IRB 6600

Industrial Robot

MAIN APPLICATIONS
Spot Welding
Machine tending
Material handling

Securing your production
A new world of possibilities opens up with ABB's new IRB 6600 robot family. It comes in several versions, with different lengths of the arm and matching handling capacities.

The IRB 6600 is adapted for process applications
Upper arm extenders and different wrist modules will allow customization to each process. As the robot can bend fully backwards, the working range is greatly extended and the robot fits well into dense production lines. Typical application areas are spot welding, material handling, and machine tending.

Service Information
A built-in Service Information System monitors the motion and load of the machine and optimizes service requirements by itself.

A safe investment
A range of software products have been added – all falling under the umbrella designation of Active Safety – to protect not only personnel in the unlikely event of an accident, but also the robot itself.

Active Safety Features
Collision detection, which reduces the collision force substantially, is especially useful on robots handling high payloads.

An **Electronically Stabilized Path** will ensure that the robot will maintain its planned path to its best capability considering acceleration, drag, gravity and inertia. This feature is secured through our TrueMove.

Active Brake System, which not only controls the braking while ensuring the robot maintains its path but permits rapid recovery too.

To achieve optimized performance, the robot adapts to true payloads through its **Self-tuning Performance**. This feature is based on QuickMove.

Passive Safety Features
Passive Safety Features include load identification, movable mechanical stops, double-safe limit switches, stiff steel structure, shape of the lower arm, and compactness of the upper arm's elbow.

ABB

IRB 6600

TECHNICAL DATA, IRB 6600 INDUSTRIAL ROBOT

SPECIFICATION

Robot versions IRB	Reach	Handling capacity	Center of gravity	Wrist torque
6600-175	2.55	175 kg	360 mm	961 Nm
6600-225	2.55	225 kg	305 mm	1324 Nm
6600-175	2.80	175 kg	392 mm	1206 Nm
6650-125	3.20	125 kg	360 mm	715 Nm
6650-200	2.75	200 kg	365 mm	1135 Nm

Extra loads can be mounted on all variants.
50 kg on upper arm and 500 kg on frame of axis 1.

Number of axes:	6
Protection:	Complete robot IP 67
Mounting:	Floor mounted

PERFORMANCE

Positions repeatability	0.1 mm
Path repeatability	0.3 mm

Axis movements	Working range	Axis max speed 6600/6650-200	Axis max speed 6650-125
Axis 1 Rotation	+180° to -180°	Axis 1 100°/s	110°/s
Axis 2 Arm	+ 80° to - 65°	Axis 2 90°/s	90°/s
Axis 3 Arm	+ 60° to -180°	Axis 3 90°/s	90°/s
Axis 4 Wrist	+300° to -300°	Axis 4 150°/s	150°/s
Axis 5 Bend	+120° to -120°	Axis 5 120°/s	120°/s
Axis 6 Turn	+300° to -300°	Axis 6 190°/s	235°/s

A supervision function prevents overheating in applications with intensive and frequent movements.

ELECTRICAL CONNECTIONS

Supply voltage	200-600 V, 50/60 Hz
Power consumption	ISO-Cube 2.6 kW
Normal robot movements	3.8 kW

PHYSICAL

Dimensions robot base	1136 x 850 mm
Weight (all versions)	1750 kg

ENVIRONMENT

Ambient temperature for mechanical unit

During operation	+5 °C (41 °F) - +52 °C (122 °F)
During transportation and storage	-25 °C (13 °F) - +55 °C (131 °F)
for short periods (max 24 h)	up to +70 °C (158 °F)

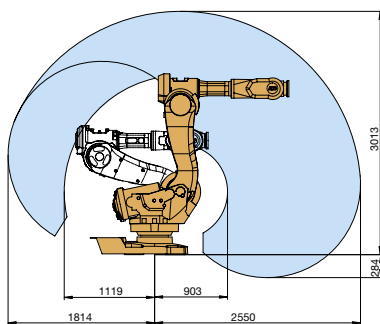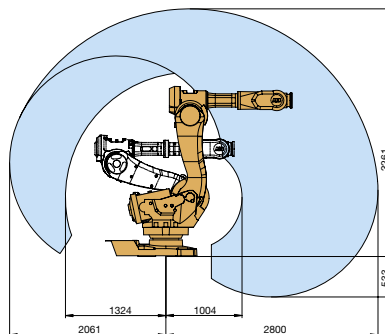|	
Relative humidity	Max 95%
Noise level	Max 73 dB (A)
Safety	Double circuits with supervision, emergency stops and safety functions, 3-position enable device.
Emission	EMC/EMI-shielded

*Data and dimensions may be changed without notice
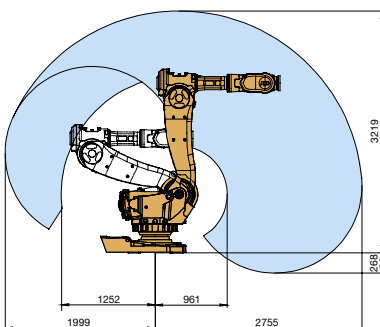
WORKING RANGE

IRB 6600-175/2.55, IRB 6600-225/2.55

IRB 6600-175/2.8

6650-200/2.75

6650-125/3.2

www.abb.com/robotics

ABB