protect your values

PYRO-SAFE©
Fire protection

Cable penetration sealings

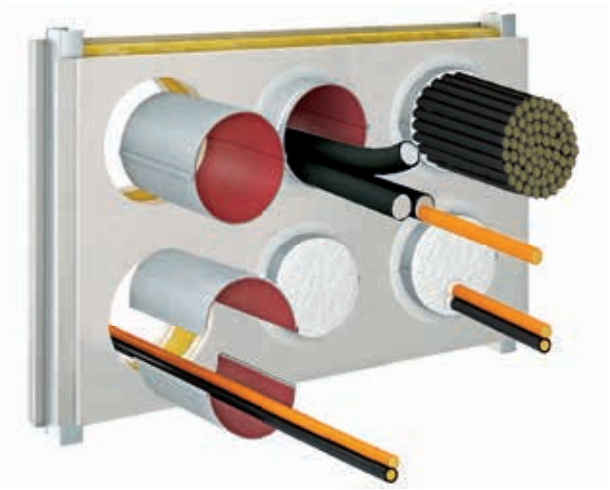
PYRO-SAFE© CT
PYRO-SAFE© CT ML

Cable penetration sealing in walls; floors and beneath system floors

svt FIRE PROTECTION

PYRO-SAFE© Fire protection

Cable penetration sealing with the PYRO-SAFE CT and the system floor sealing variant, the "mousehole" PYRO-SAFE CT ML.



Contents

Fire protection sealings

General requirements on fire protection sealings

The technical fire protection characteristics of the components enclosing the room, the walls and floors, must generally be retained following the installation of a fire stop system. If a solid wall is rated for 90 minutes, the fire stop which is installed is required to withstand a fire for at least 90 minutes. Within the defined period of time, fire protection sealings must prevent flash-over; the passage of smoke and heat insulation.

Fire protection sealings

The fire protection products used to seal wall passages for cable penetrations are usually fire protection mortars and mineral fibre boards. Additional fire protection measures, e.g. fire protection coatings or fire protection wraps (fire protection fabrics) have to be applied in the case of certain cables due to their material and/or size.

PYRO-SAFE CT cable tube

The PYRO-SAFE CT cable tube is an independent fire protection sealing system for cables, electrical conduits and other applications. It is easy to install and meets all of the specified fire protection requirements.

In the event of a fire, the intumescent fire protection fabric, bonded into half-shells foams, seals the spaces between the cables and thereby prevents the fire from spreading. The insulating effect of the foamed material reduces thermal conduction. Soft foam plugs which are adapted to the application and sealed with the ablative PYRO-SAFE FLAMMOTECT-A are used to seal the face ends, and act as cold smoke seals.

What are system floors?

System floors serve to accommodate the various, modern IT, telecommunications and electrical engineering installations, which are rapidly expanding or being replaced.

System floors are subdivided into

- *Cavity floors*
  These consist of a base course of cast screed and do not reveal any joints.
- *Double floors*
  These consist of prefabricated, tightly laid supporting plates and individual pillars.

PYRO-SAFE CT ML cable tube

The PYRO-SAFE CT ML cable tube, the "mousehole", is a variant of the PYRO-SAFE CT cable tube.

It consists of a half-shell with an intumescent fire protection fabric inlay.
On one side, the inlay is extended by approx. 120 mm (bottom flap). A soft foam plug with ablative sealing is used to close off a face end.

The "mousehole" can be installed on one side. A significant advantage which takes actual installation situations into account.

PYRO-SAFE® CT

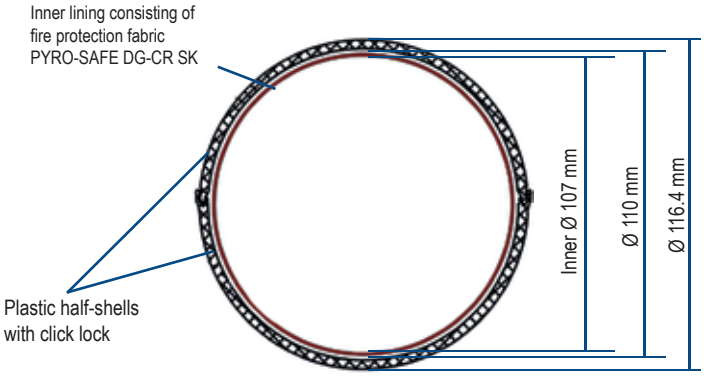
- **Fast and easy installation**
- **100% filling of the cable tube cross-section possible**
- **No additional framing is required in plasterboard**
- **Easy retrospective installation**
- **Installation possible even after cable pulling**
- **Group configurations with zero spacing possible**

The click lock enables easy installation with existing cable penetrations. Thanks to its simple and economic installation, even in group configurations, the PYRO-SAFE CT is also outstandingly suitable for new installations and as a so-called reserve sealing system. The cable tube can be installed in plasterboard, solid walls and floors.

The PYRO-SAFE CT can be configured in groups and, depending on design, can be fully filled with electrical cables and conductors, optical fibre cables, cable bundles and electrical conduits according to EN 61386-22 made of PE-HD with and without cable filling plus PVC-U conduits, A/C split line combinations, PE lines Gabocom "speed pipe" (for glass fibre cables and micro cables), bundled or individually, without glass fibre cables up to 100% of the tube opening.

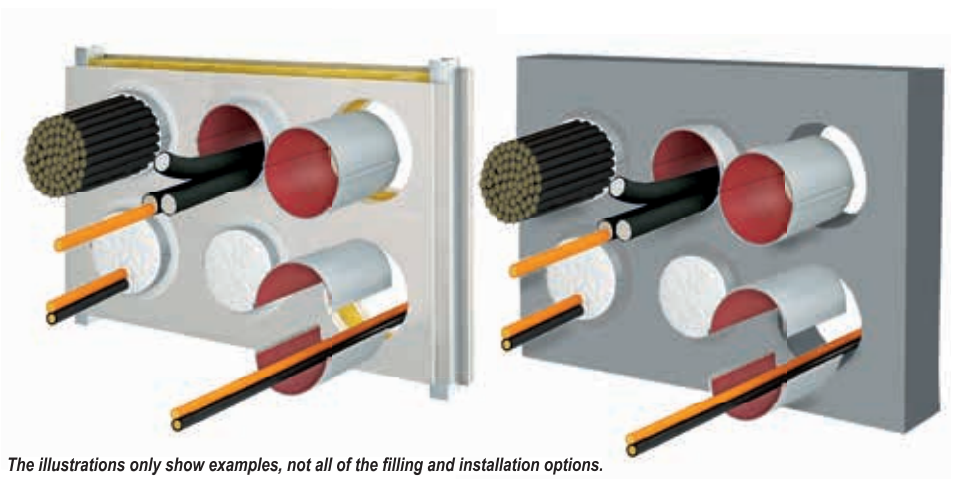
Structure of the PYRO-SAFE CT cable tube

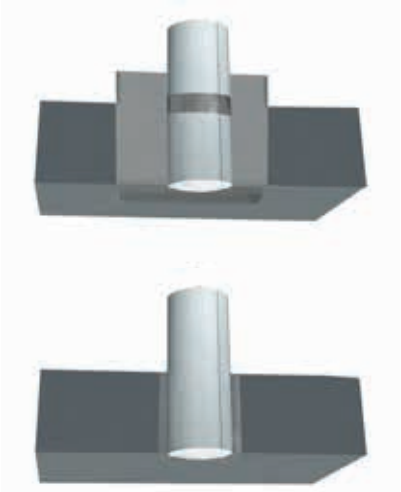
The PYRO-SAFE CT cable tube is available in lengths of 150 mm, 200 mm and 300 mm (longer lengths on request).
It consists of two plastic half-shells with an intumescent fire protection fabric PYRO-SAFE DG-CR SK holohedrally bonded on the inner side. The two half-shells are joined firmly together with a click lock.
Both ends are closed with a 40 mm thick Melamine resin foam plug and subsequent sealing with PYRO-SAFE FLAMMOTECT-A.



Installation situations

Any gaps around the PYRO-SAFE CT can be sealed with coated mineral fibre boards or fire protection mortar.
On installation in core holes, the ring gap can be sealed using plaster or mortar.





The illustrations only show examples, not all of the filling and installation options.

PYRO-SAFE® CT ML system floor sealing variant

- **Fast and easy installation from one side**
- **100% filling of the "mousehole" cross-section possible**
- **Group configurations with zero spacing possible**
- **Rated installation beneath fire doors and in rated solid and plasterboard walls**
- **The floor tiles of the system floor must only be non-combustible (no requirement on the certain fire resistances)**

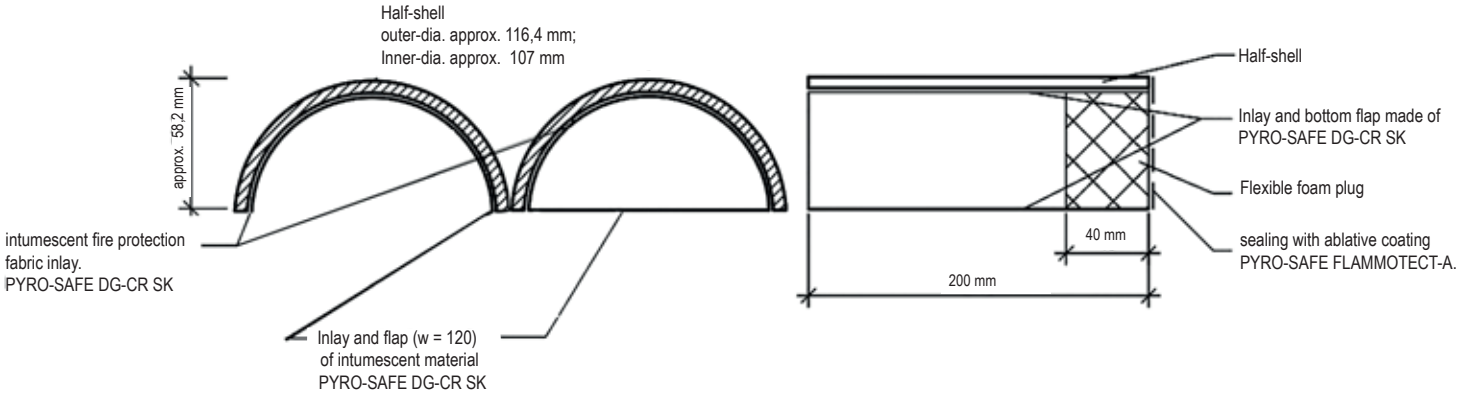
Easy, single-sided installation, the low spatial requirement (necessary height beneath the system floor 8 to 15 cm), installation in rated walls, including beneath fire doors and plasterboard, make the "mousehole" PYRO-SAFE CT ML a genuine all-rounder in terms of system floor sealing.
The floor tiles of the system floor do not have to be rated (no requirement on the system floor's fire resistance), but must only be non-combustible.

The PYRO-SAFE CT ML can also be configured in groups with zero spacing, and can be filled with individual cables, cable bundles and electrical conduits with or without individual cables up to 100% of the tube opening.

Structure of the PYRO-SAFE CT ML cable tube

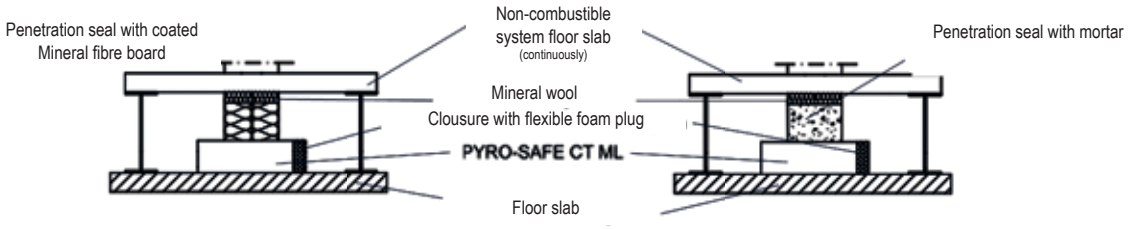
The PYRO-SAFE CT ML cable tube consists of an approx. 3.2 mm thick, 200 mm long plastic half-shell with intumescent PYRO-SAFE DG-CR SK fire protection fabric holohedrally bonded on the inner side. On one side, the inlay is extended by approx. 120 mm (bottom flap). One end is closed with a 40 mm thick Melamine resin foam plug and subsequent sealing with PYRO-SAFE FLAMMOTECT-A.

system floor sealing variant PYRO-SAFE CT ML



Installation situations

The gaps around PYRO-SAFE CT ML can be sealed with coated mineral fibre boards or fire protection mortar.



The illustrations only show examples, not all of the filling and installation options.

Technical data

PYRO-SAFE® CT

Applications

Easy installation makes this system an economical fire protection barrier for existing cable/ electrical conduit penetrations, A/C split line combinations, PE lines Gabocom "speed pipe" (for glass fibre cables and micro cables), and for new installations.

Characteristics

Resistant to fire and flue gases; forms a layer of expanded graphite based insulating foam in the event of a fire. Outstandingly easy to install.

Fire rating

EI 30 - EI 120 in accordance with EN 13501-2

Certificate

Approved by Deutsches Institut für Bautechnik, Berlin.
European Technical Assessment: ETA-16/0016, European Technical Approval: ETA-13/0821, general building inspectorate approval No.: abZ Z-200.2-43 as an emission-evaluated construction product.
Approvals requested - reference

Use in PYRO-SAFE Novasit COMBI 90 approved.
Ref. III 28.1.19.15-112/13 PYRO-SAFE Flammotect/Sibralit COMBI 90

Permissible services

Depending on design, services such as electrical cables and lines (excluding so-called waveguide cables) and optical fibre cables, cable bundles and electrical conduits according to EN 61386-22 made of PE-HD with and without cables. PVC-U conduits, A/C split line combinations, PE lines Gabocom "speed pipe" (for glass fibre cables and micro cables), bundled or individually, without glass fibre cables. 100% of the tube Ø may be filled.

Particular points to note

Must only be fitted and used in accordance with the installation instructions.

Retrospective installation

Cables and conductors can be subsequently installed at any time without difficulty using basic tools.

Fire ratings for wall and floor penetrations

The fire ratings are dependent on the structural barriers, the filling, the length of the PYRO-SAFE CT and any additional measures.

PYRO-SAFE CT	Length 150 mm		Length 200 mm		Length 300 mm		
Structural barrier	Wall	Floor	Wall	Floor	Wall		Floor
Wall/Floor thickness / Permissible services	≥ 100	≥ 150	≥ 100	≥ 150	≥ 100	≥ 150	≥ 150
Cable Ø ≤ 21 mm	EI 90	EI 120	EI 120	EI 120	EI 120	EI 120	EI 120*
Cable Ø > 21 mm up to Ø ≤ 50 mm	EI 45	EI 45	-	EI 45	EI 60	EI 90	EI 120*
Cable Ø > 50 mm up to Ø ≤ 80 mm	-	-	-	-	-	EI 90	EI 60
Cable bundle Ø ≤ 107 mm with cable Ø ≤ 21 mm	EI 90	EI 60	EI 120	EI 60	EI 120	EI 120	EI 120
Max. 3 x conduits Ø ≤ 32 mm with/without cable Ø ≤ 14 mm	EI 90	EI 90	-	-	-	-	-
Conduit bundle Ø ≤ 107 mm with conduit Ø ≥ 16 mm to Ø ≤ 32 mm, with/without cable Ø ≤ 21 mm	-	-	EI 120	-	EI 120	EI 120	EI 120*
PVC-U conduits with outside Ø 20 mm x wall thickness 1.5 mm up to outside Ø 32 mm x wall thickness 2.4 mm	-	-	-	-	EI 120	EI 120	-
A/C split line combination Conduit 1/conduit 2 outside Ø 6 up to 10 mm/10 up to 18 mm + PE-100 outside Ø ≤ 25 mm, t 1.5 mm + max. 3 cables with Ø ≤ 14 mm	EI 90	EI 90	EI 90	EI 90	EI 90	EI 90	-
A/C split line combination Conduit 1/conduit 2 outside Ø 6 up to 22 mm/6 up to 22 mm + PE-100 outside Ø ≤ 25 mm, t 1.8 mm + max. 3 cables with Ø ≤ 14 mm	-	EI 120		EI 120	-	-	EI 120
"speed pipe", bundled or individually, without glass fibre cables Max. 24 pcs. conduit outside Ø ≤ 7 mm Max. 7 pcs. conduit outside Ø ≤ 10 mm Max. 5 pcs. conduit outside Ø ≤ 12 mm	-	EI 120	-	EI 120	-	-	EI 120

* Floor 200 mm (CT 300 or 2 x CT 150)

Technical data

PYRO-SAFE® CT ML

Applications

Easy installation makes this system an economical fire protection barrier for existing cable/electrical conduit penetrations and for new installations in the system floor area.

Characteristics

Resistant to fire and flue gases; forms a layer of expanded graphite based insulating foam in the event of a fire. Single-sided installation possible.

Fire rating

EI 30 - EI 120 in accordance with EN 13501-2

Certificate

Approved by Deutsches Institut für Bautechnik, Berlin.
ETA-16/0016
Application approval requested

References

Ref. III 29.1.19.15-48/18 PYRO-SAFE Novasit COMBI 90
Ref. III 28.1.19.15-9/15 PYRO-SAFE Flammotect/Sibralit COMBI 90

Permissible services

Depending on design, services such as electrical cables and conductors (excluding so-called waveguide cables) and optical fibre cables Ø ≤ 50 mm and cable conduits of PE-HD Ø ≤ 32 mm with and without cables (individual cable Ø ≤ 21 mm). The PYRO-SAFE CT ML can be filled to capacity.

Particular points to note

Must only be fitted and used in accordance with the installation instructions.

Retrospective installation

Cables and conductors can be subsequently installed at any time without difficulty using basic tools.

Dimensions

Configuration	Component thickness	Structural barrier thickness	Structural barrier width	Structural barrier height/length
Wall	≥ 100	≥ 100	≤ 2000	≥ 80
or			≤ 2000	≤ 150

Fire ratings

PYRO-SAFE CT ML fire ratings						
Permissible services	Fire ratings					
	EI 30	EI 45	EI 60	EI 90	EI 120	E 120
Cable Ø ≤ 21 mm	●	●	●	●	●	●
Cable Ø > 21 mm up to Ø ≤ 50 mm	●	●	●	●	-	●
Cable bundle full capacity with cables Ø ≤ 21 mm	●	●	●	●	●	●
Full conduit bundle capacity with conduit Ø ≥ 16 mm up to Ø ≤ 32 mm with/without cable Ø ≤ 21 mm	●	●	●	●	●	●

Notes on installation

Installation in rated walls; below fire doors and plasterboard walls possible.
The floor tiles of the system floor do not have to be rated (no requirement on the system floor's fire rating). They must only be non-combustible.
The PYRO-SAFE CT ML can be installed from one side (single-side seal with 40 mm thick melamine resin foam plugs and sealing with PYRO-SAFE FLAMMOTECT-A).

safety via technology

svt Brandschutz Vertriebsgesellschaft International GmbH
Glüsinger Straße 86 • 21217 Seevetal • Germany
Telephone (+49 41 05) 40 90 0 • Telefax (+49 41 05) 40 90 32
info@svt.de • www.svt.de