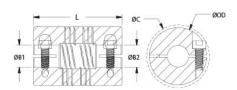




## FCR20-14MM-3/8"-A

Ruland FCR20-14MM-3/8"-A, 14mm x 3/8" Six Beam Coupling, Aluminum, Clamp Style, 1.250" (31.8mm) OD, 1.750" (44.5mm) Length





## **Description**

Ruland FCR20-14MM-3/8"-A is a clamp style six beam coupling with 14mm x 0.3750" bores, 1.250" (31.8mm) OD, and 1.750" (44.5mm) 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. FCR20-14MM-3/8"-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. FCR20-14MM-3/8"-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. FCR20-14MM-3/8"-A is manufactured in our Marlborough, MA factory under strict controls using proprietary processes.

 	uve	OPC	 ations

Small Bore (B2)	0.3750 in		
B2 Max Shaft Penetration	0.842 in (21.4 mm)		
Bore Tolerance	+0.001 in / -0.000 in (+0.025 mm / -0.000 mm)		
Clearance Diameter (C) MAX	1.459 in (37.06 mm)		
+0.0000 / -0.0005 " (+0.000 / -0.013 <b>Cap Screw</b> mm)			
Hex Wrench Size	4.0 mm		
Seating Torque	9.5 Nm		
Dynamic Torque Reversing	11.2 lb-in (1.27 Nm)		
<b>Dynamic Torque Non-Reversing</b>	22.5 lb-in (2.54 Nm)		
Static Torque	45.0 lb-in (5.08 Nm)		
Torsional Stiffness	0.080 Deg/lb-in (0.71 Deg/Nm)		
Maximum Speed	6,000 RPM		
Nypatch® Anti-Vibration Hardware?	Yes		
Balanced Design	Yes		
Recommended Hex Key	Metric Hex Keys		
Temperature	-40°F to 225°F (-40°C to 107°C)		
Manufacturer	Ruland Manufacturing		
Weight (lbs)	0.161900		
Tariff Code	8483.60.8000		
Torque ratings are at maximum misalignment.			
Performance ratings are for guidance only. The user must determine suitability for a particular application.			
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. Keyways are			
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technical support for more assistance.

## Prop 65

▲ WARNING This product can expose you to the chemical Ethylene Thiourea, known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to <a href="https://www.P65Warnings.ca.gov">www.P65Warnings.ca.gov</a>.

## **Installation Instructions**

- 1. Align the bores of the FCR20-14MM-3/8"-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 Misialignment*: 3°, *Parallel Misalignment*: 0.015 in (0.38 mm), *Axial Motion*: 0.010 in (0.25 mm))
- 2. Fully tighten the M5 screw on one hub to the recommended seating torque of 9.5 Nm using a 4.0 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 0.842 in (21.4 mm).