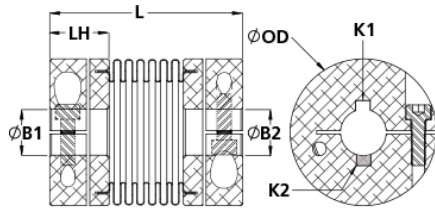




MBCLK33-12-9-A

Ruland MBCLK33-12-9-A, 12mm x 9mm Bellows Coupling, Aluminum, Clamp Style With Keyway, 33.3mm OD, 49.8mm Length



Description

Ruland MBCLK33-12-9-A is a clamp bellows coupling with 12mm x 9mm bores, 33.3mm OD, 49.8MM length and 4mm x 3mm keyways. It is zero-backlash and has a balanced design for reduced vibration at high speeds. MBCLK33-12-9-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 MBCLK33-12-9-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. MBCLK33-12-9-A is carefully manufactured in our Marlborough, MA factory under strict controls using proprietary processes.

Product Specifications

Bore (B1)	12 mm	Small Bore (B2)	9 mm
Keyway (K1)	4 mm	Keyway (K2)	3 mm
B1 Max Shaft Penetration	23.7 mm	B2 Max Shaft Penetration	23.7 mm
Outer Diameter (OD)	1.313 in (33.3 mm)	Bore Tolerance	+0.03 mm / -0.00 mm
Length (L)	1.962 in (49.8 mm)	Length Tolerance	+/- 0.76 mm
Hub Width (LH)	15.00 mm	Recommended Shaft Tolerance	+0.000 mm / -0.013 mm
Key Width (K1)	4 mm	Key Width (K2)	3 mm
Key Height (K1)	4 mm	Key Height (K2)	3 mm
Keyway 1 Height (T1)	13.8 mm	Keyway 2 Height (T2)	10.4 mm
Keyway 1 Width Tolerance	+0.015 mm / -0.015 mm	Keyway 1 Height Tolerance	+0.1 mm / 0 mm
Keyway 2 Width Tolerance	+0.012 mm / -0.012 mm	Keyway 2 Height Tolerance	+0.1 mm / 0 mm
Forged Clamp Screw	M3	Screw Material	Alloy Steel
Hex Wrench Size	2.5 mm	Screw Finish	Black Oxide
Seating Torque	2.1 Nm	Number of Screws	2 ea
Dynamic Torque Reversing	3.40 Nm	Angular Misalignment	3.0°
Dynamic Torque Non-Reversing	6.80 Nm	Parallel Misalignment	0.30 mm
Static Torque	13.6 Nm	Axial Motion	0.81 mm
Torsional Stiffness	33.9 Nm/Deg	Moment of Inertia	48.114 x10 ⁻⁶ kg-m ²
Maximum Speed	10,000 RPM	Full Bearing Support Required?	Yes
Zero-Backlash?	Yes	Balanced Design	Yes
Torque Wrench	TW:BT-1R-1/4-18.3	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	Epoxy
Manufacturer	Ruland Manufacturing	Country of Origin	USA

Weight (lbs)	0.041412	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	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. Please consult technical support for more assistance.		