

IRB 52

A compact painting specialist

The IRB 52 is a compact painting robot designed specifically for painting small and medium sized parts in a wide range of industries.

It provides you with an affordable, professional and high-quality painting solution.

Compact

The compact design of the IRB 52 means smaller spray-booth sizes, reduced ventilation needs and system energy savings.

Flexible

With its small size and impressive reach (1.2 or 1.45 meters) the IRB 52 is flexible and versatile, while its high speed and accuracy offer short cycle times and high quality painting.

Versatile mounting options allow the IRB 52 to meet your demands for flexible integration and increased production.

The IRB 52 can be easily integrated with a range of process accessories, such as turntables, shuttle tables and conveyor systems. The robot is light weight and very easy to install, program and maintain.



Integrated

The IRB 52 is designed for painting - fully prepared for integrated paint process equipment. It utilizes the powerful and well proven Integrated Process System (IPS) for high speed process control - synchronized with the superior IRC5P motion system.

The IPS system includes color change valves and air- and paint regulation, providing accurate process regulation, offering high quality finish and major paint savings.

The combination of proven technology and well-tested innovations offers reliable production and high uptime. The IRB 52 can significantly improve your productivity.

IRB 52

Compact - Flexible - Integrated

The IRB 52 is ideal for painting, glazing, enamelling, powder and dispensing.

Specification

Number of axes	6	
Payload on wrist	7 kg	
Robot mounting	Floor, inverted, wall, tilted	
Ingress protection degree	IP67 (wrist IP54)	
Ex-certification	Explosion protected Exi/Exp for installation in hazardous area, Zone 1 (Europe) and Division I, Class I & II	
Ambient temperature	Robot unit	+5°C to +60°C
	Robot controller	+48°C maximum
Relative humidity	Non-condensing	95% maximum

Physical

	Vertical arm	Total height
IRB 52 / 1.2 m reach	475 mm	1069 mm
IRB 52 / 1.45 m reach	700 mm	1294 mm
Robot footprint	484 X 648 mm	
Robot Controller (H x W x D)	1450 x 725 x 710 mm	
Weight	Robot unit	250 kg
	Robot controller	180 kg

Performance

Axis	Working range:		Max
motion:	1.2 m reach:	1.45 m reach:	Speed
1 - Rotation	+180° to -180°	+180° to -180°	180°/s
2 - Vertical arm	+110° to -63°	+120° to -90°	180°/s
3 - Horizontal arm	+55° to -235°	+55° to -235°	180°/s
4 - Hor.arm rotation	+200° to -200°	+200° to -200°	320°/s
5 - Wrist bend	+115° to -115°	+115° to -115°	400°/s
6 - Wrist rotation	+400° to -400°	+400° to -400°	460°/s
Static repeatability	0.15 mm		
Path accuracy	+/- 2 mm		

Extensions and limitations:

- When the robot is tilted up to 30°, axis 1 is limited to +/-45°.
- When the robot is wall mounted, axis 1 is limited to +/-20°.
- With axis 1 limited to +/-100° on IRB 52/1.2m, axis 2 extends to +136° to -63°.
- With axis 1 limited to +/-95° on IRB 52/1.45m, axis 2 extends to +150° to -90°.
- Axis 4 and axis 6 can rotate max. +/-190 and +/-288 revolutions respectively (can be extended by SW configuration), however, there will be physical limitations caused by the paint 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



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Designed for painting

The IRC5P is the newest 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 the customizable PC software for paint cell supervision, RobView 5.

Interface

Digital inputs/outputs	512/512, expandable
Analog inputs/outputs	16/12, expandable
Fieldbus support	Interbus-S, ProfiBus, CC Link, DeviceNet

Working envelope

