



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 up to 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 enable 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 the IRB 4400 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 optimized 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.

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TECHNICAL DATA, IRB 4400 INDUSTRIAL ROBOT

SPECIFICATION

Versions	Reach	Payload	Standard	Foundry Plus	Wash	Clean Room
IRB 4400/45	1.96 m	45 kg	X	X	X	X
IRB 4400/60	1.96 m	60 kg	X	X	X	X
IRB 4400/L10	2.55 m	10 kg	X	X	X	X
IRB 4400/L30	2.43 m	30 kg	X	X	X	X
IRB 4400/S	2.74 m*	30 kg	X	X	X	X

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	.05-5 Mb, 3,000-35,000 instructions
3.5" diskette drive	144 Mb, 15,000 instructions

PERFORMANCE

Positional repeatability	0.07-0.1 mm
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Path repeatability at 1 m/s	0.25-0.4 mm
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Axis movements	IRB 4400, 4400F and 4400F/L	IRB 4400F/S and 4400/S
Axis	Working range	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
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Rated power,

Transformer rating	7.8 kVA
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PHYSICAL

Robot mounting	Floor
IRB 4400	Floor
IRB 4400/L	Shelf
IRB 4400FS	

Dimensions

Robot base	920 x 640 mm
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Weight

Robot	980-1,300 kg
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ENVIRONMENT

Ambient temperature	5 - 45°C (41 - 113°F)
Manipulator	

Relative humidity	Max. 95%
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Degree of protection

Standard version	IP 54
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Foundry Plus and

Wash versions	IP 67 and high pressure steam washable
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Noise level

Max. 70 dB (A)

Safety

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

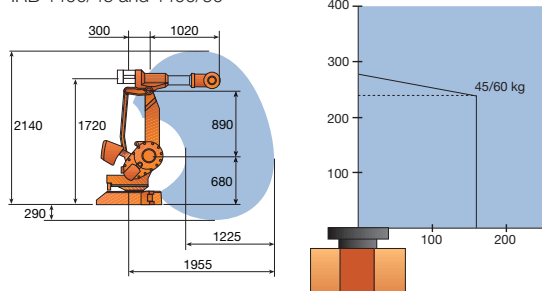
Emission

EMC/EMI-shielded

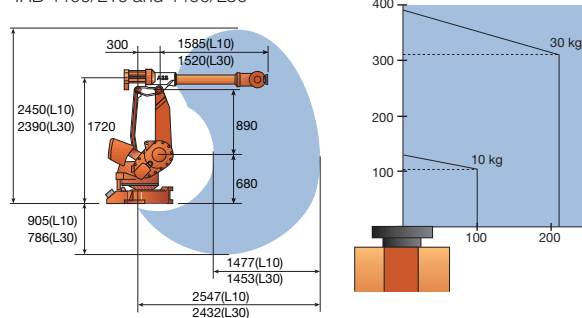
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WORKING RANGE AND LOAD DIAGRAM

IRB 4400/45 and 4400/60



IRB 4400/L10 and 4400/L30



IRB 4400/S

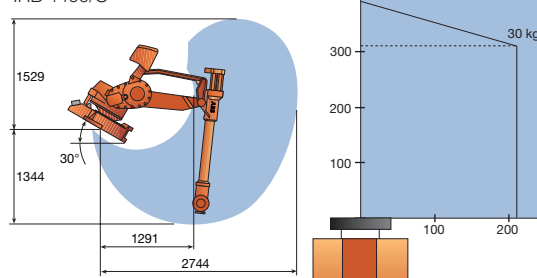


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