MDCS25-12-12-A

Ruland MDCS25-12-12-A, 12mm x 12mm Single Disc Coupling, Aluminum, Clamp Style, 25.4mm OD, 26.2mm Length

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Description

Ruland MDCS25-12-12-A is a clamp single disc coupling with 12mm x 12mm bores, 25.4mm OD, and 26.2mm 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. MDCS25-12-12-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 MDCS25-12-12-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. MDCS25-12-12-A is manufactured in our Marlborough, MA factory under strict controls using proprietary processes.

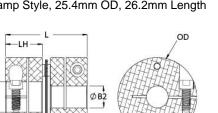
Product	Specifications
Poro (P1)	

12 mm	Small Bore (B2)	12 mm
11.8 mm	B2 Max Shaft Penetration	11.8 mm
25.4 mm	Bore Tolerance	+0.03 mm / -0.00 mm
26.2 mm	Hub Width (LH)	11.85 mm
+0.000 mm / -0.013 mm	Forged Clamp Screw	M3
Alloy Steel	Hex Wrench Size	2.5 mm
Black Oxide	Seating Torque	2.1 Nm
2 ea	Dynamic Torque Reversing	1.40 Nm
1.0°	Dynamic Torque Non-Reversing	2.80 Nm
0.00 mm	Static Torque	5.6 Nm
0.15 mm	Torsional Stiffness	10.6 Nm/Deg
2.487 x 10 ⁻⁶ kg-m ²	Maximum Speed	10,000 RPM
Yes	Zero-Backlash?	Yes
Yes	Torque Wrench	<u>TW:BT-1R-1/4-18.3</u>
Metric Hex Keys	Material Specification	Hubs: 2024-T351 Aluminum Bar, Disc Springs: Type 302 Stainless Steel
-40°F to 200°F (-40°C to 93°C)	Finish Specification	Sulfuric Anodized MIL-A-8625 Type II, Class 2 and ASTM B580 Type B Black Anodize
Ruland Manufacturing	Country of Origin	USA
0.055900	UPC	634529084939
8483.60.8000	UNSPC	31163008
Stainless steel hubs are available upon request.		
Torque ratings are at maximum misalignment.		
Performance ratings are for guidance only. The user must determine suitability for a particular application.		
normal/typical conditions the hubs a cases, especially when the smallest shaft is possible below the rated tor	are capable of holding up to the rated standard bores are used or where s que of the disc springs. Keyways are	I torque of the disc springs. In some shafts are undersized, slippage on the available to provide additional
	11.8 mm 25.4 mm 26.2 mm +0.000 mm / -0.013 mm Alloy Steel Black Oxide 2 ea 1.0° 0.00 mm 0.15 mm 2.487 x 10 ⁻⁶ kg-m ² Yes Yes Metric Hex Keys -40°F to 200°F (-40°C to 93°C) Ruland Manufacturing 0.055900 8483.60.8000 Stainless steel hubs are available u Torque ratings are at maximum mis Performance ratings are for guidance Torque ratings for the couplings are normal/typical conditions the hubs at cases, especially when the smallest shaft is possible below the rated tor torque capacity in the shaft/hub con	11.8 mm B2 Max Shaft Penetration 25.4 mm Bore Tolerance 26.2 mm Hub Width (LH) +0.000 mm / -0.013 mm Forged Clamp Screw Alloy Steel Hex Wrench Size Black Oxide Seating Torque 2 ea Dynamic Torque Reversing 1.0° Dynamic Torque Non-Reversing 0.00 mm Static Torque 0.15 mm Torsional Stiffness 2.487 x 10 ⁻⁶ kg-m ² Maximum Speed Yes Zero-Backlash? Yes Torque Wrench Metric Hex Keys Material Specification -40°F to 200°F (-40°C to 93°C) Finish Specification Ruland Manufacturing Country of Origin 0.055900 UPC 8483.60.8000 UNSPC Stainless steel hubs are available upon request. Torque ratings are at maximum misalignment. Performance ratings are for guidance only. The user must determine sui Torque ratings for the couplings are based on the physical limitations/fai normal/typical conditions the hubs are capable of holding up to the rated Torque capacity when the smallest standard bores are used or where shaft is possible below the rated torque of the disc sprin

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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 MDCS25-12-12-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:* 0.15 mm)
- 2. Fully tighten the M3 screw on the first hub to the recommended seating torque of 2.1 Nm using a 2.5 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 11.8 mm.