

## Small Payload Handling Intelligent Robot

# FANUC Robot M-10iA



### Features

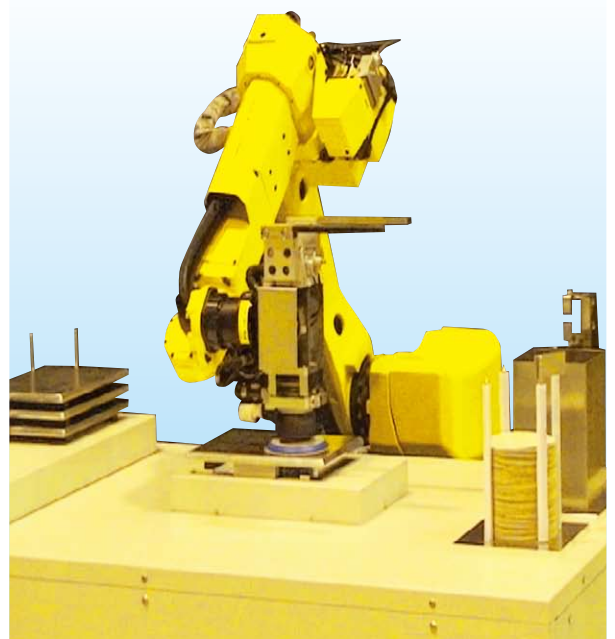
FANUC Robot M-10iA is a small payload handling robot whose payload is 7 to 12kg.

- The robot covers the motion range from 1.4m to 2.0m reach for various application adaptation. Spare parts such as motor, reducer and controller are communized among all M-10iA model.
- The robot can position tools without vibration, even after high speed motion. High speed and high accuracy motion can improve the productivity of the system.
- The unique gear drive mechanism in wrist axes realizes the slim arm in torch cable integrated robot.
- Hand cable utilities are integrated in the arm. And the tool controller is on J3 casing. It makes system setup easy.
- Thanks to hand cable management, off-line teaching function by ROBOGUIDE (Option) reduces teaching cost.
- Latest intelligent functions with iRvision (integrated vision) and force sensor are available.

### Application system



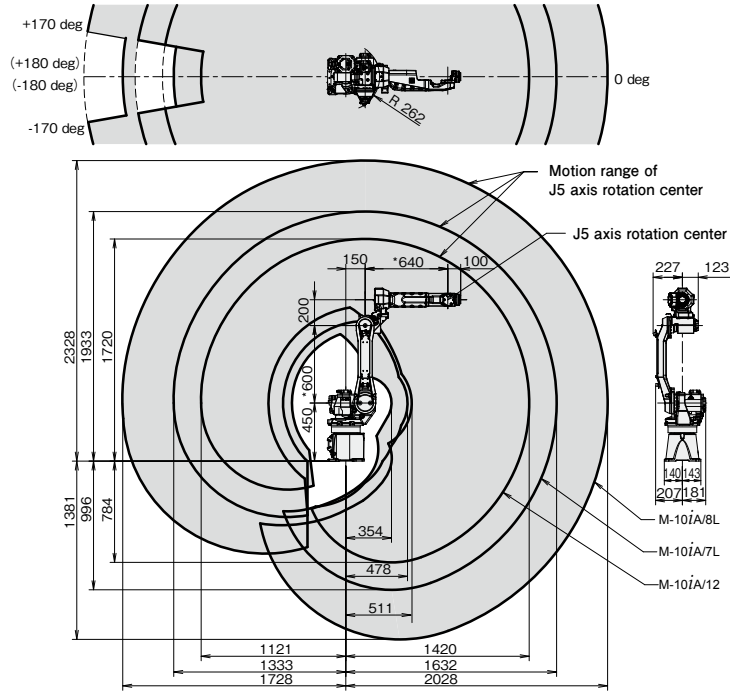
Small parts bin picking



Case parts polishing

# Operating space

## M-10iA



\*J2 arm length  
 M-10iA/12 : 600mm  
 M-10iA/7L : 600mm  
 M-10iA/8L : 780mm

\*J3 arm length  
 M-10iA/12 : 640mm  
 M-10iA/7L : 860mm  
 M-10iA/8L : 1080mm

# Specifications

Model		M-10iA/12	M-10iA/7L	M-10iA/8L
Controlled axes		6 axes (J1, J2, J3, J4, J5, J6)		
Reach		1420mm	1632mm	2028mm
Installation		Floor, Upside-down, Angle mount		
Motion range (Maximum speed) (Note 1, 2)	J1 axis rotation	340°/360° (Option) (230°/s) 5.93 rad/6.28 rad (Option) (4.01 rad/s)		340°/370°(Option) (200°/s) 5.93 rad / 6.45 rad°(Option) (3.49 rad/s)
	J2 axis rotation	250° (225°/s) 4.36 rad (3.93 rad/s)		255° (200°/s) 4.45 rad (3.49 rad/s)
	J3 axis rotation	445° (230°/s) 7.76 rad (4.01 rad/s)	447°(230°/s) 7.80 rad(4.01 rad/s)	462° (210°/s) 8.06 rad (3.67 rad/s)
	J4 axis wrist rotation	380° (430°/s) 6.63 rad (7.50 rad/s)		400° (430°/s) 6.98 rad (7.50 rad/s)
	J5 axis wrist swing	380° (430°/s) 6.63 rad (7.50 rad/s)		360° (430°/s) 6.28 rad (7.50 rad/s)
	J6 axis wrist rotation	720° (630°/s) 12.57 rad (11.0 rad/s)		900° (630°/s) 15.71 rad (11.00 rad/s)
Maximum load capacity at wrist		12 kg	7 kg	8 kg
Allowable load moment at wrist	J4 axis	22.0 N·m	15.7 N·m	16.1 N·m
	J5 axis	22.0 N·m	10.1 N·m	16.1 N·m
	J6 axis	9.8 N·m	5.9 N·m	5.9 N·m
Allowable load inertia at wrist	J4 axis	0.65 kg·m <sup>2</sup>	0.63 kg·m <sup>2</sup>	0.63 kg·m <sup>2</sup>
	J5 axis	0.65 kg·m <sup>2</sup>	0.38 kg·m <sup>2</sup>	0.63 kg·m <sup>2</sup>
	J6 axis	0.17 kg·m <sup>2</sup>	0.061 kg·m <sup>2</sup>	0.061 kg·m <sup>2</sup>
Repeatability		± 0.08 mm		
Mass (Note 3)		130 kg	135 kg	150 kg
Installation environment		Ambient temperature : 0 to 45°C Ambient humidity : Normal 75 %RH or less (No dew not frost allowed), Short term 95 %RH or less (within one month) Vibration acceleration : 4.9 m/s <sup>2</sup> (0.5G) or less		

Note 1) In case of angle mounting, J1 and J2 axis motion range are restricted.

Note 2) In case of short distance motion, the axis speed may not reach the maximum value stated.

Note 3) Without controller

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