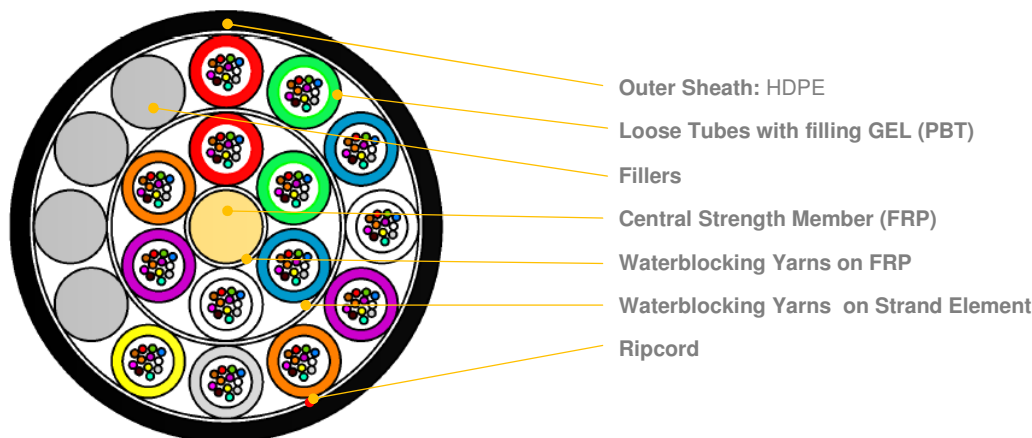


Type:	Metrojet MK-LX9	REV: 2.4
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**MetroJET MK-LX9 Multi Loose Tube microcable (up to 216F)**



\*schematic drawing, not to scale

**APPLICATION:**

Microduct cabling air-blowing system application  
 Metro networks  
 Flexible network design  
 Distribution network

**STRUCTURE AND COMPOSITION:**

HDPE, UV stabilized external jacket with low coefficient of friction  
 Loose tubes (and fillers), SZ stranded around the CSM  
 PBT tubes containing up to 12 optical fibres  
 Smallest outer diameter for blowing into 14/12mm ducts

**CONSTRUCTION:**

Variant	Quantity [pcs]					Ø nominal (±5%) [mm]	Nominal weight (±10%) [kg/km]
	Fibres	Fibres per tube	Total elements	Active tubes	Fillers		
14T x 12F	168	12	18	14	4	8.9	62
16T x 12F	192	12	18	16	2	8.9	63
18T x 12F	216	12	18	18	0	8.9	64
*	*Other fibre counts are also available on demand						

**APPLICATION:**

<b>Suggested Duct - Ø (min)</b>	mm	16/12mm, 14/12mm	
<b>Temperature Range</b>	Transport & Storage:	- 40 to + 70 °C	<b>Minimum Bending Radius</b>
	Installation:	- 15 to + 60 °C	Dynamic: 20 x cable Ø
	Operation:	- 30 to + 70 °C	Static: 10 x cable Ø

**MAIN MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS** (according to IEC 60794-5)

Test	Test Standard	Specified Value	Requirement*
Max Installation Tension	IEC 60794-1-21-E1	750 N	$\Delta\epsilon_r \leq 0.33\%$ , $\Delta\alpha$ reversible
Max Operation Tension	IEC 60794-1-21-E1	250 N	$\Delta\epsilon_r \leq 0.05\%$ , $\Delta\alpha \leq 0.05$ dB/km
Crush	IEC 60794-1-21-E3	1000 N / 100 mm, max. 15 min	$\Delta\alpha$ reversible, no significant damage
Impact	IEC 60794-1-21-E4	10 Nm, 3 impacts, R= 300 mm	$\Delta\alpha \leq 0.05$ dB after the test
Torsion	IEC 60794-1-21-E7	100N, +/- 180°, 10 cycles	$\Delta\alpha \leq 0.05$ dB, no damage
Repeated Bending	IEC 60794-1-21-E6	R=20x D, 100N, 35 cycles	no damage
Cable Bend	IEC 60794-1-21-E11	R=20x D, 4 turns, 3 cycles	$\Delta\alpha \leq 0.05$ dB, no damage
Temperature Cycling	IEC 60794-1-22-F1	-15°C to +60°C -30°C to +70°C	$\Delta\alpha \leq 0.05$ dB/km $\Delta\alpha \leq 0.10$ dB/km
Water Penetration	IEC 60794-1-22-F5B	sample=3m, water column=1m, 24h	no water leakage

(\*) values for single-mode fibers, all optical measurements performed at @1550nm

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#### FIBRE PARAMETERS

For selected post-production optical fibres parameters please see DSH\_OFP document.

#### OPTICAL FIBRE AND MODULES COLOUR IDENTIFICATION

For optical fibres and modules identification information please see DSH\_Colors\_CODE\_XXXX document.

#### MARKING

The following print (ink jet, laser or other suitable method depending on availability) is applied at 1-meter intervals:

- Supplier: FIBRAIN
- Standard code (Product type, fibre type, fibre count)
- Year of manufacture: xxxx
- Length marking in meters
- Cable ID / Drum No

Example: FIBRAIN METROJET MK-LX9 168F SM G652D 14T12F "YEAR OF MANUFACTURE" "LASER SYMBOL" "LENGTH MARKING" "BATCH NUMBER"

The accuracy of marking is  $\pm 0,5\%$ . Remarking is in accordance with Bellcore GR 20 and supersedes earlier markings. Occasional loss of marking is possible. Cables can be supplied with a range of single mode or multimode fibres and customized print.

#### PACKING

Cables will be shipped on disposable wooden or treated wooden drums. Both ends of the cable will be capped and accessible for testing. Identification information will be placed on drum's flange.

#### DELIVERY LENGTH

2000 – 8000 meters  $\pm 5\%$ , with possibility of supplying up to 5% of total contract quantity as short length cables which should be above 1000 meters long. Tolerance of 5 % of order quantity shall be allowed.

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