CLASS-LEADING PERFORMANCE FOR HIGH-QUALITY MANUFACTURING
Aimed at increasing manufacturing productivity, IRB 1100 provides up to 35% faster cycle times and best-in-class repeatability for high quality manufacturing. IRB 1100 consistently outperforms similar robots in terms of payload and position repeatability (RP) even when under space constraints. Indeed, IRB 1100 offers the highest payload for a robot of its class.

COMPACT AND SMALL FOOTPRINT DESIGN ENSURES FLEXIBLE INSTALLATION
Compared to the previous generation, the IRB 1100 robot design was optimized with a 10% smaller footprint and over 20% weight reduction for space-efficient installation in diverse environments, such as electronics manufacturing factories.

The small footprint allows multiple robots to be deployed simultaneously in order to collaboratively perform automation operations, enabling more flexible handling for heavy-load operations with complex tools/end effectors.

Powered by ABB’s new OmniCore™ controller, IRB 1100 is equipped with advanced motion control capabilities, making it ideal for supporting rapid assembly, pick-and-place, and material handling applications.

RUGGED YET COMPACT IP67 RATED
The IRB 1100 has IP40 as standard protection and IP67 as option. The entire robot is designed to be IP67 compliant according to IEC 60529 - from base to wrist, which means that the electrical compartments are sealed against water and solid contaminants.

CLEANROOM ISO 4
IRB 1100 Cleanroom version provides lower production costs to industries requiring minimal environmental pollutants.

KEY BENEFITS
- Offers 35% faster cycle times for increased productivity
- 10% smaller footprint and over 20% weight reduction for easy installation
- The highest payload for a robot of its class
- Equipped with up to 16 I/O connections (C1+C2) for more sophisticated/complex applications

MAIN APPLICATIONS
- Assembly & Testing
- Loading & Unloading
- Screw driving
- Rubber insertion
- Polishing, grinding, buffing, deburring and sanding
### Specification

<table>
<thead>
<tr>
<th>Robot version</th>
<th>Reach (m)</th>
<th>Payload (kg)</th>
<th>Armload (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>IRB 1100-4/0.475</td>
<td>0.475</td>
<td>4</td>
<td>0.5</td>
</tr>
<tr>
<td>IRB 1100-4/0.58</td>
<td>0.58</td>
<td>4</td>
<td>0.5</td>
</tr>
</tbody>
</table>

- **Number of axes**: 6
- **Protection**: Standard IP40, Option IP67
- **Cleanroom**: Option ISO 4
- **Mounting**: Any angle
- **Controller**: OmniCore E10, C30, C90XT
- **Integrated signal and power supply**: Up to 16 Signals (C1+C2) on wrist
- **Integrated air supply**: 4 air on wrist (Max. 6 Bar)
- **Integrated ethernet**: One 1000 Base-T ethernet Port

1. There are some reachable space limitation when the payload/pose is tough.
2. Optional

---

### Performance (according to ISO 9283)

<table>
<thead>
<tr>
<th></th>
<th>IRB 1100-4/0.475</th>
<th>IRB 1100-4/0.58</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pose repeatability, RP (mm)</td>
<td>0.01 mm</td>
<td>0.01 mm</td>
</tr>
<tr>
<td>Pose stabilization time, PST (s) within 0.1 mm of the position</td>
<td>0.08</td>
<td>0.19</td>
</tr>
<tr>
<td>Path repeatability, RT (mm)</td>
<td>0.05 mm</td>
<td>0.05 mm</td>
</tr>
</tbody>
</table>

---

### Performance

- **1 kg picking cycle**: 0.42 s

---

### Physical

- **Dimensions robot type**: 160 x 172 mm
- **Weight IRB 1100**: 21 kg

---

### Movement

<table>
<thead>
<tr>
<th>Axis movement</th>
<th>Working range</th>
<th>Axis max. speed IRB 1100-4/0.475</th>
<th>Axis max. speed IRB 1100-4/0.58</th>
</tr>
</thead>
<tbody>
<tr>
<td>Axis 1 rotation</td>
<td>+230° to -230°</td>
<td>460°/s</td>
<td>460°/s</td>
</tr>
<tr>
<td>Axis 2 arm</td>
<td>+113° to -115°</td>
<td>380°/s</td>
<td>360°/s</td>
</tr>
<tr>
<td>Axis 3 arm</td>
<td>+55° to -205°</td>
<td>280°/s</td>
<td>280°/s</td>
</tr>
<tr>
<td>Axis 4 wrist</td>
<td>+230° to -230°</td>
<td>560°/s</td>
<td>560°/s</td>
</tr>
<tr>
<td>Axis 5 bend</td>
<td>+120° to -125°</td>
<td>420°/s</td>
<td>420°/s</td>
</tr>
<tr>
<td>Axis 6 turn</td>
<td>+400° to -400°</td>
<td>750°/s</td>
<td>750°/s</td>
</tr>
</tbody>
</table>

Specifications subject to change without notice.

---

abb.com/robotics

---

We reserve the right to make technical changes or modify the contents of this document without prior notice. With regard to purchase orders, the agreed particulars shall prevail. ABB does not accept any responsibility whatsoever for potential errors or possible lack of information in this document.

We reserve all rights in this document and in the subject matter and illustrations contained therein. Any reproduction, disclosure to third parties or utilization of its contents – in whole or in parts – is forbidden without prior written consent of ABB.

Copyright © ABB
All rights reserved