



# 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 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.

# IRB 4400

## Industrial Robot

### 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 4450S    | 2.40 m | 30 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

#### PERFORMANCE

Positional repeatability 0.07-0.1 mm

Path repeatability at 1 m/s 0.25-0.4 mm

#### Axis movements

| Axis          | Working range |
|---------------|---------------|
| 1, C Rotation | 330°          |
| 2, B Arm      | 165°          |
| 3, A Arm      | 125°          |
| 4, D Wrist    | 400°          |
| 4, Option     | Unlimited     |
| 5, E Bend     | 240°          |
| 6, P Turn     | 800°          |
| 6, Option     | Unlimited     |

Movement on ISO test plane, all axis in motion

Max. TCP velocity 2.2 m/s

Max. TCP acceleration 12-14 m/s<sup>2</sup>

#### ELECTRICAL CONNECTIONS

Supply voltage 200-600 V, 50/60 Hz

Rated power,

Transformer rating 7.8 kVA

#### PHYSICAL

Robot mounting

IRB 4400 Floor

IRB 4400/L Floor

IRB 4450S Shelf

Dimensions

Robot base 920 x 640 mm

Weight

Robot 980-1 060 kg

#### ENVIRONMENT

Ambient temperature

Manipulator 5 – 45°C

Relative humidity

Max. 95%

Degree of protection

Standard version IP 54

Foundry Plus and

Wash versions 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

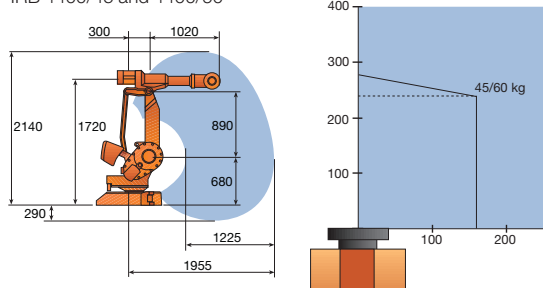
Emission

EMC/EMI-shielded

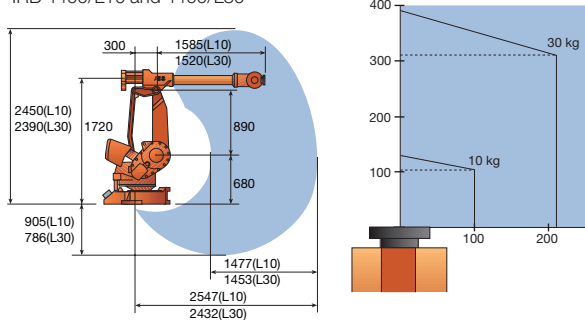
*Data and dimensions may be changed without notice.*

#### WORKING RANGE AND LOAD DIAGRAM

IRB 4400/45 and 4400/60



IRB 4400/L10 and 4400/L30



IRB 4450S

