

Berghof



**Controls
Process Engineering**

**Top performance for industrial
automation**

- Economically
- Innovative
- Flexible



Reputable, competent, innovative

Our roots go back to 1966: that was the year in which Prof. Georg Zundel PhD founded a private research institute known as the "Physikalisch-Technisches Laboratorium Berghof GmbH" in the university town of Tübingen. The Berghof Group of Companies as we know it today emerged from the industrial implementation and commercialization of research results in the fields of electrochemistry, membrane filtration and plastics engineering. Its owners are all members of the Zundel family. It is the sons of the company founder who are continuing the

family business in the second generation.

Policy
For over 40 years now, we have focused on our customers' wishes. This expresses itself in the competence, innovative power and long-term strategic thinking of a company which focuses on people.

Beyond all technology and products, our strategy is to identify the customers' expectations and to produce and implement optimal solutions in cooperation with the customer. This is how

we want to secure our long-term mutual success, no matter whether it is a result of the technology or the application.

Group of companies
We operate globally as a provider of technically sophisticated, benefit-oriented industrial products and services. Business units with autonomous management structures have been established at the Eningen, Tübingen, Chemnitz, Mühlhausen and Ravensburg locations. An extensive network of trade and technology partners ensures both proximity to customers and the ability to respond flexibly to the signals from the market in global competition.

Knowledge transfer
Thanks to our heterogeneous structure, for a medium-sized company we have extraordinary options and skills. Cooperation with diverse industries and technologies within the Group of companies combined with interdisciplinary knowledge transfer is the basis on which we solve the problems posed innovatively and with great value added for the customer.



Basic information
In 2010, with 200 employees, the Group of companies achieved sales to the tune of approximately 32 million euros.

Industrial automation
As defined in the company policy, Berghof is a manufacturer, supplier and engineering partner for economically efficient industrial automation solutions.

In our Controls and Process Engineering business units we develop and manufacture components and system solutions for machine and plant auto-

- Controls
- Process Engineering
- Analytics
- Environmental Engineering
- Membrane Technology
- Laboratory Technology
- Fluoroplastic Technology

mation. These are developed and produced at our locations in Germany.

We are certified and are subject to regular monitoring.



Systematic Control

Berghof is one of the leading providers in the fields of PLC controls, controls with displays, industrial PC, I/O modules and motion control.

Innovative control system solutions with hardware and software components manufactured and sold by Berghof save you time and money.

Berghof distinguishes itself on the market by its control solutions based on its modular standard program, perfected by the ability to combine special solutions, specific adaptations and individ-

ual services to form perfect system solutions.

- Variable, multipurpose standard products
- Standardized programming and visualization about CoDeSys
- Flexible communication via Ethernet and fieldbus with standard protocols
- Specific adaptations and customized special developments
- Design and programming



"Each control solution provides our customers with maximum flexibility, functionality and economic efficiency".

Franz Ott
Area Manager Controls

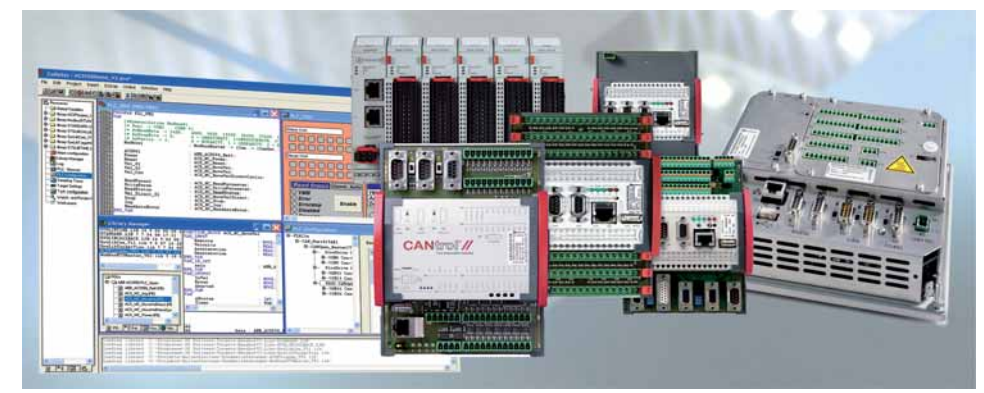
Components

Control, communicate, and visualize: CANtrol dialog controller

Berghof dialog controllers are perfectly integrated PLC controllers and displays with minimal dimensions.

Plenty of PLC in a small space: CANtrol control computer

The Berghof CANtrol controller is the PLC with specific performance characteristics, which can be extended with modules and programmed in CoDeSys.



Everything in a single tool: Programming with CoDeSys

CoDeSys is the PLC programming tool for visualization, drives and communication. All five programming languages of EC 61131-3 are available for the optimal automation solution.

Integrated into the PLC programming tool: Visualization

In the case of CoDeSys visualization, controller and drives are all to be found in the same tool. All classes of appliances use the same visualization tool, irrespective of whether it is in an integrated device such as a PLC with a display or in a separate Ethernet terminal.

HMI displays for PLC visualization: CANtrol e-terminal

The Berghof e-terminal is the plug & play terminal with integrated target visualization for CoDeSys control systems.

Switching, capturing, positioning: CANtrol I/O and drive modules

Berghof CANtrol I/O and drive modules are characterized by extremely small dimensional requirements, simple assembly and fast commissioning for distributed solutions.



Easy device integration: Drive technology

CoDeSys integrates the drive technology directly in the control system: from simple point-to-point positioning to complete processes using the same software with the integrated activation of different functions.

Industrial communication: Networking and data management

Modular machine structures and the requirement for the data they produce to be managed, call for efficient networking concepts. Industrial communication using Ethernet, EtherCAT, Profinet, Profibus and CAN are part of CoDeSys and specific hardware extensions.



Innovative system solutions

The control solution packages from Berghof make project planning reliable and implementation fast and economically successful. Berghof solutions meet the demands of both the plant constructors and the plant operators in terms of flexibility, individuality and functionality.

Our system solutions are based on standard electronic components developed and produced at Berghof. Combined with Berghof's engineering skills, innovative system solutions evolve, the benefit of which for the customer goes far beyond the "value" of

the individual components with a positive impact on value added.

Competence

Berghof possesses special knowledge and extensive experience in the special fields of ESR controls and modular production machines. Coordinated directly with the requirements of mechanical and plant engineering, the customers receive special solution packages. These include control components for electric suspended railways as well as compact PLC controls combined with drive controllers for machine functions.

References

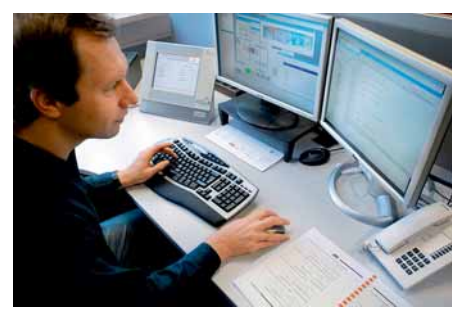
Mechanical and plant engineering companies in the following industries place their trust in our control technology:

- The solar and semiconductor industry
- Energy production
- The food and animal feed industries
- Intralogistics
- Laboratory technology

Customer orientation

If you cannot find what you need in Berghof's standard range of products, simply ask about our adaptations and industrial solutions. At Berghof you will find the specific solution for your automation problem, ranging from hardware adaptation to software application.

Our customer advisors will be happy to clarify the technical and business aspects of specific adaptations with you personally.



Our customer-oriented services:

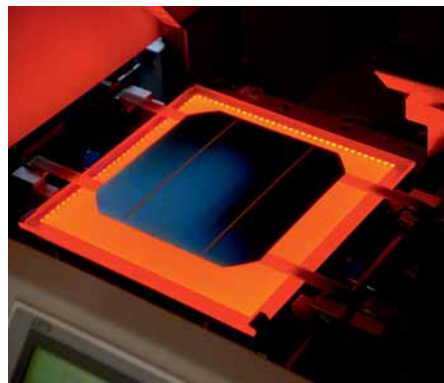
- Support hotline
- Training courses

Customer-specific project services:

- Application-specific software
- Plant-related visualizations
- The development of customer-specific electronics and their mechanical construction
- Project management
- Switchgear cabinet engineering and design
- Complete supply of hardware and software for machines and plants

Software tools and libraries:

- Functions for fast, simple updating of machine programs
- Communication protocols (Modbus RTU / TCP, 3964R, email)
- Integration of third-party products (e.g. Drive controllers in CoDeSys)



We meet quality demands individually

Our experts fulfill the increasing quality demands and sophisticated product innovations of our customers by means of innovative test technologies.

With the aid of state-of-the-art process and test engineering we support our customers all the way through from conception of the test technology through to handing over turnkey plants.

Higher-level technical data management service and maintenance services: we are your competent partner with many years' experience.



We have been a National Instruments Alliance partner since 1996.



Functional and economically efficient

One of our strong points is to successfully apply standardized test modules from Berghof to the customers' requirements in terms of function and economy. Our range covers test engineering, beginning with the manual workstation through to a fully-integrated intelligent system within an automated production line.



Our focus: Customer benefit

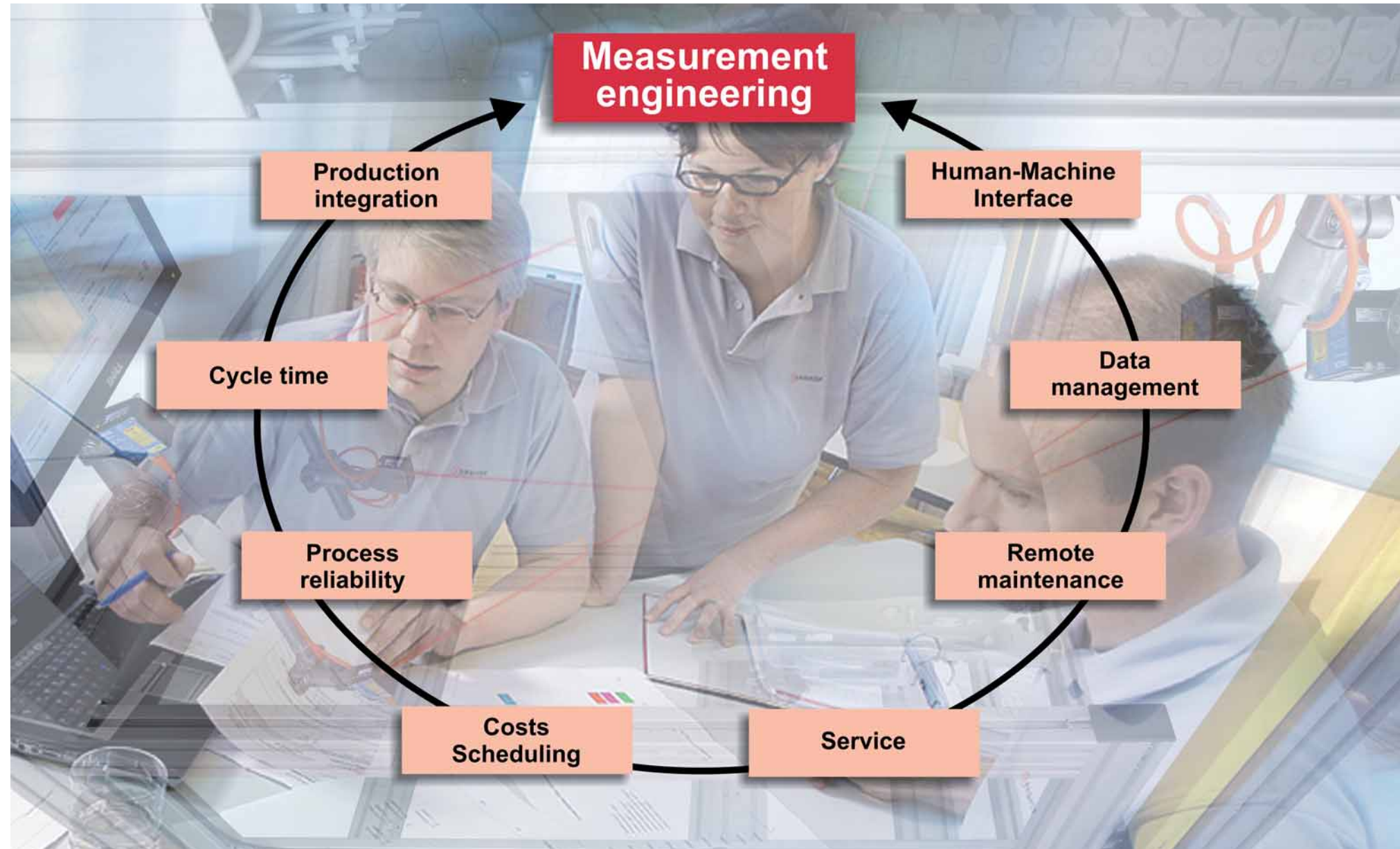
Be they project managers or software developers, our engineers have many years of professional experience and are competent persons for customers to address. It is always our objective to find an affordable solution for each of our customers' problems. The advantage: Berghof supplies the complete solution from a single source.

Berghof puts the flood of data from the test benches "in order". We support our customers with our technical data management in all aspects from the capture of measured data, data compression and conversion through to data management and archiving.

"Our objective is to always provide our customers with an affordable solution for each of their problems."



Thomas Müller
Area Manager Process-/Test Engineering



We have experience in a broad range of industries with the main emphasis on:

- Automotive
- Railway technology
- Building automation
- Consumer goods industry
- Medical technology
- Power tools

Our experts carry out tests with their special skills for:

- Electrical systems/electronics
- Symbols, surfaces, faults and light intensity
- Mechanical functions, haptics
- Oscillations, vibrations and sounds, temperatures

Information, organization, classification

Railway engineering and control systems

Control and information systems are an indispensable part of our highly complex world. They provide us with information, organization and classification. Control systems specialist Berghof develops variable, tailor-made solutions for this purpose. Berghof systems are used in many railway applications.

In intermodal transport BLU, the rail loading-station operations control system optimizes the operative processes for handling goods.

IBIS is used as a modular program system for the operations management of repair and service works in rail traffic.

The RTS rail test system is used in workshops and vehicle repair shops as modular test systems for testing traction engines, generators, hydraulic cylinders and many other things.

With the control, information and test systems from Berghof you are always in the picture and the quality of your service is assured.



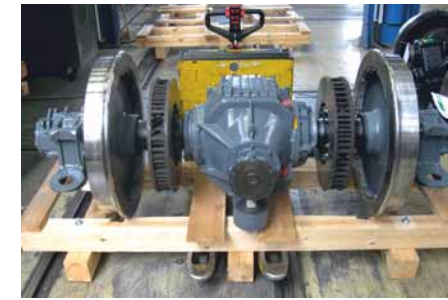
Automation with standard components

Plant automation and process visualization

Berghof engineers create automation solutions and implement projects in the field of control and feedback control systems based on standard components. Our range of products and services encompasses partial and complete solutions.

- Electrical engineering
- Switchbox construction
- Electrical installations
- Software creation
- Commissioning
- Documentation

No matter whether you are looking for controls for machinery and plants, whether you wish to monitor and operate complex plants, whether machinery and operating data are to be captured, evaluated and displayed, or processes and plant statuses are to be visualized, Berghof has the right solution.



Material flow and logistics automation

In the field of materials flow and logistics Berghof will provide you with economical and flexible solutions for your in-company logistics tasks.

You can profit from our experience in the implementation of logistics projects and from our customer-oriented approach. Discover a comprehensive range of products and benefit from the skills of a full-service provider.



“Automation, information, organization: Berghof has the right solution”



Dietmar Sieland
Branch Manager Mülhausen

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*realizing
your
ideas.*

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