



*PROVIDING SOLUTIONS IS OUR STRENGTH*

**COMPANY PORTRAIT**  
**ELECTRICAL TEST SOLUTIONS | VOLTAGE OPTIMIZATION**  
**TRANSFORMERS | REACTORS | POWER RESISTORS**

# Providing Solutions is our Strength



*»Is it presumptuous to say: I am proud of the accomplishments of our team? We succeeded in establishing ourselves as a strong national and international partner and we offer our customers excellent workmanship.*

*For every challenge we will find – within the physical limits – the right solution. That makes Ruhstrat a sought-after business partner for industry, research and development here and around the world. The reason is that we do not offer products off the peg, but instead manufacture everything to exact customer requirements.«*

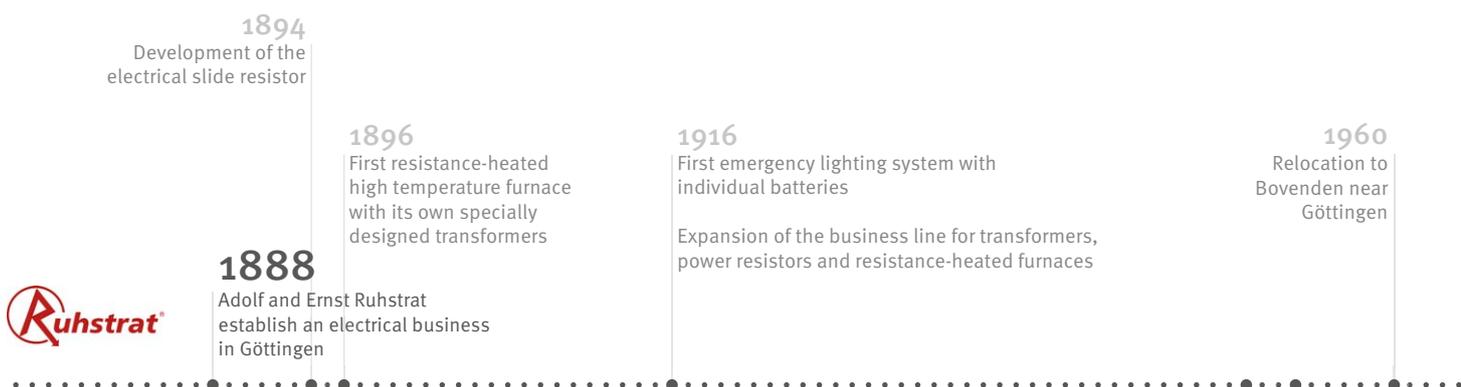
Andreas Möbus,  
CEO



You wish for more information regarding Ruhstrat and our products?  
Under the link [www.ruhstrat.com](http://www.ruhstrat.com) you will find various means to contact us.  
It goes even quicker by scanning our QR-code (shown on the left side) using your smartphone or tablet.

**Our sales team will be most pleased to consult you regarding all questions to our products.**

## Our evolution so far



**EISENMANN**

When the brothers Adolf and Ernst Ruhstrat opened their small electrical shop in 1888 in Göttingen, our company's success story was still unwritten.

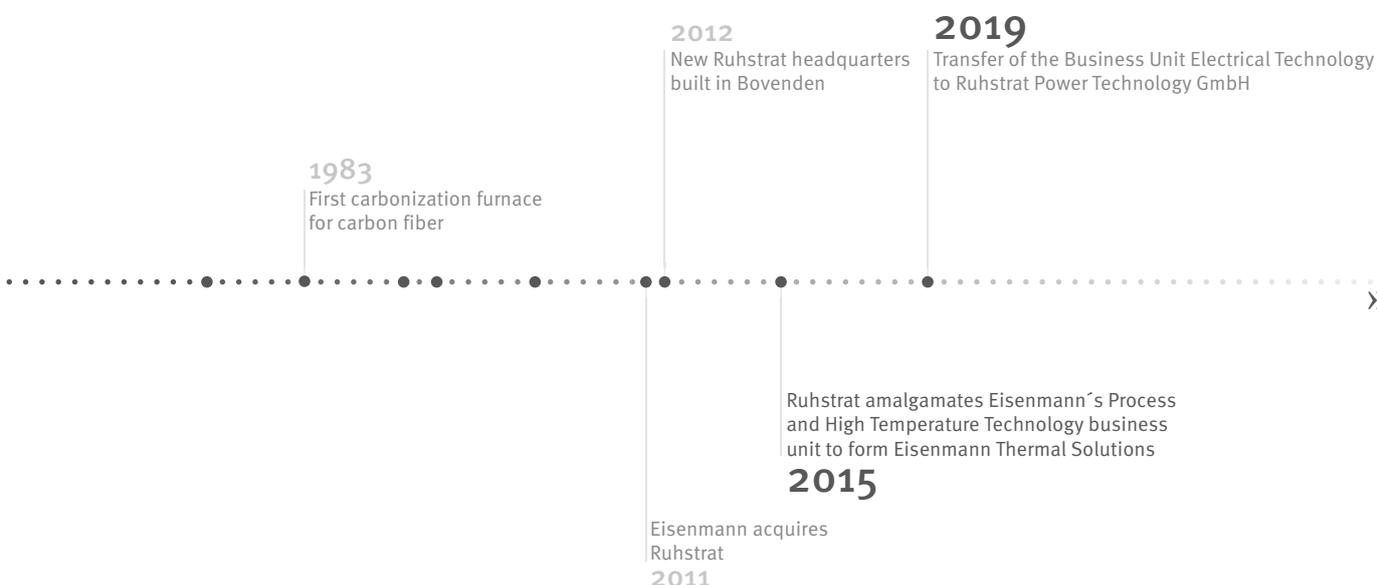
Today Ruhstrat Power Technology (RPT) designs and produces electrical testing solutions, voltage optimizers and transformers. In the electrical testing field, RPT specializes in testing facilities for temperature rise, motors and pumps as well as testing systems for high voltage cables (heat cycle tests).



In the area of voltage optimization, RPT relies on over 80 years of experience to offer modern equipment to protect against voltage dips and ensure voltage stabilization. RPT's transformer production for low and middle voltage with control cabinets guarantee a continuous high quality of all electrical elements.

The expert knowledge about the technology of electrical testing solutions, voltage optimizers, transformers and systems with control cabinets, control and PLC, makes us a strong and innovative partner to our customers,

The entire staff uses our expertise, based on more than 125 years of experience, to absolutely satisfy the requirements of our demanding customers at all times. This is made possible by custom solutions, which we develop in close cooperation with our customers. Our only mass produced products are those that meet specific customer requirements.



# Made in Germany

»A successful audit is only half the truth. The goal at Ruhstrat is continuous improvement of all processes and products – resulting in satisfied customers.

The audit is then basically the positive confirmation of our conscientiousness.



At Ruhstrat the processes are simply right. When everyone works together, in a process of active exchange and mutual respect, then work is enjoyable. That is especially apparent to outsiders: when we communicate with our customers, this is based on well-founded knowledge, binding information and a high level of commitment on the part of everyone involved.«

Andreas Möbus,  
CEO

## Ruhstrat products stand for top quality

Our quality management system was certified according to DIN EN ISO 9001 in 1993. This ensures that you, our customer, receive only the highest quality products based on certified quality standards. By choosing Ruhstrat, you can be rest assured that you have chosen the right partner. You will find our commitment to quality not only on paper but in every contract, every phase of development and in every single product we deliver.

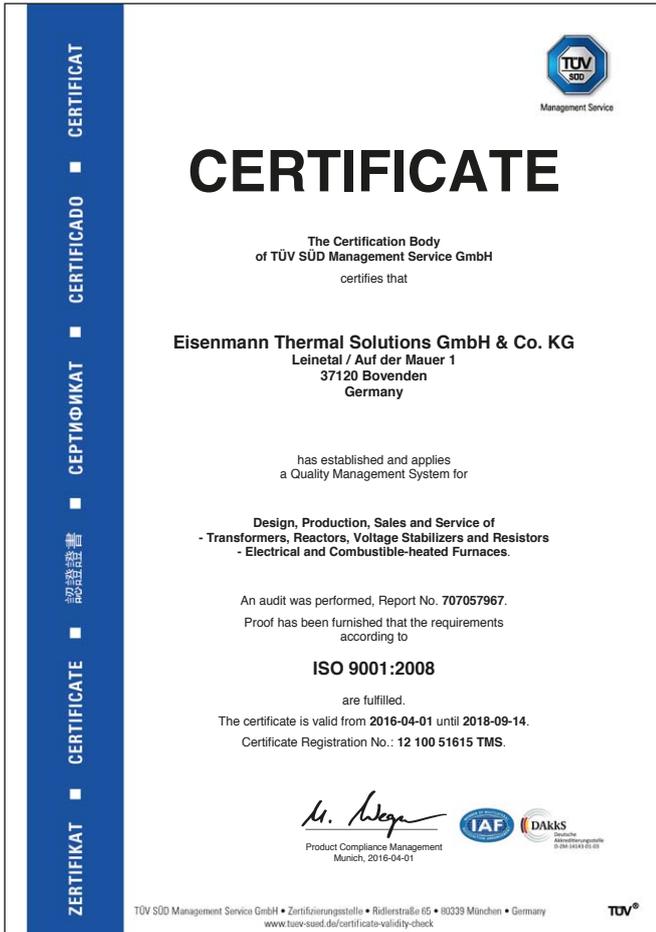
Ruhstrat is not the only brand that consistently insists on maximum quality but our numerous customers around the world are proof: At Ruhstrat everything is a touch better.

We not only see to it that our products function perfectly, we are especially concerned about the environmental balance. That is why we continuously optimize the energy efficiency and service life of our products.



## >> FACTS

- Consultation – also on your premises
- Planning – in close coordination with you
- Development – individual and customized
- Implementation – professional and from a single source
- Installation, maintenance, repair – around the globe, by our specialists



## »» FACTS

Our products offer solutions for electrical test engineering, voltage stabilization, transformers and reactors encompass power outputs from 200 VA to 20 MVA and voltages up to 36 kV:

- Electrical Test Solutions
- Voltage optimization
- Low-voltage and medium-voltage transformers
- Variable transformers
- Toroidal core transformers
- Reactors

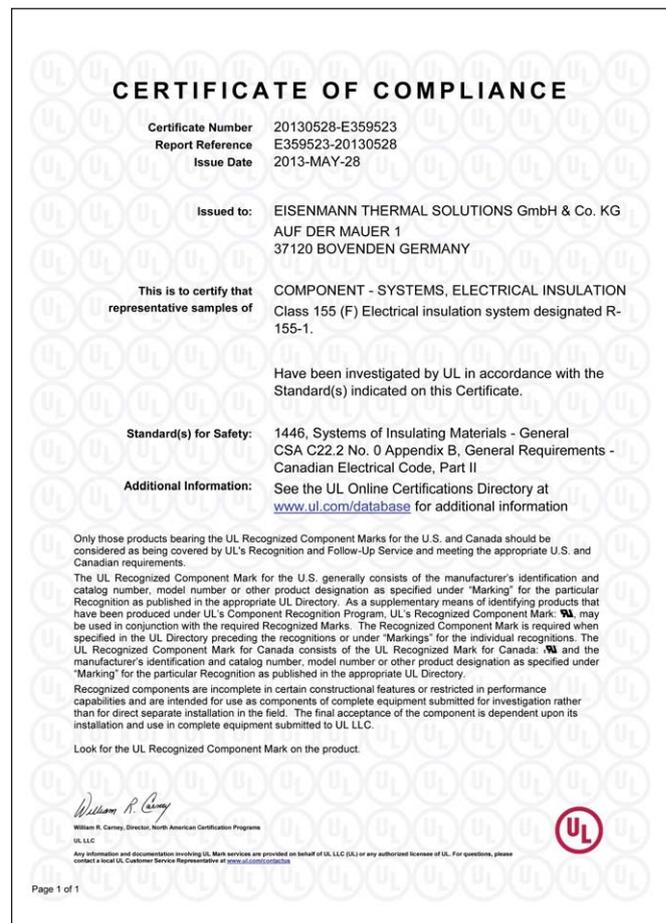
Our test and power resistors cover a spectrum from 50 W to 5 MW:

- Load resistors
- Variable resistors
- Test resistors
- Brake resistors
- Earthing resistors

### In our eyes you are the king

In addition to uncompromising product quality, Ruhstrat customers experience genuine service, just like in the old days. On request, we offer individual, on-site consultation, develop customized turnkey solutions and installation.

And, after completion of the project, you are not left alone: Our after-sales service includes maintenance and repairs according to your specific requirements – also available on the basis of service contracts. Our experienced service teams ensure global supply.



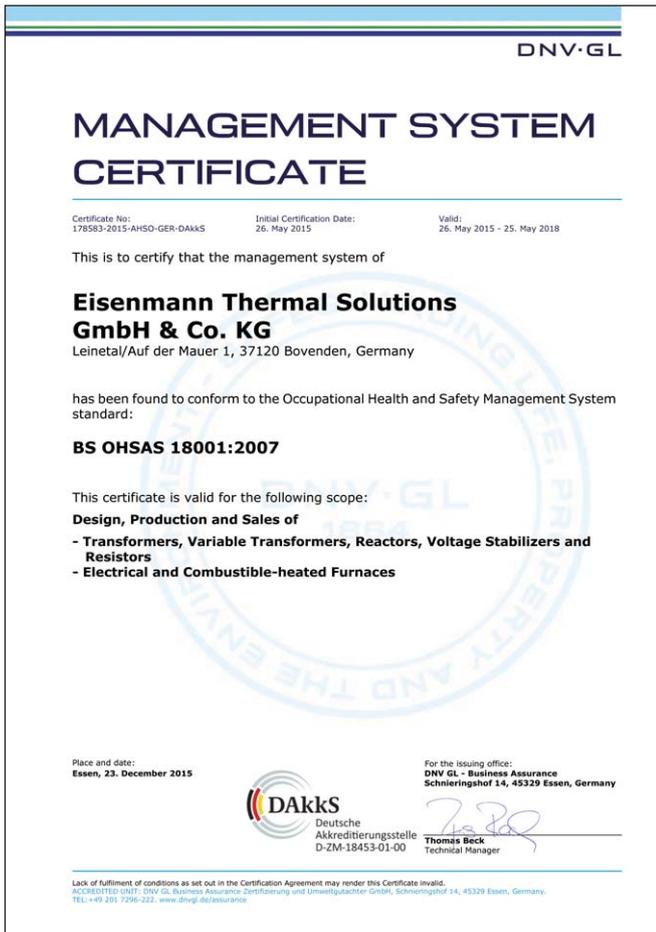
# More than 100 good reasons: Our employees

*»What makes a good workplace for me? Modern and safe working conditions. Mutual respect throughout the hierarchy. Opportunities for development. A steadfast smile among the team when there is lots to do.*

*To achieve the best results requires a solid basis. At Ruhrstrat this basis is established primarily by the people behind the success. When you have so many strengths to build on, then it is possible to jump to the top as a company.«*

*Andreas Möbus,  
CEO*





Current scientific research has also led to our state-of-the-art production facilities – including the production technology and machine park. It is characterized by short distances, intelligent logistics and the effective coordination of development, production and administration.

At Ruhstrat, we place strong emphasis on the well-founded training and development of our employees. To meet our social responsibility and to cover our own needs, we have a constant training rate of 10 to 15 percent.

Our trainees – like our products and our customers, of course – benefit from the rich store of experience and extensive expertise of our designers, engineers, programmers and specialists.

Team spirit throughout the entire company is perhaps our greatest strength.

## >> FACTS

Our production facilities:

- Cranes, 2 / 5 / 10 ton
- Vacuum impregnating system
- Vacuum drying ovens
- Vertical edgewise winding machine
- Band and wire winding machines
- Toroidal core winding machines
- Modern test facility for product inspections in accordance with relevant standards
- Test system for PD measurement

### Technology lives on innovations

Our company contributes actively to the Central Association of the German Electrical and Electronics Industry (ZVEI) and cooperates intensively with universities, technical colleges and research institutes. This sustainable process of exchange is a constant source of new impulses in our own research and development.



# We offer solutions

*matter of principle, our solutions to customer requirements are developed as a team. The insights gained are used in our own research, so that they can be applied to future projects.«*

*André Männecke,  
Product Manager Electrical Test Solutions*

*»What I find so fascinating about my work are the new challenges I face on a daily basis. No project is like another and this diversity, of course, also inspires our creativity. Which we then use to offer our customers tailor-made solutions.*

*At Ruhrstrat we always approach tasks in their entire complexity. As a*



As an internationally established brand in the area of test engineering systems, we bear a special responsibility. Our customers await the best results and expect the highest level of quality from our products. We are strengthened by the confidence placed in us by our customers on a daily basis. For you, we always have the overall picture in mind and offer you the best possible solution.



**Comprehensive product line**

Ruhstrat offers you a comprehensive line of transformer-type and resistor-controlled test engineering systems. We use variable transformers for current and voltage supplies and ohmic, inductive or capacitive load banks for load tests. On request, we can equip all systems with an electronic controller, including a control panel and visualization.

**>> FACTS**

- Power up to 2 MVA or 1MW
- Voltage up to 30,000V
- Current up to 30,000A
- Optionally available:
  - Control panels with fuses, contactors, operation and monitoring elements
  - Controller for switching, regulation, control and monitoring of relevant processes

Products:

- AC/DC power supplies
- AC high-current supplies
- Test resistors
- Inductive load banks
- RLC load banks

**>> APPLICATIONS**

- Drive technology
- Cable testing
- Renewable energies
- Switchgear temperature rise tests
- E-mobility



# Rock-solid technology for every application

»We do not rest on the laurels of our success. Our goal is the continuous development of electrical engineering technology and the improvement of our products. This commitment is appreciated by our customers throughout the entire world.

*Ruhrstrat stands for innovation. One example is the development of DeltaVolt systems, a technology that helps our customers reduce their energy costs. This benefits both the customer and the environment.«*

Martin Fräger,  
Product Manager Voltage Optimization



Do you need to optimize the voltage quality in your low-voltage network? Do you want to improve operational reliability by means of voltage stabilization? Automatic voltage stabilizers from Ruhstrat are used wherever long-term voltage fluctuations have to be stabilized.



Our systems are the optimal solution for applications with regulating accuracy of 1%. The major advantage of our systems is their simple and robust technology, which ensures extremely reliable operation even under heavy loads and harsh ambient conditions.

## >> FACTS

- Power up to 2,000 kVA
- Voltage up to 20 kV
- Voltage stabilization up to  $\pm 1\%$
- Settling time in milliseconds

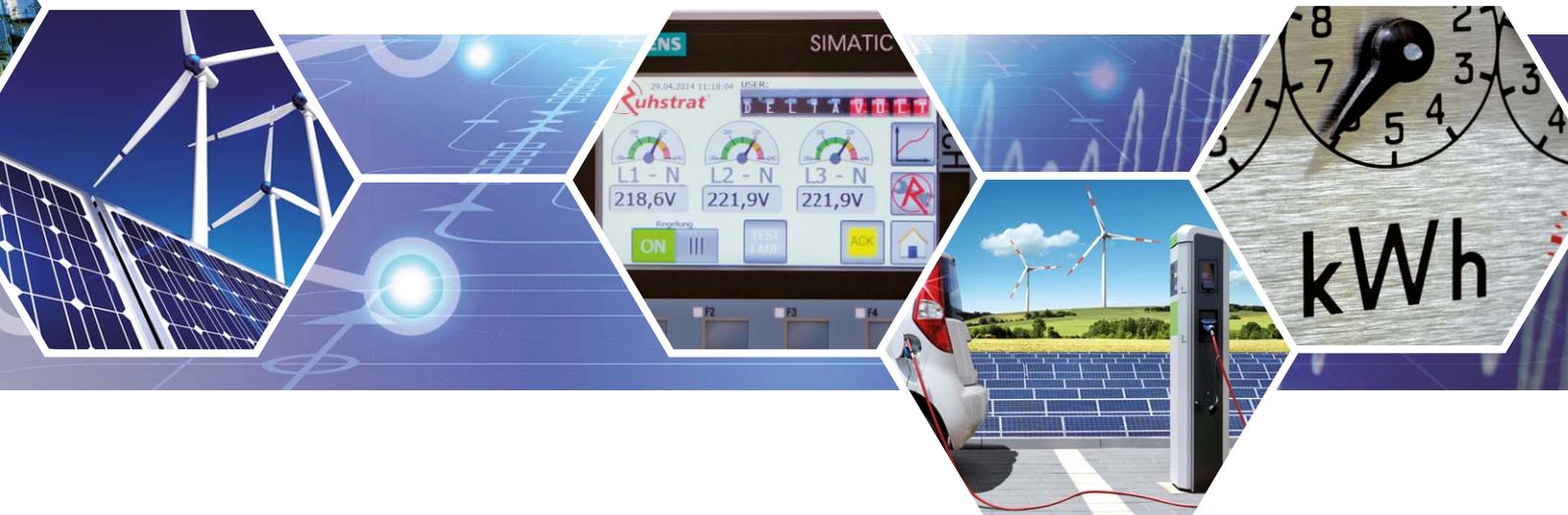
Products:

- Magnetic voltage stabilizers
- Transformer-type voltage stabilizers
- NESSY – Network Stabilizing System for local networks
- OLIVER – Online Voltage Regulation – Compensation of voltage dips

## >> APPLICATIONS

- Reliability Of Service (Industry)
- Operational Reliability (local network)
- Voltage Fluctuations up to  $\pm 40\%$
- Energy Cost Reduction

*The cheapest electricity is  
that which you don't use.*



# At home here and around the world

*Internally and externally, within the team, in dealing with our customers or with respect to our high-quality products and their delivery deadlines. We keep our word – acts of nature excepted.“*

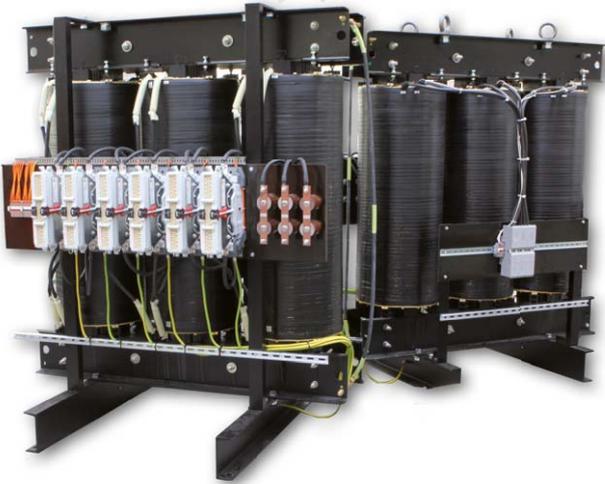
Ronny Gorzel,  
Project Engineer Transformers

*„Reliability, to our team, means much more than just coming to work on time. Being there for others, helping each other and sharing individual experience goes without saying for everyone here.*

*You can depend on Ruhrstrat in every aspect: inter-*



Ruhstrat transformers offer you a decisive advantage: They are manufactured exactly to your requirements. No matter what the application, the transformer solution for your needs already exists as a concept.



After implementation of your requirements, we test the result extensively. This allows us to guarantee equipment that functions perfectly – manufactured in accordance with international standards and with UL approval. Of course, you will have to experience for yourself the robustness and reliability for which our low- and medium-voltage transformers are known.

## » FACTS

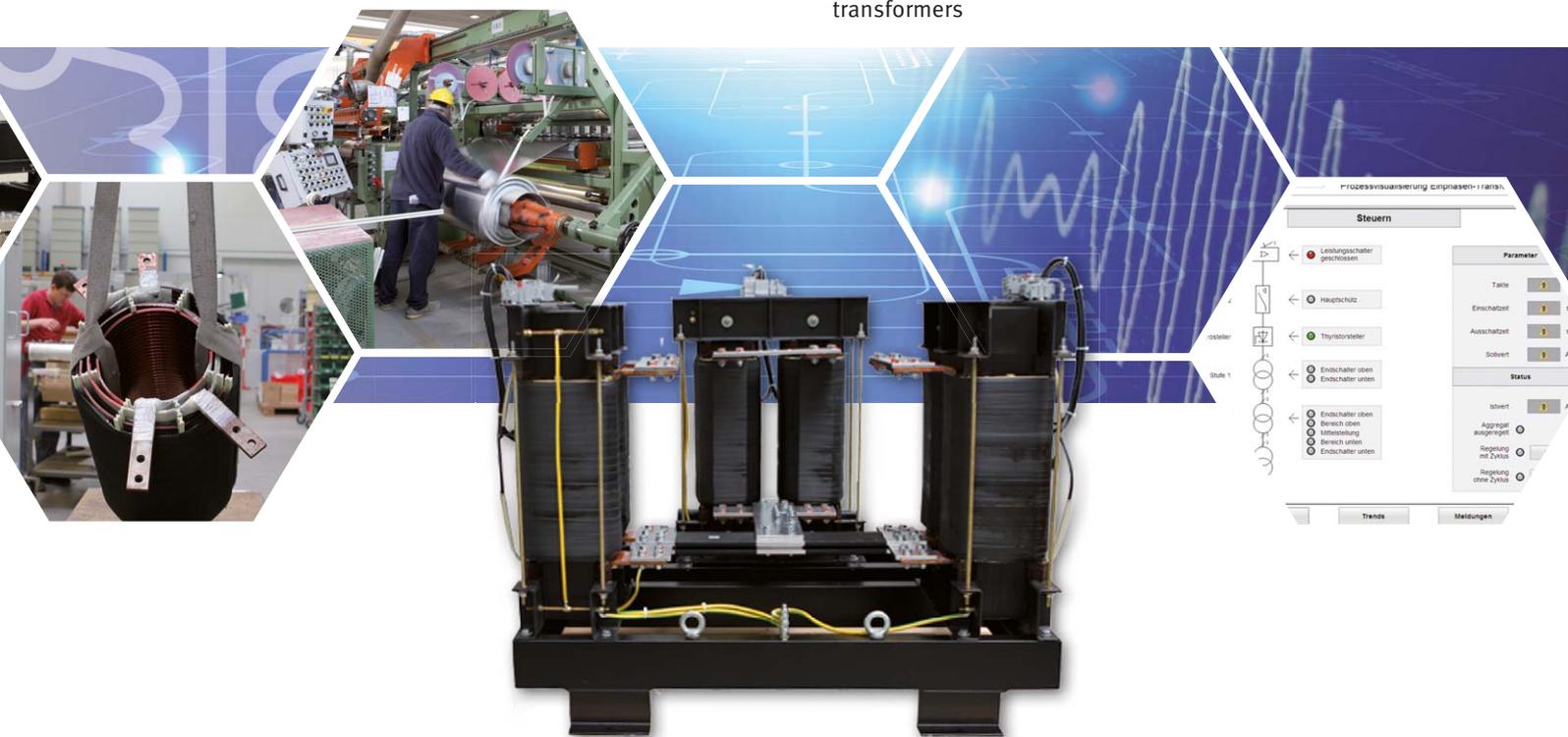
- Execution as auto- and isolation transformers
- Power up to 20 MVA
- Voltage up to 36 kV
- Current up to 30,000 A
- Frequencies up to 800 Hz
- Copper and aluminium windings

Products:

- Low-voltage transformers
- Cast resin transformers
- Toroidal core transformers
- High-current transformers

## » APPLICATIONS

- Matching transformers, for example, in tooling machines, processing centers, automatic assemblies
- Starting transformers for vessel motors, high-performance pumps, rock mills
- Distribution transformers at construction sites, tunnel construction, production equipment
- Cast-resin transformers as distribution transformers, transformers for 6-, 12-, 18- or 24-puls conversion, double-stock and multi-winding transformers, step-up transformers
- Application in large industries, milling equipment, hauling equipment, glass smelting equipment, industrial ovens, sewage cleaning
- Transformers for wind-power stations
- Testing transformers, also possible with variable transformers



# Careful work results in sound technology

*»Our top priority is to manufacture safe equipment for our customers. To achieve this, we exercise maximum care in our work. It is a good feeling that optimal work safety is so important to our company.*

*At Ruhstrat everyone can be assured that we take every measure to protect our employees from dangers to life and limb and we supply our customers with first-rate technology that guarantees safe use for every application.«*

*Matthew Kirkley,  
Technical Manager*



Ruhstrat reactors are the first choice for you if you value reliable and safe coilware. Thanks to high-quality materials and flawless craftsmanship, our products ensure the trouble-free operation of your machines and drives.



Current smoothing is extremely important especially in the extensive field of drive technology.

Typical applications also include use as an inductive load in the test facility or for suppression of interference. For each individual case, we develop the optimal solution for diverse application conditions around the globe.

## >> FACTS

- Reactors up to 3,000 A with selectable inductance values
- Rated frequency of AC reactors 16 2/3 Hz to 400 Hz
- Inductances with tapping points
- As inductive load with contactors and coupling relays for switching the inductance values

Products:

- Power reactors
- Smoothing reactors
- Compensation reactors
- Filter circuit reactors
- Motor reactors
- Test reactors

## >> APPLICATIONS

- Reduction of symmetrical and asymmetrical current distortion
- Damping of current harmonics
- Limitation of inrush current
- Increase of equipment service life
- Bridging of mains breakdown
- Limit current peaks



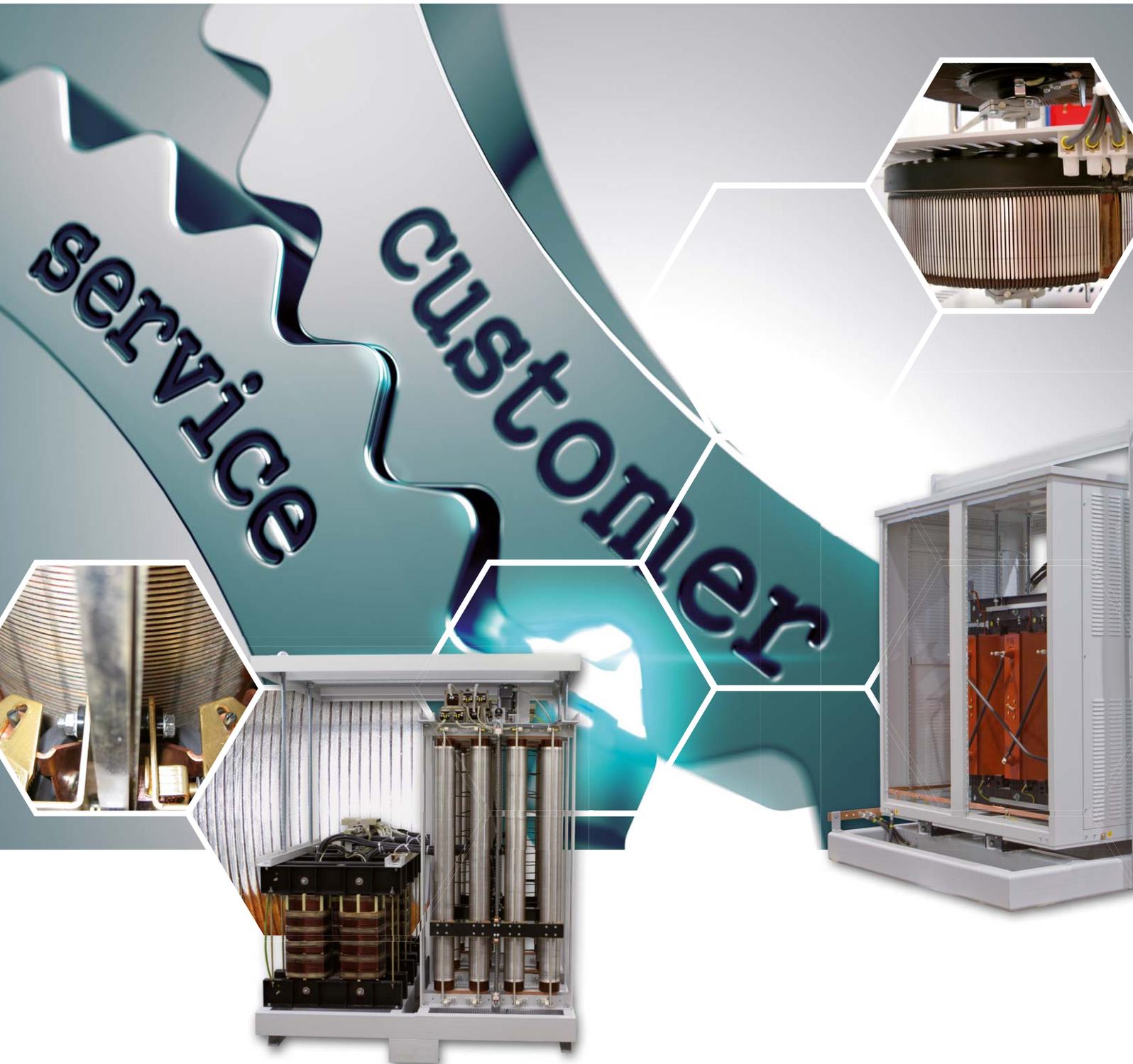
# Excellence is our standard

*heads to do things even better. And the one who benefits in the end is you, our customer. For you we strive to offer even more: more performance, more service, more value.«*

*Peter Bluhm  
Vice President*

*»In the construction of transformers we of course cannot afford to deviate from the standards. But when it comes to our ideas, we do not hesitate to force an open door.*

*Our exemplary in-house suggestion system allows us to gather the best ideas where people use their*



Variable transformers from Ruhstrat for the power supply of diverse products are preferred for use in test engineering, the glass industry, as well as in electroplating applications.

In these areas, too, all solutions are tailored to individual customer requirements.

Whether for test facilities, the glass industry, electroplating or regulation of industrial furnaces – Ruhstrat develops and manufactures specific variable transformers for continuously variable adjustment of voltages up to 30,000 volts and currents up to 30,000 amperes.

For your technical testing systems, we offer you a complete line of transformer-controlled test engineering, including electronic controllers (SIEMENS, Beckhoff, etc.) if requested. For more information, see page 8/9.



## >> FACTS

- Available as variable toroidal and variable column transformers
- Also available as a variable transformer aggregate in combination with a low-voltage, medium-voltage or high-current transformer
- Power up to 2,000 kVA
- Voltage up to 30 kV
- Frequencies up to 800 Hz

For electrical test engineering available with:

- Control panels with fuses, contactors, operation and monitoring elements
- Controller for switching, regulation, control and monitoring of relevant processes

## >> APPLICATIONS

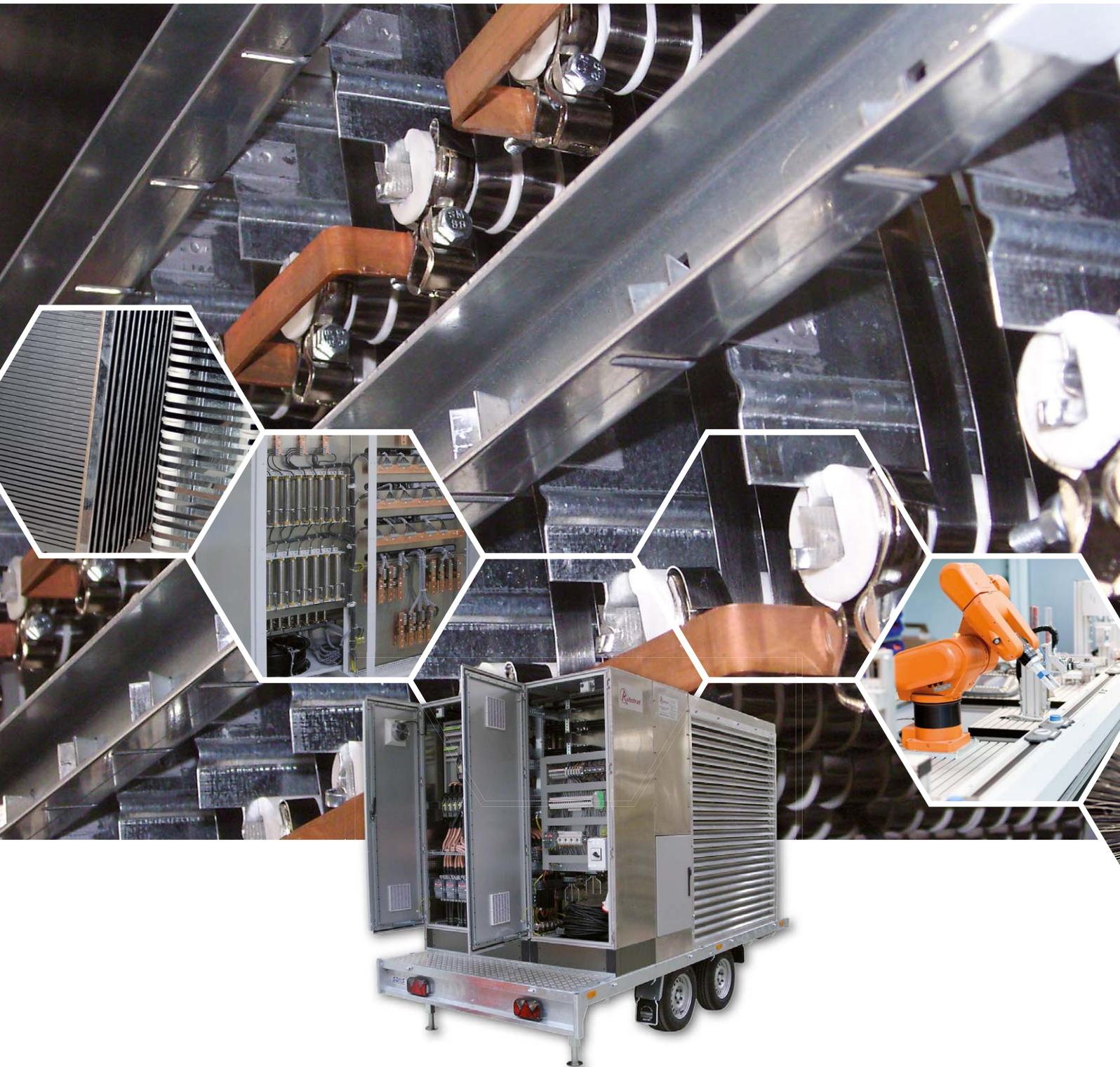
- High-voltage test facilities
- Industry (electroplating, glass, etc.)
- Control of industrial furnaces

# Quality since 1888

*„Why I like working at Ruhstrat? Because every one of us strives every day to do things better. Because we are truly there for our customers, to give them help and advice. And because we are a great team!“*

*Much has happened since the first power resistors from Ruhstrat more than 120 years ago. The principle has remained the same, while the services have multiplied. We have constantly supported and driven this development.“*

*Florian Rudolph,  
Project Engineer*



For more than a century, Ruhstrat power resistors have been indispensable in electrical engineering. Our customers especially appreciate our comprehensive service. Because no one buys “just any” product from us.



We are always a reliable partner for our customers, which means we first determine the specific requirement. We remain true to our concept of offering the right solution in every individual case. At Ruhstrat, we develop and manufacture power resistors for diverse applications in the power spectrum from 10 W up to 5,000 kW.



## »» FACTS

- Power up to 5,000 kW
- Optionally available:
  - Control panels with fuses, contactors, operation and monitoring elements
  - Controller for switching, regulation, control and monitoring of relevant processes

### Products:

- Load resistor / load bank
- Ohmic, inductive or capacitive load resistor
- Discharge resistor
- Damping resistor
- Braking resistor
- Starting resistor
- Variable resistor (potentiometer)
- Tube resistor
- Earthing resistor

## »» APPLICATIONS

- In laboratories, schools, universities
- Construction of switchgears
- Battery technique
- Conveyor technique and lift technique
- Robotics and production
- Welding technology
- Shipbuilding
- Railway technology





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