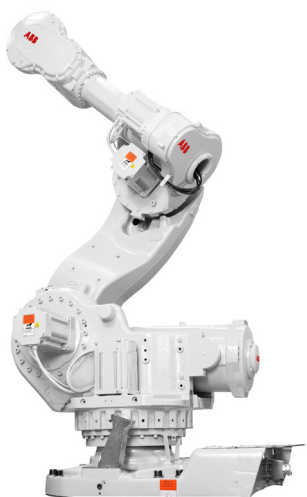


IRB 7600

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.

SafeMove

A major challenge with robots handling payloads of up to 500 kg is ensuring the safety for personnel and protecting expensive equipment from the unlikely event of an accident. As a result, ABB has developed SafeMove, a safety certified robot supervision solution that allows lean and flexible robotic systems without compromising safety. It includes a host of cutting-edge safety functions, including safe speed limits, safe standstill monitoring, safe axis ranges and position and orientation supervision.

All combined, collaboration between robots and factory workers or factory floor space savings are possible at a low total cost of investment

LeanID Dress Pack

The IRB 7600 is available with LeanID Dress Pack, an option that improves the possibility with many complex wrist movements and where the need for flexibility in changing products is high.

Powered by OmniCore

OmniCore controller offers best-in-class motion control, 20 percent energy savings, security, and scalable functions. Faster performance and enhanced flexibility enable improved productivity and ability to respond to changing market demands.

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

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Specification

Robot version	Reach (m)	Handling capacity (kg)*	Center of gravity (kg)	Wrist torque (Nm)
Without LeanID				
IRB 7600-500/2.55	2.55	500	360	3010
IRB 7600-400/2.55	2.55	400	512	3010
IRB 7600-340/2.80	2.80	340	360	2750
IRB 7600-325/3.10	3.10	325	360	2680
IRB 7600-150/3.50	3.50	150	360 ¹	1880
With LeanID				
IRB 7600-500/2.55	Not available with LeanID			
IRB 7600-400/2.55	2.55	390	360	2938
IRB 7600-340/2.80	2.80	320	360	2759
IRB 7600-325/3.10	3.10	290	360	2629
IRB 7600-150/3.50	Not available with LeanID			
Number of axes	6			
Protection	Std: IP67 Option: Foundry Plus 2			
Mounting	Floor			
Controller	IRC5 Single Cabinet, IRC5 PMC Panel mounted controller, OmniCore V400XT			

* Extra loads can be mounted on all variants. 50 kg on upper arm and 250 kg on frame of axis 1.
¹ Center of gravity for IRB 7600-150/3.50 loaded with 100 kg is 1660 mm.

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Technical information

Electrical Connections	
Supply voltage	200-600 V, 50/60 Hz
Energy consumption	3.4 kW
Physical	
Robot base	1206.5 x 791 mm
Robot weight (without DressPack)	
IRB 7600-500/2.55	2400 kg
IRB 7600-400/2.55	2400 kg
IRB 7600-340/2.80	2425 kg
IRB 7600-325/3.10	2440 kg
IRB 7600-150/3.50	2450 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. 73 dB (A)
Safety	Double circuits with supervision, emergency stops and safety functions, 3-position enable device.
Extended safety	SafeMove2
Emission	EMC/EMI-shielded
Options	Foundry Plus 2 LeanID

Data and dimensions may be changed without notice.

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Performance (according to ISO 9283)

	Position repeatability	Path repeatability
IRB 7600-500/2.55	0.08 mm	0.30 mm
IRB 7600-400/2.55	0.19 mm	1.27 mm
IRB 7600-340/2.80	0.27 mm	0.23 mm
IRB 7600-325/3.10	0.10 mm	0.59 mm
IRB 7600-150/3.50	0.19 mm	0.40 mm

Actual values are equal or below the given values.

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Movement

Axis movement	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	Default: +360 to -360 ¹ Max rev: +67 to -67 ²

¹ Working range +220° to -220° for robots with LeanID.
² The default working range for axis 6 can be extended by changing parameter values in the software.

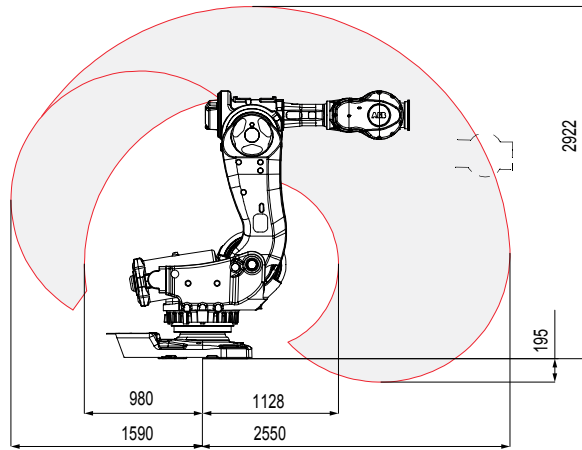
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Axis max. speed

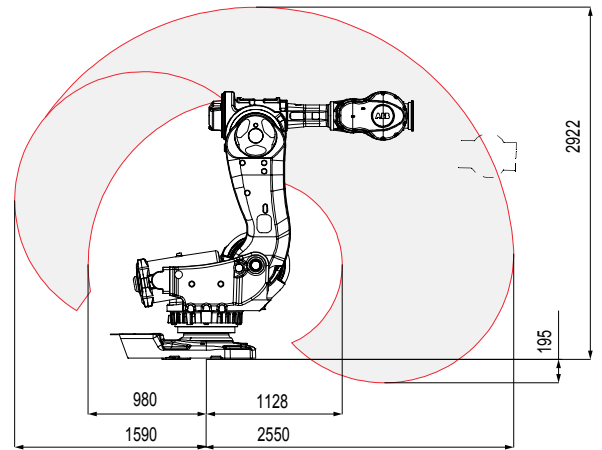
Axis No.	- 500/ 2.55	- 400/ 2.55	- 340/ 2.8	- 150/ 3.5	- 325/ 3.1
Axis 1	75°/s	75°/s	75°/s	100°/s	75°/s
Axis 2	50°/s	60°/s	60°/s	60°/s	50°/s
Axis 3	55°/s	60°/s	60°/s	60°/s	55°/s
Axis 4	100°/s	100°/s	100°/s	100°/s	100°/s
Axis 5	100°/s	100°/s	100°/s	100°/s	100°/s
Axis 6	160°/s	160°/s	160°/s	190°/s	160°/s

There is a supervision function to prevent overheating in applications with intensive and frequent movements.

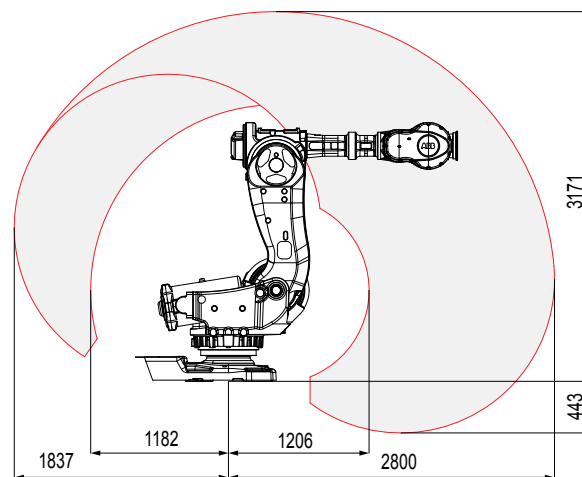
Working range, IRB 7600-500/2.55



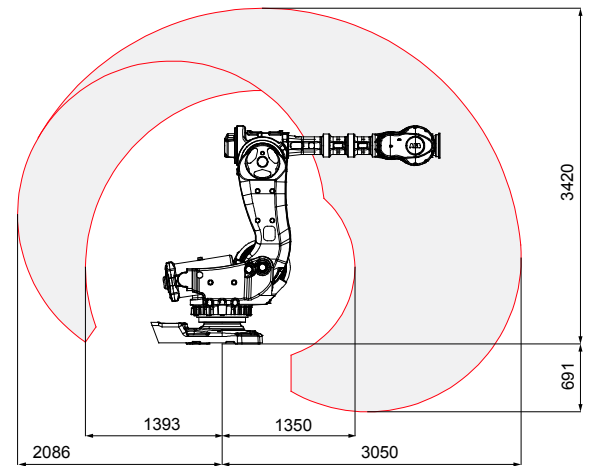
Working range, IRB 7600-400/2.55



Working range, IRB 7600-340/2.80



Working range, IRB 7600-325/3.10



Working range, IRB 7600-150/3.50

