

IRB 1100

The most compact and fast robot ever



Further expanding ABB's small robot portfolio, IRB 1100 provides 35% increased productivity and up to 10% space savings.

Class-leading performance for high-quality manufacturing

Aimed at increasing manufacturing productivity, IRB 1100 provides up to 35% faster cycle times and best-in-class repeatability for high quality manufacturing.

IRB 1100 consistently outperforms similar robots in terms of payload and position repeatability (RP) even when under space constraints. Indeed, IRB 1100 offers the highest payload for a robot of its class.

Compact and small footprint design ensures flexible installation

Compared to the previous generation, the IRB 1100 robot design was optimized with a 10% smaller footprint and over 20% weight reduction for space-efficient installation in diverse environments, such as electronics manufacturing factories.

The small footprint allows multiple robots to be deployed simultaneously in order to collaboratively perform automation operations, enabling more flexible handling for heavy-load operations with complex tools/end effectors.

Powered by ABB's new OmniCore™ controller, IRB 1100 is equipped with advanced motion control capabilities, making it ideal for supporting rapid assembly, pick-and-place, and material handling applications.

ABB's IRB 1100 cleanroom option is coming later. Moreover, the robot is available in two variants - one with a 4 kg payload and 475 mm reach, and one with a 4 kg payload and 580 mm reach.

Key benefits

- Offers 35% faster cycle times for increased productivity
- 10% smaller footprint and over 20% weight reduction for easy installation
- The highest payload for a robot of its class
- Equipped with up to 16 I/O for more sophisticated/complex applications

Main applications

- Assembly & Testing
- Loading & Unloading
- Screw driving
- Rubber insertion



01
OmniCore™
Controller and
FlexPendant

02
IRB 1100

Specification

Robot version	Reach (m)	Payload (kg)	Armload (kg)
IRB 1100-4/0.47	0.475	4	0.5
IRB 1100-4/0.58	0.58	4	0.5
Number of axes	6		
Protection	IP40		
Mounting	Any angle		
Controller	OmniCore		
Integrated signal and power supply	8 signals on wrist ¹		
Integrated air supply	4 air on outer arm (5 Bar) ¹		
Integrated ethernet	1 Gbit/s port ¹		

¹ Optional

Performance (according to ISO 9283)

1 kg picking cycle	
25 x 300 x 25 mm	0.42 s

Technical information

Physical

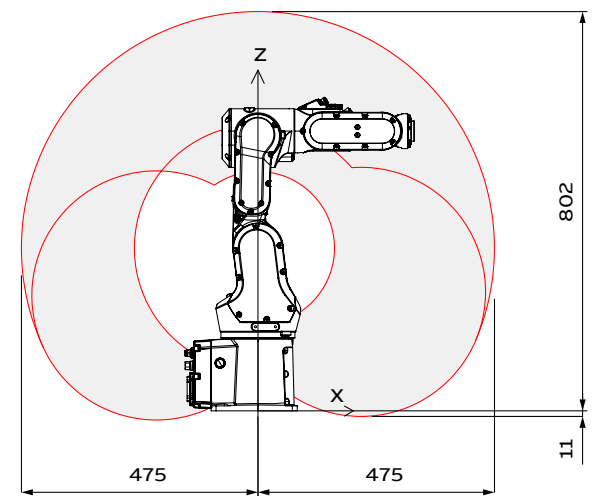
Robot base	160 x 160 mm
Robot weight	
IRB 1100-4/0.47	20.5 kg
IRB 1100-4/0.58	21 kg

Data and dimensions may be changed without notice.

Movement

Axis movement	Working range	Axis max. speed IRB 1100-4/0.47	Axis max. speed IRB 1100-4/0.58
Axis 1 rotation	+230° to -230°	460°/s	460°/s
Axis 2 arm	+113° to -115°	380°/s	360°/s
Axis 3 arm	+55° to -205°	280°/s	280°/s
Axis 4 wrist	+230° to -230°	560°/s	560°/s
Axis 5 bend	+120° to -125°	420°/s	420°/s
Axis 6 turn	+400° to -400°	750°/s	750°/s

Working range, IRB 1100-4/0.47



Working range, IRB 1100-4/0.58

