

EXPERIENCE MOBILITY

THE ELRINGKLINGER GROUP.

SYSTEM PARTNER. TECHNOLOGY LEADER. PIONEER.



SYSTEM PARTNER. TECHNOLOGY LEADER. PIONEER.

SHAPING THE FUTURE. WITH ELRINGKLINGER.

For us, system expertise means being a pioneer, creating space for development, and achieving our goals more quickly. Thanks to our high-performance product solutions, we are contributing to sustainable mobility and are also successfully heading for growth in other sectors.

Proximity to the customer, developing visions, overcoming challenges and driving forward innovations: Those are our key strengths, that's what has made us what we are today.

YEARS LEADING THE WAY



140

Nothing can replace experience combined with innovative spirit. ElringKlinger has plenty of both. In 1879, Paul Lechler founded a trading company for technical products, which would later become ElringKlinger AG. Today, we are a global player offering future-proof solutions for all drive types in all product areas. We also demonstrate our strengths in other industrial sectors. Our customers benefit from ElringKlinger's combined materials, engineering, and manufacturing expertise. Thinking ahead, developing solutions, being the first to break new ground, taking responsibility. This is what sets us apart – and has done so for more than 140 years.

4

KEY STRATEGIC
FIELDS

Alternative drive technologies, lightweight solutions, new forms of mobility, sustainability and climate protection: The transformation process in the automotive industry is in full swing. The agenda for the future is clear. We are also working every day to play our part and push the limits of what is possible. We are focusing on four strategic fields: e-mobility, lightweight technologies for all drive types, traditional mobility and non-automotive. Together with our customers, we are already finding answers to the questions of the future. And successfully driving forward innovations.

10,000

EMPLOYEES AS PARTNERS

For our customers, we are a strong and reliable development partner and series supplier with unique expertise. We are a pioneer and companion. From the idea to the finished product. Whether electro-mobility, lightweight solutions, sealing and shielding technology, tooling technology or engineering services – ElringKlinger impresses with the highest quality, reliability and performance. Around 10,000 employees are committed to achieving this at 45 sites worldwide.

VISION AND EXPERTISE

FINGER ON THE PULSE WITH FOUR STRATEGIC FIELDS.

We set the right course for the future at an early stage and are continuously developing our core competencies. Most of ElringKlinger's product segments are active in several of our four strategic fields.

E-MOBILITY

We have been working on alternative drive concepts for more than 20 years and were quick to position ourselves as a specialist in e-mobility.

- + Battery technology
- + Fuel cell technology
- + Electric drive units (EDUs)
- + Dynamic precision parts
- + Lightweighting and elastomer technology
- + Sealing systems
- + Shielding technology
- + Components made of high-performance plastics
- + Engine development services

TRADITIONAL MOBILITY

Optimized gasoline and diesel aggregates are in use around the world and are doing their part to meet mobility needs in a sustainable way.

- + Lightweighting and elastomer technology
- + Sealing systems and cylinder-head gaskets
- + Shielding technology
- + Dynamic precision parts
- + Components made of high-performance plastics
- + Engine development services
- + Elring™ spare parts

“Change favors only those who are prepared for it.”

Louis Pasteur,
chemist and pioneer in microbiology

LIGHTWEIGHT TECHNOLOGIES FOR ALL DRIVE TYPES

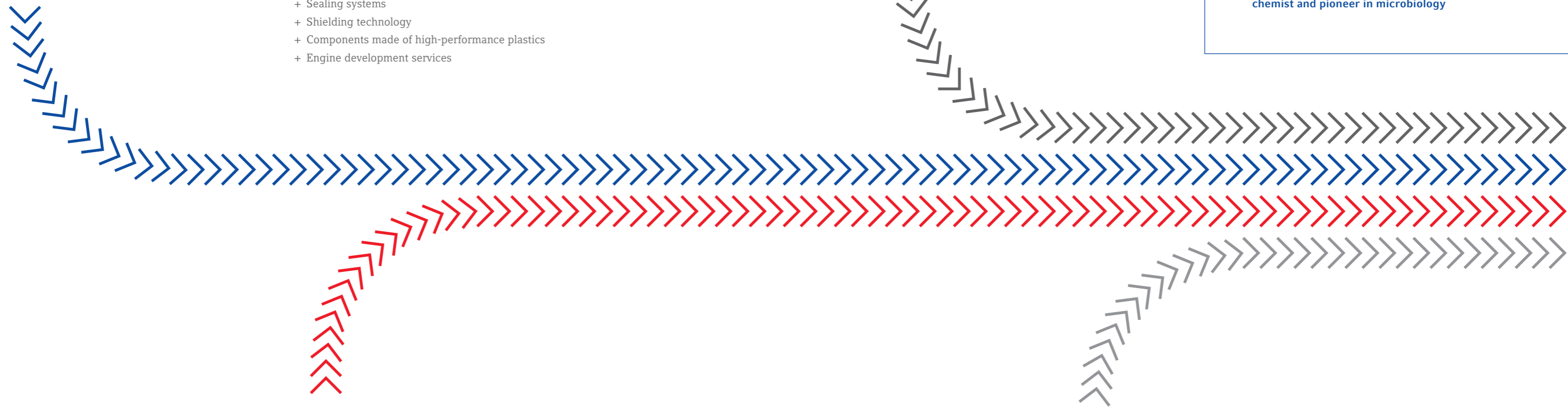
Lightweight construction is one of the key technologies in the automotive industry and other sectors. Our system expertise sets us apart here, too, and we have mastered a wide range of manufacturing processes in plastic lightweighting.

- + Thermoplastic composite hybrid technology
- + Plastic-metal hybrid technology
- + Pressing and forming technology
- + Plastic injection-molding and elastomer technology

NON-AUTOMOTIVE

ElringKlinger components and systems are also in demand outside the automotive sector, for example in rail transport, aviation, energy supply, chemical and apparatus engineering, and medical technology.

- + Battery technology
- + Fuel cell technology
- + Dynamic precision parts
- + Lightweighting and elastomer technology
- + Sealing systems and cylinder-head gaskets
- + Shielding technology
- + Components made of high-performance plastics



KNOWING HOW THINGS WORK

THE ELRINGKLINGER PRODUCT PORTFOLIO.

The world is changing. Sustainability, energy efficiency, and climate protection are the main focus. We work with our customers to develop high-performance product solutions and drive innovation.

BATTERY TECHNOLOGY



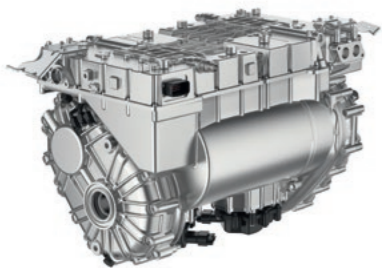
An efficient energy storage device is a key piece of technology for sustainable electric vehicles. ElringKlinger offers complete battery storage systems, battery modules and various components such as cell housings, cell connectors, cell contact systems, module connectors, pressure equalizing units, and battery management systems. Intelligent, flexible, absolutely reliable, and field-tested.

FUEL CELL TECHNOLOGY

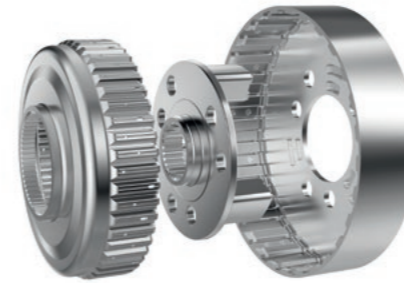


Our fuel cell modules, stack modules, and components such as metallic bipolar plates and end/media modules meet the highest standards in terms of robustness, functionality, and performance. Both customer-specific developments for each integration level and standard solutions can be provided. EKPO Fuel Cell Technologies GmbH, a joint venture between ElringKlinger and Plastic Omnium, aims to tap into the global market for fuel cell stacks and components. We have also launched a strategic partnership with Airbus to further develop fuel cell technology for aviation.

ELECTRIC DRIVE UNITS



In this area, our customers benefit from the combined expertise of ElringKlinger and our strategic partner hofer powertrain. Our range covers everything from solutions for high-volume production to small batches for standard applications or applications in the luxury and performance segments. In addition to e-engines, gearboxes, and power electronics, this also includes control software, thermal management, and safety concepts.



DYNAMIC PRECISION PARTS

Disc carriers, planetary carriers, sheet packages and brake disc carriers from ElringKlinger are mainly used in the gearbox, powertrain, and braking system of vehicles with electric engines, hybrid technology, or combustion engines. Efficiently produced, supplied ready for installation, of the highest quality, and with a weight reduction of up to 50 percent.

LIGHTWEIGHTING AND ELASTOMER TECHNOLOGY



Every gram counts. Lighter materials (fiber-reinforced plastics, thermoplastics and thermosetting plastics, organic sheet materials, and metallic materials such as aluminum and magnesium) are combined with state-of-the-art manufacturing processes. This opens up the possibility of integrating more functions, with the resulting benefits for the customer in terms of a reduction in the total number of parts. Customized lightweight components from ElringKlinger can be used anywhere in the vehicle, for example cockpit cross-car beams, door modules, underbody shielding, or engine mounts.

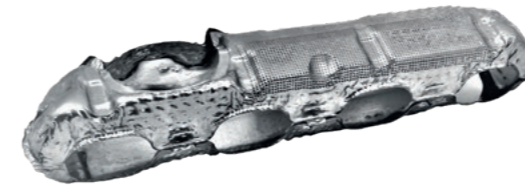


SEALING SYSTEMS

ElringKlinger deals with the numerous sealing tasks in engines, gearboxes, exhaust systems and auxiliary units, and in the bodywork and chassis area with customized, efficient sealing systems. Materials and designs are perfectly matched to the specific requirements. What's more, it is possible to integrate additional functions such as heat shields, filters, sensors, and pre-assembly elements. For maximum safety, performance, and economy.



“Changes are always an opportunity to do something even better.”



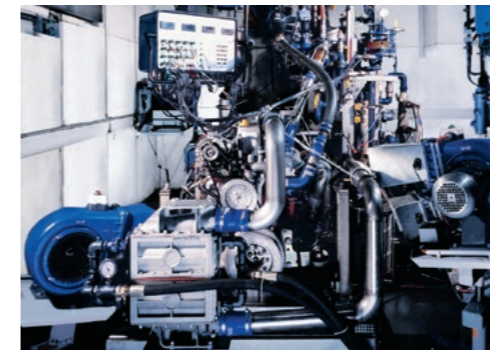
SHIELDING SYSTEMS

For any application point in the entire vehicle – from the underbody, trunk, spare wheel, exhaust manifold to the turbocharger – ElringKlinger offers the right shielding system in terms of temperature management, acoustic behavior, vehicle safety, electromagnetic compatibility, and aerodynamics. The focus here is on fuel economy, emission reduction, noise reduction, and safety aspects.



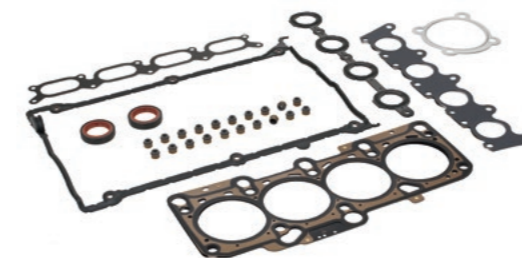
COMPONENTS MADE OF HIGH-PERFORMANCE PLASTICS

Our subsidiary ElringKlinger Kunststofftechnik GmbH specializes in innovative gaskets, construction elements, assemblies, and modules made of PTFE, PTFE compounds, and other materials. In doing so, it can draw on many years of application and processing know-how in almost all industries. Besides the automotive industry, these include medical technology, mechanical engineering, electrical engineering, chemical and apparatus engineering, and food technology.



ENGINE DEVELOPMENT SERVICES

Engine testing and development, engine trials, engine tests and the optimization of engines, exhaust tracts, hybrid and electric drives are among the services offered by our subsidiary ElringKlinger Motortechnik GmbH. Carried out in the vehicle laboratory, on modern dynamic test benches, and in test driving on roads. For maximum safety, efficiency, and reduced development times.



ELRING™ SPARE PARTS

For the professional repair of engines, gearboxes, exhaust systems and auxiliary units, we supply an extensive range of spare parts under the brand name “Elring™ – Das Original”, including gaskets, gasket sets and other components. We also offer comprehensive service, technical training courses and much more. Elring™ products for passenger cars and commercial vehicles are available in over 140 countries around the world.

COMBINED KNOW-HOW

EXPERTISE IS OUR MIDDLE NAME.

Always questioning the tried and tested, refusing to settle for standards that have been achieved. This has always been a hallmark of ElringKlinger. This is where we apply our unique expertise in materials, engineering, processes, and manufacturing methods. In addition, we invest around five percent of Group turnover in research and development each year.

EVERYTHING FROM A SINGLE SOURCE

Short development cycles, the complex interaction of all components, and exacting demands in terms of cost-effectiveness and sustainability make an integrated approach essential. This is an important factor in ElringKlinger's success, as everything from the initial concept to the finished product comes from a single source. For us, system expertise means being a pioneer, creating space for development, and achieving our goals more quickly.

That's why when it comes to innovative production concepts, for example, we place a lot of importance on our own process development and the associated accumulation of expertise. By closely integrating development, prototype construction, and series production, an optimal level of quality can be achieved immediately on start of production.

GOOD TO KNOW

We want to create scope for our customers to achieve goals more quickly and further advance sustainable mobility. That's why we always have the entire system in mind and make targeted use of our know-how and innovative strength to realize optimal product solutions.



SYSTEM EXPERTISE GIVES US THE EDGE

Our core competences include stamping, embossing, forming and coating metal, plastic injection molding, and the processing of high-performance plastics. We are also able to combine a large number of different components into a single assembly with high process reliability. Another core competence is tooling technology, as we design and manufacture a large proportion of the tools we use ourselves in our in-house tool shop. In the area of plastic injection molding, for example, which plays a major role in lightweight components in particular: our competence center in Lenningen, Germany has been specializing in mold and tool making and the processing of fiber composites for over 50 years.

The rapid transformation toward e-mobility makes industrialization processes very demanding, both technically and in terms of time. This is where we excel with our three technology centers for e-mobility, which have all the relevant manufacturing processes at their disposal to realize prototypes and pilot series in the field of alternative drive technologies. The centers enable new developments to be tested in practice at a very early stage and further optimized for series production. Sample phases for customers can be run through quickly and associated manufacturing processes developed in parallel.

DEVELOPING VISIONS

MOBILITY IS MOVING THE WORLD.

CHALLENGES SPUR US ON TO PERFORM AT OUR BEST

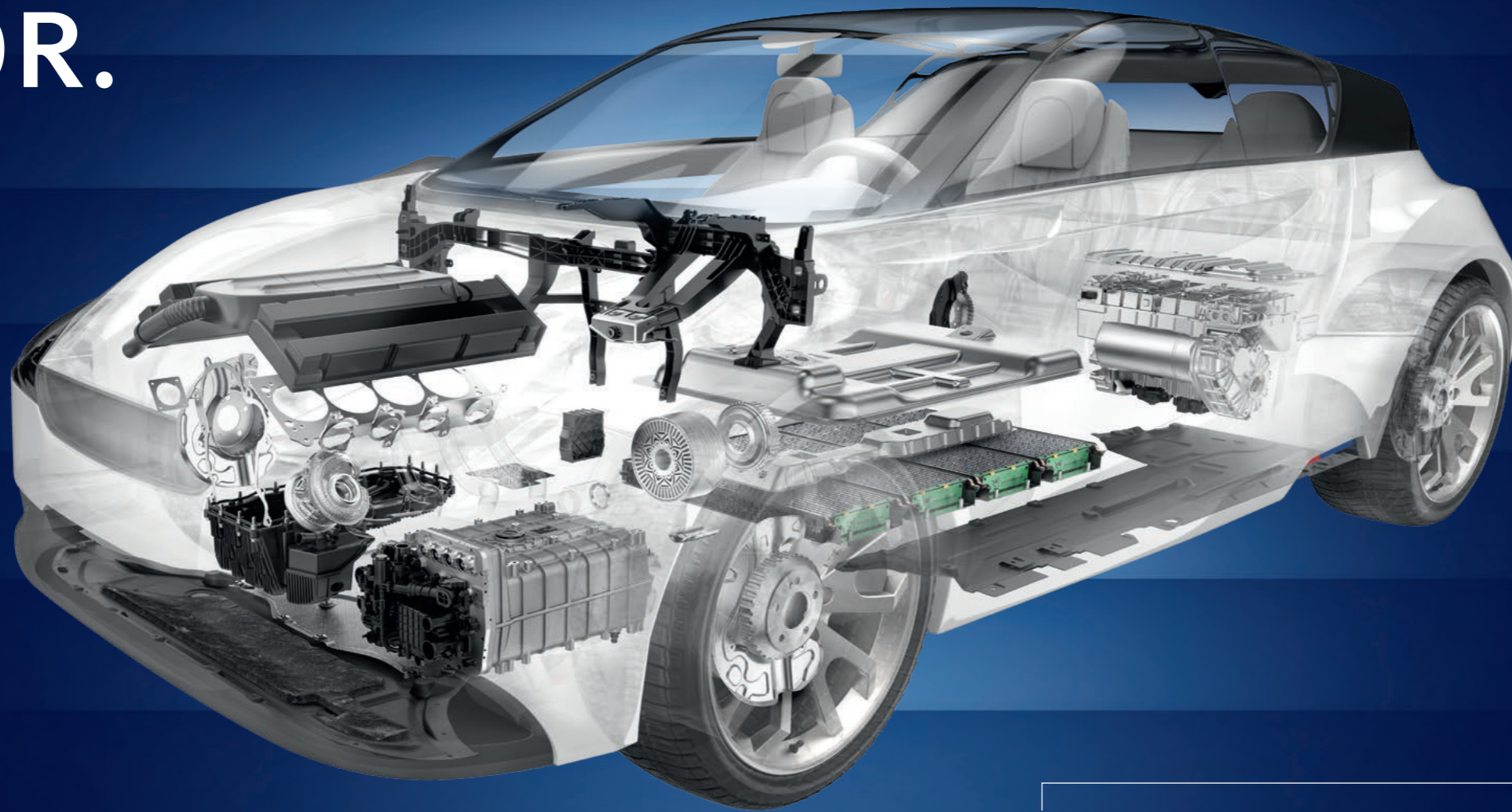
Mobility is a fundamental human need. It is essential for freedom, self-realization, independence, and exchange across borders. Participating in social and cultural life, bridging distances, transporting goods, advancing the economy and prosperity, expanding horizons – none of these are conceivable without mobility.

We are actively involved in the transformation process in the automotive industry and other sectors because we supply key components and systems for mobility both now and in the future. Challenges spur us on to perform at our best. Always being one step ahead, shortening development times and working with our customers to achieve progressive product solutions – these are our strengths, this is our aspiration.

“Moving people is what moves us: we want to develop mobility in all its facets and make it as resource-efficient, environmentally friendly, safe, convenient, and efficient as possible.”



OUR EXPERTISE IN THE AUTOMOTIVE SECTOR.



Modern vehicles are fitted with a large number of ElringKlinger components. Some of these possible applications are illustrated overleaf.



ELECTRIFIED DRIVE

FUEL CELL TECHNOLOGY

including complete PEMFC modules with peripheral components

ELECTRIC DRIVE UNITS

including the four variants: coaxial EDUs, offset EDUs, high performance torque vectoring EDUs, and high compact torque vectoring EDUs

LIGHTWEIGHTING AND ELASTOMER TECHNOLOGY

e.g. engine and assembly supports

BATTERY TECHNOLOGY

including lithium-ion battery modules and energy storage systems

DYNAMIC PRECISION PARTS

especially disc carriers, planetary carriers and differential cages for gearboxes

DEVELOPMENT SERVICES

of ElringKlinger Motortechnik GmbH

SEALING SYSTEMS

including elastomer and metal-elastomer gaskets for large and very large battery housings, deep-drawn covers with seals such as inverters or service covers, Metaloseal™ housing gaskets and ElroSeal™ shaft sealing rings for electric motors, actuators and compressors

SHIELDING SYSTEMS

e.g. ElroShield™ M with EMS shielding, also ElroActive™ for hybrid drives for (pre-) conditioning of catalytic converter/particle filter/SCR systems using electric heating of exhaust gas components including shielding system

CONVENTIONAL DRIVE & EXHAUST SYSTEM

LIGHTWEIGHTING AND ELASTOMER TECHNOLOGY

including plastic modules, e.g. oil pans, oil separation systems, dry sump oil tanks, cylinder-head covers and transmission pistons

SEALING SYSTEMS

including Metaloflex™ or metal-elastomer cylinder-head gaskets, Metaloseal™ gaskets e.g. for exhaust gas returns including rescue filters, transmission control plates, metal-elastomer gaskets e.g. for the crank housing, elastomer gaskets e.g. for the intake manifold, coolant applications and oil trays; transmission composite pistons and spring-loaded PTFE groove rings for separation of media in high-pressure injection pumps

SHIELDING SYSTEMS

ElroShield™ S, M or D as thermal or acoustic protection for components, e.g. on the exhaust manifold or turbocharger

DYNAMIC PRECISION PARTS

especially disk carriers, planetary carriers and differential cages for gearboxes

DEVELOPMENT SERVICES

of ElringKlinger Motortechnik GmbH

BODYWORK & INTERIOR

LIGHTWEIGHTING AND ELASTOMER TECHNOLOGY

e.g. cockpit cross-car beams and front-end carriers/adapters using plastic-metal hybrid technology and door modules, module supports, seat structures and crash elements using thermoplastic composite hybrid technology

SEALING SYSTEMS

including memory packings in headlight cleaning systems or in air pumps for active seats, also complete pistons in compressors for air suspension

SHIELDING SYSTEMS

e.g. ElroCoustic™ trunk covers for noise and vibration damping

CHASSIS, BRAKING SYSTEM & UNDERBODY

LIGHTWEIGHTING AND ELASTOMER TECHNOLOGY

e.g. (underbody) shielding made of fiber composite materials

SEALING SYSTEMS

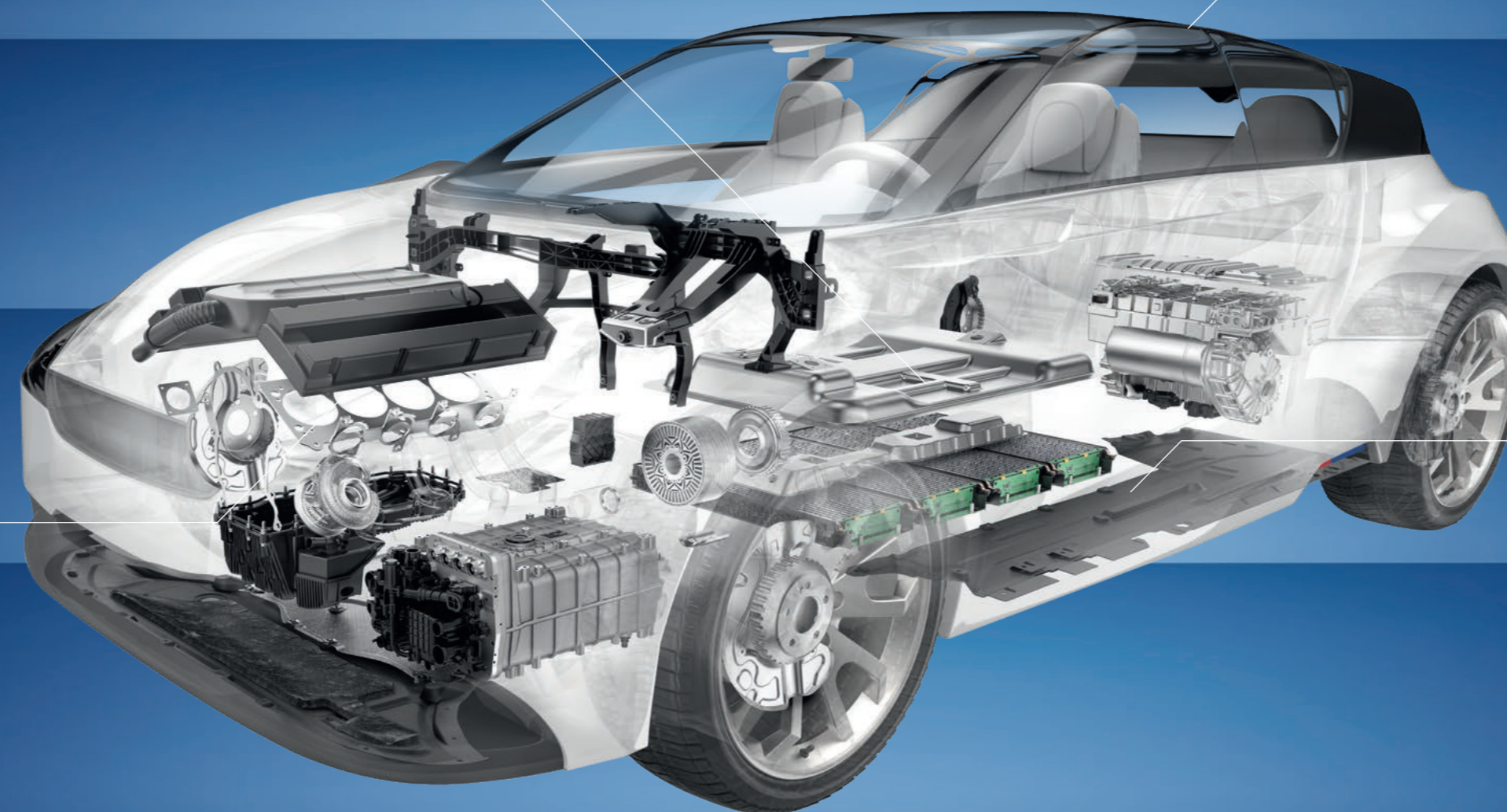
including PTFE guide bands for brake applications and PTFE membranes for pumps and valve applications

SHIELDING SYSTEMS

including ElroShield™ M and S for underbody shielding and ElroCoustic™ wheel arch linings

DYNAMIC PRECISION PARTS

especially brake disc carriers



FROM VISION TO REALITY

E-MOBILITY AS A MEGATREND.

Electric drives continue to gain momentum worldwide. Everyone is talking about climate protection. Forward-looking mobility must be environmentally friendly and resource-efficient, networked, and safe.

SUSTAINABLE SOLUTIONS IN SERIES PRODUCTION

The crucial technologies for the electrification of the powertrain are the battery and fuel cell. ElringKlinger set the right course a good 20 years ago and has the necessary expertise in development, industrialization, and manufacturing in both areas to offer mature systems and components suitable for series production. As a standard solution or custom-designed. As a modular solution or as individual parts.

Together with hofer powertrain, we are also a system partner for electric drive units (EDUs), which include the electric engine, gearbox, power electronics, control software, thermal management, and safety concepts.

Joint venture EKPO Fuel Cell Technologies GmbH combines the expertise of ElringKlinger and French automotive supplier Plastic Omnium. Its aim is to develop and mass-produce high-performance fuel cell stacks to further advance carbon-neutral mobility – whether by road, rail, water, or in open terrain.

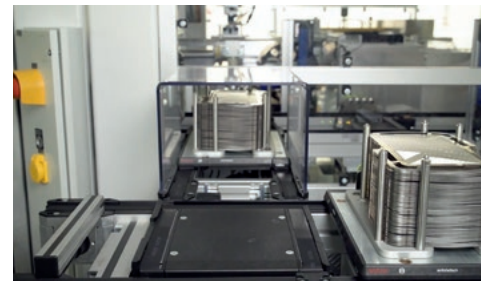
The aviation industry is also working to make mobility as climate-neutral as possible in the future. As part of our strategic partnership with aerospace company Airbus, we are looking to further develop and validate fuel cell technology for aviation.

Other strategic partnerships, for example with Dutch vehicle manufacturer VDL Bus & Coach BV, focus on the development and industrialization of fuel cell stacks and systems for mobile and stationary applications.

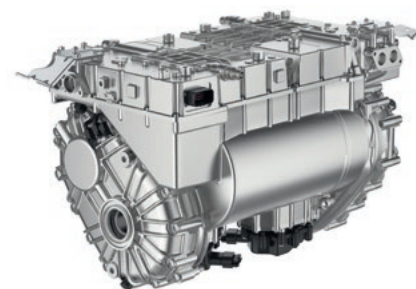
Our development and testing activities in battery and fuel cell technology are concentrated in specially established centers in Dettingen/Erms and Neuffen in Germany and Suzhou in China.



EKPO Fuel Cell Technologies offers fuel cell stacks with the highest power density in the market.



In our joint venture hpp we develop and manufacture highly efficient electric drive units (EDUs) for hybrid and pure e-vehicles. The heart of the system is the electric engine. The first series production projects for electric engines made by ElringKlinger are already underway.



SUCCESS ACROSS THE BOARD

WE CAN ALSO DO NON-AUTOMOTIVE.

ElringKlinger components and systems are also successfully used outside the traditional automotive sector. Our innovative strength, efficiency, and quality are in demand in many industries.

PRODUCTS WITH POTENTIAL

We continue to develop in the areas around our core competences. Gaskets, shielding systems, lightweight components, battery and fuel cell technology, and drive train components – the areas of application are numerous and include rail traffic, aerospace, marine applications, logistics, energy supply, domestic appliances, mobile homes, and construction, municipal and agricultural vehicles. Added to this are components made from high-performance plastics produced by our subsidiary ElringKlinger Kunststofftechnik such as those for medical technology, chemical and apparatus engineering, and food technology. With its ThermoGenius™ Water, ElringKlinger Kunststofftechnik also offers a highly efficient, environmentally friendly water heat exchanger for supplying energy to houseboats or buildings near water.

EXAMPLES OF NON-AUTOMOTIVE APPLICATIONS

In mining vehicles, ships or power plants, our metal-elastomer cylinder-head gaskets seal drive units of up to 10,000 kW. Plastic modules are also used here. Cylinder-head and oil pan gaskets from ElringKlinger are among the products used in small aircraft. As standard flange joints, for example in petrochemical plants, Volumesoftseal flat gaskets provide a long-lasting seal. ElroShield™ shielding parts are used in ovens, heating devices, etc. to deliver low energy consumption or protect against electromagnetic waves in microwave ovens. Air conditioning units, heat pumps, and small power plants are further areas of application. ElringKlinger technologies are impressive in all areas.

Free energy for houseboats as well as houses and apartment complexes near water – easy and quick to implement with the ThermoGenius™ Water heat exchanger from ElringKlinger Kunststofftechnik.



ElringKlinger's PEMFC stack modules are designed with additional system functionalities and combine top performance with a highly robust structure. They can, in addition to passenger cars and trucks, also be used in trains and other scenarios, e.g., to power the drive as a permanent charger for the traction battery.





“Growing profitably while creating sustainable value is not only compatible, but must also be the focus of all entrepreneurial activity.”

TAKING RESPONSIBILITY

SUSTAINABILITY MEANS FUTURE VIABILITY.

ElringKlinger's corporate culture is based on the combination of long-term economic success with environmental protection and social responsibility. Sustainability is a principle shared across all areas of our business.

CORPORATE SUCCESS AND RESPONSIBILITY

ElringKlinger is conscious of its responsibility towards its employees, customers, business partners, shareholders, society, and the environment. That is why, in addition to economic considerations, we always include ecological and social concerns in our decision-making processes. We have defined four spheres of activity in this context: Products and Innovations, Environment and Quality, Employees, and Social Commitment.

Our product portfolio thus contributes directly to the reduction of pollutant emissions and the further development of sustainable mobility concepts. ElringKlinger has a certified environmental management system in place throughout the Group. We also continuously optimize internal processes and invest in modern, intelligent, and resource-efficient production systems, both to keep emissions at all production sites as low as possible and to ensure high quality standards. Our ambition is to achieve carbon neutrality by 2030.

Employee satisfaction is our top priority. Appreciation, respect, opportunities for further development, diversity and equal opportunities, and a motivating working environment are essential elements of our corporate policy.

As an active member of society, it is important for us to make a positive contribution, especially in the regions and communities where we operate. In those areas, we are committed to social institutions and support climate protection campaigns while also promoting investments in science and education. ElringKlinger also engages with social issues indirectly through the Paul Lechler Foundation. The Lechler families behind the Foundation are also the main shareholders of ElringKlinger AG, meaning that year after year, a portion of the company's profits flows into the Paul Lechler Foundation. For us it is clear that corporate success and responsibility are inseparable.

MOVING FORWARD TOGETHER

OUR EMPLOYEES ARE OUR DRIVING FORCE.

Sophisticated products and services, a strong market and customer focus, and bold, forward-looking decisions are among our key strengths. However, the most important factor in our success is our workforce of some 10,000 employees.

GLOBAL PLAYER AND ATTRACTIVE EMPLOYER

Our corporate culture is characterized by open, proactive communication. It thrives on flat hierarchies and cooperation in international teams. Our employees provide creative ideas and expert input, and benefit from a wide range of training and development opportunities, appropriate levels of pay, flexible working time models, and first-class development opportunities.

Whether regionally, nationally, Europe-wide or across all national borders, we offer people the chance to take on exciting tasks and make a career for themselves. Our aim: to grow together through challenges and shape the future.



“Making
things move.”

Four out of around 10,000 people in the ElringKlinger Group, who continue to write our success story with their commitment, ideas, and actions.



ALWAYS IN MOTION

ELRINGKLINGER: THE NUMBERS.

FOUNDATION

1879

was the year in which Paul Lechler founded a trading company for technical products, which would later become ElringKlinger AG.



2000

In 2000, we launched our activities in the field of e-mobility.

45

LOCATIONS

are operated by the ElringKlinger Group in Europe, America, Africa, and Asia.

47%

is our equity ratio (December 31, 2021).

Thinking ahead, developing solutions, breaking new ground, taking responsibility.

5%

of Group turnover is invested in research and development on average.

THIS IS WHAT SETS US APART – AND HAS DONE SO FOR MORE THAN 140 YEARS.

1,624

MILLION EUROS was generated by ElringKlinger in the 2021 financial year.



OUR PORTFOLIO. FOR YOUR SUCCESS:

- + Battery technology
- + Fuel cell technology
- + Electric drive units
- + E-mobility components
- + Lightweighting and elastomer technology
- + Sealing systems
- + Shielding systems
- + Components made of high-performance plastics
- + Dynamic precision parts
- + Tooling technology
- + Engine development services
- + Elring™ spare parts



2030

IS THE YEAR BY WHICH ELRINGKLINGER AIMS TO ACHIEVE CARBON NEUTRALITY.

ElringKlinger AG

Max-Eyth-Straße 2
72581 Dettingen/Erms
Germany
Phone +49 7123 724-0
E-mail info@elringklinger.com

www.elringklinger.com

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