

#ReadyForTheFuture



RETROFITTING OPTIONS



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

The collage consists of 20 individual images arranged in a 5x4 grid, illustrating the GROB manufacturing process and customer service. The images include:

- Close-up of a large industrial machine processing a metal part.
- A worker in a blue shirt and gloves holding a metal component.
- A wide shot of a modern factory interior with a large sign reading "TAZ TECHNOLOGIE UND ANWENDUNGSZENTRUM".
- A worker operating a large industrial machine labeled "G550".
- A long row of industrial machines in a factory setting.
- A close-up of a metal part being processed by a machine.
- Three people (two men and one woman) standing in front of a machine, smiling.
- A worker operating a yellow robotic arm.
- A worker holding a large metal component.
- A sign for "GMZ GEBRAUCHT-MASCHINENZENTRUM" with people in the background.
- A close-up of a complex metal part being processed.
- A worker operating a machine, holding a large metal component.
- A close-up of a metal part being processed by a machine.
- A worker operating a machine, holding a large metal component.
- A close-up of a metal part being processed by a machine.
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Make your machine state-of-the-art

RETROFITTING OPTIONS

RETROFITTING OPTIONS FOR UNIVERSAL MACHINING CENTERS

- Remote machine diagnostics
- Tool coding system (RFID)
- Laser measurement for turning and milling tools
- Touch probe
- Marposs collision monitoring (CMS)
- Collision monitoring (DCM)
- Integration of external NC program memory (EES)
- Automatic cutting fluid circulation
- Automatic machine start and warm-up
- Communication protocols for Industry 4.0 and IIoT (OPC UA)
- Oil skimmer
- Additional flushing for volume cutting
- Close-to-spindle tool sorting

SOFTWARE OPTIONS FOR UNIVERSAL MACHINING CENTERS

- WAY
- Optimization of machine kinematics
- Interpolation turning
- Speed Feed Tools
- Data matrix code
- TRAORI turning

ENERGY SAVING CONCEPT FOR ROTOR/STATOR LINE

PRODUCTIVITY

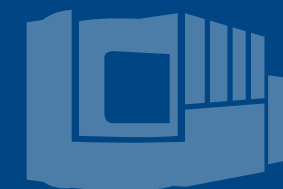
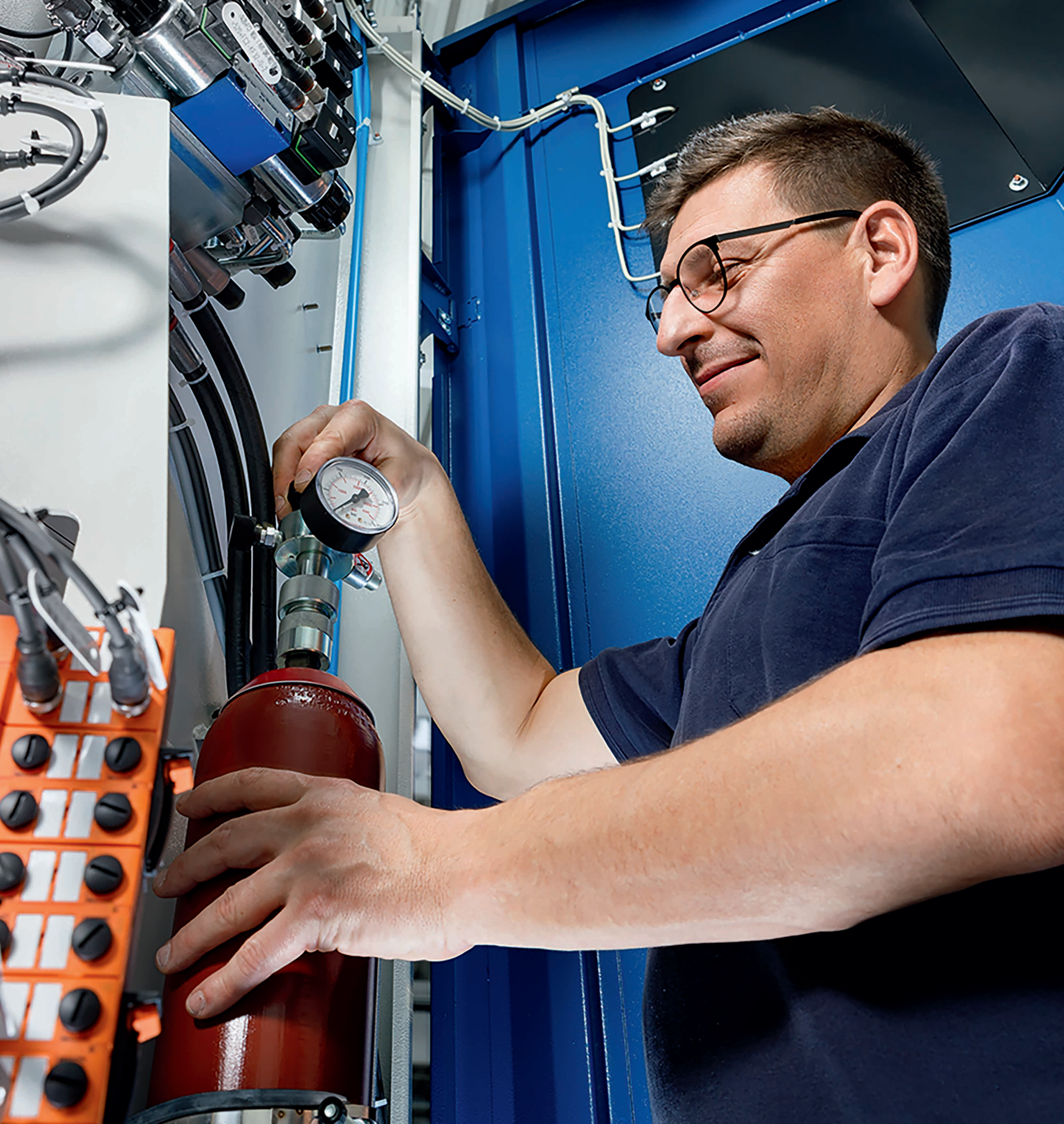
HEALTH

SUSTAINABILITY

ECONOMIC VIABILITY

QUALITY





Universal machining centers **COMPLEMENTARY ACCESSORIES**

Our extensive range of accessories increases the flexibility of our 5-axis universal machining centers while at the same time boosting productivity and cost efficiency.

- ✦ Prevent machine shutdowns
- ✦ Preclude inaccuracies in your production
- ✦ Better quality, economy, sustainability, and health



OUR SERVICE PORTFOLIO
#24/7Support #MaterialSupply
#MachineInspection

UM option 4203344

REMOTE MACHINE DIAGNOSTICS

Features

- ⊕ Hardware:
 - VPN LAN router installed in the electrical cabinet
 - Optional: Key-operated switch for activation/deactivation of remote machine diagnostics
- ⊕ All movement on the control system can be tracked by the GROB Service hotline employee

Your benefits

- ⊕ Quality
 - Extensive options for intervention in almost all control areas as well as for analysis
 - Options for installing software updates, programs, etc.
- ⊕ Economic efficiency
 - Increased productivity thanks to rapid troubleshooting
 - Less time-consuming technician services

Requirements

(must be checked individually)

- ⊕ Control system: SIEMENS, HEIDENHAIN
- ⊕ Customer: Network capability must be ensured, Remote Support Service agreement for use of remote machinediagnostics

UP TO 80 % FEWER TECHNICIAN SERVICES

Machine failure is never planned. This makes quick and uncomplicated assistance in an emergency all the more important. With remote machine diagnostics, our highly qualified GROB Service hotline staff can begin fault analysis and troubleshooting immediately.

”

UM option 4203321

TOOL CODING SYSTEM (RFID)

Features

- ⊕ Hardware:
 - BIS-V evaluation unit
 - BIS-C or BIS-M read/write head
- ⊕ Can be deselected in the HMI
- ⊕ Installation and cycle adjustment by GROB

Your benefits

- ⊕ Economic efficiency
 - Efficiency increase via automated tool management
 - Simple data evaluation for process statistics and service life optimization
 - Setup time reduction
 - Manual tool data entry no longer required

Requirements

(must be checked individually)

- ⊕ Control system: SIEMENS, HEIDENHAIN
- ⊕ Suitable tool holders

PRODUCTION INSTEAD OF ENTERING TOOL DATA

An increasing number of tools and their data requires a sophisticated tool management system. BALUFF's encoding system can be retrofitted to facilitate management. The current data (name, dimension, wear, service life, etc.) are stored directly on the tool by means of a chip and are automatically read and processed when the machine is equipped.

”



UM option 4203326

LASER MEASUREMENT FOR TURNING AND MILLING TOOLS

CHECK YOUR TOOLS DIRECTLY WHERE USED

The BLUM laser measurement system installed on the rotary table monitors each tool used by means of high-precision optical and automated tool geometry measurement under operating conditions. Incorrectly equipped or inaccurately set tools and tool damage/wear are detected promptly, preventing damage to the part or subsequent tool.

Features

- + Hardware: BLUM LC50-DIGILOG/LC52-DIGILOG
 - 50: Installed combined laser measurement system enables tool monitoring and measurement
 - 52: Laser measurement system enables contactless optical tool monitoring and measurement, even for turning tools
 - Is individually checked, particularly for older machines
- + Tool length, radius and form measurement
- + Check for wear and changes to geometry
- + Check for concentricity and dirt in the tool holder

Your benefits

- + Quality
 - Highest production quality with tool wear detection
 - Measured values can be transferred to other machines
 - High-end laser optics with a focused laser beam for exceptionally rapid and precise monitoring
- + Economic efficiency
 - Automated tool measurement and monitoring
 - Prevention of subsequent damage due to undetected tool breakage

Requirements

(must be checked individually)

- + Control system: SIEMENS, HEIDENHAIN
- + Suitable clamping

UM option 4203343

TOUCH PROBE

SETUP AND MONITORING: FAST AND RELIABLE

The touch probe with HSK holder enables simple part setup and measurement during the machining process. Thanks to the secure Frequency Hopping Spread Spectrum transmission protocol, even difficult work environments are no problem.

Features

- + Hardware:
 - Battery-operated touch probe with tool holder
 - Receiver
 - Various touch probe versions available
 - Must be checked individually
- + Easy loading from the tool magazine
- + In addition to RMP600: RMP400 now also possible (example RENISHAW touch probe)*
- + Required for the machine kinematics (GSC) option

*Only RMP400 possible for G150 (for use of GSC Light/Advanced).

Your benefits

- + Quality
 - High-precision via repeat accuracy of $\pm 1 \mu\text{m}$
 - Increase to part accuracy
 - RMP400: High accuracy possible with technical enhancement
- + Productivity
 - Collision prevention via part measurement before machining
 - Reduction of non-machining times for alignment and measurement of parts and clamping fixtures

Requirements

(must be checked individually)

- + Control system: SIEMENS, HEIDENHAIN

UM option 4203275

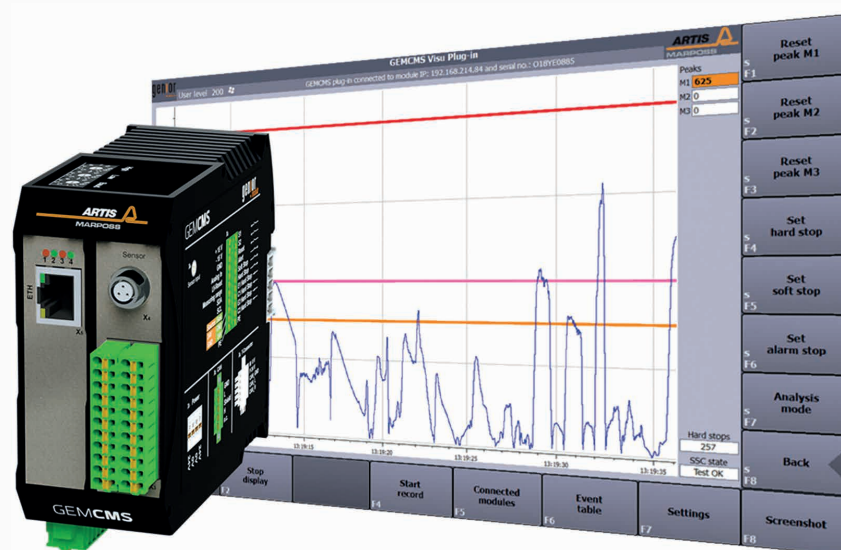
MARPOSS COLLISION MONITORING (CMS)

PREVENT TOTAL LOSS WITH A REACTION TIME OF <1 MS

In the event of a collision, the CMS machine protection system stops all axis movements of the machining center within milliseconds to minimize damage to the machine, tools, and clamping fixtures.

Features

- + Additional force sensors at the monitored axes
- + Evaluation unit in the electrical cabinet
- + Additional monitor with HEIDENHAIN/FANUC control systems
- + Targeted shutdown of axis drives when limit values are exceeded
- + Freely definable limit values
- + Control system independence



Your benefits

- + Economic efficiency
 - Prevention of downtimes due to machine, tool or clamping fixture damage
 - Prevention or reduction of repair costs for collisions
 - Save 25 % of the insurance premium in connection with machine insurance from HELVETIA
- + Health: Increased operator safety for possible collisions when testing new part programs

UM option 4203274

COLLISION MONITORING (DCM)

COLLISION PREVENTION

Dynamic collision monitoring (DCM) monitors machine components (motorized spindle and tilting rotary table) and stops axis movements before impending collisions.

Features

- + No hardware adjustment necessary
- + The license can be purchased with the SIK ID of the control system and the option can be activated via remote machine diagnostics
- + Interference contours must be stored in the parameters for the DCM software by the programmer
- + Active when a CNC program is processed or the axes are moved manually
- + Detection of impending collisions leading to immediate stop of axis movements
- + Color-coded on-screen display of the collision object
- + In a new control system, the part can be independently programmed as a collision object by the customer themselves

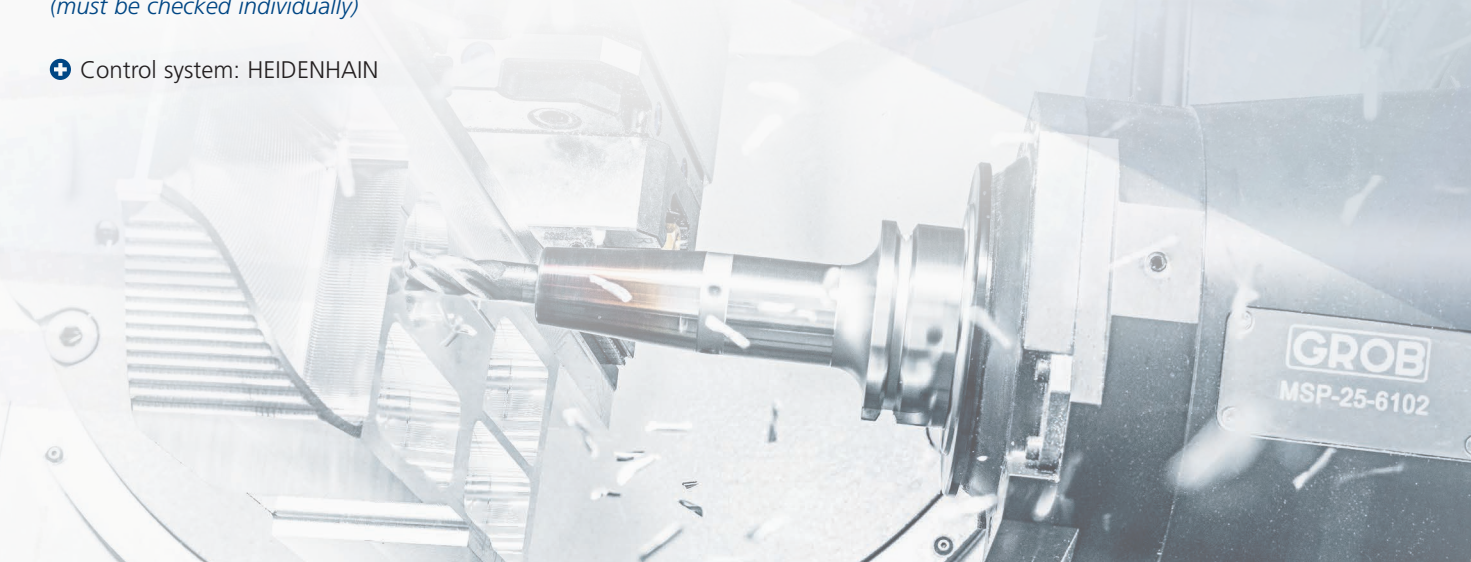
Your benefits

- + Economic efficiency
 - Prevention of downtimes due to machine, tool or clamping fixture damage
 - Prevention or reduction of repair costs for collisions
- + Health: Increased operator safety for possible collisions when testing new part programs

Requirements

(must be checked individually)

- + Control system: HEIDENHAIN



UM option 4323284

INTEGRATION OF EXTERNAL NC PROGRAM MEMORY (EES)

SIMPLIFIED PROGRAM EXECUTION VIA EXTERNAL MEMORY

With this function, you can process part programs directly from any external data storage. In addition, you can now use other functions such as "jumps" and "loops" and carry out program correction during an NC stop.

Features

- + Pure software upgrade: SIEMENS EES (Execution from External Storage)
- + The following are available as external data storage:
 - Local drive (any type)
 - Global USB to TCU
 - Windows drives (both from PCU and from a server)
- + Uniform syntax for subroutine calls – no EXTCALL calls required

Your benefits

- + Economic efficiency
 - Processing of externally stored machining programs of any size
 - Problem-free processing of a combination of externally and locally stored programs and cycles without special syntax
 - Save time with the option to stop and correct externally stored programs
 - Program correction possible during NC stop

Requirements

(must be checked individually)

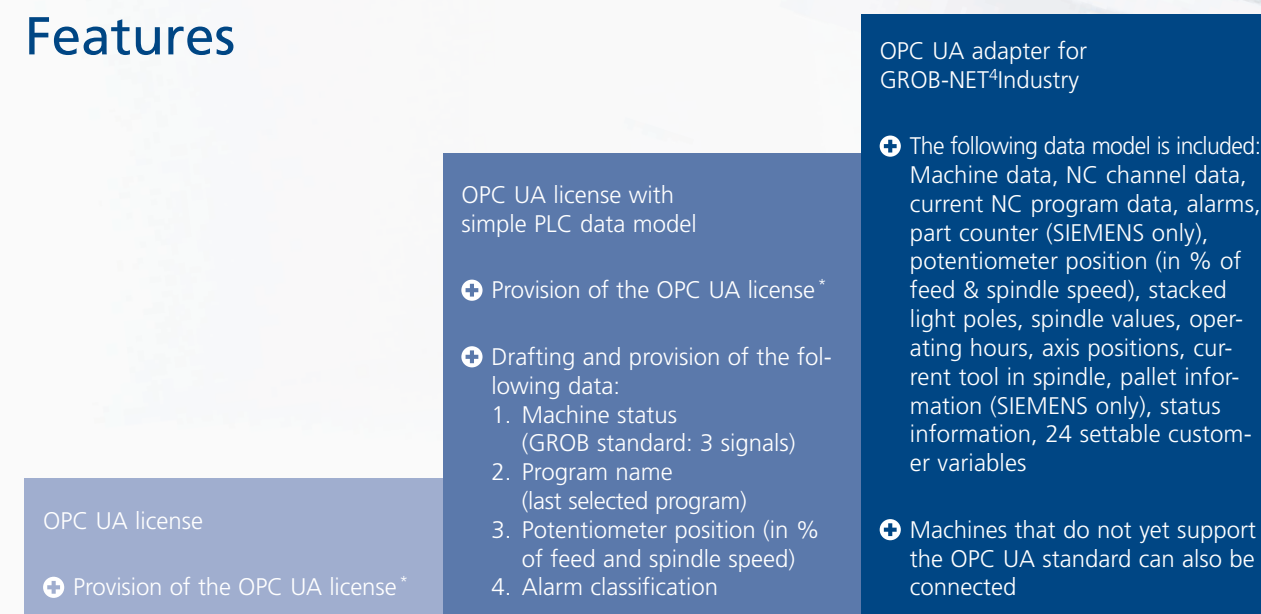
- + Control system: SIEMENS
- + Hardware: NCU 730.3B PN or higher

UM option 4481088

COMMUNICATION PROTOCOLS FOR INDUSTRY 4.0 AND IIOT (OPC UA)

OPC UA is a data exchange standard for industrial communication (machine-to-machine or PC-to-machine communication). The open-source interface standard is independent from the manufacturer or system supplier of the application, from the programming language the respective software was programmed in, and from the operating system the application is running on.

Features



* The control systems and versions must be taken into account and checked (SIEMENS > 4.07 HE 640 iTNC)

Your benefits

- + Quality/efficiency:
 - OPC UA license with simple PLC data model
 - › Immediately accessible simple PLC data model
 - GROB-NET⁴Industry OPC UA adapter
 - › Immediately accessible data model without additional programming
 - › No control system licenses required
 - › No PLC modifications required
 - › Simple installation
 - › Excellent scalability
 - › Manufacturer-neutral

UM option 5121282

AUTOMATIC MACHINE START AND WARM-UP

PROGRAMMABLE VIA HMI – TIME-CONTROLLED WARM-UP PROGRAM START

A longer period of machine standstill leads to a difference from the ideal operating temperature of the machining center (e.g., after a weekend). When the machine is switched off (main switch set to OFF) and the remote operation switch is activated, the automatic time-controlled warm-up program start is activated. The machining center is then started by the warm-up program and brought to operating temperature before actual part production in this case. The activation time of the warm-up program can be set individually by the machine operator.

Features

- ⊕ Hardware: For recirculation when the main switch has been switched off:
 - Additional LOGO logic module from SIEMENS
 - Key-operated switch for activation/deactivation
- ⊕ Software: Only required if cutting fluid circulation is already present (see pg. 20)

Your benefits

- ⊕ Quality: Higher part quality
- ⊕ Economic efficiency: Immediate production start at start of shift

Requirements

(must be checked individually)

- ⊕ Control system: SIEMENS
- ⊕ Hardware: NCU 730.3B PN or higher

WE VALUE SUSTAINABILITY

GROB Service is committed to ensuring that our customers' machines produce energy-efficiently and sustainably.



UM option 4203350

AUTOMATIC CUTTING FLUID CIRCULATION

ENVIRONMENTAL AND EMPLOYEE SAFETY THAT PAYS OFF

If the cutting fluid is not moved for a longer period of time, germs and fungi harmful to both your employees and the quality of the cutting fluid will develop. The automatic cutting fluid circulation allows the machine to be switched off with the cutting fluid still being circulated regularly. This counteracts resinification and fungus growth.

Features

- ⊕ Hardware: For recirculation when the main switch has been switched off
 - Additional LOGO logic module from SIEMENS
 - Key-operated switch for activation/deactivation
- ⊕ Individually selectable activation times

Your benefits

- ⊕ Quality: Maintaining lubricating and cooling properties leads to consistent part quality
- ⊕ Economic efficiency
 - Reduced purchase and disposal costs due to increased cutting fluid service life
 - Cumulative potential savings (after five years): €15,284.60*
- ⊕ Sustainability: Energy-saving, since the machine can be switched off without worry
- ⊕ Health: Prevention of health impairment by permanent reduction of germs and fungi

Requirements

(must be checked individually)

- ⊕ Control system: SIEMENS, HEIDENHAIN
- ⊕ Hardware: Remote-controlled main switch (GROB standard)

* GROB Mindelheim reference machine. Savings may vary depending on machine type and usage. Calculation based on 2021 electricity prices.

UM option 4203345

OIL SKIMMER

The oil skimmer reliably removes floating foreign oils and contaminants from the cutting fluid (KSS). This way, you can maintain high cutting fluid quality even when machining with a lot of metal dust and reduce downtimes due to clogged parts.

Features

- ⊕ Up to 40 % longer cutting fluid life due to continuous cleaning
- ⊕ Oil skimmer with collecting vessel and level switch
- ⊕ Electrical connection including motor protection

Your benefits

- ⊕ Quality: Improvement of the machining quality by maintaining cooling and lubricating properties
- ⊕ Economic efficiency
 - Reduction of machine malfunctions due to blockages and deposits
 - Cost savings by extension of the cutting fluid service life
- ⊕ Sustainability: Less environmental burden due to longer cutting fluid change intervals
- ⊕ Health: Health protection through fewer germs in the cutting fluid

Requirements

(must be checked individually)

- ⊕ Control system: SIEMENS, HEIDENHAIN
- ⊕ Hardware: Machine cutting fluid tank



UM option 4203349

ADDITIONAL FLUSHING FOR VOLUME CUTTING

INCREASED PRODUCTIVITY

With the volume cutting package, unplanned machine downtimes can be prevented by preventing chip build-up via special flushing nozzles at various areas of the machine. This package is available for machines with and without pallet changer.

Features

- ⊕ Volume cutting package with detection element and flushing functions for machines with or without pallet changing system
- ⊕ Additional flushing functions in the work area, the cross-slide machine bed slant and the extraction hood
- ⊕ Available for machines with or without pallet changer system
- ⊕ Improved pre-separation for less chips and cutting fluid in the extraction system
- ⊕ Increased flow speed at the detection point and in the pipe

Your benefits

- ⊕ Productivity:
 - Prevention of chip build-up via special flushing nozzles
 - Resulting avoidance of unplanned downtime

Requirements

(must be checked individually)

- ⊕ Hardware: Dependent on the machine version (note standard scope of "Pallet changer" option)

UM option 5518578

CLOSE-TO-SPINDLE TOOL SORTING

The goal of close-to-spindle sorting is to sort the tools for machining in the tool magazine closest to the spindle in order to shorten equipping times and therefore machining.

Features

The required tools are defined manually by the user via a predefined list or recorded automatically. The sorting cycle puts the tools into the main magazine in the desired order.

- ⊕ A cycle checks if a complete predefined list exists or if recording is necessary to create a predefined list.
 - Sorting mode 1:
The tools in the predefined list are placed in the magazine close to the spindle in no specific order. First, the system tries to fill all free magazine pockets with the tools from the predefined list. If there are not enough free magazine pockets, tools are removed from the magazine closest to the spindle until a suitable magazine pocket is found for the tool in the predefined list. A defined prioritization is used.
 - Sorting mode 2:
The tools of the predefined list are sorted and placed in the magazine close to the spindle in specific order. If a magazine pocket is occupied by a tool, this is removed from the magazine close to the spindle. Master tools are taken into account and remain in the magazine close to the spindle.
- ⊕ "Tools Ready For Use" option: It is checked if the tools of the predefined list are ready for use in the magazine. There is no reaction in the cycle. The reaction is programmed by the operator based on the return parameters in the machining program.

Your benefits

- ⊕ Shortens the equipping time of tools and therefore the machining time

Requirements

(must be checked individually)

- ⊕ Control system: SIEMENS
- ⊕ Software: NC software version 4.7 and higher

UM software option 6078525

WAY

WAY is a coordinate measurement software. Each point touched is automatically saved in a generated cloud of points. There, geometric elements can be fitted into it.

Features

- ⊕ Software for creating measuring programs similar to on a measuring machine
- ⊕ The programs can be created in teach mode
- ⊕ Object-oriented programming
- ⊕ Geometry elements can be probed with any number of points and fitted in with Best-Fit

Your benefits

- ⊕ Uncompromising processes because the clamping points can be freely selected if the fixture no longer needs to align the component
- ⊕ Reliable processes because incorrect probings can be detected with Best-Fit
- ⊕ Better component performance in the end product because drawing requirements can be fulfilled that were previously unthinkable
- ⊕ All measuring tasks can also be carried out at an angle in the work area and elements can be aligned to each other, including all rotations
- ⊕ The determination of shape accuracy and scatter avoids rejects by stopping the machine when tolerances are exceeded

Requirements

- ⊕ GROB software version V1.8 and higher
- ⊕ Older software versions must be checked individually



UM option 4203329

OPTIMIZATION OF MACHINE KINEMATICS BY MEANS OF GSC CLASSIC

OPTIMUM QUALITY WITH GROB SWIVEL AXIS CALIBRATION (GSC)

Every machine tool has slight systemic geometric deviations in the rotary axes. These individual, minimal deviations add up to a volumetric geometric deviation within the work area. With GROB swivel axis calibration, these geometric deviations are compensated for by the machine control system.

Features

- + Simple software upgrade
- + Determination of current kinematics via the 3D touch probe and a high-precision gauge ball
- + Optimization of swivel accuracy based on the measurement results



Your benefits

- + Quality
 - Compensation for machine and temperature-dependent geometric deviations
 - Ensures consistent production accuracy even with changing ambient conditions
- + Productivity
 - Simple machine geometry measurement
 - Rapid improvement of current machine accuracy for the entire work area

Requirements

- + Hardware
 - From GROB Generation 1 series onward
 - Geometry and laser required in advance (additional repair if necessary)
 - If required: Measurement and correction from GROB Generation 2 and higher
 - Depending on software version
- + Control system: SIEMENS, HEIDENHAIN
- + Components: Compatible touch probe, Kinematics measuring case

UM option 4203329

OPTIMIZATION OF MACHINE KINEMATICS BY MEANS OF GSC ADVANCED

OPTIMUM QUALITY WITH GROB SWIVEL AXIS CALIBRATION (GSC)

Every machine tool has slight systemic geometric deviations in the rotary axes. These individual, minimal deviations add up to a volumetric geometric deviation within the work area. With GROB swivel axis calibration, these geometric deviations are compensated for by the machine control system.

Features

- + Simple software upgrade (duration: 1 minute)
- + Determination of current kinematics via the 3D touch probe and a high-precision gauge ball
- + Optimization of swivel accuracy based on the measurement results
- + Expansion of GSC Classic to make machine calibration even more intuitive and take it to the next level
- + The machine detects the need for calibration fully automatically and uses the non-removable calibration sphere for it (without operator interaction, e.g., during pallet change)
- + Continuous documentation of the measurement results

Your benefits

- + Quality
 - Compensation of machine and temperature-related geometric deviations
 - Ensuring consistent production accuracy regardless of load and temperature influences and without a swivel cycle
- + Productivity
 - Simple machine geometry measurement
 - Rapid improvement of current machine accuracy for the entire work area
 - Supervised warm-up processes

Requirements

- + Hardware
 - From GROB Generation 1 series onward
 - Geometry and laser required in advance (additional repair if necessary)
 - If required: Measurement and correction from GROB generation 2 and higher
 - GSC Classic (SIEMENS from V01.03.10/HEIDENHAIN from V02.00.00)
- + Control system: SIEMENS, HEIDENHAIN
- + Components: Compatible touch probe, Kinematics measuring case

UM software option 6078521

INTERPOLATION TURNING

Enables any turning operations. A diameter axis is emulated by means of interpolation movements between the linear axes X, Y and the motorized spindle.

Features

- ⊕ Pure software solution to perform turning operations as with a cross-feed unit
- ⊕ GROB interpolation turning is a transformation that enables the same handling and programming environments as on a CNC lathe
- ⊕ Standard turning tools are used

Your benefits

- ⊕ Significantly more cost-effective and easier to use than a cross-feed unit
- ⊕ Easy to use because the programming and handling is completely identical to a CNC lathe
- ⊕ Optionally to be complemented by 0.5 days of training at GROB (creation of turning tool data in the tool table, explanation for switching between milling and turning mode and basic training for turning operations)

Requirements

- ⊕ GROB software version V1.8 and higher
- ⊕ Older software versions must be checked individually

UM software option 6078524

SPEED FEED TOOLS

The GROB cycle provides extended functions for programming rotational speed and feed. It enables both to be changed linearly without any time delay within one traversing block. This function is used for deep hole drilling, for example.

Features

- ⊕ Toolbox to vary spindle speed and feed motion

Your benefits

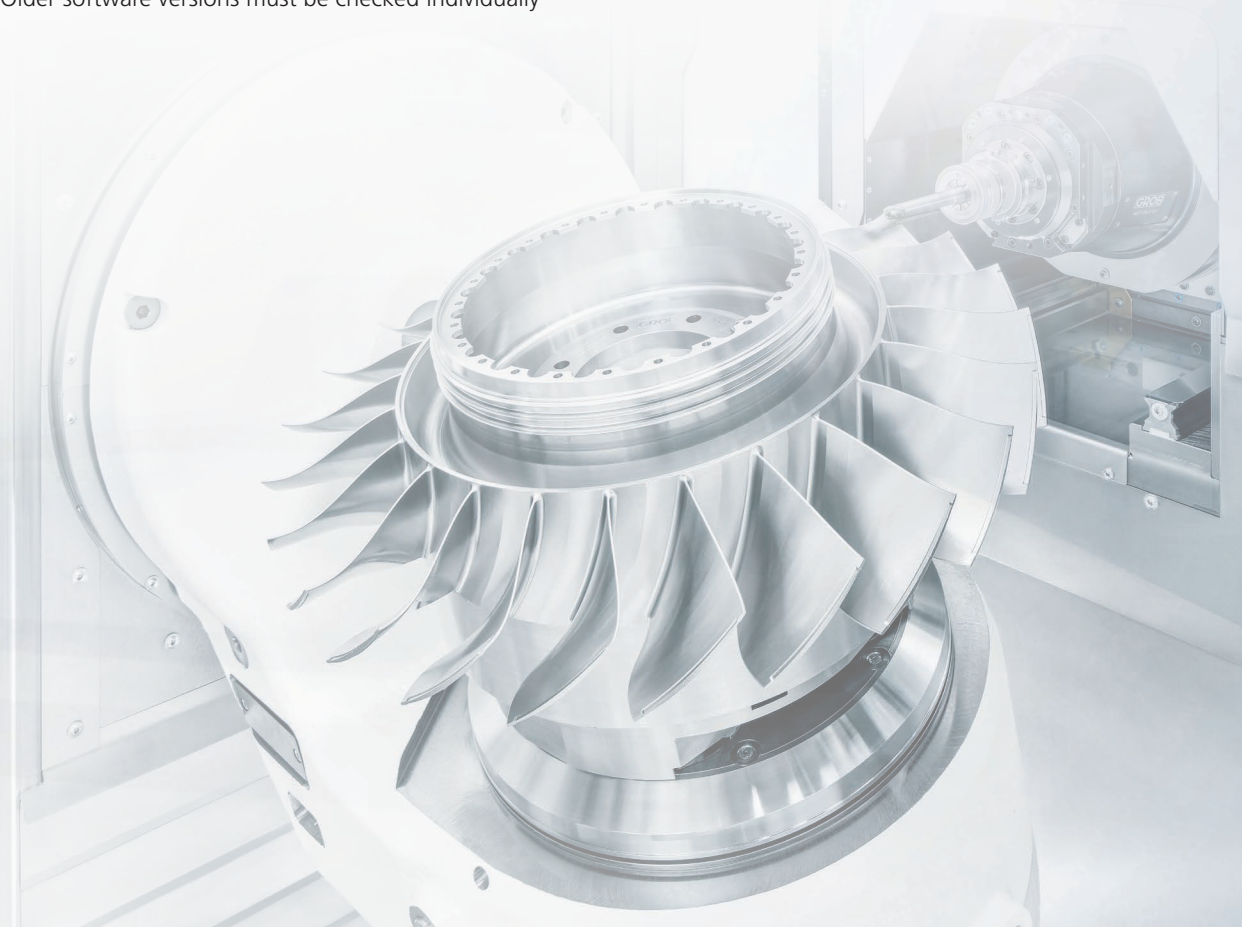
- ⊕ Reduction of vibrations by varying the spindle speed sinusoidally
- ⊕ Short chips due to sinusoidal variation of the feed motion (chip breakage with up to 10 Hz)
- ⊕ Cycle time reduction through linear variation of spindle speed and feed motion in drilling processes

Requirements

- ⊕ GROB software version V1.8 and higher
- ⊕ Older software versions must be checked individually



Use the QR code to access our short information video on the subject of interpolation turning.



UM software option 6078526

DATA MATRIX CODE

Software for reading and writing data matrix codes on parts by the machine.

Features

- + Write and read data matrix codes directly in the machine
- + The following technologies are available for writing:
 - Milling: The fastest and most machine-friendly method is to use a ball-nosed cutter with a cutting edge (GROB special tool). Can be read out using a touch probe and this software package.
 - Drilling: Drilling the individual pixels with a drilling tool. Can be read out using a touch probe and this software package.
 - Needle embossing: Except for the rotation of the spindle identical to drilling, but slightly faster and lower requirements for the position and evenness of the surface. Not readable with touch probe.

Your benefits

- + No risk of parts being mixed up, as the process takes place in the closed machine
- + Cost-effective, as no external marking station or cameras are required

Requirements

- + GROB software version V1.8 and higher
- + Older software versions must be checked individually



UM software option 6078527

TRAORI TURNING

Features

- + Online transformation of the tool center path to the machine axes
- + Part contour and tool orientation are programmed

Your benefits

- + Linearization of the movement is not required
- + The control system can ensure the technologically correct feed on the part and realize many possible corrections and superpositions in real time

Requirements

- + GROB software version V1.8 and higher
- + Older software versions must be checked individually



Use the QR code to access our short information video on the subject of TRAORI turning.





Rotor/stator line

ENERGY SAVING CONCEPT

Energy costs have a significant impact on your cost structure when manufacturing components for the electric drive (rotor/stator). To ensure that you remain competitive on the international market, we would like to support you in implementing sustainable measures.

- ✚ Includes standardized and individual measures
- ✚ Reduce energy costs in the manufacturing process
- ✚ Improvement of your carbon footprint



SUSTAINABILITY AT GROB
#Environment #Social #CorporateGovernance
#Sustainability #FutureOriented

Customized for your requirements

ROTOR/STATOR LINE ENERGY SAVING CONCEPT

Energy costs have a significant impact on your cost structure when manufacturing components for the electric drive (rotor/stator). In order to remain competitive in the international market environment, we would like to support you in the implementation of sustainable measures.

Features

- ⊕ Package includes: standard measures and customized measures at the various stations of your system
- ⊕ The measures focus on the following areas: compressed air, cooling, heating processes, extraction and lighting
- ⊕ Analysis of the current conditions of your system by means of an as-is condition analysis with subsequent evaluation of open potentials

Your benefits

- ⊕ Saving energy and thus reducing the operating costs of your system
- ⊕ Improvement of your carbon footprint due to the reduction in your energy requirements
- ⊕ Contributes to sustainable compliance with ISO50001

Requirements

Together with GROB technicians, you inspect your rotor or stator line to determine the optimization options. Not only do we present our measures to you, we also take your individual suggestions into account and use them to create an overall concept.



Weltweit, ein Maschinenleben lang

GROB – GLOBAL UND INTERNATIONAL

Von Bayern in die Welt: Seit unserer Gründung im Jahr 1926 in München sind wir als global operierendes Familienunternehmen in der Entwicklung und Herstellung von Anlagen und Werkzeugmaschinen auf konstantem Wachstumskurs. Zu unseren Kunden gehören die weltweit namhaftesten Automobilhersteller, deren Zulieferer und renommierte Unternehmen aus dem Bereich Aerospace, dem Maschinenbau und weiteren Branchen. Mit unseren Produktionsstätten in Deutschland, Brasilien, den USA, China, Italien und Indien sowie 16 weltweiten Service- und Vertriebsniederlassungen sind wir rund um den Globus vertreten und sichern so beste Qualität.

EUROPA

Mindelheim, Deutschland
Pianezza, Italien
Stratford-upon-Avon, Großbritannien
Hengelo, Niederlande
Lyon, Frankreich
Baar, Schweiz
Posen, Polen
Győr, Ungarn
Istanbul, Türkei
Steyr, Österreich

24/7-SUPPORT

GRÜNDUNG 1926

NORDAMERIKA

Bluffton, Ohio, USA
Detroit, Michigan, USA
Querétaro, Mexiko

6 WERKE

WELTWEIT 16 VERTRIEBS- UND
SERVICENIEDERLASSUNGEN

SÜDAMERIKA

São Paulo, Brasilien

ASIEN

Dalian, China
Bangalore, Indien
Peking, China
Shanghai, China
Yokohama, Japan
Suwon, Südkorea
Haiphong, Vietnam
Bangkok, Thailand

Unsere weltweiten Produktionsstandorte



Mindelheim, Deutschland



São Paulo, Brasilien



Bluffton, USA



Dalian, China



Pianezza, Italien



Bangalore, Indien



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