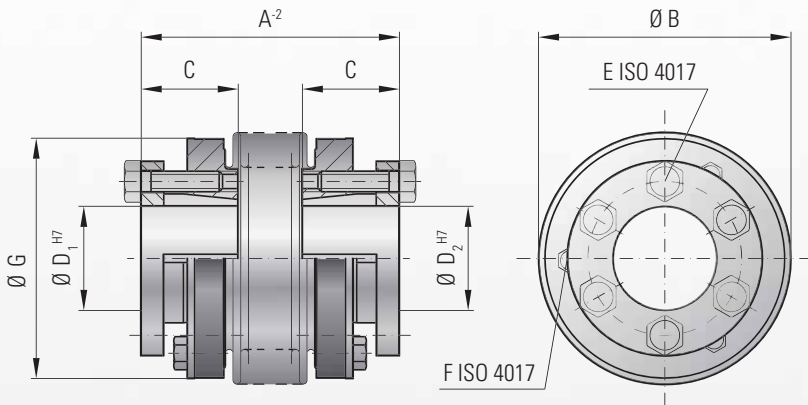




MODEL BK3

BACKLASH-FREE, TORSIONALLY STIFF METAL BELLOWS COUPLINGS

with tapered conical sleeves



Ordering example

BK3 / 60 / 76 / 20 / 22 / XX

Model
Series / Nm
Overall length mm
Bore Ø D1 H7
Bore Ø D2 H7
Non standard e.g. stainless steel

Features:

- high clamping force
- rugged, high torque design
- new jack screw design suited for space restricted applications

Material:

Bellows made from highly flexible, high grade stainless steel; hubs made from steel

Design:

With tapered conical sleeves and captive ISO 4017 jack screws
Absolutely backlash free due to frictional clamp connection

Temperature range:

-30 to +100° C (-22 to +212° F)

Speeds:

Up to 10,000 rpm; in excess of 10,000 rpm with finely balanced version (up to G = 2.5)

Service life:

Maintenance free with infinite life when operated within the technical specifications

Brief overloads:

Acceptable up to 1.5x the rated torque

Fit tolerance:

Overall clearance between hub and shaft 0.01-0.05 mm

Non standard applications:

Custom designs with various tolerances, keyways, materials, dimensions, etc. available upon request

Model BK 3			Series																									
			15		30		60		150		200		300		500		800		1500		4000		6000		10000			
Rated torque (Nm)	T_{KN}		15	30	60	150	200	300	500	800	1500	4000	6000	10000														
Overall length (mm)	A^2		48	55	57	65	66	76	75	87	78	90	89	103	97	110	114	141	195	210	217							
Outside diameter of bellows (mm)	B		49	55	66	81	90	110	124	133	157	200	253	303														
Fit length (mm)	C		19	22	27	32	32	41	41	50	61	80	85	92														
Inside diameter possible from Ø to Ø H7 (mm)	$D_{1/2}$		10-22	12-23	12-29	15-38	15-44	24-56	24-60	30-60	35-70	50-100	60-140	70-180														
Fastening screws ISO 4017	E		6x M4	6x M5	6x M5	6x M6	6x M6	6x M8	6x M8	6x M10	6x M12	6x M16	6x M16	8x M16														
Tightening torque of the fastening screws (Nm)	F		4	6	8	12	14	18	25	40	70	120	150	160														
Jack screw ISO 4017	G		3x M4	3x M4	3x M5	3x M5	3x M6	3x M6	3x M6	3x M8	6x M8	6x M10	6x M10	8x M10														
Outside diameter of hub (mm)			49	55	66	81	90	110	122	116	135	180	246	295														
Moment of inertia (10^{-3} kgm ²)	J_{total}		0.07	0.08	0.15	0.16	0.39	0.41	1.2	1.6	1.7	2.5	5.1	5.9	9.1	9.9	13.2	34.9	85.5	254	629							
Approximate weight (kg)			0.25	0.4	0.7	1.2	1.8	3	4.2	5.6	8.2	23	32.6	45.5														
Torsional stiffness (10^3 Nm/rad)	C_T		20	15	39	28	76	55	175	110	191	140	450	350	510	500	780	1304	3400	5700	10950							
Axial ± (mm)	Max. values		1	2	1	2	1.5	2	2	3	2	3	2.5	3.5	2.5	3.5	3.5	3.5	3.5	3	3							
Lateral ± (mm)			0.15	0.2	0.2	0.25	0.2	0.25	0.2	0.25	0.25	0.3	0.25	0.3	0.3	0.35	0.35	0.35	0.4	0.4	0.4	0.4						
Angular ± (degree)			1	1.5	1	1.5	1	1.5	1	1.5	1	1.5	1	1.5	1	1.5	1.5	1.5	1.5	1.5	1.5	1.5						
Axial spring stiffness (N/mm)	C_a		25	15	50	30	72	48	82	52	90	60	105	71	70	48	100	320	565	1030	985							
Lateral spring stiffness (N/mm)	C_r		475	137	900	270	1200	420	1500	435	2040	610	3750	1050	2500	840	2000	3600	6070	19200	21800							

* 1 Nm = 8.85 in lbs