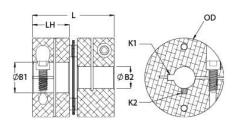




## MDCSK33-14-9-A

Ruland MDCSK33-14-9-A, 14mm x 9mm Single Disc Coupling, Aluminum, Clamp Style With Keyway, 33.3mm OD, 33.3mm Length





## **Description**

Ruland MDCSK33-14-9-A is a clamp single disc coupling with 14mm x 9mm bores, 33.3mm OD, 33.3mm length, and 5mm x 3mm keyways. 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. MDCSK33-14-9-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 MDCSK33-14-9-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. MDCSK33-14-9-A is manufactured in our Marlborough, MA factory under strict controls using proprietary processes.

**Product Specifications** 

Bore (B1)	14 mm	Small Bore (B2)	9 mm
Keyway (K1)	5 mm	Keyway (K2)	3 mm
B1 Max Shaft Penetration	16.1 mm	B2 Max Shaft Penetration	16.1 mm
Outer Diameter (OD)	33.3 mm	Bore Tolerance	+0.03 mm / -0.00 mm
Length (L)	33.3 mm	Hub Width (LH)	15.00 mm
Recommended Shaft Tolerance	+0.000 mm / -0.013 mm	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	2.83 Nm
Angular Misalignment	1.0°	Dynamic Torque Non-Reversing	5.65 Nm
Parallel Misalignment	0.00 mm	Static Torque	11.3 Nm
Axial Motion	0.20 mm	Torsional Stiffness	35.4 Nm/Deg
Moment of Inertia	9.599 x 10 <sup>-6</sup> kg-m <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	
	-40°F to 200°F (-40°C to 93°C)  Ruland Manufacturing	Finish Specification  Country of Origin	Steel Sulfuric Anodized MIL-A-8625 Type II, Class 2 and ASTM B580 Type B
Manufacturer	,		Steel Sulfuric Anodized MIL-A-8625 Type II, Class 2 and ASTM B580 Type B Black Anodize
Temperature  Manufacturer  Weight (lbs)  Tariff Code	Ruland Manufacturing	Country of Origin	Steel Sulfuric Anodized MIL-A-8625 Type II, Class 2 and ASTM B580 Type B Black Anodize USA
Manufacturer Weight (lbs) Tariff Code	Ruland Manufacturing 0.135900	Country of Origin UPC UNSPC	Steel Sulfuric Anodized MIL-A-8625 Type II, Class 2 and ASTM B580 Type B Black Anodize USA 634529201770
Manufacturer Weight (lbs) Tariff Code Note 1	Ruland Manufacturing 0.135900 8483.60.8000	Country of Origin UPC UNSPC upon request.	Steel Sulfuric Anodized MIL-A-8625 Type II, Class 2 and ASTM B580 Type B Black Anodize USA 634529201770
Manufacturer Weight (lbs)	Ruland Manufacturing 0.135900 8483.60.8000 Stainless steel hubs are available Torque ratings are at maximum mi	Country of Origin UPC UNSPC upon request.	Steel Sulfuric Anodized MIL-A-8625 Type II, Class 2 and ASTM B580 Type B Black Anodize USA 634529201770 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**

- Align the bores of the MDCSK33-14-9-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*: 0.20 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.
- 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 16.1 mm.