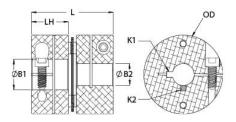




## MDCSK41-18-11-A

Ruland MDCSK41-18-11-A, 18mm x 11mm Single Disc Coupling, Aluminum, Clamp Style With Keyway, 41.3mm OD, 39.7mm Length





## Description

Ruland MDCSK41-18-11-A is a clamp single disc coupling with 18mm x 11mm bores, 41.3mm OD, 39.7mm length, and 6mm x 4mm 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. MDCSK41-18-11-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 MDCSK41-18-11-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. MDCSK41-18-11-A is manufactured in our Marlborough, MA factory under strict controls using proprietary processes.

## **Product Specifications**

SteelSteelTemperature-40°F to 200°F (-40°C to 93°C)Finish SpecificationSulfuric AnodizeManufacturerRuland ManufacturingCountry of OriginUSAWeight (lbs)0.255200UPC634529202852Tariff Code8483.60.8000UNSPC31163008Note 1Stainless steel hubs are available upon request.Stainless steel hubs are at maximum misalignment.Note 2Torque ratings are at maximum misalignment.Finite a particeNote 3Performance ratings are for guidance only. The user must determine suitability for a partice		
B1 Max Shaft Penetration       19.2 mm       B2 Max Shaft Penetration       19.2 mm         Outer Diameter (OD)       41.3 mm       Bore Tolerance       +0.03 mm / -0.00         Length (L)       39.7 mm       Hub Width (LH)       18.05 mm         Recommended Shaft Tolerance       +0.000 mm / -0.013 mm       Forged Clamp Screw       M4         Screw Material       Alloy Steel       Hex Wrench Size       3.0 mm         Screw Finish       Black Oxide       Seating Torque Reversing       5.08 Nm         Angular Misalignment       1.0°       Dynamic Torque Non-Reversing       10.15 Nm         Parallel Misalignment       0.00 mm       Static Torque       20.3 Nm         Axial Motion       0.25 mm       Torsional Stiffness       70.6 Nm/Deg         Moment of Inertia       2.801 x 10 <sup>-5</sup> kg-m <sup>2</sup> Maximum Speed       10.000 RPM         Zero-Backlash?       Yes       Balanced Design       Yes         Torque Wrench       TW:BT-1R-1/4-41.0       Recommended Hex Key       Metric Hex Keys         Full Bearing Support Required?       Yes       Material Specification       Hubs: 2024-T351         Disc Springs: Tyr Siteel       -40°F to 200°F (-40°C to 93°C)       Finish Specification       Hubs: 2024-T354         Maufacturer       Ruland Manufacturing		
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Note 4	Performance ratings are for guidance only. The user must determine suitability for a particular application.	
normal/typical conditions the hubs are capable of holding up to the rated torque of the disc cases, especially when the smallest standard bores are used or where shafts are undersize	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	

	torque capacity in the shaft/hub connection when required. Please consult technical support for more assistance.
Prop 65	<b>AWARNING</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 MDCSK41-18-11-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> 0.25 mm)</li> <li>Fully tighten the M4 screw on the first hub to the recommended seating torque of 4.6 Nm using a 3.0 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 19.2 mm.</li> </ol>