

Blick *SPECIAL*

Fire protection in electrical installations

Three fundamental points

There are three protection aims when it comes to saving human lives and protecting material assets against fire.

Maintaining electrical function

OBO tests under real fire conditions.

Fire protection in structures made of wood

Cable support systems for maintaining electrical function in wooden components.

40
YEARS
of Experience



Interview:
Managing Director Andreas Bettermann and Director of
the Fire Protection Systems BU, Stefan Ring

40
YEARS
of Experience

Fire protection in electrical installations

OBO Bettermann has spent more than a hundred years developing products and solutions for electrical installations. Because our systems penetrate buildings like networks, they have to be able to cope with difficult challenges while remaining protected. That is why building safety and fire protection are top priorities when we develop our products.

At OBO, we know exactly how important professional, customised fire protection in electrical installations is. With 40 years of experience in fire protection, we can supply you with certified cable routing systems and devices, and we can furnish you with important information and the right products so that your system is ready in the event of fire.

Electricity is now the number-one cause of fire in buildings that are not adequately safeguarded. That is why planners, architects and fitters have to think early about comprehensive fire protection. A building can only be approved if its fire protection equipment is conceived and installed professionally and correctly. The OBO family can help you do that.

Because fire protection is such a crucial topic, you should obtain the help and advice of trained experts. My colleagues and I can provide you with responsible support, beginning with an initial overview and a personal consultation, and including the development of special solutions. We supplement our expertise with our OBO fire protection products for maximum safety in the event of fire.

At OBO Bettermann we cover three fundamental fire protection aims: with our comprehensive advice and matching products we can help to limit the spread of fire, safeguard escape and rescue routes, and preserve the function of electrical systems.

OBO's experts are there to assist you in anything relating to fire protection and safety in electrical installations. Our support service can advise you, including on unusual situations. This means you can rely on our expertise for prudent and comprehensive fire protection.

Regards, Stefan Ring



THE EXPERT



Fire protection expert Stefan Ring

Mr Ring, you belong to OBO Bettermann's team of fire protection experts. What are your responsibilities?

As Director of the Fire Protection Systems Business Unit, I look after everything concerning our fire protection products. I pass my knowledge on to our colleagues and customers, and I am an expert in one of the three protection aims: the maintaining electrical function of electrical systems.

What are the protection aims?

The three protection aims represent the fundamental pillars of preventative fire protection. They help save human lives and protect material assets against flames. First of all, fire and smoke have to be prevented from spreading quickly and crossing over to other building sections. Then, escape and rescue routes have to be kept safe and usable in the event of fire. Thirdly, we have to ensure that key technical facilities continue to work for certain periods of time.

How did you come to work in fire protection?

Fire – or rather, fighting fire – has always fascinated me. I have been a trained firefighter for more than thirty years. With my experience in fire protection, I'm able to assess the hazards of a fire very accurately. Nothing is worse than a fire in a building in which the electricity suddenly cuts out or escape routes become impassable.

At what point do your private and professional interests in fire protection meet?

It's less an interest and more of a passion. As a firefighter, I actively combat fires. My work at OBO is all about preventative fire protection. If cable support systems and emergency lighting keep working perfectly during a fire, then that helps the fire brigade tremendously, which means it helps people who have to be evacuated and rescued during a fire.

OBO can look back on 40 years of experience in fire protection. What aspects of that history are you especially proud of?

I'm especially proud of the pioneering work that OBO has done over the years. For instance, in 1987 we were involved in the very first German standard on maintaining electrical function in the event of fire, and twenty years later in the first European standard. OBO Bettermann is also one of a very few companies that can fulfil all three protection aims with its advice and products. Most companies can only deal with one or two of them, but not all three.

“We fire protection experts bear the responsibility for safe electrical equipment.”

Dipl.-Ing. (FH) Stefan Ring
International Sales Engineer & Director of the
Fire Protection Systems Business Unit

40 YEARS of Experience

OBO Bettermann fire protection history

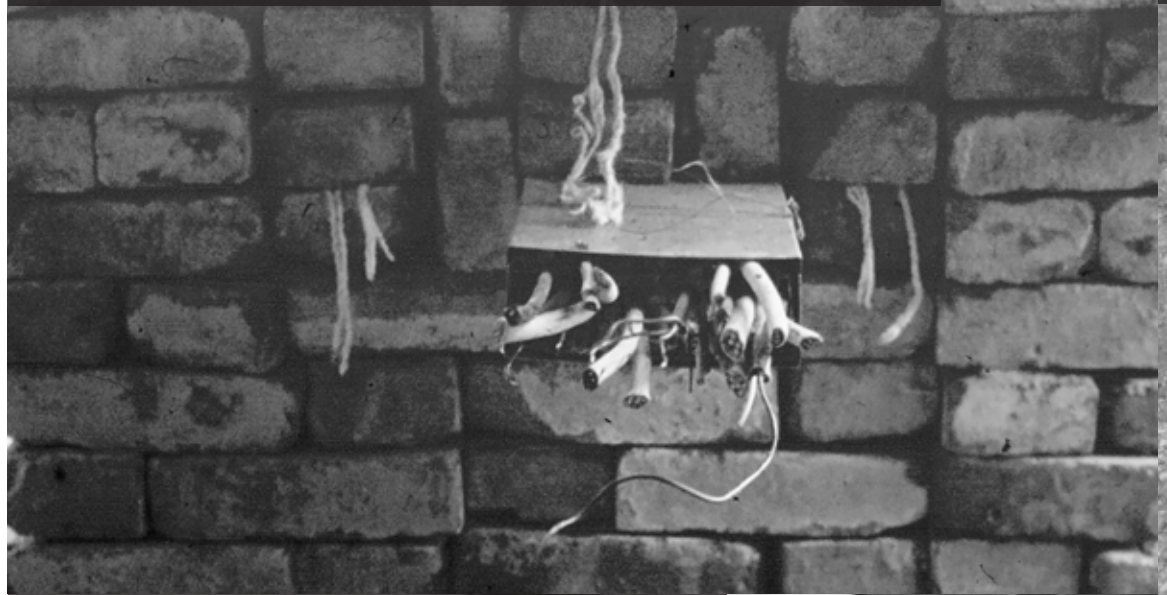
Fire protection at OBO covers four decades of experience and innovation, from the development of our first insulation solutions, to our involvement in the very first German standard on maintaining electrical function in the event of fire, all the way to numerous products and expert services that satisfy all three fire protection aims.

We want to keep breaking new ground as we always have. In 2003, OBO performed Germany's first ever test of routing systems for false ceiling installation. Four years later, our fire protection experts were involved in drawing up a European standard on maintaining electrical function in the event of fire.

Today, our experience and knowledge derived from 40 years of OBO fire protection continues to flow into new standards. We develop pioneering solutions with a passion, so that we can keep fulfilling the latest industry and construction law requirements. Responsible fire protection is not only our professional duty, it is something our experts are dedicated to in their private lives.

Take a look at our history to learn about our achievements and objectives over four decades of fire protection, and celebrate our fortieth anniversary with us.

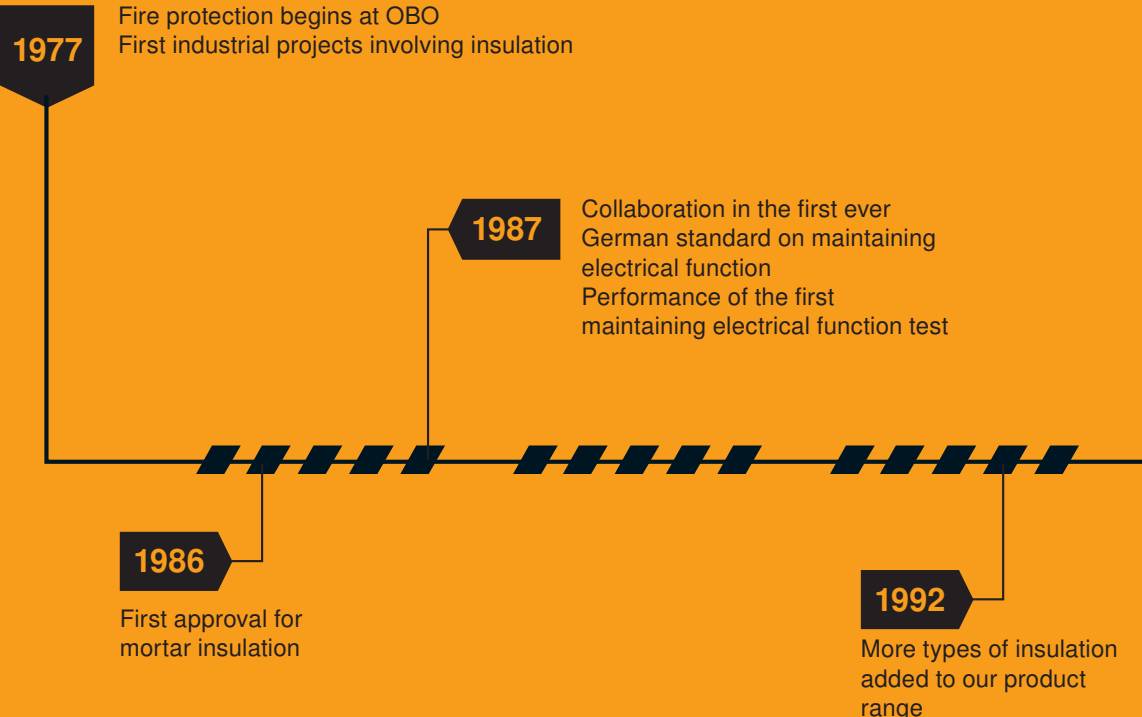
Fire protection begins at OBO, initial pre-testing of cable insulation with a combustion chamber we built ourselves.



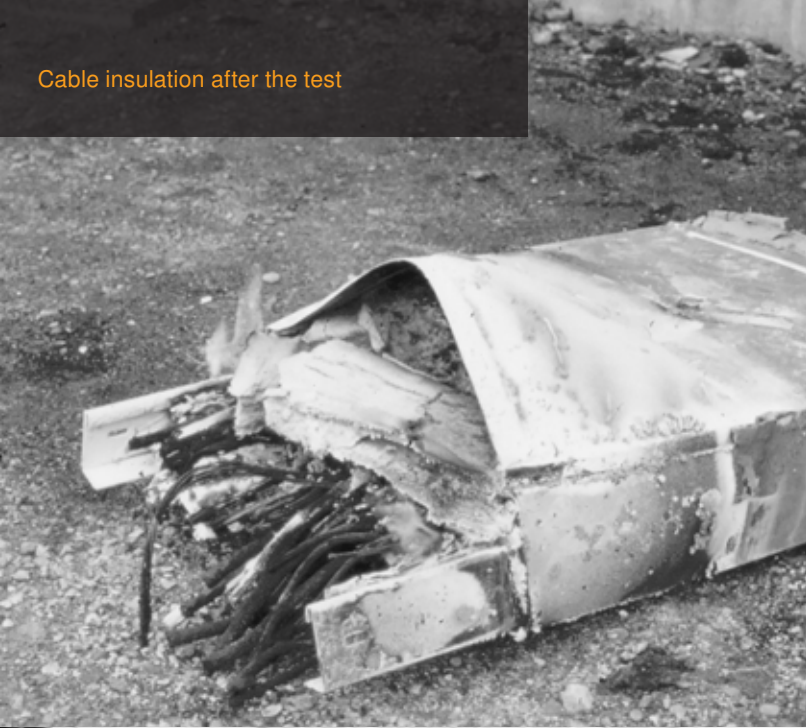
Test set-up for the first OBO cable insulation



OBO fire protection history in figures



Cable insulation after the test



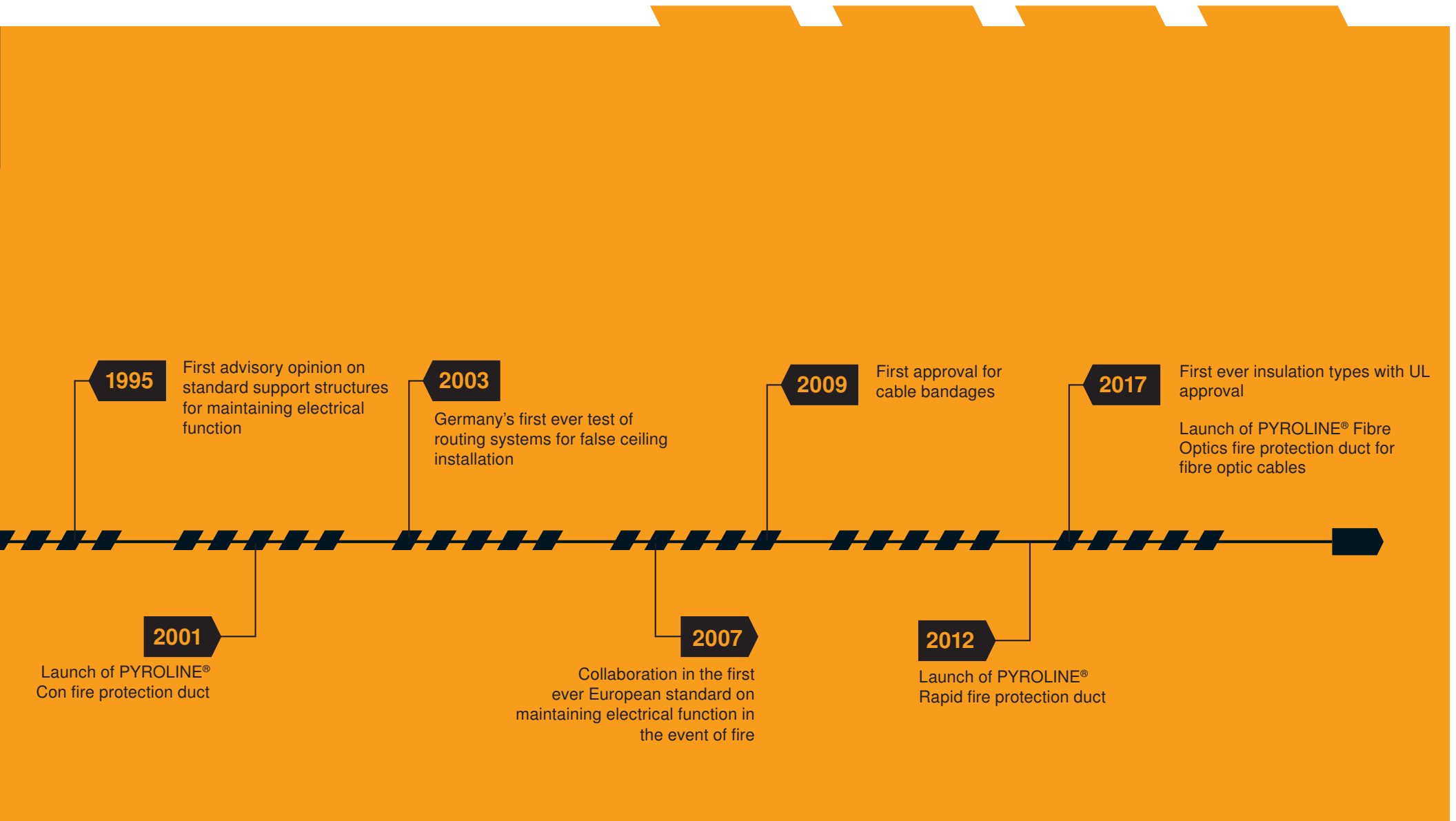
Comparing PYROLINE® Rapid fire protection duct before and after exposure to fire



Fully reacted fire protection cushions that have been exposed to fire



Simulating reaction behaviour in insulation material



175,000

175,000 is the number of times firefighters in Germany had to respond to fires and explosions in 2014. (Source: German Fire Brigade Association)

711

The damage caused by the ten biggest fire events in 2015 amounted to almost €711 million. (Source: GDV)

31

31% – almost a third of all fires in 2016 were caused by electricity. (Source: Fire Cause Report issued by the Institute of Damage Protection and Damage Research)

Three protection aims

Fire protection is an important and sensitive topic which needs to be handled responsibly. At OBO Bettermann we take responsibility by providing fire protection. There are three points, known as protection aims, that are very important when it comes to saving human lives and material assets: limiting the spread of fire, safeguarding escape and rescue routes, and preserving electrical function.

OBO Bettermann has forty years of fire protection experience and offers a diverse range of products, making it one of only a few suppliers who can cover all three protection aims with its products and consulting.

40
YEARS
of Experience

1

1. Limiting the spread of fire

Fire and smoke have to be prevented from spreading quickly in any building which is designed to be fireproof. Insulation systems and cable bandages ensure that fire does not spread across to other parts of the building.

2

2. Safeguarding escape and rescue routes

Saving human lives is the foremost priority in the event of a fire. It requires escape and rescue routes to be planned and built as fireproof.

3

3. Preserving electrical function

Technical facilities such as fire alarm systems, emergency lighting and smoke extractor systems have to keep working at all costs, even in the event of a fire. Only if electrical function is maintained by fireproof cable systems and cable support systems can firefighters safely evacuate people and fight the fire.



Expert
for protection aim 1



Top priority: Limiting the spread of fire

1

The installations needed for penetrating ceilings and walls have to reliably sealed in order to prevent fire from spreading to other parts of the building. This is done using insulation systems which effectively contain the spread of fire and smoke.

Expert
for protection aim 2



Fighting fire: Safeguarding escape and rescue routes

2

Heat and smoke caused in the event of fire endanger human lives. Escape and rescue routes allow people to leave buildings safely and enable fire-fighters to approach the flames and fight them. For this to happen, these routes have to be safely passable, even in the event of fire.

Expert
for protection aim 3



Guaranteeing safety: Maintaining electrical function

3

An electrical failure during a fire is a worst-case scenario which has to be avoided at all costs. The maintaining electrical function of safety-relevant electrical systems is essential, especially in the event of fire. Important, electrically powered facilities such as emergency lighting, fire alarm systems and smoke extractor systems have to keep on working for an adequate period of time.

THE EXPERTS

for fire protection in electrical installations

40
YEARS
of Experience



Fire protection experts at OBO carry the responsibility for safe electrical equipment. That is why our trained teams of experts can advise and inform you comprehensively on all three protection aims.

For the first protection aim, limiting the spread of fire, our fire protection expert can show you what types of insulation are suited to which different requirements.

For the second protection aim, you can depend on the expertise of our specialist when safeguarding escape and rescue routes. He will show you how we can help you safely equip these routes using our diverse product range.

Stefan Ring, International Sales Engineer & Director of the Fire Protection Systems Business Unit, is a trained firefighter, so he is very familiar with fire protection issues. He is your expert point of contact for protection aim number three: maintaining electrical function of electrical systems in the event of fire, so that the worst-case scenario – loss of power during a fire in a building – never happens.

The new Fire Protection Guidelines

Who is fire protection important for? Which legal regulations and requirements exist? What can be done to fulfil the three protection aims? Our Fire Protection Guidelines offer general and specific information about every aspect of fire protection and have been fully revised.

In the guidelines, our OBO experts explain important basic concepts, discuss problems together with a suitable solutions and tell you about testing processes and certificates. We have, of course, incorporated the latest developments, standards and legal regulations into the revised version of the guidelines.

The Fire Protection Guidelines offer helpful and new insights, whatever your level of knowledge.

Take advantage of our expertise derived from 40 years of OBO fire protection in your particular area of use. The new Fire Protection Guidelines can be pre-ordered online at www.obo-bettermann.com.



The new Fire Protection Guidelines
Available from Autumn 2017

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The four pillars of fire protection

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Cable bandages – why they are better than coatings

Safeguarding escape routes
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Installations in false ceilings and under-floor systems
Laying cables in fire protection ducts

Maintaining electrical function for safety-relevant electrical systems
Protection aim 3
Maintaining electrical function using fire protection ducts and cable support systems
Limits of maintaining electrical function

Anchoring
Attachment principles – types of anchor
Attaching to steel and wooden components





Uncompromising

Testing OBO fire protection systems

You should not compromise when it comes to fire protection. Every product you use has to work completely reliably in an emergency. To achieve this, our products satisfy strict statutory and building regulations. Our fire protection experts test every newly developed OBO product at accredited testing institutes. In doing so, they apply national and international test standards such as DIN, EN, IEC and ANSI.

Independent testers approve the results and award our products appropriate proofs of suitability, such as approvals, evaluations and test certificates. You can view and download all our fire protection certificates in the Download area of our website, www.obo.de.

Our OBO fire protection systems are tested under the toughest conditions.

We go to great lengths to test our cable support systems against fire by assessing whole cable systems, includ-

ing their routing systems and cables/lines, to see if they keep working in the event of fire.

In our practical tests, we use real-life conditions to see whether our systems can withstand temperatures of up to 1,000 °C. We demand a lot of our products, in order to arrive at uncompromisingly safe results.

We often test an OBO product rigorously during its development phase. The results then flow into the subsequent development process so that we can arrive at an absolutely safe solution. We want OBO fire protection systems to fulfil market demands and standards – and more than this, some of our cable support systems can even withstand much more heat than the law requires.

We guarantee that our OBO systems are of the utmost, safest quality. To do that, we work with numerous experienced partners in the field of fire protection. These include:

- MPA NRW, Germany
- MPA Braunschweig, Germany
- MFPA Leipzig, Germany
- DIBt Berlin, Germany
- OIB Vienna, Austria
- FIRES, Slovakia
- CNBOP, Poland
- UL Chicago, USA

Testing OBO fire protection systems

The fire tests required in the course of development are planned and prepared individually. This includes drawing up detailed set-up diagrams and assembling the various components.

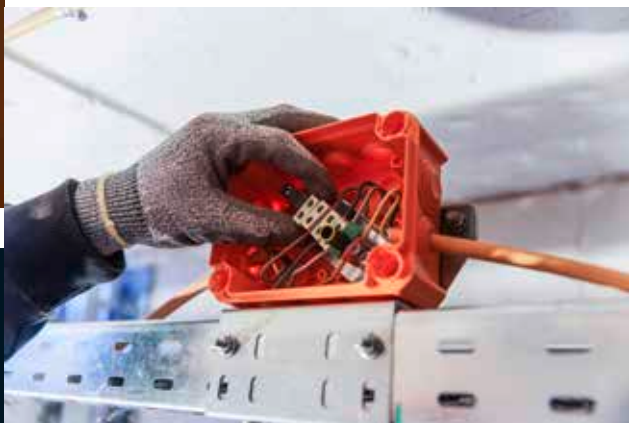
The test is set up in a furnace in close collaboration with the test institution involved. The cable systems are installed according to the manufacturer's instructions and in compliance with the relevant test standards.

The furnace is heated up in compliance with the ISO standard temperature-time curve (STTC). The STTC simulates a natural fire situation.



The various different OBO routing systems for maintaining electrical function are tested in practical ways and using different fire protection parameters.

Despite the high temperatures that occur in the event of fire, you have to be sure that a cable system will retain sufficient mechanical strength even at temperatures just above 1,000 °C. This necessitates different attachment distances and cable loads than those used in conventional installations without fire protection requirements.



After the test, you can see what kind of effects a fire and its high temperatures have had on an installation.

The cable system has to ensure that the electrical supply to safety-relevant systems, such as mechanical smoke extractors and automatic fire extinguishers, is safeguarded in the event of fire.

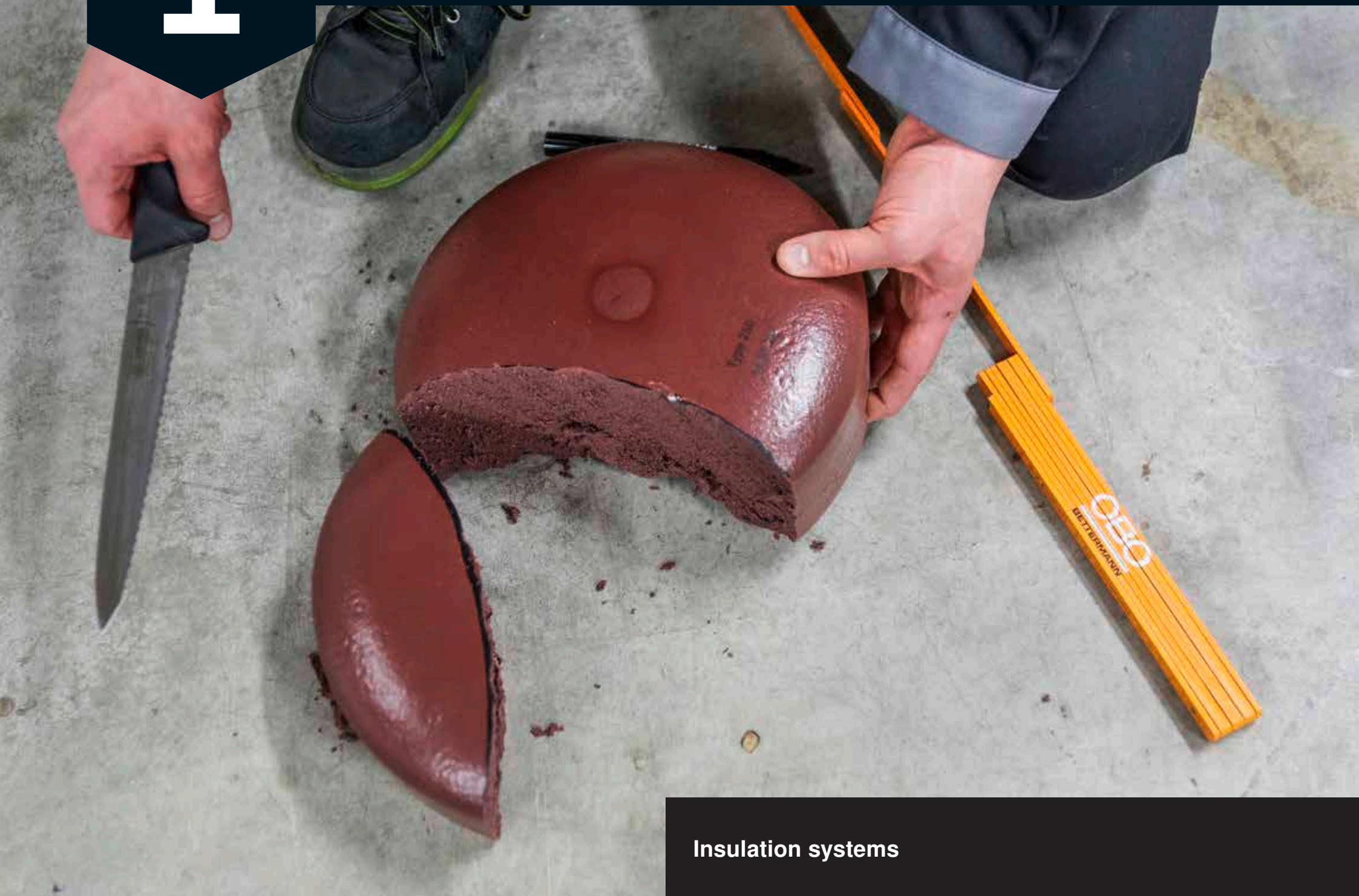
The requirements for technical systems are regulated by building law. In Germany, the Model Cable System Guidelines (*Muster-Leitungsanlagen-Richtlinie, MLAR*) have been incorporated into state construction laws in the form of technical building regulations. These Guidelines define fire protection requirements for cable installations in buildings. Over and above that, the Model Building Regulation (*Musterbauordnung*) forms the basis for the erection of buildings and regulates the use of building products in Germany.

Various approvals are needed before launching a product onto the market. For example, cable systems for maintaining electrical function have to have a general appraisal certificate which represents approval for their use.



1

Limiting the spread of fire



Insulation systems

PYROMIX®



Cable and combined insulation using mortar MSX



System benefits

- Lots of approved section insulations, including Armaflex and Foamglas
- Mineral fibre-free
- Hollow waveguides allowed
- Adheres well to subsurfaces
- Can even be used on thin components
- Water can be added to achieve the required consistency
- Easy to apply at a later stage

PYROBAG®



Cable insulation using fire protection cushions KBK



System benefits

- Easy, quick, clean and dust-free to fit
- No paint, no fillers required
- Ideal solution for frequent subsequent installations
- For permanent and temporary insulation
- Weatherproof and insensitive to water
- Mineral fibre-free

PYROSIT® NG



Cable and combined insulation using fire protection foam
FBS-S



System benefits

- Easy to work with, even if you stop working briefly
- Adheres well to subsurfaces
- Up to 2.1 litres of foam per cartridge
- Soft consistency – easy to install at a later stage
- No coating of surfaces required
- Dust-free and fibre-free installation
- Lots of approved route insulations
- Rechargeable extrusion pistol for heavy users
- Electrical installation ducting up to M40, occupied with cables or empty
- Flammable pipes up to Ø 50 mm can be routed through walls and ceilings without additional protection
- Can be painted over using emulsion paint
- Can be coated afterwards to protect against moisture

PYROPLUG® Block



Cable and combined insulation using foam blocks
FBA-B



System benefits

- Flammable pipes can be fed through without additional protection
- Non-flammable pipes can be fed through with section insulation
- Easy, dust-free and fibre-free fitting
- Easy to fit at a later stage
- Fill remaining gaps using PYROPLUG® Screed filler (type FBA-SP)
- Can be painted over using emulsion
- Can be coated afterwards to protect against moisture
- Can be combined with PYROSIT® NG fire protection foam in compliance with ETA

PYROPLUG® Peg



Cable insulation using foam fire protection plugs
FBA-SN



System benefits

- Ideal solution for core drilling in solid walls and concrete ceilings
- Can be used to form groups
- Easy, dust-free and fibre-free to install
- Easy to fit at a later stage
- Fill remaining gaps using PYROPLUG® Screed filler (type FBA-SP)

PYROCOMB® Intube



Cable insulation using pipe shells
CTS



System benefits

- Fibre-free
- Easy installation, including around lines that are already installed
- Easy to lay cables in later
- Cable coating not needed
- 100% interior occupancy
- Electrical installation ducting made of plastic up to M32
- Can be arranged in groups
- Waterproof inner coating – fluid can be poured into the pipe shell



Fire protection ducts



PYROLINE® Rapid



Fire protection duct, metal BSKM

As an I-duct, PYROLINE® Rapid fire protection duct protects escape and rescue routes against the effects of a cable fire. It is made of sheet metal and has an intumescent inner coating which actively encapsulates the fire load in the event of fire, preventing fire from spreading further. This fire protection duct can be fitted right up against the wall or ceiling, or suspended. It can also be used in system flooring and on untreated floors. All of the necessary components and fittings are pre-manufactured and metalwork does not need to be done on-site.

System benefits

- Surface galvanised or white
- Equipotential bonding created by snapping on the lid
- No screw tips inside to damage cables

PYROLINE® Con D



Fire protection duct, concrete BSK

OBO PYROLINE® Con D is used to protect escape and rescue routes against the effects of a potential cable fire. As a fire protection I-duct, it keeps escape and rescue routes free of fire, smoke and heat. As an E-duct, it enables the maintaining electrical function of safety-relevant circuits. PYROLINE® Con D fire protection duct is made of water-resistant and frost-resistant glass-fibre-reinforced lightweight concrete fire protection plates. These fire protection plates, which are defined as non-combustible (building material class A1), have a compacted surface, making them hard, smooth and abrasion-resistant. The fire protection ducts can be fitted straight onto the wall or ceiling. Fittings can easily be made on-site to suit local conditions.

System benefits

- Various dimensions
- Fire protection duct can be painted or wallpapered over
- Can be repaired using BSK-M mortar



PYROLINE® Con S



Fire protection duct, concrete BSKH

OBO PYROLINE® Con S is used to protect escape and rescue routes against the effects of a potential cable fire. As a fire protection I-duct, it keeps escape and rescue routes free of fire, smoke and heat. As an E-duct it enables the maintaining electrical function of safety-relevant circuits. Like PYROLINE® Con D, PYROLINE® Con S fire protection duct consists of non-flammable, water- and frost-resistant glass-fibre-reinforced lightweight concrete fire protection plates. These fire protection ducts can be fitted on wall brackets or on a support system suspended from the ceiling. Pre-fitted connectors allow the duct sections to be assembled quickly on-site. This duct can easily be routed around heating, ventilation and plumbing installations.

System benefits

- Various dimensions
- Fittings available for changing direction
- Loosely fitting lids make it easy to revise and refit cables
- Hard, abrasion-resistant surface





False ceiling systems

What is an escape and rescue route?

Building regulations dictate that every building has to have routes that provide access to it vertically and horizontally, not only in normal use but also in the event of fire to enable rescue. It is therefore mandatory to provide each building with at least one structural escape and rescue route. Additional structural escape and rescue routes may also be necessary, depending on the type of building.

These include:

- Mandatory stairways
- Connecting rooms between mandatory stairways and exits to the outside
- Mandatory corridors

These routes must, in every event, be usable without risk in the event of a fire, so that people can leave the building. As well as enabling evacuation, escape and rescue routes allow local firefighters to get to the fire.

According to the Cable System Guidelines (MLAR), installations in escape and rescue routes may not themselves represent an additional fire load. Appropriate methods of installation must be used to fulfil this demand:

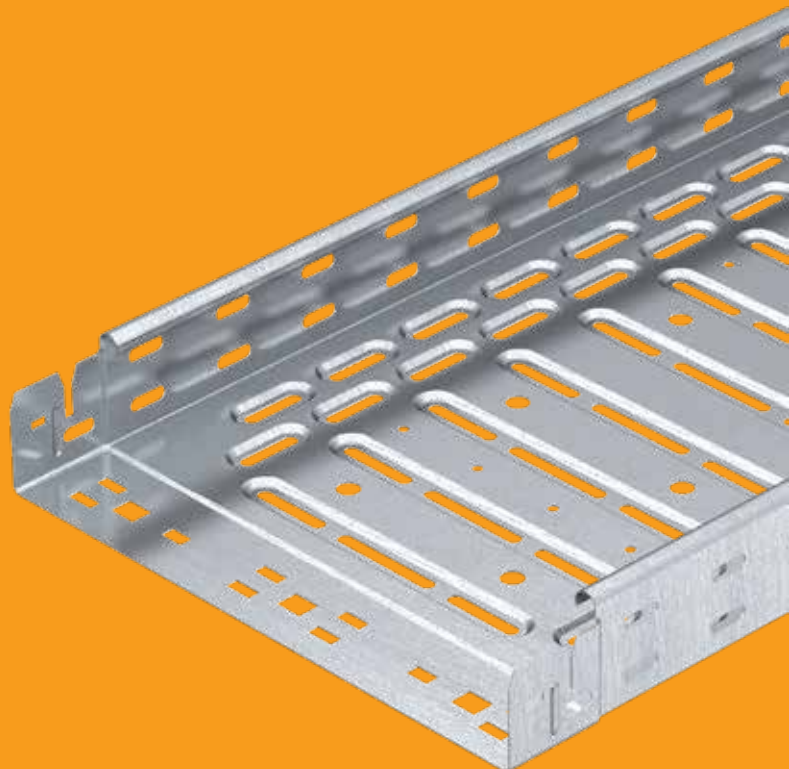
- Concealed installation
- Installation in fire protection duct systems
- Installation above suspended fire protection ceilings
- Use of non-flammable materials
- Cables used with superior behaviour in the event of fire

OBO has specially tested cable support and routing systems in its product range for installation above suspended fire protection ceilings (false ceilings). Numerous tests have proven how strong these systems are under high loads in the event of fire. Despite extreme temperatures, their components remain stable and do not fall down. There is no risk of false ceilings being destroyed. In the event of fire, escape and rescue routes remain usable for at least 30 minutes.

RKS-Magic® cable tray



RKS-Magic® cable tray routing system
RKSM



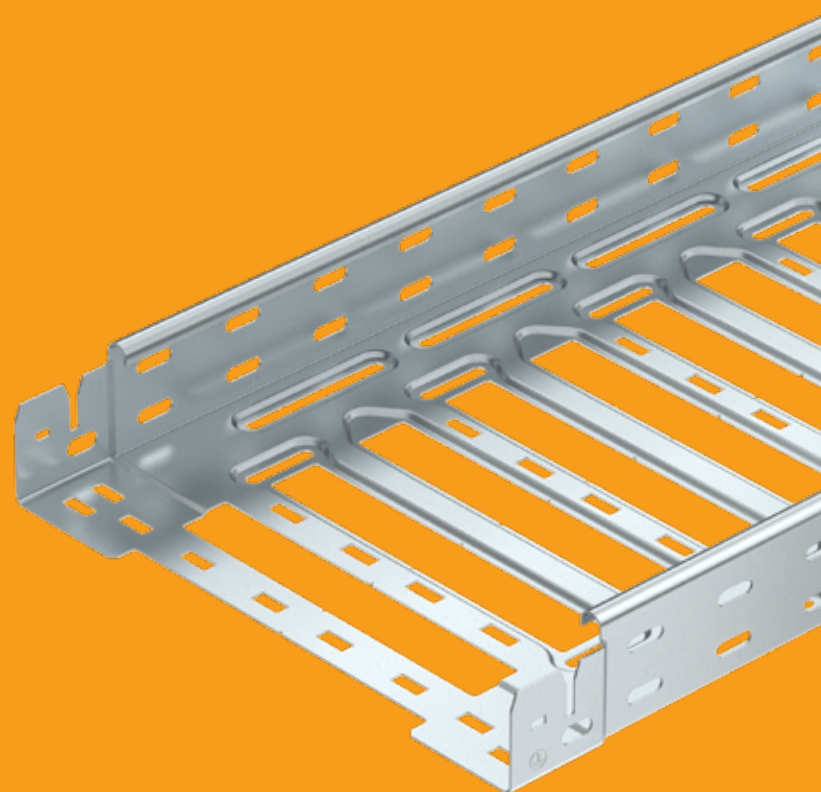
System benefits

- Ceiling-mounted using suspended supports/brackets or using mounting rails
- Wall-mounted using brackets
- Tray width max. 400 mm
- Cable load max. 60 kg/m
- Support intervals max. 1.5 m
- Deformation characteristic as minimum distance from fire protection ceiling with support intervals of 0.5 m to 1.5 m

SKS-Magic® cable tray®



SKS-Magic® cable tray routing system
SKSM



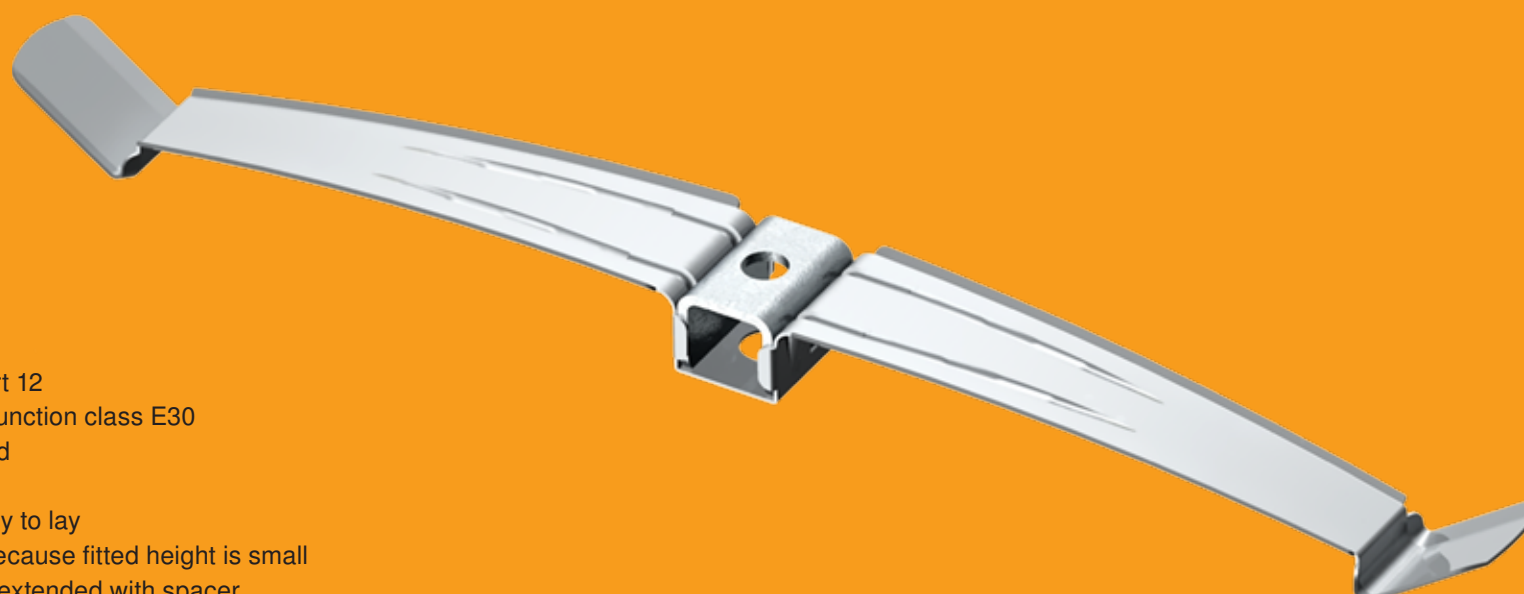
System benefits

- Ceiling-mounted using suspended supports/brackets or using mounting rails
- Wall-mounted using brackets
- Tray width max. 600 mm
- Cable load max. 90 kg/m
- Support intervals max. 1.5 m
- Deformation characteristic as minimum distance from fire protection ceiling with support intervals of 1.0 m to 1.5 m

Pressure clips, metal

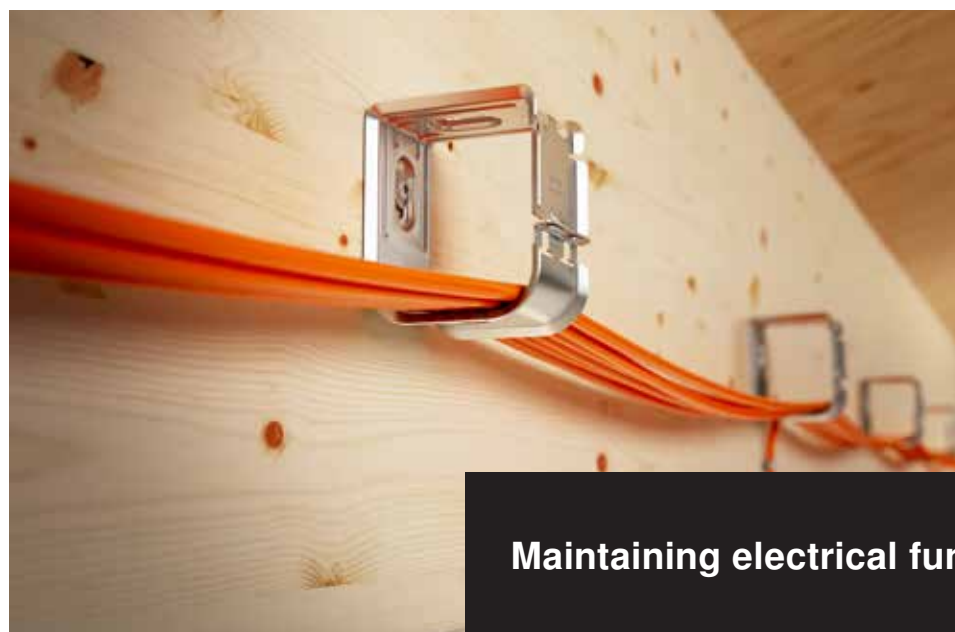


Pressure clips, metal, for 16 lines
2033



System benefits

- Tested to DIN 4102 Part 12
- Maintaining electrical function class E30
- Can be ceiling-mounted
- Two different sizes
- Makes cables very easy to lay
- Requires little space because fitted height is small
- Clamping area can be extended with spacer



Maintaining electrical function in structures made of wood

Maintaining electrical function in the event of fire is mandatory in many buildings, including ones made of wood. Safety-relevant systems, such as emergency lighting and fire alarm systems with supply cables, have to keep working for at least thirty minutes in the event of fire.

Fire protection and wooden components – it may sound at first like a contradiction. But in fact it is perfectly possible to safely secure routing systems for cable systems to wood while maintaining function in compliance with DIN 4102-12. With its specially approved wood screw for maintaining electrical function on wooden components, OBO Bettermann offers a safe way of attaching cable support systems that have been tested for fire protection.

OBO had an advisory opinion issued by an independent engineering office on the basis of test certificates, standards and evaluations.

The result: Maintaining electrical function in conjunction with wooden components without fire protection is easy to achieve given certain parameters.

Wood is becoming an increasingly important building material on account of its positive properties. Because it grows, wood is sustainable and it creates a good interior atmosphere as well as being lighter than reinforced concrete. Fire protection with wooden components is not a contradiction: although wood is a flammable substance, its special properties mean it behaves relatively well in the event of fire. The surface facing the fire forms a charcoal layer, which cuts the supply of oxygen off from the wood beneath it and protects against further combustion. The remaining, unburned cross-section of a wooden component can be calculated mathematically in order to work out the necessary component size for safe attachment.

HT 6 wafer head screw



HT 6 wafer head screw

HT 6x60 TD
HT 6x80 TD
HT 6x100 TD
HT 6x120 TD



System benefits

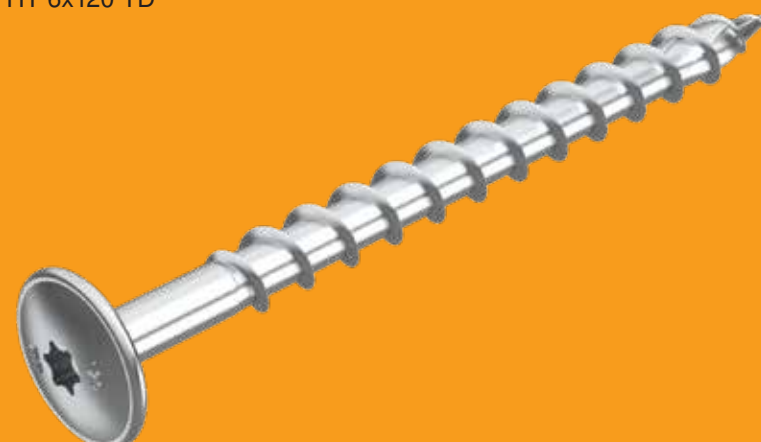
Self-drilling wood screw for the fireproof attachment of cable systems used for maintaining electrical function in compliance with DIN 4102 Part 12 on load-bearing wooden components. The wafer head shape allows it to be fitted without an additional washer.

HT 10 wafer head screw



HT 10 wafer head screw

HT 6x60 TD
HT 6x80 TD
HT 6x100 TD
HT 6x120 TD



System benefits

Self-drilling wood screw for the fireproof attachment of cable systems used for maintaining electrical function in compliance with DIN 4102 Part 12 on load-bearing wooden components. The wafer head shape allows it to be fitted without an additional washer.

GLB fire protection plate



Fire protection plate

GLB-P1

System benefits

Fire protection plate (building material class A1) applied as an effective cladding to load-bearing wooden components used for maintaining electrical function in compliance with DIN 4102 Part 12. Made of non-combustible, water- and frost-resistant glass-fibre-reinforced lightweight concrete.



Grip M grouped supports



Grip M grouped support

2031 M

System benefits

Grouped support made of sheet steel for installing inside false ceilings with a proven mechanical structural stability of 30 to 90 minutes in the event of fire. Suitable for ceiling and wall installation.





FireBox junction box

The OBO FireBox enables fireproof connections on any type of material, even wood. Coming in DIN 4102-12 categories E30 to E90, it guarantees maintaining electrical function for up to 90 minutes in the event of fire and has been tested and approved accordingly. Because it incorporates halogen-free materials, it emits little smoke in the event of fire.

From its high IP protection type, to its breaking strength, to its impact resistance, OBO's T-Series FireBox combines all the benefits of thermoplastic junction boxes. Various core cross-sections enable power cables and data wiring to be laid in a fire-proof fashion. Highly temperature-resistant terminals are pre-fitted to the connection unit in the junction box. The protective conductor terminal is connected directly to the mounting bracket. This means that metal parts do not need to be covered. A separate fuse holder allows a branch circuit to be safeguarded. The boxes are available with soft plug-in seals or as closed versions in which cable glands can be positioned where you want them. The boxes are attached using outer lugs or using fire protection screw anchors through the base. The OBO FireBox comes with an assembled connection unit and a fire protection screw anchor.

System benefits

- Can be wall- and ceiling-mounted
- Available in different sizes with different types of connection
- Made of elastic thermoplastic
- Versions available with impact-resistant lids made of polycarbonate
- Lid quick to fit by turning the screws on the corners through 90°
- Protection type up to IP66
- Impact resistance up to IK10
- Power cables with core cross-section up to 16 mm²
- Fire alarm and telecommunication cables with core diameters up to 0.8 mm
- Terminals available for retrofitting

FireBox T100 ED



FireBox with inside attachment

T100 ED 6-5
T100 ED 10-5

E90

HALOGEN
FREE



FireBox T100 ED



FireBox with outside attachment

T100 ED 6-5 A
T100 ED 10-5 A

E90

HALOGEN
FREE



FireBox T100 ED



FireBox with outside attachment and fuse holder

T100 ED 6-6
T100 ED 10-6

E90

HALOGEN
FREE



FireBox T100 ED



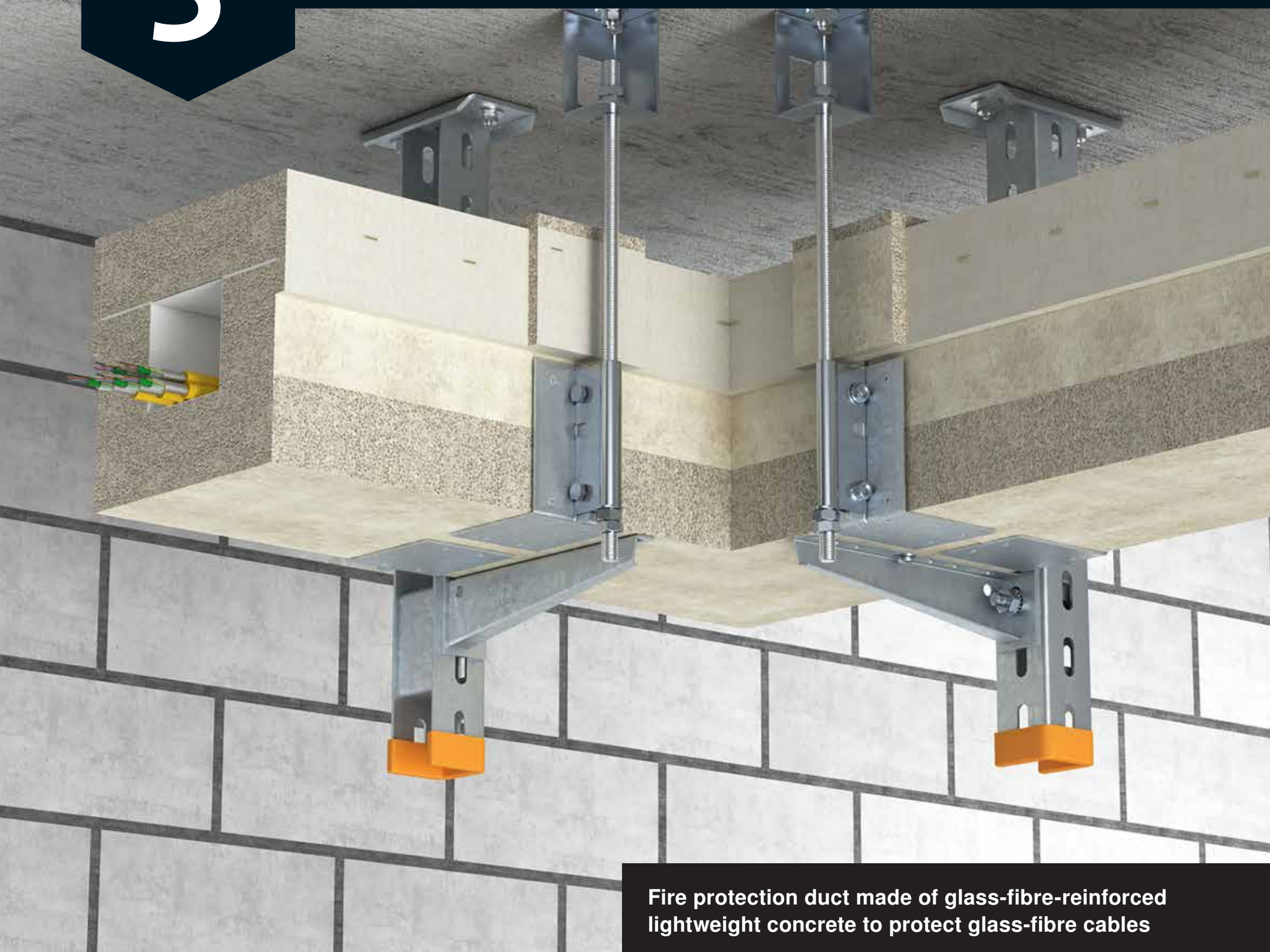
FireBox T100 ED for data equipment with inside attachment

T100 ED 4-10

E90

HALOGEN
FREE





Fire protection duct made of glass-fibre-reinforced lightweight concrete to protect glass-fibre cables

PYROLINE® Fibre Optics is the brand name of the new OBO fire protection duct system. In the event of fire, the system protects glass-fibre cables, also known as fibre-optic cables (FOC), in safety-relevant systems. PYROLINE® Fibre Optics ensures uninterrupted data transmission for up to 90 minutes in the event of fire. An advisory opinion confirms that this duct system is suitable for maintaining electrical function in compliance with DIN 4102 Part 12.

The PYROLINE® Fibre Optics fire protection duct system can easily be adapted to different building conditions. There is a version available for direct wall and ceiling mounting and for suspended mounting on support systems.

The system consists of different components. This allows you to use lengths of the material to make direct wall- and ceiling-mounted fittings on-site. Special fittings are used for suspended mounting, such as 90° bends and vertical bends to scale different heights.

The fittings allow you to maintain fibre-optic bend radius limits at all times when laying the cables. The material from which the fire protection duct and fittings are made (non-combustible, water- and frost-resistant glass-fibre-reinforced lightweight concrete categorised as a class A1 building material under EN 13501-1) protects installed fibre-optic cables safely against fire from the outside. An additional fire protection coating is applied to all the inside surfaces of the fire protection duct and fittings, and in the event of fire this acts as additional heat insulation.

The PYROLINE® Fibre Optics fire protection duct system is the ideal solution for guaranteeing the function of fibre-optic cables for up to 90 minutes in the event of fire.



**Fire protection duct made from glass-fibre-reinforced
lightweight concrete**

BSKF0808
BSKHF0808

Maintaining electrical function for fibre-optic cables
The PYROLINE® Fibre Optics fire protection duct system protects fibre-optic cables (FOC) for up to 90 minutes in the event of fire, pursuant to DIN 4102 Part 12.

System benefits

- Maintaining electrical function class E30 to E90 pursuant to DIN 4102 Part 12
- No restriction of transmission properties
- Direct or suspended mounting
- Fittings for suspended mounting
- Maintain bend radii using fittings
- Proof of usability: advisory opinion GA-2017/012-Nau

E90



Support

Help from the fire protection experts

40
YEARS
of Experience

Forty years of experience in fire protection makes OBO a reliable partner. We like to pass on our theoretical and practical knowledge to our customers, and we have developed a broad range of services to that end:

Personal service:

- Telephone advice and e-mail support
- Worldwide field service
- Fire protection seminars

Online services:

- Fire Protection Guidelines and catalogue
- Installation instructions and videos
- Selection tools
- Certificates
- OBO Construct app



Customer Service
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Monday to Thursday, 7.30 a.m. to 5 p.m.
Friday 7.30 a.m. to 5 p.m.

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Publication details
Publisher and editorial:
OBO Bettermann Holding GmbH & Co. KG
Postfach 1120 · 58694 Menden
GERMANY
Tel. +49 (0)2373 89-0 · Fax +49 (0)2373 89-1238
E-mail: blick@obo.de · www.obo.de

Concept and art direction:
Field Interactive · www.field-interactive.com

Translation and adaptation:
[danby kommunikation ltd · www.danby-kommunikation.com](http://danby-kommunikation.com)

Images
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For feedback and queries please contact the editorial team. Karin Herrmann/Marketing-service International.

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