FlexArc® – Robotic Arc-Welding Cells
Modular solutions to meet your requirements

Contact us

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Standard configuration

- Platform, Fencing with the torch service window, service door, robots, pedestals, positioner, controller, power distribution panel

- Welding power source

- Welding torch

- Operator panel

- Safety equipment PNOZ Multi including Vertical Light Curtains

Software

- FlexPendant - Graphical User Interface for operators

- Welding error handler

- Production monitoring

- Production manager

- Navigator

Optional configuration

- Robot

  - IRB 1600, 1600 ID, 2600, 2600 ID, 4600

- Welding power sources

  - According to end-user requirements

- Welding torches

  - According to end-user requirements

Others

- PLC, OP Panels

- Manual Jog

- Full Air and Gas distribution panel

- Full floor coverage

- Programming platform

Safety

- Horizontal light curtains

- Roll-down door, Two-Hand control

Tool service

- Service center for torches

- Torch cleaner

- BullsEye®: TCP calibration

Others

- Wire cutter

- Seam Finding

- SmarTac, WeldGuide III

- Fume extraction hoods

- Coverage of welding station only

- Coverage of welding station and load/unload station
The cells are equipped with centralized power distribution - a new dimension in Robotic Arc Welding. All equipment is installed on the common platform which enables cross-member, engine cradles, door modules, exhaust systems, and construction and agricultural equipment components. These checks/updates result in an improvement in the quality of welded parts and a significant increase in productivity of the cell.}

**Virtual FlexArc: The ultimate productivity tool**

A virtual replica of each FlexArc cell is available for free at www.abb.com/robotics. A virtual replica of each FlexArc cell is available for free at www.abb.com/robotics. Virtual FlexArc provides the following advantages:

- Tools for Quality and Increased Uptime
  - BullsEye® - Tool Calibration and Automated Check
  - Production Monitoring
  - Navigator

**BullsEye® - Tool Calibration and Automated Check**

The patented BullsEye® allows accurate definition and automatic updating of the Tool Center Point (TCP) and the torch angle. The BullsEye operation in two modes: "Set up mode" (to define a new tool in the system) and "yclick check" (an object-specific period to check if the tool's frequency of checking is specified in the program and automatically updated when a deviation is found). These checks are useful in the quality of welded parts and a significant increase in productivity of the cell.}

**Production Monitoring**

The robot system automatically monitors weld lengths and number of welds made on a component and reports with a screen message and a warning light. If a fault was not processed according to the original specification, it enables the operator to take immediate action to repair or reject the faulty component.

**Navigator**

The Navigator functionality includes cell calibration for off-line generated programs. This allows integration of the measuring function and cell self-diagnostics.

**Integrated Error Resolution**

There is no need to enter the cell when a weld error occurs. All the fault is performed in the service pocket in the guard, where the operator can service the welding gun e.g. changing the contact tip etc. This saves valuable production time and gives an increase in productivity.