

IRB 7600

Opening a new world of possibilities



With several variants, and up to a 630 kg handling capacity, the IRB 7600 is ideal for weighty applications, regardless of your industry. Characteristics such as high available torque and inertia capability, rigid design, and powerful acceleration have earned this market leader its “Power Robot” title.

The IRB 7600 is ideal for heavy applications, regardless of industry. Typical uses include the handling of heavy fixtures and parts, turning car bodies, lifting engines, in foundries or forges, loading and unloading of machine cells. It can also be used to lift large, heavy pallet layers.

With all these applications the moment of inertia is very high which allows the IRB 7600 to handle heavy and wide parts.

A safe investment

A major concern with robots handling payloads of up to 500 kg is protecting personnel and the robot in the unlikely event of an accident. As a result, ABB has added a range of software products all falling under the umbrella of Active and Passive Safety.

Active safety features

The function Collision Detection reduces collision force substantially. An Electronically Stabilized Path will ensure that the robot maintains its planned path at maximum capacity while taking acceleration, drag, gravity and inertia into consideration. This feature is secured through our TrueMove™.

The active brake system controls the braking while ensuring the robot maintains its path.

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

Passive safety features

These features include options like load identification, moveable mechanical stops, and electronic position switches.

Features and benefits

- Reliable - high production up time
- Security - a safe investment
- Fast - short cycle times
- Accurate - consistent parts quality
- Strong - maximized utilization
- Robust - harsh production environment
- Versatile - flexible integration and production

Specifications				
Robot version	Reach	Handling capacity	Center of gravity	Wrist torque
IRB 7600-500	2.55 m	500 kg	360 mm	3010 Nm
IRB 7600-400	2.55 m	400 kg	512 mm	3010 Nm
IRB 7600-340	2.80 m	340 kg	360 mm	2750 Nm
IRB 7600-325	3.10 m	325 kg	360 mm	2680 Nm
IRB 7600-150	3.50 m	150 kg	360 mm	1880 Nm
IRB 7600-150 (loaded with 100 kg)			1600 mm	

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

Performance					
Axis working range					
Axis 1 rotation	+180° to -180°				
Axis 2 arm	+85° to -60°				
Axis 3 arm	+60° to -180°				
Axis 4 wrist	+300° to -300°				
Axis 5 bend	+100° to -100°				
Axis 6 turn	+360° to -360°				
Maximum axis speed					
	Axis 2	Axis 3	Axis 4	Axis 5	Axis 6
IRB 7600-325/500	50°/s	55°/s	100°/s	100°/s	160°/s
IRB 7600-400	60°/s	60°/s	100°/s	100°/s	160°/s
IRB 7600-340	60°/s	60°/s	100°/s	100°/s	160°/s
IRB 7600-150	60°/s	60°/s	100°/s	100°/s	190°/s

A supervision function prevents overheating in applications with intense and frequent movements

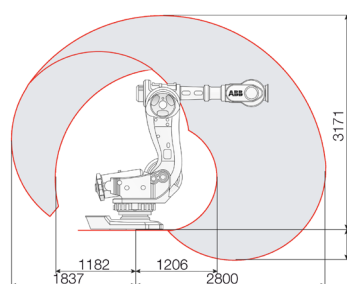
Features	
Number of axes	6
Mounting	Floor mounted
IRC5 controller variants	Single cabinet, PMC

Electrical connections	
Supply voltage	200-600 V, 50/60 Hz

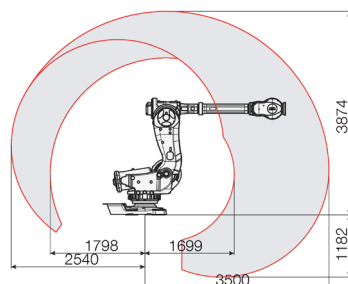
Physical	
Dimensions - robot base	1206.5 x 791 mm
Weight	2.400-2.450 kg

Environment	
Ambient temperature for mechanical unit	
During operation	+5°C (41°F) up to +50°C (122°F)
During transport & storage	-25°C (13°F) up to +55°C (131°F)
For short periods (max 24 h)	up to +70°C (158°F)
Relative humidity	Max 95%
Degree of protection	
Manipulator	IP67; Option - Foundry Plus 2
Controller	Air cooled
Noise level	Max 73 dB (A)
Safety	Double circuits with supervision, emergency stops and safety functions, 3-positions enable device.
Emission	EMC/EMI-shielded

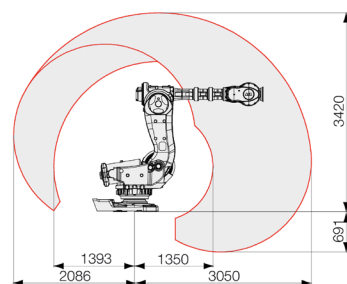
Technical drawings



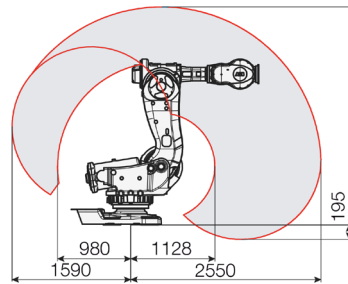
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02



03



04

- 01
IRB 7600-340/2.8
- 02
IRB 7600-150/3.5
- 03
IRB 7600-325/3.1
- 04
IRB 7600-400/2.55 /
IRB 7600-500/2.55