

#smartautomation



AUTOMATION SOLUTIONS.



This is who we are
GROB-WERKE.





Technology at its best

STEP WITH US INTO A GREEN FUTURE.

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. We also value 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 CO2 footprint.



OUR PRODUCT RANGE.

#machiningtechnology #universalmachiningcenters
#assemblyplants #electromobility #automation
#additivemanufacturing #digitalization
#usedmachines #service

Concentrated competence worldwide

INTELLIGENT TECHNOLOGY IS HUMAN.

For generations, we at GROB have lived and experienced this principle by making our customer's requirements the focus of our work. The result is sophisticated technology creating more efficient production processes worldwide and delivering highest quality.



RESEARCH & DEVELOPMENT

With a high degree of creativity and technical intuition, as well as the best engineering expertise, our developers have worked hard to earn the reputation of being a technology leader.



ASSEMBLY

From pre-assembly to machine assembly to process commissioning – our employees demonstrate their expertise with optimally coordinated workflows.



ENGINEERING

With method development and structured problem solving, our employees in Engineering develop innovative concepts representing milestones for precision, dynamics, and reliability.



COMMISSIONING

With simulation techniques and virtual commissioning, we achieve the highest adherence to delivery dates and product quality.



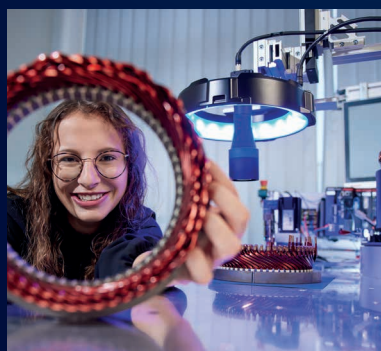
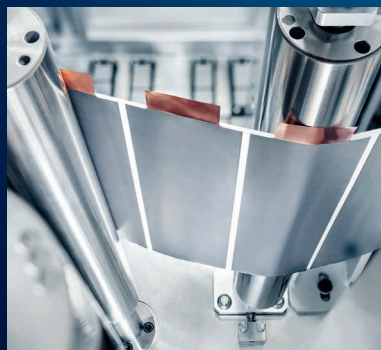
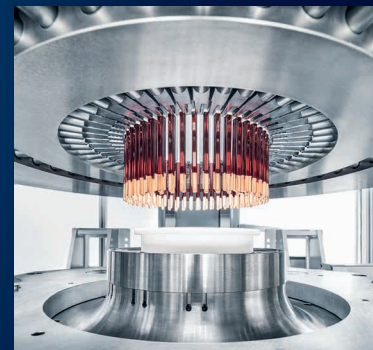
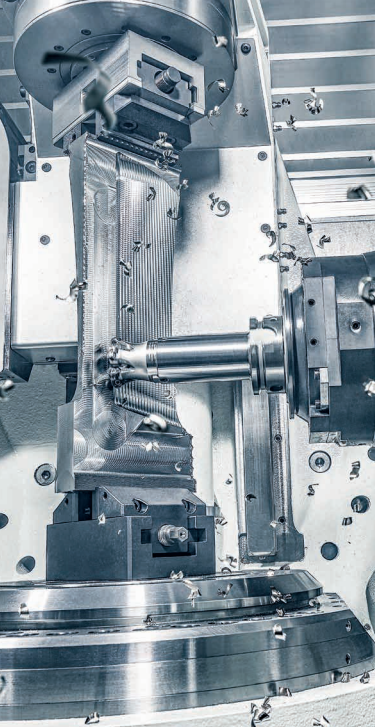
PRODUCTION

The high degree of vertical integration along the entire value creation chain, numerous machining technologies and our employees' distinctive specialist knowledge create the best conditions for state-of-the-art production.



TECHNICAL APPLICATION CENTERS

Our production plants in Germany, Brazil, the USA, China, Italy and India have technical application centers for the machining and electromobility sectors, where our customers can experience GROB technologies up close.



GROB automation solutions

THE IDEAL SOLUTION FOR YOUR MACHINE.

AUTOMATION SOLUTIONS.

STANDARD AUTOMATION.

PSS-R100/PSS-R300

PSS-T300

PSS-R450 to PSS-R1800

PPS-L450 to PSS-L2700

FLEXIBLE ROBOT CELLS.

GRC-R12

GRC-R60 to GRC-R240

GRC-V20 and GRC-V60

FLEXIBLE MANUFACTURING SYSTEMS.

Flexible manufacturing systems

Turnkey production lines

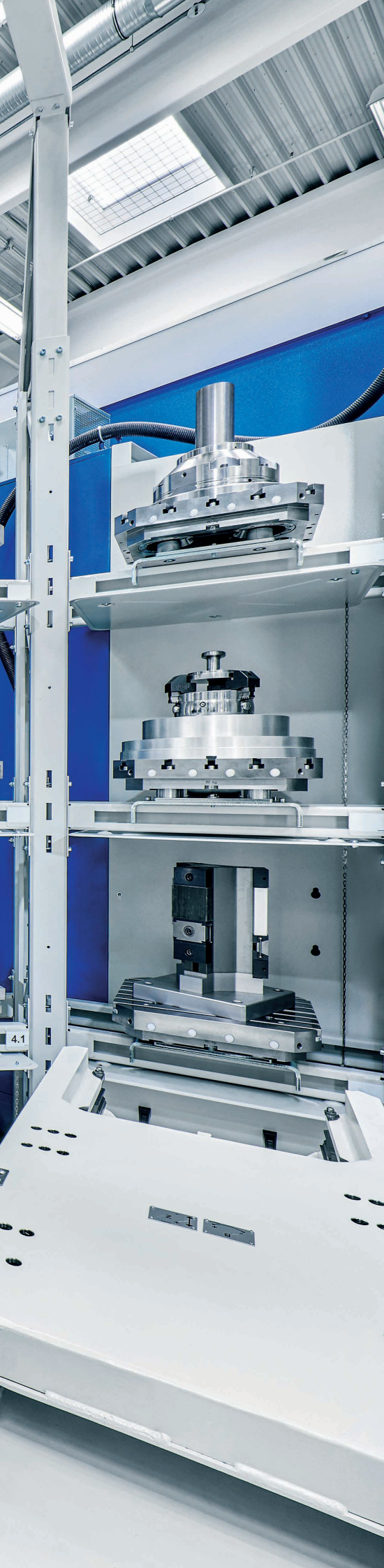
DIGITALIZATION.

SERVICE.









Smart & easy automation

STANDARD AUTOMATION BY GROB.

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 product for automated processes, no matter whether tried and proven loading systems, automation system components or fully customized solutions are utilized.

- ✚ Multiply output and productivity with GROB pallet storage systems
- ✚ Reduction of unit cost
- ✚ Ensuring 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-R100 / 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 individual character and cost-effectiveness. This makes the new PSS-R100 and PSS-R300 an ideal starter solution for automated and highly efficient manufacturing.

OPTIMAL ACCESS TO THE PALLET STORAGE SYSTEM

- ✚ Ergonomic access to the loading/unloading station

FLEXIBLE STORAGE CONFIGURATION

- ✚ Up to 16 pallet storage positions (Ø 150 pallet)
- ✚ Up to 10 pallet storage positions (320x320 pallet)
- ✚ Other configurations upon request

OPTIMIZED VIEW

- ✚ Into the work area and to the pallet storage pockets

INTUITIVE PALLET MANAGEMENT

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



COMPACT FOOTPRINT

- ✚ PSS-R100 1,700x1,700 mm
- ✚ PSS-R300 2,100x2,100 mm

Example illustration

OVERVIEW OF SPECIFICATIONS AND DIMENSIONS.

Available machines	G150 / G350a / G350	G150 / G350a / G350	G350a / G350
Design variant	PSS-R100	PSS-R300	
Pallet size [mm]	ITS148/HSK/200x200	320x320	400x400
Pallet positions	16	10	8
Max. handling [kg]	100*	220	300
Max. interference diameter [mm]	Ø 225**	Ø 450	Ø 500
Max. interference height [mm]	400**	500**	500**

*Depends on pallet size and pallet gripper

**Depends on storage configuration

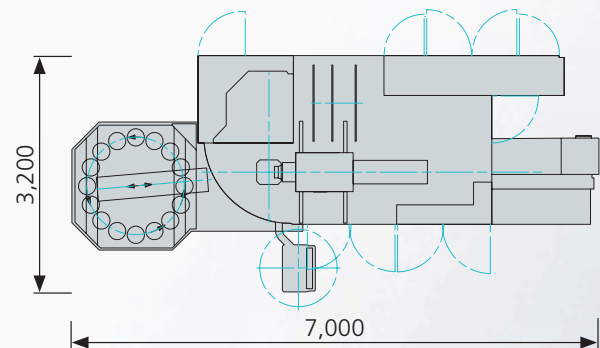
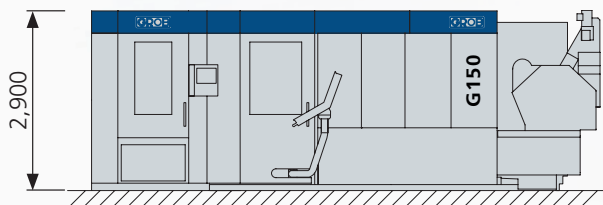


Fig.: G150 without pallet changer with PSS-R100

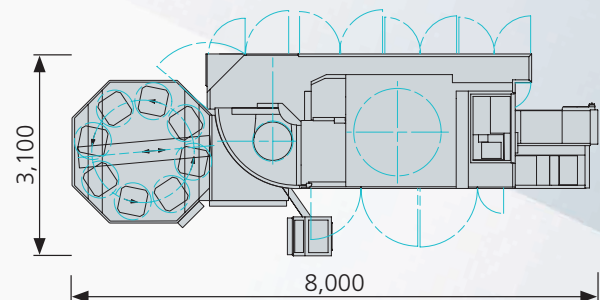
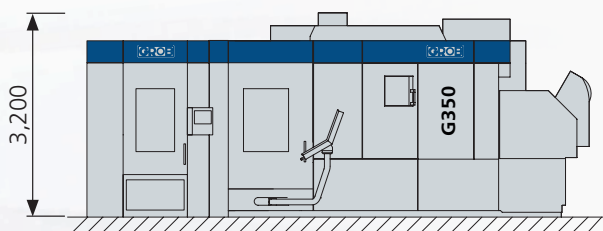
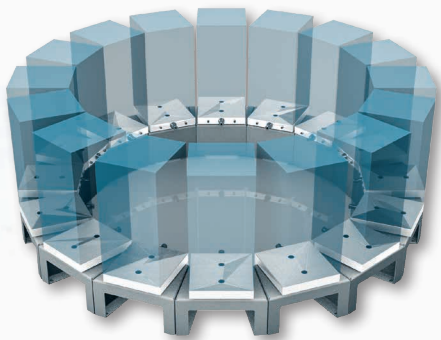


Fig.: G350 without pallet changer with PSS-R300

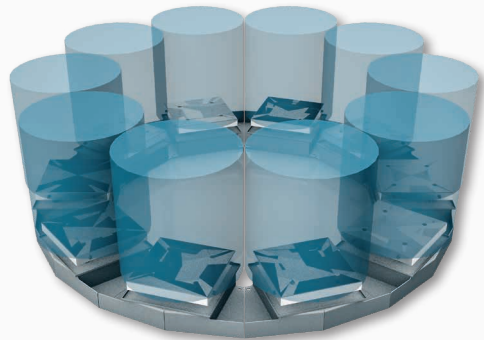
Overview

PALLET VARIANTS AND STORAGE CONFIGURATIONS.

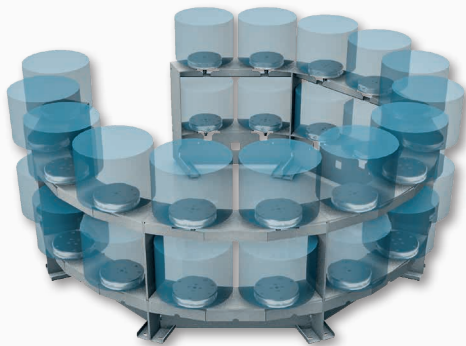
Our PSS-R100 and PSS-R300 can be flexibly adapted to your requirements. Choose the perfect solution for your production from different pallet variants and storage configurations.



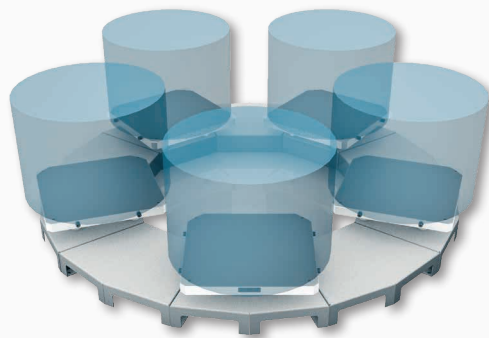
PSS-R100; ITP200



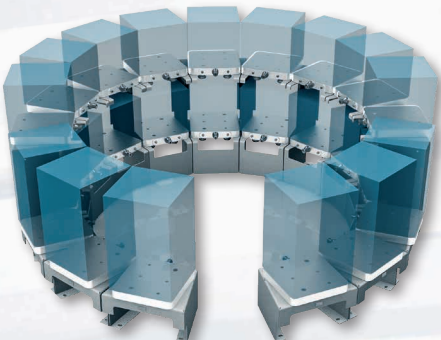
PSS-R300; ITP320



PSS-R100; ITS148



PSS-R300; MTS500



PSS-R100; Schunk



PSS-R300; Partool

Increase the efficiency of your production

OPTIMALLY PLAN YOUR PRODUCTION AND USE IT TO CAPACITY WITH GROB⁴AUTOMATION!

HIGH FLEXIBILITY AND OPTIMIZED UTILIZATION

- ⊕ Order planning with several pallets, taking into account the quantity of the order
- ⊕ Menu-driven creation of the process sheet
- ⊕ Presentation of the manufacturing range
- ⊕ Optional tool resources check

INTUITIVE USER INTERFACE

- ⊕ "Drag & Drop" function
- ⊕ Presentation of the manufacturing status in colors



THE BENEFITS TO YOU AT A GLANCE:

- ⊕ Cost-effective production thanks to significantly increased machine utilization
- ⊕ Complete solution from a single source with a uniform design
- ⊕ Capability to produce in unmanned or lightly-manned shifts
- ⊕ Parallel loading and unloading of pallets during production

”

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 number 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 and GROB pallets

FLEXIBLE PALLET ARRANGEMENT TO SUIT CUSTOMER REQUIREMENTS

- + Up to 81 pallet storage positions

OPTIMAL ACCESS TO THE SETUP STATION

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

INTUITIVE CELL OPERATION

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

MODULAR STRUCTURE

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



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] ► zero-point gripper/fork gripper	250 */300			250 */300			
Max. interference diameter [mm]	Ø 550			Ø 550			
Max. interference height [mm]	500			500			

* With EROWA RCS5 Gripper Link

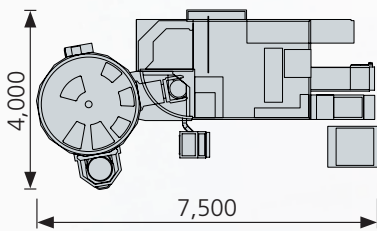


Fig.: G150 without pallet changer with PSS-T300

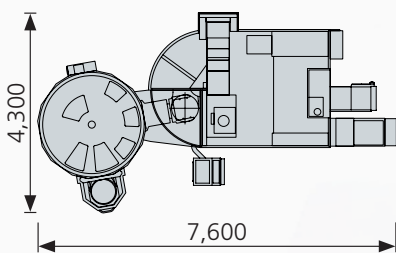
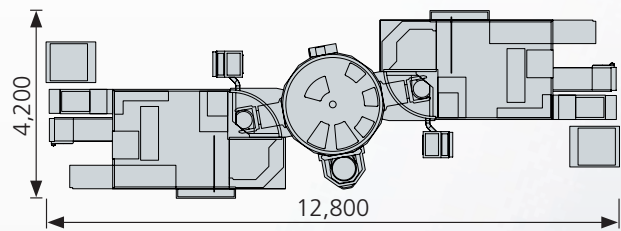


Fig.: G350a without pallet changer with PSS-T300

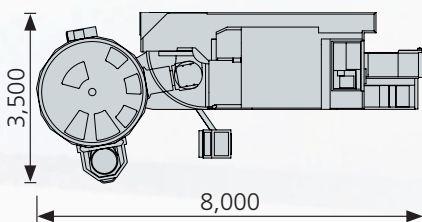
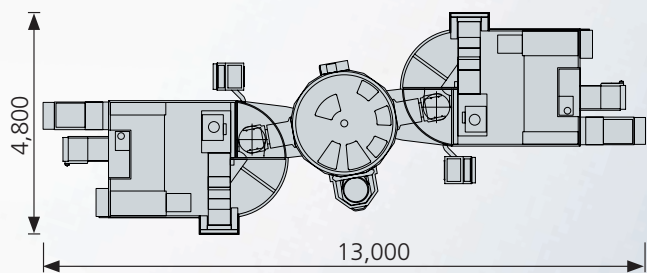
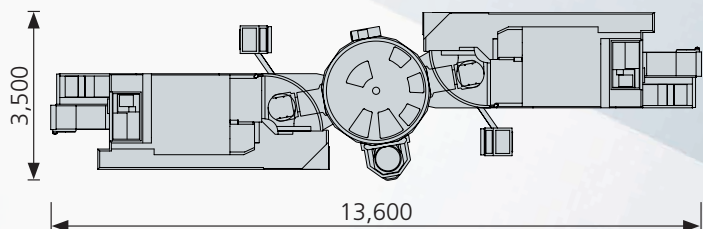


Fig.: G350 without pallet changer with PSS-T300



PSS-T300

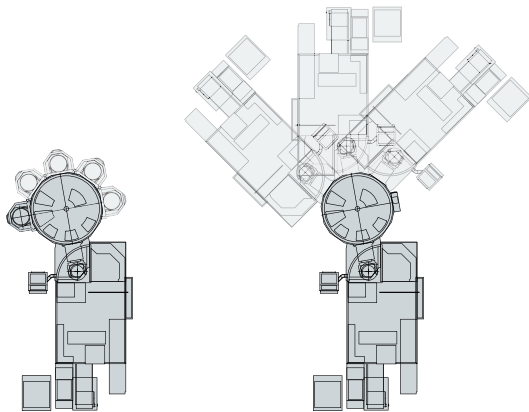
FLEXIBLE CONNECTION.

The GROB PSS-T300 allows flexible setup options and can thus be adapted to a wide variety of footprints.

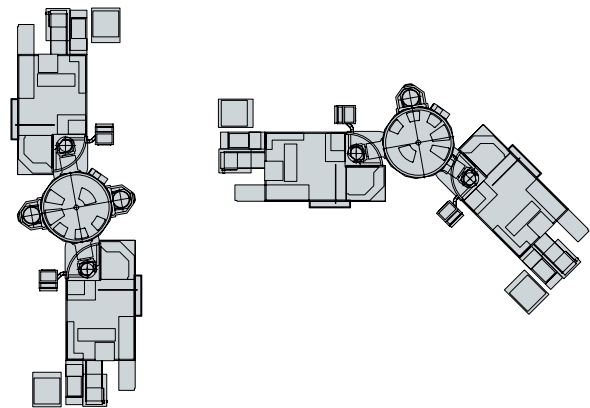
It also allows the flexible use of different pallets of different sizes. You can equip the PSS-T300 to meet your individual requirements and needs.

FLEXIBLE CONNECTION OF UP TO TWO MACHINING CENTERS

Flexible configuration of setup stations and machining centers



Setup options: Setup stations



PALLET VARIANTS *

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

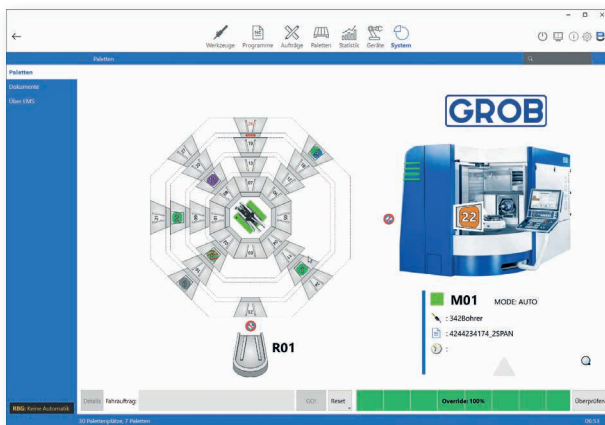
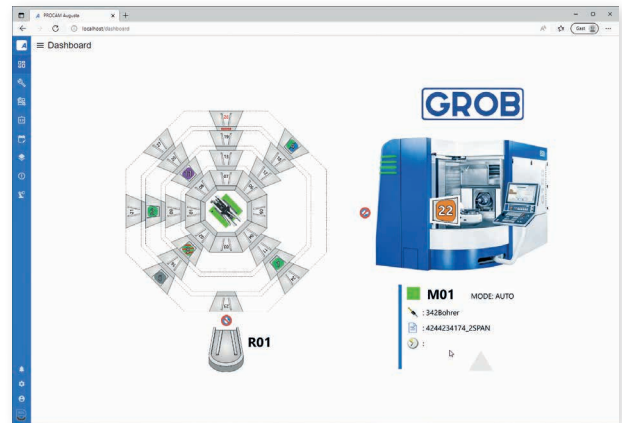
* Other variants upon request

Intuitive cell operation

GROB PRODUCTION CONTROL SYSTEM.

BASIC PACKAGE

- + System visualization
- + Pallet management
- + Connection of a single machine possible
- + Max. one pallet type in the system
- + Optional NC and tool management possible



EXTENSION PACKAGE

- + System visualizations
- + Pallet management
- + Connection of two machines possible
- + Different pallet types possible in the system
- + Optional NC and tool management
- + Optional ERP connection

THE BENEFITS TO YOU AT A GLANCE:

- + Economic production with increased machine capacity utilization
- + Capability to produce in unmanned or lightly-manned shifts
- + Parallel loading and unloading of pallets during production
- + Simple retrofit on existing machines
- + Design version with pallet storage locations at up to four levels



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.

QUICK PALLET CHANGE WITH DOUBLE-FORK LIFT UNIT*

- ⊕ When using two pallets thanks to an innovative pallet changing device

PALLET STORAGE RACK

- ⊕ With drip pans and optional cutting fluid recirculation

COMPACT FOOTPRINT

- ⊕ Up to 20 pallet storage positions (400x400 pallet)
- ⊕ Up to 13 pallet storage positions (630x630 pallet)
- ⊕ Up to 15 pallet storage positions (800x630 pallet)

SOFTWARE GROB⁴AUTOMATION ADVANCED PRODUCTION CONTROL

- ⊕ 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



Example illustration
* Only for PSS-R450 and PSS-R900

PSS-R450 / PSS-R900 / PSS-R1800

OVERVIEW OF SPECIFICATIONS AND DIMENSIONS.

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 spaces (on three levels)	10/15/20	5/10/13	10/15
Max. handling [kg]	450	900	1,800
Max. interference diameter [mm]	Ø 600	Ø 900	Ø 800/Ø 1,050
Max. interference height [mm]	500	785	1,000/1,300

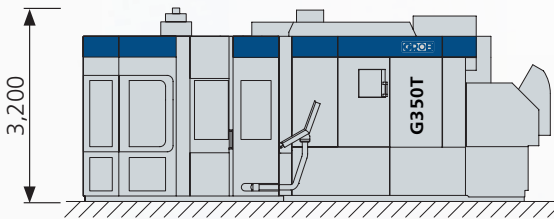


Fig.: G350T without pallet changer with PSS-R450

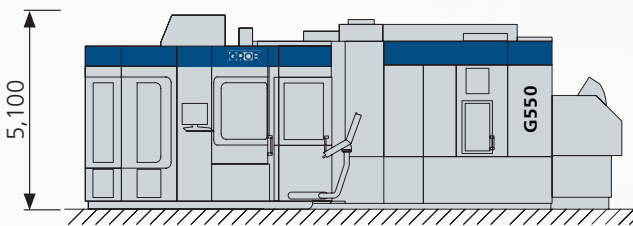
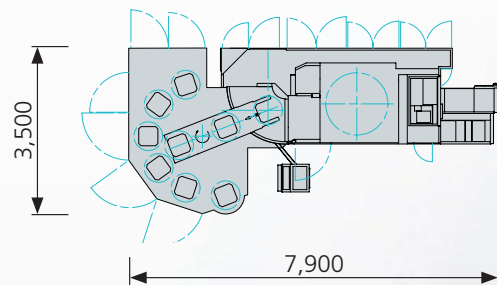


Fig.: G550 without pallet changer with PSS-R900

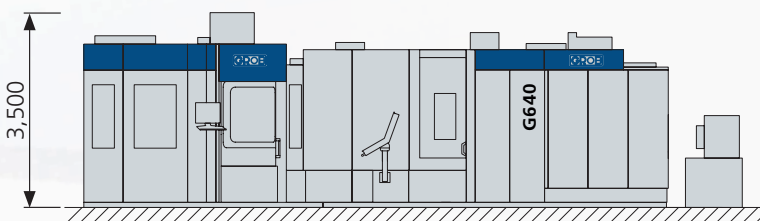
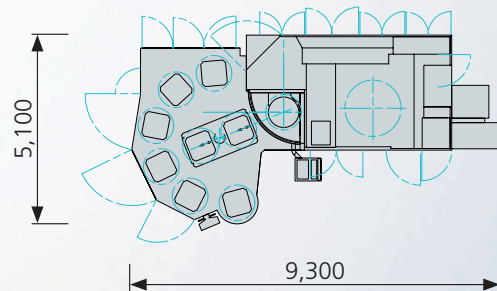
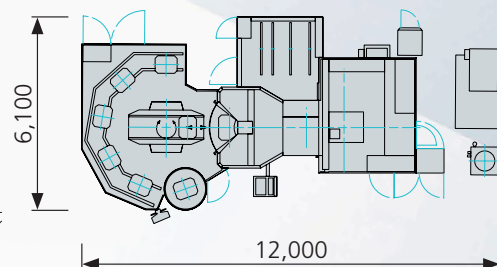


Fig.: G640 with pallet changer with PSS-R1800



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 this type.

SOFTWARE GROB⁴AUTOMATION ADVANCED PRODUCTION CONTROL

- ⊕ 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

OPTIMUM ACCESSIBILITY TO THE WORK AREA

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

DYNAMIC PALLET CHANGING DEVICE

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



Example illustration

OVERVIEW OF SPECIFICATIONS AND DIMENSIONS.

Available machines	G350a / G350 / G350T	G550a / G550 / G550T	G750	G440 / G640	G640+ / G840
Design variant	PSS-L450	PSS-L900	PSS-L1450	PSS-L1800	PSS-L2700
Pallet size [mm]	400x400	630x630	800x800	800x630	1,000x800
Max. pallet spaces in the basic module	21	15	9/12	15	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 800/ Ø 1,050	Ø 1,300* / Ø 1,500
Max. interference height [mm]	500	785	930	1,000/ 1,300	1,300* / 1,500

*Valid for G640+ with work area expansion

AUTOMATIC SETUP STATION

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



COMBINATION OF LINEAR PALLET STORAGE SYSTEM AND ROBOT CELL

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

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

OVERVIEW OF SPECIFICATIONS AND DIMENSIONS.

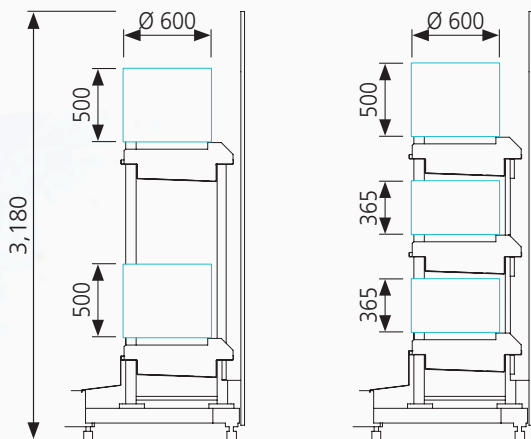


Fig.: 2 levels

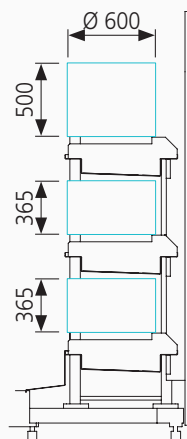


Fig.: 3 levels

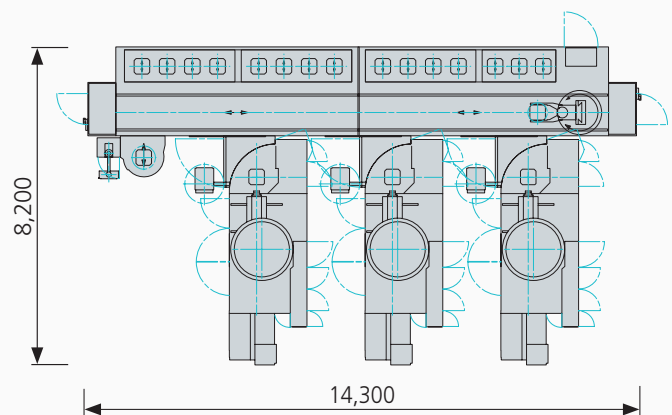


Fig.: G350 without pallet changer with PSS-L450

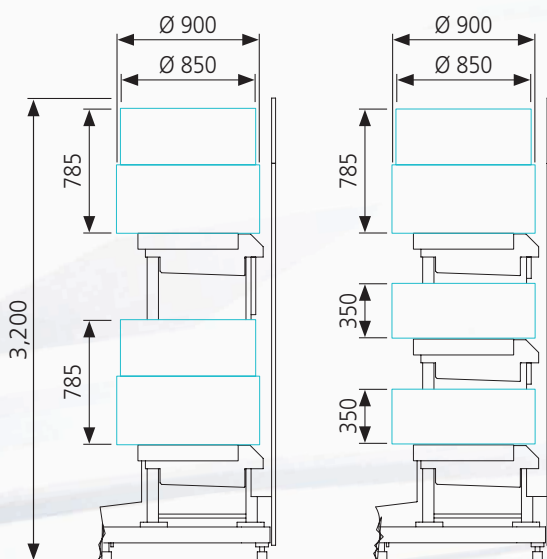


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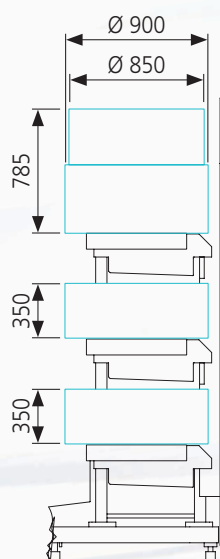


Fig.: 3 levels

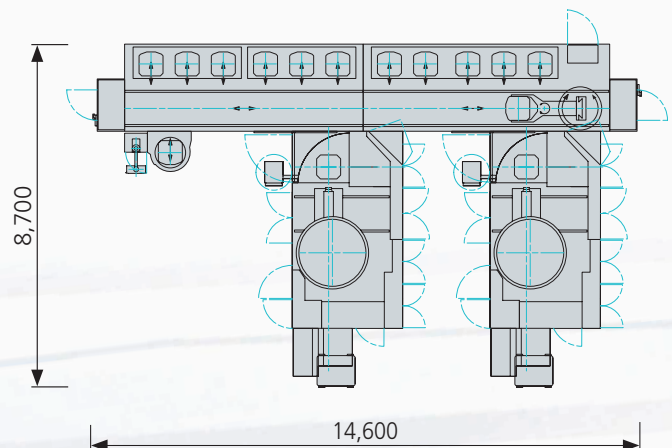


Fig.: G550 without pallet changer with PSS-L900

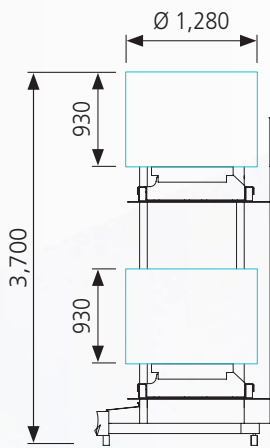


Fig.: 2 levels

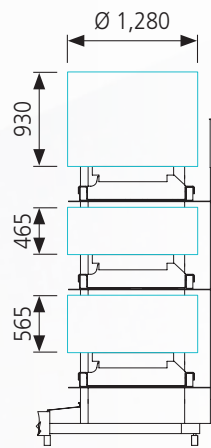


Fig.: 3 levels

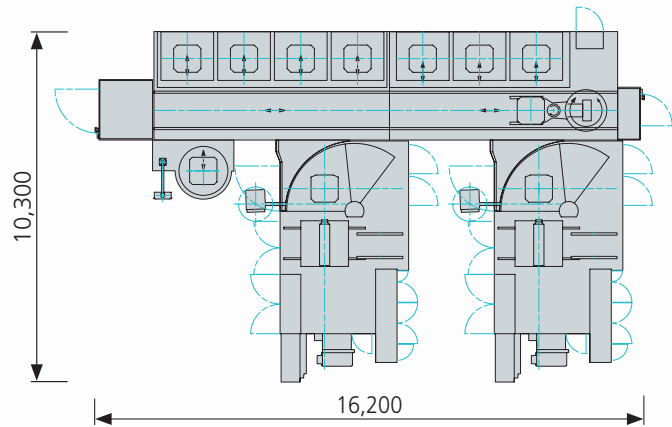


Fig.: G750 without pallet changer with PSS-L1450

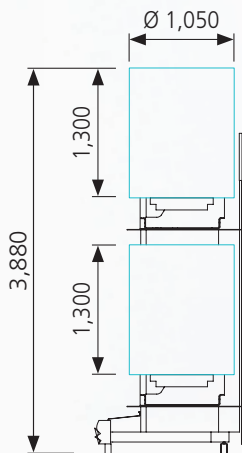


Fig.: 2 levels

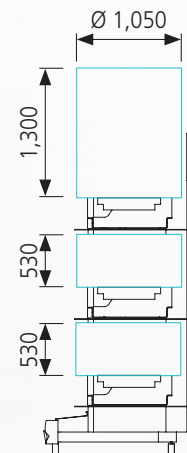


Fig.: 3 levels

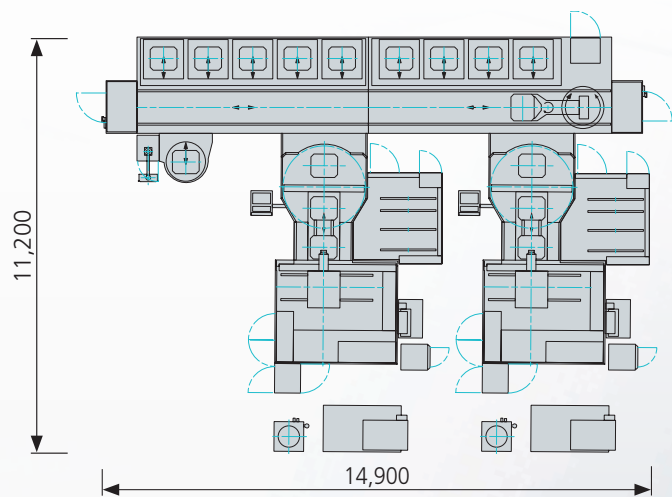


Fig.: G640 with pallet changer with PSS-L1800

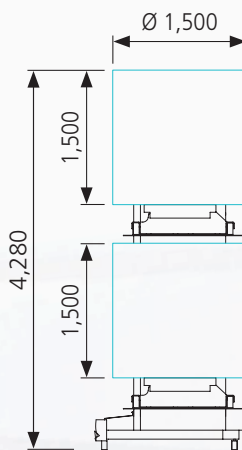


Fig.: 2 levels

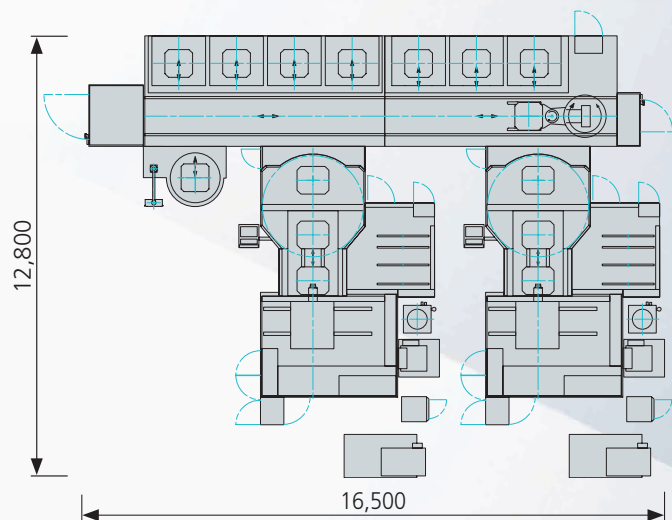


Fig.: G840 with pallet changer with PSS-L2700

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

OPTIMAL UTILIZATION THANKS TO GROB⁴AUTOMATION.

From pallet handling to tool management and forecasting tools – GROB⁴Automation offers you almost limitless possibilities.

HIGH FLEXIBILITY AND OPTIMIZED UTILIZATION

- ⊕ Thanks to simultaneous and parallel processing of an order on several pallets, taking into account the quantity of the order
- ⊕ Combined with the forecasting simulation, bottlenecks in the use of resources of the pallets and machines can be identified in real time, enabling the optimal allocation of resources.



TOOL REQUIREMENT PLANNING (option)

- + Resource planning with tool requirement planning and forecasting
- + ERP/MES connection (e. g. SAP)
- + Targeted planning of tasks for accuracy measurement and compensation of the machine before machining (GSC)
- + Central NC program distribution including EES support (SIEMENS)
- + Intuitive creation of hydraulic clamping programs at the setup station
- + Pallet preparation in front of the machine or in the gripper for time-optimized loading of the machines during machining
- + Pallet storage and retrieval via "drag & drop"
- + Detailed setup instructions incl. PDF documents, videos, and hyperlinks for optimal support of the setup process



SIMULATED FORECASTING

- + Plan and forecast the times of your orders exactly
- + For optimal utilization of the system and machines for better planning over days and weeks



THE BENEFITS TO YOU AT A GLANCE:

- + Quick reading of the machine status
- + Clear display of the machine and its parts/tools
- + Feed-in and feed-out of pallets during machining
- + Combination with a process-coordinated GROB robot cell, the flexibility and range of the systems can be further increased and the range of applications significantly expanded for part handling







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. deburring, washing system, measuring)
- ✦ Compact drawer feed system
- ✦ Automatic gripper change
- ✦ Automatic gripper jaw adjustment



OUR PORTFOLIO.

#GRC-R12 #GRC-R60 to GRC-R240
#GRC-V20 # GRC-V60

GRC-R12

GROB ROBOT CELLS.

Combined with our universal machining center G150, our new GROB robot cell offers maximum flexibility. A wide range of retrofitting options allows our robot cell to be perfectly adapted to your individual requirements.

SOFTWARE GROB⁴AUTOMATION ADVANCED PRODUCTION CONTROL

- + 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)

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 SYSTEMS

- + 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
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]	2.5
Drawer feed unit	
Max. drawers	6
Max. load per drawer [kg]	100
Usable drawer size [mm]	600x400
Max. component height for 6 drawers [mm]	85

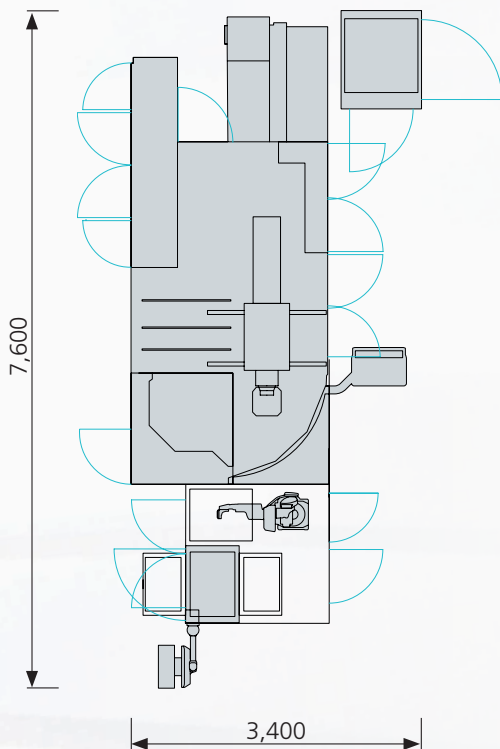


Fig.: G150 without pallet changer with GRC-R12; lateral feeding

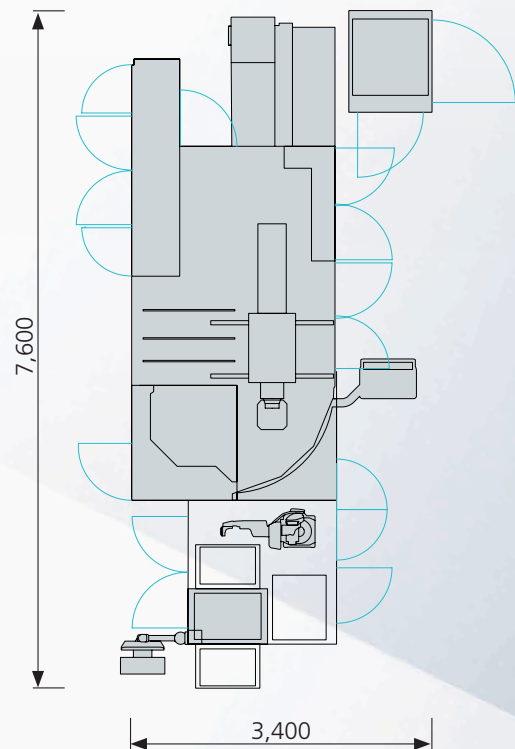


Fig.: G150 without pallet changer with GRC-R12; feeding front

GRC-R60 / GRC-R150 / GRC-R240

GROB ROBOT CELLS.

The newly developed 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 an innovative protection concept

SOFTWARE GROB⁴AUTOMATION ADVANCED PRODUCTION CONTROL

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

ACCESSORIES

- ⊕ Deburring station; ultrasonic cleaning, washing; measuring; labeling; gripper jaw adjustment; pre-marking and torquing station; Gressel R-C2

6-AXIS INDUSTRIAL ROBOT

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

FEED-OUT

- ⊕ Of SPC parts (Statistical Process Control) or NOK parts

ENTIRE SYSTEM ON ONE PLATFORM

- ⊕ For quick installation and short commissioning



Example illustration

OVERVIEW OF SPECIFICATIONS AND DIMENSIONS.

Available machines	G150 / G350 / G550 / G750 / G440 / G640		
Design variant	GRC-R60	GRC-R150	GRC-R240
Max. load [kg]	70	165/210	270
Robot range (radius) [mm]	2,050	2,655/3,100	2,655
Part handling	•	•	•
Pallet handling	—	•*	•

*Depends on pallet size

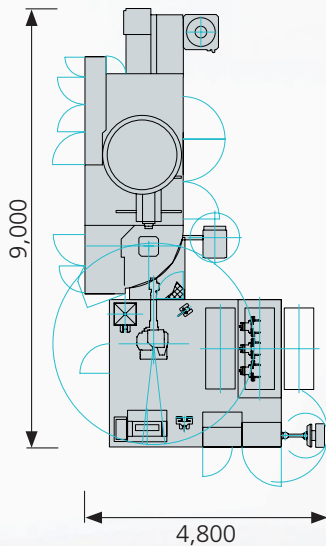


Fig.: G150 without pallet changer with GRC-R60

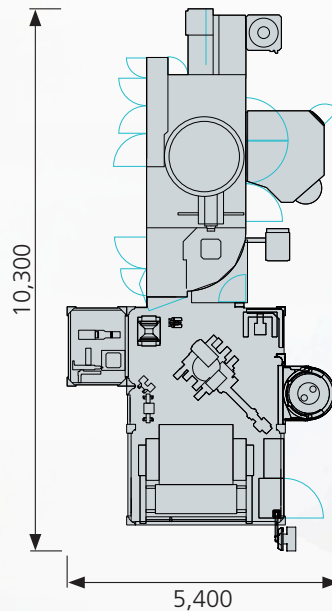


Fig.: G350 without pallet changer with GRC-R150

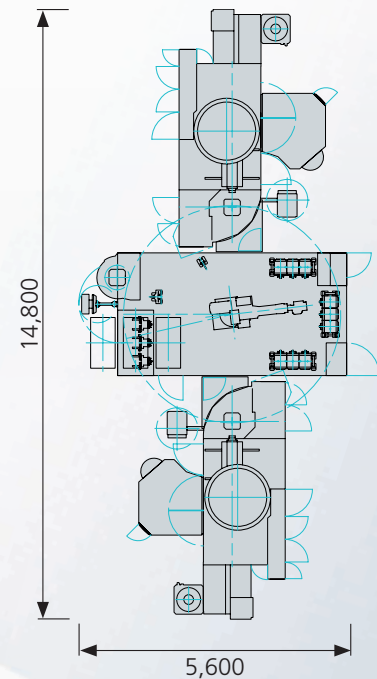


Fig.: 2x G350 without pallet changer with GRC-R240

GRC-V20 / GRC-V60

GROB ROBOT CELLS.

Our new Vision Robot Cell is at the heart of job order and contract manufacturing. The camera-controlled CNC automation system is ideally suited for the series production of small to medium batch sizes. The compact design ensures self-sufficiency and flexibility in the smallest spaces.

ACCESSORIES

- ⊕ Re-gripping/Turning/Centering (e. g.: OP10 and OP20); Stamping station; cleaning blow-off box

6-AXIS INDUSTRIAL ROBOT

- ⊕ By FANUC (standard)

AUTOMATION OF MECHANICAL VISES

- ⊕ No expensive retrofitting of the clamping hydraulics

PART STORAGE SYSTEM

- ⊕ Choose: Space box, pallet or trolley

STATE-OF-THE-ART, INTUITIVE USER INTERFACE

- ⊕ Job setup in 5 minutes

GRIPPER SYSTEM

- ⊕ Single and double gripper; 2-jaw centric gripper; 3-jaw centric gripper

Example illustration



GRC-V20 / GRC-V60

OVERVIEW OF SPECIFICATIONS AND DIMENSIONS.

Available machines	G150/G350/G350a	G150/G350/G350a/ G550/G550a
Design variant	GRC-V20	GRC-V60
Robot	FANUC M-20iB/25	FANUC M-710iC/70
Part dimensions		
Round bars, Ø [mm]	15-220	15-220
Square bars, min./max. [mm]	20x20x10/200x200x200	20x20x10/300x300x300
Max. raw material weight [kg]	13	40
"Space Box" part storage system		
Number of extensions [pcs]	4/5/10	
Effective area extension [mm]	1,000x600	
Load per extension [kg]	135	
Part storage system [mm] ▶ 4 extensions/5 extensions/10 extensions	190/115/40	
"Euro pallet" or "hand truck" part storage system		
Number in system max. [pcs.]	2	
Effective area [mm]	1,200x800	

All automation solutions also for machines with pallet changer

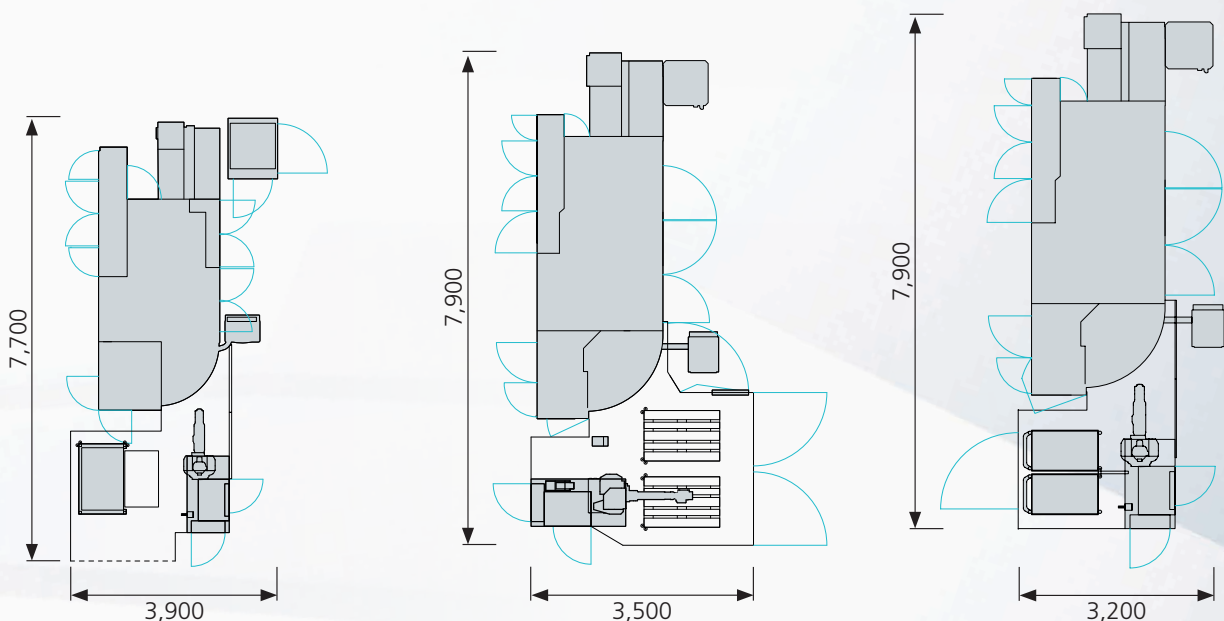
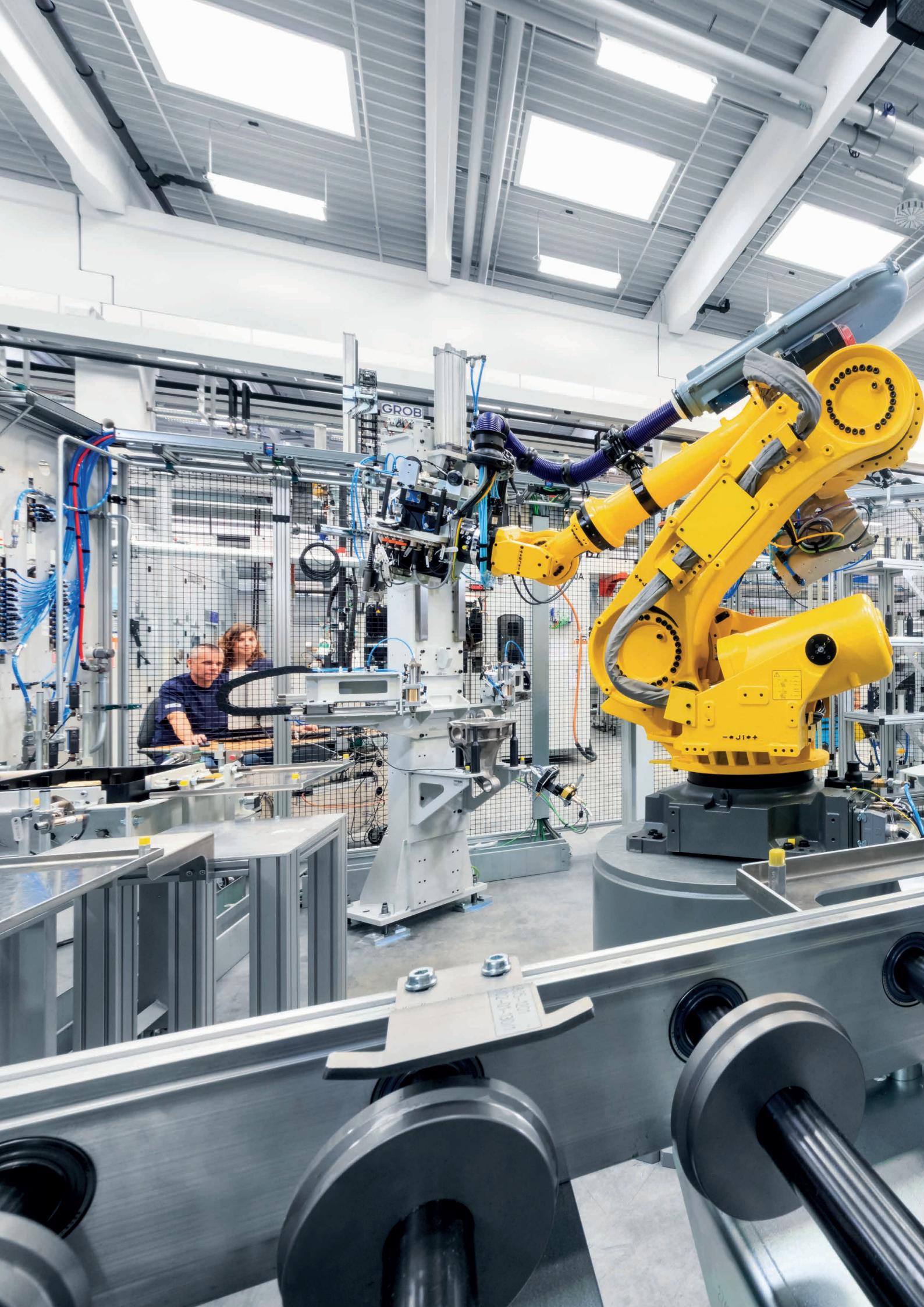


Fig.: G150 without pallet changer with GRC-V20 (space box)

Fig.: G350 without pallet changer with GRC-V60 (Euro pallets)

Fig.: G350 without pallet changer with GRC-V60 (hand truck)





*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 positions and three machining centers are connected.

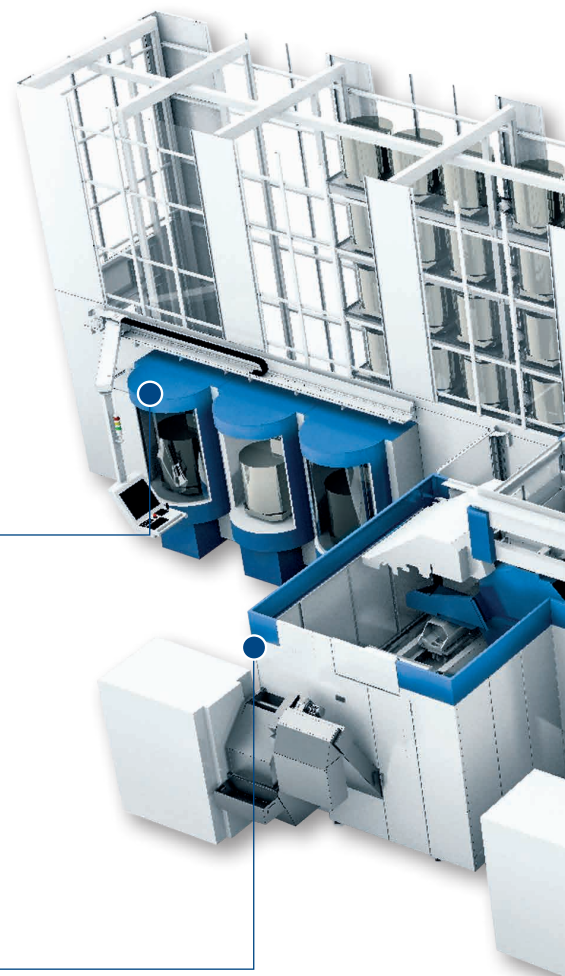
- ⊕ External periphery can be connected
- ⊕ Flexible installation variants; configurable to your requirements
- ⊕ Expandable modular system
- ⊕ Combination of rough part storage and pallet storage system

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

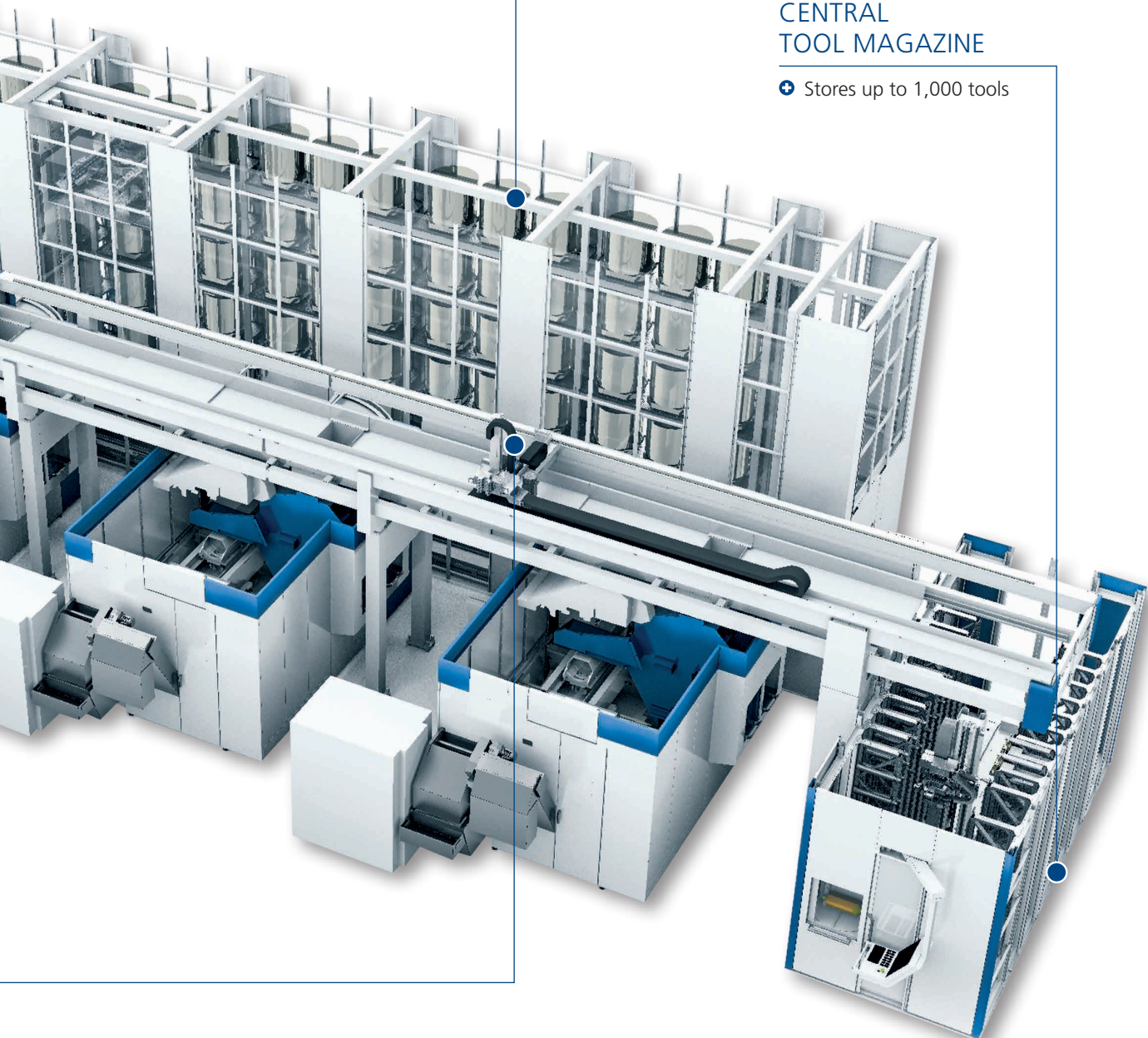
- ⊕ From a central tool magazine with tool resources check

PALLET STORAGE SYSTEM

- ⊕ Can be used with 90 pallet storage positions and a pallet changing device

CENTRAL TOOL MAGAZINE

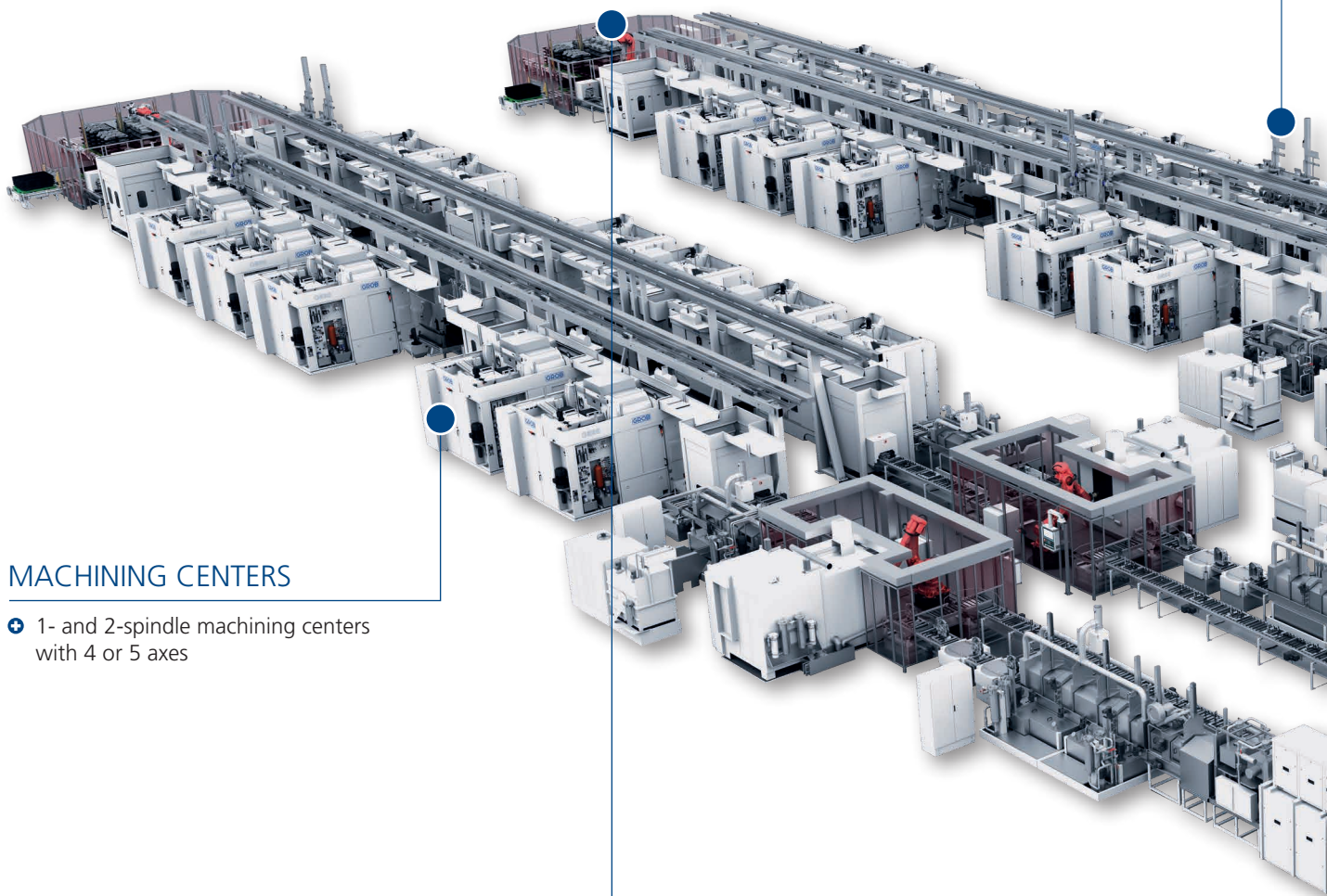
- ⊕ Stores up to 1,000 tools



Turnkey manufacturing lines

ALL VALUE ADDED FROM A SINGLE SOURCE.

The customer plant illustrated has one 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.



MACHINING CENTERS

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

GROB ROBOT CELL

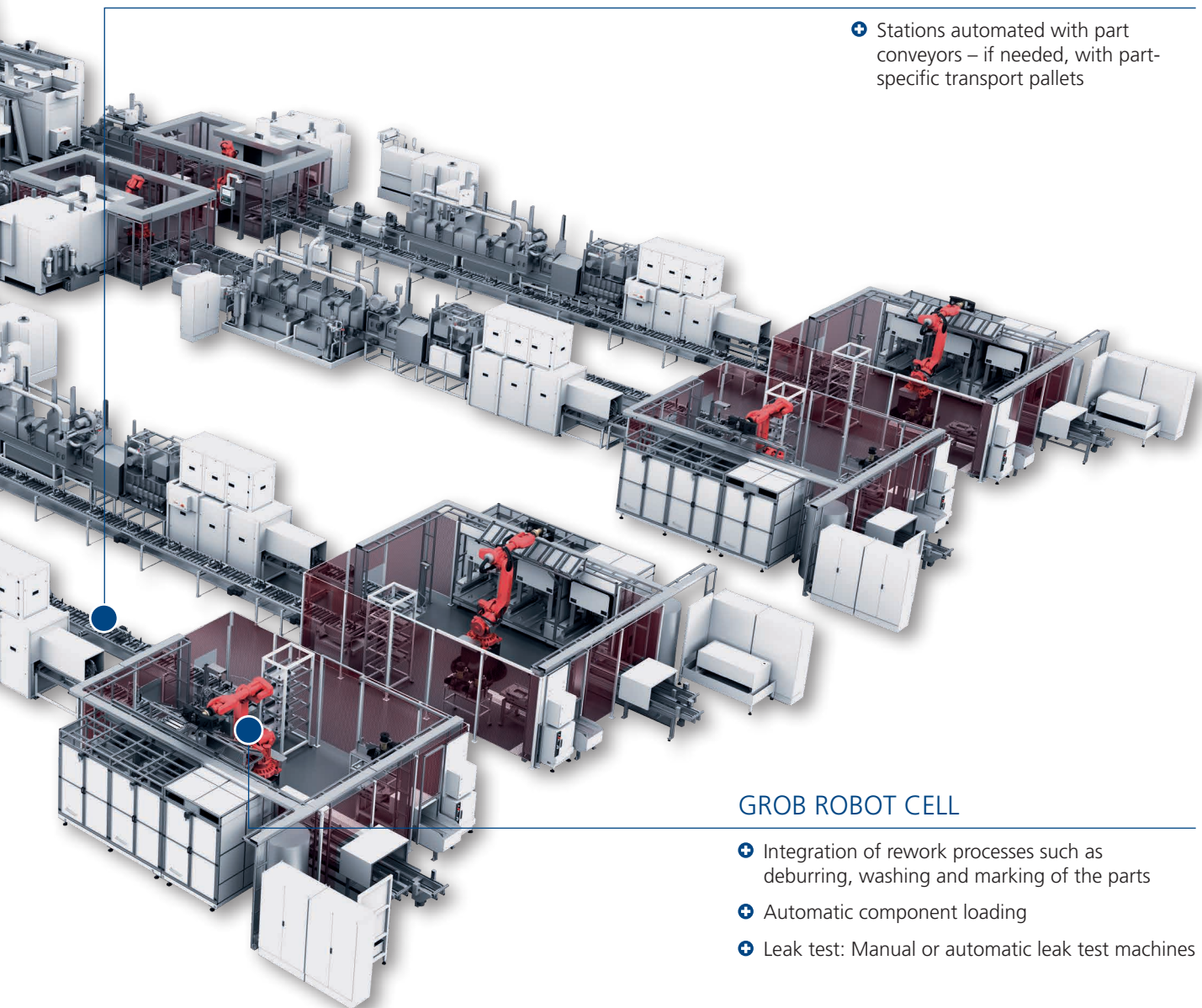
- ⊕ Modular design provides a concept tailored to your needs
- ⊕ Various storage options allow the provision of raw parts parallel to main machining times

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



GROB ROBOT CELL

- ⊕ Integration of rework processes such as deburring, washing and marking of the parts
- ⊕ Automatic component loading
- ⊕ 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



OUR SOFTWARE PORTFOLIO.

#grobnet4industry #interactiveapplication
#cloud4machine

Intuitive production control software for unmanned operation

GROB⁴AUTOMATION.

GROB⁴Automation supplies your machining center with parts or pallets through a fully automated process, providing automated, lightly manned production. The production control software controls and visualizes the flexible production cell and is operated via keyboard or touch.

PALLETS AND PARTS

- + Simple configuration of pallet storage positions

ESSENTIAL PROCESS STEPS

- + Can be adapted in a user-friendly way and allow changing the machining order/priority of parts

TOOL REQUIREMENT PLANNING

- + Via assignment of the NC program to the respective part

OFFSET DATA

- + Provide continuous information about the machine status



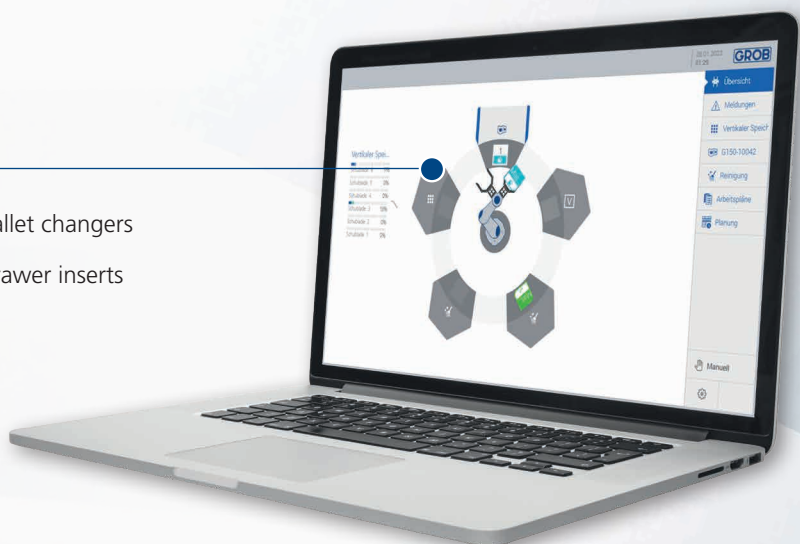


INTUITIVE PRODUCTION CONTROL SOFTWARE

- ⊕ Time-based production planning with resource verification
- ⊕ Range analysis through tool life monitoring
- ⊕ Fast change times thanks to "part/pallet preparing"
- ⊕ Supports several clamping positions (clamping units)
- ⊕ Multiple OP10/OP20 operation steps possible with automated turning
- ⊕ Integration of information sources (images, instructions) for each production step

FULLY AUTOMATIC SUPPLY OF THE MACHINING CENTER

- ⊕ Support of machines with and without pallet changers
- ⊕ Visualized editor for creating your own drawer inserts
- ⊕ Automated error handling to avoid production loss in unmanned operation (e. g. tool breakage)
- ⊕ Management of several grippers and dynamic gripper jaw adjustment
- ⊕ Part feed during machining with a flexible drawer system







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
#replacementparts #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 14 worldwide service centers and sales branches, we are represented around the globe, ensuring the highest quality.

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Detroit, Michigan, USA
Querétaro, Mexico

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AND SERVICE BRANCHES WORLDWIDE

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São Paulo, Brazil

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São Paulo, Brazil

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Mindelheim, Germany
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Baar, Switzerland
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24/7 SUPPORT

8,300 EMPLOYEES WORLDWIDE



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Bluffton, USA



Dalian, China



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