

IRB 5500

The next generation FlexPainter

The latest generation IRB 5500 FlexPainter takes painting closer to perfection by integrating the paint application equipment. Combined with its large work area and high acceleration and painting speed, the result is the most efficient and flexible painter of any exterior car body paint robot.



Paint savings

Our compact and light-weight paint application components enable us to put vital paint regulation equipment, like the pumps, as close as 15 cm from the wrist. This reduces paint and solvent waste during color change significantly.

We have integrated the process equipment in the IRB 5500 FlexPainter so you can enjoy substantial savings.

Powered by IPS

The “push-out” function integrated in the IPS system, reduces the paint savings even further. No programming is necessary. You specify the paint savings in percent, and IPS takes care of the rest.

Built for painting

Standard solutions accommodate color change valves for up to 32* colors with circulation, integrated in the robot. Also two pumps, driven by integrated servo motors, and 64 pilot valves are integrated. Solutions for both solvent- and water-borne paint are available.

*More on special request

Less atomizers, higher flow

ABB’s high flow RB1000 atomizer family is specifically designed for the high acceleration and speed of the IRB 5500 FlexPainter. This unique combination significantly reduces the number of robots needed in a spray booth and provides superior performance and high finish quality.

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Our light and compact paint application equipment enables us to integrate 32 colors into the IRB 5500 FlexPainter and keep the speed and acceleration. To you, this means paint savings.



Modular paint components

To integrate the process into the IRB 5500 FlexPainter, ABB has developed a series of light-weight, compact and modular paint application components. This includes color change valves, 2K mixers, air- and paint regulators and pumps. All components are designed for maximum flow.

Paint performance example

Color loss example using 26 colors with a 6 cc pump. The measurements are "real life" including the atomizer. The IPS "push-out" function is used.

Paint loss	< 15 cc
Color change time	8 seconds

Paint robot control system

IRC5P is the new generation paint robot control system, specifically designed for the paint shop, with the integrated paint system (IPS), the user-friendly Ex certified FlexPaint Pendant and RobView 5, the customizable PC software to run your paint installation.

PC Tools

RobView 5	Paint cell supervision and operation (included)
ShopFloor Editor	Off-line path- and process tuning using 3D graphics
RobotStudio Paint	Full 3D simulation and programming of the paint cell

Electrical connection

Mains voltage	200 - 600VAC, 3-phase, 50/60 Hz
Electrical safety	According to international standards

Specification

Number of axes	6 axes
Payload on wrist	13 kg
Robot mounting	Wall, floor, tilted, inverted
Ingress protection degree	IP67 (wrist IP54)
Robot unit ambient temperature	0 °C to +40 °C*
Relative humidity, non-condensing	95 % maximum
Robot footprint	500 x 680 mm
Robot unit weight	540 kg
Ex classification	II 2 G Ex ib px IIB T4 II 2 D Ex pD 21 T65°C FM Class I,II. Div.1, Group C,D,G 135 °C
Robot controller ambient temperature	+48 °C maximum
Robot controller size (H x W x D)	1450 x 725 x 710 mm
Robot controller weight	180 kg

*Recommended max ambient temp <30°

Performance

Work area	See work envelope drawings
Velocity	Max speed
Axis 1, 2 and 3	100°/s
Axis 4 - Wrist rotation	465°/s
Axis 5 - Wrist bend	350°/s
Axis 6 - Wrist flange rotation	535°/s
Wrist work envelope	±140°
Static repeatability	0.15 mm

Information may be changed or updated without notice

Interface

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

