Your future network partner.

System solutions for the FTTx expansion.

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www.gabocom.com

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1.1 gabocom.
Your future network partner.

From drainage pipe to speed·pipe®

What began in 1970 with the production of the first plastic pipes and general fittings for telecommunications is today a coordinated complete system provided by a single source. Consistent performance capabilities throughout the entire life cycle and more than 50 years of experience in telecommunications make us what we are today:

gabocom is your manufacturer of micro duct systems - made in Germany and since 2019 'a member of HellermannTyton'.

We give our advice eye-to-eye already during the development process of your fibre-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. We are constantly growing with 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 accessories and split ducts for existing duct routes complete our portfolio as system provider.

With HellermannTyton we have found our perfect match. As a leading provider of fibre management systems, HellermannTyton offers a complete end-to-end range of FTTx solutions that, together with gabocom products, cover fibre connectivity and distribution along the broadband roll-out.

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 – Europe-wide. Just make use of our callback service on www.gabocom.com.

gabocom.
Your future network partner.

➤ **50**⁺
years of experience in serving the telecoms industry

➤ approx.
320⁺
employees

➤ Since
2019
a Member of HellermannTyton

➤ **55T** sqm
of factory area based in Niederwinkling, Germany

➤ **30**⁺
patents

➤ Serving more than
40⁺
countries worldwide

➤ More than
3.4 Mio km
of speed•pipe® ducts and bundles already laid around the world - 85 times the earth perimeter

dated 07/2022

gabocom

gabocom

1.2 speed•pipe® system.
flexible. reliable. proven.

High demands are made on modern fibre optic networks: They must be effective and reliable, they should grow with new challenges and at the same time they should also remain in budget. speed•pipe® is the innovative micro duct system that meets all these factors. It provides a basis for a demand-oriented and cost-effective roll-out for FTTN, FTTC, FTTH or backhaul-solutions in the mobile telephony segment.

You can rely on the gabocom speed•pipe® system at any time. The materials used for the production of speed•pipe® components not only comply with the REACH (EU regulations 1970/2006) and RoHs (EU directives 2011/65) standards for environmentally friendly production and recycling, but are also subjected to comprehensive quality tests in our in-house test laboratory.

In the following three examples:
- speed•pipe® are tested for several hours according to DIN 16874: you use your micro duct system like on the first day, even after decades. tested. documented. demonstrable.

- Every sealing element withstands a x-fold of the required tensile force during the tensile test - and still remains reusable. Thus, a real repeat offender, the following applies here too: the performance remains continuously.

- Even during production we control the constant inner diameter of the speed•pipe® – indispensably for an optimal airflow during the blowing-in process. As soon as the tolerance value has been exceeded the process is immediately stopped.

CE

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.

Tensile test.

1.3 Solutions for Fibre-to-the-x.
Durable complete systems.

SPEED•PIPE® IN-DUCT SOLUTIONS.

The fastest and cheapest kind of broadband expansion: reduction of civil engineering costs by using already existing duct systems. Non-occupied PE-HD ducts or occupied with cables or cable duct constructions often still contain valuable, unused underground space. With the speed•pipe® system – single ducts as well as duct bundles – as basis of in-duct solutions, you are able to upgrade existing plants with fibre-optic in only two steps.

SPEED•PIPE® GROUND – SOLUTIONS FOR DIRECT BURYING.

In the construction of new fibre-optic routes, by using speed•pipe® ground and speed•pipe® bundles ground for direct burying you can waive additional protective pipes without any losses in efficiency. You save material and work time: no additional storing of the protective pipes, no additional process for blowing in micro ducts. In only one step – the professional laying of speed•pipe® ground – you raise a long-lasting passive infrastructure for long-lasting high ranges by blowing-in fibre-optic cables.

ACCESSORIES - CONNECT, SEAL, FIX.

Whether in-duct or direct burying: only with matching sealing, fixing and connecting elements you exploit your micro duct system also in the long run – and remain flexible with the fibre-optic occupancy.

CONNECTING NETWORKS - FOR ALL FTTX AREAS.

Since 2019 gabocom is a member of the world's leading supplier of cabling solutions for network infrastructures. Together with HellermannTyton, gabocom offers a comprehensive range of fibre optic solutions, including FDN closures, street cabinets, customer connection points (CCP), as well as fibre wall outlets and much more.

SPEED•PIPE® INDOOR FOR BUILDINGS, CHANNELS AND TUNNELS.

Especially inside buildings particularly strict requirements are effective – primarily with regard to fire protection. The speed•pipe® indoor system masters the line between safety, optimum blowing-in characteristics and ease of assembly.
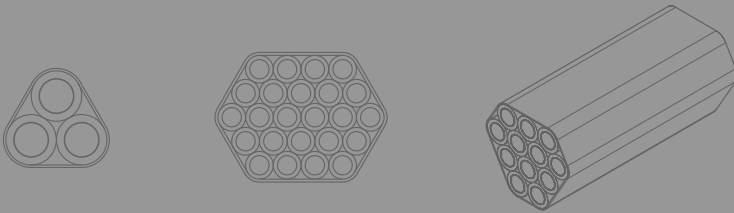
(SPLIT-)DUCT SYSTEM - SAFE REPAIRING AND SEALING OF OCCUPIED CABLE DUCTS.

By means of the (split-)duct system a gas- and water-tight repair without network interruption can be carried out at existing duct systems - quick, cost-saving and absolutely reliable..
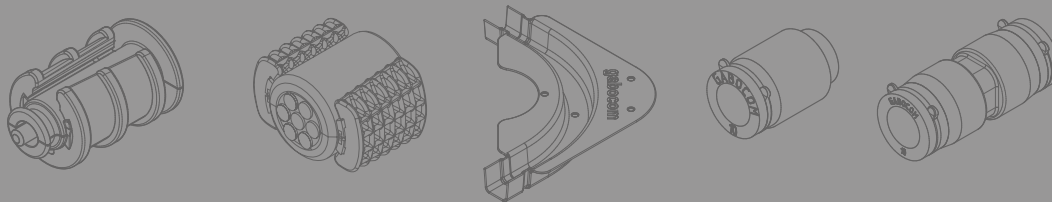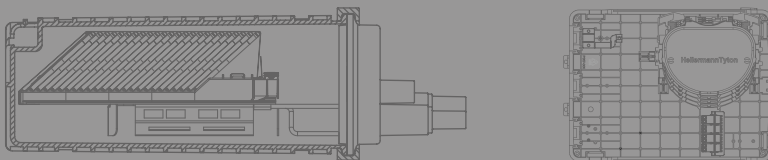
Use existing duct systems.
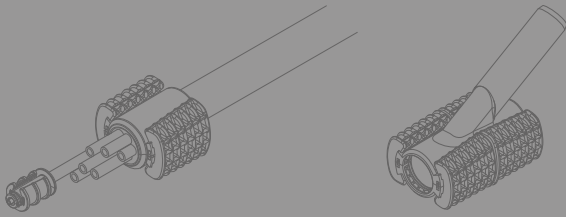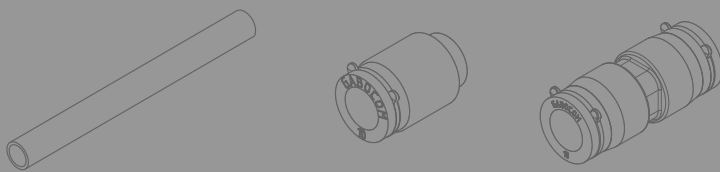
Solutions for direct burying.

Connect, seal, fix.

Connecting networks.

The next level. speed·pipe® indoor.

Safe repairing and sealing of occupied cable ducts.
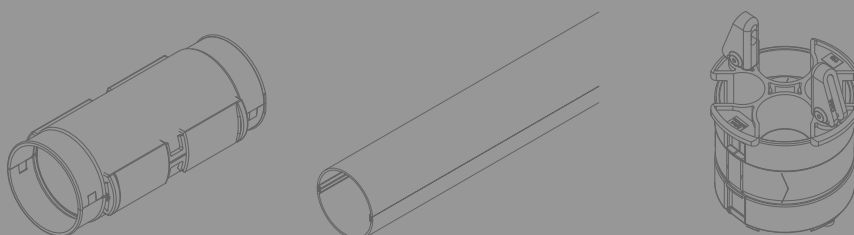
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1.4 System solutions thought further.
gabocom & HellermannTyton.

FTTN

FTTC

micro tube systems

Fibre optic management systems

Common fittings & split ducts (FTTN)

speed•pipe® & accessories (FTTN/FTTC)

02.
manhole

01.
Local telephone exchange

UFC/FRBU/FST
(Backbone)

UFC/FRBU/FST
(FTTN)

Accessories
(FTTC)

gabocom

	FTTB		**FTTH**

Connecting & sealing (FTTC/FTTB)

Branches, marking systems & Protective elements (FTTC/FTTB)

House lead-ins (FTTB/FTTH)

speed•pipe® indoor & accessories (FTTH)

03.
Customer's home

FDN/UFC/FRBU/CFN (FTTB/FTTH)

CCP/MDU (FTTB)

Fibre wall outlet (FTTH)

1.5 Our standards.
Certified quality, social and environmental management.

CERTIFIED QUALITY MANAGEMENT.

The solutions offered by gabocom are manufactured according to an ISO 9001 certified quality management process. The QM covers not only the complete product portfolio but also the distribution of the manufactured products.

ENVIRONMENTAL AND ENERGY MANAGEMENT.

Materials used in the manufacture of speed-pipe® components comply with REACH (EU Regulation 1907/2006) and RoHS (EU Directives 2011/65) standards for environmentally friendly manufacturing and recycling.

ETHICAL & SOCIAL COMMITMENT.

With its Ethical and Social Charter, gabocom sets strict requirements for its suppliers and ensures the responsible treatment of employees and the environment throughout the entire supply chain.

gabocom

1.6 Our service.
For our customers and partners.

COMPLETE SYSTEMS FROM A SINGLE SOURCE.

- gabocom does not only deliver ducts, but complete systems.
- All products are repeatedly examined during production.
- Your requests constitute the scale of our planning and developments.

A PRODUCT SYSTEM MEETING ALL DEMANDS.

- All speed•pipe® accesories are divisible, reusable, gas- and water-tight.
- All ducts are UV-resistant for three years of South European climate.
- The single system components are compatible among each other.

QUALITY AND SAFETY.

- First-class products ensure stability and network coverage.
- High-quality raw materials guarantee durability and performance.
- Quality management is certified according to DIN EN ISO 9001:2008, environmental management to DIN EN ISO 14001 and energy management system to ISO 50001:2018

RESEARCH AND INNOVATION.

- Technological competence is based on specialization for many years.
- Unique speed•pipe® system sets state-of-the-art standards.
- Proximity to partners allows product innovations meeting all demands.

SERVICE AND CONSULTATION.

- Europe-wide sales network allows on-site support.
- Internal trainings and seminars impart valuable know-how.
- Order processing, production and dispatch offer flexibility.

CONTINUITY AND TEAM SPIRIT.

- All company sectors are united in Niederwinkling.
- Decisions are made on short, collegial ways.
- gabocom is proven as great employer by low fluctuation.

gabocom

1.7 Sustainability.
Our responsibility.

Sustainability and resource protection have always been important to gabocom. The durability and efficiency of our products is just as important as many big and small optimisations to conserve resources. Great successes have already been achieved in recent years.

CDP DISCLOSER
CDP runs the global environmental disclosure system. Each year CDP supports thousands of companies, cities, states and regions to measure and manage their risks and opportunities on climate change, water security and deforestation. gabocom has been a CDP Supply Chain member since 2021 and thus measures and reduces its environmental impact and offers its customers transparency and operational competence.

WE ARE CARBON TRANSPARENT.
In 2021, an extensive and continuous data analysis was kicked-off. Besides measures already taken discussed above, we now want to collect, control and share our carbon emissions. gabocom is now carbon transparent. We are able to collect and calculate all of our emissions from all departments on a yearly basis. Our emissions will be published every year in a report, following the GHG protocol and giving full transparency to everyone about our CO_2 footprint and further reduction and other measures taken. Protecting our planet and operating more sustainably is a collective mission so being transparent about our footprint and efforts is a key priority at gabocom.

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Step 1 in broadband expansion.

Utilization of existing duct systems.
speedpipe in-duct solutions.

2.1   Step 1: Utilization of existing duct systems.
speedpipe for in-duct solutions.
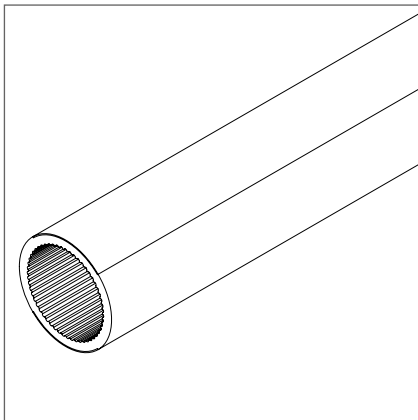
speedpipe

speedpipe for in-duct installations.

USE EXISTING DUCT SYSTEMS.

speedpipe for subduct solutions are blown into PE-HD ducts over long distances. Free space within occupied or empty duct systems can be used to the maximum. Simultaneously the bigger inner diameter, compared to microducts that can be layed in the ground, offers space for high fibre capacities - space that can be exploited for every single speedpipe even after decades.

Features and benefits
• small outer diameter for optimum exploitation of the existing duct capacity
• transparent inspection windows show the occupation with cables
• can also be blown into occupied PE-HD-protective pipes (Ø 40, 50, 63 mm)
• reusable even after blowing out installed fibre optic cables - like on the first day
• sliding ribs specified for any dimension for an optimal air cushion of the optical fibre during the blowing in process
• available in various dimensions in strong colours for better distinction
• they are delivered on a wooden one-way spool which is optimised for transport and installation

Type	Ø (D)	Wall (WT)	Length (L)	Cable Ø min	Cable Ø max	Colour	Pressure Nominal (PN)	Weight	Total weight	Item no.
speedpipe_7x0.75	7	0.75	5000 m	1.8	4	Black (BK)	PN 10	0.014 kg/m	93 kg	848
	7	0.75	5000 m	1.8	4	Blue (BU)	PN 10	0.014 kg/m	93 kg	607
	7	0.75	5000 m	1.8	4	Brown (BN)	PN 10	0.014 kg/m	93 kg	851
	7	0.75	5000 m	1.8	4	Green (GN)	PN 10	0.014 kg/m	93 kg	604
	7	0.75	5000 m	1.8	4	Grey (GY)	PN 10	0.014 kg/m	93 kg	616
	7	0.75	5000 m	1.8	4	Orange (OG)	PN 10	0.014 kg/m	93 kg	619
	7	0.75	5000 m	1.8	4	Red (RD)	PN 10	0.014 kg/m	93 kg	601
	7	0.75	5000 m	1.8	4	Violet (VT)	PN 10	0.014 kg/m	93 kg	854
	7	0.75	5000 m	1.8	4	White (WH)	PN 10	0.014 kg/m	93 kg	613
	7	0.75	5000 m	1.8	4	Yellow (YE)	PN 10	0.014 kg/m	93 kg	610
speedpipe_10x1.0	10	1.00	2500 m	2.5	6.5	Black (BK)	PN 10	0.027 kg/m	91 kg	865
	10	1.00	2500 m	2.5	6.5	Blue (BU)	PN 10	0.027 kg/m	91 kg	594
	10	1.00	2500 m	2.5	6.5	Brown (BN)	PN 10	0.027 kg/m	91 kg	867
	10	1.00	2500 m	2.5	6.5	Green (GN)	PN 10	0.027 kg/m	91 kg	643
	10	1.00	2500 m	2.5	6.5	Grey (GY)	PN 10	0.027 kg/m	91 kg	599
	10	1.00	2500 m	2.5	6.5	Orange (OG)	PN 10	0.027 kg/m	91 kg	645
	10	1.00	2500 m	2.5	6.5	Red (RD)	PN 10	0.027 kg/m	91 kg	647
	10	1.00	2500 m	2.5	6.5	Violet (VT)	PN 10	0.027 kg/m	91 kg	908
	10	1.00	2500 m	2.5	6.5	White (WH)	PN 10	0.027 kg/m	91 kg	649
	10	1.00	2500 m	2.5	6.5	Yellow (YE)	PN 10	0.027 kg/m	91 kg	596
speedpipe_12x1.1	12	1.10	2000 m	3	8	Black (BK)	PN 10	0.034 kg/m	91 kg	42147
	12	1.10	2000 m	3	8	Blue (BU)	PN 10	0.034 kg/m	91 kg	1402
	12	1.10	2000 m	3	8	Brown (BN)	PN 10	0.034 kg/m	91 kg	42148
	12	1.10	2000 m	3	8	Green (GN)	PN 10	0.034 kg/m	91 kg	1400
	12	1.10	2000 m	3	8	Grey (GY)	PN 10	0.034 kg/m	91 kg	1405
	12	1.10	2000 m	3	8	Orange (OG)	PN 10	0.034 kg/m	91 kg	1406
	12	1.10	2000 m	3	8	Red (RD)	PN 10	0.034 kg/m	91 kg	1401
	12	1.10	2000 m	3	8	Violet (VT)	PN 10	0.034 kg/m	91 kg	1293
	12	1.10	2000 m	3	8	White (WH)	PN 10	0.034 kg/m	91 kg	1404
	12	1.10	2000 m	3	8	Yellow (YE)	PN 10	0.034 kg/m	91 kg	1403
speedpipe_14x1.3	14	1.30	1500 m	4	9.5	Blue (BU)	PN 10	0.050 kg/m	98 kg	1022
	14	1.30	1500 m	4	9.5	Green (GN)	PN 10	0.050 kg/m	98 kg	1021
	14	1.30	1500 m	4	9.5	Red (RD)	PN 10	0.050 kg/m	98 kg	1020
	14	1.30	1500 m	4	9.5	Yellow (YE)	PN 10	0.050 kg/m	98 kg	1023
	14	1.30	3000 m	4	9.5	Blue (BU)	PN 10	0.050 kg/m	185 kg	1799
	14	1.30	3000 m	4	9.5	Green (GN)	PN 10	0.050 kg/m	185 kg	1026
	14	1.30	3000 m	4	9.5	Red (RD)	PN 10	0.050 kg/m	185 kg	1025
	14	1.30	3000 m	4	9.5	Yellow (YE)	PN 10	0.050 kg/m	185 kg	2322
speedpipe_16x1.5	16	1.50	1200 m	7.5	11	Blue (BU)	PN 10	0.066 kg/m	102 kg	3282
	16	1.50	1200 m	7.5	11	Green (GN)	PN 10	0.066 kg/m	102 kg	3281
	16	1.50	1200 m	7.5	11	Red (RD)	PN 10	0.066 kg/m	102 kg	3280

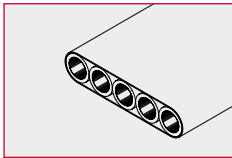All dimensions in mm. Subject to technical changes.
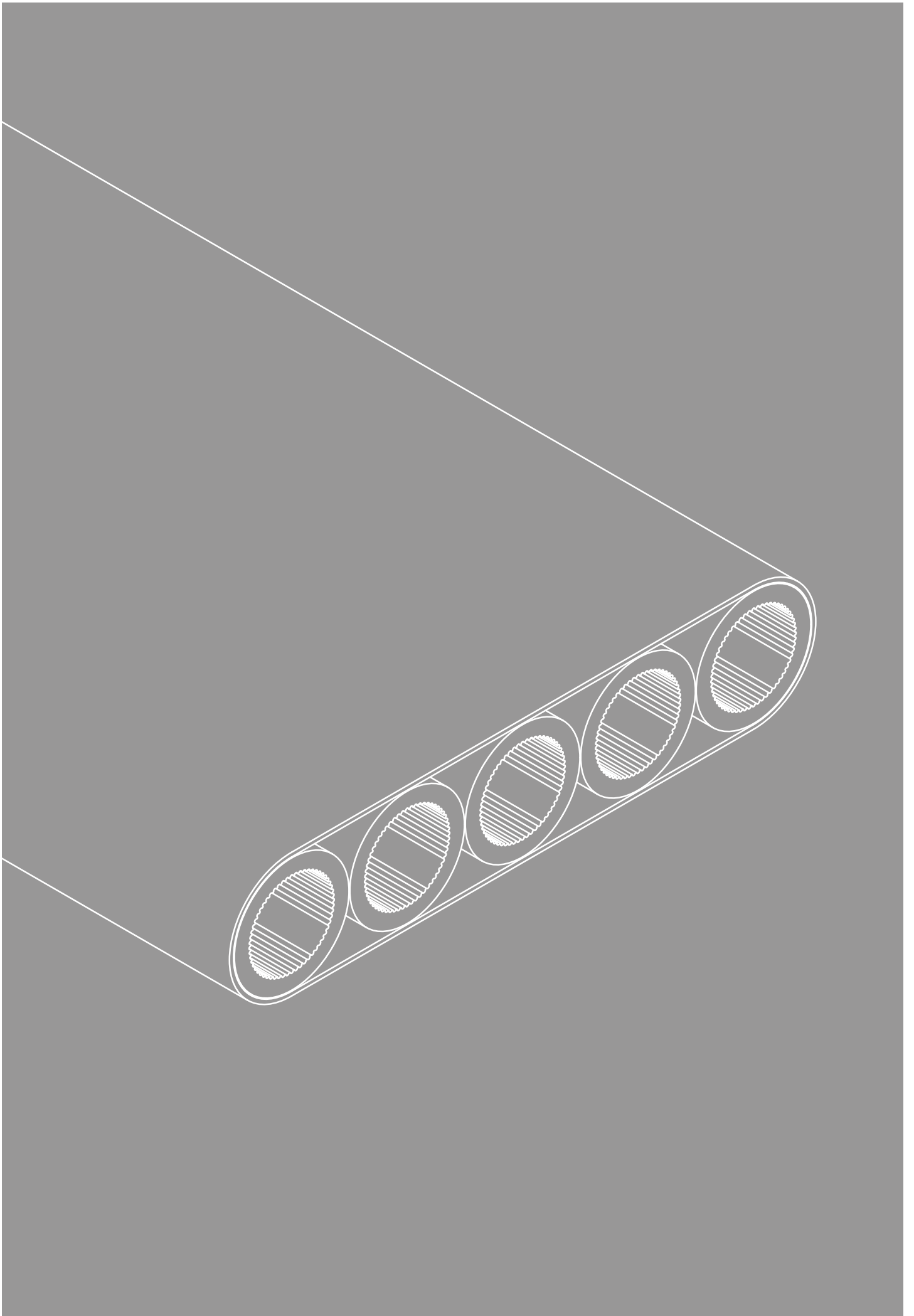
2.2 speedpipe bundles in-duct.
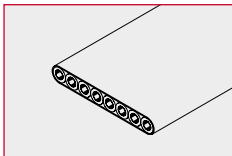## Solid and progressive in one go.

In just one step various speedpipe are drawn into the existing duct network at the same time. You will find the appropriate solution of speedpipe bundles for subduct installations for any FTTx-section.
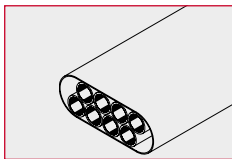
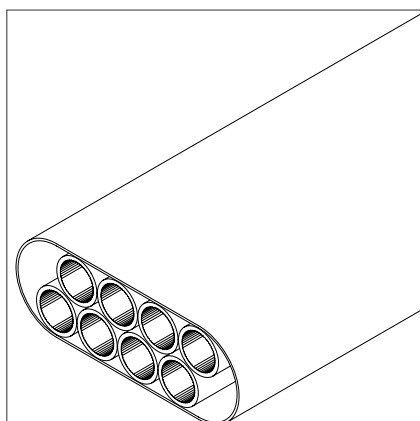In-duct

2.2.1 bundles in-duct (for duct systems Ø ≥ 110 mm).

2.2.2 bundles in-duct (for duct systems Ø ≥ 80 mm).

2.2.3 bundles in-duct (for duct systems Ø ≤ 63 mm).

Products and solutions
In-duct solutions
gabocom
Chapter II
24

In-duct

2.2.1 speedpipe bundles in-duct.
For duct systems Ø ≥ 110 mm.

speedpipe bundles SRV

SRV bundles with EZA-t for in-duct installations.

USE EXISTING DUCT SYSTEMS IN ONE GO.

By means of a cable grip on the flexible jacket pipe the speedpipe bundles SRV are drawn into empty as well as occupied cable ducts. With the internal eight speedpipe 10 x 1.0 mm up to two bundles can be drawn into an empty cable duct Ø 110 mm. Even in case of an occupancy with a cable up to Ø 50 mm the SRV optimally exploits the residual section for additional fibre optic cables. The comparison with a standard multi-duct MR4 regarding material and effort clearly is in favour of the bundle.

Features and benefits
- significant cost saving especially appears in comparison to the occupation with a multi duct MR4
- high-quality PE-HD ensures highest product quality and a long life cycle
- fibre optic cables can be blown into the speedpipe over long distances
- branching off is carried out in an easy and cost saving way
- SRV can be sealed against gas and water up to 0.5 bar and are fixed against elongations due to temperature changes by using the outside stiffener SHa or the double outside stiffener DSHa and the ADE / TDUX (Tyco)
- supplied on a wooden one-way spool

Type	Ø (D)	Configuration	Variant	Length (L)	Colour	Weight	Total weight	Item no.
SRV_50/8x10	50	8 speedpipe 10x1.0	DIN	2300 m	Black (BK)	0.313 kg/m	1070 kg	3187
	50	8 speedpipe 10x1.0	DIN	2300 m	Orange (OG)	0.313 kg/m	1070 kg	8432
	50	8 speedpipe 10x1.0	DIN	2300 m	Orange (OG), Black (BK)	0.313 kg/m	1070 kg	4279

All dimensions in mm. Subject to technical changes. The coil length shown does not correspond to the minimum purchase quantity.

In-duct

2.2.2 speedpipe bundles in-duct.
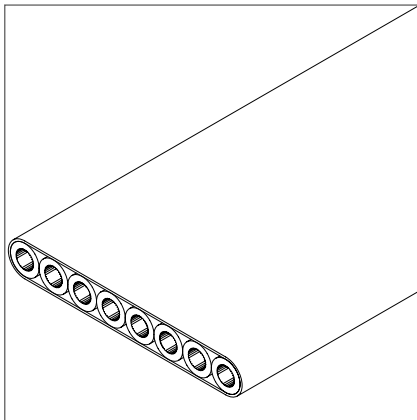### For duct systems Ø ≥ 80 mm.
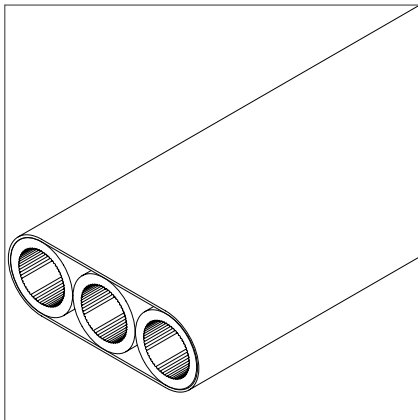
speedpipe bundles ground SRV-G

speedpipe bundles ground SRV-G for in-duct installations.

SOLID AND PROGRESSIVE IN ONE GO - FOR CABLE DUCT SYSTEMS Ø ≥ 80 MM (FTTC/FTTN).

By means of a cable basket on the flexible jacket pipe the speedpipe bundles SRV-G are pulled into cable duct systems. The bundles are supplied on a wooden one-way spool.

Type	Ø (D)	Configuration	Variant	Length (L)	Colour	Weight	Total weight	Item no.
SRV-G_32/3x12	32	3 speedpipe ground 12x2.0	gabo	400 m	Orange (OG)	0.242 kg/m	120 kg	1203
SRV-G_40/3x14	40	3 speedpipe ground 14x2.0	gabo	3400 m	Orange (OG)	0.294 kg/m	1350 kg	8001
SRV-G_40/3x16	40	3 speedpipe ground 16x2.0	gabo	2100 m	Orange (OG)	0.324 kg/m	1030 kg	42312
SRV-G_40/4x12	40	4 speedpipe ground 12x2.0	gabo	350 m	Orange (OG)	0.319 kg/m	135 kg	42107
SRV-G_50/4x14	50	4 speedpipe ground 14x2.0	gabo	1700 m	Orange (OG)	0.386 kg/m	1006 kg	5100
SRV-G_50/4x16	50	4 speedpipe ground 16x2.0	gabo	2100 m	Orange (OG)	0.426 kg/m	1245 kg	42308
SRV-G_50/5x12	50	5 speedpipe ground 12x2.0	gabo	2700 m	Orange (OG)	0.399 kg/m	1427 kg	5001
SRV-G_50/5x14	50	5 speedpipe ground 14x2.0	gabo	1700 m	Orange (OG)	0.458 kg/m	1129 kg	8003

All dimensions in mm. Subject to technical changes. The coil length shown does not correspond to the minimum purchase quantity.

speedpipe bundles ground SRV-G

speedpipe bundles ground SRV-G with EZA-t and SHi for in-duct installations.
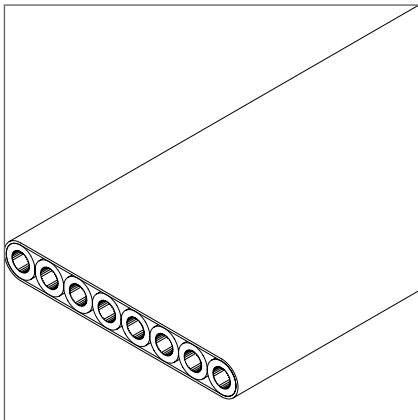
SOLID AND PROGRESSIVE IN ONE GO - FOR CABLE DUCT SYSTEMS Ø ≥ 80 MM (FTTB/FTTH).

By means of a cable basket on the flexible jacket pipe the speedpipe bundles SRV-G are pulled into cable duct systems Ø ≥ 80 mm. The bundles are supplied on a wooden one-way spool.

Type	Ø (D)	Configuration	Variant	Length (L)	Colour	Weight	Total weight	Item no.
SRV-G_32/4x10	32	4 speedpipe ground 10x2.0	gabo	450 m	Orange (OG)	0.251 kg/m	136 kg	6129
SRV-G_32/6x7	32	6 speedpipe ground 7x1.5	gabo	4000 m	Orange (OG)	0.209 kg/m	1186 kg	3834
SRV-G_40/5x10	40	5 speedpipe ground 10x2.0	gabo	3650 m	Orange (OG)	0.314 kg/m	1496 kg	5007
SRV-G_40/8x7	40	8 speedpipe ground 7x1.5	gabo	400 m	Orange (OG)	0.275 kg/m	133 kg	1572
SRV-G_50/7x10	50	7 speedpipe ground 10x2.0	gabo	450 m	Orange (OG)	0.429 kg/m	228 kg	1569
SRV-G_50/10x7	50	10 speedpipe ground 7x1.5	gabo	4000 m	Orange (OG)	0.344 kg/m	1726 kg	3836

All dimensions in mm. Subject to technical changes. The coil length shown does not correspond to the minimum purchase quantity.

2.2.3 speedpipe bundles in-duct.
For duct systems Ø ≤ 63 mm.

speedpipe bundles ground SRV-G

A pulling head fastens individual tubes and ensures optimal use of force.

SOLID AND PROGRESSIVE IN ONE GO - FOR PE-HD DUCTS Ø 32, 40, 50, 63 MM.

The higher permissible tensile strength of speedpipe ground especially pays off in case of a tight relation of the existing capacity to the outer diameter of the speedpipe. Nevertheless, a cutting device removes the lose duct coat before the pulling-in process to be able to use the remaining space. A pulling head that is mounted directly at the ends of the speedpipe fixes the single tubes and guarantees the optimum use of force – without taking up more space inside the duct. Thus also bundles with more than eight speedpipe inside or additional single tubes can be linearly fed into the duct system. The bundles are supplied on a wooden one-way spool.

Type	Ø (D)	Configuration	Variant	Length (L)	Colour	Weight	Total weight	Item no.
SRV-G_32/6x7	32	6 speedpipe ground 7x1.5	gabo	4000 m	Orange (OG)	0.209 kg/m	1186 kg	3834
SRV-G_40/8x7	40	8 speedpipe ground 7x1.5	gabo	400 m	Orange (OG)	0.275 kg/m	133 kg	1572
SRV-G_40/14x7	40	14 speedpipe ground 7x1.5	DIN	3500 m	Orange (OG)	0.423 kg/m	1831 kg	2363
	40	14 speedpipe ground 7x1.5	gabo	3500 m	Orange (OG)	0.423 kg/m	1831 kg	3067
SRV-G_50/10x7	50	10 speedpipe ground 7x1.5	gabo	4000 m	Orange (OG)	0.344 kg/m	1726 kg	3836
SRV-G_50/18x7	50	18 speedpipe ground 7x1.5	DIN	1950 m	Orange (OG)	0.542 kg/m	1407 kg	3830
	50	18 speedpipe ground 7x1.5	gabo	1950 m	Orange (OG)	0.542 kg/m	1407 kg	3828
SRV-G_50/24x7	50	24 speedpipe ground 7x1.5	gabo	1800 m	Orange (OG)	0.690 kg/m	1592 kg	1672

All dimensions in mm. Subject to technical changes. The coil length shown does not correspond to the minimum purchase quantity.

In-duct

PE-HD duct	Bundles with speed•pipe® ground 7 × 1,5		Bundles with speed•pipe® ground 7 × 1,5 + speed•pipe® ground		
Ø 32 × 2,9 (2,0)	SRV-G 32 / 6 × 7				
Ø 40 × 3,7 (2,5)	SRV-G 50 / 10 × 7		SRV-G 40 / 8 × 7	+	14 × 2,0 (12 × 2,0)
Ø 50 × 4,6 (3,0)	SRV-G 40 / 14 × 7	SRV-G 50 / 18 × 7	SRV-G 50 / 10 × 7	+	14 × 2,0 (12 × 2,0)
Ø 63 × 5,8 (4,7)	SRV-G 50 / 24 × 7		SRV-G 50 / 24 × 7	+	16 × 2,0 (14 × 2,0)

Possible occupancy of PE-HD ducts

Step 2 in broadband expansion.

Construction of micro duct systems.
Solutions for direct burying.

Direct burying

3.1 Step 2:
Expansion of existing infrastructure and new construction of passive infrastructure.
speedpipe ground for direct burying.
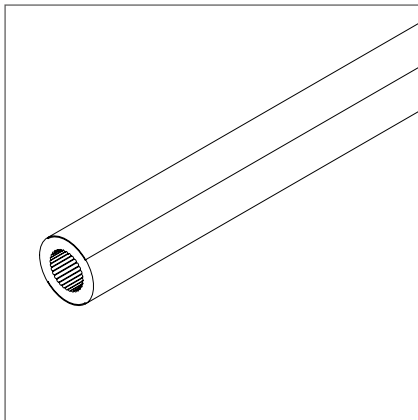
speedpipe ground

speepipe ground for direct burying.

FOR ALL FTTX-SECTIONS.

For the extension or new construction of passive infrastructure in fibre optic expansion. speedpipe ground are suitable for direct burying in all FTTx-sections as well as für branching-off from existing duct routes. Due to the dimensionally stable wall thickness made from first-class PE-HD protects each speedpipe ground duct system against the emerging ground pressure. Due to a higher vertex pressure in comparison to for example a PE-HD duct 50 × 4.6 the pipes stay in shape. Sliding ribs specified for any dimension ensure an optimal air cushion of the fibre optic during the blowing-in process, even after decades.

Features and benefits
- transparent inspection windows show the occupation with cables
- due to powerful colours the different dimensions are differentiated
- suitable combination with subduct solutions due to appropriate accessories
- delivered on a wooden one-way spool which is optimised for transport and installation

Type	Ø (D)	Wall (WT)	Length (L)	Cable Ø min	Cable Ø max	Colour	Pressure Nominal (PN)	Weight	Total weight	Item no.
speedpipe-ground_7x1.5	7	1.50	1250 m	1	2.7	Black (BK)	PN 16	0.025 kg/m	39 kg	2267
	7	1.50	1250 m	1	2.7	Blue (BU)	PN 16	0.025 kg/m	39 kg	1012
	7	1.50	1250 m	1	2.7	Blue (BU), Brown (BN)	PN 16	0.025 kg/m	39 kg	1727
	7	1.50	1250 m	1	2.7	Blue (BU), Green (GN)	PN 16	0.025 kg/m	39 kg	1724
	7	1.50	1250 m	1	2.7	Brown (BN)	PN 16	0.025 kg/m	39 kg	2266
	7	1.50	1250 m	1	2.7	Green (GN)	PN 16	0.025 kg/m	39 kg	1011
	7	1.50	1250 m	1	2.7	Green (GN), Grey (GY)	PN 16	0.025 kg/m	39 kg	1726
	7	1.50	1250 m	1	2.7	Green (GN), Violet (VT)	PN 16	0.025 kg/m	39 kg	1725
	7	1.50	1250 m	1	2.7	Grey (GY)	PN 16	0.025 kg/m	39 kg	1014
	7	1.50	1250 m	1	2.7	Grey (GY), Yellow (YE)	PN 16	0.025 kg/m	39 kg	1723
	7	1.50	1250 m	1	2.7	Orange (OG)	PN 16	0.025 kg/m	39 kg	2223
	7	1.50	1250 m	1	2.7	Red (RD)	PN 16	0.025 kg/m	39 kg	2265
	7	1.50	1250 m	1	2.7	Red (RD), Blue (BU)	PN 16	0.025 kg/m	39 kg	1718
	7	1.50	1250 m	1	2.7	Red (RD), Green (GN)	PN 16	0.025 kg/m	39 kg	1717
	7	1.50	1250 m	1	2.7	Red (RD), Grey (GY)	PN 16	0.025 kg/m	39 kg	1720
	7	1.50	1250 m	1	2.7	Red (RD), Violet (VT)	PN 16	0.025 kg/m	39 kg	1719
	7	1.50	1250 m	1	2.7	Red (RD), Yellow (YE)	PN 16	0.025 kg/m	39 kg	1716
	7	1.50	1250 m	1	2.7	Yellow (YE)	PN 16	0.025 kg/m	39 kg	1013
	7	1.50	1250 m	1	2.7	Yellow (YE), Blue (BU)	PN 16	0.025 kg/m	39 kg	1721
	7	1.50	1250 m	1	2.7	Yellow (YE), Violet (VT)	PN 16	0.025 kg/m	39 kg	1722
speedpipe-ground_10x2.0	10	2.00	500 m	1.8	4.6	Pink (PK)	PN 16	0.047 kg/m	32 kg	1705
	10	2.00	2500 m	1.8	4.6	Blue (BU)	PN 16	0.047 kg/m	141 kg	1016
	10	2.00	2500 m	1.8	4.6	Brown (BN)	PN 16	0.047 kg/m	141 kg	2659
	10	2.00	2500 m	1.8	4.6	Green (GN)	PN 16	0.047 kg/m	141 kg	1018
	10	2.00	2500 m	1.8	4.6	Grey (GY)	PN 16	0.047 kg/m	141 kg	1962
	10	2.00	2500 m	1.8	4.6	Orange (OG)	PN 16	0.047 kg/m	141 kg	3348
	10	2.00	2500 m	1.8	4.6	Pink (PK)	PN 16	0.047 kg/m	141 kg	1340
	10	2.00	2500 m	1.8	4.6	Red (RD)	PN 16	0.047 kg/m	141 kg	1017
	10	2.00	2500 m	1.8	4.6	Yellow (YE)	PN 16	0.047 kg/m	141 kg	1019

All dimensions in mm. Subject to technical changes.

Direct burying

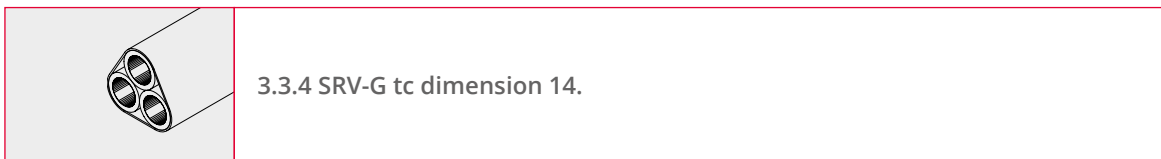| Type	Ø (D)	Wall (WT)	Length (L)	Cable Ø min	Cable Ø max	Colour	Pressure Nominal (PN)	Weight	Total weight	Item no.
speedpipe-ground_12x2.0	12	2.00	2000 m	3	6.8	Black (BK)	PN 16	0.060 kg/m	143 kg	1620
	12	2.00	2000 m	3	6.8	Blue (BU)	PN 16	0.060 kg/m	143 kg	1627
	12	2.00	2000 m	3	6.8	Brown (BN)	PN 16	0.060 kg/m	143 kg	1621
	12	2.00	2000 m	3	6.8	Green (GN)	PN 16	0.060 kg/m	143 kg	1625
	12	2.00	2000 m	3	6.8	Green-Yellow (GNYE)	PN 16	0.060 kg/m	143 kg	2175
	12	2.00	2000 m	3	6.8	Grey (GY)	PN 16	0.060 kg/m	143 kg	1632
	12	2.00	2000 m	3	6.8	Orange (OG)	PN 16	0.060 kg/m	143 kg	1623
	12	2.00	2000 m	3	6.8	Red (RD)	PN 16	0.060 kg/m	143 kg	1622
	12	2.00	2000 m	3	6.8	Turquoise (TQ)	PN 16	0.060 kg/m	143 kg	1563
	12	2.00	2000 m	3	6.8	Violet (VT)	PN 16	0.060 kg/m	143 kg	1628
	12	2.00	2000 m	3	6.8	White (WH)	PN 16	0.060 kg/m	143 kg	1631
	12	2.00	2000 m	3	6.8	Yellow (YE)	PN 16	0.060 kg/m	143 kg	1624
speedpipe-ground_14x2.0	14	2.00	1500 m	3	8.7	Black (BK)	PN 16	0.072 kg/m	131 kg	42288
	14	2.00	1500 m	3	8.7	Blue (BU)	PN 16	0.072 kg/m	131 kg	42294
	14	2.00	1500 m	3	8.7	Brown (BN)	PN 16	0.072 kg/m	131 kg	42289
	14	2.00	1500 m	3	8.7	Green (GN)	PN 16	0.072 kg/m	131 kg	42293
	14	2.00	1500 m	3	8.7	Grey (GY)	PN 16	0.072 kg/m	131 kg	42296
	14	2.00	1500 m	3	8.7	Orange (OG)	PN 16	0.072 kg/m	131 kg	4134
	14	2.00	1500 m	3	8.7	Pink (PK)	PN 16	0.072 kg/m	131 kg	2150
	14	2.00	1500 m	3	8.7	Red (RD)	PN 16	0.072 kg/m	131 kg	42290
	14	2.00	1500 m	3	8.7	Turquoise (TQ)	PN 16	0.072 kg/m	131 kg	2149
	14	2.00	1500 m	3	8.7	Violet (VT)	PN 16	0.072 kg/m	131 kg	42297
	14	2.00	1500 m	3	8.7	White (WH)	PN 16	0.072 kg/m	131 kg	42295
	14	2.00	1500 m	3	8.7	Yellow (YE)	PN 16	0.072 kg/m	131 kg	42292
speedpipe-ground_16x2.0	16	2.00	1200 m	6.5	10.4	Black (BK)	PN 10	0.082 kg/m	121 kg	42494
	16	2.00	1200 m	6.5	10.4	Blue (BU)	PN 10	0.082 kg/m	121 kg	42499
	16	2.00	1200 m	6.5	10.4	Brown (BN)	PN 10	0.082 kg/m	121 kg	42495
	16	2.00	1200 m	6.5	10.4	Green (GN)	PN 10	0.082 kg/m	121 kg	42498
	16	2.00	1200 m	6.5	10.4	Grey (GY)	PN 10	0.082 kg/m	121 kg	1565
	16	2.00	1200 m	6.5	10.4	Orange (OG)	PN 10	0.082 kg/m	121 kg	42497
	16	2.00	1200 m	6.5	10.4	Pink (PK)	PN 10	0.082 kg/m	121 kg	1566
	16	2.00	1200 m	6.5	10.4	Red (RD)	PN 10	0.082 kg/m	121 kg	42496
	16	2.00	1200 m	6.5	10.4	Turquoise (TQ)	PN 10	0.082 kg/m	121 kg	42302
	16	2.00	1200 m	6.5	10.4	Violet (VT)	PN 10	0.082 kg/m	121 kg	1564
	16	2.00	1200 m	6.5	10.4	White (WH)	PN 10	0.082 kg/m	121 kg	42501
	16	2.00	1200 m	6.5	10.4	Yellow (YE)	PN 10	0.082 kg/m	121 kg	42500
speedpipe_ground_20x2.5	20	2.50	1400 m	8	12.5	Pink (PK)	PN 10	0.129 kg/m	216 kg	1349

All dimensions in mm. Subject to technical changes.
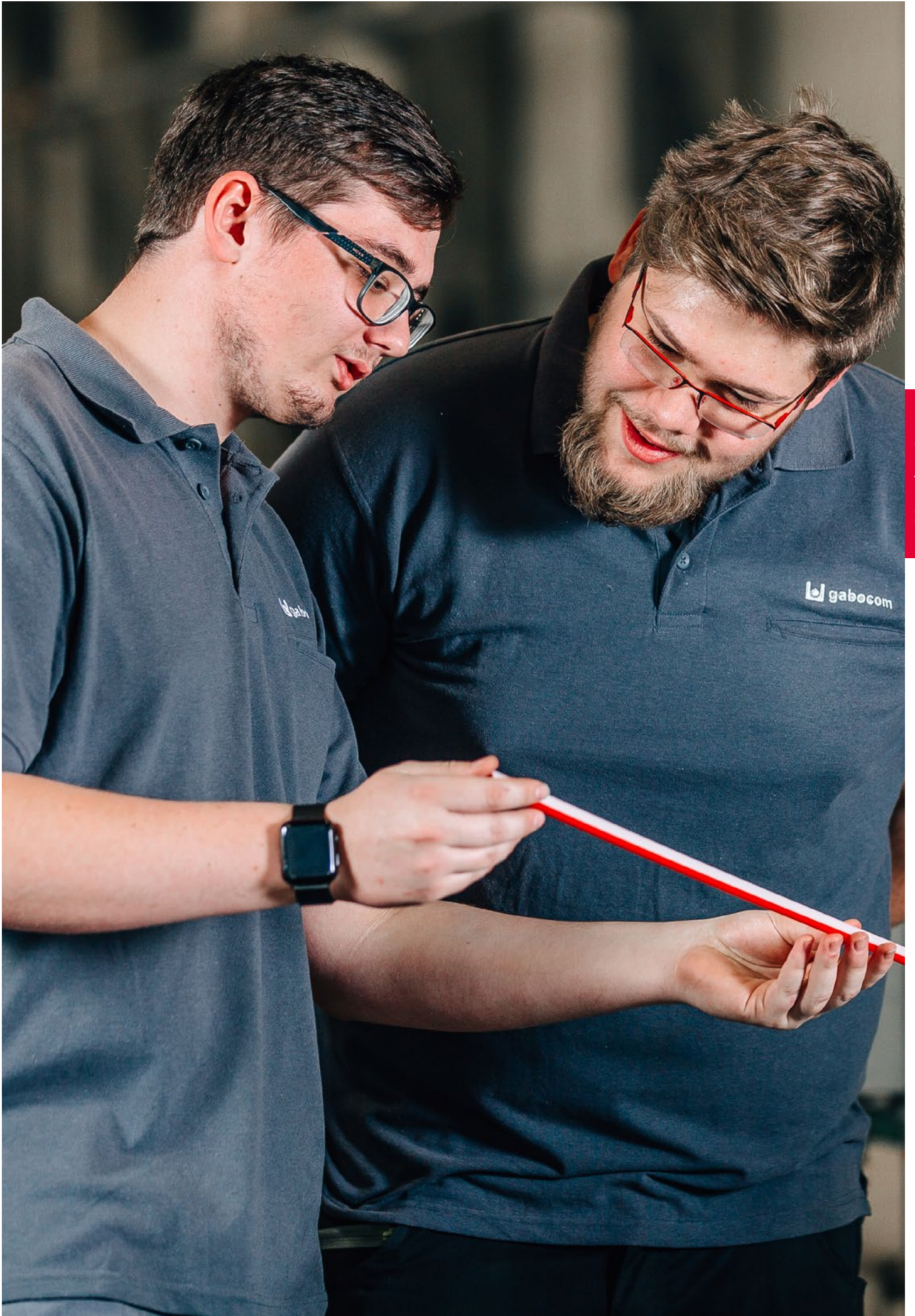
3.2 speedpipe coil.

speedpipe coil 7

APPLICATIONS FOR FIBER OPTIC HOUSE CONNECTIONS.

speedpipe coils help to prepare and realize house connections efficiently. House branches from the speedpipe bundle can already be made when the main line is laid and can be laid on the property as required. The microduct can be laid from the speedpipe coil to the inside of the building for later connection. In areas where broadband expansion has not yet been completed, the speedpipe coil can be used to lay the microduct from the house to the street so that the microduct can then be connected to the main route at a later date. This means that new civil engineering work on private property can be avoided.

Features and benefits
- Optimal for tight spaces
- Easy transport with low total weight
- easy unwinding without special equipment
- accessories already professionally installed
- sealing elements: 0.5 bar gas- and water-tight, tensile and buriable

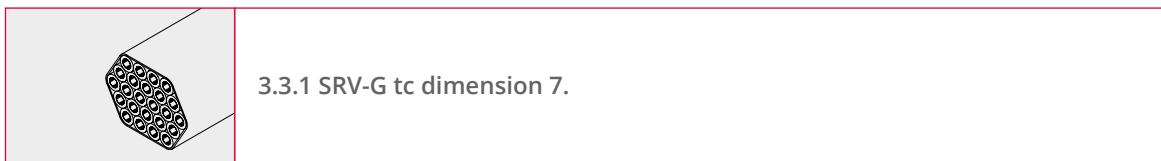| Type	Ø (D)	Length (L)	Colour	Item no.
Ringbund_speedpipe-ground_7x1.5	7	25 m	Orange (OG)	3673
Ringbund_speedpipe-ground_10x2.0	10	25 m	Pink (PK)	3674
Ringbund_speedpipe-ground_12x2.0	12	25 m	Green-Yellow (GNYE)	3675

All dimensions in mm. Subject to technical changes.

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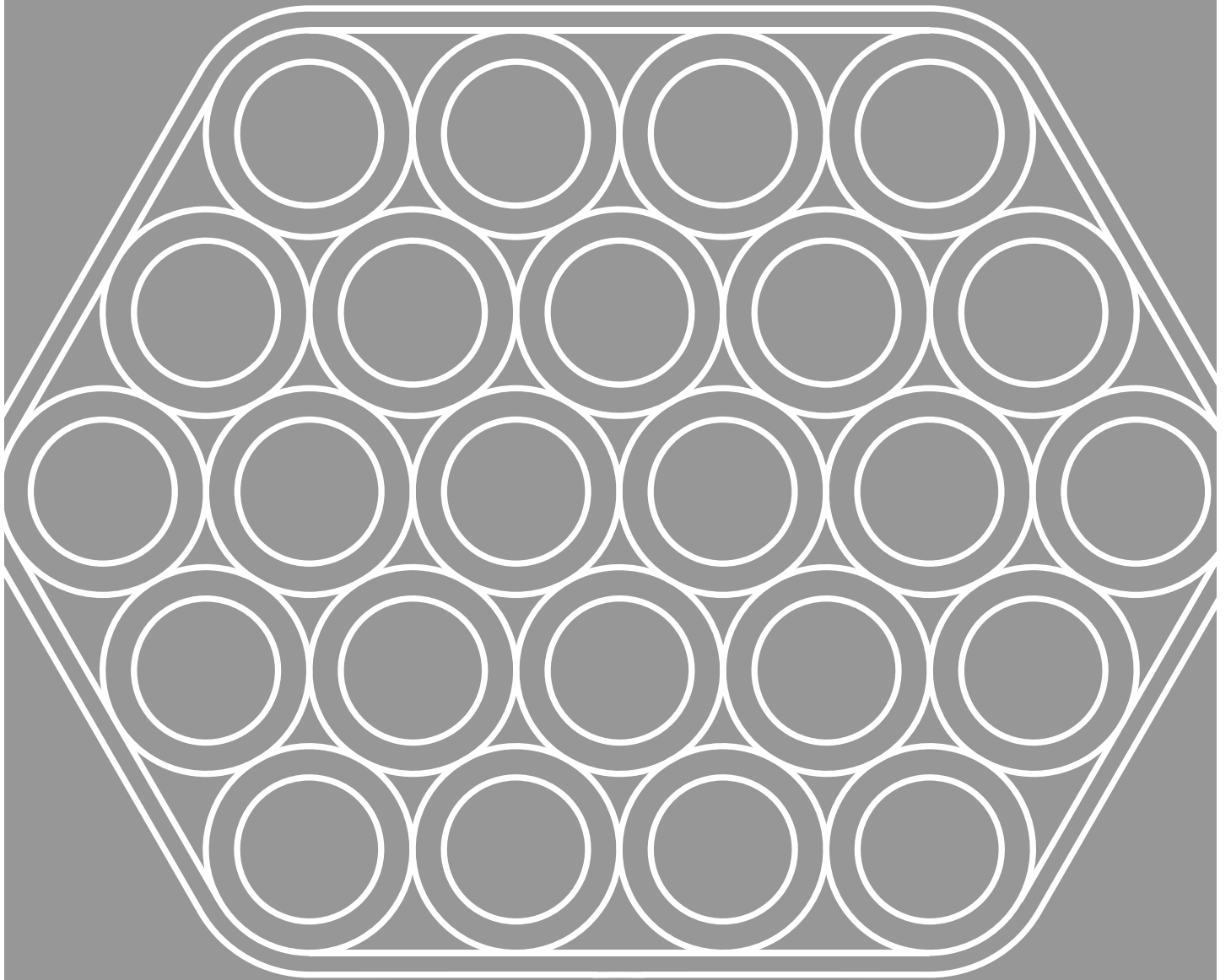
3.3. speedpipe bundles ground for direct burying.
The all-rounder among the bundles.

With the speedpipe bundles ground gabocom offers maximum flexibility for direct burying and the use of existing duct networks. Highest product quality ensures state of the art broadband networks.
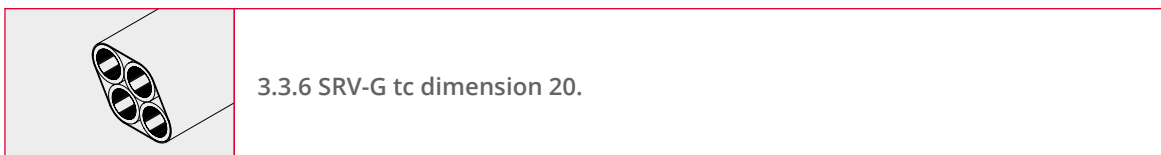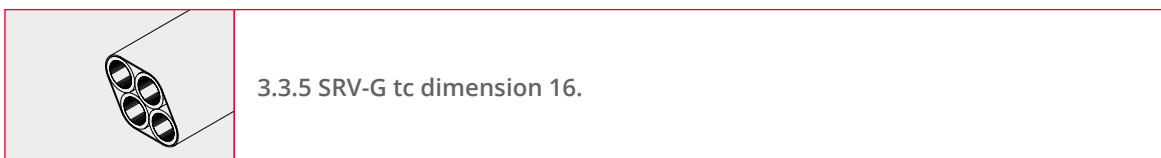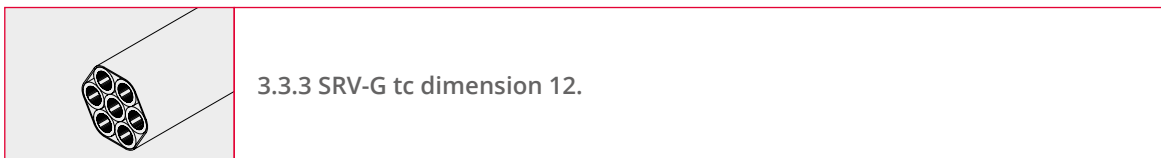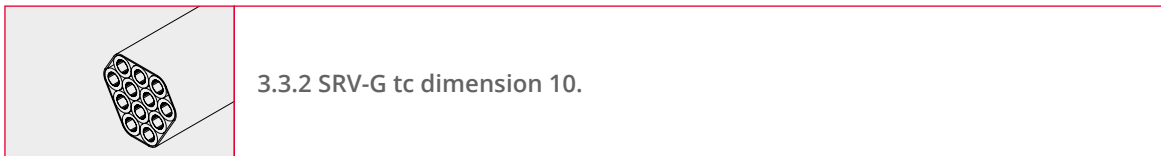
3.3.1 SRV-G tc dimension 7.

3.3.2 SRV-G tc dimension 10.

3.3.3 SRV-G tc dimension 12.

3.3.4 SRV-G tc dimension 14.

3.3.5 SRV-G tc dimension 16.

3.3.6 SRV-G tc dimension 20.

Direct burying

3.3. speedpipe bundles ground SRV-G tc.
For direct burying.

speedpipe bundles ground SRV-G tc bundle various colored, thick-walled speed-pipe ground by means of a tight outer sheath. Due to the variety of single duct dimensions of the speedpipe ground and their combination within the bundle, you consider spare capacities for the future by using speedpipe ground bundles SRV-G tc.

Our system concept is reflected in the protective function and the ease of assembly of the tight outer sheath: it is rugged against the impacts of the surrounding soil, but nevertheless can be opened quickly, easily and safely for branching-off from the bundle.

For a safe installation the tight outer sheath fixes the internal speedpipe ground in their position. Additionally you insert the bundle in linear guide of the speed-pipe ground directly into the intended opening in the ground by removing it under tension. The overlying soil keeps the bundle and the single ducts in suit - even in the future.
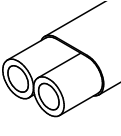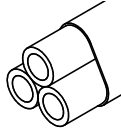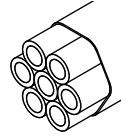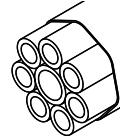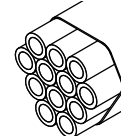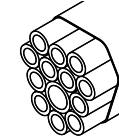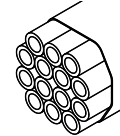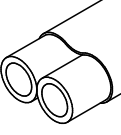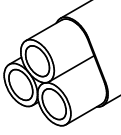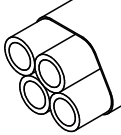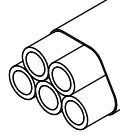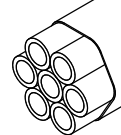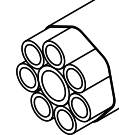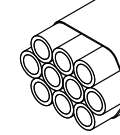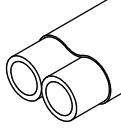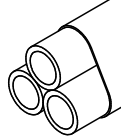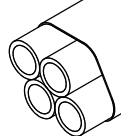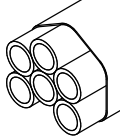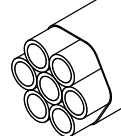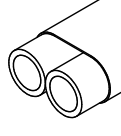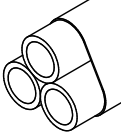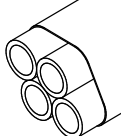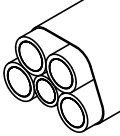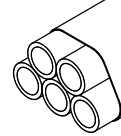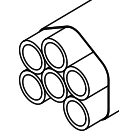
With the multitude of variants of the SRV-G tc, you are ready for all levels of broadband expansion and application scenarios - optionally even combined in one design. The combination of smaller dimensions with an internal single duct of a greater diameter is suitable for FTTB/H as well as for FTTN/C: speedpipe ground 7 x 1.5 or 10 x 2.0 serve for house connections, the additional speedpipe ground 12 x 2.0, 14 x 2.0, 16 × 2.0 or 20 × 2.5 expands your access network.

Alternatively with this combination you prepare yourself against unforeseen interventions from the outside: in case the greater duct diameter remains unoccupied, use the speedpipe ground as average duct in the event of damage. Your fibre optic network quickly returns into operation, simultaneously you have enough time for the professional repair of the fibre optic cable.
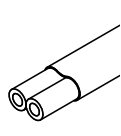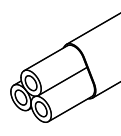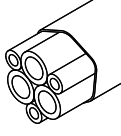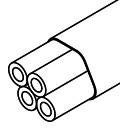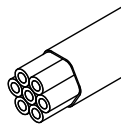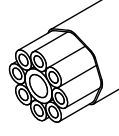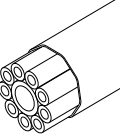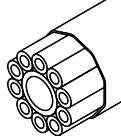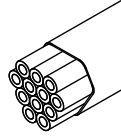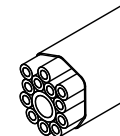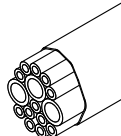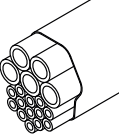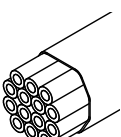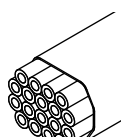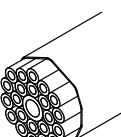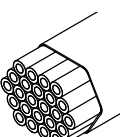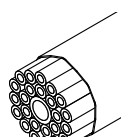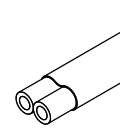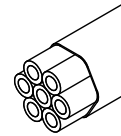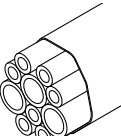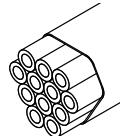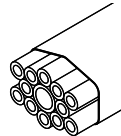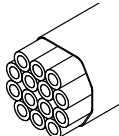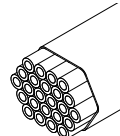
Owing to the resistant material of the speedpipe ground and the outer sheath the bundles SRV-G tc are suitable for all common types of laying in compacted and open ground like for example in
 • open trench
 • ploughing method
 • flush drilling method
 • all common milling technologies

Overview SRV-G tc for new construction: Access network (FTTN|FTTC)

speed•pipe® ground 12 × 2.0 partially combined with 16 × 2.0						
SRV-G 2 × 12 tc	SRV-G 3 × 12 tc	SRV-G 7 × 12 tc	SRV-G 7×12+1×16 tc	SRV-G 12 × 12 tc	SRV-G 12×12+1×16 tc	SRV-G 14 × 12 tc

speed•pipe® ground 14 × 2.0 partially combined with 20 × 2.5						
SRV-G 2 × 14 tc	SRV-G 3 × 14 tc	SRV-G 4 × 14 tc	SRV-G 5 × 14 tc	SRV-G 7 × 14 tc	SRV-G 7×14+1×20 tc	SRV-G 10 × 14 tc

speed•pipe® ground 16 × 2.0					
SRV-G 2 × 16 tc	SRV-G 3 × 16 tc	SRV-G 4 × 16 tc	SRV-G 6 × 16 tc	SRV-G 7 × 16 tc	

speed•pipe® ground 20 × 2.5 partially combined with 16 × 2.0					
SRV-G 2 × 20 tc	SRV-G 3 × 20 tc	SRV-G 4 × 20 tc	SRV-G 4×20+1×16 tc	SRV-G 5 × 20 tc	SRV-G 6 × 20 tc

Direct burying

Overview SRV-G tc for direct burying: Customer connection network (FTTB|FTTH)

SRV-G 2 × 7 tc	SRV-G 3 × 7 tc	SRV-G 3 × 7 + 3 × 12 tc	SRV-G 4 × 7 tc	SRV-G 7 × 7 tc	SRV-G 8 × 7 + 1 × 12 tc

speed•pipe® ground 7 × 1.5 partially combined with 12 × 2.0 / 14 × 2.0 / 16 × 2.0					
SRV-G 9 × 7 + 1 × 14 tc	SRV-G 10 × 7 + 1 × 16 tc	SRV-G 12 × 7 tc	SRV-G 12 × 7 + 1 × 14 tc	SRV-G 12 × 7 + 3 × 14 tc	SRV-G 13 × 7 + 5 × 14 tc
SRV-G 14 × 7 tc	SRV-G 18 × 7 tc	SRV-G 22 × 7 + 1 × 12 tc	SRV-G 24 × 7 tc	SRV-G 24 × 7 + 1 × 14 tc	

speed•pipe® ground 10 × 2.0 partially combined with 16 × 2.0					
SRV-G 2 × 10 tc	SRV-G 7 × 10 tc	SRV-G 7 × 10 + 3 × 16 tc	SRV-G 12 × 10 tc	SRV-G 12 × 10 + 1 × 16 tc SRV-G 14 × 10 tc	SRV-G 24 × 10 tc

3.3.1　speedpipe bundles ground SRV-G tc.
SRV-G tc dimension 7.

speedpipe bundles ground SRV-G tc

speedpipe bundles ground SRV-G tc with EZA-t for sealing.

FOR DIRECT BURYING.

speedpipe bundles ground SRV-G tc bundle various colored, thick-walled speedpipe ground by means of a tight outer sheath. Due to the variety of single duct dimensions of the speedpipe ground and their combination within the bundle, you consider spare capacities for the future. Our system concept is reflected in the protective function and the ease of assembly of the tight outer sheath: it is rugged against the impacts of the surrounding soil, but nevertheless can be opened quickly, easily and safely for branching-off from the bundle.

Features and benefits
- resistant to the effects of the surrounding soil
- easy and time saving branching off without any special tools
- the combination of smaller dimensions with an internal single duct of a greater diameter is suitable for FTTB/H as well as for FTTN/C
- suitable for all common types of laying
- supplied on a wooden one-way spool

Type	Configuration	Variant	Length (L)	Colour	Weight	Total weight	Item no.
SRV-G_2x7_tc	2 speedpipe ground 7x1.5	DIN	400 m	Green (GN)	0.069 kg/m	36 kg	2833
	2 speedpipe ground 7x1.5	DIN	400 m	Orange (OG)	0.069 kg/m	36 kg	1445
SRV-G_3x7_tc	3 speedpipe ground 7x1.5	DIN	4000 m	Orange (OG)	0.097 kg/m	598 kg	1744
SRV-G_3x7+3x12_tc	3 speedpipe ground 7x1.5 3 speedpipe ground 12x2.0	DIN	4000 m	Green (GN)	0.323 kg/m	1642 kg	3289
SRV-G_4x7_tc	4 speedpipe ground 7x1.5	DIN	4000 m	Orange (OG)	0.126 kg/m	714 kg	1746
SRV-G_7x7_tc	7 speedpipe ground 7x1.5	DIN	4000 m	Orange (OG)	0.225 kg/m	1250 kg	1529
	7 speedpipe ground 7x1.5	DIN	4000 m	Orange (OG), Black (BK)	0.225 kg/m	1250 kg	1531
	7 speedpipe ground 7x1.5	DIN	4000 m	Orange (OG), White (WH)	0.225 kg/m	1250 kg	1533
	7 speedpipe ground 7x1.5	gabo	750 m	Orange (OG)	0.225 kg/m	379 kg	1993
	7 speedpipe ground 7x1.5	gabo	4000 m	Orange (OG)	0.225 kg/m	1250 kg	1283
SRV-G_8x7+1x12_tc	8 speedpipe ground 7x1.5 1 speedpipe ground 12x2.0	DIN	4000 m	Orange (OG)	0.323 kg/m	1642 kg	1850
	8 speedpipe ground 7x1.5 1 speedpipe ground 12x2.0	DIN	4000 m	Orange (OG), Black (BK)	0.323 kg/m	1642 kg	3985
	8 speedpipe ground 7x1.5 1 speedpipe ground 12x2.0	DIN	4000 m	Orange (OG), Red (RD)	0.323 kg/m	1642 kg	3981
	8 speedpipe ground 7x1.5 1 speedpipe ground 12x2.0	DIN	4000 m	Orange (OG), White (WH)	0.323 kg/m	1642 kg	3983
	8 speedpipe ground 7x1.5 1 speedpipe ground 12x2.0	gabo	4000 m	Orange (OG)	0.323 kg/m	1642 kg	1289
	8 speedpipe ground 7x1.5 1 speedpipe ground 12x2.0	gabo	4000 m	Orange (OG), Black (BK)	0.323 kg/m	1642 kg	1742
	8 speedpipe ground 7x1.5 1 speedpipe ground 12x2.0	gabo	4000 m	Orange (OG), White (WH)	0.323 kg/m	1642 kg	1752
SRV-G_9x7+1x14_tc	9 speedpipe ground 7x1.5 1 speedpipe ground 14x2.0	DIN	1570 m	Orange (OG), Green (GN)	0.365 kg/m	783 kg	2560
SRV-G_10x7+1x16_tc	10 speedpipe ground 7x1.5 1 speedpipe ground 16x2.0	DIN	2650 m	Orange (OG)	0.404 kg/m	1421 kg	2831

All dimensions in mm. Subject to technical changes. The coil length shown does not correspond to the minimum purchase quantity.

Direct burying

Type	Configuration	Variant	Length (L)	Colour	Weight	Total weight	Item no.
SRV-G_12x7_tc	12 speedpipe ground 7x1.5	DIN	4000 m	Green (GN)	0.365 kg/m	1810 kg	3202
	12 speedpipe ground 7x1.5	DIN	4000 m	Green (GN), Blue (BU)	0.365 kg/m	1810 kg	2846
	12 speedpipe ground 7x1.5	DIN	4000 m	Green (GN), Red (RD)	0.365 kg/m	1810 kg	2844
	12 speedpipe ground 7x1.5	DIN	4000 m	Green (GN), White (WH)	0.365 kg/m	1810 kg	2850
	12 speedpipe ground 7x1.5	DIN	4000 m	Green (GN), Yellow (YE)	0.365 kg/m	1810 kg	2848
	12 speedpipe ground 7x1.5	DIN	4000 m	Orange (OG)	0.365 kg/m	1810 kg	1767
	12 speedpipe ground 7x1.5	DIN	4000 m	Orange (OG), Blue (BU)	0.365 kg/m	1810 kg	2838
	12 speedpipe ground 7x1.5	DIN	4000 m	Orange (OG), Green (GN)	0.365 kg/m	1810 kg	2836
	12 speedpipe ground 7x1.5	DIN	4000 m	Orange (OG), Red (RD)	0.365 kg/m	1810 kg	2834
	12 speedpipe ground 7x1.5	DIN	4000 m	Orange (OG), White (WH)	0.365 kg/m	1810 kg	2842
	12 speedpipe ground 7x1.5	DIN	4000 m	Orange (OG), Yellow (YE)	0.365 kg/m	1810 kg	2840
	12 speedpipe ground 7x1.5	gabo	4000 m	Orange (OG)	0.365 kg/m	1810 kg	1238
	12 speedpipe ground 7x1.5	gabo	4000 m	Orange (OG), Blue (BU)	0.365 kg/m	1810 kg	2116
	12 speedpipe ground 7x1.5	gabo	4000 m	Orange (OG), Green (GN)	0.365 kg/m	1810 kg	2063

All dimensions in mm. Subject to technical changes. The coil length shown does not correspond to the minimum purchase quantity.

Type	Configuration	Variant	Length (L)	Colour	Weight	Total weight	Item no.
SRV-G_12x7+1x14_tc	12 speedpipe ground 7x1.5 1 speedpipe ground 14x2.0	DIN	2650 m	Green (GN)	0.450 kg/m	1543 kg	2860
	12 speedpipe ground 7x1.5 1 speedpipe ground 14x2.0	DIN	2650 m	Green (GN), Blue (BU)	0.450 kg/m	1543 kg	2862
	12 speedpipe ground 7x1.5 1 speedpipe ground 14x2.0	DIN	2650 m	Green (GN), Red (RD)	0.450 kg/m	1543 kg	2858
	12 speedpipe ground 7x1.5 1 speedpipe ground 14x2.0	DIN	2650 m	Green (GN), White (WH)	0.450 kg/m	1543 kg	2866
	12 speedpipe ground 7x1.5 1 speedpipe ground 14x2.0	DIN	2650 m	Green (GN), Yellow (YE)	0.450 kg/m	1543 kg	2864
	12 speedpipe ground 7x1.5 1 speedpipe ground 14x2.0	DIN	2650 m	Orange (OG)	0.450 kg/m	1543 kg	1458
	12 speedpipe ground 7x1.5 1 speedpipe ground 14x2.0	DIN	2650 m	Orange (OG), Black (BK)	0.450 kg/m	1543 kg	2375
	12 speedpipe ground 7x1.5 1 speedpipe ground 14x2.0	DIN	2650 m	Orange (OG), Blue (BU)	0.450 kg/m	1543 kg	2854
	12 speedpipe ground 7x1.5 1 speedpipe ground 14x2.0	DIN	2650 m	Orange (OG), Green (GN)	0.450 kg/m	1543 kg	2852
	12 speedpipe ground 7x1.5 1 speedpipe ground 14x2.0	DIN	2650 m	Orange (OG), Grey (GY)	0.450 kg/m	1543 kg	3660
	12 speedpipe ground 7x1.5 1 speedpipe ground 14x2.0	DIN	2650 m	Orange (OG), Red (RD)	0.450 kg/m	1543 kg	2379
	12 speedpipe ground 7x1.5 1 speedpipe ground 14x2.0	DIN	2650 m	Orange (OG), White (WH)	0.450 kg/m	1543 kg	2377
	12 speedpipe ground 7x1.5 1 speedpipe ground 14x2.0	DIN	2650 m	Orange (OG), Yellow (YE)	0.450 kg/m	1543 kg	2856
	12 speedpipe ground 7x1.5 1 speedpipe ground 14x2.0	gabo	2650 m	Orange (OG)	0.450 kg/m	1543 kg	1734
	12 speedpipe ground 7x1.5 1 speedpipe ground 14x2.0	gabo	2650 m	Orange (OG), Black (BK)	0.450 kg/m	1543 kg	1869
SRV-G_12x7+3x14_tc	12 speedpipe ground 7x1.5 3 speedpipe ground 14x2.0	DIN	1570 m	Orange (OG)	0.609 kg/m	1306 kg	2870
	12 speedpipe ground 7x1.5 3 speedpipe ground 14x2.0	DIN	1570 m	Orange (OG), Blue (BU)	0.609 kg/m	1306 kg	3906
	12 speedpipe ground 7x1.5 3 speedpipe ground 14x2.0	DIN	1570 m	Orange (OG), Green (GN)	0.609 kg/m	1306 kg	2573
	12 speedpipe ground 7x1.5 3 speedpipe ground 14x2.0	DIN	1570 m	Orange (OG), Red (RD)	0.609 kg/m	1306 kg	2868
SRV-G_13x7+5x14_tc	13 speedpipe ground 7x1.5 5 speedpipe ground 14x2.0	gabo	1450 m	Orange (OG)	0.797 kg/m	1506 kg	3236

All dimensions in mm. Subject to technical changes. The coil length shown does not correspond to the minimum purchase quantity.

Direct burying

Type	Configuration	Variant	Length (L)	Colour	Weight	Total weight	Item no.
SRV-G_14x7_tc	14 speedpipe ground 7x1.5	DIN	2650 m	Green (GN)	0.420 kg/m	1463 kg	2880
	14 speedpipe ground 7x1.5	DIN	2650 m	Green (GN), Blue (BU)	0.420 kg/m	1463 kg	2882
	14 speedpipe ground 7x1.5	DIN	2650 m	Green (GN), Red (RD)	0.420 kg/m	1463 kg	2878
	14 speedpipe ground 7x1.5	DIN	2650 m	Green (GN), White (WH)	0.420 kg/m	1463 kg	2886
	14 speedpipe ground 7x1.5	DIN	2650 m	Green (GN), Yellow (YE)	0.420 kg/m	1463 kg	2884
	14 speedpipe ground 7x1.5	DIN	2650 m	Orange (OG)	0.420 kg/m	1463 kg	1535
	14 speedpipe ground 7x1.5	DIN	2650 m	Orange (OG), Blue (BU)	0.420 kg/m	1463 kg	1539
	14 speedpipe ground 7x1.5	DIN	2650 m	Orange (OG), Green (GN)	0.420 kg/m	1463 kg	2872
	14 speedpipe ground 7x1.5	DIN	2650 m	Orange (OG), Red (RD)	0.420 kg/m	1463 kg	1537
	14 speedpipe ground 7x1.5	DIN	2650 m	Orange (OG), White (WH)	0.420 kg/m	1463 kg	2876
	14 speedpipe ground 7x1.5	DIN	2650 m	Orange (OG), Yellow (YE)	0.420 kg/m	1463 kg	2874
	14 speedpipe ground 7x1.5	gabo	2650 m	Green (GN)	0.420 kg/m	1463 kg	1862
	14 speedpipe ground 7x1.5	gabo	2650 m	Orange (OG)	0.420 kg/m	1463 kg	1285
SRV-G_18x7_tc	18 speedpipe ground 7x1.5	gabo	2650 m	Orange (OG)	0.530 kg/m	1755 kg	1242

All dimensions in mm. Subject to technical changes. The coil length shown does not correspond to the minimum purchase quantity.

Type	Configuration	Variant	Length (L)	Colour	Weight	Total weight	Item no.
	22 speedpipe ground 7x1.5 1 speedpipe ground 12x2.0	DIN	1950 m	Green (GN)	0.702 kg/m	1719 kg	2215
	22 speedpipe ground 7x1.5 1 speedpipe ground 12x2.0	DIN	1950 m	Green (GN), Blue (BU)	0.702 kg/m	1719 kg	2906
	22 speedpipe ground 7x1.5 1 speedpipe ground 12x2.0	DIN	1950 m	Green (GN), Red (RD)	0.702 kg/m	1719 kg	2904
	22 speedpipe ground 7x1.5 1 speedpipe ground 12x2.0	DIN	1950 m	Green (GN), White (WH)	0.702 kg/m	1719 kg	2910
	22 speedpipe ground 7x1.5 1 speedpipe ground 12x2.0	DIN	1950 m	Green (GN), Yellow (YE)	0.702 kg/m	1719 kg	2908
	22 speedpipe ground 7x1.5 1 speedpipe ground 12x2.0	DIN	1950 m	Orange (OG)	0.702 kg/m	1719 kg	2902
	22 speedpipe ground 7x1.5 1 speedpipe ground 12x2.0	DIN	1950 m	Orange (OG), Black (BK)	0.702 kg/m	1719 kg	4040
	22 speedpipe ground 7x1.5 1 speedpipe ground 12x2.0	DIN	1950 m	Orange (OG), Blue (BU)	0.702 kg/m	1719 kg	2896
SRV-G_22x7+1x12_tc	22 speedpipe ground 7x1.5 1 speedpipe ground 12x2.0	DIN	1950 m	Orange (OG), Green (GN)	0.702 kg/m	1719 kg	2894
	22 speedpipe ground 7x1.5 1 speedpipe ground 12x2.0	DIN	1950 m	Orange (OG), Red (RD)	0.702 kg/m	1719 kg	2892
	22 speedpipe ground 7x1.5 1 speedpipe ground 12x2.0	DIN	1950 m	Orange (OG), White (WH)	0.702 kg/m	1719 kg	2900
	22 speedpipe ground 7x1.5 1 speedpipe ground 12x2.0	DIN	1950 m	Orange (OG), Yellow (YE)	0.702 kg/m	1719 kg	2898
	22 speedpipe ground 7x1.5 1 speedpipe ground 12x2.0	gabo	1950 m	Green (GN)	0.702 kg/m	1719 kg	1827
	22 speedpipe ground 7x1.5 1 speedpipe ground 12x2.0	gabo	1950 m	Orange (OG)	0.702 kg/m	1719 kg	1291
	22 speedpipe ground 7x1.5 1 speedpipe ground 12x2.0	gabo	1950 m	Orange (OG), Black (BK)	0.702 kg/m	1719 kg	1736
	22 speedpipe ground 7x1.5 1 speedpipe ground 12x2.0	gabo	1950 m	Orange (OG), Red (RD)	0.702 kg/m	1719 kg	1740
	22 speedpipe ground 7x1.5 1 speedpipe ground 12x2.0	gabo	1950 m	Orange (OG), White (WH)	0.702 kg/m	1719 kg	1738

All dimensions in mm. Subject to technical changes. The coil length shown does not correspond to the minimum purchase quantity.

Direct burying

Direct burying

| Type	Configuration	Variant	Length (L)	Colour	Weight	Total weight	Item no.
SRV-G_24x7_tc	24 speedpipe ground 7x1.5	DIN	1950 m	Green (GN)	0.689 kg/m	1694 kg	2921
	24 speedpipe ground 7x1.5	DIN	1950 m	Green (GN), Blue (BU)	0.689 kg/m	1694 kg	2923
	24 speedpipe ground 7x1.5	DIN	1950 m	Green (GN), Red (RD)	0.689 kg/m	1694 kg	2919
	24 speedpipe ground 7x1.5	DIN	1950 m	Green (GN), White (WH)	0.689 kg/m	1694 kg	2927
	24 speedpipe ground 7x1.5	DIN	1950 m	Green (GN), Yellow (YE)	0.689 kg/m	1694 kg	2925
	24 speedpipe ground 7x1.5	DIN	1950 m	Orange (OG)	0.689 kg/m	1694 kg	1541
	24 speedpipe ground 7x1.5	DIN	1950 m	Orange (OG), Black (BK)	0.689 kg/m	1694 kg	2096
	24 speedpipe ground 7x1.5	DIN	1950 m	Orange (OG), Blue (BU)	0.689 kg/m	1694 kg	2912
	24 speedpipe ground 7x1.5	DIN	1950 m	Orange (OG), Green (GN)	0.689 kg/m	1694 kg	1543
	24 speedpipe ground 7x1.5	DIN	1950 m	Orange (OG), Red (RD)	0.689 kg/m	1694 kg	2098
	24 speedpipe ground 7x1.5	DIN	1950 m	Orange (OG), White (WH)	0.689 kg/m	1694 kg	2917
	24 speedpipe ground 7x1.5	DIN	1950 m	Orange (OG), Yellow (YE)	0.689 kg/m	1694 kg	2915
	24 speedpipe ground 7x1.5	gabo	1950 m	Orange (OG)	0.689 kg/m	1694 kg	1287
	24 speedpipe ground 7x1.5	gabo	1950 m	Orange (OG), Black (BK)	0.689 kg/m	1694 kg	1800
	24 speedpipe ground 7x1.5	gabo	1950 m	Orange (OG), Blue (BU)	0.689 kg/m	1694 kg	2118
	24 speedpipe ground 7x1.5	gabo	1950 m	Orange (OG), Green (GN)	0.689 kg/m	1694 kg	1802
	24 speedpipe ground 7x1.5	gabo	1950 m	Orange (OG), Red (RD)	0.689 kg/m	1694 kg	1919
	24 speedpipe ground 7x1.5	gabo	1950 m	Orange (OG), White (WH)	0.689 kg/m	1694 kg	1917

All dimensions in mm. Subject to technical changes. The coil length shown does not correspond to the minimum purchase quantity.

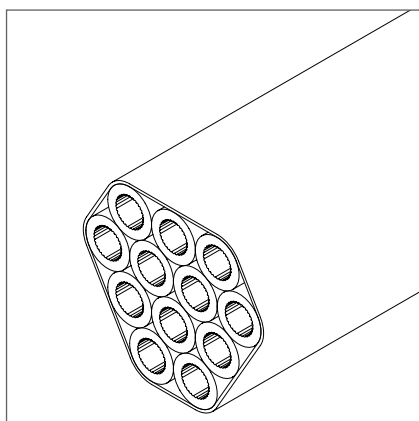| Type	Configuration	Variant	Length (L)	Colour	Weight	Total weight	Item no.
SRV-G_24x7+1x14_tc	24 speedpipe ground 7x1.5 1 speedpipe ground 14x2.0	DIN	1570 m	Green (GN)	0.768 kg/m	1556 kg	2937
	24 speedpipe ground 7x1.5 1 speedpipe ground 14x2.0	DIN	1570 m	Green (GN), Blue (BU)	0.768 kg/m	1556 kg	2939
	24 speedpipe ground 7x1.5 1 speedpipe ground 14x2.0	DIN	1570 m	Green (GN), Red (RD)	0.768 kg/m	1556 kg	2935
	24 speedpipe ground 7x1.5 1 speedpipe ground 14x2.0	DIN	1570 m	Green (GN), White (WH)	0.768 kg/m	1556 kg	2943
	24 speedpipe ground 7x1.5 1 speedpipe ground 14x2.0	DIN	1570 m	Green (GN), Yellow (YE)	0.768 kg/m	1556 kg	2941
	24 speedpipe ground 7x1.5 1 speedpipe ground 14x2.0	DIN	1570 m	Orange (OG)	0.768 kg/m	1556 kg	1527
	24 speedpipe ground 7x1.5 1 speedpipe ground 14x2.0	DIN	1570 m	Orange (OG), Black (BK)	0.768 kg/m	1556 kg	1762
	24 speedpipe ground 7x1.5 1 speedpipe ground 14x2.0	DIN	1570 m	Orange (OG), Blue (BU)	0.768 kg/m	1556 kg	2931
	24 speedpipe ground 7x1.5 1 speedpipe ground 14x2.0	DIN	1570 m	Orange (OG), Green (GN)	0.768 kg/m	1556 kg	2929
	24 speedpipe ground 7x1.5 1 speedpipe ground 14x2.0	DIN	1570 m	Orange (OG), Grey (GY)	0.768 kg/m	1556 kg	3662
	24 speedpipe ground 7x1.5 1 speedpipe ground 14x2.0	DIN	1570 m	Orange (OG), Red (RD)	0.768 kg/m	1556 kg	2373
	24 speedpipe ground 7x1.5 1 speedpipe ground 14x2.0	DIN	1570 m	Orange (OG), White (WH)	0.768 kg/m	1556 kg	1778
	24 speedpipe ground 7x1.5 1 speedpipe ground 14x2.0	DIN	1570 m	Orange (OG), Yellow (YE)	0.768 kg/m	1556 kg	2933
	24 speedpipe ground 7x1.5 1 speedpipe ground 14x2.0	gabo	1570 m	Orange (OG)	0.768 kg/m	1556 kg	1294
	24 speedpipe ground 7x1.5 1 speedpipe ground 14x2.0	gabo	1570 m	Orange (OG), Black (BK)	0.768 kg/m	1556 kg	2206
	24 speedpipe ground 7x1.5 1 speedpipe ground 14x2.0	gabo	1570 m	Orange (OG), Green (GN)	0.768 kg/m	1556 kg	1902
	24 speedpipe ground 7x1.5 1 speedpipe ground 14x2.0	gabo	1570 m	Orange (OG), Red (RD)	0.768 kg/m	1556 kg	1900

All dimensions in mm. Subject to technical changes. The coil length shown does not correspond to the minimum purchase quantity.
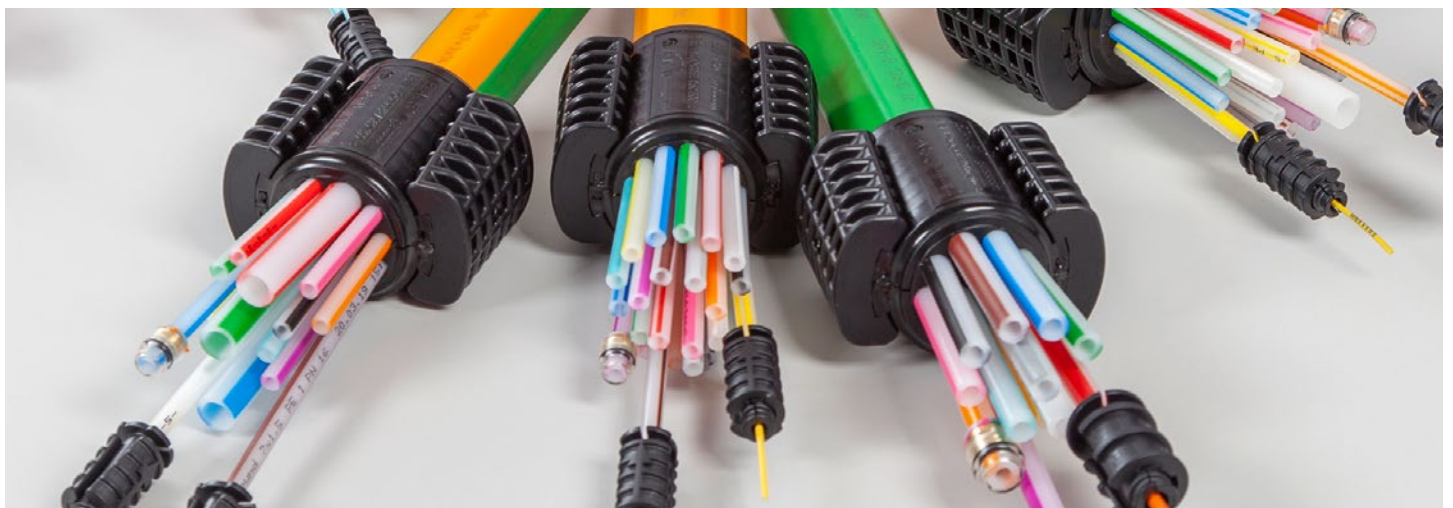
Direct burying

3.3.2 speedpipe bundles ground SRV-G tc.
SRV-G tc dimension 10.

speedpipe bundles ground SRV-G tc

speedpipe bundles ground SRV-G tc with EZA-t for sealing.

FOR DIRECT BURYING.

speedpipe bundles ground SRV-G tc bundle various colored, thick-walled speedpipe ground by means of a tight outer sheath. Due to the variety of single duct dimensions of the speedpipe ground and their combination within the bundle, you consider spare capacities for the future. Our system concept is reflected in the protective function and the ease of assembly of the tight outer sheath: it is rugged against the impacts of the surrounding soil, but nevertheless can be opened quickly, easily and safely for branching-off from the bundle.

Features and benefits
• resistant to the effects of the surrounding soil
• easy and time saving branching off without any special tools
• the combination of smaller dimensions with an internal single duct of a greater diameter is suitable for FTTB/H as well as for FTTN/C
• suitable for all common types of laying
• supplied on a wooden one-way spool

Type	Configuration	Variant	Length (L)	Colour	Weight	Total weight	Item no.
SRV-G_2x10_tc	2 speedpipe ground 10x2.0	DIN	900 m	Green (GN)	0.129 kg/m	139 kg	2945
	2 speedpipe ground 10x2.0	DIN	900 m	Orange (OG)	0.129 kg/m	139 kg	2387
	2 speedpipe ground 10x2.0	gabo	900 m	Orange (OG)	0.129 kg/m	139 kg	1443
SRV-G_7x10_tc	7 speedpipe ground 10x2.0	DIN	3650 m	Green (GN)	0.406 kg/m	1832 kg	2958
	7 speedpipe ground 10x2.0	DIN	3650 m	Green (GN), Blue (BU)	0.406 kg/m	1832 kg	2960
	7 speedpipe ground 10x2.0	DIN	3650 m	Green (GN), Grey (GY)	0.406 kg/m	1832 kg	3455
	7 speedpipe ground 10x2.0	DIN	3650 m	Green (GN), Red (RD)	0.406 kg/m	1832 kg	2956
	7 speedpipe ground 10x2.0	DIN	3650 m	Green (GN), White (WH)	0.406 kg/m	1832 kg	2964
	7 speedpipe ground 10x2.0	DIN	3650 m	Green (GN), Yellow (YE)	0.406 kg/m	1832 kg	2962
	7 speedpipe ground 10x2.0	DIN	3650 m	Orange (OG)	0.406 kg/m	1832 kg	2556
	7 speedpipe ground 10x2.0	DIN	3650 m	Orange (OG), Black (BK)	0.406 kg/m	1832 kg	3851
	7 speedpipe ground 10x2.0	DIN	3650 m	Orange (OG), Blue (BU)	0.406 kg/m	1832 kg	2950
	7 speedpipe ground 10x2.0	DIN	3650 m	Orange (OG), Green (GN)	0.406 kg/m	1832 kg	2948
	7 speedpipe ground 10x2.0	DIN	3650 m	Orange (OG), Red (RD)	0.406 kg/m	1832 kg	2946
	7 speedpipe ground 10x2.0	DIN	3650 m	Orange (OG), White (WH)	0.406 kg/m	1832 kg	2954
	7 speedpipe ground 10x2.0	DIN	3650 m	Orange (OG), Yellow (YE)	0.406 kg/m	1832 kg	2952
	7 speedpipe ground 10x2.0	gabo	3650 m	Orange (OG)	0.406 kg/m	1832 kg	1756
SRV-G_7x10+3x16_tc	7 speedpipe ground 10x2.0 3 speedpipe ground 16x2.0	gabo	850 m	Orange (OG)	0.686 kg/m	793 kg	3190

All dimensions in mm. Subject to technical changes. The coil length shown does not correspond to the minimum purchase quantity.

Direct burying

Type	Configuration	Variant	Length (L)	Colour	Weight	Total weight	Item no.
SRV-G_12x10_tc	12 speedpipe ground 10x2.0	DIN	1800 m	Green (GN)	0.667 kg/m	1551 kg	1843
	12 speedpipe ground 10x2.0	DIN	1800 m	Green (GN), Black (BK)	0.667 kg/m	1551 kg	2992
	12 speedpipe ground 10x2.0	DIN	1800 m	Green (GN), Blue (BU)	0.667 kg/m	1551 kg	2772
	12 speedpipe ground 10x2.0	DIN	1800 m	Green (GN), Brown (BN)	0.667 kg/m	1551 kg	2986
	12 speedpipe ground 10x2.0	DIN	1800 m	Green (GN), Grey (GY)	0.667 kg/m	1551 kg	2984
	12 speedpipe ground 10x2.0	DIN	1800 m	Green (GN), Pink (PK)	0.667 kg/m	1551 kg	2996
	12 speedpipe ground 10x2.0	DIN	1800 m	Green (GN), Red (RD)	0.667 kg/m	1551 kg	2776
	12 speedpipe ground 10x2.0	DIN	1800 m	Green (GN), Turquoise (TQ)	0.667 kg/m	1551 kg	2990
	12 speedpipe ground 10x2.0	DIN	1800 m	Green (GN), Violet (VT)	0.667 kg/m	1551 kg	2988
	12 speedpipe ground 10x2.0	DIN	1800 m	Green (GN), White (WH)	0.667 kg/m	1551 kg	2774
	12 speedpipe ground 10x2.0	DIN	1800 m	Green (GN), Yellow (YE)	0.667 kg/m	1551 kg	2982
	12 speedpipe ground 10x2.0	DIN	1800 m	Orange (OG)	0.667 kg/m	1551 kg	1839
	12 speedpipe ground 10x2.0	DIN	1800 m	Orange (OG), Black (BK)	0.667 kg/m	1551 kg	2978
	12 speedpipe ground 10x2.0	DIN	1800 m	Orange (OG), Blue (BU)	0.667 kg/m	1551 kg	2970
	12 speedpipe ground 10x2.0	DIN	1800 m	Orange (OG), Brown (BN)	0.667 kg/m	1551 kg	2972
	12 speedpipe ground 10x2.0	DIN	1800 m	Orange (OG), Green (GN)	0.667 kg/m	1551 kg	2968
	12 speedpipe ground 10x2.0	DIN	1800 m	Orange (OG), Grey (GY)	0.667 kg/m	1551 kg	2413
	12 speedpipe ground 10x2.0	DIN	1800 m	Orange (OG), Pink (PK)	0.667 kg/m	1551 kg	2980
	12 speedpipe ground 10x2.0	DIN	1800 m	Orange (OG), Red (RD)	0.667 kg/m	1551 kg	2966
	12 speedpipe ground 10x2.0	DIN	1800 m	Orange (OG), Turquoise (TQ)	0.667 kg/m	1551 kg	2976
	12 speedpipe ground 10x2.0	DIN	1800 m	Orange (OG), Violet (VT)	0.667 kg/m	1551 kg	2974
	12 speedpipe ground 10x2.0	DIN	1800 m	Orange (OG), White (WH)	0.667 kg/m	1551 kg	2409
	12 speedpipe ground 10x2.0	DIN	1800 m	Orange (OG), Yellow (YE)	0.667 kg/m	1551 kg	2411
	12 speedpipe ground 10x2.0	gabo	1800 m	Orange (OG)	0.667 kg/m	1551 kg	1269
	12 speedpipe ground 10x2.0	gabo	1800 m	Orange (OG), Black (BK)	0.667 kg/m	1551 kg	1929
	12 speedpipe ground 10x2.0	gabo	1800 m	Orange (OG), White (WH)	0.667 kg/m	1551 kg	1809

All dimensions in mm. Subject to technical changes. The coil length shown does not correspond to the minimum purchase quantity.
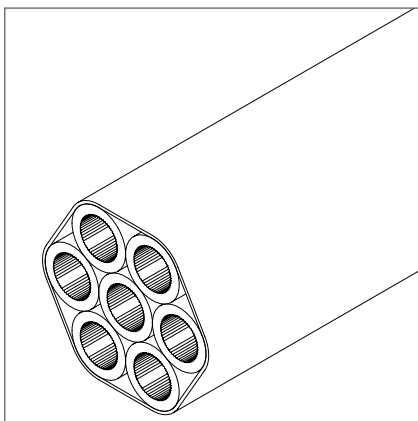
Type	Configuration	Variant	Length (L)	Colour	Weight	Total weight	Item no.
SRV-G_12x10+1x14_tc	12 speedpipe ground 10x2.0 1 speedpipe ground 14x2.0	DIN	1800 m	Green (GN)	0.749 kg/m	1698 kg	4503
	12 speedpipe ground 10x2.0 1 speedpipe ground 14x2.0	DIN	1800 m	Orange (OG)	0.749 kg/m	1698 kg	4505
SRV-G_12x10+1x16_tc	12 speedpipe ground 10x2.0 1 speedpipe ground 16x2.0	DIN	1800 m	Green (GN)	0.766 kg/m	1729 kg	3315
SRV-G_14x10_tc	14 speedpipe ground 10x2.0	DIN	1800 m	Orange (OG)	0.770 kg/m	1736 kg	2814
	14 speedpipe ground 10x2.0	DIN	1800 m	Orange (OG), Blue (BU)	0.770 kg/m	1736 kg	3267
	14 speedpipe ground 10x2.0	DIN	1800 m	Orange (OG), Brown (BN)	0.770 kg/m	1736 kg	3271
	14 speedpipe ground 10x2.0	DIN	1800 m	Orange (OG), Green (GN)	0.770 kg/m	1736 kg	2818
	14 speedpipe ground 10x2.0	DIN	1800 m	Orange (OG), Red (RD)	0.770 kg/m	1736 kg	2816
	14 speedpipe ground 10x2.0	DIN	1800 m	Orange (OG), Yellow (YE)	0.770 kg/m	1736 kg	3269
SRV-G_24x10_tc	24 speedpipe ground 10x2.0	DIN	900 m	Green (GN)	1.326 kg/m	1543 kg	3011
	24 speedpipe ground 10x2.0	DIN	900 m	Green (GN), Blue (BU)	1.326 kg/m	1543 kg	3013
	24 speedpipe ground 10x2.0	DIN	900 m	Green (GN), Red (RD)	1.326 kg/m	1543 kg	3009
	24 speedpipe ground 10x2.0	DIN	900 m	Green (GN), White (WH)	1.326 kg/m	1543 kg	3017
	24 speedpipe ground 10x2.0	DIN	900 m	Green (GN), Yellow (YE)	1.326 kg/m	1543 kg	3015
	24 speedpipe ground 10x2.0	DIN	900 m	Orange (OG)	1.326 kg/m	1543 kg	2625
	24 speedpipe ground 10x2.0	DIN	900 m	Orange (OG), Blue (BU)	1.326 kg/m	1543 kg	3003
	24 speedpipe ground 10x2.0	DIN	900 m	Orange (OG), Green (GN)	1.326 kg/m	1543 kg	3001
	24 speedpipe ground 10x2.0	DIN	900 m	Orange (OG), Red (RD)	1.326 kg/m	1543 kg	2999
	24 speedpipe ground 10x2.0	DIN	900 m	Orange (OG), White (WH)	1.326 kg/m	1543 kg	3007
	24 speedpipe ground 10x2.0	DIN	900 m	Orange (OG), Yellow (YE)	1.326 kg/m	1543 kg	3005

All dimensions in mm. Subject to technical changes. The coil length shown does not correspond to the minimum purchase quantity.

Direct burying

Direct burying

3.3.3 speedpipe bundles ground SRV-G tc.
SRV-G tc dimension 12.

speedpipe bundles ground SRV-G tc

speedpipe bundles ground SRV-G tc with EZA-t for direct burying.

FOR DIRECT BURYING.

speedpipe bundles ground SRV-G tc bundle various colored, thick-walled speedpipe ground by means of a tight outer sheath. Due to the variety of single duct dimensions of the speedpipe ground and their combination within the bundle, you consider spare capacities for the future. Our system concept is reflected in the protective function and the ease of assembly of the tight outer sheath: it is rugged against the impacts of the surrounding soil, but nevertheless can be opened quickly, easily and safely for branching-off from the bundle.

Features and benefits
- resistant to the effects of the surrounding soil
- easy and time saving branching off without any special tools
- the combination of smaller dimensions with an internal single duct of a greater diameter is suitable for FTTB/H as well as for FTTN/C
- suitable for all common types of laying
- supplied on a wooden one-way spool

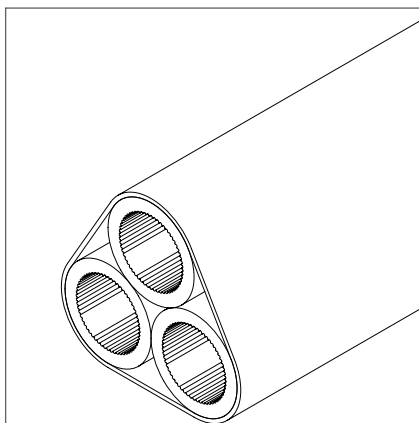| Type	Configuration	Variant	Length (L)	Colour	Weight	Total weight	Item no.
SRV-G_2x12_tc	2 speedpipe ground 12x2.0	DIN	650 m	Green (GN)	0.160 kg/m	127 kg	3020
	2 speedpipe ground 12x2.0	DIN	650 m	Orange (OG)	0.160 kg/m	127 kg	3019
	2 speedpipe ground 12x2.0	gabo	650 m	Orange (OG)	0.160 kg/m	127 kg	1613
SRV-G_3x12_tc	3 speedpipe ground 12x2.0	DIN	2700 m	Green (GN)	0.241 kg/m	1001 kg	3021
	3 speedpipe ground 12x2.0	DIN	2700 m	Orange (OG)	0.241 kg/m	1001 kg	1848
	3 speedpipe ground 12x2.0	gabo	2700 m	Orange (OG)	0.241 kg/m	1001 kg	1232
SRV-G_7x12_tc	7 speedpipe ground 12x2.0	DIN	2400 m	Green (GN)	0.511 kg/m	1576 kg	2554
	7 speedpipe ground 12x2.0	DIN	2400 m	Green (GN), Blue (BU)	0.511 kg/m	1576 kg	3025
	7 speedpipe ground 12x2.0	DIN	2400 m	Green (GN), Red (RD)	0.511 kg/m	1576 kg	3023
	7 speedpipe ground 12x2.0	DIN	2400 m	Green (GN), White (WH)	0.511 kg/m	1576 kg	3029
	7 speedpipe ground 12x2.0	DIN	2400 m	Green (GN), Yellow (YE)	0.511 kg/m	1576 kg	3027
	7 speedpipe ground 12x2.0	DIN	2400 m	Orange (OG)	0.511 kg/m	1576 kg	2169
	7 speedpipe ground 12x2.0	DIN	2400 m	Orange (OG), Black (BK)	0.511 kg/m	1576 kg	3987
	7 speedpipe ground 12x2.0	DIN	2400 m	Orange (OG), Blue (BU)	0.511 kg/m	1576 kg	2640
	7 speedpipe ground 12x2.0	DIN	2400 m	Orange (OG), Green (GN)	0.511 kg/m	1576 kg	2638
	7 speedpipe ground 12x2.0	DIN	2400 m	Orange (OG), Red (RD)	0.511 kg/m	1576 kg	2636
	7 speedpipe ground 12x2.0	DIN	2400 m	Orange (OG), White (WH)	0.511 kg/m	1576 kg	2644
	7 speedpipe ground 12x2.0	DIN	2400 m	Orange (OG), Yellow (YE)	0.511 kg/m	1576 kg	2642
	7 speedpipe ground 12x2.0	gabo	2400 m	Orange (OG)	0.511 kg/m	1576 kg	1296
	7 speedpipe ground 12x2.0	gabo	2400 m	Orange (OG), Black (BK)	0.511 kg/m	1576 kg	1858
SRV-G_7x12+1x16_tc	7 speedpipe ground 12x2.0 1 speedpipe ground 16x2.0	DIN	1750 m	Green (GN)	0.603 kg/m	1405 kg	3313

All dimensions in mm. Subject to technical changes. The coil length shown does not correspond to the minimum purchase quantity.

Type	Configuration	Va- riant	Length (L)	Colour	Weight	Total weight	Item no.
SRV-G_12x12_tc	12 speedpipe ground 12x2.0	DIN	1050 m	Green (GN)	0.841 kg/m	1233 kg	3041
	12 speedpipe ground 12x2.0	DIN	1050 m	Green (GN), Blue (BU)	0.841 kg/m	1233 kg	3043
	12 speedpipe ground 12x2.0	DIN	1050 m	Green (GN), Red (RD)	0.841 kg/m	1233 kg	3039
	12 speedpipe ground 12x2.0	DIN	1050 m	Green (GN), White (WH)	0.841 kg/m	1233 kg	2710
	12 speedpipe ground 12x2.0	DIN	1050 m	Green (GN), Yellow (YE)	0.841 kg/m	1233 kg	2718
	12 speedpipe ground 12x2.0	DIN	1050 m	Orange (OG)	0.841 kg/m	1233 kg	2114
	12 speedpipe ground 12x2.0	DIN	1050 m	Orange (OG), Black (BK)	0.841 kg/m	1233 kg	2161
	12 speedpipe ground 12x2.0	DIN	1050 m	Orange (OG), Blue (BU)	0.841 kg/m	1233 kg	3033
	12 speedpipe ground 12x2.0	DIN	1050 m	Orange (OG), Green (GN)	0.841 kg/m	1233 kg	3031
	12 speedpipe ground 12x2.0	DIN	1050 m	Orange (OG), Red (RD)	0.841 kg/m	1233 kg	2171
	12 speedpipe ground 12x2.0	DIN	1050 m	Orange (OG), White (WH)	0.841 kg/m	1233 kg	3037
	12 speedpipe ground 12x2.0	DIN	1050 m	Orange (OG), Yellow (YE)	0.841 kg/m	1233 kg	3035
SRV-G_12x12+1x16_tc	12 speedpipe ground 12x2.0 1 speedpipe ground 16x2.0	DIN	1000 m	Green (GN)	0.933 kg/m	1283 kg	3317
SRV-G_14x12_tc	14 speedpipe 12x2.0	DIN	1050 m	Orange (OG)	0.971 kg/m	1370 kg	4054

All dimensions in mm. Subject to technical changes. The coil length shown does not correspond to the minimum pur-chase quantity.

3.3.4 speedpipe bundles ground SRV-G tc.
SRV-G tc dimension 14.

speedpipe bundles ground SRV-G tc

speedpipe bundles ground SRV-G tc for direct burying.

FOR DIRECT BURYING.

speedpipe bundles ground SRV-G tc bundle various colored, thick-walled speedpipe ground by means of a tight outer sheath. Due to the variety of single duct dimensions of the speedpipe ground and their combination within the bundle, you consider spare capacities for the future. Our system concept is reflected in the protective function and the ease of assembly of the tight outer sheath: it is rugged against the impacts of the surrounding soil, but nevertheless can be opened quickly, easily and safely for branching-off from the bundle.

Features and benefits
- resistant to the effects of the surrounding soil
- easy and time saving branching off without any special tools
- the combination of smaller dimensions with an internal single duct of a greater diameter is suitable for FTTB/H as well as for FTTN/C
- suitable for all common types of laying
- supplied on a wooden one-way spool

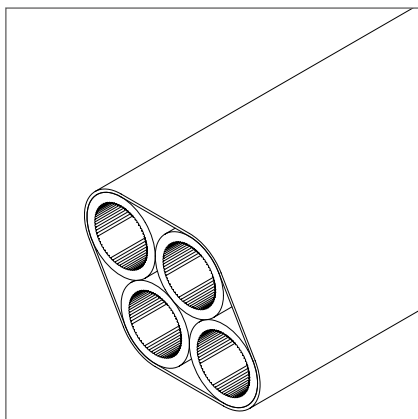| Type	Configuration	Va-riant	Length (L)	Colour	Weight	Total weight	Item no.
SRV-G_2x14_tc	2 speedpipe ground 14x2.0	DIN	450 m	Orange (OG)	0.203 kg/m	114 kg	1899
	2 speedpipe ground 14x2.0	DIN	3400 m	Green (GN)	0.203 kg/m	1040 kg	3047
	2 speedpipe ground 14x2.0	DIN	3400 m	Orange (OG)	0.203 kg/m	1040 kg	3045
	2 speedpipe ground 14x2.0	gabo	450 m	Orange (OG)	0.203 kg/m	114 kg	1444
	2 speedpipe ground 14x2.0	gabo	3400 m	Orange (OG)	0.203 kg/m	1040 kg	42250
SRV-G_3x14_tc	3 speedpipe ground 14x2.0	DIN	3400 m	Green (GN)	0.287 kg/m	1326 kg	3049
	3 speedpipe ground 14x2.0	DIN	3400 m	Orange (OG)	0.287 kg/m	1326 kg	2000
	3 speedpipe ground 14x2.0	gabo	3400 m	Orange (OG)	0.287 kg/m	1326 kg	1300
SRV-G_4x14_tc	4 speedpipe ground 14x2.0	DIN	3000 m	Green (GN)	0.370 kg/m	1460 kg	2425
	4 speedpipe ground 14x2.0	DIN	3000 m	Green (GN), Blue (BU)	0.370 kg/m	1460 kg	2784
	4 speedpipe ground 14x2.0	DIN	3000 m	Green (GN), Brown (BN)	0.370 kg/m	1460 kg	3712
	4 speedpipe ground 14x2.0	DIN	3000 m	Green (GN), Grey (GY)	0.370 kg/m	1460 kg	2824
	4 speedpipe ground 14x2.0	DIN	3000 m	Green (GN), Red (RD)	0.370 kg/m	1460 kg	2770
	4 speedpipe ground 14x2.0	DIN	3000 m	Green (GN), Violet (VT)	0.370 kg/m	1460 kg	3710
	4 speedpipe ground 14x2.0	DIN	3000 m	Green (GN), White (WH)	0.370 kg/m	1460 kg	2820
	4 speedpipe ground 14x2.0	DIN	3000 m	Green (GN), Yellow (YE)	0.370 kg/m	1460 kg	2822
	4 speedpipe ground 14x2.0	DIN	3000 m	Orange (OG)	0.370 kg/m	1460 kg	1468
	4 speedpipe ground 14x2.0	DIN	3000 m	Orange (OG), Blue (BU)	0.370 kg/m	1460 kg	3055
	4 speedpipe ground 14x2.0	DIN	3000 m	Orange (OG), Green (GN)	0.370 kg/m	1460 kg	3053
	4 speedpipe ground 14x2.0	DIN	3000 m	Orange (OG), Red (RD)	0.370 kg/m	1460 kg	3051
	4 speedpipe ground 14x2.0	DIN	3000 m	Orange (OG), White (WH)	0.370 kg/m	1460 kg	3059
	4 speedpipe ground 14x2.0	DIN	3000 m	Orange (OG), Yellow (YE)	0.370 kg/m	1460 kg	3057
	4 speedpipe ground 14x2.0	gabo	3000 m	Orange (OG)	0.370 kg/m	1460 kg	1301

All dimensions in mm. Subject to technical changes. The coil length shown does not correspond to the minimum purchase quantity.

Direct burying

Type	Configuration	Va-riant	Length (L)	Colour	Weight	Total weight	Item no.
SRV-G_5x14_tc	5 speedpipe ground 14x2.0	DIN	1700 m	Green (GN)	0.453 kg/m	1120 kg	3081
	5 speedpipe ground 14x2.0	DIN	1700 m	Green (GN), Blue (BU)	0.453 kg/m	1120 kg	3083
	5 speedpipe ground 14x2.0	DIN	1700 m	Green (GN), Red (RD)	0.453 kg/m	1120 kg	3079
	5 speedpipe ground 14x2.0	DIN	1700 m	Green (GN), White (WH)	0.453 kg/m	1120 kg	3087
	5 speedpipe ground 14x2.0	DIN	1700 m	Green (GN), Yellow (YE)	0.453 kg/m	1120 kg	3085
	5 speedpipe ground 14x2.0	DIN	1700 m	Orange (OG)	0.453 kg/m	1120 kg	1804
	5 speedpipe ground 14x2.0	DIN	1700 m	Orange (OG), Blue (BU)	0.453 kg/m	1120 kg	3073
	5 speedpipe ground 14x2.0	DIN	1700 m	Orange (OG), Green (GN)	0.453 kg/m	1120 kg	3064
	5 speedpipe ground 14x2.0	DIN	1700 m	Orange (OG), Red (RD)	0.453 kg/m	1120 kg	3061
	5 speedpipe ground 14x2.0	DIN	1700 m	Orange (OG), White (WH)	0.453 kg/m	1120 kg	3077
	5 speedpipe ground 14x2.0	DIN	1700 m	Orange (OG), Yellow (YE)	0.453 kg/m	1120 kg	3075
	5 speedpipe ground 14x2.0	gabo	1700 m	Orange (OG)	0.453 kg/m	1120 kg	1258

All dimensions in mm. Subject to technical changes. The coil length shown does not correspond to the minimum purchase quantity.

Direct burying

Type	Configuration	Variant	Length (L)	Colour	Weight	Total weight	Item no.
	7 speedpipe ground 14x2.0	DIN	1700 m	Green (GN)	0.608 kg/m	1384 kg	2361
	7 speedpipe ground 14x2.0	DIN	1700 m	Green (GN), Blue (BU)	0.608 kg/m	1384 kg	3102
	7 speedpipe ground 14x2.0	DIN	1700 m	Green (GN), Brown (BN)	0.608 kg/m	1384 kg	3467
	7 speedpipe ground 14x2.0	DIN	1700 m	Green (GN), Grey (GY)	0.608 kg/m	1384 kg	3465
	7 speedpipe ground 14x2.0	DIN	1700 m	Green (GN), Red (RD)	0.608 kg/m	1384 kg	3100
	7 speedpipe ground 14x2.0	DIN	1700 m	Green (GN), Turquoise (TQ)	0.608 kg/m	1384 kg	3471
	7 speedpipe ground 14x2.0	DIN	1700 m	Green (GN), Violet (VT)	0.608 kg/m	1384 kg	3469
	7 speedpipe ground 14x2.0	DIN	1700 m	Green (GN), White (WH)	0.608 kg/m	1384 kg	3106
	7 speedpipe ground 14x2.0	DIN	1700 m	Green (GN), Yellow (YE)	0.608 kg/m	1384 kg	3104
	7 speedpipe ground 14x2.0	DIN	1700 m	Orange (OG)	0.608 kg/m	1384 kg	1561
	7 speedpipe ground 14x2.0	DIN	1700 m	Orange (OG), Black (BK)	0.608 kg/m	1384 kg	3588
	7 speedpipe ground 14x2.0	DIN	1700 m	Orange (OG), Blue (BU)	0.608 kg/m	1384 kg	3093
SRV-G_7x14_tc	7 speedpipe ground 14x2.0	DIN	1700 m	Orange (OG), Brown (BN)	0.608 kg/m	1384 kg	3582
	7 speedpipe ground 14x2.0	DIN	1700 m	Orange (OG), Green (GN)	0.608 kg/m	1384 kg	3091
	7 speedpipe ground 14x2.0	DIN	1700 m	Orange (OG), Grey (GY)	0.608 kg/m	1384 kg	3580
	7 speedpipe ground 14x2.0	DIN	1700 m	Orange (OG), Pink (PK)	0.608 kg/m	1384 kg	3591
	7 speedpipe ground 14x2.0	DIN	1700 m	Orange (OG), Red (RD)	0.608 kg/m	1384 kg	3089
	7 speedpipe ground 14x2.0	DIN	1700 m	Orange (OG), Turquoise (TQ)	0.608 kg/m	1384 kg	3586
	7 speedpipe ground 14x2.0	DIN	1700 m	Orange (OG), Violet (VT)	0.608 kg/m	1384 kg	3584
	7 speedpipe ground 14x2.0	DIN	1700 m	Orange (OG), White (WH)	0.608 kg/m	1384 kg	3097
	7 speedpipe ground 14x2.0	DIN	1700 m	Orange (OG), Yellow (YE)	0.608 kg/m	1384 kg	3095
	7 speedpipe ground 14x2.0	gabo	1700 m	Green (GN)	0.608 kg/m	1384 kg	1712
	7 speedpipe ground 14x2.0	gabo	1700 m	Orange (OG)	0.608 kg/m	1384 kg	1304
	7 speedpipe ground 14x2.0	gabo	1700 m	Orange (OG), Black (BK)	0.608 kg/m	1384 kg	1880
SRV-G_7x14+1x20_tc	7 speedpipe ground 14x2.0 1 speedpipe ground 20x2.0	DIN	1100 m	Orange (OG)	0.752 kg/m	1177 kg	2780
	10 speedpipe ground 14x2.0	DIN	1100 m	Green (GN)	0.847 kg/m	1282 kg	3111
SRV-G_10x14_tc	10 speedpipe ground 14x2.0	DIN	1100 m	Orange (OG)	0.847 kg/m	1282 kg	3109
	10 speedpipe ground 14x2.0	gabo	1100 m	Orange (OG)	0.847 kg/m	1282 kg	2268

All dimensions in mm. Subject to technical changes. The coil length shown does not correspond to the minimum purchase quantity.
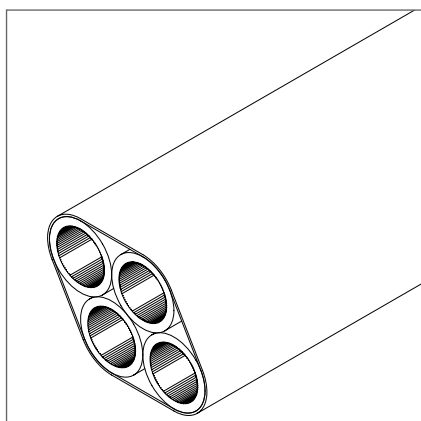
3.3.5 speedpipe bundles ground SRV-G tc.
SRV-G tc dimension 16.

speedpipe bundles ground SRV-G tc

speedpipe bundles ground SRV-G tc with EZA-t for direct burying.

FOR DIRECT BURYING.

speedpipe bundles ground SRV-G tc bundle various colored, thick-walled speedpipe ground by means of a tight outer sheath. Due to the variety of single duct dimensions of the speedpipe ground and their combination within the bundle, you consider spare capacities for the future. Our system concept is reflected in the protective function and the ease of assembly of the tight outer sheath: it is rugged against the impacts of the surrounding soil, but nevertheless can be opened quickly, easily and safely for branching-off from the bundle.

Features and benefits
• resistant to the effects of the surrounding soil
• easy and time saving branching off without any special tools
• the combination of smaller dimensions with an internal single duct of a greater diameter is suitable for FTTB/H as well as for FTTN/C
• suitable for all common types of laying
• supplied on a wooden one-way spool

Type	Configuration	Variant	Length (L)	Colour	Weight	Total weight	Item no.
SRV-G_2x16_tc	2 speedpipe ground 16x2.0	DIN	2650 m	Green (GN)	0.232 kg/m	825 kg	3113
	2 speedpipe ground 16x2.0	DIN	2650 m	Orange (OG)	0.232 kg/m	825 kg	2403

All dimensions in mm. Subject to technical changes. The coil length shown does not correspond to the minimum purchase quantity.

Type	Configuration	Variant	Length (L)	Colour	Weight	Total weight	Item no.
SRV-G_3x16_tc	3 speedpipe ground 16x2.0	DIN	2100 m	Green (GN)	0.326 kg/m	1035 kg	3121
	3 speedpipe ground 16x2.0	DIN	2100 m	Green (GN), Blue (BU)	0.326 kg/m	1035 kg	3123
	3 speedpipe ground 16x2.0	DIN	2100 m	Green (GN), Red (RD)	0.326 kg/m	1035 kg	2808
	3 speedpipe ground 16x2.0	DIN	2100 m	Green (GN), White (WH)	0.326 kg/m	1035 kg	3128
	3 speedpipe ground 16x2.0	DIN	2100 m	Green (GN), Yellow (YE)	0.326 kg/m	1035 kg	3126
	3 speedpipe ground 16x2.0	DIN	2100 m	Orange (OG)	0.326 kg/m	1035 kg	2188
	3 speedpipe ground 16x2.0	DIN	2100 m	Orange (OG), Blue (BU)	0.326 kg/m	1035 kg	2367
	3 speedpipe ground 16x2.0	DIN	2100 m	Orange (OG), Green (GN)	0.326 kg/m	1035 kg	2365
	3 speedpipe ground 16x2.0	DIN	2100 m	Orange (OG), Red (RD)	0.326 kg/m	1035 kg	3115
	3 speedpipe ground 16x2.0	DIN	2100 m	Orange (OG), White (WH)	0.326 kg/m	1035 kg	3119
	3 speedpipe ground 16x2.0	DIN	2100 m	Orange (OG), Yellow (YE)	0.326 kg/m	1035 kg	3117
	3 speedpipe ground 16x2.0	gabo	2100 m	Orange (OG)	0.326 kg/m	1035 kg	1306

All dimensions in mm. Subject to technical changes. The coil length shown does not correspond to the minimum purchase quantity.

Direct burying

Direct burying

Type	Configuration	Variant	Length (L)	Colour	Weight	Total weight	Item no.
SRV-G_4x16_tc	4 speedpipe ground 16x2.0	DIN	2100 m	Green (GN)	0.421 kg/m	1234 kg	3132
	4 speedpipe ground 16x2.0	DIN	2100 m	Green (GN), Blue (BU)	0.421 kg/m	1234 kg	3134
	4 speedpipe ground 16x2.0	DIN	2100 m	Green (GN), Pink (PK)	0.421 kg/m	1234 kg	3633
	4 speedpipe ground 16x2.0	DIN	2100 m	Green (GN), Red (RD)	0.421 kg/m	1234 kg	3130
	4 speedpipe ground 16x2.0	DIN	2100 m	Green (GN), White (WH)	0.421 kg/m	1234 kg	3139
	4 speedpipe ground 16x2.0	DIN	2100 m	Green (GN), Yellow (YE)	0.421 kg/m	1234 kg	3136
	4 speedpipe ground 16x2.0	DIN	2100 m	Orange (OG)	0.421 kg/m	1234 kg	1936
	4 speedpipe ground 16x2.0	DIN	2100 m	Orange (OG), Black (BK)	0.421 kg/m	1234 kg	2744
	4 speedpipe ground 16x2.0	DIN	2100 m	Orange (OG), Blue (BU)	0.421 kg/m	1234 kg	2740
	4 speedpipe ground 16x2.0	DIN	2100 m	Orange (OG), Green (GN)	0.421 kg/m	1234 kg	2738
	4 speedpipe ground 16x2.0	DIN	2100 m	Orange (OG), Red (RD)	0.421 kg/m	1234 kg	2736
	4 speedpipe ground 16x2.0	DIN	2100 m	Orange (OG), White (WH)	0.421 kg/m	1234 kg	2421
	4 speedpipe ground 16x2.0	DIN	2100 m	Orange (OG), Yellow (YE)	0.421 kg/m	1234 kg	2742
	4 speedpipe ground 16x2.0	gabo	2100 m	Orange (OG)	0.421 kg/m	1234 kg	1246
SRV-G_6x16_tc	6 speedpipe ground 16x2.0	DIN	1300 m	Green (GN)	0.607 kg/m	1139 kg	3143
	6 speedpipe ground 16x2.0	DIN	1300 m	Orange (OG)	0.607 kg/m	1139 kg	2133
	6 speedpipe ground 16x2.0	DIN	1300 m	Orange (OG), Blue (BU)	0.607 kg/m	1139 kg	2371
	6 speedpipe ground 16x2.0	DIN	1300 m	Orange (OG), Green (GN)	0.607 kg/m	1139 kg	2369
	6 speedpipe ground 16x2.0	DIN	1300 m	Orange (OG), Red (RD)	0.607 kg/m	1139 kg	3141

All dimensions in mm. Subject to technical changes. The coil length shown does not correspond to the minimum purchase quantity.

Type	Configuration	Variant	Length (L)	Colour	Weight	Total weight	Item no.
	7 speedpipe ground 16x2.0	DIN	1300 m	Green (GN)	0.692 kg/m	1250 kg	2810
	7 speedpipe ground 16x2.0	DIN	1300 m	Green (GN), Black (BK)	0.692 kg/m	1250 kg	3611
	7 speedpipe ground 16x2.0	DIN	1300 m	Green (GN), Blue (BU)	0.692 kg/m	1250 kg	3151
	7 speedpipe ground 16x2.0	DIN	1300 m	Green (GN), Brown (BN)	0.692 kg/m	1250 kg	3487
	7 speedpipe ground 16x2.0	DIN	1300 m	Green (GN), Grey (GY)	0.692 kg/m	1250 kg	3485
	7 speedpipe ground 16x2.0	DIN	1300 m	Green (GN), Pink (PK)	0.692 kg/m	1250 kg	3613
	7 speedpipe ground 16x2.0	DIN	1300 m	Green (GN), Red (RD)	0.692 kg/m	1250 kg	2812
	7 speedpipe ground 16x2.0	DIN	1300 m	Green (GN), Turquoise (TQ)	0.692 kg/m	1250 kg	3491
	7 speedpipe ground 16x2.0	DIN	1300 m	Green (GN), Violet (VT)	0.692 kg/m	1250 kg	3489
	7 speedpipe ground 16x2.0	DIN	1300 m	Green (GN), White (WH)	0.692 kg/m	1250 kg	3155
	7 speedpipe ground 16x2.0	DIN	1300 m	Green (GN), Yellow (YE)	0.692 kg/m	1250 kg	3153
	7 speedpipe ground 16x2.0	DIN	1300 m	Orange (OG)	0.692 kg/m	1250 kg	2229
SRV-G_7x16_tc	7 speedpipe ground 16x2.0	DIN	1300 m	Orange (OG), Black (BK)	0.692 kg/m	1250 kg	2331
	7 speedpipe ground 16x2.0	DIN	1300 m	Orange (OG), Blue (BU)	0.692 kg/m	1250 kg	3145
	7 speedpipe ground 16x2.0	DIN	1300 m	Orange (OG), Brown (BN)	0.692 kg/m	1250 kg	3617
	7 speedpipe ground 16x2.0	DIN	1300 m	Orange (OG), Green (GN)	0.692 kg/m	1250 kg	2415
	7 speedpipe ground 16x2.0	DIN	1300 m	Orange (OG), Grey (GY)	0.692 kg/m	1250 kg	3615
	7 speedpipe ground 16x2.0	DIN	1300 m	Orange (OG), Pink (PK)	0.692 kg/m	1250 kg	3623
	7 speedpipe ground 16x2.0	DIN	1300 m	Orange (OG), Red (RD)	0.692 kg/m	1250 kg	2746
	7 speedpipe ground 16x2.0	DIN	1300 m	Orange (OG), Turquoise (TQ)	0.692 kg/m	1250 kg	3621
	7 speedpipe ground 16x2.0	DIN	1300 m	Orange (OG), Violet (VT)	0.692 kg/m	1250 kg	3619
	7 speedpipe ground 16x2.0	DIN	1300 m	Orange (OG), White (WH)	0.692 kg/m	1250 kg	3149
	7 speedpipe ground 16x2.0	DIN	1300 m	Orange (OG), Yellow (YE)	0.692 kg/m	1250 kg	3147
	7 speedpipe ground 16x2.0	gabo	1300 m	Orange (OG)	0.692 kg/m	1250 kg	1308

All dimensions in mm. Subject to technical changes. The coil length shown does not correspond to the minimum purchase quantity.

Direct burying

3.3.6 speedpipe bundles ground SRV-G tc.
SRV-G tc dimension 20.

speedpipe bundles ground SRV-G tc

speedpipe bundles ground SRV-G tc with EZA-t for direct burying.

FOR DIRECT BURYING.

speedpipe bundles ground SRV-G tc bundle various colored, thick-walled speedpipe ground by means of a tight outer sheath. Due to the variety of single duct dimensions of the speedpipe ground and their combination within the bundle, you consider spare capacities for the future. Our system concept is reflected in the protective function and the ease of assembly of the tight outer sheath: it is rugged against the impacts of the surrounding soil, but nevertheless can be opened quickly, easily and safely for branching-off from the bundle.

Features and benefits
- resistant to the effects of the surrounding soil
- easy and time saving branching off without any special tools
- the combination of smaller dimensions with an internal single duct of a greater diameter is suitable for FTTB/H as well as for FTTN/C
- suitable for all common types of laying
- supplied on a wooden one-way spool

Type	Configuration	Variant	Length (L)	Colour	Weight	Total weight	Item no.
SRV-G_2x20_tc	2 speedpipe ground 20x2.5	DIN	1400 m	Green (GN)	0.341 kg/m	687 kg	3159
	2 speedpipe ground 20x2.5	DIN	1400 m	Orange (OG)	0.341 kg/m	687 kg	3157
SRV-G_3x20_tc	3 speedpipe ground 20x2.5	DIN	1400 m	Green (GN)	0.487 kg/m	1032 kg	3161
	3 speedpipe ground 20x2.5	DIN	1400 m	Orange (OG)	0.487 kg/m	1032 kg	2231
	3 speedpipe ground 20x2.5	gabo	1400 m	Orange (OG)	0.487 kg/m	1032 kg	1250
SRV-G_4x20_tc	4 speedpipe ground 20x2.5	DIN	1400 m	Green (GN)	0.629 kg/m	1231 kg	1837
	4 speedpipe ground 20x2.5	DIN	1400 m	Green (GN), Blue (BU)	0.629 kg/m	1231 kg	3175
	4 speedpipe ground 20x2.5	DIN	1400 m	Green (GN), Red (RD)	0.629 kg/m	1231 kg	3173
	4 speedpipe ground 20x2.5	DIN	1400 m	Green (GN), White (WH)	0.629 kg/m	1231 kg	3179
	4 speedpipe ground 20x2.5	DIN	1400 m	Green (GN), Yellow (YE)	0.629 kg/m	1231 kg	3177
	4 speedpipe ground 20x2.5	DIN	1400 m	Orange (OG)	0.629 kg/m	1231 kg	1833
	4 speedpipe ground 20x2.5	DIN	1400 m	Orange (OG), Blue (BU)	0.629 kg/m	1231 kg	3167
	4 speedpipe ground 20x2.5	DIN	1400 m	Orange (OG), Green (GN)	0.629 kg/m	1231 kg	3165
	4 speedpipe ground 20x2.5	DIN	1400 m	Orange (OG), Red (RD)	0.629 kg/m	1231 kg	3163
	4 speedpipe ground 20x2.5	DIN	1400 m	Orange (OG), White (WH)	0.629 kg/m	1231 kg	3171
	4 speedpipe ground 20x2.5	DIN	1400 m	Orange (OG), Yellow (YE)	0.629 kg/m	1231 kg	3169
	4 speedpipe ground 20x2.5	gabo	1400 m	Orange (OG)	0.629 kg/m	1231 kg	1758
SRV-G_4x20+1x16_tc	4 speedpipe ground 20x2.5 1 speedpipe ground 16x2.0	DIN	1100 m	Green (GN)	0.724 kg/m	1146 kg	4002
SRV-G_5x20_tc	5 speedpipe ground 20x2.0	DIN	1100 m	Green (GN)	0.774 kg/m	1201 kg	3183
	5 speedpipe ground 20x2.0	DIN	1100 m	Orange (OG)	0.774 kg/m	1201 kg	3181
	5 speedpipe ground 20x2.0	gabo	1100 m	Orange (OG)	0.774 kg/m	1201 kg	1807
SRV-G_6x20_tc	6 speedpipe ground 20x2.5	DIN	650 m	Green (GN)	0.915 kg/m	945 kg	3188
	6 speedpipe ground 20x2.5	DIN	650 m	Orange (OG)	0.915 kg/m	945 kg	3185

All dimensions in mm. Subject to technical changes. The coil length shown does not correspond to the minimum purchase quantity.

3.4 Suitable for all common types of laying.
speedpipe bundles ground SRV-G tc.

When it comes to choosing the installation technology, there are several methods available for broadband expansion. This makes it all the more important to generally consider all installation techniques when planning an expansion project.

The most suitable installation method must be selected for each construction project.

Thanks to the hard-wearing material of the speedpipe ground and the jacket, the SRV-G tc bundles is suitable for all common laying methods in paved and open terrain.

SPEEDPIPE BUNDLES FOR OPEN TRENCH

In case of rocky or stony subsoil, the trench bottom must be excavated at least 0.15 m deeper and the excavation must be replaced by a stone-free layer (sand 0-2, with maximum grain size Ø 2 mm). After laying under tension, the duct zone must be backfilled with sand up to 10 cm above the bundle peak (see ZTV-TK network 10 / 11). speedpipe ground bundles (SRV-G tc) are typically laid in open trenches. Due to the variety of individual duct dimensions of the speedpipe ground and their combination within the duct system, capacity reserves for the future are taken into account.

SPEEDPIPE BUNDLES FOR MOLE PLOUGHING

The installation of speedpipe bundles ground (SRV-G tc) by plowing methods is typically applicable when there is no paved surface, such as in the countryside, in open areas along roads or on soft, non-stony soils with obstacles. It is also used when underground infrastructure is mapped to prevent damage. The typical laying depth is about 1 m and a laying speed of up to 5 km/day can be achieved.

SPEEDPIPE BUNDLES FOR WATER DRILLING (HDD)

This installation technique is used for crossing areas where open cut construction is not possible, such as rivers, railroad lines and highways. It combines rotation of the drill bit, pushing and lifting movements, and liquefaction in the borehole between two shafts. speedpipe bundles ground (SRV-G tc) of the appropriate size and configuration are pulled into the borehole.

SPEEDPIPE BUNDLES FOR TRENCHING MILLING

This installation method enables effective use in urban areas or along roads made of concrete, asphalt or gravel. Cut or milled slots are produced. Distances of up to 3 km are possible. Direct buried speedpipe ground bundles are specially designed for micro-trenching and can be used universally (horizontal/vertical installation).

Direct burying

3.5 speedpipe bundles SRV-G tc.
Colour code DIN.

This color sequence defines the speedpipe ground in the gabocom speedpipe bundles ground SRV-G tc with color code according to DIN EN 60794-1-1.

no.	colour code	colour
1	red / 2 colour strips	
2	green / 2 colour strips	
3	blue / 2 colour strips	
4	yellow / 2 colour strips	
5	white / 2 colour strips	
6	grey / 2 colour strips	
7	brown / 2 colour strips	
8	violet / 2 colour strips	
9	turquoise / 2 colour strips	
10	black / 2 colour strips	
11	orange / 2 colour strips	
12	pink / 2 colour strips	
13	red / 4 colour strips	
14	green / 4 colour strips	
15	blue / 4 colour strips	
16	yellow / 4 colour strips	
17	white / 4 colour strips	
18	grey / 4 colour strips	
19	brown / 4 colour strips	
20	violet / 4 colour strips	
21	turquoise / 4 colour strips	
22	black / 4 colour strips	
23	orange / 4 colour strips	
24	pink / 4 colour strips	
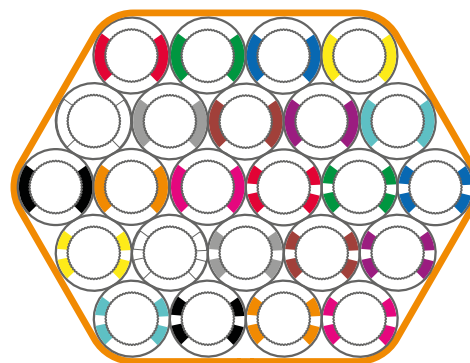
Example: SRV-G 24 × 7 tc with DIN color code

The definition of the gabo color sequence can be found in our laying instruction speedpipe bundle ground SRV-G and SRV-G tc.

Small investment, huge benefit.

Connect,
seal and fix.
Accessories for
speedpipe and bundles.

4.1 Connecting, sealing and fixing elements.
Small-scale investment, huge benefit.

A small investment increases the durability and safety of your fibre optic network. Connecting, sealing and fixing of speedpipe duct systems.

4.1.1 Divisible seals for SRV-G tc.

4.1.2 Divisible seals for in-duct use, SRV and SRV-G.

4.1.3 Divisible seals for speedpipe.

4.1.4 Divisible seals micro.

4.1.5 End-stops transparent permanent.

4.1.6 Identification labels with microduct end-caps.

Accessories
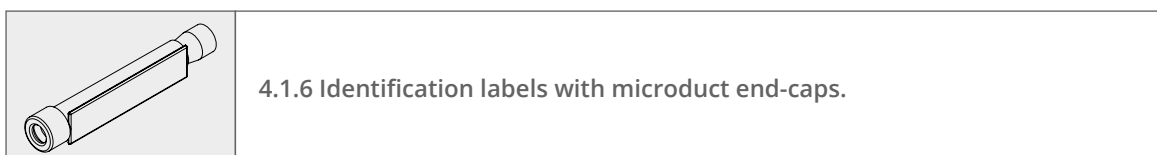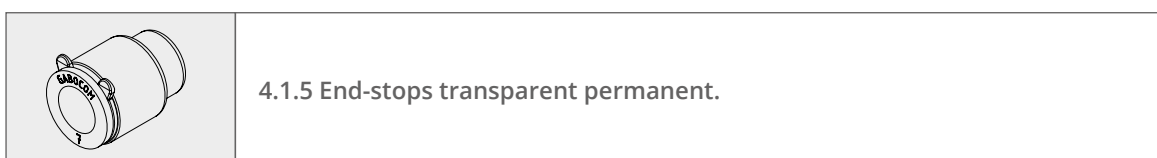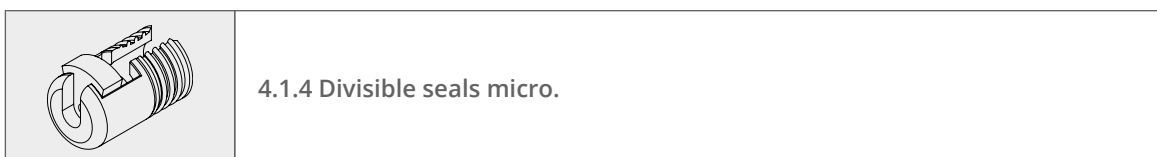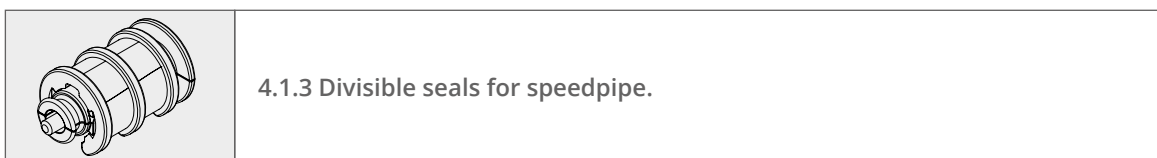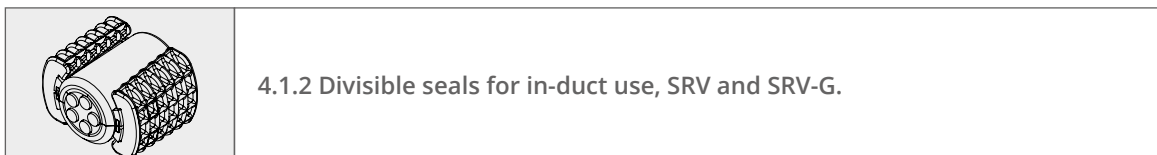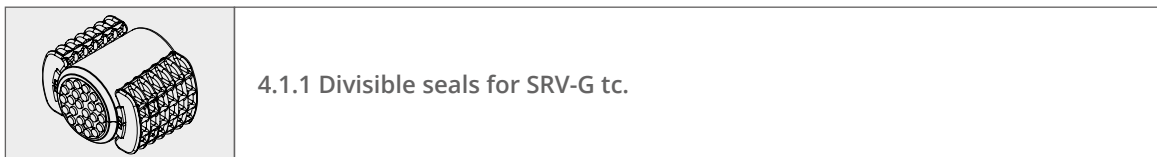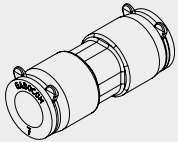
4.1.7 Transparent permanent connectors.
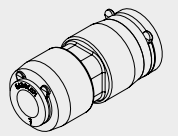
4.1.8 Transparent permanent reducers.
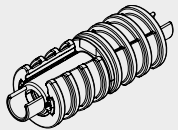
4.1.9 Divisible connectors.
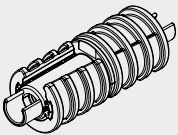
4.1.10 Divisible connectors with gas-stop.
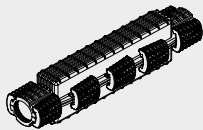
4.1.11 Bundle connectors.
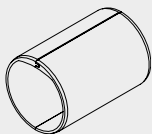
4.1.12 Inside stiffeners.

4.1.13 (Double-) outside stiffeners.

Accessories
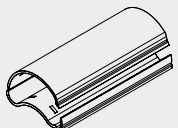
4.1.1　Divisible seals for SRV-G tc.
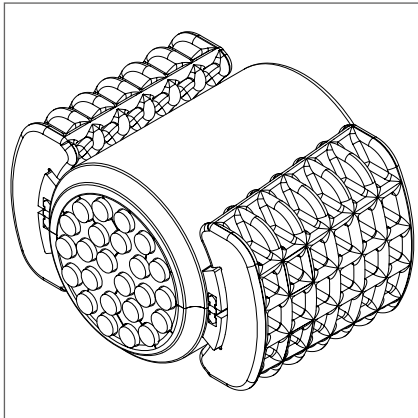
Divisible seals EZA-t

speedpipe bundles ground SRV-G tc with EZA-t for sealing.

SEALING SPEEDPIPE BUNDLES GROUND.

Sealing speedpipe bundles under ground with divisible seals, adjusted to all SRV-G tc: due to the variable gaskets bundles remain clean, dry and operational over decades. The divisible elements fix speedpipe subduct solutions against temperature-affected length modifications.

Features and benefits
- divisible
- reusable
- gas- and water-tight up to 0.5 bar

Type	Applications	Colour	Item no.
EZA-t_3x12	3 speedpipe Ø 12	Black (BK)	1237
EZA-t_3x14	3 speedpipe Ø 14	Black (BK)	1273
EZA-t_3x16	3 speedpipe Ø 16	Black (BK)	1905
EZA-t_3x20	3 speedpipe Ø 20	Black (BK)	1906
EZA-t_4x14	4 speedpipe Ø 14	Black (BK)	1857
EZA-t_4x16	4 speedpipe Ø 16	Black (BK)	1278
EZA-t_4x20	4 speedpipe Ø 20	Black (BK)	1282
EZA-t_5x14	5 speedpipe Ø 14	Black (BK)	1277
EZA-t-7x7	7 speedpipe Ø 7	Black (BK)	1236
EZA-t_7x10	7 speedpipe Ø 10	Black (BK)	1268
EZA-t_7x12	7 speedpipe Ø 12	Black (BK)	1591
EZA-t_7x14	7 speedpipe Ø 14	Black (BK)	1280
EZA-t_7x16	7 speedpipe Ø 16	Black (BK)	1281
EZA-t_8x7+1x12	8 speedpipe Ø 7 1 speedpipe Ø 12	Black (BK)	1589
EZA-t-12x7	12 speedpipe Ø 7	Black (BK)	1904
EZA-t_12x7+1x14	12 speedpipe Ø 7 1 speedpipe Ø 14	Black (BK)	2514
EZA-t_12x7+3x14	12 speedpipe Ø 7 3 speedpipe Ø 14	Black (BK)	2801
EZA-t_12x10	12 speedpipe Ø 10	Black (BK)	1276
EZA-t_12x12	12 speedpipe Ø 12	Black (BK)	2429
EZA-t_13x7+5x14	13 speedpipe Ø 7 5 speedpipe Ø 14	Black (BK)	4056
EZA-t_14x7	14 speedpipe Ø 7	Black (BK)	1267
EZA-t_18x7	18 speedpipe Ø 7	Black (BK)	1274
EZA-t_22x7+1x12	22 speedpipe Ø 7 1 speedpipe Ø 12	Black (BK)	1590
EZA-t_24x7	24 speedpipe Ø 7	Black (BK)	1275
EZA-t_24x7+1x14	24 speedpipe Ø 7 1 speedpipe Ø 14	Black (BK)	1279

All dimensions in mm. Subject to technical changes.

Accessories

4.1.2 Divisible seals for in-duct use, SRV and SRV-G.
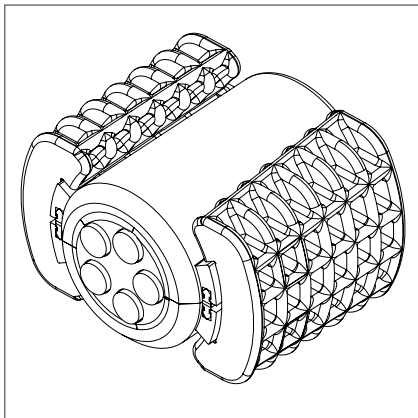
Divisible seals EZA-t

Divisible seals EZA-t seal ducts and speedpipe bundles.

SEALING SPEEDPIPE BUNDLES GROUND.

Sealing speedpipe bundles under ground with divisible seals, adjusted to all occupancy variants of PE-HD ducts: due to the variable gaskets bundles as well as protective ducts - either empty or occupied with speedpipe / cables - remain clean, dry and operational over decades. The divisible elements fix speedpipe subduct solutions against temperature-affected length modifications.

Features and benefits
• divisible
• reusable
• gas- and water-tight up to 0.5 bar

Type	Ø (D)	Applications	Cable Ø min	Cable Ø max	Colour	Item no.
EZA-t_32/K+2x10	32	0 - 2 speedpipe Ø 10	8	13.5	Black (BK)	3551
EZA-t_32/3x10	32	0 - 3 speedpipe Ø 10	-	-	Black (BK)	506
EZA-t_32/3x12	32	0 - 3 speedpipe Ø 12	-	-	Black (BK)	4078
EZA-t_32/4x10	32	0 - 4 speedpipe Ø 10	-	-	Black (BK)	4099
EZA-t_32/7x7	32	0 - 7 speedpipe Ø 7	-	-	Black (BK)	2355
EZA-t_40/K+2x7	40	0 - 2 speedpipe Ø 7	18.5	27.5	Black (BK)	1378
EZA-t_40/K+3x10	40	0 - 3 speedpipe Ø 10	8	18.5	Black (BK)	947
EZA-t_40/3x14	40	0 - 3 speedpipe Ø 14	-	-	Black (BK)	4101
EZA-t_40/3x16	40	0 - 3 speedpipe Ø 16	-	-	Black (BK)	42328
EZA-t_40/4x12	40	0 - 4 speedpipe Ø 12	-	-	Black (BK)	4083
EZA-t_40/K+5x7	40	0 - 5 speedpipe Ø 7	8	18.5	Black (BK)	42527
EZA-t_40/5x10	40	0 - 5 speedpipe Ø 10	-	-	Black (BK)	507
EZA-t_40/5x12	40	0 - 5 speedpipe Ø 12	-	-	Black (BK)	1640
EZA-t_40/7x10	40	0 - 7 speedpipe Ø 10	-	-	Black (BK)	4097
EZA-t_40/8x7+12-14	40	0 - 8 speedpipe Ø 7 0 - 1 speedpipe Ø 12 / 14	-	-	Black (BK)	42329
EZA-t_40/10x7	40	0 - 10 speedpipe Ø 7	-	-	Black (BK)	526
EZA-t_40/14x7	40	0 - 14 speedpipe Ø 7	-	-	Black (BK)	4821
EZA-t_50/K+2x7	50	0 - 2 speedpipe Ø 7	18.5	27.5	Black (BK)	1379
EZA-t_50/K+3x10	50	0 - 3 speedpipe Ø 10	16	25.5	Black (BK)	3550
EZA-t_50/3x20	50	0 - 3 speedpipe Ø 20	-	-	Black (BK)	1407
EZA-t_50/4x16	50	0 - 4 speedpipe Ø 16	-	-	Black (BK)	42330
EZA-t_50/K+5x10	50	0 - 5 speedpipe Ø 10	8	18.5	Black (BK)	3545
EZA-t_50/K+5x12	50	0 - 5 speedpipe Ø 12	8	18.5	Black (BK)	3553
EZA-t_50/5x14	50	0 - 5 speedpipe Ø 14	-	-	Black (BK)	1101
EZA-t_50/K+7x7	50	0 - 7 speedpipe Ø 7	8	18.5	Black (BK)	42125
EZA-t_50/16x7+3x12	50	0 - 7 speedpipe Ø 7 0 - 3 speedpipe Ø 12	-	-	Black (BK)	2195
EZA-t_50/7x12	50	0 - 7 speedpipe Ø 12	-	-	Black (BK)	4090
EZA-t_50/8x10	50	0 - 8 speedpipe Ø 10	-	-	Black (BK)	5698
EZA-t_50/9x12	50	0 - 9 speedpipe Ø 12	-	-	Black (BK)	5091
EZA-t_50/10x7+12-14	50	0 - 10 speedpipe Ø 7 0 - 1 speedpipe Ø 12 / 14	-	-	Black (BK)	3552
EZA-t_50/12x10	50	0 - 12 speedpipe Ø 10	-	-	Black (BK)	5085
EZA-t_50/14x7	50	0 - 14 speedpipe Ø 7	-	-	Black (BK)	497
EZA-t_50/18x7	50	0 - 18 speedpipe Ø 7	-	-	Black (BK)	42200
EZA-t_50/22x7+1x12	50	0 - 22 speedpipe Ø 7 0 - 1 speedpipe Ø 12	-	-	Black (BK)	42331
EZA-t_50/24x7	50	0 - 24 speedpipe Ø 7	-	-	Black (BK)	5080
EZA-t_63/4x20	63	0 - 4 speedpipe Ø 20	-	-	Black (BK)	1408
EZA-t_63/7x12	63	0 - 7 speedpipe Ø 12	-	-	Black (BK)	1965
EZA-t_63/7x14	63	0 - 7 speedpipe Ø 14	-	-	Black (BK)	1072
EZA-t_63/7x16	63	0 - 7 speedpipe Ø 16	-	-	Black (BK)	1199
EZA-t_63/24x7+14-16	63	0 - 24 speedpipe Ø 7 0 - 1 speedpipe Ø 14 / 16	-	-	Black (BK)	1071

All dimensions in mm. Subject to technical changes.

Accessories

4.1.3 Divisible seals for speedpipe.
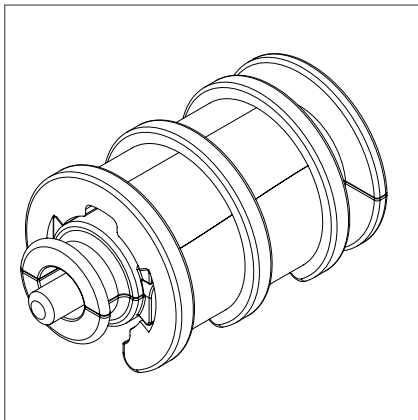

Divisible seals EZA-t

Divisible seals EZA-t are suitable for sealing unoccupied and occupied speedpipe.

SEALING WITH OR WITHOUT FIBRE OPTIC CABLE.

Tensile and reusable: the divisible elements are sealing occupied or empty speedpipe against gas and water up to 0.5 bar. The integrated safety valve opens before a blowing in pressure of 10 bar has been reached. They can be installed fast and easy and without special equipment.

Features and benefits
• gas- and water-tight up to 0.5 bar
• inclusive guiding for fibre optic cables
• reusable
• sealing empty and occupied speedpipe
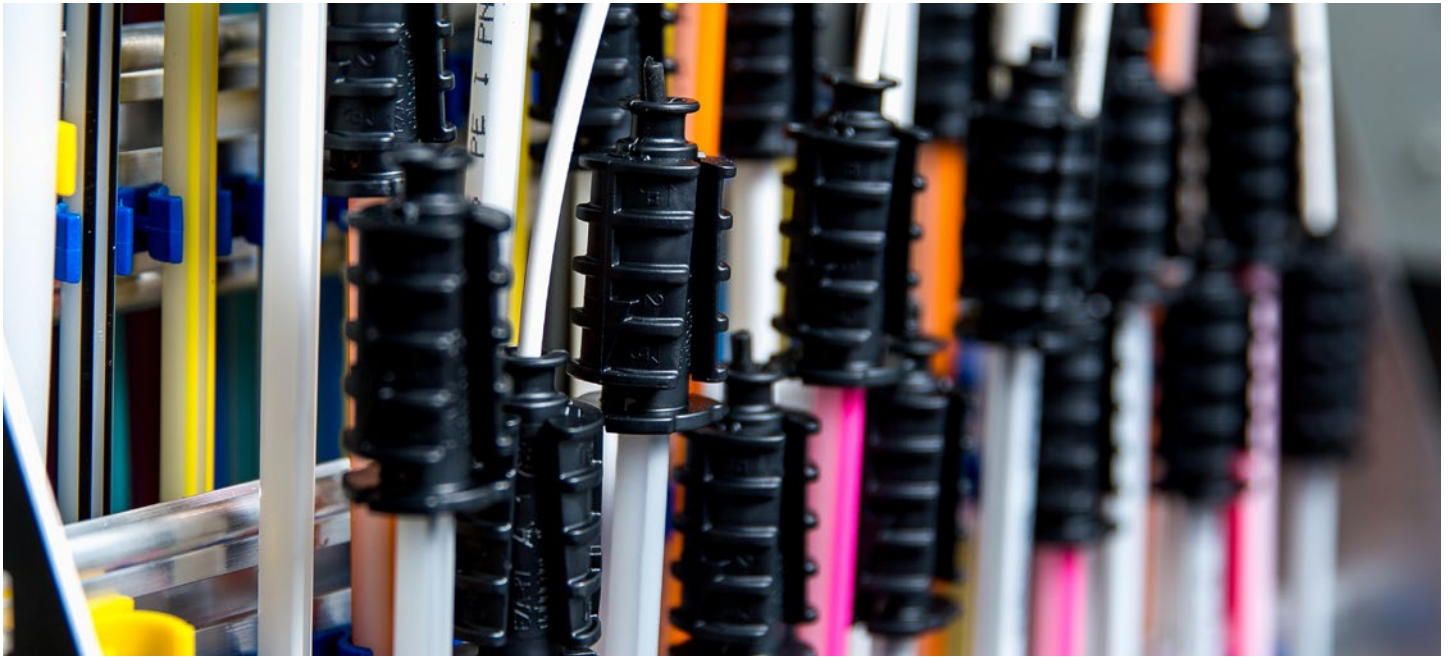
Type	Ø (D)	Cable Ø min	Cable Ø max	Colour	Item no.
EZA-t_7/0.8-2.5	7	0.8	2.5	Black (BK)	4136
EZA-t_7/2.0-4.0	7	2	4	Black (BK)	4135
EZA-t_10/0.8-2.5	10	0.8	2.5	Black (BK)	3477
EZA-t_10/1.8-3.5	10	1.8	3.5	Black (BK)	2914
EZA-t_10/3.0-5.0	10	3	5	Black (BK)	1348
EZA-t_10/5.0-6.5	10	5	6.5	Black (BK)	481
EZA-t_12/1.8-3.5	12	1.8	3.5	Black (BK)	2515
EZA-t_12/3.0-5.0	12	3	5	Black (BK)	1352
EZA-t_12/5.0-6.5	12	5	6.5	Black (BK)	1360
EZA-t_12/6.5-8.0	12	6.5	8	Black (BK)	1365
EZA-t_12/7.5-8.5	12	7.5	8.5	Black (BK)	3478
EZA-t_14/3.0-5.0	14	3	5	Black (BK)	10341
EZA-t_14/5.0-6.5	14	5	6.5	Black (BK)	5405
EZA-t_14/6.5-8.0	14	6.5	8	Black (BK)	5414
EZA-t_14/8.0-9.5	14	8	9.5	Black (BK)	1003
EZA-t_16/3.0-5.0	16	3	5	Black (BK)	3479
EZA-t_16/5.0-6.5	16	5	6.5	Black (BK)	3480
EZA-t_16/6.5-8.0	16	6.5	8	Black (BK)	42324
EZA-t_16/8.0-9.5	16	8	9.5	Black (BK)	42325
EZA-t_16/9.5-11.0	16	9.5	11	Black (BK)	42326
EZA-t_20/5.0-6.5	20	5	6.5	Black (BK)	3481
EZA-t_20/6.5-8.0	20	6.5	8	Black (BK)	3473
EZA-t_20/8.0-10.5	20	8	10.5	Black (BK)	1350
EZA-t_20/10.5-13.0	20	10.5	13	Black (BK)	1353

All dimensions in mm. Subject to technical changes.

Accessories

4.1.4 Divisible seals micro.
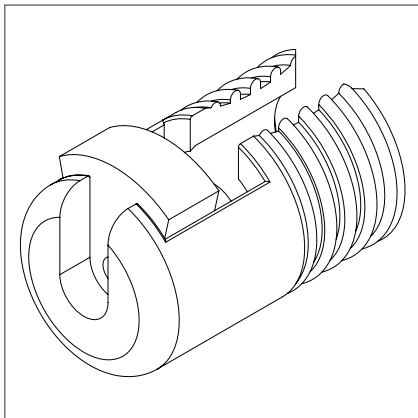
Divisible seals EZA-t micro
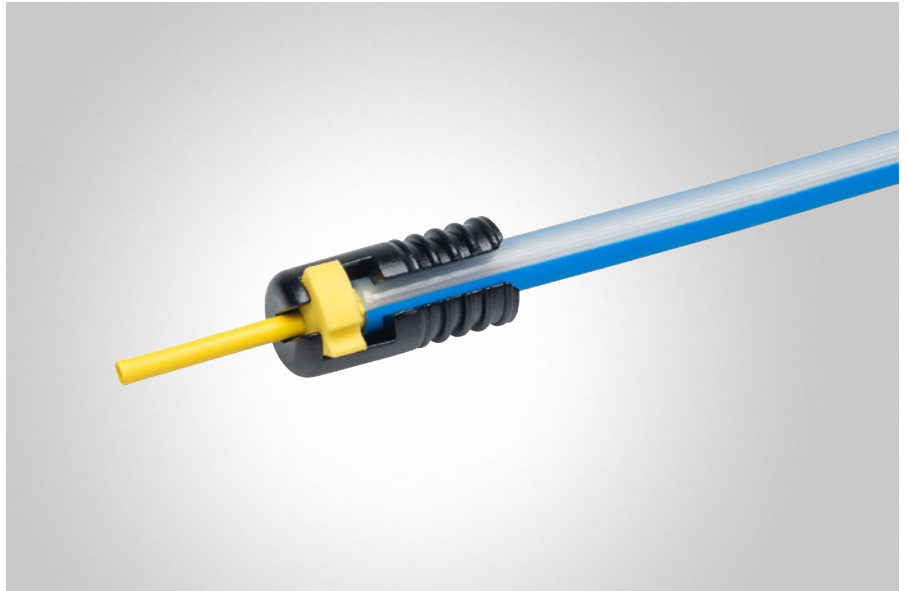
Divisible seals EZA-t micro are suitable for sealing speedpipes occupied by cables.

COMPLETES OUR PROOFEN EZA-T.

With the separable single-pull seal, micro pipes can be quickly and safely sealed gas- and watertight. Optimum use of limited space: The perfect supplement for tight space conditions in cable distributors. The sealing rubber is simply placed over the fibre optic cable, afterwards it is fixed with the plastic housing and the complete EZA-t micro is pushed onto the speedpipe. Individual sealing areas can easily be distinguished by the different collors of the sealing rubber.

Features and benefits
- gas- and water-tight up to 0.5 bar
- tool-less installation
- optimally suited for retrofitting
- perfect supplement for tight space conditions in cable distributors
- suitable for speedpipe ground 7x1.5 and 10x2.0

Type	Ø (D)	Cable Ø min	Cable Ø max	Colour	Item no.
EZA-t_5/0.5-1.0_micro	5	0.5	1	Red (RD), Black (BK)	3882
EZA-t_5/1.0-1.5_micro	5	1.0	1.5	Green (GN), Black (BK)	3883
EZA-t_5/1.5-1.8_micro	5	1.5	1.8	Blue (BU), Black (BK)	3884
EZA-t_5/1.9-2.2_micro	5	1.9	2.2	Yellow (YE), Black (BK)	3885
EZA-t_5/2.3-2.5_micro	5	2.3	2.5	White (WH), Black (BK)	3886
EZA-t_7/0.5-1.0_micro	7	0.5	1	Red (RD), Black (BK)	3860
EZA-t_7/1.0-1.5_micro	7	1	1.5	Green (GN), Black (BK)	3861
EZA-t_7/1.5-2.0_micro	7	1.5	2	Blue (BU), Black (BK)	3862
EZA-t_7/2.0-2.5_micro	7	2	2.5	Yellow (YE), Black (BK)	3863
EZA-t_7/2.5-3.0_micro	7	2.5	3	White (WH), Black (BK)	3864
EZA-t_8/0.5-1.0_micro	8	0.5	1	Red (RD), Black (BK)	3872
EZA-t_8/1.0-1.5_micro	8	1	1.5	Green (GN), Black (BK)	3873
EZA-t_8/1.5-2.0_micro	8	1.5	2	Blue (BU), Black (BK)	3879
EZA-t_8/2.0-2.5_micro	8	2	2.5	Yellow (YE), Black (BK)	3880
EZA-t_8/2.5-3.0_micro	8	2.5	3	White (WH), Black (BK)	3881
EZA-t_10/1.5-2.0_micro	10	1.5	2	Blue (BU), Black (BK)	3865
EZA-t_10/2.0-2.5_micro	10	2	2.5	Yellow (YE), Black (BK)	3866
EZA-t_10/2.5-3.0_micro	10	2.5	3	White (WH), Black (BK)	3868
EZA-t_10/3.0-3.5_micro	10	3	3.5	Grey (GY), Black (BK)	3869
EZA-t_10/3.5-4.0_micro	10	3.5	4	Brown (BN), Black (BK)	3870
EZA-t_10/4.0-4.5_micro	10	4	4.5	Violet (VT), Black (BK)	3871

All dimensions in mm. Subject to technical changes.

Accessories

4.1.5 End-stops transparent permanent.
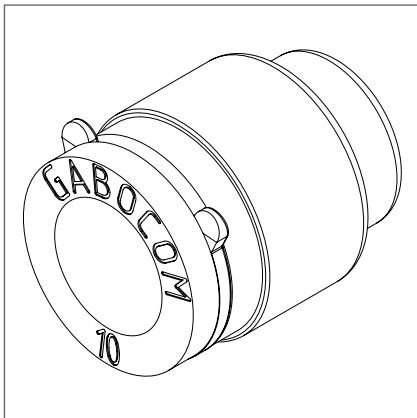
End-stops ES

Transparent permanent end-stops ES seal speedpipe gas- and water-tight.

SECURELY LOCK SPEEDPIPE ENDS AND RE-OPEN THEM EASILY.

Tensile and buriable: The cover of the speedpipe ends protects the entire duct system against the penetration of water, dirt and gas. The end plug itself is gas- and water-tight up to 0.5 bar. Mounted on the speedpipe by simply sliding it up, the end plug as easily is removed by opening the locking ring.

Features and benefits
- gas- and water-tight up to 0.5 bar
- resistant to tensile and easily and quickly installed
- applicable for direct burying

Type	Ø (D)	Colour	Item no.
ES_7	7	Transparent (CL)	2282
ES_10	10	Transparent (CL)	2283
ES_12	12	Transparent (CL)	2284
ES_14	14	Transparent (CL)	2285
ES_16	16	Transparent (CL)	2286
ES_20	20	Transparent (CL)	2287

All dimensions in mm. Subject to technical changes.

4.1.6 Identification labels with microduct end-caps.
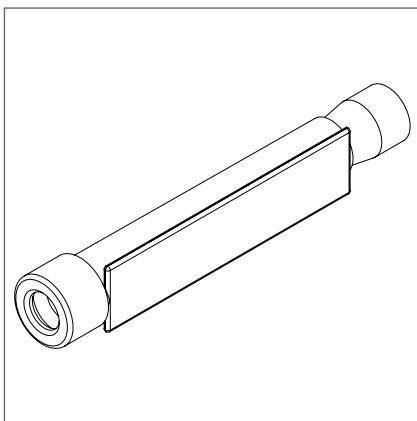
Identification labels with microduct end-caps KmR

Identification labels with end-caps KmR are used for labeling speedpipe.

MARKING AND SEALING OF SPEEDPIPE.

Sealing and identifying in just one step: empty speedpipe - without any fibre optics - are sealed gas- and water-tight up to 0.5 bar due to the duct plug. Before the blowing-in process the protective cap is pulled off and the identification label remains on the end of the speedpipe in the distributor.

Features and benefits
- gas- and water-tight up to 0.5 bar
- easily and quickly installed

Type	Ø (D)	Colour	Item no.
KmR_7	7	White (WH), Orange (OG)	1094
KmR_10	10	White (WH), Pink (PK)	998
KmR_12	12	White (WH), Green-Yellow (GNYE)	1059
KmR_14	14	White (WH), Orange (OG)	1150
KmR_16	16	White (WH), Turquoise (TQ)	1010
KmR_20	20	White (WH), Pink (PK)	4043

All dimensions in mm. Subject to technical changes.

Accessories

4.1.7 Transparent permanent connectors.
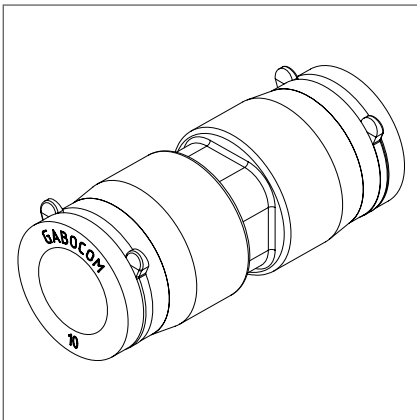
Transparent permanent connectors
DSM 10

Transparent permanent connectors DSM connect speedpipe.

CONNECT TWO SPEEDPIPE - ALSO DIRECTLY BURIED.

Transparent permanent connectors are tensile, directly buriable and pressure-tight up to 15 bar (tested up to 30 minutes). By means of the transparent connectors, two speedpipe of the same type can be connected. The high range that is reached when blowing in fibre optic cables into speedpipe remains unaffected. Quickly and easily assembled, the accessory can be separated from the speedpipe by removing the locking ring.

Features and benefits
- gas- and water-tight up to 0.5 bar
- pressure-tight up to 15 bar (tested up to 30 minutes)
- resistant to tensile and easily and quickly installed
- applicable for direct burying

Type	Ø (D)	Colour	Item no.
DSM_7_transparent_permanent	7	Transparent (CL)	2272
DSM_10_transparent_permanent	10	Transparent (CL)	2273
DSM_12_transparent_permanent	12	Transparent (CL)	2274
DSM_14_transparent_permanent	14	Transparent (CL)	2275
DSM_16_transparent_permanent	16	Transparent (CL)	2276
DSM_20_transparent_permanent	20	Transparent (CL)	2277

All dimensions in mm. Subject to technical changes.

4.1.8 Transparent permanent reducers.
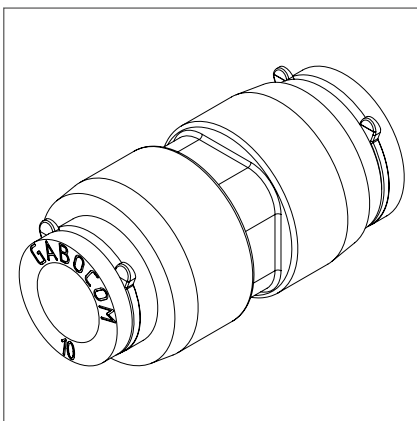
Reducers RSM

Transparent permanent reducers RSM connect speedpipe with the same inner diameter.

TWO SPEEDPIPE WITH THE SAME INNER DIAMETER CAN BE CONNECTED.

Transparent permanent reducers are tensile, directly buriable and pressure-tight up to 15 bar (tested up to 30 minutes). By means of the transparent reducers two speedpipe with the same inner diameter can be connected. The high range that is reached when blowing in fibre optic cables into speedpipe remains unaffected. Quickly and easily assembled, the accessory can be separated from the speedpipe by removing the locking ring.

Features and benefits
- gas- and water-tight up to 0.5 bar
- pressure-tight up to 15 bar (tested up to 30 minutes)
- resistant to tensile and easily and quickly installed
- applicable for direct burying

Type	Ø (D)	Ø (D2)	Colour	Item no.
RSM_10-7	10	7	Transparent (CL)	2278
RSM_12-10	12	10	Transparent (CL)	2279
RSM_14-12	14	12	Transparent (CL)	2280
RSM_16-14	16	14	Transparent (CL)	2281
RSM_20-16	20	16	Transparent (CL)	3842

All dimensions in mm. Subject to technical changes.

Accessories

4.1.9 Divisible connectors.
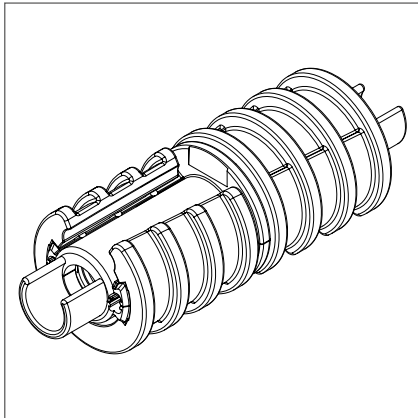
Divisible connector EBM

Divisible connectors EBM connect occupied speedpipe.

SAVING TIME BLOWING FIBRE OPTIC CABLE INTO SPEEDPIPE.

Connectors for the continuation of the blowing-in processes: as soon as the maximum blowing-in length has been reached the speedpipe is opened and the blowing-in process is continued in exactly this position. The divisible connectors permanently connect the occupied speedpipe up to 0.5 bar and - for jetting in the complete length - gas- and water-tight up to 10 bar for 30 minutes.

Features and benefits
• permanent gas- and water-tight up to 0.5 bar
• for a duration of 30 minutes pressure-tight up to 10 bar
• resistant to tensile for all current practical applications
• applicable for direct burying
• easily and quickly installed

Type	Ø (D)	Colour	Item no.
EBM_7	7	Black (BK)	10753
EBM_10	10	Black (BK)	10786
EBM_12	12	Black (BK)	10787
EBM_14	14	Black (BK)	10788
EBM_16	16	Black (BK)	1065
EBM_20	20	Black (BK)	2516

All dimensions in mm. Subject to technical changes.

Accessories
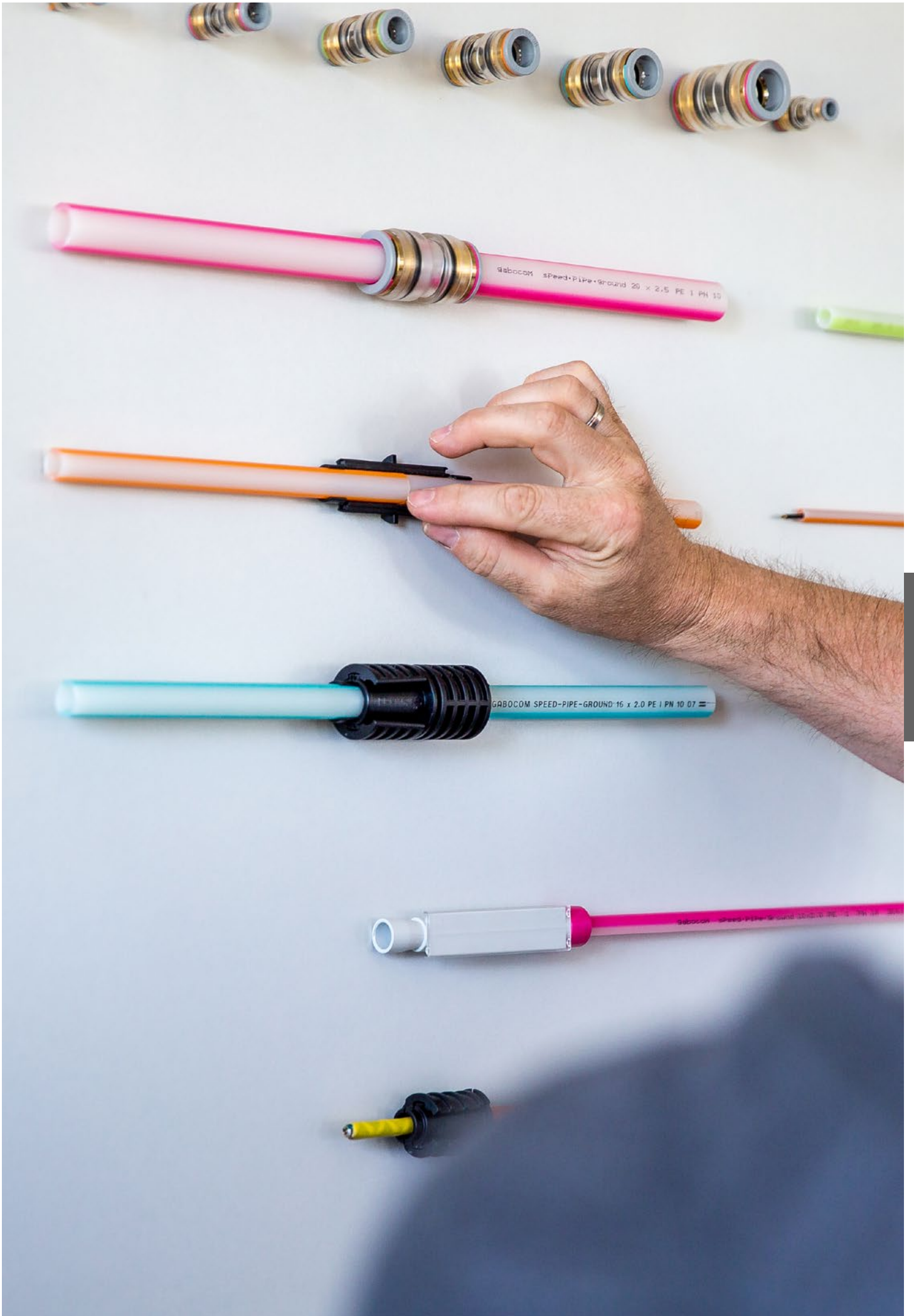
4.1.10   Divisible connectors with gas-stop.
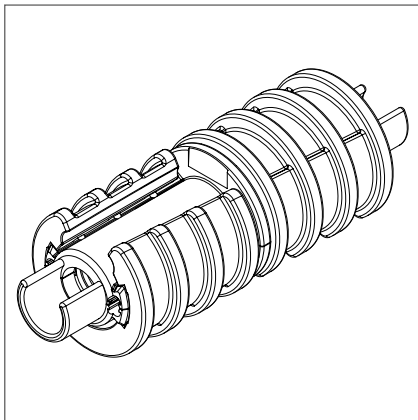
Divisible connector with gas-stop
EBM-GS
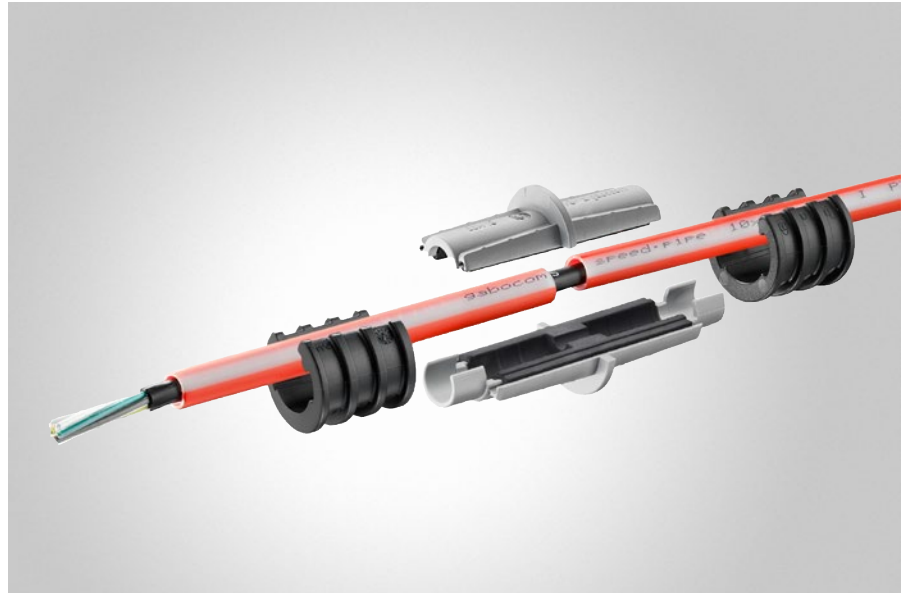
Divisible connectors with gas-stop EBM-GS connect occupied speedpipe.

SEALING EMPTY AND OCCUPIED SPEEDPIPE.

The divisible connector with gas-stop connects alreay occupied speedpipe. Especially ahead of house lead-ins and ground connectors the integraded gas-stop pays off: It serves for the gas- and water-tight sealing of speedpipe up to a pressure of 0.5 bar also in longitudinal direction. Buildings and sleeves remain dry and safe.

Features and benefits
- sealing speedpipe against gas and water up to 0.5 bar (also longitudinally)
- resistant to tensile for all current practical applications
- applicable for direct burying
- easily and quickly installed

Type	Ø (D)	Ø (D2)	Cable Ø min	Cable Ø max	Colour	Item no.
EBM-GS_7-0.8-4.0	7	-	0.8	4	Black (BK)	42415
EBM-GS_10-1.8-3.5	10	-	1.8	3.5	Black (BK)	42450
EBM-GS_10-3.0-5.0	10	-	3	5	Black (BK)	42451
EBM-GS_10-5.0-6.5	10	-	5	6.5	Black (BK)	42452
EBM-GS_12-3.0-5.0	12	-	3	5	Black (BK)	42447
EBM-GS_12-5.0-6.5	12	-	5	6.5	Black (BK)	42448
EBM-GS_12-6.5-8.0	12	-	6.5	8	Black (BK)	42449
EBM-GS_12-10-5.0-6.5	12	10	5	6.5	Black (BK)	1315
EBM-GS_14-5.0-6.5	14	-	5	6.5	Black (BK)	42445
EBM-GS_14-6.5-8.0	14	-	6.5	8	Black (BK)	42446
EBM-GS_16-6.5-8.0	16	-	6.5	8	Black (BK)	1068
EBM-GS_16-8.0-9.5	16	-	8	9.5	Black (BK)	1069
EBM-GS_16-9.5-11.0	16	-	9.5	11	Black (BK)	1070

All dimensions in mm. Subject to technical changes.

Accessories

4.1.11 Bundle connectors.
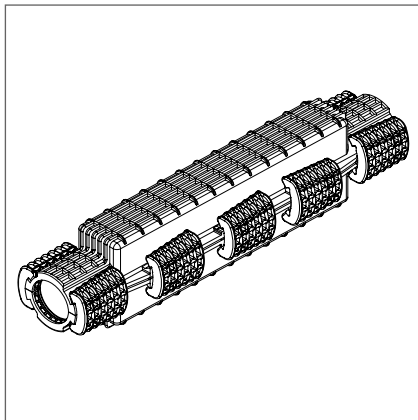
speedpipe bundle connectors SRV-M
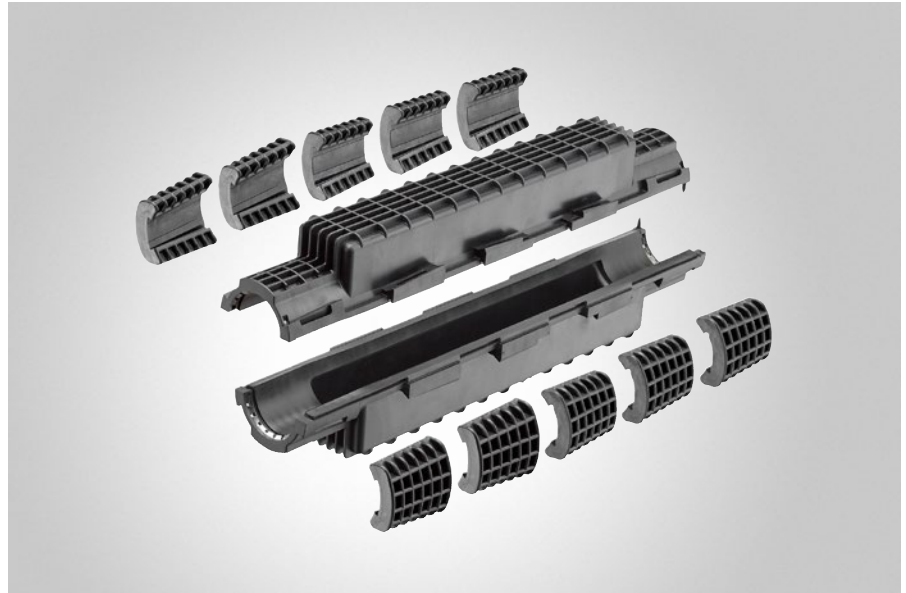
speedpipe bundle connectors SRV-M for repairing light damage.

CONNECTION OF SPEEDPIPE BUNDLES FOR FIBRE OPTICS IN THE TRENCH - OR AT THE TRANSITION FROM DUCTS TO DIRECT BURYING.

The SRV-M and SRV-M MAXI serve for the pressure-tight protection of the connecting points of two buried speedpipe bundles against the penetration of gas and water through the duct gaps. In case of a in-duct solution with jacket pipes up to Ø 63 mm or at the transition to a buried bundle, the connectors connect the complete duct system gas-, pressure- and water-tight as well. The split SRV-M MAXI for SRV-G tc are suitable for the pressure-tight connection of speedpipe bundles ground SRV-G tc.

Features and benefits
• gas- and water-tight up to 0.5 bar
• reusable and applicable for direct burying
• to connect the speedpipe bundles ground SRV-G inside stiffeners SHi needed on both sides

Accessories

Type	Ø (D)	Ø (D2)	Applications	Length (L)	Colour	Item no.
SRV-M_MAXI_fuer_ SRV-G_tc_Gr._1	-	-	Application for SRV-G 7×7 tc, SRV-G 8×7 + 1×12 tc, SRV-G 12×7 tc, SRV-G 12×7 + 1×14 tc, SRV-G 12×7 + 3×14 tc, SRV-G 14×7 tc, SRV-G 18×7 tc, SRV-G 22×7 + 1×12 tc, SRV-G 24×7 tc, SRV-G 24×7 + 1×14 tc, SRV-G 7×10 tc, SRV-G 12×10 tc, SRV-G 12×10 + 1×16 tc, SRV-G 14×10 tc, SRV-G 3×12 tc, SRV-G 7×12 tc, SRV-G 3×14 tc, SRV-G 4×14 tc, SRV-G 5×14 tc, SRV-G 7×14 tc, SRV-G 7×14 + 1×20 tc, SRV-G 3×16 tc, SRV-G 4×16 tc, SRV-G 6×16 tc, SRV-G 7×16 tc, SRV-G 3×20 tc	550	Black (BK)	1704
SRV-M_MAXI_fuer_ SRV-G_tc_Gr._2	-	-	Application for SRV-G 12×12 tc, SRV-G 12×12 + 1×16 tc, SRV-G 10×14 tc, SRV-G 4×20 tc, SRV-G 5×20 tc	550	Black (BK)	2321
SRV-M_40	40	-	Application for tubes with max Ø 40 cm	455	Black (BK)	4853
SRV-M_50	50	-	Application for tubes with max Ø 50 cm	455	Black (BK)	4852
SRV-M_50_MAXI	50	-	Application for tubes with max Ø 50 cm	550	Black (BK)	1190
	50	-	Application for tubes with max Ø 50 cm	550	Black (BK)	1451
SRV-M_63_MAXI	63	-	Application for tubes with max Ø 63 cm	550	Black (BK)	1191
SRV-M_63-50_ MAXI	63	50	Application for tubes with max Ø 63-50 cm	550	Black (BK)	1358

All dimensions in mm. Subject to technical changes.

4.1.12 Inside stiffener.
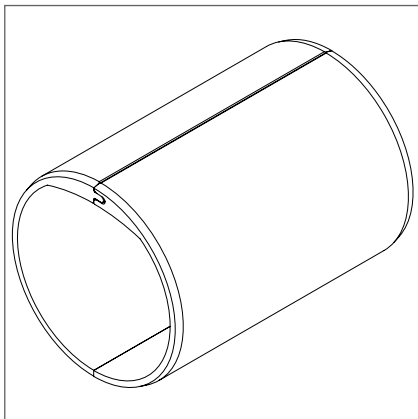
Inside stiffener SHi
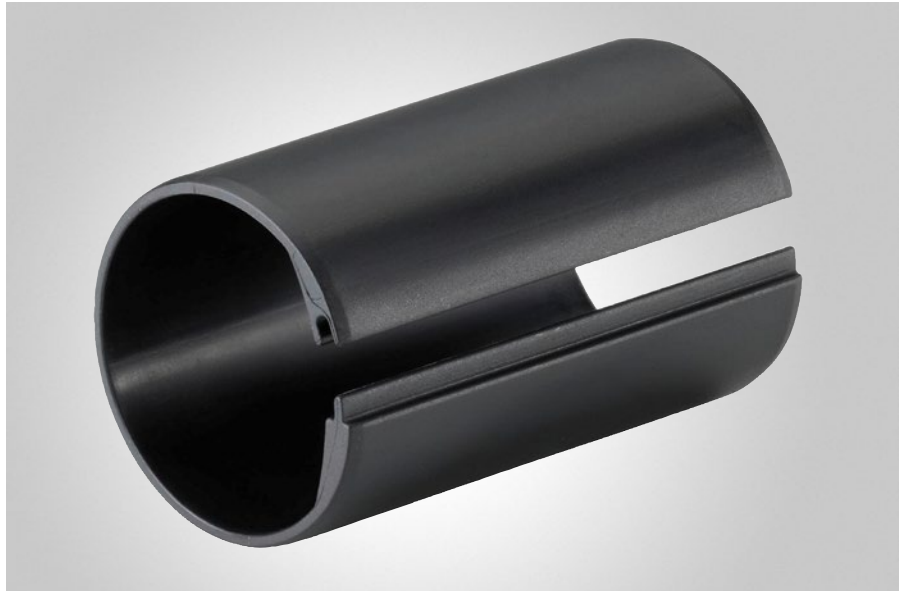
Stiffeners SHi for stiffening the outer sheath before mounting the EZA-t or bundle connector.

PROTECTION AND STIFFENING - ALL IN ONE.

Before assembling the divisible seals or bundle connectors the flexible jacket pipe of the speedpipe bundle SRV and SRV-G is strengthened with a stiffener. A round duct with a standardised diameter is the result. The clamping rings of the sealing elements gain traction without damaging internal speedpipe.

Type	Ø (D)	Colour	Item no.
SHi_32	32	Black (BK)	4857
SHi_40	40	Black (BK)	4863
SHi_50	50	Black (BK)	4547
SHi_63	63	Black (BK)	1066

All dimensions in mm. Subject to technical changes.

4.1.13 (Double-) outside stiffener.
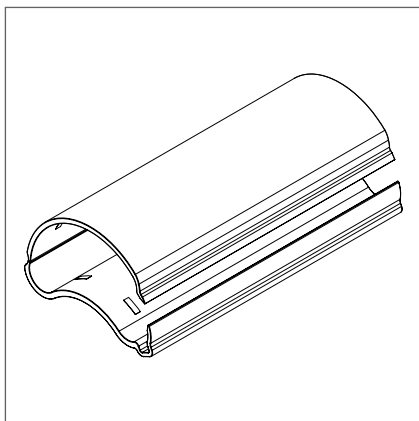
Outside stiffener SHa

(Double-) outside stiffeners SHa and DSHa are used for stiffening the outer sheath.

Accessories

PROTECTION AND STIFFENING FUNCTION ALL IN ONE.

The split outer stiffener SHa is used for outer stiffening of the jacket of the speedpipe SRV 50/8x10. The split double stiffener DSHa is used for the outer stiffening of the jackets of two SRV 50/8x10. Both versions are required in a protective pipe/cable protection pipe before the ADE/TDUX sealing element is installed. The accessories prevent the pressure of the TDUX from changing the shape of the internal speedpipe (ovalization). Fiber optic cables can still be blown in.

Type	Ø (D)	Colour	Item no.
DSHa_50	50	Black (BK)	4565
SHa_50	50	Black (BK)	4584

All dimensions in mm. Subject to technical changes.
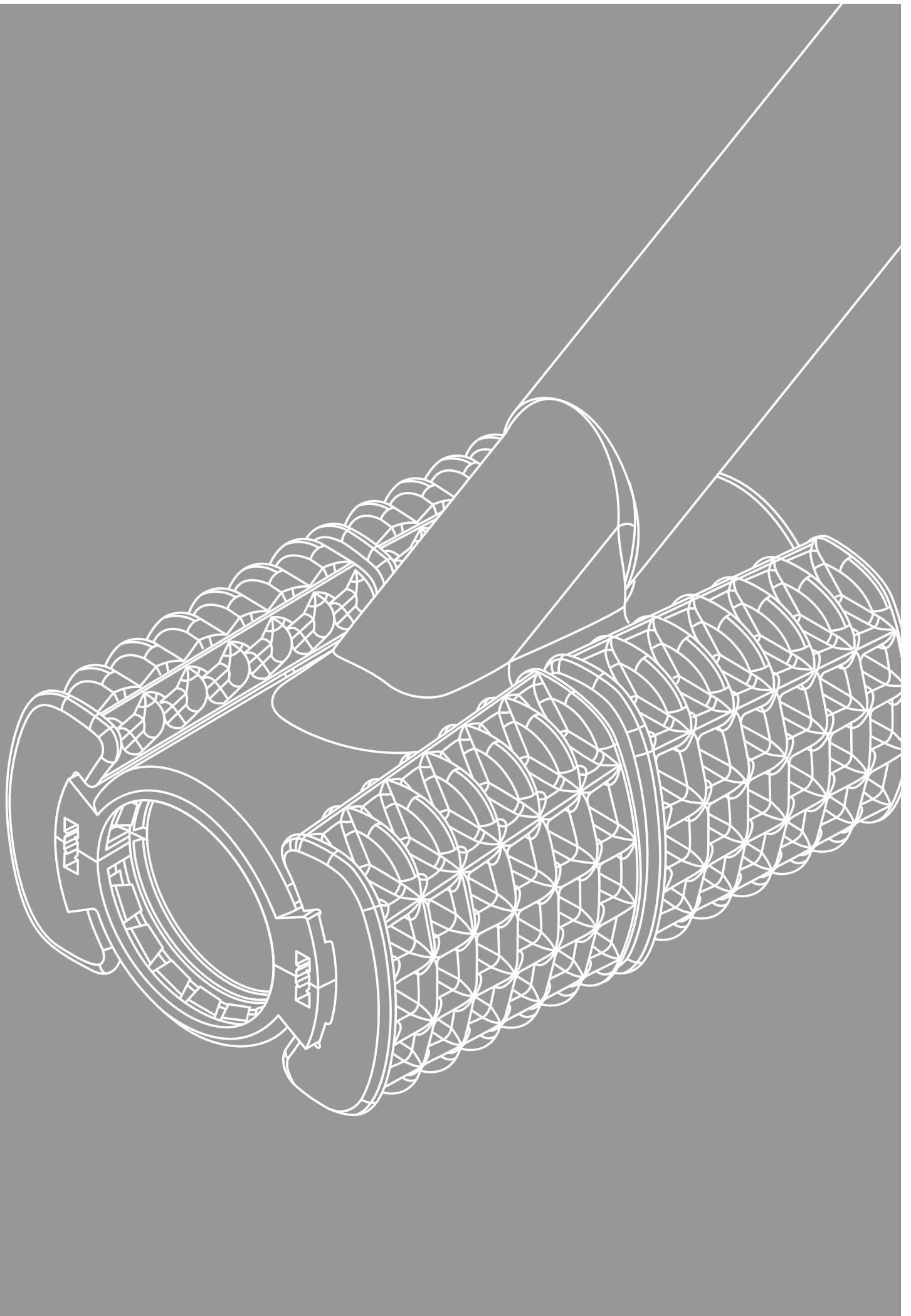
4.2 Branch supports.
For direct burying.

Avoid subsequent head holes: The branch supports lead you to the customer or distribution box in a safe bend.
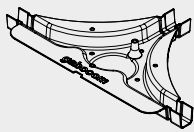
	4.2.1 Branch supports.
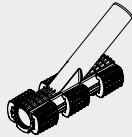
	4.2.2 Split duct tees.
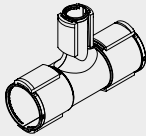
	4.2.3 Half-shell branch.

4.2.1 Branch supports.
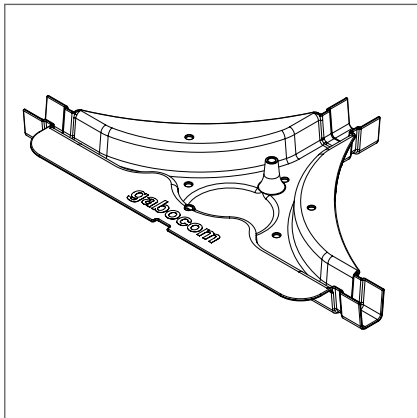
T-Branch Support TBS

Branch supports LBS and TBS with speedpipe bundle SRV-G tc

BRANCH-OFF SPEEDPIPE FROM A BUNDLE WITHOUT ANY RISK.

Single speedpipe ground can be branched off the speedpipe bundle ground in a safe bend to the customer or to the distribution box by using the T-branch-support TBS or the L-branchsupport LBS. The branch supports are connected with the speedpipe bundle ground and the branching speedpipe ground by means of cable straps. The use of a marking system like the markerpeg or the ball marker facilitates the subsequent localisation of the branch.

Features and benefits
• can be fitted with a ball marker or markerpeg
• minimum bending radius of the speedpipe is automatically maintained, ensuring safe blowing-in

Type	Colour	Item no.
TBS	Black (BK)	2423
LBS	Black (BK)	2330

All dimensions in mm. Subject to technical changes.

4.2.2 Split duct tees.
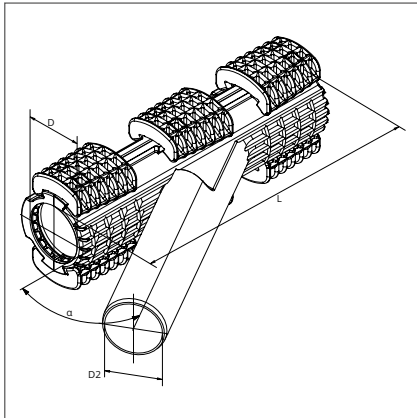
Branches HRMA

Branch off speedpipe or cable from a PE/PVC pipe with HRMA branches.

BRANCH OFF SAFELY.

Apertures of existing duct systems for branching off standard cables or internal speedpipe are closed safely and simply. Thus no manhole is necessary any more for branching off from a duct system. Install the branches wherever you want to minimize or optimize your routes. Due to the mechanical protection of the branch point you receive optimum results at blowing in fibre optic cables into the internal speedpipe even after decades.

Features and benefits
- gas- and water-tight up to 0.5 bar
- no interference with the other speedpipe or cables or the ongoing data transmissions during the interventions

Type	Ø (D)	Ø (D2)	Angle	Length (L)	Colour	Item no.
HRMA_32/32-30°	32	32	30 °	261	Black (BK)	42174
HRMA_40/32-30°	40	32	30 °	125	Black (BK)	1034
HRMA_40/40-90°	40	40	90 °	261	Black (BK)	10315
HRMA_50/32-30°	50	32	30 °	125	Black (BK)	486
HRMA_50/50-30°	50	50	30 °	261	Black (BK)	4621
HRMA_50/50-90°	50	50	90 °	261	Black (BK)	983
HRMA_110/50-30°-BK	110	50	30 °	300	Black (BK)	288

All dimensions in mm. Subject to technical changes.

4.2.3 Half-shell branch.
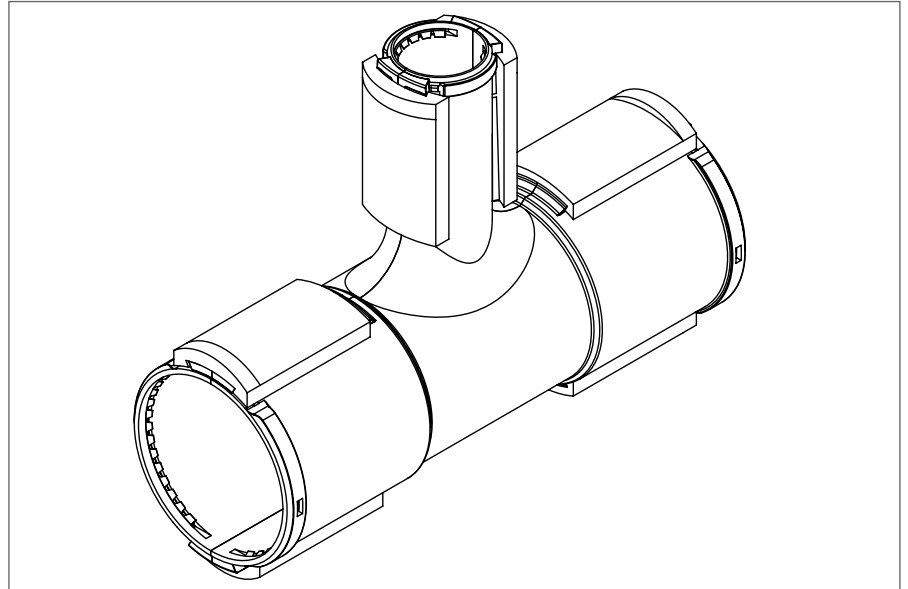
Half-shell branch HSA

EASY AND FAST ASSEMBLY.

The half shell branch HSA is used for passing through and branching cables. It is divided along its longitudinal axis and is tensile in the master as well as in the branching direction. The fitting is sand-tight and can easily and quickly be installed.

Type	Ø (D)	Ø (D2)	Angle	Length (L)	Colour	Item no.
HSA_110/50-90°	110	50	90 °	350	Black (BK)	12233

All dimensions in mm. Subject to technical changes.

Accessories
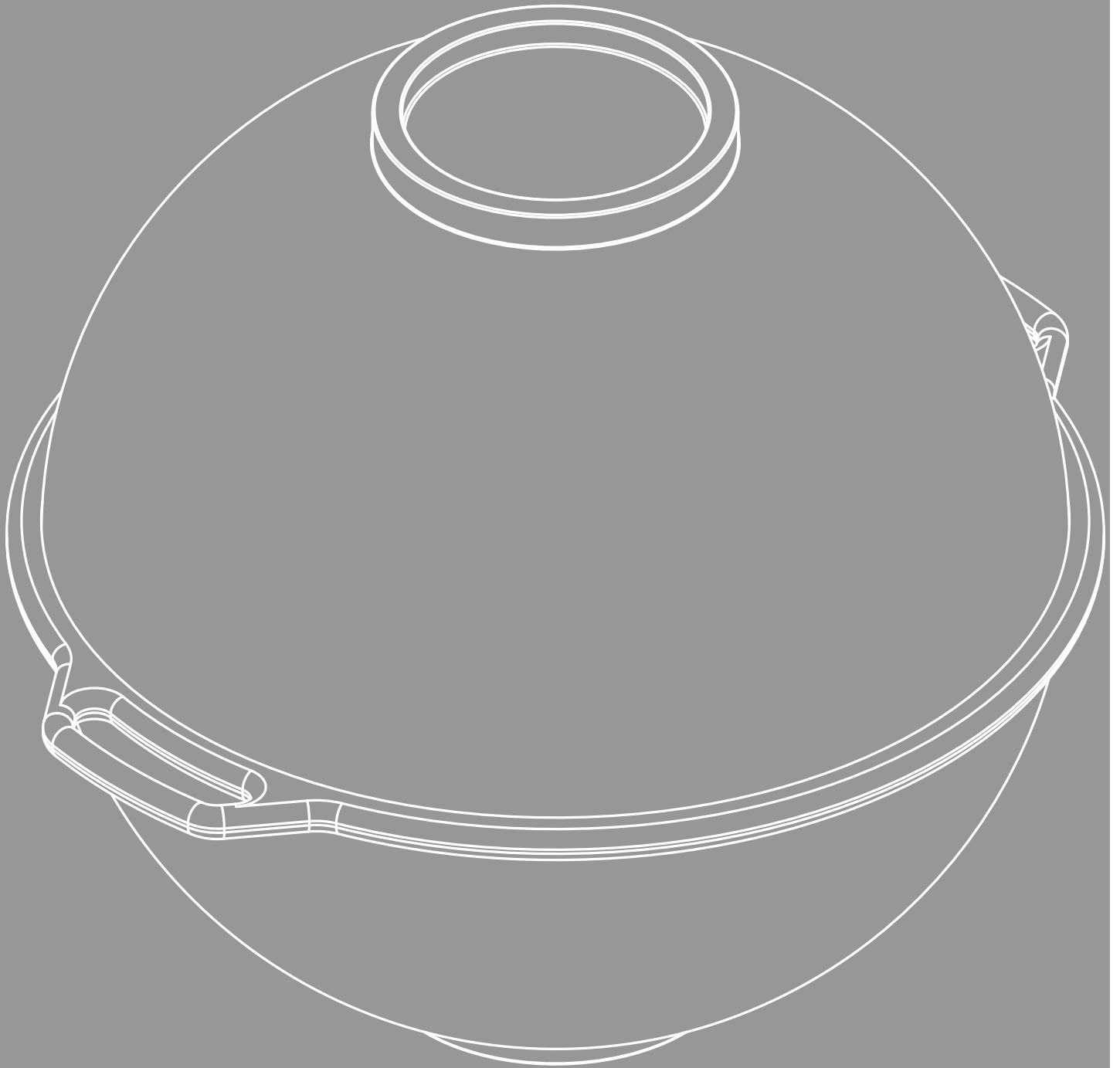
4.3 Marking systems.
For direct burying.

Using a marking system makes it easy to find branches again. Marking systems can be used to locate routes and branches.

	4.3.1 Markerpeg.

	4.3.2 Ball marker.

	4.3.3 Identification tapes.

Accessories
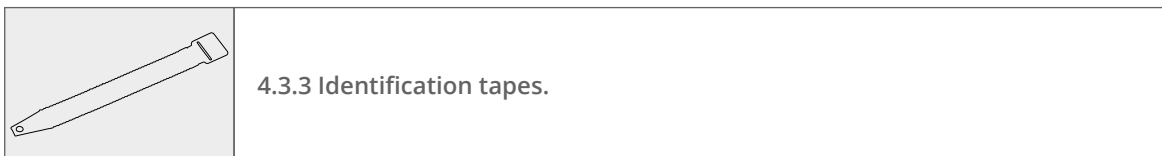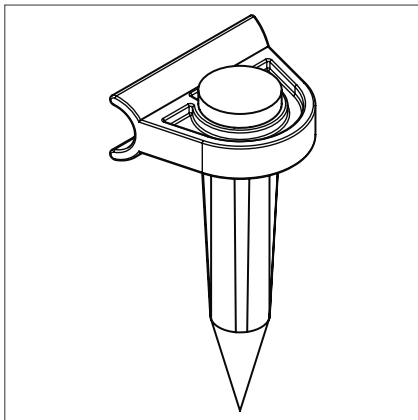
4.3.1 Markerpeg.

Markerpeg

Markerpeg with holder for precise and fast locating.

MAKE IT EASIER TO FIND EXISTING PIPE ROUTES.

The markerpeg can be placed along the track or at a breakout that needs to be found. The markerpeg should be put vertically in the ground. It can be mounted to the duct or microduct with the included holder.

Features and benefits
- locatability: vertical 1,5 - 2m; 45° -1m
- frequency: 101,4 kHz
- temperature range from -10 to 25 °C

Type	Applications	Colour	Item no.
Ortungsstift_mit_Halter	Markerpeg	Orange (OG), Red (RD)	2424

All dimensions in mm. Subject to technical changes.

4.3.2 Ball marker.
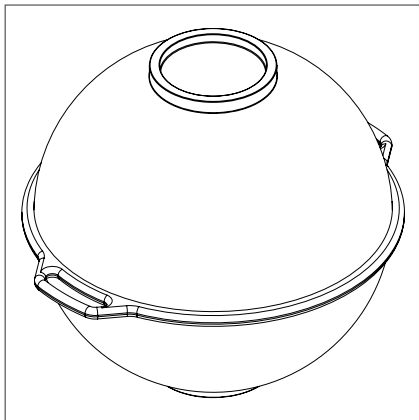
Marker Ball

Marker ball for precise and quick location.

PRECISE LOCATION OF ROUTE JUNCTIONS.

Ball Markers are buried at the most important points (e.g. house junctions, joints, etc.) when laying speedpipe or bundles along the route and can later be located quickly and precisely.

Features and benefits
- installation depth: 1,5 m
- self-levelling design for precise horizontal positioning
- passive antenna in a water-repellent polyethylene shell
- temperature range from -20 to 50 °C
- no external power supply needed

Type	Applications	Colour	Item no.
Kugelmarker	Marker ball	Orange (OG)	3484

All dimensions in mm. Subject to technical changes.

4.3.3 Identification tapes.

Identification tapes indicate buried speedpipe.

IDENTIFY SPEEDPIPE BUNDLES.

With the identification tapes, direct buried speedpipe and pipe bundles with diameters up to 60 mm can be differented by colour.

Features and benefits
- made from LD-PE
- available in all 12 DIN colours
- suitable for ground installation

Type	Applications	Colour	Item no.
Kennzeichnungsband	Identification tapes	Black (BK)	3815
	Identification tapes	Blue (BU)	3808
	Identification tapes	Brown (BN)	3812
	Identification tapes	Green (GN)	3807
	Identification tapes	Grey (GY)	3811
	Identification tapes	Orange (OG)	3814
	Identification tapes	Pink (PK)	3891
	Identification tapes	Red (RD)	3806
	Identification tapes	Turquoise (TQ)	3890
	Identification tapes	Violet (VT)	3813
	Identification tapes	White (WH)	3810
	Identification tapes	Yellow (YE)	3809

All dimensions in mm. Subject to technical changes.

Accessories
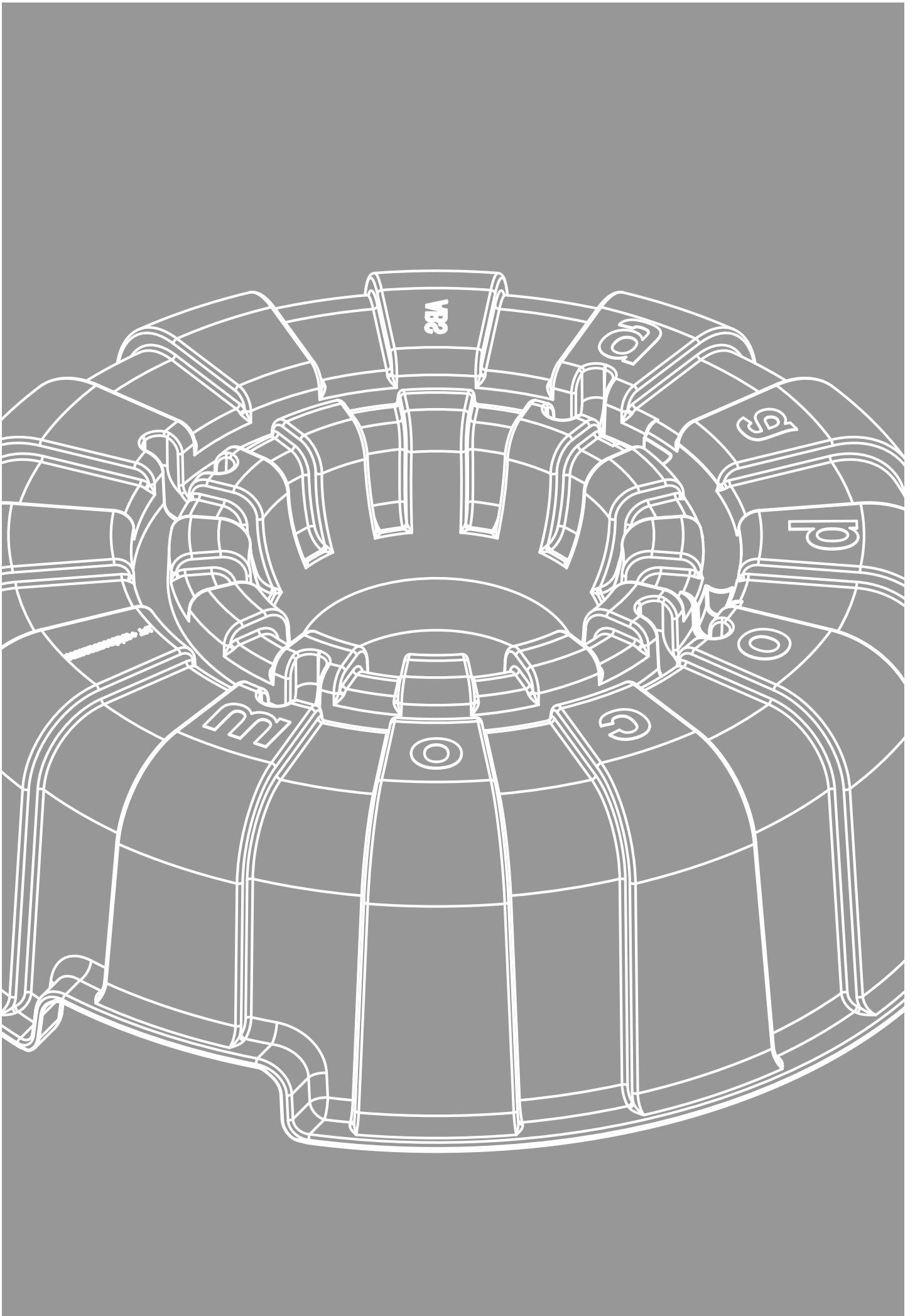
4.4 Protective elements.
For direct burying.

Safe protection of speedpipe and cables against damages. For facilitating the storage of excess length, gabocom has developed special protective elements.
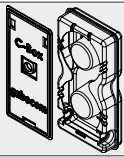
	4.4.1 Cable box.

	4.4.2 Protective sleeves.

	4.4.3 speedpipe box.

Accessories
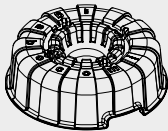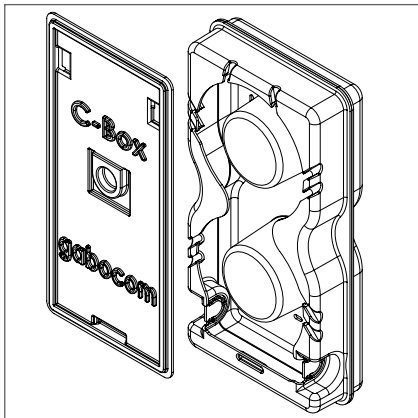
4.4.1 Cable box.

Cable Box C-Box

Cable boxes C-Box protect the excess length of micro-tube cables in the shaft from damage.

FOR EXCESS LENGTHS OF FIBRE OPTIC CABLES.

The cable box has been developed for excess lengths of fibre optic cables. It is easy to assemble and is locked with a cover. Thus the layed cables are protected agains damages.

Type	Configuration	Length (L)	Width (W)	Height (H)	Colour	Item no.
C-Box_Typ_A	30 m micro cable overlength	600	300.0	120	Black (BK)	91
C-Box_Typ_B	120 m micro cable overlength	650	680.0	160	Black (BK)	4088

All dimensions in mm. Subject to technical changes.

4.4.2 Corrugated protective pipes.

Corrugated protective pipes PPWR-t protect speedpipe in the shaft from damage.

DIVISIBLE PROTECTION FOR SPEEDPIPE.

The corrugated protective pipe is divided in longitudinal direction and protects speedpipe in the shaft against damages.

Type	Ø (D)	Length (L)	Colour	Item no.
PPWR-t_12	12	50 m	Black (BK)	1966
PPWR-t_40	40	25 m	Black (BK)	1913
PPWR-t_50	50	25 m	Black (BK)	1914

All dimensions in mm. Subject to technical changes.

4.4.3 speedpipe box.
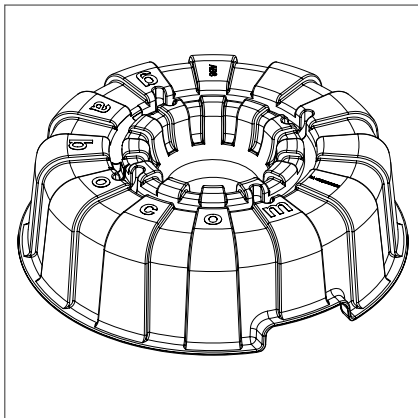
speedpipe box

speedpipe box as mechanical protection for excess lengths of speedpipe ground.

Accessories

FOR THE SAFE STORAGE OF SPEEDPIPE GROUND EXCESS LENGTHS.

The speedpipe box is a buriable storage for excess lengths. A bundle of up to 50 meters of speedpipe ground 7 x 1.5 (or 15 m of speedpipe ground 10 x 2.0) remains mechanically protected in the long run. The use of a marking system like for example a ball marker makes the later localization easier.

Features and benefits
• can be fitted with a ball marker or markerpeg
• Outer dimensions: Ø = 340 mm; hight = 105 mm

Type	Colour	Item no.
speedpipe_Box	Black (BK)	2609

All dimensions in mm. Subject to technical changes.
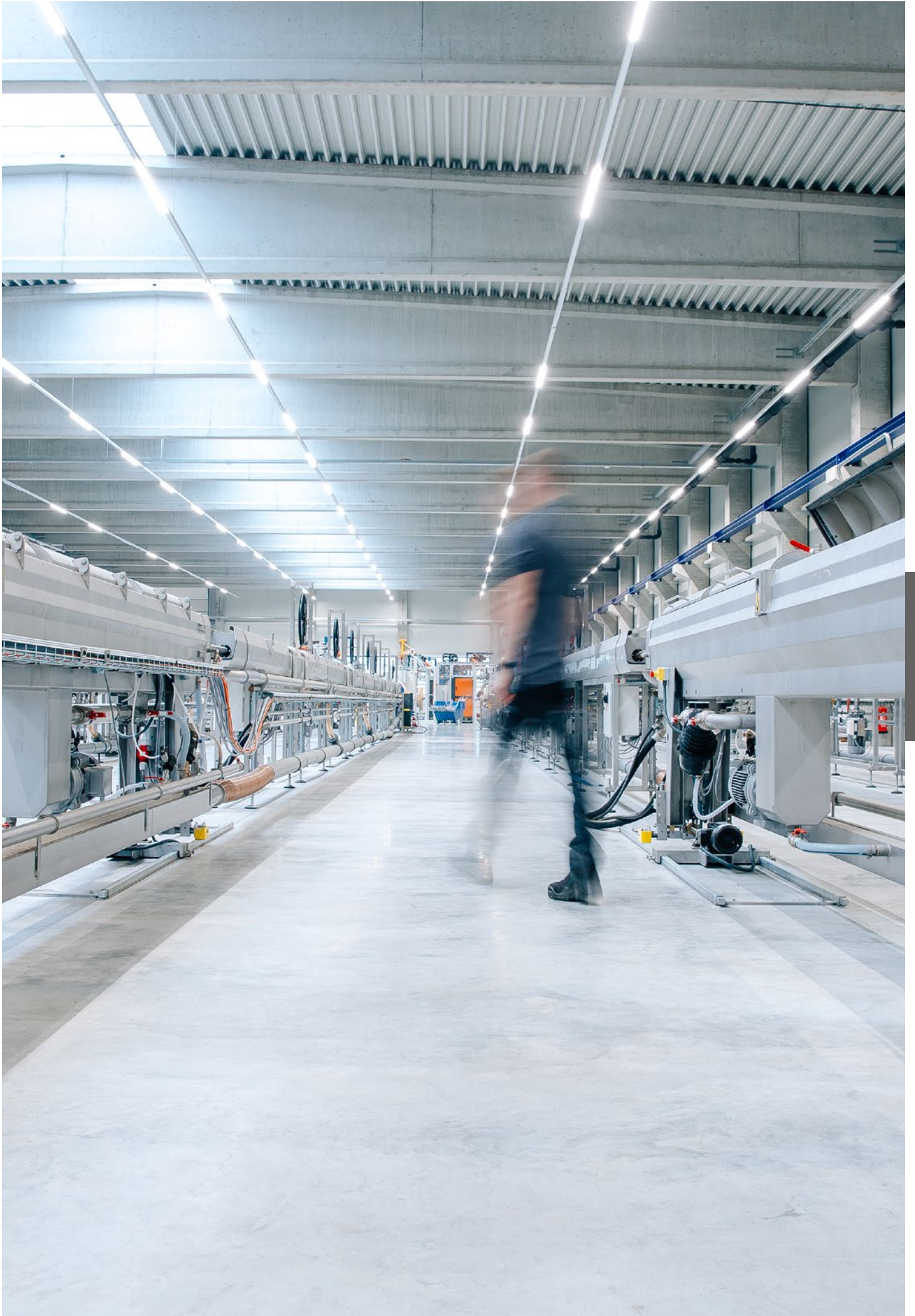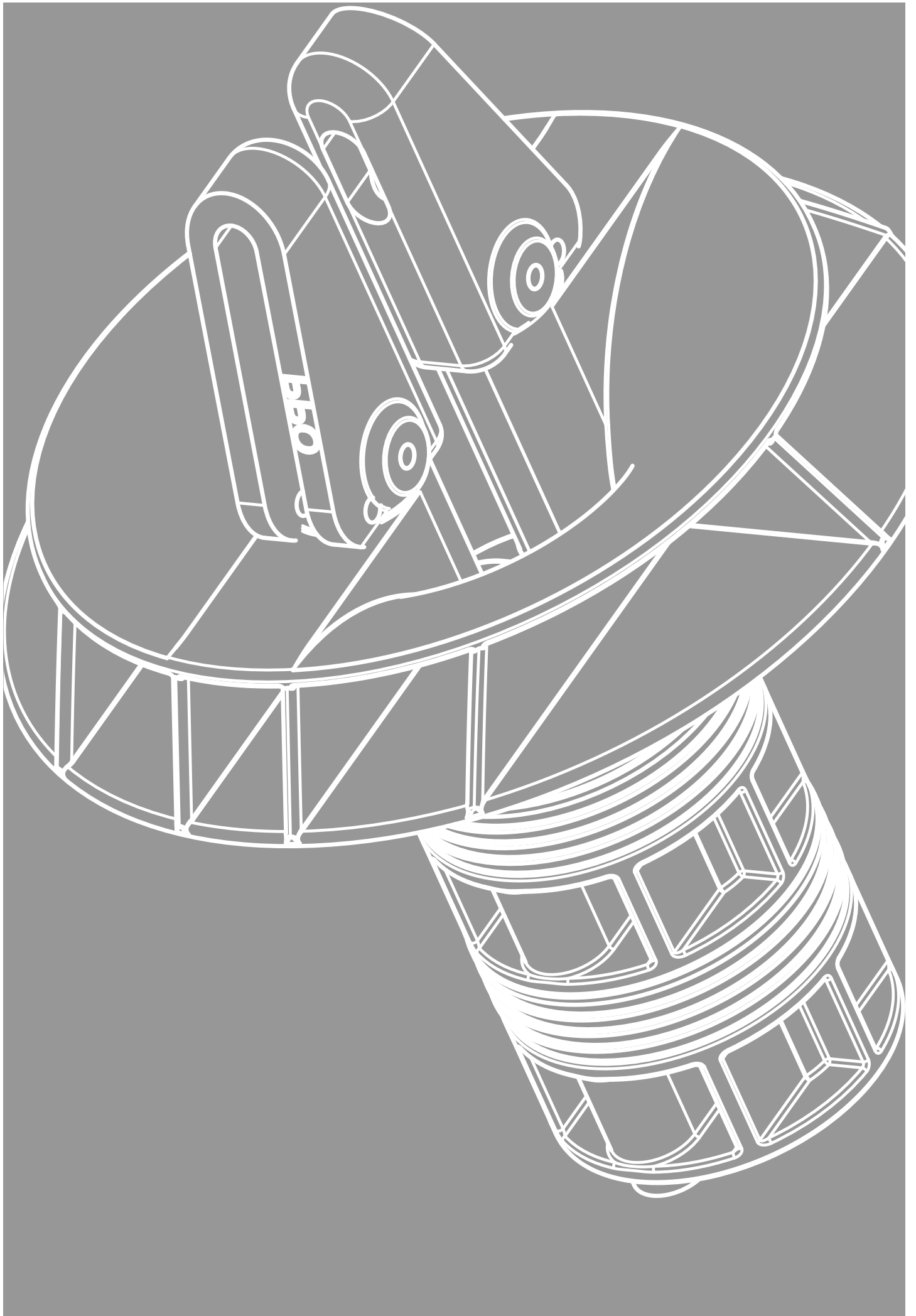
4.5 House lead-ins.
Master the transition into the house.

House lead-ins ensure a professional and reliable sealing of the building. For the quick and easy connection of buildings to the fibre optic network - gas- and water-tight: In the cellar, through the wall or via the wall of the building.
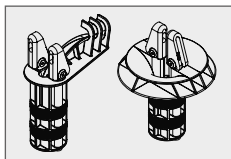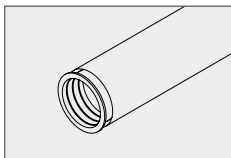
	4.5.1 House lead-ins ADSB/ADSB-D/ADSB-F.
	4.5.2 Sanded sleeves SKW.
	4.5.3 Sanded sleeves.
	4.5.4 House lead-ins GFH.
	4.5.5 House lead-ins MIS.
	4.5.6 House lead-ins HEO/MOB.
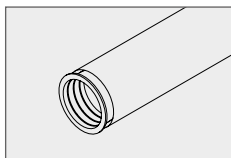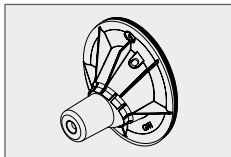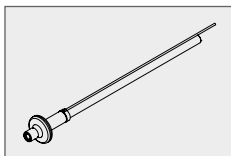
Accessories

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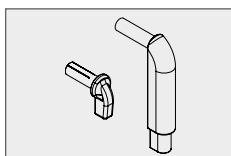
4.5.1 House lead-ins ADSB/ADSB-D/ADSB-F.
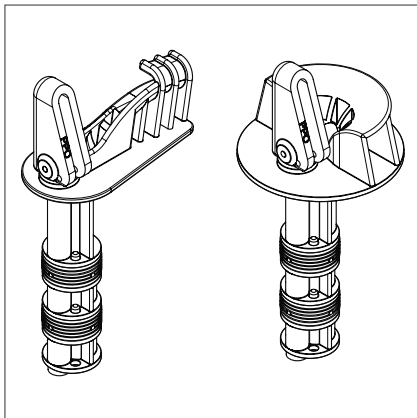
House lead-ins ADSB

House lead-ins ADSB are used for an easy house entry of speedpipe ground trough the cellar.

LEAD SPEEDPIPE INTO THE HOUSE VIA UNDERGROUND ACCESS.

gabocom offers two different sealing elements with protective bend: ADSB (single) and ADSB-D (double). Both versions include a inside- and outside-part with integrated sealing that allow the house lead-in of cables or speedpipe ground in the cellar. Without the use of tools - they are suitable for the application in environments with soil moisture or non-pressing water, gas- and water-tight up to 1 bar.

The ADSB-F can also be installed in buildings without basement and can be installed with an installation angle of up to 30°. After the blowing-in process the speedpipe ground is fed into the integrated deflection pulley and lead along the cellar wall.

From a wall thickness of over 400 mm upwards or in hollow block, the additional use of the sanded sleeve is recommended.

Features and benefits
- water impact classes according to DIN 18533: W1.1-E: Soil moisture and non-pressing water in floor slabs and walls in contact with the ground; W1.2-E: Soil moisture and non-pressing water in floor slabs and walls in contact with the ground with drainage
- gas and water tightness: 1 bar
- principle of sealing: integrated sealing element
- installation in concrete wall: no auxiliary material needed
- installation in hollow block: sanded sleeve

Type	Ø (D)	Applications	Colour	Item no.
Set_ADSB_28/7	28	1 speedpipe ground 7x1.5	Black (BK), Orange (OG)	42124
Set_ADSB-F_28/7	28	1 speedpipe ground 7x1.5	Black (BK), Orange (OG)	42469
Set_ADSB-F_28/10	28	1 speedpipe ground 10x2.0	Black (BK)	42470
Set_ADSB_7.0-9.0	47	1 speedpipe ground 7x1.5 or 1 cable 7 - 9	Orange (OG), Black (BK)	42157
Set_ADSB_9.0-12.5	47	1 speedpipe ground 10x2.0 / 12x2.0 or 1 cable 9 - 12.5	Black (BK)	42158
Set_ADSB-D_7.0-9.0	47	2 speedpipe ground 7x1.5 or 2 cable 7 - 9	Orange (OG), Black (BK)	42159
Set_ADSB-D_9.0-12.5	47	2 speedpipe ground 10x2.0 / 12x2.0 or 2 cable 9 - 12.5	Black (BK)	42160

All dimensions in mm. Subject to technical changes.

4.5.2 Sanded sleeves SKW.
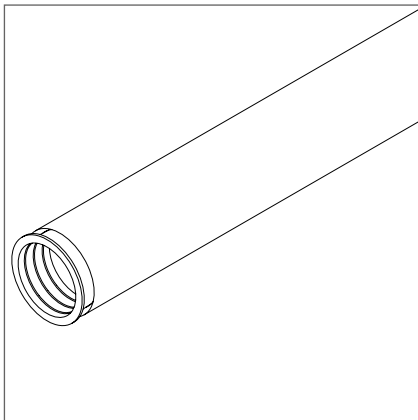
Sanded sleeve SKW

Sanded sleeve SKW are used for house entries through brickwork.

Accessories

GRASP IN BRICK MASONRY.

To ensure that the integrated seal of the ADSB, ADSB-D and ADSB-F house lead-ins can grip completely via the lever mechanism even with brickwork or a wall thickness of over 400 mm, the additional use of the sanded sleeve SKW is recommended. The ends are protected by a tapered plug against soiling when being plastered.

Features and benefits
• protected against pollution, while the wall is coverd with a layer of render

Type	Ø (D)	Length (L)	Colour	Item no.
SKW_32	32	390	Grey RAL 7030 (RAL7030)	1987
	32	500	Grey RAL 7030 (RAL7030)	1988
SKW_50	50	390	Grey RAL 7030 (RAL7030)	1989
	50	390	Grey RAL 7030 (RAL7030)	4546
	50	500	Grey RAL 7030 (RAL7030)	1990
	50	500	Grey RAL 7030 (RAL7030)	5422

All dimensions in mm. Subject to technical changes.

4.5.3 Partially sanded sleeves.

Sanded sleeve

Accessories
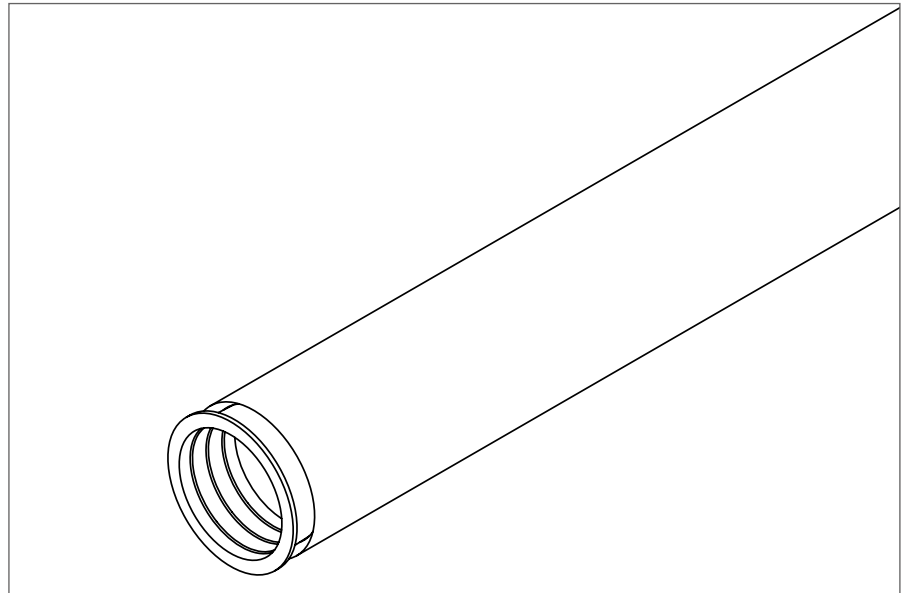
GRASP IN BRICK MASONRY.

The partially sanded sleeves are suitable for almost all installation situations and wall thicknesses and can be used universally. Both house entries and EZA-t can be easily installed at the sand-free ends, providing a secure and professional seal for the speedpipe or cables to be inserted. The length of the sleeves can be adapted to the different wall thicknesses at the smooth ends. The sand-free areas ensure that cutting is particularly easy on the tools. The ends are protected against soiling during plastering by a conical plug.

Features and benefits
• can be used universally thanks to the partial sanding
• protected against soiling during plastering

Type	Ø (D)	Applications	Configuration	Length (L)	Colour	Item no.
Futterrohr_32	32	partially sanded sleeve 32	420 millimeters sanded	1200	Grey RAL 7030 (RAL7030)	1437
Futterrohr_50	50	partially sanded sleeve 50	240 millimeters central sanded	600	Grey RAL 7030 (RAL7030)	42135
	50	partially sanded sleeve 50	420 millimeters sanded	1200	Grey RAL 7030 (RAL7030)	42227

All dimensions in mm. Subject to technical changes.

4.5.4 House lead-ins GFH.
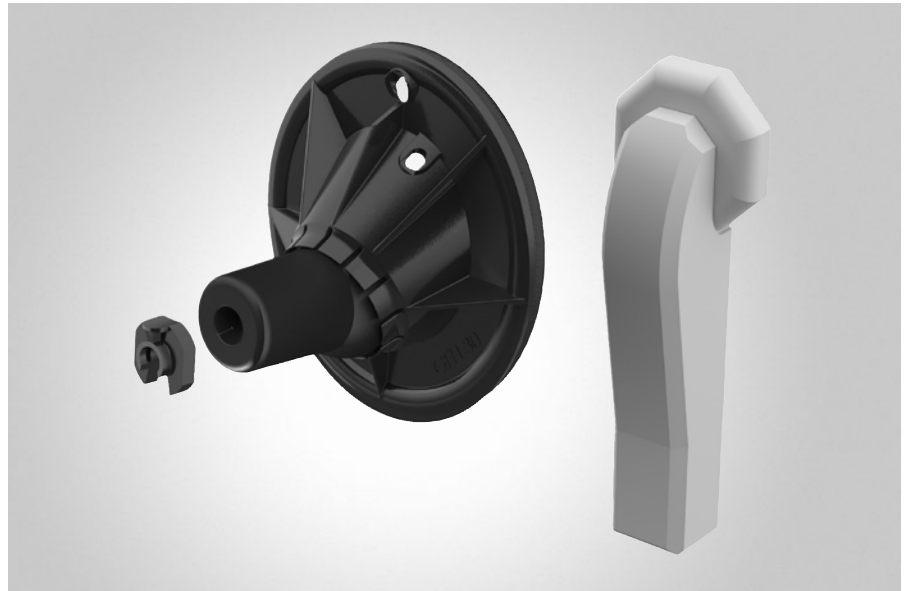
House lead-ins GFH allow professional sealing due to resin injection.

LEAD SPEEDPIPE WITH RESIN INJECTION SYSTEMS INTO THE BUILDING.

For environments with soil moisture and non-pressurised water or with moderate exposure to pressurised water up to 3 m immersion depth or backwater height: GFH by Hauff (applicable in buildings with and without basement) complete the gabocom range with single house entries with injection systems for drillings in the most common wall types.

Features and benefits
- gas- and water-tight up to 1 bar
- professional sealing carried out with the help of resin injection

Type	Applications	Colour	Item no.
GFH20_2x7-10_PRO	speedpipe ground 1x7 / 2x7 / 1x10 / 2x10	White (WH), Black (BK)	3578
GFH20_1x12-16_PRO	speedpipe ground 1x12 / 1x14 / 1x16	White (WH), Black (BK)	3579

All dimensions in mm. Subject to technical changes.

Type	Applications	Colour	Item no.
EH_Resinator_80	2-component resin	Transparent (CL)	3644
GFH_MW	Cartridge gun from Hauff for processing Hauff 2-component resin RESINATOR	Black (BK)	3646
GFH_WAE	Hauff wall termination element suitable for micro ducts up to 20mm	White (WH)	3705

All dimensions in mm. Subject to technical changes.

4.5.5 House lead-ins MIS.
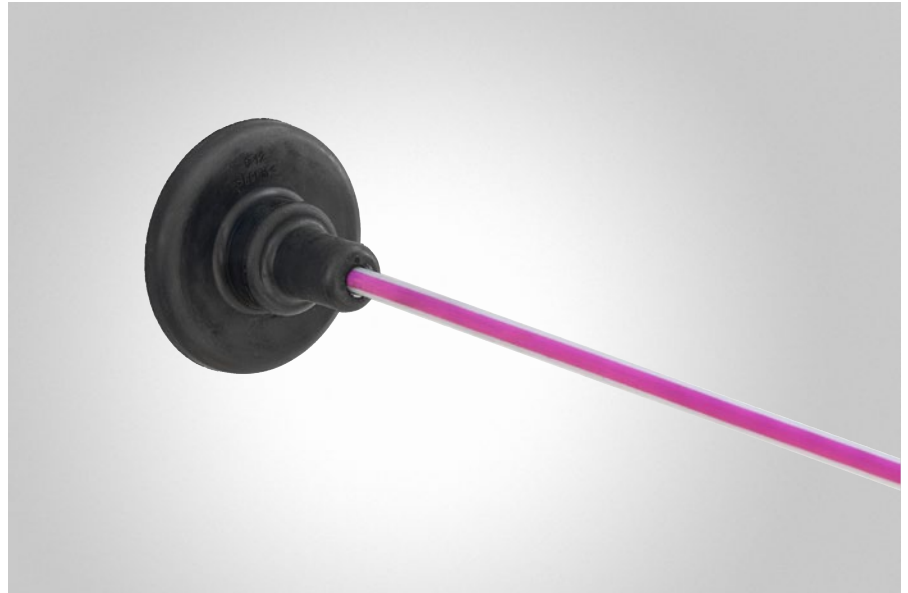
House lead-ins MIS allow professional sealing due to resin injection.

Accessories

RESIN INJECTION SYSTEMS FOR CONCRETE AND BRICKWORK.

For environments with soil moisture and non-pressurised water or with moderate exposure to pressurised water up to 3 m immersion depth or backwater height: MIS by Hauff (applicable in buildings with basement) complete the gabocom range with single house entries with injection systems for drillings in the most common wall types.

Features and benefits
- gas- and water-tight up to 1 bar
- professional sealing carried out with the help of resin injection
- auxiliary means: cartridge gun (available separately)

Type	Applications	Colour	Item no.
Set_MIS_40D_2x5-7_K	speedpipe ground 1x7 / 2x7	Black (BK)	3576
Set_MIS_60D_K	speedpipe ground 1x7 / 2x7 / 3x7 / 4x7 / 1x10 / 2x10 / 3x10 / 1x12 / 1x14 / 1x16	Black (BK)	3575
Set_MIS_40D_1x9-12_K	speedpipe ground 1x10 / 1x12	Black (BK)	3577

All dimensions in mm. Subject to technical changes.

4.5.6 House lead-ins HEO/MOB.
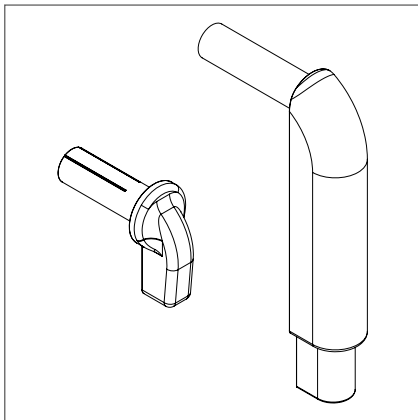
House lead-ins HEO

House lead-ins HEO enable above ground house entry.

LEAD SPEEDPIPE ABOVE GROUND INTO THE BUILDING.

By means of an integrated connector with gas-stop, a speedpipe ground can be converted into a speedpipe indoor for the inside of the building. The gas-stop fixes and seals the cable up to 0.5 bar against gas and water in longitudinal direction. speedpipe and connection points are covered with inconspicuous, plain panels and thus are mechanically protected.

Features and benefits
• splash water protection according to IP 65
• cable fixed against tensile loadings (HEO)
• gas- and water-tight sealing up to 0.5 bar
• integrated deflection bend with a radius of 25 mm assuring an accurate lead of inside the wall

Type	Ø (D)	Applications	Configuration	Colour	Item no.
Set_HEO_7	7	speedpipe ground 7x1.5	with gas stop	White (WH)	3457
Set_MOB_7	7	speedpipe ground 7x1.5	without gas stop	White (WH)	3458
Set_HEO_10	10	speedpipe ground 10x2.0	with gas stop	White (WH)	2633
Set_HEO_12	12	speedpipe ground 12x2.0	with gas stop	White (WH)	3908

All dimensions in mm. Subject to technical changes.

4.6.1 Tools.

Our tools are ideal for professional assembly.

FOR PROFESSIONAL ASSEMBLY.

The speedpipe cutter and the bundle cutter with ratchet drive contribute to the professional assembly. Both tools allow a chip-free and rectangular cut of speedpipe and speedpipe bundles. The sheath cutter with sliding guide and the ceramic safety cutter especially are suitable for opening bundles - reducing the risk of injury compared to using for example a knife. The use of sheath cutter with sliding guide also protects the internal micro pipes in the bundles.

Type	Applications	Colour	Item no.
Kunststoffrohr-Schere	Bundle cutter	Black (BK)	3632
Keramik-Sicherheitsmesser	Ceramic safety cutter	Black (BK)	2430
Ersatzklingen_fuer_Sicherheitsmesser	Replacement blades for ceramic safety cutter	White (WH)	2431
Abmantelungsmesser_mit_Gleitschuh	Sheath cutter with sliding guide	Red (RD), Orange (OG)	1806
Ersatzklingen_fuer_sp_Schneider	Spare blade for speedpipe cutter	Silver (SR)	1205
speedpipe_Schneider	speedpipe cutter	Silver (SR)	1204

All dimensions in mm. Subject to technical changes.

4.6.2 Toolbox.

Opened black toolbox including tools.

Opened grey toolbox including tools.

ALL USEFUL GABOCOM TOOLS IN ONE BOX.

Professional toolbox with high-quality tools for laying and installing the speedpipe system.
The grey tool box contains a bundle cutter with ratchet drive, a speedpipe cutter, a sheath cutter with sliding guide, a wooden yard stick, a hammer, a water pump pliers, a permanent marker and spare blades for the speedpipe cutter.

The black toolbox with drawer contains a speedpipe cutter, a sheath cutter with sliding guide, a wooden yard stick, a hammer, a water pump pliers, a permanent marker, cable ties 290x4.8 mm and spare blades for the speedpipe cutter.

Type	Applications	Colour	Item no.
Werkzeugkoffer	Toolbox	Grey (GY)	4011
Werkzeugkoffer_mit_Schublade	Toolbox with drawer	Black (BK)	4161

All dimensions in mm. Subject to technical changes.

Connecting networks.
gabocom and HellermannTyton for all FTTx areas.

Chapter I   **gabocom.**
Your future network partner.

Chapter II   **In-duct solutions.**
Utilization of existing duct systems.

Chapter III   **Solutions for direct burying.**
Construction of micro duct systems.

Chapter IV   **Accessories for speedpipe and bundles.**
Connect, seal and fix.

Chapter V   **Connecting networks.**
gabocom and HellermannTyton.

Chapter VI   **speedpipe indoor.**
For buildings, channels and tunnels.

Chapter VII   **(Split-)duct system.**
Safe repair and sealing of occupied cable ducts.

5.1 HellermannTyton Closures.
Your advantages.

A PATENTED PRODUCT FAMILY
- fibre management: a comprehensive range of closures as well as street cabinets and enclosures – all of them using the same trays
- sealing: patented Cablelok mechanical seal available in several versions – enables fast safe cable installation

PRODUCT BENEFITS
- Integrated Routing (IR) or Tubed (TB) systems available
- double stacked versions incl. fiberbridge for optimal fibre management
- optionally with connectorized options (LC/SC), trays, as well as fibre storage basket
- different versions of trays in 6 colours available
- different splice protector- and splitter holder
- lockable or sealable
- optionally with valve for pressure testing

OUR SERVICE
- all individual parts in one package
- datasheets, test reports and installation instructions are available electronically

5.2 Cablelok.
HellermannTyton Closures.

100% MECHANICAL SEAL.
- excellent sealing properties to in excess of 6m head of water (58.8kPa)
- easy and rapid installation with no specialist tools required
- simple, fast and compact sealing system
- eliminates the need for potentially hazardous gas bottle transportation and storage
- ideal for use in hazardous or restricted areas due to no heat or gas beeing required for the installation
- dual outlet versions for loop through applications
- multi-hole versions are available
- proven, patented technology

HOW DOES THE CABLELOK WORK?
Cablelok is manufactured from an external grade of flexible polychloroprene. Sealing is achieved by multiple internal lip seals which are compressed onto the cable during installation.

Cable Sealing Zone

Lip Seals

HellermannTyton
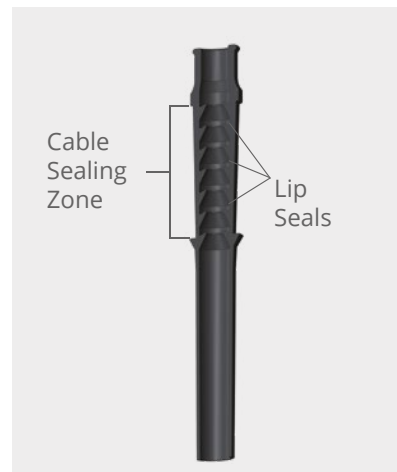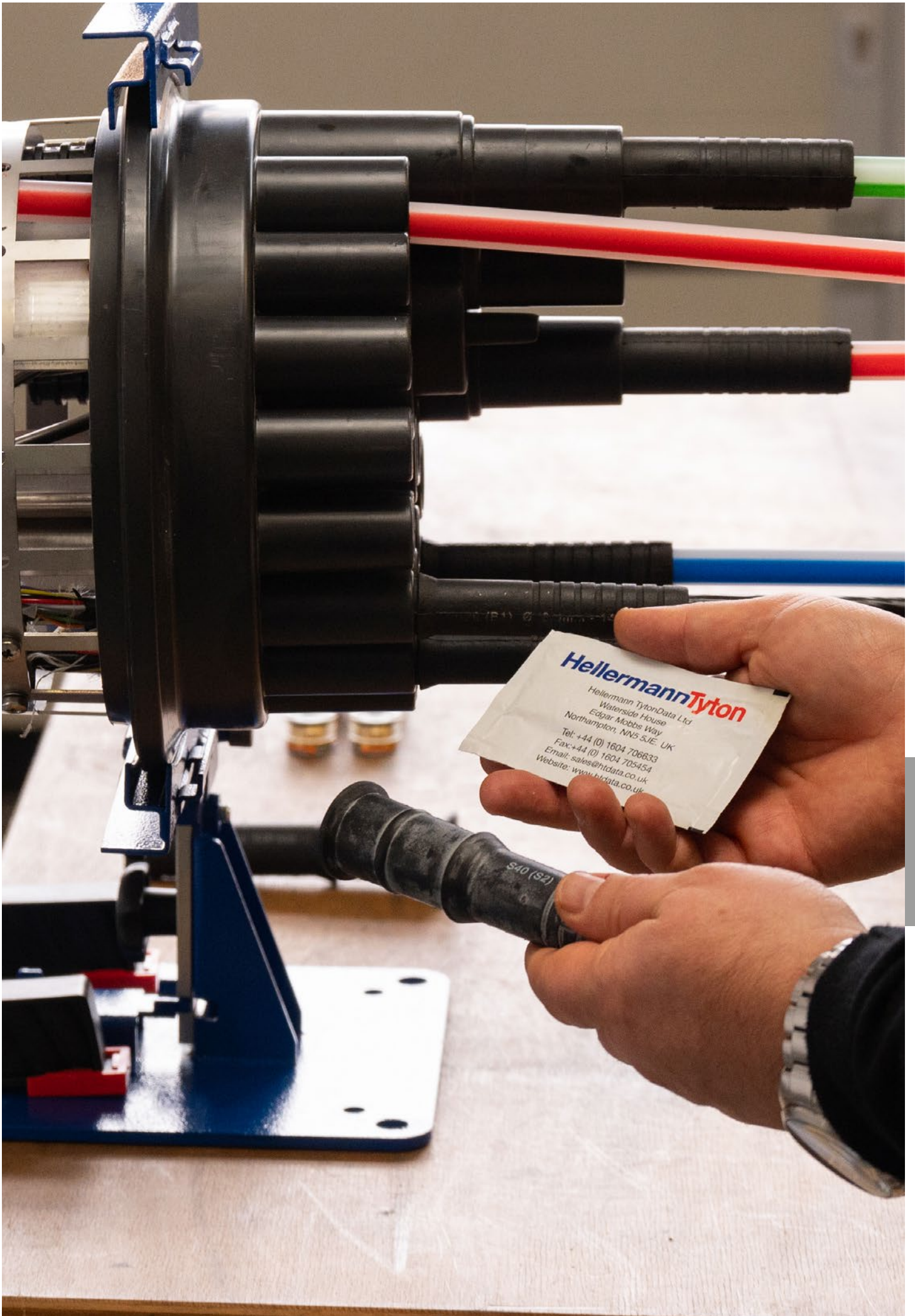
5.3 Fibre Optic Splice Closures.
Above-ground and underground application.

UFC Closure
Integrated Routing

FDN Closure
Integrated Routing

CFN Closure
Integrated Routing

FRBU Closure
Tubed

Type	UFC		FDN		CFN	FRBU
Fibre Management System	**Integrated Routing**	**Tubed**	**Integrated Routing**	**Tubed**	**Integrated Routing**	**Tubed**
Diameter (mm)	310		312 (222) oval design		250 (180) oval design	130
Length (mm)	549 - 749	400 - 749	455 - 789		335 - 410	360 - 505
Splice capacity*	1440***	1728***	864		288	144
Port count						
- Variation 1 round/oval	27 ports 26/1 or 24/2		13 ports 13/0 or 11/1		19 ports 18/1	9 ports 8/1
- Variation 2 round/oval			58 ports 58 or 56/1		27 ports 26/1	17 ports 16/1
Splice cassettes*	60 SE*** / 120 SC-B***	72 Hellipse SE-A ***	36 SE / 72 SC-B	36 Hellipse SE-A	12 SE / 24 SC-B	6 Hellapon***
Accommodation of optical splitters	✓		✓		✓	✓
Double sided configuration possible	✓		✗		✗	✓
Connectorized option**	✗		✗		✗	✓
Fibre storage basket**	✓ (in single sided configuration)		✓		✓	✓ (with max. 3 cassettes)
Sealing method	Cablelok, Heatshrink		Cablelok, Heatshrink		Cablelok	Cablelok, Heatshrink
Mounting Bracket**	✓		✓		✓	✓
Locking option	lockable / sealable		lockable / sealable		lockable / sealable	sealable

* up to   ** optional   *** in double sided configuration

Connect networks

HellermannTyton

5.3 Fibre Optic Splice Closures.
Above-ground and underground application.

FST Closure
Tubed

FML Closure
Integrated Routing

FDN Closure
Tubed

FRBU Closure (Connectorised)
Tubed

Connect networks

Type	FDN		FML		FRBU	FST
Fibre Management System	Integrated Routing	Tubed	Integrated Routing	Tubed	Tubed	Tubed
Diameter (mm)	312 (222) oval design		275		130	110
Length (mm)	455 - 789		598 - 748	400 - 748	360 - 505	310
Splice capacity*	864		720	864	144	36
Port count						
- Variation 1 **round/oval**	13 ports 13/0 or 11/1		10 ports 10/0 or 8/1		9 ports 8/1	4 ports 3/1
- Variation 2 **round/oval**	58 ports 58 or 56/1				17 ports 16/1	13 ports 12/1
Splice cassettes*	36 SE / 72 SC-B	36 Hellipse SE-A	30 SE / 60 SC-B	36 Hellipse SE-B	6 Hellapon***	3 Hellapon
Accommodation of optical splitters	✓		✓		✓	✓
Double sided configuration possible	✗		✗		✓	✓
Connectorized option**	✗		✗		✓	✓
Fibre storage basket**	✓		✓		✓ (with max. 3 cassettes)	✓ (with max.1 cassette)
Sealing method	Cablelok, Heatshrink		Cablelok, Heatshrink		Cablelok, Heatshrink	Cablelok, Heatshrink
Mounting Bracket**	✓		✓		✓	✓
Locking option	lockable / sealable		lockable / sealable		sealable	sealable

* up to ** optional *** in double sided configuration

Connect networks

5.4 Fibre Optic Enclosures.
Your advantages.

THE PRODUCT ITSELF
- fibre management MDU-S3 / MDU-S4 / MDU-S5 - modules and trays can be used for enclosures, as well as for closures
- high qualitiy adaptors and pigtails
- different versions of trays in 6 colours available
- various splice protection- and splitter holder
- various fibre storage baskets
- modular, flexible system
- customer logos can be added

LONG TERM SAFETY
- high quality casing
- all indoor casings with flammability rating V0
- protection rating IP 54 to IP 55 and IK08
- several locking options

OUR SERVICE
- pre-assembled produtcs – saving time in your service
- all-in-one – different parts don't have to be ordered separatly - pre-defined package solutions
- datasheets, test reports and installation instructions are available electronically

Connect networks

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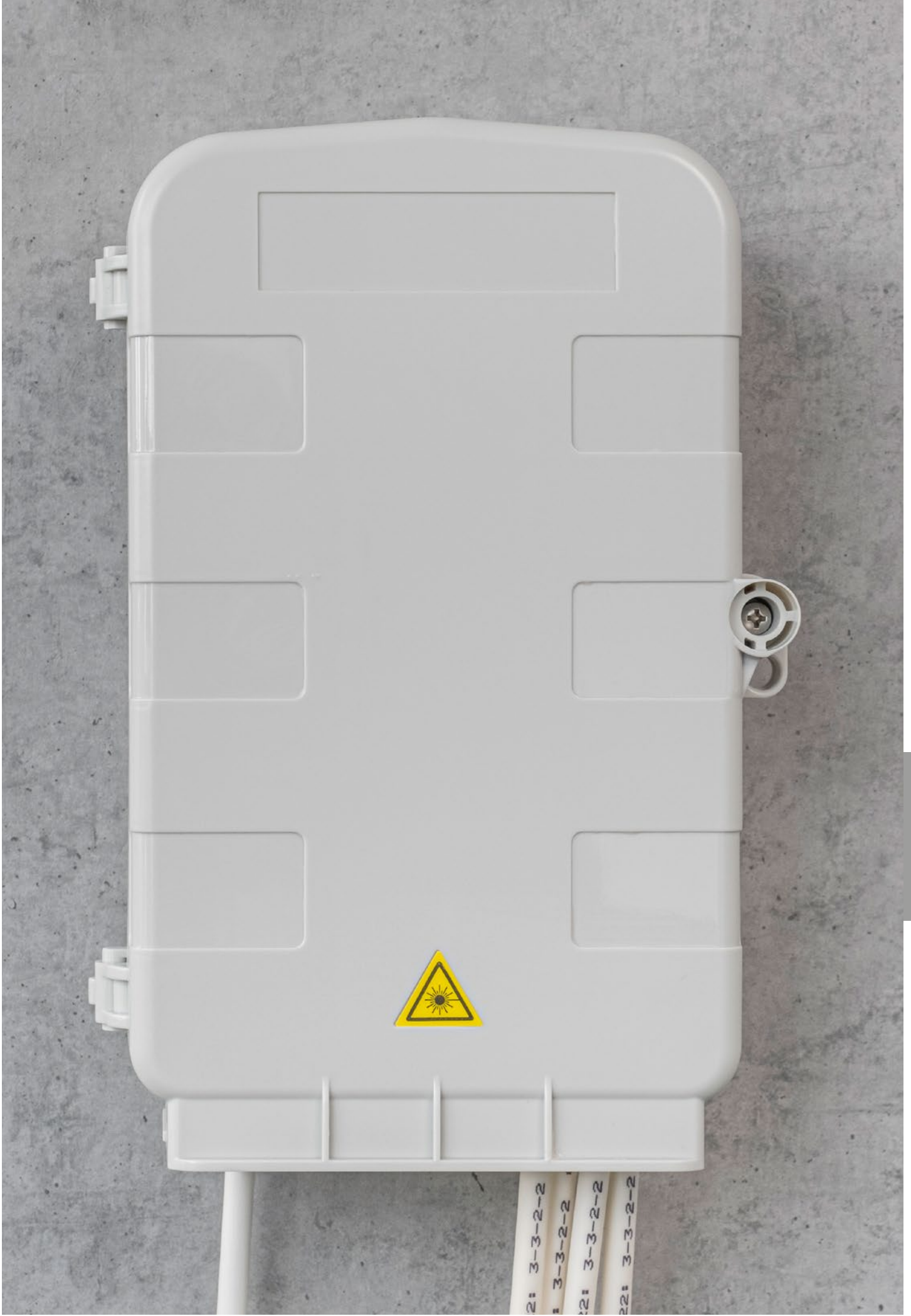
5.4 Fibre Optic Enclosures.
Wall-mountable, UV-resistant casing
up to 48 ports.
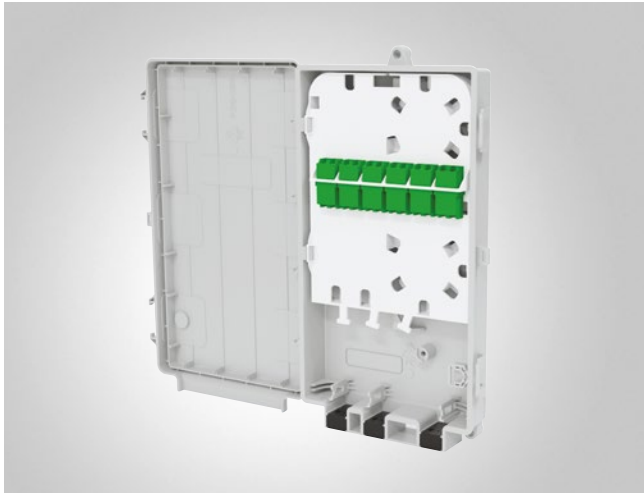
MDU - S1 XS

- up to 12 customer connections
- up to 6 SC Simplex/LC Duplex connectors
- maximum 60 fibre splices
- positive fibre management throughout (30mm min bend radius)
- insallation of optical splitters possible
- various cable entries (also for loop through applications)
- V0 flammability rating
- low profile
- tamper proof

MDU - S1

- up to 24 customer connections
- up to 12 SC or LC Simplex customer connections
- maximum 24 fibre splices
- positive fibre management throughout (30mm min bend radius)
- insallation of optical splitters possible
- various cable entries (also for loop through applications)
- fibre storage basket optional
- separation of incoming feeder cable from customer drops
- protection rating IP55 and IK08
- V0 flammability rating
- tamper proof
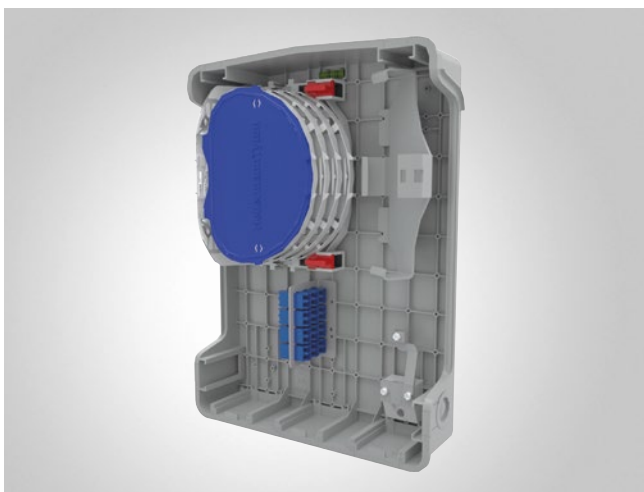
MDU - S3

- up to 48 customer connections
- different versions with LC or SC connections
- maximum 96 fibre splices
- up to 4 SE or 8 SC-B Trays
- positive fibre management with IR system
- installation of optical splitters possible
- various cable entries (also for loop through applications)
- fibre storage area optional
- protection rating IP55 and IK08
- V0 flammability rating
- possibility of installing a lock

Type	MDU S1 XS	MDU S1	MDU S3
customer connections*	12	24	48
Connector Type*	6 SC/SX / LC/DX	12 SC/SX / LC/DX	different versions SC / LC
Splice capacity*	60	24	96
Trays*	integrated	integrated	4 SE / 8 SC-B
positive fibre management	✓	✓	✓
installation of optical splitters possible	✓	✓	✓
separation of incoming feeder cable from customer drops	✓	✓	✓
fibre storage basket**	✓	✓	✓
cable entries for loop through application	✓	✓	✓
Ingress Protection rating	IP 54	IP 55 / IK 08	IP 54 / IK 08
Flammability rating	V0	V0	V0
UV-stable	✓	✓	✓
Locking option	tamper proof	tamper proof	lock**
Hight (mm)	233	241	340
Width (mm)	135	154	247
Depth (mm)	37	72	76

* up to   ** optional

Connect networks

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5.4 Fibre Optic Enclosures.
Wall-mountable, UV-resistant casing up to 96 ports.
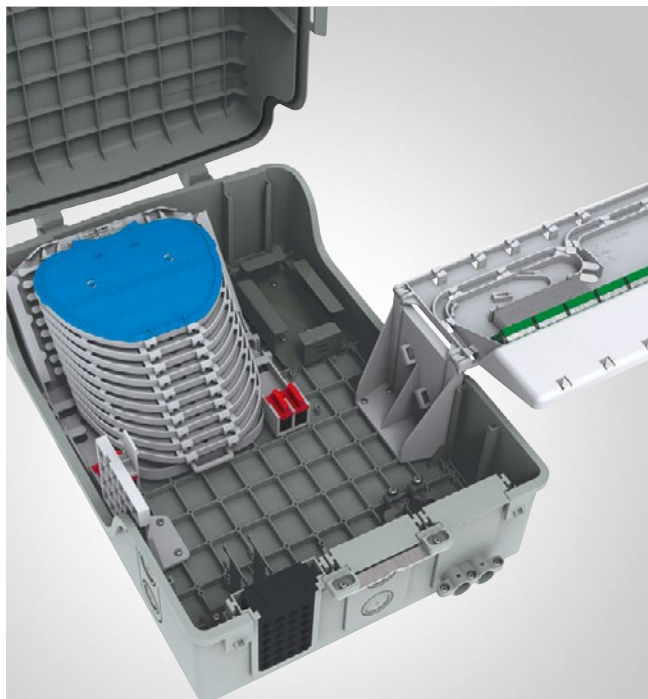
MDU - S4

- up to 48 customer connections (64 - splitter version)
- different versions with LC or SC connections
- maximum 240 fibre splices
- 10 SE or 20 SC-B trays
- positive fibre management with IR system
- optionally rotatable splitter/ adaptor-manager
- optionally pre-assembled with
  1x or 2x 1:32 LC-connectors
- various cable entries (also for loop through applications)
- fibre storage area optional
- Protection rating IP54 and IK08
- V0 flammability rating
- possibility of installing a lock
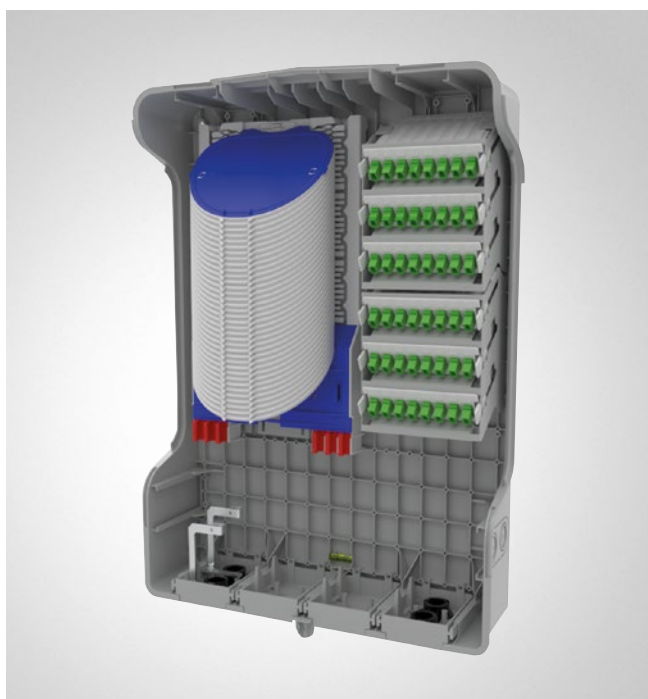
MDU – S5

- up to 96 customer connections
- different versions with LC or SC connections
- maximum 432 fibre splices
- 18 SE or 36 SC-B trays
- positive fibre management with IR system
- insallation of optical splitters possible
- various cable entries (also for loop through applications)
- fibre storage basket optional
- Protection rating IP54 and IK08
- V0 flammability rating
- possibility of installing a lock

Connect networks

Type	MDU S4	MDU S5
customer connections*	48 (64 - splitter version)	96
Connector Type*	different versions SC / LC	different versions SC / LC
Splice capacity*	240	432
Trays*	10 SE / 20 SC-B	18 SE / 36 SC-B
positive fibre management	✓	✓
installation of optical splitters possible	✓	✓
separation of incoming feeder cable from customer drops	✓	✓
fibre storage basket**	✓	✓
cable entries for loop through application	✓	✓
Ingress Protection rating	IP 54 / IK 08	IP 54 / IK 08
Flammability rating	V0	V0
UV-stable	✓	✓
Locking option	lock**	lock**
Hight (mm)	471	568
Width (mm)	307	375
Depth (mm)	147	165

* up to   ** optional

Connect networks

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5.5 Fibre Wall Outlet FWO.
Connecting routers or ONT.

FIBRE WALL OUTLET FWO

- three versions available:
    - pre-assembled with adaptors, pigtails and cable
    - with adaptors and Pigtails
    - empty enclosure
- up to 4 SC Simplex or LC Duplex Fibre Adaptor
- up to 4 splice protectors
- positive fibre management throughout (30mm min bend radius)
- 4 cable entries
- IP20 rated
- V0 rated
- install directly on the wall or onto a flush-mount back box
- tamper proof latches
- optional delivery in a spool box (only pre-assembled versions)

Pre-assembled FWOB.
With integrated unwinding unit.

TECHNICAL DESCRIPTION

The directly on the wall or onto a flush-mount back box installable Fibre Wall Outlet provides one or more connection points for fibre optic cables to connect routers or ONT.

Cables can be inserted into the FWO from the base, through the rear of the unit or at the sides. Cable fixing ties for strain relief are located at all entry points. They contain a Positive fibre management to maintain consistent minimum bend.

The warning notice „Laser hazard" is fixed in the cover.

The packaging carton specially developed for this product has an unwinding unit inside. This ensures clean unwinding of the pre-assembled cable.

The FWOB is available in various versions with different cable lengths as well as SC/SX or LC/DX connectors.

Connect networks

The next level.
**speedpipe indoor
for buildings, channels
and tunnels.**

Chapter I   **gabocom.**
Your future network partner.

Chapter II   **In-duct solutions.**
Utilization of existing duct systems.

Chapter III   **Solutions for direct burying.**
Construction of micro duct systems.

Chapter IV   **Accessories for speedpipe and bundles.**
Connect, seal and fix.

Chapter V   **Connecting networks.**
gabocom and HellermannTyton.

Chapter VI   **speedpipe indoor.**
For buildings, channels and tunnels.

Chapter VII   **(Split-)duct system.**
Safe repair and sealing of occupied cable ducts.

Products and solutions **gabocom**
speed•pipe® indoor   Chapter VI
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6.1   speedpipe indoor.

speedpipe indoor

speedpipe indoor for use in buildings, canals and tunnels.

FIRE PROTECTION AND SAFE NETWORKS INSIDE THE BUILDING.

The speedpipe indoor were developed by gabocom especially for the application inside buildings. They are not flame spreading and were tested in accordance with the standards DIN EN 13501-1, DIN EN 60332-1-2 and regarding the absence of halogens according to DIN EN 60684-2. Furthermore, the speedpipe indoor were tested in accordance with DIN EN 61386-22 (VDE 0605) for a clear definition of their laying.

Features and benefits
- fire tests according to the legal safety objectives
- installation and laying instructions available
- can be used in combination with firewalls
- inner side furnished with optimised slide ribs, therefore optimally applicable for blowing and pulling in micro cables
- not flame spreading and halogen free according to EN 60684-2 and low smoke density according to EN 61034-2
- speedpipe indoor are delivered on a wooden or plastic spool (box) which is optimised for shipment and installation

Type	Ø (D)	Wall (WT)	Length (L)	Colour	Pressure Nominal (PN)	Weight	Packaging unit	Total weight	Item no.
speedpipe-indoor_4x0.75	4	0.75	600 m	White (WH)	PN 16	0.008 kg/m	carton	7 kg	3510
	4	0.75	1600 m	White (WH)	PN 16	0.008 kg/m	drum	19 kg	3500
speedpipe-indoor_5x0.75	5	0.75	400 m	White (WH)	PN 16	0.011 kg/m	carton	6 kg	3511
	5	0.75	1000 m	White (WH)	PN 16	0.011 kg/m	drum	17 kg	3501
speedpipe-indoor_7x1.5	7	1.50	250 m	White (WH)	PN 16	0.028 kg/m	carton	9 kg	3513
	7	1.50	500 m	White (WH)	PN 16	0.028 kg/m	drum	20 kg	3502
	7	1.50	1250 m	White (WH)	PN 16	0.028 kg/m	drum	43 kg	3503
speedpipe-indoor_10x1.0	10	1.00	500 m	White (WH)	PN 10	0.030 kg/m	drum	23 kg	3504
	10	1.00	2500 m	White (WH)	PN 10	0.030 kg/m	drum	98 kg	3505
speedpipe-indoor_10x2.0	10	2.00	500 m	White (WH)	PN 16	0.054 kg/m	drum	35 kg	3526
	10	2.00	2500 m	White (WH)	PN 16	0.054 kg/m	drum	158 kg	3525
speedpipe-indoor_12x2.0	12	2.00	350 m	White (WH)	PN 16	0.068 kg/m	drum	32 kg	3506
	12	2.00	2000 m	White (WH)	PN 16	0.068 kg/m	drum	159 kg	3507
speedpipe-indoor_14x2.0	14	2.00	250 m	White (WH)	PN 16	0.082 kg/m	drum	29 kg	3508
	14	2.00	1500 m	White (WH)	PN 16	0.082 kg/m	drum	146 kg	3509

All dimensions in mm. Subject to technical changes.

speed·pipe® indoor

6.2 speedpipe indoor accessories.
Safe networks inside buildings.

speedpipe indoor accessories complement speedpipe indoor tested in accordance to DIN EN 61386-22, DIN EN 13501-1 and DIN EN 60684-2: not inflammable and absence of halogens.
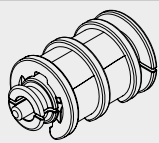
6.2.1 Divisible indoor seals.
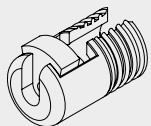
6.2.2 Divisible indoor seals micro.

6.2.3 Indoor end-stops.

6.2.4 Indoor indification labels with microduct endcaps.

speed·pipe® indoor

gabocom **Products and solutions**
Chapter VI speed•pipe® indoor
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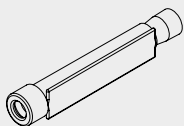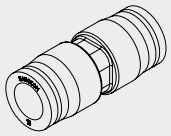
6.2.5 Indoor connectors.
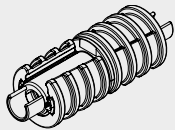
6.2.6 Divisible indoor connectors.
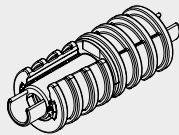
6.2.7 Divisible indoor connectors with gas-stop.

6.2.8 Indoor bends.

Products and solutions   gabocom
speed•pipe® indoor   Chapter VI
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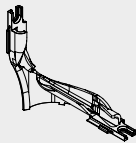
6.2.1 Divisible indoor seals.
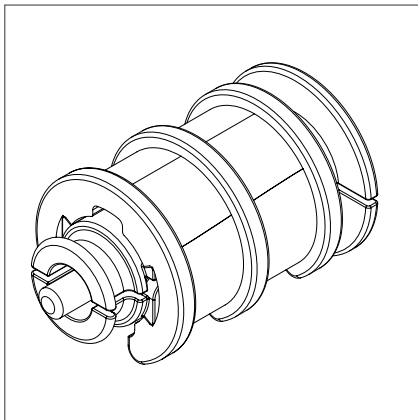
Divisible seals EZA-t indoor

Divisible seals EZA-t indoor are suitable for sealing occupied and unoccupied speedpipe indoor.

FIXING AND SEALING EMPTY AND OCCUPIED SPEEDPIPE INDOOR.

The hardly inflammable, halogen-free and divisible seals EZA-t indoor are reusable and suitable for sealing empty and occupied speedpipe indoor. The integrated safety valve opens before a possible injection pressure of 10 bar is reached when blowing in fibre optic cables.

Features and benefits
- flame-retardant and halogen-free
- gas- and water-tight up to 0.5 bar
- tensile and quick and easy to assemble
- inclusive guiding for fibre optic cables
- designed for operating temperatures from 0 - 50 °C

speed•pipe® indoor

Type	Ø (D)	Cable Ø min	Cable Ø max	Colour	Item no.
EZA-t_4/1.0-2.0_indoor	4	1	2	White (WH)	1085
EZA-t_7/0.8-2.5_indoor	7	0.8	2.5	White (WH)	1320
EZA-t_7/2.0-4.0_indoor	7	2	4	White (WH)	1324
EZA-t_10/1.8-3.5_indoor	10	1.8	3.5	White (WH)	1325
EZA-t_10/3.0-5.0_indoor	10	3	5	White (WH)	1326
EZA-t_10/5.0-6.5_indoor	10	5	6.5	White (WH)	1327
EZA-t_12/3.0-5.0_indoor	12	3	5	White (WH)	1328
EZA-t_12/5.0-6.5_indoor	12	5	6.5	White (WH)	1329
EZA-t_14/3.0-5.0_indoor	14	3	5	White (WH)	1331
EZA-t_14/5.0-6.5_indoor	14	5	6.5	White (WH)	1332
EZA-t_14/6.5-8.0_indoor	14	6.5	8	White (WH)	1333
EZA-t_14/8.0-9.5_indoor	14	8	9.5	White (WH)	1334

All dimensions in mm. Subject to technical changes.

speed·pipe® indoor

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6.2.2 Divisible indoor seals micro.
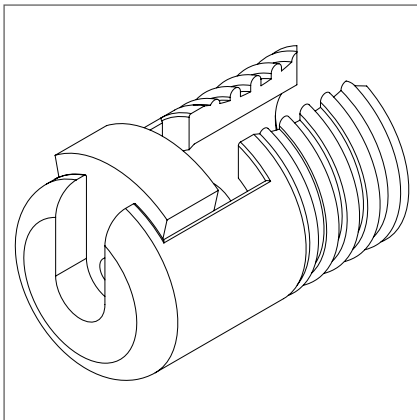
EZA-t micro indoor

Divisible seals EZA-t micro indoor

SECURE SEALING AND FIXING OF SPEEDPIPE INDOOR.

Tensile strength and stability: Due to the compact design, you seal occupied speedpipe indoor optimally and safely - even in extremely limited spaces. The different coloured sealing rubbers fit perfectly to all common cable diameters which are suitable for the respective pipe dimension due to the intuitive mounting.

Features and benefits
- tensile and compact
- gas- and water-tight up to 0.5 bar
- easy and quick to install
- halogen-free and flame-retardant
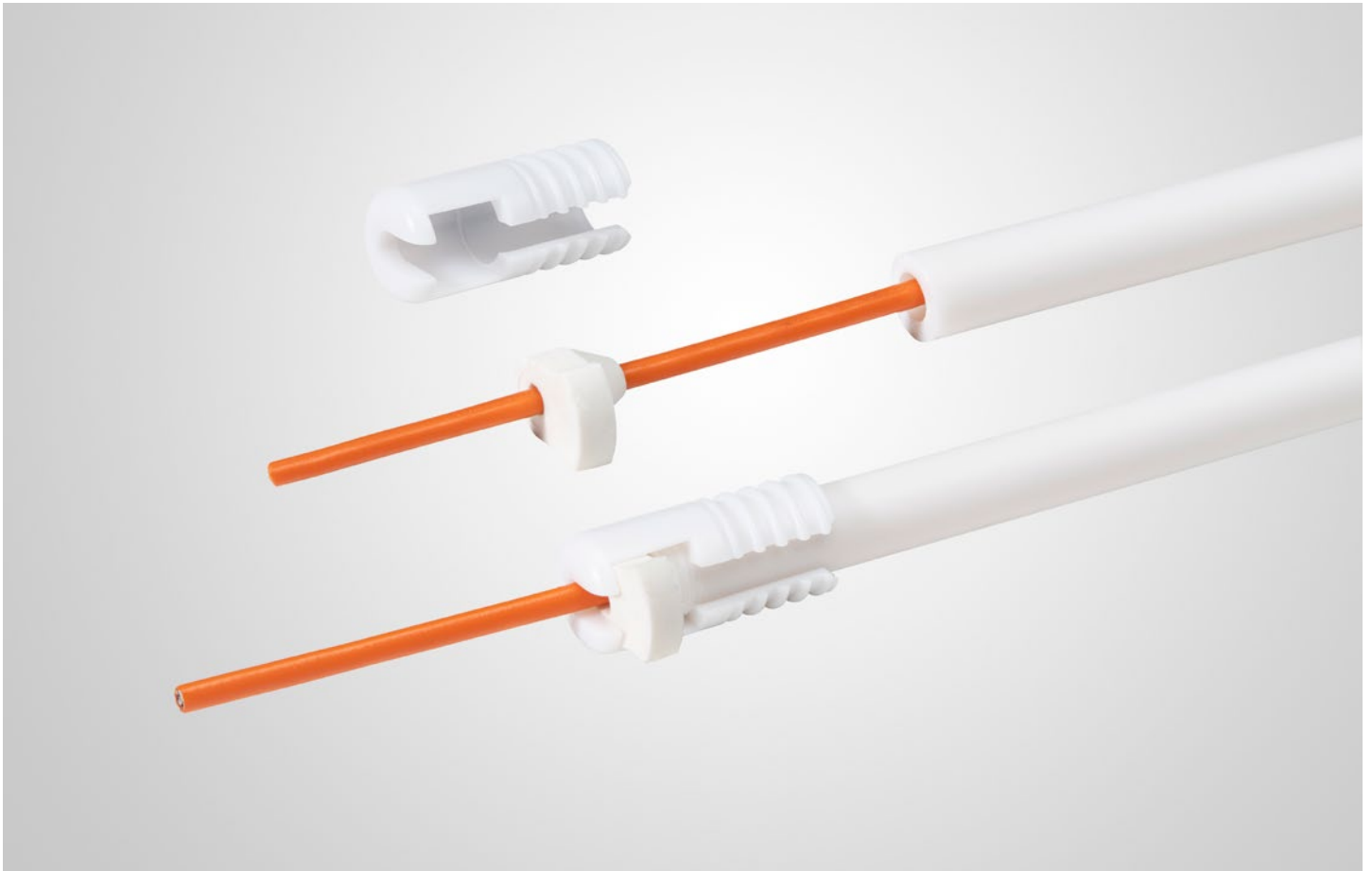
Type	Ø (D)	Applications	Cable Ø min	Cable Ø max	Colour	Item no.
EZA-t_5/0.5-1.0_micro_indoor	5	speedpipe indoor 5 x 0.75	0.5	1.0	White (WH), Red (RD)	4180
EZA-t_5/1.0-1.5_micro_indoor	5	speedpipe indoor 5 x 0.75	1.0	1.5	White (WH), Green (GN)	4181
EZA-t_5/1.5-1.8_micro_indoor	5	speedpipe indoor 5 x 0.75	1.5	1.8	White (WH), Blue (BU)	4182
EZA-t_5/1.9-2.2_micro_indoor	5	speedpipe indoor 5 x 0.75	1.9	2.2	White (WH), Yellow (YE)	4183
EZA-t_5/2.3-2.5_micro_indoor	5	speedpipe indoor 5 x 0.75	2.3	2.5	White (WH)	4184
EZA-t_7/0.5-1.0_micro_indoor	7	speedpipe indoor 7 x 1.5	0.5	1.0	White (WH), Red (RD)	4185
EZA-t_7/1.0-1.5_micro_indoor	7	speedpipe indoor 7 x 1.5	1.0	1.5	White (WH), Green (GN)	4186
EZA-t_7/1.5-2.0_micro_indoor	7	speedpipe indoor 7 x 1.5	1.5	2.0	White (WH), Blue (BU)	4187
EZA-t_7/2.0-2.5_micro_indoor	7	speedpipe indoor 7 x 1.5	2.0	2.5	White (WH), Yellow (YE)	4188
EZA-t_7/2.5-3.0_micro_indoor	7	speedpipe indoor 7 x 1.5	2.5	3.0	White (WH)	4189
EZA-t_10/1.5-2.0_micro_indoor	10	speedpipe indoor 10 x 2.0	1.5	2.0	White (WH), Blue (BU)	4195
EZA-t_10/2.0-2.5_micro_indoor	10	speedpipe indoor 10 x 2.0	2.0	2.5	White (WH), Yellow (YE)	4196
EZA-t_10/2.5-3.0_micro_indoor	10	speedpipe indoor 10 x 2.0	2.5	3.0	White (WH)	4197
EZA-t_10/3.0-3.5_micro_indoor	10	speedpipe indoor 10 x 2.0	3.0	3.5	White (WH), Grey (GY)	4198
EZA-t_10/3.5-4.0_micro_indoor	10	speedpipe indoor 10 x 2.0	3.5	4.0	White (WH), Brown (BN)	4199
EZA-t_10/4.0-4.5_micro_indoor	10	speedpipe indoor 10 x 2.0	4.0	4.5	White (WH), Violet (VT)	4200

All dimensions in mm. Subject to technical changes.

speed·pipe® indoor

6.2.3 Indoor end-stops.
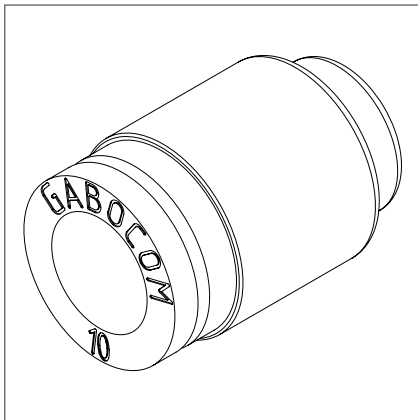
End-stops ES indoor

End-stops ES indoor seal speedpipe indoor gas- and water-tight.

FOR ALL SPEEDPIPE INDOOR DIMENSIONS.

The hardly inflammable and halogen-free end stops ES indoor are suitable for the gas- and water-tight sealing of speedpipe indoor up to 0.5 bar. They are tensile and quick and easy to assemble.
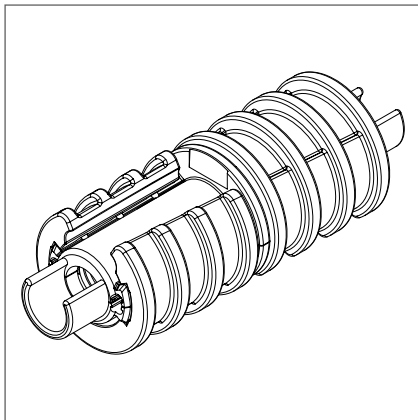
Features and benefits
* gas- and water-tight up to 0.5 bar
* gas- and water-tight up to 15 bar (tested up to 30 minutes)
* tensile
* quick and easy to assemble
* flame-retardant and halogen-free
* designed for operating temperatures from 0 - 50 °C

speed•pipe® indoor

Type	Ø (D)	Colour	Item no.
ES_4_indoor	4	White (WH)	1979
ES_5_indoor	5	White (WH)	1980
ES_7_indoor	7	White (WH)	1694
ES_10_indoor	10	White (WH)	1695
ES_12_indoor	12	White (WH)	1696
ES_14_indoor	14	White (WH)	1697

All dimensions in mm. Subject to technical changes.

6.2.4 Indoor indification labels with microduct endcaps.
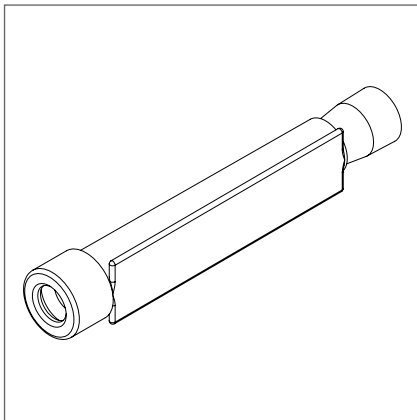
Identification labels with microduct end-caps KmR indoor

Identification labels with end-caps KmR indoor are used for labeling speedpipe indoor.

LABELLING AND SEALING ALL SPEEDPIPE INDOOR DIMENSIONS.

The identification labels with microduct end-cap KmR indoor serve for labelling speedpipe indoor with the customer's address in the distribution area by means of a permanent marker. They serve for the gas- and water-tight sealing of empty speedpipe indoor up to 0.5 bar and are quickly and easily to assemble. By breaking off the protective cap, the customer's address remains at the speedpipe indoor after occupation with a fibre optic cable.

Features and benefits
- gas- and water-tight up to 0.5 bar
- quick and easy to assemble
- flame-retardant and halogen-free
- designed for operating temperatures from 0 - 50 °C

Type	Ø (D)	Colour	Item no.
KmR_7_indoor	7	White (WH)	2017
KmR_10_indoor	10	White (WH)	2018
KmR_12_indoor	12	White (WH)	2019
KmR_14_indoor	14	White (WH)	2020

All dimensions in mm. Subject to technical changes.

speed·pipe® indoor

6.2.5 Indoor connectors.
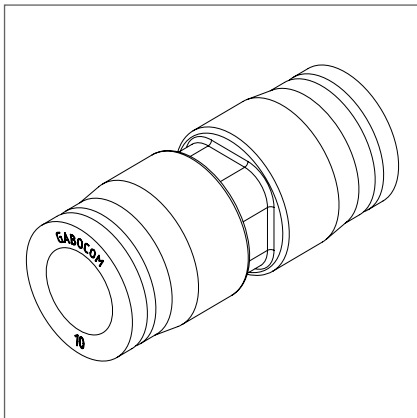
connectors DSM indoor

Connectors DSM indoor connect speedpipe indoor.

THE SAFE CONNECTION OF ALL SPEEDPIPE INDOOR DIMENSIONS.

The hardly inflammable and halogen-free connectors DSM indoor connect speedpipe indoor. Easily and quickly assembled, the accessories can simply be removed by compressing.

Features and benefits

- gas- and water-tight up to 0.5 bar
- gas- and water-tight up to 15 bar (tested up to 30 minutes)
- tensile and quick and easy to assemble
- flame-retardant and halogen-free
- designed for operating temperatures from 0 - 50 °C

Type	Ø (D)	Colour	Item no.
DSM_4_indoor	4	White (WH)	1298
DSM_5_indoor	5	White (WH)	1479
DSM_7_indoor	7	White (WH)	1220
DSM_10_indoor	10	White (WH)	1221
DSM_12_indoor	12	White (WH)	1222
DSM_14_indoor	14	White (WH)	1223

All dimensions in mm. Subject to technical changes.

speed•pipe® indoor

6.2.6 Divisible indoor connectors.
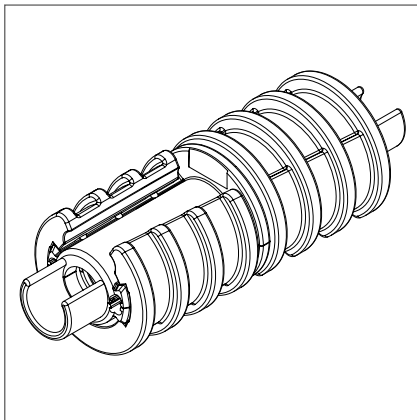
Divisible connector EBM indoor
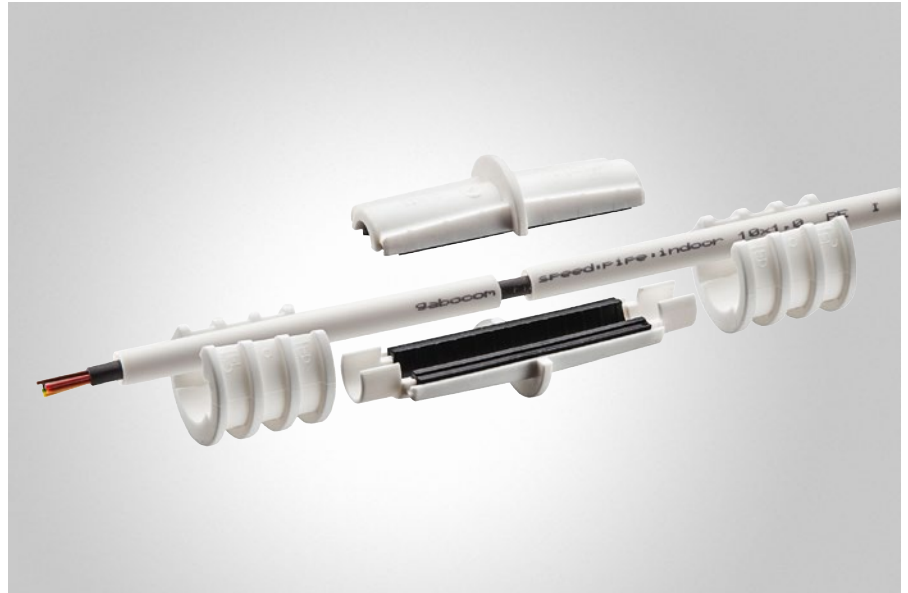
Divisible connectors EBM indoor connect occupied speedpipe indoor.

FOR SAFE NETWORKS IN THE ENTIRE BUILDING.

The hardly inflammable and halogen-free divisible indoor connectors EBM indoor serve for the gas- and water-tight connection of occupied speedpipe indoor up to 0.5 bar. They are tensile and quick and easy to assemble.

Features and benefits
• gas- and water-tight up to 0.5 bar
• tensile and quick and easy to assemble
• flame-retardant and halogen-free
• designed for operating temperatures from 0 - 50 °C

Type	Ø (D)	Colour	Item no.
EBM_7_indoor	7	White (WH)	1748
EBM_10_indoor	10	White (WH)	1749
EBM_12_indoor	12	White (WH)	1750
EBM_14_indoor	14	White (WH)	1751

All dimensions in mm. Subject to technical changes.

6.2.7 Divisible indoor connectors with gas-stop.

Divisible connector with gas-stop
EBM-GS indoor
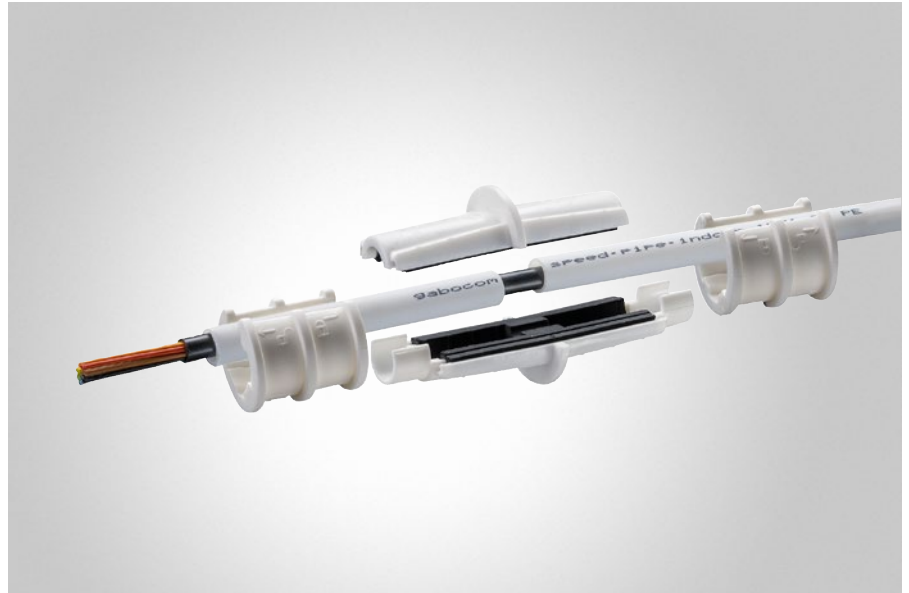
Divisible connectors with gas-stop EBM-GS to connect occupied speedpipe indoor.

FOR SAFE NETWORKS IN THE ENTIRE BUILDING.

The hardly inflammable and halogen-free divisible connectors EBM-GS indoor have an integrated gas-stop. The divisible indoor connectors connect occupied speedpipe indoor.

Features and benefits
- gas- and water-tight up to 0.5 bar (also in longitudinal direction)
- tensile and quick and easy to assemble
- flame-retardant and halogen-free
- designed for operating temperatures from 0 - 50 °C

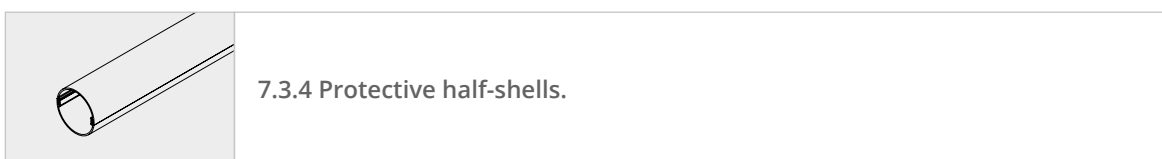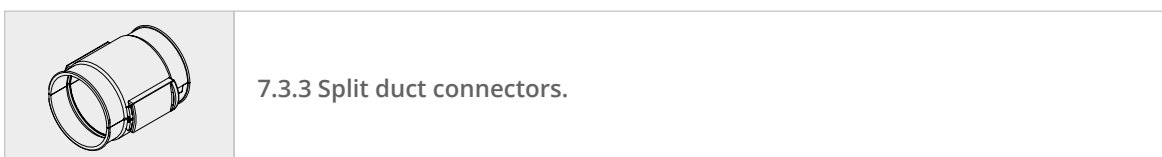| Type	Ø (D)	Ø (D2)	Cable Ø min	Cable Ø max	Colour	Item no.
EBM-GS_7/0.8-4.0_indoor	7	-	0.8	4	White (WH)	1335
EBM-GS_10/1.8-3.5_indoor	10	-	1.8	3.5	White (WH)	1336
EBM-GS_10/3.0-5.0_indoor	10	-	3	5	White (WH)	1337
EBM-GS_10/5.0-6.5_indoor	10	-	5	6.5	White (WH)	1338
EBM-GS_12/3.0-5.0_indoor	12	-	3	5	White (WH)	1339
EBM-GS_12/5.0-6.5_indoor	12	-	5	6.5	White (WH)	1341
EBM-GS_12/10-5.0-6.5_indoor	12	10	5	6.5	White (WH)	1470
EBM-GS_14/5.0-6.5_indoor	14	-	5	6.5	White (WH)	1343
EBM-GS_14/6.5-8.0_indoor	14	-	6.5	8	White (WH)	1344

All dimensions in mm. Subject to technical changes.

speed·pipe® indoor
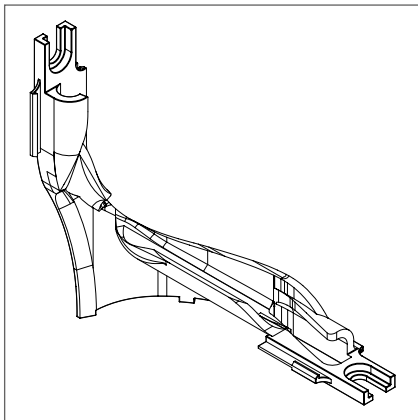
6.2.8 Indoor bends.

indoor bends IB

Indoor bends IB are used to divert speedpipe indoor.

LEAD SPEEDPIPE INDOOR IN THE BUILDING IN A SAVE ANGLE WITHOUT ANY KINKS.

The hardly inflammable and halogen-free indoor bend IB serves for the deflection of speedpipe indoor inside the building without any kinks.

Features and benefits
- any number of IBs can be stacked together
- flame-retardant and halogen-free
- designed for operating temperatures from 0 - 50 °C

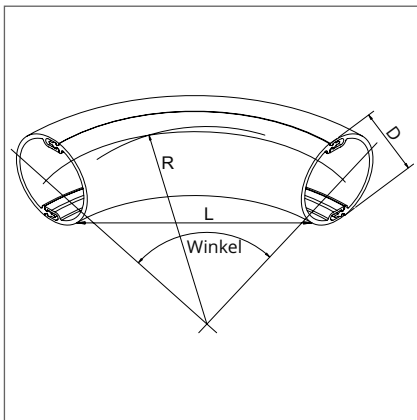| Type	Ø (D)	Ø (D2)	Description	Colour	Item no.
IB_7_mit_Duebel	7	-	with dowel	White (WH)	1414
IB_7_ohne_Duebel	7	-	without dowel	White (WH)	1415
IB_10/12_mit_Duebel	10	12	with dowel	White (WH)	3965

All dimensions in mm. Subject to technical changes.

speed•pipe® indoor

Safe repair and sealing of occupied cable ducts.
(Split-)duct system.

7.1 Split ducts.

Split ducts KKHR

Split ducts KKHR for pressure-tight sealing of damage in cable ducts.

PRESSURE-TIGHT AND DIVISIBLE SOLUTIONS FOR REPAIR WORKS.

Divisible split duct components seal blowing-in points or repair occupied duct systems quickly, simply and efficiently. Internal speedpipe or cables and the ongoing data transmission remain unaffected by the operations on the protective duct.

Features and benefits
- suitable for the gas- and water-tight sealing of blow-in points
- two half shells manufactured out of high-quality PVC-U
- easy installation
- assembly device required for correct sealing

Type	Ø (D)	Length (L)	Applications	Colour	Item no.
KKHR_32	32	2000	gas and waterproof up to 0.5 bar permanently (10 bar / 30 min.)	Black (BK)	12195
KKHR_40	40	2000	gas and waterproof up to 0.5 bar permanently (10 bar / 30 min.)	Black (BK)	9956
KKHR_50	50	2000	gas and waterproof up to 0.5 bar permanently (10 bar / 30 min.)	Black (BK)	9957
KKHR_110	110	2000	gas and waterproof up to 0.5 bar	Black (BK)	14149
	110	6000	gas and waterproof up to 0.5 bar	Black (BK)	4709
KKHR_125	125	3000	gas and waterproof up to 0.5 bar	Black (BK)	5298
	125	6000	gas and waterproof up to 0.5 bar	Black (BK)	5299

All dimensions in mm. Subject to technical changes.

(split-)duct system

7.2 Repair set for multiducts.

Multiple pipe connector MR-VM to repair occupied multiple pipes.

FOR THE REPAIR OF OCCUPIED MULTIPLE PIPES.

The repair set for multiducts MR-RS has been developed by gabocom for the repair of occupied multidicts and for the connection in manholes. The gas- and water-tight system completes the split duct system KKHR 110. It is compatible with multiducts in the dimensions 2×32 and 2×40 and is easy to assemble.

The set contains:
2x split ducts MR-HR 32
2x split ducts MR-HR 40
2x multiple pipe connectors MR-VM

Type	Ø (D)	Ø (D2)	Length (L)	Colour	Item no.
MR-RS	40	32	4000	Black (BK)	6348

All dimensions in mm. Subject to technical changes.

(split-)duct system
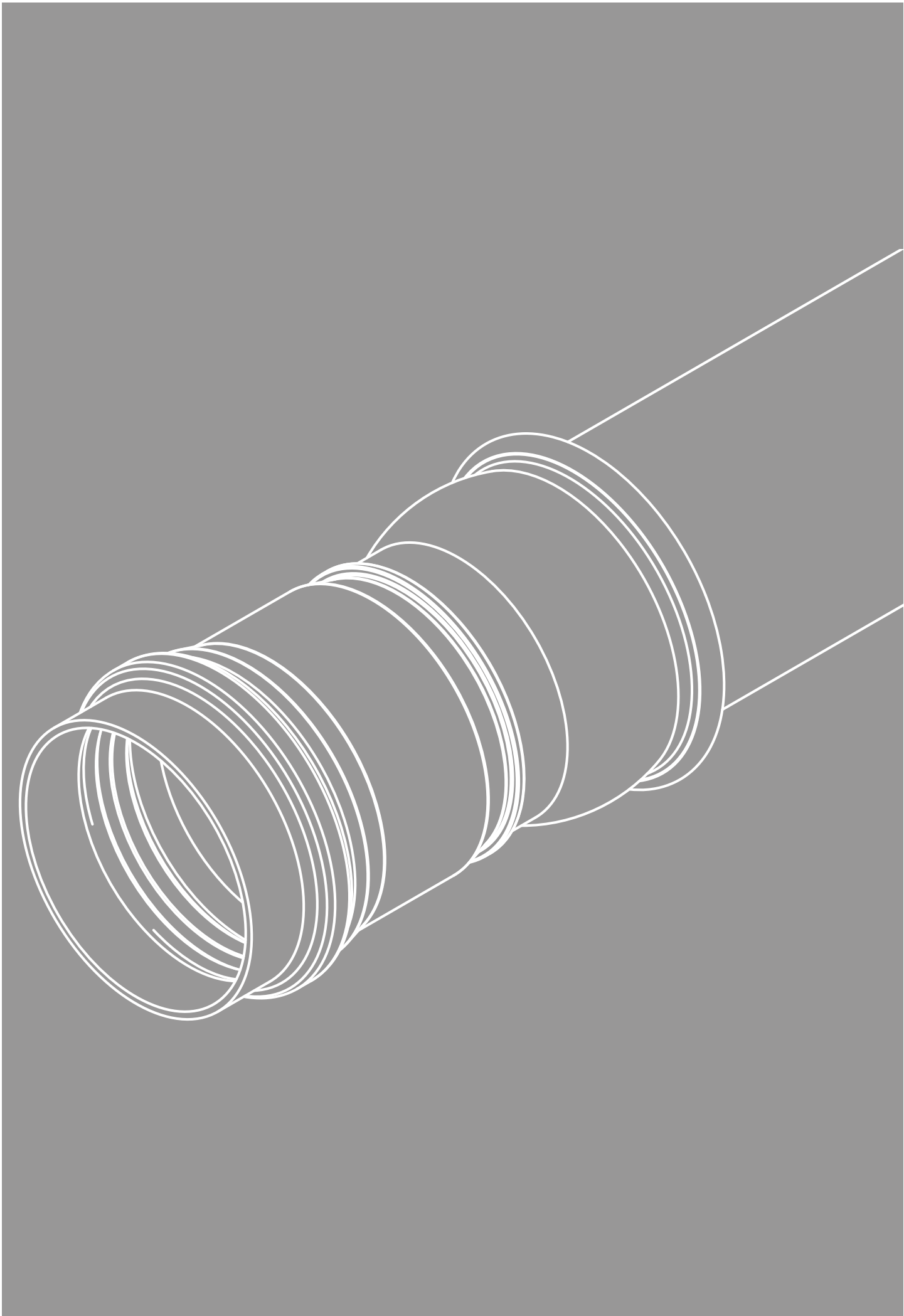
7.3 Split duct accessories.
Quick repair without any net-interruption.

Repair and assembly works can be carried out both quick and cost-saving.
Meanwhile occupied ducts can be used further on without any signal interruptions.

7.3.1 Split duct bends.

7.3.2 Divisible Cable duct joint bends.

7.3.3 Split duct connectors.

7.3.4 Protective half-shells.

7.3.5 Assembly device.

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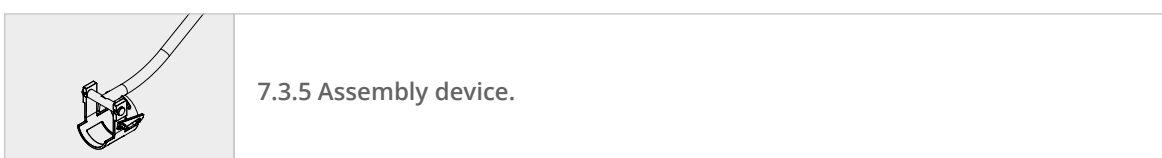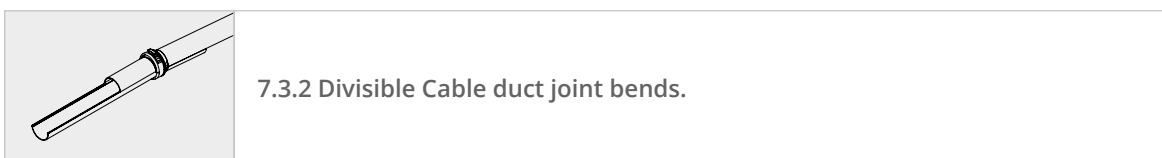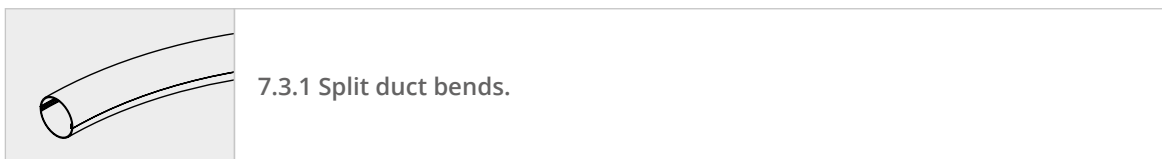
7.3.1 Split duct bends.

Split duct bends KKHRB

Split duct bends KKHRB

SPLIT DUCT BENDS FOR CABLE DUCTS.

The divisible split duct bends for cable ducts KKHRB are used for the repair of ducts that are layed in curves because of changes in the route or because of height differences. They consist of PVC-U and are gas- and water tight up to 0.5 bar.

Features and benefits
- tensile and gas- and water tight up to 0.5 bar
- made from PVC-U
- assembly device KKHRG required for correct sealing

Type	Ø (D)	Radius (R)	Angle	Length (L)	Colour	Item no.
KKHRB_50_Type_I	50	1000	90 °	1379	Black (BK)	4765
KKHRB_50_Type_II	50	3100	45 °	2776	Black (BK)	4763
KKHRB_110	110	1000	45 °	723	Black (BK)	5068
	110	1000	90 °	1336	Black (BK)	5067
KKHRB_110_Type_I	110	2710	45 °	2181	Black (BK)	4757
KKHRB_110_Type_II	110	3340	45 °	2706	Black (BK)	4754
KKHRB_110_Type_III	110	4040	45 °	3252	Black (BK)	4750
KKHRB_110_Type_IV	110	4810	45 °	3893	Black (BK)	4741
KKHRB_110_Type_V	110	6070	45 °	5148	Black (BK)	4739
KKHRB_125_Type_I	125	2710	45 °	2181	Black (BK)	1196

All dimensions in mm. Subject to technical changes.

(split-)duct system

7.3.2 Divisible cable duct joint bends.
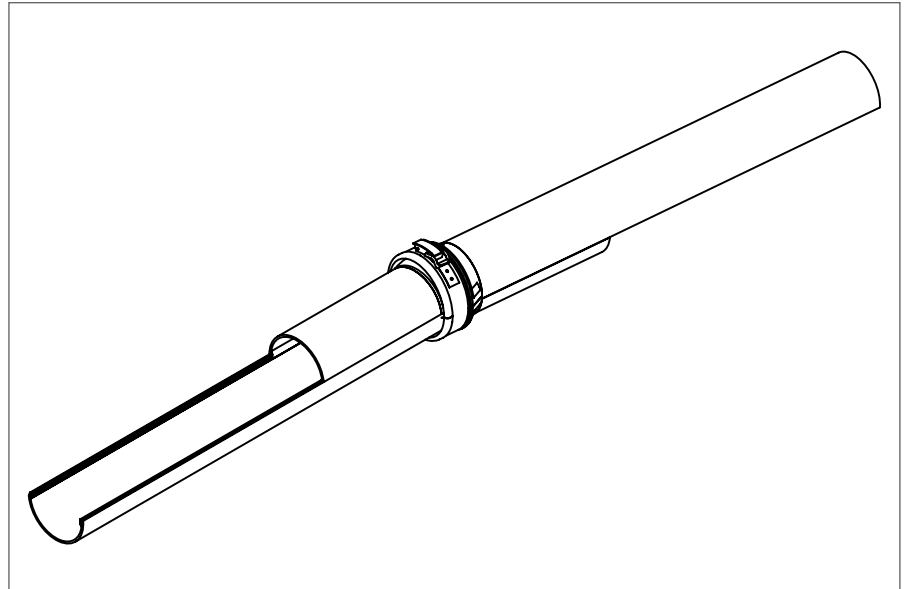
Cable duct joint bends KKGB-t

FLEXIBLE AND PRESSURE-TIGHT.

The divisible cable duct joint bend KKGB-t is used in a variety of possible applications: for redirecting the duct route in case of obstacles or external plants like gas pipes or district heating pipelines; in case of height or lateral differences of duct routes; in case of changes in the duct route level due to slopes or subsidence when crossing the road; for skipping obstacles within a bend area; for branching off and refixing ducts into the duct route; in case of local tightness at distribution boxes, cable manholes or distribution stations; for connection ranges that do not align; generally in rough terrain. The flexible duct bends with socket and insertion end include the smallest possible bending radius limit.

Features and benefits
- use smallest possible bending radius limit
- gas- and water-tight up to 0.5 bar
- assembly device KKHRG required for correct sealing

Type	Ø (D)	Wall (WT)	Angle	Colour	Item no.
KKGB-t_110/8°	110	3.20	8 °	Black (BK)	3968

All dimensions in mm. Subject to technical changes.

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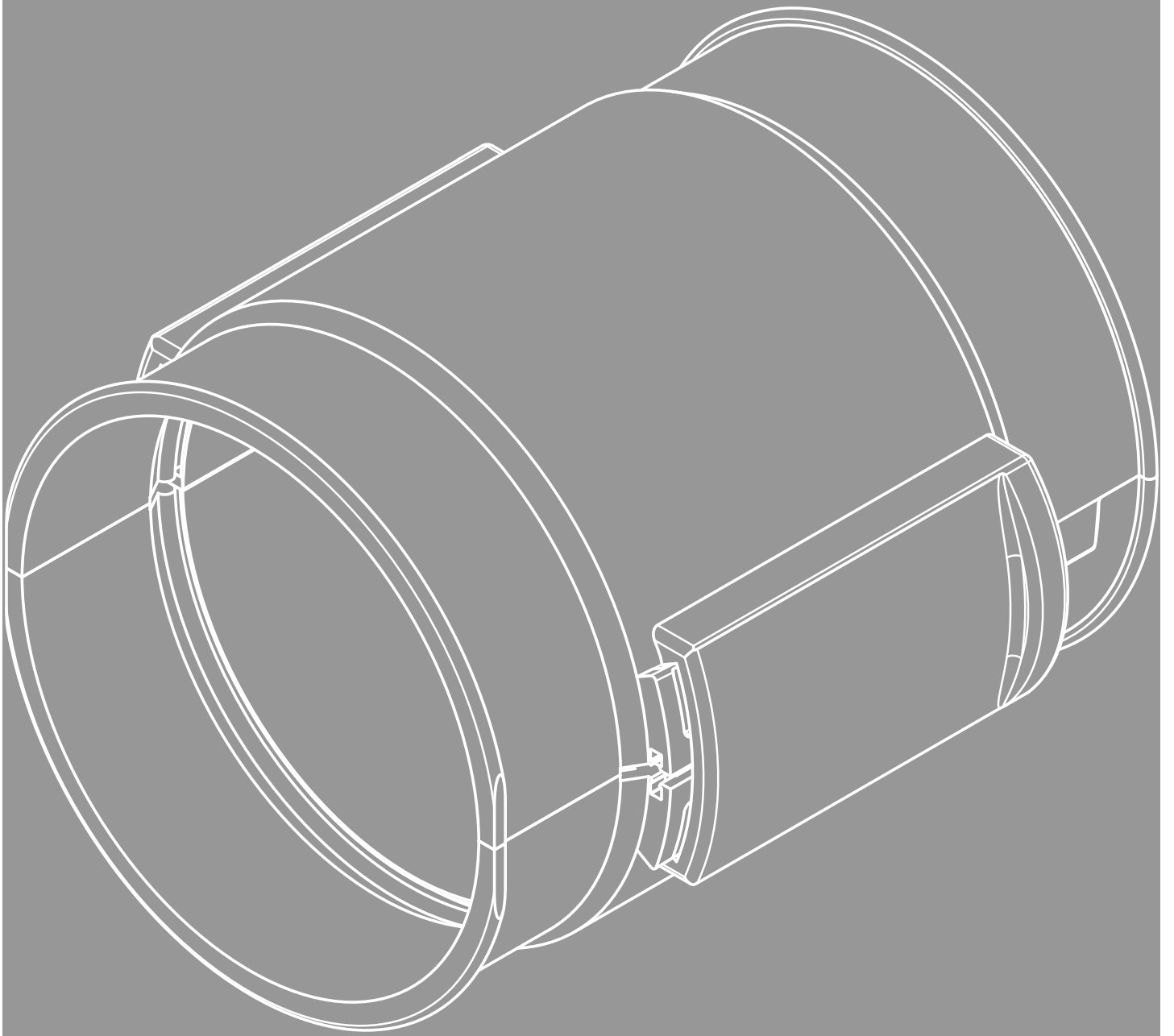
7.3.3 Split duct connectors.
Quick repair without any net-interruption.

The split duct connectors are used for the gas- and water-tight connection of the split duct with the duct.
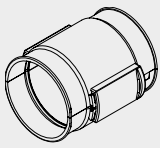
7.3.3.1 Split duct connectors.
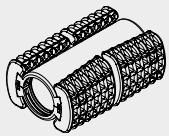
7.3.3.2 Divisible connectors.
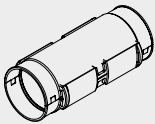
7.3.3.3 Repair sleeves.
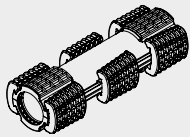
7.3.3.4 Repair sleeves.
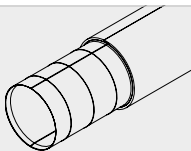
7.3.3.5 Transition fittings.

7.3.3.1 Split duct connectors.
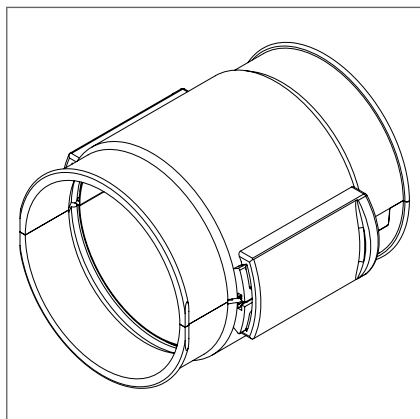
Connectors KKHRM

Connectors KKHRM connect split ducts gas- and water-tight.

CONNECT THE HALF-PIPE TO THE PIPE IN A GAS- AND WATER-TIGHT MANNER.

The split duct connectors KKHRM are used for the gas- and water-tight connection of the split duct with the duct.

Features and benefits
• divisible
• gas and watertight up to 0.5 bar
• made from PVC-U

Type	Ø (D)	Length (L)	Colour	Item no.
KKHRM_110	110	180	Black (BK)	5891
KKHRM_125	125	180	Black (BK)	5695

All dimensions in mm. Subject to technical changes.

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7.3.3.2 Divisible connectors.
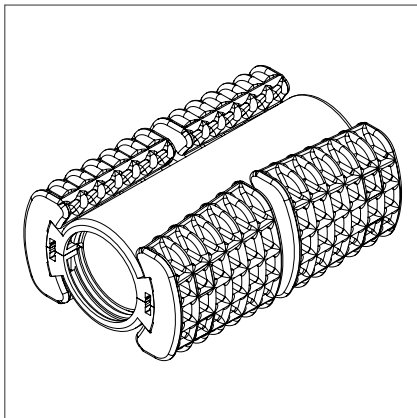
Divisible connectors EBM

Divisible connectors EBM for the gas- and water-tight connection of split duct and duct.

CONNECT THE SPLIT-DUCT TO THE DUCT IN A GAS- AND WATER-TIGHT MANNER.

The divisible connector EBM is used for the gas- and water-tight connection of the split duct with the duct. The EBM is tensile, divisible and consist of PVC-U.

Features and benefits
- permanently gas and watertight up to 0.5 bar (10 bar/30 min)
- tensile
- made from PVC-U

Type	Ø (D)	Colour	Item no.
EBM_32	32	Black (BK)	10777
EBM_40	40	Black (BK)	10778
EBM_50	50	Black (BK)	10779

All dimensions in mm. Subject to technical changes.

(split-)duct system

7.3.3.3 Repair sleeves.
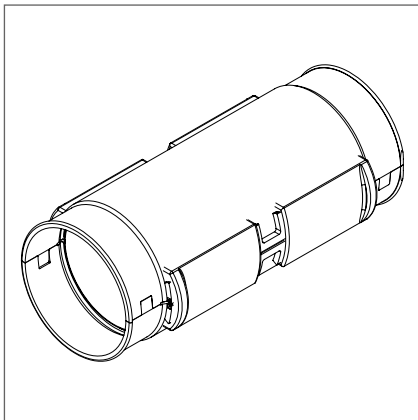
Repair sleeves RM

Split repair sleeve RM repairs damage to unoccupied pipes or pipes covered with cables.

REPAIR OF EMPTY DUCTS OR DUCTS OCCUPIED WITH CABLES.

The RM split repair sleeves are suitable for repairing minor damage up to 150 mm to empty pipes or pipes covered with cables.

Features and benefits
- gas- and water-tight up to 0.5 bar
- made from PVC-U

Type	Ø (D)	Length (L)	Colour	Item no.
RM_110	110	300	Black (BK)	11188

All dimensions in mm. Subject to technical changes.

7.3.3.4 Repair sleeves.
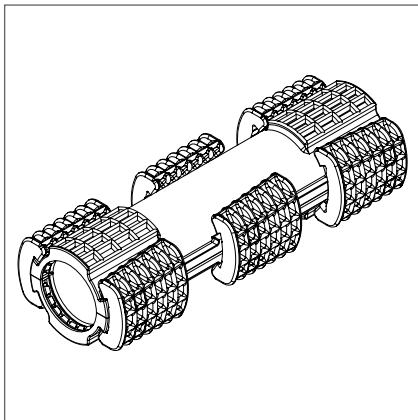
Repair sleeves EBM-R

Repair sleeve EBM-R for repairing occupied and unoccupied cable conduits.

REPAIR OF EMPTY DUCTS OR DUCTS OCCUPIED WITH CABLES.

The divisible repair connectors EBM-R are suitable for the repair of small damages up to approx. 170 mm on empty ducts or on ducts occupied with cables. They are tensile and gas- and water-tight up to 0.5 bar.

Features and benefits
• tensile
• permanently gas and watertight up to 0.5 bar
• made from PVC-U

Type	Ø (D)	Length (L)	Colour	Item no.
EBM-R_32	32	260	Black (BK)	42233
EBM-R_40	40	260	Black (BK)	10316
EBM-R_50	50	260	Black (BK)	997

All dimensions in mm. Subject to technical changes.

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7.3.3.5 Transition fittings.
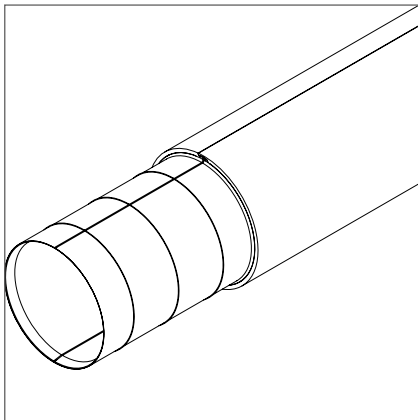
Split transition fittings UEFT-t

Split transition fittings UEFT-t 110 are suitable for cable duct shaped blocks that are already occupied.

SAND-, GAS- AND WATER-TIGHT.

The split transition fitting ÜFT-t made of PVC-U was developed for cable duct blocks that are already covered with cables.

Features and benefits
• up to 0.5 bar gas- and watertight
• made from PVC-U
• assembly device KKHRG required for correct sealing

Type	Ø (D)	Length (L)	Colour	Item no.
UEFT-t_110	110	1650	Black (BK)	8255

All dimensions in mm. Subject to technical changes.
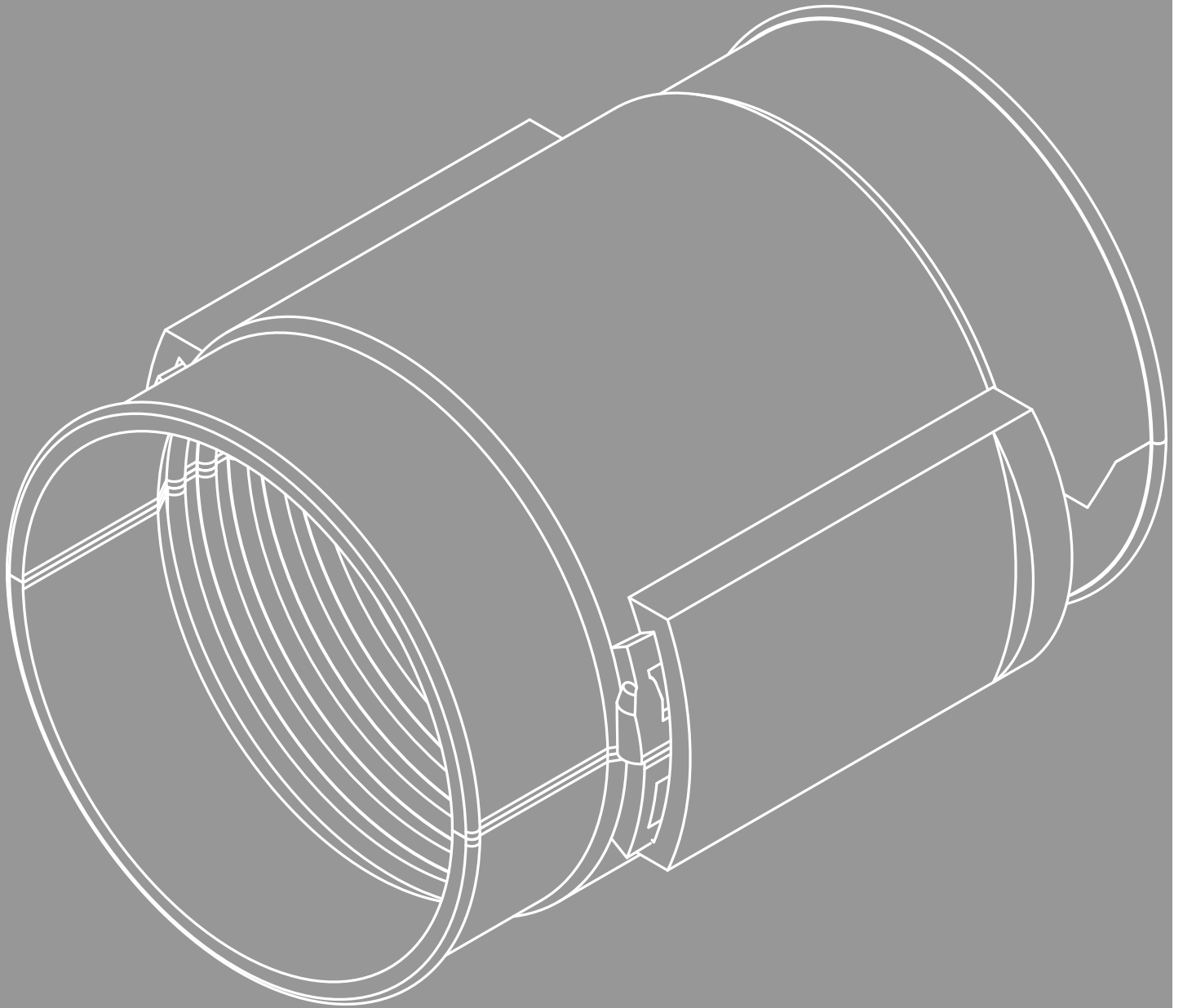
7.3.4 Protective half-shells.
Above ground installation.

The protective half-shells protect the communications and power cables at the aboveground installation. Furthermore they fulfill all requirements for repair half shells of fine sand-tight protective pipes for cables.
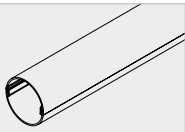
7.3.4.1 Protective half-shells.

7.3.4.2 Half-shell sleeves.

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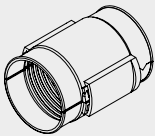
7.3.4.1 Protective half-shells.
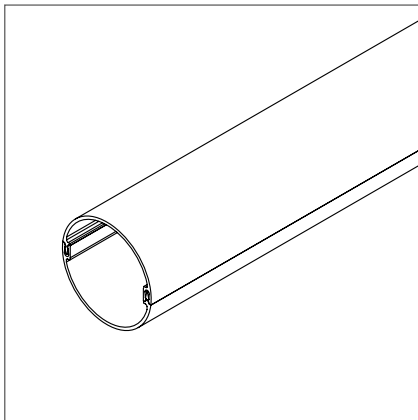
Protective half-shells HS

Protective half-shells HS protect cables during above-ground installation.

PROTECT THE COMMUNICATIONS AND POWER CABLES AT THE ABOVE GROUND INSTALLATION.

The protective half-shells HS protect the communications and power cables at the above ground installation. Furthermore they fulfill all requirements of fine sand-tight protective pipes for cables for repair half shells. They consist of two half shells with continuous snap lock and are made from UV-resistant PVC-U. Due to their white color, they expand only to a minimum under solar exposure. The simple handling allows quick assembly and reusability.

Features and benefits
- made of UV-resistant PVC-U
- easy assembly and reusability
- assembly device KKHRG required for correct sealing

Type	Ø (D)	Wall (WT)	Length (L)	Colour	Item no.
HS_110	110	3.20	3000	White (WH)	4222
	110	3.20	6000	White (WH)	7757

All dimensions in mm. Subject to technical changes.

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7.3.4.2 Half-shell sleeves.
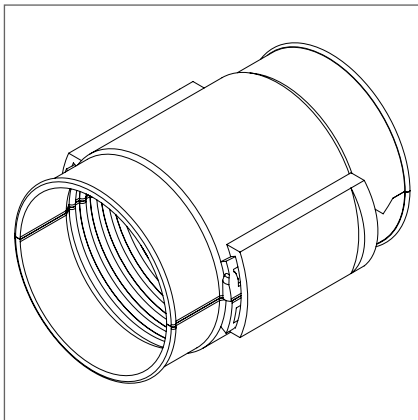
Half-shell sleeve for protective pipes HSM

Half-shell sleeves for protective pipes HSM make connections fine sand-tight.

CONNECTING PROTECTIVE HALF-SHELLS.

Half-shell sleeves for protective pipes are used with two connecting clamps and are made from PVC-U. The UV-resistant, white moulded part is fine sand-tight and reusable.

Features and benefits
• made from UV-resistant PVC-U
• reusable and fine sand-tight

Type	Ø (D)	Length (L)	Colour	Item no.
HSM_110	110	180	White (WH)	7749

All dimensions in mm. Subject to technical changes.
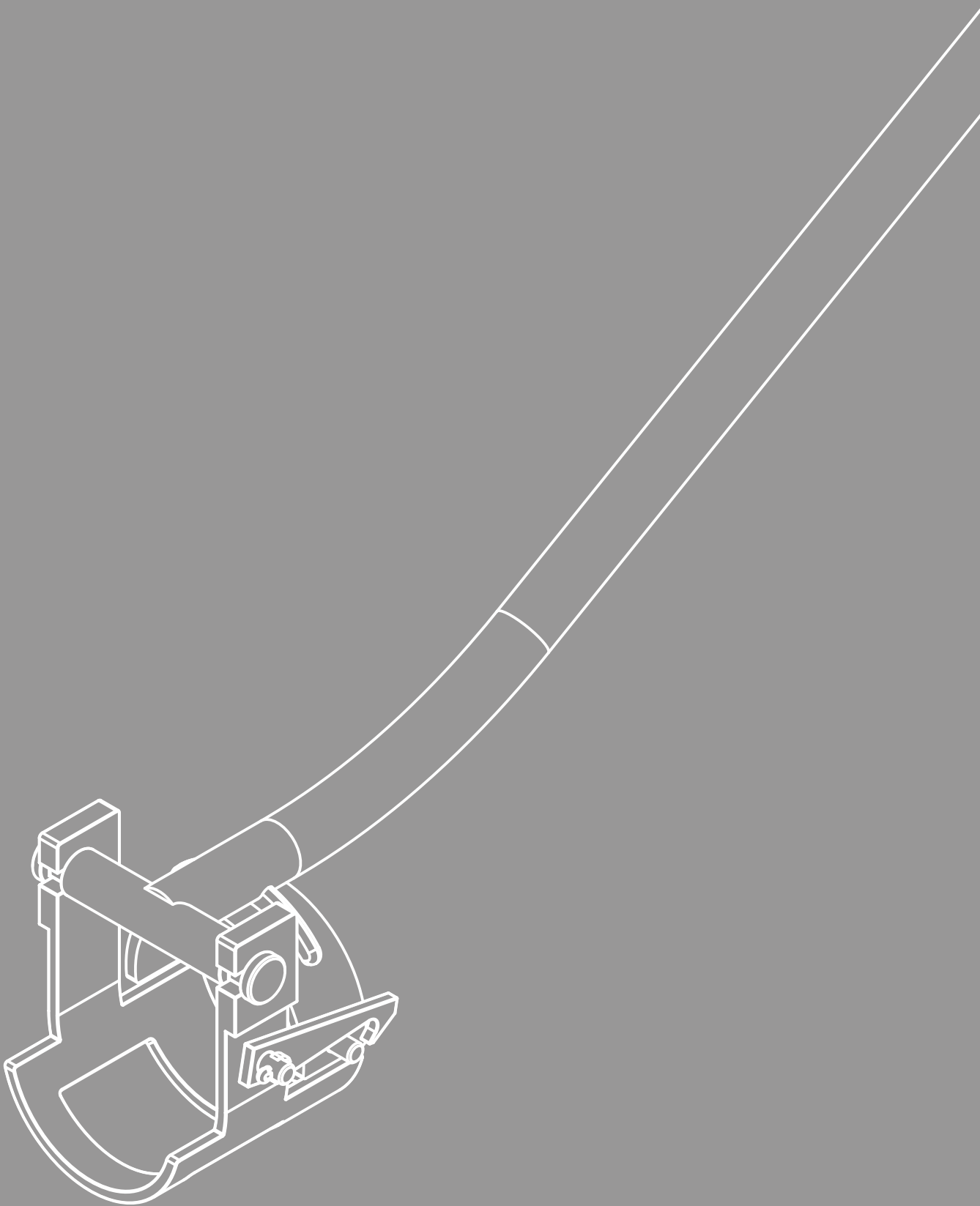
7.3.5 Assembly device.
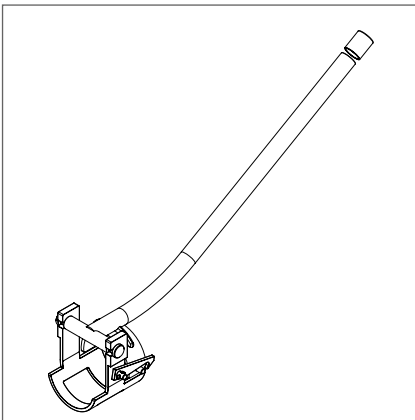
Assembly device KKHRG

Assembly device KKHRG are needed for professional assembly.

ASSEMBLY OF SPLIT DUCT SYSTEMS.

The divisible split duct assembly devices KKHRG are required for the professional assembly of gabocom split duct systems.

Type	Ø (D)	Colour	Item no.
KKHRG_32	32	Silver (SR)	5022
KKHRG_40	40	Silver (SR)	4179
KKHRG_50	50	Silver (SR)	7624
KKHRG_110	110	Silver (SR)	1930
KKHRG_125	125	Silver (SR)	9747

All dimensions in mm. Subject to technical changes.

(split-)duct system
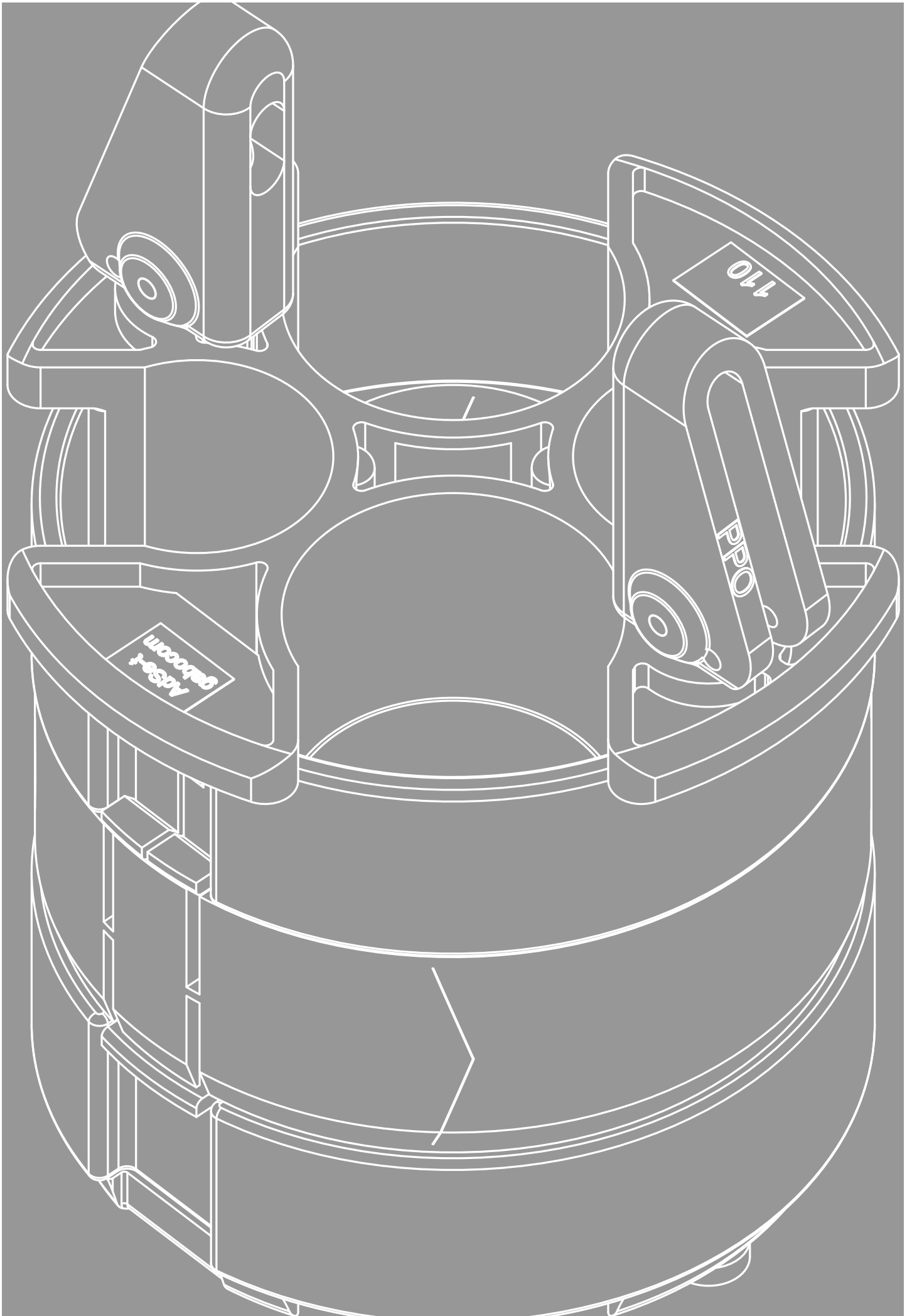
7.4 Accessories for Telecommunications duct systems.
Everything for quick assembly.

The gabocom product range has grown with the special requirements of tele-communications, cable television and energy supply. Over the years, we developed a wide range of gas-, water- and dirt-tight accessories of the highest quality.
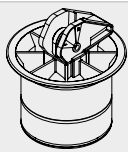
7.4.1 Sealing-and fixing-elements
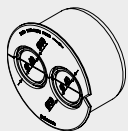
7.4.2 Connectors.
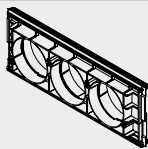
7.4.3 Ducting terminal panels.
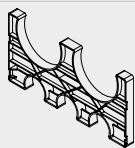
7.4.4 Spacers.
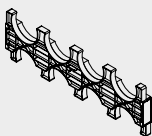
7.4.5 Spacers for bridge construction.

7.4.6 Cable duct joint bends.

(split-)duct system

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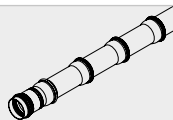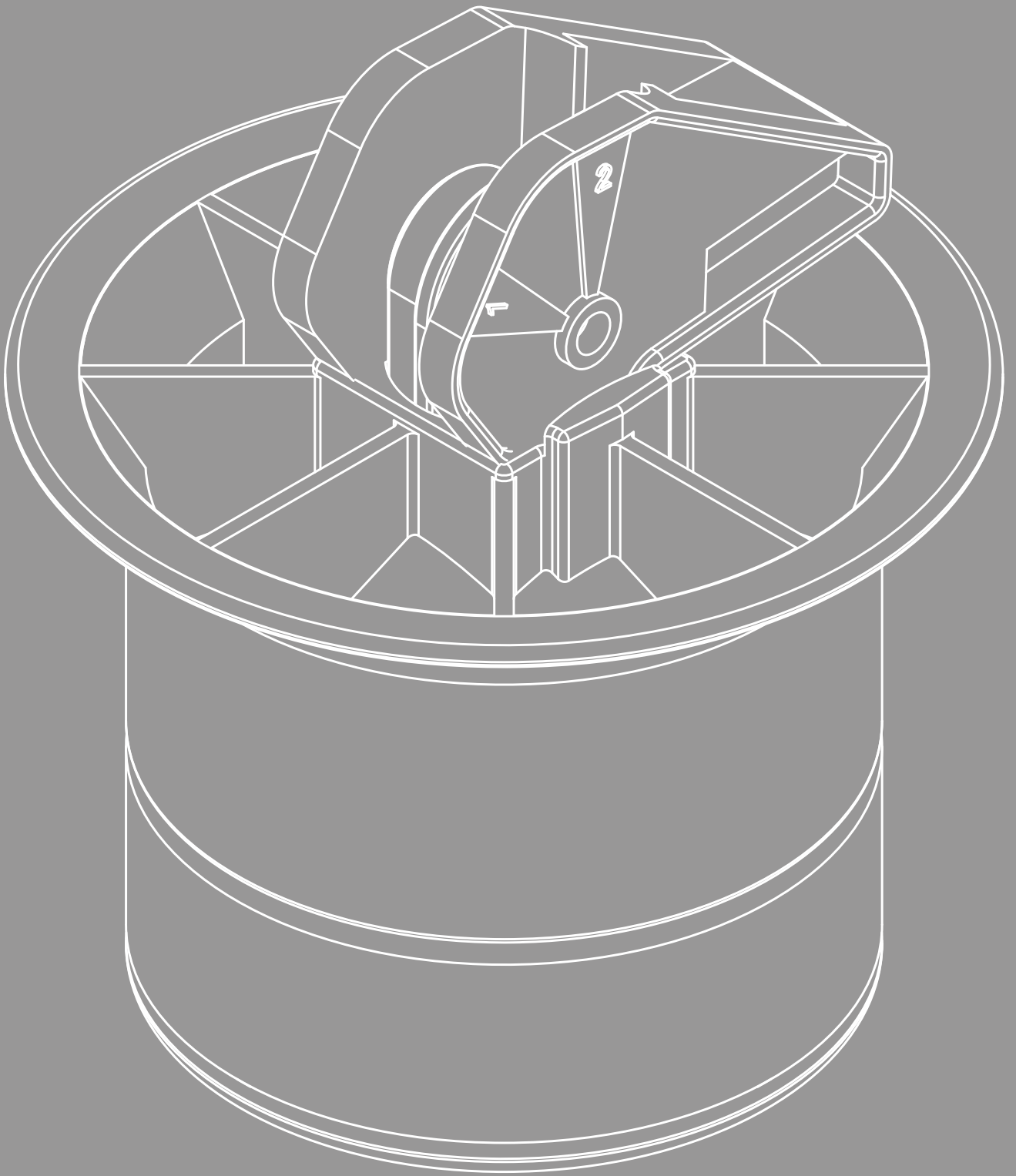
7.4.1 Sealing- and fixing-elements.
Divisible and easy to install.

Sand-, gas-, and water-tight sealing of existing and new duct systems depending on the application - gabocom offers the optimum solution.
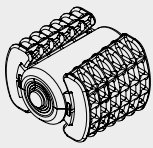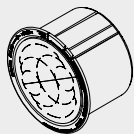

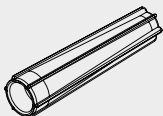**7.4.1.1 Divisible seals.**

7.4.1.2 Sealing plugs.
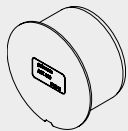
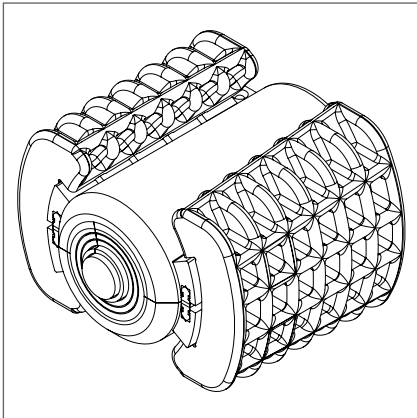**7.4.1.3 Sealing caps.**

7.4.1.4 Divisible sealing and fixing discs.

7.4.1.5 Protective duct seals.

7.4.1.6 Cable end-caps.

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7.4.1.1 Divisible seals.

Divisible seals EZA-t

Divisible seals EZA-t K seal ducts occupied with cables.

FOR PIPES OCCUPIED WITH CABLES.

The divisible sealing elements EZA-t allow gas- and water-tight sealing of empty ducts and ducts occupied with cables up to 0.5 bar. They are also applicable for fixing against elongations due to temperature changes. The high-quality fittings are reusable and can easily and quickly be installed.

Features and benefits
- divisible, reusable and up to 0.5 bar gas- and watertight
- stabilisation against temperature-induced changes in length

Type	Ø (D)	Applications	Cable Ø min	Cable Ø max	Colour	Item no.
EZA-t_32/K	32	1 cable (10.5 - 21.5)	10.5	21.5	Black (BK)	271
EZA-t_40/2K	40	1 cable (10.5 - 16) and 1 cable (10.5 - 18.5)	-	-	Black (BK)	527
EZA-t_40/K	40	1 cable (10.5 - 25.5)	10.5	25.5	Black (BK)	272
EZA-t_50/2K	50	1 cable (10.5 - 16) or 1 cable (10.5 - 25.5); when using 2 cables: sum of the two cable diameters ≤ 30	-	-	Black (BK)	274
EZA-t_50/K	50	1 cable (21.5 - 34)	21.5	34	Black (BK)	4344
EZA-t_50/3K	50	2 cable (10.5 - 16) and 1 cable (10.5 - 18.5)	-	-	Black (BK)	277
EZA-t_63/2K	63	1 cable (10.5 - 16) or 1 cable (10.5 - 25.5); when using 2 cables: sum of the two cable diameters ≤ 30	-	-	Black (BK)	1797
EZA-t_63/K	63	1 cable (21.5 - 34)	21.5	34	Black (BK)	1846
EZA-t_63/3K	63	2 cable (10.5 - 16) and 1 cable (10.5 - 18.5)	-	-	Black (BK)	1817

All dimensions in mm. Subject to technical changes.

7.4.1.2 Sealing plugs.
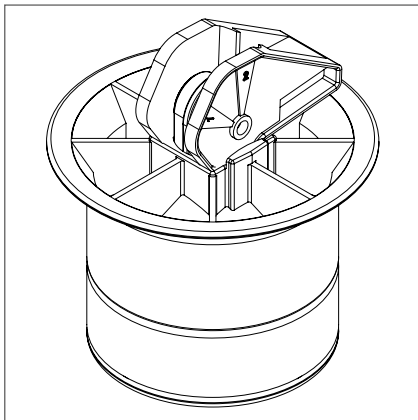
Sealing plugs AdS

Sealing plugs AdS seal insertion ends and sleeves.

CLOSE PLUG-IN TIPS AND SLEEVES.

AdS sealing plugs seal off plug-in tips and sleeves, preventing the ingress of gas and water at pressures of up to 0.5 bar. As soon as the handle is closed, seal integrity is assured, and the correct installation position is obvious at a glance.
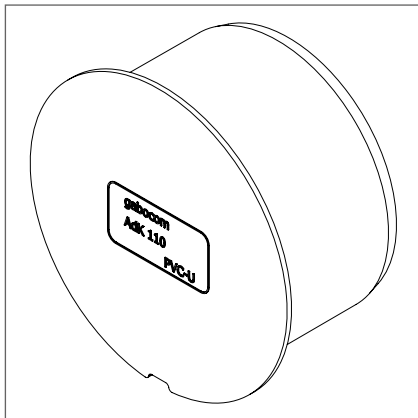
Features and benefits
- gas- and water-tight up to 0.5 bar
- reusable

Type	Ø (D)	Applications	Colour	Item no.
AdS_50	50	sealing range 39.5 - 50.5	Black (BK)	5997
AdS_110	110	sealing range 97.5 - 111	Black (BK)	6135
AdS_125	125	sealing range 118 - 126	Black (BK)	6144

All dimensions in mm. Subject to technical changes.

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7.4.1.3 Sealing caps.

Sealing caps AdK

Sealing caps AdK seal unoccupied ducting terminal panels.

SEAL UNASSIGNED DUCTING TERMINAL PANELS.

AdK sealing caps made of PVC-U are used to seal unassigned cable duct terminal panels and openings. They can also be used to close sleeve ends on PVC-U tubes.
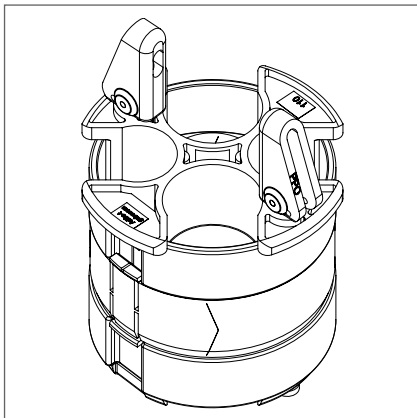
Features and benefits

• made of PVC-U
• protects against sand
• reusable

Type	Ø (D)	Colour	Item no.
AdK_50	50	Black (BK)	3867
AdK_110	110	Black (BK)	3398

All dimensions in mm. Subject to technical changes.

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7.4.1.4 Divisible sealing and fixing discs.

Divisible sealing and fixing discs AdSe-t

Divisible sealing and fixing discs AdSe-t seal the cavity between the cable duct pipe or half-pipe run and the multiple pipe.

SEALING CAVITY.

With the divisible AdSe-t sealing and retaining discs, the remaining cavity between cable duct tube or pipe section and multiple tube is sealed and secured at the same time. The shaped parts are gas and watertight to 0.5 bar and are also suitable for retrospective installation on multiple tubes containing pulled-through cables. Available for the combination of PE duct and steel pipe, PP duct and cable duct blocks (KKF), PVC duct and split duct (KKHR) as well as PVC duct only.
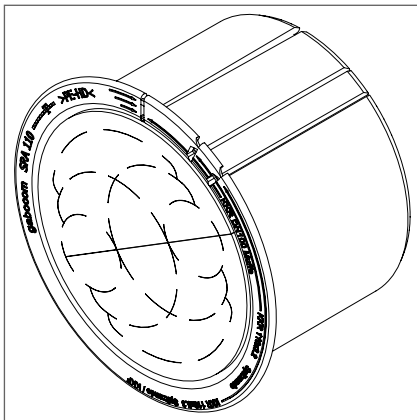
Features and benefits

- gas- and water-tight up to 0.5 bar
- reusable
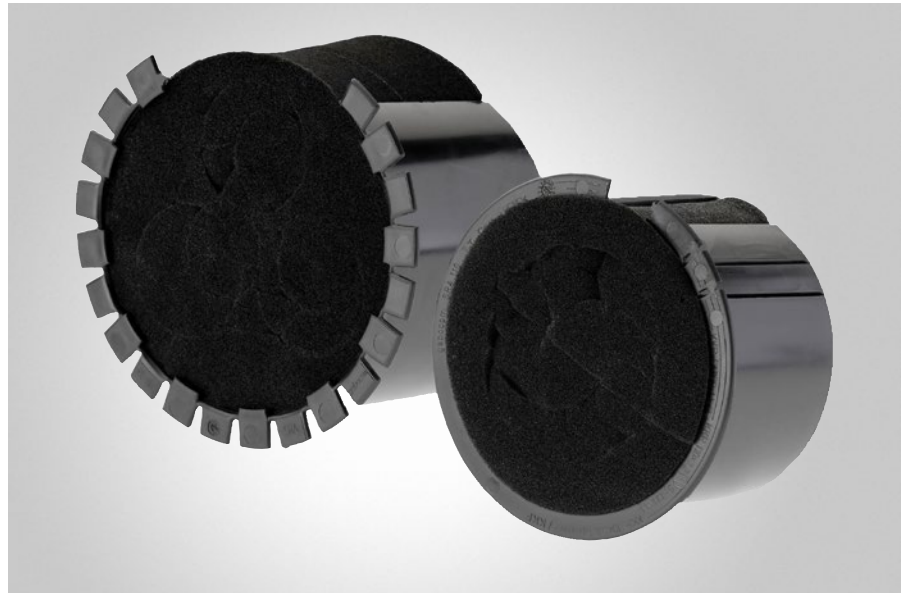- compatible with multiple ducts 2x32 and 2x40

Type	Ø (D)	Applications	Colour	Item no.
AdSe-t_110x4.3	110	PE pipe 110 x 4.3 / steel pipe 108 x 3.6	White (WH)	292
AdSe-t_110x3.4	110	PP pipe 110 x 3.4 / KKF 110	Green (GN)	309
AdSe-t_110x3.2	110	PVC pipe 110 x 3.2 / KKHR 110 x 3.2	Black (BK)	1264
AdSe-t_125x3.7	125	PVC pipe 125 x 3.7	Black (BK)	3354

All dimensions in mm. Subject to technical changes.

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7.4.1.5 Protective duct seals.

Protective duct seals SRA

Protective duct seals SRA are used to protect against sand.

TO PROTECT DUCTS AGAINST SAND.

SRA protective duct seals are used at intersections and on unassigned (i.e. empty) protective cable tubes to protect them against sand. Due to pre-stamped sealing bodies, tubes containing cables are protected against the ingress of fine sand. These high-quality shaped parts fit inside cable duct tube sleeves and plug-in tips. They are quick and easy to install and eliminate the need for unsafe makeshift solutions. No tools are required for removal and subsequent reuse.

Features and benefits
• protect against sand
• no tools required
• reusable

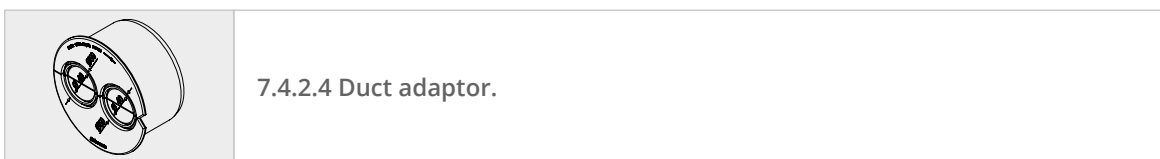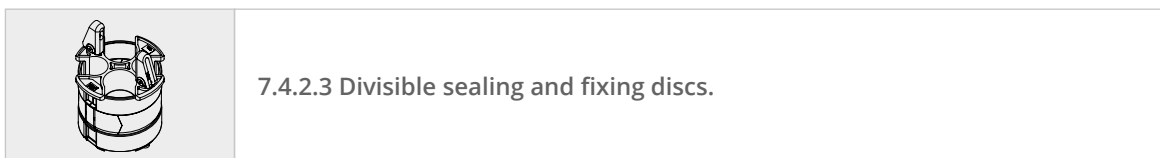| Type	Ø (D)	Applications	Length (L)	Colour	Item no.
SRA_50	50	inner duct Ø 40-50	60	Black (BK)	4271
SRA_90	90	inner duct Ø 88-100	113	Black (BK)	1607
SRA_110	110	inner duct Ø 99-110	80	Black (BK)	2998
SRA_125	125	inner duct Ø 110-120	113	Black (BK)	3357
SRA_140	140	inner duct Ø 125-134.5	113	Black (BK)	7567

All dimensions in mm. Subject to technical changes.

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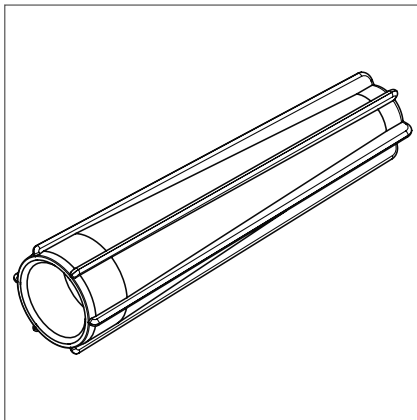
7.4.1.6 Cable end-caps.

Cable end-caps KEK

Cable end-caps KEK seal cable ends gas- and watertight.

SEAL THE ENDS OF CABLES GAS- AND WATERTIGHT.

KEK cable end caps (ferrules) are the low-cost alternative to expensive shrink-fit sleeves and serve to seal the ends of cables in a gas- and water-tight manner. For these reasons, they are used in manufacturing, transport, warehousing and construction site environments. These reusable parts are easy to install, save power and time, and do not require any gas burners.

Features and benefits
• reusable
• easy assembly
• made from PVC-U

Type	Cable Ø min	Cable Ø max	Colour	Item no.
KEK_8-17	8	17	Black (BK)	1865
KEK_15-24.5	15	24.5	Black (BK)	1866

All dimensions in mm. Subject to technical changes.

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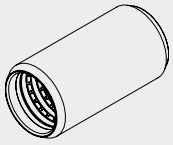**194**
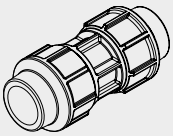
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7.4.2 Connectors.
Safe transitions from duct to duct.

gabocom offers sand-, gas- and water-tight transition and connection possibilities. They are suitable for empty as well as for occupied duct networks.
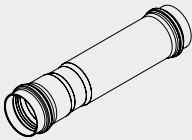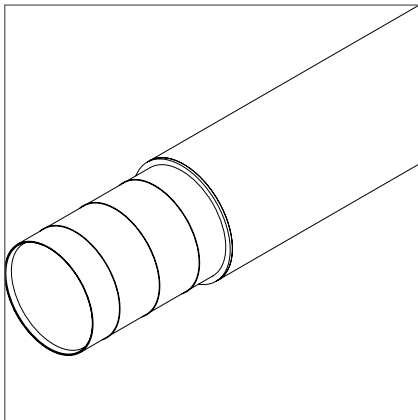
7.4.2.1 Transition fittings.

7.4.2.2 Transition duct socket.

7.4.2.3 Divisible sealing and fixing discs.

7.4.2.4 Duct adaptor.
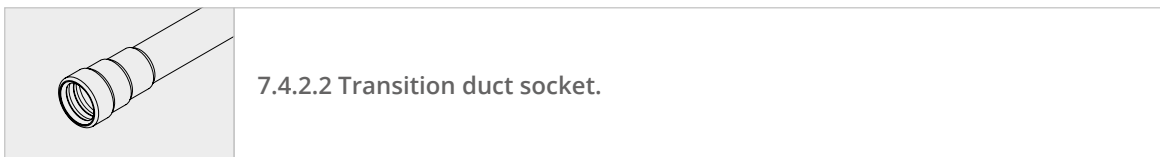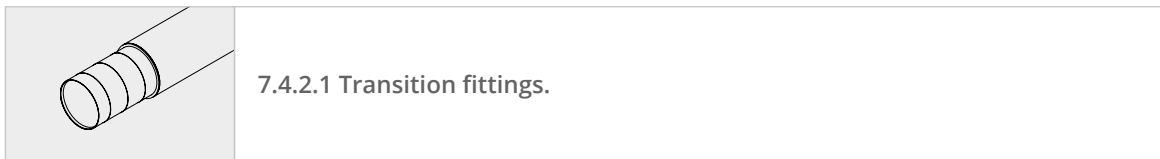
7.4.2.5 Connector.

7.4.2.6 Double clamp fittings.

7.4.2.7 Couplers.

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7.4.2.1 Transition fittings.

Transition fittings UEFT

Transition fittings UEFT connect ducts with duct fittings.

SAND-, GAS- AND WATER-TIGHT.

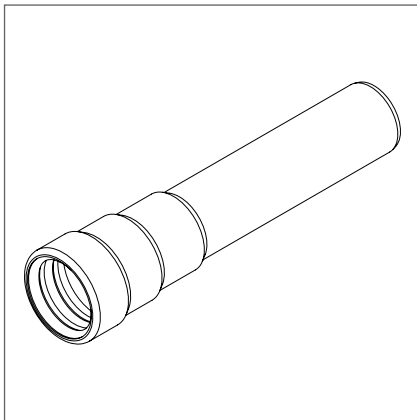The transition fitting UEFT connects cable duct pipes with cable duct bricks and is made of PVC-U.

Features and benefits
• made from PVC-U
• up to 0.5 bar gas- and watertight

Type	Ø (D)	Length (L)	Colour	Item no.
UEFT_110	110	1650	Black (BK)	8254

All dimensions in mm. Subject to technical changes.

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7.4.2.2 Transition duct socket.

Transition duct socket UMPE

Cable duct transition sleeve UMPE connects culvert pipes with cable duct pipes.

CONNECT CABLE DUCT PIPES.

The UMPE cable duct adapter sleeve is used to connect PE-HD crossing pipes to cable duct tubes. This accessory is made of durable PVC-U.
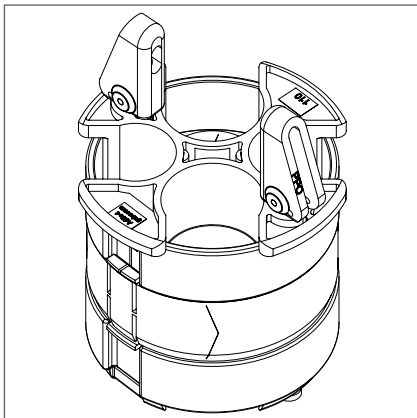
Features and benefits
- made from PVC-U
- up to 0.5 bar gas- and watertight

Type	Ø (D)	Ø (D2)	Length (L)	Colour	Item no.
UMPE_125	125	110	690	Black (BK)	4336

All dimensions in mm. Subject to technical changes.

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7.4.2.3 Divisible sealing and fixing discs.

Divisible sealing and fixing discs
AdSe-t

Divisible sealing and fixing discs AdSe-t seal the cavity between the cable duct pipe or half-pipe run and the multiple pipe.

SEALING CAVITY.

With the divisible AdSe-t sealing and retaining discs, the remaining cavity between cable duct tube or pipe section and multiple tube is sealed and secured at the same time. The shaped parts are gas and watertight to 0.5 bar and are also suitable for retrospective installation on multiple tubes containing pulled-through cables. Available for the combination of PE duct and steel pipe, PP duct and cable duct blocks (KKF), PVC duct and split duct (KKHR) as well as PVC duct only.
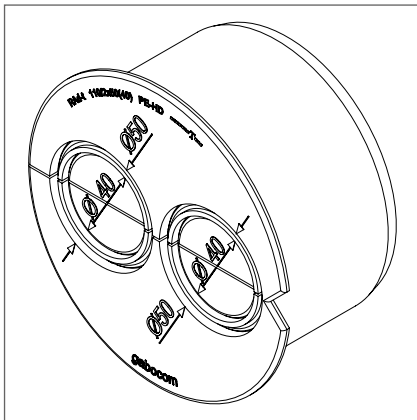
Features and benefits
- gas- and water-tight up to 0.5 bar
- reusable
- compatible with multiple ducts 2x32 and 2x40

Type	Ø (D)	Applications	Colour	Item no.
AdSe-t_110x4.3	110	PE pipe 110 x 4.3 / steel pipe 108 x 3.6	White (WH)	292
AdSe-t_110x3.4	110	PP pipe 110 x 3.4 / KKF 110	Green (GN)	309
AdSe-t_110x3.2	110	PVC pipe 110 x 3.2 / KKHR 110 x 3.2	Black (BK)	1264
AdSe-t_125x3.7	125	PVC pipe 125 x 3.7	Black (BK)	3354

All dimensions in mm. Subject to technical changes.

(split-)duct system

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7.4.2.4 Duct adaptor.

Duct adaptor RAd-t

Duct adaptor RAd-t for use in sleeves.

SAFE TRANSITION FROM DUCT TO DUCT.

The divisible duct adaptor Rad-t made of PE-HD is installed in sleeves with a diameter of 110 mm. They are suitable for PE-HD ducts with a diameter of 40 or 50 mm.
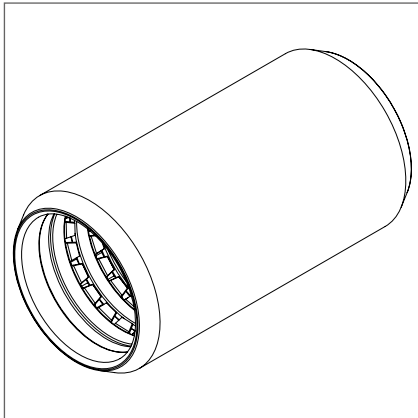
Features and benefits
- divisible
- made from PE-HD
- easy and fast assembly of the tubes due to predetermined breaking points

Type	Ø (D)	Length (L)	Colour	Item no.
RAd-t_110/2x50(40)	110	65	Black (BK)	1474

All dimensions in mm. Subject to technical changes.

(split-)duct system

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7.4.2.5 Connector.

Double connector DSM

Double connectors DSM for connecting PE pipes.

TENSILE JOINTING OF PE-HD PIPES DIMENSION 50.

The DSM connects PE-HD tubes of dimension 50. This accessory has tensile strength and is suitable for being pushed in firmly.
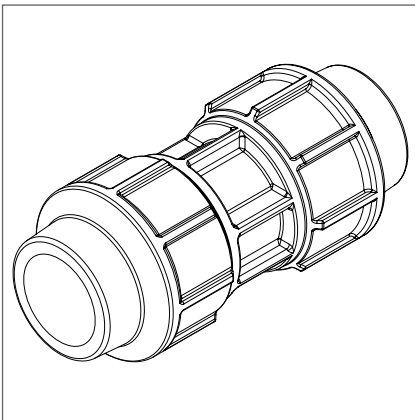
Features and benefits
• up to 0.5 bar gas- and watertight
• upt to 15 bar pressure thight (tested 30 minutes)
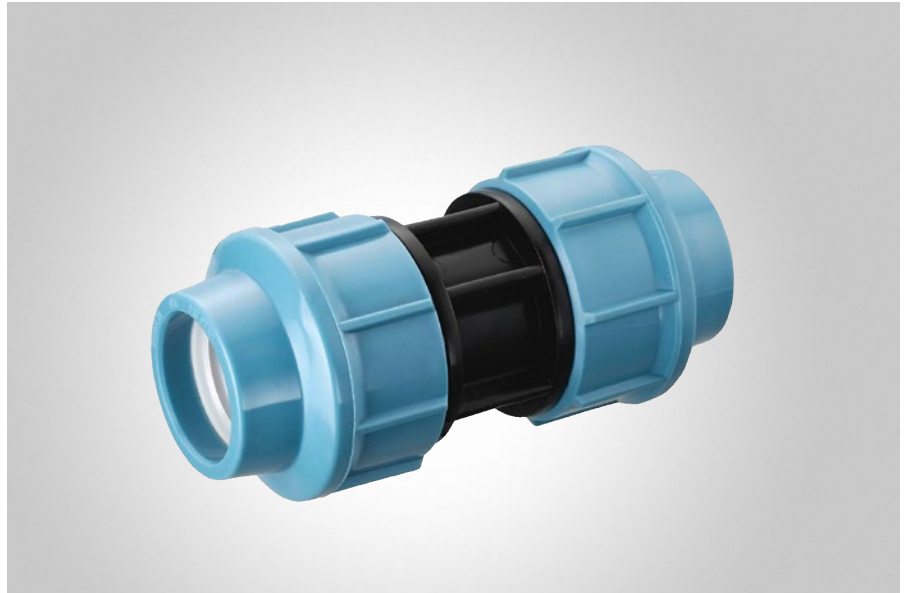• directly buriable
• tensile
• made from PVC-U

Type	Ø (D)	Colour	Item no.
DSM_50	50	White (WH)	12215

All dimensions in mm. Subject to technical changes.

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7.4.2.6 Double clamp fittings.

Double clamp fittings DKF

Double clamp fittings DKF connect PE-HD ducts.

CONNECT PE-HD TUBES.

DKF double clamp fittings can be used to connect PE-HD tubes of dimension 50 together.
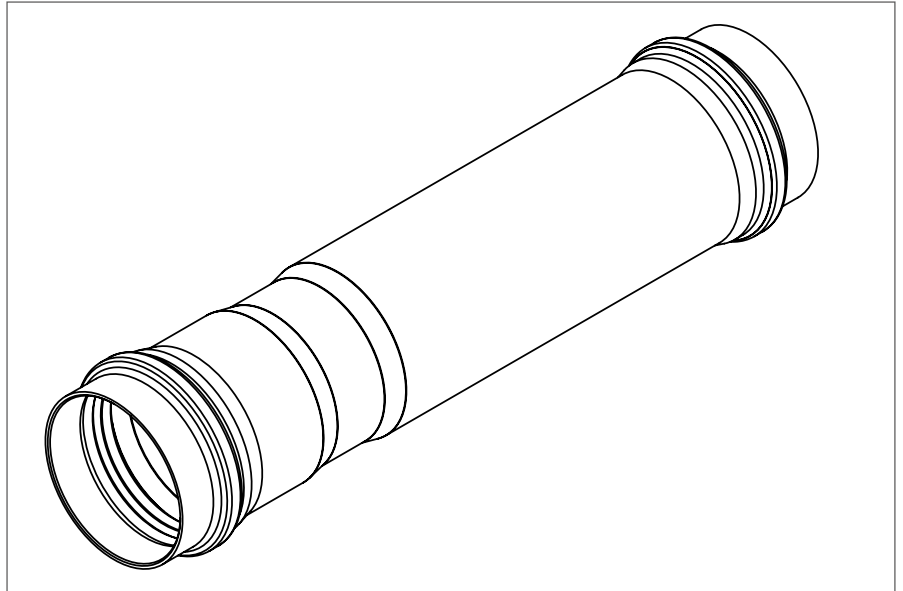
Features and benefits
- up to 0.5 bar gas- and watertight
- suitable for a blow-in pressure higher than 10 bar (tested up to 30 minutes)
- made from PP

Type	Ø (D)	Colour	Item no.
DKF_50	50	Light Blue (LTBU)	3789

All dimensions in mm. Subject to technical changes.

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7.4.2.7 Couplers.

Coupler DS

CONNECT TWO PIPES Ø110 PRESSURE-TIGHT

The coupler DS and the coupler for expansion compensation DSD 110 connect two pipes Ø110 pressure-tight.
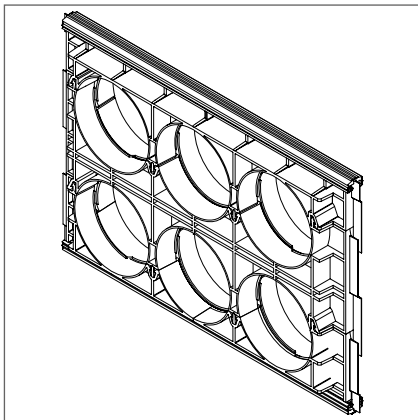
Features and benefits
- gas- and watertight up to 0.5 bar
- made from PVC-U

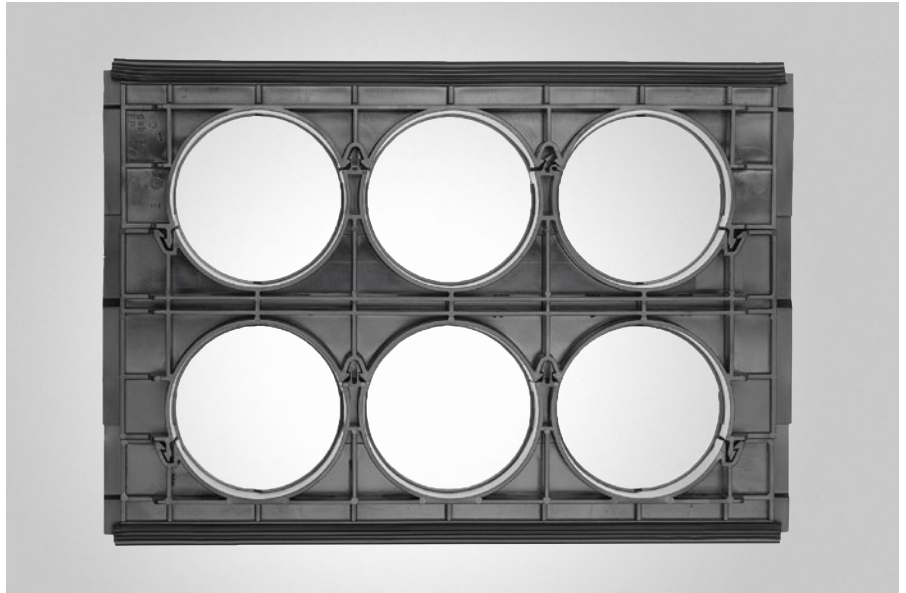| Type	Ø (D)	Length (L)	Colour	Item no.
DS_110	110	540	Black (BK)	6489
DSD_110	110	540	Black (BK)	8002

All dimensions in mm. Subject to technical changes.

7.4.3 Ducting terminal panels.

Ducting terminal panels EP

Ducting terminal panels EP insert pipes into junction boxes and small manholes.

INSERT PIPES INTO JUNCTION BOXES AND SMALL MANHOLES.

The ducting terminal panels EP have been developed for inserting ducts with a diameter of 110 mm into junction boxes and small manholes. They consist of PE-HD, are self-clamping at the duct und thus they are particularly easy to assemble. A subsequent installation is also possible.
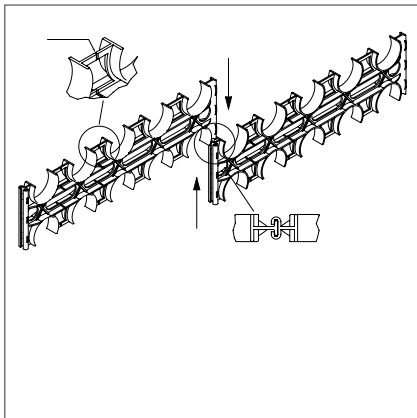
Features and benefits
• made from PE-HD
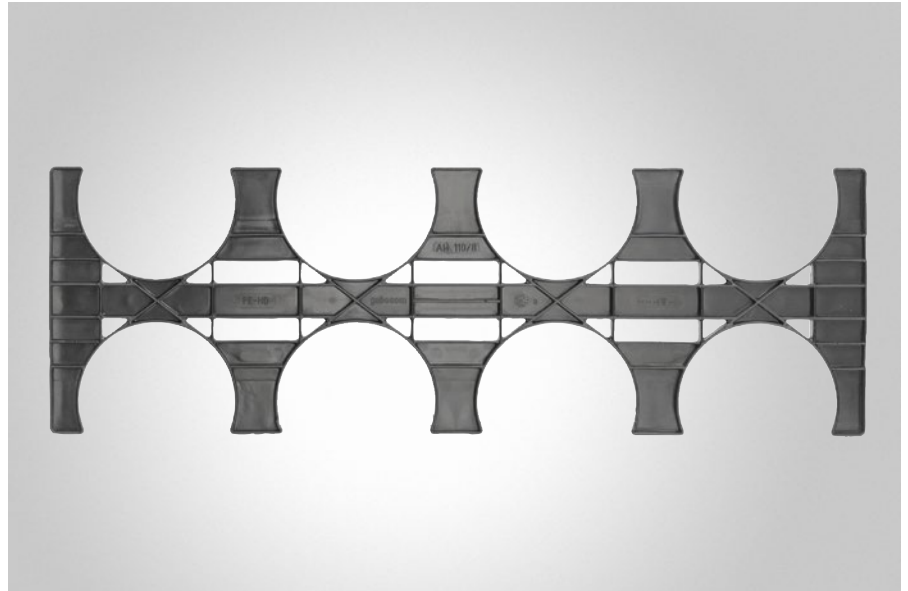• self-clamping at the duct and thus easy to install

Type	Ø (D)	Applications	Compatibility	Colour	Item no.
EP_1x110	110	1x 110 duct	Azk 83	Black (BK)	1769
EP_3x110	110	3 x 110 ducts	Azk 86 / KS 88R1	Black (BK)	280
EP_6x110	110	6 x110 ducts	Azk 83 / Azk 86 / KS 88R1	Black (BK)	282

All dimensions in mm. Subject to technical changes.

7.4.4 Spacers.

Spacers AH 50/10

The AH spacers are used for underground installation.

FOR DIRECT BURYING.

The spacer AH is used for underground laying and is made of PE-HD. The spacer AH 50/10 is also used in underground installation but is made of durable PVC-U and can be divided and extended.
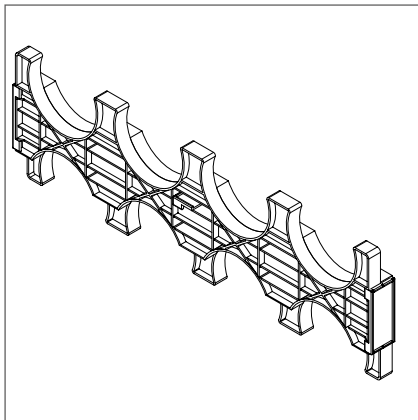
Features and benefits
• made from PE-HD / PVC-U

Type	Ø (D)	Length (L)	Colour	Item no.
AH_50/3+110/2	50	293	Black (BK)	208
AH_50/10	50	400	Black (BK)	7563
AH_110/4	110	293	Black (BK)	209
AH_110/6	110	433	Black (BK)	210
AH_110/8	110	573	Black (BK)	211

All dimensions in mm. Subject to technical changes.

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7.4.5 Spacers for bridge construction.

Spacers for bridge construction AH Br
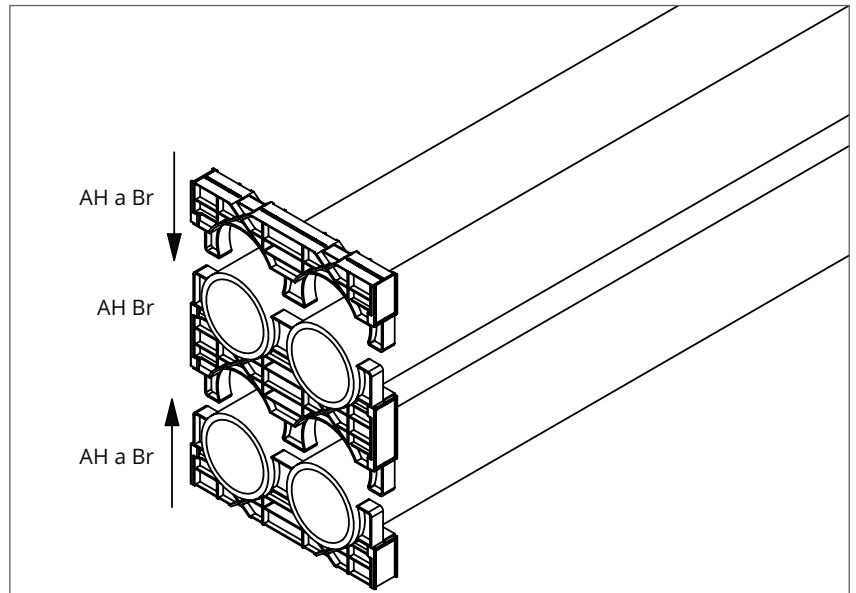
Spacers AH Br

FOR ABOVE GROUND LAYING.

Furthermore gabocom offers spacers in the dimensions 50 and 110 especially, for the construction of bridges. These are suitable for aboveground installation and consist of high-quality PE-HD.

Features and benefits
• made of PE-HD

Type	Ø (D)	Ø (D2)	Applications	Length (L)	Colour	Item no.
AH_50/3+110/2_Br	50	110	-	303	Black (BK)	4601
AH_110/4a_Br	110	-	initial section	303	Black (BK)	4603
AH_110/6a_Br	110	-	initial section	443	Black (BK)	4605
AH_110/8a_Br	110	-	initial section	583	Black (BK)	4388
AH_110/4_Br	110	-	middle section	303	Black (BK)	4604
AH_110/6_Br	110	-	middle section	443	Black (BK)	4606
AH_110/8_Br	110	-	middle section	583	Black (BK)	4389

All dimensions in mm. Subject to technical changes.

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7.4.6 Cable duct joint bends.
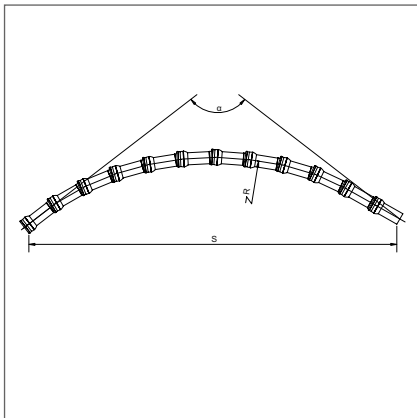
Cable duct joint bends KKGB

Cable duct joint bends KKGB offer the smallest possible bending radius limitation.

FLEXIBLE AND PRESSURE-TIGHT.

The cable duct joint bend KKGB is used in a variety of possible applications: for redirecting the duct route in case of obstacles or external plants like gas pipes or district heating pipelines; in case of height or lateral differences of duct routes; in case of changes in the duct route level due to slopes or subsidence when crossing the road; for skipping obstacles within a bend area; for branching off and refixing ducts into the duct route; in case of local tightness at distribution boxes, cable manholes or distribution stations; for connection ranges that do not align; generally in rough terrain. The flexible duct bends with socket and insertion end include the smallest possible bending radius limit.

Features and benefits
- include the smallest possible bending radius limit
- gas- and water-tight up to 0.5 bar

Type	Ø (D)	Wall (WT)	Radius (R)	Angle	Length (L)	Colour	Item no.
KKGB_50/1.0/90°	50	1.80	1000	90 °	1653	Black (BK)	540
KKGB_110/8°	110	3.20	-	8 °	460	Black (BK)	3992
KKGB_110/1.0/90°	110	3.20	1000	90 °	1930	Black (BK)	3328
KKGB_110/2.5/45°	110	3.20	2500	45 °	2023	Black (BK)	3228

All dimensions in mm. Subject to technical changes.

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