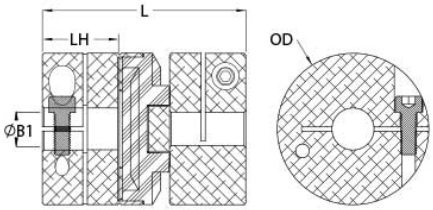
MOCT51-20-A

Ruland MOCT51-20-A, 20mm Oldham Coupling Hub, Aluminum, Clamp Style, 50.8mm OD, 20.8mm Length



Description

Ruland MOCT51-20-A is a clamp oldham coupling hub with a 20mm bore, 50.8mm OD, and 20.8mm length. It is a component of a three-piece design consisiting 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. MOCT51-20-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. MOCT51-20-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)	20 mm	**Outer Diameter (OD)**	50.8 mm
B1 Max Shaft Penetration	20.8 mm	**Bore Tolerance**	+0.03 mm / -0.00 mm
Hub Width (LH)	20.83 mm	**Length (L)**	59.7 mm
Recommended Shaft Tolerance	+0.000 mm / -0.013 mm	**Forged Clamp Screw**	M5
Number of Screws	1 ea	**Screw Material**	Alloy Steel
Screw Finish	Black Oxide	**Seating Torque**	9.5 Nm
Hex Wrench Size	4.0 mm	**Torque Specifications**	Torque ratings vary with insert selection
Angular Misalignment	0.5°	**Parallel Misalignment**	0.010 in (0.25 mm)
Max Parallel Misalignment	0.200 in (5.08 mm)	**Axial Motion**	0.008 in (0.20 mm)
Moment of Inertia	3.812 x 10^{-5} kg-m^2	**Maximum Speed**	4,500 RPM
Recommended Inserts	OD32/51-AT, OD32/51-PEK	**Full Bearing Support Required?**	Yes
Zero-Backlash?	Yes	**Balanced Design**	Yes
Mechanical Fuse?	Yes	**UPC**	634529065785
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)	0.226000	**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. 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."
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 MOCT51-20-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:* 0.008 in (0.20 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 9.5 Nm using a 4.0 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.