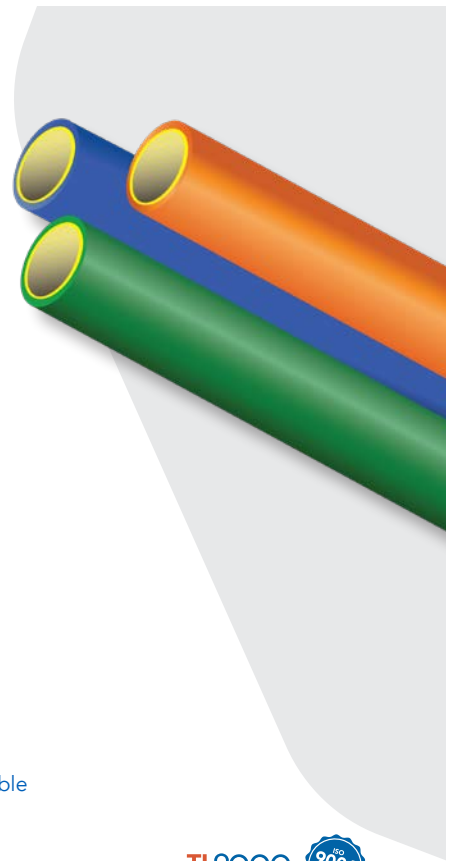


MICROTECHNOLOGY

HDPE MICRODUCTS

- HDPE MicroDucts are small, 5mm – 27mm in diameter
- Co-extruded with SuperSilicore™ permanent lining to reduce friction on cable installs
- Revitalize existing networks with over-rides
- MicroDucts can accommodate up to 432 fiber MicroCables



installation types

	size range available (OD/ID mm)			
Subdivided Conduit	27/20	16/12	12/10	7/5.5
Overrides	22/16	14/10	10/8	7/3.5
Trench	18/14	12.7/10	8.5/6	5/3.5
Directional Bore MicroTrench	16/13	12.7/8	8/6	

microduct colors



FEATURES	STANDARD
	SEQUENTIAL FOOT OR METER MARKINGS Custom print streams available
	SUPER SILICORE is co-extruded with the tough HDPE wall creating a permanent, super slippery interior lining. It has the lowest co-efficient of friction compared to other options, no performance loss in all temperature conditions and functions without additional wet lubricants
	INTERNAL RIBS standard on most MicroDucts (3.5mm ID are designed with a standard smooth interior)
	OPTIONS
	FIRE RETARDANT Available in Riser, Plenum or Low Smoke Zero Halogen (LSZH)
	PRE-INSTALLED FIBER OR PULL-STRING OPTION Fiber cable or cordage can be factory preinstalled; alternatively, MicroDuct can be supplied with a factory pre-installed pull string for pulling in fiber optic cable



product recommendations:

Dura-Line manufactures many different sizes and configurations of MicroDucts for a variety of applications, such as: Backbone, Back-haul, Direct Buried, Directional Drilling, Over-Rides, and populating existing conduits. In order to get the best product performance, please follow the suggested guidelines for choosing the best MicroDuct size.

DIRECT BURIED (DB): In applications where the MicroDucts will be directly buried, or bundled into FuturePath configurations, we recommend using a thicker walled MicroDuct to maintain the optimum fill ratios and have faster, easier installations.

DIRECT INSTALL (DI): In applications where the MicroDuct or FuturePath configuration will be placed inside an existing conduit, like an Over-Ride or populating an existing conduit, we recommend using a thinner walled product where protection is provided by the existing conduit and space is more sensitive.

MICRODUCT TECHNICAL SPECIFICATIONS

MICRODUCT SIZE (MM)	APPLICATION DB/DI	NOM OD (MM/IN)	MIN ID (MM/IN)	WEIGHT (#/FT)	BEND RADIUS SUP (IN)*	BEND RADIUS UNSUP (IN)*	SAFE WORKING PULL STRENGTH (LBS) †
5/3.5	DI	5/0.20	3.4/0.13	0.006	2	4	33
7/3.5	DB	7/0.28	3.7/0.15	0.018	3	6	97
7/5.5	DI	7/0.28	5.6/0.22	0.009	3	6	49
8/6	DI	8/0.31	5.8/0.23	0.014	3	6	76
8.5/6	DI/DB	8.5/0.33	5.9/0.23	0.018	3	7	96
10/8	DI	10/0.39	8.1/0.32	0.018	4	8	93
12/10	DI	12/0.47	9.9/0.39	0.021	5	9	114
12.7/10	DI/DB	12.7/0.50	9.8/0.39	0.032	5	10	167
12.7/8	DB	12.7/0.50	7.9/0.31	0.05	5	10	268
14/10	DB	14/0.55	9.8/0.39	0.05	6	11	264
16/12	DB	15.90/0.63	11.6/0.46	0.058	6	13	305
16/13	DI	16/0.63	12.8/0.5	0.043	6	13	229
18/10	DB	18/0.71	10/0.39	0.11	7	14	581
18/14	DB	18/0.71	13.6/0.54	0.066	7	14	352
22/16	DB	22/ 0.87	15.4/0.61	0.116	9	18	615
27/20	DB	26.67/1.050	20.7/0.81	0.132	11	21	701

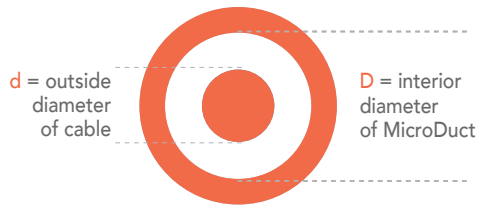
* Unsupported Bend Radius guidelines should be followed during the installation process. The Supported Bend Radius are post-installation measurements.

† Safe working pull strength is calculated at 80% of tensile or breaking strength



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$(d/D)*100 = \% \text{ Fill Ratio}$

To calculate the fill ratio, divide the cable diameter (d) by the interior dimension (D) of the MicroDuct. To achieve maximum jetting performances, Dura-Line recommends a fill ratio between 50% and 75%. Several factors impact jetting performance, including the condition of route, bends and equipment.

RECOMMENDED FIBER FILL RATIOS

MICRODUCT SIZE* (MM)	FIBER COUNT†	FIBER CABLE OD RANGE (MM)
5/3.5	up to 12	1.8 – 2.6
7/5.5	up to 48	2.8 – 4.1
8.5/6	up to 96	3.0 – 4.5
10/8	up to 96	4.0 – 6.0
12.7/10	up to 144	5.0 – 7.5
14/10	up to 144	5.0 – 7.5
16/12	up to 192	6.0 – 9.0
16/13	up to 288	6.5 – 9.8
18/10	up to 144	5.0 – 7.5
18/14	up to 288	7.0 – 10.5
22/16	up to 432	8.0 – 12.0
27/20	up to 432	10.0 – 15.0

*Other sizes available, please contact Customer Service for details

†Fiber count subject to change

RECOMMENDED MICRODUCT FILL RATIOS (# OF MICRODUCTS PER STANDARD DUCT SIZE SDR11 OR SDR13.5)

DUCT SIZE	16MM/13MM	12.7MM/10 MM	12MM/10MM	10MM/8MM
1"	N/A	2	2	3
1.25"	N/A	3	4	5
1.5"	2	4	6	8
2"	5	7	8	10

Numbers can vary based on the path of the existing conduit, bend radii, elevation changes, distances, and installation method.



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