

## Small Payload Handling Intelligent Robot

**FANUC** Robot **M-10iA**

**FANUC** Robot **M-20iA**

### Features

The M-10iA/ M-20iA is a light payload handling robot with a cable-integrated arm.

- M-10iA standard type, short arm type (10S), long arm type (6L) and M-20iA standard type, long arm type (10L) are available for various application adaptation.
- A highly rigid arm and advanced servo technology enable increased acceleration performance. This decreases cycle time; leading to higher productivity.
- A unique drive mechanism in the wrist axis allows for a hollow, slim arm with cable integration.
- Integrated cable routing and easy maintenance by cantilevered forearm provides excellent cable management. A conduit with embedded hand cables is provided as an option.
- Thanks to stable hand cable management, off-line teaching function by ROBOGUIDE (option) reduces teaching cost.
- Latest intelligent functions with *i*RVision (integrated vision) and force sensor are available.

### Application system



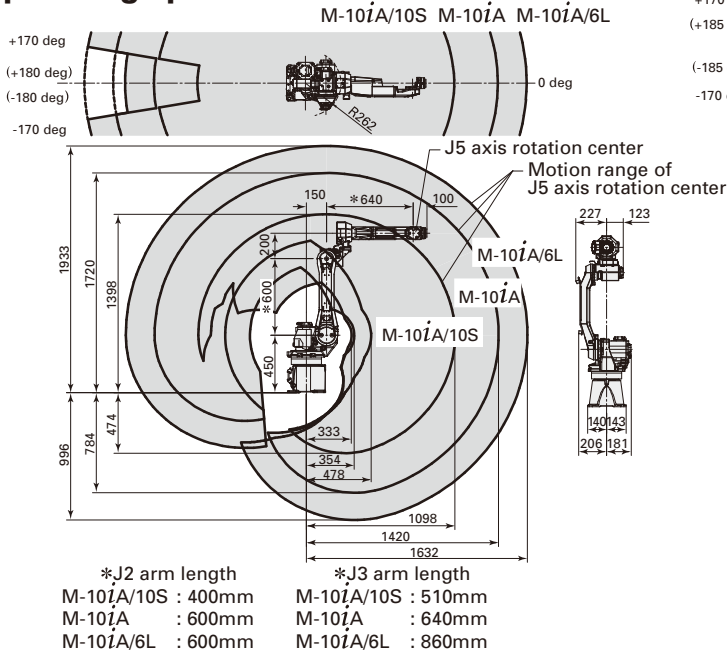
Small parts bin picking



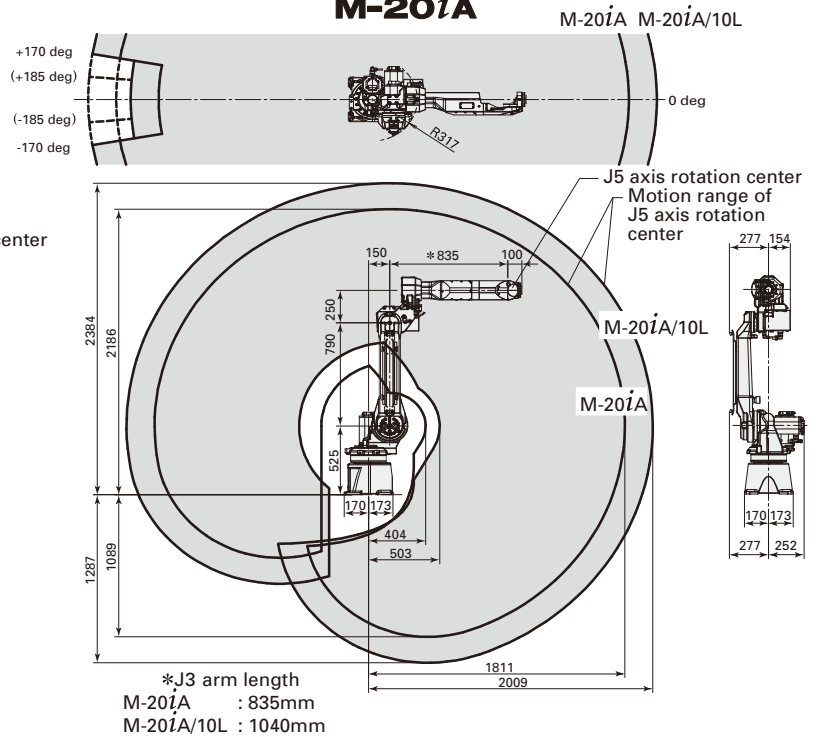
Plastic part material removal

# FANUC Robot M-10iA, M-20iA

## Operating space M-10iA



## M-20iA



## Specifications

Item	Specifications					
	M-10iA/10S	M-10iA	M-10iA/6L	M-20iA	M-20iA/10L	
Type	6 axes (J1, J2, J3, J4, J5, J6)					
Reach	1,098mm	1,420mm	1,632mm	1,811mm	2,009mm	
Installation	Floor, Upside-down, Angle mount					
Motion range (Maximum speed) (Note 1, 2)	J1 axis rotation	340°/360° (option) (220°/s) 5.93 rad/6.28 rad (option) (3.84 rad/s)	340°/360° (option) (210°/s) 5.93 rad/6.28 rad (option) (3.67 rad/s)	340°/360° (option) (195°/s) 5.93 rad/6.45 rad (option) (3.40 rad/s)	340°/370° (option) (195°/s) 5.93 rad/6.45 rad (option) (3.40 rad/s)	
	J2 axis rotation	250° (230°/s) 4.36 rad (4.01 rad/s)	250° (190°/s) 4.36 rad (3.32 rad/s)	260° (175°/s) 4.54 rad (3.05 rad/s)	260° (175°/s) 4.54 rad (3.05 rad/s)	
	J3 axis rotation	340° (270°/s) 5.93 rad (4.71 rad/s)	445° (210°/s) 7.76 rad (3.67 rad/s)	447° (210°/s) 7.80 rad (3.67 rad/s)	458° (180°/s) 8.00 rad (3.14 rad/s)	460° (180°/s) 8.04 rad (3.14 rad/s)
	J4 axis wrist rotation	380° (410°/s) 6.63 rad (7.15 rad/s)	380° (400°/s) 6.63 rad (6.98 rad/s)	380° (400°/s) 6.63 rad (6.98 rad/s)	400° (360°/s) 6.98 rad (6.28 rad/s)	400° (400°/s) 6.98 rad (6.98 rad/s)
	J5 axis wrist swing	380° (410°/s) 6.63 rad (7.15 rad/s)	380° (400°/s) 6.63 rad (6.98 rad/s)	380° (400°/s) 6.63 rad (6.98 rad/s)	360° (360°/s) 6.28 rad (6.28 rad/s)	360° (400°/s) 6.28 rad (6.98 rad/s)
	J6 axis wrist rotation	720° (610°/s) 12.57 rad (10.65 rad/s)	720° (600°/s) 12.57 rad (10.5 rad/s)	720° (600°/s) 12.57 rad (10.5 rad/s)	900° (550°/s) 15.71 rad (9.60 rad/s)	900° (600°/s) 15.71 rad (10.47 rad/s)
Maximum load capacity at wrist	10 kg		6 kg	20 kg	10 kg	
Allowable load moment at wrist	J4 axis	22.0 N·m	15.7 N·m	44.0 N·m	22.0 N·m	
	J5 axis	22.0 N·m	10.1 N·m	44.0 N·m	22.0 N·m	
	J6 axis	9.8 N·m	5.9 N·m	22.0 N·m	9.8 N·m	
Allowable load inertia at wrist	J4 axis	0.63 kg·m <sup>2</sup>	0.63 kg·m <sup>2</sup>	1.04 kg·m <sup>2</sup>	0.63 kg·m <sup>2</sup>	
	J5 axis	0.63 kg·m <sup>2</sup>	0.38 kg·m <sup>2</sup>	1.04 kg·m <sup>2</sup>	0.63 kg·m <sup>2</sup>	
	J6 axis	0.15 kg·m <sup>2</sup>	0.061 kg·m <sup>2</sup>	0.28 kg·m <sup>2</sup>	0.15 kg·m <sup>2</sup>	
Repeatability	± 0.05 mm		± 0.08 mm			
Mass (Note 3)	130 kg		135 kg	250 kg		
Installation environment	Ambient temperature : 0 ~ 45°C Ambient humidity : Normal 75%RH or less (No dew not frost allowed), Short term 95%RH or less (within one month) Vibration : 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 doesn't reach maximum one.

Note 3) Without controller



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