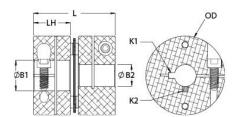




## DCSK21-8-5-A

Ruland DCSK21-8-5-A, 1/2" x 5/16" Single Disc Coupling, Aluminum, Clamp Style With Keyway, 1.313" OD, 1.313" Length





## **Description**

Ruland DCSK21-8-5-A is a clamp single disc coupling with 0.5000" x 0.3125" bores, 1.313" OD, 1.313" length, and 1/8" keyway on the 1/2" bore and no keyway on the 5/16" bore. 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. DCSK21-8-5-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 DCSK21-8-5-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. DCSK21-8-5-A is manufactured in our Marlborough, MA factory under strict controls using proprietary processes.

**Product Specifications** 

Bore (B1)	0.5000 in	Small Bore (B2)	0.3125 in
Keyway (K1)	1/8 in	Keyway (K2)	NK
B1 Max Shaft Penetration	0.635 in	<b>B2 Max Shaft Penetration</b>	0.635 in
Outer Diameter (OD)	1.313 in	Bore Tolerance	+0.001 in / -0.000 in
Length (L)	1.313 in	Hub Width (LH)	0.590 in
Recommended Shaft Tolerance	+0.0000 in / -0.0005 in	Forged Clamp Screw	M3
Screw Material	Alloy Steel	Hex Wrench Size	2.5 mm
Screw Finish	Black Oxide	Seating Torque	2.1 Nm
Number of Screws	2 ea	Dynamic Torque Reversing	25 lb-in
Angular Misalignment	1.0°	<b>Dynamic Torque Non-Reversing</b>	50 lb-in
Parallel Misalignment	0.00 in	Static Torque	100 lb-in
Axial Motion	0.008 in	Torsional Stiffness	313 lb-in/Deg
Moment of Inertia	0.0331 lb-in <sup>2</sup>	Maximum Speed	10,000 RPM
Zero-Backlash?	Yes	Balanced Design	Yes
Torque Wrench	TW:BT-1R-1/4-18.3	Recommended Hex Key	Metric Hex Keys
Full Bearing Support Required?	Yes	Material Specification	Hubs: 2024-T351 Aluminum Bar, Disc Springs: Type 302 Stainless Steel
Temperature	-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
Manufacturer	Ruland Manufacturing	Country of Origin	USA
	Ruland Manufacturing 0.140300	Country of Origin UPC	
Weight (lbs)			USA
Manufacturer Weight (lbs) Tariff Code Note 1	0.140300	UPC UNSPC	USA 634529201480
Weight (lbs) Tariff Code Note 1	0.140300 8483.60.8000	UPC UNSPC upon request.	USA 634529201480
Weight (lbs) Tariff Code	0.140300 8483.60.8000 Stainless steel hubs are available Torque ratings are at maximum m	UPC UNSPC upon request.	USA 634529201480 31163008

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 DCSK21-8-5-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 in, *Axial Motion:* 0.008 in)
- 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.
- 4. 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 0.635 in.