

ABB Robotics New intelligent ArcPack controls improve welding quality in metal fabrication industries

ABB's newly integrated solution with 10 times faster internal digital communication speed for robotised arc welding offers full integration of all welding equipment, easy programming and powerful performance for automated welding applications.

The robotic welding package, ArcPack, is designed to offer high quality welds with minimum downtime. The package includes ABB's fifth generation IRC5 controller, the touch screen interface FlexPendant, RobotWare Arc programming software and an IRB1410 industrial robot to deliver an integrated solution for hassle-free arc welding. The package is also provided with ABB's new RPC welding power source suited for MIG (Metal Inert Gas) and MAG (Metal Active Gas) welding automation.

The new RPC welding power source offers enhanced control of welding applications enabling manufacturers to specify process parameters such as voltage, current and gas flow, managed via the ABB FlexPendant controller. Using efficient fieldbus-based communications, the RPC power source internal digital communication speed is 10 times faster than previous models. It offers faster reaction speeds and consistently smooth and reliable wire feeding for better control in MIG and MAG welding applications.

It also provides synergic curves – pre-programmed process database that use common welding parameters for manufacturers to choose. Manufacturers can simply select the thickness of the plate to be welded on the RPC welding power source, and let the machine automatically find the right welding parameters.

Also included is ArcPack's Memory Channel function. It enables manufacturers to program different parameters, comprising welding voltage, wire feed speed and additional features such as creep start, burnback or crater fill setting – all within one memory channel. Up to 90 channels are available for programming, presenting manufacturers with an easy way to set up and begin production.

Available with both synergic or pulsed welding process variants in 400 amp or 350 amp models, the device offers a quick set up and uses a logical process adjustment to select the optimum parameters for your application. The new wire feed unit is also very compact and lightweight incorporating a 4x4-drive mechanism with metal feeding rolls for optimum wire feeding performance.

Working at the centre of the ArcPack solution is ABB's IRB1410, a well-proven and cost-efficient robot with a stroke and reach accurate for arc welding applications. It is based on the IRB 1400, which has been installed in over 14,000 units worldwide out of which most are arc-welding applications. The IRB1410 is only delivered in the function package IRB1410 ArcPack.

The package combines these benefits with those of the IRC5 world leading robot controller including superior path motion, user friendly FlexPendant programming, flexible RAPID language and powerful communication capabilities. This provides manufacturers with the tools for unmatched quality and improved productivity in arc welding installations. The welding torch, wire feeder, bobbin plus the power and signal cables, are also integrated with the RPC power source and the IRB1410 robot.

The ArcPack robotic welding package provides manufacturers with intelligent controls to manage welding applications in metal fabrication industries, from bicycles, sporting goods, automotive parts to agricultural equipment. The technology can also be used to fabricate small and medium size components.

Press Release



Further information for editors.

ABB (www.abb.com) is a leader in power and automation technologies that enable utility and industry customers to improve their performance while lowering environmental impact. The ABB Group of companies operates in around 100 countries and employs about 117,000 people.

ABB Robotics is a leading supplier of industrial robots - also providing robot software, peripheral equipment, modular manufacturing cells and service for tasks such as welding, handling, assembly, painting and finishing, picking, packing, palletizing and machine tending. Key markets include automotive, plastics, metal fabrication, foundry, electronics, machine tools, pharmaceutical and food and beverage industries. A strong solutions focus helps manufacturers improve productivity, product quality and worker safety. ABB has installed more than 175,000 robots worldwide.

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