IRB 580
Top model functions - compact design

IRB 580 combines the advanced functions of the IRB 5400 series with a compact design. The result is a highly flexible, cost-effective and accurate paint robot system.

ABB's high precision hollow wrist has a straight design that eliminates wear and tear on the paint- and air supply hoses, increasing the overall reliability. The wrist can rotate 140° in any direction. It makes IRB 580 one of the most versatile and easy to program paint robots in its class.

Powered by IPS

IRB 580 features ABB's unique Integrated Process System with closed loop regulation and high-speed control of paint and airflow adjustments. The paint process equipment is integrated in the robot arm to increase process response times and reduce paint and solvent waste. Synchronizing the paint flow triggering with the robot arm motion increases transfer efficiency and keeps overspray to an absolute minimum. This saves paint and increases your cost-effectiveness.

High finish quality

The IPS system will automatically compensate for physical changes in the environment or the equipment, always keeping the commanded flow rate within strict tolerances. This ensures a uniform film build with specified thickness. The result is high finish quality and optimum use of the paint material.

High uptime

The IPS system of the IRB 580 robot will monitor and warn the operator of equipment wear over time. It can also detect a broken cable or defective sensor and automatically enter open-loop production mode (if so configured) until it is convenient to enter the booth and perform the necessary maintenance. All this significantly increases uptime.

Why choose IRB 580

High precision and efficiency - ABB's Hollow wrist technology, Integrated process system and ABB's bell technology.
Increased flexibility - Two different arm lengths and flexible paint process solutions.
Increased productivity - Fast installation and high uptime with ABB's efficient software tools and superior control technology.

Power and productivity
for a better world™

ABB

IRB 580
Top model functions - compact design

IRB 580, a high precision paint robot

Specification

Number of axes	6 axes. 7 when rail-mounted
Payload on wrist	10 kg
Robot mounting	Floor, inverted and rail
Ingress protection degree	IP67 (wrist IP54)
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
Ambient temperature	Robot unit +5°C to +45°C*
	Robot controller +48°C maximum
Relative humidity	Non-condensing 95% maximum

*Recommended max ambient temp <30°C

Physical

IRB 580 / 1620 mm horizontal arm	2.6 m reach
IRB 580 / 1220 mm horizontal arm	2.2 m reach
Robot footprint	660 X 750 mm
Robot Controller (H x W x D)	1450 x 725 x 710 mm
Weight Robot unit	630 kg
Robot controller	180 kg

Performance

Axis motion	Working range	Max speed
1 - Rotation	+150° to -150°	112°/s
2 - Vertical arm	+75° to -70°	112°/s
3 - Horizontal arm	+35° to -60°	112°/s
4 - Wrist rotation	unlimited	465°/s
5 - Wrist bend	unlimited	350°/s
6 - Wrist flange rotation	unlimited*	535°/s
Wrist work envelope	±140°	
Static repeatability	0.3 mm	

*Limited by the hoses

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

Interface

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

Designed for painting

IRC5P is the new generation paint robot control system, specifically designed for the paint shop. Key elements of its user-friendly interface are the new Exi certified FlexPaint Pendant with multi-language support and RobView 5, the customizable PC software for paint cell supervision and control.
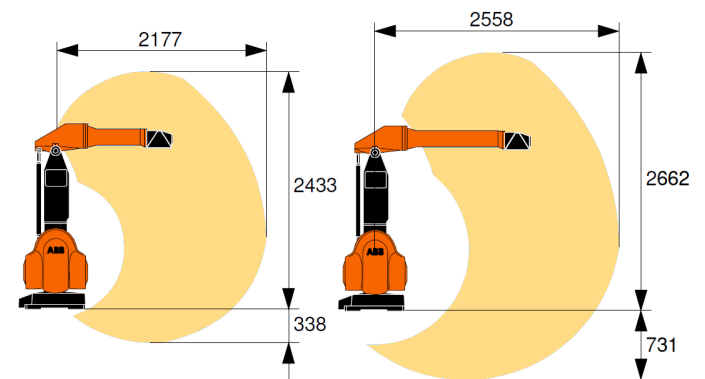
User interface

Operator panel	on cabinet
Programming unit	FlexPaint Pendant, Exi certified, soft keys, dual joystick, live handle, 3.5" color screen. Asian language support.
Backup	USB connection and Ethernet

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

Work envelope

Information may be changed or updated without notice