

# Couplings for agricultural and forestry engineering

High quality for tough applications





# If you want to set things in motion: KTR

### Competence meets creativity

As a leading manufacturer of high-quality drive components, KTR supplies mechanical couplings, clamping sets, torque limiters, torque measuring systems and hydraulic components all over the world. With more than 50 years experience in power transmission we are trendsetters in the development of coupling technology and offer customised solutions to all industries. The KTR trademark characterises quality and innovation, speed, reliability, flexibility and a close working relationship with customers.

Having started with the curved-tooth gear coupling® BoWex® and the torsionally flexible jaw coupling ROTEX®, KTR has built up an extensive product portfolio covering torques from 0,15 to over 750.000 Nm. The production by KTR's in-house, up-to-date machinery ensures that the couplings are made to the utmost accuracy. The couplings having a unit weight of up to 2 tons. Flexible automation ensures a quick and low-cost production even if the product has to be customised to meet customers individual specifications. KTR produce several million couplings a year.

Even though KTR's standard product portfolio is quite extensive, it only represents a fraction of the different options available. KTR is not only a subcontractor but also a solution provider.

The knowledge gained from thousands of applications in the field allows us to find optimum, low-cost solutions for customised applications. We will consult you during the planning stage providing drawings and prototypes or arranging for local discussions if required. Every year KTR produces more than 10.000 new products ordered by customers. This trend increases year on year. This leads to many special products becoming standard items: We permanently give vital ideas to the Power Transmission technology – in cooperation with our customers.



### Accuracy meets speed

KTR products are evidence of well-designed, quality components resulting in improved characteristics of the drive system and as a consequence, a longer service life. It is our aim to continually improve the quality of our products and services. We can analyse the stiffness of components by utilising FEM (Finite Element Method) system and we can also perform torsional vibration calculations for entire drive systems. In our in-house Research and Development Centre we test our products on accurate test benches in realistic operating conditions. Our main objective is to provide the uppermost satisfaction to our customers.

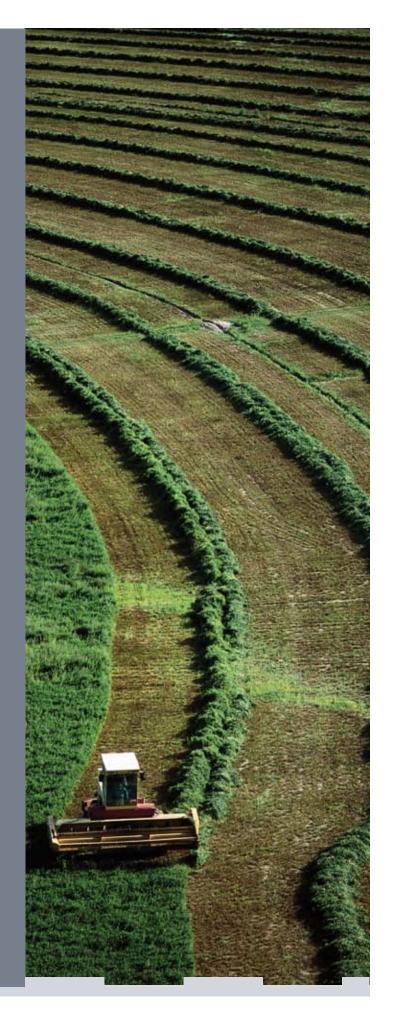
Our technical sales engineers and our well-trained sales staff will be pleased to give you advice. KTR provides you with extensive services online, too: At www.ktr.com you can request information, including our product catalogue, 3D-CAD-models and assembly instructions. Depending on your application you can select your drive component from of more than 3.500 standard products. Having selected which one is the right component for your application by using our online calculation

program, you are now in a position to order the products by contacting your nearest KTR company. Alternatively our Euro shop is open 24 hours a day.

Our latest scheduling system SAP ERP ensures an optimum networking with our customers and allows for a quick and reliable delivery service. A selection of 3.500 couplings and hydraulic components are permanently available from stock. For orders placed by 2:00pm we guarantee the despatch of orders the same day! In the KTR Logistics Centre the overall flow of goods is supervised by radio-controlled barcode scanning. Leading distribution partners ensure delivery on time. Our tracking and tracing system allows you to follow the progress of your order at all times. KTR supplies to every location in the world.

For further details about us and our products:

www.ktr.com



# How to gain ground easily

Agricultural machines and their attachments are becoming more and more powerful, but are supposed to operate requiring less maintenance and cost. In addition, the operating conditions are particularly hard, wind and weather, sand and dirt, vibrations and shocks, all load the drives. Consequently, the components need to be able to withstand all of the above.

## More flexibility, less wear

KTR offers you an extensive range of couplings meeting every requirement, even with tough ambient conditions. They are easy to assemble, free from wear, maintenance-free and are characterised by low mass moments of inertia or high power density.

Our flexible couplings compensate for shaft misalignment or heat expansion caused by the assembly. They compensate for shocks and vibrations in the drive system and shift critical torsional vibrations of diesel engines.

#### Less weight, more power

KTR couplings are able to perform much more. High-tensile light metals and reinforced nylon materials result in a reduction of weight which is beneficial to the overall system. Our high-quality hub materials allow you to make use of the full range of ROTEX® elastomers, among those are some brand-new materials with higher temperature resistance and a better resistance to wear. You can simply select the right coupling depending on the application and operating conditions.



## For main and auxiliary drives: KTR

KTR couplings are at home on all fields throughout the world. Typical applications are; agricultural machines like combine-harvesters, field choppers, large-area mowers, potato diggers and beet lifters, grape pick-up loaders, tree-cutting machines and wood choppers, attachments like swath rakes, mowers, hay-making machines. Presses, mulching machines, drillers, large-area spreaders, phytopharmacy sprayers and many more; moreover mixers and worm conveyors, e.g. for biogas plants.



Photos: DEUTZ-FAHR, Grimme



# How to make the right choice safely

Selecting the wrong coupling for the main drive may cause an early failure of the coupling and other critical drive components. That is why we would recommend you to consult us! KTR couplings for the connection to diesel engines are subject to particularly strict criteria with regard to the correct torsional vibration coordination within the drive system.

Based on our FEM (Finite Element Method) calculation programmes and detailed vibration analysis we ensure you of a safe and long-term operation of the couplings. It goes without saying that this does not only apply for the extensive range offered in our catalogues, but also for special designs following your requests.

#### Special designs

Couplings for agricultural and forestry engineering tend to be non-standard. For a large number of applications special designs are necessary; this is a job the KTR design engineers are pleased to do. They not only analyse the transmission of the torque, but the operation of the entire machine supporting you during the design period.

#### Cool completion

To cool air, water and all kinds of oil we develop tailor-made heat exchangers based on your thermal data. No matter if you require single-circuit or multiple-circuit coolers: We adapt them to your application either as a module or system solution in a compact and optimum design.



#### Standard solutions

- BoWex® FLE-PA, the torsionally rigid flange coupling for the connection to dieselengines and hydraulic pumps, ensures a resonance-free operation.
- BoWex-ELASTIC<sup>®</sup>, the highly flexible flange coupling for drives subject to dangerous torsional vibrations with diesel engines, is used in numerous applications in mobile hydraulics.
- ROTEX®, the axial plug-in torsionally flexible jaw coupling for torsion-damping power transmission, increases the service life of the drive, allows an easy separation, e.g. if attachments are to be maintained or cleaned and may serve as an overload protection if necessary.
- ROTEX® A-H, the coupling in a segment design for radial assembly with 4 screws only, which means that replacing the spider can be achieved without disassembly. In this way the different crops, as an example, can be changed without any trouble.
- CLAMPEX® clamping sets facilitate the production of drive systems and reduce costs.

#### Perfect spline

For mechanical drives of attachments that can be connected to a power take off, e.g sowing machines, self loading forage boxes, balers, etc. We produce the ROTEX® coupling with power take-off spline to DIN 9611. The splines are produced by using broaches. As a result ROTEX® with power take-off spline are available in the short term: three standard sizes are available from stock, other sizes and double-cardanic designs on request, if required with special protection to wear.

## Special protection

For applications with special loads we offer couplings with a special protection for wear and corrosion. For that purpose the couplings are coated with a thin layer of this protection. The technology which has already proven itself with saltwater applications in Marine and Offshore technology. This application can be utilised in Agricultural machinery also.

Photo: Krone

# Couplings for agricultural and forestry engineering

Product	ROTEX®	POLY-NORM®	BoWex <sup>®</sup>	REVOLEX® KX
Automotive machines				l
Field choppers	•			
Feed mixers	•			
Forestry machines	•			
Self loading forage boxes				
Combine-harvesters	•			
Phytopharmacy sprayers	•			
Beet lifters	•			
Butt rotary cutters				
Telescopic loaders				
Grape pick-up loaders	•			
Attachments and accessory	units			
Balers	•			
Biogas plants	•	•	•	•
Slope regenerators	•			
Drillers	•			
Large-area spreaders	•			
Wood splitters	•		•	
Potato diggers	•			
Mowers/Slitting rollers	•			
Mulching machines				
Swath rakes	•			

BoWex-ELASTIC®	BoWex® FLE-PA	MONOLASTIC®	CLAMPEX®	RUFLEX®
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