## FlexArc - Robotic Arc Welding Cells

**FlexArc - choose the configuration to match your needs**

### Standard Models

<table>
<thead>
<tr>
<th>Model</th>
<th>IRB or IRB 1600</th>
<th>Load Capacity</th>
<th>Length (in MM)</th>
<th>Distance (in MM)</th>
<th>Station Footprint (L x W x H) with light curtains</th>
<th>Station Footprint (L x W x H) with roll-down door</th>
</tr>
</thead>
<tbody>
<tr>
<td>FlexArc Single 500C MultiMove</td>
<td>1 IRB 1600</td>
<td>500 Kg</td>
<td>1600</td>
<td>1000</td>
<td>5300 x 3600 x 2500</td>
<td>4000 x 3600 x 2700</td>
</tr>
<tr>
<td>FlexArc Single 250R MultiMove</td>
<td>1 IRB 1600</td>
<td>250 Kg</td>
<td>5300 x 3600 x 2500</td>
<td>4000 x 3600 x 2700</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FlexArc Single 500R Multimove 2</td>
<td>2 IRB 1600</td>
<td>500 Kg</td>
<td>2000 / 1200</td>
<td>5600 x 3700 x 2700</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FlexArc Single 750R Multimove 2</td>
<td>2 IRB 1600</td>
<td>750 Kg</td>
<td>2000 / 1200</td>
<td>5600 x 3700 x 2700</td>
<td></td>
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</tr>
<tr>
<td>FlexArc Single 250K Multimove 2</td>
<td>2 IRB 1600</td>
<td>250 Kg</td>
<td>2500 / 1200</td>
<td>4800 x 5300 x 3000</td>
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### Standard Equipment

- Platform, Fencing with torch service pocket, Service door, Robots, Pedestals, Positioner, Controller, Power distribution panel
- Power Source: Fronius TS 4000, air cooled
- Welding Torch: Fronius MTG 4000/22, air cooled
- Operator Panel: Fronius TPS 4000, Aluminum
- Safety equipment: PNOZ Multi, Vertical Light Curtains
- Software: FlexPendant Operator Interface, Welding Torches, Seam Finding
- Welding Error Handler: Fronius Roboweld 5000/22, water cooled
- Production Monitoring: Tough Gun 500/22, air cooled
- Production Manager: ABB PSF 315, air cooled
- Navigator: ABB PK 500, water cooled

### Optional Equipment

- Robot: IRB 2400L
- Power Sources: Fronius TPS 4000, water cooled, Fronius CMT 3200R/4000R, ABB MigRob 500/316E
- Welding Torches: Fronius Robocata 5000/22, water cooled, ABB PKI 500, water cooled
- Safety: Horizontal Light Curtains, Albany roll-down door
- Tool Service: Torch Cleaner, BullHorse TCP Calibration
- Software: Wire Cutter
- Fume extraction hoods: Coverage of welding station only, Coverage of welding station and load/unload station

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**Cost effective modular solutions to match your needs**

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www.abb.com/robotics
A new dimension in robotics arc welding

Optimal productivity calls for equipment that combines effective operation with maximum cost-efficiency. Modular, standardized robot cells are an established way of providing this kind of optimized solution for robotic arc welding operations, since they are far more cost-effective than custom-designed welding cells.

FlexArc heralds a new generation

The arrival of FlexArc marks a new generation of standardized welding cells, which are designed to deliver cost-effective, state-of-the-art robotic welding operations. FlexArc welding cells are built to a global standard that delivers savings in both time and money.

FlexArc cells are designed using a modular system of standard components that can meet the requirements of most applications. All the cells are designed to deliver maximum performance whilst making optimum use of the space available.

FlexArc tells its own tale

- Low investment cost
- Reduced downtime thanks to improved error handling
- Higher quality through automatic production and process monitoring
- Improved cost-efficiency thanks to global standardization across all your facilities
- Extremely short delivery times
- Proven two-station principle (loading and welding)
- Offline programming for fast and easy implementation
- Improved worker & workplace safety

FlexArc is the most cost-effective global cell solution in your industry

- General industry: Door modules, grids, switch boards, printing units, steel furniture, shopping carts, racks, compressors, lawn mowers, two-wheelers, construction and agricultural equipment components
- Automotive industry: Cross members, engine cradles, door modules, exhaust systems, brake components, car seats, wheels, axles, dash boards and more

Boosting your workflow

FlexArc features the FlexPendant graphical operator interface, which provides operators with an overview of the status of the cell plus important quality and production data. The interface allows the operator to communicate effectively with all of the functions within a cell and access all the information about the cell’s performance, including the status of the robot, robot control, plus other functions such as roll-down door control.

With minimum training, the user can organize the welding operation into a series of work steps. The operator has all the information needed to keep track of the number of parts produced, as well as cycle times, the number of welds produced and the individual weld length.

Short delivery times and easy implementation make FlexArc’s standard approach the natural choice for “plug-and-produce” operations.

Virtual FlexArc: the ultimate productivity tool

- Train operators on the virtual cell without losing valuable production time on the real thing
- Generate programs off-line before your new system arrives
- Generate programs for new parts while the real cell continues to produce uninterrupted
- Design the weld fixture around an optimized robot welding program
- Verify that tooling provides proper weld torch access to the weld seam prior to building the weld fixture

Quality and up-time tools

Production monitoring

The robot automatically monitors the production quality and reports via a message and a warning light if a part was not produced according to the specification. This enables the operator to take immediate action.

Navigator

The Navigator help function includes cell calibration for off-line generated programs, tooling calibration (including integrated co-ordinated measurement functionality) and cell self-diagnostics.

Integrated error handling

There’s no need to look outside the cell when a weld error occurs. At the push of a button the robot will come to a service gate in the fence, where the operator can service the gun, for example, by changing the contact tip. This saves valuable production time.