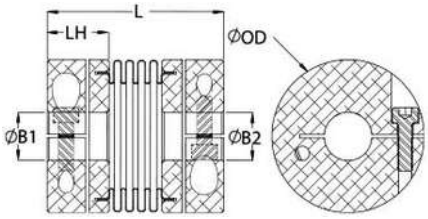
# MBC41-20-20-A

Ruland MBC41-20-20-A, 20mm x 20mm Bellows Coupling, Aluminum, Clamp Style, 41.3mm OD, 50.8mm Length






## Description

Ruland MBC41-20-20-A is a bellows coupling with 20mm x 20mm bores, 41.3mm OD, and 50.8mm length. It is zero-backlash and has a balanced design for reduced vibration at high speeds. MBC41-20-20-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 manufactures MBC41-20-20-A to be torsionally rigid and 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 RoHS2 and REACH compliant. MBC41-20-20-A is carefully manufactured in our Marlborough, MA factory under strict controls using proprietary processes.

## Product Specifications

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| **Large Bore B1** | 20 mm | **Small Bore B2** | 20 mm |
| **B1 Shaft Penetration** | 24.0 mm | **B2 Shaft Penetration** | 24.0 mm |
| **Outer Diameter OD** | 41.3 mm | **Bore Tolerance** | +.03 mm / -.00 mm |
| **Length L** | 50.8 mm | **Hub Width LH** | 18.05 mm |
| **Forged Clamp Screw** | M4 | **Screw Material** | Alloy Steel |
| **Hex Wrench Size** | 3.0 mm | **Screw Finish** | Black Oxide |
| **Seating Torque** | 4.6 Nm | **Number of Screws** | 2 ea |
| **Static Torque** | 28.0 Nm | **Angular Misalignment** | 2.0° |
| **Dynamic Torque Non-Reversing** | 14.00 Nm | **Parallel Misalignment** | 0.25 mm |
| **Dynamic Torque Reversing** | 7.00 Nm | **Axial Motion** | 0.50 mm |
| **Torsional Stiffness** | 63 Nm/Deg | **Maximum Speed** | 10,000 RPM |
| **Material Specification** | Hubs: 2024-T351 Aluminum Bar<br>Bellows: Type 321 Stainless Steel | **Temperature** | -40°F to 200°F<br>-40°C to 93°C |
| **Finish Specification** | Sulfuric Anodized MIL-A-8625 Type II, Class 2 and ASTM B580 Type B Black Anodize | **Country of Origin** | USA |
| **Weight (lbs.)** | 0.3050 | **UPC** | 63452906424 |
| **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** | Torque ratings for the couplings are based on the physical limitations/failure point of the metal bellows. Under normal/typical conditions the hubs are capable of holding up to the rated torque of the metal bellows. In some cases, especially when the smallest standard bores are used or where shafts are undersized, slippage on the shaft is possible below the rated torque of the metal bellows. Keyways are available to provide additional torque capacity in the shaft/hub connection when required. Please consult technical support for more assistance. | | |