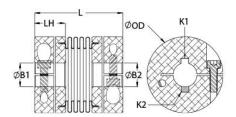




MBCK57-32-18-A

Ruland MBCK57-32-18-A, 32mm x 18mm Bellows Coupling, Aluminum, Clamp Style With Keyway, 57.2mm OD, 82.2mm Length





Description

Ruland MBCK57-32-18-A is a clamp bellows coupling with 32 mm x 18 mm bores, 57.2 mm OD, 82.2mm length and 10 mm x 6 mm keyways. It is zero-backlash and has a balanced design for reduced vibration at high speeds. MBCK57-32-18-A is comprised of two anodized aluminum hubs and a stainless steel bellows. The bellows are able to flex while remaining rigid under torsional loads allowing for all types of misalignment to be accommodated. This bellows coupling is lightweight and has low inertia making it suitable for applications with speeds up to 10,000 RPM. Hardware is metric and tests beyond DIN 912 12.9 standards for maximum torque capabilities. Ruland MBCK57-32-18-A has four convolutions allowing for high torsional rigidity and making it an excellent fit for precise positioning stepper servo applications as well as encoders. It is machined from solid bar stock that is sourced exclusively from North American mills and RoHS3 and REACH compliant. MBCK57-32-18-A is carefully manufactured in our Marlborough, MA factory under strict controls using proprietary processes.

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| Bore (B1) | 32 mm | Small Bore (B2) | 18 mm | | | |
|-------------------------------------|--|---|---|--|--|--|
| Keyway (K1) | 10 mm | Keyway (K2) | 6 mm | | | |
| B1 Max Shaft Penetration | 38.0 mm | B2 Max Shaft Penetration | 38.0 mm | | | |
| Outer Diameter (OD) | 57.2 mm | Bore Tolerance | +0.03 mm / -0.00 mm | | | |
| Length (L) | 82.2 mm | Length Tolerance | +/- 0.76 mm | | | |
| Hub Width (LH) | 26.7 mm | Recommended Shaft Tolerance | +0.000 mm / -0.013 mm | | | |
| Forged Clamp Screw | M6 | Screw Material | Alloy Steel | | | |
| Hex Wrench Size | 5.0 mm | Screw Finish | Black Oxide | | | |
| Seating Torque | 16 Nm | Number of Screws | 2 ea | | | |
| Dynamic Torque Reversing | 15.00 Nm | Angular Misalignment | 2.0° | | | |
| Dynamic Torque Non-Reversing | 30.00 Nm | Parallel Misalignment | 0.30 mm | | | |
| Static Torque | 60.00 Nm | Axial Motion | 0.75 mm | | | |
| Torsional Stiffness | 135 Nm/Deg | Moment of Inertia | 1.633 x 10 ⁻⁴ kg-m ² | | | |
| Maximum Speed | 10,000 RPM | Full Bearing Support Required? | Yes | | | |
| Zero-Backlash? | Yes | Balanced Design | Yes | | | |
| Torque Wrench | TW:BT-4C-3/8-140 | Recommended Hex Key | Metric Hex Keys | | | |
| Material Specification | Hubs: 2024-T351 Aluminum Bar Bellows: Type 321 Stainless Steel | Temperature | -40°F to 200°F (-40°C to 93°C) | | | |
| Finish Specification | Sulfuric Anodized MIL-A-8625 Type II, Class 2 and ASTM B580 Type B Black Anodize | Bellows Attachment Method | Ероху | | | |
| Manufacturer | Ruland Manufacturing | Country of Origin | USA | | | |
| Weight (lbs) | 0.716200 | UPC | 634529310793 | | | |
| Tariff Code | 8483.60.8000 | UNSPC | 31163018 | | | |
| Note 1 | Stainless steel hubs are available upon request. | | | | | |
| Note 2 | Torque ratings are at maximum misalignment. | | | | | |
| Note 3 | Performance ratings are for guidance only. The user must determine suitability for a particular application. | | | | | |
| Note 4 | normal/typical conditions the hubs a cases, especially when the smallest | are capable of holding up to the rated standard bores are used or where s | ilure point of the metal bellows. Unde d torque of the metal bellows. In some shafts are undersized, slippage on the are available to provide additional | | | |

Installation Instructions

- 1. Align the bores of the MBCK57-32-18-A bellows coupling on the shafts that are to be joined and determine if the misalignment parameters are within the limits of the coupling. (*Angular Misialignment:* 2.0 °, *Parallel Misalignment.* 0.30 mm, *Axial Motion:* 0.75 mm)
- 2. Fully tighten the M6 screw on the first hub to the recommended seating torque of 16 Nm using a 5.0 mm hex torque wrench.
- 3. Before tightening the screw on the second hub, rotate the coupling by hand to allow it to reach its free length.
- Tighten the screw on the second hub to the recommended seating torque. Make sure the coupling remains axially relaxed and the misalignment angle remains centered along the length of the coupling.
- 5. The shafts may extend into the relieved portion of the bore as long as it does not exceed the shaft penetration length of 38 mm.