

ABB's new 15kg ID robot ramps up productivity in materials handling and machine tending

The IRB 2600ID robot with 15kg handling capacity increases productivity, simplifies programming and lowers overall operating costs in materials handling and machine tending applications

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ABB has added an additional Integrated Dressing (ID) robot to its IRB 2600 range of mid-sized robots. The IRB 2600ID with 1.85 metre reach has a 15kg payload capacity and a total upper arm load of 26kg. The new robot is designed with materials handling and machine tending applications in mind and comes complete with a flexible conduit for routing cables and hoses for signals, air and power inside the robot's upper arm and wrist.

According to Per Lowgren, product manager at ABB, the current trend in industrial robotic design is for integrated cables in the upper arms of robots. A robot with integrated dressing increases output and lowers operational costs, but until now, ID robots have been designed only for arc welding.

With its increased load capacity the IRB 2600ID is well suited for applications such as case packing, machine tool tending, small format palletizing, plastic injection molding machine tending and foundry parts handling.

"Integrated dressing brings several benefits to robotics operations," explains Lowgren. "Because the movement of the hoses and cables is totally predictable the robot can operate at maximum speeds. It also simplifies off-line programming, as swinging cables do not need to be taken into account when simulating robot systems. The complete robot program can be made off-line resulting in a much faster start of production. Using this method programming time can be reduced by up to 90%."

With all hoses and cables firmly secured and protected inside the robot arm and wrist they swing far less during operation, reducing their exposure to cutting fluids and other sources of overall wear. This increases significantly the working life of the cables and hoses, and improves the robot's predictable motion, allowing it to work in narrow spaces and around parts of a complex geometry on which the dressing could otherwise catch. Cable and hose replacement costs are decreased by 75% and up to three production stops per year can be eliminated.

With its compact design the IRB 2600ID has a very small footprint, with a swing base radius of only 337mm and a base width of only 511mm. The reduced risk of interference with other robots allows for productive, high-density installations with 50% more robots, and up to 50% higher output from a typical production cell. ABB's patented Quick-Move motion control software ensures that maximum acceleration is used at all times and that cycle times are consistently shorter.

The IRB 2600 robot family, first introduced in Q4 2010, is the latest of ABB's medium capacity range of multipurpose robots. It offers the best accuracy and speed in its class, improving productivity through increased output, faster cycle times and lower scrap rates.

The 15kg, 1.85m IRB 2600ID is available with ABB's well proven IRC5 Robot Controller and is fully supported by the ABB Robotics global sales and service organization in 53 countries.

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