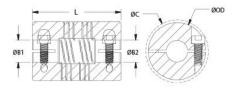




FCR20-13MM-1/2"-SS

Ruland FCR20-13MM-1/2"-SS, 13mm x 1/2" Six Beam Coupling, Stainless Steel, Clamp Style, 1.250" (31.8mm) OD, 1.750" (44.5mm) Length





Description

Ruland FCR20-13MM-1/2"-SS is a clamp style six beam coupling with 13mm x 0.5000" 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. FCR20-13MM-1/2"-SS 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. FCR20-13MM-1/2"-SS is made from 303 stainless steel for increased torque capacity. It is machined from bar stock that is sourced exclusively from North American mills and RoHS3 and REACH compliant. FCR20-13MM-1/2"-SS is manufactured in our Marlborough, MA factory under strict controls using proprietary processes.

Product Specifications

13 mm	Small Bore (B2)	0.5000 in
0.842 in (21.4 mm)	B2 Max Shaft Penetration	0.842 in (21.4 mm)
1.250 in (31.8 mm)	Bore Tolerance	+0.001 in / -0.000 in (+0.025 mm /
		-0.000 mm)
1.750 in (44.5 mm)	Clearance Diameter (C) MAX	1.459 in (37.06 mm)
+0.0000 / -0.0005 " (+0.000 / -0.013 mm)	Cap Screw	M5
Alloy Steel with Nypatch®	Hex Wrench Size	4.0 mm
Black Oxide	Seating Torque	9.5 Nm
2 ea	Dynamic Torque Reversing	25 lb-in (2.83 Nm)
3°	Dynamic Torque Non-Reversing	50.1 lb-in (5.66 Nm)
0.015 in (0.38 mm)	Static Torque	100.2 lb-in (11.32 Nm)
0.010 in (0.25 mm)	Torsional Stiffness	0.037 Deg/lb-in (0.33 Deg/Nm)
0.1094 lb-in ² , 32.426 x10 ⁻⁶ kg-m ²	Maximum Speed	6,000 RPM
Yes	Nypatch® Anti-Vibration Hardware?	Yes
Yes	Balanced Design	Yes
<u>TW:BT-4C-3/8-86</u>	Recommended Hex Key	Metric Hex Keys
Type 303 Austenitic, Non-Magnetic Bar	Temperature	-40°F to 350°F (-40°C to 176°C)
Bright, No Plating	Manufacturer	Ruland Manufacturing
USA	Weight (Ibs)	0.433200
634529193099	Tariff Code	8483.60.8000
31163003		
Torque ratings are at maximum misalignment.		
Performance ratings are for guidance only. The user must determine suitability for a particular application.		
Torque retinge for the sourlings are	based on the physical limitations/fai	lure point of the machined beams.
	0.842 in (21.4 mm) 1.250 in (31.8 mm) 1.750 in (44.5 mm) +0.0000 / -0.0005 " (+0.000 / -0.013 mm) Alloy Steel with Nypatch® Black Oxide 2 ea 3° 0.015 in (0.38 mm) 0.010 in (0.25 mm) 0.1094 lb-in ² , 32.426 x10 ⁻⁶ kg-m ² Yes Yes Yes Yes TW:BT-4C-3/8-86 Type 303 Austenitic, Non-Magnetic Bar Bright, No Plating USA 634529193099 31163003 Torque ratings are at maximum miss Performance ratings are for guidance	0.842 in (21.4 mm)B2 Max Shaft Penetration1.250 in (31.8 mm)Bore Tolerance1.750 in (44.5 mm)Clearance Diameter (C) MAX+0.0000 / -0.0005 " (+0.000 / -0.013 Cap Screw mm)Hex Wrench SizeAlloy Steel with Nypatch®Hex Wrench SizeBlack OxideSeating Torque2 eaDynamic Torque Reversing3°Dynamic Torque Non-Reversing0.015 in (0.38 mm)Static Torque0.010 in (0.25 mm)Torsional Stiffness0.1094 lb-in², 32.426 x10 ⁻⁶ kg-m²Maximum SpeedYesBalanced DesignTW:BT-4C-3/8-86Recommended Hex KeyType 303 Austenitic, Non-Magnetic BarTemperatureBright, No PlatingManufacturerUSAWeight (lbs)634529193099Tariff Code31163003Torque ratings are at maximum misalignment.Performance ratings are for guidance only. The user must determine su

	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 www.P65Warnings.ca.gov.		
Installation Instructions			
	 Align the bores of the FCR20-13MM-1/2"-SS six beam coupling on the shafts that are to be joined and determine if the misalignment parameters are within the limits of the coupling. (<i>Angular</i> <i>Misialignment:</i> 3°, <i>Parallel Misalignment:</i> 0.015 in (0.38 mm), <i>Axial Motion:</i> 0.010 in (0.25 mm)) 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. Before tightening the screws on the second hub, rotate the coupling by hand to allow it to reach its free length. 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. 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). 		