ 30	≥ 20	≥ 20
All specifications in mm							

5. Used Products



NOVASIT BM
Fire protection mortar
 20 kg bag – Art. no. 01161000
 10 kg pail – Art. no. 01161010



DG-CR 1.5
Fire protection wrap
 Roll, 10 m × 125 mm – Art. no. 01261931



Recommended tools
 Mixing container – mortar cask
 Mixing paddle
 Cover sheeting
 Masonry tools (round dippers)
 Wire binding pliers, size 10 key or ratchet
 steel wire

5.1 Declarations of Performance

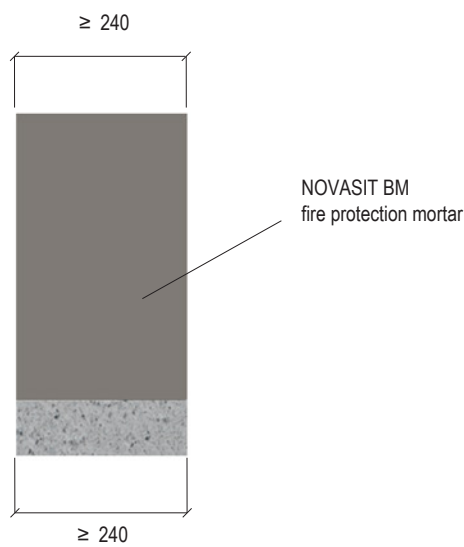
The Declarations of Performance for the featured products are available for download on our website:
<https://svt-global.com/downloads>

Novasit BM 240

6. Design variants

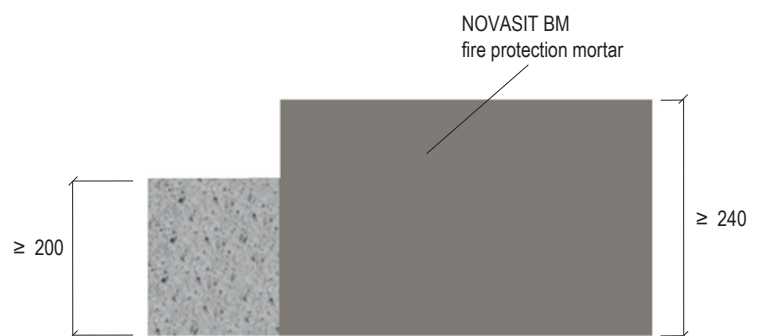
- The sealing system may be used to close openings without installations (reserve penetration for subsequent configurations).
- There must be suitable measures in the buildings to secure sealing systems in floors from being stepped on or subjected to loads.
- When installing in floors, seal surfaces > 500 × 500 mm without services or cable trays must be provided with an appropriate friction-locked steel reinforcement.

Design variant in walls



All specifications in mm

Design variant in floors



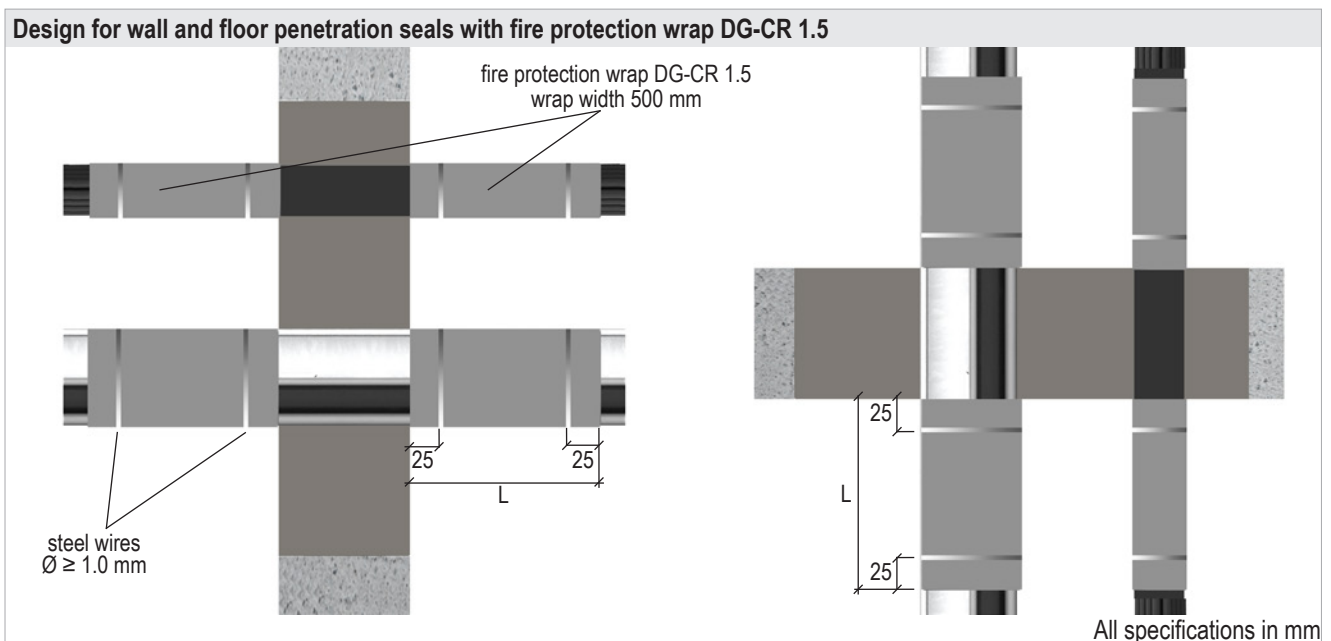
All specifications in mm

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7. Fire protection measures

7.1 Cables / cable bundles / cable trays

- Cables and cable bundles may be installed with or without cable trays.
- Cable bundles may be installed unopened in the seal. It is not necessary to fill the gussets if the bundles consist of parallel-running cables that are tightly packed, tied, stitched or welded together.
- The supporting structures for cable trays must be designed in such a way that the penetration seal will not be subjected to additional mechanical stress in case of fire.
- The fire protection wrap DG-CR 1.5 is coated on one side and equipped with a protective film. The film must be removed before applying the wrap. The wrap is applied with the coated side facing inwards and fastened with steel wires.

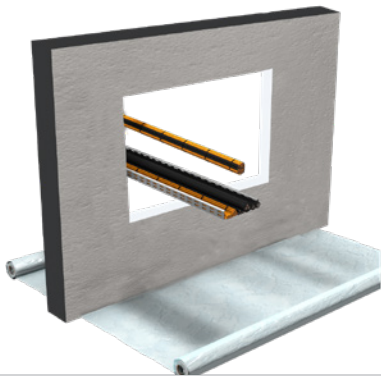


Service	Cable bundles	Fire protection wrap DG-CR 1.5						Fire resistance class	
		Wrap width [mm]	Number of wraps [n]	Number of layers [n]	Overlap [mm]	Inside seal [mm]	Outside seal [mm]	Wall	Floor
Cables	Ø ≤ 80	500	2	2	0	0	500	EI 240	EI 240
Cable bundles	Ø ≤ 100	500	2	2	0	0	500	EI 240	EI 240

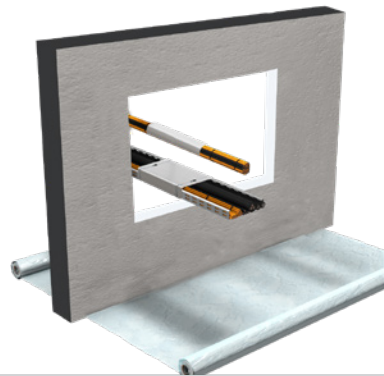
Novasit BM 240

8. Installation steps

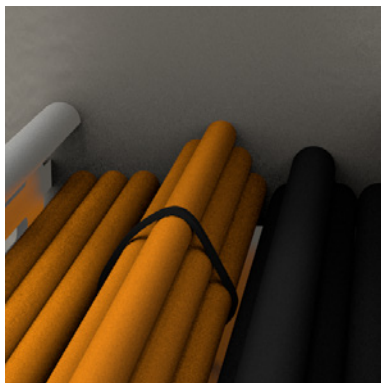
1. If necessary, cover the floor on both sides with protective sheets, clean the reveal and wet absorbing surfaces of the reveal with water. Prepare NOVASIT BM fire protection mortar according to the instructions on the packaging.



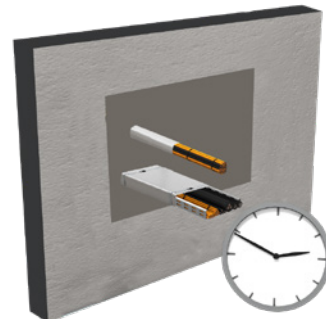
2. Apply the fire protection wrap DG-CR 1.5 on cable, cable bundles and cable trays as shown on page 9 on both sides at a length of 500 mm and fasten it with steel wires.



3. Apply the mortar in such a way that it tightly and firmly connects to the building element. All gussets and cavities must be filled completely.



4. After hardening, smooth the surfaces with the trowel and fully rework any shrinkage cracks. The same applies to any areas revealed after removing the formwork.



5. If required, label the penetration seal. Fill out the label neatly and attach it firmly next to/above (not on!) the penetration seal.



6. After the mortar residues have dried, remove them from cables, walls and floors, clean surfaces. Remove the protective sheets and ensure their proper disposal.

