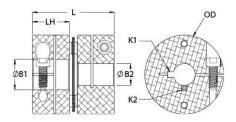




MDCSK25-11-6-A

Ruland MDCSK25-11-6-A, 11mm x 6mm Single Disc Coupling, Aluminum, Clamp Style With Keyway, 25.4mm OD, 26.2mm Length





Description

Ruland MDCSK25-11-6-A is a clamp single disc coupling with 11mm x 6mm bores, 25.4mm OD, 26.2mm length, and 4mm keyway on the 11mm bore and no keyway on the 6mm bore. 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. MDCSK25-11-6-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 MDCSK25-11-6-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. MDCSK25-11-6-A is manufactured in our Marlborough, MA factory under strict controls using proprietary processes.

Product Specifications

Disc Springs: Type 30. SteelTemperature-40°F to 200°F (-40°C to 93°C)Finish SpecificationSulfuric Anodized MIL- II, Class 2 and ASTM I Black AnodizeManufacturerRuland ManufacturingCountry of OriginUSAWeight (lbs)0.062000UPC634529200919Tariff Code8483.60.8000UNSPC31163008Note 1Stainless steel hubs are available upon request.Note 2Note 2Torque ratings are at maximum misalignment.Verify for a particular a Disc Springs: Type 30. SteelNote 3Performance ratings are for guidance only. The user must determine suitability for a particular a Torque ratings for the couplings are based on the physical limitations/failure point of the disc sp	duct specifications			
B1 Max Shaft Penetration 12.7 mm B2 Max Shaft Penetration 12.7 mm Outer Diameter (OD) 25.4 mm Bore Tolerance +0.03 mm / -0.00 mm Length (L) 26.2 mm Hub Width (LH) 11.8 mm Recommended Shaft Tolerance +0.000 mm / -0.013 mm Forged Clamp Screw M3 Screw Finish Black Oxide Seating Torque 2.1 Nm Number of Screws 2 ea Dynamic Torque Reversing 1.40 Nm Angular Misalignment 1.0° Dynamic Torque Non-Reversing 2.80 Nm Parallel Misalignment 0.00 mm Static Torque 5.6 Nm Axial Motion 0.15 mm Torsional Stiffness 10.6 Nm/Deg Moment of Inertia 2.546 x 10° kg-m² Maximum Speed 10.000 RPM Zero-Backlash? Yes Balanced Design Yes Full Bearing Support Required? Yes Material Specification Hubs: 2024-T351 Alur Disc Springs: Type 30 Steel Temperature -40°F to 200°F (-40°C to 93°C) Finish Specification Sulfuric Anodized MIL- II, Class 2 and ASTM I Black Anodize Manufacturer Ruland Manufacturing Country of Origin USA Weight (lb	≥ (B1)	11 mm	Small Bore (B2)	6 mm
Outer Diameter (OD) 25.4 mm Bore Tolerance +0.03 mm / -0.00 mm Length (L) 26.2 mm Hub Width (LH) 11.8 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 1.40 Nm Angular Misalignment 1.0° Dynamic Torque Non-Reversing 2.80 Nm Parallel Misalignment 0.00 mm Static Torque 5.6 Nm Axial Motion 0.15 mm Torsional Stiffness 10.6 Nm/Deg Moment of Inertia 2.546 x 10 ⁶ kg-m ² Maximum Speed 10,000 RPM Zero-Backlash? Yes Balanced Design Yes Torque Wrench TW:BT-tR-t/4-18.3 Recommended Hex Key Metric Hex Keys Full Bearing Support Required? Yes Material Specification Sulfuric Anodized MIL-II, Class 2 and ASTM IBlack Anodize Manufacturer Ruland Manufacturing Country of Origin USA Weight (Ibs) 0.062000 UPC <t< td=""><td>way (K1)</td><td>4 mm</td><td>Keyway (K2)</td><td>NK</td></t<>	way (K1)	4 mm	Keyway (K2)	NK
Length (L) 26.2 mm Hub Width (LH) 11.8 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 1.40 Nm Angular Misalignment 1.0° Dynamic Torque Non-Reversing 2.80 Nm Parallel Misalignment 0.00 mm Static Torque 5.6 Nm Axial Motion 0.15 mm Torsional Stiffness 10.6 Nm/Deg Moment of Inertia 2.546 x 10 ⁻⁸ kg-m ² 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 Sulfuric Anodized MIL-II, Class 2 and ASTM IBlack Anodize Manufacturer Ruland Manufacturing Country of Origin USA Weight (Ibs) 0.062000 UPC 634529200919 Tariff Code 8483.60.8000 UNSPC 31163008	lax Shaft Penetration	12.7 mm	B2 Max Shaft Penetration	12.7 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 1.40 Nm Angular Misalignment 1.0° Dynamic Torque Non-Reversing 2.80 Nm Parallel Misalignment 0.00 mm Static Torque 5.6 Nm Axial Motion 0.15 mm Torsional Stiffness 10.6 Nm/Deg Moment of Inertia 2.546 x 10°6 kg-m² 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 Alun Disc Springs: Type 30 Steel Temperature -40°F to 200°F (-40°C to 93°C) Finish Specification USA Maufacturer Ruland Manufacturing Country of Origin USA Weight (Ibs) 0.062000 UPC 634529200919 Tariff Code 8483.60.8000 USPC 31163	r Diameter (OD)	25.4 mm	Bore Tolerance	+0.03 mm / -0.00 mm
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 1.40 Nm Angular Misalignment 1.0° Dynamic Torque Non-Reversing 2.80 Nm Parallel Misalignment 0.00 mm Static Torque 5.6 Nm Axial Motion 0.15 mm Torsional Stiffness 10.60 Nm/Deg Moment of Inertia 2.546 x 10° ⁶ kg-m ² 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 Alun Disc Springs: Type 30 Steel Temperature -40°F to 200°F (-40°C to 93°C) Finish Specification Sulfuric Anodized MILL II, Class 2 and ASTM Black Anodize Manufacturer Ruland Manufacturing Country of Origin USA Weight (lbs) 0.062000 UPC 634529200919 Tariff Code 8483.60.8000 UNSPC 31163008 Note 1 Stainless steel hubs are avail	gth (L)	26.2 mm	Hub Width (LH)	11.8 mm
Screw FinishBlack OxideSeating Torque2.1 NmNumber of Screws2 eaDynamic Torque Reversing1.40 NmAngular Misalignment1.0°Dynamic Torque Non-Reversing2.80 NmParallel Misalignment0.00 mmStatic Torque5.6 NmAxial Motion0.15 mmTorsional Stiffness10.6 Nm/DegMoment of Inertia2.546 x 10° kg-m²Maximum Speed10,000 RPMZero-Backlash?YesBalanced DesignYesTorque WrenchTW:BT-1R-1/4-18.3Recommended Hex KeyMetric Hex KeysFull Bearing Support Required?YesMaterial SpecificationHubs: 2024-T351 Alun 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)0.062000UPC634529200919Tariff Code8483.60.8000UNSPC31163008Note 1Stainless steel hubs are available upon request.Note 3Note 3Performance ratings are for guidance only. The user must determine suitability for a particular a Torque ratings for the couplings are based on the physical limitations/failure point of the disc sp	ommended Shaft Tolerance	+0.000 mm / -0.013 mm	Forged Clamp Screw	M3
Number of Screws2 eaDynamic Torque Reversing1.40 NmAngular Misalignment1.0°Dynamic Torque Non-Reversing2.80 NmParallel Misalignment0.00 mmStatic Torque5.6 NmAxial Motion0.15 mmTorsional Stiffness10.6 Nm/DegMoment of Inertia2.546 x 10° ⁶ kg-m²Maximum Speed10,000 RPMZero-Backlash?YesBalanced DesignYesTorque WrenchTW:BT-1R-1/4-18.3Recommended Hex KeyMetric Hex KeysFull Bearing Support Required?YesMaterial SpecificationHubs: 2024-T351 Alun 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)0.062000UPC634529200919Tariff Code8483.60.8000UNSPC31163008Note 1Stainless steel hubs are available upon request.Note 3Note 3Performance ratings are at maximum misalignment.Note 4Note 4Torque ratings for the couplings are based on the physical limitations/failure point of the disc sp	w Material	Alloy Steel	Hex Wrench Size	2.5 mm
Angular Misalignment1.0°Dynamic Torque Non-Reversing2.80 NmParallel Misalignment0.00 mmStatic Torque5.6 NmAxial Motion0.15 mmTorsional Stiffness10.6 Nm/DegMoment of Inertia2.546 x 10°6 kg-m²Maximum Speed10,000 RPMZero-Backlash?YesBalanced DesignYesTorque WrenchTW:BT-1R-1/4-18.3Recommended Hex KeyMetric Hex KeysFull Bearing Support Required?YesMaterial SpecificationHubs: 2024-T351 Alun 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 (lbs)0.062000UPC634529200919Tariff Code8483.60.8000UNSPC31163008Note 1Stainless steel hubs are available upon request.Yorque ratings are at maximum misalignment.Note 3Performance ratings are for guidance only. The user must determine suitability for a particular a Torque ratings for the couplings are based on the physical limitations/failure point of the disc sp	w Finish	Black Oxide	Seating Torque	2.1 Nm
Parallel Misalignment0.00 mmStatic Torque5.6 NmAxial Motion0.15 mmTorsional Stiffness10.6 Nm/DegMoment of Inertia2.546 x 10° kg-m²Maximum Speed10,000 RPMZero-Backlash?YesBalanced DesignYesTorque WrenchTW:BT-1R-1/4-18.3Recommended Hex KeyMetric Hex KeysFull Bearing Support Required?YesMaterial SpecificationHubs: 2024-T351 Alun Disc Springs: Type 30 SteelTemperature-40°F to 200°F (-40°C to 93°C)Finish SpecificationSulfuric Anodized MIL- II, Class 2 and ASTM I Black AnodizeManufacturerRuland ManufacturingCountry of OriginUSAWeight (Ibs)0.062000UPC634529200919Tariff Code8483.60.8000UNSPC31163008Note 1Stainless steel hubs are available upon request.Note 1Note 3Performance ratings are at maximum misalignment.Note 4Note 4Torque ratings for the couplings are based on the physical limitations/failure point of the disc sp	ber of Screws	2 ea	Dynamic Torque Reversing	1.40 Nm
Axial Motion0.15 mmTorsional Stiffness10.6 Nm/DegMoment of Inertia2.546 x 10 ⁻⁶ kg-m²Maximum Speed10,000 RPMZero-Backlash?YesBalanced DesignYesTorque WrenchTW.BT-1R-1/4-18.3Recommended Hex KeyMetric Hex KeysFull Bearing Support Required?YesMaterial SpecificationHubs: 2024-T351 Alun 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 (lbs)0.062000UPC634529200919Tariff Code8483.60.8000UNSPC31163008Note 1Stainless steel hubs are available upon request.Torque ratings are at maximum misalignment.Note 3Performance ratings are for guidance only. The user must determine suitability for a particular a Torque ratings for the couplings are based on the physical limitations/failure point of the disc sp	ular Misalignment	1.0°	Dynamic Torque Non-Reversing	2.80 Nm
Moment of Inertia2.546 x 10 ⁻⁶ kg-m²Maximum Speed10,000 RPMZero-Backlash?YesBalanced DesignYesTorque WrenchTW:BT-1R-1/4-18.3Recommended Hex KeyMetric Hex KeysFull Bearing Support Required?YesMaterial SpecificationHubs: 2024-T351 Alun 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 (lbs)0.062000UPC634529200919Tariff Code8483.60.8000UNSPC31163008Note 1Stainless steel hubs are available upon request.Torque ratings are at maximum misalignment.Note 3Performance ratings are for guidance only. The user must determine suitability for a particular a Torque ratings for the couplings are based on the physical limitations/failure point of the disc sp	Illel Misalignment	0.00 mm	Static Torque	5.6 Nm
Zero-Backlash?YesBalanced DesignYesTorque WrenchTW:BT-1R-1/4-18.3Recommended Hex KeyMetric Hex KeysFull Bearing Support Required?YesMaterial SpecificationHubs: 2024-T351 Alum Disc Springs: Type 30. SteelTemperature-40°F to 200°F (-40°C to 93°C)Finish SpecificationSulfuric Anodized MIL- II, Class 2 and ASTM I Black AnodizeManufacturerRuland ManufacturingCountry of OriginUSAWeight (lbs)0.062000UPC634529200919Tariff Code8483.60.8000UNSPC31163008Note 1Stainless steel hubs are available upon request.Note 1Note 2Torque ratings are at maximum misalignment.Ver maximum sulfagment.Note 3Performance ratings are for guidance only. The user must determine suitability for a particular a Torque ratings for the couplings are based on the physical limitations/failure point of the disc sp	I Motion (0.15 mm	Torsional Stiffness	10.6 Nm/Deg
Torque WrenchTW:BT-1R-1/4-18.3Recommended Hex KeyMetric Hex KeysFull Bearing Support Required?YesMaterial SpecificationHubs: 2024-T351 Alum Disc Springs: Type 30. SteelTemperature-40°F to 200°F (-40°C to 93°C)Finish SpecificationSulfuric Anodized MIL- II, Class 2 and ASTM I Black AnodizeManufacturerRuland ManufacturingCountry of OriginUSAWeight (lbs)0.062000UPC634529200919Tariff Code8483.60.8000UNSPC31163008Note 1Stainless steel hubs are available upon request.Note 1Note 2Torque ratings are at maximum misalignment.Torque ratings are for guidance only. The user must determine suitability for a particular a Note 4	nent of Inertia	2.546 x 10 ⁻⁶ kg-m ²	Maximum Speed	10,000 RPM
Full Bearing Support Required?YesMaterial SpecificationHubs: 2024-T351 Alum 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)0.062000UPC634529200919Tariff Code8483.60.8000UNSPC31163008Note 1Stainless steel hubs are available upon request.Torque ratings are at maximum misalignment.Note 3Performance ratings are for guidance only. The user must determine suitability for a particular a Torque ratings for the couplings are based on the physical limitations/failure point of the disc sp	-Backlash?	Yes	Balanced Design	Yes
Disc Springs: Type 30 SteelTemperature-40°F to 200°F (-40°C to 93°C)Finish SpecificationSulfuric Anodized MIL- II, Class 2 and ASTM I Black AnodizeManufacturerRuland ManufacturingCountry of OriginUSAWeight (lbs)0.062000UPC634529200919Tariff Code8483.60.8000UNSPC31163008Note 1Stainless steel hubs are available upon request.Vote 2Note 2Torque ratings are at maximum misalignment.Vertication on the physical limitations/failure point of the disc spNote 3Performance ratings are for guidance only. The user must determine suitability for a particular a Torque ratings for the couplings are based on the physical limitations/failure point of the disc sp	lue Wrench	TW:BT-1R-1/4-18.3	Recommended Hex Key	Metric Hex Keys
II, Class 2 and ASTM Black AnodizeManufacturerRuland ManufacturingCountry of OriginUSAWeight (lbs)0.062000UPC634529200919Tariff Code8483.60.8000UNSPC31163008Note 1Stainless steel hubs are available upon request.Stainless steel hubs are at maximum misalignment.Note 2Torque ratings are at maximum misalignment.Ferformance ratings are for guidance only. The user must determine suitability for a particular a Torque ratings for the couplings are based on the physical limitations/failure point of the disc sp	Bearing Support Required?	Yes	Material Specification	Hubs: 2024-T351 Aluminum Bar, Disc Springs: Type 302 Stainless Steel
Weight (lbs)0.062000UPC634529200919Tariff 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 aNote 4Torque ratings for the couplings are based on the physical limitations/failure point of the disc sp	perature -	-40°F to 200°F (-40°C to 93°C)	Finish Specification	Sulfuric Anodized MIL-A-8625 Typ II, Class 2 and ASTM B580 Type E Black Anodize
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 aNote 4Torque ratings for the couplings are based on the physical limitations/failure point of the disc sp	ufacturer	Ruland Manufacturing	Country of Origin	USA
Note 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 aNote 4Torque ratings for the couplings are based on the physical limitations/failure point of the disc sp	ght (lbs)	0.062000	UPC	634529200919
Note 2Torque ratings are at maximum misalignment.Note 3Performance ratings are for guidance only. The user must determine suitability for a particular aNote 4Torque ratings for the couplings are based on the physical limitations/failure point of the disc sp	if Code	8483.60.8000	UNSPC	31163008
Note 3Performance ratings are for guidance only. The user must determine suitability for a particular aNote 4Torque ratings for the couplings are based on the physical limitations/failure point of the disc sp	e 1	Stainless steel hubs are available upon request.		
Note 4 Torque ratings for the couplings are based on the physical limitations/failure point of the disc sp	2	Torque ratings are at maximum misalignment.		
	3	Performance ratings are for guidance only. The user must determine suitability for a particular application.		
	1	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	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 MDCSK25-11-6-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> 0.15 mm) 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. 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 12.7 mm. 		