## SERVICE

YOU CAN COUNT ON US!





24/7 SUPPORT
MATERIAL SUPPLY
MACHINE INSPECTION

## GOOD SERVICE KNOWS NO BOUNDS



## Top quality and the best service throughout the global GROB service network at all times

Our top priority is maximum productivity of your machines. Would you like to have someone there for you around the clock whose most important task is to resolve your problems? Would you like to see maximum machine availability without your spare part warehousing costs going sky-high?

Our decades of experience as one of the world's leading manufacturers of machining centers and complex production and assembly systems make us your constant and reliable partner: all over the world and for the entire lifespan of your machine.

## GROB Service: As versatile as our customers' demands

It makes no difference to us whether your GROB machine is old or new, or whether you have a small or large machine fleet. You, as the customer – with your unique requirements, processes and challenges – are our number one priority at all times. We address your individual challenges and are exactly the partner you need.

## Our promise to you:

- An advisor, who assists with compiling an individual spare and wear part package to suit you.
- A trainer, who helps you get even more from your machines.
- An innovator who works with you to realize and drive Industry 4.0 projects.
- A specialist, who puts your machine through its paces and achieves the same production accuracy you enjoyed on the very first day.



# Experience our products and services and gain new insights – with our GROB Product Stories!







PRODUCT STORY

"Webshop GROB<sup>4</sup>Care" https://youtu.be/WPjp8y8EKZk



PRODUCT STORY

"Maintenance & Inspection" https://youtu.be/HUsVkc14wrU





**PRODUCT STORY** 

"Customer training" <a href="https://youtu.be/5nEIPrBWUAs">https://youtu.be/5nEIPrBWUAs</a>

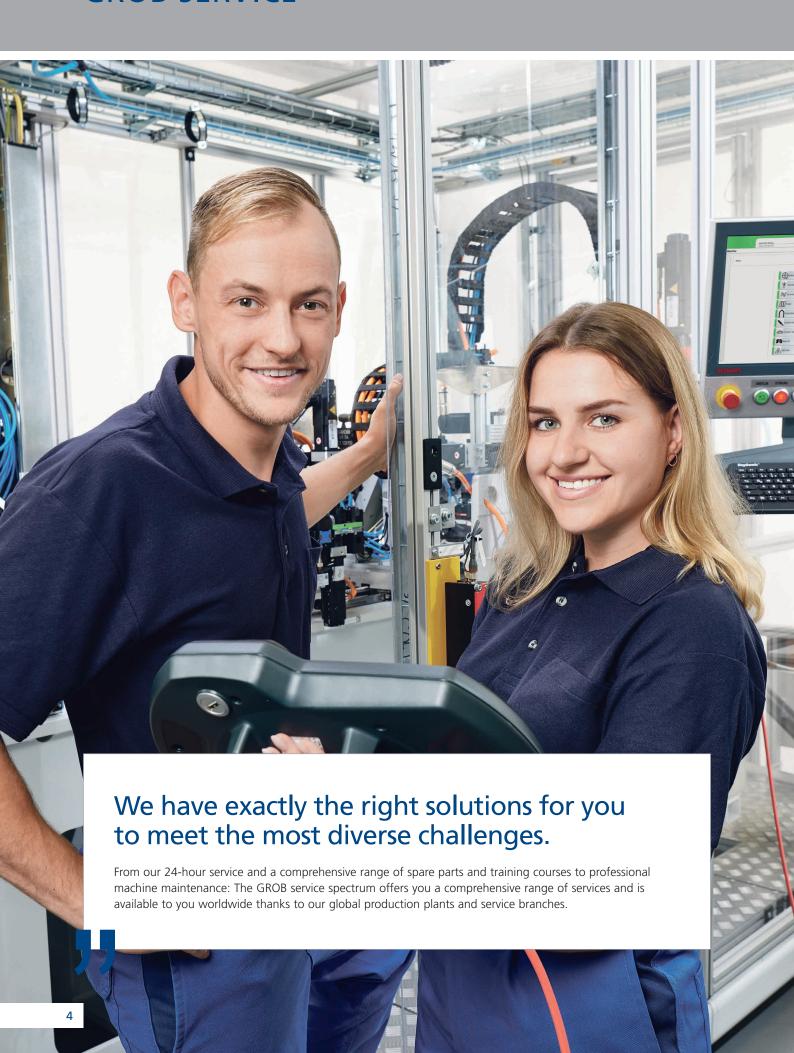




PRODUCT STORY

"Express production of spare parts" <a href="https://youtu.be/1evlR7RLosU">https://youtu.be/1evlR7RLosU</a>

## **GROB SERVICE**



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## BASIC SERVICES AND SERVICE-LEVEL-AGREEMENT



#### **BASIC SERVICES**

Would you like to have someone whose most important task is to resolve your problems? We are exactly such a partner: Listening. Finding solutions. Getting it done.

- GROB service hotline: Highly qualified techniciansare there for you 24 hours per day, 7 days per week, 360 days per year.
- Skilled contacts for optimal knowledge transfer.
- Detailed error analysis, with machine remote diagnosis if desired, and subsequent initiation of further steps for rapid restart of your GROB machine.
- Broad network of express technicians who are quickly on site – including spare parts and special tools if required.



## YOU WANT MORE? – SERVICE-LEVEL-AGREEMENT WHEN EVERY SECOND COUNTS...

With GROB's Service-Level-Agreement (SLA\*), you can reduce machine downtime to a minimum. With guaranteed response times for our hotline and our express technicians, as well as dispatch standby times for motorized spindles and spare parts, we are on hand immediately.

\* The Service-Level-Agreement is currently available to you in Germany and Austria for universal machining centers. Further machines and systems upon request. The scope of services and product details can be found in the quotation.

## Our promise to you:

- Callback by a qualified technician within max. 60 minutes
- Hotline support: Direct accessibility via a special contract phone number
- Departure of a express technician within 6 hours
- Dispatch of in-stock spare parts as well as replacement motorized spindles within 6 hours
- Including flat rate for remote machine diagnostics



## Typical service content at a glance

	Basic services	Remote support	Service-Level- Agreement (SLA)
Telephone availability Hotline: Mon – Fri: 7 am to 18:30 pm and Sat: 7 am to 12 pm <sup>(i)</sup>	Standard phone number +49 8261 996-777	Standard phone number +49 8261 996-777	Direct accessibility via a special contract phone number
Callback by a GROB specialist	Subject to availability	Subject to availability	Within max. 60 minutes <sup>(2)</sup>
Departure readiness for on-site service call (3)	Usually on the following working day	Usually on the following working day	Within max. 6 hours (2)
Readiness for dispatch of the motorized spindle (4)	On the following working day	On the following working day	Within max. 6 hours (2)
Remote machine diagnostics (5)	Included in the warranty period	Flatrate	Flatrate
Readiness for dispatch of spare parts When order is received via Spare Parts Advisor: Mon – Fri: 7 am to 17:30 pm Webshop GROB <sup>4</sup> Care: Mon – Fri: 7 am to 20:00 pm <sup>®</sup>	On the following working day	On the following working day	Within max. 6 hours (1)

<sup>(1)</sup> Outside of the specified hours of availability: on-call service or forwarding to other GROB locations (24/7/360 except Christmas, New Year's Eve, New Year's Day, Easter, Pentecost).
(2) In case of machine breakdown from the time of commissioning and technical clarification within the availability of the hotline by phone (Mon — Fri 7am to 6:30pm and Sat 7am to 12 pm).
(3) Readiness for departure from Mindelheim or other locations, no departure and no travel between 9 pm and 7 am. A service technician may only be mobilized on Friday, Saturday and Sunday within the time agreed upon by the SLA if the service technician can actually carry out the work on Saturday and, if necessary, on Sunday.
(4) Chargeable transport via paid special delivery for in-stock replacement spindles/special tools.
(5) Requirement: MRD (machine remote diagnosis) is installed and usable by the customer.
(6) Applies to spare parts in stock. Express delivery is optionally available for a fee. Plus evening surcharge without Service-Level-Agreement from 3 pm.

## WEBSHOP GROB4CARE

## More than just a webshop

Spare parts identification and procurement for easy and fast repair, preventive maintenance and maintenance.



Our service and maintenance portal not only gives you access to an interactive spare parts catalog, including parts lists and technical drawings, you can also conveniently order spare parts online: Worldwide, at any time. GROB<sup>4</sup>Care is the platform for maintenance, scheduling and purchasing.

- Display of your GROB machines and systems
- Spare parts inquiry and ordering process
- Simple integration into your ERP system
- Availability of spare and wear parts via stock queries in real time
- Display of your prices and discounts via real-time queries

## The benefits to you as a purchaser



#### CONVENIENTLY ORDER SPARE PARTS ONLINE 24/7

Through real-time queries, you have an overview of your warehouse stock, your individual prices and your discounts at all times. You have a machine standstill and are in urgent need of a spare part of which there is only one in stock? Good that GROB<sup>4</sup>Care allows you to reserve items for up to 48 hours.

The item is held for you while the order is passing through your internal approval process, so you don't need to worry about availability.

#### • PROCESS RELIABILITY THANKS TO THE HIGHEST DEGREE OF INDIVIDUALIZATION

Every customer is unique. This applies to both the produced parts, but also especially to the internal processes and workflows. GROB<sup>4</sup>Care allows you to show your individual release and approval process directly, and also to assign various rights and budgets.

The maintenance department is to be allowed to order spare parts up to a value of 2,000€ per month? GROB⁴Care allows you to make this setting extremely easily, so you benefit from absolute process reliability.

### The benefits to you as a maintenance technician

#### EVERYTHING AT A GLANCE

The webshop is tailored to your specific needs: Your own GROB machine and system fleet, including parts lists, drawings and technical documentation, is displayed in GROB<sup>4</sup>Care. The integrated spare part catalog and highly efficient search tools allow you to find spare parts much faster than through the conventional procedure. This saves you valuable time and, when it comes to a machine standstill, irritation and money.

#### DIGITAL PLANNING SUPPORT

GROB<sup>4</sup>Care supports you with watch lists when planning overhauls and preventive maintenance activities. Add spare and wear parts to the shopping cart and retrieve it again at a later time. GROB<sup>4</sup>Care makes sure that nothing goes astray and that you have all data to hand at all times.

"We prefer to use the spare parts catalog in the webshop **GROB**<sup>4</sup>**Care**. We can interactively find specific spare parts for our machines in the digital part drawings. The part drawings of our machines can easily be downloaded as PDF files. So we have everything in digital form."

**SAAROTEC GMBH** 

## GROB<sup>4</sup>CARE integrated into your ERP system – simple and convenient

We meet the needs of your individual processes. We will happily discuss with you the possibility of a link to your ERP system in order to transfer shopping carts from GROB<sup>4</sup>Care to your ordering system quickly and easily.



- Setup within 10 minutes
- Shopping cart transferred to your ERP system
- 48-hour reservation of stock items
- Cost saving through process automation
- O Display of your specific release and approval processes

## **MOTORIZED SPINDLES**



## Motorized spindle service

Fast, flexible, efficient: The various offers of GROB's spindle service prepares you for all circumstances and optimizes your machine availability. Choose the supply solution that suits your needs and benefit from our short response times and attractive conditions.

#### YOUR BENEFITS

- Immediate response after a motorized spindle failure thanks to our extensive replacement spindle warehouse
- Your machine is down for the shortest possible time
- Twelve month warranty as for a new spindle
- Maximum useful life with manufacturer repair
- Cost and time saving through special prices under a free service agreement

#### **GLOBAL PRESENCE**

Our global repair centers and spindle warehouses ensure fast and highly flexible motorized spindle service.





## Replacement spindle service

#### WHEN EVERY MINUTE COUNTS

The motorized spindle in your GROB machine has failed and needs to be replaced? Not a problem. We immediately take care of the delivery and installation of an overhauled spindle from our replacement spindle warehouse, while our experts restore your defective spindle back to working order in the GROB Repair Center.



## Partial spindle repair

SAVE UP TO 75 % ON REPAIR COSTS

Benefit from a flexible partial rather than full repair: In our Repair Center, we take care of the defective parts of your GROB motorized spindle and send the repaired spindle back to you via express shipping if necessary.



### Spindle Hotel

PROFESSIONAL STORAGE

Do you have a replacement spindle, but lack the right environment for storage and maintenance? We have the solution: In the GROB Spindle Hotel, our experts store your replacement spindle in an optimal environment and take care of maintenance and inspection if necessary.



## Spindle reservation

#### HIGHLY FLEXIBLE WITHOUT REPLACEMENT SPINDLES

Fast help even without your own replacement spindle: With a spindle reservation, we guarantee an available replacement spindle from our in-house spindle pool at any time. Smooth replacement ensures minimal machine downtime.

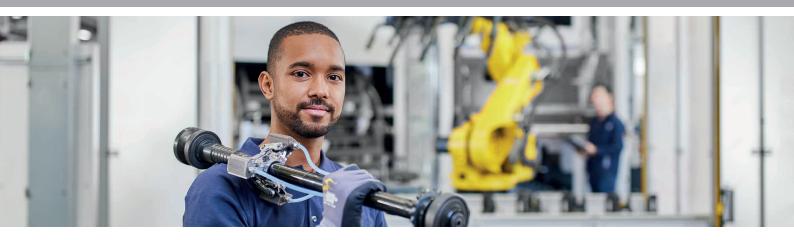




A motorized spindle failure costs time and money, and causes irritation. Make it easier for yourself with solutions from GROB.



### REPLACEMENT PARTS



## All about replacement parts

#### GROB SPARE PART STORAGE

We store spare parts for you at nine different locations worldwide. A high level of vertical integration, a good degree of standardization and customer-oriented supply concepts guarantee you get the spare and wear parts you need on time.

- GROB Express: Over 2,000 materials of all product groups are available from stock. The materials leave the warehouse within 24 hours or on the same day if necessary.
- Safety and reliability thanks to genuine manufacturer-quality spare parts.
- Electrical components such as drives and power modules can also be repaired by our professional partners within 24 hours as and when required.

#### REPLACEMENT ASSEMBLIES

The only way for you to prepare for extended machine downtimes independently and flexibly is to store replacement and wear part assemblies. Order quickly and conveniently via our service hotline, your office contact or our GROB<sup>4</sup>Care webshop.

- Save up to 9 hours in repair time compared to individual replacement parts
- Faster and easier replacement of the entire assembly
- Use also for minor repairs
- · Ensure short downtimes



### **GROB SPECIAL TOOL**

## The right package for everyone

Our high-quality special tools and measuring instruments allow you to inspect your GROB machine yourself and to replace components quickly and confidently with your own experience. Please do not hesitate to contact us, we will be pleased to provide you with a set of special tools to suit your requirements. A training held by our highly qualified employees will help you to use these special tools correctly.

#### YOUR BENEFITS

- Efficient preventive maintenance and repairs for your GROB machine
- Repairs and inspections by your own personnel
- Shortest possible machine standstills





## Take matters into your own hands

If you have the confidence, we will provide you with the tool you require to inspect your GROB machines and replace parts yourself.



### **EXPRESS PRODUCTION**



## WE KNOW WHAT A MACHINE STANDSTILL MEANS FOR YOU – DESPITE THE STANDSTILL THE USUAL COMPONENT QUALITY IS REQUIRED IN THE SHORTEST TIME

We meet this requirement through our flexible express production service, where our decades of experience in producing special components are combined with speed. To provide this exclusive service, we hold additional production capacities that allow us to put your order in the fast lane. Your parts are prioritized for production and then delivered within the shortest possible time. For this we charge an express surcharge of 50 % on the sales price.

#### YOUR BENEFITS

- We guarantee delivery on time.

  If delivery is delayed by more than 24 hours, you will receive a 50 % discount on the total order price.
- Shortest downtime due to fastest spare parts supply.

Components	Max. cycle time [days]
Sheet metal parts, fabricated components Sawing, milling, turning	1
Turning & milling parts without heat treatment or coating	1
Complex components  Heat treatment, coatings, grinding	3

## When every minute counts: GROB's flexible express production service

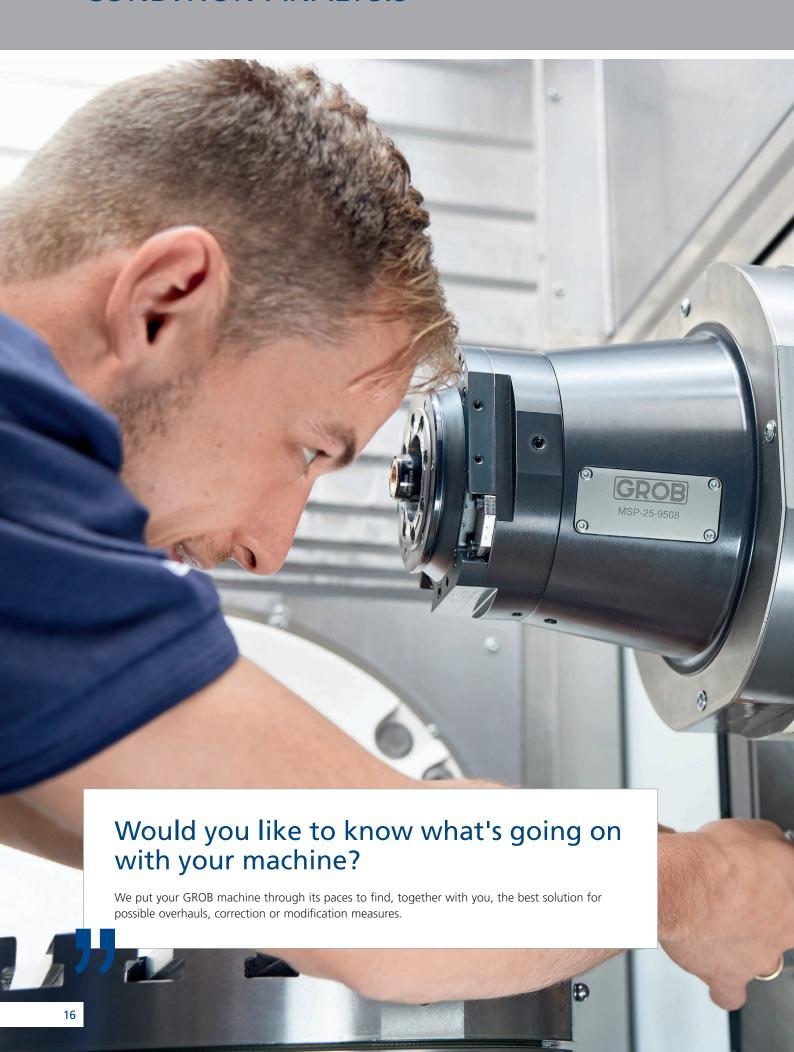
Long waiting times are a thing of the past.





	Product examples	
Product	Characteristics	Max. cycle time [days]
Сар	<ul><li>High-density cast iron</li><li>Ground round inside</li><li>Without surface technology</li></ul>	1
Housing	Milled from the solid	1
Clamp lever	<ul><li>Clamp lever with conical fixture</li><li>Milled from the solid</li><li>Case-hardened and tempered</li></ul>	3
Locating pin	<ul> <li>Locating pin with blow-off function</li> <li>Hardened and ground</li> <li>Tolerance in the range of 5 µm</li> </ul>	3
Sheet metal	Sawing and milling     Heat and surface treatment	4
Thrust piece	<ul><li>Sawing and milling</li><li>Heat and surface treatment</li><li>Grinding and polishing</li></ul>	6

## **CONDITION ANALYSIS**



Reliability and accuracy are what count. The GROB Condition Analysis shows you what needs to be done for you to produce trouble-free once again. No matter whether after a machine crash, in case of tolerance deviations or to define potential overhaul scopes – one of the four analysis packages or a condition analysis tailored to your needs will identify the causes and suggest suitable remedial measures. To meet every demand, machines are inspected for functionality, quality, precision and output.

#### YOUR BENEFITS

- Knowledge of machine condition and fault causes
- Sound decision basis for modification measures, machine overhauls and modernizations
- Reliable planning of the machine's future output
- Risk minimization if older machines continue to be used

## The flexible GROB Condition Analysis: All packages at a glance

Ahead of any condition analysis, we hold an in-depth discussion with you to precisely understand your needs and identify an inspection scope to suit you. All results are professionally prepared and documented. We then evaluate the results and derive the necessary measures, including possible part recommendations.

	Analysis packages			
Content	Quick check	Basic	Advanced	Professional
Gathering machine-specific data	х	х	х	x
Ballbar measurement – RENISHAW Ballbar QC20	х	Х	Х	Х
Motorized spindle geometry	-	X	X	X
Analysis according to analysis report	-	-	Х	Х
Evaluation and interpretation of measurement reports	-	-	-	Х
Discussion of results and steps to take	X	Х	X	X

ALTERNATIVELY, WE ADAPT THE CONDITION ANALYSIS TO SUIT YOUR PARTICULAR NEEDS.

## RETROFIT AND OVERHAUL



## Manufacturing accuracy and reliability as on the first day

After a few years, your GROB machine will not deliver the same accuracy and productivity anymore as in the beginning due to wear. Consequently, you are not far away from the decision to buy a new one. However, there are attractive alternatives for revitalizing your machine.



## Machine overhauls by GROB: From OLD to NEW

There can be good reasons for modernizing an existing machine or system instead of buying a new one. Identifying potentials for improvement and successfully integrating new technologies into your company and your products calls for an integrated analysis and professional implementation.

Our experienced specialists develop suitable solutions for increasing the capacity utilization of your GROB machines and help you decide which is the more economical – an overhaul or a new acquisition.







## Over 130 retrofits per year – Carried out by experienced GROB professionals

#### • INCREASED EFFICIENCY AND PRODUCT RELIABILITY

Upgrade your machine to state-of-the-art technology to increase your utilization rate and also your machine's availability.

#### • NEEDS-BASED OVERHAUL

We offer you a tailored overhaul based on the actual condition of your machine.

#### • BEST FRAMEWORK CONDITIONS

We have access to all the documents required to carry out a professional and efficient overhaul. In addition, genuine spare parts can be accessed at any time.

#### COMPETENCE AND EXPERIENCE

Our technicians with years of experience know "what matters". You can also benefit from this in-depth knowledge for your next machine overhaul.

#### VALUE RETENTION

A retrofit or an overhaul will help you prolong your machine's useful life. As a result, you get more from your investment and retain the value of your machine over the long term.

### **PCU RETROFIT**

## Hardware replacement: PCU replaced by an industrial PC (IPC)

#### PRODUCT DETAILS

- For all GROB machining centers/linear gantries/transfer lines with PowerLine control system
- PCU/MMC replaced by an industrial PC (IPC) running with Windows 10
- Software modified to suit the new system



#### YOUR BENEFITS

- Significantly less expensive than an upgrade to a SolutionLine control system
- Maximum IT security thanks to the Windows 10 operating system
- Familiar HMI with improved performance
- Permits the use of additional software
- Machine downtime limited to one day
- Option: Spare part availability of electrical components or preventive replacement of all critical electrical components

Control and drive components for machines with PowerLine control system are generally no longer available as new commodities. Trading with used components is also becoming increasingly popular. We offer you two possible solutions. Both of them give you a refurbished component in exchange for the defective one. All components have to pass a thorough function test prior to delivery. You also get an 18-month warranty on the exchanged components.

## Get your GROB machine fit for years to come

For little investment, you can increase your IT security and guarantee a supply of spare parts over the long term.



PCU retrofit procedure		
1. Prerequisite	GROB machine with PowerLine control and PCU50 or MMC103	
Software review by     GROB's specialist department	Retrofit potentials identified	
3. Quotation/order	Fixed price quotation     Order placed by the customer	
4. Preparation and testing on the GROB test bench	<ul><li>Machine-specific software modified</li><li>Software simulation on the new IPC on the GROB test bench</li></ul>	
5. Pre-installation at GROB	Customer software (NC archive) is finally installed on the IPC	
6. On-site implementation	PCU/MMC replaced by IPC, duration approx. 1 day	

## Option 1

#### SPARE PART AVAILABILITY OF ELECTRICAL COMPONENTS

The spare part availability of electrical components option guarantees you a suitable, immediate replacement should any electrical component fail. A scope of critical electrical spare parts to suit your needs is agreed between you and GROB. We guarantee you availability of the spare parts for your selected period, for example 10 years.

## Option 2

#### PREVENTIVE REPLACEMENT OF ALL CRITICAL ELECTRICAL COMPONENTS

We also offer the preventive replacement of all critical electrical components for all GROB machines.

Option 1	Option 2
• Securing of spare part availability up until 2030, for example, even if discontinued by the manufacturer	• Increased machine availability
• Fixed and attractive replacement costs for the entire period	• Reduced machine downtimes
• Spare part delivery within 24 hours*	• Attractive conditions

<sup>\* 24</sup> hours within Europe for orders placed on weekdays before 5 pm.

### MAINTENANCE AND INSPECTION





## For all those who are already thinking about tomorrow

PROFESSIONAL FUNCTIONAL TESTING AND REPLACEMENT OF WEAR PARTS FOR MAXIMUM PRODUCTIVITY.

As part of the annual inspection, our experts determine the actual condition of your machine and **CHECK SAFETY AND FUNCTION-RELEVANT ASSEMBLIES USING OUR MACHINE-SPECIFIC CHECKLISTS.** Possible sources of error can be detected and eliminated in advance, before they even become a problem.

It goes without saying that we provide the test equipment required for a thorough inspection as part of our maintenance and inspection service. Thanks to regular inspection and calibration of the test equipment in combination with the many years of experience of our technicians, all GROB inspections yield **HIGHLY ACCURATE**, **MEANINGFUL RESULTS**.

## The right package for everyone

#### **Maintenance and inspection**

### One-time manufacturer maintenance

- ✓ Machine-specific GROB Inspection✓ GROB Maintenance
- 5.0 % loyalty discount on spare parts
- 3.5 % loyarty discount on nourly service rat
   Callla all writing many 60 minutes.
- Caliback Within Hax. Ou Hilliutes
- Dispatch of a express technician within
- Dispatch of in-stock spare parts and motorized spindles within six hours
- Simplified ordering procedures in case of a machine standstill

#### GROB Maintenance Agreement<sup>(1)</sup>

### Three years manufacturer maintenance

- ✓ Machine-specific GROB Inspection
- ✓ GROB Maintenance
- 5,0 % loyalty discount on spare part
- 3.5 % loyalty discount on hourly service rate
- Callback within max. 60 minutes
- Dispatch of a express technician within six hours
- Dispatch of in-stock spare parts and motorized spindles within six hours
- Simplified ordering procedures in case
   of a machine standstill

#### **GROB Production Safety** (1) (2)

### Three years of GROB Production Safety

(GROB maintenance agreement + Service-Level-Agreement)

- ✓ Machine-specific GROB Inspection
- ✓ GROB Maintenance
- 8.5 % loyalty discount on spare parts
- 3.5 % loyalty discount on hourly service rate
- Callback within max. 60 minutes
- ✓ Flat rate for remote machine diagnostics
- ✓ Dispatch of a express technician within six hours
- ✓ Dispatch of in-stock spare parts and motorized spindles within six hours
- Simplified ordering procedures in case of a machine standstill
  - (1) Available in Germany and Austria
  - (2) Available for universal machining centers

#### **GROB MAINTENANCE**

#### O SCOPE:

- Carrying out maintenance measures related to running performance and time
- Includes package with original wear parts and professional replacement

#### **O** THE WEAR PART PACKAGE INCLUDES:

- Additional and bedway wiper
- Motorized spindle groove ring
- Tool change system brush
- Linear encoder filter element

## MACHINE-SPECIFIC GROB INSPECTION

#### O INSPECTION OF:

- Safety functions and safeguards
- Hydraulic system, lines, pressure setting and tightness
- Lubrication, chip conveyor and pneumatic system
- Spindle cooling, filter, electrical cabinet fan
- Electrical lines, fluid hoses and measuring systems
- Linear guides, ball screws, drives of all axes
- Pallet changer, tool change group
- Additional tool magazine

#### **O** MOTORIZED SPINDLE CHECK:

- Geometry: Mandrel position, radial and axial runout
- Rotary transmission
- Clamping force measurement



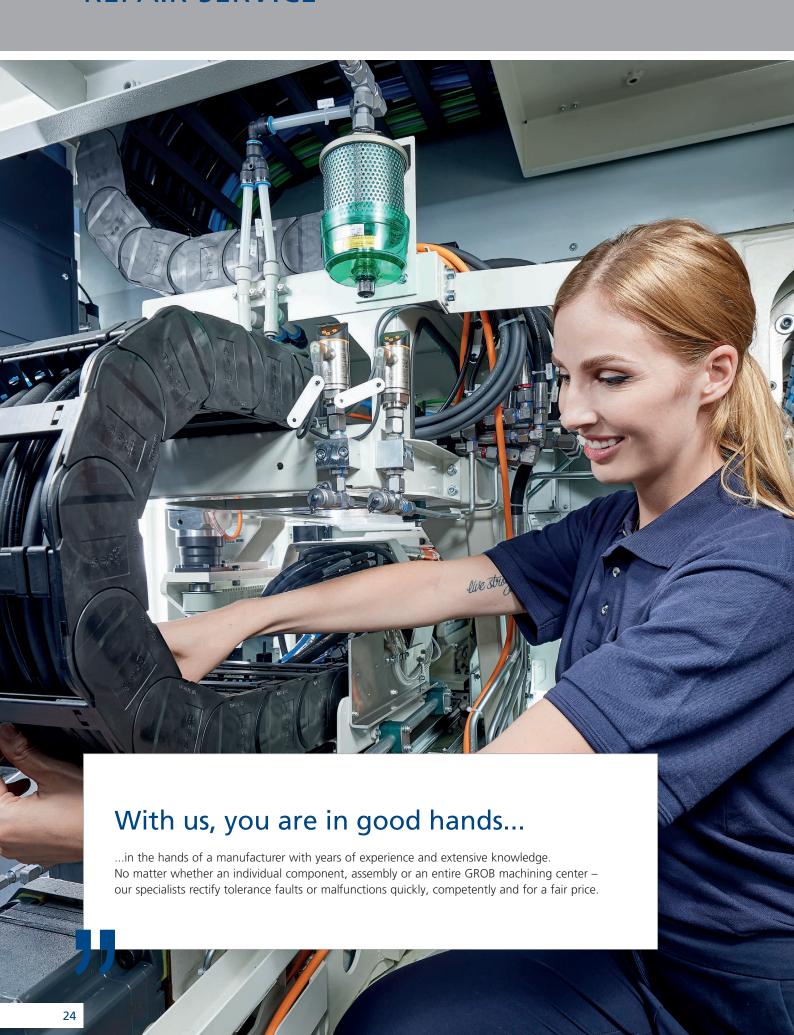
#### INDIVIDUAL EXTENSION

- Maintenance and inspection for your automation solutions by GROB
- On request, additional options such as circular form measurement

"GROB's service really deserves praise. You are always in good hands, whether there are problems with the machine or with spare parts. They always help you."

MR. BERND KREIS, MILLING DEPARTMENT MANAGER AT SII PRECISION PARTS

## REPAIR SERVICE



## Repair service - Mechanical systems

As with all our services, you get a one-to-one consultation even before a repair. During this process, we establish whether to carry out your repairs for a fixed price or according to findings. In the case of the latter, we first examine and assess the components or the assembly. On the basis of these results, you then decide what is to be done and we repair according to you specific requirements, given the material availability, within just one week. For an unscheduled repair, GROB professionals can optionally carry out an express repair on-site.

#### YOUR BENEFITS

- Time and cost saving through efficient processes and large purchase volume
- Warranty of 12/18 months (also possible for the complete assembly)
- Reliability and quality assurance by qualified personnel
- Implementation of product improvements
- Only original spare parts used
- High spare part availability

### Repair service - Electronic systems

Are you experiencing difficulties maintaining electronic components in a swift and reliable manner? Then we are the right partner for you. Also when it comes to service, we consider ourselves a complete solution provider for mechanical and electronic components.

#### FOR GROB AND THIRD-PARTY MACHINES

- Procurement of rebuilt components or repair service
- 100 % function and performance check
- Over 30,000 different rebuilt items (SIEMENS, INDRAMAT, HEIDENHAIN, FANUC and BOSCH) constantly available from stock
- Both current and discontinued materials
- Motors, performance modules, CPU, NCU etc.

#### YOUR BENEFITS

- Significant cost benefits with the same reliability
- Quick and individual process
- 18-month warranty
- Avoidance of compatibility problems or modification measures
- Express provisioning without additional costs

### NON-MACHINING TIME OPTIMIZATION

#### A GROB NON-MACHINING TIME OPTIMIZATION STANDS FOR

- 100 % transparency and calculability
- You only pay what you save

We earn on every percentage point by which we shorten your cycle time for you. Fair and cooperative. The savings are especially attractive for machining processes with high non-machining times.

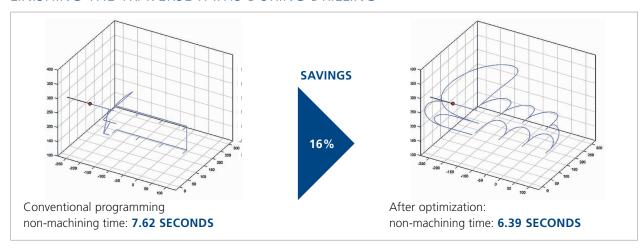
#### YOUR BENEFITS

- Increasing the output quantity: More parts per time
- Cost savings by reducing the unit costs
- Saved machining times can be used for preventive maintenance works
- The cost-benefit-ratio can be clearly calculated and is transparent

#### **REQUIREMENTS**

System machine development stage 5 with SIEMENS Solution Line from software version 2.6

#### LINISHING THE TRAVERSE PATHS DURING DRILLING



## We all know that time is money

Save both with a non-machining time optimization by GROB.

We can get more out of your machine by improving the performance of the NC-axes and by optimizing the motion sequences. As the manufacturer, we know your machine better than anyone else. Thus, we optimize without increasing the wear and without affecting the warranty.



## Machine inspecti

### To the goal in three steps

#### 1.INFORMATION GATHERING:

#### LET US KNOW IF YOU NEED ASSISTANCE WITH OPTIMIZATION.

- In which operation sequence do you require a non-machining time optimization?
- How many and what part types would you like to optimize?

By means of a GROB parameter file and the trace function at the machine, a coordinated measurement file called "GTRACE" is created for the non-machining time optimization, which is used for the assessment of the optimization potential. We also require your NC archives. Of course, the information gathering can also be carried out by a GROB technician.

## 2. DETERMINATION OF THE OPTIMIZATION POTENTIAL: SO THAT YOU KNOW HOW MUCH WE CAN GET OUT FOR YOU.

We then analyze the gathered data and determine your optimization potential. A solid analysis takes time, but it will pay off later for you. When ordering the non-machining time optimization, the costs of the analysis will be balanced one-to-one according to the number of the various assessments and non-machining time optimizations. At the end of the day, it is you who decides what increase in performance should be achieved.

## 3.IMPLEMENTATION OF THE NON-MACHINING TIME OPTIMIZATION: 1–2 DAYS PER MACHINE, WHICH IS WORTH IT.

Our service includes:

- Optimization of the NC programs
- Implementation and test on site
- Documentation of the current cycle time for the listed operation procedures



#### PRODUCT STORY

You will find further information in our Product Story "High Performance Programming" via the QR code or under the following link: https://www.youtube.com/watch?v=RNRRUpy1bfg



## **GROB WORLDWIDE**

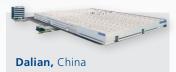


### PRODUCTION PLANTS













Would you like to contact us?







