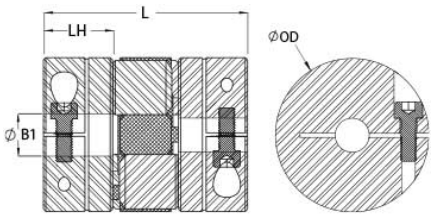
MJC51-20-A

Ruland MJC51-20-A, 20mm Jaw Coupling Hub, Aluminum, Clamp Style, 50.8mm OD, 20.8mm Length





Description

Ruland MJC51-20-A is a clamp zero-backlash jaw coupling hub with a 20mm bore, 50.8mm OD, and 20.8mm length. It is a component in a three-piece design consisiting of two aluminum hubs and an elastomeric insert called the spider creating a lightweight low inertia coupling capable of speeds up to 8,000 RPM. 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. Spiders are available in three durometers allowing the user to tailor coupling performance to their application. Ruland jaw couplings have a balanced design for reduced vibration at high speeds. Hardware is metric and tests beyond DIN 912 12.9 standards for maximum torque capabilities. MJC51-20-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	**B1 Max Shaft Penetration**	20.8 mm
Outer Diameter (OD)	2.000 in (50.8 mm)	**Bore Tolerance**	+0.03 mm / -0.00 mm
Hub Width (LH)	20.83 mm	**Length (L)**	2.400 in (61.0 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	**Hex Wrench Size**	4.0 mm
Seating Torque	9.5 Nm	**Torque Specifications**	Torque ratings vary with insert selection
Misalignment	Misalignment ratings vary with insert selection	**Maximum Speed**	8,000 RPM
Moment of Inertia	4.220 x 10^{-5} kg-m^2	**Full Bearing Support Required?**	Yes
Recommended Inserts	JD32/51-98R, JD32/51-92Y	**Zero-Backlash?**	Yes
Balanced Design	Yes	**Fail Safe?**	Yes
Weight (lbs)	0.240400	**Temperature**	-10°F to 180°F (-23°C to 82°C)
Material Specification	2024-T351 Aluminum Bar	**Finish**	Bright
Finish Specification	Bright, No Plating	**Manufacturer**	Ruland Manufacturing
Recommended Gap Between Hubs	0.050 in (1.25 mm)	**Country of Origin**	USA
UPC	634529067895	**UNSPC**	31163011
Tariff Code	8483.60.8000		
Note 1	Stainless steel hubs are available upon request.		
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 spiders. Under normal/typical conditions the hubs are capable of holding up to the nominal torque of the spiders. In some cases, especially when the smallest standard bores are used or where shafts are undersized, slippage on the shaft is possible below the nominal torque of the spiders. 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 MJC51-20-A jaw coupling hubs on the shafts that are to be joined and

determine if the misalignment parameters are within the limits of the coupling. (See spider for misalignment parameters.)

2. Fully tighten the M5 screw(s) on the first hub to the recommended seating torque of 9.5 Nm using a 4.0 mm hex torque wrench.
3. Insert a spider into the jaws of one hub until the raised points contact the base of the hub.
4. Insert the jaws of the second hub into the spider openings until the raised points contact the base of the second hub. Some force will be required to insert the second hub. This is normal.
5. Assure that a gap is maintained between the two hubs so there is no metal to metal contact. Fully tighten the screw(s) on the second hub to the recommended seating torque.