SAFETY AND PROTECTION INSTALLATIONS

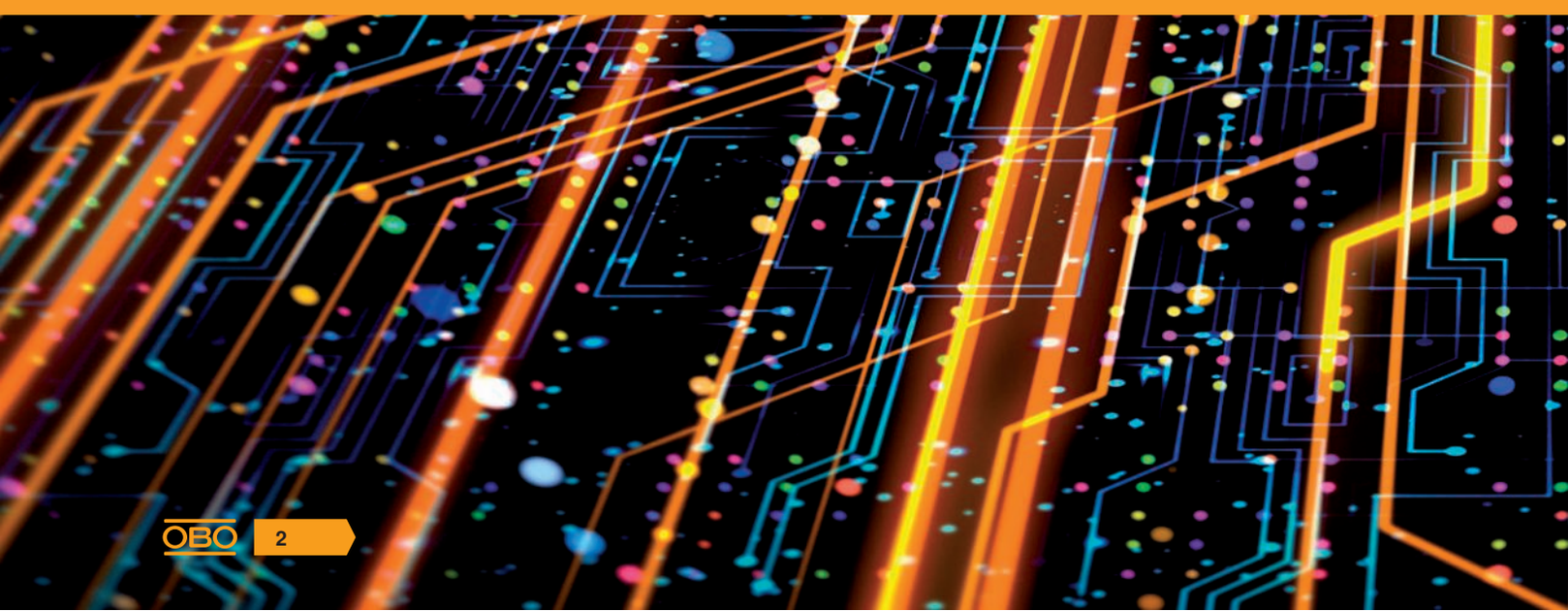
Insulation & cable bandages

OBO BETTERMANN

Building Connections

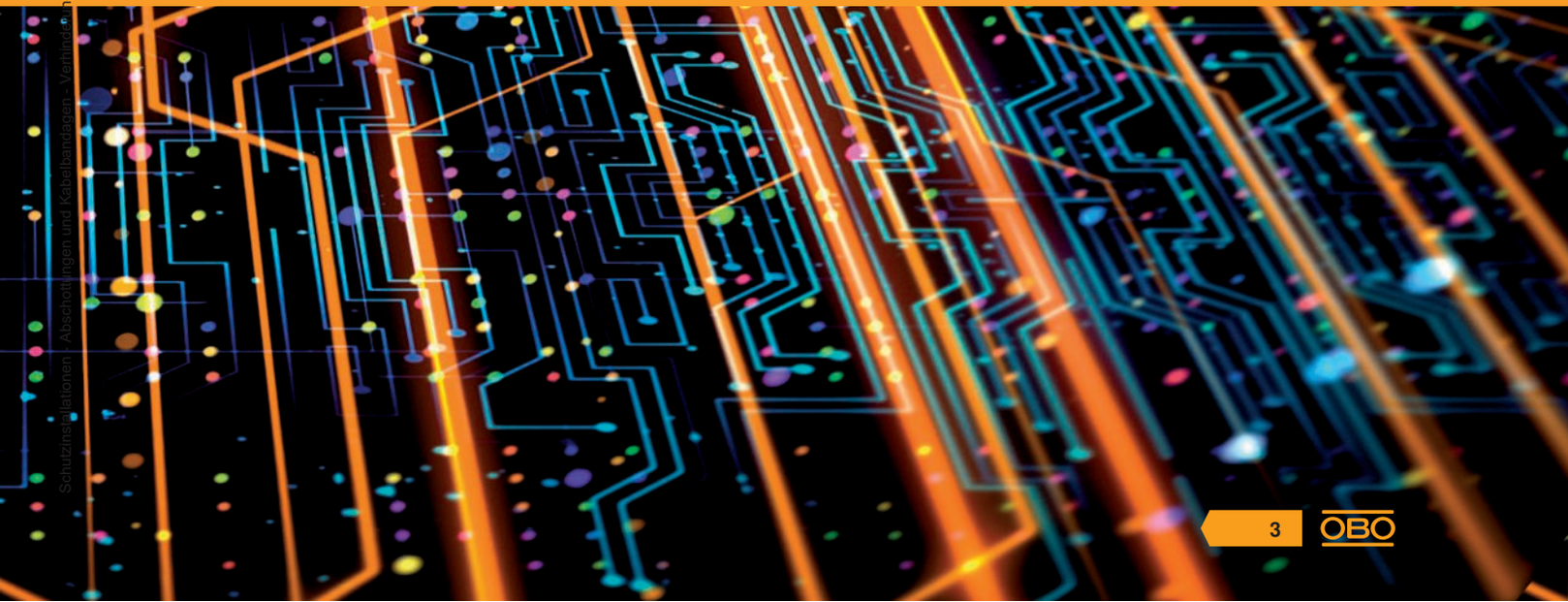
Digitalisation, the Energiewende (energy transition), mobility – the future is gathering speed. At OBO Bettermann, we're proud to be a driving force. And as a facilitator, we make connections. Today, we are already developing the innovative electrical infrastructure systems and solutions of tomorrow. Reliably, flexibly, sustainably.

Already today, OBO is one of the leading manufacturers of installation systems for the electrical infrastructure in buildings and plants. When it comes to the friction-free flow of power, energy and data, engineers and tradespeople worldwide rely on the comprehensive range from OBO.



OBO applies its slogan "Building Connections" to around 30,000 high-quality branded electrical products and services, which are used in application solutions for projects in industry, business and infrastructure.

OBO operates a global network and employs more than 4,200 people in more than 60 countries. The headquarters of the family company, which was founded in 1911, is located in Menden, Germany. In addition, more than 40 subsidiaries are present in markets on all continents.



Improved structure, sharpened profile

Each of our products carries a benefit which only the OBO brand can offer. Products are developed, manufactured and tested with a high level of competence – from the idea through to the final check. From flawless logistics through to practical information – we can provide support at every level. We can offer additional security through certificates on the conformity of our products with the most important standards and directives. In a nutshell – OBO helps you more. In every location and in every phase of a project.

To maintain this, we continually challenge ourselves. Not as an end in itself but for the better processing of each customer's requests – fast, reliably and future-oriented. That is the reason we have not only established our three central application areas, but also reworked our catalogue structure. In this way, we can display our service offers more clearly, highlight the product benefits more effectively and illustrate the respective application areas more tangibly.

OBO Product Worlds

Industrial installations

- Cable support systems
- Connection and routing systems
- Fastening material

Building installations

- Cable routing systems
- Device installation ducts, trunking and poles
- Floor installation systems and underfloor applications
- Installation systems

Safety and protection installations

- Surge protection
- External lightning protection
- Equipotential bonding and earthing
- Insulation and cable bandages
- Fire-tested support and routing systems
- Fire protection ducts

It's your choice – from now on there's a catalogue for each OBO product category. Simply select the catalogues and order together with a collection case.

Always at your service

If you have questions about products, installation or planning – OBO staff offer exceptionally competent support at each and every phase of your project. So that you are always on the safe side.

- Product and system information, digitally or printed
- Selection and planning aids on the web, as a CAD application or in printed form, as well as in the myOBO app
- 2D and 3D product data for planning
- Field service and branch offices in 60 countries
- Engineering services for major projects

Our Customer Service can be contacted on +49 23 73 89 - 17 00

Monday–Thursday	07.30 - 17.00
Friday	07.30 - 15.00

or via e-mail at export@obo.de

OBO Construct: Planning has never been so easy!

OBO Construct is a collection of planning tools that were developed especially for electrical installation engineers and planners. This platform offers support in product configuration and a selection aid for the matching systems, and automatically generates a corresponding parts list. With OBO Construct, you can therefore access and edit projects at any time and at any location – via your smartphone, tablet or desktop PC. Versions of the app are available for iOS and Android.

Laden im App Store

JETZT BEI Google Play

OBO Academy: From the basics to the concrete application

The OBO Academy has been offering an extensive further education programme for many years. This programme helps with first-hand information and expertise, giving you that essential head start in terms of in-depth knowledge. In our seminars, planner days or online seminars, we provide you with current developments, trends, norms and regulations – systematically, comprehensively and practically oriented.

Planning virtually, implementing efficiently

When planning and implementing electrical technology, BIM (building information modelling) is becoming increasingly more important. We can now offer our partners the first solution to unlock the full potential of the BIM method for practical applications - giving you more planning efficiency, transparency and cost security with complex projects. Find out about the advantages of BIM@OBO now:

- Intelligent libraries structured according to individual systems
- Available for Revit, as a plug-in and directly via the OBO website
- Simple integration via drag & drop
- Practical display of material lists for ordering directly
- Intuitive user interface

You can find further information at **obo.de/BIM**. Welcome to the future!

Clear delivery capability

With an approximate storage area of 38,000 m² and five strategically well-located sales warehouses, we ensure that our products arrive at the right place at the right time. Our logistics specialists work hard to ensure all our partners are supplied flexibly and as quickly as possible. This you can rely on!

1 **Sales Warehouse North**
Bad Fallingbostel

2 **Sales Warehouse West**
Iserlohn

3 **Sales Warehouse East**
Delitzsch

4 **Sales Warehouse South-West**
Groß-Rohrheim

5 **Sales Warehouse South**
Dasing


PYROMIX

Planning aids

First protection aim: Maintenance of the fire sections

1

Insulation systems reliably seal the ceiling and wall penetrations required for installations against fire and smoke.

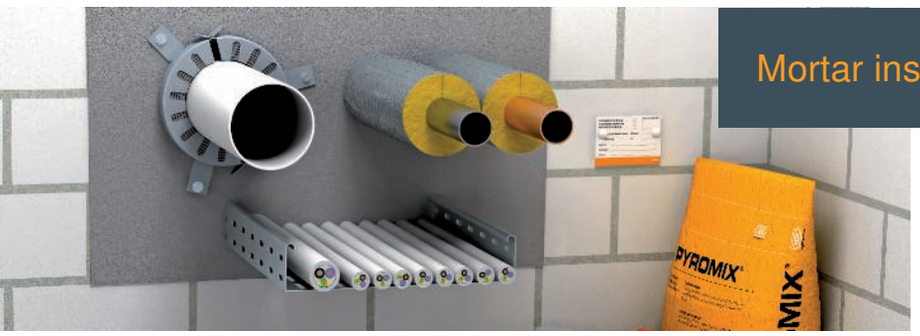
The division of buildings into fire sections protects unaffected building sections against the spread of fires for specific periods of time. Insulation maintains the fire sections, thus limiting the spread of fire and smoke. These constructive measures protect people and property, allowing fire brigades to prevent the spread of fires to other parts of the building through extinguishing measures.

Function of firewalls
Firewalls should ensure that a fire cannot pass to neighbouring buildings or building sections. This creates so-called fire sections. The construction design of these firewalls (materials, fire resistance classes, stress values) is regulated by building regulations and standards.

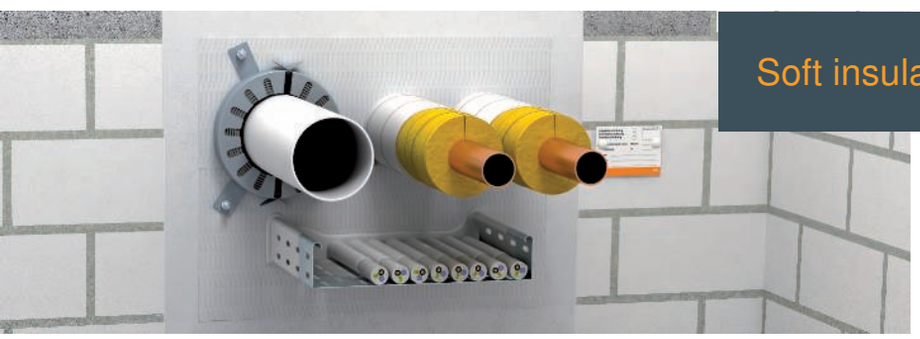
Electrical cables and pipes may only be run through walls and ceilings at the ends of rooms when there is a guarantee that they do not present an opportunity for fire and smoke to spread. Insulation systems reliably seal the ceiling and wall penetrations required for installations against fire and smoke.

Special requirements
The following requirements apply to cable penetrations with cable insulation:
- The spread of fire and smoke must be prevented
- Room closure must be guaranteed
- On the side of the insulation away from the fire, the surfaces of cables, pipes, cable support systems and the surface of the insulation may not heat up to an impermissible level

Insulation systems



Mortar insulation systems



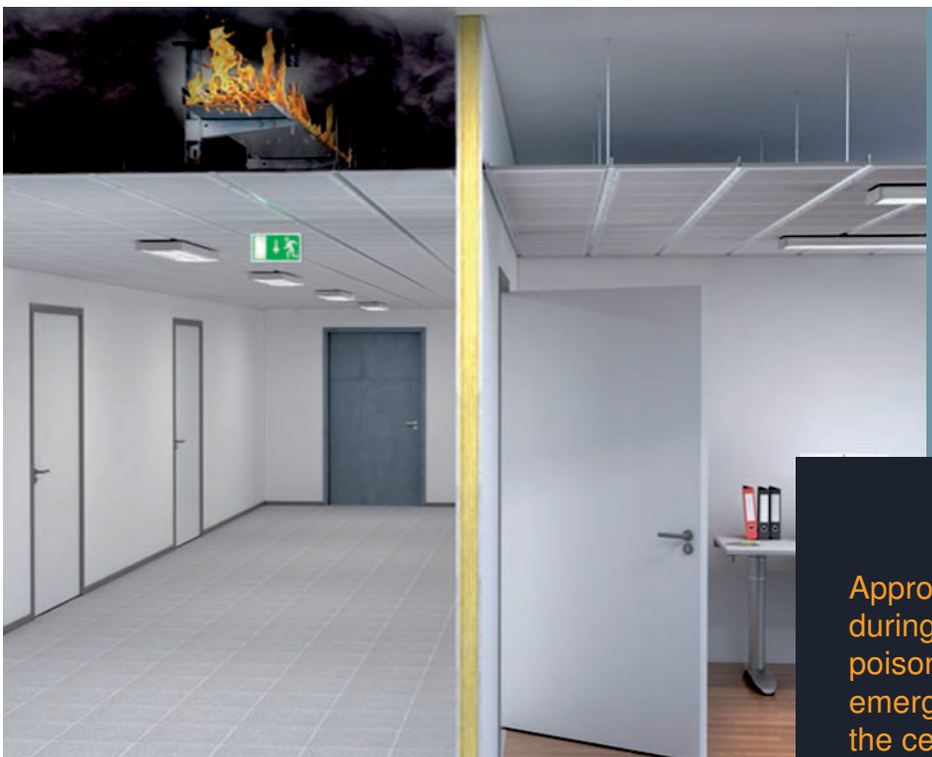
Soft insulation systems

Foam systems

Pipe shell systems

Cable bandages

Second protection aim: Protection of escape routes



2

Approximately 95% of all deaths during fires are caused by smoke poisoning! In case of fire, emergency and escape routes are the central lifeline of the building and must remain usable under all circumstances.

What is an emergency and escape route?
According to the construction regulations, there must be routes in buildings which not only permit access to the building in a horizontal and vertical direction in normal situations, but which also offer the option of rescue in case of fire. It is therefore obligatory to equip buildings with at least one constructive emergency and escape route. Additional emergency and escape routes may also be necessary, depending on the type of building.

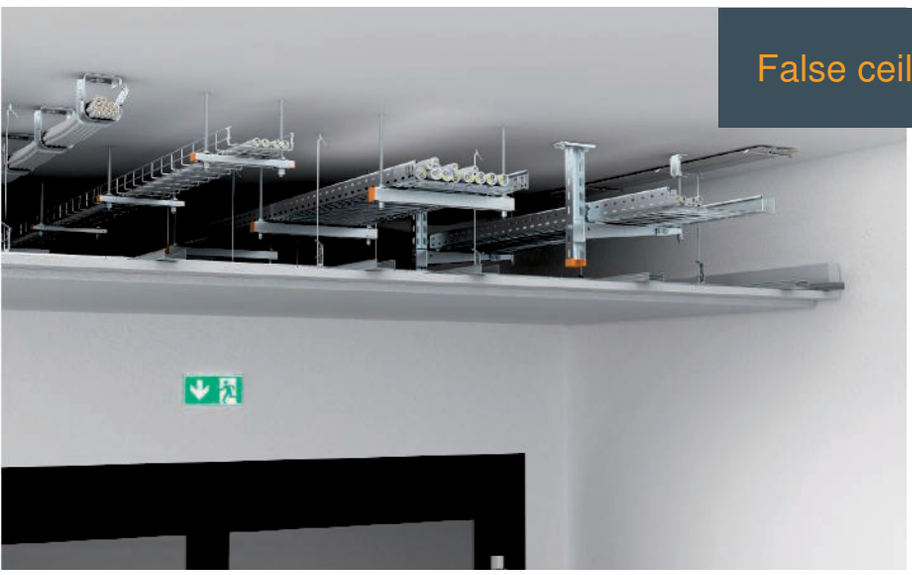
These include:
- Necessary staircases (vertical access)
- Connecting rooms between the necessary stairwells and exits to the outside
- Necessary corridors (horizontal access)

There must be a guarantee that, if there is a fire, these routes can be used to leave the building without any risk. In addition to evacuation, the emergency and escape routes also aid the local fire brigades as a point of attack.

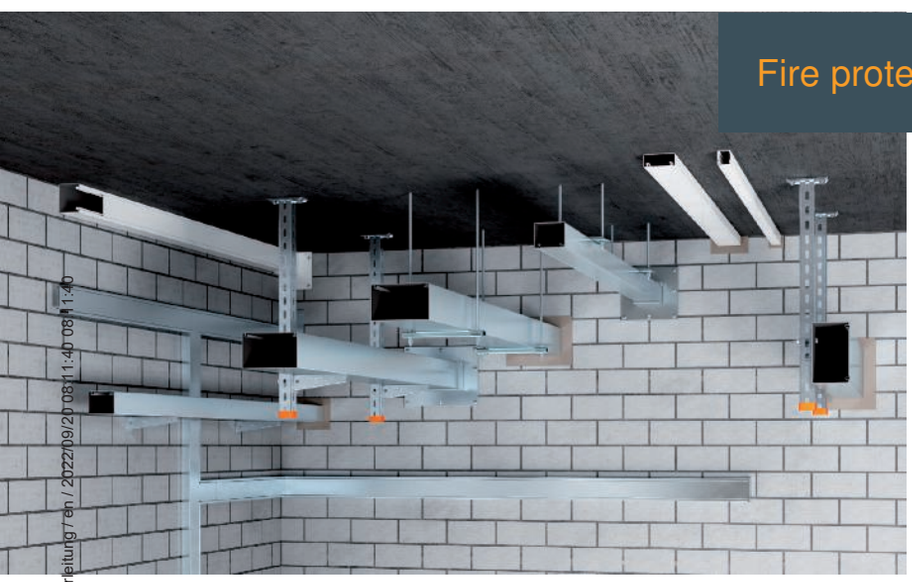
In the area of emergency and escape routes, an installation may not pose an additional fire load. This requirement can be fulfilled using an appropriate type of installation:
- Concealed installation
- Installation in fire protection duct systems
- Installation above suspended fire protection ceilings
- Use of non-combustible materials
- Routing of cables with improved behaviour in case of fire

Escape route installations

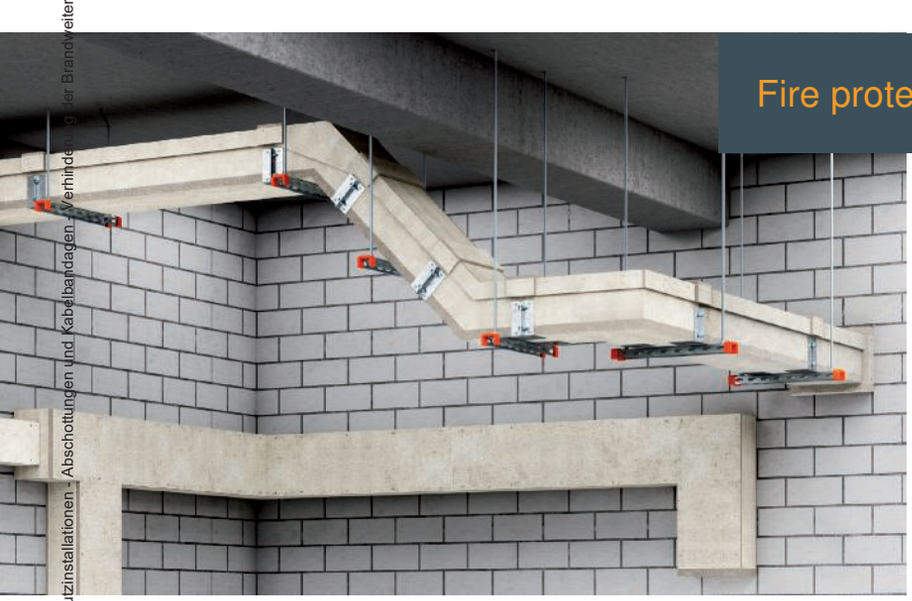
False ceiling mounting



Fire protection ducts, metal



Fire protection ducts, concrete



Third protection aim: Maintaining the functionality of electrical systems

3

E30 E90

If there is a fire, emergency and escape routes must remain usable and important technical equipment, such as emergency lighting, fire alarm systems and smoke extraction systems, continue to function. Therefore, it is essential that the power supply for these systems is specially protected. In addition, certain technical systems must support the fire brigades in fighting fires for a sufficiently long period of time.

Where is the maintenance of electrical function required?
Technical equipment that maintains electrical function is required for the following buildings and systems:
- Hospitals
- Hotels and restaurants
- Tower blocks
- Meeting points
- Commercial buildings
- Closed large garages
- Underground railway systems
- Chemicals industry
- Power stations
- Tunnels

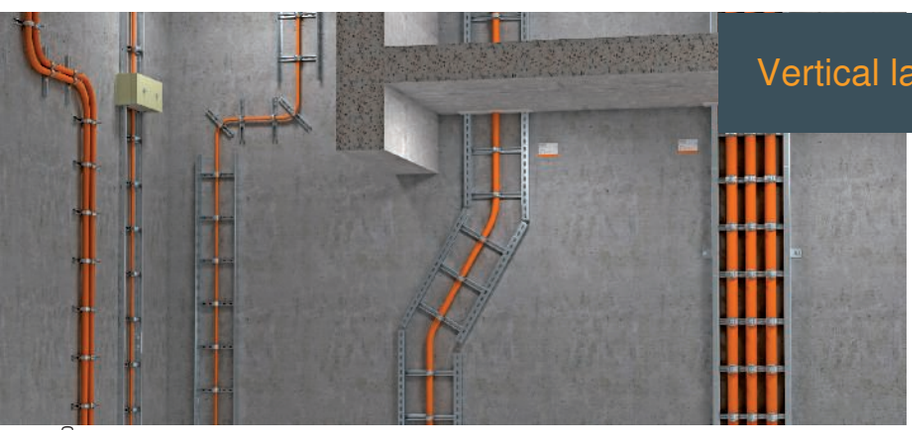
This could be because these constructions are regularly frequented by many people, which creates an increased safety risk for gatherings of people. However, with certain systems, property and the environment must also be protected.

30 minutes: Maintenance of electrical function for safe evacuation and rescue
The first 30 minutes after the start of a fire play an important role. For the affected building to be cleared quickly the maintenance of electrical function must be guaranteed for the following equipment during this time:
- Safety lighting systems
- Lifts with fire control
- Fire alarm systems
- Alarm systems and systems to issue instructions
- Fire extraction systems

90 minutes: Maintenance of electrical function for effective firefighting
To support firefighting operations, it is imperative that certain technical equipment is supplied with sufficient power even up to 90 minutes after a fire breaks out in a building. This equipment includes:
- Water pressure increase systems for fire water supply
- Mechanical smoke extraction systems and smoke protection pressure systems
- Fire brigade lifts
- Bed lifts in hospitals and similar equipment

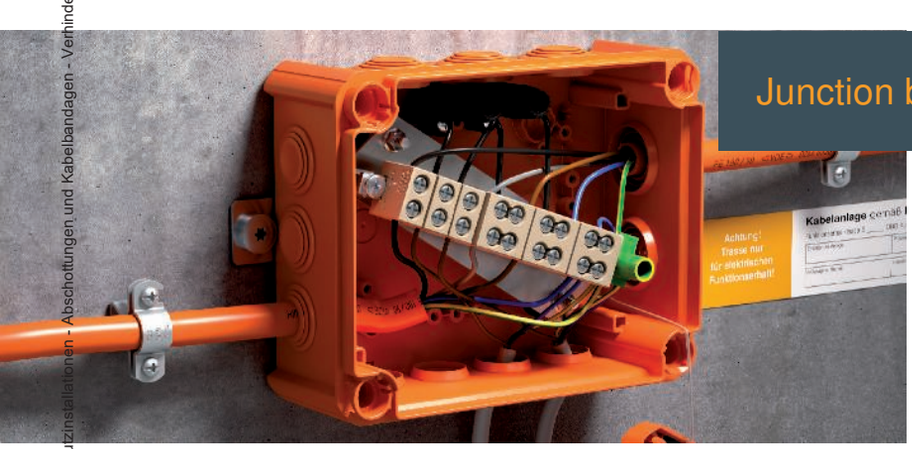
Systems that maintain the electrical function

Cable trays and cable ladders



Vertical ladders

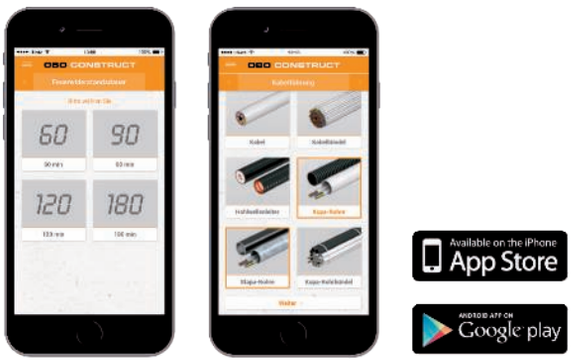
Individual routing



Junction boxes

Technical support

OBO BSS seminars: First-hand knowledge
With a comprehensive programme of training courses and seminars on the subject of fire protection systems, OBO is able to support its customers with specialist knowledge from a single source. Alongside the basic theoretical principles, the programme also deals with practical implementation in everyday applications. Special calculation and application examples round off the comprehensive programme of knowledge transfer.



The OBO construct BSS online Tool

It works on any computer with Internet access. The BSS software simplifies the planning of suitable fire protection systems. After the basic data has been entered, the user obtains an overview of the approved insulation systems, as well as of any necessary and optional system accessories. Thus, they can create, edit and export a personal shopping list in a targeted manner. All the key information on standards and approvals can be found directly with the systems.

BSS app

The OBO Construct BSS app makes finding the right product even quicker. In only a short time, the app determines the fire protection systems required for the appropriate project. It offers the full scope of the Construct BSS module, allowing simple planning and material calculations in any location. It's extremely practical, as the parts list can be sent directly by e-mail. The app is available for Android and Apple devices from Google Play Store and the iTunes App Store.

Fire protection guide for electrical installations

In the second edition of the fire protection guide, we have again compiled lots of useful information. The interconnections of fire protection between different types of technical building equipment are now explained in even more detail. Perhaps you will find some new information in this edition which can help you in the planning and implementation of fire protection systems.

Would you like an overview of all certificates?
Simply scan the QR code.

Insulation, maintenance of the fire sections

PYROMIX® mortar insulation
System description

The PYROMIX® system from OBO is used to create cable and combination insulation made of a mineral fibre-free special mortar. Depending on the amount of water added, the finished compound can be applied to openings by hand, with pumps or with presses. The high level of substrate adhesion makes lining unnecessary for small insulation areas. The porous consistency of the mortar means that retroinstallation is easy. If there is a fire, the fire protection mortar reliably prevents the spread of fire and smoke.

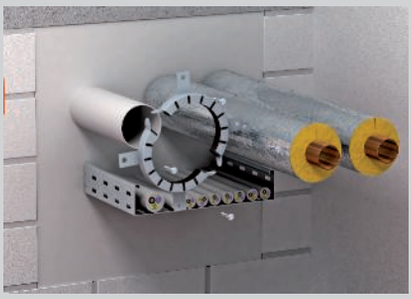
PYROMIX® mortar insulation
Installation principle

Stir the mortar with water until the desired consistency is reached.

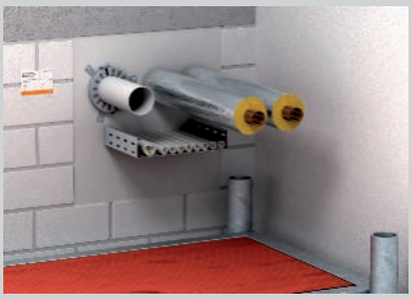
Apply mortar to the opening, use lining as necessary.

Use approved section insulation for metal pipes.

Section insulation should also be applied to steel electrical installation pipes.



Mount pipe sleeves for combustible pipes on both sides of the wall.



Apply labelling to combination insulation for various structures.

Classification to DIN

S30 S60 S90

Classification to EN

EI15 EI30 EI45 EI60 EI90 EI120

Erectors of combination insulation systems have to be trained.

PYROMIX® mortar insulation
Registration data

Combination insulation in walls / ceilings

Fire resistance class	S30, S60, S90
Proof of application	General construction approval of DIBt, Berlin
Approval number	Z- 19. 15-2046
Testing standard	DIN 4102 Part 9
Masonry mortar according to DIN EN 998-2	Sort 2.5

Note:
For the legally compliant documentation, the European Technical Assessment (ETA), the general design approval (aBG) and the declaration of performance (DoP) are needed. The labelling of the insulation system and the submittal of the declaration of conformity statement are mandatory after the installation. All certificates and a sample of the declaration of conformity statement that can be edited are available from the download area at www.obo.de.

Areas of installation
Insulation systems in walls/ceilings

Component	Rigid walls	Flexible walls	Rigid floors
			
Min. component strength	10 cm (S30/S60/S90)	–	15 cm (S30 / S60 / S90)
Min. insulation thickness	15 cm (S30 / S60 / S90)	–	15 cm (S30 / S60 / S90)
Opening size	↔ ≤ 100 cm ↕ ≤ 200 cm	–	↔ ≤ 100 cm ↕ Unlimited
	↔ ≤ 200 cm ↕ ≤ 60 cm x ≤ 60 cm	–	

PYROMIX® mortar insulation
Installations

Cable

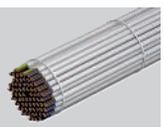
All Ø ✓

Pipe bundle of electrical installation pipes

Only with PYROCOMB® Intube ✓

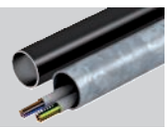
Cable bundle

Ø 100 mm,
cable Ø 21 mm ✓



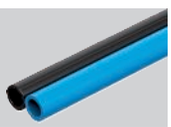
Electrical installation pipe made of steel

Ø 63 mm,
cable Ø 22 mm ✓



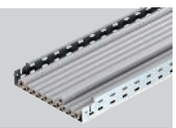
Individual lines for control purposes

Ø 15 mm ✓



Cable support systems

Profiles made of steel,
aluminium or plastic ✓

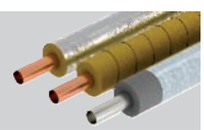


Electrical installation pipe made of plastic, rigid

Ø 63 mm,
cable Ø 22 mm ✓

Metal pipes with path insulation

Steel, stainless steel and
cast steel Ø 219.1 mm,
copper Ø 88.9 mm ✓

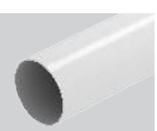


Electrical installation pipe made of plastic, flexible

Ø 63 mm,
cable Ø 22 mm ✓

Plastic pipes

Ø 200 mm ✓



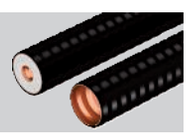
Special installations

Double solar pipes

Stainless steel with AEROGEL
insulation and accompanying
cable (PVC sheathing)
Ø 25 mm (150 mm
component) ✓

Hollow shaft conductor

HELIFLEX HCA...-...J
Ø 61.4 mm ✓



Hydraulic hoses

HANSA-FLEX HD 200-2 SN
Ø 55.9 mm (150 mm
component) ✓

Details on the version can be found in the proof of suitability or mounting instructions.
All the stated dimensions are maximum values.

PYROMIX® mortar insulation

PYROMIX® dry mortar in paper sack

Type	Contents kg	Pack Piece	Weight kg/100 pc.	Item no.
MSX-S1	20	1	2,000.000	**7206104**

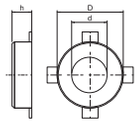
Mortar to create cable and combination insulation in solid walls and ceilings. Suitable for pumping, pressing and for manual installation. Adding approx. 6 litres of water to 20 kg of dry mortar produces about 20 litres of workable compound.
In dry, frost-free rooms, the dry mortar can be stored for at least 12 months in closed original containers.

PYROMIX® dry mortar in bucket

Type	Contents kg	Pack Piece	Weight kg/100 pc.	Item no.
MSX-E1	10	1	1,000.000	**7206058**

Mortar to create cable and combination insulation in solid walls and ceilings. Suitable for pumping, pressing and for manual installation. Adding approx. 3 litres of water to 10 kg of dry mortar produces about 10 litres of workable compound.
In dry, frost-free rooms, the dry mortar can be stored for at least 12 months in closed original containers.

Pipe sleeve with 2 fastening straps

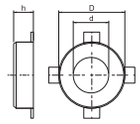


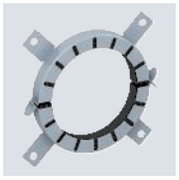
Type	Pipe Ø mm	Dim. h mm	Dim. D mm	Dim. d mm	Pack Piece	Weight kg/100 pc.	Item no.
TCX-032	32-34	26	50	36	1	6.500	**7202200**
TCX-040	40-42	26	58	44	1	7.000	**7202201**
TCX-050	50-52	26	68	54	1	8.000	**7202203**

Pipe sleeve for combustible pipes.
If there is a fire, fire protection inserts inside the sheet steel housing expand, exerting a very great pressure onto the burning thermoplastic pipes.
Fastening with anchors or M6 threaded rods.

Pipe sleeve with 4 fastening straps

Type	Pipe Ø mm	Dim. h mm	Dim. D mm	Dim. d mm	Pack Piece	Weight kg/100 pc.	Item no.
TCX-063	63-65	26	94	67	1	15.500	**7202204**
TCX-075	75-77	26	106	79	1	19.000	**7202205**
TCX-090	90-92	26.6	132	94	1	37.000	**7202206**
TCX-110	110-112	26.6	155	114	1	46.000	**7202207**
TCX-125	125-127	40	172	129	1	70.000	**7202208**

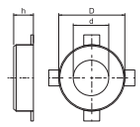


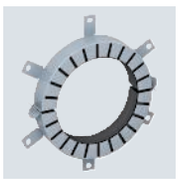


Pipe sleeve for combustible pipes.
If there is a fire, fire protection inserts inside the sheet steel housing expand, exerting a very great pressure onto the burning thermoplastic pipes.
Fastening with anchors of M6 threaded rods up to size 75 mm, then M8.

Pipe sleeve with 6 fastening straps

Type	Pipe Ø mm	Dim. h mm	Dim. D mm	Dim. d mm	Pack Piece	Weight kg/100 pc.	Item no.
TCX-140	140-142	40	200	144	1	106.000	**7202209**
TCX-160	160-162	40	220	164	1	107.000	**7202210**





Pipe sleeve for combustible pipes.
If there is a fire, fire protection inserts inside the sheet steel housing expand, exerting a very great pressure onto the burning thermoplastic pipes.
Fastening with anchors or M8 threaded rods.

St G

Threaded rod

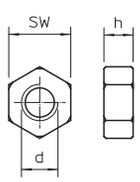
Type	Thread	Dim. d mm	Dim. L mm	Pack Piece	Weight kg/100 pc.	Item no.
TR M6 1M G	M6	6	1000	10	18.300	**3141047**
TR M8 1M G	M8	8	1000	10	30.000	**3141128**

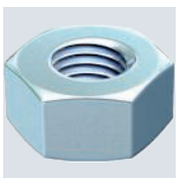
Threaded rod to DIN 976.

St G

Hexagonal nut DIN 934

Type	Thread	SW mm	Dim. h mm	Dim. d mm	Pack Piece	Weight kg/100 pc.	Item no.
HN M6 G	M6	10	5.2	6	100	0.221	**3400069**
HN M8 G	M8	13	6.8	8	100	0.500	**3400085**



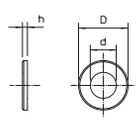


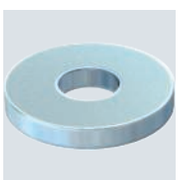
Hexagonal nut to DIN 934 with metric thread.

St G

Washer ISO 7093

Type	Thread	Dim. d mm	Dim. D mm	Dim. h mm	Pack Piece	Weight kg/100 pc.	Item no.
WS M6 D28 G	M6	6.5	28	2.5	100	1.104	**3402207**
WS M8 D28 G	M8	8.5	28	2.5	100	1.100	**3402215**





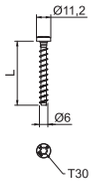
Washer of large outer diameter for universal use.

Always indicate the item number when ordering.

PYROMIX® mortar insulation

MMS-plus P round head tie, with panhead

St G

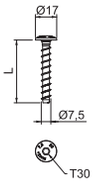


Type	Dimension mm	Dim. L mm	Drill hole Ø mm	Head Ø mm	Screw system	Pack Piece	Weight kg/100 pc.	Item no.
MMS+ P 6x40	6x40	40	5	11.2	Torx	100	1.000	**3498105**
MMS+ P 6x50	6x50	50	5	11.2	Torx	100	1.000	**3498108**

Bolt tie for direct mounting without additional anchors in cracked and uncracked concrete and masonry. With round head for universal fastenings. Torx drive T30.
Construction product tested according to EAD and CE mark, with European Technical Assessment (ETA) and proof of suitability. Load-bearing capacities under fire loads proven up to fire resistance class R120.

MMS-plus MS mounting rail tie, with flat panhead

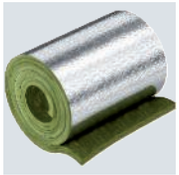
St G



Type	Dimension mm	Dim. L mm	Drill hole Ø mm	Head Ø mm	Screw system	Pack Piece	Weight kg/100 pc.	Item no.
MMS+ MS 7.5x50	7,5x50	50	6	17	Torx	100	1.500	**3498261**
MMS+ MS 7.5x60	7,5x60	60	6	17	Torx	50	1.800	**3498262**

Bolt tie for direct mounting without additional anchors in cracked and uncracked concrete and masonry. With large round head to fasten mounting and profile rails. Torx drive T30.
Construction product tested according to EAD and CE mark, with European Technical Assessment (ETA) and proof of suitability. Load-bearing capacities under fire loads proven up to fire resistance class R120.

Section insulation for metal pipes



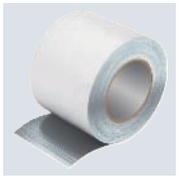
Type	Length mm	Width mm	Thickness mm	Pack Piece	Weight kg/100 pc.	Item no.
MIW-MA	6100	500	30	2	1,010.000	**7202308**

Mineral wool mats with aluminium lamination for section insulation on copper and steel pipes. Fastening with winding wire, securing of joints with aluminium adhesive tape.

Applicable in the systems:
PYROMIX® mortar insulation
PYROSIT® NG fire insulation foam
PYROPLATE® Fibre soft insulation
PYROPLUG® Block blocks

Material class EN 13501 - A1 non-combustible; melting point ≥ 1,000 °C

Aluminium adhesive tape for path insulation

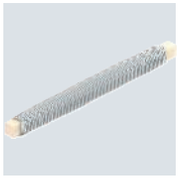


Type	Length m	Width mm	Pack Piece	Weight kg/100 pc.	Item no.
MIW-AT	100	100	1	136.900	**7202305**

Aluminium adhesive tape for applying the aluminium-laminated section insulation. The aluminium adhesive tape is self-adhesive and not classified as combustible according to DIN 4102-1.

Winding wire for path insulation

St

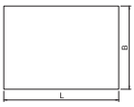


Type	Length m	Pack Piece	Weight kg/100 pc.	Item no.
MIW-TD	50	1	10.000	**7202309**

The steel wire is used to fix the section insulation. It is non-combustible and guarantees optimum retention of the section insulation on non-combustible pipes and cables.

Bandage for insulation

Type	Length m	Width mm	Pack Piece	Weight kg/100 pc.	Item no.
FSB-WB 1.5	10	125	1	220.000	**7203163**

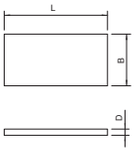


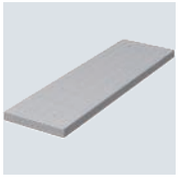
Coated fire protection coil with material that foams up in the event of fire for wrapping installations in the PYROMIX® mortar insulation and PYROPLATE® Fibre plate insulation. The carrier mesh has an insulation former on one side. The nominal thickness is 1.5 mm.

The coil can be used as an addition, according to the appropriate proof of suitability.

Calcium silicate plate

Type	Dim. L mm	Dim. B mm	Dim. D mm	Pack Piece	Weight kg/100 pc.	Item no.
KSI-P1	500	150	20	1	42.000	**7202283**
KSI-P2	500	250	30	1	111.000	**7202904**
KSI-P3	1000	250	30	1	222.000	**7202912**



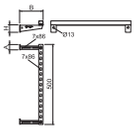


Calcium silicate plate, as support plate, for the construction of frames in the penetration and to double thin wall thicknesses.
Materials class EN 13501 - A1 non-combustible.

St

Support construction for insulations, with bracket

Type	Dim. H mm	Dim. B mm	Dim. A mm	Pack Piece	Weight kg/100 pc.	Item no.
SKA 05 VZ	70	217	50	1	190.740	**7202436**

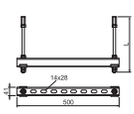


Suspension and fastening material, made of steel, to create the first support of pass-through installations in fire insulation. Mounting of the bracket on the wall, support of the installation using mounting rail.
The maximum distance of the mounting rail to the wall of 200 mm fulfils the requirements of most insulation systems.

St

Support construction for insulations, with pendulum suspension

Type	Dim. L mm	Pack Piece	Weight kg/100 pc.	Item no.
SKP 05 VZ	1000	1	235.240	**7202446**

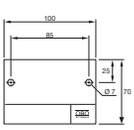


Suspension and fastening material, made of steel, to create the first support of pass-through installations in fire insulation. Mounting of the pendulum with threaded rods under the ceiling. A maximum of two layers can be mounted with connection sleeves from two sets. The support constructions must be arranged on both sides of the wall at the prescribed distance to the insulation system.

PS

Identification plate

Type	Language	Pack Piece	Weight kg/100 pc.	Item no.
KS-S DE	German	1	2.400	**7205425**



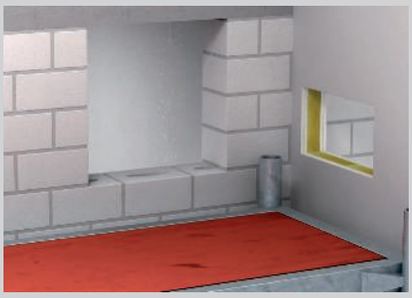
Identification plate to be written on with waterproof and light-resistant felt-tip pen for fire-safe cable glands, including 2 push-fit anchors.

Always indicate the item number when ordering.

Soft insulation, PYROPLATE® Fibre
System description

The PYROPLATE® Fibre system from OBO is used to create cable and combination insulation. The core of the system is the mineral fibre plate coated with a moisture-resistant ablation coating. When there is a fire, the fire protection coating creates an insulating carbon foam and, in combination with the mineral fibre plate, prevents the spread of fire and smoke. According to the construction approval, in addition to the cables, pipes made of steel, copper or various plastics may also be run through the same insulation. For pipelines, additional fire protection measures, such as section insulation and pipe sleeves, are required. The mortar or soft insulation made of PYROPLATE® Fibre is thus combination insulation which is appropriate for diverse structures.

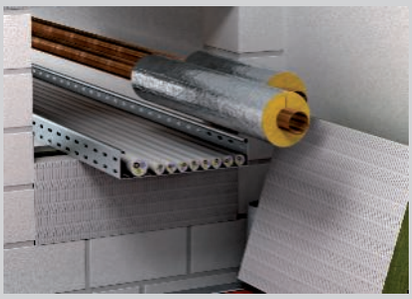
Soft insulation, PYROPLATE® Fibre
Installation principle



The installation is possible in light-duty partition walls or in solid walls.

Moisten the component layer and apply the coating to the cut edges for adhesion.

The plates can be inserted carefully with a hammer and board.



Use approved section insulation for metal pipes.

Apply the final coating to the surface and the installations.

Fix pipe sleeves for combustible pipes with threaded rods on both sides.

Combination insulation for various structures with labelling.

Secure soft insulation in ceilings against footfall.

Classification to DIN

S30 S60 S90

Classification to EN

EI15 EI30 EI45 EI60 EI90 EI120 EI180 EI240

Erectors of combination insulation systems have to be trained.

Soft insulation, PYROPLATE® Fibre
Registration data

Combination insulation in walls / ceilings

Fire resistance class	S30, S60, S90
Proof of application	General construction approval of DIBt, Berlin
Approval number	Z- 19. 15-2046
Testing standard	DIN 4102 Part 9

Note:
For the legally compliant documentation, the European Technical Assessment (ETA), the general design approval (aBG) and the declaration of performance (DoP) are needed. The labelling of the insulation system and the submittal of the declaration of conformity statement are mandatory after the installation. All certificates and a sample of the declaration of conformity statement that can be edited are available from the download area at www.obo.de.

Areas of installation
Insulation systems in walls/ceilings

Component	Rigid walls	Flexible walls	Rigid floors
			
Min. component strength	10 cm (S30/S60/S90)	10 cm (S30/S60/S90)	15 cm (S30 / S60 / S90)
Min. insulation thickness	10 cm (S30 / S60 / S90)	10 cm (S30 / S60 / S90)	10 cm (S30 / S60 / S90)
Opening size	↔ ≤ 120 cm, ↕ ≤ 200 cm ↔ ≤ 200 cm, ↕ ≤ 120 cm	↔ ≤ 120 cm, ↕ ≤ 200 cm ↔ ≤ 200 cm, ↕ ≤ 120 cm	↔ ≤ 125 cm, ↕ unlimited

Soft insulation, PYROPLATE® Fibre

Installations

Cable

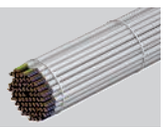
All Ø ✓

Pipe bundle of electrical installation pipes

Only with PYROCOMB® Intube ✓

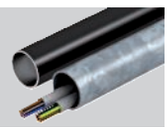
Cable bundle

Ø 100 mm,
cable Ø 21 mm ✓



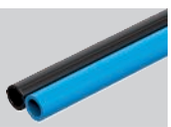
Electrical installation pipe made of steel

Two steel and copper pipes
Ø 6-15 mm with insulation ✓



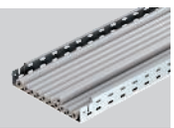
Individual lines for control purposes

Ø 15 mm ✓



Cable support systems

Profiles made of steel,
aluminium or plastic ✓

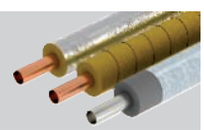


Electrical installation pipe made of plastic, rigid

✗

Metal pipes with path insulation

Steel, stainless steel and
cast steel Ø 219.1 mm,
copper Ø 88.9 mm ✓

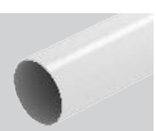


Electrical installation pipe made of plastic, flexible

Ø 32 mm,
cable Ø 21 mm ✓

Plastic pipes

Ø 160 mm ✓



Special installations

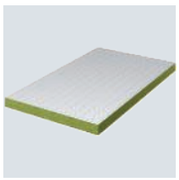
Speed pipe

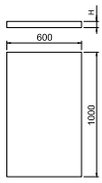
24 pipes Ø 7 mm x 1.5 mm,
7 pipes Ø 12 mm x 2.0 mm,
Ø 50 mm in total ✓

Details on the version can be found in the proof of suitability or mounting instructions.
All the stated dimensions are maximum values.

Soft insulation, PYROPLATE® Fibre

Mineral fibre plate, pre-coated





Type	Length mm	Width mm	Height mm		Pack Piece	Weight kg/100 pc.	Item no.
PSX-P	1000	600	50		1	625.000	**7202295**

Mineral fibre plate, pre-coated with the PYROCOAT® ASX ablation coating, as the basis for the PYROPLATE® Fibre soft insulation system. 50 mm plate for insulation according to German approval, 60 mm plate for insulation according to European approval.

Ablation coating PYROCOAT® in a cartridge

Type	Contents ml		Pack Piece	Weight kg/100 pc.	Item no.
ASX-K	310		1	50.000	**7202310**

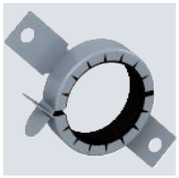
Combined, endothermic and weatherproof coating for internal and external areas. Universal protection coating for cable and cable support structures. Use as direct filler, and as paint when stirred.
Material class DIN 4102 - B2, normally flammable.
In dry, frost-free rooms, the coating can be stored at temperatures from +5 °C to +25 °C for up to 18 months in closed, upright original containers.

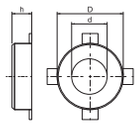
Ablation coating PYROCOAT® in a bucket

Type	Contents kg		Pack Piece	Weight kg/100 pc.	Item no.
ASX-E	5		1	500.000	**7202312**

Combined, endothermic and weatherproof coating for internal and external areas. Universal protection coating for cable and cable support structures. Use as direct filler, and as paint when stirred. Sufficient for an area of 4 m².
Material class DIN 4102 - B2, normally flammable.
In dry, frost-free rooms, the coating can be stored at temperatures from +5 °C to +25 °C for up to 18 months in closed, upright original containers.

Pipe sleeve with 2 fastening straps

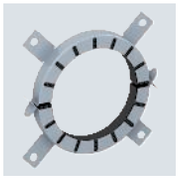


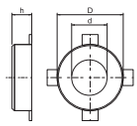


Type	Pipe Ø mm	Dim. h mm	Dim. D mm	Dim. d mm		Pack Piece	Weight kg/100 pc.	Item no.
TCX-032	32-34	26	50	36		1	6.500	**7202200**
TCX-040	40-42	26	58	44		1	7.000	**7202201**
TCX-050	50-52	26	68	54		1	8.000	**7202203**

Pipe sleeve for combustible pipes.
If there is a fire, fire protection inserts inside the sheet steel housing expand, exerting a very great pressure onto the burning thermoplastic pipes.
Fastening with anchors or M6 threaded rods.

Pipe sleeve with 4 fastening straps



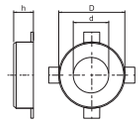


Type	Pipe Ø mm	Dim. h mm	Dim. D mm	Dim. d mm		Pack Piece	Weight kg/100 pc.	Item no.
TCX-063	63-65	26	94	67		1	15.500	**7202204**
TCX-075	75-77	26	106	79		1	19.000	**7202205**
TCX-090	90-92	26.6	132	94		1	37.000	**7202206**
TCX-110	110-112	26.6	155	114		1	46.000	**7202207**
TCX-125	125-127	40	172	129		1	70.000	**7202208**

Pipe sleeve for combustible pipes.
If there is a fire, fire protection inserts inside the sheet steel housing expand, exerting a very great pressure onto the burning thermoplastic pipes.
Fastening with anchors of M6 threaded rods up to size 75 mm, then M8.

Pipe sleeve with 6 fastening straps

Type	Pipe Ø mm	Dim. h mm	Dim. D mm	Dim. d mm	Pack Piece	Weight kg/100 pc.	Item no.
TCX-140	140 - 142	40	200	144	1	106.000	**7202209**
TCX-160	160 - 162	40	220	164	1	107.000	**7202210**



Pipe sleeve for combustible pipes.
If there is a fire, fire protection inserts inside the sheet steel housing expand, exerting a very great pressure onto the burning thermoplastic pipes.
Fastening with anchors or M8 threaded rods.

St G

Threaded rod

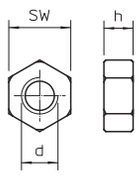
Type	Thread	Dim. d mm	Dim. L mm	Pack Piece	Weight kg/100 pc.	Item no.
TR M6 1M G	M6	6	1000	10	18.300	**3141047**
TR M8 1M G	M8	8	1000	10	30.000	**3141128**

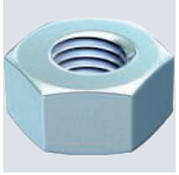
Threaded rod to DIN 976.

St G

Hexagonal nut DIN 934

Type	Thread	SW mm	Dim. h mm	Dim. d mm	Pack Piece	Weight kg/100 pc.	Item no.
HN M6 G	M6	10	5.2	6	100	0.221	**3400069**
HN M8 G	M8	13	6.8	8	100	0.500	**3400085**



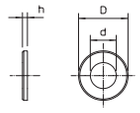


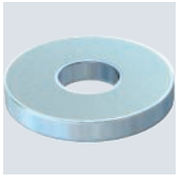
Hexagonal nut to DIN 934 with metric thread.

St G

Washer ISO 7093

Type	Thread	Dim. d mm	Dim. D mm	Dim. h mm	Pack Piece	Weight kg/100 pc.	Item no.
WS M6 D28 G	M6	6.5	28	2.5	100	1.104	**3402207**
WS M8 D28 G	M8	8.5	28	2.5	100	1.100	**3402215**

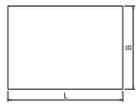




Washer of large outer diameter for universal use.

Bandage for insulation

Type	Length m	Width mm	Pack Piece	Weight kg/100 pc.	Item no.
FSB-WB 1.5	10	125	1	220.000	**7203163**

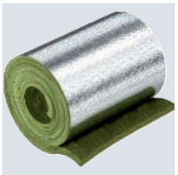


Fire protection coil, coated on one side with material that foams up in the event of fire, for wrapping installations in the PYROMIX® mortar insulation and PYROPLATE® Fibre plate insulation. The carrier mesh has an insulation former on one side. The nominal thickness is 1.5 mm.

Always indicate the item number when ordering.

Soft insulation, PYROPLATE® Fibre

Section insulation for metal pipes



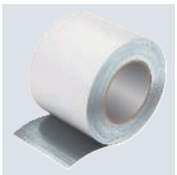
Type	Length mm	Width mm	Thickness mm	Pack Piece	Weight kg/100 pc.	Item no.
MIW-MA	6100	500	30	2	1,010.000	**7202308**

Mineral wool mats with aluminium lamination for section insulation on copper and steel pipes. Fastening with winding wire, securing of joints with aluminium adhesive tape.

Applicable in the systems:
PYROMIX® mortar insulation
PYROSIT® NG fire insulation foam
PYROPLATE® Fibre soft insulation
PYROPLUG® Block blocks

Material class EN 13501 - A1 non-combustible; melting point ≥ 1,000 °C

Aluminium adhesive tape for path insulation



Type	Length m	Width mm	Pack Piece	Weight kg/100 pc.	Item no.
MIW-AT	100	100	1	136.900	**7202305**

Aluminium adhesive tape for applying the aluminium-laminated section insulation. The aluminium adhesive tape is self-adhesive and not classified as combustible according to DIN 4102-1.

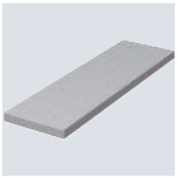
Winding wire for path insulation

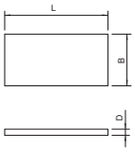
St

Type	Length m	Pack Piece	Weight kg/100 pc.	Item no.
MIW-TD	50	1	10.000	**7202309**

The steel wire is used to fix the section insulation. It is non-combustible and guarantees optimum retention of the section insulation on non-combustible pipes and cables.

Calcium silicate plate



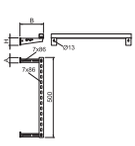


Type	Dim. L mm	Dim. B mm	Dim. D mm	Pack Piece	Weight kg/100 pc.	Item no.
KSI-P1	500	150	20	1	42.000	**7202283**
KSI-P2	500	250	30	1	111.000	**7202904**
KSI-P3	1000	250	30	1	222.000	**7202912**

Calcium silicate plate, as support plate, for the construction of frames in the penetration and to double thin wall thicknesses.
Materials class EN 13501 - A1 non-combustible.

Support construction for insulations, with bracket

St



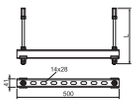
Type	Dim. H mm	Dim. B mm	Dim. A mm	Pack Piece	Weight kg/100 pc.	Item no.
SKA 05 VZ	70	217	50	1	190.740	**7202436**

Suspension and fastening material, made of steel, to create the first support of pass-through installations in fire insulation. Mounting of the bracket on the wall, support of the installation using mounting rail.
The maximum distance of the mounting rail to the wall of 200 mm fulfils the requirements of most insulation systems.

St

Support construction for insulations, with pendulum suspension

Type	Dim. L mm	Pack Piece	Weight kg/100 pc.	Item no.
SKP 05 VZ	1000	1	235.240	**7202446**

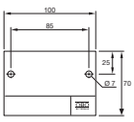


Suspension and fastening material, made of steel, to create the first support of pass-through installations in fire insulation. Mounting of the pendulum with threaded rods under the ceiling. A maximum of two layers can be mounted with connection sleeves from two sets. The support constructions must be arranged on both sides of the wall at the prescribed distance to the insulation system.

PS

Identification plate

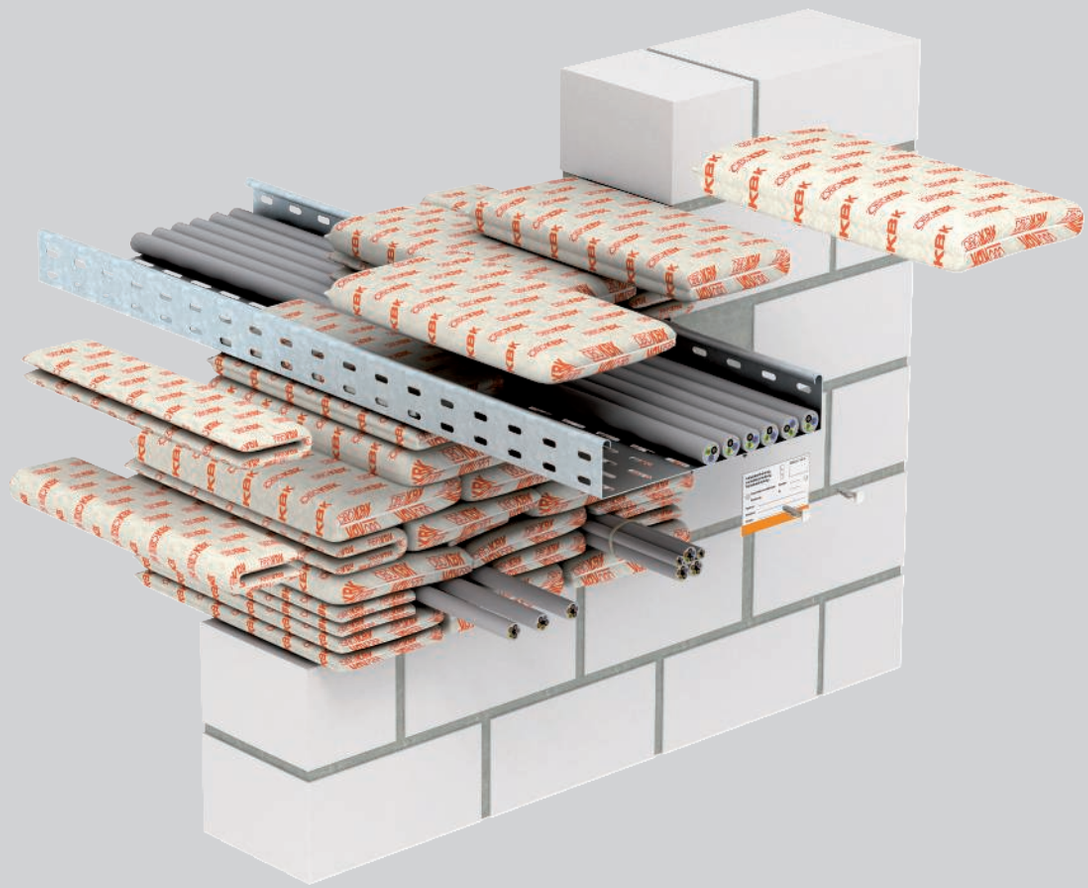
Type	Language	Pack Piece	Weight kg/100 pc.	Item no.
KS-S DE	German	1	2.400	**7205425**



Identification plate to be written on with waterproof and light-resistant felt-tip pen for fire-safe cable glands, including 2 push-fit anchors.

Always indicate the item number when ordering.

PYROBAG® fire protection cushion insulation
System description



The PYROBAG® system from OBO is used to create cable insulation from fire protection cushions. The fire protection cushions, which can be shaped in any way, are stacked simply and quickly on top of each other, allowing absolutely tidy and dust-free mounting. The cushions can be used for permanent or temporary insulation in walls and ceilings, e.g. during renovations. The fire protection cushions are an ideal solution for frequent retroinstallations. Additional cables can be installed quickly, neatly and economically at a later date because the cushions can be used several times over. The cushions consist of a close-knit, dense and mechanically solid glass fabric with a special filling. The shell and the filling are free of mineral fibres and are also weatherproof and waterproof. Neither painting nor the use of filler are required.

PYROBAG® fire protection cushion insulation
Installation principle

Closing of the opening with cushions – without filler or coating.

Panels as mounting aid for the last cushion layer.

Lock against falling out during ceiling mounting.

Lock against slippage above the floor.

Cushions arranged in the duct.

Retaining profile to prevent slippage in vertical arrangements.

Discreet attachment of the identification plate.

Classification to DIN

S30 S60 S90

Erectors of combination insulation systems have to be trained.

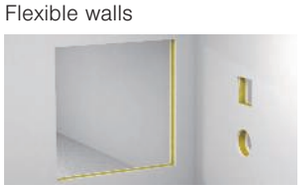
PYROBAG® fire protection cushion insulation
Registration data

Insulation in walls/ceilings

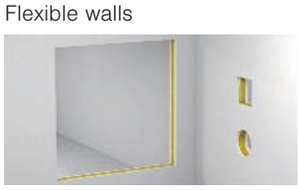
Fire resistance class	S30, S60, S90
Proof of application	General construction approval of DIBt, Berlin
Approval number	Z- 19. 15-1115
Testing standard	DIN 4102 Part 9

Note:
For the legally compliant documentation, the European Technical Assessment (ETA), the general design approval (aBG) and the declaration of performance (DoP) are needed. The labelling of the insulation system and the submittal of the declaration of conformity statement are mandatory after the installation. All certificates and a sample of the declaration of conformity statement that can be edited are available from the download area at www.obo.de.

Areas of installation
Insulation systems in walls/ceilings

Component	Rigid walls	Flexible walls	Rigid floors
			
Min. component strength	10 cm (S30/S60/S90)	10 cm (S30/S60/S90)	15 cm (S30 / S60 / S90)
Min. insulation thickness	35 cm (S30 / S60 / S90)	35 cm (S30 / S60 / S90)	35 cm (S30 / S60 / S90)
Opening size	↔ ≤ 100 cm, ↕ ≤ 150 cm	↔ ≤ 100 cm, ↕ ≤ 100 cm	↔ ≤ 60 cm, ↕ unlimited

Insulation in cable ducts

Component	Rigid walls	Flexible walls	Rigid floors
			
Min. insulation thickness	10 cm (S30 / S60 / S90)	10 cm (S30 / S60 / S90)	15 cm (S30 / S60 / S90)
Duct size	35 cm (S30 / S60 / S90)	35 cm (S30 / S60 / S90)	35 cm (S30 / S60 / S90)
Plastic ducts	21 cm x 10 cm	21 cm x 10 cm	21 cm x 10 cm
Metal ducts	21 cm x 8 cm	21 cm x 8 cm	21 cm x 8 cm

PYROBAG® fire protection cushion insulation
Installations

Cable

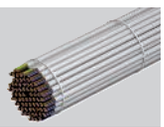
All Ø ✓

Pipe bundle of electrical installation pipes

✗

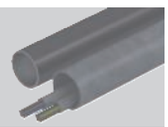
Cable bundle

Ø 150 mm,
cable Ø 21 mm ✓



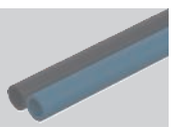
Electrical installation pipe made of steel

✗



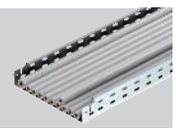
Individual lines for control purposes

✗



Cable support systems

Profiles made of steel,
aluminium or plastic ✓



Electrical installation pipe made of plastic, rigid

✗

Metal pipes with path insulation

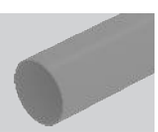
✗

Electrical installation pipe made of plastic, flexible

✗

Plastic pipes

✗



Special installations

Plastic ducts

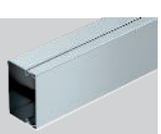
210 × 100 mm, wall thickness
≤ 3.5 mm ✓

Insulation in the lining pipe

Ø 200 mm,
wall thickness 3.5 mm, PVC ✓

Metal ducts

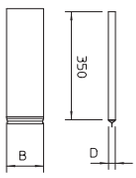
210 × 80 mm, wall thickness
≤ 2.0 mm ✓



Details on the version can be found in the proof of suitability or mounting instructions.
All the stated dimensions are maximum values.

PYROBAG® fire protection cushion insulation

PYROBAG® fire protection cushion

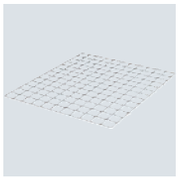


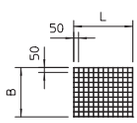
Type	Dim. B mm	Dim. D mm	Pack Piece	Weight kg/100 pc.	Item no.
KBK-1	120	10	5	18.000	7202709
KBK-2	170	23	5	33.000	7202725
KBK-3	170	40	5	63.000	7202741

Cable fire protection cushions made of dense, closely knit and mechanically solid glass mesh with a special filling.
Free from mineral fibres, weatherproof and water-resistant.
Can be stored for an unlimited period of time in dry, frost-free rooms.

Steel wire grid

St FT



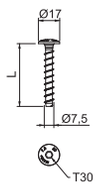


Type	Dim. L mm	Dim. B mm	Pack Piece	Weight kg/100 pc.	Item no.
SDG-1	600	500	1	135.000	7202963
SDG-2	1000	600	1	270.000	7202971

Steel wire grid as support and protection grid, wire diameter 4 mm.

MMS-plus MS mounting rail tie, with flat panhead

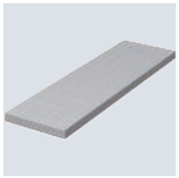
St G

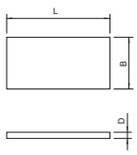


Type	Dimension mm	Dim. L mm	Drill hole Ø mm	Head Ø mm	Screw system	Pack Piece	Weight kg/100 pc.	Item no.
MMS+ MS 7.5x50	7,5x50	50	6	17	Torx	100	1.500	3498261
MMS+ MS 7.5x60	7,5x60	60	6	17	Torx	50	1.800	3498262

Bolt tie for direct mounting without additional anchors in cracked and uncracked concrete and masonry. With large round head to fasten mounting and profile rails. Torx drive T30.
Construction product tested according to EAD and CE mark, with European Technical Assessment (ETA) and proof of suitability. Load-bearing capacities under fire loads proven up to fire resistance class R120.

Calcium silicate plate



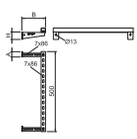


Type	Dim. L mm	Dim. B mm	Dim. D mm	Pack Piece	Weight kg/100 pc.	Item no.
KSI-P1	500	150	20	1	42.000	7202283
KSI-P2	500	250	30	1	111.000	7202904
KSI-P3	1000	250	30	1	222.000	7202912

Calcium silicate plate, as support plate, for the construction of frames in the penetration and to double thin wall thicknesses.
Materials class EN 13501 - A1 non-combustible.

Support construction for insulations, with bracket

St



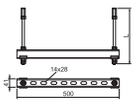
Type	Dim. H mm	Dim. B mm	Dim. A mm	Pack Piece	Weight kg/100 pc.	Item no.
SKA 05 VZ	70	217	50	1	190.740	7202436

Suspension and fastening material, made of steel, to create the first support of pass-through installations in fire insulation. Mounting of the bracket on the wall, support of the installation using mounting rail.
The maximum distance of the mounting rail to the wall of 200 mm fulfils the requirements of most insulation systems.

St

Support construction for insulations, with pendulum suspension

Type	Dim. L mm	Pack Piece	Weight kg/100 pc.	Item no.
SKP 05 VZ	1000	1	235.240	**7202446**

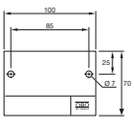


Suspension and fastening material, made of steel, to create the first support of pass-through installations in fire insulation. Mounting of the pendulum with threaded rods under the ceiling. A maximum of two layers can be mounted with connection sleeves from two sets. The support constructions must be arranged on both sides of the wall at the prescribed distance to the insulation system.

PS

Identification plate

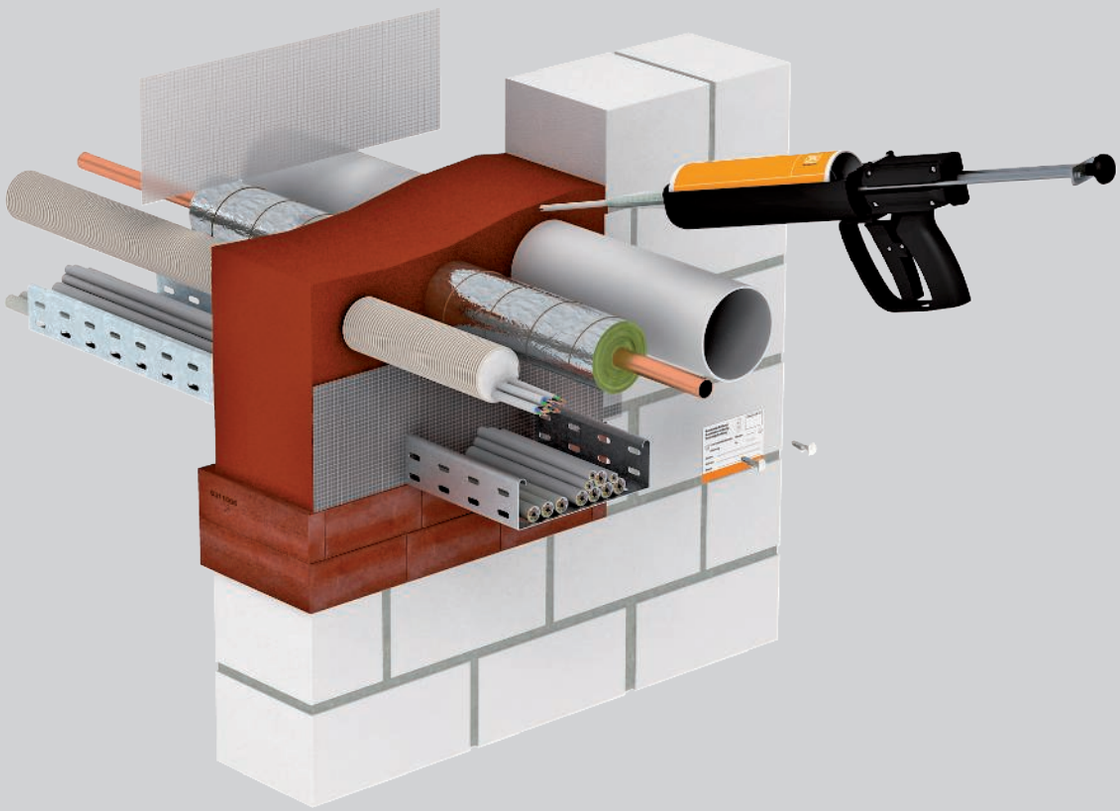
Type	Language	Pack Piece	Weight kg/100 pc.	Item no.
KS-S DE	German	1	2.400	**7205425**



Identification plate to be written on with waterproof and light-resistant felt-tip pen for fire-safe cable glands, including 2 push-fit anchors.

Always indicate the item number when ordering.

PYROSIT® NG fire protection foam
System description



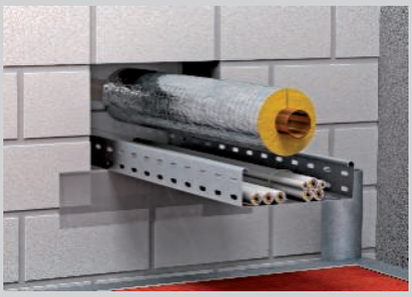
The PYROSIT® NG fire protection foam system from OBO is used to create cable and combination insulation made of fire protection foam. The special recipe of the 2-component foam allows simple, "pinpointed" processing. The good substrate adhesion prevents the foam from running out of the opening. Work can easily be interrupted to carry out checks. The system can be installed without dust and fibres. Surface coating is not necessary.

According to the construction approval, in addition to the cables, pipes made of steel, copper or various plastics may also be run through the same insulation. The PYROSIT® NG insulation is suitable as combination insulation for different units. Due to the soft consistency, the insulation made of PYROSIT® NG can be reassigned simply. The insulation system can be combined with the PYROPLUG® Block foam block.

PYROSIT® NG fire protection foam
Installation principle

Clean the layer and attach the lining aids, e.g. adhesive tape.

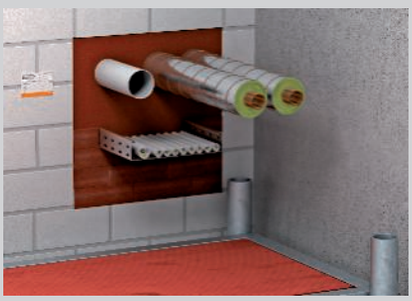
Apply the foam from the rear to the front, and remove residues as necessary.



Use approved section insulation for metal pipes.

Electrical installation pipes up to M40, filled with cables or empty.

Combustible pipes up to Ø 50 mm can be run through without additional measures.



Combination insulation for various structures with labelling.

Application of the fire protection foam directly under the wall.

Labelled underfloor insulation with reserve empty pipe.

Empty pipes with tension wires can be foamed in for assignment at a later date.

Classification to EN

EI15 EI30 EI45 EI60 EI90 EI120

Erectors of combination insulation systems have to be trained.

PYROSIT® NG fire protection foam
Registration data

Combination insulation in walls/ceilings

Fire resistance class	EI 15, EI 30, EI 45, EI 60, EI 90, EI 120
Proof of application	General type approval of the DIBt, Berlin
Approval number	Z-19.53-2338
Testing standard	DIN EN 1366 Part 3

Insulation in underfloor ducts

Fire resistance class	EI 15, EI 30, EI 45, EI 60, EI 90, EI 120
Proof of application	General type approval of the DIBt, Berlin
Approval number	Z-19.53-2338
Testing standard	DIN EN 1366 Part 3

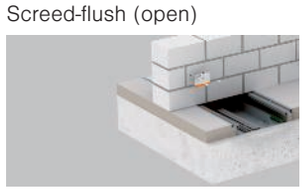
Additive proofs

Heat permeation	Fraunhofer IBP Stuttgart, P1-002/2012
Air permeation/pressure resistance	ift Rosenheim, 11-003694-PR03
Noise insulation	HfT Stuttgart, 122-007-04P-186a

Areas of installation
Insulation systems in walls/ceilings

Component	Rigid walls	Flexible walls	Rigid floors
			
Min. component strength	10 cm (EI30 / EI60 / EI90 / EI120)	10 cm (EI30 / EI60 / EI90 / EI120)	15 cm (EI30 / EI60 / EI90 / EI120)
Min. insulation thickness	14.4 cm (IET90 / IET150) 20 cm (IET 90 / IET 150)	14.4 cm (IET90 / IET150) 20 cm (IET 90 / IET 150)	14.4 cm (IET90 / IET150) 20 cm (IET 90 / IET 150)
Opening size for 14.4 cm insulation thickness	↔ ≤ 45 cm ↕ ≤ 50 cm	↔ ≤ 45 cm ↕ ≤ 50 cm	↔ ≤ 45 cm ↕ ≤ 45 cm
Opening size for 20 cm insulation thickness	↔ ≤ 45 cm ↕ ≤ 50 cm	↔ ≤ 45 cm ↕ ≤ 50 cm	↔ ≤ 45 cm ↕ ≤ 45 cm

Insulation in underfloor ducts

Underfloor system	Screed-covered	Screed-flush (open)
		
Min. insulation thickness	2 x 20 cm (S30/S60/S90)	20 cm (S30/S60/S90)
Duct size	↔ ≤ 35 cm ↕ ≤ 5 cm	↔ ≤ 60 cm ↕ ≤ 16 cm
Min. screed thickness	3.5 cm	–
Underfloor socket distance	Unlimited	–

PYROSIT® NG fire protection foam
Installations

Cable

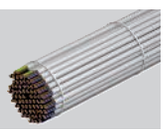
Ø 80 mm ✓

Pipe bundle of electrical installation pipes

Ø 80 mm ✓

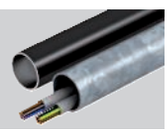
Cable bundle

Ø 100 mm,
cable Ø 21 mm ✓



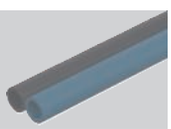
Electrical installation pipe made of steel

Ø 16 mm ✓



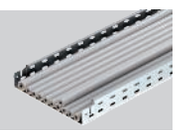
Individual lines for control purposes

✗



Cable support systems

Steel profiles ✓

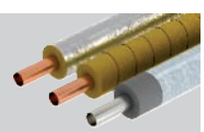


Electrical installation pipe made of plastic, rigid

Ø 40 mm ✓

Metal pipes with path insulation

Steel, stainless steel and
cast steel Ø 88.9 mm,
copper Ø 88.9 mm ✓

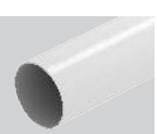


Electrical installation pipe made of plastic, flexible

Ø 40 mm ✓

Plastic pipes

Ø 50 mm ✓



Special installations

Cables

Ø 24 mm ✓

Open underfloor ducts

Width max. 60 cm,
height max. 16 cm ✓

Screed-covered underfloor ducts

Width max. 35 cm,
height max. 18 cm ✓

Insulation in the lining pipe

Ø 16 cm, max. wall thickness
7 mm, PVC/PE component
thickness 15 cm ✓

Details on the version can be found in the proof of suitability or mounting instructions.
All the stated dimensions are maximum values.

Fire protection foam PYROSIT® NG

2-component fire protection foam PYROSIT® NG

Type	Contents ml	Pack Piece	Weight kg/100 pc.	Item no.
FBS-S	380	1	64.600	**7203800**

PYROSIT® NG 2-component fire protection foam in a cartridge, including 2 mixing tubes.
To create cable and combination insulation; always process the coaxial cartridge 5:1 with FBS-PH or FBS-PA cartridge pistols.
In dry, frost-free rooms, the cartridge can be stored closed and standing upright at temperatures from +5 °C to +30 °C for up to 12 months.

Mixer pipe set

Type	Pack PU	Weight kg/100 PUs	Item no.
FBS-M	1	10.000	**7203803**

10 mixing tubes and 5 extension tubes in the set for PYROSIT® NG fire protection foam. Must be used with the 5:1 coaxial cartridge.

Professional cartridge pistol

Type	Pack Piece	Weight kg/100 pc.	Item no.
FBS-PH	1	120.000	**7203806**

High-quality 2-component cartridge pistol for use with the PYROSIT® NG fire protection foam. The action of the trigger parallel to the handle ensures easy working. Suitable for 5:1 coaxial cartridges. Free the moving parts, push rods and pressure plate from any foam residues and maintain them with a re-greasing cleaning agent.

Battery-operated cartridge pistol

Type	Pack Piece	Weight kg/100 pc.	Item no.
FBS-PA2	1	560.000	**7203813**

High-quality, motor-operated 2-component cartridge pistol for use with the PYROSIT® NG fire protection foam.
Suitable for 5:1 coaxial cartridges.
Free the moving parts, push rods and pressure plate from any foam residues and maintain them with a re-greasing cleaning agent.
The hard-shell case contains a FBS-PA pistol, a charging device and a rechargeable battery.

Battery

Type	Capacity Ah	Nom. V	Pack Piece	Weight kg/100 pc.	Item no.
EA 3-14	3	14.4	1	56.000	**7203816**

Battery for motor-operated cartridge pistol FBS-PA2.

Fire protection case

Type	Pack Piece	Weight kg/100 pc.	Item no.
FBS-K	1	420.000	**7203809**

The PYROSIT® NG fire protection case contains all the required products to create foam insulations. The complete set contains 3 foam cartridges, 1 professional cartridge pistol, 6 mixing and 5 extension pipes.

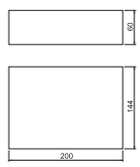
Tempering box

Type	Pack Piece	Weight kg/100 pc.	Item no.
FBS-TB	1	610.100	**7203818**

The correct temperature is essential for cartridges when pressing out. To achieve this, a tempering box is recommended. Temperature control is possible at up to +/– 30 °C above/below the ambient temperature. An integrated voltage monitor prevents the car battery from discharging. With digital temperature display and connection for 230 Volts AC and 12 Volts DC.
Capacity: 12 cartridges of PYROSIT® NG

PYROPLUG® Block foam block

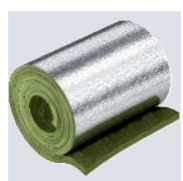
Type	Dimension mm	Pack Piece	Weight kg/100 pc.	Item no.
FBA-B200-14	200x144x60	4	44.800	**7202505**



Soft, permanently elastic foam block for cable and combination insulation. Vertical and transverse installation to achieve different fire resistance classes. Can be combined with the two-component fire protection foam PYROSIT® NG. Can be used in solid ceilings and walls and in light-duty partitions and is approved for many installations. CE-labelled construction product according to ETA-15/0803 for applications with fire resistance periods of up to 120 minutes.
Details on the applications can be found in the approval documents.
Protect the surface of the foam insulation against water in order to guarantee safe expansion in the event of fire.
Coating with standard silicone is approved.

Section insulation for metal pipes

Type	Length mm	Width mm	Thickness mm	Pack Piece	Weight kg/100 pc.	Item no.
MIW-MA	6100	500	30	2	1,010.000	**7202308**



Mineral wool mats with aluminium lamination for section insulation on copper and steel pipes. Fastening with winding wire, securing of joints with aluminium adhesive tape.

Applicable in the systems:
PYROMIX® mortar insulation
PYROSIT® NG fire insulation foam
PYROPLATE® Fibre soft insulation
PYROPLUG® Block blocks

Material class EN 13501 - A1 non-combustible; melting point ≥ 1,000 °C

St

Winding wire for path insulation

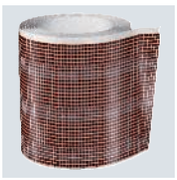
Type	Length m	Pack Piece	Weight kg/100 pc.	Item no.
MIW-TD	50	1	10.000	**7202309**

The steel wire is used to fix the section insulation. It is non-combustible and guarantees optimum retention of the section insulation on non-combustible pipes and cables.

Always indicate the item number when ordering.

Fire protection foam PYROSIT® NG

Cable coil

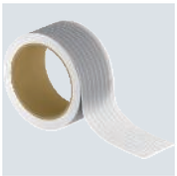


Type	Length m	Width mm	Pack Piece	Weight kg/100 pc.	Item no.
FBA-WI	5	150	1	384.000	**7202510**

Self-adhesive, intumescent cable protector, 5 mm thick, for use with large cable diameters and penetrated cable support systems, applicable in PYROPLUG® systems and PYROSIT® NG.

Adhesive tape

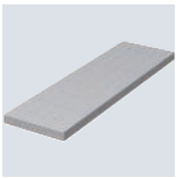
PE

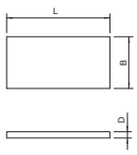


Type	Length m	Width mm	Pack Piece	Weight kg/100 pc.	Item no.
SHT	25	50	5	12.000	**7202521**

Fibre-reinforced, transparent adhesive tape as lining aid for applications with PYROSIT® NG fire protection foam and for universal fix. One roll contains 25 m².

Calcium silicate plate



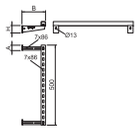


Type	Dim. L mm	Dim. B mm	Dim. D mm	Pack Piece	Weight kg/100 pc.	Item no.
KSI-P1	500	150	20	1	42.000	**7202283**
KSI-P2	500	250	30	1	111.000	**7202904**
KSI-P3	1000	250	30	1	222.000	**7202912**

Calcium silicate plate, as support plate, for the construction of frames in the penetration and to double thin wall thicknesses.
Materials class EN 13501 - A1 non-combustible.

Support construction for insulations, with bracket

St

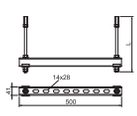


Type	Dim. H mm	Dim. B mm	Dim. A mm	Pack Piece	Weight kg/100 pc.	Item no.
SKA 05 VZ	70	217	50	1	190.740	**7202436**

Suspension and fastening material, made of steel, to create the first support of pass-through installations in fire insulation. Mounting of the bracket on the wall, support of the installation using mounting rail.
The maximum distance of the mounting rail to the wall of 200 mm fulfils the requirements of most insulation systems.

Support construction for insulations, with pendulum suspension

St



Type	Dim. L mm	Pack Piece	Weight kg/100 pc.	Item no.
SKP 05 VZ	1000	1	235.240	**7202446**

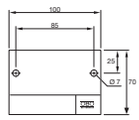
Suspension and fastening material, made of steel, to create the first support of pass-through installations in fire insulation. Mounting of the pendulum with threaded rods under the ceiling. A maximum of two layers can be mounted with connection sleeves from two sets. The support constructions must be arranged on both sides of the wall at the prescribed distance to the insulation system.

PS

Identification plate

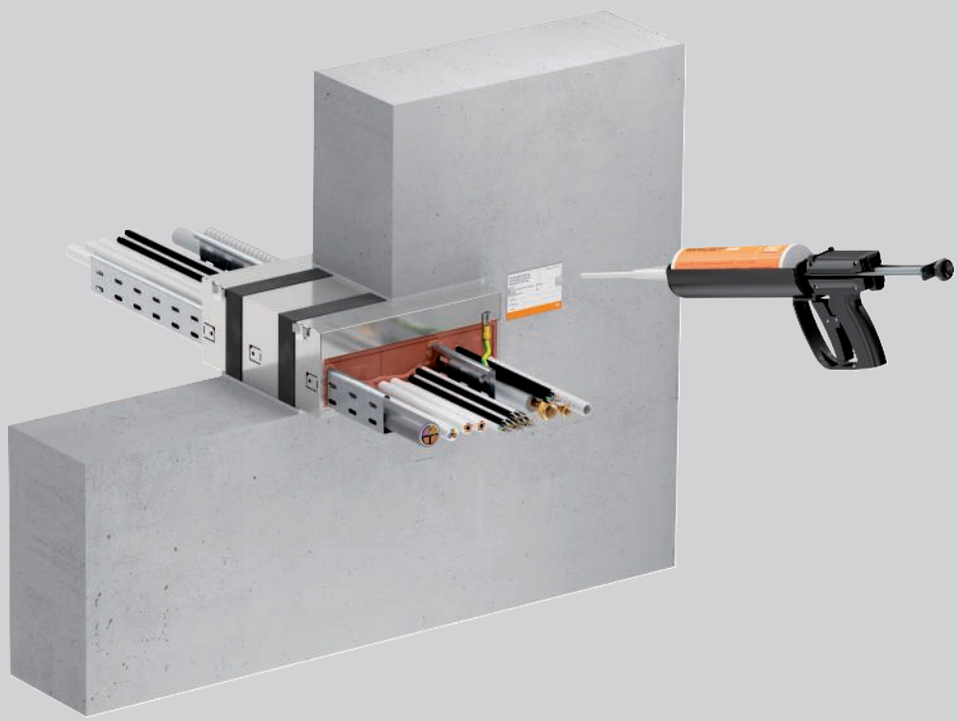
Type	Language		Pack Piece	Weight kg/100 pc.	Item no.
KS-S DE	German		1	2.400	**7205425**

Identification plate to be written on with waterproof and light-resistant felt-tip pen for fire-safe cable glands, including 2 push-fit anchors.



Always indicate the item number when ordering.

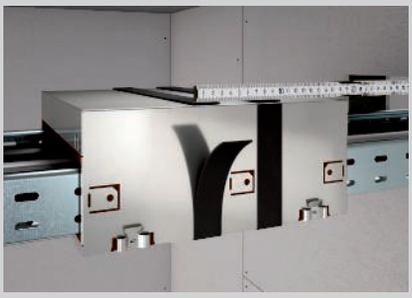
PYROPLUG® MagicBox 4-sided variant
System description



The OBO fire protection box PYROPLUG® MagicBox in the 4-sided variant consists of a two-part stainless steel housing with intumescent fire protection inlays. It can be used as an insulation system in walls and ceilings. Its releasable Magic connection means it's very quick to mount. Simply click the halves of the housing together, insert them in the component opening and mortar them in. Side straps secure the correct position of the PYROPLUG. MagicBox, allowing safe mortaring. The interior of the MagicBoxes can be fully assigned with installations. In addition, they are particularly suited to the creation of cable support systems with widths of up to 600 mm. Residual openings can be closed with the PYROSIT®NG fire protection foam which means that also seals with difficult geometries can be filled in easily. Inlay blocks of forgiving foam can be used for larger cavities or for use as reserve insulation. The graphite strips contained in the scope of delivery are attached to the MagicBox at the width of the component. If there is a fire, these foam up, reliably closing the resulting gap around the MagicBox. The perfectly matched portfolio of different heights and widths can cover any application and also offers fire protection boxes with a particularly large interior. They can be arranged in groups with two boxes on top of each other or two boxes next to each other. The PYROPLUG® MagicBox is a construction product with CE labelling and has the fire resistance class EI90 (fire-resistant).

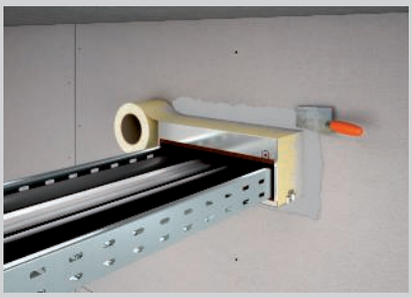
PYROPLUG® MagicBox 4-sided variant
Installation principle

Clicking the box together

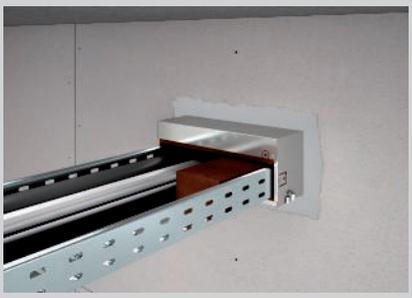


Measuring the wall thickness and attaching graphite strips at the appropriate distance

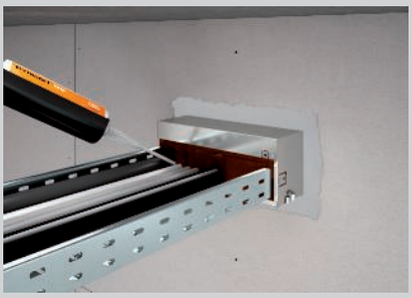
Inserting the box into the wall opening



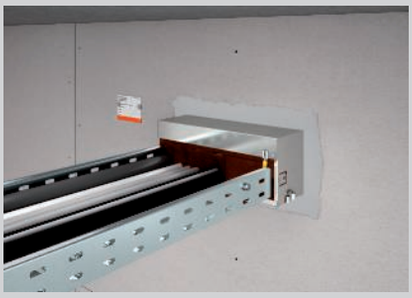
Masking and tidy mortaring in of the box



Inserting cut-to-size inlay block into the larger empty spaces



Closing the gaps completely with PYROSIT® NG fire protection foam



Attaching the equipotential bonding and the identification plate

Creation of groups with two boxes above each other or two boxes next to each other possible

Variant as ceiling insulation, fastening using fold-out lugs

Classification to EN

EI90 E120

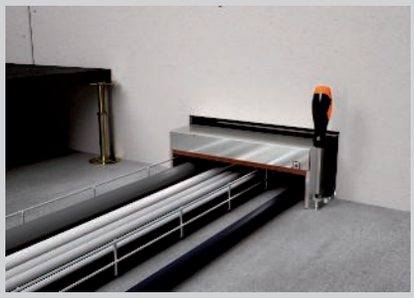
Erectors of combination insulation systems have to be trained.

PYROPLUG® MagicBox 3-sided variant
System description

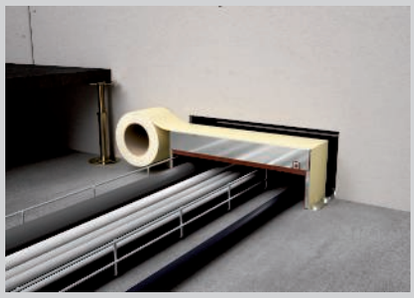
In the 3-sided variant, the PYROPLUG® MagicBox consists of a single-part stainless steel housing with intumescent fire protection inlays. This variant can be used as an insulation system in walls, on raw floors, beneath system floors and as insulation for rising sections in ceilings. The stainless steel housing offers very quick mounting. Simply insert in the component opening and mortar in. Side straps secure the correct position of the PYROPLUG® MagicBox, allowing safe mortaring. The interior of the MagicBoxes can be fully assigned with installations. In addition, they are particularly suited to the creation of cable support systems with widths of up to 600 mm. Residual openings can be closed with the PYROSIT®NG fire protection foam which means that also seals with difficult geometries can be filled in easily. Inlay blocks of forgiving foam can be used for larger cavities or for use as reserve insulation. The graphite strips contained in the scope of delivery are attached to the MagicBox at the width of the component. If there is a fire, these foam up, reliably closing the resulting gap around the MagicBox. The perfectly matched portfolio of different heights and widths can cover any application and also offers fire protection boxes with a particularly large interior. They can be arranged in groups with two boxes on top of each other or two boxes next to each other. The PYROPLUG® MagicBox is a construction product with CE labelling and has the fire resistance class EI90 (fire-resistant).

PYROPLUG® MagicBox 3-sided variant
Installation principle

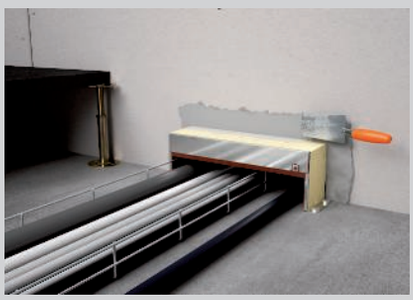
Measuring the wall thickness and attaching graphite strips at the appropriate distance



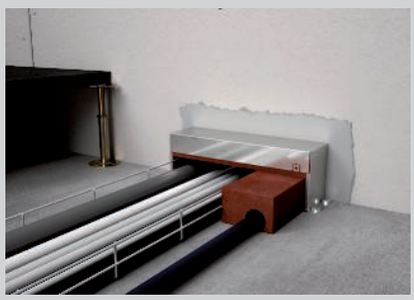
Inserting the box into the wall opening and fastening to the floor



Masking of the box



Tidy mortaring in of the box



Inserting cut-to-size inlay block into the larger empty spaces

Closing the gaps completely with PYROSIT® NG fire protection foam

Attaching the equipotential bonding and the identification plate

Creation of group with two boxes next to each other possible

Variant as ceiling insulation via rising sections

Classification to EN

EI90 E120

Erectors of combination insulation systems have to be trained.

PYROPLUG® MagicBox
Registration data

Insulation systems in walls/ceilings

Fire resistance class	Fire-resistant (90 minutes)
European Technical Assessment	ETA-22/0175
European Technical Assessment	Z-19.53-26
Test standard	DIN EN 1366-3
Classification standard	DIN EN 13501-2
Declaration of performance	05-DOP-14

Note:
For the legally compliant documentation, the European Technical Assessment (ETA), the general design approval (aBG) and the declaration of performance (DoP) are needed. The labelling of the insulation system and the submittal of the declaration of conformity statement are mandatory after the installation. All certificates and a sample of the declaration of conformity statement that can be edited are available from the download area at www.obo.de.

Areas of installation
Insulation systems in walls/ceilings

Component	Rigid walls	Flexible walls	Rigid floors
			
Min. component strength	≥ 100 mm	≥ 100 mm	≥ 150 mm
Insulation thickness*	300 mm	300 mm	300 mm

* According to box length

PYROPLUG® MagicBox
Installations

Cable

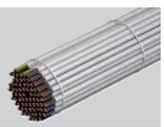
All Ø ✓

Pipe bundle of electrical installation pipes

Ø 100 mm
max. pipe Ø 63 mm ✓

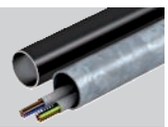
Cable bundle

Ø 100 mm
Cable Ø 21 mm ✓



Electrical installation pipe made of steel

Ø 16 mm ✓

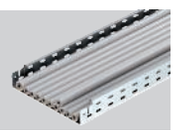


Electrical installation pipe made of plastic, rigid

Ø 63 mm ✓

Cable support systems

Width to 600 mm,
side height to 110 mm ✓



Special installations

Hollow shaft conductor

Various types by the companies RFS, Hanover and CommScope Technologies, Oberhausen ✓

Climate splitting lines

Combination of copper pipes with insulation, condensation hose and accompanying cables ✓

Copper pipes Polyurethane

WICU eco pipes with insulation made of PUR foam ✓

Hydraulic hoses

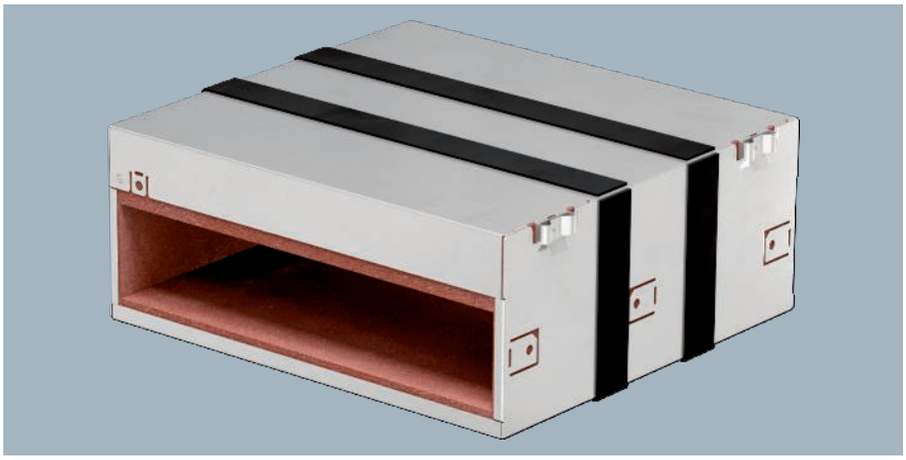
AEROQUIP to Ø 64.3 mm ✓

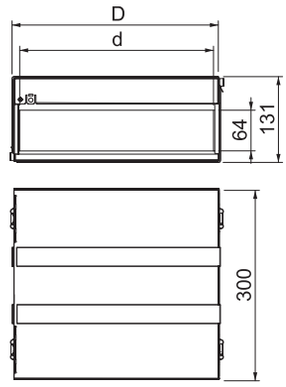
Details on the version can be found in the proof of suitability or mounting instructions.
All the stated dimensions are maximum values.

PYROPLUG® MagicBox, interior height 60 mm

PYROPLUG® MagicBox, four-sided, interior height 60 mm

VA 2B



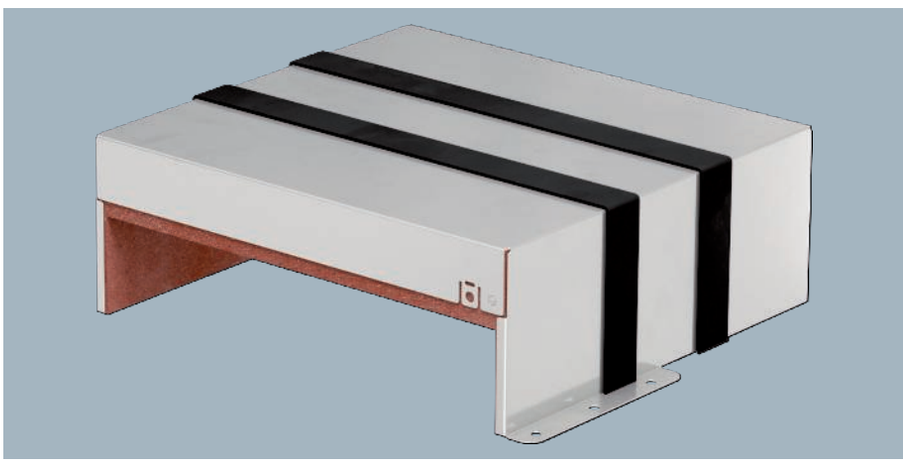


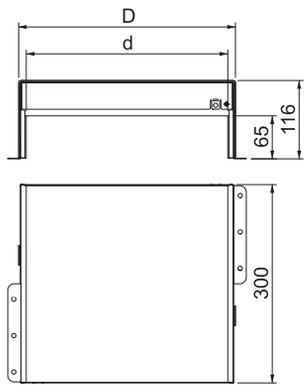
Type	Length mm	Dim. D mm	Dim. d mm	Pack Piece	Weight kg/100 pc.	Item no.
PMB 610-4 A2	300	123	105	1	219.200	**7204000**
PMB 620-4 A2	300	223	205	1	331.500	**7204004**
PMB 630-4 A2	300	323	305	1	432.800	**7204008**
PMB 640-4 A2	300	423	405	1	563.100	**7204012**
PMB 650-4 A2	300	523	505	1	677.400	**7204016**
PMB 660-4 A2	300	623	605	1	768.600	**7204020**

Fire protection box as an insulation system, made of a two-part stainless steel housing with intumescent fire protection inlays. Can be used in walls and ceilings. Quick mounting through the releasable Magic connection. Interior can be fully assigned with installations. Closure of the residual openings with PYROSIT® NG fire protection foam, particularly simple for difficult geometries. CE-labelled construction product with general type approval. Fire resistance class EI90 (fire-resistant). Including graphite strip.

PYROPLUG® MagicBox, three-sided, interior height 60 mm

VA 2B



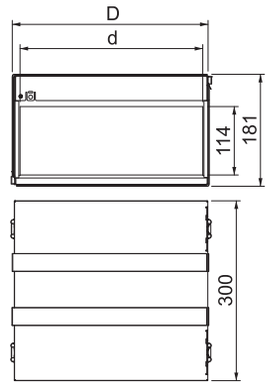


Type	Length mm	Dim. D mm	Dim. d mm	Pack Piece	Weight kg/100 pc.	Item no.
PMB 610-3 A2	300	123	105	1	158.000	**7204030**
PMB 620-3 A2	300	223	205	1	233.400	**7204034**
PMB 630-3 A2	300	323	305	1	309.800	**7204038**
PMB 640-3 A2	300	423	405	1	383.100	**7204042**
PMB 650-3 A2	300	523	505	1	459.700	**7204046**
PMB 660-3 A2	300	623	605	1	536.700	**7204050**

Fire protection box as insulation system, made of a single-part stainless steel housing with intumescent fire protection inlays. Can be used in walls, on raw floors, beneath system floors and as insulation of rising sections in ceilings. Interior can be fully assigned with installations. Closure of the residual openings with PYROSIT® NG fire protection foam, particularly simple for difficult geometries. CE-labelled construction product with general type approval. Fire resistance class EI90 (fire-resistant). Including graphite strip.

VA 2B

PYROPLUG® MagicBox, four-sided, interior height 110 mm

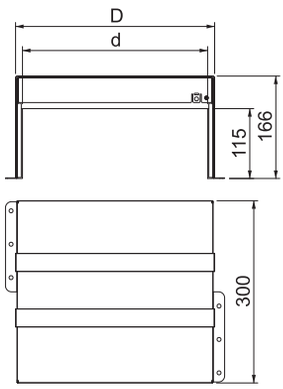


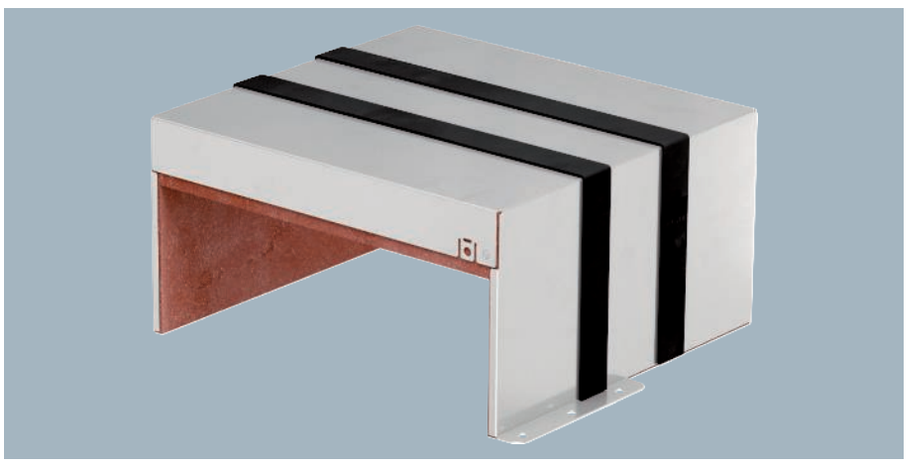
Fire protection box as an insulation system, made of a two-part stainless steel housing with intumescent fire protection inlays. Can be used in walls and ceilings. Quick mounting through the releasable Magic connection. Interior can be fully assigned with installations. Closure of the residual openings with PYROSIT® NG fire protection foam, particularly simple for difficult geometries. CE-labelled construction product with general type approval. Fire resistance class EI90 (fire-resistant). Including graphite strip.

Type	Length mm	Dim. D mm	Dim. d mm	Pack Piece	Weight kg/100 pc.	Item no.
PMB 110-4 A2	300	123	105	1	281.900	**7204120**
PMB 120-4 A2	300	223	205	1	394.200	**7204124**
PMB 130-4 A2	300	323	305	1	495.400	**7204128**
PMB 140-4 A2	300	423	405	1	625.700	**7204132**
PMB 150-4 A2	300	523	505	1	740.000	**7204136**
PMB 160-4 A2	300	623	605	1	831.300	**7204140**

VA 2B

PYROPLUG® MagicBox, three-sided, interior height 110 mm





Fire protection box as insulation system, made of a single-part stainless steel housing with intumescent fire protection inlays. Can be used in walls, on raw floors, beneath system floors and as insulation of rising sections in ceilings. Interior can be fully assigned with installations. Closure of the residual openings with PYROSIT® NG fire protection foam, particularly simple for difficult geometries. CE-labelled construction product with general type approval. Fire resistance class EI90 (fire-resistant). Including graphite strip.

Type	Length mm	Dim. D mm	Dim. d mm	Pack Piece	Weight kg/100 pc.	Item no.
PMB 110-3 A2	300	123	105	1	220.700	**7204150**
PMB 120-3 A2	300	223	205	1	296.000	**7204154**
PMB 130-3 A2	300	323	305	1	372.500	**7204158**
PMB 140-3 A2	300	423	405	1	445.700	**7204162**
PMB 150-3 A2	300	523	505	1	522.300	**7204166**
PMB 160-3 A2	300	623	605	1	599.400	**7204170**

Always indicate the item number when ordering.

PYROPLUG® MagicBox accessories

2-component fire protection foam PYROSIT® NG

Type	Contents ml	Pack Piece	Weight kg/100 pc.	Item no.
FBS-S	380	1	64.600	**7203800**

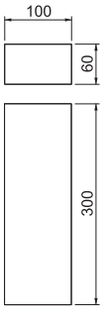
PYROSIT® NG 2-component fire protection foam in a cartridge, including 2 mixing tubes.
To create cable and combination insulation; always process the coaxial cartridge 5:1 with FBS-PH or FBS-PA cartridge pistols.
In dry, frost-free rooms, the cartridge can be stored closed and standing upright at temperatures from +5 °C to +30 °C for up to 12 months.

Intumescent insulating strip

Type	Length mm	Width mm	Height mm	Pack Piece	Weight kg/100 pc.	Item no.
PMB-GS	1000	30	2	1	8.200	**7204180**

Graphite strip as reserve for the PYROPLUG® MagicBox. Foams up to close the gap that forms around the MagicBox in the event of fire.

Inlay block for PYROPLUG® MagicBox

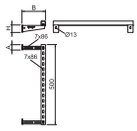


Type	Length mm	Width mm	Height mm	Pack Piece	Weight kg/100 pc.	Item no.
PMB-SI 4	300	100	63	4	49.300	**7204184**
PMB-SI 8	300	100	63	8	49.300	**7204188**

Inlay block to fill unassigned areas in the MagicBoxes, also for complete filling of the MagicBoxes when used as reserve insulation. Joint closure with PYROSIT® NG fire protection foam.

Support construction for insulations, with bracket

St



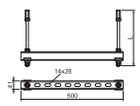
Type	Dim. H mm	Dim. B mm	Dim. A mm	Pack Piece	Weight kg/100 pc.	Item no.
SKA 05 VZ	70	217	50	1	190.740	**7202436**

Suspension and fastening material, made of steel, to create the first support of pass-through installations in fire insulation. Mounting of the bracket on the wall, support of the installation using mounting rail.
The maximum distance of the mounting rail to the wall of 200 mm fulfils the requirements of most insulation systems.

St

Support construction for insulations, with pendulum suspension

Type	Dim. L mm		Pack Piece	Weight kg/100 pc.	Item no.
SKP 05 VZ	1000		1	235.240	**7202446**

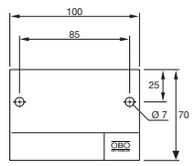


Suspension and fastening material, made of steel, to create the first support of pass-through installations in fire insulation. Mounting of the pendulum with threaded rods under the ceiling. A maximum of two layers can be mounted with connection sleeves from two sets. The support constructions must be arranged on both sides of the wall at the prescribed distance to the insulation system.

PS

Identification plate

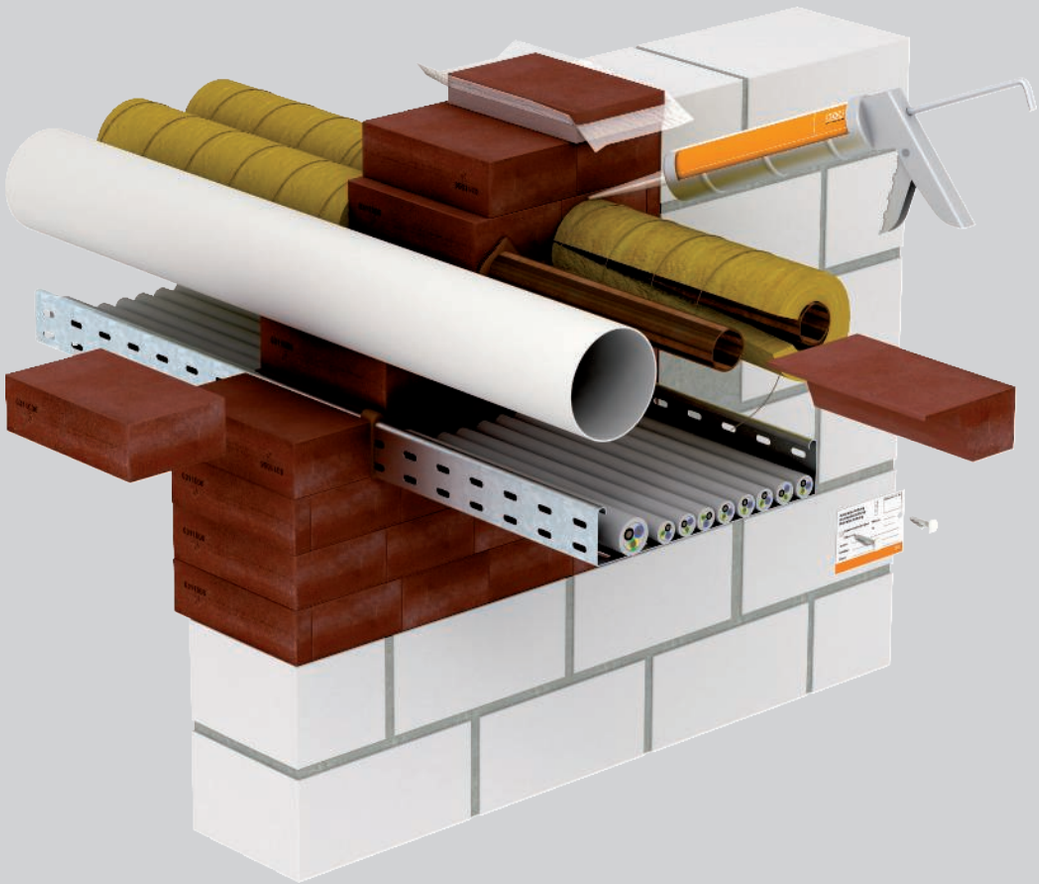
Type	Language		Pack Piece	Weight kg/100 pc.	Item no.
KS-S DE	German		1	2.400	**7205425**



Identification plate to be written on with waterproof and light-resistant felt-tip pen for fire-safe cable glands, including 2 push-fit anchors.

Always indicate the item number when ordering.

PYROPLUG® Block
System description



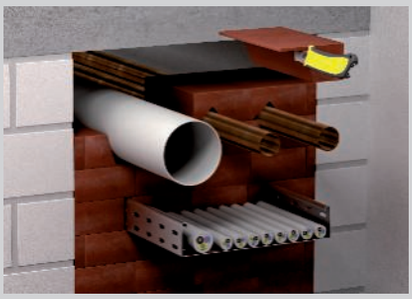
The OBO PYROPLUG® Block combination insulation is created from foam blocks, which, if there is a fire, expand without any noticeable pressure creation. In so doing, they form an insulating carbon foam. This reliably prevents the penetration of fire and smoke through the cable insulation. Combustible pipes can be run in this insulation without an additional sleeve. Copper and steel pipes can be insulated either with or without section insulation. All the PYROPLUG® Block insulation is completely dust and fibre-free. This also applies to any installations at a later date. This is an aspect which is particularly important for installation in IT and laboratory rooms.

PYROPLUG® Block
Installation principle

Mounting of the cut blocks.

Vacuum blocks for simple residual gap closing.

Simple retroinstallation through removal of individual blocks.

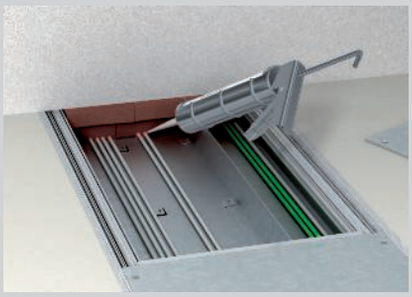


Running of combustible pipes without additional measures.

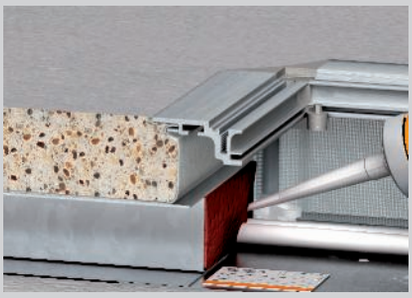
Run-through, non-combustible pipes with section insulation.

Tight-fitting installation of the blocks in the ceiling penetration.

Cut thin strips for the duct compartments.



Close the joints and spandrels between the installed cables and the blocks with a layer of the FBA-SP fire protection compound of at least 2 cm deep.



Close the residual joints between cables and blocks with the FBA-SP filler.

Classification to DIN

S30 S60 S90

Classification to EN

EI15 EI30 EI45 EI60 EI90 EI120

Erectors of combination insulation systems have to be trained.

PYROPLUG® Block
Registration data

Combination insulation in wall / ceiling

Fire resistance class	S30, S60, S90
Proof of application	General type approval of the DIBt, Berlin
Approval number	Z-19.53-2391
Testing standard	DIN 4102 Part 9

Insulation in underfloor ducts

Fire resistance class	S90
Proof of application	General type approval of the DIBt, Berlin
Approval number	Z-19.53-2391
Testing standard	DIN 4102 Part 9

Additive proofs

Heat permeation	Fraunhofer IBP Stuttgart, P1-001/2012
Air permeation/ pressure resistance	ift Rosenheim, 11-003694-PR02
Noise insulation	HfT Stuttgart, 122-007-04P-186a

Areas of installation
Insulation systems in walls/ceilings

Component	Rigid walls	Flexible walls	Rigid floors
			
Min. component strength	10 cm (S30/S60/S90)	10 cm (S30/S60/S90)	15 cm (S30 / S60 / S90)
Min. insulation thickness	20 cm (S30/S60/S90)	20 cm (S30/S60/S90)	20 cm (S30/S60/S90)
Opening size	↔ ≤ 100 cm ↕ ≤ 100 cm	↔ ≤ 84 cm ↕ ≤ 57 cm --- ↔ ≤ 57 cm ↕ ≤ 84 cm	↔ ≤ 70 cm ↕ unlimited

Underfloor system	Screed-covered	Screed-flush (open)
		
Min. insulation thickness	2 x 20 cm (S30/S60/S90)	20 cm (S30/S60/S90)
Duct size	↔ ≤ 35 cm ↕ ≤ 5 cm	↔ ≤ 60 cm ↕ ≤ 16 cm
Min. screed thickness	3.5 cm	–
Underfloor socket distance	Unlimited	–

PYROPLUG® Block
Installations

Cable

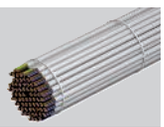
All Ø ✓

Pipe bundle of electrical installation pipes

✗

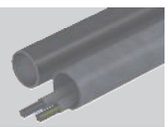
Cable bundle

Ø 100 mm,
cable Ø 21 mm ✓



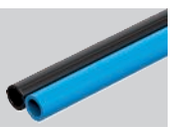
Electrical installation pipe made of steel

✗



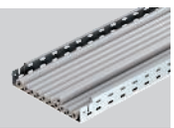
Individual lines for control purposes

Ø 15 mm ✓



Cable support systems

Profiles made of steel,
aluminium or plastic ✓

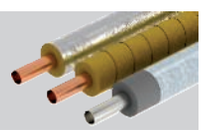


Electrical installation pipe made of plastic, rigid

Ø 20 mm ✓

Metal pipes with path insulation

Steel, stainless steel
cast steel Ø 168.3 mm
copper Ø 88.9 mm ✓

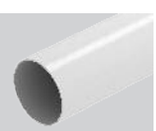


Electrical installation pipe made of plastic, flexible

Ø 20 mm ✓

Plastic pipes

Ø 110 mm ✓



Special installations

Screed-covered underfloor ducts

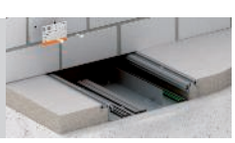
350 × 48 mm ✓

Hydraulic hoses

AEROQUIP GH 793-...
Ø 38.1 mm ✓

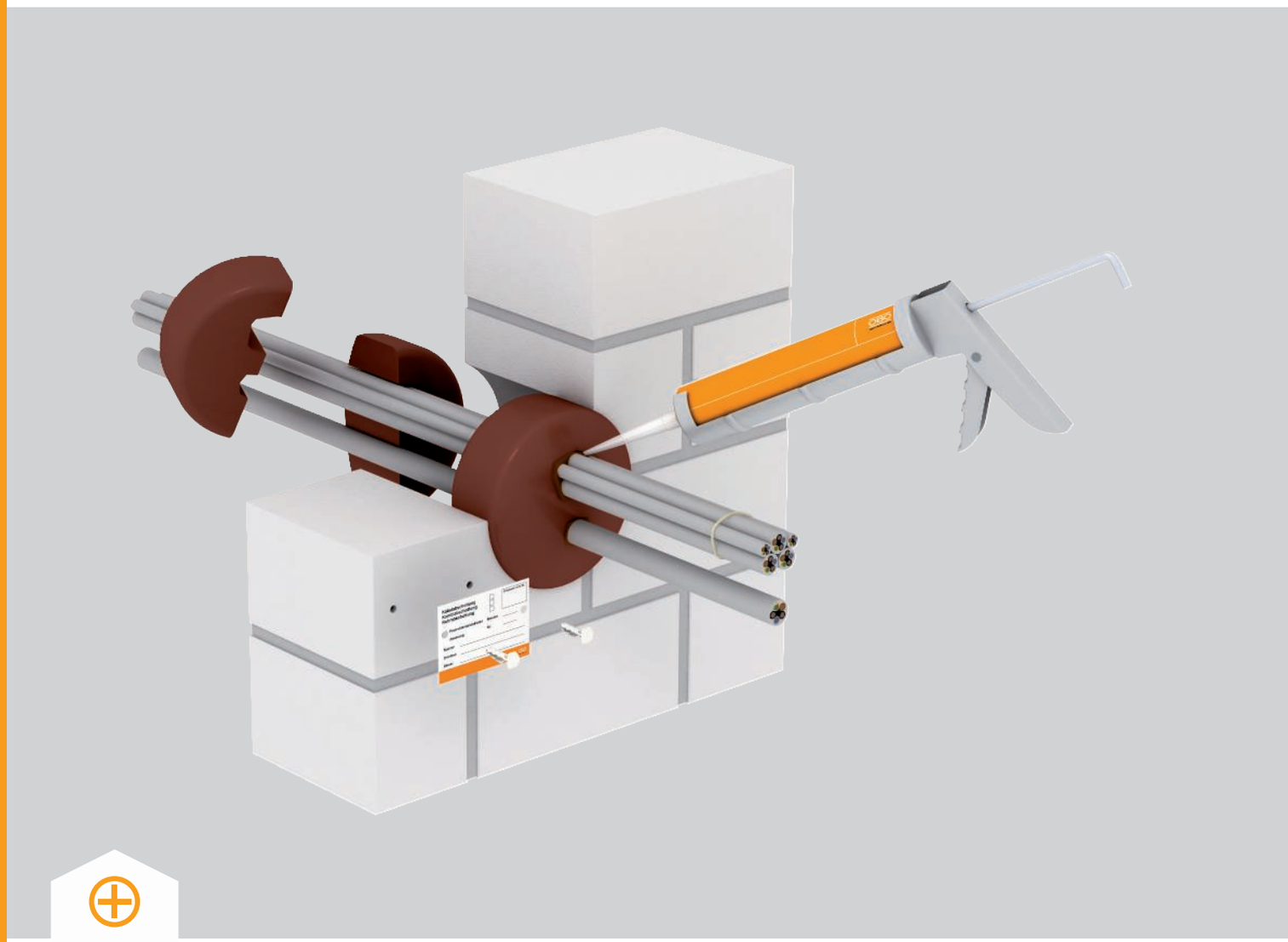
Open underfloor ducts

600 x 240 mm ✓



Details on the version can be found in the proof of suitability or mounting instructions.
All the stated dimensions are maximum values.

PYROPLUG® Peg foam series
System description

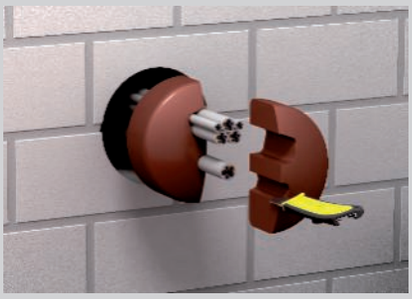


The PYROPLUG® Peg system from OBO is used to create cable insulation with fire protection foam plugs. The foam plugs are ideal for closing core drill holes in solid walls and concrete ceilings. The foam plugs are made of permanently elastic, closed-pore foam, which expands in the event of fire without any significant pressure build-up, thus creating an insulating plastic foam. This reliably prevents the penetration of fire and smoke through the cable insulation. The PYROPLUG® Peg insulation system can be used without difficulty in areas of data processing and in laboratories, as mounting is completely clean and is free of dust and fibres. This also applies to any necessary cable installations at a later date. Special tools are not required for processing, a knife is sufficient.

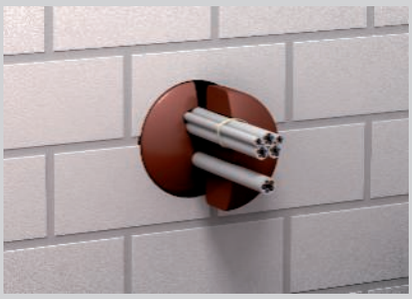
PYROPLUG® Peg foam series
Installation principle

Ideal for core drill holes of 55 mm to 240 mm.

Cutting of the plugs for cable assignment on the edge of the core hole.



Push cut plugs into the core hole.



Due to the elastically material a quick mounting is possible.

Cutting and mounting of the plugs in ceilings.

Residual joints are closed off with the filler FBA-SP.

Small distance to next core drill hole possible.

With retroinstallations, carefully cut or drill the plugs.

Classification to DIN

S30 S60 S90

Classification to EN

EI15 EI30 EI45 EI60 EI90 EI120

Erectors of combination insulation systems have to be trained.

PYROPLUG® Peg foam series
Registration data

Insulation in wall / ceiling

Fire resistance class	S30, S60, S90
Proof of application	General construction approval of DIBt, Berlin
Approval number	Z-19. 15-1558
Testing standard	DIN 4102 Part 9

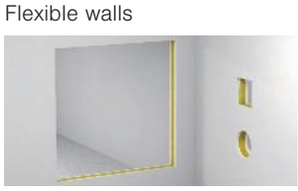
Additive proofs

Heat permeation	Fraunhofer IBP Stuttgart, P1-001/2012
Air permeation/pressure resistance	ift Rosenheim, 11-003694-PR01
Noise insulation	HfT Stuttgart, 122-007-04P-186a

Note:
For the legally compliant documentation, the European Technical Assessment (ETA), the general design approval (aBG) and the declaration of performance (DoP) are needed. The labelling of the insulation system and the submittal of the declaration of conformity statement are mandatory after the installation. All certificates and a sample of the declaration of conformity statement that can be edited are available from the download area at www.obo.de.

Areas of installation
Insulation systems in walls/ceilings

Component F30	Rigid walls	Flexible walls	Rigid floors
			
Min. component strength	5 cm (S30 / S60 / S90)	7.5 cm (S30 / S60 / S90)	15 cm (S30 / S60 / S90)
Min. insulation thickness	12 cm (S30 / S60 / S90)	12 cm (S30 / S60 / S90)	12 cm (S30 / S60 / S90)
Opening size	Ø 55 mm, Ø 68 mm, Ø 97 mm, Ø 112 mm, Ø 124 mm, Ø 155 mm, Ø 190 mm, Ø 240 mm	Ø 55 mm, Ø 68 mm, Ø 97 mm, Ø 112 mm, Ø 124 mm, Ø 155 mm, Ø 190 mm, Ø 240 mm	Ø 55 mm, Ø 68 mm, Ø 97 mm, Ø 112 mm, Ø 124 mm, Ø 155 mm, Ø 190 mm, Ø 240 mm

Component F90	Rigid walls	Flexible walls	Rigid floors
			
Min. component strength	10 cm (S30 / S60 / S90)	10 cm (S30 / S60 / S90)	15 cm (S30 / S60 / S90)
Min. insulation thickness	15 cm (S30 / S60 / S90)	15 cm (S30 / S60 / S90)	15 cm (S30 / S60 / S90)
Opening size	Ø 55 mm, Ø 68 mm, Ø 97 mm, Ø 112 mm, Ø 124 mm, Ø 155 mm, Ø 190 mm, Ø 240 mm	Ø 55 mm, Ø 68 mm, Ø 97 mm, Ø 112 mm, Ø 124 mm, Ø 155 mm, Ø 190 mm, Ø 240 mm	Ø 55 mm, Ø 68 mm, Ø 97 mm, Ø 112 mm, Ø 124 mm, Ø 155 mm, Ø 190 mm, Ø 240 mm

PYROPLUG® Peg foam series
Installations

Cable

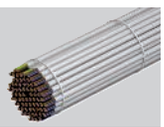
All Ø ✓

Pipe bundle of electrical installation pipes

✗

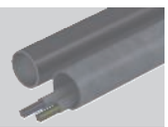
Cable bundle

Ø 100 mm,
cable Ø 21 mm ✓



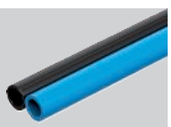
Electrical installation pipe made of steel

✗



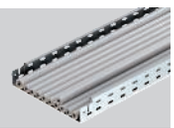
Individual lines for control purposes

Ø 15 mm ✓



Cable support systems

Profiles made of steel,
aluminium or plastic ✓



Electrical installation pipe made of plastic, rigid

Ø 20 mm ✓

Metal pipes with path insulation

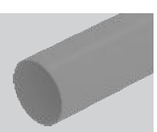
✗

Electrical installation pipe made of plastic, flexible

Ø 20 mm ✓

Plastic pipes

✗



Details on the version can be found in the proof of suitability or mounting instructions.
All the stated dimensions are maximum values.

PYROPLUG® Box box insulation
System description

The PYROPLUG® Box system from OBO is used to create cable insulation with boxes made of foam. The system is particularly suitable for simple mounting of cable insulation in light-duty partitions. No layering is required. Installation in solid walls and solid ceilings is also possible and approved. The insulation system consists of a two-part frame and two matching internal pieces. The permanently elastic, closed-pore foam material expands in the event of fire without any significant pressure build-up, thus creating an insulating plastic foam. This reliably prevents the penetration of fire and smoke through the cable insulation. The usable area of the boxes corresponds to the maximum approval cable assignment area of 60%. It is thus impossible to over assign it with cables.

PYROPLUG® Box box insulation
Installation principle

Insertion of the split frame in light-duty partitions, without additional layering.

Mounting of the frame with previously installed cables.

Exact cutting of the internal pieces and then insertion in the frame.

Closing joint component on full assignment with FBA-SP filler.

Grouped arrangement of the boxes.

Classification to DIN

S30 S60 S90

Erectors of combination insulation systems have to be trained.

PYROPLUG® Box box insulation
Registration data

Insulation in wall/ceiling

Fire resistance class	S30, S60, S90
Proof of application	General construction approval of DIBt, Berlin
Approval number	Z-19. 15-1557
Testing standard	DIN 4102 Part 9

Areas of installation
Insulation systems in walls/ceilings

Component F30	Rigid walls	Flexible walls	Rigid floors
			
Min. component strength	5 cm (S30 / S60 / S90)	7.5 cm (S30 / S60 / S90)	15 cm (S30 / S60 / S90)
Min. insulation thickness	20 cm (S30 / S60 / S90)	20 cm (S30 / S60 / S90)	20 cm (S30 / S60 / S90)
Opening size	↔ ≤ 50 cm ↕ ≤ 50 cm	↔ ≤ 50 cm ↕ ≤ 50 cm	↔ ≤ 50 cm ↕ ≤ 50 cm

Component F90	Rigid walls	Flexible walls	Rigid floors
			
Min. component strength	10 cm (S30 / S60 / S90)	10 cm (S30 / S60 / S90)	15 cm (S30 / S60 / S90)
Min. insulation thickness	20 cm (S30 / S60 / S90)	20 cm (S30 / S60 / S90)	20 cm (S30 / S60 / S90)
Opening size	↔ ≤ 50 cm ↕ ≤ 50 cm	↔ ≤ 50 cm ↕ ≤ 50 cm	↔ ≤ 50 cm ↕ ≤ 50 cm

PYROPLUG® Box box insulation
Installations

Cable

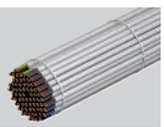
All Ø ✓

Pipe bundle of electrical installation pipes

✗

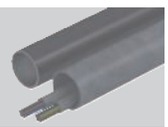
Cable bundle

Ø 100 mm,
cable Ø 21 mm ✓



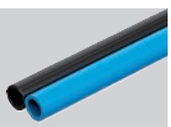
Electrical installation pipe made of steel

✗



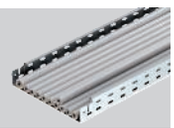
Individual lines for control purposes

Ø 15 mm ✓



Cable support systems

Profiles made of steel,
aluminium or plastic ✓



Electrical installation pipe made of plastic, rigid

Ø 20 mm ✓

Metal pipes with path insulation

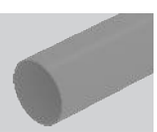
✗

Electrical installation pipe made of plastic, flexible

Ø 20 mm ✓

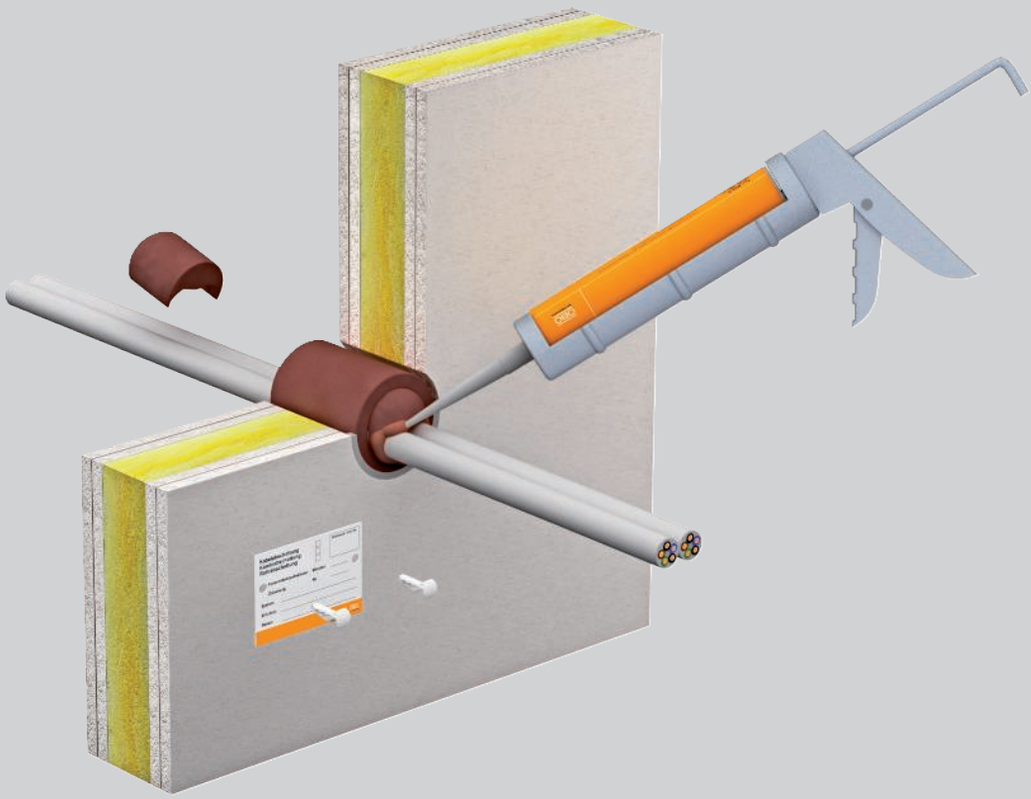
Plastic pipes

✗



Details on the version can be found in the proof of suitability or mounting instructions.
All the stated dimensions are maximum values.

PYROPLUG® Shell pipe shells
System description

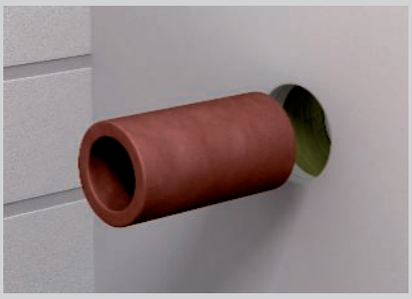


The OBO PYROPLUG® Shell system is specially designed for cable insulation in box drill holes in light-duty partitions. The insulation system consists of a pipe shell and two matching plugs. The material is made of permanently elastic, closed-pore foam, which expands in the event of fire without any significant pressure build-up, thus creating an insulating plastic foam. This reliably prevents the penetration of fire and smoke through the cable insulation. The ratio of the external diameter to the internal diameter of the pipe shell ensures that over assignment with cables is not possible, even at full assignment.

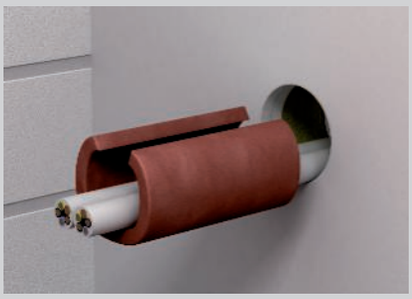
PYROPLUG® Shell pipe shells
Installation principle

Drilling of a hole with a drill crown.

Grouped arrangement of the drill holes.

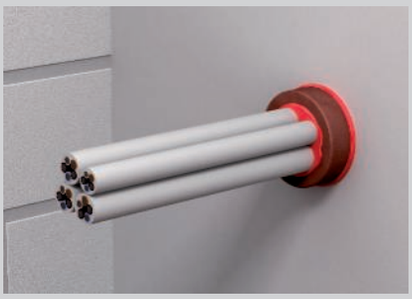


Insertion of the pipe shell in the light-duty partition.



For previously installed cables, cutting of the pipe shell.

Cutting and insertion of the plugs in the pipe shell.



Full assignment of the pipe shell.

Classification to DIN

S30 S60 S90

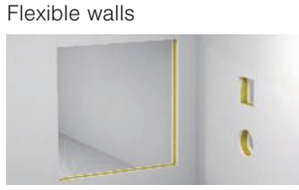
Erectors of combination insulation systems have to be trained.

PYROPLUG® Shell pipe shells
Registration data

Insulation in wall / ceiling

Fire resistance class	S30, S60, S90
Proof of application	General construction approval of DIBt, Berlin
Approval number	Z-19. 15-1559
Testing standard	DIN 4102 Part 9

Areas of installation
Insulation systems in walls/ceilings

Component F30	Rigid walls	Flexible walls	Rigid floors
			
Min. component strength	5 cm (S30 / S60 / S90)	7.5 cm (S30 / S60 / S90)	15 cm (S30 / S60 / S90)
Min. insulation thickness	10 cm (S30 / S60 / S90)	10 cm (S30 / S60 / S90)	10 cm (S30 / S60 / S90)
Opening size	≤ Ø 10 cm	≤ Ø 10 cm	≤ Ø 10 cm

Component F90	Rigid walls	Flexible walls	Rigid floors
			
Min. component strength	10 cm (S30 / S60 / S90)	10 cm (S30 / S60 / S90)	15 cm (S30 / S60 / S90)
Min. insulation thickness	10 cm (S30 / S60 / S90)	10 cm (S30 / S60 / S90)	10 cm (S30 / S60 / S90)
Opening size	≤ Ø 10 cm	≤ Ø 10 cm	≤ Ø 10 cm

PYROPLUG® Shell pipe shells
Installations

Cable

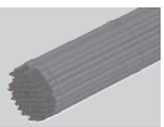
All Ø ✓

Pipe bundle of electrical installation pipes

✗

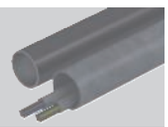
Cable bundle

✗



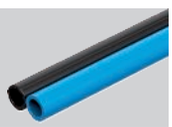
Electrical installation pipe made of steel

✗



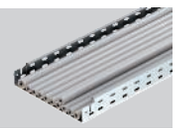
Individual lines for control purposes

Ø 15 mm ✓



Cable support systems

Profiles made of steel, aluminium or plastic ✓



Electrical installation pipe made of plastic, rigid

✗

Metal pipes with path insulation

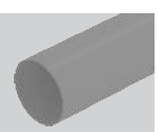
✗

Electrical installation pipe made of plastic, flexible

✗

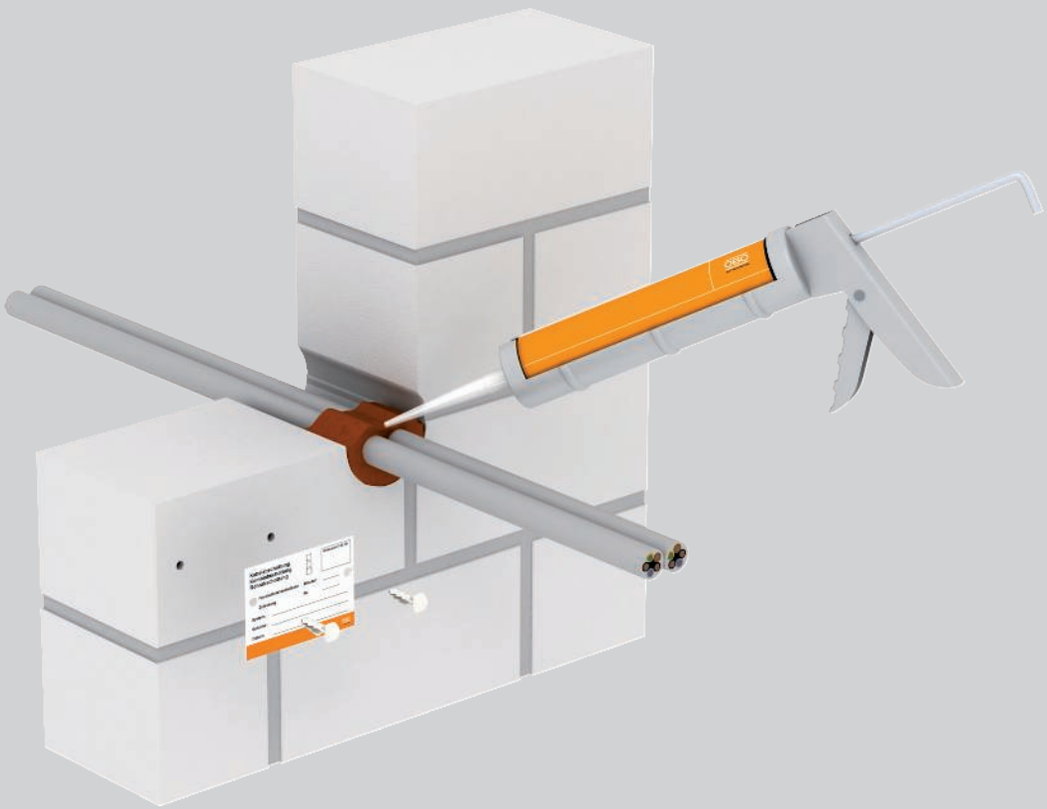
Plastic pipes

✗



Details on the version can be found in the proof of suitability or mounting instructions.
All the stated dimensions are maximum values.

PYROPLUG® Mini filler
System description



The OBO PYROPLUG® Mini system is ideal for small, round cable insulations up to a diameter of 8 cm. It only consists of the one-component filler PYROPLUG® Screed. In light-duty partitions, the empty mini pipe shell of the PYROPLUG® Shell system is used as layering. The interior of these pipe shells may be completely assigned. Only the residual joints must be filled with the filler.

PYROPLUG® Mini filler
Installation principle

Closing of the opening with the filler FBA-SP.

In light-duty partitions, use of the mini pipe shell FBA-DR.

Complete assignment of the mini pipe shell.

Classification to DIN

S30 S60 S90

Erectors of combination insulation systems have to be trained.

PYROPLUG® Mini filler
Registration data

Insulation in wall/ceiling

Fire resistance class	S30, S60, S90
Proof of application	General construction approval of DIBt, Berlin
Approval number	Z-19. 15-1851
Testing standard	DIN 4102 Part 9

Areas of installation
Insulation systems in walls/ceilings

Component F90	Rigid walls	Flexible walls	Rigid floors
			
Min. component strength	10 cm (S30 / S60 / S90)	10 cm (S30 / S60 / S90)	15 cm (S30 / S60 / S90)
Min. insulation thickness	10 cm (S30 / S60 / S90)	10 cm (S30 / S60 / S90)	15 cm (S30 / S60 / S90)
Opening size	≤ Ø 8 cm	≤ Ø 8 cm	≤ Ø 8 cm

PYROPLUG® Mini filler
Installations

Cable

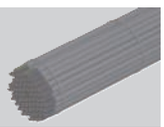
Ø 18 mm ✓

Pipe bundle of electrical installation pipes

✗

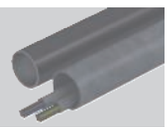
Cable bundle

✗



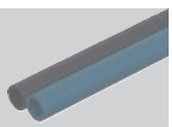
Electrical installation pipe made of steel

✗



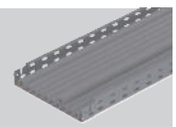
Individual lines for control purposes

✗



Cable support systems

✗



Electrical installation pipe made of plastic, rigid

✗

Metal pipes with path insulation

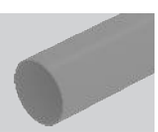
✗

Electrical installation pipe made of plastic, flexible

✗

Plastic pipes

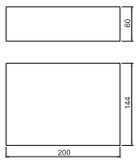
✗



Details on the version can be found in the proof of suitability or mounting instructions.
All the stated dimensions are maximum values.

PYROPLUG® foam series

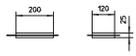
PYROPLUG® Block foam block



Type	Dimension mm	Pack Piece	Weight kg/100 pc.	Item no.
FBA-B200-14	200x144x60	4	44.800	**7202505**

Soft, permanently elastic foam block for cable and combination insulation. Vertical and transverse installation to achieve different fire resistance classes. Can be combined with the two-component fire protection foam PYROSIT® NG. Can be used in solid ceilings and walls and in light-duty partitions and is approved for many installations. CE-labelled construction product according to ETA-15/0803 for applications with fire resistance periods of up to 120 minutes.
Details on the applications can be found in the approval documents.
Protect the surface of the foam insulation against water in order to guarantee safe expansion in the event of fire. Coating with standard silicone is approved.

PYROPLUG® Block vacuum block



Type	Dimension mm	Pack Piece	Weight kg/100 pc.	Item no.
FBA-BV200-14	200x144x25	1	40.000	**7202515**

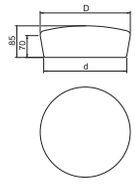
Vacuum-packed version of the FBA-B200-14 foam block for the simple closure of the residual gap in the PYROPLUG® Block combination insulation. After mounting has been completed, the film is cut and the block expands to its original size again. The film can remain in the insulation.

2-component fire protection foam PYROSIT® NG

Type	Contents ml	Pack Piece	Weight kg/100 pc.	Item no.
FBS-S	380	1	64.600	**7203800**

PYROSIT® NG 2-component fire protection foam in a cartridge, including 2 mixing tubes.
To create cable and combination insulation; always process the coaxial cartridge 5:1 with FBS-PH or FBS-PA cartridge pistols.
In dry, frost-free rooms, the cartridge can be stored closed and standing upright at temperatures from +5 °C to +30 °C for up to 12 months.

PYROPLUG® Peg plugs



Type	For opening Ø mm	Dim. D mm	Dim. d mm	Pack Piece	Weight kg/100 pc.	Item no.
FBA-SN65	55-65	75	65	4	8.200	**7202553**
FBA-SN78	68-78	87	78	4	12.600	**7202557**
FBA-SN107	97-107	117	107	4	21.600	**7202561**
FBA-SN122	112-122	132	122	4	28.600	**7202565**
FBA-SN134	124-134	144	134	4	32.900	**7202569**
FBA-SN165	155-165	175	165	1	49.700	**7202573**
FBA-SN200	190-200	210	200	1	74.400	**7202577**
FBA-SN250	240-250	260	250	1	101.400	**7202581**

Plug for cable insulation.
Protect the FBA plugs against water in order to guarantee safe foaming in case of fire.

PYROPLUG® screed filler

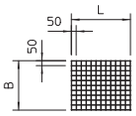
Type	Contents ml	Pack Piece	Weight kg/100 pc.	Item no.
FBA-SP	310	1	46.000	**7202322**

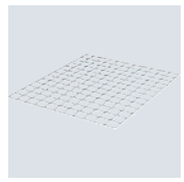
Fire protection filler in a cartridge.
Usable as small insulation and as joint closing compound in all insulation of the PYROPLUG® series.
In dry, frost-free rooms, the fire protection filler can be stored for up to 12 months at a temperature of +5 °C to +30 °C.

St FT

Steel wire grid

Type	Dim. L mm	Dim. B mm	Pack Piece	Weight kg/100 pc.	Item no.
SDG-1	600	500	1	135.000	7202963
SDG-2	1000	600	1	270.000	7202971



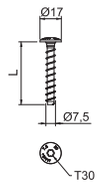


Steel wire grid as support and protection grid, wire diameter 4 mm.

St G

MMS-plus MS mounting rail tie, with flat panhead

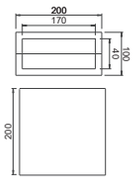
Type	Dimension mm	Dim. L mm	Drill hole Ø mm	Head Ø mm	Screw system	Pack Piece	Weight kg/100 pc.	Item no.
MMS+ MS 7.5x50	7,5 x 50	50	6	17	Torx	100	1.500	3498261
MMS+ MS 7.5x60	7,5 x 60	60	6	17	Torx	50	1.800	3498262



Bolt tie for direct mounting without additional anchors in cracked and uncracked concrete and masonry. With large round head to fasten mounting and profile rails. Torx drive T30.
Construction product tested according to EAD and CE mark, with European Technical Assessment (ETA) and proof of suitability. Load-bearing capacities under fire loads proven up to fire resistance class R120.

PYROPLUG® Box box insulation

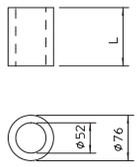
Type	Dimension mm	Pack Piece	Weight kg/100 pc.	Item no.
FBA-F	200x200x100	1	122.000	7202660



Box for cable insulation.
Consisting of a two-part, hard frame and two soft internal pieces. Protect the frame and internal pieces against water in order to guarantee safe foaming in case of fire.

PYROPLUG® Shell drill crown insulation

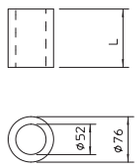
Type	Dim. L mm	Pack Piece	Weight kg/100 pc.	Item no.
FBA-D100	100	1	15.500	7202624
FBA-D150	150	1	19.200	7202628



Pipe shell for cable insulation.
Consisting of a one-part, hard pipe sleeve and two soft plugs of 50 mm diameter. Protect the pipe sleeves and plugs against water in order to guarantee safe foaming in case of fire.

Empty mini pipe shell

Type	Dim. L mm	Pack Piece	Weight kg/100 pc.	Item no.
FBA-DR100	100	1	6.500	7202613
FBA-DR150	150	1	10.200	7202617

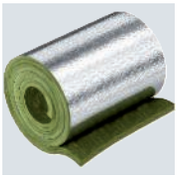


Empty pipe sleeve for use in FBA-SP small insulation in lightweight partitions.
Protect the pipe sleeves against water in order to guarantee safe foaming in case of fire.

Always indicate the item number when ordering.

PYROPLUG® foam series

Section insulation for metal pipes



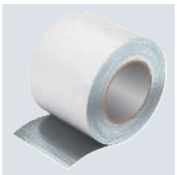
Type	Length mm	Width mm	Thickness mm		Pack Piece	Weight kg/100 pc.	Item no.
MIW-MA	6100	500	30		2	1,010.000	**7202308**

Mineral wool mats with aluminium lamination for section insulation on copper and steel pipes. Fastening with winding wire, securing of joints with aluminium adhesive tape.

Applicable in the systems:
PYROMIX® mortar insulation
PYROSIT® NG fire insulation foam
PYROPLATE® Fibre soft insulation
PYROPLUG® Block blocks

Material class EN 13501 - A1 non-combustible; melting point ≥ 1,000 °C

Aluminium adhesive tape for path insulation



Type	Length m	Width mm		Pack Piece	Weight kg/100 pc.	Item no.
MIW-AT	100	100		1	136.900	**7202305**

Aluminium adhesive tape for applying the aluminium-laminated section insulation. The aluminium adhesive tape is self-adhesive and not classified as combustible according to DIN 4102-1.

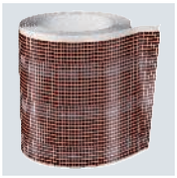
Winding wire for path insulation

St

Type	Length m		Pack Piece	Weight kg/100 pc.	Item no.
MIW-TD	50		1	10.000	**7202309**

The steel wire is used to fix the section insulation. It is non-combustible and guarantees optimum retention of the section insulation on non-combustible pipes and cables.

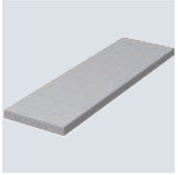
Cable coil

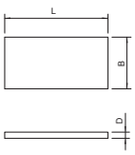


Type	Length m	Width mm		Pack Piece	Weight kg/100 pc.	Item no.
FBA-WI	5	150		1	384.000	**7202510**

Self-adhesive, intumescent cable protector, 5 mm thick, for use with large cable diameters and penetrated cable support systems, applicable in PYROPLUG® systems and PYROSIT® NG.

Calcium silicate plate





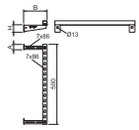
Type	Dim. L mm	Dim. B mm	Dim. D mm		Pack Piece	Weight kg/100 pc.	Item no.
KSI-P1	500	150	20		1	42.000	**7202283**
KSI-P2	500	250	30		1	111.000	**7202904**
KSI-P3	1000	250	30		1	222.000	**7202912**

Calcium silicate plate, as support plate, for the construction of frames in the penetration and to double thin wall thicknesses.
Materials class EN 13501 - A1 non-combustible.

St

Support construction for insulations, with bracket

Type	Dim. H mm	Dim. B mm	Dim. A mm	Pack Piece	Weight kg/100 pc.	Item no.
SKA 05 VZ	70	217	50	1	190.740	**7202436**

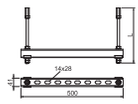


Suspension and fastening material, made of steel, to create the first support of pass-through installations in fire insulation. Mounting of the bracket on the wall, support of the installation using mounting rail.
The maximum distance of the mounting rail to the wall of 200 mm fulfils the requirements of most insulation systems.

St

Support construction for insulations, with pendulum suspension

Type	Dim. L mm	Pack Piece	Weight kg/100 pc.	Item no.
SKP 05 VZ	1000	1	235.240	**7202446**

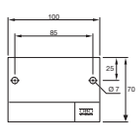


Suspension and fastening material, made of steel, to create the first support of pass-through installations in fire insulation. Mounting of the pendulum with threaded rods under the ceiling. A maximum of two layers can be mounted with connection sleeves from two sets. The support constructions must be arranged on both sides of the wall at the prescribed distance to the insulation system.

PS

Identification plate

Type	Language	Pack Piece	Weight kg/100 pc.	Item no.
KS-S DE	German	1	2.400	**7205425**



Identification plate to be written on with waterproof and light-resistant felt-tip pen for fire-safe cable glands, including 2 push-fit anchors.

Always indicate the item number when ordering.

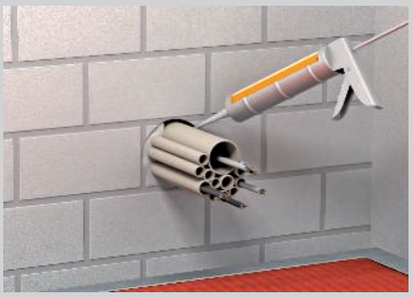
PYROCOMB® Tubes pipe sleeve
System description

The PYROCOMB® Tubes system is used to create cable insulation with pipe sleeves. The system comprises multiple sizes of the pipe sleeve, type TCX. This allows simple insulation of bundles of plastic electrical installation pipes, rigid or flexible, up to a size of M63. It is irrelevant whether the pipes are filled with cables or are empty. In the event of fire, the fire protection material inserted within the seal foams up after a few minutes under high pressure, closing the softened bundles at a high pressure. This safely prevents the spread of fire and smoke, should a fire occur.

PYROCOMB® Tubes pipe sleeve
Installation principle

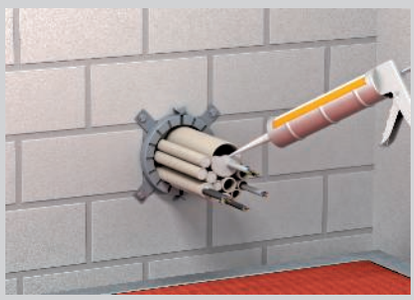
Two-sided arrangement of the pipe sleeves for wall mounting.

Mounting on the underside of the ceiling with metal anchors.

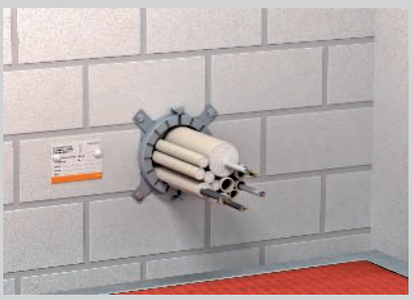


Closing of the ring gap with the insulation layer creator DSX.

Combination of the sleeve halves and fastening on the wall.



Closing of the pipe ends with the insulation layer creator DSX.



Labelled insulation of installation pipe bundles.

Classification to DIN

S30 S60 S90

Classification to EN

EI15 EI30 EI45 EI60 EI90 EI120

Erectors of combination insulation systems have to be trained.

PYROCOMB® Tubes pipe sleeve
Registration data

Combination insulation in walls and ceilings

Fire resistance class	EI 15, EI 30, EI 45, EI 60, EI 90, EI 120
Proof of application	General construction approval of OIB, Vienna
Approval number	ETA-12/0207
Testing standard	EN 1366-3

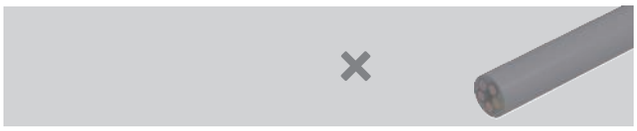
Note:
For the legally compliant documentation, the European Technical Assessment (ETA), the general design approval (aBG) and the declaration of performance (DoP) are needed. The labelling of the insulation system and the submittal of the declaration of conformity statement are mandatory after the installation. All certificates and a sample of the declaration of conformity statement that can be edited are available from the download area at www.obo.de.

Areas of installation
Insulation systems in walls/ceilings

Component	Rigid walls	Flexible walls	Rigid floors
			
Min. component strength	10 cm (EI 30 / EI 60 / EI 90 / EI 120)	10 cm (EI 30 / EI 60 / EI 90 / EI 120)	15 cm (EI 30 / EI 60 / EI 90 / EI 120)
Min. insulation thickness	10 cm (EI 60 / EI 90 / EI 120)	10 cm (EI 60 / EI 90 / EI 120)	15 cm (EI 60 / EI 90 / EI 120)
Opening size	Ø 32 mm, Ø 40 mm, Ø 50 mm, Ø 63 mm, Ø 75 mm, Ø 90 mm, Ø 110 mm, Ø 125 mm	Ø 32 mm, Ø 40 mm, Ø 50 mm, Ø 63 mm, Ø 75 mm, Ø 90 mm, Ø 110 mm, Ø 125 mm	Ø 32 mm, Ø 40 mm, Ø 50 mm, Ø 63 mm, Ø 75 mm, Ø 90 mm, Ø 110 mm, Ø 125 mm

PYROCOMB® Tubes pipe sleeve
Installations

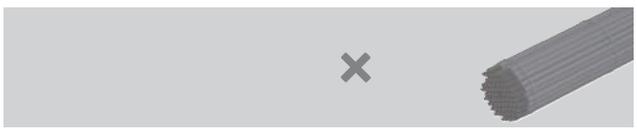
Cable



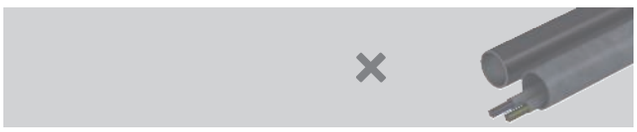
Pipe bundle of electrical installation pipes

Ø 125 mm ✓

Cable bundle



Electrical installation pipe made of steel



Individual lines for control purposes

Cable support systems

Electrical installation pipe made of plastic, rigid

Metal pipes with path insulation

Electrical installation pipe made of plastic, flexible

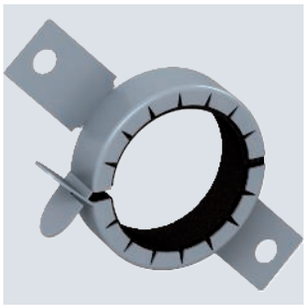
Ø 32 mm,
cable Ø 21 mm ✓

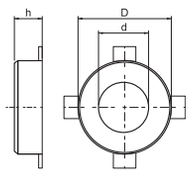
Plastic pipes

Details on the version can be found in the proof of suitability or mounting instructions.
All the stated dimensions are maximum values.

PYROCOMB® pipe sleeve

Pipe sleeve with 2 fastening straps

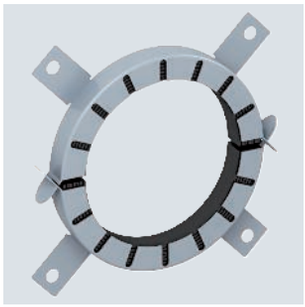


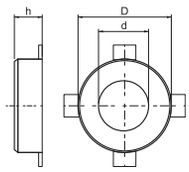


Type	Pipe Ø mm	Dim. h mm	Dim. D mm	Dim. d mm	Pack Piece	Weight kg/100 pc.	Item no.
TCX-032	32-34	26	50	36	1	6.500	**7202200**
TCX-040	40-42	26	58	44	1	7.000	**7202201**
TCX-050	50-52	26	68	54	1	8.000	**7202203**

Pipe sleeve for combustible pipes.
If there is a fire, fire protection inserts inside the sheet steel housing expand, exerting a very great pressure onto the burning thermoplastic pipes.
Fastening with anchors or M6 threaded rods.

Pipe sleeve with 4 fastening straps

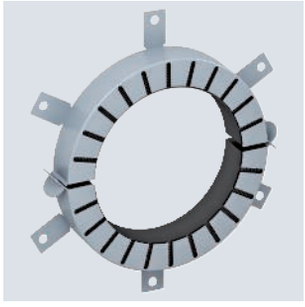


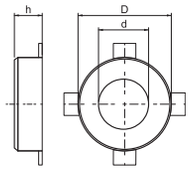


Type	Pipe Ø mm	Dim. h mm	Dim. D mm	Dim. d mm	Pack Piece	Weight kg/100 pc.	Item no.
TCX-063	63-65	26	94	67	1	15.500	**7202204**
TCX-075	75-77	26	106	79	1	19.000	**7202205**
TCX-090	90-92	26.6	132	94	1	37.000	**7202206**
TCX-110	110-112	26.6	155	114	1	46.000	**7202207**
TCX-125	125-127	40	172	129	1	70.000	**7202208**

Pipe sleeve for combustible pipes.
If there is a fire, fire protection inserts inside the sheet steel housing expand, exerting a very great pressure onto the burning thermoplastic pipes.
Fastening with anchors of M6 threaded rods up to size 75 mm, then M8.

Pipe sleeve with 6 fastening straps

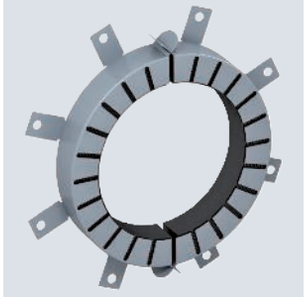


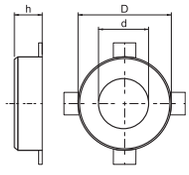


Type	Pipe Ø mm	Dim. h mm	Dim. D mm	Dim. d mm	Pack Piece	Weight kg/100 pc.	Item no.
TCX-140	140-142	40	200	144	1	106.000	**7202209**
TCX-160	160-162	40	220	164	1	107.000	**7202210**

Pipe sleeve for combustible pipes.
If there is a fire, fire protection inserts inside the sheet steel housing expand, exerting a very great pressure onto the burning thermoplastic pipes.
Fastening with anchors or M8 threaded rods.

Pipe sleeve with 8 fastening straps





Type	Pipe Ø mm	Dim. h mm	Dim. D mm	Dim. d mm	Pack Piece	Weight kg/100 pc.	Item no.
TCX-180	180-182	40	264	184	1	175.000	**7202212**
TCX-200	200-202	40	284	204	1	242.000	**7202214**

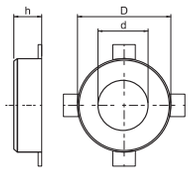
Pipe sleeve for combustible pipes.
If there is a fire, fire protection inserts inside the sheet steel housing expand, exerting a very great pressure onto the burning thermoplastic pipes.
Fastening with anchors or M8 threaded rods.

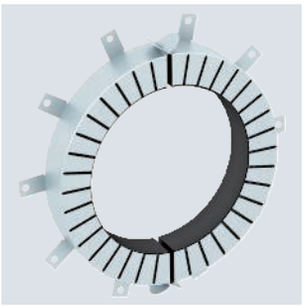
FS

Pipe sleeve with 10 fastening straps

Type	Pipe Ø mm	Dim. h mm	Dim. D mm	Dim. d mm	Pack Piece	Weight kg/100 pc.	Item no.
TCX-225	225-227	51.5	328	239	1	306.000	**7202213**
TCX-250	250-252	51.5	353	264	1	346.000	**7202215**

Pipe sleeve for combustible pipes.
If there is a fire, fire protection inserts inside the sheet steel housing expand, exerting a very great pressure onto the burning thermoplastic pipes.
Fastening with anchors or M8 threaded rods.



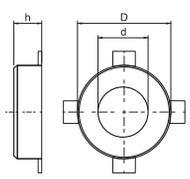


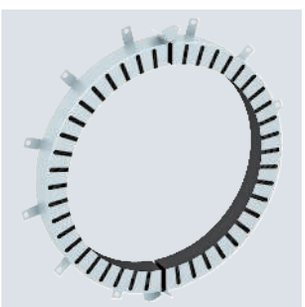
FS

Pipe sleeve with 12 fastening straps

Type	Pipe Ø mm	Dim. h mm	Dim. D mm	Dim. d mm	Pack Piece	Weight kg/100 pc.	Item no.
TCX-280	280-282	51.5	378	289	1	398.000	**7202216**
TCX-300	300-302	51.5	403	314	1	405.000	**7202217**
TCX-315	315-317	51.5	417	328	1	425.000	**7202218**
TCX-355	355-357	51.5	459	370	1	460.000	**7202219**
TCX-400	400-402	51.5	504	415	1	520.000	**7202220**

Pipe sleeve for combustible pipes.
If there is a fire, fire protection inserts inside the sheet steel housing expand, exerting a very great pressure onto the burning thermoplastic pipes.
Fastening with anchors or M8 threaded rods.





St G

Threaded rod

Type	Thread	Dim. d mm	Dim. L mm	Pack Piece	Weight kg/100 pc.	Item no.
TR M6 1M G	M6	6	1000	10	18.300	**3141047**
TR M8 1M G	M8	8	1000	10	30.000	**3141128**

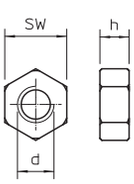
Threaded rod to DIN 976.

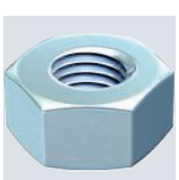
St G

Hexagonal nut DIN 934

Type	Thread	SW mm	Dim. h mm	Dim. d mm	Pack Piece	Weight kg/100 pc.	Item no.
HN M6 G	M6	10	5.2	6	100	0.221	**3400069**
HN M8 G	M8	13	6.8	8	100	0.500	**3400085**

Hexagonal nut to DIN 934 with metric thread.



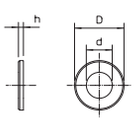


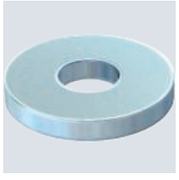
St G

Washer ISO 7093

Type	Thread	Dim. d mm	Dim. D mm	Dim. h mm	Pack Piece	Weight kg/100 pc.	Item no.
WS M6 D28 G	M6	6.5	28	2.5	100	1.104	**3402207**
WS M8 D28 G	M8	8.5	28	2.5	100	1.100	**3402215**

Washer of large outer diameter for universal use.



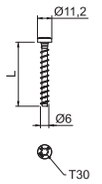


Always indicate the item number when ordering.

PYROCOMB® pipe sleeve

MMS-plus P round head tie, with panhead

St G

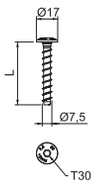


Type	Dimension mm	Dim. L mm	Drill hole Ø mm	Head Ø mm	Screw system	Pack Piece	Weight kg/100 pc.	Item no.
MMS+ P 6x40	6x40	40	5	11.2	Torx	100	1.000	**3498105**
MMS+ P 6x50	6x50	50	5	11.2	Torx	100	1.000	**3498108**

Bolt tie for direct mounting without additional anchors in cracked and uncracked concrete and masonry. With round head for universal fastenings. Torx drive T30.
Construction product tested according to EAD and CE mark, with European Technical Assessment (ETA) and proof of suitability. Load-bearing capacities under fire loads proven up to fire resistance class R120.

MMS-plus MS mounting rail tie, with flat panhead

St G

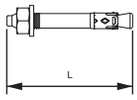


Type	Dimension mm	Dim. L mm	Drill hole Ø mm	Head Ø mm	Screw system	Pack Piece	Weight kg/100 pc.	Item no.
MMS+ MS 7.5x50	7,5x50	50	6	17	Torx	100	1.500	**3498261**
MMS+ MS 7.5x60	7,5x60	60	6	17	Torx	50	1.800	**3498262**

Bolt tie for direct mounting without additional anchors in cracked and uncracked concrete and masonry. With large round head to fasten mounting and profile rails. Torx drive T30.
Construction product tested according to EAD and CE mark, with European Technical Assessment (ETA) and proof of suitability. Load-bearing capacities under fire loads proven up to fire resistance class R120.

Nail anchor N with thread

St G

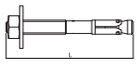


Type	Thread	Drill hole Ø mm	Drill hole depth mm	Clamping range mm	Dim. L mm	Pack Piece	Weight kg/100 pc.	Item no.
N 6-5-10/49	M6	6	40	5-10	49	100	1.160	**3498396**

The nail anchor N can be used for multiple fastenings of non-load-bearing systems and in cracked and non-cracked concrete, thereby combining the benefits of a bolt tie with even easier mounting.
The nail tie only needs to be hammered into the drill hole. It is not necessary to apply torque subsequently. When the load occurs, the nail tie spreads itself and bolts itself in the drill hole.

Bolt tie BZ-U

St G

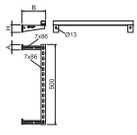


Type	Thread	Dim. L mm	Pack Piece	Weight kg/100 pc.	Item no.
BZ-U 8-10-21/75	M8	75	50	3.460	**3498320**

Bolt tie BZ for the anchoring of medium-duty to heavy-duty loads, both in cracked and non-cracked concrete. It combines high approved loads with small edge distances and axial spacings.

Support construction for insulations, with bracket

St



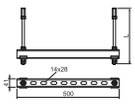
Type	Dim. H mm	Dim. B mm	Dim. A mm	Pack Piece	Weight kg/100 pc.	Item no.
SKA 05 VZ	70	217	50	1	190.740	**7202436**

Suspension and fastening material, made of steel, to create the first support of pass-through installations in fire insulation. Mounting of the bracket on the wall, support of the installation using mounting rail.
The maximum distance of the mounting rail to the wall of 200 mm fulfils the requirements of most insulation systems.

St

Support construction for insulations, with pendulum suspension

Type	Dim. L mm	Pack Piece	Weight kg/100 pc.	Item no.
SKP 05 VZ	1000	1	235.240	**7202446**

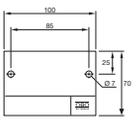


Suspension and fastening material, made of steel, to create the first support of pass-through installations in fire insulation. Mounting of the pendulum with threaded rods under the ceiling. A maximum of two layers can be mounted with connection sleeves from two sets. The support constructions must be arranged on both sides of the wall at the prescribed distance to the insulation system.

PS

Identification plate

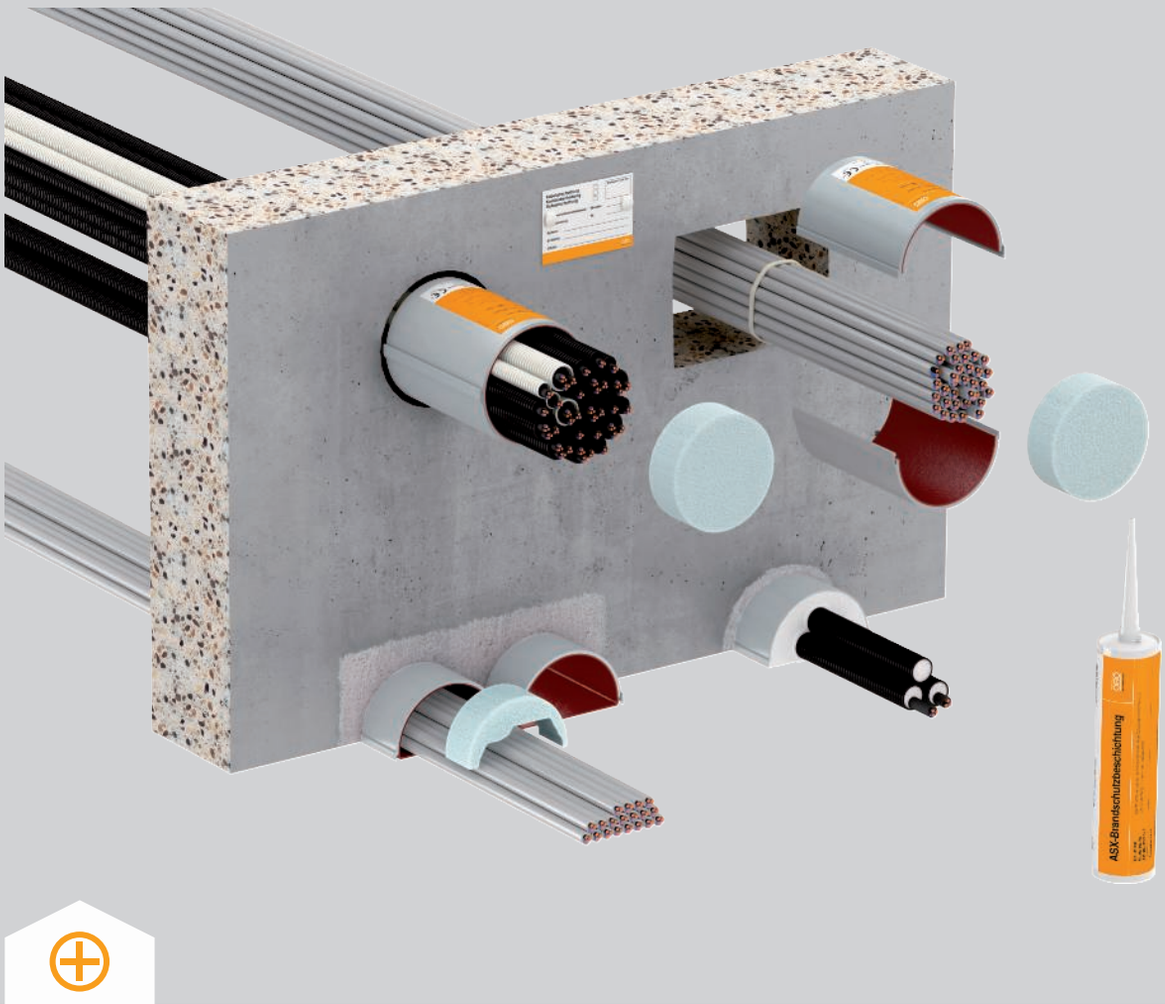
Type	Language	Pack Piece	Weight kg/100 pc.	Item no.
KS-S DE	German	1	2.400	**7205425**



Identification plate to be written on with waterproof and light-resistant felt-tip pen for fire-safe cable glands, including 2 push-fit anchors.

Always indicate the item number when ordering.

PYROCOMB® Intube pipe shell
System description



The PYROCOMB® Intube system is used to create cable insulation with pipe shells or half shells. The pipe shell is particularly suitable for core drill holes and can very easily be installed in solid ceilings or walls and also light-duty partitions. For this, two half pipe sleeves are clicked together and bedded in mortar in the core hole. Then the pipe sleeves are closed with seals and the surface is sealed with ASX ablation coating. The cables don't require any coating. The half shell can be used particularly well in the underfloor area. It is sealed on one side with fire protection plugs and sealed with ASX ablation coating. In case of a fire, the inner coating of the pipe shell or the half shell expands and, in so doing, closes the opening cross-section completely. The transfer of fire and smoke is thus safely prevented. With the PYROCOMB® Intube system, 100% assignment of the interior is possible.

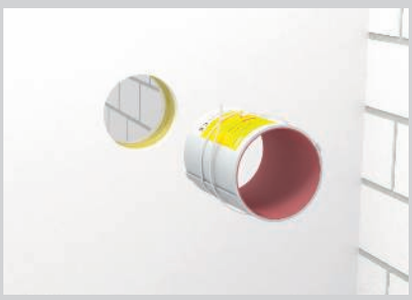
PYROCOMB® Intube pipe shell
Installation principle

Mounting of the pipe shell by clicking the half shells together around the existing installation.

Closing of the opening with PYROMIX® mortar.

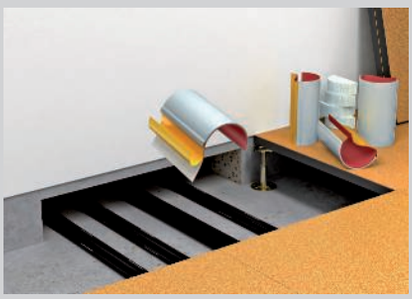
Adjust the foam plugs to installations using a knife and create smoke gas-tight sealing of the sealings using the ASX coating compound.

With ceiling mounting, use a lined body to prevent the pipe shell from falling out.



In certain applications, securing with metal tensioning straps in light-duty partitions is necessary.

Pipe shells with full assignment with cable bundles and electrical installation pipes.



Mounting of the half shell.

Adjusting the foam plug to the cables.

Fully installed half shell in PYROPLATE® Fibre soft insulation.

Classification to DIN

EI15 EI30 EI45 EI60 EI90

Erectors of combination insulation systems have to be trained.

PYROCOMB® Intube pipe shell
Registration data

Insulation in wall/ceiling

Fire resistance class	EI 60, EI 90, EI 120
Proof of application	General construction approval of OIB, Vienna
Approval number	ETA - 13/0904
Testing standard	EN 1366-3

Note:
For the legally compliant documentation, the European Technical Assessment (ETA), the general design approval (aBG) and the declaration of performance (DoP) are needed. The labelling of the insulation system and the submittal of the declaration of conformity statement are mandatory after the installation. All certificates and a sample of the declaration of conformity statement that can be edited are available from the download area at www.obo.de.

Areas of installation
Insulation systems in walls/ceilings

Component		Rigid walls	Flexible walls	Rigid floors
				
Min. component strength		10 cm - 15 cm (EI 30 / EI 60 / EI 90) CTS-150	10 cm - 15 cm (EI 30 / EI 60 / EI 90) CTS-150	12.5 cm (EI 30 / EI 45 / EI 60) CTS-150
		15 cm - 30 cm (EI 30 / EI 60 / EI 90 / EI 120) CTS-300	10 cm - 15 cm (EI 30 / EI 60 / EI 90 / EI 120) CTS-300	15 cm (EI 30 / EI 60 / EI 90 / EI 120) CTS-300
Min. insulation thickness		10 cm - 15 cm (EI 30 / EI 60 / EI 90) CTS-150	10 cm - 15 cm (EI 30 / EI 60 / EI 90) CTS-150	12.5 cm (EI 30 / EI 45 / EI 60) CTS-150
		15 cm - 30 cm (EI 30 / EI 60 / EI 90 / EI 120) CTS-300	10 cm - 15 cm (EI 30 / EI 60 / EI 90 / EI 120) CTS-300	15 cm (EI 30 / EI 60 / EI 90 / EI 120) CTS-300
Opening size		Ø 125 mm	Ø 125 mm	Ø 125 mm
		55 mm x 116 mm	55 mm x 116 mm	55 mm x 116 mm

PYROCOMB® Intube pipe shell
Installations

Cable

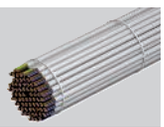
Ø 80 mm ✓

Pipe bundle of electrical installation pipes

Ø 107 mm ✓

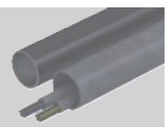
Cable bundle

Ø 107 mm,
cable Ø 21 mm ✓



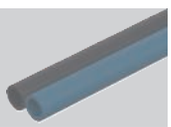
Electrical installation pipe made of steel

✗



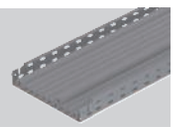
Individual lines for control purposes

✗



Cable support systems

✗



Electrical installation pipe made of plastic, rigid

✗

Metal pipes with path insulation

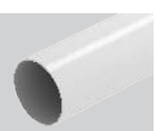
✗

Electrical installation pipe made of plastic, flexible

Ø 32 mm,
cable Ø 21 mm ✓

Plastic pipes

2× Ø 32 mm ✓

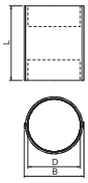


Details on the version can be found in the proof of suitability or mounting instructions.
All the stated dimensions are maximum values.

Pipe shell PYROCOMB® Intube

PYROCOMB® Intube pipe shell, Ø 60 mm

PVC

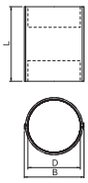


Type	Dim. L mm	Dim. B mm	Dim. D mm	For opening Ø mm	Pack Piece	Weight kg/100 pc.	Item no.
CTS 06150	150	60	50.6	65	1	17.500	**7204290**

Internally coated pipe shells with click lock. The inner space can be fitted with cables and electrical installation pipes completely. CE-labelled, European approved construction product according to ETA-13/0904 and German general type approval. Fire resistance up to 120 minutes.
Closing with 2 foam plugs included in the delivery. The surface seal is created with PYROCOAT® ASX coating.
In some applications, the use of metallic tightening straps is prescribed to secure the pipe shells in light-duty partitions. Details can be found in the mounting instructions/approval.

PYROCOMB® Intube pipe shell, Ø 90 mm

PVC

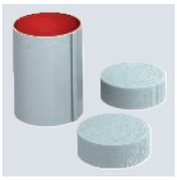


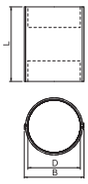
Type	Dim. L mm	Dim. B mm	Dim. D mm	For opening Ø mm	Pack Piece	Weight kg/100 pc.	Item no.
CTS 09150	150	90	80.6	100	1	27.500	**7204292**
CTS 09300	300	90	80.6	100	1	54.000	**7204296**

Internally coated pipe shells with click lock. The inner space can be fitted with cables and electrical installation pipes completely. CE-labelled, European approved construction product according to ETA-13/0904 and German general type approval. Fire resistance up to 120 minutes.
Closing with 2 foam plugs included in the delivery. The surface seal is created with PYROCOAT® ASX coating.
In some applications, the use of metallic tightening straps is prescribed to secure the pipe shells in light-duty partitions. Details can be found in the mounting instructions/approval.

PYROCOMB® Intube pipe shell, Ø 120 mm

PVC



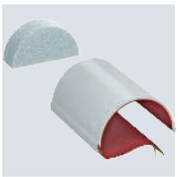


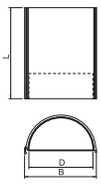
Type	Dim. L mm	Dim. B mm	Dim. D mm	For opening Ø mm	Pack Piece	Weight kg/100 pc.	Item no.
CTS 12150	150	116.4	107	125	1	35.200	**7204300**
CTS 12300	300	116.4	107	125	1	70.000	**7204304**

Internally coated pipe shells with click lock. The inner space can be fitted with cables and electrical installation pipes completely. CE-labelled, European approved construction product according to ETA-13/0904 and German general type approval. Fire resistance up to 120 minutes.
Closing with 2 foam plugs included in the delivery. The surface seal is created with PYROCOAT® ASX coating.
In some applications, the use of metallic tightening straps is prescribed to secure the pipe shells in light-duty partitions. Details can be found in the mounting instructions/approval.

PYROCOMB® Intube half shell

PVC





Type	Dim. D mm	Dim. L mm	Dim. B mm	Pack Piece	Weight kg/100 pc.	Item no.
CTS-HP200	106	200	118	1	20.000	**7204306**

Internally coated half shell, the inner space of which can be fully assigned with cables and electrical installation pipes. CE-labelled, European approved construction product according to ETA-13/0904 and German general type approval. Fire resistance up to 120 minutes.
Closing with foam plug included in the delivery. The surface seal is created with PYROCOAT® ASX coating. The system is particularly suitable for underfloor areas.
Details can be found in the mounting instructions/approval.

Ablation coating PYROCOAT® in a cartridge

Type	Contents ml	Pack Piece	Weight kg/100 pc.	Item no.
ASX-K	310	1	50.000	**7202310**

Combined, endothermic and weatherproof coating for internal and external areas. Universal protection coating for cable and cable support structures. Use as direct filler, and as paint when stirred.
Material class DIN 4102 - B2, normally flammable.
In dry, frost-free rooms, the coating can be stored at temperatures from +5 °C to +25 °C for up to 18 months in closed, upright original containers.

Ablation coating PYROCOAT® in a bucket

Type	Contents kg	Pack Piece	Weight kg/100 pc.	Item no.
ASX-E	5	1	500.000	**7202312**

Combined, endothermic and weatherproof coating for internal and external areas. Universal protection coating for cable and cable support structures. Use as direct filler, and as paint when stirred. Sufficient for an area of 4 m².
Material class DIN 4102 - B2, normally flammable.
In dry, frost-free rooms, the coating can be stored at temperatures from +5 °C to +25 °C for up to 18 months in closed, upright original containers.

PYROMIX® dry mortar in bucket

Type	Contents kg	Pack Piece	Weight kg/100 pc.	Item no.
MSX-E1	10	1	1,000.000	**7206058**

Mortar to create cable and combination insulation in solid walls and ceilings. Suitable for pumping, pressing and for manual installation. Adding approx. 3 litres of water to 10 kg of dry mortar produces about 10 litres of workable compound.
In dry, frost-free rooms, the dry mortar can be stored for at least 12 months in closed original containers.

PYROMIX® dry mortar in paper sack

Type	Contents kg	Pack Piece	Weight kg/100 pc.	Item no.
MSX-S1	20	1	2,000.000	**7206104**

Mortar to create cable and combination insulation in solid walls and ceilings. Suitable for pumping, pressing and for manual installation. Adding approx. 6 litres of water to 20 kg of dry mortar produces about 20 litres of workable compound.
In dry, frost-free rooms, the dry mortar can be stored for at least 12 months in closed original containers.

VA 2B

Metal strip clips, narrow

Type	Length mm	Width mm	Pack Piece	Weight kg/100 pc.	Item no.
MBS 045	450	7	50	0.602	**7203104**

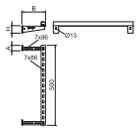
Metal strip clip in ladder form with single lock. For high-temperature and weatherproof fixing. Use MBS-Z pliers to tighten.

Always indicate the item number when ordering.

Pipe shell PYROCOMB® Intube

Support construction for insulations, with bracket

St

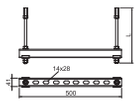


Type	Dim. H mm	Dim. B mm	Dim. A mm	Pack Piece	Weight kg/100 pc.	Item no.
SKA 05 VZ	70	217	50	1	190.740	**7202436**

Suspension and fastening material, made of steel, to create the first support of pass-through installations in fire insulation. Mounting of the bracket on the wall, support of the installation using mounting rail.
The maximum distance of the mounting rail to the wall of 200 mm fulfils the requirements of most insulation systems.

Support construction for insulations, with pendulum suspension

St

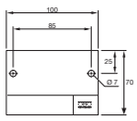


Type	Dim. L mm	Pack Piece	Weight kg/100 pc.	Item no.
SKP 05 VZ	1000	1	235.240	**7202446**

Suspension and fastening material, made of steel, to create the first support of pass-through installations in fire insulation. Mounting of the pendulum with threaded rods under the ceiling. A maximum of two layers can be mounted with connection sleeves from two sets. The support constructions must be arranged on both sides of the wall at the prescribed distance to the insulation system.

Identification plate

PS



Type	Language	Pack Piece	Weight kg/100 pc.	Item no.
KS-S DE	German	1	2.400	**7205425**

Identification plate to be written on with waterproof and light-resistant felt-tip pen for fire-safe cable glands, including 2 push-fit anchors.

PYROMIX Screed® small insulation
System description

Small insulation for cables is created using the PYROMIX® Screed system. It consists of OBO's insulation forming material, type DSX, and the MIW mineral wool. As the insulation basis, the opening is first filled using the non-combustible mineral wool (melting point ≥ 1,000 °C). Then, both sides of the opening are sealed with the DSX insulation creator. If there is a fire, the filler foams up, preventing penetration by fire and smoke. When the material foams up, heat is also drawn from the cables, thus considerably reducing the transfer of heat via the copper cores.

PYROMIX Screed® small insulation
Installation principle

Mineral wool with melting point ≥ 1,000 °C to plug the opening.

Closure of the surfaces on both sides with the DSX insulation layer creator.
(Minimum thickness 1 cm on each side.)

Labelling of the small insulation.

Classification to DIN

S30 S60 S90

Erectors of combination insulation systems have to be trained.

PYROMIX Screed® small insulation
Registration data

Insulation in walls/ceilings

Fire resistance class	S30, S60, S90
Proof of application	General type approval of the DIBt, Berlin
Approval number	Z-19.53-2314
Testing standard	DIN 4102 Part 9

Areas of installation
Insulation systems in walls/ceilings

Component	Rigid walls	Flexible walls	Rigid floors
			
Min. component strength	10 cm (S30/S60/S90)	10 cm (S30/S60/S90)	15 cm (S30 / S60 / S90)
Min. insulation thickness	10/15 cm (S30/S60/S90)	10/15 cm (S30/S60/S90)	15 cm (S30 / S60 / S90)
Opening size	↔ ≤ 35 cm ↕ ≤ 15 cm ⌀ ≤ Ø 15 cm	⌀ ≤ 35 cm ≤ 15 cm ≤ Ø 15 cm	↔ ≤ 15 cm ↕ ≤ 15 cm ⌀ ≤ Ø 15 cm

PYROMIX Screed® small insulation
Installations

Cable

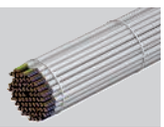
All Ø ✓

Pipe bundle of electrical installation pipes

≤ 100 mm Ø
EIR ≤ 32 mm Ø

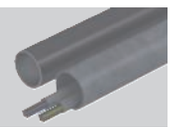
Cable bundle

≤ 100 mm Ø
Cable ≤ 21 mm Ø



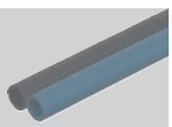
Electrical installation pipe made of steel

✗



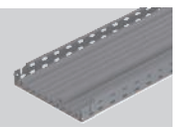
Individual lines for control purposes

✗



Cable support systems

✗



Electrical installation pipe made of plastic, rigid

✗

Metal pipes with path insulation

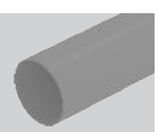
✗

Electrical installation pipe made of plastic, flexible

≤ 32 mm Ø

Plastic pipes

✗



Details on the version can be found in the proof of suitability or mounting instructions.
All the stated dimensions are maximum values.

Small insulation, bandage and individual cables according to MLAR

Insulation layer creator in a cartridge

Type	Contents ml		Pack Piece	Weight kg/100 pc.	Item no.
DSX-K	300		1	50.000	**7202300**

Dispersion-based fire protection compound for interior areas, to fill residual joints and close openings. Approved material for the closing of core drill holes when feeding through single cables and for closing the annular gap when exiting cables from the PYROLINE® Con PLC fire protection duct. Material class DIN 4102 - B2, normally flammable. In dry, frost-free rooms, the compound can be stored at temperatures from +5 °C to +25 °C for up to 18 months in closed, upright original containers.

Insulation layer creator in a bucket

Type	Contents kg		Pack Piece	Weight kg/100 pc.	Item no.
DSX-E	5		1	500.000	**7202302**

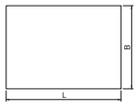
Dispersion-based fire protection compound for interior areas, to fill residual joints and close openings. Approved material for closing core drill holes for individual cable glands.
Material class DIN 4102 - B2, normally flammable.
In dry, frost-free rooms, the compound can be stored at temperatures from +5 °C to +25 °C for up to 18 months in closed, upright original containers.

Mineral wool

Type	Dimension		Pack Piece	Weight kg/100 pc.	Item no.
MIW-S	25 Liter		1	250.000	**7202306**

Universal filling wool for various fire protection applications, packed in compressed form.
Material class EN 13 501 - A1, non-combustible; melting point ≥ 1,000 °C.

Bandage for insulation

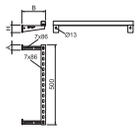


Type	Length m	Width mm		Pack Piece	Weight kg/100 pc.	Item no.
FSB-WB 1.5	10	125		1	220.000	**7203163**

Fire protection coil, coated on one side with material that foams up in the event of fire, for wrapping installations in the PYROMIX® mortar insulation and PYROPLATE® Fibre plate insulation. The carrier mesh has an insulation former on one side. The nominal thickness is 1.5 mm.

Support construction for insulations, with bracket

St



Type	Dim. H mm	Dim. B mm	Dim. A mm		Pack Piece	Weight kg/100 pc.	Item no.
SKA 05 VZ	70	217	50		1	190.740	**7202436**

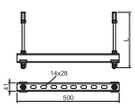
Suspension and fastening material, made of steel, to create the first support of pass-through installations in fire insulation. Mounting of the bracket on the wall, support of the installation using mounting rail.
The maximum distance of the mounting rail to the wall of 200 mm fulfils the requirements of most insulation systems.

St

Support construction for insulations, with pendulum suspension

Type	Dim. L mm	Pack Piece	Weight kg/100 pc.	Item no.
SKP 05 VZ	1000	1	235.240	**7202446**

Suspension and fastening material, made of steel, to create the first support of pass-through installations in fire insulation. Mounting of the pendulum with threaded rods under the ceiling. A maximum of two layers can be mounted with connection sleeves from two sets. The support constructions must be arranged on both sides of the wall at the prescribed distance to the insulation system.

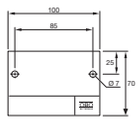


PS

Identification plate

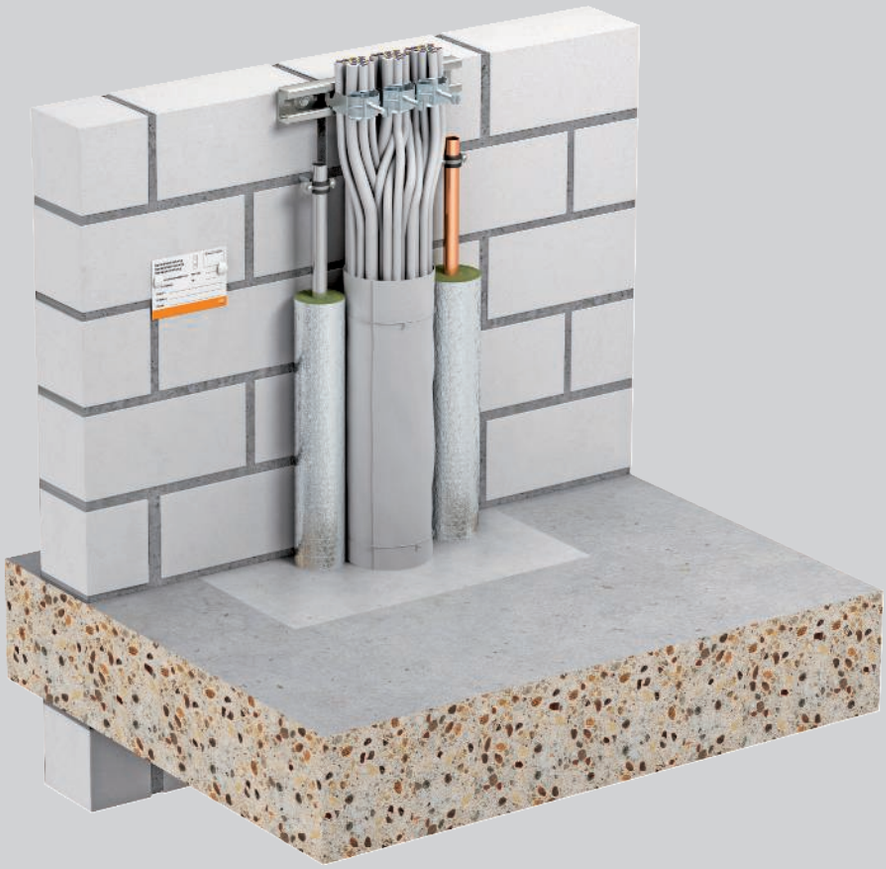
Type	Language	Pack Piece	Weight kg/100 pc.	Item no.
KS-S DE	German	1	2.400	**7205425**

Identification plate to be written on with waterproof and light-resistant felt-tip pen for fire-safe cable glands, including 2 push-fit anchors.



Always indicate the item number when ordering.

Cable insulation Conlit® Bandage
System description



The Conlit® system, consisting of the fire protection bandage, type CL-KS, is used within buildings as cable insulation for individual cables, cable and electrical installation pipe bundles (EIP). The flexible bandage is simply laid around the installations and fixed with a wire. Cable bundles and rigid EIPs must be wound with at least two layers of the bandage and flexible EIPs with at least three layers. In case of a fire, the material foams up and closes the opening cross-section. The fire protection bandage is suitable for cable and electrical installation pipe bundles up for 100 mm diameter. No spacing is required to many insulated pipes. The system insulates fire sections for a period of max. 90 minutes.

Cable insulation Conlit® Bandage
Installation principle

Preparation of the cable insulation.

Installation of the fire protection bandage.

Fixing of the bandage using winding wire.

Using mortar, close off the residual insulation opening and mount the identification plate.

Using mortar, close off the residual insulation opening and mount the identification plate.

Installation of the fire protection bandage with no distance to the Rockwool Conlit pipe insulation.

Classification to DIN

S30 S60 S90

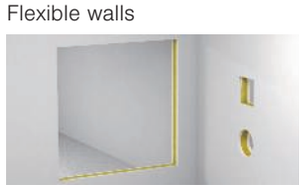
Erectors of combination insulation systems have to be trained.

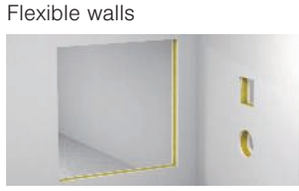
Cable insulation Conlit® Bandage
Registration data

Insulation in walls/ceilings

Fire resistance class	S30, S60, S90
Proof of application	General construction approval of DIBt, Berlin
Approval number	Z-19.15-1877
Testing standard	DIN 4102 Part 9

Areas of installation
Insulation systems in walls/ceilings

Component F30		Rigid walls	Flexible walls	Rigid floors
				
Min. component strength		5 cm (S30 / S60 / S90)	7.5 cm (S30 / S60 / S90)	15 cm (S30 / S60 / S90)
Min. insulation thickness		10 cm (S30 / S60 / S90)	10 cm (S30 / S60 / S90)	10 cm (S30 / S60 / S90)
Opening size		≤ Ø 10 cm	≤ Ø 10 cm	≤ Ø 10 cm

Component F90		Rigid walls	Flexible walls	Rigid floors
				
Min. component strength		10 cm (S30 / S60 / S90)	10 cm (S30 / S60 / S90)	15 cm (S30 / S60 / S90)
Min. insulation thickness		10 cm (S30 / S60 / S90)	10 cm (S30 / S60 / S90)	10 cm (S30 / S60 / S90)
Opening size		≤ Ø 10 cm	≤ Ø 10 cm	≤ Ø 10 cm

Cable insulation Conlit® Bandage
Installations

Cable

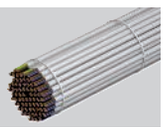
All Ø ✓

Pipe bundle of electrical installation pipes

Ø 100 mm ✓

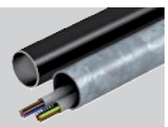
Cable bundle

Ø 100 mm,
cable all Ø ✓



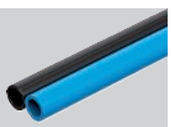
Electrical installation pipe made of steel

Ø 50 mm,
cable all Ø ✓



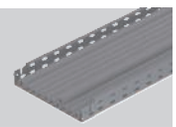
Individual lines for control purposes

Ø 15 mm ✓



Cable support systems

✗



Electrical installation pipe made of plastic, rigid

Ø 40 mm,
cable Ø 32 mm ✓

Metal pipes with path insulation

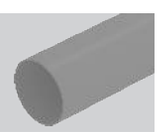
✗

Electrical installation pipe made of plastic, flexible

Ø 40 mm,
cable Ø 22 mm ✓

Plastic pipes

✗



Details on the version can be found in the proof of suitability or mounting instructions.
All the stated dimensions are maximum values.

Small insulation, bandage and individual cables according to MLAR

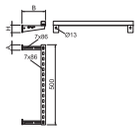
Fire protection bandage

Type	Length m	Width mm	Pack Piece	Weight kg/100 pc.	Item no.
CL-KS	1	380	1	50.000	**7202316**

The fire protection bandage is used as cable insulation for individual cables, cable- and electrical installation pipe bundles (EIR). The insulation consists of a flexible bandage, fixed using wire. When surrounding the cables, take account of how often the appropriate medium must be surrounded. Refer to the approval for details. The bandage can be used directly next to Rockwool pipe insulation. Winding wire is included.

Support construction for insulations, with bracket

St

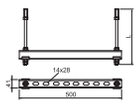


Type	Dim. H mm	Dim. B mm	Dim. A mm	Pack Piece	Weight kg/100 pc.	Item no.
SKA 05 VZ	70	217	50	1	190.740	**7202436**

Suspension and fastening material, made of steel, to create the first support of pass-through installations in fire insulation. Mounting of the bracket on the wall, support of the installation using mounting rail.
The maximum distance of the mounting rail to the wall of 200 mm fulfils the requirements of most insulation systems.

Support construction for insulations, with pendulum suspension

St

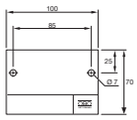


Type	Dim. L mm	Pack Piece	Weight kg/100 pc.	Item no.
SKP 05 VZ	1000	1	235.240	**7202446**

Suspension and fastening material, made of steel, to create the first support of pass-through installations in fire insulation. Mounting of the pendulum with threaded rods under the ceiling. A maximum of two layers can be mounted with connection sleeves from two sets. The support constructions must be arranged on both sides of the wall at the prescribed distance to the insulation system.

Identification plate

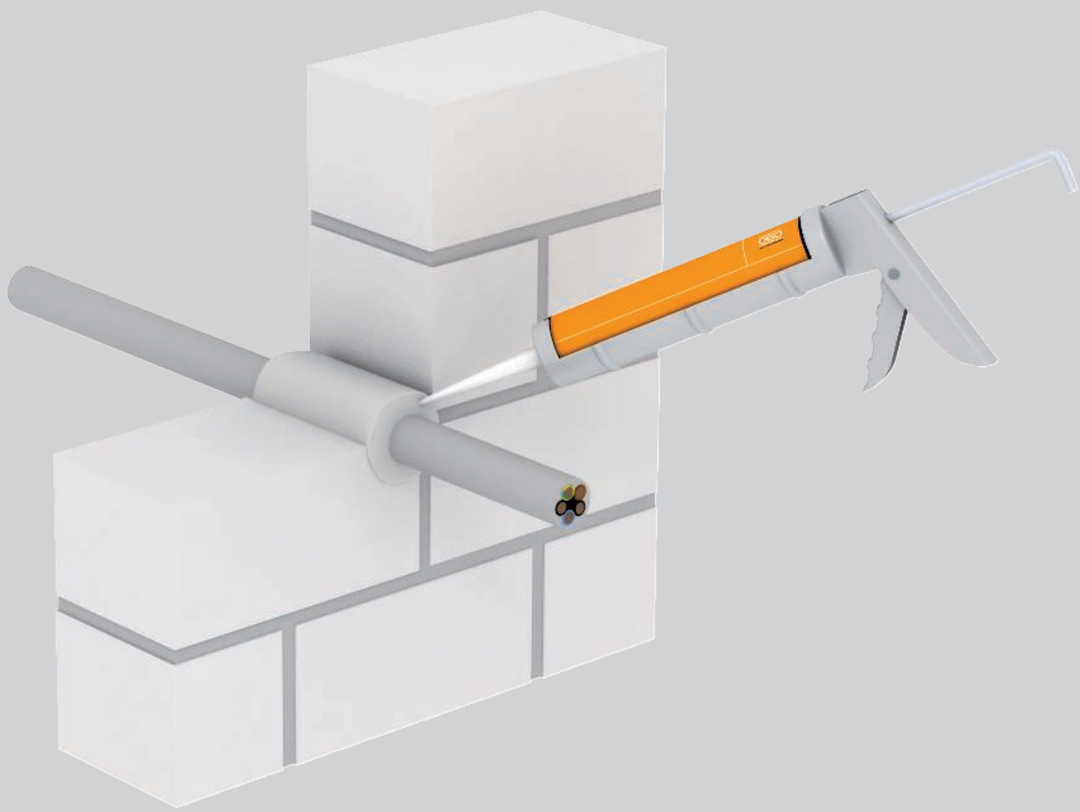
PS



Type	Language	Pack Piece	Weight kg/100 pc.	Item no.
KS-S DE	German	1	2.400	**7205425**

Identification plate to be written on with waterproof and light-resistant felt-tip pen for fire-safe cable glands, including 2 push-fit anchors.

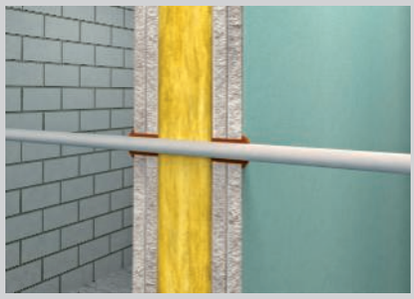
Individual cables according to MLAR with insulating layer forming agent
System description



The type DSX insulation forming material from OBO can be used to fill ring gaps around individual cables or multiple cables of a small cross-section routed alongside one another. The ring gap around the cable must be filled with fire protection filler along the entire wall thickness. If there is a fire, the filler foams up, preventing penetration by fire and smoke. When the material foams up, heat is also drawn from the cables, thus considerably reducing the transfer of heat via the copper cores.

Individual cables according to MLAR with insulating layer forming agent
Installation principle

DSX insulation layer creator, suitable for full-wall ring gap closure in solid walls and ceilings.



With light-duty partitions, filling the double plates to both sides is sufficient.

Classification to DIN 4102

F30 F60 F90

Insulation layer creator on dispersion basis

Material class	B2 – normally flammable
Proof of application	General construction approval of DIBt, Berlin
Approval number	Z-19.11-1991
Testing standard	DIN 4102

Minimum dimensions of components and their fire resistance period

Min. solid component strength	40	70	80
Fire resistance class	F30	F60	F90
Ring gap max.	15	15	15

All data in mm. The data in the named proofs of applicability applies.

Erectors of combination insulation systems have to be trained.

Small insulation, bandage and individual cables acc. to MLAR

Insulation layer creator in a cartridge

Type	Contents ml		Pack Piece	Weight kg/100 pc.	Item no.
DSX-K	300		1	50.000	**7202300**

Dispersion-based fire protection compound for interior areas, to fill residual joints and close openings. Approved material for the closing of core drill holes when feeding through single cables and for closing the annular gap when exiting cables from the PYROLINE® Con PLC fire protection duct. Material class DIN 4102 - B2, normally flammable. In dry, frost-free rooms, the compound can be stored at temperatures from +5 °C to +25 °C for up to 18 months in closed, upright original containers.

Insulation layer creator in a bucket

Type	Contents kg		Pack Piece	Weight kg/100 pc.	Item no.
DSX-E	5		1	500.000	**7202302**

Dispersion-based fire protection compound for interior areas, to fill residual joints and close openings. Approved material for closing core drill holes for individual cable glands.
Material class DIN 4102 - B2, normally flammable.
In dry, frost-free rooms, the compound can be stored at temperatures from +5 °C to +25 °C for up to 18 months in closed, upright original containers.

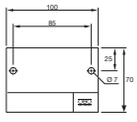
Mineral wool

Type	Dimension		Pack Piece	Weight kg/100 pc.	Item no.
MIW-S	25 Liter		1	250.000	**7202306**

Universal filling wool for various fire protection applications, packed in compressed form.
Material class EN 13 501 - A1, non-combustible; melting point ≥ 1,000 °C.

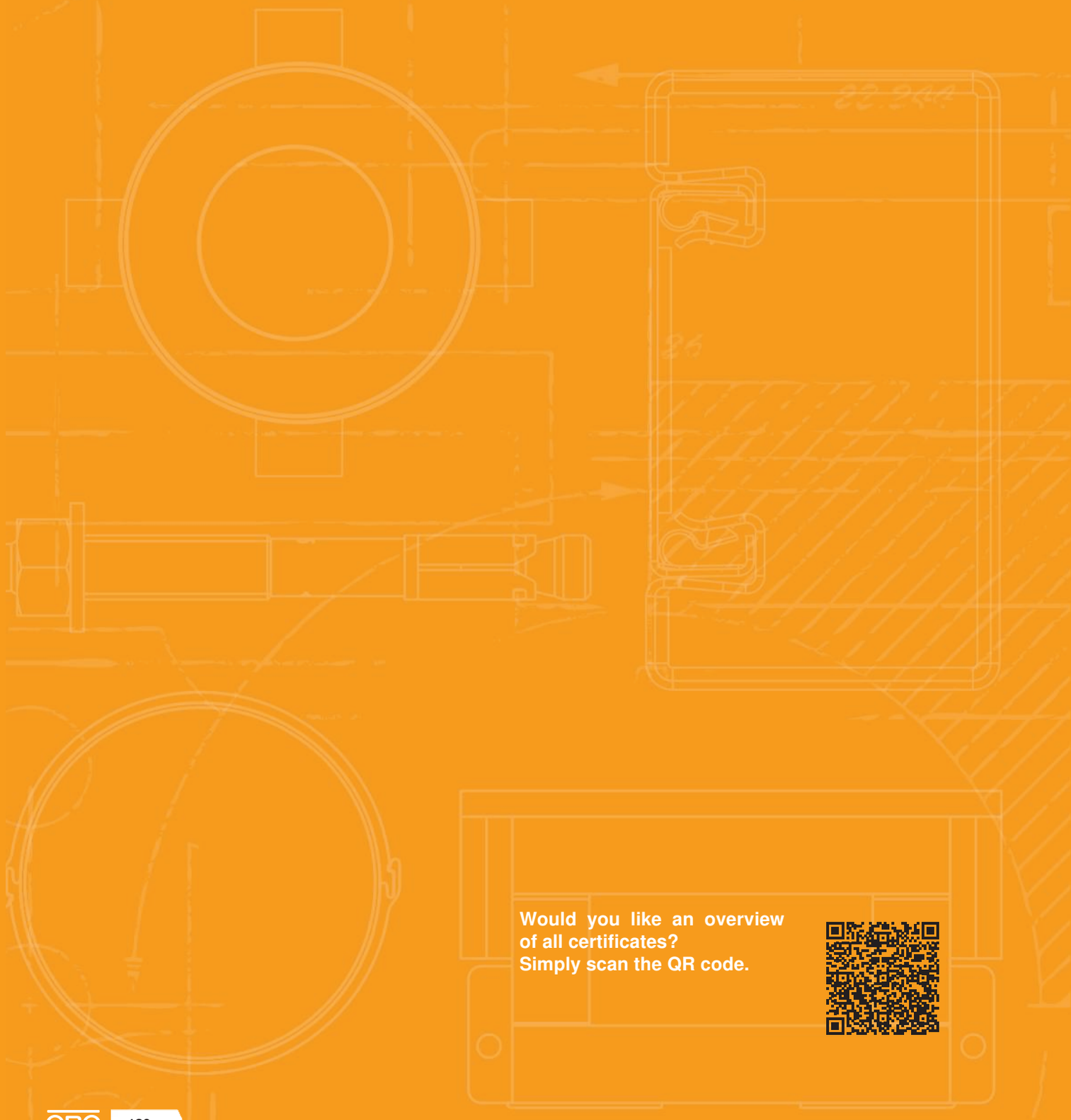
Identification plate for single cable

PVC



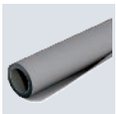
Type	Language		Pack Piece	Weight kg/100 pc.	Item no.
KS-LAR DE	German		1	2.400	**7205420**

Identification plate to be written on with waterproof and light-resistant felt-tip pen for fire-safe cable glands according to the cable systems directive MLAR, including 2 push-fit anchors.

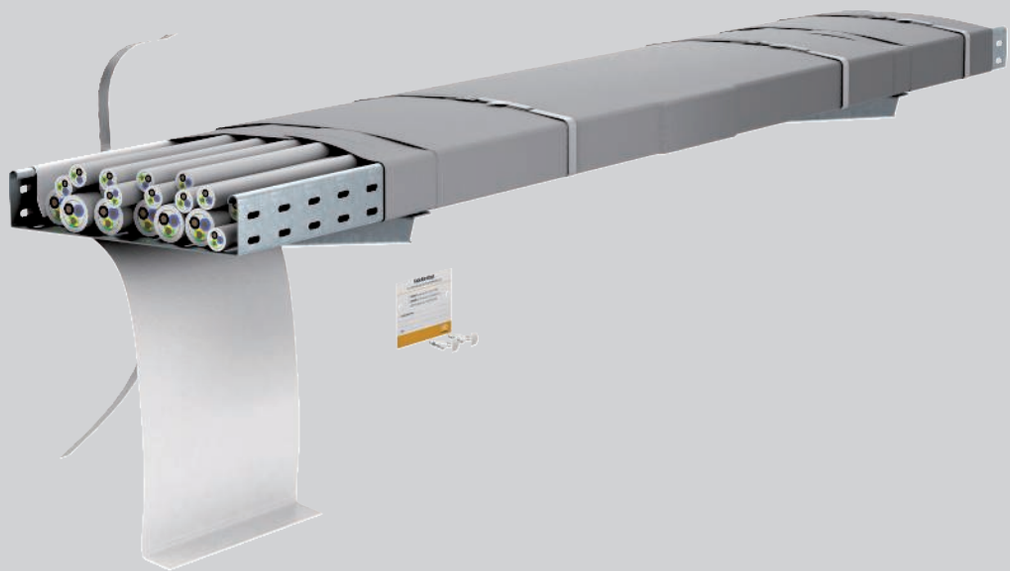


Would you like an overview of all certificates?
Simply scan the QR code.

Cable bandages, prevention of the spread of fire



PYROWRAP® Wet FSB-WLS
Application in interior areas and wet rooms
System description



The PYROWRAP® Wet FSB-WLS system can be used to wrap large cable bundles or cable support systems within the fire sections, in order to prevent the spread of a fire. The mesh possesses a fire protection coating, which stops a fire in its tracks at an early stage, e.g. in the case of a short circuit. If there is fire coming in from the outside, the material is not involved in the course of the fire, effectively preventing the spread of the fire, both in vertical and horizontal directions.

In the escape and rescue routes of small buildings, the mounting of a cable bandage is permitted, as only low smoke development is to be expected and only a small number of people must be evacuated. In larger buildings, the residual risk of smoke development is accepted, even if considerably more people must be evacuated. Here, the fire protection bandage frequently presents the only economic solution compared to fire protection ceilings or panelling with plate materials.

PYROWRAP® Wet FSB-WLS
Application in interior areas and wet rooms
Installation principle

Complete encasement of the suspended cable run.

Complete encasement of the cables in a cable run as wall mounting.

Bandage fastening with metallic rails in a single-clip installation.

Bandage fastening with metallic tightening straps in a rail installation.

Cable exit with bandaging.

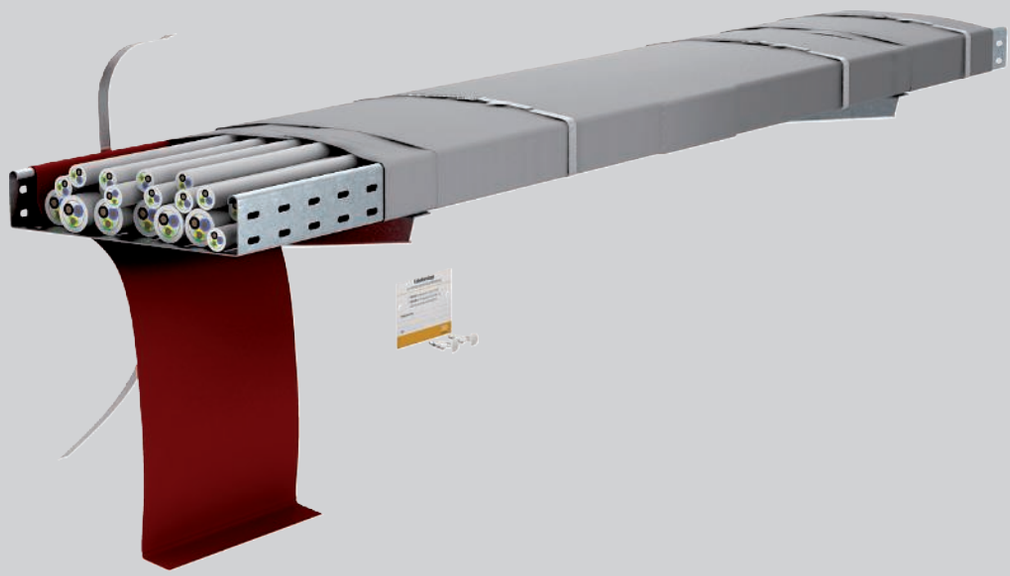
Bandaging of the cable bundles on support systems.

Cable jacketing to prevent fire spread

Proof of application	Application approval of DIBt Berlin Material approval of DIBt Berlin
Documents	Z-56.217-3600 Z-19.11-2183
Prevention of fire spread	Min. 90 minutes
Material properties	Exterior grey glass fibre mesh, interior light grey materials class C-s2, d0 according to EN 13501-1 – hardly flammable
Max. fastening spacing	0.5 m
Cable types and cross-sections	No restriction

Caution!
Use in emergency and escape routes of building classes 4 and 5 may require the approval of the construction supervision, e.g. through a fire protection concept.

PYROWRAP® Wet FSB-WB
Application in industrial areas/outdoors
System description



The PYROWRAP® Wet FSB-WB system comprises a fire protection bandage, which is used in areas with special environmental conditions. The fire protection bandage can be used to wrap large cable bundles or cable support systems, in order to prevent the spread of fire. The bandage is made of a weatherproof material, which is insensitive to various chemicals and oils. It has construction approval from the DIBt as a highly flame-resistant material according to DIN EN 13501-1. When the fire protection coating foams up in the event of fire, this safely prevents the spread of fire via the cables.

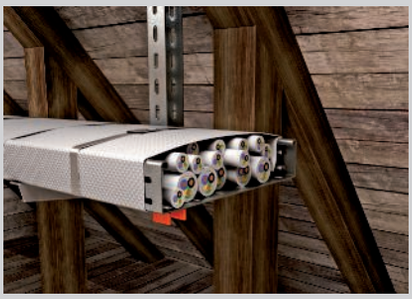
PYROWRAP® Wet FSB-WB
Application in industrial areas/outdoors
Installation principle

Use of the bandage in aggressive environments, e.g. offshore.

Bandaged rising section in the tower of a wind power plant.

Use on support systems in supply rooms or production halls.

Cable tunnel with bandages in power stations.



Bandaged cable support systems in areas with many combustible materials.

Use for photovoltaic cables run over a fire wall.

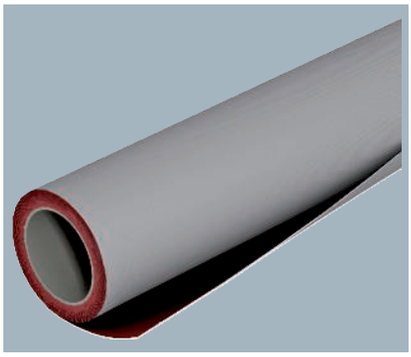
Cable jacketing to prevent fire spread

Proof of application	IEC test report of the iBMB MPA materials testing institute, Braunschweig National and European material approval of DIBt Berlin
Document no.	IEC-3630/081/10-AR Z-19.11-1971 ETA-13/0158
Prevention of fire spread	Min. 120 minutes
Material properties	Exterior grey glass fibre mesh, interior red Materials class EN 13501-1: B1, d0,s1 – hardly flammable Weather-resistant, resistant to various chemicals and oils
Max. fastening spacing	0.5 m
Cable types and cross-sections	No restriction

Caution!
The use of photovoltaic cables over fire walls may require the approval of the local construction authorities. A positive special report is available.

Cable bandages

PYROWRAP® Wet - cable bandage for wet areas

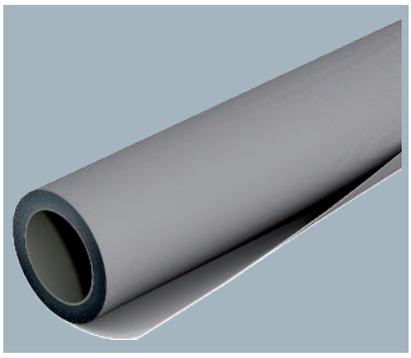


Type	Length m	Width mm		Pack Piece	Weight kg/100 pc.	Item no.
FSB-WB	20	1100		1	2,200.000	**7203160**

Weatherproof fire protection jacketing made of flexible mesh with fire protection coating to prevent fire spreading via cables and cable support systems. External side grey, internal side red. One roll contains 22 m².

The use of photovoltaic cables over fire walls may require the approval of the local construction authorities. A positive special report is available.

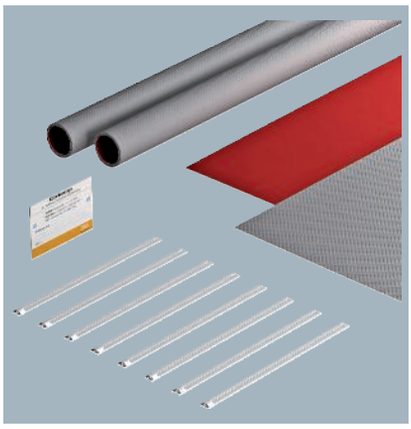
PYROWRAP® Wet - cable bandage for dry areas



Type	Length m	Width mm		Pack Piece	Weight kg/100 pc.	Item no.
FSB-WLS	10	1100		1	1,000.000	**7203170**

Fire protection jacketing made of flexible mesh with fire protection coating to prevent fire spreading via cables and cable support systems. If there is a fire, the bandage only creates very little smoke, and is thus approved by the MBO building regulations as a measure for improved behaviour in case of fire in building classes 1 to 3. Hardly-flammable substance, according to EN 13501-1 - Class C-s2, d0). External side grey, internal side light grey. Can be moist wiped, use in interiors and wet rooms. One roll contains 11 m², nominal thickness 0.7 mm.

Complete set for external applications



Type	Length mm	Width mm		Pack Piece	Weight kg/100 pc.	Item no.
FSB-K32	550	380		1	96.000	**7203150**
FSB-K82	550	880		1	213.000	**7203154**

Complete set for covering cable bundles or cable support systems without cover to prevent a fire spreading. Application in outdoor areas. Each of the sets contains 4 sections of the weather-resistant cable bandage PYROWRAP® Wet, 8 metal strip clips and an identification plate. Sufficient for approx. 2 m length.
Dimension data: Sections of the FSB-WB bandage

Scope of the surrounding cable support systems:
FSB-K32 maximum 320 mm
FSB-K82 maximum 820 mm
(including min. 5 cm bandage overlap)

Use with photovoltaic cables over firewalls may require the approval of the local construction authorities. A positive special report is available.

Metal strip clips

VA 2B

Metal strip clips, wide

Type	Length mm	Width mm	Pack Piece	Weight kg/100 pc.	Item no.
MBS 075	750	12	25	2.300	**7203108**
MBS 100	1000	12	25	3.000	**7203110**
MBS 120	1200	12	25	3.600	**7203112**
MBS 150	1500	12	25	4.400	**7203114**

Metal strip clip in ladder form with single lock. For high-temperature and weatherproof fixing. Use MBS-Z pliers to tighten.

VA 2B

Metal strip clips, narrow

Type	Length mm	Width mm	Pack Piece	Weight kg/100 pc.	Item no.
MBS 015	150	7	100	0.230	**7203100**
MBS 030	300	7	100	0.399	**7203102**
MBS 045	450	7	50	0.602	**7203104**
MBS 061	610	7	50	0.806	**7203106**

Metal strip clip in ladder form with single lock. For high-temperature and weatherproof fixing. Use MBS-Z pliers to tighten.

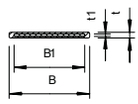
Tightening straps

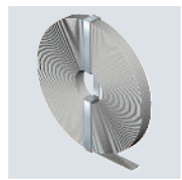
St

Tightening strap for fastening of cable bandages

Type	Width mm	Per roll m	Pack Piece	Weight kg/100 pc.	Item no.
FSB-SB 100	15	100	1	220.000	**7203131**

100 m roll of lightweight, galvanised tightening strap, for universal fastening.





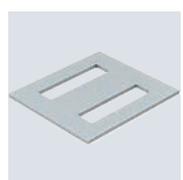
Tightening strap locks

St

Tightening strap lock

Type	Length mm	Width mm	Pack Piece	Weight kg/100 pc.	Item no.
FSB-SV	26	24	50	0.340	**7203132**

Tightening strap lock with buckle, for simple fixing of the tightening straps FSB-SB.



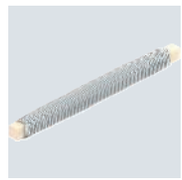
Winding wire for fixing

St

Winding wire for path insulation

Type	Length m	Pack Piece	Weight kg/100 pc.	Item no.
MIW-TD	50	1	10.000	**7202309**

The steel wire is used to fix the section insulation. It is non-combustible and guarantees optimum retention of the section insulation on non-combustible pipes and cables.



Always indicate the item number when ordering.

Securing clip

Securing clip

VA

Type	Width mm	Height mm		Pack Piece	Weight kg/100 pc.	Item no.
FSB-SC	14	29		50	0.180	**7203134**

Stainless steel clip to secure the bend tightening strap. Provides prevention of removal from the lock.

Pliers

Pliers for metal strip clips

St

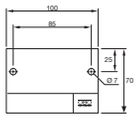
Type			Pack Piece	Weight kg/100 pc.	Item no.
MBS-Z			1	55.500	**7203120**

High-quality spring chuck with cutting tool for metal strip clips, type MBS.

Identification plates

Identification plate

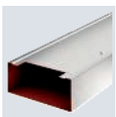
PVC



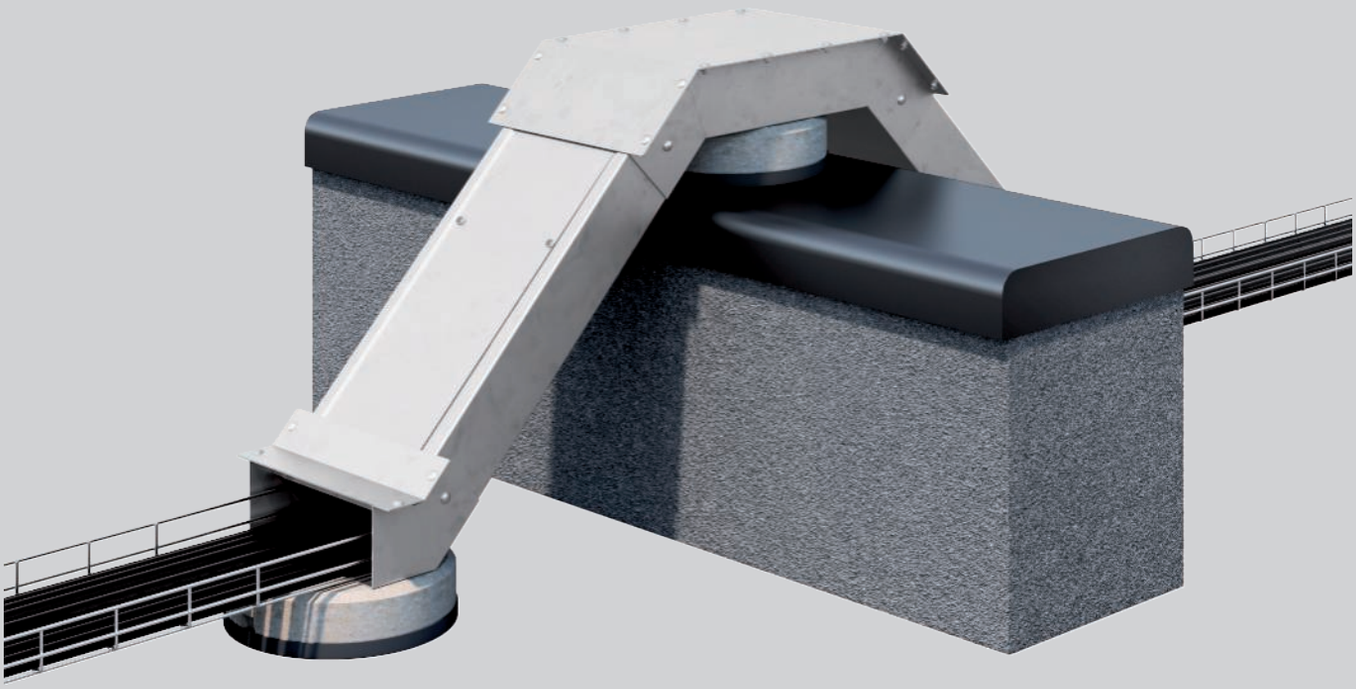
Type	Language		Pack Piece	Weight kg/100 pc.	Item no.
KS-FSB DE	German		1	2.400	**7203140**

Universal identification plate to be written on with waterproof and light-resistant felt-tip pen for cable bandages, including two push-fit anchors.

Fire protection duct for roof structures, to prevent the spread of fire



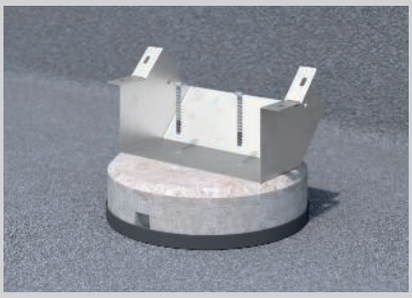
PYROLINE® PLMR
Fire protection duct for external applications
System description



The PYROLINE® PLMR installation duct with intumescent fire protection mesh prevents the spread of fire and protects against the effects of a cable fire. It offers a fire resistance period of up to 90 minutes. Obstacles in external areas can be overcome using the stainless steel installation duct and the matching fittings. Mounting can take place on FangFix concrete blocks. The screws to fasten the duct cover are included in the scope of delivery.

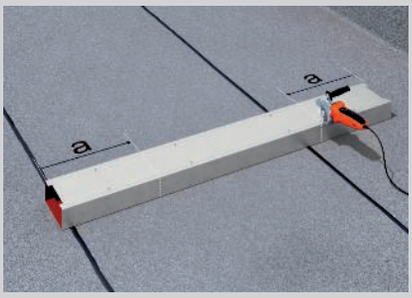
Can be used as a special solution for the routing of cables over fire walls according to the expert opinion GA-2021/047b-Nau. Solution according to the EltAnlagen 2020 of the BMI +AMEV (Section 7.3.3.5 - Photovoltaic systems - Fire protection). Only the appropriate pre-terminated fittings may be used.

PYROLINE® PLMR
Fire protection duct for external applications
Installation principle



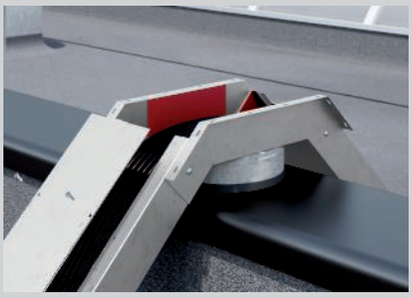
Fastening of the level, rising, on the FangFix concrete block.

Fastening of the level, double falling, on the FangFix concrete block.

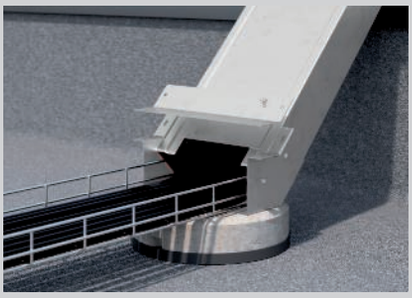


Cutting of the installation duct to the required length.

Joining of installation duct and fittings.



Mounting of the duct cover after cable routing.



Mounting of the level cover, rising.

Mounting of the level cover, double falling.

Mounting example of the installation duct with fittings to overcome obstacles.

Application example of the stainless steel installation duct.

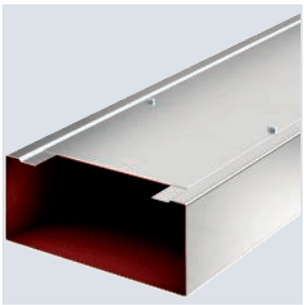
Installation duct to prevent the spread of fire

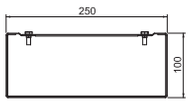
Proofs of usability	IEC test report of the iBMB MPA Materials Testing Institute, Braunschweig European Material Approval of the DIBt Surveyor's report by the IBB
Documents	IEC 60332-3-22 Cat. A test report no. 3630/081/10-AR ETA-18/0430 Declaration of performance 05-DOP-012 GA-2021/047b-Nau
Prevention of fire spread	Min. 90 minutes
Material properties	Corrosion-resistant stainless steel duct with intumescent fire protection mesh
Material class, fire protection mesh	C-s2,d0 according to EN 13501-1 - hardly flammable
Cable types and cross-sections	No restriction

Metal installation duct

Metal installation duct, for outdoor applications

VA





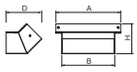
Type	Dim. B mm	Dim. H mm	Dim. i mm	Length mm		Pack m	Weight kg/100 m	Item no.
PLMR 1025 A2	250	100	157	2000		2	750.000	**7216401**

Metal installation duct with intumescent fire protection mesh. Prevents the spread of fire and protects against the impacts of a cable fire. Fire resistance up to 90 minutes.
With the corresponding fittings, it is possible to overcome obstacles in outdoor areas. Suitable for mounting on FangFix concrete blocks.
Can be used as a special solution in the routing of cables
over fire walls according to surveyor's report GA-2021/047a. Solution according to EltAnlagen 2020 of BMI+AMEV. Only approved pre-terminated fittings may be used.

Including screws to fasten the duct cover.

Level, rising, for PLMR installation duct

VA



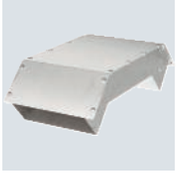
Type	Dim. A mm	Dim. B mm	Dim. D mm	Dim. H mm		Pack Piece	Weight kg/100 pc.	Item no.
PLMR-LR 1025 A2	310	253	170	143		1	98.000	**7216451**

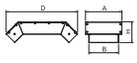
Level, rising version. Suitable for the PLMR installation duct. To overcome obstacles in outdoor areas.

Including bolts and nuts.

Level, double falling, for PLMR installation duct

VA



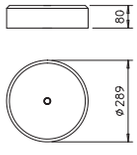


Type		Pack Piece	Weight kg/100 pc.	Item no.
PLMR-LFD 1025 A2		1	443.000	**7216456**

Level, double falling version with intumescent fire protection mesh. Suitable for the PLMR installation duct. To overcome obstacles in outdoor areas.

Including bolts and nuts.

Concrete base for FangFix system, min. 10 kg

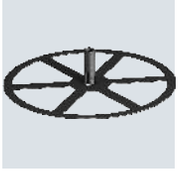


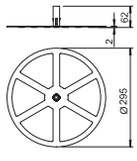
Type	Nominal size Ø mm		Pack Piece	Weight kg/100 pc.	Item no.
F-FIX-S10	289		1	1,000.000	**5403117**

- Min. 10 kg block of Ø 289 mm, high level of stability
- Frost-resistant concrete
- Stackable

Base for FangFix system 10 kg

PP





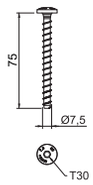
Type	Nominal size Ø mm		Pack Piece	Weight kg/100 pc.	Item no.
F-FIX-B10	295		10	7.600	**5403124**

Edge protection with integrated dowel (basic) suitable for FangFix 10 kg system.

VA

MMS-plus P round head tie, with panhead, made of A4 stainless steel

Type	Dimension mm	Drill hole Ø mm	Head Ø mm	Screw system	Pack Piece	Weight kg/100 pc.	Item no.
MMS+ P 7.5x75 A4	7,5x75	6	14.5	Torx	50	1.900	**3498274**



Stainless steel screw-in anchor for direct mounting without additional anchors in cracked and uncracked concrete and masonry. With round head for universal fastenings in wet rooms and outdoor areas. Torx drive T30. Construction product tested according to EAD and CE mark, with European Technical Assessment (ETA) and proof of suitability. Load-bearing capacities under fire loads proven up to fire resistance class R120.

Directories

Test marks

	American Bureau of Shipping, USA
	AENOR, Producto Certificado, Spain
	STOWARZYSZENIE ELEKTRYKÓW POLSKICH, Poland
	Lightning current-tested
	Lightning current-tested, Class H (100 kA)
	CEBEC, Belgium
	Canadian Standards Association, Canada
	DEMKO, Danmarks Elektriske Materielkontrol, Denmark
	Deutsches Institut für Bautechnik Berlin, Germany
	Det Norske Veritas
	ENEC Austria
	ATEX certificate for explosive areas
	ELEKTROTECHNICKÝ ZKUŠEBNÌ ÚSTAV, Czech Republic
	FIMKO, Finland
	Forschungs- und Materialprüfungsanstalt, Germany
	Russia, GOST The State Committee for Standards
	Test marks for technical resources, VDE Prüf- und Zertifizierungsinstitut Offenbach, Germany
	Halogen-free; without chlorine, fluorine and bromine
	INMETRO, Brazil
	KEMA-KEUR, Netherlands
	Indication of metric products
	MAGYAR ELEKTROTECHNIKAI ELLENŐRZŐ INTÉZET Budapest, Hungary
	NEMKO, Norway
	AFNOR Quality symbol of the French standardisation institute

	Underwriters Laboratories Inc., USA + CSA, Canada
	Österreichischer Verband für Elektrotechnik, Austria
	INSTITUTO ITALIANO DEL MARCHO DI QUALITÁ, Italy
	RINA 1861, Ship Classification, Certification and Services
	Underwriters Laboratories Inc., USA
	SEMKO An Inchcape Testing Services Company, Sweden
	Eidgenössisches Starkstrominspektorat, Switzerland
	South African Bureau of Standards
	Shock-tested, Bundesamt für Zivilschutz, Germany
	Sähkötarkastuskeskus Elinspektionscentralen Electrical Inspectorate, Finland
	Underwriters Laboratories Inc., USA
	Underwriters Laboratories Inc., USA
	Verband der Elektrotechnik, Elektronik, Informationstechnik e.V., Germany
	German Association of Electricians, tested safety
	5-year warranty

Pictogram explanation

Surfaces

FS	Strip galvanised
FSK	Strip galvanised/plastic-coated
DD	Strip galvanised zinc/aluminium, double dip
BK	Bright
2B	Bright, reworked
EL	Anodised
F	Hot-dip galvanised
G	Electrogalvanised
GK	Electrogalvanised/plastic-coated
GCL	Electrogalvanised, yellow-chromatised
GGP	Electrogalvanised, yellow passivated
GTP	Electrogalvanised, transparently passivated
GR	Primed
L	Painted
SG	Welding primed
FT	Hot-dip galvanised
FT SO	Hot-dip galvanised 85 µm
Cu	Copper-plated
N	Nickel-plated
ZD	Galvanised, Deltatone 500
ZDM	Galvanised, MAGNI 565
GA	Zinc-aluminium coated, Galfan
ZL	Zinc scale

Conformity symbol

CE	Communautés Européennes, EC declaration of conformity according to EC directives
RoHS conform	RoHS-conformant

Quality marks

	Halogen-free; without chlorine, fluorine and bromine
650°	Flame resistant 650 °C
750°	Flame resistant 750 °C
960°	Flame resistant 960 °C
UV RESISTANT	UV-resistant

Specific product symbols

Ø 60	Diameter 60 mm
Ø 68	Diameter 68 mm
Type 3	Protection device to DIN EN 61643-11 or IEC 61643-11
LPZ 2→3	Transition from LPZ 2 to LPZ 3
AS	Acoustic signalling

Applications

FS	Remote signalling
AS	Acoustic signalling
ISDN	Integrated Service Digital Network, ISDN applications
DSL	Digital Subscriber Line, DSL applications
Analog TK	Analogue telecommunication
Cat 5	Category 5 TwisterPair
Cat 6_A	Channel Performance to American EIA/TIA standard
MSR	Measuring, controlling and regulating systems
TV	TV applications
SAT	SAT-TV applications
Mu	MultiBase base
	LifeControl
EX	Intrinsically safe protection device for potentially explosive areas
Class E_A	Channel Performance to ISO/IEC 11801
PoE	Power over Ethernet
230/ 400 V System	230/400 V system
IP 54	Protection rating IP 54
IP 65	Protection rating IP 65

Lightning protection classes

Type 1	Protection device to DIN EN 61643-11 or IEC 61643-11
Type 1+2	Combination protection device made of type 1 and type 2
Type 2	Protection device to DIN EN 61643-11 or IEC 61643-11

Lightning protection classes

Type 2+3	Protection device to DIN EN 61643-11 or IEC 61643-11
Type 3	Protection device to DIN EN 61643-11 or IEC 61643-11

Lightning protection zone

LPZ 0→1	Transition from LPZ 0 to LPZ 1
LPZ 0→2	Transition from LPZ 0 to LPZ 2
LPZ 0→3	Transition from LPZ 0 to LPZ 3
LPZ 1→2	Transition from LPZ 1 to LPZ 2
LPZ 1→3	Transition from LPZ 1 to LPZ 3
LPZ 2→3	Transition from LPZ 2 to LPZ 3

BSS maintenance of electrical function installation

	Fire-tested systems
	Escape route ceiling mounting with pressure clip
	OBO Grip, wall routing type
	OBO Grip, ceiling routing type
	Pressure clip for maintenance of electrical function, ceiling mounting

BSS anchor

	Fire protection anchor
	Fire protection bolt tie

BSS test marks/material class

E30	Maintenance of electrical function class E30
E90	Maintenance of electrical function class E90

Clamp clip base shapes

N	Clamp clip for C profile rail, slot width 11–12 mm
H	Clamp clip for C profile rail, slot width 16–17 mm
U	Clamp clip for C profile rail, slot width 18–22 mm

Diameter

Ø 60	Diameter 60 mm
Ø 68	Diameter 68 mm
Ø 70	Diameter 70 mm
Ø 74	Diameter 74 mm

Entries

4	4 cable entries
6	6 cable entries
7	7 cable entries
8	8 cable entries
9	9 cable entries
10	10 cable entries
12	12 cable entries
10	10 cable entries ECO
12	12 cable entries ECO
14	14 cable entries ECO
16	16 cable entries
18	18 cable entries ECO
24	24 cable entries

Gland thread

M	Thread metric
Pg	Thread Pg

Entry size

M20	M20 entry
M25	M25 entry
M32	M32 entry
M40	M40 entry

KTS side heights

	Cable tray, side height 35 mm
	Cable tray, side height 60 mm
	Cable tray, side height 85 mm
	Mesh cable tray, side height 35 mm
	Mesh cable tray, side height 55 mm

Materials

	Flat steel
	Angular steel
	U steel
	Round material

Always indicate the item number when ordering.

Pictogram explanation

Nominal cross-section

1,5 mm²	Nominal cross-section 1.5 mm²
1,5–2,5 mm²	Nominal cross-section 1.5–2.5 mm²
2,5 mm²	Nominal cross-section 2.5 mm²
2,5–4 mm²	Nominal cross-section 2.5–4 mm²
4 mm²	Nominal cross-section 4 mm²
4-6 mm²	Nominal cross-section 4–6 mm²
6 mm²	Nominal cross-section 6 mm²
10 mm²	Nominal cross-section 10 mm²
16 mm²	Nominal cross-section 16 mm²

Nominal voltage

400 V	Nominal voltage 400 V
500 V	Nominal voltage 500 V
660 V	Nominal voltage 660 V

Polarity

3	3-pole
5	5-pole
7	7-pole
8	8-pole
10	10-pole
12	12-pole

Slot widths

7,5	Slot width 7.5 mm
11	Slot width 11 mm
11-12	Slot width 11–12 mm
12	Slot width 12 mm
15	Slot width 15 mm
16	Slot width 16 mm
16,5	Slot width 16.5 mm
16-17	Slot width 16–17 mm
17	Slot width 17 mm
18	Slot width 18 mm
22	Slot width 22 mm
35	Slot width 35 mm

Screw heads

	Philips screw
	Torx screw
	Phillips screw
	Pozidriv

Firing devices

	Bolt-firing tool
	Nail device

Protection rating

IP 20	Protection rating IP 20
IP 30	Protection rating IP 30
IP 31	Protection rating IP 31
IP 44	Protection rating IP 44
IP 54	Protection rating IP 54
IP 55	Protection rating IP 55
IP 65	Protection rating IP 65
IP 66	Protection rating IP 66
IP 67	Protection rating IP 67
IP 68	Protection rating IP 68

Metals

Alu	Aluminium
Alu/St	Aluminium/steel
A2	Stainless steel, rustproof
A4	Stainless steel, rustproof
A5	Stainless steel, rustproof
Cu	Copper
CuZn 37	Brass
St	Steel
TG	Malleable iron
Zn	Die-cast zinc

Plastics

ABS/ASA	Acrylonitrile butadiene styrene
UF	Duroplast, Aminoplast, type 131.5
MF	Duroplast, melamine resin, type 150
EVA	Ethylene vinyl acetate

Plastics

FA	Fibre-proof material DIN 28091
GFK	Fibreglass-reinforced plastic
NBR SBR	Rubber mixture
NBR	Nitrile rubber
PETR	Petrolatum
PA	Polyamide
PA/ GF	Polyamide, fibreglass reinforced
PBPT	Polybutylene terephthalate
PC	Polycarbonate
PE	Polyethylene
PP	Polypropylene
PP/GF	Polypropylene, fibreglass reinforced
PS	Polystyrene
PVC	Polyvinylchloride
ZELL PE	Cellular polyethylene

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ASX-E	5850199	7202312	101
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ASX-K	5850182	7202310	101
		/100 pc.	
BZ-U 8-10-21/75	6411818	3498320	94
		/pc.	
CL-KS	6447169	7202316	114
CTS 06150	6810161	7204290	100
CTS 09150	6810178	7204292	100
CTS 09300	6810185	7204296	100
		/pc.	
CTS 12150	6135752	7204300	100
CTS 12300	6135769	7204304	100
CTS-HP200	6448081	7204306	100
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KSI-P1	5847854	7202283	52
KSI-P1	5847854	7202283	86
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KSI-P2	5847861	7202904	44
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KS-S DE	5448259	7205425	39
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