

PRODUCT OVERVIEW

JETTED FIBER

FAST AND FLEXIBLE SOLUTION FOR FIBER OPTIC
NETWORK DEPLOYMENT



molex

WHAT'S IMPORTANT IN A COMMUNICATIONS NETWORK? >

With changing technology, headcount and working practices, bandwidth requirements can increase at unpredictable rates. The challenge is to design a network with the flexibility to cope with changing requirements, but without incurring unnecessary costs.

Molex Jetted fiber reduces the expense of installation and enables you to spread the cost of building your network over time.

HOW DOES JETTED FIBER WORK?

Traditionally fiber is installed by pulling fibers through ducts or sub-ducts. However this method can be damaging to fibers. The pulling force is unevenly distributed along the length of the cable and additional friction is created at any bends or junctions. This restricts the maximum length that can be installed in any one section.

Lubricants have been developed to help overcome these friction challenges. However over time their effectiveness often decreases. This means that ducts that were suitable at the time of the original installation may not be suitable if fibers need to be added or changed at a later date.

Jetted fiber uses blown air to guide fiber through the ducts, minimizing friction and ensuring force is applied more evenly along its length. This means that longer lengths of fiber can be installed, more quickly and more safely. Multiple fibers can be blown simultaneously, and as the technique does not rely on lubricants, the additional fibers can be installed inexpensively whenever required.

THE BENEFITS:

Limit capital investment: Only install the fiber you need right now: no need to "predict" future bandwidth or install dark or unused fibers

Easy MACs: Once a pathway is in place, it's easy to remove, replace or jet in additional fiber

Embrace the latest technology: Future fiber technologies can be deployed without disturbing existing networks

Longer cable runs: Fibers can be jetted distances up to 3,000 feet, with typical installation speeds of 150-200 feet/min

Multi-celled pathways: Configurations up to 24 pathways allow for rapid deployment of fiber today with permanent pathways in place for future growth

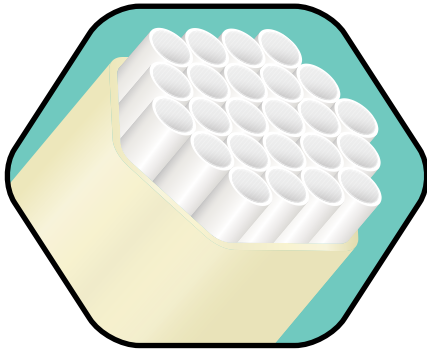
Jetted Fiber solution network design: End-to-end jetting eliminates the need for mid-span entries and prevents future disruption

Suitable for a range of facilities: Communication networks in facilities such as hospitals, corporate campuses, manufacturing facilities, data centers and broadcast studios are already using jetted fiber solutions

Molex Jetted Fiber is available in a variety of sizes and configurations to suit the installation needs of your entire network.

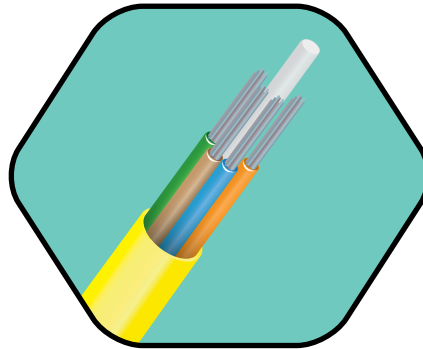


JETTED FIBER SOLUTION KEY COMPONENTS >



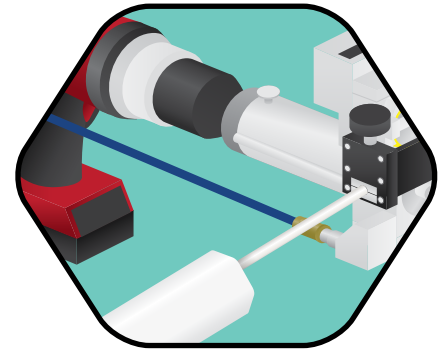
MICRODUCTS

- MicroDucts, either single or bundled as FuturePath (up to 24 MicroDucts)
- Riser, Plenum, LSZH or HDPE/OSP material
- Armored configuration available for protection from rodents or harsh environments
- SILICORE™ and SuperSILICORE™ construction reduces friction for fast fiber installations



MICROCABLE

- Fiber counts range from 2–96 strands
- Jettable indoor/outdoor rated fiber
- Available in Singlemode and Multimode (OM1, OM3, OM4)
- Fully GR-409 Compliant (TIA/EIA 568-C and ANSI/ICEA)
- NEC/NFPA Flame Rated (Riser and Plenum)
- Water-blocking feature inside cable
- Ribbon options available



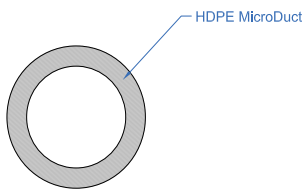
JETTING EQUIPMENT

- Handheld units, powered by standard cordless or corded drills
- “Air-assisted” jetting distances of up to 3,000 feet are possible
- Installation speeds of 150-200 feet/min are typical
- Easily and quickly installed by small crews of 3 people or less

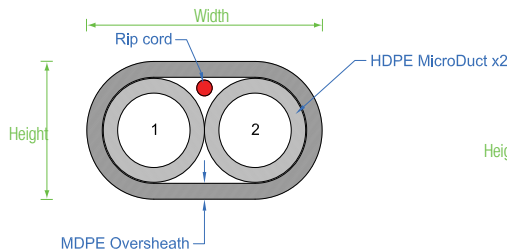
JETTED FIBER PATHWAY ➤

Molex Jetted Fiber (MJF) Pathway is available in many sizes and configurations to suit your network installation needs. Manufacturing materials are HDPE, riser, plenum and armored. MicroDuct sizes include 12.7 mm and 8.5 mm to accommodate your fiber requirements. Configurations from a single MicroDuct to 24 MicroDucts will allow for rapid deployment of fiber today with permanent pathways in place for future growth.

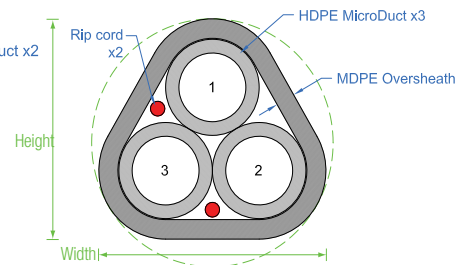
CONFIGURATIONS



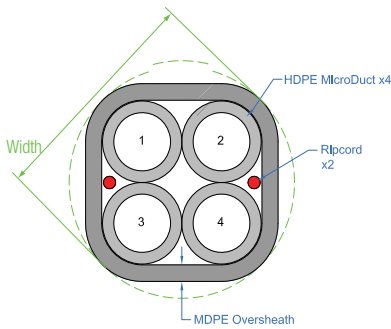
Individual



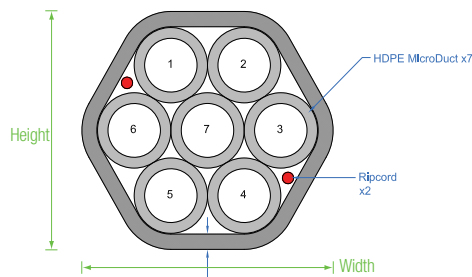
2-Way



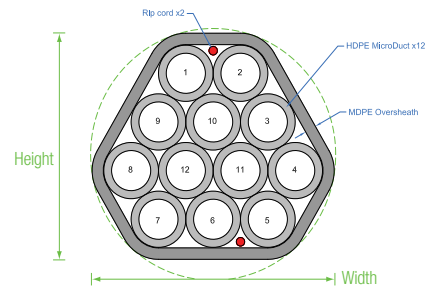
3-Way



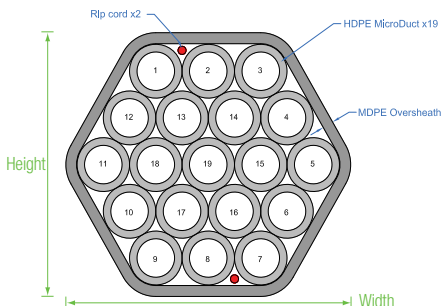
4-Way



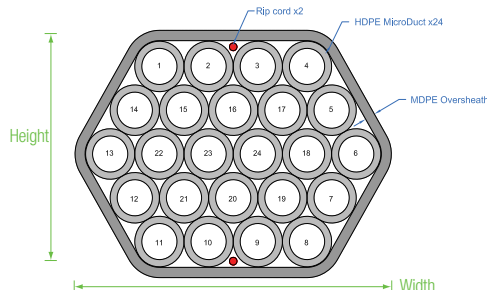
7-Way



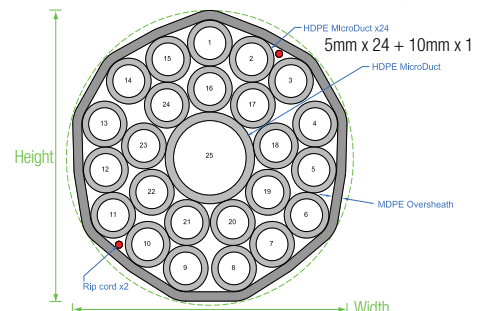
12-Way



19-Way



24-Way



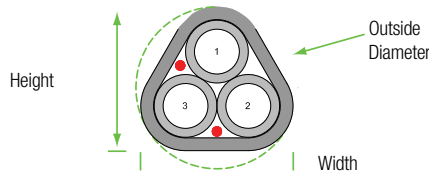
24 + 1-Way

JETTED FIBER PATHWAY >

MICRODUCT SYSTEM—8.5 MM/6 MM



MJF Pathway 24-Way Configuration



Outside Dimensions: Height x Width

Outside Diameter: Used to Calculate Fill Ratios

MicroDuct Specifications

PARAMETER	VALUE
OD	8.5 mm ± 0.10 (0.335" ± 0.004")
Wall Min.	1.14mm (0.045")
Wall Max.	1.24mm (0.049")
ID Min.	5.92mm (0.233")
Materials	HDPE, Riser, Plenum, Armored
Fiber Count	6, 12, 24, 48, 72, 96 strand MicroCable SM, MM
Shipping Length (in feet per reel)	1,000 2,500 4,000 5,000 6,000 Custom lengths available

MECHANICAL SPECIFICATIONS

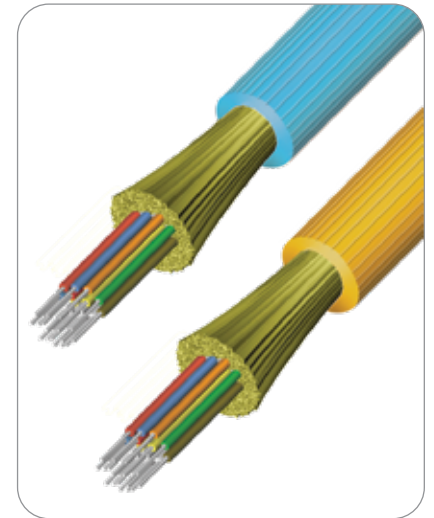
PARAMETER	CONFIGURATION						
	2-WAY	3-WAY	4-WAY	7-WAY	12-WAY	19-WAY	24-WAY
Outside Dimensions HxW (inches)	0.44/0.77	0.75/0.79	0.79/0.93	1.04/1.13	1.33/1.46	1.62/1.80	1.62/2.13
Outside Dimensions HxW (mm)	11.2/19.7	19.0/20.2	20.2/23.7	26.4/28.7	33.8/37.2	41.1/45.7	41.1/54.2
Outside Diameter (inches)	0.77	0.85	0.93	1.13	1.48	1.80	2.13
Outside Diameter (mm)	19.7	21.5	23.7	28.7	37.7	45.7	54.2
Over-Sheath Thickness	0.050"	0.060"	0.060"	0.060"	0.060"	0.060"	0.060"
HDPE Over-Sheath Color	Orange	Orange	Orange	Orange	Orange	Orange	Orange
Rated Over-Sheath Color	Natural	Natural	Natural	Natural	Natural	Natural	Natural
MicroDuct	Natural	Natural	Natural	Natural	Natural	Natural	Natural
HDPE Locate Wire (optional)	20 ga.	20 ga.	20 ga.	20 ga.	20 ga.	20 ga.	20 ga.
Rated Locate Wire	No	No	No	No	No	No	No
Ripcords	2	2	2	2	2	2	2
Bend Radius Supported	5"	8"	8"	11"	14"	16"	16"
Bend Radius Un-Supported	10"	16"	16"	22"	28"	32"	32"

For full specifications & ordering information, visit
> <https://www.molexces.com/products/fiber/jetted-fiber/>

JETTED FIBER CABLE ➤

MJF cables are designed to offer the most rugged and reliable enterprise-based jetted fiber solution in the market today. The patent pending cable design combines a light-weight, high-drag jacketing system that allows the cable to be jetted long distances.

The cable series also features additional attributes that set this product above and beyond traditional blown fiber cables. These enhanced features include mechanical strengthening that permits the cable to comply with industry-standard premise interconnect specifications. In addition, the MJF cable series feature flame-resistance characteristics which result in stand-alone riser and plenum rated options suitable for routing outside of the MicroDuct system. Because of these mechanical, environmental and optical qualifications, MJF cables can also be installed in third-party, flame-rated duct and pathway systems.



Features and Advantages

Flame rating options include: • Plenum OFNP per NFPA 262 OFNP • Riser OFNR per NFPA NEC 2005 Art 770.51(B)	Complies with NFPA/NEC build codes for fire resistance. Can be installed in eABF duct or third-party rated duct systems.
GR-20 Water-blocking	Reduces risk of moisture migration
GR-409-CORE compliant	Standards compliant stand-alone interconnect cable
Complete range of single-mode and multimode fibers	Supports 10G, 40G and 100G Ethernet architectures
Aramid-strengthened cable core	Robust tensile load bearing capable
OD compatible with 6 mm ID Micro-ducts	Higher density fiber pathway solutions
96-Fiber count fits into 8.5 mm x 6 mm Micro-duct	Up to 2,304 fibers per 24-way FuturePath Duct

Applications

- Horizontal distribution
- Backbone distribution
- Indoor/outdoor optical circuits
- Data center interconnect
- Low-cost fiber upgrade migration strategies

Specifications

FIBER TYPE	ISO DESIGNATION	MAXIMUM ATTENUATION (DB/KM)			OVERFILL LAUNCH MIN. BANDWIDTH (MHZ-KM)		EMBC (MHZ-KM)	GIGABIT ETHERNET MIN. LINK DISTANCE (METERS)		10 GIGABIT ETHERNET MIN. LINK DISTANCE (METERS)	
		850 NM	1300 NM	1550 NM	850 NM	1300 NM		850 NM	1300 NM	850 NM	1300 NM
62.5/125	OM1	3.5	1.2	N/A	200	600	N/A	300	550	32	N/A
50/125	OM2 BIF	3.5	1.2	N/A	500	500	N/A	600	600	82	N/A
50/125	OM3 BIF	3.5	1.2	N/A	1500	500	2000	1000	550	300	N/A
50/125	OM4 BIF	3.5	1.2	N/A	3500	550	4700	1040	550	550	N/A
SM	OS2 (G.652D/ G.657.A1)	N/A	0.4	0.4	N/A	N/A	N/A	N/A	5000	N/A	10000

BIF = Bend Insensitive Fiber

For full specifications & ordering information, visit
➤ <https://www.molexces.com/products/fiber/jetted-fiber/>

POPULAR ACCESSORIES

Molex offers a complete line of accessories designed to make your jetted cable installation successful. Highlighted below are a few of our most popular products. Please visit our website or contact your sales representative for more details.



Coupler



End Cap



End Plug



Gas Block Connector



Round MicroDuct Cutter



Longitudinal Sheath Slitter

MICROCOUPLERS AND END CAPS

- MicroCouplers are used to join two segments of MicroDucts; Straight and Transition Couplers are available
- End Caps and End Plugs keep MicroDucts clean and free of debris
- Gas Block Connectors provide a simple and effective gas seal between the MicroDuct and the fiber cable

Description	Part No
8.5mm Straight Coupler	MJF-201834
8.5mm x 8mm Transition Coupler	MJF-201884
8.5mm x 5mm Transition Coupler	MJF-201883
10mm x 8.5mm Transition Coupler	MJF-201881
8.5mm End Cap	MJF-201819
8.5 End Plug (for Riser only)	MJF-201523
8.5/6mm Gas Block Connector for Cable 3.3-4.0mm	MJF-202104

MICRODUCT CUTTERS

Using the correct tool for the job makes all the difference. Choose from a variety of cutters designed with a special purpose in mind – making the job go safely, smoothly, and quickly.

Description	Part No
MicroDuct Round Cutter	MJF-201745
MicroDuct Straight Cutter	MJF-201856
Ratchet Cutter for 3/4" to 1-1/2" Conduit	MJF-201923
Ratchet Cutter for 2" Conduit	MJF-201803
Longitudinal Sheath Slitter	MJF-203768

POPULAR ACCESSORIES ➤



MOUNTING BRACKET

- Expandable modular system designed to organize multiple ducts at termination
- Small and compact, requiring a minimum amount of mounting space
- Additional brackets can be added as needed; when ordering the Wall Mounting Plate Kit, please note you will also need to order a Top Mounting Bracket to complete the first row

Description	PKG	Color	Part No
8.5mm Duct Wall Mounting Plate Kit that secures a row of 8 ducts. Includes wall plate, and single base bracket, with 3 screws. Additional top mounting bracket (MJF-201719) will be required to complete the first row.	each	orange	MJF-202120
8.5mm Duct Top Mounting Bracket. Each bracket secures a row of 8 ducts, with 3 screws.	each	orange	MJF-201719



DISTRIBUTION BOX

A convenient indoor junction box where multiple ducts can be joined. For example, this would be used to drop a tube to an adjacent floor, while allowing other ducts to pass through to the next distribution box. The NEMA 12 box is a continuous hinge wall mount type box used in conjunction with Molex enclosure connectors.

Description	Configuration	Part No
Box 16x14x8 NEMA 12 JIC 1 Door Continuous Hinge Wall Mount - MDB	16 x 14 x 8 NEMA 12	MJF-202884
Box 20x20x7 NEMA 12 JIC 1 Door Continuous Hinge Wall Mount - MDB	20 x 20 x 7 NEMA 12	MJF-203021



ENCLOSURE CONNECTORS

Description	Part No
Enclosure Connector 8.5mm single	MJF-203048
Enclosure Connector 8.5mm 2-way	MJF-201915
Enclosure Connector 8.5mm 3-way	MJF-203049
Enclosure Connector 8.5mm 4-way	MJF-201916
Enclosure Connector 8.5mm 7-way	MJF-201917
Enclosure Connector 8.5mm 12-way	MJF-201918
Enclosure Connector 8.5mm 19-way	MJF-201919
Enclosure Connector 8.5mm 24-way	MJF-201920

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