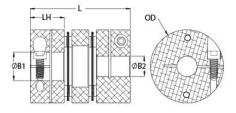




MDCDE15-5-5-A

Ruland MDCDE15-5-5-A, 5mm x 5mm Double Disc Coupling, Aluminum, Clamp Style, Electrically Isolating, 15.0mm OD, 23.8mm Length





Description

Note 1

Note 4

Product Specifications

Ruland MDCDE15-5-5-A is an electrically isolating clamp double disc coupling with 5mm x 5mm bores, 15.0mm OD, and 23.8mm 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 an acetal center spacer allowing each disc to bend individually and accommodate all types of misalignment. The acetal center spacer isolates the two hubs preventing the incidental transfer of current from the motor to the driven component or vice versa. MDCDE15-5-5-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 MDCDE15-5-5-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. MDCDE15-5-5-A is manufactured in our Marlborough, MA factory under strict controls using proprietary processes.

5 mm Small Bore (B2) 5 mm Bore (B1) 11.6 mm **B1 Max Shaft Penetration** 11.6 mm **B2 Max Shaft Penetration** Outer Diameter (OD) 15.0 mm Bore Tolerance +0.03 mm / -0.00 mm Hub Width (LH) Length (L) 23.8 mm 8.3 mm +0.000 mm / -0.013 mm **Recommended Shaft Tolerance** 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** 0.43 Nm **Angular Misalignment** 1.0° Dynamic Torque Non-Reversing 0.85 Nm **Parallel Misalignment** 0.05 mm 1.7 Nm Static Torque **Axial Motion** 0.10 mm **Torsional Stiffness** 3.0 Nm/Deg 2.637 x 10⁻⁷ kg-m² Maximum Speed 10.000 RPM Moment of Inertia **Full Bearing Support Required?** Yes Zero-Backlash? Yes **Torque Wrench Balanced Design** Yes TW:BT-1R-1/4-5.3 **Recommended Hex Key** Metric Hex Keys Material Specification Hubs: 2024-T351 Bar, Disc Springs: Type 302 Stainless Steel, Center Spacer: Acetal Temperature -10°F to 150°F (-23°C to 65°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 634529089194 Weight (lbs) 0.018500 UPC **Tariff Code** 8483.60.8000 UNSPC 31163008

Stainless steel hubs are available upon request. Torgue ratings are at maximum misalignment.

 Note 2
 Torque ratings are at maximum misalignment

 Note 3
 Performance ratings are for guidance only. The second s

Performance ratings are for guidance only. The user must determine suitability for a particular application. Torque ratings for the couplings are based on the physical limitations/failure point of the disc springs. Under normal/typical conditions the hubs are capable of holding up to the rated torque of the disc springs. In some cases, especially when the smallest standard bores are used or where shafts are undersized, slippage on the shaft is possible below the rated torque of the disc springs. Keyways are available to provide additional torque capacity in the shaft/hub connection when required. Please consult technical support for more

	assistance.
Prop 65	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	
	 Align the bores of the MDCDE15-5-5-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. (<i>Angular Misialignment:</i> 1.0°, <i>Parallel Misalignment.</i> 0.05 mm, <i>Axial Motion:</i> 0.10 mm) 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. 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. The shafts may extend into the relieved portion of the bore as long as it does not exceed the shaft penetration length of 11.6 mm.