Kawasaki Robot Lineup



Our Product Philosophy is "Simple and friendly"

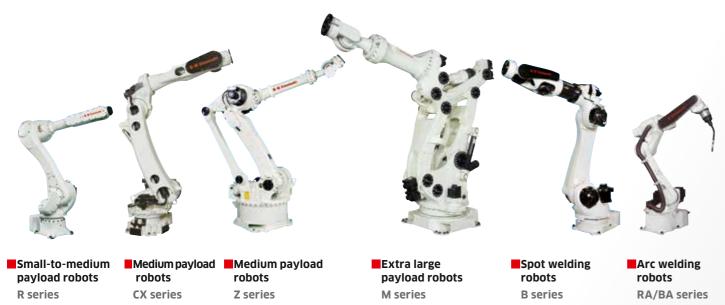
With more than 50 years experience in industrial robotics, we have consolidated our "state-of-the-art" technologies into productivity enhancing flexible automation solutions that are simple and friendly. Our product lineup offers comprehensive functionality with operational ease of use.

Kawasaki began the manufacture and sales of industrial robots in 1969. Since that time, we have consistently produced high quality, cost effective industrial robots featuring state-of-the-art technology for both the domestic and overseas markets.

Our broad product portfolio services a wide range of applications across diverse industries; from the assembly of miniature components weighing only a few grams, to the material handling of castings weighing 1.500 kg. For optimum control of the manipulator, our high-performance lineup is supported by our continuous development of control technology to improve function and operation.

Our human and environmentally friendly robot systems provide a high level of skill and intelligence. We hope that you will benefit from our technology and experience in your future automation projects to increase production, lower costs and improve quality.







Y series

duAro

RD/CP/MD/ZD

K series

2

MS/MC series

robots

Small-to-medium payload robots up to 80 kg

R series

Setting the benchmark in its class - higher speed and longer reach in a compact design.



Medium payload robots

up to 210 kg

CX series

Kawasaki's latest technology delivers increased robot motion speed and installation flexibility.

		RS003N	RS005N/005L	RS007N/007L	RS006L/010N	RS015X	RS010L/020N	RS030N/050N/080N
Applica	tion	• • • • •		• • • • • (•)		• • • • •	• • • • • (•)	• • • • •
Degree	of freedom (axes)	6						
Max. pa	ıyload (kg)	3	5	7	6/10	15	10/20	30/50/80
Max. re	ach (mm)	620	705/903	730/930	1.650/1.450	3.150	1.925/1.725	2.100
Repeata	ability *1 (mm)	±0,02	±0,02/±0,03	±0,02/±0,03	±0,03	±0,06	±0,05/±0,04	±0,06
	Arm rotation (JT1)	±160	±180	±180	±180	±180	±180	±180
	Arm out-in (JT2)	+15060	+13580	±135	+145105	+140105	+155105	+140105
Motion	Arm up-down (JT3)	+120150	+118172	±155/±157	+150163	+135155	+150163	+135155
range (°)	Wrist swivel (JT4)	±360	±360	±200	±270	±360	±270	±360
,	Wrist bend (JT5)	±135	±145	±125	±145	±145	±145	±145
	Wrist twist (JT6)	±360	±360	±360	±360	±360	±360	±360
	Arm rotation (JT1)	360	360/300	470/370	250	180	190	180
	Arm out-in (JT2)	250	360/300	380/310	250	180	205	180
Max.	Arm up-down (JT3)	225	410/300	520/410	215	200	210	185/185/160
speed (°/s)	Wrist swivel (JT4)	540	460	550	365	410	400	260/260/185
() - /	Wrist bend (JT5)	225	460	550	380	360	360	260/260/165
	Wrist twist (JT6)	540	740	1.000	700	610	610	360/360/280
Mass (kg)		20	34/37	35/36	150	545	230	555
Installa	tion			Floo	or, Ceiling, Optional: \	Wall		
Controller			F60		E01/F60	E02	E01	E02

Application: Assembly Dispensing Machine tending Material handling Material removal Palletizing Arc welding

		CX110L	CX165L	CX210L			
Applica	tion		• • • •				
Degree	of freedom (axes)		6				
Max. payload (kg)		110	165	210			
Max. reach (mm)		2.699	2.699	2.699			
Repeata	ability *1 (mm)	±0,06	±0,06	±0,06			
	Arm rotation (JT1)	±160	±160	±160			
	Arm out-in (JT2)	+8060	+8060	+8060			
Motion	Arm up-down (JT3)	+9575	+9575	+9575			
range (°)	Wrist swivel (JT4)	±210	±210	±210			
()	Wrist bend (JT5)	±120	±120	±120			
	Wrist twist (JT6)	±360	±360	±360			
	Arm rotation (JT1)	140	130	125			
	Arm out-in (JT2)	135	125	115			
Max.	Arm up-down (JT3)	135	125	115			
speed (°/s)	Wrist swivel (JT4)	200	180	155			
. , =,	Wrist bend (JT5)	200	180	160			
	Wrist twist (JT6)	300	280	220			
Mass (k	g)	870	870	870			
Installa	tion		Floor				
Controller			E02				
	+- 1500000						

CX210L

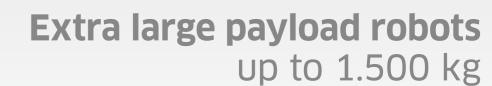
Application: • Assembly • Material handling • Palletizing • Spot welding

Medium payload robots up to 300 kg

Z series

Robust low-maintenance design with wide work envelope provides application flexibility.







		ZX130S/130L/165U/200S/300S	ZH100U	ZT130S/165U/200S	ZT130Y/165X/165Y			
Applica	tion	• • • •	• • •	• •	• •			
Degree	of freedom (axes)		6					
Max. pa	ayload (kg)	130/130/165/200/300	100	130/165/200	130/165/165			
Max. re	ach (mm)	2.651/2.951/2.651/2.651/2.501	1.634	3.230	3.130/2.830/3.130			
Repeata	ability *1 (mm)	±0,3	±0,3	±0,3	±0,3			
	Arm rotation (JT1)	±180	±160	±180	±180			
	Arm out-in (JT2)	+7560	+12060	+6075	+50120			
Motion	Arm up-down (JT3)	+250120	+7590	+16595	+15065			
range (°)	Wrist swivel (JT4)	±360	±360	±360	±360			
•	Wrist bend (JT5)	±130/±130/±130/±130	±130	±130/±130/±120	±130			
	Wrist twist (JT6)	±360	±360	±360	±360			
	Arm rotation (JT1)	130/110/110/105/100	140	130/105/100	120/120/105			
	Arm out-in (JT2)	130/110/110/110/85	100	130/105/100	110/110/105			
Max.	Arm up-down (JT3)	130/110/115/105/85	100	130/105/90	115/115/100			
speed (°/s)	Wrist swivel (JT4)	180/140/140/120/90	150	180/135/120	160/140/140			
.,,	Wrist bend (JT5)	180/135/155/120/90	150	180/135/115	180/155/155			
	Wrist twist (JT6)	280/230/260/200/150	250	280/210/180	280/260/260			
Mass (k	g)	1.350/1.400/1.350/1.400/1.400	750	1.550/1.550/1.600 1.665/1.650/1.665				
Installa	tion	Floor		Shelf				
Controller		E02						

★1: conforms to ISO9283

Application: ullet Assembly ullet Material handling ullet Palletizing ullet Spot welding

		MX350L	MX420L	MX500N	MX700N	MT400N	MG10HL	MG15HL	
Applica	tion	• •							
Degree	of freedom (axes)	6							
Max. pa	yload (kg)	350	420	500	700	400	1.000	1.500	
Max. re	ach (mm)	3.018	2.778	2.540	2.540	3.503	4.005	4.005	
Repeata	ability *1 (mm)	±0,5	±0,5	±0,5	±0,5	±0,5	±0,1	±0,1	
	Arm rotation (JT1)	±180	±180	±180	±180	±180	±150	±150	
	Arm out-in (JT2)	+9045	+9045	+9045	+9045	+15135	+9040	+9040	
Motion	Arm up-down (JT3)	+20115	+20125	+20130	+20130	+10630	+30110	+30*2110	
range (°)	Wrist swivel (JT4)	±360	±360	±360	±360	±360	±360	±360	
` '	Wrist bend (JT5)	±110	±110	±110	±110	±120	±120	±120	
	Wrist twist (JT6)	±360	±360	±360	±360	±360	±360	±360	
	Arm rotation (JT1)	80	80	80	65	80	65	65	
	Arm out-in (JT2)	70	70	70	50	70	33.5	33.5	
Max.	Arm up-down (JT3)	70	70	70	45	70	37.5	37.5	
speed (°/s)	Wrist swivel (JT4)	80	80	80	50	70	65	36	
,	Wrist bend (JT5)	80	80	80	50	70	65	36	
	Wrist twist (JT6)	120	120	120	95	130	80	80	
Mass (k	g)	2.800	2.800	2.750	2.860	2.600	6.500	6.550	
Installa	tion		Flo	oor		Shelf	FI	oor	
Control	ler		E	04		E02	E	58	

*1: conforms to ISO9283 *2: depends on payload

MG15HL

Application: • Machine tending • Material handling

Spot welding robots

B series

High speed spot welding with greater spot control. Space saving design supports "high density" applications.



Arc welding robots

BA/RA series

Kawasaki robots use the latest arc welding technology to rival the quality of a skilled human welder.



		BX100S	BX100N	BX100L/165L/200L	BX130X/BX200X	BX165N	BX250L/300L	BT165L/BT200L	
Applica	tion				•				
Degree	of freedom (axes)		6						
Max. pa	yload (kg)	100	100	100/165/200	130/200	165	250/300	165/200	
Max. re	ach (mm)	1.634	2.200	2.597	2.991/3.412	2.325	2.812	3.151	
Repeata	ability *1 (mm)	±0,06	±0,06	±0,06	±0,06/±0,07	±0,06	±0,07	±0,08	
	Arm rotation (JT1)	±160	±160	±160	±160/±180	±160	±180	±160	
	Arm out-in (JT2)	+12065	+12065	+7660	+7660	+7660	+7660	+80130	
Motion	Arm up-down (JT3)	+9081	+9077	+9075	+9075/+90110	+9075	+90120	+9075	
range (°)	Wrist swivel (JT4)	±210	±210	±210	±210	±210	±210	±210	
()	Wrist bend (JT5)	±125	±125	±125	±125	±125	±125	±125	
	Wrist twist (JT6)	±210	±210	±210	±210	±210	±210	±210	
	Arm rotation (JT1)	135	135	105/120/105	105/125	105	125	120/105	
	Arm out-in (JT2)	125	110	130/110/90	90/102	130	120/102	110/85	
Max.	Arm up-down (JT3)	155	140	130/130/100	130/85	130	100/85	130/100	
speed (°/s)	Wrist swivel (JT4)	200	200	200/170/120	200/105	120	140/105	170/120	
() - /	Wrist bend (JT5)	160	200	160/170/120	160/120	160	140/110	170/120	
	Wrist twist (JT6)	300	300	300/280/200	300/200	300	200/180	280/200	
Mass (k	g)	720	740	890	920/1.450	875	1.460	1.100	
Installa	tion			FI	oor			Shelf	
Controller		FO2							

*****1: conforms to ISO9283 Application: ● Spot welding

		BA006N	BA006L	RA005L	RA006L	RA010N	RA010L	RA020N	
Applica	tion								
Degree	of freedom (axes)				6				
Max. pa	ayload (kg)	6	6	5	6	10	10	20	
Max. re	ach (mm)	1.445	2.036	903	1.650	1.450	1.925	1.725	
Repeata	ability *1 (mm)	±0,06	±0,08	±0,03	±0,03	±0,03	±0,05	±0,04	
	Arm rotation (JT1)	±165	±165	±180	±180	±180	±180	±180	
	Arm out-in (JT2)	+15090	+15090	+13580	+145105	+145105	+155105	+155105	
Motion	Arm up-down (JT3)	+90175	+90175	+118172	+150163	+150163	+150163	+150163	
range (°)	Wrist swivel (JT4)	±180	±180	±360	±270	±270	±270	±270	
()	Wrist bend (JT5)	±135	±135	±145	±145	±145	±145	±145	
	Wrist twist (JT6)	±360	±360	±360	±360	±360	±360	±360	
	Arm rotation (JT1)	240	210	300	250	250	190	190	
	Arm out-in (JT2)	240	210	300	250	250	205	205	
Max.	Arm up-down (JT3)	220	220	300	215	215	210	210	
speed (°/s)	Wrist swivel (JT4)	430	430	460	365	365	400	400	
(, = ,	Wrist bend (JT5)	430	430	460	380	380	360	360	
	Wrist twist (JT6)	650	650	740	700	700	610	610	
Mass (kg)		150	160	37	150	150	230	230	
Installa	tion				Floor, Ceiling				
Controller		E01,	/F60	F60	E01,	/F60	E	01	
*1: confo	orms to ISO9283								

*1: conforms to ISO9283

Application: • Arc welding

Painting robots

K series

The optimum wrist configuration and model can be selected according to the workpiece.

Servo controlled part positioning equipment available (explosion proof).



Palletizing robots

Kawasaki's high-speed palletizing robots meet the demands for flexibility on reduced energy consumption.

			KF121	KF192/193/194	KF262/263/264	KJ194/244/264	KJ314		
Applica	tion								
Degree	of freedom ((axes)			6		6/7		
Max. pa	yload (kg)		5	Wrist: 12 Upper Arm: 20	Wrist: 12 Upper Arm: 20	Wrist: 15 Upper Arm: 25	Wrist: 15 Upper Arm: 25		
Max. re	ach (mm)		1.240	1.973/1.973/1.978	2.665/2.665/2.668	1.940/2.490/2.640	3.100		
Repeata	ability *1 (mn	n)	±0,2	±0,5	±0,5	±0,5	±0,5		
	Arm rotation	(JT1)	±160	±150	±150*2	±120*2	±120		
	Arm out-in	(JT2)	±90	+11060	+11060	+13080	+13080		
Motion	Arm up-dow	n (JT3)	±150	+9080	+9080	+9065	+9065		
range	Wrist	(JT4)	±270	±360/±720/±720	±360/±720/±720	±720	±720		
(°)	Wrist	(JT5)	±145	±360/±720/±720	±360/±720/±720	±720	±720		
	Wrist	(JT6)	±360	±360/±410/±410	±360/±410/±410	±410	±410		
	Arm	(JT7)	-	-	-	-	±90		
Wrist ty	/pe		RBR	BBR/3Rø40/3Rø70	BBR/3Rø40/3Rø70	3Rø70	3Rø70		
Mass (k	g)		140	690/720/750	720/740/770	530/540	720		
Explosion protection		n		Combinat	ion of pressurized type and i (II 2G Ex pxb ib II E	3 3.			
Installa	tion			Floor, Wall		Floor, Shelf, Wall	Wall		
Control	ler		E47		E45				

KJ264

^{*1:} conforms to ISO9283 *2: wall left side: +120-30, wall right side: +30-120

App	lication:	Painting

		RD080N	ZD130S	ZD250S	CP180L	CP300L	CP500L	CP700L	
Applica	tion		•						
Degree	of freedom (axes)	5			4	ļ.			
Max. pa	yload (kg)	80	130	250	180	300	500	700	
Max. re	ach (mm)	2.100	3.255	3.255	3.255	3.255	3.255	3.255	
Repeata	ability *2 (mm)	±0,06	±0,5	±0,5	±0,5	±0,5	±0,5	±0,5	
	Arm rotation (JT1) ±180	±180	±180	±160	±160	±160	±160	
Motion	Arm out-in (JT2	+140105	+9050	+9050	+9546	+9546	+9546	+9546	
range	Arm up-down (JT3	+40205	+15120	+15120	+15110	+15110	+15110	+15110	
(°)	Wrist swivel (JT4	±360	±360	±360	±360	±360	±360	±360	
	Wrist compensation (JT5) ±10 *3	N/A	N/A	N/A	N/A	N/A	N/A	
	Arm rotation (JT:) 180	135	95	140 *4/130	115 * ⁵ /100	85	75	
Max.	Arm out-in (JT2	180	110	90	125 *4/120	100 *5/90	80	65	
speed (°/s)	Arm up-down (JT3	175	130	95	130 *4/125	100 *5/90	80	65	
	Wrist swivel (JT4	360	400	190	400 *4/330	250 * ⁵ /220	180	170	
Working	Width	1.100	1.800	1.800	1.800	1.800	1.800	1.800	
area	Depth	1.100	1.600	1.600	1.600	1.600	1.600	1.600	
(mm)	Height	2.062	2.200	2.200	2.200	2.200	2.200	2.200	
Palletizing capacity *1(cycle/hour)		900	1.500	1.400	2.050 *4/1.800	1.700 *5/1.500	1.000	900	
Mass (k	g)	540	1.350	1.350	1.600	1.600	1.650	1.650	
Controll		E03		43		EC			

CP700L

Dual-arm SCARA Robot duftro

The duAro can fit into a single-person space. The coaxial dual-arm configuration makes coordinated movements possible.

Clean robots

NT/NS series

Horizontal Articulated type

A wide range of horizontal articulated robots for semi-conductor manufacturing lines



		duAro 1/duAro 2		
Application	n	• • •		
Degree of	freedom (axes)	4 × (each arm)	
Vertical stroke		150 mm	550 mm	
Max. payload (kg)		2 (each arm)	3 (each arm)	
Repeatabil	ity (mm)	:	±0,05	
		Arm 1 (lower arm)	Arm 2 (upper arm)	
Madian	Arm rotation (JT1)	-170 - +170	-140 - +500	
Motion range (°)	Arm rotation (JT2)	-130 - +140	-140 - +130	
range ()	Arm up-down (mm)(JT3)	0 - +550*1	0 - +550*1	
	Wrist swivel (JT4)	-360 - +360*1	-360 - +360* ¹	
Mass (kg)		210 (integrated type), 10	0 (arm unit of separated type)	
Installation	ı	Floor		
Controller		F61		
*1: Specifica	ition varies in case of other o	ptions or conversion		

*1: Specification varies in case of other options or conversionApplication: Assembly • Material handling • Machine tending • Dispensing

First in the industry!
4 FOUPs without traverse truck.

First in the industry!

NT520

DuAro 1

Pick & Place robots

Y series

Ultra high-speed picking robot with renowned Kawasaki product quality and reliability.



				02N	YF0	03N		
Application			• •					
Туре				Parallel link type				
Max. payloa	Max. payload (kg)			2	3	3		
Degree of		Standard		4	1			
freedom (ax	es)	Option	-	-	E	5		
Motion range	e (m	ım)	ø600 ×	H200*3	ø1.300 >	4 H500*4		
Cycle time *	Cycle time *1 (Payload)		0,3 s (0,5 kg)	0,36 s (2 kg)	0,27 s (1 kg)	0,45 s (3 kg)		
Positional re	pea	tability *2 (mm)	± 0,04		± 0,1			
Angular repe	eata	bility (°)	± 0,1					
Mass (kg)			6	60 145		45		
Installation				Cei	ing			
Environmental	Amb	ient Temperature (°C)	10 -	40	0 - 45			
condition	Rela	ative Humidity (%)	35 - 85 (No dew, nor frost allowed)			ed)		
Degree of		Standard		IP	65			
protection		Option	-	-	IP	67		
Controller		E91						
±1. Motion nat	tern	(25mm un 305r	nm horizontal 25	mm down in a to	-and-fro motion)			

- 1: Motion pattern (25mm up, 305mm horizontal, 25mm down in a to-and-fro motion)
- *2: conforms to ISO9283
- *3: Motion range is changing at H=150
- *4 Motion range is changing at H=300
- Application: Assembly Material handling

Medical & Pharmaceutical robots

Degree of freedom (axes) Max. payload (kg) Max. reach (mm) 505,8 660 Repeatability *1 (mm) ±0,05 ±0,1 Arm rotation (JT1) ±180 ±180 Arm out-in (JT2) +135 - -95 +135 - -90 +60 - -155 ±120 Motion Wrist swivel (JT4) ±270 ±180 ±120 Wrist bend (JT5) ±115 Wrist twist (JT6) ±270 ±180 Arm rotation (JT7) ±180 Arm rotation (JT1) 200 130 180 130 Arm out-in (JT2) Arm up-down (JT3) 225 215 Wrist swivel (JT4) 700 300 speed 500 Wrist bend (JT5) 300 Wrist twist (JT6) 350 480 215 25 50 Mass (kg) Installation Floor, ceiling Floor Controller F60 *1: conforms to ISO9283

90

MC004N MS005N MC004V

Clean robots that meet the healthcare industry's specifications for processing equipment.

MS005N

YF003N

Kawasaki Robotics Options: Individual Additions for Your Robots

Safety Modules, Software Solutions, External Axes and more: Kawasaki Robotics offers an extensive range of application-specific options for our robots and controllers - allowing you to precisely adapt each Kawasaki robot to your individual needs and to maximize its performance.



Cubic-S

The Kawasaki Robotics Cubic-S safety module enables you to individually define and precisely limit the available working space. With Cubic-S, extremely space-saving application cells are easily possible. The robot is not able to exceed the given work area limits at any time. This ensures the safety of employees and the system itself at all times - without additional, expensive safety technology.

Cubic-S offers a total of eight individual functions, including Motion Area Monitoring Function, Axis Monitoring Function, Speed Monitoring Function and Emergency Stop Function. It is compatible with light barriers of many kinds and provides a multitude of inputs and interfaces.

Bus-Modules

A variety of bus-modules for Kawasaki Robotics controllers allow for maximum adaptability and fast communication between controllers and sensors/actuators of all types. The available bus-modules are:

DeviceNet (Slave/Master), PROFIBUS (Slave/Master), Interbus (Slave), EtherNet/IP (Slave/Master), Modbus-TCP - Server (Slave), CANopen (Slave), PROFINET IO (Slave/Master), ControlNet (Slave), EtherCAT (Slave) and CC-Link (Slave).



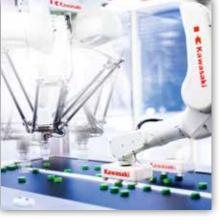
Conveyor Tracking

This optional module allows the tracking of up to four external conveyor belts in linear or circular shape and the immediate calculation into the robot movement the position of each conveyor belt is not relevant. Up to 16 robots can be operated on a single conveyor.

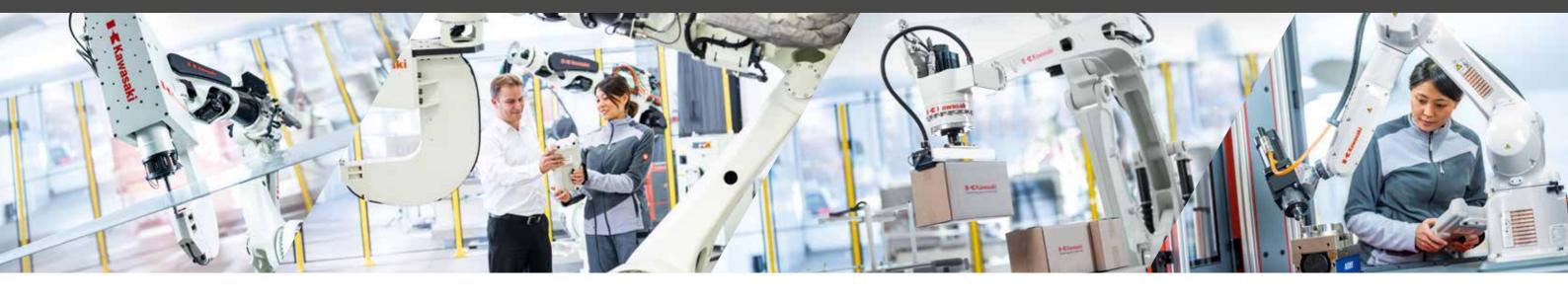


Arm-ID Board

The Arm-ID Board comes with an IO interface board and provides additional in- and outputs. These IOs are located on the Robot Arm and can be used to control grippers or any other peripheral devices.







Additional Input/Output Boards

Available:

- Analog Input Board (E-Controller)
- Analog Output Board, PNP, with 32 additional Digital IOs
- Analog Output Board, NPN, with 32 additional Digital IOs
- Analog In- and Output Board (F-Controller)
- Additional Digital IO Board with 32 Digital IOs, NPN (E-Controller)
- Additional Digital IO Board with 32 Digital IOs, PNP (E-Controller)
- Additional Digital IO Board with 32 Digital IOs, PNP & NPN (F-Controller)

External Axis

The system can be extended through the use of external axes, such as positioners. By using an external axis, the robot system will be more efficient and flexible.

Arm Power/Signal Harness

While the standard version of the arm power and signal cables for Kawasaki robots in the EU is 10 meters, they can be exchanged at your request for 5-40 m cables – available in 5 m steps. Specialized/custom lengths are available as well.

Sensor Harness

Harnesses for setting up a signal connection of grippers to the Arm-ID Board.

Brake Release Box

The brake release box makes it possible to release the individual brakes of a robot. Brake release buttons are a standard option for all E4x controllers.

External Operator Panel

The external control panel is equipped with an Emergency Off Switch, a Teach/Repeat Switch and an optional Fast Check Switch.

Filter Option for Controller/Transformer

Additional filters can be installed to protect the inside of the controller and transformer from dust and other coarse particles in especially challenging work environments.

IP54 Option for F60 Controller

This option upgrades the F-Controller to protection class IP54. The front and back as well as the bottom of the controller unit are provided with additional elements and the controller is effectively sealed off from its environment.

Remote IO Unit, PNP & NPN

The external box provides additional inputs and outputs. The digital version offers 32 Digital IOs while the analogue version offers 4 inputs and 4 outputs. A maximum of six boxes, 4 digital and 2 analogue, can be connected to one controller. The boxes offer a variety of mounting options such as brackets on all sides or top-hat rail mounting. The unit is configurable as NPN and PNP – including 2AW or 2AH boards.

IO-Connector Harness

The IO-Connector harness allows to access the IOs of the F-Controller via a D-SUB-connector.

IO-Connector Interface Module

The IO-connector interface is a terminal block which can be connected to the IO-connector harness.

Teach Pendant Light Harness Options

It is possible to exchange the Teach Pendant Light Harness from its original 10m to a different length. Available in 5m, 15m, 20m, 25m and 30m

Cable Reel for Teach Pendant Light

To keep the workspace safe and clean, a cable reel for the Teach Pendant is available in two variants: $10\,\mathrm{m}$ or $15\,\mathrm{m}$

Pedestal

Our space-saving, sturdy and light-weight pedestals are available for the models BX200L, BX300L, RS020N and MG15HL. Their hollow design elevates the robot, increases its effective workspace and allows for the easy storage of cables within the pedestal.

Selection of Software Options

Collision Detection

This option allows the monitoring of motor current values according to selectable thresholds. Different values can be defined for manual and automatic operation of each robot. This option can reduce the damage caused by collisions significantly.

Spin Control Function

Available for robots and external axes (such as positioners), the spin control function allows for the endless rotation of axis 6 in \pm range. It can be reset at the end of the process via command – no separate retraction of axis 6 is required.

Changing Servo System Gain

This option allows the soft switching of the control parameters of individual axes. The robot will move back to its original position as soon as the external disturbance is no longer present.

Soft Absorber

The Soft Absorber option makes the soft switching of the control parameters of individual axes possible, within individually definable limits, such as direction and path. If the external disturbance is no longer present, the robot stops at the current position.

K-IDE

K-IDE is an intuitive programming interface for Kawasaki robots, enabling the precise development of programs for numerous applications and systems. The easy to use editor, the clearly arranged project management, the automatic synchronization between software and robots and many other functions make K-IDE the perfect tool for programming.

K-Roset

K-Roset enables simple 3D simulations and offline programming of Kawasaki robots – ensuring maximum planning reliability for your automation. The tool directly accesses the kinematic models and controller software of the Kawasaki robots.

K-Logic

K-Logic is a software-based PLC (programmable logic controller) with several logical functions.

K-Ladder

Additional programming software for K-Logic. Requires an installation of K-Logic.

K-Sparc

K-Sparc is a palletizing software for Kawasaki robots – makes it possible to create individual packing patterns on pallets. Requires both K-Roset and a separate license.

K-Vision

K-Vision offers a flexible vision system for numerous applications. It enables the easy connection of cameras to Kawasaki robots for implementing position detection and inspection processes within the robot application. This way, you are able to considerably increase both effectiveness and flexibility in automation.

Open AS

Open AS provides an easy-to-use development environment for the convenient creation of user interfaces, applications and the flexible integration of sensors/signals.

Learn more about our options!

Talk to us!



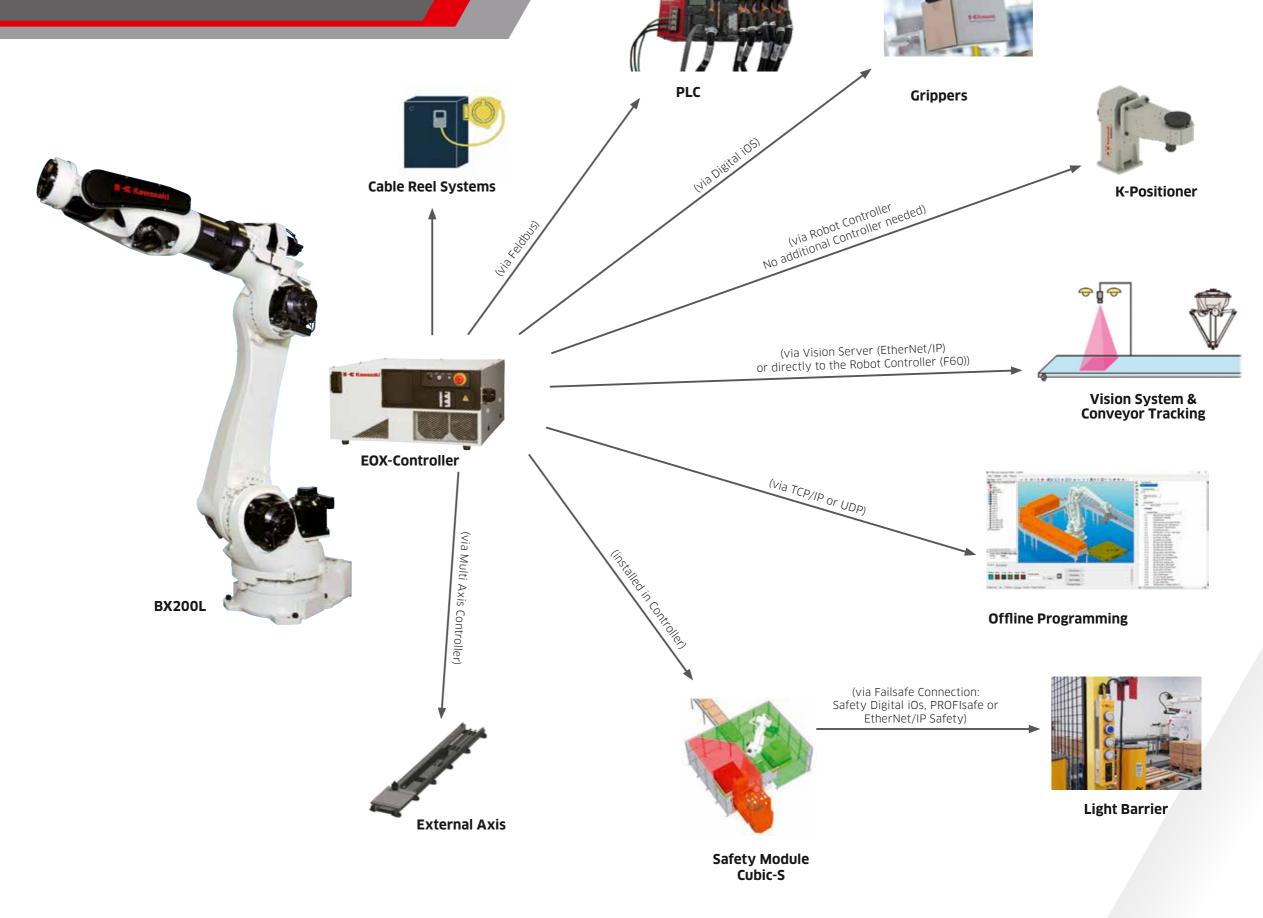
Kawasaki Robotics Options: Adapt each robot to your individual needs

Color LCD teach pendant for the E and F series controllers

The teach pendant has a significantly lighter body with an optimized weight balance that reduces the burden of teaching work. The operator can now switch on the motors and activate the cycle start all from the teach pendant. In addition, new features such as the easy-to-navigate screen and switch layout allow for a more convenient control system. Two information windows can be displayed simultaneously on the monitor screen, providing access to different type of information (e.g. positional information and signal information).



The explosion-proof teach pendant features a color LCD with a large-sized touch screen that allows for teaching, editing, and monitoring of information such as current position and IO signals in the painting area. It is possible to customize the interface panel according to user preference. The backlight provides a clear view of the screen in dark locations.



Controller

Combines high performance, unprecedented reliability, a host of integrated features and simple operation all in a compact design. The enhanced CPU capacity allows for more accurate trajectory control and faster application program execution.



F-Controller



E9X-Controller



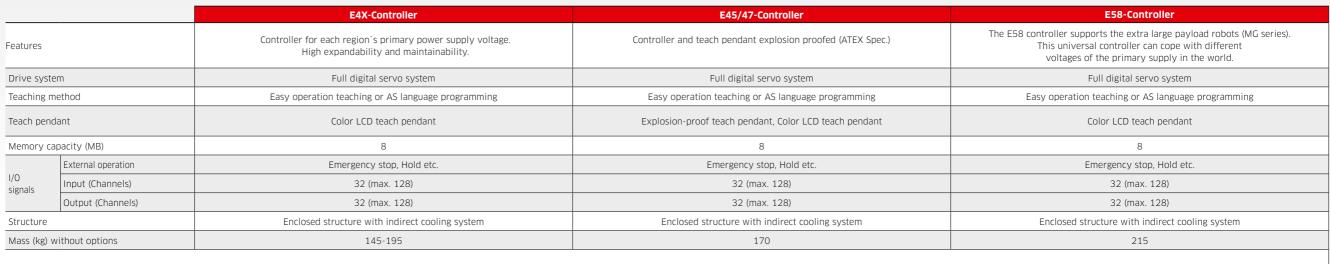
EOX-Controller

		F-Controller	E9X-Controller	E0X-Controller		
Features		Smallest Controller in its class. Compact design for small arm robots. High performance, 19 inch rack compatible, electrical regeneration function and safety system Cubic-S. (Option)	Compact design for medium robot arms, Vertical or horizontal installation	Universal Controller. Available for multiple primary power supply voltage with a separate transformer unit. Electricity regeneration function for palletizing robots. (energy saving)		
Drive system		Full digital servo system	Full digital servo system	Full digital servo system		
Teaching method		Easy operation teaching or AS language programming	Easy operation teaching or AS language programming	Easy operation teaching or AS language programming		
Teach pendant		Color LCD teach pendant	Color LCD teach pendant	Color LCD teach pendant		
Memory capacity (MB)		16	8	8		
	External operation	Emergency stop, Hold etc.	Emergency stop, Hold etc.	Emergency stop, Hold etc.		
/O signals	Input (Channels)	16 (max. 144)	32 (max. 96)	32 (max. 96)		
11PLIGIT	Output (Channels)	16 (max. 144)	32 (max. 96)	32 (max. 96)		
Structure		Open structure with direct cooling system	Enclosed structure with indirect cooling system	Enclosed structure with indirect cooling system		
Mass (kg) without options		8,3	40	40/45		

		ons

Hardware Options					
Harness	Arm Power/Signal Harness Set, 5 m steps from 5 to 40 m Arm Power/Signal Harness Set, 5 m steps from 5 to 40 m		Arm Power/Signal Harness Set, 5 m steps from 5 to 40 m		
Cubic-S	Hardware module to customize workspace and safety settings	Hardware module to customize workspace and safety settings	Hardware module to customize workspace and safety settings		
DeviceNet (Slave/Master), PROFIBUS (Slave/Master), Interbus (Slave), EtherNet (Slave/Master), Modbus-TCP - Server (Slave), CANopen (Slave), PROFINET IO (Smaster), ControlNet (Slave), EtherCAT (Slave) and CC-Link (Slave).		DeviceNet (Slave/Master), PROFIBUS (Slave/Master), Interbus (Slave), EtherNet/IP (Slave/Master), Modbus-TCP - Server (Slave), CANopen (Slave), PROFINET IO (Slave/Master), ControlNet (Slave), EtherCAT (Slave) and CC-Link (Slave).	DeviceNet (Slave/Master), PROFIBUS (Slave/Master), Interbus (Slave), EtherNet/II (Slave/Master), Modbus-TCP - Server (Slave), CANopen (Slave), PROFINET IO (Slave Master), ControlNet (Slave), EtherCAT (Slave) and CC-Link (Slave).		
Conveyor Tracking	Tracking of up to four external conveyor belts and operation of up to 16 robots	Tracking of up to four external conveyor belts and operation of up to 16 robots	Tracking of up to four external conveyor belts and operation of up to 16 robots		
Pedestal	Space-saving, sturdy and light-weight pedestals for BX200L, BX300L, RS020N and MG15HL	Space-saving, sturdy and light-weight pedestals for BX200L, BX300L, RS020N and MG15HL	Space-saving, sturdy and light-weight pedestals for BX200L, BX300L, RS020N and MG15HL		
Arm-ID Board	Providing additional in- and outputs through an IO interface board	Providing additional in- and outputs through an IO interface board	Providing additional in- and outputs through an IO interface board		
External Axis	Including all necessary equipment to operate up to 16 indiviual axes per controller	Including all necessary equipment to operate up to 16 indiviual axes per controller	Including all necessary equipment to operate up to 16 indiviual axes per controller		
Brake Release Box	Makes it possible to release individual brakes.	Makes it possible to release individual brakes.	Makes it possible to release individual brakes.		
External Operator Panel	Equipped with additional switches.	Equipped with additional switches.	Equipped with additional switches.		
IP54 Option for F60	Option for upgrading the F-Controller to protection class IP54	N/A	N/A		
Remote IO Unit PNP & NPN	Provides additional in- and outputs	Provides additional in- and outputs	Provides additional in- and outputs		
IO-Connector Harness	Connection line between IOs and the F-Controller	N/A	N/A		
IO-Connector Interface Module	Transfer module for attaching adapter cable to the IO connection of the F-Controller	N/A	N/A		
Sensor Harness	Harnesses for setting up a signal connection of grippers to the Arm-ID Board	Harnesses for setting up a signal connection of grippers to the Arm-ID Board	Harnesses for setting up a signal connection of grippers to the Arm-ID Board		
Teach Pendant Light Harness Options	Harness Options Available options: 5/15/20/25/30 m Available options: 5/15/20/25/30 m		Available options: 5/15/20/25/30 m		
Cable Reel for Teach Pendant Light	Available options: 10/15 m	Available options: 10/15 m	Available options: 10/15 m		
Additional In/Output Boards	Analogue IO Board, Digital IO Board (PNP/NPN)	Digital IO Board (PNP/NPN), Analogue Input Board, Analogue Output Board (Analogue Boards include 32 Digital IOs (NPN/PNP))	Digital IO Board (PNP/NPN), Analogue Input Board, Analogue Output Board (Analogue Boards include 32 Digital IOs (NPN/PNP))		
Filter Option for Controller/Transformer	ontroller/Transformer Additional filters to protect the inside of Controller Additional filters to protect the inside of Controller		N/A		
K-Vision	Flexible vision system for numerous applications	Flexible vision system for numerous applications	Flexible vision system for numerous applications		
Software Options					
Collision Detection	Monitoring of motor current values according to selectable thresholds	Monitoring of motor current values according to selectable thresholds	Monitoring of motor current values according to selectable thresholds		
Spin Control Function	Available for robots and external axes - allowing for the endless rotation of axis 6 in ± range	Available for robots and external axes – allowing for the endless rotation of axis 6 in ± range	Available for robots and external axes - allowing for the endless rotation of axis 6 in ± range		
Changing Servo System Gain	Allows soft switching of the control parameters of individual axes	Allows soft switching of the control parameters of individual axes	Allows soft switching of the control parameters of individual axes		
Soft Absorber	Supports the soft switching of the control parameters of individual axes	Supports the soft switching of the control parameters of individual axes	Supports the soft switching of the control parameters of individual axes		
K-IDE	Intuitive programming interface for Kawasaki robots	Intuitive programming interface for Kawasaki robots	Intuitive programming interface for Kawasaki robots		
K-ROSET	Enables simple 3D simulations and offline programming of Kawasaki robots	Enables simple 3D simulations and offline programming of Kawasaki robots	Enables simple 3D simulations and offline programming of Kawasaki robots		
K-Sparc	Palletizing software for Kawasaki robots	Palletizing software for Kawasaki robots	Palletizing software for Kawasaki robots		
K-Ladder	Additional programming software for K-Logic	Additional programming software for K-Logic	Additional programming software for K-Logic		
Open AS Easy-to-use development environment		Easy-to-use development environment	Easy-to-use development environment		





Available Options



Н	la	rc	lv	νa	re	9 (O	p	tı	0	n	S

Harness	Arm Power/Signal Harness Set, 5 m steps from 5 to 40 m	Arm Power/Signal Harness Set, 5 m steps from 5 to 40 m			
Cubic-S	Hardware module to customize workspace and safety settings	Hardware module to customize workspace and safety settings	Hardware module to customize workspace and safety settings		
Bus-Modules	DeviceNet (Slave/Master), PROFIBUS (Slave/Master), Interbus (Slave), EtherNet/IP (Slave/Master), Modbus-TCP - Server (Slave), CANopen (Slave), PROFINET IO (Slave/Master), ControlNet (Slave), EtherCAT (Slave) and CC-Link (Slave).	DeviceNet (Slave/Master), PROFIBUS (Slave/Master), Interbus (Slave), EtherNet/IP (Slave/Master), Modbus-TCP - Server (Slave), CANopen (Slave), PROFINET IO (Slave/Master), ControlNet (Slave), EtherCAT (Slave) and CC-Link (Slave).	DeviceNet (Slave/Master), PROFIBUS (Slave/Master), Interbus (Slave), EtherNet/(Slave/Master), Modbus-TCP - Server (Slave), CANopen (Slave), PROFINET IO (Slame), Master), ControlNet (Slave), EtherCAT (Slave) and CC-Link (Slave).		
Conveyor Tracking	Tracking of up to four external conveyor belts and operation of up to 16 robots	Tracking of up to four external conveyor belts and operation of up to 16 robots	Tracking of up to four external conveyor belts and operation of up to 16 robots		
Pedestal	Space-saving, sturdy and light-weight pedestals for BX200L, BX300L, RS020N and MG15HL	Space-saving, sturdy and light-weight pedestals for BX200L, BX300L, RS020N and MG15HL	Space-saving, sturdy and light-weight pedestals for BX200L, BX300L, RS020N and MG15HL		
Arm-ID Board	Providing additional in- and outputs through an IO interface board	Providing additional in- and outputs through an IO interface board	Providing additional in- and outputs through an IO interface board		
External Axis	Including all necessary equipment to operate up to 16 indiviual axes per controller	Including all necessary equipment to operate up to 16 indiviual axes per controller	Including all necessary equipment to operate up to 16 indiviual axes per controller		
Brake Release Box	N/A	N/A	Making it possible to release the individual brakes of a robot		
External Operator Panel	N/A	N/A	Equipped with an Emergency Off Switch, a Teach/Repeat Switch and an optional Fast Check Switch		
IP54 Option for F60	N/A	N/A	N/A		
Remote IO Unit PNP & NPN	N/A	N/A	N/A		
IO-Connector Harness	N/A	N/A	N/A		
IO-Connector Interface Module	N/A	N/A	N/A		
Sensor Harness	Harnesses for setting up a signal connection of grippers to the Arm-ID Board	Harnesses for setting up a signal connection of grippers to the Arm-ID Board	Harnesses for setting up a signal connection of grippers to the Arm-ID Board		
Teach Pendant Light Harness Options	Available options: 5/15/20/25/30 m	Available options: 5/15/20/25/30 m	Available options: 5/15/20/25/30 m		
Cable Reel for Teach Pendant Light	Available options: 10/15 m	Available options: 10/15 m	Available options: 10/15 m		
Additional In/Output Boards	Digital IO Board (PNP/NPN), Analogue Input Board, Analogue Output Board (Analogue Boards include 32 Digital IOs (NPN/PNP))	Digital IO Board (PNP/NPN), Analogue Input Board, Analogue Output Board (Analogue Boards include 32 Digital IOs (NPN/PNP))	Digital IO Board (PNP/NPN), Analogue Input Board, Analogue Output Board (Analogue Boards include 32 Digital IOs (NPN/PNP))		
Filter Option for Controller/Transformer	troller/Transformer Additional filters to protect the inside of Controller Additional filters to protect the inside of Controller		Additional filters to protect the inside of Controller		
K-Vision	Flexible vision system for numerous applications	Flexible vision system for numerous applications	Flexible vision system for numerous applications		
Software Options			·		
Collision Detection	Monitoring of current values and encoder positions according to selectable thresholds	Monitoring of current values and encoder positions according to selectable thresholds	Monitoring of current values and encoder positions according to selectable thresholds		



E58-Controller

IX VISIOII	riexibic vision system for nomerous applications	Tiexible vision system for homerous applications	Trexible vision system for homerous applications				
Software Options							
Collision Detection Monitoring of current values and encoder positions according to selectable thresholds Monitoring of current values and encoder positions according to selectable thresholds.			Monitoring of current values and encoder positions according to selectable thresholds				
Spin Control Function	Available for robots and external axes – allowing for the endless rotation of axis 6 in ± range	Available for robots and external axes – allowing for the endless rotation of axis 6 in ± range	Available for robots and external axes – allowing for the endless rotation of axis 6 in ± range				
Changing Servo System Gain	Allows soft switching of the control parameters of individual axes	Allows soft switching of the control parameters of individual axes	Allows soft switching of the control parameters of individual axes				
Soft Absorber	Supports the soft switching of the control parameters of individual axes	Supports the soft switching of the control parameters of individual axes	Supports the soft switching of the control parameters of individual axes				
K-IDE	Intuitive programming interface for Kawasaki robots	Intuitive programming interface for Kawasaki robots	Intuitive programming interface for Kawasaki robots				
K-ROSET	Enables simple 3D simulations and offline programming of Kawasaki robots	Enables simple 3D simulations and offline programming of Kawasaki robots	Enables simple 3D simulations and offline programming of Kawasaki robots				
K-Sparc	Palletizing software for Kawasaki robots	Palletizing software for Kawasaki robots	Palletizing software for Kawasaki robots				
K-Ladder	Additional programming software for K-Logic	Additional programming software for K-Logic	Additional programming software for K-Logic				
Open AS	Easy-to-use development environment	Easy-to-use development environment	Easy-to-use development environment				

24 25

As individual and reliable as our robots: Our Service

The Kawasaki Robotics Service Program

- To guarantee maximum availability of your robots and systems, our experts are available 24/7 via our technical hotline and, of course, on site.
- Customers benefit from our international network, cross-industry expertise and excellent service.
- We help to avoid downtimes through fast fault analyses and predictive maintenance.



In addition to visual and functional checks, cleaning as well as grease and battery changes, we also check:

- Grease check for metal particles
- The braking power of the servo motors
- A detailed log is generated after each maintenance
- In case of malfunctions, our service technicians provide a fast analysis to keep downtimes as predictable and low as possible as well as quick and competent support in the selection of the right spare parts.



CS24 Support

Kawasaki Robotics provides numerous options for comprehensive technical support - with or without a maintenance contract.

- Our 24/7 Phone Support
- Tailor-made service for each customer around the clock: They can always reach our trained service technicians via an individual hotline number.
- Spare parts service
- On-site support

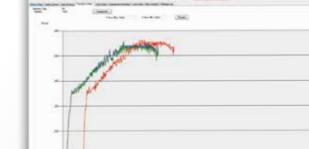
Planning ahead:

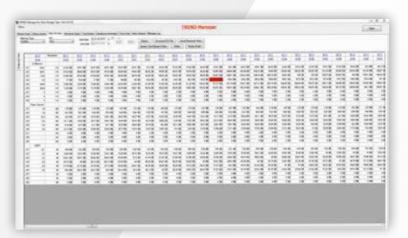
The Kawasaki TREND Manager

The unique Kawasaki TREND Manager automatically and continuously analyses all status data of any given robot. This enables our diagnostic tool in the controller to predict inspections, signs of wear and problems at an early stage.

The advantages of the TREND Manager at a glance:

- Maximum availability of robots and systems
- Agile maintenance support
- Clear visualisation
- Local real-time recording of numerous parameters
- Improvement of service life through load testing and program optimisation
- Automatic motor current monitoring







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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.





ISO certified in Akashi Works.