

ABB IRB1520ID Arc Welder datasheet

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IRB 1520ID

The Lean Arc Welder

This high precision robotic arc welder, with integrated process dressing, combines 24/7 production output with 50% lower cost of maintenance to deliver the lowest cost per weld in its class.



Dedicated arc welding robot

With IRB 1520ID (Integrated Dressing), the hose package is totally integrated into the upper arm and through the base of the robot. This means, all media necessary for arc welding, including power, welding wire, shielding gas and pressurized air is routed for maximized performance and energy efficiency. The IRB 1520ID delivers stable welding, excellent path accuracy, short cycle times and extended life expectancy of the hose package. Thanks to the integrated dressing, welding around cylindrical objects can be carried out without any stops and narrow spaces are more easily accessed.

Flexible installation

With a payload capacity of 4 kilograms and a reach of 1.5 meters, the highly compact IRB 1520ID can be mounted in both floor and inverted position. This positioning flexibility offers short cycle times and a wide range of production possibilities.

Superior accuracy and speed

ABB robots are renowned for their superior motion control. With the second generation TrueMove™ technology, IRB 1520ID has an outstanding path accuracy. With the second generation QuickMove™ technology, the robot is able to utilize maximum acceleration between welds to increase output with minimum energy consumption.

Easy to use, Easy to program

Both robot and arc welding process are easily programmed and maintained with the ABB FlexPendant. It has a intuitive graphical interface which lets the operators control the robot and selected process equipment in their own language. It is equipped with a touchscreen and the unique ABB joy-stick for quick and easy positioning of the robot. If you appreciate the benefits of simulating and programming offline, ABB offers the most popular, reliable and cost-efficient software packages with RobotStudio™ and RobotStudio Arc Welding PowerPac including VirtualArc™. With VirtualArc™ you get built-in welding expertise and the opportunity for virtual trial and error to achieve a perfect welding parameter setup and much less trimming. The welding robot will produce predictable cycle times and welding quality after only a few hours.

Global service and support

For worry-free operation, ABB also offers RemoteService, which gives remote access to equipment for monitoring and support. Moreover, ABB customers can take advantage of the company's service organization; with more than 35 years of experience in the arc welding sector, ABB provides service support in over 100 locations in 53 countries.

IRB 1520ID

Main applications

Arc welding

Specification

| | |
|--------------------------|------------------------------|
| Payload | 4 kg |
| Armload | 10 kg |
| Reach | 1.50 m |
| Number of axes | 6 |
| Protection | IP40 |
| Mounting | Floor, Inverted |
| IRC5 controller variants | Drive module, Single cabinet |

Physical

| | |
|-----------------------|--------------|
| Dimensions robot base | 300 x 300 mm |
| Robot weight | 170 kg |

Performance (according to ISO 9283)

| | |
|-----------------------------|---------|
| Position repeatability (RP) | 0.05 mm |
| Path repeatability (RT) | 0.35 mm |

Movement

| Axis movements | Working range | Maximum speed |
|----------------|----------------|---------------|
| Axis 1 | +170° to -170° | 130°/s |
| Axis 2 | +150° to -90° | 140°/s |
| Axis 3 | +80° to -100° | 140°/s |
| Axis 4 | +155° to -155° | 320°/s |
| Axis 5 | +135° to -135° | 380°/s |
| Axis 6* | +200° to -200° | 460°/s |

*+288 rev. to -288 rev max.

Electrical connections

| | |
|-------------------|-----------------|
| Supply voltage | 380 V |
| Power consumption | ISO cube 0.6 kW |

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% at constant temperature

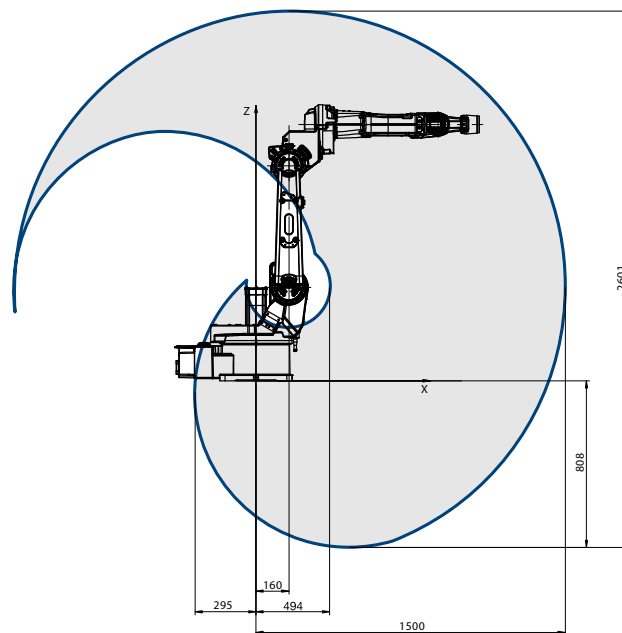
Safety Double circuits with supervision, emergency stops and safety functions, 3-position enabling device

Emission EMC/EMI shielded

Data and dimensions may be changed without notice

Working range

IRB 1520ID-4/1.5



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