

BKC Series Metal Bellows Couplings

FEATURES

- For use with Magtrol TM/THS/TMB 309 - 312 In-Line Torque Transducers
- High torque
- Torsionally stiff
- With radial clamping screw per hub



DESCRIPTION

BKC metal bellows couplings provide the ideal complement to Magtrol's TM/THS/TMB 309 - 312 Torque Transducers, when 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 for 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.

Material

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

Design

With a single ISO 4762 radial fastening screw per hub.

RATINGS

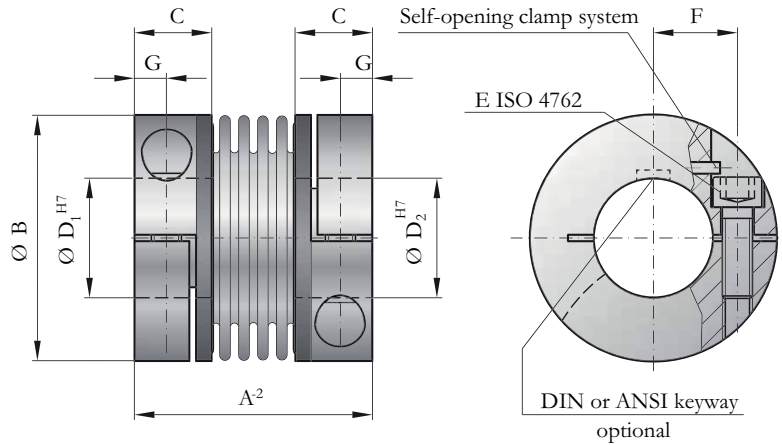
Coupling Model	BKC-30-58	BKC-60-67	BKC-150-78	BKC-300-94
Torque transducers	TM 309	TM 310	TM 311	TM 312
Rated torque (N·m)	30	60	150	300
Maximum torque (N·m)	45	90	225	450
Maximum speed	10000 m ⁻¹ (without balancing)			
Speed max. for balancing G=2.5 (min ⁻¹)*	40,000	40,000	40,000	25,000
Misalignment, axial (mm)**	1	1.5	2	2
Misalignment, radial (mm)**	0.2	0.2	0.2	0.25
Misalignment, angular (degree)**	1	1	1	1
Torsional stiffness (10 ³ N·m/rad)	50	67	77	112
Axial spring stiffness (N/mm)	366	679	960	2940
Lateral spring stiffness (N/mm)	31	72	141	157
Moment of inertia (10 ⁻³ kg·m ²)***	0.1	0.26	0.65	6.3
Hub material	aluminum	aluminum	aluminum	steel

*The specified maximum speed may require balancing. By default, Magtrol delivers couplings without balancing.

**For torque measurement applications, the alignment quality will be much higher than the values listed in the table.

*** According to manufacturer's specifications

DIMENSIONS



Model	A	$\varnothing B$	C	$\varnothing D_1/D_2$ (H7) min – max	$\varnothing D_1$ for TM	E	F	Fastening Screws E	G	Weight
BKC-30-58	58	56	21	12-32	20	M6	20	15 N·m	7.5	0.21 kg
BKC-60-67	67	66	23	14-35	20	M8	23	40 N·m	9.5	0.37 kg
BKC-150-78	78	82	27.5	19-42	20	M10	27	70 N·m	11	0.72 kg
BKC-300-94	94	110	34	24-60	20	M12	39	130 N·m	13	3.26 kg

All ratings listed are Manufacturer's Specifications.

ORDERING INFORMATION

When ordering a coupling, please indicate the shaft diameter of the machines to which the transducer will be coupled. In the part number, H7 indicates the manufacturing tolerance of the coupling.

Example: Shaft diameter of machine No. 1 35 mm
 Number of keys on the shaft 2
 Coupling model BKC-30-58
 Part number BKC-30-58-35H7(2K)/20H7

Due to the continual development of our products, we reserve the right to modify specifications without forewarning.



www.magtrol.com

MAGTROL INC

70 Gardenville Parkway
 Buffalo, New York 14224 USA
 Phone: +1 716 668 5555
 Fax: +1 716 668 8705
 E-mail: magtrol@magtrol.com

MAGTROL SA

Route de montena 77
 1728 Rossens/Fribourg, Switzerland
 Phone: +41 (0)26 407 3000
 Fax: +41 (0)26 407 3001
 E-mail: magtrol@magtrol.ch

Subsidiaries in:

Germany • France
 China • India
 Worldwide Network
 of Sales Agents



BKC-US 09/15