

## Microduct Bundles 20/16mm

Direct Bury / Thick Walled / HDPE

### Application/Product Description

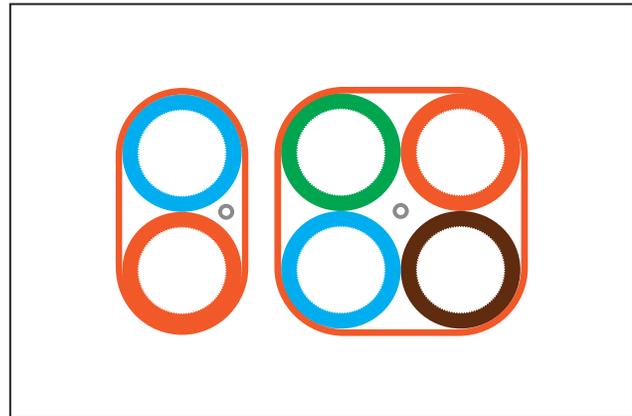
Direct Bury (DB) type of microducts are thick wall products that attain their mechanical robustness and functional performance through their intrinsic thick walls and need no further protection at underground installations. The microducts conform to BS EN 61386 and BS EN 60794-5.

The substantial wall thickness of the microduct and the type of raw material means this bundle can be used in as a direct buried product where the product is installed straight into the ground as well as a direct install product, where it is installed into an existing duct.

HellermannTyton microduct bundles are made of virgin high density polyethylene - HDPE. Every microduct has a permanent, co-extruded silicone compound inner liner giving a coefficient of friction of less than 0.1. The inner surface of microduct can be manufactured with longitudinal grooves or with a smooth finish. The bundle has a sheath suitable for installation, handling and marking.

The colours of microducts and the colour of the sheath as well as the placement of coloured microducts in a bundle are fully customizable. Both options - fully coloured microducts or natural colour with coloured stripes - are available.

The inclusion of tracing wire, for detecting installed bundles, must be specified by the customer when ordering.



Microduct Bundles 20/16 mm.

### General Data

Mechanical characteristics			
Criteria	Test Method	Examination acc to IEC 60794-5-10 or acc to customer specification	Requirements
Pressure withstand	IEC 60794-1-22, Method F13	Temp 20°C, duration 30 min; 2.5x installation pressure	No leaks*
	IEC 60794-1-22, Method F13	Temp 40°C, duration 24h; 1.3x installation pressure	No leaks*
	EN 50411-6-1:2011 Annex B	Temp 20°C, duration 30min; 18 bar	No leaks*
Tensile performance	IEC 60794-1-21, Method E1	Temp length >1m, tensile load 840N, load 10min	No damage**
Kinking	IEC 60794-1-21, Method E10	Temp 23 +/- 3°C; 20x OD	No kinking, $d=C/\pi$
Crush	IEC 60794-1-21, Method E3A	Test length 250mm, load 2kN, duration 1min, recov 1h	No damage**
Impact	IEC 60794-1-21, Method E4	Impact energy 15J, striking surface radius 300mm	No damage**
Bending	IEC 60794-1-21, Method E11B	Mandrel diam 40x OD, 3 cycles	No damage**
Repeated bending	IEC 60794-1-21, Method E6	Bending diam 40x OD, 25 cycles	No damage**
Inner clearance test	IEC 60794-1-21, Annex E	To confirm inner diameter with steel ball in diameter 85%	Passes full length
Coefficient of Friction	IEC 62470	Tension around a curve 1040mm	CoF less than 0.1
Min-max recommendations			
Temperature ranges	For installation	-15 ... +50°C	
	Transport, storage, operation	-45 ... +70°C	
Fibre Optical Cable dims for blowing	Duct 20/16 mm	50% ... 75% of duct ID	
Outdoor exposure at Central Europe without protection	Standard	up to 24 months	
<b>The extra UV stabilized microduct is Black in color and contains min 2.5% well dispersed carbon black</b>			

(\* Under visual examination without magnification the microduct shall show no damage (\*\* Under visual examination without magnification the microduct shall show no damage and the test piece shall pass inner clearance test after recovery time. HellermannTyton production quality control plan follows EN 50411-6-1 and IEC 60794-5 and IEC 60794-5-10 and IEC 60794-5-20 requirements.



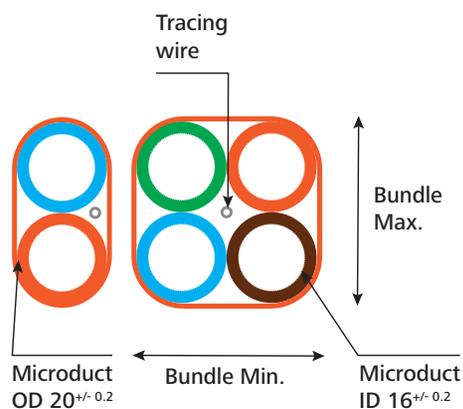
Material Data

Single Microduct 20/16mm					
Duct Type	OD	ID	Inner clearance test	Min bending radius	Install tensile force
	mm	mm	% of ID	mm	N
20/16mm	20 +/- 0.2	16 +/- 0.2	85	200	Max 2000
Test method	EN 50411-6-1:2011 Annex A:A1		IEC 60794-1-21 Full Length		

Multi Microduct Bundles 20/16mm					
Duct Type	Microduct OD	Microduct ID	Bundle min x max	Min bending radius	Install tensile force
	mm	mm	mm	mm	N
2 x 20/16	20 +/- 0.2	16 +/- 0.2	22 x 42	220	Max 4000
3 x 20/16 FLAT	20 +/- 0.2	16 +/- 0.2	62 x 22	220	Max 6000
4 x 20/16 FLAT	20 +/- 0.2	16 +/- 0.2	42 x 58	420	Max 8000
4 x 20/16	20 +/- 0.2	16 +/- 0.2	44 x 44	440	Max 8000

Technical Diagrams

2 x 20/16mm      4 x 20/16mm



All measurements in mm unless otherwise stated.