Introduction

The following instructions apply to limiting horizontal end float of Falk gear couplings. This manual applies to Sizes 1010 thru 1150 & 2080 thru 2150 for Types G10, G20, G31 & G32.

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

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 loads from drive before installing or servicing couplings.

Type G10 & G20: End float is limited with an elastomer gap disc as shown in Figure 1 below.

Type G32 (& G31): End float is limited with steel spacer plates when a standard stock spacer is provided as shown in Figure 2 on Page 2, or with integral bumper faces in a non-stock spacer as shown in Figure 3 on Page 2.

Minimum rotor end float is usually indicated on the NEMA motor nameplate, or the extreme end float (end play) limits are marked on the shaft. If not given, determine float by measuring the maximum in and out travel of the shaft. Limit coupling end float to less than half of rotor end float unless otherwise specified by the equipment manufacturer. See Table 1 for NEMA recommendations.

Assembly Instructions for Type G10 & G20

Mount coupling halves on their respective shafts as instructed in coupling Service Manual 458-110 or 458-112 (depending upon coupling size) and proceed as follows:

1. Position the movable shaft at its midpoint of travel (or as specified by the equipment manufacturer) and secure the shaft axially in this position. Align the coupling per manual 458-110 or 458-112 and set the coupling hub gap per Table 2 and Figure 1 below. Do not use hub gap from manual 458-110 or 458-112.
2. Insert gap disc and assemble coupling per Service Manual 458-110 or 458-112. Test run the assembly and measure the actual end float of the movable shaft.

TABLE 1 — Rotor & Coupling Float ★

Motor HP (Kw)	Synchronous Motor RPM	End Float — Inch	
		Motor Rotor (Min)	Cplg (Max)
500 (400) & Below	1800 & Below	.25	.09
300 (250) to 500 (400) incl.	3600 & 3000	.50	.19
600 (500) & Higher	All Speeds	.50	.19

★ From NEMA Standard MG 1-20.81, March 1988.

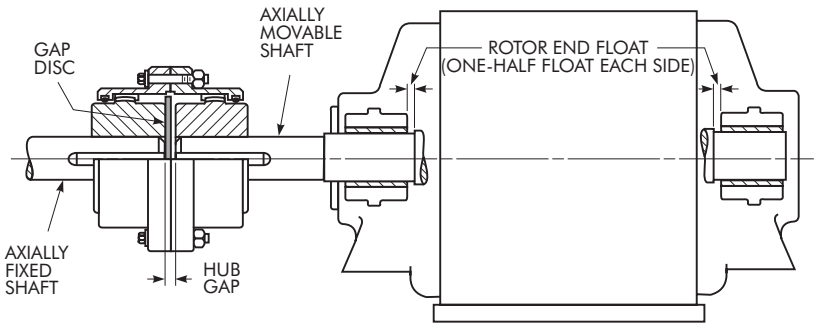
TABLE 2 — G10 & G20 End Float & Standard Gap Disc Dimensions — Inches

CPLG SIZE	End Float †	Gap Disc ‡		Hub Gap	
		Thickness	Dia.		
1010	.094	.156	2.95	.203	.005
1015	.094	.156	3.70	.203	
1020	.094	.188	4.50	.234	
1025	.094	.281	5.55	.328	
1030	.094	.312	6.50	.359	
1035	.188	.312	7.55	.406	.010
1040	.188	.312	8.95	.406	
1045	.188	.438	9.95	.531	
1050	.188	.438	10.95	.531	
1055	.188	.469	12.00	.563	
1060	.188	.532	13.12	.625	
1070	.188	.625	15.10	.719	
1080/2080G	.188	.625	16.38	.719	
1090/2090G	.188	.875	18.50	.969	
1100/2100G	.188	.875	20.50	.969	
1110/2110G	.188	.875	22.38	.969	
1120/2120G	.188	.875	24.50	.969	
1130/2130G	.188	1.312	26.62	1.406	
1140/2140G	.188	1.312	28.62	1.406	
1150/2150G	.188	1.312	30.62	1.406	

† If these values exceed one-half rotor end float or equipment manufacturer's specification, refer to Factory. Dimensions are nominal values only.

‡ Gap disc material: Neoprene, 70 durometer.

Figure 1 — Type G10 or G20
(Illustration represents Sizes 1010 thru 1070G20 Couplings)



Assembly Instructions For Type G32 (& G31)

Mount coupling hubs on their respective shafts as instructed in Service Manual 458-110 or 458-112 (depending upon coupling size) and then proceed as follows:

1. Determine spacer design. The spacer could be provided with steel spacer plates as shown in Figure 2 or with integral bumper faces as shown in Figure 3. For spacers with integral bumper faces proceed to step 2. For spacers with spacer plate design proceed as follows:

   Measure the thickness of the spacer plates and make sure they agree with the values specified in Table 3. Seat spacer plates into counterbores of spacer.
2. Determine the distance between shaft ends (dimension BE) as shown in Figure 2 or Figure 3. Accurately measure dimension SL at 90° intervals. If measurement varies by more than .010", check spacer plates for proper seating. The required BE dimension is equal to SG + SL + SG. See Table 3 for SG dimension.
3. Position the movable shaft at its midpoint of travel (or as specified by the equipment manufacturer) and secure the shaft axially in this position. Set the distance between flex hub faces to the value determined in Step 2. Align the coupling per instructions in Service Manual 458-110 or 458-112.
4. Position spacer with assembled spacer plates (if so equipped) between the flex hubs. Assemble coupling per Service Manual 458-110 or 458-112. NOTE: Use one half of the listed lube weight amount in each end of coupling. No additional lube weight per inch of spacer length is required for either spacer design. Test run and measure actual end float or movable shaft.

TABLE 3 — G32 End Float & Spacer Plate Dimensions — Inches

CPLG SIZE	End Float †	Spacer Plate ★		SG	BE Tolerance
		Thickness +.000 -.005	Dia +.000 -.010		
1015	.094	.188	3.578	.0235	.005
1020	.094	.198	4.588	.0235	
1025	.094	.248	5.458	.0235	
1030	.094	.268	6.458	.0235	
1035	.188	.276	7.398	.047	.010
1040	.188	.376	8.768	.047	
1045	.188	.436	9.768	.047	
1050	.188	.446	10.768	.047	
1055	.188	.456	12.128 ‡	.047	
1060	.188	.536	13.288 ‡	.047	
1070	.188	.656	15.298	.047	
1080/2080 thru 1150/2150	.188	. . .	. . .	.047	

★ Spacer plate material: AISI 1018 or better.
† If these values exceed one-half rotor end float or equipment manufacturer's specification, refer to Factory. Dimensions are nominal values only.
‡ Spacer plate is stepped on O.D.; large diameter fits spacer counterbore.

Figure 2 — Type G32 & G31, Stock Spacer Design (Illustration represents Sizes 1015 thru 1070G32 couplings)

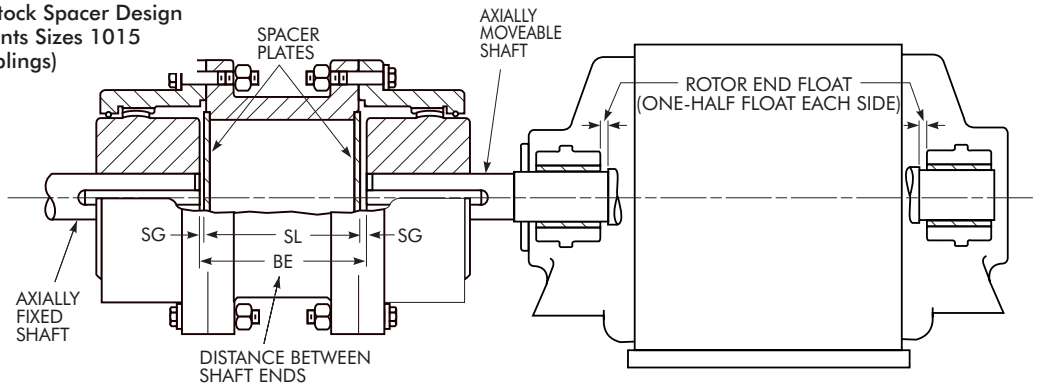
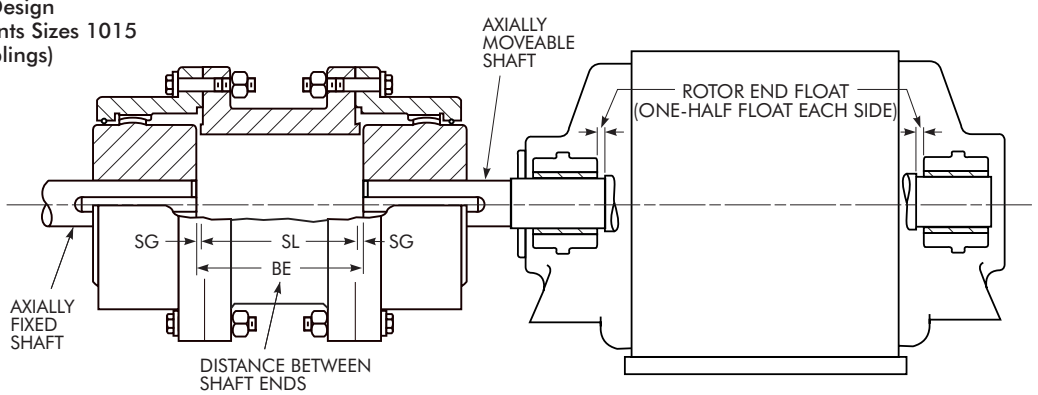


Figure 3 — Non-Stock Spacer Design (Illustration represents Sizes 1015 thru 1070G32 couplings)



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