Fujikura 45S Fusion Splicer

The 45S cladding alignment fusion splicer is changing the way people splice fibre in small to mid-fibre count applications. This Fujikura splicer debuts a landmark improvement to the fusion splicing process with the ability to prepare and load both fibres simultaneously. The hand-held fibre coating stripper, the SS-05, is capable of stripping two 250µm coated fibres in the same pass, along with the CT-60 or CT-16A cleaver adapter plate which can likewise accommodate two bare fibres for cleaving. After preparation, the 45S patented sheath clamps enable loading both fibres simultaneously into the splicer with one fibre in each hand. The user can press down on the sheath clamp base to close it while positioning the fibre in the V-grooves. This enables one-handed operation.

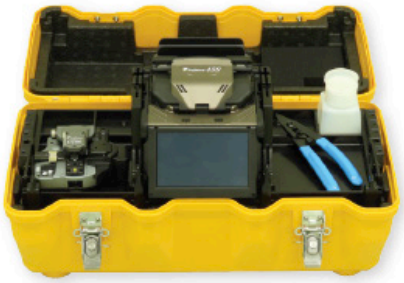
Furthermore, the 45S sheath clamps are mechanically linked to the wind protector, so after splicing is finished, opening the wind protector also opens both sheath clamps for quick sleeve positioning and transfer to the tube heater. The 45S tube heater shrinks sleeves much faster than its predecessor with a nominal ~20 second heat time for 60mm sleeves down from ~26 seconds. The simultaneous fibre 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 fibre placement, battery access, and machine ergonomics. Previously, when using sheath clamps, if the cleaved fibre was accidentally set past the electrode centreline, the machine would send an error and require manual intervention. The 45S will now accept this mistake and reverse the fibre 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.

Backed by the best service team in the industry, the Fujikura 45S is the ideal splicer to use when portability, ruggedness, speed, and reliability are needed. If you'd like to see the 45S capabilities first-hand, please contact us at 1300 232 476 to arrange a product demonstration at your earliest convenience.



45S



45S Standard Kit



45S on Tripod

Features

- Simultaneous fibre preparation with newly patented sheath clamp design
- Sheath clamps automatically opened with the wind protector
- Automatic fibre placement correction
- Active Fusion Control for arc optimisation 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

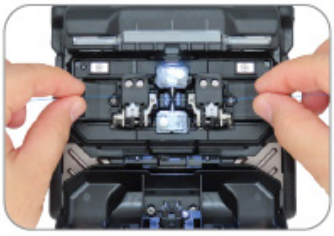
Applications

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

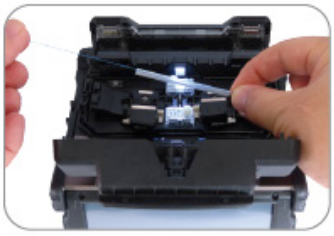
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Fujikura 45S Fusion Splicer

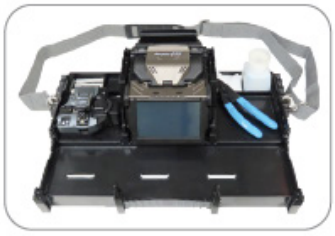
Features



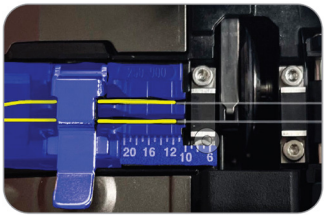
Simultaneous Fibre Loading



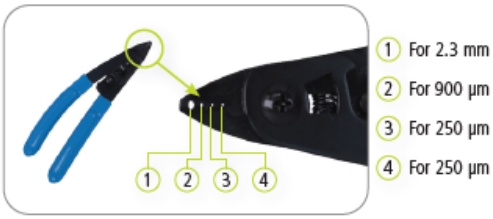
Sleeve Positioning



Work Tray with Neck Strap



Dual Cleaving



Fibre Stripper SS-05

Ordering Information

DESCRIPTION	AFL NO.
Fujikura 45S Fusion Splicer Standard Kit (with cleaver) **Includes:** CT-60 cleaver, SS-05 single fibre stripper, ELCT2-16B Spare Electrodes (Pair), ADC-21 AC Adapter, BTR-17 Battery Pack (installed), ACC-12 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, and instruction manual downloaded from splicer.	FUJ45S-CT60
Fujikura 45S Fusion Splicer Standard Kit without Bluetooth (with cleaver), **Includes:** CT-60 cleaver, SS-05 single fibre stripper, ELCT2-16B Spare Electrodes (Pair), ADC-21 AC Adapter, BTR-17 Battery Pack (installed), ACC-12 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, and instruction manual downloaded from splicer.	FUJ45S-CT60-NW
Fujikura 45S Fusion Splicer Standard Kit (no cleaver) **Includes:** SS-05 single fibre stripper, ELCT2-16B Spare Electrodes (Pair), ADC-21 AC Adapter, BTR-17 Battery Pack (installed), ACC-12 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, and instruction manual downloaded from splicer.	FUJ45S-NC

Recommended Accessories

DESCRIPTION	AFL NO.
Cleavers and Strippers	
CT60 Cleaver	S018654
CT16 Fibre Cleaver (with AD-16A)	S018330-AD16A
SS-05 Dual Fibre Strippers	S018327
Fibre Holders	
CLAMP-S35A Standard Sheath Clamp	S018464
CLAMP-S35B Loose Buffer Tube Clamp	S018333
FH-70-250 (250 µm single fibre)	S017111
FH-70-200 (200 µm single fibre)	S017711
FH-70-900 Fibre Holders (900 µm single fibre)	S017113
FH-60-LT900 (900 µm loose buffer tube)	S015181
FUSEConnect® Accessories	
FH-FC-20 (900 µm within 2.0 mm sheathing) (each)	S014696
FH-FC-30 (900 µm within 3.0 mm sheathing) (pair)	S014695
FH-FC-900 (900 µm cable) (each)	S014697
CLAMP-FC-2000 (pair)	S014705
CLAMP-FC-3000 (single holder)	S014704

DESCRIPTION	AFL NO.
Power Supply Options	
BTR-17 Battery Pack	S018324
ADC-21 AC Adapter	S018168
ACC-12 Power Cord	S014390
Miscellaneous	
WT-10 Work Tray	S018336
TS-03 Tripod Screw	S017524
ST-03 Carrying Case and Work Tray Strap	S017549
CLAMP-DC-12 Drop Cable Clamp On Work Tray	S017550
ELCT2-16B Electrodes	S017103
CC-45 Transit Case	S018326
Splicer V-Groove Cleaning Kit	S014397
USB-01 USB Cable	S014777
SP-04 Fibre Holder Set Plates	S018332
AD-16A Adapter Plate (CT-50 and CT-16 up to 900 µm)	S018328
Portable Tripod Workstation (see web listing for more detail)	S014773

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Fujikura 45S Fusion Splicer

Specifications

PARAMETER		VALUE
Fibre Alignment Method		Active core alignment
Fibre Count Can Be Spliced		Single fibre
Applicable Fibre	Fibre type	Singlemode optical fibre
		Multi-mode optical fibre
	Cladding Dia.	Approx. 125 µm
Applicable Coating	Sheath Clamp	Coating dia.: Max. 3,000 µm
		Cleave length: 5 to 16 mm*1
	Fibre Holder	Coating diameter: 160 µm - 3,000 µm based on available fibre holder options
		Cleave length: Approx. 10 mm
Fibre Splice Performance	Splice Loss*2	ITU-T G.652 : Avg. 0.03 dB
		ITU-T G.651 : Avg. 0.01 dB
		ITU-T G.653 : Avg. 0.05 dB
		ITU-T G.655 : Avg. 0.05 dB
		ITU-T G.657 : Avg. 0.03 dB
	Splice Time*3	SM FAST mode: Avg. 6 to 7 sec
		SM AUTO mode: Avg. 8 to 10 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.15 to 22 sec
		60 mm slim mode: Avg. 15 to 17 sec
Fibre 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% RH non-condensing
		Storage: 0 to 95% RH non-condensing
	Altitude	Max. 5,000 m
AC Adaptor	Input	AC100 to 240 V, 50/60 Hz, 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	132 to 300X
Illumination	V-Grooves	LED lamp
Interface	PC	USB 2.0 MINI B type
		USB 2.0 A type
	External LED Lamp	Approx. DC5V, 500mA
	Wireless*8	Bluetooth® 5.2

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Fujikura 45S Fusion Splicer

Specifications

PARAMETER		VALUE
Data Storage	Splice Mode	100 splice modes
	Heat Mode	30 heat modes
	Splice Result	20,000 splices
	Fibre 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
		Close when setting fibre
		Easy sleeve positioning design
	Electrode	Tool-less replacement
	PC Software	Splicer firmware update via internet
		Parameter Upload and download

*1 Cleave length range depending on fibre 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 fibres. The average splice loss changes depending on the environmental condition and fibre characteristics.

*3 Measured at room temperature. The definition of splice time is from the fibre image appearing on the LCD monitor to the estimated splice loss. The average splice time changes depending on the environmental conditions, fibre type, and fibre 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, fibre 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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