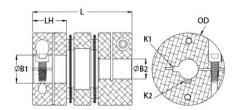




MDCDK51-20-18-A

Ruland MDCDK51-20-18-A, 20mm x 18mm Double Disc Coupling, Aluminum, Clamp Style With Keyway, 50.8mm OD, 64.0mm Length





Description

Ruland MDCDK51-20-18-A is a clamp double disc coupling with 20mm x 18mm bores, 50.8mm OD, 64.0mm length, and 6mm x 6mm keyways. It is zero-backlash and has a balanced design for reduced vibration at high speeds. The double disc design is comprised of two anodized aluminum hubs, two sets of thin stainless steel disc springs, and a center spacer allowing each disc to bend individually and accommodate all types of misalignment. MDCDK51-20-18-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 MDCDK51-20-18-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. MDCDK51-20-18-A is manufactured in our Marlborough, MA factory under strict controls using proprietary processes.

Pro	duct	Spec	ificati	one
FIU	uua	SUEL		

Temperature -40°F to 200°F (-40°C to 93°C) Finish Specification Sulfuric Anodize) mm			
B1 Max Shaft Penetration 30.3 mm B2 Max Shaft Penetration 30.3 mm Outer Diameter (OD) 50.8 mm Bore Tolerance +0.03 mm / -0.00 mm / -0.012 mm Forged Clamp Screw M5 Recommended Shaft Tolerance +0.000 mm / -0.013 mm Forged Clamp Screw M5 Screw Material Alloy Steel Hex Wrench Size 4.0 mm Screw Finish Black Oxide Seating Torque 9.5 Nm Number of Screws 2 ea Dynamic Torque Reversing 9.90 Nm Angular Misalignment 2.0° Dynamic Torque Non-Reversing 19.80 Nm Parallel Misalignment 0.30 mm Static Torque 39.6 Nm Axial Motion 0.64 mm Torsional Stiffness 67.2 Nm/Deg Moment of Inertia 9.9831 x 10 ⁻⁵ kg-m² Maximum Speed 10,000 RPM Zero-Backlash? Yes Balanced Design Yes Torque Wrench TW:BT-4C-3/8-86 Recommended Hex Key Metric Hex Keys Full Bearing Support Required? Yes Material Specification Hubs and Center 2024-T351 Alum Disc Springs: Ty Steel Temperature -40°F to 200°F (-40°C to 93°C) Finish Specification Sulfuric Anodize II, Class 2 and A Black Anodize) mm			
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II, Class 2 and A Black Anodize	•			
Manufacturer Ruland Manufacturing Country of Origin USA	d MIL-A-8625 Type STM B580 Type B			
Weight (lbs) 0.586000 UPC 634529177105				
Tariff Code 8483.60.8000 UNSPC 31163008				
Note 1 Stainless steel hubs are available upon request.	Stainless steel hubs are available upon request.			
Note 2 Torque ratings are at maximum misalignment.	Torque ratings are at maximum misalignment.			
Note 3 Performance ratings are for guidance only. The user must determine suitability for a partic	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 discases, especially when the smallest standard bores are used or where shafts are undersi	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

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 www.P65Warnings.ca.gov.

Installation Instructions

- 1. Align the bores of the MDCDK51-20-18-A double 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*: 2.0°, *Parallel Misalignment*: 0.30 mm, *Axial Motion*: 0.64 mm)
- 2. Fully tighten the M5 screw on the first hub to the recommended seating torque of 9.5 Nm using a 4.0 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 30.3 mm.