MDCS57-20-17-A

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Ruland MDCS57-20-17-A, 20mm x 17mm Single Disc Coupling, Aluminum, Clamp Style, 57.2mm OD, 58.8mm Length

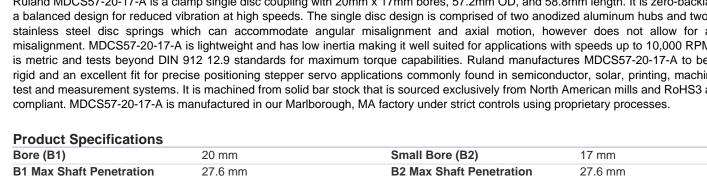
OD

Description

-LH

Ruland MDCS57-20-17-A is a clamp single disc coupling with 20mm x 17mm 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. MDCS57-20-17-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 MDCS57-20-17-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

Disc Springs: Type -40°F to 200°F (-40°C to 93°C) Finish Specification Sulfuric Anodize	
Length (L)58.8 mmHub Width (LH)26.67 mmRecommended Shaft Tolerance+0.000 mm / -0.013 mmForged Clamp ScrewM6Screw MaterialAlloy SteelHex Wrench Size5.0 mmScrew FinishBlack OxideSeating Torque16 NmNumber of Screws2 eaDynamic Torque Reversing12.73 NmAngular Misalignment1.0°Dynamic Torque Non-Reversing25.45 NmParallel Misalignment0.00 mmStatic Torque50.9 NmAxial Motion0.38 mmTorsional Stiffness113.0 Nm/DegMoment of Inertia1.517 x 10 ⁻⁴ kg-m²Maximum Speed10,000 RPMFull Bearing Support Required?YesZero-Backlash?YesBalanced DesignYesTorque WrenchTW:BT-4C-3/8-Recommended Hex KeyMetric Hex KeysMaterial SpecificationHubs: 2024-T38 Disc Springs: T SteelTemperature-40°F to 200°F (-40°C to 93°C)Finish SpecificationUSAWeight (Ibs)0.742100UPC634529153994Tariff Code8483.60.8000UNSPC31163008	
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II, Class 2 and Black AnodizeManufacturerRuland ManufacturingCountry of OriginUSAWeight (lbs)0.742100UPC634529153994Tariff Code8483.60.8000UNSPC31163008	51 Aluminum Bar, ype 302 Stainless
Weight (lbs) 0.742100 UPC 634529153994 Tariff Code 8483.60.8000 UNSPC 31163008	ed MIL-A-8625 Typ ASTM B580 Type I
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 parti	icular application.
Note 4 Torque ratings for the couplings are based on the physical limitations/failure point of the onormal/typical conditions the hubs are capable of holding up to the rated torque of the disc cases, especially when the smallest standard bores are used or where shafts are unders shaft is possible below the rated torque of the disc springs. Keyways are available to protorque capacity in the shaft/hub connection when required. Please consult technical supprassistance.	sc springs. In some sized, slippage on t wide additional









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 MDCS57-20-17-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.