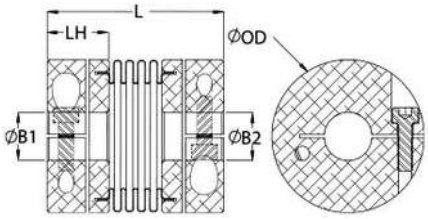
RULAND
Carefully Made Shaft Collars and Couplings

MBC51-20-16-A

Ruland MBC51-20-16-A, 20mm x 16mm Bellows Coupling, Aluminum, Clamp Style, 50.8mm OD, 58.7mm Length





Description

Ruland MBC51-20-16-A is a bellows coupling with 20mm x 16mm bores, 50.8mm OD, and 58.7mm length. It is zero-backlash and has a balanced design for reduced vibration at high speeds. MBC51-20-16-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 MBC51-20-16-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. MBC51-20-16-A is carefully manufactured in our Marlborough, MA factory under strict controls using proprietary processes.

Product Specifications

Large Bore B1	20 mm	**Small Bore B2**	16 mm
B1 Shaft Penetration	27.9 mm	**B2 Shaft Penetration**	27.9 mm
Outer Diameter OD	50.8 mm	**Bore Tolerance**	+.03 mm / -.00 mm
Length L	58.7 mm	**Hub Width LH**	20.55 mm
Forged Clamp Screw	M5	**Screw Material**	Alloy Steel
Hex Wrench Size	4.0 mm	**Screw Finish**	Black Oxide
Seating Torque	9.5 Nm	**Number of Screws**	2 ea
Static Torque	45.2 Nm	**Angular Misalignment**	2.0°
Dynamic Torque Non-Reversing	22.60 Nm	**Parallel Misalignment**	0.25 mm
Dynamic Torque Reversing	11.30 Nm	**Axial Motion**	0.50 mm
Torsional Stiffness	108 Nm/Deg	**Maximum Speed**	10,000 RPM
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	**Country of Origin**	USA
Weight (lbs.)	0.4400	**UPC**	63452906438
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.		