



For advanced
drive
technology



PRESS REPORT

SUBJECT: Innovation for pump construction: Double- instead of single-cardanic couplings

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Shaft coupling contributes to longer service life of pumps

As „permanent runners“ in many ranges of industry pumps have to meet particularly high requirements of availability and lifetime. Therefore, pump manufacturers increasingly use, amongst others, electronics in order to control parameters relevant for maintenance.

As manufacturers of couplings compensating for shaft displacements in pump drives, KTR Kupplungstechnik GmbH also contributes to the optimisation of service life of pumps and forces the use of the double-cardanic ROTEX ZS-DKM which has been developed especially for this application.

In order to explicitly show the advantages of this coupling design, we completely cancelled the single-cardanic extendable couplings of the line ROFLEX N-H from the catalogue programme. At first this step may be surprising because single-cardanic shaft couplings have been the „quasi standard“ of many pump manufacturers for decades and also the works standards of big users request this coupling design.



But especially in pump drives there can be a very high shaft displacement, and single-cardanic couplings cannot compensate for it. This can be noted already when assembling the pump on the base plate: If the pump is heated during operation, the material extends, and this causes displacements opposite to the electric motor. In order to guarantee an optimal run in the operating condition, you often install the drive with an „installed“ error in displacement which will be compensated for when achieving the operating temperature.

You can save this work when using the ROTEX ZS-DKM: The double-cardanic coupling with the disassemblable spacer works like a cardan joint and can accept high displacements. Hereby, the load is decreased and consequently the wear in the total drive system, as tests in cooperation with a pump manufacturer showed:

Vibrational movements were reduced from 8 mm/s to 2 mm/s. Thus the coupling contributes to a long lifetime of bearings and slip ring seals. Furthermore, a noise reduction by 5 dB(A) was measured.

Some important pump users have already noticed the advantage of the ROTEX ZS-DKM and have added this coupling type to their works standards: Particularly in case of critical applications problems could be avoided hereby and considerably improve the service life of the pumps. Here the low restoring forces can be noted positively in addition to the high displaceability.

The ROTEX ZS-DKM covers the complete spectrum of applications of the pump drives. It is offered in ten different sizes; the performance data are coordinated with those of the chemistry norm pumps. Regarding the length of the spacer KTR complies with the requests of the user. But for each size there are standard lengths which are available from stock.

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