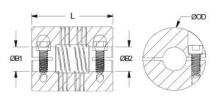




PCMR19-3-3-SS

Ruland PCMR19-3-3-SS, 3mm x 3mm Four Beam Coupling, Stainless Steel, Clamp Style, 19.1mm OD, 22.9mm Length





Description

Ruland PCMR19-3-3-SS is a clamp style four beam coupling with 3mm x 3mm bores, 19.1mm OD, and 22.9mm 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. PCMR19-3-3-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. PCMR19-3-3-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. PCMR19-3-3-SS is manufactured in our Marlborough, MA factory under strict controls using proprietary processes.

Product Specifications

Max Shaft Penetration 10.7 mm B2 Max Shaft Penetration 10.7 mm	i roduct opcomoditoris			
uter Diameter (OD) 19.1 mm 19.2 manic Torlance 19.2 mm 19.2 mm 19.3 mm 19.4 mm 19.5 mm 19.9 mm 19.0 m	Bore (B1)	3 mm	Small Bore (B2)	3 mm
ap Screw M2.5 Screw Material Alloy Steel ax Wrench Size 2.0 mm Screw Finish Black Oxide ax Wrench Size 2.0 mm Number of Screw Finish Black Oxide ax Wrench Size 2.0 mm Number of Screw Material 3.0° aximing Torque Reversing 0.99 Nm Angular Misalignment 3.0° ynamic Torque Non-Reversing 1.98 Nm Parallel Misalignment 0.20 mm aximic Torque Non-Reversing 1.98 Nm Axial Motion 0.13 mm brosional Stiffness 0.75 Deg/Nm Moment of Inertia 2.048 x10 6 kg-m² aximinum Speed 6.000 RPM Full Bearing Support Required? Yes aro-Backlash? Yes Balanced Design Yes brorque Wrench TW:BT-1R-1/4-10.7 Recommended Hex Key Metric Hex Keys aterial Specification Type 303 Austenitic, Non-Magnetic Bar mountry of Origin USA Weight (lbs) 0.083800 PC 634529048740 Tariff Code 8483.60.8000 NSPC 31163003 brorque ratings are at maximum misalignment. brorque ratings are at maximum misalignment. brorque 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 constections are undersized, slippage on the shaft is possible below the rated torque of the machined beams. Please constections are used or where shafts are undersized, slippage on the shaft is possible below the rated torque of the machined beams. Please constections are undersized, slippage on the shaft is possible below the rated torque of the machined beams. Please constections are undersized, slippage on the shaft is possible below the rated torque of the machined beams. Please constections are undersized, slippage on the shaft is possible below the rated torque of the machined beams. Please constections are undersized.	B1 Max Shaft Penetration	10.7 mm	B2 Max Shaft Penetration	10.7 mm
Alloy Steel M2.5 Screw Material Alloy Steel M2.5 Screw Material Alloy Steel M2.5 Screw Finish Black Oxide M2.6 Screw Finish Black Oxide M2.7 Screw Finish Black Oxide M2.8 Nampler of Screws 2 ea M2.8 Nampler M2.8 N	Outer Diameter (OD)	19.1 mm	Bore Tolerance	+0.025 mm / -0.000 mm
ex Wrench Size 2.0 mm Screw Finish Black Oxide acting Torque 1.21 Nm Number of Screws 2 ea ynamic Torque Reversing 0.99 Nm Angular Misalignment 3.0° ynamic Torque Non-Reversing 1.98 Nm Parallel Misalignment 0.20 mm attic Torque 3.95 Nm Axial Motion 0.13 mm orsional Stiffness 0.75 Deg/Nm Moment of Inertia 2.048 x10 ⁻⁶ kg-m² aximum Speed 6,000 RPM Full Bearing Support Required? Yes orque Wrench TW:BT-1R-1/4-10.7 Recommended Hex Key Metric Hex Keys aterial Specification Type 303 Austenitic, Non-Magnetic Bar nish Specification Bright, No Plating Manufacturer Ruland Manufacturing ountry of Origin USA Weight (lbs) 0.083800 PC 634529048740 Tariff Code 8483.60.8000 Torque ratings are at maximum misalignment. othe 1 Torque 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 cons technical support for more assistance. TOR WARNING This product can expose you to chemicals including Ethylene Thiourea and Nickel (metallic	Length (L)	22.9 mm	Recommended Shaft Tolerance	+0.000 mm / -0.013 mm
parting Torque 1.21 Nm Number of Screws 2 ea ynamic Torque Reversing 0.99 Nm Angular Misalignment 3.0° ynamic Torque Non-Reversing 1.98 Nm Parallel Misalignment 0.20 mm tatic Torque 3.95 Nm Axial Motion 0.13 mm porsional Stiffness 0.75 Deg/Nm Moment of Inertia 2.048 x10⁻⁶ kg-m² aximum Speed 6,000 RPM Full Bearing Support Required? Yes pro-Backlash? Yes Balanced Design Yes porque Wrench Tw.BT-1R-1/4-10.7 Recommended Hex Key Metric Hex Keys aterial Specification Type 303 Austenitic, Non-Magnetic Bar mish Specification Bright, No Plating Manufacturer Ruland Manufacturing pountry of Origin USA Weight (lbs) 0.083800 PC 634529048740 Tariff Code 8483.60.8000 NSPC 31163003 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. Please cons technical support for more assistance. ★WARNING This product can expose you to chemicals including Ethylene Thiourea and Nickel (metallic	Cap Screw	M2.5	Screw Material	Alloy Steel
ynamic Torque Reversing 0.99 Nm Angular Misalignment 3.0° ynamic Torque Non-Reversing 1.98 Nm Parallel Misalignment 0.20 mm tatic Torque 3.95 Nm Axial Motion 0.13 mm porsional Stiffness 0.75 Deg/Nm Moment of Inertia 2.048 x10° kg-m² pro-Backlash? Yes Balanced Design Yes pro-Backlash? Yes Balanced Design Yes proque Wrench TW.BT-1R-1/4-10.7 Recommended Hex Key Metric Hex Keys paterial Specification Type 303 Austenitic, Non-Magnetic Temperature 40°F to 350°F (-40°C to 176°C) Bar nish Specification Bright, No Plating Manufacturer Ruland Manufacturing pountry of Origin USA Weight (lbs) 0.083800 PC 634529048740 Tariff Code 848.60.8000 NSPC 31163003 Torque ratings are at maximum misalignment. One 1 Torque ratings are at maximum misalignment. Torque 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 cons technical support for more assistance.	Hex Wrench Size	2.0 mm	Screw Finish	Black Oxide
ynamic Torque Non-Reversing 1.98 Nm Parallel Misalignment 0.20 mm tatic Torque 3.95 Nm Axial Motion 0.13 mm orsional Stiffness 0.75 Deg/Nm Moment of Inertia 2.048 x10 ⁻⁶ kg-m² aximum Speed 6,000 RPM Full Bearing Support Required? Yes areo-Backlash? Yes Balanced Design Yes orque Wrench Tw.:BT-1R-1/4-10.7 Recommended Hex Key Metric Hex Keys aterial Specification Type 303 Austenitic, Non-Magnetic Temperature -40°F to 350°F (-40°C to 176°C) Bar nish Specification Bright, No Plating Manufacturer Ruland Manufacturing ountry of Origin USA Weight (lbs) 0.083800 PC 634529048740 Tariff Code 8483.60.8000 PC 634529048740 Tariff Code 8483.60.8000 PC 31163003 Ote 1 Torque ratings are at maximum misalignment. Ote 2 Performance ratings are for guidance only. The user must determine suitability for a particular application. Ote 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 cons technical support for more assistance.	Seating Torque	1.21 Nm	Number of Screws	2 ea
axiatic Torque 3.95 Nm Axial Motion 0.13 mm orsional Stiffness 0.75 Deg/Nm Moment of Inertia 2.048 x10 ⁻⁶ kg-m ² aximum Speed 6,000 RPM Full Bearing Support Required? Yes orque Wrench TW:BT-1R-1/4-10.7 Recommended Hex Key Metric Hex Keys aterial Specification Type 303 Austenitic, Non-Magnetic Bar nish Specification Bright, No Plating Manufacturer Ruland Manufacturing ountry of Origin USA Weight (lbs) 0.083800 PC 634529048740 Tariff Code 8483.60.8000 NSPC 31163003 ote 1 Torque ratings are at maximum misalignment. ote 2 Performance ratings are for guidance only. The user must determine suitability for a particular application. ote 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 cons technical support for more assistance.	Dynamic Torque Reversing	0.99 Nm	Angular Misalignment	3.0°
orsional Stiffness 0.75 Deg/Nm Moment of Inertia 2.048 x10⁻⁶ kg-m² xaximum Speed 6,000 RPM Full Bearing Support Required? Yes Pro-Backlash? Yes Balanced Design Yes orque Wrench TW:BT-1R-1/4-10.7 Recommended Hex Key Metric Hex Keys aterial Specification Type 303 Austenitic, Non-Magnetic Bar Properature Type 303 Austenitic, Non-Magnetic Bar Bright, No Plating Manufacturer Ruland Manufacturing ountry of Origin USA Weight (lbs) 0.083800 PC 634529048740 Tariff Code 8483.60.8000 NSPC 31163003 Torque ratings are at maximum misalignment. Ote 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 cons technical support for more assistance. ■ WARNING This product can expose you to chemicals including Ethylene Thiourea and Nickel (metallic	Dynamic Torque Non-Reversing	1.98 Nm	Parallel Misalignment	0.20 mm
Aximum Speed 6,000 RPM Full Bearing Support Required? Yes ero-Backlash? Yes Balanced Design Yes orque Wrench TW:BT-1R-1/4-10.7 Recommended Hex Key Metric Hex Keys aterial Specification Type 303 Austenitic, Non-Magnetic Bar nish Specification Bright, No Plating Manufacturer Ruland Manufacturing Ountry of Origin USA Weight (lbs) 0.083800 PC 634529048740 Tariff Code 8483.60.8000 NSPC 31163003 ote 1 Torque ratings are at maximum misalignment. ote 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 cons technical support for more assistance.	Static Torque	3.95 Nm	Axial Motion	0.13 mm
Pro-Backlash? Yes Balanced Design Yes Orque Wrench TW:BT-1R-1/4-10.7 Recommended Hex Key Metric Hex Keys -40°F to 350°F (-40°C to 176°C) Bar Inish Specification Bright, No Plating Manufacturer Weight (Ibs) 0.083800 PC 634529048740 Tariff Code 8483.60.8000 NSPC 31163003 Torque ratings are at maximum misalignment. Ote 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 cons technical support for more assistance. TOP 48 Weight (Ibs) 0.083800 8483.60.8000 Torque ratings are at maximum misalignment. 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. Please cons technical support for more assistance.	Torsional Stiffness	0.75 Deg/Nm	Moment of Inertia	2.048 x10 ⁻⁶ kg-m ²
TW:BT-1R-1/4-10.7 Recommended Hex Key aterial Specification Type 303 Austenitic, Non-Magnetic Bar Temperature Temperat	Maximum Speed	6,000 RPM	Full Bearing Support Required?	Yes
Type 303 Austenitic, Non-Magnetic Temperature nish Specification Bright, No Plating Manufacturer Ruland Manufacturing ountry of Origin USA Weight (Ibs) 0.083800 PC 634529048740 Tariff Code 8483.60.8000 NSPC 31163003 ote 1 Torque ratings are at maximum misalignment. ote 2 Performance ratings are for guidance only. The user must determine suitability for a particular application. ote 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 cons technical support for more assistance. TOP 65	Zero-Backlash?	Yes	Balanced Design	Yes
Bar Inish Specification Bright, No Plating Manufacturer Ruland Manufacturing Dountry of Origin USA Weight (Ibs) 0.083800 PC 634529048740 Tariff Code 8483.60.8000 NSPC 31163003 Torque ratings are at maximum misalignment. Dote 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 cons technical support for more assistance. TOP 65	Torque Wrench	TW:BT-1R-1/4-10.7	Recommended Hex Key	Metric Hex Keys
Dountry of Origin USA Weight (lbs) 0.083800 PC 634529048740 Tariff Code 8483.60.8000 NSPC 31163003 Torque ratings are at maximum misalignment. Dete 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 cons technical support for more assistance. TOP 65	Material Specification		Temperature	-40°F to 350°F (-40°C to 176°C)
PC 634529048740 Tariff Code 8483.60.8000 NSPC 31163003 ote 1 Torque ratings are at maximum misalignment. ote 2 Performance ratings are for guidance only. The user must determine suitability for a particular application. ote 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 cons technical support for more assistance. TOP 65	Finish Specification	Bright, No Plating	Manufacturer	Ruland Manufacturing
NSPC ote 1 Torque ratings are at maximum misalignment. ote 2 Performance ratings are for guidance only. The user must determine suitability for a particular application. ote 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 cons technical support for more assistance. TOP 65 WARNING This product can expose you to chemicals including Ethylene Thiourea and Nickel (metallic	Country of Origin	USA	Weight (lbs)	0.083800
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. Please cons technical support for more assistance. TOP 65	UPC	634529048740	Tariff Code	8483.60.8000
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 cons technical support for more assistance. TOP 65	UNSPC	31163003		
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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 cons technical support for more assistance. TOP 65 WARNING This product can expose you to chemicals including Ethylene Thiourea and Nickel (metallic	Note 2	Performance ratings are for guidance only. The user must determine suitability for a particular application.		
	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 PCMR19-3-3-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. 0.20 mm, Axial Motion: 0.13 mm)
- 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.
- 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 10.7 mm.