

# Collaborative robotics portfolio

Our state-of-the-art collaborative robots  
are engineered to exceed expectations.

Automation has never been easier.

# Built to work together

## Introducing our extensive range of collaborative robots

Meeting the fast-paced demands of today's consumers calls for a new type of production line, one where the capabilities of human workforces are augmented by collaborative robots. Robots that consistently work at the highest levels of performance, no matter what the task.

Easy to operate, safe, and offering fast, precise, and repeatable performance, ABB's family of cobots help you expand your production horizons. Whatever you need, we're here to support you along every single step of your automation journey.

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## Meet our cobot team

### Are you ready to automate?

Our collaborative robots are made for a huge range of tasks, in operations of every size. They're easy to set up, program, operate, and scale. Built by industry-leading experts. And serviced by the broadest service network in the industry. Whatever you need, we're here to support every step of your automation journey.



#### GoFa™

**CRB 15000 GoFa 5**  
**CRB 15000 GoFa 10**  
**CRB 15000 GoFa 12**

**Go far with your new helping hand.**

Go faster. Go further than ever. GoFa's class-leading speed, safety, and ease of use will take your business to the next level.

**Payload**  
**Up to 14 kg\***

**Reach**  
**Up to 1.62 m**

\* wrist down configuration



#### YuMi®

**IRB 14000 and IRB 14050**

**Inherently safe,**  
**incredibly agile.**

Meet your robotic co-worker for small parts assembly.

YuMi sets new standards for loads of up to 0.5 kg. Safe, quick, and flexible, it will make your operations more productive.

**Payload**  
**0.5 kg/per arm**

**Reach**  
**0.56 m**



#### Wizard

**Wizard easy programming**

Makes setting up and operating your cobot easier than you can imagine.

Get started programming robots immediately – no coding skills needed.

### Why cobots:



Enable simplicity



Enhance flexibility



Increase productivity



Optimize performance



Ensure consistent quality production



Help employees with their tasks



## Features:

- Payload range up to 14 kg
- Extensive safety features for collaborative operation
- Easy to use
- Easy to program
- Fast, repeatable performance for maximum productivity



## GoFa™ CRB 15000

### Go far. Go Faster. Go further.

GoFa™ is your collaborative partner for high payload applications up to 14 kg. With class-leading reach, advanced and comprehensive safety, plus easy operation, GoFa will take your business further than ever.

### Introducing GoFa

GoFa incorporates a range of features that allow it to be used safely, directly alongside human workers and without the need to design and build expensive barriers or fencing. GoFa can continuously share workspace with people, giving it maximum flexibility and efficiency. Robot and human cooperate on the same tasks, without jeopardizing speed or safety.

Built with the first-time user in mind, GoFa is easy to set up and operate, with no prior experience needed to get up and running.



### Easy to use

- Enhanced interaction with arm side interface
- Superior lead-through programming anywhere on the robot
- Wizard easy programming
- SafeMove configurator App on the FlexPendant

### Collaborative safety

- Superior power and force limiting performance through integrated torque sensors
- Safe design of robot, rounded geometry, no pinch/trap points
- Safety certified Category 3, PL d

### Productivity

- With a TCP speed of up to 2.2m/s,\* GoFa is faster than other cobots in its class
- 1.62 m reach: 14 percent longer than comparable 10 kg cobots
- Powered by OmniCore with best-in-class motion control

### Accuracy

- With path accuracy down to 0.03mm, GoFa delivers over 10 times greater accuracy than other cobots\*
- Absolute position accuracy of 0.1 mm maintains tight tolerances\*
- Offline programming with RobotStudio® achieves up to 99% match between simulation and reality, reducing the need for adjustments and ensuring efficient deployment\*

\* Available with GoFa Ultra Accuracy feature

## Why choose GoFa

### Fast, repeatable performance

With a TCP speed of up to 2.2 m/s,\* GoFa is faster than other cobots in its class. Excellent position repeatability and superior motion control also enable it to perform its tasks accurately and precisely.

\*Safe collaborative speed will be lower, refer to the SafeMove configurator App for recommendation. Always do a safety risk assessment of your cobot application.



### No experience required

Designed with first-time users in mind, getting started with GoFa is easy. Lead-through programming, a customizable two-button interface, plus ABB's Wizard easy programming software combine to help anyone get GoFa up and running in no time.



### Safety inside and out

Eliminate the cost and space issues caused by barriers or fencing. Built-in intelligent sensors stop GoFa in milliseconds if contact is detected. A comprehensive set of safety functions are provided together with SafeMove configurator App on the FlexPendant to help you install your cobot safe.



### Ultra accuracy, flawless precision

With path accuracy down to 0.03mm, GoFa delivers precise production and superior product quality, achieving over 10 times greater path accuracy compared to other cobots on the market.



### Reliable and robust

GoFa, powered by the advanced OmniCore™ controller, uses TrueMove and QuickMove technologies for smooth, precise movements. Built to last like an industrial robot, GoFa performs with the reliability and robustness expected in demanding industrial environments.

### Built-in Force control

GoFa's integrated Force Control feature provides the cobot with adaptive tactile sensing capabilities, enhancing process cycle time and quality. This enables the robot in maintaining a constant force between itself and the objects it interacts with, while also shortening programming time and reducing installation costs.

## YuMi® IRB 14000 and IRB 14050

### Inherently safe. Made to succeed.

Best-in-class safety. Ultimate flexibility. Approachable design. YuMi® was engineered to work directly alongside your people, and boost productivity.

### Introducing YuMi

In 2015 ABB introduced YuMi, the world's first truly collaborative robot. YuMi was a game-changer and heralded a new era where people and robots could work safely and productively side-by-side without physical barriers. Thanks to its inherently safe capabilities, YuMi can move impressively fast. In fact, when working collaboratively it boasts one of the highest safe working speeds of all cobots. Moving at 1.5 meter per second, it's single- or dual-arm set-up will transform the capabilities of your business.



**Payload**  
0.5 kg/per arm

**Reach**  
0.56 m

### Easy to use

- Lead-through programming
- Wizard easy programming (for single arm YuMi only)
- SmartGripper with servo, vacuum and integrated vision

### Productivity

- High working speed (1.5 m/s TCP speed)
- Best-in-class accuracy 0.02 mm for high-precision manufacturing
- Two arm coordinated movements powered by MultiMove with dual-arm YuMi

### Collaborative safety

- Better safety through inherently safe design
- Collision detection
- Lightweight magnesium arm with protective padding
- Dual-arm YuMi: Category B, PL b
- Single-arm YuMi: Category 3, PL d



## Consistently quick

Speed up production without sacrificing accuracy. Even at its top velocity of 1.5 m/s, YuMi works to within 0.02 mm accuracy. Whether you choose single- or dual-arm, you get consistent quality every single time.



## Ultra safe

No need for fences. No reasons to worry. YuMi is the world's first inherently safe robot, with best-in-class safety design and collision detection control. That means it can be deployed right alongside your people across a wide range of environments.\*

\*When no hazardous tool or workpiece is mounted. Always do a safety risk assessment of your cobot application.



## Make your business more competitive

Portable, adaptable, and efficient, YuMi lets you take automation to the next level. Make your business more competitive by increasing throughput, improving quality, and reducing costs.



## A world of applications

ABB's collaborative robots are built to work side-by-side with people in production lines. Different cobots can be deployed in different stations.

The image and descriptions below give examples of how people and robots can work collaboratively to increase productivity, optimize performance, and take your business to the next level.



### Welding

With advanced torque sensors and motion control technology, GoFa guarantees precise positioning, fluid movement, and superior torch control. Its fast and precise welding capabilities reduce cycle time and maximize production output.



### Palletizing

With its impressive reach of 1.62 m, GoFa can handle larger pallets and stack items higher, increasing efficiency and optimizing space utilization.



### Packaging

GoFa CRB 15000's speed, precision and payload of up to 12 kg make it the ideal solution for handling a wide range of items in bin picking and packing applications. GoFa's safety features and interaction light enables safe operation alongside manual workers to help handle difficult or repetitive tasks.



### Assembly

Our YuMi and GoFa cobots can be used throughout assembly lines to help maximize flexibility. Designed to work safely, they can be installed individually or together to handle a wide variety of items and assembly tasks, while boosting quality and productivity.



## Machine tending

Featuring protection class up to IP67, our GoFa CRB 15000 offers protection against dust ingress. GoFa is safe enough to work directly alongside humans, while ensuring that machine-tending processes can operate with high efficiency.



## Screwdriving

Compact, lightweight, and offering class-leading repeatability of 0.02 mm, the GoFa CRB 15000 can be mounted at any angle to perform tasks such as screwdriving in confined spaces whilst collaborating safely with people



## Sanding/Polishing

Fast, precise, and consistent, GoFa's exceptional force control ensures consistent pressure across surfaces, making it ideal for sanding and polishing applications. This precise control allows GoFa to adapt to varying surface structures and materials, achieving uniform and high-quality finishes.



## Dispensing/ Gluing

GoFa's Ultra Accuracy feature offers an impressive path accuracy down to 0.03 mm, making it the ideal solution for gluing applications. GoFa's advanced motion control technology ensures that every movement follows the exact intended route, delivering consistency and precision in dispensing applications.

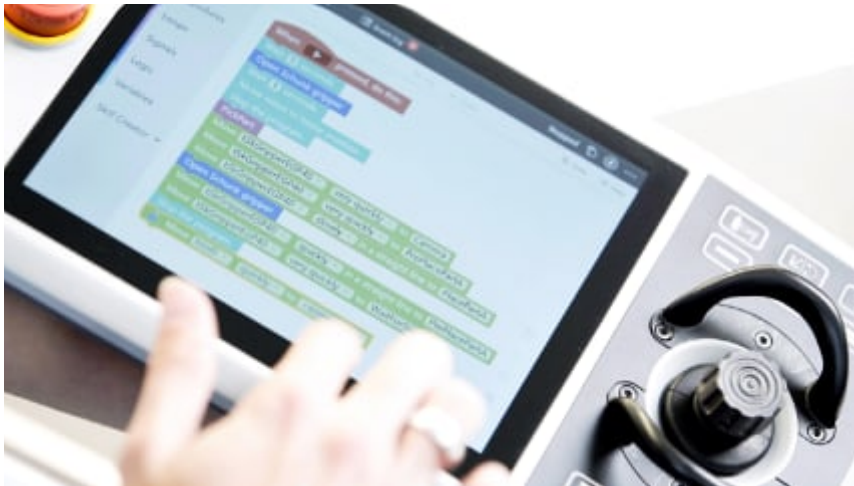


## Cutting edge software solution for effortless automation

### Wizard easy programming

#### Making robotic automation easier than you can imagine

No coding skills required: get started programming cobots immediately.

**Easy to get started**

no prior training needed. Featuring a tutorial inside the software, Wizard easy programming is easy to master

**Graphical user interface**

drag and drop graphical blocks, no coding needed

Customized blocks possible using Wizard Skill Creator

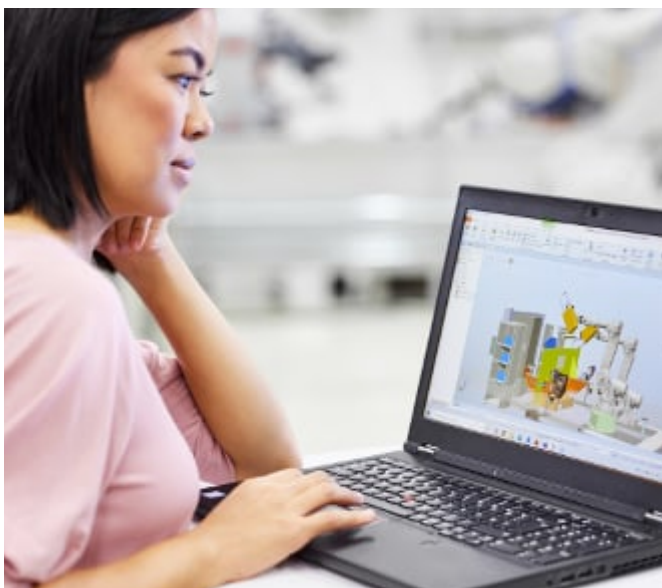
Allows first-time users to program robots within minutes without specialized training

ABB's Wizard easy programming software allows first-time users to program robots within minutes without specialized training. With its simple graphical blocks, Wizard easy programming makes it easy to build a series of simple processes for the robot to perform. The blocks represent actions such as 'move to location', 'pick up an object', and 'repeat movements', removing the need for specialist programming knowledge.

### RobotStudio

#### The world's most used powerful offline programming tool

RobotStudio®, ABB's simulation and offline programming software, enables robot programming on a PC without disrupting production.

**Path Optimization**

Fine-tune the cobot movements to enhance speed and precision, reduce cycle times and improve task accuracy

**Stop Position Simulation**

Simulate and analyze your cobot's behavior at specific stop positions within a programmed path, identify potential collisions, validate reachability and ensure precision, even before real deployment

**Virtual Commissioning**

Tests and validate robotic workflows in a virtual environment, ensure smooth and risk-free deployment

**Digital Twin Technology**

Create an exact virtual replica of the cobot, enable real-time simulation, monitoring, and optimization



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## Why ABB?

### Expertise and support you can rely on

We make automation easier than you can imagine.

Whatever the nature or size of your business, we make it easy to design, build, operate, and maintain your collaborative robots. Our **ABB Robotics Ecosystem Program** is a great addition to our easy to use cobots. Our chosen partners can deliver fully compatible integrated robotic packages, tested and certified to the highest standards by ABB, helping you to automate more easily.

Tailored solutions for industries.

ABB offers several application cells that incorporate the GoFa cobot, designed to enhance efficiency and precision in various tasks. These cells help transform industrial processes, making them more efficient, precise, and adaptable to your operational needs. Whether it's the OmniVance Collaborative Machine Tending Cell or the arc-welding cell, ABB's solutions ensure that your operations are optimized for maximum productivity and quality.

Learn more: <https://new.abb.com/products/robotics/application-cells>

Trusted by Innovators, worldwide.

From automotive giants to small-scale manufacturers, our wide range of customer base is testament to how our cobots are transforming customer's operations by enhancing productivity and delivering exceptional results. Discover how our solutions can drive your success, by exploring our customer success stories.

Learn more: <https://new.abb.com/products/robotics/robots/collaborative-robots/customer-stories>

50 years of expertise.  
At your service.

ABB launched the world's first commercial microprocessor-controlled robot in 1974. Whatever your unique requirements, we bring all of our experience and expertise to help you find the right answer. Together, we will transform your performance, and help you unlock new levels of productivity, efficiency, and competitiveness.

24/7 monitoring for unmatched performance.

All cobots come with condition monitoring & diagnostics, enabling the users to connect the cobot to the cloud to secure 24/7 monitoring and diagnostics for faster reaction time, higher efficiency and better service technician preparation for on-site calls and technical support.

Help from humans.  
Anytime.

No unanswered emails. No hidden phone numbers. We always offer you real-life, very-human support. Our platforms and services help you learn at lightning speed, enabling you to go from beginner to expert in no time. Plus, with our extensive experience of robot technology and applications, we can connect you to an unrivaled global network of knowledge and ideas to help you get the most from your investment in robotic automation.

Get more information about our ecosystem products and partners: [Solutions.abb.com/robotics-ecosystem](https://solutions.abb.com/robotics-ecosystem)

# Collaborative robot selection table

Spec	IRB 14000 Dual-arm YuMi	IRB 14050 Single-arm YuMi	CRB 15000 GoFa 5	CRB 15000 GoFa 10	CRB 15000 GoFa 12
Payload	0.5 kg   arm	0.5 kg	5 kg	10kg*	12kg**
Reach	0.56 m	0.56 m	TCP reach 1.05m	TCP reach 1.63 m	TCP reach 1.38 m
DoF (degree of freedom)	14	7	6	6	6
Max TCP Speed	1.5m/s	1.5 m/s	2.2 m/s	2m/s	2m/s
Robot weight	38 kg incl. controller	9.6 kg	28 kg	51 kg	48 kg
Pose repeatability	0.02 mm	0.02 mm	0.02 mm	0.02 mm	0.02 mm
Protection class	IP30	IP30	IP54	IP67	IP67
Protection standards	ISO Clean Room 5	ISO Clean Room 6	ISO Clean Room 4	ISO Clean Room 4	ISO Clean Room 4
Functional safety	Category B, PL b	Category 3, PL d	Category 3, PL d	Category 3, PL d	Category 3, PL d
Mounting position	Table	Any	Any	Any	Any
Controller	IRC5	OmniCore	OmniCore	OmniCore	OmniCore
Features	<ul style="list-style-type: none"><li>– Two-arm coordinated movements</li><li>– Integrated air supply</li><li>– SmartGripper with servo, vacuum and integrated vision</li><li>– Controller integrated in robot body</li><li>– Lead-through programming</li></ul>	<ul style="list-style-type: none"><li>– Integrated air supply</li><li>– SmartGripper with servo, vacuum and integrated vision</li><li>– Wizard easy programming</li><li>– Lead-through programming</li></ul>	<ul style="list-style-type: none"><li>– Wizard easy programming</li><li>– Lead-through programming</li><li>– Arm-side interface</li><li>– Interaction status light</li><li>– Torque sensing capabilities in each joint</li><li>– Force control at the TCP</li></ul>	<ul style="list-style-type: none"><li>– Wizard easy programming</li><li>– Lead-through programming</li><li>– Arm-side interface</li><li>– Interaction status light</li><li>– Torque sensing capabilities in each joint</li><li>– Force control at the TCP</li></ul>	<ul style="list-style-type: none"><li>– Wizard easy programming</li><li>– Lead-through programming</li><li>– Arm-side interface</li><li>– Interaction status light</li><li>– Torque sensing capabilities in each joint</li><li>– Force control at the TCP</li></ul>

\*GoFa 10 goes upto 12kg with wrist down configuration  
\*\* GoFa 12 goes upto 14kg with wrist down configuration