



SOURCES FOR SHAFT COUPLINGS

INTRODUCTION

This document lists several manufacturers of flexible shaft couplings. Listings of other qualified sources can be found in industrial trade references. When designing a torque meter installation, obtain complete specifications from the coupling manufacturer. S. Himmelstein and Company Technical Memorandum 7850 should also be reviewed as part of the installation design process. Technical Memorandum 7551 contains information pertinent to high speed installations.

FLEXIBLE DIAPHRAGM COUPLINGS

Flexible Diaphragm Couplings are non-lubricated, constant velocity, zero backlash types. They are usually double flex devices. A wide range of torques and speeds are covered. Approved source:

- **Goodrich (Formerly TRW-Lucas Aerospace), Rome, NY**
315/838-1200, www.goodrichrome.com

FLEXIBLE DISC COUPLINGS

Flexible Disc Couplings are non-lubricated, constant velocity, zero backlash types. Both single and double flex are offered. Wide capacity and speed ranges are available. Approved source:

- **Rexnord Corporation, Thomas Coupling Operation Warren, PA**
814/723-6600, www.rexnord.com

PRECISION GEAR COUPLINGS

Precision Gear Couplings are constant velocity types, generally require lubrication, and exhibit backlash. They have the smallest size for a given load capacity. Both single and double flex types are available. Very wide capacity ranges and operation to moderately high speeds is common. Approved sources:

- **Browning Mfg. Division, Emerson Corporation, Maysville, KY**
606/564-2011, www.emerson-ept.com
- **Falk Corporation, Milwaukee, WI**
414/342-3131, www.falkcorp.com
- **Lovejoy, Inc., Downers Grove, IL**
630/852-0500, www.lovejoy-inc.com
- **Kop-Flex, Harmans, MD**
410/768-2000, www.emerson-ept.com

CONVENTIONAL (HOOKE OR CARDAN) U-JOINT COUPLINGS

Conventional (Hooke or Cardan) U-Joint Couplings are generally lubricated and available to medium torque capacity and speeds. They handle the greatest misalignment in a short space and have backlash. A single U-joint (single flex) is not constant velocity

but two properly phased U-joints, back-to-back, approximate constant velocity operation and are the equivalent of a double flex. Approved sources:

Dana Corporation, Spicer U Joint Division, Toledo, OH
419/866-3900, www.dana.com

Twin Disc, Inc., Racine, WI
414/634-1981, www.twindisc.com

Ameridrives International, Erie, PA
814/480-5100, www.ameridrives.com

CONSTANT VELOCITY U-JOINT COUPLINGS

Several types of Constant Velocity U-Joint Couplings are commercially available. They require lubrication and exhibit backlash. Variations include Rzeppa, Cross Groove, Double Offset (both end motion and fixed center) and Bendix-Weiss types. Approved source:

Dana Corporation, Spicer U-Joint Division, Toledo, OH
419/866-3900 www.dana.com

OTHER COUPLING TYPES

Elastomer Shear Couplings, Elastomer Jaw Couplings, Bellows Couplings, Oldham (double slider) Couplings, Spring Couplings, Chain Couplings, Steel Grid Couplings, and combination types are also available. They aren't recommended either because they exhibit large deformations under centrifugal stress (and therefore can't be balanced at high speed), or they have high backlash, or they aren't constant velocity, or they are only available as double flex types and have no compelling application advantage, or have high inertia and mass per unit of torque capacity.

Torsionally Resilient Couplings, Electrically Insulated Couplings, Shear Pin Couplings, and other special types are also available. Shear Pin Couplings can be used to provide positive overload protection. Electrically Insulated devices interrupt the flow of electrical current and magnetic flux through machinery shafts. Torsionally Resilient types dampen torsional vibrations and help cushion shock and starting loads. Because they absorb vibratory power, Torsionally Resilient Couplings can cause torque and power measurement errors. Avoid them when high measurement accuracy is important.

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