

Flat Drop Cable

Preparation & Handling Procedure

Table of Contents page

1.0 Product Applications	1
2.0 Safety	1
3.0 General Installation Considerations	1
4.0 Tool and Materials Needed	2
5.0 Reference Drawing	2
6.0 End of Cable Access Procedure	2
7.0 Cable End Access Procedure	3-5
8.0 Aerial Applications.....	5-6
9.0 Bonding and Grounding.....	6
10.0 Trenching Considerations	7



Dielectric Flat Drop



Toneable Flat Drop

1.0 Product Applications

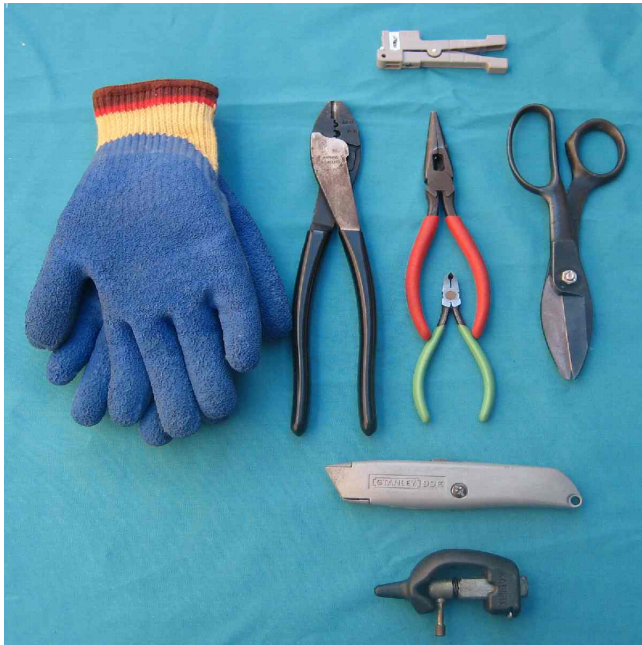
The instructions in this document explain how to prepare end openings of the Prysmian Flat Drop fiber optic cable for termination. The document also contains coupling coils and hardware recommendations. Instructions for the application of other fiber optic products, such as splice closures, distributors on cabinets, etc., are included in the installation instructions for the product in question.

2.0 Safety

- 2.1** strongly recommends the use of approved personal protective equipment in the performance of this procedure. Wear safety glasses and gloves, and use solvents in well-ventilated areas.
- 2.2** Never look directly into the end of a fiber that may be carrying laser light. Laser light may be invisible and can damage your eyes. Viewing it directly does not cause pain. The iris of the eye will not close involuntarily as when viewing a bright light. Consequently, serious damage to the retina of the eye is possible. Should accidental eye exposure to laser light be suspected, arrange for an eye examination immediately.
- 2.3 DO NOT** use magnifiers in the presence of laser radiation. Diffused laser light can cause eye damage if focused with optical instruments. Should accidental eye exposure be suspected, arrange for an eye examination immediately.
- 2.4** The optional toning wire is not designed to support any load and should not be used as metallic messenger.

3.0 General Installation

- 3.1** Aerial application: Aerial applications require the use of coupling coils.
- 3.2** Recommended hardware: Aerial drop clamps should be all-metallic with a dimpled shim and have a minimum tensile strength of at least 550 lbs. recommends the end user check with the clamp supplier for specific clamp installation instructions and to ensure proper load ratings.
- 3.3** Maximum Tensile Load: Maximum Installation Load is typically 300 lbf. See the datasheet for specific requirements.
- 3.4** Minimum Bend Radius: Do not bend the buffer tube at sharp angles while removing the jacket, armor, yarns, or strength members. See the datasheet for bend radius specifications.
- 3.5** Buffer tube removal: Do not remove more than 48" of tube at a time. When accessing the buffer tube, always pull the buffer tube & the RSM's out of the ripcord slot together to prevent kinking the tube.
- 3.6** Bonding grounding: Tone wire must be bonded and grounded in accordance with customer requirements. recommends all metallic components be bonded and grounded at each cable end.

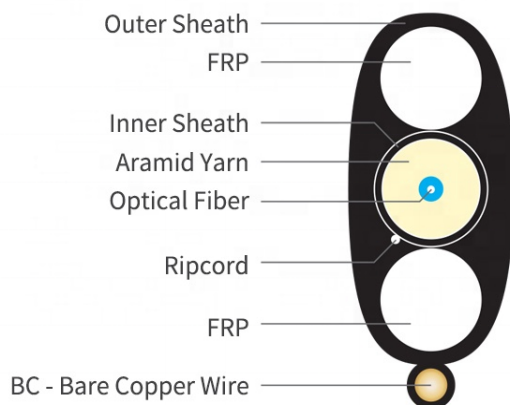


4.0 Tools and Materials Needed

- [+] Protective gloves
- [+] Diagonal cutters pliers
- [+] Needle nose pliers
- [+] Scissors or armid shears
- [+] Buffer tube ring cutters or buffer tube access tool
- [+] Utility knife or sheath knife

Not pictured:

- [+] Cable ties
- [+] Lint-free wipes
- [+] Isopropyl alcohol
- [+] Wire strippers (to strip optional toning wire)



5.0 Reference Drawing



Toneable Flat Drop

6.0 End of Cable Access Procedure

Quick Reference Checklist

1. If the cable has the optional toning wire, it must first be separated from the cable (if there is no tone wire continue to step 2).
2. Determine length of cable to be stripped, make Ring Cut #1 that distance from the end of the cable.
3. Shave off the jacket/sheath over each radial strength member (RSM).
4. Separate the buffer tube from yarns and strength members.
5. Cut and discard the yarns and strength members at appropriate length.
6. Determine the length of fibers to be accessed and open the buffer tube. Use Ideal® ring cutter to score the buffer tube. Flex the tube and pull off tube (maximum increments of 48").
7. Clean fibers

7.0 Cable End Access Procedure

7.1 Optional Toning Wire

If the cable has the optional toning wire, it must first be separated from the cable.

NOTE: If there is no toning wire, skip to Step 7.4.



Optional Toning Wire



7.2 Notch The Web

At the end of the cable, notch the web between the cable and the toning wire using a knife or shears.

7.3 Separate Toning Wire

Separate the toning wire by pulling it away from the cable perpendicular to the flat face. This will shear the web and form a clean separation. The amount of toning wire to be separated will depend on the specific application. The sheath over the toning wire can be removed with wire strippers or using a knife.

NOTE: Pull the toning wire in a shearing motion. Make sure to leave enough toning wire for you specific application



7.4 Score The Jacket

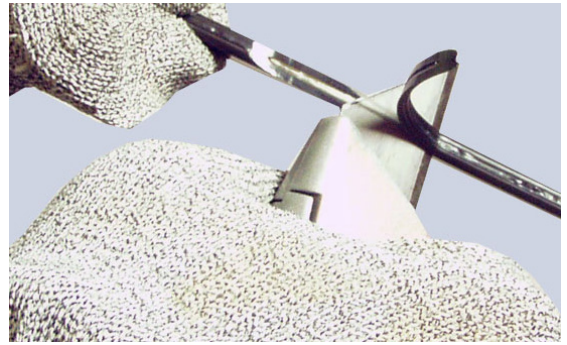
Determine the length of cable to be accessed. At the end of the access length, use a knife to score the cable sheath.



7.5 Shave Along Radial Strength Members (RSMs)

Hold the cable such that the radial strength members (RSMs) are oriented vertically and shave along both RSMs to the end of the cable.

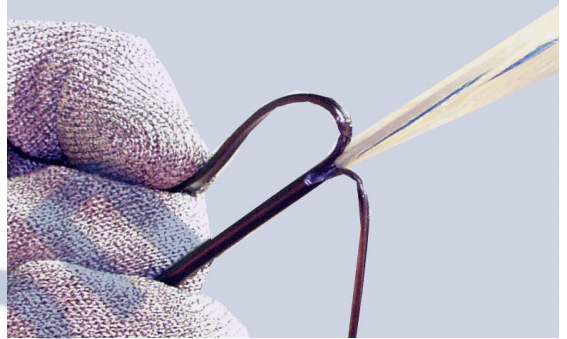
CAUTION: Always shave away from your body



7.6 Peel The Jacket Strips

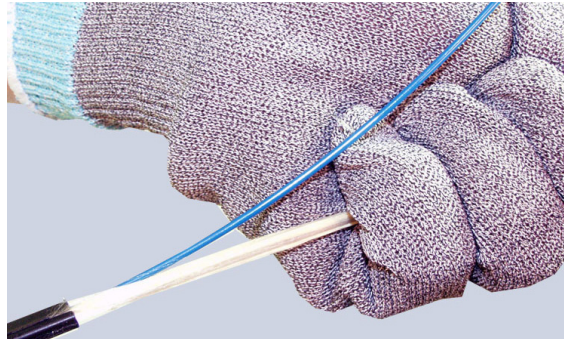
Grab the remaining two strips of jacket and peel apart. Make sure to separate the strength yarns from the jacket strips when first starting the peel.

CAUTION: Holding the RSMs, yarns and tube together will prevent kinking of the buffer tube



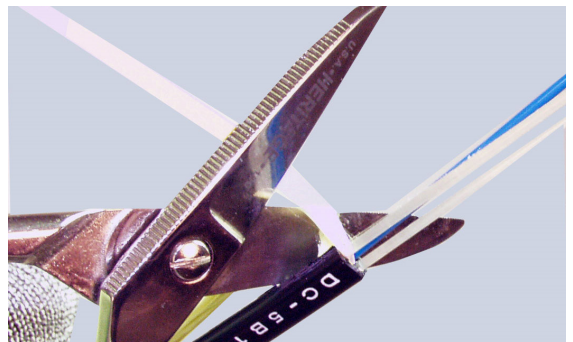
7.7 Separate The Tube

At the end of the access window, locate the buffer tube. Separate and pull the entire tube away from the strength yarns and RSMs at this location.



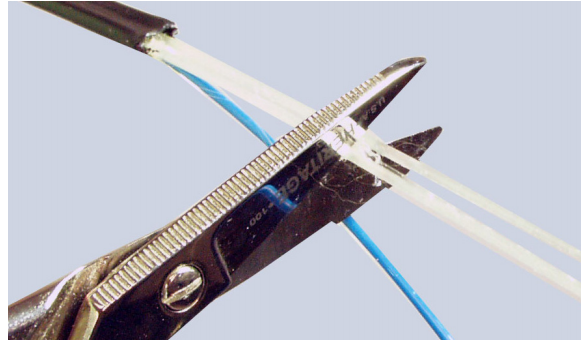
7.8 Cut The Yarns

Separate the strength yarns from the RSMs. Cut and discard the strength yarns.



7.9 Cut The RSMs

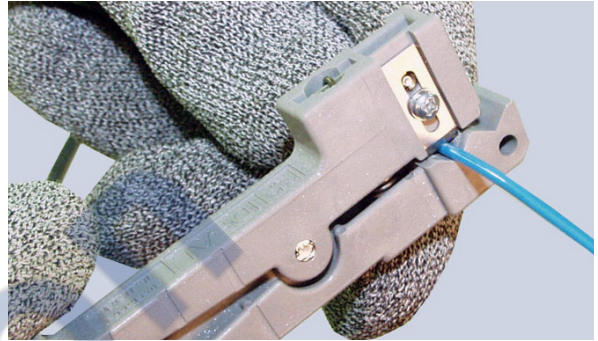
Determine the appropriate length of RSMs to keep, based on instructions from the closure manufacturer. Cut the remaining length of RSMs off and discard.



7.10 Score The Buffer Tubes

Determine the length of fibers to be accessed and score the buffer tube, remove the tube at a maximum of 48 inch increments until the desired length of fiber is exposed. Note that the small buffer tube can be routed in most splice trays eliminating the need for transportation tubing. Snap the buffer tube at the score location and slide it off the fibers. Clean fibers and prepare for splicing.

NOTE: Use an appropriate buffer tube access tool to score the buffer tube (1 revolution). The tool should not cut all the way through the buffer tube. Once the tube has been scored, bend and snap the tube at the score location and slide it off the fibers.



8.0 Aerial Applications

8.1 Coupling Coils

Coupling coils are necessary to prevent an undesirable phenomenon commonly referred to as “fiber retraction” at splice closures or other termination points. When installed aerially, a cable can be subjected to weather loading as a result of wind and ice. This weather loading can cause a significant elongation of the cable. In typical stranded loose tube cables, the fibers, buffer tube, and cable are coupled together by design, and will elongate or strain in equal amounts. However, in central-tube-type cables, there is insufficient coupling between the fibers and the buffer tube. Because of this lack of coupling, as the cable elongates due to weather loading, the fibers can retract at both ends of the cable. This fiber retraction at closures can lead to high optical loss at the termination points, or in a worst-case scenario, break the fiber in the splice case.

The use of coupling coils is a necessary applications solution to prevent fiber retraction in the flat drop cable. In self support aerial applications coupling coils are a means to couple the fibers to the buffer tube and the cable, such that they all behave together, similar to a stranded loose tube cable.

has conducted extensive testing and has found coupling coils to be the best solution to prevent fiber retraction. A coupling coil consists of four 8-inch loops of cable at each end of the cable.

NOTE: A coupling coil must be placed at both ends of the cable to be effective. Failure to place a coupling coil at each end of the cable can lead to fiber retraction from the closure or termination box.

