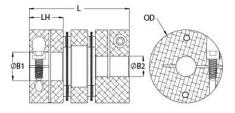




## MDCDE41-20-15-A

Ruland MDCDE41-20-15-A, 20mm x 15mm Double Disc Coupling, Aluminum, Clamp Style, Electrically Isolating, 41.3mm OD, 55.0mm Length





## Description

Ruland MDCDE41-20-15-A is an electrically isolating clamp double disc coupling with 20mm x 15mm bores, 41.3mm OD, and 55.0mm 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. MDCDE41-20-15-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 MDCDE41-20-15-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. MDCDE41-20-15-A is manufactured in our Marlborough, MA factory under strict controls using proprietary processes.

## **Product Specifications**

Length (L)55.0 mmHub Width (LH)18.0 mmRecommended Shaft Tolerance+0.000 mm / -0.013 mmForged Clamp ScrewM4Screw MaterialAlloy SteelHex Wrench Size3.0 mmScrew FinishBlack OxideSeating Torque4.6 NmNumber of Screws2 eaDynamic Torque Reversing5.08 NmAngular Misalignment2.0°Dynamic Torque Non-Reversing10.15 NmParallel Misalignment0.25 mmStatic Torque20.3 NmAxial Motion0.51 mmTorsional Stiffness42.4 Nm/DoMoment of Inertia3.380 x 10 <sup>5</sup> kg·m²Maximum Speed10,000 RPIFull Bearing Support Require?YesZero-Backlash?YesBalanced DesignYesTorque WrenchTW:BT-IRRecommended Hex KeyMetric Hex KeysMaterial SpecificationHubs: 2024 Type 302 S Spacer: AcTemperature-10°F to 150°F (-23°C to 65°C)Finish SpecificationSulfuric Am II, Class 2 a Black AnodManufacturerRuland ManufacturingCountry of OriginUSAWeight (Ibs)0.295800UPC634529089Tariff Code8483.60.8000UNSPC31163008Note 1Stainless steel hubs are available upon request.Note 2Torque ratings are at maximum misalignment.		
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normal/typical conditions the hubs are capable of holding up to the rated torque of th cases, especially when the smallest standard bores are used or where shafts are un shaft is possible below the rated torque of the disc springs. Keyways are available to	the disc springs. In some indersized, slippage on th	

	torque capacity in the shaft/hub connection when required. Please consult technical support for more assistance.
Prop 65	<b>MARNING</b> 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	
	<ol> <li>Align the bores of the MDCDE41-20-15-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</i> <i>Misialignment:</i> 2.0°, <i>Parallel Misalignment:</i> 0.25 mm, <i>Axial Motion:</i> 0.51 mm)</li> <li>Fully tighten the M4 screw on the first hub to the recommended seating torque of 4.6 Nm using a 3.0 mm hex torque wrench.</li> <li>Before tightening the screw on the second hub, rotate the coupling by hand to allow it to reach its free length.</li> <li>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.</li> <li>The shafts may extend into the relieved portion of the bore as long as it does not exceed the shaft penetration length of 26.1 mm.</li> </ol>