

Medium Payload Intelligent Robot

FANUC Robot M-710*i*C

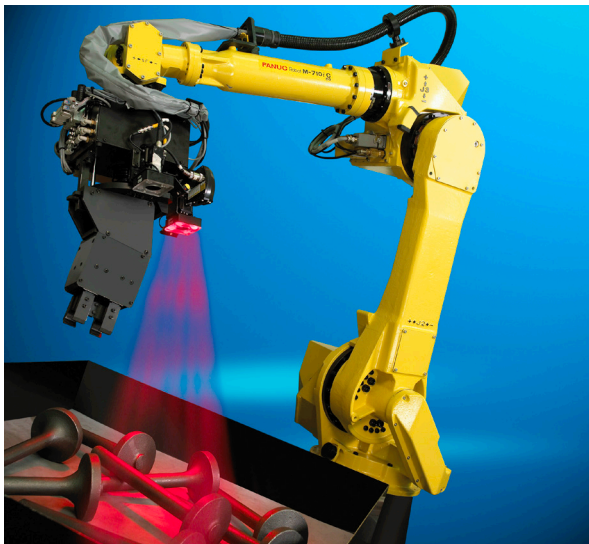


Features

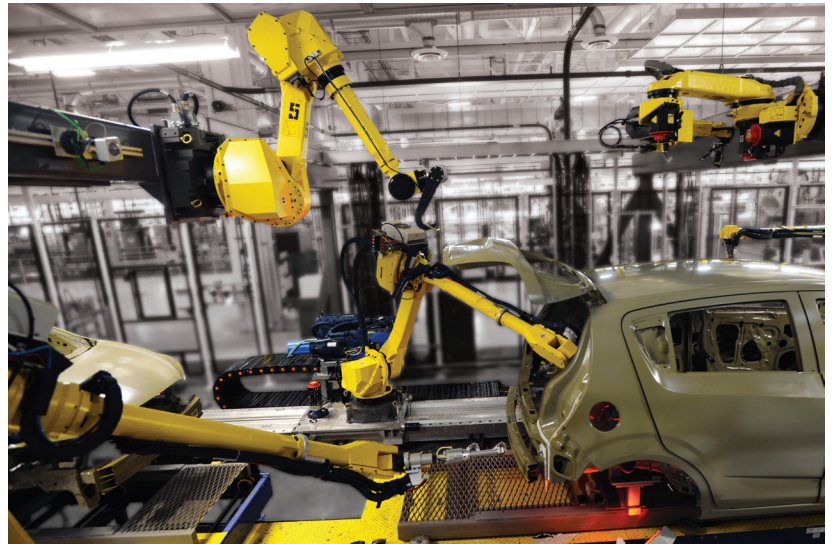
The M-710*i*C is a medium payload robot with a wrist payload of 20, 50 or 70kg.

- Five models are available which can be used in a wide variety of applications.
 - **FANUC Robot M-710*i*C/50, /70**
Wide motion envelope and enough wrist load capacity to handle a large panel.
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 for narrow work environments. (Payload capacity 50kg)
 - **FANUC Robot M-710*i*C/20L**
Long reach and high motion performance make it suitable for various applications, such as material handling, sealing and arc welding. (Payload capacity 20kg)
 - **FANUC Robot M-710*i*C/50H**
This five-axes model is designed for the high speed transferring of parts. The ceiling mount option is ideal for compact handling systems. (Payload capacity 50kg)
- The full cover provides IP67-equivalent resistance to environmental conditions (dust and liquid). The M-710*i*C is reliable for various applications, such as load/unload for machined parts, de-burring and die cast loading.

Application system

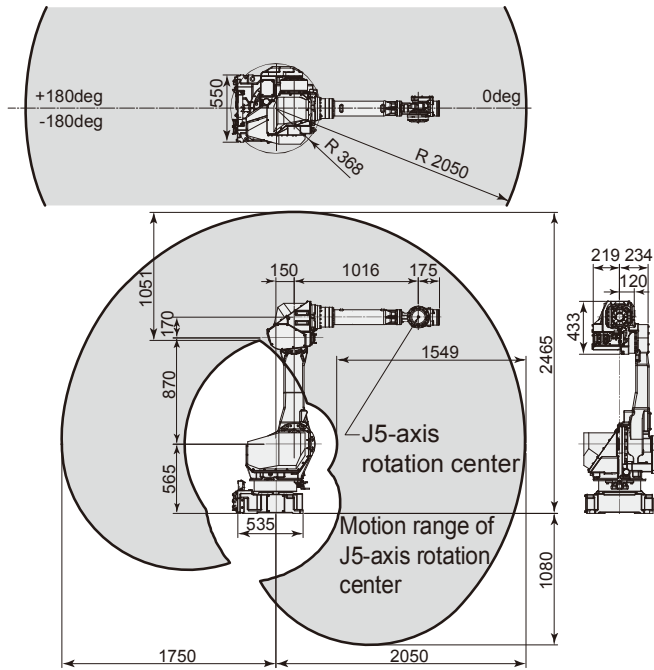


Bin picking of cylindrical parts

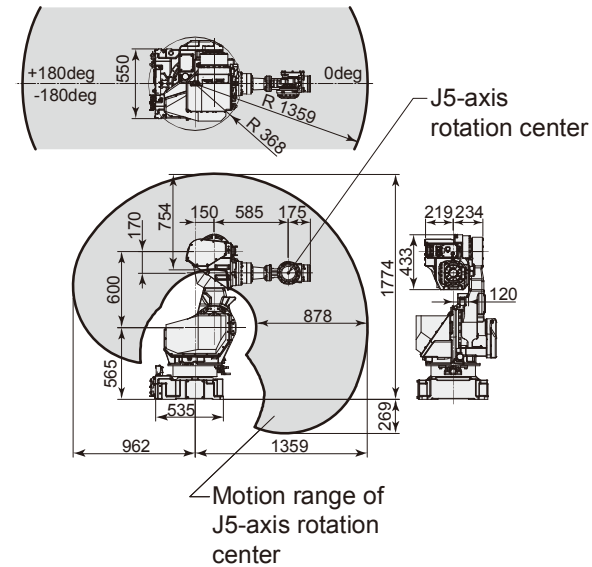


Car body sealing

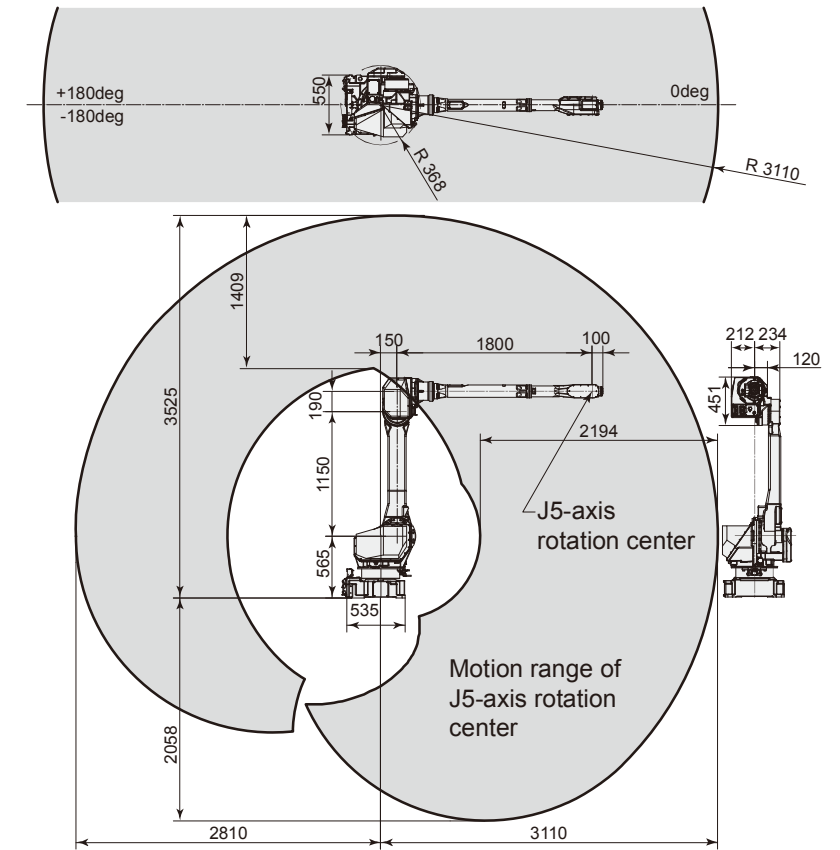
Operating space (M-710iC/50, /70)



Operating space (M-710iC/50S)



Operating space (M-710iC/20L)



Specifications

Item	Specification	
	M-710iC/50	M-710iC/70
Type	Articulated Type	
Controlled axes	6 axes (J1, J2, J3, J4, J5, J6)	
Reach	2.05m	
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	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 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	50kg	70kg
Max. load capacity at J3 arm (Note 3)	15kg	
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	± 0.07 mm	
Mass (Note 4)	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 : 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 casting is limited by payload at wrist.
 Note 4) Without controller.

Specifications

Item	Specification	
	M-710iC/50S	
Type	Articulated Type	
Controlled axes	6 axes (J1, J2, J3, J4, J5, J6)	
Reach	1.36m	
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	50kg	
Max. load capacity at J3 arm (Note 3)	15kg	
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	± 0.07 mm	
Mass (Note 4)	545 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 : 0.5G or less	

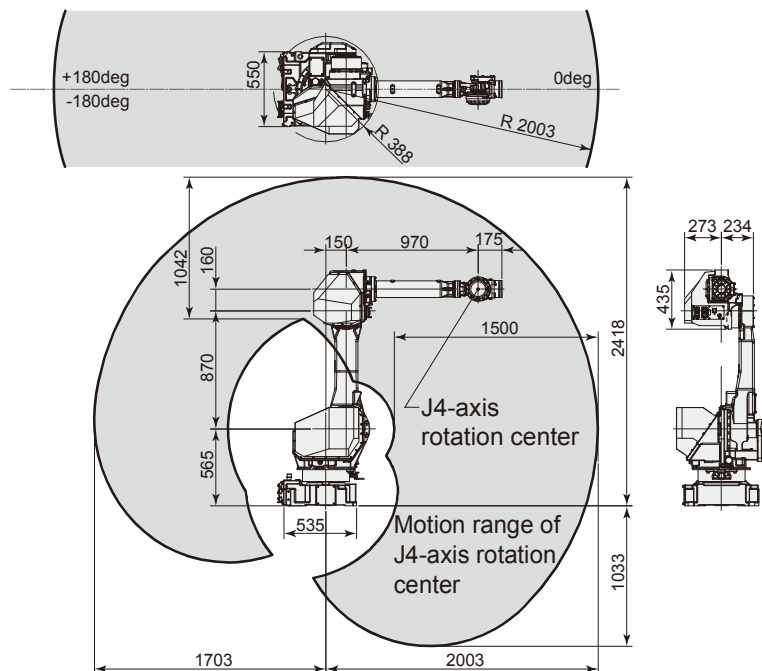
Note 1) In case of the angle mounting, the J1 and J2 axis motion range are restricted.
 Note 2) In case of short distance motion, the axis speed doesn't reach maximum one.
 Note 3) Max. load capacity at J3 casting is limited by payload at wrist.
 Note 4) Without controller.

Specifications

Item	Specification	
	M-710iC/20L	
Type	Articulated Type	
Controlled axes	6 axes (J1, J2, J3, J4, J5, J6)	
Reach	3.11m	
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	225°(175°/s) 3.93 rad (3.05 rad/s)
	J3 axis rotation	432°(180°/s) 7.54 rad (3.14 rad/s)
	J4 axis wrist rotation	400°(350°/s) 6.98 rad (6.11 rad/s)
	J5 axis wrist swing	280°(360°/s) 4.89 rad (6.28 rad/s)
	J6 axis wrist rotation	900°(600°/s) 15.71 rad (10.47 rad/s)
Max. load capacity at wrist	20kg	
Max. load capacity at J3 arm (Note 3)	24kg	
Allowable load moment at wrist	J4 axis	39.2 N·m 4.0 kgf·m
	J5 axis	39.2 N·m 4.0 kgf·m
	J6 axis	19.6 N·m 2.0 kgf·m
Allowable load inertia at wrist	J4 axis	0.88 kg·m ² 9.0 kgf·cm·s ²
	J5 axis	0.88 kg·m ² 9.0 kgf·cm·s ²
	J6 axis	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 : 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 casting 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		2.00m
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 arm (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)		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) In case of short distance motion, the axis speed doesn't reach maximum one.

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

Note 3) Without controller.

FANUC

FANUC AMERICA CORPORATION
3900 WEST HAMLIN ROAD
ROCHESTER HILLS MI 48309-3253

