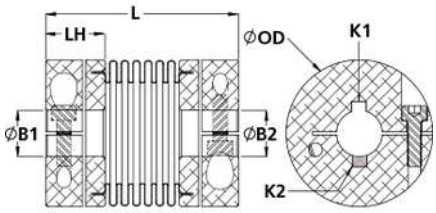
MBCLK25-10-6-A

Ruland MBCLK25-10-6-A, 10mm x 6mm Bellows Coupling, Aluminum, Clamp Style With Keyway, 25.4mm OD, 38.7mm Length





Description

Ruland MBCLK25-10-6-A is a clamp bellows coupling with 10mm x 6mm bores, 25.4mm OD, 38.7mm length and 3mm keyway on the 10mm bore and no keyway on the 6mm bore. It is zero-backlash and has a balanced design for reduced vibration at high speeds. MBCLK25-10-6-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 MBCLK25-10-6-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. MBCLK25-10-6-A is carefully manufactured in our Marlborough, MA factory under strict controls using proprietary processes.

Product Specifications

Bore (B1)	10 mm	**Small Bore (B2)**	6 mm
Keyway (K1)	3 mm	**Keyway (K2)**	NK
B1 Max Shaft Penetration	18.2 mm	**B2 Max Shaft Penetration**	18.2 mm
Outer Diameter (OD)	1.000 in (25.4 mm)	**Bore Tolerance**	+0.03 mm / -0.00 mm
Length (L)	1.523 in (38.7 mm)	**Length Tolerance**	+/- 0.76 mm
Hub Width (LH)	11.85 mm	**Recommended Shaft Tolerance**	+0.000 mm / -0.013 mm
Key Width (K1)	3 mm	**Key Height (K1)**	3 mm
Keyway 1 Height (T1)	11.4 mm	**Keyway 1 Width Tolerance**	+0.012 mm / -0.012 mm
Keyway 1 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**	1.70 Nm
Angular Misalignment	3.0°	**Dynamic Torque Non-Reversing**	3.40 Nm
Parallel Misalignment	0.20 mm	**Static Torque**	6.8 Nm
Axial Motion	0.61 mm	**Torsional Stiffness**	20.9 Nm/Deg
Moment of Inertia	2.866 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)**	0.068206
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.