Specialty Fiber Fusion Splicers

Fujikura

ARCMaster™

FSM-100 series

- Patented “Split V-groove” clamping system
- “Plasma Zone” fiber positioning
- Short cleave length capability
- Special arc calibration
- Dual splice loss estimation
- Enhanced sweep arc
- Internet firmware update & interface
- Production environment friendly design
- Zero degree fiber holder position
- Fiber profile learning function
- Dual PM alignment method (FSM-100P Only)

Specialty Fiber Fusion Splicer

FSM-100M

Polarization Maintaining Fiber Fusion Splicer

FSM-100P

PM fiber splicing capability

ARCMaster™ *product line*

Fujikura’s new “ARCMaster” splicers are engineered with a robust set of features that offer customers technology and reliability not available elsewhere. The need for Accurate, Reliable, and Consistent splicing is expanding to new applications beyond telecommunications. These entirely new “ARCMaster” fusion splicers from Fujikura have been developed to provide the ultimate in performance and flexibility for a variety of customers and markets.

Additional information can be found at www.StateoftheARC.com website which is the central repository of information for all of Fujikura’s state of the art fusion splicer products. Stay tuned to www.StateoftheARC.com for forthcoming additions to the “ARCMaster” family of specialty fusion splicers where incremental capabilities will be revealed.

State of the ARC

Specialty Fiber Fusion Splicer

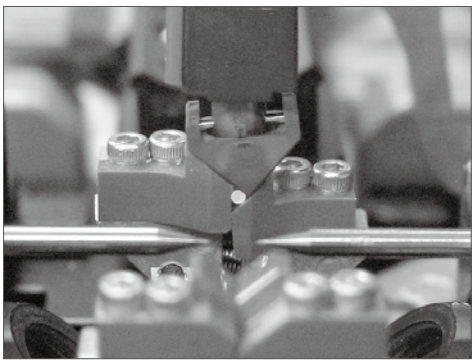
Polarization Maintaining Fiber Fusion Splicer

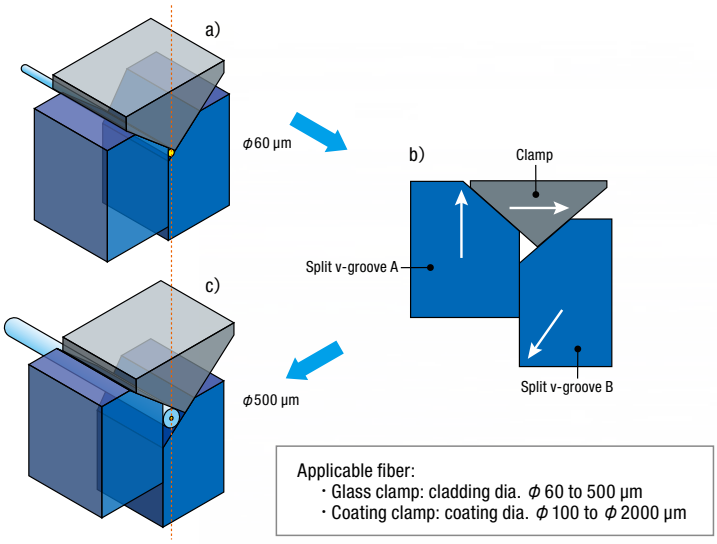
FSM-100M FSM-100P

Fujikura's new specialty splicers FSM-100M and FSM-100P offer a host of innovative technology to address the rapidly expanding splicing needs for factory, manufacturing, laboratory and R&D applications. These models are introduced as "ARCMaster" splicers due to their unique capabilities to control the plasma zone of the fusion arc. These capabilities will revolutionize the way users will splice various types of specialty fibers; LDF, low contrast PM, holey structured, etc.

Patented "Split V-groove" clamping system

The FSM-100 series has the revolutionary design clamp system.
- No need to change V-groove or clamp part
- Programmable for any fiber or coating size
- Reliably "captures" fiber for good alignment



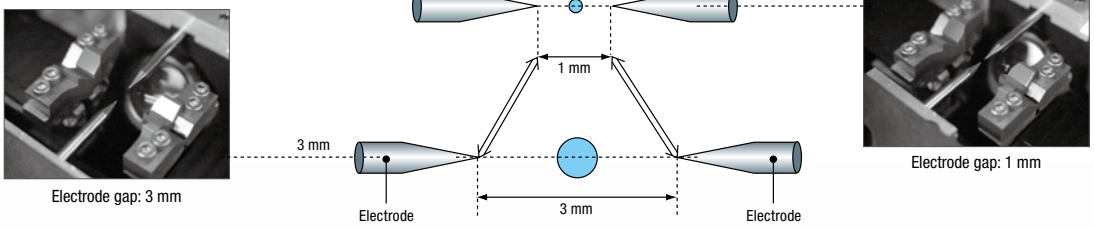


Applicable fiber:
- Glass clamp: cladding dia. φ 60 to 500 μm
- Coating clamp: coating dia. φ 100 to φ 2000 μm

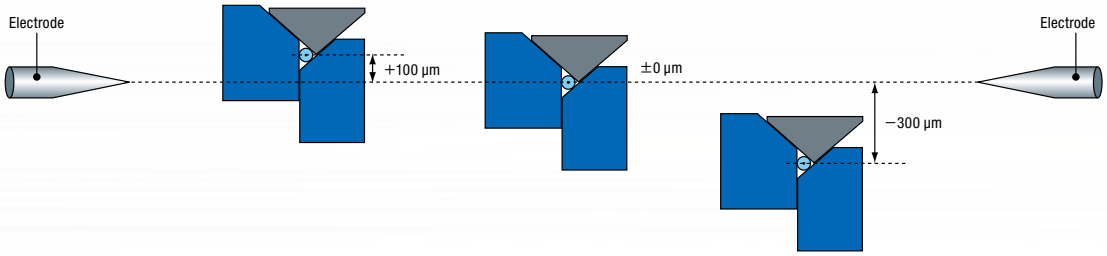
"Plasma Zone" fiber positioning

The FSM-100 series has two electrode positioning techniques in order to provide unprecedented versatility for each specialty fiber.

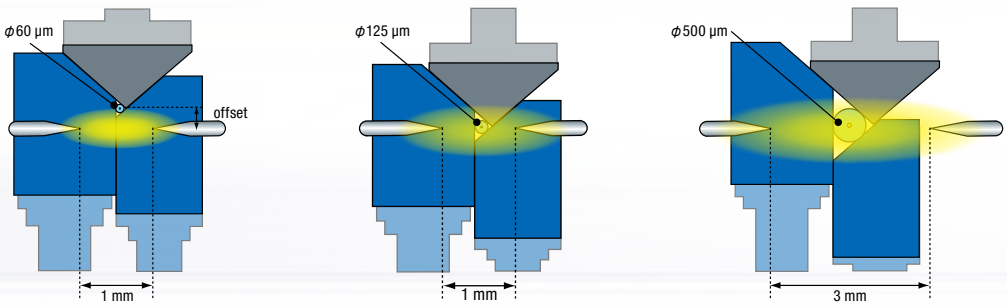
Electrode Gap



V Height Shift

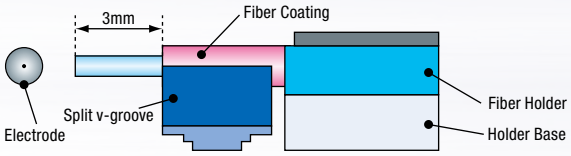


Optimum plasma Zone



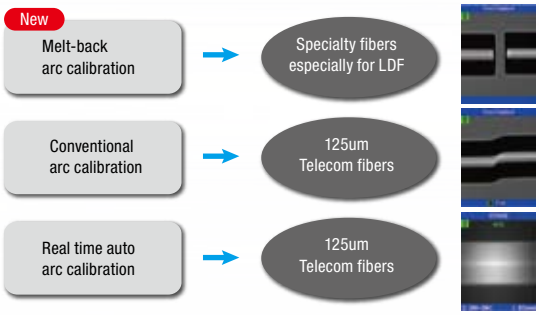
Short cleave length capability

For minimizing the length of stripped fiber at splice point, FSM-100 series can splice a short cleave length fiber.



Special arc calibration

This calibration technology facilitates an easy transfer of high end splicing applications from R&D to production by ensuring consistent performance and takes full advantage of "Plasma Zone" capabilities.



Dual splice loss estimation

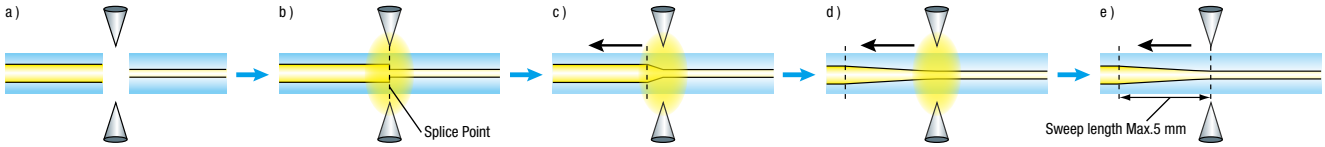
Combining the best features of both cold and warm splice imaging, FSM-100 series offer unprecedented accuracy for splice loss estimation.

Image of PAS

Image of WSI

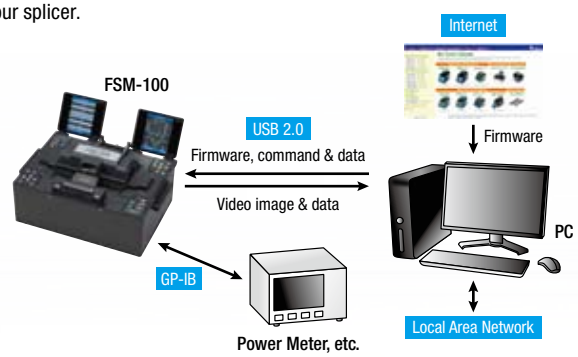
Enhanced sweep arc

Increased travel range for "sweep arc" provides improved MFD matching capability and the ability for reshaping non-circular fibers in preparation for splicing.



Internet firmware update & interface

An industry first! Customers can now upgrade firmware as new capabilities become available from Fujikura. Upgrading is as simple as connecting a USB cable to your splicer.



Production enviroment friendly design

A low profile design that eliminates fiber catch points, the dimensions of both splicers are consistent with the most popular production splicing work-benches in use today.

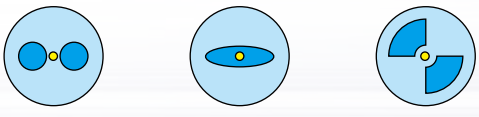
Zero degree fiber holder position – For splicing LDF fibers with minimal core angle, the fiber holders are horizontally positioned relative to the v-grooves.

Fiber profile learning function

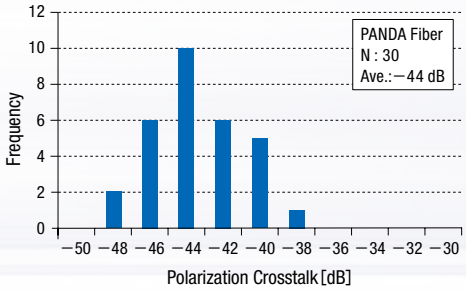
The splicer learns the fiber profile with the best focusing position in order to observe the core position accurately.
After learning, the focusing time during a splice will be short.

Dual PM alignment (FSM-100P Only)

To properly align and splice the ever increasing and technically challenging variety of PM fibers, Fujikura developed IPA which is a new alignment technology. The FSM-100P includes both traditional PAS alignment as well as the new IPA technology, and it provides users with the most comprehensive capabilities on the market for splicing PM fiber. IPA also enables accurate PER estimation for all PM fiber types.



PANDA Ellipic-core BOWTIE



SPECIFICATION

Description		FSM-100M	FSM-100P
Applicable type of fibers	For Telecommunication	SMF(ITU-T G652), NZDSF(ITU-T G655), MMF(ITU-T G651), EDF, DCF and other specialty fibers.	
	Large Diameter Fiber	Conventional sillica LDF	
	PM fiber		PMF
	Clad diameter	ϕ 60 to 500 µm	
	Coating diameter	ϕ 100 to 2000 µm	
Fiber count		Single	
Cleave length		Glass clamp: 8 to 10 mm (standard 9 mm) Coatimg clamp: 3 to 5 mm (standard 4 mm)	
Typically splice loss	SMF	0.03 dB	
	NZDSF/LDF	0.05 dB	
	MMF	0.02 dB	
	PMF		0.06 dB
Splice time	SMF/MMF	15 sec	
	NZDSF/LDF	25 sec	
	PMF (PANDA)		35 to 50 sec
	PM AUTO		90 to 300 sec
Typically Polarization crosstalk	PMF (PANDA)		-40 dB / 0.6 degree
	PM AUTO		-32 dB / 1.4 degree
Return loss		>> 60 dB	
Tube heat time	FP-03 40 mm	30 sec	
	FP-03 60 mm	35 sec	
	FPS01 series (micro sleeve)	55 sec *Heat time change with depended on tyep of micro sleeve	
Fiber clamp		It chages according to cladding diameter and coating diameter automatically.	
Sweep range		± 5 mm (the arc center is 0mm.)	
Electrode life		2500 arc discharges. (at the SMF (ITU-T G.652) splicing with 1mm electrode gap)	
Electrode gap		1.0 to 3.0 mm (adjustable)	
Electrode offset		-0.3 to +0.1 mm (adjustable)	

Standard Package

Name	Model	FSM-100M Qty.	FSM-100P Qty.
Splicer Main Body	FSM-100M	1pc	-
	FSM-100P	-	1pc
Carrying Case	CC-27	1pc	1pc
Fiber Holder for 250um	FH-100-250	1pair	1pair
Fiber Holder for 400um	FH-100-400	-	1pair
AC Adapter	ADC-15	1pc	1pc
AC Power Cord for AC adapter	ACC-**	1pc	1pc
Spare Electrodes	ELCT2-25	1pair	1pair
USB Cable	USB-01	1pc	1pc
Dust Cleaning Stick	DCS-01	1pc	1pc
Warnings and Cautions	W-100MP-E	1pc	1pc
Splicing Report	-	1pc	1pc
Instruction Manual	M-100MP-E	1pc	1pc

OPTIONAL ITEMS

Item	Description	Note
Fiber Holder	FH-100-***	*** : Coating diameter FH-100-060, FH-100-100, FH-100-125, FH-100-150, FH-100-180,FH-100-210,FH-100-250, FH-100-300, FH-100-350, FH-100-400, FH-100-500, FH-100-600, FH-100-700, FH-100-800, FH-100-900
	FH-100-****	Coating Dia. : 1000 to 2000 µm
	FH-40-LT900	Coating Dia. : 900 µm for loose tube
Cleaver	CT-32	Cladding Dia. : 125 µm, Cleave length: 4 mm / 9 mm
	CT-38	Cladding Dia. : 80 µm, Cleave length: 4 mm / 9 mm
	CT-10	Cladding Dia. : 125 µm, Cleave length: 5 mm /10 mm
	CT-30	Cladding Dia. : 125 µm, Cleave length: 5 mm /10 mm
Angle Cleaver	CT-11	Cladding Dia. : 125 µm
Jacket Stripper	JS-02-900	Coating Dia. : 900 µm (applicable for fiber holder 900 µm)
	JS-01	Coating Dia. : 900 µm
Hot Jacket Stripper	HJS-02	Coating Dia. : 250 to 400 µm
Ultrasonic Cleaner	USC-02	-
Recoter & Proof tester	FSR-02	-
Sleeve	FP-03	60 mm
	FP-04S	40 mm
Micro sleeve	FPS01-400-**	12,15,20,25,34,45 mm / coating dia. 400 µm
	FPS01-900-**	15,20,25,34,45 mm / coating dia. 900 µm

SPECIFICATION

Description		FSM-100M	FSM-100P
Proof test		1.96 to 2.45 N	
Magnification		58 to 300 (changeable)	
Auto start function		Available	
Spliceing mode	Number of splice mode	Total 300 modes	
	Standard Mode	Available	
	Manual mode	Available	
	Power meter mode	Available	
	Attenuation mode	Available	
Number of tube heating mode		100 heating mode installed	
Strage of splicing result		The last 2000 results to be stored in the internal memory.	
Lahguage		English / Japanese / Chinese	
Arc power calibration		3 methods installed	
Arc positon calibration		2 methods installed	
Fiber learning function		Available	
PC communication	Software upgrade	Capable via internet.	
	Display image data	Capable	
	Splice conditions	Capable	
	Splice results	Capable	
	PC control	Capable Sample software and command list is available.	
Display		Dual 4.1" inches color LCD monitor.	
Dimensions		311 (W) × 232 (D) × 160 (H) mm excluding rubber foot	
Weight		7.5 kg	7.9 kg
Power supply		external AC adapter: ADC-15 Input : AC100 to 240 V (50 to 60Hz) (max.100 W AC)	
Operating condition		0 to 95%RH and 0 to 40 degC respecitively	
Storage condition		0 to 95%RH and -40 to 80 degC respectively	
Terminals		Power supply: DC19 V 4.5 A	
		USB2.0 (Mini-B type) for PC communication	
		IEEE-488 24 pin for power monitor feedback alignment	
		Two 6-pin Mini-DIN connector for external equipment (HJS-02)	

Standard Package

Specifications and descriptions are subject to change without prior notice.

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