

BK5

BLIND MATE WITH CLAMPING HUB

15 - 1,500 Nm

ABOUT

FEATURES

- ▶ easy installation and removal
- ▶ electrically and thermally isolating
- ▶ absolutely backlash free assembly

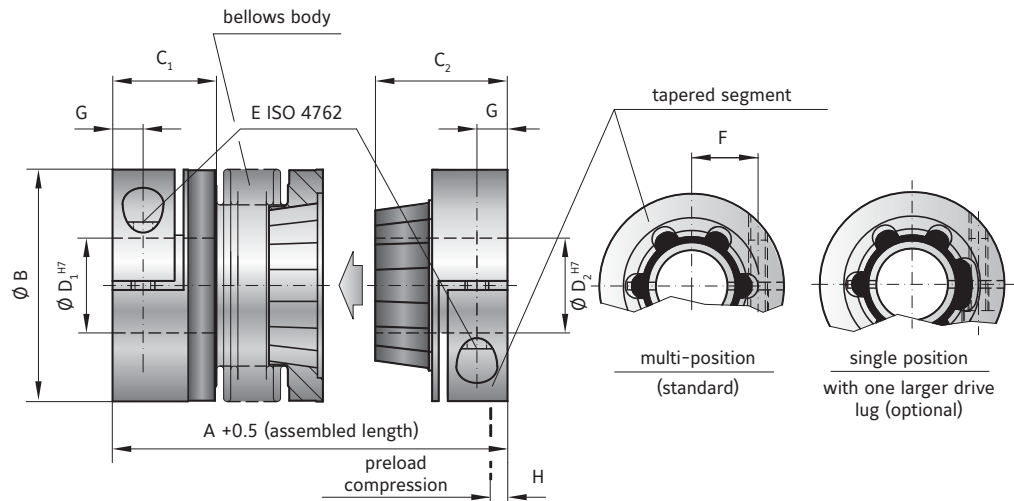
MATERIAL

- ▶ **Bellows:** high grade stainless steel
- ▶ **Hubs:** up through size 80 Aluminum, size 150 and up steel

- ▶ **Tapered male segment:** high strength plastic

DESIGN

Two clamping hubs, one of which has a tapered male projection for blind mate connection. Brief overloads of up to 1.5x the rated torque are acceptable.



MODEL BK5

| SIZE | | | 15 | 30 | 60 | 80 | 150 | 300 | 500 | 800 | 1500 |
|---|-------------|--|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Rated torque (Nm) | T_{KN} | | 15 | 30 | 60 | 80 | 150 | 300 | 500 | 800 | 1500 |
| Overall length (inserted) (mm) | $A^{+0.5}$ | | 60 67 | 71 79 | 85 95 | 94 106 | 95 107 | 114 128 | 136 149 | 150 172 | 172 |
| Outside diameter (mm) | B | | 49 | 55 | 66 | 81 | 81 | 110 | 124 | 133 | 157 |
| Fit length (mm) | C_1 | | 22 | 27 | 32 | 36 | 36 | 43 | 51 | 45 | 55 |
| Fit length (mm) | C_2 | | 28 | 33 | 39 | 43 | 43 | 52 | 61 | 74 | 94 |
| Inside diameter possible from Ø to Ø H7 (mm) | D_1 | | 8-28 | 10-30 | 12-32 | 14-42 | 14-42 | 24-60 | 35-60 | 40-75 | 50-80 |
| Inside diameter possible from Ø to Ø H7 (mm) | D_2 | | 8-22 | 10-25 | 12-32 | 14-38 | 14-38 | 24-58 | 35-60 | 40-62 | 50-75 |
| Fastening screw ISO 4762 | | | M5 | M6 | M8 | M10 | M10 | M12 | M16 | 2 x M16** | 2 x M20** |
| Tightening torque of the fastening screw (Nm) | E | | 8 | 15 | 40 | 50 | 70 | 130 | 200 | 250 | 470 |
| Distance between centerlines (mm) | F | | 17 | 19 | 23 | 27 | 27 | 39 | 41 | 2 x 48** | 2 x 55** |
| Distance (mm) | G | | 6.5 | 7.5 | 9.5 | 11 | 11 | 13 | 16.5 | 18 | 22.5 |
| Preload compression (mm) | | | 0.2 - 1.0 | 0.5 - 1.0 | 0.5 - 1.5 | 0.5 - 1.5 | 0.5 - 1.5 | 0.5 - 1.5 | 1.0 - 2.0 | 1.0 - 2.5 | 0.5 - 1.5 |
| Axial recovery force at maximum pretensioning (N) | H | | 20 12 | 50 30 | 70 45 | 48 32 | 82 52 | 157 106 | 140 96 | 200 | 650 |
| Moment of inertia (10^{-3} kgm ²) | J_{RES} | | 0.07 0.08 | 0.14 0.15 | 0.23 0.26 | 0.65 0.67 | 2.2 2.4 | 7.4 7.9 | 13.7 14.4 | 26.2 | 51.4 |
| Approximate weight (kg) | | | 0.1 0.1 | 0.3 0.3 | 0.4 0.4 | 0.9 0.9 | 1.8 1.8 | 4 4 | 6.5 6.7 | 8.2 | 15.3 |
| Torsional stiffness (10^3 Nm/rad) | C_T | | 10 8 | 20 14 | 38 28 | 65 43 | 88 55 | 225 175 | 255 245 | 400 | 650 |
| Axial* ± (mm) | | | 0.5 1 | 0.5 1 | 0.5 1 | 1 1 | 2 1 | 2 1.5 | 2 2.5 | 3 3.5 | 3 2 |
| Lateral ± (mm) | Max. values | | 0.15 0.2 | 0.2 0.25 | 0.2 0.25 | 0.2 0.25 | 0.2 0.25 | 0.2 0.25 | 0.3 0.3 | 0.35 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 1.5 | 1 1.5 | 1 1.5 |
| Lateral spring stiffness (N/mm) | C_r | | 475 137 | 900 270 | 1200 420 | 920 290 | 1550 435 | 3750 1050 | 2500 840 | 2000 | 3600 |

*in addition to maximum allowable pretension **180° opposed in each clamping hub.

| ORDERING EXAMPLE | BK5 | 30 | 71 | 18 | 19 | XX |
|--|-----|----|----|----|----|----|
| Model | ● | | | | | |
| Size | | ● | | | | |
| Overall length mm | | | ● | | | |
| Bore D1 H7 | | | | ● | | |
| Bore D2 H7 | | | | | ● | |
| For custom features place an XX at the end of the part number and describe the special requirements (e.g. BK5 / 30 / 71 / 18 / 19 / XX; XX=finely balanced for 25,000 rpm) | | | | | | |