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

**Features**

**Application specific operation**
Each robot is equipped standard with an easy to view and operate color LCD touchscreen teach pendant. The operator teaches the process path using dedicated arc welding teaching screens that are designed for simplified use and easy operation.

**Welding condition database**
During an automated process, the operator can change the welding conditions on-the-fly, and then store these changes to a built-in database. The saved conditions can then be recalled from the database and reused.

**Reduced downtime**
A standard, dedicated start sequence function improves the arc establishment. Also, for weld process faults, the robot includes a restart sequence function to automatically conduct overlap welding and resume the operation.

**Manual arc control**
The Kawasaki arc welding robots feature a one button “arc on / arc off” function to allow operators to easily and quickly turn the weld off and on during the automatic weld process. This manual arc control helps operators deal with part anomalies.

**Advanced technology**
Servo torch, touch sensing, special weaving pattern, real-time path modification (RTPM) sensor, start point sensing, multilayer welding function, and auto voltage control (AVC) sensor are some of the advanced arc welding options available with the Kawasaki welding robots.

**Offline programming**
Kawasaki offers arc welding specific offline programming software to automatically generate robot programs from 3D CAD data. Kawasaki’s K-CONG software significantly reduces robot teaching time and lowers production costs.
Standard specifications

<table>
<thead>
<tr>
<th>Type</th>
<th>RADDON</th>
<th>RADDOL</th>
<th>RS00DL</th>
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<th>RS00DL</th>
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<td>210</td>
<td>545</td>
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</tbody>
</table>

KCONG - Kawasaki Common Offline NC data Generator

KCONG, our offline programming software, automatically generates a robot’s welding path based off of workpiece geometry.

Features

- No need for time-consuming robot teaching
- Generates robot welding paths quickly and easily from 3D CAD data such as DXF, IGES, STEP or VRML
- Offline process verification

Once KCONG automatically generates the robot welding path, users can then view the simulation of the arc welding process, check for collisions, weld access, and system layout issues, and make fine adjustments to the generated welding path.

Direct program download

After verifying the weld process and making any necessary adjustments, the operation program is generated by KCONG. The completed weld operation program can then be downloaded directly to the robot controller.

Servo torch

Kawasaki’s servo torch option delivers high quality welding.

Features

- Can be used with small-gauge iron or aluminum wire

The steady feed of the iron (or 0.6 mm) or aluminum wire results in no buckling.

Excellent arc stability

The constant speed and control of the wire feed results in excellent arc stability.

Improved arc ignition performance

The servo torch can control complex wire feeding at the start and end of welding operations, thereby improving arc ignition.

Optional equipment

- Shock sensor
- Torch bracket (350 A / 500 A)
- Installation base (600 mm / 300 mm)
- Base plate (750 mm x 750 mm x 25 mm)
- Linear slide
- Positioner
- Servo torch
- RTPM (arc sensor)
- AVC (arc sensor dedicated to TIG welding)
- 3D laser sensor
- Wall mounting

Integration with many welding power supplies

For communication between the Kawasaki robot and power source as well as easy and comprehensive arc welding process controls, Kawasaki Robotics offers a welder specific interfaces to leading arc welding power sources, such as:

- Lincoln
- Miller
- Fronius
- OTC Daiken
Motion range & dimensions

BA006N

RS006L

BA006L

RS010N
**E series**

Kawasaki has incorporated more than 50 years of experience as a robot industry leader into the development of the most technically advanced controller available. The E Controller combines high performance, unprecedented reliability, a host of integrated features and simple operation, all in a compact design.

### Features

**Compact**

The overall volume of the E Controller has been reduced compared with the previous model. The small footprint of this compact controller allows for installation in "high-density" applications. For further space saving options, an upright-position or stacked installation is possible, without impairing performance.

**User-friendly operation**

The easy-to-use teach pendant now incorporates motor power and cycle start at your fingertips. Multiple information screens can be displayed simultaneously. The intuitive teaching interface is easy to use.

**Programming ease & flexibility**

A rich set of programming functions come standard with the E Controller to support a wide range of applications. Functions can be combined and easily configured within a system to suit a particular application. Also, the powerful Kawasaki AS Programming Language provides sophisticated robot motion and sequence controls.

**Advanced technologies**

The enhanced CPU capacity allows for more accurate trajectory control, faster program execution, and quicker loading and saving of files. In addition, memory has been expanded to meet the need for higher program storage capacity. The controller comes equipped with a USB port for external storage devices.

**Easy maintenance**

Modular components with limited cables translate into easy diagnostics and maintenance. A host of maintenance functions are available, including self-diagnosis on hardware and application errors to minimize troubleshooting and reduce MTT (Mean Time To Repair). Remote diagnostics via the web server function enables service support from anywhere in the world.

**Expandable**

Two external axes can be added to the E01/E02 controller for a total of nine controlled axes. Numerous communication field buses are available for controlling peripheral devices. The Kawasaki K-Link sequencer software can be combined with user customized interface panels on the teach pendant.

### Specifications

**Standards and Options**

<table>
<thead>
<tr>
<th>Option</th>
<th>Standard</th>
<th>Optional</th>
</tr>
</thead>
<tbody>
<tr>
<td>Option</td>
<td>E01 / E02</td>
<td>Transformer unit</td>
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</tbody>
</table>

**Dimensions (mm)**

<table>
<thead>
<tr>
<th>Option</th>
<th>E01 / E02</th>
<th>Transformer unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Option</td>
<td>610 x 410 x 230</td>
<td>610 x 410 x 230</td>
</tr>
</tbody>
</table>

**Controller Structure**

- Enclosed structure with indirect cooling system
- Number of controlled axes: 9
- Drive system: Full-digital servo system
- Coordinate systems: Joint, Base, Tool
- Types of motion control: Joint / Linear / Circular Interpolated Motion
- Programme: Point to point teaching or language based programming

**Memory capacity (bit)**

- 8

**General purpose signals**

<table>
<thead>
<tr>
<th>Option</th>
<th>External operation</th>
<th>Motor power / hold</th>
</tr>
</thead>
<tbody>
<tr>
<td>Option</td>
<td>32</td>
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</tbody>
</table>

**Operation panel**

- E-Stop switch, Teach/pause switch, Control power light (Cycle start, motor on, hold/on, and error reset are activated from the teach pendant)
- Cycle start switch, Motor-on switch, Hold/run switch, Error light, Rapid-Feed Check mode switch

**Cable length (m)**

- Teach pendant (m):
  - 5
  - 10
  - 15
- Transformer (m):
  - 40

**Power requirements**

- AC100-230V +/−10%, 50/60Hz, 3A
  - Transformer unit: AC380-415V +/−10%, 50/60Hz, 3A

**Environmental conditions**

- Temperature: 0°C to 40°C
- Humidity: 10% to 85% (no dew, no frost allowed)

**Other**

- Teach pendant: TFT color LCD display with teach panel, 6-stop switch, Teach-lock switch, Brake switch
- Auxiliary storage unit:
  - USB memory
- Interface:
  - USB, Ethernet (100Base-TX), RS-232C

### System configuration diagram

- **DIO board**
  - Option board: RS-232C
  - Optional device: Brake release switch, Transformer unit
  - External-axis motor, USB memory
  - Teach pendant, USB, Ethernet, Terminal software
  - Vision controller
  - Optional board: DIO board: 32 points each
  - DeviceNet board, master/slave
  - CC-Link board, master/slave
  - PROPLUS board, master/slave
  - PROFIBUS board, master/slave
  - EtherCAT board, master/slave
  - CAN open board, slave
  - EtherCAT board, master/slave
  - Conveyor (F board)
  - Cubic-S (area monitor/ speed monitor)