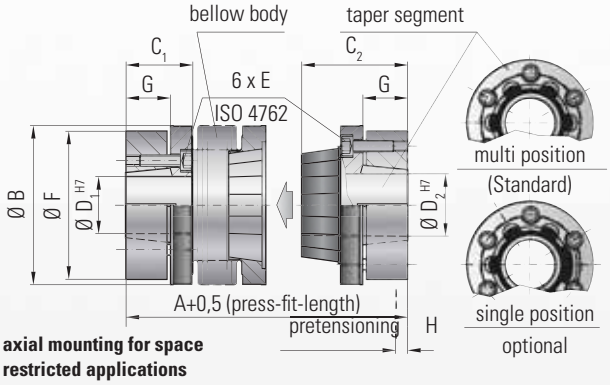
optional stainless steel

MODEL **BK6**

BACKLASH-FREE, TORSIONALLY STIFF METAL BELLOWS COUPLINGS

Press-fit, with conical sleeve



axial mounting for space restricted applications

Material BK 6:

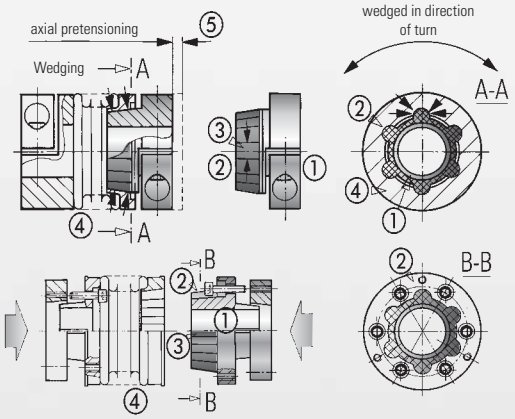
Bellows made of highly flexible, high-grade stainless steel; conical sleeves and tapered segment on bellows face are made of steel.

Tapered segment on hub face: glass-fiber rein forced plastic molded onto a steel hub.

Design BK 6:

One side concial sleeve with 6 fastening screws ISO 4762 and 3 draw-off threads. One side with backlash-free tapered concial sleeve with press-fit connection and 3 draw-off screws

Design details BK 5 / BK 6



Due to the press-fit design the complete drive unit can be simply pulled away when servicing is required.

Six self-centering, tapered drive projections (2) have been formed into the plastic conical element, which has been molded onto an aluminium hub (1). The six axially arranged projections are configured conically in a longitudinal direction (3). The mating piece consits of a metal bellows with a tapered female mounting element (4). Absolutely backlash-free torque transmission is ensured due to the axial pretensioning (5) of the metal bellows during its mounting. This slight pretensioning has no negative influence on the operation of the metal bellows coupling or of the shaft bearing.

Material description of the plastic segment:

This is a glass-fiber reinforced plastic of the duromer group. With a glass-fiber content of 65% it achives a strength and rigidity roughly that of steel.

Model BK 6			Series															
			15		30		60		150		300		500		800		1500	
Rated torque	(Nm)	T_{KN}	15		30		60		150		300		500		800		1500	
Overall length (inserted)	(mm)	$A^{+0,5}$	58	65	68	76	79	89	97	109	113	127	132	145	140		158	
Outer diameter	(mm)	B	49		55		66		81		110		124		133		157	
Fit length	(mm)	C_1	13.5		16.5		18		23.5		27		32		42		53	
Fit length	(mm)	C_2	29		34		39		49.5		59		68		74		90.5	
Inner diameter from Ø to Ø H7	(mm)	D_1	10-22		12-24		12-32		15-40		24-56		30-60		40-62		50-75	
Inner diameter from Ø to Ø H7	(mm)	D_2	10-22		12-24		12-32		15-40		24-56		30-60		40-62		50-75	
Fastening screw ISO 4762		E	M4		M5		M5		M6		M8		M8		M10		M12	
Tightening torque	(Nm)		3.5		6.5		8		12		30		32		55		110	
Diameter of clamping cone	(mm)	F	46.5		51		60		74		102		114		126		146	
Konuslänge	(mm)	G	9.5		10.5		11.5		17.5		20		23		27		32	
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		1.0 up to 2.0		1.0 up to 2.0		0.5 up to 1.5	
Axial recovery force of coupling max.	(N)		20	12	50	30	70	45	82	52	157	106	140	96	400		650	
Moment of inertia	(10^{-3} kgm²)	J_{total}	0.1	0.12	0.2	0.25	0.4	0.45	2.0	2.5	5.4	6.1	8.4	9.1	19.5		44	
Approx. weight	(kg)		0.3	0.32	0.5	0.52	0.82	0.84	1.6	1.7	4.1	4.2	6.0	6.3	9.4		16.2	
Torsional stiffness	(10^3 Nm/rad)	C_T	10	8	20	14	38	28	88	55	225	175	255	245	400		660	
axial*	± (mm)	Max. values	0.5	1	0.5	1	0.5	1	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	0.25	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	1.5		1.5	
Lateral spring stiffness	(N/mm)	C_r	475	137	900	270	1200	420	1550	435	3750	1050	2500	840	2000		3600	

(1Nm ≙ 8.85 in lbs) * allowed following maximum pretensioning Higher torques on request.