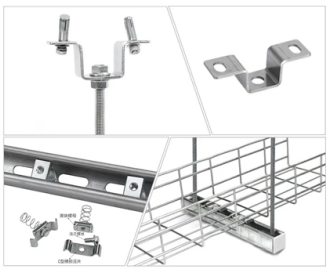
Stripping process for flexible optical cables





Overview

Good fiber optic stripping techniques in your cable assembly process are crucial. See best practices for how to strip fiber optic cable buffers & jackets.

Key Takeaways

Stripping flexible optical cables involves carefully removing protective layers using mechanical, thermal, chemical, or laser-based methods to expose the fiber without causing damage.

Overview of Stripping Flexible Optical Cables

Flexible optical cables typically consist of multiple layers: an outer jacket, aramid yarn for tensile strength, buffer coatings, and the glass fiber core. Each layer must be stripped progressively and individually to avoid damaging the underlying fiber or weakening the cable's structural integrity. The outer jacket is usually a soft plastic material that can be removed with appropriately gauged wire strippers, while aramid yarn and buffer coatings require more precise handling.

Mechanical Stripping

Mechanical strippers are precision tools designed to remove coatings such as acrylate, PVC, or polyimide. They work by clamping and cutting the coating without nicking the glass fiber. Typical mechanical strippers are used for standard telecommunication fibers with a 125 µm glass cladding and 250 µm coating, but specialized strippers exist for thinner or tight-buffered fibers.

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Mechanical stripping is often combined with cleaning and inspection steps to ensure the fiber is free of scratches or residues.

Thermal and Chemical Stripping

Thermal strippers use controlled heat to soften or burn off polymer coatings, while chemical strippers dissolve coatings using solvents. These methods are effective for certain polyimide or specialty coatings but require careful handling to avoid fiber damage or chemical hazards. Thermal strippers can be diameter-adjustable to accommodate different fiber sizes, providing flexibility for multi-layer cables.

Laser-

Based Stripping

Laser stripping is a contact-free, highly precise method suitable for ultra-high reliability applications. A focused laser beam removes acrylate or polyimide coatings by forming grooves in the protective layers, which are then split and removed without touching the fiber. Laser stripping allows for end or window stripping, precise dimensional control, and residue-free fiber surfaces, making it ideal for processes like Fiber Bragg Grating fabrication or high-density ribbon cables.

It is particularly advantageous for tight-buffered or flexible fibers where mechanical contact could cause micro-cracks.

Best Practices

Progressive Layer Removal: Strip the outer jacket first, then aramid yarn, and finally the buffer coating, ensuring no damage to the fiber. Tool Maintenance: Keep cutting edges sharp and calibrated to prevent nicks or scratches. Cleaning: After stripping, clean the fiber with lint-free wipes and high-purity alcohol to remove residues.

Inspection: Use a fiber microscope or bend test to check for micro-damage before connectorization or splicing. Controlled Strip Lengths: Avoid stripping more than 50 mm at a time to reduce the risk of fiber damage.

Applications

Stripped fibers are prepared for connectorization, fusion splicing, or specialized optical processing. Laser and non-contact methods are preferred for ultra-high reliability (UHR) applications, while mechanical and thermal strippers are widely used in standard telecommunication and industrial fiber assemblies. By selecting the appropriate stripping method and following best practices, flexible optical cables can be prepared efficiently while maintaining fiber integrity and performance.

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Article Content

Stripping Techniques For Your Fiber Optic Cable

Good fiber optic stripping techniques in your cable assembly process are crucial. See best practices for how to strip fiber optic cable buffers & jackets.

The Ultimate Optical Fiber Stripper Guide

Explore Optical Fiber Stripper types and uses. Learn pro techniques for precise stripping to ensure reliable network performance with top tools.

Fiber Strippers – tools, mechanical, thermal, chemical,

Automated systems are particularly valuable when processing specialty fibers or when strict tensile strength requirements necessitate a touch-free stripping

Fiber Stripping | Komax

Semi-automatic fiber-stripping machines enable precise and efficient processing of coated, buffered, and jacketed glass fibers. Designed for reliability and repeatability, these machines ensure high-quality

Fiber Optic Cable Stripping: A Comprehensive Guide

By following these guidelines and utilizing the appropriate tools, you can ensure safe and efficient stripping, leading to reliable and high-performing fiber optic networks.

How to Strip and Prepare Fibre Optic Cable for Termination: A ...

In this informative guide, we''ll walk you through the step-by-step process of stripping and preparing fibre optic cable for termination, covering techniques, tools, and best practices to help you

Laser-based methods of stripping fiber optic cables

One aspect of the disclosure is a method of stripping a fiber optic cable having a protective cover with an outer surface that surrounds at least one optical fiber and that has a cable...

The “golden rule” in stripping

Note the cable diameter and jacket thickness for each cable – Stripping cables and fibers is a delicate process. Carefully set your hand tool or machine tool to the right cable diameter and

Fiber Optic Stripping

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With several patents for fiber optic stripping, such as Burst™ Technology and the Ring of Fire®, 3SAE''s state-of-the-art non-contact, chemical free fiber coating removal solutions are ideal for the end

Stripping (fiber)

Stripping is the act of removing the protective polymer coating around optical fiber in preparation for fusion splicing. The splicing process begins by preparing both fiber ends for fusion, which requires

How to Strip and Prepare Fibre Optic Cable for Termination: A ...

Introduction: Stripping and preparing fibre optic cables for termination is a critical step in the installation and maintenance of fibre optic networks. Properly stripping the cable and preparing

Tips & Techniques for Using Stripping Tools on Fiber Optic Cable

Optical cable specification development includes design and quality testing. FOC''s impact reaches the network physical capabilities through fiber manufacturing process expertise from

Preparing your Fiber Optic Cable for Connectors or Splices

Learn the essential steps and tools for preparing fiber optic cables for connectors or splices. Master mechanical and fusion splicing techniques to

The Ultimate Optical Fiber Stripper Guide

Adjustable and Specialized Optical Fiber Stripper Models While most applications use standard fiber sizes, some projects may involve non-standard or

How to Strip And Clean Fiber-Optic Cable

Whether it is indoor or outdoor fiber-optic (FO) cable, using a step-by-step approach reduces the chance of fiber damage while ensuring the performance of fibers our continuing discussion of installing FO

How to Terminate Fiber Optic Cable: Top 5 Essential Tips

Learn how to terminate fiber optic cable with connectors and splicing. Discover tools, techniques, and tips for precise termination.

Cable Preparation Best Practices for Fiber Optic Indoor/Outdoor ...

This best practices document is a step-by-step guide for end and midspan access of loose tube optical cable, including sheath removal, core preparation, and fiber preparation.

Fiber Strippers – tools, mechanical, thermal, chemical,

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Fiber strippers are precision tools that remove a coating from a fiber before connectorization or splicing. There are mechanical, thermal and non-contact

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