Kawasaki Robot
duArro 2 Dual-arm SCARA Robot

Features:

Coexistent operations with workers
Co-existing and collaborative works with human workers are possible thanks to various functions to assure safety and the use of soft materials on the arm surface. In the event of a collision with the worker, the collision detection function will make the duArro stop.

Vertical Stroke (Z-axis) expanded to 550mm
The vertical stroke is extended from 150 to 550mm, enabling wider applications such as packing boxes with a large height.

Payload Capacity increased to 3 kg
The payload capacity is increased from 2 kg to 3 kg (total 6 kg for 2 arms) for wider applications.

Easy use of the vision system
Since vision sensors can be used by simply adding optional software, a vision controller is not needed.

Separation of the arms and controller
In addition to the integrated type of arms and controller, a separate type (arms and controller are installed separately) allows free layout of the production line.
Application

Packing products prior to shipment

Inspection of assembled PCBs

Specifications

<table>
<thead>
<tr>
<th>duAro 2</th>
<th>Assembly, handling, dispensing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Degree of freedom (axes)</td>
<td>4 x 2 arms</td>
</tr>
<tr>
<td>Max. payload (kg)</td>
<td>3 x 2 arms</td>
</tr>
<tr>
<td>Positional repeatability (mm)</td>
<td>±0.05</td>
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</tbody>
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Motion range

<table>
<thead>
<tr>
<th>Arm1 (lower arm)</th>
<th>Arm2 (upper arm)</th>
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<tbody>
<tr>
<td>Arm rotation (°)</td>
<td>°10 - °170 (JT3)</td>
</tr>
<tr>
<td>Arm rotation (°)</td>
<td>°130 - °140 (JT2)</td>
</tr>
<tr>
<td>Art up-down (mm)</td>
<td>0 - +550 (JT3)</td>
</tr>
<tr>
<td>Wrist swivel (°)</td>
<td>°360 - °360 (JT4)</td>
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Number of controlled axes 
Max. 12 (standard 8, optional 4)

Drive system
Full digital servo system

Type of motion control
Manual mode
Coordinated movement of 2 arms, individual movement of 1 arm, (Interpolation mode), Joint, Base, Tool
Auto mode
Coordinated movement of 2 arms, individual movement of 2 arm, (Interpolation mode), Joint, Linear interpolated motion

Programming
Direct teaching method through tablets

Memory capacity (MB) | 16
I/O signal
General input (No. of input) | 16 (max. 80)
General output (No. of output) | 16 (max. 80)

Power requirements
AC200-230V ±10%, 50/60Hz ±2%, Single phase, Max. 22kVA**

Mass (kg)
210kg (integrated type), 100 kg (separated type arm unit)

Environmental condition
Temperature (°C) | 5 - 40°C
Humidity (%) | 35 - 85 (no dew, nor frost allowed) **

Note:
*1: At the time of power activation, rush current generates in the range of several to tens of several times of the normal current. Due to such rush current, the supply voltage could drop. It is recommended to select a power supply capacity with enough room to cope with such instantaneous current change.
*2: Please consult with us for use of specifications other than specified above.