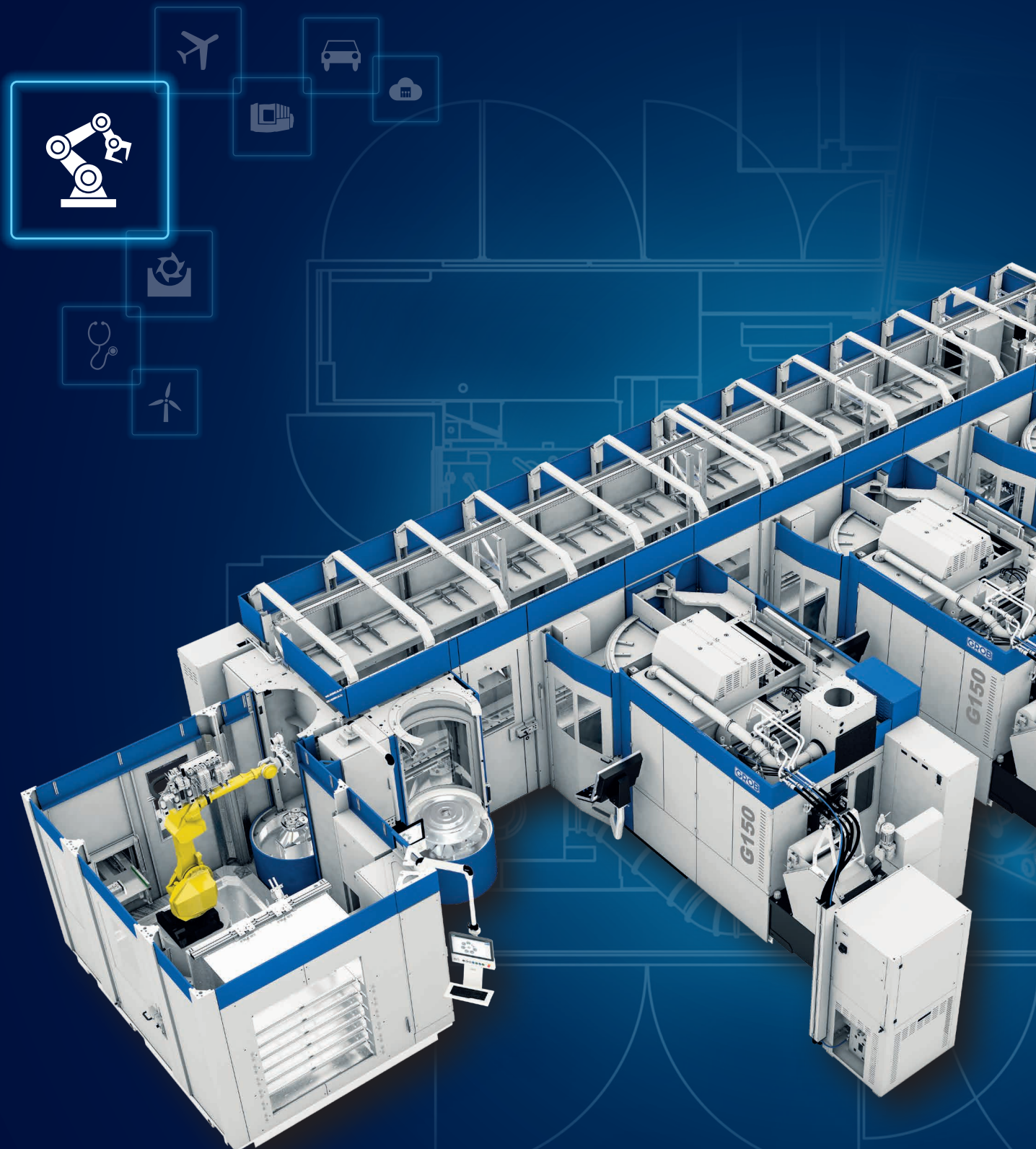


#SmartAutomation



AUTOMATION SOLUTIONS



This is who we are
GROB-WERKE



Technology at its best
**STEP INTO A
GREEN FUTURE
WITH US**

At GROB, we strive for continuous progress and improvement. Not only do we strive to develop outstanding solutions and products for our customers, but we also seek to make a contribution to our environment and future generations. This is firmly anchored in our corporate philosophy and lived every day.

We therefore utilize photovoltaics and geothermal energy in our locations and support a wide variety of social projects. But we also place great emphasis on SUSTAINABILITY in our internal departments. Our products are based on the highest energy efficiency and regenerative drive systems. We integrate our supplier network in reducing the carbon footprint.

Excellence in sustainable technology



OUR PRODUCT RANGE

#MachiningTechnology #UniversalMachiningCenters
#AssemblyPlants #Electromobility
#Automation #AdditiveManufacturing #Digitalization
#NewAndQualityCheckedUsedMachines #Service



RESEARCH &
DEVELOPMENT



ASSEMBLY



ENGINEERING



COMMISSIONING



PRODUCTION



TECHNICAL
APPLICATION CENTERS

A collage of 18 images showcasing GROB's manufacturing capabilities. The images include: a close-up of a CNC machine tool; a worker in a blue shirt and gloves holding a precision-machined part; a large industrial hall with a 'TAZ TECHNOLOGIE-UND ANWENDUNGSZENTRUM' sign; a worker operating a 'G550' machine; a long row of industrial machines; a close-up of a precision-machined part; three people standing in front of a 'GROB G550 access' machine; a worker operating a machine with a yellow robotic arm; a worker inspecting a large cylindrical part; a 'GMZ GEBRAUCHT-MASCHINENZENTRUM' sign; a worker operating a machine; a close-up of a precision-machined part; a worker operating a machine; a close-up of a precision-machined part; a worker operating a machine; a close-up of a precision-machined part; a worker operating a machine; and a close-up of a precision-machined part.

GROB automation solutions

THE IDEAL SOLUTION FOR YOUR MACHINE

AUTOMATION SOLUTIONS

STANDARD AUTOMATION

PSS-R300

PSS-T300

PSS-R450 bis PSS-R1800

PSS-L450 bis PSS-L2700

GROB⁴Automation – PSS-R/PSS-L

FLEXIBLE ROBOT CELLS

GRC-R12

GRC-R60 bis GRC-R240

GROB⁴Automation – GRC

FLEXIBLE MANUFACTURING SYSTEMS

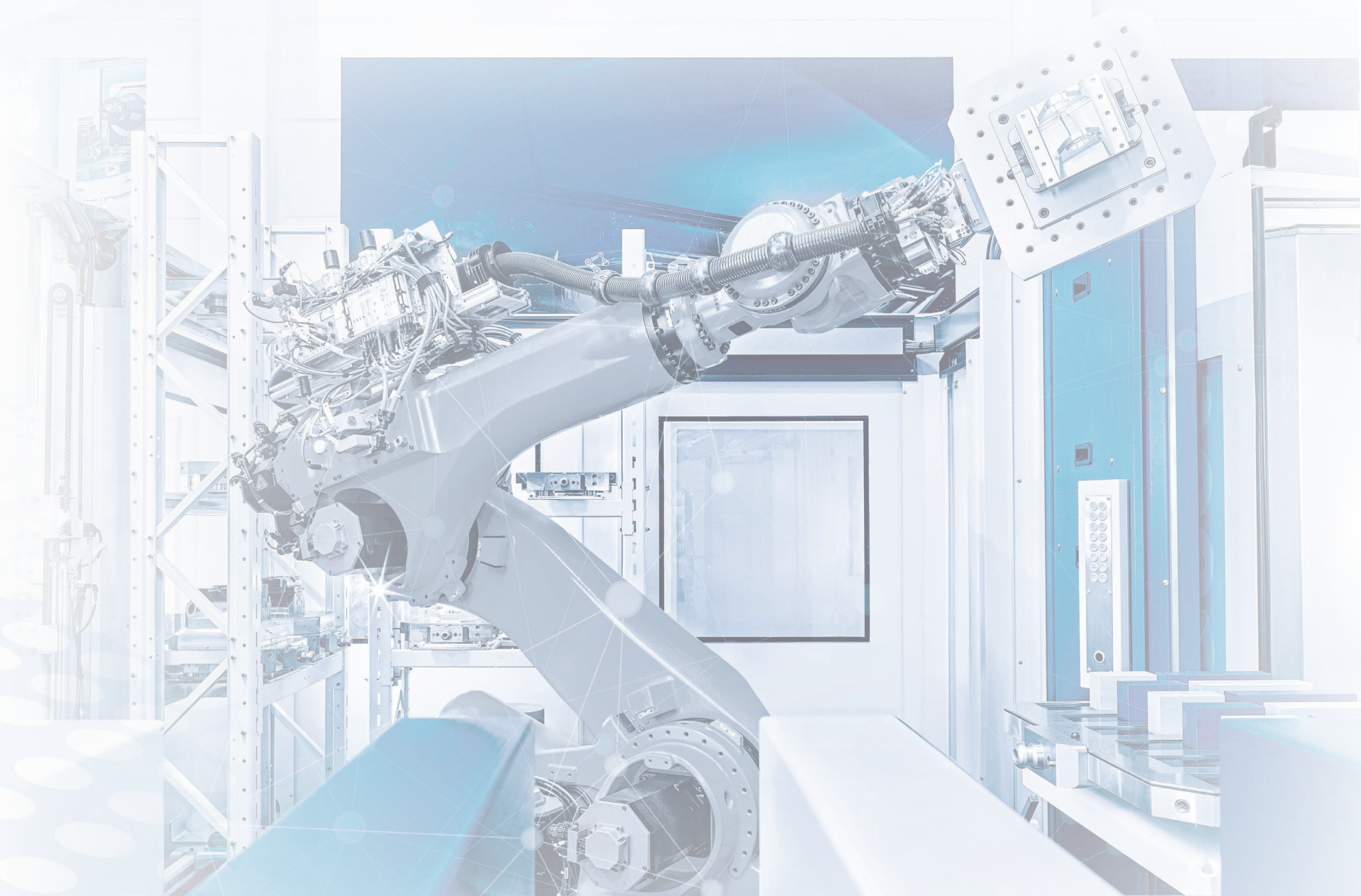
Flexible manufacturing systems

Autonomous mobile robot system

Turnkey production lines

DIGITALIZATION

SERVICE





Smart & easy automation

GROB'S STANDARD AUTOMATION

We will develop an automation concept with you that is perfectly customized to your requirements!

GROB's specifically developed automation solutions allow for both partially and fully automatic production of exceptional quality. GROB delivers the ideal products for automated processes.

- ✦ Multiply output and productivity with GROB pallet storage systems
- ✦ Reduction of unit cost
- ✦ Ensure an efficient production process
- ✦ Setup during the machining operation
- ✦ Ergonomic machine operation
- ✦ Intuitive production planning on the control system
- ✦ Highly dynamic pallet changer systems
- ✦ Clamping hydraulics and high-precision setup stations
- ✦ Perfectly matched to the machining center



OUR PORTFOLIO

#PalletTowerStorageSystem
#RotaryPalletStorageSystem
#LinearPalletStorageSystem

PSS-R300

GROB ROTARY PALLET STORAGE SYSTEM

The GROB rotary pallet storage system expands the G-module to a flexible manufacturing cell and makes it possible to manufacture small and medium lot sizes and even individual orders with cost-effectiveness. This makes the PSS-R300 an ideal starter solution for automated and highly efficient manufacturing.

FLEXIBLE STORAGE CONFIGURATION

- ⊕ Up to 20 pallet storage locations (pallet Ø148)
- ⊕ Up to 10 pallet storage locations (320x320 pallet)
- ⊕ Other configurations upon request

INTUITIVE PALLET MANAGEMENT

- ⊕ For a longer unmanned production period with a visual organization of production orders

OPTIMAL ACCESS TO THE PALLET STORAGE SYSTEM

- ⊕ Ergonomic access to the loading/unloading station

COMPACT FOOTPRINT

- ⊕ PSS-R300: 2,100x2,100 mm

OPTIMIZED VIEW

- ⊕ Into the work area and to the pallet storage locations

Example illustration

OVERVIEW OF SPECIFICATIONS AND DIMENSIONS

Available machines	G150	G350	G350a
Design variant	PSS-R300	PSS-R300	PSS-R300
Pallet size [mm]	ITS148/PC210/ HSK-A63/HSK-A100/ ITP200/MTS320/ GROB320/UPC320	ITS148/PC210/ UPC320/MTS398/ GROB400	MTS398/ GROB400
Pallet positions	20/20/20/ 20/10/ 10/10	20/20/ 10/8/ 8	8/8
Max. handling [kg]	40/80/30/ 150/250/ 300/250	40/80/ 250/250/ 300	250/ 300
Max. interference diameter [mm]	Ø 250/Ø 250/Ø 250/ Ø 250/Ø 450/ Ø 450/Ø 450	Ø 250/Ø 250/ Ø 450/Ø 500/ Ø 500	Ø 500/ Ø 500
Max. interference height [mm]	400	400	400

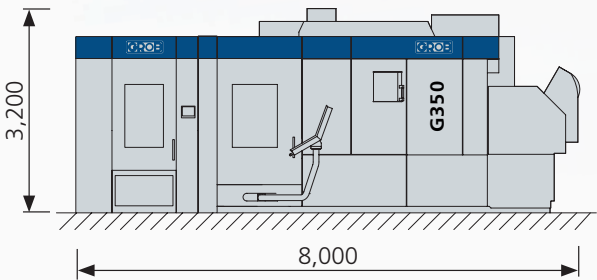


Fig.: G350 without pallet changer with PSS-R300

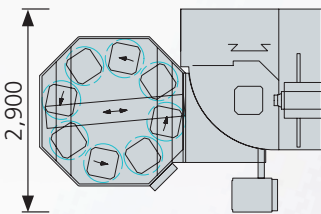
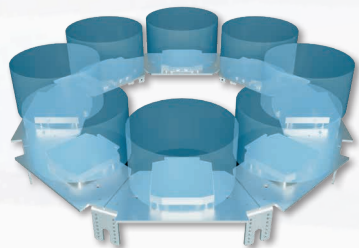
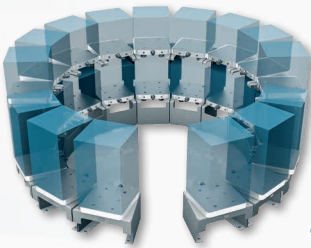


Fig.: G350 with PSS-R300



PSS-R300; 320 x 320



PSS-R300; ITP200

PALLET VARIANTS AND STORAGE CONFIGURATIONS

- ⊕ Our variant PSS-R300 can be flexibly adapted to your requirements

PSS-T300

GROB PALLET TOWER STORAGE SYSTEM

The GROB pallet tower storage system expands the G-module to a flexible manufacturing cell. It is suitable for a single machine as well as for an interlinked system of up to two machines. The PSS-T300 enables the handling of round and square pallets in different sizes. Depending on customer requirements, the arrangement of storage positions can be freely selected.

HANDLING OF DIFFERENT PALLET SIZES & MANUFACTURERS

- ⊕ Use of commercially available automation pallets in various sizes possible
- ⊕ Use of MTS, ITS, HSK, Schunk and GROB pallets

INTUITIVE CELL OPERATION

- ⊕ Permits a longer unmanned production period with visual organization of production orders

FLEXIBLE PALLET ARRANGEMENT TO SUIT CUSTOMER REQUIREMENTS

- ⊕ Up to 81 pallet storage positions

MODULAR STRUCTURE

- ⊕ Individual connection of up to two machines and a second setup station

OPTIMAL ACCESS TO THE SETUP STATION

- ⊕ Allows pallet loading and unloading during the machining operation with accessibility from above

Example illustration

OVERVIEW OF SPECIFICATIONS AND DIMENSIONS

Available machines	G150			G350a / G350			
Pallet size [mm]	□ 320	Ø 148	Ø 210	□ 320	□ 400	Ø 148	Ø 210
Max. pallet spaces	38	81	38	38	27	81	38
Max. handling [kg]	250* / 300			250* / 300			
▸ zero-point gripper/fork gripper							
Max. interference diameter [mm]	Ø 550			Ø 550			
Max. interference height [mm]	500			500			

*With EROWA RCS5 Gripper Link

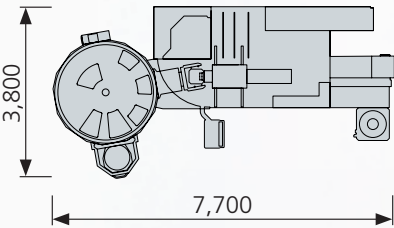


Fig.: G150 without pallet changer with PSS-T300

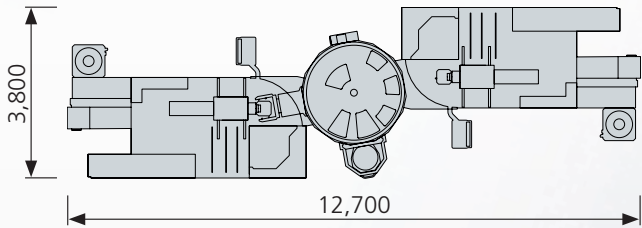



Fig.: 2x G150 without pallet changer with PSS-T300



PALLET VARIANTS *				
	1	2	3	4
Pallet	 ITS148	 MTS320	 MTS400	 GROB 320x320
Gripper	 ITS gripper	 RCS5	 RCS5	 Fork gripper

* Other variants upon request

PSS-R450 / PSS-R900 / PSS-R1800

GROB ROTARY PALLET STORAGE SYSTEM

The GROB rotary pallet storage system expands the G-module to a flexible production cell to offer automated, highly efficient production. Thanks to a further development of the PSS-R900 size, it is now possible to store up to 32 pallets of size 630 x 630 by means of an extension module. The new generation of the rotary pallet storage system can also be prepared for the connection of a GMR (GROB Mobile Robot) or a GRC (GROB Robot Cell). A two-machine connection is also possible, especially for customers with a very long pallet runtime.

QUICK PALLET CHANGE

- With double-fork lift unit* and innovative pallet changing device

PALLET TOWER STORAGE (PTS)

PALLET STORAGE RACK

- With drip pans and optional cutting fluid recirculation

ADVANCED PRODUCTION CONTROL SOFTWARE GROB⁴AUTOMATION

- Permits a longer unmanned production period with a visual organization of production orders and visual display

OPTIMAL ACCESS TO THE SETUP STATION

- Allows pallet loading and unloading during the machining operation with accessibility from above
- With optional clamping hydraulics

COMPACT FOOTPRINT

- Up to 20 pallet storage locations (400x400 pallet)
- Up to 32 pallet storage locations (630x630 pallet)
- Up to 15 pallet storage locations (800x630 pallet)

PSS-R450 / PSS-R900 / PSS-R1800

OVERVIEW OF SPECIFICATIONS

Available machines	G350a / G350 / G350T	G550a / G550 / G550T	G440 / G640
Design variant	PSS-R450	PSS-R900	PSS-R1800
Pallet size [mm]	400x400	630x630	max. 800x630
Pallet positions	10/15/20	15/17/20/24/29/32	10/15
Max. handling [kg]	450	900	1,800
Max. interference diameter [mm]	Ø 600	Ø 900	Ø 1,050
Max. interference height [mm]	500	725	1,300
Connection of two machines	upon request	◦	—
Pallet tower storage (PTS)	upon request	◦	—

◦ Option — Not available



Example illustration
* Only for PSS-R900

PSS-R450/PSS-R900/PSS-R1800

OVERVIEW OF DIMENSIONS

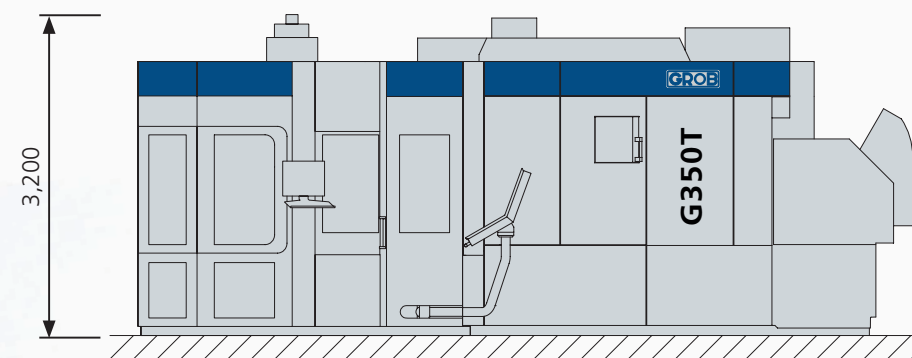


Fig.: G350T without pallet changer with PSS-R450

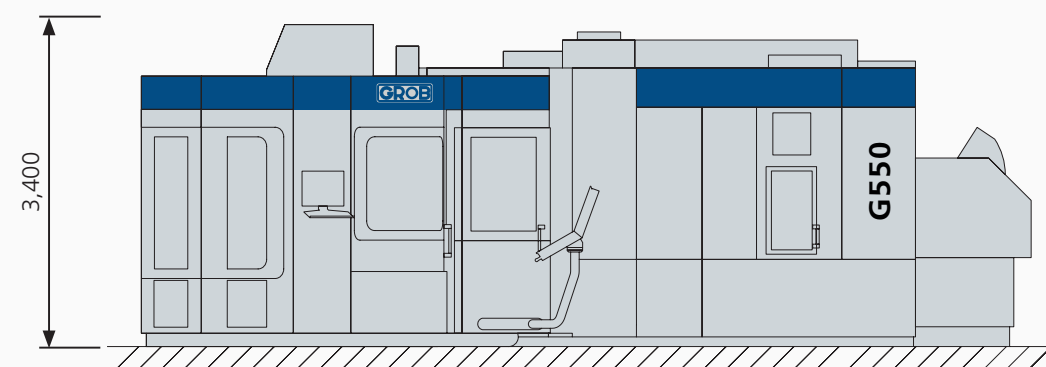


Fig.: G550 without pallet changer with PSS-R900

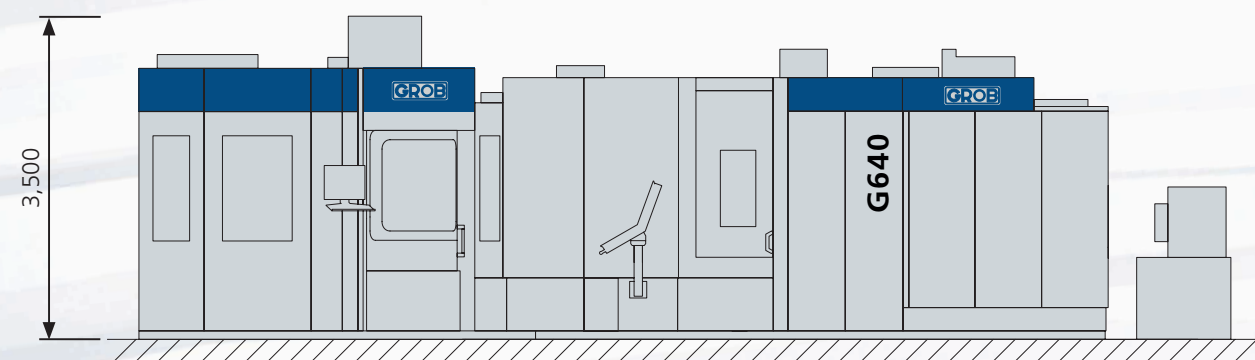
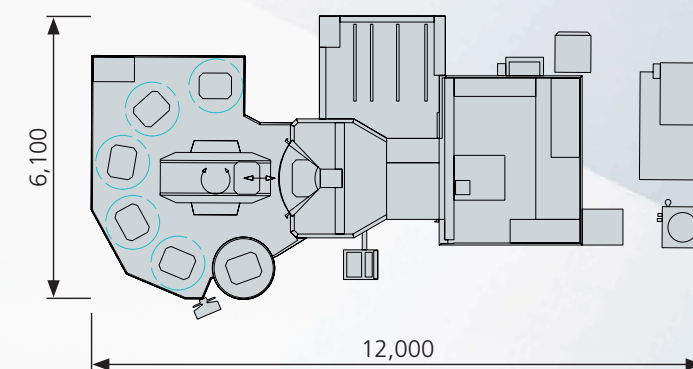
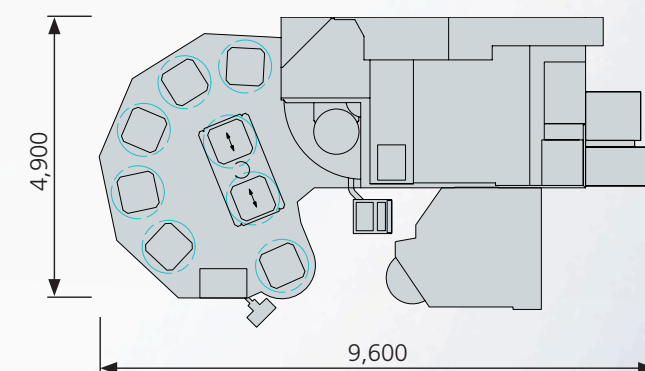
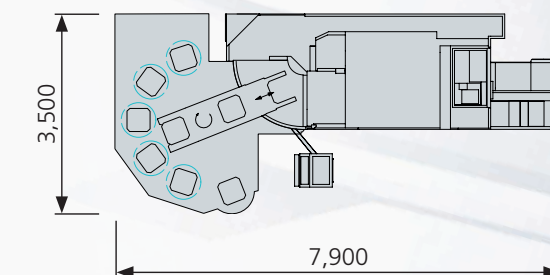
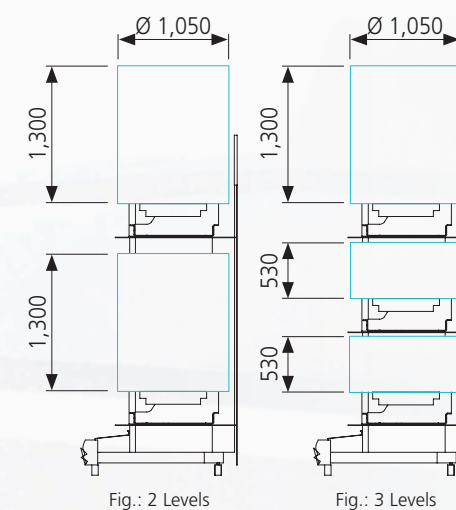
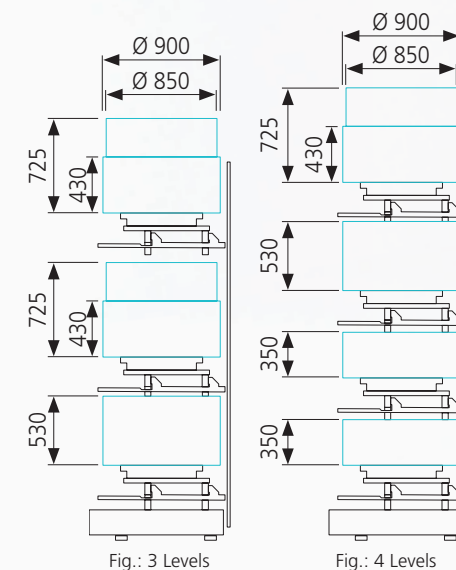
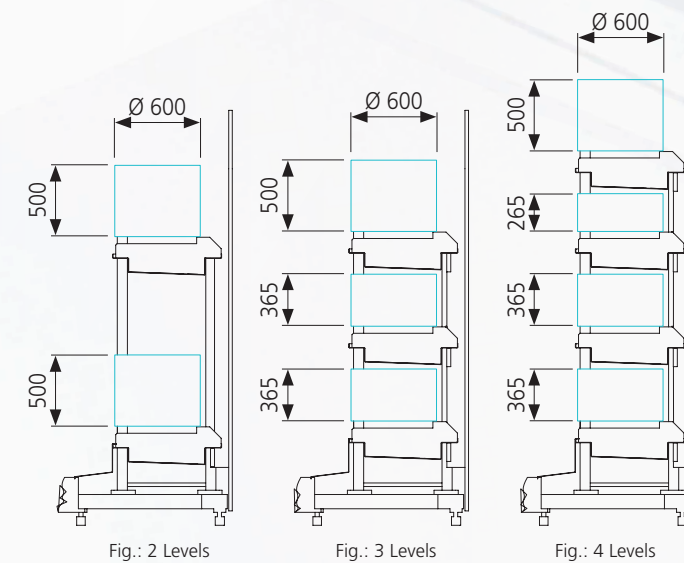


Fig.: G640 with pallet changer with PSS-R1800



PSS-L450/PSS-L900/PSS-L1450/PSS-L1800/PSS-L2700

GROB LINEAR PALLET STORAGE SYSTEM

The linear pallet storage system is a GROB development that complements the product range with an automated, flexible manufacturing system for a wide variety of part machining. It is suitable for stand-alone machines and for interlinking identical machines. Depending on the customer requirement, two or three magazine levels and the number of required setup stations can be freely selected for pallets of the same type.

ADVANCED PRODUCTION CONTROL SOFTWARE GROB⁴AUTOMATION

- ⊕ Permits a longer unmanned production period with a visual organization of production orders and visual display

DYNAMIC PALLET CHANGING DEVICE

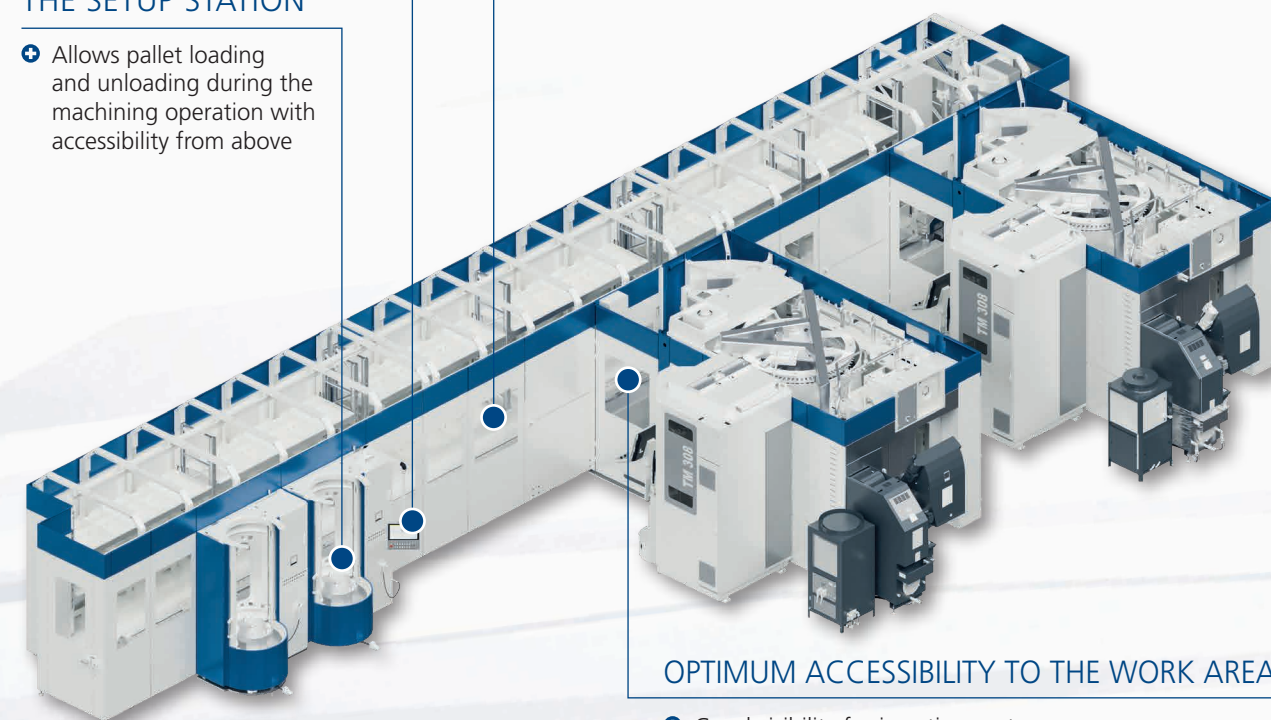
- ⊕ Enables the use of up to five machining centers in one system with pallet changer for low cycle times
- ⊕ Enables the use of up to five machining centers in one system with direct loading for medium to high cycle times

OPTIMAL ACCESS TO THE SETUP STATION

- ⊕ Allows pallet loading and unloading during the machining operation with accessibility from above

OPTIMUM ACCESSIBILITY TO THE WORK AREA

- ⊕ Good visibility for inserting parts
- ⊕ Direct access to the work area/part



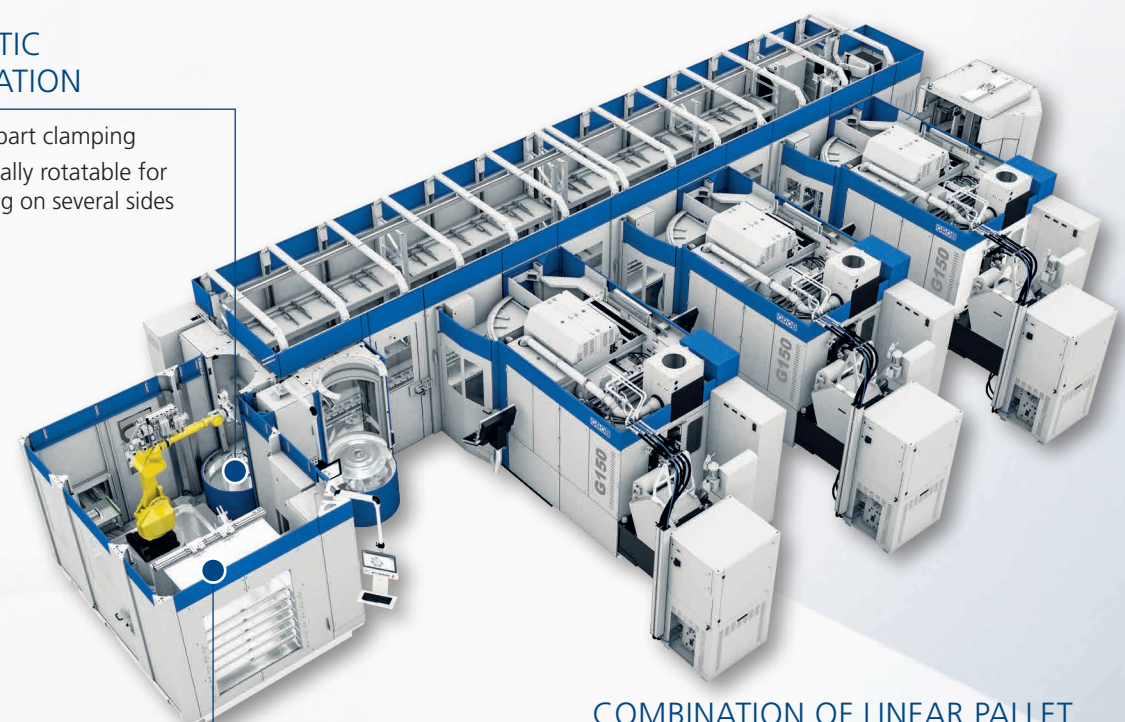
Example illustration

OVERVIEW OF SPECIFICATIONS

Available machines	G150 / G350a / G350 / G350T	G550a / G550 / G550T	G750 / G750T	G440 / G640	G640+ / G840
Design variant	PSS-L450	PSS-L900	PSS-L1450	PSS-L1800	PSS-L2700
Pallet size [mm]	320x320 / 400x400	630x630	800x800	630x500 / 800x630	800x630 / 1,000x800
Max. pallet spaces in the basic module	21	15	9	12	6/9
Max. pallet spaces in the extension module	24	18	12	15	8/12
Max. handling [kg]	450	900	1,450	1,800	2,700
Max. interference diameter [mm]	Ø 600	Ø 900	Ø 1,280	Ø 1,050	Ø 1,500
Max. interference height [mm]	500	785	930	1,300	1,500

AUTOMATIC SETUP STATION

- ⊕ Hydraulic part clamping
- ⊕ Automatically rotatable for part loading on several sides



COMBINATION OF LINEAR PALLET STORAGE SYSTEM AND ROBOT CELL

- ⊕ High flexibility by manual setup available
- ⊕ High autonomy time by part handling and reduction of fixture costs

Illustration of customized manufacturing cell

PSS-L450/PSS-L900/PSS-L1450/PSS-L1800/PSS-L2700

OVERVIEW OF DIMENSIONS

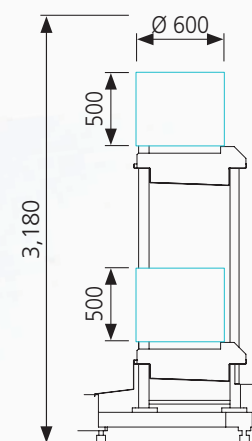


Fig.: 2 Levels

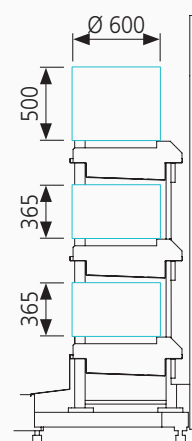


Fig.: 3 Levels

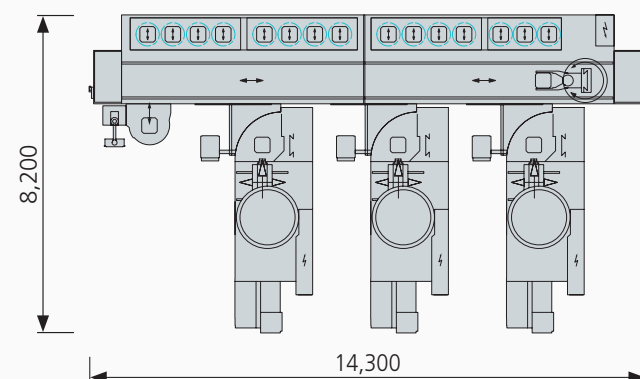


Fig.: G350 without pallet changer with PSS-L450

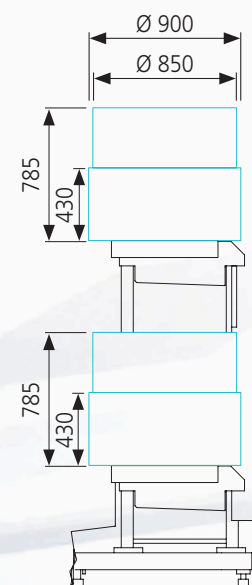


Fig.: 2 Levels

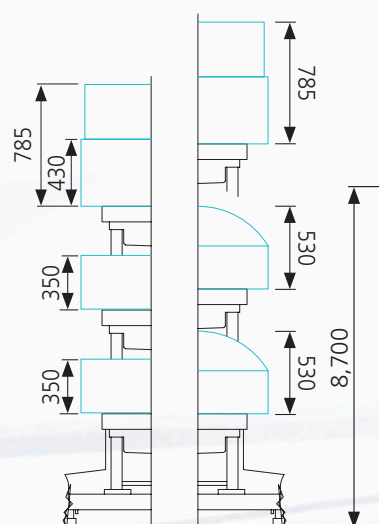


Fig.: 3 Levels standard
3 Levels max. (+ 400 mm)

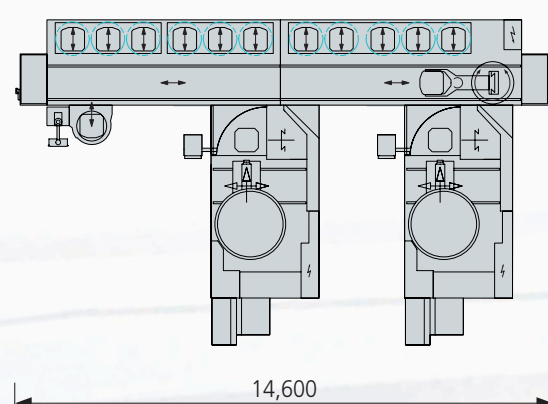


Fig.: G550 without pallet changer with PSS-L900

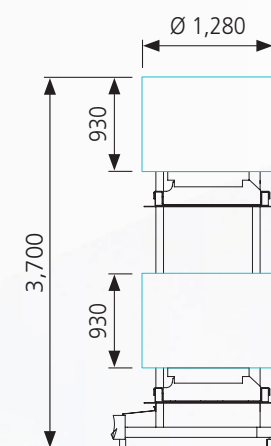


Fig.: 2 Levels

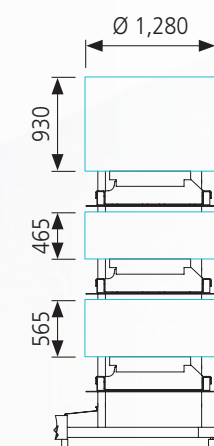


Fig.: 3 Levels

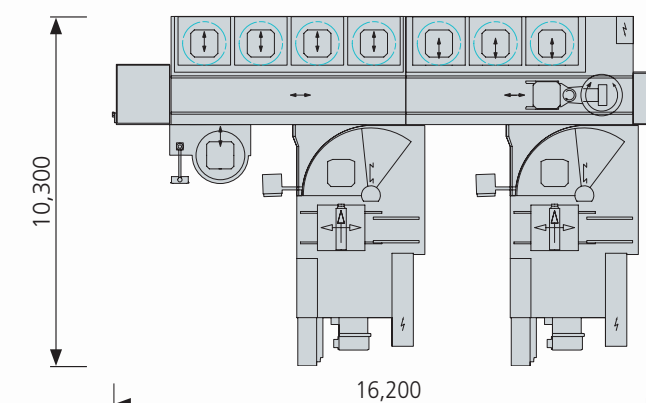


Fig.: G750 without pallet changer with PSS-L1450

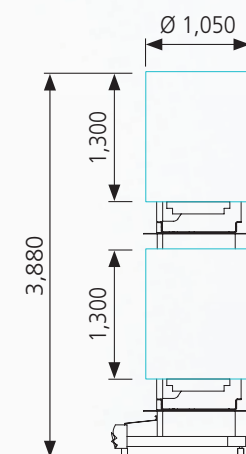


Fig.: 2 Levels

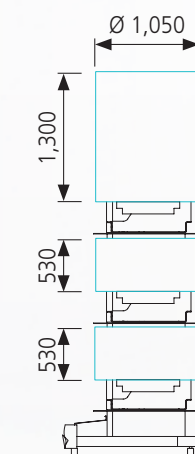


Fig.: 3 Levels

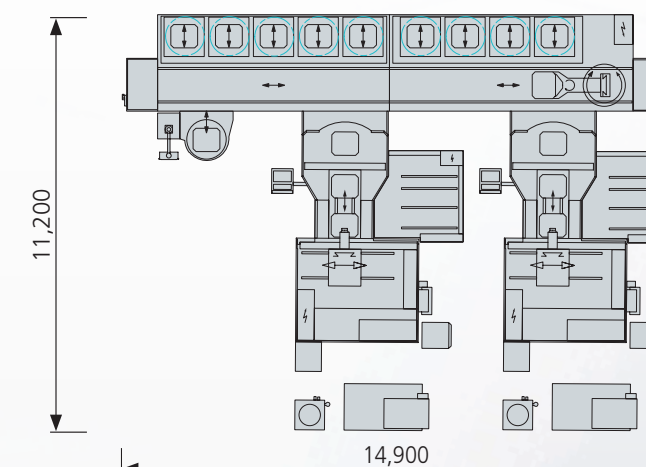


Fig.: G640 with pallet changer with PSS-L1800

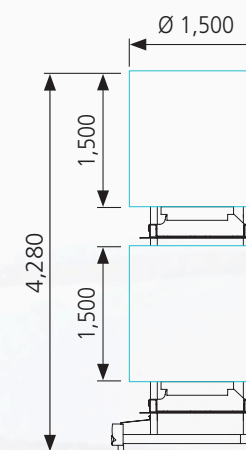


Fig.: 2 Levels

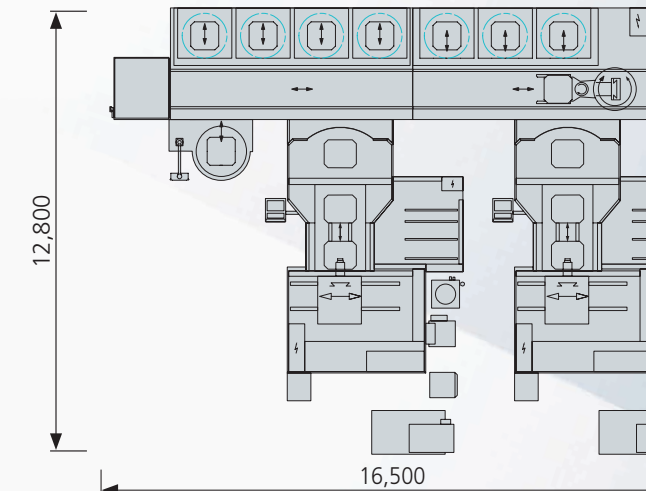


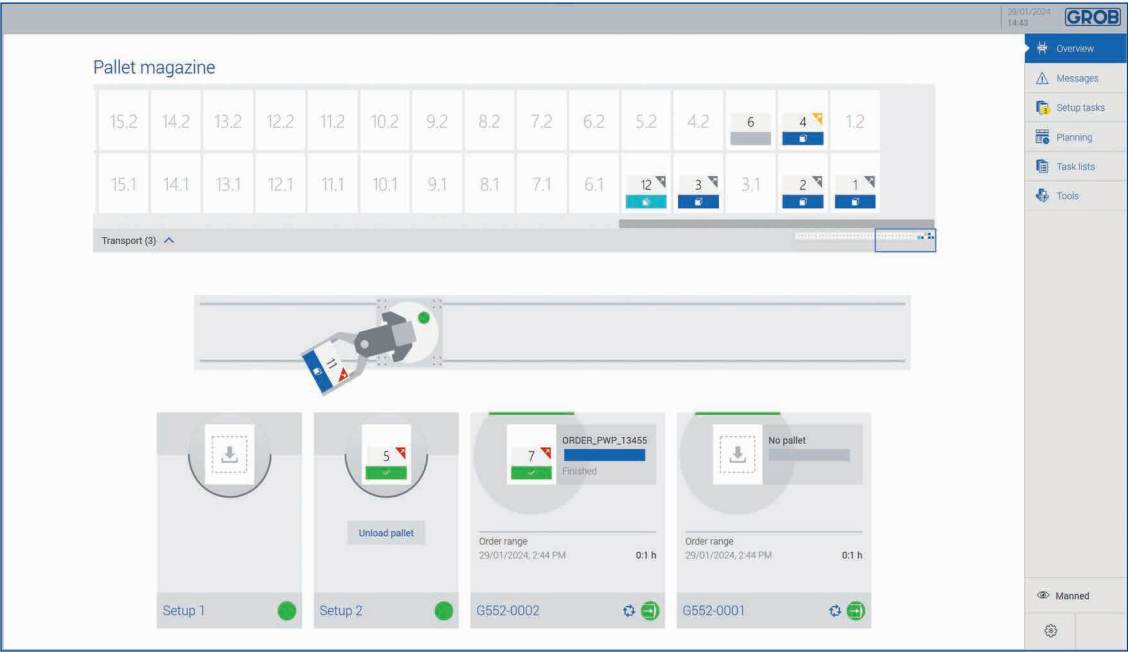
Fig.: G840 with pallet changer with PSS-L2700

PSS-R / PSS-L

PROCESS CONTROL SYSTEM GROB⁴AUTOMATION

The process control system GROB⁴Automation rounds out the efficiency and performance of GROB automation systems. The operator is provided with intuitive and clear software for configuring, planning and monitoring jobs. To meet all your requirements while providing the best price/performance ratio, GROB⁴Automation can be customized and tailored to your requirements with many options.

SYSTEM OVERVIEW



YOUR BENEFITS

- ERP/MES connection (e.g., SAP)
- Central NC program distribution including EES support (SIEMENS)
- Tool requirement planning
- Clamping program editor
- Order-related parameter transfer
- Hardware support for additional HMIs and visualizations
- Analysis of utilization and machine data (GROB⁴Analyze)
- Support for unmanned manufacturing through push & email notifications for idle state (GROB⁴Line)



TOOL REQUIREMENT PLANNING

Orders										Tool TOOL_1.1			Overview
Order	Pal.	Quantity	Name	Lifetime	Number	Required	Remaining	Number	Remaining	Pos.			Messages
ORDER_TST_4324	11	3 of 100	TOOL_1.1	1:00 min	0	0 sec	1:00 min	1	1:00 min	IN			Setup tasks
ORDER_GEW_124556	5	2 of 1555	TOOL_10.1	10:00 min	0	0 sec	10:00 min						Planning
ORDER_LKJ_49834	4	2 of 100000	TOOL_11.1	∞	0	0 sec	∞						Task lists
			TOOL_12.1	∞	0	0 sec	∞						Tools
			TOOL_13.1	∞	0	0 sec	∞						
			TOOL_14.1	∞	0	0 sec	∞						
			TOOL_15.1	∞	0	0 sec	∞						
			TOOL_16.1	∞	0	0 sec	∞						
			TOOL_17.1	∞	0	0 sec	∞						
			TOOL_18.1	∞	0	0 sec	∞						
			TOOL_19.1	∞	0	0 sec	∞						
			TOOL_2.1	2:00 min	0	0 sec	2:00 min						
			TOOL_20.1	∞	0	0 sec	∞						
			TOOL_3.1	2:30 min	0	13 sec	2:17 min						
			TOOL_4.1	4:00 min	0	0 sec	4:00 min						
			TOOL_5.1	5:00 min	0	0 sec	5:00 min						
			TOOL_6.1	6:00 min	0	0 sec	6:00 min						
			TOOL_7.1	7:00 min	0	0 sec	7:00 min						

ORDER PLANNING

PIPELINE

LIST

20/01/2024
14:38

GROB

Overview

Messages

Setup tasks

Planning

Task lists

Tools

Manual

</



Tailored to your requirements

GROB ROBOT CELLS

We provide you with flexible robot cells tailored to your needs:

- ✦ Round, linear, or flexible configuration
- ✦ Part and/or pallet handling
- ✦ External peripheral device (e.g., cleaning, measuring, marking)
- ✦ Compact drawer feed system
- ✦ Automatic gripper change
- ✦ Automatic gripper jaw adjustment
- ✦ Automatic gripper finger and clamping jaw change
- ✦ NC-controlled long stroke clamp



OUR PORTFOLIO
#GRC-R12 #GRC-R60 to #GRC-R240

GRC-R12

GROB ROBOT CELL

Combined with our universal machining centers G150, G350a and G350, our GROB robot cell GRC-R12 offers maximum flexibility. A wide range of retrofitting options allows our robot cell to be perfectly adapted to your individual requirements.

ADVANCED PRODUCTION CONTROL SOFTWARE GROB⁴AUTOMATION

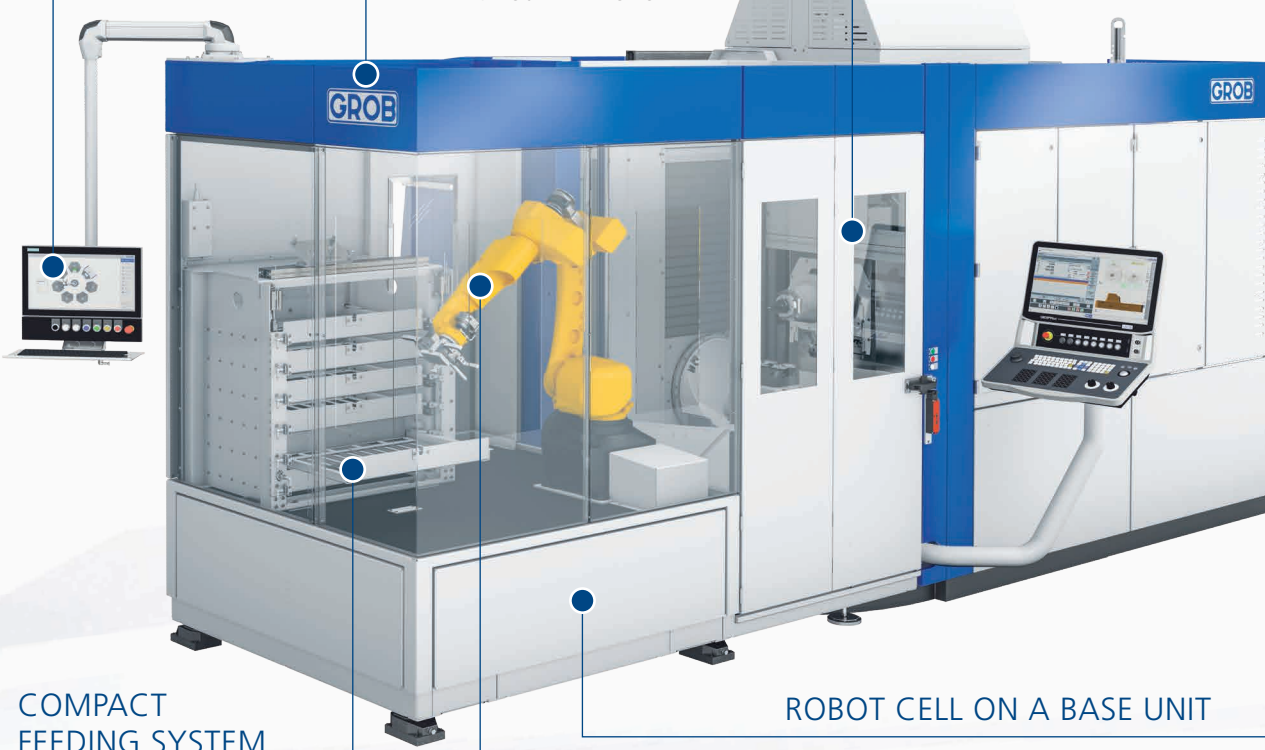
- For a longer unmanned production period with a visual organization of production orders

ACCESSORIES

- Expandable by a wide variety of modules (e.g., blow-off box, SPC station, alignment station)
- Clamping jaw changing station

DIRECT ACCESS TO THE MACHINE

- Window into cabinet for good visibility, folding/revolving door enables direct access to the machine's work area



COMPACT FEEDING SYSTEM

- For loading and unloading of the parts during machining operations thanks to an innovative drawer concept*

ROBOT CELL ON A BASE UNIT

- For quick installation and short commissioning

6-AXIS INDUSTRIAL ROBOT

- Pneumatic single and double gripper**

Example illustration

*Feeding is from the side or optionally from the front
 **An integrated blast nozzle at the gripper for blowing off the part and the clamping fixture

OVERVIEW OF SPECIFICATIONS AND DIMENSIONS

Available machines	G150 / G350a / G350
Robot	FANUC M-10iD/12
Max. load [kg]	12
Robot range (radius) [mm]	1,441
Pneumatic 2-finger parallel gripper	
Single gripper: Max. part weights [kg]	5
Double gripper: Max. part weights [kg]	2x 2.5
Drawer feed unit	
Max. drawers	9
Max. load per drawer [kg]	100
Usable drawer size [mm]	600x400
Max. component height for 6 drawers [mm]	95
Max. component height for 9 drawers [mm]	60

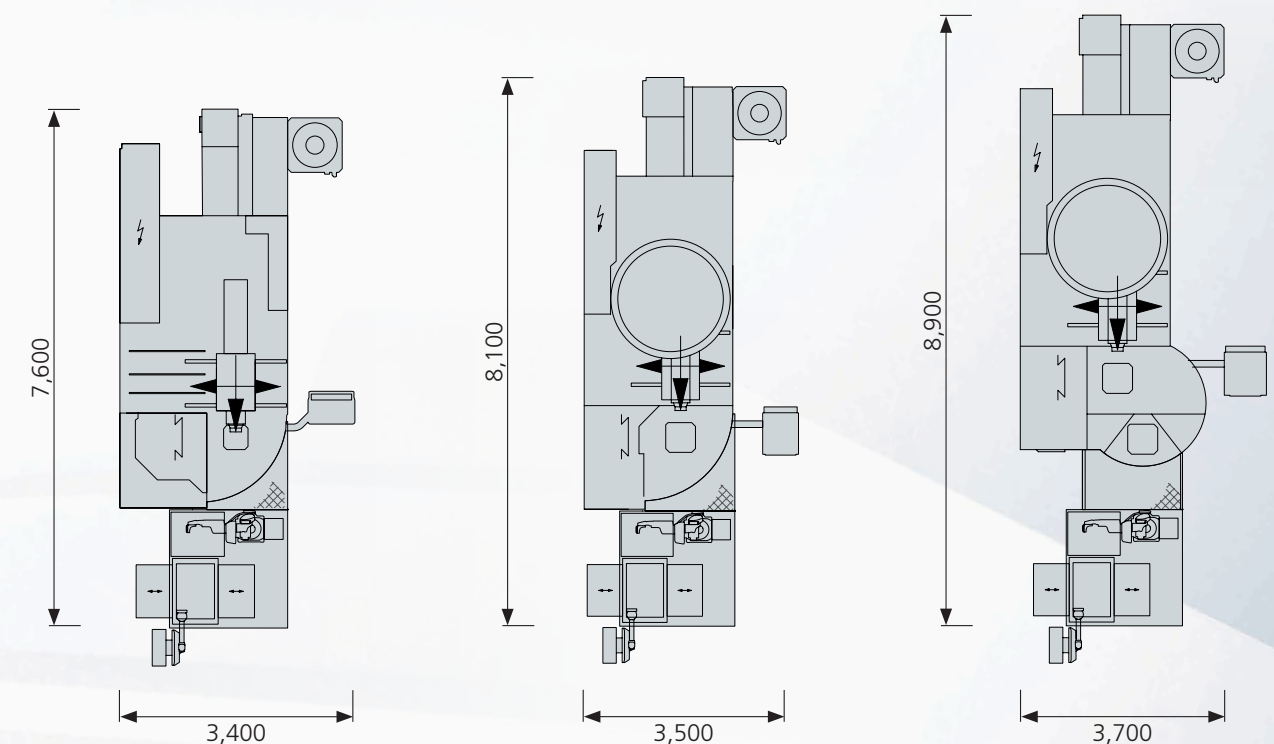


Fig.: G150 without pallet changer with GRC-R12

Fig.: G350 without pallet changer with GRC-R12

Fig.: G350 with pallet changer with GRC-R12

GRC-R60 / GRC-R150 / GRC-R240

GROB ROBOT CELL

The GROB robot cell combined with our G-modules offers maximum flexibility and customization for your manufacturing needs.

COMPACT DRAWER SYSTEM

- For loading and unloading of the parts during machining operations thanks to a compact drawer feed system

ACCESSORIES

- Deburring station; ultrasonic cleaning; measuring; labeling; gripper jaw adjustment; pre-marking and torquing station

ADVANCED PRODUCTION CONTROL SOFTWARE GROB⁴AUTOMATION

- For a longer unmanned production period with a visual organization of production orders

6-AXIS INDUSTRIAL ROBOT


- By FANUC (standard), KUKA and ABB (optional) with quick coupling for gripper change and pallet handling

SETUP STATION

- Setup of special components
- Loading and unloading of clamping fixtures

ENTIRE SYSTEM ON ONE PLATFORM

- For quick installation and short commissioning



OVERVIEW OF SPECIFICATIONS AND DIMENSIONS

Available machines	G150 / G350 / G350a / G550 / G550a		
Design variant	GRC-R60	GRC-R150	GRC-R240
Max. load [kg]	70	165	270
Nominal robot load max. [kg]	2,050	2,655	2,655
Part handling	•	•	•
Pallet handling	—	•*	•
Drawer feed unit			
Max. drawers	9		
Max. load per drawer [kg]	400		
Usable drawer size [mm]	1,660x600		
Max. component height for 9 drawers [mm]	110		

*Depends on pallet size

• Option — Not available

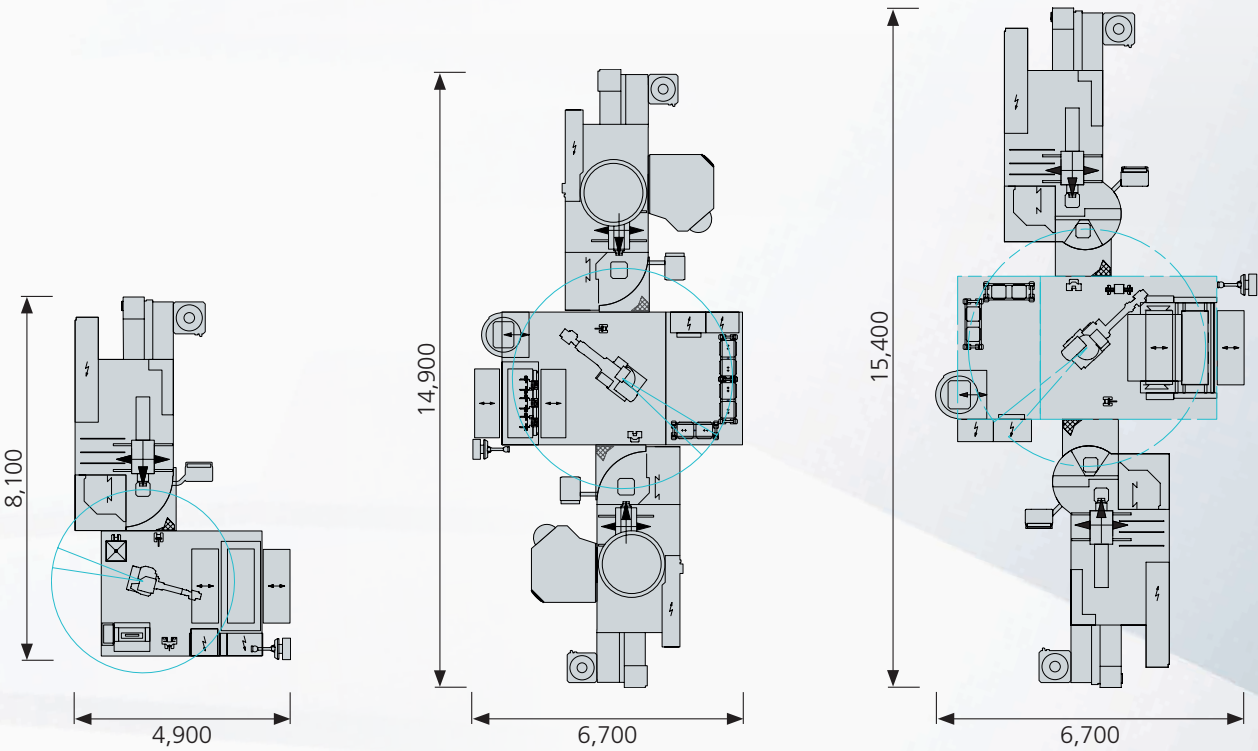


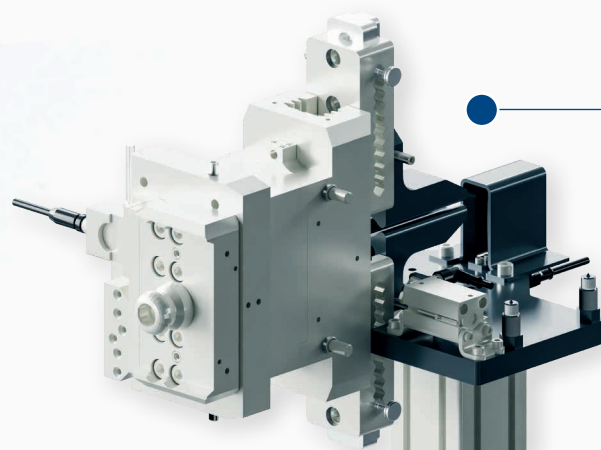
Fig.: G150 without pallet changer with GRC-R60

Fig.: 2x G350 with pallet changer with GRC-R240

Fig.: 2x G150 with pallet changer with GRC-R150

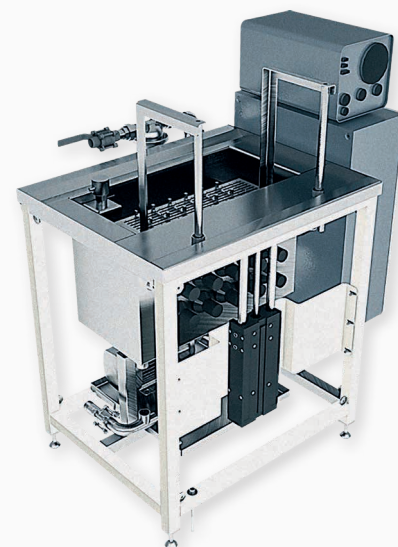
Tailored to your needs

BENEFIT FROM OUR DIVERSE EQUIPMENT SOLUTIONS



AUTOMATIC GRIPPER JAW ADJUSTMENT

- ✚ Gripper opening 20-270 mm
- ✚ Use of standard components
- ✚ No restriction of the clamping force
- ✚ Can be retrofitted
- ✚ Manual adjustment possible



CLEANING

- ✚ Cleaning within the robot cell
- ✚ Reduction of downstream & external process steps
- ✚ Ultrasonic and compressed air cleaning

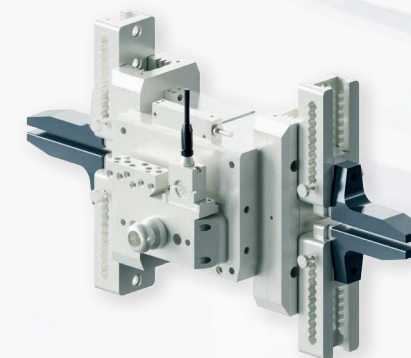
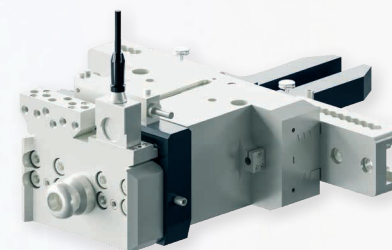


FEEDING SYSTEMS

- ✚ Robust drawer system for rough and finished parts
- ✚ Setup station for manual clamping on machine pallets
- ✚ Setup station for the insertion of clamping fixtures
- ✚ Loading/unloading during the machining operation at the drawer system and setup station possible
- ✚ Other interfaces upon request

CUSTOMIZED GRIPPER SOLUTIONS

- ✚ 2-finger parallel gripper, vacuum gripper, magnetic gripper
- ✚ Single or double grippers
- ✚ Automatic gripper change
- ✚ Integrated gripper deposits
- ✚ Integrated blow-off function



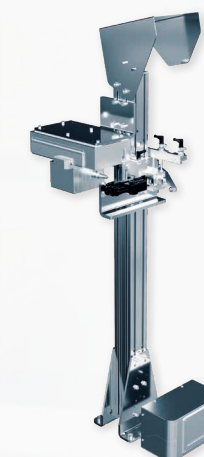
MEASUREMENT

- ✚ Measuring within the robot cell
- ✚ Coordinate measuring machine



LABELING

- ✚ Labeling within the robot cell
- ✚ Scoring or needle marker
- ✚ Laser marking



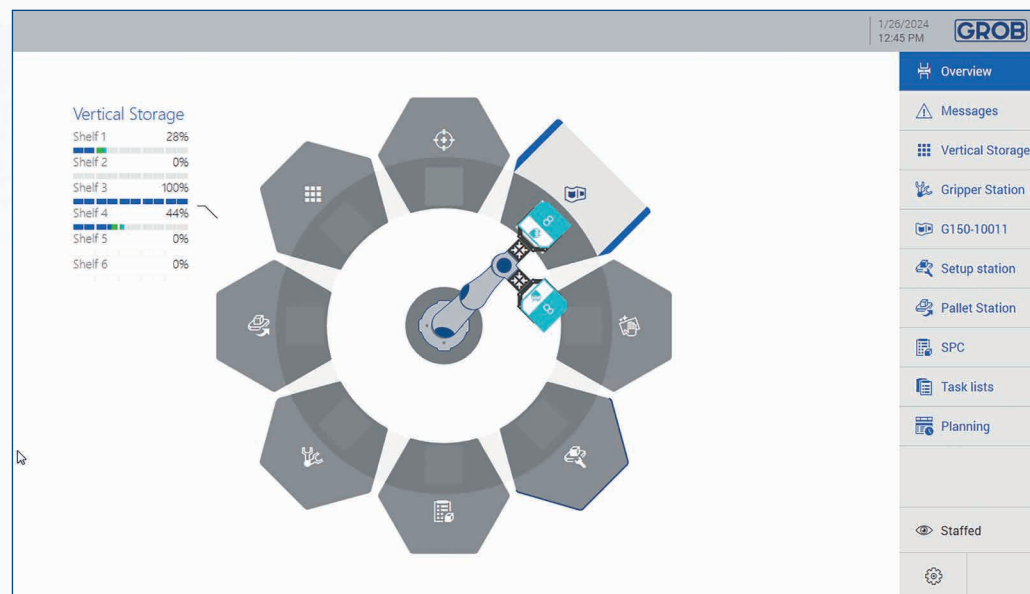
GRC-R12 / GRC-R60 / GRC-R150 / GRC-R240

PROCESS CONTROL SYSTEM

GROB⁴AUTOMATION

The process control system GROB⁴Automation rounds out the efficiency and performance of GROB automation systems. The operator is provided with intuitive and clear software for configuring, planning and monitoring jobs. To meet all your requirements while providing the best price/performance ratio, GROB⁴Automation can be customized and tailored to your requirements with many options.

SYSTEM OVERVIEW

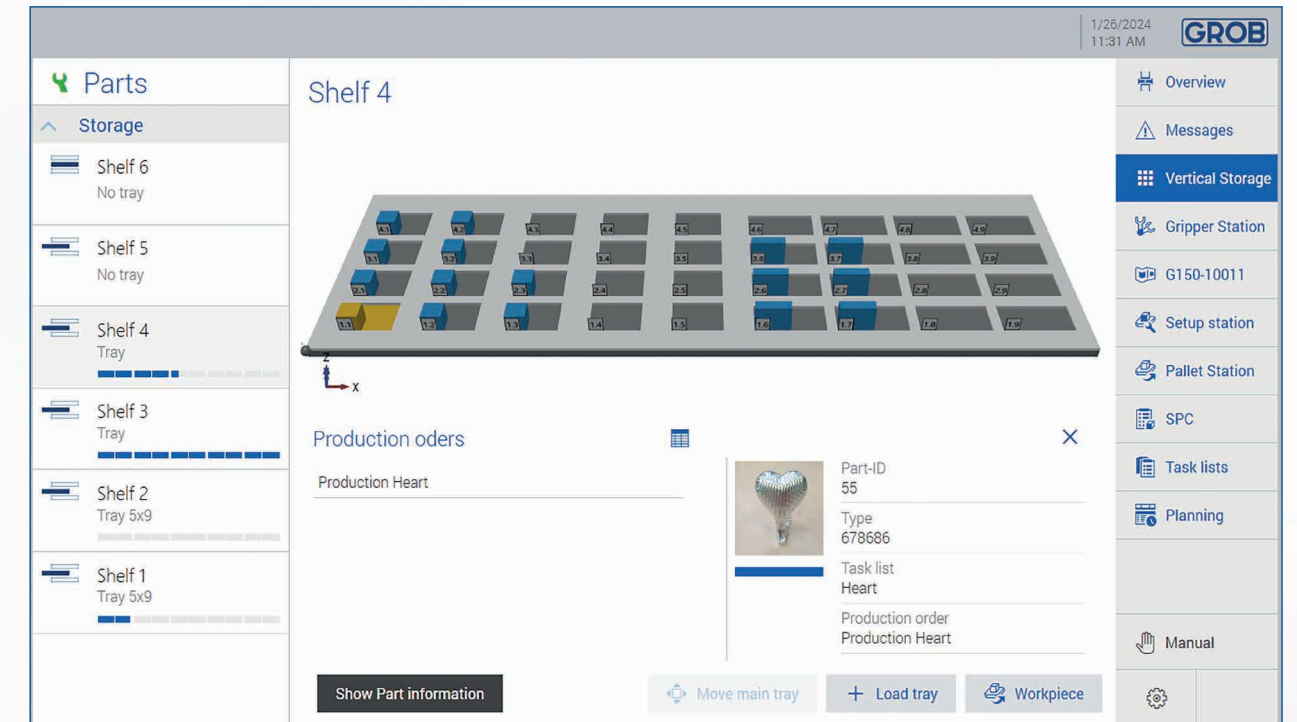


YOUR BENEFITS

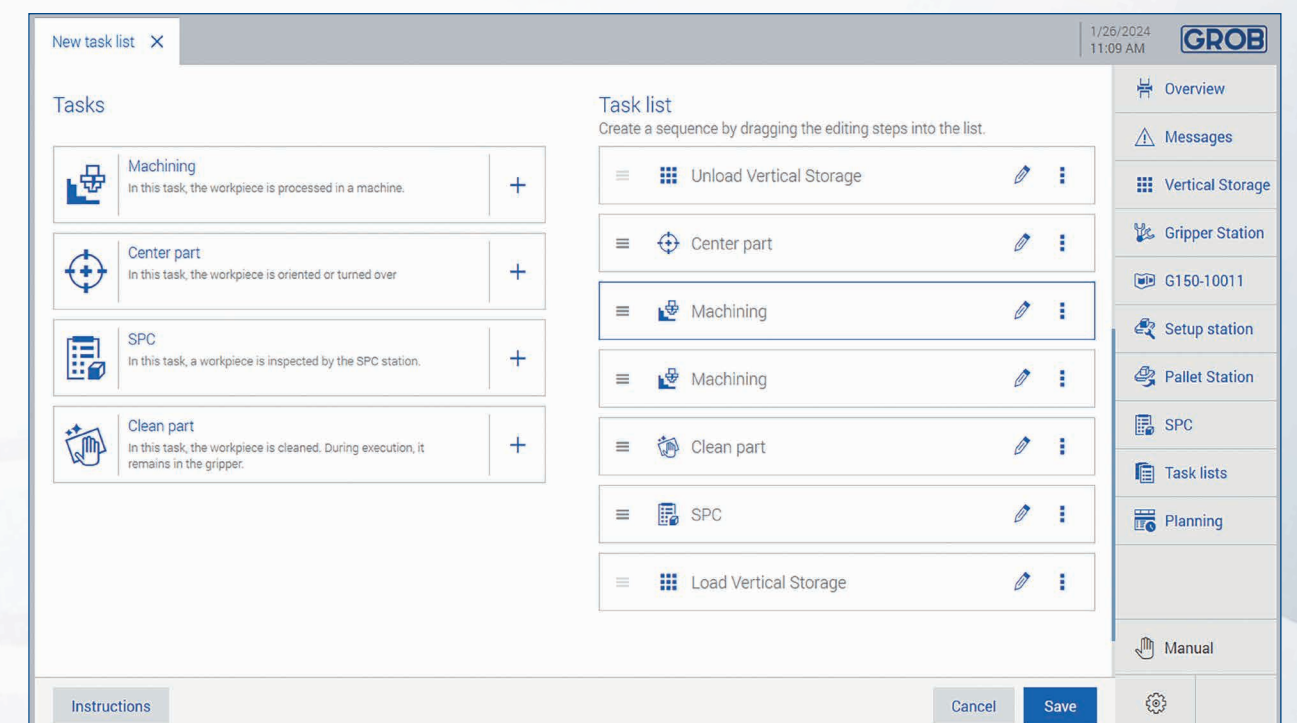
- ⊕ Fast order creation for manufacturing single pieces as well as large series
- ⊕ Unmanned processing of your manufacturing orders over several days
- ⊕ Rapid scope for action in the event of shifts in manufacturing priorities
- ⊕ Easy operation of your robot cell – no robot knowledge required – no teaching necessary
- ⊕ Time-based order planning with resource verification
- ⊕ Part feed during machining with a flexible drawer system
- ⊕ Fast change times thanks to "part/pallet preparing"
- ⊕ Multiple OP10/OP20/OP30 operation steps possible with automated turning
- ⊕ Integration of the machine axes made possible via overhead loading and unloading
- ⊕ Automated error handling to avoid production loss in unmanned operation (e.g., tool breakage)



PART MANAGEMENT



ORDER CREATION





*All value added
from a single source*

FLEXIBLE MANUFACTURING SYSTEMS

Our customers in small, medium, and large-scale production have been relying on GROB automation solutions for decades. The experience gained is fed straight into our automation solutions, making GROB a strong partner – for solutions with pallet or part storage systems to highly flexible, turn-key manufacturing lines. GROB automation technology allows you to flexibly adapt to capacities and guarantees pallet and part handling perfectly in tune with your needs.

- ✦ Mechanical machining and automation from a single source
- ✦ Optimal automation for your production plant
- ✦ Responsibility for quality and scheduling with one partner
- ✦ Turn-key project management



OUR PORTFOLIO

#FlexibleManufacturingSystems
#TurnkeyManufacturingLines

Flexible manufacturing system

COMPLETE PROCESS CHAIN FROM A SINGLE SOURCE

The flexible manufacturing system allows for automating both the tool flow and the part flow. This illustration shows a version of a flexible manufacturing system with a central tool magazine. The portal can interchange tools in the disk-type tool magazines of several machines. The part flow is managed by a pallet changing device for pallet handling, to which three setup stations, one high-rack storage system with 90 pallet storage locations and three machining centers are connected.

- ✚ External periphery can be connected
- ✚ Flexible installation variants; configurable to your requirements
- ✚ Expandable modular system
- ✚ Combination of rough part storage and pallet storage system

OPTIMAL ACCESS TO THE SETUP STATION

- ✚ Allows pallet loading and unloading during the machining operation with accessibility from above

INTERLINKED MACHINING CENTERS

- ✚ Increase productivity thanks to simultaneous machining of several part types

AUTOMATIC TOOL SUPPLY

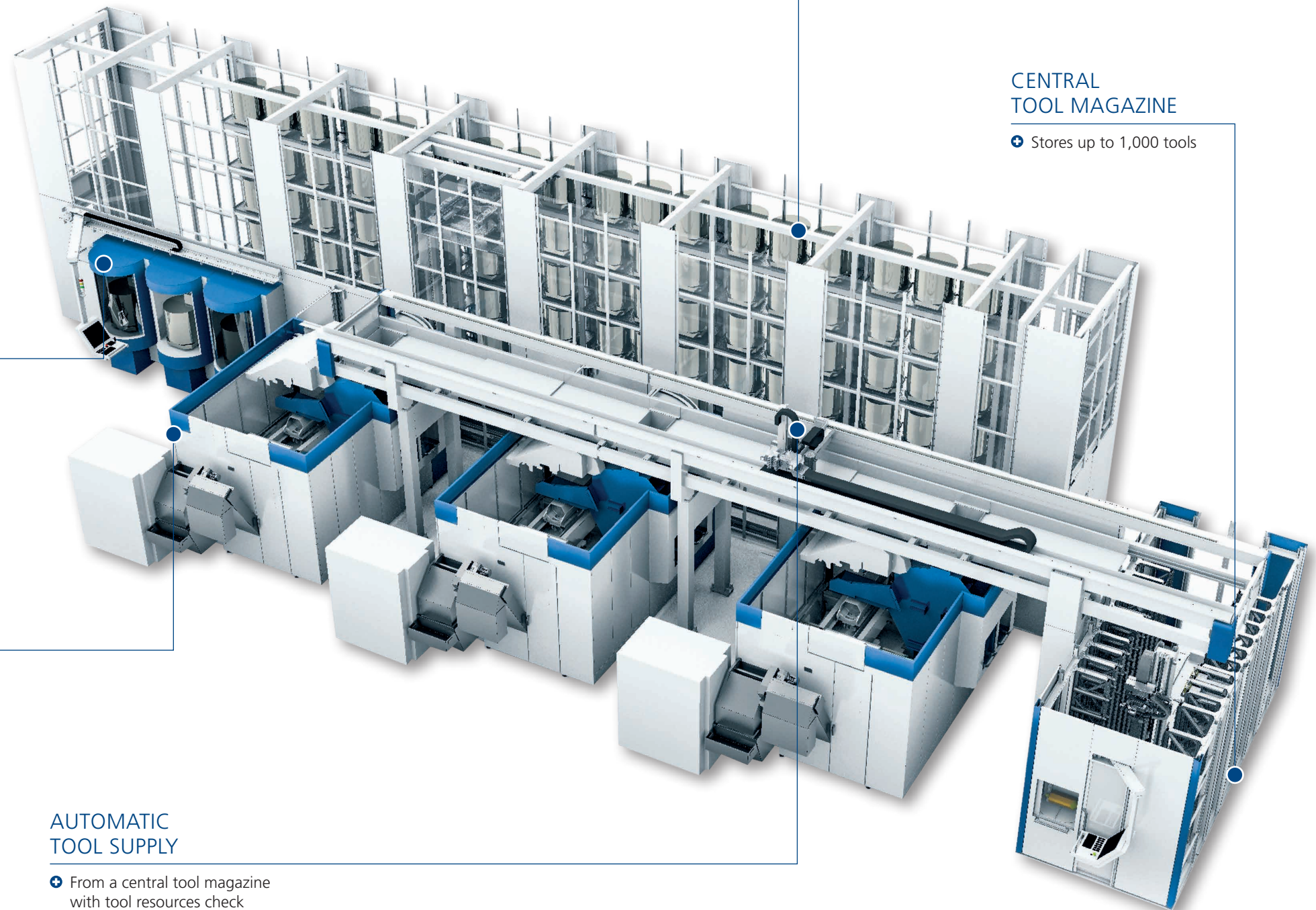
- ✚ From a central tool magazine with tool resources check

PALLET STORAGE SYSTEM

- ✚ Can be used with 90 pallet storage locations and a pallet changing device

CENTRAL TOOL MAGAZINE

- ✚ Stores up to 1,000 tools



For efficient and intelligent material movement

AUTONOMOUS MOBILE ROBOT SYSTEM

No more manual transport and long distances! Our autonomous mobile robot system, also called the GMR (GROB Mobile Robot), revolutionizes your internal movement of material. Rely on fully automated, precise and reliable transport solutions to take your manufacturing processes to the next level.

Our GMR is the ideal addition for modern and efficient production. Equipped with advanced sensor technology, it effortlessly navigates through your production hall without relying on human guidance. This means less downtime and optimal utilization of your resources.

ADVANTAGES THROUGH THE USE OF ROTARY PALLET STORAGE SYSTEMS

- ⊕ Quick pallet change with double-fork lift unit
- ⊕ Pallet buffer places in front of each machine
- ⊕ Unrestricted use of rotary pallet storage systems possible directly on the machine
- ⊕ Simple retrofitting (machine-independent)

ADVANTAGES THROUGH THE USE OF PALLET CARRIERS

- ⊕ The GMR can be used for other tasks (e.g., chip container transport) after pallet carriers have been removed
- ⊕ Different pallet types possible by using specific pallet carriers
- ⊕ Flexible layout design independent of location



DECENTRALIZED PALLET DEPOSIT LOCATION

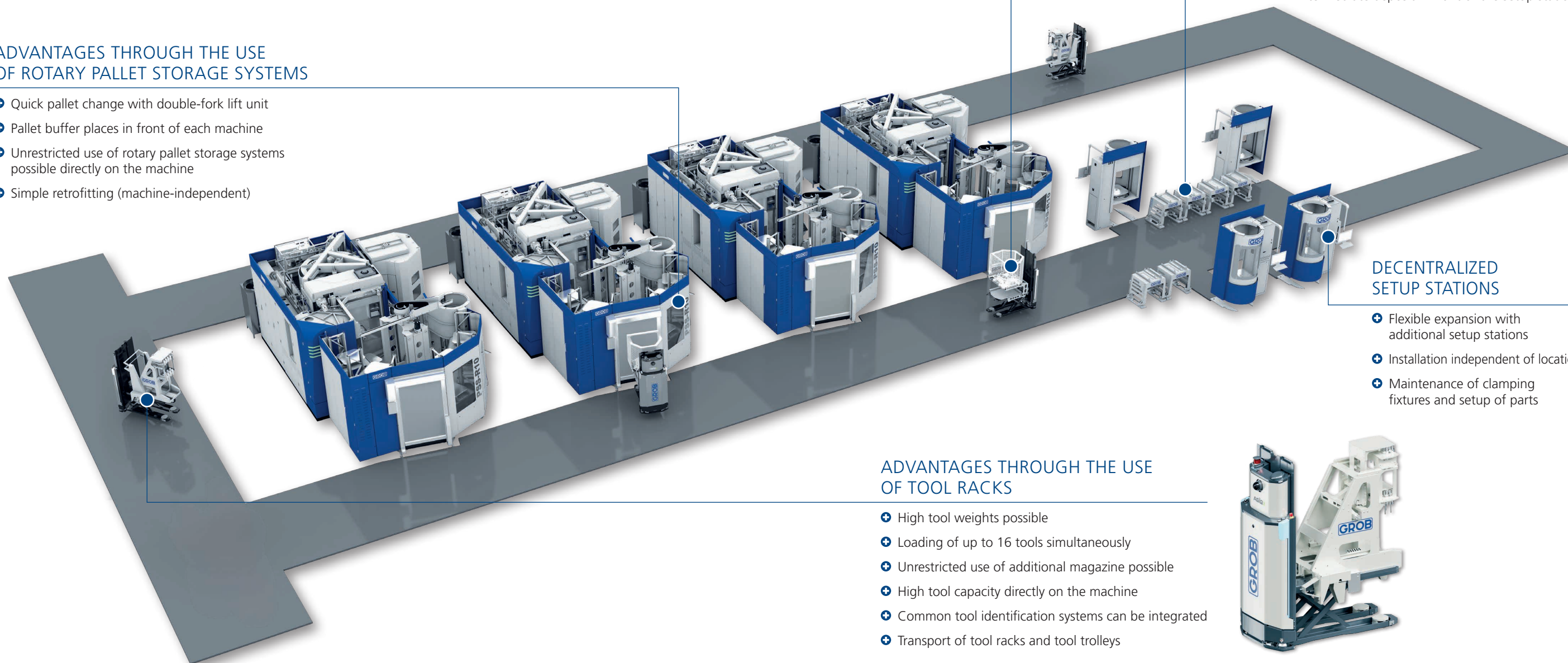
- ⊕ Flexible expansion of pallet storage locations
- ⊕ Intermediate deposit in front of the setup stations

DECENTRALIZED SETUP STATIONS

- ⊕ Flexible expansion with additional setup stations
- ⊕ Installation independent of location
- ⊕ Maintenance of clamping fixtures and setup of parts

ADVANTAGES THROUGH THE USE OF TOOL RACKS

- ⊕ High tool weights possible
- ⊕ Loading of up to 16 tools simultaneously
- ⊕ Unrestricted use of additional magazine possible
- ⊕ High tool capacity directly on the machine
- ⊕ Common tool identification systems can be integrated
- ⊕ Transport of tool racks and tool trolleys



Turn-key manufacturing line

ALL VALUE ADDED FROM A SINGLE SOURCE

The customer plant illustrated has a highly efficient GROB manufacturing line for machining transmission cases and clutch housings. In this turn-key project, GROB designed and built the machining centers, and also the complete automation system. The linear gantry can be designed as an I- or H-loader. It has one or two vertical axes per carriage.

HIGHLY DYNAMIC GROB LINEAR GANTRIES

- ⊕ Designed as I- and H-loaders

TRANSPORTATION AND AUTOMATION COMPONENTS

- ⊕ Stations automated with part conveyors – if needed, with part-specific transport pallets

MACHINING CENTERS

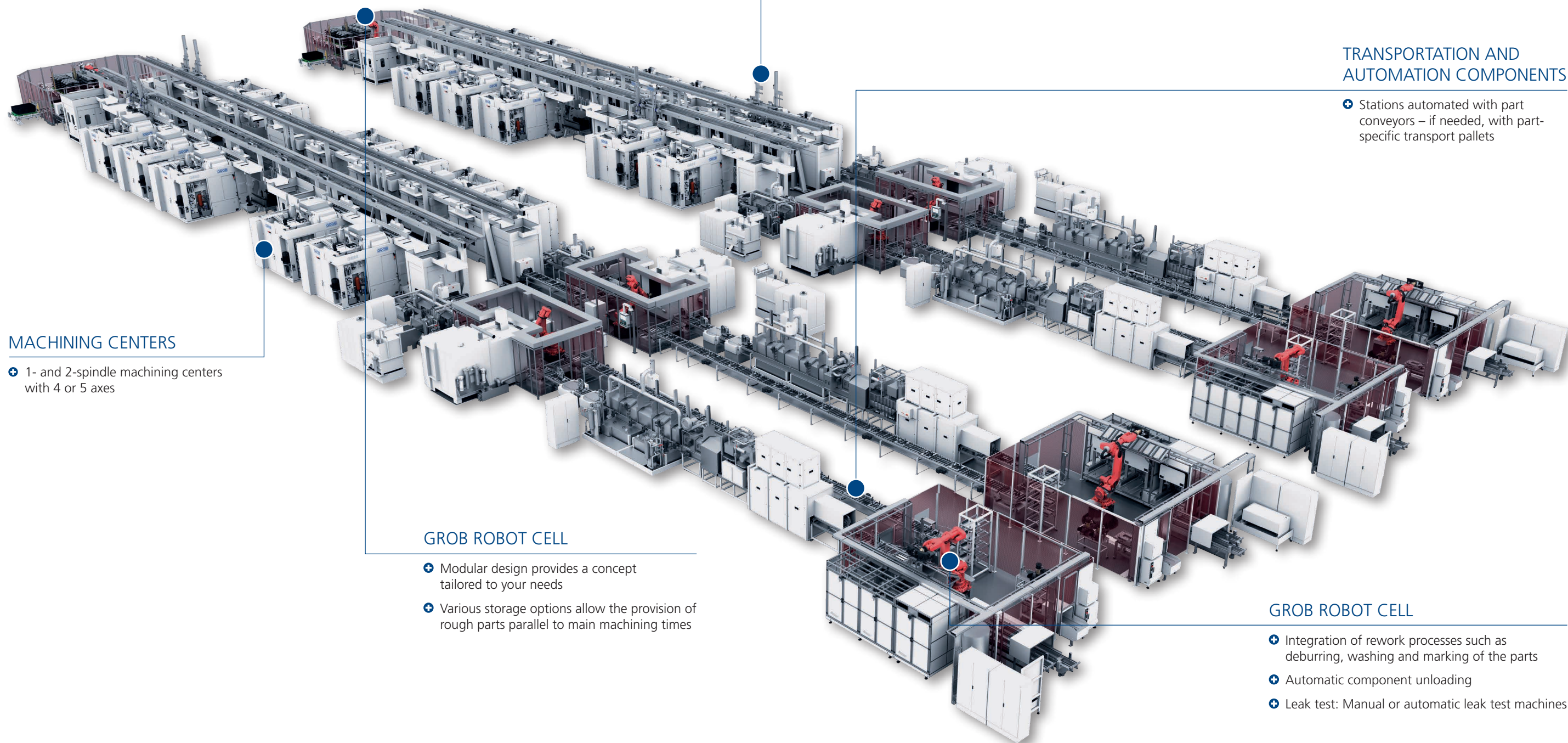
- ⊕ 1- and 2-spindle machining centers with 4 or 5 axes

GROB ROBOT CELL

- ⊕ Modular design provides a concept tailored to your needs
- ⊕ Various storage options allow the provision of rough parts parallel to main machining times

GROB ROBOT CELL

- ⊕ Integration of rework processes such as deburring, washing and marking of the parts
- ⊕ Automatic component unloading
- ⊕ Leak test: Manual or automatic leak test machines





Moving into a digital future INDUSTRY 4.0

Transparency and connectivity – our modular GROB-NET⁴Industry web applications let you network and digitalize your production processes across all plants to make your production even more efficient. From planning to engineering to maintenance, GROB-NET⁴Industry combines relevant modules for increasing productivity and offers you an all-round package for modern production in the Industry 4.0 era.

- ✚ GROB⁴AUTOMATION –
Intuitive production control software for unmanned operation
- ✚ GROB⁴LINE – watch the machine on your smartphone
- ✚ GROB⁴ANALYZE – machine feedback for the CIP
- ✚ GROB⁴TDX – transfer tool data automatically



OUR SOFTWARE PORTFOLIO

#GrobNet4Industry #InteractiveApplication
#Cloud4Machine



*Friendly,
committed, competent*
GROB SERVICE

From 24-hour service and a comprehensive range of spare parts and training courses to professional machine maintenance and analysis: The GROB service spectrum offers you a comprehensive range of products and services and is available to you worldwide thanks to our global production plants and service branches.

- ✚ Worldwide service network
- ✚ Available 24/7/360
- ✚ One hotline for everything
- ✚ We are right where our customers are



OUR SERVICE PORTFOLIO

#Hotline #Webshop #ServiceAgreements
#SpareParts #RepairCenter #Overhaul&Optimization
#MotorizedSpindleService #GrobTechnicalAcademy

Worldwide throughout the machine service life

GROB – GLOBAL AND INTERNATIONAL

From Bavaria to the world: Since our founding in 1926 in Munich, we as a global, family-managed company have been on a constant growth trajectory developing and manufacturing systems and machine tools. Our customers include the world's leading automotive manufacturers, their suppliers, and renowned companies from the aerospace, mechanical engineering, and other industries. With our production facilities in Germany, Brazil, the USA, China, Italy and India, as well as 16 worldwide service centers and sales branches, we are represented around the globe, ensuring the highest quality.

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Pianezza, Italy
Stratford-upon-Avon, Great Britain
Hengelo, Netherlands
Lyon, France
Baar, Switzerland
Poznań, Poland
Győr, Hungary
Istanbul, Türkiye
Steyr, Austria

24/7 SUPPORT

FOUNDED IN 1926

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Bangkok, Thailand

Our global production sites



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São Paulo, Brazil



Bluffton, USA



Dalian, China



Pianezza, Italy



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GROB-WERKE GmbH & Co. KG

Pioneers in designing and building highly innovative production and automation systems for almost 100 years.

*#MachiningTechnology #UniversalMachiningCenters
#AssemblyPlants #Electromobility #Automation
#AdditiveManufacturing #Digitalization
#NewAndQualityCheckedUsedMachines #Service*



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