The IRB 5350 door opener robot is a compact and precise robot assistant for automotive interior painting, both for stop-and-go and moving-line solutions. A specially designed door opener tool with integrated sensors for search and force feedback makes this an efficient and important part of the interior paint zone.

**Optimized design for various applications**
The IRB 5350 robot provides two options for different interior painting solutions: the three axes stop-and-go version and the four axes moving-line version. This capable and efficient interior painting solution can support booth width from 4.5 to 6 meters, booth length from 3 to 10 meters and conveyor speeds ranging from 5 to 10 m/min.

**Compact design and flexible installation**
With the compact arm/foot/rail system, the IRB 5350 can accomplish the following:
- easily integrated into a narrow booth
- increased flexibility for the paint robot by using a dedicated rail system
- common solutions to be used on both sides of the booth, shift the working range for axis 2 for a left or right version
- the rail system support floor mounting.

**High performance and reliability**
For the last several decades, ABB has been peerless in robotic motion control technology. With the QuickMove™/TrueMove™ technology, the IRB 5350 robot is able to utilize swift acceleration and smart sensor tooling to complete a door opening cycle within 3 seconds (A typical cycle includes approaching, searching, gripping, opening, closing, releasing etc.)

The IRB 5350 handles a gripper tool of up to 7kg to grip, open and close different kinds of car doors using its advanced sensors, built into the tooling for detecting the door. Well known for its high protection standards, ABB's IRB 5350 has an IP66 rating. The rail axis has IP66 protection as standard.

**Easy control and programming**
With clear functionality, ABB offers a manageable solution to any interior painting challenge.
- Use the IRC5P robot controller to command both the IRB 5350 door opener robot along with the ABB's paint robots, common spare parts and interface.
- The EX-certified Teach Pendant can be used inside the paint booth for program modifications and testing.
- Offline programming of the entire interior zone is possible with use of ABB's innovative RobotStudio.

**Global service and support**
ABB customers can take advantage of the company's service organization; with more than 40 years of experience in the paint application area. ABB has support offices in 53 countries.
### Specification

**Number of axes**
3 axes/4 axes when rail-mounted

**Robot mounting**
Floor and rail mounted

**Payload on tower**
7 kg

**Opening and closing force**
Max 150N, Force is Perpendicular to the door blade.

**Ingress protection degree**
IP66

**Robot unit ambient temperature**
+0°C to +40°C*

**Relative humidity, non-condensing**
95% maximum

**Ex classification**
II 2 G Ex ib px IIB T4 Gb
II 2 D Ex ib pd IIIC T65°C
FM Class I, II, Div.1, Group C, D, G 135°C

**Robot controller ambient temperature**
+48°C maximum
* Recommended max ambient temp +30°C

**Performance (according to ISO 9283)**

| Position repeatability (RP) | 0.02 mm |
| Path repeatability (RT) | 0.13 mm |

### Movement

**Axis motion**

#### Working range

<table>
<thead>
<tr>
<th>3 axes</th>
<th>4 axes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 – Inner arm</td>
<td>+150° to -150°</td>
</tr>
<tr>
<td>2 – Outer arm</td>
<td>+175° to -125° (left)</td>
</tr>
<tr>
<td>3 – Tower</td>
<td>350 mm</td>
</tr>
<tr>
<td>4 – Rail axis*</td>
<td>350 mm</td>
</tr>
<tr>
<td><strong>Max speed</strong></td>
<td>780 mm/s</td>
</tr>
<tr>
<td><strong>Max speed</strong></td>
<td>1920 mm/s</td>
</tr>
</tbody>
</table>

*Optional axis for rail motion
**Determined by the rail length

### Controller interfaces

**Backup**
USB connection and Ether net

**I/O boards**
Analog, digital, relay, 120VAC, encoder and process I/O boards available

**Fieldbus support**
Interbus-S, ProfiBus, Profinet, CC Link, DeviceNet and Ether net IP available

**Network**
Ethernet FTP/NFS

### PC tools

**RobView 5 (included)**
Paint cell supervision and operation

**ShopFloor Editor**
Off-line editing and process tuning

**RobotStudio Paint**
3D off-line simulation and programming

### Electrical connection

**Mains voltage**
200 – 600VAC, 3-phase, 50/60 Hz

**Power consumption**
Stand by <300 W, production <800 W

**Electrical safety**
According to international standards

**Emission**
EMC/EMI shielded

Information may be changed or updated without notice

### Physical

**Robot footprint**
410 x 430 mm (standard foot)
465 mm x (3 – 10 m) length* (rail)

| Robot height | 1256 mm |
| Robot weight (3 axes) | 215 kg |
| Robot weight (4 axes) | 316 kg |
| Rail weight | 124 kg/m |
| Robot Controller (H x W x D) | 1450 x 725 x 710 mm |
| Robot controller weight | 180 – 200 kg |

* Longer rail lengths on request

### Flexible rail system

The rails are designed for overspray protection and are available in a 1 m module that combines to the desired length, up to the 10 m (standard). It can be mounted on floor. One or two door opener robots can be mounted on one rail.

### Work envelope, left version

[Diagram of work envelope, left version]

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