



ezMICRODUCT™

Jetted microduct loose tube cable



Optimized for jetted microduct installations Overview

Prysmian's ezMICRODUCT cables provide optimized jetting performance for underground microduct installations or jetting directly over existing cable. Prysmian offers microduct product solutions for microducts ranging from 10 mm to 14 mm, or larger, inside diameters. These small diameter cables combine high reliability with reduced size and weight for optimum blowing performance.

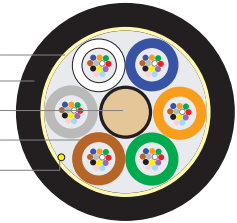
With this approach, network operators can maximize duct utilization, defer capital expenditures to match revenue streams, maintain flexibility for future growth, and reduce installation and upgrade costs

Product Snapshot

Applications	Jetted microduct deployment, installed in microducts or partially filled duct
Constructions	Stranded dielectric loose tube/specialized jacket and construction
Fiber Count	2 to 528 fibers in color coded buffer tubes
Fiber Types	Bend-insensitive SMF
Performance Options	ANSI/ICEA 744, IEC, RUS, GR-20 Tonewire
Registered Supplier	ISO 9001, ISO 14001, TL 9000 and OHSAS 18001



- Water Blocking Elements
- Jacket (optimized for Jetting)
- Central Strength Member
- Gel-Filled Buffer Tube Containing up to 12 Fibers
- Ripcord



Features and Benefits

Optimal Jetting Performance

- Reduced size and weight for installation in microduct
- Up to 65% reduction in cross-section vs. conventional
- Demonstrated results more than 1-1/4 miles (single and 6 miles (cascaded))
- Simple and standard loose tube entry via ripcords, swellable binders, and flexible buffer tubes

Reduced Total Installed Cost

- Reduce total Installed Cost
- Defer CAPEX by maximizing duct utilization
- Reduce installation and upgrade costs
- Minimize disruption to underground infrastructure
- Quick installation - long lengths and high speeds
- Allow use of ducts already containing cable
- Microduct options available with mid-span express buffer tube storage capabilities shown in the below table.

Minimum Microduct ID (mm)	* Optimum Microduct ID (mm)	Part Number Family	Fiber Count	Tone Wire Option # Fibers (Gauge)	# Tube/Filler	# Fibers/Tube	Tube Size (mm)	Tube Type	SMF Maximum Express Tube Storage (ft)	Cable Diameter inches (mm)	Cable Weight lb/kf (kg/km)	Bend Radius with Load inches (cm)	Bend Radius No Load inches (cm)	Tensile Load Maximum / Operating (lbf)
250 µm Fiber														
10	10	MDS1JKT-12	2-72	2-60 (19 AWG)	6	12	1.9	PBT	8	0.28 (7.0)	28 (41)	6 (14)	4 (11)	300/90
12	12	MDS1JKT-12	74-96	74-84 (19 AWG)	8	12	1.9	PBT	8	0.33 (8.4)	42 (62)	7 (17)	5 (13)	300/90
10	12	MDM1JKT-24	96-144	72-120 (19 AWG)	6	24	2.2	PBT	8	0.30 (7.7)	42 (62)	6 (16)	5 (12)	300/90
12	12	MDM1JKT-12	96-144	96-132 (20 AWG)	12	12	1.5	PBT	6	0.34 (8.6)	42 (63)	7 (17)	5 (13)	300/90
13	14	MDM1JKT-12	156-288	144-276 (20 AWG)	24	12	1.5	PBT	8	0.40 (10.1)	55 (82)	10 (25)	6 (15)	375/112
13	14	MDM1JKT-12	300-312	288-300 (20 AWG)	26	12	1.5	PBT	8	0.41 (10.6)	68 (101)	10 (26)	6 (16)	375/112
200 µm Fiber														
10	10	MDM1JKT-24	168-288	--	12	24	1.4	PBT	16	0.31 (8.0)	36 (54)	6 (16)	5 (12)	300/90
14	14	MDM1JKT-24	312-528	312-504 (20 AWG)	22	24	1.8	PBT	** 6	0.44 (11.2)	67 (100)	10 (26)	6 (16)	300/90
FlexRibbon														
13	14	RCFMD1JKT-12	144-192	--	--	--	7.9	--	--	0.41 (10.5)	51 (76)	8 (21)	6 (16)	300/90
FlexRibbon 200 µm														
16	18	RCFMD 1JKT-24	864	--	--	--	10.9	--	--	0.52 (13.1)	96 (142)	14 (33)	11 (26)	300/90

* The optimum duct size may provide longer blowing distances and/or provides a larger margin of error from unexpected tube deformations.

** In cold climates, Mid-Span Buffer Tube ("Express") storage is recommended only for below ground closures. Please contact Prysmian if above ground splice storage is desired.

Installation note:
Cables should be blown, not pulled.

Part Number Family	Fiber Count	TEMPERATURE RANGE		Compression N/cm per IEC6040, CR20	Impact Energy N•m (FOTP25)	Tube Size (mm)	Prysmian Mid-Span Access Tool Insert
		Operating °F (°C)	Installation °F (°C)				
250 μm Fiber							
MDS1JKT-12	2 - 72	-40 to +158 (-40 to +70)	-22 to +140 (-30 to +60)	220	4.4	1.9	20021564
MDS1JKT-12	74 - 96	-40 to +158 (-40 to +70)	-22 to +140 (-30 to +60)	220	4.4	1.9	20021564
MDM1JKT-24	96 - 144	-22 to +158 (-30 to +70)	+14 to +122 (-10 to +50)	100	4.4	2.2	CUS10003948
MDM1JKT-12	96 - 144	-22 to +158 (-30 to +70)	+14 to +122 (-10 to +50)	100	4.4	1.5	CUS10003949
MDM1JKT-12	156-288, 300-312	-22 to +158 (-30 to +70)	+14 to +122 (-10 to +50)	100	4.4	1.5	CUS10003949
200 μm Fiber							
MDM1JKT-24	168 - 288	-40 to +158 (-40 to +70)	-22 to +140 (-30 to +60)	220	4.4	1.4	Miller MSAT 16 (Setting #2)
MDM1JKT-24	312 - 528	-22 to +140 (-30 to +60)	+14 to +122 (-10 to +50)	100	4.4	1.75	CUS10003931
FlexRibbon							
RCFMD 1JKT-12	144 - 192	-22 to +158 (-30 to +70)	+14 to +140 (-10 to +60)	100	4.4	--	--
FlexRibbon 200 μm							
RCFMD 1JKT-24	864	-22 to +158 (-30 to +70)	-22 to +158 (-30 to +70)	100	4.4	--	--

Maximum Reel Length: 41,010 feet (12,500 meters)

Ordering Guide

The Prysmian Group part number incorporates several significant attributes involving cable design and optical performance. The appropriate part number can be configured using the process described in the example.

Example: ezMICRODUCT loose tube cable | single jacket dielectric (12 fibers/tube) with 72 single-mode fibers (printed in feet)

1 LENGTH MARKINGS	2 PRODUCT FAMILY	3 CONSTRUCTION	4 FIBER GROUPING	5 FIBER TYPE	6 FIBER COUNT	7 FIBER GRADE	8 OPTIONAL TONE WIRE
F	MDS	1JKT	12	B1	072	E3	BLANK

PART NUMBER CONSTRUCTION	
1 LENGTH MARKINGS	F = Feet or M = Meters
2 PRODUCT FAMILY	MDS = ezMICRODUCT™ (BIF ONLY) MDM = ezMICRODUCT™ with 1.5 mm 12f tubes (BIF ONLY) MDM = ezMICRODUCT™ with 2.2 mm 24f tubes (BIF ONLY) MDM = ezMICRODUCT™ with 1.75 mm 24f tubes (200μm BIF ONLY) MDM = ezMICRODUCT™ with 1.4 mm 24f tubes (22 or 2X 200μm BIF ONLY) RCFMD = ezMICRODUCT™ with central tube FlexRibbon technology RCFBMD = ezMICRODUCT™ with central tube Breakout FlexRibbon technology
3 CONSTRUCTION	1JKT = Single Jacket
4 FIBER GROUPING	12 = 12f per tube 24 = 24f per tube (12 fibers per unit)

Other cable constructions and fiber performance grades available on request.

FIBER INFORMATION		
5 FIBER TYPE	SINGLE-MODE	
	B1 = Bend-Insensitive Single-Mode (ITU G.657.A1 & G.652.D)	
	B2 = Bend-Insensitive Single-Mode (ITU G.657.A2 & .B2, & G.652.D)	
	CU = Corning® SMF-28® Ultra Single-Mode (ITU G.657.A1 & G.652.D)	
	21 = 200μm Bend-Insensitive Single-Mode (ITU G.657.A1 & G.652.D)	
	2U = Corning® SMF-28® Ultra 200μm Single-Mode (ITU G.657.A1 & G.652.D)	
	22 = 200 um Bend-Insentive Single-Mode (ITU G.657.A2 & G.652.D)	
	2X = Draka BendBrightXS 200um Single-Mode (ITU G.657.A2 & G652.D)	
6 FIBER COUNT	002 to 528 fibers	
7 FIBER GRADE	SINGLE-MODE	
	Attenuation (dB/km)	Wavelength (nm) Type
	E1 = 0.40/0.40/0.30	1310/1383/1550 B1, B2, 21, 2U, 22, or 2X Use E1 with 200um fiber designs & FlexRibbon
	E3 = 0.35/0.35/0.25	1310/1383/1550 B1, B2, CU, 21, 22, 2U, or 2X
	EA = 0.50/0.50/0.50	1310/1383/1550 21 Use with 864f, 200um fiber FlexRibbon designs
8 TONE WIRE OPTIONS (See table on page one)	19AWG = one 19AWG tone wire 20AWG = one 20AWG tone wire 12AWG = one 12AWG tone wire	