

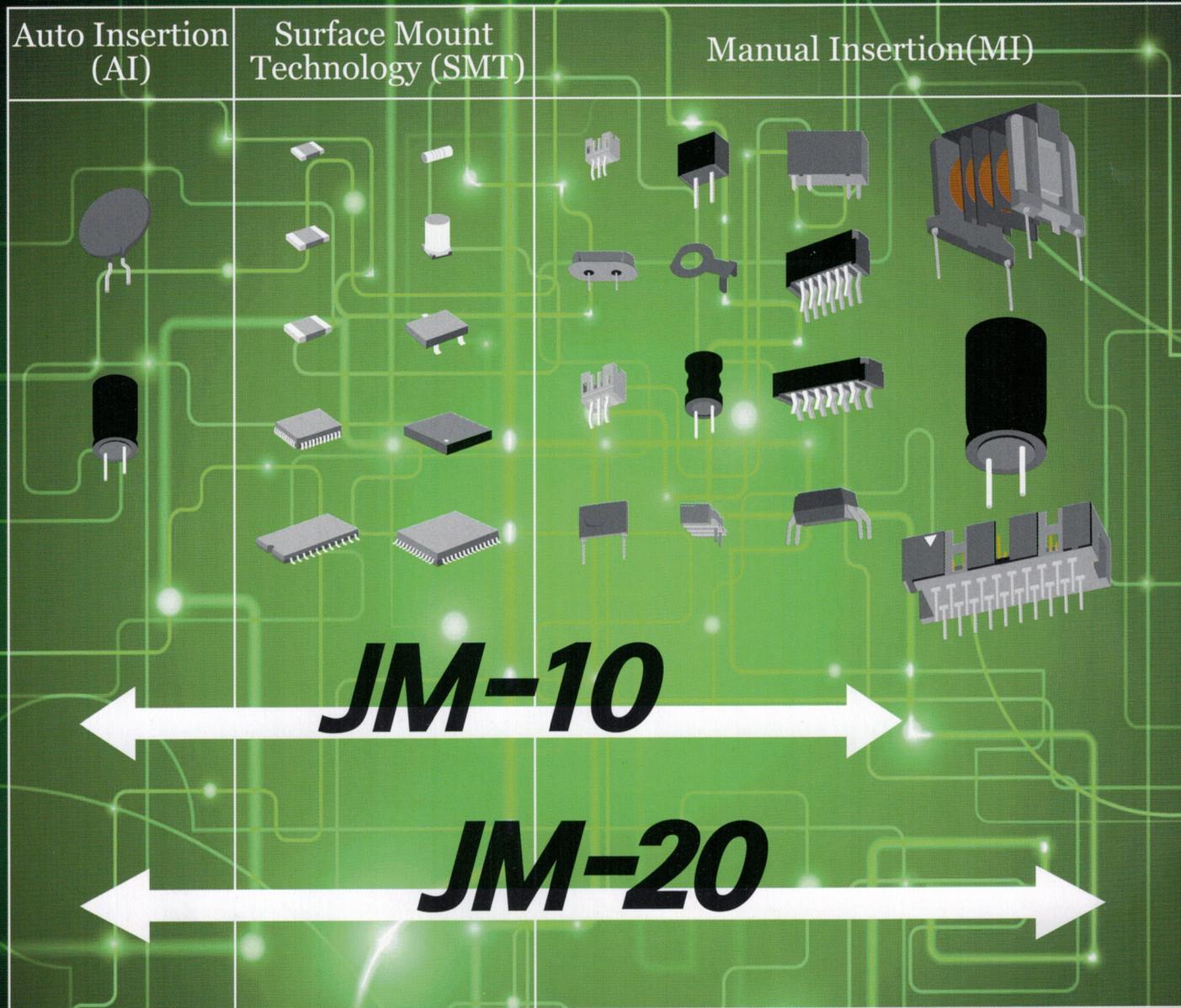
JUKI's Latest Technology

JUKI

Introducing the JM Series - Automating the Manual Insertion Process



3E EVOLUTION



Higher quality and labor saving

Multitask Platform

JM-10



Compact model for applications with smaller components

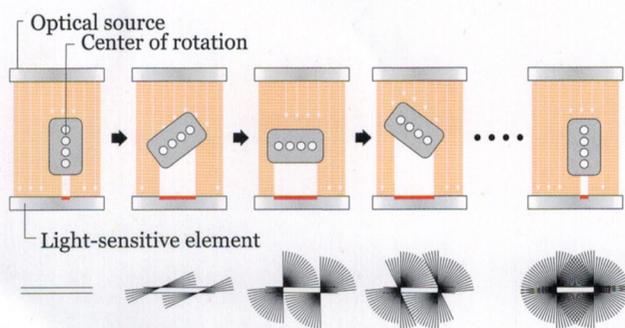
JM-20



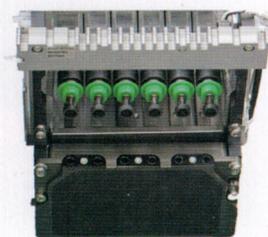
Advanced model for larger/heavier components and larger boards

Laser sensor for lead detection

The laser sensor is ideal for lead tip detection leading to improved insertion process



Components are rotated 360 degrees in the laser. The entire outline of the component is measured accurately by a high resolution CCD sensor. The exact component position and angle are obtained in a fraction of a second without a side trip to a camera. After measuring the component body, the lead tips are measured to ensure accurate insertion.



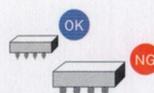
Laser sensor integrated into placement head

Recognizing component	Recognition result (body)	Recognition result (lead)	Recognition image

Improved placement quality with component detection function

Laser detects component presence from pick to placement, reducing defects.

Component dimension check



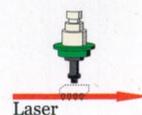
Compare the dimensions of the part picked to the component data to ensure the right part is picked.

Component fall check



Laser checks if the component falls before placement.

Release check



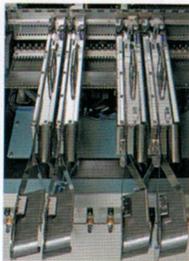
Laser checks if the component is properly released on the board after placement.

by automating manual insertion

Wide variety of feeder types^{※1}

Feeders for tape, stick, radial, axial, tray, and bulk components.
A wide variety of custom feeders are also available

Tape feeder types



Radial Feeder
(MRF-S/MRF-L)



Radial Feeder for
snap-in MRF-LF



Axial Feeder
MAF-S

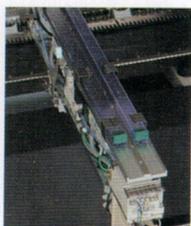


Axial Feeder
MAF-L



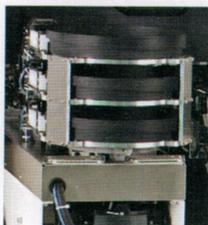
Tape Feeder
(SMT)
CTFR

Stick feeder

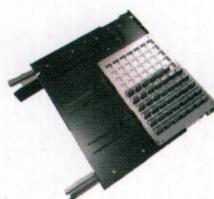


Stick Feeder

Bulk and tray feeders



Bowl Feeder for large
component MBF-L
(tolley)



Tray Holder



Matrix Tray server
TR5



Matrix Tray server
TR7DN

Feeder capacity^{※3}

	Tape feeder in case of 8mm tape	Radial feeder		Axial Feeder		Stick Feeder	Bowl Feeder MBF-L	Tray ^{※2※4}		
		MRF-S	MRF-L	MAF-S	MAF-L			Tray Holder (full)	MTS (TR5)	MTS (TR7DN)
JM-10	60	20	14	16	12	12	2	1	1	-
JM-20	80	26	20	22	16	16	2	2	1	1

※1 Customization possible.

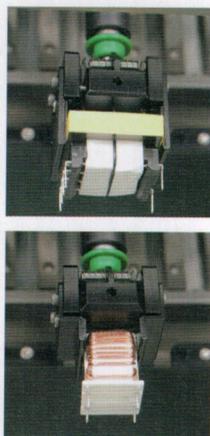
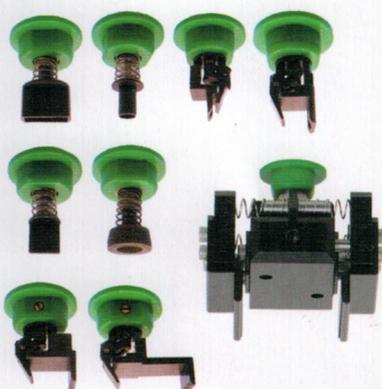
※2 Please contact our sales person for tray specification detail.

※3 Max applicable number of same feeders (Front & Rear total).

※4 Applicable only on rear side.

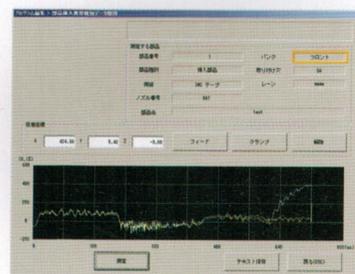
Nozzle types

JUKI has many years of experience making specialty nozzles for a wide variety of applications.



Insertion failure detection

A torque sensor determines if the component has been inserted correctly in the board.



Specifications

		Multitask Platform		Multitask Platform	
		JM-10		JM-20	
		M-size board	L-sized board	XL-sized board	
Board Size	Single Clamp	410×250mm	410×360mm	410×560mm	
	Double Clamp	-	800×360mm ^{※1}	800×560mm	
PCB Weight		Max. 2kg		Max. 4kg	
Component Height	28mm	○		○	
	55mm	-		○	
Component Size	Laser recognition	0603~□33.5mm		0603~□50mm	
	Vision recognition ^{※2}	54mm view camera	□3mm~□33.5mm	□3mm~□50mm	
		27mm view camera	1005~□24mm	1005~□24mm	
Insertion Speed	Vacuum (JUKI Condition)	0.8 sec/part		0.8 sec/part ^{※3}	
	Gripper (JUKI Condition)	1.3 sec/part		1.3 sec/part ^{※3}	
Placement Accuracy (SMD)	Chip (Optimal)	17,500 CPH		15,500 CPH ^{※3}	
	IC	4,100 CPH		4,200 CPH ^{※3}	
Placement Accuracy (SMD)	Laser recognition	±0.05mm (3σ)		±0.05mm (±3σ)	
	Vision recognition ^{※2}	±0.04mm		±0.04mm	
Residual number of components control ^{※2}		○		○	
Power supply		200 to 415 VAC 3-phase		200 to 415 VAC 3-phase	
Apparent power		1.8KVA		2.0kVA	
Circuit breaker ^{※2}		○		○	
Operation air pressure		0.5±0.05 Mpa		0.5±0.05 MPa	
Air consumption		345 L/min 50L/min in case with vacuum pump		50 L/min	
Vacuum pump		○ ^{※2}		○	
950mm conveyor height ^{※2}		○		○	
Machine dimension (W×D×H) ^{※4}		1,445×1,295×1,460mm	1,500×1,657×1,550mm	1,500×1,892×1,550mm	
Mass (Approximately)		1,000kg	1,760kg	1,985kg	

※1 Requires long PWB option (indexes PWB twice)
 ※2 Optional specification.

※3 For component height 28mm.
 ※4 Dimensions of machine described are for conveyor height 900mm.

Options

	Multitask Platform		Multitask Platform	
	JM-10		JM-20	
	M-size board	L-sized board	X L-sized board	
ATC 6-6	●		-	
Check nozzle base ^{※1}	-		●	
C-A T C (ATC for Chuck nozzle)	-		●	
Rear side operation unit	-		●	
Conveyor extension 250mm	-		●	
Conveyor guide 100mm	●		-	
Main line filter	●		●	
Circuit breaker	●		-	
Conveyor height 950mm	●		●	
Placement Force Control	-		●	
Vision centering System(54mm view camera)	●		●	
Vision centering System(27mm view camera)	●		●	
SMT feeder version bank(Selectable Front and/or Rear)	-		●	
SMT connector bracket	-		●	
MI Line Optimizer ^{※2}	●		●	

※1 For using chuck nozzle, separate custom parts will be required.
 ※2 This option is available for line control optimization.

JUKI ECO PRODUCTS  JUKI ECO PRODUCTS	The JM-20 is an eco-friendly product which complies with JUKI ECO PRODUCTS standards for protecting the environment. ●The machine complies with the "Juki Group Green Procurement Guidelines" on the use of hazardous substances, which is stricter than other restrictions, such as those of the RoHS Directive. <small>※The RoHS Directive is an EU Directive limiting the use of 6 hazardous substances(lead, hexavalent chromium, mercury, cadmium,PBB and PBDE) in electrical and electronic equipment. The Juki Green Procurement Guideline is the voluntarily established criteria to eliminate not only the aforementioned six substances, but also other ones which also adversely affect the environment.</small>
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 MS JAB CM001	 JSA EMS ISO 14001 JSAE389	 UKAS ISO 9001 089
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JUKI CORPORATION HEAD OFFICE
 The activities of research, development, design, sales, distribution, and maintenance services of industrial sewing machines, household sewing machines and industrial robots, etc., including sales and maintenance services of data entry systems.

※Please refer to the product specifications for details.

JUKI®

MANUFACTURER: JUKI CORPORATION
 INQUIRY: JUKI AUTOMATION SYSTEMS CORPORATION
 2-11-1, Tsurumaki, Tama-shi, Tokyo 206-8551, JAPAN
 TEL.81-42-357-2321 FAX.81-42-357-2297

<http://www.juki.co.jp>



JUKI Specifications and appearance may be changed without notice.
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