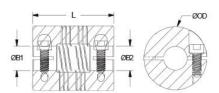




PCMR25-8-8-A

Ruland PCMR25-8-A, 8mm x 8mm Four Beam Coupling, Aluminum, Clamp Style, 25.4mm OD, 31.8mm Length





Description

Ruland PCMR25-8-8-A is a clamp style four beam coupling with 8mm x 8mm bores, 25.4mm OD, and 31.8mm 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. PCMR25-8-8-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. PCMR25-8-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. PCMR25-8-A is manufactured in our Marlborough, MA factory under strict controls using proprietary processes.

Product Specifications

| Bore (B1) 8 mm Small Bore (B2) 8 mm B1 Max Shaft Penetration 14.7 mm B2 Max Shaft Penetration 14.7 mm Outer Diameter (OD) 25.4 mm Bore Tolerance +0.025 mm / -0.000 mm Length (L) 31.8 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 0.93 Nm Angular Misalignment 3* Static Torque 3.73 Nm Asial Motion 0.25 mm Static Torque Non-Reversing 1.87 Nm Parallel Misalignment 0.38 mm Static Torque 3.73 Nm Axial Motion 0.25 mm Torsional Stiffness 1.57 Deg/Nm Moment of Inertia 3.394 x10° kg·m² Maximum Speed 6,000 RPM Full Bearing Support Required? Yes Torque Wrench 1W:BT-1R-1/4-41.0 Recommended Hex Key Metric Hex Keys Material Specification | | | | |
|--|------------------------------|--|--------------------------------|---|
| Outer Diameter (OD) 25.4 mm Bore Tolerance +0.025 mm/-0.000 mm Length (L) 31.8 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 0.93 Nm Angular Misalignment 3* Oyamic Torque Non-Reversing 1.87 Nm Parallel Misalignment 0.38 mm Static Torque 3.73 Nm Axial Motion 0.25 mm Torsional Stiffness 1.57 Deg/Nm Moment of Inertia 3.394 x10* kg-m² Maximum Speed 6,000 RPM Full Bearing Support Required? Yes Torque Wrench TW:BT-18-1/4-41.0 Recommended Hex Key Metric Hex Keys Material Specification Bright, No Plating Manufacturer Ruland Manufacturing Country of Origin USA Weight (lbs) 0.081000 UPC 634529031742 Tariff Code 8483.60.8000 UNSPC < | Bore (B1) | 8 mm | Small Bore (B2) | 8 mm |
| Length (L) 31.8 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 0.93 Nm Angular Misalignment 3* Dynamic Torque Non-Reversing 1.87 Nm Parallel Misalignment 0.38 mm Static Torque 3.73 Nm Axial Motion 0.25 mm Torsional Stiffness 1.57 Deg/Nm Moment of Inertia 3.394 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 2075-T651 Extruded and Drawn Aluminum Bar Temperature 40°F to 225°F (-40°C to 107°C) Finish Specification Bright, No Plating Manufacturer Ruland Manufacturing Country of Origin USA Weight (lbs) 0.081000 UPC 634529031742 Tariff Code 8483.60.8000 | B1 Max Shaft Penetration | 14.7 mm | B2 Max Shaft Penetration | 14.7 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 0.93 Nm Angular Misalignment 3° Dynamic Torque Non-Reversing 1.87 Nm Parallel Misalignment 0.38 mm Static Torque 3.73 Nm Axial Motion 0.25 mm Torsional Stiffness 1.57 Deg/Nm Moment of Inertia 3.394 x10° kg-m² Maximum Speed 6,000 RPM Full Bearing Support Required? Yes Torque Wrench TW:BT-IR-I/4-41.0 Recommended Hex Key Metric Hex Keys Material Specification Bright, No Plating Manufacturer Ruland Manufacturing Country of Origin USA Weight (lbs) 0.081000 UPC 634529031742 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 l | Outer Diameter (OD) | 25.4 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 0.93 Nm Angular Misalignment 3° Dynamic Torque Non-Reversing 1.87 Nm Parallel Misalignment 0.38 mm Static Torque 3.73 Nm Axial Motion 0.25 mm Torsional Stiffness 1.57 Deg/Nm Moment of Inertia 3.394 x10° 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 7075-T651 Extruded and Drawn Aluminum Bar Aluminum Bar Finish Specification Bright, No Plating Weight (lbs) 0.081000 UPC 634529031742 Tariff Code 3483.60.8000 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. 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 consult technical support for more assistance. Prop 65 | Length (L) | 31.8 mm | Recommended Shaft Tolerance | +0.000 mm / -0.013 mm |
| Seating Torque 4.6 Nm Number of Screws 2 ea Dynamic Torque Reversing 0.93 Nm Angular Misalignment 3° Dynamic Torque Non-Reversing 1.87 Nm Parallel Misalignment 0.38 mm Static Torque 3.73 Nm Axial Motion 0.25 mm Torsional Stiffness 1.57 Deg/Nm Moment of Inertia 3.394 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 7075-T651 Extruded and Drawn Aluminum Bar Temperature -40°F to 225°F (-40°C to 107°C) Finish Specification Bright, No Plating Manufacturer Ruland Manufacturing Country of Origin USA Weight (lbs) 0.081000 UNSPC 634529031742 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 c | Cap Screw | M4 | Screw Material | Alloy Steel |
| Dynamic Torque Reversing 0.93 Nm Angular Misalignment 3° Dynamic Torque Non-Reversing 1.87 Nm Parallel Misalignment 0.38 mm Static Torque 3.73 Nm Axial Motion 0.25 mm Torsional Stiffness 1.57 Deg/Nm Moment of Inertia 3.394 x10 6 kg-m² Full Bearing Support Required? Yes Torque Wrench TW:BT-1R-1/4-41.0 Recommended Hex Key Metric Hex Keys Material Specification 7075-7651 Extruded and Drawn Aluminum Bar Finish Specification 7075-7651 Extruded and Drawn Aluminum Bar Finish Specification Bright, No Plating Manufacturer Ruland Manufacturing Country of Origin USA Weight (lbs) 0.081000 UPC 634529031742 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. 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. 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 | Hex Wrench Size | 3.0 mm | Screw Finish | Black Oxide |
| Dynamic Torque Non-Reversing 1.87 Nm Parallel Misalignment 0.38 mm Static Torque 3.73 Nm Axial Motion 0.25 mm Torsional Stiffness 1.57 Deg/Nm Moment of Inertia 3.394 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 7075-T651 Extruded and Drawn Aluminum Bar Finish Specification Bright, No Plating Manufacturer Ruland Manufacturing Country of Origin USA Weight (lbs) 0.081000 UPC 634529031742 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 consult technical support for more assistance. Prop 65 | Seating Torque | 4.6 Nm | Number of Screws | 2 ea |
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| Torsional Stiffness 1.57 Deg/Nm Moment of Inertia 3.394 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 7075-T651 Extruded and Drawn Aluminum Bar Finish Specification Bright, No Plating Manufacturer Ruland Manufacturing Country of Origin USA Weight (lbs) 0.081000 UPC 634529031742 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 consult 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 www.P65Warnings.ca.gov. | Dynamic Torque Non-Reversing | 1.87 Nm | Parallel Misalignment | 0.38 mm |
| 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 7075-T651 Extruded and Drawn Aluminum Bar Temperature -40°F to 225°F (-40°C to 107°C) Finish Specification Bright, No Plating Manufacturer Ruland Manufacturing Country of Origin USA Weight (lbs) 0.081000 UPC 634529031742 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 consult technical 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 www.P65Warnings.ca.gov. | Static Torque | 3.73 Nm | Axial Motion | 0.25 mm |
| Torque Wrench TW:BT-1R-1/4-41.0 Recommended Hex Key Metric Hex Keys 7075-T651 Extruded and Drawn Aluminum Bar Finish Specification Bright, No Plating Manufacturer Ruland Manufacturing Country of Origin USA Weight (lbs) 0.081000 UPC 634529031742 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 consult technical 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 www.P65Warnings.ca.gov. | Torsional Stiffness | 1.57 Deg/Nm | Moment of Inertia | 3.394 x10 ⁻⁶ kg-m ² |
| Material Specification7075-T651 Extruded and Drawn Aluminum BarTemperature-40°F to 225°F (-40°C to 107°C)Finish SpecificationBright, No PlatingManufacturerRuland ManufacturingCountry of OriginUSAWeight (lbs)0.081000UPC634529031742Tariff Code8483.60.8000UNSPC31163003Note 1Torque ratings are at maximum misalignment.Note 2Performance ratings are for guidance only. The user must determine suitability for a particular application.Note 3Torque 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▲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 www.P65Warnings.ca.gov. | Maximum Speed | 6,000 RPM | Full Bearing Support Required? | Yes |
| Finish Specification Bright, No Plating Manufacturer Ruland Manufacturing Country of Origin USA Weight (lbs) 0.081000 UPC 634529031742 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 consult technical 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 www.P65Warnings.ca.gov. | Torque Wrench | TW:BT-1R-1/4-41.0 | Recommended Hex Key | Metric Hex Keys |
| Country of Origin USA Weight (lbs) 0.081000 UPC 634529031742 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 consult 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 www.P65Warnings.ca.gov. | Material Specification | | Temperature | -40°F to 225°F (-40°C to 107°C) |
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| 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 consult 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 www.P65Warnings.ca.gov . | Country of Origin | USA | Weight (lbs) | 0.081000 |
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| cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov. | Note 3 | 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 | | |
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Installation Instructions

- 1. Align the bores of the PCMR25-8-8-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: 0.38 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 14.7 mm.