

ARC Mate® 100iB/6S

Basic Description

The ARC Mate 100iB/6S is a six-axis, modular construction, electric servo-driven robot designed for precise, high-speed welding and cutting. Based on its simple and reliable construction, the ARC Mate 100iB/6S provides accurate and consistent path performance. The R-J3iB Controller and easy-to-use ArcTool software provide reliable performance with high productivity.

The new ARC Mate 100iB/6S, the latest generation arc welding 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.

Benefits

- Features highest motion speeds in class for maximum performance and productivity.
- Best in class reach versus stroke ratio.
- Compact design simplifies installation and transportation of system.
- Fastest wrist axes in class minimizes air cut time by quickly reorienting the weld torch.
- High axis speeds maximize product throughput.
- Design allows for extremely small weld cells or a high density of arc welding torches in a given area.

Features

- Slim wrist size enables the robot to enter into smaller openings in the work space.

Note: ARC Mate is a registered trademark of FANUC LTD.



- 951 mm reach.
- 622 mm stroke.
- 6 kg payload on faceplate.
- All axes mechanical brakes.
- Absolute encoder positioning.
- TurboMove™ advanced servo control features allow quick and smooth point-to-point motion, which increases arc on-time and throughput.
- “Plug and play” simplicity with Lincoln Electric's Power Wave or STT™ (Surface Tension Transfer) power sources.
- Compatible with all major brands of welding equipment.
- Arc welding teach pendant with application-specific hard keys offers intuitive control over the process.
- Interfaces with most types of servo-driven or indexing positioners.
- Multiple mounting positions include upright, inverted, wall or angle mount with no changes to the mechanical unit.

- Sealed bearings and drives provide protection and improve reliability.
- RV reducer drivetrain with integral bearings provides rigidity and performance in a compact package.

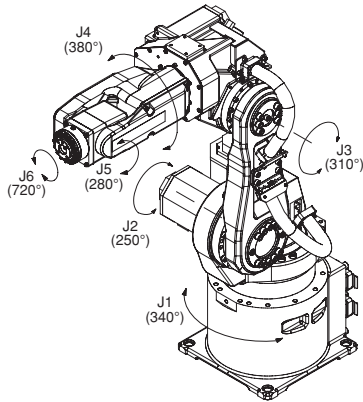
Options

- EMI shielding kits for TIG (GTAW), plasma (PAW) and plasma cutting (PAC) allow operation in harsh EMI (electro-magnetic interference) environments.
- Additional process welding I/O integrates multi-channel welding equipment such as 4 channel TIG and 3 channel MIG (STT).
- Various robot connection cable lengths for flexible cabinet placement and optional track rated cables.
- J1 axis stroke modification kit.
- Auxiliary axis packages for integration into welding positioners.

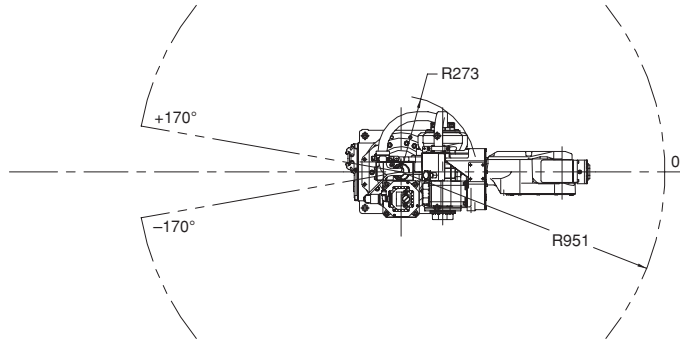
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ARC Mate 100iB/6S

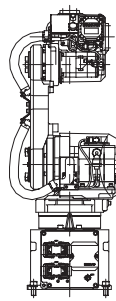
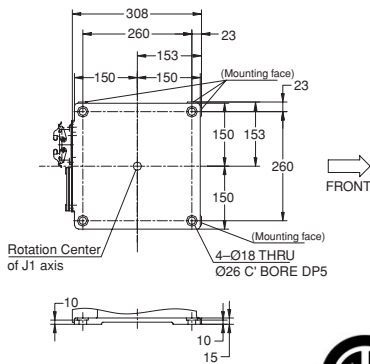
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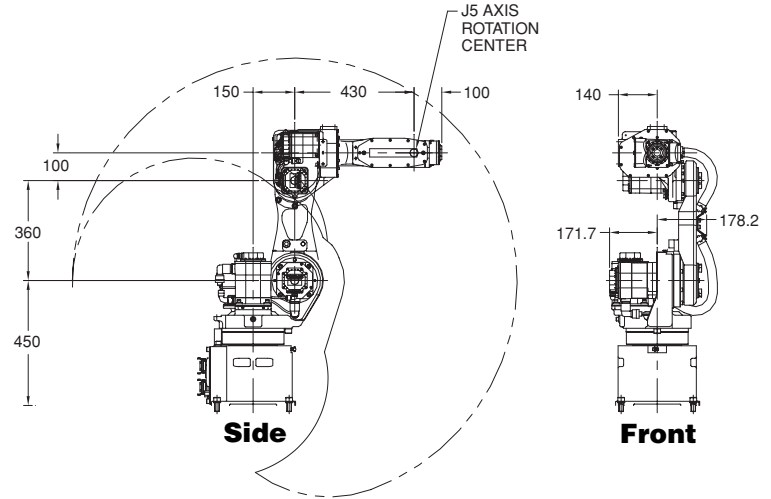
Top



Footprint



Back



Side

Front

ARC Mate 100iB/6S Specifications

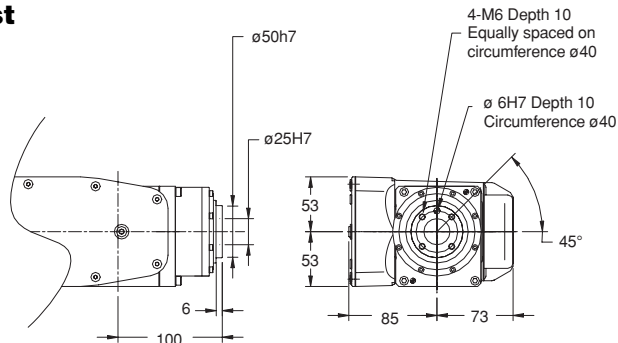


Items		
Axes	6	
Payload (kg)	6	
Reach (mm)	951	
Repeatability (mm)	±0.08	
Interference radius (mm)	273	
Motion range (degrees)	J1	340
	J2	250
	J3	310
	J4	380
	J5	280
	J6	720
Motion speed (degrees/sec.)	J1	200
	J2	200
	J3	260
	J4	400
	J5	400
	J6	720
Wrist moment (kgf-m)	J4	1.6
	J5	1.0
	J6	0.6
Wrist inertia (kgf-cm-s ²)	J4	6.4
	J5	2.2
	J6	0.62
Mechanical brakes	All axes	
Mechanical weight (kg)	135	
Mounting method ⁽¹⁾	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)	4.9 or less	
Payload at axis 3 (kg)	12	

Notes:

(1) Motion range is de-rated for wall and angle mount.

Wrist



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



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