

FANUC Robot M-710*i*C

FEATURES

FANUC Robot M-710*i*C is a medium payload handling robot series with the capacity of 12kg - 70kg .

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

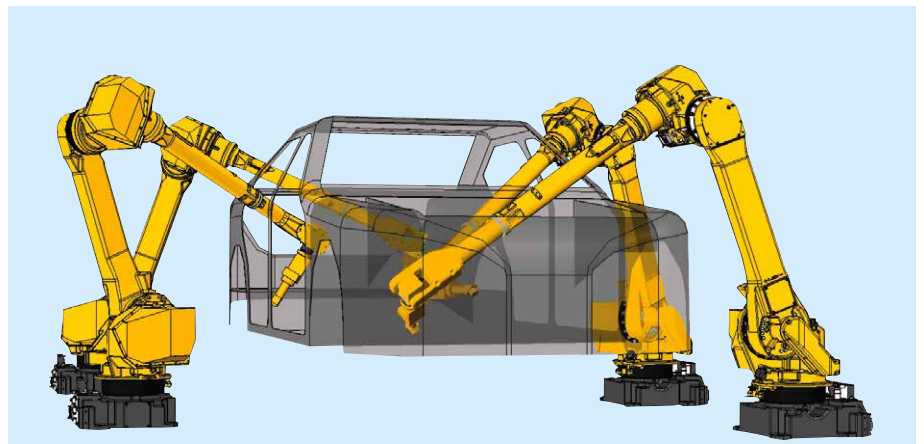
- FANUC Robot M-710*i*C/45M, /50, /70
Wide motion envelop and large wrist load capacity are enough to handle a large panel.
M-710*i*C/45M : Payload capacity 45kg
M-710*i*C/50 : Payload capacity 50kg
M-710*i*C/70 : Payload capacity 70kg
 - FANUC Robot M-710*i*C/50S
This model has a compact body suitable for narrow area operation. (Payload capacity 50kg)
 - FANUC Robot M-710*i*C/12L, /20L, /20M
Long reach and high motion performance are suitable for various applications, such as handling, sealing and arc welding.
M-710*i*C/12L : Payload capacity 12kg (Hollow wrist)
M-710*i*C/20L : Payload capacity 20kg
M-710*i*C/20M : Payload capacity 20kg
 - FANUC Robot M-710*i*C/50H
This model is a 5 axes type robot that corresponds to the high speed transferring. The ceiling mount realizes a compact handling system. (Payload capacity 50kg)
- The full cover realizes IP67-equivalent resistance to severe environmental conditions (dust and dips). It's reliable in various applications, such as load / unload for machined parts, de-burring and die cast loading.



Application Examples



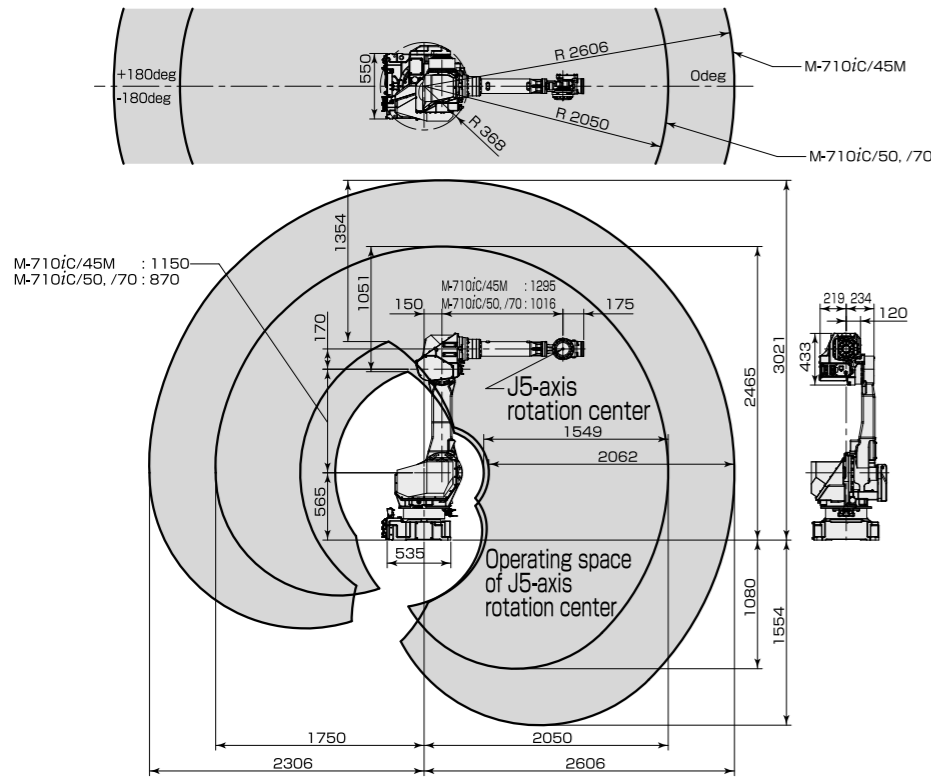
Bin picking of cylindrical parts



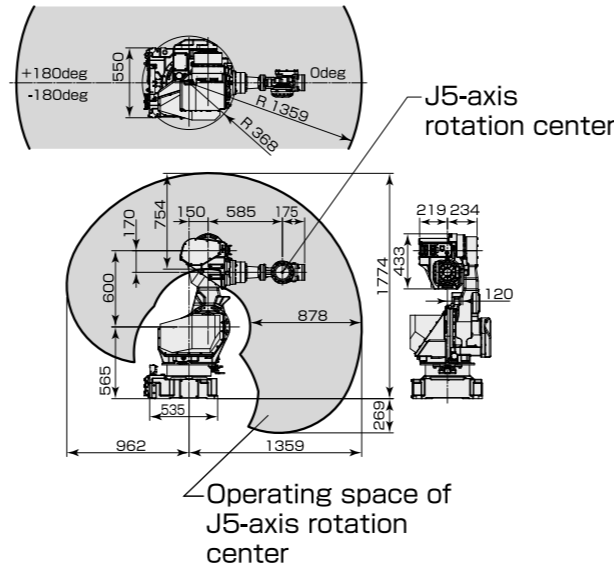
Car body sealing

Operating space

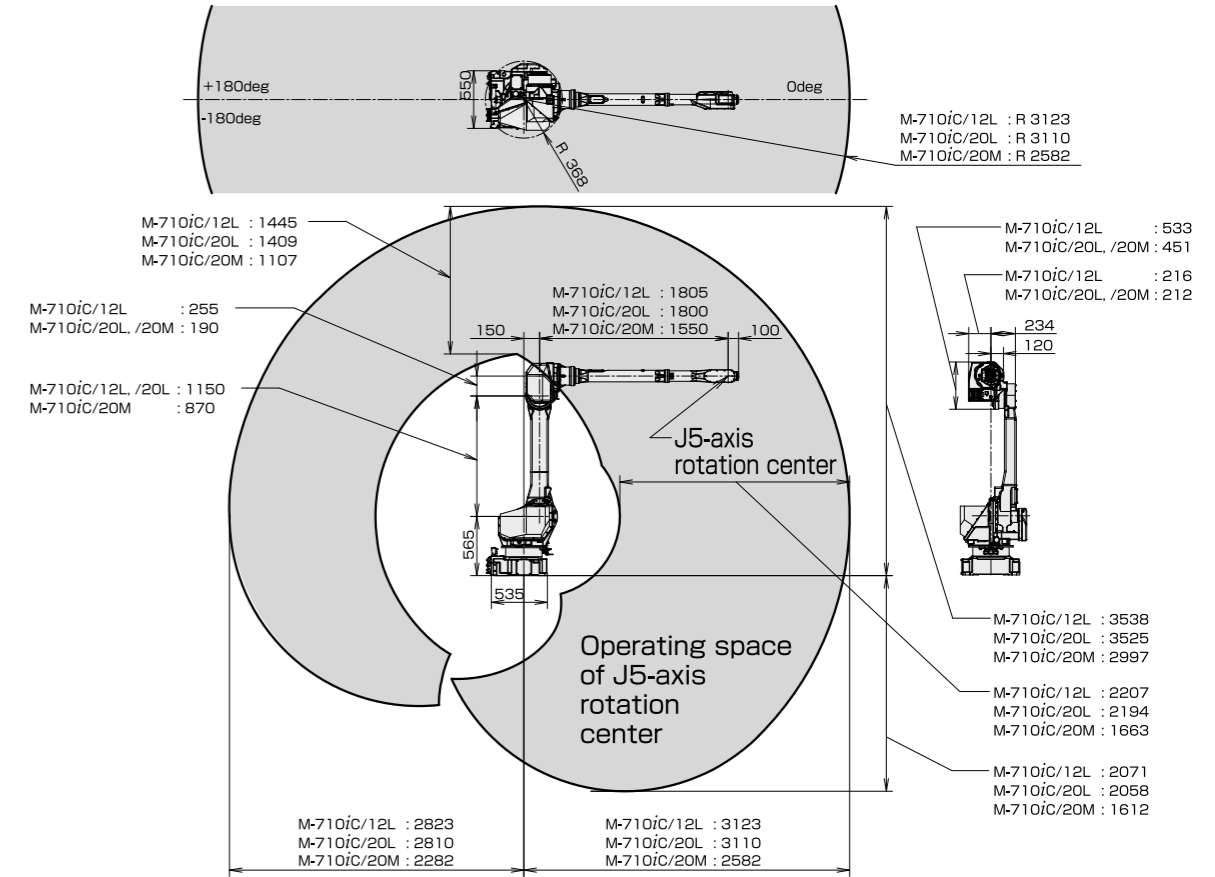
M-710iC/45M, /50, /70



M-710iC/50S



M-710iC/12L, /20L, /20M



Specifications

Model	M-710iC/45M	M-710iC/50	M-710iC/70	
Type	Articulated Type			
Controlled axes	6 axes (J1, J2, J3, J4, J5, J6)			
Reach	2606 mm	2050 mm		
Installation (Note 1)	Floor, Upside-down, Angle mount			
Motion range (Maximum speed) (Note 2)	J1 axis rotation	360° (180°/s) 6.28 rad (3.14 rad/s)	360° (175°/s) 6.28 rad (3.05 rad/s)	360° (160°/s) 6.28 rad (2.79 rad/s)
	J2 axis rotation	225° (180°/s) 3.93 rad (3.14 rad/s)	225° (175°/s) 3.93 rad (3.05 rad/s)	225° (120°/s) 3.93 rad (2.09 rad/s)
	J3 axis rotation	440° (180°/s) 7.68 rad (3.14 rad/s)	440° (175°/s) 7.68 rad (3.05 rad/s)	440° (120°/s) 7.68 rad (2.09 rad/s)
	J4 axis wrist rotation	800° (250°/s) 13.96 rad (4.36 rad/s)	720° (250°/s) 12.57 rad (4.36 rad/s)	720° (225°/s) 12.57 rad (3.93 rad/s)
	J5 axis wrist swing	250° (250°/s) 4.36 rad (4.36 rad/s)	250° (250°/s) 4.36 rad (4.36 rad/s)	250° (225°/s) 4.36 rad (3.93 rad/s)
	J6 axis wrist rotation	800° (360°/s) 13.96 rad (6.28 rad/s)	720° (355°/s) 12.57 rad (6.20 rad/s)	720° (225°/s) 12.57 rad (3.93 rad/s)
	Max. load capacity at wrist	45 kg	50 kg	70 kg
Max. Load capacity at J3 casing (Note 3)	15 kg			
Allowable load moment at wrist	J4 axis	206 N·m 21 kgf·m	294 N·m 30 kgf·m	294 N·m 30 kgf·m
	J5 axis	206 N·m 21 kgf·m	294 N·m 30 kgf·m	294 N·m 30 kgf·m
	J6 axis	127 N·m 13 kgf·m	147 N·m 15 kgf·m	147 N·m 15 kgf·m
Allowable load inertia at wrist	J4 axis	28 kg·m ²	286 kgf·cm·s ²	286 kgf·cm·s ²
	J5 axis	28 kg·m ²	286 kgf·cm·s ²	286 kgf·cm·s ²
	J6 axis	20 kg·m ² 204 kgf·cm·s ²	11 kg·m ² 112 kgf·cm·s ²	112 kgf·cm·s ²
Drive method	Electric servo drive by AC servo motor			
Repeatability (Note 4)	± 0.06 mm	± 0.03 mm	± 0.04 mm	
Mass (Note 5)	570 kg	560 kg		
Installation environment	Ambient temperature : 0 to 45°C Ambient humidity : Normally 75 %RH or less (No condensation allowed) Short term (within one month) Max. 95 %RH or less (No condensation allowed) Vibration acceleration : 4.9m/s ² (0.5G) or less			

Note 1) In case of the angle mounting, the J1 and J2 axis motion range are restricted.
 Note 2) During short distance motions, the axis speed may not reach the maximum value stated.
 Note 3) Max. load capacity at J3 casing is limited by payload at wrist.
 Note 4) Compliant with ISO 9283.
 Note 5) Without controller.

Specifications

Model	M-710iC/50S	
Type	Articulated Type	
Controlled axes	6 axes (J1, J2, J3, J4, J5, J6)	
Reach	1359 mm	
Installation (Note 1)	Floor, Upside-down, Angle mount	
Motion range (Maximum speed) (Note 2)	J1 axis rotation	360° (175°/s) 6.28 rad (3.05 rad/s)
	J2 axis rotation	169° (175°/s) 2.95 rad (3.05 rad/s)
	J3 axis rotation	376° (175°/s) 6.56 rad (3.05 rad/s)
	J4 axis wrist rotation	720° (250°/s) 12.57 rad (4.36 rad/s)
	J5 axis wrist swing	250° (250°/s) 4.36 rad (4.36 rad/s)
	J6 axis wrist rotation	720° (355°/s) 12.57 rad (6.20 rad/s)
	Max. load capacity at wrist	50 kg
Max. load capacity at J3 casing (Note 3)	15 kg	
Allowable load moment at wrist	J4 axis	206 N·m 21 kgf·m
	J5 axis	206 N·m 21 kgf·m
	J6 axis	127 N·m 13 kgf·m
Allowable load inertia at wrist	J4 axis	28 kg·m ² 286 kgf·cm·s ²
	J5 axis	28 kg·m ² 286 kgf·cm·s ²
	J6 axis	11 kg·m ² 112 kgf·cm·s ²
Drive method	Electric servo drive by AC servo motor	
Repeatability (Note 4)	± 0.03 mm	
Mass (Note 5)	545 kg	
Installation environment	Ambient temperature : 0 to 45°C Ambient humidity : Normally 75 %RH or less (No condensation allowed) Short term (within one month) Max. 95 %RH or less (No condensation allowed) Vibration acceleration : 4.9m/s ² (0.5G) or less	

Note 1) In case of the angle mounting, the J1 and J2 axis motion range are restricted.
 Note 2) During short distance motions, the axis speed may not reach the maximum value stated.
 Note 3) Max. load capacity at J3 casing is limited by payload at wrist.
 Note 4) Compliant with ISO 9283.
 Note 5) Without controller.

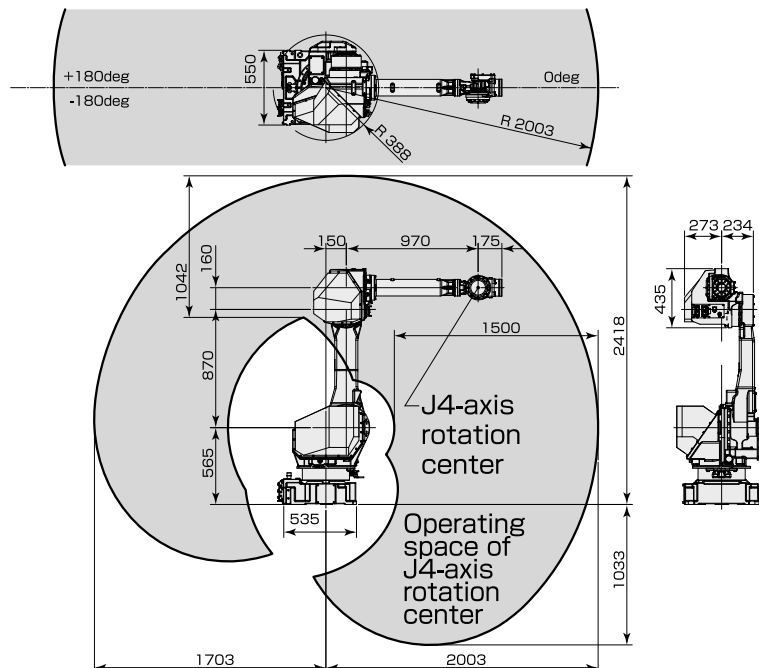
Specifications

Model	M-710iC/12L	M-710iC/20L	M-710iC/20M	
Type	Articulated Type			
Controlled axes	6 axes (J1, J2, J3, J4, J5, J6)			
Reach	3123 mm	3110 mm	2582 mm	
Installation (Note 1)	Floor, Upside-down, Angle mount			
Motion range (Maximum speed) (Note 2)	J1 axis rotation	360° (180°/s) 6.28 rad (3.14 rad/s)	360° (175°/s) 6.28 rad (3.05 rad/s)	360° (175°/s) 6.28 rad (3.05 rad/s)
	J2 axis rotation	225° (180°/s) 3.93 rad (3.14 rad/s)	225° (165°/s) 3.93 rad (2.88 rad/s)	225° (175°/s) 3.93 rad (3.05 rad/s)
	J3 axis rotation	434° (180°/s) 7.57 rad (3.14 rad/s)	432° (180°/s) 7.54 rad (3.14 rad/s)	435° (180°/s) 7.59 rad (3.14 rad/s)
	J4 axis wrist rotation	400° (400°/s) 6.98 rad (6.98 rad/s)	400° (350°/s) 6.98 rad (6.11 rad/s)	400° (350°/s) 6.98 rad (6.11 rad/s)
	J5 axis wrist swing	380° (430°/s) 6.63 rad (7.50 rad/s)	280° (360°/s) 4.89 rad (6.28 rad/s)	280° (360°/s) 4.89 rad (6.28 rad/s)
	J6 axis wrist rotation	720° (630°/s) 12.57 rad (11.0 rad/s)	900° (600°/s) 15.71 rad (10.47 rad/s)	900° (600°/s) 15.71 rad (10.47 rad/s)
	Max. load capacity at wrist	12 kg	20 kg	
Max. Load capacity at J3 casing (Note 3)	24 kg			
Allowable load moment at wrist	J4 axis	22.0 N·m 2.24 kgf·m	39.2 N·m 4.0 kgf·m	4.0 kgf·m
	J5 axis	22.0 N·m 2.24 kgf·m	39.2 N·m 4.0 kgf·m	4.0 kgf·m
	J6 axis	9.8 N·m 1.0 kgf·m	19.6 N·m 2.0 kgf·m	2.0 kgf·m
Allowable load inertia at wrist	J4 axis	0.65 kg·m ² 6.6 kgf·cm·s ²	0.88 kg·m ² 9.0 kgf·cm·s ²	9.0 kgf·cm·s ²
	J5 axis	0.65 kg·m ² 6.6 kgf·cm·s ²	0.88 kg·m ² 9.0 kgf·cm·s ²	9.0 kgf·cm·s ²
	J6 axis	0.17 kg·m ² 1.7 kgf·cm·s ²	0.25 kg·m ² 2.6 kgf·cm·s ²	2.6 kgf·cm·s ²
Drive method	Electric servo drive by AC servo motor			
Repeatability (Note 4)	± 0.06 mm			
Mass (Note 5)	540 kg		530 kg	
Installation environment	Ambient temperature : 0 to 45°C Ambient humidity : Normally 75 %RH or less (No condensation allowed) Short term (within one month) Max. 95 %RH or less (No condensation allowed) Vibration acceleration : 4.9m/s ² (0.5G) or less			

Note 1) In case of the angle mounting, the J1 and J2 axis motion range are restricted.
 Note 2) During short distance motions, the axis speed may not reach the maximum value stated.
 Note 3) Max. load capacity at J3 casing is limited by payload at wrist.
 Note 4) Compliant with ISO 9283.
 Note 5) Without controller.

Operating space

M-710iC/50H



Specifications

Model		M-710iC/50H
Type		Articulated Type
Controlled axes		5 axes (J1, J2, J3, J4, J5)
Reach		2003 mm
Installation		Floor, Upside-down
Motion range (Maximum speed) (Note 1)	J1 axis rotation	360° (175°/s) 6.28 rad (3.05 rad/s)
	J2 axis rotation	225° (175°/s) 3.93 rad (3.05 rad/s)
	J3 axis rotation	440° (175°/s) 7.68 rad (3.05 rad/s)
	J4 axis wrist swing	234° (175°/s) 4.08 rad (3.05 rad/s)
	J5 axis wrist rotation	720° (720°/s) 12.57 rad (12.57 rad/s)
Max. load capacity at wrist		50 kg
Max. load capacity at J3 casing (Note 2)		15 kg
Allowable load moment at wrist	J4 axis	150 N·m 15.3 kgf·m
	J5 axis	68 N·m 6.9 kgf·m
Allowable load inertia at wrist	J4 axis	6.3 kg·m ² 64.3 kgf·cm·s ²
	J5 axis	2.5 kg·m ² 25.5 kgf·cm·s ²
Drive method		Electric servo drive by AC servo motor
Repeatability (Note 3)		± 0.03 mm
Mass (Note 4)		540 kg
Installation environment		Ambient temperature : 0 to 45°C Ambient humidity : Normally 75 %RH or less (No condensation allowed) Short term (within one month) Max. 95 %RH or less (No condensation allowed) Vibration acceleration : 4.9m/s ² (0.5G) or less

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

Note 2) Max. load capacity at J3 casing is limited by payload at wrist.

Note 3) Compliant with ISO 9283.

Note 4) Without controller.

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