



IRB 6400RF

Industrial Robot

MAIN APPLICATIONS

Cast cleaning
Pre-machining



Powerful and accurate material removal robot

The robot's parallel design gives a powerful, stiff and sturdy structure allowing high speed and high power material removing processing without compromising path control. IRB 6400RF can be used in machining applications normally carried out by machine tools, and still maintain the flexibility and cost-efficiency of an industrial robot. The 6-axis IRB 6400RF manipulator controlled by the IRC5-controller provides short and precise cycle times, rapid changeovers and consistent high process precision. The IRB 6400RF robot is controlled by the advanced dynamic control functions, QuickMove and TrueMove, always ensuring excellent path accuracy and optimized performance over the entire working envelope.

Adaptable for a demanding foundry environment

IRB 6400RF has unique foundry plus protection. To withstand harsh environments, the robot is

protected with adhesive epoxy paint, improved sealing, motor and connector protection as well as specially designed cast covers. Foundry plus protection of the complete robot implies IP66 and IP67 tightness, corrosion protection and high-pressure steam washable. The compact design with a small interference radius ensures flexible installations in areas with high density of production equipment.

Reliability and Safety

IRB 6400RF is a well-proven design, featuring a robust all-steel construction with high material strength. The arms are mechanically balanced and equipped with double bearings. Advanced motion control and collision detection options greatly reduce the risk of tool and work piece damage, making this a highly reliable and safe robot.

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TECHNICAL DATA, IRB 6400RF INDUSTRIAL ROBOT

SPECIFICATION

Robot versions	Reach to 5 th axis	Handling capacity	Remarks
IRB 6400RF/2.5-200	2.5 m	200 kg	
IRB 6400RF/2.8-200	2.8 m	200 kg	
All IRB 6400RF-versions have Foundry Plus protection. For details, see under Environment.			
Supplementary load	50+320 kg		
Number of axes	6		
Robot manipulator	6		
External devices	6		
Integrated signal supply	10 poles 50 V DC 2 poles 250 V AC 2 CAN-Buses		

Integrated air supply Max. 10 bar

PERFORMANCE

Position repeatability		
2.5-120 and 2.5-150	0.1 mm	
Others	0.15 mm	
Path repeatability at 1 m/s (based on ISO path)		
2.5-120 and 2.5-150	1.0 mm	
Others	1.5 mm	
Max. TCP velocity on ISO-plane	>2-3 m/s	
Max. TCP acceleration on ISO-plane	>10 m/s ²	
Axis working range		
	Axis	
Positioning	1 Rotation	360°
	2 Arm	155°
	3 Arm	138°
Reorientation	4 Wrist	600°
	5 Bend	240°
	6 Turn	600°

	Axis	Axis maximum speed, °/s	
		2.5-200	2.8-200
Positioning	1 Rotation	100	90
	2 Arm	90	70
	3 Arm	90	70
Reorientation	4 Wrist	120	110
	5 Bend	120	110
	6 Turn	190	110

ELECTRICAL CONNECTIONS

Supply voltage	200–600 V, 50/60 Hz
Rated power, supply transformer	7.2 - 7.8 kVA

PHYSICAL

Dimensions manipulator base	1080 x 1050 mm
Weight manipulator	2060 – 2390 kg

ENVIRONMENT

Ambient temperature	
Manipulator	5 – 50°C
Relative humidity	Max. 95%
Degree of protection	
Foundry plus	IP 67 and steam washable
Noise level	Max. 70 dB (A)
Safety	Double circuits with supervision, emergency stops and safety functions, 3-position enable device
Emmission	EMC/EMI-shielded

Data and dimensions may be changed without notice.

WORKING RANGE AND LOAD DIAGRAM

IRB 6400RF

