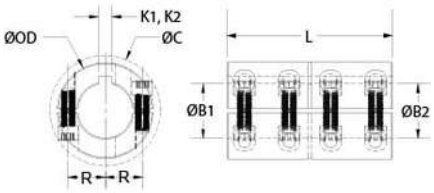
MSPC-10-10-F

Ruland MSPC-10-10-F, 10mm x 10mm Rigid Coupling, Black Oxide Steel, Two-Piece Clamp Style With Keyway, 29mm OD, 45mm Length







Description

Ruland MSPC-10-10-F 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-F 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-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. MSPC-10-10-F is manufactured in our Marlborough, MA factory under strict controls using proprietary processes.

Product Specifications

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**	Alloy Steel with Nypatch®
Hex Wrench Size	3.0 mm	**Screw Finish**	Black Oxide
Seating Torque	4.6 Nm	**Screw Location (R)**	10.6 mm
Number of Screws	8 ea	**Rated Torque**	105 Nm
Moment of Inertia	2.138 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**	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)	0.398500	**UPC**	634529016442
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 MSPC-10-10-F 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 2.3 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 4.6 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.