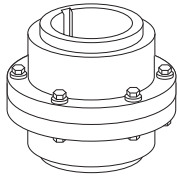
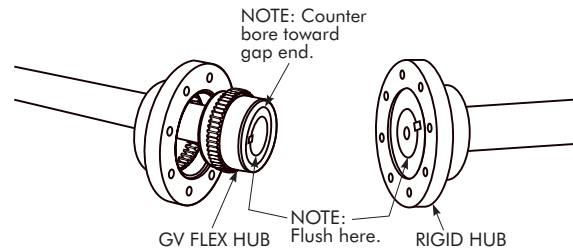
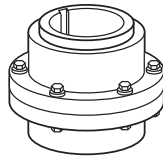


Type GV20



Type GV52



How To Use This Manual

This manual, in conjunction with manual 458-110, provides detailed instructions on installation, maintenance and parts identification for Falk Lifalign® double and single engagement gear couplings, Types GV10/20 & GV51/52. Use the table of contents below to locate required information.

Table of Contents

| | |
|---|--------------------------|
| Introduction | Page 1 |
| Lube Fittings | Page 1 |
| Installation & Alignment Instructions | Pages 1 & 2 |
| Installation & Alignment Data | Page 3 |
| Parts Identification & Parts Interchangeability | Page 4 |
| Lubrication | See 458-110, Pages 1 & 2 |
| Balanced Couplings | See 458-110, Page 3 |
| Maintenance | See 458-110, Page 3 |

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

INTRODUCTION

This manual applies to standard coupling Types GV10 and GV51 with shrouded bolts, and GV20 and GV52 with exposed bolts. 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 GV couplings are recommended for vertical applications or for inclinations over 10° from horizontal. Do not use GV10/20 couplings for thrust applications — refer to Factory. Use type GV51/52 couplings for the lower coupling in vertical floating shaft assemblies and downward thrust applications.

CAUTION: Consult applicable local and national safety codes for proper guarding of rotating members. Observe all safety rules when installing or servicing couplings.

WARNING: Lockout starting switch of prime mover and remove all external loads from drive before installing or servicing couplings.

LUBE FITTINGS

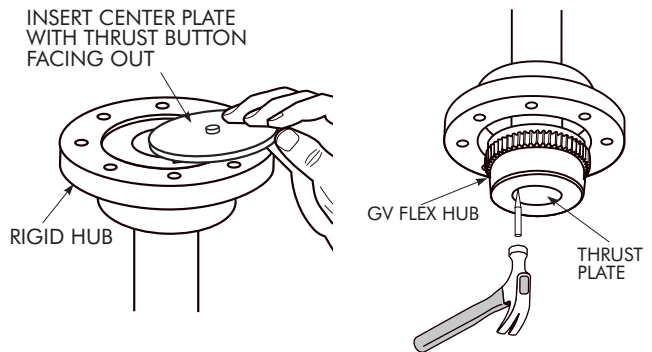
Sleeves have $\frac{1}{8}$ " NPT lube holes for Sizes 1010GV20 - 1035GV20, and 1025GV10 - 1035GV10. (Sizes 1010GV10 - 1020GV10 use $\frac{1}{4}$ "-28 SAE LT automotive plugs and fittings.) Sizes 1040GV thru 1070GV have $\frac{1}{4}$ " NPT holes. Use a standard grease gun and lube fittings.

VERTICAL COUPLING INSTALLATION

Refer to TYPE G HORIZONTAL COUPLING INSTALLATION and MAXIMIZE PERFORMANCE & LIFE sections on Page 3 of 458-110.

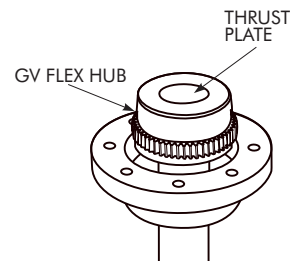
1 — Mount Flanged Sleeve(s), Seals & Hubs

Place the flanged sleeves WITH seal rings on shafts BEFORE mounting the hubs. Mount flex or rigid hubs on their respective shafts, as shown above, so that the counterbore face is flush with the end of its shaft. Allow hubs to cool before proceeding. Seal keyways to prevent leakage. Insert set screws (if required) and tighten.



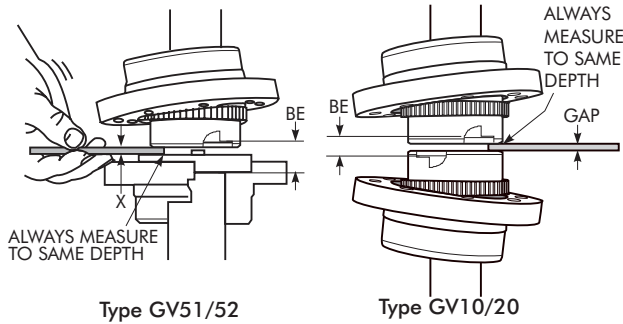
2A — Type GV51/52, Install Plates

Set the CENTERPLATE with thrust button in the RIGID hub and the THRUST plate in the FLEX hub counter bores. Stake to lock thrust plate in place. Note the direction shown for the thrust button. Place gasket on rigid hub flange face. Position the moveable unit and align per steps 3 and 4A.



2B — Type GV10/20, Install Thrust Plate

Install THRUST plate in the LOWER hub counterbore. Position equipment and align per Steps 3 and 4B.

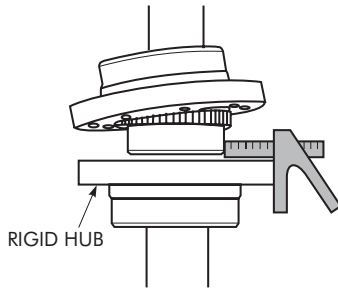


Type GV51/52

Type GV10/20

3 — Gap & Angular Alignment

For Types GV51/52 use a spacer bar equal in thickness to the "X" dimension specified in Table 1, Page 3. For Types GV10/20 use a spacer bar equal in thickness to gap specified in Table 1, Page 3. Insert bar, as shown above, 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, Page 3.

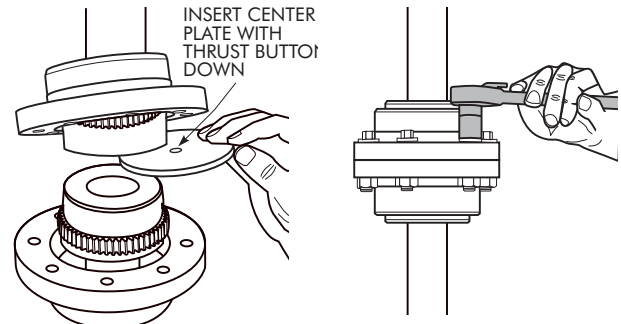


4A — Type GV51/52, Parallel Offset Alignment

Align coupling so that, with the square (or depth micrometer) resting squarely on the flange, equal clearance measurements are obtained between flange and the hub O.D. In four places 90° apart. The difference between minimum and maximum feeler readings should not exceed the INSTALLATION PARALLEL OFFSET limit in Table 1 divided by two. The above measurement is TIR. Tighten all foundation bolts and repeat steps 3 and 4A. Realign coupling if necessary.

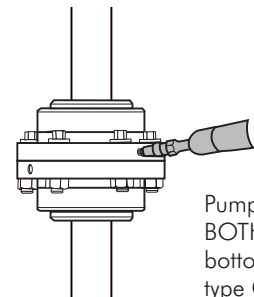
4B — Type GV10/20, Parallel Offset Alignment

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



5 — Insert Gasket, Center Plate & Join Flanges

IMPORTANT: Generously pack flanged sleeve(s) with recommended grease. For Type GV10/20, insert gasket, then insert the centerplate with the thrust button down. Center the plate in the counterbore of the lower flanged sleeve. Draw flanged sleeve(s) into position. Use only the fasteners furnished with the coupling. **IMPORTANT:** Tighten fasteners to torque specified in Table 1, Page 3.



6 — Lubricate

Remove all grease plugs and fill with recommended grease until an excess appears at the open hole; then insert plug. **CAUTION:** Remove grease fitting and make certain all plugs are inserted after lubricating.

TABLE 1 — Installation & Alignment Data ■ Dimensions – Inches (Metric – mm)

| COUPLING SIZE | | 1010 | 1015 | 1020 | 1025 | 1030 | 1035 | 1040 | 1045 | 1050 | 1055 | 1060 | 1070 | |
|---------------------------------------|-----------------------------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|------|
| TYPE GV51/52 | | | | | | | | | | | | | | |
| "X" Dimension | | .140 (3,5) | .140 (3,5) | .140 (3,5) | .200 (5,0) | .200 (5,0) | .260 (6,6) | .300 (7,6) | .360 (9,1) | .315 (8,0) | .315 (8,0) | .315 (8,0) | .380 (9,6) | |
| BE | | .580 (14,7) | .580 (14,7) | .580 (14,7) | .640 (16,3) | .640 (16,3) | .710 (18,0) | .865 (22,0) | 1.050 (26,7) | 1.090 (27,7) | 1.090 (27,7) | 1.215 (30,9) | 1.540 (39,1) | |
| Installation Limits | Angular | .006 (0,15) | .007 (0,18) | .009 (0,23) | .011 (0,28) | .013 (0,33) | .015 (0,38) | .018 (0,46) | .020 (0,51) | .022 (0,56) | .024 (0,61) | .026 (0,66) | .031 (0,79) | |
| | Parallel Offset | .001 (0,03) | .001 (0,03) | .001 (0,03) | .002 (0,05) | .002 (0,05) | .002 (0,05) | .003 (0,08) | .003 (0,08) | .003 (0,08) | .003 (0,08) | .004 (0,10) | .005 (0,13) | |
| "W" | | .035 (0,89) | .045 (1,14) | .054 (1,37) | .067 (1,70) | .079 (2,01) | .092 (2,34) | .108 (2,74) | .121 (3,07) | .131 (3,33) | .144 (3,66) | .157 (3,99) | .183 (4,65) | |
| Coupling Speed Range (rpm) | NLGI #0 Grease – Max. ‡ | | 7000 | 6000 | 5000 | 4750 | 4400 | 3900 | 3600 | 3200 | 2900 | 2650 | 2450 | 2150 |
| | Falk LTG or NLGI #1 Grease | Min. | 1030 | 700 | 550 | 460 | 380 | 330 | 290 | 250 | 230 | 210 | 190 | 160 |
| | | Allow. | 8000 | 6500 | 5600 | 5000 | 4400 | 3900 | 3600 | 3200 | 2900 | 2650 | 2450 | 2150 |
| Grease – lbs. (kg) | | .08 (0,036) | .12 (0,054) | .20 (0,091) | .40 (0,181) | .60 (0,272) | 1.00 (0,454) | 1.50 (0,680) | 2.00 (0,907) | 3.00 (1,36) | 3.70 (1,68) | 5.00 (2,27) | 7.20 (3,27) | |
| Flange Bolt Torque lb-in. (Nm) | GV51 | 108 (12,2) | 372 (42) | 372 (42) | 900 (102) | 900 (102) | 1800 (203) | 1800 (203) | 1800 (203) | 3000 (339) | 3000 (339) | ... | ... | |
| | GV52 | 108 (12,2) | 372 (42) | 900 (102) | 1800 (203) | 1800 (203) | 3000 (339) | 3000 (339) | 3000 (339) | 3000 (339) | 3000 (339) | 3000 (339) | 3000 (339) | |
| TYPE GV10/20 | | | | | | | | | | | | | | |
| Gap-Hub Separation | | .438 (11) | .438 (11) | .438 (11) | .562 (14) | .562 (14) | .688 (17) | .875 (22) | 1.000 (25) | 1.000 (25) | 1.000 (25) | 1.125 (29) | 1.375 (35) | |
| Gap Tolerance | | .012 (0,30) | .012 (0,30) | .012 (0,30) | .018 (0,46) | .018 (0,46) | .025 (0,64) | .025 (0,64) | .031 (0,79) | .031 (0,79) | .031 (0,79) | .031 (0,79) | .037 (0,94) | |
| BE (Between Shaft Ends) | | .94 (23,7) | .94 (23,7) | .94 (23,7) | 1.06 (26,7) | 1.06 (26,7) | 1.19 (29,7) | 1.38 (34,7) | 1.74 (44,0) | 1.74 (44,0) | 1.74 (44,0) | 1.88 (48,0) | 2.40 (60,4) | |
| Installation Limits | Angular | .006 (0,15) | .007 (0,18) | .009 (0,23) | .011 (0,28) | .013 (0,33) | .015 (0,38) | .018 (0,46) | .020 (0,51) | .022 (0,56) | .024 (0,61) | .026 (0,66) | .031 (0,79) | |
| | Parallel Offset | .002 (0,05) | .003 (0,08) | .003 (0,08) | .004 (0,10) | .005 (0,13) | .006 (0,15) | .007 (0,18) | .008 (0,20) | .009 (0,23) | .010 (0,25) | .011 (0,28) | .013 (0,33) | |
| "W" | | .035 (0,89) | .045 (1,14) | .054 (1,37) | .067 (1,70) | .079 (2,01) | .092 (2,34) | .108 (2,74) | .121 (3,07) | .131 (3,33) | .144 (3,66) | .157 (3,99) | .183 (4,65) | |
| Coupling Speed Range (rpm) | NLGI #0 Grease – Max. ‡ | | 7000 | 6000 | 5000 | 4750 | 4400 | 3900 | 3600 | 3200 | 2900 | 2650 | 2450 | 2150 |
| | Falk LTG or NLGI #1 Grease | Min. | 1030 | 700 | 550 | 460 | 380 | 330 | 290 | 250 | 230 | 210 | 190 | 160 |
| | | Allow. | 8000 | 6500 | 5600 | 5000 | 4400 | 3900 | 3600 | 3200 | 2900 | 2650 | 2450 | 2150 |
| Grease – lbs. (kg) | | .18 (0,082) | .30 (0,136) | .50 (0,227) | .90 (0,408) | 1.40 (0,635) | 2.20 (0,998) | 3.20 (1,45) | 4.40 (2,00) | 6.30 (2,86) | 8.00 (3,63) | 10.60 (4,81) | 15.60 (7,08) | |
| Flange Bolt Torque lb-in. (Nm) | GV10 | 108 (12,2) | 372 (42) | 372 (42) | 900 (102) | 900 (102) | 1800 (203) | 1800 (203) | 1800 (203) | 3000 (339) | 3000 (339) | ... | ... | |
| | GV20 | 108 (12,2) | 372 (42) | 900 (102) | 1800 (203) | 1800 (203) | 3000 (339) | 3000 (339) | 3000 (339) | 3000 (339) | 3000 (339) | 3000 (339) | 3000 (339) | |

■ Refer to selection guide for maximum bores and Engineering 427-108 for reboring instructions.

† Refer to ANNUAL MAINTENANCE on Page 3 of 458-110.

‡ Couplings with NLGI #0 grease may be operated at any speed between zero and the maximum shown.

PARTS IDENTIFICATION & PART NUMBER LOCATION

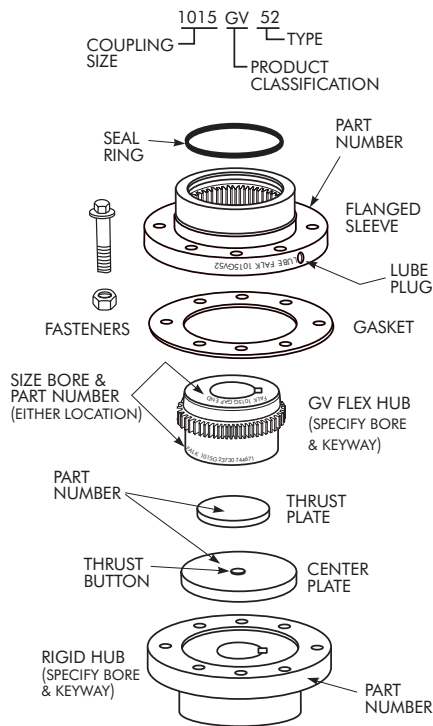
Coupling parts have identifying size and part numbers as illustrated below. When ordering parts, always SPECIFY SIZE, TYPE, HUB BORE, KEYWAY and PART NUMBER found on each item.

Contact your Rexnord Distributor or Rexnord for price and availability.

EXAMPLE:

- Complete 1050GV20 Gear Coupling
- Consisting of:
- 2 – 1050GV20 Sleeves
(Includes: Gasket & Seal)
- 2 – 1050G Flex Hubs
Bore: 6.750 Keyway: 1.750 x .750
Bore: 7.375 Keyway: 1.750 x .750
- 1 – Fastener Set
- 1 – Centering Component Kit
(Includes: Thrust Plate, Center Plate & Thrust Button)

TYPE GV51/52



TYPE GV10/20

