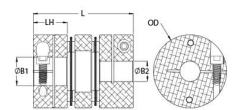




DCD10-4-4-A

Ruland DCD10-4-4-A, 1/4" x 1/4" Double Disc Coupling, Aluminum, Clamp Style, 0.590" OD, 0.937" Length





Description

Ruland DCD10-4-4-A is a clamp double disc coupling with 0.2500" x 0.2500" bores, 0.590" OD, and 0.937" length. It is zero-backlash and has a balanced design for reduced vibration at high speeds. The double disc design is comprised of two anodized aluminum hubs, two sets of thin stainless steel disc springs, and a center spacer allowing each disc to bend individually and accommodate all types of misalignment. DCD10-4-4-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 DCD10-4-4-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. DCD10-4-4-A is manufactured in our Marlborough, MA factory under strict controls using proprietary processes.

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Bore (B1)	0.2500 in	Small Bore (B2)	0.2500 in					
B1 Max Shaft Penetration	0.458 in	B2 Max Shaft Penetration	0.458 in					
Outer Diameter (OD)	0.590 in	Bore Tolerance	+0.001 in / -0.000 in					
Length (L)	0.937 in	Hub Width (LH)	0.328 in					
Recommended Shaft Tolerance	+0.0000 in / -0.0005 in	Forged Clamp Screw	M2					
Screw Material	Alloy Steel	Hex Wrench Size	1.5 mm					
Screw Finish	Black Oxide	Seating Torque	0.6 Nm					
Number of Screws	2 ea	Dynamic Torque Reversing	3.75 lb-in					
Angular Misalignment	1.0°	Dynamic Torque Non-Reversing	7.5 lb-in					
Parallel Misalignment	0.002 in	Static Torque	15 lb-in					
Axial Motion	0.004 in	Torsional Stiffness	27 lb-in/Deg					
Moment of Inertia	0.0010 lb-in ²	Maximum Speed	10,000 RPM					
Full Bearing Support Required?	Yes	Zero-Backlash?	Yes					
Balanced Design	Yes	Torque Wrench	TW:BT-1R-1/4-5.3					
Recommended Hex Key	Metric Hex Keys	Material Specification	Hubs and Center Spacer: 2024-T351 Aluminum Bar Disc Springs: Type 302 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					
Manufacturer	Ruland Manufacturing	Country of Origin	USA					
Weight (lbs)	0.018900	UPC	634529081532					
Tariff Code	8483.60.8000	UNSPC	31163008					
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	normal/typical conditions the hubs a cases, especially when the smalles shaft is possible below the rated to	e based on the physical limitations/far are capable of holding up to the rated t standard bores are used or where s rque of the disc springs. Keyways are anection when required. Please cons	d torque of the disc springs. In some shafts are undersized, slippage on the e available to provide additional					

assistance.

Prop 65

MARNING 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 www.P65Warnings.ca.gov.

Installation Instructions

- Align the bores of the DCD10-4-4-A double 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: 0.002 in, Axial Motion: 0.004 in)
- 2. Fully tighten the M2 screw on the first hub to the recommended seating torque of 0.6 Nm using a 1.5 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.
- 4. 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 0.458 in.