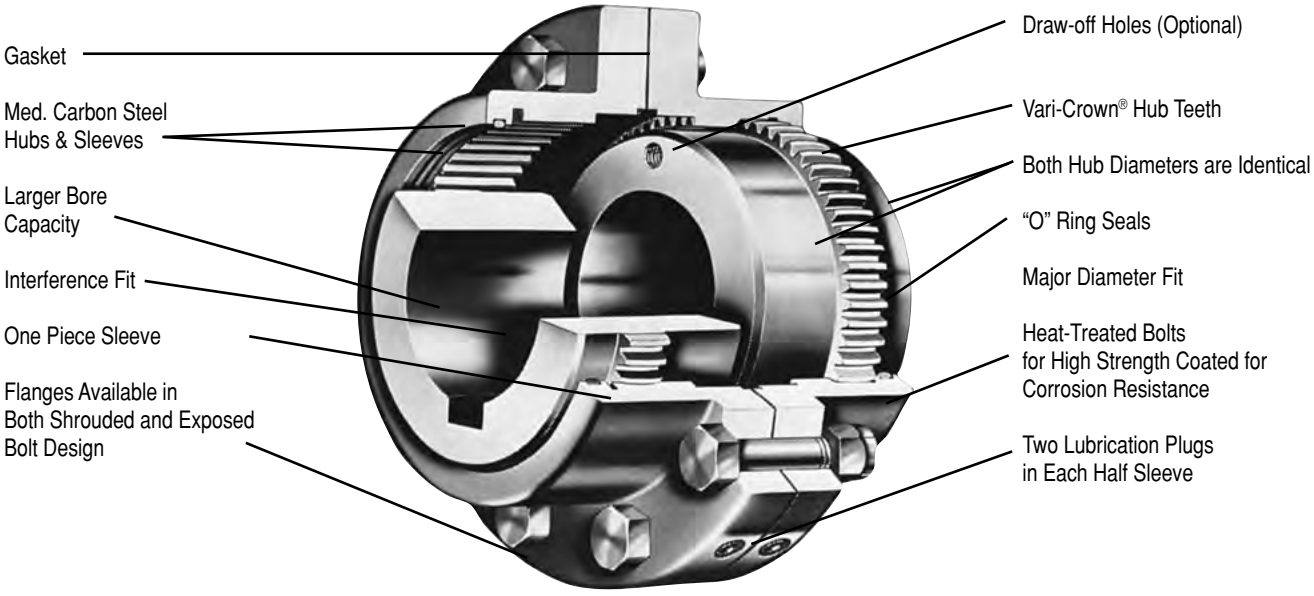
Lovejoy / Sier-Bath Flanged Sleeve Gear Couplings



Lovejoy / Sier-Bath Flanged Sleeve Gear Couplings

F Type Flex-Flex Couplings

The F Type coupling consists of two flex hubs, two sleeves and one accessory kit. This coupling is supplied with exposed bolts as standard. Shrouded bolts are available upon request through size 5.5.

Features

- Patented Vari-Crown® tooth form for long life
- Standard 20° pressure angle
- Heat treated bolts for greater strength
- Corrosion resistant bolts and nuts for ease of maintenance
- Provides parallel, angular misalignment and end float
- Flex Half coupling interchangeable with industry standards

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F Type Performance Data

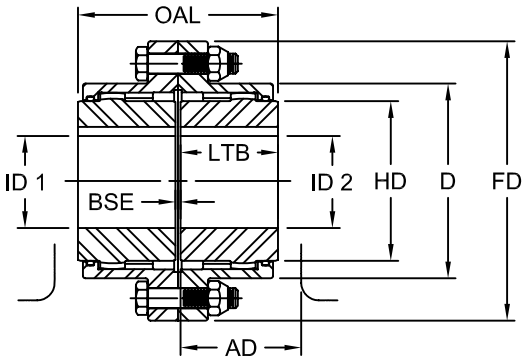
Size	Nominal Torque		Maximum Speed		ID1 - ID2 Max Bore		ID1 - ID2 Rough Stock Bore		Weight		Axial Misalignment		Max Angular Misalignment Degrees
	in-lb	Nm	Unbal RPM	Bal RPM	in	mm	in	mm	lbs	kg	in	mm	
1	7,600	850	6,000	9,000	1.625	42	0.44	11	9	4	0.056	1.4	1.5° Per Gear Mesh
1.5	18,900	2 140	5,500	8,250	2.125	56	0.69	18	19	9	0.060	1.5	
2	31,500	3 560	5,000	7,500	2.750	73	0.94	24	34	15	0.085	2.2	
2.5	56,700	6 410	4,400	6,600	3.250	85	1.44	37	54	25	0.105	2.7	
3	94,500	10 700	4,000	6,000	4.000	107	1.44	37	80	36	0.115	2.9	
3.5	151,200	17 100	3,500	5,250	4.625	125	1.81	46	130	59	0.130	3.3	
4	220,500	24 900	3,000	4,500	5.375	145	2.44	62	190	86	0.150	3.8	
4.5	302,400	34 200	2,700	4,050	6.000	165	3.00	76	250	114	0.175	4.4	
5	434,700	49 100	2,500	3,750	6.500	180	3.00	76	380	173	0.200	5.1	
5.5	573,300	64 800	2,200	3,300	7.500	200	4.00	101	520	236	0.220	5.6	
6	749,700	84 700	2,100	3,150	8.250	225	4.00	101	650	295	0.120	3.0	0.75° Per Gear Mesh
7	1,008,000	113 900	2,000	3,000	9.500	255	5.00	127	950	431	0.135	3.4	
8	1,323,000	149 500	1,900	2,850	11.500	310	6.00	152	1,560	708	0.160	4.1	
9	1,827,000	206 400	1,800	2,700	12.500	340	7.00	177	2,015	915	0.165	4.2	

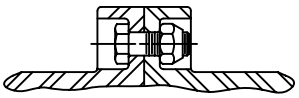
Ordering Information

- Application: Driver and Driven.
- Type and size of coupling, horizontal, vertical etc.
- Power: Motor horspower or torque requirement.
- Speed: Motor RPM or Driven RPM.
- Distance between shaft ends (BSE).
- Shaft sizes.

Lovejoy / Sier-Bath Flanged Sleeve Gear Couplings

F Type Flex-Flex Couplings





Shrouded bolt design
also available

F Type Dimensional Data

Size	OAL	ID1 - ID2				LTB	BSE	AD	FD	D	HD
		Max Bore		Rough Stock Bore							
	in	in	mm	in	mm	in	in	in	in	in	in
1	3.50	1.625	42	0.44	11	1.69	0.13	2.04	4.56	3.06	2.31
1.5	4.00	2.125	56	0.69	18	1.94	0.13	2.32	6.00	3.97	3.00
2	5.00	2.750	73	0.94	24	2.44	0.13	2.94	7.00	4.86	4.00
2.5	6.25	3.250	85	1.44	37	3.03	0.19	3.47	8.38	5.84	4.63
3	7.38	4.000	107	1.44	37	3.59	0.19	3.97	9.44	6.84	5.63
3.5	8.63	4.625	125	1.81	46	4.19	0.25	4.57	11.00	7.91	6.50
4	9.75	5.375	145	2.44	62	4.75	0.25	5.00	12.50	9.25	7.50
4.5	10.94	6.000	165	3.00	76	5.31	0.31	5.50	13.63	10.38	8.50
5	12.38	6.500	180	3.00	76	6.03	0.31	6.34	15.31	11.56	9.50
5.5	14.13	7.500	200	4.00	101	6.91	0.31	7.04	16.75	12.72	10.50
6	15.13	8.250	225	4.00	101	7.41	0.31	8.35	18.00	14.00	11.50
7	17.75	9.500	255	5.00	127	8.69	0.38	9.82	20.75	15.75	13.00
8	22.38	11.500	310	6.00	152	11.00	0.38	12.31	23.25	18.34	15.50
9	23.50	12.500	340	7.00	177	11.50	0.50	13.00	26.00	20.38	17.00

Notes:
- Exposed Bolt Design is standard.
- Shrouded Bolt Design available upon request for sizes 1 through 5.5.
- Puller Holes are standard on sizes 4 through 9.
- Puller Holes are available for sizes 1 through 3.5 at an additional charge.
- Interference bores with no set screws are standard unless otherwise specified.
- Bore and keyway tolerances conform to ANSI / AGMA 9002-B04.
- For metric bores and keyway tolerances, consult Lovejoy Engineering Section.

Lovejoy / Sier-Bath Flanged Sleeve Gear Couplings

FFR Single Engagement (Flex-Rigid)

The FRR Type coupling consists of one flex hub, one rigid hub, one sleeve and one accessory kit. This coupling is supplied with exposed bolts as standard. Shrouded bolts are available upon request through size 5.5.

Features

- Patented Vari-Crown® tooth form on the Flex Hub for long life
- Standard 20° pressure angle
- Heat treated bolts for greater strength
- Corrosion resistant bolts and nuts for ease of maintenance
- Accommodates angular misalignment only
- Half coupling interchangeable with industry standards

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FFR Type Performance Data

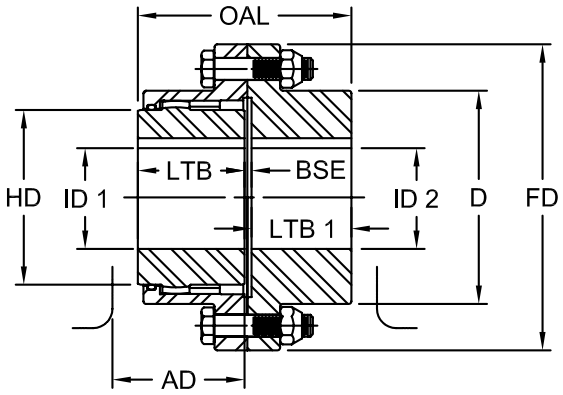
Size	Nominal Torque		Maximum Speed		ID1 Flex Hubs Max Bore		ID1 Flex Hubs Rough Stock Bore		ID2 Rigid Hubs Max Bore		ID2 Rigid Hubs Rough Stock Bore		Weight		Max Angular Misalignment
	in-lb	Nm	Unbal RPM	Bal RPM	in	mm	in	mm	in	mm	in	mm	lbs	kg	Degrees
1	7,600	850	6,000	9,000	1.625	42	0.44	11	2.125	56	solid	solid	9	4	1.5° Per Gear Mesh
1.5	18,900	2 140	5,500	8,250	2.125	56	0.69	18	2.813	76	solid	solid	17	8	
2	31,500	3 560	5,000	7,500	2.750	73	0.94	24	3.500	95	solid	solid	34	15	
2.5	56,700	6 410	4,400	6,600	3.250	85	1.44	37	4.250	114	solid	solid	55	25	
3	94,500	10 700	4,000	6,000	4.000	107	1.44	37	4.875	134	solid	solid	86	39	
3.5	151,200	17 100	3,500	5,250	4.625	125	1.81	46	5.625	150	solid	solid	125	61	
4	220,500	24 900	3,000	4,500	5.375	145	2.44	62	6.500	176	solid	solid	195	89	
4.5	302,400	34 200	2,700	4,050	6.000	165	3.00	76	7.625	202	solid	solid	268	122	
5	434,700	49 100	2,500	3,750	6.500	180	3.00	76	8.750	230	4.00	101	394	179	
5.5	573,300	64 800	2,200	3,300	7.500	200	4.00	101	9.500	260	4.50	114	526	239	
6	749,700	84 700	2,100	3,150	8.250	225	4.00	101	10.500	285	5.50	127	687	312	0.75° Per Gear Mesh
7	1,008,000	113 900	2,000	3,000	9.500	255	5.00	127	12.000	320	5.75	139	1,017	462	
8	1,323,000	149 500	1,900	2,850	11.500	310	6.00	152	14.000	375	6.50	165	1,609	730	
9	1,827,000	206 400	1,800	2,700	12.500	340	7.00	177	15.500	415	7.50	190	2,128	966	

Ordering Information

- Application: Driver and Driven.
- Type and size of coupling, horizontal, vertical etc.
- Power: Motor horspower or torque requirement.
- Speed: Motor RPM or Driven RPM.
- Distance between shaft ends (BSE).
- Shaft sizes.

Lovejoy / Sier-Bath Flanged Sleeve Gear Couplings

FFR Type Flex-Rigid Couplings



FFR Type Dimensional Data

Size	OAL	ID1				ID2				LTB	LTB 1	BSE	AD	FD	D	HD
		Flex Hubs Max Bore		Flex Hubs Rough Stock Bore		Rigid Hubs Max Bore		Rigid Hubs Rough Stock Bore								
	in	in	mm	in	mm	in	mm	in	mm	in	in	in	in	in	in	in
1	3.41	1.625	42	0.44	11	2.125	56	solid	solid	1.69	1.56	0.16	2.19	4.56	3.06	2.31
1.5	3.94	2.125	56	0.69	18	2.813	76	solid	solid	1.94	1.84	0.16	2.47	6.00	3.97	3.00
2	4.88	2.750	73	0.94	24	3.500	95	solid	solid	2.44	2.28	0.16	3.10	7.00	4.86	4.00
2.5	6.13	3.250	85	1.44	37	4.250	114	solid	solid	3.03	2.91	0.19	3.65	8.38	5.84	4.63
3	7.19	4.000	107	1.44	37	4.875	134	solid	solid	3.59	3.41	0.19	4.15	9.44	6.84	5.63
3.5	8.38	4.625	125	1.81	46	5.625	150	solid	solid	4.19	3.97	0.22	4.78	11.00	7.91	6.50
4	9.50	5.375	145	2.44	62	6.500	176	solid	solid	4.75	4.43	0.31	5.31	12.50	9.25	7.50
4.5	10.68	6.000	165	3.00	76	7.625	202	solid	solid	5.31	5.03	0.34	5.97	13.63	10.38	8.50
5	12.06	6.500	180	3.00	76	8.750	230	4.00	101	6.03	5.69	0.34	6.69	15.31	11.56	9.50
5.5	13.40	7.500	200	4.00	101	9.500	260	4.50	114	6.91	6.15	0.34	7.34	16.75	12.72	10.50
6	15.23	8.250	225	4.00	101	10.500	285	5.50	127	7.41	7.41	0.41	8.78	18.00	14.00	11.50
7	17.88	9.500	255	5.00	127	12.000	322	5.75	139	8.69	8.69	0.50	10.31	20.75	15.75	13.00
8	22.50	11.500	310	6.00	152	14.000	375	6.50	165	11.00	11.00	0.50	12.81	23.25	18.34	15.50
9	23.56	12.500	340	7.00	177	15.500	415	7.50	190	11.50	11.50	0.56	13.56	26.00	20.38	17.00

Notes:
- Exposed Bolt Design is standard.
- Shrouded Bolt Design available upon request for sizes 1 through 5.5.
- Puller Holes are standard on sizes 4 through 9.
- Puller Holes are available for sizes 1 through 3.5 at an additional charge.
- Interference bores with no set screws are standard unless otherwise specified.
- Bore and keyway tolerances conform to ANSI / AGMA 9002-B04.
- For metric bores and keyway tolerances, consult Lovejoy Engineering Section.

Lovejoy / Sier-Bath Flanged Sleeve Gear Couplings

FFS – Floating Shaft Gear Coupling

The FFS Type coupling consists of two flex-rigid couplings and one floating shaft. This coupling is supplied with rigid hubs outboard unless otherwise specified. Exposed bolts are standard. Shrouded bolts are available upon request tru sizes 5.5.

Features

- Patented Vari-Crown® tooth form on Flex Hubs for long life
- Standard 20° pressure angle
- Heat treated bolts for greater strength
- Corrosion resistant bolts and nuts for ease of maintenance
- Accommodates angular, parallel, and axial misalignment
- Removal of center assembly allows for ease of maintenance without repositioning machinery
- Rigid hubs outboard allows for larger shaft diameters

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FFS Type Performance Data

Size	Nominal Torque		Maximum Speed[1]		ID1 - ID2 Rigid Hubs Max Bore		ID1 - ID2 Rigid Hubs Rough Stock Bore		ID1 - ID2 Flex Hubs Max Bore		ID1 - ID2 Flex Hubs Rough Stock Bore		Weight		Angular Misalignment Max Degrees
	in-lb	Nm	Unbal RPM	Bal RPM	in	mm	in	mm	in	mm	in	mm	lbs	kg	
1	7,600	850	6,000	9,000	2.125	56			1.625	42	0.44	11	9	4	
1.5	18,900	2 140	5,500	8,250	2.813	76			2.125	56	0.69	18	19	9	
2	31,500	3 560	5,000	7,500	3.500	95			2.750	73	0.94	24	34	15	
2.5	56,700	6 410	4,400	6,600	4.250	114			3.250	85	1.44	37	54	25	
3	94,500	10 700	4,000	6,000	4.875	134	Solid w/Center		4.000	107	1.44	37	80	36	1.5° Per Gear Mesh
3.5	151,200	17 100	3,500	5,250	5.625	150			4.625	125	1.81	46	130	59	
4	220,500	24 900	3,000	4,500	6.500	176			5.375	145	2.44	62	190	86	
4.5	302,400	34 200	2,700	4,050	7.625	202			6.000	165	3.00	76	250	114	
5	434,700	49 100	2,500	3,750	8.750	231	4.000	101	6.500	180	3.00	76	380	173	
5.5	573,300	64 800	2,200	3,300	9.500	260	4.500	114	7.500	200	4.00	101	520	236	
6	749,700	84 700	2,100	3,150	10.500	288	5.500	127	8.250	225	4.00	101	650	295	
7	1,008,000	113 900	2,000	3,000	12.000	318	5.750	139	9.500	255	5.00	127	950	431	0.75° Per Gear Mesh
8	1,323,000	149 500	1,900	2,850	14.000	380	6.500	165	11.500	310	6.00	152	1,560	708	
9	1,827,000	206 400	1,800	2,700	15.500	418	7.500	190	12.500	340	7.00	177	2,015	915	

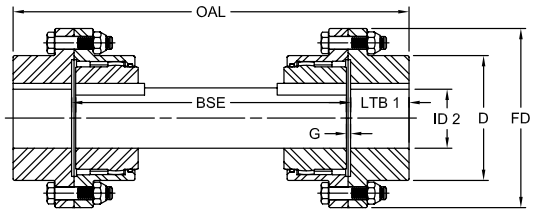
Note: ■ 1 indicates: Maximum RPM of floating shaft set determined by critical speed of floating shaft.

Ordering Information

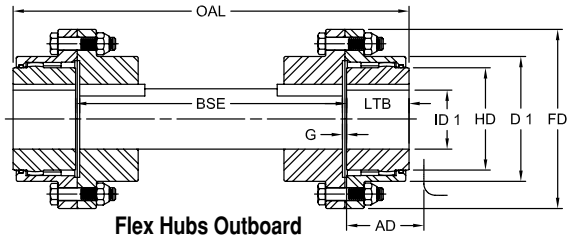
- Application: Driver and Driven.
- Type and size of coupling, horizontal, vertical etc.
- Power: Motor horspower or torque requirement.
- Speed: Motor RPM or Driven RPM.
- Distance between shaft ends (BSE).
- Equipment shaft sizes.
- Specify which hubs are to be used on the equipment (Rigid or Flex).
- Rigid hubs will be used on the equipment unless otherwise specified.

Lovejoy / Sier-Bath Flanged Gear Couplings

FFS Type Floating Shaft Couplings



Rigid Hubs Outboard



Flex Hubs Outboard

Maximum RPM of floating shaft set determined by critical speed of floating shaft

FFS Type Dimensional Data

Size	OAL Min	BSE Min	ID1 - ID2 Rigid Hubs Max Bore		ID1 - ID2 Rigid Hubs Rough Stock Bore		ID1 - ID2 Flex Hubs Max Bore		ID1 - ID2 Flex Hubs Rough Stock Bore		LTB 1	LTB	G	AD	FD	D	D 1	HD
	in	in	in	mm	in	mm	in	mm	in	mm	in	in	in	in	in	in	in	in
1	8.07	4.94	2.125	56	Solid w/Center		1.625	42	0.44	11	1.56	1.69	0.16	2.06	4.56	3.06	3.06	2.31
1.5	9.19	5.50	2.813	76			2.125	56	0.69	18	1.84	1.94	0.16	2.37	6.00	3.97	3.97	3.00
2	12.06	7.50	3.500	95			2.750	73	0.94	24	2.28	2.44	0.16	2.94	7.00	4.84	4.91	4.00
2.5	14.37	8.56	4.250	114			3.250	85	1.44	37	2.91	3.03	0.19	3.53	8.38	5.84	5.91	4.63
3	16.69	9.88	4.875	134			4.000	107	1.44	37	3.41	3.59	0.19	3.97	9.44	6.84	6.91	5.63
3.5	19.25	11.31	5.625	150			4.625	125	1.81	46	3.97	4.19	0.22	4.56	11.00	7.91	7.91	6.50
4	21.82	12.94	6.500	176			5.375	145	2.44	62	4.44	4.75	0.31	5.00	12.50	9.25	9.25	7.50
4.5	24.69	14.63	7.625	202			6.000	165	3.00	76	5.03	5.31	0.34	5.69	13.63	10.38	10.38	8.50
5	28.07	16.69	8.750	231	4.000	101	6.500	180	3.00	76	5.69	6.03	0.34	6.35	15.31	11.56	11.56	9.50
5.5	30.87	18.56	9.500	260	4.500	114	7.500	200	4.00	101	6.16	6.91	0.34	6.59	16.75	12.72	12.81	10.50
6	35.37	20.56	10.500	288	5.500	127	8.250	225	4.00	101	7.41	7.41	0.41	8.78	18.00	14.00	14.00	11.50
7	40.63	23.25	12.000	318	5.750	139	9.500	255	5.00	127	8.69	8.69	0.50	10.31	20.75	15.75	15.75	13.00
8	49.63	27.63	14.000	380	6.500	165	11.500	310	6.00	152	11.00	11.00	0.50	12.81	23.25	18.34	18.50	15.50
9	52.13	29.13	15.500	418	7.500	190	12.500	340	7.00	177	11.50	11.50	0.56	13.56	26.00	20.38	20.38	17.00

Notes:
- Exposed Bolt Design is standard.
- Shrouded Bolt Design available upon request for sizes 1 through 5.5.
- Puller Holes are standard on sizes 4 through 9.
- Puller Holes are available for sizes 1 through 3.5 at an additional charge.
- Interference bores with no set screws are standard unless otherwise specified.
- Bore and keyway tolerances conform to ANSI / AGMA 9002-B04.
- For metric bores and keyway tolerances, consult Lovejoy Engineering Section.

Lovejoy / Sier-Bath Heavy Duty Flanged Sleeve Gear Couplings

FHD Type Flex-Flex Couplings

The FHD Type coupling consists of two flex hubs, two sleeves with bolt-on seal carriers and one accessory kit. This coupling is supplied with exposed bolts only.

Features

- Patented Vari-Crown® tooth form for long life
- Standard 20° pressure angle
- Heat treated bolts for greater strength
- Corrosion resistant bolts and nuts for ease of maintenance
- Provides parallel, angular misalignment and end float
- Designed for high-torque low-speed applications that occur in mill operations

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FHD Type Performance Data

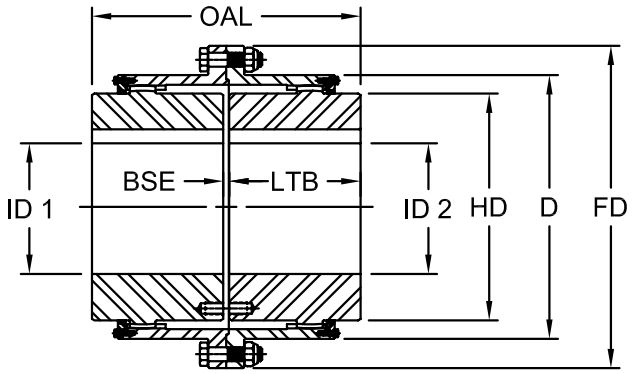
Size	Nominal Torque in-lb	Nominal Torque Nm	Maximum Speed Unbal RPM	Maximum Speed Bal RPM	ID1 - ID2 Max Bore Standard Keyway in	ID1 - ID2 Max Bore Standard Keyway mm	Weight lbs	Weight kg	Parallel Misalignment in	Parallel Misalignment mm	Angular Misalignment Degrees
7	1,008,000	113 900	2,000	3,000	9.500	255	950	431	0.135	3.429	0.75° Per Gear Mesh
8	1,323,500	149 000	1,900	2,850	11.500	310	1,560	708	0.160	4.064	
9	1,827,700	206 400	1,750	2,625	12.500	340	2,015	915	0.165	4.191	
10	2,521,000	280 000	1,550	2,325	13.750	355	2,500	1,135	0.180	4.572	
11	3,466,000	390 000	1,400	2,100	15.500	410	3,380	1,535	0.205	5.207	
12	4,412,000	500 000	1,300	1,950	17.000	435	4,165	1,891	0.210	5.334	
13	5,249,000	600 000	1,150	1,725	18.250	480	5,215	2,368	0.230	5.842	
14	6,429,000	730 000	1,050	1,575	19.500	—	6,400	2,906	0.255	6.477	
15	7,752,000	880 000	900	1,350	21.000	—	7,710	3,500	0.280	7.112	
16	9,454,000	1 070 000	800	1,200	22.500	—	9,250	4,200	0.295	7.493	
18	12,605,000	1 420 000	550	825	25.500	—	11,890	5,398	0.295	7.493	
20	17,017,000	1 920 000	450	675	28.000	—	16,830	7,641	0.280	7.112	
22	21,429,000	2 420 000	380	570	31.000	—	21,970	9,974	0.310	7.874	
24	26,471,000	2 990 000	325	485	34.000	—	27,735	12,592	0.300	7.620	
26	32,773,000	3 700 000	280	420	37.000	—	34,370	15,604	0.300	7.620	
28	39,076,000	4 410 000	240	360	40.000	—	40,910	18,573	0.320	8.128	
30	47,269,000	5 340 000	220	330	42.000	—	47,470	21,551	0.320	8.128	

Ordering Information

- Application: Driver and Driven.
- Type and size of coupling, horizontal, vertical etc.
- Power: Motor horspower or torque requirement.
- Speed: Motor RPM or Driven RPM.
- Distance between shaft ends (BSE).
- Shaft sizes.

Lovejoy / Sier-Bath Heavy Duty Flanged Sleeve Gear Couplings

FHD Type Flex-Flex Couplings



FHD Type Dimensional Data

Size	OAL	ID1 - ID2 Max Bore Standard Keyway		1 Rectangular Keyway Width	1 Rectangular Keyway Depth	LTB	BSE	FD	D	HD
	in	in	mm	in	in	in	in	in	in	in
7	17.76	9.500	255	2.5000	0.8750	8.69	0.38	20.75	15.75	13.00
8	22.38	11.500	310	3.0000	1.0000	11.00	0.38	23.25	18.34	15.50
9	23.50	12.500	340	3.0000	1.0000	11.50	0.50	26.00	20.38	17.00
10	24.50	13.750	355	3.5000	1.2500	12.00	0.50	28.00	22.31	18.50
11	26.75	15.500	410	4.0000	1.5000	13.13	0.50	30.50	24.36	21.00
12	28.25	17.000	435	4.0000	1.5000	13.88	0.50	33.00	26.63	22.75
13	30.00	18.250	480	5.0000	1.7500	14.63	0.75	35.75	28.88	24.75
14	31.75	19.500	—	5.0000	1.7500	15.50	0.75	38.00	31.68	26.50
15	33.75	21.000	—	5.0000	1.7500	16.50	0.75	40.50	32.97	28.50
16	35.75	22.500	—	6.0000	2.0000	17.38	1.00	43.00	35.13	30.38
18	37.00	25.500	—	6.0000	2.0000	18.00	1.00	47.25	39.25	34.25
20	43.25	28.000	—	7.0000	2.5000	21.13	1.00	53.50	43.50	38.00
22	47.00	31.000	—	8.0000	2.7500	23.00	1.00	59.00	47.63	41.81
24	50.50	34.000	—	9.0000	3.0000	24.75	1.00	64.25	51.75	45.50
26	54.00	37.000	—	9.0000	3.0000	26.50	1.00	68.50	55.88	49.38
28	55.25	40.000	—	10.0000	3.5000	27.13	1.00	73.75	60.00	53.00
30	56.25	42.000	—	10.0000	3.5000	27.63	1.00	78.00	64.13	57.00

Notes:
- Exposed Bolt Design is standard.
- Puller Holes are standard.
- Interference bores with no set screws are standard unless otherwise specified.
- Inch bore and keyway tolerances conform to ANSI / AGMA 9002-B04, for bores above 18 inches, keyways conform to ANSI B17.1.
- For metric bore and keyway tolerances, consult Lovejoy Engineering Section.

Lovejoy / Sier-Bath Heavy Duty Flanged Sleeve Gear Couplings

FHDFR Type Flex-Rigid Couplings

The FHDFR Type coupling consists of one flex hub, one sleeve with bolt-on seal carrier, one rigid hub and one accessory kit. This coupling is supplied with exposed bolts only.

Features

- Patented Vari-Crown® tooth form for long life
- Standard 20° pressure angle
- Heat treated bolts for greater strength
- Corrosion resistant bolts and nuts for ease of maintenance
- Provides parallel, angular misalignment and end float
- Designed for high-torque low-speed applications that occur in mill operations

FHDFR Type Performance Data

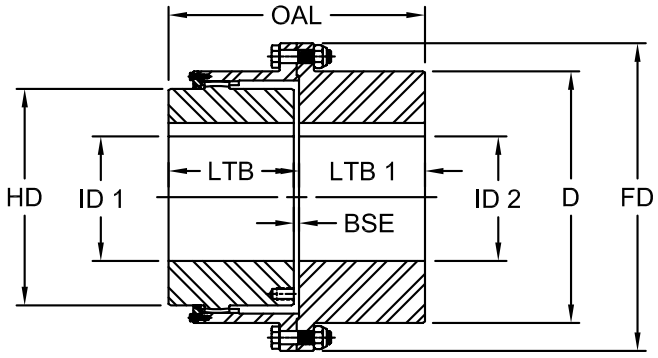
Size	Nominal Torque in-lb	Nominal Torque Nm	Maximum Speed Unbal RPM	Maximum Speed Bal RPM	ID1 Flex Hubs Max Bore Std Keyway in	ID1 Flex Hubs Max Bore Std Keyway mm	ID2 Rigid Hubs Max Bore Std Keyway in	ID2 Rigid Hubs Max Bore Std Keyway mm	Weight lbs	Weight kg	Max Angular Misalignment Degrees
7	1,008,000	113 900	2,000	3,000	9.500	255	12.000	320	1,017	462	0.75° Per Gear Mesh
8	1,323,500	149 000	1,900	2,850	11.500	310	14.000	375	1,609	730	
9	1,827,700	206 400	1,750	2,625	12.500	340	15.500	415	2,128	966	
10	2,521,000	280 000	1,550	2,325	13.750	355	17.000	455	2,723	1,236	
11	3,466,000	390 000	1,400	2,100	15.500	410	18.500	500	3,640	1,653	
12	4,412,000	500 000	1,300	1,950	17.000	435	20.250	—	4,508	2,047	
13	5,249,000	600 000	1,150	1,725	18.250	480	22.000	—	5,600	2,542	
14	6,429,000	730 000	1,050	1,575	19.500	—	23.500	—	6,837	3,104	
15	7,752,000	880 000	900	1,350	21.000	—	24.250	—	8,244	3,743	
16	9,454,000	1 070 000	800	1,200	22.500	—	26.000	—	9,848	4,471	
18	12,605,000	1 420 000	550	825	25.500	—	28.000	—	12,673	5,754	
20	17,017,000	1 920 000	450	675	28.000	—	31.000	—	18,113	8,223	
22	21,429,000	2 420 000	380	570	31.000	—	34.000	—	23,671	10,747	
24	26,471,000	2 990 000	325	485	34.000	—	37.000	—	29,958	13,601	
26	32,773,000	3 700 000	280	420	37.000	—	40.000	—	37,014	16,845	
28	39,076,000	4 410 000	240	360	40.000	—	43.000	—	44,012	19,981	
30	47,269,000	5 340 000	220	330	42.000	—	46.000	—	51,065	23,184	

Ordering Information

- Application: Driver and Driven.
- Type and size of coupling, horizontal, vertical etc.
- Power: Motor horspower or torque requirement.
- Speed: Motor RPM or Driven RPM.
- Distance between shaft ends (BSE).
- Shaft sizes.

Lovejoy / Sier-Bath Heavy Duty Flanged Sleeve Gear Couplings

FHDFR Type Flex-Rigid Couplings



FHDFR Type Dimensional Data

Size	OAL	ID1 Flex Hubs Max Bore Std Keyway		ID2 Rigid Hubs Max Bore Std Keyway		LTB	LTB1	BSE	FD	D	HD
	in	in	mm	in	mm	in	in	in	in	in	in
7	17.81	9.500	255	12.000	320	8.69	8.69	0.50	20.75	15.75	13.00
8	22.50	11.500	310	14.000	375	11.00	11.00	0.50	23.25	18.34	15.50
9	23.56	12.500	340	15.500	415	11.50	11.50	0.56	26.00	20.38	17.00
10	24.63	13.750	355	17.000	455	12.00	12.00	0.63	28.00	22.31	18.50
11	26.88	15.500	410	18.500	500	13.13	13.13	0.63	30.50	24.36	21.00
12	28.38	17.000	435	20.250	—	13.88	13.88	0.63	33.00	26.63	22.75
13	30.00	18.250	480	22.000	—	14.63	14.63	0.75	33.75	28.88	24.75
14	31.75	19.500	—	23.500	—	15.50	15.50	0.75	38.00	31.00	26.50
15	33.75	21.000	—	24.250	—	16.50	16.50	0.75	40.50	32.97	28.50
16	35.75	22.500	—	26.000	—	17.38	17.38	1.00	43.00	35.13	30.38
18	37.00	25.500	—	28.000	—	18.00	18.00	1.00	47.25	39.25	34.25
20	43.25	28.000	—	31.000	—	21.13	21.13	1.00	53.50	43.50	38.00
22	47.13	31.000	—	34.000	—	23.00	23.00	1.13	59.00	47.63	41.81
24	50.63	34.000	—	37.000	—	24.75	24.75	1.13	64.25	51.75	45.50
26	54.13	37.000	—	40.000	—	26.50	26.50	1.13	68.50	55.88	49.38
28	55.38	40.000	—	43.000	—	27.13	27.13	1.13	73.75	60.00	53.00
30	56.38	42.000	—	46.000	—	27.63	27.63	1.13	78.00	64.13	57.00

Notes:
- Exposed Bolt Design is standard.
- Puller Holes are standard.
- Interference bores with no set screws are standard unless otherwise specified.
- Inch bore and keyway tolerances conform to ANSI / AGMA 9002-B04, for bores above 18 inches, keyways are to ANSI B17.1.
- Metric bore and keyway tolerances conform to ISO 286 and ANSI / AGMA 9112-A04.
- Consult Lovejoy Technical Support for metric bores larger than 500mm.

Lovejoy / Sier-Bath Heavy Duty Flanged Sleeve Gear Couplings

FHDFS Type Floating Shaft Couplings

The FHDFS Type coupling consists of two flex-rigid couplings and one floating shaft. The coupling is supplied with the rigid hubs outboard unless otherwise specified. The coupling comes with exposed bolts only.

Features

- Patented Vari-Crown® tooth form on Flex Hubs for long life
- Standard 20° pressure angle
- Heat treated bolts for greater strength
- Corrosion resistant bolts and nuts for ease of maintenance
- Accommodates parallel and angular misalignment
- Removal of center assembly allows forease of maintenance without repositioning machinery
- Rigid hubs outboard allows for larger shaft diameters
- Designed for high-torque low-speed applications that occur in mill operations

G

FHDFS Type Performance Data

Size	Nominal Torque in-lb	Nominal Torque Nm	Maximum Speed[1] Unbal RPM	Maximum Speed[1] Bal RPM	ID1 Flex Hubs Max Bore Std Keyway in	ID1 Flex Hubs Max Bore Std Keyway mm	ID2 Rigid Hubs Max Bore Std Keyway in	ID2 Rigid Hubs Max Bore Std Keyway mm	Weight lbs	Weight kg	Max Angular Misalignment Degrees
7	1,008,000	113 900	2,000	3,000	9.500	255	12.000	320	1,017	462	0.75° Per Gear Mesh
8	1,323,000	149 000	1,900	2,850	11.500	310	14.000	375	1,609	730	
9	1,827,000	206 400	1,750	2,625	12.500	340	15.500	415	2,128	966	
10	2,521,000	280 000	1,550	2,325	13.750	355	17.000	455	2,723	1,236	
11	3,500,000	390 000	1,400	2,100	15.500	410	18.500	500	3,640	1,653	
12	4,400,000	500 000	1,300	1,950	17.000	435	20.250	—	4,508	2,047	
13	5,300,000	600 000	1,150	1,725	18.250	480	22.000	—	5,600	2,542	
14	6,400,000	730 000	1,050	1,575	19.500	—	23.500	—	6,837	3,104	
15	7,700,000	880 000	900	1,350	21.000	—	24.250	—	8,244	3,743	
16	9,500,000	1 070 000	800	1,200	22.500	—	26.000	—	9,848	4,471	
18	12,600,000	1 420 000	550	825	25.500	—	28.000	—	12,673	5,754	
20	17,000,000	1 920 000	450	675	28.000	—	31.000	—	18,113	8,223	
22	21,400,000	2 420 000	380	570	31.000	—	34.000	—	23,671	10,747	
24	26,500,000	2 990 000	325	488	34.000	—	37.000	—	29,958	13,601	
26	32,800,000	3 700 000	280	420	37.000	—	40.000	—	37,104	16,845	
28	39,100,000	4 410 000	240	360	40.000	—	43.000	—	44,012	19,981	
30	47,300,000	5 340 000	220	330	42.000	—	46.000	—	51,065	23,184	

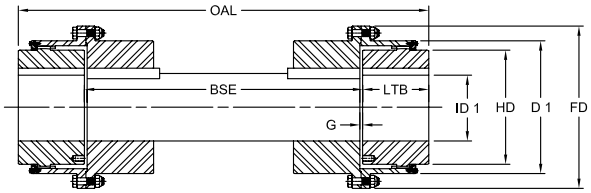
Note: ■ 1 indicates: Maximum RPM of floating shaft set determined by critical speed of floating shaft.

Ordering Information

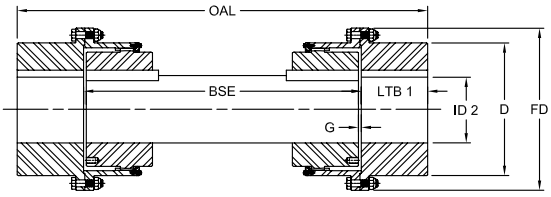
- Application: Driver and Driven.
- Type and size of coupling, horizontal, vertical etc.
- Power: Motor horspower or torque requirement.
- Speed: Motor RPM or Driven RPM.
- Distance between shaft ends (BSE).
- Connecting equipment shaft sizes.
- Specify which hubs are to be used on the equipment (Rigid or Flex).
- Rigid hubs will be used on the equipment unless otherwise specified.
- Length of floating shaft may affect max angular misalignment.

Lovejoy / Sier-Bath Heavy Duty Flanged Sleeve Gear Couplings

FHDFS Type Floating Shaft Couplings



Flex Hubs Outboard



Rigid Hubs Outboard

Maximum RPM of floating shaft set determined by critical speed of floating shaft

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FHDFS Type Dimensional Data

Size	OAL in	BSE in	ID1 Flex Hubs Max Bore Std Keyway in	ID1 mm	ID2 Rigid Hubs Max Bore Std Keyway in	ID2 mm	LTB 1 in	LTB in	G in	FD in	D in	D 1 in	HD in
7	To Be Determined From Customer Specifications		9.500	255	12.000	320	8.69	8.69	0.50	20.75	15.75	15.75	13.00
8			11.500	310	14.000	375	11.00	11.00	0.50	23.25	18.34	18.50	15.50
9			12.500	340	15.500	415	11.50	11.50	0.56	26.00	20.38	20.38	17.00
10			13.750	355	17.000	455	12.00	12.00	0.63	28.00	22.31	22.38	18.50
11			15.500	410	18.500	500	13.13	13.13	0.63	30.50	24.36	24.50	21.00
12			17.000	435	20.250	—	13.88	13.88	0.63	33.00	26.63	26.63	22.75
13			18.250	480	22.000	—	14.63	14.63	0.75	33.75	28.88	28.88	24.75
14			19.500	—	23.500	—	15.50	15.50	0.75	38.00	31.00	31.00	26.50
15			21.000	—	24.250	—	16.50	16.50	0.75	40.50	32.97	33.13	28.50
16			22.500	—	26.000	—	17.38	17.38	1.00	43.00	35.13	35.13	30.38
18			25.500	—	28.000	—	18.00	18.00	1.00	47.25	39.25	39.25	34.25
20			28.000	—	31.000	—	21.13	21.13	1.00	53.50	43.50	43.50	38.00
22			31.000	—	34.000	—	23.00	23.00	1.13	59.00	47.63	47.63	41.81
24			34.000	—	37.000	—	24.75	24.75	1.13	64.25	51.75	51.75	45.50
26			37.000	—	40.000	—	26.50	26.50	1.13	68.50	55.88	55.88	49.38
28			40.000	—	43.000	—	27.13	27.13	1.13	73.75	60.00	60.00	53.00
30			42.000	—	46.000	—	27.63	27.63	1.13	78.00	64.13	64.13	57.00

Notes:
- Exposed Bolt Design is standard.
- Puller Holes are standard.
- Interference bores with no set screws are standard unless otherwise specified.
- Inch bore and keyway tolerances conform to ANSI / AGMA 9002-B04, for bores about 18 inches, keyways are to ANSI B17.1.
- For metric bore and keyway tolerances, consult Lovejoy Engineering Section.
- Consult Lovejoy Technical Support for metric bores larger than 500mm.

Lovejoy / Sier-Bath Flanged Sleeve Gear Couplings

FMM Type Mill Couplings

The FMM Type coupling consists of one standard flex hub, one universal straight bored hub as standard, two sleeves and one accessory kit. This coupling is supplied with exposed bolts as standard. Shrouded bolts are available upon request through size 5.5.

Features

- Patented Vari-Crown® tooth form for long life
- Standard 20° pressure angle
- Heat treated bolts for greater strength
- Corrosion resistant bolts and nuts for ease of maintenance
- Provides parallel, angular misalignment and end float
- Flex Half coupling interchangeable with industry standards
- Long Universal Hub supplied to customer specifications with straight or tapered bores

G

FMM Type Performance Data

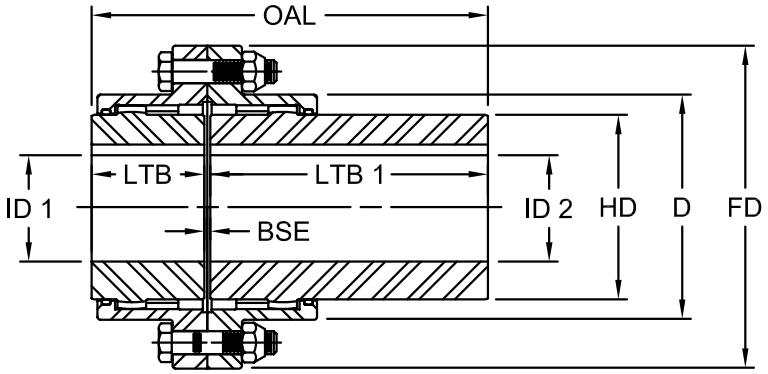
Size	Nominal Torque		Maximum Speed		ID1 - ID2 Max Bore		ID1 - ID2 Rough Stock Bore		Weight		Parallel Misalignment		Max Angular Misalignment Degrees
	in-lb	Nm	Unbal RPM	Bal RPM	in	mm	in	mm	lbs	kg	in	mm	
1	7,600	850	6,000	9,000	1.625	42	0.44	11	12	5	0.056	1.4	1.5° Per Gear Mesh
1.5	18,900	2 140	5,500	8,250	2.125	56	0.69	18	24	11	0.060	1.5	
2	31,500	3 560	5,000	7,500	2.750	73	0.94	24	45	20	0.085	2.2	
2.5	56,700	6 410	4,400	6,600	3.250	85	1.44	37	71	32	0.105	2.7	
3	94,500	10 700	4,000	6,000	4.000	107	1.44	37	104	47	0.115	2.9	
3.5	151,200	17 100	3,500	5,250	4.625	125	1.81	46	151	69	0.130	3.3	
4	220,500	24 900	3,000	4,500	5.375	145	2.44	62	234	86	0.150	3.8	
4.5	302,400	34 200	2,700	4,050	6.000	165	3.00	76	310	141	0.175	4.4	
5	434,700	49 100	2,500	3,750	6.500	180	3.00	76	450	204	0.200	5.1	
5.5	573,300	64 800	2,200	3,300	7.500	200	4.00	101	609	276	0.220	5.6	
6	749,700	84 700	2,100	3,150	8.250	225	4.00	101	764	347	0.120	3.0	0.75° Per Gear Mesh

Ordering Information

- Application: Driver and Driven.
- Type and size of coupling, horizontal, vertical etc.
- Power: Motor horspower or torque requirement.
- Speed: Motor RPM or Driven RPM.
- Distance between shaft ends (BSE).
- Shaft sizes.
- Taper per foot and length of taper if tapered bore is required.
- Specify counterbore dimensions if desired.
- Submit a drawing if available.

Lovejoy / Sier-Bath Flanged Sleeve Gear Couplings

FMM Type Mill Couplings



FMM Type Dimensional Data

Size	OAL	ID1 - ID2				LTB	LTB1 Max	BSE	FD	D	HD
		Max Bore		Rough Stock Bore							
	in	in	mm	in	mm	in	in	in	in	in	in
1	5.81	1.625	42	0.44	11	1.69	4.00	0.13	4.56	3.06	2.31
1.5	6.56	2.125	56	0.69	18	1.94	4.50	0.13	6.00	3.97	3.00
2	8.06	2.750	73	0.94	24	2.44	5.50	0.13	7.00	4.86	4.00
2.5	9.72	3.250	85	1.44	37	3.03	6.50	0.19	8.38	5.84	4.63
3	10.78	4.000	107	1.44	37	3.59	7.00	0.19	9.44	6.84	5.63
3.5	11.94	4.625	125	1.81	46	4.19	7.50	0.25	11.00	7.91	6.50
4	13.25	5.375	145	2.44	62	4.75	8.25	0.25	12.50	9.25	7.50
4.5	14.63	6.000	165	3.00	76	5.31	9.00	0.31	13.63	10.38	8.50
5	15.84	6.500	180	3.00	76	6.03	9.50	0.31	15.31	11.56	9.50
5.5	17.72	7.500	200	4.00	101	6.91	10.50	0.31	16.75	12.72	10.50
6	18.97	8.250	225	4.00	101	7.41	11.25	0.31	18.00	14.00	11.50

Notes:
- LTB1 Dimensions are the maximum lengths of Universal Hubs kept in stock and altered to customer specifications. Longer length hubs are made to order.
- Exposed Bolt Design is standard.
- Shrouded Bolt Design available upon request for sizes 1 through 5.5.
- Puller Holes are standard on sizes 4 through 6.
- Puller Holes are available for sizes 1 through 3.5 at an additional charge.
- Interference bores with no set screws are standard unless otherwise specified.
- Inch bore and keyway tolerances conform to ANSI / AGMA 9002-B04.
- For metric bore and keyway tolerances, consult Lovejoy Engineering Section.

Lovejoy / Sier-Bath Flanged Sleeve Gear Couplings

FMM Type Mill Motor Couplings

The FMM Type coupling consists of one standard flex hub, one universal straight bored hub as standard, two sleeves and one accessory kit. This coupling is supplied with exposed bolts as standard. Shrouded bolts are available upon request through size 5.5.

Features

- Patented Vari-Crown® tooth form for long life
- Standard 20° pressure angle
- Heat treated bolts for greater strength
- Corrosion resistant bolts and nuts for ease of maintenance
- Provides parallel, angular misalignment and end float
- Flex Half coupling interchangeable with industry standards
- Long Universal Hub used for AISE Motor Frames

FMM Type Mill Motor Performance Data

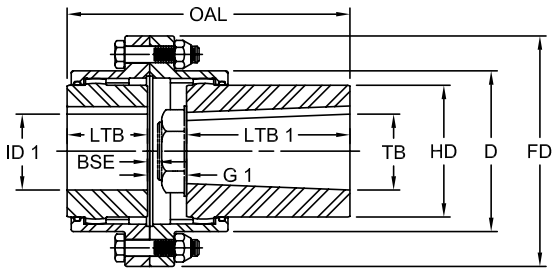
Size	Nominal Torque		Maximum Speed		ID1 - ID2 Max Bore		ID1 - ID2 Rough Stock Bore		Weight		Parallel Misalignment		Max Angular Misalignment Degrees
	in-lb	Nm	Unbal RPM	Bal RPM	in	mm	in	mm	lbs	kg	in	mm	
1	7,600	850	6,000	9,000	1.625	42	0.44	11	12	5	0.056	1.4	1.5° Per Gear Mesh
1.5	18,900	2 140	5,500	8,250	2.125	56	0.69	18	24	11	0.060	1.5	
2	31,500	3 560	5,000	7,500	2.75	73	0.94	24	45	20	0.085	2.2	
2.5	56,700	6 410	4,400	6,600	3.25	85	1.44	37	71	32	0.105	2.7	
3	94,500	10 700	4,000	6,000	4.000	107	1.44	37	104	47	0.115	2.9	
3.5	151,200	17 100	3,500	5,250	4.625	125	1.81	46	151	69	0.130	3.3	
4	220,500	24 900	3,000	4,500	5.375	145	2.44	62	234	86	0.150	3.8	
4.5	302,400	34 200	2,700	4,050	6.000	165	3.00	76	310	141	0.175	4.4	
5	434,700	49 100	2,500	3,750	6.500	180	3.00	76	450	204	0.200	5.1	
5.5	573,300	64 800	2,200	3,300	7.500	200	4.00	101	609	276	0.220	5.6	
6	749,700	84 700	2,100	3,150	8.250	225	4.00	101	764	347	0.120	3.0	0.75° Per Gear Mesh

Ordering Information

- Application: Driver and Driven.
- Type and size of coupling, horizontal, vertical etc.
- Power: Motor horspower or torque requirement.
- Speed: Motor RPM or Driven RPM.
- Distance between shaft ends (BSE).
- Shaft sizes.
- Mill Motor frame size.
- Submit a drawing if available.

Lovejoy / Sier-Bath Flanged Sleeve Gear Couplings

FMM Type Mill Motor Couplings



FMM Type Mill Motor Dimensional Data

Size	AISE Frame No	OAL in	ID1 in	LTB in	LTB1 in	G1	BSE in	FD in	D in	HD in	TB in	Mill Motor Hub Kw W in	Mill Motor Hub Kw H in
1.5	602/802 603/803 604/804	6.00 6.56 6.56	2.125	1.94	3.00 3.50 3.50	1.06 * 1.13 * 1.13 *	0.13	6.00	3.97	3.00	1.7485 - 1.7495 1.998 - 1.999 1.998 - 1.999	0.50 0.50 0.50	0.25 0.25 0.25
2	603/803 604/804 606/806	7.06 7.06 7.69	2.750	2.44	3.50 3.50 4.00	1.13 1.13 1.25	0.13	7.00	4.86	4.00	1.998 - 1.999 1.998 - 1.999 2.498 - 2.499	0.50 0.50 0.50	0.25 0.25 0.25
2.5	603/803 604/804 606/806 608/808	7.72 7.72 8.34 8.34	3.250	3.03	3.50 3.50 4.00 4.50	1.19 1.19 1.31 1.44	0.19	8.38	5.84	4.63	1.998 - 1.999 1.998 - 1.999 2.498 - 2.499 2.998 - 2.999	0.50 0.50 0.50 0.75	0.25 0.25 0.25 0.25
3	606/806 608/808 610/810 612/812	8.91 9.53 9.66 10.28	4.000	3.59	4.00 4.50 4.50 5.00	1.31 1.44 1.56 1.69	0.19	9.44	6.84	5.63	2.498 - 2.499 2.998 - 2.999 3.248 - 3.249 3.623 - 3.624	0.50 0.75 0.75 0.75	0.25 0.25 0.25 0.25
3.5	608/808 610/810 612/812 614/814	10.19 10.31 10.94 11.06	4.625	4.19	4.50 4.50 5.00 5.00	1.50 1.63 1.75 1.88	0.25	11.00	7.91	6.50	2.998 - 2.999 3.248 - 3.249 3.623 - 3.624 4.270 - 4.2485	0.75 0.75 0.75 1.00	0.25 0.25 0.25 0.38
4	610/810 612/812 614/814 616/816 618/818	10.88 11.50 11.63 12.25 12.31	5.375	4.75	4.50 5.00 5.00 5.50 6.00	1.63 1.75 1.88 2.00 1.56	0.25	12.50	9.25	7.50	3.248 - 3.249 3.623 - 3.624 4.2470 - 4.2485 4.6220 - 4.6235 4.9970 - 4.9985	0.75 0.75 1.00 1.25 1.25	0.25 0.25 0.38 0.38 0.50
4.5	614/814 616/816 618/818	12.25 12.88 12.94	6.000	5.31	5.00 5.50 6.00	1.94 2.06 1.63	0.31	13.63	10.38	8.50	4.2470 - 4.2485 4.6220 - 4.6235 4.9970 - 4.9985	1.00 1.25 1.25	0.38 0.38 0.50
5	614/814 616/816 618/818 620	12.97 13.59 13.66 14.84	6.500	6.03	5.00 5.50 6.00 6.75	1.94 2.06 1.63 2.06	0.31	15.31	11.56	9.50	4.2470 - 4.2485 4.6220 - 4.6235 4.9970 - 4.9985 5.8720 - 5.8735	1.00 1.25 1.25 1.50	0.38 0.38 0.50 0.75
5.5	616/816 618/818 620 622	14.47 14.53 15.72 16.84	7.500	6.91	5.50 6.00 6.75 7.25	2.06 1.63 2.06 2.69	0.31	16.75	12.72	10.50	4.6220 - 4.6235 4.9970 - 4.9985 5.8720 - 5.8735 6.2470 - 6.2485	1.25 1.25 1.50 1.50	0.38 0.50 0.75 0.75
6	616/816 618/818 620 622	14.97 15.03 16.22 17.34	8.250	7.41	5.50 6.00 6.75 7.25	2.06 1.63 2.06 2.69	0.31	18.00	14.00	11.50	4.6220 - 4.6235 4.9970 - 4.9985 5.8720 - 5.8735 6.2470 - 6.2485	1.25 1.25 1.50 1.50	0.38 0.50 0.75 0.75

Notes:
- * indicates: That a counterbore is required.
- Bore taper is 1-1/4 inch per foot on diameter.
- Exposed Bolt Design is standard.
- Shrouded Bolt Design available upon request for sizes 1.5 through 5.5.
- Puller Holes are standard on sizes 4 through 6.
- Puller Holes are available for sizes 1.5 through 3.5 at an additional charge.
- Interference bores with no set screws are standard unless otherwise specified.
- Inch bore and keyway tolerances conform to ANSI / AGMA 9002-B04.
- For metric bore and keyway tolerances, consult Lovejoy Engineering Section.
- 1/4 inch hub standoff.

Lovejoy / Sier-Bath Flanged Sleeve Gear Couplings

FSL Type Slide Coupling

The FSL Type coupling consists of one or two modified flex hubs depending on the maximum slide required, two sleeves, one plate with lube holes and one accessory kit. The coupling is supplied with exposed bolts as standard. Shrouded bolts are available upon request through size 5.5.

Features

- Patented Vari-Crown® tooth form for long life
- Standard 20° pressure angle
- Heat treated bolts for greater strength
- Corrosion resistant bolts and nuts for ease of maintenance
- Assembled to suit a wide range of axial movement
- Plates with lube holes so both halves of the coupling will be adequately lubricated

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FSL Type Performance Data

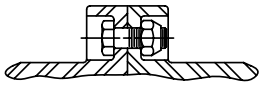
Size	Nominal Torque in-lb	Nominal Torque Nm	Maximum Speed Unbal RPM	Maximum Speed Bal RPM	ID1 - ID2 Max Bore in	ID1 - ID2 Max Bore mm	ID1 - ID2 Rough Stock Bore in	ID1 - ID2 Rough Stock Bore mm	Weight lbs	Weight kg	Max Angular Misalignment Degrees
1	7,600	850	6,000	9,000	1.625	42	0.44	11	9	4	1.5° Per Gear Mesh
1.5	18,900	2 140	5,500	8,250	2.125	56	0.69	18	19	9	
2	31,500	3 560	5,000	7,500	2.750	73	0.94	24	34	15	
2.5	56,700	6 410	4,400	6,600	3.250	85	1.44	37	54	25	
3	94,500	10 700	4,000	6,000	4.000	107	1.44	37	80	36	
3.5	151,200	17 100	3,500	5,250	4.625	125	1.81	46	130	59	
4	220,500	24 900	3,000	4,500	5.375	145	2.44	62	190	86	
4.5	302,400	34 200	2,700	4,050	6.000	165	3.00	76	250	114	
5	434,700	49 100	2,500	3,750	6.500	180	3.00	76	380	173	
5.5	573,300	64 800	2,200	3,300	7.500	200	4.00	101	520	236	
6	749,700	84 700	2,100	3,150	8.250	225	4.00	101	650	295	0.75° Per Gear Mesh
7	1,008,000	113 900	2,000	3,000	9.500	255	5.75	139	950	431	

Ordering Information

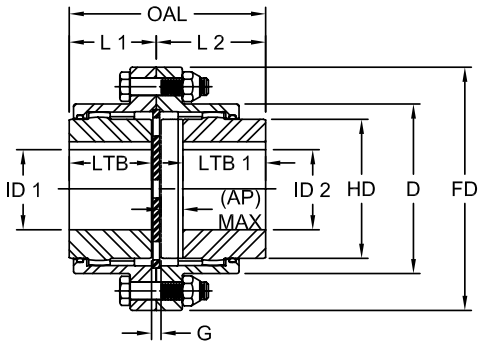
- Application: Driver and Driven.
- Type and size of coupling, horizontal, vertical etc.
- Power: Motor horspower or torque requirement.
- Speed: Motor RPM or Driven RPM.
- Distance between shaft ends (maximum-minimum shaft separation).
- Shaft sizes.
- Amount of slide required.

Lovejoy / Sier-Bath Flanged Sleeve Gear Couplings

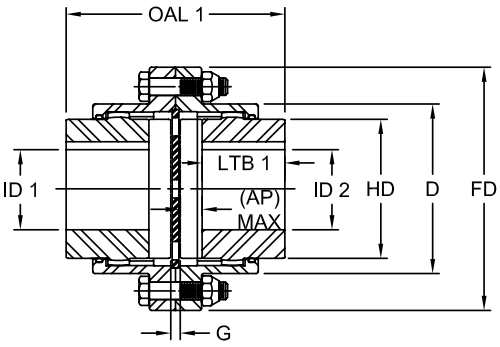
FSL Type Slide Couplings



Shrouded Bolt Design
Also Available



1 Hub Reversed
And Modified



2 Hubs Reversed
And Modified

FSL Type Dimensional Data

Size	OAL One Hub Reversed in	OAL1 Two Hubs Reversed in	L1 Std Hub in	L2 Slide Half in	ID1 - ID2 Max Bore in	ID1 - ID2 Max Bore mm	ID1 - ID2 Rough Stock Bore in	ID1 - ID2 Rough Stock Bore mm	LTB Std Hub in	LTB1 Slide Hub in	AP[1] Max in	G Min in	FD in	D in	HD in
1	3.81	4.13	1.75	2.06	1.625	42	0.44	11	1.59	1.50	0.41	0.31	4.56	3.06	2.31
1.5	4.25	4.50	2.00	2.25	2.125	56	0.69	18	1.84	1.75	0.34	0.31	6.00	3.97	3.00
2	5.69	6.38	2.50	3.19	2.750	73	0.94	24	2.34	2.25	0.78	0.31	7.00	4.86	4.00
2.5	7.03	7.81	3.13	3.91	3.250	85	1.44	37	2.94	2.78	0.94	0.38	8.38	5.84	4.63
3	8.03	8.69	3.69	4.34	4.000	107	1.44	37	3.50	3.13	1.03	0.38	9.44	6.84	5.63
3.5	9.19	9.75	4.31	4.88	4.625	125	1.81	46	4.09	3.59	1.06	0.44	11.00	7.91	6.50
4	10.44	11.13	4.88	5.56	5.375	145	2.44	62	4.56	3.94	1.31	0.63	12.50	9.25	7.50
4.5	12.00	13.06	5.47	6.53	6.000	165	3.00	76	5.13	4.50	1.69	0.69	13.63	10.38	8.50
5	13.72	15.06	6.19	7.53	6.500	180	3.00	76	5.84	5.22	1.97	0.69	15.31	11.56	9.50
5.5	15.34	16.56	7.06	8.28	7.500	200	4.00	101	6.72	5.88	2.06	0.69	16.75	12.72	10.50
6	16.53	17.94	7.56	8.97	8.250	225	4.00	101	7.16	7.09	1.47	0.81	18.00	14.00	11.50
7	19.06	20.38	8.88	10.19	9.500	255	5.75	139	8.38	7.78	1.91	1.00	20.75	15.75	13.00

Notes:
- 1 indicates: AP Max = Maximum slide per coupling half.
- Exposed Bolt Design is standard.
- Shrouded Bolt Design available upon request for sizes 1 through 5.5.
- Puller Holes are standard on sizes 4 through 9.
- Puller Holes are available for sizes 1 through 3.5 at an additional charge.
- Interference bores with no set screws are standard unless otherwise specified.
- Inch bore and keyway tolerances conform to AGMA 9002-B04.
- For metric bore and keyway tolerances, consult Lovejoy Engineering Section.

Lovejoy / Sier-Bath Flanged Sleeve Gear Couplings

FSLX Type Long Slide Couplings

The FSLX Type basic coupling consists of a standard flex half and a custom designed long slide half. The standard flex half can be replaced by a reversed and modified hub for additional slide requirement. These couplings are also supplied with a plate with lube holes. The coupling is supplied with exposed bolts as standard. Shrouded bolts available upon request through size 5.5.

Features

- Patented Vari-Crown® tooth form for long life
- Standard 20° pressure angle
- Heat treated bolts for greater strength
- Corrosion resistant bolts and nuts for ease of maintenance
- Assembled to suit a wide range of axial movement
- Plates with lube holes so both halves of the coupling will be adequately lubricated

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FSLX Type Performance Data

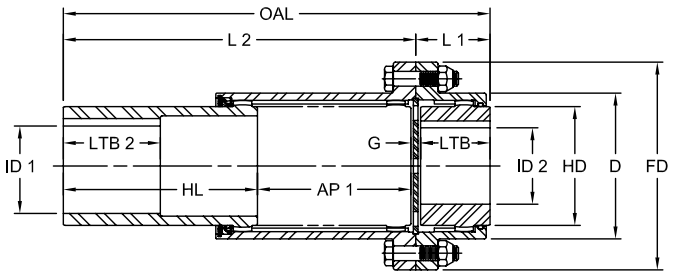
Size	Nominal Torque in-lb	Nominal Torque Nm	Maximum Speed Unbal RPM	Maximum Speed Bal RPM	ID1 - ID2 Max Bore in	ID1 - ID2 Max Bore mm	ID1 - ID2 Rough Stock Bore in	ID1 - ID2 Rough Stock Bore mm	Weight lbs	Weight kg	Max Angular Misalignment Degrees
1.5	18,900	2 140	5,500	8,250	2.125	56	0.69	18	19	9	1.5° Per Gear Mesh
2	31,500	3 560	5,000	7,500	2.750	73	0.94	24	34	15	
2.5	56,700	6 410	4,400	6,600	3.250	85	1.44	37	54	25	
3	94,500	10 700	4,000	6,000	4.000	107	1.44	37	80	36	
3.5	151,200	17 100	3,500	5,250	4.625	125	1.81	46	130	59	
4	220,500	24 900	3,000	4,500	5.375	145	2.44	62	190	86	
4.5	302,400	34 200	2,700	4,050	6.000	165	3.00	76	250	114	
5	434,700	49 100	2,500	3,750	6.500	180	3.00	76	380	173	
5.5	573,300	64 800	2,200	3,300	7.500	200	4.00	101	520	236	
6	749,700	84 700	2,100	3,150	8.250	225	4.00	101	650	295	0.75° Per Gear Mesh
7	1,008,000	113 900	2,000	3,000	9.500	255	5.75	139	950	431	

Ordering Information

- Application: Driver and Driven.
- Type and size of coupling, horizontal, vertical etc.
- Power: Motor horspower or torque requirement.
- Speed: Motor RPM or Driven RPM.
- Distance between shaft ends (maximum-minimum shaft separation).
- Shaft sizes.
- Amount of slide required.
- HL Dimension.
- LTB2 Dimension.

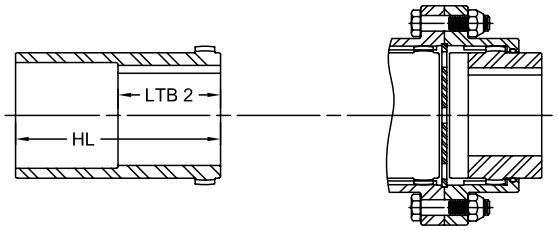
Lovejoy / Sier-Bath Flanged Sleeve Gear Couplings

FSLX Type Long Slide Couplings



Long Slide Half

Standard Half



Alternate Type hub shaft contact is deep inside hub

One Hub reversed with long slide half

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FSLX Type Dimensional Data

Size	OAL	L1 Std Hub	L2 Slide Half	ID1 - ID2 Max Bore		ID1 - ID2 Rough Stock Bore		LTB Std Hub	LTB2 Slide Hub	G Min	AP1 Long Slide Max	AP2 Long Slide w/one Hub Reversed Max	AP3 Long Slide Both Ends Max	HL	FD	D	HD
	in	in	in	in	mm	in	mm	in	in	in	in	in	in	in	in	in	in
1.5	10.41	2.00	8.41	2.125	56	0.69	18	1.84	2.19	0.31	3.38	3.72	6.75	4.88	6.00	3.97	3.00
2	10.88	2.50	8.38	2.750	73	0.94	24	2.34	2.69	0.31	3.31	4.09	6.63	4.91	7.00	4.86	4.00
2.5	13.59	3.13	10.47	3.250	85	1.44	37	2.94	3.28	0.38	4.16	5.09	8.31	6.13	8.83	5.84	4.63
3	21.72	3.69	18.03	4.000	107	1.44	37	3.50	3.84	0.38	7.78	8.81	15.56	10.06	9.44	6.84	5.63
3.5	22.38	4.31	18.06	4.625	125	1.81	46	4.09	4.44	0.44	7.66	8.72	15.31	10.19	11.00	7.91	6.50
4	23.00	4.88	18.13	5.375	145	2.44	62	4.56	5.00	0.63	7.50	8.81	15.00	10.31	12.50	9.25	7.50
4.5	23.75	5.47	18.28	6.000	165	3.00	76	5.13	5.56	0.69	7.38	9.06	14.75	10.56	13.63	10.38	8.50
5	24.16	6.19	17.97	6.500	180	3.00	76	5.84	6.28	0.69	7.06	9.03	14.13	10.56	15.31	11.56	9.50
5.5	25.09	7.06	18.03	7.500	200	4.00	101	6.72	6.88	0.69	6.81	8.88	13.63	10.88	16.75	12.72	10.50
6	25.66	7.56	18.09	8.250	225	4.00	101	7.16	7.66	0.81	6.81	8.28	13.63	10.88	18.00	14.00	11.50
7	27.06	8.88	18.19	9.500	255	5.75	139	8.38	8.94	1.00	6.81	8.72	13.63	10.88	20.75	15.75	13.00

Notes:
- Exposed Bolt Design is standard.
- Shrouded Bolt Design available upon request for sizes 1 through 5.5.
- Puller Holes are standard on sizes 4 through 9.
- Puller Holes are available for sizes 1 through 3.5 at an additional charge.
- Interference bores with no set screws are standard unless otherwise specified.
- Inch bore and keyway tolerances conform to AGMA 9002-B04.
- For metric bore and keyway tolerances, consult Lovejoy Engineering Section.

Lovejoy / Sier-Bath Flanged Sleeve Gear Couplings

FSPCR Type Spacer Couplings

The FSPCR Type coupling consists of two flex hubs, two sleeves, one spacer and two accessory kits. This coupling is supplied with exposed bolts as standard. Shrouded bolts are available upon request through size 5.5.

Features

- Patented Vari-Crown® tooth form for long life
- Standard 20° pressure angle
- Heat treated bolts for greater strength
- Corrosion resistant bolts and nuts for ease of maintenance
- Provides parallel, angular misalignment and end float
- Removal of spacer provides adequate space for the removal of either coupling half without moving the driver or driven units

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FSPCR Type Performance Data

Size	Nominal Torque		Maximum Speed[1]		ID1 - ID2 Max Bore		ID1 - ID2 Rough Stock Bore		Weight Less Spacer		Max Angular Misalignment Degrees
	in-lb	Nm	Unbal RPM	Bal RPM	in	mm	in	mm	lbs	kg	
1	7,600	850	6,000	9,000	1.625	42	0.44	11	9	4	1.5° Per Gear Mesh
1.5	18,900	2 140	5,500	8,250	2.125	56	0.69	18	19	9	
2	31,500	3 560	5,000	7,500	2.750	73	0.94	24	34	15	
2.5	56,700	6 410	4,400	6,600	3.250	85	1.44	37	54	25	
3	94,500	10 700	4,000	6,000	4.000	107	1.44	37	80	36	
3.5	151,200	17 100	3,500	5,250	4.625	125	1.81	46	130	59	
4	220,500	24 900	3,000	4,500	5.375	145	2.44	62	190	86	
4.5	302,400	34 200	2,700	4,050	6.000	165	3.00	76	250	114	
5	434,700	49 100	2,500	3,750	6.500	180	3.00	76	380	173	
5.5	573,300	64 800	2,200	3,300	7.500	200	4.00	101	520	236	
6	749,700	84 700	2,100	3,150	8.250	225	4.00	101	650	295	0.75° Per Gear Mesh
7	1,008,000	113 900	2,000	3,000	9.500	255	5.00	127	950	431	

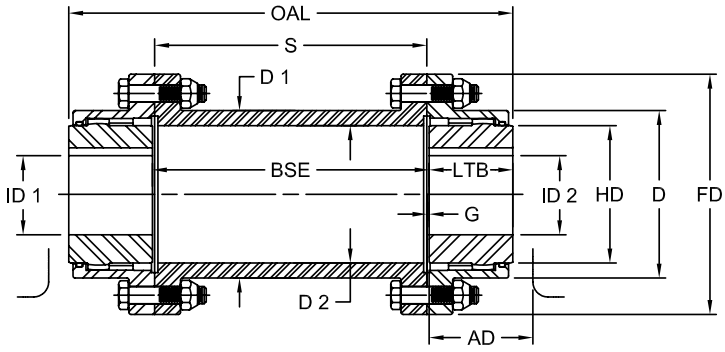
Note: ■ 1 indicates: Maximum RPM of spacer set determined by critical speed of spacer.

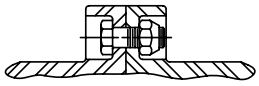
Ordering Information

- Application: Driver and Driven.
- Type and size of coupling, horizontal, vertical etc.
- Power: Motor horspower or torque requirement.
- Speed: Motor RPM or Driven RPM.
- Distance between shaft ends (BSE).
- Shaft sizes.

Lovejoy / Sier-Bath Flanged Sleeve Gear Couplings

FSPCR Type Spacer Couplings





Shrouded bolt design also available

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FSPCR Type Dimensional Data

Size	OAL in	S in	AD in	ID1 - ID2 Max Bore in	ID1 - ID2 Max Bore mm	ID1 - ID2 Rough Stock Bore in	ID1 - ID2 Rough Stock Bore mm	LTB in	BSE in	G in	FD in	D in	HD in	D1 in	D2 in
1	Determined by Shaft Separation		2.04	1.625	42	0.44	11	1.69	Determined by Customer Specs	0.06	4.56	3.06	2.31	3.00	2.41
1.5			2.32	2.125	56	0.69	18	1.94		0.06	6.00	3.97	3.00	3.75	3.13
2			2.94	2.750	73	0.94	24	2.44		0.06	7.00	4.86	4.00	4.75	4.00
2.5			3.47	3.250	85	1.44	37	3.03		0.09	8.38	5.84	4.63	5.50	4.78
3			3.97	4.000	107	1.44	37	3.59		0.09	9.44	6.84	5.63	6.50	5.75
3.5			4.57	4.625	125	1.81	46	4.19		0.13	11.00	7.91	6.50	7.38	6.63
4			5.00	5.375	145	2.44	62	4.75		0.13	12.50	9.25	7.50	8.63	7.75
4.5			5.50	6.000	165	3.00	76	5.31		0.16	13.63	10.38	8.50	9.38	8.50
5			6.34	6.500	180	3.00	76	6.03		0.16	15.31	11.56	9.50	10.38	9.56
5.5			7.04	7.500	200	4.00	101	6.91		0.16	16.75	12.72	10.50	11.44	10.56
6			8.35	8.250	225	4.00	101	7.41		0.16	18.00	14.00	11.50	12.38	11.44
7			9.82	9.500	255	5.00	127	8.69		0.19	20.75	15.75	13.00	14.00	13.00

Notes:
- Exposed Bolt Design is standard.
- Shrouded Bolt Design available upon request for sizes 1 through 5.5.
- Puller Holes are standard on sizes 4 through 9.
- Puller Holes are available for sizes 1 through 3.5 at an additional charge.
- Interference bores with no set screws are standard unless otherwise specified.
- Inch bore and keyway tolerances conform to AGMA 9002-B04.
- For metric bore and keyway tolerances, consult Lovejoy Engineering Section.

Lovejoy / Sier-Bath Flanged Sleeve Gear Couplings

FLEF Type Limited End Float Couplings

The FLEF Type coupling consists of two flex hubs, two sleeves, one accessory kit and a steel plate to limit the movement. This coupling is supplied with exposed bolts as standard. Shrouded bolts are available upon request through size 5.5.

Features

- Patented Vari-Crown® tooth form for long life
- Standard 20° pressure angle
- Heat treated bolts for greater strength
- Corrosion resistant bolts and nuts for ease of maintenance
- Provides and maintains restriced end float in sleeve bearings and rotor systems where thrust is not permitted
- Optional flow-through steel plate with lube holes available

FLEF Type Performance Data

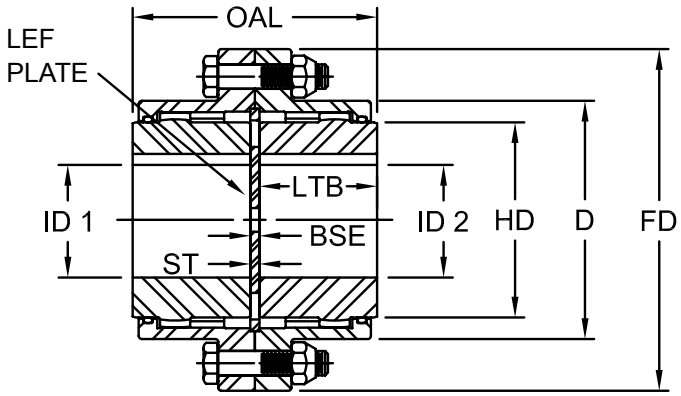
Size	Nominal Torque		Maximum Speed		ID1 - ID2 Max Bore		ID1 - ID2 Rough Stock Bore		Weight		Parallel Misalignment		Max Angular Misalignment Degrees
	in-lb	Nm	Unbal RPM	Bal RPM	in	mm	in	mm	lbs	kg	in	mm	
1	7,600	850	6,000	9,000	1.625	42	0.44	11	9	4	0.056	1.4	1.5° Per Gear Mesh
1.5	18,900	2 140	5,500	8,250	2.125	56	0.69	18	19	9	0.060	1.5	
2	31,500	3 560	5,000	7,500	2.750	73	0.94	24	34	15	0.085	2.2	
2.5	56,700	6 410	4,400	6,600	3.250	85	1.44	37	54	25	0.105	2.7	
3	94,500	10 700	4,000	6,000	4.000	107	1.44	37	80	36	0.115	2.9	
3.5	151,200	17 100	3,500	5,250	4.625	125	1.81	46	130	59	0.130	3.3	
4	220,500	24 900	3,000	4,500	5.375	145	2.44	62	190	86	0.150	3.8	
4.5	302,400	34 200	2,700	4,050	6.000	165	3.00	76	250	114	0.175	4.4	
5	434,700	49 100	2,500	3,750	6.500	180	3.00	76	380	173	0.200	5.1	
5.5	573,300	64 800	2,200	3,300	7.500	200	4.00	101	520	236	0.220	5.6	
6	749,700	84 700	2,100	3,150	8.250	225	4.00	101	650	295	0.120	3.0	0.75° Per Gear Mesh
7	1,008,000	113 900	2,000	3,000	9.500	255	5.00	127	950	431	0.135	3.4	

Ordering Information

- Application: Driver and Driven.
- Type and size of coupling, horizontal, vertical etc.
- Power: Motor horspower or torque requirement.
- Speed: Motor RPM or Driven RPM.
- Distance between shaft ends (BSE).
- Shaft sizes.
- Amount of thrust on either or both shafts.
- Submit a drawing if available.

Lovejoy / Sier-Bath Flanged Sleeve Gear Couplings

FLEF Type Limited End Float Couplings



FLEF Type Dimensional Data

Size	OAL	ID1 - ID2				LTB	BSE	F[1] (ref)	ST	FD	D	HD
		Max Bore		Rough Stock Bore								
	in	in	mm	in	mm	in	in	in	in	in	in	in
1	3.56	1.625	42	0.44	11	1.69	0.19	0.13	0.13	4.56	3.06	2.31
1.5	4.06	2.125	56	0.69	18	1.94	0.19	0.13	0.13	6.00	3.97	3.00
2	5.06	2.750	73	0.94	24	2.44	0.19	0.13	0.13	7.00	4.86	4.00
2.5	6.34	3.250	85	1.44	37	3.03	0.28	0.19	0.19	8.38	5.84	4.63
3	7.47	4.000	107	1.44	37	3.59	0.28	0.19	0.19	9.44	6.84	5.63
3.5	8.69	4.625	125	1.81	46	4.19	0.31	0.25	0.19	11.00	7.91	6.50
4	9.88	5.375	145	2.44	62	4.75	0.38	0.25	0.25	12.50	9.25	7.50
4.5	11.06	6.000	165	3.00	76	5.31	0.44	0.25	0.31	13.63	10.38	8.50
5	12.59	6.500	180	3.00	76	6.03	0.53	0.31	0.38	15.31	11.56	9.50
5.5	14.34	7.500	200	4.00	101	6.91	0.53	0.31	0.38	16.75	12.72	10.50
6	15.28	8.250	225	4.00	101	7.41	0.47	0.31	0.31	18.00	14.00	11.50
7	17.94	9.500	255	5.00	127	8.69	0.56	0.38	0.38	20.75	15.75	13.00

Notes:
- 1 indicates: F is the total end float. (May be modified.)
- Exposed Bolt Design is standard.
- Shrouded Bolt Design available upon request for sizes 1 through 5.5.
- Puller Holes are standard on sizes 4 through 9.
- Puller Holes are available for sizes 1 through 3.5 at an additional charge.
- Interference bores with no set screws are standard unless otherwise specified.
- Inch bore and keyway tolerances conform to AGMA 9002-B04.
- For metric bore and keyway tolerances, consult Lovejoy Engineering Section.

Lovejoy / Sier-Bath Flanged Sleeve Gear Couplings

FRR Type Rigid-Rigid Couplings

The F Type coupling consists of two rigid hubs and one accessory kit. This coupling is supplied with exposed bolts as standard. Shrouded bolts are available upon request through size 5.5.

Features

- All Steel construction
- Torque capacities that exceed the mild steel shafts to be coupled
- Heat treated bolts for greater strength
- Corrosion resistant bolts and nuts for ease of maintenance
- Rigid Half coupling interchangeable with industry standards

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FRR Type Performance Data

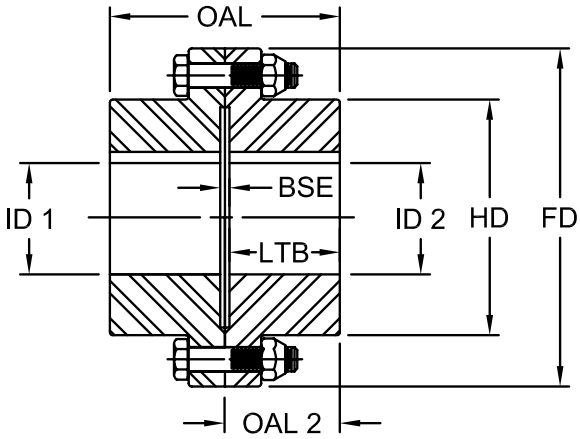
Size	Nominal Torque		Maximum Speed		ID1 - ID2 Max Bore		ID1 - ID2 Rough Stock Bore		Weight		Max Angular Misalignment Degrees
	in-lb	Nm	Unbal RPM	Bal RPM	in	mm	in	mm	lbs	kg	
1	7,600	850	6,000	9,000	2.125	56	solid	solid	10	5	0°
1.5	18,900	2 140	5,500	8,250	2.813	76	solid	solid	20	9	
2	31,500	3 560	5,000	7,500	3.500	95	solid	solid	34	15	
2.5	56,700	6 410	4,400	6,600	4.250	114	solid	solid	60	27	
3	94,500	10 700	4,000	6,000	4.875	134	solid	solid	91	41	
3.5	151,200	17 100	3,500	5,250	5.625	150	solid	solid	143	65	
4	220,500	24 900	3,000	4,500	6.500	176	solid	solid	211	96	
4.5	302,400	34 200	2,700	4,050	7.625	202	solid	solid	289	131	
5	434,700	49 100	2,500	3,750	8.750	230	4.00	101	417	189	
5.5	573,300	64 800	2,200	3,300	9.500	260	4.50	114	541	246	
6	749,700	84 700	2,100	3,150	10.500	285	5.50	127	724	329	
7	1,008,000	113 900	2,000	3,000	12.000	320	5.75	139	1,084	492	

Ordering Information

- Application: Driver and Driven.
- Type and size of coupling, horizontal, vertical etc.
- Power: Motor horspower or torque requirement.
- Speed: Motor RPM or Driven RPM.
- Distance between shaft ends (BSE).
- Shaft sizes.
- Submit drawing if available.

Lovejoy / Sier-Bath Flanged Sleeve Gear Couplings

FRR Type Rigid-Rigid Couplings



FRR Type Dimensional Data

Size	OAL in	OAL2 in	ID1 - ID2 Max Bore in	ID1 - ID2 Max Bore mm	ID1 - ID2 Rough Stock Bore in	ID1 - ID2 Rough Stock Bore mm	LTB in	BSE in	FD in	HD in
1	3.31	1.66	2.125	56	solid	solid	1.56	0.19	4.56	3.06
1.5	3.88	1.94	2.813	76	solid	solid	1.84	0.19	6.00	3.97
2	4.75	2.38	3.500	95	solid	solid	2.28	0.19	7.00	4.86
2.5	6.00	3.00	4.250	114	solid	solid	2.91	0.19	8.38	5.84
3	7.00	3.50	4.875	134	solid	solid	3.41	0.19	9.44	6.84
3.5	8.13	4.07	5.625	150	solid	solid	3.97	0.19	11.00	7.91
4	9.25	4.63	6.500	176	solid	solid	4.44	0.38	12.50	9.25
4.5	10.44	5.22	7.625	202	solid	solid	5.03	0.38	13.63	10.38
5	11.75	5.88	8.750	230	4.00	101	5.69	0.38	15.31	11.56
5.5	12.69	6.35	9.500	260	4.50	114	6.16	0.38	16.75	12.72
6	14.88	7.44	10.500	285	5.50	127	7.25	0.50	18.00	14.00
7	18.00	9.00	12.000	320	5.75	139	8.69	0.63	20.75	15.75

Notes:
- Exposed Bolt Design is standard.
- Shrouded Bolt Design available upon request for sizes 1 through 5.5.
- Puller Holes are standard on sizes 4 through 7.
- Puller Holes are available for sizes 1 through 3.5 at an additional charge.
- Interference bores with no set screws are standard unless otherwise specified.
- Inch bore and keyway tolerances conform to AGMA 9002-B04.
- For metric bore and keyway tolerances, consult Lovejoy Engineering Section.

Lovejoy / Sier-Bath Flanged Sleeve Gear Couplings

FLA Type Flex-Flex All-Metal Labyrinth Seal Couplings

The FLA Type coupling consists of two special flex hubs, Two sleeves and one accessory kit. This coupling is supplied with exposed bolts as standard. Shrouded bolts are available upon request through size 5.5.

Features

- All-Metal Labyrinth Seals
- AISI 4140 Alloy Steel Construction
- Patented Vari-Crown® tooth form for long life
- Standard 20° pressure angle
- Heat treated bolts for greater strength
- Corrosion resistant bolts and nuts for ease of maintenance
- Provides parallel, angular misalignment and end float
- Flex Half coupling interchangeable with industry standards

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FLA Type Performance Data

Size	Nominal Torque in-lb	Nominal Torque Nm	Maximum Speed Unbal RPM	Maximum Speed Bal RPM	ID1 - ID2 Max Bore Standard Keyway in	ID1 - ID2 Max Bore Standard Keyway mm	ID1 - ID2 Rough Stock Bore in	ID1 - ID2 Rough Stock Bore mm	Weight lbs	Weight kg	Parallel Misalignment in	Parallel Misalignment mm	Max Angular Misalignment Degrees
1.5	15,000	1 700	12,000	18,000	1.625	41	0.38	9	17.6	8	0.028	0.7	0.5° Per Gear Mesh
2	35,500	4 000	9,300	13,950	2.125	53	0.5	12	29.1	13	0.035	0.9	
2.5	69,300	7 800	7,900	11,850	2.750	69	0.75	19	50.9	23	0.044	1.1	
3	118,900	13 400	6,800	10,200	3.125	79	1.13	28	74.4	34	0.052	1.3	
3.5	188,500	21 300	6,000	9,000	3.750	95	1.50	38	120	55	0.061	1.5	
4	283,800	32 100	5,260	7,890	4.250	107	1.50	38	185	84	0.070	1.8	
4.5	393,800	44 500	4,770	7,155	4.750	120	1.50	38	240	109	0.079	2.0	
5	551,300	62 300	4,300	6,450	5.500	139	2.50	63	365	166	0.087	2.2	
5.5	732,500	82 800	3,880	5,820	5.875	149	3.00	76	435	198	0.096	2.4	
6	952,500	107 600	3,600	5,400	6.500	165	4.00	101	538	244	0.105	2.7	
7	1,512,500	170 900	3,000	4,500	8.000[1]	203	4.50	114	860	390	0.122	3.1	

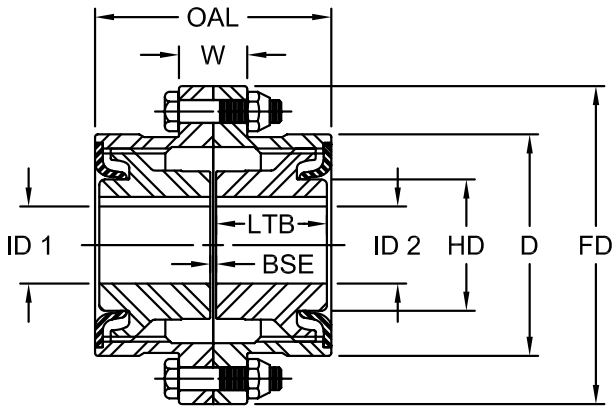
Note: ■ 1 Indicates: Maximum bore for square keyway.

Ordering Information

- Application: Driver and Driven.
- Type and size of coupling, horizontal, vertical etc.
- Power: Motor horspower or torque requirement.
- Speed: Motor RPM or Driven RPM.
- Distance between shaft ends (BSE).
- Shaft sizes.

Lovejoy / Sier-Bath Flanged Sleeve Gear Couplings

FLA Type All Metal Labyrinth Seal Couplings



FLA Type Dimensional Data

Size	OAL in	W in	ID1 - ID2 Max Bore Standard Keyway in	ID1 - ID2 Max Bore Standard Keyway mm	ID1 - ID2 Rough Stock Bore in	ID1 - ID2 Rough Stock Bore mm	LTB in	BSE in	FD in	D in	HD in	C/L - C/L of Teeth* in	Puller Holes
1.5	4.19	1.50	1.625	41	0.38	9	1.94	0.13	6.00	3.97	2.19	3.25	1/4-20
2	5.19	1.50	2.125	53	0.50	12	2.44	0.13	7.00	4.91	2.88	4.00	38-16
2.5	6.44	1.75	2.750	69	0.75	19	3.03	0.19	8.38	5.91	3.63	5.00	1/2-13
3	7.69	1.75	3.125	79	1.13	28	3.59	0.19	9.44	6.91	4.25	6.00	5/8-11
3.5	8.88	2.25	3.750	95	1.50	38	4.19	0.25	11.00	7.91	5.00	7.00	5/8-11
4	10.13	2.50	4.250	107	1.50	38	4.75	0.25	12.50	9.25	5.75	8.00	7/8-9
4.5	11.38	2.50	4.750	120	1.50	38	5.31	0.31	13.63	10.38	6.50	9.00	1-8
5	12.63	3.00	5.500	139	2.50	63	6.03	0.31	15.31	11.56	7.31	10.00	1-8
5.5	14.13	1.88	5.875	149	3.00	76	6.91	0.31	16.75	12.81	8.00	11.00	1-8
6	15.13	2.00	6.500	165	4.00	101	7.41	0.31	18.00	14.00	8.81	12.00	1-8
7	17.75	2.25	8.000[1]	203	4.50	114	8.69	0.38	20.75	15.75	10.31	14.00	1 1/4-7

Notes:
- 1 indicates: Maximum bore for square keyway.
- * indicates: Center line to center line of teeth.
- Exposed Bolt Design is standard.
- Shrouded Bolt Design available upon request for sizes 1 through 5.
- Puller Holes are standard on sizes 4 through 7.
- Puller Holes are available for sizes 1 through 3.5 at an additional charge.
- Interference bores with no set screws are standard unless otherwise specified.
- Inch bore and keyway tolerances conform to AGMA 9002-B04.
- For metric bore and keyway tolerances, consult Lovejoy Engineering Section.

Lovejoy / Sier-Bath Flanged Sleeve Gear Couplings

FLAFR Type Flex-Rigid All-Metal Labyrinth Seal Couplings

The FLAFR Type coupling consists of one special flex hub, one rigid hub, one sleeve and one accessory kit. This coupling is supplied with exposed bolts as standard. Shrouded bolts are available upon request through size 5.5.

Features

- All-metal labyrinth seal
- AISI 4140 alloy steel construction (flex half)
- Patented Vari-Crown® tooth form for long life
- Standard 20° pressure angle
- Heat treated bolts for greater strength
- Corrosion resistant bolts and nuts for ease of maintenance
- Provides angular misalignment only
- Flex Half coupling interchangeable with industry standards

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FLAFR Type Performance Data

Size	Nominal Torque in-lb	Nominal Torque Nm	Maximum Speed Unbal RPM	Maximum Speed Bal RPM	ID1 Flex Hubs Max Bore Standard Keyway in	ID1 Flex Hubs Max Bore Standard Keyway mm	ID2 Flex Hubs Rough Stock Bore in	ID2 Flex Hubs Rough Stock Bore mm	ID1 Rigid Hubs Max Bore Standard Keyway in	ID1 Rigid Hubs Max Bore Standard Keyway mm	ID2 Rigid Hubs Rough Stock Bore in	ID2 Rigid Hubs Rough Stock Bore mm	Weight lbs	Weight kg	Max Angular Misalignment Degrees
1.5	15,000	1 700	12,000	18,000	1.625	41	0.38	9	2.813	76	0.75	19	19	8	0.5° Per Gear Mesh
2	35,500	4 000	9,300	13,950	2.125	53	0.50	12	3.500	95	1.00	25	31	14	
2.5	69,300	7 800	7,900	11,850	2.750	69	0.75	19	4.250	114	1.50	38	55	25	
3	118,900	13 400	6,800	10,200	3.125	79	1.13	28	4.875	134	1.75	44	83	38	
3.5	188,500	21 300	6,000	9,000	3.750	95	1.50	38	5.625	150	2.50	63	131	60	
4	283,800	32 100	5,260	7,890	4.250	107	1.50	38	6.500	176	3.00	76	193	88	
4.5	393,800	44 500	4,770	7,155	4.750	120	1.50	38	7.625	202	3.50	88	258	117	
5	551,300	62 300	4,300	6,450	5.500	139	2.50	63	8.750	230	4.00	101	383	174	
5.5	732,500	82 800	3,880	5,820	5.875	149	3.00	76	9.500	260	4.50	114	436	198	
6	952,500	107 600	3,600	5,400	6.500	165	4.00	101	10.500	285	5.00	127	536	243	
7	1,512,500	170 900	3,000	4,500	8.000[1]	203	4.50	114	12.000	320	5.50	139	851	386	

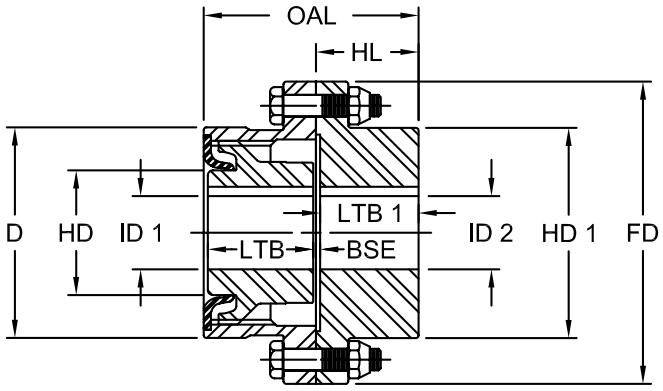
Note: ■ 1 indicates: Maximum bore for square keyway.

Ordering Information

- Application: Driver and Driven.
- Type and size of coupling, horizontal, vertical etc.
- Power: Motor horspower or torque requirement.
- Speed: Motor RPM or Driven RPM.
- Distance between shaft ends (BSE).
- Shaft sizes.

Lovejoy / Sier-Bath Flanged Sleeve Gear Couplings

FLAFR Type Flex-Rigid All Metal Labyrinth Seal Couplings



FLAFR Type Dimensional Data

Size	OAL	HL	ID1 Flex Hubs Max Bore Standard Keyway		ID2 Flex Hubs Rough Stock Bore		ID1 Rigid Hubs Max Bore Standard Keyway		ID2 Rigid Hubs Rough Stock Bore		LTB	LTB1	BSE	FD	HD1	HD	D	Puller Holes Flex Hub	Puller Holes Rigid Hub
	in	in	in	mm	in	mm	in	mm	in	mm	in	in	in	in	in	in	in	in	in
1.5	4.03	1.94	1.625	41	0.38	9	2.813	76	0.75	19	1.94	1.84	0.16	6.00	3.97	2.19	3.97	1/4-20	None
2	4.97	2.38	2.125	53	0.50	12	3.500	95	1.00	25	2.44	2.28	0.16	7.00	4.86	2.88	4.91	38-16	5/16-18
2.5	6.22	3.00	2.750	69	0.75	19	4.250	114	1.50	38	3.03	2.91	0.19	8.38	5.84	3.63	5.91	1/2-13	3/8-16
3	7.41	3.50	3.125	79	1.13	28	4.875	134	1.75	44	3.59	3.41	0.19	9.44	6.84	4.25	6.91	5/8-11	1/2-13
3.5	8.56	4.06	3.750	95	1.50	38	5.625	150	2.50	63	4.19	3.97	0.22	11.00	7.91	5.00	7.91	5/8-11	1/2-13
4	9.69	4.63	4.250	107	1.50	38	6.500	176	3.00	76	4.75	4.44	0.31	12.50	9.25	5.75	9.25	7/8-9	5/8-11
4.5	10.91	5.22	4.750	120	1.50	38	7.625	202	3.50	88	5.31	5.03	0.34	13.63	10.38	6.50	10.38	1-8	5/8-11
5	12.19	5.88	5.500	139	2.50	63	8.750	230	4.00	101	6.03	5.69	0.34	15.31	11.56	7.31	11.56	1-8	3/4-10
5.5	13.41	6.34	5.875	149	3.00	76	9.500	260	4.50	114	6.91	6.16	0.34	16.75	12.72	8.00	12.81	1-8	1-8
6	15.22	7.66	6.500	165	4.00	101	10.500	285	5.00	127	7.41	7.41	0.41	18.00	14.00	8.81	14.00	1-8	1-8
7	17.88	9.00	8.000[1]	203	4.50	114	12.000	320	5.50	139	8.69	8.69	0.50	20.75	15.75	10.31	15.75	1 1/4-7	1-8

Notes:
- 1 indicates: Maximum bore for square keyway.
- Exposed Bolt Design is standard.
- Shrouded Bolt Design available upon request for sizes 1 through 5.
- Puller Holes are standard on sizes 4 through 7.
- Puller Holes are available for sizes 1 through 3.5 at an additional charge.
- Interference bores with no set screws are standard unless otherwise specified.
- Inch bore and keyway tolerances conform to AGMA 9002-B04.
- For metric bore and keyway tolerances, consult Lovejoy Engineering Section.

Lovejoy / Sier-Bath Flanged Sleeve Gear Couplings

FLAMM Type Flex-Flex Mill Motor Couplings

The FLAMM Type coupling consists of one standard FLA flex hub, one universal flex hub bored to an A.I.S.E. frame size, two sleeves and one accessory kit. This coupling is supplied with exposed bolts as standard. Shrouded bolts are available upon request through size 5.5.

FLAMMFR Type Flex-Rigid Mill Motor Couplings

The FLAMMFR Type coupling consists of a rigid hub, one universal flex hub bored to A.I.S.E. frame size, one sleeve and one accessory kit. This coupling is supplied with exposed bolts as standard. Shrouded bolts are available upon request through size 5.5.

Features

- Patented Vari-Crown® tooth form for long life on Flex Half
- Standard 20° pressure angle
- Heat treated bolts for greater strength
- Corrosion resistant bolts and nuts for ease of maintenance
- Provides parallel, angular misalignment and end float
- Flex Half coupling interchangeable with industry standards
- Long Universal Hub used for A.I.S.E. Motor Frames

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FLAMM and FLAMMFR Type Performance Data

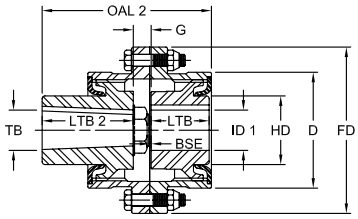
Size	Nominal Torque		Max Speed		ID1 Flex Hub Max Bore Standard Keyway		ID2 Flex Hub Rough Stock Bore		ID1 Rigid Hub Max Bore Standard Keyway		ID2 Rigid Hub Rough Stock Bore		Weight		Parallel Misalignment FLAMM only		Max Angular Misalignment Degrees
	in-lb	Nm	Unbal RPM	Bal RPM	in	mm	in	mm	in	mm	in	mm	lbs	kg	in	mm	
1.5	18,900	2 140	5,500	8,250	1.625	41	0.38	9	2.813	76	solid	solid	24	11	0.28	0.7	0.5° Per Gear Mesh
2	31,500	3 560	5,000	7,500	2.125	53	0.50	12	3.500	95	solid	solid	45	20	0.35	0.9	
2.5	56,700	6 410	4,400	6,600	2.750	69	0.75	19	4.250	114	solid	solid	71	32	0.44	1.1	
3	94,500	10 700	4,000	6,000	3.125	79	1.13	28	4.875	134	solid	solid	104	47	0.52	1.3	
3.5	151,200	17 100	3,500	5,250	3.750	95	1.50	38	5.625	150	solid	solid	151	69	0.61	1.5	
4	220,500	24 900	3,000	4,500	4.250	17	1.50	38	6.500	176	solid	solid	234	86	0.70	1.8	
4.5	302,400	34 200	2,700	4,050	4.750	120	1.50	38	7.625	202	solid	solid	310	141	0.79	2.0	
5	434,700	49 100	2,500	3,750	5.500	139	2.50	63	8.750	230	4.00	101	450	204	0.87	2.2	
5.5	573,300	64 800	2,200	3,300	5.875	149	3.00	76	9.500	260	4.50	114	609	276	0.96	2.4	
6	749,700	84 700	2,100	3,150	6.500	165	4.00	101	10.500	285	5.50	127	764	347	0.105	2.7	
7	1,008,000	113 900	2,000	3,000	8.000[1]	203	4.50	114	12.000	320	5.75	139	1,212	551	0.122	3.1	

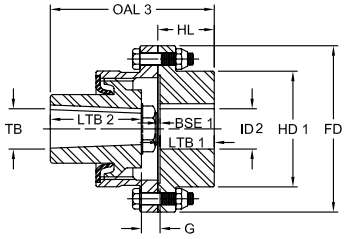
Notes:
- 1 indicates: Maximum bore for square keyway.
- Application: Driver and Driven.
- Type and size of coupling, horizontal, vertical etc.
- Power: Motor horspower or torque requirement.
- Speed: Motor RPM or Driven RPM.
- Distance between shaft ends (BSE).
- Shaft sizes.
- Mill Motor frame size.
- Submit a drawing if available.

Lovejoy / Seir-Bath Flanged Sleeve Gear Couplings

FLAMM and FLAMMFR Type

All Metal Labyrinth Seal Mill Motor Couplings





FLAMM and FLAMMFR Type Dimensional Data

Size	AISE Frame No	OAL 2 in	OAL 3 in	LTB in	LTB1 in	LTB2 in	G in	BSE in	BSE 1 in	FD in	D in	HD in	HD 1 in	TB in	Mill Mtr Hub Kw W in	Mill Mtr Hub Kw H in
1.5	602/802	6.00	5.91	1.94	1.84	3.00	1.06	0.13	0.16	6.00	3.97	2.19	3.97	1.7485 - 1.7495	0.50	0.13
2	602/802	6.50	6.34	2.44	2.28	3.00	1.06	0.13	0.16	7.00	4.91	2.88	4.86	1.7485 - 1.7495	0.50	0.25
	603/803	7.06	6.91			3.50	1.13							1.998 - 1.999	0.50	0.25
	604/804	7.06	6.91			3.50	1.13							1.998 - 1.999	0.50	0.25
2.5	602/802	7.16	7.03	3.03	2.28	3.00	1.13	0.19	0.19	8.38	5.91	3.63	5.84	1.7485 - 1.7495	0.50	0.25
	603/803	7.72	7.59			3.50	1.19							1.998 - 1.999	0.50	0.25
	604/804	7.72	7.59			3.50	1.19							1.998 - 1.999	0.50	0.25
	606/806	8.34	8.22			4.00	1.31							2.498 - 2.499	0.50	0.25
3	602/802	7.72	7.53	3.59	2.91	3.00	1.13	0.19	0.19	9.44	6.91	4.25	6.84	1.7485 - 1.7495	0.50	0.25
	603/803	8.28	8.09			3.50	1.19							1.998 - 1.999	0.50	0.25
	604/804	8.28	8.09			3.50	1.19							1.998 - 1.999	0.50	0.25
	606/806	8.91	8.72			4.00	1.31							2.498 - 2.499	0.50	0.25
	608/808	9.53	9.34			4.50	1.44							2.998 - 2.999	0.75	0.25
	610/810	9.66	9.47			4.50	1.56							3.248 - 3.249	0.75	0.25
3.5	603/803	8.88	8.66	4.19	3.97	3.50	1.19	0.25	0.22	11.00	7.91	5.00	7.91	1.998 - 1.999	0.50	0.25
	604/804	8.88	8.66			3.50	1.19							1.998 - 1.999	0.50	0.25
	606/806	9.50	9.28			4.00	1.31							2.498 - 2.499	0.50	0.25
	608/808	10.13	9.91			4.50	1.44							2.998 - 2.999	0.75	0.25
	610/810	10.25	10.03			4.50	1.56							3.248 - 3.249	0.75	0.25
	612/812	10.94	10.72			5.00	1.75							3.623 - 3.624	0.75	0.25
4	606/806	10.13	9.81	4.75	4.44	4.00	1.38	0.25	0.31	12.50	9.25	5.75	9.25	2.498 - 2.499	0.50	0.25
	608/808	10.75	10.44			4.50	1.50							2.998 - 2.999	0.75	0.25
	610/810	10.88	10.56			4.50	1.63							3.248 - 3.249	0.75	0.25
	612/812	11.50	11.19			5.00	1.75							3.623 - 3.624	0.75	0.25
	614/814	11.63	11.31			5.00	1.88							4.2470 - 4.2485	1.00	0.38
	616/816	12.25	11.94			5.00	2.00							4.6220 - 4.6235	1.25	0.28
4.5	610/810	11.50	11.22	5.31	5.03	4.50	1.69	0.31	0.34	13.63	10.38	6.50	10.38	3.248 - 3.249	0.75	0.25
	612/812	12.12	11.84			5.00	1.81							6.623 - 3.624	0.75	0.25
	614/814	12.25	11.97			5.00	1.94							4.2470 - 4.2485	1.00	0.38
	616/816	12.88	12.59			5.50	2.06							4.6220 - 4.6235	1.25	0.38
	618/818	12.94	12.66			6.00	1.63							4.9970 - 4.9985	1.25	0.50
5	612/812	12.84	12.50	6.03	5.69	5.00	1.81	0.31	0.34	15.31	11.56	7.31	11.56	3.623 - 3.624	0.75	0.25
	614/814	12.97	12.63			5.00	1.94							4.2470 - 4.2485	1.00	0.38
	616/816	13.59	13.25			5.50	2.06							4.6220 - 4.6235	1.25	0.38
	618/818	13.66	13.31			6.00	1.63							4.9970 - 4.9985	1.25	0.50
5.5	616/816	14.47	13.72	6.91	6.16	5.50	2.06	0.31	0.34	16.75	12.81	8.00	12.72	4.6220 - 4.6235	1.25	0.38
	618/818	14.53	13.78			6.00	1.63							4.9970 - 4.9985	1.25	0.50
	620	15.72	14.97			6.75	2.06							5.8720 - 5.8735	1.50	0.75
	622	16.84	16.09			7.25	2.69							6.2470 - 6.2485	1.50	0.56
6	620	16.22	16.22	7.41	7.41	6.75	2.06	0.31	0.41	18.00	14.00	8.81	14.00	5.8720 - 5.8735	1.50	0.75
	622	17.34	17.34			7.25	2.69							6.2470 - 6.2485	1.50	0.75
	624	19.34	19.34			9.25	2.69							6.9970 - 6.9985	1.50	0.50
7	622	18.69	18.69	8.69	8.69	7.25	2.75	0.38	0.50	20.75	15.75	10.31	15.75	6.2470 - 6.2485	1.50	0.75
	624	20.69	20.69			9.25	2.75							6.9970 - 6.9985	1.50	0.75

Notes:
- Bore taper is 1-1/4 inch per foot on diameter.
- Exposed Bolt Design is standard.
- Shrouded Bolt Design available upon request for sizes 1.5 through 5.
- Puller Holes are standard on sizes 4 through 7.
- Puller Holes are available for sizes 1.5 through 3.5 at an additional charge.
- Interference bores with no set screws are standard unless otherwise specified.
- Inch bore and keyway tolerances conform to AGMA 9002-B04.
- For metric bore and keyway tolerances, consult Lovejoy Engineering Section.

Lovejoy / Sier-Bath Flanged Sleeve Gear Couplings

FA Type Alloy Steel Flex-Flex Couplings

The FA Type coupling consists of two flex hubs, two sleeves and one accessory kit. This coupling is supplied with exposed bolts as standard. Shrouded bolts are available upon request through size 5.5.

Features

- Molded seals maintain proper lubricant retention during misalignment conditions
- AISI 4140 Alloy Steel Construction
- Patented Vari-Crown® tooth form for long life
- Standard 20° pressure angle
- Heat treated bolts for greater strength
- Corrosion resistant bolts and nuts for ease of maintenance
- Provides parallel, angular misalignment and end float
- Flex Half coupling interchangeable with industry standards

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FA Type Performance Data

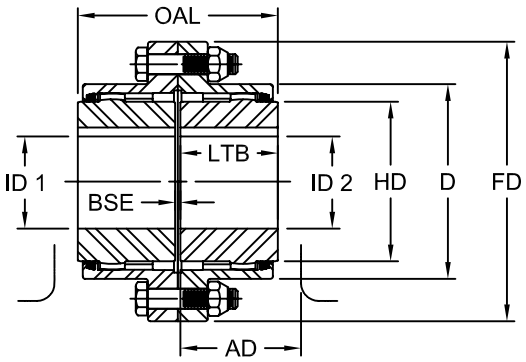
Size	Nominal Torque		Maximum Speed		ID1 - ID2 Max Bore Standard Keyway		ID1 - ID2 Rough Stock Bore		Weight		Parallel Misalignment		Max Angular Misalignment Degrees
	in-lb	Nm	Unbal RPM	Bal RPM	in	mm	in	mm	lbs	kg	in	mm	
1	11,300	1 280	6,000	9,000	1.625	42	0.44	11	9	4	0.056	1.4	1.5° Per Gear Mesh
1.5	22,700	2 560	5,500	8,250	2.125	56	0.69	18	19	9	0.060	1.5	
2	39,000	4 410	5,000	7,500	2.75	73	0.94	24	34	15	0.085	2.2	
2.5	69,300	7 930	4,400	6,600	3.25	88	1.44	37	54	25	0.105	2.7	
3	118,000	13 300	4,000	6,000	4.000	107	1.44	37	80	36	0.115	2.9	
3.5	177,000	20 000	3,500	5,250	4.625	124	1.81	46	130	59	0.130	3.3	
4	263,400	29 760	3,000	4,500	5.375	147	2.44	62	190	86	0.150	3.8	
4.5	354,000	40 000	2,700	4,050	6.000	167	3.00	76	250	114	0.175	4.4	
5	508,600	57 470	2,500	3,750	6.500	176	3.00	76	380	173	0.200	5.1	
5.5	670,700	75 790	2,200	3,300	7.500	202	4.00	101	520	236	0.220	5.6	
6	877,100	99 110	2,100	3,150	8.250	225	4.00	101	650	295	0.120	3.0	0.75° Per Gear Mesh
7	1,179,300	1 332 600	2,000	3,000	9.500	255	5.00	127	950	431	0.135	3.4	

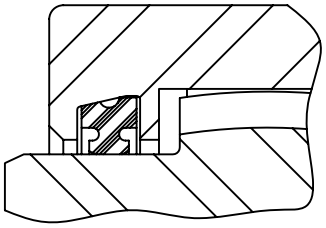
Ordering Information

- Application: Driver and Driven.
- Type and size of coupling, horizontal, vertical etc.
- Power: Motor horspower or torque requirement.
- Speed: Motor RPM or Driven RPM.
- Distance between shaft ends (BSE).
- Shaft sizes.

Lovejoy / Sier-Bath Flanged Sleeve Gear Couplings

FA Type Alloy Steel Couplings





FA Type Dimensional Data

Size	OAL in	AD in	ID1 - ID2 Max Bore Standard Keyway in	ID1 - ID2 Max Bore Standard Keyway mm	ID1 - ID2 Rough Stock Bore in	ID1 - ID2 Rough Stock Bore mm	LTB in	BSE in	FD in	D in	HD in
1	3.50	4.19	1.625	42	0.44	11	1.69	0.13	4.56	3.06	2.31
1.5	4.00	4.75	2.125	56	0.69	18	1.94	0.13	6.00	3.97	3.00
2	5.00	6.00	2.750	73	0.94	24	2.44	0.13	7.00	4.86	4.00
2.5	6.25	7.13	3.250	88	1.44	37	3.03	0.19	8.38	5.84	4.63
3	7.38	8.13	4.000	107	1.44	37	3.59	0.19	9.44	6.84	5.63
3.5	8.63	9.38	4.625	124	1.81	46	4.19	0.25	11.00	7.91	6.50
4	9.75	10.25	5.375	147	2.44	62	4.75	0.25	12.50	9.25	7.50
4.5	10.94	11.50	6.000	167	3.00	76	5.31	0.31	13.63	10.38	8.50
5	12.38	13.00	6.500	176	3.00	76	6.03	0.31	15.31	11.56	9.50
5.5	14.13	14.38	7.500	202	4.00	101	6.91	0.31	16.75	12.72	10.50
6	15.13	17.00	8.250	225	4.00	101	7.41	0.31	18.00	14.00	11.50
7	17.75	20.00	9.500	255	5.00	127	8.69	0.38	20.75	15.75	13.00

Notes:
- Exposed Bolt Design is standard.
- Shrouded Bolt Design available upon request for sizes 1 through 5.5.
- Puller Holes are standard on sizes 4 through 7.
- Puller Holes are available for sizes 1 through 3.5 at an additional charge.
- Interference bores with no set screws are standard unless otherwise specified.
- Inch bore and keyway tolerances conform to AGMA 9002-B04.
- For metric bore and keyway tolerances, consult Lovejoy Engineering Section.