

FANUC Robot M-710*ic*

FEATURES

FANUC Robot M-710*ic* 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*ic*/45M, /50, /70
Wide motion envelop and large wrist load capacity are enough to handle a large panel.

 - M-710*ic*/45M : Payload capacity 45kg

 - M-710*ic*/50 : Payload capacity 50kg

 - M-710*ic*/70 : Payload capacity 70kg

- FANUC Robot M-710*ic*/50S

 - This model has a compact body suitable for narrow area operation. (Payload capacity 50kg)

- FANUC Robot M-710*ic*/12L, /20L, /20M

 - Long reach and high motion performance are suitable for various applications, such as handling, sealing and arc welding.

 - M-710*ic*/12L : Payload capacity 12kg (Hollow wrist)

 - M-710*ic*/20L : Payload capacity 20kg

 - M-710*ic*/20M : Payload capacity 20kg

- FANUC Robot M-710*ic*/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)

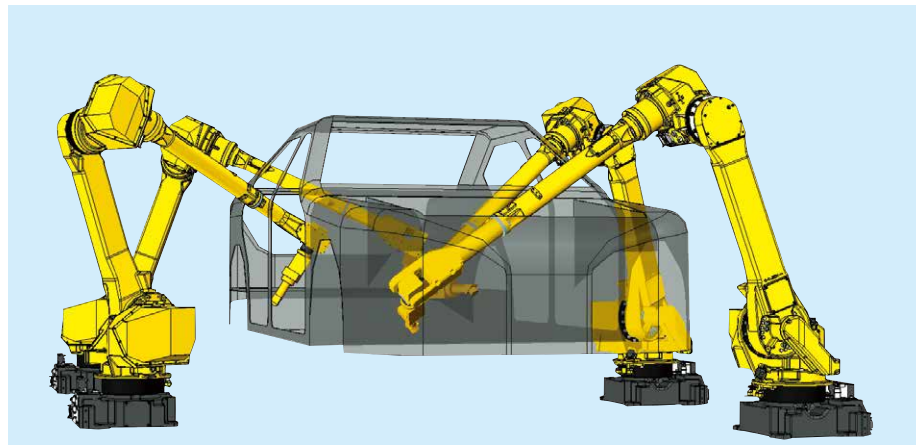
- The full cover realizes IP67-equivalent resistance to severe environmental conditions (dust and dips). It's reliable in various applications, such as load / unload for machined parts, de-burring and die cast loading.



Application Examples



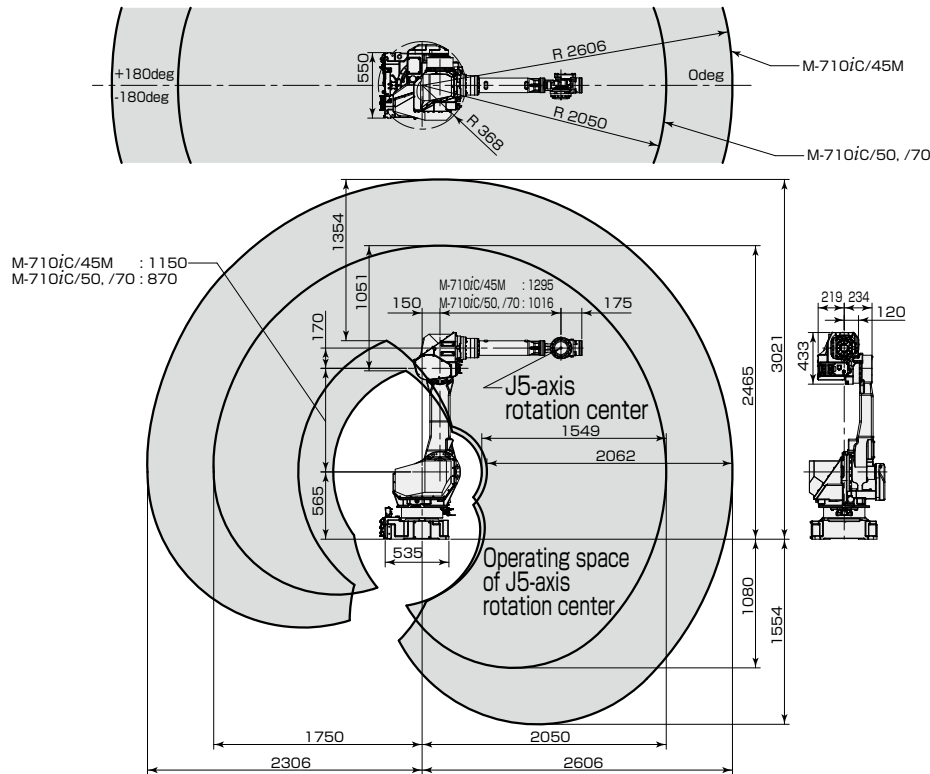
Bin picking of cylindrical parts



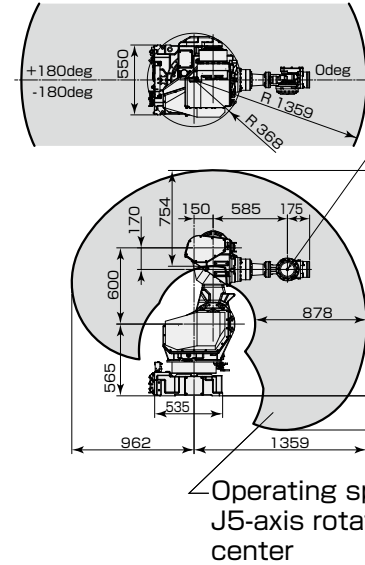
Car body sealing

Operating space

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



M-710iC/50S



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
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
	J5 axis	206 N·m	21 kgf·m	294 N·m 30 kgf·m
	J6 axis	127 N·m	13 kgf·m	147 N·m 15 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	20 kg·m ² 204 kgf·cm·s ²	11 kg·m 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 dew nor frost allowed) Short term 95%RH or less (within one month) Vibration acceleration : 4.9m/s ² (0.5G) or less		

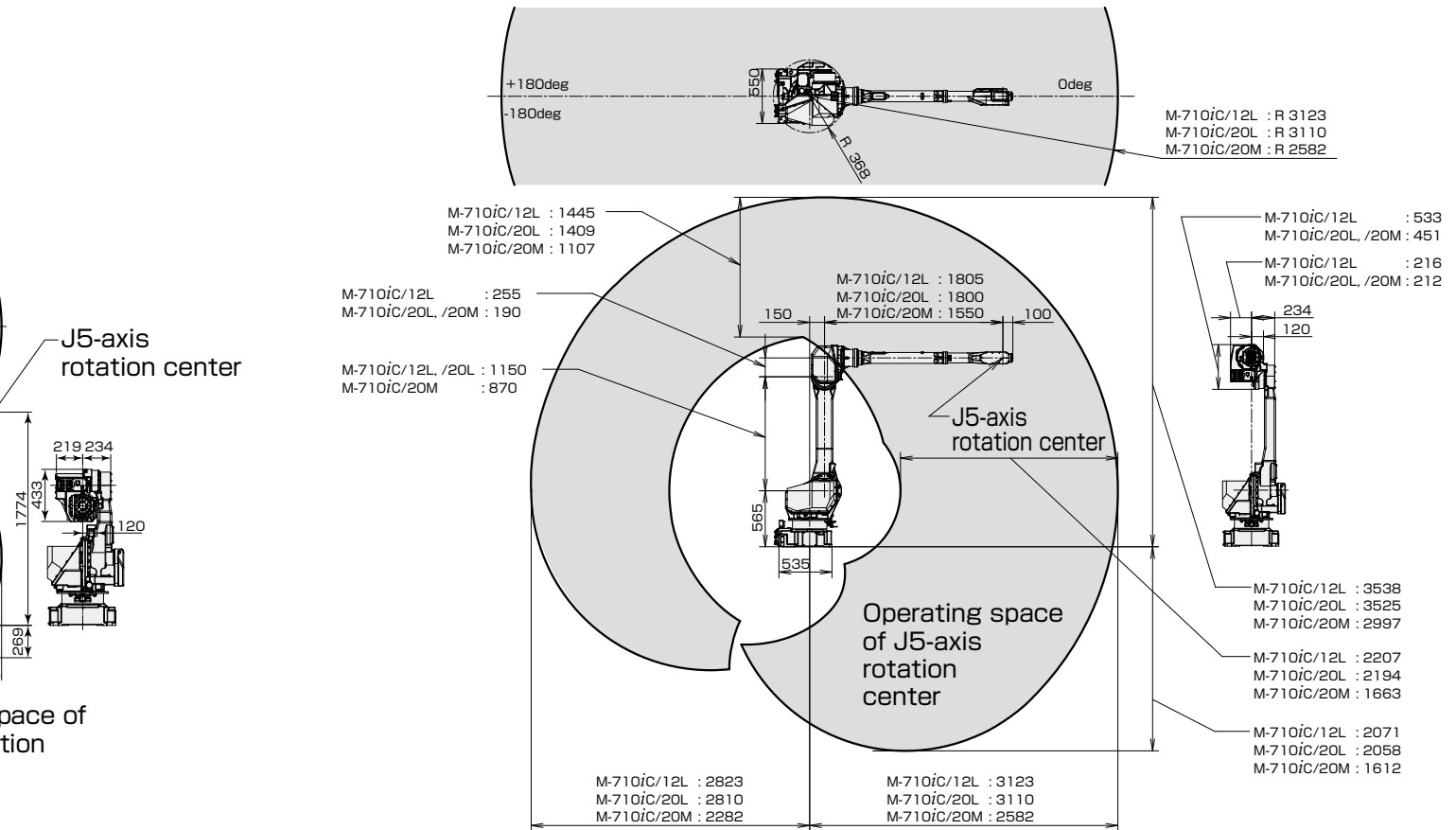
Note 1) In case of the angle mounting, the J1 and J2 axis motion range are restricted.
 Note 2) During short distance motions, the axis speed may not reach the maximum value stated.
 Note 3) Max. load capacity at J3 casing is limited by payload at wrist.
 Note 4) Compliant with ISO 9283.
 Note 5) Without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

Specifications

Model		
Type		
Controlled axes		
Reach		
Installation (Note 1)		
Motion range (Maximum speed) (Note 2)	J1 axis rotation	
	J2 axis rotation	
	J3 axis rotation	
	J4 axis wrist rotation	
	J5 axis wrist swing	
	J6 axis wrist rotation	
	Max. load capacity at wrist	
Max. load capacity at J3 casing (Note 3)		
Allowable load moment at wrist	J4 axis	
	J5 axis	
	J6 axis	
Allowable load inertia at wrist	J4 axis	
	J5 axis	
	J6 axis	
Drive method		Ele
Repeatability (Note 4)		
Mass (Note 5)		
Installation environment		Ambie Ambie Vibrati

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 Note 4) Compliant with ISO 9283.
 Note 5) Without controller.

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



Specifications

M-710iC/50S
Articulated Type
6 axes (J1, J2, J3, J4, J5, J6)
1359 mm
Floor, Upside-down, Angle mount
360° (175°/s)
6.28 rad (3.05 rad/s)
169° (175°/s)
2.95 rad (3.05 rad/s)
376° (175°/s)
6.56 rad (3.05 rad/s)
720° (250°/s)
12.57 rad (4.36 rad/s)
250° (250°/s)
4.36 rad (4.36 rad/s)
720° (355°/s)
12.57 rad (6.20 rad/s)
50 kg
15 kg
206 N·m 21 kgf·m
206 N·m 21 kgf·m
127 N·m 13 kgf·m
28 kg·m ² 286 kgf·cm·s ²
28 kg·m ² 286 kgf·cm·s ²
11 kg·m ² 112 kgf·cm·s ²
Electric servo drive by AC servo motor
± 0.03 mm
545 kg
Ambient temperature : 0 to 45°C
Ambient humidity : Normally 75%RH or less (No dew nor frost allowed)
Short term 95%RH or less (within one month)
Acceleration : 4.9m/s ² (0.5G) or less

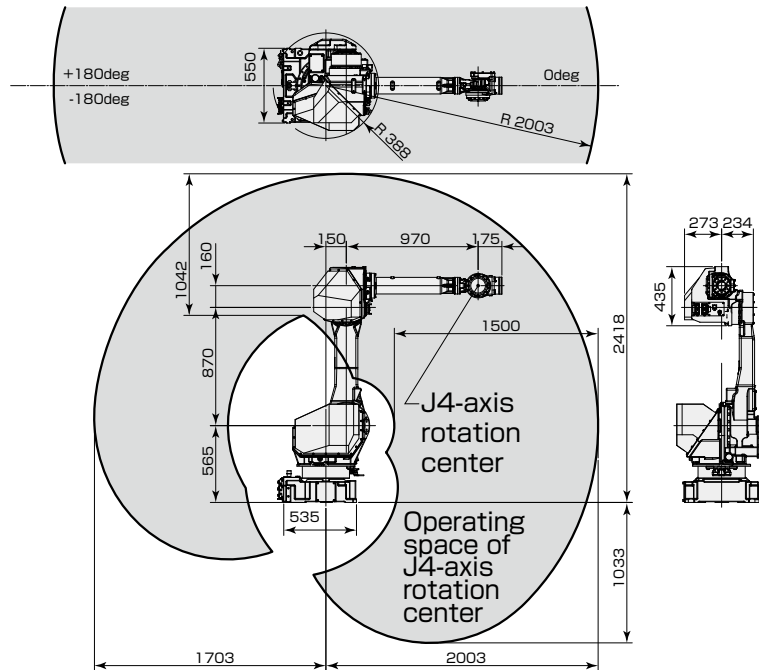
Model	M-710iC/12L	M-710iC/20L	M-710iC/20M	
Type	Articulated Type			
Controlled axes	6 axes (J1, J2, J3, J4, J5, J6)			
Reach	3123 mm	3110 mm	2582 mm	
Installation (Note 1)	Floor, Upside-down, Angle mount			
Motion range (Maximum speed) (Note 2)	J1 axis rotation	360° (180°/s) 6.28 rad (3.14 rad/s)	360° (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° (175°/s) 3.93 rad (3.05 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 dew nor frost allowed)			
	Short term 95%RH or less (within one month)			
	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.

Note 1) In case of the angle mounting, the J1 and J2 axis motion range are restricted.
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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 dew nor frost allowed) Short term 95%RH or less (within one month) 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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