CORNING

Installing Preconnectorized FREEDM® LST Cables with Pulling Grip

004-153, Issue 2

1. General

Pulling grips protect the connectors and their fibers during installation and are removed once the cable is pulled into place. Use conventional cable-pulling methods and observe precautions regarding pulling tension and bend radius. The grips can withstand tensions up to 110 pounds.

Personnel should be experienced with pulling optical cable. The methods and practices in this procedure are only guidelines, as each installation will be influenced by local conditions, your company's policies, and user preferences.

For detailed information on cable placement, and a comprehensive list of applicable safety precautions, refer to SRP-005-011, Fiber Optic Cable Placing - Duct. It is necessary to have radio or other two-way communications between the pull points in order to stop the pulling operations in the event of a kink or other pulling problem to prevent cable and/or connector damage.

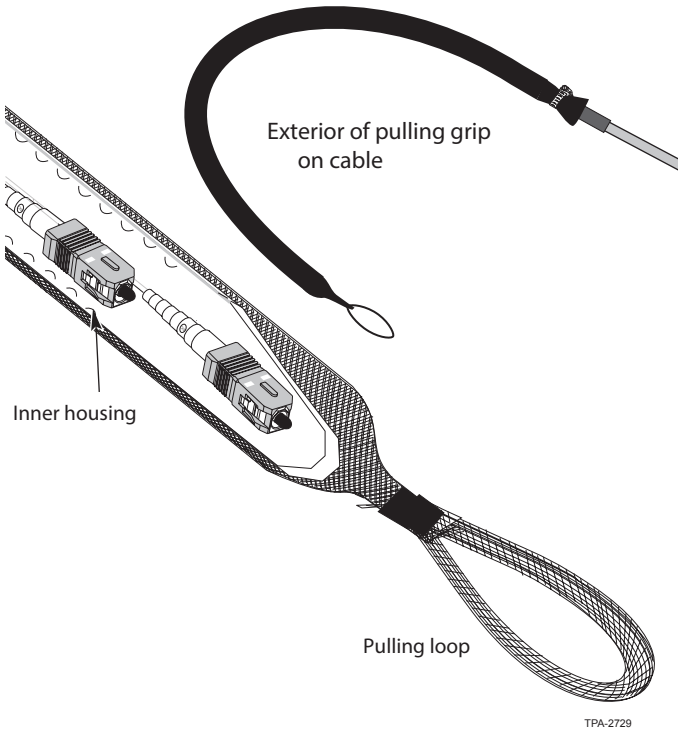


Figure 1

2. Precautions

2.1 Safety Precautions

WARNING: To reduce the chance of accidental injury, observe standard safety precautions. Wear safety headgear, eye protection, gloves, etc., as specified in your company's practices. Your company's safety precautions and practices take precedence over any conflicting recommendations given in this document.

2.2 Pulling Grip Precautions



CAUTION: The pulling grips installed on preconnectorized cables contain the connectors and their sub-units. Unlike conventional pulling grips, do not cut off the grip and cable inside it upon the completion of cable installation. Remove the pulling grip from over the connectors and subunits only as described in this procedure. Failure to do so may result in damage or loss of the connector assemblies.

Do not attempt to disassemble the pulling grip before the cable is pulled into place. Doing so may cause the pulling grip to fail.

CAUTION: Do NOT use any type of lubricant when installing this series of pulling grip.

CAUTION: These grips are intended to be placed and pulled by hand. Do not use any mechanical pulling devices on this series of grip.

2.3 Pulling Grip Limits and Precautions

CAUTION: This series pulling grip has a maximum tensile rating of 110 pounds. NEVER EXCEED THIS TENSION DURING INSTALLATION.

The cable assembly has a minimum bend radius of 3 inches (16.8 cm). When blocks or sheaves are used to control bend radius, a single wheel with a minimum diameter of 13.2 inches (33.6 cm) is required.

Duct Limitations:

Cable Size:	Minimum duct inside diameter
4 - 6 fiber	1 inch (2.54 cm)
8 - 12 fiber	1.5 inch (3.81 cm)

2.4 Cable Handling Precautions

CAUTION: Fiber optic cable is sensitive to excessive pulling, bending, and crushing forces. Consult the cable specification sheet for the cable you are installing. Do not bend the cable more sharply than the minimum recommended bend radius. Do not apply more pulling force to the cable than specified. Do not crush the cable or allow it to kink. Doing so may cause damage that can alter the transmission characteristics of the cable; the cable may have to be replaced.

3. Tools and Materials

- Normal equipment and tools for pulling cable
- Scissors or side cutters

4. Use of the Pulling grip for cable installation

NOTE: This procedure assumes that a pull line has been placed in the duct route and that the equipment necessary to maintain the bend-radius of the pulling grip is in position.

Step 1: Remove the protective wrapping from the cable reel or shipping box. Place a cable reel on a reel stand so that the pulling grip/cable will pay-off the top of the reel.

Step 2: Attach a pull line to the pulling loop at the end of the grip.

Step 3: If performing a center pull with pulling grips on both ends, pull the first distance, coil the cable in a figure-8 pattern to access the other end, and then pull the second distance.

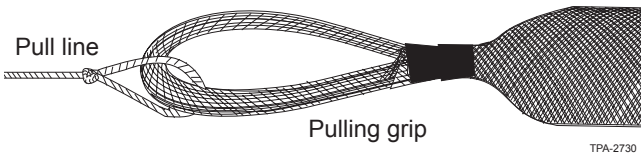


Figure 2

Step 4: Place the cable using your company's standard practice, taking care not to exceed either the minimum bend radius or tensile rating of the grip.

IMPORTANT: Unlike conventional pulling grips, do not cut off the grip upon completion of cable installation.

5. Disassembly of the grip and cable placement in the hardware

IMPORTANT: Disassemble the pulling grip on a work surface free from dirt, excessive heat, or any solvents.

Step 1: Clean the grip of obvious dirt or debris.

Step 2: Cut the mesh just below the heatshrink tube on the pulling loop with scissors or side cutters.

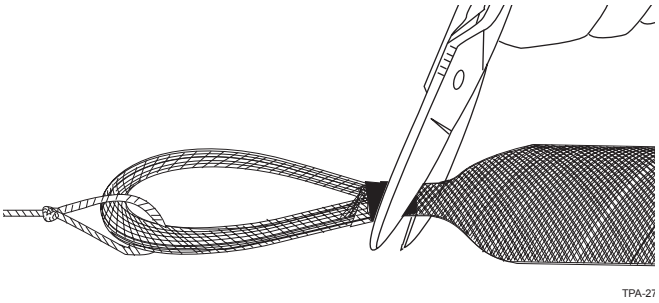


Figure 3

Step 3: Pull the mesh down until the plastic covering is completely exposed.

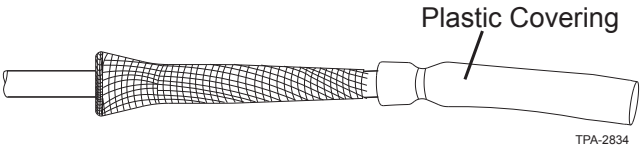


Figure 4

Step 4: Pull the ripcord on the heatshrink tube and remove.

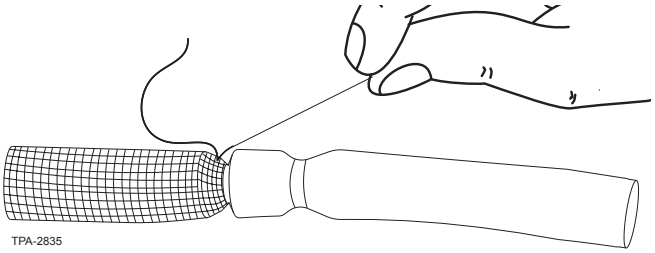


Figure 5

Step 5: Remove the tape and the mesh from the cable.

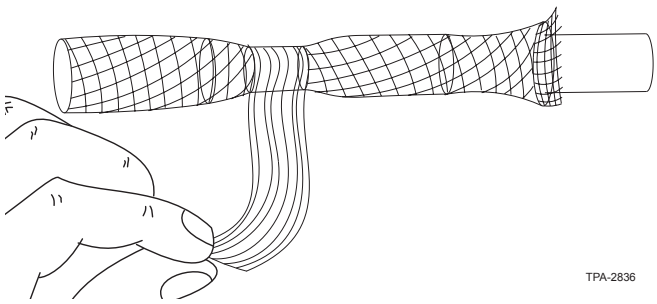


Figure 6

Step 6: Cut the top of the plastic covering.

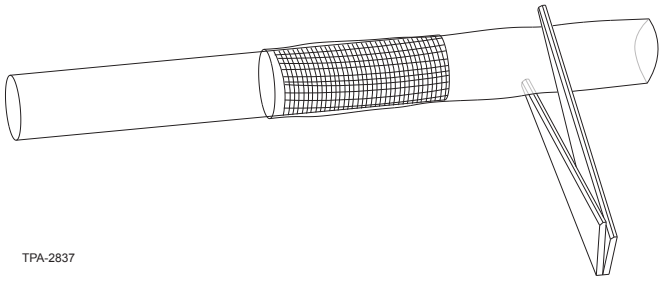


Figure 7

Step 7: Cut the plastic covering from end to end, then remove it from the cable.

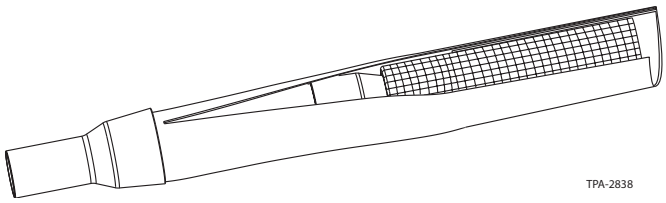


Figure 8

Step 8: Remove the black tape holding the inner mesh.

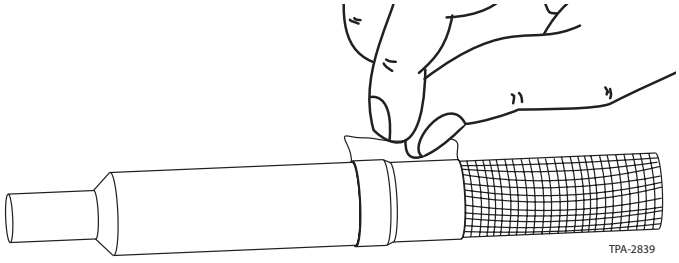


Figure 9

Step 9: Remove the mesh to expose the connectors.

Refer to SRP-006-135 for proper cleaning and inspection of the connectors prior to mating with an adapter.



Figure 10

The connectors are now ready to be installed.

Corning Optical Communications LLC • PO Box 489 • Hickory, NC 28603-0489 USA
800-743-2675 • FAX: 828-325-5060 • International: +1-828-901-5000 • www.corning.com/opcomm

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