

IRB 4400 Industrial Robot

Main Applications

Cutting and deburring
Grinding and polishing
Machine tending
Material handling



Fast, compact and versatile industrial robot

An extremely fast, compact robot for medium to heavy handling. Exceptional all-round capabilities make it suitable for a variety of manufacturing applications. The load capacity of 60 kg at very high speeds usually permits handling of two parts at a time. A rigid, well-balanced design and patented TrueMove™ function provide smooth and fast movement throughout the entire working range.

This ensures very high quality in applications such as cutting. Rapid maneuverability makes the IRB 4400 perfectly matched for applications where speed and flexibility are important. The compact design and protected versions enables use in situations where conventional robots cannot work, such as foundry and spraying applications. The foundry plus version is IP 67 protected and can be washed with high pressure steam, which makes it ideal for use in harsh environments.

Reliability and economy

The robust, rigid construction means long intervals between routine maintenance. Well-balanced steel arms with double bearing joints, a torque-strut on axis 2 and use of maintenance-free gearboxes and cabling also contribute to the very high levels of reliability. The drive train is optimised to give high torque with the lowest power consumption for economic operation.

Extensive communication for easy integration

The extensive communication capabilities include serial links, network interfaces, PLC, remote I/O and field bus interfaces. This makes for easy integration in small manufacturing stations as well as large scale factory automation systems.

IRB 4400

Specification

Robot versions	Reach	Payload	Standard	Foundry	
				Plus 2	Prime 2
IRB 4400/60	1.96 m	60 kg	x	x	x
Supplementary load					
on axis 2		35 kg			
on axis 3		15 kg			
on axis 4		0-5 kg			
Number of axes					
Robot manipulator		6			
External devices		6			
Integrated signal supply		23 signals and 10 power on upper arm			
Integrated air supply		Max. 8 bar on upper arm			
IRC5 Controller variants		Single cabinet, Dual cabinet			

Performance

Position repeatability	0.19 mm
Path repeatability at 1.6 m/s	0.56 mm

Axis movements

Working range		
Axis	Working range	Maximum speed
1, C Rotation	Axis 1 + 165 to - 165	Axis 1 150°/s
2, B Arm	Axis 2 + 96 to - 70	Axis 2 120°/s
3, A Arm	Axis 3 + 65 to - 60	Axis 3 120°/s
4, D Wrist	Axis 4 +200 to - 200	Axis 4 225°/s
4, Option	Unlimited	
5, E Bend	Axis 5 +120 to - 120	Axis 5 250°/s
6, P Turn	Axis 6 + 400 to - 400	Axis 6 330°/s
6, Option	Unlimited	

Electrical Connections

Supply voltage	200-600 V, 50/60 Hz
Rated power	
Transformer rating	7.8 kVA

Physical

Robot mounting	
IRB 4400	Floor
Dimensions	
Robot base	920 x 640 mm
Weight	
Robot	1040 kg

Environment

Ambient temperature	
Manipulator	5 – 45°C
Relative humidity	
	Max. 95%
Degree of protection	
Standard version	IP 54
Foundry Plus 2 and Foundry Prime 2	IP 67 and high pressure steam washable
Noise level	
	Max. 70 dB (A)
Safety	
	Double circuits with supervision, emergency stops and safety functions, 3-position enable device
Emission	
	EMC/EMI-shielded

Data and dimensions may be changed without notice

Working range and load diagram

IRB 4400/60

