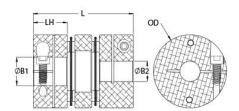




DCDE21-8-6-A

Ruland DCDE21-8-6-A, 1/2" x 3/8" Double Disc Coupling, Aluminum, Clamp Style, Electrically Isolating, 1.313" OD, 1.770" Length





Description

Ruland DCDE21-8-6-A is an electrically isolating clamp double disc coupling with 0.5000" x 0.3750" bores, 1.313" OD, and 1.770" length. It is zero-backlash and has a balanced design for reduced vibration at high speeds. The double disc design is comprised of two anodized aluminum hubs, two sets of thin stainless steel disc springs, and an acetal center spacer allowing each disc to bend individually and accommodate all types of misalignment. The acetal center spacer isolates the two hubs preventing the incidental transfer of current from the motor to the driven component or vice versa. DCDE21-8-6-A is lightweight and has low inertia making it well suited for applications with speeds up to 10,000 RPM. Hardware is metric and tests beyond DIN 912 12.9 standards for maximum torque capabilities. Ruland manufactures DCDE21-8-6-A to be torisionally rigid and an excellent fit for precise positioning stepper servo applications commonly found in semiconductor, solar, printing, machine tool, and test and measurement systems. It is machined from solid bar stock that is sourced exclusively from North American mills and RoHS3 and REACH compliant. DCDE21-8-6-A is manufactured in our Marlborough, MA factory under strict controls using proprietary processes.

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|--------------------------------|---|--|--|--|--|--|--|--|
| Bore (B1) | 0.5000 in | Small Bore (B2) | 0.3750 in | | | | | |
| B1 Max Shaft Penetration | 0.842 in | B2 Max Shaft Penetration | 0.842 in | | | | | |
| Outer Diameter (OD) | 1.313 in | Bore Tolerance | +0.001 in / -0.000 in | | | | | |
| Length (L) | 1.770 in | Hub Width (LH) | 0.590 in | | | | | |
| Recommended Shaft Tolerance | +0.0000 in / -0.0005 in | Forged Clamp Screw | M3 | | | | | |
| Screw Material | Alloy Steel | Hex Wrench Size | 2.5 mm | | | | | |
| Screw Finish | Black Oxide | Seating Torque | 2.1 Nm | | | | | |
| Number of Screws | 2 ea | Dynamic Torque Reversing | 25 lb-in | | | | | |
| Angular Misalignment | 2.0° | Dynamic Torque Non-Reversing | 50 lb-in | | | | | |
| Parallel Misalignment | 0.008 in | Static Torque | 100 lb-in | | | | | |
| Axial Motion | 0.016 in | Torsional Stiffness | 253 lb-in/Deg | | | | | |
| Moment of Inertia | 0.0399 lb-in ² | Maximum Speed | 10,000 RPM | | | | | |
| Full Bearing Support Required? | Yes | Zero-Backlash? | Yes | | | | | |
| Balanced Design | Yes | Torque Wrench | TW:BT-1R-1/4-18.3 | | | | | |
| Recommended Hex Key | Metric Hex Keys | Material Specification | Hubs: 2024-T351 Bar, Disc Springs: Type 302 Stainless Steel, Center Spacer: Acetal | | | | | |
| Temperature | -10°F to 150°F (-23°C to 65°C) | Finish Specification | Sulfuric Anodized MIL-A-8625 Type II, Class 2 and ASTM B580 Type B Black Anodize | | | | | |
| Manufacturer | Ruland Manufacturing | Country of Origin | USA | | | | | |
| Weight (lbs) | 0.164600 | UPC | 634529088302 | | | | | |
| Tariff Code | 8483.60.8000 | UNSPC | 31163008 | | | | | |
| Note 1 | Stainless steel hubs are available u | ipon request. | | | | | | |
| Note 2 | Torque ratings are at maximum misalignment. | | | | | | | |
| Note 3 | Performance ratings are for guidance only. The user must determine suitability for a particular application. | | | | | | | |
| Note 4 | normal/typical conditions the hubs a cases, especially when the smalles shaft is possible below the rated tor | e based on the physical limitations/fai are capable of holding up to the rated it standard bores are used or where s rque of the disc springs. Keyways are nnection when required. Please cons | d torque of the disc springs. In some shafts are undersized, slippage on the available to provide additional | | | | | |
| | | | | | | | | |

assistance.

Prop 65

MARNING 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

- Align the bores of the DCDE21-8-6-A double disc coupling on the shafts that are to be joined and determine if the misalignment parameters are within the limits of the coupling. (*Angular Misialignment*: 2.0°, *Parallel Misalignment*: 0.008 in, *Axial Motion*: 0.016 in)
- 2. Fully tighten the M3 screw on the first hub to the recommended seating torque of 2.1 Nm using a 2.5 mm hex torque wrench.
- 3. Before tightening the screw on the second hub, rotate the coupling by hand to allow it to reach its free length.
- 4. Tighten the screw on the second hub to the recommended seating torque. Make sure the coupling remains axially relaxed and the misalignment angle remains centered along the length of the coupling.
- 5. The shafts may extend into the relieved portion of the bore as long as it does not exceed the shaft penetration length of 0.842 in.