



Quick Reference Guide

Servo Couplings: Bellows vs. Elastomer

Elastomer? Bellows? What is the best coupling technology for your motion control application? Each has its advantages from torsional stiffness to vibration dampening. A quick comparison of features and advantages can point to the best solution.

Servo Coupling Design

There are two basic types of servo couplings: bellows and elastomer. Both provide zero-backlash, low inertia, and compensation for shaft misalignment. Their difference lies in the flexible, compensating element.

Bellows

The bellows coupling uses stainless steel bellows connected to the clamping hubs via a press fit brass wire providing zero-backlash and extremely high torsional stiffness.

Elastomer

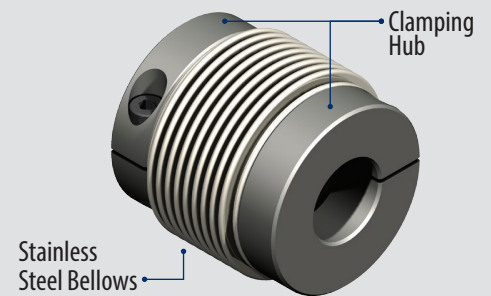
The elastomer coupling uses an elastomer "spider." The spider and the clamping hubs interlock with involute teeth providing zero-backlash and vibration dampening.

Selection

Use this quick guide to select the best type of coupling for an application:

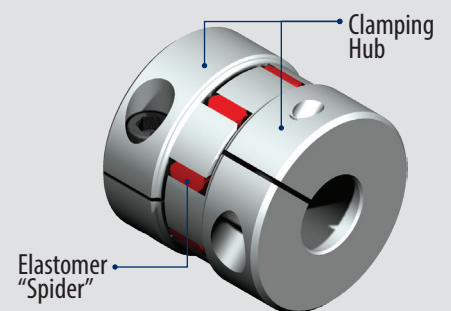
| Your application prioritizes... | Use this style coupling... |
|---------------------------------|----------------------------|
| Ability to repair | Elastomer |
| Continuous duty cycle | Elastomer |
| Cyclic duty cycle | Bellows |
| Electrical insulation | Elastomer |
| Extreme temperature range | Bellows |
| High speed | Bellows |
| High torque capacity | Bellows |
| High torsional stiffness | Bellows |
| Low-cost solution | Elastomer |
| No maintenance | Bellows |
| Vibration/resonance dampening | Elastomer |

Bellows Coupling



- High torsionally stiffness
- Temperatures to 300°C
- Torque capacity up to 4000 Nm
- Suitable for all motion control applications

Elastomer Coupling



- Vibration/resonance dampening
- Temperatures to 120°C
- Torque capacity up to 2000 Nm
- Lower cost for less precise applications
- Plug-in assembly
- Electrically insulating

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