



FSM-100P+



FSM-100M+

ARC Master™

FSM-100M+ and FSM-100P+ Fusion Splicers

The FSM-100M+ and FSM-100P+ specialty fusion splicers provide advanced capabilities suitable for fiber lasers, sensors, research and development and the medical field. New capabilities include an innovative “end-view” fiber observation system, XLDF (Extra Large Diameter Fiber) splicing capability using “Plasma Zone Path Modulation,” enhanced sweep arc technology and other features for glass processing and fiber tapering, and patented split V-groove clamping system. With State of the ARCTM technology, the ARC Master series of fusion splicers sets a new standard for fusion splicing, providing the ultimate in performance and flexibility.

Features: FSM-100M+/FSM-100P+

- End-view observation system for alignment of non-circular, “holey” and other exotic fibers
- XLDF (Extra Large Diameter Fiber) splicing capability up to 1200 µm diameter fiber
- Patented “split V-groove” clamping system covers a range from 60 to 2000 µm
- Advanced “Plasma-Zone” control methods to optimize heating for specific fiber types
 - Motorized electrodes to change electrode gap to optimize Plasma Zone shape
 - Adjustable vertical height to position fiber within Plasma Zone
 - Electrode oscillation produces “Plasma Zone Path Modulation” for XLDF splicing
- Enhanced ability for fiber shaping, glass processing, tapering, etc.
 - Custom multi-step “Special Functions” programmability
 - Long-travel sweep arc technology (fiber sweep motion up to +/- 18 mm)
 - Long-travel left/right Z-drive mechanisms
- Three selectable arc calibration methods
 - Conventional calibration method for standard fibers
 - New melt-back method with new parameters for special fibers including XLDF
 - Real-time calibration by arc brightness observation (with fiber brightness learning function)
- Dual 4.1 inch monitors with user-selectable information display
- Extensive PC connectivity functions (software upload, data upload/download, PC control)

Features: FSM-100P+

- Three alignment methods for PM fibers
 - Fast PANDA mode alignment by PAS system
 - New IPA mode for aligning all kinds of PM fibers (with learning function for expandable PM fiber auto-recognition database)
 - End-view PM fiber alignment including ability to align PM fiber core
- Theta rotation for non-PM LMA fibers
 - Provides best alignment of both LMA core and pump guide (inner clad)

Ordering Information

DESCRIPTION	AFL NO.
ARC Master FSM-100M+ Fusion Splicer (machine only) Includes: FH-100-250 fiber holders (pair), FH-100-250-EV fiber holders (pair), FH-100-900, ELCT3-25-LDF Included electrode for LDF, ELCT3-25 STD Electrode (Installed), ADC-15 AC adapter, EV-LS01 End-View Light Source, ACC-02 AC power cord, USB cable, dust cleaning swab set, EC-01 Electrode Cleaner, operation manual and software on CD and transit case	S014813
ARC Master FSM-100P+ Fusion Splicer (machine only) Includes: FH-100-250 fiber holders (pair), FH-100-400 fiber holders (pair), FH-100-250-EV fiber holders (pair), FH-100-400-EV fiber holders (pair), FH-100-900, ELCT3-25-LDF Included electrode for LDF, ELCT3-25 STD Electrode (Installed), EV-LS01 End-View Light Source, ADC-15 AC adapter, ACC-02 AC power cord, USB cable, dust cleaning swab set, EC-01 Electrode Cleaner, operation manual and software on CD and Transit case	S014815
One year extended warranty (extends factory warranty by one year)	S012996
Two year extended warranty (extends factory warranty by two years)	S013000



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Accessories

DESCRIPTION	AFL NO.
High Strength Accessories	
High Strength Preparation Kit Includes: USC-02, AFL PowerStrip and AFL PowerCleave	S013632
Ultrasonic Cleaner (USC-02)	S014783
HTS-12 High Tensile Stripper - includes 250 µm blades (400 µm available)	S012094
AFL PowerStrip High Tensile Stripper	S012808
AFL PowerCleave High Strength Cleaver	S009972
Strippers	
RS02 Thermal Stripper	S016815
RS03-80 Thermal Stripper	S016842
SPA-RS02-08 Spacer	S016818
Electrodes	
ELCT3-25 STD Electrodes	S015184
ELCT3-25-LDF Electrodes	S015015
Cleavers	
CT52 Cleaver	S017078
CT58 Cleaver (for 80 µm cladding)	S017097
Fiber Holders (Pairs)	
FH-110-60 Fiber Holder	S018215
FH-110-100 Fiber Holder	S018216
FH-110-125 Fiber Holder	S018217
FH-110-150 Fiber Holder	S018218
FH-110-180 Fiber Holder	S018219
FH-110-210 Fiber Holder	S018220
FH-110-250 Fiber Holder	S018221
FH-110-300 Fiber Holder	S018222
FH-110-350 Fiber Holder	S018223
FH-110-400 Fiber Holder	S018224
FH-110-500 Fiber Holder	S018225
FH-110-600 Fiber Holder	S018226
FH-110-700 Fiber Holder	S018227
FH-110-800 Fiber Holder	S018228
FH-110-900 Fiber Holder	S018229
FH-110-1000 Fiber Holder	S018230
FH-110-1100 Fiber Holder	S018231
FH-110-1200 Fiber Holder	S018232
FH-110-1300 Fiber Holder	S018233
FH-110-1400 Fiber Holder	S018234
FH-110-1500 Fiber Holder	S018235
FH-110-1600 Fiber Holder	S018236
FH-110-1700 Fiber Holder	S018237
FH-110-1800 Fiber Holder	S018238
FH-110-1900 Fiber Holder	S018239
FH-110-2000 Fiber Holder	S018240

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Accessories

DESCRIPTION	AFL NO.
Power and Cords	
ADC-15 AC Adapter (FSM-100M/P)	S014826
ACC-02 AC Power Cord	S001171
ADC-09A AC Adapter (RS01)	S016820
ACC-09 AC Power Cord (for ADC-09)	S014390
Miscellaneous	
CC-27 Transit Case (100 M/P)	S014825
DCS-01 Dust Cleaning Swab	S014827
EC-01 Electrode Cleaner	S015024
USB-01 USB Cable	S014777
HP Power Meter Coupling Adapter	S012180
ILX Power Meter Coupling Adapter	S012184
Fiber Holder Adapter for HP/ILX PM	S012188
Splicer V-Groove Cleaning Kit	S014397

Specifications

PARAMETER	VALUE
Applicable Fiber	Silica based Single-mode and Multimode glass fiber: SMF (G.652), MMF (G.651), NZDSF (G.655), EDF, DCF, LDF and PMF, etc.
Fiber Dimension	Cladding dia.: 60 to 1,200 µm; Coating dia.: 60 to 2,000 µm
Cleave Length	Glass clamping 8 to 30 mm (standard 9 mm) Coating clamping 3 to 5 mm (standard 4 mm)
Typical Splice Loss	SMF: 0.03 dB; MMF: 0.02 dB; NZDSF/LDF: 0.05 dB; PMF: 0.06 dB
Splicing Time	SMF/MMF: 15 seconds; NZDSF/LDF: 25 seconds; PMF (PANDA): 35 to 50 seconds (FSM-100P+); PMF (IPA): 70 to 300 seconds (FSM-100P+)
Polarization Cross-Talk	PMF (PANDA): -40 dB / 0.6 degree (FSM-100P+); PMF (IPA): -40 dB / 0.6 degree (FSM-100P+)
Return Loss	60 dB or more
Heating Time	FP-40: 30 seconds FP-60: 35 seconds Micro sleeves: 55 seconds
Sweep Range	±18 mm
Electrode Life	2,500 Arc Discharges (SMF28 G.652 with 1 mm electrode gap)
Electrode Gap	1 to 3 mm
Electrode Offset	-0.3 to +0.1 mm
Proof Test	1.96 to 2.45 N
Dimensions	470 mm (W) x 232 mm (D) x 160 mm (H)
Weight	8.5 kg (FSM-100M+) / 9.5 kg (FSM-100P+) excluding AC adapter
Operation Temp.	0 to 40°C at 0 to 95 % RH (non-dew)
Storage Temp.	-40 to 80°C at 0 to 95 % RH (non-dew)
Monitor Type	4.1 inch TFT color LCD monitor x 2 pcs.
Magnification	125 µm: 187 to 300 X, 250 µm: 3.5 to 300 X, 400 µm: 58 to 93 X, 1000 µm: 3.5 to 7.0 X