

# ARC Mate 120iLT

## Basic Description

The FANUC Robotics' ARC Mate 120iLT is a six-axis, overhead rail-mounted robot that provides accurate and consistent path performance necessary for welding and cutting. The R-J3 Controller and easy-to-use Arc Tool software, standard with all ARC Mate series robots, provide reliable performance with high productivity.

## ARC Mate 120iLT, the solution for:

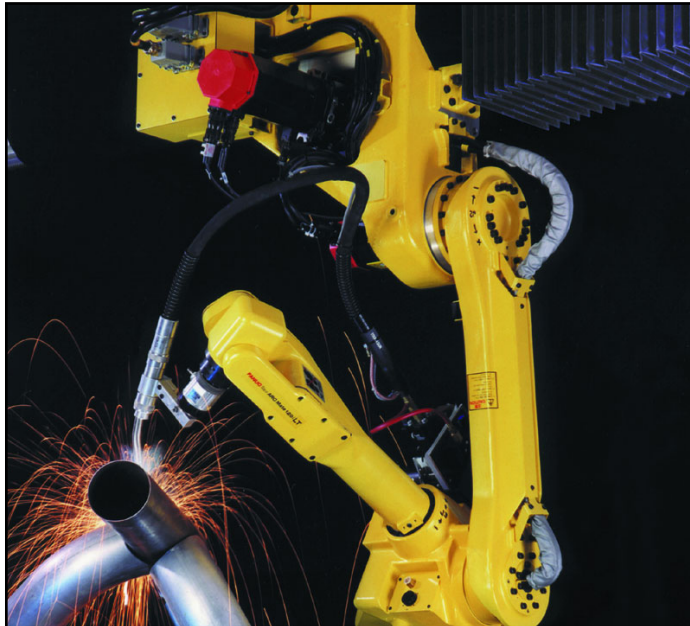
- Welding large area parts such as truck and trailer, large agricultural components, tanks, vessels and containers.
- Heavy arc welding applications such as chassis, booms and track roller assemblies.
- Pick-up weld robot for missed welds or options parts.
- Prototype
- Increased arc density

## Benefits

- The ARC Mate 120iLT offers an extremely large work envelope useful for large parts or complex tooling.
- Best in class reach versus stroke ratio.
- Compact yet flexible design maximizes reach capability within confined areas.
- Extremely fast wrist axes reduces aircut times, improving throughput.

## Features

- Six axes of motion (one linear, five rotary) result in a "mobile" robot capable of servicing multiple fixtures or large parts.
- User-specified J2 heights.
- Standard rail travel lengths. Non-standard lengths also available.



- Based on proven, reliable, standard products (ARC Mate 120iL).
- Modular rails can be attached to free-standing support columns with variable height attachment.
- Reduces floor space and ceiling height requirements (compared to gantry robots).
- 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 PowerWave™ and STT™ Series 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.
- RV reducer drive train with integral bearings provide rigidity and performance in a compact package.

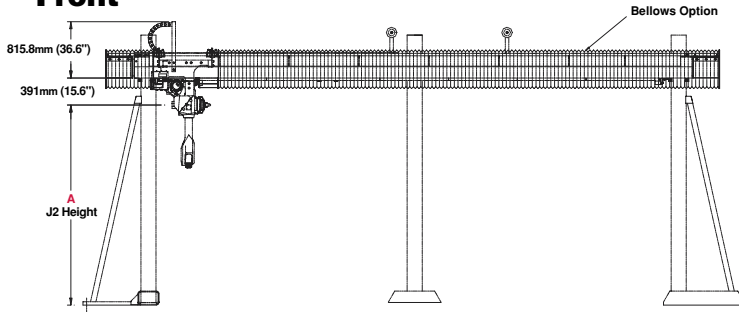
- Brushless AC servo motors minimize motor maintenance.
- Rack and pinion drive on all models.
- Fail-safe brakes on all six axes.
- 10 kg load on faceplate for ARC Mate 120iLT.
- Serial link construction eliminates the "link arm" and provides greater flexibility and fewer moving parts.
- Plug and play to Fanuc standard positioners

## Options

- Additional process welding I/O integrates multi-channel welding equipment such as three channel MIG (STT) and dual wire welding.
- Auxiliary axis package for integration into welding positioners.
- Plug and play to AM-HS500 and AM-FW500 standard welding positioners.
- Custom lengths and heights available.
- Optional bellows for Axis 1 protection.

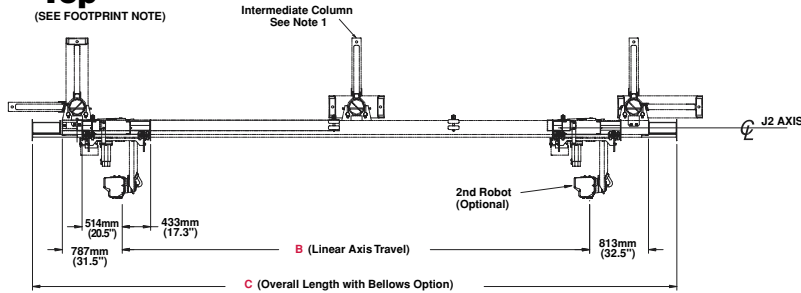
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### Front



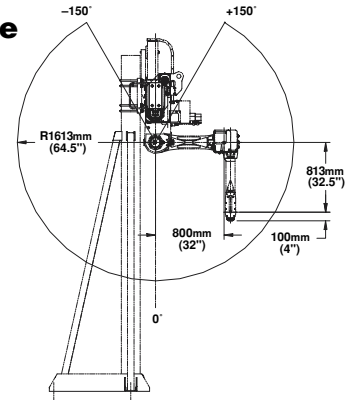
A (J2 Height)	B (Linear Travel)	C (Length/Bellows)
1.8m - 2.2m	3.0m (118.1')	5.4m (213')
2.1m - 2.5m	6.5m (255.9')	8.9m (350')
2.4m - 2.8m	15.5m (610.25')	19.7m (775')

### Top

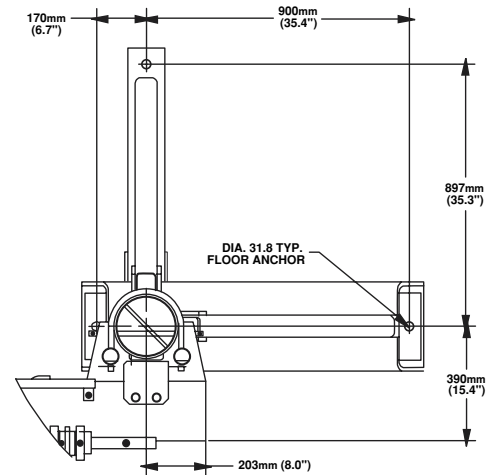


Note 1: Intermediate column required if unsupported span exceeds 7.7 meters.

### Side



### Footprint



NOTE: COLUMNS MAY BE ROTATED TO ANY POSITION. INBOUND ROTATION WILL CAUSE COLUMN STRUTS TO BE IN WORK ENVELOPE

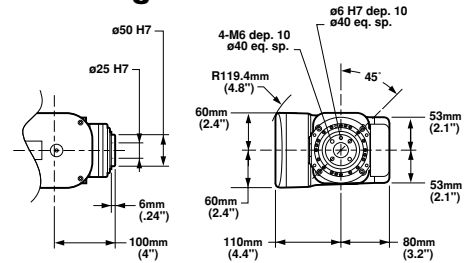
### Items Specifications

		AM120iLT	
		Range	Speed
Motion range and speed	Axis 1 <sup>A</sup>	3.0m, 15.5m, 6.5m	2m/sec
	Axis 2	300°	140°/sec
	Axis 3	480°	140°/sec
	Axis 4	400°	330°/sec
	Axis 5	280°	330°/sec
	Axis 6	900°	450°/sec
Wrist Moments (kgf · m)	Axis 4	2.2	
	Axis 5	2.0	
	Axis 6	1.0	
Wrist Load inertias (kgf·cm·s <sup>2</sup> )	Axis 4	5.3	
	Axis 5	4.3	
	Axis 6	1.0 (16kg payload) <sup>B</sup>	
Articulated arm repeatability, mm (in)	±0.1(±0.004)		
Rail repeatability mm (in)	±0.25(±0.010) <sup>A</sup>		
Maximum J6 payload capacity, kg (lbs)	10 (22)		
Maximum articulated arm reach, mm (in)	1613 (63.5)		
J2 height (floor to centerline of J2)	2.0m (1.8m - 2.2m) 2.3m (2.1m - 2.5m) 2.6m (2.4m - 2.8m) 2.9m (2.7m - 3.1m)		
Mechanical brakes	All axes		
Mechanical weight	902kg (1984lb) <sup>B</sup>		
Levels of protection	Wrist and J3 arm	IP67	
	Body	IP54 (IP55 optional)	
	Controller	IP54	

A Standard linear axis travel of 3.0m, 15.5m, or 6.5m. For other lengths PLEASE CONTACT FANUC ROBOTICS

B Weight of robot and 3.0m linear axis travel rail (columns not included)

### Mounting Plate



Note: Dimensions shown in millimeters

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