CELLRO
AUTOMATION

Elevate

Superior vertical storage capacity

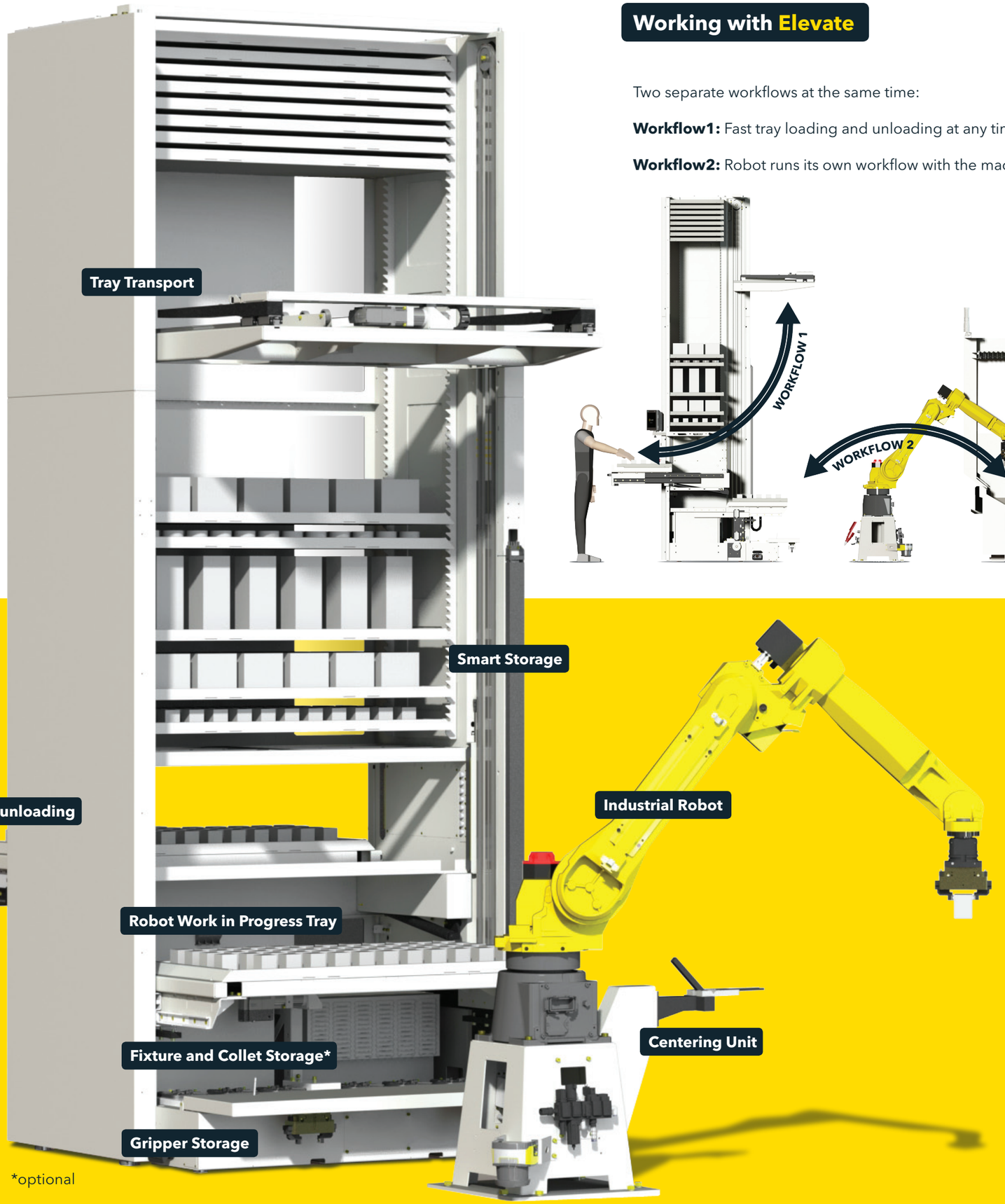
The benefits of Elevate

Elevate is the automation solution that maximises product storage capacity whilst using the smallest possible floor space. A large variety of products can be flexibly handled by storing the products on trays. Elevate can operate one or more lathes, milling machines or other types of machines.

Due to the ergonomic loading position, the products can simply be placed on a tray using a drawer while production. The tray is then stored in the Elevate and is ready for the robot on demand.

The place of the active tray from which the robot retrieves and delivers products has a separate position, so the lift and the robot can work parallel to each other. For example; you request a tray with manufactured products, the lift can pick it up without interrupting the robot's work. If Elevate is loading several machines, a second operation position is possible.

Since the robot is separate from the lift, a wide assortment of robots with different payloads is available. Long-term autonomy of your machine(s) is guaranteed due to the large storage capacity.



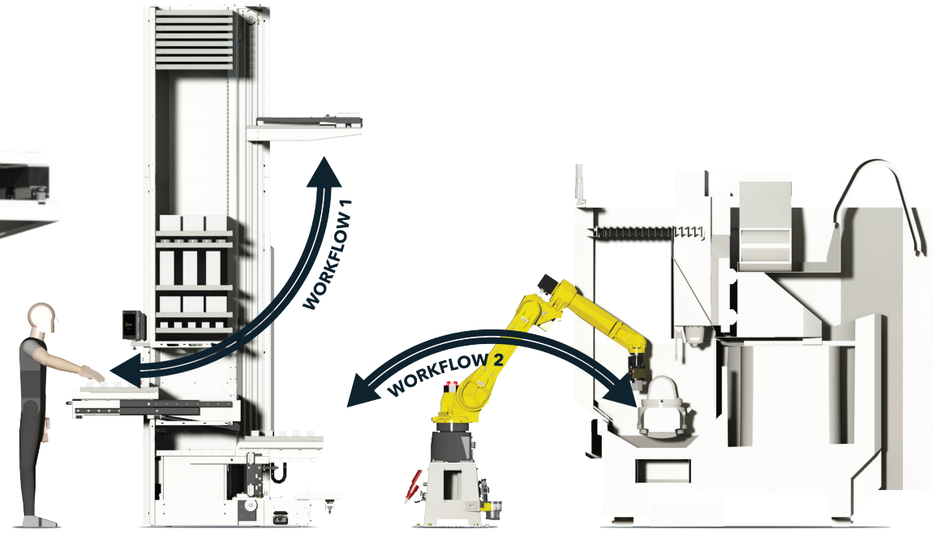
*optional

Working with Elevate

Two separate workflows at the same time:

Workflow1: Fast tray loading and unloading at any time.

Workflow2: Robot runs its own workflow with the machine(s)



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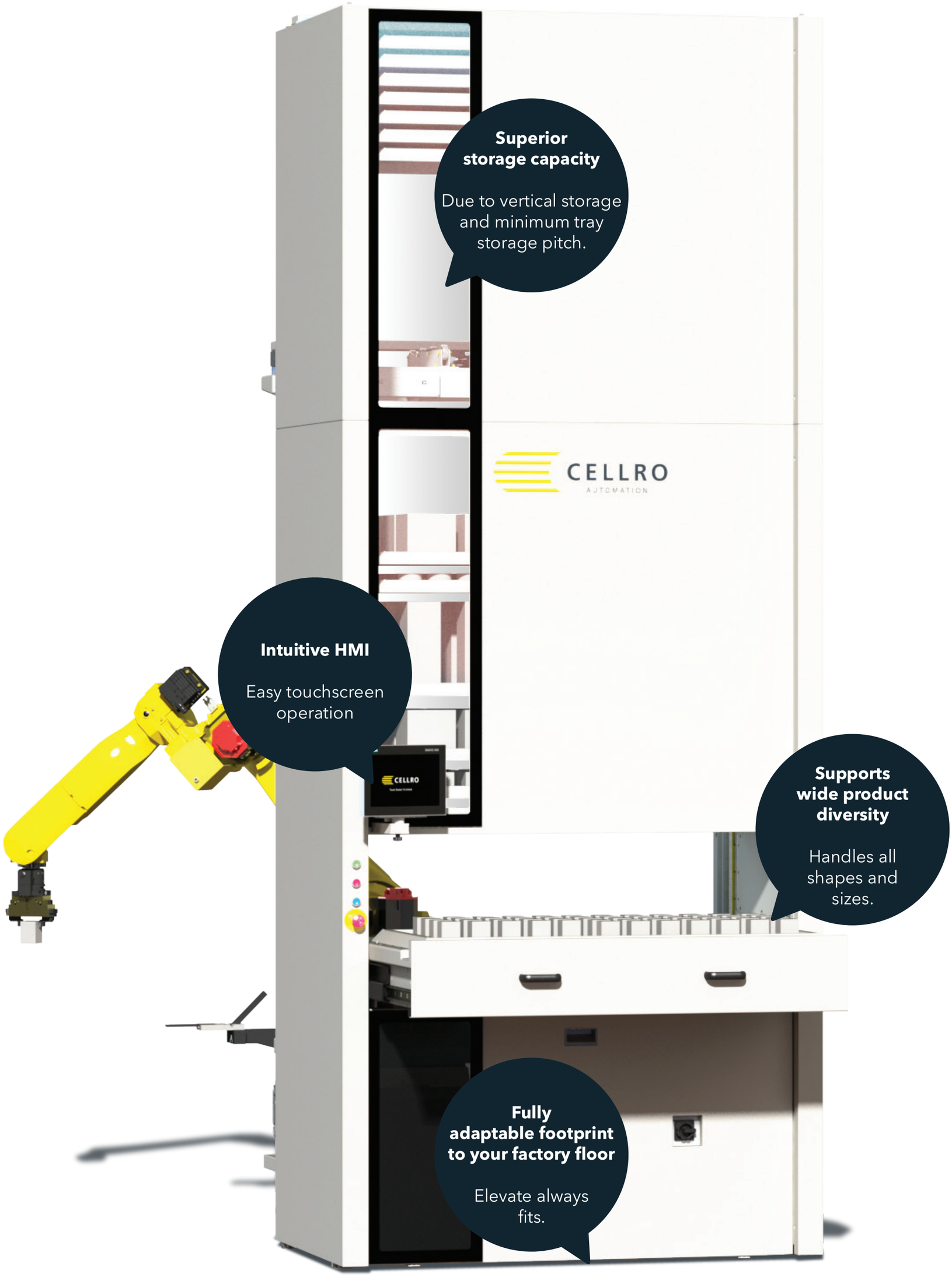
Superior storage capacity
Due to vertical storage and minimum tray storage pitch.
CELLRO
AUTOMATION
Intuitive HMI
Easy touchscreen operation
Supports wide product diversity
Handles all shapes and sizes.
Fully adaptable footprint to your factory floor
Elevate always fits.

Smart Storage

Every product fits perfectly. Flexible storage of different products with minimum waste of storage space.

Effective usage of the Smart storage is done by fitting each product within a 30mm pattern. Thereby no more than 30mm height on top of the product is wasted to store the next product above it. This enables an utmost effective usage of storage space that we call Smart storage. In the top of the Elevate the unused trays are stored effectively on top of each other.

The smart storage will optimize all production towards the lowest point in the storage. Thereby the travel time is shortened and free usable storage space is created in the above section to store your products. Also travel time and waste of available storage space is reduced to a minimum. A product height check is performed to assure the correct product enters the Elevate before placing it in the storage.

Elevate Software

Cello System Control [CSC]:

- Job Management for easy configuration of new jobs and queuing of actual jobs. Automatic handling of the predefined production sequence (prioritisation) for autonomous production.
- Motion Controlled Vertical Axis for optimal speed and maintaining part-position accuracy.
- Smart Storage Control to obtain most optimal storage mapping by usage of the product height.

Cellro System Interface [CSI]:

- User friendly setup of jobs by configuration-by-graphics.
- Step-by-step walkthrough of new jobs for easy configuration.
- Database with existing products and jobs for quick re-usage of existing parameters.

Technical Data

Robot Selection

Standard Robot Selection	E20	E35	E50	E70
Robot type*	Fanuc M20iA with collision detection and automatic gripper exchange head.	Fanuc M-20iA/35M with collision detection and automatic gripper exchange head.	Fanuc M-710iC/50 with collision detection and automatic gripper exchange head.	Fanuc M-710iC/70 with collision detection and automatic gripper exchange head.
Handling weight of robot (excl. Gripper)	20kg	35kg	50kg	70kg
Maximum Reach	1811mm	1813mm	2050mm	2050mm

* Other robot selections with different reach or more handling weight are possible on request.

Storage Selection

Standard Storage Selection	1600x3000	1600x4000	2000x3000	2000x4000
System dimensions	1600x3000mm (WxH)	1600x4000mm (WxH)	2000x3000mm (WxH)	2000x4000mm (WxH)
Tray dimensions	1200x550mm (0.66m²)	1200x550mm (0.66m²)	1600x550mm (0.88m²)	1600x550mm (0.88m²)
Tray handling weight	300kg	300kg	300kg	300kg
Max. Speed of Tray Transport	0.5m/sec.	0.5m/sec.	0.5m/sec.	0.5m/sec.
Tray position pitch	30mm	30mm	30mm	30mm
Min. Pitch of Trays with Products	90mm	90mm	90mm	90mm
Max. product height	300mm	300mm	300mm	300mm
Max. amount of Trays with a Pitch of 90mm	17	28	17	28
Footprint without Robot	1750x1600mm=2.8m²	1750x1600mm=2.8m²	1750x2000mm=3.5m²	1750x2000mm=3.5m²
Footprint with Robot 20/35	2350x1600mm=3.8m²	2350x1600mm=3.8m²	2350x2000mm=4.7m²	2350x2000mm=4.7m²
Footprint with Robot 50/70	2500x1600mm=4m²	2500x1600mm=4m²	2500x2000mm=5m²	2500x2000mm=5m²
Loading height	1070mm	1070mm	1070mm	1070mm
Effective Height for Tray Storage	1530mm	2530mm	1530mm	2530mm

Options

Fixture Exchange™

Collet Exchange™

Second CNC machine

Job Manager

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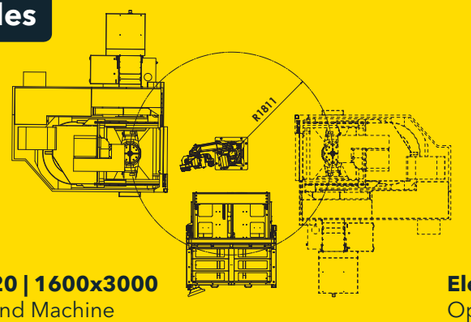
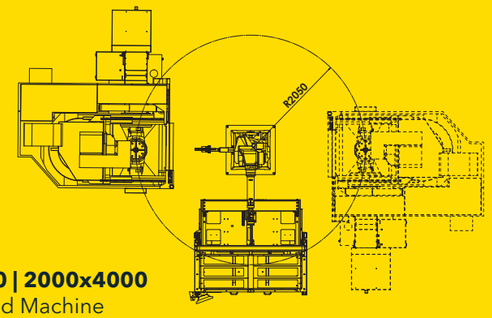
Examples



Elevate E20 | 1600x3000
Optional 2nd Machine



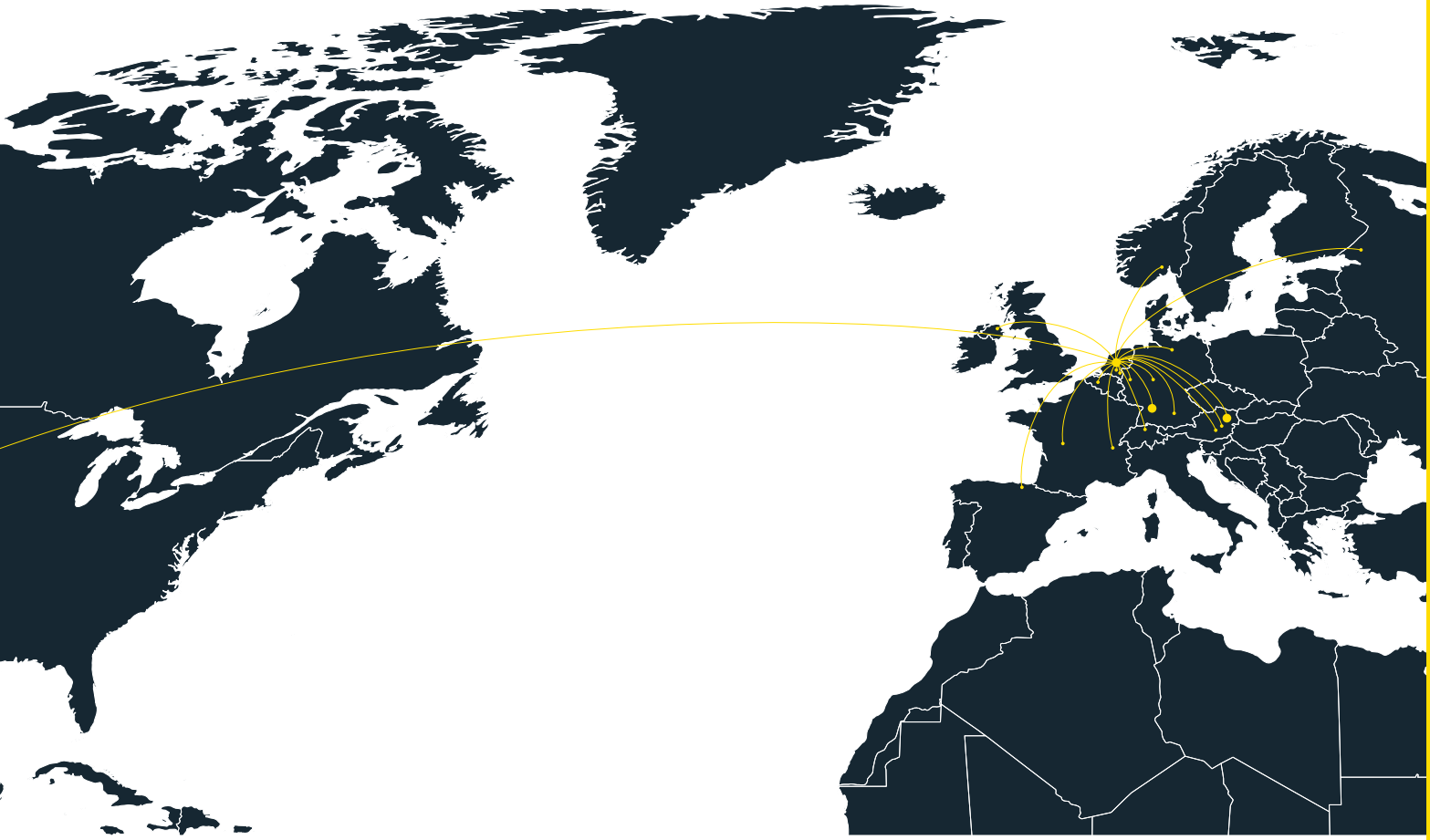
Elevate E70 | 2000x4000
Optional 2nd Machine

The Cellro Network

When purchasing a Cellro system, you can rely upon our strong international network. You benefit from nearby points of purchase and service, as well as adjustment to local needs and overall synergy in automation knowledge and expertise.

Throughout the world, local distributors sell our standardized solutions, such as Elevate.

Furthermore, Cellro is the automation of choice for numerous renowned machine tool builders, which seek to meet the demand for all-in-one machine-automation combinations.



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English | V1.0

About Cellro

Cellro is the first class developer of robotic automation for the machining industry. Our company is built on the idea that your automation needs to be future proof. Because you never know what drastic production changes are ahead of you, automation's long-term value fully depends on its flexibility. This means a Cellro system, such as Elevate, is easily adjustable in order to increase your profits for years to come.

Elevate is your key to long-term profitable automation. There is no need to let rigid automation tighten your flexibility. Cellro's modular technology and smart controls allow you to switch functions and options at any time. As a result, you benefit from full flexibility for current and future use.

Your Machines,
More Profitable.