
IRB 5720

Large size robot for material handling,
payload from 90kg to 180kg



Faster, more robust and accurate, the IRB 5720 brings higher uptime, increased productivity, and better performance in the automotive and general industries.

ABB is expanding its large size robot portfolio with IRB 5720, offering faster performance, more accurate, expanded mounting options, and advanced foundry protection than other competing robots in its class. The IRB 5720 is available in four variants spanning various options for payload from 90kg to 180kg, reach from 2.6m to 3m.

IRB 5720 is ideal for use in material handling, machine tending, and high precision assembly applications in the Electric Vehicle (EV), automotive, and the general industries. For Electric Vehicles, the robots can handle an array of tasks, including EV battery module picking and placing, high precision assembly, and parts handling.

Productivity

Thanks to the robot's robust mechanical design and OmniCore controller V250XT's motion control, the IRB 5720 provides improved speed and accuracy to help increase productivity. IRB 5720 is faster than competing robots and up to 25 percent faster than ABB's large-size robots (IRB 6700 and IRB 6620), enabling more products to be manufactured in less time. With the excellent position repeatability, path accuracy, and path speed, IRB 5720 is more accurate

than other robots, enabling the highest levels of manufacturing quality to be achieved.

LeanID Integrated DressPack increases uptime

By integrating cabling within the body of the robot, ABB's unique Lean ID Integrated DressPack reduces the problem of swinging cables that can cause wear and tear, reducing downtime and maintenance cost. LeanID makes it easier to program and simulate with predictable cable movements at RobotStudio.

Flexible production layout

IRB 5720 has multiple mounting options, including floor, angled, inverted and semi shelf for maximum production layout design flexibility. IRB 5720 offers more mounting options than other robots.

Foundry protections

The robots also include superior harsh environment protection, Foundry Plus, additional sealant protection for high radiant or contact heat, ensuring higher availability, fewer breakdowns and longer equipment lifetime. The optional protection guards IRB 5720 against the harshest of foundry environments.

Key benefits

- TrueMove and QuickMove software enables best-in-class motion control and improved cycle times, and path accuracy.
- Increased speed and shorter cycle times – faster than other robots, and up to 25 percent faster than IRB 6620 and IRB 6700.
- LeanID Integrated DressPack reduces cable wear and tear, and lengthens service interval.
- Robust design with a rigid structure increases uptime.
- Multiple mounting options for flexible production layouts.
- Built to operate in harsh environments—available with Foundry Plus protection.

Specification

| Robot version | Reach (m) | Handling capacity (kg)* | Center of gravity (mm) | Wrist torque (Nm) |
|----------------------|-----------------------|-------------------------|------------------------|-------------------|
| IRB 5720-180/2.6 | 2.6 | 180 | 300 | 980 |
| IRB 5720-125/3.0 | 3.0 | 125 | 300 | 573 |
| IRB 5720-155/2.6 LID | 2.6 | 155 | 300 | 994 |
| IRB 5720-90/3.0 LID | 3.0 | 90 | 300 | 569 |
| Number of axes | 6 | | | |
| Protection | IP67 | | Option: Foundry Plus | |
| Mounting | Floor, tilted max 15° | | Option: Inverted | |
| Controller | OmniCore V250XT | | | |

* LID versions include dresspack, other versions allow 20kg extra load on upper arm

Performance (according to ISO 9283)

| | Position repeatability | Path repeatability |
|------------------|------------------------|--------------------|
| IRB 5720-180/2.6 | 0.04 mm | 0.10 mm |
| IRB 5720-125/3.0 | 0.05 mm | 0.14 mm |

Technical information

Electrical Connections

| | |
|---------------------|-------------------------|
| Supply voltage | 380 - 480 VAC, 50/60 Hz |
| Energy consumption* | 2.5 kW |

* ISO-cube at max performance depending on robot version

Physical

| | | |
|------------------------------|---------------|---------|
| Robot base | 1023 x 724 mm | |
| Robot weight | Std | Inv |
| 3300-326 IRB 5720-180/2.6 | 990 kg | 1005 kg |
| 3300-327 IRB 5720-125/3.0 | 985 kg | 1000 kg |
| 3300-328 IRB 5720-155/2.6LID | 1050 kg | 1070 kg |
| 3300-329 IRB 5720-90/3.0LID | 1050 kg | 1060 kg |

Main applications

- EV Battery modules picking, placing, and high precision assembly.
- Automotive tier 1 parts material handling, and machine tending.
- General Industry material handling, machine tending, die casting, and general high precision applications.

More applications on process applications such as welding, cutting, or dispensing will be released in 2023.

Environment

| | |
|---|--|
| Ambient temperature for mechanical unit | |
| During operation | +5°C (41°F) to +50°C (122°F) |
| During transportation and storage | -25°C (13°F) to +55°C (131°F) |
| During short periods (max 24 hours) | up to +70°C (158°F) |
| Relative humidity | Max 95% |
| Noise level | 75 dB |
| Safety | Double circuits with supervision, emergency stops and safety functions, 3-position enable device |
| Extended safety | SafeMove |
| Emission | EMC/EMI-shielded |

Movement

| Working range | IRB 5720-180/2.6 IRB 5720-125/3.0 | IRB 5720-155/2.6LID IRB 5720-90/3.0LID |
|---------------|--------------------------------------|---|
| Axis 1* | ±170° | ±170° |
| Axis 2 | -75°/+145° | -75°/+145° |
| Axis 3 | -180°/+70° | -160°/+70° |
| Axis 4 | ±300° | ±300° |
| Axis 5 | ±130° | ±120° |
| Axis 6 | ±360° | ±200° |

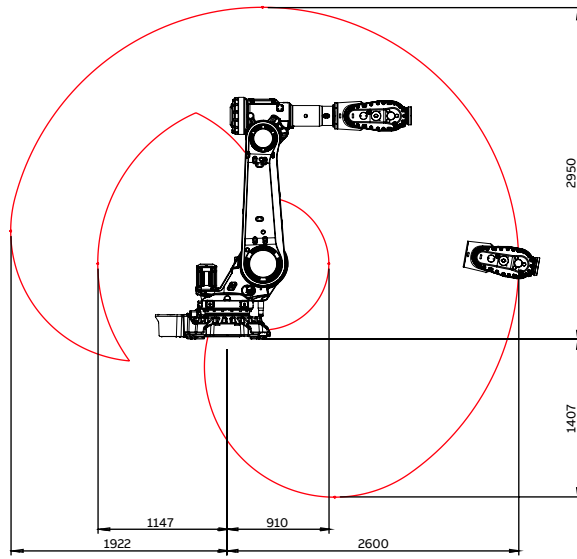
* Option ±220° working range is the same for inverted variant.

Axis max speed

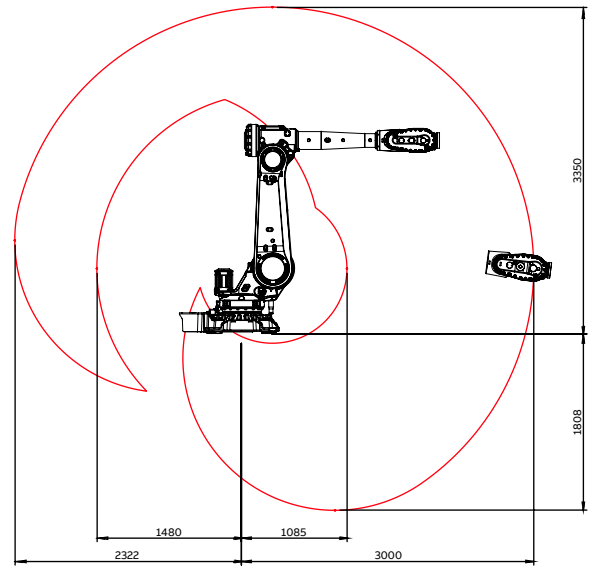
| | Axis 1 | Axis 2 | Axis 3 | Axis 4 | Axis 5 | Axis 6 |
|---------------------|--------|--------|--------|--------|--------|--------|
| IRB 5720-180/2.6 | 110°/s | 90°/s | 110°/s | 200°/s | 150°/s | 210°/s |
| IRB 5720-125/3.0 | 110°/s | 90°/s | 110°/s | 250°/s | 200°/s | 250°/s |
| IRB 5720-155/2.6LID | 110°/s | 90°/s | 110°/s | 200°/s | 150°/s | 210°/s |
| IRB 5720-90/3.0LID | 110°/s | 90°/s | 110°/s | 250°/s | 200°/s | 250°/s |

More information about the data specification is found in the Product Specification
Data and dimensions may be changed without notice

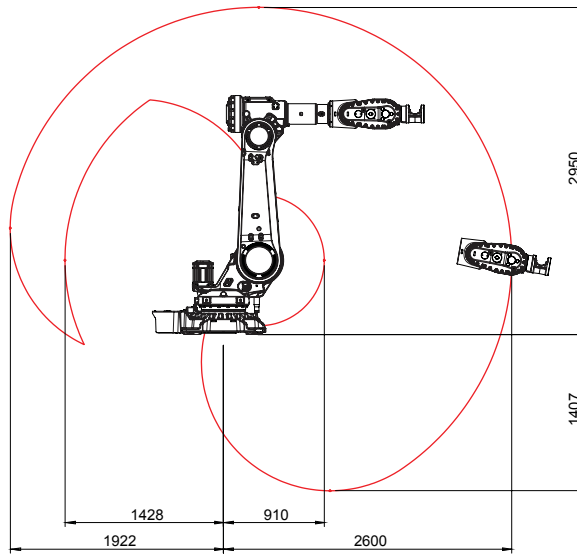
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