



FAFL 90S Plus Fusion Splicing Systems User Guide

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Buyer's Guide Fusion Splicing Systems



Core Alignment Splicers



Ribbon Splicers



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FUSION SPLICING SYSTEMS



Features

- Cleaver tracking and upkeep with wireless communication
- Improved real-time arc control for fibers with poor cleave angles
- Loose and tight buffer with same sheath clamp
- Automated wind protector, sheath clamps and splice operation
- Graphical User Interface with 5.0" Touchscreen
- PC software and 90S+ manual downloaded from splicer
- Multi-function transit case with integrated workstation
- Lithium-ion battery with 300 splices/shrinks per charge



90S+ Wind Protector Open

Core Alignment Fusion Splicers Fujikura 90S+ Fusion Splicer

The Fujikura 90S+ core alignment fusion splicer solves common problems seen in the field—from splicing poor quality legacy fiber to automated equipment maintenance and upkeep. The Fujikura 90S+ can be use in multiple field splicing applications including bend-insensitive fibers in drop cables, long-haul terrestrial and submarine LEAF® fibers, loose buffer fiber, splice-on connectors, and the list goes on. The speed and accuracy of the 90S+ make it suitable for certain production and specialty environments where high output, tight packaging, and low loss

requirements are required.

Regardless of your scenario, the Fujikura 90S+ is designed to keep you in the field with an extended battery life of 300 splice and heat cycles. With its multiple automated and easy-to-use features, the 90S+ alleviates the need for traditional operation tasks such as frequent arc calibrations, cleaver blade rotations, cleaver usage tracking, and manual splicing operations. A redesigned work tray, cooling tray, and optional cable clamp make the 90S+ kit more versatile than its predecessors in adapting to varying work conditions and environments.

When splicing loose buffer fiber, additional sheath clamps are not needed. The standard universal sheath clamp now handles both loose and tight buffer fibers. The new Active Fusion Control (AFC) technology improves splice losses for fibers that possess a poor cleave angle. Combined with Active Blade Management between the splicer and cleaver, the Fujikura 90S+ contains a robust set of splicing features that will reduce the likelihood of poor splice installations or repairs.

Maximize productivity in the field with the Fujikura 90S+ core alignment splicer with active blade management technology!

AFL No.	SPC NO.	Model
S017519	151X950	90S+ Fusion Splicer (machine only)
S017521	151X960	90S+ Fusion Splicer Kit (with CT50 Cleaver)
S017520	151X955	90S+ Fusion Splicer without Bluetooth (machine only)
S012996	151X106	One Year Extended Warranty (must be ordered at time of purchase)
S013000	151X110	Two Year Extended Warranty (must be ordered at time of purchase)

* 90S+ comes with a 2-year warranty.



Features

- Cleaver tracking and upkeep with wireless communication

- Automated wind protector, tube heater and splice operation
- User replaceable v-grooves
- 200 μ m and 250 μ m SWR universal ribbon prep accessories
- Graphical User Interface with 5.0" Touchscreen
- PC software and 90R manual downloaded from splicer
- Multi-function transit case with integrated workstation



90R In Work Tray

Ribbon Splicers

Fujikura 90R Fusion Splicer

The Fujikura 90R is the mass fusion splicer workhorse of the splicing world.

As data demand continues to rise, the solution to handle the increased traffic is to increase fiber counts. As a result, fiber counts being utilized in enterprise data centers, campus, and metro networks have grown enough to make single fiber splicing too costly and timely.

High density cabling made possible by SpiderWeb Ribbon® (SWR) and others like it are spurring ribbon splicing activity in places that have traditionally used loose fiber. The 90R is the answer to these changes in splicing demand. With automated splice start, tube heater, wind protector, cleave tracking, and blade rotations for up to 2 cleavers at a time, this splicer frees up operator time for other fiber preparation steps.

New to the 90R, you can keep your splicer in the field longer with field replaceable V-grooves. When V-grooves can no longer be cleaned after extended use, or are accidentally damaged, you can resume splicing in minutes by installing the spare set included with your 90R kit.

Save operator's time for other fiber preparation steps with 90R's automated splice start, wind protector, cleave tracking, and blade rotations for up to 2 cleavers at a time!

AFL No.	SPC NO.	Model
S017509	151X935	90R Fusion Splicer (machine only)
S017511	151X945	90R Fusion Splicer Kit (CT50 Cleaver and RS03 Thermal Stripper)
S017540	151X965	90R Fusion Splicer without Bluetooth (machine only)
S017510	151X965	90R Fusion Splicer kit without Bluetooth (with CT50 Cleaver and RS01 Thermal S tripper)
S012996	151X106	One Year Extended Warranty (must be ordered at time of Splicer purchase)
S013000	151X103	Two Year Extended Warranty (must be ordered at time of Splicer purchase)

* 90R comes with a 2-year warranty.



90R In Work Tray



CT50 Cleaver



R503 Thermal Stripper



45S Fusion Splicer

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

Active Cladding Alignment Fusion Splicers

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. 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. 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.

AFL No.	SPC NO.	Model
S018318	151X655	45S Fusion Splicer Kit (with CT50 Cleaver)
S018319	151X679	45S Fusion Splicer (machine only)
S018314	151X626	35S Standard Kit with CT16 Cleaver and Fiber Holders
S018316	151X621	35S Fusion Splicer Kit with Fiber Holders and No Cleaver
S012996	151X106	One Year Extended Warranty (must be ordered at time of splicer purchase)
S013000	151X110	Two Year Extended Warranty (must be ordered at time of splicer purchase)

* All Active Cladding Alignment Fusion Splicers come with a 1 year warranty.



35S Splicer



CT50 Cleaver



CT16 Cleaver

FIBER CLEAVERS

Fujikura CT50 Fiber Cleaver

The CT50 features automated blade rotation, unprecedented durability, and simplistic maintenance unseen with any other cleaver. Paired with a Bluetooth enabled Fujikura splicer, cleaver blade positions can be automatically advanced when needed based on cleave count or cleave quality. If automated rotation is not desired, the blade position can be advanced at the touch of a button, no tools required.

The easy to read blade position indicator clearly displays the selected position. The Bluetooth® feature, along with simplified mechanical operation, increases overall productivity and reliability. The fiber clamp opens beyond 90 degrees and readies the blade for cleaving in the same motion. This allows easy viewing of the distance scale used to gauge cleave length. The 16-position blade yields 60,000 single-fiber cleaves, or 5,000 12-fiber ribbon cleaves. The built-in scrap collector conveniently stores fiber shards until they can be safely discarded.

The CT50 is an industry first cleaver ruggedized to withstand severe shock, including drops up to 30 inches. If needed, the CT50 is field serviceable with all precision components easily replaced in the field.

AFL No.	SPC No.	Model
S017030	151X649	CT50 – Single Fiber or Ribbon (Bluetooth)

Fujikura CT16 Fiber Cleaver

The CT16 fiber cleaver from Fujikura was designed for FTTH or other space constrained applications where ergonomics and durability are key. It is compact, can be operated ambidextrously, and features a unique fiber

adapter, allowing users to cleave two bare fibers simultaneously when paired with the dual fiber stripper, the SS05. The scrap collector and fiber adapter side can be swapped by the user for left or right-handed preference, or as environmental constraints dictate. Furthermore, the thumbwheel on the bottom of the cleaver is utilized for blade rotations as opposed to previous tedious processes to rotate a cleaver blade. The top lever opens past vertical allowing for easy viewing, cleaning, and adjustment of the cleave length. The blade is retracted when the top lever is opened and the blade activates to score the fiber when it is closed, making this a true one-step cleaver. Like its predecessor, this cleaver can withstand a 30" drop from any of six different orientations and still maintain factory specified cleave angle performance. The cleaver blade and fiber clamping mechanisms are easy to replace in the field, mitigating the need to send this cleaver in for service.

AFL No.	SPC No.	Model
S018330	151X709	CT16 – Single Fiber

Cleaver Accessories

AFL No.	SPC No.	Model
S017076	151X924	CB-08 (Replacement Blade for CT50)
S018335	121X925	CB-09 (Replacement Blade for CT16)
S017122	151X919	ARM-CT50-01 (Replacement Pads/Anvil)
S018373	–	ARM-CT16-01 (Replacement Pads/Anvil)



CT50 Cleaver



CT16 Cleaver

FIBER STRIPPERS

Thermal and Mechanical Strippers

The RS01, RS02, and RS03 Thermal Strippers provide superior stripping performance for both single and multi-fiber stripping. The fast heating time of 3 seconds speeds productivity.

The ergonomic design, combined with the low level of force needed for stripping, makes the RS series comfortable and easy to use for high fiber count applications. The strippers are also capable of stripping 200 µm coated fibers and ribbons. An audible beep and illuminated LED signal indicate that the proper heating temperature has been reached. A temperature selection switch permits easy field optimization for different fibers or operating conditions. These strippers accept all Fujikura field and factory style fiber holders.

Bluetooth® capabilities on the RS02 and RS03 models provide a convenient way to program the stripper for user preferences via an Android or iOS smartphone app. The RS03 model includes a powerful Lithium-Ion battery that

delivers enough power for 600 stripping cycles. The RS03-80 is offered for stripping 80 μ m cladding fiber applications. For those situations and locations where Bluetooth-enabled devices are not permitted, the RS01 model is available with all of the features of the RS02 model but without the Bluetooth technology.

AFL No.	SPC No.	Model
S016815	–	RS01 – Thermal
S016816	151X908	RS02 – Thermal (Bluetooth)
S016817	151X914	RS03 – Thermal (Bluetooth and Cordless)
S017098		SS03 – Mechanical (Hand Tool)
S018327	–	SS05 Dual Fiber Coating Stripper

ACCESSORIES & CONSUMABLES

Consumables – Splice Sleeves

AFL No.	SPC No.	Model	Description
S015915	151X680	60 mm (Single Splice)	QTY: 1000 box / 100 pack
S015916	151X685	40 mm (Single Splice)	QTY: 1000 box / 100 pack
S003027	151X311	40 mm (Ribbon –12 fiber)	QTY: 250 – 999
			QTY: 1000 – 4999
			QTY: 5000+



RS01 Thermal Stripper



RS02 Thermal Stripper



RS03 Thermal Stripper



SS03 Fibre Strippers



SS05 Dual Fiber Coating Stripper



Splice Protection Sleeves

Splicer Kit Items

AFL No.	SPC No.	Model
S017548	151X968	12 Fiber V-grooves (90R)
S017103	151X967	Electrodes (90 series, 31/41S, 35/45S)
S017524	151X919	Tripod Screw (90 series, 31/41S, 35/45S, CT50)
S017512	151X969	90 Series Battery
S014536	151X796	90 Series Power Cord
S017513	151X735	90 Series AC Adapter
S014390	151X888	RX0X, 31/41S, 35/45S Power Cord
S018324	—	BTR-17 Battery Pack (35/45S)
S018168	—	ADC-21 AC Adapter (35/45S)

Splicing Accessories

AFL No.	SPC No.	Description
S014397	151X777	Splicer V-Groove Cleaning Kit
S014416	–	Splicer V-Groove Cleaning Kit Refill
S010212	151X714	FAT-04 Fiber Arrangement Tool – for forming temporary ribbons
S008622	151X708	FAA-03A Ribbon Adhesive (0.5 liter bottle)
S017465	151X937	RT-02 Ribbonizing Tool (No Glue)
S014012	151X769	FST-12 Ribbon Separation Tool
S014773	151X830	Portable Tripod Workstation
S017111	151X928	250 µm Single Fiber Holders (Pair)
S017113	151X930	900 µm Single Fiber Holders (Pair)
S017119	151X931	12 Fiber 250 µm Ribbon Fiber Holders (Pair)
S018333	–	CLAMP-S35B Loose Buffer Sheath Clamp (35/45S)



Splicer V-Groove Cleaning Kit



RT-02 Ribbonizing Tool



FST-12 Ribbon Separation Tool



900 µm Single Fiber Holders (Pair)

REVISION CHANGES HISTORY

October 15, 2023

Added New Products

AFL NO	Description
Active Cladding Alignment Fusion Splicers	
S018318	455 Fusion Splicer Kit (with CT-50 Cleaver)
S018319	455 Fusion Splicer (machine only)
S018314	35S Standard Kit with CT16 Cleaver and Fiber Holders
S018316	35S Fusion Splicer Kit with Fiber Holders and No Cleaver
Fiber Cleavers	
S018330	CT-16 — Single Fiber
Cleaver Accessories	
S018335	CB-09 (Replacement Blade for CT- 16)
S018373	AARM-CT16-01 (Replacement Pads/Anvil)
Mechanical and Thermal Strippers	
S018327	SS-05 Dual Fiber Coating Stripper
Splicer Kit Items	
S018324	BTR- 17 Battery Pack (455)
S018168	ADC-21 AC Adapter (45S)
Splicing Accessories	
S018333	CLAMP-S35B Loose Buffer Sheath Clamp 45S

Removed Products

AFL NO. SPC No.	Description
Active Cladding Alignment Fusion Splicers	
S017090	41S+ Fusion Splicer (machine only)
S017091	41S+ Fusion Splicer Kit (with CT-50 Cleaver)
S017081	31S Fusion Splicer (machine only)
S017109	31S Fusion Splicer Kit (with CT08 Cleaver)
Fiber Cleavers	
S017004	CT08 – Single Fiber
Cleaver Accessories	
S017013	CB-07 (CT08 Blade Replacement)
Splicing Accessories	
S017014	ARM-CT08-01 (Replacement Pads/Anvil)
S017101	31S/41S 900 µm Loose Buffer Sheath Clamp
S017104	31S/41S AC Adapter
S017354	31S/41S Battery



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Documents / Resources

	<p>FAFL 90S Plus Fusion Splicing Systems [pdf] User Guide 90S Plus Fusion Splicing Systems, 90S Plus, Fusion Splicing Systems, Splicing Systems, Systems</p>
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References

- [User Manual](#)

[Manuals+](#), [Privacy Policy](#)

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