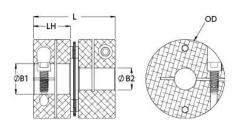




## DCS10-1/8"-3MM-A

Ruland DCS10-1/8"-3MM-A, 1/8" x 3mm Single Disc Coupling, Aluminum, Clamp Style, 0.590" (15.0mm) OD, 0.719" (18.3mm) Length





## **Description**

Ruland DCS10-1/8"-3MM-A is a clamp single disc coupling with 0.1250" x 3mm bores, 0.590" (15.0mm) OD, and 0.719" (18.3mm) 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. DCS10-1/8"-3MM-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 DCS10-1/8"-3MM-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. DCS10-1/8"-3MM-A is manufactured in our Marlborough, MA factory under strict controls using proprietary processes.

**Product Specifications** 

.354 in (9.0 mm) .590 in (15.0 mm) .719 in (18.3 mm) 0.0000 / -0.0005 " (+0.000 / -0.013 mm) Illoy Steel	Small Bore (B2) B2 Max Shaft Penetration Bore Tolerance Hub Width (LH) Forged Clamp Screw Hex Wrench Size	3 mm 0.354 in (9.0 mm) +0.001 in / -0.000 in (+0.03 mm / -0.00 mm) 0.328 in (8.3 mm) M2
.590 in (15.0 mm) .719 in (18.3 mm) 0.0000 / -0.0005 " (+0.000 / -0.013 nm) Illoy Steel	Bore Tolerance  Hub Width (LH)  Forged Clamp Screw	+0.001 in / -0.000 in (+0.03 mm / -0.00 mm) 0.328 in (8.3 mm) M2
.719 in (18.3 mm) 0.0000 / -0.0005 " (+0.000 / -0.013 nm) Iloy Steel	Hub Width (LH) Forged Clamp Screw	-0.00 mm) 0.328 in (8.3 mm) M2
0.0000 / -0.0005 " (+0.000 / -0.013 nm) lloy Steel	Forged Clamp Screw	0.328 in (8.3 mm) M2
0.0000 / -0.0005 " (+0.000 / -0.013 nm) lloy Steel	Forged Clamp Screw	M2
nm) Iloy Steel		
lloy Steel	Hex Wrench Size	
•	Hex Wrench Size	
lack Oxide		1.5 mm
	Seating Torque	0.6 Nm
ea	Dynamic Torque Reversing	3.75 lb-in (0.43 Nm)
.5°	<b>Dynamic Torque Non-Reversing</b>	7.5 lb-in (0.85 Nm)
.000 in (0.00 mm)	Static Torque	15 lb-in (1.7 Nm)
.002 in (0.05 mm)	Torsional Stiffness	50 lb-in/Deg (5.6 Nm/Deg)
.0008 lb-in <sup>2</sup> (2.250 x 10 <sup>-7</sup> kg-m <sup>2</sup> )	Maximum Speed	10,000 RPM
es	Zero-Backlash?	Yes
es	Torque Wrench	TW:BT-1R-1/4-5.3
letric Hex Keys	Material Specification	Hubs: 2024-T351 Aluminum Bar,
		Disc Springs: Type 302 Stainless Steel
10°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
uland Manufacturing	Country of Origin	Black Anodize USA
<del>_</del>		634529149973
		31163008
	*****	31103000
·		
, ,		
.( .( .( .( .( .( .( .( .( .( .( .( .(	2000 in (0.00 mm) 2002 in (0.05 mm) 2008 lb-in² (2.250 x 10⁻² kg-m²) 2018 lb-in² (2.250 x 10⁻ kg-m²) 2018 lb-in² (2.2	000 in (0.00 mm) Static Torque 002 in (0.05 mm) Torsional Stiffness 0008 lb-in² (2.250 x 10⁻² kg-m²) Maximum Speed 25 Zero-Backlash? Torque Wrench 26 Material Specification  0°F to 200°F (-40°C to 93°C) Finish Specification  1016700 UPC

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 assistance.

## Prop 65

**MARNING** 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 <a href="https://www.P65Warnings.ca.gov">www.P65Warnings.ca.gov</a>.

## **Installation Instructions**

- 1. Align the bores of the DCS10-1/8"-3MM-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*: 0.5°, *Parallel Misalignment*: 0.00 in (0.00 mm), *Axial Motion*: 0.002 in (0.05 mm))
- 2. Fully tighten the M2 screw on the first hub to the recommended seating torque of 0.6 Nm using a 1.5 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 0.354 in (9.0 mm).