



Company Profile

Aksh Optifibre Ltd. is India's leading Optical Fibre and Optical Fiber Cable manufacturing company and is also diversified into FTTH, IPTV, VOIP & Broadband services.

Established in 1986, our manufacturing operations are spread across **3 ISO 9001 certified plants by UL**. Made according to stringent quality standards and using state of the art technology (from **Nokia - Finland, Rosendahl - Austria** etc.), Aksh is the **world's only** integrated Optical Fibre, Optical Fibre Cables and Fibre Reinforced Plastic (FRP) Rods producer. The company has established excellent process based organization, rated by Global Majors such as FONS (USA) etc. as a facility of international standards.

AKSH produces **variety of optical fibre cables** such as Single mode & Multimode Cables, Duct Cables, Armoured & Aerial Cables, Indoor & Outdoor Cables, Ribbon Cables alongwith Hybrid Cables.

With the changing needs of the customer and ever-growing volumes, Aksh has also upheld concepts of value engineering and product enhancement. Our Design and Development Department is well equipped with capabilities like In-House Industrial & Engineering Design, Optical & Mechanical testing equipments and Environmental test laboratory for conducting reliability and life tests. We have carved a niche in the segment by constantly creating innovative solutions with **many patents**. Recently Aksh has developed cost effective solutions for introducing **Fibre-to-Home (FTTH)**.

With its two subsidiaries **Aksh Networks & Aksh Broadband**, we also undertake turnkey projects and provide complete solution for vast range of customer requirements. Recently Aksh has won major project from state owned company MTNL for **IPTV** for Delhi, National Capital of India. Also Aksh is providing **broadband network for the whole state** of Andhra Pradesh in India.

Aksh is poised to grow exponentially with plans for manifold growth in coming future. Further details about organization and product could be accessed at www.akshoptifibre.com



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Bringing fibre to the home.



Optical Fibres

Single-Mode Fiber (ITU-T G.652.B)

- for Large-Capacity & Low-Loss Optical Transmission in the 1310nm and 1550nm

Low-Water-Peak Single-Mode Fibre (ITU-T G.652.D)

- for WDM Optical Transmission for Metro Networks

3 Non-Zero Dispersion Shifted Fibre NZ-DSF (ITU-T G.655)

- for Long-Distance DWDM Optical Transmission

Multi-Mode Fibre (50/125)

Multi-Mode Fibre (62.5/125)



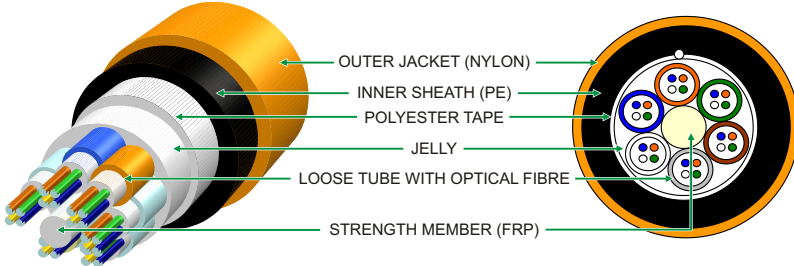
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All Dielectric Metal Free Cables – Duct Installation

(A) MULTI TUBE DESIGN:

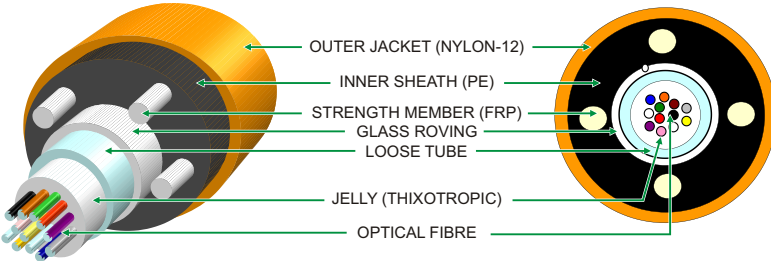
The cable has multiple loose tubes containing optical fibres and jelly. The tubes are S-Z stranded around non metallic central strength member.



PART NUMBER	FIBRE COUNT	DIAMETER (mm) Nominal	WEIGHT (Kg./Km) Nominal	TENSILE STRENGTH (N)		BENDING RADIUS (mm)	
				Installation	Operating	Temporary	Permanent
D-6/SM/MTJ(F)-PMFN-O11.0	UPTO 24 FIBRE	11.0	110	2700	1500	110	220
D-26/SM/MTJ(F)-PMFN-O12.0	26 TO 48 FIBRE	12.0	120	3000	1500	120	240
D-50/SM/MTJ(F)-PMFN-O13.0	50 TO 72 FIBRE	13.0	140	3000	1500	130	260
D-74/SM/MTJ(F)-PMFN-O14.5	74 TO 96 FIBRE	14.5	175	4000	2000	145	290

(B) UNITUBE DESIGN:

The loose tube containing optical fibres and jelly is centrally placed and non-metallic strength members (FRP rods) are embedded in the HDPE sheath for protection.



PART NUMBER	FIBRE COUNT	DIAMETER (mm) Nominal	WEIGHT (Kg./Km) Nominal	TENSILE STRENGTH (N)		BENDING RADIUS (mm)	
				Installation	Operating	Temporary	Permanent
D-4/SM/UT(4F&G)-PMFN-O8.3	UPTO 12 FIBRE	8.3	60	2700	1500	83	166
D-14/SM/UT(4F&G)-PMFN-O10	14 TO 24 FIBRE	10.0	84	2700	1500	100	200

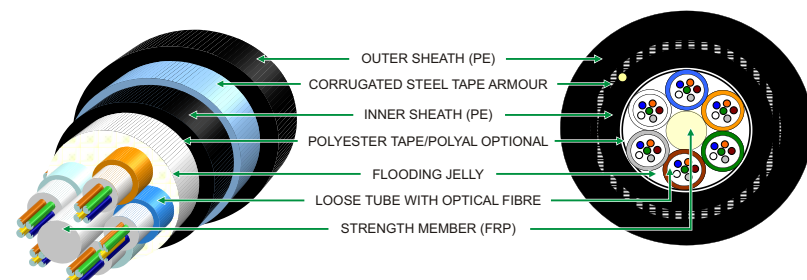


Armoured Cables – Direct Burial Installation

(A) ARMoured BURIAL CABLES MULTITUBE DESIGN:

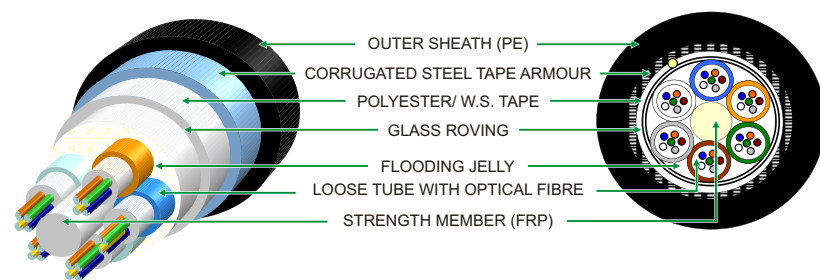
1. DOUBLE SHEATH CONSTRUCTION

The loose tube containing fibres and jelly are stranded around a central strength member. An armour of corrugated steel tape between the inner and outer HDPE sheath provides the necessary strength required for Direct buried applications.



PART NUMBER	FIBRE COUNT	DIAMETER (mm) Nominal	WEIGHT (Kg./Km) Nominal	TENSILE STRENGTH (N)		BENDING RADIUS (mm)	
				Installation	Operating	Temporary	Permanent
B-6/SM/MTJ(F)-PCCSTP-B15.0	UPTO 12 FIBRE	15.0	215	4000	2000	150	300
B-14/SM/MTJ(F)-PCCSTP-B15.0	14 TO 24 FIBRE	15.0	215	4000	2000	150	300
B-26/SM/MTJ(F)-PCCSTP-B16.0	26 TO 48 FIBRE	16.0	240	4000	2000	160	320
B-50/SM/MTJ(F)-PCCSTP-B16.0	50 TO 72 FIBRE	16.0	240	4000	2000	160	320
B-74/SM/MTJ(F)-PCCSTP-B18.0	74 TO 96 FIBRE	18.0	300	6000	3000	180	360

2. SINGLE SHEATH CONSTRUCTION



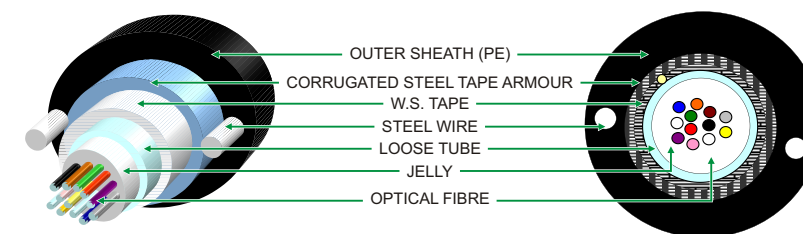
PART NUMBER	FIBRE COUNT	DIAMETER (mm) Nominal	WEIGHT (Kg./Km) Nominal	TENSILE STRENGTH (N)		BENDING RADIUS (mm)	
				Installation	Operating	Temporary	Permanent
B-6/SM/MTJ(F&G)-CCSTP-B13.0	UPTO 24 FIBRE	13.0	155	4000	2000	130	260
B-26/SM/MTJ(F&G)-CCSTP-B13.0	26 TO 48 FIBRE	13.0	155	4000	2000	130	260
B-50/SM/MTJ(F&G)-CCSTP-B14.0	50 TO 72 FIBRE	14.0	175	4000	2000	140	280
B-74/SM/MTJ(F&G)-CCSTP-B15.0	74 TO 96 FIBRE	15.0	215	5000	2700	150	300



(B) ARMoured BURIAL CABLES UNITUBE DESIGN:

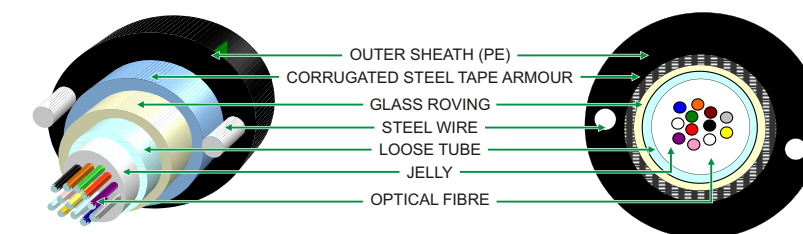
1. HIGH TENSILE STRENGTH

The loose tube containing fibres and jelly is centrally located. An armour of corrugated steel tape provides crush resistance. Steel wire strength members are embedded in HDPE sheath to provide high tensile strength.



PART NUMBER	FIBRE COUNT	DIAMETER (mm) Nominal	WEIGHT (Kg./Km) Nominal	TENSILE STRENGTH (N)		BENDING RADIUS (mm)	
				Installation	Operating	Temporary	Permanent
B-4/SM/UT(2W)-CCSTP-B11.0	UPTO 6 FIBRE	11.0	115	3000	1500	110	220
B-8/SM/UT(2W)-CCSTP-B11.0	8 TO 12 FIBRE	11.0	115	3000	1500	110	220
B-14/SM/UT(2W)-CCSTP-B11.0	14 TO 24 FIBRE	11.0	120	3000	1500	110	220

2. MEDIUM TENSILE STRENGTH



PART NUMBER	FIBRE COUNT	DIAMETER (mm) Nominal	WEIGHT (Kg./Km) Nominal	TENSILE STRENGTH (N)		BENDING RADIUS (mm)	
				Installation	Operating	Temporary	Permanent
B-4/SM/UT(2W&G)-CCSTP-B8.5	UPTO 6 FIBRE	8.5	85	2000	1000	85	170
B-8/SM/UT(2W&G)-CCSTP-B8.5	8 TO 12 FIBRE	8.5	85	2000	1000	85	170
B-14/SM/UT(2W&G)-CCSTP-B10.0	14 TO 24 FIBRE	10.0	100	2000	1000	110	220

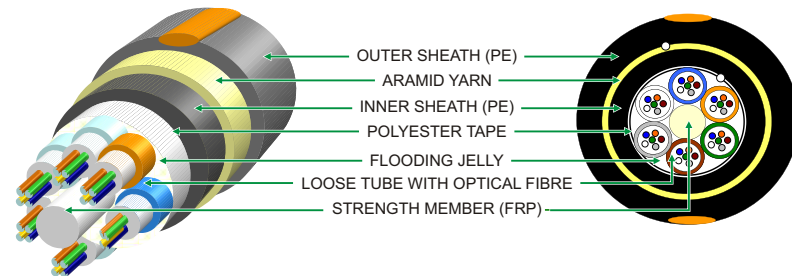
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All Dielectric Metal Free Cables – Aerial Installation

(A) MULTI TUBE DESIGN:

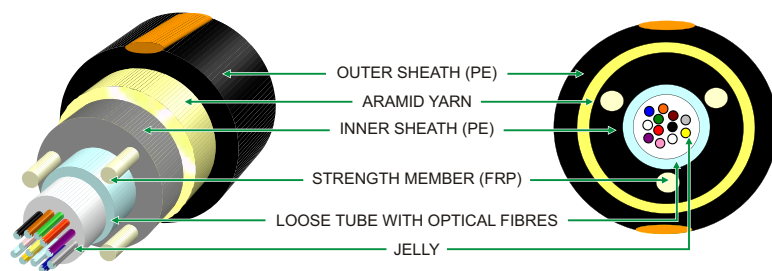
The loose tubes containing fibres and jelly are S-Z stranded around a central strength member. A layer of non metallic strength member (aramid yarn) between the inner and outer HDPE sheath provides the extra tensile strengths required for aerial installations on electric polls.



PART NUMBER	FIBRE COUNT	DIAMETER (mm) Nominal	WEIGHT (Kg./Km) Nominal	TENSILE STRENGTH (N)		BENDING RADIUS (mm)	
				Installation	Operating	Temporary	Permanent
A-6/SM/MTJ(F&A)-PMFP-B13.5	UPTO 12 FIBRE	13.5	140	5000	2700	135	270
A-14/SM/MTJ(F&A)-PMFP-B13.5	14 TO 24 FIBRE	13.5	140	5000	2700	135	270
A-26/SM/MTJ(F&A)-PMFP-B15.0	26 TO 48 FIBRE	15.0	165	6000	3000	150	300
A-50/SM/MTJ(F&A)-PMFP-B15.0	50 TO 72 FIBRE	15.0	170	6000	3000	150	300

(B) UNI TUBE DESIGN:

The loose tube containing the fibres and jelly is centrally located. The strength members (FRP rod) are embedded in the HDPE sheath. A layer of non metallic strength member (aramid yarn) between the inner and outer HDPE sheath provides the extra tensile strengths required for aerial installations. Light weight permits larger spans.



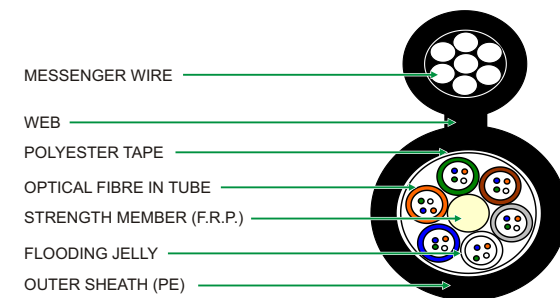
PART NUMBER	FIBRE COUNT	DIAMETER (mm) Nominal	WEIGHT (Kg./Km) Nominal	TENSILE STRENGTH (N)		BENDING RADIUS (mm)	
				Installation	Operating	Temporary	Permanent
A-4/SM/UT(3F&A)-PMFP-B11.0	UPTO 6 FIBRE	11.0	100	4000	2000	110	220
A-8/SM/UT(3F&A)-PMFP-B11.0	8 TO 12 FIBRE	11.0	100	4000	2000	110	220
A-14/SM/UT(3F&A)-PMFP-B12.0	14 TO 24 FIBRE	12.0	120	4000	2000	120	240

Bringing fibre to the home.



(C) FIGURE-8 DESIGN:

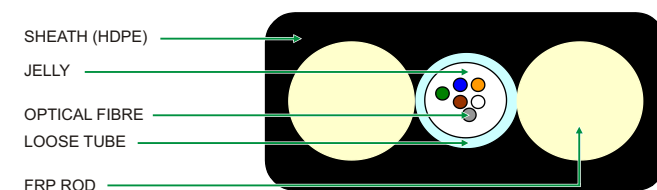
The loose tubes containing fibres and jelly are S-Z stranded around a central strength member. A bunch of stranded steel wires are sheathed with core to make the figure-8 construction, ideal for aerial installation.



PART NUMBER	FIBRE COUNT	DIAMETER (mm) Nominal	WEIGHT (Kg./Km) Nominal	TENSILE STRENGTH (N)		BENDING RADIUS (mm)	
				Installation	Operating	Temporary	Permanent
A-6/SM/MTJ(F)-SWP-B20.5	UPTO 24 FIBRE	10.5 X 20.5	200	5000	2700	105	210
A-26/SM/MTJ(F)-SWP-B21.5	26 TO 48 FIBRE	11.5 X 21.5	220	6000	3000	115	230
A-50/SM/MTJ(F)-SWP-B21.5	50 TO 72 FIBRE	11.5 X 21.5	225	6000	3000	115	230

(D) AERIAL DROP CABLE - FLAT DESIGN

The loose tube containing the fibres and jelly is protected by two FRP rods and sheathed with tough weather resistant HDPE.



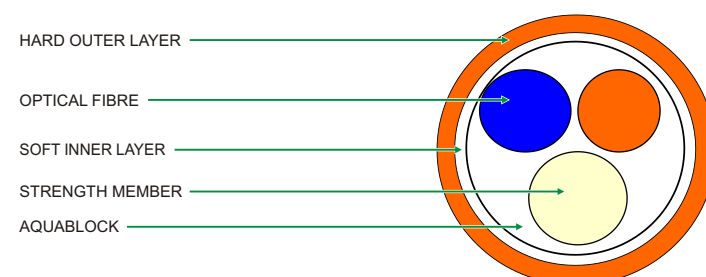
PART NUMBER	FIBRE COUNT	DIMENSIONS (mm) Nominal		WEIGHT (Kg./Km) Nominal	TENSILE STRENGTH (N)		BENDING RADIUS (mm)	
		Width	Height		Installation	Operating	Temporary	Permanent
A-2/SM/UT(2F)-MFP-B6.5	UPTO 6 FIBRE	6.5	3.3	25	1200	600	33	65
A-8/SM/UT(2F)-MFP-B6.8	8 TO 12 FIBRE	6.8	3.3	27	1200	600	33	65



FTTH Cables – Air Blown Type

(A) AIR BLOWN FIBRE CABLE:

The cable is used for blowing into micro ducts.
The loose tube contains fibres, aquablock and strength member (ARP rod).

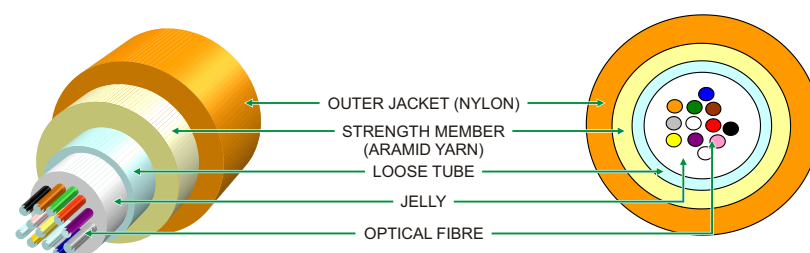


PART NUMBER	FIBRE COUNT	DIAMETER (mm) Nominal	WEIGHT (Kg./Km) Nominal	TENSILE STRENGTH (N)		BENDING RADIUS (mm)	
				Installation	Operating	Temporary	Permanent
D-2/SM/UT(K)-MFN-O1.7	2F	1.7	2.3	40	20	40	60
D-4/SM/UT(K)-MFN-O1.9	4F	1.9	2.7	40	20	40	60

(B) AIR BLOWN MICRO CABLE UNI TUBE DESIGN:

1. MEDIUM TENSILE STRENGTH

The loose tube containing fibre and jelly is covered with strength member (aramid yarn) and jacketed with Nylon 12 polymer.

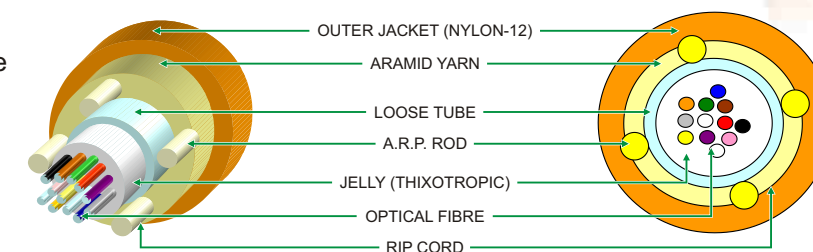


PART NUMBER	FIBRE COUNT	DIAMETER (mm) Nominal	WEIGHT (Kg./Km) Nominal	TENSILE STRENGTH (N)		BENDING RADIUS (mm)	
				Installation	Operating	Temporary	Permanent
D-4/SM/UT(A)-MFN-O3.3	UPTO 12 FIBRE	3.3	10	600	300	33	66
D-14/SM/UT(A)-MFN-O5.2	14 TO 24 FIBRE	5.2	22	800	400	52	104



2. HIGH TENSILE STRENGTH

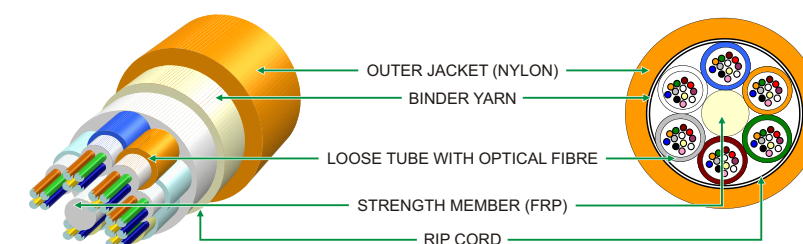
Aramid FRP rods are placed around loose tube to give added rigidity and tensile strength.



PART NUMBER	FIBRE COUNT	DIAMETER (mm) Nominal	WEIGHT (Kg./Km) Nominal	TENSILE STRENGTH (N)		BENDING RADIUS (mm)	
				Installation	Operating	Temporary	Permanent
D-4/SM/UT(4K & A)-MFN-O3.8	UPTO 12 FIBRE	3.8	11	800	400	38	76
D-14/SM/UT(4K & A)-MFN-O5.6	14 TO 24 FIBRE	5.6	24	1000	500	56	112

(C) AIR BLOWN MICRO CABLE MULTI TUBE DESIGN:

The loose tubes containing fibres and jelly are S-Z stranded around a central strength member and jacketed with nylon 12 material.

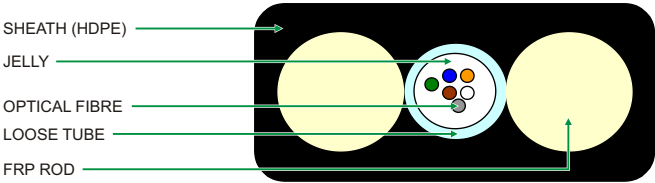


PART NUMBER	FIBRE COUNT	DIAMETER (mm) Nominal	WEIGHT (Kg./Km) Nominal	TENSILE STRENGTH (N)		BENDING RADIUS (mm)	
				Installation	Operating	Temporary	Permanent
D-12/SM/MT(F)-MFN-O5.5	UPTO 48 FIBRE	5.5	26	800	400	55	110
D-50/SM/MT(F)-MFN-O6.3	50 TO 72 FIBRE	6.3	33	1000	500	63	126

FTTH Cables – Aerial Installation

(A) AERIAL DROP CABLE - FLAT DESIGN

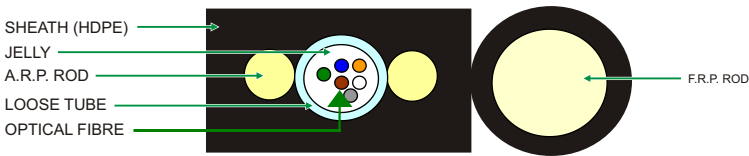
The loose tube containing the fibres and jelly is protected by two FRP rods and sheathed with tough weather resistant HDPE.



PART NUMBER	FIBRE COUNT	DIMENSIONS (mm) Nominal		WEIGHT (Kg./Km) Nominal	TENSILE STRENGTH (N)		BENDING RADIUS (mm)	
		Width	Height		Installation	Operating	Temporary	Permanent
A-2/SM/UT(2F)-MFP-B6.5	UPTO 6 FIBRE	6.5	3.3	25	1200	600	33	65
A-8/SM/UT(2F)-MFP-B6.8	8 TO 12 FIBRE	6.8	3.3	27	1200	600	33	65

(B) AERIAL DROP DESIGN - JP

The loose tube containing fibres and jelly is placed between two aramid FRP rods. One GFRP rod provides extra tensile strength for arial installation. This cable is good for last mile FTTH connectivity using electric poles.

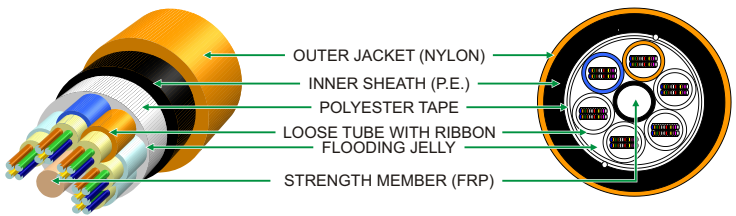


PART NUMBER	FIBRE COUNT	DIMENSIONS (mm) Nominal		WEIGHT (Kg./Km) Nominal	TENSILE STRENGTH (N)		BENDING RADIUS (mm)	
		Width	Height		Installation	Operating	Temporary	Permanent
A-2/SM/UT(F&2A)-MFP-B6.8	UPTO 6 FIBRE	6.8	3.0	23	1200	600	34	68
A-8/SM/UT(F&2A)-MFP-B7.0	8 TO 12 FIBRE	7.0	3.0	25	1200	600	35	70

Ribbon Cables

MULTI TUBE DESIGN

The loose tubes containing fibres encapsulated in ribbon shape S-Z stranded around a central strength member, sheathed with HDPE and an optional nylon 12 jacket. Ribbon cables are suitable for high fibre count and reduces splicing time.



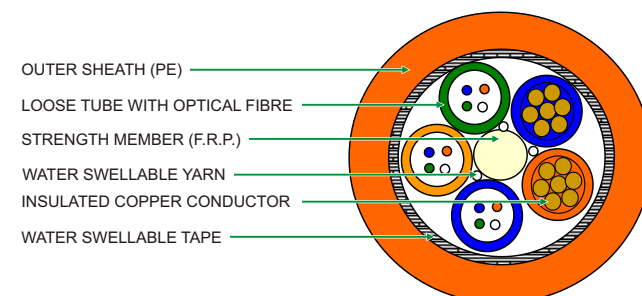
PART NUMBER	FIBRE COUNT	DIAMETER (mm) Nominal	WEIGHT (Kg./Km) Nominal	TENSILE STRENGTH (N)		BENDING RADIUS (mm)	
				Installation	Operating	Temporary	Permanent
D-48/SM/MTJ(F)-PMFN-O19.0	48 FIBRE	19.0	290	8000	4000	190	380
D-96/SM/MTJ(F)-PMFN-O19.0	96 FIBRE	19.0	290	8000	4000	190	380
D-144/SM/MTJ(F)-PMFN-O20.5	144 FIBRE	20.5	340	9000	4500	205	410
D-288/SM/MTJ(F)-PMFN-O22.0	288 FIBRE	22.0	380	10000	5000	220	440
D-576/SM/MTJ(F)-PMFN-O30.0	576 FIBRE	30.0	720	12000	6000	300	600



Special Application Cables

(A) HYBRID CABLES

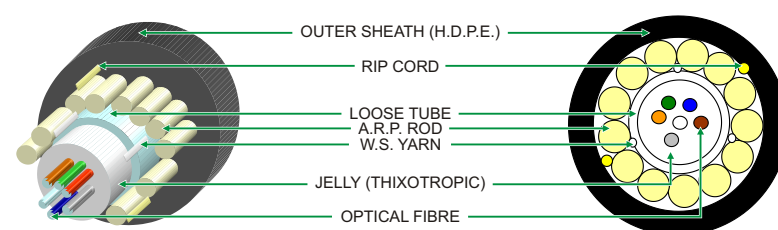
MULTITUBE DESIGN & TWO INSULATED COPPER CONDUCTOR



PART NUMBER	FIBRE COUNT	DIAMETER (mm) Nominal	WEIGHT (Kg./Km) Nominal	TENSILE STRENGTH (N)		BENDING RADIUS (mm)	
				Installation	Operating	Temporary	Permanent
O-4/SM/MTY(F)-P-B12.0	UPTO 12 FIBRE & 2 COPPER CONDUCTOR	12.0	140	2700	1000	120	240
O-14/SM/MTY(F)-P-B12.0	14 TO 36 FIBRE & 2 COPPER CONDUCTOR	12.0	145	2700	1000	120	240
O-38/SM/MTY(F)-P-B13.0	38 TO 48 FIBRE & 2 COPPER CONDUCTOR	13.0	160	4000	2000	130	260

(B) ALL PURPOSE CABLE

The loose tube containing fibres and jelly is protected by strength members aramid reinforced plastic rod. The ARP rod makes cable very flexible and provides good tensile strength and crush resistance. The cable can be installed on electric poles or directly buried or blown in ducts. The light weight and flexibility makes it ideal for FTTH application.

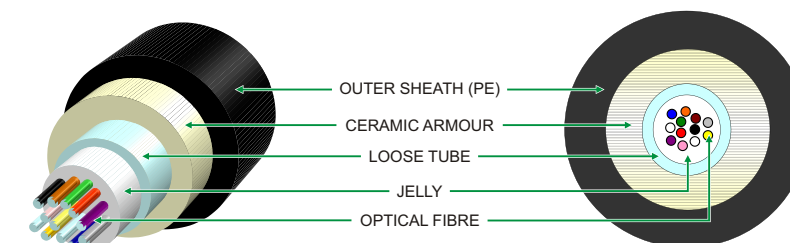


PART NUMBER	FIBRE COUNT	DIAMETER (mm) Nominal	WEIGHT (Kg./Km) Nominal	TENSILE STRENGTH (N)		BENDING RADIUS (mm)	
				Installation	Operating	Temporary	Permanent
A-2/SM/UT(13K)-MFP-B5.0	UPTO 6 FIBRE	5.0	20	800	400	50	100



(C) CERAMIC ARMoured CABLE

The loose tube containing fibres and jelly is protected by dielectric rigid ceramic armour and sheathed with HDPE. This cable is non-metallic, rodent proof, moisture resistant with very high tensile and crush resistance. This cable can be used for arial, direct burial and duct installation.



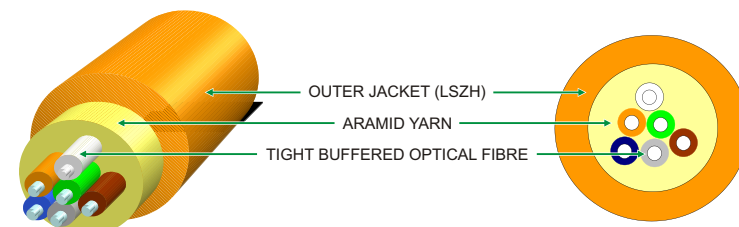
PART NUMBER	FIBRE COUNT	DIAMETER (mm) Nominal	WEIGHT (Kg./Km) Nominal	TENSILE STRENGTH (N)		BENDING RADIUS (mm)	
				Installation	Operating	Temporary	Permanent
D-2/SM/UT()-PrMFP-B8.0	2 TO 12 FIBRE	8.0	60	1600	800	240	320
A-2/SM/UT()-PrMFP-B5.5	2 TO 12 FIBRE	5.5	25	1200	600	150	200



Indoor Cables

(A) TIGHT BUFFERED DESIGN:

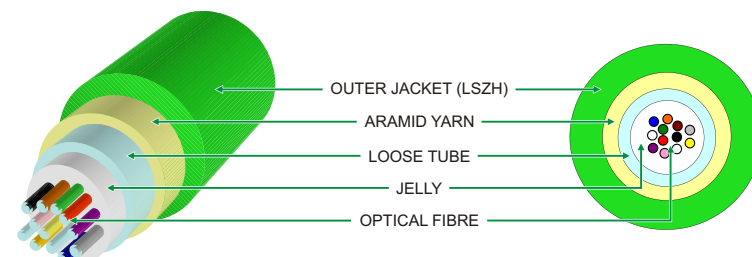
Tight buffered fibre with PVC/Nylon/LSZH upto 900 microns, strength member Aramid yarn and overall jacketed with PVC/LSZH.



PART NUMBER	FIBRE COUNT	DIAMETER (mm) Nominal	WEIGHT (Kg./Km) Nominal	TENSILE STRENGTH (N)		BENDING RADIUS (mm)	
				Installation	Operating	Temporary	Permanent
I-4/62.5/TB(A)-MFZ-O5.0	UPTO 6 FIBRE	5.0	26	1000	500	50	100
I-8/62.5/TB(A)-MFZ-O5.8	8 FIBRE	5.8	32	1000	500	58	116
I-12/62.5/TB(A)-MFZ-O6.2	12 FIBRE	6.2	36	1000	500	62	124
I-16/62.5/TB(A)-MFZ-O8.5	16 FIBRE	8.5	52	1200	600	85	170
I-24/62.5/TB(A)-MFZ-O9.5	24 FIBRE	9.5	60	1200	600	95	190

(B) LOOSE TUBE DESIGN:

The loose tube containing the fibres filled with thixotropic jelly, Strength member aramid yarn & overall jacketed with PVC/LSZH.



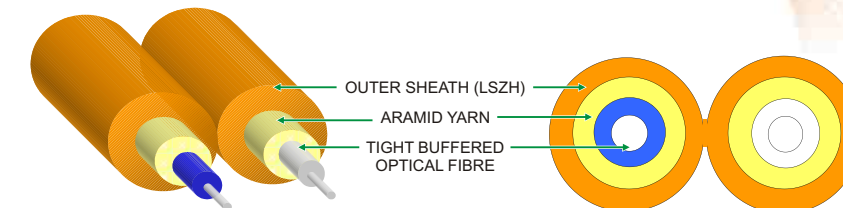
PART NUMBER	FIBRE COUNT	DIAMETER (mm) Nominal	WEIGHT (Kg./Km) Nominal	TENSILE STRENGTH (N)		BENDING RADIUS (mm)	
				Installation	Operating	Temporary	Permanent
I-4/SM/UT(A)-MFZ-Gr5.8	UPTO 6 FIBRE	5.8	33	1000	500	58	116
I-8/SM/UT(A)-MFZ-Gr5.8	8 TO 12 FIBRE	5.8	33	1000	500	58	116
I-14/SM/UT(A)-MFZ-Gr7.0	14 TO 24 FIBRE	7.0	50	1000	500	70	140



(C) DUPLEX DESIGN:

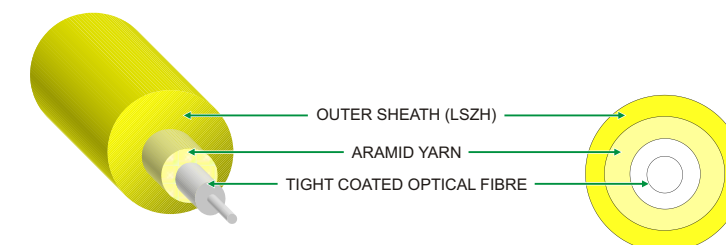
Tight buffered fibre with PVC/Nylon/LSZH upto 900 microns, strength member Aramid yarn and overall jacketed with PVC/LSZH to form the duplex shape.

New Minizip Duplex Cable design have tight buffered fibres upto 600 microns.



(D) SIMPLEX DESIGN:

Tight buffered fibre with PVC/Nylon/LSZH upto 900 microns, strength member Aramid yarn and overall jacketed with PVC/LSZH.



PART NUMBER	FIBRE COUNT	DIAMETER (mm) Nominal	WEIGHT (Kg./Km) Nominal	TENSILE STRENGTH (N)		BENDING RADIUS (mm)	
				Installation	Operating	Temporary	Permanent
I-1/SM/TB(A)-NMFV-Y3.0	SIMPLEX-3.0 mm	3.0	7.5	400	200	30	60
I-2/SM/TB(A)-NMFV-O6.0	DUPLEX-6.0 mm MAXIZIP	6.0	16	600	300	30	60
I-1/SM/TB(A)-NMFV-Y2.0	SIMPLEX-2.0 mm	2.0	3.6	300	150	20	40
I-2/SM/TB(A)-NMFV-O4.0	DUPLEX-4.0 mm MINIZIP	4.0	4.0	7.5	400	200	2040