

**MICROTECHNOLOGY**

# FUTUREPATH HYBRID 3-WAY

- FuturePath configuration mixing a popular MicroDuct size with a common Smoothwall duct size
- A perfect choice for customers who need to place micro cables and larger standard fiber cables at the same time, or would like to plan for future possibilities
- Multiple pathways for one installation cost, allows flexibility and future growth
- No special tools or equipment needed. Installation uses the same as traditional conduit or innerduct

**CONFIGURATIONS**

- 1 1/4" SDR 11 (1) + 18/14mm MicroDucts (2)
- 1 1/4" SDR 13.5 (1) + 22/16mm MicroDucts (2)
- 2" SDR 13.5 (1) + 22/16mm MicroDucts (2)

**INSTALLATION TYPES**

- Plow
- Trench
- MicroTrench
- Directional Bore
- Tray

**STANDARD COLORS**

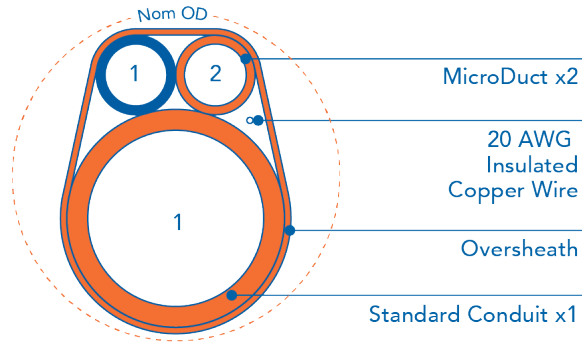
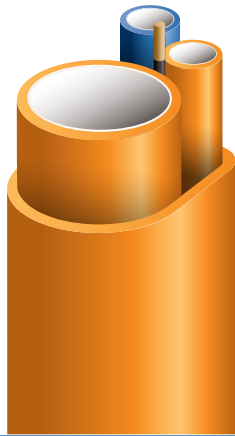
■ Oversheath ■ MicroDucts ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ Custom colors available



FEATURES

<b>STANDARD</b>
<b>SPECIFICATIONS/DETAILS</b> FuturePath configuration consisting of two or more different sizes of conduit and or MicroDucts. Manufactured from flexible HDPE (High Density Polyethylene). All Smoothwall conduit dimensions meet or exceed one or more of the following: ASTM F-2160, ASTM D-3350, ASTM D-3485, NEMA TC-7, UL 651A, UL 1990, Bellcore GR-356.
<b>FILL RATIO</b> 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.
<b>CONDUIT MARKINGS</b> Permanent marking along FuturePath includes: material, relevant standards, production info, and sequential feet or meter markings. Custom options available.
<b>CO-EXTRUDED LINING</b> 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.
<b>INTERNAL RIBS</b> Standard on MicroDucts, available as an option in the Conduits
<b>LOCATE WIRE</b> Available with or without a 20 AWG insulated copper wire
<b>RIP CORDS</b> For easy opening of the oversheath

# FUTUREPATH HYBRID 3-WAY TECHNICAL SPECIFICATIONS

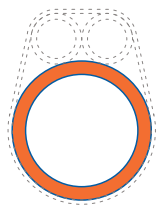


DUCT TYPES	MAX OD (IN)	HEIGHT (IN)	WIDTH (IN)	OVERSHEATH (IN)	WEIGHT (LB/FT)	BEND RADIUS SUP (IN)	BEND RADIUS UNSUP (IN)	SWPS (LB)
1 1/4" SDR 11 + 18/14mm	2.54	2.46	1.80	0.070	0.644	38	64	3,500
1 1/4" SDR 13.5 + 22/16mm	2.68	2.56	1.84	0.050	0.893	28	46	4,801
2" SDR 13.5 + 22/16mm	3.39	3.32	2.52	0.070	1.003	63	83	5,441

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

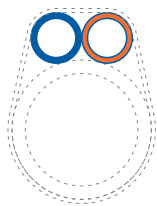
\* Unsupported Bend Radius guidelines should be followed during the installation process. The Supported Bend Radius are post-installation measurements.

## SMOOTHWALL DUCT TECHNICAL SPECIFICATIONS



DUCT TYPE	OD (IN)	MIN ID (IN)
1 1/4" SDR 11	1.660	1.318
1 1/4" SDR 13.5	1.660	1.374
2" SDR 13.5	2.375	1.981

## MICRODUCT TECHNICAL SPECIFICATIONS



MICRODUCT SIZE	OD (MM/IN)	MIN ID (MM/IN)
18/14MM	18/0.71	13.6/0.54
22/16MM	22/0.87	15.4/0.61

## MICROTECHNOLOGY

# FUTUREPATH HYBRID 6-WAY

- FuturePath configuration mixing variations of popular MicroDuct sizes with common Smoothwall duct sizes and materials
- A perfect choice for customers who need to place micro cables and larger standard fiber cables at the same time, or would like to plan for future possibilities
- Multiple pathways for one installation cost, allows flexibility and future growth
- No special tools or equipment needed; installation uses the same as traditional conduit or innerduct

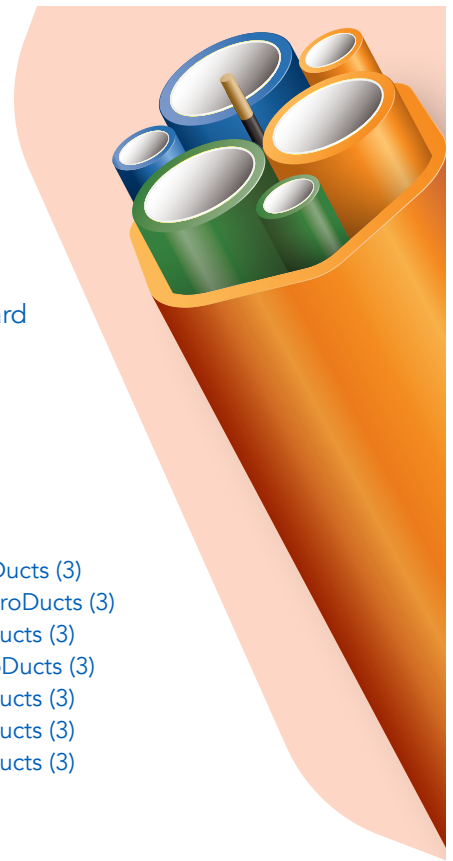
### INSTALLATION TYPES

Plow	Directional Bore
Trench	Tray
MicroTrench	

### CONFIGURATIONS

- 1 1/4" TSIDR 9 (3) + 18/14mm MicroDucts (3)
- 1 1/4" TSIDR 11.5 (3) + 18/14mm MicroDucts (3)
- 1 1/4" SDR 11 (3) + 18/14mm MicroDucts (3)
- 1 1/4" SDR 13.5 (3) + 18/14mm MicroDucts (3)
- 1 1/4" SDR 11 (3) + 22/16mm MicroDucts (3)
- 1 1/2" SDR 11 (3) + 18/14mm MicroDucts (3)
- 1 1/2" SDR 11 (3) + 22/16mm MicroDucts (3)

### STANDARD COLORS



## STANDARD

**SPECIFICATIONS/DETAILS** FuturePath configuration consisting of two or more different sizes of conduit and or MicroDucts. Manufactured from flexible HDPE (High Density Polyethylene). All Smoothwall conduit dimensions meet or exceed one or more of the following: ASTM F-2160, ASTM D-3350, ASTM D-3485, NEMA TC-7, UL 651A, UL 1990, Bellcore GR-356.

**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 FuturePath 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 on MicroDucts, available as an option in the Conduits

**LOCATE WIRE** Available with or without a 20 AWG insulated copper wire

**RIP CORDS** For easy opening of the oversheath

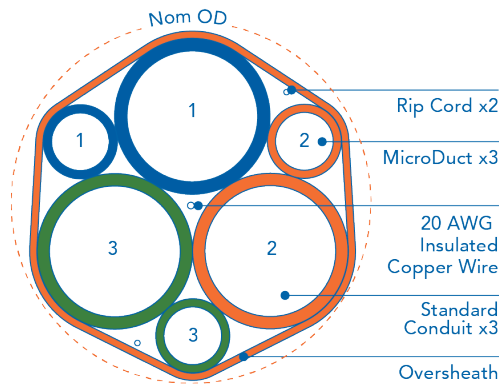
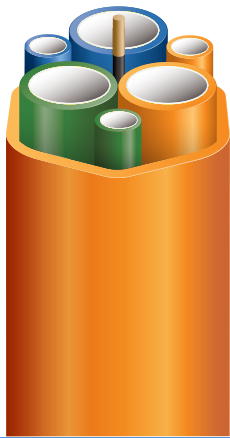
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# FUTUREPATH HYBRID 6-WAY TECHNICAL SPECIFICATIONS



DUCT TYPES	MAX OD (IN)	HEIGHT (IN)	WIDTH (IN)	OVERSHEATH (IN)	WEIGHT (LB/FT)	BEND RADIUS SUP (IN)	BEND RADIUS UNSUP (IN)	SWPS (LB)
1 1/4" TSIDR 9 + 18/14mm	3.49	3.45	3.24	0.070	1.290	52	87	7,021
1 1/4" TSIDR 11.5 + 18/14mm	3.35	3.34	3.12	0.070	1.116	50	84	5,963
1 1/4" SDR 11 + 18/14mm	3.72	3.61	3.46	0.070	1.448	56	93	7,882
1 1/4" SDR 11 + 22/16mm	3.82	3.77	3.45	0.070	1.610	57	96	8,738
1 1/4" SDR 13.5 + 18/14mm	3.72	3.61	3.46	0.070	1.300	56	93	6,880
1 1/2" SDR 11 + 18/14mm	4.23	3.98	3.94	0.070	1.773	63	106	9,305
1 1/2" SDR 11 + 22/16mm	4.23	4.14	3.94	0.070	1.868	63	106	10,147

† 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.

## SMOOTHWALL DUCT TECHNICAL SPECIFICATIONS

DUCT TYPE	OD (IN)	MIN ID (IN)
1 1/4" TSIDR 9	1.530	1.230
1 1/4" TSIDR 11.5	1.488	1.224
1 1/4" SDR 11	1.660	1.318
1 1/4" SDR 13.5	1.660	1.374
1 1/2" SDR 11	1.900	1.512

## MICRODUCT TECHNICAL SPECIFICATIONS

MICRODUCT SIZE	OD (MM/IN)	MIN ID (MM/IN)
18/14mm	18/0.71	13.6/0.54
22/16mm	22/0.87	15.4/0.61



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## MICROTECHNOLOGY

# FUTUREPATH HYBRID 8-WAY

- FuturePath configuration mixing two popular MicroDuct sizes
- A perfect choice for customers who need to place two different micro cables at the same time, or would like to plan for future possibilities
- Multiple pathways for one installation cost, allows flexibility and future growth
- No special tools or equipment needed; installation uses the same as traditional conduit or innerduct

### INSTALLATION TYPES

Plow  
Trench  
MicroTrench

Directional Bore  
Tray

### STANDARD COLORS

■ Oversheath ■ ■ ■ ■ ■ ■ ■ ■ MicroDucts  
custom colors available

### CONFIGURATIONS

16/13mm MicroDuct (1) + 12.7/10mm MicroDucts (7)



### STANDARD

**SPECIFICATIONS/DETAILS** FuturePath configuration consisting of two or more different sizes of conduit and or MicroDucts. 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 FuturePath 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 on MicroDucts

**LOCATE WIRE** Available with or without a 20 AWG insulated copper wire

**RIP CORDS** For easy opening of the oversheath

FEATURES

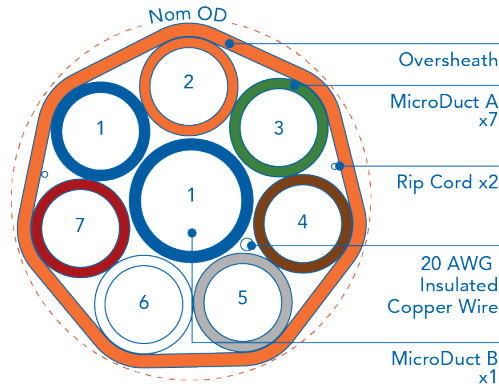
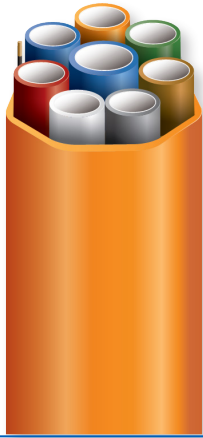


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# FUTUREPATH HYBRID 8-WAY TECHNICAL SPECIFICATIONS

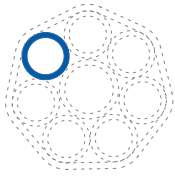


DUCT TYPES	MAX OD (IN)	HEIGHT (IN)	WIDTH (IN)	OVERSHEATH (IN)	WEIGHT (LB/FT)	BEND RADIUS SUP (IN)	BEND RADIUS UNSUP (IN)	SWPS (LB)
16/13mm + 12.7/10mm	1.79	1.74	1.74	0.070	0.416	18	36	2,215

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

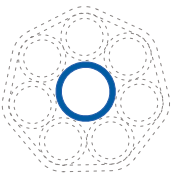
\* Unsupported Bend Radius guidelines should be followed during the installation process. The Supported Bend Radius are post-installation measurements.

## MICRODUCT TECHNICAL SPECIFICATIONS



MICRODUCT SIZE	OD (MM/IN)	MIN ID (MM/IN)
12.7/10mm	12.7/0.50	9.8/0.39

## MICRODUCT TECHNICAL SPECIFICATIONS



MICRODUCT SIZE	OD (MM/IN)	MIN ID (MM/IN)
16/13mm	16/0.630	12.8/0.50

## MICROTECHNOLOGY

# FUTUREPATH HYBRID 9-WAY

- FuturePath configuration mixing two popular MicroDuct sizes
- A perfect choice for customers who need to place two different micro cables at the same time, or would like to plan for future possibilities
- Multiple pathways for one installation cost, allows flexibility and future growth
- No special tools or equipment needed; installation uses the same as traditional conduit or innerduct

### INSTALLATION TYPES

Plow  
Trench  
MicroTrench

Directional Bore  
Tray

### STANDARD COLORS

■ Oversheath ■ ■ ■ ■ ■ ■ ■ ■ ■ MicroDucts

MicroDucts: (1) Blue, (2) Blue, (3) Orange, (4) Green, (5) Brown, (6) Grey, (7) White, (8) Red (9) Black



### CONFIGURATIONS

22/16mm MicroDuct (1) + 12.7/10mm MicroDucts (8)

## FEATURES

### STANDARD

**SPECIFICATIONS/DETAILS** FuturePath configuration consisting of two or more different sizes of conduit and or MicroDucts. 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 FuturePath 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 on MicroDucts

**LOCATE WIRE** Available with or without a 20 AWG insulated copper wire

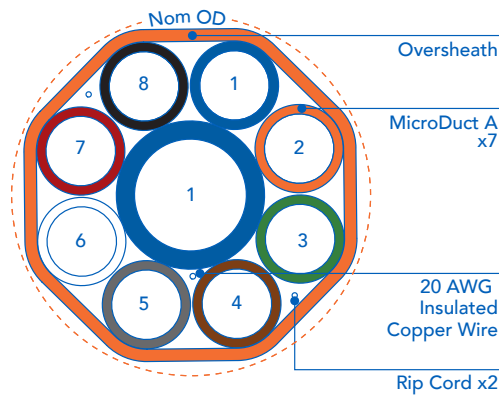
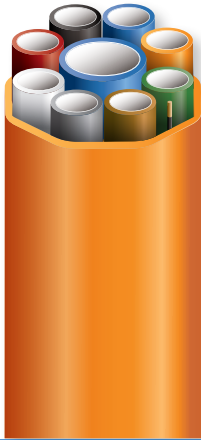
**RIP CORDS** For easy opening of the oversheath



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# FUTUREPATH HYBRID 9-WAY TECHNICAL SPECIFICATIONS

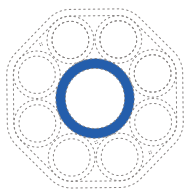


DUCT TYPES	MAX OD (IN)	HEIGHT (IN)	WIDTH (IN)	OVERSHEATH (IN)	WEIGHT (LB/FT)	BEND RADIUS SUP (IN)	BEND RADIUS UNSUP (IN)	SWPS (LB)
22/16mm + 12.7/10mm	1.98	1.98	1.98	0.070	0.528	20	40	2,811

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

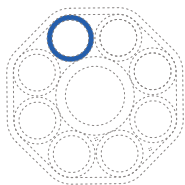
\* Unsupported Bend Radius guidelines should be followed during the installation process. The Supported Bend Radius are post-installation measurements.

## MICRODUCT A TECHNICAL SPECIFICATIONS



MICRODUCT SIZE	OD (MM/IN)	MIN ID (MM/IN)
22/16mm	22/0.87	15.4/0.61

## MICRODUCT B TECHNICAL SPECIFICATIONS



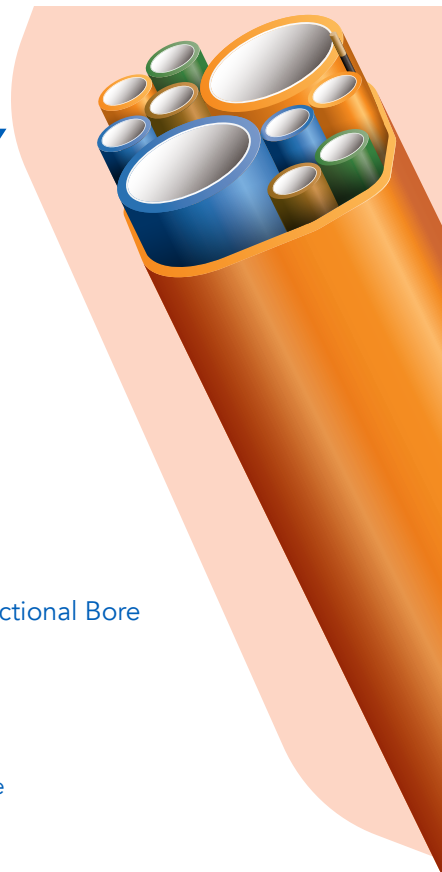
MICRODUCT SIZE	OD (MM/IN)	MIN ID (MM/IN)
12.7/10mm	12.7/0.50	9.8/0.39



**MICROTECHNOLOGY**

# FUTUREPATH HYBRID 10-WAY

- FuturePath configuration mixing a popular MicroDuct size with a common Smoothwall duct size
- A perfect choice for customers who need to place micro cables and larger standard fiber cables at the same time, or would like to plan for future possibilities
- Multiple pathways for one installation cost, allows flexibility and future growth
- No special tools or equipment needed. Installation uses the same as traditional conduit or innerduct



**CONFIGURATIONS**

1 1/2" TSDR 11 (2) + 18/14mm MicroDucts (8)

**INSTALLATION TYPES**

Plow	Directional Bore
Trench	Tray
MicroTrench	

**STANDARD COLORS**

Oversheath 
 







 MicroDucts 
 






 Custom colors available

**STANDARD**

**SPECIFICATIONS/DETAILS** FuturePath configuration consisting of two or more different sizes of conduit and or MicroDucts. Manufactured from flexible HDPE (High Density Polyethylene). All Smoothwall conduit dimensions meet or exceed one or more of the following: ASTM F-2160, ASTM D-3350, ASTM D-3485, NEMA TC-7, UL 651A, UL 1990, Bellcore GR-356.

**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 FuturePath 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 on MicroDucts, available as an option in the Conduits

**LOCATE WIRE** Available with or without a 20 AWG insulated copper wire

**RIP CORDS** For easy opening of the oversheath

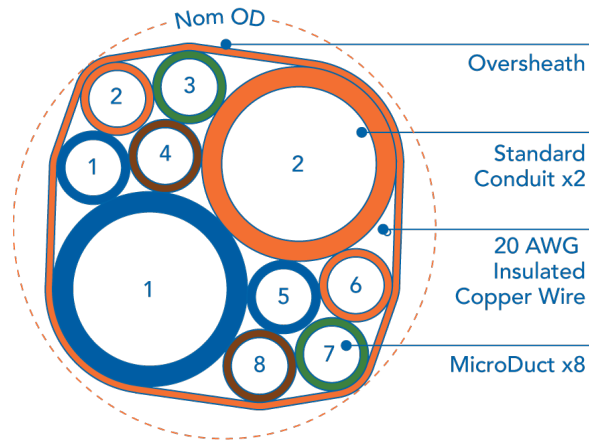
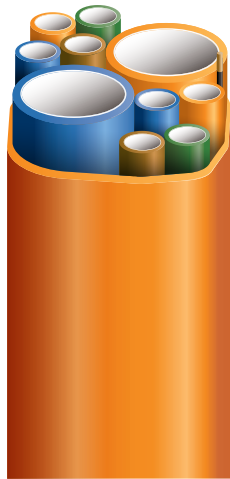
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# FUTUREPATH HYBRID 10-WAY TECHNICAL SPECIFICATIONS

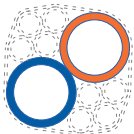


DUCT TYPES	MAX OD (IN)	HEIGHT (IN)	WIDTH (IN)	OVERSHEATH (IN)	WEIGHT (LB/FT)	BEND RADIUS SUP (IN)	BEND RADIUS UNSUP (IN)	SWPS (LB)
1 1/2" TSDR 11 + 18/14mm	4.09	3.58	3.52	0.070	1.621	63	105	8,783

† 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.

## SMOOTHWALL DUCT TECHNICAL SPECIFICATIONS



DUCT TYPE	NOM OD (IN)	MIN ID (IN)
1 1/2" TSDR 11	1.89	1.48

## MICRODUCT TECHNICAL SPECIFICATIONS



MICRODUCT SIZE	OD (MM/IN)	MIN ID (MM/IN)
18/14mm	18/0.71	13.6/0.54



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**MICROTECHNOLOGY**

# FUTUREPATH HYBRID 12-WAY

- FuturePath configuration mixing two popular MicroDuct sizes
- A perfect choice for customers who need to place two different micro cables at the same time, or would like to plan for future possibilities
- Multiple pathways for one installation cost, allows flexibility and future growth
- No special tools or equipment needed; installation uses the same as traditional conduit or innerduct

**CONFIGURATIONS**

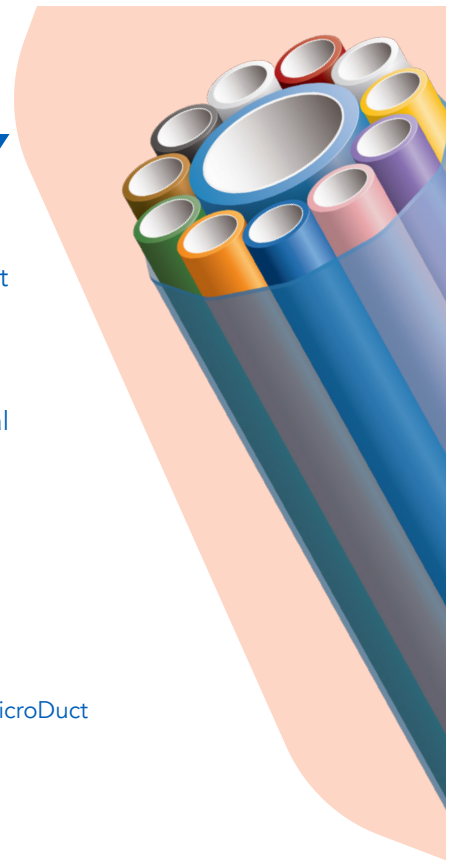
12.7/10mm MicroDuct (1) + 5/3.5mm MicroDucts (11)

**INSTALLATION TYPES**

- |             |                  |
|-------------|------------------|
| Plow        | Directional Bore |
| Trench      | Tray             |
| MicroTrench |                  |

**STANDARD COLORS**

■ Transparent Oversheath  
 ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ MicroDuct  
 Custom colors available



**FEATURES**

**STANDARD**

**SPECIFICATIONS/DETAILS** FuturePath configuration consisting of two or more different sizes of conduit and or MicroDucts. 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 FuturePath 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 on MicroDucts

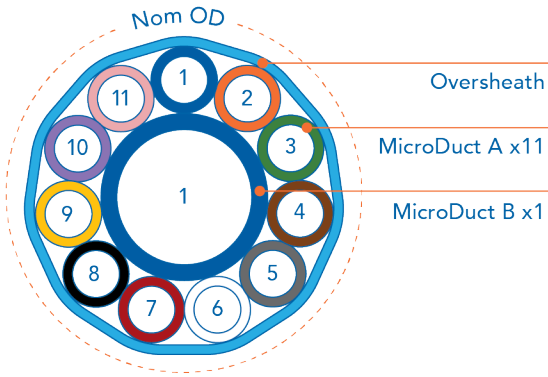
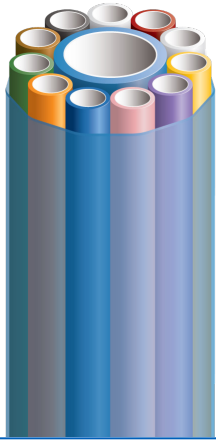
**LOCATE WIRE** Available with or without a 20 AWG insulated copper wire

**RIP CORDS** For easy opening of the oversheath

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# FUTUREPATH HYBRID 12-WAY TECHNICAL SPECIFICATIONS



DUCT TYPES	MAX OD (IN)	OVERSHEATH (IN)	WEIGHT (LB/FT)	BEND RADIUS SUP (IN)	BEND RADIUS UNSUP (IN)	SWPS (LB)
5/3.5mm + 12.7/10mm	0.98	0.040	0.147	10	20	797

† 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.

## SMOOTHWALL DUCT TECHNICAL SPECIFICATIONS

MICRODUCT SIZE	MAX OD (MM/IN)	MIN ID (IN)
5/3.5mm	5.0/0.20	3.4/0.13

## MICRODUCT TECHNICAL SPECIFICATIONS

MICRODUCT SIZE	MAX OD (MM/IN)	MIN ID (MM/IN)
12.7/10mm	12.7/0.50	9.8/0.39



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## MICROTECHNOLOGY

# FUTUREPATH HYBRID 15-WAY

- FuturePath configuration mixing two popular MicroDuct sizes
- A perfect choice for customers who need to place two different micro cables at the same time, or would like to plan for future possibilities
- Multiple pathways for one installation cost, allows flexibility and future growth
- No special tools or equipment needed. Installation uses the same as traditional conduit or innerduct

### CONFIGURATIONS

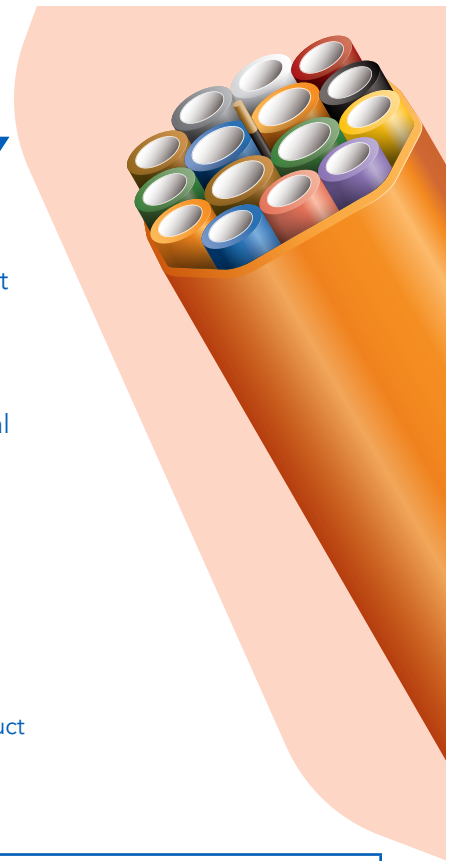
16/12mm MicroDuct (4) + 14/10mm MicroDucts (11)

### INSTALLATION TYPES

Plow                                      Directional Bore  
Trench                                     Tray  
MicroTrench

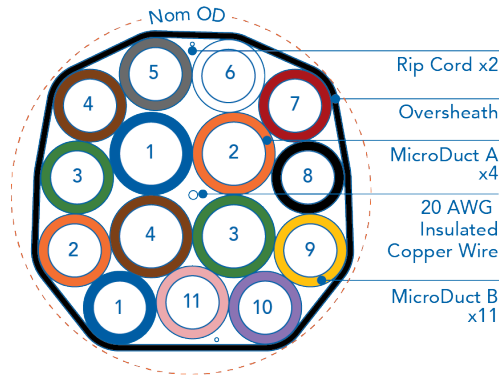
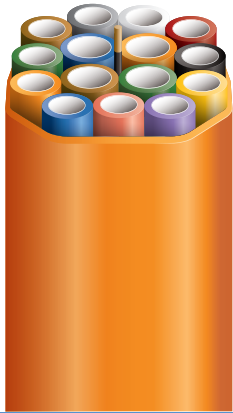
### STANDARD COLORS

■ Oversheath  
■ ■ ■ ■ ■ ■ ■ ■ ■ ■ MicroDuct  
 Custom colors available



<b>FEATURES</b>	<b>STANDARD</b>
	<b>SPECIFICATIONS/DETAILS</b> FuturePath configuration consisting of two or more different sizes of conduit and or MicroDucts. Manufactured from flexible HDPE (High Density Polyethylene).
	<b>FILL RATIO</b> 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.
	<b>CONDUIT MARKINGS</b> Permanent marking along FuturePath includes: material, relevant standards, production info, and sequential feet or meter markings. Custom options available.
	<b>CO-EXTRUDED LINING</b> 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.
	<b>INTERNAL RIBS</b> Standard on MicroDucts
	<b>LOCATE WIRE</b> Available with or without a 20 AWG insulated copper wire
	<b>RIP CORDS</b> For easy opening of the oversheath

# FUTUREPATH HYBRID 15-WAY TECHNICAL SPECIFICATIONS

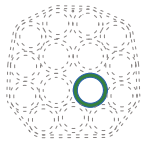


DUCT TYPES	MAX OD (IN)	HEIGHT (IN)	WIDTH (IN)	OVERSHEATH (IN)	WEIGHT (LB/FT)	BEND RADIUS SUP (IN)	BEND RADIUS UNSUP (IN)	SWPS (LB)
14/10mm + 16/12mm	2.70	2.42	2.42	0.050	0.946	36	61	5,015

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

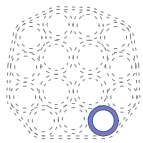
\* Unsupported Bend Radius guidelines should be followed during the installation process. The Supported Bend Radius are post-installation measurements.

## MICRODUCT A TECHNICAL SPECIFICATIONS



MICRODUCT SIZE	MAX OD (MM/IN)	MIN ID (MM/IN)
16/12mm	15.9/0.63	11.6/0.46

## MICRODUCT B DUCT TECHNICAL SPECIFICATIONS



MICRODUCT SIZE	MAX OD (MM/IN)	MIN ID (IN)
14/10mm	14/0.55	9.8/0.39