

## Medium Payload Handling Intelligent Robot

# FANUC Robot M-710iC



### FEATURES

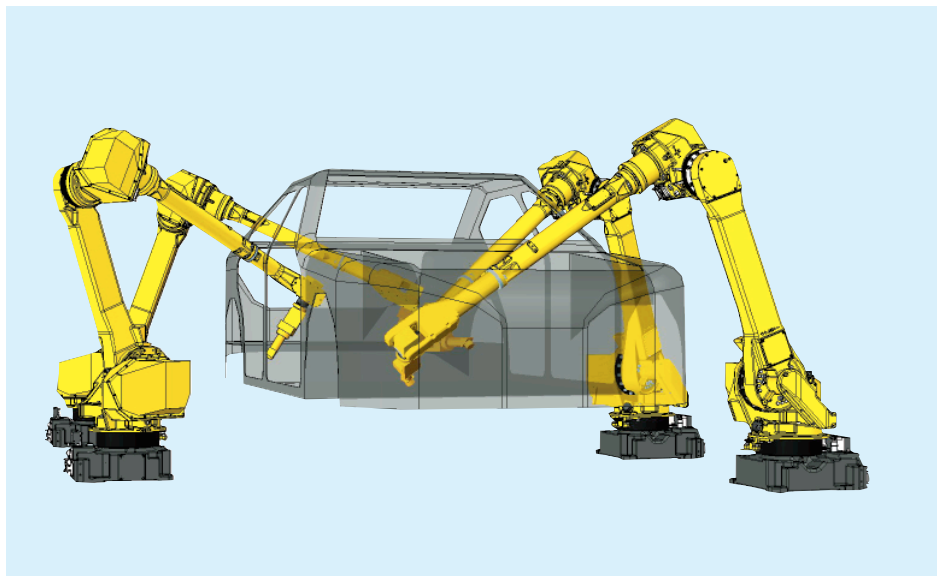
FANUC Robot M-710iC is the medium payload handling robot whose wrist payload is 20, 50 and 70kg.

- Four models are available to meet a variety of application.
  - FANUC Robot M-710iC/50, 70  
This model has a longest reach in the medium payload handling robot. The wrist capacity is enhanced drastically, and the strong wrist enables to handle large panel.  
M-710iC/50 : Payload capacity 50kg  
M-710iC/70 : Payload capacity 70kg
  - FANUC Robot M-710iC/50S  
This model has a compact body without reducing strong wrist capacity. It's suitable in narrow area operation. (Payload capacity 50kg)
  - FANUC Robot M-710iC/20L  
Long reach and high motion performance are suitable for various applications, such as handling, sealing and arc welding. (Payload capacity 20kg)
- The robot can be used safely by putting full cover in various applications, such as load / unload for a variety of machined parts, de-burring and die cast handling, because it has IP67-equivalent resistance to environmental conditions (dust and dips).
- M-710iC can be installed on the floor, upside-down or inclined at any angle.
- The latest intelligent functions can be applied using vision sensor or force sensor.

### Application system



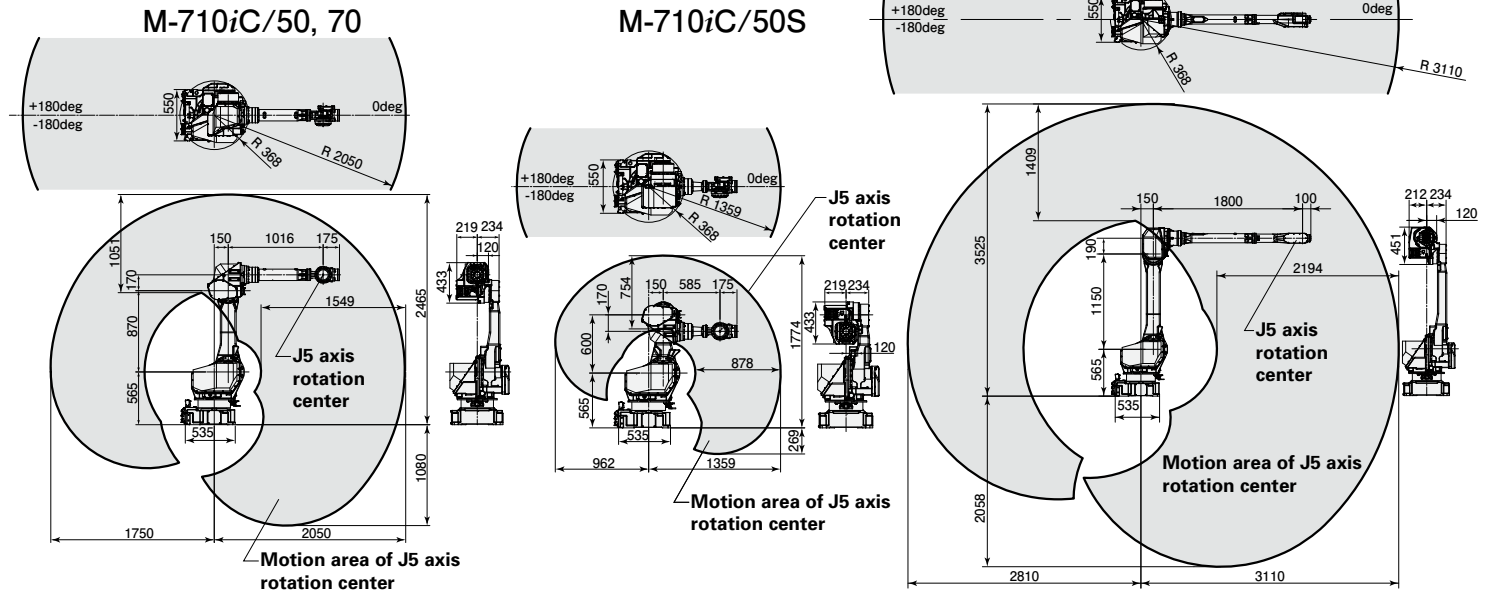
Bin picking of cylindrical parts by M-710iC/50



Car body sealing by M-710iC/20L

# FANUC Robot M-710iC

## Operating space



## Specifications

Item	Specification				
	M-710iC/50	M-710iC/50S	M-710iC/70	M-710iC/20L	
Type	Articulated Type				
Controlled axes	6 axes (J1, J2, J3, J4, J5, J6)				
Reach	2.05m	1.36m	2.05m	3.11m	
Installation (Note 1)	Floor, Upside-down, (Angle mount)				
Motion range (Maximum speed) (Note 2)	J1 axis rotation	360° (175°/sec) 6.28 rad (3.05 rad/sec)		360° (160°/sec) 6.28 rad (2.79 rad/sec)	
	J2 axis rotation	225° (175°/sec) 3.93 rad (3.05 rad/sec)	169° (175°/sec) 2.95 rad (3.05 rad/sec)	225° (120°/sec) 3.93 rad (2.09 rad/sec)	
	J3 axis rotation	440° (175°/sec) 7.68 rad (3.05 rad/sec)	376° (175°/sec) 6.56 rad (3.05 rad/sec)	440° (120°/sec) 7.68 rad (2.09 rad/sec)	432° (180°/sec) 7.54 rad (3.14 rad/sec)
	J4 axis wrist rotation	720° (250°/sec) 12.57 rad (4.36 rad/sec)		720° (225°/sec) 12.57 rad (3.93 rad/sec)	400° (350°/sec) 6.98 rad (6.11 rad/sec)
	J5 axis wrist swing	250° (250°/sec) 4.36 rad (4.36 rad/sec)		250° (225°/sec) 4.36 rad (3.93 rad/sec)	280° (360°/sec) 4.89 rad (6.28 rad/sec)
	J6 axis wrist rotation	720° (355°/sec) 12.57 rad (6.20 rad/sec)		720° (225°/sec) 12.57 rad (3.93 rad/sec)	900° (600°/sec) 15.71 rad (10.47 rad/sec)
Max. load capacity at wrist	Max. 50kg		Max. 70kg	Max. 20kg	
Max. Load capacity at J3 arm (Note 3)	15kg			24kg	
Allowable load moment at wrist	J4 axis	206 N·m 21 kgf·m	294 N·m 30 kgf·m	39.2 N·m 4.0 kgf·m	
	J5 axis	206 N·m 21 kgf·m	294 N·m 30 kgf·m	39.2 N·m 4.0 kgf·m	
	J6 axis	127 N·m 13 kgf·m	147 N·m 15 kgf·m	19.6 N·m 2.0 kgf·m	
Allowable load inertia at wrist	J4 axis	28 kg·m <sup>2</sup> 286 kgf·cm·sec <sup>2</sup>		0.88 kg·m <sup>2</sup> 9.0 kgf·cm·sec <sup>2</sup>	
	J5 axis	28 kg·m <sup>2</sup> 286 kgf·cm·sec <sup>2</sup>		0.88 kg·m <sup>2</sup> 9.0 kgf·cm·sec <sup>2</sup>	
	J6 axis	11 kg·m <sup>2</sup> 112 kgf·cm·sec <sup>2</sup>		0.25 kg·m <sup>2</sup> 2.5 kgf·cm·sec <sup>2</sup>	
Drive method	Electric servo drive by AC servo motor				
Repeatability	± 0.07 mm			± 0.15 mm	
Mass (Note 4)	Approx.560kg	Approx.545kg	Approx.560kg	Approx.540kg	
Installation environment	Ambient temperature : 0~45°C				
	Ambient humidity : Normally 75%RH or less (No dew nor frost allowed) Short term 95%RH or less (within one month)				
	Vibration : 0.5G or less				

Note 1) Under the installation condition within ( ), the J1 and J2 axis motion range will be limited.

Note 2) In case of short distance motion, the axis speed doesn't reach maximum one.

Note 3) Max. load capacity at J3 casting is limited by payload at wrist.

Note 4) Without controller.

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