



CNC Automation



Series  
**Elevate**



# CELLRO

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# About Cellro

Since 2004, we have been a leading company in the machining industry because of our continued focus on innovation. Our vision for the future is based on the understanding that machining companies must constantly innovate to remain relevant. Our passion is to enable innovation both for our customers and ourselves.

We see plenty of opportunities for innovation in the automation and digitalisation of the machining industry. We believe in new ways of doing business, accelerating and optimising processes using advanced technological solutions in collaboration with expert skilled personnel.

With a strong commitment to our customers' needs and a deep understanding of the machining industry, we work every day to develop innovative solutions that increase productivity, improve efficiency and enhance competitiveness.

At Cellro, we believe that the best of the machining industry's future is still ahead of us, and we are therefore determined to push boundaries, explore new opportunities and pave the way to a successful and sustainable future.



**International country strategy**



**Standard product portfolio**



**Ecosystem for Manufacturing Intelligence**

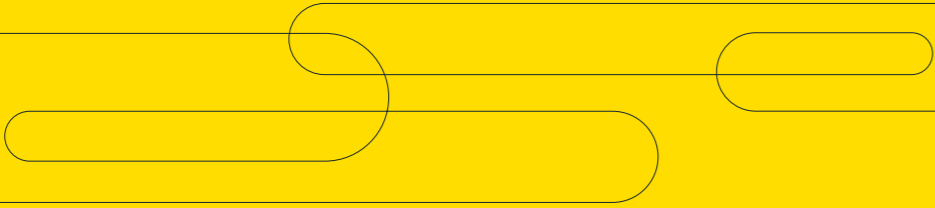


**A-brand positioning**



**Customization for customer convenience**

*Cellro's strategic pillars*



**Think ahead**



E80

E110

## The benefits of Elevate

With Elevate, you can perform a wide range of tasks and benefit from maximum unmanned production without sacrificing flexibility. Whether you want to load and unload your machines with products, pallets and fixtures, or implement specific robotic technology tailored to your requirements between loading and unloading cycles and tasks, such as 6-sided machining. Elevate will become your most profitable and flexible production tool, with a rapid return on your future-proof investment.

Elevate offers impressive storage capacity, allowing you to store a large number of trays with products. The entire system takes up only a limited floor space, allowing you to make efficient use of the available space in your factory. An unmanned production of more than 3 days is therefore no exception and allows you to bridge a weekend.

Thanks to the complete logistics integrated in Elevate, you can benefit from autonomy and efficiency in your production process. The system continuously generates feedback for current and future tasks, allowing you to better plan logistics on the shop floor. In addition, Elevate offers new opportunities for customers with their own products, where production can be done on demand instead of producing in advance and filling up the warehouse.



[www.cellro.com](http://www.cellro.com)

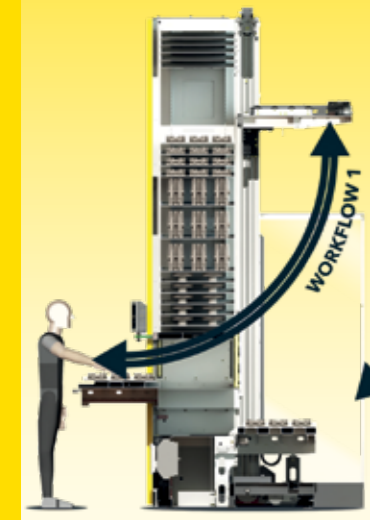
# Working with Elevate

**Elevate is more than a lot of storage capacity. Because the complete logistics for the products to be processed are present in Elevate, autonomy but, above all, efficient production is 100% guaranteed.**

The system constantly generates feedback for jobs to be made today but also in the future. Elevate can also park the active tray being worked from and meanwhile continue with other tasks while the robot works. This way, no time is lost.

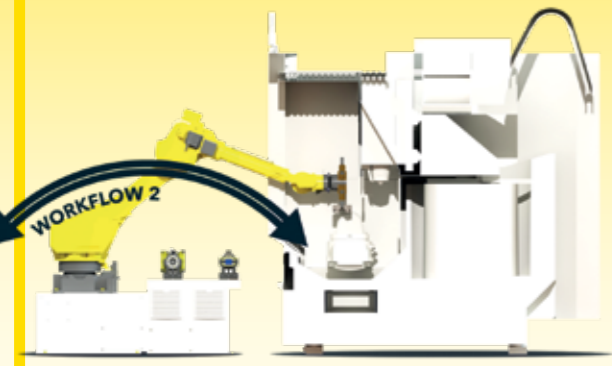
## Workflow 1

Rapid loading and unloading of trays.



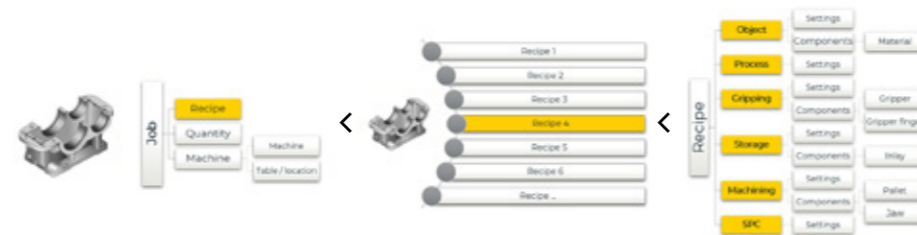
## Workflow 2

The robot performs its own tasks on the machine.



**Create an unmanned production job within 5 minutes.**

1. Select the number of processing steps
2. Select raw material from the library
3. Enter product dimensions for (semi-processed) parts
4. Select desired process options such as pre-centring
5. Select gripper and gripper fingers from the library
6. Fill in how the gripper should grip the product in its fingers
7. Select vise and clamping jaws
8. Enter how the product should be clamped in the clamp
9. Select an inlay from the library
10. Select machine<sup>1</sup>, table<sup>2</sup>, and zero point clamping system<sup>3</sup>
11. Select the NC program to be loaded on the machine
12. Activate Statistical Process Control if required
13. Save the settings; a recipe is now created
14. Start a job by selecting a recipe and entering a production number



<sup>1</sup> If multiple machines available

<sup>2</sup> If multiple tables within the selected machine available

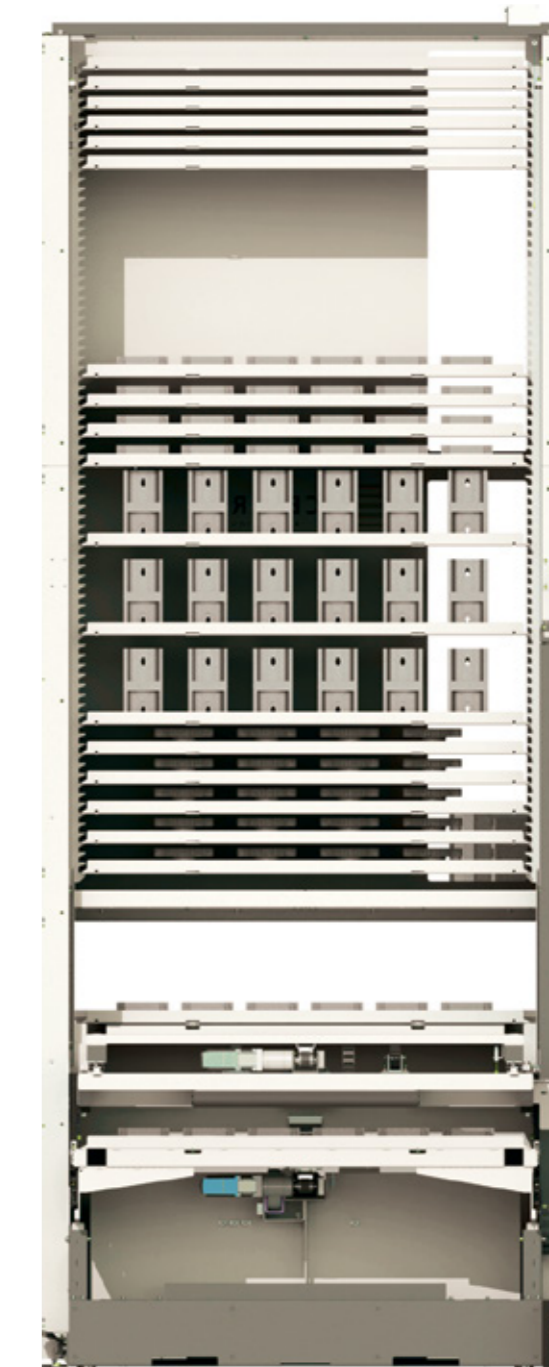
<sup>3</sup> If multiple zero-point clamping systems within the selected table available

# Smart Storage

**Each product fits perfectly. Flexible storage of different products with minimal loss of storage space.**

Effective use of the Smart Storage is achieved by fitting each product in the best possible way. We call this highly effective use of storage space Smart Storage. At the top of Elevate, unused trays are effectively stacked.

The lift is controlled by motion detection for the most stable and fast transport possible. Product height is monitored to ensure the right product is stored in Elevate. Errors are reported directly to the operator, increasing efficiency and reducing errors.



**Storage of unused trays at the top.**

**Smart Storage for maximum loading capacity of a variety of products.**

**Height verification, verification of product height before storage.**

# Operation

**Optimize your operations with C3 Advanced to streamline workflows and capture valuable production performance insights**

› Intuitive dialogue controls, simple page design, and clear navigation logic deliver the ultimate user experience on a user-friendly touchscreen.

- › Easily and rapidly establish new tasks for fresh work. Smart wizards assist in configuring your tasks seamlessly. Access your results on a single, straightforward overview screen without any complex steps.
- › With responsive software design, any inconsistencies are promptly identified and relayed to your operator, significantly enhancing efficiency and minimizing errors.
- › Seamless integration with your CNC machine in your production environment.
- › Powerful data management and data visualisation. The most complete, integrated and secure solution for fast cell production.
- › Built-in security with different log-in levels for users.



## Software functionalities



Machine Fixture Exchange™



Second CNC machine



Machine Collet Exchange™



Jobmanager

# Job Validation

Automatically validate all prerequisites to initiate an unmanned production job. Every input, from products and grippers to inlays and additional details, is automatically archived in the database. Simply create a new job using this data from the libraries.

**Enter, check, validate and execute the following prerequisites easily within the software.**

- › Material
- › Gripper fingers
- › CNC machine data
- › Inlays
- › Pallets & clamps
- › NC-file data
- › Grippers
- › Clamping jaws
- › Tooling data



- ✓ **Certainty** of correct input
- ✓ **Certainty** of production quantities
- ✓ **Certainty** of delivery

**Superior storage capacity**  
due to vertical storage and dynamic arranging possibilities.

**Intuitive HMI**  
User-friendly touchscreen.

**Ergonomic design**  
Exceptionally accessible loading.

**Supports a high variety of products**  
Suitable for various shapes and sizes.

**Use of Fanuc robots**  
Fast, accurate and reliable:  
99.99% uptime.


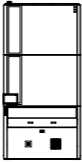
**Efficient use of valuable production space**  
Minimum footprint with maximum storage capacity.




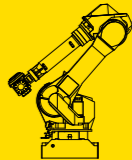
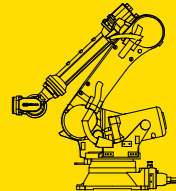
**Think ahead**

# Technical data

## Elevate Configurations

Standard storage selection	E80 	E110 
System dimensions	1.600x4.000 mm (BxH)	2.000x4.000 mm (BxH)
Tray dimensions	1.200x550 mm (0,66 m²)	1.600x550 mm (0,88 m²)
Processing weight trays	300 kg	300 kg
Max. Speed of tray transport	0,4 m/sec.	0,4 m/sec.
Height per tray position	30 mm	30 mm
Min. height required in storage per tray	90 mm	90 mm
Max. product height	300 mm	300 mm
Max. number of trays on a 90 mm pitch	27	27
Floor space with Robot 20/35	1.600x3.500 mm = ca. 6,5 m²	2.000x4.100 mm = 8,2 m²
Floor space with Robot 50/70	1.600x4.000 mm = ca. 6,7 m²	2.000x4.200 mm = 8,4 m²
Loading height	1.070 mm	1.070 mm
Effective height of tray storage	2.430 mm	2.530 mm
Software	C3 Advanced	C3 Advanced
Screen operating height	1.500 mm	1.500 mm

## Robot Configurations

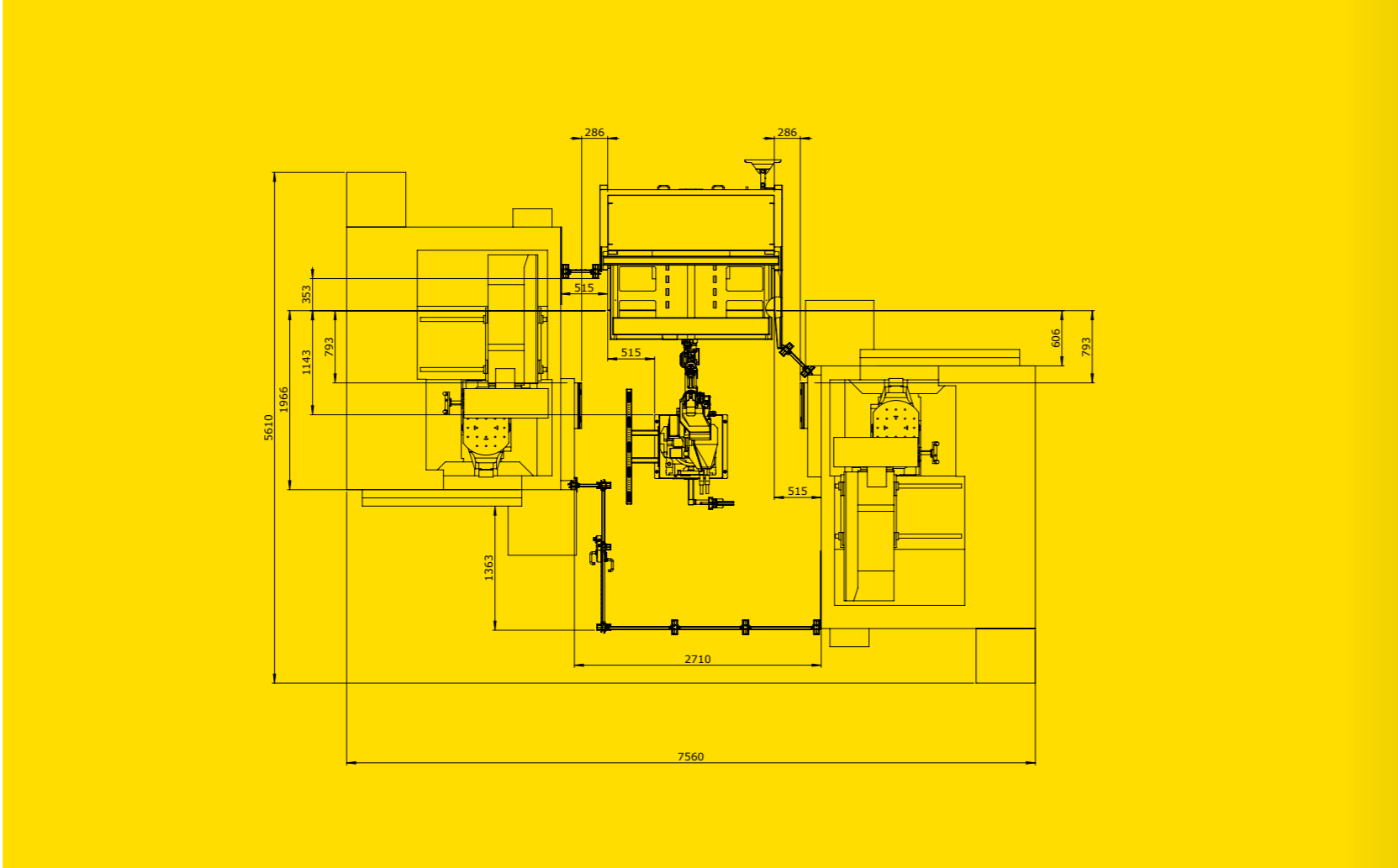
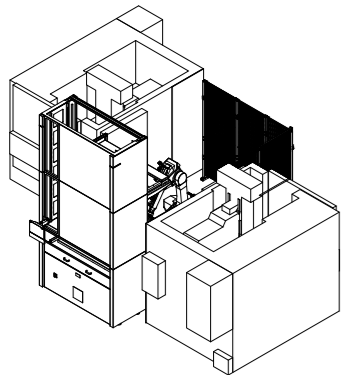
Standard robot selection				
Robot type*	Fanuc M20iD/25 with collision detection	Fanuc M20iD/35 with collision detection	M-710iC/70 with collision detection	R-2000iC/165F with collision detection
Robot payload (excl. gripper)	25 kg	35 kg	70 kg	165 kg
Maximum reach	1.833 mm	1.831 mm	2.050 mm	2.655 mm
Robot quick-change system	SWS 021	SWS 021	NSE 75	NSE 138
Electrical connection	400 VAC+PE (CEE 32A socket)	400 VAC+PE (CEE 32A socket)	400 VAC+PE (CEE 32A socket)	400 VAC+PE (CEE 32A socket)
P(KVA)	12	12	17	17
I(A) (at 400 V)	17,5	17,5	24	24
Fuse e	25 A	25 A	32 A	32 A
Pressure pneumatic connection	6-8 bar	6-8 bar	6-8 bar	6-8 bar
Hose	Air hose 10 mm	Air hose 10 mm	Air hose 10 mm	Air hose 10 mm
Air usage	400** litres/min	400** litres/min	400** litres/min	400** litres/min

\* Robot selections with different reach or higher processing weight are also available on request. Robots also possible on track.

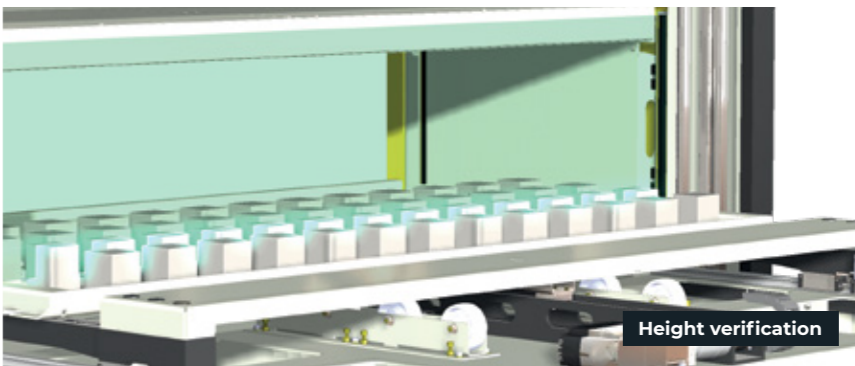
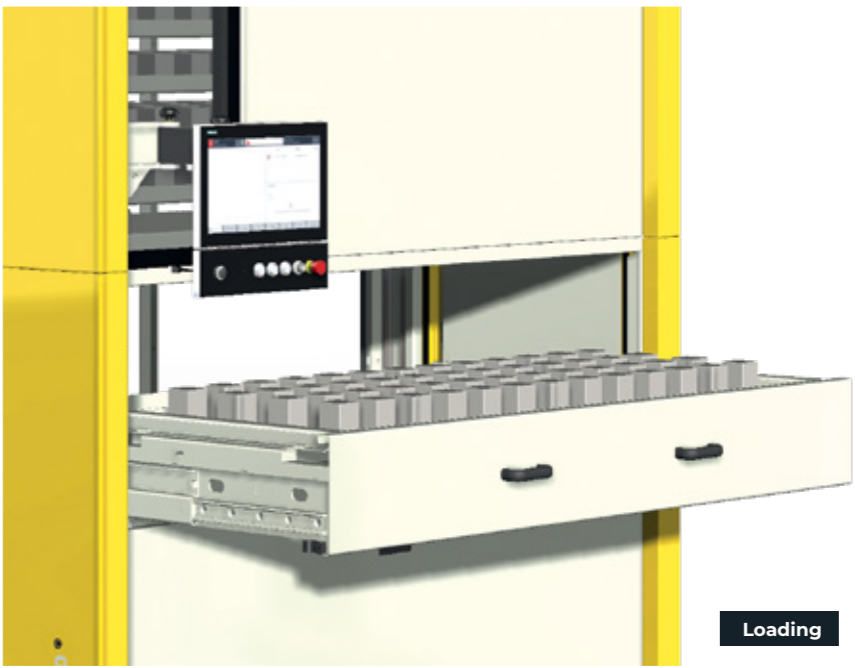
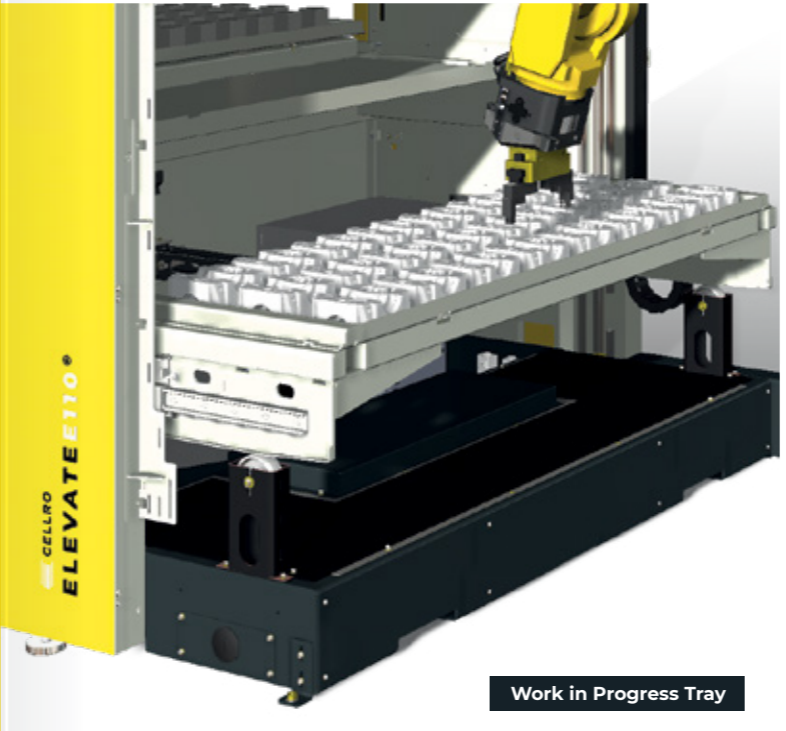
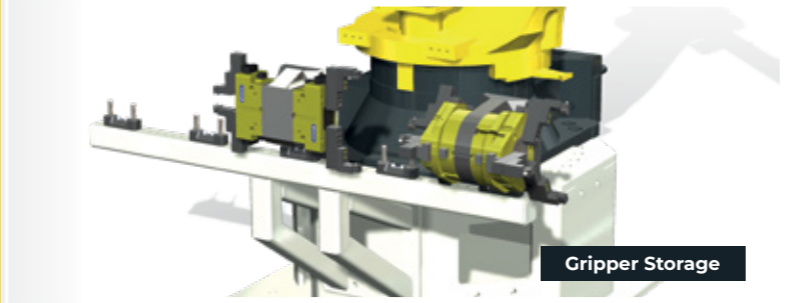
\*\* Air usage with blow-off option: 800 litres/min.

# Example configuration

Elevate E110 | M-710iC/70  
 Example customer project



# System details



## Safety

**Working safely with automated systems is the first priority. This is why Cellro pays a lot of attention to this. We maintain CE safety standards at all times.**

With Elevate, there are multiple configurations that allow you to configure the desired automation solution to suit your requirements and working environment. Your employees can work undisturbed and safely while Cellro's loading robots load and unload your CNC machine.

### Keeping open access to your machine

There are two different safety features that Cellro applies to maintain access to your CNC machine while it is linked to your Elevate:

- > **Fence with door** (and MGB lock)
- > **Vertical safety scanner**



### Personal advice

**Would you like personal advice on the safety option that best suits your production situation?**

If so, please contact directly one of our specialists via our chat, e-mail or by phone!



[cellro.com/en/contact](https://cellro.com/en/contact)

## Service & Warranty

**To ensure the availability of your robotic cell, Cellro has a service department with its own specialists, who are broadly trained in their respective fields. With this team, we are ready to provide our customers with prompt and effective support.**

In the event of an unexpected failure, our service team can analyze nearly any issue swiftly through a remote connection, providing rapid support. If a fault cannot be resolved using the remote connection, we collaborate with the customer to plan a follow-up action.

By utilizing top-tier components from reputable suppliers, we maintain high spare parts availability and prioritize seamless service interventions. Our objective is to keep your productivity at its peak.

Clients choose Cellro automation solutions to not just safeguard but supercharge their competitive edge in the market. Our service department is committed to not only preserving this advantage but also unlocking new avenues for growth and innovation.



# The Cellro network

When you invest in a Cellro system, you can count on our robust global network. With purchase and service points strategically located in your vicinity, we offer localized support to our customers. This grants you access to our expertise and facilitates knowledge exchange everywhere.

Our global network of local distributors markets our standardized solutions, such as Elevate. Furthermore, a multitude of esteemed machine builders have selected Cellro as their automation system to meet the market's demand for seamless machine-automation combinations.



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