

RIBE® Fastening Systems

INNOVATIVE FASTENING SYSTEMS







As a founding member of the Global Fastener Alliance (GFA) we ensure the global availability of our fastening solutions.

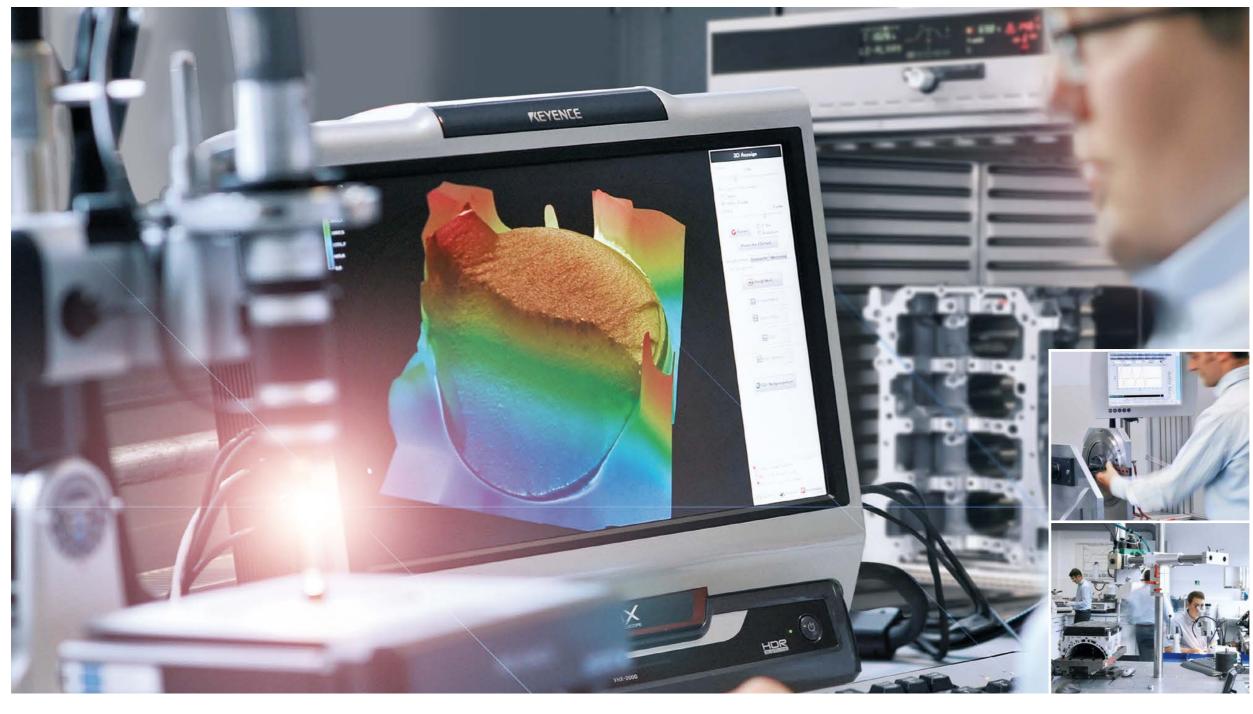
The structure of an owner-operated family company and an unwavering focus on R&D investments with above-average returns help secure our production sites and create tomorrow's innovations.

Experience and innovative spirit – for optimum solutions of tomorrow

RIBE® – WE HAVE THE ANSWERS TO YOUR CHALLENGES

Lightweight design – regardless of the drive concept – downsizing is absolutely imperative in order to sustainably reduce CO₂ emissions. Highly stressed fasteners and the use of new materials and material combinations place new demands on our developments. And we are already working on fastening solutions to address these challenges. Our experienced and committed employees, a comprehensive portfolio of products and technologies and over 100 years full of innovations are the basis for our solutions to the challenges of tomorrow. Our development services and expertise in a wide range of production technologies have helped establish us as a technology leader in a variety of application areas in the global market.

Production sites in Germany, Slovakia, the US and Asia and cooperation agreements with our partners in the Global Fastener Alliance (GFA) enable us to ensure the global availability of our products and services.



Resource-friendly products

RIBE® expertise in the

development for raw material and weight savings.

Certified development expertise

Lab with testing equipment to ensure that parts perform optimally in their installed state

Trust and safety throughout the entire product life cycle

PERFECTLY DEVELOPED – FOR SOLUTIONS TO YOUR REQUIREMENTS

We are more than just a highly qualified producer of fastening elements and systems, because we believe our task is in the development of new products and application engineering design for optimally customized and coordinated solutions. We use our knowledge to support your development team throughout every phase of your project.

Our engineers execute calculations and design thread-forming and metric bolts for custom applications all the way to maximum strength and special materials requirements. We select or develop the optimum surfaces, define the appropriate assembly parameters and perform application engineering tests on your components. All with a single aim: Optimizing our customers functionality and installation costs.



Consistently high product quality

Customer audits also rate our manufacturing and production quality as outstanding.

Manufacturing expertise thanks to coordinated processes

The entire production chain right through to logistics is structured according to "lean production" principles – for maximum productivity.

Maximum quality – along the entire value chain

O PPM IS AN ACHIEVABLE TARGET FOR US

Our consistently high product quality exhibit that our development and manufacturing strategy is right on track – reviews in customer audits and numerous awards confirm this. After all, for us quality means a comprehensive view of every element in value creation. From preparing an offer and all of the steps in development to series production and logistics.

But for us quality also means efficiently using resources and technologies. One example of this is the highly specialized production line for high-strength aluminum bolts. This line – which is separated from all of our other products – is built exclusively for aluminum production and used to manufacture our global line of RIBE-Aluform® products.



RIBE® Fastening Systems – Innovations for tomorrow and beyond

OUR ANSWER TO HIGHLY STRESSED **FASTENERS**







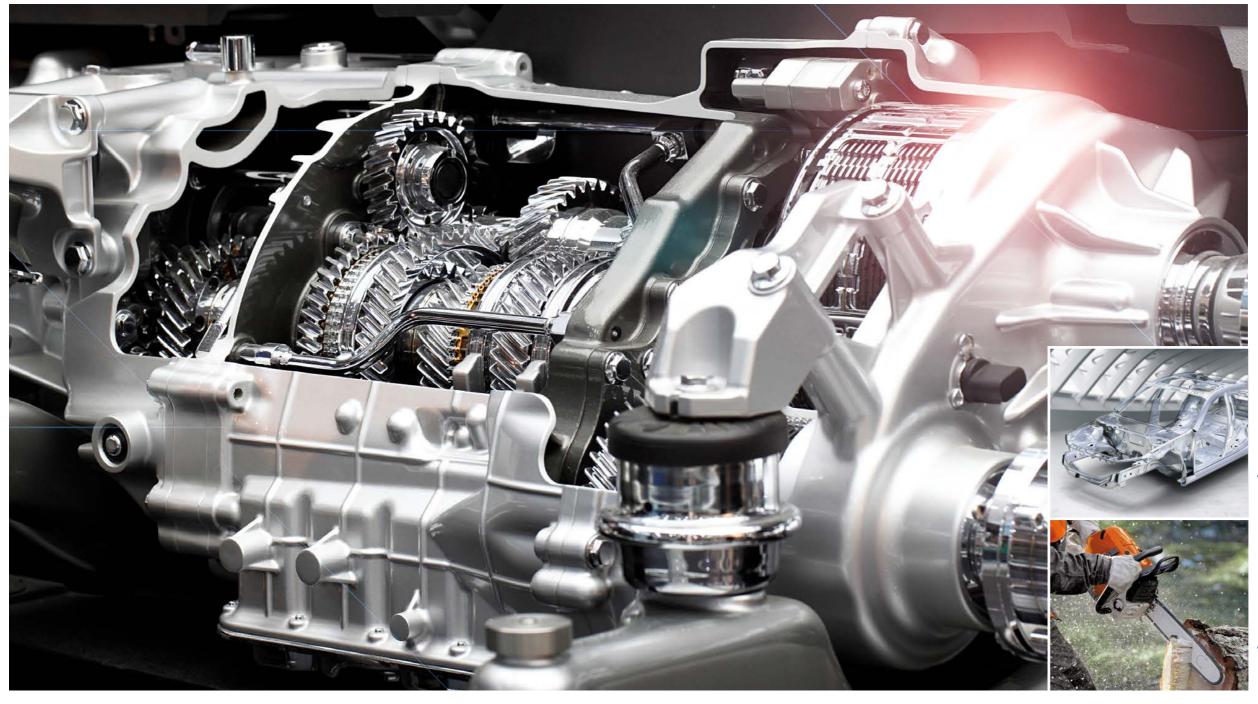


Our core expertise is aimed at developing and manufacturing complex, functional, mechanical fastening elements and systems. We see ourselves as a full line supplier of special bolts and cold formed parts with a broad spectrum of dimensions. We offer high and maximum strength engine bolts in strength classes of up to 15.9 to meet all the demands of engine downsizing for increasingly compact, densely packed combustion engines.

For complex application scenarios.

For optimum downsizing and cost optimization.

Our development expertise in tool design and our leading technological forming capabilities enable us to produce heavy-duty fastening solutions. Because it is one of the key requirements for consistently high quality, we always perform heat treatment in-house at our sites in Schwabach and Dubnica (Slovakia) on systems that are often engineered especially for and with us. Our plant in Nitra (Slovakia) also offers us the flexibility to achieve cost-effective small series and machining operations.



Reduces recycling costs later on.

♦ Weight optimization

Thanks to light, high-strength

RIBE® Fastening Systems – Innovations for tomorrow and beyond

HIGH-STRENGTH ALUMINUM BOLTS FOR YOUR IDEAL WEIGHT





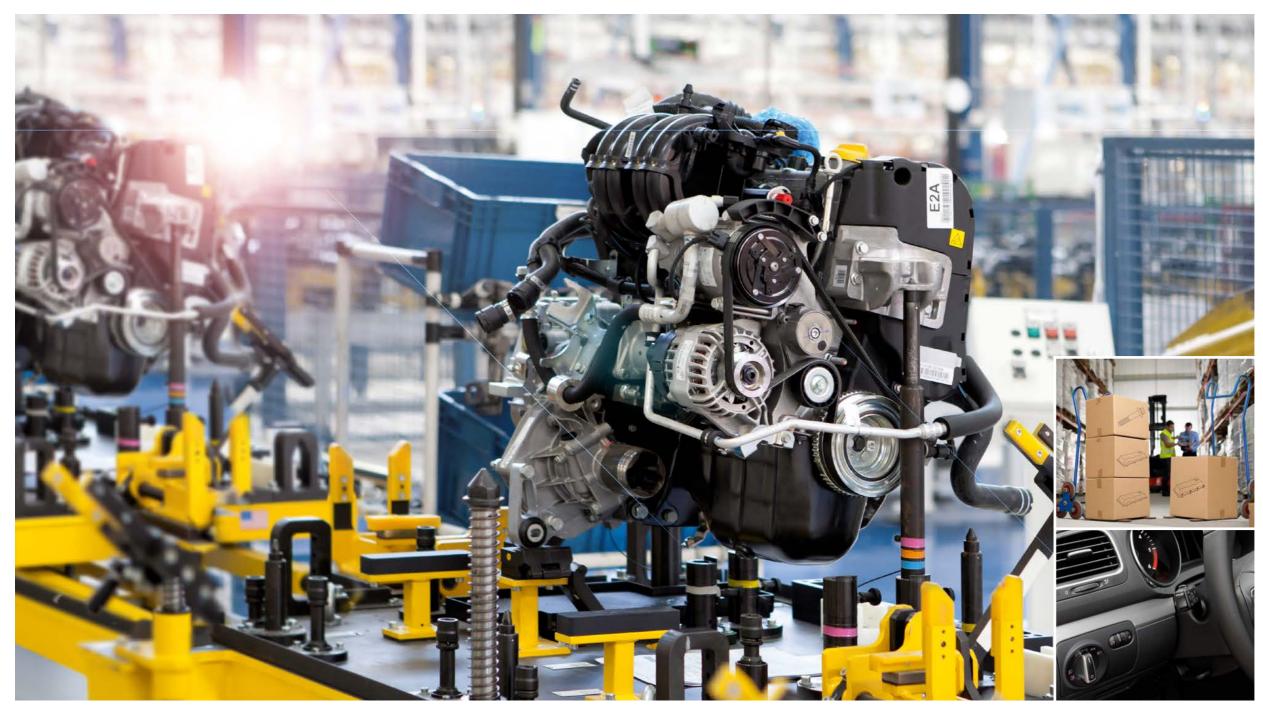




Light alloys are being used more and more frequently in every area of engineering. However, they require specially designed, material-adapted joining technologies and elements.

With RIBE-Aluform®, RIBE® is the world's technology leader in high strength aluminum bolts. This is because RIBE® fastening elements made from aluminum alloys paired with magnesium or aluminum offer significant advantages over steel bolts. Some of these advantages include dramatic weight savings of over 65%, the high strength of the connection, the ability to retain prestressing force in the operational state, the avoidance of galvanic corrosion and tremendous cost-savings potential.

Technical innovations, years of experience and continuous advancements in materials, surfaces and production technologies are the reason for the wideranging, constantly expanding RIBE-Aluform® applications in the automotive engineering and industrial sectors.



Optimizes functional advantages and logistics costs.

Can be integrated into virtually every component.

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PRE-ASSEMBLED IS SIMPLY MORE ROBUST AND AFFORDABLE



RIFIXX® is our answer to customers' demands for reduced costs and functional advantages in final assembly. RIFIXX® is a combination of bolt and sleeve that is used in plastic and metal. It is pre-assembled in the respective assembly, absolutely secure and thus saves expensive worksteps in final assembly. More compact bolt connections and RIFIXX® made of aluminum also enable weight savings. Thus RIFIXX® offers clear weight and cost advantages along with significant quality improvements.

RIFIXX® also cuts procurement and logistics costs, because only one element needs to be ordered and delivered to the assembly line. Safe-mounting is assured, since the elements cannot be lost. And RIFIXX® not only joins components, it also performs additional functions such as spacing, vibration damping or custom features.



✓ Self-tapping bolts

Reduce process costs in countless components.

♦ Optimized fastening solutions

Adapted to many different applica-

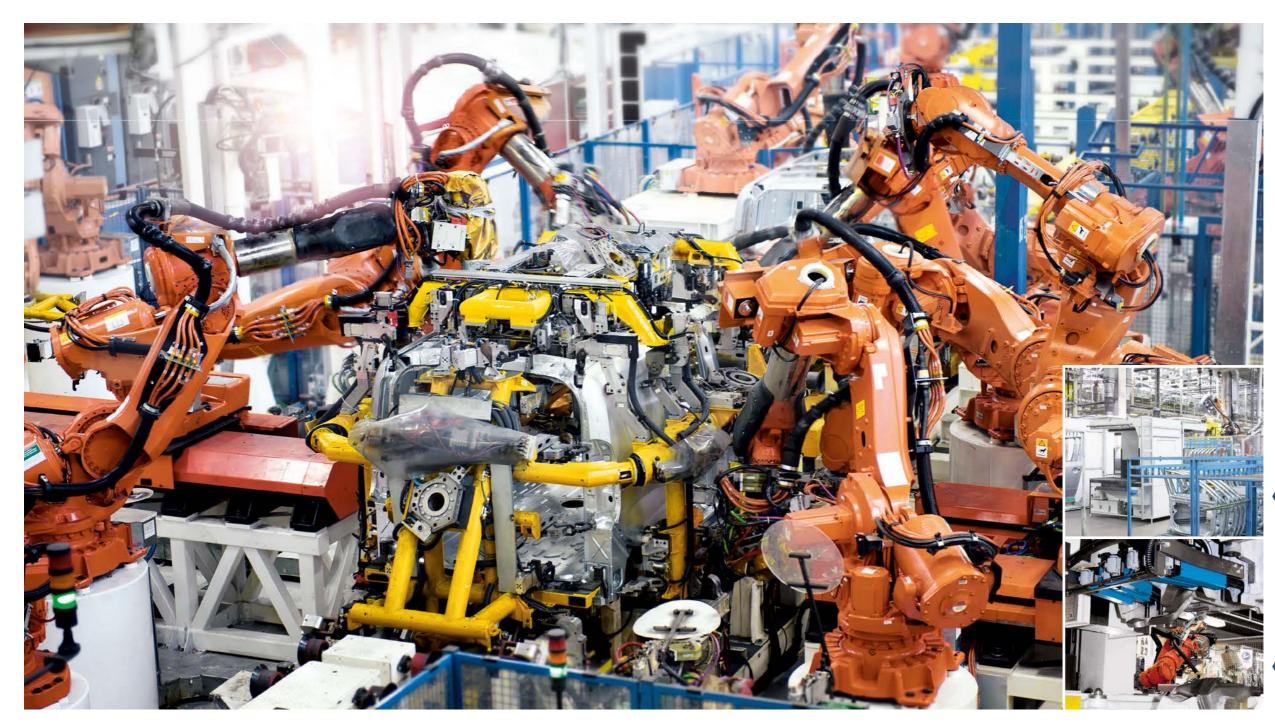
RIBE® Fastening Systems – Innovations for tomorrow and beyond

SAVE YOUR PRODUCTION FROM HAVING TO CUT THREADS



Self-tapping bolts create their own nut thread during assembly by forming the nut material. This makes it possible to bolt them directly into components without pre-existing nut threads, which drastically reduces the overall costs of the mechanical connections. Above all, self-tapping bolts lower process costs, because the thread cutting or thread forming workstep is no longer necessary and there are no chips to get in the way of working.

RIBE® self-tapping bolts were specially designed to meet the demands of a wide range of usage scenarios and materials and are available in a variety of thread geometries (TRIFORM™, TAPTITE®), materials and surfaces.



∢ RIFAST® systems engineering

Offers economic advantages in body frameworks.

RIFAST® processing technology used with a press

For direct integration of the joining element in the

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FUNCTIONAL ADVANTAGES FOR YOUR BODYWORK — PROCESS-INTEGRATED









RIFAST® systems engineering offers economic advantages over the use of welding elements, not only due to the process-integrated workmanship, but also in the areas of logistics, quality and energy consumption. Benefits that our customers in the US and China truly appreciate – in addition to the local support we provide through our subsidiaries.

Growing demands on press plants and body frameworks for function and process optimization paired with the need to reduce costs and component requirements including strength, material selection and weight savings call for innovative, integrated system solutions.

Our functional, design-based consulting, our systems engineering expertise and our knowledge of fastening elements make us one of the leading system suppliers in the sheet metal joining technology segment for automated joining element processing.

YOUR REQUIREMENT – OUR SOLUTION

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WEIGHT SAVINGS	7	F	Ĵ	7	Ĵ	0	
DOWNSIZING	7	1		1			
PRODUCTION COST SAVINGS		7			F	20	
OPTIMIZED QUALITY	7	7	P		F	20	
MODULAR CAPABILITY	7	7		F	F	20	
LOGISTICS OPTIMIZATION	7					20	
ELECTRICAL CONDUCTIVITY		7				20	
MULTI-MATERIAL CONCEPTS		1		1	- Ja	?	

RIBE® Fastening Systems

LOCATIONS AND PARTNERS OF THE RIBE® GROUP WORLDWIDE



WE CONNECT THE WORLD



RICHARD BERGNER VERBINDUNGSTECHNIK GMBH & CO. KG