

LR Mate 100iB™

Basic Description

The LR Mate 100iB is a five-axis, modular construction, electric servo-driven robot designed for precision machine load/unload, welding and material handling. The robot's small size and extensive capabilities make it the perfect solution for light industrial applications or use in laboratory environments. The FANUC LR Mate 100iB robot is designed for maximum reliability in a variety of harsh plant environments.

LR Mate 100iB the Solution for:

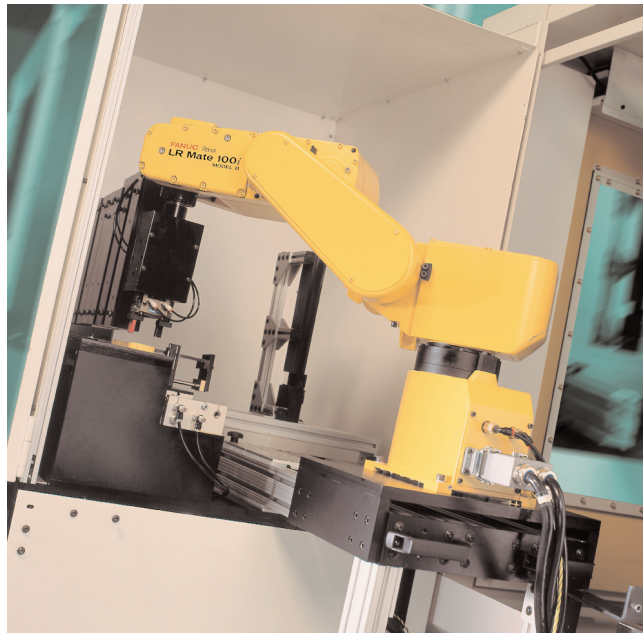
- Machine load/unload
- Material handling
- Welding
- Parts cleaning
- Dispensing
- Assembly
- Material removal
- Testing and sampling
- Cleanroom environments

Features

- 5 axes of motion
- 3-4 kg nominal payload capacity
- 5 kg maximum load capacity (with restricted envelope)
- ± 0.04 mm repeatability
- Absolute encoder positioning
- Two integrated double acting air solenoids
- End effector connector built into the wrist with six end-of-arm tool inputs

R-J3iB Mate Controller Features

- Provides easy installation, startup, troubleshooting and maintenance
- Standard controller weight 35 kg
- Small size for convenient placement 410 mm width x 470 mm height x 320 mm depth



- Integrated 24VDC I/O: (20 inputs (8 dedicated), (16) outputs (4 dedicated)
- α -i Series Amplifiers w/FSSB
- FANUC I/O Link (master or slave)
- Extended communications capabilities (Ethernet, Serial, Fieldbus)
- RIA 15.06 1999 compliant

Performance Features

- Large work envelope for robot class.
- Offset castings allow robot to flip over on itself for increased work envelope and flexibility.
- Sealed for laboratory and industrial use.
- Enhanced motion control system.

Benefits

- Multiple mounting positions and tabletop size increase installation flexibility.
- Hollow joint construction encloses all cable routing to eliminate snagging.
- Small footprint for tight installations on machine tools.
- Slim wrist design allows for

operation in tight workspaces.

- Capable of high speeds for lowest possible cycle times.
- Compatible with existing LR Mate 100i work cells and tooling.

Reliability Features

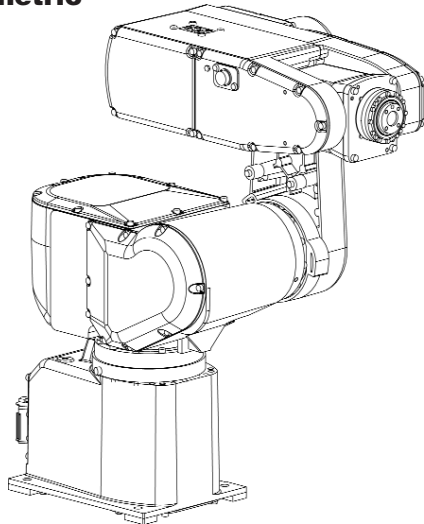
- All axes have gear and/or harmonic drivetrains which result in higher reliability and reduced maintenance costs.
- Sealed bearings and drives allow operation in harsh factory environments.
- Standard "D" size batteries for encoder backup.
- Grease fittings on all lubrication points for quick and easy maintenance.
- Easily removable service panels for quick access to robot drivetrain.
- Enhanced motion control reduces wear and tear.
- Enhanced maintenance tracking functions.

Options

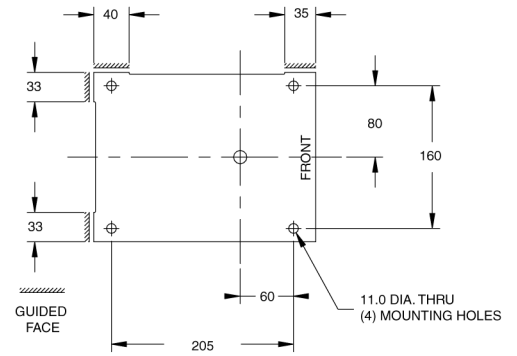
- J1 360 degree motion range
- Single phase power (220 VAC)
- Brakes for all axes

LR Mate 100iB Dimensions

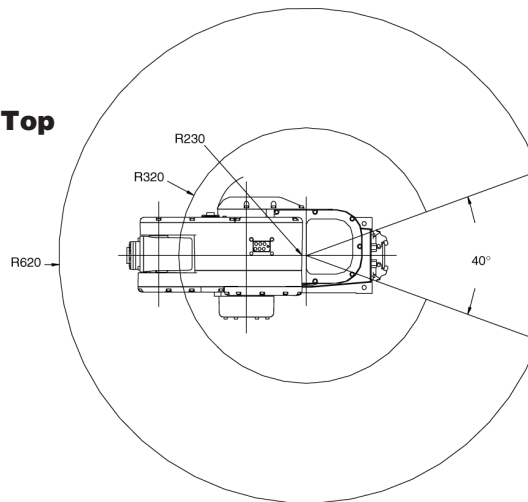
Isometric



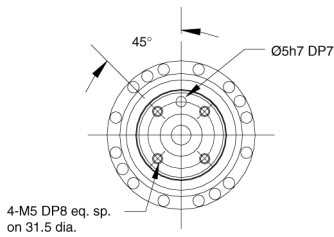
Footprint



Top



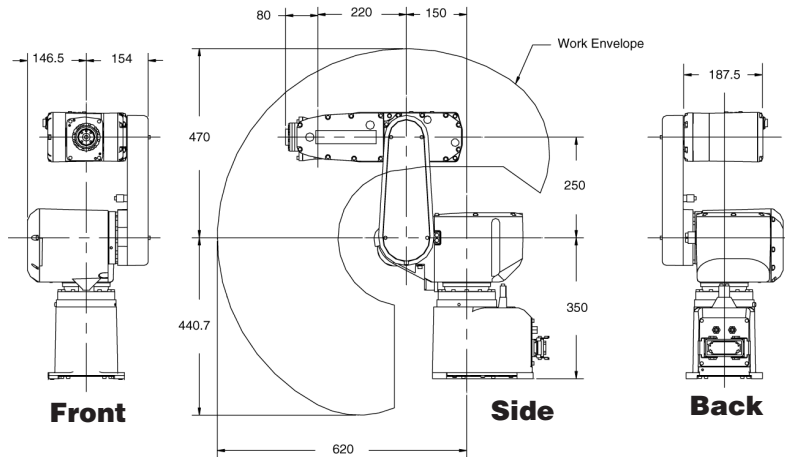
Wrist



LR Mate 100iB Specifications

Items

Axes	5	
Payload (kg)	3-5	
Reach (mm)	620	
Repeatability (mm)	±0.04	
Interference radius (mm)	230	
Motion range (degrees)	J1	320
	J2	185
	J3	365
	J4	240
	J5	400
Motion speed (degrees/sec.)	J1	240
	J2	270
	J3	240
	J4	330
	J5	480
Wrist moment (kgf-cm)	J4	74
	J5	53.2
Wrist inertia (kgf-cm-s ²)	J4	1.4
	J5	0.772
Mechanical brakes	J2, J3 std; All axes option	
Mechanical weight (kg)	39	
Mounting method	Floor, ceiling	
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)	4.9 or less	
IP Ratings	IP65	



Robot motion range is restricted when applying a 5 kg load.

Note: Dimensions are shown in millimeters.

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