

# Spot Welding Functional Module

A complete spot welding system



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01 Spot Welding  
Functional Module  
with IRB 6700

## Long experience guarantees your optimum production

ABB has long experience in delivering spot welding equipment that solves your unique requirements. We have delivered functional modules for the automotive and other industries for more than 40 years.

Spot Welding Functional Module is specifically designed to be a ready- to-use and reliable solution for spot welding applications. All hardware, software and electrical modules you require to complete a functional module are included. The components are designed and configured to easily interface with each other.

Spot Welding Functional Module includes a welding cabinet for rapid and efficient service and maintenance. In addition, includes a wide range of welding guns available and tip dresser that will adapt to your specific requirements.

## Seamless integration with ABB power robots

The functional module are designed and configured to optimize processes together with the ABB power robot families. The packages are seamlessly integrated with the robot, which ensures high quality and performance. it is easily configured at the same time as you order a power robot.

ABB offers fully configured, ready-to use robot packages for high quality and high performance spot welding process. Spot Welding Functional Module is built from a combination of hardware and software that are dedicated to optimize your specific process. We are working with key values like simplicity, ease of use and reliability.

## Main benefits

- Single supplier of robot and application equipment guarantees simultaneous delivery and verified system functionality.
- Configurable for various requirements thanks to a modular design to meet your specific process requirements.
- High performance and high uptime guarantee high quality production optimized to your needs.
- A well integrated process control and regulation contributes a higher performance and reduces risk in your production.
- ABB standard solutions with verified suppliers guarantees accurate spare part deliveries.
- Available for both robot-carried guns as well as for stationary guns.
- Complete fully configured and tested equipment ready before delivery that allows a fast and easy commissioning.
- Optimized and feasible solution available in early project stage through virtual controller and simulation models available.



01

- 01 IRB 6700 with GWT X9 spot welding gun
- 02 Tip dresser
- 03 Spot Welding Cabinet

**IRB**

- Increased service intervals and decreased service times.
- Longer uptime – mean time between failures 400,000 hours.
- Increased speed and shorter cycle times – on average 5 percent faster.
- Improved accuracy and higher payloads.
- 5 percent lower power consumption.

**DressPack – Lean ID**

- Partly integrated dresspack for a secured and flexible production.
- Minimal cable wear gives few cable replacements.
- Easy access and clever quick-locks for exceptionally fast replacement.

**Water and Air Unit**

- Water and Air unit fitted on the base of the robot.
- Water circuit with electric shut-off valve and flow switch.
- Air circuit with filter, electrical pressure switch.

**Spot Welding Cabinet**

- Supports MFDC welding applications with Bosch weld controllers as standard options.
- Based on the IRC5 design and can be stacked on top of the robot controller to gain floor space.
- Integrated tip dress control.

In addition to our standard package we also offer custom packages designed around your specific needs.



02



03

**Spot Welding Software**

- RobotWare Spot – Welding with MFDC weld controllers.
- Spot Servo – Welding with electric servo guns with MFDC weld controllers.
- Spot Servo Equalizing – compensating for electrode arm deflection
- Bosch Weldtimer Interface – Enables the operator to program and monitor main parameters of the Bosch weld timer.
- A simple and robust software that contribute with simplicity, reliability and quality on your production.

**GWT X9**

- Same compact body for all models.
- Adaptable to a wide range of arm sizes and types.
- Multiple side mounting options.
- Quick gun commissioning.
- Easy maintenance and replacements for all components.
- Replacements MTTR < 15 minutes.
- Easily removable cover.

**Tip dresser**

- Single tip dresser with vacuum system and total cutter.
- Cutting performed in seconds – saves cycle time.
- Wide range of electrode-types.
- TCP check (beam) for high performance and weld quality.