

# IRB 5350 Door Opener Robot

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 both floor and wall 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.



# IRB 5350

## Compact – Flexible – High performance

Specification	
Number of axes	3 axes/4 axes when rail-mounted
Robot mounting	Floor and rail mounted
Payload on tower	7 kg
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		Max Speed
	3 axes	4 axes	
1 – Inner arm	+150° to -150°	+88° to -88°	167°/s
2 – Outer arm	+175° to -125° (left)	+175° to -125° (left)	180°/s
	+125° to -175° (right)	+125° to -175° (right)	
3 – Tower	350 mm	350 mm	780 mm/s
4 – Rail axis*	/	**	1920 mm/s

\*Optional axis for rail motion

\*\*Determined by the rail length

Controller interfaces	
Backup	USB connection and Ethernet
I/O boards	Analog, digital, relay, 120VAC, encoder and process I/O boards available
Fieldbus support	Interbus-S, ProfiBus, Profinet, CC Link, DeviceNet and Ethernet 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

For more information please contact:

[www.abb.com/robotics](http://www.abb.com/robotics)

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 or wall. One or two door opener robots can be mounted on one rail.



### Work envelope

(Left version)

