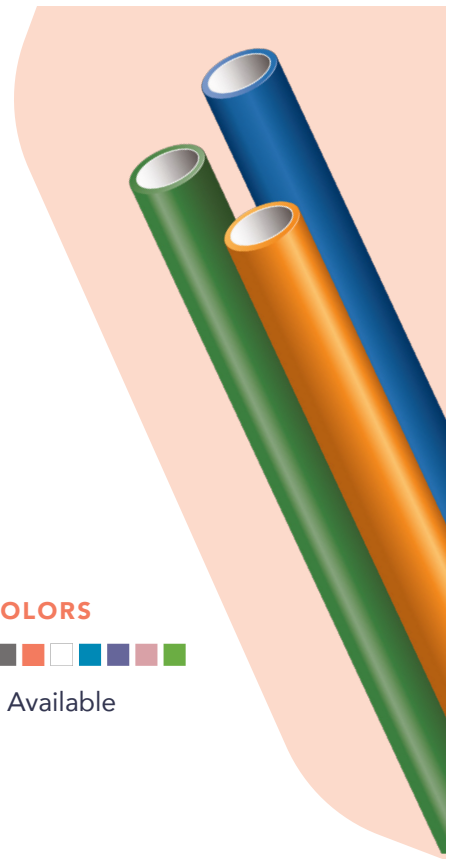


MICROTECHNOLOGY

MICRODUCTS HDPE

- ▶ HDPE MicroDucts available from 5mm OD – 27mm OD
- ▶ Co-extruded with SILICORE® ULF permanent lining to reduce friction on cable installs
- ▶ Utilize space in an occupied duct
- ▶ Revitalize existing networks with OverRides
- ▶ Substantially reduce construction costs & deployment time
- ▶ Install up to 432 count fiber MicroCables



INSTALLATION TYPES

Subdivided Conduit
OverRides
Plow Installations
Trench Installations
Directional Bore
MicroTrench
Tray Installations

SIZE RANGE AVAILABLE (OD/ID MM)

27/20	16/12	8.5/6
22/18	14/10	8/6
22/16	12.7/10	7/3.5
18/14	12.7/8	5/3.5
18/10	12/10	
16/13	10/8	

STANDARD COLORS



Custom Colors Available

FEATURES

STANDARD

SPECIFICATIONS/DETAILS MicroDucts are smaller diameter conduit, manufactured from flexible HDPE (High Density Polyethylene)

FILL RATIO Choose the correct MicroDuct size based on the Outer Diameter (OD) of desired MicroCable. Dura-Line recommends a fill ratio of 50% to 75% for optimal cable placement performance. Several factors impact jetting distance including the condition of route, bends, and equipment.

CONDUIT MARKINGS Permanent marking along MicroDuct includes: material, relevant standards, production info, and sequential feet or meter markings. Custom options available.

CO-EXTRUDED Lining SILICORE® ULF (Ultra-Low Friction) is co-extruded inside the HDPE wall creating a slick, permanent, interior lining. SILICORE® ULF exhibits no loss in performance over time or in extreme temperature conditions.

INTERNAL RIBS Standard (except 3.5mm ID which are designed with a standard smooth interior)

OPTIONS

PRE-INSTALLED STRING Factory pre-installed Pull String available in MicroDucts to aid in cable placement.

PRE-INSTALLED FIBER Fiber cable or cordage can be factory pre-installed in MicroDucts



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PRODUCT RECOMMENDATIONS



APPLICATION (DI/DB) If a MicroDuct size has a thicker wall, it is recommended for direct bury (DB) applications either alone or in a FuturePath configuration, and will maintain optimal fill ratios for faster, easier installations. If the MicroDuct size has a thinner wall, it is optimized for placement inside an existing conduit, like an Over-Ride or populating an existing conduit. The direct install (DI) product is chosen where protection is provided by the existing conduit and space is more sensitive.

MICRODUCTS TECHNICAL SPECIFICATIONS

MICRODUCT SIZE (MM)	APPLICATION (DB/DI)	NOM OD (MM/IN)	MIN ID (MM/IN)	WEIGHT (LB/FT)	BEND RADIUS SUP (IN)	BEND RADIUS UNSUP (IN)	SWPS (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
8/6	DI	8/0.31	5.8/0.23	0.014	3	6	76
8.5/6	DI,DB	8.5/0.34	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
12.7/8	DB	12.7/0.50	7.9/0.31	0.050	5	10	268
12.7/10	DI,DB	12.7/0.50	9.8/0.39	0.032	5	10	167
14/10	DB	14/0.55	9.8/0.39	0.050	6	11	264
16/12	DB	15.9/0.63	11.6/0.46	0.058	6	13	305
16/13	DI	16/0.63	12.8/0.50	0.043	6	13	229
18/10	DB	18/0.71	10/0.39	0.110	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
22/18	DB, DI	22/0.87	18/0.71	0.083	9	17	425
27/20	DB	26.7/1.05	20.7/0.81	0.132	11	21	701

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

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



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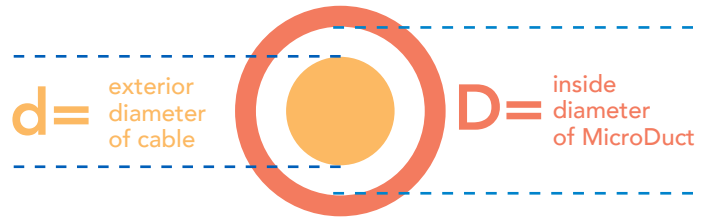
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CALCULATE $(d/D)*100=\%$ CABLE FILL RATIO

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
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
22/18	Up to 432	9.0 - 13.5
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

DUCT SIZE	16MM/13MM	12.7MM/10MM	12MM/10MM	10MM/8MM
1"	1	2	2	3
1 1/4"	2	3	4	5
1 1/2"	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.