



# 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.



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### 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

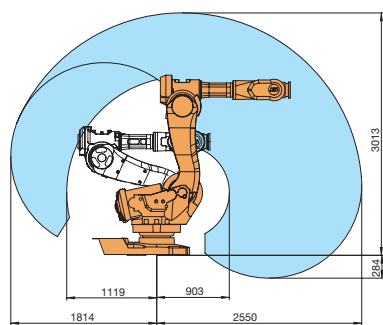
Positions repeatability 0.1 mm  
Path repeatability 1.88 mm

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

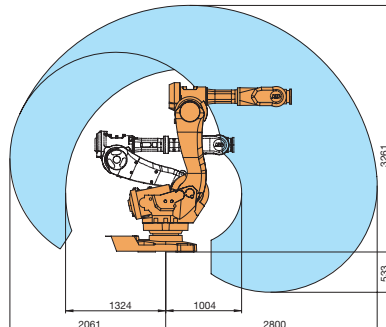
A supervision function prevents overheating in applications with intensive and frequent movements.

#### WORKING RANGE

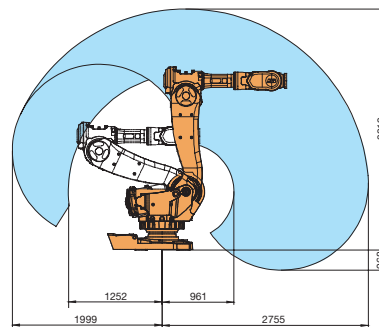
IRB 6600-175/2.55, IRB 6600-225/2.55



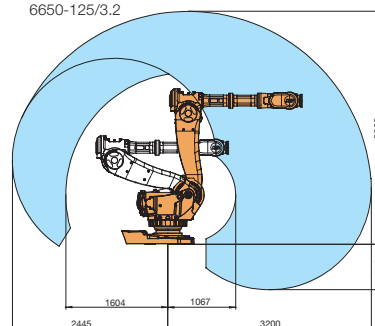
IRB 6600-175/2.8



6650-200/2.75



6650-125/3.2



#### 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) 1,700 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



ABB Inc.  
1250 Brown Rd.  
Auburn Hills, MI 48326  
Phone: 248-391-9000  
Fax: 248-391-7390

ABB Inc.  
201 West Creek Blvd.  
Brampton, Ontario L6T 5S6  
Phone: 905-460-3000  
Fax: 905-460-3001

[www.abb.com/robotics](http://www.abb.com/robotics)  
email address: [sales.info@us.abb.com](mailto:sales.info@us.abb.com)