Mass Fusion Splicer 41R kit

Smart Management

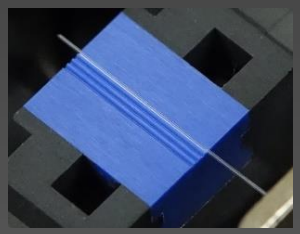
Fujikura

Active Fusion Control Technology

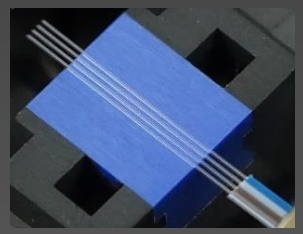
ACTIVE FUSION
CONTROL TECHNOLOGY

1. Active Fusion control by fiber count

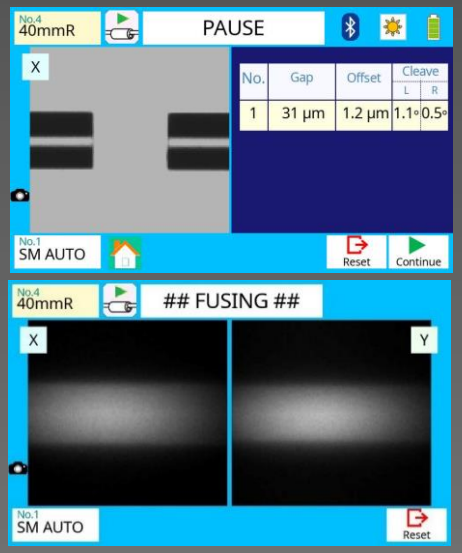
The 41R automatically determines the number of optical fibers from a single to maximum of 4 fiber ribbon. It minimizes splice loss by performing fusion splicing according to the number of fibers.

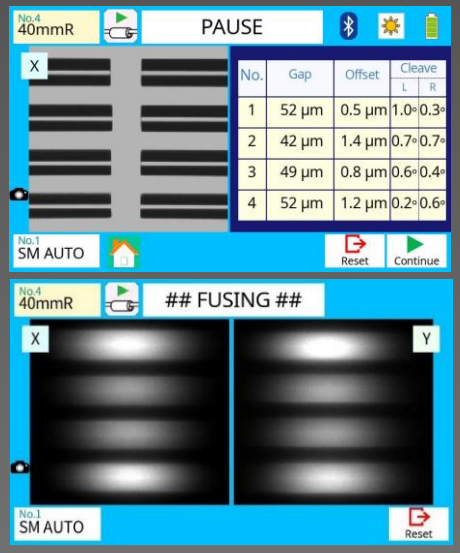


Single fiber



4 fiber ribbon

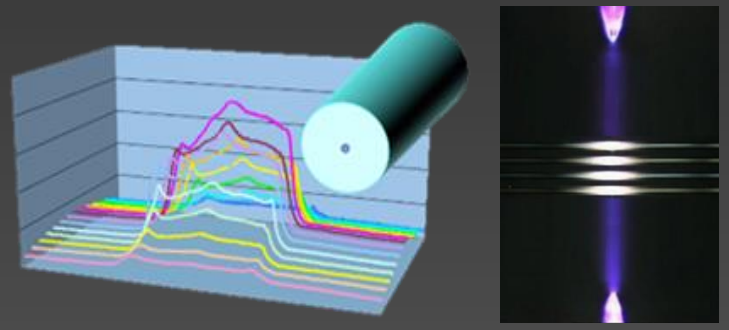




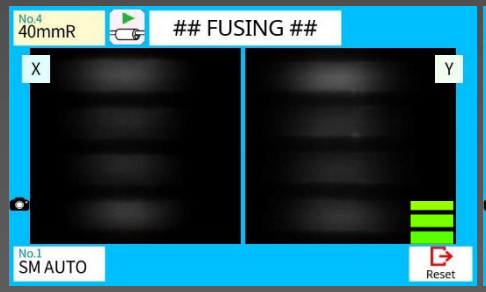
Automatic fusion control by fiber count

2. Active Fusion control in real-time

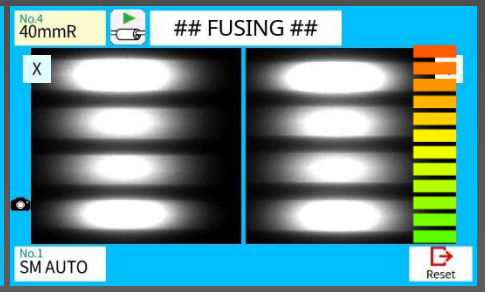
The 41R features real-time fusion power control by analyzing the fiber's brightness intensity during splicing. Therefore, it can splice the fiber using appropriate fusion parameters. The 41R does not have active core alignment mechanisms, however, during fusion, fiber surface tension effects minimize preexisting offsets.



Analyzing Brightness Intensity

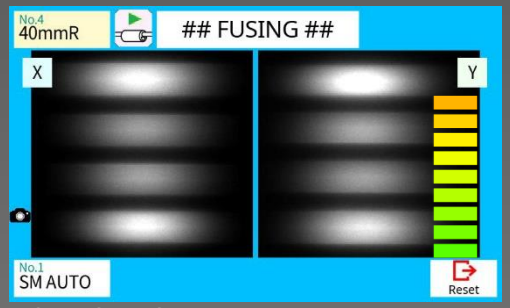


Fiber brightness : Weak



Fiber brightness : Strong

Real-time Fusion control



Fiber brightness : Appropriate

Real-time Fusion control

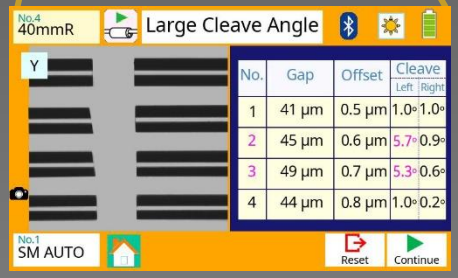
Active Blade Management Technology

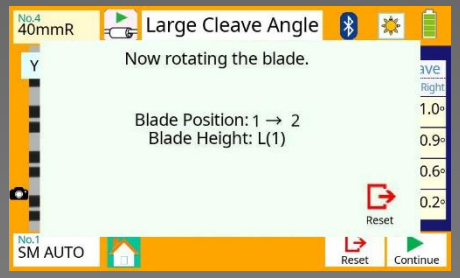
ACTIVE BLADE
MANAGEMENT TECHNOLOGY

1. Active Blade rotation by motor

The 41R fusion splicer and CT50 fiber cleaver are enabled with wireless data connectivity. This capability allows automatic cleaver blade rotation when the splicer judges the blade is worn.

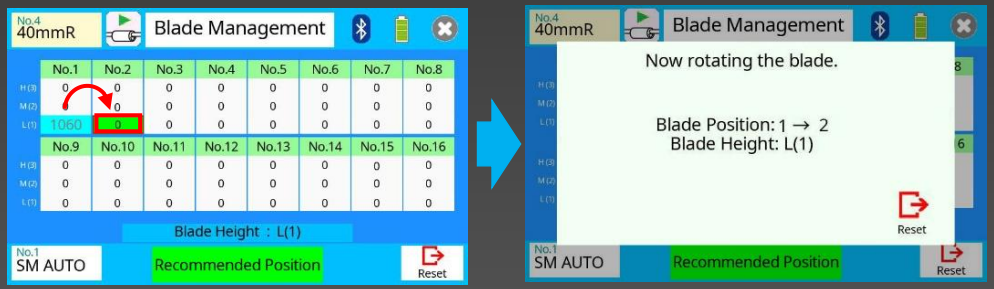
Motorized blade



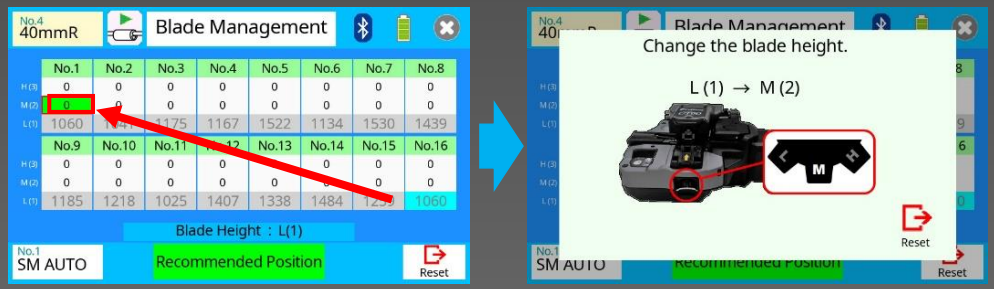


2. Active Blade life management

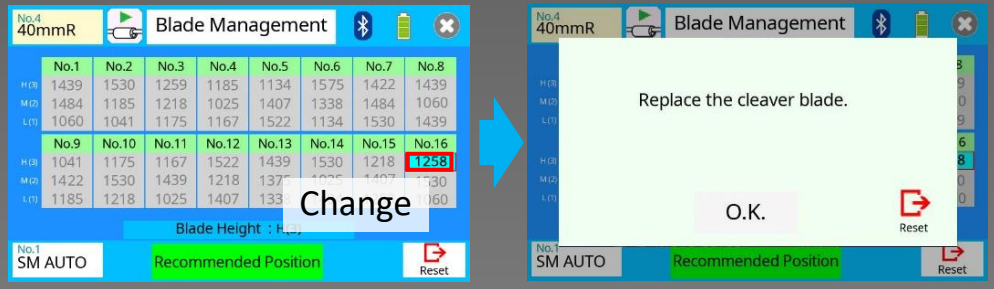
The 41R fusion splicer displays the remaining blade life and informs the user when a blade height change, position change, or new blade is required.



Instructions for changing position



Instructions for changing height

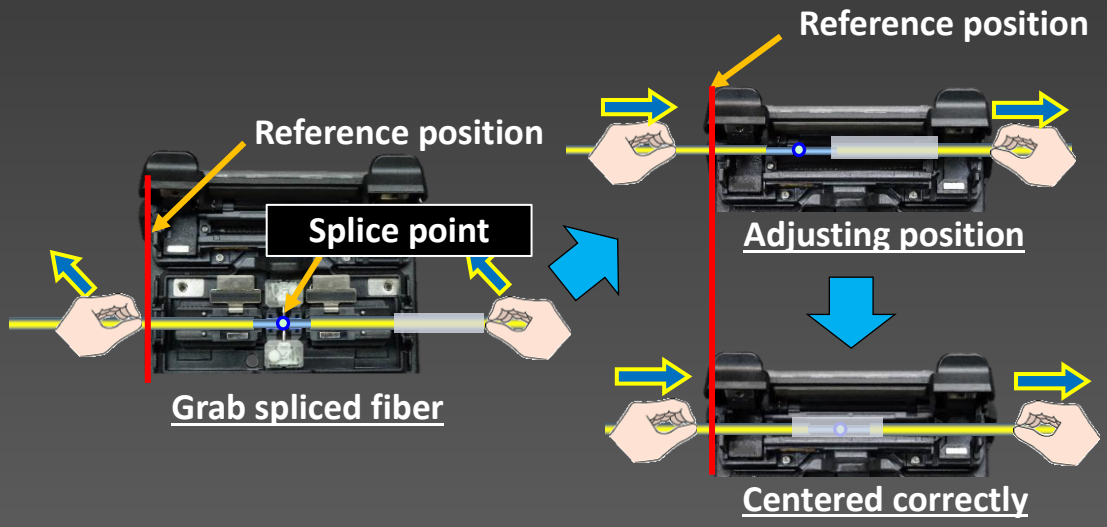


Instructions for changing new blade

Well-developed operability

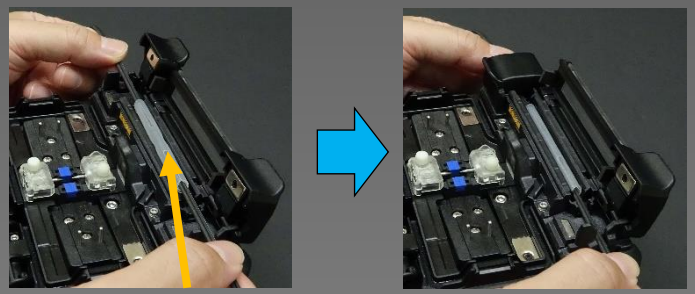
1. Simple sleeve centering

The 41R mass fusion splicer features simple sleeve positioning with its designated centering area on top of the tube heater.



2. Universal Tube Heater

The 41R mass fusion splicer can accommodate a max 6.0mm (before shrinking) diameter protection sleeve. As a result, it supports a wide range of protection sleeve sizes.

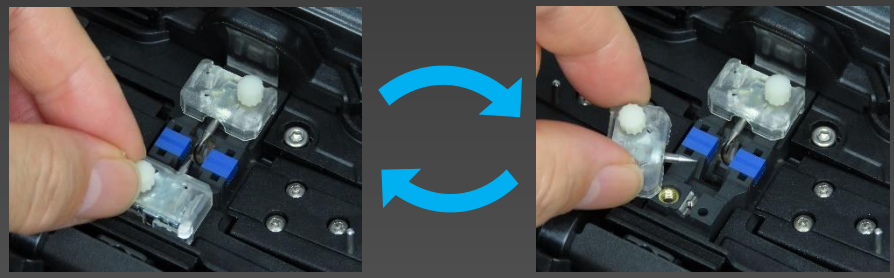


Max. 6.0mm diameter before shrinking

3. Easy replacement of consumable parts

3-1 Tool-less Electrode replacement

The 41R electrode comes as an assembly including the fixing screw. The screw can be tightened by hand without tools, enabling easy electrode replacement.



Electrode replacement without tools

3-2 Easy Maintenance

The CT50 fiber cleaver has a user replaceable blade and rubber clamps - there's no need to send the device to a service center for blade or clamp replacement.

Replaceable rubber clamps **Replaceable cleaver blade**

4. Carrying Case

There are multiple ways to utilize the 41R carrying case. The 41R is ready to use just by opening the case, but it is also possible to place the tray on top of the carrying case or only with the work tray depending on the work environment.

5. Work Tray

The tray incorporates a drawer which can be slid open to provide more work-space. A locking mechanism is also provided which secures the alcohol pot in place

Splicing on the Carrying Case

Ready to use !

Expandable work tray structure

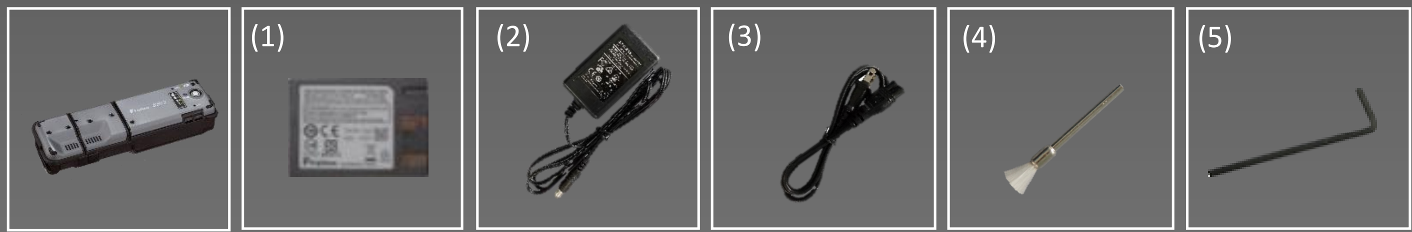
Stable aerial operation with belts

Standard Package

41R Standard Package

Item	Model	Qty
Clad Alignment Fusion Splicer	41R	1 pc
(1) Battery Pack *	BTR-11A	1 pc
(2) AC Adapter	ADC-19A	1 pc
(3) AC Power Cord	ACC-08, 09, 10, 11 or 12	1 pc
(4) USB Cable	USB-01	1 pc
(5) Electrodes, for spare	ELCT2-16B	1 pair
(6) V-groove Cleaning Brush	VCB-01	1 pc
(7) Carrying Case	CC-36	1 pc
(8) Work tray	WT-08	1 pc
(9) Tripod Screw	TS-03	1 pc
(10) Carrying Case Strap	ST-03	1 pc
(11) Alcohol Dispenser	AP-02	1 pc
(12) Quick Reference Guide	QRG-04-E	1 pc
Single Fiber Stripper	SS01 or SS03	1 pc
Ribbon Fiber Stripper	RS03	1 pc
(1) Battery Pack *	BTR-12A	1 pc
(2) AC Adapter	ADC-09A	1 pc
(3) AC Power Cord	ACC-08, 09, 10, 11 or 12	1 pc
(4) Blade Cleaning Brush	BRS-02	1 pc
(5) Hexagonal Wrench	HEX-01	1 pc
Optical Fiber Cleaver	CT50	1 pc
(1) Fiber Scrap Collector	FDB-05	1 pc
(2) Fiber Setting Plate	AD-10-M24	1 pc
(3) Case	CC-37	1 pc
(4) Hexagonal Wrench	HEX-01	1 pc

* Please follow IATA regulation when shipping the battery by air.



Specifications

41R Specifications

Item		Specification
Fiber alignment method		Self cladding alignment with surface melting tension
Fiber count		Up to 4 fiber ribbon
Applicable fiber	Fiber type	Single mode optical fiber
		Multi mode optical fiber
	Cladding dia.	Approx.125µm
Applicable coating	Fiber holder	Coating shape. : Refer to options
		Cleave length : Approx. 10mm
Fiber splice performance	Splice loss *1	ITU-T G.652 : Avg. 0.05dB
		ITU-T G.651 : Avg. 0.02dB
		ITU-T G.653 : Avg. 0.08dB
		ITU-T G.655 : Avg. 0.08dB
		ITU-T G.657 : Avg. 0.05dB
	Splice time *2	SM FAST mode : Avg. 10 to 12sec.
		SM AUTO mode : Avg. 15 to 18sec.
Applicable protection sleeve	Sleeve type	Heat shrinkable sleeve
	Sleeve length	Max. 66mm
	Sleeve dia.	Max. 6.0mm before shrinking
Sleeve heat performance	Heat time *3	40mm FP-04T mode : Avg. 29 to 30sec.
		Single 60mm mode: Avg. 25 to 27sec.
Fiber tensile test force		Approx. 2.0N
Electrode life *4		Approx. 2000 splices
Physical description	Dimensions W	Approx.131mm without projection
	Dimensions D	Approx.201mm without projection
	Dimensions H	Approx.79mm without projection
	Weight	Approx. 1.2kg including battery
Environmental condition	Temperature	Operate : -10 to 50 degrees C
		Storage : -40 to 80 degrees C
	Humidity	Operate : 0 to 95%RH non-condensing
		Storage : 0 to 95%RH non-condensing
	Altitude	Max. 3700m
AC adaptor	Input	AC100 to 240V, 50/60Hz, Max. 1.5A
Battery pack	Type	Rechargeable Lithium Ion
	Output	Approx. DC14.4V, 3190mAh
	Capacity *5	Approx. 140 splice and heat cycles
	Temperature	Recharge : 0 to 40 degrees C
		Long Term Storage : -20 to 30 degrees C
Display	LCD monitor	TFT 4.9 inches with touch screen
	Magnification	Approx. 44 to 66X
Illumination	V-grooves	LED lamp
Interface	PC	USB2.0 Mini B type
	External LED lamp	USB2.0 A type Approx. DC5V, 500mA
	Wireless *7	Bluetooth 4.1 LE
Data storage	Splice mode	100 splice modes
	Heat mode	30 heat modes
	Splice result	10000 splices
	Splice image	100 images
Screw hole for tripod		1/4-20UNC
Other features	Automatic functions	Splice mode select by fiber count analysis
		Fusion power calibration
	Reference guide	PDF file stored in splicer
	Electrode	Replaceable without tools

41R Options

Item	Model	Remark
Fiber Holder	FH-70-200	200µm coating diameter
	FH-70-250	250µm coating diameter
	FH-70-900	900µm coating diameter
	FH-70-2	2 fiber ribbon
	FH-70-4	4 fiber ribbon
	FH-FC-20	900µm in 2mm diameter cable
	FH-FC-30	900µm in 3mm diameter cable
	FH-60-LT900	900µm loose buffer cable
Transfer Clamp	CLAMP-DC-12	Transferring drop cable on work tray
Protection sleeve	FP-04(T)	40mm up to 8 fiber ribbon

Notes

*1 Measured with a cut-back method relevant to ITU-T and IEC standard after splicing Fujikura identical fibers. The average splice loss changes depending on the environmental condition and fiber characteristics.

*2 Measured at room temperature. The definition of splice time is from the fiber image appearing on the LCD monitor to the estimated loss displayed. The average splice time changes depending on the environmental conditions, fiber type, and fiber characteristics.

*3 Measured at room temperature with the AC adapter. The heat time is defined from the start beep sound to the finish beep sound. The average heat time changes depending on the environmental conditions, sleeve type and battery pack condition.

*4 The electrode life changes depending on the environmental conditions, fiber type and splice modes.

*5 Test condition
(1) Splice and heat time: 2 minute cycle
(2) Using the splicer power save settings
(3) Using a not degraded battery
(4) At room temperature
The battery capacity changes when testing with different conditions to the above.

*6 The battery capacity decreases to a half after approx. 500 discharge and recharge cycles. The battery life is shortened further when using outside of the storage temperature range, operating temperature range or if completely discharged by storing for a long time without recharging.

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Specifications

CT50 Specifications

Item		Specification
Applicable fiber	Fiber type	Single mode optical fiber
		Multi mode optical fiber
	Fiber count	Up to 16 fiber ribbon
	Cladding dia.	Approx. 125µm
Applicable coating	Fiber setting plate	AD-10-M24 : Max. 900µm coating diameter
		AD-50 : Max. 3mm coating diameter
	Fiber holder	Coating shape. : Refer to splicer options
Cleave length	Fiber setting plate	AD-10-M24 : 5 to 20mm *1
		AD-50 *C.D. : coating diameter C.D. = 250µm or less : 5 to 20mm *1 250µm < C.D. < =900µm : 10 to 20mm 900µm < C.D. < =3mm : 14 to 20mm
	Fiber holder	Approx. 10mm
Cleave angle *2	Single fiber	Avg. 0.3 to 0.9 degrees
	Fiber ribbon	Avg. 0.3 to 1.2 degrees
Blade life *3		Approx. 60000 fiber cleaves
Physical description	Dimensions W	Approx. 117mm without projection *4
	Dimensions D	Approx. 94mm without projection *4
	Dimensions H	Approx. 59mm without projection *4
	Weight	Approx. 306g including battery and AD-10-M24
Environmental condition	Temperature	Operate : -10 to 50 degreeC
		Storage : -40 to 80 degreeC
	Humidity	Operate : 0 to 95%RH non-condensing
		Storage : 0 to 95%RH non-condensing
Battery		2 pieces of LR03, AAA dry battery
Wireless interface *5		Bluetooth 4.1 LE
Screw hole for tripod		1/4-20UNC
Holding mechanism for the fiber holder		Existence
Other features	Blade rotation	Motorized rotation
		Manual rotation dial
	Replaceable parts	Blade
		Clamp arm

CT50 Options

Item	Model	Remark
Fiber Setting Plate	AD-50	Optional fiber setting plate
Blade	CB-08	Blade for replacement
Clamp Arm	ARM-CT50-01	Clamp arm with anvil for replacement
Fiber Scrap Collector	FDB-05	Spare scrap collector
Side cover	SC-CT50-01	Side cover instead of scrap collector
Spacer	SPA-CT08-10	Cleave length 10mm
	SPA-CT08-09	Cleave length 9mm
	SPA-CT08-08	Cleave length 8mm

Notes

*1 When the cleave length is less than 10mm, the coating diameter should be 250µm or less. Also, a blade height adjustment is required before cleaving. The average cleave angle is worse than the specification when the cleave length is less than 10mm.

*2 Measured with an interferometer at room temperature, not with a splicer. A new blade was used to cleave both the single fibers and ribbon fibers. The average cleave angle changes depending on the environmental conditions, blade condition, operating method, and cleanliness.

*3 The blade life changes depending on the environmental conditions, operating method, and the fiber type cleaved.

*4 Measured in a condition when closing the lever.

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RS03 Specifications

Item		Specification
Applicable fiber	Fiber type	Single mode optical fiber
		Multi mode optical fiber
	Fiber count	Up to 16 fiber ribbon
	Cladding dia.	Approx. 125µm
	Coating dia.	200 to 400µm
Stripping length		Max. 35mm
Heat time *1		Approx. 3sec
		Approx. 5sec with Eco-mode
Heat temperature		85 to 140 degreeC
Physical description	Dimensions W	Approx.156mm without projection
	Dimensions D	Approx.49mm without projection
	Dimensions H	Approx.37mm without projection
	Weight	Approx. 265g including battery
Environmental condition	Temperature	Operate : -10 to 50 degreeC
		Storage : -40 to 80 degreeC
	Humidity	Operate : 0 to 95%RH non-condensing
		Storage : 0 to 95%RH non-condensing
AC adaptor	Input	AC100 to 240V, 50/60Hz, Max. 0.58A
DC input		DC10 to 17V, Approx. 1A
Battery pack	Type	Rechargeable Lithium Ion
	Output	Approx. DC7.2V, 1840mAh
	Capacity *2	Approx. 600 times with Eco-mode
	Temperature	Operate : -10 to 50 degreeC
		Recharge : 0 to 40 degreeC
		Long Term Storage : -20 to 30 degreeC
	Battery life *3	Approx. 500 recharge cycles
Wireless interface *4		Bluetooth 4.1 LE
Other features	Stripping force	Lower stripping force design
	Automatic heat setting	Controlled from splicer or smartphone

RS03 Options

Item	Model	Remark
Spacer	SPA-RS02-08	Coating length 8mm
DC power cord	DCC-11	Splicer to ribbon stripper

Notes

*1 Measured at room temperature. The heat time changes depending on the environmental conditions and fiber coating type.

*2 Tested at room temperature with a not degraded battery and Eco-mode. The number of cycles changes depending on the environmental conditions, stripper settings and battery degrading condition.

*3 The battery capacity decreases to a half after approx. 500 discharge and recharge cycle. The battery life is shortened further when using outside of the storage temperature range, operating temperature range or if completely discharged by storing for a long time without recharging.

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https://www.fusionsplicer.fujikura.com

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91330-2201-0108-01