

IRB 1300

Class-leading performance in a compact package



IRB 1300 offers class-leading lifting ability, reach and path accuracy, in a faster, more compact package to enhance both productivity and production-line flexibility.

High lifting capacity

The IRB 1300 six-axis industrial robot has the reach and lifting capacity to serve high load applications in electronics, general industry, food & beverage, logistics and tier 1 automotive production. Available in three main load/reach versions - 11 kg/0.9 m, 10 kg/1.15 m, and 7 kg/1.4 m - the 11 kg variant offers the highest payload of any robot in its class.

More production in a smaller space

Meeting the need to maximize production capacity while saving on space, the ABB IRB 1300 is nearly 60 percent lighter and one-sixth the footprint of ABB's IRB 1600 robot. Occupying just 220 mm by 220 mm of floor space, the IRB 1300 enables more robots to be deployed in a given area.

Faster cycle times speed up production

Rapid production is ensured by the IRB 1300's 27 percent improvement in cycle times. Combined with greater payload and reach, the IRB 1300 can be used for a wide range of tasks in materials handling, machine tending, polishing, and assembly and testing applications.

More I/O

IRB 1300 provides up to 24 I/O connections (C1+C2+C3) connections to handle more sophisticated grippers or end-effectors, allowing users to improve productivity by handling an increased number of work pieces simultaneously.

Advanced motion control

Complex applications such as polishing and machine tending are made possible by ABB's OmniCore controller, giving the IRB 1300 advanced motion control and best-in-class path accuracy.

Key benefits

- The highest payload with its 900mm reach of its class
- 60% weight reduction*, and only one-sixth* of the footprint for confined spaces
- Up to 27% faster cycle times* for increased productivity
- Equipped with up to 24 I/O connections (C1+C2+C3) for more sophisticated/complex applications

Main applications

- Material handling
- Machine tending
- Polishing
- Assembly and testing
- Loading and unloading
- Welding
- Item picking

*Compared with IRB 1600

Specification

Robot version	Reach (mm)	Payload (kg)	Armload (kg)
IRB 1300-11/0.9	900	11	1
IRB 1300-10/1.15	1150	10	0.5
IRB 1300-7/1.4	1400	7	0.5
Protection	Standard IP40		
Mounting	Any angle ⁽¹⁾		
Controllers	OmniCore C30/C90XT		
Integrated signal and power supply	Up to 24 Signals (C1+C2+C3) on wrist (optional)		
Integrated air supply	Φ6 x 4 air on wrist (Max. 6 Bar) (optional)		
Integrated ethernet	One 1000 Base-T ethernet port (optional)		

Note: (1) There are some reachable space limitation when the payload/pose is tough.

Performance

1 kg picking cycle

	IRB 1300-11/0.9	IRB 1300-10/1.15	IRB 1300-7/1.4
25* 300 * 25mm	0.42s	0.45s	0.45s

Performance (according to ISO 9283)

	Position repeatability RP (mm)	Pose stabilization time, PSt (s) within 0.1 mm of the position
IRB 1300-11/0.9	0.02	0.28
IRB 1300-10/1.15	0.023	0.27
IRB 1300-7/1.4	0.03	0.38

Technical information

Physical

	IRB 1300-11/0.9	IRB 1300-10/1.15	IRB 1300-7/1.4
Dimensions robot base (mm)	220x220	220x220	220x220
Weight (kg)	74.5	77	78.5

Movement, IRB 1300-11/0.9

Axis movement	Working range	Axis max speed
Axis 1 rotation	+180° to -180°	243°/s
Axis 2 arm	+130° to -100°	225°/s
Axis 3 arm	+65° to -210°	300°/s
Axis 4 wrist	+230° to -230°	500°/s
Axis 5 bend	+130° to -130°	420°/s
Axis 6 turn	+400° to -400°	720°/s

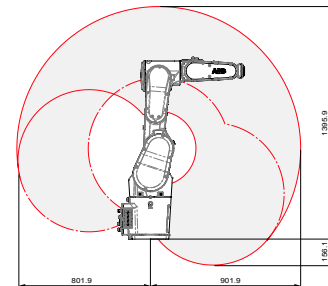
Movement, IRB 1300-10/1.15

Axis movement	Working range	Axis max speed
Axis 1 rotation	+180° to -180°	225°/s
Axis 2 arm	+155° to -95°	228°/s
Axis 3 arm	+65° to -210°	330°/s
Axis 4 wrist	+230° to -230°	500°/s
Axis 5 bend	+130° to -130°	420°/s
Axis 6 turn	+400° to -400°	720°/s

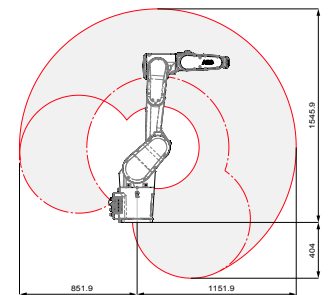
Movement, IRB 1300-7/1.4

Axis movement	Working range	Axis max speed
Axis 1 rotation	+180° to -180°	249°/s
Axis 2 arm	+155° to -95°	180°/s
Axis 3 arm	+69° to -210°	235°/s
Axis 4 wrist	+230° to -230°	500°/s
Axis 5 bend	+130° to -130°	420°/s
Axis 6 turn	+400° to -400°	720°/s

Working range, IRB 1300-11/0.9



Working range, IRB 1300-10/1.15



Working range, IRB 1300-7/1.4

