

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 | CRB 1100 SWIFTI | CRB 1300 SWIFTI |
|-----------------------------|--|---|---|---|---|--|--|
| Payload | 0.5kg arm | 0.5kg | 5kg | 10kg | 12kg | 4kg | 7kg / 10kg / 11kg |
| Reach | 0.56m | 0.56m | 1.05m | 1.62 m (TCP reach) | 1.37 m | 0.58m 0.475m | 0.9 m / 1.15 m / 1.4 m |
| DoF (degree of freedom) | 14 | 7 | 6 | 6 | 6 | 6 | 6 |
| Max TCP Speed | 1.5m/s | 1.5m/s | 2.2m/s | 2m/s | 2m/s | 5.05 4.32m/s | 6.2m/s |
| Robot weight | 38 kg incl. controller | 9.6kg | 28kg | 51 kg | 48 kg | 21kg | 75 kg / 77 kg / 79 kg |
| Pose repeatability accuracy | 0.02 mm | 0.02 mm | 0.02mm | 0.02 mm | 0.02 mm | 0.01mm | 0.02 mm |
| Protection class | IP30 | IP30 | IP54 | IP67 | IP567 | IP40 (Std) | IP40 (Std) / IP67 (Optional) |
| Protection standards | ISO Clean Room 5 | ISO Clean Room 6 | ISO Clean Room 4 | ISO Clean Room 4 | 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 | Category 3, PL d | Category 3, PL d |
| Mounting position | Table | Any | Any | Any | Any | Any | Any |
| Controller | IRC5 | OmniCore | OmniCore | OmniCore | OmniCore | OmniCore | OmniCore |
| Features | <ul style="list-style-type: none"> - Two-arm coordinated movements - Integrated air supply - SmartGripper with servo, vacuum and integrated vision - Controller integrated in robot body - Lead-through programming | <ul style="list-style-type: none"> - Integrated air supply - SmartGripper with servo, vacuum and integrated vision - Wizard easy programming - Lead-through programming | <ul style="list-style-type: none"> - Wizard easy programming - Lead-through programming - Arm-side interface - Interaction status light - Integrated torque sensors in each axis | <ul style="list-style-type: none"> - Wizard easy programming - Lead-through programming - Arm-side interface - Interaction status light - Integrated torque sensors in each axis | <ul style="list-style-type: none"> - Wizard easy programming - Lead-through programming - Arm-side interface - Interaction status light - Integrated torque sensors in each axis | <ul style="list-style-type: none"> - Wizard easy programming - Integrated air supply - Lead-through programming device - High-speed - Interaction status light - Safety laser scanner included | <ul style="list-style-type: none"> - Wizard easy programming - Integrated air supply - Lead-through programming device - High-speed - Interaction status light - Safety laser scanner included |

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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 the newest members of our collaborative robotics family

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. Designed for loads up to 5 kg.

Payload
Up to 12 kg

Reach
Up to 1.62 m



SWIFTI™

CRB 1100 and CRB 1300
Unleash the speedy cobot.

A lightning-fast cobot that combines industrial-level performance and innovative safety. SWIFTI gets the job done faster and more accurately than you can imagine.

Payload
Up to 11 kg

Reach
Up to 1.4 m



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.

Features:

- Payload range up to 12 kg
- Extensive safety features for collaborative operation
- Easy to use
- Fast, repeatable performance for maximum productivity

Why cobots:

- Enable simplicity
- Enhance flexibility
- Increase productivity
- Optimize performance
- Ensure consistent quality production
- Help employees with their tasks

Go far. Go Faster. Go further.

GoFa™ is your collaborative partner for high payload applications up to 12 kg. With class-leading reach, advanced and comprehensive safety, plus easy operation, GoFa will take your business further than ever.

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



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

Payload
up to 12 kg

Reach
up to 1.62 m

Productivity

- With a TCP speed of up to 2.2 m/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

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.

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 safely.*

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



Industrial speeds, collaborative skills.

SWIFTI™ merges class-leading speed and performance with extremely safe collaboration. Don't compromise, get the best of both worlds.

Easy to use

- Wizard easy programming
- Intuitive robot movement programming using external lead-through device
- SafeMove configurator App on the FlexPendant



Payload
11 kg
Reach
up to 1.4 m

Collaborative safety

- Supervised by SafeMove and safety sensor
- Stop safely before contact with a human
- Interaction status light
- Safety certified Category 3, PL d

Productivity

- With a TCP speed of up to 6.2 m/s,* SWIFTI is 5 times faster than other cobots in its class
- Up to 10 times higher position repeatability 0.01 mm than most cobots in its class
- Four integrated air supplies enable vacuum picking

Meet SWIFTI

SWIFTI bridges the gap between collaborative and industrial robots. It enables proven safe collaborative operation to be achieved, even in applications that demand industrial-level speed and lifting capabilities.

SWIFTI combines the safety features and simple operation of a collaborative robot with the speed, precision, and compact design of ABB's class-leading IRB 1100 industrial robot. It offers exciting new possibilities for companies to transform their productivity by enabling greater co-operation between robotic and human workers across a wide range of applications.

A true speed leader

With a TCP speed of over 5m/s,* SWIFTI is 5 times faster than other cobots in its class. Combined with best-in-class accuracy and integrated vacuum capability, SWIFTI can boost productivity, improve flexibility, and future-proof your production.

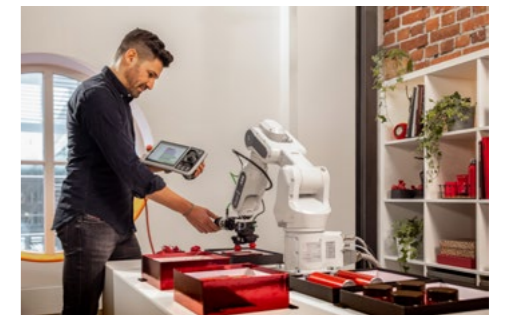
*Safe collaborative speed will be lower, refer to the SafeMove configurator App for recommendation. Always do a safety risk assessment of your cobot application.

Proven safety. Proven benefits.

SWIFTI's safety abilities are founded on proven technologies. ABB's SafeMove works with a certified safety sensor to provide effective protection, with benefits including an interaction light that shows SWIFTI's status, giving you safe collaboration without physical fencing.

Simplicity baked in

Never used a cobot before? No problem. No programming language knowledge? Not an issue. Lead-through programming, plus our graphical Wizard easy programming and SafeMove configurator App on the FlexPendant help reduce the complexity.



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.

Easy to use

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



Payload
0.5 kg/per arm
Reach
0.56 m

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

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

The YuMi family

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, its single- or dual-arm set-up will transform the capabilities of your business.

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.

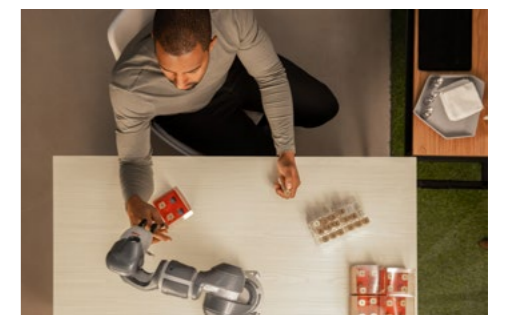
Ultra safe

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.



Machine tending

Featuring a choice of IP54 or 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.

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. With a reach of 1.62 m, the GoFa 10 is also ideal for palletizing applications. GoFa's safety features and interaction light enables safe operation alongside manual workers to help handle difficult or repetitive tasks.

AGV mounting

With its lightweight design, class-leading reach and built-in safety measures, GoFa CRB 15000 can be mounted on AGVs to work collaboratively with people and enable fast, safe and efficient materials replenishment.

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.

Kitting

The high speed and precise performance of SWIFTI CRB 1100 can help to enhance productivity in kitting applications while offering seamless human robot collaboration.

Assembly

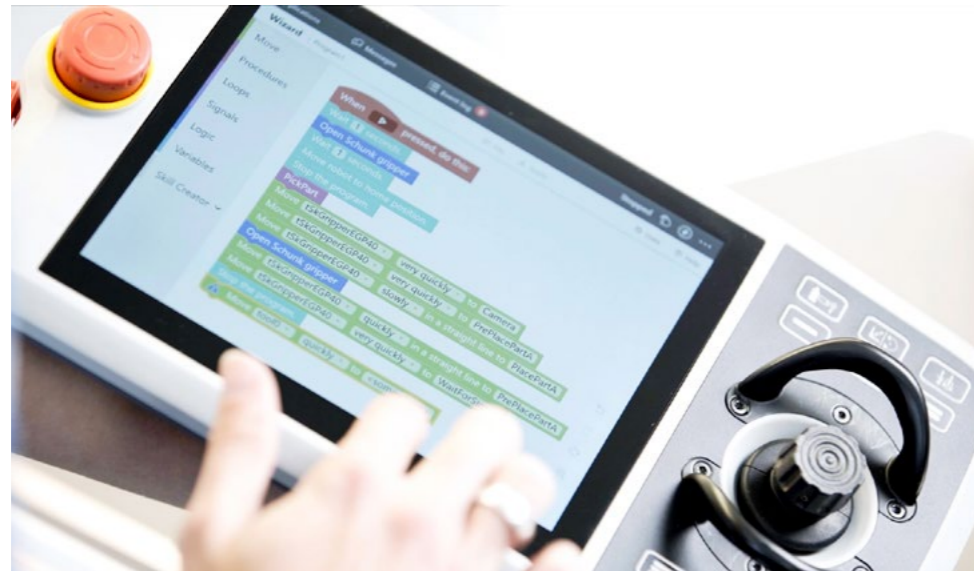
Our YuMi, GoFa, and SWIFTI cobots can be used throughout assembly lines to help maximize flexibility. Designed to work safely, they can be installed individually or together to handle a wide variety of items and assembly tasks, while boosting quality and productivity.

Wizard easy programming

Making robotic automation easier than you can imagine

No coding skills required: get started programming cobots immediately.

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



Customized blocks possible using Wizard Skill Creator

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

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.

Why ABB?

Expertise and support you can rely on

Getting started is simple with the cobot starter package

First-time users are supported from the moment the robot is delivered. Every cobot installation includes a comprehensive service bundle, free for the first 6 months. It contains a cobot starter hotline for all cobot questions regarding ordering, applications and programming, installed-base and all related tools. It also includes a set of easy to understand online tutorials for self-study to support an easy start and programming. All cobots also 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.

46+ 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.



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.

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.