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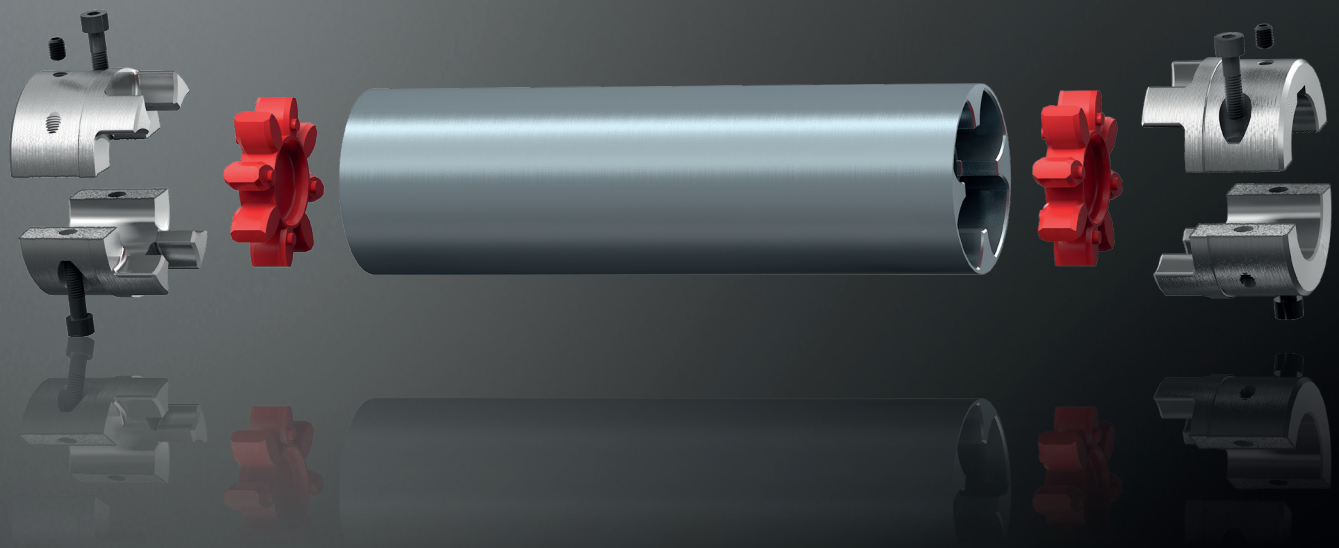

ROTEX® ZRS

Flexible / backlash-free intermediate shaft coupling

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ROTEX® ZRS
Flexible / backlash-free intermediate shaft coupling

Examples of application

Pumps

Indoor material handling

Linear Motion Technology

Gantry robots

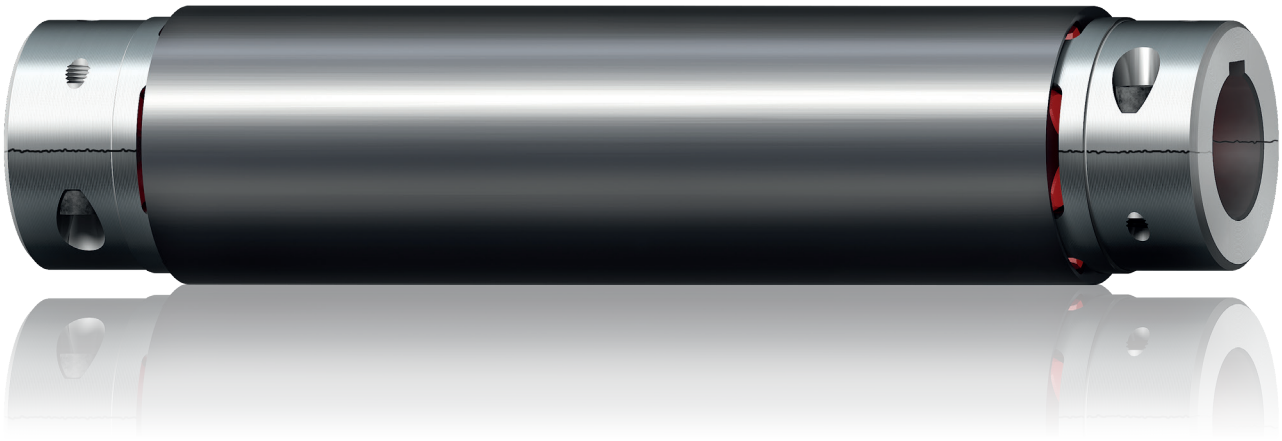
Agricultural technology

ROTEX® ZRS
Flexible / backlash-free intermediate shaft coupling

Description of product and application

"ROTEX ZRS jaw coupling for bridging smaller and larger shaft distances. The light-weight type ZRS made of high-strength aluminium impresses by very high overall stiffness. The high stiffness of the aluminium pipe results from the design; here two pipes combined via webs - the ROTEX cams - are concerned. There is a positive impact on the critical bending speed of the coupling; shaft distances up to 4,000 mm can be bridged subject to the very low bending. Apart from that the speed may be significantly higher with reference to the shaft distance dimension, as with the renowned intermediate pipe coupling with a steel pipe. The high stiffness of the pipe allows for torque transmission from the soft 92 Sh-A spider to the torsionally stiff 64 Sh-D spider. Applications of the torsionally flexible ROTEX-ZRS intermediate pipe coupling:

The intermediate pipe coupling type ZRS is used wherever large shaft distances must be bridged, e. g. on scissors lifts and conveyors in the lower torque range. The wide range of ROTEX hubs can be combined with the ZRS pipe and by the combination with, for example, the split ROTEX-SH-SPLIT hubs allows for radial assembly and disassembly without shifting driving and driven side. Please note: This type is not permissible for crane and hoist drives."

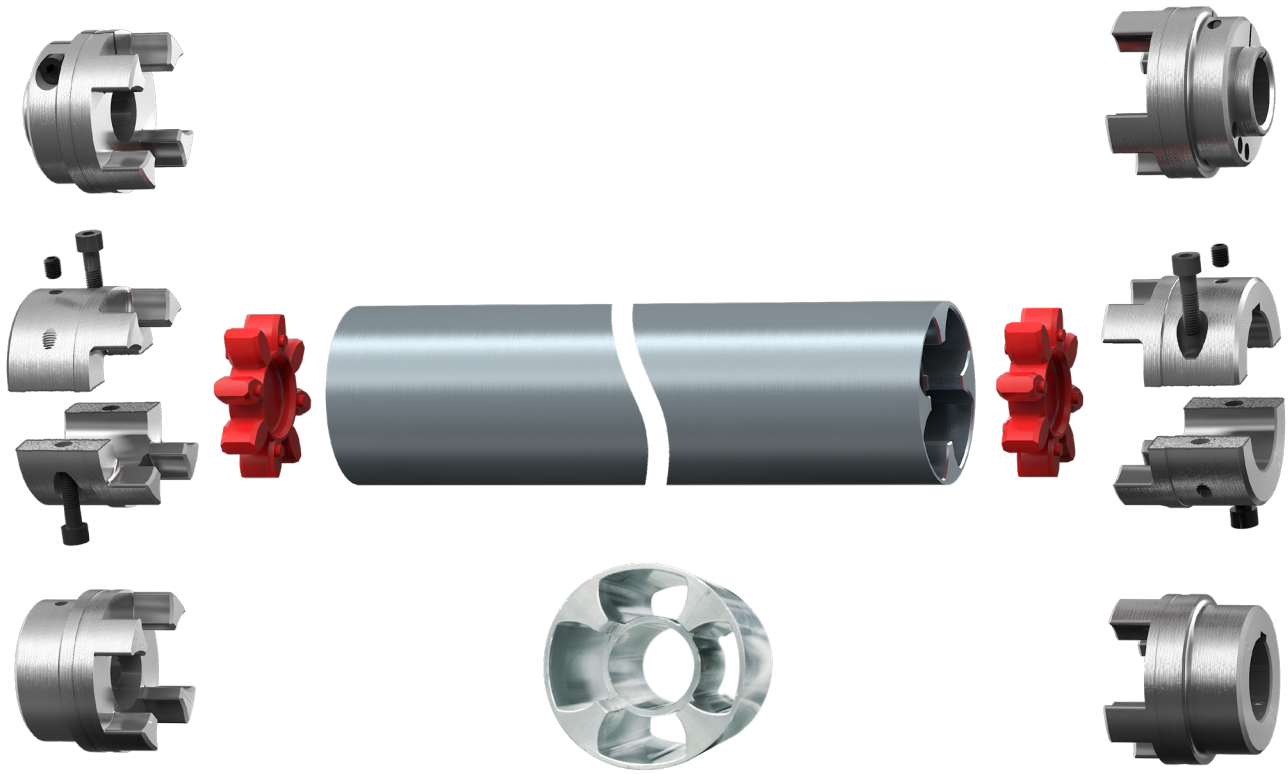


Product characteristics

- Intermediate tube made of aluminium extruded section
- ROTEX size 19 to 42
- For bridging small to large shaft distances up to 4000 mm
- Improved torsional spring stiffness and higher operating speed
- Very short delivery time
- Compatible with all ROTEX and ROTEX GS hubs
- Compatible with all ROTEX GS spiders
- Utility model protection by the German Patent and Trade Mark Office

ROTEX® ZRS
Flexible / backlash-free intermediate shaft coupling

Various hub designs



Insight into ROTEX ZRS intermediate shaft

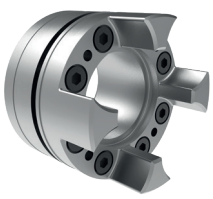
Intermediate shaft coupling can be combined with all ROTEX hub variants

The two backlash-free ROTEX-GS spiders of the double-cardanic jaw coupling centre and support the intermediate tube. Both spiders are positioned in the tube and thus protected from external influences such as falling dirt.

The ZRS intermediate tube can be combined with all **hub versions** of the KTR coupling series ROTEX standard and **ROTEX GS**, thus allowing for a wide range of applications. Depending on the hub version, the coupling is mounted and dismounted either radially or axially. It is manufactured at KTR's headquarters in Rheine and can be delivered within a few working days after order confirmation.

Examples of combinations with ROTEX hub variants:

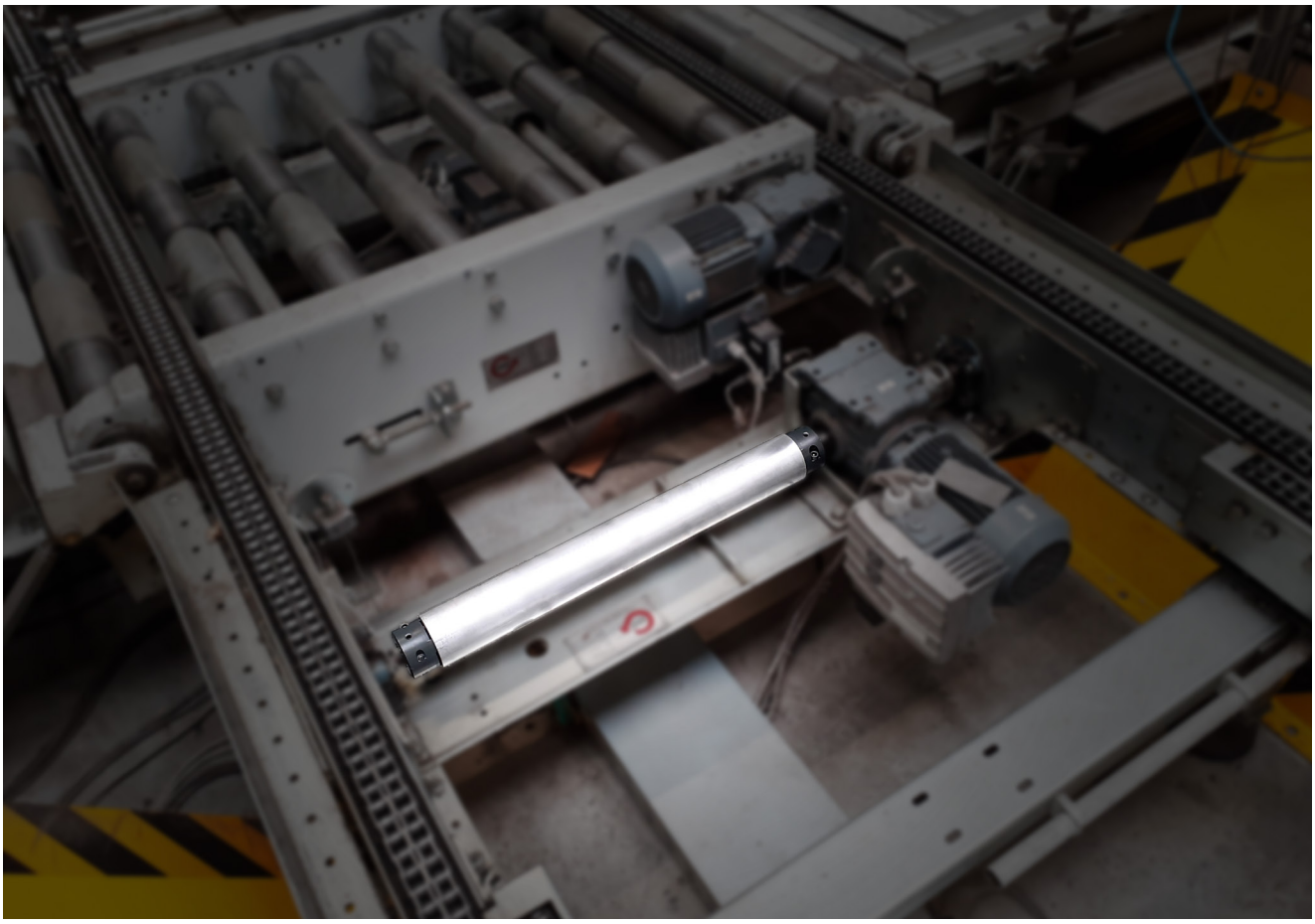
ROTEX GS, Clamping hub



ROTEX GS, Clamping ring hub

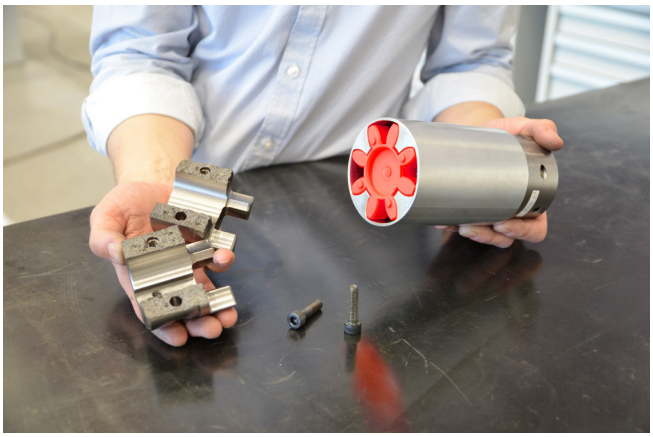
ROTEX® ZRS
Flexible / backlash-free intermediate shaft coupling

Application example of horizontal installation in the KTR logistics centre



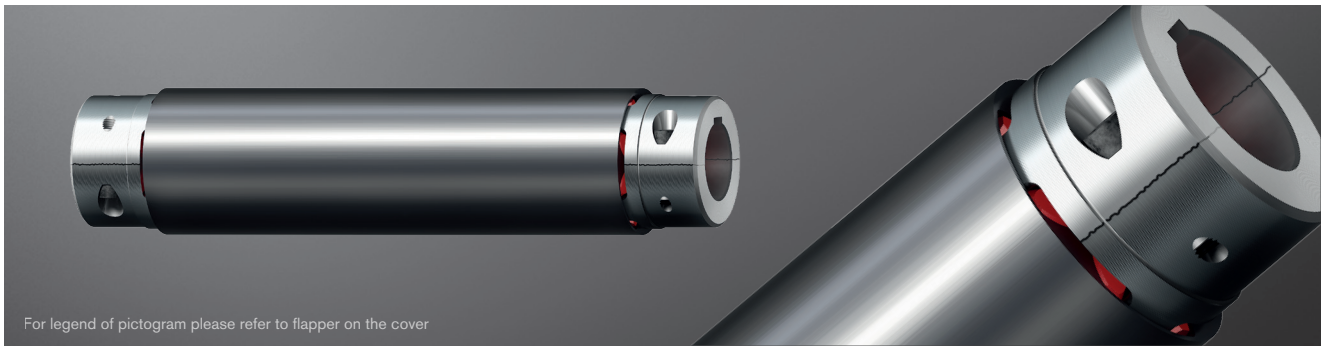
- ROTEX 28 ZRS with SPLIT hubs
- Connection electric gear motor with chain drive
- More than 10,000 operating hours in use

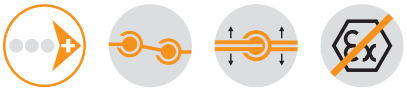
Various designs

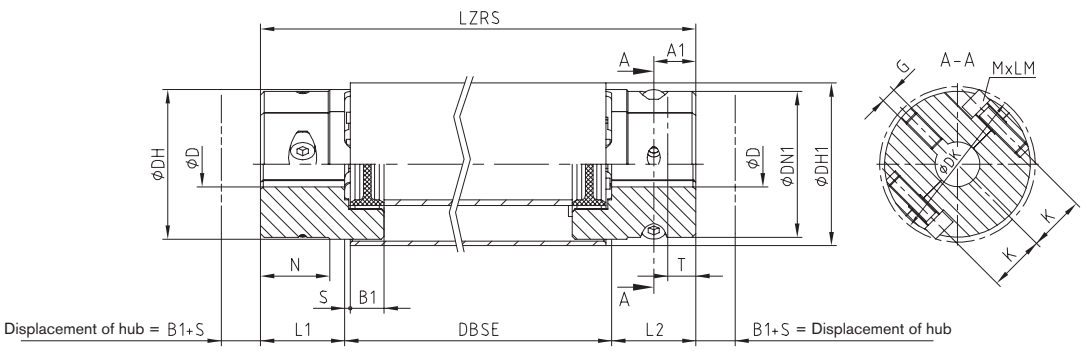


ROTEX® ZRS
Flexible / backlash-free intermediate shaft coupling

Intermediate shaft programme

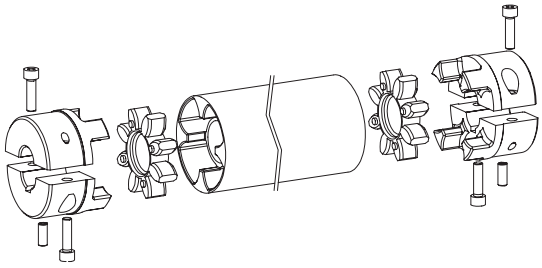






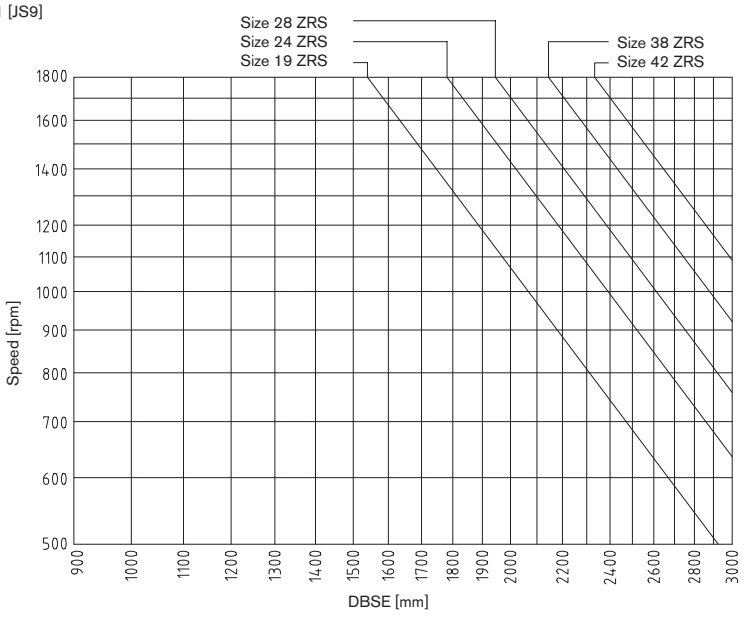
ROTEX® type ZRS																
Size	Dimensions [5] [mm]													Intermediate pipe Torsion spring stiffness C [2]	Clamping screw DIN EN ISO 4762		LZRS [1]	Min. DBSE
	Finish bore D (min. - max.)	DH	DN1	L1, L2	N	B1	S	G	T	A1	K	DK	DH1	[Nm/rad]	MxLM	Tightening torque T_A [Nm]		
19 [3]	0-20	40	-	25	-	12	2.0	-	-	8.0	14.5	46.0	45	3800	M6x16	14	[4]	33
24	0-24	55	-	30	-	14	2.0	M5	10	15.0	20.0	57.5	60	11100	M6x20	14		37
28	0-38	65	-	35	-	15	2.5	M8	15	17.5	25.0	73.0	72	23600	M8x25	34	LZRS =	40
38	24-45	80	78	45	37.0	18	3.0	M8	15	22.5	30.0	83.5	87	43800	M8x30	34	DBSE + L1 + L2	49
42	24-55	95	94	50	40.0	20	3.0	M8	20	25.0	30.0	97.0	103	82600	M10x35	67		53

[1] For inquiries and orders please specify the shaft distance dimension DBSE along with the maximum speed to review the critical bending speed. Maximum DBSE = 4000 mm (different lengths on request).
[2] Torsion spring stiffness with an intermediate pipe length of 1 m
[3] Available as a clamping hub type DH (7.5/7.6)
[4] LZRS = DBSE + L1 + L2 - 15
[5] Finish bore according to ISO fit H7, feather keyway according to DIN 6885, sheet 1 [JS9]



7.1 = SPLIT hub with feather keyway

Displacements			
Size	Axial displacement [mm]	Radial displacement [mm] per 1m of pipe length	Angular displacement [degree]
19	1.2	15.7	0.9
24	1.4	15.7	0.9
28	1.5	15.7	0.9
38	1.8	17.5	1.0
42	2.0	17.5	1.0



Ordering example:

ROTEX® 38	ZRS	1200	98 ShA-GS	7.1	Ø30	7.1	Ø30
Coupling size	Type	Shaft distance dimension DBSE	Spider hardness	Hub type	Finish bore	Hub type	Finish bore

Notes

Notes

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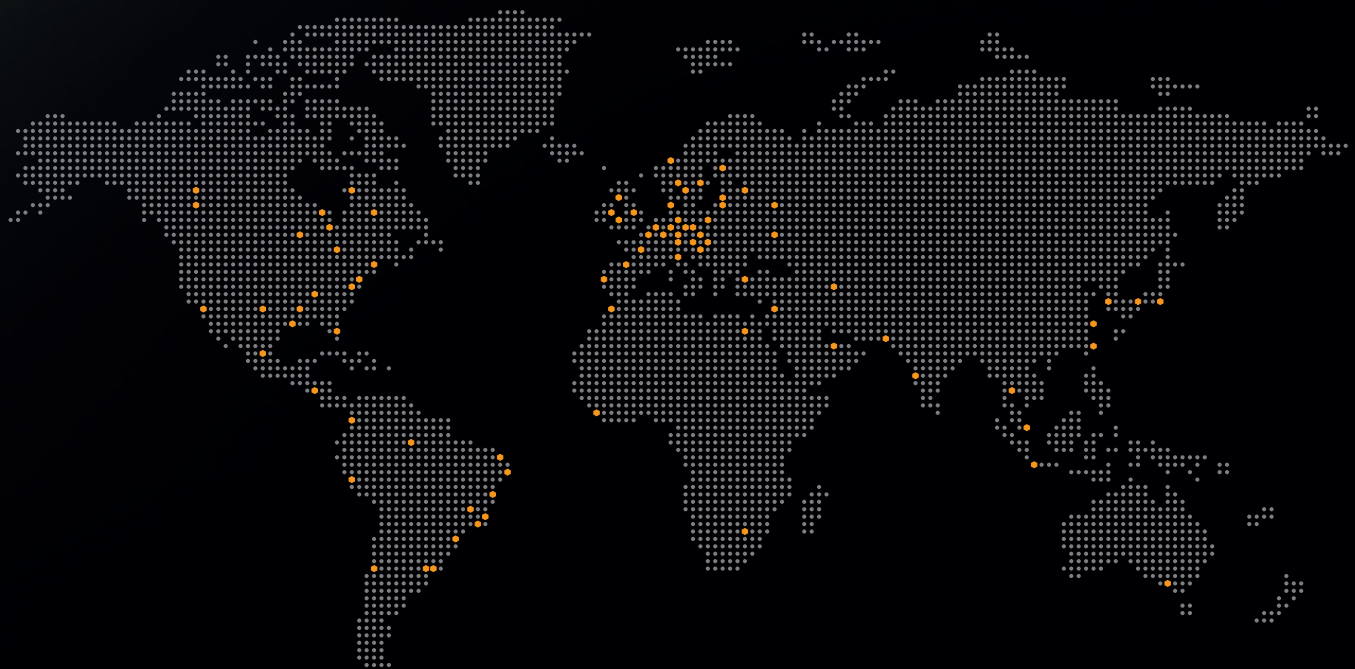

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Made for Motion KTR

Certificates and Approvals

Being one of the first companies in the field of drive technology, KTR was certified in accordance with DIN EN ISO 9001 already in 1993, including the plants in Poland, China, India and USA.

Currently KTR products have been approved by numerous internationally renowned societies for standardization and classification. Individual approvals by other societies can be implemented on request without fail.

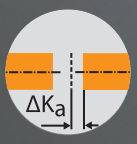
Legend of pictograms

Torsionally stiff


Light-weight


Maintenance-free

Torsionally flexible



Axial compensation

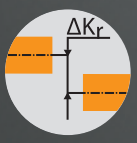

Protected against corrosion

Highly flexible

Angular compensation


Electrically insulating


Damping vibrations



Radial compensation

Maximum speed


Axial plug-in


Shiftable at standstill


No eddy current losses

Consider shaft distance


Double-cardanic

Torque limiter slipping

Relatively short shaft distance


Radial disassembly, ease of service

Torque limiter with synchronous ratching

Maximum operating temperature


Standard drop-out center lengths available

Torque limiter with idle rotation type


High speeds

Available in accordance with API


Hardened surface


Backlash-free

Complying with ATEX
For details refer to our ATEX leaflet

Accuracy X %


Shear type, separating, slipping

Certified in accordance with ABS


Consider axial displacement


Additional features compared to standard version