

# FANUC Robot LR Mate 200iD



## FEATURES

LR Mate 200iD is a human arm sized mini robot.

- The slim arm minimizes interference to peripheral equipment at narrow space.
- Standard arm (717mm reach), short arm (550mm reach), long arm (911mm reach), clean type, water-proof type for washing and 5 axes high speed type are available.
- The lightest mechanical unit in its class realizes easy integration into a machine or upside-down mounting on a frame.
- High rigidity arm and the most advanced servo technology enable smooth motion without vibration in high speed operation.
- Wrist load capacity is enhanced extremely. It makes efficiency to increase by handling plural work pieces.
- Sensor cable, auxiliary axis cable, solenoid valve, air tube and I/O cable for device control are integrated in the arm. It realizes easy hand cabling. (option for limited model)
- Dust and water proof ability is enhanced to IP69K for mechanical unit. It expands various application. (option for limited model)
- Various intelligent functions are available as option, such as “robot link” that synchronizes plural robots operation, “soft float” that enables the hand to follow the work piece and “collision detection” that minimizes damage by interference to peripheral equipment.
- Advanced intelligent functions are available as an option, such as *i*RVision (integrated vision) and part insertion by force sensor.

## Application Example



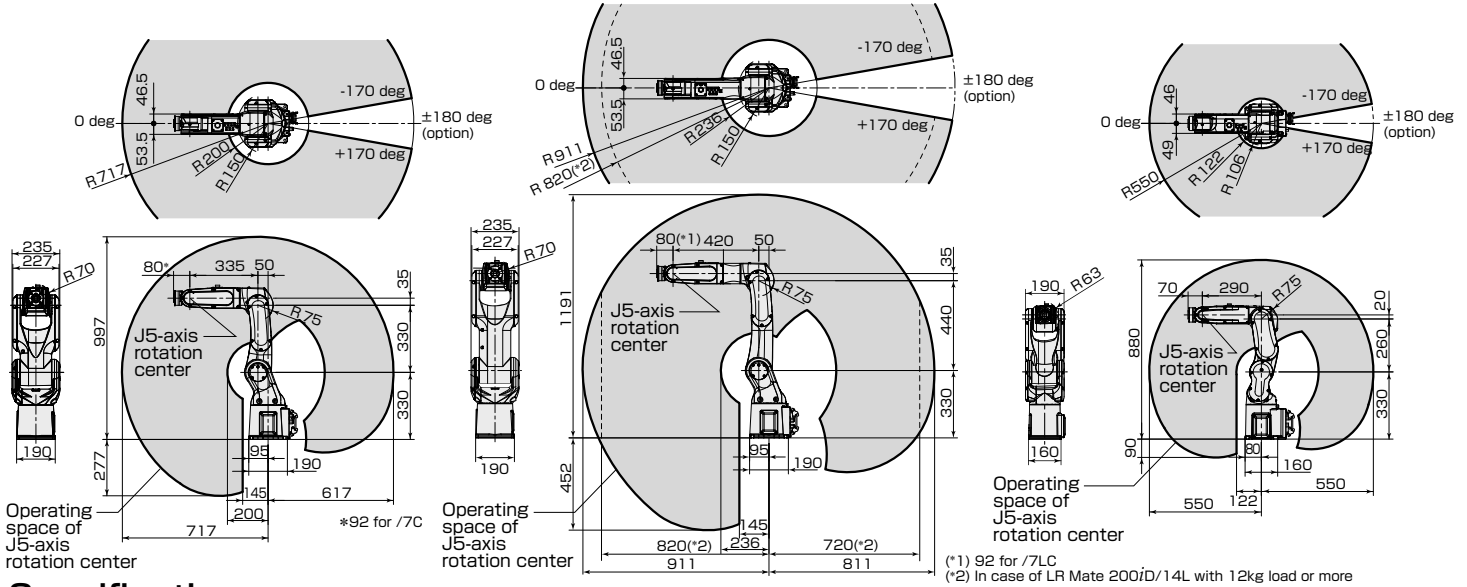
Load/unload from ROBOTDRILL

# Operating space

LR Mate200iD, /7C, /7WP, /7H

LR Mate200iD/7L, /7LC, /14L

LR Mate200iD/4S



## Specifications

Model	LR Mate 200iD LR Mate 200iD/7C LR Mate 200iD/7WP	LR Mate 200iD/7H	LR Mate 200iD/7L LR Mate 200iD/7LC	LR Mate 200iD/14L	LR Mate 200iD/4S	
Controlled axes	6 axes		5 axes	6 axes		
Reach	717 mm		911 mm	911 mm (load capacity < 12 kg) 820 mm (load capacity ≥ 12 kg)	550 mm	
Installation (Note 2)	Floor, Upside-down, Angle mount					
Motion range (Maximum speed)	J1 axis	340°/360° (option) (450°/s) 5.93 rad/6.28 rad (option) (7.85 rad/s)		340°/360° (option) (370°/s) 5.93 rad/6.28 rad (option) (6.46 rad/s)	340°/360° (option) (120°/s) 5.93 rad/6.28 rad (option) (2.09 rad/s)(Note 3)	340°/360° (option) (460°/s) 5.93 rad/6.28 rad (option) (8.03 rad/s)
	J2 axis	245° (380°/s) 4.28 rad (6.63 rad/s)		245° (310°/s) 4.28 rad (5.41 rad/s)	245° (61°/s) 4.28 rad (1.06 rad/s)(Note 3)	230° (460°/s) 4.01 rad (8.03 rad/s)
	J3 axis	420° (520°/s) 7.33 rad (9.08 rad/s)		430° (410°/s) 7.50 rad (7.16 rad/s)	430° (58°/s) 7.50 rad (1.01 rad/s)(Note 3)	402° (520°/s) 7.02 rad (9.08 rad/s)
	J4 axis	380° (550°/s) 6.63 rad (9.60 rad/s)	250° (545°/s) 4.36 rad (9.51 rad/s)	380° (550°/s) 6.63 rad (9.60 rad/s)	380° (400°/s) 6.63 rad (6.98 rad/s)(Note 3)	380° (560°/s) 6.63 rad (9.77 rad/s)
	J5 axis	250° (545°/s) 4.36 rad (9.51 rad/s)	720° (1500°/s) 12.57 rad (26.18 rad/s)	250° (545°/s) 4.36 rad (9.51 rad/s)	250° (240°/s) 4.36 rad (4.19 rad/s)(Note 3)	240° (560°/s) 4.19 rad (9.77 rad/s)
	J6 axis	720° (1000°/s) 12.57 rad (17.45 rad/s)		720° (1000°/s) 12.57 rad (17.45 rad/s)	720° (400°/s) 12.57 rad (6.98 rad/s)(Note 3)	720° (900°/s) 12.57 rad (15.71 rad/s)
Max. load capacity at wrist	7 kg			14 kg	4 kg	
Allowable load moment at wrist	J4 axis	16.6 N·m		31.0 N·m	8.86 N·m	
	J5 axis	16.6 N·m	4.0 N·m 5.5 N·m (option)	16.6 N·m	8.86 N·m	
	J6 axis	9.4 N·m		9.4 N·m	4.90 N·m	
Allowable load inertia at wrist	J4 axis	0.47 kg·m <sup>2</sup>		0.66 kg·m <sup>2</sup>	0.20 kg·m <sup>2</sup>	
	J5 axis	0.47 kg·m <sup>2</sup>	0.046 kg·m <sup>2</sup> 0.15 kg·m <sup>2</sup> (option)	0.47 kg·m <sup>2</sup>	0.66 kg·m <sup>2</sup>	0.20 kg·m <sup>2</sup>
	J6 axis	0.15 kg·m <sup>2</sup>		0.15 kg·m <sup>2</sup>	0.30 kg·m <sup>2</sup>	0.067 kg·m <sup>2</sup>
Repeatability (Note 4)	± 0.01 mm					
Mass (Note 5)	25 kg	24 kg		27 kg	20 kg	
Installation environment	Ambient temperature : 0 to 45°C Ambient humidity (Note 8) : Normally 75%RH or less (No dew nor 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) During short distance motions, the axis speed may not reach the maximum value stated.

Note 2) Angle mounting needs J1 and J2 axis motion range restriction according with the payload, except for LR Mate 200iD/4S.

Note 3) Maximum operating speed of LR Mate 200iD/14L is limited under 500mm/s.

Note 4) Compliant with ISO9283.

Note 5) Without controller.

Note 6) The liquids that deteriorate the sealing members, such as organic solvents, acids, alkalis, and chloric coolants, must not be used.

Note 7) Cleanliness of the clean type (/7C, /7LC) is class 10 (ISO class 4) with white paint, antirust surface and food grade grease.

Note 8) Except for LR Mate 200iD/7WP.

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