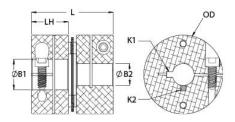




## MDCSK33-16-14-A

Ruland MDCSK33-16-14-A, 16mm x 14mm Single Disc Coupling, Aluminum, Clamp Style With Keyway, 33.3mm OD, 33.3mm Length





## Description

Ruland MDCSK33-16-14-A is a clamp single disc coupling with 16mm x 14mm bores, 33.3mm OD, 33.3mm length, and 5mm x 5mm 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. MDCSK33-16-14-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 MDCSK33-16-14-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. MDCSK33-16-14-A is manufactured in our Marlborough, MA factory under strict controls using proprietary processes.

## **Product Specifications**

16 mm	Small Bore (B2)	14 mm
		14 11111
5 mm	Keyway (K2)	5 mm
15.0 mm	B2 Max Shaft Penetration	16.1 mm
33.3 mm	Bore Tolerance	+0.03 mm / -0.00 mm
33.3 mm	Hub Width (LH)	15.0 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	2.83 Nm
1.0°	Dynamic Torque Non-Reversing	5.65 Nm
0.00 mm	Static Torque	11.3 Nm
0.20 mm	Torsional Stiffness	35.4 Nm/Deg
9.335 x 10 <sup>-6</sup> kg-m <sup>2</sup>	Maximum Speed	10,000 RPM
Yes	Balanced Design	Yes
<u>TW:BT-1R-1/4-18.3</u>	Recommended Hex Key	Metric Hex Keys
Yes	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
0.123200	UPC	634529201886
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.		
Torque ratings for the couplings are based on the physical limitations/failure point of the disc springs. Under normal/typical conditions the hubs are capable of holding up to the rated torque of the disc springs. In some cases, especially when the smallest standard bores are used or where shafts are undersized, slippage on the shaft is possible below the rated torque of the disc springs. Keyways are available to provide additional		
	15.0 mm         33.3 mm         33.3 mm         +0.000 mm / -0.013 mm         Alloy Steel         Black Oxide         2 ea         1.0°         0.00 mm         0.20 mm         9.335 x 10 <sup>-6</sup> kg-m <sup>2</sup> Yes         TW:BT-1R-1/4-18.3         Yes         -40°F to 200°F (-40°C to 93°C)         Ruland Manufacturing         0.123200         8483.60.8000         Stainless steel hubs are available         Torque ratings are at maximum m         Performance ratings are for guidate	15.0 mmB2 Max Shaft Penetration33.3 mmBore Tolerance33.3 mmHub Width (LH)+0.000 mm / -0.013 mmForged Clamp ScrewAlloy SteelHex Wrench SizeBlack OxideSeating Torque2 eaDynamic Torque Reversing1.0°Dynamic Torque Non-Reversing0.00 mmStatic Torque0.20 mmTorsional Stiffness9.335 x 10 <sup>-6</sup> kg·m²Maximum SpeedYesBalanced DesignTW:BT-1R-1/4-18.3Recommended Hex KeyYesMaterial Specification-40°F to 200°F (-40°C to 93°C)Finish SpecificationRuland ManufacturingCountry of Origin0.123200UPC8483.60.8000UNSPCStainless steel hubs are available upon request.Torque ratings are at maximum misalignment.Performance ratings are for guidance only. The user must determine su

	torque capacity in the shaft/hub connection when required. Please consult technical support for more assistance.	
Prop 65	<b>MARNING</b> 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		
	<ol> <li>Align the bores of the MDCSK33-16-14-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. (<i>Angular Misialignment:</i> 1.0°, <i>Parallel Misalignment:</i> 0.00 mm, <i>Axial Motion:</i> 0.20 mm)</li> <li>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.</li> <li>Before tightening the screw on the second hub, rotate the coupling by hand to allow it to reach its free length.</li> <li>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.</li> <li>The shafts may extend into the relieved portion of the bore as long as it does not exceed the shaft penetration length of 15.0 mm for bore 1 and 16.1 mm for bore 2.</li> </ol>	