

RIBE[®]


VERBINDUNGSTECHNIK



RIFIXX[®]
READY TO FIT

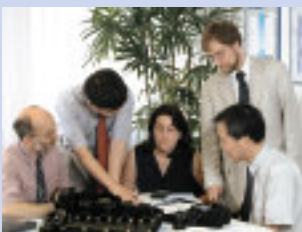


RIBE — A family business with tradition.

RIBE is one of the leading international suppliers of mechanical fasteners, technical springs and electrical fittings. The RIBE Group employs a workforce of over 1,300 at nine locations and produces a total sales volume of over 100 million euros.

Know-how leadership, global presence, highly motivated employees and a broad product and technology portfolio are the key factors that make RIBE a powerful development partner for international companies. Most of our customers are global players from the automotive, electrical, electronic and mechanical engineering industries. We are their competent development partner for innovative system solutions with top engineering capabilities, optimum quality and efficient cost structures.

RIBE is a certified member company of the Global Fastener Alliance (GFA), a worldwide network of independent, engineering-oriented manufacturers of fasteners. This partnership enables us to support our customers in localization of application engineering and logistic assignments at home and abroad.



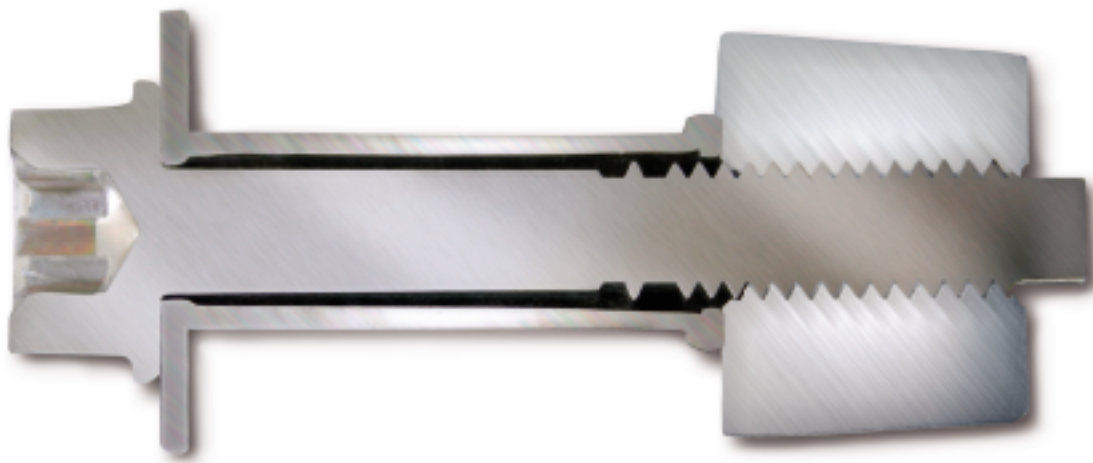
RIBE – Your development partner for fastening systems.



We supply the international automotive, aerospace and capital goods industries and see ourselves as a competent development partner for innovative and complete fastening solutions. Our development work concentrates on solutions for particularly difficult applications and on the use of mechanical fasteners to meet exacting requirements.

A special highlight of our product portfolio is the RIFIXX® fastening system. This unique screw combination for use with plastic and metal components is preassembled as captive element in the module to save costly working steps in final assembly. But the revolutionary RIFIXX® fastening system does a lot more.

RIFIXX® – Small screw, big impact!



- Reduced
 - assembly costs
 - assembly time
- Less variety of parts
- High assembly reliability
- Lower assembly effort
- Integrated tolerance
- Captive parts
- High load-bearing joint
- Reduced logistic costs
- No thread cutting
- Optimized product design
- Elimination of mistakes
- Good transport and storage

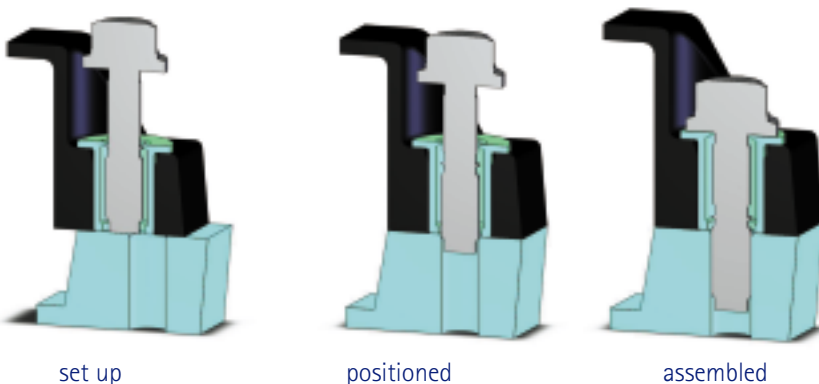
The innovative **RIFIXX**[®]-system.



The RIFIXX[®] system has been developed for fastening a wide range of modules. This screw-sleeve combination is mounted as a captive element at the assembly position in the module. The RIFIXX[®] system meets the most demanding requirements in terms of load-bearing capacity, corrosion resistance and ease of assembly.

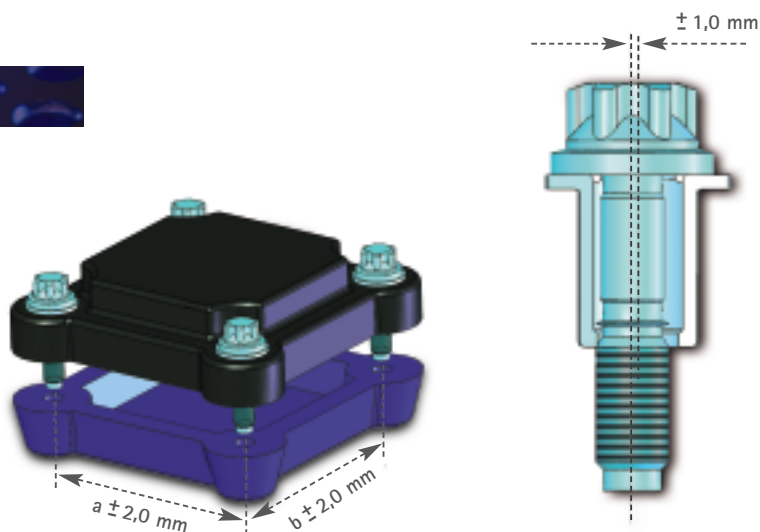
High assembly reliability

RIFIXX[®] is designed so that the screw thread is clear of the fastening plane on dismantled components. This also prevents the screw tilting during assembly of screwed connections. RIFIXX[®] even allows easy overhead assembly.



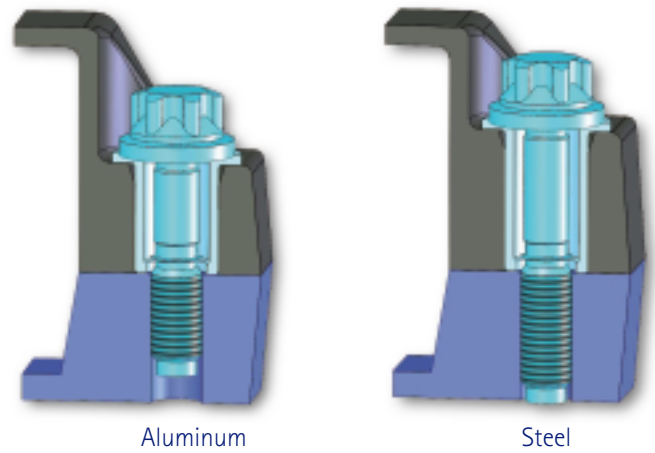
Integrated tolerance

Offset holes in production and deformation of the components to be fastened frequently cause assembly problems. The RIFIXX[®] system is designed to compensate these inaccuracies.



High load-bearing joint

The optimum dimensioning of the RIFIXX® joint ensures high prestressing force. Large bearing faces result in low surface pressure for screwing into alloy materials. The thread lengths are matched to the material properties to guarantee maximum load-bearing capacity and cost-effectiveness.

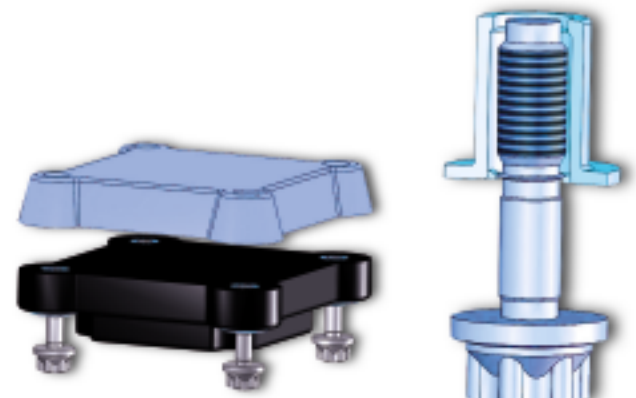


Aluminum

Steel

Guaranteed captive

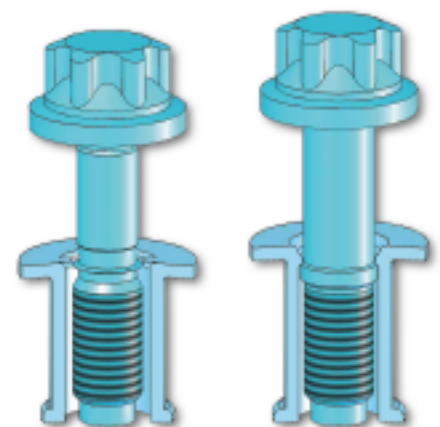
In components of metal materials, the sleeve provides the captive function. The ingenious design of the RIFIXX® system ensures that no screws are lost during delivery or assembly of the parts. Even overhead assembly is no problem



Overhead assembly

Compact designs

Modules fitted with RIFIXX® can be assembled with simple screw systems and no space is needed for feeding in fasteners. As the captive elements are extremely short and can be arranged close to the faces of the sleeve, the complex designs can be made to save space and costs (e.g. shorter sleeves and screws).



RIFIXX®

Competitor

The **RIFIXX**[®] fastening system is the ready-made

RIFIXX[®] screws can be designed with a wide range of head shapes and corrosion-resistant finishes. Both metric and self-forming threads are available to suit the application. Here are the three most important RIFIXX[®] elements:

RIFIXX[®]

RIFIXX[®] can be used for components of plastic or metal. When used with plastic components, the sleeve provides the captive function for the screw and transfers the pre-stressing force. In metal materials, the sleeve provides the captive function.



RIFIXX[®] Plus

RIFIXX[®] PLUS is used, for example, when an acoustically decoupled fastening is required to reduce noise by decoupling vibration in the construction. An extra elastomer part transfers the sealing force of the screw to the module flange and prevents the transfer of structure-borne noise.



Aluform RIFIXX[®]

ALUFORM[®] RIFIXX[®] is the aluminum version of RIFIXX[®] and RIFIXX[®] PLUS. The low weight offers considerable advantages. The substantially smaller modulus of elasticity increases the elasticity of the joint and thus reduces the prestressing force losses in case of settling. This version can be used with magnesium components without risk of contact corrosion.

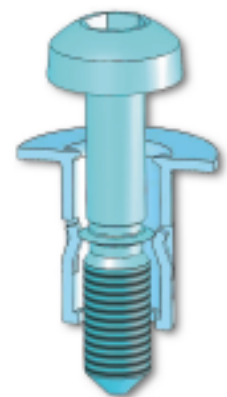


Our customers in the automotive industry and other industries also use RIFIXX® to solve their most difficult applications or when mechanical fasteners must be manufactured to exacting specifications. RIBE therefore specializes in screws that are regarded as still to be invented.

RIFIXX® with axial premounted screw as click system

The assembly of complex design parts such as vehicle engines increasingly demands fully equipped components. RIFIXX® with axially premounted fasteners contains all the necessary fastening elements for cost-effective and easy-to-handle final assembly.

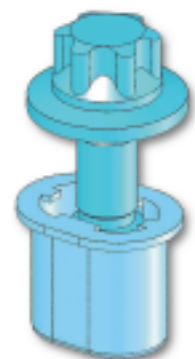
- For use under difficult assembly conditions, e.g. lack of space when feeding modules into the fastening plane from the side (V-engines)
- Fastening system with no additional elements
- No entangling of protruding screw ends



RIFIXX® with oval sleeve for elongated holes

We have developed RIFIXX® with an oval sleeve for components needing an extremely large offset tolerance.

- RIFIXX® as captive fastener for an extremely large tolerance



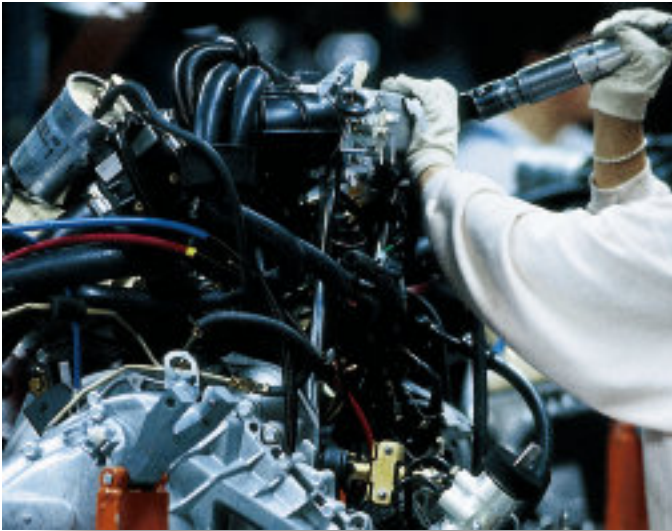
RIFIXX® with integrated sealing function

RIFIXX® can also incorporate the sealing function for "wet" screwed joints. This eliminates the need for extra seals and their costly assembly.

- Fewer parts
- Operating reliability



Tighten up on costs — with **RIFIXX®**



Real added value:

Cost-effectiveness is the measure of all things in the development of engineering solutions. The added value of modules fitted with RIFIXX® is soon apparent to the end customer and the car manufacturer, for example, can achieve substantial savings despite the extra initial costs of the component.

Easier storage and logistics

As the necessary fasteners are integrated into the respective module, the number of individual products to be stocked is reduced. The simplified purchasing and administration leads to significant savings over the otherwise usual storage and logistic costs, e.g. for car and system parts manufacturers.

Efficient production

The assembly of complex constructions becomes considerably simpler and more cost-effective if their components are already fitted with RIFIXX®. As it is no longer necessary to feed in the fasteners, the assembly line can be designed as a space-saving unit with simple handling and screwing systems. This reduces the probability of failure and increases the productivity of the system.

Cost-saving with light metals

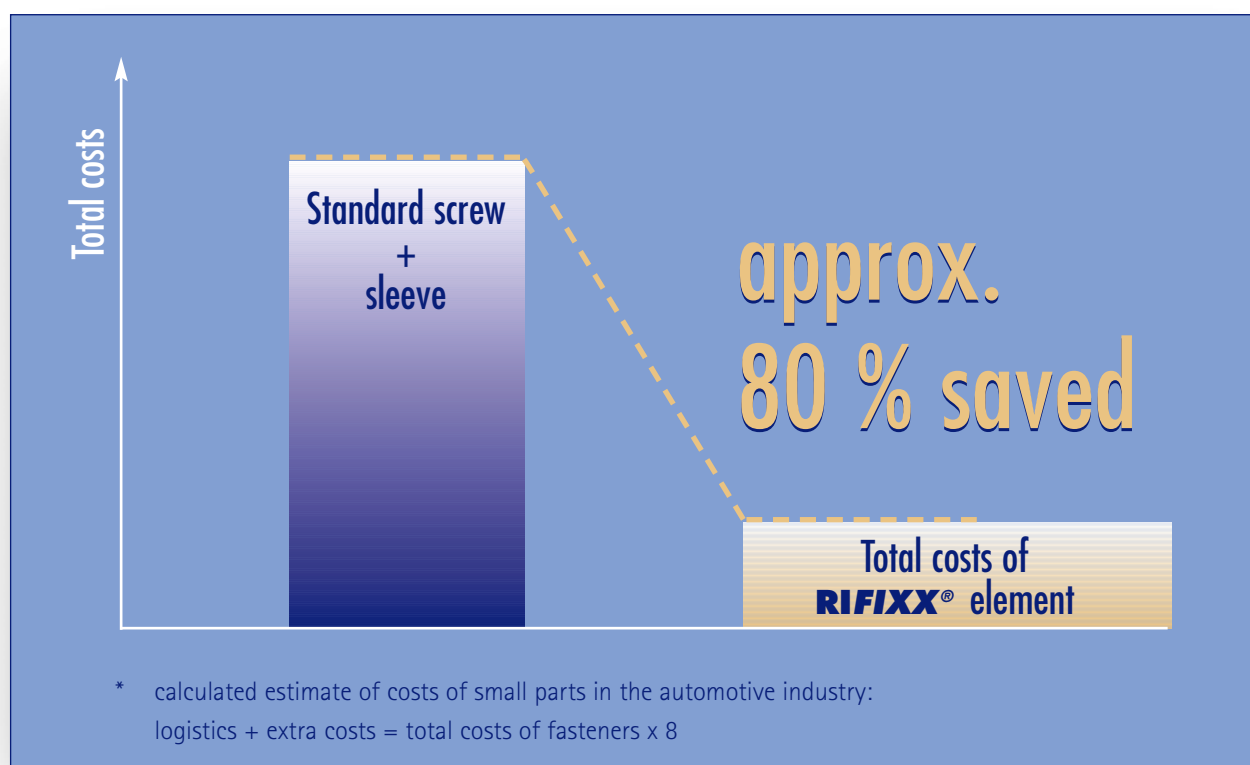
RIFIXX® saves costs in constructions of light metals like aluminum or magnesium. As the thread-forming screws (Triform) can be screwed directly into the precast holes, neither thread cutting nor c'sinks for the female thread are necessary.

Lower quality costs

RIFIXX® elements are given a 100 % final inspection (RIBE-Q 100). The components fitted with these parts need not be checked again in this respect. Assembly mistakes are not possible and there is no risk of extra costs or damage caused by screws falling into the engine compartment, e.g. during repair.

RIFIXX® saves total costs

A cost comparison* based on the example of a cylinder head cover with 14 fixing points with screws and sleeves shows: Fastening with **RIFIXX®** saves approx. 80 % of the total costs.



The reduction in the number of parts results in substantial savings in storage, logistics and assembly costs.

RIFIXX® pays off!



Focus on service!



Special customer requirements need individual solutions. As a developer and supplier, we have the latest technical equipment available to develop and manufacture the parts your need and to your particular specifications.

We have all the necessary test and evaluation facilities for investigating assembly behavior or corrosion resistance. Our CAD data can be integrated into your design at an early stage for customized development. Our development and application engineering facilities support customers' product development and contribute to increasingly faster development cycles.

Challenge us. Ask us your questions – we will offer you our function-optimized and most cost-effective solution.

The timely supply of RIFIXX® parts means your purchasing department is also on the safe side.

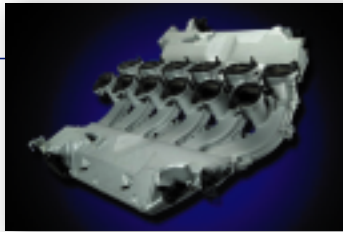


- Development excellence
- Customized solutions
- Modern test facilities
- Shorter development cycles
- 3D software
- Direct contact
- Individual support
- Cost benefit for purchasing
- Reliable parts supply
- Fast order handling

RIFIXX[®] can be found in:

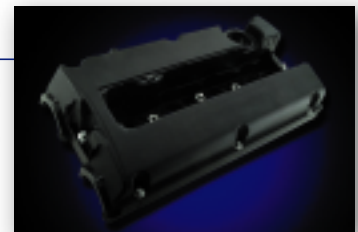
RIBE[®]

BMW



12-cylinder intake manifold

GM/OPEL



Cylinder head cover

BMW



4-cylinder
diesel cylinder head cover

GM/OPEL



Junction box

VW



Cable holder

These big international companies rely on RIFIXX[®]:

Alfa Romeo

BMW

DAF

Daimler Chrysler

Ford

GM/OPEL

Jaguar

Lancia

MAN

Mazda

Mitsubishi Motors

Peugeot

VW

ARaymond

AUMA

BOSCH

BRUSS

EATON

ElringKlinger

LEAR

MAHLE

MANN+HUMMEL

MARK IV

MECAPLAST

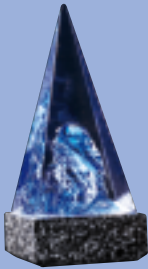
Montaplast

PIERBURG

WOCO

Many quality awards!

RIBE Fastening Systems maintains a quality management system that meets the stringent requirements of the automotive and aerospace industries. Our excellent quality standards have been repeatedly acknowledged by customers' awards in the past. RIBE has also been awarded the Bavarian State Government's Quality Prize for outstanding quality achievements in production.



RIBE[®]
MADE TO **fit**

**RICHARD BERGNER
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