



# Backlash-free bellow

## Couplings for servo-motors

Torque: **30 to 500Nm**

**GERWAH AK**

- Backlash and maintenance free
- High torsional stiffness
- Low moment of inertia
- Shaft/bore link without backlash
- Recommended assembly tolerances H7/g6
- Working temperature -30°C to +100°C
- Materials:
  - Hub: steel
  - Bellows: stainless steel
- Please specify bore size on order (between min and max  $\varnothing$ )

clamp fixing



### Torque calculation

- Use the formula

$$T_{KN} > K \times T_{AS} \times J_{mach} / (U_{mot} + J_{mach}) \text{ in Nm}$$

With following safety coefficient:

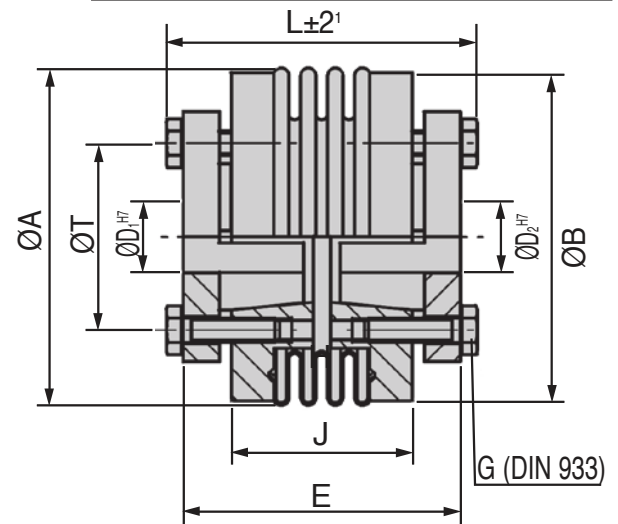
K = 1.5 for regular motion

K = 2 for irregular motion

K = 2.5 - 4 for jerky motion

Jx = moment of inertia (machine + motor)

T<sub>AS</sub> Required torque



**High Precision**

### DISCOUNTS

Qty.	1+	3+	6+
Disc. List	-8%	On request	

Part number	Nominal torque (Nm)	Stiffness			Moment of inertia (10 <sup>-3</sup> kgm <sup>2</sup> )	Tightening torque (Nm)	Weight (kg)	Misalignment			Max. speed (t/min)
		torsional (10 <sup>3</sup> Nm/Rad)	radial (N/mm)	axial (N/mm)				radial (mm)	axial (mm)	angular (°)	
AK30-60	30	25	220	30	0,15	3,0	0,4	0,2	0,5	1,5	11 000
AK60-73	60	50	330	55	0,24	8,5	0,8	0,2	0,5	1,5	9 100
AK80-91	80	75	400	55	0,65	10,0	1,3	0,2	0,5	1,5	7 000
AK150-92	150	100	600	85	0,65	14,0	1,3	0,2	0,5	1,5	7 000
AK200-93	200	120	450	85	0,87	14,0	1,6	0,2	0,5	1,5	6 700
AK300-104	300	280	1500	150	2,33	18,0	3,4	0,2	0,5	1,5	5 200
AK500-113	500	310	1000	85	3,61	26,0	4,7	0,2	1,0	1,5	4 600

Part number	ØA (mm)	ØB (mm)	L	D <sub>1</sub> <sup>H7</sup> /D <sub>2</sub> <sup>H7</sup>		E	J	ØT	G	Price each 1 to 2
				min.	max.					
AK30-60	56	55	60	12	20	53	38	31	6 x M4	239,36 €
AK60-73	66	64	73	15	25	65	46	37	6 x M6	261,10 €
AK80-91	82	80	91	20	35	83	61	51	6 x M6	286,83 €
AK150-92	82	80	92	20	35	84	61	51	6 x M6	334,30 €
AK200-93	90	90	93	20	40	85	63	56	6 x M6	391,53 €
AK300-104	110	109	104	25	50	93	67	75	6 x M8	453,01 €
AK500-113	122	120	113	35	55	105	72	80	6 x M8	589,52 €

Dimensions in mm