MICROTECHNOLOGY

MICRODUCTS HDPE

- HDPE MicroDucts are small starting at a 5mm diameter
- Coextruded with SILICORE® ULF permanent lining to reduce friction on cable installs
- Utilize space in an occupied duct
- Revitalize existing networks with Over-Rides
- Substantially reduce construction costs & deployment time
- Install up to 432 count fiber MicroCables
- Check specifications below

INSTALLATION TYPES

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

SIZE RANGE AVAILABLE (OD/ID MM)

27/20	14/10	8/6
22/16	12.7/10	7/5.5
18/14	12.7/8	7/3.5
18/10	12/10	5/3.5
16/13	10/8	
16/12	8.5/6	

STANDARD COLORS

Custom Colors Available

FEATURES

STANDARD

SEQUENTIAL FOOT OR METER MARKINGS Custom print streams available

SILICORE® ULF (Ultra-Low Friction) is co-extruded inside the HDPE wall creating a slick, permanent, interior lining. With a coefficient of friction 60% lower than standard HDPE conduit without the aid of wet lubricants, SILICORE ULF exhibits no loss in performance over time or in extreme temperature conditions.

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.

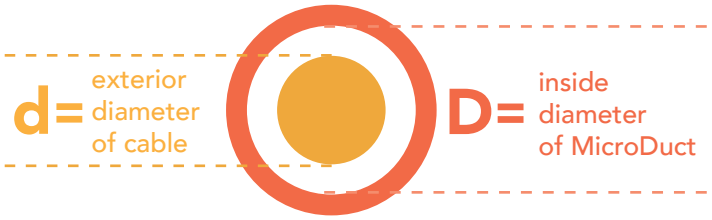
DIRECT INSTALL (DI): In applications where the MicroDuct or FuturePath configuration will be placed inside an existing conduit, like an Over-Ride or populating an existing conduit, we recommend using a thinner walled product where protection is provided by the existing conduit and space is more sensitive.

MICRODUCT-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	5/0.2	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	8.5/0.34	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	12.7/0.5	7.9 / 0.31	0.05	5	10	268
12.7/10	DB, DI	12.7/0.5	9.8 / 0.39	0.032	5	10	167
14/10	DB	14/0.55	9.8 / 0.39	0.05	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 / 0.5	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	26.7/1.05	20.7 / 0.81	0.132	11	21	701

Calculate (d/D) * 100 = % Cable Fill Ratio

(OD CABLE / ID MICRODUCT) * 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
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.