



Designed to Customer – Special designs

In-house development, testing and manufacturing.

www.reich-kupplungen.com



SIMPLY **POWERFUL**. SIMPLY **GLOBAL**.





CONTENTS

D2C special designs

04 Our strengths

10 Our sectors at a glance

12 Our solutions for our powerful industry applications

14 Our innovative special solutions

Reich



We develop solutions, not just couplings:

EXPERTISE IN POWER TRANSMISSION SINCE 1946

A small manufacturer of spare parts in the mining industry becomes an internationally recognised specialist in the field of power transmission – we engineered this success story ourselves and are proud of it. We are just as proud of our quality couplings, which have won over and advanced entire sectors thanks to their resilience, ease of maintenance and reliability.

Industry, test bench technology, pumps and compressors, marine applications, power generation and mobile applications – REICH couplings transfer torque reliably and absorb any unwanted vibrations.

The REICH brand is synonymous with torsionally flexible couplings with a high degree of vertical integration. These products are predominantly used for combustion engines in stationary and mobile applications. Our sophisticated coupling system solutions are well-known far beyond our main factory in Bochum, Germany, and are used all over the world. Thanks to our own subsidiaries and partner companies, they are also used in China, India, Italy, Korea, the Netherlands, Poland, the UK and the USA.

But no matter where in the world, our experienced employees at REICH use state-of-the-art manufacturing technologies to produce far more than interchangeable rubber/metal couplings. Our couplings ensure that everything runs smoothly for you!

“Managing the family business founded by my grandfather, now in its third generation, and expanding the global success of the REICH brand in the future is a task that requires a lot of engineering passion and self-drive.”

LOCATED IN BOCHUM
AND FAMILY OWNED **SINCE 1946.**

Christian Reich (Dipl.- Ing.)

Innovation at the highest level:

REICH ELASTOMERS ARE IN REICH PRODUCTS

The development and ongoing optimisation of all the elastomers we use are essential quality factors for our couplings. With our own test field and test benches as well as state-of-the-art production technologies, we create high-quality and durable products for our customers' power transmission and offer solutions for a wide range of industries.

High-tech, expertise and technical curiosity are what drive our research and development team. Using the latest calculation and simulation software as well as highly dynamic coupling test benches, we create products which provide maximum customer benefits. This is due in no small part to the production and ongoing development of our own elastomers, which are used in all REICH couplings.

It is especially in flexible coupling systems that our in-house elastomers prove their unique properties – as a transmission elements that reliably absorb torsional vibrations, shift resonances and compensate for misalignments. We offer our customers a wide variety of rubber compounds from soft to hard and for ambient temperatures up to 120 degrees Celsius.

The choice of optimum rubber compound for your individual industry solution is determined by our research and development team on the basis of its extensive expert knowledge and decades of experience.



“We can only meet our own high standards by offering high-quality and durable products for our customers' power transmission – which is why we also develop and continuously optimise the elastomers we use ourselves.”





In-house development, testing and manufacturing:

D2C – DESIGNED TO CUSTOMER

Choose from a wide range of products with standard couplings or let us create a customised one-off coupling solution for you. Each and every REICH coupling is selected just for you using the ‘Designed to Customer’ principle and only leaves our company after thorough testing. We will gladly rise to your challenge!

Thanks to our constantly growing, modular and perfectly coordinated product portfolio, you can simply select the optimum coupling solution for your power transmission requirement or entrust it to our experienced staff, who will be happy to guide you through the coupling selection process.

Being on an equal footing with our customers, we are very quick to identify the solution that best meets requirements – be it a standard version coupling or a special customised solution in individual production. The designs are mainly based on modular components to provide effective and efficient customer solutions.

Our own state-of-the-art test benches and equipment guarantee high-quality durable REICH products. The ISO 9001-certified quality management system has production-related testing systems that guarantee their compliance with customer requirements when used in practice. We also hold approvals from recognised classification societies for shipbuilding and marine applications.

The company policy at REICH embraces, first and foremost, principles such as customer satisfaction, flexibility, quality, prompt delivery and adaptability to the requirements of our customers.

REICH supplies not only a coupling, but a solution: Designed to Customer – SIMPLY **POWERFUL**.

“Being able to offer each of our customers the perfect solution and the right coupling system time and again is what spurs us on every day. The enquiries we receive from a wide variety of industries are valuable sources of inspiration and fuel our ambition.”

D2C
Designed to Customer

REICH world:

OUR SECTORS AT A GLANCE



POWER GENERATION

Efficiency for the future.



MOBILE APPLICATIONS

Reliability for automotive engineering.





PUMPS AND COMPRESSORS

Great for power transmission.



TEST BENCHES

Strong in testing areas.



INDUSTRIAL SECTORS

Open to any challenge.







MARINE APPLICATIONS



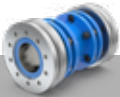


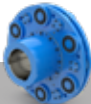



Durability in marine applications.

SIMPLY **POWERFUL**. SIMPLY **GLOBAL**.

FIELDS OF APPLICATION

For industry-specific requirements:

	AC	AC-VSK	iTOK	TOK-SYSTEM	TOK-DOCKING-SYSTEM
INDUSTRY 	    				
POWER GENERATION 	●	●	●		
Applications: Combined heat and power station · Hydrogen and					
MOBILE APPLICATIONS 	●	●	●	●	
Applications: Railway applications · Construction machinery ·					
TEST BENCHES 	●	●		●	●
Applications: Noise, vibration, harshness · Roller dynamometer					
PUMPS AND COMPRESSORS 	●	●	●		
Applications: High pressure/plunger pumps · Roots/vacuum					
INDUSTRIAL SECTORS 			●		
Applications: Conveyor drives · Crane technology · Steelworks ·					
MARINE APPLICATIONS 	●	●	●	●	
Applications: Bow/stern and transverse thrusters · Cranes and					

MMS	MMS-HS	FD	FD-HS	RCT	ELBO	RB	MCF	MCR
								
●		●						
wood/bio gas/natural gas applications • ORC • GenSets								
●		●		●				
Trucks • Agricultural and forest management								
	●	●	●					
test benches • Gearbox test benches • E-machines/HighSpeed • Combustion engines • EOL								
●		●	●	●	●	●	●	●
pumps • Rotary/centrifugal pumps • Screw compressors • Piston compressors								
●		●			●	●	●	●
Woodworking • Crushers • Shredders • Oil and gas								
●		●		●				
winches • Propeller drives • Onboard power supply generator sets								

Innovative coupling unit optimises railway drive:

EFFICIENT DRIVE SYSTEM FOR RAILWAY APPLICATIONS

In the world of railway technology, focus is always on efficiency and safety. This is where innovative solutions play a decisive role, not only ensuring reliable torque transmission, but also meeting safety requirements.

Maximum combustion engine performance is the focus of the innovative coupling unit, comprising the highly flexible ARCUSAFLEX® flange coupling and an electromagnetic clutch. Specially designed for the application, it effectively minimises torsional vibrations and ensures smooth operation.

The anti-friction-mounted attachment unit allows for axial and radial force absorption, for example, without causing additional loads on the flywheel/crankshaft bearing. This feature makes them particularly suitable for demanding applications such as cleaning a ballast bed in the railway industry.

Connecting a fixed-mounted pump transfer gearbox by means of a cardan shaft enables a displacement-compensating connection for operating a variety of hydraulic pumps. Compliance with the prescribed regulations, such as the 'zone stop' in hazardous areas, ensures a high level of safety.

In addition, the switchable coupling unit enables the engine to be started without load and flexible connection and disconnection of the hydraulics, especially in critical situations. This combination of performance, safety and flexibility makes the coupling unit the ideal solution for demanding railway applications.





The highlights:

- highly flexible Arcusaflex® flange coupling
- SAE 1 external flange bearing (housing)
- SAE 14 flywheel connection
- DIN 180 drive shaft connection flange for pump transfer gearbox
- Electromagnetic clutch with 24 V nominal voltage

Setting new standards:

HIGHLY FLEXIBLE COUPLING WITH SPRING STEEL MEMBRANE

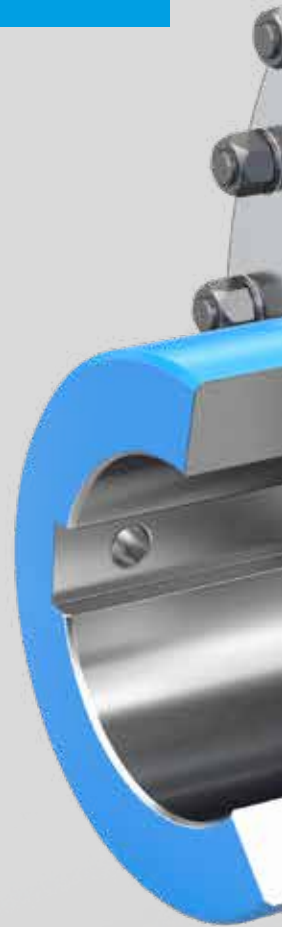
The innovative combination of a highly flexible coupling and a spring steel membrane for resiliently mounted combustion engines is setting new standards in efficiency and performance.

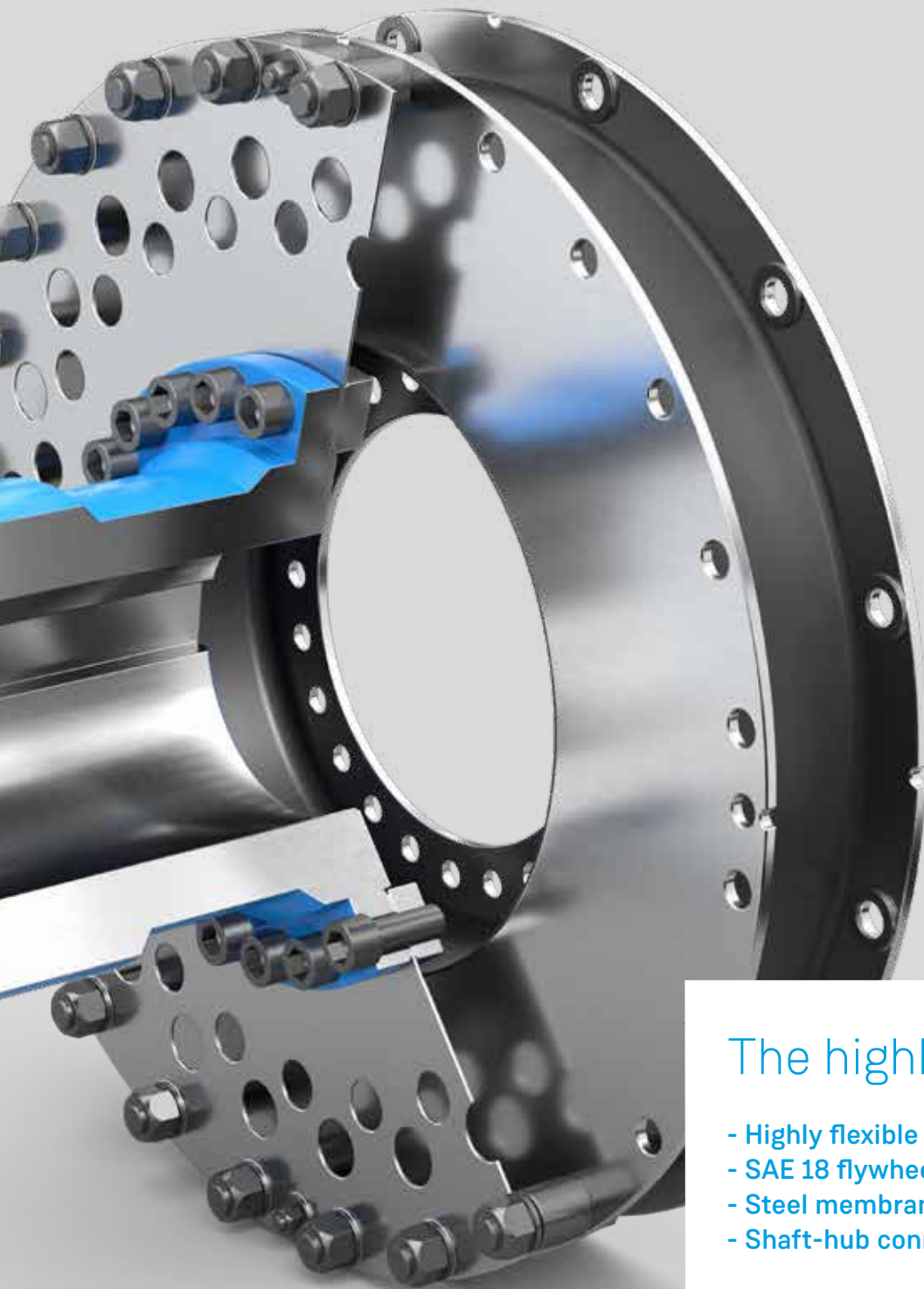
The highly flexible coupling combined with a spring steel membrane, developed especially for use with resiliently mounted combustion engines, offers a wider range of applications, including for power generation. This innovative solution is designed around the proven VSK coupling elements and has been optimised for use with a spring steel membrane.

The design of the coupling membrane was based on a comprehensive FEM analysis using the FKM guideline to ensure component strength in the customer's specific operating conditions. The result is a combination that allows for radial and axial displacements during operation without exerting high restoring forces on the connected units.

Thanks to the sophisticated design, a radial element can be replaced without having to move the units. There is the option of arranging the coupling elements in multiple rows to reduce torsional stiffness, and it is also possible to use different degrees of rubber hardness.

This cutting-edge technology not only offers high performance and flexibility, but also a design that meets the requirements of modern power generation applications.





The highlights:

- Highly flexible EMC coupling
- SAE 18 flywheel connection
- Steel membrane
- Shaft-hub connection with parallel key

Optimised performance and durability:

INNOVATIVE COUPLING IN AGRICULTURAL ENGINEERING

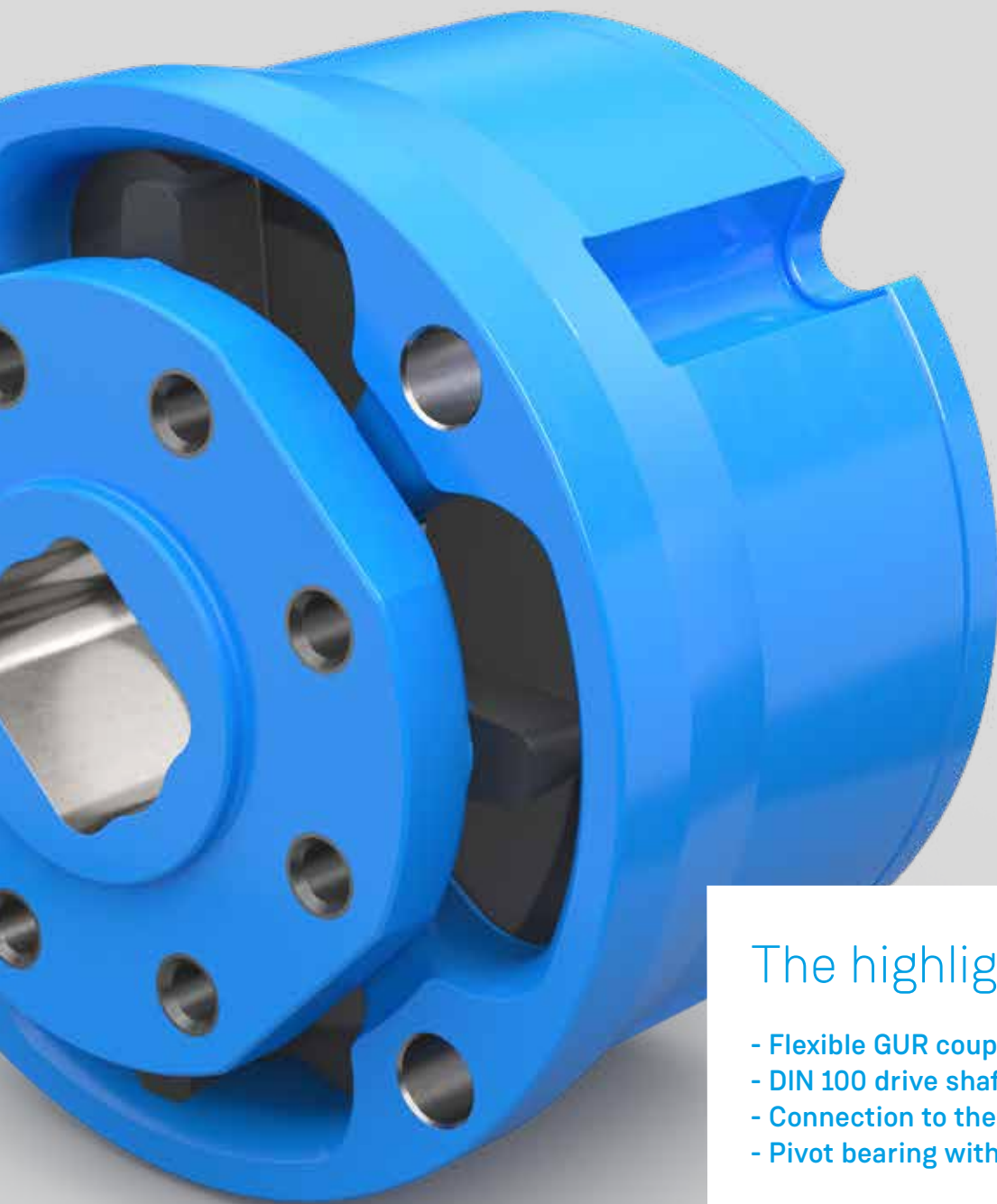
Innovative coupling in agricultural engineering: advanced coupling technology reduces shocks and vibrations at the power take-off drive while greatly optimising performance.

A special coupling has been developed to improve the efficiency and durability of agricultural machinery by systematically reducing shocks and vibrations at the power take-off drive. To meet the operational requirements, this innovative coupling acts as a torsionally flexible cardan joint with a progressive characteristic curve.

An integrated self-aligning pivot bearing and axial damping help to compensate for displacements and shocks, in turn significantly extending the service life of the agricultural machine. Compared to conventional coupling solutions, this enhanced design represents a significant step forward. Vulcanised, optimally shaped pressure elements not only reduce wear, but also significantly increase torque capacity.

However, the high power density in a minimal installation space presented a challenge. Additional measures were taken to increase the transmissible torque capacity of the bolted flange connection, which included the incorporation of ceramic particles. The result is a high-performance coupling that meets the high demands of agricultural engineering, while ensuring optimal performance.





The highlights:

- Flexible GUR coupling
- DIN 100 drive shaft connection flange
- Connection to the power take-off drive
- Pivot bearing with damping

Coupling hub with integrated safety system:

RELIABLE OVERLOAD PROTECTION FOR RAILWAY APPLICATIONS

Integrating overload protection into the coupling hub of the ARCUSAFLEX® flange coupling has revolutionised the way combustion engines and generators are protected in railway applications.

The highly flexible Arcusaflex® flange coupling is redefining the standards for the protection of combustion engines and generators in railway applications with this innovation.

Originally designed for the traction drive of a railway application, the coupling hub was to be mounted on the conical generator input shaft by means of an oil press fit. After extensive torsional vibration modelling and matching the rubber quality to the required torsional stiffness, the analysis showed a potential danger: in the event of a short circuit, the transient impact load would exceed the permissible loads on the drive train many times over.

To prevent damage, an overload protection device has been developed: a self-centring internal clamping set in the coupling hub combined with a sliding bushing on the generator shaft. This design allows for effective and repeatable adjustment of the transmissible torque. In the event of a short circuit, the clamping set glides on the sliding bushing and prevents transmission of the full torque thrust.

Thanks to this innovative solution, the coupling and combustion engine are effectively protected, ensuring both reliability and safety in railway applications.





The highlights:

- Highly flexible ARCUSAFLEX® flange coupling
- SAE 14 flywheel connection
- Shaft-hub connection with parallel key
- Sliding bushing





Reich

**MASTERING EVERY
CHALLENGE WITH
A VARIETY OF
SOLUTIONS AND
TECHNOLOGIES.**

**EFFECTIVELY
AND RELIABLY.**







D₂C
Designed to Customer



D2C SPECIAL DESIGNS


SIMPLY POWERFUL. 


Industrial solutions:


-  Power generation
-  Mobile applications
-  Test benches
-  Pumps and compressors
-  Industry
-  Marine applications

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