

IRB 4400

Industrial Robot

MAIN APPLICATIONS

- Cutting and deburring
- Die spraying
- Glueing and sealing
- Grinding and polishing
- Machine tending
- Material handling
- Packing
- Palletizing



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 or up to 45 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 versions are IP 67 protected and can be washed with high pressure steam, which make them 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.



TECHNICAL DATA, IRB 4400 INDUSTRIAL ROBOT

SPECIFICATION

Robot versions	Reach of 5 th axis	Handling capacity	Remarks
IRB 4400/45	1.96 m	45 kg	
IRB 4400F/45	1.96 m	45 kg	Foundry plus
IRB 4400/60	1.96 m	60 kg	
IRB 4400F/60	1.96 m	60 kg	Foundry plus
IRB 4400L/10	2.55 m	10 kg	Glueing/Sealing
IRB 4400L/30	2.43 m	30 kg	
IRB 4400FL/30	2.43 m	30 kg	Foundry plus
IRB 4400FS	2.74 m*	30 kg	Foundry plus, Shelf

* at 30° mounting angle.

Supplementary load	
on axis 2	35 kg
on axis 3	15 kg
on axis 4	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

Memory/instructions	
Program memory	2,5-6 Mb, 7,500-18,000 instructions
Storage memory	0,5-5 Mb, 3,000-35,000 instructions
3.5" diskette drive	1,44 Mb, 15,000 instructions

PERFORMANCE

Positional repeatability	
	0.07 - 0.1 mm

Path repeatability at 1 m/s	
	0.25-0.4 mm

Axis movements	IRB 4400/IRB 4400L	IRB 4400FS
Axis Working range		
1, C Rotation	330°	230°
2, B Arm	165°	160°
3, A Arm	125°	125°
4, D Wrist	400°	400°
4, Option	Unlimited	Unlimited
5, E Bend	240°	240°
6, P Turn	800°	800°
6, Option	Unlimited	Unlimited

Movement on ISO test plane, all axis in motion	
Max. TCP velocity	2.2 m/s
Max. TCP acceleration	12-14 m/s ²

ELECTRICAL CONNECTIONS

Supply voltage	
	200-600 V, 50/60 Hz

Rated power, Transformer rating	
	7.8 kVA

PHYSICAL

Robot mounting	
4400	Floor
4400L	Floor
4400FS	Shelf

Dimensions	
Robot base	920 x 640 mm

Weight	
Robot	980-1,300 kg

ENVIRONMENT

Ambient temperature	
Manipulator	5 - 45°C

Relative humidity	
	Max. 95%

Degree of protection	
Standard version	IP 54
Foundry Plus versions	IP 67 and washable

Noise level	
	Max. 70 dB (A)

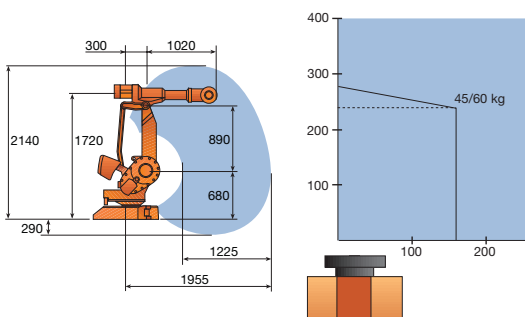
Safety	
	Double circuits with supervision, emergency stops and safety functions, 3-position enable device

Emission	
	EMC/EMI-shielded

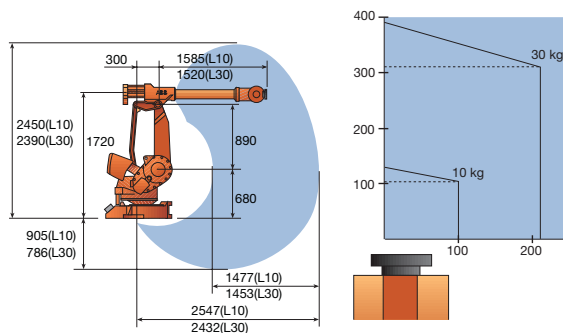
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WORKING RANGE AND LOAD DIAGRAM

IRB 4400



IRB 4400L



IRB 4400FS

