

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.

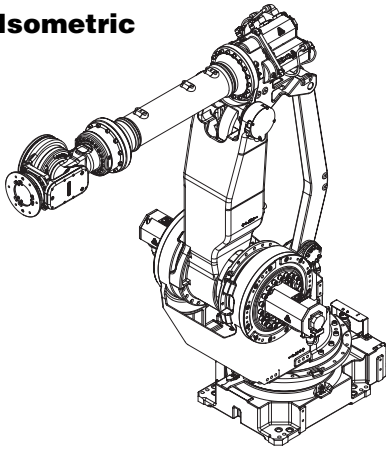
Options

- 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.

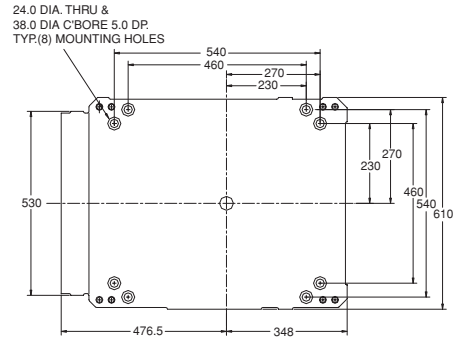
FANUC
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M-900iA/350 & M-900iA/260L Dimensions

Isometric

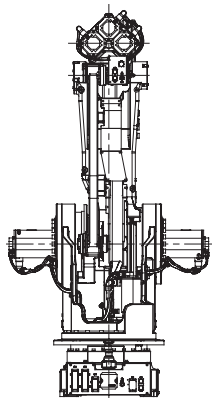
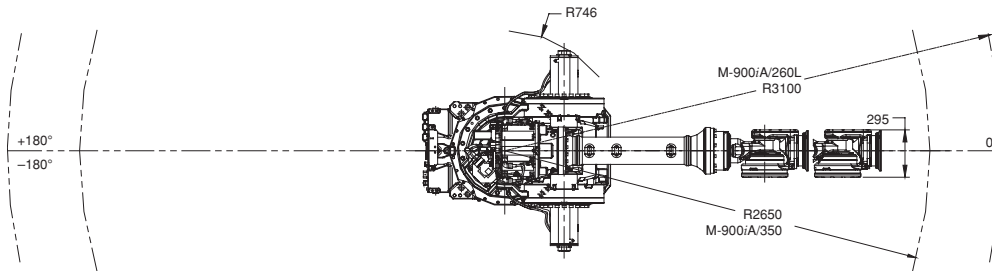


Footprint

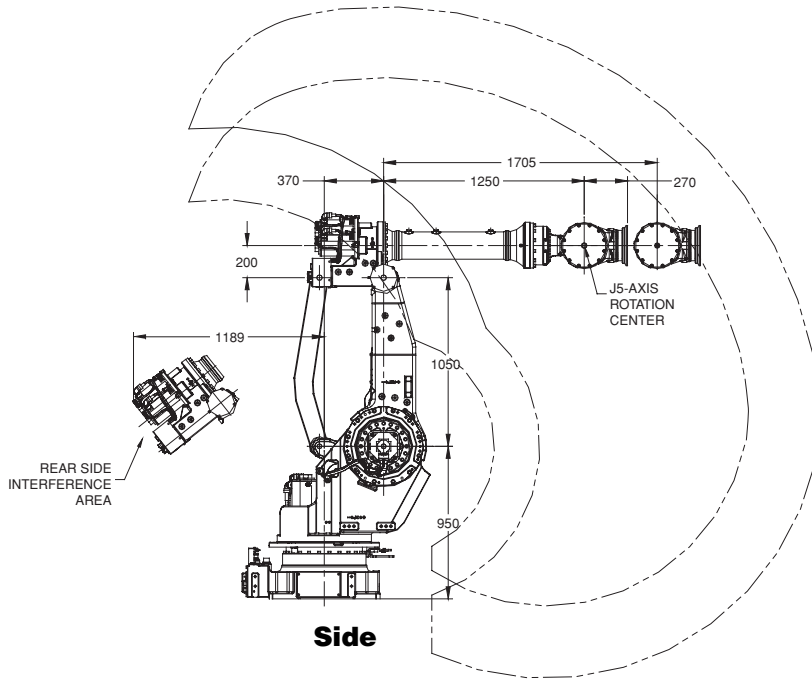


→ **Front**

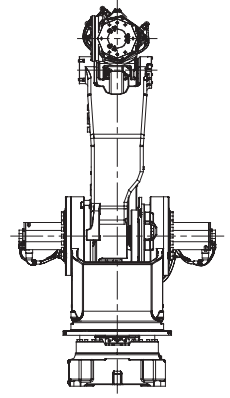
Top



Back

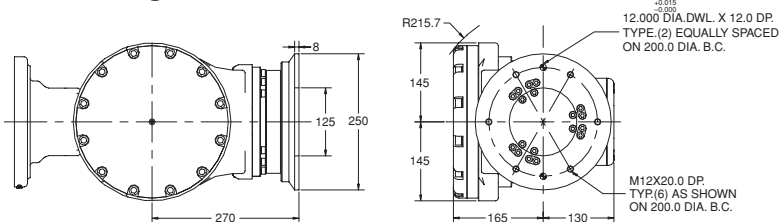


Side



Front

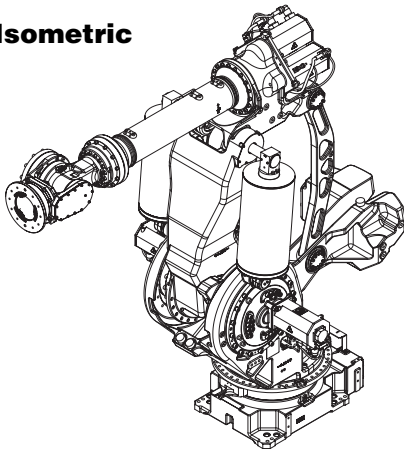
ISO Flange Wrist



Note: Dimensions shown in millimeters.

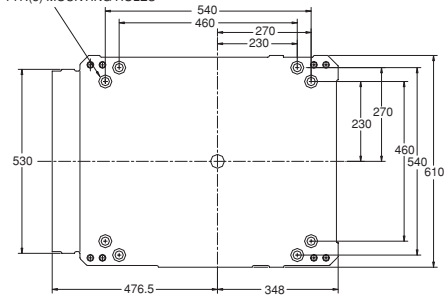
M-900iA/600 Dimensions

Isometric



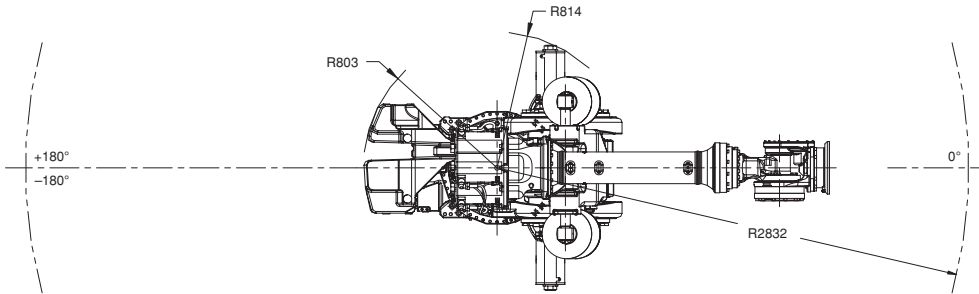
Footprint

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

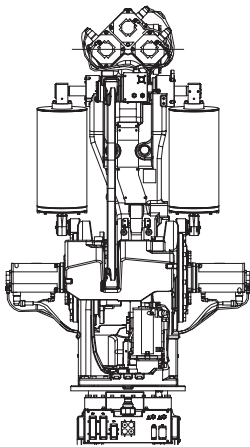


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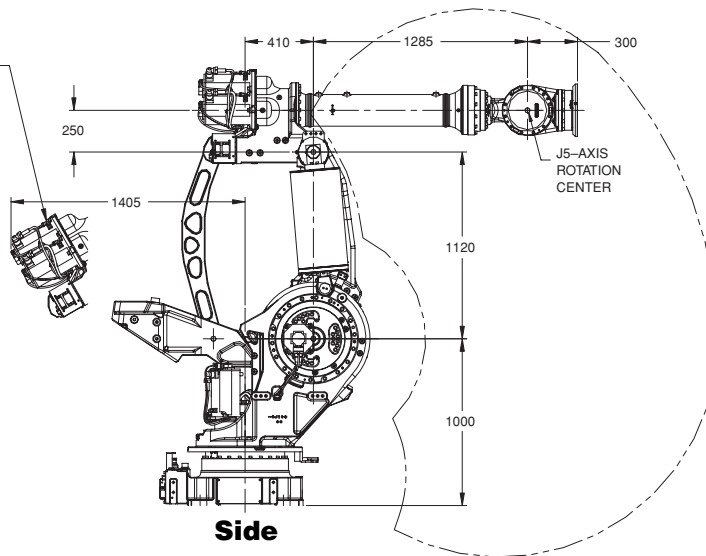
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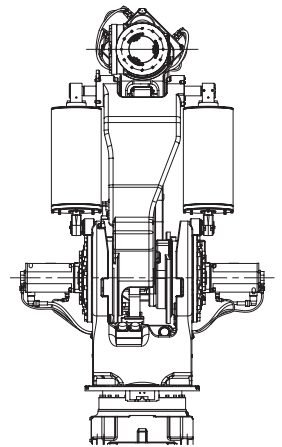
REAR SIDE
INTERFERENCE
AREA



Back

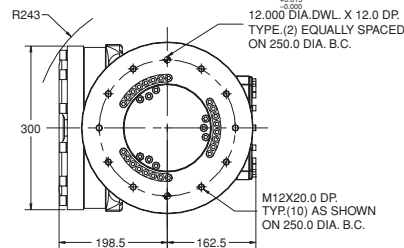
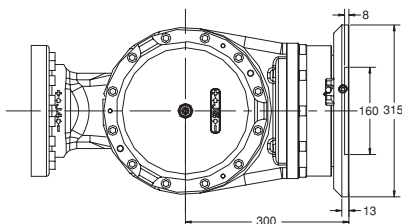


Side



Front

ISO Flange Wrist



Note: Dimensions shown in millimeters.



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



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

M-900iA Series Specifications

Items		/350	/260L	/600
Axes		6	6	6
Payload - Wrist (kg)		350	260	600
- 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	360
	J2	150	150	154
	J3	223	211	160
	J4	720	720	720
	J5	250	250	244
	J6	720	720	720
Motion speed (degrees/sec.)	J1	100	100	80
	J2	95	105	80
	J3	95	95	80
	J4	105	120	100
	J5	105	120	100
	J6	170	200	160
Wrist moment (kgf-m)	J4	200	170	345
	J5	200	170	345
	J6	91	73	176
Wrist inertia⁽¹⁾ (kgf-cm-s² by axis)	J4	2400	1920 / 3200	5204
	J5	2400	1920 / 3200	5204
	J6	1600	1200 / 2300	3265
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:				
Ambient temperature °C		0 to 45		
Humidity		Normally: 75% or less Short term (within a month): 95% or less No condensation (No dew or frost allowed)		
Vibration (m/s²)		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.



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



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