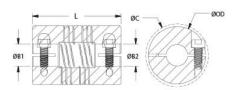




FCR16-5-5-A

Ruland FCR16-5-5-A, 5/16" x 5/16" Six Beam Coupling, Aluminum, Clamp Style, 1.000" OD, 1.500" Length





Description

Ruland FCR16-5-5-A is a clamp style six beam coupling with 0.3125" x 0.3125" bores, 1.000" OD, and 1.500" length. It is machined from a single piece of material and features two sets of three spiral cuts. This gives it higher torque capacity, lower windup, and larger body sizes than single or four beam couplings and allows for use in light duty power transmission applications such as coupling a servo motor to a lead screw. FCR16-5-5-A is zero-backlash and has a balanced design for reduced vibration at high speeds of up to 6,000 RPM. Ruland supplies this spiral coupling with Nypatch® anti-vibration hardware that allows for even seating of the screw, repeated screw installations, prevents galling, and maintains high holding power. All hardware is metric and tests beyond DIN 912 12.9 standards for maximum torque capabilities. FCR16-5-5-A is made from 7075 aluminum for lightweight and low inertia. It is machined from bar stock that is sourced exclusively from North American mills and RoHS3 and REACH compliant. FCR16-5-5-A is manufactured in our Marlborough, MA factory under strict controls using proprietary processes.

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Product Specifications								
Bore (B1)	0.3125 in	Small Bore (B2)	0.3125 in					
B1 Max Shaft Penetration	0.720 in	B2 Max Shaft Penetration	0.720 in					
Outer Diameter (OD)	1.000 in	Bore Tolerance	+0.001 in / -0.000 in					
Length (L)	1.500 in	Clearance Diameter (C) MAX	1.117 in					
Recommended Shaft Tolerance	+0.0000 in / -0.0005 in	Cap Screw	M4					
Screw Material	Alloy Steel with Nypatch®	Hex Wrench Size	3.0 mm					
Screw Finish	Black Oxide	Seating Torque	4.6 Nm					
Number of Screws	2 ea	Dynamic Torque Reversing	8.25 lb-in					
Angular Misalignment	3°	Dynamic Torque Non-Reversing	16.5 lb-in					
Parallel Misalignment	0.015 in	Static Torque	33 lb-in					
Axial Motion	0.010 in	Torsional Stiffness	0.093 Deg/lb-in					
Moment of Inertia	0.0139 lb-in ²	Maximum Speed	6,000 RPM					
Full Bearing Support Required?	Yes	Nypatch® Anti-Vibration	Yes					
		Hardware?						
Zero-Backlash?	Yes	Balanced Design	Yes					
Torque Wrench	TW:BT-1R-1/4-41.0	Recommended Hex Key	Metric Hex Keys					
Material Specification	7075-T651 Extruded and Drawn	Temperature	-40°F to 225°F (-40°C to 107°C)					
	Aluminum Bar							
Finish Specification	Bright, No Plating	Manufacturer	Ruland Manufacturing					
Country of Origin	USA	Weight (lbs)	0.094900					
UPC	634529008423	Tariff Code	8483.60.8000					
UNSPC	31163003							
Note 1	Torque ratings are at maximum mis	salignment.						
Note 2		ce only. The user must determine su						
Note 3	Torque ratings for the couplings are based on the physical limitations/failure point of the machined beams. Under normal/typical conditions the hubs are capable of holding up to the rated torque of the machined beams. 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 machined beams. Please consult technical support for more assistance.							
Prop 65		pose you to the chemical Ethylene The defects or other reproductive harm.						

Installation Instructions

- 1. Align the bores of the FCR16-5-5-A six beam coupling on the shafts that are to be joined and determine if the misalignment parameters are within the limits of the coupling. (*Angular Misalignment*: 3°, *Parallel Misalignment*: 0.015 in, *Axial Motion*: 0.010 in)
- 2. Fully tighten the M4 screw on one hub to the recommended seating torque of 4.6 Nm using a 3.0 mm hex torque wrench.
- 3. Before tightening the screws on the second hub, rotate the coupling by hand to allow it to reach its free length.
- 4. Tighten the screws 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 0.720 in.