

M-900iA™ Series

Basic Description

FANUC Robotics' M-900iA series robot is engineered for precision, high-speed/high payload operation, user-friendly setup and maximum reliability supported by our extensive service and parts network. The M-900iA series represents our advanced evolution of the company's rugged S-900iB series of heavy payload robots. The M-900iA series is a six-axis, modular construction, electric servo-driven family of robots designed for a variety of manufacturing and systems processes.

M-900iA Series, the Solution for:

- Material handling
- Machine load/unload
- Heavy duty spot welding
- Large sheet or panel handling
- Glass handling
- Casting operations
- Material removal

Benefits

- Rugged wrist design performs reliably even in the harshest manufacturing environments.
- Small robot footprint and reduced controller size conserve floor space.
- Slim arm and wrist assemblies minimize interference with system peripherals and allow operation in confined spaces.
- "Best in class" wrist moments and inertia meet a variety of heavy handling challenges.
- Many process attachment points make integration easier.
- Stationary outer arm simplifies hose and cable dressout, prolongs service life.
- Proven, reliable FANUC servo drives provide highest uptime and productivity.



- Invert mount installation is possible on the M-900iA/350 & M-900iA/260L where space is a big concern.
- Longer maintenance intervals equate to lower operating costs.
- Robust mechanical design reduces down time, increases mean time between failure (MTBF) and minimizes spare part requirements.
- High performance motion yields fast cycle times and high throughput.

Features

Mechanical:

- Multiple controller type and mounting capabilities
- 6 axes of motion
- Slim profile design
- RV reducers for all axes
- Process/application cables routed through the arm
- No motors at wrist

Control:

- Quick change amplifier <5 min.
- Fast boot time <30 sec.
- Standard Ethernet port.
- PCMCIA Software distribution.
- Easy connections to a variety of I/O, including a number of distributed I/O networks.

Software:

- Process specific software packages for various applications.
- Web-based software tools for remote connectivity, diagnostics and production monitoring.
- Machine vision for robot guidance and inspection.
- iPendant, a color, Internet-ready teach pendant for even easier programming and custom cell user interface design.

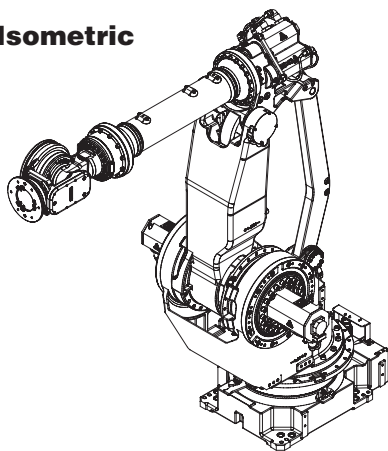
Options

- Enhanced severe dust and liquid protection package with two-part epoxy paint for harsh environments.
- 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.
- iPendant is also available with touch screen support.
- Monochrome pendant available.
- Integrated spot welding utilities.
- Electrically-insulated faceplate.

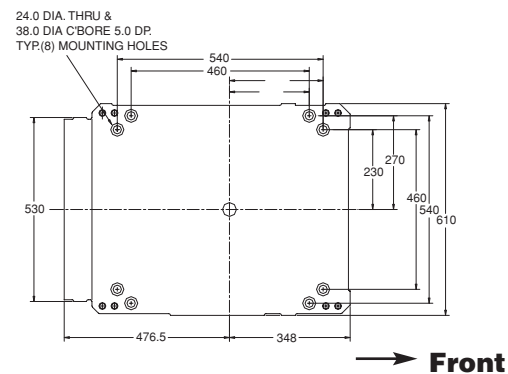
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M-900iA/350 & M-900iA/260L Dimensions

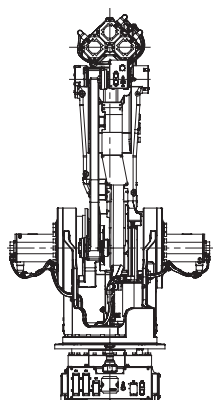
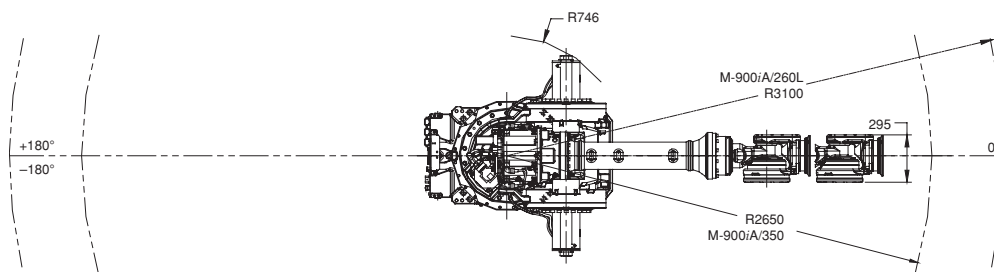
Isometric



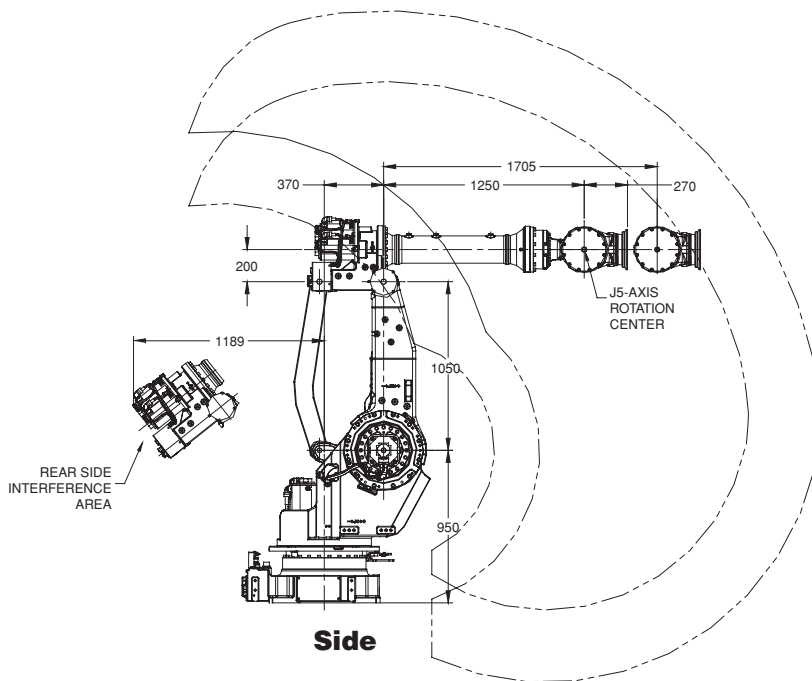
Footprint



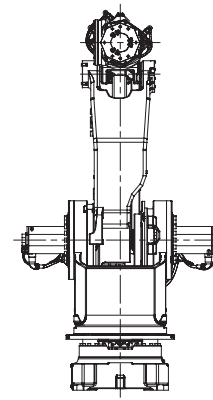
Top



Back

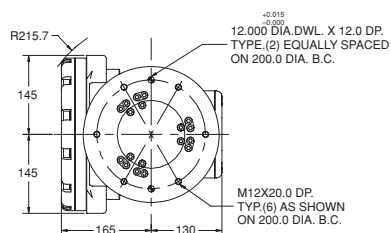
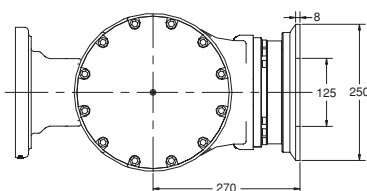


Side



Front

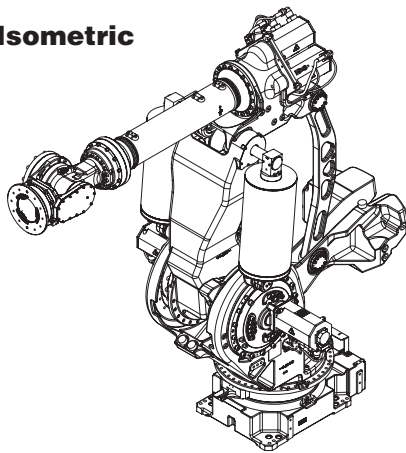
ISO Flange Wrist



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

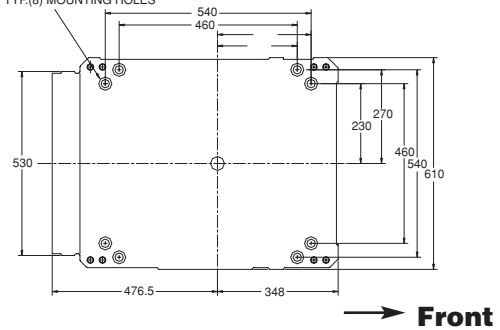
M-900iA/600 and 700kg Option Dimensions

Isometric



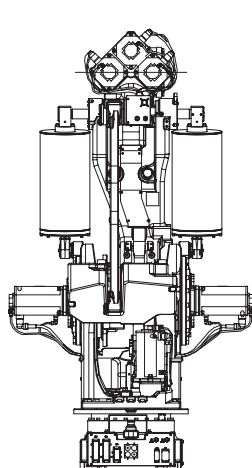
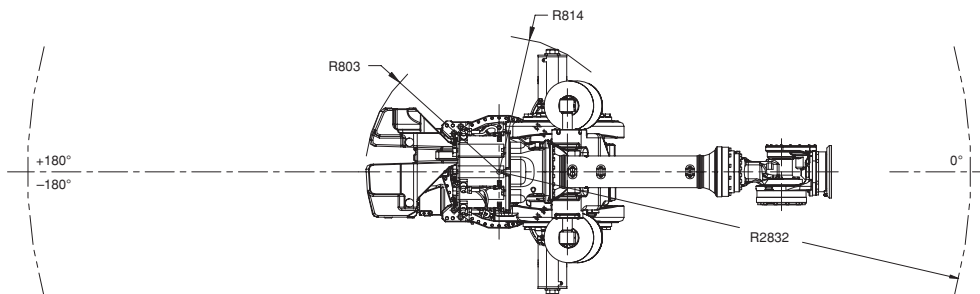
Footprint

24.0 DIA. THRU &
38.0 DIA C'BORE 5.0 DP.
TYP.(8) MOUNTING HOLES



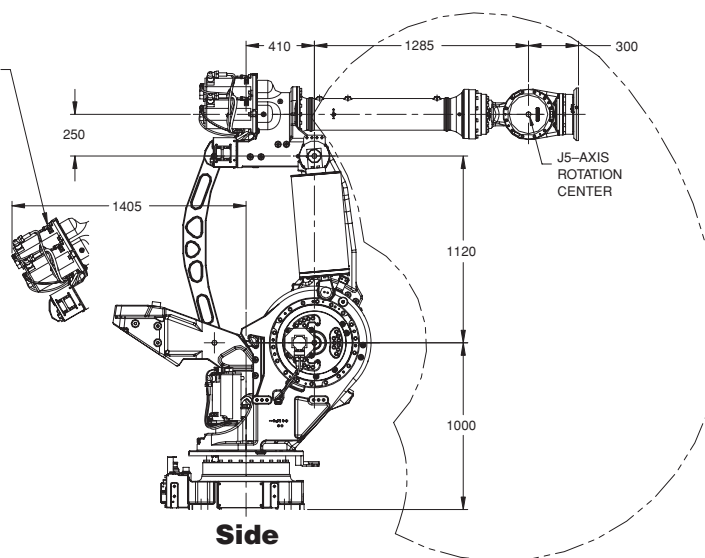
→ **Front**

Top

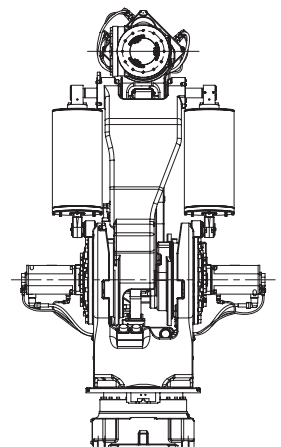


Back

REAR SIDE
INTERFERENCE
AREA

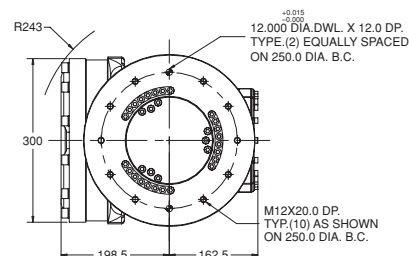
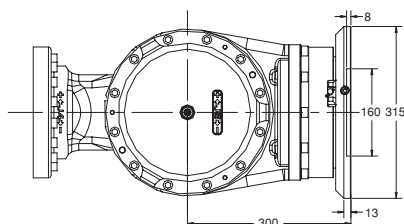


Side



Front

ISO Flange Wrist



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

M-900iA Series Specifications

Items	/350	/260L	/600
Axes	6	6	6
Payload - Wrist (kg)	350	260	600 (std) /700 (option)
- J3 Arm (kg)	25	25	25
- J2 Base (kg)	550	550	550
Reach (mm)	2650	3100	2832
Repeatability (mm)	±0.3	±0.3	±0.4
Interference radius (mm)	746	746	814
Motion range (degrees)	J1	360	360
	J2	150	150
	J3	223	211
	J4	720	720
	J5	250	244
	J6	720	720
Motion speed (degrees/s)	J1	100	80
	J2	95	105
	J3	95	80
	J4	105	100
	J5	105	100
	J6	170	160
Wrist moment N-m (kgf·m)	J4	1961 (200)	1667 (170)
	J5	1961 (200)	1667 (170)
	J6	892 (91)	715 (73)
Wrist inertia ⁽¹⁾ (kg·m ²)	J4	235/391	188/313
	J5	235/391	188/313
	J6	156/352	117/225
Mechanical brakes	All axes	All axes	All axes
Mechanical weight (kg)	1720	1800	2800
Mounting method ⁽²⁾	Floor, ceiling angle & wall	Floor, ceiling angle & wall	Floor
Installation environment:	0 to 45		
Ambient temperature °C			
Humidity	Normally: 75% or less Short term (within a month): 95% or less No condensation (No dew or frost allowed)		
Vibration (m/s ²)	4.9 or less (0.5G or less)		
IP Rating(s)	Wrist & J3 arm IP67, rest IP54 (IP66 optional)		

Notes:

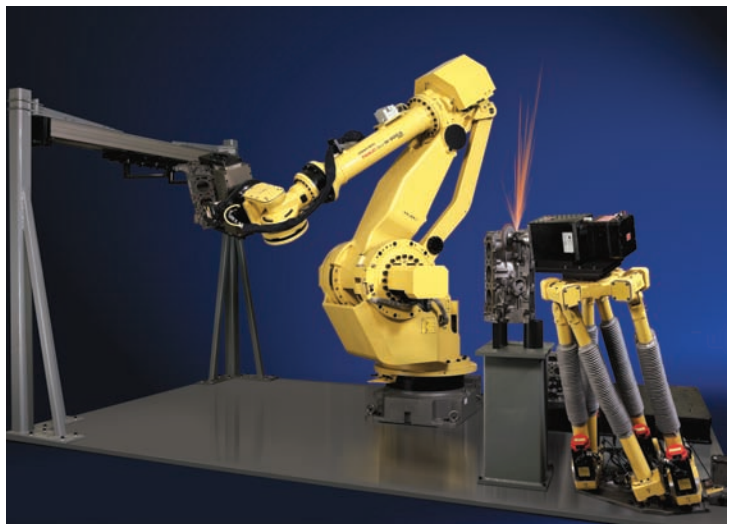
- 1) Allowable load inertia at wrist can be switched by software parameters.
- 2) Motion range will be derated for angle and wall mount.



Sand core package handling with M-900iA/600kg.



Cast iron valve body handling with M-900iA/350kg robot.



Engine block handling and deflashing with Intelligent M-900iA/350kg and F-200iB robots.

Intelligent Robot Solutions

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