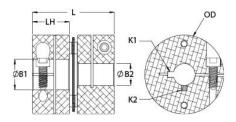




MDCSK57-24-18-A

Ruland MDCSK57-24-18-A, 24mm x 18mm Single Disc Coupling, Aluminum, Clamp Style With Keyway, 57.2mm OD, 58.8mm Length





Description

Ruland MDCSK57-24-18-A is a clamp single disc coupling with 24mm x 18mm bores, 57.2mm OD, 58.8mm length, and 8mm x 6mm 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. MDCSK57-24-18-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 MDCSK57-24-18-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. MDCSK57-24-18-A is manufactured in our Marlborough, MA factory under strict controls using proprietary processes.

Product Specifications

Bore (B1)24 mmSmall Bore (B2)18 mmKeyway (K1)8 mmKeyway (K2)6 mmB1 Max Shaft Penetration27.6 mmB2 Max Shaft Penetration27.6 mmOuter Diameter (OD)57.2 mmBore Tolerance+0.03 mm / -0.00 mmLength (L)58.8 mmHub Width (LH)26.67 mmRecommended Shaft Tolerance+0.000 mm / -0.013 mmForged Clamp ScrewM6Screw MaterialAlloy SteelHex Wrench Size5.0 mmScrew FinishBlack OxideSeating Torque16 NmNumber of Screws2 eaDynamic Torque Reversing12.73 NmAngular Misalignment1.0°Dynamic Torque Non-Reversing25.45 NmParallel Misalignment0.00 mmStatic Torque50.9 NmAxial Motion0.38 mmTorsional Stiffness113.0 Nm/DegMoment of Inertia1.503 x 10 ⁴ kg-m²Maximum Speed10,000 RPMZero-Backlash?YesBalanced DesignYesFull Bearing Support Required?YesMaterial SpecificationDisc Springs: Type 30 SteelFull Bearing Support Required?YesFinish SpecificationUI, Class 2 and ASTM Black AnodizeManufacturerRuland ManufacturingCountry of OriginUSAWeight (Ibs)0.714700UPC634529206171Tariff Code843.60.8000UNSPC31163008Note 1Stainless steel hubs are available upon request.Sitales AnodizeNote 3Performance ratings are for guidance only. The user must determine svita								
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Outer Diameter (OD) 57.2 mm Bore Tolerance +0.03 mm / -0.00 mm Length (L) 58.8 mm Hub Width (LH) 26.67 mm Recommended Shaft Tolerance +0.000 mm / -0.013 mm Forged Clamp Screw M6 Screw Material Alloy Steel Hex Wrench Size 5.0 mm Screw Finish Black Oxide Seaing Torque 16 Nm Number of Screws 2 ea Dynamic Torque Reversing 12.73 Nm Angular Misalignment 1.0° Dynamic Torque Reversing 25.45 Nm Parallel Misalignment 0.00 mm Static Torque 50.9 Nm Axial Motion 0.38 mm Torsional Stiffness 113.0 Nm/Deg Moment of Inertia 1.503 x 10 ⁻⁴ kg-m ² Maximum Speed 10,000 RPM Zero-Backlash? Yes Balanced Design Yes Torque Wrench TW:BT-4C-3/8-140 Recommended Hex Key Metric Hex Keys Full Bearing Support Required? Yes Material Specification Sulfuric Anodized MIL II, Class 2 and ASTM Black Anodize Manufacturer Ruland Manufacturing Country of Origin USA Weight (lbs) 0.714700 UPC		8 mm			Keyway (K2)		6 mm	
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Screw FinishBlack OxideSeating Torque16 NmNumber of Screws2 eaDynamic Torque Reversing12.73 NmAngular Misalignment1.0°Dynamic Torque Non-Reversing25.45 NmParallel Misalignment0.00 mmStatic Torque50.9 NmAxial Motion0.38 mmTorsional Stiffness113.0 Nm/DegMoment of Inertia1.503 × 10 ⁻⁴ kg-m²Maximum Speed10,000 RPMZero-Backlash?YesBalanced DesignYesTorque WrenchTW:BT-4C-3/8-140Recommended Hex KeyMetric Hex KeysFull Bearing Support Required?YesMaterial SpecificationHubs: 2024-T351 Alu Disc Springs: Type 30 SteelTemperature-40°F to 200°F (-40°C to 93°C)Finish SpecificationSulfuric Anodized MIL II, Class 2 and ASTM Black AnodizeManufacturerRuland ManufacturingCountry of OriginUSAWeight (Ibs)0.714700UPC634529206171Tariff Code8483.60.8000UNSPC31163008Note 1Stainless steel hubs are available upon request.Note 3Performance ratings are for guidance only. The user must determine suitability for a particular in the disc specification Note 4Torque ratings for the couplings are based on the physical limitations/failure point of the disc specification	/ -0.013 mr	+0.000 mm /	m / -0.013 mm	nm	Forged Clam	p Screw	M6	
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Tariff Code8483.60.8000UNSPC31163008Note 1Stainless steel hubs are available upon request.Note 2Torque ratings are at maximum misalignment.Note 3Performance ratings are for guidance only. The user must determine suitability for a particular and the couplings are based on the physical limitations/failure point of the disc spectrumNote 4Torque ratings for the couplings are based on the physical limitations/failure point of the disc spectrum	ufacturing	Ruland Manu	anufacturing	g	Country of O	rigin	USA	
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Note 4 Torque ratings for the couplings are based on the physical limitations/failure point of the disc sp	Torque ratings are at maximum misalignment.							
	Performance ratings are for guidance only. The user must determine suitability for a particular application.							
cases, especially when the smallest standard bores are used or where shafts are undersized, s shaft is possible below the rated torque of the disc springs. Keyways are available to provide a	al conditior	normal/typica cases, espec	pical conditions	ions the hub en the smal	os are capable of h lest standard bore	holding up to the rate s are used or where	d torque of the disc shafts are undersize	springs. In some ed, slippage on th

	torque capacity in the shaft/hub connection when required. Please consult technical support for more assistance.							
Prop 65	WARNING 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								
	 Align the bores of the MDCSK57-24-18-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> 0.38 mm) Fully tighten the M6 screw on the first hub to the recommended seating torque of 16 Nm using a 5.0 mm hex torque wrench. Before tightening the screw on the second hub, rotate the coupling by hand to allow it to reach its free length. 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. The shafts may extend into the relieved portion of the bore as long as it does not exceed the shaft penetration length of 27.6 mm. 							