

FANUC Robot M-710*i*C

FEATURES

FANUC Robot M-710*i*C is the medium payload handling robot whose wrist payload is 12kg - 70kg .

- Seven models are available to meet a variety of application.

- FANUC Robot M-710*i*C/45M, /50, /70

Wide motion envelop and enough 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 that is suitable in narrow area operation. (Payload capacity 50kg)

- FANUC Robot M-710*i*C/12L, /20L

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

- FANUC Robot M-710*i*C/50H

This model is 5 axes type robot that corresponds to the high speed transferring. The ceiling mount realizes compact handling system.

(Payload capacity 50kg)

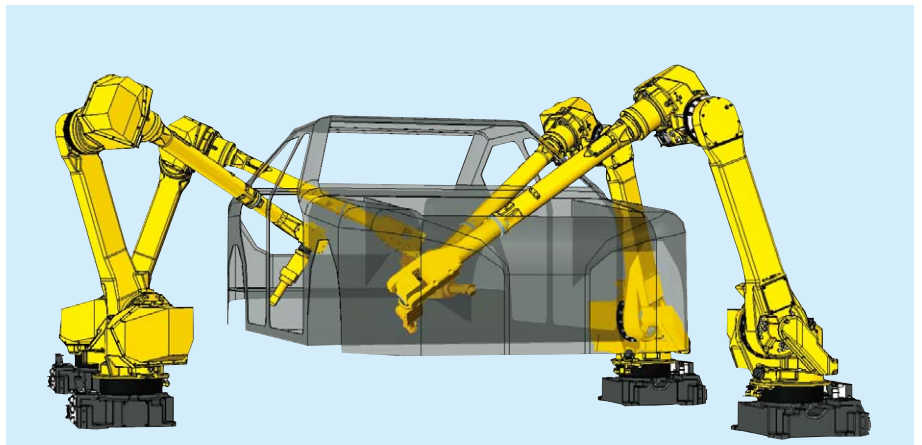
- The full cover realizes IP67-equivalent resistance to environmental conditions (dust and dips). It's reliable in various applications, such as load / unload for machined parts, de-burring and die cast loading.



Application system



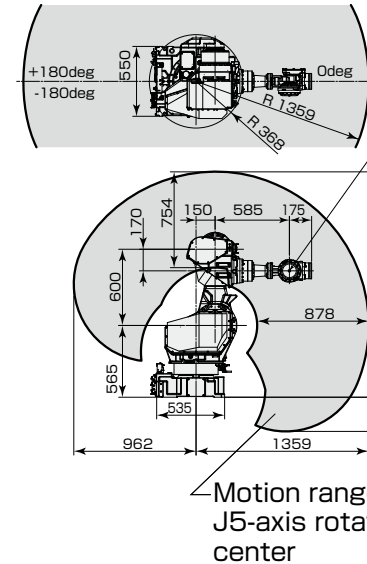
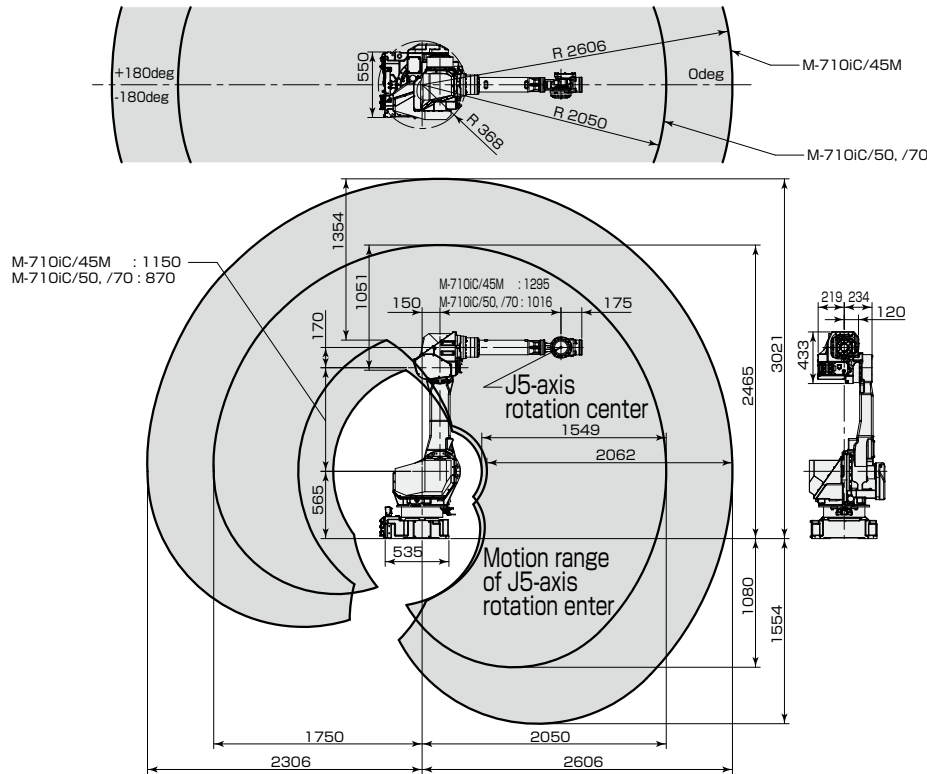
Bin picking of cylindrical parts



Car body sealing

Operating space (M-710iC/45M, /50, /70)

Operating space (M-710iC/50S, /12L, /20L)



Specifications

Item	Specification			
	M-710iC/45M	M-710iC/50	M-710iC/70	
Type	Articulated Type			
Controlled axes	6 axes (J1, J2, J3, J4, J5, J6)			
Reach	2606mm	2050mm		
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	45kg	50kg	70kg
Max. load capacity at J3 casing (Note 3)	15kg			
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	± 0.1 mm		± 0.07 mm	
Mass (Note 4)	570 kg		560 kg	
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 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) In case of short distance motion, 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) Without controller.

Specifications

Item		
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		
Repeatability		
Mass (Note 4)		
Installation environment		

Note 1) In case of the angle mounting, the J1 and J2 axis motion range are restricted.

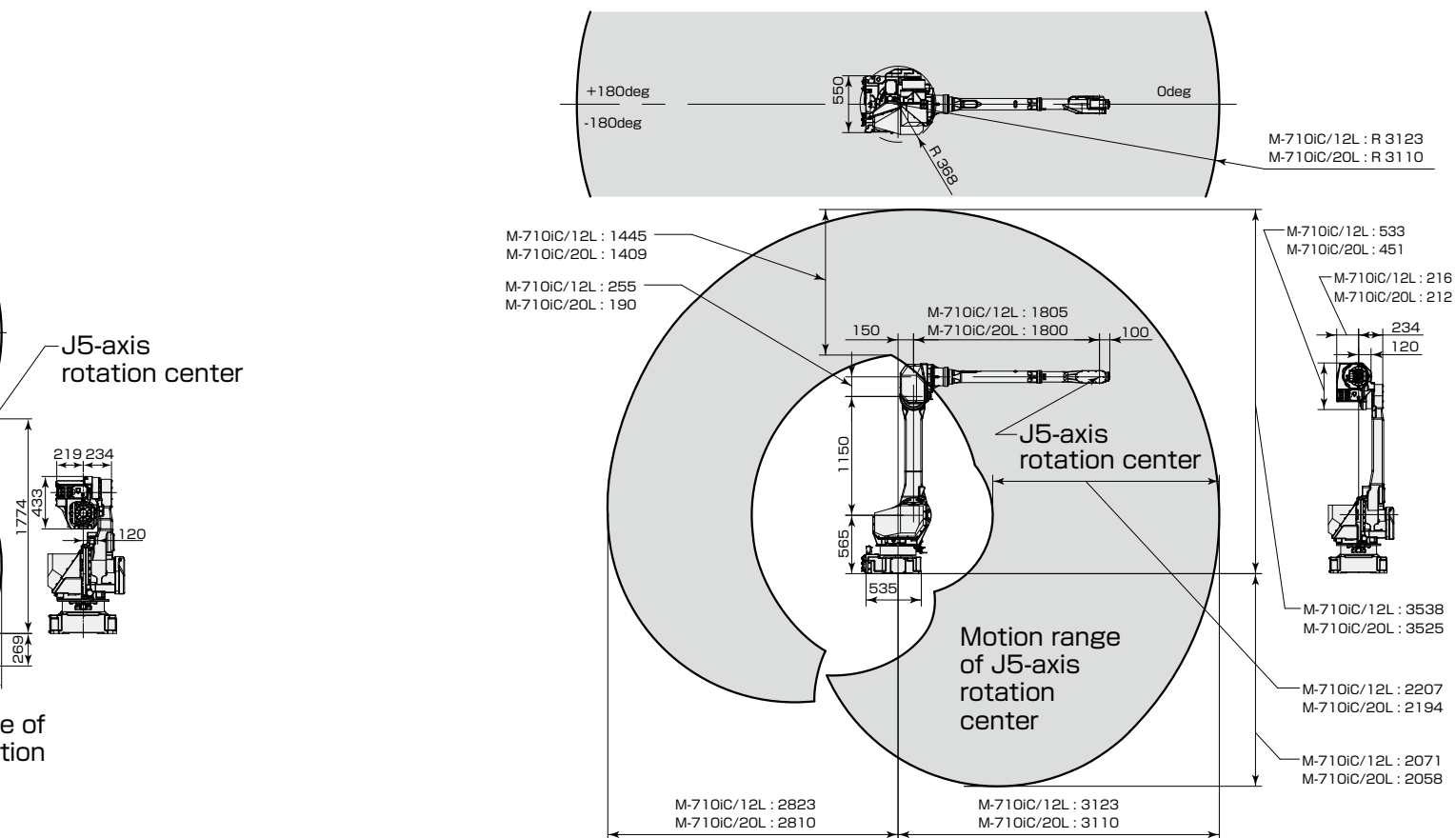
Note 2) In case of short distance motion, the axis speed may not reach the maximum value stated.

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

Note 4) Without controller.

50S)

Operating space (M-710iC/12L, /20L)



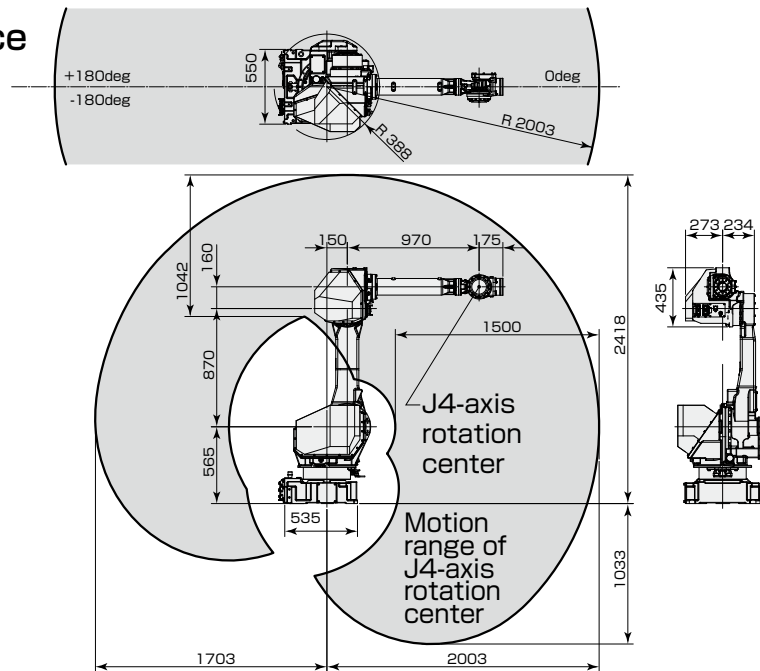
Specifications

Specification
M-710iC/50S
Articulated Type
6 axes (J1, J2, J3, J4, J5, J6)
1359mm
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)
50kg
15kg
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
± 0.07 mm
545 kg
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 acceleration : 4.9m/s ² (0.5G) or less

Item	Specification			
	M-710iC/12L		M-710iC/20L	
Type	Articulated Type			
Controlled axes	6 axes (J1, J2, J3, J4, J5, J6)			
Reach	3123mm		3110mm	
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)	
	J2 axis rotation	225° (180°/s) 3.93 rad (3.14 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)	
	J4 axis wrist rotation	400° (400°/s) 6.98 rad (6.98 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)	
	J6 axis wrist rotation	720° (630°/s) 12.57 rad (11.0 rad/s)	900° (600°/s) 15.71 rad (10.47 rad/s)	
Max. load capacity at wrist	12kg		20kg	
Max. Load capacity at J3 casing (Note 3)	24kg			
Allowable load moment at wrist	J4 axis	22.0 N·m 2.24 kgf·m	39.2 N·m 4.0 kgf·m	
	J5 axis	22.0 N·m 2.24 kgf·m	39.2 N·m 4.0 kgf·m	
	J6 axis	9.8 N·m 1.0 kgf·m	19.6 N·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	
	J5 axis	0.65 kg·m ² 6.6 kgf·cm·s ²	0.88 kg·m 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 2.5 kgf·cm·s ²	
Drive method	Electric servo drive by AC servo motor			
Repeatability	± 0.15 mm			
Mass (Note 4)	540 kg			
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 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) In case of short distance motion, the axis speed doesn't reach maximum one.
Note 3) Max. load capacity at J3 casing is limited by payload at wrist.
Note 4) Without controller.

Operating space



Specifications

Item		Specification
		M-710iC/50H
Type		Articulated Type
Controlled axes		5 axes (J1, J2, J3, J4, J5)
Reach		2003mm
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		50kg
Max. load capacity at J3 casing (Note 2)		15kg
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		± 0.15 mm
Mass (Note 3)		540 kg
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 acceleration : 4.9m/s ² (0.5G) or less

Note 1) In case of short distance motion, 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) Without controller.

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