

ROBOTICS

IRB 1410 Industrial Robot



The IRB 1410 gives you fast and reliable work cycles that boost productivity. The robot is proven in arc welding applications and provides outstanding performance and value, ensuring short payback times.

The robot has a handling capacity of 5kg at the wrist with a unique 18kg additional load for applications equipment on the upper arm. Superior levels of control and path accuracy provide excellent work quality.

The ability to adjust process speed and position means you achieve optimum manufacturing accuracy with little or no rejects.

IRB 1410 is known for its stiff and robust construction. This translates into low noise levels, long intervals between routine maintenance and long service life. The robot has a large working area and long reach. The compact design, very slim wrist and high performance operation even in difficult and restricted locations.

Adapted for arc welding

The IRB 1410 has integrated wire feed cabling and mounting holes for optimized assembly of process equipment on the arm. Easy-to-use arc welding functions are included as standard in the IRC5 robot controller are made available via the patented programming and operation interface unit the FlexPendant.

Global service and support

For worry-free operation, ABB also offers Remote-Service, 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.

Main applications

- Arc Welding
- Material Handling
- Machine Tending

Specification

| Robot version | Reach of 5th axis (m) | Handling capacity (kg) | Supple- mentary load, on axis 3 (kg) | Supple- mentary load, on axis 1 (kg) |
|-----------------------------|----------------------------------|------------------------------|---|---|
| IRB 1410 | 1.44 | 5 | 18 | 19 |
| Number of axes | 6 | | | |
| Mounting | Floor | | | |
| Controller | IRC5 Single Cabinet/IRC5 Compact | | | |
| Integrated signal supply | 12 signals on upper arm | | | |
| Integrated air supply | Max. 8 bar | on upper a | rm | |
| | | | | |

| Moveme | ant. |
|----------|------|
| Plovelli | enc |

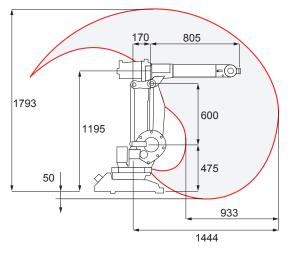
| Axis movement | Working range | Velocity 3-phase power supply | Velocity 1-phase power supply |
|-----------------|----------------|--|--|
| Axis 1 rotation | +170° to -170° | 120°/s | 105°/s |
| Axis 2 arm | +70° to -70° | 120°/s | 105°/s |
| Axis 3 arm | +70° to -65° | 120°/s | 105°/s |
| Axis 4 rotation | +150° to -150° | 280°/s | 280°/s |
| Axis 5 bend | +115° to -115° | 280°/s | 280°/s |
| Axis 6 turn | +300° to -300° | 280°/s | 280°/s |

Working range

Performance (according to ISO 9283)

| | IRB 1410 | |
|--------------------------------------|--|--|
| Max. TCP Velocity | 2.10 m/s | |
| Continuous rotation of axis | 6 | |
| Position repeatability | 0.025 mm | |
| | | |
| — Technical information | | |
| Electrical Connections | | |
| Supply voltage | 200-600 V,50/60 Hz | |
| Rated power | 4 kVA/7.8 kVA | |
| transformer rating | with external axes | |
| Physical | | |
| Robot base | 620 x 450 mm | |
| Robot weight | 225 kg | |
| Environment | | |
| Ambient temperature for me | echanical 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) | |
| During short periods (max. 24h) | up to + 70°C (158°F) | |
| Relative humidity | Max. 95 % | |
| Degree of protection | Class D (dry) for welding, machining etc. | |
| Noise level | Max. 70 dB (A) | |
| Emission | EMC/EMI-shielded | |
| Clean room | Class 100 US Federal Standard 209e | |

Data and dimensions may be changed without notice.



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© ABB All rights reserved