

M-16iB™ Series

Basic Description

The M-16iB series is a six-axis, modular construction, electric servo-driven robot designed for a variety of industrial applications. Based on its simple and reliable construction, the M-16iB series provides sophisticated motion control and consistent performance with high productivity. The robot controller and easy-to-use HandlingTool™ application software provide accurate and consistent path performance.

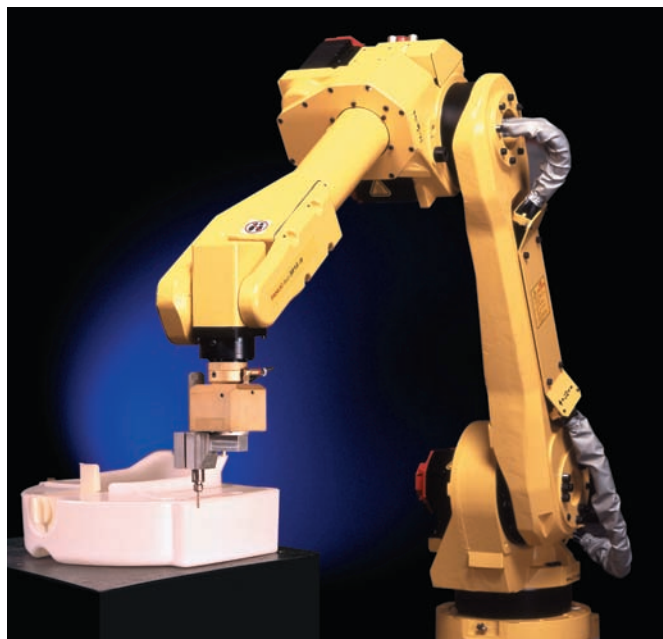
The M-16iB series, the latest generation material handling robot, has a compact design with improved motion range and speed. The compact yet flexible design simplifies installation, maximizes reach capability within confined areas and enables high-density installation of robots and peripherals.

M-16iB Series, the Solution for:

- Assembly
- Dispensing
- Material handling
- Machine load/unload
- Material removal
- Waterjet cutting
- Laser cutting
- Packing

Benefits

- Largest work envelope and load capacity in its class allows robot operation in a wide range of high-speed, medium-payload manufacturing processes.
- No robot modification required for upright, inverted, angle and wall mounting.
- Unique hollow RV speed reducers simplify cable routing.
- Small footprint facilitates placement in tight surroundings.
- Low arm mass and rigid design allow high-speed, precise positioning.
- Dedicated pneumatic and electrical connections on J3 axis.



- Material handling style teach pendant with large LCD screen and ergonomic design offers intuitive control over the process.
- Fail-safe brakes on all axes increase safety, functionality and control.

Features

- *iPendant*™, a color, Internet-ready teach pendant for even easier programming and custom cell user interface design.
- Repeatability of ± 0.08 mm at full speed and full payload within entire work envelope.
- 20 kg payload capacity.
- “Double-jointed” arm increases work envelope and positioning flexibility.
- Absolute serial encoders eliminate the need for calibration at power-up.

Reliability Features

- Sealed bearings and drives, and brushless AC motors minimize maintenance.
- Grease fittings on all lubrication points for quick and easy maintenance.
- Uses directly-coupled drives, which are more reliable than belts, pulleys or chains.

- All motors, cables and tooling services are engineered to prevent snagging and damage from chips, sprays and other hazards.
- Dust and water resistant design maximizes durability.
- Quick disconnect robot connecting cables.

Options

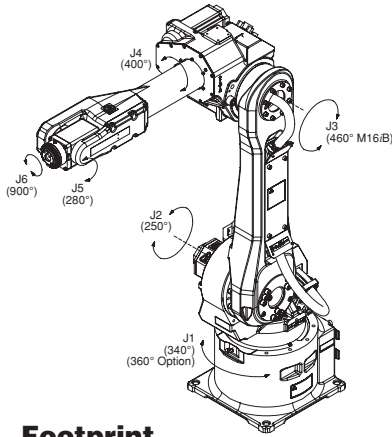
- *iPendant* is also available with touch screen support.
- 360° Axis 1 base rotation.
- FoundryPRO® protection package for harsh environment applications (standard M-16iB wrist is rated IP67 to withstand temporary immersion in liquids).
- Auxiliary axis packages for integration into part positioners.
- Various robot connection cable lengths for flexible cabinet placement and optional track rated cables.
- Monochrome pendant available.
- *iRVision*™ (Integrated Robot Vision) system delivers high-performance 2-D and 3-D machine vision capabilities with FANUC reliability.

Note: FoundryPRO is a registered trademark of FANUC LTD.

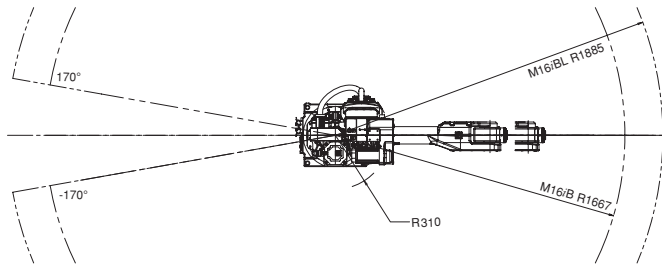
FANUC
Robotics

M-16iB Series Dimensions

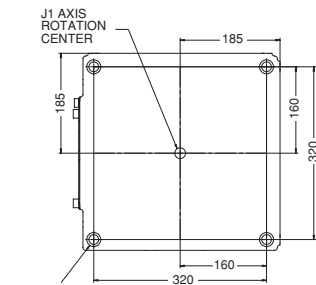
Isometric



Top

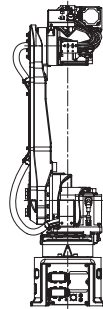
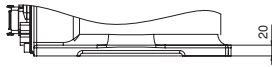


Footprint

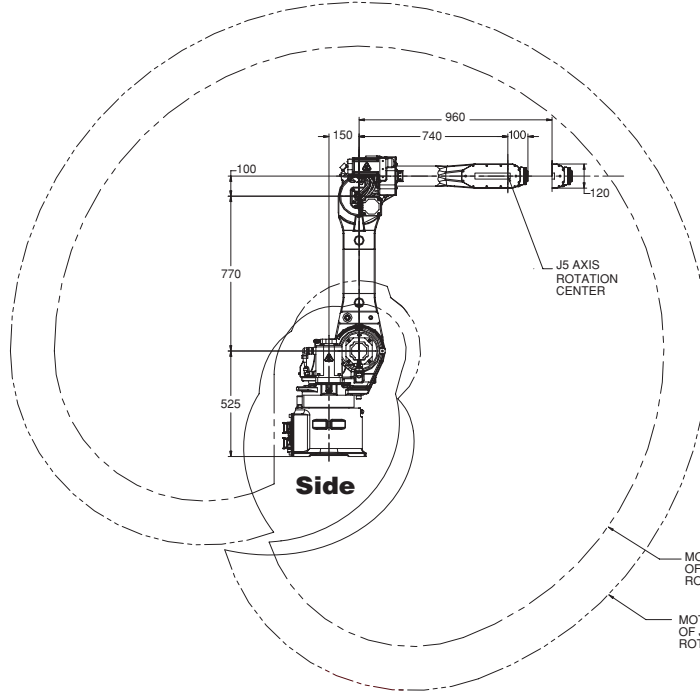


4ø18 THROUGH
ø26 FACING DEPTH 5

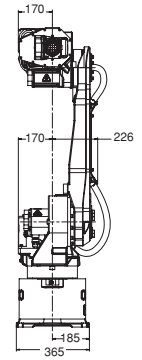
Mounting Hardware: M16X35 (4pcs);
Strength Class: 12.9; Tightening Torque: 314 Nm



Back



Side

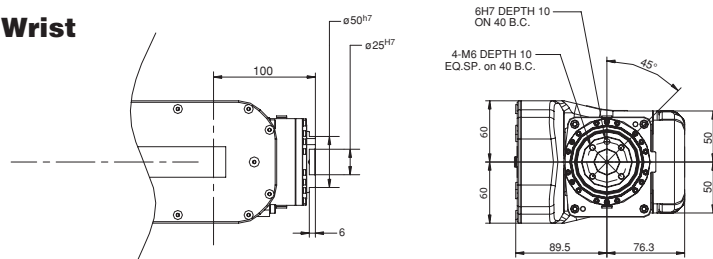


Front

M-16iB Series Specifications

Items	M-16iB/20	M-16iB/10L
Axes	6	6
Payload (kg)	16	10
Reach (mm)	1605	1813
Repeatability (mm)	±0.08	±0.10
Interference radius (mm)	312	312
Motion range (degrees)	J1	330
	J2	240
	J3	455.5
	J4	400
	J5	280
	J6	900
	Motion speed (degrees/s)	J1
J2		140
J3		140
J4		330
J5		330
J6		450
Wrist moment N-m (kgf-m)		J4
	J5	39 (4)
	J6	19 (2)
	J6	9.8 (1)
Wrist inertia kg-m ²	J4	.88
	J5	.88
	J6	.25
	J6	0.15
Brakes	All axes	All axes
Mechanical weight (kg)	270	270
Mounting method	Floor, ceiling, angle and wall	
Installation environment	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)	4.9m/s ² or less (0.5G or less)	
IP Rating(s)	Body IP54 std. (IP55 optional) Wrist & J3 arm IP67	

Wrist



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

Intelligent Robot Solutions



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