



## Fusion Splicing



Bluetooth®

90R

### 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.



In Work Tray

#### Features

- Cleave tracking and upkeep with wireless communication
- Automated wind protector, tube heater and splice operation
- User replaceable v-grooves
- 200  $\mu$ m and 250  $\mu$ 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

#### Applications

- Data Center cable installation
- High fiber count metro and campus networks
- Long-haul network installs and repair
- Trunk cable repair with Splice-on MPOs
- Ribbon splicing high density cables with 200  $\mu$ m loose fiber



Wind Protector Open

## Fujikura 90R Fusion Splicer

### Ordering Information

| DESCRIPTION  | AFL NO.                 |
|--|-------------------------|
| <b>90R Fusion Splicer (machine only)</b><br><b>Includes:</b> BTR-15 Battery, ADC-20 AC Adapter, ACC-14 AC Cord, ELCT2-16B Spare Electrodes (pair) with spare V-Grooves (VG12-01), FH-70-12 Fiber Holders (pair), USB Cable, Alcohol Dispenser, Splicer Carrying Strap, Quick Reference Guide, TS-03 Tripod Screw, Video Instruction Manual, Work Tray, CC-39 Transit Case with Carrying Strap and Two Year Warranty  | <a href="#">S017509</a> |
| <b>90R Fusion Splicer Kit (with cleaver &amp; thermal stripper)</b><br><b>Includes:</b> BTR-15 Battery, CT50 Cleaver, RS03 Stripper, ADC-20 AC Adapter, ACC-14 AC Cord, ELCT2-16B Spare Electrodes (pair) with spare V-Grooves (VG12-01), FH-70-12 Fiber Holders (pair), USB Cable, Alcohol Dispenser, Splicer Carrying Strap, Quick Reference Guide, TS-03 Tripod Screw, Video Instruction Manual, CC-39 Transit Case with Carrying Strap and Two Year Warranty                   | <a href="#">S017511</a> |
| <b>90R Fusion Splicer without Bluetooth (machine only)</b><br><b>Includes:</b> BTR-15 Battery, ADC-20 AC Adapter, ACC-14 AC Cord, ELCT2-16B Spare Electrodes (pair) with spare V-Grooves (VG12-01), FH-70-12 Fiber Holders (pair), USB Cable, Alcohol Dispenser, Splicer Carrying Strap, Quick Reference Guide, TS-03 Tripod Screw, Video Instruction Manual, CC-39 Transit Case with Carrying Strap and Two Year Warranty   | <a href="#">S017540</a> |
| <b>90R Fusion Splicer Kit without Bluetooth (with cleaver &amp; thermal stripper)</b><br><b>Includes:</b> BTR-15 Battery, CT50 Cleaver, RS01 Stripper, ADC-20 AC Adapter, ACC-14 AC Cord, ELCT2-16B Spare Electrodes (pair) with spare V-Grooves (VG12-01), FH-70-12 Fiber Holders (pair), USB Cable, Alcohol Dispenser, Splicer Carrying Strap, Quick Reference Guide, TS-03 Tripod Screw, Video Instruction Manual, CC-39 Transit Case with Carrying Strap and Two Year Warranty | <a href="#">S017510</a> |
| One Year Extended Warranty (must be ordered at time of Splicer purchase)   | <a href="#">S012996</a> |
| Two Year Extended Warranty (must be ordered at time of Splicer purchase)   | <a href="#">S013000</a> |

### Recommended Products for the 90R

| DESCRIPTION  | AFL NO.                 |
|--|-------------------------|
| <b>Cleavers and Strippers</b>                                |                         |
| CT50 Cleaver   | <a href="#">S017030</a> |
| RS01 Thermal Stripper  | <a href="#">S016815</a> |
| RS02 Thermal Stripper  | <a href="#">S016816</a> |
| RS03 Thermal Stripper  | <a href="#">S016817</a> |
| <b>Fiber Holders (pair)</b>                                  |                         |
| FH-70-2  | <a href="#">S017114</a> |
| FH-70-4  | <a href="#">S017115</a> |
| FH-70-6  | <a href="#">S017116</a> |
| FH-70-8  | <a href="#">S017117</a> |
| FH-70-10   | <a href="#">S017118</a> |
| FH-70-12   | <a href="#">S017119</a> |
| FH-70-12PC (pitch conversion holder for 200 µm loose fibers) | <a href="#">S017464</a> |
| FH-70-12-200 (200 µm pitch ribbons)                          | <a href="#">S017681</a> |
| FH-70-16   | <a href="#">S017533</a> |
| FH-70-250 (250 µm coated single fiber)                       | <a href="#">S017111</a> |
| FH-70-900 (900 µm jacketed single fiber)                     | <a href="#">S017113</a> |
| FH-60-LT900 (Loose buffer 900 µm fiber)                      | <a href="#">S015181</a> |
| <b>FUSEConnect® Accessories</b>                              |                         |
| FH-FC-20 (900 µm within 2.0 mm sheathing) (each)             | <a href="#">S014696</a> |
| FH-FC-30 (900 µm within 3.0 mm sheathing) (pair)             | <a href="#">S014695</a> |
| FH-FC-900 (900 µm cable) (each)                              | <a href="#">S014697</a> |
| CLAMP-FC-2000 (pair)   | <a href="#">S014705</a> |
| <b>Batteries and Power Cords</b>                             |                         |
| ADC-20 AC Adapter  | <a href="#">S017513</a> |
| BTR-15 Battery   | <a href="#">S017512</a> |
| DCC-11 splicer to ribbon stripper power cord                 | <a href="#">S013852</a> |
| DCC-20 Power Cord  | <a href="#">S017527</a> |
| Connects ADC-20 to cigarette lighter socket                  |                         |
| DCC-21 Power Cord  | <a href="#">S017528</a> |
| Connects ADC-20 to power source via alligator clips          |                         |
| ACC-14 AC Power Cord   | <a href="#">S014536</a> |

| DESCRIPTION   | AFL NO.                 |
|---|-------------------------|
| <b>Miscellaneous</b>  |                         |
| SS01 Single fiber stripper (1 hole)                               | <a href="#">S017099</a> |
| ELCT2-16B Electrodes  | <a href="#">S017103</a> |
| Portable Tripod Workstation (see product profile for more detail) | <a href="#">S014773</a> |
| ASW-02 Splicing Workstation (see product profile for more detail) | <a href="#">S010532</a> |
| WT-09R Work Tray Right  | <a href="#">S017515</a> |
| WT-09L Work Tray Left   | <a href="#">S017516</a> |
| JP-09 Work Tray J-Plate   | <a href="#">S017517</a> |
| JP-10 J-Plate (Cooling tray attaches to splicer)                  | <a href="#">S017522</a> |
| JP-10-FC J-Plate with Fiber Clamps                                | <a href="#">S017523</a> |
| TS-03 Tripod Screw (90 Series)                                    | <a href="#">S017524</a> |
| ST-02 Fusion Splicer Strap  | <a href="#">S017525</a> |
| CLAMP-DC-12 (Drop Cable clamp on work tray)                       | <a href="#">S017550</a> |
| FST-12 Fiber Separation Tool                                      | <a href="#">S014012</a> |
| FAT-04 Fiber Arrangement Tool                                     | <a href="#">S010212</a> |
| RT-02 Fiber Arrangement Tool                                      | <a href="#">S017465</a> |
| VG12-01 12 fiber V-groove   | <a href="#">S017548</a> |
| VG12-01-200 12 fiber V-groove (200µm pitch ribbons)               | <a href="#">S017680</a> |
| VG04-01 4 fiber V-groove  | <a href="#">S017551</a> |
| VG08-01 Spare 8 fiber V-grooves                                   | <a href="#">S017508</a> |
| VG16-01 16 fiber V-groove   | <a href="#">S017552</a> |
| FAA-03A Ribbon Forming Adhesive (4 oz. bottle)                    | <a href="#">S008720</a> |
| FAA-03A Ribbon Forming Adhesive (0.5 liter bottle)                | <a href="#">S008622</a> |
| CC-39 Transit Case  | <a href="#">S017514</a> |
| Splicer V-Groove Cleaning Kit                                     | <a href="#">S014397</a> |



#### Fiber Arrangement Tool

- Features an easy-to-use fiber arrangement method utilizing linear travel
- Includes a spare paste applicator



#### V-Groove Cleaning Kit

- Removes environmental contamination from the v-groove of the splicer
- Maintains performance and ensures fiber alignment

## Fujikura 90R Fusion Splicer

### Specifications

| PARAMETER                    | VALUE  |  |
|------------------------------|--|--|
| Fiber Alignment Method       | Self cladding alignment with melting surface tension                   |  |
| Fiber Count Can Be Spliced   | Up to 16 fiber ribbon  |  |
| Applicable Fiber             | Fiber Type   | Single mode optical fiber  |
|                              | Cladding Dia.  | Multi mode optical fiber   |
| Applicable Coating           | Sheath Clamp   | Approx. 125 µm   |
|                              |  | Coating shape : Refer to options<br>Cleave length : 10mm                     |
| Fiber Splice Performance     | Splice Loss  | ITU-T G.652 : Avg. 0.05 dB   |
|                              |  | ITU-T G.651 : Avg. 0.02 dB   |
|                              |  | ITU-T G.653 : Avg. 0.08 dB   |
|                              |  | ITU-T G.655 : Avg. 0.08 dB   |
| Splice Time                  | ITU-T G.657 : Avg. 0.05 dB   |  |
|                              | SM FAST mode : Avg. 14 to 15 sec.<br>SM AUTO mode : Avg. 19 to 20 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  | 40 mm FP-05 mode : Avg. 38 to 40 sec.  |
|                              |  | 40 mm FP-04T mode : Avg. 17 to 19 sec.                                       |
|                              |  | Single 60 mm mode: Avg. 13 to 15 sec.  |
| Fiber Tensile Test Force     | Approx. 2.0 N  |  |
| Electrode Life               | Approx. 1,500 splices  |  |
| Physical Description         | Dimensions W   | Approx. 170 mm without projection  |
|                              | Dimensions D   | Approx. 173 mm without projection  |
|                              | Dimensions H   | Approx. 150 mm without projection  |
|                              | Weight   | Approx. 2.6 kg including battery   |
| Environmental Condition      | Temperature  | Operate : -10 to 50°C  |
|                              |  | Storage : -40 to 80°C  |
|                              | Humidity   | Operate : 0 to 95% RH non-condensing<br>Storage : 0 to 95% RH non-condensing |
| Altitude                     | Max. 3,700 m   |  |
| Ac Adaptor                   | Input  | AC100 to 240 V, 50/60 Hz, Max. 1.5 A   |
| Battery Pack                 | Type   | Rechargeable Lithium Ion   |
|                              | Output   | Approx. DC14.4V / 6,380 mAh  |
|                              | Capacity   | Approx. 165 splice and heat cycles   |
|                              | Temperature  | Recharge : 0 to 30°C   |
|                              |  | Storage : -20 to 30°C  |
|                              | Battery Life   | Approx. 500 recharge cycles  |
| Recharge Time                | Approx. 5 – 8 hours from empty   |  |
| Display                      | LCD Monitor  | TFT 5 inches with touch screen   |
|                              | Magnification  | Approx. 20X : 12 Ribbon to 60X : Single                                      |
| Illumination                 | V-Grooves  | LED lamp   |
| Interface                    | PC   | USB2.0 Mini B type   |
|                              | External Led Lamp  | USB2.0 A type, Approx. DC5V, 500 mA  |
|                              | Ribbon Stripper  | Mini DIN 6 pin, DC12V, Max. 1A   |
|                              | Wireless   | Bluetooth 4.1 LE   |
| Data Storage                 | Splice Mode  | 100 splice modes   |
|                              | Heat Mode  | 30 heat modes  |
|                              | Splice Result  | 10,000 splices   |
|                              | Splice Image   | 100 images   |
| Screw Hole For Tripod        |  | 1/4-20 UNC   |
| Other Features               | Automatic Functions  | Splice mode select by fiber type analysis                                    |
|                              |  | Discharge power calibration  |
|                              |  | Wind protector : open/close  |
|                              |  | Sheath clamp : open  |
|                              |  | Heater lid : open/close  |
|                              | Heater clamp : open/close  |  |
| Reference Guide              | Video and PDF file stored in splicer                                   |  |
| Electrode                    | Replaceable without tool   |  |