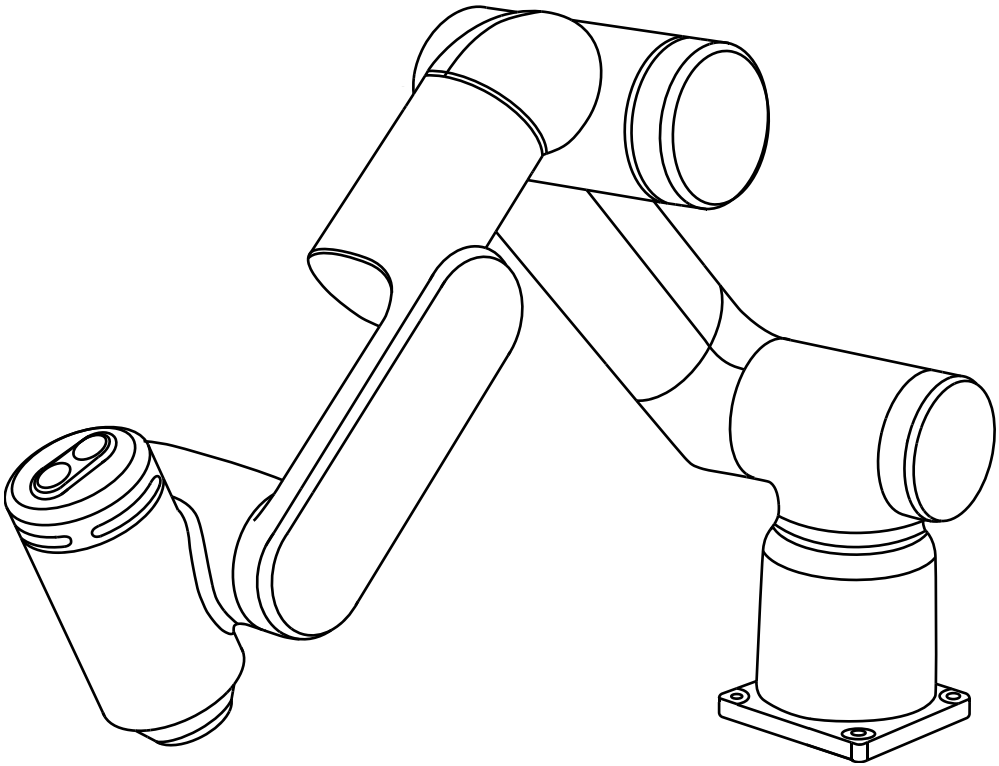
GoFa-5/10/12



GoFa CRB 15000

Unboxing the cobot - Get Started Guide

Version 1.0

Before you start

—

RobotAssist - Free smartphone app

To control, operate and program the cobot from the phone and for easy access to product manuals, tutorials and more information, download our app here:

iOS: https://apps.apple.com/app/robot-assist/id1631106010
Android: https://play.google.com/store/apps/details?id=com.abb.robotassist

iOS

Android

Robot Assist is also available in various application stores in China.

—

Free online video tutorials

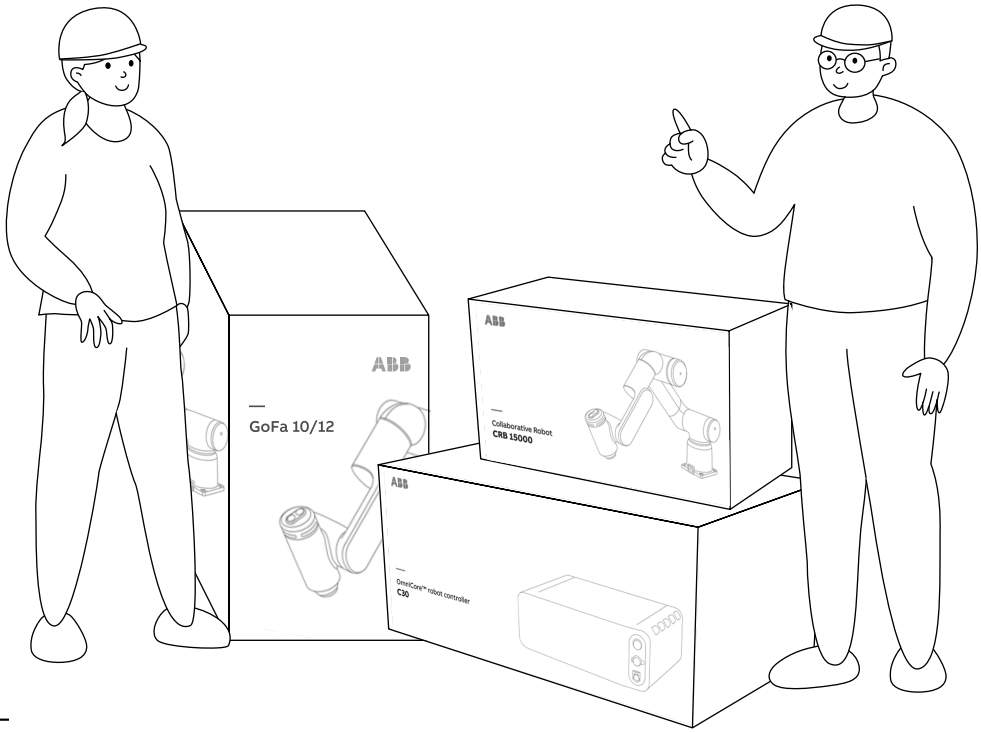
For a detailed video guide on how to get started, access our online tutorial here:
https://to.abb/gGQaiskS

—

Product manual

You can also access product manuals for further information.
Please contact your local ABB sales team to set up your account.
GoFa Manipulator: https://to.abb/BLGHcyT-
OmniCore C30: https://to.abb/3mg-yMES

Before you start



—

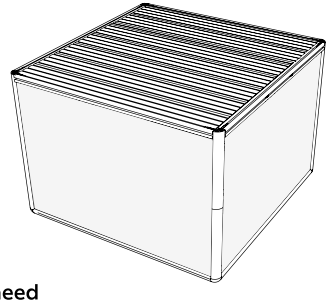
Things to know before getting started

IMPORTANT- The manipulator:

Variants		Weight
CRB 15000-5/0.95	**'GoFa-5'**	**28** kg
CRB 15000-10/1.52	**'GoFa-10'**	**51** kg
CRB 15000-12/1.27	**'GoFa-12'**	**48** kg

For safe installation, we recommend two trained persons with knowledge of mechanical and electrical installation/ maintenance/repair work, assemble this robot.

Preparation



—

You may need

- A mounting foundation/table with holes for securing M10 screws and locating pins
- A 0.4 mm (or smaller) slot screw driver **(4)**
- A wrench or a hex key fit for M10 screws **(4)**

—

Robot base and pin hole dimensions

- Robot base dimension for GoFa-10/12 **(1)** & GoFa-5 **(2)**
- Pin hole dimension for GoFa-5/10/12 **(3)**

—

ABB Robotics webshop

You can buy the required accessories from ABB webshop: https://webshop.robotics.abb.com/us/accessories.html

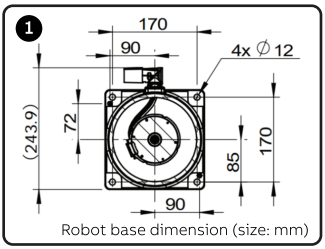
—

Product specification and data sheet

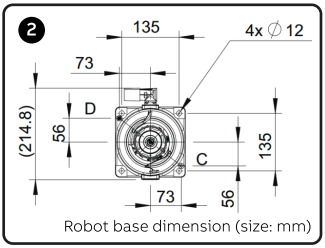
View product specification & data sheet for more information. Access the documentations here:

https://to.abb/GZIOZHZX

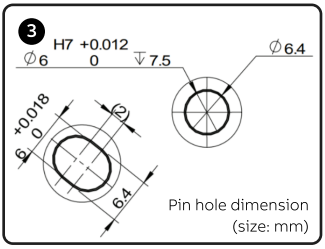
https://to.abb/eLKx7hKS



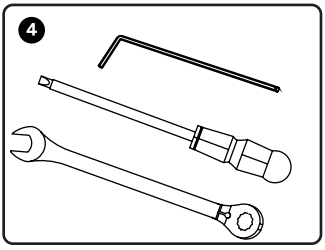
Robot base dimension (size: mm)



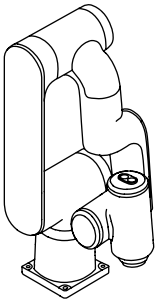
Robot base dimension (size: mm)



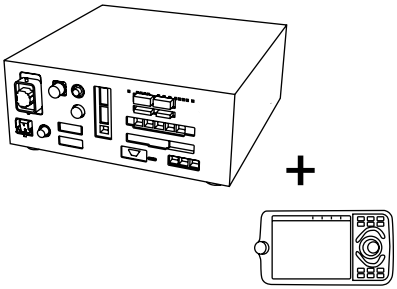
Pin hole dimension (size: mm)



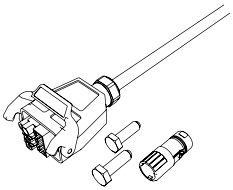
What’s inside the boxes?



01 GoFa-5/10/12
CRB 15000 Manipulator



02 OmniCore C30 cobot controller
+ FlexPendant



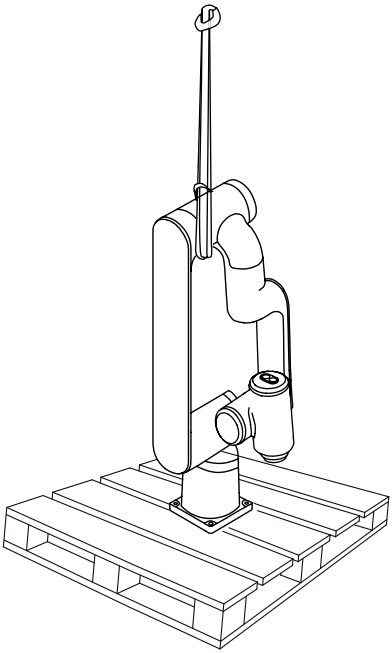
03 Accessories, incl. screws, cables

04 Documents and labels

Keep the printed documents and labels for further service.

Mounting the robot

Example: Table mounting

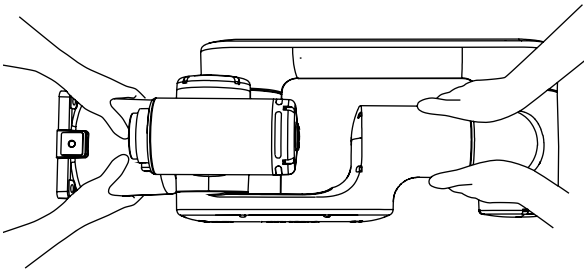


01 Lift the manipulator

IMPORTANT

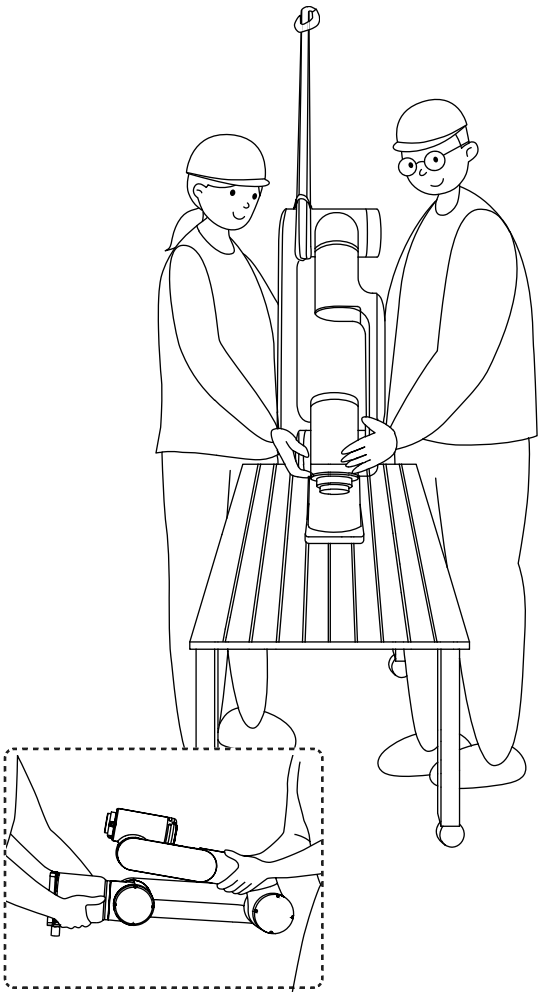
GoFa-10/12

When lifting the robot from the pallet packaging, attach the round slings to the robot as shown in the figure. Make sure the round slings do not rub against any sharp edges.
Then unscrew the base of the robot from the pallet.



GoFa-5

When lifting the robot from the packaging, grasp the robot at the foot and elbow, as shown in the image.



—

02 Transport the manipulator

Make sure the intended mounting platform or foundation is stable and flat.

In case you want to transport the robot in the future, you can reuse the packaging and adjust the robot back to the shipping position:

GoFa-5,

Axis 1	0°	Axis 2	0°
Axis 3	+85°	Axis 4	0°
Axis 5	0°	Axis 6	0°

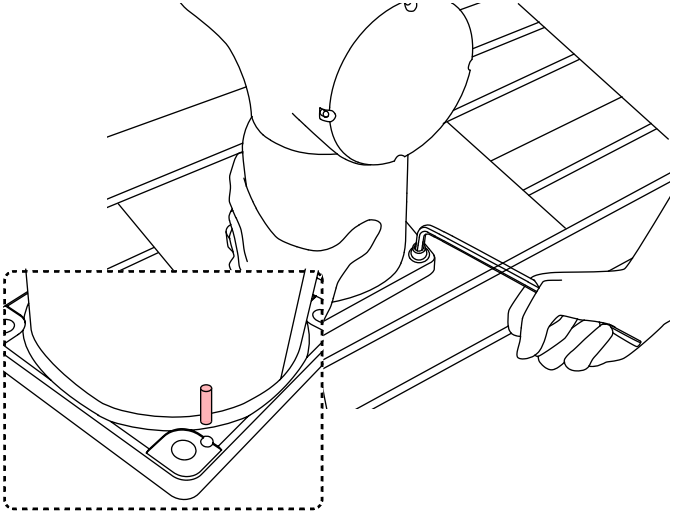
GoFa-10,

Axis 1	0°	Axis 2	-15°
Axis 3	-225°	Axis 4	0°
Axis 5	-30°	Axis 6	0°

GoFa-12,

Axis 1	0°	Axis 2	-10°
Axis 3	+85°	Axis 4	0°
Axis 5	+15°	Axis 6	0°

The robot is mechanically unstable if not secured to the foundation.



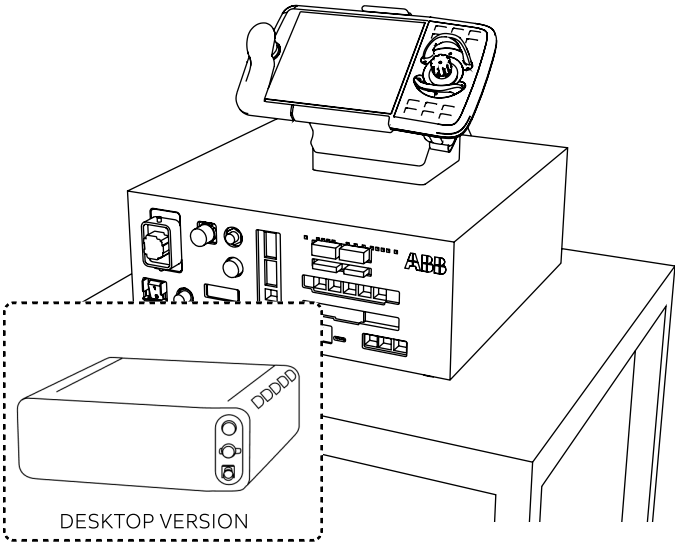
—

03 Tighten the screws

You can find four screws and two pins in the controller packaging box.

You should use the pins to position the robot more precisely.

Insert the four screws at the robot base. Tighten each screw with recommended torque of 32 Nm +/-10%.



—

04 Place the controller

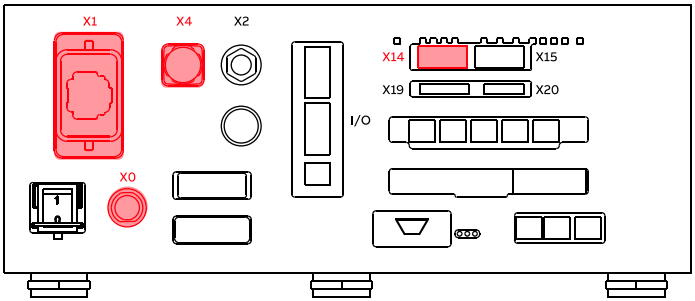
Lift the controller from C30 box and place it on an appropriate table. Ensure the height, weight and stability of the table.

Mount the covers if you ordered the desktop version. In this case, you also need to plug in the Ethernet, FlexPendant and power cables on the front side of the controller.

Insert the cable pins to a connector and attach it to X15 port. Connect the FlexPendant cable to X4 port.

Please refer to OmniCore C30 manual, https://to.abb/3mg-yMES for mounting the covers of the desktop version.

Connect cables

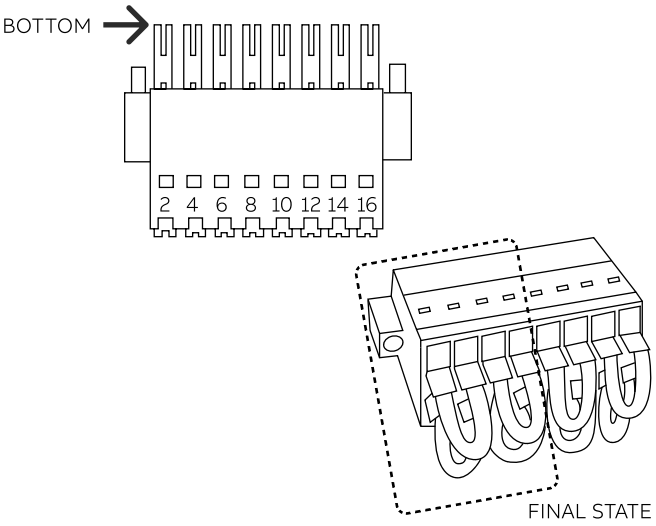


01 Controller

Connect the corresponding cables to ports X1 and X0.

Connect the FlexPendant power cable to the X4 port.

Please connect X4 port from the front if you have the destop version.



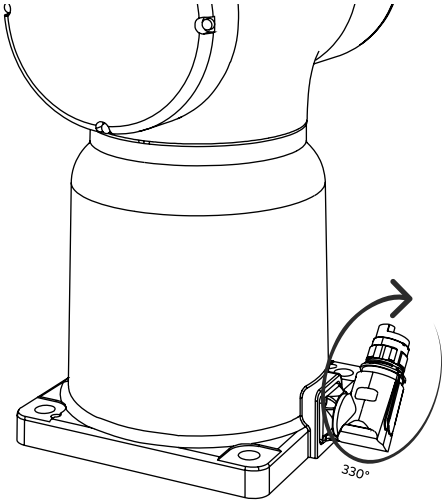
02 X14 Connector

The X14 jumper connector disables safety inputs to the controller, used for fenced installations.

You need to connect the remaining 4 jumper connectors to be able to use the robot in automatic mode later.

Connector article number:
X14: 3HAC079051-001 &
3HAC079124-001

In order to run a robot in automatic mode, a safety configuration must first be created, using the SafeMove app in the FlexPendant. See page 16.



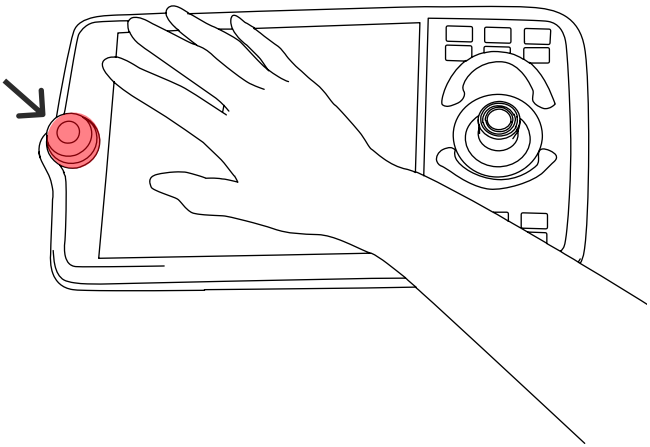
—
03 Manipulator

Connect the cable to the manipulator, and rotate the cable plug to tighten it. The connector can be rotated 330° clockwise.

Cable article number: 3HAC073212-002 (connected to X1)

Safety

You need to know this before switching on the robot

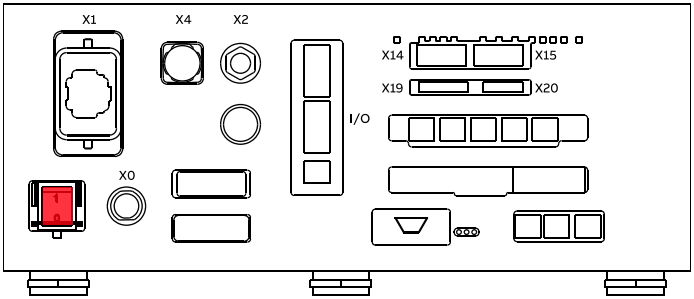


—
01 Emergency stop button

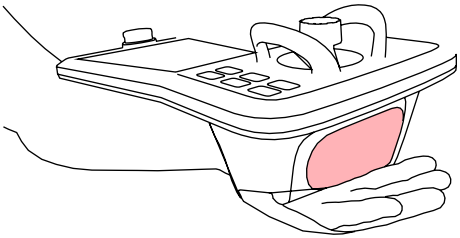
Press the emergency stop button on the FlexPendant immediately if a person is at risk in the working area of the robot, or if the robot causes harm to the equipment.

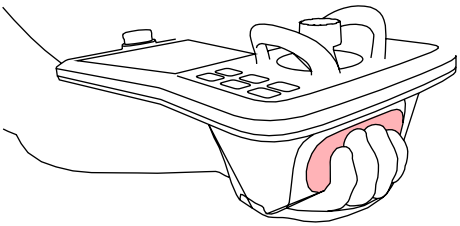
IMPORTANT- Emergency stop button should not be used for stopping the robot in normal use, as this can cause excessive wear on the brakes.

Switch on the robot



01 Press the power button

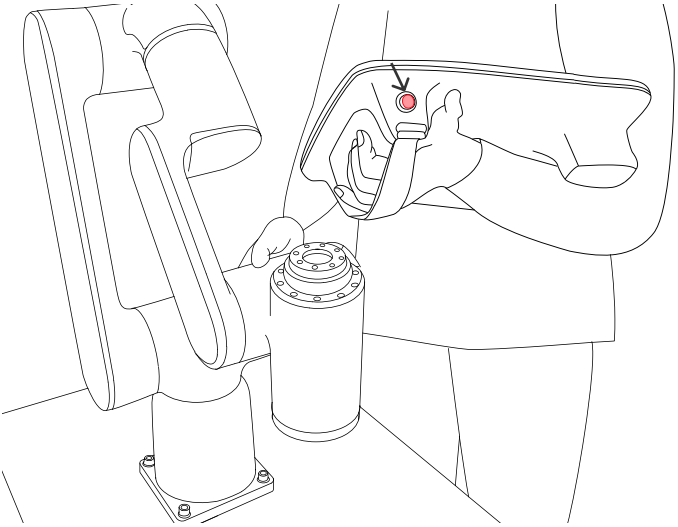




02 FlexPendant

Follow the instruction on the FlexPendant screens, and press the enabling device. See page 14.

Move the robot



01 Move the robot

When you turn on the robot for the first time it is in Manual mode. You need to press and hold the enabling button to the middle stage to turn on the robot's motors and move it. When the motors are on you can either jog the robot or use lead-through to move the robot.

Move the robot to a suitable position for mounting grippers and tools.

02 Enable Lead-through

Use FlexPendant, click on the three dots menu (1) on the top right and open the **Lead-through** interface (2).

You need to switch Lead-through button (3) On if needed.

Set lead-through functions as required.

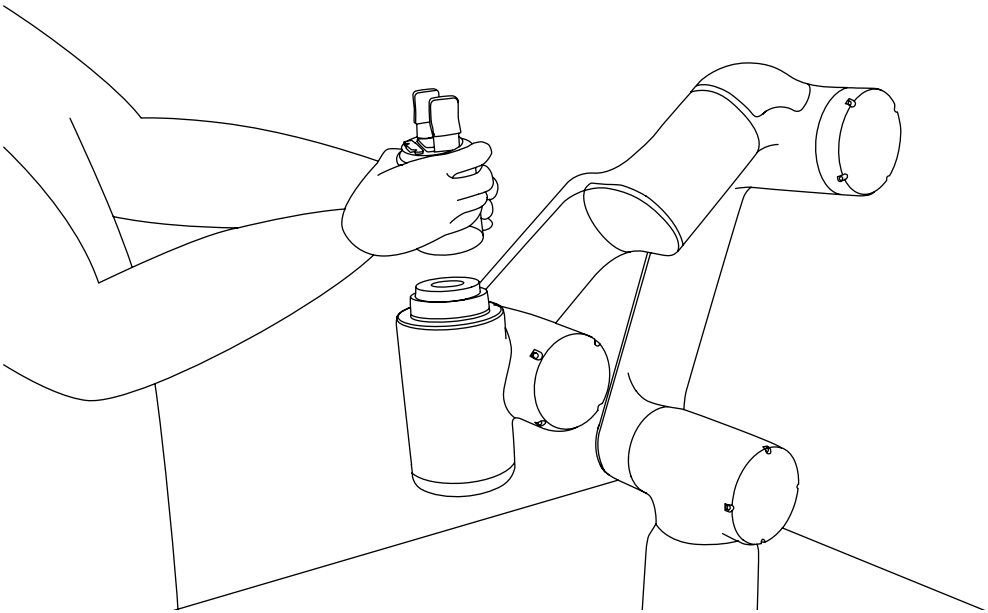
You can also press the thumb button and the enabling button on the FlexPendant, at the same time to enable Lead-through.

IMPORTANT: Switch off Lead-through after you are done moving the robot.

Lead-through can also be activated using ASI buttons. See page 18

Mount external tools

Example: Gripper



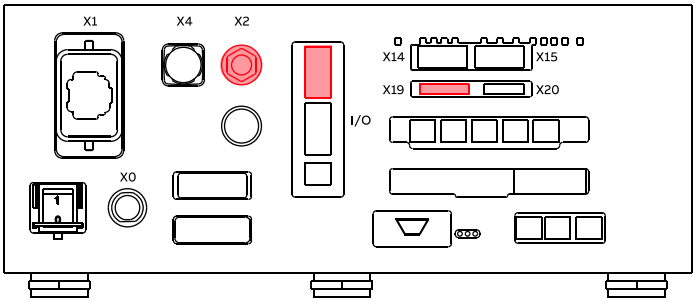
—

01 Mount the gripper

Follow the instructions of your gripper manual to mount the gripper.

You may need to prepare M6 screws for mounting.

IMPORTANT: Switch off the robot for this step. Make sure you install the Software for your gripper or create a new appropriate tool configuration before you swith on Lead-through next time.

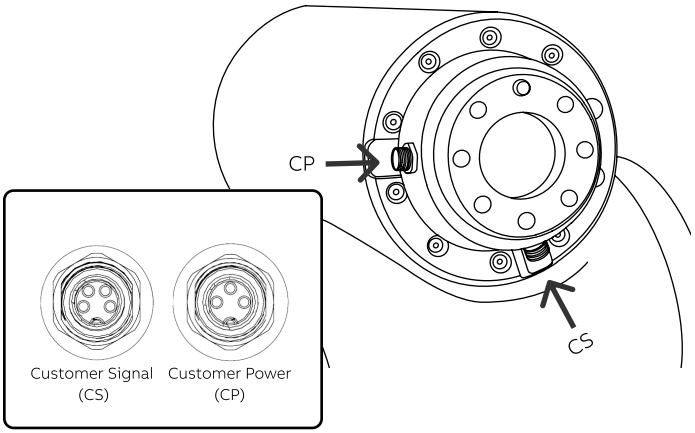


—

02 Connect to controller

Connect the tool signal cable to the X2 port.

You may also need to connect I/O signals, and get 24V power supply from the X19 port.



—

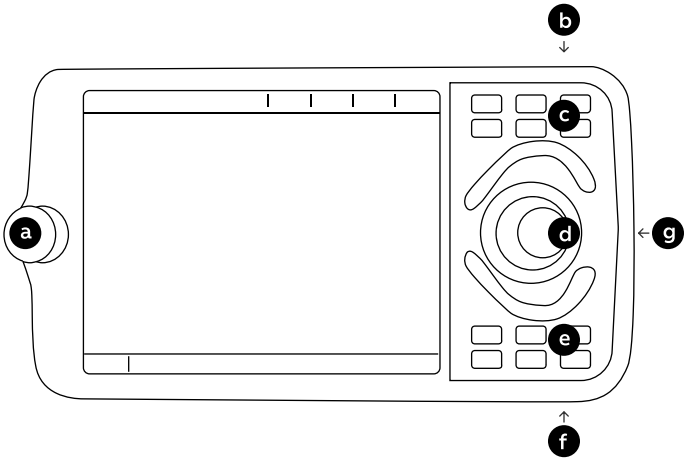
03 Connect to the flange

Follow the instructions of your gripper manual for this step. You may also need to build the cable by yourself.

ABB offers two female connectors on the flange: 3-pin connector is for customer power (CP), (two pins for use, one pin is spare), and the 4-pin connector is for customer signal (CS).
Both CP and CS connectors with M8, 200mm wire, straight.

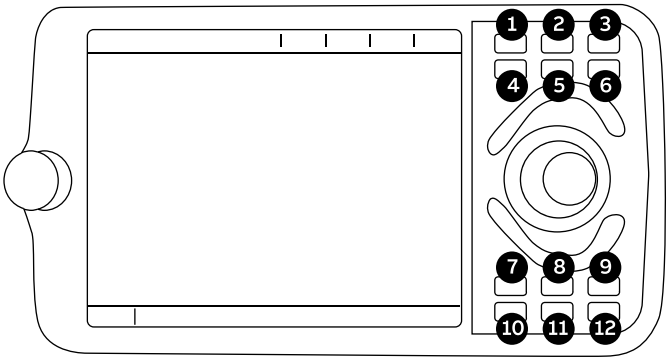
Learn more about the connectors and pin specifications in the product manual.

Get started with FlexPendant



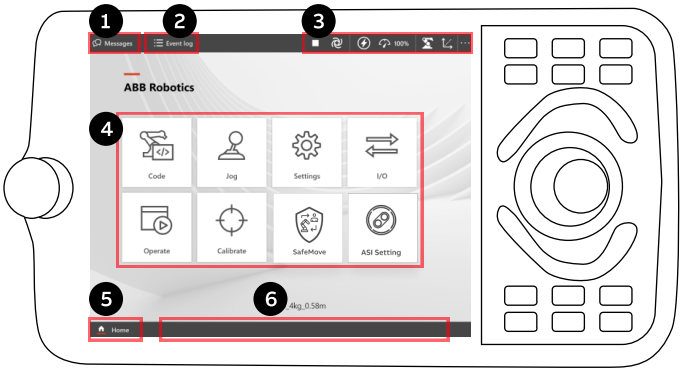
01 Hard buttons

a - Emergency stop
b - Thumb button (enable/disable lead-through)
c - Shortcut buttons
d - Joystick
e - Shortcut buttons
f - USB port and reset button.
g - Enabling device



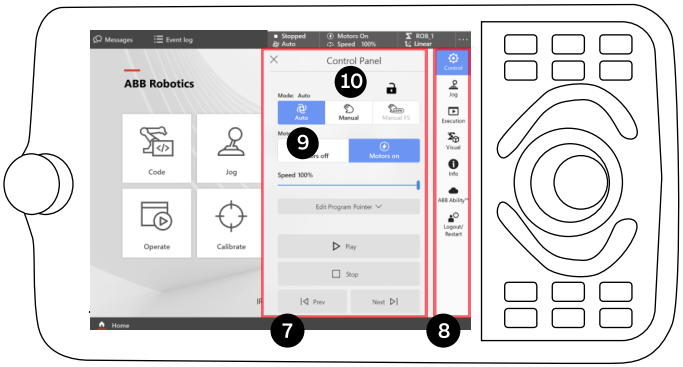
1 - Mechanical unit
2 - Linear / Reorient
3 - Axis 123 / Axis 456
4 - User shortcut #1
5 - Quick settings
6 - User shortcut #2
7 - User shortcut #3
8 - Start program
9 - User shortcut #4
10 - Step to previous
11 - Stop program
12 - Step to next

Get started with FlexPendant



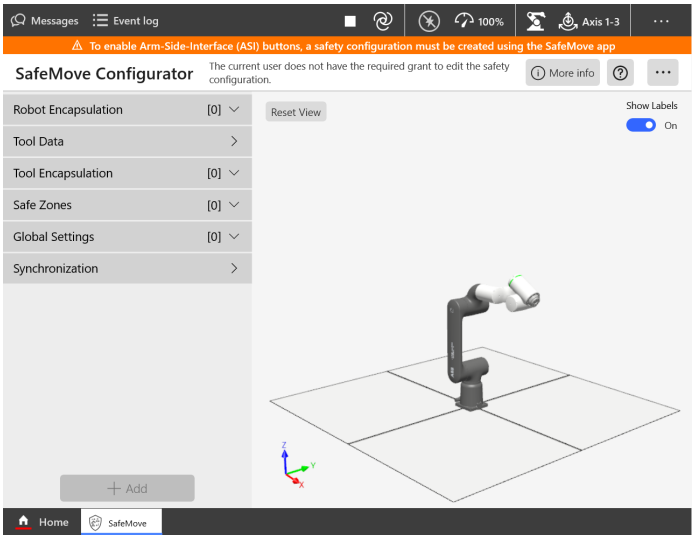
User interface

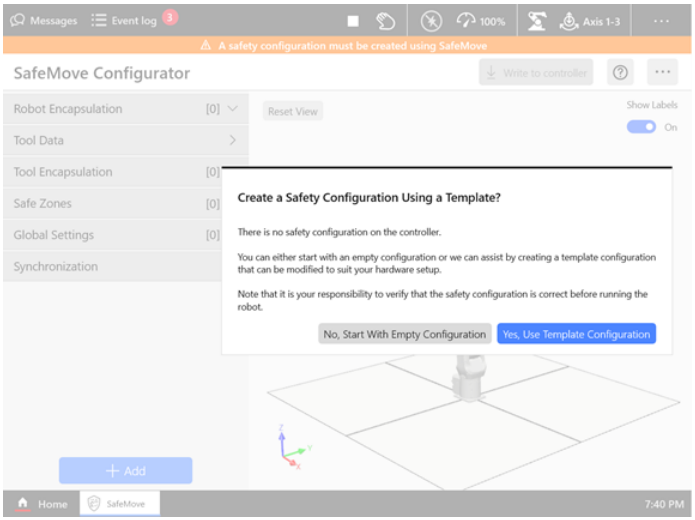
1 - Operator messages
2 - Event log
3 - Status & Quick settings
4 - Applications
5 - Home button
6 - Open applications



7 - Control panel
8 - Quick settings
9 - Automatic mode
10 - Manual mode

FlexPendant Apps





SafeMove
A correct safety configuration is mandatory and essential for a safe experience and to enable full functionality of the robot.

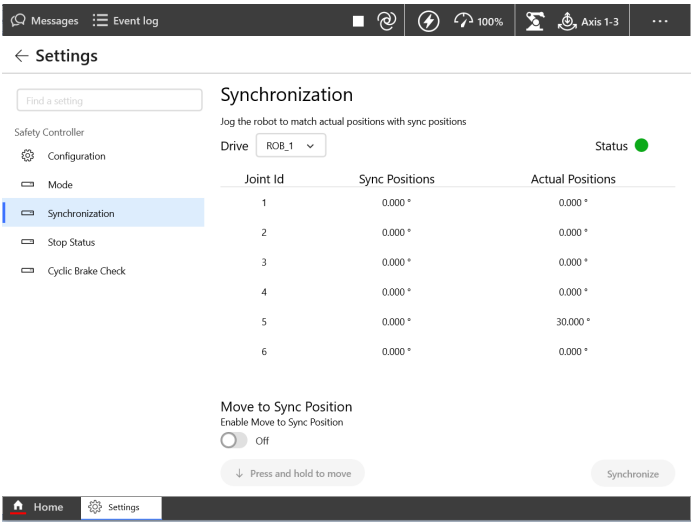
To edit the safety settings, you need to log in to the FlexPendant as admin user with the following credentials:
Account: Admin
Password: robotics

You can load the safety template, to get started quickly. To do this click on Edit, and then there will be a dialog box as shown in the picture, and select, Yes, Use Template Configuration. Check if the template has suitable safety configurations and then click write to controller to finalize.

A safety configuration is required in order to run the robot in automatic mode.

For more information on safety configuration, refer to the online tutorial or product manual. Refer to the links on page 01.

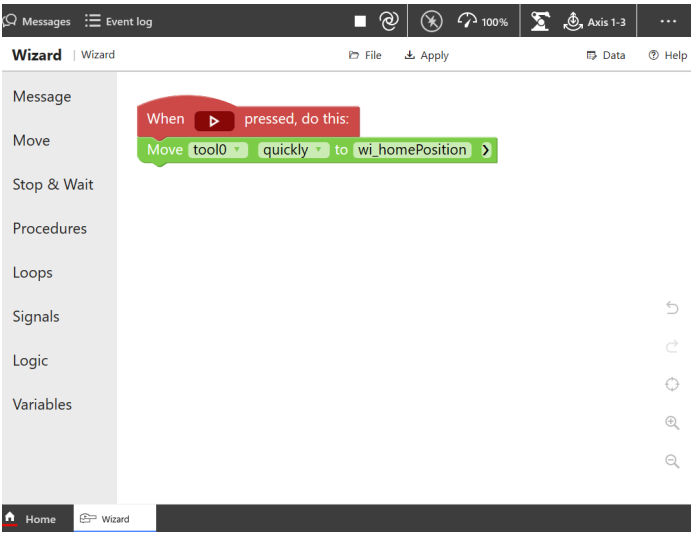
SafeMove



Sychronization

You may need to synchronize the safety controller when editing the safety settings.
Access the synchronization function via Settings > Safety controller.

The robot must be in manual mode to do this. You must jog the robot to the sync positions to synchronize the robot. Make sure the logged-in user has safety user grants.

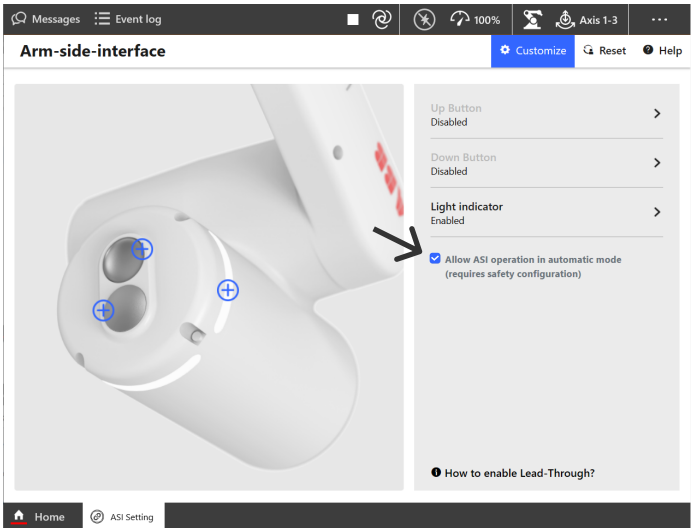


Wizard Easy Programming

You can program your application using Wizard.

The intuitive user interface enables you to program the robot without prior knowledge or experience.

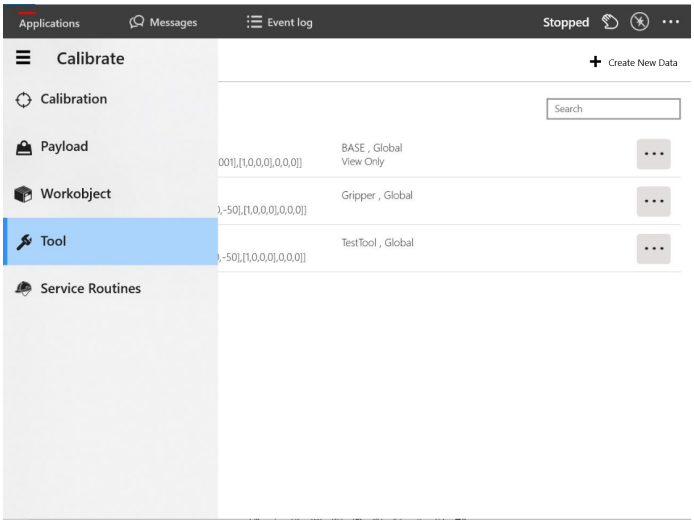
Find more information in online tutorials.
https://to.abb/k2AoUvpa



ASI setting

The ASI (arm-side interface) on the sixth axis are two user-programmable buttons and a light ring. It is designed to make it easier to program the robot.

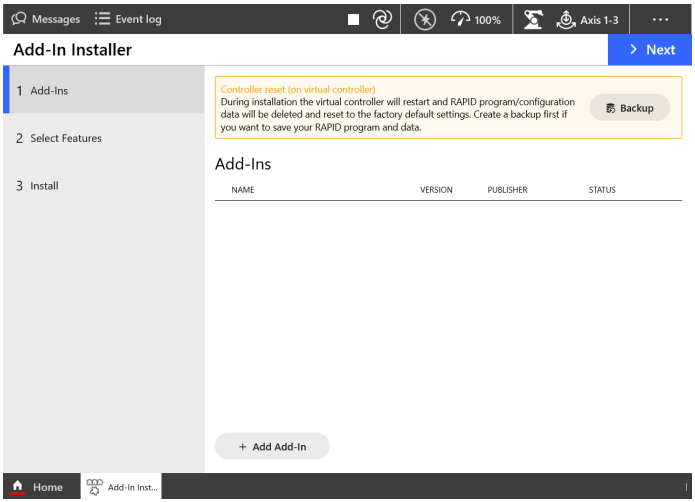
If you want to use the ASI buttons in Automatic mode be sure the check the box.



Calibration

The Calibration app allows you to define your own tools and work objects.

You could also use the prepared files of a supplier to add a gripper.



Add-In Installer

The Add-In Installer app allows to install Add-Ins provided by different ecosystem suppliers like gripper, camera, etc.

This feature is available from RobotWare 7.7.

More information

—

Learn more about ABB cobots

For the latest updates and information about our cobots, visit our website: **https://solutions.abb/cobots**

—

ABB robot social media

Follow us to stay updated, search **ABB Robotics** on Facebook, YouTube, LinkedIn, Twitter and Wechat.

YouTube

Twitter

LinkedIn

Facebook

WeChat

—

ABB Service

Get support for your region via chat, email or phone.
https://to.abb/KgwLVwp9