

Compact, Flexible, Multipurpose 6-Axis Robot



ABB Robotics has introduced the IRB 120T, a faster version its smallest ever multipurpose 6-axis robot, first introduced in the Fall of 2009. The IRB 120T provides significant increases in the maximum speeds of axes 4, 5 and 6, delivering increased cycle speeds from the standard IRB 120 model, already among the fastest in the industry. Comparing a 1kg picking cycle of 25 x 300 x 25, the IRB 120T completes a cycle in 0.52 seconds, a 10% improvement from the 0.58 seconds of the standard model. With the addition of a 180° axis 6 reorientation to the movement, the speed improvement grows to 25%, 0.69 seconds per cycle compared to 0.92 seconds. The IRB 120T will be ideal for assembly and pick and place applications requiring extensive reorientation of the product, commonly found in the food and beverage, consumer packaging, consumer electronics, electrical and Tier 1 automotive industries.

The new model has all the functionality of the standard IRB 120, with unmatched path repeatability of 0.01mm, superior motion control and outstanding path accuracy; providing agility, precision and speed to applications where a smaller footprint and profile are required. Weighing just 25kg (55 lbs), the IRB 120 has a standard payload of 3kg (6.6 lbs), a vertical wrist payload of 4kg (8.8 lbs), a reach of 580mm, a best-in-class stroke of 411mm and the ability to reach 112mm below its base.

“As the installed base of the IRB 120 spread into numerous industries over the last two years we found there was a need for a faster version for many assembly and pick and place applications,” said John Bubnikovich, executive director, marketing and business development, ABB Robotics. “The increasing demand for higher outputs in consumer goods industries requires the most efficient and cost effective equipment. We are pleased to support this need with the new IRB 120T.”

In addition to the standard IRB 120 and IRB 120T robots, a Clean Room version was

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introduced earlier this year. All three models are:

- The most accurate 6-axis robot on the market with a repeatability of pose (RP) of 0.01mm; competitive 6-axis robot models feature an RP of 0.02mm.
- Easy to integrate into new and existing lines, able to be mounted at any angle, either in a cell, on top of a machine or in close proximity to other robots on the line. Wall- and invert-mounting saves floor space and optimizes working range.
- Extremely nimble, featuring a compact turning radius on axis 1, allowing it to be mounted close to application process machines.

All IRB 120 models are available with the compact version of the industry-leading IRC5 controller, making it easy to program and control for a variety of tasks. The Compact IRC5 is fully compatible with the standard and panel mount IRC5 controllers, with user friendly FlexPendant programming, RobotStudio offline programming, flexible RAPID language and powerful communication capabilities.

ABB Robotics

www.abb.com/robotics [1]

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