ROBOTICS

# IRB 910INV

## Ceiling-mounted SCARA increases assembly flexibility


Fast, cost-effective and, because it's from ABB, accurate. The ceiling-mounted SCARA offers space savings and increased assembly flexibility.

**Ceiling-mounted SCARA increases the working area**
ABB's new ceiling-mounted IRB 910INV robot is designed to increase the space efficiency and flexibility of each cell and support the performance of complex tasks even in confined spaces. By mounting the IRB 910INV on the ceiling, manufacturers can increase the space efficiency and flexibility of each cell and do more complex tasks even in confined spaces. Moreover, the IRB 910INV robot can collaborate with other robots and machines, substantially boosting productivity.

**Best-in-class motion control for faster cycle times**
Powered by an ABB OmniCore™ controller, the IRB 910INV robot offers the best-in-class motion control for repeatable point-to-point accuracy during pick-and-place, assembly, and testing applications. This includes electronics small parts assembly tasks such as screw driving, component inserting or mounting, and automated quality control inspections.

IP54 and Cleanroom ISO 1 are available options. IRB 910INV is ISO 14644-1 certified for use in cleanroom applications in, for example, the semiconductor industry.

**Delivers excellent performance and comprehensive functionalities**
When designing the IRB 910INV robot, ABB wanted to emphasize speed and accuracy. Although small in size, the ceiling-mounted IRB 910INV robot offers the same high performance and functionalities as other ABB small robots, specifically, superior path control, accuracy, and a small footprint.

**Key Benefits**
- Ceiling-mounted SCARA offers space savings and increased flexibility
- Class-leading repeatable accuracy with ABB's superior motion control
- Fast cycle times for increased throughput and productivity
- Equipped with up to 16 I/O for more sophisticated/complex applications

**Main applications**
- Assembly & Testing
- Material handling
- Picking & Placing
- Screw driving
- Rubber insertion

## Specification

| Robot version | Reach (m) | Payload (kg) | Armload (kg) |
|---|---|---|---|
| IRB 910INV-3/0.35 | 0.35 | 3 | - |
| IRB 910INV-6/0.55 | 0.55 | 6 | - |
| Number of axes | 4 | | |
| Protection | Standard: IP3O[1]<br>Options: IP54 or Cleanroom ISO1 | | |
| Mounting | Inverted | | |
| Controller | OmniCore | | |
| Integrated signal and power supply | 8 signals on outer arm[2] | | |
| Integrated air supply | 4 air on outer arm (Max. 6 Bar)[2] | | |
| Integrated ethernet | 1 Gbit/s port[2] | | |

[1] Ballscrew area: IP20
[2] Optional

## Performance (according to ISO 9283)

| 1 kg picking cycle | | |
|---|---|---|
| IRB 910Inv-3/0.35<br>25 x 300 x 25 mm | 0.35 s | |
| IRB 910Inv-6/0.55<br>25 x 300 x 25 mm | 0.40 s | |
| **Version** | **3/0.35** | **6/0.55** |
| Pose repeatability (mm) | 0.01 | 0.01 |
| Linear path repeatability (mm) | 0.06 | 0.05 |
| Pose stabilization time within 0.1 mm of the position | 0.61 | 1.05 |

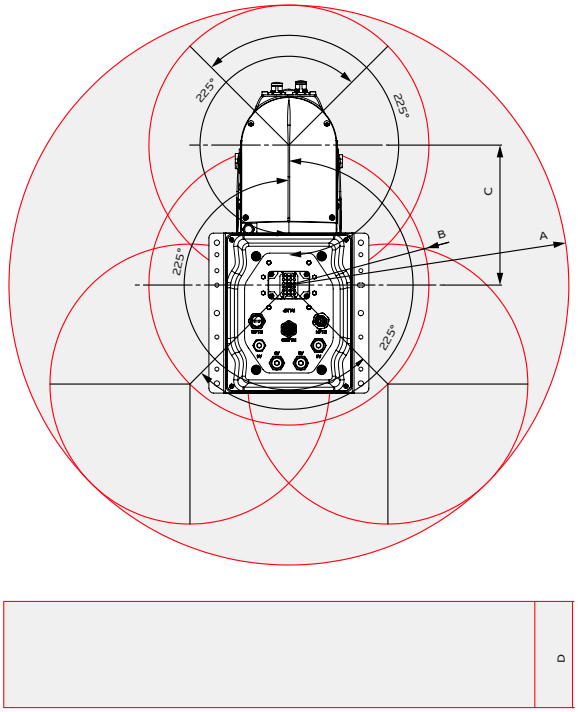
## Technical information

| Physical | |
|---|---|
| Dimensions robot base | 200 x 200 mm |
| Weight IRB 910INV-3/0.35 | 19 kg |
| Weight IRB 910INV-6/0.55 | 22 kg |

## Movement, IRB 910INV-3/0.35

| Axis movement | Working range | Axis max speed |
|---|---|---|
| Axis 1 | -225° to 225° | 672°/s |
| Axis 2 | -225° to 225° | 748°/s |
| Axis 3 | -140 mm to 0 mm | 1.1m/s |
| Axis 4 | -720° to 720° | 3000°/s |

## IRB 910INV-3/0.35 and IRB 910INV-6/0.55, working range




| | IRB 910INV-3/0.35 | IRB 910INV-6/0.55 |
|---|---|---|
| A (mm) | R350 | R550 |
| B (mm) | R175 | R275 |
| C (mm) | 175 | 275 |
| D (mm) | 140 | 190 |

## Movement, IRB 910INV-6/0.55

| Axis movement | Working range | Axis max speed |
|---|---|---|
| Axis 1 | -225° to 225° | 420°/s |
| Axis 2 | -225° to 225° | 780°/s |
| Axis 3 | -190 mm to 0 mm | 1.1m/s |
| Axis 4 | -720° to 720° | 3000°/s |

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