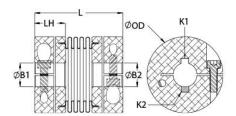




## MBCK57-16-14-A

Ruland MBCK57-16-14-A, 16mm x 14mm Bellows Coupling with Keyways, High Stiffness, Aluminum, 57.2mm, OD 82.2mm Length





## **Description**

Ruland MBCK57-16-14-A is a high stiffness bellows coupling with 16mm x 14mm bores, 57.2mm OD, 82.2mm length, and 5mm x 5mm keyways. It has fewer convolutions than comparably sized increased misalignment styles allowing for increased torsional stiffness making it the ideal choice for precision positioning applications. MBCK57-16-14-A is comprised of two anodized aluminum hubs and a stainless steel bellows for lightweight and low inertia. It is also engineered with a balanced design for reduced vibration at high speeds up to 10,000 RPM. The thin walls of the bellows are able to flex while remaining rigid under torsional loads allowing for the accommodation of all forms of misalignment. Hardware is metric and tests beyond DIN 912 12.9 standards for maximum torque capabilities. MBCK57-16-14-A is machined from meticulously selected bar stock that is sourced exclusively from North American mills. It is carefully made in our ISO 9001:2015 advanced manufacturing facility in Marlborough, MA under strict controls using proprietary processes. MBCK57-16-14-A is RoHS3, REACH, and Conflict Minerals compliant.

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Product Specifications			
Bore (B1)	16 mm	Small Bore (B2)	14 mm
Keyway (K1)	5 mm	Keyway (K2)	5 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)	26.67 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	1.713 x 10 <sup>-4</sup> kg-m <sup>2</sup>
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)	0.828500	UPC	634529310007
Tariff Code	8483.60.8000	UNSPC	31163018
Note 1	Stainless steel hubs are available u	pon request.	
Note 2	Torque ratings are at maximum mis	alignment.	
Note 3	Performance ratings are for guidance	ce only. The user must determine su	itability for a particular application.
Note 4	normal/typical conditions the hubs a cases, especially when the smalles shaft is possible below the rated tor	are capable of holding up to the rated	•

torque capacity in the shaft/hub connection when required. Please consult technical support for more

## Installation Instructions

- 1. Align the bores of the MBCK57-16-14-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.