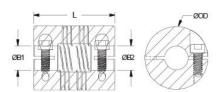




PCR12-2-2-A

Ruland PCR12-2-2-A, 1/8" x 1/8" Four Beam Coupling, Aluminum, Clamp Style, 0.750" OD, 0.900" Length





Description

Ruland PCR12-2-2-A is a clamp style four beam coupling with 0.1250" x 0.1250" bores, 0.750" OD, and 0.900" 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. PCR12-2-2-A 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. PCR12-2-2-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. PCR12-2-2-A is manufactured in our Marlborough, MA factory under strict controls using proprietary processes.

Product Specifications

B1 Max Shaft Penetration Outer Diameter (OD) O.750 in Bore Tolerance +0.001 in / -0.000 in Length (L) O.900 in Recommended Shaft Tolerance +0.0000 in / -0.0005 in Cap Screw M2.5 Screw Material Hex Wrench Size 2.0 mm Screw Finish Black Oxide Seating Torque 1.21 Nm Number of Screws 2 ea Dynamic Torque Reversing 6.5 lb-in Angular Misalignment Opnamic Torque Reversing 13 lb-in Parallel Misalignment Outer in Axial Motion Outer in Outer				
Cuter Diameter (OD) 0.750 in Bore Tolerance +0.001 in /-0.000 in Length (L) 0.900 in Recommended Shaft Tolerance +0.0000 in /-0.0005 in Recommended Shaft Tolerance +0.0000 in /-0.0005 in Recommended Shaft Tolerance +0.0000 in /-0.0005 in Recommended Shaft Tolerance Proposes M2.5 Screw Material Alloy Steel Black Oxide Seating Torque 2.0 mm Screw Finish Black Oxide Seating Torque Reversing 6.5 lb-in Angular Misalignment 3° Dynamic Torque Reversing 13 lb-in Parallel Misalignment 0.008 in Recommended Proposes Propose	Bore (B1)	0.1250 in	Small Bore (B2)	0.1250 in
Length (L) 0.900 in Recommended Shaft Tolerance +0.0000 in /-0.0005 in Cap Screw M2.5 Screw Material Alloy Steel Hex Wrench Size 2.0 mm Screw Finish Black Oxide Seating Torque 1.21 Nm Number of Screws 2 ea Dynamic Torque Reversing 6.5 lb-in Angular Misalignment 3° Dynamic Torque Reversing 13 lb-in Parallel Misalignment 0.008 in Static Torque 26 lb-in Axial Motion 0.005 in Torsional Stiffness 0.180 Deg/lb-in Moment of Inertia 0.0025 lb-in² Torsional Stiffness 0.180 Deg/lb-in Moment of Inertia 0.0025 lb-in² Yes Balanced Design Yes Torque Wrench TW-BT-1R-1/4-10.7 Recommended Hex Key Metric Hex Keys Torque Wrench TW-BT-1R-1/4-10.7 Recommended Hex Key Metric Hex Keys Temperature 40°F to 225°F (-40°C to 107°C) Material Specification Bright, No Plating Manufacturer Ruland Manufacturing Country of Origin USA Weight (lbs) 0.031200 UPC 634529032435 Tariff Code 8483.60.8000 UPC 634529032435 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 are at maximum misalignment. Under normal/typical conditions the hubs are capable of holding up to the rated torque of the machined beams. Under normal/typical conditions the hubs are capable of holding up to the rated torque of the machined beams. Propulse of the machined beams. Please consulted his product on 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	B1 Max Shaft Penetration	0.422 in	B2 Max Shaft Penetration	0.422 in
Cap Screw M2.5 Screw Material Alloy Steel Hex Wrench Size 2.0 mm Screw Finish Black Oxide Seating Torque 1.21 Nm Number of Screws 2 ea Dynamic Torque Reversing 6.5 lb-in Angular Misalignment 3° Dynamic Torque Reversing 13 lb-in Parallel Misalignment 0.008 in Static Torque 26 lb-in Axial Motion 0.005 in Torsional Stiffness 0.180 Deg/lb-in Moment of Inertia 0.0025 lb-in² Maximum Speed 6,000 RPM Full Bearing Support Required? Yes Zero-Backlash? Yes Balanced Design Yes Torque Wrench Tw.BT-1R-1/4-10.7 Recommended Hex Key Metric Hex Keys Material Specification 7075-T651 Extruded and Drawn Aluminum Bar Finish Specification Bright, No Plating Manufacturer Ruland Manufacturing Country of Origin USA Weight (lbs) 0.031200 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. Propose to the colorination of the California to cause cancer and birth defects or other reproductive harm. For more information go to	Outer Diameter (OD)	0.750 in	Bore Tolerance	+0.001 in / -0.000 in
Hex Wrench Size 2.0 mm Screw Finish Black Oxide Seating Torque 1.21 Nm Number of Screws 2 ea Dynamic Torque Reversing 6.5 lb-in Angular Misalignment 3° Dynamic Torque Non-Reversing 13 lb-in Parallel Misalignment 0.008 in Static Torque 26 lb-in Axial Motion 0.005 in Torsional Stiffness 0.180 Deg/lb-in Moment of Inertia 0.0025 lb-in² Maximum Speed 6,000 RPM Full Bearing Support Required? Yes Zero-Backlash? Yes Balanced Design Yes Torque Wrench TW:BT-1R-1/4-10.7 Recommended Hex Key Metric Hex Keys Material Specification 7075-T651 Extruded and Drawn Aluminum Bar Finish Specification Bright, No Plating Manufacturer Ruland Manufacturing Country of Origin USA Weight (lbs) 0.031200 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 consultechnical support for more assistance. Prop 65 AWARNING 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	Length (L)	0.900 in	Recommended Shaft Tolerance	+0.0000 in / -0.0005 in
Seating Torque 1.21 Nm Number of Screws 2 ea Dynamic Torque Reversing 6.5 lb-in Angular Misalignment 3° Dynamic Torque Non-Reversing 13 lb-in Parallel Misalignment 0.008 in Static Torque 26 lb-in Axial Motion 0.005 in Torsional Stiffness 0.180 Deg/lb-in Moment of Inertia 0.0025 lb-in² Maximum Speed 6,000 RPM Full Bearing Support Required? Yes Zero-Backlash? Yes Balanced Design Yes Torque Wrench TW:BT-1R-1/4-10.7 Recommended Hex Key Metric Hex Keys Material Specification 7075-T651 Extruded and Drawn Aluminum Bar Finish Specification Bright, No Plating Manufacturer Ruland Manufacturing Country of Origin USA Weight (Ibs) 0.031200 UPC 634529032435 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. 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 consultechnical support for more assistance. Prop 65	Cap Screw	M2.5	Screw Material	Alloy Steel
Dynamic Torque Reversing Dynamic Torque Reversing Dynamic Torque Non-Reversing Dynamic Torque Non-Reversing Dynamic Torque Non-Reversing Dynamic Torque Non-Reversing Dynamic Torque Non-Bill Misalignment Dynamic D	Hex Wrench Size	2.0 mm	Screw Finish	Black Oxide
Dynamic Torque Non-Reversing 13 lb-in Parallel Misalignment 0.008 in Static Torque 26 lb-in Axial Motion 0.005 in Torsional Stiffness 0.180 Deg/lb-in Moment of Inertia 0.0025 lb-in² Maximum Speed 6,000 RPM Full Bearing Support Required? Yes Zero-Backlash? Yes Torque Wrench Material Specification 7075-T651 Extruded and Drawn Aluminum Bar Finish Specification Bright, No Plating Manufacturer Auland Manufacturing Country of Origin USA Weight (lbs) 0.031200 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. Under normal/typical conditions the hubs are capable of holding up to the rated torque 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 consultechnical support for more assistance. Prop 65 AWARNING 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	Seating Torque	1.21 Nm	Number of Screws	2 ea
Static Torque 26 lb-in Axial Motion 0.005 in Torsional Stiffness 0.180 Deg/lb-in Moment of Inertia 0.0025 lb-in² Maximum Speed 6,000 RPM Full Bearing Support Required? Yes Zero-Backlash? Yes Balanced Design Yes Torque Wrench TW:BT-1R-1/4-10.7 Recommended Hex Key Metric Hex Keys Material Specification 7075-T651 Extruded and Drawn Aluminum Bar Finish Specification Bright, No Plating Manufacturer Ruland Manufacturing Country of Origin USA Weight (lbs) 0.031200 UPC 634529032435 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. 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 consultechnical support for more assistance. Prop 65 MARNING 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	Dynamic Torque Reversing	6.5 lb-in	Angular Misalignment	3°
Torsional Stiffness 0.180 Deg/lb-in Maximum Speed 6,000 RPM Full Bearing Support Required? Yes Zero-Backlash? Yes Balanced Design Yes Torque Wrench TW:BT-1R-1/4-10.7 Recommended Hex Key Metric Hex Keys Material Specification 7075-T651 Extruded and Drawn Aluminum Bar Fumperature -40°F to 225°F (-40°C to 107°C) Finish Specification Bright, No Plating Manufacturer Ruland Manufacturing Country of Origin USA Weight (lbs) 0.031200 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. 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 consultechnical support for more assistance. Prop 65 AWARNING 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	Dynamic Torque Non-Reversing	13 lb-in	Parallel Misalignment	0.008 in
Maximum Speed 6,000 RPM Full Bearing Support Required? Yes Zero-Backlash? Yes Balanced Design Yes Torque Wrench TW:BT-1R-1/4-10.7 Recommended Hex Key Metric Hex Keys Material Specification 7075-T651 Extruded and Drawn Aluminum Bar Finish Specification Bright, No Plating Manufacturer Ruland Manufacturing Country of Origin USA Weight (lbs) 0.031200 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. Under normal/typical conditions the hubs are capable of holding up to the rated torque 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 consultechnical support for more assistance. Prop 65 MARNING 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	Static Torque	26 lb-in	Axial Motion	0.005 in
Torque Wrench TW:BT-1R-1/4-10.7 Recommended Hex Key Metric Hex Keys Torque Wrench TW:BT-1R-1/4-10.7 Recommended Hex Key Metric Hex Keys 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 (Ibs) 0.031200 UPC 634529032435 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. 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 consutechnical support for more assistance. Prop 65 MARNING 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	Torsional Stiffness	0.180 Deg/lb-in	Moment of Inertia	0.0025 lb-in ²
Torque Wrench TW:BT-1R-1/4-10.7 Recommended Hex Key Metric Hex Keys 7075-T651 Extruded and Drawn Aluminum Bar Finish Specification Bright, No Plating Weight (lbs) USA Weight (lbs) Weight (lbs) Weight Wei	Maximum Speed	6,000 RPM	Full Bearing Support Required?	Yes
Material Specification 7075-T651 Extruded and Drawn Aluminum Bar Finish Specification Bright, No Plating Manufacturer Ruland Manufacturing Country of Origin USA Weight (lbs) 0.031200 UPC 634529032435 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. 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 consutechnical support for more assistance. Prop 65 AWARNING 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	Zero-Backlash?	Yes	Balanced Design	Yes
Aluminum Bar Finish Specification Bright, No Plating Manufacturer Ruland Manufacturing Country of Origin USA Weight (lbs) 0.031200 UPC 634529032435 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. 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 consutechnical 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	Torque Wrench	TW:BT-1R-1/4-10.7	Recommended Hex Key	Metric Hex Keys
Finish Specification Bright, No Plating Manufacturer Ruland Manufacturing Country of Origin USA Weight (Ibs) 0.031200 0.031200 WSPC 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. 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 consultechnical 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	Material Specification	7075-T651 Extruded and Drawn	Temperature	-40°F to 225°F (-40°C to 107°C)
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Installation Instructions

1. Align the bores of the PCR12-2-2-A 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:* 0.008 in, *Axial Motion:* 0.005 in)
- 2. Fully tighten the M2.5 screw on one hub to the recommended seating torque of 1.21 Nm using a 2.0 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.
- 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 0.422 in.