

# Optical Fiber Recoater FSR115/116/117/115L



## Optical Fiber Recoater FSR115/116/117/115L

FSR115, FSR116, FSR117 and FSR115L provide automatic operation with various sizes of quartz molds available. Colored and non-colored fibers can be recoated. This new recoater series introduces easily exchangeable molds, resin bottle and pump assemblies. The new bubble removal system eliminates bubbles before they reach the mold cavity. A programmable resin injection system provides an exact volume of resin to the mold cavity to ensure consistent recoat performance.



### Product Variation

Model	FSR115	FSR116	FSR117	FSR115L
Appearance				
Recoat diameter(μm)	Approx.195μm, Approx.255μm, Approx.280μm, Approx.320μm, Approx.450μm, Approx.600μm, Approx.670μm, Approx.850μm and Approx.1,000μm			Approx.280μm, Approx.320μm, Approx.670μm
Recoating length	Max.50mm			Max.100mm
Proof -tester	—	✓ (0.2 to 2.0kgf)	✓ ( 0.2 to 10.0kgf)	—
Proof Clamping Method	—	Flat Clamp	Mandrel clamp	—

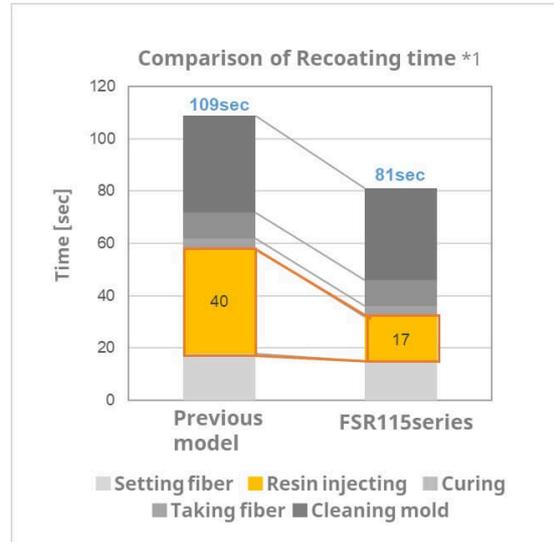
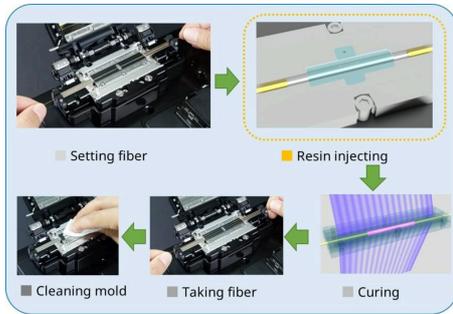
# Features

## Faster

### Shortened UV curing resin injection time

New designed pump provides shorter UV resin injection time. It also provides 25% shorter total recoating time than previous model.

### How to recoat



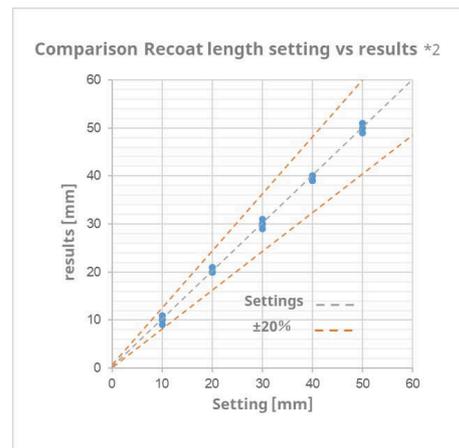
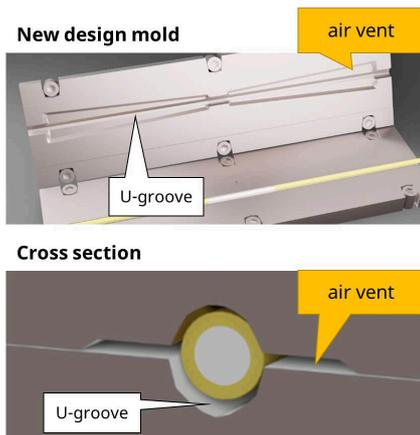
\*1: Test condition:

- (1) UV recoat Resin : Japan Fine Coatings Co., Ltd. 950Y200 or Luvantix ADM Ltd. PC-373LD
- (2) Recoat diameter : 280μm
- (3) Recoat Length : 20mm
- (4) Fiber : Clad Diameter 125μm/Transparent UV 250μm Coating Diameter, Coating Stripping length 16mm
- (5) Environmental Condition : 25°C

## More accurate

### Improved recoating length repeatability

The recoat mold has slight steps on the U-groove to provide an air vent. It helps to improve the recoating length repeatability, as well as the ability to reach a max. 50mm length.



\*2: The table does not guarantee the recoat length accuracy.

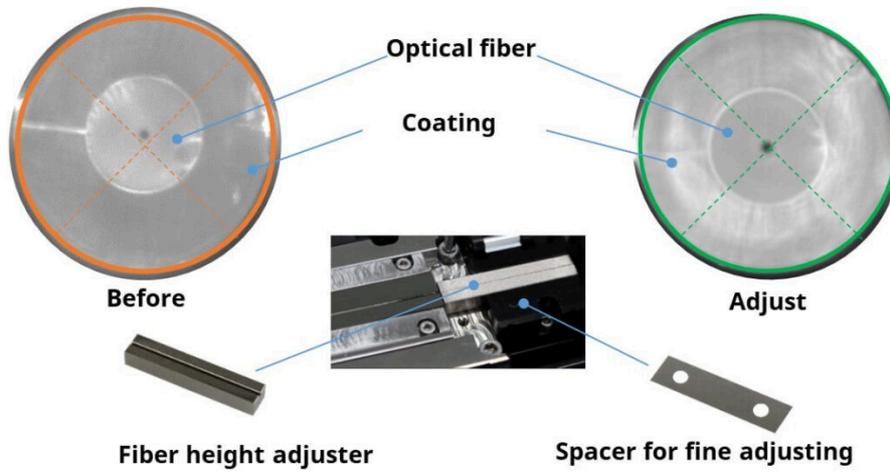
Test condition:

- (1) UV recoat Resin : Japan Fine Coatings Co., Ltd. 950Y200
- (2) Recoat diameter : 280μm
- (3) Recoat Length : 10-50mm
- (4) Fiber : Clad Diameter 125μm/Transparent UV 250μm Coating Diameter, Coating Stripping length 60mm
- (5) Environmental Condition : 25°C
- (6) Model : Excepting FSR115L

### More user friendly

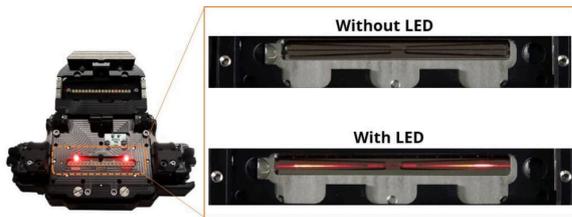
#### Fiber and recoating centering adjustment is now possible by the user

The Fiber height adjuster enables the adjustment of fiber diameter centering by setting the fiber to be centered in the mold. The spacers allow for fine tuning based on original fiber coating variations.



#### Clear observation of resin injection

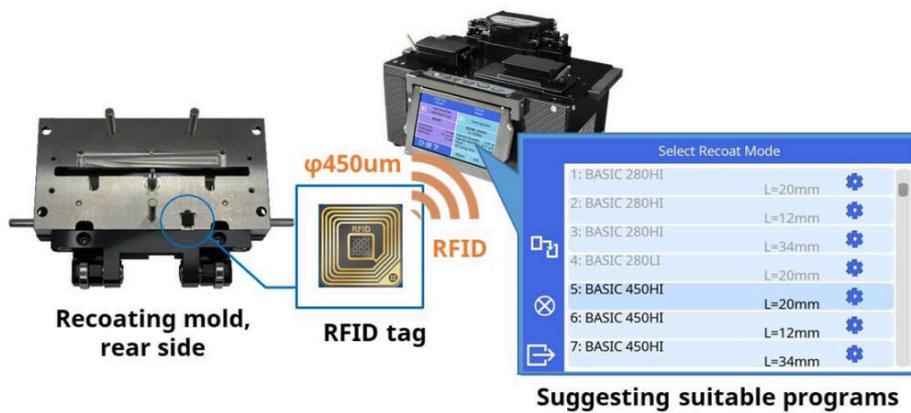
LEDs under the mold shows the injected resin more clearly.



Injection movie

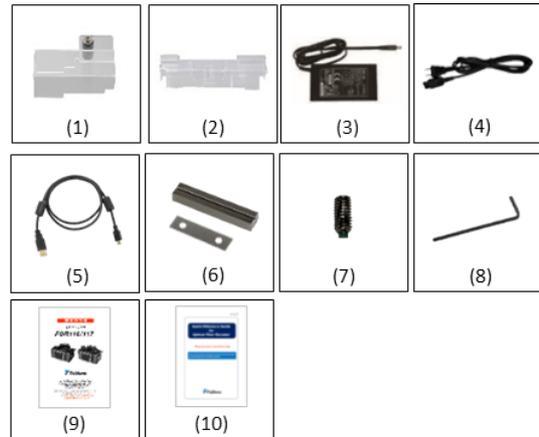
#### Recoat mode suggestion function

The new molds are equipped with RFID tags on the bottom of the mold. The FSR115 series scan the RFID and suggest suitable programs according to the RFID data. This improves our customers efficiency when changing molds.



# Standard Package

Item	Model	Qty
Optical Fiber Recoater	FSR115, FSR116, FSR117	1 pc
1 Fiber Protection Cover	PC-02	1 pc
2 Fiber Protection Cover	PC-03	1 pc
3 AC Adapter	ADC-21	1 pc
4 AC Power Cord	ACC-08, 09, 10, 11 or 12	1 pc
5 USB Cable	USB-01	1 pc
6 Fiber Height adjust spacer set	SPA-FSR115-SET	1 set
7 Setscrew for Fiber Height Adjuster	—	1 set (5 pcs)
8 Hexagonal Wrench	HEX-04	1 pc
9 Instruction Manual	—	PDF file stored in Recoater
10 Quick Reference Guide	QRG-09-E	1 pc



# Specifications

Item	FSR115	FSR116	FSR117
Applicable Optical fiber	Single fiber		
Applicable Fiber Coating Diameter	90µm to 970µm		
Recoat Mold	Quartz glass mold		
Recoat Diameter	Approx. 195µm, Approx. 255µm, Approx. 280µm, Approx. 320µm, Approx. 450µm, Approx. 600µm, Approx. 670µm, Approx. 850µm and Approx. 1,000µm		
Recoat Length	4mm to 50mm (*1) Recoat Length accuracy: ±20% (*2)		
Applicable UV curing resin	Japan Fine Coatings Co., Ltd. 950Y200 and Luvantix ADM Ltd. PC-373LD (*3)		
UV curing resin supply system	A built-in pump supplies UV curing resin to the recoat mold from a replaceable built-in bottle. (*4)		
UV curing resin injection time	950Y200: Approx. 17seconds (*2) PC-373LD: Approx. 20seconds (*2)		
Lamps for UV curing resin	UV light sources are placed on top and bottom. Individual control of light emitting position, intensity and time is possible.		
UV curing time	950Y200: Approx. 4seconds (*2) PC-373LD: Approx. 10seconds (*2)		
Proof Test	Proof mechanism	None	Equipped
	Fiber clamp method	—	Flat clamp type
	Settable Proof Force range	—	0.2 to 2.0kgf
Physical description	Dimensions W	Approx. 252mm without projection	Approx. 252mm without projection
	Dimensions D	Approx. 135mm without projection	Approx. 175mm without projection
	Dimensions H	Approx. 169mm without projection	Approx. 169mm without projection
	Weight	Approx. 3.3kg including recoat Mold and Fiber Height Adjuster	Approx. 4.8kg including recoat Mold and Fiber Height Adjuster
			Approx. 5.0kg including recoat Mold and Fiber Height Adjuster
Environmental condition	Temperature	Operate: 10 to 30 °C, Storage: -40 to 80 °C	
	Humidity	Operate: 0 to 95%RH non-condensing, Storage: 0 to 95%RH non-condensing	
AC adapter	Input	AC100 to 240V, 50/60Hz, Max. 1.5A	
	Output	Approx. DC 19V, Max. 2.1A	
Display	TFT 4.35 inches with touch screen		
Interface	PC	USB2.0 Mini B type	
	Earth Terminal	Applicable by M3 size truss screw.	
Wireless communication	RFID	Compliant with ISO 15693	
Data storage	Recoat Mode	100 Recoat modes	
	Proof Test Mode	—	30 Proof modes
	Recoat Result	5,000 Recoat	
	Proof Test Result	—	5,000 Proof
Other features	Mold	Recoat length stabilizing mechanism	
		Alignable clamp position according to fiber eccentricity between coating center and clad center.	
		Replace cable by user.	
	Software for PC	Illuminates the flowing UV curing resin on the groove to advance resin visibility.	
		RFID tag identifies the type of Recoat mold	
Proof force Calibration	—	Enable (*5)	

**Notes**

- \*1. The recoat length may not achieve to the setting value, depending on the combination of recoat diameter and fiber coating diameter, ambient temperature, etc.,
- \*2. Test condition
  - (1) UV recoat Resin: Japan Fine Coatings Co., Ltd. 950Y200 or Luvantix ADM Ltd. PC-373LD
  - (2) Recoat diameter: 280µm
  - (3) Recoat Length: 20mm
  - (4) Fiber: Clad Diameter 125µm/Transparent UV 250µm Coating Diameter, Coating Stripping length 16mm
  - (5) Environmental Condition: 25 °C
- \*3. Purchase the UV curing resin from UV curing resin local distributors. Fujikura doesn't sell UV curing resin.
- \*4. Ask the distributor to replace the built-in pump.
- \*5. FGA-02 and specified force gauge, FGP-20 that manufactured by Nidec-Shimpo Co., Ltd. are necessary.

# Options

Item	Model	Remark
Recoat Mold for 195µm	FSR115-MOLD-195	Approx. φ195 µm, 50 mm (*1)
Recoat Mold for 255µm	FSR115-MOLD-255	Approx. φ255 µm, 50 mm (*1)
Recoat Mold for 280µm	FSR115-MOLD-280	Approx. φ280 µm, 50 mm (*1)
Recoat Mold for 320µm	FSR115-MOLD-320	Approx. φ320 µm, 50 mm (*1)
Recoat Mold for 450µm	FSR115-MOLD-450	Approx. φ450 µm, 50 mm (*1)
Recoat Mold for 600µm	FSR115-MOLD-600	Approx. φ600 µm, 50 mm (*1)
Recoat Mold for 670µm	FSR115-MOLD-670	Approx. φ670 µm, 50 mm (*1)
Recoat Mold for 850µm	FSR115-MOLD-850	Approx. φ850 µm, 50 mm (*1)
Recoat Mold for 1000µm	FSR115-MOLD-1000	Approx. φ1000 µm, 50 mm (*1)
Fiber Height Adjuster	FSR115-HADJ-100	φ90µm to φ110µm (*2)
	FSR115-HADJ-125	φ110µm to φ140µm (*2)
	FSR115-HADJ-160	φ140µm to φ180µm (*2)
	FSR115-HADJ-200	φ180µm to φ225µm (*2)
	FSR115-HADJ-250	φ225µm to φ275µm (*2)
	FSR115-HADJ-300	φ250µm to φ350µm (*2)
	FSR115-HADJ-400	φ350µm to φ450µm (*2)
	FSR115-HADJ-500	φ450µm to φ550µm (*2)
	FSR115-HADJ-600	φ540µm to φ660µm (*2)
	FSR115-HADJ-750	φ660µm to φ810µm (*2)
Force Gauge Adapter	FGA-02	For proof force calibration. Please purchase the Force Gauge that manufactured by Nidec-Shimpo Ltd., FGP-20.
	FSR-05-BTL-01	Bottle for UV curing resin
Setscrew for Fiber Height Adjuster	SCREW-CT-01	1 set (15pcs)
Fiber Height adjust spacer set	SPA-FSR115-SET	1 set

**Notes**

- \*1. Recoat diameter, maximum recoat length
- \*2. Coating diameter



Contact us

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