



## Specialty Fiber Fusion Splicers

# FSM-100series



- Advanced plasma zone control methods
- LDF (Large Diameter Fiber) splicing capability
- Enhanced arc calibration methods
- Dual splice loss estimation
- Enhanced Sweep arc
- Fiber profile learning function
- Enhanced ability for fiber shaping, glass processing, tapering
- EndView observation system (FSM-100M+, FSM-100P+)
- Advanced PM fiber alignment methods (FSM-100P, FSM-100P+)

Specifications and descriptions are subject to change without prior notice.

überreicht durch:

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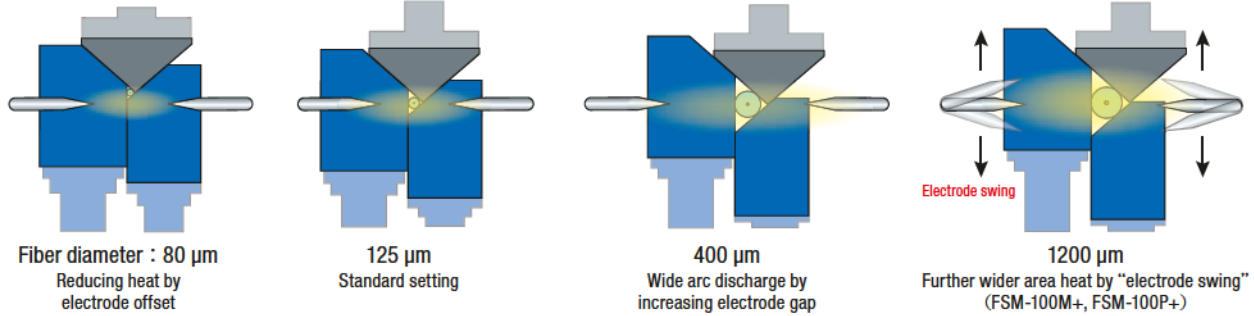
# FSM-100series

Fujikura specialty fiber splicer FSM-100 series 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, LDFs, PMFs and so on.

## Functions

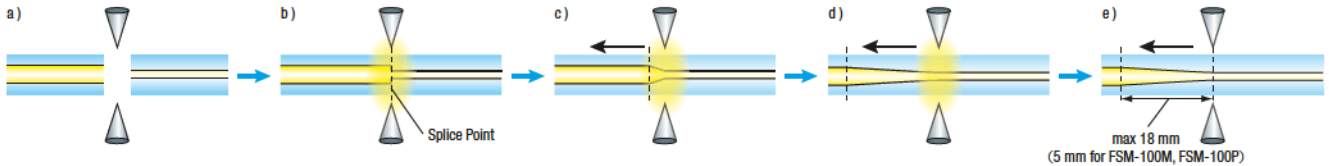
### Optimum Plasma Zone Control

Patented "Split V-groove" and electrode systems create flexible the plasma zone flexible.



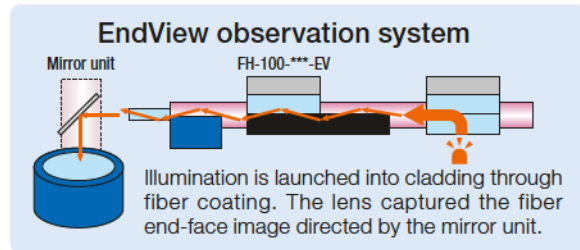
### Enhanced Sweep Arc

Sweep function moving both L and R fiber together, guides to better splice loss especially for dissimilar fiber splicing and fiber shaping.



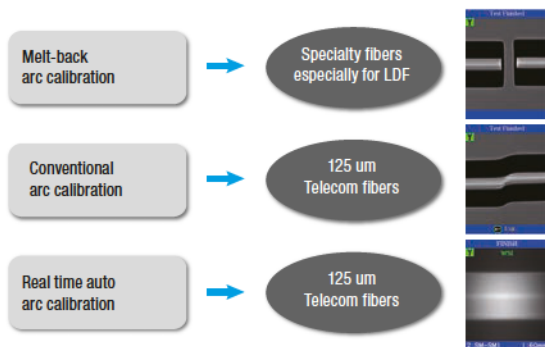
### PM Fiber Splicing FSM-100P, FSM-100P+

- Three alignment methods for PM fibers
- Fast PANDA mode aligning by PAS system
- New IPA mode for aligning all kinds of PM fibers
- EndView PM fiber aligning (FSM-100P+ only)



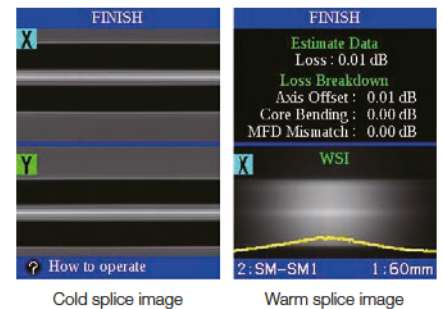
### Enhanced Arc Calibrations

FSM-100 series provides three types of arc calibration methods, for not only 125  $\mu\text{m}$  fibers but also LDF.



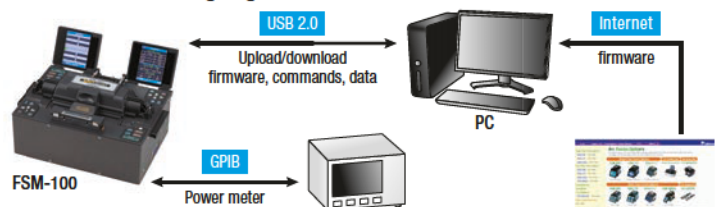
### Dual Splice Loss Estimation

FSM-100 series provides loss estimation method by both cold and warm splice image. It offers accurate splice loss estimation.



### USB, GPIB Communication

Splicer firmware can be upgraded via internet connection. Also, splice data upload/download is available. GPIB connection provides power meter feedback aligning.



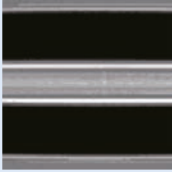




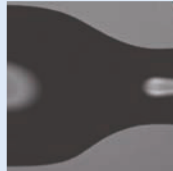
### Fiber Profile Learning function

The splicer learns the fiber profile with the adequate focusing in order to observe the core accurately. After learning, it shorten the splicing time.

FSM-100P and FSM-100P+ learn the PM fiber profile to analyze polarization.

# FSM-100 series can...

## Specialty Fiber Splicing

<b>PM Fiber Splicing</b>  By PAS FSM-100P FSM-100P+	<b>Special Shape Fiber Splicing</b>  Polygon shape fiber FSM-100P+	<b>Dissimilar Fiber Splicing</b>  Different MFD
 By EndView FSM-100P+	 Photonic crystal fiber (NKT Photonics) FSM-100M+ FSM-100P+	 Different diameter

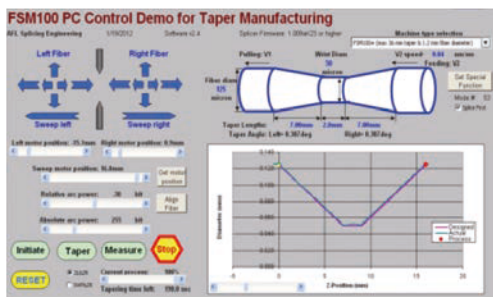


## Fiber Shaping

### Tapering

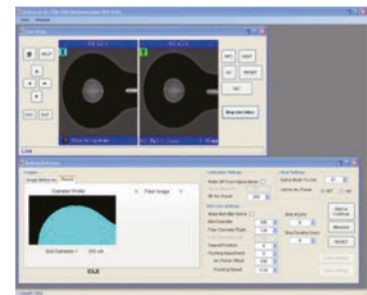


### End Cap



PC software "SpliceLab" for "Fiber Shaping" is available.

Applicable to Microsoft Windows® XP7,8



## Comparison of FSM-100 series

		FSM-100M	FSM-100P	FSM-100M+	FSM-100P+
<b>Cladding diameter</b>		60 ~ 500 $\mu$ m		60 ~ 1200 $\mu$ m	
<b>Cleave length</b>	<b>Coating clamp</b>	3-8 mm (standard 4 mm)		3-21 mm (standard 4 mm)	
	<b>Glass clamp</b>	3-13 mm (standard 9 mm)		8-26 mm (standard 9 mm)	
<b>PM fiber splicing</b>		-	✓	-	✓
<b>EndView</b>		-	-	✓	-
<b>Electrode swinging</b>		-	-	✓	-
<b>Maximum sweep length</b>		$\pm$ 5 mm		$\pm$ 18 mm	



# Fujikura FSM-100series

## SPECIFICATIONS

Description	FSM-100M	FSM-100P	FSM-100M+	FSM-100P+	
Applicable Fiber	Fiber Type SMF (ITU-T-G652), NZDSF (G655), MMF (G651), EDF, DCF LDF (large diameter fibers) and other specialty fibers.				
	PM fiber	—	PANDA and other PMF	—	
	Cladding Diameter	60 to 500 µm		60 to 1200 µm	
	Coating Diameter	100 to 2000 µm			
	Fiber Count	single			
Cleave Length	Coating Clamp	3-8 mm (standard 4 mm)		3-21 mm (standard 4 mm)	
	Glass Clamp	8-13 mm (standard 9 mm)		8-26 mm (standard 9 mm)	
Typical Splice Loss	SMF	0.03 dB			
	NZDSF/LDF	0.05 dB			
	MMF	0.02 dB			
	PMF	—	0.06 dB	—	
Typical Splice Time	SMF	15 sec			
	NZDSF/LDF	25 sec			
	PMF (PANDA)	—	30 to 50 sec	—	
	PMF (non-PANDA)	—	70 to 300 sec	—	
Typical Polarization Crosstalk	PMF (PANDA)	—	-40 dB/0.6 deg	—	
	PMF (non-PANDA)	—	-32 dB/1.6 deg	—	

## STANDARD ITEMS

Name	Model	FSM-100M	FSM-100P	FSM-100M+	FSM-100P+
Splicer Main Body	FSM-100M	1pc	—	—	—
	FSM-100P	—	1pc	—	—
	FSM-100M+	—	—	1pc	—
	FSM-100P+	—	—	—	1pc
Carrying Case	CC-27	1pc			
	FH-100-250	1pair			
Fiber Holder	FH-100-250-EV	—	—	1pair	
	FH-100-400	—	1pair	—	1pair
	FH-100-400-EV	—	—	1pair	
	AC Adaptor	ADC-15	1pc		
AC Code	ACC-xx	1pc: ACC-01: Japan, -02: USA, -03: UK, -04: EU, -05: Australia			
Electrodes	ELCT2-25	2pairs (1pair for spare)		—	
	ELCT3-25	—		1pair	
	ELCT3-25-LDF	—		1pair for spare	
EndView Light Source	EV-LS01	—		2pcs	
USB Cable	USB-01	1pc			
Dust Cleaning Stick	DCS-01	1pc			
Electrode Cleaner	EC-01	—		1pc	
Warning and Cautions	W-100MP-E	1pc			
Instruction Manual	M-100MP-E	1pc			
Splicing Report	SR-01-E	1pc			

## OPTIONAL ITEMS

Item	Model	Note
Fiber Holder	FH-100-xxx FH-100-xxx-EV	xxx: coating diameter 060, 100, 125, 150, 180, 210, 250, 300, 350, 400, 500, 600, 700, 800, 900, 1000, 1100, 1200, 1300, 1400, 1500, 1600, 1700, 1800, 1900, 2000 -EV model is the fiber holder for EndView observation system.
	FH-40-LT900	for 900 µm coating loose tube fiber.
Fiber Cleaver	CT-100	Cladding diameter: 80-250 µm, Cleave length: 3-40 mm, Angled cleaving available up to 15 deg.
	CT-105	Cladding diameter: 80-1250 µm, Cleave length: 5-40 mm
	CT-106	Cladding diameter: 80-1250 µm, Cleave length: 5-40 mm, Angled cleaving available up to 15 deg.
	CT-32	Cladding diameter: 125 µm, Cleave length: 3-5, 8-10 mm
	CT-38	Cladding diameter: 80 µm, Cleave length: 3-5, 8-10 mm
Jacket Stripprt	JS-02-900	Cladding diameter: 125 µm, Coating diameter 900 µm
	HJS-02	Cladding diameter: 125 µm, Coating diameter 250-400 µm
	HJS-02-80	Cladding diameter: 80 µm, Coating diameter up to 250 µm
	PCS-100	for polyimide coated fiber
Ultra Sonic Cleaner	USC-03	
Recoater & Cleaner	FSR-05/FSR-06/FSR-07	Selectable moldsize: 195 µm, 255 µm, 280 µm, 450 µm, 670 µm, 1000 µm
Protection Sleeves	FP-, FPS-series	

Description	FSM-100M	FSM-100P	FSM-100M+	FSM-100P+
EndView Observation System	—		with EndView mirror	
Return Loss	>>60 dB			
Tube Heat Time	30 sec for FP-03 (40 mm), 24 to 45 sec for FPS-series			
Electrode Life	2500 arc discharged, SMF with 1 mm electrode gap			
Proof Test	1.96 to 2.45 N			
Image Magnification on LCD	35 to 300 changeable			
Num. of Splice Program	300 for splice, 100 for heater mode			
Num. of Splice Data Storage	2000 for splice data, 100 for splice image			
Language	English / Japanese / Chinese / French			
Display	Dual 4.1" color LCD monitor			
Dimensions [mm] ※ 1	311(W) x 232(D) x 160(H)	470(W) x 232(D) x 160(H)		
Weight	7.5 kg	8.0 kg	7.9 kg	9.0 kg
Power Supply	AC100-240 V (50/60 Hz) with AC adaptor ADC-15			
Operation Condition	0 to 95%RH and 0 to 40° respectively			
Storage Condition	0 to 95%RH and -40 to 80° respectively			
Terminals	Power supply: DC19 V 4.5 A			
	USB2.0 (mini-B type) for PC communication			
	IEEE-488 24pin for power meter feedback splicing			
	Two 6 pin mini-DIN connector for external equipments			

※ 1 : excluding rubber foot

## STANDARD PACKAGE



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