

FANUC Robot M-900iB



FEATURES

FANUC Robot M-900iB is an heavy payload robot series with the capacity of 280 - 700 kg.

- Eight models are available to meet a variety of applications.

FANUC Robot M-900iB/700, /700E, /400L

These models are heavy payload type. They can be applied to large glass handling, drilling and riveting for aircraft body panel. The long arm type M-900iB/400L has wide operating space and it can be applied to car body lifting and large size structure handling. M-900iB/700E is a wrist load capacity enhanced type.

FANUC Robot M-900iB/360, /360E, /280L, /280, /330L

These models are high speed type. Compact wrist and high speed motion will meet the needs in various applications, such as transferring and spot welding.

M-900iB/360E is a wrist load capacity enhanced type and M-900iB/280 is a high rigidity type. Two models of long reach type are also available.

- The wrist can be used in severe environment because it has durability equivalent to IP67 (dust proof and drip-proof).
- Various features are available such as Maintenance Reminder, Learning Vibration Control, Bin Picking, Force Sensor.

Application Examples



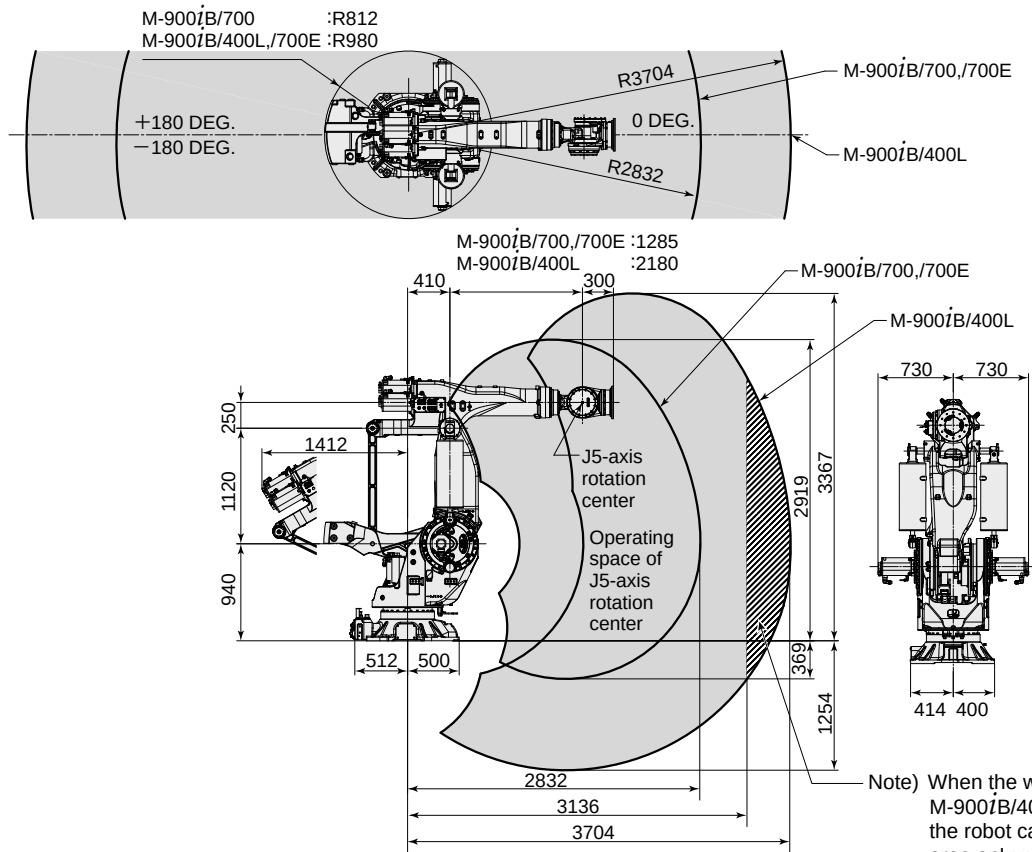
FSW: Friction Stir Welding



Heavy Workpiece Handling

Operating space

M-900iB/700,/700E,/400L



Specifications

Model		M-900iB/700	M-900iB/700E	M-900iB/400L
Type		Articulated Type		
Controlled axes		6 axes (J1, J2, J3, J4, J5, J6)		
Reach		2832 mm		3704 mm Note 1)
Installation		Floor		
Motion range (Maximum speed) Note 2)	J1 axis rotation	360°(80°/s) 6.28 rad (1.40 rad/s)		
	J2 axis rotation	154°(80°/s) 2.69 rad (1.40 rad/s)		
	J3 axis rotation	160°(80°/s) 2.79 rad (1.40 rad/s)		
	J4 axis wrist rotation	720°(100°/s) 12.57 rad (1.75 rad/s)		
	J5 axis wrist swing	244°(100°/s) 4.26 rad (1.75 rad/s)		
	J6 axis wrist rotation	720°(160°/s) 12.57 rad (2.79 rad/s)		
Max. load capacity at wrist		700 kg		400 kg
Max. load capacity at J2 base		550 kg		
Max. load capacity at J3 arm		25 kg		
Allowable load moment at wrist	J4 axis	3400 N·m 347 kgf·m	5000 N·m 510 kgf·m	2744 N·m 280 kgf·m
	J5 axis	3400 N·m 347 kgf·m	5000 N·m 510 kgf·m	2744 N·m 280 kgf·m
	J6 axis	1725 N·m 176 kgf·m	2800 N·m 286 kgf·m	1725 N·m 176 kgf·m
Allowable load inertia at wrist	J4 axis	1098 kg·m ² 11200 kgf·cm·s ²		
	J5 axis	1098 kg·m ² 11200 kgf·cm·s ²		
	J6 axis	444 kg·m ² 4532 kgf·cm·s ²		
Drive method		Electric servo drive by AC servo motor		
Repeatability Note 3)		±0.1 mm		
Mass Note 4)		2800 kg	3030 kg	3150 kg
Installation environment		Ambient temperature : 0 to 45°C Ambient humidity : Normally 75 %RH or less. (No condensation allowed.) Short time (within one month) Max 95 %RH (No condensation allowed.) Vibration acceleration : 4.9 m/s ² (0.5G) or less		

Note 1) Wrist motion is restricted when the wrist payload is over 300 kg. Refer to the figure of Operating space.

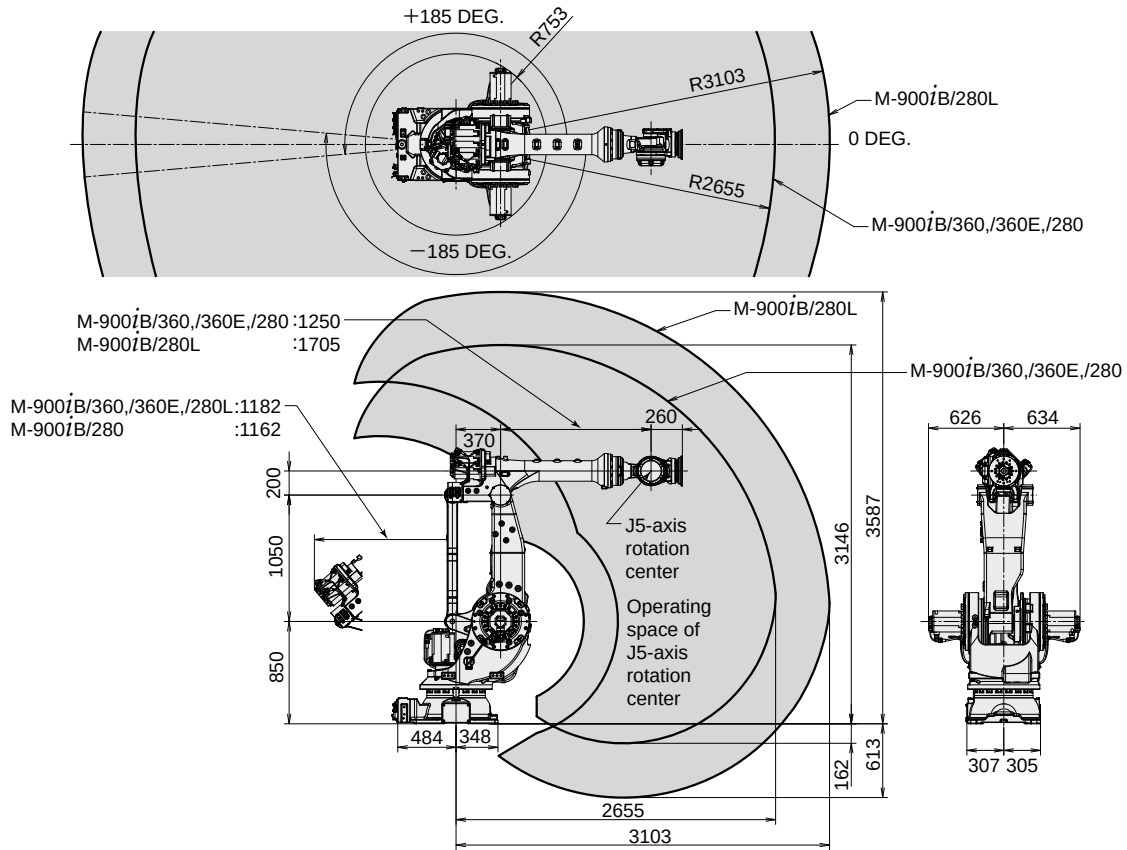
Note 2) During short distance motions, the axis speed may not reach the maximum value stated.

Note 3) Compliant with ISO 9283.

Note 4) Without controller.

Operating space

M-900iB/360,/360E,/280L,/280



Specifications

Model		M-900iB/360,/280	M-900iB/360E	M-900iB/280L
Type		Articulated Type		
Controlled axes		6 axes (J1, J2, J3, J4, J5, J6)		
Reach		2655 mm		3103 mm
Installation		Floor, Upside-down		
Motion range (Maximum speed) Note 1)	J1 axis rotation	370°(110°/s) 6.46 rad (1.92 rad/s)		
	J2 axis rotation	151°(105°/s) 2.64 rad (1.83 rad/s)		
	J3 axis rotation	223.7°(100°/s) 3.90 rad (1.75 rad/s)		
	J4 axis wrist rotation	720°(110°/s) 12.57 rad (1.92 rad/s)		720°(125°/s) 12.57 rad (2.18 rad/s)
	J5 axis wrist swing	250°(110°/s) 4.36 rad (1.92 rad/s)		250°(125°/s) 4.36 rad (2.18 rad/s)
	J6 axis wrist rotation	720°(180°/s) 12.57 rad (3.14 rad/s)		720°(205°/s) 12.57 rad (3.58 rad/s)
Max. load capacity at wrist		360kg (M-900iB/360,/360E) 280kg (M-900iB/280)		280 kg
Max. load capacity at J2 base		550 kg		
Max. load capacity at J3 arm		50 kg		
Allowable load moment at wrist	J4 axis	1960 N·m 200 kgf·m	2330 N·m 238 kgf·m	1700 N·m 174 kgf·m
	J5 axis	1960 N·m 200 kgf·m	2330 N·m 238 kgf·m	1700 N·m 174 kgf·m
	J6 axis	1050 N·m 107 kgf·m	1280 N·m 131 kgf·m	950 N·m 97 kgf·m
Allowable load inertia at wrist	J4 axis	260 kg·m ² 2653 kgf·cm·s ²	500 kg·m ² 5102 kgf·cm·s ²	215 kg·m ² 2194 kgf·cm·s ²
	J5 axis	260 kg·m ² 2653 kgf·cm·s ²	500 kg·m ² 5102 kgf·cm·s ²	215 kg·m ² 2194 kgf·cm·s ²
	J6 axis	160 kg·m ² 1633 kgf·cm·s ²	360 kg·m ² 3673 kgf·cm·s ²	140 kg·m ² 1429 kgf·cm·s ²
Drive method		Electric servo drive by AC servo motor		
Repeatability Note 2)		±0.1 mm		
Mass Note 3)		1540kg (M-900iB/360,/360E) 1700kg (M-900iB/280)		1600 kg
Installation environment		Ambient temperature : 0 to 45°C Ambient humidity : Normally 75 %RH or less. (No condensation allowed.) Short time (within one month) Max 95 %RH (No condensation allowed.) Vibration acceleration : 4.9 m/s ² (0.5G) or less		

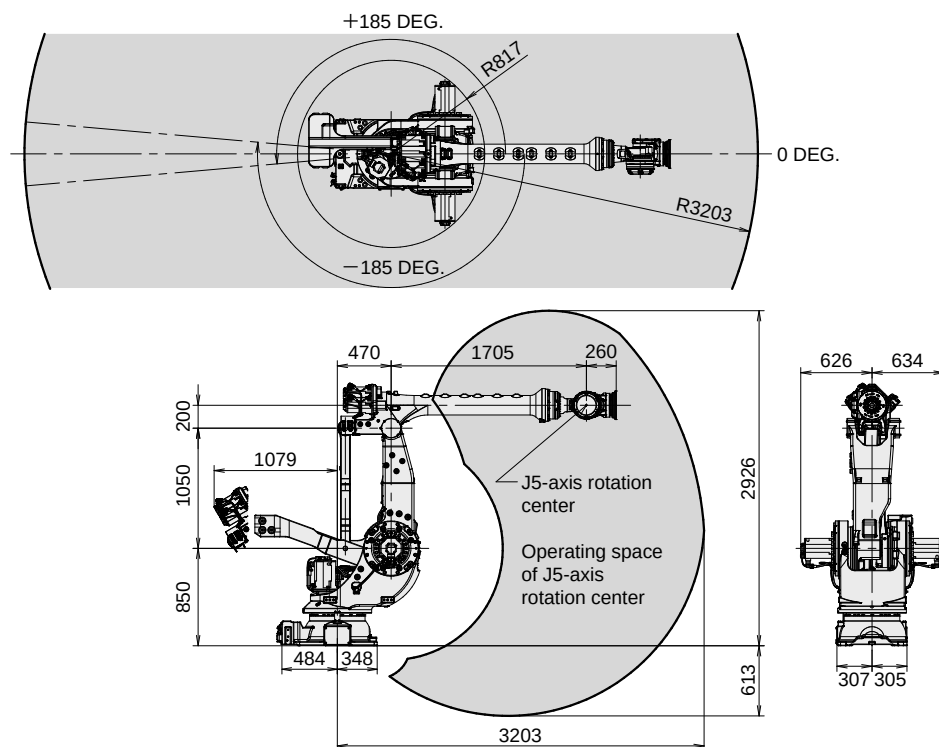
Note 1) During short distance motions, the axis speed may not reach the maximum value stated.

Note 2) Compliant with ISO 9283.

Note 3) Without controller.

Operating space

M-900iB/330L



Specifications

Model		M-900iB/330L	
Type		Articulated Type	
Controlled axes		6 axes (J1, J2, J3, J4, J5, J6)	
Reach		3203 mm	
Installation		Floor	
Motion range (Maximum speed) Note 1)	J1 axis rotation	370° (100°/s)	6.46 rad (1.75 rad/s)
	J2 axis rotation	151° (85°/s)	2.64 rad (1.48 rad/s)
	J3 axis rotation	163.7° (85°/s)	2.86 rad (1.48 rad/s)
	J4 axis wrist rotation	720° (90°/s)	12.57 rad (1.57 rad/s)
	J5 axis wrist swing	250° (85°/s)	4.36 rad (1.48 rad/s)
	J6 axis wrist rotation	720° (165°/s)	12.57 rad (2.88 rad/s)
Max. load capacity at wrist		330 kg	
Max. load capacity at J2 base		550 kg	
Max. load capacity at J3 arm		50 kg	
Allowable load moment at wrist	J4 axis	2205 N·m	225 kgf·m
	J5 axis	2205 N·m	225 kgf·m
	J6 axis	1200 N·m	122 kgf·m
Allowable load inertia at wrist	J4 axis	340 kg·m ²	3470 kgf·cm·s ²
	J5 axis	340 kg·m ²	3470 kgf·cm·s ²
	J6 axis	220 kg·m ²	2245 kgf·cm·s ²
Drive method		Electric servo drive by AC servo motor	
Repeatability Note 2)		±0.1 mm	
Mass Note 3)		1780 kg	
Installation environment		Ambient temperature	: 0 to 45°C
		Ambient humidity	: Normally 75 %RH or less. (No condensation allowed.) Short time (within one month) Max 95 %RH (No condensation allowed.)
		Vibration acceleration	: 4.9 m/s ² (0.5G) or less

Note 1) During short distance motions, the axis speed may not reach the maximum value stated.

Note 2) Compliant with ISO 9283.

Note 3) Without controller.

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