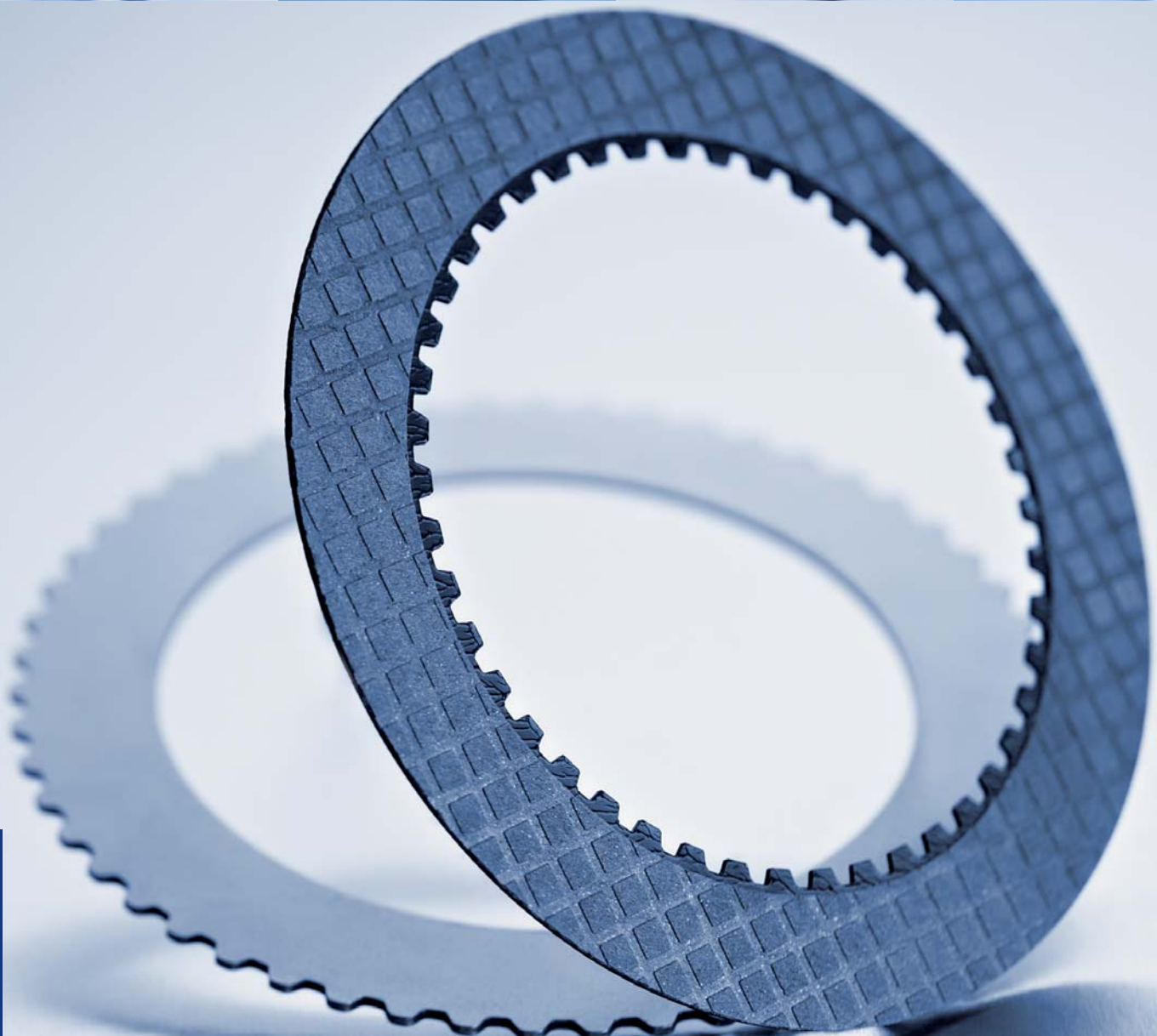


*Innovation in Motion*



## Miba Friction Group



# Content

Customer-Oriented Solutions	3
The Ideal Solution for Each Application	5
Sintered Materials for Extreme Loads	7
Synchronizer Rings for Highest Demands	9
Global Presence	11
Technological Leadership	13
Operational Excellence	15
Quality and Service	17
Contacts	19



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## Customer-Oriented Solutions



The Miba Friction Group has been a development partner and supplier of high-performance friction materials to the international vehicle and machine industry for almost forty years. Friction materials are a key performance element in the clutches and brakes of vehicles and industrial applications. They make an important contribution in boosting efficiency.

Our customers benefit from optimized components for clutch and brake systems. Because we use high quality materials and innovative processes, our products have excellent friction coefficients and wear resistance.

For each application we have a customized product, including high-performance friction materials for wet- and dry-running applications, mating discs and complete disc pack assemblies.





## Discs for Each Application

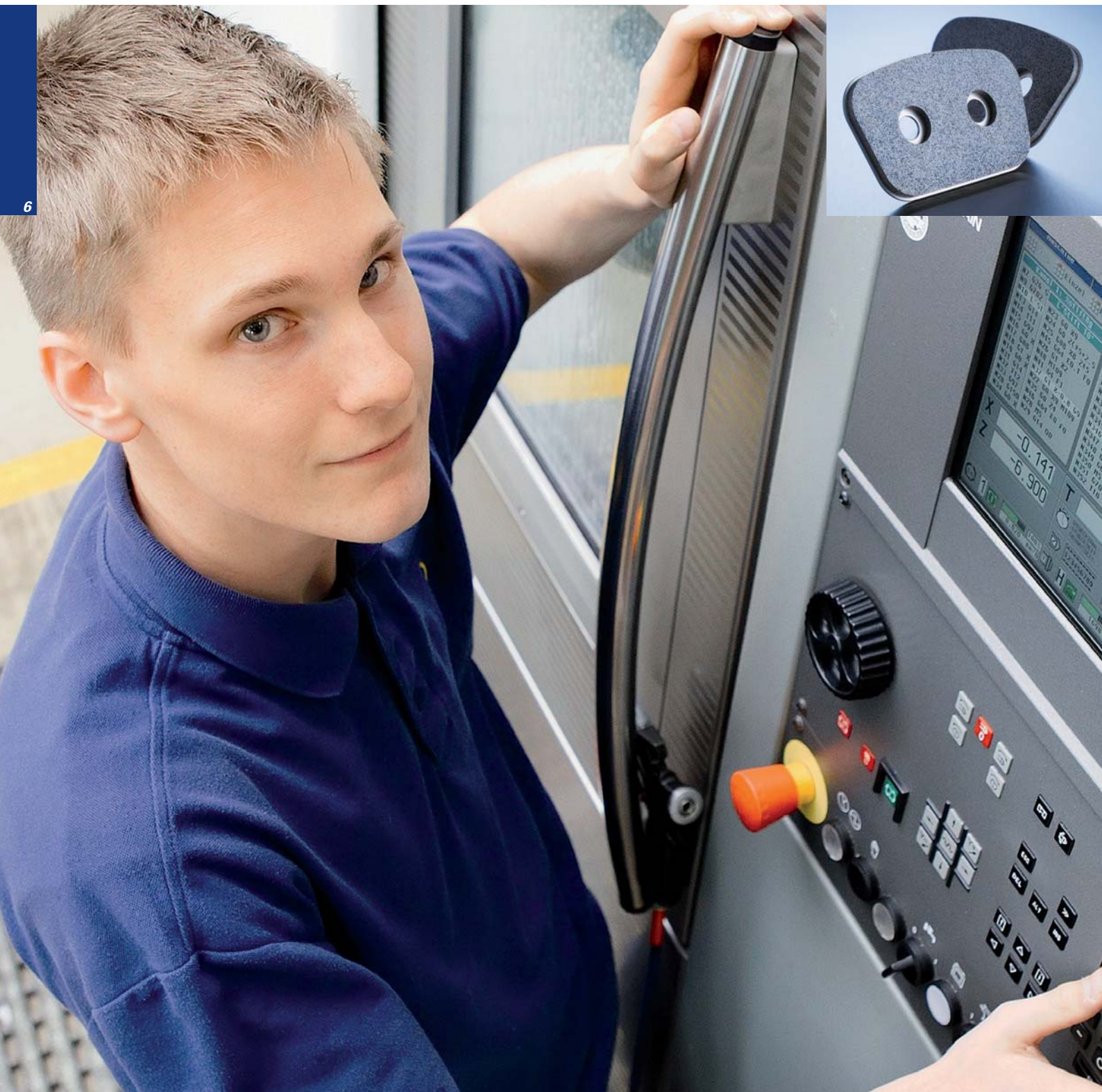


The correct design and formulation of friction materials, steel mating discs and the oil is a challenging task which we govern. Because of our steadily growing range of friction materials, we are able to offer the ideal solution for any application including high power densities.

- Fiber Composite
- Carbon
- Sinter Bronze sprinkled
- Molybdenum

Hence, Miba offers the broadest friction materials portfolio worldwide.

In our in-house steel disc production we carry out all types of production methods and special treatments. Our tool shop produces complex tools quickly and flexibly. A variety of friction materials and grooving patterns guarantee the best possible customized performance for applications in brakes, transmissions as well as all-wheel and auxiliary drives.



## Sintered Materials for Extreme Loads



Dry-running applications in clutches and brakes of tractors, commercial vehicles, high-speed trains, racing or industrial applications are subject to high specific loads. For this kind of applications we offer high performance molded sintered friction materials running against mating materials made of steel, cast iron or composite materials. Because we use innovative raw materials and processes, our products have a high degree of stability in their friction coefficient. Sintered segments produced by the Miba Friction Group are resistant to wear and noise, have a high and stable coefficient of friction and are able to withstand high temperatures.







## Synchronizer Rings for Highest Demands



Friction materials for synchronizer systems of modern manual and automated manual transmissions as well as double-clutch transmissions for cars and trucks are subject to ever-increasing loads. At the same time, requirements for shifting comfort and durability are growing. Our range of composite and carbon friction materials meet these outstanding demands.

We offer complete synchronizer rings for single and multiple synchronizer units based on sheet metal formed, forged or powder metal bodies. In cooperation with the Miba Sinter Group, we also design and produce complete synchronizer modules.

Miba HydraMechanica Corp.  
Sterling Heights, USA

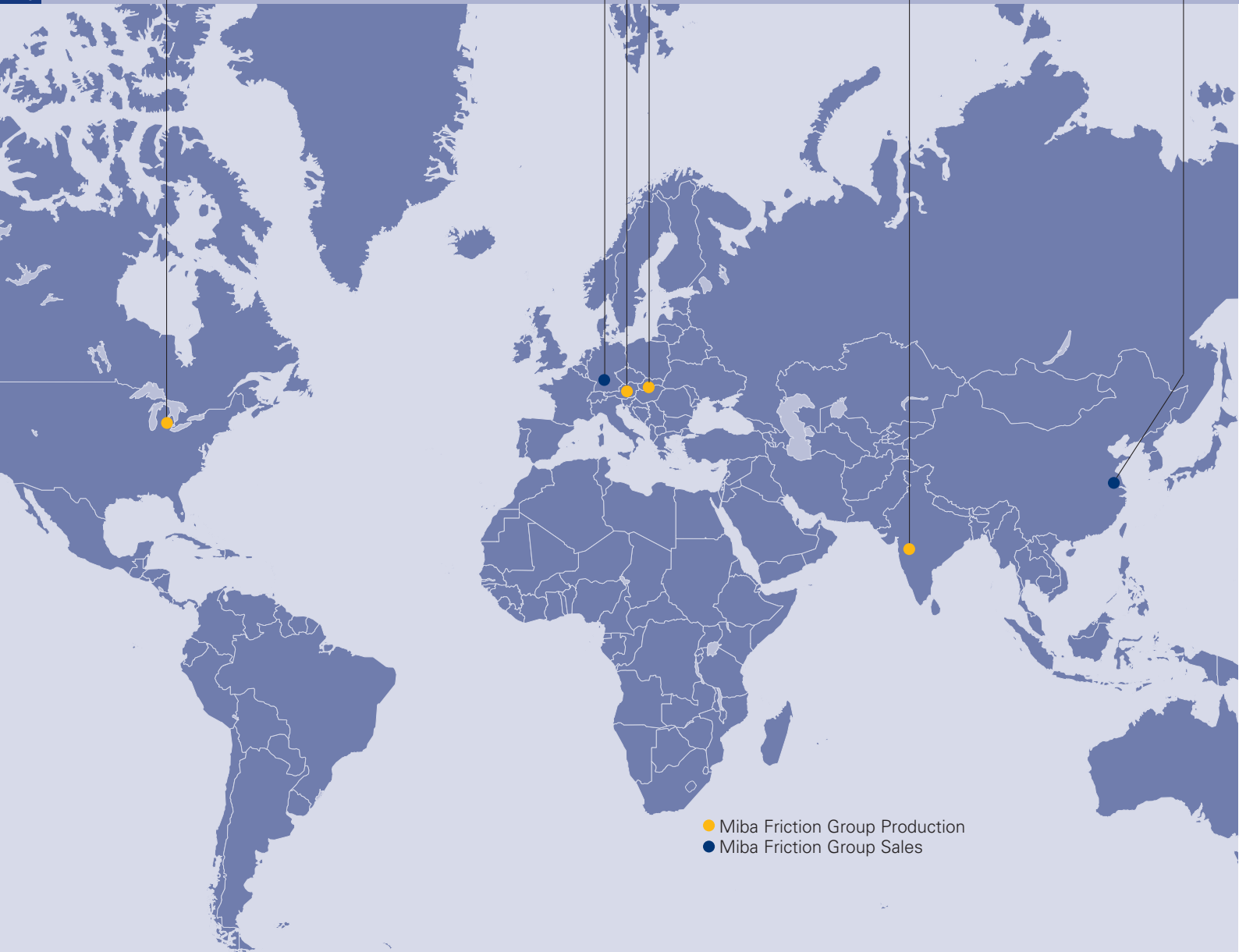
Miba Frictec GmbH  
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Miba Steeltec s.r.o.  
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Miba Precision Components  
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Suzhou, P. R. China

Miba Deutschland GmbH  
Schongau, Germany

Miba Drivetec India  
Pune, India



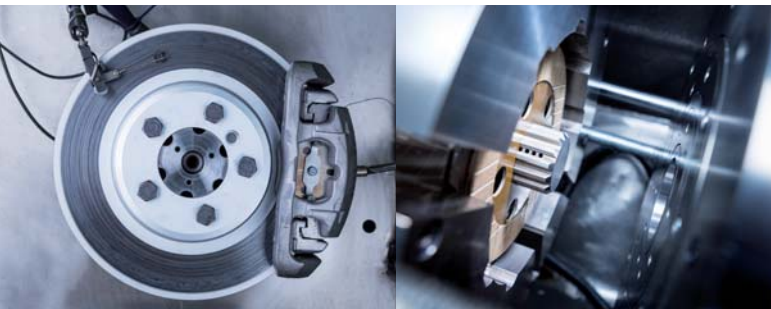
## Global Presence

Wherever our customers are located, they can rely on the performance of the Miba Friction Group. We accompany customers in their worldwide expansion and provide support via our products and services. With four production sites and a distribution network covering three continents, we react quickly and flexibly to customers' needs.





## Technological Leadership



As a technological leader, Miba Friction Group constantly strives for new and improved products. Our R&D center at the Roitham site relies on advanced R&D equipment. This includes labs for developing and analyzing metallic and composite friction materials, as well as the latest component and system testing equipment for wet- and dry-running applications. They are adjustable to simulate customer test procedures. In our test center we are able to simulate temperatures of -20°C and carry out analysis using our self developed Noise-Vibration-Harshness (NVH) test bench to optimize systems like axles or transmissions.

We are engaged in fundamental research in cooperation with international research centers and universities. The development and testing of our products is performed in close collaboration with our customers.





## Operational Excellence



Not only our products but also the methods to produce them are technologically advanced. At our production sites in Roitham (Austria), Vráble (Slovakia), Sterling Heights (USA) and Pune (India) we use modern, flexible production systems. Automated line production for large batches and production cells for small quantities allow us to process orders efficiently. Our integrated production systems deliver true performance by relying on a high degree of process stability and productivity.

In addition, we further optimize our processes and cost by a well-implemented continuous improvement process (CIP). Constant training of our staff ensures a high level of quality and productivity.



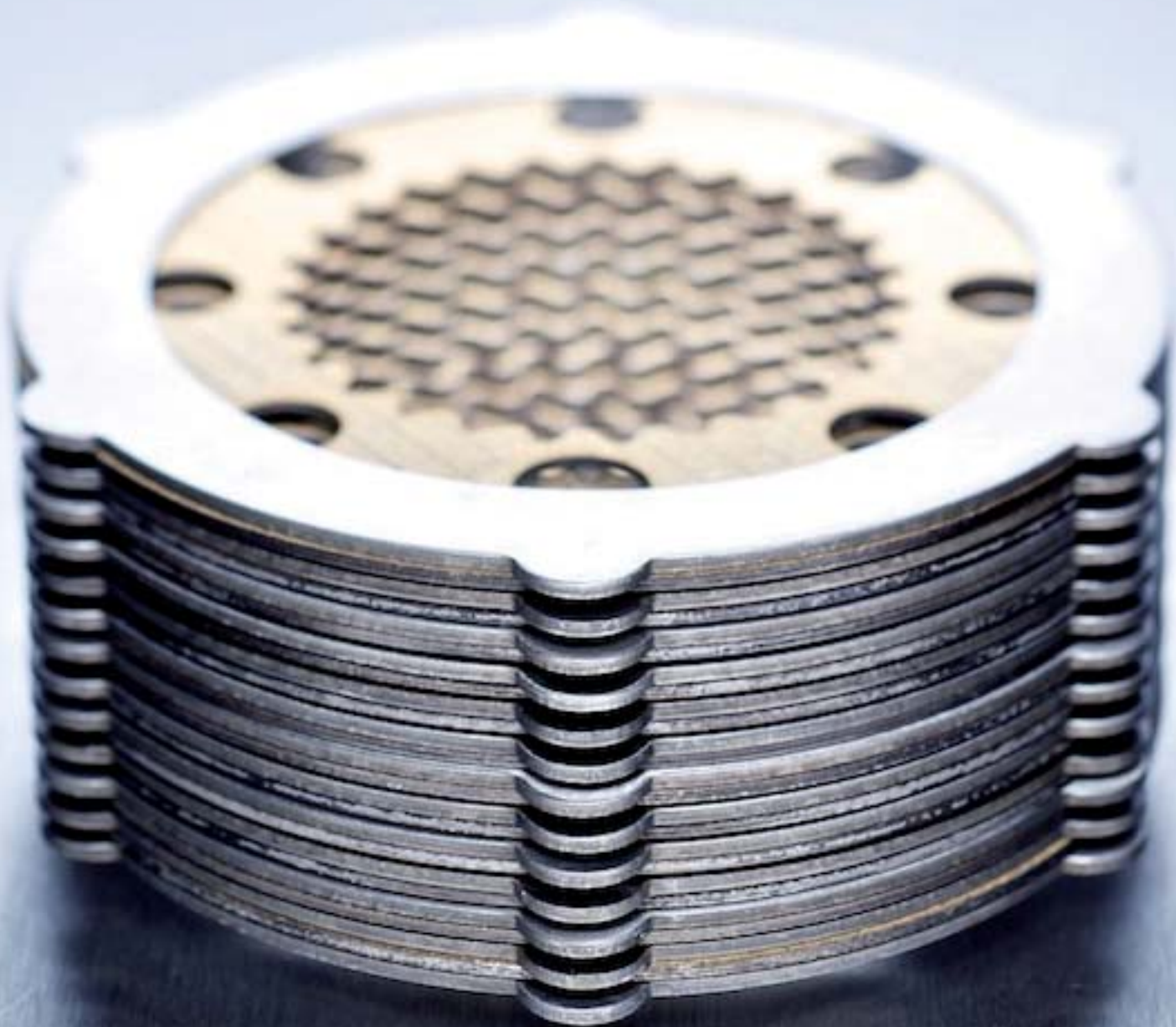
## Quality and Service



Highest quality of our friction materials is top priority for each of us. Every single product that leaves one of our plants has to meet the customer's requirements. Our comprehensive quality assurance methods guarantee high levels of product and process quality for both small and large batches. All our production sites operate based on a modern Total Quality Management system.

We see ourselves as a technological leader and a supreme service provider for friction materials in a global market. Our customers benefit from our individual and excellent service. They receive support from our specialists all the way through from the initial inquiry to shipping of the order.





# Contacts

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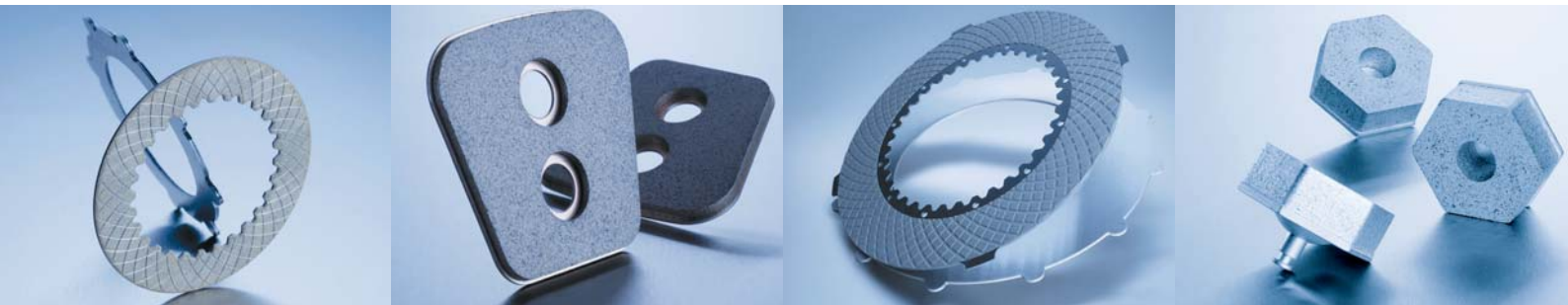
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