

CORNING



Smaller Cables, Bigger Possibilities



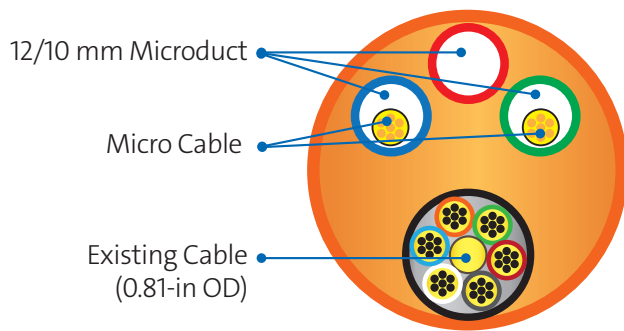


FuturePath Flex

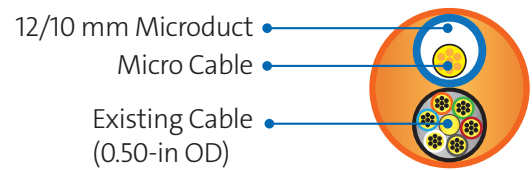
Microduct Overrides in Existing Occupied Conduit

Microduct overrides offer a cost-effective solution for congested pathways with existing cables. Utilizing the existing pathway offsets the cost of new construction while gaining capacity for expansion. Some common examples of microduct overrides are shown here, but many other variations are possible.

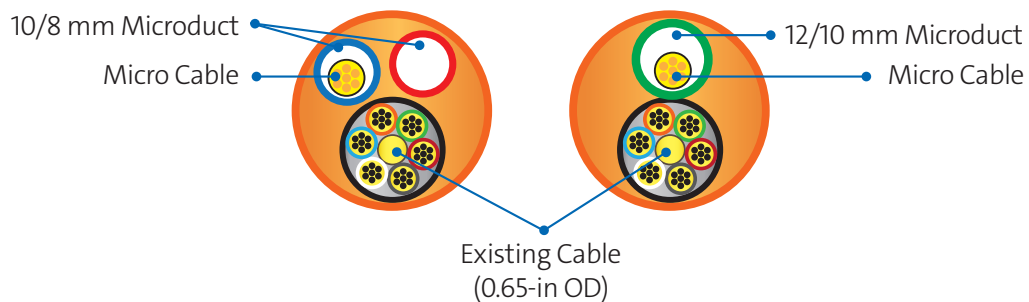
2-in Duct



1-in Duct



1.25-in Duct



MiniXtend® Cable Portfolio

Outlined below are the smallest and optimal microduct sizes for each cable in the MiniXtend® cable portfolio.

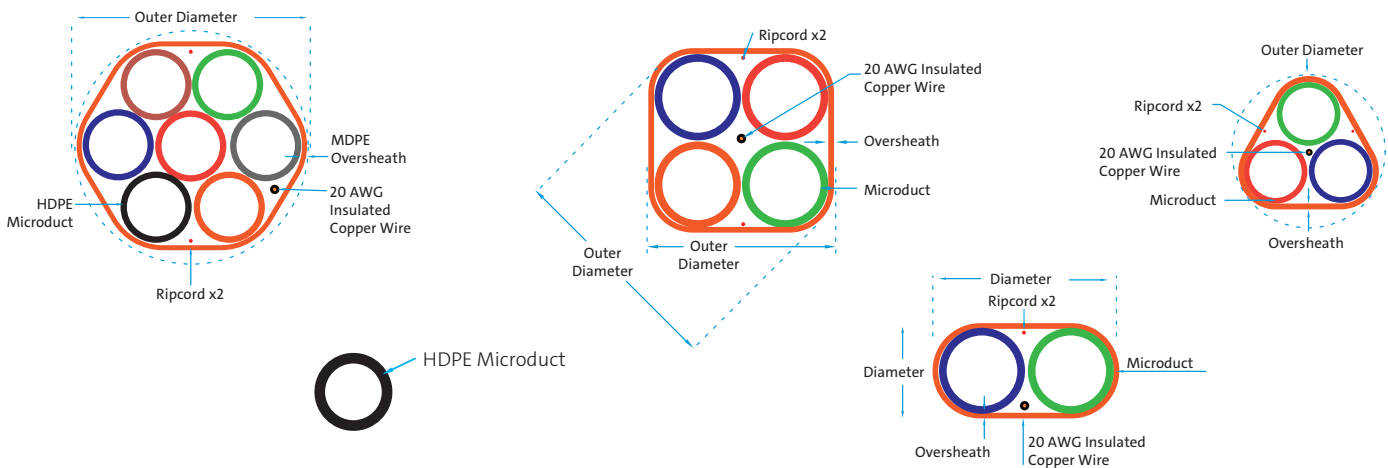
	MiniXtend® Cables With Binderless* FastAccess® Technology			MiniXtend® HD Cables With Binderless* FastAccess® Technology						Indoor/Outdoor Riser MiniXtend Cables		
Fiber Count	12-72 F	96 F	144 F	144 F	192 F	216 F	288 F	288	432	12-72 F	96 F	144 F
Cable OD	5.4 mm	6.3 mm	8.1 mm	6.3 mm	7.5 mm	8.0 mm	9.7 mm	8.1 mm	10.8 mm	9.7 mm	10.6 mm	13.2 mm
Smallest Duct ID (fill ratio)	8.0 mm (68%)	8.0 mm (79%)	10.0 mm (81%)	8.0 mm (79%)	10.0 mm (75%)	10.0 mm (80%)	12.0 mm (81%)	10.0 mm (81%)	14.0 mm (77%)	13.0 mm (75%)	13.0 mm (82%)	16 mm (82.5%)
Optimal Duct ID (fill ratio)	10.0 mm (54%)	10.0 mm (63%)	12.0 mm (68%)	10.0 mm (63%)	12.0 mm (63%)	12.0 mm (67%)	14.0 mm (69%)	12.0 mm (68%)	16.0 mm (68%)	14.0 mm (69%)	14 mm (76%)	20.0 mm (66%)

Corning's proprietary Binderless FastAccess® technology refers to the combination of a Corning FastAccess technology jacket with an innovative technology used to bind cable construction through the manufacturing process, eliminating the use of binder yarns and waterblocking tapes.

Dura-Line Microduct Sizes and FuturePath Configurations

Microduct Size (OD/ID mm)	Application (Installation Options)	Configuration (Number of Microducts)
10/8	Direct Install (in an existing conduit system)	Single, 2-way, 3-way, 4-way, 7-way FuturePath
12.7/10	Direct Install/Direct Buried (functions well in both environments)	Single, 2-way, 3-way, 4-way, 7-way FuturePath
12/10	Direct Install	Single, 2-way, 3-way, 4-way, 7-way FuturePath
14/10	Direct Buried	Single, 2-way, 3-way, 4-way, 7-way FuturePath
16/12	Direct Buried	Single, 2-way, 3-way, 4-way, 7-way FuturePath
16/13	Direct Install	Single, 2-way, 3-way, 4-way, 7-way FuturePath
18/14	Direct Buried, Plenum, Riser, General	Single, 2-way, 3-way, 4-way, 7-way FuturePath
27/20	Direct Buried, General	Single, 2-way, 3-way, 4-way FuturePath

Each configuration is available with a toning wire. Aerial versions are also available.



Filling an Empty Conduit With Individual Microducts

Recommended Microduct Fill Ratios: Number of microducts per standard duct size SDR11 or SDR13.5


Duct Size	16 mm/13 mm	12.7 mm/10 mm	12 mm/10 mm	10 mm/8 mm
1 in	N/A	2	2	3
1.25 in	N/A	3	4	5
1.5 in	2	4	6	8
2 in	5	7	8	10

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

Optimized Duct Space Utilization (*Empty Duct Scenario*)


An empty 1.25-in duct can accommodate 3 x 12.7/10 mm, or 5 x 10/8 mm microducts

MiniXtend® Cables
with Binderless* FastAccess® Technology



3 x 12.7/10 mm Microducts

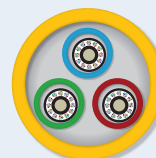
- 3 x 144 F cables
- 8.1 mm OD
- Total = 432 F



5 x 10/8 mm Microducts


- 5 x 96 F cables
- 6.3 mm OD
- Total = 480 F

MiniXtend® HD Cables
with Binderless* FastAccess® Technology



3 x 12.7/10 mm Microducts

- 3 x 288 F cables
- 8.1 mm OD
- Total = 864 F



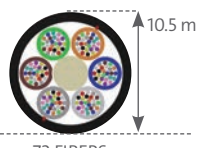
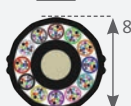

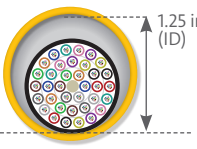
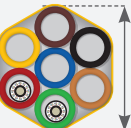
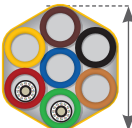
5 x 10/8 mm Microducts

- 5 x 144 F cables
- 6.3 mm OD
- Total = 720 F

MiniXtend Cables

Micro technology means higher density and a smaller footprint today AND the simplest path to future growth tomorrow.

- Defer your capital investment — only install the fiber you need today
- Easy technology upgrades
- Empty pathways available for future growth

Per Cable Fiber Density		
<p>Loose Tube (LT) Cable</p>  <p>10.5 mm</p> <p><u>72 FIBERS</u></p>	<p>MiniXtend Cable with Binderless FastAccess Technology <u>144 F</u></p>  <p>8.1 mm</p> <p><u>100% MORE FIBERS</u></p>	<p>MiniXtend HD Cable with Binderless FastAccess Technology <u>288 F</u></p>  <p>8.1 mm</p> <p><u>300% MORE FIBERS</u></p>
<p>↓</p>  <p>1.25 in (ID)</p> <p><u>432 FIBERS</u> (maximum LT fiber count)</p>	<p>↓</p> <p>Day One: 2 x 144 = <u>288 F</u></p>  <p>1.64 in</p> <p>Future: up to <u>1,008 FIBERS</u></p>	<p>↓</p> <p>Day One: 2 x 288 = <u>576 F</u></p>  <p>1.64 in</p> <p>Future: up to <u>2,016 FIBERS</u></p>

Corning's proprietary Binderless FastAccess® technology refers to the combination of a Corning FastAccess technology jacket with an innovative technology used to bind cable construction through the manufacturing process, eliminating the use of binder yarns and waterblocking tapes.