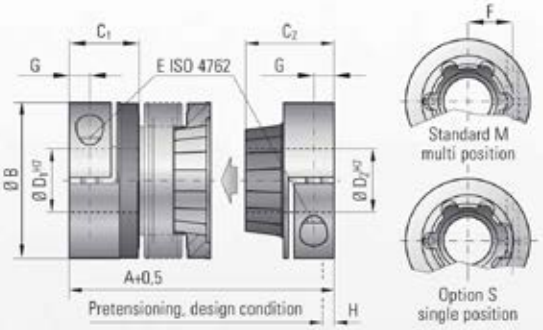
Coupling
Type BK5

optional stainless steel

MODEL **BK5**

TECHNICAL SPECIFICATIONS

Press-fit precision metal bellows couplings



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

Temperature range: -30 to +120° C (3.6 F - 270 F)

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

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

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

Brief overloads: Acceptable up to 1.5 times the value specified.

Tolerance: On the hub/shaft connection 0.01 to 0.05 mm

Material BK 5: Bellows made of highly flexible, high-grade stainless steel; clamping hubs up to series 80 aluminium 150 and up steel. Tapered segment on hub face: glass-fiber reinforced plastic sprayed onto an aluminium hub.

Design BK 5: 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.

Design details BK 5 / BK 6

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 toque	(Nm)	T_{KN}	15		30		60		80		150		300		500		800		1500	
Overall length (inserted)	(mm)	A	60	67	71	79	85	95	94	106	95	107	114	128	136	149	150		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	
ISO 4762 screw		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*	
	(mm)	G	6.5		7.5		9.5		11		11		13		16.5		18		22.5	
Pretensioning approx.	(mm)	H	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		1.0 up to 2.5	
Axial recovery force of coupling max.	(N)		20	12	50	30	70	45	48	32	82	52	157	106	140	96	200		650	
Mass moment of inertia	(10^{-3} kgm²)	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	
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	
Torsional stiffness	(10^3 Nm/rad)	C_T	10	8	20	14	38	28	65	43	88	55	225	175	255	245	400		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	
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	
Lateral spring stiffness	(N/mm)	C_L	475	137	900	270	1200	420	920	290	1550	435	3750	1050	2500	840	2000		3600	

(1Nm ≙ 8.85 in lbs) * allowed following maximum pretensioning * two screws each hub, 180° apart