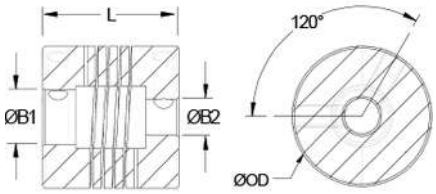
# MIS50-5/8"-9/16"-A

Ruland MIS50-5/8"-9/16"-A, 5/8" x 5/8" Single Beam Coupling, Aluminum, Set Screw Style, 1.181" (30.0mm) OD, 1.181" (30.0mm) Length






## Description

Ruland MIS50-5/8"-9/16"-A is a single beam coupling with 0.6250" x 0.5625", 1.969" (50.0mm) OD, and 2.126" (54.0mm) length. It is machined from a single piece of material and feature one long continuous spiral cut. This gives it higher misalignment capabilities than comparably sized multiple beam couplings. MIS50-5/8"-9/16"-A is zero-backlash making it well suited for applications such as encoders that require high positioning accuracy. MIS-series couplings have purely metric outer diameter and length dimensions and fit in a smaller envelope than the ISR-series. All hardware is metric and tests beyond DIN 912 12.9 standards for maximum torque capabilities. MIS50-5/8"-9/16"-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, REACH, and Conflict Minerlas compliant. MIS50-5/8"-9/16"-A is manufactured in our Marlborough, MA factory under strict controls using proprietary processes.

## Product Specifications

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|---|---|---|---|
| **Bore (B1)** | 0.6250 in | **Small Bore (B2)** | 0.5625 in |
| **B1 Max Shaft Penetration** | 1.040 in (26.4 mm) | **B2 Max Shaft Penetration** | 1.040 in (26.4 mm) |
| **Outer Diameter (OD)** | 1.969 in (50.0 mm) | **Bore Tolerance** | +0.001 in / -0.000 in (+0.025 mm / -0.000 mm) |
| **Length (L)** | 2.126 in (54.0 mm) | **Recommended Shaft Tolerance** | +0.0000 in / -0.0005 in |
| **Forged Set Screw** | M6 | **Screw Material** | Alloy Steel |
| **Hex Wrench Size** | 3.0 mm | **Screw Finish** | Black Oxide |
| **Seating Torque** | 7.2 Nm | **Number of Screws** | 4 ea |
| **Dynamic Torque Reversing** | 5.65 Nm | **Angular Misalignment** | 5.0° |
| **Dynamic Torque Non-Reversing** | 11.30 Nm | **Parallel Misalignment** | 0.25 mm |
| **Static Torque** | 22.60 Nm | **Axial Motion** | 0.25 mm |
| **Torsional Stiffness** | 0.52 Deg/Nm | **Moment of Inertia** | 87.616 x$10^{-6}$ kg-$m^2$ |
| **Maximum Speed** | 6,000 RPM | **Full Bearing Support Required?** | Yes |
| **Zero-Backlash?** | Yes | **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)** | 0.567240 |
| **UPC** | 63452944016 | **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. | | |