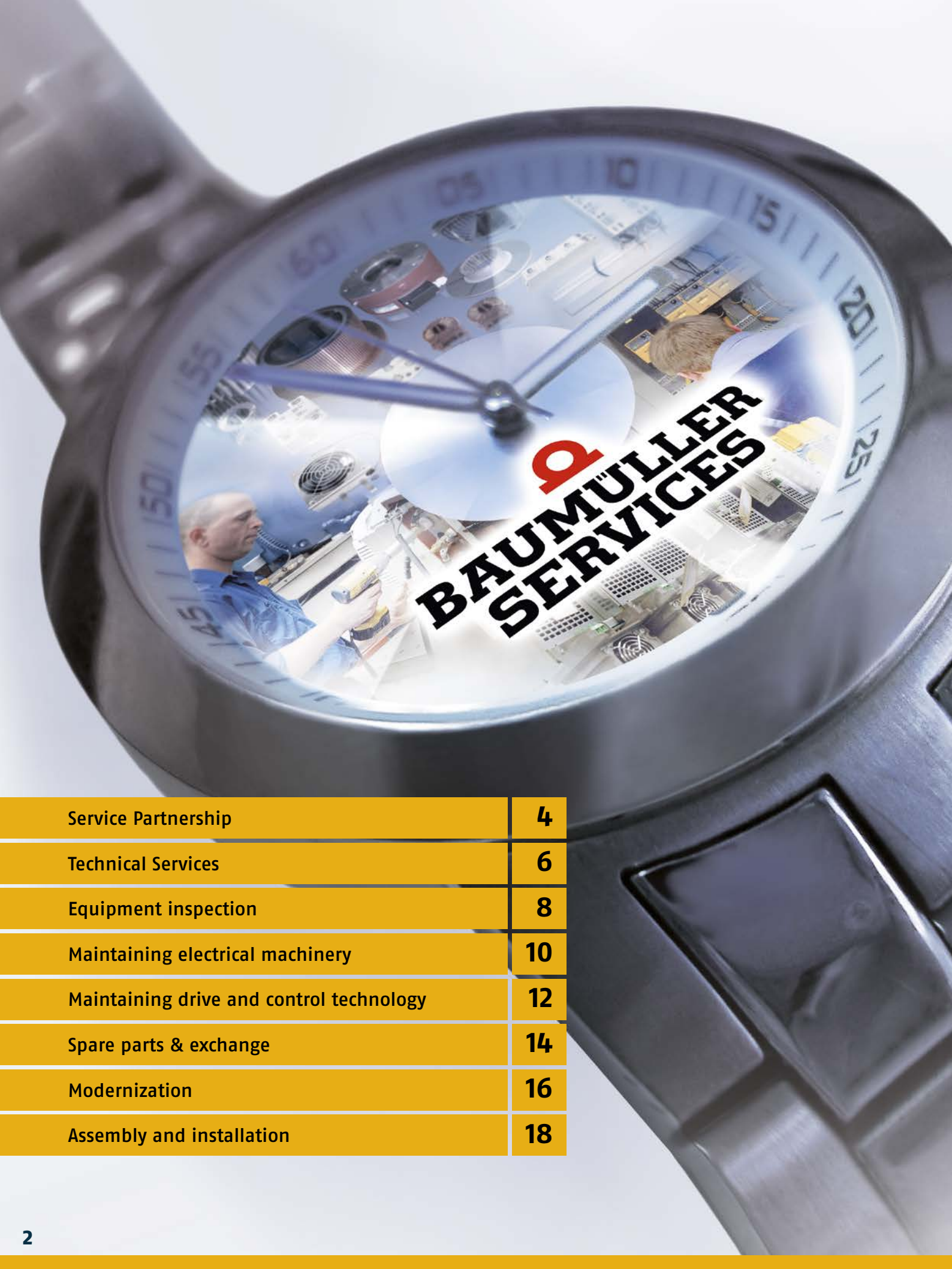



Maintenance

be in motion



BAUMÜLLER SERVICES

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Baumüller Services – Benefit from our comprehensive range of services

Reactive, preventative and condition-orientated services under one roof. Optimized for you. Around the clock.

Baumüller will partner you throughout the entire lifecycle of your machinery and systems – from commissioning, installation and preventive maintenance to reconditioning maintenance and repair and modernization.

The experts at Baumüller provide a range of services, including remote diagnosis via web browser, a 24-hour support hotline and branch contacts on site.

Customer satisfaction is so much more than a buzzword to us.

We top it up with new content every day and we are fully committed to ensuring that our customers benefit from our expertise at all times.

Technical competence, innovative strength, flexibility and absolute customer focus are the primary characteristics of our corporate philosophy. We live out our motto: be in motion.

For up-to-date information, appointments and projects, visit: **www.baumueller-services.com**

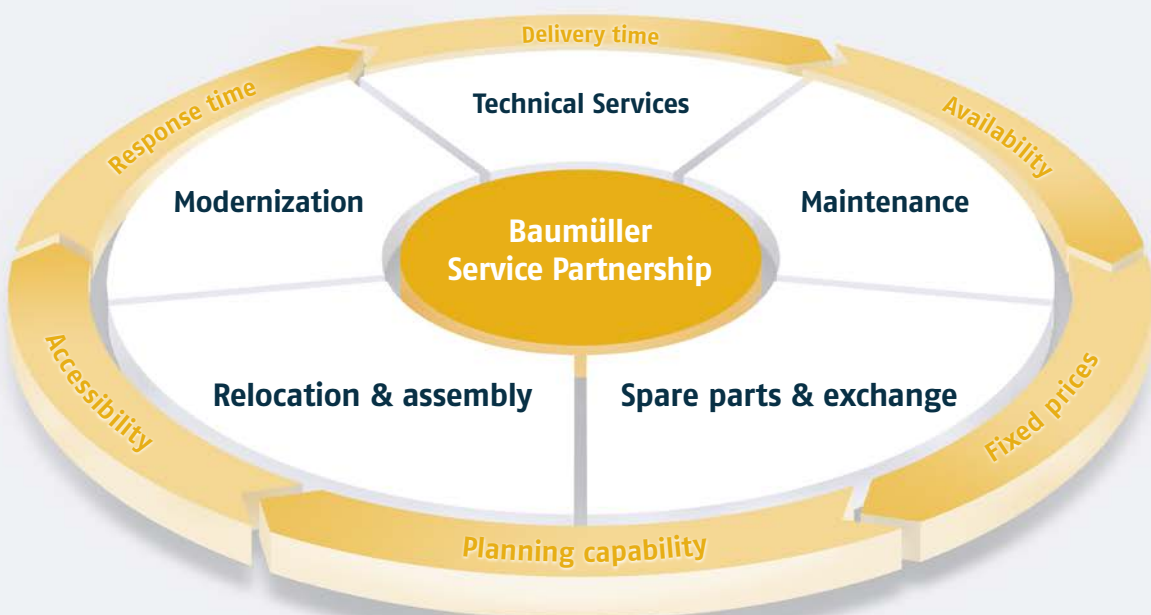
**24h Support Line
+49 (0) 911 9552-150**

Service Partnership – Individually optimized services

With the Baumüller service partnership you benefit from the bundling of services and the ensuing synergies from our wide, innovative range of services as well as our densely packed network of branches and service partners all over the world.

Our extensive services accompany you through the lifecycle of your machinery and plant: from installation and commissioning, via preventative maintenance, to as-new refurbishment and modernization.

Baumüller service partnerships are structured in a modular fashion. Services and their characteristics are drawn up with your input in order to meet your requirements. The various different services can be combined individually or in groups. The result is an optimized integrated service partnership that ensures the long-term protection and operation of your machinery – including predictable costings.





Our goal is your benefit: The maximum availability of your machinery and plant with the lowest possible total system costs

Your benefit

- ◎ A service package optimized to your requirements and machines guarantees long-term operation
- ◎ Constant predictable costs with comprehensive service packages
- ◎ A competent and reliable partner throughout the entire lifecycle of your machinery and systems
- ◎ Defined procedure in the event of a malfunction to minimize downtimes
- ◎ Scheduled downtimes to optimize machine availability
- ◎ Reduction in interfaces for efficient, simplified processing

Technical services – For greater availability of your machinery and systems

A dense network of subsidiaries and partner operations enables the deployment of service technicians around the globe at short notice. If technically possible, our mobile service teams will carry out repairs on site in order to minimize downtime. During this process only genuine spare parts are used, along with replacement and exchange units that are as good as new.

Our goal is your benefit: The increased availability of your machinery and systems

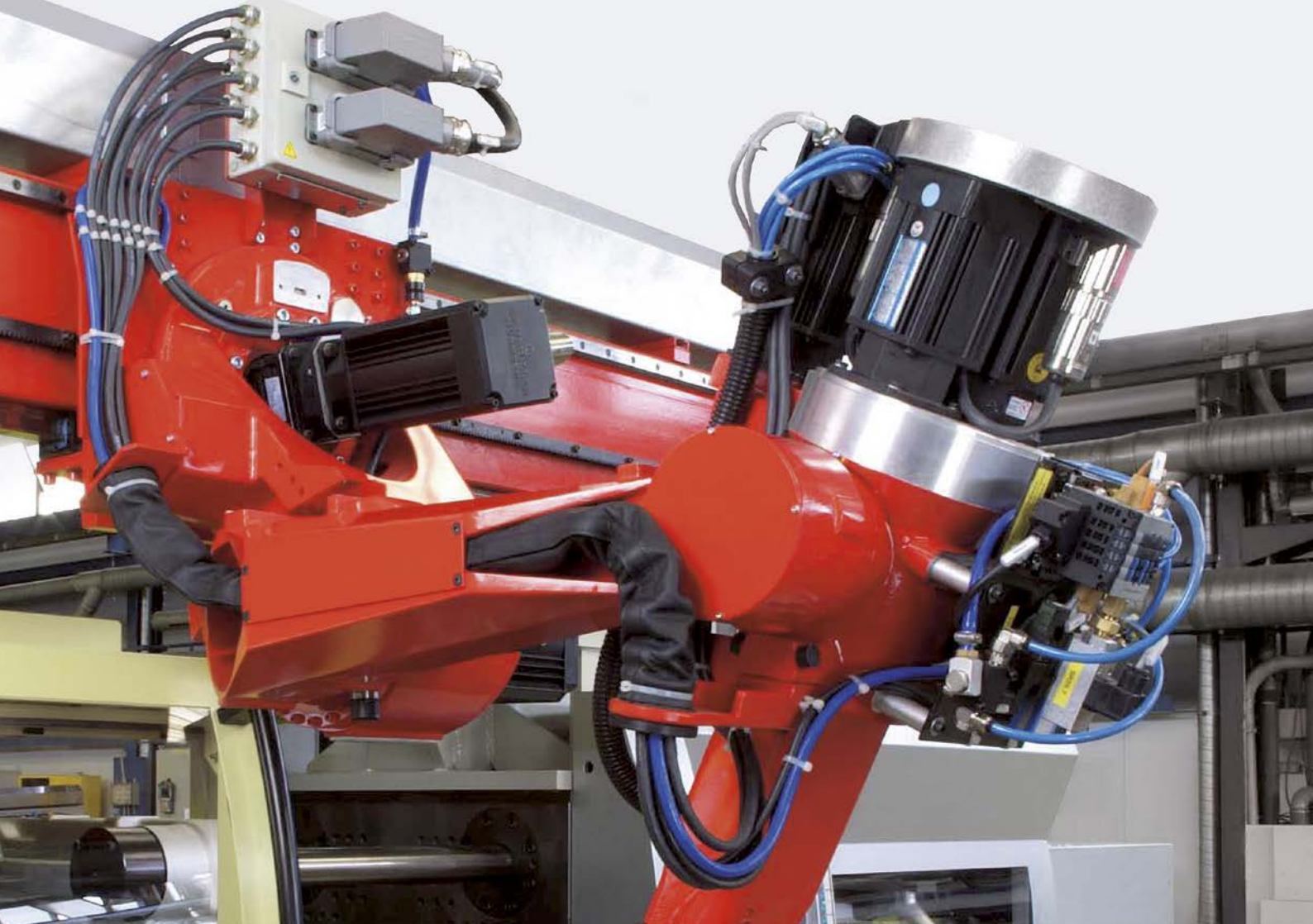


Installation & commissioning – From just one component to a complete system

During the installation and commissioning of your equipment, our service technicians are available to be on site at your request. They will ensure smooth parametrization and commissioning and provide training for the machine personnel.

Inspection & maintenance – Keeping you informed about the state of your machine

Together with you we prepare optimized maintenance schedules tailored to your needs. With regular inspections our experienced specialist personnel anticipate possible sources of failures and initiate the necessary action.



Troubleshooting – Keeping downtimes to a minimum

With the aid of high quality instrumentation, Baumüller service technicians undertake both complete system tests and function tests on individual components to locate the cause of the malfunction and to resolve the problem efficiently.

Condition monitoring – Keeping one step ahead of line stoppages

Baumüller has already set standards for remote monitoring and diagnostics in the printing industry with BAUDIS. Baumüller can now offer online analysis of each individual drive's parameters for other industries also, while ensuring that you always maintain control over access to your machinery and systems.

Equipment inspection – Safety for your employees and electrical equipment

Defects in electrical systems and equipment pose an increased risk of fire and accidents. Regular inspection of your electrical equipment and machinery will increase the safety of your staff, reduce the risk of damage and also comply with health and safety regulations.

All of our employees are salaried electricians, master electrical technicians or engineers and “Competent persons according to the Industrial Safety Regulation” as per TRBS 1203.

A thermal imaging analysis of your machinery and systems enables us to detect and eliminate pending faults at an early stage. This increases the safety and reliability of your system.

As a qualified specialist company, we can perform the following equipment inspections (BetrSichV/DGUV Vorschrift 3):

DIN VDE 0701-0702
Portable
electrical equipment

Office equipment, printers, PCs, photocopiers, handheld workshop devices, mobile equipment in the pharmaceutical sector

DIN VDE 0100-600
DIN VDE 0105-100
Stationary
electrical equipment

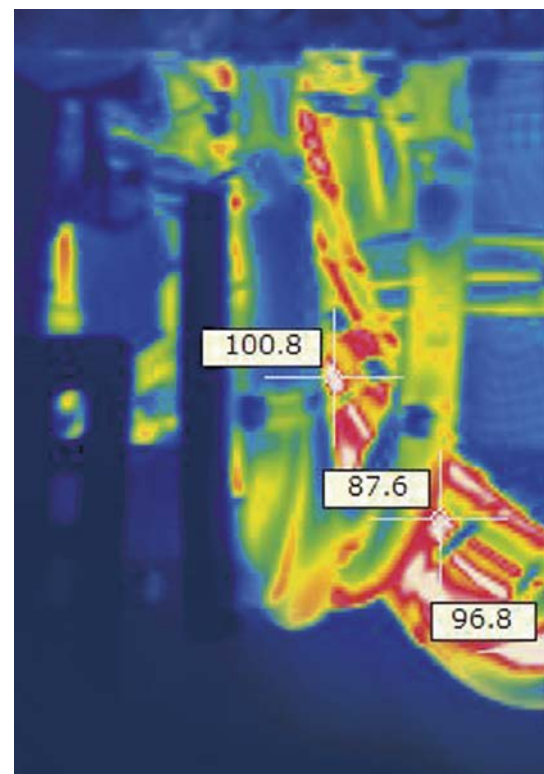
Main and sub-distribution units, lamps, sockets, switches, all equipment installed permanently in the building

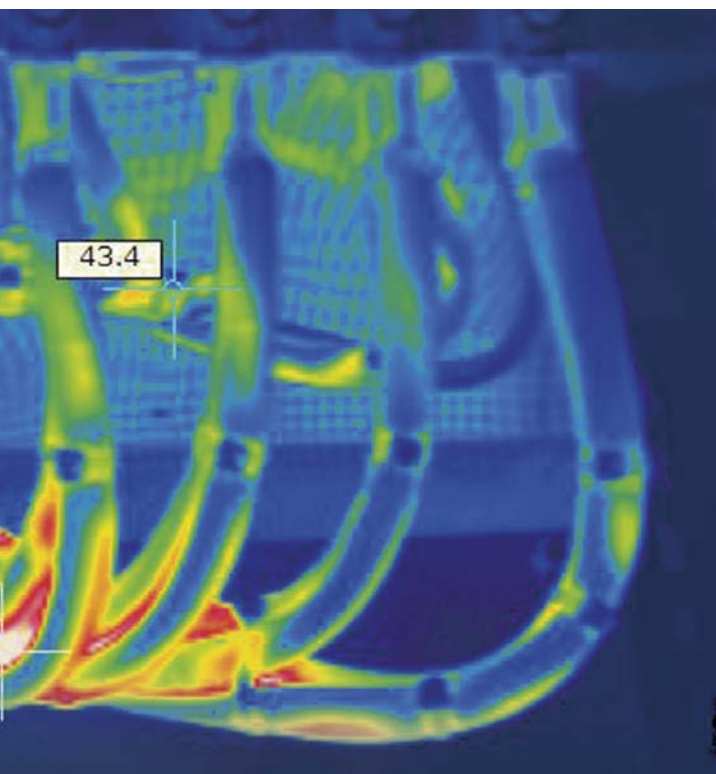
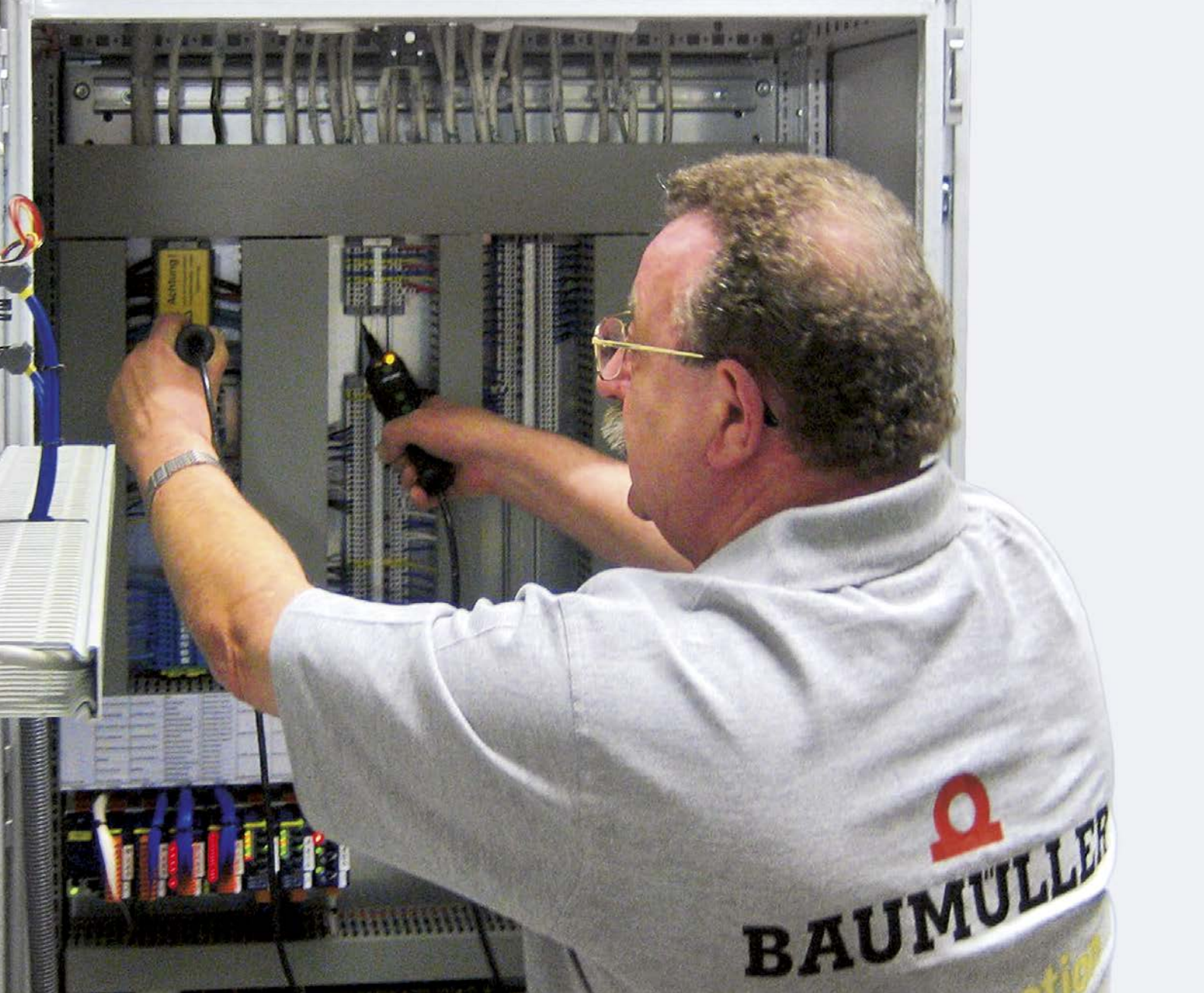
DIN VDE 0105-100
DIN VDE 0113-1
Fixed
electrical equipment

Ventilation systems, cranes, pumps, printing machines, extruders, conveyor belts, lifts, air-conditioning units, lathes, milling and grinding machines

EN 473 Stufe 1
Stufe 2
Thermal imaging

on main and sub-distribution units, control cabinets of machine tools and transformers





Your benefit

- ⊙ The risk of damage is significantly reduced
- ⊙ Documentation and evaluation of the measurements in meaningful reports
- ⊙ Evidence of compliance with the BetrSichV/DGUV Vorschrift 3 inspection stipulated by law in Germany
- ⊙ Evidence of compliance can be used in court
- ⊙ Minimal interference with normal operation due to agreed schedule planning
- ⊙ Reduction in downtimes as a consequence of component wear due to timely detection

Maintenance and repair of electric machines – A new drive for your machinery

Our service ranges from the replacement of faulty components to the complete overhauling of electrical machinery in the multi-megawatt range.

Our test equipment complies with the latest technical and environmental requirements to ensure reliable diagnostics and the highest possible quality standards. Our services are based on DIN, VDI, VDE and EX regulations. We only fit genuine parts to ensure optimum maintenance and repair.

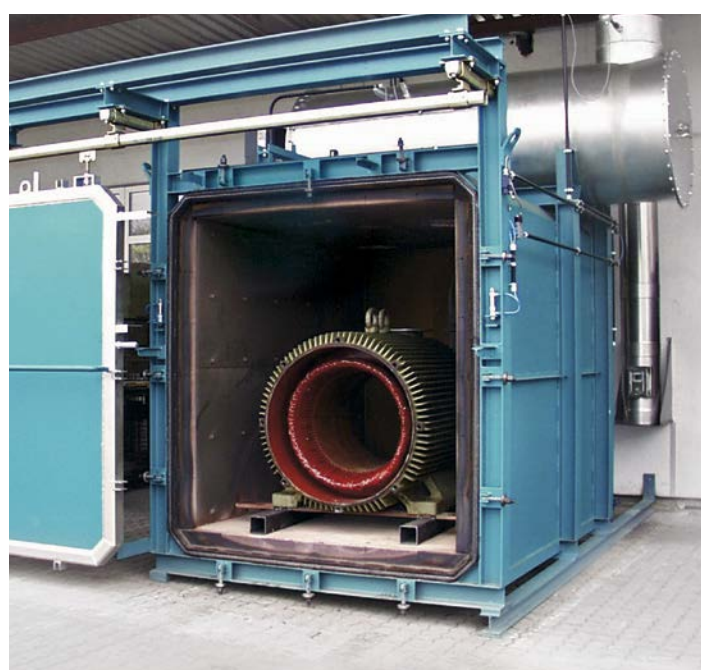
Many of our processes are computer-controlled to obtain high quality results: from the environmentally-friendly and quality-conscious thermal removal of insulation in the pyrolysis oven to the bubble-free impregnation of all winding parts in our vacuum-pressure impregnation plant.

Our goal is your benefit: Efficient, high-quality maintenance and repair for longer and more reliable operation of your electrical machinery

Your benefit

- © An experienced service partner for the complete spectrum of your electrical machinery – irrespective of the manufacturer
- © As good as new reconditioning increases the reliability and extends the service life of your electrical machinery
- © Short standard delivery times with option of express repair and as a result reduced downtimes
- © 24-hour, 7-day a week availability and quick rectification of malfunctions on site if necessary





Maintenance and repair of drive and control technology

Your machinery and equipment may contain drive and automation systems supplied by various different manufacturers. Using state-of-the-art diagnostic methods and detailed test cycles, we can ensure as-new quality and performance. This extends the life cycle of the electronics and helps to increase production efficiency. Our staff collaborate close with highly specialized partners. Working in this network, we are able to offer you a solution for almost every type of drive electronics and control system.

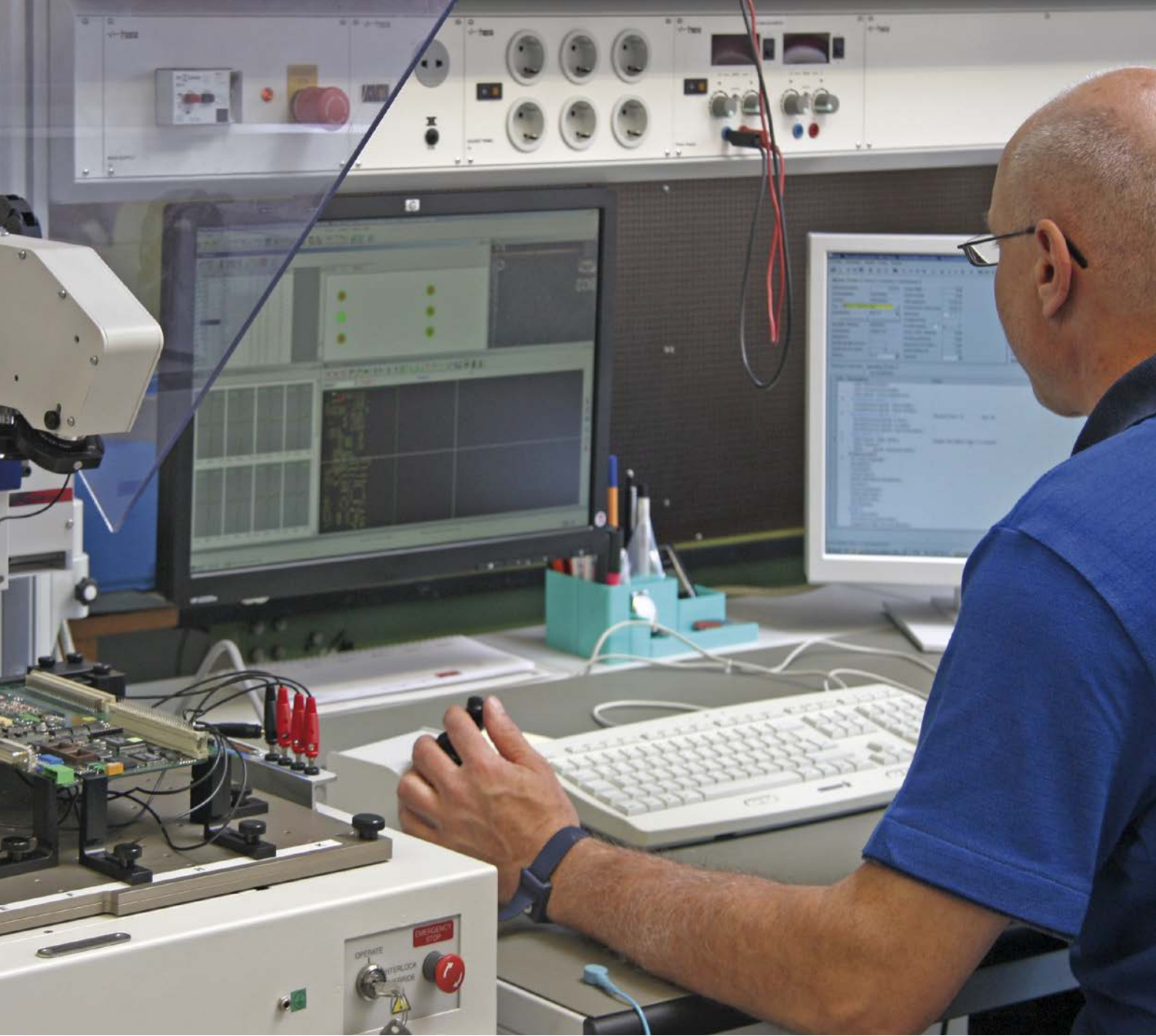
The full functionality of power sections, feed-in and feed-out power modules as well as analog controllers is thoroughly tested on our specially designed test rig. Integrated temperature sensors pick up sporadically occurring heat-related faults that would otherwise be difficult to detect. The deep level of test ensures exceptionally high-quality maintenance and repair, which reduces the risk of a malfunction recurring.

Benefit from our experience in maintaining discontinued assemblies

Your benefit

- ◎ One service partner for the entire drive train on your machine: from the servo motor to the drive electronics and control
- ◎ As good as new reconditioning, including discontinued assemblies, to increase the operating life of your machinery
- ◎ Quick delivery of the most common assemblies to resume production as quickly as possible
- ◎ Service technicians on site at your request
- ◎ 12-month warranty from date of delivery





Spare parts & exchange – Minimizing costly downtimes

We guarantee very high availability of common spare parts and wear parts. Our long regular opening times and 24-hour emergency service mean that we are always available and can provide rapid assistance due to our straightforward procedures – because we understand how critical your situation can be.

Our goal is your benefit: Worldwide delivery of the necessary parts in the shortest possible time



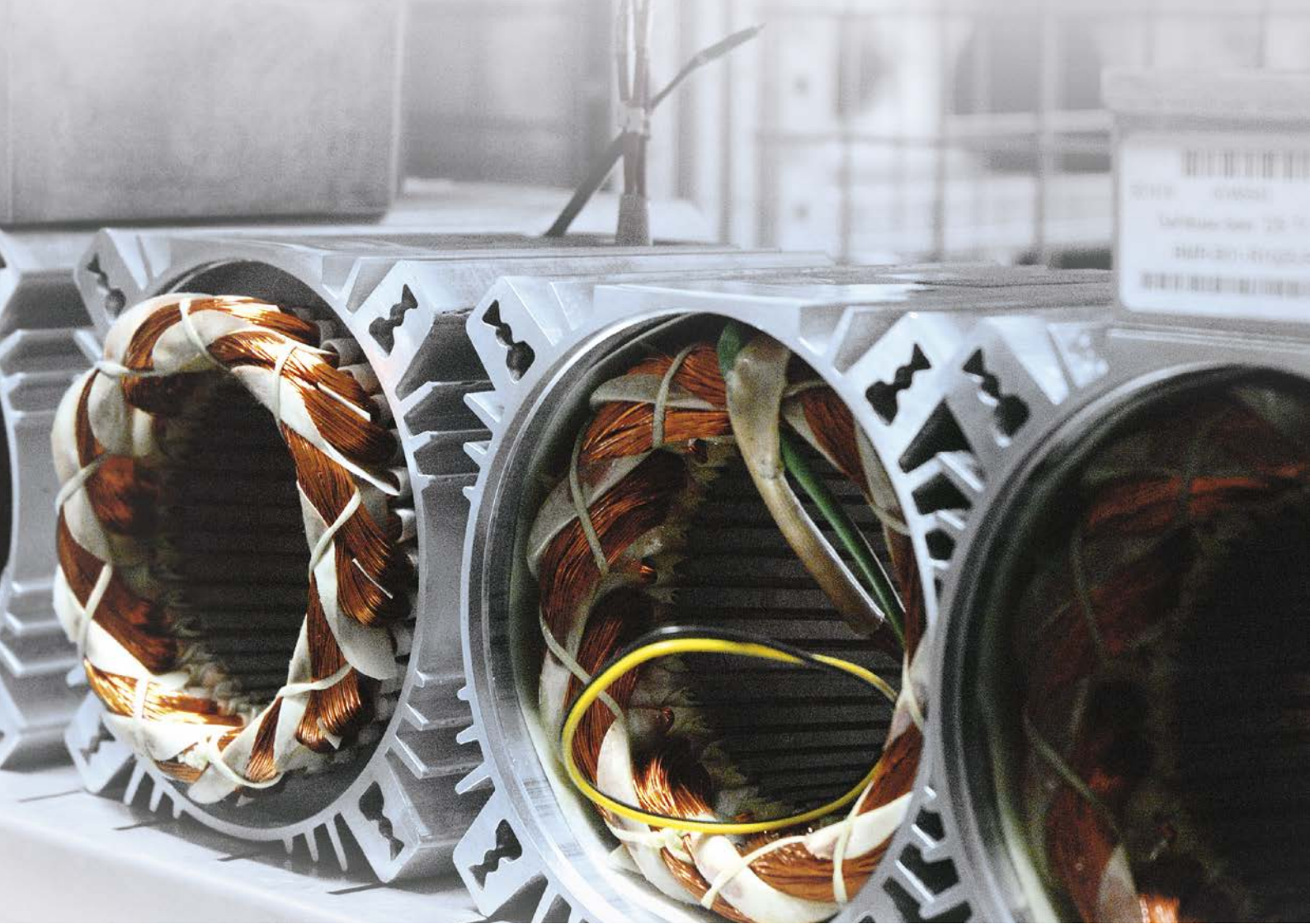
Spare parts service

Our global network of experienced professionals usually ship the required spare parts immediately – whenever and wherever you may need them – 24 hours a day, 365 days a year. We even supply spare parts many years after the end of normal production to guarantee long-term operation of your machine.

Replacement servo motors *

We offer rapid replacement of Baumüller servo motors from the DS 45–100 range. We can make an exact copy of your servo motor from our extensive spare parts warehouse. Whether IP64/65 non-ventilated or IP54 surface-ventilated, whether with resolver or SinCos encoder, whether with brake or without, you will receive exactly the servo motor you need.

* Other manufacturers on request



Replacement electronics *

In our extensive replacement unit warehouse for digital and analog drive electronics, we will have a replacement in stock for your unit – including components both from the current product range and from ranges that were discontinued years ago. The ready supply of exchange units enables you bring your machine back online in the shortest possible time.

* Other manufacturers on request

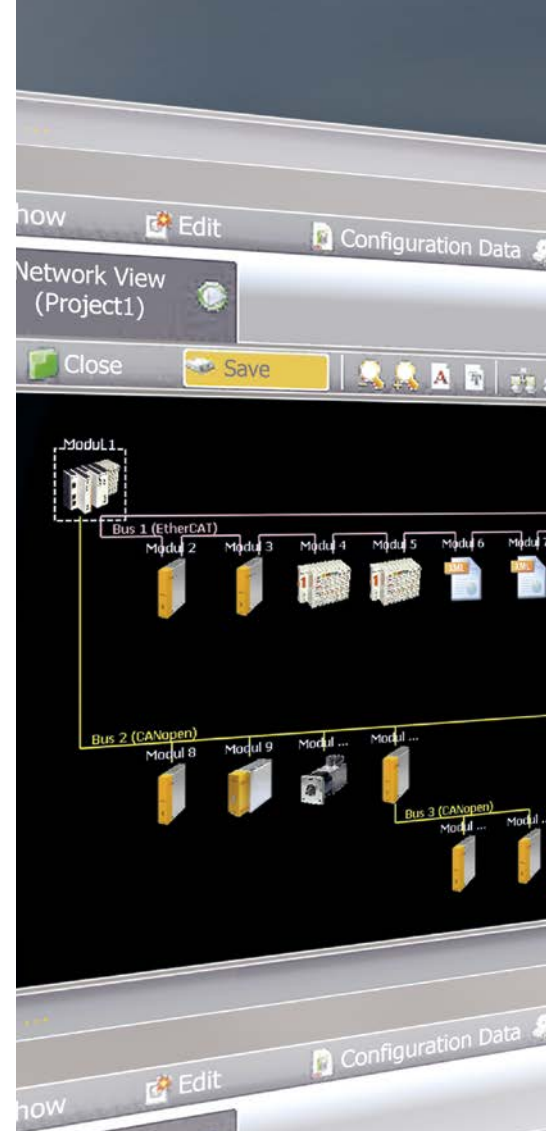
Customer-specific stocking

Together with you we prepare optimized stock packs specially matched to your needs. Our experienced staff advises you during the selection and definition of the volume of the components and spare parts, taking into account your procurement history and your future planning.

Modernization – Customized solutions for your existing system

We retrofit existing systems with up-to-date drive systems, control cabinets and user interfaces, so that your system can execute failure-free, state-of-the-art production. Using an adaptation or expansion of your existing machine architecture, you quickly achieve an increased flexibility and availability of your systems – while allowing you to estimate the expense involved and manage your investments.

Our goal is your benefit: Increasing the productivity and efficiency of your machinery and plant



Netzanschlußleistung

Übersicht		Details		Projekt-Kosten im Vergleich	
Leistungsfluss					
Effektivleistung	12.141 W	Energiekosten			
Gesamtdauerleistung	7.422 W	Energiekosten	€ 0,10 /kWh		
Nettodauerleistung	7.422 W	Maschinenlaufzeit	24 Stunden/Tag 7 Tag/Woche		
Spitzenleistung	31.793 W		52 Wochen/Jahr 10 Jahre		
Daueranschlußleistung	7.422 W	Energiekosten System	€ 6.483,48 /Jahr	€ 64.834,78	Lebensdauer
Spitzenanschlußleistung	31.793 W	Analyse			
Dauerückspeiseleistung	0 W	Achse	Servopumpe		
Spitzenrückspeiseleistung	0 W	Energiekosten Achse	€ 1.543,03 /Jahr	€ 15.430,29	Lebensdauer
Ballast Dauerleistung	1.045 W	Zusätzliche Kapazität zur Vermeidung anfallender Leistung im Ballast	748 mF		
		Potenitielle Kosteneinsparungen	€ 970,30 /Jahr	€ 9.703,01	Lebensdauer

Durch das Hinzufügen einer Kapazität von 748 mF oder das Wechseln zu einem Netzzückspeisemodul, könnten € 970,30 /Jahr Energiekosten - für die Investition in ein Kondensator-/Netzzückspeisemodul - eingespart werden.

OK Anwenden Cancel



Your benefit

- ◎ We manage the complete project for drive modernization
- ◎ Extension of the operating life of your machine by the installation of modern technology and components with long-term availability
- ◎ Increase in the availability of your machine due to a reduction in the probability of failure caused by wear
- ◎ Reduction in your operating costs by using modern, reliable drive components
- ◎ Increase in the energy efficiency of your production by using modern, efficient drive systems

Assembly and installation – A flexible solution to complex tasks

NÜRMONT Installations is responsible for assembly within the Baumüller Group. The range of services offered by the industrial service provider includes more than just assembly work. As a system partner of manufacturers and operators, the company offers an extensive range of services throughout the machine lifecycle. Maintenance and retrofitting form the core competences of this Nuremberg company together with global assembly, relocation and service work. In addition, the technology center at the Nürmont facility in Freiberg, Saxony has specialized in mechanical production in the company's own machining department as well as in design and special machine construction.

Our goal is your benefit: Individual complete solutions for efficient recommissioning of your machinery and systems





NÜRMONT

Turnkey Plant and Equipment Installation

+49 (0) 9128 9255-0

sales@nuermont.com, www.nuermont.com

Your benefit

- ◎ A combination of expertise and many years of experience help us achieve a high degree of efficiency. As a result, you can free up capacity to take on other jobs and additional business, even if your own personnel capacities have already been exhausted.
- ◎ Quality management forms a central part of our project business, and is guaranteed by certifications according to DIN EN ISO 9001, SCC, the German Water Resources Act (WHG) and many more. After all, only quality makes our services what they are supposed to be: Active assistance during the optimization of your core business.
- ◎ Short response times, technical know-how, comprehensive project management and authorization to employ staff temporarily enable us to implement individually customized complete solutions.
- ◎ As a general contractor, we also assume overall responsibility for the assembly of all kinds of systems, working together with the relevant project management team while providing flexibility and expertise in a package that includes fixed prices and schedules.

**Reactive, preventative and condition-orientated services
under one roof. Optimized for you. Around the clock.
+49 (0) 911 9552-150**



Baumüller Reparaturwerk GmbH & Co. KG

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Meglinger Straße 58, 81477 München, Phone: +49(0)89 748898-0, Fax: +49(0)89 748898-55

Nordstraße 57, 01917 Kamenz, Phone: +49(0)3578 3406-15, Fax: +49(0)3578 3406-50

www.baumueller-services.com

Visit www.baumueller-services.com for more information on how you can benefit
from our extensive range of services