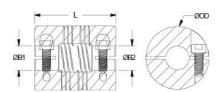




PCMR29-10-7-SS

Ruland PCMR29-10-7-SS, 10mm x 7mm Four Beam Coupling, Stainless Steel, Clamp Style, 28.6mm OD, 38.1mm Length





Description

Ruland PCMR29-10-7-SS is a clamp style four beam coupling with 10mm x 7mm bores, 28.6mm OD, and 38.1mm length. It is machined from a single piece of material and feature two sets of two spiral cuts. This gives it higher torque capacity, lower windup, and larger body sizes than single beam couplings. PCMR29-10-7-SS is zero-backlash and has a balanced design for reduced vibration at high speeds of up to 6,000 RPM. This four beam spiral coupling is zero-backlash and has a balanced design for reduced vibration at high speeds of up to 6,000 RPM. All hardware is metric and tests beyond DIN 912 12.9 standards for maximum torque capabilities. PCMR29-10-7-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. PCMR29-10-7-SS is manufactured in our Marlborough, MA factory under strict controls using proprietary processes.

Product Specifications

B1 Max Shaft Penetration 17.6 mm B2 Max Shaft Penetration 17.6 mm Outer Diameter (OD) 28.6 mm Bore Tolerance +0.025 mm /-0.000 mm Length (L) 38.1 mm Recommended Shaft Tolerance +0.000 mm /-0.013 mm Cap Screw M4 Screw Material Alloy Steel Hex Wrench Size 3.0 mm Screw Finish Black Oxide Seating Torque 4.6 Nm Number of Screws 2 ea Dynamic Torque Reversing 1.53 Nm Angular Misalignment 3° Dynamic Torque Reversing 3.05 Nm Parallel Misalignment 0.38 mm Static Torque 6.10 Nm Axial Motion 0.25 mm Torsional Stiffness 0.63 Deg/Nm Moment of Inertia 17.643 x10 ⁻⁶ kg-m² Maximum Speed 6.000 RPM Full Bearing Support Required? Yes Zero-Backlash? Yes Balanced Design Yes Torque Wrench TW:BT-1R-1/4-41.0 Recommended Hex Key Metric Hex Keys Material Specification Type 303 Austenitic, Non-Magnetic Temperature -40°F to 350°F (-40°C to 176° Bar Finish Specification Bright, No Plating Manufacturer Ruland Manufacturing Country of Origin USA Weight (Ibs) 0.307800 UPC 634529049051 Tariff Code 8483.60.8000 UNSPC 31163003 Note 1 Torque ratings are at maximum misalignment. Note 2 Performance ratings are for guidance only. The user must determine suitability for a particular application 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 or technical support for more assistance.	i roduct opecinications			
Outer Diameter (OD) 28.6 mm Bore Tolerance +0.025 mm / -0.000 mm / -0.001 mm Length (L) 38.1 mm Recommended Shaft Tolerance +0.000 mm / -0.013 mm Cap Screw M4 Screw Material Alloy Steel Hex Wrench Size 3.0 mm Screw Finish Black Oxide Seating Torque 4.6 Nm Number of Screws 2 ea Dynamic Torque Reversing 1.53 Nm Angular Misalignment 3° Dynamic Torque Non-Reversing 3.05 Nm Parallel Misalignment 0.38 mm Static Torque 6.10 Nm Axial Motion 0.25 mm Torsional Stiffness 0.63 Deg/Nm Moment of Inertia 17.643 x 10°6 kg-m² Maximum Speed 6,000 RPM Full Bearing Support Required? Yes Zero-Backlash? Yes Balanced Design Yes Torque Wrench TW:BT-1R-1/4-41.0 Recommended Hex Key Metric Hex Keys Material Specification Type 303 Austenitic, Non-Magnetic Temperature -40°F to 350°F (-40°C to 176° t	Bore (B1)	10 mm	Small Bore (B2)	7 mm
Length (L) 38.1 mm Recommended Shaft Tolerance +0.000 mm /-0.013 mm Cap Screw M4 Screw Material Alloy Steel Black Oxide Seating Torque 4.6 Nm Number of Screws 2 ea Dynamic Torque Reversing 1.53 Nm Angular Misalignment 3° Dynamic Torque Non-Reversing 3.05 Nm Parallel Misalignment 0.38 mm Static Torque 6.10 Nm Axial Motion 0.25 mm Torsional Stiffness 0.63 Deg/Nm Moment of Inertia 17.643 x10 6 kg-m² Maximum Speed 6,000 RPM Full Bearing Support Required? Yes Torque Wrench TW:BT-1R-1/4-41.0 Recommended Hex Key Metric Hex Keys Material Specification Type 303 Austenitic, Non-Magnetic Bar Finish Specification Bright, No Plating Manufacturer Finish Specification USA Weight (Ibs) 0.307800 UPC 634529049051 Tariff Code 8483.60.8000 UNSPC 31163003 Note 1 Torque ratings are at maximum misalignment. Note 2 Performance ratings are for guidance only. The user must determine suitability for a particular application 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 or technical support for more assistance. Prop 65	B1 Max Shaft Penetration	17.6 mm	B2 Max Shaft Penetration	17.6 mm
Cap Screw M4 Screw Material Alloy Steel Hex Wrench Size 3.0 mm Screw Finish Black Oxide Seating Torque 4.6 Nm Number of Screws 2 ea Dynamic Torque Reversing 1.53 Nm Angular Misalignment 3° Dynamic Torque Non-Reversing 3.05 Nm Parallel Misalignment 0.38 mm Static Torque 6.10 Nm Axial Motion 0.25 mm Torsional Stiffness 0.63 Deg/Nm Moment of Inertia 17.643 x10 6 kg-m² Maximum Speed 6.000 RPM Full Bearing Support Required? Yes Zero-Backlash? Yes Balanced Design Yes Torque Wrench TW.BT-1R-1/4-41.0 Recommended Hex Key Metric Hex Keys Material Specification Type 303 Austenitic, Non-Magnetic Temperature -40°F to 350°F (-40°C to 176° Bar Finish Specification Bright, No Plating Manufacturer Ruland Manufacturing Country of Origin USA Weight (lbs) 0.307800 UPC 634529049051 Tariff Code 8483.60.8000 UNSPC 31163003 Note 1 Torque ratings are at maximum misalignment. Note 2 Performance ratings are for guidance only. The user must determine suitability for a particular application Note 2 Performance ratings are for guidance only. The user must determine suitability for a particular application Seams. 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. 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 of technical support for more assistance. Prop 65	Outer Diameter (OD)	28.6 mm	Bore Tolerance	+0.025 mm / -0.000 mm
Hex Wrench Size 3.0 mm Screw Finish Black Oxide Seating Torque 4.6 Nm Number of Screws 2 ea Dynamic Torque Reversing 1.53 Nm Angular Misalignment 3° Dynamic Torque Non-Reversing 3.05 Nm Parallel Misalignment 0.38 mm Static Torque 6.10 Nm Axial Motion 0.25 mm Torsional Stiffness 0.63 Deg/Nm Moment of Inertia 17.643 x10.6 kg-m² Maximum Speed 6,000 RPM Full Bearing Support Required? Yes Zero-Backlash? Yes Balanced Design Yes Torque Wrench TW:BT-1R-1/4-41.0 Recommended Hex Key Metric Hex Keys Material Specification Type 303 Austenitic, Non-Magnetic Temperature -40°F to 350°F (-40°C to 176° Bar Finish Specification Bright, No Plating Manufacturer Ruland Manufacturing Country of Origin USA Weight (Ibs) 0.307800 UPC 634529049051 Tariff Code 8483.60.8000 UNSPC 31163003 Note 1 Torque ratings are at maximum misalignment. Note 2 Performance ratings are for guidance only. The user must determine suitability for a particular application 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 of technical support for more assistance. Prop 65	Length (L)	38.1 mm	Recommended Shaft Tolerance	+0.000 mm / -0.013 mm
Seating Torque 4.6 Nm Number of Screws 2 ea Dynamic Torque Reversing 1.53 Nm Angular Misalignment 3° Dynamic Torque Non-Reversing 3.05 Nm Parallel Misalignment 0.38 mm Static Torque 6.10 Nm Axial Motion 0.25 mm Torsional Stiffness 0.63 Deg/Nm Moment of Inertia 17.643 x10° kg-m² Maximum Speed 6,000 RPM Full Bearing Support Required? Yes Zero-Backlash? Yes Balanced Design Yes Torque Wrench Tw:BT-1R-1/4-41.0 Recommended Hex Key Metric Hex Keys Material Specification Type 303 Austenitic, Non-Magnetic Bar Finish Specification Bright, No Plating Manufacturer Country of Origin USA Weight (lbs) 0.307800 UPC 634529049051 Tariff Code 8483.60.8000 UNSPC 31163003 Note 1 Torque ratings are at maximum misalignment. Note 2 Performance ratings are for guidance only. The user must determine suitability for a particular application and the physical limitations/failure point of the machined bea Under normal/typical conditions the hubs are capable of holding up to the rated torque of the machined bea 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 or technical support for more assistance. Prop 65	Cap Screw	M4	Screw Material	Alloy Steel
Dynamic Torque Reversing Dynamic Torque Non-Reversing Dynamic Torque Reversing Dynamic Torque Ratile Misalignment Dynamic Torque Non-Reversing Dynamic Torque Reversing Dynamic Torque Non-Reversing Dynamic Torque Non-Re	Hex Wrench Size	3.0 mm	Screw Finish	Black Oxide
Dynamic Torque Non-Reversing 3.05 Nm Parallel Misalignment 0.38 mm Static Torque 6.10 Nm Axial Motion 0.25 mm Torsional Stiffness 0.63 Deg/Nm Moment of Inertia 17.643 x10 ⁻⁶ kg-m² Maximum Speed 6,000 RPM Full Bearing Support Required? Yes Zero-Backlash? Yes Balanced Design Yes Torque Wrench Tw:BT-1R-1/4-41.0 Recommended Hex Key Metric Hex Keys Material Specification Type 303 Austenitic, Non-Magnetic Bar Finish Specification Bright, No Plating Manufacturer Ruland Manufacturing Country of Origin USA Weight (lbs) 0.307800 UPC 634529049051 Tariff Code 8483.60.8000 UNSPC 31163003 Note 1 Torque ratings are at maximum misalignment. Note 2 Performance ratings are for guidance only. The user must determine suitability for a particular application 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 or technical support for more assistance. Prop 65	Seating Torque	4.6 Nm	Number of Screws	2 ea
Static Torque 6.10 Nm Axial Motion 0.25 mm Torsional Stiffness 0.63 Deg/Nm Moment of Inertia 17.643 x10 ⁻⁶ kg-m² Maximum Speed 6,000 RPM Full Bearing Support Required? Yes Zero-Backlash? Yes Balanced Design Yes Torque Wrench TW:BT-1R-1/4-41.0 Recommended Hex Key Metric Hex Keys Material Specification Type 303 Austenitic, Non-Magnetic Bar Finish Specification Bright, No Plating Manufacturer Ruland Manufacturing Country of Origin USA Weight (Ibs) 0.307800 UPC 634529049051 Tariff Code 8483.60.8000 UNSPC 31163003 Note 1 Torque ratings are at maximum misalignment. Note 2 Performance ratings are for guidance only. The user must determine suitability for a particular application Note 3 Torque ratings for the couplings are based on the physical limitations/failure point 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 or technical support for more assistance. Prop 65 ▲WARNING This product can expose you to chemicals including Ethylene Thiourea and Nickel (meta	Dynamic Torque Reversing	1.53 Nm	Angular Misalignment	3°
Torsional Stiffness 0.63 Deg/Nm Moment of Inertia 17.643 x10 ⁻⁶ kg-m ² Maximum Speed 6,000 RPM Full Bearing Support Required? Yes Torque Wrench TW:BT-1R-1/4-41.0 Recommended Hex Key Metric Hex Keys Type 303 Austenitic, Non-Magnetic Bar Finish Specification Bright, No Plating Manufacturer Weight (Ibs) 30.307800 JPC 634529049051 Tariff Code 8483.60.8000 JNSPC 31163003 Note 1 Torque ratings are at maximum misalignment. Note 2 Performance ratings are for guidance only. The user must determine suitability for a particular application of the machined beam 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 or technical support for more assistance. Prop 65 ■ WARNING This product can expose you to chemicals including Ethylene Thiourea and Nickel (metals)	Dynamic Torque Non-Reversing	3.05 Nm	Parallel Misalignment	0.38 mm
Maximum Speed 6,000 RPM Full Bearing Support Required? Yes Zero-Backlash? Yes Balanced Design Yes Torque Wrench TW:BT-1R-1/4-41.0 Recommended Hex Key Metric Hex Keys Material Specification Type 303 Austenitic, Non-Magnetic Bar Finish Specification Bright, No Plating Manufacturer Ruland Manufacturing Country of Origin USA Weight (Ibs) 0.307800 UPC 634529049051 Tariff Code 8483.60.8000 UNSPC 31163003 Note 1 Torque ratings are at maximum misalignment. Note 2 Performance ratings are for guidance only. The user must determine suitability for a particular application and the physical limitations/failure point of the machined beam 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 contection and product of the machined beams. Please contention and product of the product of the pro	Static Torque	6.10 Nm	Axial Motion	0.25 mm
Terrouse Wrench TW:BT-1R-1/4-41.0 Recommended Hex Key Metric Hex Keys Torque Wrench Type 303 Austenitic, Non-Magnetic Bar Finish Specification Bright, No Plating Manufacturer Ruland Manufacturing Country of Origin USA Weight (lbs) USA UNSPC UNSPC 31163003 Note 1 Torque ratings are at maximum misalignment. Note 2 Performance ratings are for guidance only. The user must determine suitability for a particular application of the machined beam 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 of technical support for more assistance. Prop 65	Forsional Stiffness	0.63 Deg/Nm	Moment of Inertia	17.643 x10 ⁻⁶ kg-m ²
Torque Wrench Type 303 Austenitic, Non-Magnetic Bar Finish Specification Bright, No Plating Weight (Ibs) Weight (Ibs) Word Torque ratings are at maximum misalignment. Note 2 Prop 65 Prop 65 Recommended Hex Key Metric Hex Keys Adv°F to 350°F (-40°C to 176° Bar Temperature Avo°F to 350°F (-40°C to 176° Bar Temperature Avo°F to 350°F (-40°C to 176° Manufacturer Ruland Manufacturing 0.307800 D.307800 Tariff Code 8483.60.8000 Torque ratings are at maximum misalignment. Note 1 Torque ratings are for guidance only. The user must determine suitability for a particular application of the machined beams. Torque ratings for the couplings are based on the physical limitations/failure point 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 of technical support for more assistance. Prop 65	Maximum Speed	6,000 RPM	Full Bearing Support Required?	Yes
Type 303 Austenitic, Non-Magnetic Temperature Bar Finish Specification Bright, No Plating Manufacturer Ruland Manufacturing USA Weight (Ibs) 0.307800 JPC 634529049051 Tariff Code 8483.60.8000 JNSPC 31163003 Note 1 Torque ratings are at maximum misalignment. Note 2 Performance ratings are for guidance only. The user must determine suitability for a particular application 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 of technical support for more assistance. Prop 65 ■WARNING This product can expose you to chemicals including Ethylene Thiourea and Nickel (metals).	Zero-Backlash?	Yes	Balanced Design	Yes
Finish Specification Bright, No Plating Manufacturer Ruland Manufacturing Country of Origin USA Weight (Ibs) 0.307800 UNSPC 31163003 Note 1 Torque ratings are at maximum misalignment. Note 2 Performance ratings are for guidance only. The user must determine suitability for a particular application and the physical limitations/failure point of the machined bear 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 or technical support for more assistance. Prop 65 ■ WARNING This product can expose you to chemicals including Ethylene Thiourea and Nickel (metals)	Torque Wrench	TW:BT-1R-1/4-41.0	Recommended Hex Key	Metric Hex Keys
Country of Origin USA Weight (Ibs) 0.307800 UNSPC 31163003 Note 1 Torque ratings are at maximum misalignment. Note 2 Performance ratings are for guidance only. The user must determine suitability for a particular application of the machined bear 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 or technical support for more assistance. Prop 65 WARNING This product can expose you to chemicals including Ethylene Thiourea and Nickel (meta)	Material Specification	•	Temperature	-40°F to 350°F (-40°C to 176°C)
UNSPC 31163003 Note 1 Torque ratings are at maximum misalignment. Note 2 Performance ratings are for guidance only. The user must determine suitability for a particular application of the machined bear 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 of technical support for more assistance. Prop 65 WARNING This product can expose you to chemicals including Ethylene Thiourea and Nickel (meta)	Finish Specification	Bright, No Plating	Manufacturer	Ruland Manufacturing
UNSPC Note 1 Torque ratings are at maximum misalignment. Note 2 Performance ratings are for guidance only. The user must determine suitability for a particular application of the machined bear 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 of technical support for more assistance. Prop 65 ■ WARNING This product can expose you to chemicals including Ethylene Thiourea and Nickel (metals)	Country of Origin	USA	Weight (lbs)	0.307800
Note 1 Torque ratings are at maximum misalignment. Performance ratings are for guidance only. The user must determine suitability for a particular application of the sum of the machined bear of the physical limitations/failure point of the machined bear 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 of technical support for more assistance. Prop 65 WARNING This product can expose you to chemicals including Ethylene Thiourea and Nickel (meta)	UPC	634529049051	Tariff Code	8483.60.8000
Note 2 Performance ratings are for guidance only. The user must determine suitability for a particular application of the suit	UNSPC	31163003		
Torque ratings for the couplings are based on the physical limitations/failure point of the machined bea 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 of technical support for more assistance. Prop 65 WARNING This product can expose you to chemicals including Ethylene Thiourea and Nickel (meta)	Note 1	Torque ratings are at maximum misalignment.		
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 of technical support for more assistance. Prop 65 WARNING This product can expose you to chemicals including Ethylene Thiourea and Nickel (meta)	Note 2	Performance ratings are for guidance only. The user must determine suitability for a particular application.		
Prop 65	Note 3	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		
	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		

Installation Instructions

1. Align the bores of the PCMR29-10-7-SS four 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: 0.38 mm, Axial Motion: 0.25 mm)
- 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 17.6 mm.