

## IRB 6640

A strong robot for numerous applications



The IRB 6640 is available in different arm lengths and matching handling capacities. It is based on proven components from earlier generations, to ensure ease of maintenance and exchangeability as well as high up time.

Upper arm extenders and different wrist modules allow customization to each process. As the robot can bend fully backwards, the working range is greatly extended allowing it to fit well into dense production lines. Typical application areas are material handling, machine tending and spot welding.

The robot is also available with different options such as Foundry Plus, Foundry Prime for different working environments.

### Higher payload

The maximum payload is 235 kg, which makes it suitable for a variety of heavy material handling applications. The robot also follows the tradition of having outstanding inertia capabilities, which makes it possible to handle heavy and wide parts. ABB robots are also known for their collision resistance.

### Easy maintenance

Simplified fork lift pockets and more space in the robot foot make the robot easier to maintain.

### Increased path performance

The IRB 6640 is compatible with second generation TrueMove™ and QuickMove™. The software allows for more accurate motion in shorter programming times for improved processes. The software also monitors internal robot loads which reduces the risk of overload and increases the robot's life cycle.

### Passive safety features

Passive safety features include load identification, movable mechanical stops, Electronic Positions Switches (EPS) and a stiff steel structure.

### Main Applications

- Material handling
- Machine tending
- Spot Welding

## Specification

Robot version	Reach (m)	Handling capacity (kg)*	Center of gravity (kg)	Wrist torque (Nm)
IRB 6640-235/2.55	2.55	235	300	1324
IRB 6640-185/2.8	2.80	185	300	1206
Number of axes	6			
Protection	Complete robot IP 67			
Mounting	Floor			
Controller	IRC5 Single Cabinet			

\*Extra loads can be mounted on all variants. 50 kg on upper arm (except ID) and 250 kg on frame of axis 1.

## Performance (according to ISO 9283)

	Position repeatability	Path repeatability
IRB 6640-235/2.55	0.05 mm	0.66 mm
IRB 6640-185/2.80	0.05 mm	0.74 mm

## Technical information

### Electrical Connections

Supply voltage	2000-600 V, 50/60 Hz
Power consumption	ISO-Cube 2.7 kW

### Physical

Robot base	1107 x 720 mm
Robot weight (without DressPack)	
IRB 6640-235/2.55	1310 kg
IRB 6640-185/2.8	1405 kg

### Environment

Ambient temperature for mechanical unit	
During operation	+5°C (41°F) to +50°C (122°F)
During transportation and storage	-25°C (13°F) to +55°C (131°F)
During short periods (max. 24 h)	Up to +70°C (158°F)
Relative humidity	Max. 95%
Noise level	Max 71 dB (A)
Safety	Double circuits with supervisions, emergency stops and safety functions. 3-position enable device
Emission	EMC/EMI shielded
Options	Foundry Plus

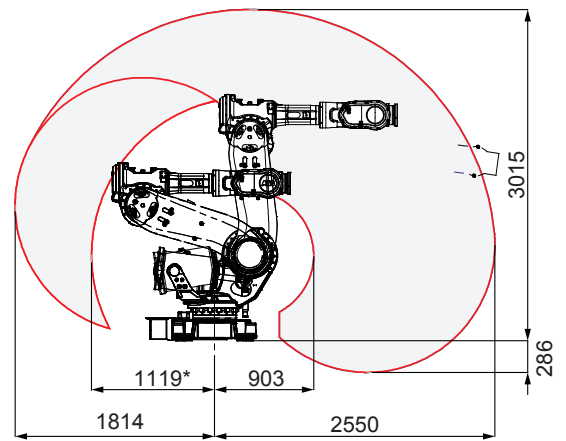
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## Movement

Axis movement	Working range	Axis max. speed
Axis 1 Rotation	+170° to -170°	100 to -110°/s
Axis 2 Arm	+85° to -65°	90°/s
Axis 3 Arm	+70° to -180°	90°/s
Axis 4 Wrist	+300° to -300°	170 to -190°/s
Axis 5 Bend	+120° to -120°	120 to -140°/s
Axis 6 Turn	+360° to -360°	190 to -235°/s

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

### Working range, IRB 6640-235/2.55



\* 1549 for 6640ID

### Working range, IRB 6640-185/2.8

