

# Introduction to FieldShield®

## FieldShield Fiber and Microduct



*Installing fiber where you want it, when you want it and cost-effectively is the promise of the FieldShield Optical Fiber Protection System. FieldShield is a turn-key system to take fiber through the fields and streets to the home or business, up the tower to the antenna or throughout the riser to the data center or desk. Used in conjunction with Clearfield® FieldSmart® fiber management solutions for the CO, Outside Plant and access network, FieldShield delivers and protects fiber through every distribution point of the network.*

### Components of the FieldShield System include:

- FieldShield Microduct
- FieldShield Pushable Optical Fiber
- FieldShield Pushable Fiber Connectors
- FieldShield Assist Module and Accessories

### FieldShield Ruggedized Microduct

FieldShield starts with a ruggedized microduct in a 10 mm or 14 mm outer diameter space-saving footprint across all deployment environments to support your aerial, direct-bury and inside plant last mile needs. FieldShield Microducts can be placed using traditional placement methods allowing you to leverage your existing conduit placement equipment of boring or plowing methods. FieldShield Microducts can also be placed using newer, less disruptive technologies such as saw cutting or micro-trenching. Due to the column strength of the FieldShield Microduct, occupied duct that was thought to be exhausted, can almost always accommodate FieldShield duct as the product can be deployed as a rod directly within the larger duct. Optional pulling carrots make installation of microduct inside a larger occupied duct a simple operation.



Available for aerial and buried environments in the outside plant as well as in a plenum configuration or riser environment, FieldShield Microduct provides the pathway to quickly deliver a crush-resistant FieldShield pushable fiber assembly.

### FieldShield Pushable Optical Fiber

The FieldShield Microduct provides the pathway to quickly deliver the FieldShield Fiber Cable. Handled in much the same manner as a bend-insensitive patch cord, one to 48 fibers are housed in a rugged jacket that is crush-resistant yet flexible.

Manufactured with bend-insensitive fiber, FieldShield Pushable Optical Fiber is strong enough to be stapled to walls and offers a built-in, bend-limiting function to prevent damage to fiber during installation. Available in bulk reels, FieldShield offers total installation flexibility. Terminated with a FieldShield Pushable Fiber Connector, the polymer properties unique to FieldShield Pushable Optical Fiber allow the assembly to be pushed or pulled through the FieldShield Microduct.

### FieldShield Pushable Fiber Connectors

Terminating a FieldShield Pushable Fiber Connector onto FieldShield Fiber Cable allows it to be pulled or pushed through the FieldShield Microduct. Various connector styles are available including singlemode simplex SC/APC or SC/UPC, simplex or duplex LC/APC or LC/UPC and singlemode MPO. FieldShield Fiber Connectors are factory polished to achieve consistent high performance optical parameters. With a small profile, they can easily be pushed through FieldShield Microduct. The rear and outer housings are easily snapped in place by the technician in the field after the connector is pulled through the microduct. This factory pre-connectorized approach lowers installation costs by reducing costly labor in the field. Additionally, it presents a more reliable and consistent performance level compared to field installed connectors or field splices. Whether you choose to push or pull the fiber into the FieldShield Microduct, the PBT jacketing of the Clearfield FieldShield Pushable Fiber easily slips through the microduct's smooth inner wall.

### FieldShield Assist Module and Other Accessories

Clearfield offers a number of FieldShield Microduct and Fiber Cable accessories to help install and complete a project. The FieldShield Assist Module can be used to enhance the pull/push experience by providing a continuous force on the FieldShield Fiber Cable being pushed into the FieldShield Microduct. Compared to hand push installation, the Assist Module can extend installations to 500 feet or more. The Assist Module also has an integrated clutch mechanism that releases the installation force should there be an unexpected resistance caused by too many corners passed or an excessively sharp bend of the microduct. Other accessories range from couplers and end caps to pulling eyes/carrots and socks for FieldShield Microduct and Fiber Cable.