

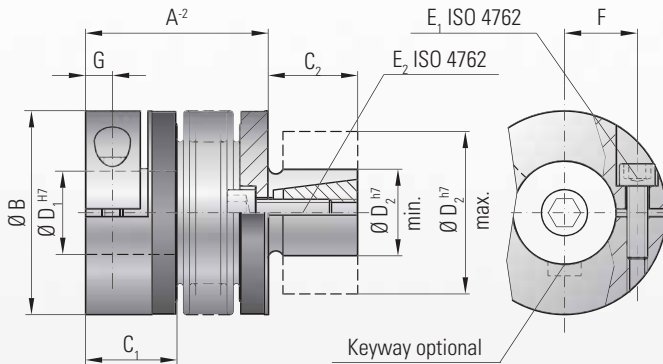
optional
stainless steel

MODEL BK7

BACKLASH-FREE, TORSIONALLY STIFF METAL BELLOWS COUPLINGS



with expanding shaft



Properties:

- compact design, conserves space while saving cost
- easy mounting
- backlash-free and torsionally rigid
- low moment of inertia
- compensation for misalignment

Material:

Bellows made of highly flexible high-grade stainless steel, hub material: see table, Expanding hub and cone (steel).

Design:

On one side with a single radial clamping screw ISO 4762. On one side an expanding shaft with tapered clamping element.

Temperature range:

-30 to +110° C (-22 F to 230 F)

Speeds:

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

Service life:

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

Backlash:

Absolutely backlash-free due to frictional clamp connection.

Brief overloads:

Acceptable up to 1.5 times the value specified.

Tolerance:

On the hub/shaft connection 0.01 to 0.05 mm

Custom Designs:

Custom designs with varied tolerances, keyways, non-standard material, bellows and ATEX designs are available upon request.

Ordering example

BK7 / 150 / 71 / 32 / 35 / XX

Model
Series / Nm
Overall length
Ø D1 H7
Ø D2 h7
non standard

Model BK 7	Series									
	15		30		60		150		300	
Rated torque (Nm)	T _{KN} 15		30		60		150		300	
Overall length (inserted)(mm)	A ⁻² 45 52		53 61		62 72		71 83		84 98	
Outer diameter (mm)	B 49		55		66		81		110	
Fit length (mm)	C ₁ 22		27		32		36		43	
Fit length (mm)	C ₂ 20		25		27		32		45	
Inner diameter from Ø to Ø H7 (mm)	D ₁ 8-28		10-30		12-35		19-42		30-60	
Shaft diameter from Ø to Ø h7 (mm)	D ₂ 13-25		14-30		23-38		26-42		38-60	
Fastening screw ISO 4762	E _{1/2} M5		M6		M8		M10		M12	
Tightening torque of the fastening screw (Nm)	E _{1/2} 8		14		38		65		120	
Distance between centers (mm)	F 17		19		23		27		39	
Distance (mm)	G 6.5		7.5		9.5		11		13	
Moment of inertia (10 ⁻³ kgm ²)	J _{total} 0.07 0.08		0.14 0.15		0.23 0.26		2.2 2.4		6.5 8.9	
Hub material (standard) (steel on request)	Al		Al		Al		steel		steel	
Approx. weight (kg)	0.15		0.3		0.4		1.7		4	
Torsional stiffness (10 ³ Nm/rad)	C _T 20 15		39 28		76 55		175 110		450 350	
axial ± (mm)	1 2		1 2		1.5 2		2 3		2.5 3.5	
lateral ± (mm)	0.15 0.2		0.2 0.25		0.2 0.25		0.2 0.25		0.25 0.3	
angular ± (degree)	1 1.5		1 1.5		1 1.5		1 1.5		1 1.5	
axial spring stiffness (N/mm)	C _a 20 12		50 30		72 48		82 52		105 71	
lateral spring stiffness (N/mm)	C _r 315 108		730 230		1200 380		1550 435		3750 1050	

(1Nm ≅ 8.85 in lbs)

Installation instructions:

By tightening the screw through the bellow body, the shaft is caused to expand. The coupling is designed for high dynamic hollow shaft connections eg. gear boxes. Recommended bore tolerance: ISO H7

