Simple and friendly

Kawasaki Robot

EUROPE

PALLETIZER

up to 500 kg payload

»Simple and friendly« INTO THE FUTURE

Palletizing jobs in different weight classes are the domain of this application orientated robot series

»40 years of experience and state-of-the-art robot technology«

An extremely compact and light-weight design forms the basis for high speeds and rigidity as well as an enormous reach.

»Your goal is our task«

It was Kawasaki's intelligence and flexibility which made them build the most powerful robots in their class. Combined with a high-end control system, they reliably meet the demands of the most varied application fields – now, in the near and far future.

Kawasaki Palletizer

Synergy

Using the existing robot series, Kawasaki Robotics developed the Palletizer Series. Within this series, robots of the R-, Z-, and M- Series are used as the basis for the equivalent palletizer. Especially designed for palletizing, these robots are the ideal working machines for this application.

Flexibility

The right robot for each type of palletizing application. Cycle time, payload or max. working envelope. Based on the application focus you can find the applicable Robot Model to do the duty with maximum power.

Power

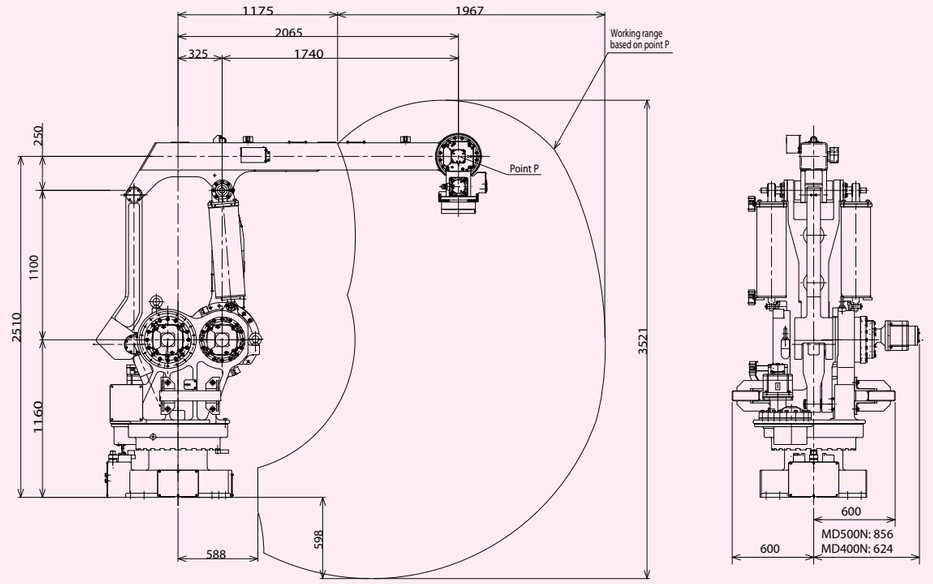
The data is telling its own tale! From 2,800 cycles per hour (see table) of the RD080N up to 500 kg payload of the MD500N, these robots are building a powerful and varied selection for your highest demands.

MO DEL		RD080N	ZD130S	ZD250S	MD400N	MD500N
Degrees of Freedom				4 Axes		
Maximum Reach*1		2100 mm	3255 mm	3255 mm	3142 mm	3142 mm
Maximum Payload		80 kg	130 kg	250 kg	400 kg	500 kg
Maximum Stroke	Axis 1	±180°	±180°	±180°	±180°	±180°
	Axis 2	+140° ~ -105°	+90° ~ -50°	+90° ~ -50°	+90° ~ -45°	+90° ~ -45°
	Axis 3	+40° ~ -205°	+15° ~ -120°	+15° ~ -120°	+14° ~ -125°	+14° ~ -125°
	Axis 4	±360°	±360°	±360°	±360°	±360°
Maximum Speed	Axis 1	180°/s	135°/s	95°/s	80°/s	70°/s
	Axis 2	180°/s	110°/s	90°/s	70°/s	65°/s
	Axis 3	175°/s	130°/s	95°/s	70°/s	45°/s
	Axis 4	360°/s	400°/s	190°/s	180°/s	160°/s
Max. torque of inertia (payload)	Wrist	13.7 kg/m²	50 kg/m²	100 kg/m²	200 kg/m²	250 kg/m²
Repeatability (Measure Point: Center of Flange)		± 0.07 mm	± 0.5 mm	± 0.5 mm	± 0.5 mm	± 0.5 mm
Weight		540 kg	1350 kg	1350 kg	2650 kg	2680 kg
Palletizing performance data (vertical/horizontal) RD080N*2: 75 mm/900 mm RD080N*3 : 400 mm/2000 mm ZD/MD: 400 mm/2000 mm		*2 2800 cycles/h (80 kg) *3 900 cycles/h (80 kg)	1800 cycles/h (60 kg) 1500 cycles/h (130 kg)	850 cycles/h (250 kg)	740 cycles/h (400 kg)	600 cycles/h (500 kg)
Controller		E42	E43	E43	E44	E44
Color		Munsell 10GY9/1 equivalent				
Installation		Floor				
Ambient Conditions	Temperature	0-45°				
	Humidity	35~85% (no Dew, nor Frost allowed)				
	Others	Installation Ambience must be free of: • Inflammable or corrosive Liquid or Gas • Electric Noise Interferences				
Application Media Upper Arm	input	12	12	12	12	12
	output	8	8	8	8	8
	air pipes	2 x 10 mm Ø	2 x 12 mm Ø	2 x 12 mm Ø	2 x 12 mm Ø	2 x 12 mm Ø

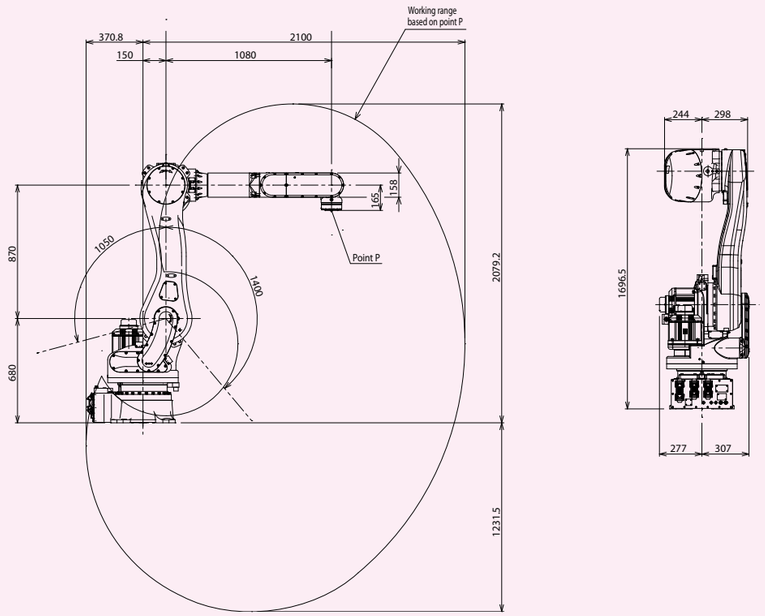
*1 Distance between center of Axis 1 and center of flange.

RD080N, MD400N and MD500N are using a compensating 5th axis to eliminate the parallelogram

Standard specifications

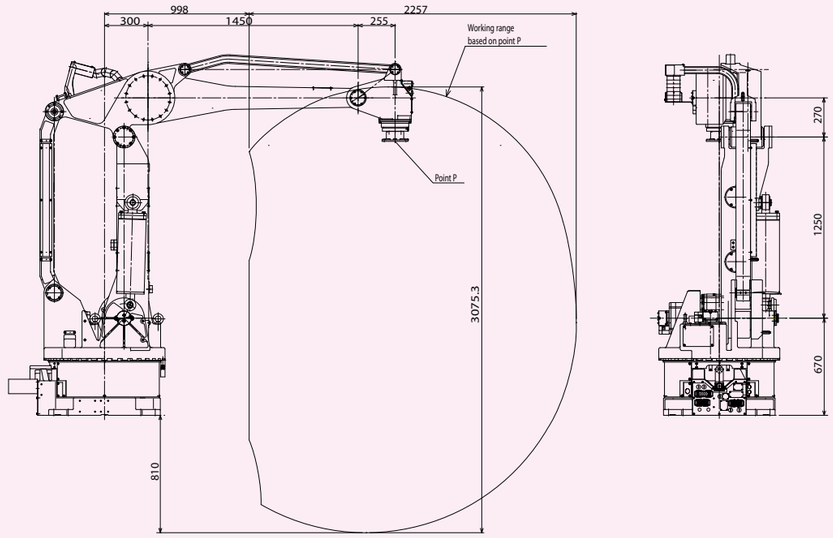


MD400N/MD500N



RD080N

Standard specifications



ZD130S/ZD250S

CONTROLLER

The E-Controller – technically mature, easy to operate and powerful

Compact, upgradeable and user-friendly

A maximum of 10 external axes may be integrated, up to three of which in the controller housing (E4x). All established bus systems (Interbus, Profibus, ProfiNet…) are supported. The integrated Soft PLC may be edited via Teach Pendant or even more comfortably at the PC (option). Custom-tailored user interfaces may be programmed and used for the simplified control of the robot and also peripheral devices. Motor voltage ON and program start may be activated directly via the manual control unit. The parallel display of two information screens (e.g. position and signal data) facilitates the process control.

System

Ultra-fast execution of programs, loading and storing processes as well as a precise continuous-path control and much more thanks to the up-to-date processor design and powerful components. 8 MB RAM (80,000 steps) and USB interface as standard.

Maintenance

»Simple and friendly« – Due to the optimized modular configuration of the Kawasaki control, maintenance work is exceptionally user-friendly. Furthermore integrated service and diagnosis tools guarantee increased safety in operation. Remote diagnosis via Ethernet is also included in the standard package.

MODEL		E42	E43	E44
Number of Controlled Axes		5 (16)	4 (16)	5 (16)
Servo Motors		Brushless AC Servomotors		
Position Detectors		Absolute Encoder		
Servo System		Full digital servo system		
Programming		Block or AS-Language		
Coordinate Systems		Joint, Base, Tool, external Tool		
Motion Control		Joint-, Linear- and Circular interpolated		
Signals	External	Motor power, Signal HOLD, etc.		
	Input	32 (optional 128)		
	Output	32 (optional 128)		
	Analogue Input (optional)	8/16		
	Analogue Output (optional)	4/8/12/16		
Memory		8 MB (ca. 80.000 steps)		
External Memory		2 x USB		
Data Interfaces	PC, Network, etc.	2 x RS-232C, 2 x Ethernet		
	Fieldbus (optional)	DeviceNet®, PROFIBUS®, PROFINET®, INTERBUS-S®, Ethernet/IP®, CC-Link®, CANopen®, Modbus TCP®, Control Net®		
Teach Pendant		6.4“ TFT LCD with Touch Panel, Emergency Stop SW, Teach-Lock, Deadman SW, Motor power, Program start, Hold/Run		
Operation Panel		Emergency Stop SW, Control Power, TEACH/REPEAT		
Cable Length (Controller – Arm), (Controller – Teach Pendant)		10 m (Arm: optional up to 40 m), (TP: optional up to 30 m)		
Dimensions (WxDxH mm)		730x550x1200		
Weight (kg)		195		
Power Requirements		AC 380-415V ± 10%, 50/60Hz, 3 Phases, 9,9kVA		
Ground		<100Ω, Max. Leakage Current 10mA		
Safety Category		3, Performance Level d (EN ISO13849-1:2008)		
Ambience Temperature / Humidity		0-45°C / 35-85% (no Dew, nor Frost allowed)		
Color		Munsell 10GY9/1 equivalent		

Note: Not all Options can be combined.

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Cautions to be taken to ensure safety

For those persons involved with the operation / service of your system, including Kawasaki Robot, they must strictly observe all safety regulations at all times. They should carefully read the Manuals and other related safety documents.

Products described in this catalogue are general industrial robots. Therefore, if a customer wishes to use the robot for special purposes, which might endanger operators or if the robot has any problems please contact us. We will be pleased to help you.

BE CAREFUL: As Photographs illustrated in this catalogue are frequently taken after removing safety fences and other safety devices stipulated in the safety regulations from the Robot operation system.

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