



Network level 4

speed·pipe[®] indoor system.

Secure indoor
networks.

www.gabocom.com

Networks of the future. Safety obliges.

Fiber-optic more and more approaches the end-user – also inside buildings efficient passive infrastructures are in demand for fiber-optic installations.

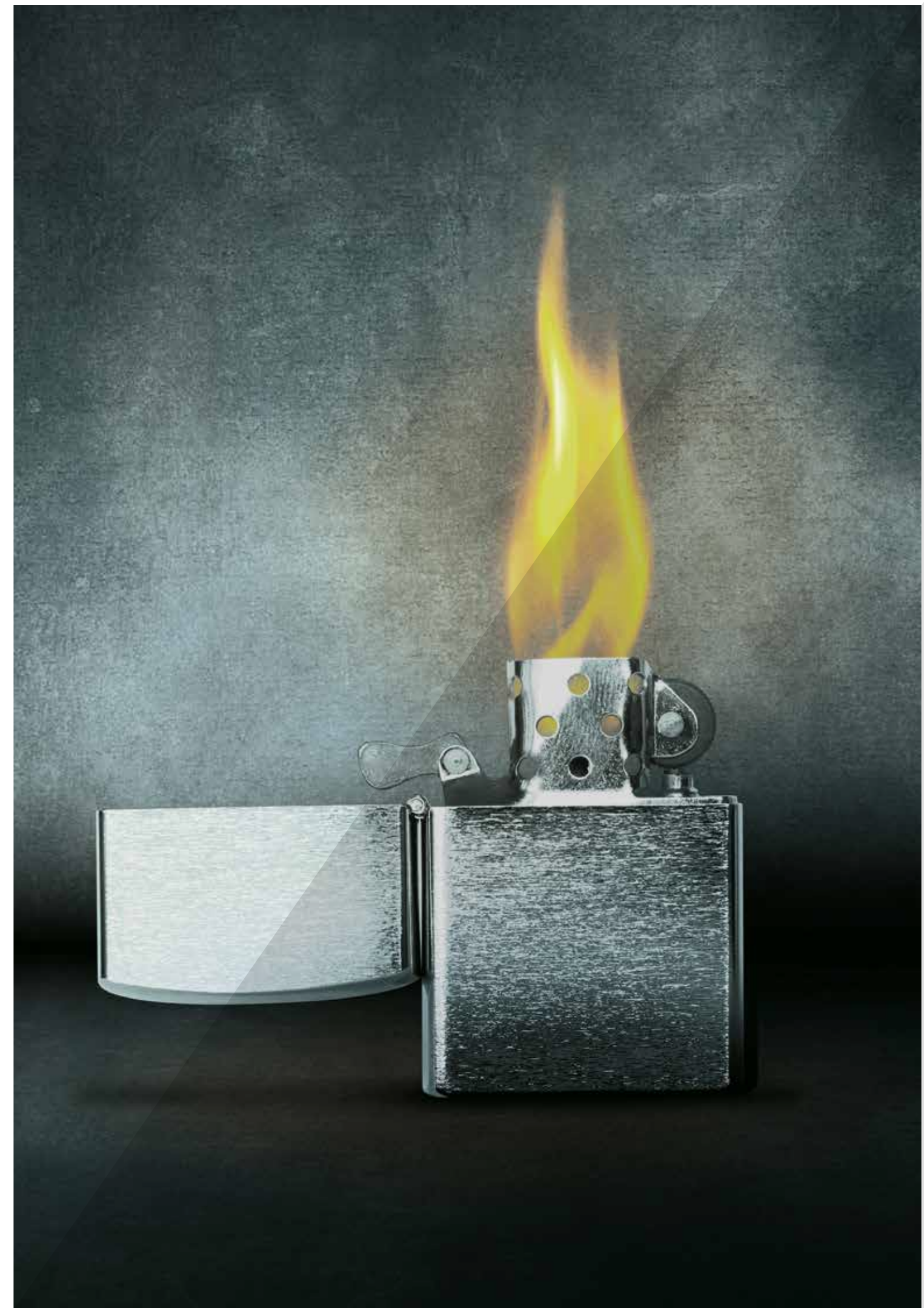
Provision even is obligatory – and is engraved in stone for the whole European Union:

„The existence of high-speed electronic communications networks up to the end-user should [...] be facilitated, in particular by high-speed-ready in-building physical infrastructure. Given that providing for mini-ducts during the construction of a building has only a limited incremental cost while retrofitting buildings [...], all new buildings or buildings subject to major renovation should be equipped with physical infrastructure, allowing the connection of end-users with high-speed networks.“

(Excerpt from EU directive 2014/61/EU)

Article 8 of the directive demands the integration of high-speed-ready, in-building physical infrastructures for all new buildings and extensive renovations with applied building permit after the 31st of December 2016.

But inside buildings particularly strict requirements to fire protection are effective. On the next pages you will learn more about how we can support you in your building planning.



gabocom. Your partner for networks of the future.

A coordinated all-in system from one provider, constant capacities over the entire lifetime, more than 40 years of experience in telecommunication:

gabocom is your manufacturer of micro duct systems – made in Germany.

We give our advice eye-to-eye already during the development process of your fiber-optic network. Along with you we consider all requirements of the broadband extension. By means of our products you use existing duct systems, lay new duct routes and master the crossover between both variants. All times we are growing by new challenges in the FTTx-sector – every single experience gained improves our speed•pipe® system.

Not for nothing our products are complementary to one solution like made of one piece: fittings for sealing and fixing all dimensions of ducts and variants of bundles as well as our general fittings and split ducts for existing duct routes complete our portfolio as system provider.

Withal reliability means tradition for us – in every respect.

- gabocom products comply with relevant standards (and more).
- you can trust our word.
- facts say more than thousand words.

Visit our website:
www.gabocom.com

Your investment in infrastructure is supposed to be secure and successful. Thereto we are by your side with pleasure. You can find your personal contact on our website at any time – Germany- and Europe-wide. Just make use of our callback service.



speed•pipe® indoor system. The next level.

Regardless of the legal obligation especially in apartment buildings or highly charged buildings the infrastructure inside the building envelope must be suitable for a fast connection to the outside. But especially inside buildings particularly strict requirements are effective – primarily with regard to fire protection.

Durability and optimum blowing-in results of micro ducts are not sufficient: Installations inside buildings must meet various requirements regarding the topic fire protection.

The speed•pipe® indoor system masters the line between safety, optimum blowing-in characteristics and ease of assembly.



The speed•pipe® and speed•pipe® bundles correspond to the EU Low-Voltage Directive 2014/35/EU and to the 1st Product Safety Regulation (ProdSV). Thereby gabocom speed•pipe® meet the needs of the safety- and health-requirements of the European Union. As evidence of this our duct systems are equipped with the CE label for secure, faultless and high-quality products on all European markets.

The main standard. EN 61386-22 (VDE 0605-22-2011-12).

Duct systems cable management - Part 22: Particular requirements for pliable duct systems (IEC 61386-22:2002).

All available speed•pipe® indoor dimensions were examined and obtained their classification code according to DIN EN 61386-22. Thus the laying according to DIN VDE 0100-520 can be broken down. The speed•pipe® indoor obtain a VDE certification as well as a CE marking.

Compatibility with firewalls according to EN 61386-22

The various speed•pipe® indoor dimensions and components are suitable for being laid in firewalls for wall ducts.

Please note:

The firewall used in combination with speed•pipe® indoor must dispose of a respective applicability for "pliable duct systems according to EN 61386-22" or the direct reference to speed•pipe® indoor in its General Building Approval (ABZ) or in its European Technical Assessment (ETA).



Well prepared for the case of emergency. speed-pipe® indoor for building internal infrastructure.

SPEED-PIPE® INDOOR

speed-pipe® indoor may look rather unimposing – but just optically! With regard to their technical characteristics they withstand all requirements. According to the EU Low-Voltage Directive 2014/35/EU the speed-pipe® indoor system entirely is tested in accordance with EN 61386-22, e.g.

- fire tests corresponding to the statutory security objectives
- regulations for installation and laying
- compatibility with firewalls

speed-pipe® indoor are flame-retardant and tested according to EN 60684-2 with regard to the absence of halogens and EN 61034-2 with regard to low smoke density. With speed-pipe® indoor every single homeowner and resident is well prepared for the case of emergency.



AVAILABLE DIMENSIONS OF SPEED-PIPE® INDOOR

| Term | Colour | D x s (mm) | Length (m) | Non-returnable wooden spool D x s (mm) |
|-----------------------------|--------|------------|------------|--|
| speed-pipe® indoor 4 x 0.75 | white | 4 x 0.75 | 600 | 340 x 340 x 340 (box) |
| | | | 1600 | 600 x 360 |
| speed-pipe® indoor 5 x 0.75 | white | 5 x 0.75 | 400 | 340 x 340 x 340 (box) |
| | | | 1000 | 600 x 360 |
| speed-pipe® indoor 7 x 1.5 | white | 7 x 1.5 | 250 | 340 x 340 x 340 (box) |
| | | | 500 / 1250 | 600 x 360 / 700 x 370 |
| speed-pipe® indoor 10 x 1.0 | white | 10 x 1.0 | 500 / 2500 | 1200 x 370 |
| speed-pipe® indoor 10 x 2.0 | white | 10 x 2.0 | 2500 | 1200 x 700 |
| speed-pipe® indoor 12 x 2.0 | white | 12 x 2.0 | 350 / 2000 | 700 x 370 / 1200 x 370 |
| speed-pipe® indoor 14 x 2.0 | white | 14 x 2.0 | 250 / 1500 | 700 x 370 / 1200 x 370 |

→ Additional dimensions on request / Overview of fittings see point 1.3 in the product catalog or at www.gabocom.com



Connect, seal and fix. The complete system.

DIVISIBLE INDOOR SEALING ELEMENTS EZA-T 4 / 7 / 10 / 12 / 14 INDOOR

The flame-retardant, halogen-free and divisible sealing elements EZA-t indoor are reusable and are suitable for sealing empty and occupied speed•pipe® indoor. They are tensile, gas- and water-tight up to 0.5 bar and contain a lead for fiber optic cables. The integrated safety valve opens before a possible blow-in pressure of 10 bar is reached. The fittings are quick and easy to assemble without any special tools.



DIVISIBLE INDOOR CONNECTORS WITH GAS-STOP EBM-GS 7 / 10 / 12 / 14 INDOOR

The flame-retardant and halogen-free connectors EBM-GS indoor are equipped with an integrated gas-stop. They were developed by gabocom for connecting occupied speed•pipe® indoor and for sealing them against gas and water up to 0.5 bar. The divisible fittings are tensile and quick and easy to assemble.



INDOOR END PLUGS / INDOOR MARKING LABELS WITH PIPE PLUG ES / KMR 7 / 10 / 12 / 14 INDOOR

The flame retardant and halogen-free ES indoor and KmR indoor are suitable for sealing speed•pipe® indoor against gas and water up to 0.5 bar. They are tensile as well as quick and easy to assemble. KmR indoor are additionally designed to brand and sign speed•pipe® indoor.



| Term | D (mm) | Sealing range of cable (mm) | Pcs. / unit | Item no. |
|-----------------------------|--------|-----------------------------|-------------|----------|
| EZA-t 4 / 1.0 - 2.0 indoor | 4 | 1.0 - 2.0 | 40 | 01085 |
| EZA-t 7 / 0.8 - 2.5 indoor | 7 | 0.8 - 2.5 | 40 | 01320 |
| EZA-t 7 / 2.0 - 4.0 indoor | 7 | 2.0 - 4.0 | 40 | 01324 |
| EZA-t 10 / 1.8 - 3.5 indoor | 10 | 1.8 - 3.5 | 40 | 01325 |
| EZA-t 10 / 3.0 - 5.0 indoor | 10 | 3.0 - 5.0 | 40 | 01326 |
| EZA-t 10 / 5.0 - 6.5 indoor | 10 | 5.0 - 6.5 | 40 | 01327 |
| EZA-t 12 / 3.0 - 5.0 indoor | 12 | 3.0 - 5.0 | 40 | 01328 |
| EZA-t 12 / 5.0 - 6.5 indoor | 12 | 5.0 - 6.5 | 40 | 01329 |
| EZA-t 14 / 3.0 - 5.0 indoor | 14 | 3.0 - 5.0 | 40 | 01331 |
| EZA-t 14 / 5.0 - 6.5 indoor | 14 | 5.0 - 6.5 | 40 | 01332 |
| EZA-t 14 / 6.5 - 8.0 indoor | 14 | 6.5 - 8.0 | 40 | 01333 |

| Term | D (mm) | Sealing range of cable (mm) | Pcs. / unit | Item no. |
|------------------------------|--------|-----------------------------|-------------|----------|
| EBM-GS 7 / 0.8 - 4.0 indoor | 7 | 0.8 - 4.0 | 12 | 01335 |
| EBM-GS 10 / 1.8 - 3.5 indoor | 10 | 1.8 - 3.5 | 12 | 01336 |
| EBM-GS 10 / 3.0 - 5.0 indoor | 10 | 3.0 - 5.0 | 12 | 01337 |
| EBM-GS 10 / 5.0 - 6.5 indoor | 10 | 5.0 - 6.5 | 12 | 01338 |
| EBM-GS 12 / 3.0 - 5.0 indoor | 12 | 3.0 - 5.0 | 12 | 01339 |
| EBM-GS 12 / 5.0 - 6.5 indoor | 12 | 5.0 - 6.5 | 12 | 01341 |
| EBM-GS 14 / 5.0 - 6.5 indoor | 14 | 5.0 - 6.5 | 12 | 01343 |
| EBM-GS 14 / 6.5 - 8.0 indoor | 14 | 6.5 - 8.0 | 12 | 01344 |

| Term | D (mm) | Pcs. / unit | Item no. |
|---------------|--------|-------------|----------|
| ES 4 indoor | 4 | 50 | 01978 |
| ES 5 indoor | 5 | 50 | 01980 |
| ES 7 indoor | 7 | 50 | 01694 |
| ES 10 indoor | 10 | 50 | 01695 |
| ES 12 indoor | 12 | 25 | 01696 |
| ES 14 indoor | 14 | 25 | 01697 |
| KmR 7 indoor | 7 | 40 | 02017 |
| KmR 10 indoor | 10 | 40 | 02018 |
| KmR 12 indoor | 12 | 40 | 02013 |
| KmR 14 indoor | 14 | 40 | 02020 |

Connect, seal and fix. The complete system.

INDOOR CONNECTORS

DSM 4 / 5 / 7 / 10 / 12 / 14 INDOOR

The flame-retardant and halogen-free connectors DSM indoor are used for connecting speed-pipe® indoor. They are pressure-tight up to 15 bar, they are tensile and quick and easy to assemble.



DIVISIBLE INDOOR CONNECTORS

EBM 7 / 10 / 12 / 14 INDOOR

The flame-retardant and halogen-free connectors EBM indoor ensure the permanent gas- and water-tight connection of occupied speed-pipe® indoor up to 0.5 bar. The divisible fittings are tensile and are quick and easy to assemble.



INDOOR BENDS

IB 7

The flame-retardant and halogen-free indoor bend IB is used for deflecting speed-pipe® indoor inside the building without any kinks. Any number of indoor bends can be stacked one onto the other.



TOOLS

By means of a speed-pipe® cutter the speed-pipe® indoor are cut correctly in a chipless and rectangular way.



| Term | D (mm) | Pcs. / unit | Item no. |
|---------------|--------|-------------|----------|
| DSM 4 indoor | 4 | 50 | 01298 |
| DSM 5 indoor | 5 | 50 | 01479 |
| DSM 7 indoor | 7 | 50 | 01220 |
| DSM 10 indoor | 10 | 50 | 01221 |
| DSM 12 indoor | 12 | 25 | 01222 |
| DSM 14 indoor | 14 | 25 | 01223 |

| Term | D (mm) | Pcs. / unit | Item no. |
|---------------|--------|-------------|----------|
| EBM 7 indoor | 7 | 12 | 01748 |
| EBM 10 indoor | 10 | 12 | 01749 |
| EBM 12 indoor | 12 | 12 | 01750 |
| EBM 14 indoor | 14 | 12 | 01751 |

| Term | D (mm) | Pcs. / unit | Item no. |
|---------------------|--------|-------------|----------|
| IB 7 with dowels | 7 | 10 | 01414 |
| IB 7 without dowels | 7 | 10 | 01415 |

| Term | Pcs. / unit | Item no. |
|------------------------------------|-------------|----------|
| speed-pipe® cutter | 1 | 01204 |
| spare blade for speed-pipe® cutter | 1 | 01205 |

House lead-in. Master the transition.

IN THE CELLAR: ADSB, ADSB-D, ADSB-F

For ambiances with non-pressing water: Each set contains an inner and an outer part, for a gas- and water-tight lead-in up to 1 bar of up to two speed-pipe® or cables into the house through the cellar. After the blowing-in procedure the speed-pipe® ground is lead into the integrated deflection duct and further on is lead along the wall of the cellar.



INSIDE WALLS: SKW

Applicable for the direct use in concrete, the house lead-in meets all requirements for brickworks. Please note: For allowing a complete grip of the integrated sealing by the lever mechanism also in case of brickwork we recommend the additional application of a sanded sleeve.



ABOVE GROUND: HEO

By means of a gas-stop that is integrated at the wall of the house, in the exterior area it is modified from speed-pipe® ground to speed-pipe® indoor for the interior of the building. The gas-stop fixes the cable and seals it longitudinally against gas and water up to 0.5 bar. speed-pipe® and joint are covered by unobtrusive and simple blinds and are mechanically protected.



| Term | Suitable for cable D (mm) | Suitable for speed-pipe® ground (mm) | Quantity cable / speed-pipe® ground |
|-----------------------|---------------------------|--------------------------------------|-------------------------------------|
| Set ADSB 28 / 7 | | 7 × 1.5 | 1 |
| Set ADSB 7.0 – 9.0 | 7.0 – 9.0 | 7 × 1.5 | 1 |
| Set ADSB-D 7.0 – 9.0 | 7.0 – 9.0 | 7 × 1.5 | 2 |
| Set ADSB 9.0 – 12.5 | 9.0 – 12.5 | 10 × 2.0 / 12 × 2.0 | 1 |
| Set ADSB-D 9.0 – 12.5 | 9.0 – 12.5 | 10 × 2.0 / 12 × 2.0 | 2 |
| Set ADSB-F 28 / 7 | | 7 × 1.5 | 1 |
| Set ADSB-F 28 / 10 | | 10 × 2.0 | 1 |

→ The set contains an inner and an outer part.

| Term | D (mm) | Length (mm) |
|--------|--------|-------------|
| SKW 32 | 32 | 390 |
| SKW 32 | 32 | 500 |
| SKW 50 | 50 | 390 |
| SKW 50 | 50 | 500 |

| Term | speed-pipe® ground (mm) |
|------------------------------|-------------------------|
| Set HEO 7 (with gas-stop) | 7 × 1.5 |
| Set MOB 7 (without gas-stop) | 7 × 1.5 |
| Set HEO 10 (with gas-stop) | 10 × 2.0 |

→ Details of house lead-ins see point 5 in the product catalog or at www.gabocom.com

Test procedure.

Secure. Tested. In every respect.

EN 61386-22

Test on the final product (Conduit systems for cable management for electrical energy and for information)

The test is carried out from 20 up to 35 seconds (depending on the dimension) with a 1 kW flame. Flames and embers are to put out within 30 seconds.

DIN EN 13501-1

Test on the final product (building product)

The test is carried out by means of a large-scale burner with a 30.8 kW flame during 26 minutes.

EN 60332-1-2

Testing standard for cables (test on the final product)

The test is carried out for 60 seconds with a 1 kW flame (lighter).



Standards, regulations and test reports. Tested. Classified.

The central standard for speed-pipe® indoor:
EN 61386-22 (VDE 0605-22:2011-12)

**Conduit system for cable management for electrical energy
and for information – Part 22: Special requirements
for pliable conduit systems for cable management (IEC 61386-22:2002).**

All available speed-pipe® indoor dimensions were examined
and obtained their classification code according to DIN EN 61386-22.
Thus the laying according to DIN VDE 0100-520 can be broken down.
The speed-pipe® indoor obtain a VDE certification as well as a CE marking.

Absence of halogens according to EN 60684-2

Insulating tubes – Part 2: Test methods (IEC 60684-2);
German version EN 60684-2

The products of the speed-pipe® indoor system satisfy the demanding
requirements for absence of halogens

Low smoke density according to EN 61034-2

Measurement of smoke density of cables and insulated conduits
burning under defined conditions – Part 2: Testing method and
requirements (IEC 61034-2:2005); German version EN 61034-2.

Fire test according to EN 60332-1-2 (IEC)

Tests on electric and fiber optic cables under fire conditions.
Part 1-2. Test for vertical flame propagation for a single small insulated wire or
cable. Test method for 1 kW flame with gas-/air-mixture. speed-pipe® indoor
and speed-pipe® indoor ground satisfy the demanding fire test.

Classification according to DIN EN 13501-1

speed-pipe® indoor and speed-pipe® indoor ground: class D s3 d2
Hard components of the speed-pipe® indoor fittings: class B s2 d0

EN 61386-22 (VDE 0605)

**Requirements for duct systems
for electrical installation**

Certificate of conformity with factory
surveillance

DIN EN 13501-1

Building products

Classification report:
speed-pipe® indoor and speed-pipe®
indoor ground

DIN EN 13501-1

Building products

Classification report:
Fittings for the speed-pipe® indoor system

EN 60684-2

Absence of halogens

Test report: speed-pipe® indoor

EN 60684-2

Absence of halogens

Test report:
Fittings for the
speed-pipe® indoor system

EN 60332-1-2 (IEC)

Test standard for cables

Test report





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Personal. Competent.

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