Standard specifications

MS005NGE73031

(Electric tool spec.)

July 10, 2015

KAWASAKI HEAVY INDUSTRIES, LTD.

ROBOT DIVISION

Specification :	90101-2308DEB
(Arm) :	90151-0043DEB
(Controller) :	90152-0012DEA

[1] Robot Arm

1. Model	MS005N-B03x
2. Name	MSR05N
3. Type	Articulated robot
4. Degree of freedom	8 axes (Arms 7axes)

5. Axis specification

Operating axis		Max. operating range	Max. speed
Shoulder rotatic	(JT1)	＋180 ° ～－180 °	130 °/s
Shoulder out-in	(JT2)	＋135 ° ～－90 °	130 °/s
Arm up-down	(JT3)	＋120 ° ～－120 °	215 °/s
Wrist swivel	(JT4)	＋180 ° ～－180 °	300 °/s
Wrist bend	(JT5)	＋115 ° ～－115 °	300 °/s
Wrist twist	(JT6)	＋180 ° ～－180 °	480 °/s
Arm rotation	(JT7)	＋180 ° ～－180 °	215 °/s

6. Repeatability	±0.10 mm (at the tool mounting surface)
7 Max. payload	5 kg
8 Max. speed	6600 mm/s (at the center of tool mounting surface) * It isn't linear motion speed

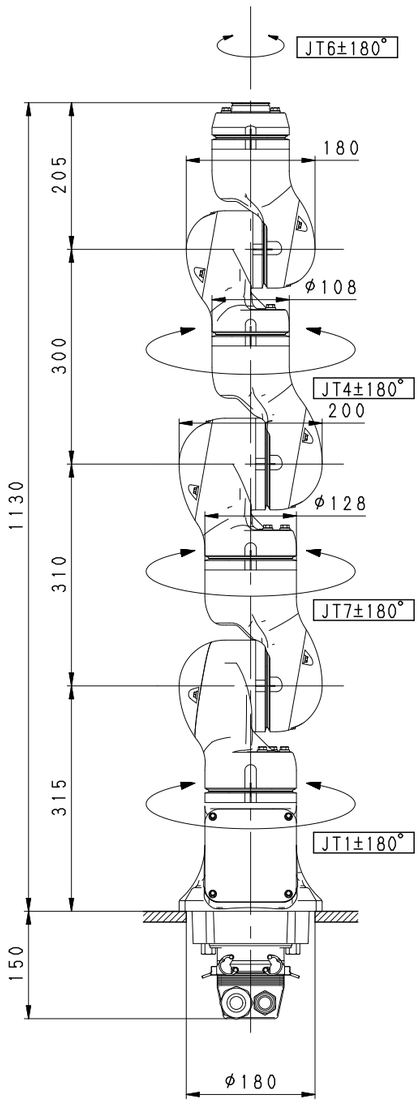
9. Load capacity of wrist

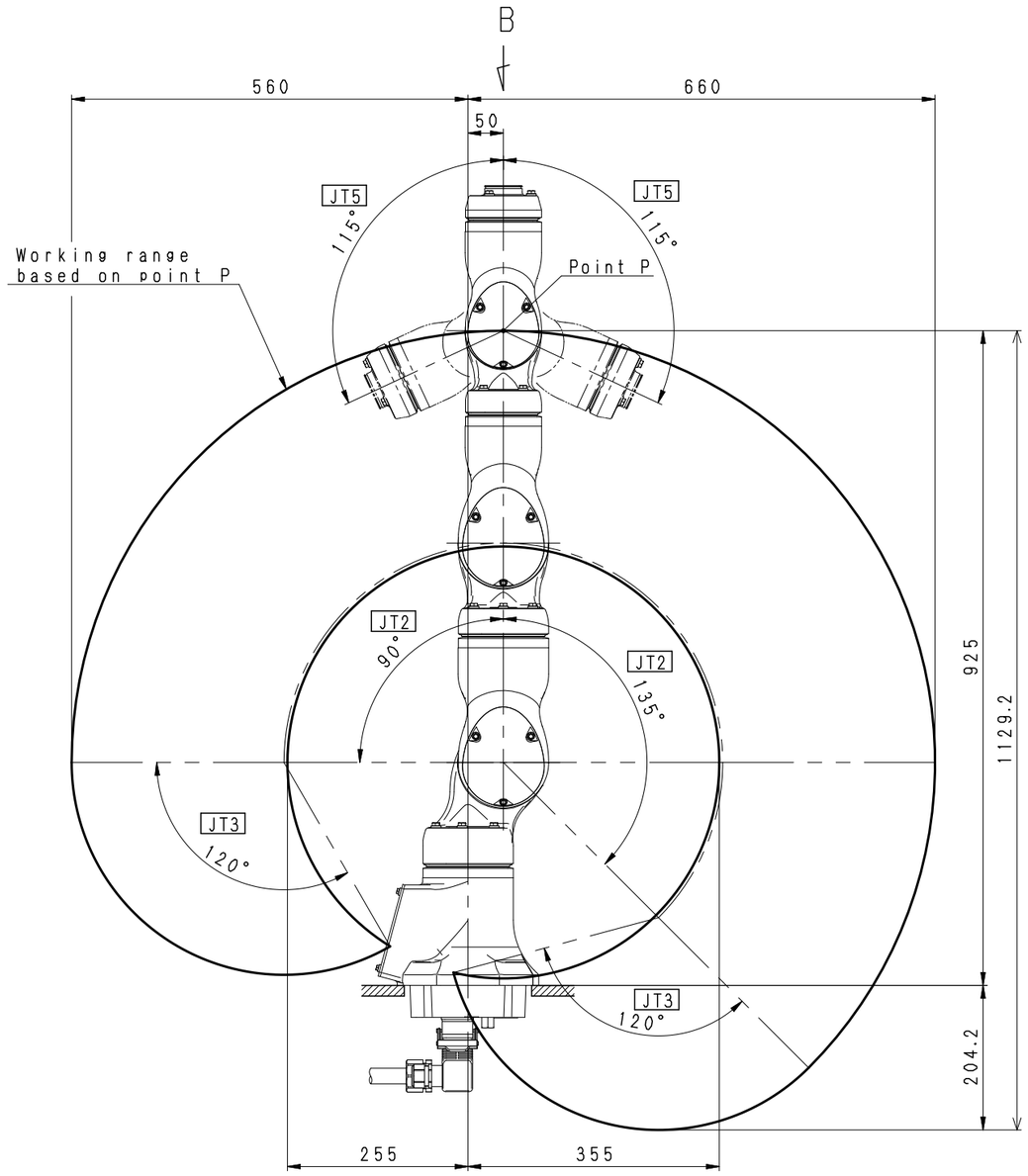
	Max. torque	Moment of inertia*
JT4	17.0 N･m	0.90 kg･m^2
JT5	17.0 N･m	0.90 kg･m^2
JT6	7.0 N･m	0.40 kg･m^2

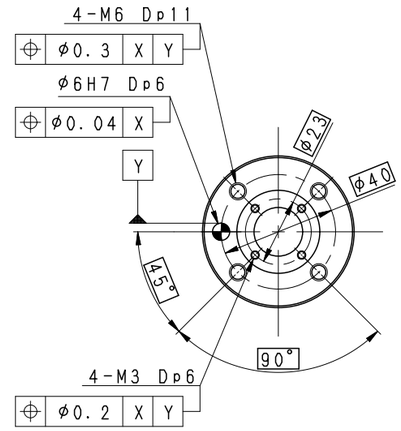
Note* Each value in this table shows allowable moment of inertia of JT4/JT5/JT6 when max. allowed torque is applied to each axis. If more detailed data is required for your application, please contact Kawasaki.

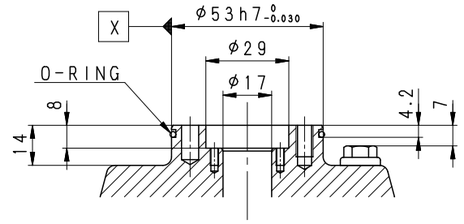
10. Driving motor	Brushless AC Servomotor
11. Working range	See attached drawing
12. Mass	50 kg (without options)
13. External facing	Mirror-finished Stainless steel (316L equivalent)
14. Installation	Floor mounting
15. Environment cond.	(Temperature) 10 ～35 °C, (Humidity) 35 ～ 85 %, no dew, nor frost allowed
16. Cleanliness	ISO Class 5
17. Degree of protection	IP69K (except tool mounting surface and connectors box)
18. Built-in utilities	Through harness(AWG23: 3 twisted pairs ,AWG25: 4 twisted pairs) wired inside robot a
19. Overhaul intarval	15000Hours (Conditonal interval: 20000Hours)
20. Options	
21. Others	Consult Kawasaki about maintenance parts and spare parts.

[2] Controller			
1. Model	E73/E74		
2. Enclosure	Open structure / Direct cooling system		
3. Dimensions	See attached drawing		
4. Number of controlled axes	8 axes		
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	Teach/Repeat SW, Emergency Stop SW, Control power lamp		
12. Cable length	Power/Signal cable	5 m	
	Teach Pendant cable	5 m	
13. Mass	See attached drawing		
14. Power requirement	AC200 V - AC240 V±10%, 50/60 Hz, 1 phases, Max 1.5 kVA(E73), Max 3 kVA(E74)		
15. Ground	Less than 100 Ω (robot dedicated ground) Leakage current: max. 100 mA		
16. Ambient temperature	0 - 45 ℃ (Horizontal mount), 0 - 40℃ (Vertical mount)		
17. Relative humidity	35 - 85 % (non-condensation)		
18. Surface Treatment	Zinc Plating, Trivalent chromate finish		
19. Teach Pendant	TFT color display (5.7 inch LCD) with touch panel Emergency Stop SW, Teach Lock SW and Enable SW		
20. Options			
General purpose signals	Input signals	64/96 channels	
	Output signals	64/96 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	10m, 15m		
Teach Pendant cable	10m, 15m		
Motor brake release	Manual brake release switch BOX		
Auxiliary storage	USB memory		
PC cable	1.5 m, 3 m		
Teach Pendant option	Connector for TP less		
Others	Field BUS, Software PLC, Analog input/output, Conveyor Synchronization, Vision and so on		
21. Others	Consult Kawasaki about maintenance parts and spare parts.		

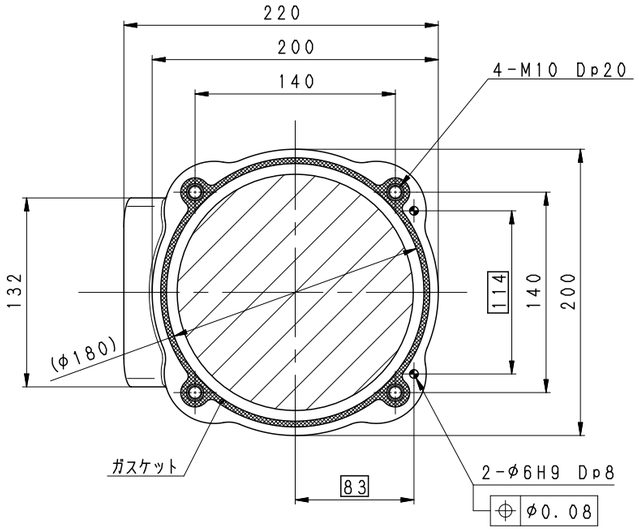








VIEW B



VIEW A

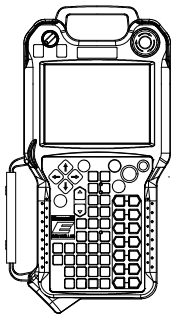
(Installation Dimensions)

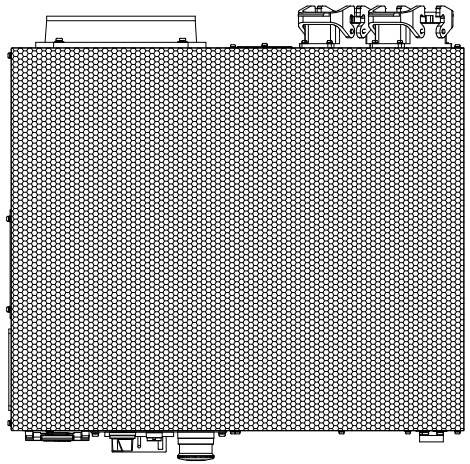
MSR05N

WORKING RANGE

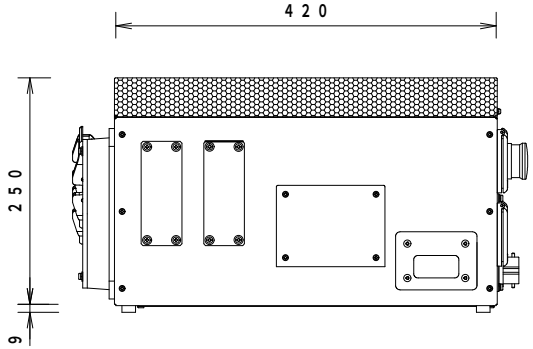
E73／E74 CONTROLLER

MASS：30Kg

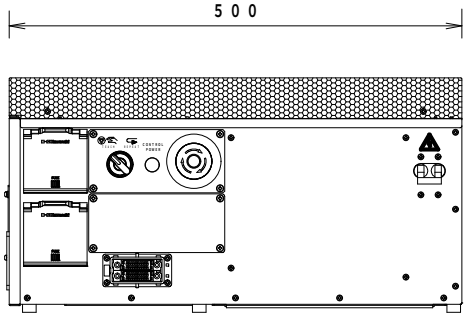




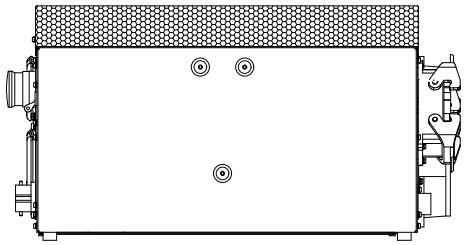
TOP VIEW



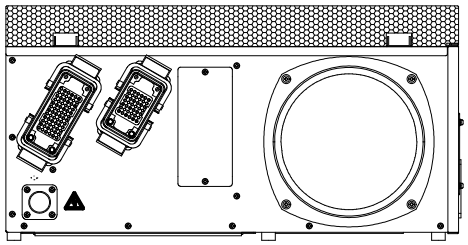
SIDE VIEW



FRONT VIEW



SIDE VIEW



REAR VIEW