

FANUC Robot **ARC Mate 100iC**

FANUC Robot **ARC Mate 120iC**



Features

The FANUC ARC Mate 100iC / 120iC series robot is specifically designed for arc welding applications. It features a hollow wrist for torch cable integration and highest motion performance for its class.

- A rigid arm combined with advanced servo technology enable maximum speed and acceleration performance. This reduces cycle time by up to 15%.
- A unique wrist axis drive mechanism encased within the slimmest wrist available in an ARC robot allows for operation in narrow spaces and high density installation.
- Smooth torch cable routing and easy maintenance through a hollow forearm provides excellent cable management with stable wire feeding for high performance welding.
- The robot can integrate weld power cables in addition to wire feeder control cables and assist gas hoses.
- Enhanced wrist load capacity allows support of various torch tools such as sensor units, Servo Torch and tandem torch.
- Various optional intelligent functions are available, such as iRVision, collision detection and coordinated motion.

Application system



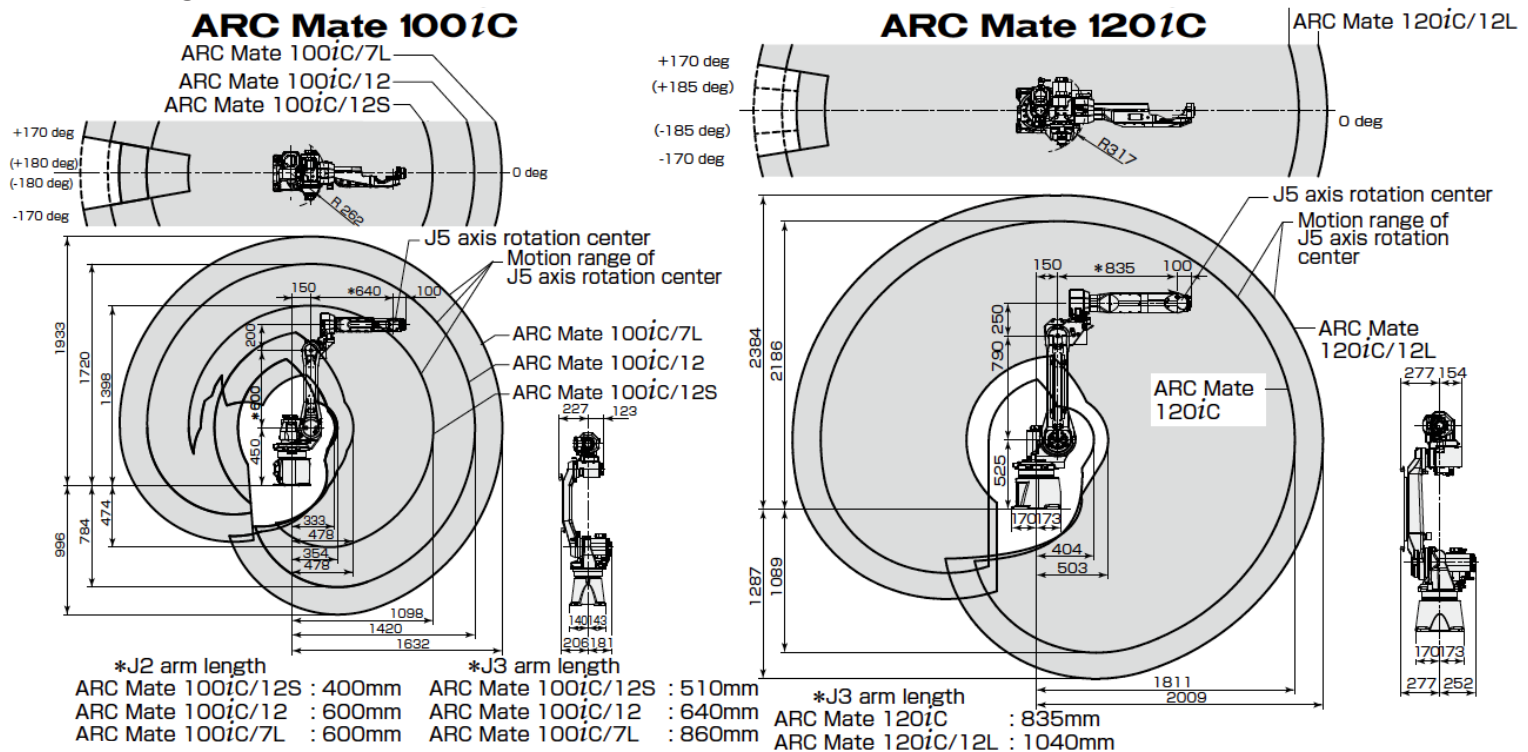
ARC Mate 120iC with coordinated motion on kart frame.



Triple ARM coordinated motion welding exhaust system.

FANUC Robot ARC Mate 100iC/120iC

Operating Space



Specifications

Item		Specifications				
		ARC Mate 100iC/12S	ARC Mate 100iC/12	ARC Mate 100iC/7L	ARC Mate 120iC	ARC Mate 120iC/12L
Type		6 axes (J1, J2, J3, J4, J5, J6)				
Reach		1098mm	1420mm	1632mm	1811mm	2009mm
Installation		Floor, Upside-down, Angle mount				
Motion range (Maximum speed) (Note 1, 2)	J1 axis rotation	340°/360° (option) (260°/s) 5.93 rad/6.28 rad (option) (4.54 rad/s)	340°/360° (option) (230°/s) 5.93 rad/6.28 rad (option) (4.01 rad/s)		340°/370° (option) (195°/s) 5.93 rad/6.45 rad (option) (3.40 rad/s)	340°/370° (option) (200°/s) 5.93 rad/6.45 rad (option) (3.49 rad/s)
	J2 axis rotation	250°(280°/s) 4.36 rad(4.89 rad/s)	250°(225°/s) 4.36 rad(3.93 rad/s)		260°(175°/s) 4.54 rad(3.05 rad/s)	
	J3 axis rotation	340°(315°/s) 5.93 rad(5.50 rad/s)	445°(230°/s) 7.76 rad(4.01 rad/s)	447°(230°/s) 7.80 rad(4.01 rad/s)	458°(180°/s) 8.00 rad(3.14 rad/s)	460°(190°/s) 8.04 rad(3.32 rad/s)
	J4 axis wrist rotation	380°(430°/s) 6.63 rad(7.50 rad/s)			400°(360°/s) 6.98 rad(6.28 rad/s)	400°(430°/s) 6.98 rad(7.50 rad/s)
	J5 axis wrist swing	380°(430°/s) 6.63 rad(7.50 rad/s)			360°(360°/s) 6.28 rad(6.28 rad/s)	360°(430°/s) 6.28 rad(7.50 rad/s)
	J6 axis wrist rotation	720°(630°/s) 12.57 rad(11.0 rad/s)			900°(550°/s) 15.71 rad(9.60 rad/s)	900°(630°/s) 15.71 rad(11.0 rad/s)
Maximum load capacity at wrist		12 kg		7 kg	20 kg	12 kg
Allowable load moment at wrist	J4 axis	22.0 N·m		15.7 N·m	44.0 N·m	22.0 N·m
	J5 axis	22.0 N·m		10.1 N·m	44.0 N·m	22.0 N·m
	J6 axis	9.8 N·m		5.9 N·m	22.0 N·m	9.8 N·m
Allowable load inertia at wrist	J4 axis	0.65 kg·m ²		0.63 kg·m ²	1.04 kg·m ²	0.65 kg·m ²
	J5 axis	0.65 kg·m ²		0.38 kg·m ²	1.04 kg·m ²	0.65 kg·m ²
	J6 axis	0.17 kg·m ²		0.061 kg·m ²	0.28 kg·m ²	0.17 kg·m ²
Repeatability		± 0.05 mm		± 0.08 mm		
Mass (Note 3)		130 kg		135 kg	250 kg	
Installation environment		Ambient temperature : 0 ~ 45℃ Ambient humidity : Normal 75%RH or less(No dew not frost allowed), Short term 95%RH or less(within one month) Vibration acceleration : 4.9m/s ² (0.5G) or less				

Note 1) In case of angle mounting, J1 and J2 axis motion range are restricted.

Note 2) In case of short distance motion, the axis speed may not reach the maximum value stated.

Note 3) Without controller

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