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KawasakiRobotics.com

Kawasaki Robot
Z series
Large payload robots - up to 300 kg

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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The large payload long reach Z series robots can perform a wide range of applications across diverse industries.

The Z series heavy-duty robots are the workhorses of the Kawasaki Robotics product line. The versatile and upgradeable designs are directly responsible for improved production line efficiencies in automotive and general industry applications. The robust low-maintenance Z series robots offer payload capacities from 100 to 300 kg and are available in floor mount (ZX), shelf mount (ZT) and compact (ZH) models to best suit the application.

Features

Cycle time advantage
The Z series robots’ reduced footprint combined with the E Controller results in improved cycle times.

Wide work envelope
A long-reach arm combined with minimal dead space results in the widest work envelope in its class.

Flexibility
The Z series line is manufactured using modular components and a common software platform. This design allows some models’ characteristics to be modified, providing great flexibility to accommodate production and system changes. Both hardware and software alterations can easily be performed in the field.

Note: Under duty working environment, oil-leaking事件 is rapid. Under water-cooled condition, there are some possibilities to cause metal rust or weaken the water resistance.
## Standard specifications

<table>
<thead>
<tr>
<th>Type</th>
<th>ZX130U</th>
<th>ZX130L</th>
<th>ZX165U</th>
<th>ZX200S</th>
<th>ZX300S</th>
<th>ZH100U</th>
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<tbody>
<tr>
<td>Degrees of freedom (axes)</td>
<td>6 Option 7</td>
<td>6 Options 7</td>
<td>6 Options 7</td>
<td>6 Options 7</td>
<td>6 Options 7</td>
<td>6 Options 7</td>
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<tr>
<td>Max. payload (kg)</td>
<td>360</td>
<td>320</td>
<td>360</td>
<td>320</td>
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<td>320</td>
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<tr>
<td>Max. reach (mm)</td>
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<td>2911</td>
<td>2651</td>
<td>2911</td>
<td>2651</td>
<td>2911</td>
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<tr>
<td>Power requirements (kW)</td>
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</table>

### Work envelopes and Max. speed

<table>
<thead>
<tr>
<th>Axis</th>
<th>Motion range (mm)</th>
<th>Max. speed (mm/s)</th>
<th>Motion range (mm)</th>
<th>Max. speed (mm/s)</th>
<th>Motion range (mm)</th>
<th>Max. speed (mm/s)</th>
<th>Motion range (mm)</th>
<th>Max. speed (mm/s)</th>
<th>Motion range (mm)</th>
<th>Max. speed (mm/s)</th>
<th>Motion range (mm)</th>
<th>Max. speed (mm/s)</th>
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<tbody>
<tr>
<td>X-Axis</td>
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<td>≤110</td>
<td>≤1380</td>
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<tr>
<td>Z-Axis</td>
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<td>≤110</td>
<td>≤110</td>
<td>≤110</td>
<td>≤110</td>
<td>≤110</td>
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<tr>
<td>Waist pivot</td>
<td>≤1360</td>
<td>≤1360</td>
<td>≤1360</td>
<td>≤1360</td>
<td>≤1360</td>
<td>≤1360</td>
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<tr>
<td>Waist band</td>
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<tr>
<td>Arm Traverses (LT/LT)</td>
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<td>≤1365</td>
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<td>≤1365</td>
<td>≤1365</td>
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</tr>
<tr>
<td>Arm Traverse (RT/RT)</td>
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<td>≤1380</td>
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<td>≤1380</td>
<td>≤1380</td>
<td>≤1380</td>
<td>≤1380</td>
</tr>
</tbody>
</table>

### Integrated function


### Option

Motion range & dimensions

ZT130U / ZT165U / ZT200S

- Releasing work from resin molding machine
- Releasing and loading / unloading of large-sized workpieces by vision system
- Hemming process of the car door
E series

The E Controller, delivering unprecedented quality with a compact size, was developed to respond to the requirements of our customers. Kawasaki’s past achievements and experience have led to the development of the most technically advanced controller available. This industry-leading design provides improved performance and easy operation that surpasses all expectations.

Features

Compact

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

User-friendly operation

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

Programming ease & flexibility

A rich set of programming functions comes 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 control.

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 MTTR (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 E2X controller for a total of nine controlled axes. Numerous communication fieldbuses are available for controlling peripheral devices. The Kawasaki S5C-CNC sequencer software can be combined with user-customized interface panels on the teach pendant.

Specifications

<table>
<thead>
<tr>
<th>America</th>
<th>Europe</th>
<th>Option</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimensions (mm)</td>
<td>W560 × D580 × H578</td>
<td>W560 × D580 × H578</td>
</tr>
<tr>
<td>Structure</td>
<td>Unitized structure with indirect cooling system.</td>
<td>Transformer unit: W560 × D580 × H578</td>
</tr>
<tr>
<td>Number of controlled axes</td>
<td>7</td>
<td>Max. 9</td>
</tr>
<tr>
<td>Drive system</td>
<td>Full digital servo system.</td>
<td></td>
</tr>
<tr>
<td>Coordinate systems</td>
<td>Joint, Base, Tool.</td>
<td>Fixed toolpoint</td>
</tr>
<tr>
<td>Types of motion control</td>
<td>Joint, Linear, Circular interpolated motion</td>
<td></td>
</tr>
<tr>
<td>Programming</td>
<td>Point to point teaching or language based programming</td>
<td></td>
</tr>
<tr>
<td>Memory capacity (kB)</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>General purpose I/O (onboard)</td>
<td>Motor power off, hold</td>
<td></td>
</tr>
<tr>
<td>Operation panel</td>
<td>E-stop switch, Teach/Reset switch, Controller power light (Cycle start, motor-on, feedback, and error reset are activated).</td>
<td></td>
</tr>
<tr>
<td>Cycle time</td>
<td>Teach pendant (ms)</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Robot controller (ms)</td>
<td>5</td>
</tr>
<tr>
<td>Power requirements</td>
<td>AC200-250V ±10%, 50/60Hz, 3e</td>
<td>AC380-415V ±10% of AC400-480V ±10% 50/60Hz, 3e</td>
</tr>
<tr>
<td>Transformer unit</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td>Exterernal connection</td>
<td>380VAC ±5% (DC 0 - 45VDC)</td>
<td>380VAC ±5% (DC 0 - 45VDC)</td>
</tr>
<tr>
<td>Power supply</td>
<td>380VAC ±5% (DC 0 - 45VDC)</td>
<td>380VAC ±5% (DC 0 - 45VDC)</td>
</tr>
<tr>
<td>Interface</td>
<td>Ethernet (1000BASE-T), RS-232C</td>
<td>USB memory</td>
</tr>
</tbody>
</table>

System configuration diagram

[Diagram of system configuration]