Ruland MDCS57-22-16-A, 22mm x 16mm Single Disc Coupling, Aluminum, Clamp Style, 57.2mm OD, 58.8mm Length

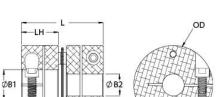
Description

Ruland MDCS57-22-16-A is a clamp single disc coupling with 22mm x 16mm bores, 57.2mm OD, and 58.8mm 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. MDCS57-22-16-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 MDCS57-22-16-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. MDCS57-22-16-A is manufactured in our Marlborough, MA factory under strict controls using proprietary processes.

Disc Springs: Type 302 St SteelTemperature-40°F to 200°F (-40°C to 93°C)Finish SpecificationSulfuric Anodized MIL-A-8 II, Class 2 and ASTM B58 Black AnodizeManufacturerRuland ManufacturingCountry of OriginUSAWeight (lbs)0.736000UPC634529154045Tariff Code8483.60.8000UNSPC31163008Note 1Stainless steel hubs are available upon request.Note 2Note 2Torque ratings are at maximum misalignment.Note 3Note 3Performance ratings are for guidance only. The user must determine suitability for a particular appli normal/typical conditions the hubs are capable of holding up to the rated torque of the disc springs. cases, especially when the smallest standard bores are used or where shafts are undersized, slipped	c opcomoations				
Outer Diameter (OD) 57.2 mm Bore Tolerance +0.03 mm /-0.00 mm Length (L) 58.8 mm Hub Width (LH) 26.67 mm Recommended Shaft Tolerance +0.000 mm /-0.013 mm Forged Clamp Screw M6 Screw Material Alloy Steel Hex Wrench Size 5.0 mm Screw Finish Black Oxide Seating Torque 16 Nm Number of Screws 2 ea Dynamic Torque Reversing 12.73 Nm Angular Misalignment 1.0° Dynamic Torque Non-Reversing 25.45 Nm Parallel Misalignment 0.00 mm Static Torque 50.9 Nm Axial Motion 0.38 mm Torsional Stiffness 113.0 Nm/Deg Moment of Inertia 1.514 x 10 ⁻⁴ kg-m ² Maximum Speed 10,000 RPM Full Bearing Support Required? Yes Zero-Backlash? Yes Balanced Design Yes Torque Wrench TW:BT-4C-3/8-140 Recommended Hex Key Metric Hex Keys Material Specification III, Class 2 and ASTM B58 Manufacturer Ruland Manufacturing Country of Origin USA) 21	22 mm	Small Bore (B2)	16 mm	
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	n ca si to	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			











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 MDCS57-22-16-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 mm, *Axial Motion:* 0.38 mm)
- 2. Fully tighten the M6 screw on the first hub to the recommended seating torque of 16 Nm using a 5.0 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 27.6 mm.