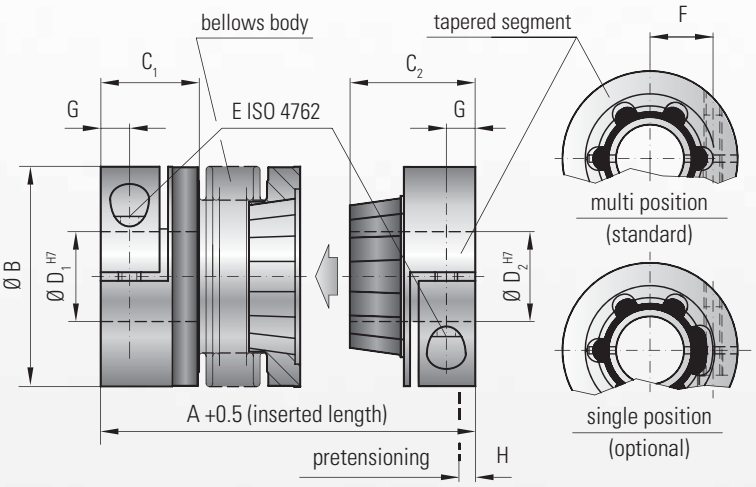
optional stainless steel

MODEL **BK5**

BACKLASH-FREE, TORSIONALLY STIFF METAL BELLOWS COUPLINGS

blind mate with clamping hubs



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

Material:
Bellows made from highly flexible, high grade stainless steel; clamping hubs up to series 80 made from aluminum; series 150 and up made from steel. Bellows side adapter plate made from aluminum; series 800 and up made from steel. Tapered male segment made from glass reinforced plastic molded directly onto the clamping hub

Design:
With a single ISO 4762 radial clamping screw per hub. Absolutely backlash free due to frictional clamp connection and axial pretensioning of the tapered press fit segment

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

Ordering example

BK5 / 30 / 71 / 18 / 19 / XX

- Model
- Series / Nm
- Overall length mm
- Bore Ø D1 H7
- Bore Ø D2 H7
- Non standard e.g. single position engagement

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	
Outside 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	
Inside diameter possible from Ø to Ø H7	(mm)	D_1	8-28		10-30		12-32		14-42		19-42		24-60		35-60		40-75		50-80	
Inside diameter possible from Ø to Ø H7	(mm)	D_2	8-22		10-25		12-32		14-38		19-38		24-58		35-60		40-62		50-75	
Fastening screw ISO 4762		E	M5		M6		M8		M10		M10		M12		M16		2 x M16**		2 x M20**	
Tightening torque	(Nm)		8		15		40		50		70		130		200		250		470	
Distance between centerlines	(mm)	F	17		19		23		27		27		39		41		2 x 48**		2 x 55**	
Distance	(mm)	G	6.5		7.5		9.5		11		11		13		16.5		18		22.5	
Approximate pretensioning	(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		0.5 up to 1.5	
Axial recovery force at maximum pretensioning	(N)		20	12	50	30	70	45	48	32	82	52	157	106	140	96	200		650	
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	
Approximate 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	
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	
Lateral spring stiffness	(N/mm)	C_r	475	137	900	270	1200	420	920	290	1550	435	3750	1050	2500	840	2000		3600	

* in addition to maximum pretensioning

** two screws per hub, 180 degrees opposed

1 Nm = 8.85 in lbs