

FANUC Robot M-1*i*A

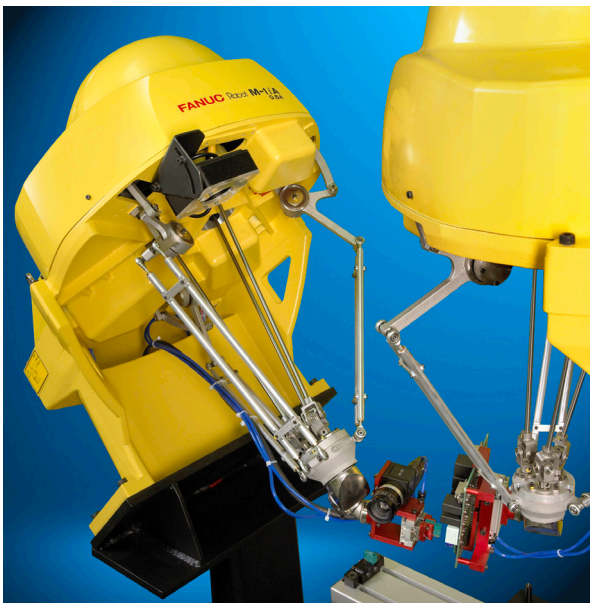


Features

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.
- Three 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.
 - FANUC Robot M-1*i*A/1H
Three axis with a 1kg payload and no wrist rotation. Ultra high speed motion for line transfer or pick and place operations.
- 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



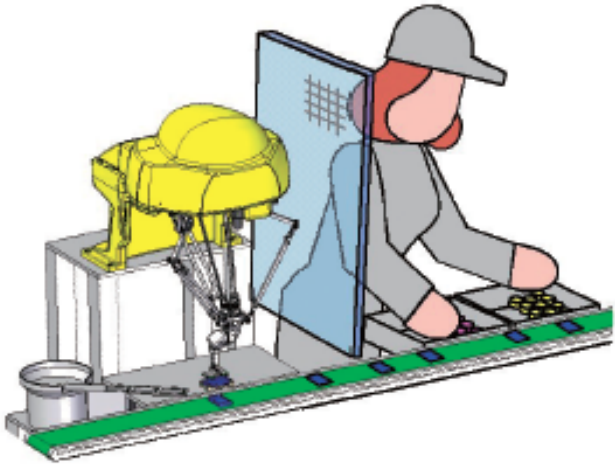
Circuit board insertion



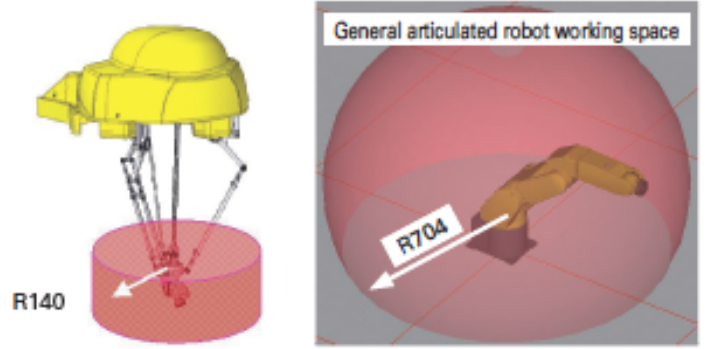
LED lens assembling

Compact, Flexibility and High-speed

Space saving

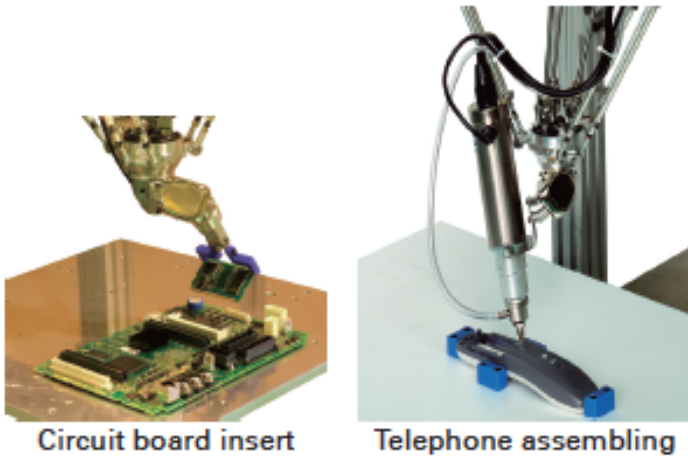


The work envelope is limited to the operation so that the total installation space can be minimized. The robot and the worker can work along the manufacturing line effectively.



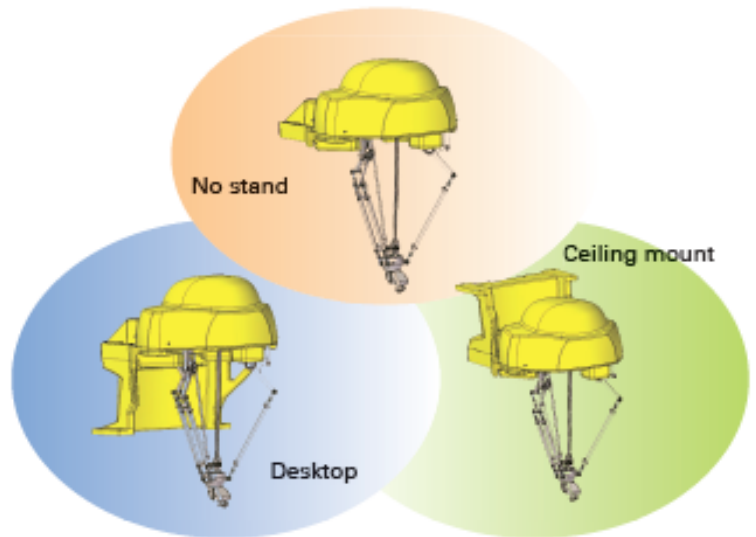
Complex assembly

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



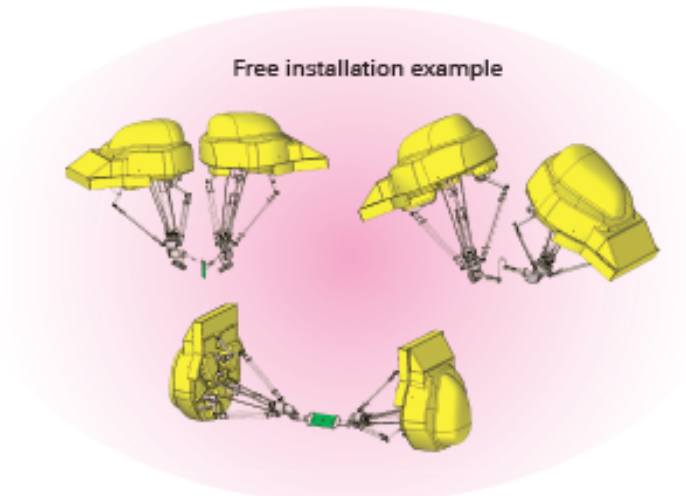
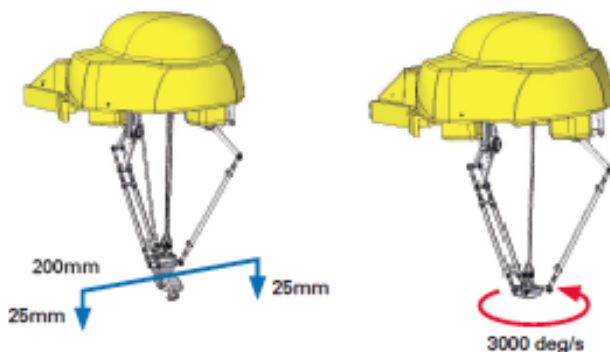
Multiple installation methods

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



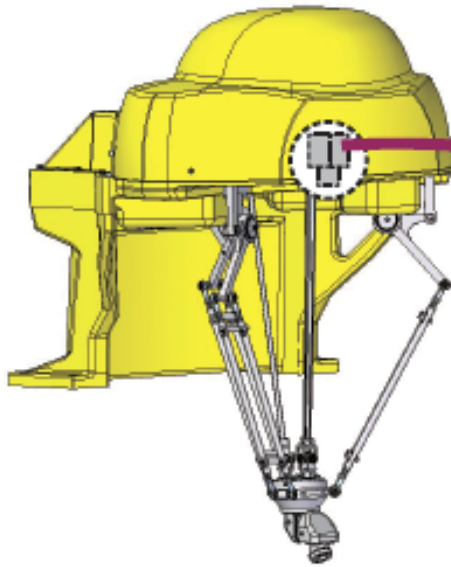
High-speed motion

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.

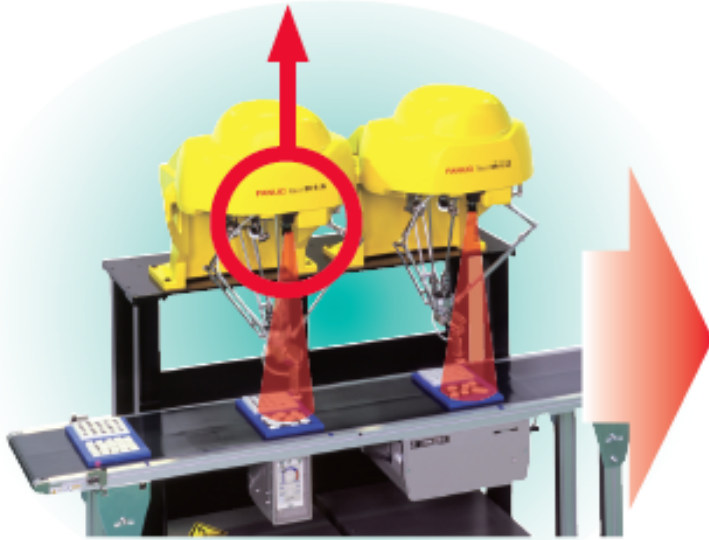


Intelligence

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.



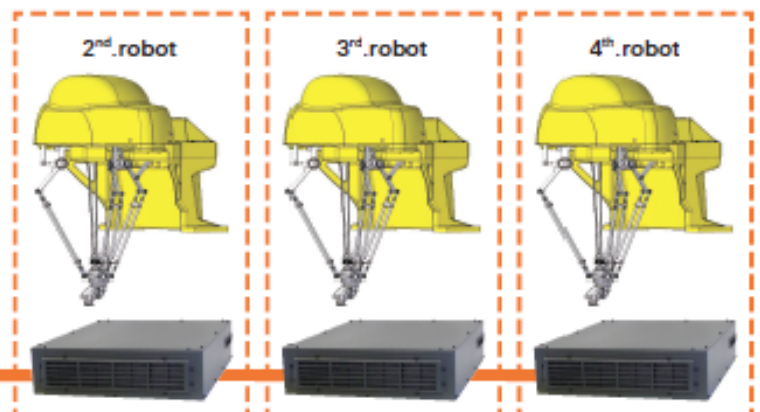
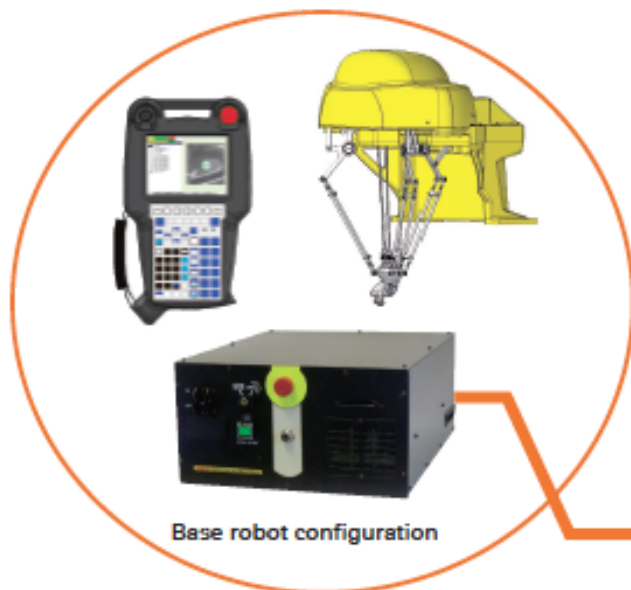
ROBOGUIDE

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



Configuration

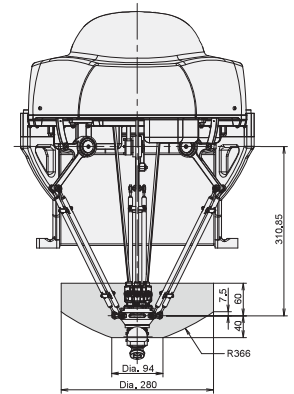
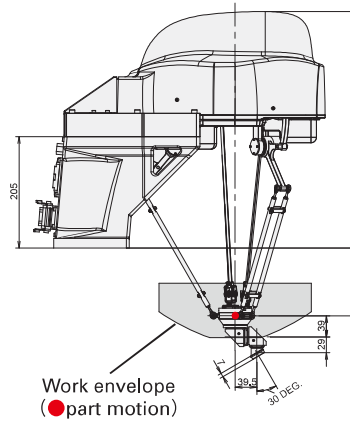
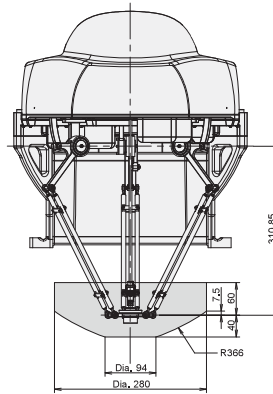
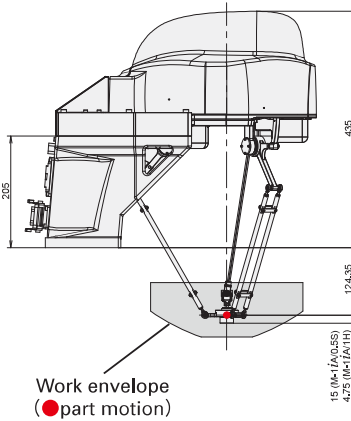
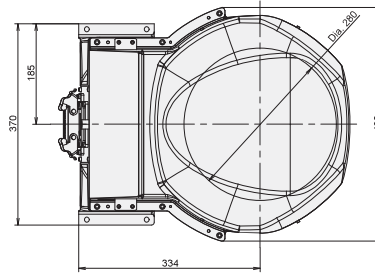
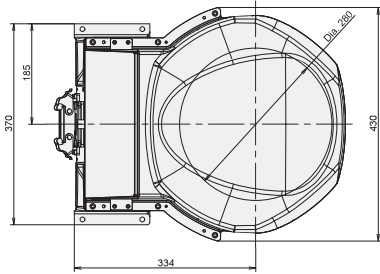
The controller can control a maximum of four robots. Additional robot configurations such as combining the mechanical unit and amplifier box are easy to do.



Operating space

M-1*i*A/0.5S, M-1*i*A/1H

M-1*i*A/0.5A



Specifications

Item	Specifications			
	M-1 <i>i</i> A/0.5S	M-1 <i>i</i> A/0.5A	M-1 <i>i</i> A/1H	
Type	Parallel link mechanism			
Controlled axes	4 axes (J1, J2, J3, J4)	6 axes (J1, J2, J3, J4, J5, J6)	3 axes (J1, J2, J3)	
Installation	Floor and ceiling mount	Floor, angle and ceiling mount	Floor 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	0.5 kg (1kg with an option)		1kg	
Repeatability	0.02mm			
Drive method	Electric servo drive by AC servo motor			
Mass (Note2)	14kg	17kg	12kg	
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 : 4.9m/s ² (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"

