

Conduit & Couplers

SELECTION GUIDE

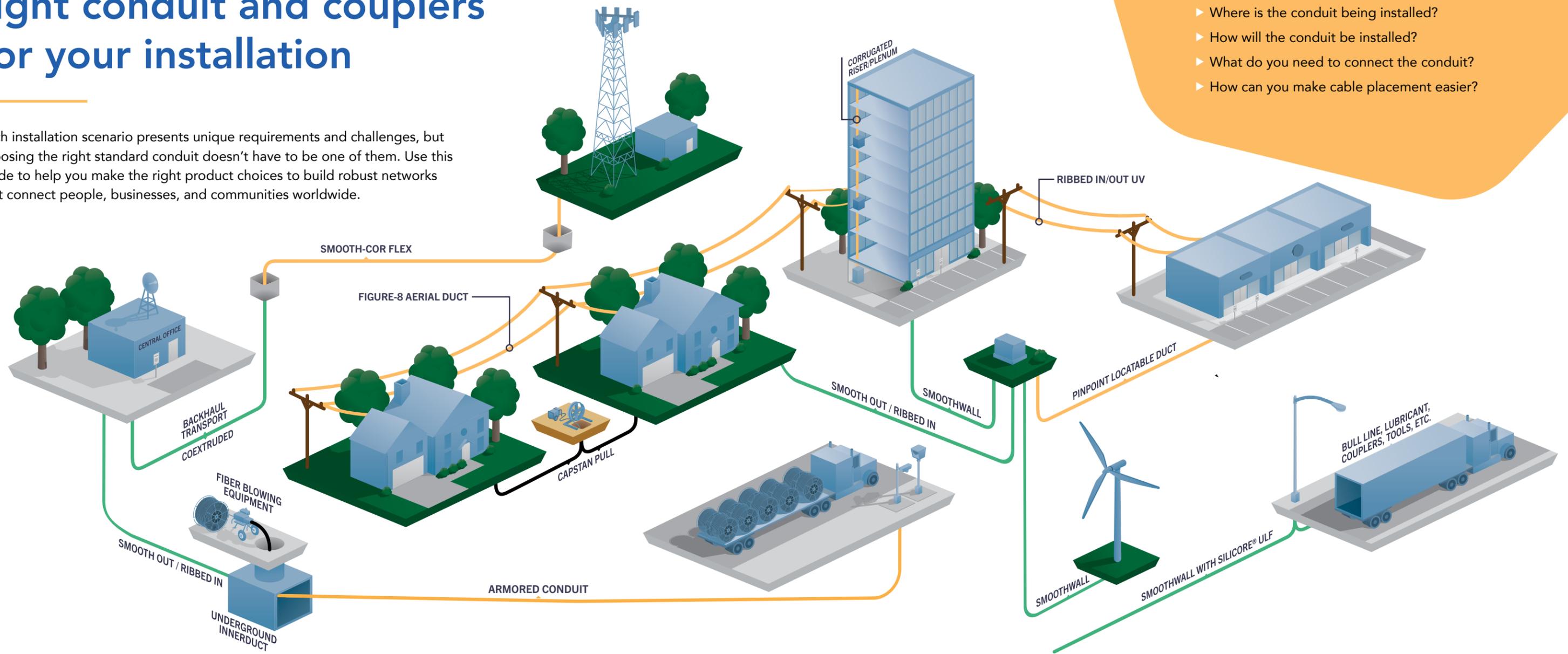


 **dura·line**

An Orbia Connectivity
Solutions business.

Your guide for choosing the right conduit and couplers for your installation

Each installation scenario presents unique requirements and challenges, but choosing the right standard conduit doesn't have to be one of them. Use this guide to help you make the right product choices to build robust networks that connect people, businesses, and communities worldwide.



Things to consider

- ▶ Where is the conduit being installed?
- ▶ How will the conduit be installed?
- ▶ What do you need to connect the conduit?
- ▶ How can you make cable placement easier?

STANDARD CONDUIT



SPECIALTY

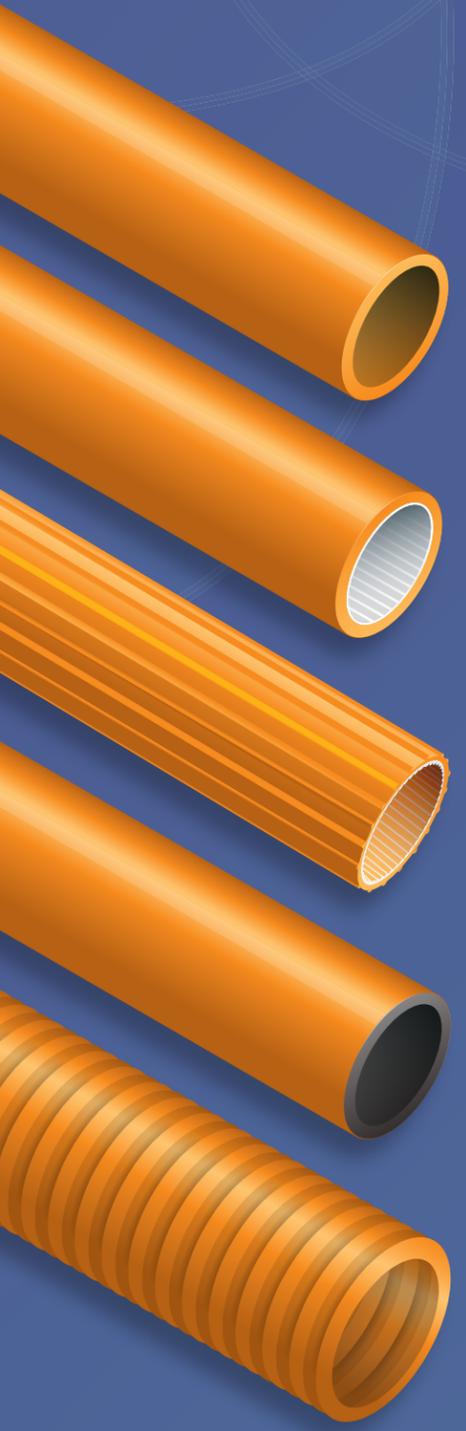


Demystifying Standard Conduit Nomenclature

COMMON NOMENCLATURE

1 Smoothwall 2 HDPE

3 1 1/2" 4 SDR 11



1 Product

Smoothwall
Smooth Out/Ribbed In
Ribbed In/Out
CoExtruded
Corrugated

How the product is manufactured:

There are wall variations of:
Smooth
Ribbed
Corrugated
CoExtruded (2 layers)

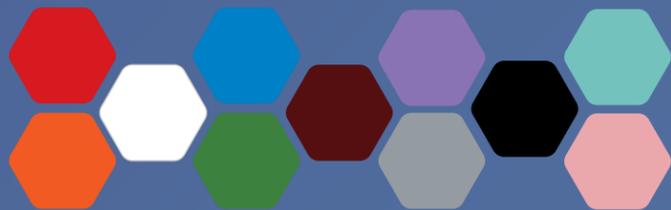
2 Material

Most common material is HDPE
High-Density Polyethylene

Can also be Riser or Plenum for fire-rated applications



An array of colors and stripes are available to aid in identification and differentiation



3 Size

The size range depends on the specific product.

For Smoothwall it's from:

1/2" to 12"
Nominal Outer Diameter



4 Wall Type

The three main wall types are:

SDR
SCH
SIDR

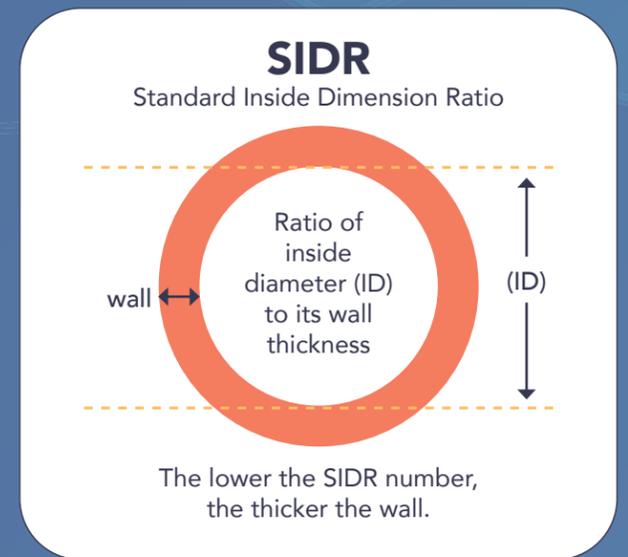
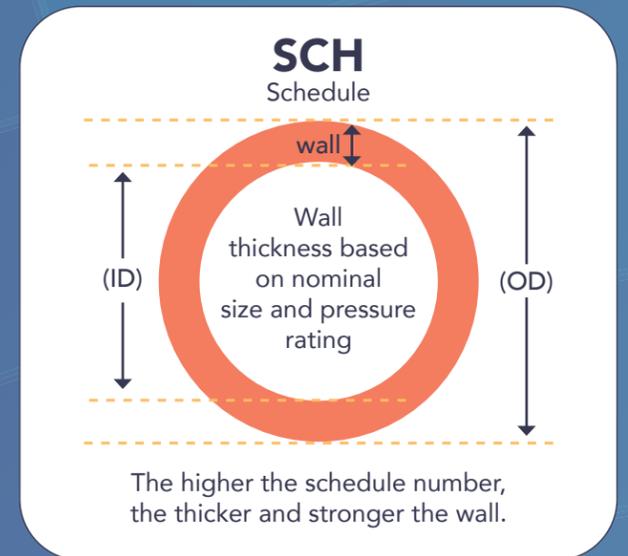
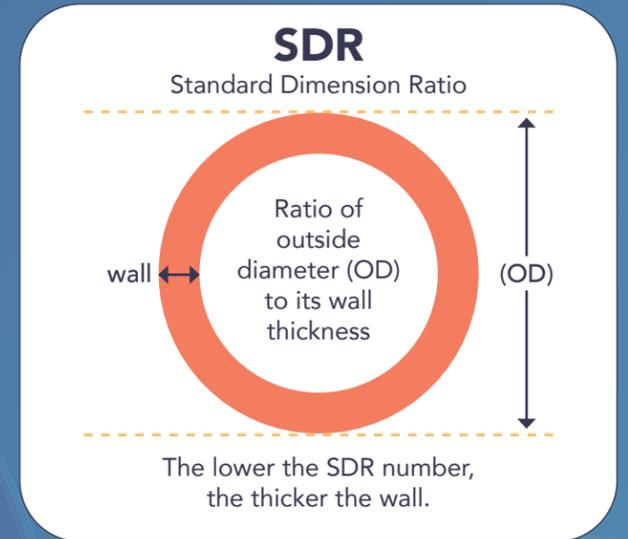
Other Considerations

Options

- SILICORE® ULF
- Colors and stripes
- UV protection
- Pre-installed cable
- Pre-installed Bull-Line pull tape

Packaging

- Reels
- Parallel reels
- Divided reels
- Sticks
- Coils



Choose the right coupler for your conduit installation

Dura-Line offers an extensive line of couplers which offer an air- and water-tight connection where the cable is the most vulnerable – at the joint.

Our range of mechanical couplers can be installed in the field by hand with common tools. There's no need to use toxic adhesives associated with other conduit materials.

If you're using standard conduit, your installation will determine the type of coupler you need. Find your installation type in the table below, and choose the correct coupler according to the size of your conduit, and your installation needs.



Coupler Table Key

- ✓ Recommended
- Not recommended
- ✦ Size specific

	Clear-Lock	Shur-Lock II	Redi-Lock	Split-Lock +	Double E-LOC	Mor Clamp
Installation Scenarios:						
Trench	✓	✓	✓	✓	✓	✓
Plow (after duct installation)	✓	✓	✓	✓	✓	✓
Directional Bore (after duct installation)	✓	✓	✓	✓	✓	✓
Aerial	–	✓	–	–	✓	✓
Cable Tray (OSP)	–	✓	–	✓	✓	✓
Features:						
Size Range	0.5" - 2"	1" - 6"	2" - 6"	1" - 2"	1" - 2"	1.25" - 8"
Removable	✓	✓	✓	✓	✓	✓
Cable Jetting	✓	✓	✓	✓	✓	✓
No-Stop Feature or Option	–	✓	–	✓	–	✓
Air-and Water-Tight	✓	✓	✓	✓	✓	✓
UV-Stabilized	–	✓	✓	✓	✓	✓
Listed (UL/ETL/CSA)	–	✦	–	✓	–	–
Conduit Repair of Cable-Occupied Duct	–	–	–	✓	–	✓
Recommended for Connecting:						
HDPE to HDPE	✓	✓	✓	–	–	–
HDPE to Fiberglass, Threaded Metal, PVC	–	✓	–	–	✓	✓

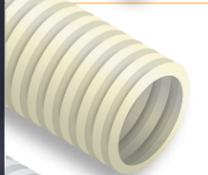
Specialty Conduit

Dura-Line's Specialty Conduits are designed and manufactured to meet application-specific requirements such as aerial and locatable, providing superior mechanical protection, and fire-resistant spaces.

Specialty conduit is paired with specialty couplers to create seals that work in your unique installation environment. Choose the correct coupler from the table (page 9) according to the application and installation types, the size of your conduit, and your installation needs.



Specialty Conduits are chosen by function

	Armor Guard	For rocky terrain or harsh environments where extra durability and superior rodent protection is required
	PinPoint	Locatable conduit for underground applications
	Figure-8	Self-supported conduit for aerial applications
	Ribbed In/Out UV	For lashable aerial applications
	Corrugated Riser	Short distances where flexibility and riser rating required
	Corrugated Plenum	Short distances where flexibility and plenum rating required

Connecting with Specialty Conduit

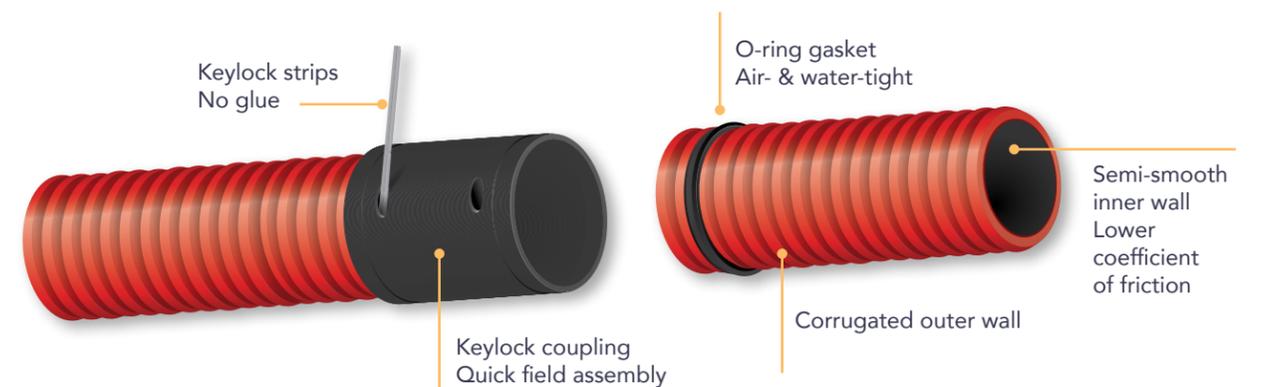


	PinPoint Splice Kits	Armor Guard Kit	Smooth-Cor Flex Coupler Kit	Smooth-Cor Flex Adapter Kit
Application	PinPoint to PinPoint	Armor Guard to Armor Guard	Smooth-Cor Flex to Smooth-Cor Flex	Smooth-Cor Flex to Fiberglass, Threaded Metal, PVC, HDPE (reeled)
Installation	Trench, plow,* directional bore*	Trench, plow,* directional bore*	Trench, cable tray	Trench, cable tray, directional bore*
Size	1"-2" 2.5"	1.25"	2", 3", 4"	2", 3", 4"
Cable Jetting	✓	✓		
Removable	✓	✓	✓	✓
Size Transition Available				✓

*after duct installation

Smooth-Cor Flex

Flexible, yet rugged product for power and telecom application



SILICORE[®] ULF

QUICKER SLICKER FASTER BETTER

Dura-Line's SILICORE[®] ULF is an ultra-low friction, permanent, CoExtruded lining that allows cable to be installed safer, faster, and farther than ever.

The super-slick, non-greasy lining boasts a greater than 60% lower coefficient of friction¹ than standard HDPE conduit.

Testing at Dura-Line's state-of-the-art, world-class test track has shown that you can air-jet fiber optic cable into a MicroDuct lined with SILICORE ULF almost 5 times farther² than without it.

Features

- ▶ Permanent. Remains unchanged for life of conduit.
- ▶ Lowest coefficient of friction available.
- ▶ No performance loss in all temperature conditions.
- ▶ Identifiable by its contrasting white color.

Benefits

- ▶ Bypass or eliminate handholes.
- ▶ Reduce the need for permitting.
- ▶ Scale down environmental impact.
- ▶ Save time and money on messy lubricants.
- ▶ Enjoy fewer jetting setups.

FIELD-TEST RESULTS³

Air-Jetting Distance

16/12 mm MicroDucts (internal ribs)
HDPE vs SILICORE ULF

HDPE MicroDucts (no lining)



HDPE MicroDucts with SILICORE ULF



ALMOST
5X
FARTHER

Pulling Tension

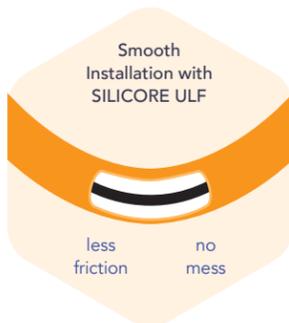
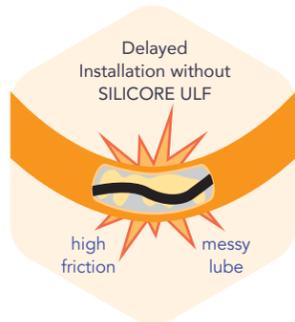
1" SDR 13.5 HDPE
Smoothwall Conduit
HDPE vs SILICORE ULF



HDPE Conduit
(no lining)



Conduit with
SILICORE ULF



Watch a short animation and learn more about the benefits of **SILICORE ULF**.

¹62.5%. Testing performed on 1 1/2" SDR 13.5 Smoothwall conduits, utilizing an HDPE sheathed cable, with and without SILICORE ULF.

²4.92 times farther. To see the full report on the test results, email marketing@duraline.com.

³All testing performed at Dura-Line's Eagle Way Test Track in Clinton, TN (USA) from Nov. 29 - Dec. 2, 2022, with MicroDucts and conduits installed in the ground over a 2700-ft (823 m) loop with multiple handholes.

Note: Your results may vary, as many factors influence jetting distances (e.g., bends in pathway, gravity, weather, etc.).



Still prefer to use a lubricant?

For tricky pulling scenarios, a high-quality lubricant gives you extra peace of mind knowing that your cable will glide smoothly through the conduit. Choose the correct lubricant for your job from the table below based on the season, installation type, and application.



LEARN MORE

Cable Pulling Copper, Fiber Optic, Coax, Electrical & Duct				Jetting Fiber Optic or MicroCable	
F-100i Longer pulls, high speed	F-150i Longest horizontal pulls	F-200i Long difficult pulls with heavy cables & multiple bends	F-300i Horizontal or vertical pulls with heavy cables and multiple bends	Lubaduk Contains microspheres to aid with heavy cable placement and technical routes	AT-500 Pre-lubricating conduit prior to air assisted blowing with heavy cables and multiple bends

	Free-Flowing Liquids		Stiff Gels		Jetting
	F-100i	F-150i	F-200i	Lubaduk/ F-300i	AT-500
Sidewall Load	> 200 lb/ft	✓	✓	✓	
	< 200 lb/ft	✓	✓	✓	✓
Pull Speed	> 60 fpm	✓	✓		✓
	< 60 fpm		✓	✓	
Pull Length	> 800 ft.	✓	✓	✓	✓
	< 800 ft.	✓	✓	✓	✓
Duct Conditions	Wet		✓	✓	
	Dry	✓	✓	✓	✓
Orientation	Vertical		✓	✓	✓
	Horizontal	✓	✓	✓	✓
Cable Weight	Heavy		✓	✓	
	Light	✓	✓	✓	✓

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- ▶ HDPE vs PVC
- ▶ SILICORE® ULF and Coefficient of Friction
- ▶ Courses on how to choose the right conduit, coupler, and lubricant
- ▶ Coupler installation courses, including Clear-Lock, Shur-Lock II, and Redi-Lock

Full Courses



Conduit Installation



MDU Installations



MicroTrench Installations



Trench Installations



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