

IRB 1660ID

High performance ID robot for arc welding and machine tending

When shorter cycle times, unmatched versatility, and a smaller more powerful wrist matter - ABB's new IRB 1660ID is the robot of choice.



Up to 10% shorter cycle times

IRB 1660ID's new compact wrist with very powerful motors enables fast and reliable movements that do not impede swinging cables and allow maximum acceleration and speed at all times. This combined with ABB's QuickMove™ technology allows the IRB 1660ID to shorten cycle times up to 10% compared to competition.

Outstanding weld quality

The demand for superior and even quality in arc welding applications has increased, requiring improved wire feeding control near the arc to guarantee high volume production. The IRB 1660ID has a stronger more rigid upper arm able to lift up to 6 kg to accommodate heavier torches. This, combined with ABB's TrueMove™ technology and the new motion process "Accuracy mode" provides 0.05 mm path repeatability for excellent welding results.

Safe robot movements enable high density cells

The IRB 1660ID with the aid of RobotStudio®, ABB's premier offline robot software programming tool, enables robot programmers to envision high density cells with several robots welding close to each other with a minimum of work piece heat distortions. RobotStudio simulations help to secure safe robot movements with max speed and accelerations at all times to provide predictable and shortest possible and cycle times. Such high density cells can maximize your output, provide top quality parts and operate with unmatched reliability.

Fast, agile and reliable for machine tending

The compact and hollow wrist enables fast and reliable movements since the robot can move at maximum acceleration and speed without damaging the Integrated DressPack. The risk of collision in confined spaces is also eliminated. The combined working range of axes 4, 5 and 6 of 1,390° provides outstanding agility inside CNC machines. The IP67 wrist, the protection of the cablings from water and the controlled movements provide up to 50 percent lower maintenance costs and a longer life expectancy.

Simplified online programming

Online programming is further simplified thanks to the full control of the hose packages or cablings, the compact 135 mm size wrist for faster re-orientations and the 0.30 mm TCP reorientation accuracy (absolute accuracy option needed) for highly accurate corner re-orientations.

Main applications

- Arc welding
- Machine tending
- Material handling

Specification

Variants:	Reach	Payload	Armload
IRB 1660ID	1.55 m	6 kg	15 + 15 kg
Number of axes	6		
Protection	IP67 (IP40 for axis 4)		
Mounting	Floor, tilted and inverted		
IRC5 controller variants	Single cabinet, Panel mounted, Compact controller		

Physical

Dimensions robot base	484 x 648 mm
Height	1392 mm
Weight	257 kg

Performance

Position repeatability (RP)	0.02 mm
Path repeatability (RT)	0.05 mm
TCP re-orientation accuracy, average	0.30 mm*

* Absolute accuracy option required

Movement

Axis movements	Working range	Maximum speed
Axis 1 Rotation	+180° to - 180°	180°/s
Axis 2 Arm	+150° to - 90°	180°/s
Axis 3 Arm	+ 79° to - 238°	180°/s
Axis 4 Wrist	+175° to - 175°	320°/s
Axis 5 Bend	+120° to - 120°	360°/s
Axis 6 Turn	+400° to - 400°	500°/s

Electrical connections

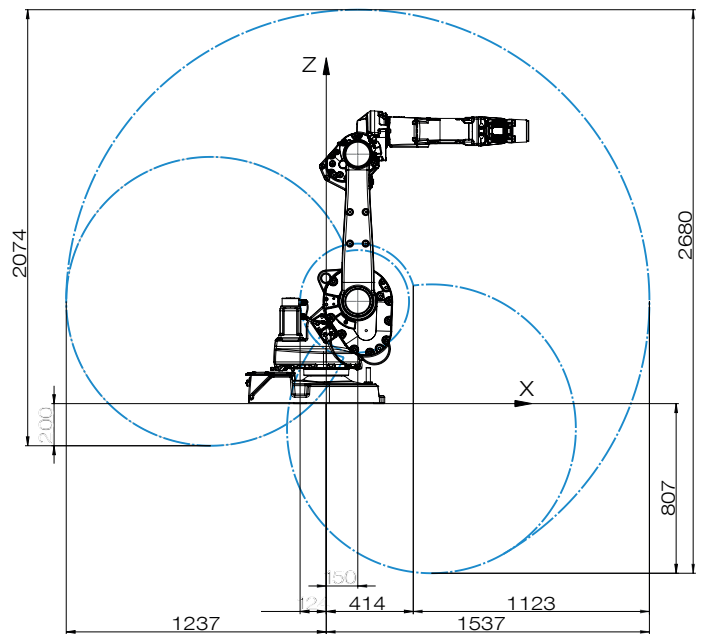
Supply voltage	200-600 V, 50-60 Hz
Power consumption	0,62 kW, ISO-Cube at max load and speed

Environment

Ambient temperature for mechanical unit:

During operation	+ 5°C (41°F) to + 45°C (113°F)
During transportation and storage	- 25°C (- 13°F) to + 55°C (131°F)
For short periods (max 24h)	up to + 70°C (158°F)
Relative humidity	Max. 95%
Noise level	< 70 dB (A)
Safety	Double circuits with supervisions, emergency stops and safety functions, 3-position enable device
Emission	EMC/EMI shielded

Data and dimensions may be changed without notice



For more information please contact:

ABB AB

Robotics

Hydrovågen 10

SE-721 36 Västerås, Sweden

Phone: +46 21 325000

www.abb.com/robotics

Note

We reserve the right to make technical changes or modify the contents of this document without prior notice. With regard to purchase orders, the agreed particulars shall prevail. ABB does not accept any responsibility whatsoever for potential errors or possible lack of information in this document.

We reserve all rights in this document and in the subject matter and illustrations contained therein. Any reproduction, disclosure to third parties or utilization of its contents - in whole or in parts - is forbidden without prior written consent of ABB.

Copyright© 2016 ABB All rights reserved