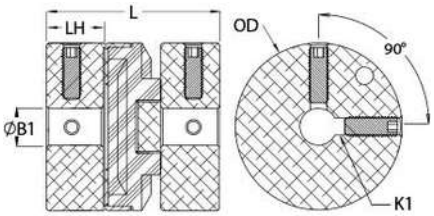
MOSC25-12-A

Ruland MOSC25-12-A, 12mm Oldham Coupling Hub, Aluminum, Set Screw Style With Keyway, 25.4mm OD, 11.9mm Length







Description

Ruland MOSC25-12-A is a set screw oldham coupling hub with a 12mm bore, 4mm keyway, 25.4mm OD, and 9.9mm 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. MOSC25-12-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. MOSC25-12-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

Bore (B1)	12 mm	**Keyway (K)**	4 mm
Outer Diameter (OD)	1.000 in (25.4 mm)	**B1 Max Shaft Penetration**	9.9 mm
Bore Tolerance	+0.03 mm / -0.00 mm	**Hub Width (LH)**	9.91 mm
Length (L)	1.125 in (28.6 mm)	**Recommended Shaft Tolerance**	+0.000 mm / -0.013 mm
Forged Set Screw	M4	**Number of Screws**	2 ea 90° apart
Screw Material	Alloy Steel	**Screw Finish**	Black Oxide
Seating Torque	2.2 Nm	**Hex Wrench Size**	2.0 mm
Torque Specifications	Torque ratings vary with insert selection	**Angular Misalignment**	0.5°
Parallel Misalignment	0.008 in (0.20 mm)	**Max Parallel Misalignment**	0.100 in (2.54 mm)
Axial Motion	0.004 in (0.10 mm)	**Moment of Inertia**	1.1600×10^{-6} kg-m^2
Maximum Speed	4,500 RPM	**Recommended Inserts**	OD16/25-AT, OD16/25-NL, OD16/25-PEK
Full Bearing Support Required?	Yes	**Zero-Backlash?**	Yes
Balanced Design	Yes	**Mechanical Fuse?**	Yes
UPC	634529116807	**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°) 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)**	0.026000
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 MOSC25-12-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:* 0.008 in (0.20 mm), *Axial Motion:* 0.004 in (0.10 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 M4 screw(s) on each hub to the recommended seating torque of 2.2 Nm using a 2.0 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.