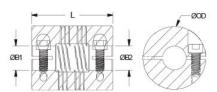




MWC15-5-3-A

Ruland MWC15-5-3-A, 5mm x 3mm Four Beam Coupling, Aluminum, Clamp Style, 15.0mm OD, 22.0mm Length





Description

Ruland MWC15-5-3-A is a clamp style four beam coupling with 5mm x 3mm bores, 15.0mm OD, and 22.0mm 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. MWC15-5-3-A is zero-backlash and has a balanced design for reduced vibration at high speeds of up to 6,000 RPM. MW-series couplings have purely metric outer diameter and length dimensions and fit in a smaller envelope than the P-series allowing for easier interchanges from single beam couplings. 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. MWC15-5-3-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. MWC15-5-3-A is manufactured in our Marlborough, MA factory under strict controls using proprietary processes.

Product Specifications

B1 Max Shaft Penetration 10.6 mm B2 Max Shaft Penetration 10.6 mm Outer Diameter (OD) 15.0 mm Bore Tolerance +0.025 mm / -0.000 mm Aunual Duter Diameter (OD) 15.0 mm Recommended Shaft Tolerance +0.000 mm / -0.013 mm Aunual Duter Diameter (OD) 22.0 mm Recommended Shaft Tolerance +0.000 mm / -0.013 mm Aunual Duter Diameter (OD) 22.0 mm Recommended Shaft Tolerance +0.000 mm / -0.013 mm Aunual Duter Diameter (OD) Screw Material Alloy Steel Alloy Stee	r roduct opecifications			
Duter Diameter (OD) 15.0 mm Bore Tolerance +0.025 mm / -0.000 mm Length (L) 22.0 mm Recommended Shaft Tolerance +0.000 mm / -0.013 mm Recommended Shaft Tolerance +0.000 mm / -0.013 mm Recommended Shaft Tolerance -0.000 mm Recommended Shaft Tolerance	Bore (B1)	5 mm	Small Bore (B2)	3 mm
Length (L) 22.0 mm Recommended Shaft Tolerance +0.000 mm / -0.013 mm Cap Screw M2 Screw Material Alloy Steel Hex Wrench Size 1.5 mm Screw Finish Black Oxide Seating Torque 0.6 Nm Number of Screws 2 ea Dynamic Torque Reversing 0.20 Nm Angular Misalignment 3° Dynamic Torque Non-Reversing 0.41 Nm Parallel Misalignment 0.20 mm Static Torque 0.81 Nm Axial Motion 0.12 mm Torsional Stiffness 5.21 Deg/Nm Moment of Inertia 0.293 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-1/4-5.3 Recommended Hex Key Metric Hex Keys Material Specification 7075-T651 Extruded and Drawn Aluminum Bar Finish Specification Bright, No Plating Manufacturer Weight (lbs) 0.017700 UPC 634529054987 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. 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	B1 Max Shaft Penetration	10.6 mm	B2 Max Shaft Penetration	10.6 mm
Cap Screw M2 Screw Material Alloy Steel Hex Wrench Size 1.5 mm Screw Finish Black Oxide Seating Torque 0.6 Nm Number of Screws 2 ea Dynamic Torque Reversing 0.20 Nm Angular Misalignment 3° Dynamic Torque Non-Reversing 0.41 Nm Parallel Misalignment 0.20 mm Static Torque Non-Reversing 0.41 Nm Parallel Misalignment 0.20 mm Static Torque 0.81 Nm Axial Motion 0.12 mm Torsional Stiffness 5.21 Deg/Nm Moment of Inertia 0.293 x10⁻⁶ kg-m² Waximum Speed 6,000 RPM Full Bearing Support Required? Yes Zero-Backlash? Yes Balanced Design Yes Torque Wrench TW:BT-1R-1/4-5.3 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) 0.017700 UPC 634529054987 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	Outer Diameter (OD)	15.0 mm	Bore Tolerance	+0.025 mm / -0.000 mm
Hex Wrench Size 1.5 mm Screw Finish Number of Screws 2 ea Dynamic Torque Reversing 0.20 Nm Angular Misalignment 3° Dynamic Torque Non-Reversing 0.41 Nm Parallel Misalignment 0.20 mm Static Torque 0.81 Nm Axial Motion 0.12 mm Torsional Stiffness 5.21 Deg/Nm Moment of Inertia 0.293 x10°6 kg-m² Waximum Speed 6,000 RPM Full Bearing Support Required? Yes Torque Wrench TW-BT-1R-1/4-5.3 Recommended Hex Key Metric Hex Keys Material Specification 7075-T651 Extruded and Drawn Aluminum Bar Finish Specification Bright, No Plating Manufacturer Weight (lbs) 0.017700 UNSPC 31163003 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 consult etchnical 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)	22.0 mm	Recommended Shaft Tolerance	+0.000 mm / -0.013 mm
Seating Torque 0.6 Nm Number of Screws 2 ea Dynamic Torque Reversing 0.20 Nm Angular Misalignment 3° Dynamic Torque Non-Reversing 0.41 Nm Parallel Misalignment 0.20 mm Static Torque 0.81 Nm Axial Motion 0.12 mm Torsional Stiffness 5.21 Deg/Nm Moment of Inertia 0.293 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-1/4-5.3 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) 0.017700 UPC 634529054987 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 consul 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	Cap Screw	M2	Screw Material	Alloy Steel
Dynamic Torque Reversing Dynamic Torque Reversing O.20 Nm Angular Misalignment O.20 mm O.20 mm O.21 mm O.22 mm O.22 mm O.23 x10 ⁻⁶ kg-m ² Maximum Speed O.20 RPM Full Bearing Support Required? Ves Cero-Backlash? Forque Wrench Material Specification O.755-T651 Extruded and Drawn Aluminum Bar Country of Origin USA Weight (Ibs) O.017700 UPC O.3163003 Very O.3163003 Very Organic Torque Reversing O.20 Nm Axial Motion O.12 mm O.293 x10 ⁻⁶ kg-m ² Ves Dalanced Design Ves Dalanced Design Ves Temperature Ves Metric Hex Keys Temperature Very Very Temperature Very Ves	Hex Wrench Size	1.5 mm	Screw Finish	Black Oxide
Dynamic Torque Non-Reversing 0.41 Nm Parallel Misalignment 0.20 mm Static Torque 0.81 Nm Axial Motion 0.12 mm Torsional Stiffness 5.21 Deg/Nm Moment of Inertia 0.293 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-1/4-5.3 Recommended Hex Key Metric Hex Keys Material Specification 7075-7651 Extruded and Drawn Aluminum Bar Finish Specification Bright, No Plating Manufacturer Ruland Manufacturing Country of Origin USA Weight (lbs) 0.017700 UPC 634529054987 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 consul technical support for more assistance. Prop 65	Seating Torque	0.6 Nm	Number of Screws	2 ea
Static Torque 0.81 Nm Axial Motion 0.12 mm Torsional Stiffness 5.21 Deg/Nm Moment of Inertia 0.293 x10⁻⁶ kg-m² Waximum Speed 6,000 RPM Full Bearing Support Required? Yes Zero-Backlash? Yes Balanced Design Yes Torque Wrench TW:BT-1R-1/4-5.3 Recommended Hex Key Metric Hex Keys Material Specification 7075-1651 Extruded and Drawn Aluminum Bar Aluminum Bar Finish Specification Bright, No Plating Manufacturer Ruland Manufacturing Country of Origin USA Weight (lbs) 0.017700 UPC 634529054987 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. 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 consul 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	Dynamic Torque Reversing	0.20 Nm	Angular Misalignment	3°
Torsional Stiffness 5.21 Deg/Nm Moment of Inertia 0.293 x10 ⁻⁶ kg-m ² Maximum Speed 6,000 RPM Full Bearing Support Required? Yes Zero-Backlash? Yes Balanced Design Yes Torque Wrench TW:BT-1R-1/4-5.3 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) 0.017700 UPC 634529054987 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. 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 consul 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	Dynamic Torque Non-Reversing	0.41 Nm	Parallel Misalignment	0.20 mm
Maximum Speed 6,000 RPM Full Bearing Support Required? Yes Zero-Backlash? Yes Balanced Design Yes Torque Wrench TW:BT-1R-1/4-5.3 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) 0.017700 UPC 634529054987 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. 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 consul 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	Static Torque	0.81 Nm	Axial Motion	0.12 mm
Torque Wrench TW:BT-1R-1/4-5.3 Recommended Hex Key Metric Hex Keys Material Specification 7075-T651 Extruded and Drawn Aluminum Bar Finish Specification Bright, No Plating Manufacturer Weight (Ibs) USA Weight (Ibs) USA Weight (Ibs) 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 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	5.21 Deg/Nm	Moment of Inertia	0.293 x10 ⁻⁶ kg-m ²
Torque Wrench TW:BT-1R-1/4-5.3 Recommended Hex Key Metric Hex Keys 7075-T651 Extruded and Drawn Aluminum Bar Finish Specification Bright, No Plating Weight (lbs) USA Weight (lbs) USA Weight (lbs) UNSPC Word Word Word Word Word Word Word Word	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 Country of Origin USA Weight (Ibs) 0.017700 UPC 634529054987 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 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	Zero-Backlash?	Yes	Balanced Design	Yes
Aluminum Bar Finish Specification Bright, No Plating Manufacturer Ruland Manufacturing Country of Origin USA Weight (lbs) 0.017700 UPC 634529054987 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 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	Torque Wrench	TW:BT-1R-1/4-5.3	Recommended Hex Key	Metric Hex Keys
Country of Origin USA Weight (Ibs) 0.017700 034529054987 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. 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		Temperature	-40°F to 225°F (-40°C to 107°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. 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 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	Finish Specification	Bright, No Plating	Manufacturer	Ruland Manufacturing
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 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	Country of Origin	USA	Weight (lbs)	0.017700
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	Prop 65	California to cause cancer and birth defects or other reproductive harm. For more information go to		

Installation Instructions

- 1. Align the bores of the MWC15-5-3-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*: 0.20 mm, *Axial Motion*: 0.12 mm)
- 2. Fully tighten the M2 screw on one hub to the recommended seating torque of 0.6 Nm using a 1.5 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 10.6 mm.