

# IRB 6660- 205/1.9

## Industrial Robot

### MAIN APPLICATIONS

Machining  
Milling  
Grinding  
Cutting  
Sawing



### IRB 6660 – a robot for high-performance applications

IRB 6660 -205/1.9 is a robot designed for high-performance applications. The superior stiffness and robustness of the robot allow for high productivity in challenging applications like cleaning and pre-machining of castings. The accuracy of the robot also makes for consistent and higher part quality, even during high and fluctuating process forces. The new stiff design supports accuracy and short cycle time, which in the end increases productivity.

The IRB 6660 is a member of the powerful ABB large robots family. The robot is a combination of ABB's well proven technology and design; and some new features making it the stiffest articulated robot to date. This unique combination makes IRB 6660 very reliable, accurate, cost efficient and easy to maintain and to install. The robot is available with ABB's well proven Foundry Plus protection and has also a dedicated chip protection to further strengthen the reliability and uptime.

#### The new optimized pre-machining robot

High productivity in cleaning and pre-machining applications requires a stiff and robust robot. The IRB 6660 has a parallel arm structure and in general a very compact and sturdy mechanical design, which makes it suitable for applications with external forces. This is further supported by the special dual bearing design and its powerful

gears and motors. IRB 6660 is specially designed for applications where robot stability and stiffness is key factors for success.

IRB 6660 is attacking one of the remaining challenges in robotized cleaning and pre-machining, the inconsistent quality of moulded parts. The inconsistent parts lead to unpredictable and changing forces on the robot, and in turn affect the final product quality. The robot design makes it robust, allowing for effective handling of fluctuating process forces that are common within applications such as milling, deburring and grinding.

As an option ABB can offer RobotWare Machining Force Control. This software provides improved process results and quality – secure controlled contact force in grinding application gives improved and consistent product quality.

Absolute Accuracy is another option that supports the performance of IRB 6660. It makes a real robot an ideal robot as it maintains the accuracy between the real world and the offline world of CAD software and ABB's RobotStudio. Programming is preferably done with RobotStudio's offline capabilities, including reusing data from CAD/CAM generated programs and special supporting features that makes it easy to create paths.

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## TECHNICAL DATA, IRB 6660 INDUSTRIAL ROBOT

### SPECIFICATION

Robot versions	Reach	Handling capacity	Center of gravity	Wrist torque
IRB 6660-205/1.9	1.93	205	375 mm	Axis 5 1177 Nm Axis 6 620 Nm

Extra loads can be mounted on the robot  
15 kg on upper arm with 205 kg payload and 500 kg on the frame.

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

### PERFORMANCE

Positions repeatability	0,07	
Axis movements	Working range	Axis max speed
Axis 1 Rotation	+180° to - 180°	Axis 1 130 °/s
Axis 2 Arm	+ 85° to - 42°	Axis 2 130 °/s
Axis 3 Arm	+120° to - 20°	Axis 3 130 °/s
Axis 4 Wrist	+300° to - 300°	Axis 4 150 °/s
Axis 5 Bend	+120° to - 120°	Axis 5 120 °/s
Axis 6 Turn	+360° to - 360°	Axis 6 190 °/s
Axis 2-3	+160° to + 20°	

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 2.6kW
Normal robot movements	3.8kW

### ELECTRICAL CONNECTIONS

Dimensions robot base	1206 x 798 mm
Weight	1730 kg

### ENVIRONMENT

Ambient temperature for mechanical unit	
During operation	+ 5° C (41° F) -+50° C (122° F)
During transportation and storage for short periods (max 24h)	- 25° C (13° F) -+55° C (131° F) up to +70° C (158° F)

Relative humidity	Max 95%
Noise level	Max 70 dB (A)

Safety	Double circuits with supervision, emergency stops and safety functions, 3-positions enable device.
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Emission	EMC/EMI-shielded
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Selected Options	RobotWare Machining Force Control Foundry Plus Absolute Accuracy
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Data and dimensions may be changed without notice.

### WORKING RANGE

IRB 6660 optimized for pre-machining  
IRB 6660-205/1.9

