

# Robot Leonardo

Easy operation and  
robust functionality



# Uncompromisingly productive

The autonomous system has many advantages.

Up to 32 pallet positions for UPC 320 are available on only 2x2 meters floor space. Pallets do not leave the system, because setups take place on the integrated loading station.

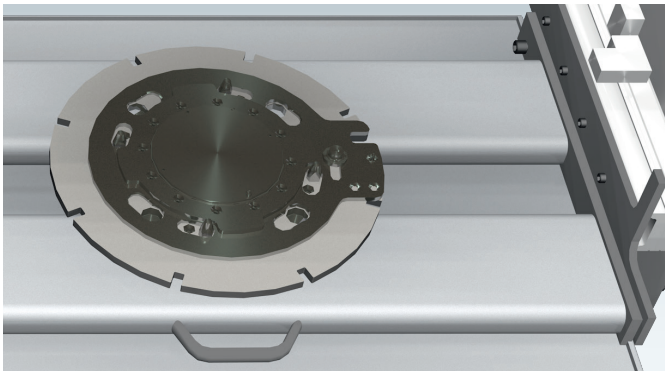




Leonardo is a pallet-handling unit with multi-level magazines. Transfer weight is 120 kg.

The X-axis has a long travel range of 1565 mm reaching even into large machines.

Other options are: Automatic gripper change, or 8x45° rotatable loading position.

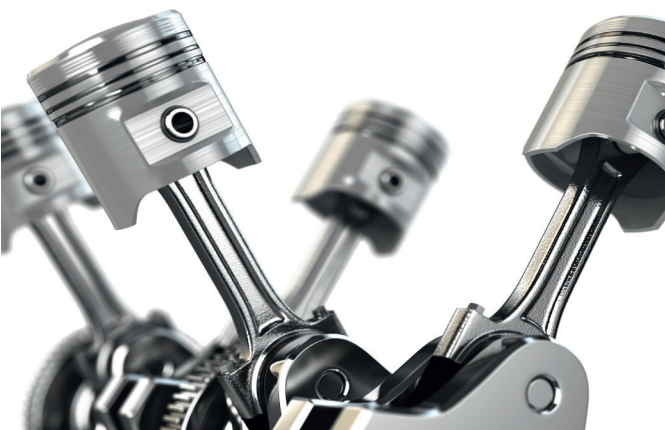


Rotary plate on the loading station. Easy access to the workpieces on multiple clamping devices or tombstones. With lockable 8x45° pitch.

The pallets are securely held for direct clamping of workpieces using a large torque wrench.



Pallets are moved into the robot via the integrated loading station. Leonardo automatically places the prepared pallets into an available magazine position.



#### FACTS

MonoBlock design

Scalable concept

Integrated loading station

One robot – various pallets

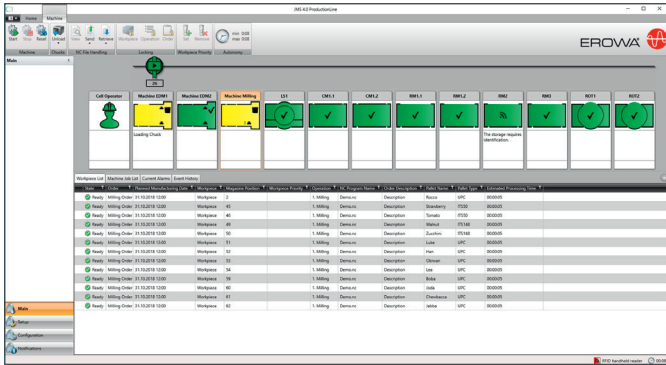


# More than expected

Leonardo exceeds expectations in more than one aspect. The flexible magazine configuration is a major advantage over other devices. The autonomous system ensures a clean working environment, and the operation is extremely easy.





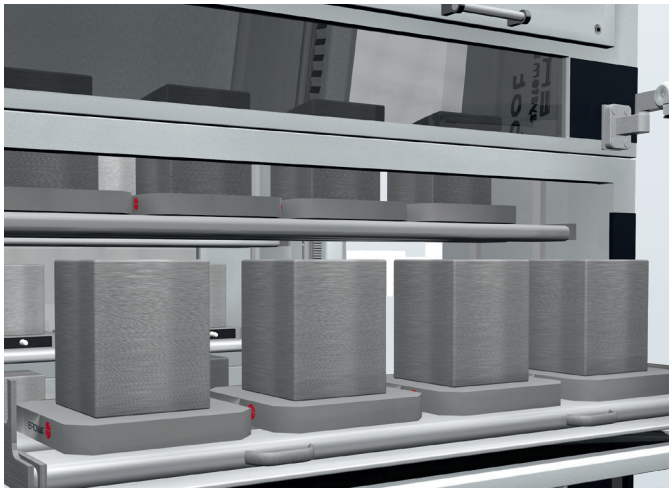


**Pad control**

The few necessary commands are entered using a touch pad. The integrated control unit has a high autonomy. Pallets are stored automatically at an available position.

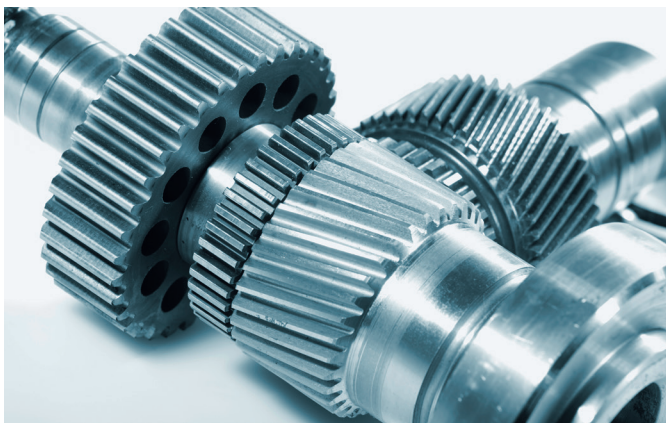
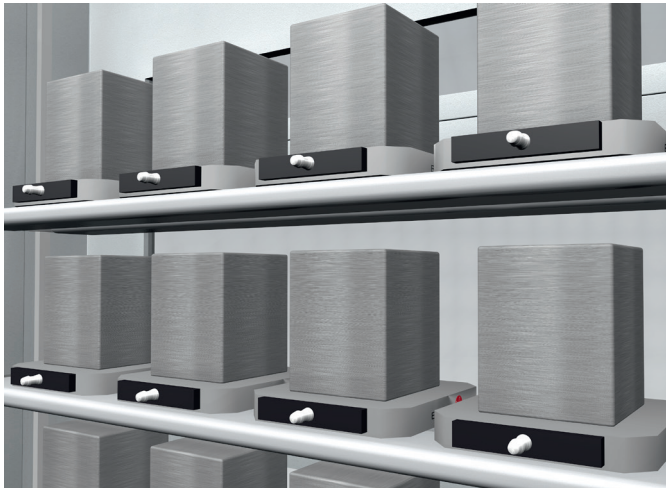
**Magazine configuration**

The various EROWA standard pallet sizes are placed optimally at the storage levels. Depending on requirements, the levels are matched to each other in height.



**Optimum ratio of installation location to number of pallets**

32 UPC pallets (320x320 mm) can be accommodated in Leonardo's just under 4 sqm of floor space. An external setup station is unnecessary thanks to the integrated loading station.



**FACTS**

- Control panel with control system
- Excellent space/pallet ratio
- Open magazine configuration

# Modular design

To fit Leonardo perfectly to the machine, a variety of combination options are available. In cooperation with the machine manufacturer, the optimal configuration is worked out and declared a standard. The magazine division remains largely open and can be customized.



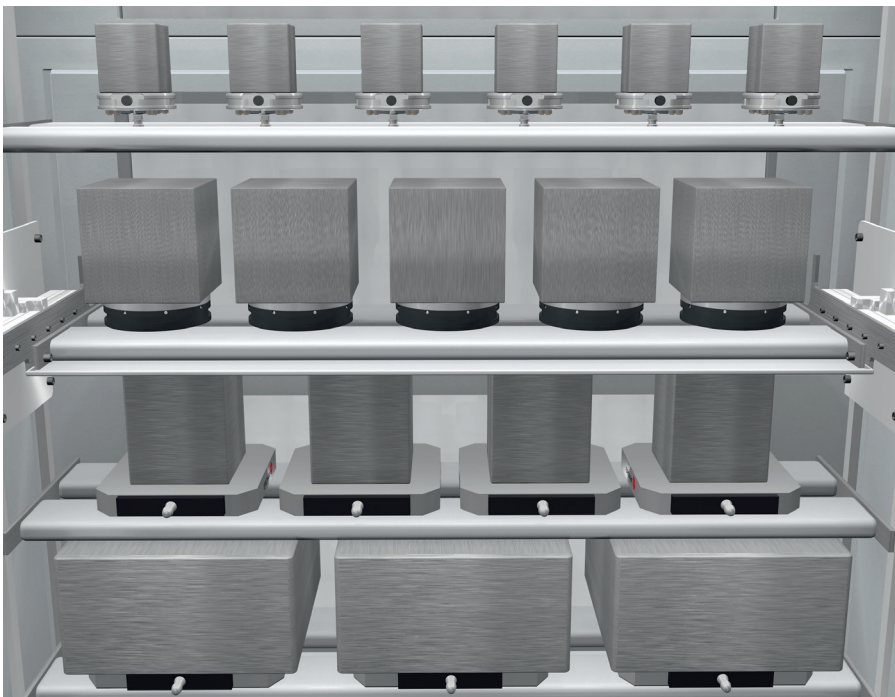




### Modular design

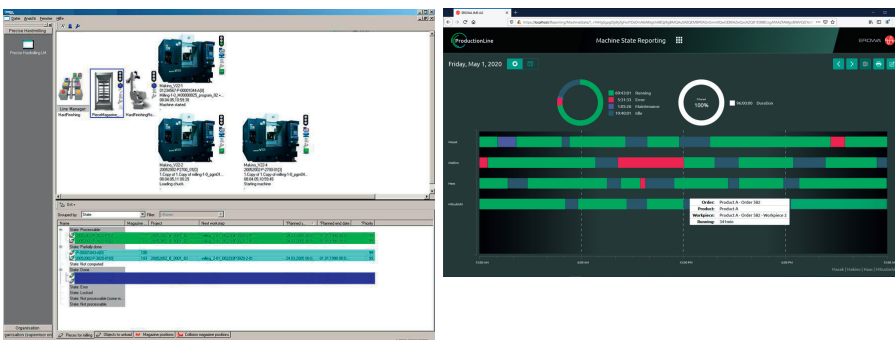
Whether placed on the right, left or front of the machine, the 1565 mm travel range of the X-axis allows Leonardo to reach the chuck on the machine table.

2-machine loading (optional) offers maximum productivity.



### Large or small pallets

From ITS 148 to MTS 500 – all pallets are reliably exchanged. If desired, also in mixed operation with automatic gripper change.



### Control system

The EROWA process control system JMS 4.0 provides the basis for increasing the effective machine time. By linking all data and controlling the complete manufacturing process, processes are accelerated and possible human errors are minimized.

### FACTS

Advanced control  
Integrated safety  
Open interfaces



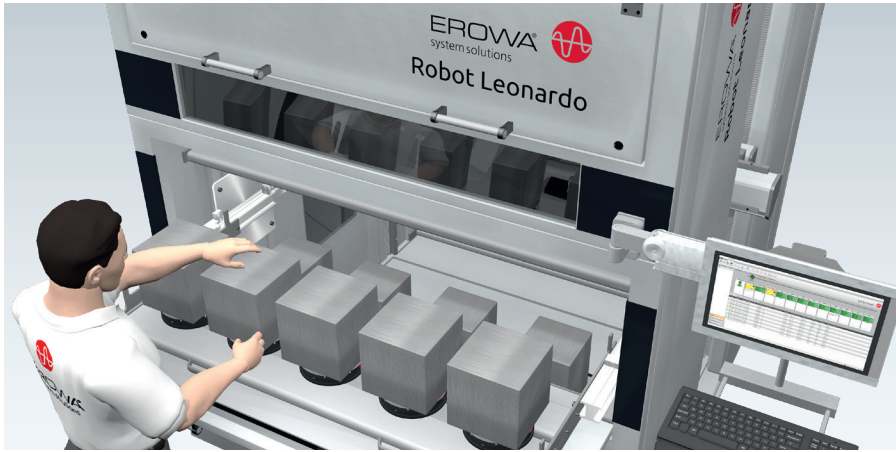
# Only with Leonardo

Setup of next jobs while the robot is working. Thanks to a light barrier, safety is assured.

It's the carefully thought out little helpers that make a big difference.

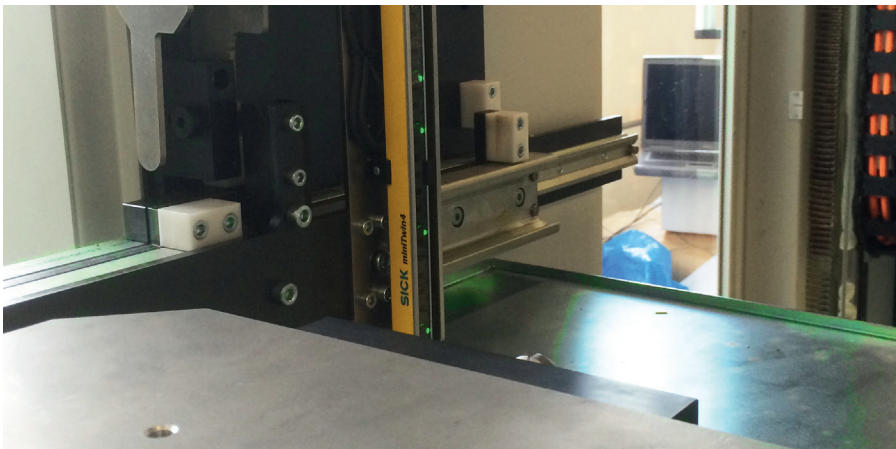


# Options



## Setup during main time

With open loading station for uninterrupted operation.



## RFID identification

The pallets are identified by RFID chips. This allows you to locate any pallet inside or outside the loading device.



## Remote maintenance

For quick intervention or software updates.

## Two-machine loading

Leonardo can load two machine tools, one to the left and one to the right.



## FACTS

Safe monitoring

RFID pallet identification

EWIS ManuLink

Two-machine loading

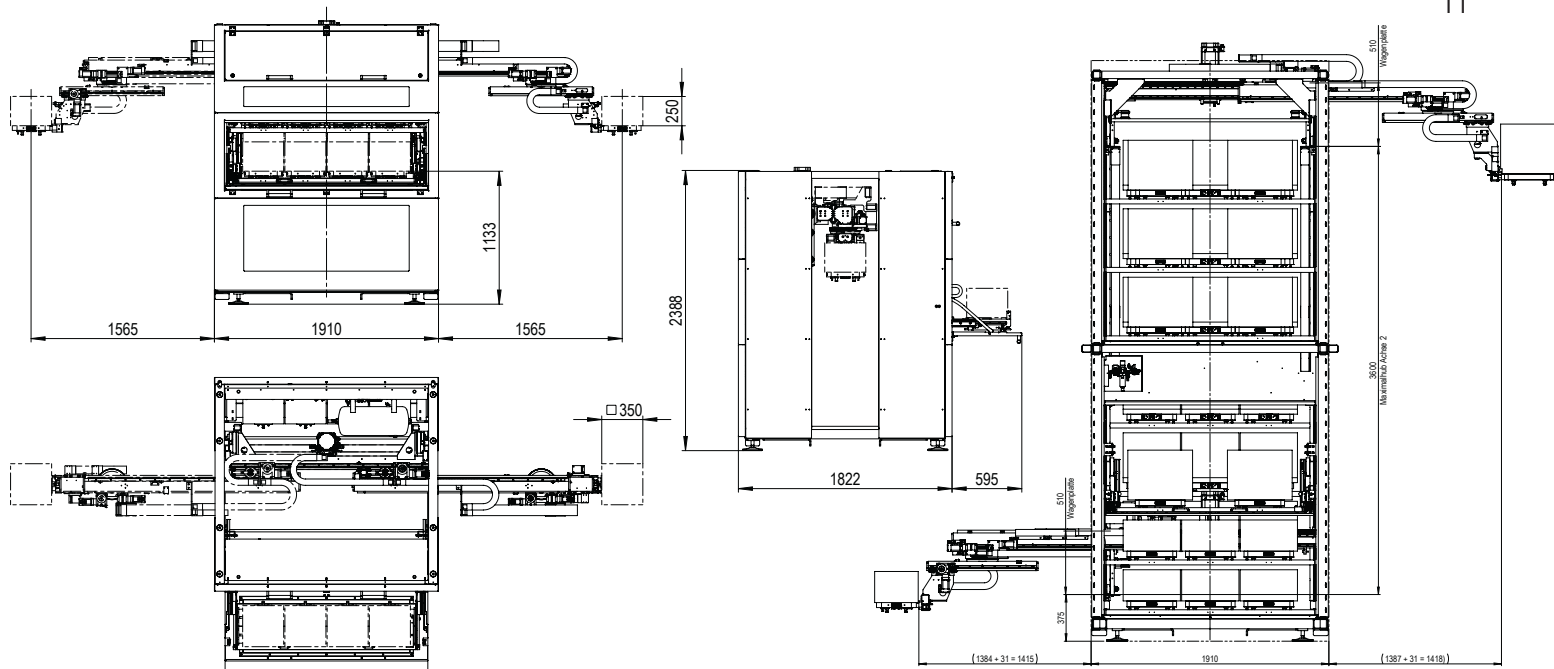


# At a glance

These specifications may be get you excited.







## TECHNICAL DETAILS

### TRANSFER WEIGHT

Transfer weight	<b>120 kg</b>
Pallet changing time	<b>&lt; 65 s</b>
Gripper change	<b>optional</b>
Magazine capacity max.	<b>4000 kg</b>
Two-machine operation	<b>left and right (optional)</b>

### TRANSFER AXIS STANDARD HIGH

X travel	<b>1565 mm</b> (UPC 320)	<b>1565 mm</b>
Z travel	<b>1245 mm</b> (UPC 320)	<b>3600 mm</b>
Rotational axis horizontal	<b>+/- 90°</b>	

### DIMENSIONS l x w x h

<b>STANDARD</b>	<b>1910 x 1822 x 2420 mm</b> (UPC 320)
<b>HOCH</b>	<b>1910 x 1822 x 4868 mm</b> (UPC 320)

Empty weight	<b>STANDARD</b>	<b>HIGH</b>
	<b>2000 kg</b>	<b>2400 kg</b>

### MAGAZINE POSITIONS STANDARD HIGH

Pallet	Envelope contour	STANDARD	HIGH	
ITS 148	200x200	<b>48x</b>	<b>96x</b>	<b>(6 per level)</b>
PC 210	250x250	<b>40x</b>	<b>80x</b>	<b>(5 per level)</b>
UPC 320	350x350	<b>32x</b>	<b>64x</b>	<b>(4 per level)</b>
MTS 400	460x460	<b>24x</b>	<b>48x</b>	<b>(3 per level)</b>
MTS 500	500x500	<b>16x</b>	<b>32x</b>	<b>(2 per level)</b>

Workpiece height **250 (350/400) mm**

### CONTROL SYSTEM

Interface	<b>Ethernet</b>
Magazine position management	<b>static</b>
Workpiece identification	<b>RFID (optional)</b>
Job Manager	<b>EROWA Control system</b> <b>ML (MoldLine)</b> <b>PL (ProductionLine)</b>

## SYSTEM GRIPPERS



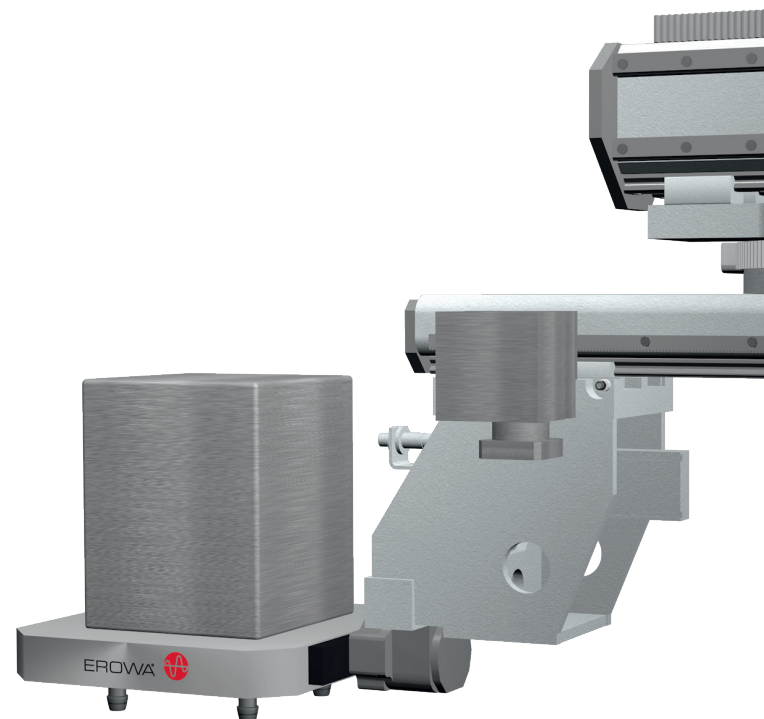
RCS 5 gripper for MTS, UPC. At the same interface for all other exchange grippers. Load capacity horizontally/vertically max. 130 kg.



PC210 gripper for PC210 pallets with ring groove. Load capacity horizontal/vertical max. 130 kg.



ITS 148 gripper for ITS 148 pallets. Load capacity horizontal max. 40 kg, vertical max. 30 kg.



# The next step

Important things need to be planned. And your next step is certainly among the important things. For 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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