

**PYROPLUG® Peg foam plug**  
Mounting instructions



## **PYROPLUG® Peg**

Mounting instructions

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# 1 About these instructions

## 1.1 Target group

These instructions are aimed at installation engineers trained in fire protection.

## 1.2 Using these instructions

- These instructions are based on the standards valid at the time of compilation.
- Before commencing work, read these instructions through once completely.
- Keep all the documents supplied with the system safe, so that the information is available should you need it.
- We will not accept any warranty claims for damage caused through non-observance of these instructions.
- Any images are intended merely as examples. Mounting results may look different.
- In these instructions, cables and lines are referred to simply as cables.
- To find out more about planning and mounting the system, we recommend a comprehensive training course.

## 1.3 Types of safety information

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Type of risk!

Shows a possibly risky situation. If the situation is not avoided, then light or minor injury may result.

---



ATTENTION

Type of risk!

Shows a possibly hazardous situation. If the situation is not avoided, then damage to the product or the surroundings may occur.

---

**Note!**

*Indicates important information or assistance*

## 1.4 Correct use

PYROSIT® Peg is a fire protection insulation system for building interiors, used to close openings in fire-resistant walls or ceilings, through which cables or electrical installation pipes are run. In case of fire, this prevents the spread of fire and smoke in the area of the penetration.

The system is not designed for any other purpose than the one described here. If the system is installed and used for another purpose, any liability, warranty or damage claims shall be rendered null and void.

## 1.5 Applicable documents

- Declaration of conformity
- European Technical Assessment ETA-15/0701
- Safety data sheet, "PYROPLUG® Peg"
- Declarations of performance

## 1.6 Basic standards and regulations

- EN 1366 Part 3
- EN 13501 Parts 1 and 2
- EN 1363
- EU CPR

## 1.7 General safety information

Observe the following general safety information on handling the system:

- The European Technical Assessment ETA-15/0701 of the Austrian Institute of Construction Engineering has priority when creating the fire insulation within the European Union (EU).
- Refer to the ETA and this manual for all the technical specifications, such as the permitted insulation size, wall/ceiling types, fire resistance classes, installations and their first support, working areas, etc.
- It must be ensured that the installation of the fire insulation does not compromise the stability of the adjacent element – even in the event of a fire. Consult the proof of application of the component.
- All the appropriate regulations and technical regulations of other units, in particular those for electrical engineering, must be observed and complied with.
- Fire insulation in ceilings must be safeguarded against loads, in particular including being walked on, by means of suitable measures (e.g. through protectors or covering them with a grating).
- According to ETAG 026-2, the insulation system is to be assigned to the use category Z1. This means that the approved ambient conditions for the use of the product are interiors with any moisture and temperatures above 0 °C.
- Observe the safety data sheets of the products.
- Always wear suitable protective glasses and protective gloves when handling the PYROPLUG® Peg.

## 2 Product description, PYROPLUG® Peg fire protection plug

### 2.1 Basic principles

PYROSIT® Peg is a fire protection insulation system for lightweight partition walls, solid walls and solid ceilings in interior areas with and without moisture.

Correct mounting ensures that the insulation system prevents the cold smoke gases, created during the initial stages of fire, from spreading into adjacent areas. The PYROPLUG® Peg insulation system prevents the spread of fires through the wall/ceiling opening for a period of up to 120 minutes.

PYROPLUG® Peg can be used as cable insulation up to EI 120 for the following installations:

- Solid walls, solid ceilings and lightweight partitions
- Fire insulation of electrical cables, telecommunication cables, fibre optic cables, electrical installation pipes and cable support systems



**Fig. 1:** PYROPLUG® Peg fire protection foam in a solid wall (left) and a lightweight partition (right)

## 2.2 System components

The system consists of the PYROPLUG® Peg fire protection plug and the PYROPLUG® Screed filler and, depending on requirements, is supplemented with the PYROPLUG® FBA-WI cable coil.



Fig. 2: System components

- ① PYROPLUG® Peg fire protection plug
- ② PYROPLUG® Screed filler
- ③ PYROPLUG® FBA-WI cable coil

### 2.2.1 PYROPLUG® Peg fire protection plug

The PYROPLUG® Peg fire protection plug is a permanently elastic, closed-pore plug for cable insulation.

Plugs	Max. opening [mm]	Item number	Packaging unit
FBA-SN65	65	7202 55 3	4
FBA-SN78	78	7202 55 7	4
FBA-SN107	104	7202 56 1	4
FBA-SN122	118	7202 56 5	4
FBA-SN134	128	7202 56 9	4
FBA-SN165	160	7202 57 3	2
FBA-SN200	194	7202 57 7	2
FBA-SN250	240	7202 58 1	2
FBA-SP	-	7202 32 2	1
FBA-WI	-	7202 51 0	1

### 2.2.2 PYROPLUG® Screed filler

The PYROPLUG® Screed filler is an intumescent material and can be used as small insulation and a joint compound in all insulation of the PYROPLUG® series.

Filler	Contents [ml]	Item number	Packaging unit
FBA-SP	310	7202 32 2	1

### 2.2.3 PYROPLUG® FBA-WI cable coil

The PYROPLUG® FBA-WI cable coil is an intumescent material and can be used in the PYROPLUG® Peg, PYROPLUG® Block and PYROSIT® NG systems.

Cable coil	Width/length [mm]	Item number	Packaging unit
FBA-WI	150/5000	7202 51 0	1

## 2.3 Accessories

Depending on the national requirements, the insulation must be given a filled-out identification plate.



Fig. 3: Identification plate for insulation systems

Sign	Language	Item number	Packaging unit
KS-S DE	German	7205 42 5	1
KS-S EN	English	7205 42 9	1
KS-S ES	Spanish	7205 42 7	1
KS-S SE	Swedish	7205 42 6	1
KS-S HR	Croatian	7205 43 8	1

## 2.4 Examination of the fire protection properties under environmental influences

Approved ambient conditions	
Acc. to ETAG 026-2	Use category Z1 Product for use in interiors with any moisture and temperatures above 0 °C.

## 2.5 Declarations of performance

System component	DOP number
PYROPLUG® Peg fire protection plug	2015/05-CPR/002
PYROPLUG® Screed filler	2015/05-CPR/003
The declarations of performance can be viewed for the appropriate products at <a href="http://www.obo.de">www.obo.de</a> .	

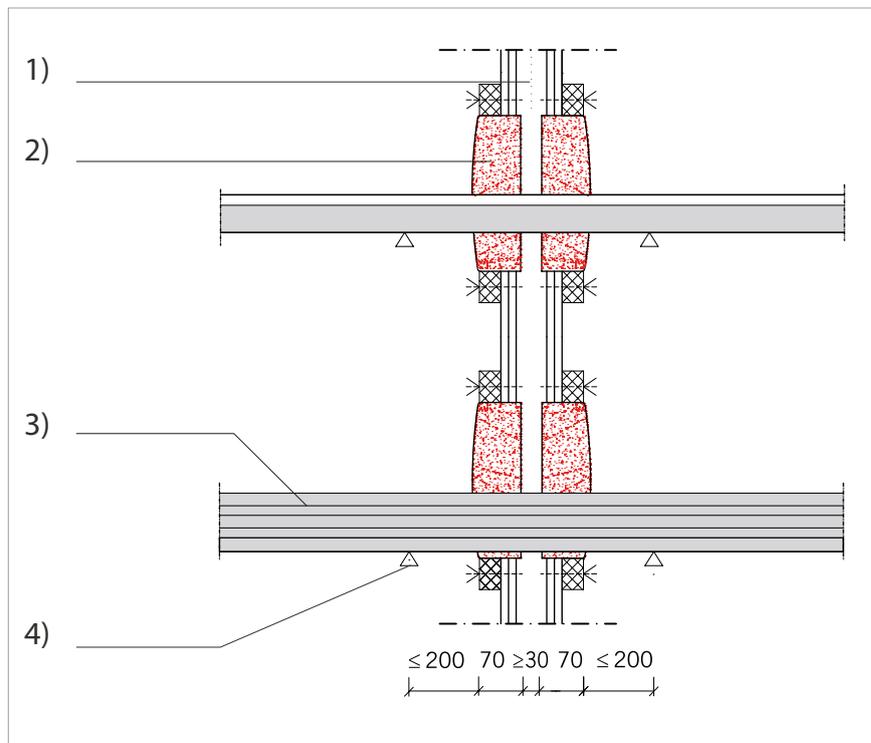
## **3 Approved installations and installation locations**

### **3.1 General information**

- The cables, as well as the control cables and electrical installation pipes, must be fastened on the cable trays and ladders in support structures according to the technical rules.
- The cable support structures (cable trays and ladders) and their supports and fastenings must be made of steel and fastened in such a way on both sides of the fire insulation that, in case of fire, no additional mechanical load can impact on the fire insulation for the length of the required fire resistance class. In this context, the technical regulations and specifications of the manufacturer of the cable support system and the fastening system must be complied with. This also applies to electrical installation pipes.
- Cable trays and ladders may be run through the fire insulation.
- The ends of the electrical installation pipes must be closed off with the PYROPLUG® Screed FBA-SP filler or mineral wool, so that they are smoke gas-tight.
- The total cross-sectional area of the installations, relative to the insulation area, may not be more than 60%.

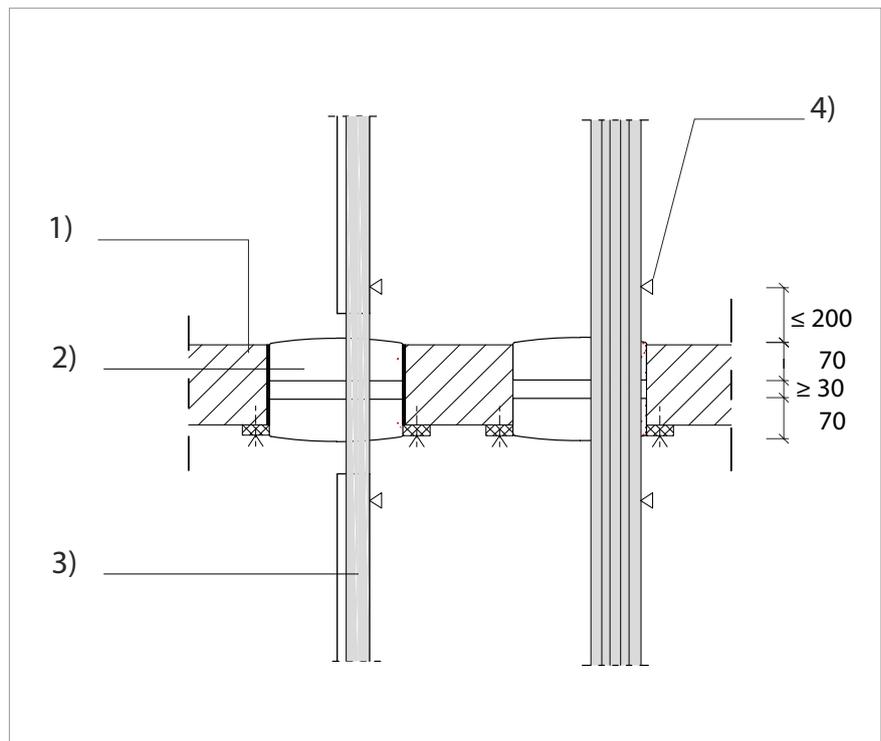
### 3.2 Support of electrical installation pipes and cables for insulation in ceilings and walls

- With wall and ceiling installation, the first support of the cables, cable trays or ladders and the electrical installation pipes must be mounted at a maximum of 200 mm in front of the insulation (maximum spacing in ceilings only required on the upper side).



**Fig. 4:** Support of electrical installation pipes and cables/cable support structures in walls

1. Lightweight partition wall
2. PYROPLUG® Peg plug
3. Cables/cable support structures, electrical installation pipes
4. First support of the cables/cable support structures, electrical installation pipes, pipes



**Fig. 5:** Support of electrical installation pipes and cables/cable support structures in ceilings

1. Solid ceiling
2. PYROPLUG® Peg plug
3. Cables/cable support structures, electrical installation pipes
4. First support of the cables/cable support structures, electrical installation pipes, pipes

### 3.3 Approved installation locations of the insulation system

APPROVED INSTALLATION LOCATIONS OF THE INSULATION SYSTEM					
COMPONENTS	MINIMUM THICKNESS	CLASSIFICATION OF THE STRUCTURE	FIRE RESISTANCE*	MINIMUM INSULATION THICKNESS*	MAXIMUM INSULATION DIMENSION
Solid wall: Porous concrete, concrete, reinforced concrete, masonry	100 mm	EN 13501-2	EI 120	170 mm or 200 mm	ø 250 mm
Lightweight partition wall: Wooden or steel stand-off construction with planking on both sides	100 mm	EN 13501-2	EI 120	170 mm or 200 mm	ø 250 mm
Solid ceiling: Porous concrete, concrete, reinforced concrete	150 mm	EN 13501-2	EI 120	170 mm or 200 mm	ø 250 mm

\* Refer to the tables of the fire resistance classifications for the required insulation thickness, according to the fire resistance class and the penetrated installation.

**Table 1:** Approved installation locations of the insulation systems

### 3.4 Approved installations

#### 3.4.1 Cables

- Jacketed cables, telecommunication cables, fibre optic cables up to a maximum outer diameter of 80 mm
- Firmly tied cable bundles up to a total diameter of 100 mm, consisting of jacketed cables, telecommunication cables, fibre optic cables up to a maximum outer diameter of 21 mm (internal closure of the cable spangle is not required)
- Cables up to a maximum outer diameter of 24 mm

#### 3.4.2 Control cables/electrical installation pipes

- Electrical installation pipes/steel pipes up to a maximum outer diameter of 16 mm with or without cable assignment
- Electrical installation pipes/plastic pipes up to a maximum outer diameter of 16 mm with or without cable assignment

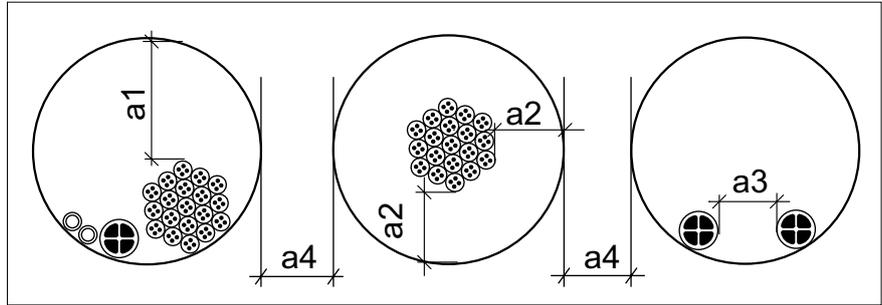
#### 3.4.3 Cable support structures

- Steel cable trays (perforated or unperforated), coated as required
- Steel cable ladders, coated as required
- Classification according to EN 13501-1 at least A2-s1,d0

### 3.4.4 Minimum working spaces

There must be a minimum spacing of 100 mm between two insulations of this approval.

No spacings need be maintained between cables, cable support structures and electrical installation pipes in insulations subject to this approval.



a4: 100 mm

a1, a2, a3: 0 mm

### 3.5 Fire resistance classifications, cable insulation

Installation in lightweight partitions or solid walls of a thickness > 100 mm or in solid walls of a thickness > 150 mm.

	PASSED-THROUGH ELEMENTS	MINIMUM INSULATION THICKNESS OF THE CABLE INSULATION	
		170 mm	200 mm
CABLES/CABLE TRAYS, CABLE LADDERS	Jacketed cables, telecommunication cables and fibre optic cables up to an outer diameter of 21 mm	E 120 Walls: EI 90 / EI 120 <sup>1)</sup> Ceilings: EI 120	E 120 Walls: EI 90 / EI 120 <sup>1)</sup> Ceilings: EI 120
	Jacketed cables, telecommunication cables and fibre optic cables up to an outer diameter of 21 mm < $\varnothing \leq 50$ mm	E 120 Walls: EI 90 Ceilings: EI 90 / EI 120 <sup>1)</sup>	E 120 EI 90 / EI 120 <sup>1)</sup>
	Jacketed cables, telecommunication cables and fibre optic cables up to an outer diameter of 50 mm < $\varnothing \leq 80$ mm	E 120 Walls: EI 60 / EI 90 <sup>1)</sup> Ceilings: EI 60	E 120 Walls: EI 90 Ceilings: EI 90 / EI 120 <sup>1)</sup>
	Firmly tied cable bundles up to a maximum outer diameter of 100 mm, consisting of jacketed cables, telecommunication cables or fibre optic cables up to a maximum outer diameter of 21 mm	E 120 EI 90	E 120 EI 90
	Cables up to a max. outer diameter of 17 mm	E 120 EI 90	E 120 EI 90
ELECTRICAL INSTALLATION PIPES*	Cables up to a max. outer diameter of 24 mm	E 120 Walls: EI 60 Ceilings: EI 90	E 120 Walls: EI 60 Ceilings: EI 90
	Electrical installation pipes/steel pipes up to a max. outer diameter of 16 mm with/without cables	E 120 Walls: EI 120 Ceilings: EI 90	E 120 Walls: EI 120 Ceilings: EI 90
	Electrical installation pipes/plastic pipes up to a max. outer diameter of 16 mm with/without cables	E 120 EI 120	E 120 EI 120

<sup>1)</sup> The cables, cable bundles and cable support structures must be surrounded on both sides of the insulation using the FBA-WI cable coil.  
\* The beginning and end must be closed off with the PYROPLUG® Screed filler or mineral wool, so that they are smoke gas-tight.

**Table 2:** Fire resistance classifications

## 4 Creating insulation

When creating the fire insulation, the assessment ETA-15/0701 and the appropriate national regulations are of primary importance.

**Note!** *Depending on the fire resistance class of the insulation to be created, it may be necessary to insert the cable coil FBA-WI, see „4.2.3 Preparatory work“ on page 18.*

**Note!** *If the cartridge tip has dried out, never press out the cartridge with force. Destruction of the cartridge or the pressing device may result.*

**Note!** *Wear suitable protective clothing, goggles and gloves.*

### 4.1 Creating tuning

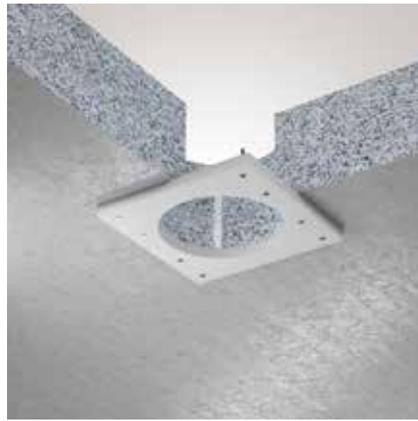
If the thickness of the ceiling, wall or lightweight wall is insufficient to achieve the required component thickness, then tuning or, if necessary, a frame must be created.

#### 4.1.1 Tuning during installation in solid walls and solid ceilings

- If the solid wall or ceiling in the area of the fire insulation does not correspond to the required minimum insulation thickness, then use tuning (Fig. 6 on page 17) made of non-combustible plates (plasterboard, silicate or calcium silicate plates of class A2-s1, d0 or A1 according to EN 13501-1) around the insulation opening, so that the PYROSIT® Peg plug is in full contact with the tuning and wall/ceiling.
- To fasten the tuning (at least 50 mm wide), sufficiently large/long screws and metal anchors or bolt ties, suitable for the substrate, must be used. In porous concrete components, use rapid installation or chipboard screws without anchors. At least four screws must be used for each plate.
- Insulation in ceilings must be safeguarded against loads, in particular including being walked on, by means of a cover in the form of grating or reinforcement.

#### 4.1.2 Tuning for installation in lightweight partitions

- Use tuning made of non-combustible plates (plasterboard, silicate or calcium silicate plates of class A2-s1, d0 or A1 according to EN 13501-1) around the insulation opening, so that the PYROSIT® Peg plug is in contact of at least 60 mm with the tuning and wall/ceiling (Fig. 6 on page 17).
- To fasten the tuning (at least 50 mm wide), sufficiently large/long rapid installation or chipboard screws must be used. At least four screws must be used for each plate.
- The cavity between the planking of the lightweight partition must be tightly plugged for at least 10 cm all around with mineral wool (melting point  $\geq 1,000$  °C, minimum density 40 kg/m<sup>3</sup>).
- For walls with a wooden stand-off subconstruction, there must be a spacing of at least 100 mm between the insulation and wooden stands, which is plugged with mineral wool (classification A2-s1, d0 or A1 according to EN 13501-1). The cross-section of the wooden stand must be at least 50 x 75 mm (width x depth).



**Fig. 6:** Tuning for:  
Ceiling



solid wall or lightweight partition wall

Tuning can be arranged on one or both sides, as required.

## 4.2 Creating insulation for solid walls and ceilings

### 4.2.1 Tips and notes

- For optimum cutting of the OBO fire protection products, we recommend using a knife with a serrated blade.
- Single-person mounting is also possible for the ceiling insulation.
- The insulation system can be painted over with standard emulsion paint.
- After filling the gaps between cables, spandrels and open gaps with the PYROPLUG® Screed filler, they can be smoothed over with a moist brush.
- Cutting out a circular sector allows overlarge PYROPLUG® Peg plugs to be made to fit simply.

### 4.2.2 Special features of installation in solid walls and solid ceilings

- The fire insulation may be installed in openings whose soffit consists of a flush, concreted-in pipe (lost lining) made of PE-HD (EN 1519-1, EN 12201-2, EN 12666-1), ABS (EN 1455-1) or SAN+PVC (EN 1565-1) (see image Fig. 7 on page 17).



**Fig. 7:** Lost lining in solid ceiling

### 4.2.3 Preparatory work

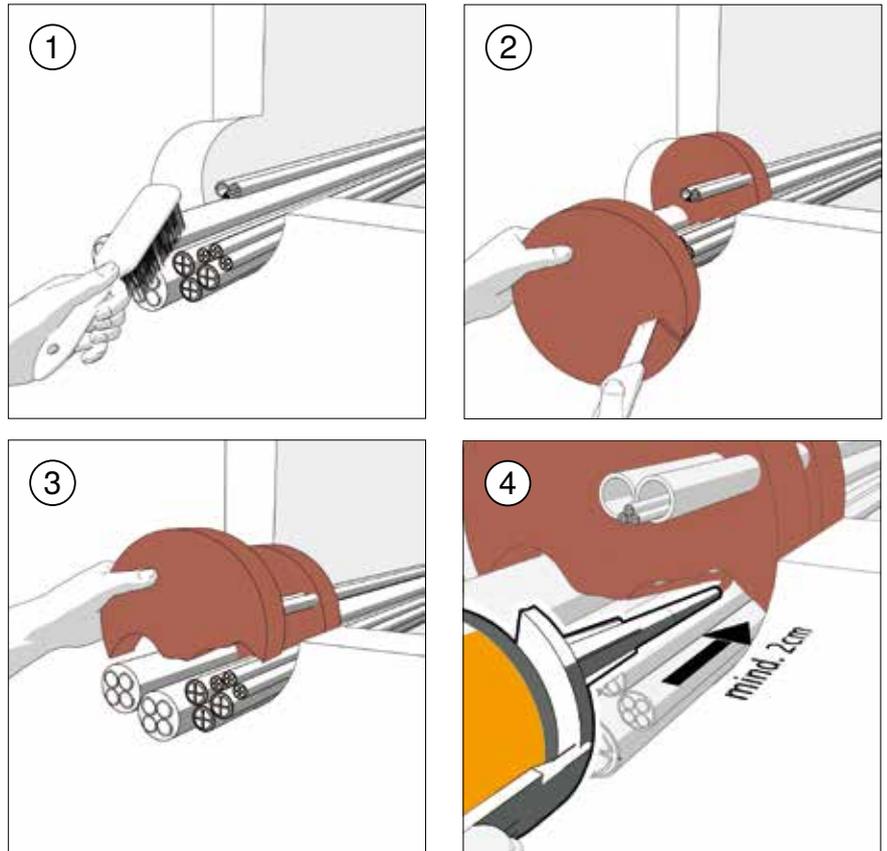
To create cable insulation offering a fire resistance class EI 120, the cable coil FBA-WI may need to be mounted around the cables or cable support structures (see „Table 2: Fire resistance classifications“ on page 15):



**Fig. 8:** Insertion of the cable coil FBA-WI

- Cut off a sufficiently long piece of FBA-WI cable coil and remove the white protective film.
- Wind the cable coil FBA-WI around the installations on both sides (the adhesive side must touch the cables or the cable support structures – the glass mesh points outwards).
- Connect the start and the end of the FBA-WI cable coil with at least two steel clamps or steel wire ( $\varnothing$  1 mm). The overlapping length must be approx. 45 mm.
- Multiple strips, one behind the other, can be also be arranged with an overlap length of min. 45 mm. The joints should also be connected with steel clamps or steel wire.

#### 4.2.4 Mounting steps



**Fig. 9:** Mounting steps for fire protection plug

- ① Clean the component soffit with a brush or hand cleaner.
- ② Select the suitable size of PYROPLUG® Peg plug for the component opening (see system components). Cut two PYROPLUG® Peg plugs according to the passed-through installations.
- ③ Insert the cut PYROPLUG® Peg plugs into the component opening so that they fit tightly. The air gap between the two PYROPLUG® Peg plugs must be at least 30 mm (insulation thickness 170 mm) or at least 60 mm (insulation thickness 200 mm) („Table 2: Fire resistance classifications“ on page 15)).
- ④ Fill gaps between cables, spandrels and open joints on both sides with PYROPLUG® Screed filler to a depth of at least 20 mm.

#### 4.2.5 Attaching the identification plate

- Fill out the identification plate for insulation systems clearly with a permanent marker and attach it permanently on one side next to the insulation.

### 4.3 Retroinstallation of cables and pipes

Newly added installations must fulfil all the requirements of the approval. (For example, first support, if necessary installation of the FBA-WI cable coil).

- Remove the PYROPLUG® Peg plug from the insulation.
- Cut the PYROPLUG® Peg plug according to the new cables to be passed through so that a sufficiently large recess is created.
- Reinsert the two cut PYROPLUG® Peg plugs into the component opening so that they fit tightly.
- Alternatively, a suitable cutting/drilling tool can be used to create a sufficiently large opening in the insulation. (The necessary protective measures and safety regulations must be taken into account.)
- The PYROPLUG® Peg plug may knock against individual cables.
- Fill gaps between cables, spandrels and open joints on both sides with PYROPLUG® Screed filler to a depth of at least 20 mm.

### 4.4 National requirements

**Note!** *When mounting the system outside Germany or Austria, please note that other country-specific requirements may exist, in addition to the national construction law.*

#### **Germany/Austria**

- The insulation system must be permanently labelled with a sign next to the insulation.
- After work has been completed, the client must be presented with a written declaration of conformity.

## 5 Maintenance

PYROPLUG® Peg requires no maintenance. Nonetheless, we recommend carrying out a visual inspection of the insulation at regular intervals, as part of the inspection of the electrical systems:

- Check that all the component parts of the insulation are tightly sealed with PYROPLUG® Peg.
- Reseal any gaps with PYROPLUG® Peg.

## 6 Disposal

**Note!** *Comply with national regulations and specifications!*

### **Disposal during mounting**

- Material: As household waste
- Packaging: As household waste

### **Disposal during building demolition**

Installed PYROPLUG® Peg insulation must be disposed of as a mixed construction waste.

### **Disposal after a fire**

If the PYROPLUG® Peg system has been subjected to fire damage, then the complete insulation must be removed and disposed of. We recommend obtaining the advice of the local fire damage restorer during disposal.

---

### **Danger from corrosive effect of fire residues!**

If there is a fire in the interior of the pipe sleeve, the burned cable insulation will create corrosive gases, which can have an irritant and corrosive effect. Before opening and disposing of system components which have been subjected to a fire, wear breathing protection and protective clothing.

---





## 7 Appendix – Declaration of conformity (sample)

### Insulation system according to EN 1366 Part 3

**Name and address** of the company which erected the cable insulation

**Building site or building** with address

**Required fire resistance class**

**Date of erection**

This is confirmation that

- The cable insulation PYROPLUG® Peg, fire resistance classes to EI 120 according to EN 1366-3 and EN 13501, European Approval Number of Deutsches Institut für Bautechnik DIBt ETA-15/0701 for installation in (component with fire resistance class, e.g. "Walls of fire resistance class EI 90") was correctly created and installed as well as labelled according to all the individual requirements and in compliance with all the requirements of the named proof of usability and
- The building products used to produce the object of the approval (e.g. insulation compounds, mineral fibre plates, frames, etc.) were labelled according to the requirements of the proof of usability.

Place, date

stamp and signature

This confirmation must be given to the builder for forwarding, if necessary, to the responsible construction supervisory board.





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