PART OF EXCELLENCE

Solutions for durable and safe applications.

Components for Gearboxes

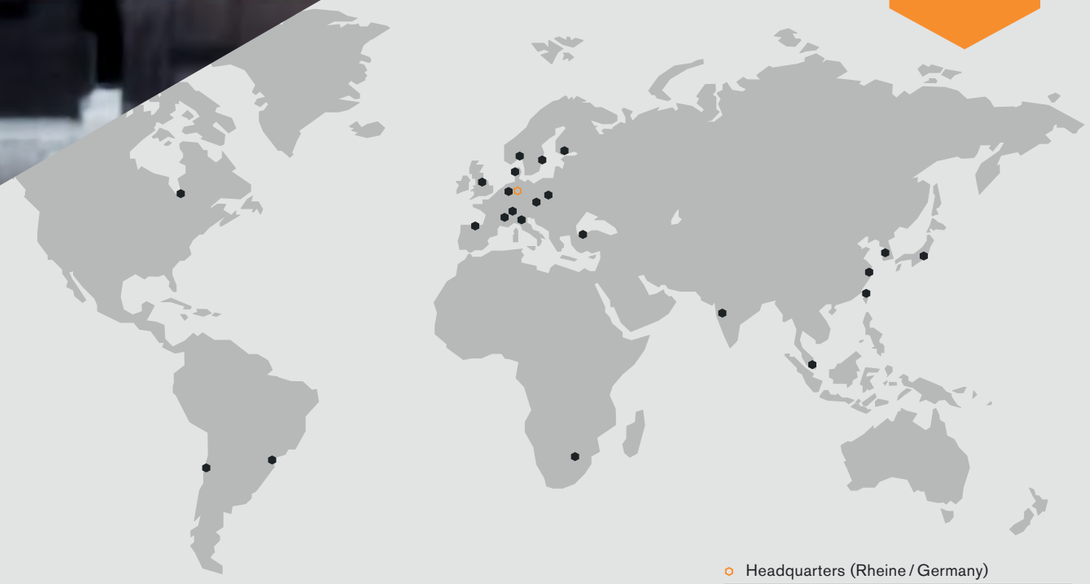
Made for Motion KTR

Drive technology and shaft connections

Brake systems

Cooling systems

Hydraulic components



KTR worldwide – Our locations for quality and service.

- Headquarters (Rheine / Germany)
- **24** subsidiaries

90 sales partners

More than 1,200 employees worldwide

KTR Systems – Solutions across industries for a global market.

As a progressive and innovative knowledge partner for our customers, we actively shape the technological future. By consciously responding to the needs of our customers and having a deep understanding of their technology, it is possible for us to develop cross-industry solutions. In doing so, we always strive for excellence and optimise existing approaches. And this has been the case since 1959.

PART OF EXCELLENCE

Our philosophy of PART OF EXCELLENCE is reflected in every single component and service we provide. With our expertise and innovation, we achieve top performance together with our customers. KTR is at home in industrial markets on all continents with more than 500 employees at its headquarters in Rheine, more than 1,200 employees worldwide, 24 subsidiaries and over 90 sales partners. As a **leading manufacturer of high-quality drive technology, braking and cooling systems and hydraulic components** KTR is a reliable partner for all companies that want to keep moving. As a leading expert in these fields, we take pride in offering our versatile solutions in the following industry:

→ Gearboxes

Our components for gearboxes

The gearbox sector faces numerous challenges and increasing demands: higher energy efficiency, improved performance and productivity, combined with more compact designs and reduced CO_2 emissions. In addition, advancing digitalisation requires the integration of smart and networked components to enable greater efficiency and predictive maintenance.

Being a development partner and supplier of international manufacturers, we support our customers with tailor-made solutions, particularly in the field of couplings and brakes. Our products not only offer reliable performance under demanding conditions, but also meet the latest regulatory requirements and standards. We ensure quality and reliability through comprehensive testing and validation in order to meet the high demands of our customers long-term. Our products are primarily used in the following sectors:

Applications

Industrial gears	**Low-backlash gearboxes**
Mining	Automation
Cement	Machine tools
Pulp & Paper	
Conveyor systems	
Gear motors	
Intralogistics	
Food & Beverage	
Packaging	

DRIVE COMPONENTS

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Torsionally flexible jaw coupling

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2 **POLY-NORM®**
Torsionally flexible shaft coupling

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Torsionally flexible shaft coupling

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Flexible pin & bush coupling

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Curved-tooth gear coupling®

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Oil-air coolers

You can find more information on our website **www.ktr.com/en/industries.**

KTR SYSTEMS

You can also find more components in our comprehensive four product catalogues in the download area:
↓
www.ktr.com

Our components for gearboxes
in comparison

Industrial gears

KTR components

	1	3	4	6	10	13	14	16	17	19	20
Fast running side	⬡	⬡									
Slow running side			⬡	⬡	⬡						
Brakes								⬡	⬡		
Coolers										⬡	⬡
Safety function						⬡	⬡				

Gear motors

KTR components

	1	5	11	13	14	15
Fast running side	⬡	⬡				
Slow running side	⬡					⬡
Safety function			⬡	⬡	⬡	

Low-backlash gearboxes

KTR components

	8	9	10	12
Fast running side		⬡		
Slow running side	⬡		⬡	
Safety function				⬡

You can find more information on our website **www.ktr.com/en/industries.**

Whether for the slow- or fast-turning side – we always offer you the optimum solution with our couplings and brakes. Our broad product portfolio for gearboxes sets the course for long-term and trusting partnerships. The focus is on you and your challenges. We make our contribution with passion and creativity, true to our motto PART OF EXCELLENCE.

Wide range of couplings for torque ranges up to 5,500,000 Nm

DRIVE COMPONENTS

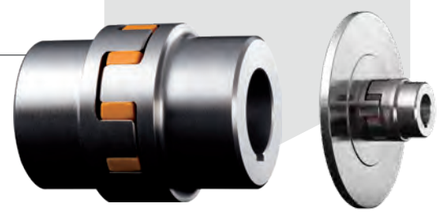
0 to 35,000 Nm nominal torque

1

ROTEX®
Torsionally flexible jaw coupling

The torsionally flexible jaw coupling **ROTEX®** is characterized by a compact design. Despite its low weight and mass moment of inertia, the elastomer coupling enables high torque transmission and is also available with a brake disk or drum brake as an option.

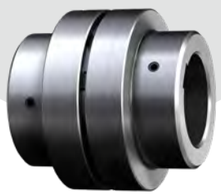
- Compact design, universally applicable
- Long service life, sound operating characteristics
- Standard spiders made of high-temperature resistant T-PUR®



↑ Also available in the service-friendly SH version

2

POLY-NORM®
Torsionally flexible shaft coupling



The torsionally flexible and fail-safe **POLY-NORM®** is characterized by a compact design. The torque is transmitted via elastomers between the cams. In addition, the elastomers serve for compensating for displacements and damping shocks and torsional vibrations.

- Low-priced standard version
- Small shaft distance dimension
- Easy assembly

100,000 to 5,500,000 Nm nominal torque

3

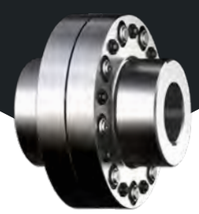
POLY-NORM® M
Torsionally flexible shaft coupling

The fail-safe **POLY-NORM® M** is a robust large coupling that is mainly used in applications with high torques and impact-loaded drives.

- Shaft diameter up to 900 mm
- Small shaft distance dimension
- Maintenance-free and fail-safe

4

REVOLEX®
Flexible pin & bush coupling



The **REVOLEX®** is a torsionally flexible, fail-safe pin & bush coupling that is mainly used in applications with high torques and impact-loaded drives. It is particularly robust, compensates for any type of shaft misalignment and transmits torque safely.

- Pins can be mounted radially
- Machined allover, good dynamic properties
- Hub material available in cast iron or steel

↑ Also available in the service-friendly SH version

0 to 2,500 Nm nominal torque

5

BoWex®
Curved-tooth gear coupling®

The **BoWex®** curved-tooth gear coupling is a flexible shaft connection for positive-locking torque transmission. According to the curved-tooth gear principle. Edge pressure in the spline is avoided with angular and radial displacements, making the coupling virtually maintenance-free in operation.

- Compensating for axial, radial and angular shaft displacements
- Double-cardanic curved-tooth gear coupling
- Operating temperature up to 120 °C

Also available in the ↑ service-friendly GT-version

6

GEARex®
All-steel gear coupling

up to 2,750,000 Nm nominal torque

GEARex® is used in all areas of mechanical engineering where high operational reliability and long service life are required. A low net weight with a low mass moment of inertia result in a wide application range of GEARex® gear couplings of all-steel gear couplings.

- Compensating for axial, radial and angular shaft displacements
- As special solution also for vertical mounting
- High power density

Backlash-free components for high-precision applications

9

TOOLFLEX®
Metal bellow-type coupling

TOOLFLEX® is a backlash-free, torsionally stiff and flexible all-metal coupling with a bellow made of stainless steel. Depending on size and type the coupling hubs are available made of aluminium or steel. The metal bellow optimally compensates for axial, radial and angular displacements with conformal torque transmission and low restoring forces.

- High torsional stiffness, low mass moment of inertia
- Wear- and maintenance-free
- Available in various hub designs and bellows lengths

10

up to 3,200 Nm nominal torque

RADEX®-NC
Backlash-free servo laminae coupling

The set of torsionally stiff steel laminas flexible in bending offsets axial, angular and radial shaft displacements. The backlash-free servo laminae coupling **RADEX®-NC** can be used with temperatures up to +200 °C and under aggressive ambient conditions.

- Single and double cardanic types available
- Equipped with clamping hubs or clamping ring hubs
- Maintenance-free

↑ Also available in a service-friendly version with cracked hubs

0 to 300,000 Nm nominal torque

7

RADEX®-N
Steel laminae coupling

All-steel couplings with laminae sets made of high-strength and stainless spring steel. The steel laminae sets of the **RADEX®-N** were developed based on FEM calculations.

- Laminae sets made of high-strength and stainless spring steel
- Double-cardanic
- High power density and able to absorb displacements

Also available in a service-friendly ↑ version with cracked hubs

11

SYNTEX®
Backlash-free Safety coupling

The **SYNTEX®** is an overload coupling with positive locking operation. A special punched disk spring serves for transmitting the torque. The design of the safety coupling ensures short response times and high repeatability.

- Torque setting possible when in place
- Easy integration of the coupling in the drive
- Easy connection of customer components, e. g. toothed belt pulleys or sprocket

8

up to 5,850 Nm nominal torque

ROTEX®GS
Backlash-free servo coupling

ROTEX® GS is a three-part servo coupling, backlash-free under prestress Due to the various hub designs and different shore hardnesses, the elastomer coupling is used wherever drives need to position themselves precisely.

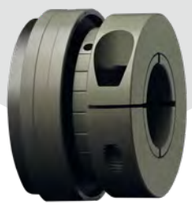
- Hub material made of aluminium or steel
- Modular system with high variability
- Ideal for use in automation

↑ Also available in the service-friendly A-H version

12

up to 550 Nm nominal torque

SYNTEX®-NC
Backlash-free Safety coupling



The **SYNTEX®-NC** is a backlash-free safety coupling with low weight and low mass moment of inertia. Large bore diameters and an assembly-friendly clamping ring version are further features of the extremely compact overload coupling.

- Backlash-free amd positive-locking ball engagement principle
- Short response times and high repeatability
- Low weight and low mass moment of inertia

KTR most certainly offers right solution for gearboxes

You can find more information on our website **www.ktr.com/en/industries.**

BRAKE SYSTEMS

13 KTR-SI FRE
Idle rotation overload coupling

800 to 1,500,000 Nm nominal torque

The core of the idle rotation overload coupling **KTR-SI FRE** is formed by the idle rotation elements. They uncouple the driving and driven side in case of overload while protecting the drive train from damages. After eliminating the overload, the rotation segments are manually re-engaged so that the drive is released again.

- Backlash-free and positive-locking ball engagement principle
- The number of idle rotation elements varies depending on the required release torque
- If requested, the coupling can be preset by the manufacturer

14 RUFLEX®
Torque limiter

up to 12,000 Nm nominal torque

The **RUFLEX®** torque limiter provides for load-holding, frictionally engaged overload protection. When the torque set is exceeded, the drive element slips. As soon as the occurring torque decreases, the torque limiter automatically continues to transmit the torque.

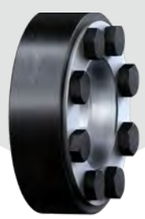
- Can be combined with established KTR couplings
- Integration of customised drive components
- Modular system enables versatile use

15 CLAMPEX®
Clamping set

up to 7,394,000 Nm nominal torque

CLAMPEX® clamping sets (clamping elements) enable a backlash-free and frictionally engaged connection between cylindrical shafts without keyway and hubs are preferred, among other things, as an alternative to a feather key connection considering their benefits.

- Backlash-free shaft-hub-connection
- Simultaneous transmission of torque and axial force
- Maintenance-free
- Operating temperature from –20 °C to +160 °C

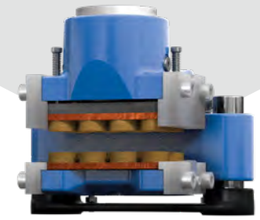


16 KTR-STOP®
Hydraulic floating caliper brake

up to 1,200 kN clamping force

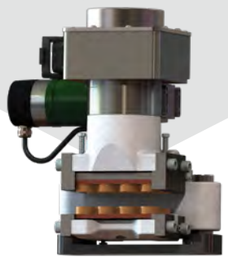
The hydraulic **KTR-STOP®** floating caliper break is designed to work reliably under adverse environmental conditions. The brake operates free of axial force and reliably prevents damage to the drive train. It can be mounted directly on the gearbox, which reduces the space required.

- Use in cryogenic temperature range
- Optimised floating caliper design
- Pressure connections on the rear side



17 EMB-STOP
Electromechanical floating caliper brake

up to 12 kN clamping force



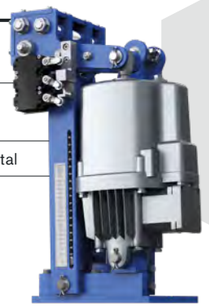
The electromechanical **EMB-STOP** floating caliper brake is characterised by its closed system. The brake operates free of axial force and reliably prevents damage to the drive train. It can be mounted directly on the gearbox, which reduces the space required.

- Clean and low-maintenance system
- Extremely fast response times (passive design)
- Self-locking (active design)

18 KTR-STOP® TB
Thruster Brake

The spring-operated thruster brake **KTR-STOP® TB** is an electro-hydraulic braking system that engages in the event of a power failure and is released via a brake fan. It meets the requirements of DIN 15435 (drum brake) and industry standards (disc brake) and can be easily integrated into existing systems.

- Braking torque can be set on site
- Technical options (e. g. wear adjustment) possible
- Brake pads, either organic or sintered metal



COOLING SYSTEMS

19

OPC
Oil-air coolers

The powerful cooling unit with integrated pump is particularly suitable for gear oil cooling. The flexible design of the series allows to use different pumps or motors with different voltage ranges.

- Available in “maritime” and “ATEX” versions
- Electric motor specified acc. to protection class IP55
- Drive motor 230 / 400 V 50 Hz & 460 V 60 Hz, special voltages on request

20

OAC
Oil-air coolers

Compact and high-performance oil cooler Standard fan drive consisting of 230 / 400 V motor, 12 V / 24 V fan and hydraulic fan drive. Also available with electric motor and 60 Hz frequency.

- Available in “maritime” and “ATEX” versions
- Easy to service and good options of cleaning
- Low sound pressure level

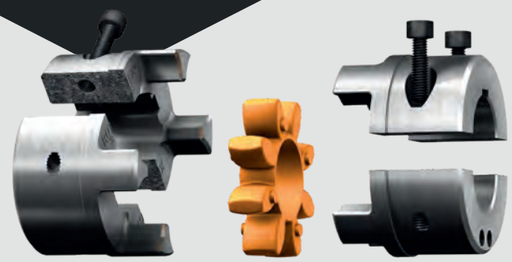
KTR FOCUS

Serviceability.
Efficient and straightforward maintenance work – thanks to split hubs

- Radial assembly and disassembly without shifting adjacent components
- Assembly and disassembly without heavy equipment
- Short downtimes

Top hub half with feather keyway | **Lower hub half** | **Put together** | **Secure via screws**

ROTEX® SH
Torsionally flexible jaw coupling

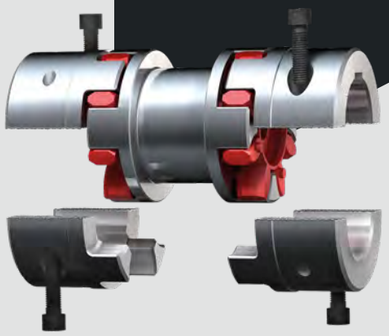


Torsionally flexible jaw coupling with SPLIT hubs up to **7,500 Nm nominal torque.**

- Material: cast iron
- Complying with ATEX (acc. to EU directive 2014 / 34 / EU)
- Easy assembly / disassembly via four screws
- Centering of both hub halves through the cracked surface

You can find more information on our website **www.ktr.com/en/industries.**

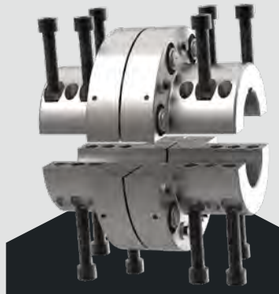
ROTEX® ZS-DKM-SH
Torsionally flexible jaw coupling



Torsionally flexible jaw coupling with SPLIT hubs up to **2,400 Nm nominal torque.**

- Double-cardanic elastomer coupling for large shaft displacements
- Good damping properties due to double arrangement of spiders
- For bigger radial displacements generated by thermal expansions
- Assembly / disassembly via four screws

REVOLEX® KX-D made of steel
Torsionally flexible pin & bush coupling



Torsionally flexible pin & bush couplings with split hubs up to **1,350,000 Nm nominal torque.**

- Fail-safe shaft coupling
- Maintenance-free
- Pins radially mountable / dismountable
- Machined allover, good dynamic properties

BoWex® GT
Gear coupling

Gear coupling with sleeve consisting of two half shells up to **560 Nm nominal torque.**

- Double-cardanic curved-tooth gear coupling
- Carbon fibre reinforced sleeve
- Capacity for large radial displacements

RADEX®-N
Steel laminae coupling

Double-cardanic steel lamina coupling with split hubs up to **280,000 Nm nominal torque.**

- All-steel coupling
- Optionally available with positive-locking or friction fit shaft-hub-connections
- Double-cardanic type
- Complying with ATEX (acc. to EU directive 2014 / 34 / EU)

ROTEX® GS A-H
Backlash-free servo coupling

Backlash-free servo coupling with split hubs up to **560 Nm nominal torque.**

- Material: aluminium
- Backlash-free half-shell coupling / drop-out centre design coupling
- Assembly / disassembly via four screws

RADEX®-NC
Backlash-free servo coupling

Backlash-free servo laminae coupling with split hubs up to **3,200 Nm nominal torque.**

- Maintenance-free
- Max. ambient temperatures of +200 °C
- Torsionally stiff
- Single- and double-cardanic

You can find more information on our website **www.ktr.com/en/industries.**

Serviceability in focus at KTR Systems

You can find more information on our website:

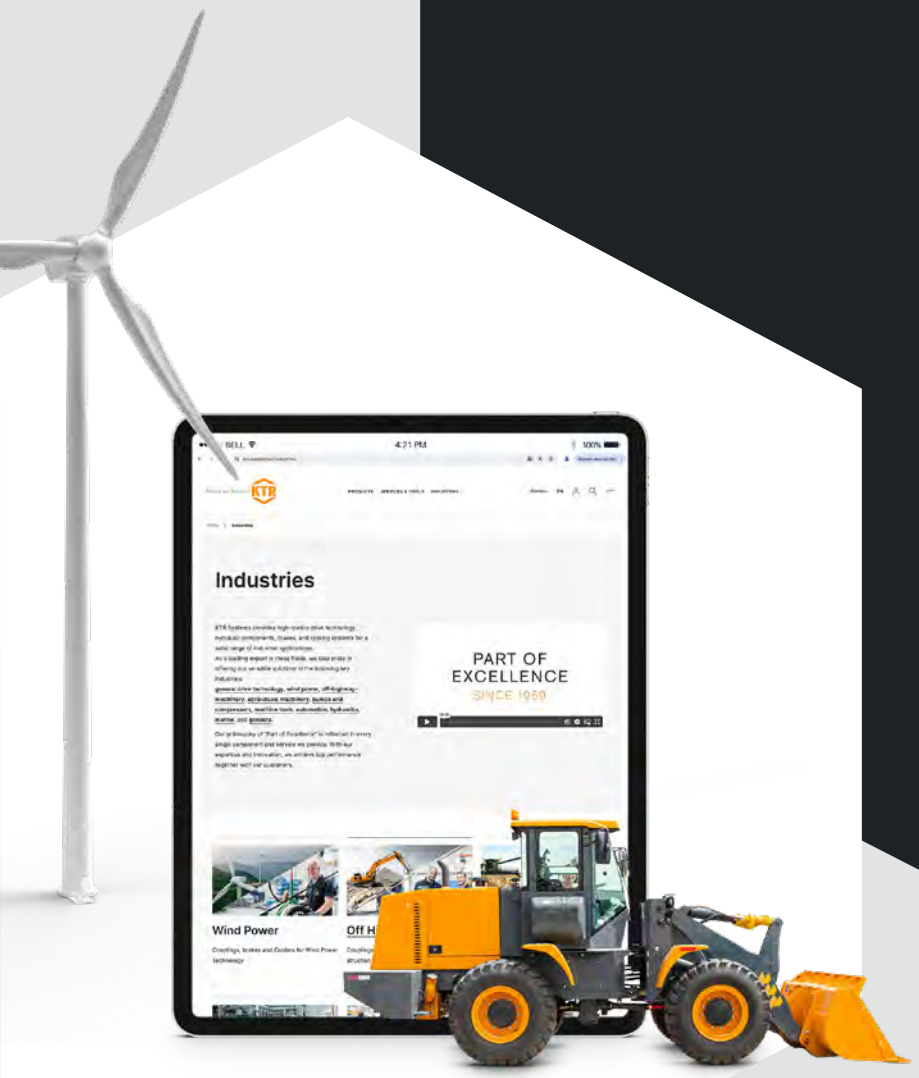
www.ktr.com/de/en/industries

Solutions across all industries on our KTR website.

KTR Systems supplies high-quality products for a wide range of industrial applications. We are proud to be able to offer versatile solutions across all key industries with our drive technology, hydraulic components, brakes and cooling systems.

No matter what industry you need components for, we look forward to supporting you with our expertise and innovative strength to meet your challenges. Achieve peak performance with us! Find out more about the diversity of our portfolio on our website:

www.ktr.com



GLEUDNER HELBACH DESIGN

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Made for Motion KTR