

# FANUC Robot ARC Mate 100*i*C

# FANUC Robot ARC Mate 120*i*C



## FEATURES

FANUC Robot ARC Mate 100*i*C / 120*i*C is torch cable integrated arc welding robot.

- ARC Mate 100*i*C Standard type, short arm type (12S), long arm type (7L) and ARC Mate 120*i*C Standard type, long arm type (12L) are available for various application adaptation.
- High rigidity arm and advanced servo technology enable to increase acceleration performance. This decreases cycle time and realizes high productivity.
- The unique drive mechanism in wrist axis realizes the slim arm in torch cable integrated robot.
- Smooth hand cable routing and easy maintenance by cantilevered fore arm provides excellent cable management with stable wire feeding.
- Thanks to stable hand cable management, off-line teaching function by ROBOGUIDE (Option) reduces teaching cost.
- Latest intelligent functions with *i*RVision (integrated vision) and Coordinated motion with Positioner are available.

## Application system



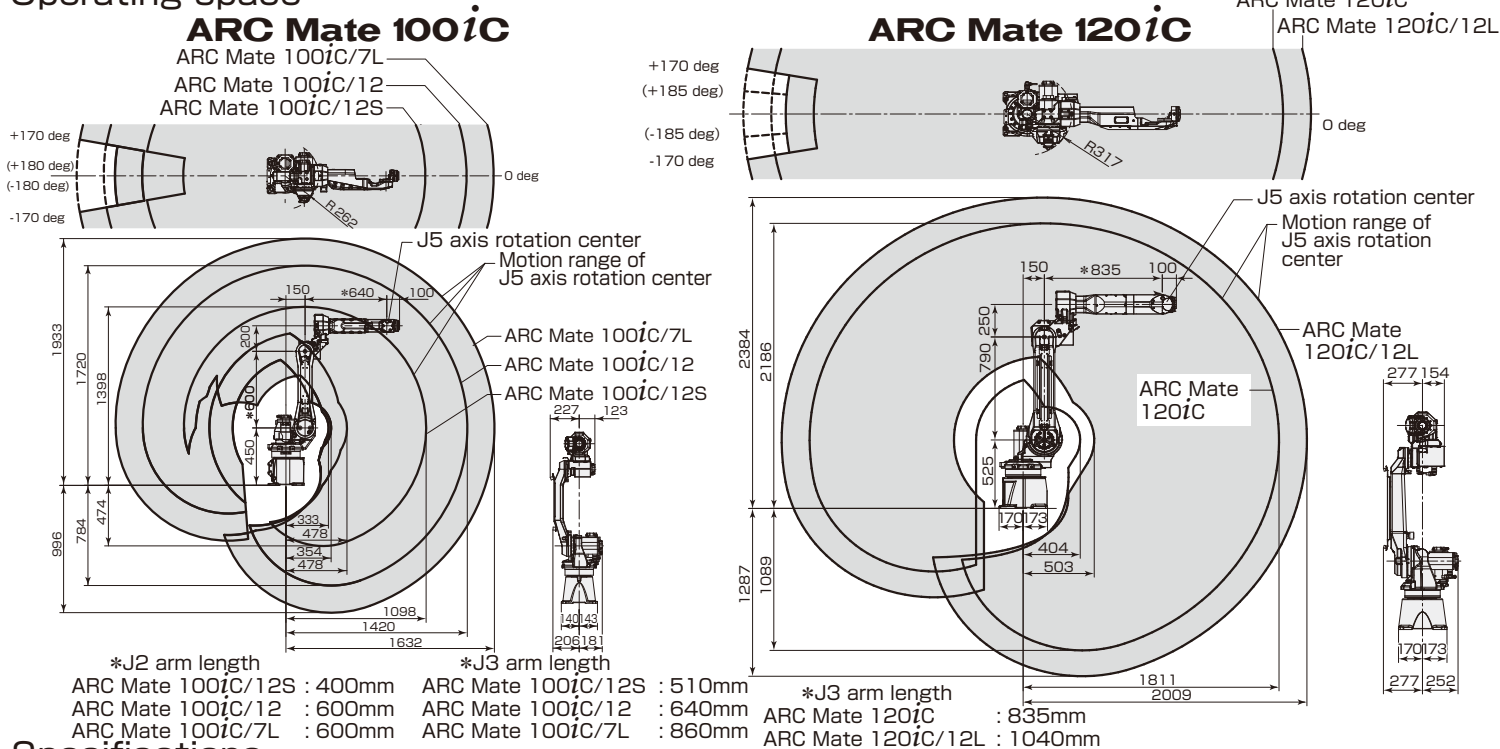
Automobile part arc welding with Servo Torch



Architectural part arc welding with *i*RVision

# 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 <sup>2</sup>	0.63 kg·m <sup>2</sup>	1.04 kg·m <sup>2</sup>	0.65 kg·m <sup>2</sup>	
	J5 axis	0.65 kg·m <sup>2</sup>	0.38 kg·m <sup>2</sup>	1.04 kg·m <sup>2</sup>	0.65 kg·m <sup>2</sup>	
	J6 axis	0.17 kg·m <sup>2</sup>	0.061 kg·m <sup>2</sup>	0.28 kg·m <sup>2</sup>	0.17 kg·m <sup>2</sup>	
Repeatability	± 0.05 mm		± 0.08 mm			
Mass (Note 3)	130 kg		135 kg	250 kg		
Installation environment	Ambient temperature : 0 ~ 45°C 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 <sup>2</sup> (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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