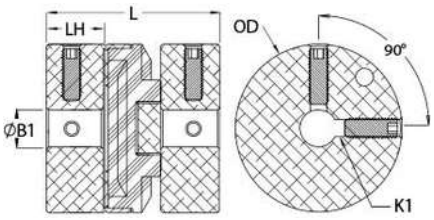
# MOSC41-14-A

Ruland MOSC41-14-A, 14mm Oldham Coupling Hub, Aluminum, Set Screw Style With Keyway, 41.3mm OD, 18.0mm Length








## Description

Ruland MOSC41-14-A is a set screw oldham coupling hub with a 14mm bore, 5mm keyway, 41.3mm OD, and 18.0mm length. It is a component of a three-piece design consisting of two anodized aluminum 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. MOSC41-14-A 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. MOSC41-14-A 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

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| **Bore (B1)** | 14 mm | **Keyway (K)** | 5 mm |
| **Outer Diameter (OD)** | 1.625 in (41.3 mm) | **B1 Max Shaft Penetration** | 18.0 mm |
| **Bore Tolerance** | +0.03 mm / -0.00 mm | **Hub Width (LH)** | 18.05 mm |
| **Length (L)** | 2.000 in (50.8 mm) | **Recommended Shaft Tolerance** | +0.000 mm / -0.013 mm |
| **Forged Set Screw** | M5 | **Number of Screws** | 2 ea 90° apart |
| **Screw Material** | Alloy Steel | **Screw Finish** | Black Oxide |
| **Seating Torque** | 4 Nm | **Hex Wrench Size** | 2.5 mm |
| **Torque Specifications** | Torque ratings vary with insert selection | **Angular Misalignment** | 0.5° |
| **Parallel Misalignment** | 0.010 in (0.25 mm) | **Max Parallel Misalignment** | 0.163 in (4.13 mm) |
| **Axial Motion** | 0.006 in (0.15 mm) | **Moment of Inertia** | 1.5450 x $10^{-5}$ kg-$m^2$ |
| **Maximum Speed** | 4,500 RPM | **Recommended Inserts** | OD26/41-AT, OD26/41-NL, OD26/41-PEK |
| **Full Bearing Support Required?** | Yes | **Zero-Backlash?** | Yes |
| **Balanced Design** | Yes | **Mechanical Fuse?** | Yes |
| **UPC** | 634529116876 | **Country of Origin** | USA |
| **Material Specification** | 2024-T351 Aluminum Bar | **Finish** | Black Anodized |
| **Finish Specification** | Sulfuric Anodized MIL-A-8625 Type II, Class 2 and ASTM B580 Type B Black Anodize | **Manufacturer** | Ruland Manufacturing |
| **Temperature** | Acetal Disk -10°F to 150°F (-23°C to 65°)<br>Nylon Disk -10°F to 130°F (-23°C to 54°C)<br>PEEK Disk -10°F to 300°F (-23°C | **Weight (lbs)** | 0.142000 |

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| | to 148°C) | | |
| **Tariff Code** | 8483.60.8000 | **UNSPC** | 31163015 |
| **Note 1** | "Now available in stainless steel!" | | |
| **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 torque disks. Under normal/typical conditions the hubs are capable of holding up to the rated torque of the disks. 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.

**Installation Instructions**

1. Align the bores of the MOSC41-14-A 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:* 0.010 in (0.25 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 M5 screw(s) on each hub to the recommended seating torque of 4 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.