



TRAINING CONCEPT

GROB ASSEMBLY LINES

TRAINING CONCEPT



GROB customer trainings

As products become more and more complex, customer training as a key component of the GROB global range of services becomes increasingly important. An experienced team of qualified trainers is squaring up to this challenge at GROB.

The GROB service range

Besides individual customer consultation and support, the GROB service range above all includes an extensive range of training and development modules.

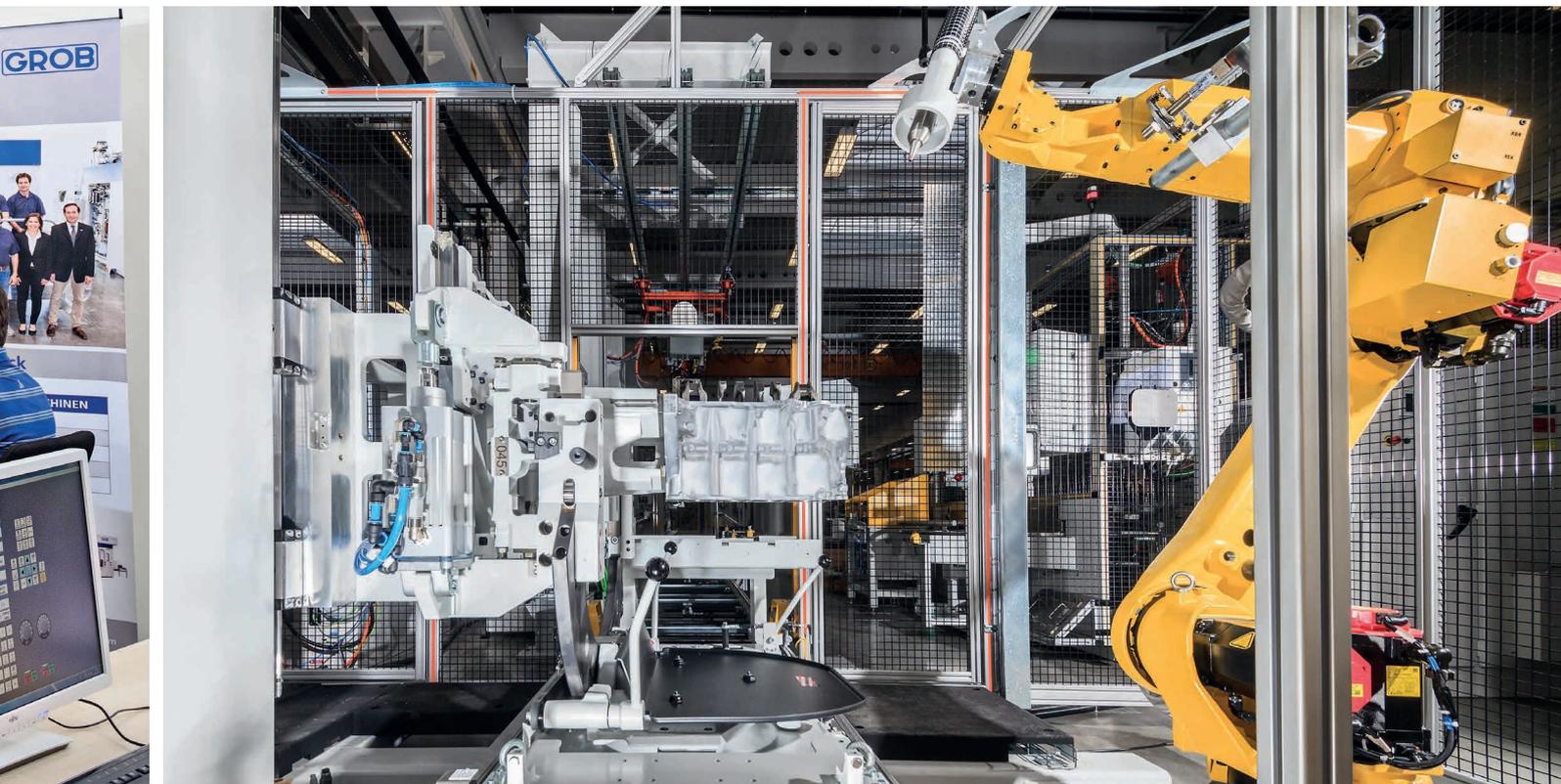
From line operation, NC programming to preventive maintenance and inspection through to mechanical and electrical maintenance, the offer covers all there is to know about our extensive product range.

For you to get the best out of your GROB assembly line, we offer various training modules for operators, programmers and maintenance engineers. Our small group approach means that due consideration can be given to the interests and prior knowledge of all the participants.

Depending on availability, individual training modules can be configured to suit particular needs.

The training is essentially delivered in German and English. Interpreters can of course also be provided for a fee.

All participants who successfully attend the GROB customer training receive a certificate.



The GROB training modules at a glance

TRAINING MODULES

Operation

Transport systems

Mechanical maintenance

Basic principles: Robots on GROB basis

Electrical maintenance

SIEMENS TIA / Beckhoff TwinCAT 3
basic course of the GROB structure

YOUR CONTACT

GROB Customer Training

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INDIVIDUAL TRAINING OPPORTUNITIES WITH GROB

It will be our pleasure to prepare a training concept to meet your specific needs. We do this by analyzing your needs and requirements to develop a tailored course that fulfills your personal aspirations.

Please submit your written training enquiry/application to
E-Mail: training@grob.de • Tel.: +49 8261 996-5771

Further information about your training is available at:
www.grobgroup.com/service/kundenschulung

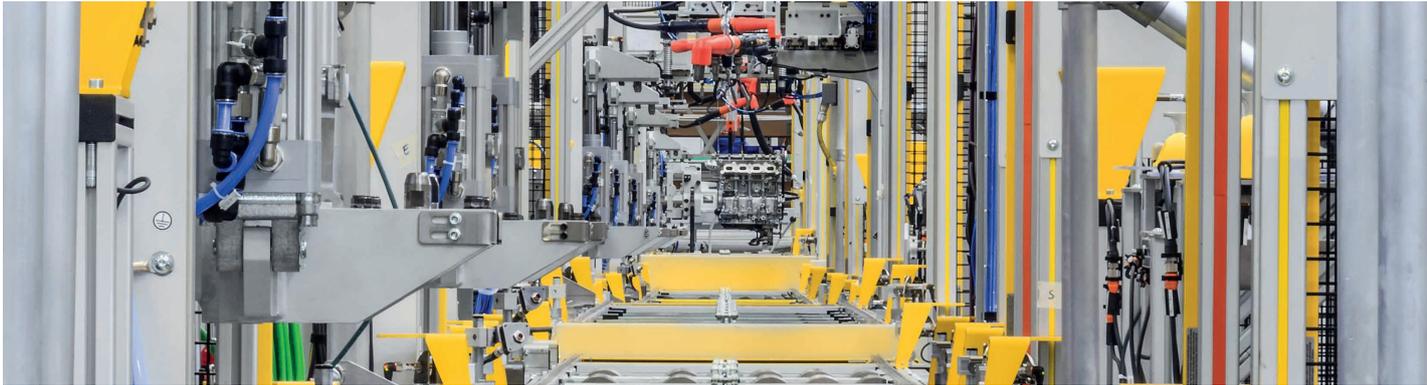


GROB training modules

You will be optimally acquainted with GROB assembly systems through various modules. No matter whether novice or experienced machine operator – we demonstrate how your machines work to optimal effect.

OPERATION	
Target group	<ul style="list-style-type: none">• Machine operators, mechanical and electrical maintenance engineers
Requirements	<ul style="list-style-type: none">• Basic knowledge of the assembly line
Duration	Can be adapted on a project-by-project basis
Composition	<ul style="list-style-type: none">• 20% theory, 80% practical exercises
Contents	Customer-specific content, depending on the individual stations
Learning objective	<ul style="list-style-type: none">• Correct and safety-conscious machine operation• Quick analysis and elimination of malfunctions• Minimization of machine downtimes

TRANSPORT SYSTEMS	
Target group	<ul style="list-style-type: none">• Mechanical maintenance engineers
Requirements	<ul style="list-style-type: none">• Training on mechanical systems
Duration	Can be adapted on a project-by-project basis
Composition	<ul style="list-style-type: none">• 20% theory, 80% practical exercises
Contents	<ul style="list-style-type: none">• Structure and function• Inspection• Preventive maintenance and maintenance measures• Replacing wear parts
Learning objective	<ul style="list-style-type: none">• Localizing and rectifying mechanical faults• Replacing spare and wear parts• Minimization of machine downtimes• Carrying out inspection and preventive maintenance tasks



MECHANICAL MAINTENANCE	
Target group	<ul style="list-style-type: none"> • Mechanical maintenance engineers
Requirements	<ul style="list-style-type: none"> • Training on mechanical systems • Basic knowledge of hydraulic and pneumatic systems • Knowledge of preventive maintenance of assembly lines
Duration	Can be adapted on a project-by-project basis
Composition	<ul style="list-style-type: none"> • 30% theory, 70% practical exercises
Contents	Customer-specific content, depending on the individual stations
Learning objective	<ul style="list-style-type: none"> • Localizing and rectifying mechanical faults • Replacing spare and wear parts • Minimization of machine downtimes • Carrying out inspection and preventive maintenance tasks

BASIC PRINCIPLES: ROBOTS ON GROB BASIS	
Target group	<ul style="list-style-type: none"> • Machine operators, maintenance engineers
Requirements	none
Duration	2 days
Composition	<ul style="list-style-type: none"> • 20% theory, 80% practical exercises
Contents	<ul style="list-style-type: none"> • Safety during robot operation • Types of movement • Basis and tool measurement • Selecting and running programs • "Teaching" of points / position corrections • Retracting of robots • Creating and importing backups • Practical exercises
Learning objective	Safe operation of a robot

TRAINING MODULES



ELECTRICAL MAINTENANCE	
Target group	<ul style="list-style-type: none"> • Maintenance engineers, electronics engineers
Requirements	<ul style="list-style-type: none"> • Training on electronic systems
Duration	Can be adapted on a project-by-project basis
Composition	<ul style="list-style-type: none"> • 50% theory, 50% practical exercises
Contents	Customer-specific content, depending on the individual stations
Learning objective	<ul style="list-style-type: none"> • Correct and safety-conscious machine operation • Quick analysis and rectification of malfunctions • Safe replacement of electrical components

BASIC COURSE SIEMENS TIA / BECKHOFF TWINCAT 3 OF THE GROB STRUCTURE	
Target group	<ul style="list-style-type: none"> • Maintenance engineers, electronics engineers
Requirements	<ul style="list-style-type: none"> • Training on electronic systems • Basic knowledge of the programming on the used control system
Duration	Can be adapted on a project-by-project basis
Composition	<ul style="list-style-type: none"> • 70% theory, 30% practical exercises
Contents	<ul style="list-style-type: none"> • Introduction of the hardware • Introduction to the GROB structures • Basic knowledge of programming • Data backup • Diagnostic options • Data processing • Interface description • Sequencers • Visualization
Learning objective	<ul style="list-style-type: none"> • Correct and safety-conscious machine operation • Knowledge of the GROB structures • Tracking of data communication • Understanding the sub-components' interfaces



THE GROB GROUP

Tradition – Know-how spanning generations

As a global, family-owned company, we have been developing manufacturing systems and machine tools for more than 90 years. Our customers include the world's leading automotive manufacturers, their component suppliers and other companies from a broad range of sectors.

We have an international reach through our production plants in Mindelheim (Germany), Bluffton, Ohio (USA), São Paulo (Brazil), Dalian (China) and Pianezza, TO (Italy), as well as through our worldwide service and sales branches. The GROB Group employs 6,800 people and generates 1.21 billion euro in revenue from all around the world (19/20 fiscal year).

GROB product range

SYSTEM MACHINES
<ul style="list-style-type: none"> • G-modules • Large machining centers • Modular special-purpose machines • Thermal spraying systems • Machining centers for framework structure components • Machine configuration for turbine housing production • Motorized spindles

UNIVERSAL MACHINING CENTERS
<ul style="list-style-type: none"> • 5-axis universal milling machining centers • 5-axis universal mill-turn machining centers • Large machining centers • Pallet storage systems • Additional tool magazines • Motorized spindles

ASSEMBLY SYSTEMS
<ul style="list-style-type: none"> • Individual assembly units (fully-automatic, semi-automatic, manual) • Customer-specific assembly systems

E-MOBILITY
<ul style="list-style-type: none"> • Production systems for electric motors (stator, rotor and overall assembly) • Assembly systems for batteries (cell, module and pack) and fuel cells

SOFTWARE AND AUTOMATION SOLUTIONS
<ul style="list-style-type: none"> • GROB-NET⁴Industry (the Industry 4.0 solution) • Transport systems (e.g. automation and loading systems) • Highly complex manufacturing systems (turn-key projects)

GROB core expertise

- ⊕ At GROB, all core expertise is concentrated under one roof:
Sales • Project Management • Engineering • Production • Assembly • Commissioning • Customer Service
- ⊕ Clear sales structure: You have one dedicated contact person throughout the entire project cycle
- ⊕ Our production facility offers you optimized vertical integration, and enables us to dynamically control capacities and respond to bottle neck situations in a flexible manner
- ⊕ You can reach our Customer Service in Mindelheim 24 hours a day



NORTH AMERICA

Bluffton, Ohio, USA
 Detroit, Michigan, USA
 Querétaro, Mexico

SOUTH AMERICA

São Paulo, Brazil

EUROPE

Mindelheim, Germany
 Pianezza (TO), Italy
 Birmingham, Great Britain
 Hengelo, Netherlands
 Senlis, France
 Baar, Switzerland
 Poznań, Poland
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