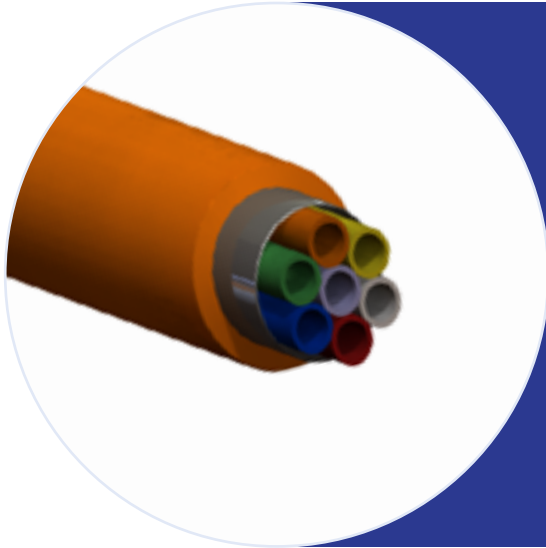


GryphonX™ Bundle Ducts

5/3.5mm HDPE Enhanced Moisture-Barrier Direct Buried Bundle Ducts



GryphonX™ Micro Bundle Ducts assemblies of PE tubes, each tube with low friction inner sheath suitable for fibre blowing.

The bundle tube is surrounded by a layer of moisture-barrier aluminium tape and the outer sheath is high quality orange PE which providing excellent protection in the harsh environment.

SPECIFICATION

MICRO DUCT : 5/3.5mm

Diameter	5.0 ± 0.1 mm (Outer)	3.5 ± 0.1 mm (Inner)
Sheath Thickness	0.75 ± 0.1 mm	
Sheath Material	HDPE	
Sheath Colour	Red, Green, Yellow, Blue & Beige	

BUNDLED DUCT

Colour & No. of Stripes	2 * Purple
Armoured	Aluminum Tape
Sheath Thickness	1.2 ± 0.3 mm
Material of Ducts Sheath	HDPE
Colour of Duct Sheath	Orange

Number of Ducts	2 WAYS	4 WAYS	7 WAYS	12 WAYS	19 WAYS	24+1 WAYS
Part No.	MTD-0535P02PA	MTD-0535P04PA	MTD-0535P07PA	MTD-0535P12PA	MTD-0535P19PA	MTD-0535P24RPA
Cross Section						
Bundled Duct Dia (mm)	12.4 * 7.4 ± 1.1	14.5 ± 1.1	17.4 ± 1.1	22.5 ± 1.1	27.4 ± 1.1	32.5 ± 1.1
Min Bend Dia. (mm)	Outer Diameter * 10 times					

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PHYSICAL & MECHANICAL PROPERTIES

Characteristic	Test Method	Acceptance Criteria
MICRO DUCT		
Outer Diameter	ASTM D2122	5.0 ± 0.1 mm
Inner Diameter	ASTM D 2122	3.5 ± 0.1 mm
Wall Thickness	ASTM D 2122	0.75 ± 0.1 mm
Ovality	ASTM D 2122	≤ 5%
Standard Dimension ratio	SDR= Outer dia./Wall thickness	6.6
Pressurization	5 min @ 15 bar each micro duct	No damage, no leaks
Crush	IEC 60794-1-2 Method E3, 1000 N load, 60 sec, 1 hour recovery time.	No residual deformation > 15% of inner and outer diameter.
Tensile Strength	IEC 60794-1-2 Method E1 ASTM F 2160, ASTM D 638 (Type IV), speed 50mm/min	No permanent damage or deformation to the primary tubing or component parts of the sheath assembly after an applied load at 20mm/minute
Bend	IEC 60794-1-2 METHOD E11A	No residual deformation > 15% of inner and outer diameter.
Elongation at Break	IEC 60794-1-2 Method E1 ASTM F 2160 ASTM D 638 (Type IV), speed 50mm/min	Min 400%
Kink	IEC 60794-1-2 Method E8	Duct bent between 2 parallel supports 20*OD apart
Environmental Stress Crack Resistance	ASTM D 1693	No crack shall observed at 50 ± 2°C for 96 hours, when used 10% Igepal solution
Impact	IEC 60794-1-2 Method E4, 5 J Impact, 10 mm anvil, recovery time 1 hour.	No residual deformation > 15% of inner and outer diameter.
Repeated Bending	IEC 60794-1-2 Method E6 10*OD	No residual deformation > 15% of inner and outer diameter.
Co-efficient of Friction	Bell core, 750 mm Diameter, 450° loop, 5 kg tail mass	μ < 0.06
Heat Reversion	ISO 2505	110°C for 1 hrs (< 3%)
Colour	Visual inspection	See specification
Printing	Visual inspection	HERMESYS GRYPHONX MICRODUCT 5/3.5MM COIL NO. XXXXm MMY

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BUNDLED DUCT		
Wall thickness (Sheathing)	ASTM D 2122	1.2 ± 0.3 mm
Colour of Stripes	Visual inspection	See specification
Pressurization	5 min @ 15 bar each micro duct	No damage, No leaks
Kink	IEC 60794-1-21 METHOD E10, 10*OD	No residual deformation > 15% of inner and outer diameter.
Crush	IEC 60794-1-2 Method E3, 1500 N load, 60 sec, 1 hour recovery time.	No residual deformation > 15% of inner and outer diameter.
Impact	IEC 60794-1-2 Method E4, 5 J Impact, 10 mm anvil, recovery time 1 hour.	No residual deformation > 15% of inner and outer diameter.
Colour & Sequence	Visual inspection.	See specification
Tensile Strength at Yield	IEC 60794-1-2 Method E1 ASTM F 2160, ASTM D 638 (Type IV), speed 50mm/min	20 – 30 N/mm ²
Elongation at Break	IEC 60794-1-2 Method E1 ASTM F 2160, ASTM D 638 (Type IV), speed 50mm/mi	Min 400%
Bend Test	IEC 60794-1-2 Method E11A, 10*OD	No residual deformation > 15% of inner and outer diameter.
Printing	Visual inspection	HERMESYS GRYPHONX HDPE/AL/HDPE MTD- XXXXXXXXXX MD <no. of way> * 5/3.5mm XXXXm MMYY