

How To Use This Manual

This manual provides detailed instructions on installation, maintenance and parts identification. Use the table of contents below to locate required information.

Table of Contents

| | |
|--|-------------|
| Introduction | Page 1 |
| Parts Identification | Page 1 |
| Maximize Performance & Life | Page 1 |
| Lubrication | Page 1 |
| Horizontal Coupling Installation | Pages 1 & 2 |

CAREFULLY FOLLOW THE INSTRUCTIONS IN THIS MANUAL FOR OPTIMUM PERFORMANCE AND TROUBLE FREE SERVICE.

INTRODUCTION

This manual applies to standard coupling Type G70. For couplings furnished with special features, refer to assembly drawing furnished with coupling for proper assembly arrangement and any additional installation or maintenance requirements. Type G70 couplings are recommended for horizontal applications only. For vertical applications, refer to the Factory.

PARTS IDENTIFICATION

All coupling parts have identifying parts numbers or coupling size. When ordering parts, always specify SIZE and TYPE, hub bore, keyway and part number on each item. For special couplings, furnish M.O. number and drawing number stamped on the hub. The decimal bore size is stamped on the hub face.

MAXIMIZE PERFORMANCE & LIFE

The performance and life of couplings depend largely upon how you install and maintain them. Before installing couplings, make certain that foundations of equipment to be connected meet manufacturers' requirements. Check for soft foot. The use of stainless steel shims is recommended. Measuring misalignment and positioning equipment within alignment tolerances is simplified with an alignment computer. These calculations can also be done graphically or mathematically.

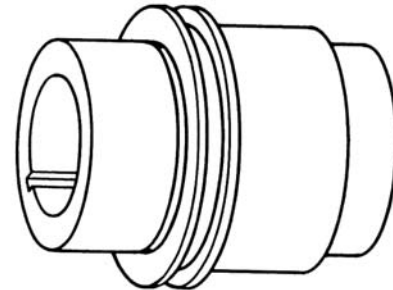
When coupling is used on stationary equipment, it is recommended that final alignment be checked using either an alignment computer or graphical analysis. Both methods allow the incorporation of "cold offsets", which will compensate for shaft position changes due to thermal growth.

WARNING: Consult applicable local and national safety codes for proper guarding of rotating members. Observe all safety rules when installing or servicing couplings. Lockout starting switch of prime mover and remove all external load from drive before working on or installing couplings.

LUBRICATION

Adequate lubrication is essential for satisfactory operation. Type G70 couplings are not grease sealed nor are the teeth protected from foreign material that may reduce coupling life. Before each use, the coupling gear mesh should be inspected for contaminants and cleaned and relubricated every six months. For normal operation, a Molykote BR-2 Plus lubricant is recommended.

Type G70



HORIZONTAL COUPLING INSTALLATION

Only standard mechanics tools, wrenches, a straight edge and feeler gauges are required to install gear couplings. For best results use a dial indicator to check final alignment. Clean all parts using a non-flammable solvent. Check hubs, shafts, and keyways for burrs.

INTERFERENCE FIT HUBS — Unless otherwise specified, Falk Gear couplings are furnished for an interference fit without set screw. Heat hubs to a maximum 275°F(135°C) using an oven, torch, induction heater, or an oil bath. To prevent damage, DO NOT heat hubs beyond a maximum temperature of 400°F (205°C).

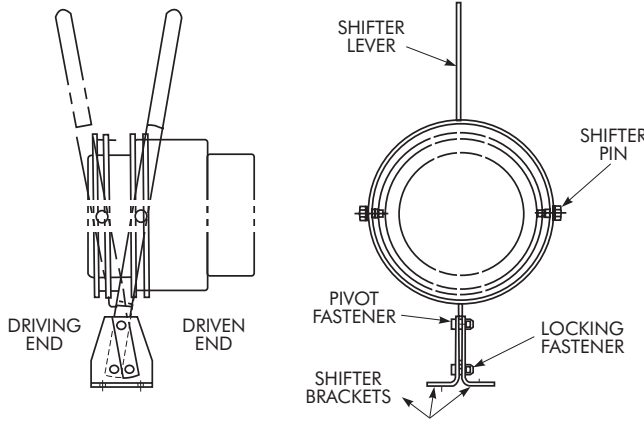
WARNING: If an oil bath is used, the oil must have a flash point of 350°F(177°C) or higher. Do not rest hubs on the bottom of the container. Do not use an open flame in a combustible atmosphere or near combustible materials.

When an oxy-acetylene or blow torch is used, use an excess acetylene mixture. Mark hubs near the center of their length in several places on hub body with a temperature sensitive crayon, 275°F(135°C) melt temperature. Direct flame towards hub bore using constant motion to avoid overheating an area.

1. Mount Sleeve and Hubs

Coat sleeve teeth with grease. Place the sleeve on the driving shaft BEFORE mounting the hub. Mount hubs on their respective shafts, with short hub barrel located at shaft end with hub face flush with the end of its shaft. Seal keyways to prevent leakage.

NOTE: If coupling was not supplied with a Falk optional shifting lever, assemble shifting lever (furnished by others) as required and proceed to step 3.



Typical shifting lever assembly designs may vary. Refer to drawing supplied with lever for proper assembly arrangement.

2. Assemble Factory Supplied Shifter Lever

Assemble shifter brackets to shifter lever using pivot fastener. Do not tighten fully. With shifter pins removed, position shifter lever over sleeve so pin holes line up with sleeve groove. Insert shifter pins and tighten.

Position shifter brackets in proper location in relation to driving hub. (Refer to Shifter Lever Assembly drawing.) Shifting lever must also be positioned so that shifter pins are parallel to sleeve groove, with equal clearance from sleeve groove diameter and pin. Fasten brackets to foundation or structure. (Foundation fasteners are normally not furnished with lever.) The sleeve should move freely without binding of shifter pins.

3. Gap and Angular Alignment

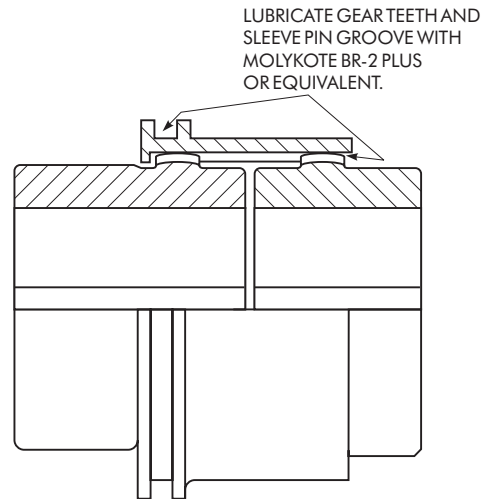
Position equipment in approximate alignment with approximate gap specified in Table 1. Use a spacer bar equal in thickness to gap specified in Table 1. Insert bar to same depth at 90° intervals and measure clearance between bar and hub face with feelers. The difference in minimum and maximum measurements must not exceed the INSTALLATION ANGULAR limit specified in Table 1.

4. Offset Alignment

Align so that a straight edge rests squarely (or within the installation limits specified in Table 1) on both hubs as shown above and also at 90° intervals. Check with feelers. The clearance must not exceed the INSTALLATION OFFSET limit specified in Table 1. Tighten all foundation bolts and repeat Steps 3 and 4. Realign coupling if necessary.

5. Lubricate

Lubricate sleeve (if not done in step 1), hub gear teeth and sleeve pin groove with Molykote BR-2 PLUS or equivalent as shown above right.



6. To Engage Coupling:

With coupling at rest, slide sleeve toward driven hub to engage coupling. When engaging, some indexing of connecting shafts may be necessary to align coupling teeth for meshing. Excessive force to slide coupling sleeve may indicate poor coupling alignment, coupling tooth mismatch, improper coupling gap or incorrect assembly of coupling or shifter lever. Correct problem before operating coupling. Lock sleeve into engaged position with shifting lever locking fastener.

7. To Disengage Coupling:

With coupling at rest and all external loads removed from drive, remove shifting lever locking fastener, slide sleeve toward driving hub to disengage coupling. Lock sleeve into disengaged position using locking fastener.

TABLE 1 — Installation & Alignment Data

| Coupling Size | Allowable Speed (rpm) ★ | Hub Gap Separation ±10% | Installation Limits † | |
|---------------|-------------------------|-------------------------|-----------------------|--------------|
| | | | Offset, Max | Angular, Max |
| 1010 | 630 | .125 | .005 | .018 |
| 1015 | 500 | .125 | .005 | .022 |
| 1020 | 400 | .125 | .007 | .027 |
| 1025 | 330 | .188 | .009 | .034 |
| 1030 | 280 | .188 | .010 | .039 |
| 1035 | 240 | .250 | .011 | .046 |
| 1040 | 200 | .250 | .012 | .054 |
| 1045 | 180 | .312 | .013 | .061 |
| 1050 | 170 | .312 | .015 | .065 |
| 1055 | 150 | .312 | .015 | .072 |
| 1060 | 140 | .312 | .018 | .079 |
| 1070 | 120 | .375 | .020 | .092 |
| 1080 | 110 | .375 | .010 | .046 |
| 1090 | 100 | .500 | .010 | .051 |
| 1100 | 90 | .500 | .010 | .057 |
| 1110 | 80 | .500 | .010 | .064 |
| 1120 | 75 | .500 | .010 | .070 |
| 1130 | 70 | .750 | .010 | .075 |
| 1140 | 65 | .750 | .010 | .082 |
| 1150 | 60 | .750 | .010 | .088 |

★ Consult Factory for higher speeds.

† For intermittent duty, coupling alignment is adequate when sleeve can easily engage driven hub. Flexible couplings are designed to accommodate changes in operating conditions. Coupling life expectancy is a function of load, speed, alignment, and lubrication.