## MDCS41-12-10-A

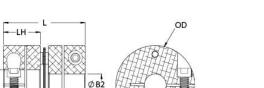
Ruland MDCS41-12-10-A, 12mm x 10mm Single Disc Coupling, Aluminum, Clamp Style, 41.3mm OD, 39.7mm Length

## Description

Ruland MDCS41-12-10-A is a clamp single disc coupling with 12mm x 10mm bores, 41.3mm OD, and 39.7mm 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. MDCS41-12-10-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 MDCS41-12-10-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. MDCS41-12-10-A is manufactured in our Marlborough, MA factory under strict controls using proprietary processes.

Product	Specifications
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Small Bore (B2)10 mmB2 Max Shaft Penetration19.2 mmBore Tolerance+0.03 mm / -0.00 mmHub Width (LH)18.05 mm3 mmForged Clamp ScrewM4Hex Wrench Size3.0 mmSeating Torque4.6 NmDynamic Torque Reversing5.08 NmDynamic Torque Non-Reversing10.15 NmStatic Torque20.3 NmTorsional Stiffness70.6 Nm/DegMaximum Speed10,000 RPMZero-Backlash?YesTorque WrenchTW:BT-1R-1/4-41.0Material SpecificationHubs: 2024-T351 Aluminum E Disc Springs: Type 302 Stainl
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Steel
D°C to 93°C) Finish Specification Sulfuric Anodized MIL-A-8625 II, Class 2 and ASTM B580 Ty Black Anodize
ring Country of Origin USA
UPC 634529085219
UNSPC 31163008
s are available upon request.
at maximum misalignment.
s are for guidance only. The user must determine suitability for a particular application
the couplings are based on the physical limitations/failure point of the disc springs. U ditions the hubs are capable of holding up to the rated torque of the disc springs. In s when the smallest standard bores are used or where shafts are undersized, slippage show the rated torque of the disc springs. Keyways are available to provide additional the shaft/hub connection when required. Please consult technical support for more
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**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 MDCS41-12-10-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:* 0.25 mm)
- 2. 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.
- 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 19.2 mm.