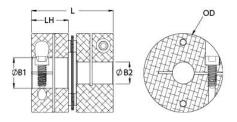




DCS12-4-4-A

Ruland DCS12-4-4-A, 1/4" x 1/4" Single Disc Coupling, Aluminum, Clamp Style, 0.750" OD, 0.906" Length





Description

Ruland DCS12-4-4-A is a clamp single disc coupling with 0.2500" x 0.2500" bores, 0.750" OD, and 0.906" length. It is zero-backlash and has a balanced design for reduced vibration at high speeds. The single disc design is comprised of two anodized aluminum hubs and two sets of thin stainless steel disc springs which can accommodate angular misalignment and axial motion, however does not allow for any parallel misalignment. DCS12-4-4-A is lightweight and has low inertia making it well suited 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 DCS12-4-4-A to be torisionally rigid and an excellent fit for precise positioning stepper servo applications commonly found in semiconductor, solar, printing, machine tool, and test and measurement systems. It is machined from solid bar stock that is sourced exclusively from North American mills and RoHS3 and REACH compliant. DCS12-4-4-A is manufactured in our Marlborough, MA factory under strict controls using proprietary processes.

Product Specifications

Bore (B1)0.2500 inSmall Bore (B2)0.2500 inB1 Max Shaft Penetration0.442 in0.442 in0.442 inOuter Diameter (OD)0.750 inBore Tolerance+0.001 in /-0.000 inLength (L)0.906 inHub Width (LH)0.418 inRecommended Shaft Tolerance+0.0000 in /-0.0005 inForged Clamp ScrewM2.5Screw MaterialAlloy SteelHex Wrench Size2.0 mmScrew FinishBlack OxideSeating Torque Reversing6.25 lb-inAngular Misalignment1.0°Dynamic Torque Reversing12.5 lb-inArall Motion0.000 inStatic Torque25 lb-inAxial Motion0.002 inTorsional Stiffness77 lb-in/DegMoment of Inertia0.0025 lb-in²Maximum Speed10,000 RPMFull Bearing Support Required?YesZero-Backlash?YesBalanced DesignYesTorque WrenchTW-BT-1R-1/4-10.7Recommended Hex KeyMetric Hex KeysMaterial SpecificationSulfuric Anodized MIL-4 ll, Class 2 and ASTM B Black AnodizeManufacturerRuland ManufacturingCountry of OriginUSAWeight (Ibs)0.032800UPC34529082133Tariff Code8483.60.8000UNSPC31163008Note 1Stainless steel hubs are available upon request.Sitelication the sulfactorial upon request.Note 3Performance ratings are of upuling are based on the physical limitations/fail-re point diversionSitelication file to disc sprinNote 4Stainless steel hubs are capable of	
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shaft is possible below the rated torque of the disc springs. Keyways are available to provide add torque capacity in the shaft/hub connection when required. Please consult technical support for n assistance.	igs. In some ippage on the ditional

WARNING This product can expose you to chemicals including Ethylene Thiourea and Nickel (metallic), known to the State of California to cause cancer, and Ethylene Thiourea known to the State of California to cause birth defects or other reproductive harm. For more information go to <u>www.P65Warnings.ca.gov</u>.

Installation Instructions

- 1. Align the bores of the DCS12-4-4-A single disc coupling on the shafts that are to be joined and determine if the misalignment parameters are within the limits of the coupling. (*Angular Misialignment:* 1.0°, *Parallel Misalignment:* 0.00 in, *Axial Motion:* 0.004 in)
- 2. Fully tighten the M2.5 screw on the first hub to the recommended seating torque of 1.21 Nm using a 2.0 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 0.442 in.