

SPECIFICATION OF ROBOT

RD080NEE42

2nd Edition : Nov.14.2013

KAWASAKI HEAVY INDUSTRIES LTD.

ROBOT DIV.

Doc, No: 90101-1964DEB

1. Specification of Robot

[1] Robot Arm									
1. Model	RD080N-A								
2. Type	Articulated robot								
3. Degree of freedom	5 axes								
4. Axis specification	Operating axis	Max. operating range	Max. speed						
	Arm rotation (JT1)	+180° ~ -180°	180°/s						
	Arm out-in (JT2)	+140° ~ -105°	180°/s						
	Arm up-down (JT3)	+ 40° ~ -205°	175°/s						
	Wrist twist (JT4)	+360° ~ -360°	360°/s						
	Wrist bend* (JT5)	+ 10° ~ - 10°*	—						
* Motion range of JT5 is ±10° to the vertical direction.									
5. Palletizing Capacity (Maximum)	Approx. 900 cycles/h (Load: 80 kg, Vertical: 400 mm & Horizontal: 2000 mm)								
6. Repeatability	±0.07 mm (at the tool mounting surface)								
7. Max. payload	80 kg								
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>—</td> <td>13.7 kg·m²</td> </tr> </tbody> </table>				Max. torque	Moment of inertia*	JT4	—	13.7 kg·m ²
		Max. torque	Moment of inertia*						
JT4	—	13.7 kg·m ²							
Note* Restrictions are applied to the center of gravity. See the Installation and Connection Manual. If more detailed data is required for your application, please contact Kawasaki.									
9. Driving motor	Brushless AC Servomotor								
10. Working range	See attached drawing								
11. Mass	540 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. Degree of protection	Wrist : IP67 Arm : IP65								
16. Built-in utilities	Pneumatic pipings (φ 10 × 2 lines)								
17. Options	Degree of protection of arm : IP67								
	Sensor harness (8 circuits), wired inside robot arm								
	Optional harness (7 pairs), wired inside robot arm								
	Double solenoid/ Single solenoid valves (4 units max.)								
	Air cleaning equipment (filter, regulator, mistseparator)								
	Adjustable mechanical stoppers JT1/JT2/JT3								
	Color (Munsell								
) Traverse unit (Stroke								
) Arm installation stand (height 600 mm, 300 mm)								
) Arm installation plate (750 mm × 750 mm)								
18. Others	Consult Kawasaki about maintenance parts and spare parts.								

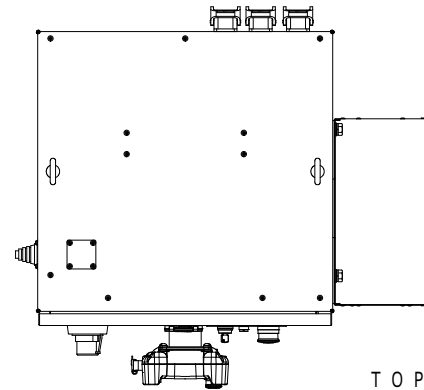
[2] Controller		
1. Model	E40/E42/E43/E44	
2. Enclosure	Enclosed structure / Indirect cooling system	
3. Dimensions	See attached drawing	
4. Number of controlled axes	6 axes for E40/E42/E44, 5 axes for E43 (depends on number of axes of arm) 7/8/9 axes(built-in addition, option), Max.16 axes(external 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±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.

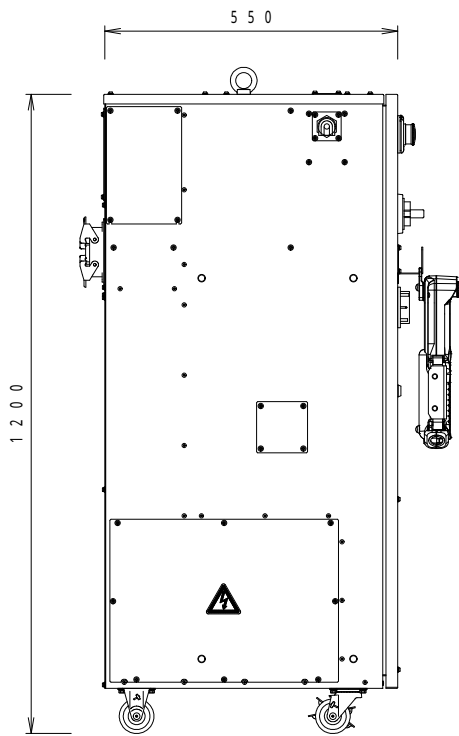
E 4 2 C O N T R O L L E R

(W i t h A d d i t i o n a l R e s i s t o r B o x)

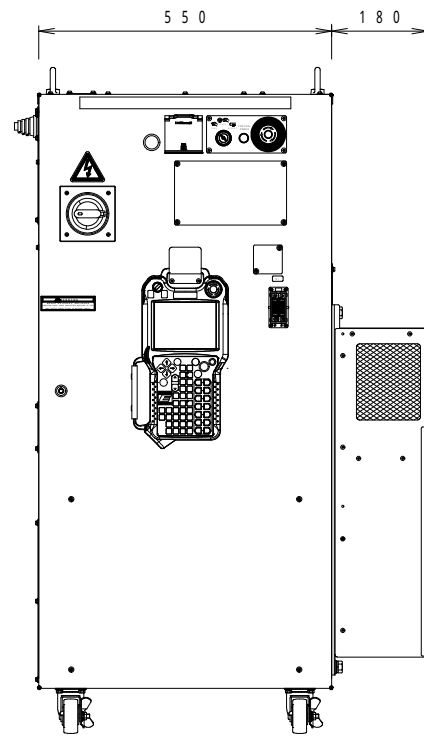
M A S S : 1 9 5 K g



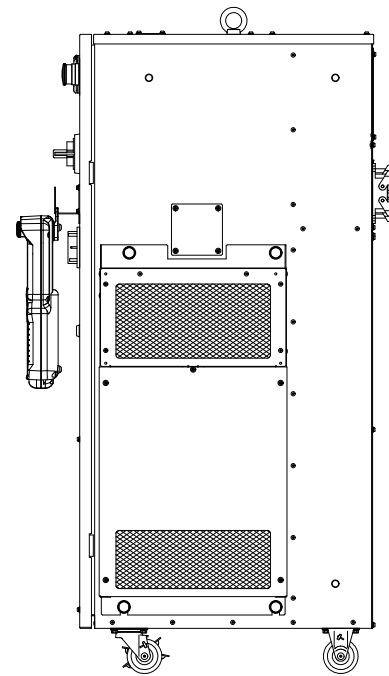
T O P V I E W



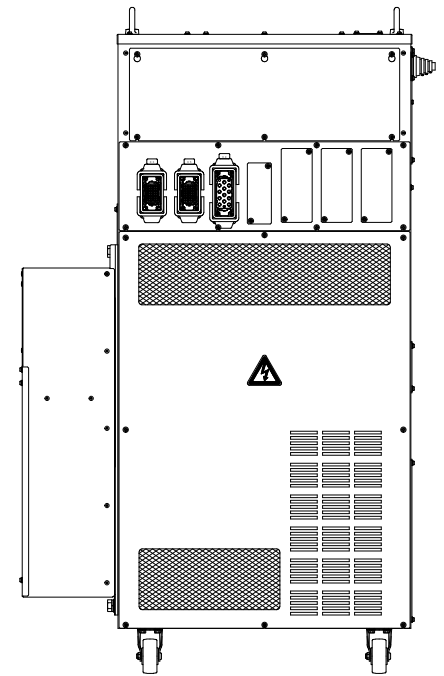
S I D E V I E W



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