

Transformer – WorkMaster



System 3R

When all you need is everything, it's good to know that there is one company that you can count on to deliver complete solutions and services. System 3R equips world-class electrical discharge machines (EDM), Laser texturing and Additive Manufacturing through to first-class Milling by Tooling, Automation and software systems — all backed by unrivalled customer service and support — we, help you raise your game and increase your competitive edge.

Swedish design and quality

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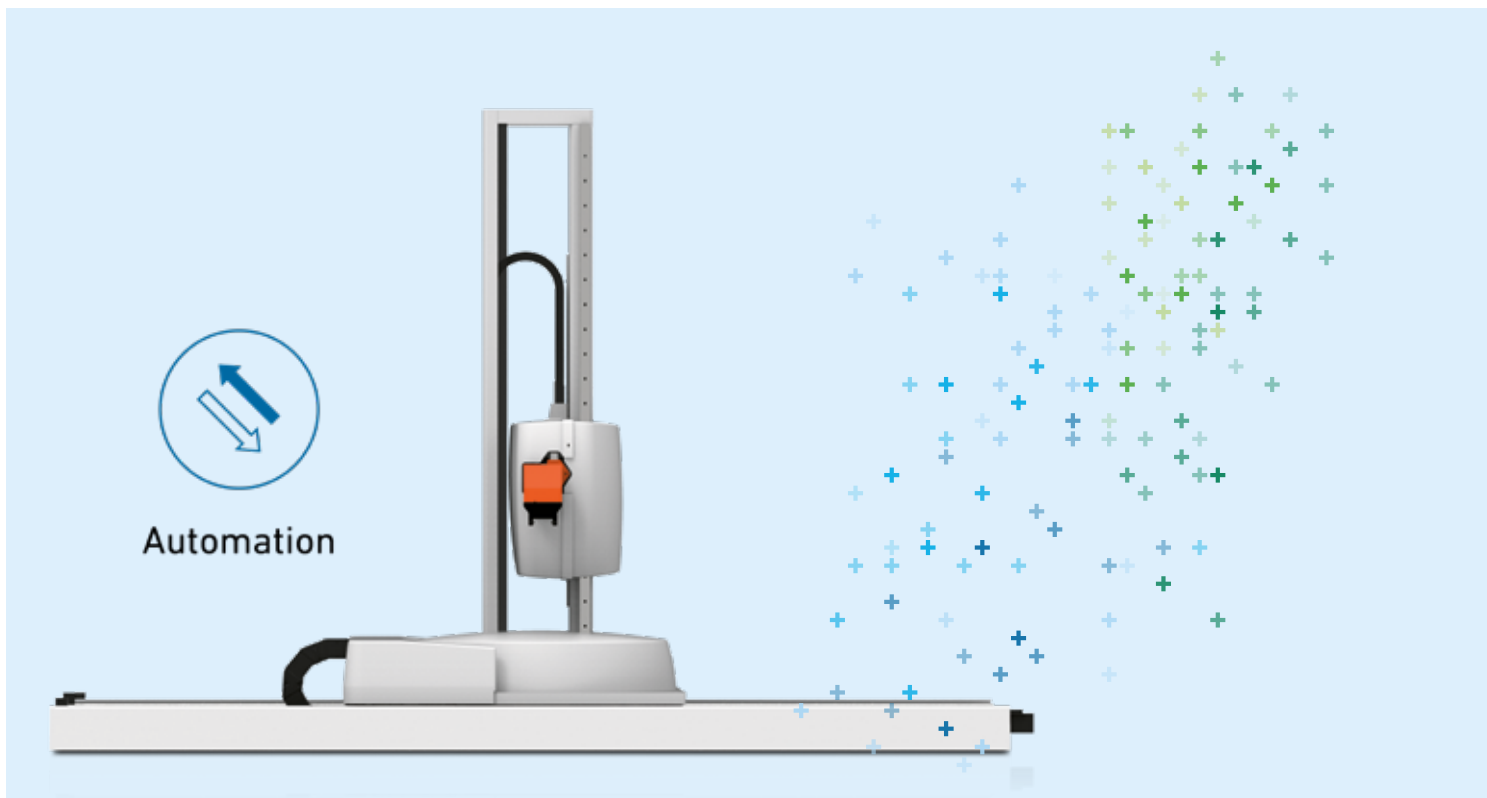
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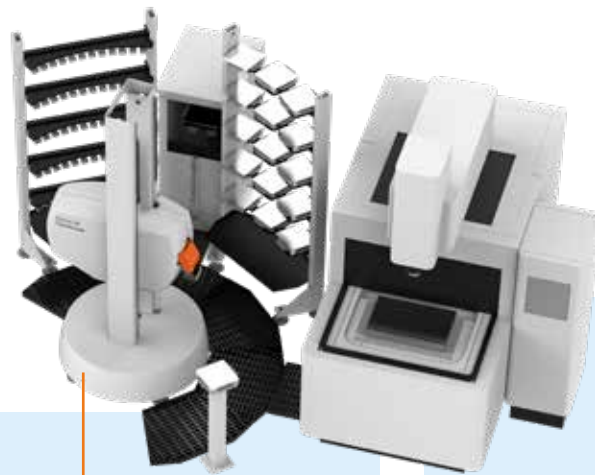
Transform Your Business

- + Scalable Automation solutions for various types of machines from a multitude of machine tool manufacturers.
- + Whatever the Automation requirement, the Transformer can be tailored to serve your needs: customer-specific solutions.
- + Modern design and smart technical solutions using standardized modules allow for cost-effective yet flexible Automation.
- + User-friendly cell management software complex Automation made easy!

Achieve greater return on your investment !

Scalable Automation

Grows with your needs

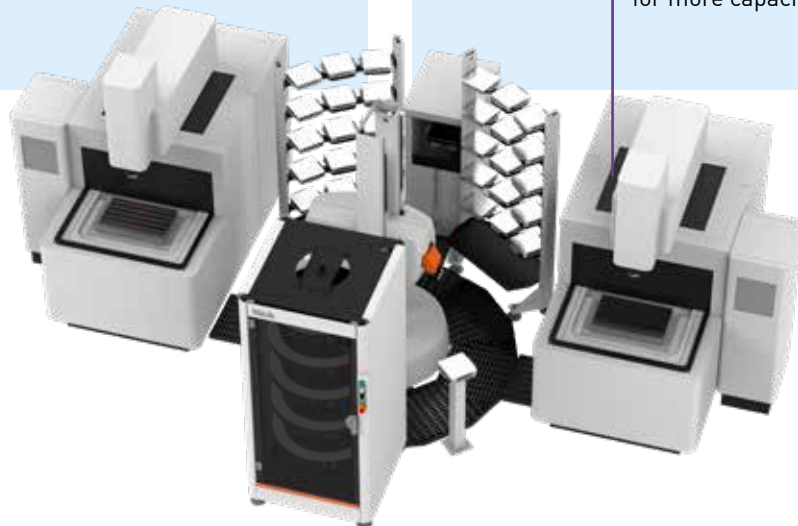


Begin with a single machine and small magazine capacity.

Begin

Add

Add a second machine and a rotary magazine for more capacity.



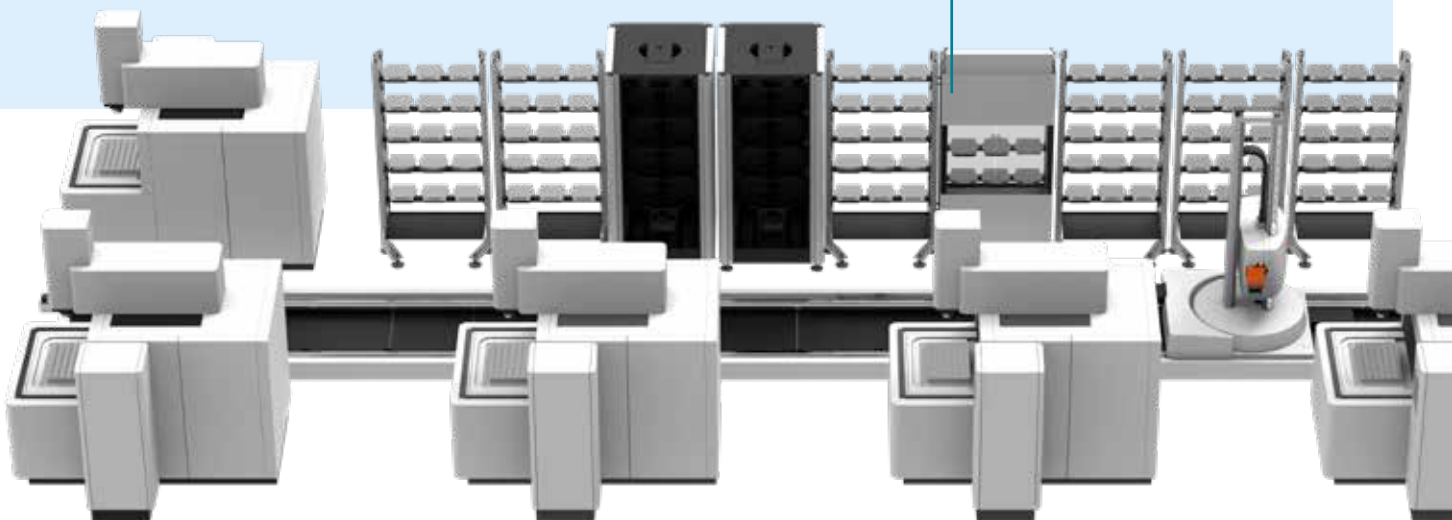


Place the Transformer on rails and add magazine capacity to serve additional machines, or start with a similar solution from the beginning.

E X T E N D

and Transform

Extend the rails for even more magazine capacity and machines.



Customer-specific Solutions

Tailored to serve your needs

Milling application

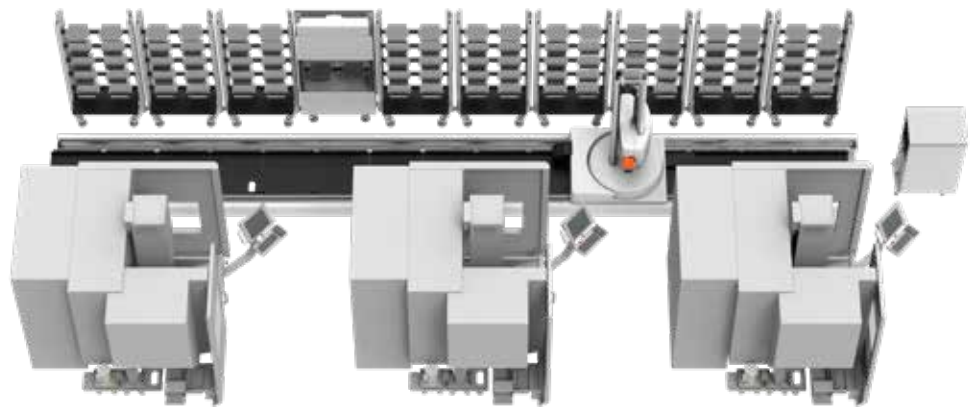
- Three Milling machines
- Rack magazines
- Multiple loading station
- Draining station



Automation



Milling



Wire-cutting EDM (WEDM) application

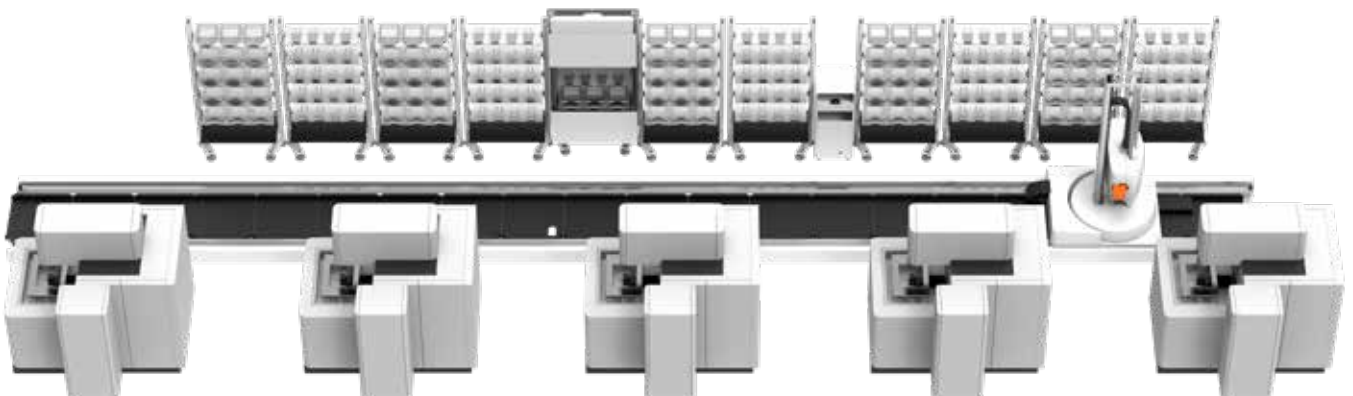
- Five WEDM machines
- Rack magazines
- Loading station
- Drying station

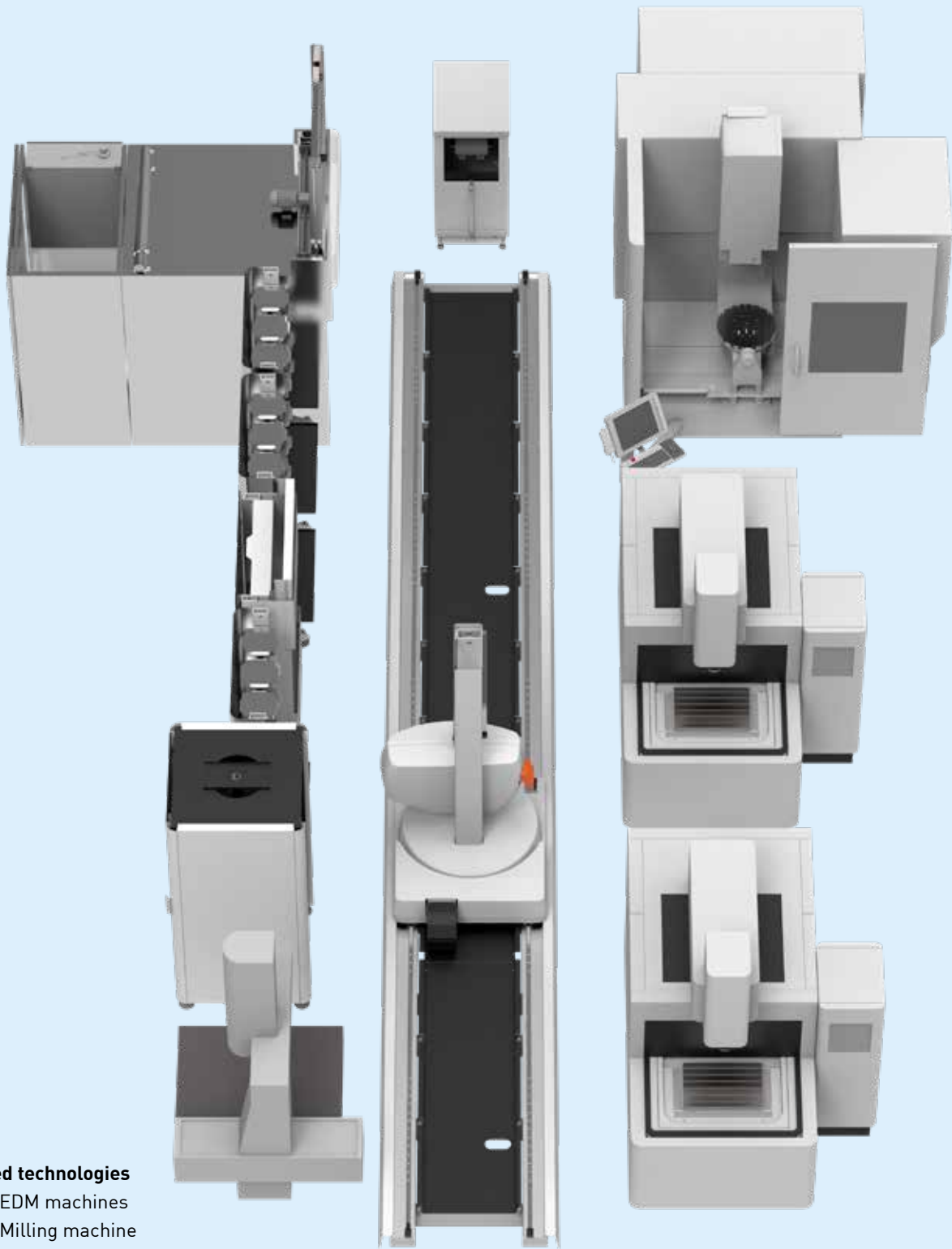


Automation



Wire cutting





Mixed technologies

- Two EDM machines
- One Milling machine
- One coordinate measuring machine
- One washing machine
- Draining station
- Rack magazines
- Multiple loading station
- Rotary magazine



Automation



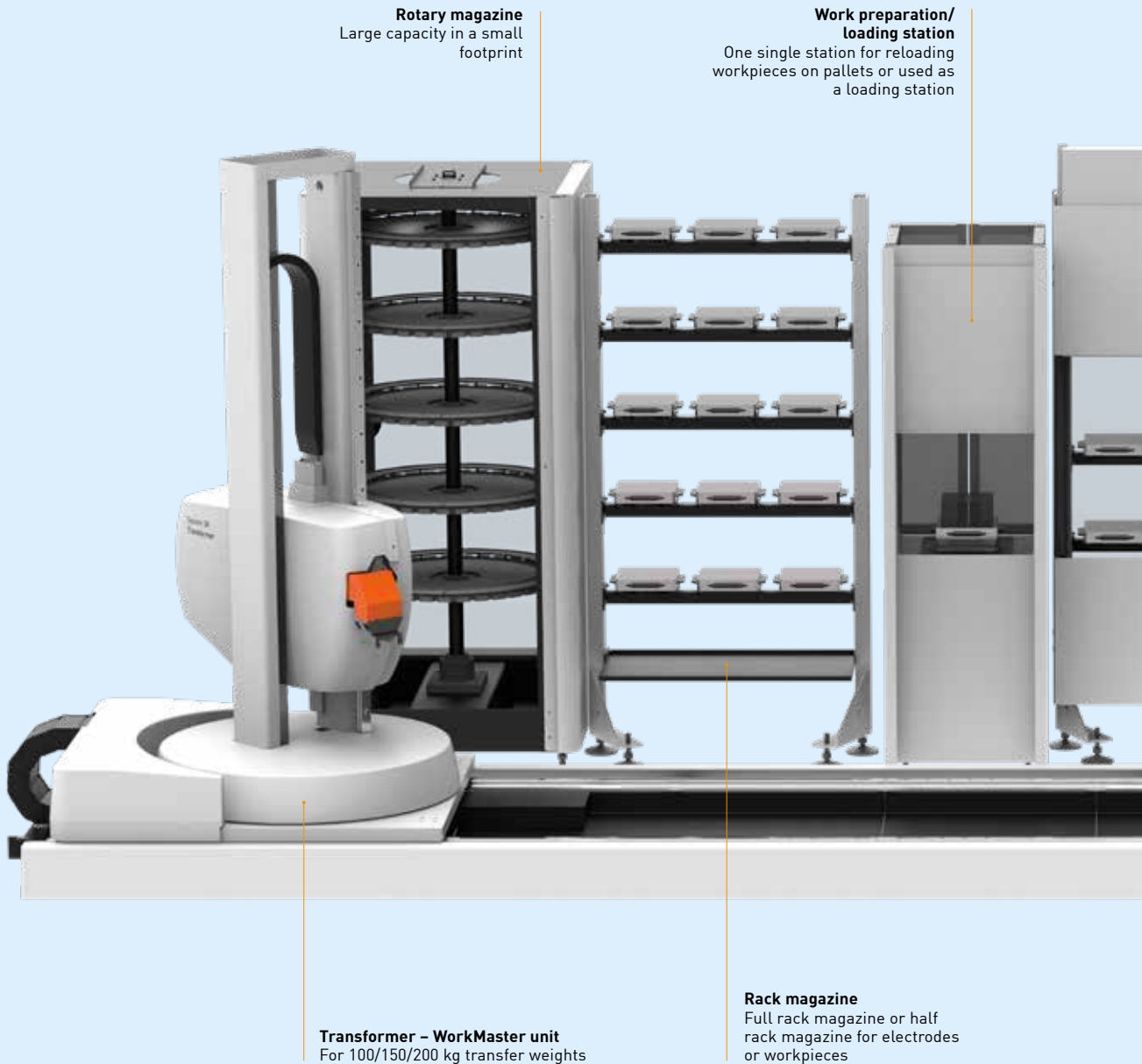
Die sinking



Milling

Standardized modules

For cost-effective solutions

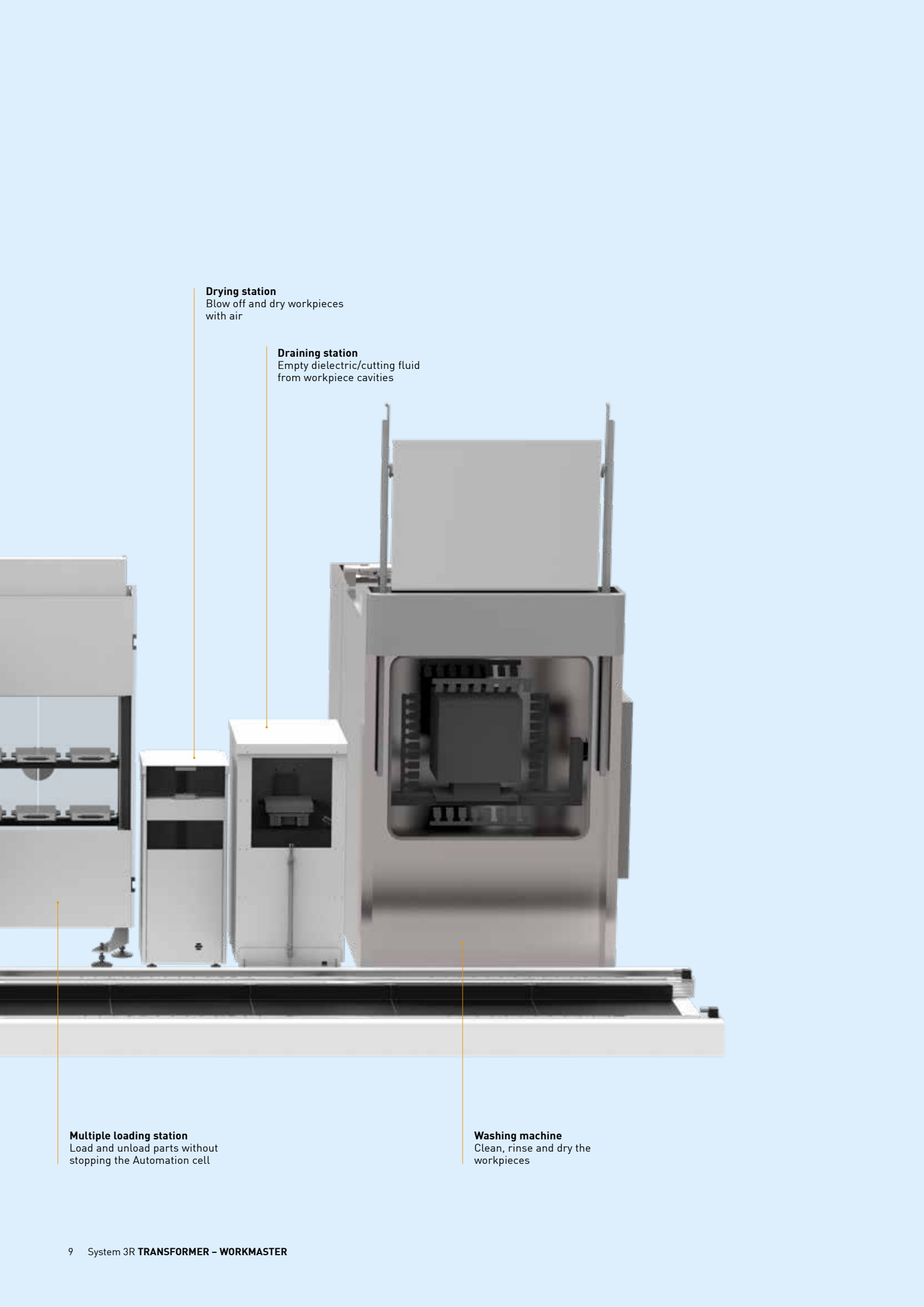


Rotary magazine
Large capacity in a small footprint

**Work preparation/
loading station**
One single station for reloading workpieces on pallets or used as a loading station

Transformer – WorkMaster unit
For 100/150/200 kg transfer weights

Rack magazine
Full rack magazine or half rack magazine for electrodes or workpieces



Drying station
Blow off and dry workpieces
with air

Draining station
Empty dielectric/cutting fluid
from workpiece cavities

Multiple loading station
Load and unload parts without
stopping the Automation cell

Washing machine
Clean, rinse and dry the
workpieces

Technical specifications

**Transformer
WorkMaster
100/150/200**

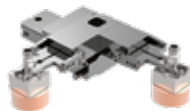


**Transformer
WorkMaster Linear
100/150/200**



Specifications	Transformer – WorkMaster 100/150/200 Transformer – WorkMaster Linear 100/150/200
Payload	100, 150, 200 kg (220, 330, 440 lbs)
Max. X-stroke	1250 or 1500 mm (49.21 or 59.05 in)
Max. Z-stroke	1400 mm (55.12 in)
Max. C-rotation	300°
Stationary cell, max. # of machines	Up to 3
Linear cell, max. # of machines	Up to 12
Rail type	Standard (Transformer – WorkMaster 100) Heavy (Transformer – WorkMaster 150/200)
Max. rail length	25 m, 984 in (Transformer – WorkMaster Linear)
Max. transfer weight (pallet and workpiece)	100 kg, 220 lbs (Transformer – WorkMaster 100 or Linear 100) 150 kg, 330 lbs (Transformer – WorkMaster 150 or Linear 150) 200 kg, 440 lbs (Transformer – WorkMaster 200 or Linear 200)

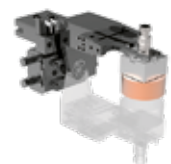
Accessories	
Rack magazine, max. pallet size	700 x 450 mm (27.56 x 17.71 in)
Rotary magazine, max. pallet size	320 x 320 mm (12.6 x 12.6 in)
Loading station	max. 200 kg (440 lbs), 700 x 450 mm (27.56 x 17.71 in)
Washing machine	max. 200 kg (440 lbs), 500 x 500 mm (19.68 x 19.68 in)
Draining station	max. 200 kg (440 lbs), 450 x 450 mm (17.71 x 17.71 in)
Drying station WEDM	max. 30 kg (66 lbs), 300 x 300 mm (11.81 x 11.81 in)



Double



Tilting



Turning

Optional grippers

6-axis Transformer

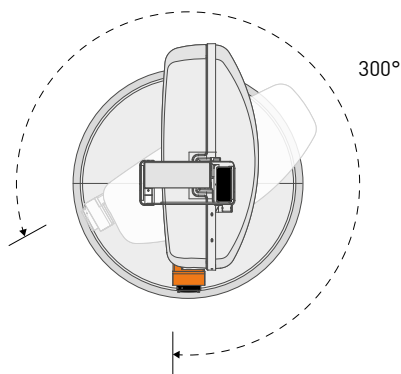
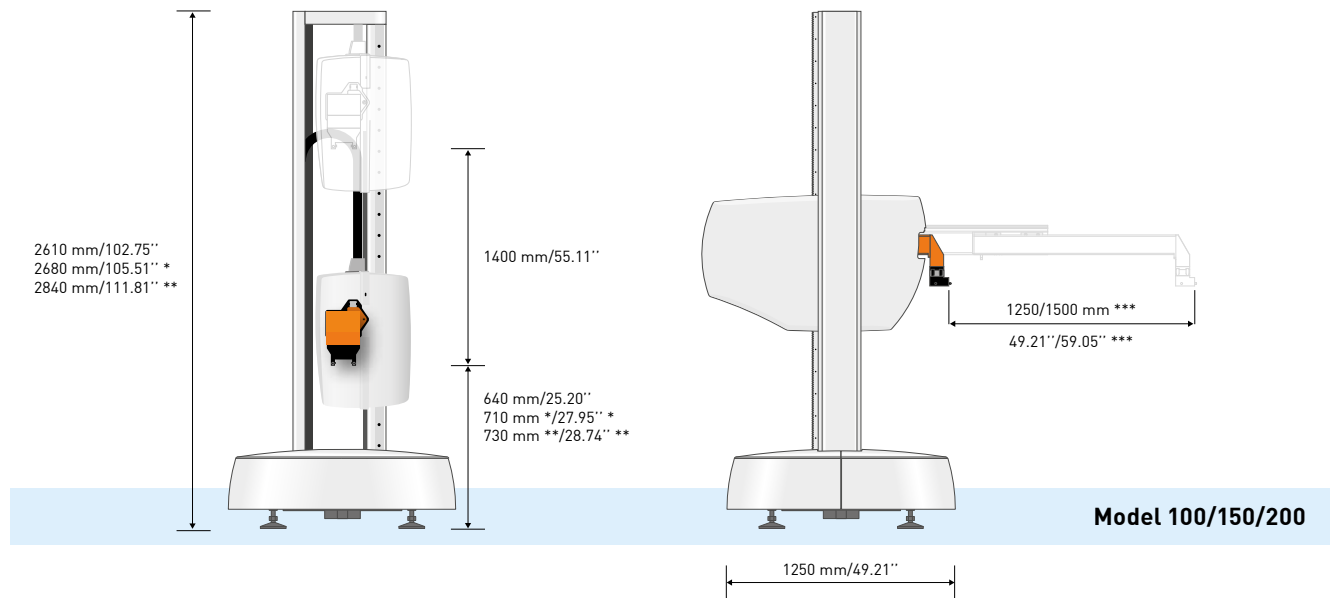
Six-axis robots are offered as an option instead of the Transformer – WorkMaster unit for transfer weights ranging between 70-700 kg, or for applications requiring complex movements.



Rail type

Standard

Heavy



* Rail type: standard
** Rail type: heavy

Technical specifications

Magazines



Rotary magazine



Full rack



Half rack

Magazines are available in two basic designs: rack and rotary. Each magazine unit consists of a number of shelves (determined by the height of the workpieces in question).

Rotary magazine		
Tooling	Pos.*	Size in mm (in)
Dynafix	4	320 x 320 (12.6 x 12.6)
	5	290 x 290 (11.4 x 11.4)
GPS 240	4	320 x 320 (12.6 x 12.6)
	5	290 x 290 (11.4 x 11.4)
	6	260 x 260 (10.2 x 10.2)
Erowa UPC	4	320 x 320 (12.6 x 12.6)
Macro-Magnum	8	210 x 210 (8.27 x 8.27)
	10	185 x 185 (7.28 x 7.28)
	12	160 x 160 (6.3 x 6.3)
GPS 120	12	160 x 160 (6.3 x 6.3)
Macro	36	65 x 65 (2.56 x 2.56)

Option Rapid ID scanning

Full rack magazine		
Tooling	Pos.*	Size in mm (in)
Macro	12	70 x 200 (2.75 x 12.2)
Macro 116	6	150 x 150 (5.9 x 5.9)
Macro-Magnum	4	210 x 210 (8.27 x 8.27)
	5	170 x 170 (6.7 x 6.7)
Dynafix	2	400 x 400 (15.75 x 15.75)
	1	700 x 500 (27.56 x 19.68)
GPS 70	10	95 x 95 (3.74 x 3.74)
GPS 240	3	275 x 275 (10.83 x 10.83)
	2	400 x 400 (15.75 x 15.75)
Delphin 400 x 400	2	400 x 400 (15.75 x 15.75)
	1	700 x 500 (27.56 x 19.68)

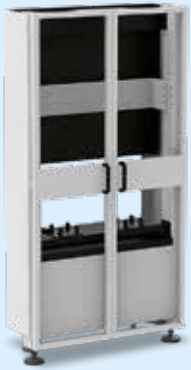
Half rack magazine		
Tooling	Pos.*	Size in mm (in)
Dynafix	1	480 x 400 (18.9 x 15.75)
GPS 240	1	480 x 400 (18.9 x 15.75)
Delphin 400 x 400	1	480 x 400 (18.9 x 15.75)

Options Additional shelves
Door for loading from behind

* Positions per level
Note: The maximum height of the workpiece depends on the number of levels

Technical specifications

Accessories



Multiple loading station



Work preparation station



Washing machine



Drying station



Draining station

Multiple loading station

Used for loading and unloading without the need to stop the Automation cell

The station is equipped with ID antennas and presence sensors.

It can be configured to meet the requirements of tooling type and part sizes.

Work preparation station

Used for preparing the workpieces. The station has doors for easy access and side guards.

Max. workpiece size: 450 x 450 x 450 mm

Max. load: 200 kg

Drip tray for oil and flushing liquid

Presence monitoring

Prepared for chuck installation, including foot control and pneumatic connections

Options

Manual flushing liquid sensor

Manual Indexing unit, 4 x 90 degrees, with locking device

ID antenna

Washing machine

A washing machine intended for cleaning, rinsing and air drying metal components placed on a pallet. The unit consists of an insulated cabinet with a lifting door, fixed spraying system and a rotating fixture for the pallets. The unit is automatically loaded by the robot.

Maximum part size

500 x 500 x 500 mm including pallet, chuck and workpiece

Maximum weight

200 kg including pallet, chuck and workpiece

Drying station

A station with two stages to blow off and dry the workpiece.

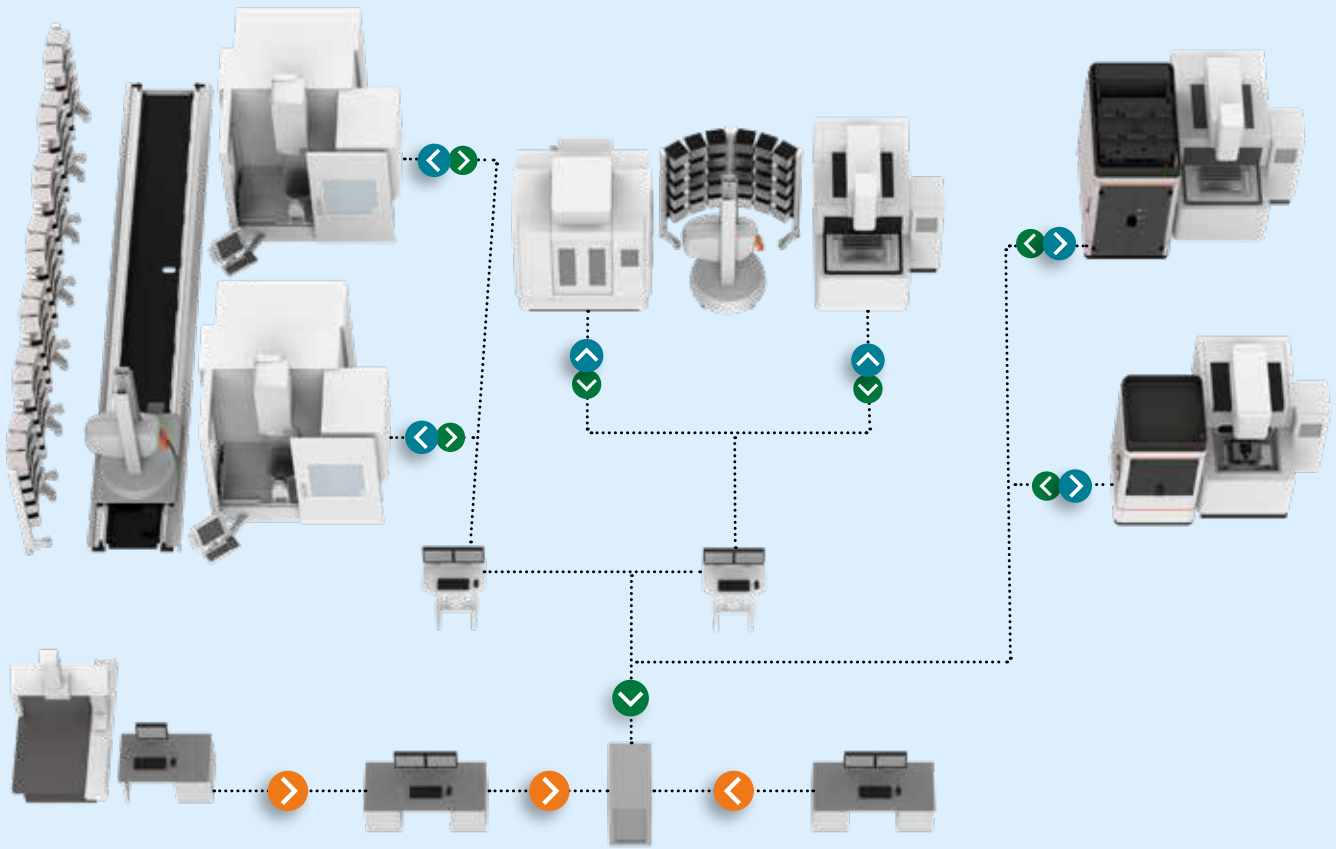
First compartment removes fluids with compressed air.

Second compartment dries the workpiece.

Draining station

After machining, the workpiece is placed in the station where the remaining dielectric is tipped out of the cavities and fed back to the machine.

Optional flushing nozzles available.



WSM – WorkShopManager

User-friendly Cell Management Software

- + Necessary data is entered quickly and in a structured manner.
- + Quick, precise overview of the entire process chain
- + Increased flexibility: The order of priority can be changed at any time.
- + Simpler, safer preparation of automated cells
- + The risk of errors due to the human factor is minimized.
- + Increased process security.



.....> **Preparation – WorkCenter**

- Create an order
- Assign operations and NC programs
- Retrieve offset values
- Release the order for production

.....> **Monitoring – CellMonitor**

- Display status of all cells
- Display status of individual machines and processes

Statistics – WSM Statistics

- Retrieve and analyze cell utilization data
- Retrieve and analyze order data

.....> **Execution – CellManager**

- Manages the pallet ID codes and magazine positions
- Creates priority lists
- Automatically starts available jobs in the order of the priority list
- Updates the information in the database with the status and machining times of individual orders

Optimize the uptime of your equipment with our Customer Services

System 3R's Customer Services is uniquely positioned to help you maximize the availability, value, precision and productivity of your System 3R equipment. Our cost-effective, customer-centric and expert services put your success at the center, ramp up your productivity and ensure predictable, uninterrupted uptime. System 3R's service engineers are your expert partners for a wide range of success-triggering services.

For more info ask your local System 3R dealer.

For contact details, please refer to:
www.system3r.com.

