

BKC SERIES

METAL BELLOWS COUPLINGS

FEATURES

- Metal bellows couplings for use with Magtrol TM, TMB, TMHS and new TS In-Line Torque Transducers and Sensors
- Easy to mount
- High Torsional Stiffness
- Diameter Range: 8 - 60mm
- Radial Clamping Screw hub for smooth shaft.
- Ideal for the transmission of large torques

DESCRIPTION

BKC - Metal Bellows Couplings provide the ideal complement to Magtrol's TM/TMB/TMHS/TS In-Line Torque Transducers and Sensors, when these are to be mounted in a drive train.

The torque transmission element consists of a metal bellows and 2 clamping hubs. The couplings are both torsionally stiff and flexible in order to compensate axial, angular and radial misalignment when connecting two shaft ends. The high torsional spring rate of the couplings ensures a high torsional stiffness and angular precision.



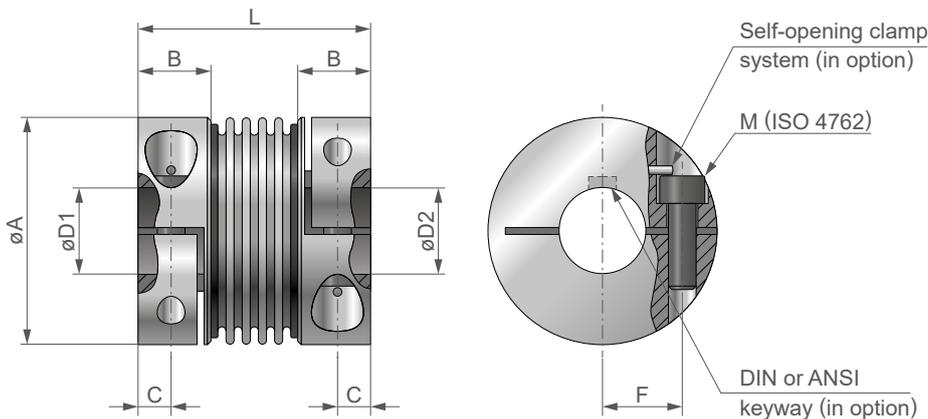
Fig. 1: BKC-60-67 | Metal Bellow Coupling

DESIGN & MATERIAL

Bellows are made of highly flexible high-grade stainless steel, the hub material of aluminium or steel (see "Specifications")

With a single ISO 4762 radial clamping screw per hub.

DIMENSIONS



NOTE: All values are in metric units. Dimensions are in millimeters.

MODEL	øA	B	C	øD1 or øD2 min - max ^{a)}	F	L	M	FASTENING TORQUE	WEIGHT
BKC-15-48	49	16.5	6.5	8 - 28	17.5	48	M5	8 N·m	0.13 kg
BKC-30-58	56	21.0	7.5	12 - 32	20.0	58	M6	15 N·m	0.21 kg
BKC-60-67	66	23.0	9.5	14 - 35	23.0	67	M8	40 N·m	0.37 kg
BKC-150-78	82	27.5	11.0	19 - 42	27.0	78	M10	70 N·m	0.72 kg
BKC-300-94	110	34.0	13.0	24 - 60	39.0	94	M12	130 N·m	3.26 kg

a) The standard versions are manufactured with integer values; the standard tolerance is H7. All diameters and tolerances are possible. Please contact our sales department.

SPECIFICATIONS

MODEL	BKC-15-48	BKC-30-58	BKC-60-67	BKC-150-78	BKC-300-94
Can be ideally combined with Torque Transducers	TM304 - 307 TS 104 - 107	TM309 TS 109	TM310 TS 110	TM311 TS 111	TM312 TS 112

RATINGS						
Rated Torque	[N·m]	15	30	60	150	300
Maximum Torque	[N·m]	22	45	90	225	450
Maximum Speed ^{a)}	[rpm] or [min ⁻¹]	10000				
Max. Speed with G=2.5 Balancing ^{b)}	[rpm] or [min ⁻¹]	60000	40000		25000	

MISALIGNMENT					
Axial Misalignment ^{c)}	[mm]	1		1.5	2
Radial Misalignment ^{c)}	[mm]	0.2			
Angular Misalignment ^{c)}	[°]	1			

STIFFNESS & MOMENT OF INERTIA						
Torsional Stiffness	[N·m/rad] x 10 ³	23	31	72	141	157
Axial Spring Stiffness	[N/mm]	30	50	67	77	112
Lateral Spring Stiffness	[N/mm]	315	366	679	960	2940
Moment of Inertia ^{d)}	[kg·m ²] x 10 ⁻³	0.05	0.1	0.26	0.65	6.3

MECHANICAL CHARACTERISTICS						
Diameter Range ^{e)}	ø [mm] H7	8-28	12-32	14-35	19-42	24-60
Hub Material		aluminium				steel

- a) Without balancing
- b) The specified maximum speed may require balancing. By default, Magtrol delivers couplings without balancing.
- c) For torque measurement applications, the alignment quality will be much higher than the values listed in the table.
- d) According to manufacturer's specifications
- e) The standard versions are manufactured with integer values; the standard tolerance is H7. All diameters and tolerances are possible. Please contact our sales department.

ORDERING INFORMATION

ORDERING NUMBER	BKC -	---	---	-	---	---	(__)	/	---	---
15-48, ..., 300-94 : coupling models										
XX : øD1 Diameter in mm ^{a)}										
H7, XX : Tolerance on øD1 ^{b)}										
blank, 1K, 2K : number of keyways										
XX : øD2 Diameter in mm ^{a)}										
H7, XX : Tolerance on øD2 ^{b)}										

- a) Standard diameters are expressed in whole numbers and must be contained within the diameter range. For other diameters, please contact our sales department.
- b) The standard bore tolerance is H7 (ISO tolerance system). For other tolerances, please contact our sales department.

Example: BKC Series Coupling, model 30-58, ø15H7 and ø20H7 with 1 keyway would be ordered as follows:
BKC-30-58-15H7(1K)/20H7

BKC Series Coupling, model 150-78, ø19.4H7 and ø21 JS6, without keyway: **please contact our sales department**