



CELLRO
AUTOMATION

Xcelerate

The ideal employee that helps you to **significantly increase your turnover** for years to come.



What you can do with Xcelerate

Xcelerate is a robotic loading system for loading and unloading machining tools and machines.

Suitable for milling, turning, grinding, measuring, spark machining and washing.

Three design types: X10, X20 and X60. These variants differ in terms of handling weight and loading capacity. Handling weights vary from 12-70 kg*

*(including gripper and workpiece)

Storage capacity of Xcelerate X10 is 1.6m². The storage capacity of Xcelerate X20 is twice that of X10 and Xcelerate X60 has 3 times more storage capacity than X20.

Positioning perpendicular to the machine to ensure access for the operator.

Communication between robot and your machine control system is quickly established. Cellro is not dependent on a particular machine and works intensively with a range of machine manufacturers.

For the machining companies of today

Machining companies are facing a major challenge. Many are encountering challenges such as diminishing batch sizes, reduced delivery times, a lack of skilled professionals, increasingly complex products and cost prices that are under enormous pressure.

How can you overcome challenges such as these and make your production processes more efficient and profitable? What steps can you take in order to gain as many spindle hours as possible with your machines?

You want to be able to respond to your production orders in a flexible manner with a solution that is easy to operate, switches effortlessly between products and can work late into the evening and at weekends.

In short: what does the machining company of today need? **Xcelerate!**

www.cellro.com



Deployment through standardised flexibility

Every standard Xcelerate configuration consists of intelligent components that provide a high level of functionality and reliability.

The **gripper technology** enables you to replace grippers and gripper fingers efficiently when required. The universal **product inlays** are easy to adjust and can be used for products in a range of sizes (up to 160 mm). Furthermore, the smooth motorised drawers allow for products to be stacked (without support), thereby providing additional storage capacity.

Assisted by intelligent software, these technologies mean that your Xcelerate is able to guarantee high ease-of-use and flexibility.



Stack your products in the drawers for double or triple capacity.



The **universal inlay** enables you to place multiple products in one drawer.



Create your own inlay and gripper fingers if you are dealing with products with unique designs.



Simple to use. Wide range of applications.

- ✓ Round parts, squares, axles, forgings and castings can all be machined via the same system thanks to Cellro's universal product inlays.
- ✓ Your operator can set up the machine for a new product in no time using the intelligent Xcelerate control system (touch screen). The operator can also see and make note of all key parameters in real time for an optimum production process.
- ✓ An intelligent, user-friendly HMI enables the user to independently make product-specific adjustments.

Average numbers when using Xcelerate in practice

20%	Higher output during manned production hours
60%	Lower wage costs per hour
20 hours	Additional unmanned production per week
1.5 years	Return on investment of Xcelerate

Manufacture via unmanned operation in long cycles

- ✓ Huge storage capacity thanks to an innovative horizontal loading system controlled by spindle motors. Stack products or place them at angles for maximum use of space.
- ✓ Automatically interchangeable gripper head allows Xcelerate to pick up the next product without having to realign the grippers.
- ✓ Each drawer can store a different job. You can automate multiple batches in one session to increase your turnover more effectively.

Quick return on investment

- ✓ Xcelerate costs less than €14 per hour to operate. It is not possible to find an employee who is as economical and efficient as this on the market.
- ✓ Significantly increase your output without employing extra staff.
- ✓ It is also cost-effective with small batch sizes.

Xcelerate. Unique in many ways.

Xcelerate Features

Future expansion

New functionalities can be added at any time.

Communicates with all makes of machine

Both new and old.

Exceptional storage capacity

Manufacture in long cycles via unmanned operation.

User-friendly

Intuitive touch screen operation.

Safety scanner

Work in safety without fences and access doors.

Compact and mobile

Maintain access to the machine without adjusting the floor layout.



Xcelerate X10



Xcelerate X20



Xcelerate X60

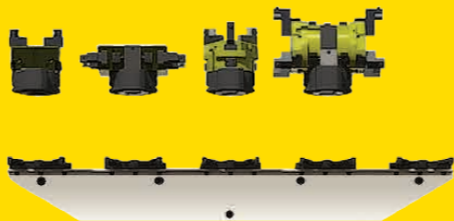
10.1" LCD colour touch screen
On hinged cover panel



Reverse/centring station
Reverse and centre products between two machine cycles.



Safety
The safety circuit is activated by a laser scanner and is combined with a safety screen.



Automatic gripper exchange
Independent exchange of grippers. Grippers with adjustable grip strength.

Framebase
Frame with removable floor anchors which acts as a casing for the robot and the modules.



X10



X20

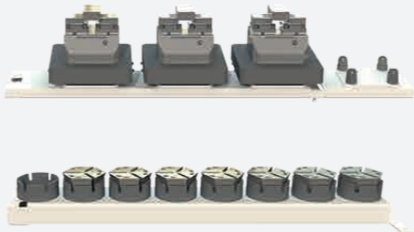


X60

Industrial robot
Several robots have been assigned to the frames with a difference in payload and working range.



Fixture Exchange™ & Collet Exchange™
For handling machine vices and collet chucks.





	X10	X20		X60			
Framebase + robot							
Robot type	M-10iA/12	M-20iA	M-20iA/35M	M-20iA	M-20iA/35M	M710iC/50	M710iC/70
Robot operating range (radius)	1.420mm	1.811mm	1.813mm	1.811mm	1.813mm	2.050mm	2.050mm
Payload robot	12kg	20kg	35kg	20kg	35kg	50kg	70kg
Dimensions	1.410x910x2.450mm	1.680x1.150x2.520mm	1.680x1.150x2.520mm	2.000x2.200x2.800mm	2.000x2.200x2.800mm	2.200x2.900x2.800mm	2.200x2.900x2.800mm

Storage Modules			
Number and dimensions of product storage capacity (lxwxh)	1 cart of 1.000x800x400mm	2 carts of 800x600x450mm	19 trays of 1.200x550mm (pitch 100mm)
	2 drawers of 1.000x400x255mm	2 drawers of 1.200x600x255mm	Maximum productheight 300mm
LVC* X10 - 200kg	3 drawers of 1.000x400x165mm	3 drawers of 1.200x600x165mm	
LVC* X20 - 170kg	4 drawers of 1.000x400x105mm	4 drawers of 1.200x600x105mm	
LVD* X10 - 120kg			
LVD* X20 - 200kg			
LVI* X60 - 280kg			

Gripper storage			
Number of positions	5 positions	6 positions	7 positions
	Note: Wide grippers such as double 2- or 3-point grippers with quick-change fingers require sufficient space adjacent to the grippers.	Note: Wide grippers such as double 2- or 3-point grippers with quick-change fingers require sufficient space adjacent to the grippers.	Note: X60 with 50 en 70kg robot have 6 positions and wide grippers such as double 2- or 3-point grippers with quick-change fingers require sufficient space adjacent to the grippers
Grippers	Single 2-point, double 2-point, double 3-point	Single 2-point, double 2-point, double 3-point	Single 2-point, double 2-point, double 3-point
Gripper bit materiaal	PA6	PA6	PA6

Requirements for system installation				
Electrical connection	400VAC+PE (CEE 32A socket	400VAC+PE (CEE 32A socket	400VAC+PE (CEE 32A socket	400VAC+PE (CEE 32A socket
P(KVA)	3	3	8	12,5
I(A) (at 400V)	4,33	4,33	11,73	18,23
Fuse	10A	10A	16A	25A
Pneumatic connection pressure	6-8 bar	6-8 bar	6-8 bar	6-8 bar
Hose	10mm air hose	10mm air hose	10mm air hose	10mm air hose
Air consumption	300** litres/min	300** litres/min	300** litres/min	300** litres/min

HMI			
Software	Premium control system	Premium control system	Premium control system
Operating height (middle of screen)	1.500mm	1.500mm	1.500mm

* LV = Load capacity per Drawer, Cart or Tray

** Air consumption with relief valve option: 800 litres/min

Interface specifications	
Xcelerate's machine interface can be supplied in four different versions.	<ul style="list-style-type: none">Hard-wired I/O, 14 potential-free inputs and outputsProfibusEthernet IPFanuc I/O link

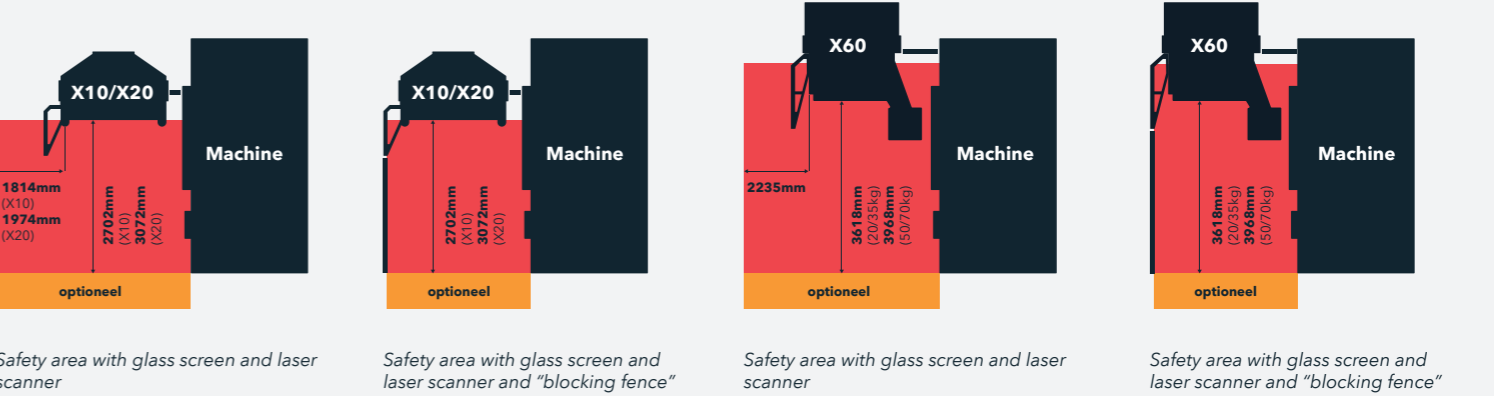
Features

Tasks no longer carried out by the operator	
Product handling***	<ul style="list-style-type: none">Stacking productsStoring productsGripping productsLoading CNC machines (Xcelerate can be easily relocated to load several machines)
Product Processing	<ul style="list-style-type: none">Switching (switching products between 2 CNC cycles for 6-sided product processing)Centring (improved product placement accuracy up to 0.5 mm)
Cleaning	<ul style="list-style-type: none">Automatic machine vice cleaning (robot removes clamps using pressurised air before the product is moved)
Gripper exchange	<ul style="list-style-type: none">Independent exchange of grippers
Fixture- en Collet Exchange	<ul style="list-style-type: none">For handling machine vices and collet chucks with workpieces
Jobmanager	<ul style="list-style-type: none">Different (small) production batches can be bundled into a single long, unmanned cycle

Characteristics	
Mobility	<ul style="list-style-type: none">Xcelerate can easily be relocated to another machine.
*** Raw material (blocks, cylinders), bars, free-form material (organic products)	

Safety

Safety	
Floorscanner	<ul style="list-style-type: none">Safety laser scanner(does not interrupt production)
Glass safety screen	<ul style="list-style-type: none">Provides shielding for the robot.

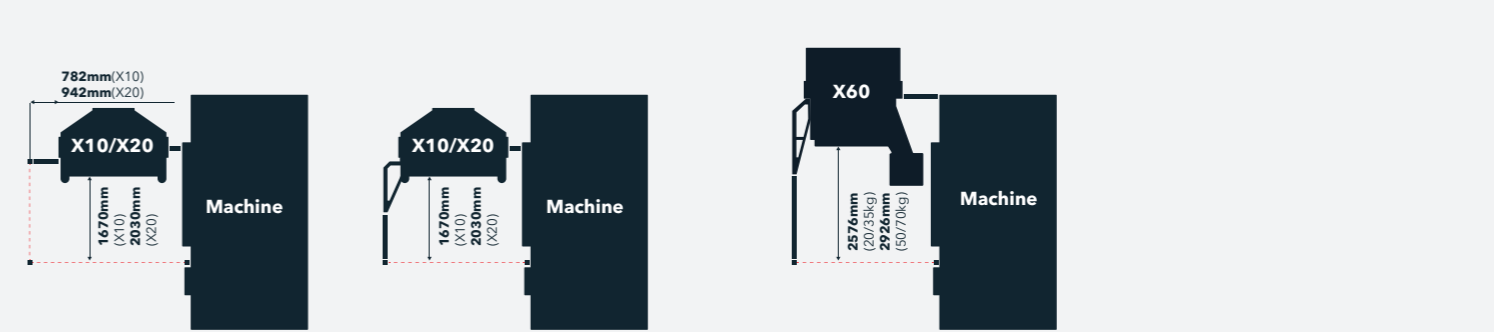


Safety area with glass screen and laser scanner

Safety area with glass screen and laser scanner and "blocking fence"

Safety area with glass screen and laser scanner

Safety area with glass screen and laser scanner and "blocking fence"



Safety area with lightcurtain and mirror.

Safety area with lightcurtain.

Safety area with lightcurtain.

Together we can generate more business

“Orders that I could hardly deliver on Friday without automation, are already **ready** on Wednesday.”

“Cellro is the only one who **can make very specific adjustments** to the system, so that it brings exactly what we need.”

“Actually we have a **second CNC-machine**, so much benefit we have from Xcelerate.”

“We chose Xcelerate because of the **compactness** of the system and the **ease of operation**.”

“Automation is very important **because it relieves you**. This enables us to produce much more cost-efficiently.”

“Cellro is the only one who could give us the **storage capacity** we need.”

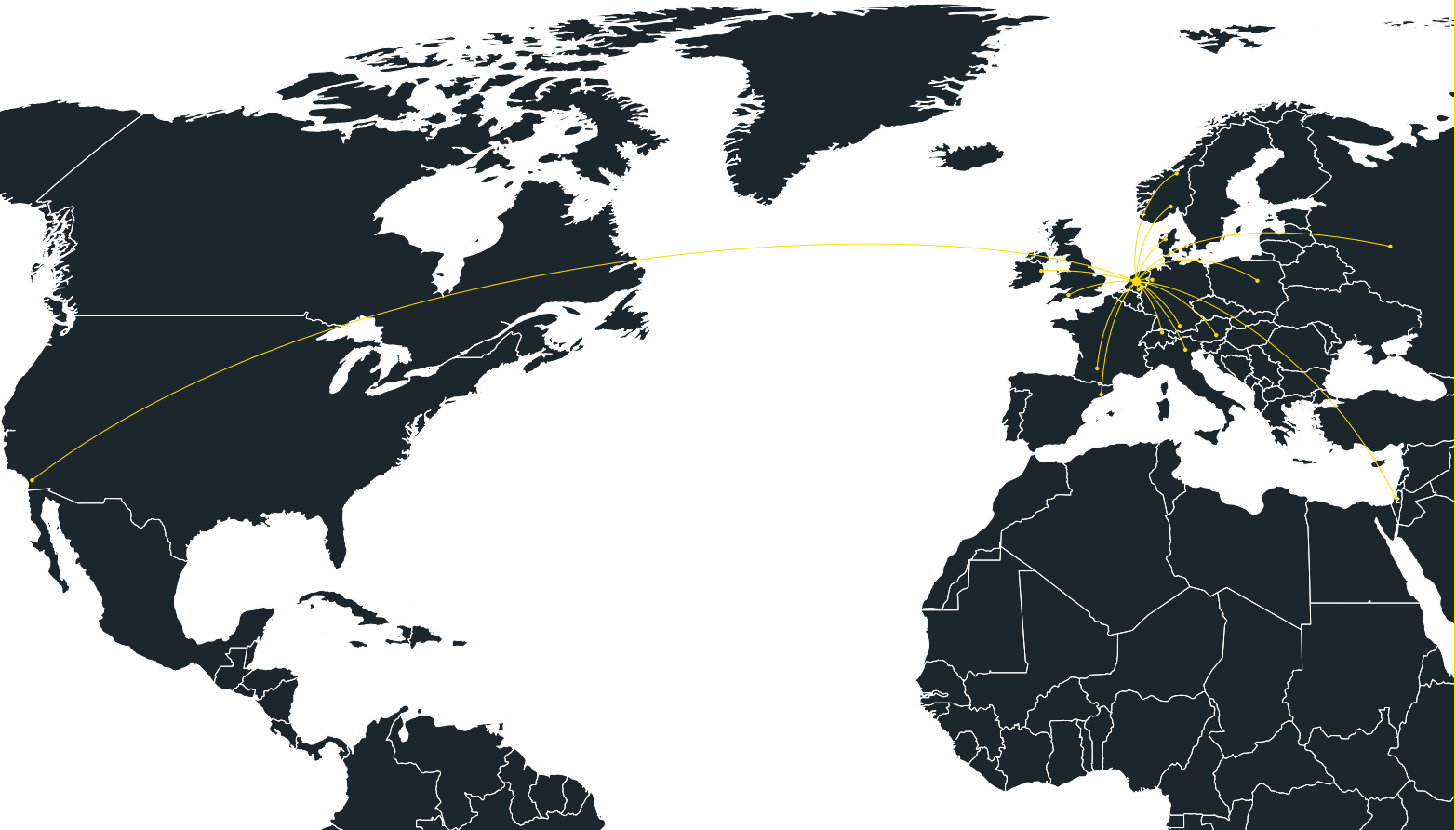
“We can use our **professionals** for the more **challenging work**.”

“With two Xcelerates we have an **extra 200 spindle hours** in one week.”

The Cellro Network

When you purchase a Cellro system, you can rely on our strong international network. We serve our customers locally through local procurement and service points in your area. This allows you to benefit from our expertise everywhere and ensures the transfer of knowledge.

Our local distributors sell our standardized solutions such as the Xcelerate worldwide. In addition, a large number of renowned machine builders have chosen Cellro as their automation system in order to meet the market demand for ready-made combinations of machine and automation.



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About Cellro

Cellro is a first-class developer of robot automation for the machining industry. Our company is based on the idea that your automation must be future-proof. After all, automation lasts for decades. Our automation solutions are in line with the growth of your company, your future production and the automation roadmap within your company with your employees. We have designed our automation flexibly. This means that a Cellro system, such as the Xcelerate, can easily be adapted to your needs, so that your profits can continue to increase in the coming years.

Our products are your key to profitable automation, now and in the future. With 15 years of experience and close cooperation with our customers, our modular design and smart software are the basis of these flexible automation solutions. This gives you a high return on your investment, now and in the future, as well as a future-proof, risk-free investment.

**Your Machines,
More Profitable.**