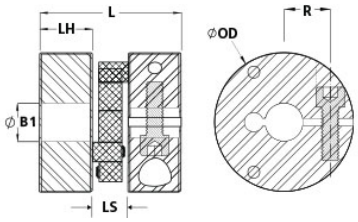
CPRS23-4-A

Ruland CPRS23-4-A, Controlflex Coupling Hub, Aluminum, Clamp Style, 1.457" OD, 1.181" Length





Description

Ruland CPRS23-4-A is a Controlflex coupling hub with a 0.2500" bore, 1.457" OD, and 1.181" length. It is a component in a three-piece design consisting of two aluminum hubs mounted by pins to one acetal insert creating a lightweight low inertia coupling capable of speeds up to 15,000 RPM. This three-piece design allows for a highly customizable coupling that easily combines clamp hubs with inch, metric, keyed, and keyless bores. Hardware is metric and tests beyond DIN 912 12.9 standards for maximum torque capabilities. Controlflex couplings have a balanced design for reduced vibrations at high speeds, can accommodate all forms of misalignment, and are an excellent fit for encoders, tachometers, and light duty stepper servo positioning applications. CPRS23-4-A is RoHS3 and REACH compliant.

Product Specifications

Bore (B1)	0.2500 in	**B1 Max Shaft Penetration**	0.570 in
Outer Diameter (OD)	1.457 in (37.0 mm)	**Bore Tolerance**	+0.002 in / +0.001 in
Hub Width (LH)	0.394 in	**Length (L)**	1.181 in (30.0 mm)
Space Between Hubs (LS)	0.393 in (10.0 mm)	**Forged Clamp Screw**	M4
Screw Material	Alloy Steel	**Hex Wrench Size**	3.0 mm
Screw Finish	Black Oxide	**Seating Torque**	3.0 Nm
Screw Location (R)	12.4 mm	**Number of Screws**	1 ea
Rated Torque	2 Nm	**Angular Misalignment**	1.5°
Peak Torque	3 Nm	**Torsional Stiffness**	1.70 Nm/Deg
Axial Motion	0.028 in	**Parallel Misalignment**	0.039 in
Maximum Speed	15,000 RPM	**Recommended Inserts**	CPFRG23/37-AT
Full Bearing Support Required?	Yes	**Zero-Backlash?**	Yes
Balanced Design	Yes	**Weight (lbs)**	0.057300
Temperature	-22°F to 175°F (-30°C to 80°C)	**Material Specification**	6082 Aluminum Bar
Finish	Clear Anodized	**Finish Specification**	Clear Anodized
Manufacturer	Schmidt Kupplung	**UPC**	634529223758
Country of Origin	Germany	**Tariff Code**	8483.60.8000
UNSPC	31163022		
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 inserts. Under normal/typical conditions the hubs are capable of holding up to the rated torque of the inserts. 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. 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 chemicals including Ethylene Thiourea and Nickel (metallic), known to the State of California to cause cancer, and Ethylene Thiourea known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.		

Installation Instructions

1. Align the bores of the CPRS23-4-A controlflex coupling hub on the shafts that are to be joined with the drive pins facing each other and determine if the misalignment parameters are within the limits of the coupling. (*Angular Misialignment:* 1.5°, *Parallel Misalignment*: 1.0 mm, *Axial Motion*: 0.7 mm)
2. Rotate the hubs on the shaft so the drive pins are 90° from each other.

3. Place the first hub at the end of the shaft. Tighten the clamp screw to 3.0 Nm using a 3.0 mm hex torque wrench.
4. Place an insert(s) with the standoffs facing the hub over the pins of the hub that was just installed.
5. Align the drive pins on the second hub to match the holes in the insert(s).
6. Verify that the space between hubs is 0.393 in, 10.0 mm.
7. Tighten the clamp screw on the second hub to the recommended seating torque of 3.0 Nm using a 3.0 mm hex torque wrench.