IRB 660
Taking palletizing to new heights

Thanks to its state-of-the-art 4-axes design, customers can look forward to a speedy machine that combines a 3.15 meter reach with a 250 kg payload, making it ideal for palletizing bags, boxes, crates, bottles and more. In fact, ABB is set to reinforce its position as the sole global supplier of complete robot-based packaging line automation.

Pushing the working envelope
The IRB 660 is a dedicated palletizer that blends speed, reach and payload like no other robot on the market. This is an exceptionally fast 4-axis machine that combines a 3.15 meter reach with a 250 kg payload, making it ideal for palletizing bags, boxes, crates, bottles and more.

The IRB 660 is considerably faster than its predecessor. Its optimized motor power and motion performance ensure significantly shorter cycle times than competing products. The new palletizer comes in a high-speed version capable of handling 180 kg payloads at full speed, and as a 250 kg version for high throughput.

The robot’s impressive reach means it can service up to four in-feed conveyors, two pallet stacks, one slip-sheet stack and four palletizing out-feeding lines. In fact, the IRB 660 has the versatility, reach and handling capacity to meet the demands of just about any palletizing applications.

The IRB 660 is easy to come to grips with. ABB’s multi-functional IRC 5 controller and comprehensive packaging line software, PickMaster, house all the key functions for quick, easy programming and intuitive operation on the shop floor. Furthermore, the robot’s rugged design and IP 67 tightness make for steady performance in even the toughest environments. As well as ensuring those extra lengthy service intervals.

Main applications
• Material handling
• Palletizing
Position repeatability | Path repeatability
---|---
IRB 660-180/3.15 | 0.1 mm | 0.3 mm
IRB 660-250/3.15 | 0.1 mm | 0.3 mm

Performance (according to ISO 9283)

- **Electrical Connections**
  - Supply voltage: 200-600 V, 50/60 Hz
  - Power consumption: ISO cube 2.7 kW, Normal movements 3.2 kW

- **Physical**
  - Robot base: 1136 x 850 mm
  - Robot weight: 1650 kg

- **Environment**
  - Ambient temperature for mechanical unit:
    - During operation: +0°C (32°F) to +50°C (122°F)
    - During transportation and storage: -25°C (-13°F) to +55°C (131°F)
    - During short periods (max. 24 h): +70°C (158°F)
  - Relative humidity: Max. 95%
  - Noise level: Max. 73 dB (A)

- **Safety**
  - Double circuits with supervisions, emergency stops and safety functions. 3-position enable device

- **Emission**
  - EMC/EMI shielded

Data and dimensions may be changed without notice.

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**Specification**

<table>
<thead>
<tr>
<th>Robot version</th>
<th>Reach (m)</th>
<th>Handling capacity (kg)</th>
<th>Cycles per hour</th>
</tr>
</thead>
<tbody>
<tr>
<td>IRB 660-180/3.15</td>
<td>3.15</td>
<td>180</td>
<td>1570</td>
</tr>
<tr>
<td>IRB 660-250/3.15</td>
<td>3.15</td>
<td>250</td>
<td>1360</td>
</tr>
<tr>
<td>Number of axes</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Protection</td>
<td>IP 67</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mounting</td>
<td>Floor</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Controller</td>
<td>IRC5 Single Cabinet</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Movement**

<table>
<thead>
<tr>
<th>Axis movement</th>
<th>Working range</th>
<th>Max. velocity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Axis 1 rotation</td>
<td>+180° to -180°</td>
<td>130°/s 95°/s</td>
</tr>
<tr>
<td>Option: +220° to -220°</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Axis 2 arm</td>
<td>+85° to -42°</td>
<td>130°/s</td>
</tr>
<tr>
<td>Axis 3 arm</td>
<td>+120° to -20°</td>
<td>130°/s</td>
</tr>
<tr>
<td>Axis 6 turn</td>
<td>Default: +300° to -300°</td>
<td>300°/s</td>
</tr>
<tr>
<td>Max. rev: +150 to -150</td>
<td></td>
<td>240°/s</td>
</tr>
</tbody>
</table>

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