

# **SPECIFICATION OF ROBOT**

**MX350LFD44**

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KAWASAKI HEAVY INDUSTRIES LTD.  
ROBOT DIV.

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# 1. Specification of Robot

[1] Robot Arm															
1. Model	MX350L-A														
2. Type	Articulated robot														
3. Degree of freedom	6 axes (Option 7 axes)														
4. Axis specification	Operating axis	Max. operating range	Max. speed												
	Arm rotation (JT1)	+180° ~ -180°	80°/s												
	Arm out-in (JT2)	+ 90° ~ - 45°	70°/s												
	Arm up-down (JT3)	+ 20° ~ -115°	70°/s												
	Wrist swivel (JT4)	+360° ~ -360°	80°/s												
	Wrist bend (JT5)	+110° ~ -110°	80°/s												
	Wrist twist (JT6)	+360° ~ -360°	120°/s												
	Linear traverse ( - )	2000 mm (Standard)	1000 mm/s												
5. Repeatability	±0.5 mm (at the tool mounting surface)														
6. Max. payload	350 kg														
7. Max. linear interpolation speed	2000 mm/s														
8. Load capacity of wrist	<table border="1"> <thead> <tr> <th></th> <th>Max. torque</th> <th>Moment of inertia*</th> </tr> </thead> <tbody> <tr> <td>JT4</td> <td>2740 N·m</td> <td>400 kg·m<sup>2</sup></td> </tr> <tr> <td>JT5</td> <td>2740 N·m</td> <td>400 kg·m<sup>2</sup></td> </tr> <tr> <td>JT6</td> <td>1960 N·m</td> <td>259 kg·m<sup>2</sup></td> </tr> </tbody> </table>				Max. torque	Moment of inertia*	JT4	2740 N·m	400 kg·m <sup>2</sup>	JT5	2740 N·m	400 kg·m <sup>2</sup>	JT6	1960 N·m	259 kg·m <sup>2</sup>
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<p>Note * Each value in this table shows allowable moment of inertia of JT4/JT5/JT6 when max. allowed torque is applied to each axis. If more detailed data is required for your application, please contact Kawasaki.</p>															
9. Driving motor	Brushless AC Servomotor														
10. Working range	See attached drawing														
11. Mass	2800 kg (without options)														
12. Color	Munsell 10GY9/1 equivalent														
13. Installation	Floor mounting														
14. Environment cond.	(Temperature) 0 ~ 45 °C, (Humidity) 35 ~ 85 %, no dew, nor frost allowed														
15. Built-in utilities	Pneumatic pipings ( φ 12 × 2 lines )														
	Wirings for valves to operate the hand (DC24 V × 7 circuits)														
16. Options	Adjustable mechanical stoppers JT1/JT2/JT3														
	Limit switches JT1/JT2/JT3														
	Forklift pockets for transport														
	Color (Munsell )														
	Traverse unit (Stroke mm)														
	Internal signal harness														
	Double solenoid valve (1 circuit/2 circuits)														
	Single solenoid valve (1 circuit/2 circuits)														
	Double solenoid valve (1 circuit) and single solenoid valve (1 circuit)														
	Air cleaning equipment (filter, regulator, mistseparator)														
	Piping for cooling water														
17. Others	Consult Kawasaki about maintenance parts and spare parts.														

[2] Controller		
1. Model	D40/D42/D43/D44	
2. Construction	Self-supported type	
3. Dimensions	See attached drawing	
4. Number of controlled axes	6 axes for D40/D42/D44, 5 axes for D43 (depends on number of axes of arm) 7/8 axes(built-in addition, option), Max.16 axes(external additional amplifier, option)	
5. Servo control and drive system	Full Digital Servo System	
6. Type of control	Teach mode	Joint, Base, Tool, Fixed Tool (option) operation mode
	Repeat mode	PTP, CP control mode Joint, Linear, Circular (option) interpolation
7. Teaching method	Teaching or AS language programming	
8. Memory capacity	1 MB (Includes system memory)	
9. External operation signals	External Motor Power Off, External Hold, etc.	
10. General purpose signals	Input signals	32 channels (Includes dedicated signals)
	Output signals	32 channels (Includes dedicated signals)
11. Operation panel	Basic Operation Switches (Motor Power On, Cycle Start, Error Reset, Emergency Stop, Hold/Run, Teach/Repeat)	
12. Cable length	Power/Signal cable	10 m
	Teach Pendant cable	10 m
13. Mass	See attached drawing	
14. Power requirement	AC380/400/415/440 V±10% with transformer, 50/60 Hz, 3 phases, 5.9 kVA(D40), 11.4 kVA(D42/D43/D44)	
15. Ambient temperature	0 - 45 °C	
16. Relative humidity	35 - 85 % (non-condensation)	
17. Ground	Less than 100 Ω (robot dedicated ground) Leakage current: max. 10 mA	
18. Color	Munsell: 10GY9/1 equivalent	
19. Teach Pendant	Color display (6.4 inch LCD) with touch panel Emergency Stop, Teach Lock and Deadman Switches 58 hardware keys	
20. Auxiliary storage	PC card interface	
21. Motor brake release	Manual brake release switch	
22. Options		
Memory capacity	4 MB (Includes system memory)	
General purpose signals	Input signals	64/96/128 channels (Includes dedicated signals)
	Output signals	64/96/128 channels (Includes dedicated signals)
Power/Signal cable	5 m, 15 m	
Teach Pendant cable	5 m, 15 m	
PC card	16/32/64/128 MB	
PC cable	1.5 m, 3 m	
Others	Built-in PLC, LAN, Interbus-S, analog input and so on	
23. Others	Consult Kawasaki about maintenance parts and spare parts.	



D44 (MX) CONTROLLER

MASS : 190kg

