RobotWare – Spot
Part of the SpotPack offer

RobotWare spot welding options are designed to be universal and flexible software platforms for easy creation of customized and high performance function packages for different kinds of spot welding systems.

Quality and Full Process Control
The RobotWare family includes specific spot welding options to ensure quality and full process control. The spot welding options provide support for sequential welding with either pneumatic guns or electric servo guns. Multi gun handling is also available, allowing simultaneous welding and full individual monitoring of several separate welding guns and weld controllers.

RobotWare spot can be used both on robot carried welding guns and on stationary welding guns. The options provide spot welding instructions for fast and accurate positioning combined with gun manipulation, process initiating and supervision of the weld equipment.

Spot welding options are universal and can be extensively customized to fit unique process demands. They are, however, delivered with “ready-to-use” functionality containing basic configuration data.

The spot welding options are seamlessly integrated with RobotWare operating system running on IRC5 robot controllers.

Main Features
- Fast and accurate positioning using the unique QuickMove and TrueMove concept for shortest time per spot.
- Powerful spot welding instructions.
- Weld gun closing synchronized with robot movement (Spot Servo options).
- Extensive supervision of equipment and welding performance to ensure weld quality and protect the equipment.
- Error handling and recovery functions to minimize downtime.
- Tip wear handling to secure weld quality.
- A dedicated Spot Welding user interface on the IRC5 FlexPendant enabling easy accessible manual control functions.
- Flexible interface for all major brands of welding equipment.
Robotware options overview
Spot – Sequential spot welding with pneumatic single/dual guns with AC or MFDC weld controllers or synchronous welding and monitoring of up to four separate guns and weld controllers.

Spot Servo – Sequential spot welding with electric servo controlled guns with AC or MFDC weld controllers or synchronous welding and monitoring of two separate guns and weld controllers.

Spot Servo Equalizing – As Spot Servo and additionally provides process software allowing spot welding gun equalizing without mechanical hardware.

Servo Tool Change – Enables an on-line change of servo gun during production.

Bosch weld timer interface – Enables the operator to program and monitor main parameters of the Bosch weld timer.

Robotware spot supported processes
• Pneumatic welding gun
• Electric servo welding gun
• Robot carried welding gun
• Stationary welding gun
• AC welding
• MFDC welding

Weld data and gun parameters
• Weld program number
• Gun pressure
• Weld ready timeout
• Gun pre-close
• Small / Large gun stroke
• Spot count for tip dress supervision

Supervision
User-defined autonomous supervision, functions
• Supervision before and after welding
• Water flow
• Air pressure
• Monitoring of the external weld timer (Weld error)
• Gun closure and opening
• Gun pressure (Servo gun only)
• Detecting of missing or improper sheets (Servo gun only)
• Number of welds (to initiate tip dress/change when required)

Manual actions, service and recovery
• Manual actions possible for test welding and gun opening and closing
• Restart alternatives: re-weld, skip or service
• Reverse execution with gun control
• Weld error recovery with automatic re-welding
• Power failure handling
• Simulated welding
• Servo gun calibration