Standard FlexArc Models

Available FlexArc Models

FlexArc with A-Type Positioners - IRBP A

Robot	IRB1520ID, IRB1600(ID), IRB2600(ID), IRB4600
Number of Robots	1 to 2
Positioner	IRBP A-250, IRBP A-500, IRBP A-750
Handling Capacity	Max 750 kg
Welding Equipment	Fronius, Miller, Lincoln, SKS
Torch Equipment	Tregaskis, Binzel, Dinse
Safety Equipment	Complete System of Safety Features - safety fencing, light curtains, laser scanner, roll doors, safety locks, safety PLC

FlexArc with C-Type Positioners - IRBP C

Robot	IRB 1520ID, IRB1600(ID), IRB2600(ID), IRB4600
Number of Robots	1-2 (up to 3 on request)
Positioner	IRBP C-500, IRBP C-1000
Handling Capacity	Max 1000 kg
Welding Equipment	Fronius, Miller, Lincoln, SKS
Torch Equipment	Tregaskis, Binzel, Dinse
Safety Equipment	Complete System of Safety Features - safety fencing, light curtains, laser scanner, roll doors, safety locks, safety PLC

FlexArc with K-Type Positioners - IRBP K

Robot	IRB 1520ID, IRB1600(ID), IRB2600(ID), IRB4600
Number of Robots	1-2 (up to 4 on request)
Positioner	IRBP K-300, IRBP K-600, IRBP K-1000
Handling Capacity	Max 1000 kg
Welding Equipment	Fronius, Miller, Lincoln, SKS
Torch Equipment	Tregaskis, Binzel, Dinse,
Safety Equipment	Complete System of Safety Features - safety fencing, light curtains, laser scanner, roll doors, safety locks, safety PLC

FlexArc with D-Type Positioners - IRBP D

Robot	IRB 1520ID, IRB1600(ID), IRB2600(ID), IRB4600
Number of Robots	1-2 (up to 3 on request)
Positioner	IRBP D-300, IRBP D-600
Handling Capacity	Max 600 kg
Welding Equipment	Fronius, Miller, Lincoln, SKS
Torch Equipment	Tregaskis, Binzel, Dinse
Safety Equipment	Complete System of Safety Features - safety fencing, light curtains, laser scanner, roll doors, safety locks, safety PLC

FlexArc with B-Type Positioners - IRBP B

Robot	IRB 1520ID, IRB1600(ID), IRB2600(ID), IRB4600
Number of Robots	1 to 2
Positioner	IRBP B-250, IRBP B-500, IRBP B-750
Handling Capacity	Max 750 kg
Welding Equipment	Fronius, Miller, Lincoln, SKS
Torch Equipment	Tregaskis, Binzel, Dinse
Safety Equipment	Complete System of Safety Features - safety fencing, light curtains, laser scanner, roll doors, safety locks, safety PLC

FlexArc with R-Type Positioners - IRBP R

Robot	IRB 1520ID, IRB1600(ID), IRB2600(ID), IRB4600
Number of Robots	1-2 (up to 4 on request)
Positioner	IRBP R-300, IRBP R-600, IRBP R-1000
Handling Capacity	Max 1000 kg
Welding Equipment	Fronius, Miller, Lincoln, ESAB, SKS
Torch Equipment	Tregaskis, Binzel, Dinse, SKS
Safety Equipment	Complete System of Safety Features - safety fencing, light curtains, laser scanner, roll doors, safety locks, safety PLC

FlexArc U2, Fixed Station Cell

Robot	IRB 1520ID, IRB1600(ID), IRB2600(ID)
Number of Robots	1
Positioner	2x Fixed Table
Handling Capacity	Max 300 kg
Welding Equipment	Fronius, Miller
Torch Equipment	Tregaskis, Binzel, Dinse
Safety Equipment	Complete System of Safety Features - guarding, manual station doors, maintenance door, Electronic position switch (EPS)

ArcPac U2, Fixed Station Cell

Robot	IRB 1520ID, IRB1600(ID)
Number of Robots	1
Positioner	2x Fixed Table, Optional 300L Per Side
Handling Capacity	225 Kg Per Table
Welding Equipment	Fronius, Miller
Torch Equipment	Tregaskis Air Cooled LSR
Safety Equipment	Complete System of Safety Features - guarding, manual station doors, maintenance door, Electronic position switch (EPS)

Standard Configuration

Platform, Fencing with the touch 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

Robotware Arc

FlexPendant - Graphical User Interface for Operators

Welding Error Handler

Production Monitoring

Production Manager

Optional Configuration

Robot	**Safety**
IRB 1520ID, 1600, 1600ID, 2600, 2600ID, 4600	Verical/Horizontal Light Curtains
	Roll Down Door, Two-Hand Control
Welding Power Sources	**Tool Service**
According to end-user requirements	Service Center for Torches
Seam Finding	Torch Cleaner
SmartTac, WeldGuide III,	BullsEye®; TCP Calibration
1-D Laser SmartTac	Wire Cutter
Other Options	**Welding Torches**
PLC, OP Panels	According to end-user requirements
Manual Jog	**Fume Extraction Hood**
Full Air and Gas Distribution Panel	Welding Station Only Coverage
Programming Platform	Coverage of Welding Stations and Load/Unload Station

Contact Us

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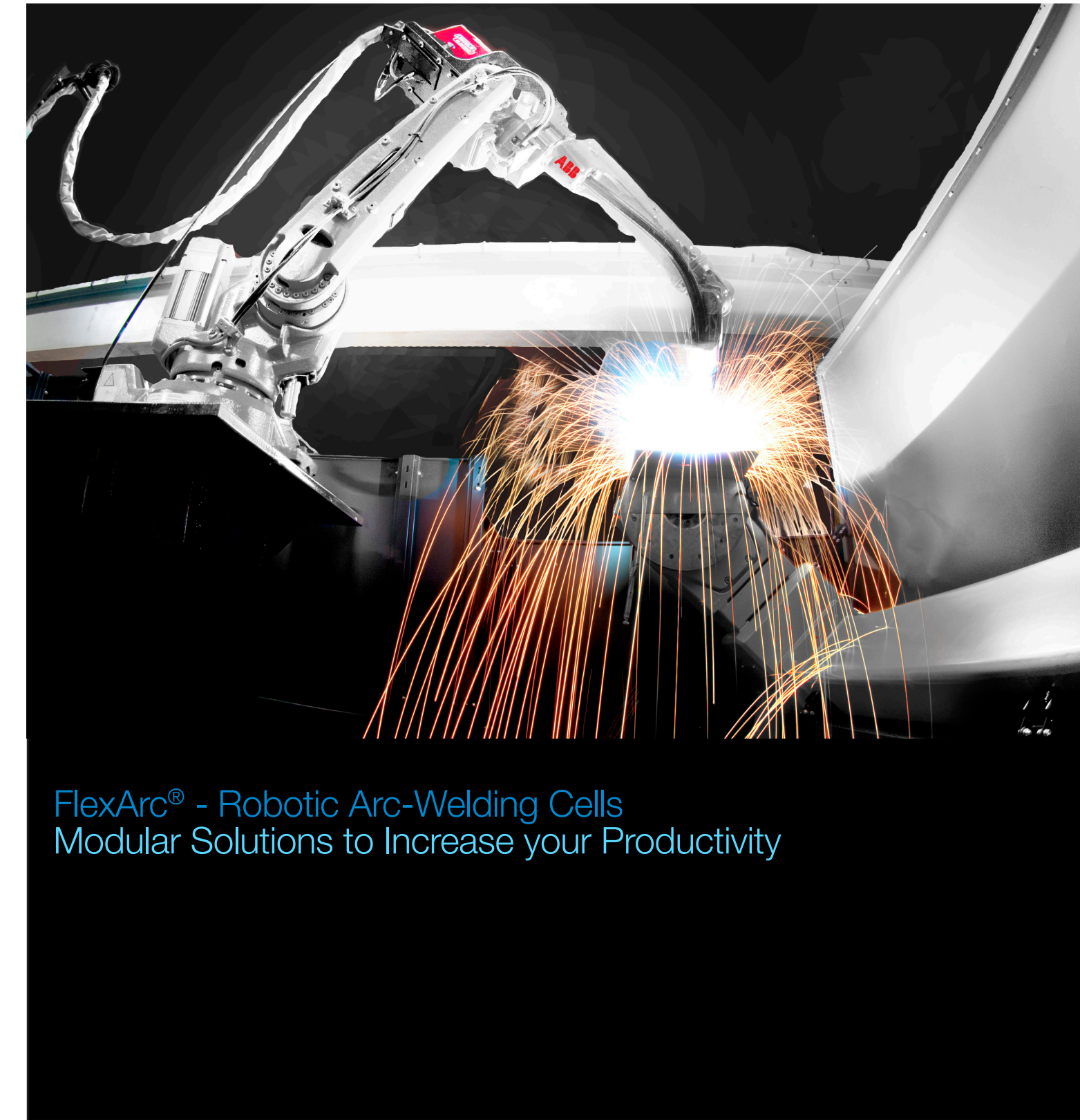
FlexArc® - Robotic Arc-Welding Cells
Modular Solutions to Increase your Productivity

A New Dimension in Robotic Arc Welding

FlexArc® - A New Generation of Welding Cells

FlexArc® is a new generation of standardized welding cells, which are designed to deliver cost-effective, state of-the-art robotic welding operations. All cells deliver maximum performance whilst making optimum use of available space. The basic options feature either a single robot, or two robots with Multi-Move, a choice of ABB positioners from our extensive range and welding equipment to suit your needs. All equipment is installed on the common platform, which provides shorter commisioning time and relocation within the production facilities.The cells are equipped with centralized power distribution - all components are supplied from one source; this means that only one power supply cable for the whole cell is necessary.

FlexArc® Advantages

- Low investment cost
- Intuitive graphical user interface for operators
- Reduced downtime thanks to improved error handling
- Higher quality through automatic production and process monitoring
- Improved cost-efficiency thanks to global standardization
- Short delivery times
- Proven two-station principle (loading and welding)
- Off-line programming for fast and easy implementation
- Improved workspace safety
- Designed and built to last

Optimal productivity requires equipment that combines effective operation with maximum cost-efficiency. Modular, pre-engineered robot cells are an established way of providing this type of solution.

Boosting your workflow

FlexArc® features the FlexPendant graphical user interface, which not only provides operators with an overview of the status of the cell, but also important quality and production data. The interface allows the operator to communicate effectively with all of the functions within a cell and access all information regarding cell performance, including the status of the robot and controller along with 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 necessary to keep track of the number of parts produced, cycle times, the number of welds produced and the individual weld length. Easy implementation makes the FlexArc® standard approach the natural choice for "plug-and-produce" operations.

FlexArc® is the Most Effective Solution in your industry

- General Industry:
  Door modules, grids, switch boards, printing units, steel furniture, shopping carts, racks, compressors, lawnmowers, two wheelers and 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

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The Ultimate Productivity Tools

IRB 1520ID	IRB 1600ID	IRB 2600ID	IRB 4600
IRBP L	Motor and Gear Unit Sets	IRBP C 500	IRBP R 300
IRBP K 600	IRBP D 600	IRBP B 250	IRBP A 250

Tools for Quality and Increased Uptime

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 part was not produced according to the original specification. This enables the operator to take immediate action to repair or reject the faulty component.

Customer-Specific FlexPendant Screens

Whatever the requirement, the ABB IRC5 Platform offers the ability to easily make Teach Pendant screens specific to your needs. Whether it's a quick model change, enhanced operator interface, or an on-the-fly program adjustment: FlexPendant interface is there to make you more productive.

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.


Automatic Error Handling

There is no need to enter the cell when a weld error occurs. At the push of a button the robot will go to 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.
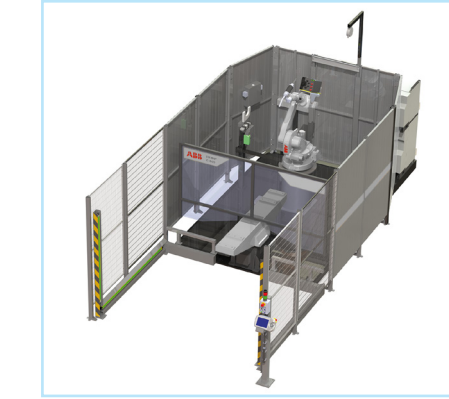
Navigator

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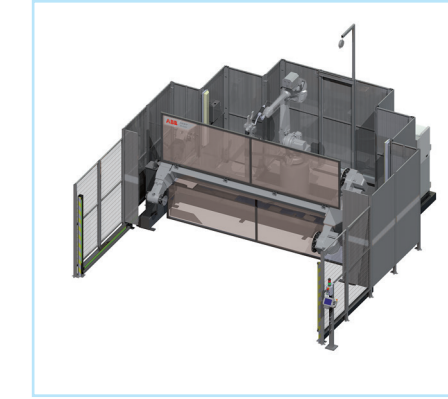

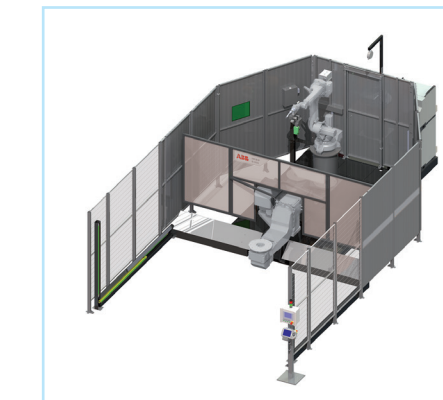# FlexArcs - Configured to Match Your Needs
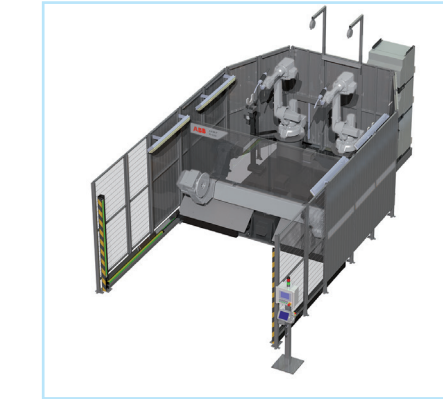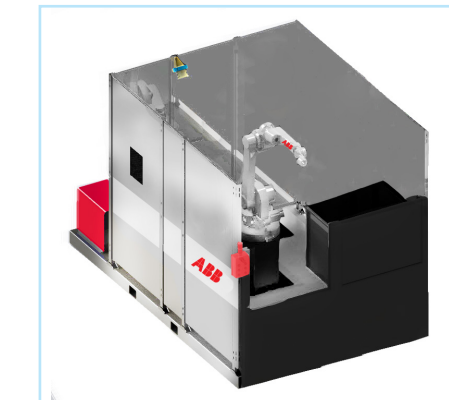

FlexArc 300R Dual IRB1600ID   FlexArc 500C Single IRB1520ID   FlexArc 600K Single IRB2600ID

FlexArc 500B Single IRB2600ID   FlexArc U2 Fixed Station Cell   ArcPack U2 Fixed Station Cell

Virtual FlexArc® with RobotStudio

- Train operators on the virtual cell without losing valuable production time on the real cell
- 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