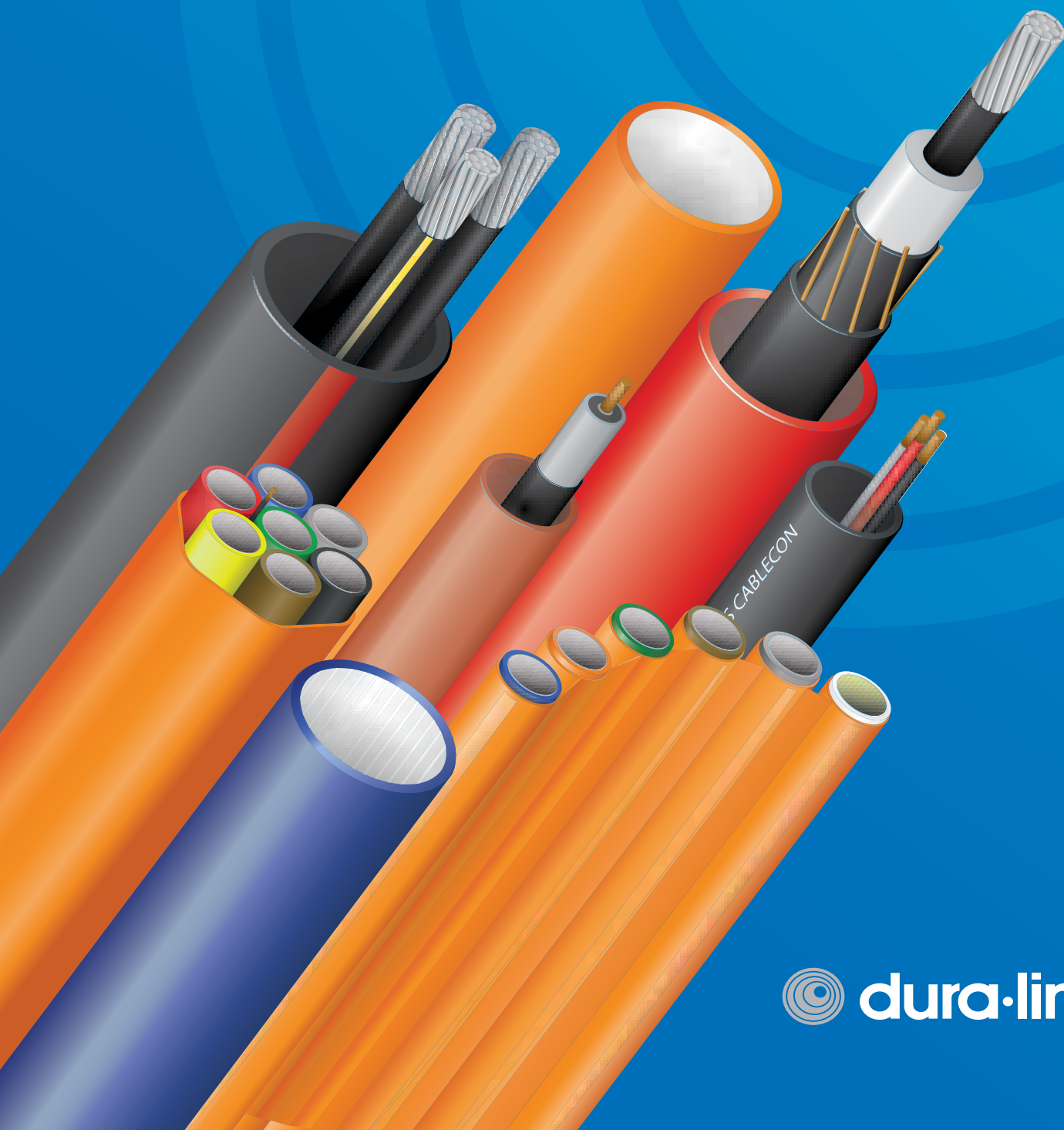


DURA-LINE FTTX SYSTEM CATALOGUE



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Dura-Line Europe is an authorized reseller of all accessories presented in this catalogue.
In co-operation with manufacturers of the accessories, we test and control the quality of the selected products.
Upon request, our customers will be provided with Certificates of Origin and other official quality certificates and product tests, issued by the manufacturers.

DURA-LINE EUROPE INTRODUCTION

COMPANY

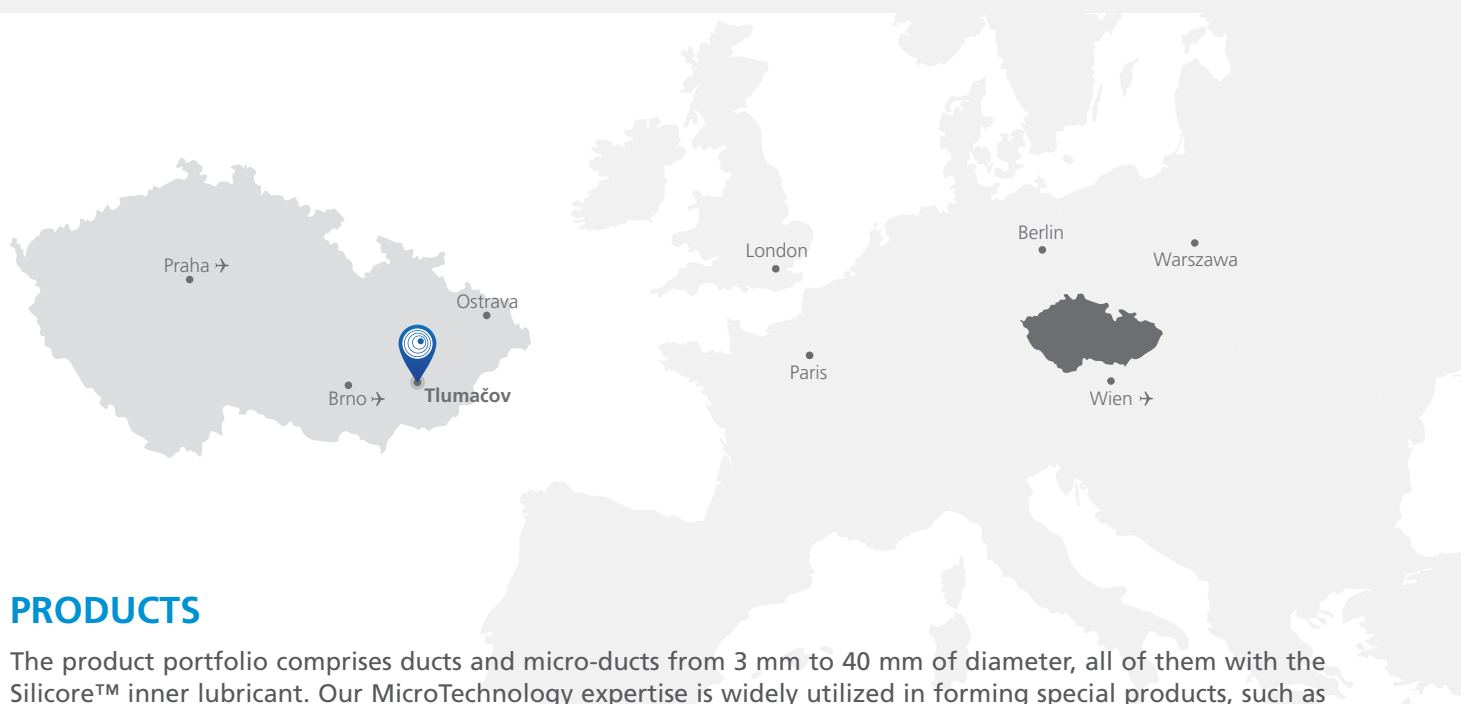
DURA-LINE CT, s. r. o. ("Dura-Line Europe) is part of the global group Dura-Line Corporation, established in 1971, headquartered in Knoxville, Tennessee, USA.

We are an international manufacturer and distributor of communication and energy infrastructure products and systems. A unified system of DURA-LINE's products provides protection and fast, safe installation of communication and power cables for a wide variety of industries.

Since the 1980's, we have focused on the development of special HDPE ducts and micro-ducts for the protection of fiber optics communication cables.

Our ducting, equipped with the unique Silicore™ permanently lubricated lining, are widely used by companies specializing in building telecom, CATV and enterprise data networks. Globally, Dura-Line operates 18 factories spread throughout 4 continents.

The European markets are served from the Czech Republic, where Dura-Line Europe produces a large variety of protective ducting solutions specifically designed for a variety of FTTx networks. Products from our European plant are used by hundreds of customers in more than 25 countries. Dura-Line's MicroTechnology products together with accessories manufactured by European renowned manufacturers, and presented in this catalogue, form an unified system appreciated by the largest telecom operators, system integrators, cable manufacturers or contractors and installers.



PRODUCTS

The product portfolio comprises ducts and micro-ducts from 3 mm to 40 mm of diameter, all of them with the Silicore™ inner lubricant. Our MicroTechnology expertise is widely utilized in forming special products, such as Dura-Multi™, DuraFlat™ or DuraPack™ protective HDPE bundles. In addition we can also ensure a simultaneous installation of telecommunication cable into the micro-ducts, offering to markets advanced, and yet economical, DuraFibre™ and DuraCable™ solutions.

In response to increasing customers requirements on quality and individual solutions for new products, profiles and materials for micro-ducts developed in our company, we have opened a testing center where the quality of installation of our products is evaluated. In this testing center we are able to simulate conditions of actual use in terrain and measure behavior of our products when being installed.



DuraDuct

- ✓ SILICORE™ permanent lubricant
- ✓ Complete range of dimensions
- ✓ Customized product – color, strips, labels
- ✓ High quality HDPE
- ✓ OD from 18 to 50 mm



DuraMicro

- ✓ No excavation required when installed into existing HDPE ducts
- ✓ Increase of the route capacity
- ✓ Revival of occupied ducts – override blowing
- ✓ High flexibility of the network
- ✓ Investment time distribution – fiber on request
- ✓ OD from 3 mm to 16 mm



DuraTrace

- ✓ Duct with tracing wire
- ✓ Quick & easy localization of buried utilities



DuraMulti

- ✓ Maximum space utilization
- ✓ High flexibility of the network – spare ducts for future use
- ✓ Avoid undulations and crossing of single micro-ducts – better blowing performance
- ✓ Minimization of installation costs, fast and easy installation of several micro-ducts in one operation step



DuraFlat

- ✓ HDPE material ensures high chemical and corrosion resistance
- ✓ High flexibility during installation, horizontal/vertical/folded shape installation
- ✓ Minimization of installation costs, fast and easy installation of several micro-ducts in one operation step
- ✓ Ideal last mile drop connection of single houses
- ✓ Minimum need for accessories - simple and easy branching



DuraPack

- ✓ Very high flexibility of your network configuration – combinations on request
- ✓ Minimizes deployment time and installation cost
- ✓ The best solution for micro-duct protection and blowing performance
- ✓ Effectively uses duct space – higher filling ratio compared with blowing
- ✓ Loose micro-ducts – very high impact resistance



DuraAir F8

- ✓ Lightweight future-proof solution
- ✓ Standard Figure 8 construction, metal free
- ✓ High UV resistance (at least 15 years guaranteed)
- ✓ Standard aerial accessories
- ✓ Tested & Certified – vibration test, tension test
- ✓ Compliance with EN 60794

ProDuct Guide





Introduction

As an ISO-9001 rated manufacturer, Dura-line takes pride in manufacturing state-of-the-art quality products. We have several technologies that set us apart from other manufacturers including SILICORE™ super slick permanent lining and specially designed interior ribs reducing the coefficient of friction. Dura-Line is leading the way in the development of MicroTechnology with innovative products and solutions.

MICROTECHNOLOGY

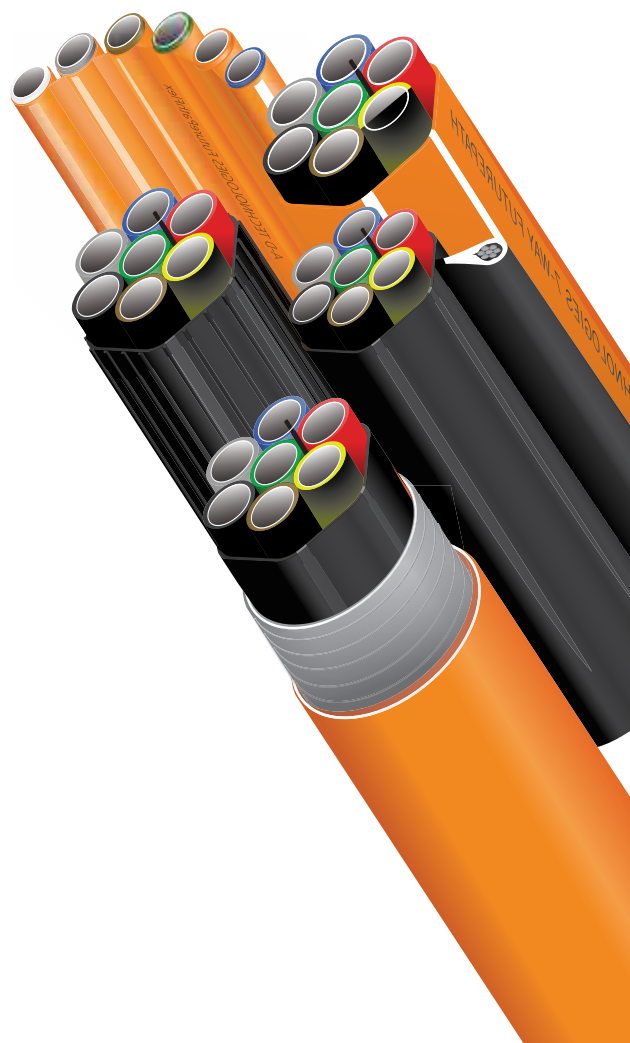
MicroTechnology is a forward-thinking, future-oriented technology that you can put in place today. As network demands continue to grow, it becomes more important than ever to better utilize the available space in your existing duct systems. Single micro-ducts or bundles like DuraMulti allow for controlled expansion of your network, meeting bandwidth requirements as needed. With the multiple pathways in bundle, as your network grows, you will have available pathways without additional construction costs.

VERSATILE COST-EFFECTIVE EXPANSION

With so many different styles, configurations and sizes of micro-ducts available, there is virtually no fiber optic project that could not benefit from the use of MicroTechnology in both reducing initial construction costs and future proofing the network. It can be used in every facet of the network build, and by utilizing the different versions it can easily be installed in any scenario.

Micro-duct bundles have proven to be a very cost effective solution when compared to traditional methods and designs. Both DuraMulti and DuraFlat provide maximum space utilization at minimum installation cost which is much lower compared to a traditional sub duct installation. Also the ability to expand your network easily in the future is already in place.

With its many configurations, micro-duct bundles can be utilized for expanding most networks, whether subdividing existing conduit structures or as an OverRide solution for occupied duct. Crowded easements, both aerial and buried, can benefit from MicroTechnology for network expansion while requiring minimal space. When it comes to expanding any network, it is important to be able to minimize expenditures, and MicroTechnology is an excellent way to accomplish that goal.



Material & feature variants

Dura-Line offers a full complement of products and accessories to facilitate placement of HDPE duct and communications cables. All our product lines can be customized to meet your needs. Material, color, diameter, inner layer, application or print, all give you a enormous variety of options and the freedom to choose the best solution for your network.

MATERIAL

All our ProDucts are made only from virgin HDPE, so we can always guarantee the top quality final product. Besides standard HDPE, we can offer modifications such like:

HDPE – High Density Polyethylene ducts, generally considered as an outside plant product. Recyclable.

LSHF – Low Smoke Halogen Free, fire-retardant material, which is recommended for indoor applications.

UV Stabilized – ducts with increased UV resistance necessary for any applications where ducts are exposed to sun UV rays.

AntiRodent – ducts saturated with AntiRodent additive, which repels rodents like mice, squirrels and protects against their attacks.

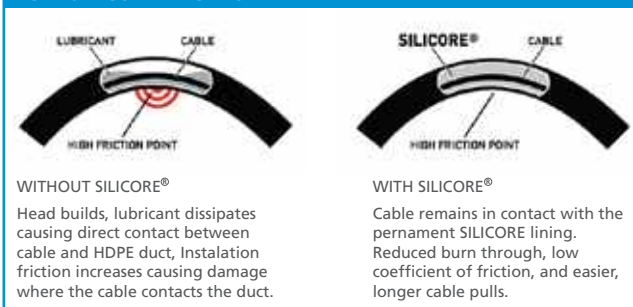
AntiStat – micro-ducts with anti-static treatment, reducing static charge buildup, improving thus blowing performance (blowing length and speed).

INNER LAYER

All our products are treated with a super-slick, permanently lubricated Silicore lining, in order to reduce coefficient of friction between the cable and duct itself.

The Silicore lining is manufactured during the extrusion process and lasts the lifetime of the duct.

HOW SILICORE® WORKS



PRODUCT VARIATION

All of these product lines can be customized to meet your needs. Material, color, diameter, inner layer, application and print stream, all give you a variety of products and the freedom to choose the best solution.

APPLICATION	MATERIAL	INNER LAYER	COLOR RANGE
Direct Install	HDPE	Smooth	Plain
Direct Burial	LSHF	Ribbed	Transparent
	UV Stabilized	always with Silicore™	Stripped
	AntiRodent		RAL color codes
	AntiStat		

RAL COLOR RANGE

Wide range of standard RAL colors are available. Combination with colored stripes, customer is getting huge choice of color combinations and options for unique micro-duct identification.

2009	2003	3020	6029	6018	6017	6027
5015	5021	1016	1018	1021	3015	4003
tran	4006	8015	8015	1015	7045	9003

PRINTING

Micro-ducts are printed along the entire length with text according to the customer's requirements. Printing colour is in contrast to the micro-duct colour. Printing scheme is repeated each 1 meter along the micro-duct, unless specified otherwise.

Example of the printing scheme:

DURA-LINE CT DuraMicro DB 14/10 mm SILICORE 09/2014 LOT No 12345678 0000 m >|<

Packaging

We are always looking for the best and most suitable way of packaging to meet customer requirements. Therefore we offer more than one option to pack and dispatch our products. Of course we always suggest the best option considering transport efficiency, handling and customer needs. Just contact our customer service and find the most suitable way for you. We distribute our product on wooden drums, in coils, on micro-drums (MTB) and we can also supply you with FAST-IN collapsible drums.

STANDARD DUCT PACKAGING

- a) Big Wooden Drums (DB) – Heavy-duty duct packaging. Reusable, refundable. Several sizes available to meet project requirements. These can be also offered as 2 section drum for simultaneous unwinding of 2 products.
- b) Coils – Cost effective for small scale projects. Short coils allow machinery free handling. Long coils can be unwinded with FAST-IN drum
- c) FAST-IN – Collapsible metal drum for easy manipulation with long coils. Universal – adjustable core dia 80-95 cm. No hassle with drums returns.



MICRO-DUCT PACKAGING

- a) MTB drums – Disposable drums made of plywood for standard handling & storage on site. Wide range of sizes.
- b) Plastic drums PTB – 100% wear resistance, only advised where severe weather conditions or manipulation is expected. Disposable.

All our products are packed, protected by stretched foil and labeled with unified stickers.

STORING

Wooden drums must be stored safely. Improper storage conditions can easily cause damage to drums and ducts themselves. Therefore please follow these basic instructions below.

- ✓ Keep the drum in an upright position
- ✓ Keep and handle the drum in an upright position otherwise you risk the problems with your duct. Duct layers can get entangled and damaged when drum is laid on its side.
- ✓ Always keep your duct protected with black foil against UV rays.
- ✓ Your duct ends must be sealed and protected against ingress of moisture and dirt and also fixed to the drum.
- ✓ If storing outside please follow your product datasheet instructions according to temperature range and storing conditions. Standard temperature range is from -20°C to +40°C
- ✓ Check drums before moving. Any nails or other damage of the drum can damage your duct itself.

TRANSPORT INSTRUCTIONS

Drums should only be transported with suitable vehicles and has to be secured firmly to prevent them from moving during transportation. Main danger comes from invisible damages leading to unusable product. Combination of wedges and support must be used and tied down. Drums should be fastened sideways from the highest point. Rolling of the drums can be avoided by using transport blocks. The front most drum should rest against the truck front board, considering the shaft weight.

dura-line	
PRODUCT	DuraDuct
OD / ID	40 / 33
CUSTOMER	2
ORDER	130145070P66
LENGTH	2000 m
LOT No	71024592
PRINT	ČD Telematika a.s.
COLOR	ORANGE
SPECIAL	4 x 1 BROWN STRIP
PRESSURE TEST	OK
PRELIMINARY TEST	
CONTROL	

Quality control

Our quality department carries out a wide range of tests to ensure supreme quality of our products. All our production records are stored and fully trackable, available for customers or quality inspections. The below mentioned mechanical tests are essential, but additional tests are also performed.

PRODUCTION

- ✓ BB test – steel ball with specific diameter is blown into the duct to confirm that inner diameter meets specification
- ✓ Operational pressure test – duct is pressurized up to 10 bar to confirm no air leakage

LABORATORY

- ✓ **Dimension check** – measurement of ducts' inner and outer diameter, wall thickness and ovality to confirm product meets dimensional specifications
- ✓ **Tensile strength** – duct sample is pulled to detect any change in material composition
- ✓ **Crushing** – duct is pressed to verify adequate duct outer pressure resistance
- ✓ **Inner friction** – confirmation of duct inner layer meeting friction specification
- ✓ **Long term pressure test** – duct is pressurized up to 18 bar for 170 hours in 80 degree of celsius bath. No leakage accepted. Confirms heat and pressure resistance.



DURA-LINE CT		MICRODUCTS TEST REPORT No. 48 / 2014	
Order No.	42523478	Dimensions	14/10 mm
Product type	1.1m 100/100	Page	standard
Substrate	Aluminum		
Inner surface	Alumel		
Manufactured	10.1.2014		
Customer			
MECHANICAL			
Outside diameter (mm)	14.0	Inside diameter (mm)	10.0
Min wall thickness (mm)	0.8		
TENSILE STRENGTH			
Tensile strength (MPa)	140	Tensile strength (MPa)	140
Max. deformation (%)	14.0	Pressure resistance (bar)	14.0
Hardness (HV)	6.0		
COEFFICIENT OF FRICTION			
Friction factor (N)	0.01	Coefficient of friction (N)	0.001
CRUSHING STRENGTH			
Crushing force (N)	34.0	Wall deformation (mm)	14.0
Hardness (HV)	0.001		
HEAT RESISTANCE			
Heat resistance (h)	16.7	Heat resistance (h)	16.7
NOTES			
Location			
Customer			
Product			
Material			
Order			
Date	10.1.2014	Printed by	

Dura-Line Europe has been successfully recertified according to international standards ISO 9001, ISO 14001 and ISO (OHSAS) 18001. This confirms full compliance and effectivity of our processes.





DuraDuct

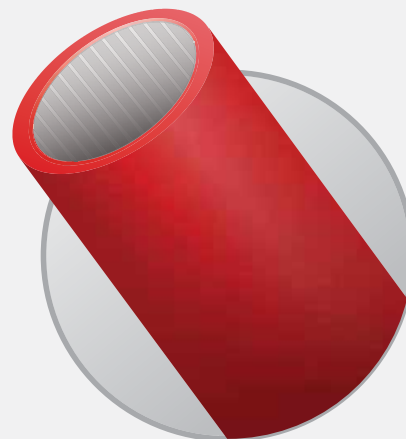
FEATURES & CHARACTERISTICS

Our DuraDuct are the top quality subducts, made only from virgin or regrind HDPE. They are available in many material & application variants. Exceptional inner surface treated with permanent Silicore™ layer for a low friction & better cable blowing performance.

DuraDucts can be either pulled inside the main 100 mm conduits within metropolitan network or direct buried in the trench.

Both applications are indicated with DI or DB in the product name.

- ✓ SILICORE™ permanent lubricant
- ✓ Wide range of dimensions & applications
- ✓ Customizable product – color, stripes, print, inner surface
- ✓ High quality HDPE only
- ✓ Any size from 18 mm to 50 mm OD



PRODUCT RANGE

Application	OD	ID	Weight [kg / km]	Standard Pack [length / weight]
DB	20	15	131	DB1 (6500 m / 1300 kg)
DB	20	16	107	DB1 (6500 m / 1200 kg)
DB	25	20	168	DB1 (4000 m / 1050 kg)
DB	32	25.5	280	DB1 (2700 m / 1150 kg)
DB	32	25	300	DB1 (2700 m / 1210 kg)
DB	32	26.2	255	DB1 (2700 m / 1100 kg)
DB	32	26	260	DB1 (2700 m / 1100 kg)
DB	40	32.6	430	DB1 (1750 m / 1150 kg)
DB	40	32	461	DB1 (1750 m / 1200 kg)
DB	40	33	384	DB1 (1750 m / 1070 kg)
DB	50	40.6	635	DB1 (1000 m / 1110 kg)
DB	50	40.8	623	DB1 (1000 m / 1070 kg)
DB	50	40	672	DB1 (1000 m / 1170 kg)
DB	50	41	611	DB1 (1000 m / 1010 kg)
DB	50	42	550	DB1 (1000 m / 950 kg)
DI	25	21	140	DB1 (4000 m / 950 kg)
DI	32	27	220	DB1 (2700 m / 1000 kg)
DI	32	28.2	167	DB1 (2700 m / 850 kg)
DI	32	28	177	DB1 (2700 m / 870 kg)
DI	40	34	330	DB1 (1750 m / 1000 kg)
DI	40	35.4	260	DB1 (1750 m / 850 kg)
DI	40	35	280	DB1 (1750 m / 890 kg)
DI	50	43	490	DB1 (1000 m / 900 kg)
DI	50	44	425	DB1 (1000 m / 900 kg)



DuraMicro

FEATURES & CHARACTERISTICS

DuraMicro micro-ducts are made of only virgin HDPE material and are available for both DI & DB applications.

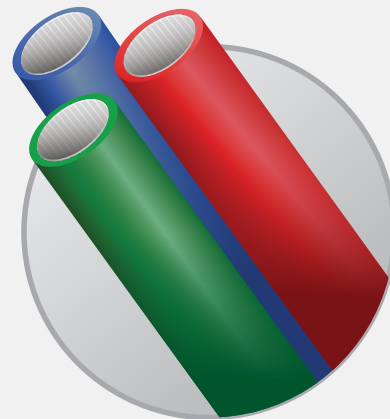
Direct Installed versions must be protected and therefore are pre-installed, pulled or blown into DuraDuct.

Direct Buried micro-ducts have a high impact & crush resistance so they can be direct buried into the ground with no other protection.

For the safety reasons we also offer low smoke halogen free micro-ducts, which are recommended for indoor installation.

Complete range and material variants covers completely the current FTTH network demand.

- ✓ SILICORE TM permanent lubricant
- ✓ Wide range of dimensions from 3 / 2.1 mm to 16 / 14 mm
- ✓ Customizable product – color, stripes, print, inner surface, material, application
- ✓ High quality HDPE only
- ✓ Investment time distribution – fiber on request





PRODUCT RANGE

Application	OD	ID	Weight [kg/km]	Standard Pack [length/weight]
DB	4	3	5	MTB DT small (4000 m / 33 kg), MTB DT (6000 m / 135 kg)
DB	6	3.5	18.1	MTB DT small (2000 m / 47 kg), MTB DT (6000 m / 194 kg)
DB	7	3.5	28	MTB DT small (1300 m / 47 kg), MTB DT (6000 m / 176 kg)
DB	7	4	25	MTB DT small (1300 m / 44 kg), MTB DT small (1000 m / 44 kg)
DB	8	4.4	33	MTB DT (5000 m / 190 kg), MTB DT small (1000 m / 47 kg)
DB	8	4	36	MTB DT (5000 m / 205 kg), MTB DT small (1000 m / 40 kg)
DB	8	5	29	MTB DT (5000 m / 170 kg), MTB DT (5000 m / 126 kg)
DB	8	6	20	MTB DT small (1000 m / 26 kg), MTB DT small (700 m / 47 kg)
DB	10	5.5	52	MTB DT (3500 m / 207 kg), MTB DT (3500 m / 192 kg)
DB	10	6	47.5	MTB DT small (700 m / 47 kg), MTB DT (3500 m / 158 kg)
DB	10	7	38	MTB DT small (700 m / 38 kg)
DB	12	8	59	MTB DT (2200 m / 155 kg)
DB	14	10	72	MTB DT (1800 m / 156 kg)
DB	15	9.6	100	MTB DT (1400 m / 165 kg)
DB	16	10	117	MTB DT (1200 m / 166 kg)
DB	16	12	84	MTB DT (1200 m / 126 kg)
DI	3	2.1	3.2	MTB DT small (3000 m / 21 kg), MTB DT (5000 m / 73 kg)
DI	5	3.5	9.5	MTB DT small (3000 m / 39 kg), MTB DT (6000 m / 116 kg)
DI	6	4	15	MTB DT small (1900 m / 40 kg), MTB DT small (1300 m / 29 kg)
DI	7	5.5	14	MTB DT (6000 m / 109 kg), MTB DT (3500 m / 120 kg)
DI	10	8	27	MTB DT small (700 m / 28 kg)
DI	12	10	34	MTB DT (2200 m / 101 kg)
DI	14	11	55	MTB DT (1800 m / 125 kg)
DI	14	12	40	MTB DT (1800 m / 98 kg)
DI	15	12	59	MTB DT (1400 m / 109 kg)
DI	16	13	62	MTB DT (1200 m / 100 kg)
DI	16	14	43	MTB DT (1200 m / 78 kg)
DI	18	14	96	MTB DT (1000 m / 122 kg)
DI	18	15	74	MTB DT (1000 m / 100 kg)
DI	18	16	51	MTB DT (1000 m / 77 kg)

DuraTrace

FEATURES & CHARACTERISTICS

DuraTrace products indicate the presence of tracing wire for quick & easy localization. For single micro-duct tracing wire is placed outside and over-sheathed together with duct. Within bundles, tracing wire is placed in the free space among the micro-ducts.

- ✓ duct with tracing wire
- ✓ quick & easy localization of buried utilities
- ✓ tracing wire: black, dia 2.1mm

PRODUCT RANGE

DuraTrace can be supplied in all variants of DuraMicro, DuraMulti, DuraFibre or DuraPack.



DuraMulti

FEATURES & CHARACTERISTICS

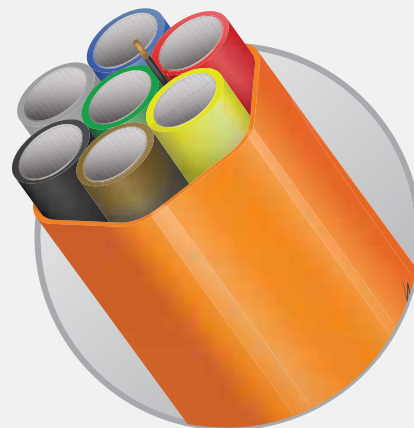
DuraMulti micro-duct bundles with tight thin jacket are designed for a quick, simple & cost effective installation of multi micro-ducts in one deploying step.

DuraMulti DB bundles contain thick walled micro-ducts, have very high crush resistance and therefore can be directly buried without any additional protection. Thin jacket allows easy access to individual micro-ducts which can be connected only with simple connectors with no need for protective enclosures and branch-off boxes. This reduces the cost of accessories compared with loose bundle solution.

DuraMulti DI bundles contain thin walled micro-ducts and therefore require extra protection. These are typically pulled in main conduits from manhole to manhole or inside the MDU's as a main riser duct route.

The construction of these bundles allows to combine different sizes of micro-ducts. Such like DuraMulti Hybrid bundles are highly customized products for effective FTTH network deployment.

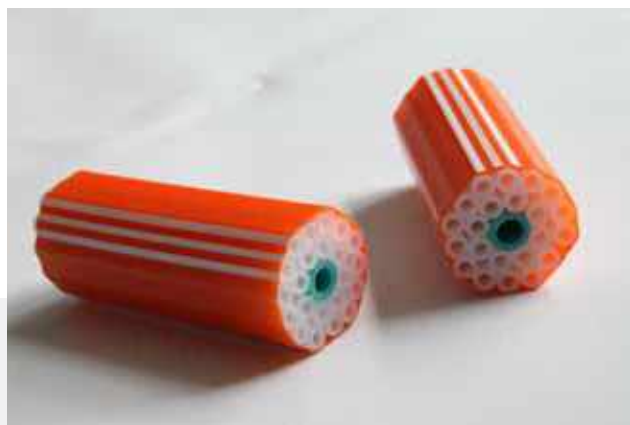
- ✓ exceptional network flexibility, customized configuration
- ✓ no special tools – see installation scheme DuraMulti connection in the trench
- ✓ very high crush resistance
- ✓ no tendency of micro-bending, long distance cable blowing
- ✓ all installation methods & applications (pulling, blowing, DB, indoor)



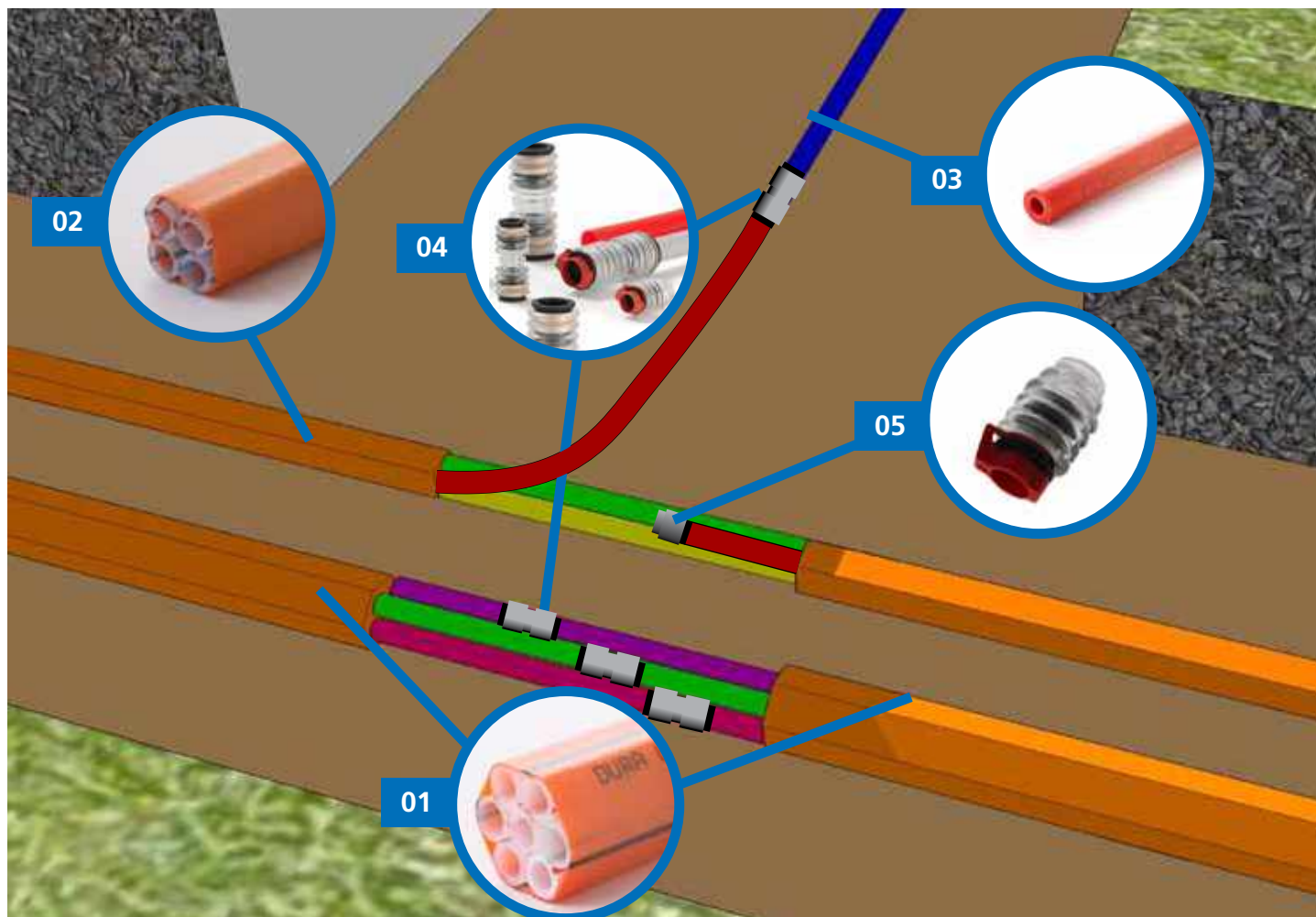
PRODUCT RANGE

Application	Size of MD	Number of MD								Standard packaging		Product name
	OD / DO	2	3	4	7	10	12	22	24	Weight [kg /km]	Packaging [length /weight]	
DB	4 / 2.5	X	X	X	X	X	X	X	X	178	DB 1 (3x 1500 m / 1250 kg)	DuraMulti DB 24x 4 / 2.5 mm
DB	5 / 2.1	X	X	X	X	X	X	X	X	424	DB 1 (3700 m / 2000 kg)	DuraMulti DB 24x 5 / 2.1 mm
DB	7 / 4	X	X	X	X	X	X	X	X	355	DB 1 (3500 m / 1640 kg)	DuraMulti DB 12x 7 / 4 mm
DB	8 / 5	X	X	X	X	X	X			263	DB 1 (4400 m / 1660 kg)	DuraMulti DB 7x 8 / 5 mm
DB	10 / 6	X	X	X	X	X	X			134	MTB DT (1400 m / 213 kg)	DuraMulti DB 2x 10 / 6 mm
DB	12 / 8	X	X	X	X	X	X			305	DB 1 (2x 2000 m / 1620 kg)	DuraMulti DB 4x 12 / 8 mm
DB	14 / 10	X	X	X	X	X				615	DB 1 (1300 m / 1200 kg)	DuraMulti DB 7x 14 / 10 mm
DB	16 / 12	X	X	X	X					235	DB 1 (4x 1000 m / 1500 kg)	DuraMulti DB 2x 16 / 12 mm
DI	3 / 2.1	X	X	X	X	X	X	X	X	39	MTB DT (3500 m / 163 kg)	DuraMulti DI 7x 3 / 2.1 mm
DI	5 / 3.5	X	X	X	X	X	X	X	X	160	MTB DT (800 m / 154 kg)	DuraMulti DI 12x 5 / 3.5 mm
DI	7 / 5.5	X	X	X	X	X	X	X	X	132	DB 1 (5800 m / 1160 kg)	DuraMulti DI 7x 7 / 5.5 mm
DI	10 / 8	X	X	X	X	X				160	DB 1 (2x 2600 m / 1230 kg)	DuraMulti DI 4x 10 / 8 mm
DI	12 / 10	X	X	X	X					320	DB 1 (2000 m / 1040 kg)	DuraMulti DI 7x 12 / 10 mm
DI	14 / 12	X	X	X	X					380	DB 1 (1350 m / 890 kg)	DuraMulti DI 7x 14 / 12 mm
DI	16 / 13	X	X	X						336	DB 1 (1000 m / 735 kg)	DuraMulti DI 4x 16 / 13 mm

Application	Bundle configuration	Standard packaging		Product name
		Weight [kg /km]	Packaging [length /weight]	
DB	12x 7 / 4 + 1x 14 / 10	445	DB6 1200 m / 1000 kg	DuraMulti Hybrid DB 12x 7 / 4 + 1x 14 / 10
		445	DB1 1900 m / 1300 kg	DuraMulti Hybrid DB 12x 7 / 4 + 1x 14 / 10
DB	24x 7 / 4 + 1x 14 / 10	765	DB1 1500 m / 1550 kg	DuraMulti Hybrid DB 24x 7 / 4 + 1x 14 / 10
DI	12x 5 / 3.5 + 1x 10 / 8	198	DB 1 4800 m / 1400 kg	DuraMulti Hybrid DI 12x 5 / 3.5 + 1x 10 / 8
DI	22x 5 / 3.5 + 1x 12 / 10	323	DB 1 2700 m / 1350 kg	DuraMulti Hybrid DI 22x 5 / 3.5 + 1x 12 / 10



SITE LAYOUT



PRODUCT OVERVIEW

DuraMulti Connection

Product Group		Catalogue page	Product Group Representative
DuraMulti DB	01	16	DuraMulti 7x14/10 mm
DuraMulti DB	02	16	DuraMulti 4x7/4 mm
DuraMicro DB	03	13	DurMicro DB 7/4 mm
Micro-duct Connector DI or DB	04	36, 37, 39, 43	Robust Reinforced Connector DB
Micro-duct End Cap	05	44, 45, 46	Robust Reinforced End Cap
Duct Shears		85	
Micro-duct Shears		64	

SITE APPLICATIONS



SITE LAYOUT



PRODUCT OVERVIEW

DuraMulti Connection

Product Group		Catalogue page	Product Group Representative
DuraMulti	01	16	
DuraMicro	02	13	
Duct sealing systems	03	56	MDIII Duct seal
Bundle sealings	04	55	DuraMulti termination Sealing
Gasblock terminators	05	48, 49, 51, 52	Divisible gasblock
Gasblock connectors	06	50	Gas-block Connector
EndCaps	07	44, 45, 46	Robust reinforced End Cap
Fibre optic cables	08		
DuraMicro LSHF	09		
Micro-duct Shears		64	
Duct Shears		85	

SITE APPLICATIONS





DuraFlat

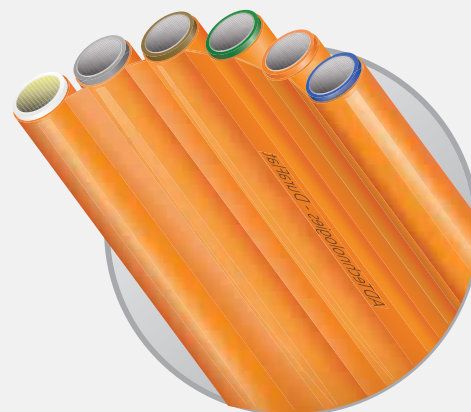
DuraFlat

FEATURES & CHARACTERISTICS

Flat shaped bundles of micro-ducts, DuraFlat production line is a perfect solution primarily designed for last mile customer connection. It is the most flexible type of micro-duct bundle which allows many different installation techniques – Direct Buried, Vertical long haul, MicroTrenching & also indoor on wall installation. This makes it the most versatile and easy to install system.

When installed in horizontal position it is more sensitive for micro-bending. On the other hand, it is completely free of spiraling effect when uncoiled from drum. Also branching and connection is super simple & quick.

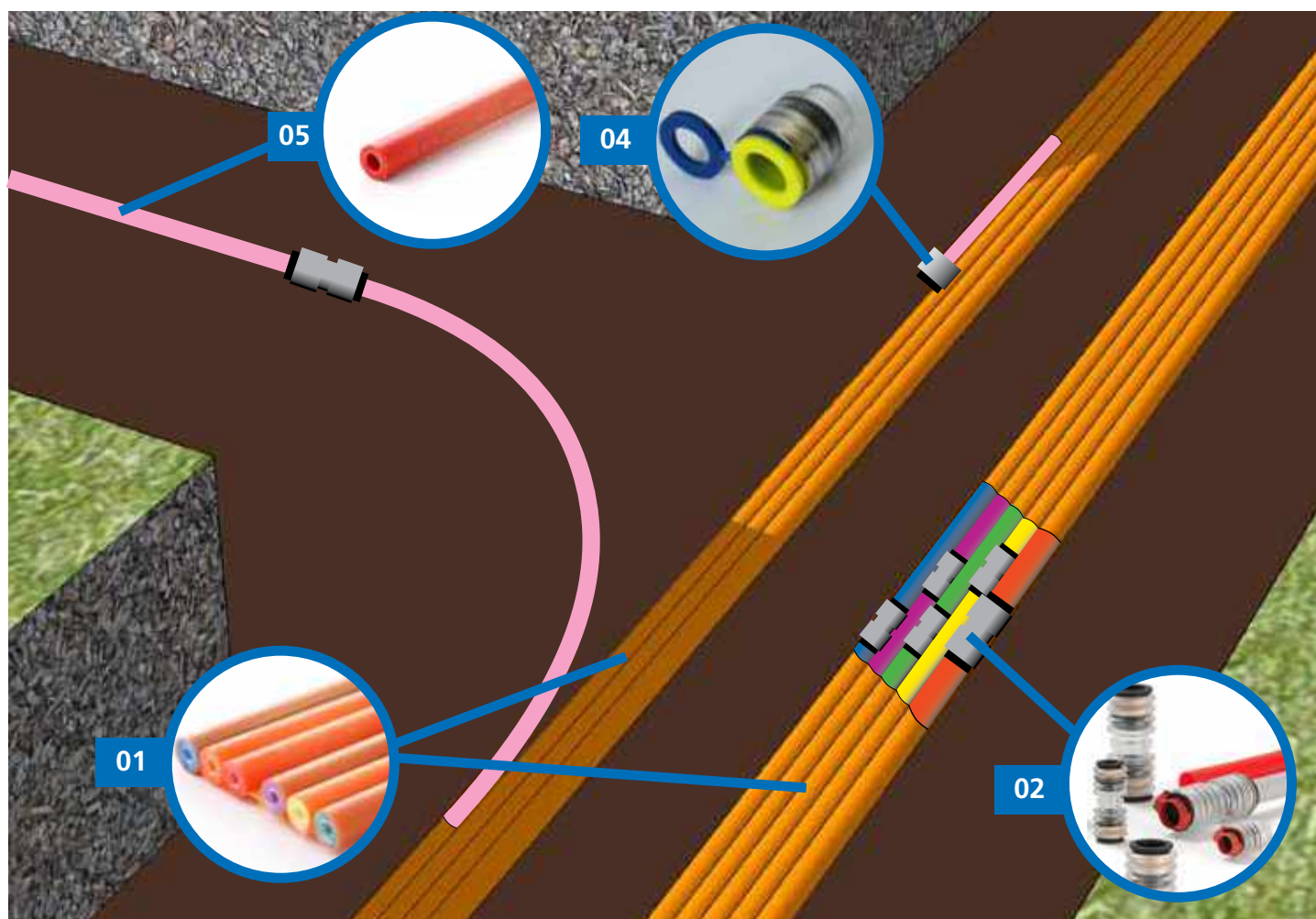
- ✓ Very high flexibility – horizontal/vertical/ folded shape installation
- ✓ up to 7 micro-ducts within one bundle
- ✓ minimum accessories – eliminates enclosures & duct gas seals, only simple DB connectors
- ✓ highly customizable product – micro-duct size, colors, jacket color, stripes & printing
- ✓ user-friendly deployment of many micro-ducts



Application	Size of MD	Number of MD					Standard packaging		Product name
	OD / DO	3	4	5	6	7	Weight [kg/km]	Packaging [length/weight]	
DB	7 / 4	X	X	X	X		300	DB1 (5000 m / 2000 kg)	DuraFlat DB 6x 7 / 4 mm
DB	8 / 5	X	X	X	X		274	DB1 (4500 m / 1750 kg)	DuraFlat DB 6x 8 / 5 mm
DB	10 / 6	X	X	X	X		440	DB1 (3000 m / 1720 kg)	DuraFlat DB 6x 10 / 6 mm
DB	12 / 8	X	X	X	X		495	DB1 (2000 m / 1390 kg)	DuraFlat DB 6x 12 / 8 mm
DB	14 / 10	X	X	X	X		580	DB 1 (1500 m / 1270 kg)	DuraFlat DB 6x 14 / 10 mm
DI	16 / 12	X	X	X	X		620	DB1 (1000 m / 1000 kg)	DuraFlat DB 5x 16 / 12 mm
DI	5 / 3.5	X	X	X	X	X	126	MTBDT (1150 m / 170 kg)	DuraFlat DI 7x 5 / 3.5 mm
DI	8 / 5.5	X	X	X	X		245	DB1 (4500 m / 1600 kg)	DuraFlat DI 6x 8 / 5.5 mm
DI	10 / 8	X	X	X	X		315	DB1 (3000 m / 1340 kg)	DuraFlat DI 6x 10 / 8 mm
DI	12 / 10	X	X	X	X		340	DB1 (2000 m / 1080 kg)	DuraFlat DI 6x 12 / 10 mm
DI	14 / 12	X	X	X	X		330	DB1 (1350 m / 950 kg)	DuraFlat DI 5x 14 / 12 mm
DI	16 / 13	X	X	X	X		270	DB1 (3x 1000 m / 1200 kg)	DuraFlat DI 3x 16 / 13 mm
DI	20 / 16	X	X	X	X		591	DB1 (1200 m / 1160 kg)	DuraFlat DI 4x 20 / 16 mm



SITE LAYOUT



PRODUCT OVERVIEW

DuraFlat Connection

Product Group		Catalogue page	Product Group Representative
DuraFlat DB	01	22	
Micro-duct Connector DB	02	36, 37, 39, 43	Robust Reinforced Connector DB
Micro-duct Reducing connector	03	41, 42	Reducing reinforced Connector DB
Micro-duct End Cap	04	44, 45, 46	Robust Reinforced End Cap
Micro-duct Shears		64	
DuraFlat Stripper		65	



DuraFlat

SITE APPLICATIONS



DuraPack

FEATURES & CHARACTERISTICS

Loose bundles of micro-ducts protected in main duct has been proved over the year to be excellent solution for FTTH networks. Individual micro-ducts can be pulled or blown into the sub-duct on site which gives a huge flexibility in CAPEX/OPEX management. On the other hand, DuraPack bundles are produced at a factory and such like saving installation cost & time of micro-duct blowing. The max. number of micro-ducts within the DuraPack bundles is also always higher then what can be achieved by blowing on site.

Since micro-ducts are loose and sub-duct provides excellent impact protection, DuraPack is the least sensitive product to micro-bending & trench quality. The Silicore inner lining remains in the duct for many years which makes future repairs or micro-duct replacement easier.

Connection and branching of DuraPacks is done within the special enclosures (see DuraPack installation scheme) which keeps the main duct route clean.

- ✓ Very high flexibility of your network configuration – combinations on request
- ✓ The best impact resistance for micro-duct protection
- ✓ The best cable blowing performance
- ✓ Effectively uses duct space – higher filling ratio compared to blowing on site
- ✓ Future-proof solution - main duct filling can be re-configured

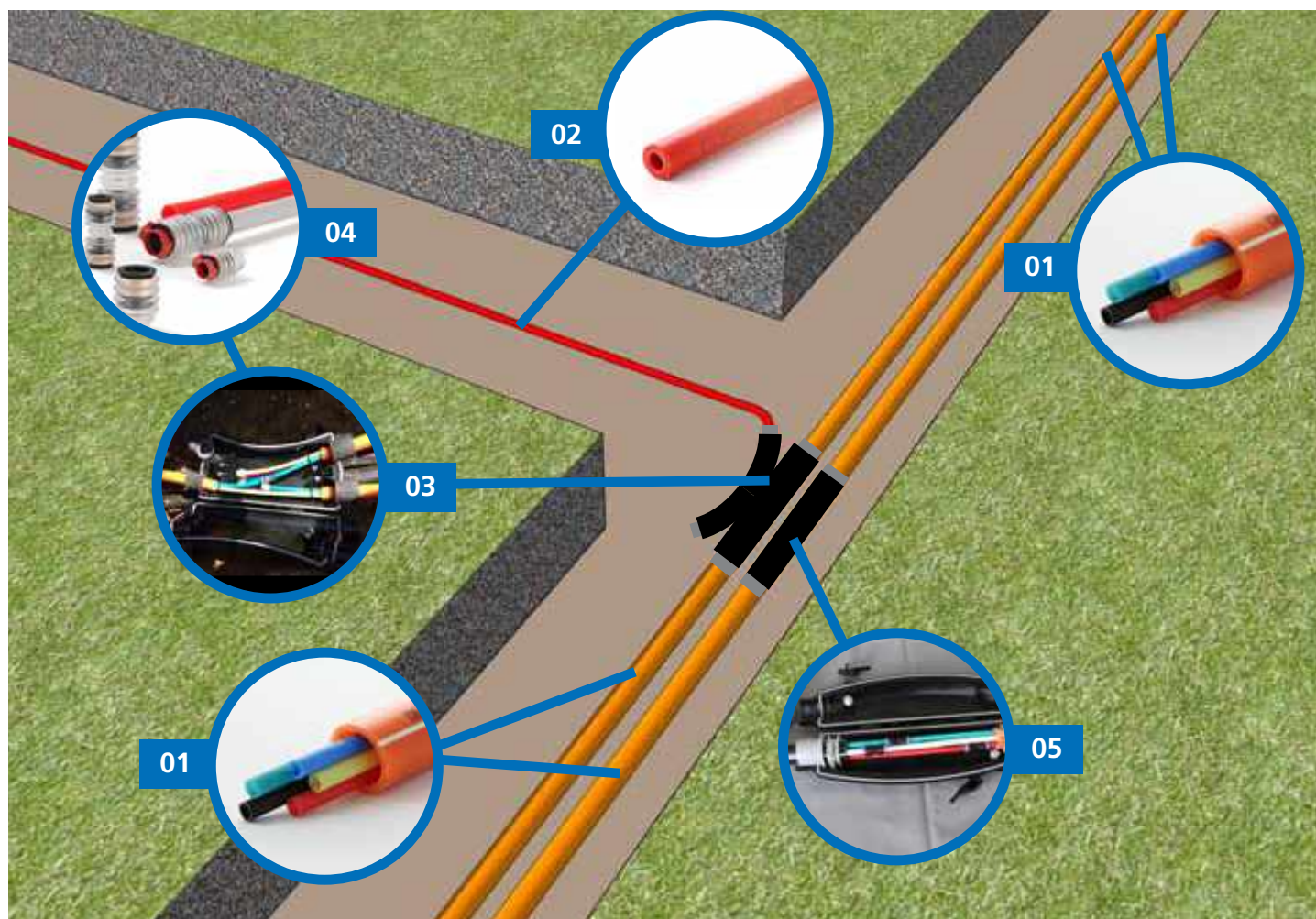


PRODUCT RANGE

Application	SubDuct OD / DO	Size of micro-ducts: OD [mm]										Standard packaging		
		4	5	7	8	10	12	14	16	18	Weight [kg /km]	Packaging [length /weight]	Product name	
	Maximum number of micro-ducts in the duct													
DB	16 / 12	7	3	1	1						94	MTB DT 900 m / 110 kg	DuraPack DB 16 / 12 + 2x 4 / 3 mm	
DB	25 / 20	12	4	3							187	DB1 4000 m / 1100 kg	DuraPack DB 25 / 20 + 2x 5 / 3.5 mm	
DB	32 / 26	16	8	5	4						372	DB1 2500 m / 1380 kg	DuraPack DB 32 / 26 + 8x 7 / 5,5 mm	
DB	40 / 33	26	13	10	7	4	3				495	DB1 1750 m / 1200 kg	DuraPack DB 40 / 32.8 + 4x 10 / 8 mm	
DB	40 / 33	26	13	10	6	4	3				546	DB1 1750 m / 1500 kg	DuraPack DB 40 / 33 + 6x 10 / 8 mm	
DB	50 / 41	39	20	15	9	6	5	4			839	DB1 1000 m / 1340 kg	DuraPack DB 50 / 40, 6 + 6x 12 / 10 mm	
DB	50 / 41	51	20	15	10	7	5	4			865	DB1 1000 m / 1320 kg	DuraPack DB 50 / 41 + 6x 12 / 10 mm	
DI	25 / 21	13	5	4							178	DB1 4000 m / 1160 kg	DuraPack DI 25 / 21 + 4x 5 / 3.5 mm	
DI	32 / 27	17	9	5	4	3					301	DB1 2000 m / 1050 kg	DuraPack DI 32 / 27 + 3x 10 / 8 mm	
DI	32 / 28	19	9	6	4	3	1				285	DB1 2700 m / 1300 kg	DuraPack DI 32 / 28 + 4x 10 / 8 mm	
DI	40 / 34	27	14	11	7	4	3				520	DB1 1750 m / 1360 kg	DuraPack DI 40 / 34 + 4x 12 / 10 mm	
DI	40 / 35	29	15	11	7	5	3				433	DB1 1750 m / 1210 kg	DuraPack DI 40 / 35 + 6x 10 / 8 mm	
DI	50 / 42	42	21	16	10	7	5	4			754	DB1 1000 m / 1200 kg	DuraPack DI 50 / 42 + 6x 12 / 10 mm	
DI	50 / 43	44	22	17	11	7	5	4	3		592	DB1 1000 m / 1100 kg	DuraPack DI 50 / 43 + 3x 12 / 10 mm	
DI	50 / 44	46	23	18	11	8	5	4	3		597	DB1 1000 m / 1050 kg	DuraPack DI 50 / 44 + 4x 16 / 14 mm	
DI	63 / 55				18	12	9	7	5		1030	DB1 670 m / 1130 kg	DuraPack DI 63 / 55 + 12x 10 / 8 mm	



SITE LAYOUT



PRODUCT OVERVIEW

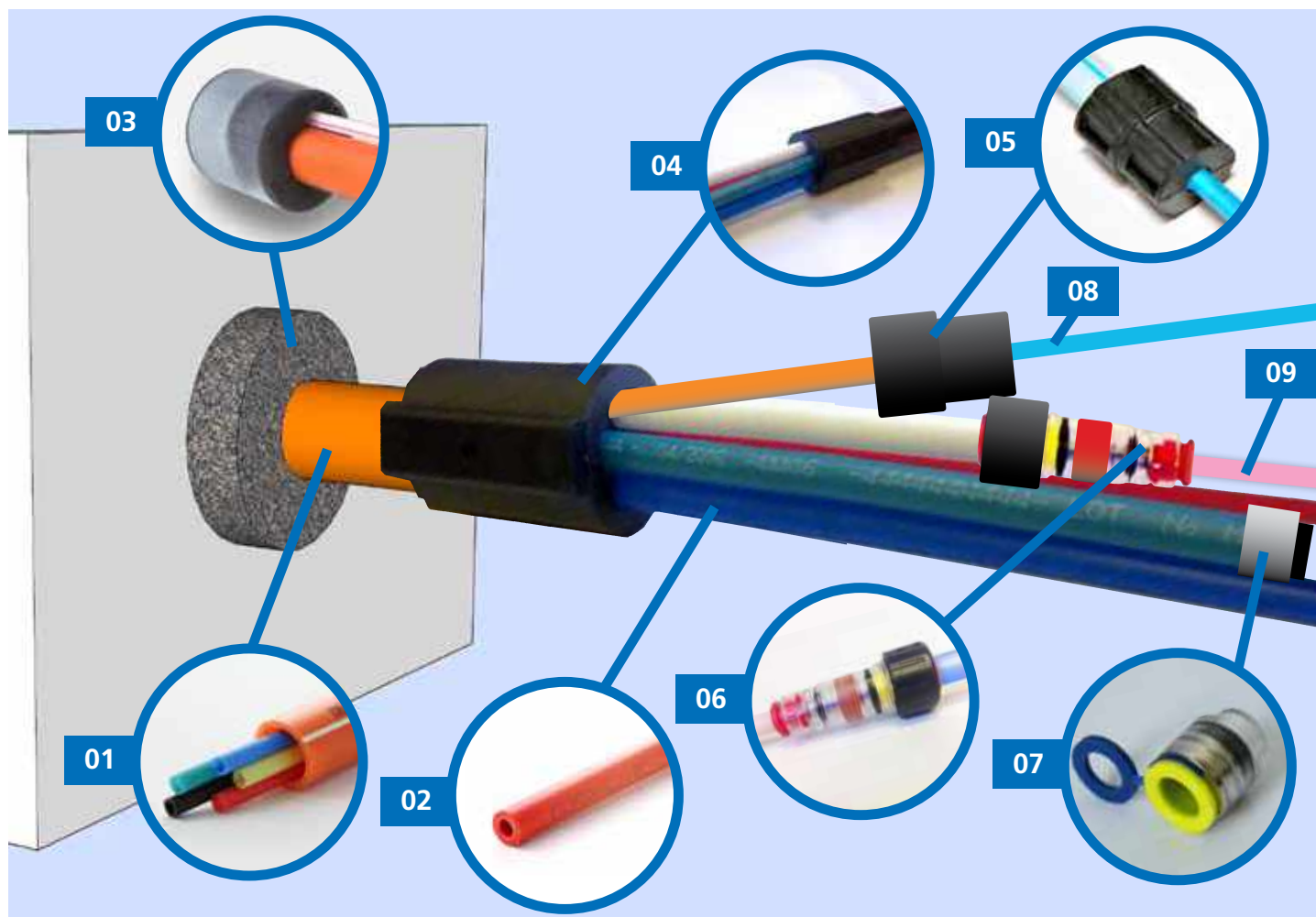
DuraPack Connection

Product Group		Catalogue page	Product Group Representative
DuraPack	01	25	
DuraMicro	02	13	
Bundles Connectivity Closure	03	57, 58, 59, 60	H-Hermetic Derivation Element
Micro-duct Connector DI or DB	04	36, 37, 39, 43	Robust Reinforced Connector DB
Micro-duct End Cap	04	44, 45, 46	Robust Reinforced End Cap
Bundles Connectivity Closure	05	57, 58, 59, 60	Inline Hermetic Element for HDPE (DuraPacks)
Duct Shears		85	
Micro-duct Shears		64	

SITE APPLICATIONS



SITE LAYOUT



PRODUCT OVERVIEW

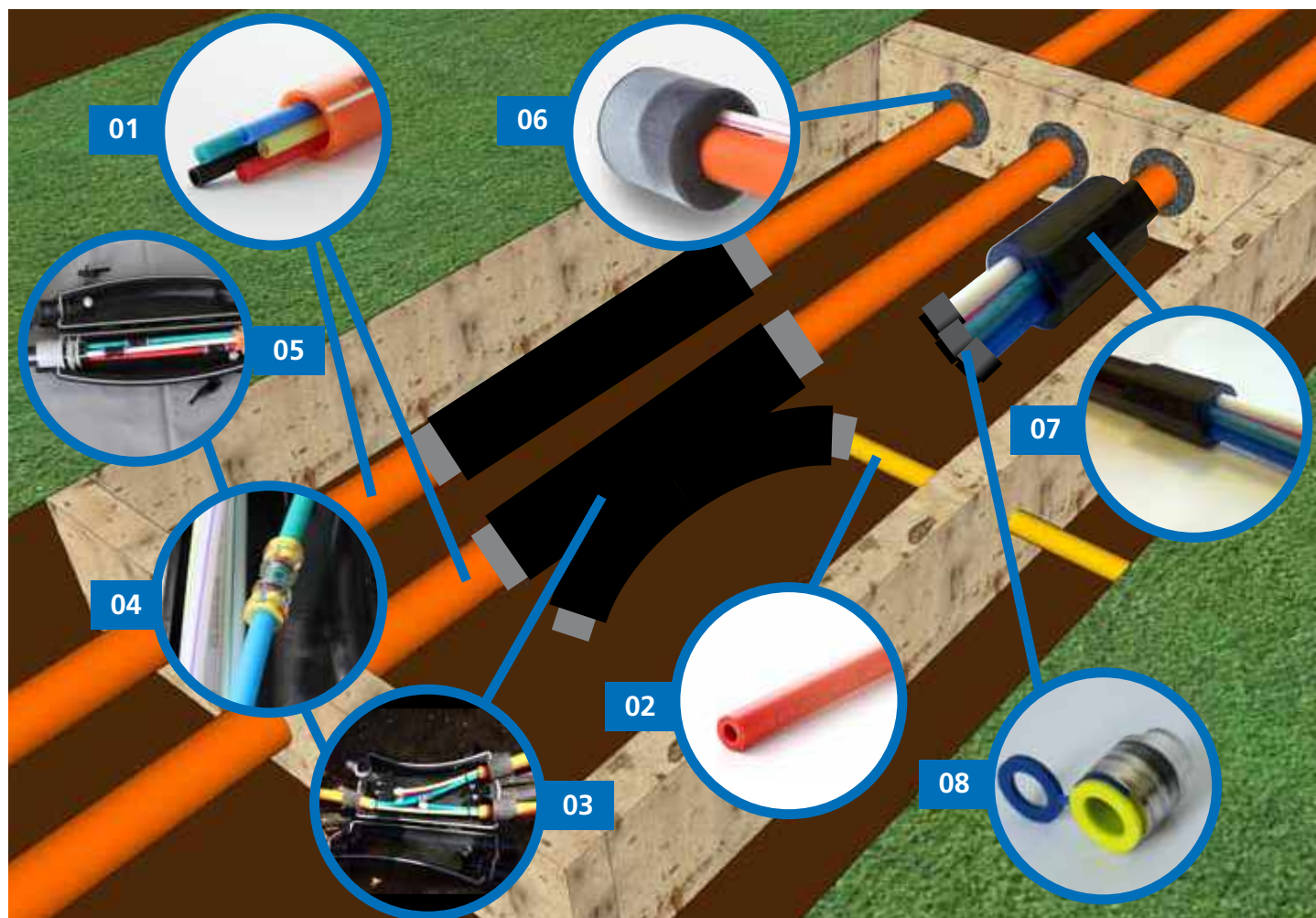
DuraPack Connection

Product Group		Catalogue page	Product Group Representative
DuraPack	01	25	
DuraMicro	02	13	
Duct sealing systems	03	56	MDIII Duct seal
Bundle sealings	04	53	Divisible SD Sealing
Gasblock terminators	05	48, 49, 51, 52	Divisible gasblock
Gasblock connectors	06	50	Gas-block Connector
End caps	07	44, 45, 46	Robust reinforced End Cap
Fibre optic cables	08		
DuraMicro DI LSHF	09		
Micro-duct Shears		64	
Duct Shears		85	

SITE APPLICATIONS



SITE LAYOUT



ACCESSORIES OVERVIEW

DuraPack Connection

Product Group		Catalogue page	Product Group Representative
DuraPack	01	25	
DuraMicro	02	13	
Bundles Connectivity Closure	03	57, 58, 59, 60	H-Hermetic Derivation Element
Micro-duct Connector DI or DB	04	36, 37, 38, 43	Robust Reinforced Connector DB
Micro-duct End Cap	04	44, 45, 46	Robust Reinforced End Cap
Bundles Connectivity Closure	05	57, 58, 59, 60	Inline Hermetic Element for HDPE (DuraPacks)
Duct sealing systems	06	56	MDIII Duct seal
Bundle sealings	07	55	Divisible SD Sealing
Duct Shears		85	
Micro-duct Shears		64	

SITE APPLICATIONS

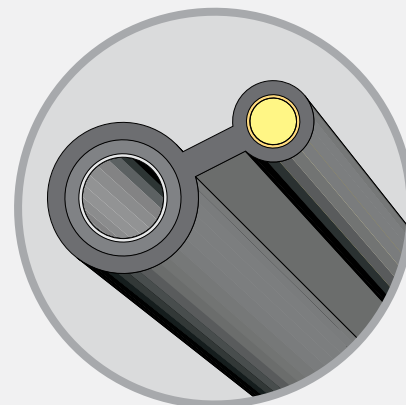


DuraAir

FEATURES & CHARACTERISTICS

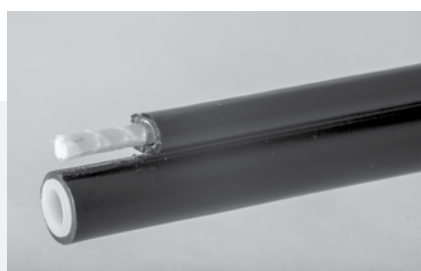
The standard figure 8 construction of our new aerial drop product is lightweight and with minimal visual pollution solution. It is easy to install, with only very low stringing tension required. DuraAir F8 withstands also some extreme overloads due to the severe weather conditions. Using Push-Fit connectors it will easily become part of your micro-duct based FTTH network with quick one-step cable blowing operation.

- ✓ Lightweight future-proof solution
- ✓ Standard Figure 8 construction, metal free
- ✓ High UV resistance (at least 15 years guaranteed)
- ✓ Standard aerial accessories
- ✓ Tested & Certified – vibration test, tension test
- ✓ Compliance with EN 60794



PRODUCT RANGE

Construction	Configuration	Weight [kg/km]	Packaging [length/weight]
Figure 8	1x MD 5 / 3.5		37 MTB DT 4000 m / 174 kg
Figure 8	1x MD 10 / 8		71 MTB DT 1650 m / 147 kg
Figure 9	1x MD 14 / 12		92 MTB DT 1000 m / 118 kg
Figure 8	1x SD 20 / 16		142DB1 6500 m / 1200 kg
Figure 8	2x MD 12 / 10		210DB1 5800 m / 1620 kg
Figure 8	3x MD 12 / 10		280DB1 4500 m / 1750 kg
Figure 8	4x MD 12 / 10		450DB1 2400 m / 1500 kg
Figure 8	12x MD 5 / 3.5 + 1x10 / 8		





DuraAir

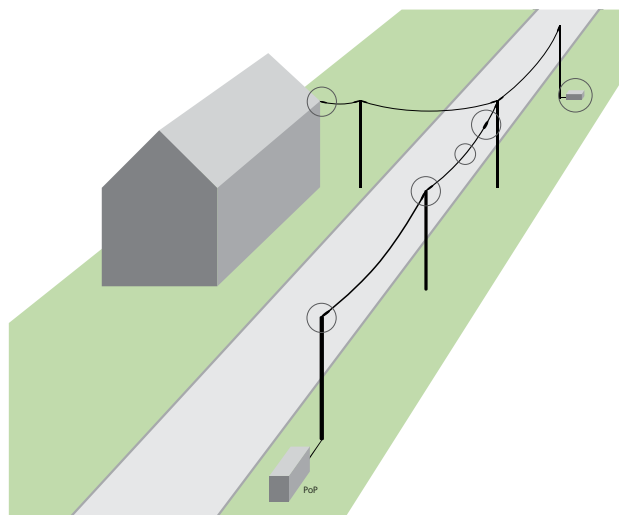
Typical application

- ✓ Span: max 50 m
- ✓ Sag: Usually the average sag is set up at 1 % of the average span at 15 or 20 °C.
For instance, given an average span of 50 meters, the sag would be 0.5 m
- ✓ Tension very small, for 50 m span & 0.5 m sag, TENSION = 30 daN



Tension Calculation

$$\text{Tension} = \frac{(\text{Weight}_D + \text{Weight}_C) \times (\text{Span})^2}{8 \times \text{Sag}}$$



DuraAir F8 5/3.5	Temperature at time of installation °C	Sag	Installation force [N] at a span length in meters of				
			30 m	40 m	50 m	60 m	70 m
	20	1 %	176 N	235 N	293 N	352 N	410 N

Sag according to span between poles, including cable of 3 kg/km weight.

Accessories



SC37C Suspension clamp



BQC12x50 Pigtail hook

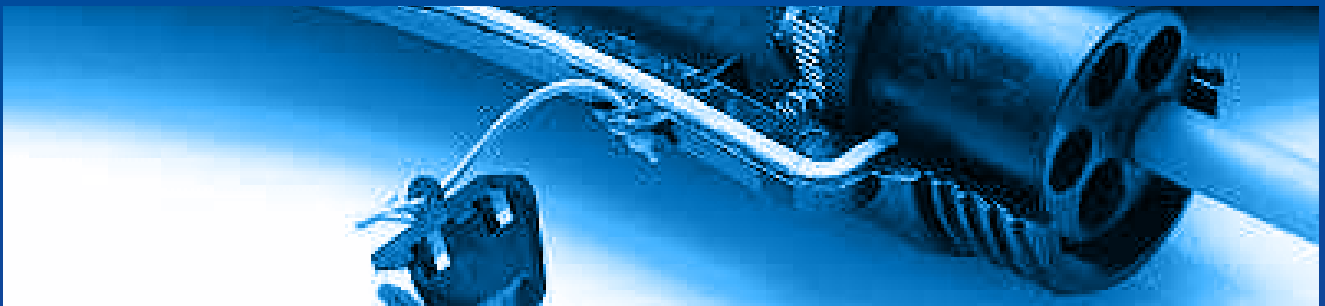


AC35 260 Anchoring clamp



UPB Universal PoleBracket

Micro-duct Accessories



Metal Free Connector DB

DESCRIPTION

Innovative new generation micro-connectors developed for tele-com industry.

Metal free design avoids corrosion problems in DB applications. High quality materials and transparent body assure easy and quick installation.

DB connectors has to be protected with rubber protection caps for proper DB functionality.



MAIN FEATURES & CHARACTERISTICS

- ✓ No metal parts
- ✓ Inner diameter leveled with DB micro-ducts
- ✓ Light gray color for DB quick identification
- ✓ Safety clips pre-installed
- ✓ Push-fit system
- ✓ Body material: polyamide
- ✓ Working Pressure: max. 20 bars
- ✓ Lifespan: 25 years
- ✓ Standards: EN 50411-2-8



TABLE OF ARTICLES

SAP Code	Product Code	Product Name	MoQ	Package
AC1290	NFTC7-3.5	Metal free connector for 7/3 mm MD	10	100 pcs bag
AC1291	NFTC8-5	Metal free connector for 8/5 mm MD	10	100 pcs bag
AC1292	NFTC10-5.5	Metal free connector for 10/5.5 mm MD	10	100 pcs bag
AC1293	NFTC12-8	Metal free connector for 12/8 mm MD	10	100 pcs bag
AC1294	NFTC14-10	Metal free connector for 14/10 mm MD	10	100 pcs bag
AC1295	NFTC16-12	Metal free connector for 16/12 mm MD	10	100 pcs bag
AC1443	NFTCDBK7	Metal free 7mm connector DB kit (conn+clips+rubber caps)	10	100 pcs bag
AC1444	NFTCDBK10	Metal free 10mm connector DB kit (conn+clips+rubber caps)	10	100 pcs bag
AC1445	NFTCDBK12	Metal free 12mm connector DB kit (conn+clips+rubber caps)	10	100 pcs bag
AC1446	NFTCDBK14	Metal free 14mm connector DB kit (conn+clips+rubber caps)	10	100 pcs bag
AC1447	NFTCDBK16	Metal free 16mm connector DB kit (conn+clips+rubber caps)	10	100 pcs bag

Robust Reinforced Connector DB



DESCRIPTION

Fully dedicated for direct buried applications, these top quality connectors are made only of high performance materials. Unsurpassed tensile load increase the ability of resistance to duct thermal dilatation. They don't need any extra cover or protection when buried due to the superior impact resistance. Top quality product for top-quality networks.



MAIN FEATURES & CHARACTERISTICS

- ✓ Patented reinforced design for high impact resistance
- ✓ Very thin middle block (1–1,4 mm)
- ✓ Safety clips pre-installed, tamper evident
- ✓ Push-in technology, direct burial applications
- ✓ Body material: polycarbonate
- ✓ Working Pressure: max. 25 bars
- ✓ Impact resistance: 15J @ -5C, EIC 61386-24
- ✓ Lifespan: 25 years
- ✓ Standards: EN 50411-2-8

TABLE OF ARTICLES

SAP Code	Product Code	Product Name	MoQ	Package
AC1369	PDBC07	Reinforced micro-duct connector DB for mm MD+safety clip	10	100 pcs bag
AC1370	PDBC08	Reinforced micro-duct connector DB for 8 mm MD+safety clip	10	100 pcs bag
AC1371	PDBC10	Reinforced micro-duct connector DB for 10 mm MD+safety clip	10	100 pcs bag
AC1372	PDBC12	Reinforced micro-duct connector DB for 12 mm MD+safety clip	10	100 pcs bag
AC1373	PDBC14	Reinforced micro-duct connector DB for 14 mm MD+safety clip	10	100 pcs bag
AC1453	PDBC16	Reinforced micro-duct connector DB for 16mm MD+safety clip	10	100 pcs bag



Metal Free Connector *DI*

DESCRIPTION

Innovative new generation micro-connectors developed for tele-com industry.

Metal free design avoids corrosion problems. High quality materials and transparent body assure easy and quick installation.

DI connectors are designed to fit with thin-walled micro-ducts and for any application indoor, inside manholes or branching boxes. Should not be directly buried.



MAIN FEATURES & CHARACTERISTICS

- ✓ No metal parts
- ✓ Inner diameter leveled with DI micro-ducts
- ✓ Dark gray for DI identification
- ✓ Safety clips pre-installed
- ✓ Push fit system
- ✓ Body material: polyamide
- ✓ Working Pressure: max. 20 bars
- ✓ Lifespan: 25 years
- ✓ Standards: EN 50411-2-8



TABLE OF ARTICLES

SAP Code	Product Code	Product Name	MoQ	Package
AC1413	NFTC3-2.1	Metal free connector for 3/2.1 mm MD	25	100 pcs bag
AC1283	NFTC5-3.5	Metal free connector for 5/3.5 mm MD	25	100 pcs bag
AC1284	NFTC7-5.5	Metal free connector for 7/5.5 mm MD	25	100 pcs bag
AC1285	NFTC8-6	Metal free connector for 8/6 mm MD	25	100 pcs bag
AC1286	NFTC10-8	Metal free connector for 10/8 mm MD	25	100 pcs bag
AC1287	NFTC12-10	Metal free connector for 12/10 mm MD	10	100 pcs bag
AC1288	NFTC14-12	Metal free connector for 14/12 mm MD	10	100 pcs bag
AC1289	NFTC15-12	Metal free connector for 15/12 mm MD	10	100 pcs bag
AC1414	NFTC16-14	Metal free connector for 16/14 mm MD	10	100 pcs bag
AC1415	NFTC18-15	Metal free connector for 18/15 mm MD	10	100 pcs bag

Micro-duct Connector JG



DESCRIPTION

Standard push-fit connectors, transparent, black or white with two locking clips, to prevent tube release. Clips ordered separately. Solid color connectors can be also direct buried.



MAIN FEATURES & CHARACTERISTICS

- ✓ Safety clips to be ordered separately
- ✓ Push fit system
- ✓ Body material: polycarbonate (transparent) or acetal polymer (solid)
- ✓ Working Pressure: max. 15 bars (transparent), max. 10 bars (solid)

TABLE OF ARTICLES

SAP Code	Product Code	Product Name	MoQ	Package
AC1115	MSJG4	Straight connector JG dia. 4 mm	10	500 pcs box
AC1116	MSJG5	Straight connector JG dia. 5 mm	10	500 pcs box
AC1118	MSJG6	Straight connector JG dia. 6 mm	10	400 pcs box
AC1119	MSJG8	Straight connector JG dia. 8 mm	10	300 pcs box
AC1109	MSJG10	Straight connector JG dia. 10 mm	10	200 pcs box
AC1111	MSJG12	Straight connector JG dia. 12 mm	10	100 pcs box
AC1112	MSJG15	Straight connector JG dia. 15 mm	10	100 pcs box
AC1113	MSJG18	Straight connector JG dia. 18 mm	10	50 pcs box
AC1114	MSJG3p	Straight connector JG dia. 3 mm - transparent	10	1000 pcs box
AC1117	MSJG5p	Straight connector JG dia. 5 mm - transparent	10	500 pcs box
AC1120	MSJG8p	Straight connector JG dia. 8 mm - transparent	10	400 pcs box
AC1110	MSJG10p	Straight connector JG dia. 10 mm - transparent	10	250 pcs box



Metal Free Reducing Connector

DESCRIPTION

Reducing connectors allows interconnection between two micro-ducts with different outer diameter. Typically this is the case of transition point from DB to DI micro-duct entering the house.



MAIN FEATURES & CHARACTERISTICS

- ✓ No metal parts
- ✓ Inner diameter leveled with micro-ducts
- ✓ Dark gray
- ✓ Safety clips pre-installed
- ✓ Body material: polyamide
- ✓ Working Pressure: max. 20 bars
- ✓ Lifespan: 25 years
- ✓ Standards: EN 50411-2-8



TABLE OF ARTICLES

SAP Code	Product Code	Product Name	MoQ	Package
AC1308	NFTR7-5	Metal free reducing connector 7–5 mm (ID 3,5 mm)	20	100 pcs bag
AC1309	NFTR10-7	Metal free reducing connector 10–7 mm (ID 5,5 mm)	20	100 pcs bag
AC1310	NFTR10-8	Metal free reducing connector 10–8 mm (ID 5,5 mm)	20	100 pcs bag
AC1311	NFTR12-10	Metal free reducing connector 12–10 mm (ID 8 mm)	10	100 pcs bag
AC1312	NFTR14-12	Metal free reducing connector 14–12 mm (ID 10 mm)	10	100 pcs bag

Reducing Reinforced Connector DB



DESCRIPTION

Reducing connectors allows interconnection between two micro-ducts with different outer diameter. Typically this is the case of transition point from DB to DI micro-duct entering the house. These top quality connectors are made only of high performance materials.

Unsurpassed tensile load increase the ability of resistance to duct thermal dilatation. They don't need any extra cover or protection when buried due to the superior impact resistance.

MAIN FEATURES & CHARACTERISTICS

- ✓ Patented reinforced design for high impact resistance
- ✓ Very thin middle block (1-1,4mm)
- ✓ Safety clips pre-installed, tamper evident
- ✓ Push-in technology, direct burial applications
- ✓ Body material: polycarbonate
- ✓ Working Pressure: max. 25 bars
- ✓ Impact resistance: 15J @ -5C, EIC 61386-24
- ✓ Lifespan: 25 years
- ✓ Standards: EN 50411-2-8

TABLE OF ARTICLES

SAP Code	Product Code	Product Name	MoQ	Package
AC1374	PDBR1012	Reducing MD connector, reinforced for MD 10-12+safety clip	10	100 pcs bag
AC1375	PDBR1214	Reducing MD connector, reinforced for MD 12-14+safety clip	10	100 pcs bag

Reducing Connectors other sizes

DESCRIPTION

Reducing connectors allows interconnection between two micro-ducts with different outer diameter. Typically this is the case of transition point from DB to DI micro-duct entering the house. If you did not find your correct size among METAL FREE or REINFORCED than choose one of these.



MAIN FEATURES & CHARACTERISTICS

- ✓ Safety clips on request, not included
- ✓ Push-fit technology
- ✓ Working Pressure: max. 10 bars



TABLE OF ARTICLES

SAP Code	Product Code	Product Name	MoQ	Package
AC1047	MDRSP5/3	Redukční spojka E přímá 5/3mm	10	100 pcs bag
AC1048	MDRSP5/4	Redukční spojka E přímá 5/4mm	10	100 pcs bag
AC1049	MDRSP6/4	Redukční spojka E přímá 6/4mm	10	100 pcs bag
AC1050	MDRSP7/4	Redukční spojka E přímá 7/4mm	10	100 pcs bag
AC1051	MDRSP7/5	Redukční spojka E přímá 7/5mm	10	100 pcs bag
AC1052	MDRSP8/5	Redukční spojka E přímá 8/5mm	10	100 pcs bag
AC1041	MDRSP10/5	Redukční spojka E přímá 10/5mm	10	100 pcs bag
AC1042	MDRSP10/7	Redukční spojka E přímá 10/7mm	10	100 pcs bag
AC1043	MDRSP10/8	Redukční spojka E přímá 10/8mm	10	100 pcs bag
AC1044	MDRSP12/10	Redukční spojka E přímá 12/10mm	10	100 pcs bag
AC1045	MDRSP12/7	Redukční spojka E přímá 12/7mm	10	100 pcs bag
AC1046	MDRSP14/12	Redukční spojka E přímá 14/12mm	10	100 pcs bag
AC1224	MDRSP16/12	Redukční spojka E přímá 16/12mm	10	100 pcs bag

ACE Connectors

DESCRIPTION

Straight & Reducing connectors, which guarantee a good performance. Transparent body allows verification of the micro-ducts position inside.

Safety clips, tamper evident, are pre-installed. Tested & comply with EN 50411-2-8.



MAIN FEATURES & CHARACTERISTICS

- ✓ Tamper evident safety clips pre-installed
- ✓ Push-fit system
- ✓ Working Pressure: max. 16 bars
- ✓ Standards: EN 50411-2-8



TABLE OF ARTICLES

SAP Code	Product Code	Product Name	MoQ	MoQ/Package
	ACEC 5/35	Straight connector ACE for 5/3.5mm DI micro-duct, incl. clips	DI	10/100 pcs bag
	ACEC 7/4	Straight connector ACE for 7/4mm DB micro-duct, incl. clips	DB	10/100 pcs bag
	ACEC 10/8	Straight connector ACE for 10/8mm DI micro-duct, incl. clips	DI	10/50 pcs bag
	ACEC 10/6	Straight connector ACE for 10/6mm DB micro-duct, incl. clips	DB	10/50 pcs bag
	ACEC 12/10	Straight connector ACE for 12/10mm DI micro-duct, incl. clips	DI	10/40 pcs bag
	ACEC 12/8	Straight connector ACE for 12/8mm DB micro-duct, incl. clips	DB	10/40 pcs bag
	ACEC 14/10	Straight connector ACE for 14/10mm DB micro-duct, incl. clips	DB	10/25 pcs bag
	ACEC 16/12	Straight connector ACE for 16/12mm DB micro-duct, incl. clips	DB	10/25 pcs bag

Robust Reinforced End Cap



DESCRIPTION

Fully dedicated for direct buried applications, these top quality End Caps are made only of high performance materials. Special patented ribbed design gives it superior impact resistance and therefore there is no need for any extra cover or protection when buried. Top quality product for top-quality networks.



MAIN FEATURES & CHARACTERISTICS

- ✓ Patented reinforced design for high impact resistance
- ✓ Safety clips pre-installed
- ✓ Push-fit system
- ✓ Direct burial application
- ✓ Body material: polyamide
- ✓ Working Pressure: max. 25 bars
- ✓ Impact resistance: 5J, EIC 61386-1
- ✓ Lifespan: 25 years
- ✓ Standards: EN 50411-2-8

TABLE OF ARTICLES

SAP Code	Product Code	Product Name	MoQ	Package
AC1376	PDBE07	Reinforced End Cap, MD 7 mm + clip	10	100 pcs bag
AC1377	PDBE08	Reinforced End Cap, MD 8 mm + clip	10	100 pcs bag
AC1378	PDBE10	Reinforced End Cap, MD 10 mm + clip	10	100 pcs bag
AC1379	PDBE12	Reinforced End Cap, MD 12 mm + clip	10	100 pcs bag
AC1380	PDBE14	Reinforced End Cap, MD 14 mm + clip	10	100 pcs bag
AC1454	PDBE16	Reinforced End Cap, MD 16mm + safety clip	10	100 pcs bag

Metal Free End Cap

DESCRIPTION

Metal Free End Caps give you the benefit of metal free design and transparent body. Together with pre-installed safety clips, this is good value for good money. Quick & easy installation, keep your micro-duct clean and dry. All open micro-duct ends should be closed to keep your duct network quality and future-proof.

Special rubber covers are recommended for direct burial applications to secure easy & smooth push-fit functionality of the connectors when re-entry is needed.



MAIN FEATURES & CHARACTERISTICS

- ✓ No metal parts
- ✓ Gray or yellow
- ✓ Push fit system
- ✓ Safety clips pre-installed
- ✓ Body material: polyamide
- ✓ Direct burial & direct install application
- ✓ Working Pressure: max. 20 bars
- ✓ Lifespan: 25 years
- ✓ Standards: EN 50411-2-8



TABLE OF ARTICLES

SAP Code	Product Code	Product Name	MoQ	Package
AC1298	NFCC 5	Metal free End Stop for 5 mm micro-duct	10	100 pcs bag
AC1299	NFCC 7	Metal free End Stop for 7 mm micro-duct	10	100 pcs bag
AC1300	NFCC 8	Metal free End Stop for 8 mm micro-duct	10	100 pcs bag
AC1301	NFCC 10	Metal free End Stop for 10 mm micro-duct	10	100 pcs bag
AC1302	NFCC 12	Metal free End Stop for 12 mm micro-duct	10	100 pcs bag
AC1303	NFCC 14	Metal free End Stop for 14 mm micro-duct	10	100 pcs bag
AC1304	NFCC 15	Metal free End Stop for 15 mm micro-duct	10	100 pcs bag
AC1305	NFCC 16	Metal free End Stop for 16 mm micro-duct	10	100 pcs bag
AC1296	NFTCCAP12	12 mm Rubber protection cap for DB app	10	100 pcs bag
AC1297	NFTCCAP14	14 mm Rubber protection cap for DB app	10	100 pcs bag



ACE End Cap



DESCRIPTION

Standard transparent end caps, which are used to terminate open ended tubes to avoid air leakage, water or other material ingress. End caps are preassembled with security clips.



MAIN FEATURES & CHARACTERISTICS

- ✓ Tamper evident safety clips preassembled
- ✓ Push-fit system
- ✓ Working Pressure: max. 16 bars
- ✓ Standards: EN 50411-2-8

TABLE OF ARTICLES

SAP Code	Product Code	Product Name	Application	MoG/Package
	ACEEC 5	End Cap ACE for 5/3.5 mm micro-ducts	DI	10/100 pcs bag
	ACEEC 7	End Cap ACE for 7 mm micro-ducts	DB	10/100 pcs bag
	ACEEC 10	End Cap ACE for 10 mm micro-ducts	DB	10/100 pcs bag
	ACEEC 12	End Cap ACE for 12 mm micro-ducts	DB	10/80 pcs bag
	ACEEC 14	End Cap ACE for 14 mm micro-ducts	DB	10/50 pcs bag
	ACEEC 16	End Cap ACE for 16 mm micro-ducts	DB	10/50 pcs bag

Micro-duct End Cap with Valve



DESCRIPTION

Standard push-fit end cap with valve. Used to pressurize the micro-duct prior the micro-duct blowing process. Locking clips to be ordered separately.



MAIN FEATURES & CHARACTERISTICS

- ✓ Clips not included
- ✓ Standard valve

TABLE OF ARTICLES

SAP Code	Product Code	Product Name	MoQ	Package
AC1029	MDKV5	End stop E with valve dia. 5 mm	10	100 pcs bag
AC1030	MDKV7	End stop E with valve dia. 7 mm	10	100 pcs bag
AC1031	MDKV8	End stop E with valve dia. 8 mm	10	100 pcs bag
AC1027	MDKV10	End stop E with valve dia. 10 mm	10	100 pcs bag
AC1028	MDKV12	End stop E with valve dia. 12 mm	10	100 pcs bag
AC1329	MDKV14	End stop E with valve dia. 14 mm	10	100 pcs bag



Divisible Gas-Block

DESCRIPTION

Simple modular design enables easy installation in all situations, even if cable is already terminated.

Made of glass-fiber reinforced polyamide, provides gas-tight sealing of your micro-duct with cable up to 0,5 bar.

Very compact design helps to installations in congested spaces like inside ODF.



MAIN FEATURES & CHARACTERISTICS

- ✓ 2 shell, divisible solution
- ✓ For micro-ducts OD 10 to 20 mm
- ✓ Simple & quick installation
- ✓ Body material: glassfiber reinforced polyamide
- ✓ Sealing: up to 0,5 bars
- ✓ Packaging: 25 pcs per box



TABLE OF ARTICLES

SAP Code	Product Code	Product Name	MoQ	Package
AC1241	DGBLCK10/2.5	Divisible GasBlock MD 10 mm with cable 2.5–3.5 mm	10	25 pcs box
AC1242	DGBLCK10/3.5	Divisible GasBlock MD 10 mm with cable 3.5–5.0 mm	10	25 pcs box
AC1243	DGBLCK10/5.0	Divisible GasBlock MD 10 mm with cable 5.0–6.5 mm	10	25 pcs box
AC1244	DGBLCK10/6.5	Divisible GasBlock MD 10 mm with cable 6.5–8.0 mm	10	25 pcs box
AC1245	DGBLCK12/2.5	Divisible GasBlock MD 12 mm with cable 2.5–3.5 mm	10	25 pcs box
AC1246	DGBLCK12/3.5	Divisible GasBlock MD 12 mm with cable 3.5–5.0 mm	10	25 pcs box
AC1247	DGBLCK12/5.0	Divisible GasBlock MD 12 mm with cable 5.0–6.5 mm	10	25 pcs box
AC1248	DGBLCK12/6.5	Divisible GasBlock MD 12 mm with cable 6.5–8.0 mm	10	25 pcs box
AC2212	DGBLCK14/3	Divisible GasBlock MD 14 mm with cable 3–5.0 mm	10	25 pcs box
AC1354	DGBLCK14/5.0	Divisible GasBlock MD 14 mm with cable 5.0–6.5 mm	10	25 pcs box
AC1249	DGBLCK14/6.5	Divisible GasBlock MD 14 mm with cable 6.5–8.0 mm	10	25 pcs box
AC1250	DGBLCK14/8.0	Divisible GasBlock MD 14 mm with cable 8.0–10.0 mm	10	25 pcs box
AC1251	DGBLCK16/6.5	Divisible GasBlock MD 16 mm with cable 6.5–8.0 mm	10	25 pcs box
AC1252	DGBLCK16/8.0	Divisible GasBlock MD 16 mm with cable 8.0–10.0 mm	10	25 pcs box
AC1253	DGBLCK18/9.4	Divisible GasBlock MD 18 mm with cable 9.4–12.0 mm	10	25 pcs box
AC1254	DGBLCK20/9.4	Divisible GasBlock MD 20 mm with cable 9.4–12.0 mm	10	25 pcs box

Divisible Gas-Block Nano



DESCRIPTION

Very compact design, small dimension enables installation within ODFs with difficult access.

Thanks to clever design the installation is only matter of sliding the rubber seal over the fiber & pushing it against the duct wall. It has been developed to provide gas tight seal between a micro-duct OD 4–8 mm and micro-cables from 0.9 to 2.5 mm.

MAIN FEATURES & CHARACTERISTICS

- ✓ Transparent body, PCTPE
- ✓ For micro-ducts OD 4 to 8 mm
- ✓ Cables from 0.9 to 2.5 mm
- ✓ Very compact & small dimension
- ✓ Indoor applications (house, cabinet)
- ✓ Sealing: up to 0,5 bars
- ✓ Packaging: 100 pcs per bag

TABLE OF ARTICLES

SAP Code	Product Code	Product Name	MoQ	Package
AC1362	DGBLCK4/0.9	Divisible GasBlock MD 4 mm with cable 0.9 mm	20	100 pcs bag
AC1349	DGBLCK4/125	Divisible GasBlock MD 4 mm with cable 1.25 mm	20	100 pcs bag
AC1363	DGBLCK5/0.9	Divisible GasBlock MD 5mm with cable 0.9mm	20	100 pcs bag
AC1364	DGBLCK5/1.6	Divisible GasBlock MD 5mm with cable 1.6mm	20	100 pcs bag
AC1350	DGBLCK5/125	Divisible GasBlock MD 5 mm with cable 1.25 mm	20	100 pcs bag
AC1351	DGBLCK5/2.5	Divisible GasBlock MD 5 mm with cable 2.5 mm	20	100 pcs bag
AC1365	DGBLCK6/0.9	Divisible GasBlock MD 6 mm with cable 0.9 mm	20	100 pcs bag
AC1366	DGBLCK6/1.6	Divisible GasBlock MD 6 mm with cable 1.6 mm	20	100 pcs bag
AC1352	DGBLCK6/1.25	Divisible GasBlock MD 6 mm with cable 1.25 mm	20	100 pcs bag
AC1353	DGBLCK6/2.5	Divisible GasBlock MD 6 mm with cable 2.5 mm	20	100 pcs bag
AC1360	DGBLCK7/0.9	Divisible GasBlock MD 7 mm with cable 0.9 mm	20	100 pcs bag
AC1355	DGBLCK7/125	Divisible GasBlock MD 7 mm with cable 1.25 mm	20	100 pcs bag
AC1359	DGBLCK7/1.6	Divisible GasBlock MD 7 mm with cable 1.6 mm	20	100 pcs bag
AC1356	DGBLCK7/2.5	Divisible GasBlock MD 7 mm with cable 2.5 mm	20	100 pcs bag
AC1361	DGBLCK7/35	Divisible GasBlock MD 7 mm with cable 2.1 mm	20	100 pcs bag
AC1367	DGBLCK8/0.9	Divisible GasBlock MD 8 mm with cable 0.9 mm	20	100 pcs bag
AC1357	DGBLCK8/125	Divisible GasBlock MD 8mm with cable 1.25mm	20	100 pcs bag
AC1368	DGBLCK8/1.6	Divisible GasBlock MD 8mm with cable 1.6mm	20	100 pcs bag
AC1358	DGBLCK8/2.5	Divisible GasBlock MD 8mm with cable 2.5mm	20	100 pcs bag

Gas-block Connector

DESCRIPTION

Micro-duct connector providing gas tight seal connection around the cable inside. When opened, cable can be blown through this connector and sealed afterwards by rotating ring. They operate safely at blowing pressure of 10 Bar and protect the inner cavity of your micro-ducts against ingress of any particles. Should always be installed always at the entry transition points to the buildings, ODFs etc. where water or gas presence is the matter of danger. Two locking clips can be ordered separately to prevent micro-ducts self release.



MAIN FEATURES & CHARACTERISTICS

- ✓ Available for wide range of micro-duct sizes OD 4–16
- ✓ Push-fit system
- ✓ Transparent body
- ✓ Body material: polycarbonate
- ✓ Sealing: up to 0,3 bars
- ✓ Packaging: bag

TABLE OF ARTICLES

SAP Code	Product Code	Product Name	MoQ	Package
AC1017	MDGB4	Gas-block connector dia 4 mm; cable 1–2 mm	10	100 bag
AC1018	MDGB5	Gas-block connector dia 5 mm; cable 1–3,5 mm	10	100 bag
AC1019	MDGB7	Gas-block connector dia 7 mm; cable 2–5,5 mm	10	100 bag
AC1333	MDGB8<3.5	Gas-block connector dia 8 mm; cable 1–3,5 mm	10	100 bag
AC1334	MDGB8>3.5	Gas-block connector dia 8 mm; cable 3,5–6 mm	10	100 bag
AC1015	MDGB10	Gas-block connector dia 10 mm; cable 5–8 mm	5	100 bag
AC1391	MDGB103-6	Gas-block connector dia 10 mm; cable 3–6 mm	5	100 bag
AC1418	MDGB10c	Gas-block connector dia 10 mm; cable 1–4 mm	5	100 bag
AC1016	MDGB12	Gas-block connector dia 12 mm; cable 7–10 mm	5	100 bag
AC1265	MDGB12b	Gas-block connector dia 12 mm; cable 3–6 mm	5	100 bag
AC1419	MDGB12c	Gas-block connector dia 12 mm; cable 5–8 mm	10	100 bag
AC1193	MDRGB8/7	Reducing Gas-block connector dia 8–7 mm;	10	100 bag
AC1206	MDRGB75	Reducing Gas-block connector dia 7–5 mm; cable 2–4 mm	10	100 bag
AC1205	MDGB145-8	Gas-block connector dia 14 mm; cable 5–8 mm	5	100 bag
AC1420	MDGB14b	Gas-block connector dia 14 mm; cable 3–6 mm	5	100 bag
AC1421	MDGB14c	Gas-block connector dia 14 mm; cable 7–10 mm	5	100 bag
AC1223	MDGB16	Gas-block connector dia 16 mm; cable 9–12 mm	5	100 bag

Other sizes on request.

GasBlock Terminator ALU

DESCRIPTION

Very compact design allows easy & quick installation onto small micro-ducts, terminating ends gastight. It seals both empty or occupied ducts with cables inside. It is very comfortable to use within small cabinets and can be reused 5 times. Divisible version which can be installed over the terminated cable is also available.



MAIN FEATURES & CHARACTERISTICS

- ✓ Seals both empty & occupied duct
- ✓ Push fit system
- ✓ Body material: Aluminium
- ✓ Seal: >0.5 bars from -40 °C to +65 °C



TABLE OF ARTICLES

SAP Code	Product Code	Product Name	MoQ	Package
AC1392	GBALU 5/10-16	GasBlock termination of MD 5/3.5 with cable 1.0-1.6 mm	10	100
AC1393	GBALU 7/21-26	GasBlock termination of MD 7/4 with cable 2.1-2.6mm	10	100
AC1394	GBALU 10/61-65	GasBlock termination of MD 10/8 with cable 6.1-6.5mm	10	10
AC1395	GBALU 12/61-65	GasBlock termination of MD 12/8 with cable 6.1-6.5mm	10	10
AC1396	GBALU 14/80-85	GasBlock termination of MD 14/10 with cable 8.0-8.5mm	10	10
AC1397	GBALU 16/98-103	GasBlock termination of MD 16/12 with cable 9.8-10.3mm	10	10
AC1398	GBALUD 5/10-16	Divisible GasBlock termination of MD 5/3.5 with cable 1.0-1.6 mm	100	100
AC1399	GBALUD 7/21-26	Divisible GasBlock termination of MD 7/4 with cable 2.1-2.6 mm	100	100
AC1400	GBALUD 10/61-65	Divisible GasBlock termination of MD 10/8 with cable 6.1-6.5 mm	100	100
AC1401	GBALUD 12/61-65	Divisible GasBlock termination of MD 12/8 with cable 6.1-6.5 mm	100	100
AC1402	GBALUD 14/80-85	Divisible GasBlock termination of MD 14/10 with cable 8.0-8.5 mm	100	100
AC1403	GBALUD 16/98-103	Divisible GasBlock termination of MD 16/12 with cable 9.8-10.3 mm	100	100

Push-In Gas-block Terminator

DESCRIPTION

First pushed-in Gas-block Terminator on the market. Due to this push-in system, the installation of these gas-blocks is super quick and simple.

Moreover, they can be re-used 5 times without any performance degradation. It's patented design provides very flexible & universal sealing system covering wide range of cable diameters. Therefore you can have only one product, sealing complete range of cables used within your network.

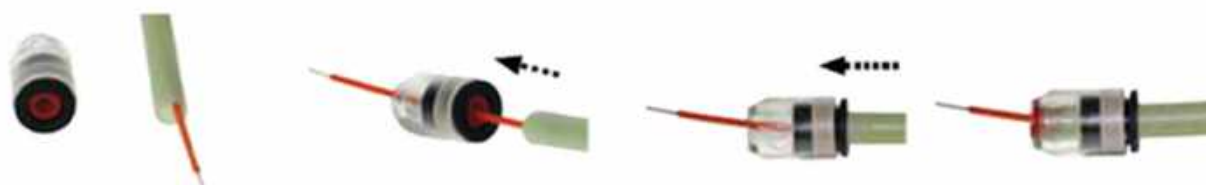


MAIN FEATURES & CHARACTERISTICS

- ✓ transparent body, polycarbonate composite
- ✓ for micro-ducts OD 5 to 14 mm
- ✓ cables from 1 to 9 mm
- ✓ easy installation - push-in system
- ✓ 1 gas-block size can seal wide range of cable diameters
- ✓ Sealing: up to 1 bar (external or internal)
- ✓ Working temperatures: -15C to +45C

TABLE OF ARTICLES

SAP Code	Product Code	Product Name	Application	PMoQ/Package
AC1448	GBLCKPF5	Push-In Gasblock Terminator Universal MD 5mm, cable 1.0-2.5mm	DI	10 / 100
AC1449	GBLCKPF7	Push-In Gasblock Terminator Universal MD 7mm, cable 1.0-4.0mm	DI	10 / 100
AC1450	GBLCKPF10	Push-In Gasblock Terminator Universal MD 10mm, cable 1.4-6.5mm	DI	10 / 50
AC1451	GBLCKPF12	Push-In Gasblock Terminator Universal MD 12mm, cable 3.0-8.6mm	DI	10 / 50
AC1452	GBLCKPF14	Push-In Gasblock Terminator Universal MD 14mm, cable 3.0-9.0mm	DI	10 / 50



Divisible SD Sealing

DESCRIPTION

Divisible Sealings are designed to seal the ends of the DuraPack bundles to block any water, gas or other particles which could come through the main duct into your building, cabinet or handhole. The modular system will guarantee easy installation of various different cable and duct configurations. Our system is divisible so can be applied at installation or afterwards. The rubber inserts can be custom designed for your specific needs and configuration and will contain (temporary) blind plugs to make the system more flexible at the installation site.



MAIN FEATURES & CHARACTERISTICS

- ✓ Compact design allows sealing of more DuraPacks next to each other
- ✓ Fully divisible solution
- ✓ Quick & simple installation
- ✓ Body material: glass fibre
- ✓ Sealing: Gas & water tight up to 0,2 bar, IEC 60794-1-2-F5a
- ✓ Packaging: plastic bag

TABLE OF ARTICLES

SAP Code	Product Code	Product Name	MoQ	Package
AC1227	DSEAL32/3x10	Divisible duct sealing 32 mm with 3xMD 10 mm OD	5	10 pcs box
AC1323	DSEAL32/4x10	Divisible duct sealing 32 mm with 3xMD 10 mm OD	5	10 pcs box
AC1324	DSEAL32/K+2x10	Divisible duct sealing 32 mm with 1xK (peelable rings 8–14 mm)+ 2xMD 10 mm OD	5	10 pcs box
AC1330	DSEAL32/3x12	Divisible duct sealing 32 mm with 3xMD 12 mm OD	5	10 pcs box
AC1240	DSEAL32/7x7	Divisible duct sealing 40 mm with 7xMD 7 mm OD	5	10 pcs box
AC1228	DSEAL40/24x4	Divisible duct sealing 40 mm with 24xMD 4 mm OD	5	10 pcs box
AC1229	DSEAL40/8x7+12	Divisible duct sealing 40 mm with 8xMD 7 mm +1x12 mm OD	5	10 pcs box
AC1230	DSEAL40/10x7	Divisible duct sealing 40 mm with 10xMD 7 mm OD	5	10 pcs box
AC1231	DSEAL40/5x10	Divisible duct sealing 40 mm with 5xMD 10 mm OD	5	10 pcs box
AC1232	DSEAL40/4x12	Divisible duct sealing 40 mm with 4xMD 12 mm OD	5	10 pcs box
AC1239	DSEAL40/7x10	Divisible duct sealing 40 mm with 7xMD 10 mm OD	5	10 pcs box
AC1325	DSEAL40/K+3x10	Divisible duct sealing 40 mm with 1xK (peelable rings 8–18 mm)+ 3xMD 10 mm OD	5	10 pcs box
AC1326	DSEAL40/K+2x12	Divisible duct sealing 40 mm with 1xK (peelable rings 8–18 mm)+ 2xMD 12 mm OD	5	10 pcs box
AC1233	DSEAL50/3x12+1x16	Divisible duct sealing 50 mm with 3xMD 12 mm + 1x15,5 mm OD	5	10 pcs box
AC1234	DSEAL50/10x7+1x12	Divisible duct sealing 50 mm with 10xMD 7 mm + 1x12 mm OD	5	10 pcs box
AC1235	DSEAL50/18x7	Divisible duct sealing 50 mm with 18xMD 7 mm OD	5	10 pcs box
AC1236	DSEAL50/7x10	Divisible duct sealing 50 mm with 7xMD 10 mm OD	5	10 pcs box
AC1237	DSEAL50/7x12	Divisible duct sealing 50 mm with 7xMD 12 mm OD	5	10 pcs box
AC1327	DSEAL50/7x14	Divisible duct sealing 50 mm with 7xMD 14 mm OD	5	10 pcs box
AC1238	DSEAL63/24x7+1x14	Divisible duct sealing 63 mm with 24xMD 7 mm + 1x14 mm OD	5	10 pcs box

Rubber Caps, Rubber Inserts



DESCRIPTION

These simple rubber caps and inserts block any rough particles getting inside the main duct of DuraPack bundle's ends. These are water/splash & dirt protective and therefore should be used only as temporary protection or at places where water/gas is not the case. The sealings are made from a high quality TPE, this material has a hardness of 40 Shore A.

The sealing inserts due to this unique construction can be used as blind or sealing plug. Furthermore, the sealing insert inside is specially shaped. This special shape enables you to adapt the plug easily to the diameter of the cable or micro-duct. This enables you to obtain savings in inventory costs since only a very limited number of types of plugs are needed.



MAIN FEATURES & CHARACTERISTICS

- ✓ Simple pull over installation
- ✓ Universal/saving cost
- ✓ Body material: TPE
- ✓ Sealing: splash & dirt
- ✓ Packaging: plastic bag

TABLE OF ARTICLES

SAP Code	Product Code	Product Name	MoQ	Package
AC1255	SCAP40/10x7	Rubber Sealing Cap for 10x7 mm in 40 mm OD duct	20	40 pcs box
AC1258	SCAP40/5x10	Rubber sealing cap for 5x10 mm in 40 mm OD duct	20	40 pcs box
AC1381	SCAP40/4x10-12	Rubber sealing cap for 4x10-12 mm in 40 mm OD duct	10	10 pcs box
AC1256	SCAP50/7x10	Rubber sealing cap for 7x10 mm in 50 mm OD duct	25	25 pcs box
AC1257	SCAP50/14x7	Rubber sealing cap for 14x7 mm in 50 mm OD duct	25	25 pcs box

SAP Code	Product Code	Product Name	Duct OD	Duct ID	Micro-duct OD	MoQ	Package
AC1382	SPLUG32/6-16	Plug sealing HDPE 32/28 with cable 6-16 mm OD	32	27-28,5	1x 6-16 mm	40	40 pcs box
AC1383	SPLUG40/5-22	Plug sealing HDPE 40/33 with cable 5-22 mm OD	40	31,5-33	1x5-22 mm	40	40 pcs box
AC1384	SPLUG40/6-22	Plug sealing HDPE 40/35 with cable 6-22 mm OD	40	34,4-36	1x6-22 mm	30	30 pcs box
AC1385	SPLUG50/8-20	Plug sealing HDPE 50/40 with cable 8-20 mm OD	50	39,5-41,5	1x8-20 mm	10	10 pcs box
AC1386	SPLUG40/7x7	Plug sealing HDPE 40/33 with 7x7 mm OD micro-duct	40	33	7x7 mm	20	100 pcs box
AC1387	SPLUG40/5x10	Plug sealing HDPE 40/33 with 5x10 mm OD micro-duct	40	33	5x10 mm	20	100 pcs box
AC1388	SPLUG40/4x12	Plug sealing HDPE 40/33 with 5x10 mm OD micro-duct	40	33	4x12 mm	20	100 pcs box
AC1389	SPLUG50/6-14	Plug sealing HDPE 50/43 with cable 6-14 mm OD	50	43,6	6-14 mm	25	50 pcs box

DuraMulti Termination Sealing

DESCRIPTION

This sealing set is specially designed for non-circular DuraMulti bundles. It is sealing the spaces among micro-ducts and bundle's jacket. If you need to bring the whole bundle inside your premises (eg. exchange or MDU), this sealing protects against ingress of water or gas alongside the individual micro-ducts. The divisible version allows repeated application and no use of chemical sealants. Depending on the type of DB-bundle, space is created in a 32, 40, 50 or 63 mm duct to spread the individual micro-ducts from the DB-bundle. These are sealed by the divisible duct sealing set. Subsequently, a similar seal is made between the DB-bundle and the HDPE duct. That brings another advantage of this solution. In many underground closures, standard ports for sealing to ducts with a diameter of 32, 40, 50 or 63 mm are provided. With this solution, you can make a simple waterproof entry of a DB-bundle.



MAIN FEATURES & CHARACTERISTICS

- ✓ Modular system
- ✓ Customer made solution
- ✓ Body material: HDPE duct + 2locks (glass fibre reinforced)
- ✓ Sealing: EPDM, up to 0,25bar
- ✓ Packaging: carton

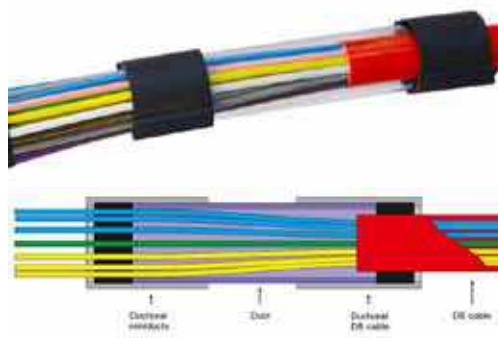


TABLE OF ARTICLES

SAP Code	Product Code	Product Name	Duct OD	MoQ	Package
AC1266	SDM7x14/10d	DuraMulti 7x14/10 termination sealing – complete set	63 mm	2 pcs	Carton
AC1267	SDM7x14/10	DuraMulti 7x14/10 termination sealing – only 2x lock	63 mm	2 pcs	Carton
AC1313	SDM7x12/8d	DuraMulti 7x12/8 termination sealing – complete set	50 mm	2 pcs	Carton
AC1314	SDM7x12/8	DuraMulti 7x12/8 termination sealing – only 2x lock	50 mm	2 pcs	Carton
AC1315	50DBSEALSplit	DuraMulti 7x12/8 termination sealing – set with divisible duct	50 mm	2 pcs	Carton

Other combinations available on request.

MDIII Duct Seal



DESCRIPTION

Duct sealing systems MDIII have been developed to provide an effective and simple solution for Gas and Watertight sealing of cables / pipes in ducts or bore holes.

This duct sealing system is extremely flexible and can be installed in ducts either vertically or horizontally. Two-component expanding polyurethane resin makes this suitable in situations where more than one cable or duct has to be sealed. Also the main pipe or bore hole does not have to be perfectly round.



MAIN FEATURES & CHARACTERISTICS

- ✓ Gas and watertight 1,0 bar
- ✓ Seals any bore hole up to 200 mm, seals multiple cables & ducts
- ✓ Easy and quick installation

TABLE OF ARTICLES

SAP Code	Product Code	Product Name	MoQ	Package
AC1404	MDIII-25	MDIII-25 Duct Seal set, sealing max. 8 mm cable in 25 mm bore hole	1	1 pc box
AC1405	MDIII-50	MDIII-50 Duct Seal set, sealing max. 20 mm cable in 50 mm bore hole	1	1 pc box
AC1406	MDIII-75	MDIII-75 Duct Seal set, sealing max. 40 mm cable in 75 mm bore hole	1	1 pc box
AC1407	MDIII-110	MDIII-110 Duct Seal set, sealing max. 80 mm cable in 110 mm bore hole	1	1 pc box
AC1408	MDIII-160	MDIII-160 Duct Seal set, sealing max. 130 mm cable in 160 mm bore hole	1	1 pc box
AC1409	MDIII-200	MDIII-200 Duct Seal set, sealing max. 160 mm cable in 200 mm bore hole	1	1 pc box
AC1410	MDIII-220	MDIII-220 Duct Seal set, sealing max. 190 mm cable in 220 mm bore hole	1	1 pc box
AC1411	MDIII-250	MDIII-250 Duct Seal set, sealing max. 220 mm cable in 250 mm bore hole.	1	1 pc box

H-Hermetic Derivation Element, I-Inline Hermetic Derivation Element

DESCRIPTION

H-hermetic element allows to interconnect and branch individual micro-tubes out of the main duct route. H-shape of this closure provides high flexibility of duct routing, network upgradeability and uninterrupted fibre/cable connectivity with no need for splicing. This solution is fully watertight. You can branch off many different combinations and sizes of your ducts using different port sealings. These have to be ordered separately but for no extra charge. Also port blank plugs are available if any of your ports will not be used. **I (In-line) hermetic** derivation elements is designed to interconnect two following lengths of DuraPack duct line, protecting connections of individual micro-ducts and keeping your main duct route clean.



MAIN FEATURES & CHARACTERISTICS

- ✓ High impact protection – reinforced with glass fibre
- ✓ Modular universal system – 50, 40, 32 mm HDPE
- ✓ Wide range of sealings – MD 7, 10, 12, 14, 16 mm
- ✓ Direct burial applications
- ✓ Body material: polypropylen, reinforced with glass fibre
- ✓ Sealing: IP 65
- ✓ Dimensions: 503 L x 214 W x 72 H mm (H), 503 L x 138 W x 72 H mm (I)
- ✓ Packaging: box

Your complete order should indicate:

- a) Box type (I or H)
- b) Sealing for each port (2 or 4) if required
- c) MD port plugs (optional)

TABLE OF ARTICLES

SAP Code	Product Code	Product Name	MoQ	Package
AC1132	NFHHBE50	Hermetic branching element for HDPE (DuraPacks)	1	1 box
AC1133	NFIHSE50	I-Hermetic inline element for HDPE (DuraPacks)	1	1 box
AC1135	NFSFHE40	Entry port sealing for 40 mm HDPE duct	1	10 bag
AC1196	NFSFHE32	Entry port sealing for 32 mm HDPE duct	1	10 bag
AC1225	NFSFHE107	Entry port sealing for 10x7 mm micro-duct	1	10 bag
AC1226	NFSFHE510	Entry port sealing for 5x10 mm micro-duct	1	10 bag
AC1264	NFSFHE1210	Entry port sealing for 12x10 mm micro-duct	1	10 bag
AC1136	NFSFHE512	Entry port sealing for 5x12 mm micro-duct	1	10 bag
AC1137	NFSFHE614	Entry port sealing for 5x14 mm micro-duct	1	10 bag
AC1263	NFSFHE714	Entry port sealing for 5x14 mm micro-duct	1	10 bag
	Plugs	Plugs for micro-duct not used positions available on request within your order	10	on request

Entry port sealing can be customized for orders higher than 100 pcs.

Matrix T-Enclosure, Matrix Inline Enclosure



DESCRIPTION

T-shape Enclosure is designed for customer micro-duct branch-off of your feeding main duct route. This solution provides enough space inside and can be easily assembled. Entry ports are designed only for one size of your HDPE duct. Different combinations determine the different product. In-line version is designed to interconnect two following lengths of DuraPack duct line, protecting connections of individual micro-ducts and keeping your main duct route clean.



MAIN FEATURES & CHARACTERISTICS

- ✓ Fully divisible, easy assembly
- ✓ Different combinations for 25, 32, 40, 50 mm ducts
- ✓ Direct burial applications
- ✓ Body material:
- ✓ Sealing: water splash only
- ✓ Dimensions: 356 L x 245 W x 70 H mm (H), 406 L x 118 W x 83 H mm (I)
- ✓ Packaging: box

TABLE OF ARTICLES

SAP Code	Product Code	Product Name	MoQ	Package
AC1152	SMXI40/40	Matrix coupling I 40/40	1	10 box
AC1153	SMXI50/50	Matrix coupling I 50/50	1	10 box
AC1154	SMXT40/40/25	Matrix coupling T 40/40/25 mm	1	10 box
AC1155	SMXT40/40/32	Matrix coupling T 40/40/32 mm	1	10 box
AC1156	SMXT40/40/40	Matrix coupling T 40/40/40 mm	1	10 box
AC1157	SMXT50/50/25	Matrix coupling T 50/50/25 mm	1	10 box
AC1158	SMXT50/50/32	Matrix coupling T 50/50/32 mm	1	10 box
AC1159	SMXT50/50/40	Matrix coupling T 50/50/40 mm	1	10 box
AC1160	SMXT50/50/50	Matrix coupling T 50/50/50 mm	1	10 box

Other combinations available on request.

Eden Inline, Y & T Enclosures

DESCRIPTION

I, T, Y-shape enclosures are designed for DuraPack bundles connections & branch-off points.

This solution is low cost and provides only mechanical protection to connected micro-ducts. The space inside is limited and therefore the amount of micro-ducts which can fit inside is limited too.



MAIN FEATURES & CHARACTERISTICS

- ✓ Fully divisible, easy assembly
- ✓ Different combinations for 25, 32, 40, 50 mm ducts
- ✓ Direct burial applications
- ✓ Body material:
- ✓ Sealing: only mechanical protection
- ✓ Packaging: box

TABLE OF ARTICLES

SAP Code	Product Code	Product Name	MoQ	Package
AC1053	MDSI32/32	Eden coupling Inline 32/32 mm	3	50 pcs box
AC1054	MDSI40/40	Eden coupling Inline 40/40 mm	3	50 pcs box
AC1055	MDSI50/50	Eden coupling Inline 50/50 mm	10	45 pcs box
AC1063	MDST32/32/32	Eden coupling T 32/32/32 mm	3	40 pcs box
AC1064	MDST40/32/32	Eden coupling T 40/32/32 mm	3	40 pcs box
AC1065	MDST40/40/25	Eden coupling T 40/40/25 mm	10	50 pcs box
AC1066	MDST40/40/32	Eden coupling T 40/40/32 mm	10	40 pcs box
AC1067	MDST40/40/40	Eden coupling T 40/40/40 mm	3	40 pcs box
AC1068	MDST50/50/32	Eden coupling T 50/50/32 mm	10	30 pcs box
AC1069	MDST50/50/50	Eden coupling T 50/50/50 mm	10	30 pcs box
AC1070	MDSY32/32/32	Eden coupling Y 32/32/32 mm	10	50 pcs box
AC1071	MDSY40/40/25	Eden coupling Y 40/40/25 mm	10	75 pcs box
AC1072	MDSY40/40/32	Eden coupling Y 40/40/32 mm	3	60 pcs box
AC1073	MDSY40/40/40	Eden coupling Y 40/40/40 mm	3	60 pcs box
AC1074	MDSY50/50/25	Eden coupling Y 50/50/25 mm	10	60 pcs box
AC1075	MDSY50/50/32	Eden coupling Y 50/50/32 mm	10	45 pcs box
AC1076	MDSY50/50/40	Eden coupling Y 50/50/40 mm	3	45 pcs box
AC1077	MDSY50/50/50	Eden coupling Y 50/50/50 mm	3	45 pcs box

Other combinations available on request.

Tube Distribution Closure (TDC)



DESCRIPTION

This closure has been especially designed as a multi-purpose closure to cover a variety of applications such as single tube connections to buildings, up to 40 mm duct connections and micro-duct break-out in H, T and Y configurations. In addition, a 6-way grommet is offered that allows up to six single DB micro-ducts to be branched from a single port. The TDC can also be deployed as a repair closure if only a few tubes have been damaged.



MAIN FEATURES & CHARACTERISTICS

- ✓ One-piece grommet and seal arrangement
- ✓ Captivated screws in lid portion allowing inverted installation
- ✓ Can be retro-fitted to existing tube bundles / sub-ducts
- ✓ Straight through H and T configurations possible
- ✓ Dimensions: 316 mm L x 220 mm W x 70 mm H
- ✓ Direct burial applications
- ✓ Body material:
- ✓ Sealing: IP 67
- ✓ Packaging: box (includes AC1084 + AC1195)

TABLE OF ARTICLES

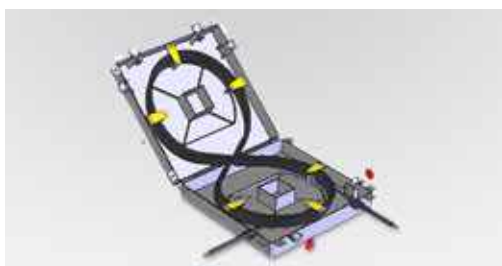
SAP Code	Product Code	Product Name	MoQ	Package
AC1084	SWP6	Tube ditribution closure	1	20 box
AC1195	SWPSE	One-piece sealing arrangement for TDC	10	10 bag
AC1199	SWPG612	6 way gro mmet for single MD branch off	10	10 bag
AC1202	SWPA19	Port adaptor for 32 mm duct	10	10 bag

Cable Loop Protection Box



DESCRIPTION

Box used to store and protect spare loop of micro-cable inside man-holes. Min. 50 m of micro-cable up to 8 mm can be stored. Extension modules available to increase storage capacity. Using 1 or 2 extension modules you can get double or triple segment version of your CLP box. Smaller version called Compact CLP Box ideal for congested spaces. Box ensures strong mechanical & anti-rodent protection due to its glass-enforced material.

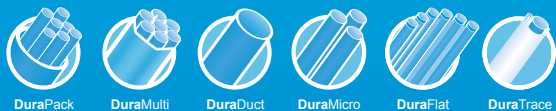


MAIN FEATURES & CHARACTERISTICS

- ✓ Universal box
- ✓ Entry ports defined by size of micro-duct (10,12,14,16)
- ✓ Modular system, extension modules
- ✓ Compact version: WxLxH: 43cmx43cmx7 mm
- ✓ Body material: **Polyester Charged 30% glass fiber**
- ✓ Dimensions: WxLxH 46cmx46cmx12cm
- ✓ Capacity: 50m of micro-cable up to 8 mm

TABLE OF ARTICLES

SAP Code	Product Code	Product Name	MoQ	Package
AC1123	CLPBox10	CLPBox storing spare loop of cable inside manhole, Entry ports 10 mm	1	1 pc box
AC1124	CLPBox12	CLPBox storing spare loop of cable inside manhole, Entry ports 12 mm	1	1 pc box
AC1125	CLPBox14	CLPBox storing spare loop of cable inside manhole, Entry ports 14 mm	1	1 pc box
AC1271	CLPBoxEx10	Extension module of CLP Box with 50 m extra cable capacity, Entry ports 10 mm	1	1 pc box
AC1272	CLPBoxEx12	Extension module of CLP Box with 50 m extra cable capacity, Entry ports 12 mm	1	1 pc box
AC1273	CLPBoxEx14	Extension module of CLP Box with 50 m extra cable capacity, Entry ports 14 mm	1	1 pc box
AC1275	CLPPole	CLPBox pole holder	1	1 pc box
AC1322	CLPKIT12	Set of entry ports 12 mm (4 pcs)	1 set	



Foam Pig

DESCRIPTION

Cylindrical foam pig cleaning micro-ducts inside & spreading lubricant before cable is blown. Foam pig jetted through the micro-duct cleans off the dust & humidity inside MD.

MAIN FEATURES & CHARACTERISTICS

- ✓ Professionally shaped foams
- ✓ Packaging: bag 20 pcs

TABLE OF ARTICLES

SAP Code	Product Code	Product Name	MoQ	Package
AC1259	CLSP4-6	Foam pig cleaning MD ID 4–6 mm, 20 pcs	1	1 bag
AC1260	CLSP7-9	Foam pig cleaning MD ID 7–9 mm, 20 pcs	1	1 bag
AC1261	CLSP10-14	Foam pig cleaning MD ID 10–14 mm, 20 pcs	1	1 bag
AC1262	CLSP16-20	Foam pig cleaning MD ID 16–20 mm, 20 pcs	1	1 bag



Lubricant 5000



DESCRIPTION

Lubricants are designed to increase the blowing distance of micro-cable being jetted into small diameter micro-ducts. The improved chemical formula allows this product to spread further and lower friction at extremely low coating levels. The lower viscosity allows practical application into the micro-ducts. It is compatible with all known micro-cable plastic jackets except resin-coated fiber cables. It is effective at quantities as low as 0.05mg/cm².

MAIN FEATURES & CHARACTERISTICS

- ✓ Water based emulsion
- ✓ Environment friendly, non-flamable
- ✓ Packaging: plastic bottle

TABLE OF ARTICLES

SAP Code	Product Code	Product Name	MoQ	Package
AC1161	MJL240P	Lubricant Microjet Prelube5000 (240 ml)	1	1 bottle

Micro-duct Cutters

DESCRIPTION

Micro-ducts require a special cutter to achieve a clean cut without any micro-duct squeeze. Do not use your pocket knife or saw, otherwise your micro-connectors will not work properly.

MICRO-DUCT SHEARS

Well build tool with spare blades option. Robust and universal product which can cut micro-ducts from 4–28 mm OD.

SAP Code	Product Code	Product Name	MoQ
AC1092	MNJB428	Micro-duct shears for MD dia 4–28 mm	1 pc
AC1121	NB-JGTS28	Spare blades for micro-duct shears	1 set



MICRO-DUCT MINI CUTTERS

Small pocket size plastic cutters for clean & fast cut of MD 4–12 mm OD.

SAP Code	Product Code	Product Name	MoQ
AC1097	MRJB412	Micro-duct cutter for MD dia 4-12 mm	1 pc



MICRO-DUCT DEBURRING TOOL

Tool deburring inner edge of micro-duct wall. It makes the smooth transition inside the connector & avoids problems with cable stopping when jetted through micro-connector.

SAP Code	Product Code	Product Name	MoQ
AC1085	RT21655	Graftix deburrer	1 pc

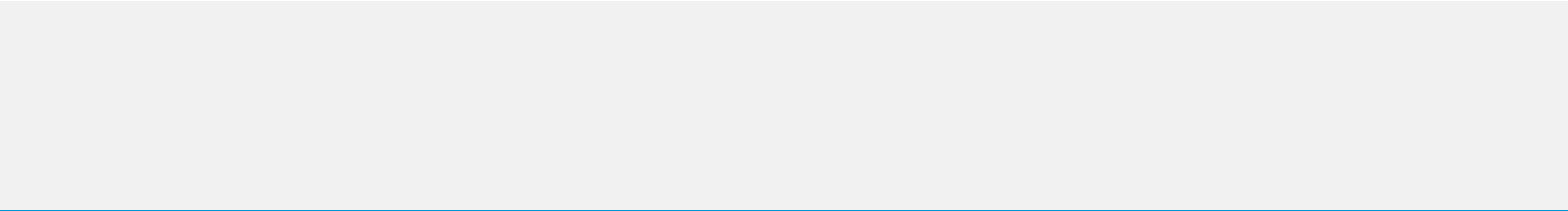


DURAFLAT STRIPPER

Cable knife with flat tip for stripping jacket of DuraFlat.

SAP Code	Product Code	Product Name	MoQ
AC1122	KN3375	Micro-duct cutter for MD dia 4–12 mm	1 pc





Sub-duct Accessories



Plasson Coupling

DESCRIPTION

Plasson Mechanical Compression PP fittings offer solutions for connecting HDPE ducts. They are designed to withstand working pressures of up to 16 bar. These fittings are manufactured in diameters ranging from 16 mm to 160 mm.



MAIN FEATURES & CHARACTERISTICS

- ✓ No metal parts, PP
- ✓ High quality, standard in telecom industry
- ✓ Max. pressure 16 Bars



TABLE OF ARTICLES

SAP Code	Product Code	Product Name	MoQ	Package
AC0033	SPP16	PP coupling PLASSON diam. 16 mm	10	400 pcs box
AC0034	SPP20	PP coupling PLASSON diam. 20 mm	10	200 pcs box
AC0035	SPP25	PP coupling PLASSON diam. 25 mm	10	180 pcs box
AC0036	SPP32	PP coupling PLASSON diam. 32 mm	10	100 pcs box
AC0037	SPP40	PP coupling PLASSON diam. 40 mm	10	75 pcs box
AC0038	SPP50	PP coupling PLASSON diam. 50 mm	10	45 pcs box
AC0039	SPP63	PP coupling PLASSON diam. 63 mm	10	30 pcs box

TABLE OF ARTICLES

SAP Code	Product Code	Product Name	MoQ	Package
AC0047	SPP32	Repair coupling PLASSON diam. 32 mm	5	80 pcs box
AC0048	SPP40	Repair coupling PLASSON diam. 40 mm	5	55 pcs box
AC0049	SPP50	Repair coupling PLASSON diam. 50 mm	5	30 pcs box
AC0050	SPP63	Repair coupling PLASSON diam. 63 mm	8	24 pcs box

C-PLAST



DESCRIPTION

CPlast PP fittings are manufactured in Spain and are certified for connecting HDPE ducts. They are designed to withstand working pressures of up to 16 bar.
Good quality for good value.

TABLE OF ARTICLES

SAP Code	Product Code	Product Name	MoQ	Package
AC0125	SPC16	PP coupling C-plast diam. 16 mm	10	50 pcs box
AC0126	SPC20	PP coupling C-plast diam. 20 mm	10	50 pcs box
AC0127	SPC25	PP coupling C-plast diam. 25 mm	10	40 pcs box
AC0128	SPC32	PP coupling C-plast diam. 32 mm	10	25 pcs box
AC0129	SPC40	PP coupling C-plast diam. 40 mm	10	13 pcs box
AC0130	SPC50	PP coupling C-plast diam. 50 mm	15	15 pcs box
AC0131	SPC63	PP coupling C-plast diam. 63 mm	17	17 pcs box

Plasscom Transparent Coupling

DESCRIPTION

PlassCom fittings are specially designed for HDPE ducts connections in telecom industry. Offering innovative features dedicated to the specific needs of cable duct installations.

Transparent body helps to identify the ducts already occupied with the cable inside and its orange color gives visual identification of telecom ducts.

The PlassCom fitting Body and Nuts are produced of PP, Polyacetal split rings and NBR O-rings.



TABLE OF ARTICLES

SAP Code	Product Code	Product Name	MoQ	Package
AC0041	SPPC20	Transparent coupling PLASSCOM diam. 20 mm	10	500 pcs box
AC0042	SPPC25	Transparent coupling PLASSCOM diam. 25 mm	10	300 pcs box
AC0043	SPPC32	Transparent coupling PLASSCOM diam. 32 mm	10	160 pcs box
AC0044	SPPC40	Transparent coupling PLASSCOM diam. 40 mm	5	100 pcs box
AC0045	SPPC50	Transparent coupling PLASSCOM diam. 50 mm	5	60 pcs box
AC0046	SPPC63	Transparent coupling PLASSCOM diam. 63 mm	2	40 pcs box

Comfit PUSH-FIT Coupling



DESCRIPTION

Comfit is a unique coupler specially designed for HDPE cable ducts. It has a compact profile helping installation within narrow trenches. PUSH-FIT connection method ensures fast and simple assembly process.

Available only for telecom duct standard OD (25-50 mm).



MAIN FEATURES & CHARACTERISTICS

- ✓ Quick PUSH-FIT system
- ✓ Max. blowing pressure 12 bars

TABLE OF ARTICLES

SAP Code	Product Code	Product Name	MoQ	Package
AC0058	SPCOM32	PP coupling COMFIT diam. 32 mm	10	70 pcs box
AC0059	SPCOM40	PP coupling COMFIT diam. 40 mm	10	60 pcs box
AC0060	SPCOM50	PP coupling COMFIT diam. 50 mm	10	33 pcs box

Plasson End-Plugs

DESCRIPTION

We offer a complete range of END-caps for HDPE cable ducts. All the types are high quality, certified and allow easy and quick mounting without loss of parts.
It is important to always terminate & seal your duct ends to keep your duct clean.
End caps with valve also available.



MAIN FEATURES & CHARACTERISTICS

- ✓ No metal parts, PP
- ✓ High quality, standard in telecom industry
- ✓ Max. pressure 16 bars
- ✓ Standards: ISO 14236, AS/NZS 4129, ISO 7/1, BS 21, DIN 2999, UNI 9561, NEN 3258, AS 1722, DIN 8076

TABLE OF ARTICLES

SAP Code	Product Code	Product Name	MoQ	Package
AC0009	KPP25	PP end-plug PLASSON diam. 25 mm	10	10 pcs box
AC0010	KPP32	PP end-plug PLASSON diam. 32 mm	5	5 pcs box
AC0011	KPP40	PP end-plug PLASSON diam. 40 mm	10	110 pcs box
AC0012	KPP50	PP end-plug PLASSON diam. 50 mm	10	75 pcs box
AC0013	KPP63	PP end-plug PLASSON diam. 63 mm	10	45 pcs box

C-Plast End-Plugs



DESCRIPTION

Very good quality fittings, which can be easily & quickly assembled. Available from 16 mm to 63 mm, ensure tightness up to 16 bars. End-plugs are supplied in paper box.

TABLE OF ARTICLES

SAP Code	Product Code	Product Name	MoQ	Package
AC0107	KPC16	PP end-plug C-plast diam. 16 mm	25	125 pcs box
AC0108	KPC20	PP end-plug C-plast diam. 20 mm	25	125 pcs box
AC0109	KPC25	PP end-plug C-plast diam. 25 mm	25	75 pcs box
AC0110	KPC32	PP end-plug C-plast diam. 32 mm	10	50 pcs box
AC0111	KPC40	PP end-plug C-plast diam. 40 mm	10	24 pcs box
AC0112	KPC50	PP end-plug C-plast diam. 50 mm	10	30 pcs box
AC0113	KPC60	PP end-plug C-plast diam. 63 mm	10	34 pcs box

Plasson End-Plugs

DESCRIPTION

End-plugs from the product line specially designed for telecom industry. Orange color visually identifies telecom duct lines and is more visually protected due its high visibility in the trench. Available from 25 to 63mm duct OD.



TABLE OF ARTICLES

SAP Code	Product Code	Product Name	MoQ	Package
AC0014	KPPC25	PP end-plug PLASSCOM diam. 25 mm	10	10 pcs box
AC0015	KPPC32	PP end-plug PLASSCOM diam. 32 mm	10	10 pcs box
AC0016	KPPC40	PP end-plug PLASSCOM diam. 40 mm	5	5 pcs box
AC0017	KPPC50	PP end-plug PLASSCOM diam. 50 mm	5	5 pcs box
AC0018	KPPC63	PP end-plug PLASSCOM diam. 63 mm	2	2 pcs box

End-Plugs With Valve

DESCRIPTION

End-plug with valve which enables quick and easy pressurization of the buried duct route. This hermetic test is a very important quality test of your duct route.



TABLE OF ARTICLES

SAP Code	Product Code	Product Name	MoQ	Package
AC0140	KPC20V	PP end-plug C-Plast 20mm + valve	10	10 pcs box
AC0141	KPC25V	PP end-plug C-Plast 25mm + valve	10	10 pcs box
AC0142	KPC32V	PP end-plug C-Plast 32mm + valve	5	10 pcs box
AC0143	KPC40V	PP end-plug C-Plast 40mm + valve	2	10 pcs box
AC0144	KPC50V	PP end-plug C-Plast 50mm + valve	10	10 pcs box
AC0145	KPC63V	PP end-plug C-Plast 63mm + valve	10	10 pcs box

Reducing Coupling Plasson



DESCRIPTION

Plasson reducing couplings are designed to withstand working pressures of up to 16bar. These fittings are manufactured in diameters ranging from 16mm to 160 mm.



MAIN FEATURES & CHARACTERISTICS

- ✓ No metal parts, PP
- ✓ High quality, standard in telecom industry
- ✓ Max. pressure 16 Bars

TABLE OF ARTICLES

SAP Code	Product Code	Product Name	MoQ	Package
AC0019	RPP20/16	Reducing coupling PLASSON diam. 20/16 mm	10	300 pcs box
AC0020	RPP25/16	Reducing coupling PLASSON diam. 25/16 mm	10	220 pcs box
AC0021	RPP25/20	Reducing coupling PLASSON diam. 25/20 mm	10	200 pcs box
AC0022	RPP32/20	Reducing coupling PLASSON diam. 32/20 mm	10	150 pcs box
AC0023	RPP32/25	Reducing coupling PLASSON diam. 32/25 mm	10	120 pcs box
AC0024	RPP40/25	Reducing coupling PLASSON diam. 40/25 mm	10	90 pcs box
AC0025	RPP40/32	Reducing coupling PLASSON diam. 40/32 mm	10	90 pcs box
AC0026	RPP50/25	Reducing coupling PLASSON diam. 50/25 mm	10	70 pcs box
AC0027	RPP50/32	Reducing coupling PLASSON diam. 50/32 mm	10	70 pcs box
AC0028	RPP50/40	Reducing coupling PLASSON diam. 50/40 mm	10	60 pcs box
AC0029	RPP63/25	Reducing coupling PLASSON diam. 63/25 mm	10	50 pcs box
AC0030	RPP63/32	Reducing coupling PLASSON diam. 63/32 mm	10	45 pcs box
AC0031	RPP63/40	Reducing coupling PLASSON diam. 63/40 mm	10	40 pcs box
AC0032	RPP63/50	Reducing coupling PLASSON diam. 63/50 mm	10	36 pcs box

C-Plast Reducing Coupling

DESCRIPTION

High quality reducing couplings that are blue in color. Designed as PN 16, they are durable and built to withstand all telecom applications with working pressure of 16 bars.



MAIN FEATURES & CHARACTERISTICS

- ✓ No metal parts, PP
- ✓ High quality, standard in telecom industry
- ✓ Max. pressure 16 Bars



TABLE OF ARTICLES

SAP Code	Product Code	Product Name	MoQ	Package
AC0114	RPC20/16	Reducing coupling C-plast diam. 20/16 mm	10	45 pcs box
AC0115	RPC25/16	Reducing coupling C-plast diam. 25/16 mm	10	45 pcs box
AC0116	RPC25/20	Reducing coupling C-plast diam. 25/20 mm	10	45 pcs box
AC0117	RPC32/20	Reducing coupling C-plast diam. 32/20 mm	10	30 pcs box
AC0118	RPC32/25	Reducing coupling C-plast diam. 32/25 mm	10	30 pcs box
AC0119	RPC40/25	Reducing coupling C-plast diam. 40/25 mm	10	18 pcs box
AC0120	RPC40/32	Reducing coupling C-plast diam. 40/32 mm	10	18 pcs box
AC0121	RPC50/32	Reducing coupling C-plast diam. 50/32 mm	10	22 pcs box
AC0122	RPC50/40	Reducing coupling C-plast diam. 50/40 mm	10	20 pcs box
AC0123	RPC63/40	Reducing coupling C-plast diam. 63/40 mm	10	20 pcs box
AC0124	RPC63/50	Reducing coupling C-plast diam. 63/50 mm	10	20 pcs box

Simplex JM Plugs



DESCRIPTION

Simplex plugs effectively seal HDPE ducts occupied with a single cable. These plugs are removable & reusable. Proper sealing around cable in conduits and subducts is important to prevent the costly flooding of buildings and sedimentation of the area around the cable. These easily removable and reusable devices facilitate the redistribution of cable slack by ensuring a clear raceway around outside plant cables.



MAIN FEATURES & CHARACTERISTICS

- ✓ Water-tight and air-tight
- ✓ Seals all types of inner duct
- ✓ Easy to retrofit
- ✓ Wide cable sealing range
- ✓ Installs and removes by hand

TABLE OF ARTICLES

SAP Code	Product Code	Product Name	MoQ	Package
AC0068	07S035SB	Simplex plug JM 25/20-21.5 mm for cable 7-9mm	10	50 pcs box
AC0069	07S057SB	Simplex plug JM 25/20-21.5 mm for cable 10-14mm	10	50 pcs box
AC0072	10S035S	Simplex plug JM 32/25.4-29 mm for cable 6.9-8.9mm	10	50 pcs box
AC0073	10S057SB	Simplex plug JM 32/25.4-29 mm for cable 8.9-14.5mm	10	50 pcs box
AC0074	10S070SB	Simplex plug JM 32/25.4-29 mm for cable 13-18mm	10	50 pcs box
AC0077	12S035S	Simplex plug JM 40/31-34.5 mm for cable 5-9mm	10	50 pcs box
AC0078	12S057SB	Simplex plug JM 40/31-34.5 mm for cable 8.9-14.5mm	10	50 pcs box
AC0079	12S070SB	Simplex plug JM 40/31-34.5 mm for cable 13-18mm	10	50 pcs box
AC0080	12S090SB	Simplex plug JM 40/31-34.5 mm for cable 18-22.9mm	10	50 pcs box
AC0086	15S057SB	Simplex plug JM 50/37.1-41.9 mm for cable 8.9-14.5 mm	10	50 pcs box
AC0087	15S070SB	Simplex plug JM 50/37.1-41.9 mm for cable 13-18 mm	10	50 pcs box
AC0088	15S090SB	Simplex plug JM 50/37.1-41.9 mm for cable 18-22.9 mm	10	50 pcs box

Blank Plug JM

DESCRIPTION

Blank plugs effectively seal empty HDPE duct ends. These plugs are removable & reusable.

Proper sealing of your conduits and subducts is important to prevent the costly flooding of buildings and sedimentation inside.



MAIN FEATURES & CHARACTERISTICS

- ✓ Water-tight and air-tight
- ✓ Easy to retrofit
- ✓ Wide dimension range
- ✓ Installs and removes by hand



TABLE OF ARTICLES

SAP Code	Product Code	Product Name	MoQ	Package
AC0067	7D100U	Blank plug for HDPE 18-26 mm	10	50 pcs box
AC0071	10D104U	Blank plug for HDPE 32/24-30 mm	10	50 pcs box
AC0076	12D148U	Blank plug for HDPE 40/29-38 mm	10	50 pcs box
AC0085	15D183U	Blank plug for HDPE 50/38-46 mm	10	50 pcs box
AC0090	20D236U	Blank plug for HDPE 63/46-60 mm	10	50 pcs box
AC0091	25D296U	Blank plug for HDPE 60-76 mm	10	50 pcs box
AC0092	30D346U	Blank plug for HDPE 76-88 mm	10	50 pcs box
AC0093	35D400U	Blank plug for HDPE 87-102 mm	10	50 pcs box
AC0095	40D402U	Blank plug for HDPE 100-110 mm	10	50 pcs box
AC0097	50D535U	Blank plug for HDPE 127-136 mm	10	50 pcs box
AC0098	60D637U	Blank plug for HDPE 148-162 mm	10	36 pcs box

Plastic Cap



DESCRIPTION

Soft PVC caps provides anti-dust protection of your duct ends. They have an excellent resistance to weather conditions and UV radiation. Ideally used for transport, storage or installation period of your ducts.



MAIN FEATURES & CHARACTERISTICS

- ✓ Resistant to acids, alkalis and salts.
- ✓ Flexible, easily adaptable, does not crack.
- ✓ Short-term resistance to thermal shock up to 120 °C
- ✓ Production tolerance – wall thickness ± 0.3 mm, length ± 1 mm

TABLE OF ARTICLES

SAP Code	Product Code	Product Name	MoQ	Package
OM0046	PC16	Plastic cap 16 mm	20	100 pcs in box
OM0095	PC20	Plastic cap 20 mm	20	100 pcs in box
OM0064	PC25	Plastic cap 25 mm	20	100 pcs in box
OM0045	PC32	Plastic cap 32 mm	20	100 pcs in box
OM0044	PC40	Plastic cap 40 mm	20	100 pcs in box
OM0053	PC50	Plastic cap 50 mm	20	100 pcs in box
OM0122	PC63	Plastic cap 63 mm	20	100 pcs in box

Electronic Marker

DESCRIPTION

The Electronic Marker System quickly pinpoints the location of buried facilities including buried splices, fiber optic facilities, service drops and manholes. It eliminates the time consuming search for hard-to-locate facilities.

Markers operate even in the presence of metal conduit or pipe, metallic conductors, fences.



MAIN FEATURES & CHARACTERISTICS

- ✓ Ball Marker - Extended Range Ball Marker - provides self-levelling design providing accurate, horizontal position regardless of how it is placed in the ground and making the job of precisely locating easier. Detectable up to 1.5 m deep.
- ✓ Mid Range - designed to provide an accurate, convenient, long-lasting method of marking underground communications facilities. Detectable up to 1.8 m deep.



TABLE OF ARTICLES

SAP Code	Product Code	Product Name	MoQ	Package
AC0001	MMK3M1401	Mini-marker ball-shaped 1401-XR	2	10 pcs in box
AC0002	MMP3M1255	Mini-Marker 1255	2	10 pcs in box

Other markers available on request.

Lubricant 2000



DESCRIPTION

Lubricant 2000 is an ideal mixture for cable & micro-duct blowing, increasing blowing distance, decreasing friction of cable. It has proven superior to paraffin oils and cable pulling lubricants. It is effective at a coating thickness of 0.5mg/cm², therefore the lubricant must be spread by blowing a foam carrier through the duct. It is delivered in bottles of 95 cl.

MAIN FEATURES & CHARACTERISTICS

- ✓ Lowers friction, increases blowing distance
- ✓ Low overall cost, effective formula
- ✓ Easy application

RECOMMENDED VOLUME

Duct size ID	Quantity per KM
24-29	300-400 ml
30-37	400-500 ml
38-46	500-600 ml

TABLE OF ARTICLES

SAP Code	Product Code	Product Name	MoQ	Package
AC0138	PREL2000	High performance Lubricant 0.95l for cable/micro-ducts air jetting	1	12 bottles



DuraDuct



DuraMicro



DuraPack



DuraFibre



DuraMulti



DuraFlat



DuraTrace

Warning Tape

DESCRIPTION

Buried on top of underground telecom lines, warning tape works as a durable, high-visibility warning element resistant to acids, alkalis and other soil substances.

It is very economical to use over entire length of line compared to the cost of damage.

There is plenty of options (colors, printing, detectable wire etc.) available on request.



MAIN FEATURES & CHARACTERISTICS

- ✓ Thickness: 0,08 mm
- ✓ Width: 22 cm
- ✓ Material: LDPE
- ✓ Printing: on request
- ✓ Package: 250 m coils

TABLE OF ARTICLES

SAP Code	Product Code	Product Name	MoQ	Package
AC0051	VF22	Warning tape – orange, 22 cm width, no print, 250 m coil	1	1 coil

Other variants on request.

Conduit Spacer



DESCRIPTION

Conduit spacers help organize your ducts in the trench. They should be placed every 10-15 meters depending on the route of the duct.

MAIN FEATURES & CHARACTERISTICS

- ✓ Fully divisible
- ✓ 0,5 bar gas-tight
- ✓ Max. blowing short term pressure 10 bars

TABLE OF ARTICLES

SAP Code	Product Code	Product Name	MoQ	Package
AC0135	DD040_10	Duct spacer dia 40 mm, 2x5 pc	50 pcs	50 pcs box

Duct Cutter ROTH



DESCRIPTION

The cutting tool with wide dimension range from 10–67 mm. Simple & precise right-angle cuts of PE, PP, PEX & PB ducts even when occupied with cable.

TABLE OF ARTICLES

SAP Code	Product Code	Product Name	MoQ	Package
AC0007	TROTH67	Automatic duct cutter ROTH to diam. 67 mm	1	1 pc in box
AC0004	NKROTH	Spare cutter wheel 7 mm for duct cutter TROTH67 3 pc	1	1 pc in box

Duct Shears

DESCRIPTION

Very robust, high quality duct shears for precise cutting of PP, PE, PEX & PB ducts up to 63 mm.



TABLE OF ARTICLES

SAP Code	Product Code	Product Name	MoQ	Package
AC0005	RN42	Pipe shears for HDPE to diam. 42 mm	1	1 pc in box
AC0006	RN63	Pipe shears for HDPE to diam. 63 mm	1	1 pc in box

Duct Shears SC – Basic



DESCRIPTION

Basic plastic duct shears for cutting HDPE ducts up to 42 mm.

TABLE OF ARTICLES

SAP Code	Product Code	Product Name	MoQ	Package
AC0056	NSC32	Pipe shears SC1 upto diam. 32 mm	1	1 pc in box
AC0057	NSC42	Pipe shears SC1 upto diam. 42 mm	1	1 pc in box



Longitudinal Cutter



DESCRIPTION

Special cutting tool for longitudinal cuts of HDPE ducts. Used when duct is already occupied with FO cable or micro-ducts.

TABLE OF ARTICLES

SAP Code	Product Code	Product Name	MoQ	Package
AC0099	RPR3	Longitudinal cutter KMS-K	1	1 pc in box
AC0100	RPRNC	Spare blade for duct longitudinal cutter KMS-K	1	1 pc in box

Deburring tool



DESCRIPTION

Hand held deburring tool chamfering the inner/outer edge of your duct for smooth & easy installation of couplings.

TABLE OF ARTICLES

SAP Code	Product Code	Product Name	MoQ	Package
AC0052	ODH40	Deburring tool for HDPE 40mm, inner/outer edge	1	1 pc in box
AC0053	ODH50	Deburring tool for HDPE 50mm, inner/outer edge	1	1 pc in box
AC0054	ODH63	Deburring tool for HDPE 63mm, inner/outer edge	1	1 pc in box
AC0139	ODH16-63	Deburring tool for HDPE 16-63mm, outer edge only	1	1 pc in box

Pulling Grip

DESCRIPTION

These grips with a longer lattice length are ideal for pulling light to medium loads. Ideal to pull lengths of FO cables or micro-ducts.



TABLE OF ARTICLES

SAP Code	Product Code	Product Name	MoQ	Package
AC0003	ZPL6	Pulling grip L6 for dia. 4-6 mm	3	3 pcs box
AC0066	ZPL9	Pulling grip L9 for dia. 6-9 mm	3	3 pcs box
AC0062	ZPL12	Pulling grip L12 for dia. 9-12 mm	3	3 pcs box
AC0063	ZPL19	Pulling grip for dia. 12-19 mm	2	2 pcs box
AC0064	ZPL25	Pulling grip for dia. 19-25 mm	2	2 pcs box
AC0065	ZPL32	Pulling grip for dia. 25-32 mm	2	2 pcs box



Packaging



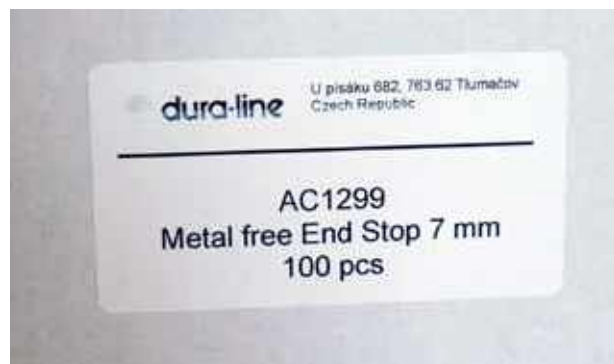
DESCRIPTION

All the products are visually checked & delivered in bags or in white cardboard boxes with DURA-LINE logo.

All the goods is handled with care so you receive the best quality.

BOX DIMENSIONS: W X H X D

- ✓ Small box 30,5 x 10 x 20,5 cm
- ✓ Medium box 32,5 x 24 x 18 cm
- ✓ Large box 27 x 36 x 26 cm
- ✓ Extra Large box: 46 x 34 x 31 cm





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