



**Manufacturer:**  
AFL

**Product Name:**  
AFL FSM-45S Fusion Splicer (battery)

**Manufacturer Part Number:**  
S018319



Learn More

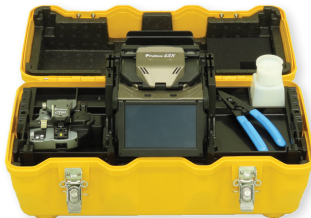
► Click here for more details on the AFL FSM-45S Fusion Splicer (battery)



## Fusion Splicing



45S



45S Standard Kit



45S on Tripod

### Fujikura 45S Fusion Splicer

The 45S cladding alignment fusion splicer is changing the way people splice fiber in small to mid-fiber count applications. This Fujikura splicer debuts a landmark improvement to the fusion splicing process with the ability to prepare and load both fibers simultaneously. The hand-held fiber coating stripper, the SS-05, is capable of stripping two 250  $\mu$ m coated fibers in the same pass, along with the CT-16A cleaver adapter plate which can likewise accommodate two bare fibers for cleaving. After preparation, the 45S patented sheath clamps enable loading both fibers simultaneously into the splicer with one fiber in each hand. The user can press down on the sheath clamp base to close it while positioning the fiber in the v-grooves. This enables one-handed operation.

Furthermore, the 45S sheath clamps are mechanically linked to the wind protector, so after splicing is finished, opening the wind protector also opens both sheath clamps for quick sleeve positioning and transfer to the tube heater. The 45S tube heater shrinks sleeves much faster than its predecessor with a nominal ~20 second heat time for 60 mm sleeves down from ~26 seconds. The simultaneous fiber preparation capability, automated sheath clamp opening, and a faster tube heater, combine to lower the overall fusion splicing cycle time by ~30% or more.

The 45S continues to benefit the user experience with improvements to fiber placement, battery access, and machine ergonomics. Previously, when using sheath clamps, if the cleaved fiber was accidentally set past the electrode centerline, the machine would send an error and require manual intervention. The 45S will now accept this mistake and reverse the fiber to correct position automatically. With a cube form factor, the 45S is easily transported and operated in space-constrained environments. The adjustable screen can alleviate glare from the sun and adjust with abnormal splicer positions confronted in challenging splice locations.

Single Fiber Splitters

### Applications

- 5G Small Cell Site
- FTTx drops and terminations
- MDF/IDF splices and terminations
- Rural fiber deployments and restorations

### Features

- Simultaneous fiber preparation with newly patented sheath clamp design
- Sheath clamps automatically opened with the wind protector
- Automatic fiber placement correction
- Active Fusion Control for arc optimization with every splice
- Active Blade Management for cleave quality monitoring and correction
- Easy-access battery, screen position adjustments, and ergonomic adaptations
- Fully ruggedized for shock, moisture and dust resistance

Contact the professionals at Fiber Optic Center for a quote or to get more details.

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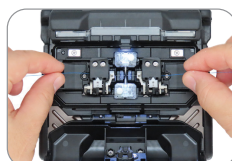
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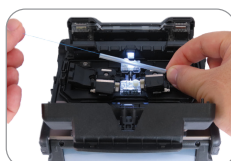
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**Fusion Splicing****Fujikura 45S Fusion Splicer**

Single Fiber Splitters

**Features**

Simultaneous Fiber Loading



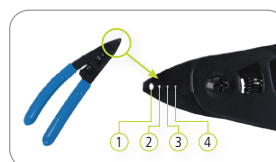
Sleeve Positioning



Work Tray with Neck Strap



CT-16A Adapter Plate on CT-50



Fiber stripper SS-05

- ① For 2.3 mm
- ② For 900  $\mu$ m
- ③ For 250  $\mu$ m
- ④ For 250  $\mu$ m

**Ordering Information**

DESCRIPTION	AFL NO.
<b>Fujikura 45S Standard Kit</b> <b>Includes:</b> CT-50 cleaver, SS-05 single fiber stripper, 1 pair each FH-70-250 and FH-70-900 fiber holders, SP-04 set plates, ELCT2-16B Spare Electrodes (Pair), ADC-21 AC Adapter, BTR-17 Battery Pack (installed), ACC-09 Power Cord, USB-01 USB Cable, AP-02 Alcohol Container, WT-10 work tray, ST-03 carrying case strap, TS-03 tripod screw, CC-45 Transit Case, 1 year factory warranty, and instruction manual downloaded from splicer	S018318
<b>Fujikura 45S Kit without Cleaver</b> <b>Includes:</b> SS-05 single fiber stripper, 1 pair each FH-70-250 and FH-70-900 fiber holders, SP-04 set plates, ELCT2-16B Spare Electrodes (Pair), ADC-21 AC Adapter, BTR-17 Battery Pack (installed), ACC-09 Power Cord, USB-01 USB Cable, AP-02 Alcohol Container, WT-10 work tray, ST-03 carrying case strap, TS-03 tripod screw, CC-45 Transit Case, 1 year factory warranty, and instruction manual downloaded from splicer	S018319
One Year Extended Warranty	S012996
Two Year Extended Warranty	S013000

**Recommended Accessories**

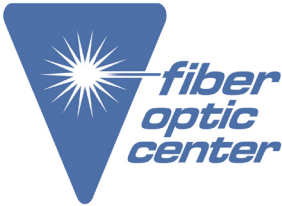
DESCRIPTION	AFL NO.	DESCRIPTION	AFL NO.
<b>Cleavers AND STRIPPERS</b>		<b>Power Supply Options</b>	
CT-50 Fiber Cleaver	S017030	BTR-17 Battery Pack	S018324
CT-16 Fiber Cleaver	S018330	ADC-21 AC Adapter	S018168
SS-05 Dual Fiber Stripper	S018327	ACC-09 Power Cord	S014390
<b>Fiber Holders</b>		<b>Miscellaneous</b>	
CLAMP-S35B Loose Buffer Sheath Clamp	S018333	WT-10 Work Tray	S018336
FH-70-250 (250 $\mu$ m single fiber)	S017111	TS-03 Tripod Screw	S017524
FH-70-200 (200 $\mu$ m single fiber)	S017711	ST-03 Carrying Case and Work Tray Strap	S017549
FH-70-900 Fiber Holders (900 $\mu$ m single fiber)	S017113	CLAMP-DC-12 drop cable clamp on work tray	S017550
FH-60-LT900 (900 $\mu$ m loose buffer tube)	S015181	ELCT2-16B Electrodes	S017103
<b>FUSEConnect® Accessories</b>		CC-45 Transit Case	S018326
FH-FC-20 (900 $\mu$ m within 2.0 mm sheathing) (each)	S014696	Splicer V-Groove Cleaning Kit	S014397
FH-FC-30 (900 $\mu$ m within 3.0 mm sheathing) (pair)	S014695	USB-01 USB Cable	S014777
FH-FC-900 (900 $\mu$ m cable) (each)	S014697	SP-04 Fiber Holder Set Plates	S018332
CLAMP-FC-2000 (pair)	S014705	AD-16A Adapter Plate (CT-50 and CT-16 up to 900 $\mu$ m)	S018328
CLAMP-FC-3000 (pair)	S014704	Portable Tripod Workstation (see web listing for more detail)	S014773

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### Fusion Splicing

### Fujikura 45S Fusion Splicer

#### Specifications

PARAMETER		VALUE
Fiber alignment method		Active cladding alignment
Fiber count can be spliced		Single fiber
Applicable fiber	Fiber type	Single-mode optical fiber
	Cladding dia.	Multimode optical fiber
Applicable coating		Approx. 125 μm
	Sheath Clamp	Coating diameter: Max. 3,000 μm
	Fiber Holder	Cleave length: 5 to 16 mm *1 Coating diameter: 160 μm – 3,000 μm based on available fiber holder options Cleave length: Approx. 10 mm
Fiber splice performance	Splice loss *2	ITU-T G.652: Avg. 0.03dB
		ITU-T G.651: Avg. 0.01dB
		ITU-T G.653: Avg. 0.05dB
ITU-T G.655: Avg. 0.05dB		
ITU-T G.657: Avg. 0.03dB		
	Splicing time *3	SM FAST mode: Avg. 6 to 8 sec. SM AUTO mode: Avg. 8 to 11 sec.
Applicable protection sleeve	Sleeve type	Heat shrinkable sleeve
	Sleeve length	Max. 66 mm
	Sleeve dia.	Max. 6.0 mm before shrinking
Sleeve heat performance	Heat time *4	60 mm mode: Avg. 21 to 23 sec. 60 mm slim mode: Avg. 16 to 18 sec.
Fiber tensile test force		Approx. 2.0 N
Electrode life *5		Approx. 6,000 splices
Physical description	Dimensions W	Approx.131 mm without projection
	Dimensions D	Approx.123 mm without projection
	Dimensions H	Approx.121 mm without projection
	Weight	Approx. 1.4 kg including battery
Environmental condition	Temperature	Operate : -10 to 50°C Storage : -40 to 80°C
	Humidity	Operate : 0 to 95% non-condensing Storage : 0 to 95% non-condensing
	Altitude	Max. 5,000 m
AC adaptor	Input	AC100 to 240V, 50/60Hz, Max. 1A
	Output	Approx. DC 19V, Max. 2.1A
Battery pack	Type	Rechargeable Lithium Ion
	Output	Approx. DC14.4V / 3,190mAh
	Capacity *6	60 mm heat mode: Approx. 200 splice & heat cycles
		60 mm slim heat mode: Approx. 230 splice & heat cycles
	Temperature	Operate: -10 to 50°C
		Recharge : 0 to 40°C
Short term storage of 30 days: -20 to 50°C Long term storage: -20 to 30°C		
	Battery life *7	Approx. 500 recharge cycles
Display	LCD monitor	TFT 4.95 inches with touch screen
	Magnification	Approx. 132 to 300X
Illumination	V-grooves	LED lamp
Interface	PC	USB2.0 MINI B type
		USB 2.0 A type
	External LED lamp	Approx. DC5V, 500mA
	Wireless *8	Bluetooth® 5.2

Single Fiber Splicers

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## Fusion Splicing

Single Fiber Splicers

### Fujikura 45S Fusion Splicer

#### Specifications

PARAMETER	VALUE
Data storage	Splice mode
	100 splice modes
	Heat mode
	30 heat modes
Screw hole for tripod	Splice result
	20,000 splices
Other features	Fiber image
	100 images
	1/4-20UNC
	Fusion control
	Blade management and control
	Splice start
	Heater start
	Reference guide
	PDF file stored on splicer
	Open with/without wind protector
Sheath clamp	Close when setting fiber
	Easy sleeve positioning design
	Tool-less replacement
	Splicer firmware update via internet
Electrode	Parameter Upload and download
PC Software	

#### NOTES:

- \*1 Cleave length range depending on fiber type  
5 – 16 mm: 125 µm cladding dia. And 250 µm coating dia.  
10 – 16 mm: 125 µm cladding dia. And 400 or 900 µm coating dia.
- \*2 Measured with cut-back method relevant to ITU-T and IEC standard after splicing Fujikura identical fibers. The average splice loss changes depending on the environmental condition and fiber characteristics.
- \*3 Measured at room temperature. The definition of splice time is from the fiber image appearing on the LCD monitor to the estimated splice loss. The average splice time changes depending on the environmental conditions, fiber type, and fiber characteristics.
- \*4 Measured at room temperature with the AC adapter. The heat time is defined from the start beep sound to the finish beep sound. The average heat time changes depending on the environmental conditions, sleeve type, and battery pack condition. In addition, since the heating operation is constantly optimized, the average heating time changes depending on the usage conditions of the fusion splicer.
- \*5 The electrode life changes depending on the environmental conditions, fiber type, and splice modes used.
- \*6 Test Conditions  
Splice and heat time: 1 minute cycle  
Using the splicer power save settings, subject to our testing condition  
Using a new battery  
Room temperature  
The battery capacity changes when testing in different conditions than above
- \*7 The battery capacity decreases to half after approx. 500 discharge and recharge cycles. The battery life is shortened further when using outside of the storage and operating temperature ranges, or if completely discharged when stored for an extended period without recharging.
- \*8 Bluetooth mark and logos are registered trademarks of Bluetooth SIG, Inc.

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