

How To Use This Manual

This manual provides detailed instructions on installation, maintenance, and parts identification for Sizes 1010-1055G81, Sizes 1010-1300G82, Sizes 1025-1070GP82 horizontal couplings and 1010-1070GV82 vertical couplings. Use the table of contents below to locate required information.

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

Introduction

This manual applies to standard rigid coupling Types G81 with shrouded bolts, G82, GP82, and GV82 with exposed bolts. For couplings furnished with special features, refer to the assembly drawing furnished with the coupling for proper assembly arrangement and any additional installation or maintenance requirements. These rigid couplings are to be used in applications where the need to accommodate misalignment or axial float is NOT required. Types G81 and G82 may be used in both horizontal and vertical applications to connect shafting where axial thrust loads are not present. Do not apply bending moments to type G81 couplings. Type GP82 is recommended for horizontal applications only, where electrical insulation from stray currents is required and axial and bending loads are not present. Type GV82 is recommended for vertical applications where axial thrust and bending moments may be present.

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.

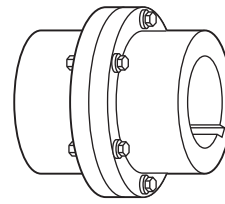
Type G Rigid Coupling Installation

Only standard mechanics tools, torque wrenches, and a dial indicator are required to install Falk gear couplings. Clean all parts using a non-flammable solvent. Check hubs, shafts, and keyways for burrs. DO NOT heat clearance fit hubs.

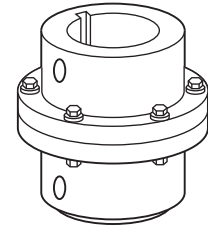
Interference Fit Hubs — Unless otherwise specified, Falk gear couplings are furnished for an interference fit without set screw. Heat hubs to 275°F(135°C) using an oven, torch, induction heater, or an oil bath. To prevent damage DO NOT heat hubs beyond a maximum temperature of 400°F(205°C).

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,

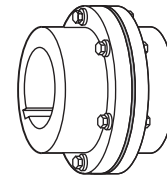
Type G82
Exposed Bolts



Type GV82
Exposed Bolts



Type GP82
Exposed Bolts



275°F(135°C) melt temperature. Direct flame towards hub bore using constant motion to avoid overheating an area.

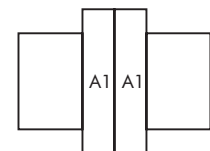
WARNING: If an oil bath is used, the oil must have a flash point of 350°F(177°C) or higher. Do not rest hubs on the bottom of the container. Do not use an open flame in a combustible atmosphere or near combustible materials.

Maximize Performance & Life

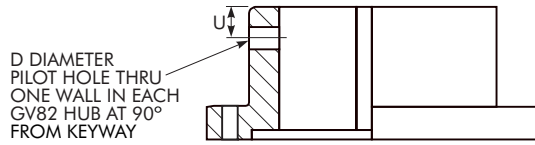
The performance and life of couplings depend largely upon how you install and maintain them. Before installing couplings, make certain that foundations of equipment to be connected meet manufacturers' requirements. Check for soft foot. The use of stainless steel shims is recommended.

Balanced Couplings

The fasteners provided are matched sets and must not be mixed or substituted. Assembly balanced couplings are match marked and must be assembled with mating match marks aligned. Coupling flanges must be assembled with O.D.'s aligned to within .002" TIR. Component parts of assembly balanced couplings must not be replaced without re-balancing the complete assembly.

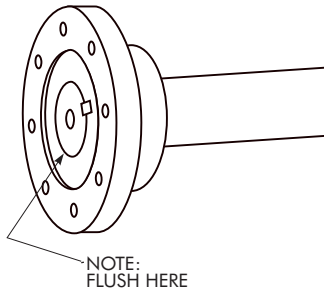


1 — Drill Pilot Hole (Type GV82 Only)



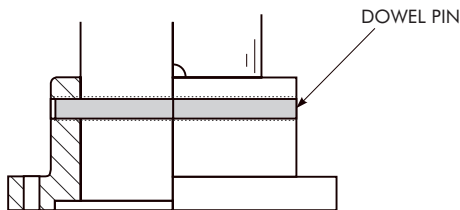
If the GV82 hubs were not supplied with a dowel pin pilot hole, drill hole using D and U dimensions specified in Table 1, Page 3.

2 — Mount Rigid Hubs



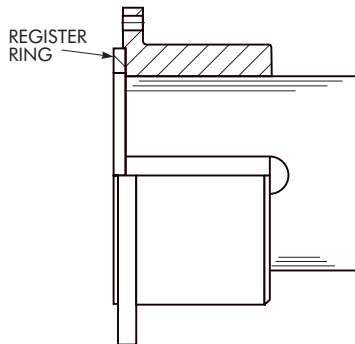
Mount rigid hubs so that the hub counterbore face is flush with the shaft end as illustrated above. Allow hubs to cool.

3 — Drill for and Fit Dowel Pin (Type GV82 Only)



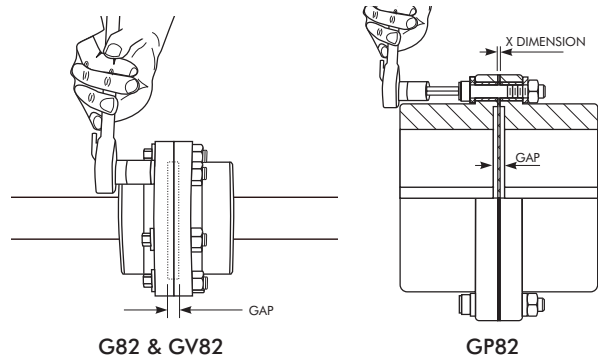
Using pilot hole, drill and ream through each hub and shaft assembly to dowel hole diameter specified in Table 1, Page 3. Drive dowel pin into hole, (cool pin to aid assembly). Stake to lock dowel at both ends.

4 — Install Register Ring (Size 1080 & Larger)



Position register ring into counterbore of either rigid hub.

5 — Insert Insulator Parts (Type GP82 only) & Join Rigid Hubs



Type G81, Sizes 1010-1055 and G82 & GV82, Sizes 1010-1070 — Bring rigid hubs together. Install fasteners into holes and tighten only enough to hold hubs in place. Check runout on rigid hub flange O.D.'s with a dial indicator and true up within .002" TIR (total indicator reading). Torque fasteners to the value specified in Table 1, Page 3.

Type GP82, Sizes 1025-1070 — Insert insulator bushings into flange holes of both hubs. Bring hubs together to the "X" distance. Check runout on rigid hub flange O.D.'s with a dial indicator and true up within .002" TIR (total indicator reading). Insert insulator center plate between flange faces and assemble fasteners with insulator washers. Use only fasteners furnished with the coupling. Make sure there are no gaps between hub faces and insulator center plate. **IMPORTANT:** Tighten fasteners to torque specified in Table 1.

Type G81/82 & GV82, Sizes 1080-1300 — Carefully guide the G82 hub counterbore onto the register ring. Check to make sure that the flange faces are seated all the way around the coupling. Install and torque fasteners to the value specified in Table 1, Page 3.

Maintenance

Whenever the equipment is down for general maintenance or service, recheck the tightening torque of the flange fasteners. Tighten the fasteners if necessary. For extreme or unusual operating conditions, check coupling more frequently.

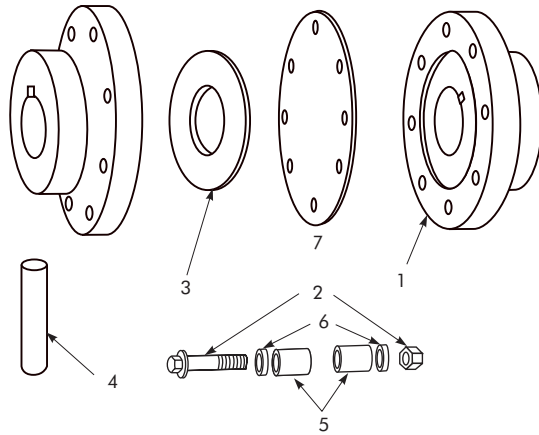
TABLE 1 — Installation Data — Dimensions – Inches (Metric – mm)

Size 1010 thru 1070													
Coupling Size		1010	1015	1020	1025	1030	1035	1040	1045	1050	1055	1060	1070
G81/G82 & GV82	Gap — Shaft Separation	.200 (5,08)	.200 (5,08)	.200 (5,08)	.200 (5,08)	.200 (5,08)	.200 (5,08)	.320 (8,13)	.320 (8,13)	.400 (10,16)	.400 (10,16)	.520 (13,21)	.660 (16,76)
	"D" Pilot Hole Diameter	.344 (8,74)	.469 (11,91)	.719 (18,26)	.938 (23,83)	1.062 (26,97)	1.188 (30,18)	1.312 (33,32)	1.438 (36,53)	1.688 (42,88)	1.688 (42,88)	1.938 (49,23)	1.938 (49,23)
GV82	"U" Dimension	.38 (9,7)	.50 (12,7)	.75 (19,1)	1.00 (25,4)	1.12 (28,4)	1.25 (31,8)	1.38 (35,1)	1.50 (38,1)	1.75 (44,5)	1.75 (44,5)	2.00 (50,8)	2.00 (50,8)
	Dowel Hole Dia.	.3740 .3745	.4990 .4995	.7490 .7495	.9990 .9995	1.1240 1.1245	1.2490 1.2495	1.3740 1.3745	1.4990 1.4995	1.7490 1.7495	1.7490 1.7495	1.9990 1.9995	1.9990 1.9995
			(9,500) (9,512)	(12,675) (12,687)	(19,025) (19,037)	(25,375) (25,387)	(28,550) (28,562)	(31,725) (31,737)	(34,900) (34,912)	(38,075) (38,087)	(44,425) (44,437)	(44,425) (44,437)	(50,775) (50,787)
GP82	"X" Dimension	...	...	...	.125 (3,18)	.125 (3,18)	.125 (3,18)	.125 (3,18)	.125 (3,18)	.125 (3,18)	.125 (3,18)	.125 (3,18)	.125 (3,18)
	Gap—Shaft Separation	...	...	...	.335 (8,51)	.335 (8,51)	.335 (8,51)	.455 (11,56)	.455 (11,56)	.535 (13,59)	.535 (13,59)	.655 (16,64)	.795 (20,19)
G81	Fastener Torque lb-in (Nm)	108 (12)	372 (42)	372 (42)	900 (102)	900 (102)	1800 (203)	1800 (203)	1800 (203)	3000 (339)	3000 (339)	...	...
	Wrench Size	.250	.375	.375	.500	.500	.625	.625	.625	.750	.750	...	...
G82 & GV82	Fastener Torque lb-in (Nm)	108 (12)	372 (42)	900 (102)	1800 (203)	1800 (203)	3000 (339)	3000 (339)	3000 (339)	3000 (339)	3000 (339)	3000 (339)	3000 (339)
	Wrench Size	.250	.375	.500	.625	.625	.750	.750	.750	.875	.875	.875	1.000
GP82	Flange Fastener Torque lb-in (Nm)	...	...	...	420 (47)	420 (47)	840 (95)	840 (95)	840 (95)	1440 (163)	1440 (163)	1440 (163)	1800 (203)
	Hex Size	...	...	...	.375	.375	.500	.500	.500	.625	.625	.625	.750

Size 1080 thru 1300																	
Coupling Size		1080	1090	1100	1110	1120	1130	1140	1150	1160	1180	1200	1220	1240	1260	1280	1300
Gap — Shaft Separation		.64 (16,3)	.64 (16,3)	.76 (19,3)	.76 (19,3)	.76 (19,3)	.76 (19,3)	.76 (19,3)	.76 (19,3)	1.00 (25,4)	1.00 (25,4)	1.00 (25,4)	1.24 (31,5)	1.24 (31,5)	1.24 (31,5)	1.24 (31,5)	1.24 (31,5)
G82	Fastener Torque lb-ft (Nm)	740 (1 003)	1050 (1 424)	1050 (1 424)	1840 (2 495)	1840 (2 495)	1840 (2 495)	1980 (2 685)	1980 (2 685)	3080 (4 176)	3080 (4 176)	4340 (5 885)	4340 (5 885)	8250 (11 186)	8250 (11 186)	10900 (14 778)	10900 (14 778)
	Wrench Size	1.688	1.875	1.875	2.250	2.250	2.250	2.625	2.625	3.000	3.000	3.375	3.375	4.250	4.250	4.625	4.625

Parts Identification & Part Number Location

All 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.



PART IDENTIFICATION

1. G Rigid Hub
(Specify Bore & Keyway)
2. Fasteners
3. Register Plate
(Size 1080 thru 1300G82)
4. Dowel Pin (GV only)
5. Insulator Bushing (GP82 only)
6. Insulator Washers (GP82 only)
7. Insulator center plate (GP82 only)

ORDER INFORMATION

1. Identify part(s) required by name above.
2. Furnish the following information.

EXAMPLE:

Coupling Size: 1015
Coupling Type: G82
Rigid Hub:
Bore: 2.250
Keyway: .500 x .250
Rigid Hub:
Bore: 2.750
Keyway: .625 x .312

3. Contact your Rexnord Distributor or Rexnord for price and availability.

