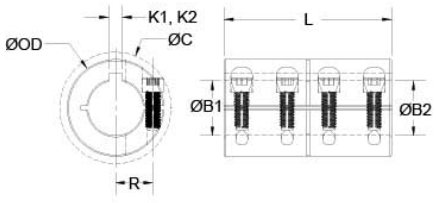
# MCLC-25-25-F

Ruland MCLC-25-25-F, 25mm x 25mm Rigid Coupling, Black Oxide Steel, One-Piece Clamp Style with Keyway, 45mm OD, 75mm Length






## Description

Ruland MCLC-25-25-F is a one-piece rigid coupling with 25mm x 25mm bores, 45mm OD, 75mm length, and 8mm x 8mm keyways. It has precision honed bores to ensure they are collinear and do not introduce misalignment or vibration into the system making it suitable for high precision servo appliactions as well as shaft to shaft connections. Proprietary Nypatch® anti-vibration coating on hardware allows for even seating of the screw, repeated screw installations, prevents galling, and maintains high holding power. It eliminates the need to treat screws upon receipt greatly reducing installation time. Forged screws test beyond DIN 912 12.9 standards to ensure maximum holding power. Tightly controlled bore tolerance of +.050mm/+.012mm is maintained. MCLC-25-25-F is made from 1215 lead-free steel with a proprietary black oxide finish that produces a fine glossy finish while increasing holding power and resisting corrosion. It is machined from solid bar stock that is sourced exclusively from North American mills and is RoHS3 and REACH compliant. MCLC-25-25-F is manufactured in our Marlborough, MA factory under strict controls using proprietary processes.

## Product Specifications

| | | | |
|---|---|---|---|
| **Bore (B1)** | 25 mm | **Small Bore (B2)** | 25 mm |
| **Keyway (K1)** | 8 mm | **Keyway (K2)** | 8 mm |
| **B1 Max Shaft Penetration** | 37.5 mm | **B2 Max Shaft Penetration** | 37.5 mm |
| **Outer Diameter (OD)** | 45 mm | **Bore Tolerance** | +0.050 mm / +0.012 mm |
| **Length (L)** | 75 mm | **Clearance Diameter (C) MAX** | 51.5 mm |
| **Recommended Shaft Tolerance** | +0.000 mm / -0.013 mm | **Forged Clamp Screw** | M6 |
| **Screw Material** | Alloy Steel with Nypatch® | **Hex Wrench Size** | 5.0 mm |
| **Screw Finish** | Black Oxide | **Seating Torque** | 16 Nm |
| **Screw Location (R)** | 16.9 mm | **Number of Screws** | 4 ea |
| **Rated Torque** | 400 Nm | **Moment of Inertia** | 1.964 x $10^{-4}$ kg-$m^2$ |
| **Maximum Speed** | 4,000 RPM | **Full Bearing Support Required?** | No |
| **Nypatch® Anti-Vibration Hardware?** | Yes | **Precision Honed Bores?** | Yes |
| **Zero-Backlash?** | Yes | **Material Specification** | 1215 Carbon Steel Bar |
| **Temperature** | -40°F to 350°F (-40°C to 176°C) | **Finish Specification** | Hot Process Black Oxide, Impregnated with Naphthenic Oil, Centrifugally Dried |
| **Manufacturer** | Ruland Manufacturing | **Country of Origin** | USA |
| **Weight (lbs)** | 1.291300 | **UPC** | 634529013120 |
| **Tariff Code** | 8483.60.8000 | **UNSPC** | 31163009 |
| **Note 1** | Performance ratings are for guidance only. The user must determine suitability for a particular application. | | |
| **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 MCLC-25-25-F one-piece rigid coupling on the two shafts to be connected. There should be no misalignment.
2. Tighten the Nypatch® screws in two stages, starting with the inside screws. Using a 5.0 mm torque wrench, tighten the inside screws to 8 Nm which is half the recommended seating torque. Repeat for the outside screws, again tightening to half of the recommended seating torque.
3. Tighten the screws to the full recommended seating torque of 16 Nm following the same pattern,

starting with the inside screws first.