

TBS900 - SEP 13, 2018

Item # TBS900 was discontinued on September 13, 2018. For informational purposes, this is a copy of the website content at that time and is valid only for the stated product.

► Tools for Installing New Fiber Optic Connectors and Building Patch Cables



T06S13
Fiber Stripping Tool



FTS3
Stripping Tool for Ø3 mm and Ø3.8 mm Furcation Tubing



CT042
Connector Crimp Tool



AFS900
Adjustable Fiber and Wire Stripping Tool



T186
Kevlar Cutting Shears



FTS4
Three-Hole Fiber Stripper

OVERVIEW

Thorlabs offers the following tools used to install connectors on single mode and multimode optical fiber.

- **Fiber Buffer Stripping Tools:** Used to Remove the Buffer from an Optical Fiber, for Ø80 to Ø1550 µm Clad Fibers
- **Furcation Stripping Tools:** Used to Remove the Fiber Jacket from an Optical Fiber, for Ø400 µm to Ø3.8 mm Fiber Jackets
- **Connector Crimp Tool:** Used to Crimp SMA, FC, SC, and ST Connectors
- **Kevlar Cutting Shears:** Carbon Steel Blades Used to Cut through Kevlar Fibers
- **Fiber Gripper:** Provides a Secure Hold without Damaging the Fiber
- **Fiber Optic Disposal Unit:** Offers a Safe Solution for Disposal of Cleaved Fiber Ends, Epoxy and Syringes, and Other Sharp Objects

Click options in the guide below to quickly navigate the page.

Fiber Optic Termination Tools Quick Links (Click Image to Enlarge)

Fiber Buffer Stripping Tools	Three Hole Fiber Stripping Tool	Adjustable Fiber Buffer and Jacket Stripping Tool	Vytran™ Stripping Tool for Ø900 µm Tight Buffer	Stripping Tool for Ø3 mm and Ø3.8 mm Furcation Tubing	Crimping Tool for Connectors	Kevlar Cutting Shears	Fiber Gripper	Fiber Optic Disposal Unit

Fiber Buffer Stripping Tools

- Self-Aligning Blade Set Assures Concentric Scoring of Buffer or Coating
- Color-Coded Blades are Long-Lasting and Swappable
- Each Stripping Tool Includes a BFG1 Bare Fiber Gripper
- Foolproof, No-Nick Design
- Fast, Reliable Fiber Stripping



Click to Enlarge
T12S16 Stripping Tool Shown with Included BFG1 Fiber Gripper

These fiber buffer stripping tools provide a quick, easy, and reliable way to remove the buffer from an optical fiber in preparation for connectorization. A fiber guide and matched blades ensure that the optical fiber is correctly positioned and stripped each time. The blades are color coded to allow for fast identification of the proper fiber stripping tool.

The BFG1 Bare Fiber Gripper is included with each fiber buffer stripping tool. When removing the buffer from an optical fiber, the textured rubber material of this gripper provides a secure hold without damaging the fiber. This method of gripping is recommended over wrapping or clamping the loose end of the fiber, as these techniques can create microfractures in the fiber. The BFG1 gripper is also sold separately below.

To select the correct fiber stripping tool for your cladding and coating diameter, please expand the Stripping Tool Selection Guide table below.

Stripping Tool Selection Guide

- Coating refers to the jacket, buffer, or coating that is being removed.

Part Number	Description	Price	Availability
T04S10	Fiber Stripping Tool, Typical Cladding/Coating: 80 µm / 170 µm	\$141.78	Today

T06S13	Fiber Stripping Tool, Typical Cladding/Coating: 125 µm / 250 µm	\$72.17	Today
T06S16	Fiber Stripping Tool, Typical Cladding/Coating: 125 µm / 400 µm	\$72.17	Today
T08S13	Fiber Stripping Tool, Typical Cladding/Coating: 125 µm / 250 µm	\$72.17	Today
T08S40	Fiber Stripping Tool, Typical Cladding/Coating: 125 µm / 900 µm	\$72.17	Today
T10S13	Fiber Stripping Tool, Typical Cladding/Coating: 200 µm / 300 µm	\$72.17	Today
T12S16	Fiber Stripping Tool, Typical Cladding/Coating: 230 µm / 400 µm	\$69.36	Today
T12S18	Fiber Stripping Tool, Typical Cladding/Coating: 230 µm / 430 µm	\$69.36	Today
T12S21	Fiber Stripping Tool, Typical Cladding/Coating: 230 µm / 500 µm	\$69.36	Today
T12S25	Fiber Stripping Tool, Typical Cladding/Coating: 230 µm / 600 µm	\$69.36	Today
T14S21	Fiber Stripping Tool, Typical Cladding/Coating: 285 µm / 500 µm	\$69.36	Today
T16S31	Fiber Stripping Tool, Typical Cladding/Coating: 325 µm / 650 µm	\$68.09	Today
T14S18	Fiber Stripping Tool, Typical Cladding/Coating: 330 µm / 450 µm	\$70.64	Today
T18S25	Fiber Stripping Tool, Typical Cladding/Coating: 400 µm / 600 µm	\$69.36	Today
T18S31	Fiber Stripping Tool, Typical Cladding/Coating: 400 µm / 730 µm	\$68.09	Today
T21S31	Fiber Stripping Tool, Typical Cladding/Coating: 425 µm / 730 µm	\$68.09	Today
T23S46	Fiber Stripping Tool, Typical Cladding/Coating: 500 µm / 1000 µm	\$68.09	Today
T28S31	Fiber Stripping Tool, Typical Cladding/Coating: 630 µm / 780 µm	\$70.64	Today
T28S46	Fiber Stripping Tool, Typical Cladding/Coating: 630 µm / 1040 µm	\$70.13	Today
M37S46	Fiber Stripping Tool, Typical Cladding/Coating: 830 µm / 1040 µm	\$70.64	Today
M37S63	Fiber Stripping Tool, Typical Cladding/Coating: 830 µm / 1400 µm	\$70.64	Today
M44S63	Fiber Stripping Tool, Typical Cladding/Coating: 1035 µm / 1400 µm	\$70.64	Today
M44S67	Fiber Stripping Tool, Typical Cladding/Coating: 1035 µm / 1600 µm	\$70.64	Today
M63S86	Fiber Stripping Tool, Typical Cladding/Coating: 1550 µm / 2000 µm	\$82.62	Today

Three-Hole Fiber Stripping Tool

The FTS4 Fiber Stripping Tool is capable of stripping the fiber jacket (furcation tubing), fiber buffer, and fiber coating. The first hole, indicated by the 1 in the photo to the right, strips the Ø1.6 mm - Ø3 mm fiber jacket down to the Ø600 µm - Ø900 µm buffer coating. The second hole strips the Ø600 µm - Ø900 µm buffer down to the Ø250 µm coating. The third hole is used to strip the Ø250 µm cable down to the glass fiber without nicks or scratches.

The handle is made of thermoplastic rubber and the tool is 6" (15 cm) long from the tip of the blade to the end of the handle. This fiber stripper is preset at the factory and cannot be adjusted or calibrated. The stripping tool should be periodically checked for proper operation and can be cleaned with dry compressed air to remove debris from the openings.



Click to Enlarge
The FTS4 three-hole fiber stripping tool can be used to strip off (1) the jacket, (2) the buffer, and (3) the coating of an optical fiber.

Part Number	Description	Price	Availability
FTS4	Three-Hole Stripping Tool for Fiber Buffers and Jackets	\$30.60	Today

Adjustable Fiber Buffer and Jacket Stripping Tool

The AFS900 Adjustable Stripping Tool is capable of stripping the fiber jacket (furcation tubing) and fiber buffer. The blades have a V-groove slot to precisely hold the fiber in the proper position as the stripping tool is closed. The AFS900 has an adjustable blade stop that can be used to ensure that the optical fiber is not cut when stripping the jacket or buffer. This tool is often used when stripping Ø900 µm fiber jacket (tight or loose), and can remove jackets and buffers down to Ø400 µm. Because of the delicate nature of fiber, we recommend that when the AFS900 is used to strip fiber buffer that the stop be properly set and then to dedicate the tool for that purpose. Also available are fiber buffer stripping tools with blades that are dedicated for use with specific fiber cladding and buffer diameters (see above).

Part Number	Description	Price	Availability
AFS900	Adjustable Stripping Tool for Fiber Buffers, Fiber Jackets, and Wire	\$20.81	Today

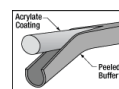
Vytran™ Stripping Tool for Ø900 µm Tight Buffer

The Vytran™ TBS900 Tight Buffer Stripping Tool is used to remove tight buffer from Ø900 µm buffered fiber without cutting the coating. It is designed for fibers with coating diameters from 250 µm to 500 µm. As shown by the image to the left, it consists of eleven slots, each of which is 4" (101.6 mm) long, and a holding plate. Each slot cuts a different depth into the buffer, as given in the table to the right.

To use, place the tool on a flat, clean surface, then push down the two rounded tabs next to the holding plate to raise the holding plate. While holding down the tabs, insert the Ø900 µm buffered fiber into the desired slot in the direction marked "Feed". Release the tabs to lower the holding plate, then pull the buffered fiber in the direction marked "Strip". This removes a portion of the buffer, as shown by the drawing to the right, and provides a starting point for peeling back the rest of the buffer by hand.

We recommend starting with a slot that will remove less material, then increasing the amount removed until the ideal slot is determined. Our JEL10 and EYL10X Eye Loupes are useful for inspecting the stripped fiber to ensure the coating has not been compromised.

Each TBS900 stripping tool ships with one single-sided blade pre-installed, as well as ten extra replacement blades. The replacement procedure, which requires a 0.050" balldriver or hex key (not included), is available in the manual.



Click to Enlarge
The TBS900 Tight Buffer Stripper shears off a portion of the buffer, allowing the user to peel the buffer back by hand.

Slot Label	Cut Depth ^a (Nominal)
-	200 µm
1	212.5 µm
2	225 µm
3	237.5 µm
4	250 µm
5	262.5 µm
6	275 µm
7	287.5 µm
8	300 µm
9	312.5 µm
+	325 µm

- Depth of Cut into an Unstripped Fiber

Part Number	Description	Price	Availability
TBS900	Vytran™ Stripping Tool for Ø900 µm Tight Buffer	\$1,147.50	3-5 Days

Stripping Tool for Ø3 mm and Ø3.8 mm Furcation Tubing

The FTS3 Stripping Tool will provide precise cuts through Ø3 mm and Ø3.8 mm furcation tubing. Simply set the depth of the dual cutting blades before placing the cutting tool around the fiber. Then spin the tool around the fiber several times. This results in two precise cuts through the tubing. The furcation tubing between the two cuts can then be removed by using the blade at the end of the FTS3 to make a precise cut through the tubing along the length of the fiber. Each FTS3 also comes with a blade that has a rounded tip. Long cuts along the length of the fiber can be made through the furcation tubing by swapping the blade at the end of the FTS3 with the rounded blade. Simply place the fiber in the end V-groove, press the blade through the furcation tubing, and then draw the fiber through the tool.

Replacement blades (Item # FTS3B) are available for the FTS3 stripping tool. Each FTS3B set contains three straight blades plus the round tipped blade.



Part Number	Description	Price	Availability
FTS3	Stripping Tool for Ø3 mm and Ø3.8 mm Furcation Tubing	\$33.41	Today
FTS3B	Replacement Blade Set for FTS3 (Three Straight Blades and One Round Blade)	\$13.57	Today

Crimping Tool for Connectors

This fiber connector crimp tool can be used to crimp SMA, FC, SC, and ST connectors. It has hex crimp sizes of 0.128", 0.151", 0.178", 0.197", and 0.215". Crimping is only required for connectors attached to furcation tubing that is Ø2 mm or greater; Ø900 µm or smaller tubing does not need to be crimped.

Part Number	Description	Price	Availability
CT042	Crimp Tool Handle with Die for SMA, FC, SC, or ST Connectors	\$103.02	Today

Kevlar Cutting Shears

The T186 Kevlar Cutting Shears (Mfg. Item # JIC-186) have carbon steel blades that are specifically designed to cut through Kevlar fibers. One blade is serrated to keep the Kevlar fibers from sliding along the blades as the shears are being closed, which allows the Kevlar fibers to be cut easily. These shears feature an ergonomic loop handle made from dual component nylon and Santoprene™. The tool is 6" (15 cm) long from the tip of the blade to the end of the handle and features an adjustable joint screw for tension adjustments.

It is important to use the T186 cutting scissors only for cutting Kevlar. Any other material, including the silica fiber itself, can potentially damage the precision edge of the blades and make them less effective in cutting Kevlar.

Part Number	Description	Price	Availability
T186	Kevlar Cutting Shears	\$19.79	Today

Fiber Gripper

The BFG1 Bare Fiber Gripper is an ideal aid when removing buffer from an optical fiber. The textured rubber material of this gripper provides a secure hold without damaging the fiber. This method of gripping is recommended over wrapping or clamping the loose end of the fiber, as these techniques can create microfractures in the fiber.

Part Number	Description	Price	Availability
BFG1	Rubber Gripper for Bare Fiber	\$5.20	Today

Fiber Optic Disposal Unit

- ▶ Safe Solution for Disposing of Cleaved Fiber Ends
- ▶ One Circular and One Rectangular Covered Hole in Lid
- ▶ Dimensions (L x W x H): 2.75" x 2.75" x 6" (6.99 cm x 6.99 cm x 15.24 cm)
- ▶ Disposable: Do Not Reuse



The FTDU offers a safe solution for disposal of cleaved fiber ends, epoxy and syringes, and other sharp objects. This high-density polyethylene (HDPE) bottle features a translucent lid with one circular and one rectangular hole in it (see the photo to the right). Both of these holes have individual covers that snap closed to keep the contents inside the unit. Tabs on the side of the lid hold the covers open for hands-free use. The two hole covers are connected by a plastic tab. Cut, or pull, the covers apart to use the holes separately.

To use, insert sharps into one of the holes in the lid. Do not remove the lid itself from the unit. Use the "Contents" space on the label to clearly indicate what is inside. To protect against spills, keep the holes covered when not inserting sharps. When it is full, securely cover both holes in the lid by inserting the tab on the cover into the slot in the lid and dispose of the canister according to the contents. Do not fill the sharps container past the indicated "Full" line on the label. Do not

reuse this unit; it is a one-time-use container only.

Part Number	Description	Price	Availability
FTDU	Fiber Optic Disposal Unit	\$7.50	Today

Superseded

Part Number	Description	Price	Availability
T865	Kevlar Cutting Shears	\$32.00	Lead Time

