

Maintenance News



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Main topic

Load emulator

The innovative testing technology for repairing
large frequency converters and inverters

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Main topic

Load emulator: innovative testing technology for the repair of large converters

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With the load emulator, frequency converter and inverters with a load of up to 100 kVA can be realistically tested at EICHLER.



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Successful on-site seminars at the Zott Dairy in Günzburg

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Recently, the renowned company Zott held two on-site seminars aimed at further training its electronic maintenance staff in the fields of automation and control technology



Tips & tricks

Year-end overhaul- focusing on mechanics and electronics

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At the end of the year, many companies shut down their systems for major overhauls, cleaning, and maintenance. One area that should not be underestimated in this process is electronics.



Specialist seminars

Successful Life Cycle & Obsolescence Management seminar at SIGNAL IDUNA PARK

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The home of Borussia Dortmund stands for passion, tradition, and unforgettable moments – making it the perfect setting for the EICHLER seminar.

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Dear customers,
prospective customers,
and business partners,



We are living in a time of change that offers countless opportunities. Whether through the rapid advancement of new technologies, the growing demands for efficiency and sustainability, or potential economic and political initiatives from Berlin and Brussels: everywhere there are opportunities to actively shape the future. Companies that recognise these developments early and act with determination secure valuable competitive advantages and lay the foundation for long-term success.

It is precisely at this point that we would like to accompany you. EICHLER has always stood for innovation, technological expertise, and practical solutions in industrial maintenance. With in-house developments such as the EICHLER load emulator, the next-generation TIA rack, and our cross-industry networking platforms, we create tools that help you make your maintenance processes more efficient, transparent, and future-oriented.

The EICHLER load emulator is an example of practical, real-world innovation: it simulates the behaviour of a real electrical machine, such as a motor, and responds to the signals of a frequency converter or inverter as if an actual motor were connected. This allows drive and converter systems to be tested realistically and safely, without the need for any physical load or motor hardware.

However, it does not always have to be groundbreaking innovations that pave the way towards a successful future. Equally important is preserving and continuing what

has proven its worth – such as our long-term service for discontinued Lauer systems, through which we continue to ensure the availability and operational reliability of your existing systems.

A key factor behind such developments is our team of dedicated experts, who continuously enhance their skills and work with passion on new solutions. We are particularly pleased to welcome Stefan Mayr, who will be strategically expanding our expertise in the field of automation. His arrival symbolises our commitment to remaining a reliable and competent partner at your side, even in times of dynamic change.

We are convinced that those who invest with foresight today, seize opportunities with confidence, and rely on strong partnerships create the best foundations for a successful future.

We wish you an insightful and inspiring read.

Kind regards,

ppa. Oliver Theil
Head of Administration

News from the technical department

Drive technology

Repair of KEB frequency inverter

The frequency inverters manufactured by KEB play a key role in the precise control of motors across a wide range of industrial applications. Most of the units received for repair at our Electronics Service Centre come from the Combivert® F5 series. Typical weak points such as fans, capacitors, or relays, which can, in the event of failure, lead to multiple, seemingly unrelated errors. In addition, these inverters are demanding to repair due to their compact design, wide range of configuration options, and use in sensitive applications – which is why EICHLER performs repairs down to component level, following complete disassembly and cleaning.

The inverter is returned only after it has successfully passed a comprehensive inspection, including full commission with a motor, despite the wide range of possible applications, and is supplied with a 24-month warranty and guarantee.



New seminar on Siemens SINAMICS® frequency converter

Technology

In 2026, EICHLERakademIe will launch a new highlight: the three-day seminar "SINAMICS STARTER® Drive/Start Drive". Building on the knowledge acquired in the SIMATIC® TIA-Portal, participants can look forward to an intensive training programme focused on the use of frequency converters in typical applications – for example, in synchronised axis systems.

To ensure that the knowledge gained can be applied directly in practice, EICHLER has developed its own training rack. With real hardware and mechanical coupling, the exercises are designed to be as realistic as possible – including typical disturbances such as friction or stiffness. This allows participants to experience genuine practical conditions and learn how to achieve maximum performance even under demanding circumstances.

By the end of the seminar, participants will be able to confidently utilise the various converter functions, troubleshoot faults quickly and systematically, and optimise control settings effectively.

Seminar highlights include:

Hardware

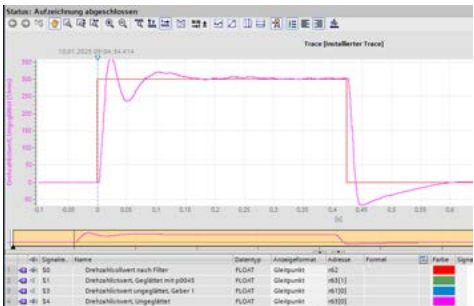
- Functional principle of frequency converter and motor behaviour
- System architecture of SINAMICS® G120 and S120

Software and parametrisation

- Communication via PROFINET
- BICO drive configuration and parameter setting
- Motion control applications
- PID control technology
- Diagnosis and optimisation of speed and position control loops

Training rack

- Practical exercises with SINAMICS® G120 on PLCs S7-315-2 PN/DP and S7-1511T
- Use of the commissioning tools SIMATIC® STARTER and TIA-Portal Startdrive.



PLC assemblies

Interview with Stefan Mayr, Head of PLC assemblies

Since when have you been working at EICHLER, and what motivated you to apply?

I joined EICHLER in May 2025 and am delighted to be part of the team. What particularly impressed me was the company's remarkable development – driven by innovation and a clear focus on quality. That convinced me to contribute my experience here and work together with my colleagues to make a difference.

What is especially important to you in working with your new team?

Absolute trust and mutual respect. I value an atmosphere in which everyone feels safe to share unconventional ideas, and where mistakes are seen as opportunities to learn. Only in such a culture can people truly feel encouraged and motivated to contribute.

And finally: what gives you strength and balance outside of work?

Without a doubt: my family. My wife and our two children are my absolute anchor – they bring me joy and give me the energy I need.



"For me success arises when a team embraces challenges, believes in itself, and finds a solution together. My role is to create the framework that makes this possible." Stefan Mayr, Head of Assemblies (R&M)

Experience & career

Over 15 years of experience in optimising and managing production, spare parts, and repair processes in the high-tech industry (including Thermo Fisher Scientific, RATIONAL AG). Extensive expertise in modern leadership methods (Agile Leadership), lean management (including PPI, 6S, Kaizen, VSM, TIMWOODS), and systematic quality assurance (including 8D, A3, FMEA, PDCA cycle), state-certified Industrial Master Metal and certified trainer (according to the German AEVO regulation).

Lauer technology – long-term service for discontinued systems

HMI

Although automation specialist Lauer has been off the market for several years, its proven technology remains in operation. Since the acquisition of IAE Service GmbH in August 2022, EICHLER has been offering comprehensive services for Lauer devices. Today, we are among the few specialised service providers still offering repairs and refresh services for Lauer automation technology – well beyond the official end of service and repair (EOSR).

Our technical experts have many years of experience working with Lauer systems – particularly in combination with operating systems

such as Windows, Zenon and VxWorks, which are used in EPC, WOP-iT, and VPC systems. Typical issues such as defective touchscreens, depleted setup batteries, memory errors, or power supply failures are systematically resolved. Mechanical wear on fans or keyboards is also well known – as are critical BIOS losses that can completely disable a system. This extensive expertise provides the foundation for reliable repairs, even in the case of complex or rare fault patterns.

At EICHLER, repairs are carried out down to chip level – from precise manual work in SMD and THT components to BGA soldering with robotic assistance. Every repair undergoes technical cleaning and comprehensive functional testing. The result is top quality and a warranty of up to 36 months.

A key element of our sustainable service is spare parts supply. Through targeted market research and strategic Stock Management, we ensure the availability of VFD displays as well as replacement type for PCS095, PCS595, LCA320 and LCA325. This puts us in an excellent position, particularly in the area of operator panels.





★ Main topic

Load emulator: innovative testing technology for the repair of high-power converters.

For almost fifty years, EICHLER has stood for repairs of the highest quality. Using state-of-the-art technology, we ensure that even complex power electronics are repaired efficiently and reliably.

Together with an international partner specialising in high-performance emulation and test systems, we have further enhanced our testing technology. With the load emulator, frequency converters and inverters with loads of up to 100 kVA can be tested under realistic conditions. This enables even large cabinet units with very high power ratings to be not only repaired but also thoroughly tested under real load conditions at EICHLER – ensuring maximum reliability and safety in the production process.

Proven repair process for maximum quality

The EICHLER repair process follows a well-established procedure, ensuring consistently high quality – both in device repair and functional testing.

Precise fault diagnosis using the latest technologies

EICHLER employs state-of-the-art diagnostic methods to accurately detect faults in power electronics. Digital multi-channel storage oscilloscopes, differential probes, and measuring coils provide detailed voltage and current measurements. In addition, Fast Fourier Transformation (FFT) enables rapid analysis of interface patterns and dominant frequencies (Fig. 1).

Optical inspection methods are also used, as shown in Fig. 2 on page 8: endoscopic cameras allow detailed insight into electronic control systems – even in complex fibre-optic setups. This makes it possible to identify faults and assess component wear before they lead to production breakdowns.



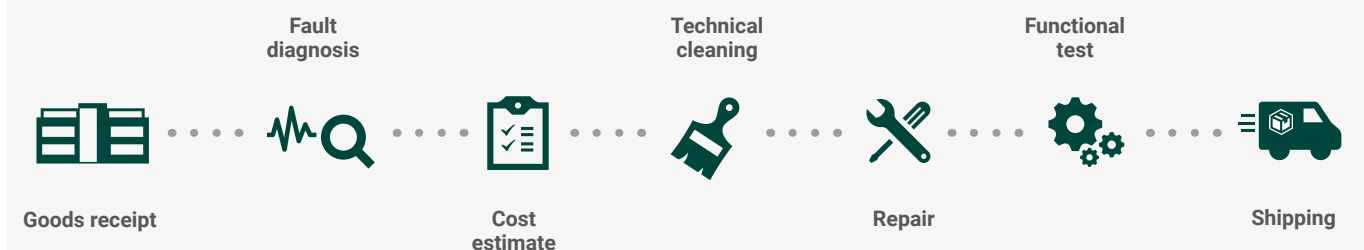
Three-phase asynchronous motor emulator for frequency converter load testing



Fig. 1: Detailed measurements using a digital oscilloscope



The repair process for ensuring repair quality



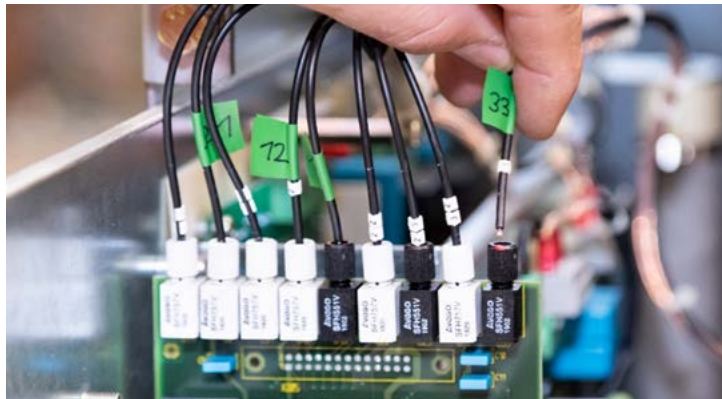


Fig. 2: Diagnosis and repair of power electronics control systems



Fig. 3: Large inverter and cabinet-mounted inverter in the EICHLER repair workshop



Fig. 4: EICHLER operating and analysis environment

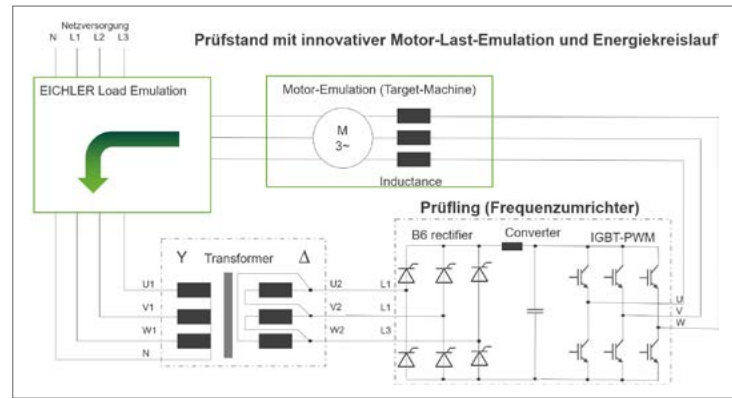
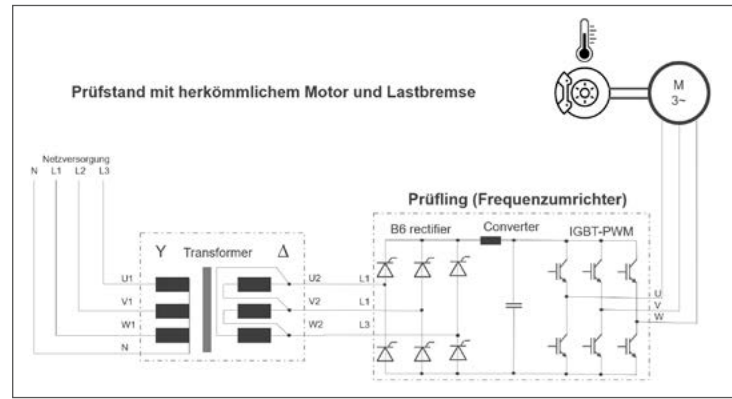


Fig. 5: Test bench with conventional motor and load break (top)
Test bench with innovative motor load emulation and energy cycle (bottom)

Component-level repair

Our repairs are always carried out down to component level (Fig. 3). Specially trained technicians work with professional soldering stations that allow precise temperature control. After soldering, joints are carefully cleaned to ensure maximum reliability. Damaged sheet-metal parts and insulation components are remanufactured in-house. Wherever possible, original spare parts are used. Alternatively, experienced specialists in our in-house test laboratory handle the identification and qualification of suitable replacement types. In addition, sustainable spare parts recovery through efficient device recycling ensures long-term supply security.

TIP: For critical production applications, our express repair service is also available – ensuring that your systems are quickly back in operation. This allows our customers to benefit from rapid repair turnaround for high-power converters sent to EICHLER.

Technical cleaning – thorough down to the smallest detail

At EICHLER, technical cleaning is carried out using state-of-the-art processes tailored to each specific assembly. Dry and wet cleaning methods, chemical agents, microorganisms, and dry ice ensure the reliable removal of even the most stubborn contamination. Individual components are treated in the large-equipment washing area and subsequently dried in convection or vacuum ovens.

This thorough cleaning process ensures that your equipment is not only repaired but also remains reliably operational in the long term. This is particularly essential for large converters that are exposed to high loads.

Innovative test and inspection technology with the load emulator

With the load emulator, parameterizable load and dynamic scenarios can be simulated under realistic conditions. Frequency converters and inverters from various manufacturers such as Siemens, Lenze, Danfoss, SEW and ABB can be tested with the highest level of precision. Customers can benefit from an extended warranty of up to 36 months as well as from a detailed test report.

Test highlights

- Endurance test of at least 90 minutes under realistic operating conditions
- Speed-controlled or positioning drive emulation including resolver feedback
- Automated test procedures for maximum quality assurance
- Detailed test report including all relevant measurement data

Throughout the entire testing process, all measurement values from temperatures and voltages to currents are recorded and analysed. Only devices that operate flawlessly under load during continuous testing leave our test environment. This ensures that our customers can be confident that their repaired converters will function reliably and without disruption in production.

Emulation – realistic and sustainable

What is emulation?

Emulation refers to the ability of a system to realistically reproduce the behaviour and functions of another system by means of software. This makes it possible to simulate operating systems, software or even hardware without the need for the original hardware itself.

At EICHLER, this means that the load emulator uses precise model of an electric machine based on modern FPGA technology. This model reproduces a real-three phase asynchronous motor so accurately that the connected frequency converter or inverter interprets the emulator signals as those of a genuine motor. In this way, converters can be tested under realistic conditions without the use of physical motor hardware (Fig. 4).

Key functionalities

- Parameterisable dynamic and load scenarios for frequency converters and inverters from various manufacturers (for example Siemens, Lenze, Danfoss, SEW, ABB and many more)
- Maximum test depth thanks to electronic simulation of real machine loads
- Extended warranty of up to 36 months
- Test report including all relevant test results

What makes it sustainable?

The load emulation demonstrates its particular strengths wherever high-performance testing is required. The core of the EICHLER load emulator is a galvanically isolated, bidirectional 100 kVA emulation and testing system with several independent power amplifiers.

The key difference compared to conventional motor test benches lies in the way energy is utilised. In traditional test benches, the generated motor power is converted into heat, whereas in the newly developed emulator the energy remains within the system. It is cyclically fed back and reused within the overall setup. As a result, the testing process becomes not only significantly more efficient and sustainable but also provides additional diagnostic information about the load behaviour of the converter and motor.

A schematic illustration, as shown in Fig. 5, highlights the difference: In a conventional test bench, the motor and brake work against each other, causing the load energy to be lost. In the modern test setup with the machine emulator, however, the energy is circulated within the system.

This creates a closed energy cycle that consistently supports the sustainability principles of EICHLER and WISAG. The load on the mains supply is reduced to a minimum: measurements have shown that an emulated 100 kVA machine requires only around 10% of the mains power.

The result is resource conservation, high energy efficiency and a forward-looking, sustainable testing technology. ■



References

Successful on-site seminars at the dairy Zott in Günzburg

The renowned dairy Zott, headquartered in Mertingen with an additional production site in Günzburg, is well known for its wide range of yoghurt and cheese specialities. Recently, the company successfully conducted two on-site seminars with **EICHLER**. The aim was to provide further training for the staff in electronic maintenance, focusing on automation and control technology – directly on-site, and individually tailored to their needs.

Quick start: Tailor-made seminars for Zott

The collaboration began with a seminar enquiry in April 2025. After a brief telephone exchange between Zott's Technical Manager and the EICHLER seminar department, it quickly became clear that the expectations and requirements matched the training concept perfectly. Within a very short time, two tailor-made offers were developed for the seminars "S7 Expert Knowledge I" and "TIA Portal Expert Knowledge I", which were commissioned just two weeks later.

Modern technology meets expert training

The required training equipment, including modern training cases and table racks for realistic system simulation, was delivered on the Monday before the start of the seminar and installed in the designated state-of-the-art meeting room.

The six participants received a well-balanced mix of sound theoretical instruction and intensive practical exercises. The topics covered included, among others:

- Programming in STEP7 using the SIMATIC® MANAGER
- STEP7 programming and HMI communication in the TIA Portal
- Testing procedures and commissioning
- Fault diagnosis and troubleshooting on real hardware

Learning in a real production environment

A highlight of the training was the direct application of the newly acquired knowledge on a real production system equipped with an S7-1516 PLC. The participants carried out various tasks, including establishing a ProfiNET connection, creating a PLC backup, reading the diagnostic buffer and setting the PLC system time. This hands-on approach ensured long-lasting learning success.

Consistently positive feedback – from practice for practice

The seminar received consistently positive feedback from all participants. In particular, they praised the strong practical focus, the clear and comprehensible structure and the way the content was delivered. The many concrete tips on network technology and efficient fault finding were also very well received.

One participant summed up the seminar experience perfectly: "A highly practice-oriented and truly engaging

seminar – you can immediately tell that it is taught by someone with real hands-on experience. This wasn't just classroom teaching, it was real work on the kinds of problems we face every day."

Conclusion

The on-site seminars at Zott clearly demonstrate how effective technical training can be when carried out directly in the workplace. We would like to thank Zott for their trust and look forward to further joint projects with the renowned dairy. ■

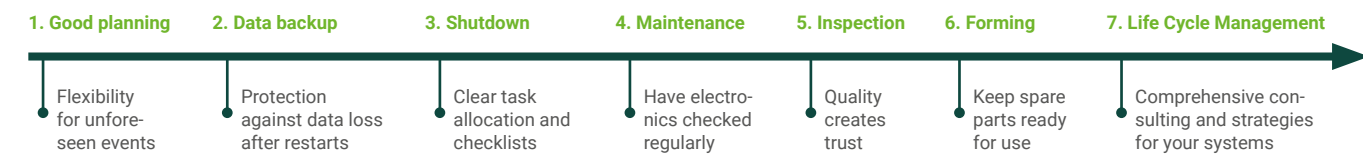
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Planned maintenance during the overhaul



Tips and tricks

Year-end overhaul – focusing on mechanics and electronics

At the end of the year, many companies carry out major maintenance work. Systems are shut down, cleaned and serviced – the ideal opportunity to get your production ready for the year ahead. Yet, while much attention is paid to mechanical components, one area is often underestimated: electronics.

Whether drives, controllers, HMI panels or robotics – electronic assemblies are the heart of modern automation. Dust, temperature fluctuations or age-related component fatigue can cause unnoticed failures. Those who focus solely on mechanical maintenance during the year-end overhaul often overlook this critical aspect.

By combining mechanical and electronic maintenance, you not only safeguard your production capability but also extend the service life of your systems. This ensures optimal availability and reduced risk as you head into the new year.

As a full-service partner, EICHLER supports you with a holistic service concept that covers all essential steps for safe, efficient and long-term reliable production.

1. Good planning is half the battle

Forward-looking planning ensures smooth maintenance and overhaul processes. Coordinate time slots, batch quantities and responsibilities at an early stage to allow sufficient flexibility for unforeseen events.

Tip: EICHLER supports you in coordinating your maintenance activities – from collection and batch planning to time scheduling.

2. Data backup – protection against data loss

Before shutting down the systems, all programs, parameters and control data should be backed up. Otherwise, there is a risk of data loss, especially with older buffer batteries.

Tip: EICHLER assists you in reading out and archiving your control data so that you can restart your systems without any unpleasant surprises.

3. Shutdown

Once the shutdown begins, the clock is ticking and everything must run smoothly to ensure that the machine can restart at the planned time.

Tip: A clear allocation of tasks and the use of checklists help save valuable time when sharing the work. The pre-planned batches can now be collected or sent to EICHLER for maintenance.

4. Maintenance – have electronics checked regularly

Electronic assemblies are subject to ageing caused by dust, temperature fluctuations and component wear. Professional maintenance extends their service life and helps prevent breakdowns.

Tip: EICHLER cleans, inspects and tests your components under real operating conditions, including the replacement of wear parts and a minimum warranty of 24 months.

5. Control – quality creates trust

After maintenance, a functional test or measurement test is recommended. This allows you to detect deviations at an early stage and make targeted adjustments.

Tip: On request, EICHLER provides detailed test reports – ensuring documented quality and offering up to 36 months of warranty.

6. Forming – keeping spare parts ready for use

Even unused spare parts age while in storage. Capacitors in particular lose their blocking capability over time, which can lead to failures during the next operation.

Tip: Do not store spare parts unused for long periods. Regular inspection and conditioning keep them reliably ready for operation. EICHLER carries out this conditioning professionally at defined intervals.

7. After maintenance comes production

After maintenance, the next production phase begins – and with its new stress on your equipment. With a well-structured Life Cycle Management approach, you can maintain an overview of availability, spare parts and potential risks.

Tip: Take advantage of our Life Cycle Management consulting. We analyse the status of your system components, provide information on spare part availability and develop strategies to secure your production in the long term.

Conclusion:

Those who include not only the mechanics but also the electronics in their year-end overhaul significantly reduce the risk of breakdowns and start the year 2026 with optimally maintained systems.

EICHLER supports you as an experienced full-service partner: we offer personal consultation, free collection and straightforward handling to ensure that your production continues to run safely and reliably. ■



Specialist seminars

Best practice live at the stadium: successful Life Cycle and Obsolescence Management seminar at SIGNAL IDUNA PARK

The SIGNAL IDUNA PARK, home of Borussia Dortmund, stands for passion, tradition and unforgettable moments, providing the perfect setting for the EICHLER Life Cycle and Obsolescence Management seminar.

In this exceptional atmosphere, professionals from maintenance, planning, and engineering came together. Over two days, they immersed themselves in the practical aspects of LCM and OM, gained fresh insights, and exchanged proven strategies.

With the increasing discontinuation of products, spare parts, and complete system components in automation and electrical engineering, many industrial companies are facing growing challenges in maintaining their systems over the long term. Spare parts are often no longer available, manufacturer support ends, and technical documentation becomes outdated. This is where the seminar comes in. It provides concrete solutions, presents practical strategies, and promotes the exchange of experience between users and experts.

Under the expert guidance of Frank Melerra and Karl-Heinz Hagemann, participants explored in intensive workshops how obsolescence can actively managed – from refresh and retrofit strategies to strategic stocking and innovative service models. The aim was to increase operational reliability, avoid unplanned breakdowns, and extend the life cycles of existing systems.

The combination of in-depth technical expertise, solution-oriented moderation, and the unique atmosphere of the stadium created an environment for open and engaging discussion among equals. Participants particularly praised the high level of practical relevance and the genuine transfer of knowledge, something rarely achieved in this form. ■



Speakers

Expert leadership of the seminar

The seminar moderation guided participants confidently through the content, linking theory with practical examples.

Frank Melerra (left), Eichler GmbH

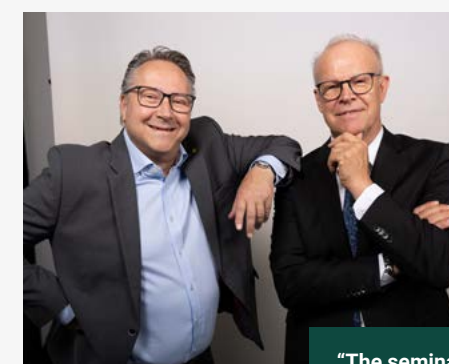
Topic: Life Cycle Management

- Managing obsolescence in practice
- Practical solutions for extending system life cycles
- Full-service Inventory Management solutions

Karl-Heinz Hagemann (right), Eichler GmbH

Topic: Seminar leadership and moderation

- Product life cycle
- Influencing factors and challenges in maintenance
- Standardisation and harmonisation



Practical insights from distinguished guest speakers

As part of the workshop, three distinguished guest speakers from industry and service sectors provided valuable, practice-oriented insights. Particularly noteworthy was their openness in sharing not only their successes but also the challenges and lessons learned along the way.



Torsten Gast, PHOENIX CONTACT GmbH & Co. KG

Topic: Safety components in the life cycle

- Service life of safety components
- Machines with and without CE marking
- Industrial security – protection against cyberattacks



Stephan von Salzen, MERCEDES-BENZ AG

Topic: Retooling of production systems

- Retooling as a response to obsolescence
- Standardisation and modularisation
- Cost-benefit analysis



Christian Knaus, WISAG Produktionsservice GmbH

Topic: Outsourcing in maintenance

- The role of maintenance in obsolescence – establishing early warning systems
- Advantage of outsourcing
- Success factors: clear interface separation and collaboration on equal terms

"The seminar was very well prepared. The guest speakers were excellent, and a great atmosphere was created. After just the first two days, it already felt as if we had been working together for years. Brilliant moderation. Respect", summarised Thomas Böhle, TBIS Elektrotechnik e. K.

Did you know ...

At EICHLER, everything revolves around electronics and technology. To keep things running smoothly, many different elements work together behind the scenes. Every cog plays its part in creating the bigger picture. Under this section, we would like to introduce you to some of the other key players who make up everyday life at EICHLER.

■ Summer party full of joy and team spirit

On 25 July, it was once again time at EICHLER to raise the curtain for our summer party – this time under the motto “60 years of WISAG”. The warm welcome from our Manager, Mr Baier, already set the tone for a special evening. In his address, he looked back with us on what has been achieved so far and, at the same time, looked ahead – with plenty of motivation for our shared future.

versations. Our events committee made sure everyone was well entertained. Whether it was stein-holding or an egg-and-spoon obstacle race, the games brought not only excitement but, above all, plenty of fun. Even the forecast rainclouds didn't stay for long: a brief shower during dinner provided a welcome break before the evening continued with renewed energy.

A heartfelt thank-you goes to the Lengenfeld Fire Brigade, who not only kindly provided their premises with great hospitality but also took excellent care of our physical well-

being: a varied barbecue buffet, a tempting cake selection, and freshly brewed coffee made the evening a culinary delight.

Above all, our heartfelt thanks go to our dedicated colleagues on the events committee: with your time, enthusiasm, and commitment, you made this celebration possible in the first place. It allowed us not only to celebrate together, but also to once again feel what truly makes us strong at EICHLER – our sense of community. ■



■ Launch of the English website – another step towards internationalisation

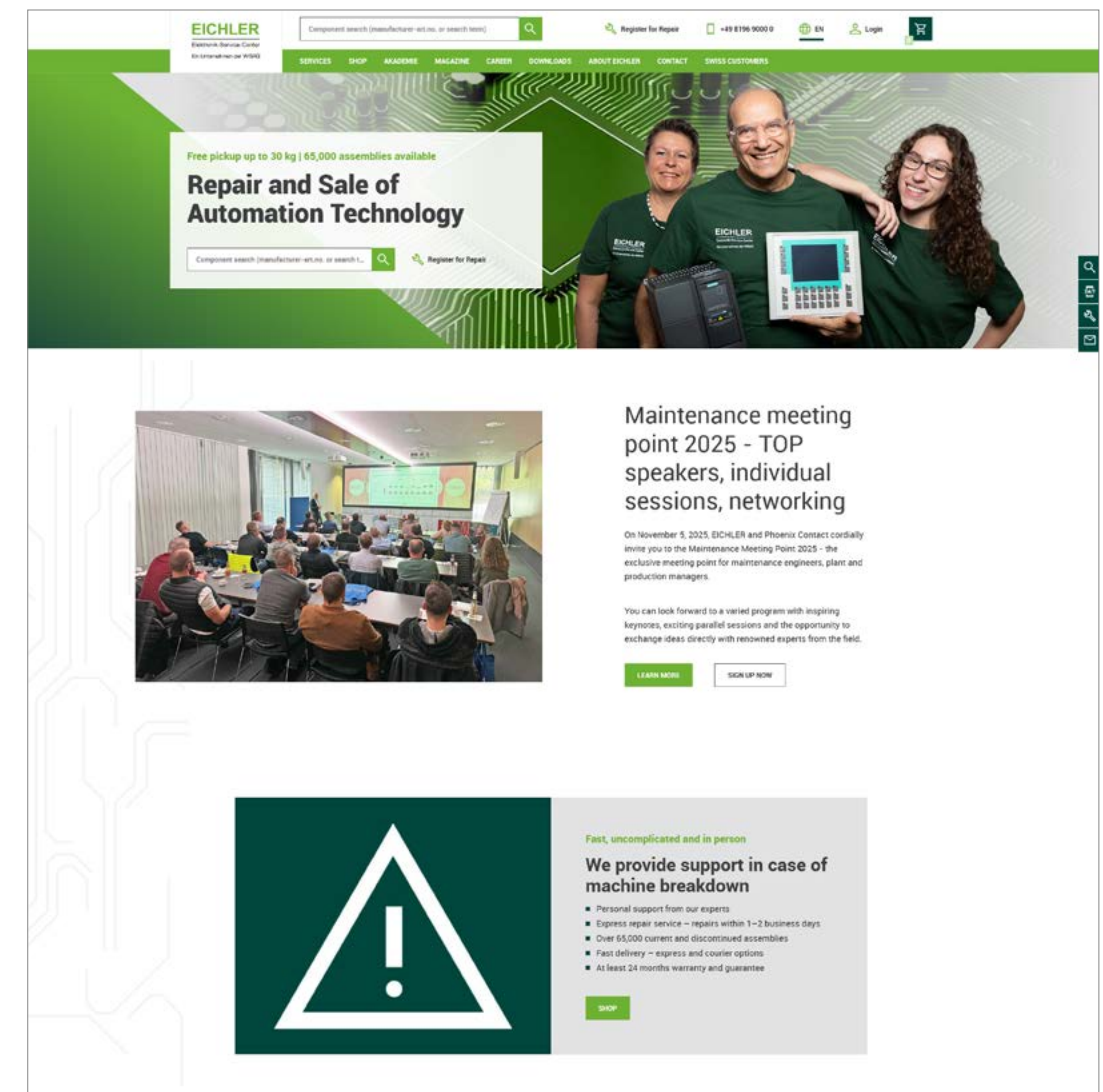
The time has come: our new English-language website is now live! Visitors can now switch between German and English with just one klick – ideal for anyone wishing to learn more about EICHLER on an international level.

The online repair registration is now available in English, making it even easier for

our international customers to use our services. This marks an important step towards further internationalisation: we are opening up new markets, reaching new target groups, and welcoming customers from all over the world.

Our English-language website opens doors for international customer, breaks down

language barriers, and makes it easier to understand our range of services. This builds trust and promotes successful collaboration. And this is only the beginning: further language versions will follow in the future, enabling us to reach our customers worldwide even more effectively and to continuously expand our range of services on an international scale. ■



Grid calculation as the key to security of supply

EICHLER has been part of the WISAG Group since 2015. In this section, we provide information about the range of services offered by our parent company WISAG Industrie Service Holding SE (WISH).



Do you have any questions about network calculation? Our expert Christian Schmidt will be happy to assist you!

Mobile: +49 173 5439092
Email: christian.w.schmidt@wisag.de

On 28 April 2025, Spain and Portugal experienced a widespread power outage. The blackout was triggered in a substation near Granada – caused by a combination of technical malfunctions, planning errors and structural weaknesses in the power grid. The result: millions of people without power, public infrastructure at a standstill and immense economic damage.

In Germany, such scenarios are rare thanks to a more robust grid structure. However, even minor outages can have costly consequences for manufacturing plants and companies. WISAG Elektrotechnik ensures a reliable energy supply for its customers, thereby minimising the risks of plant failures.

Analysis instead of failure

A stable power supply cannot be taken for granted; it is the result of careful planning and ongoing monitoring. WISAG's experts provide a wide range of services in the areas of grid planning, grid analysis and protec-

tion technology. These include the analysis of load flows, the calculation of short-circuit currents and the preparation of selectivity analyses. The aim is to identify weak points at an early stage and narrow down sources of error. This creates an infrastructure that remains stable even in the event of faults.

This technical expertise forms the basis for a comprehensive range of services that WISAG Elektrotechnik offers its customers. In addition to the analysis of supply networks, the portfolio also includes the design and calculation of new energy supplies as well as protection considerations with all necessary protection tests.

Depending on requirements, these services are provided directly on site or at one of our branches throughout Germany. Customers thus benefit from a service that covers all aspects of a safe and efficient energy supply – from analysis to implementation during on-going operations.

Our services:

- Recording and analysis of existing networks
- Planning and calculation of new supply networks
- Optimisation of operating strategies
- Target planning for expansions and new buildings
- Protection and selectivity analyses
- Performance of protection tests
- Testing for compliance with standards and local distribution network operators

Your advantages:

- Lower risk of failure
- Greater planning reliability
- Reliable basis for investment
- Compliance with all standard specifications
- Fewer network losses ■

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WISAG Industrie Service Holding SE

Sustainability at EICHLER – something we are proud of!



We are Germany's leading repair service provider for automation technology.



We stand for regional growth and create future-proof jobs.



We help to avoid more than 150,000 kilograms of electronic waste every year.



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Your Direct Line to EICHLER

24/7 service on spare parts and equipment excess stock in case of emergency

+49 8196 9000-247

Our telephone service is available 24 hours a day, 365 days a year, including Sundays and public holidays. We supply fully tested spare parts from stock. Please contact us for further details. In case of machine breakdown, you can contact our technical support team directly.

Questions about sales, maintenance and repair

+49 8196 9000-0

Due to the high quality standards we set ourselves, you will receive all repaired, replacement or exchange devices cleaned, refurbished and function-tested, with at least a 24-month guarantee and warranty. Ask at any time about maintenance orders on-site or for a detailed cost estimate.

If you have any basic questions, please arrange a personal consultation appointment with your EICHLER sales representative.

Life Cycle Management

+49 8196 9000-350

When it comes to ensuring system availability, Configuration Management with an on-site inventory or the right supply strategy – then you've come to the right place. We will be happy to answer your questions or arrange an appointment for a detailed consultation.

Training schemes – EICHLERakademiE

+49 8196 9000-366

Do you have any questions about contents, hotel bookings, how to reach us?
Are you in need of specific technical consultations or do you wish to join our training schemes? We will be happy to help you!

Sell excess stock

+49 8196 9000-550

We are constantly on the lookout for devices and units from the fields of HMI, PLC assemblies, drive technology and robotics. Across all manufacturers, we offer you an uncomplicated and fast way to reduce your automation technology stocks.

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