IRB 6660
Industrial Robot

Main Applications
Machining
Milling
Cutting
Grinding
Sawing

A robot for high performance applications
The IRB 6660 is an extremely reliable robot robot designed for high performance applications. The stiff design supports accuracy and short cycle time, which in the end increases productivity.

It comes in three versions, two with long reach aimed at high-performance press tending operations and the other with superior stiffness aimed at challenging applications like cleaning and pre-machining of castings.

The optimised press tending robot
The most critical robot axes have been reinforced according to typical press cycle time requirements, which, in combination with the parallel arm design that makes the robot stiff and easier to control, gives a faster robot.

Since the most used gears have been reinforced, gear life time is also improved when running fast in press tending.

The robot is prepared with power and resolver cabling up to the upper arm house, which makes integration of an external axis easier.

The 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.

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.

The robot is available with ABB's well proven Foundry Plus 2 protection and also has a dedicated chip protection to further strengthen the reliability and uptime.

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

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IRB 6660

Specification

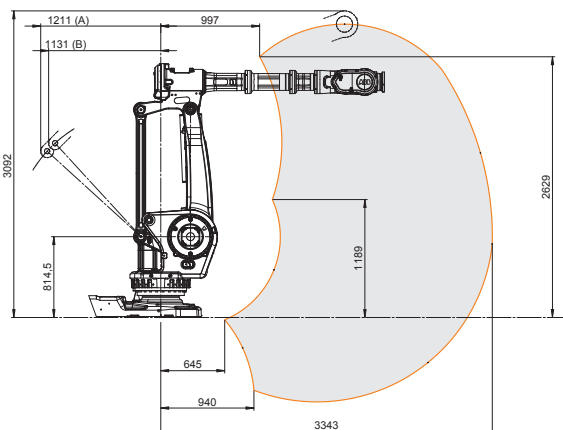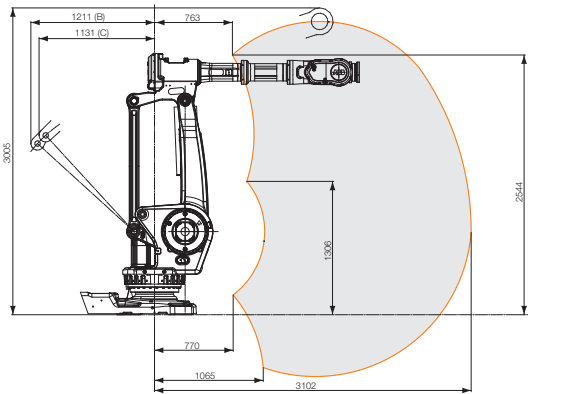| Variants	Reach	Payload	Armload
IRB 6660-100/3.3	3.30 m	100 kg	20 kg
IRB 6660-130/3.1	3.10 m	130 kg	20 kg
IRB 6660-205/1.9	1.93 m	205 kg	15 kg + 500 kg on frame
Number of axes:	6		
Protection	Complete robot IP 67, Optional FoundryPlus 2 and chip protection (only IRB 6660-205/1.9).		
Mounting:	Floor mounted		
IRC5 Controller variants	Single cabinet, Dual cabinet		

Performance

Positions repeatability	0.07 - 0.11 mm

Axis movements	Working range	Axis max speed		
		100/3.3	130/3.1	205/1.9
Axis 1 Rotation	+180° to - 180°	110°/s	110°/s	130°/s
Axis 2 Arm	+ 85° to - 42°	130°/s	130°/s	130°/s
Axis 3 Arm	+120° to - 20°	123°/s	130°/s	130°/s
Axis 4 Wrist	+300° to - 300°	150°/s	150°/s	150°/s
Axis 5 Bend	+120° to - 120°	120°/s	120°/s	120°/s
Axis 6 Turn	+360° to - 360°	240°/s	240°/s	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 (max load)	100/3.3	130/3.1	205/1.93
ISO-Cube	2.3 kW	3.1 kW	3.6 kW
Press tending cycle	4.7 kW	3.9 kW	

Physical

Dimensions robot base	1206 x 798 mm
Weight	100/3.3 1950 kg
	130/3.1 1910 kg
	205/1.9 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 70-73 dB(A)
Safety	Double circuits with supervision, emergency stops and safety functions, 3-positions enable device.
Emission	EMC/EMI-shielded

*In a high-speed press tending application max ambient temperature is 40 °C.

Data and dimensions may be changed without notice

Working range

IRB 6660-130/3.1 and IRB 6660-100/3.3 are optimized for press tending

IRB 6660-205/1.9 optimized for pre-machining

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