



## **MOCT33-14-SS**

Ruland MOCT33-14-SS, 14mm Oldham Coupling Hub, 303 Stainless Steel, Clamp Style, 33.3mm OD, 15.0mm Length



## Description

Ruland MOCT33-14-SS is a clamp oldham coupling hub with a 14mm bore, 33.3mm OD, and 15.0mm length. It is a component of a three-piece design consisiting of two stainless steel hubs press fit onto a center disk. This three-piece design allows for a highly customizable coupling that easily combines clamp or set screw hubs with inch, metric, keyed, and keyless bores. Disks are available in three materials allowing the user to tailor coupling performance to their application. MOCT33-14-SS can accommodate all forms of misalignment and is especially useful in applications with high parallel misalignment (up to 10% of the OD). It operates with low bearing loads protecting sensitive system components such as bearings and has a balanced design for reduced vibration at speeds up to 6,000 RPM. Hardware is metric and tests beyond DIN 912 12.9 standards for maximum torque capabilities. MOCT33-14-SS is machined from bar stock that is sourced exclusively from North American mills and is RoHS3 and REACH compliant. It is manufactured in our Marlborough, MA factory under strict controls using proprietary processes.

## **Product Specifications**

B1 Max Shaft Penetration  15.0 mm  Bore Tolerance  +0.03 mm / -0.00 mm    Hub Width (LH)  15.00 mm  Length (L)  47.6 mm    Recommended Shaft Tolerance  +0.000 mm / -0.013 mm  Forged Clamp Screw  M3    Number of Screws  1 ea  Screw Material  18-8 300 Series Stainless Steel    Screw Finish  Bright  Seating Torque  1.1 Nm    Hex Wrench Size  2.5 mm  Torque Specifications  Torque ratings vary with insert selection    Angular Misalignment  0.5°  Parallel Misalignment  0.008 in (0.20 mm)    Max Parallel Misalignment  0.131 in (3.33 mm)  Axial Motion  0.006 in (0.15 mm)    Moment of Inertia  1.494 x 10° kg-m²  Maximum Speed  4,500 RPM    Recommended Inserts  OD21/33-NL, OD21/33-NL, OD21/33-NL, OD21/33-NL, OD21/33-PEK  Full Bearing Support Require?  Yes    Zero-Backlash?  Yes  Balanced Design  Yes  Saterial Specification  Type 303 Austenitic, Non-Magnetic Bar    Finish  Bright  Finish Specification  Type 303 Austenitic, Non-Magnetic Bar  Saterial Specification  Saterial Specification Bright, No Plating    Manufacturer  Ruland Manufacturing  Temper	Product Specifications			
Hub Width (LH)15.00 mmLength (L)47.6 mmRecommended Shaft Tolerance+0.000 mm / -0.013 mmForged Clamp ScrewM3Number of Screws1 eaScrew Material18-8 300 Series Stainless SteelScrew FinishBrightSeating Torque1.1 NmHex Wrench Size2.5 mmTorque SpecificationsTorque ratings vary with insert selectionAngular Misalignment0.5°Parallel Misalignment0.008 in (0.20 mm)Max Parallel Misalignment0.131 in (3.33 mm)Axial Motion0.006 in (0.15 mm)Moment of Inertia1.494 x 10° kg-m²Maximum Speed4,500 RPMRecommended InsertsOD21/33-AT. OD21/33-NL. OD21/33-AT. OD21/33-NL. OD21/33-PEKFull Bearing Support Required?YesZero-Backlash?YesBalanced DesignYesCountry of OriginUSAMaterial SpecificationBright, No PlatingFinishBrightFinish SpecificationBright, No PlatingManufacturerRuland ManufacturingTemperatureAcetal Disk -10°F to 130°F (-23°C to 54°C) PEEK Disk -10°F to 130°F (-23°C to 54°C) PEEK Disk -10°F to 130°F (-23°C to 54°C) PEEK Disk -10°F to 300°F (-23°C to 148°C)Weight (Ibs)0.202200Tariff Code8483.60.8000UNSPC31163015"Performance ratings are for guidance only. The user must determine suitability for a particular application."	Bore (B1)	14 mm	Outer Diameter (OD)	33.3 mm
Recommended Shaft Tolerance+0.000 mm / -0.013 mmForged Clamp ScrewM3Number of Screws1 eaScrew Material18-8 300 Series Stainless SteelScrew FinishBrightSeating Torque1.1 NmHex Wrench Size2.5 mmTorque SpecificationsTorque ratings vary with insert selectionAngular Misalignment0.5°Parallel Misalignment0.008 in (0.20 mm)Max Parallel Misalignment0.131 in (3.33 mm)Axial Motion0.006 in (0.15 mm)Moment of Inertia1.494 x 10° kg-m²Maximum Speed4,500 RPMRecommended InsertsOD21/33-AT, OD21/33-NL, OD21/33-FKFul Bearing Support Required?YesZero-Backlash?YesBalanced DesignYesCountry of OriginUSAMaterial SpecificationType 303 Austenitic, Non-Magnetiti BarFinishBrightFinish SpecificationBright, No PlatingManufacturerRuland ManufacturingTemperatureAcetal Disk -10°F to 150°F (-23°C to 54°C) PEEK Disk -10°F to 130°F (-23°C to 54°C)Weight (lbs)0.202200Tariff Code8483.60.8000UNSPC31163015"Performance ratings are for guidance only. The user must determine suitability for a particular application."	B1 Max Shaft Penetration	15.0 mm	Bore Tolerance	+0.03 mm / -0.00 mm
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Screw FinishBrightSeating Torque1.1 NmHex Wrench Size2.5 mmTorque SpecificationsTorque ratings vary with insert selectionAngular Misalignment0.5°Parallel Misalignment0.008 in (0.20 mm)Max Parallel Misalignment0.131 in (3.33 mm)Axial Motion0.006 in (0.15 mm)Moment of Inertia1.494 x 10° kg-m²Maximum Speed4,500 RPMRecommended InsertsOD21/33-AT, OD21/33-NL, OD21/33-PEKFull Bearing Support Required? YesYesZero-Backlash?YesBalanced DesignYesCountry of OriginUSAMaterial Specification BrightType 303 Austenitic, Non-Magnetic BarFinishBrightFinish Specification Bright, No PlatingBright, No PlatingManufacturerRuland ManufacturingTemperature Accetal Disk -10°F to 150°F (-23°C to 56°) Nylon Disk -10°F to 130°F (-23°C to 54°C) PEEK Disk -10°F to 130°F (-23°C to 148°C)Nol 148°C)Weight (Ibs)0.202200Tariff Code843.60.8000UNSPC31163015"Performance ratings are for guidance only. The user must determine suitability for a particular application."	Recommended Shaft Tolerance	+0.000 mm / -0.013 mm	Forged Clamp Screw	M3
Hex Wrench Size2.5 mmTorque SpecificationsTorque ratings vary with insert selectionAngular Misalignment0.5°Parallel Misalignment0.008 in (0.20 mm)Max Parallel Misalignment0.131 in (3.33 mm)Axial Motion0.006 in (0.15 mm)Moment of Inertia1.494 x 10° kg-m²Maximum Speed4,500 RPMRecommended InsertsOD21/33-AT, OD21/33-NL, OD21/33-FEKFull Bearing Support Required?YesZero-Backlash?YesBalanced DesignYesCountry of OriginUSAUPC634529238868Country of OriginUSAMaterial SpecificationType 303 Austenitic, Non-Magnetic BarFinishBrightFinish SpecificationType 303 Austenitic, Non-Magnetic BarManufacturerRuland ManufacturingFinish SpecificationBright, No Plating Accetal Disk -10°F to 150°F (-23°C to 65°) Nylon Disk -10°F to 130°F (-23°C to 54°C) PEEK Disk -10°F to 300°F (-23°C to 148°C)Weight (lbs)0.202200Tariff Code8483.60.8000UNSPC31163015"Performance ratings are for guidance only. The user must determine suitability for a particular application."	Number of Screws	1 ea	Screw Material	18-8 300 Series Stainless Steel
Angular Misalignment0.5°Parallel Misalignment0.008 in (0.20 mm)Max Parallel Misalignment0.131 in (3.33 mm)Axial Motion0.006 in (0.15 mm)Moment of Inertia1.494 x 10°5 kg-m²Maximum Speed4,500 RPMRecommended InsertsOD21/33-AT, OD21/33-NL, OD21/33-PEKFull Bearing Support Required? YesYesZero-Backlash?YesBalanced DesignYesCountry of OriginUSAUPC63452923868Country of OriginUSAFinish Specification BarType 303 Austenitic, Non-Magnetic BarFinishBrightFinish Specification Bright, No PlatingBright, No PlatingManufacturerRuland ManufacturingTemperature to 54°C) PEEK Disk -10°F to 130°F (-23°C to 54°C) PEEK Disk -10°F to 300°F (-23°C to 148°C)Weight (Ibs)0.202200Tariff Code8483.60.8000UNSPC31163015"Performance ratings are for guidance only. The user must determine suitability for a particular application."	Screw Finish	Bright	Seating Torque	1.1 Nm
Max Parallel Misalignment0.131 in (3.33 mm)Axial Motion0.006 in (0.15 mm)Moment of Inertia1.494 x 10 <sup>5</sup> kg-m²Maximum Speed4,500 RPMRecommended InsertsOD21/33-AT, OD21/33-NL, OD21/33-PEKFull Bearing Support Required? YesYesZero-Backlash?YesBalanced DesignYesMechanical Fuse?YesUPC634529238868Country of OriginUSAMaterial Specification BarType 303 Austenitic, Non-Magnetic BarFinishBrightFinish SpecificationBright, No PlatingManufacturerRuland ManufacturingTemperatureAcetal Disk -10°F to 150°F (-23°C to 54°C) PEEK Disk -10°F to 130°F (-23°C to 148°C)Weight (lbs)0.202200Tariff Code8483.60.8000UNSPC31163015"Performance ratings are for guidance only. The user must determine suitability for a particular application."	Hex Wrench Size	2.5 mm	Torque Specifications	1 0 9
Moment of Inertia1.494 x 10 <sup>-5</sup> kg-m²Maximum Speed4,500 RPMRecommended InsertsOD21/33-AT, OD21/33-NL, OD21/33-PEKFull Bearing Support Required?YesZero-Backlash?YesBalanced DesignYesMechanical Fuse?YesUPC634529238868Country of OriginUSAMaterial SpecificationType 303 Austenitic, Non-Magnetic BarFinishBrightFinish SpecificationBright, No PlatingManufacturerRuland ManufacturingTemperatureAcetal Disk -10°F to 150°F (-23°C to 65°) Nylon Disk -10°F to 130°F (-23°C to 54°C) PEEK Disk -10°F to 300°F (-23°C to 54°C) PEEK Disk -10°F to 300°F (-23°C to 148°C)Weight (lbs)0.202200Tariff Code8483.60.8000UNSPC31163015"Performance ratings are for guidance only. The user must determine suitability for a particular application."	Angular Misalignment	0.5°	Parallel Misalignment	0.008 in (0.20 mm)
Recommended InsertsOD21/33-AT, OD21/33-NL, OD21/33-PEKFull Bearing Support Required?YesZero-Backlash?YesBalanced DesignYesMechanical Fuse?YesUPC634529238868Country of OriginUSAMaterial SpecificationType 303 Austenitic, Non-Magnetic BarFinishBrightFinish SpecificationBright, No PlatingManufacturerRuland ManufacturingTemperatureAcetal Disk -10°F to 150°F (-23°C to 55°) Nylon Disk -10°F to 130°F (-23°C to 54°C) PEEK Disk -10°F to 300°F (-23°C to 54°C) PEEK Disk -10°F to 300°F (-23°C to 148°C)Weight (Ibs)0.202200Tariff Code8483.60.8000UNSPC31163015"Performance ratings are for guidance only. The user must determine suitability for a particular application."	Max Parallel Misalignment	0.131 in (3.33 mm)	Axial Motion	0.006 in (0.15 mm)
OD21/33-PEKZero-Backlash?YesBalanced DesignYesMechanical Fuse?Yes0PC634529238868Country of OriginUSAMaterial SpecificationType 303 Austenitic, Non-Magnetic BarFinishBrightFinish SpecificationBright, No PlatingManufacturerRuland ManufacturingTemperatureAcetal Disk -10°F to 150°F (-23°C to 65°) Nylon Disk -10°F to 130°F (-23°C to 54°C) PEEK Disk -10°F to 300°F (-23°C to 148°C)Weight (lbs)0.202200Tariff Code8483.60.8000UNSPC31163015"Performance ratings are for guidance only. The user must determine suitability for a particular application."	Moment of Inertia	1.494 x 10 <sup>-5</sup> kg-m <sup>2</sup>	Maximum Speed	4,500 RPM
Mechanical Fuse?YesUPC634529238868Country of OriginUSAMaterial SpecificationType 303 Austenitic, Non-Magnetic BarFinishBrightFinish SpecificationBright, No PlatingManufacturerRuland ManufacturingTemperatureAcetal Disk -10°F to 150°F (-23°C to 65°) Nylon Disk -10°F to 130°F (-23°C to 54°C) PEEK Disk -10°F to 300°F (-23°C to 54°C) PEEK Disk -10°F to 300°F (-23°C to 148°C)Weight (lbs)0.202200Tariff Code8483.60.8000UNSPC31163015"Performance ratings are for guidance only. The user must determine suitability for a particular application."	Recommended Inserts		Full Bearing Support Required?	Yes
Country of OriginUSAMaterial SpecificationType 303 Austenitic, Non-Magnetic BarFinishBrightFinish SpecificationBright, No PlatingManufacturerRuland ManufacturingTemperatureAcetal Disk -10°F to 150°F (-23°C to 65°) Nylon Disk -10°F to 130°F (-23°C to 54°C) PEEK Disk -10°F to 300°F (-23°C to 148°C)Weight (lbs)0.202200Tariff Code8483.60.8000UNSPC31163015"Performance ratings are for guidance only. The user must determine suitability for a particular application."	Zero-Backlash?	Yes	Balanced Design	Yes
BarFinishBrightFinish SpecificationBright, No PlatingManufacturerRuland ManufacturingTemperatureAcetal Disk -10°F to 150°F (-23°C to 65°) Nylon Disk -10°F to 130°F (-23°C to 54°C) PEEK Disk -10°F to 300°F (-23°C to 148°C)Weight (Ibs)0.202200Tariff Code8483.60.8000UNSPC31163015"Performance ratings are for guidarce only. The user must determine suitability for a particular application."	Mechanical Fuse?	Yes	UPC	634529238868
ManufacturerRuland ManufacturingTemperatureAcetal Disk -10°F to 150°F (-23°C to 65°) Nylon Disk -10°F to 130°F (-23°C to 54°C) PEEK Disk -10°F to 300°F (-23°C to 148°C)Weight (Ibs)0.202200Tariff Code8483.60.8000UNSPC31163015	Country of Origin	USA	Material Specification	
with the second state of the second	Finish	Bright	Finish Specification	Bright, No Plating
to 54°C) PEEK Disk -10°F to 300°F (-23°C to 148°C)Weight (lbs)0.202200Tariff Code8483.60.8000UNSPC31163015Note 1"Performance ratings are for guidance only. The user must determine suitability for a particular application."	Manufacturer	Ruland Manufacturing	Temperature	to 65°)
to 148°C)    Weight (Ibs)  0.202200  Tariff Code  8483.60.8000    UNSPC  31163015				5
Weight (lbs)0.202200Tariff Code8483.60.8000UNSPC31163015Note 1"Performance ratings are for guidance only. The user must determine suitability for a particular application."				PEEK Disk -10°F to 300°F (-23°C
UNSPC    31163015      Note 1    "Performance ratings are for guidance only. The user must determine suitability for a particular application."	Weight (Ibs)	0.202200	Tariff Code	
	UNSPC	31163015		
	Note 1	"Performance ratings are for guid	ance only. The user must determine s	uitability for a particular application."
	Note 2			

"Torque ratings for the couplings are based on the physical limitations/failure point of the torque disks. Under normal/typical conditions the hubs are capable of holding up to the rated torque of the disks. 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 disks. Keyways are available to provide additional torque capacity in the shaft/hub connection when required. Please consult technical support for more assistance."

**AWARNING** This product can expose you to the chemical Nickel (metallic), known to the State of California to cause cancer. For more information go to <u>www.P65Warnings.ca.gov</u>.

Installation Instructions

- Align the bores of the MOCT33-14-SS oldham coupling hubs on the shafts that are to be joined and determine if the misalignment parameters are within the limits of the coupling. (*Angular Misalignment:* 0.5° *Parallel Misalignment:* 0.008 in (0.20 mm), *Axial Motion:* 0.006 in (0.15 mm))
- 2. Rotate the hubs on the shaft so the drive tenons are located 90° from each other.
- 3. Place a torque disk so one groove fits over the drive tenons of a hub and center the disk by hand.
- 4. Insert a shim with the thickness of the coupling's axial motion rating into the groove of the torque disk.
- 5. Slide the tenons of the second hub into the mating groove in the disk until it touches the shim stock.
- 6. Fully tighten the M3 screw(s) on each hub to the recommended seating torque of 1.1 Nm using a 2.5 mm hex torque wrench.
- 7. Remove the shim stock to leave a small gap between the top of the drive tenons and the torque disk to allow for axial movement.