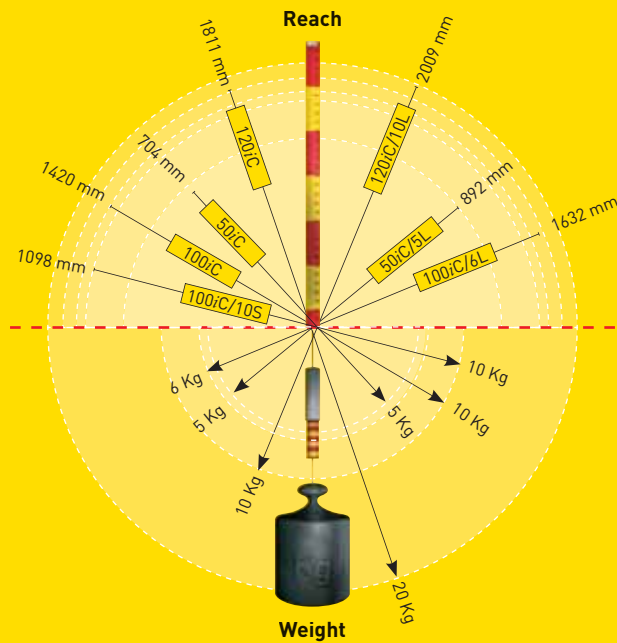


ARC MATE SERIES

16

	Robot model	Controller	Controlled axes	Max. load capacity at wrist [kg]	Repeatability [mm]	Mechanical weight [kg]	Reach [mm]	Motion range [°]						Maximum speed [°/s]						J4 Moment [Nm]/Inertia [kgm ²]	J5 Moment [Nm]/Inertia [kgm ²]	J6 Moment [Nm]/Inertia [kgm ²]	IP Rating
								J1	J2	J3	J4	J5	J6	J1	J2	J3	J4	J5	J6				
Arc Mate	50iC	R-30iA Mate	6	5	± 0.02	27	704	340/360	200	388	380	240	720	350	350	400	450	450	720	11.9/0.3	11.9/0.3	6.7/0.1	IP67
	50iC/5L		6	5	± 0.03	29	892	340/360	230	373	380	240	720	270	270	270	450	450	720	11.9/0.3	11.9/0.3	6.7/0.1	
	100iC	R-30iA/R-30iA Mate	6	10	± 0.08	130	1420	340/360	250	445	380	380	720	210	190	210	400	400	600	21.6/0.63	21.6/0.63	9.8/0.15	IP54
	100iC/6L		6	6	± 0.1	135	1632	340/360	250	447	380	380	720	210	190	210	400	400	600	15.7/0.63	10.1/0.38	5.9/0.061	
	100iC/10S		6	10	± 0.05	130	1098	340/360	250	340	380	380	720	220	230	270	410	410	610/720	22/0.63	22/0.63	9.8/0.15	
	120iC		6	20	± 0.08	250	1811	340/370	260	458	400	360	900	195	175	180	360	360	550	44/1.04	44/1.04	22/0.28	
	120iC/10L		6	10	± 0.1	250	2009	340/370	260	460	400	360	900	195	175	180	400	400	600	22/0.63	22/0.63	9.8/0.15	



Available in 7 different versions:

- Arc Mate 50iC: 5 kg payload
- Arc Mate 50iC/5L: 5 kg payload, Long arm
- Arc Mate 100iC: 10kg payload, Standard model

- Arc Mate 100iC/6L: 6kg payload, Long arm
- Arc Mate 100iC/10S: 10kg payload, Short arm
- Arc Mate 120iC: 20kg payload, Standard model
- Arc Mate 120iC/10L: 10kg payload, Long arm

THE ARC MATE SERIES OFFERS 6-AXES ROBOTS DEDICATED TO WELDING APPLICATIONS WITH PAYLOADS RANGING UP TO 20 KG AND REACHES FROM 704 MM TO 2009 MM. THE ARC MATE ROBOTS ARE SUITABLE FOR TIG, MIG, MAG, WIG AND LASER WELDING APPLICATIONS.

» FEATURES AND BENEFITS

Dedicated robot series for demanding arc welding applications

DEDICATED AND POWERFUL APPLICATION SOFTWARE = ARC TOOL FOR ARC MATE 100iC R-30iA MATE AND ARC MATE 100iC/6L R-30iA MATE

- Easy connection and communication with most common power sources
- Advanced process functions:
 - Saving time for path teaching
 - Increasing arc on time

HIGH SPEED BETWEEN WELDS

The robot coupled with the advanced FANUC controller offers high axes speed which reduces time for movement between welds

FLOOR, CEILING (ANGLE AND WALL) MOUNTING METHOD

Ceiling and angle mounted robots provide:

- Easier access to the machine being serviced
- Easier access to the parts
- Allows maximised use of the robot work envelope
- Some restrictions exist for the angle and wall mounting



OPTION: TORCH MAINTENANCE STATION

The torch maintenance station cleans and dresses arc welding torches automatically.

STANDARD AIR AND ELECTRICAL CONNECTIONS PROVIDED TO AXIS J3

Integrated air and electrical services from J1 to J3

- Short connections to tool
- Increased wiring reliability
- Proven reliability (factory built)

OPTION: TIG (HIGH FREQUENCY) PROTECTION KIT AVAILABLE

Protects the robot to be used for TIG welding and high frequency applications

ADDITIONAL MOUNTING FACILITY ON J3 ARM FOR WIRE FEED UNIT

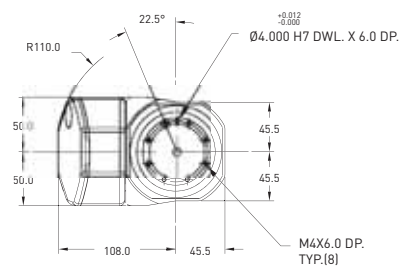
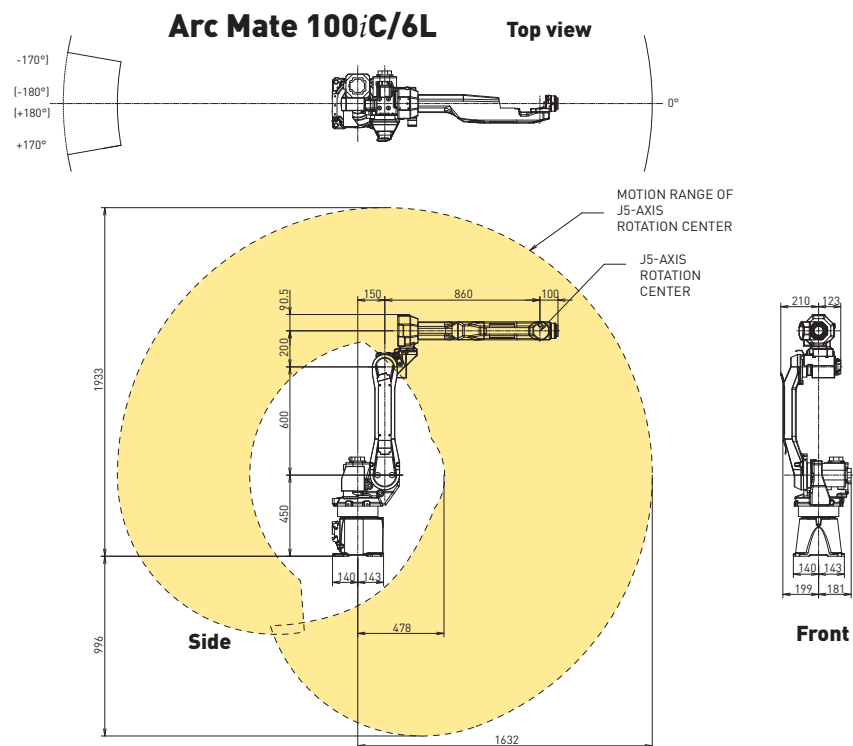
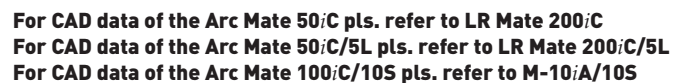
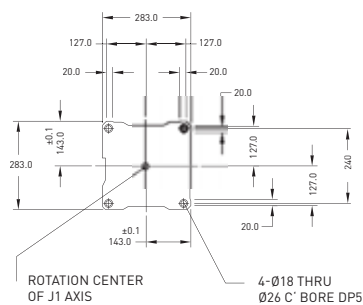
Reducing weld harness length, providing closer control to the wire feed

SPECIAL FEATURES FOR NEW GENERATION ARC MATE 100iC, ARC MATE 100iC/6L, ARC MATE 120iC, ARC MATE 120iC/10L

INTEGRATED CABLE AND HOLLOW WRIST

- Hollow Wrist (50mm diameter) and cantilevered J3 Arm for integrated cables and hoses
- Integrated wire feed control cable, with shielding gas hose and welding power cables.
- Internal routing: the dress package follows the motion range of the robot
- Internal dress package for easy programming, operation and maintenance, longer cable life
- Avoid collisions and cable interference with work piece and fixturing and maximize tool rotation range





Top view

Angular range: -170° to $+170^{\circ}$ (marked as $[-185^{\circ}]$ to $[+185^{\circ}]$)

Side

Dimensions (mm): 2186, 1089, 1811, 406, 170, 173, 525, 790, 250, 103, 150, 835, 100.

Front

Dimensions (mm): 277, 154, 170, 173, 277, 252.

Labels: MOTION RANGE OF J5 AXIS ROTATION CENTER, J5 AXIS ROTATION CENTER.

Top view

Rotation range: -170° to $+170^{\circ}$ (indicated by a dashed line and arc). A specific range of $(+185^{\circ})$ to (-185°) is also marked.

Side

Overall height: 2384

Base height: 1287

Base width: 2009

Arm dimensions (from base to end effector):

- 103
- 150
- 1040
- 100
- 250
- 790
- 525
- 170
- 173
- 503

Front

Overall height: 277

Base width: 277

Arm dimensions (from base to end effector):

- 277
- 154
- 170
- 173
- 252

MOTION RANGE OF J5 AXIS ROTATION CENTER

J5 AXIS ROTATION CENTER

Technical drawing of the front view of a square flange. The drawing includes the following dimensions and features:

- Overall square flange dimensions: 300 mm by 300 mm.
- Central circular bore diameter: 173 ± 0.1 mm.
- Four mounting holes: 4-Ø18 THRU Ø26 C' BORE DP5.
- Distance from center to mounting hole center: 150 mm (horizontal) and 150 mm (vertical).
- Distance from flange outer edge to mounting hole center: 20 mm (horizontal) and 20 mm (vertical).
- Section line A-A is shown, indicating a cross-section through the flange.
- Detail view of the flange thickness: 15 mm.

Technical drawing of a circular mechanical component, likely a valve or flange, showing front and side views with dimensions.

Dimensions:

- Overall diameter: Ø56
- Inner bore diameter: Ø4.000 H7 DWL. X 6.0 DP.
- Flange thickness: 62
- Outer diameter of mounting holes: 62
- Mounting hole pitch circle diameter: Ø56
- Mounting hole diameter: M4X6.0 DP. TYP.[15]
- Internal thread: +0.012 / 0
- Radius: R 120
- Angle: 22.5°
- Hollow shaft diameter: HOLLOW Ø.50
- Overall width: 119
- Distance from center to mounting hole center: 56.5
- Side view height: 75