

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.

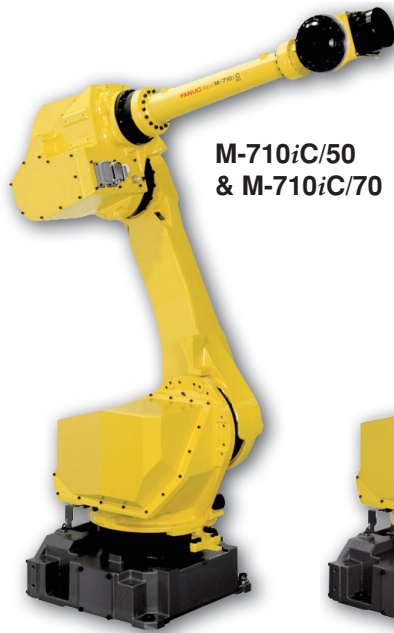
M-710iC Series, the Solution for:

- 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.

FANUC
Robotics

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

Software:

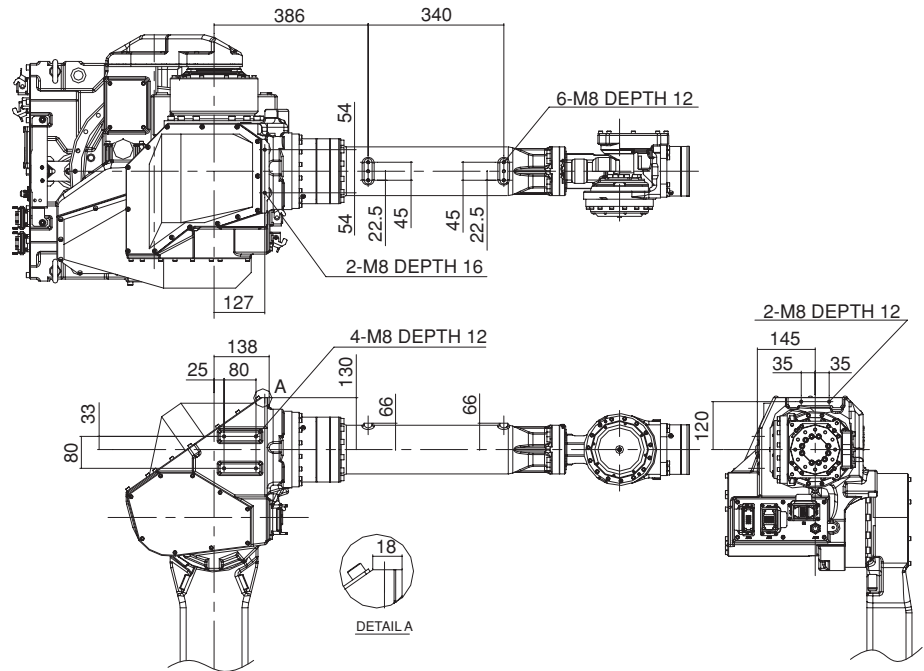
- Process specific software packages for various applications.
- Web-based software tools for remote connectivity, diagnostics and production monitoring.
- Built-in support for machine vision applications for error-proofing and robot guidance, without the need for a PC.
- iRVision™ (Integrated Robot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

Options

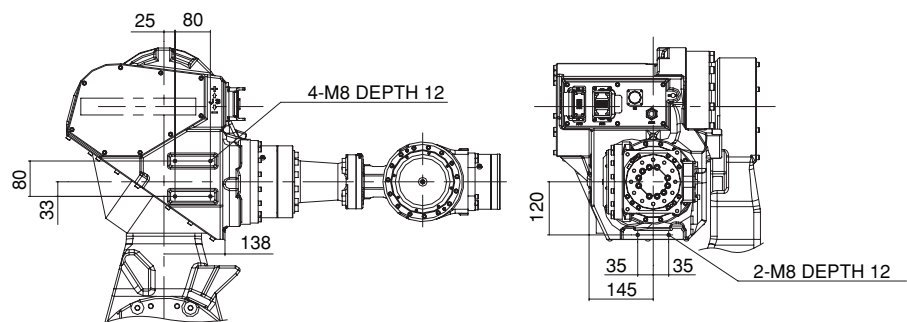
- Standard baseplate for quick robot installation.
- Auxiliary axes packages for integration of peripheral servo-controlled devices.
- Adjustable hard stops for J1, J2 and J3.
- Various robot connection cable lengths for flexible cabinet placement and optional track rated cables.
- Two-part epoxy paint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

Auxiliary Equipment Mounting Provisions

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

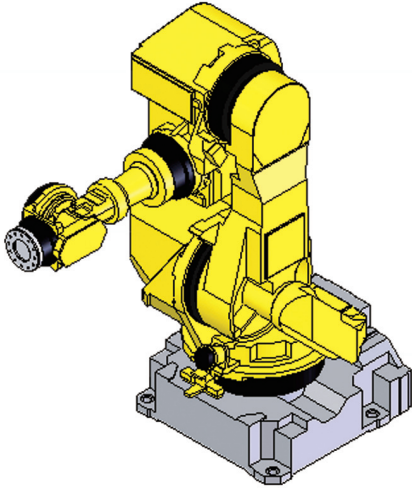


M-710iC/50S

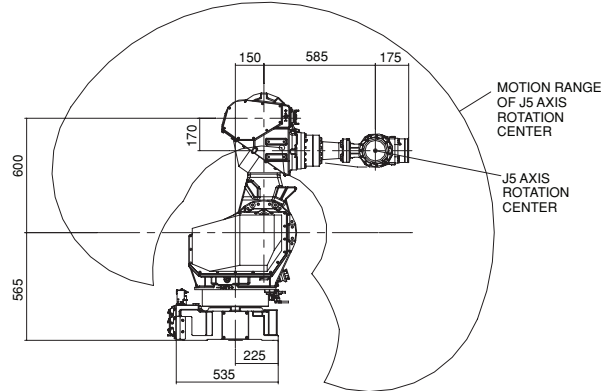
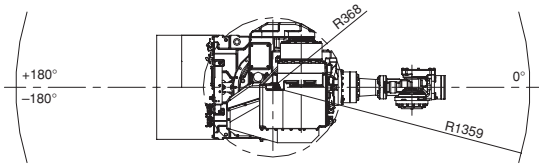


M-710iC/50S Dimensions

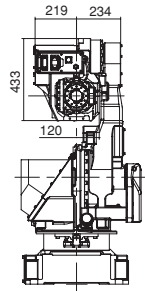
Isometric



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 ²)	J4	28
	J5	28
	J6	11
Mechanical brakes		All axes
Mechanical weight (kg) ⁽¹⁾		545
Mounting method ⁽²⁾		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 ² (G)		4.9 m/s ² 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



FANUC Robotics America, Inc.
3900 W. Hamlin Road
Rochester Hills, MI 48309-3253
(248) 377-7000
Fax (248) 377-7362

Charlotte, NC
 (704) 596-5121

Chicago, IL
 (847) 898-6000

Cincinnati, OH
 (513) 754-2400

Los Angeles, CA
 (949) 595-2700

Toledo, OH
 (419) 866-0788

Toronto, Canada
 (905) 812-2300

Montréal, Canada
 (450) 492-9001

Aguascalientes, Mexico
 52 (449) 922-8000

Sao Paulo, Brazil
 (55) (11) 3619-0599

For sales or technical information, call:
1-800-iQ-ROBOT • 1-800-47-ROBOT

marketing@fanucrobotics.com
fanucrobotics.com