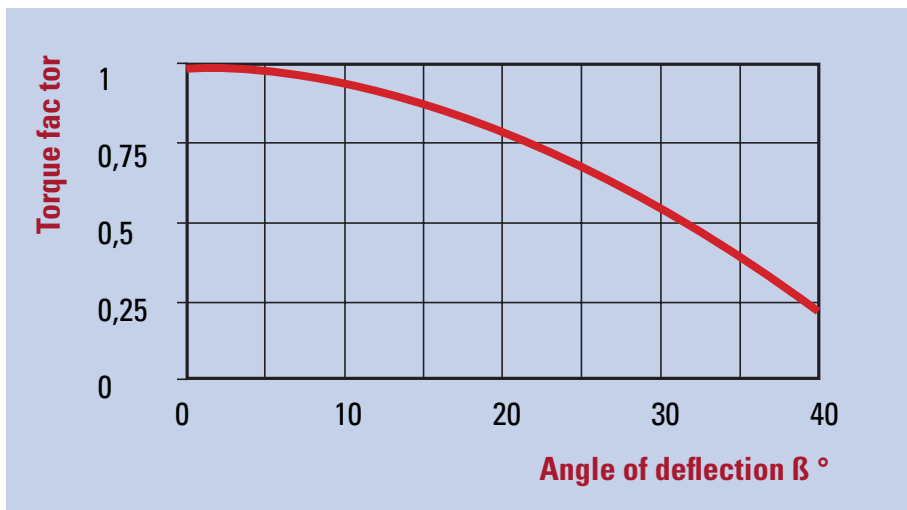


## 8. Hints for the application of pin and block cardan joints, ball and socket cardan joints

### Torque calculation for needle bearing equipped precision cardan shafts, pin and block cardan joints, ball and socket cardan joints, single

The values  $M_{d_{max}}$  listed in the diagram represent limit values that may not be exceeded. They are admissible to the full extent only at small rotation speed and minor angle of deflection respectively during intermittent operation.

The transmissible torque varies depending on the size of the angle of deflection.



### Needle bearing equipped precision cardan joints

Permitted max. operation moments of the needle bearing equipped precision cardan joints (Torque in Nm)..

Joint type	Speed (r.p.m.)						
	250	500	1000	2000	3000	4000	5000
0.616	11	10	8	6	5,5	5,1	4,8
0.620	28	25	19	15	14	12,5	12
0.625	35	30	25	20	18,5	17	16
0.632	70	60	50	40	37	34	32
0.640	150	130	100	80	74	68	64
0.650	220	190	150	120	110	100	95
0.663	450	400	310	250	220	200	190

### Pin and Block cardan joint, Ball and socket cardan joint, single

The empirical formula on the right can be used for the rolled calculation of the required joint size.

At	$M_{d_{max}}$	Speed x bending angle $\leq 500$
At	$0,5 \times M_{d_{max}}$	Speed x bending angle $\leq 5000$

### Recommendations for maintenance

An adequate lubrication shall be ensured for universal and ball-and-socket joints in permanent operation. Where drip oiling is not feasible, the joints have to be once daily lubricated (for lubricating points see arrow). Joints may also be enveloped in bellows; such bellows for these tow joint types may be ordered from us.

For utilization of cardan shafts under extreme climatical conditions (high and low temperatures) consult us first.

