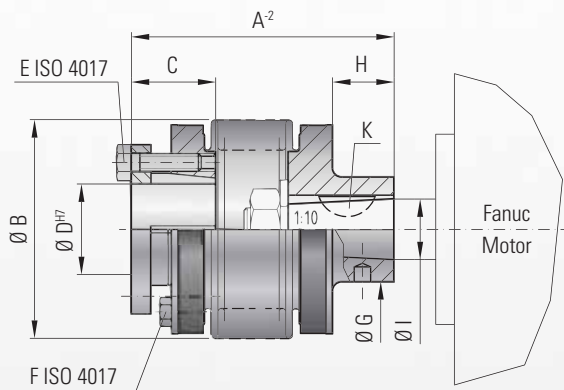




# MODEL BK4

BACKLASH-FREE, TORSIONALLY STIFF METAL BELLOWS COUPLINGS

for Fanuc-Motore



### Ordering example

BK4 / 150 / 82 / 20 / XX

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

### Properties:

- for conical shafts
- easy mounting and dismounting
- high degree of operating dependability

### Material:

Bellows made of highly flexible high-grade stainless steel, the hub material is steel.

### Design:

Spindle-side:  
With conical sleeve and strong captive ISO 4017 draw-off screws

Motor-side:  
Conical hub 1 : 10 and a keyway.

### 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 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.

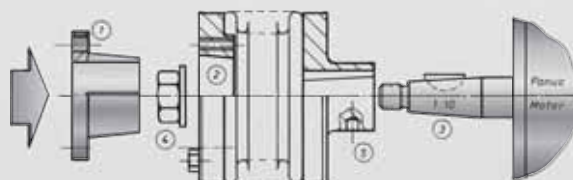
Model BK 4		Series			
		15	30	60	150
Rated torque (Nm)	$T_{KN}$	15	30	60	150
Overall length (mm)	$A^2$	47 54	68 76	72 82	82 94
Outer diameter of bellows (mm)	B	49	55	66	81
Fit length (mm)	C	19	22	27	32
Inner diameter from Ø to Ø H7 (mm)	D	10-22	12-23	12-29	15-37
Fastening screws 6x ISO 4017	E	M4	M5	M5	M6
Tightening torque of the fastening screws (Nm)	E	4	6	8	12
Draw-off screw 3x ISO 4017	F	M4	M4	M5	M5
Shaft diameter (mm)	G	20	27	30	30
Shaft length (mm)	H	8.5	22	18	20
Moment of inertia ( $10^{-3} \text{ kgm}^2$ )	$J_{total}$	0.10 0.12	0.22 0.27	0.58 0.61	1.1 1.4
Approx. weight (kg)		0.25	0.4	0.8	1.35
Torsional stiffness ( $10^3 \text{ Nm/rad}$ )	$C_T$	20 15	39 28	76 55	175 110
axial  ± (mm)	Max. values	1 2	1 2	1.5 2	2 3
lateral  ± (mm)		0.15 0.2	0.2 0.25	0.2 0.25	0.2 0.25
angular  ± (degree)		1 1.5	1 1.5	1 1.5	1 1.5
axial spring stiffness (N/mm)	$C_a$	25 15	50 30	72 48	82 52
lateral spring stiffness (N/mm)	$C_r$	475 137	900 270	1200 420	1500 435
cone Ø (Fanuc Motor)	I	11	16	16	16
Keyway width (mm)	K	4	5	5	5

Higher torques on request. (1Nm  $\approx$  8.85 in lbs)

### Technical instructions:

Before mounting the coupling, the conical sleeve (1) has to be removed. After sliding the coupling on to the motor shaft (3) the nut (4) can be put on through the bellows body (4).

To tighten the nut a special DIN 896 B key is used. The bore (5) is used for holding the coupling while tightening the nut.



Key DIN 896 B