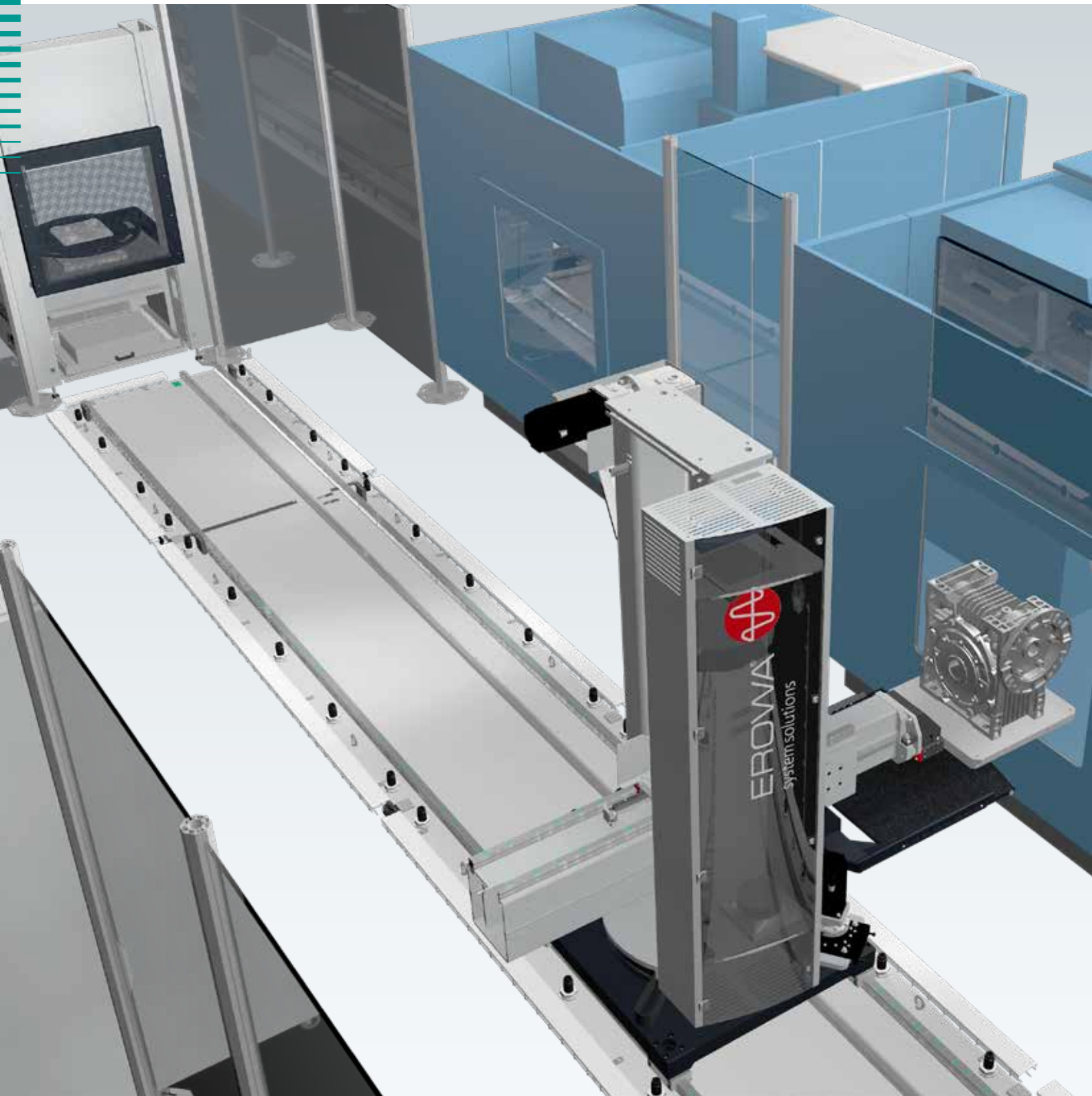




# Robot Dynamic 500

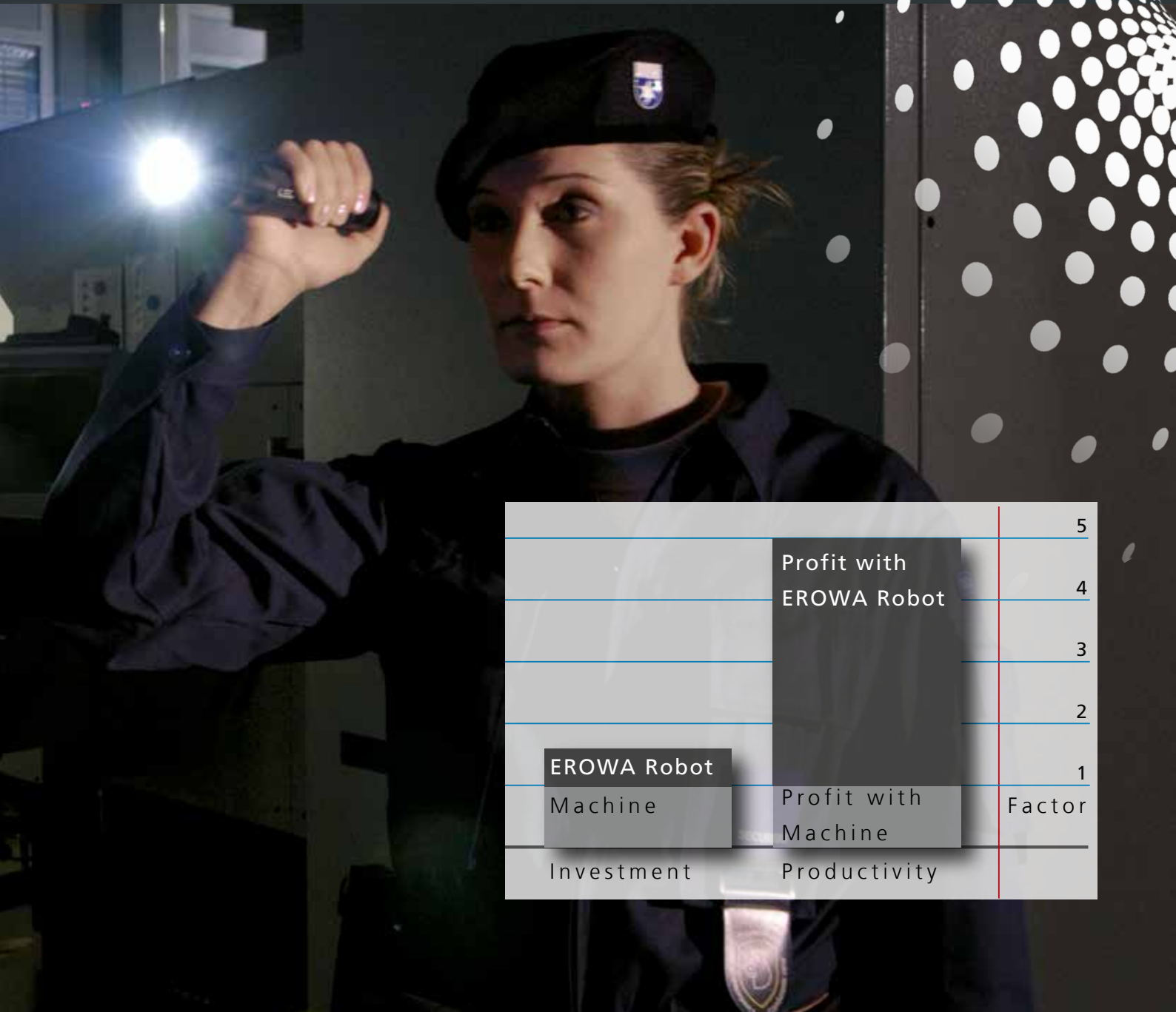
Automation for heavy parts



# Is your production in standby?

Your machines are profitable when they are producing. They should run during the day, in off-peak hours and at night, even on weekends. Achieving this goal means combining all production requirements in a plan.

The plan is called "Smart Factory". It is being turned into reality in well-dosed steps. That is part of EROWA's DNA.



			5
		Profit with EROWA Robot	4
			3
			2
	EROWA Robot		1
Machine		Profit with Machine	Factor
Investment		Productivity	

**500 kg transfer weight****4**

Lots of capacity for large and heavy workpieces

**Extendable****6**

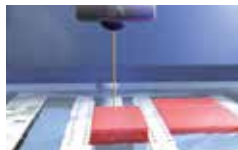
Tailored to the requirements of practical life

**Big and small****8**

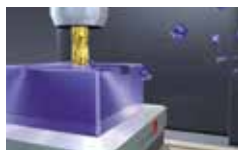
With ingenious adapter pallets suitable for every workpiece size

**The Modules****10**

Configure for a project, expand later

**Automating Tool & Die making****12**

Linking the entire manufacturing process

**Automating Production****14**

Fully automatic manufacturing of individual parts and small batches

**Job Management****16**

Automatic and flexible production with the process control system

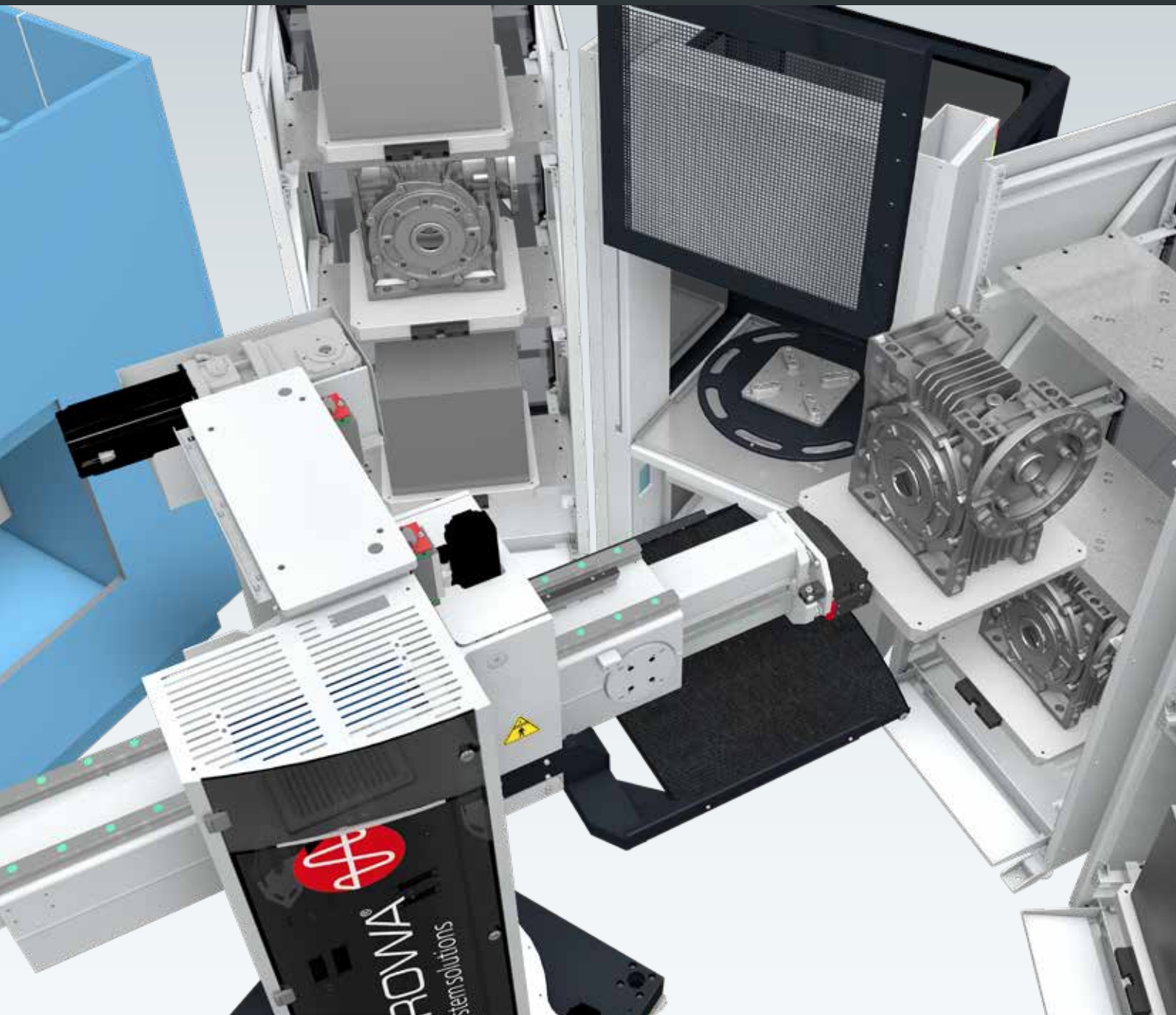
**More than 40 years of experience****18**

Competent project management and quick installation

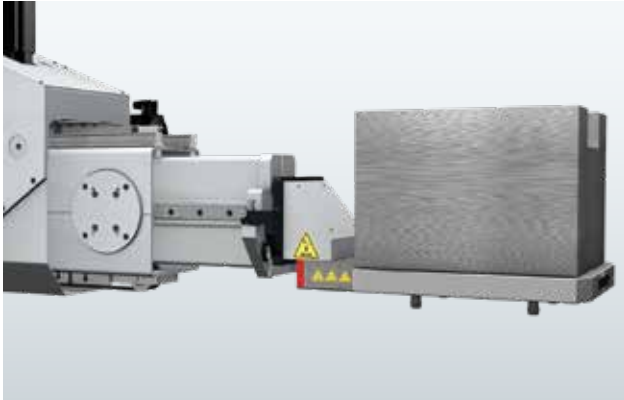


# 500 kg transfer weight

From zero to five hundred in 15 seconds. That's the time the robot needs to change its gripper and pick up a heavy pallet. Despite the capacity for heavy loads, lightweight pallets are transported with the same reliability as well.



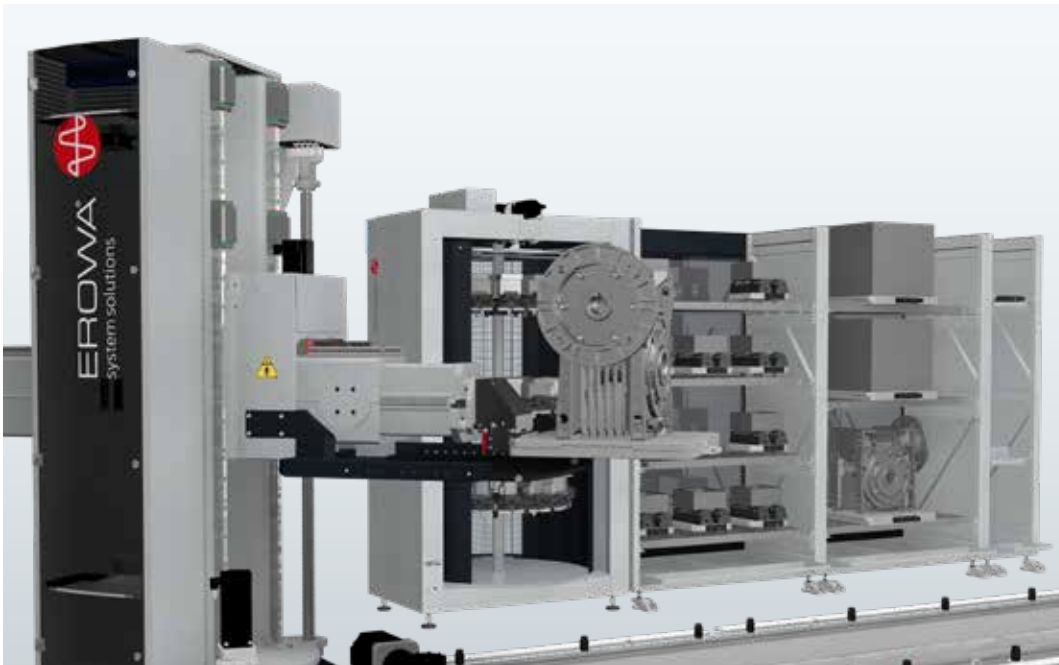
In mixed mode manufacturing, a single robot must sometimes handle both large heavy and small light workpieces.



The WGS gripper is the interface for the mega pallets up to 500 kg transfer weight. It is suitable for part sizes up to 800 x 800 x 500 mm.



With the swivel axis, handling up to 400 kg, pallets with workpieces are rotated. Useful for emptying cavities or reorienting the machining position.



The Rotary Magazine is typically chosen for up to  $\varnothing 210$  mm size pallets. The ratio of floor plan to the number of pallet positions speaks for the circular arrangement of the storage locations. Rectangular workpiece pallets are efficiently placed in the rack magazines. Both the utilization of space and the fully automatic loading by the robot are very useful for large workpieces.

#### FACTS

Machine is readily accessible  
Large coverage of the robot  
2D scanner for access safety

# Extendable

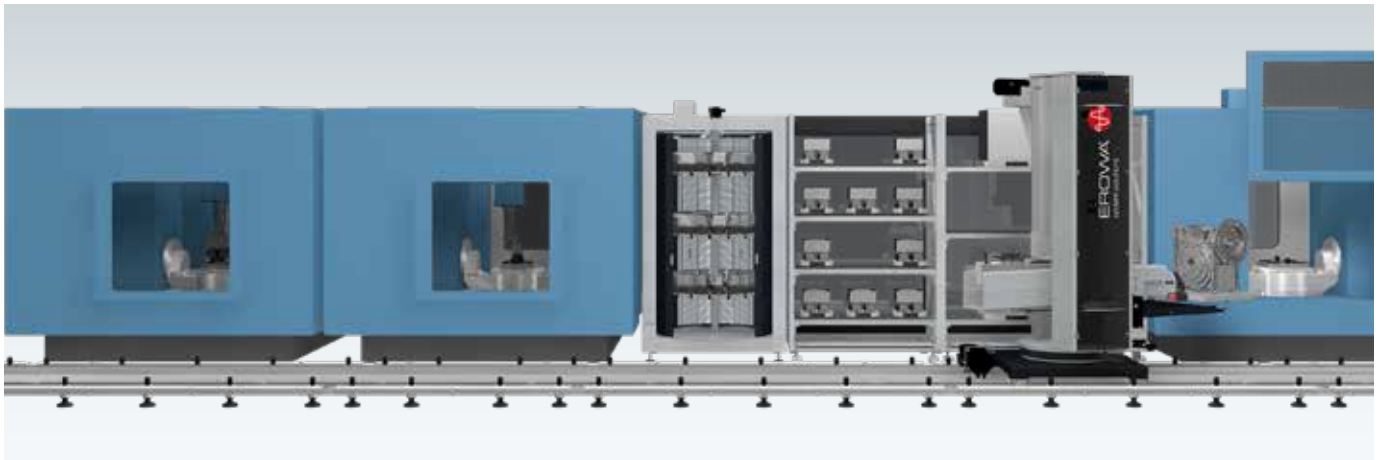
The EROWA Robot Dynamic 500 can always be adapted and extended. More magazine positions required? Operating a second machine? Adding a cleaning or a loading station? That's exactly why this robot has a highly modular design.







At a first stage, configure the machine such that hours at night can be utilized for the most part. Two magazines are sufficient for this purpose, and at an average machining time of 120 minutes per workpiece, 12 hours can thus be utilized productively.



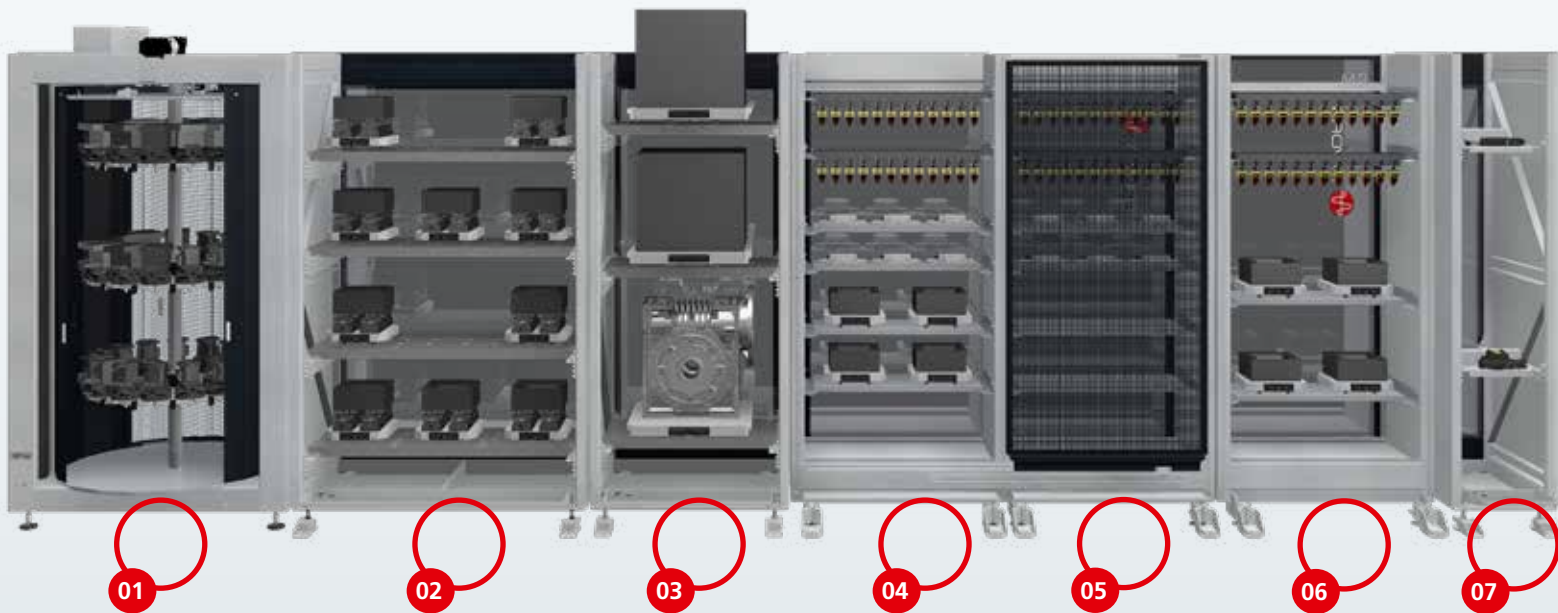
The production cell is extended. A second and third machine are integrated. The robot is equipped with rail extensions, additional magazines, and a loading station. The initial investment is utilized and complemented; the manufacturing cell now has twice the capacity.

#### FACTS

- Manageable investment steps
- Extendable at any time
- The basic investment is protected

# Large or small

The Robot Dynamic 500 is suitable for loading large and small workpieces. Independently switching from one pallet size to another size is one of the important features in the automated production of single parts and small series. Therefore, various magazine types are available.







The various system sizes are used on one and the same machine. Depending on the assigned jobs, the Robot Dynamic 500 switches to the fitting system automatically.



The correct gripper for each tooling system size. Stored in the GripperDock and automatically employed when needed.



The Robot Dynamic changes pallets with a total weight up to 500 kg reliably on to the machine ...



... and just as reliably it takes small workpieces from the magazine to the machining location.

01 | Rotary Magazine. Loading from exterior. 150 kg per pallet.

02 | Rackmagazine 500 size pallets. Loading via Robot. 250 kg per pallet.

03 | Rackmagazine 600x800 pallets. Loading via Robot. 500 kg per pallet.

04 | Twin-Rackmagazine mixed load. Roboter access open

05 | Twin-Rackmagazine. Robot access closed. Operator door may be opened for manual loading up to 150 kg per pallet.

06 | Rackmagazine for Robot loading. 150 kg per pallet.

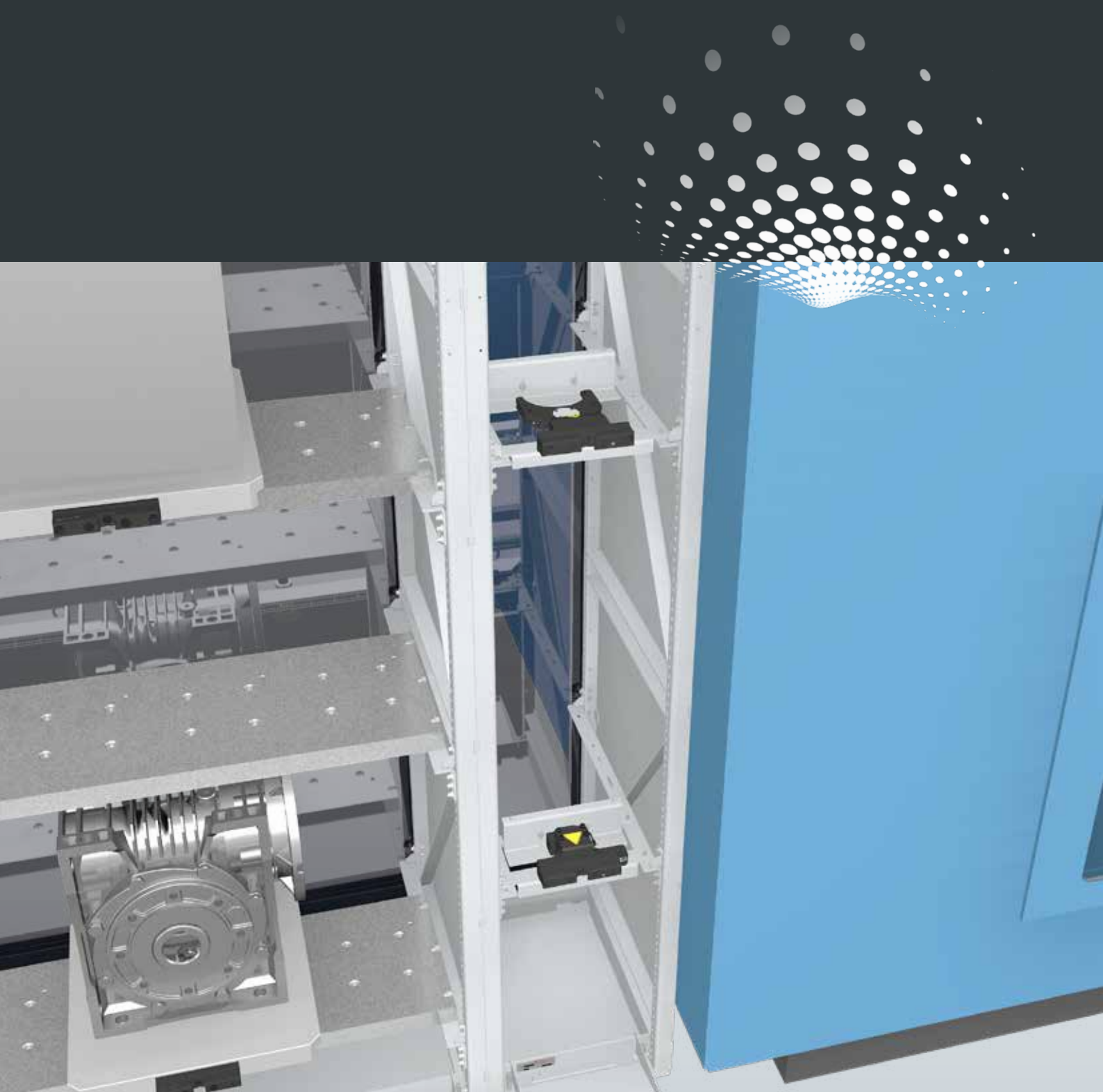
07 | Gripper Dock. May also be used for sealing rings and adapter pallets up to 500x500 mm.

#### FACTS

Mixed part sizes in manufacturing  
Transfer weight up to 500 kg  
Automatic chuck seal management

# The Modules

A Robot Dynamic 500 basically consists of a transfer unit and various magazines. These are supplemented with a gripper pool, loading station, and a rail. Extensions are sure to fit any existing installations.





A highly efficient system for automating the manufacture of single parts and small batches. Workpieces are supplied and removed via the integrated setting-up and loading stations. When needed, simply another magazine is added.



The robust linear rail is extended in segments to the required length.



Each magazine position and each pallet is continuously monitored. The EWIS™ Rapid RFID reader system ensures a clear view.



Extending the machine's tool storage; made easy with a Rotary Magazine for tool holders.

#### FACTS

Magazines for all possible EROWA clamping system pallets

Matching setting-up and loading stations

Automatic pallet recognition with EWIS™ chips



# Automating Tool & Die Making

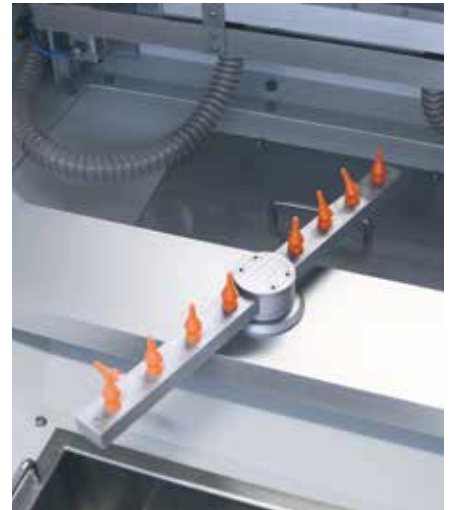
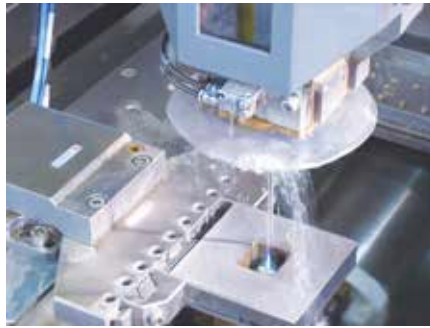
Automation tailored to the requirements of tool and mold manufacture. The Robot Dynamic provides machines of different technologies with workpieces, electrodes and tools. With the process guidance system proven in practical application, the operator is on top of all jobs and priorities.







The process control system, a critical factor for production reliability. It helps the operator to keep track at all times.



Washing, drying and quality measurement. These important steps are fully integrated in the system. At the end, it puts out completely finished workpieces with a quality certificate!



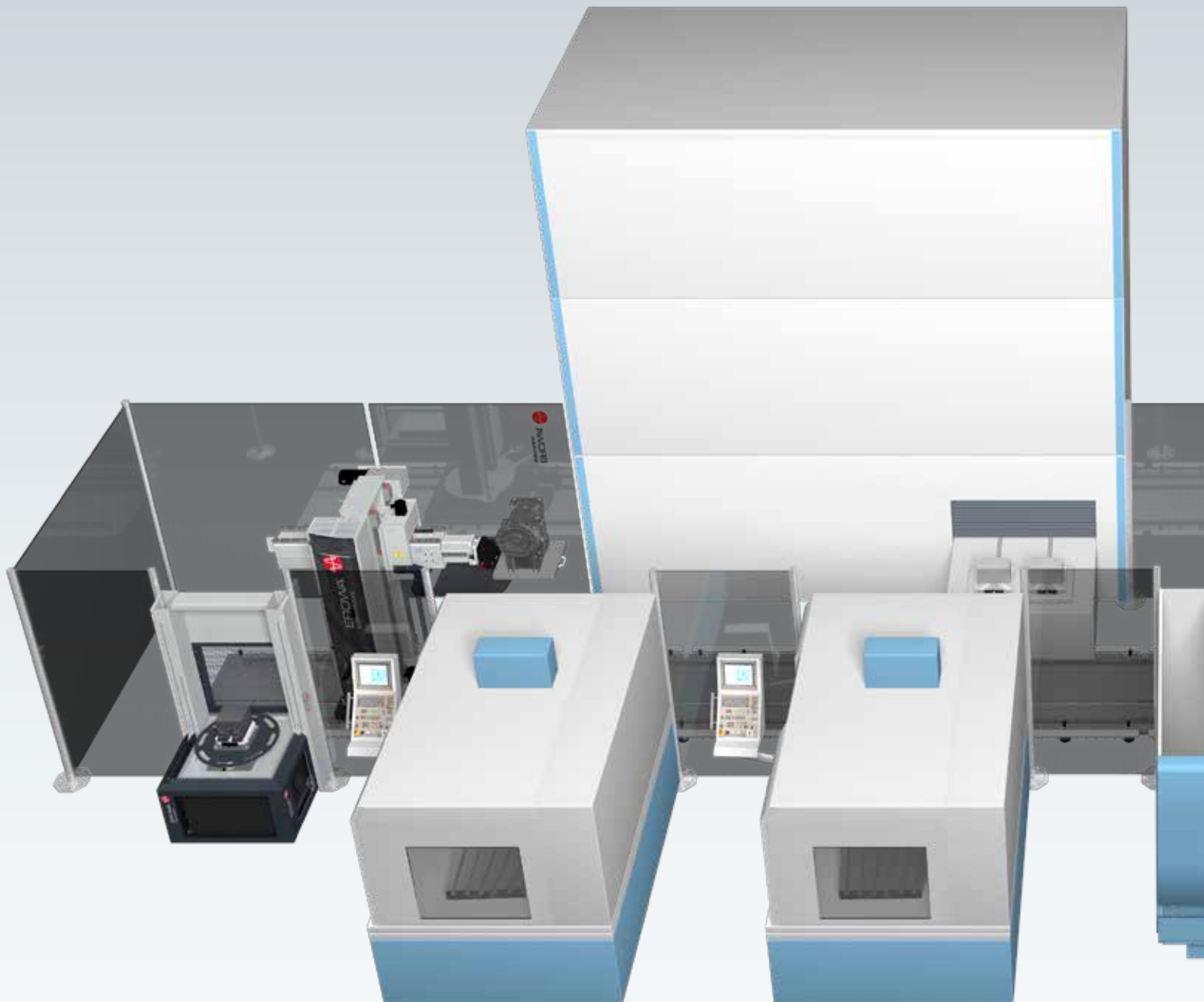
#### FACTS

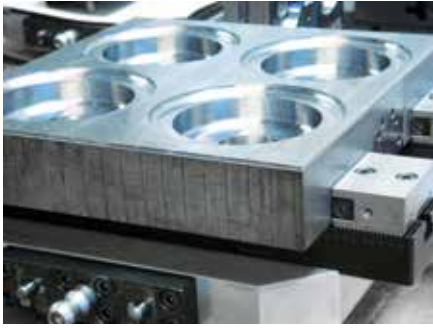
- Controlled sequence of working steps
- Integrated quality measurement
- Automatic manufacturing of single parts

# Automating Part Production

Automation tailored to the requirements of manufacturing. The Robot Dynamic loads CNC machines with workpieces. Vertical magazines are the most space-saving solution when circulating a large number of pallets is required.

The new jobs are prepared at the loading stations. If required, the machined parts are measured on site and delivered with a measuring protocol.





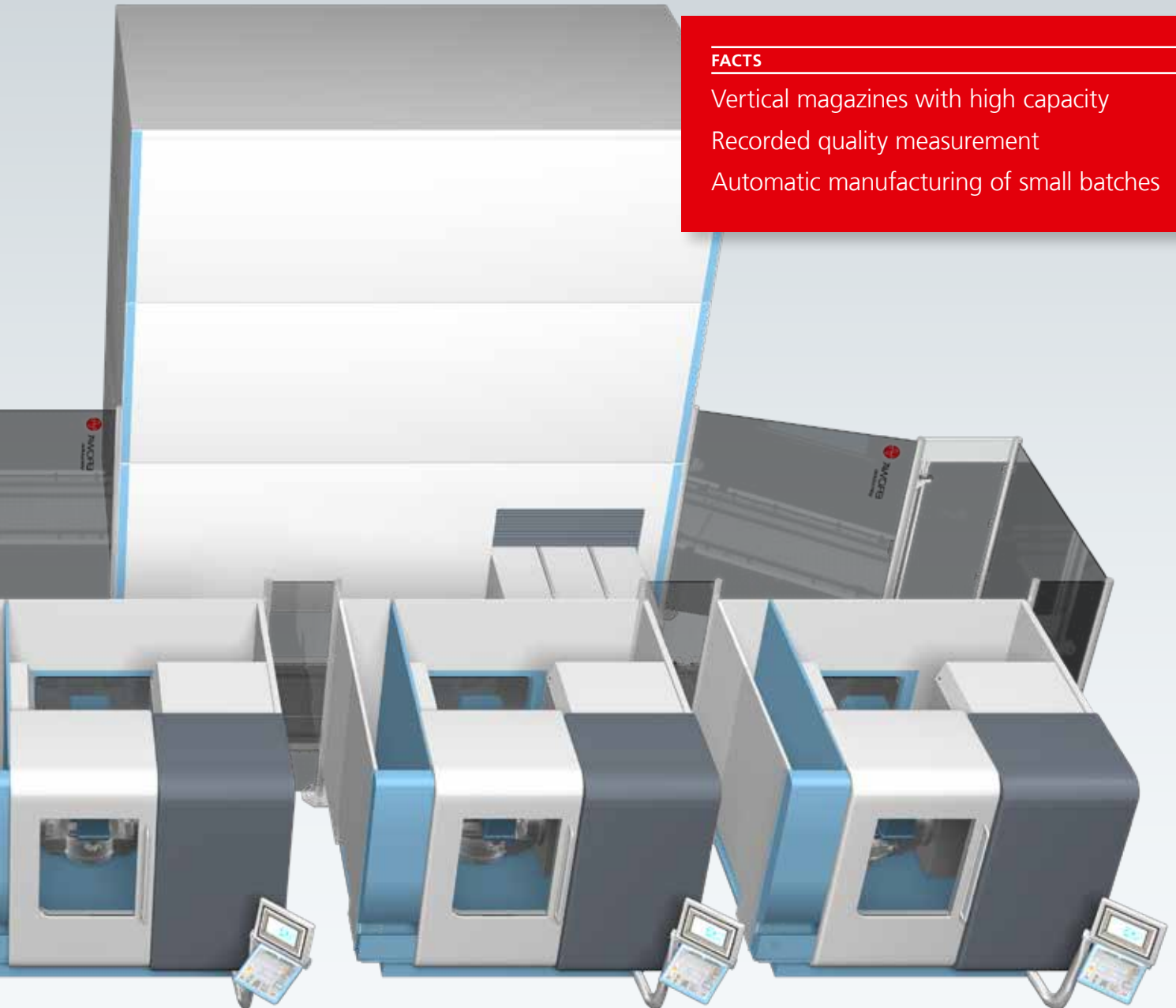
The pallets are equipped depending on the workpiece. Vise, fixture or vacuum clamping plate – EROWA tooling systems get a competent grip on everything.



These days, integrated quality control is a must. Including an EROWA CMM Qi measuring machine in your process line takes care of this requirement.

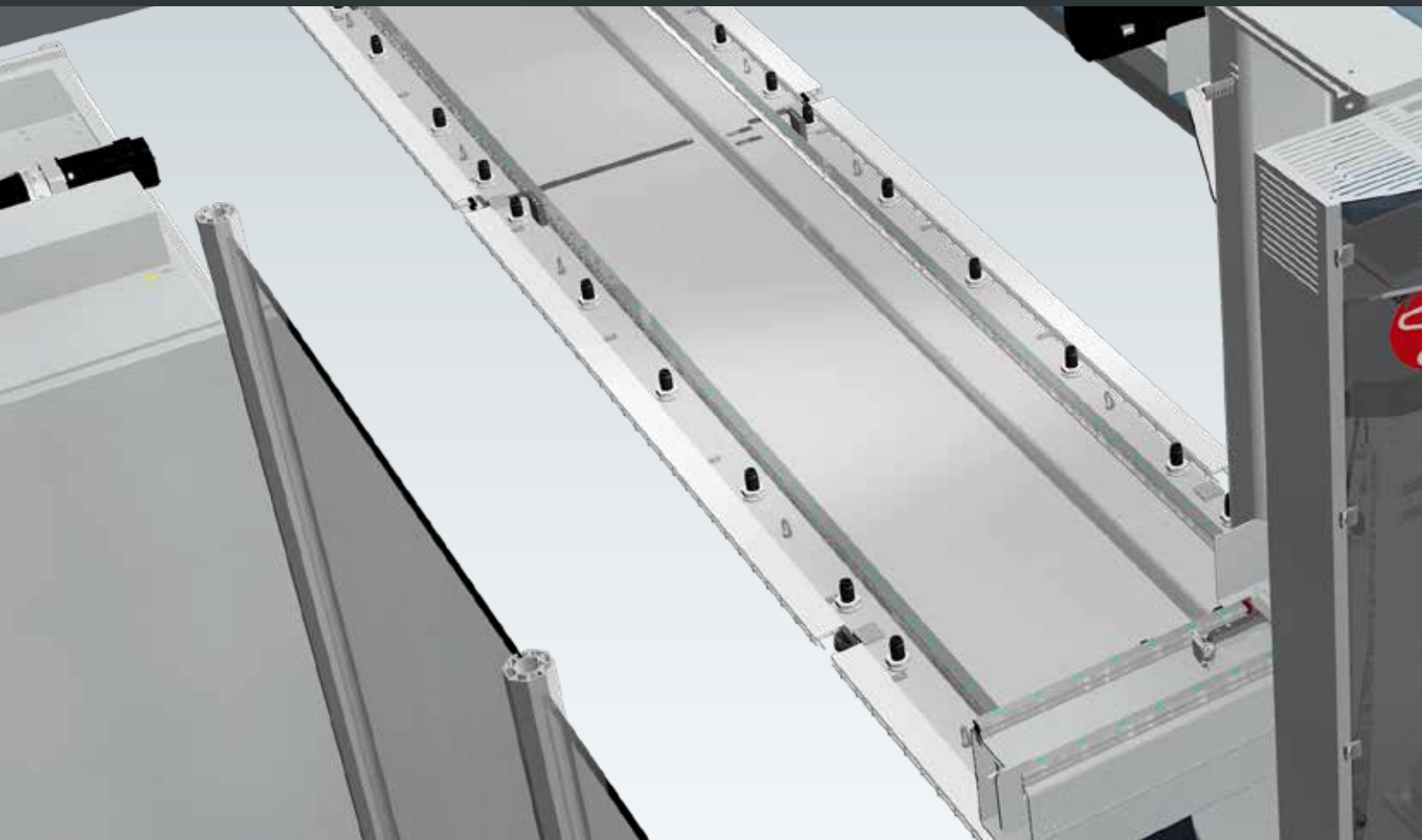
#### FACTS

- Vertical magazines with high capacity
- Recorded quality measurement
- Automatic manufacturing of small batches



# Job Management

One of the basic conditions for automatic manufacturing of small batches and single parts is: having all information available at one glance. The EROWA process control system has been developed for exactly this purpose. All relevant informations and diverse planning aids are available to the machine operator in real-time and on-line.







#### FACTS

Overview and control at any time  
Flexible planning and production  
Automatic, safe data flow

The operator is always being kept in the loop.  
CNC programs, prepared workpieces, tool life and further details are available at the push of a button.



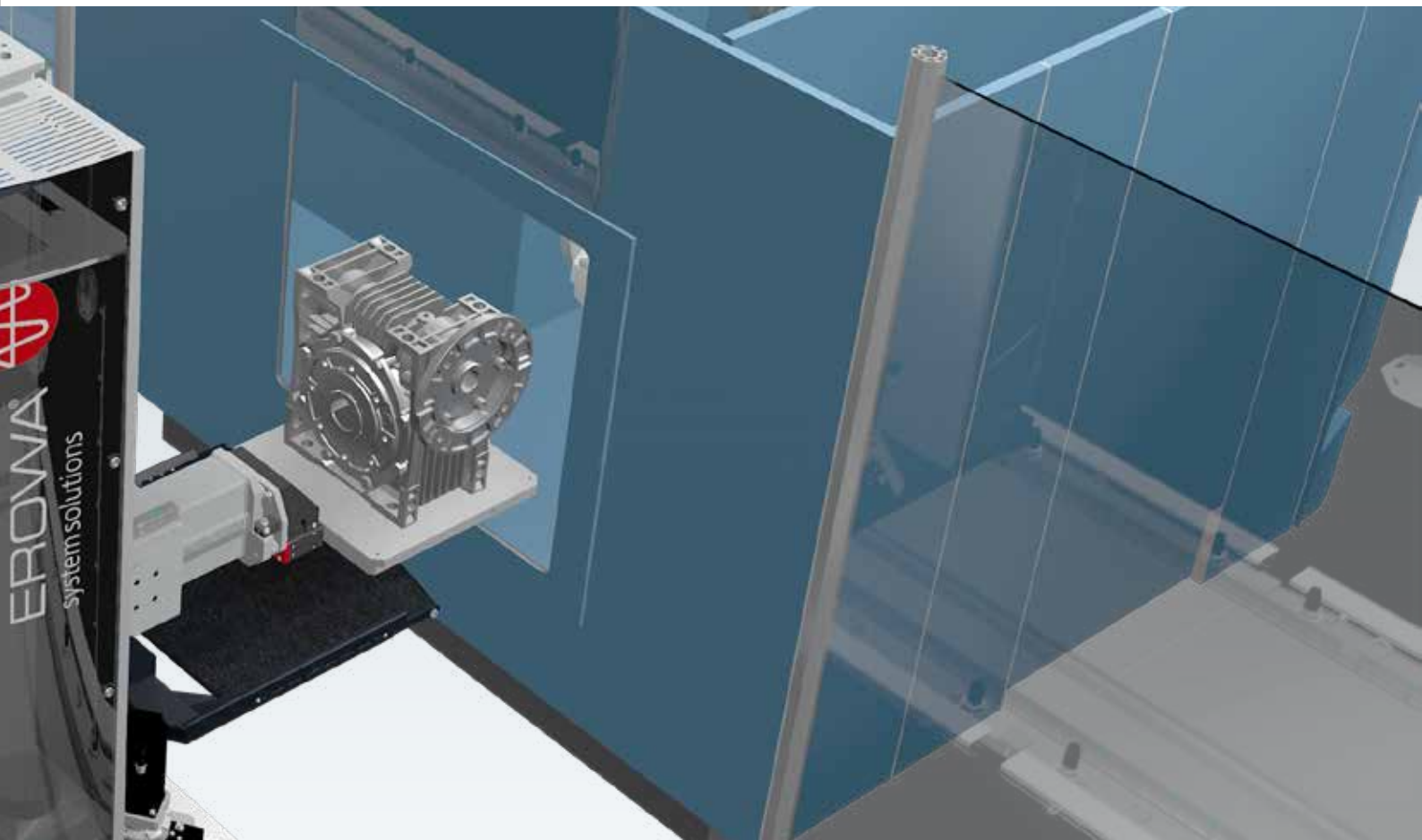
The operator obtains information about the utilization and efficiency of the cell through modules such as Reporting and OEE Dashboard.



Which tools have to be changed before the end of the day? The control system provides answers about tool statuses and remaining running times.



Everything working ok? Various colors clearly indicate the current status.  
Green > OK, Yellow > out of work, Red > error, Blue > finished.



# More than 40 years of experience

Long experience - short start-up.

EROWA robots consist of sophisticated, standardized components. This allows short set-up times.

## Your major benefits

- Everything from one single source
- Experience with more than 5000 robots
- Standardized interfaces to machines
- Long-life systems
- Independent partner
- Integrated safety system
- Perfect service and world-wide installations
- High agility and perfect positioning

## The Facts

- Up to 30 m rail length
- Machines can be positioned on all four sides
- Transfer weight of up to 500 kg
- Transfer axis with large range
- Automatic gripper change depending on pallet size
- Swivel axis with 400 kg max capacity

## The extension options

- More machines
- More magazines
- Cleaning and loading stations
- Setting-up stations with operator guidance
- Tool management
- Connection to CAD/CAM, production planning and control systems
- Fixture management
- Alarming and reporting functions
- OEE dashboard
- Supervision module

RackMagazine Twin



RackMagazine



RackMagazine



RackMagazine



RotaryMagazine



GripperDock



LoadingStation S



LoadingStation L



LoadingStation LS

**TECHNICAL DETAILS****ER-140000****TRANSFERWEIGHT**

WGS Gripper	<b>500 kg*</b>
Workpiece size max.	<b>800 x 800 x 500 mm</b>
Swivel Arm	<b>Yes</b>
Gripper change	<b>Yes</b>

**DIMENSIONS**

Travel X	<b>1950 mm</b>
Travel Z	<b>1520 mm</b>
Travel Y	<b>bis 30 m</b>
Nbr. of machines served	<b>bis 12</b>
Hight of Robot	<b>2960 mm</b>
Minimal ceiling hight	<b>3200 mm</b>

<b>MAGAZINE</b>	<b>NBR. OF LEVELS</b>	<b>LOAD PER LEVEL / MAGAZINE</b>
-----------------	-----------------------	----------------------------------

Rack	max. 20	750 kg / 2000 kg
Rotary	max. 20	650 kg / 2000 kg

**ELEKTRONICS**

Automatic pallet identification	<b>Yes/ EWIST™</b>
Interface to process control	<b>Yes</b>

**SYSTEMGRIPPERS**

WGS gripper for pallets up to 500 kg transfer weight. Interface for all other interchangeable grippers.



RCS gripper for various pallets up to 200 kg.



Fork gripper fixed or interchangeable for MTS 400 or 500. Max. load 500 kg.



PC210 gripper for ITS 148 pallets  
Max. load capacity horizontal/vertical 130 kg



ITS 148 Gripper for ITS 148 pallets.  
Max. horizontal load 40 kg, vertical load 30 kg.



ITS 115 Gripper for ITS 115 pallets.  
Max. horizontal load 40 kg, vertical load 30 kg.



PM 56 Greifer für PM Tooling.  
Tragkraft max. horizontal / vertikal 5 kg.



PM 85 and PM 130 grippers for PM Tooling.  
Max. horizontal load 20 kg, vertical load 10 kg.



Gripper for ITS holder 72.  
Max. horizontal load 20 kg, vertical load 10 kg.



S Gripper for ITS holders  
Max. horizontal load 20 kg, vertical load 10 kg.

\*at 1500 mm reach

# The next step

Important things need to be planned. And your next step is certainly among the important things. It is your start into a new, efficient era. We are pleased to be with you on the way. As consultants, in practice. For you to know at all times what you're engaging in. The next EROWA branch office is not far – **take the step.**



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