

New high-performance spider for backlash-free servo coupling

Rheine, 1 September 2022 – **KTR has a new spider in its product range which decisively increases the performance level of the backlash-free servo couplings type ROTEX GS with regard to temperature resistance and pressure resistance. The material is a newly developed "thermoplastic polyurethane" with a hardness degree of "52 Shore D" and a temperature resistance of up to 120° C. The main areas of application are servo-hydraulics and test bench technology.**



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"The new high-performance TPU is particularly characterised by its severe compressive strength with continuous temperatures of up to 120° C," Johannes Deister, Product Manager at KTR explains. "In addition, there is an excellent dynamic behaviour and an outstanding wear behaviour as well as a reduced hysteresis with alternating loads and thus low values for energy dissipation and self-heating."

Various sizes of the spider were tested at KTR's R&D centre in Rheine in endurance tests up to 120° C and with nominal torque without torque reduction by the temperature factor. Johannes Deister: "The temperature factor is up to 60 % lower with the new material than with standard polyurethanes, which has a decisive influence on the design of the coupling. This results in completely new conditions for their sizing."

The new spider "52 ShD-GS" is used in the backlash-free servo couplings of the ROTEX GS series, initially in sizes 24 to 42. Areas of application are wherever high temperatures are generated, for example in servo hydraulics and test bench technology.

Press release

Meanwhile, KTR can supply the flexible spiders for the ROTEX GS series in seven different Shore hardnesses as a torsionally soft or hard material. This allows the user to easily adapt the backlash-free servo coupling to the individual conditions of an application with regard to torsional stiffness and vibration behaviour.

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KTR Systems GmbH develops and produces mechanical couplings, brakes, coolers and hydraulic components for mechanical and plant engineering. KTR was founded in 1959 in the Westphalian town of Rheine and employs more than 1,100 people worldwide, almost 500 of them in Germany. The global network comprises 25 subsidiaries and 90 sales partners as well as production sites in Brazil, China, Germany, India, Taiwan and the United States.

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