EROWA®
systemsolutions

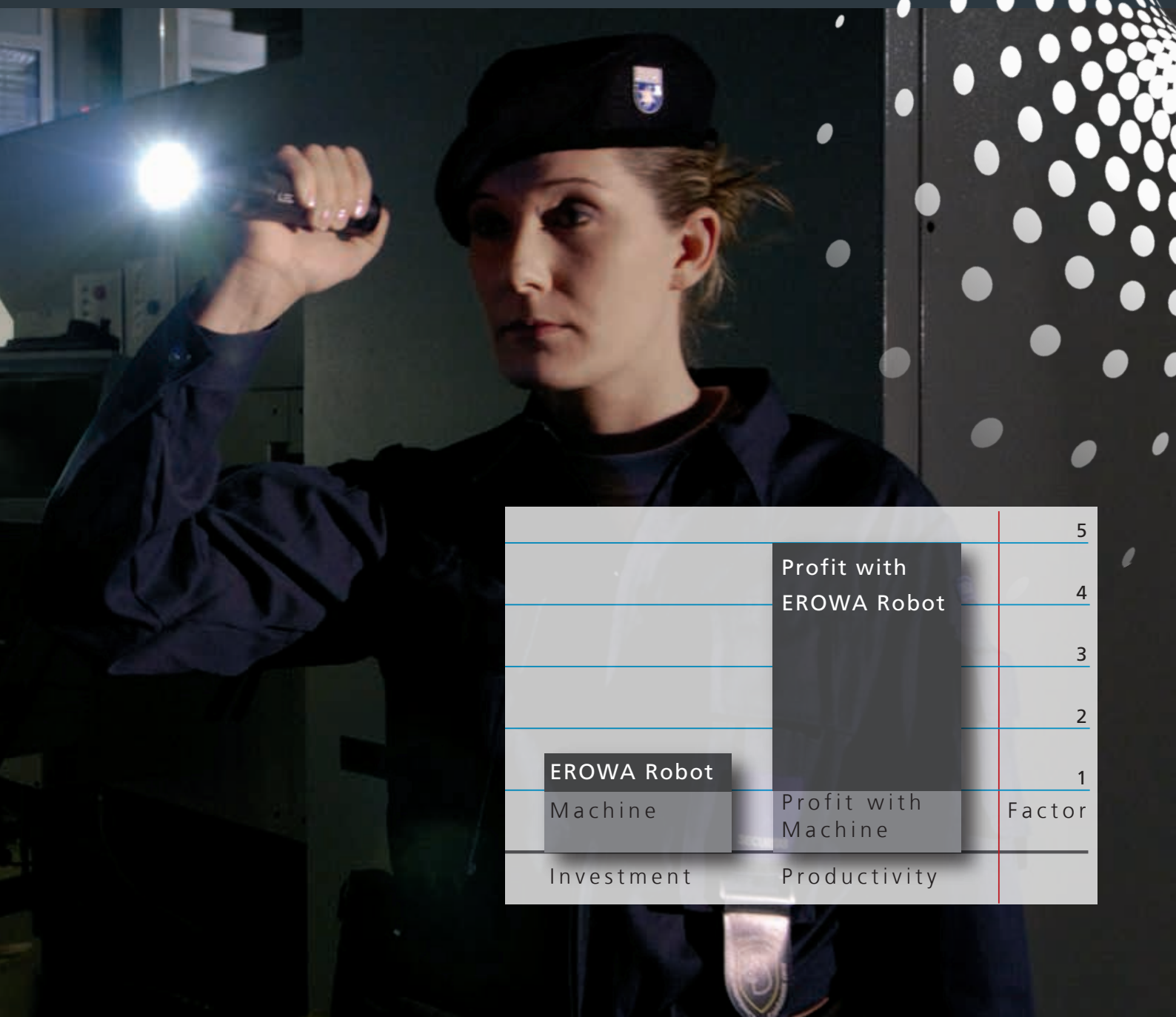
# Robot Dynamic

## Rail system

# Is your production asleep?

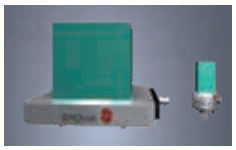
Your machines are profitable when they are producing. They should run during the day, in off-peak hours and at night, even on weekends. Achieving this goal means combining all production requirements in a plan.

The plan is called “Flexible Manufacturing Concept – FMC”.
It is implemented in carefully measured steps.



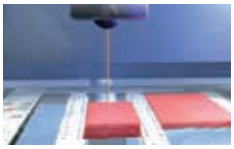




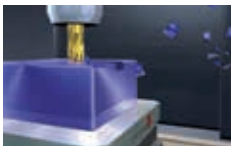




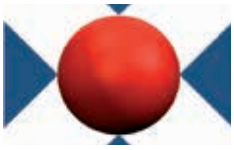








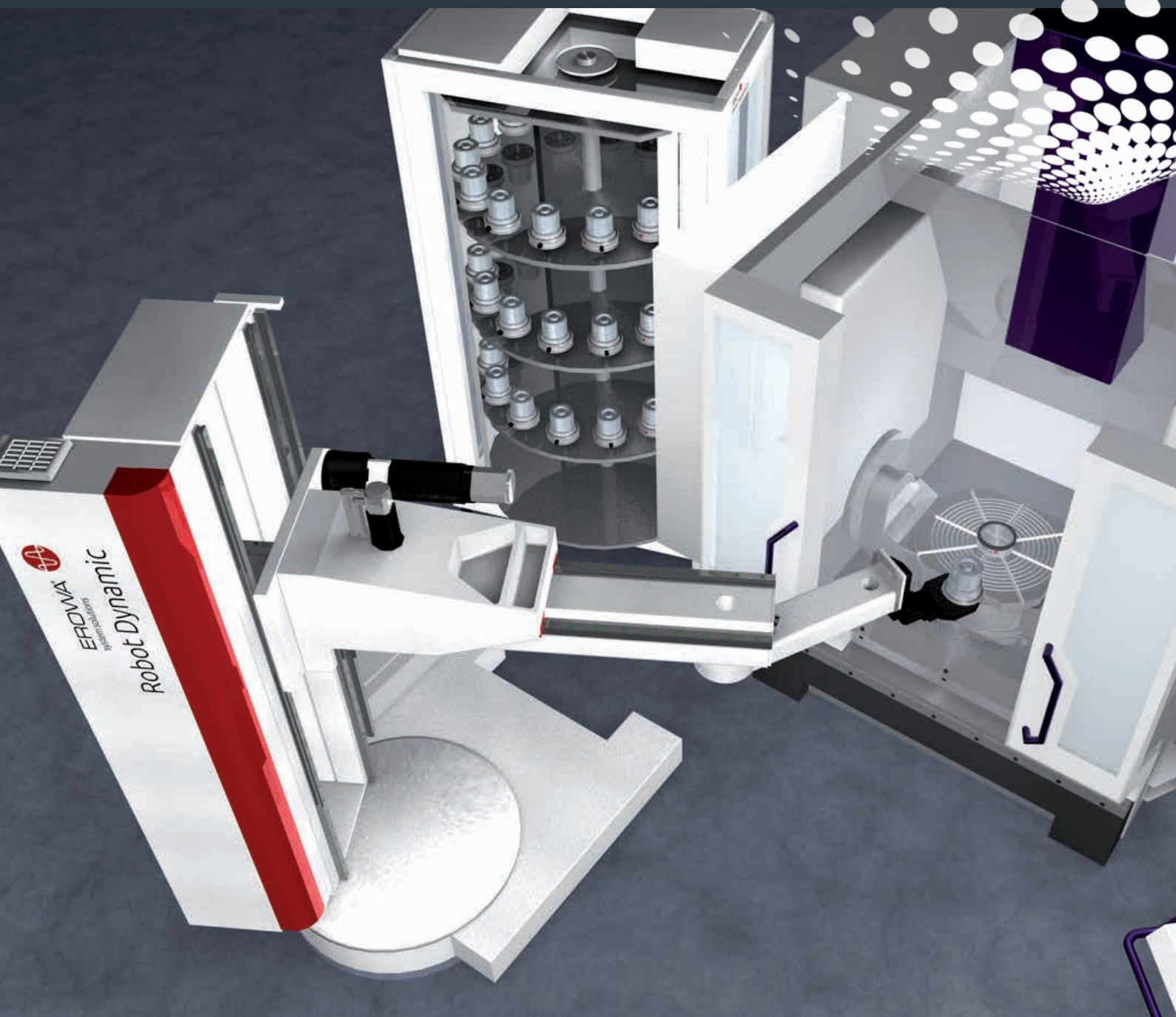






# Loading Around the Corner

The Robot Dynamic is located laterally offset from the machine. Despite loading through the front door, a safe operating zone remains accessible for manual operation.
That is flexibility!



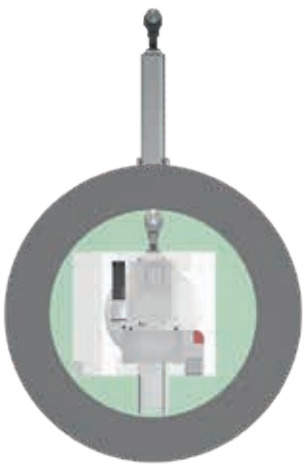
An 2D scanner continuously monitors the operator area. If a person is located in the area, pallet changes are not allowed. If the area is free, the Robot Dynamic loads the machine as planned.

The additional joint allows operating even in a small space.

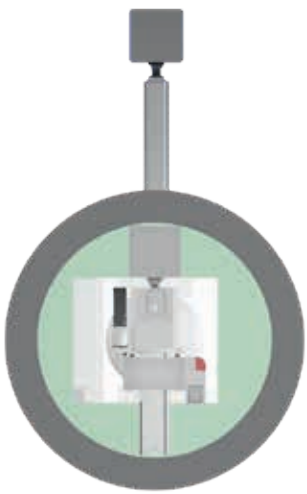
The robot's arm has a long reach of 2,350 mm. This leaves ample space in front of the machine for the operator.

## Teleskop axis with maximum travel and minimal interference contour


While transporting the pallets, the robot travels in a compact, stable position.



**min. interference contour**
**ø 2.1 m - 47 %**



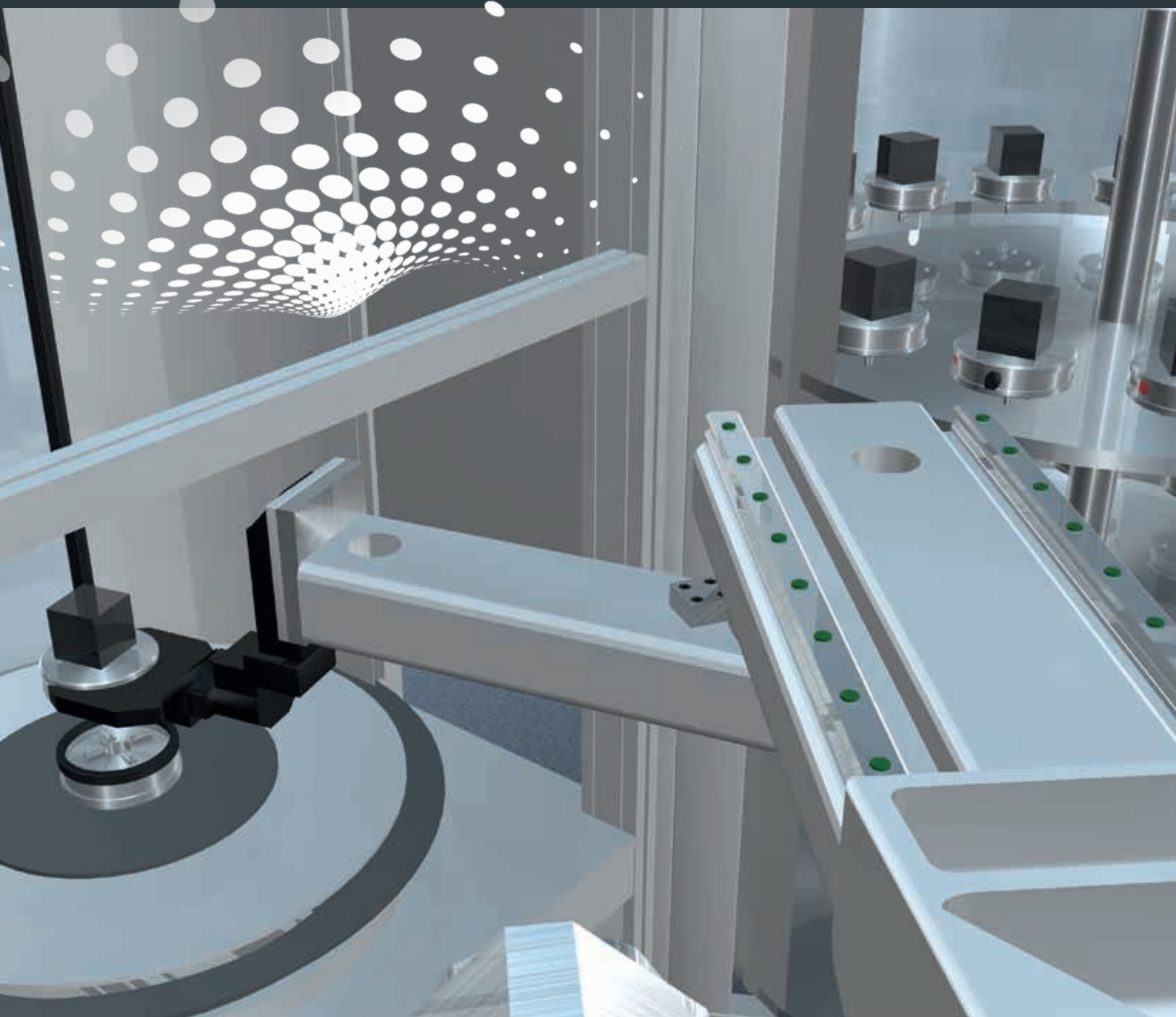
**min. interference contour**
**ø 2.4 m - 28 %**

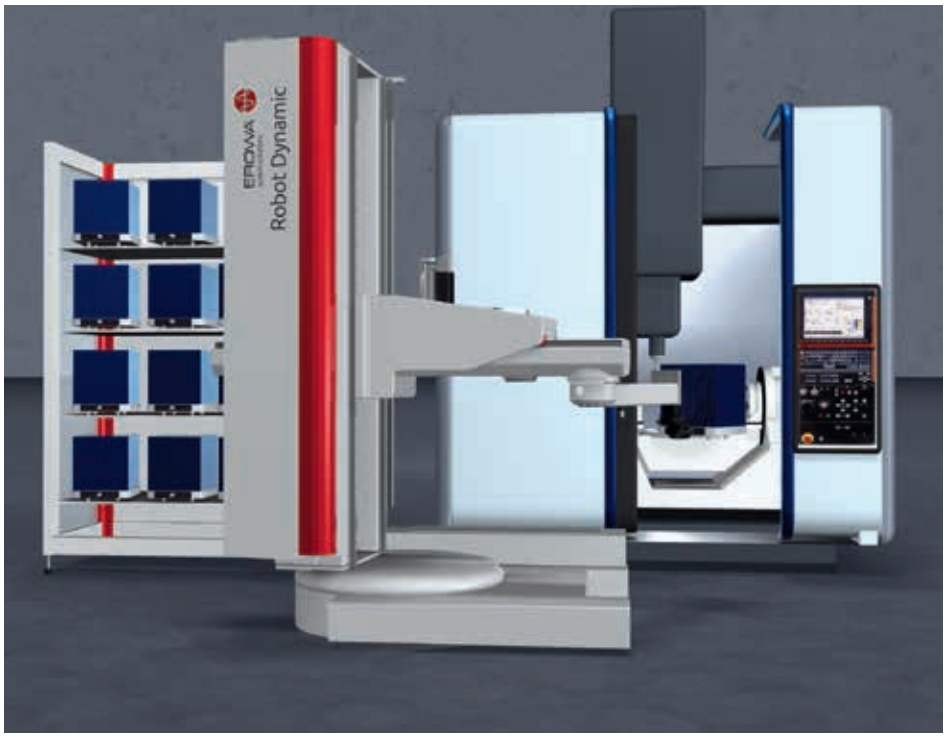
**FACTS**

- Machine is readily accessible
- Large coverage of the robot
- 2D scanner for access safety
- Optimized footprint
- Long range
- All grippers usable

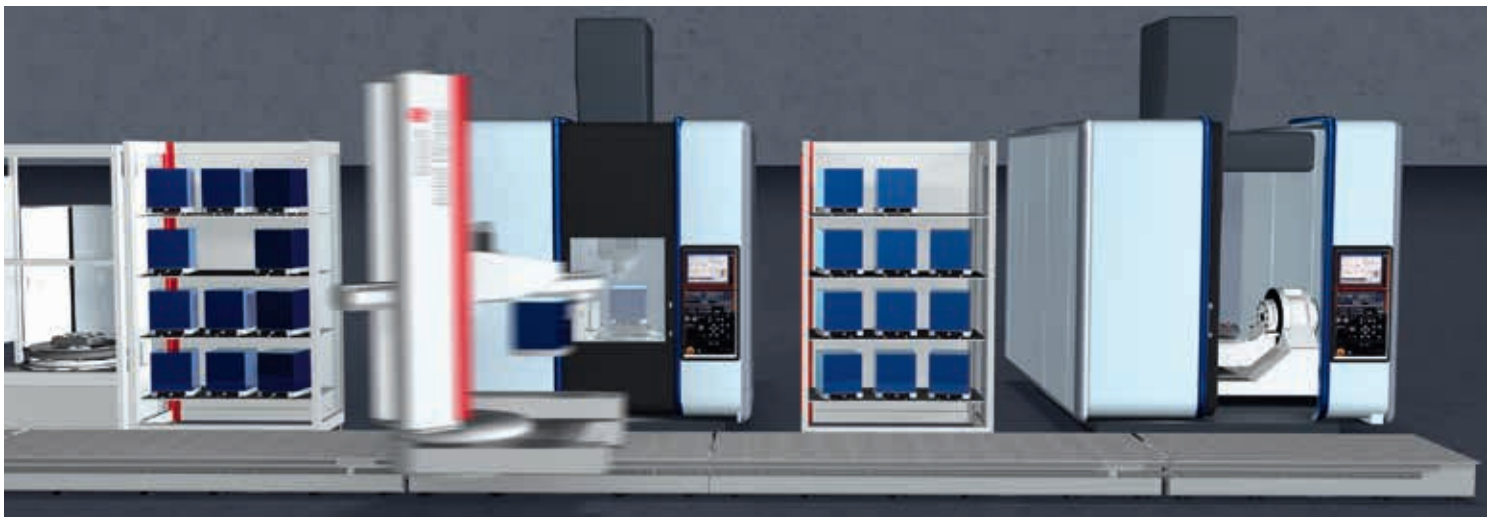
# Extendable

The EROWA Robot Dynamic can always be adapted and extended. The basic investment is protected. So it’s always the right decision to go for the modular concept of the Robot Dynamic.






At a first stage, configure the machine such that hours at night can be utilized for the most part. As one magazine is sufficient, at an average machining time of 30 minutes per workpiece, 5 hours can be utilized productively.



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

**FACTS**

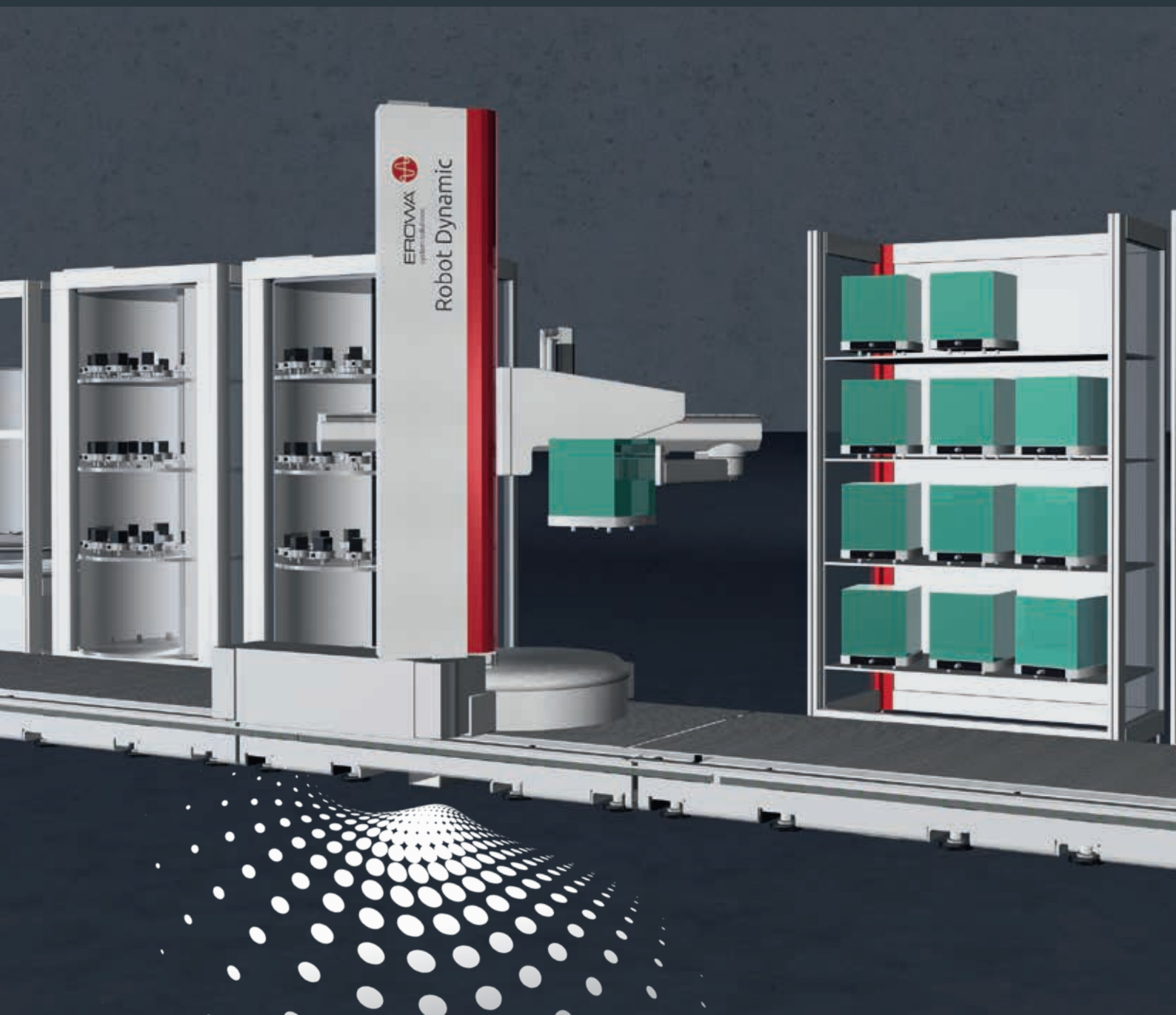
Manageable investment steps

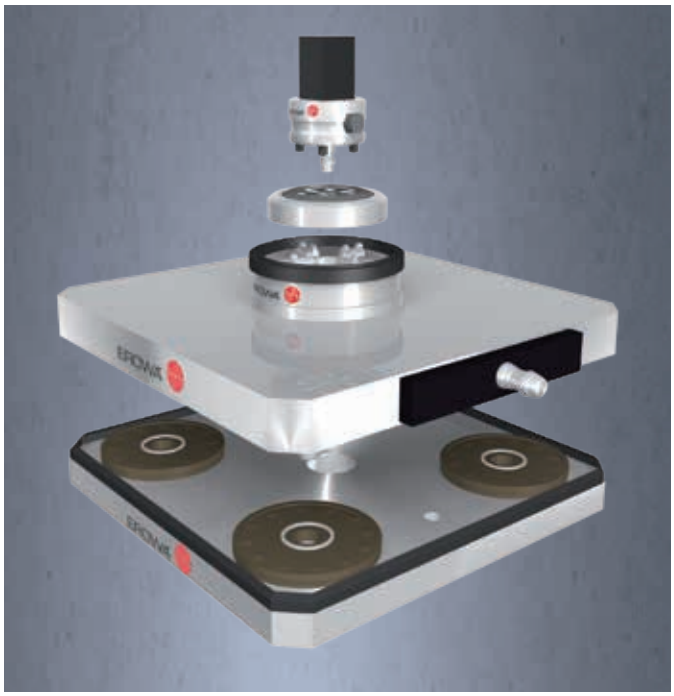
Extendable at any time

The basic investment is protected

# Big and Small

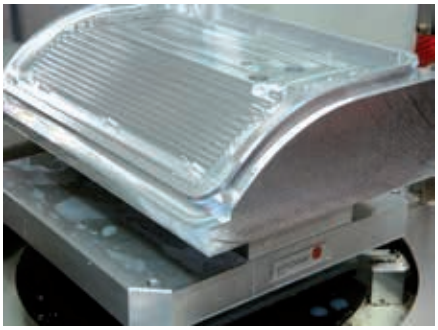
The Robot Dynamic is suitable for loading large and small workpieces. One of the important features for automated manufacturing of single parts and small batches is that the system can switch automatically between different pallet sizes.





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

The right 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 250 kg reliably on to the machine …

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

**FACTS**

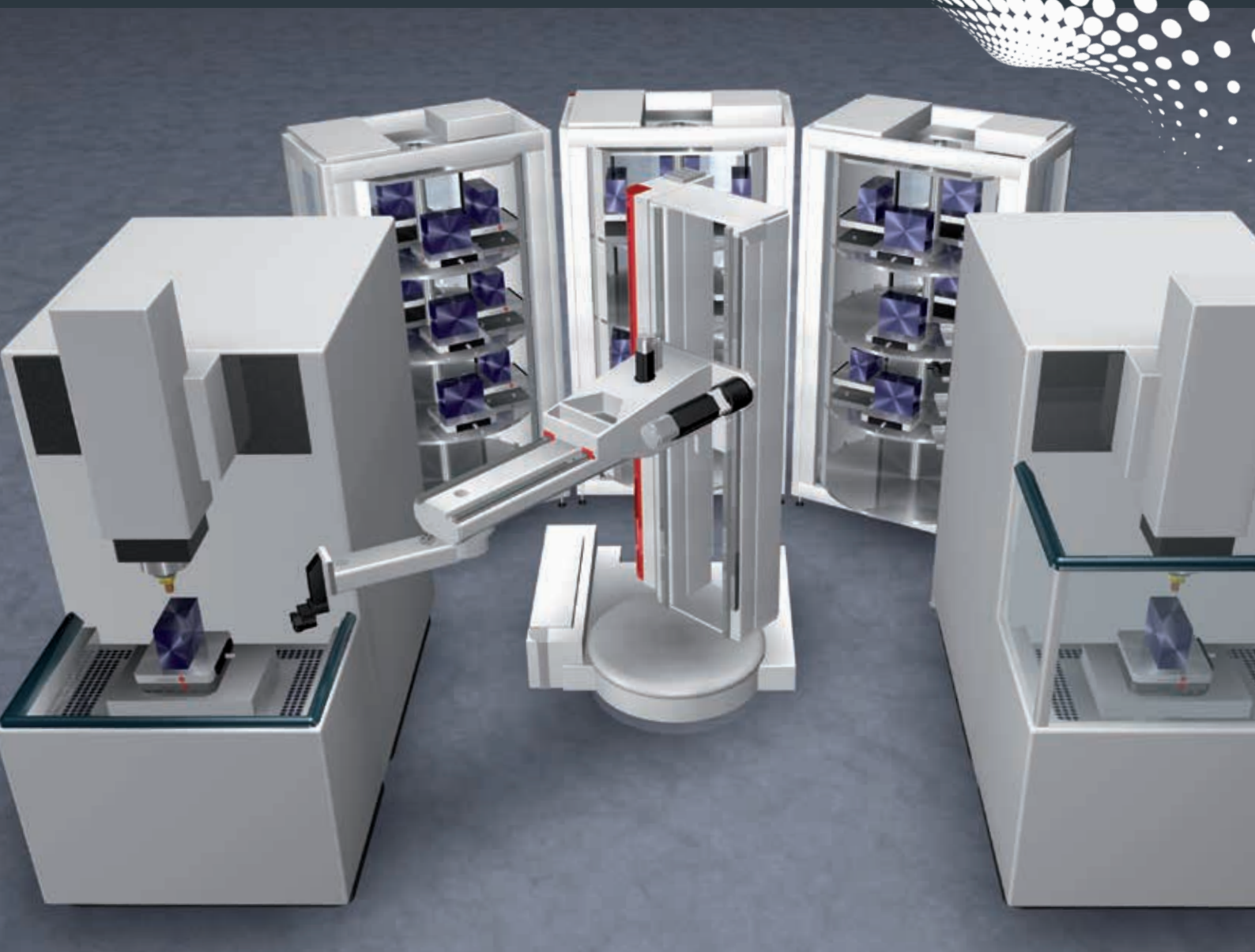
Mixed part sizes in manufacturing

Transfer weight up to 250 kg

Automatic seal management

# The Modules

A Robot Dynamic consists basically of a transfer unit and various magazines. They are supplemented with a gripper pool, loading station, and linear axis. 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 set-up and loading stations. When needed, another magazine is added.

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


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

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

**FACTS**

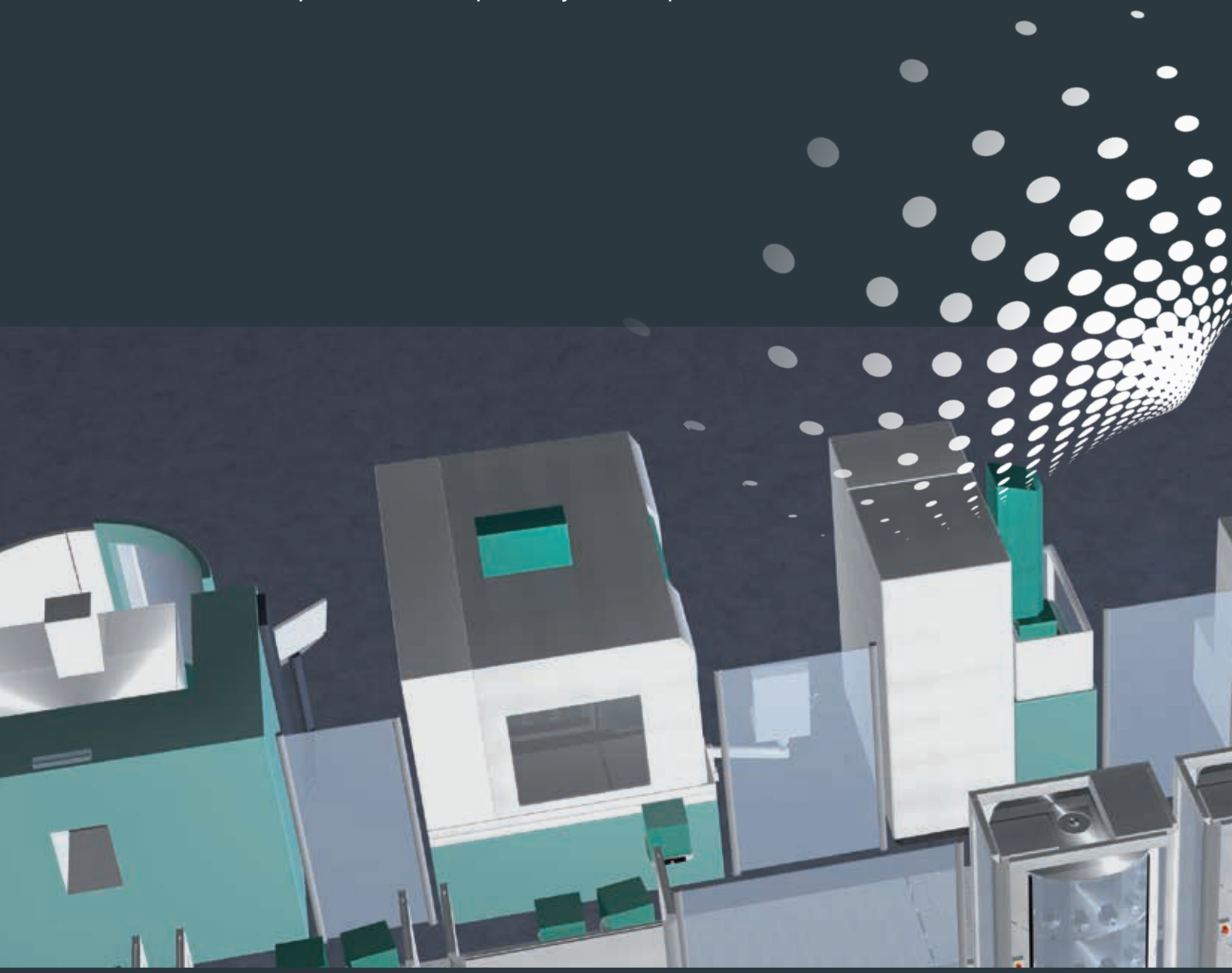
Magazines for all possible EROWA clamping system pallets

Matching setting-up and loading stations

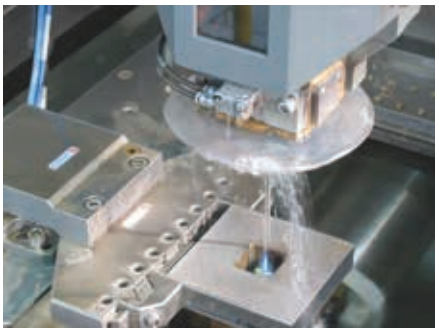
Automatic pallet identification with EWIS™ chips

# Automating Tool and Die making

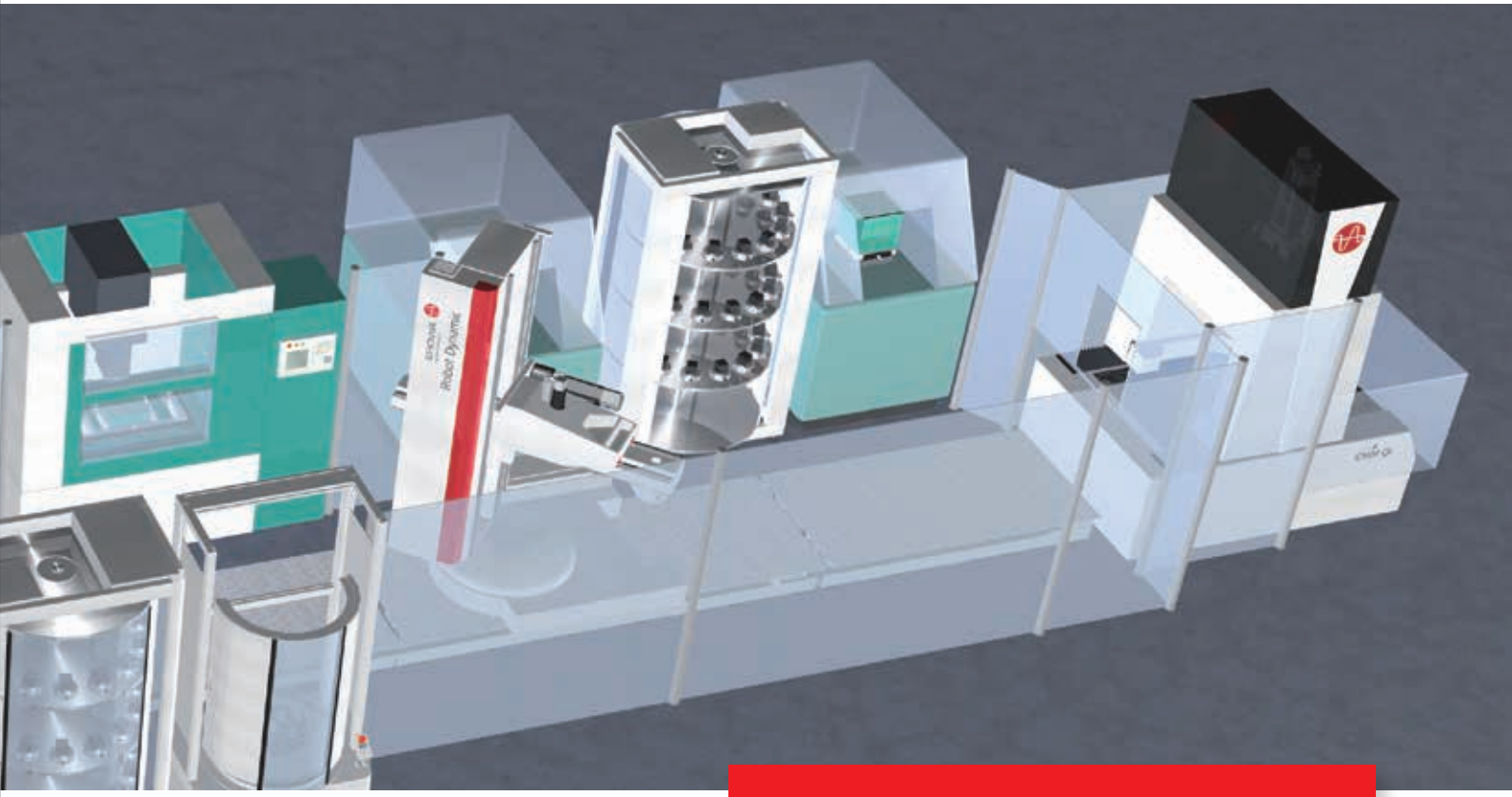
Automation tailored to the requirements of tool and die manufacture. The Robot Dynamic provides machines of different technologies with workpieces, electrodes and tools. With the process guidance system proven in practical application, the operator is on top of all jobs and priorities.



The process control system, a critical factor for production reliability, 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**

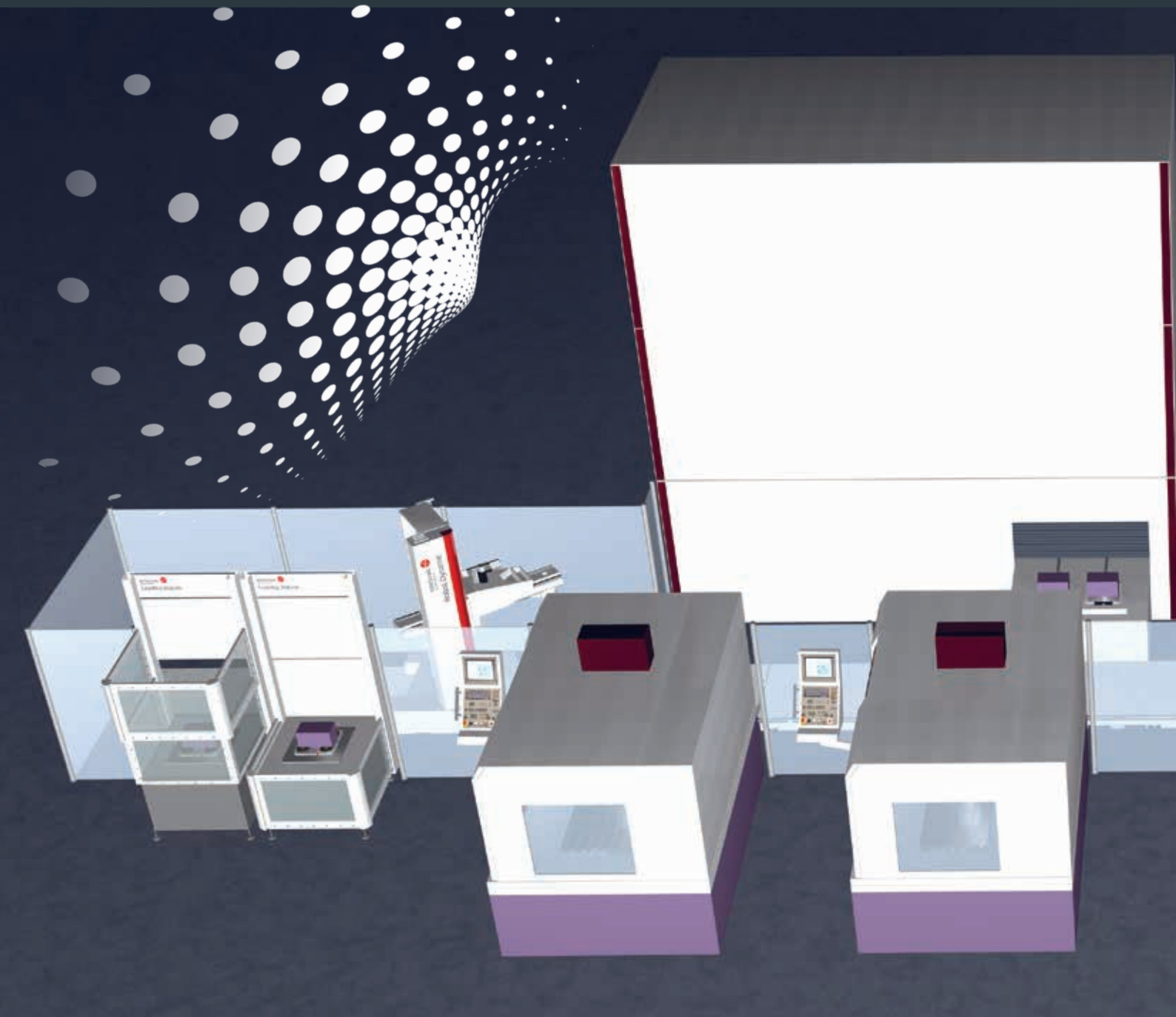
Controlled sequence of steps

Integrated quality measurement

Automatic manufacturing of single parts

# Automating the Production

Automation tailored to the requirements of manufacturing. The Robot Dynamic provides workpieces to CNC machines. Rack magazines are the most space-saving solution when a large number of pallets are to circulate. The new jobs are prepared at the loading stations. If required, the machined parts are delivered with a measurement report.



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. Integrating a Qi measuring station from EROWA in your processing line will take care of this requirement.

**FACTS**

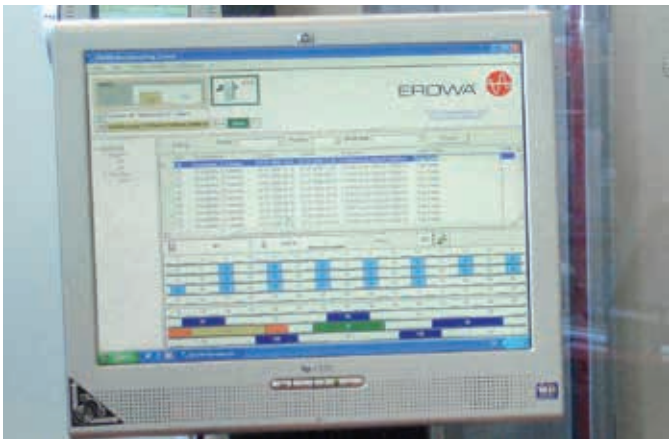
Rack magazines with high capacities

Recorded quality measurement

Automatic manufacturing of small batches

# Line 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 information and diverse planning aids are available to the machine operator in real-time and on-line.



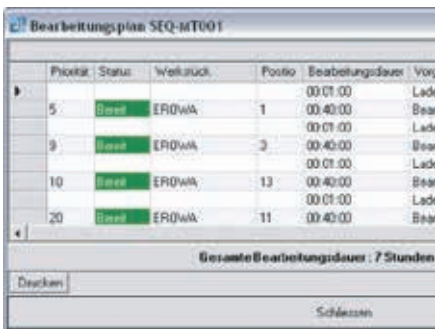
The operator is always being kept in the loop. CNC programmes, prepared workpieces, tool life and further details are available at the push of a button.

**FACTS**

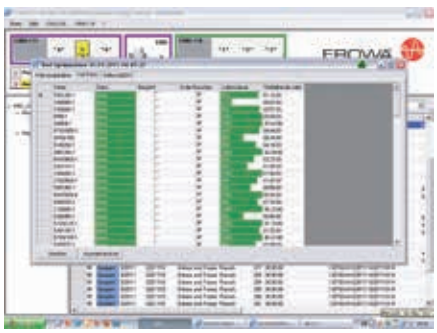
Operation per push of a button

Clear display

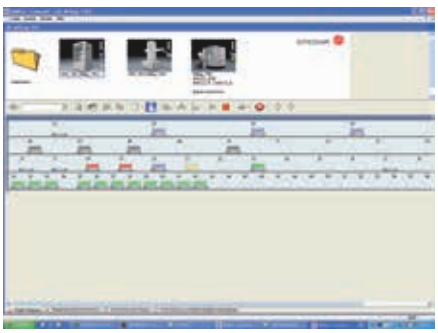
Intuitive graphic interface



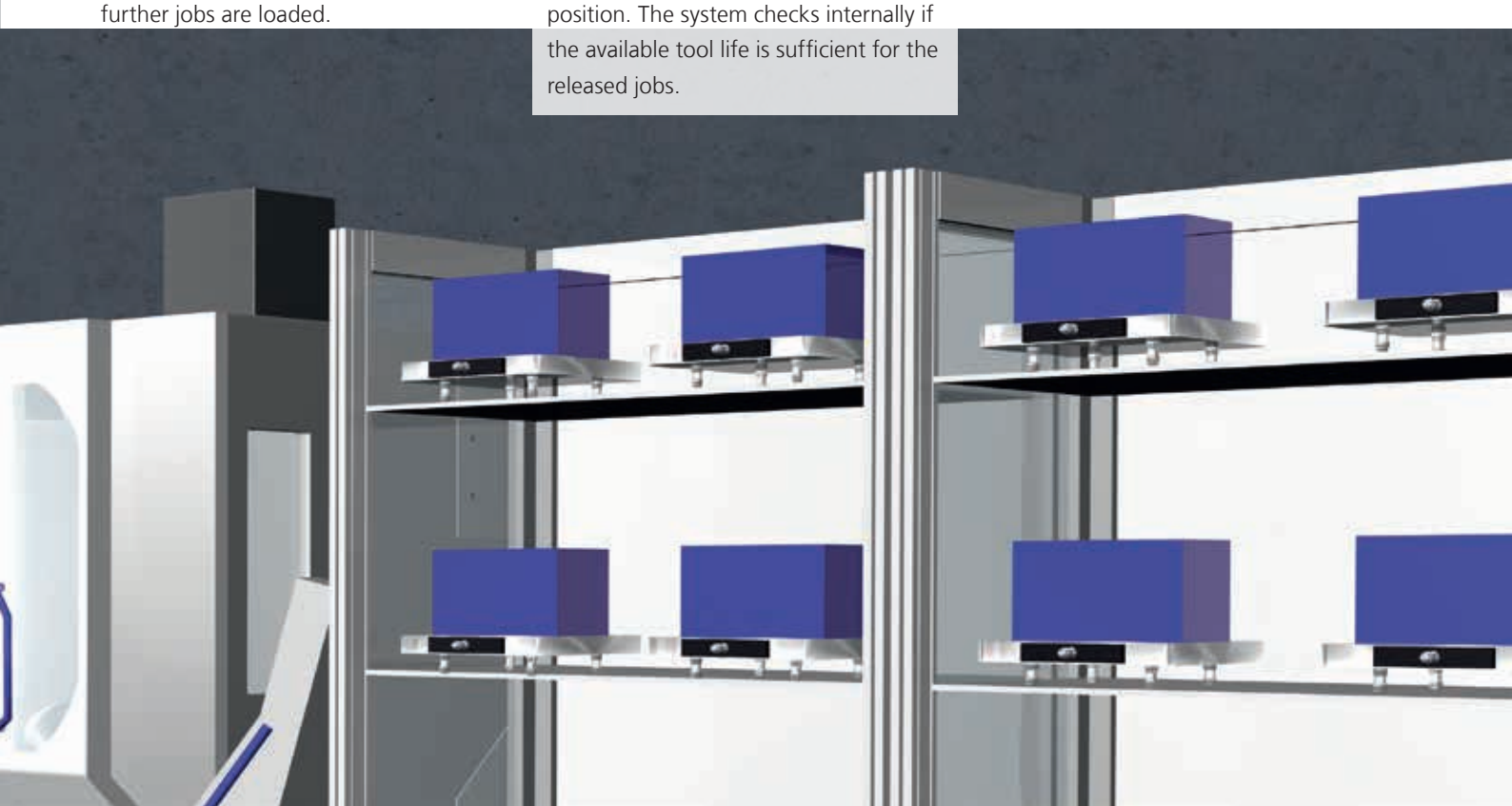

How much time is left in the automatic cell cycle? Information by mouse click. Depending on what the display shows, further jobs are loaded.



Which tools have to be changed before the end of the day? The display shows exactly how much tool life is left at which position. The system checks internally if the available tool life is sufficient for the released jobs.



How are we doing? Dif-ferent colors clearly indicate the current status.



# 25 Years of Experience

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

## Your critical benefits

- Everything from one single source
- Experience with over 3000 robots
- Standard machine interface
- Long-life systems
- Independent partner
- Integrated safety system
- Perfect service with worldwide presence
- Integrated swivel axis horizontal / vertical
- Superior dynamics and perfect positionning

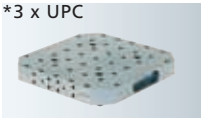
## The Facts

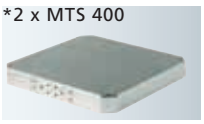
- Up to 20 m rail length
- Machines can be positioned on all four sides
- Transfer weight up to 250 kg
- Transfer axis with long range
- Telescopic axis for optimal use of space
- Automatic gripper change depending on pallet size

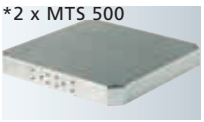
## Extension options

- More machines
- More magazines
- Cleaning, loading or set-ting-up stations
- Loading station with user guide
- Tool management
- Connection to CAD/CAM and production planning and control systems
- Fixture management

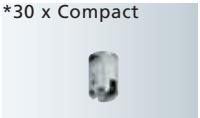
ERD Rack Magazine

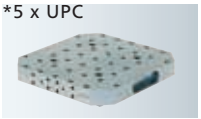


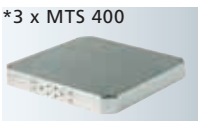




ERD Rotary Magazine













* Number of possible magazine positions per level or plate

## TECHNICAL DETAILS

### TRANSFER WEIGHT

| | |
|---|---|
| RCS | **130 kg** |
| Fixed gripper | **250 kg** |
| Telescopic X-axis | **200 kg** |
| Swivelarm | **yes** |
| Gripper change | **yes** |

### DIMENSIONS

| | |
|---|---|
| Gripper movement X | **1500 mm** |
| Telescopic movement X | **1950 mm** |
| Gripper movement X/D | **2350 mm** |
| Gripper movement Z | **1750 mm** |
| Gripper movement Y | **up to 20 m** |
| No. of machines | **up to 8** |
| System height | **3250 mm/with linear axis 3550 mm** |
| Space height min. | **3800 mm for Linear** |

| MAGAZINES | LEVELS | LOAD PER LEVEL / MAGAZINE |
|---|---|---|
| Rack | max. 9 | 750 kg / 2000 kg |
| Rotary | max. 9 | 650 kg / 2000 kg |

### ELECTRONIC SYSTEM

| | |
|---|---|
| Automatic pallet identification | **yes / EWIS™** |
| Process control system | **yes** |

## SYSTEM GRIPPERS

Fixed gripper for MTS 400 or 500.
Load capacity horizontally 250 kg.

RCS 5 gripper for MTS, UPC, PalletSet W and FrameSet. At the same time, interface for all other exchange grippers. Load capacity horizontally/vertically max. 130 kg. Reduced axis travel speed at 200 kg.

PC210 gripper for PC210 pallets with ring groove.
Load capacity horizontally/vertically max. 130 kg.

ITS 148 gripper for ITS 148 pallets.
Load capacity horizontally max. 40 kg,
vertically max. 30 kg.

ITS 115 gripper for ITS 115 pallets.
Load capacity horizontally max. 40 kg,
vertically max. 30 kg.

PM 56 gripper for PM tooling.
Load capacity horizontally/vertically max. 5 kg.

PM 85 and PM 130 gripper for PM tooling.
Load capacity horizontally max. 20 kg,
vertically max. 10 kg.

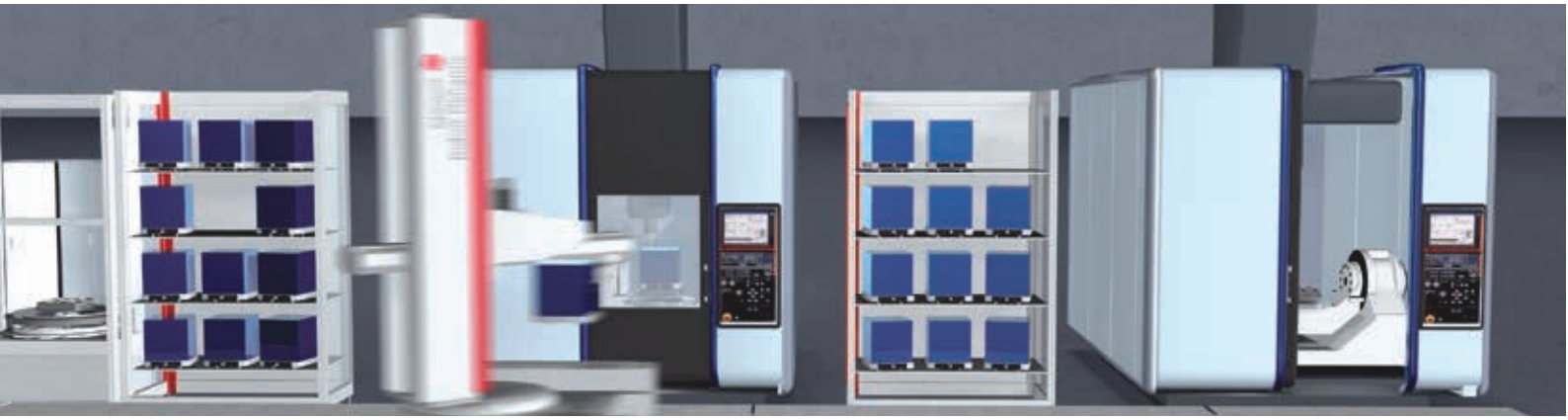
Gripper for ITS holder 72. Load capacity horizontally max. 20 kg, vertically max. 10 kg.

S gripper for ITS holder Load capacity horizontally max. 20 kg, vertically max. 10 kg.

Combo gripper for ITS and Compact tooling.
Load capacity horizontally max. 8 kg, vertically max. 5 kg.

# 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.**




**USA**
EROWA Technology, Inc.
North American Headquarters
2535 South Clearbrook Drive
Arlington Heights, IL 60005
USA
Tel. 847 290 0295
Fax 847 290 0298
e-mail: info@erowa.com
www.erowa.com

**Italy**
EROWA Tecnologie S.r.l.
***Sede Legale e Amministrativa:***
Via Alfieri Maserati 48
IT-10095 Grugliasco (TO)
Italy
Tel. 011 9664873
Fax 011 9664875
info@erowa.it
www.erowa.com

Unità di Treviso:
Via Leonardo Da Vinci 8
IT-31020 Villorba (TV)
Italy
Tel. 0422 1627132

**Singapore**
EROWA South East Asia Pte. Ltd.
56 Kallang Pudding Road
#06-02, HH@Kallang
Singapore 349328
Singapore
Tel. 65 6547 4339
Fax 65 6547 4249
sales.singapore@erowa.com
www.erowa.com

**Japan**
EROWA Nippon Ltd.
Sibadaimon Sasano Bldg.
2-6-4, Sibadaimon, Minato-ku
105-0012 Tokyo
Japan
Tel. 03 3437 0331
Fax 03 3437 0353
info@erowa.co.jp
www.erowa.com

**Switzerland**
EROWA AG
Knutwilerstrasse 3
CH-6233 Büron
Switzerland
Tel. 041 935 11 11
Fax 041 935 12 13
info@erowa.com
www.erowa.com

**France**
EROWA Distribution France Sàrl
PAE Les Glaisins
12, rue du Bulloz
FR-74940 Annecy-le-Vieux
France
Tel. 4 50 64 03 96
Fax 4 50 64 03 49
erowa.france@erowa.com
www.erowa.com

**Spain**
EROWA Technology Ibérica S.L.
c/ Avda. Cornellá, 142 7º 3ª ext.
E-08950 Esplugues de Llobregat - Barcelona
Spain
Tel. 093 265 51 77
Fax 093 244 03 14
erowa.iberica.info@erowa.com
www.erowa.com

**China**
EROWA Technology (Shanghai) Co., Ltd.
G/F, No. 24 Factory Building House
69 Gui Qing Road (Caohejing Hi-tech Park)
Shanghai 200233, PRC
China
Tel. 021 6485 5028
Fax 021 6485 0119
info@erowa.cn
www.erowa.com

**Germany**
EROWA System Technologien GmbH
Gewerbegebiet Schwadermühle
Roßendorfer Straße 1
DE-90556 Cadolzburg/Nbg
Germany
Tel. 09103 7900-0
Fax 09103 7900-10
info@erowa.de
www.erowa.de

**Scandinavia**
EROWA Technology Scandinavia A/S
Fasanvej 2
DK-5863 Ferritslev Fyn
Denmark
Tel. 65 98 26 00
Fax 65 98 26 06
info.scandinavia@erowa.com
www.erowa.com

**Eastern Europe**
EROWA Technology Sp. z o.o.
Eastern Europe
ul. Spółdzielcza 37-39
55-080 Kąty Wrocławskie
Poland
Tel. 71 363 5650
Fax 71 363 4970
info@erowa.com.pl
www.erowa.com

**India**
EROWA Technology (India) Private Limited
No: 6-3-1191/6, Brij Tarang Building
Unit No-3F, 3rd Floor, Greenlands, Begumpet,
Hyderabad 500016 (Telangana)
India
Tel. 040 4013 3639
Fax 040 4013 3630
sales.india@erowa.com
www.erowa.com





EROWA AG 071398-01 en / 07.17


EROWA system solutions