

**Manufacturer:**

AFL

**Product Name:**

AFL 45S AC Adapter - ADC-21

**Manufacturer Part Number:**

S018168

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## 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.

**Features**

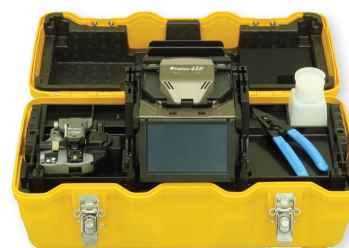
- Simultaneous fiber preparation with newly patented sheath clamp design
- Sheath clamps automatically opened with the wind protector
- Automatic fiber placement correction
- Active Fusion Control for arc optimization with every splice
- Active Blade Management for cleave quality monitoring and correction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

**Applications**

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



45S



45S Standard Kit



45S on Tripod

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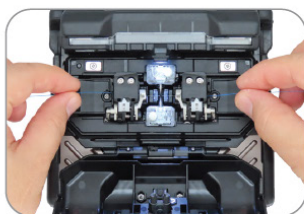
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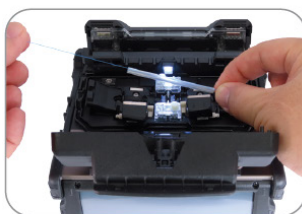
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## Fujikura 45S Fusion Splicer

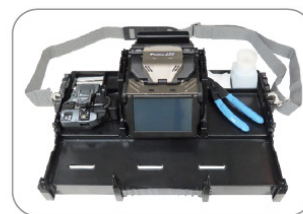
### Features



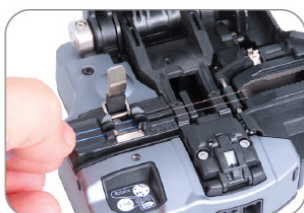
Simultaneous Fiber Loading



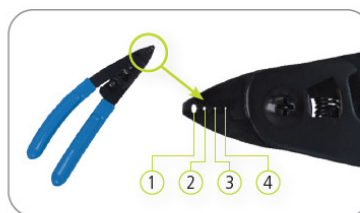
Sleeve Positioning



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 includes:</b> CT-50 cleaver, SS-05 single fiber stripper, 1 pair each FH-70-250 and FH-70-900 fiber holders, FH-FC-900 (900 $\mu$ m cable), 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 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

### 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
<b>Fiber Holders</b>		ACC-09 Power Cord	S014390
CLAMP-S35B Loose Buffer Tube Clamp	S018333	<b>Miscellaneous</b>	
FH-70-250 (250 $\mu$ m single fiber)	S017111	ELCT2-16B Electrodes	S017103
FH-70-900 Fiber Holders (900 $\mu$ m single fiber)	S017113	Splicer V-Groove Cleaning Kit	S014397
FH-60-LT900 (900 $\mu$ m loose buffer tube)	S015181		

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### 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	Sheath Clamp	Approx. 125 µm
	Fiber Holder	Coating diameter: Max. 3,000 µm
		Cleave length: 5 to 16 mm <sup>*1</sup>
Fiber splice performance	Splice loss <sup>*2</sup>	Coating diameter: 160 µm – 3,000 µm based on available fiber holder options
	Splicing time <sup>*3</sup>	Cleave length: Approx. 10 mm
Applicable protection sleeve	Sleeve type	ITU-T G.652: Avg. 0.03dB
	Sleeve length	ITU-T G.651: Avg. 0.01dB
Sleeve heat performance	Sleeve dia.	ITU-T G.653: Avg. 0.05dB
	Heat time <sup>*4</sup>	ITU-T G.655: Avg. 0.05dB
Fiber tensile test force		ITU-T G.657: Avg. 0.03dB
Electrode life <sup>*5</sup>		SM FAST mode: Avg. 6 to 7 sec.
Physical description	Dimensions W	SM AUTO mode: Avg. 8 to 10 sec.
	Dimensions D	Heat shrinkable sleeve
	Dimensions H	Max. 66 mm
	Weight	Max. 6.0 mm before shrinking
Environmental condition	Temperature	60 mm mode: Avg. 15 to 22 sec.
	Humidity	60 mm slim mode: Avg. 15 to 17sec.
	Altitude	Approx. 2.0 N
AC adaptor	Input	Approx. 6,000 splices
	Output	Approx. 131 mm without projection
Battery pack	Type	Approx. 123 mm without projection
	Output	Approx. 121 mm without projection
	Capacity <sup>*6</sup>	Approx. 1.4 kg including battery
	Temperature	Operate : -10 to 50°C
Display	LCD monitor	Storage : -40 to 80°C
	Magnification	Operate : 0 to 95% non-condensing
Illumination	V-grooves	Storage : 0 to 95% non-condensing
	PC	Max. 5,000 m
Interface	External LED lamp	AC 100 to 240V, 50/60Hz, Max. 1A
	Wireless <sup>*8</sup>	Approx. DC 19V, Max. 2.1A

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### Specifications

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

- \*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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