

What tools are used for fiber optic cable splicing and what are their prices



Overview

Selecting the right fiber optic splicing tools and kits can be challenging for many fibre optic engineers and installers.

Key Takeaways

Fiber optic splicing requires specialized tools such as fusion splicers, mechanical splices, cleavers, strippers, and inspection equipment, with prices ranging from a few hundred to several thousand dollars depending on the tool and precision. Key Splicing Tools



1. **Fusion Splicer** A fusion splicer aligns two fiber ends and fuses them using an electric arc, creating a permanent, low-loss connection. Core-alignment models offer higher precision than cladding-alignment versions. Fusion splicers are essential for trunk builds, repairs, and high-capacity installations. Typical losses are around 0.01–0.03 dB. Prices for professional fusion splicers start at approximately \$2,000–\$10,000, depending on features like touchscreen controls, automatic heating, and splice record storage .

2. **Mechanical Splice Kit** Mechanical splicing uses a device to hold fiber ends in precise alignment with an index-matching gel. It is faster and less expensive than fusion splicing but has slightly higher loss (0.1–0.3 dB). Mechanical splicing kits can cost \$100–\$500, making them suitable for temporary or quick repairs .

3. **Fiber Cleaver** A cleaver produces a perfectly flat, perpendicular end face, critical for low-loss splicing. High-quality cleavers have diamond blades with lifespans exceeding 48,000 cleaves. Prices range from \$200–\$1,000 depending on precision and durability .

4. **Fiber Strippers** Strippers remove protective coatings without damaging the glass core. Adjustable, ergonomic models are available for different fiber diameters (250µm, 900µm, 2mm, 3mm). Prices typically range from \$20–\$150 .

5. **Kevlar Shears** Kevlar yarn in fiber cables requires specialized shears with hardened steel blades to cut cleanly. These cost around \$30–\$100 .

6. **Cleaning and Inspection Tools** Proper cleaning prevents signal loss. Tools include lint-free wipes, cleaning fluid, cassette cleaners, and inspection scopes. Prices vary: basic cleaning kits start at \$50, while advanced inspection microscopes can cost \$500–\$2,000 .

7. **Visual Fault Locator (VFL)** A VFL emits a visible red laser to detect breaks, bends, or bad splices. Field models cost \$100–\$400 .

8. **Splice Sleeves and Sleeve Heater** After fusion splicing, splice sleeves protect the joint. Sleeve heaters cost \$200–\$600, and sleeves themselves are inexpensive consumables, typically \$0.50–\$2 per sleeve .

Summary of Price Ranges	
Tool	Price Range (USD)
Fusion Splicer	\$2,000–\$10,000
Mechanical Splice Kit	\$100–\$500
Fiber Cleaver	\$200–\$1,000
Fiber Strippers	\$20–\$150
Kevlar Shears	\$30–\$100
Cleaning & Inspection Kit	\$50–\$2,000
Visual Fault Locator	\$100–\$400
Splice Sleeves & Heater	\$0.50–\$600

Investing in high-quality tools ensures low-loss, reliable splices and reduces the risk of fiber damage or signal degradation. Fusion splicing is preferred for permanent, high-performance connections, while mechanical splicing is suitable for temporary or quick fixes .

Article Content

Tools & Materials Checklist — Fiber Optic Technician Equipment —

Complete list of tools and materials you need for fiber optic field work. All standards based on fusion splicing only — the industry

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Explore essential fiber optic tools for installation, splicing, and testing. Learn how to choose professional tools for

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Fiber Tools, Consumables & Accessories

CommScope features a family of tools and components for the installation, repair and maintenance of fiber cables, including prep

Essential Guide to Selecting Fiber Optic Splicing Tools and Kits

Selecting the right fiber optic splicing tools and kits can be challenging for many fibre optic engineers and installers.

What is Fiber Optic Tools and Types

Fiber optic tools are specialized tools used for installing, maintaining, and testing fiber optic

Fiber Optic Splicing Equipment

Fiber Instrument Sales has a wide variety of fiber optic splicing equipment such as fusion splicers from AFL, Sumitomo, FITELE, and

Splicing Fiber Optic Cables | A Beginner's Guide

Fiber splicing is a vital technique in cable maintenance. Knowing how to splice fiber optic cables is key for data communications with

Fiber Optic Tools: A Professional Guide to Installation, Splicing, and ...

Fiber optic tools are essential components in building reliable, high-performance fiber networks. From installation and

Fiber Optic Equipment: Every Technician Should Have

By equipping yourself with the right tools, you can improve your efficiency, reduce the likelihood of errors, and deliver

Fiber Optic Splicing: A Beginner's Guide – VCELINK

Splicing fiber optic cable indeed requires precision and the right tools. Let's delve into the essential equipment for

The Ultimate Guide to Splicing of Fiber: Techniques and Tips

Looking to understand fiber splicing? It's the process of joining two fiber optic cables using techniques such as fusion

Amazon : Fiber Optic Tool Kit

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1-48 of 864 results for "fiber splicing tools" Results Check each product page for other buying options. Price and other details may

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Top 5 Fusion Splicers for 2025: Precision Tools for Fiber Optic Experts

A fusion splicer is a precision tool used to join two optical fibers by fusing them together with an electric arc. This

Tools for Cable and Fiber Preparation

In the process of installing and preparing fiber optic cables for fusion and mechanical splicing, a number of special tools are required.

Fiber Optic Tools Guide – Choosing the Right Tools

This article provides a complete guide on how to choose the right fiber optic tools for professional installations,

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