

IRB 1600ID Industrial Robot

Main Application

Arc welding



Dedicated arc welding robot

In IRB 1600ID (Integrated Dressing), all cables and hoses are routed inside the upper arm, making the robot perfectly suitable for arc welding. The dress pack carries all the media necessary for arc welding, including power, welding wire, shielding gas and pressurized air.

Improving lifetime prediction

Faulty process cabling is a common cause of unpredicted line stops. With the IRB 1600ID, stops can be reduced to a minimum. Because the cables are routed inside the upper arm, their motion is predicted given a certain cycle. And when the motion is predicted, so is the lifetime.

Increased accessibility

Integrated dressing makes the robot's outer dimensions smaller. This extends the robot system's real working range, a crucial factor when welding on fixtures with a complex geometry. It also eliminates the risk of damaging the dress pack in case of collision with the fixture.

Simplifying robot programming

There is always a blind spot when programming a conventional robot. Because of the external routing and unpredictable motion of the dress pack, programmers have to use their imagination to ensure the dress pack won't hit anything during operation.

Prolonging cable service life

Having the dress pack routed inside the robot's upper arm gives less swing of the dress pack and the lifetime of all cables and housings is increased.

IRB 1600ID

Specification

Robot versions	Reach	Handling Capacity
IRB 1600ID-4/1.5	1.5 m	4 kg
Number of axes:	6	
Protection:	IP40	
Mounting:	Floor, and inverted	

Performance

Positions repeatability:	0.02 mm	
Path repeatability:	0.48 mm	
Axis movements:	Working range:	Axis max speed:
Axis 1 Rotation	+180° to -180°	Axis 1 180°/s
Axis 2 Arm	+150° to -90°	Axis 2 180°/s
Axis 3 Arm	+79° to -238°	Axis 3 180°/s
Axis 4 Wrist	+155° to -155°	Axis 4 320°/s
Axis 5 Bend	+135° to -90°	Axis 5 380°/s
Axis 6 Turn	+200° to -200°	Axis 6 460°/s

Axis 4 and 6 together max. +300° to -300°

A supervision function prevents overheating in applications with intensive and frequent movements.

Electrical Connections

Supply voltage:	200-600V, 50/60 Hz
Power consumption:	ISO-Cube at max speed 0.57 kW

Physical

Dimensions robot base:	484 x 648 mm Height: 1392 mm
Weight:	250 kg

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 24 h):	up to +70°C (158°F)
Relative humidity:	Max 95%
Noise level:	Max 73 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

Working Range

