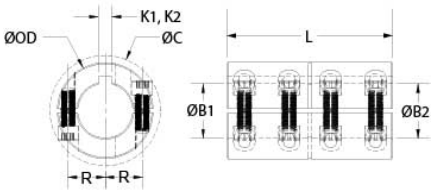
# MSPC-10-10-SS

Ruland MSPC-10-10-SS, 10mm x 10mm Rigid Coupling, 303 Stainless Steel, Two-Piece Clamp Style With Keyway, 29mm OD, 45mm Length



## Description

Ruland MSPC-10-10-SS is a two-piece rigid coupling with 10mm x 10mm bores, 29mm OD, 45mm length, and 3mm x 3mm 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. MSPC-10-10-SS has opposing hardware for a balanced design. 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. MSPC-10-10-SS is made from 303 stainless steel with hardware of like material for consistent corrosion resistance. It is machined from solid bar stock that is sourced exclusively from North American mills and is RoHS3 and REACH compliant. MSPC-10-10-SS is manufactured in our Marlborough, MA factory under strict controls using proprietary processes.

## Product Specifications

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|---|---|---|---|
| **Bore (B1)** | 10 mm | **Small Bore (B2)** | 10 mm |
| **Keyway (K1)** | 3 mm | **Keyway (K2)** | 3 mm |
| **B1 Max Shaft Penetration** | 22.5 mm | **B2 Max Shaft Penetration** | 22.5 mm |
| **Outer Diameter (OD)** | 29 mm | **Bore Tolerance** | +0.050 mm / +0.012 mm |
| **Length (L)** | 45 mm | **Clearance Diameter (C) MAX** | 33.0 mm |
| **Recommended Gap** | 1.59 mm | **Recommended Shaft Tolerance** | +0.000 mm / -0.013 mm |
| **Forged Clamp Screw** | M4 | **Screw Material** | 18-8 300 Series Stainless Steel with Nypatch® |
| **Hex Wrench Size** | 3.0 mm | **Screw Finish** | Bright |
| **Seating Torque** | 2.5 Nm | **Screw Location (R)** | 10.6 mm |
| **Number of Screws** | 8 ea | **Rated Torque** | 32 Nm |
| **Moment of Inertia** | 2.196 x $10^{-5}$ 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 |
| **Balanced Design** | Yes | **Material Specification** | Type 303 Austenitic, Non-Magnetic Bar |
| **Temperature** | -40°F to 350°F (-40°C to 176°C) | **Finish Specification** | Bright, No Plating |
| **Manufacturer** | Ruland Manufacturing | **Country of Origin** | USA |
| **Weight (lbs)** | 0.407900 | **UPC** | 634529016459 |
| **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 Nickel (metallic), known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov. | | |

**Installation Instructions**

1. Align the MSPC-10-10-SS two-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 3.0 mm torque wrench, tighten the inside screws to 1.25 Nm which is half the recommended seating torque. Repeat the process for the outside screws, tightening to half the recommended seating torque.

3. Be sure to maintain the gap of 1.59 mm between the two halves during installation.
4. Tighten the screws to the full recommended seating torque of 2.5 Nm following the same pattern, starting with the inside screws first.
5. For optimum results do not exceed the shaft penetration length of 22.5 mm.