

# M-710iC™ Series

## Basic Description

The M-710iC series is FANUC Robotics' latest-generation, six-axis, medium to medium-high payload, high-performance family of industrial robots. The M-710iC robots are designed for a variety of manufacturing and system processes. The M-710iC series provides one of the largest work envelopes in its class with one of the smallest footprints.

Engineered for extremely high speed, application flexibility and reliability, the M-710iC series delivers repeatable precision and unparalleled performance. With the FoundryPRO® option, the entire robot is IP67-protected for the M-710iC series, making these robots ideal for use in harsh environments.

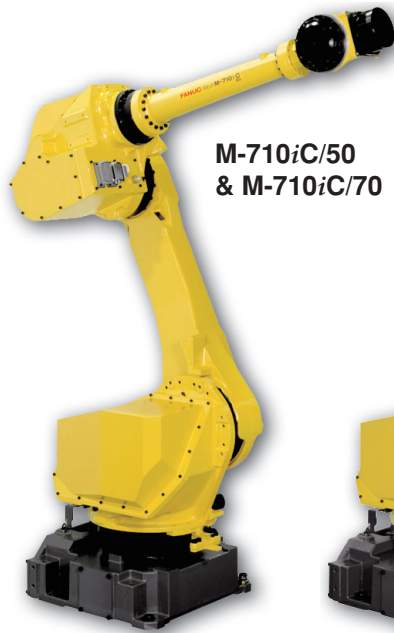
## M-710iC Series, the Solution for:

- Material handling
- Machine load/unload
- Parts transfer
- Assembly
- Waterjet cutting/routing
- Foundry applications
- Material removal
- Thermal spray
- Packing & palletizing
- Dispensing
- Arc welding

## Benefits

- Multiple mounting solutions (see specifications for robot dependent configurations).

Note: FoundryPRO is a registered trademark of FANUC LTD.



- Slim arm and wrist assemblies minimize interference with system peripherals allowing operation in confined spaces.
- Generous supplementary J3 payload up to 15 kg.
- Pneumatic and electrical connections (8RI/8RO) available on front of J3 casting for easy and simple integration of end-of-arm tooling (EOAT).
- Multiple process attachment points allowing flexibility when integrating EOAT.
- Superior wrist capacity for handling heavy work pieces and fixtures.
- Best joint speeds in its class maximize cycle time and throughput.
- Wrist flange and base mounting are identical to the M-710iB series, allowing for seamless backward compatibility.
- Larger work envelope than the M-710iB series, making replacement easier.
- Designed to use minimal mechanical components to reduce down time, increase mean time between failure and minimize spare parts.
- Utilizes proven, reliable FANUC servo motors providing the greatest uptime and productivity.

## Features

### Mechanical:

- Given the ability to reach overhead and behind, the M-710iC series has one of the largest work envelopes in its class.
- 6 degrees of freedom.
- RV reducers for all axes eliminates belts, chains and pulleys and minimizes backlash.

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Robotics

- No motors at the wrist.
- Increased work envelope realized by the elimination of counterweight/balancer.
- 360° standard J1 rotation.

#### Software:

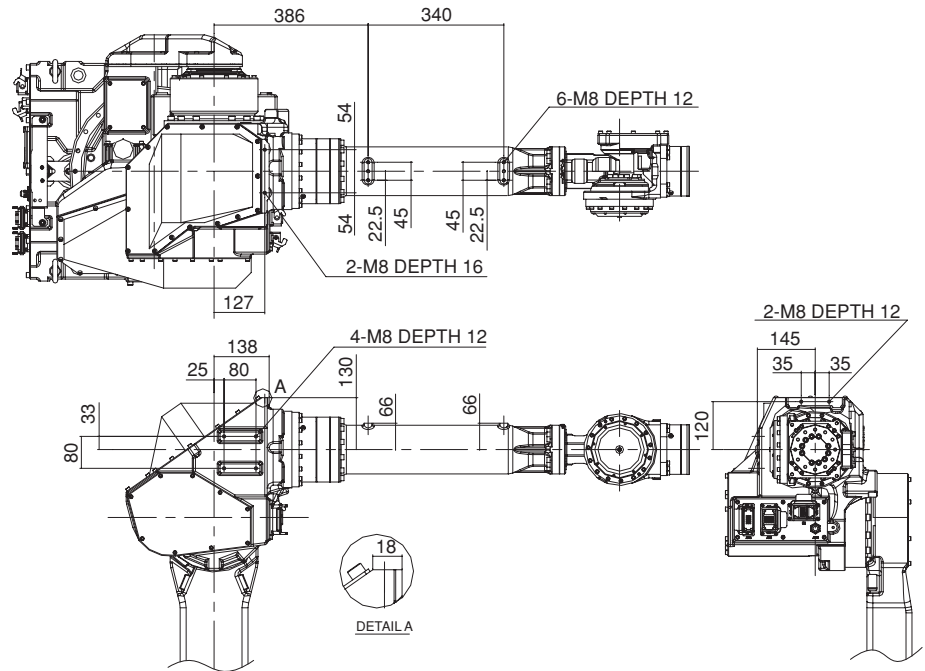
- Process specific software packages for various applications.
- Web-based software tools for remote connectivity, diagnostics and production monitoring.
- Built-in support for machine vision applications for error-proofing and robot guidance, without the need for a PC.
- *iRVision™* (Integrated Robot Vision) system delivers high-performance 2-D and 3-D machine vision capabilities with FANUC reliability.

#### Options

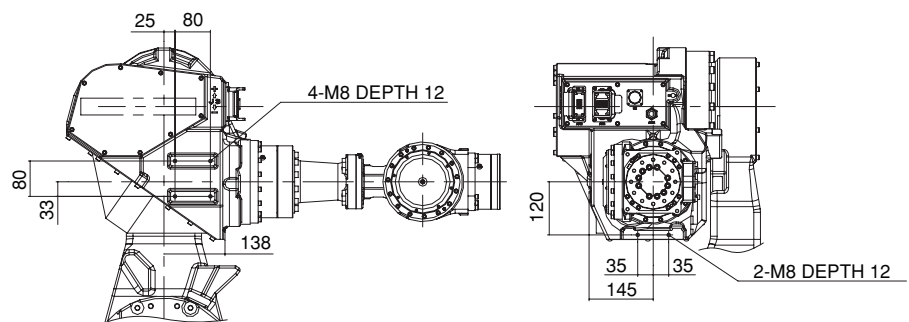
- Standard baseplate for quick robot installation.
- Auxiliary axes packages for integration of peripheral servo-controlled devices.
- Adjustable hard stops for J1, J2 and J3.
- Various robot connection cable lengths for flexible cabinet placement and optional track rated cables.
- Two-part epoxy paint available for harsh environments.
- Monochrome pendant available.
- FoundryPRO option available.
- $\pm 185$  rotation for J1.

## Auxiliary Equipment Mounting Provisions

### M-710iC/50 & M-710iC/70

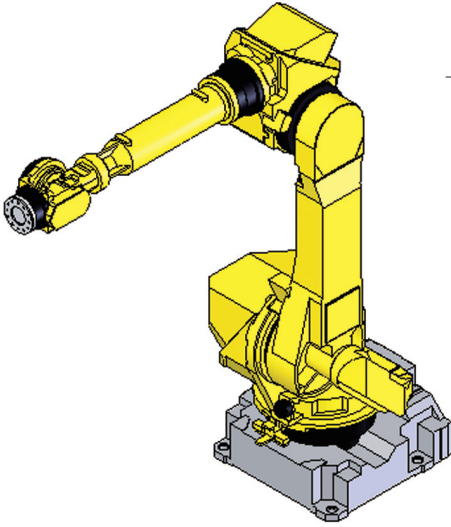


### M-710iC/50S

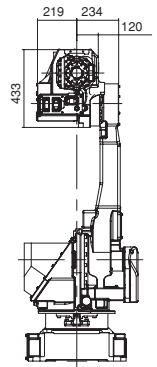
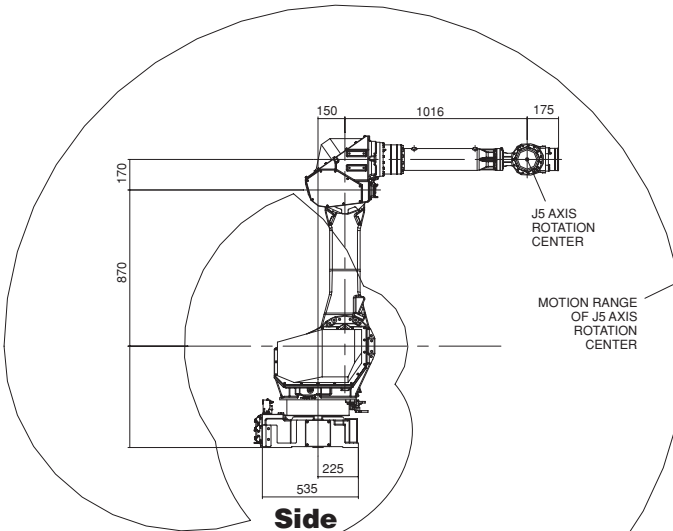
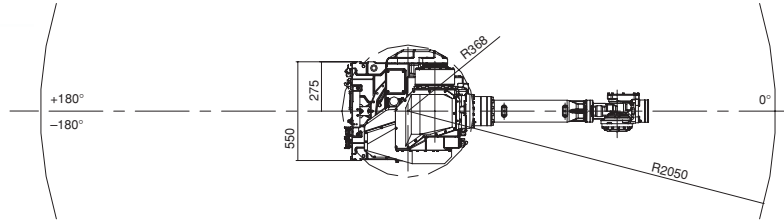


# M-710iC/50 & M-710iC/70 Dimensions

## Isometric



## Top



## Front

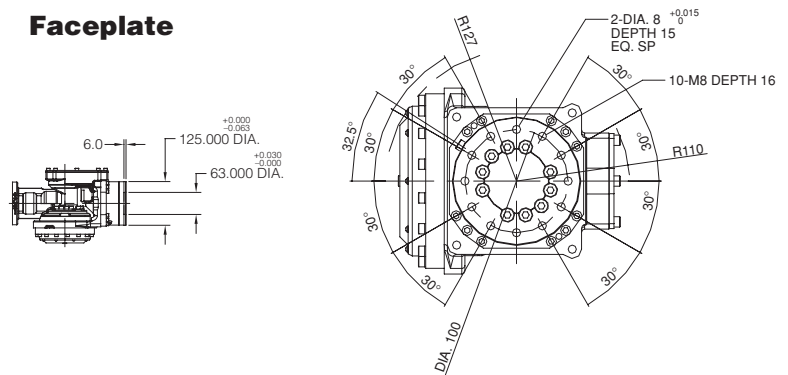
## M-710iC/50 & M-710iC/70 Specifications

Items	M-710iC/50	M-710iC/70
Axes	6	6
Payload (kg)	50	70
Payload (kg) on J3 casting	15	15
Reach (mm)	2050	2050
Repeatability (mm)	±0.07	±0.07
Interference radius (mm)	368	368
Motion range (degrees)	J1	320/360/370
	J2	225
	J3	440
	J4	720
	J5	250
	J6	720
Motion speed (degrees/s)	J1	175
	J2	175
	J3	175
	J4	250
	J5	250
	J6	355
Wrist moment N·m (kgf·m)	J4	206 (21)
	J5	206 (21)
	J6	127 (13)
Wrist inertia (kg·m <sup>2</sup> )	J4	28
	J5	28
	J6	11
Mechanical brakes	All axes	
Mechanical weight (kg) <sup>(1)</sup>	560	560
Mounting method <sup>(2)</sup>	Floor, ceiling, angle and wall	
Installation environment:		
Ambient temperature °C	0 to 45	
Humidity	Normally: 75% or less Short term (within a month): 95% or less. No condensation	
Vibration m/s <sup>2</sup> (G)	4.9 m/s <sup>2</sup> or less (0.5G or less)	
IP Rating(s)	Body IP54 Std. (IP67 optional) Wrist and joint 3 arm IP67	

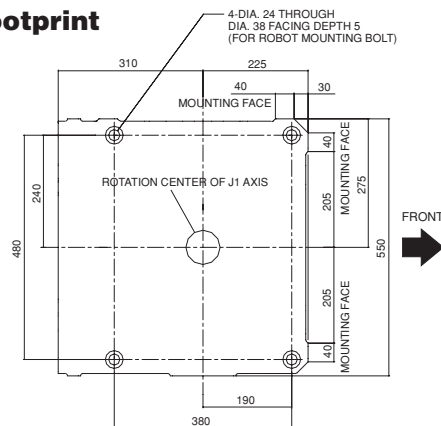
### Notes:

- (1) Without controller.
- (2) J1 and J2 axis motion range will be limited for ceiling, angle and wall. See manual under installation condition.

## Faceplate

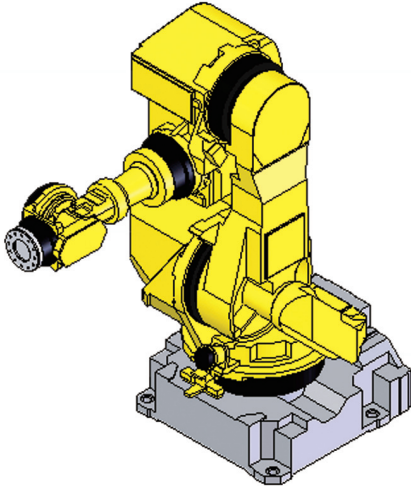


## Footprint

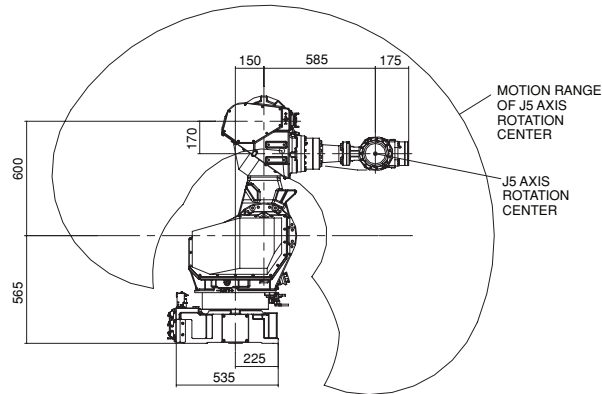
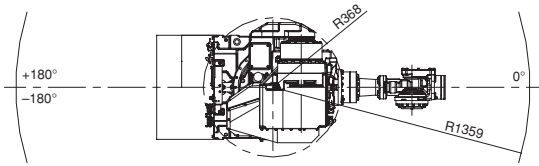


# M-710iC/50S Dimensions

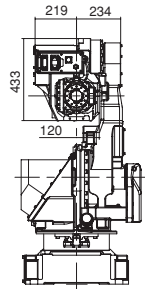
## Isometric



## Top



**Side**



**Front**

## M-710iC/50S Specifications

Items		
Axes		6
Payload (kg)		50
Payload (kg) on J3 casting		15
Reach (mm)		1360
Repeatability (mm)		±0.07
Interference radius (mm)		368
Motion range (degrees)	J1	320/360/370
	J2	169
	J3	376
	J4	720
	J5	250
	J6	720
Motion speed (degrees/s)	J1	175
	J2	175
	J3	175
	J4	250
	J5	250
	J6	355
Wrist moment N·m (kgf·m)	J4	206 (21)
	J5	206 (21)
	J6	127 (13)
Wrist inertia (kg·m <sup>2</sup> )	J4	28
	J5	28
	J6	11
Mechanical brakes		All axes
Mechanical weight (kg) <sup>(1)</sup>		545
Mounting method <sup>(2)</sup>		Floor, ceiling, angle and wall
Installation environment:		
Ambient temperature °C		0 to 45
Humidity		Normally: 75% or less Short term (within a month): 95% or less. No condensation
Vibration m/s <sup>2</sup> (G)		4.9 m/s <sup>2</sup> or less (0.5G or less)
IP Rating(s)		Body IP54 Std. (IP67 optional) Wrist and joint 3 arm IP67

**Notes:**

- (1) Without controller.
- (2) J1 and J2 axis motion range will be limited for ceiling, angle and wall. See manual under installation condition.

**Note:** Dimensions are shown in millimeters. Detailed CAD data are available upon request.

**The Faceplate and Footprint mounting provisions are the same for the entire M-710iC Series.**

## Intelligent Robot Solutions



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