

System AWM II KS

Cable sealing system

Fire-resistant sealing system for electrical installation conduits

Fire resistance class max. EI 120 in accordance with EN 13501-2 as per ETA 11/0372



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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

Consult the respective safety information for the individual penetration seal components.

Personal protective equipment:

	Wear protective clothing and non-slip shoes.
	Use safety goggles, safety glasses.
	P2 particle filter in case of short-term or low level exposure. 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 Building elements

Plasterboard walls

Non-load-bearing partition walls with a minimum thickness of 94 mm in stud design with a subconstruction made of steel or timber clad on both sides with at least two layers of boards (minimum thickness 12.5 mm) classified as A2-s1,d0 or A1 in accordance with 13501-1. In walls with timber studs a minimum clearance of 100 mm between seal and each timber stud must be observed. Cavities between seal and studs must be filled with at least 100 mm insulation of class A1 or A2 in accordance with EN 13501-1.

The supporting structure must have the required fire resistance rating according to EN 13501-2.

Solid walls

Made of concrete, aerated concrete or masonry, Thickness ≥ 100 mm.

Made of concrete, aerated concrete or masonry with a density of ≥ 600 kg/m³, Thickness ≥ 150 mm.

The walls must have the required fire resistance rating according to EN 13501-2.

Solid floors

Made of concrete or aerated concrete with a density of ≥ 500 kg/m³. Thickness ≥ 150 mm

The floors must have the required fire resistance rating according to EN 13501-2.

1.4 Thicknesses, sizes and spacing

Dimensions			
	Plasterboard wall [mm]	Solid wall [mm]	Solid floor [mm]
Thickness of building element	≥ 94	≥ 100	≥ 150
Maximum diameter of electrical installation conduit bundles	≤ 125	≤ 125	≤ 125
Distance to other cables or pipe seals	≥ 100	≥ 100	≥ 100
Distance to other apertures or installations	≥ 200	≥ 200	≥ 200
Minimum spacing distance between pipe collars	≥ 100	≥ 100	≥ 0

1.5 Initial supports

Penetrating services must be supported at the distances specified in the table below. In wall constructions support is necessary on both sides. In floor constructions support is necessary on the upper side of the floor. Essential parts of the supports must be non-combustible.

Initial supports	Wall	Floor
Electrical installation conduits	≤ 450 mm	≤ 420 mm

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2. Allowed services

2.1 Electrical installation conduits



Electrical installation conduits, single, made of plastic

Outer $\varnothing \leq 63$ mm, (with/without cables $\varnothing \leq 21$ mm).
Wave guides are not allowed.



Electrical installation conduits, bundled, made of plastic

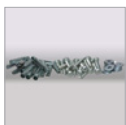
Outer $\varnothing \leq 125$ mm

3. Included products



AWM II fire protection collar
in acc. with ETA-17/0753
 $\varnothing 63$ mm – $\varnothing 125$ mm

Dimensions [mm]	Inner \varnothing collar [mm]	Outer \varnothing collar [mm]	Overall height [mm]	Number of tabs [n]	Art. no.
63	67	94	26.0	4	01142063
75	79	106	26.0	4	01142075
90	94	132	26.6	4	01142090
110	114	155	26.6	4	01142110
125	129	172	40	4	01142125



Fasteners

$\varnothing 63$ – 125 mm – Art. no.: 01146125



AC Putty Filler

310 ml cartridge – Art. no. 30005



GFM

Fire protection mortar

Fibre-free ready-mix dry mortar M20 / MG III
in accordance with EN 998-2
25 kg bag – Art. no. 01167000



General sealing material

Dimensionally stable, non-combustible (class A1 or A2-s1,d0 in acc. with EN 13501-1) material such as concrete, cement mortar, gypsum mortar



Label

1 piece – Art. no. 14003

3.1 Declarations of Performance

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

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4. Design variants

The annular gap must be sealed completely with GFM or dimensionally stable, non-combustible sealing material. The maximum width of the annular gap between the inner side of the collar and the electrical installation conduit is 15 mm.

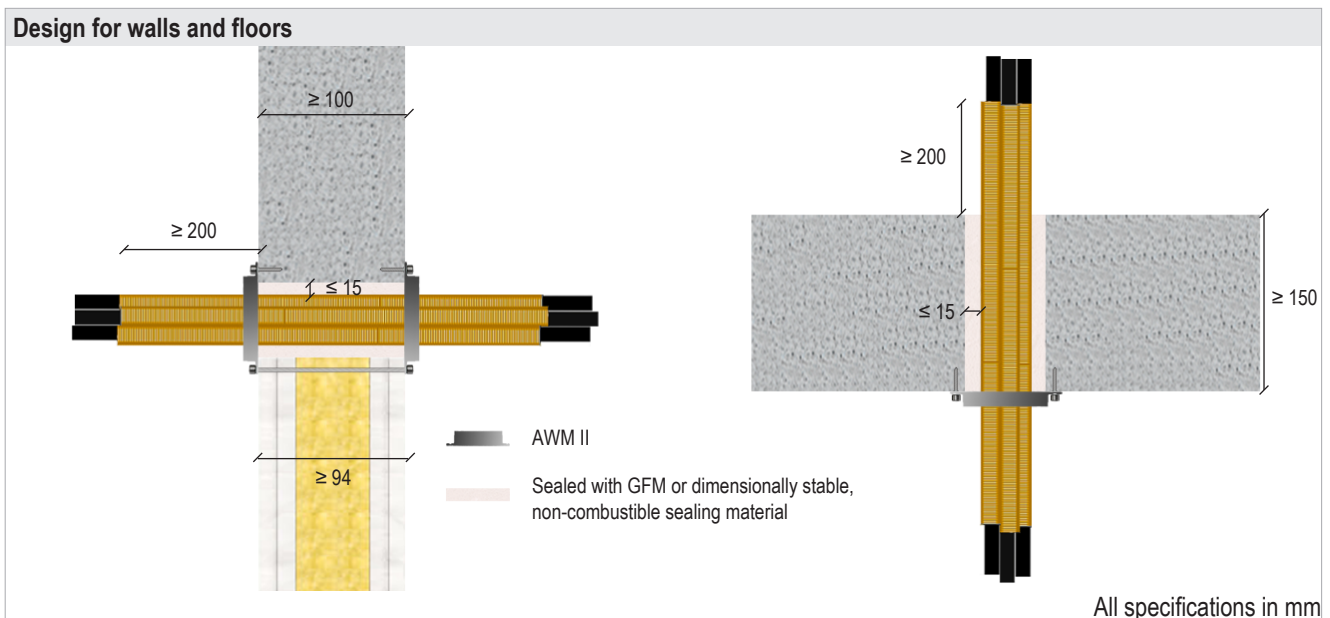
Penetrating electrical installation conduits must be sealed on both sides with AC Putty at a depth of at least 10 mm.

The electrical installation conduits must protrude on both sides at least 200 mm from the building element.

Always use a collar size fitting the diameter of the electrical installation conduit or the bundle. The inner diameter of the collar may not exceed the outer diameter of the electrical installation conduit or the bundle by more than 15 mm.

Collars must be affixed with suitable fasteners (dowels / steel screws / threaded rods M6 for inner Ø 63–75 mm, M8 for inner Ø 90–125 mm).

The lintel or the floor above the aperture must be designed structurally and in terms of fire protection in such a way that the sealing system is not subjected to an additional vertical load (except its own weight).



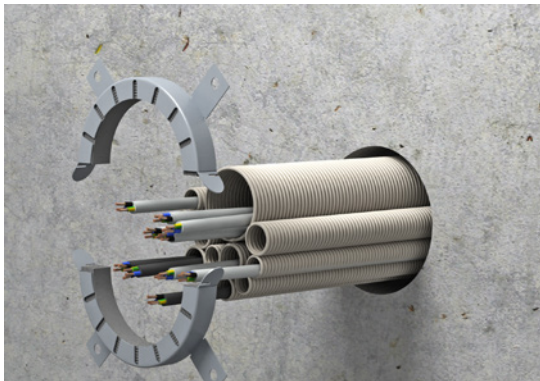
Building element	AWM II – inner Ø [mm]	Fire resistance class*
Plasterboard wall	63–75	EI 120 C/C
Solid wall ≥ 100 mm	63–125	
Solid floor ≥ 150 mm		

* The fire resistance class of the sealing system is reduced to the fire resistance class of the installed service with the lowest fire resistance rating. The fire resistance class of the sealing system is reduced to the maximum fire resistance class of the surrounding building element.

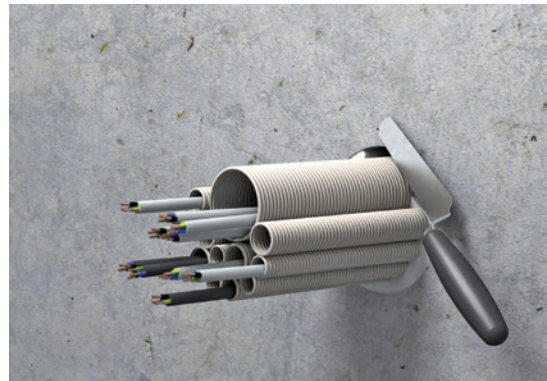
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5. Installation steps

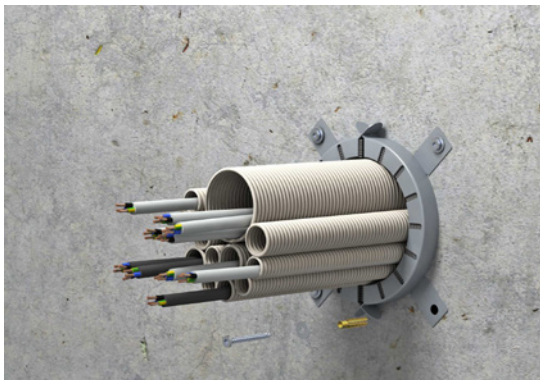
1. Choose the fire protection collar that suits the size of the respective conduit bundle.



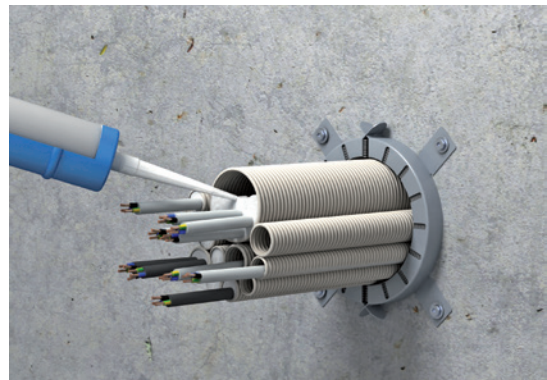
2. Seal all remaining cavities around the bundle with sealing material. The interstices between the individual conduits do not require sealing.



3. The collar must be affixed on both sides of the wall or on the underside of the floor with dowels or in plasterboard walls with continuous threaded rods M6 or M8. The inner diameter of the collar may not exceed the outer diameter of the bundle by more than 15 mm.



4. For reasons of smoke protection, the electrical installation conduits must be filled on both sides with GFM at a depth of at least 20 mm.



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

