Optical Fiber Recoater

FSR115 / FSR116 / FSR117

Faster, More Accurately,
More user-friendly.

FSR117
- Recoating
- Proof test function up to 10kgf

FSR116
- Recoating
- Proof test function up to 2kgf

FSR115
- Recoating
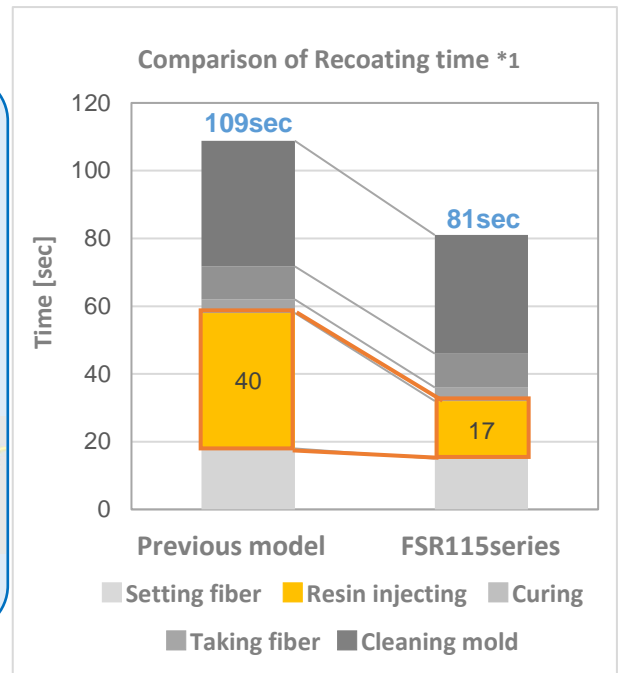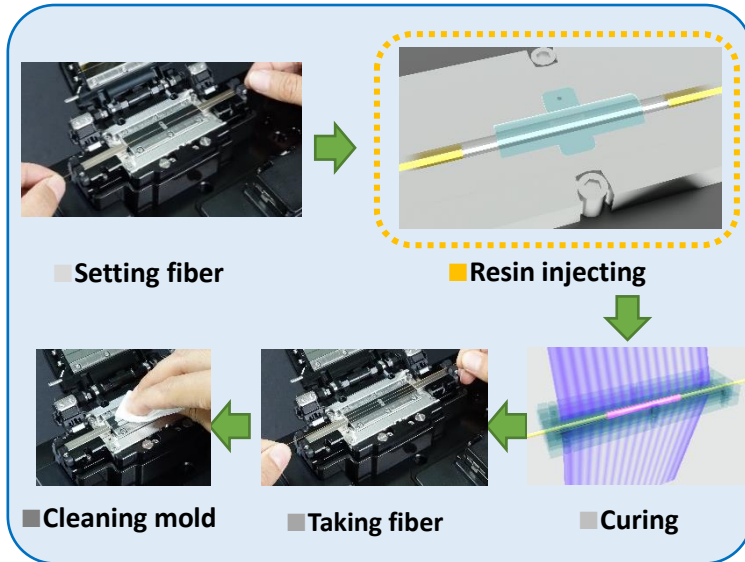- without Proof test function

Fujikura

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.
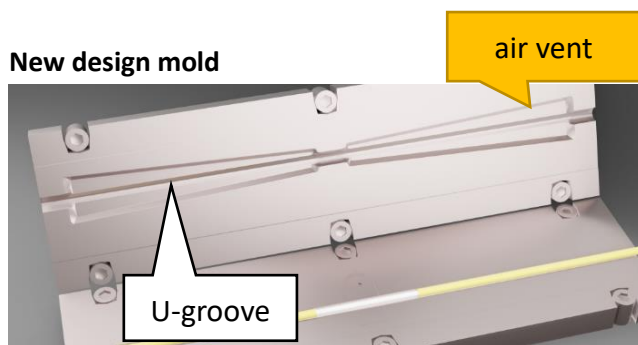
How to recoat

Setting fiber → Resin injecting → Curing → Taking fiber → Cleaning mold

Comparison of Recoating time *1

- Previous model: 109sec (Resin injecting: 40)
- FSR115series: 81sec (Resin injecting: 17)

Legend: Setting fiber, Resin injecting, Curing, Taking fiber, Cleaning mold
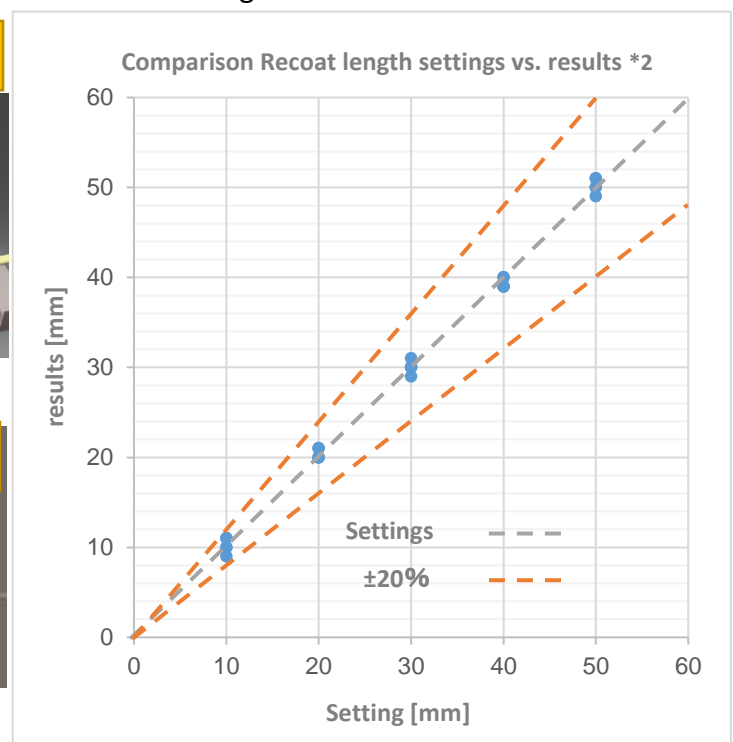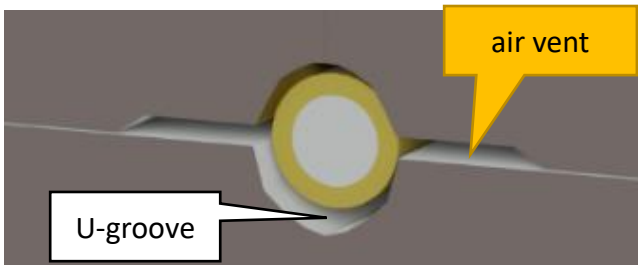
More accurate

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.

New design mold

air vent / U-groove

Cross section

air vent / U-groove

Comparison Recoat length settings vs. results *2

Settings — — — ±20%

*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
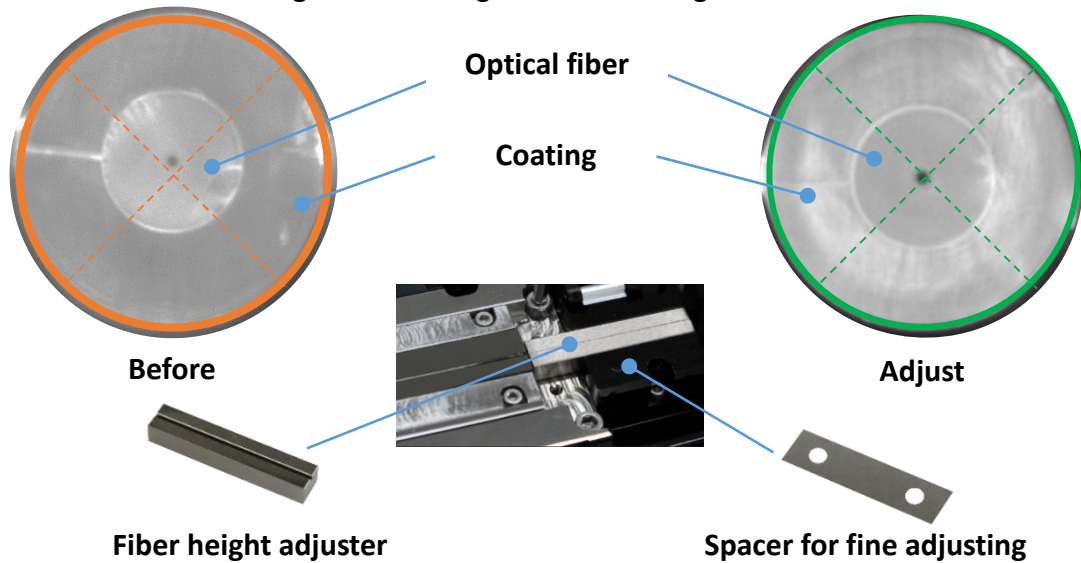
*2: The table does not guarantee the recoat length accuracy.
Test condition: (1) UV recoat Resin：Japan Fine Coatings Co., Ltd. 950Y200 (2) Recoat diameter：280μm (3) Recoat Length：10-50mm (4) Fiber：Clad Diameter 125μm/Transparent UV 250μm Coating Diameter, Coating Stripping length 60mm (5) Environmental Condition： 25°C

More user friendly

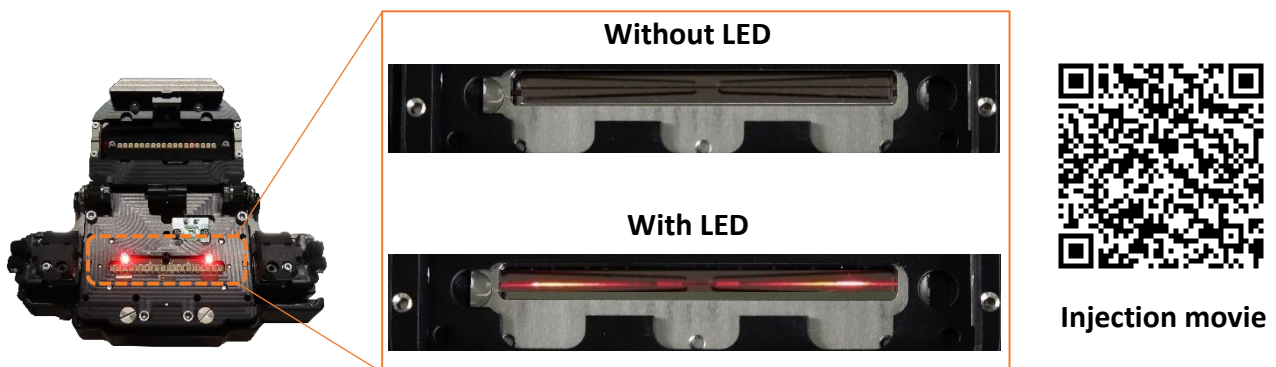## Fiber and recoating centering adjustment is now possible by the user

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.
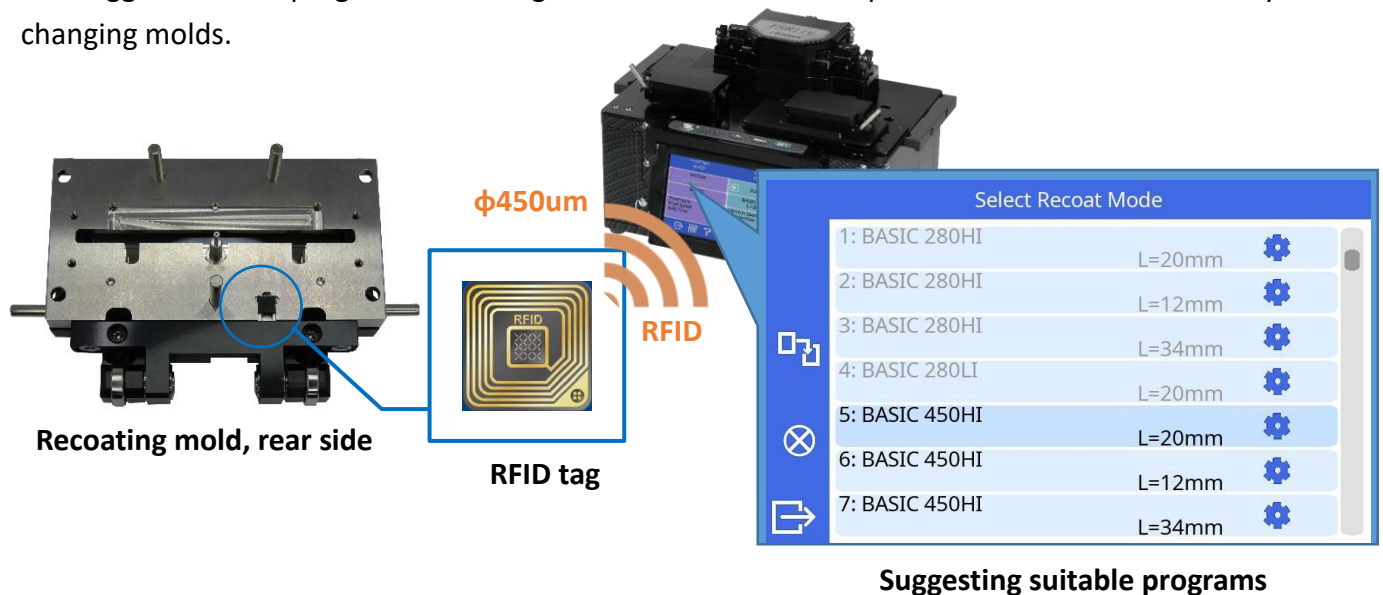
Optical fiber

Coating

Before

Adjust

Fiber height adjuster

Spacer for fine adjusting

Clear observation of resin injection

LEDs under the mold shows the injected resin more clearly.

Without LED
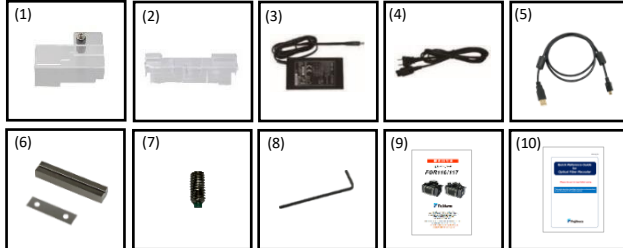
With LED

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.

Recoating mold, rear side

φ450um

RFID

RFID tag

Select Recoat Mode	
1: BASIC 280HI	L=20mm
2: BASIC 280HI	L=12mm
3: BASIC 280HI	L=34mm
4: BASIC 280LI	L=20mm
5: BASIC 450HI	L=20mm
6: BASIC 450HI	L=12mm
7: BASIC 450HI	L=34mm

Suggesting suitable programs

Standard Package

Description	Model No.	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

(1) (2) (3) (4) (5)

(6) (7) (8) (9) (10)

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
	FSR115-HADJ-900	φ810μm to φ970μm *2
Force Gauge Adapter	FGA-02	For proof force calibration. Please purchase the Force Gauge that manufactured by Nidec-Shimpo Ltd., FGP-20.
Bottle	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

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 AMD 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	Equipped
	Fiber Clamp method	—	Flat clamp type	Mandrel clamp type
	Settable Proof Force range	—	0.2 to 2.0kgf	0.2 to 10.0kgf
Physical description	Dimensions W	Approx. 252mm without projection	Approx. 252mm without projection	Approx. 252mm without projection
	Dimensions D	Approx. 135mm without projection	Approx. 175mm without projection	Approx. 175mm without projection
	Dimensions H	Approx. 169mm without projection	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	LCD monitor	TFT 4.95 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		
		Align able clamp position according to fiber eccentricity between coating center and clad center.		
		Replaceable by user.		
		Illuminates the flowing UV curing resin on the groove to advance resin visibility.		
		RFID tab identifies the type of Recoat mold		
	Software for PC	Recoater firmware update via internet		
		Parameter upload and download		
	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

BEST QUALITY SERVICE
- SINCE 1978 -

Please visit our web site!
https://www.optic-product.fujikura.com/