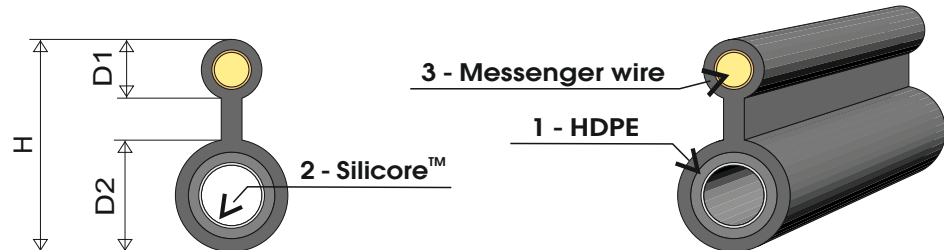


DESCRIPTION, APPLICATION

Figure"8" DuraAir DI 5/3,5 mm

Microduct DuraMicro DI is intended for protection of optical microcables. Structural part (1) is made from high density polyethylene (HDPE). Inner surface (2) is made from permanent sliding material Silicore™ with a very low coefficient of friction and standardly with fine ribs. Outer microduct's surface is smooth. Microduct is not designed for permanent inner pressure. Microduct is joined with the messenger wire (3) for hanging of bundle. Used material of bundle DuraAir is UV stabilized for outdoor installation. The product including all of its parts is metal free according to binding European legislation. Messenger element consists in long-fiber glass-reinforced polyester resin dielectric material.



STANDARDS

- DURA-LINE CT's quality system is certified according to EN ISO 9001, EN ISO 14001 and OHSAS 18001.
- The microduct does not contain chemicals in accordance to the Directive of the European Parliament and the Commission no. 2006/1907/EC (REACH)
- The microduct meets requirements of the Directive of the European Parliament and the Commission no. 2011/65/EU (RoHS), as amended on January 3, 2013 (RoHS II).

MATERIAL MODIFICATION

Bundle DuraAir can be supplied in various material modifications for specific applications, containing different types of additives or their combinations:

- **Standard** is made of virgin HDPE material that is suitable for most telecom applications;
- **UV stabilized additives** increase material resistance to ultraviolet radiation. Storage time of UV stabilized products in open air can be prolonged up to 24 months at Central Europe's outdoor climatic conditions. The storage time can be further prolonged with increased dosing of UV stabilizers based on customers' specifications.
- **Antistatic additives** decrease bundle's electrical surface resistance
- **Anti-rodent additives**, based on special repellents, increase product resistance to rodents.

MARKING

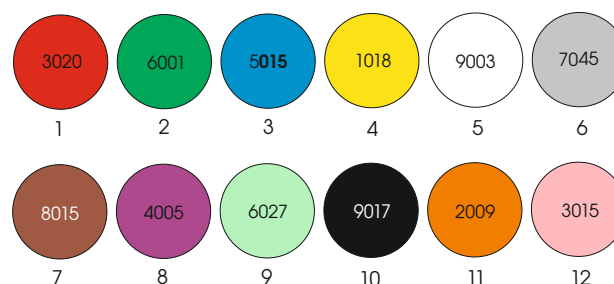
Bundle DuraAir are printed along the entire length with text according to the customer's requirements. Printing colour is in contrast to the microduct colour. Printing scheme is repeated each 1 meter along the bundle, unless specified otherwise.

Example of the printing scheme:

DURA-LINE CT Figure 8 DuraAir DI 5/3,5 mm SILICORE 05/2015 LOT No 12345678 0000 m >L<

COLOR LIST

Microduct is supplied in natural white version or in a wide scale of the following RAL list. Longitudinal stripes with the same color are another possibility.



Figure"8" DuraAir DI 5/3,5 mm

PACKING AND STORAGE

Bundle DuraAir is supplied wound on return wooden drum of appropriate size. Upon customer request, other drums for shipping and handling the bundle can be used (plastic etc.). Bundle's ends are protected by plastic caps protecting them from impurities penetrating into microducts. The winding ends app. 10 mm below the flange edge, and is completely wrapped by a black stretch foil for UV protection.

Identification stickers are placed on the drum flange.

Additional information on suitable drum types for this product, drum dimensions and its other parameters can be found in TDS DuraAir packaging

INSTALLATION

Calculation formula for tension load of DuraAir F8

Tension (in daN or kg): Average calculated tension load in the cable.

Weight_D (in kg/m): Weight of one meter of the DuraAir F8.

Weight_C (in kg/m): Weight of one meter of cable, which is planned to be used inside.
This data is available from the cable manufacturer.

Span (in m): Average distance between two poles in the route.

Sag (in m): Average sag in the network, defined for a given ambient temperature during the installation.

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.

Maximum parameters values:

Maximum wind speed: 60 km/hr

Maximum span: 50 meters

Maximum sagging in the middle of the pole-to-pole section: 1%

Maximum ice layer on the installation: 15 mm

$$Tension = \frac{(Weight_D + Weight_C) \times (Span)^2}{8 \times Sag}$$

MECHANICAL PARAMETERS

Detailed description of methods to determine mechanical parameters are in company working standards CWS 103-2015 and CWS 106-2015.

Parameter	Value	Standard, conditions
Outer diameter of microduct (OD)	5±0,1 mm	CWS 103-2015
Inner diameter of microduct (ID)	min. 3,4 mm	CWS 103-2015 (ball diameter 3,0 mm)
Wall thickness of microduct (WT)	min. 0,75 mm	CWS 103-2015
Ovality of microduct	max. 5%	CWS 103-2015, before coiling
Thickness of outer sheat	*0,75 mm	
Outer diameter of hanging element (D1)	*4,5 mm	
Total outer diameter of sheathed microduct (D2)	*6,5 mm	
Total Height of bundle DuraAir (H)	*12,0 mm	
Weight of bundle DuraAir	*43 kg/km	-
Transport and storage temperatures	from -40°C to +70°C	-
Installation temperatures	from -10°C to +50°C	-
Operating temperatures	from -40°C to +70°C	-
Installation tensile force	max. 3 500 N	at 1.0 % Elongation
Recommended cable dimens. for blowing	from 1,1 to 2,5 mm	-
Minimum bending radius	120 mm	-
Blowing pressure	max. 20 bar	max. 2 hours at max. +50°C
Outdoor exposure limit	min. 15 years	Central Europe conditions

* informative value