

Microduct Fiber Pathway

Air Blown Total Solution



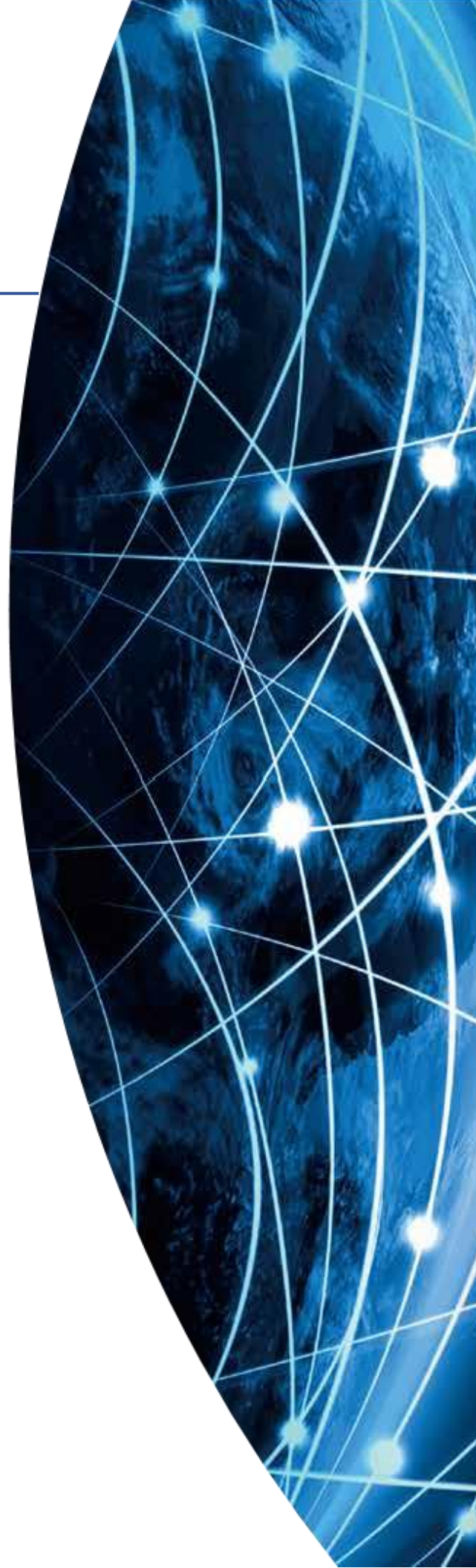
2021 - 2022

AirWave™
Leads Communication ●●●

LIGHT TO INNOVATION
Lenora 

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About us

Lenora Innovation Ltd. is a European telecommunication company dedicated to providing leading-edge, high-performance telecommunication products and services to business and enterprise customers.

Lenora specializes in manufacturing and marketing of Fiber FTTx, Air blown Total solution, Structure Cabling Systems & related connectivity products that are highly durable and offer superior performance, Lenora has evolved into a world-class provider of a complete line of products to a broad customer base.

By expanding our capabilities and product offerings, we have strategically positioned Lenora to support our customers' needs for increasingly sophisticated communications infrastructure and end-to-end cabling and connectivity solutions, by helping to implement the project from the very first step of network designing to the installation phase, providing all the necessary technical training, service and maintenance.

Lenora Structure Cabling Systems Total Solution using our products range will guarantee the best performance even in the most severe solutions, and it will significantly reduce CaPEX and OpEX in comparison with copper and fiber optic deployment techniques.

Lenora's success in the battlefield provided a foundation for the creation of a broad copper and fiber optic cable range, built on the evolution of new technologies, as well as opportunities to expand our product offerings beyond network solutions.

When you partner with Lenora, We bring you the most advanced products and solutions available. We own the knowledge and experience; we guarantee the results.



Innovation

Lenora brings efficient and innovative solutions customized to specific needs of its customers. It has developed and certified several products as the first in the world, thus contributing to the expansion of affordable and advanced solutions.



Quality control

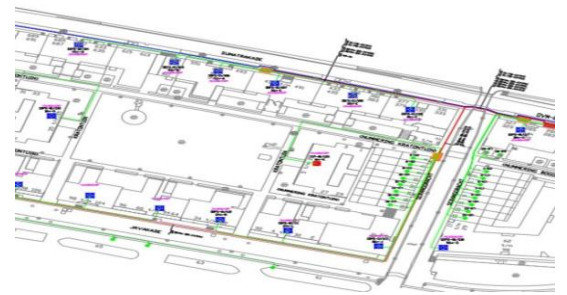
The quality of products is tested at every stage of the production cycle and is ensured by strict monitoring, Lenora Quality is designed to support a company culture based on continuous improvement, challenging objectives, effective control and corrective action.

Our Business

Lenora Leads Communication

Microduct Network Design & Engineering

The optical network construction based on microduct system is a proved, flexible and cost-effective solution, but some of the design concept is relatively new compared to the conventional cabling. With our accumulated knowledge from manufacturing, design and installation for more than 10 years, Lenora provides consulting services including network design by experienced engineers.



Network Deployment & Installation

The civil works for deploying microduct and fiber cable generally require elaborated job scheduling and experience in order to guarantee a long-term stable operation and to avoid unexpected cost expenses. For several years, Lenora has successfully carried out microduct projects ranging from inbuilding, FTTH, intra-city to long distance in many countries. With this knowledge of skilled engineers and quality products of Airwave, Lenora provides microduct total solution to our customers.



Specialized Training

Lenora experts are trained in the air blown system and various trenching techniques. We have, the facility available to other customers and partners who require training on microduct and air blown solution. We have the ability to support network design, deliver knowledge about this advanced technology, providing Fiber Network Management System as well as presenting consulting services. We have, also provide a fully integrated demonstration of microduct total solution where our clients can learn directly.



Direct Bury Aluminum (DBAL)

DIRECT BURIED ALUMINUM microduct, has the Aluminum tape which helps to block the water from the extreme wet soil condition. The outer sheath is made of rugged HDPE, providing excellent protection from the physical environment. The characteristics of Direct Buried Aluminum application robust, highly resistant to crushing and external impact, suitable for all environments.



5/3.5mm	Nom. OD (mm)	Weight (kg/km)	Length/drum (m)	Number of drums in 40'
1way	12.4	112	2,000	40
2way	17.4x12.4	159	2,000	33
4way	19.5	227	2,000	29
7way	22.4	290	2,000	22
12way	28.3	425	2,000	18
19way	32.3	543	2,000	12
24+1way	37.9	691	1,000	14



1 way

8/6mm	Nom. OD (mm)	Weight (kg/km)	Length/drum (m)	Number of drums in 40'
1way	15.4	159	2,000	36
2way	23.4x15.4	241	2,000	24
4way	26.7	358	2,000	19
7way	31.4	477	2,000	12
12way	40.8	741	1,000	12



2 way

10/8mm	Nom. OD (mm)	Weight (kg/km)	Length/drum (m)	Number of drums in 40'
1way	17.4	189	2,000	32
2way	27.4x17.4	291	2,000	21
4way	32.9	506	2,000	12
7way	38.8	669	2,000	10



4 way

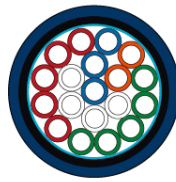
12/10mm	Nom. OD (mm)	Weight (kg/km)	Length/drum (m)	Number of drums in 40'
1way	19.4	218	2,000	29
2way	31.4x19.4	342	2,000	19
4way	37.8	598	2,000	11
7way	44.8	795	1,000	12



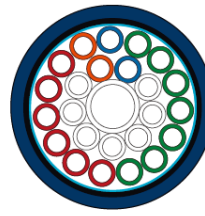
7 way



12 way



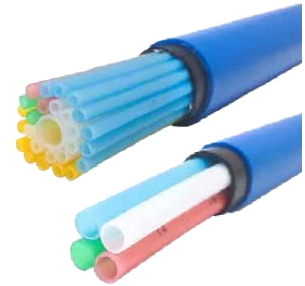
19 way



24+1 way

Direct Bury Metal Free (DBMF)

DIRECT BURIED METALL FREE Microduct, is designed to endure harsh environment with high crush resistance. Even though it is solid product, it is very easy to bend or fix the tube inside of cabinet by having thin inner tube. The extra layer (total 2 layers of the outer sheath) is added to protect the thin wall of inner tube from external ground pressure. Moreover, it is very strong against lightning and electrical surge.



5/3.5mm	Nom. OD (mm)	Weight (kg/km)	Length/drum (m)	Number of drums in 40'
1way	12.0	98	2,000	44
2way	17.0x12.0	140	2,000	36
4way	19.1	200	2,000	29
7way	22.0	259	2,000	22
12way	27.9	385	2,000	18
19way	31.9	496	2,000	12
24+1way	37.5	639	1,000	14

8/6mm	Nom. OD (mm)	Weight (kg/km)	Length/drum (m)	Number of drums in 40'
1way	15.0	140	2,000	36
2way	23.0x15.0	214	2,000	24
4way	26.3	320	2,000	19
7way	31.0	431	2,000	13
12way	40.4	680	1,000	12

10/8mm	Nom. OD (mm)	Weight (kg/km)	Length/drum (m)	Number of drums in 40'
1way	17.0	166	2,000	32
2way	27.0x17.0	259	2,000	21
4way	31.5	410	2,000	12
7way	38.2	599	2,000	10

12/10mm	Nom. OD (mm)	Weight (kg/km)	Length/drum (m)	Number of drums in 40'
1way	19.0	193	2,000	29
2way	31.0x19.0	305	2,000	19
4way	36.4	486	2,000	11
7way	44.2	712	1,000	12



1 way



2 way



4 way



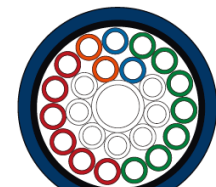
7 way



12 way



19 way



24+1 way

Thick Walled Duct (TWD)



THICK WALLED microduct is designed for direct burial by having thicker innertube. It has advantage for easy and fast termination with thin outer sheath. The thickness of each inner tube allows individual tubes to be used direct buried solution. This item is suitable for any construction sites such as open cut, Micro trenching, Mini trenching and HDD. This product is usually recommended to the site which requires fast and easy sheath cutting during fiber branch off from the FCP.

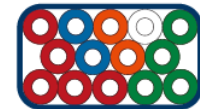
7/3.5mm	Nom. OD (mm)	Weight (kg/km)	Length/drum (m)	Number of drums in 40'
1way	9.0	52	2,000	104
2way	16.0x9.0	93	2,000	40
3way	16.0x15.1	128	2,000	32
4way	16.0x16.0	162	2,000	32
5way	23.0x15.1	195	2,000	24
6way	21.1x19.5	228	2,000	24
7way	23.0x21.1	258	2,000	21
12way	30.0x27.2	415	2,000	14
14way	37.0x21.1	485	2,000	14
19way	37.0x33.3	627	1,000	19
24way	44.0x33.3	777	1,000	14
24+1way	43.6x43.6	855	1,000	12

10/6mm	Nom. OD (mm)	Weight (kg/km)	Length/drum (m)	Number of drums in 40'
1way	12.0	81	1,000	104
2way	22.0x12.0	149	2,000	32
3way	22.0x20.7	206	2,000	22
4way	22.0x22.0	264	2,000	21
5way	32.0x20.7	320	2,000	18
6way	29.4x27.0	374	2,000	14
7way	32.0x29.3	426	2,000	12

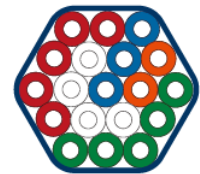
12/8mm	Nom. OD (mm)	Weight (kg/km)	Length/drum (m)	Number of drums in 40'
1way	14.0	99	2,000	40
2way	26.0x14.0	182	2,000	24
3way	26.0x24.4	254	2,000	19
4way	26.0x26.0	325	2,000	18
5way	38.0x24.4	395	2,000	12
6way	34.8x32.0	463	2,000	12
7way	38.0x34.8	527	2,000	11



12 way



14 way



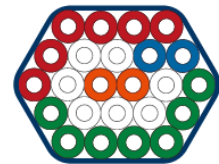
19 way

Thick Walled Duct (TWD)



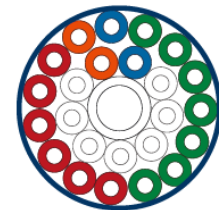
14/10mm	Nom. OD (mm)	Weight (kg/km)	Length/drum (m)	Number of drums in 40'
1way	16.0	117	2,000	88
2way	30.0x16.0	216	2,000	21
3way	30.0x28.1	301	2,000	13
4way	30.0x30.0	386	2,000	12
5way	44.0x28.1	470	2,000	11
6way	40.2x37.0	551	1,000	13
7way	44.0x40.2	628	1,000	12

16/12mm	Nom. OD (mm)	Weight (kg/km)	Length/drum (m)	Number of drums in 40'
1way	18.0	135	2,000	27
2way	34.0x18.0	250	2,000	19
3way	34.0x31.9	349	2,000	12
4way	34.0x34.0	448	2,000	11
7way	50.0x45.7	729	1,000	11



24 way

18/14mm	Nom. OD (mm)	Weight (kg/km)	Length/drum (m)	Number of drums in 40'
1way	20.0	153	1,000	36
2way	38.0x20.0	283	1,750	18
3way	38.0x35.6	395	1,000	14
4way	38.0	508	1,000	12
6way	51.2x47.0	728	1,000	10
7way	56.0x51.2	828	1,000	10



24 + 1 way

20/16mm	Nom. OD (mm)	Weight (kg/km)	Length/drum (m)	Number of drums in 40'
1way	22.0	170	1,000	33
2way	42.0x22.0	316	1,000	21
3way	42.0x39.3	443	1,000	12
4way	42.0	569	1,000	12
7way	62.0x56.6	929	500	11



1 way



3 way



4 way



5 way



6 way



7 way

Direct Install Aluminum (DIAL)

DIRECT INSTALL ALUMINUM microduct is for installation in existing duct and subduct. This product will be inserted into the existing infrastructure to maximize DI-AL advantage with the Aluminum tape which helps to block the water from the extreme wet soil condition.



5/3.5mm	Nom. OD (mm)	Weight (kg/km)	Length/drrm (m)	Number of drums in 40'
1way	8.4	50	2,000	104
2way	13.4x8.4	78	2,000	44
4way	15.5	123	2,000	36
7way	18.4	168	2,000	32
12way	23.7	246	2,000	21
19way	27.7	337	2,000	18
24+1 way	33.3	447	2,000	12



1 way

8/6mm	Nom. OD (mm)	Weight (kg/km)	Length/drrm (m)	Number of drums in 40'
1way	11.4	79	2,000	44
2way	19.4x11.4	130	2,000	33
4way	22.7	210	2,000	22
7way	27.4	301	2,000	18
12way	36.2	477	2,000	11



2 way

10/8mm	Nom. OD (mm)	Weight (kg/km)	Length/drrm (m)	Number of drums in 40'
1way	13.4	97	2,000	40
2way	23.4x13.4	161	2,000	29
4way	27.9	279	2,000	18
7way	33.8	398	2,000	12



4 way

12/10mm	Nom. OD (mm)	Weight (kg/km)	Length/drrm (m)	Number of drums in 40'
1way	15.4	115	2,000	36
2way	27.4x15.4	192	2,000	22
4way	32.8	335	2,000	12
7way	39.8	479	1,000	12



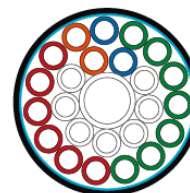
7 way



12 way



19 way



24+1 way

Direct Install Metal Free (DIMF)

DIRECT INSTALL METAL FREE microduct is designed for installation duct and subduct. This product will be installed in the existing infrastructure with relatively high crush resistance. Even though it is solid product, it is very easy to bend or fix the tube inside of cabinet by having thin inner tube. It is also strong against lightning and electrical surge.



5/3.5mm	Nom. OD (mm)	Weight (kg/km)	Length/drum (m)	Number of drums in 40'
1way	8.0	38	2,000	104
2way	13.0x8.0	62	2,000	88
4way	15.1	98	2,000	36
7way	18.0	139	2,000	32
12way	23.3	209	2,000	21
19way	27.3	293	2,000	18
24+1way	32.9	398	2,000	12

8/6mm	Nom. OD (mm)	Weight (kg/km)	Length/drum (m)	Number of drums in 40'
1way	11.0	62	2,000	88
2way	19.0x11.0	106	2,000	33
4way	22.3	175	2,000	22
7way	27.0	257	2,000	18
12way	35.8	418	2,000	11

10/8mm	Nom. OD (mm)	Weight (kg/km)	Length/drum (m)	Number of drums in 40'
1way	13.0	77	2,000	40
2way	23.0x13.0	132	2,000	30
4way	28.1	259	2,000	18
7way	34.2	383	2,000	12

12/10mm	Nom. OD (mm)	Weight (kg/km)	Length/drum (m)	Number of drums in 40'
1way	15.0	91	2,000	36
2way	27.0x15.0	158	2,000	22
4way	33.0	310	2,000	12
7way	40.2	460	1,000	12



1 way



2 way



4 way



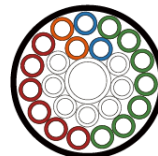
7 way



12 way



19 way



24+1 way

Low Smoke Zero Halogen (LSZH)

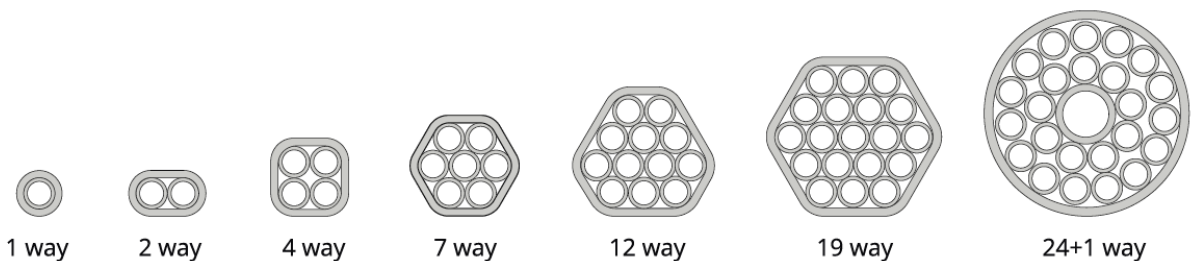
LOW SMOKE ZERO HALOGEN microduct requires the best quality of ducting pipe that can provide safety to the building. This method is the most appropriate for in-building infrastructure. Generally, the ducting pipe must comply with municipality and national authority standards and regulations on fire. The ducting pipe must be produced for retardant.



5/3.5mm	Nom. OD (mm)	Weight (kg/km)	Length/drum (m)	Number of drums in 40'
1way	7.0	42	2,000	180
2way	12.4x7.4	80	1,000	130
4way	12.4x12.4	125	2,000	40
7way	17.4x16.1	184	2,000	32
12way	22.4x20.4	278	2,000	22
19way	27.4x24.7	400	2,000	18
24+1way	32.0x32.0	533	1,000	21

10/8mm	Nom. OD (mm)	Weight (kg/km)	Length/drum (m)	Number of drums in 40'
1way	12.4	105	1,000	104
2way	22.4x12.4	183	2,000	32
4way	22.4x22.4	301	2,000	21
7way	32.4x29.7	460	2,000	12

12/10mm	Nom. OD (mm)	Weight (kg/km)	Length/drum (m)	Number of drums in 40'
1way	14.4	120	1,000	96
2way	26.4x14.4	211	2,000	24
4way	26.4x26.4	348	2,000	18
7way	38.4x35.2	533	1,000	14



Flat Duct (FLT)

FLAT microduct FOR MICRO-TRENCHING with narrow width, Direct Bury Flat Duct is the most compatible item. The product itself can be placed vertically to fit on micro-trenching dimension.

The size of the product is relatively tiny which allows better shipping and handling with the smaller reel size. As Direct Bury Flat Duct has the same thickness of the Multi duct, customers can enjoy the same benefits of Multi duct.



2 way



3 way



4 way

7/3.5mm	Nom. OD (mm)	Weight (kg/km)	Length/drum (m)	Number of drums in 40'
2way	16.0x9.0	93	2,000	40
3way	23.0x9.0	135	2,000	33
4way	29.6x8.6	162	2,000	32
5way	41.2x8.6	210	2,000	24
6way	48.2x8.6	248	2,000	22
7way	55.2x8.6	286	2,000	21

10/6mm	Nom. OD (mm)	Weight (kg/km)	Length/drum (m)	Number of drums in 40'
2way	22.0x12.0	149	2,000	32
3way	32.0x12.0	216	2,000	24
4way	41.6x11.6	264	2,000	21
5way	56.2x11.6	340	2,000	18
6way	66.2x11.6	403	2,000	13
7way	76.2x11.6	466	2,000	12

12/8mm	Nom. OD (mm)	Weight (kg/km)	Length/drum (m)	Number of drums in 40'
2way	26.0x14.0	182	2,000	24
3way	38.0x14.0	265	2,000	19
4way	49.6x13.6	326	2,000	18
5way	66.2x13.6	420	2,000	12
6way	78.2x13.6	498	1,000	18
7way	90.2x13.6	576	1,000	14

14/10mm	Nom. OD (mm)	Weight (kg/km)	Length/drum (m)	Number of drums in 40'
2way	30.0x16.0	216	2,000	21
3way	44.0x16.0	315	2,000	18
4way	57.6x15.6	388	2,000	12
5way	76.2x15.6	499	1,000	18
6way	90.2x15.6	592	1,000	13
7way	104.2x15.6	685	1,000	12

Flat Duct (FLT)

16/12mm	Nom. OD (mm)	Weight (kg/km)	Length/drum (m)	Number of drums in 40'
2way	34.0x18.0	250	2,000	19
3way	50.0x18.0	364	2,000	12
4way	65.6x17.6	449	2,000	11
5way	86.2x17.6	578	1,000	12
6way	102.2x17.6	686	1,000	12
7way	118.2x17.6	794	1,000	11

18/14mm	Nom. OD (mm)	Weight (kg/km)	Length/drum (m)	Number of drums in 40'
2way	38.0x20.0	283	1,750	18
3way	56.0x20.0	414	1,000	18
4way	73.6x19.6	511	1,000	13
5way	96.2x19.6	657	1,000	12
6way	114.2x19.6	780	1,000	10
7way	132.2x19.6	903	1,000	10

20/16mm	Nom. OD (mm)	Weight (kg/km)	Length/drum (m)	Number of drums in 40'
2way	42.0x22.0	316	1,000	21
3way	62.0x22.0	462	1,000	18
4way	81.6x21.6	571	1,000	12
5way	106.2x21.6	736	1,000	11
6way	126.2x21.6	873	800	11
7way	146.2x21.6	1,011	800	10



5 way



6 way



7 way

Microduct Accessories

STRAIGHT CONNECTORS The Push-fit straight connectors manufactured with high quality materials and transparent body assure easy and quick installation.

The straight connectors for microducts provide a quick, easy and secure connection of microducts, used to join sections of microducts.

The connector can be re-used 10 times remaining maintained the high-performance requirements for air-blown installation systems.



END CAPS is used for quick and easy tighten the ends of unused primary tube.

Provides water resistance and mud resistance. It is also used in combination with the valve end stop connector during installation of micro ducts into existing cable ducts.

for permanent or temporarily sealing of unused microducts.



REDUCERS for quick and easy splicing of microducts allows interconnection between microducts that are difference in outer diameters, the body is transparent for easy fault location during Installation, to enable cable blowing, the Reducer connector is designed to operate at 15 bars without leakage. The Push-fit reducer connectors manufactured with high quality materials and transparent body assure easy and quick installation, connector can be re-used 10 times remaining maintained the high-performance requirements for air- blown installation systems.



GAS BLOCK is used when there is a need to block gas to pass freely into different micro-duct sections.

This could for example be necessary when changing from outdoor to indoor installations.

The Gas block connector works in a similar way as the standard connector when jointing micro ducts but has a compressible rubber gasket that is sealed after the cable has been installed.



CONNECTOR COVER is typically used in place of a duct closure to protect the connector and the end cap for direct burial.



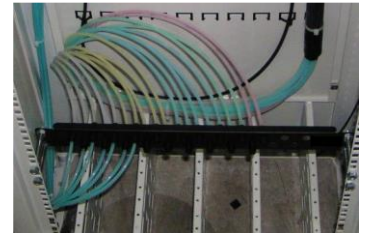
Microduct Accessories

WATER BLOCK is used when for entering underground external plant. A simple push fit device provides a water tight seal for tubes (unpopulated) and tubes with installed. water block connector works in a similar way as the standard connector when jointing micro ducts but has a compressible rubber gasket that is sealed after the cable has been installed.



MICRODUCT PATCH PANEL is 19" Rack mount 1U 24 ports for diameter 5mm Microduct

Micro duct Organizer
Max. 24 ports and good for Microduct branch.



INLINE MICRO DUCT CLOSURE is designed by modular method to change the length of closure and branch direction. It is possible to assemble or dis-assemble the closure without any special tools. The maintenance of In-Line closure can be done without cutting the ducts, and can be completed only by reopening upper modular part. In-Line closure is designed to connect several microduct bundles and to branch-off tubes without any interruption of connectivity.

The branch closure is typically used in place of a microduct to protect the connector and the end cap for direct burial. Branch closure is designed to connect several microducts and to branch-off tubes without any interruption of connectivity. Using this closure, the ducts are protected and easy to reopen for maintenance.



T-TYPE CLOSURE is designed by modular method to change the length of closure and branch direction. It is possible to assemble or dis-assemble the closure without any special tools. The maintenance of T-branch closure can be done without cutting the ducts, and can be completed only by reopening upper modular part.

T-branch closure is designed to connect two microduct bundles and to branch-off tubes without any interruption of connectivity. The branch closure is typically used in place of a microduct to protect the connector and the end cap for direct burial. Rubber sealing cap consists of Main port and Distribution port, and the Microduct, according to its different type and configuration, can be applied to different Rubber Sealing Cap



Microduct Tools

Microduct Cutter is used for precise cutting of PP and PE pipes with minimum effort. Knife blades deliver clean and straight cuts on pipe diameters up to 63 mm and especially for all the current plastic types used in installation. The aluminum construction guarantees precise operation and long professional service use.



Microduct Sheath Remover (Slitter) is used when dismantling the outer sheath of a double-sheathed microduct (direct buried).



Microduct Sheath Remover (Slitter) is used when dismantling the outer sheath of a double-sheathed microduct (direct buried).



Microduct Tube Cutter is used in the situation of cutting a tube cleanly 90° in order to make a connection with another tube perfectly



Microduct Cutter

Microduct Round cutter

Slitter

Microduct Tube Cutter

Air Blown Fiber Unit (EPFU)

AIR BLOWN FIBER UNIT, Enhanced Performance Fiber Unit (EPFU) is small size, light weight, enhanced surface outer sheath fiber unit designed for blowing into micro tube bundles by air flow. The outer thermoplastic layer provides a high level of protection and excellent installation properties, and it can be blown into the microduct of 5.0/3.5mm.

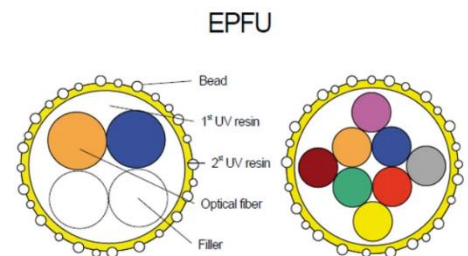
The fibers are coated with a soft acrylate resin which provides excellent dimensional and thermal stability to cushion the fibers, in addition, the resin can be easily stripped in connecting the fibers. The outer sheath is a thermoplastic that is of low friction. The surface of the sheath is designed with special grooves, compared to the surface of the traditional optical fiber cable, it provides not only the high level of mechanical protection, but also the perfect blowing performance.



Application:

The Air Blown Fiber Unit bundles assemblies consist of a number of cores 2, 4, 8 and 12 cores, that enables installation of air blown fibers cables. The fiber assemblies are bundled with outer sheath is a soft acrylate resin thermoplastic that is of low friction. The design makes the fiber cable are suitable for the following applications:

- Outdoor and indoor connections
- FTTH and last mile connections
- Distribution networks with dense fiber capacity
- Terminal connections



Operation Features:

The Air Blown Fiber Unit “ABF” bundles for FTTx systems are dedicated for the smallest microducts. Thanks to small diameter they are suitable to be used in projects requiring large number of slots and the fiber number between 2~12 core optical fiber units which can be routed into micro-ducts. The external diameter is between 1.2mm and 1.6mm, these are classified into optical fiber units with beads (EPFU) and optical fiber units with enclosures (EPSU).

- Smaller diameter
- Excellent environmental properties
- The outer sheath is a soft acrylate resin thermoplastic
- Network design flexibility
- 5/3.5mm microduct suitable
- fiber bundle diameter: 1.2 – 1.6 mm
- Singlemode or Multimode
- Greater blowing distance
- Fiber: G.G652D, G.657A1, G.657A2

Air Blown Fiber Unit (EPFU)

Temperature Performance:

Storage and Transportation [°C]: -40 to +60

Installation [°C]: -20 to +50

Operation [°C]: -30 to +60

Mechanical Performance Test compliance:

Tension: IEC 60794-1-21 Method E1

Bend: IEC 60794-1-21 Method E11

Crush: IEC 60794-1-21 Method E3

Marking:

ABF assemblies have markings showing the cable type and fiber number, Year of manufacture, Length marking. The individual fiber core is identified by their color according to the standard fiber colors.

Air Blown Fiber Unit (EPSU)

AIR BLOWN FIBER UNIT, Enhanced Performance Smooth Fiber Unit (EPSU) is small size, light weight, enhanced surface outer sheath fiber unit designed for blowing into micro tube bundles by air flow. The outer dry acrylate layer provides a high level of protection and excellent installation properties, and it can be blown into the microduct of 5.0/3.5mm.

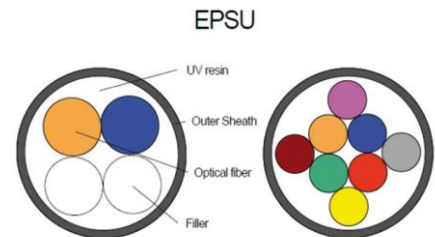
The fibers are coated with a resin which provides excellent dimensional and thermal stability to cushion the fibers, in addition, the resin can be easily stripped in connecting the fibers. The outer sheath is a smooth, slightly ribbed polyethylene that is of low friction. The surface of the sheath is designed with slightly ribbed, compared to the surface of the traditional optical fiber cable, it provides not only the high level of mechanical protection, but also the perfect blowing performance.



Application:

The Air Blown Fiber Unit bundles assemblies consist of a number of cores 2, 4, 8 and 12 cores, that enables installation of air blown fibers cables. The fiber assemblies are bundled with outer sheath is a smooth, slightly ribbed polyethylene that is of low friction. The design makes the fiber cable are suitable for the following applications.

- Outdoor and indoor connections
- FTTH and last mile connections
- Distribution networks with dense fiber capacity
- Terminal connections



Operation Features:

The Air Blown Fiber Unit “ABF” bundles for FTTx systems are dedicated for the smallest microducts. Thanks to small diameter they are suitable to be used in projects requiring large number of slots and the fiber number between 2~12 core optical fiber units which can be routed into micro-ducts. The external diameter is between 1.2mm and 1.6mm, these are classified into optical fiber units with beads (EPFU) and optical fiber units with enclosures (EPSU).

- Smaller diameter
- Excellent environmental properties
- The outer sheath is a smooth, slightly ribbed polyethylene
- Network design flexibility
- 5/3.5mm microduct suitable
- fiber bundle diameter: 1.2 – 1.6 mm
- Singlemode or Multimode
- Greater blowing distance
- Fiber: G.G652D, G.657A1, G.657A2

Air Blown Fiber Cables (EPSU)

Temperature Performance:

Storage and Transportation [°C]: -40 to +60

Installation [°C]: -20 to +50

Operation [°C]: -30 to +60

Mechanical Performance Test compliance:

Tension: IEC 60794-1-21 Method E1

Bend: IEC 60794-1-21 Method E11

Crush: IEC 60794-1-21 Method E3

Marking:

ABF assemblies have markings showing the cable type and fiber number, Year of manufacture, Length marking. The individual fiber core is identified by their color according to the standard fiber colors.

Air Blown Fiber Cables (Uni Tube)

AIR BLOWN FIBER Cable, Uni-Tube is ultra-lightweight with and small diameter and designed for metro feeder or access network to be blown into a micro duct by air-blown installation. As the cable allows the deployment of currently required fiber count, the micro cable provides a lower initial investment and the flexibility to install and upgrade to the latest fiber technologies after the initial installation. The outer PE layer provides a high level of protection and excellent installation properties and perfect blowing performance.



Application:

The Air Blown Uni-Tube Fiber Cable bundles assemblies consist of a number between 4~24 core, that enables installation of air blown fibers cables. The fiber assemblies are bundled with outer sheath is a PE layer that is of low friction. The design makes the fiber cable are suitable for the following applications.

- Outdoor and indoor connections
- FTTH and last mile connections
- Distribution networks with dense fiber capacity
- Terminal connections

Operation Features:

The Air Blown Fiber Cable Uni tube “ABC” bundles for FTTx systems are dedicated for the outdoor network infrastructure. The small diameter is suitable to be used in projects requiring large number of slots and the fiber number between 4~24 core optical fiber cable which can be routed into micro-ducts. The external diameter is between 3.8mm and 4.2mm, and optical fiber cable with the following features

- Smaller diameter
- Excellent environmental properties
- Perfect cable structure with high fiber density
- The outer sheath is a PE layer
- Fiber count between 4~24 core
- fiber bundle diameter: 3.8 – 4.2 mm
- Singlemode or Multimode
- Greater blowing distance
- Fiber: G.G652D, G.657A1, G.657A2

Air Blown Fiber Cables (Uni Tube)

Temperature Performance:

Storage and Transportation [°C]: -40 to +60

Installation [°C]: -20 to +50

Operation [°C]: -30 to +60

Mechanical Performance Test compliance:

Tension: IEC 60794-1-21 Method E1

Bend: IEC 60794-1-21 Method E11

Crush: IEC 60794-1-21 Method E3

Marking:

ABC assemblies have markings showing the cable type and fiber number, Year of manufacture, Length marking. The individual fiber core is identified by their color according to the standard fiber colors.

Air Blown Fiber Cables (Stranded Tubes)

AIR BLOWN FIBER Cable, Stranded Cable is ultra-lightweight with and small diameter and designed for metro feeder or access network to be blown into a micro duct by air-blown installation. As the cable allows the deployment of currently required fiber count, the micro cable provides a lower initial investment and the flexibility to install and upgrade to the latest fiber technologies after the initial installation. The outer PE layer provides a high level of protection and excellent installation properties and perfect blowing performance.



Application:

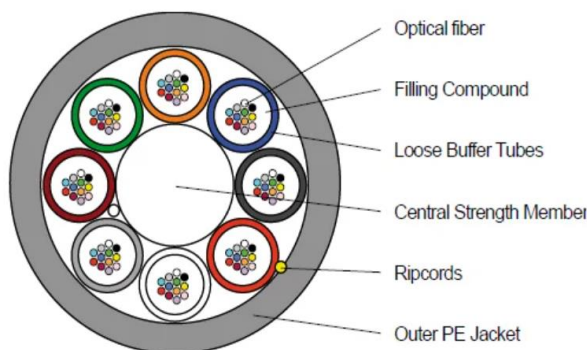
The Air Blown Stranded Fiber Cable bundles assemblies consist of a number between 12~288 core, that enables installation of air blown fibers cables. The fiber assemblies are bundled with outer sheath is a PE layer that is of low friction. The design makes the fiber cable are suitable for the following applications.

- Outdoor connections
- FTTH and last mile connections
- Distribution networks with dense fiber capacity
- Backbone network connections

Operation Features:

The Air Blown Stranded Fiber Cable “ABC” bundles for FTTx systems are dedicated for the outdoor network infrastructure. The small diameter is suitable to be used in projects requiring large number of slots and the fiber number between 12~288 core optical fiber cable which can be routed into micro-ducts. The external diameter is between 5.8mm and 11.2mm, and optical fiber cable with the following features

- Smaller diameter
- Excellent environmental properties
- Perfect cable structure with high fiber density
- The outer sheath is a PE layer
- Fiber count between 12~288 core
- fiber bundle diameter: 5.8 – 11.2 mm
- Singlemode or Multimode
- Greater blowing distance
- Fiber: G.G652D, G.657A1, G.657A2



Air Blown Fiber Cables (Stranded Tubes)

Temperature Performance:

Storage and Transportation [°C]: -40 to +60

Installation [°C]: -20 to +50

Operation [°C]: -30 to +60

Mechanical Performance Test compliance:

Tension: IEC 60794-1-21 Method E1

Bend: IEC 60794-1-21 Method E11

Crush: IEC 60794-1-21 Method E3

Marking:

ABC assemblies have markings showing the cable type and fiber number, Year of manufacture, Length marking. The individual fiber core is identified by their color according to the standard fiber colors.



Microduct Product Catalogue

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