

Genkotsu (Delta) - Compact High-Speed Assembly Robot

FANUC Robot M-1*i*A

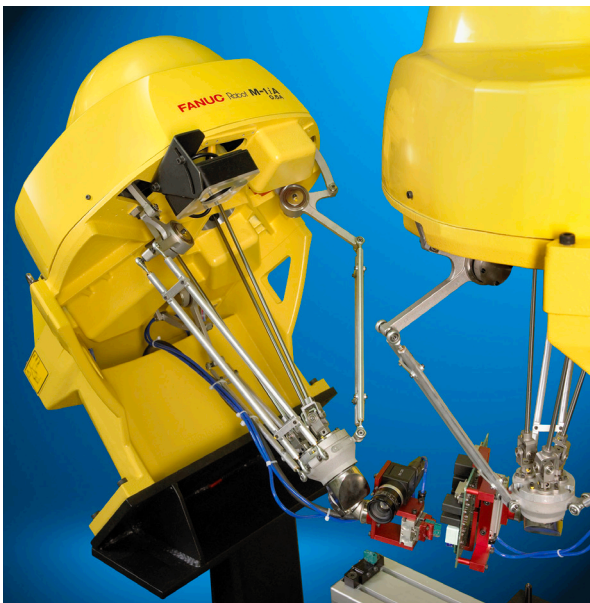


Features

The M-1*i*A is a lightweight and compact high-speed assembly robot.

- This lightweight and compact mechanical unit can be installed into tight work spaces, with free angle installation options.
- Two models are available to meet a variety of applications.
 - FANUC Robot M-1*i*A/0.5A
Three-axis wrist (robot total is six axes) type. Flexible wrist motion is suitable for assembly.
 - FANUC Robot M-1*i*A/0.5S
Single axis wrist (robot total is four axes) type. High speed 3000 deg/s wrist is suitable for picking.
- Unique parallel-link mechanism enables quick motion.
- Multiple installation methods include desktop stand, no stand, and ceiling mount for easy machine integration.
- A camera for *i*RVision (integrated vision) can be integrated in the mechanical unit.

Application system



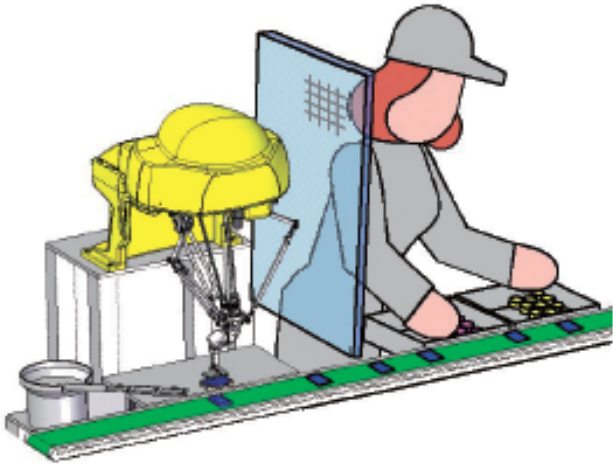
Circuit board insertion



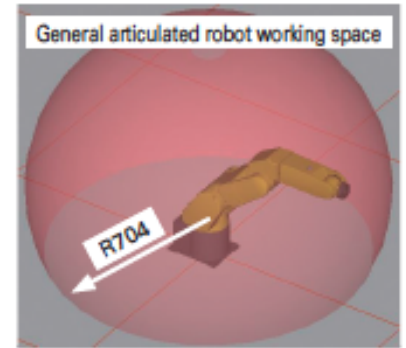
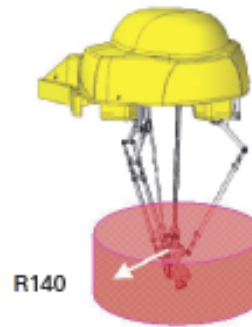
LED lens assembling

Compact, Flexibility and High-speed

Space saving

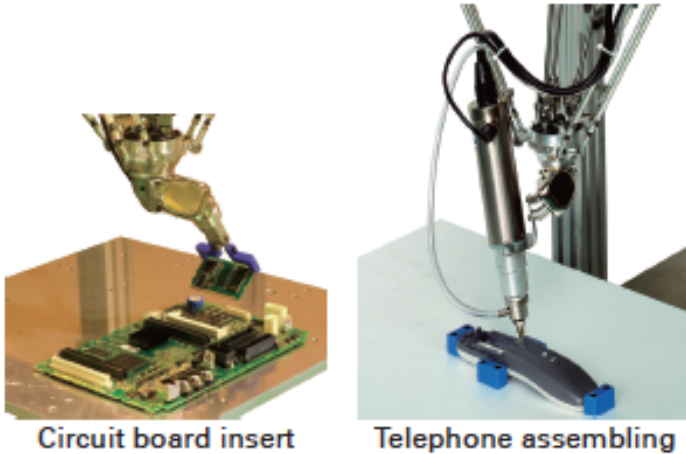


The work envelope is limited to the operation so that the total installation space can be minimized. The robot and the worker can work along the manufacturing line effectively.



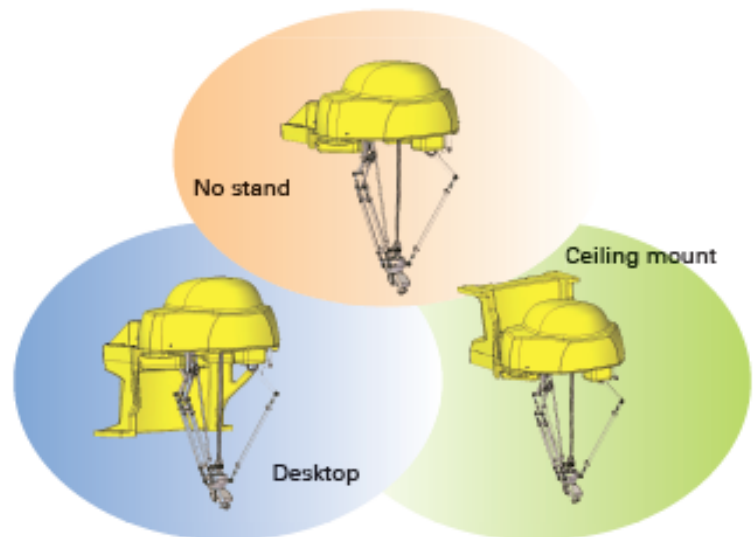
Complex assembly

The new six-axis parallel-link configuration enables complex assembly applications



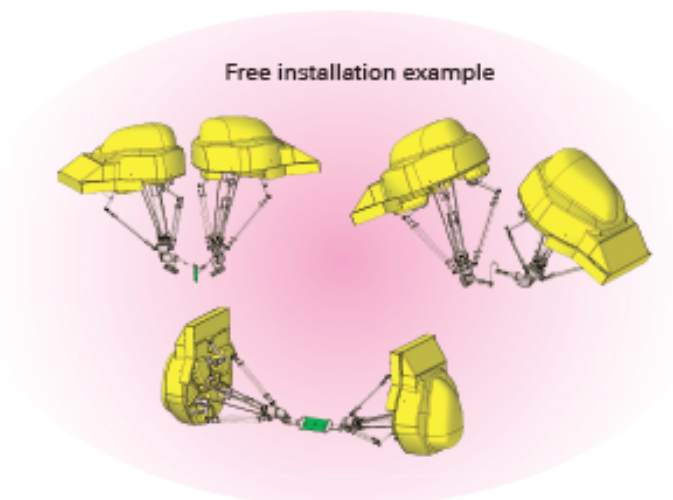
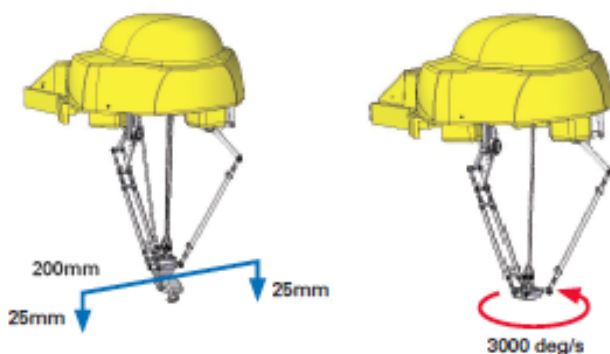
Multiple installation methods

The stand is optional and reversible. It increases flexibility for the robot's integration into a machine. The robot can also be ceiling mounted.



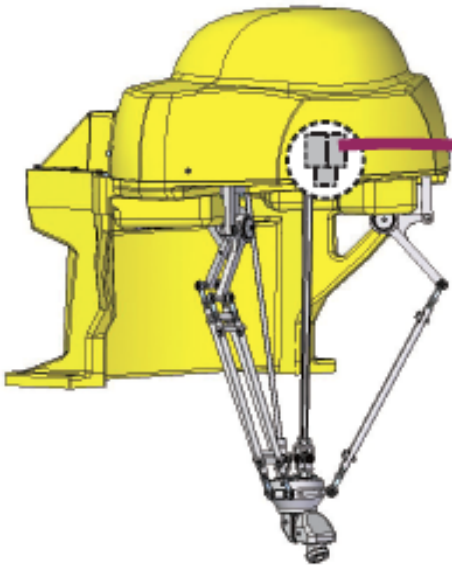
High-speed motion

The high-speed motion increases productivity. 25-200-25mm pick and place motion time is 0.3 s. The rotation of the four axes type rotates 3000deg/s, allowing quick directional changes.

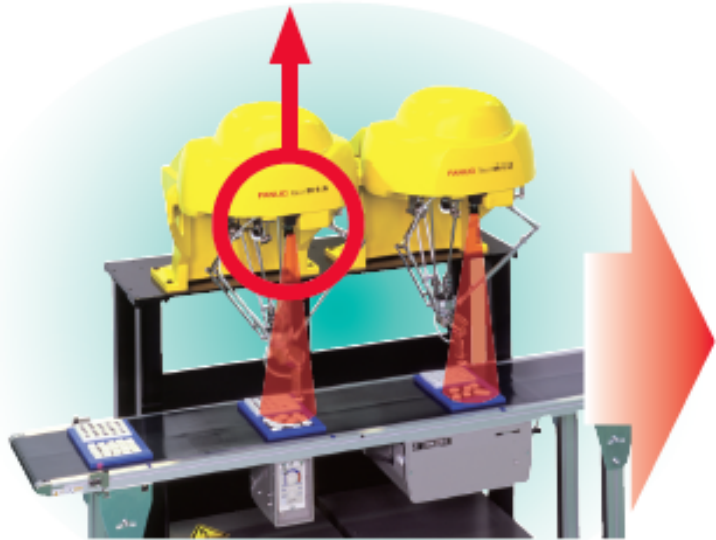


Intelligence

Integrated Vision



A camera for *i*RVision (integrated vision) can be integrated in the mechanical unit (option). Integrated hardware without a PC provides reliable image processing. The image can be monitored on the *i*Pendant. Tight integration between the vision and robot functions enables advanced robot control.

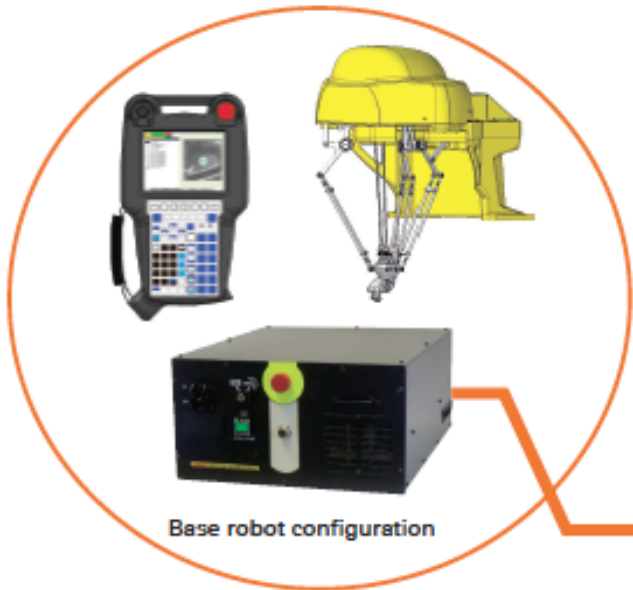


ROBOGUIDE

ROBOGUIDE provides offline programming/teaching/editing, verification of the operation with animation, and provides quick, accurate cycle time simulation in a virtual environment.

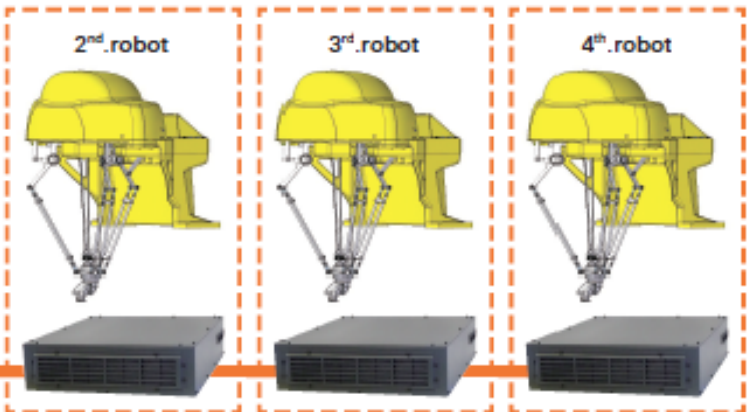


Configuration



Base robot configuration

The controller can control a maximum of four robots. Additional robot configurations such as combining the mechanical unit and amplifier box are easy to do.



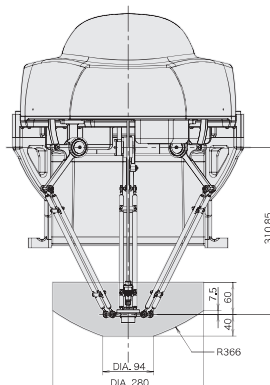
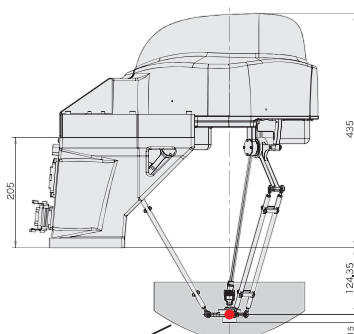
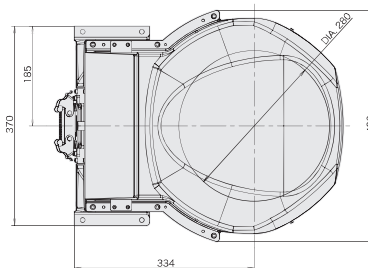
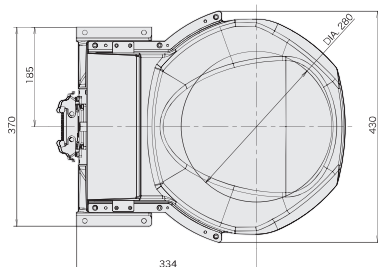
FANUC Robot M-1iA

Operating space

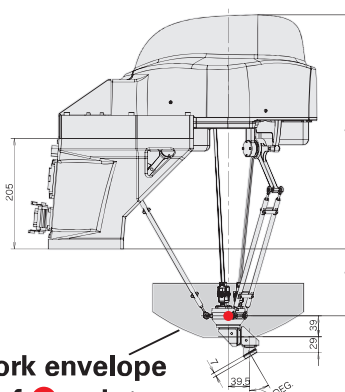
Patent

M-1iA/0.5S

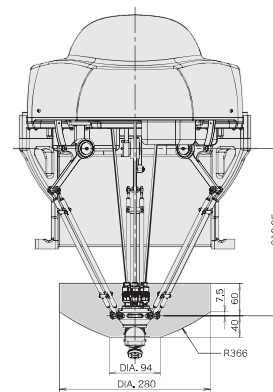
M-1iA/0.5A



Work envelope
of ● point



Work envelope
of ● point



Specifications

Item		Specifications	
		M-1iA/0.5S	M-1iA/0.5A
Type		Parallel link mechanism	
Controlled axes		4axes (J1,J2,J3,J4)	6axes (J1,J2,J3,J4,J5,J6)
Installation		Floor and ceiling mount	Floor, angle and ceiling mount
Motion range (Maximum speed) (Note1)	J1-J3	Diameter 280mm, height 100mm	
	J4	720°(3000°/s) 12.57 rad (52.34 rad/s)	720°(1440°/s) 12.57 rad (25.13 rad/s)
	J5	-	300°(1440°/s) 5.24 rad (25.13 rad/s)
	J6	-	720°(1440°/s) 12.57 rad (25.13 rad/s)
Max. payload at wrist		0.5kg(1kg with an option)	
Repeatability		±0.02mm	
Drive method		Electric servo drive by AC servo motor	
Mass (Note2)		14kg	17kg
Installation environment		Ambient temperature : 0~45°C Ambient humidity Normally : 75%RH or less (No dew, nor frost allowed) Short term : Max.95%RH or less (within one month) Vibration : 0.5G or less	

Note 1) In case of short distance motion, the axis speed doesn't reach maximum one.

Note 2) In case of "No stand"

FANUC
Robotics

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