**IRB 5400**
High performance paint process robot

A highly efficient paint robot with high acceleration, high load capacity, large work envelope and integrated process equipment. It saves cycle time and it saves paint.

**A powerful workhorse**
The IRB 5400 is a unique paint robot with high acceleration and speed, combined with the ability to carry heavy loads. It gives you short cycle times and increased production. The extensive load capacity enables us to put the process equipment close to the applicator to reduce waste.

**Add a rail for coating large objects**
The IRB 5400 can be mounted on a trolley for operating on a rail. There are two types of foot for the trolley. The clean wall foot is used when the trolley and rail is located outside the spray booth. This enables for an easy-to-clean inner spray booth wall. The in-booth foot enables the complete rail and trolley to be located inside the spray booth. This design is typically used for retrofit in existing spray booths or for spray booths with limited space.

**Paint robot control system**
The IRB 5400 uses the IRC5P paint robot control system. It is specifically designed for the paint shop with its user friendly Ex FlexPaint Pendant and RobView 5 - our paint cell software for supervision, control and diagnostics, and our powerful software tools for off-line programming and process tuning.

**Powered by IPS**
The integrated process system (IPS) integrates the paint application equipment in the robot arm. With color change valves and paint pumps close to the paint wrist, the result is reduced material consumption and significant paint savings. Air- and fluid regulation, pilot valves, flow sensors, bell speed and high voltage control are also integrated in the robot, making installation, set up and process tuning fast and easy.

**Flexible rail system**
The rails are designed for minimum disturbance of the air flow and are available in 1.5 and 2.0 m modules that combine to the desired length, up to 15 meters (standard). One or two robots can be mounted on one rail.
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**Specification**

<table>
<thead>
<tr>
<th>Robot version</th>
<th>Payload (kg)</th>
<th>Vertical arm load (kg)</th>
<th>Horizontal arm load (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>IRB 5400</td>
<td>25</td>
<td>65</td>
<td>70*</td>
</tr>
</tbody>
</table>

*Including wrist payload.

**Performance**

**IRB 5400**

- Static repeatability: 0.15 mm
- Path accuracy: ±3.0 mm
- Velocity: 1.50 m/s

**Technical Information**

**Electrical Connections**

- Main voltage: 200-600 VAC, 3 phase, 50/60 Hz
- Transformer rating: Stand by <300 W, production 700-1500 W

**Physical**

- Robot footprint: 660 x 750 mm (standard foot), 660 x 775 mm (riser foot), 633 mm x 2 - 15 m length (rail)
- Robot unit height (w/o foot): 2070 mm
- Standard foot height: 190 mm
- Riser foot height: 540 mm
- Clean wall rail foot height: 700 mm
- In-booth rail foot height: 1125 mm
- Vertical arm length: 1200 mm
- Horizontal arm length: 1620 mm
- Robot weight - standard foot: 970 kg
- Robot weight - riser foot: 1060 kg
- Controller footprint: 1450 x 725 x 710 mm
- Controller weight: 180 - 200 kg

**Environment**

- Ambient temperature for robot manipulator: +5°C (41°F) up to +45°C (113°F)
- Ambient temperature for robot controller: Max. +48°C
- Relative humidity: Max. 95%
- Safety: Double circuits with supervision, emergency stops and safety functions, 3-position enable device
- Emission: EMC/EMI-shielded

**Movement**

<table>
<thead>
<tr>
<th>Axis movement</th>
<th>Working range</th>
<th>Maximum speed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Axis 1 rotation</td>
<td>300°</td>
<td>137°/s</td>
</tr>
<tr>
<td>Axis 2 vertical arm</td>
<td>160° with riser foot</td>
<td>137°/s</td>
</tr>
<tr>
<td>Axis 3 horizontal arm</td>
<td>150°</td>
<td>137°/s</td>
</tr>
<tr>
<td>Axis 4 inner wrist</td>
<td>Unlimited</td>
<td>465°/s</td>
</tr>
<tr>
<td>Axis 5 wrist bend</td>
<td>Unlimited</td>
<td>350°/s</td>
</tr>
<tr>
<td>Axis 6 wrist turn</td>
<td>Unlimited*</td>
<td>535°/s</td>
</tr>
<tr>
<td>Total wrist bend</td>
<td>± 140°*</td>
<td></td>
</tr>
</tbody>
</table>

*Only limited by the hoses.

**PC Tools and Interface**

**PC tools**

- RobView 5 (included)
- Paint cell supervision & operation
- ShopFloor Editor
- Offline editing & process tuning
- RobotStudio® Paint
- 3D offline simulation & program

**Controller interfaces**

- I/O boards: Analog, digital, relay, 120VAC, encoder & process I/O boards
- Max. TCP velocity: Interbus-S, ProfiBus, Profinet, CC Link, DeviceNet & Ethernet IP
- Network: Ethernet FTP/NFS

**Work range, IRB 5400-12 slim arm**

**Work range, IRB 5400-22 process arm**

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