

SPECIFICATION OF ROBOT

MT400NFE42

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KAWASAKI HEAVY INDUSTRIES LTD.
ROBOT DIV.

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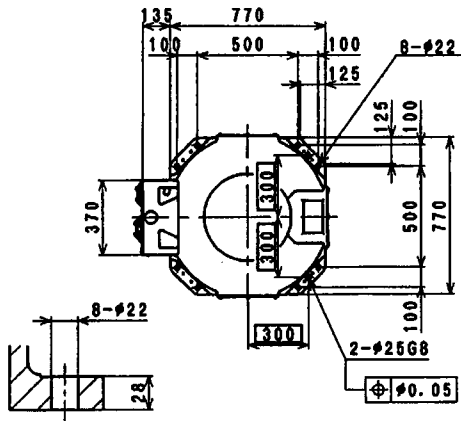
1. Specification of Robot

[1] Robot Arm

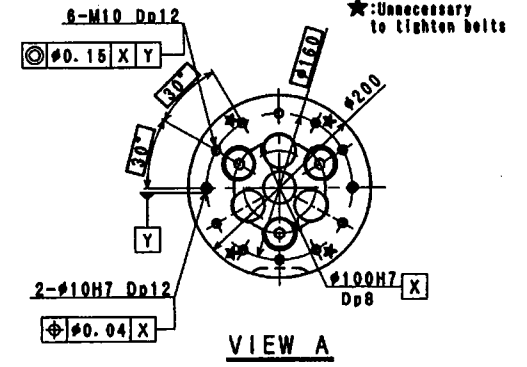
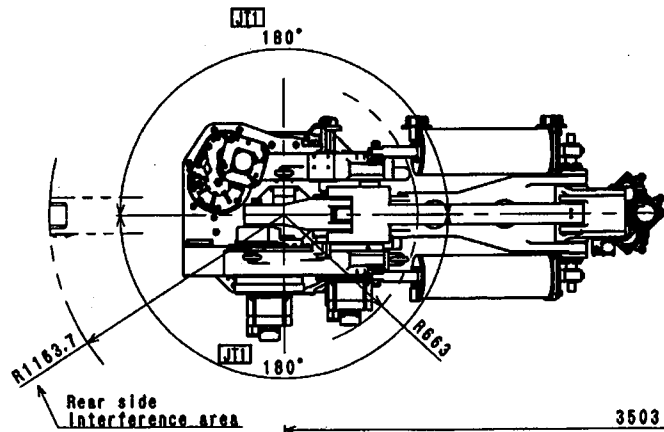
1. Model	MT400N-D		
2. Type	Articulated robot		
3. Degree of freedom	6 axes (Option 7 axes)		
4. Axis specification	Operating axis	Max. operating range	Max. speed
	Arm rotation (JT1)	+180° ~ -180°	80°/s
	Arm out-in (JT2)	+15° ~ -135°	70°/s
	Arm up-down (JT3)	+106° ~ -30°	70°/s
	Wrist swivel (JT4)	+360° ~ -360°	70°/s
	Wrist bend (JT5)	+120° ~ -120°	70°/s
	Wrist twist (JT6)	+360° ~ -360°	130°/s
	Linear traverse (-)	2000 mm (Standard)	1000 mm/s
5. Repeatability	±0.5 mm (at the tool mounting surface)		
6. Max. payload	400 kg (If payload is between 380 and 400kg , the tool mounting surface always looks down.)		
7. Max. linear interpolation speed	2200 mm/s		
8. Load capacity of wrist	In case of payload under 380kg		
		Max. torque	Moment of inertia*
	JT4	2150 N·m	200 kg·m ²
	JT5	2150 N·m	200 kg·m ²
	JT6	980 N·m	147 kg·m ²
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.			
In case of payload between 380 and 400kg Consult Kawasaki.			
9. Driving motor	Brushless AC Servomotor		
10. Working range	See attached drawing		
11. Mass	2600 kg (without options)		
12. Color	Munsell 10GY9/1 equivalent		
13. Installation	Rack 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)		
	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)			
17. Others	Consult Kawasaki about maintenance parts and spare parts.		

[2] Controller		
1. Model	E40/E42/E43/E44	
2. Enclosure	Enclosed structure / Indirect cooling system	
3. Dimensions	See attached drawing	
4. Number of controlled axes	6 axes for E40/E42/E44, 5 axes for E43 (depends on number of axes of arm) 7/8/9 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	8 MB	
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	FastCheck/Teach/Repeat SW, Emergency Stop SW, Control power lamp	
12. Cable length	Power/Signal cable	10 m
	Teach Pendant cable	10 m
13. Mass	See attached drawing	
14. Power requirement	AC380 V - AC415 V \pm 10%, 50/60 Hz, 3 phases, Max 4.9 kVA(E40), Max 9.9 kVA(E42/E43/E44)	
15. Ground	Less than 100 Ω (robot dedicated ground) Leakage current: max. 10 mA	
16. Ambient temperature	0 - 45 °C	
17. Relative humidity	35 - 85 % (non-condensation)	
18. Color	Munsell: 10GY9/1 equivalent	
19. Teach Pendant	TFT color display (5.7 inch LCD) with touch panel Emergency Stop SW, Teach Lock SW and Enable SW	
20. Safety Circuit	Category: 3, Performance Level: d (EN ISO13849-1: 2008) ★	
21. AC Outlet	AC220 - 240V Outlet (depends on Primary input voltage)	
22. Motor brake release	Manual brake release switch	
23. Options		
General purpose signals	Input signals	64/96/128 channels
	Output signals	64/96/128 channels
I/O connector	D-SUB 37pin(male,female) with cover	
Operation panel	Motor Power ON, Cycle start, RUN/HOLD, Error reset, Error lamp	
Power/Signal cable	5m, 15m	
Teach Pendant cable	5m, 15m	
Auxiliary storage	USB memory	
PC cable	1.5 m, 3 m	
Teach Pendant option	Teach Pendant Stand, Cable hook, connector for TP less	
Others	Cooler, LED Light, Field BUS, Software PLC, Analog input/output, Conveyor Synchronization, Vision and so on	
24. Others	Consult Kawasaki about maintenance parts and spare parts.	

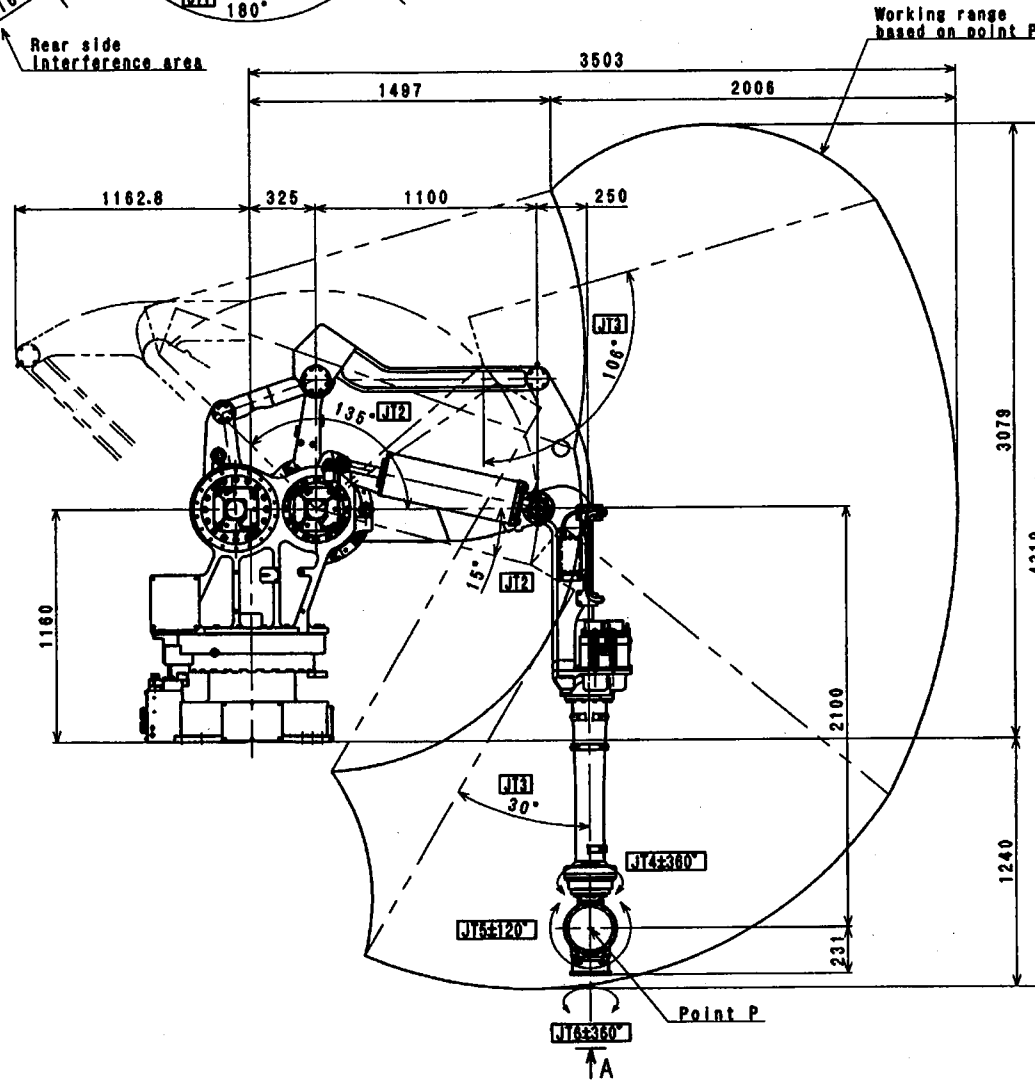
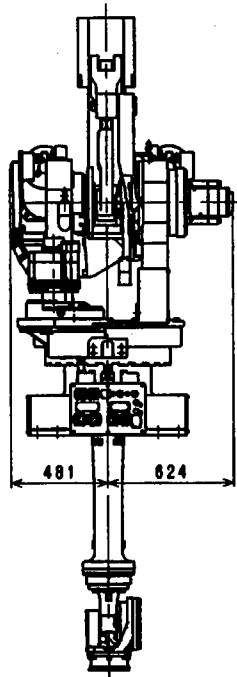
★ Category and Performance level (PL) are determined by the whole system and conditions.□
The safety circuit of this controller is available in the system of category: up to 3, PL: up to d.



Installation Dimensions



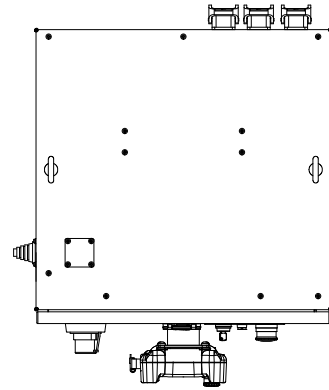
VIEW A



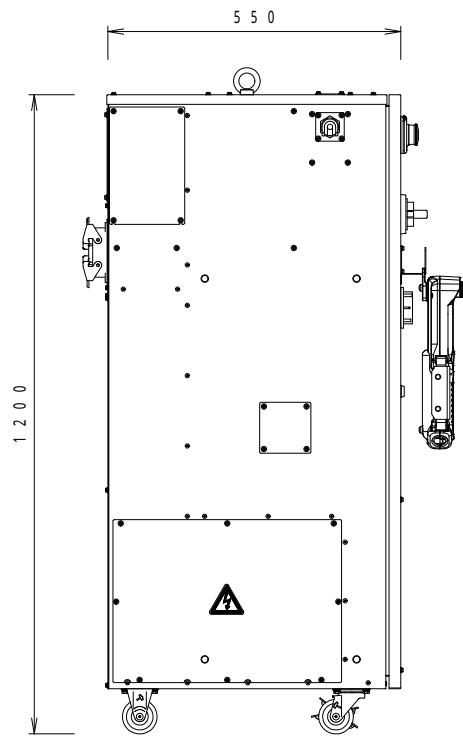
MT400N
WORKING RANGE

E 4 2 C O N T R O L L E R

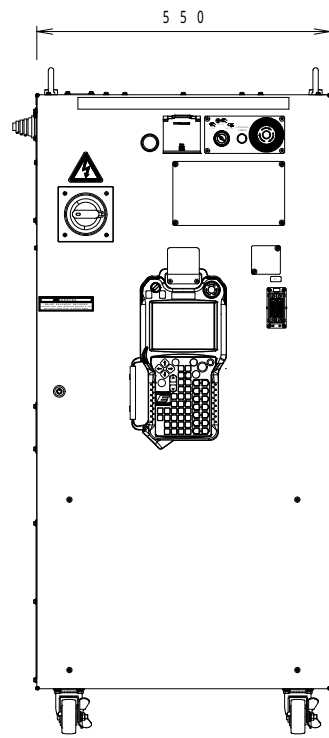
M A S S : 1 8 0 K g



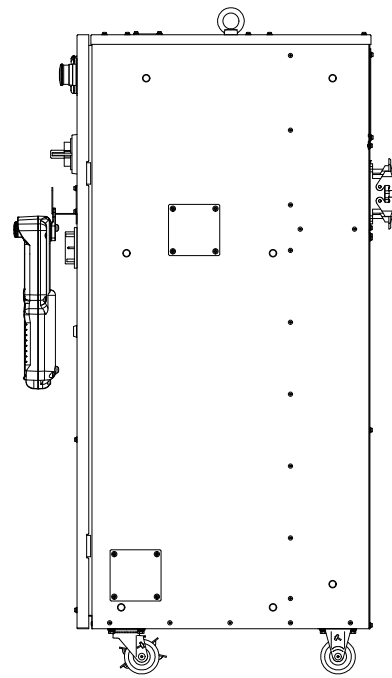
T O P V I E W



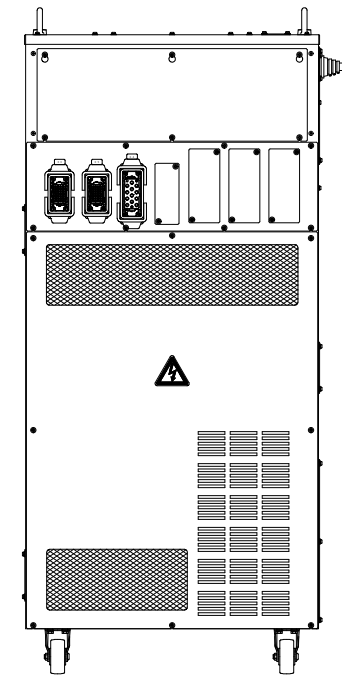
S I D E V I E W



F R O N T V I E W



S I D E V I E W



R E A R V I E W