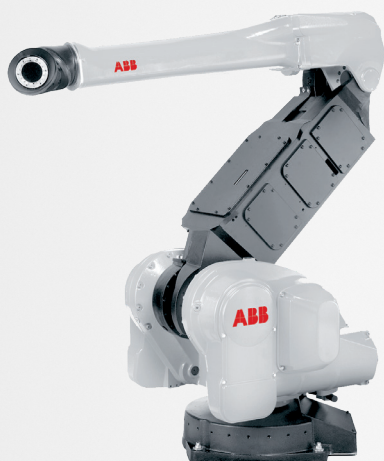


ROBOTICS

IRB 5400 - slim arm

Slim and fast paint robot



A powerful and slim paint robot with a large work envelope. ABB's hollow wrist technology with 140° unsurpassed flexibility, combined with a slim horizontal arm, allows full coating of even the most complicated parts.

A versatile paint robot

The IRB 5400 is a slim arm paint robot with high acceleration and speed, combined with a large work envelope and our unique and flexible paint wrist. It will speed up your production and help you be more profitable.

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 high speed, closed loop control of the integrated process system (IPS) secures a uniform film build and maximizes the finish quality.

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.

High uptime

ABB's powerful software tools for process supervision and diagnostics in combination with our renowned product quality gives you high uptimes and ease of mind.

Specifications	
Number of axes	6 (7 when rail mounted)
Mounting	Floor & rail
Payload on wrist	25 kg
Load - vertical arm	50 kg
Load - horizontal arm	40 kg (including wrist payload)
Protection	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

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

Performance		
Axis	Working range	Max speed
Rotation	300° 170° with riser foot	137°/s
Vertical arm	160°	137°/s
Horizontal arm	150°	137°/s
Inner wrist	Unlimited	465°/s
Wrist bend	Unlimited	350°/s
Wrist turn	Unlimited*	535°/s
Total wrist bend	± 140°	
Static repeatability	0.15 mm	
Path accuracy	±3.0 mm	
Velocity	1.50 m/s	

*only limited by the hoses

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

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

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)	1980 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	940 kg
Robot weight - riser foot	1030 kg
Controller footprint	1450 x 725 x 710 mm
Controller weight	180 - 200 kg

*longer rail lengths on request

Electrical connections	
Main voltage	200- 600 VAC, 3 phase, 50/60 Hz
Transformer rating	Stand by <300 W, production 700-1500 W
Electrical safety	Meets international standards

Flexible rail system	
IRB 5400-13/14 flexible slim arm rail	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.



Working range

