

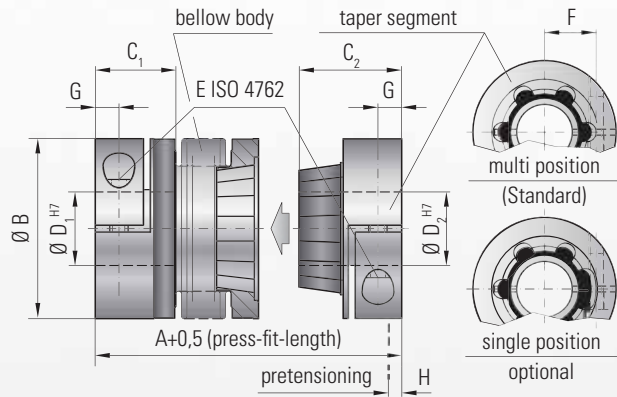


MODEL BK5

BACKLASH-FREE, TORSIONALLY STIFF METAL BELLOWS COUPLINGS



Press-fit, with clamping hub



Properties:

Temperature range:

Speeds:

Service life:

Backlash:

Brief overloads:

Tolerance:

Material BK 5:

Design BK 5:

Design details BK 5 / BK 6

- absolutely backlash-free and torsionally rigid
- easy mounting and dismounting
- electrically and thermally insulated
- wear-free and maintenance-free
- low moment of inertia
- compensation for misalignment

-30 to +110° C (-22 F to 230 F)

Up to 10,000 rpm, over 10,000 rpm available with a finely balanced version.

These couplings have an infinite life and are maintenance-free if the technical ratings are not exceeded.

Absolutely backlash-free due to frictional clamp connection and axial pretensioning of the tapered press-fit segments.

Acceptable up to 1.5 times the value specified.

On the hub/shaft connection 0.01 to 0.05 mm

Bellows made of highly flexible, high-grade stainless steel; clamping hubs up to series 80 aluminium, and 150 and up steel. Tapered segment on hub face: glass-fiber reinforced plastic molded onto an aluminium hub.

One side with a single radial clamping screw ISO 4762. One side includes backlash-free clamping hub and tapered press-fit device. Any imbalance of the clamping hub, is compensated with balancing bores located on the inside of the hub.

Ordering example BK 5 / BK 6

BK5 / 30 / 71 / 18 / 19 / XX

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

Model BK 5		Series																		
		15		30		60		80		150		300		500		800		1500		
Rated torque (Nm)	T _{KN}	15		30		60		80		150		300		500		800		1500		
Overall length (inserted) (mm)	A ^{+0.5}	60	67	71	79	85	95	94	106	95	107	114	128	136	149	150	172	172	172	
Outer diameter (mm)	B	49		55		66		81		81		110		124		133		157		
Fit length (mm)	C ₁	22		27		32		36		36		43		51		45		55		
Fit length (mm)	C ₂	28		33		39		43		43		52		61		74		94		
Inner diameter from from Ø to Ø H7 (mm)	D ₁	8-28		10-30		12-32		14-42		14-42		24-60		35-60		40-75		50-80		
Inner diameter from from Ø to Ø H7 (mm)	D ₂	8-22		10-25		12-32		14-38		14-38		24-58		35-60		40-62		50-75		
Fastening screw ISO 4762	E	M5		M6		M8		M10		M10		M12		M16		2xM16*		2xM20*		
Tightening torque (Nm)		8		15		40		50		70		130		200		250		470		
Distance between centers (mm)	F	17		19		23		27		27		39		41		2x48*		2x55*		
Distance (mm)	G	6.5		7.5		9.5		11		11		13		16.5		18		22.5		
Pretensioning approx. (mm)		0.2 up to 1.0		0.5 up to 1.0		0.5 up to 1.5		0.5 up to 1.5		0.5 up to 1.5		0.5 up to 1.5		1.0 up to 2.0		1.0 up to 2.5		0.5 up to 1.5		
Axial recovery force of coupling max. (N)	H	20	12	50	30	70	45	48	32	82	52	157	106	140	96	200	650	650	650	
Mass moment of inertia (10 ⁻³ kgm ²)	J _{total}	0.07	0.08	0.14	0.15	0.23	0.26	0.65	0.67	2.2	2.4	7.4	7.9	13.7	14.4	26.2	51.4	51.4	51.4	
Approx. weight (kg)		0.1	0.1	0.3	0.3	0.4	0.4	0.9	0.9	1.8	1.8	4	4	6.5	6.7	8.2	15.3	15.3	15.3	
Torsional stiffness (10 ⁻³ Nm/rad)	C _T	10	8	20	14	38	28	65	43	88	55	225	175	255	245	400	650	650	650	
axial* ± (mm)	Max. values	0.5	1	0.5	1	0.5	1	1	2	1	2	1.5	2	2.5	3.5	3	2	2	2	
lateral ± (mm)		0.15	0.2	0.2	0.25	0.2	0.25	0.2	0.25	0.2	0.25	0.25	0.3	0.3	0.35	0.35	0.35	0.35	0.35	0.35
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
Lateral spring stiffness (N/mm)	C _T	475	137	900	270	1200	420	920	290	1550	435	3750	1050	2500	840	2000	3600	3600	3600	

(1Nm ≈ 8.85 in lbs)

* allowed following maximum pretensioning

* two screws each hub, 180° apart
Higher torques on request