

Power transmission / design engineering / machine elements / supplier / fluid technology / energy technology

Maximum offset compensation thanks to hinged joint

New shaft coupling type from RINGSPANN increases flexibility in the powertrain

With great commitment, one-stop supplier RINGSPANN is expanding its range of functional system components for industrial drive technology. In the field of shaft couplings, the internationally active one-stop supplier has recently attracted attention with further standard elements and ready-to-install smart solutions. Now the company has announced the development of a novel hinged joint coupling, whose innovative design compensates for extreme radial, axial and angular displacements. This offers maximum flexibility and high safety in "unsteady" powertrains.

Bad Homburg, May 2022. – Some drive trains in plant and mechanical engineering can only be realized under the condition of maximum flexible shaft connections. The reasons for this can be manifold. Often it is extreme temperature changes of the systemic periphery, operational imbalances or sporadically occurring vibrations that lead designers and developers to search for shaft couplings that are as adaptable and variable as possible. In the RINGSPANN Innovation Centre, the company's coupling specialists are therefore working on solutions for such tasks. A promising example of this is a new, highly mobile hinged joint coupling, which has the ability to reliably compensate for large radial, axial and angular deviations during operation. "This is a real innovation in the field of shaft couplings that enables plant and machine builders to easily and safely compensate for technically unavoidable changes in length and position in drive trains", says RINGSPANN Product Manager Martin Schneweis.

Acrobat with balancing character

The new hinged joint coupling from RINGSPANN has a sophisticated kinematics based on the controlled interaction of two joints rotated exactly 90° against each other and several mounted bolts. Similar to a cardan shaft, this arrangement ensures a pulsation-free transmission of the torque and the rotary motion. While the two joints compensate for radial, axial and angular displacements, the mounted bolts allow the shafts to be moved under load. Seen in this light, the new hinged joint coupling from RINGSPANN could also be described as a compact cardan coupling with integrated length compensation. "This design gives our new coupling enormous mobility – regardless of whether tolerance compensation is required for thermal or mechanical reasons", emphasises Martin Schneweis.

Innovative problem solution

With this innovation in the field of shaft couplings, RINGSPANN offers an elegant solution to many design problems in industrial powertrains. Merely for the realization of pump drives that have to work in demanding thermal environments – for example in power generation and power plant technology, the new hinged joint coupling means considerable simplification. It can also make a significant contribution to higher operational reliability and lower maintenance costs in conveying systems for thermal oils or in superheated steam blowers. “The same applies, for example, to printing machines and dryers in the paper industry, where the drive shafts shift against each other for operational reasons”, adds Martin Schneeweis.

Rigid, torsionally rigid or torsionally flexible

The new hinged joint coupling enriches RINGSPANN's current shaft coupling range with another innovative solution. In total, the selection extends over 23 series, which represent almost all types currently required in mechanical and plant engineering. Designers, product developers and engineers thus have a great deal of freedom to realize rigid, torsionally rigid or torsionally elastic connections between shafts, gearboxes, motors and machines. A large part of the portfolio can now also be found in the company's online shop. Catalogues, data sheets, operating instructions and the 3D CAD data are also available for free download. *ms*

574 words with 3,940 characters (with spaces)

Mirco von Stein, freelance specialist journalist, Darmstadt

Note for editorial staff: Text and images available at www.pr-box.de!

Captions (3 pictures)

Figure 1: Acrobat for the powertrain: the new hinged joint coupling from RINGSPANN can compensate for extreme radial, axial and angular displacements and therefore offers maximum flexibility and high safety in "unsteady" drive trains.

Figure 2: RINGSPANN Product Manager Martin Schneeweis: "Our new hinged joint coupling is a real innovation in the field of shaft couplings. It allows plant and machine builders to compensate easily and safely for technically unavoidable changes in length and position in drive trains."

Figure 3: Sophisticated kinematics: the functionality of the new hinged joint coupling from RINGSPANN is based on the interaction of two joints rotated exactly 90° against each other and several mounted bolts.

(All images: RINGSPANN)

Add-ons:

Video – Direct link to [RINGSPANN-Produktanimation](#)

Provider:

RINGSPANN GmbH
Pia Katzenmeier
Schaberweg 30 - 34
D-61348 Bad Homburg
Tel.: 0049 (0) 61 72/ 275 118
Fax: 0049 (0) 61 72/ 275 61 18
Email: info@ringspann.de / pia.katzenmeier@ringspann.de

Press agency:

Graf & Creative PR
Robert-Bosch-Str. 7
D-64293 Darmstadt
Tel.: 0049 (0) 61 51 / 42 87 91-0
Fax: 0049 (0) 61 51 / 42 87 91-9
Email: info@guc.biz
Website: www.pr-box.de

Website: www.ringspann.de/ www.ringspann.com