



HP

Lovejoy High Speed and Engineered Special Gear Couplings

The High Performance group of gear couplings consists of coupling designs that require additional engineering. While standard components do exist, the unique requirements of individual applications will customize a coupling design.

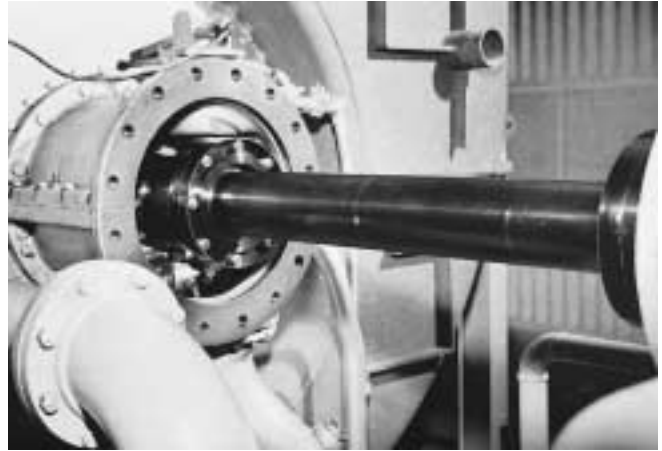
Lovejoy/Sier-Bath High Speed Couplings

The Lovejoy/Sier-Bath F Series High Speed gear couplings are designed for exacting high speed, high efficiency performance beyond the ranges and limits of standard coupling specifications. Typical applications include high speed centrifugal and axial flow compressors, gas turbines, steam turbines, test stands, etc.

High speed couplings are dynamically balanced as assemblies and match marked. Fasteners are weigh balanced in sets. Major diameter fit gear teeth, precision machined tolerances, and high quality components help to reduce the potential unbalance in the coupling assembly.

Features and Benefits:

- Dynamically balanced.
- Fasteners are weigh balanced.
- Body fitted bolts in reamed holes.
- Precision manufactured close tolerances.
- Piloted gear fit.
- Hubs, sleeves, and spacers are alloy steel.



Lovejoy Engineered Couplings

Our other product lines of engineered couplings are designed to suit special applications. Many of the components are standardized, but the special requirements of certain applications will customize each design. These couplings require specific customer input to properly design the coupling to suit the application.

Features and Benefits:

- Custom design assistance.
- Components are standardized, yet design flexibility allows for modifications to specific applications.
- Available in sizes from 1 through 30 depending on model.



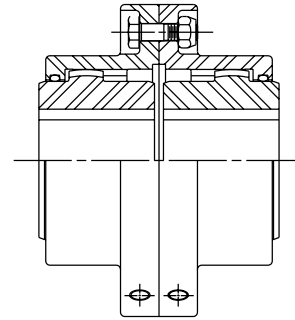
WARNING

You must refer to page iv for Important Safety Instructions and Precautions for the selection and use of these products. Failure to follow the instructions and precautions can result in severe injury or death.

Lovejoy/Sier-Bath "F" Series High Speed Couplings

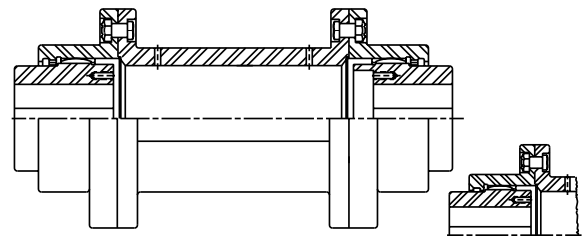
High Speed Close Coupled—"FHS"

This coupling is made from AISI 1045 steel. The design is similar to the standard "F" except the components are machined to tighter tolerances and controlled fits to allow higher operating speeds. The maximum speed is for assembly balanced couplings. Component balancing is available and may result in lower maximum speeds.



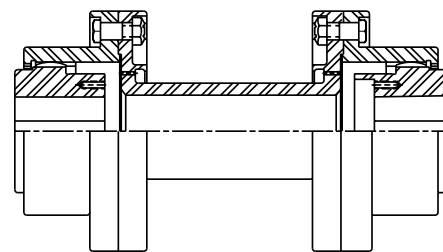
High Speed Standard—"FHSA"

The Lovejoy/Sier-Bath High Speed Standard gear couplings are made of alloy steel with a core hardness of $R_c 30-35$, and they are magnetic particle inspected. They are precision manufactured with ground bores and concentricity for dynamic stability. In addition, gear couplings are dynamically balanced, have a piloted gear fit, and have body-fitted bolts in reamed holes. For nitrided gear teeth, specify Class AN and a surface hardness of 85.5 minimum on the Rockwell 15N scale.



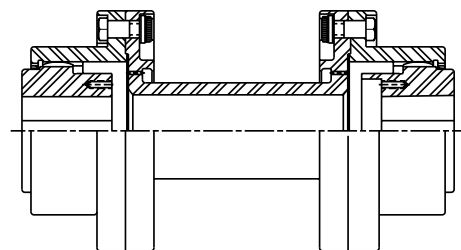
High Speed Precision—"FHSAA"

The Lovejoy/Sier-Bath High Speed Precision gear couplings are made of alloy steel with a core hardness of $R_c 30-35$ and are magnetic particle inspected. They have close tolerances and precision manufactured mating surfaces with bores ground to accurate tolerances. In addition, gear couplings are dynamically balanced, have a piloted gear fit, and have body-fitted bolts in reamed holes. The low overhung moment reduces bearing loads. They also have low moment of inertia and are extremely light weight. Balancing bands will be included, if required. For nitrided gear teeth, specify Class AAN and a surface hardness of 85.5 minimum on the Rockwell 15N scale.



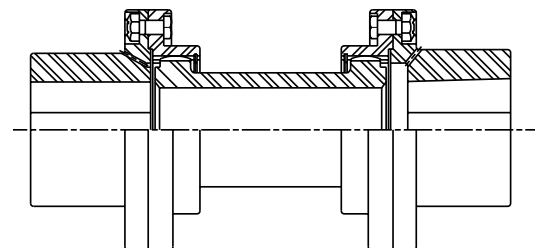
High Speed Ultra Precision—"FHSPAA"

The Lovejoy/Sier-Bath High Speed Ultra Precision gear couplings are made of Nitralloy 135 modified with a core hardness of $R_c 32-36$ and they are magnetic particle inspected. They have close tolerances and precision manufactured mating surfaces with bores precision-ground for extremely high accuracy. In addition, they have body-fitted bolts with reamed holes. These gear couplings are dynamically balanced and have a piloted gear fit to insure balance integrity during operation. The low overhung moment reduces bearing loads. They also have low moment of inertia and are extremely lightweight. Balancing bands will be included, if required. For nitrided gear teeth, specify Class PAAN and a surface hardness of 90 minimum on the Rockwell 15N scale.



High Speed Marine—"FHSMA"

The Lovejoy/Sier-Bath High Speed Marine gear couplings have a core hardness of $R_c 30-35$ and are magnetic particle inspected. They are precision manufactured with ground bores and close concentricity for dynamic stability. These couplings are dynamically balanced, have piloted gear fit, and have body-fitted bolts in reamed holes. They also have a larger shaft capacity. For nitrided gear teeth, specify Class MAN and a surface hardness of 85.5 minimum on the Rockwell 15N scale.



High Performance Gear Couplings



**Selection
Data**

Engineered and Heavy Duty

Lovejoy/Sier-Bath High Speed F Series

Coupling Type	Code	Size Range	Maximum Bore		Maximum Torque Capacity		Maximum Speed RPM	Maximum Angular Misalignment	Torque Range		
			in	mm	in-lb	Nm			Low	Med	High
Standard (Double Engagement)	FHS	1 7	1.625 9.000	42 254	7,600 1,008,400	859 113,949	14,200 3,100	1½° ¾°	X	X	
Standard - Class "A" High Speed Spacer	FHSA	1½ 6	1.500 6.000	38 162	12,600 731,000	1,424 82,503	18,000 9,000	½°	X	X	
Precision - Class "AA" High Speed Spacer	FHSAA	1½ 6	1.625 6.125	42 170	18,900 813,000	2,136 91,869	20,000 9,900	½°	X	X	
Ultra Precision - Class "PAA" High Speed Spacer	FHSPAA	1½ 6	1.625 6.125	42 170	18,900 813,000	2,136 91,869	20,000 9,900	½°	X	X	
Marine - Class "MA" High Speed Spacer	FHSMA	1½ 6	2.125 7.625	56 208	18,900 813,000	2,136 91,869	18,000 9,000	½°	X	X	

Lovejoy Engineered Series

Coupling Type	Code	Size Range	Maximum Bore		Maximum Torque Capacity		Maximum Speed RPM	Maximum Angular Misalignment	Torque Range		
			in	mm	in-lb	Nm			Low	Med	High
20° Pump Coupling	FAC	1 3½	2.250 6.125	56 157	11,300 177,000	1,280 20,100	16,700 6,900	½°	X		
Cut-out (Pin)	FCP	1 5½	1.750 7.625	42 202	6,300 535,500	712 60,512	10,000 2,700	1½°	X		
Cut-out (Shifter Collar)	FCS	1 5½	1.750 7.625	42 202	6,300 535,500	712 60,512	3,600 1,200	1½°	X		
Shear Pin	FSHP	1 7	1.750 9.750	42 254	6,300 535,500	712 60,512	7,000 1,300	1½°	X	X	

Notes: 1. These are maximum values. For reasonable life expectancy and low reactionary loads, misalignment per gear mesh should not exceed ¾° for small couplings, ½° for larger couplings and ¼° high speed couplings.

High Performance Gear Couplings



Performance
Data

"FHS" High Speed Close Coupled

Size FHS	Capacity			Max. Speed ¹ RPM	Parallel Misalignment		Maximum Bore Keys			Weight		Inertia		Torsional Stiffness (x 10 ⁶)	
	100 RPM	Torque			inch	mm	1 Sq. inch	1 Red. inch	Metric mm	lb	kg	WR ² lb-in ²	GD ² Nm ²	in-lb radian	Nm radian
		in-lb x 10 ³	Nm x 10 ³												
1	12	7.6	0.86	14,200	0.028	0.7	1.625	1.750	42	9	4	18.9	0.2	0.91	0.10
1½	30	18.9	2.14	10,800	0.030	0.8	2.125	2.250	56	19	9	64.9	0.7	3.58	0.40
2	50	31.5	3.56	9,300	0.043	1.1	2.750	2.875	73	34	15	149.8	1.7	8.33	0.94
2½	90	56.7	6.41	7,800	0.052	1.3	3.250	3.375	88	54	25	339.8	3.9	15.61	1.76
3	150	94.5	10.68	6,900	0.058	1.5	4.000	4.250	107	80	36	656.4	7.5	28.04	3.17
3½	240	151.2	17.08	5,900	0.066	1.7	4.625	4.875	124	130	59	1482.6	17.0	43.99	4.97
4	350	220.5	24.92	5,200	0.075	1.9	5.375	5.625	147	190	86	2722.0	31.2	66.09	7.47
4½	480	302.4	34.17	4,800	0.088	2.2	6.000	6.500	167	250	114	4285.7	49.2	93.31	10.54
5	690	434.7	49.12	4,200	0.101	2.6	6.500	7.000	176	380	173	8262.5	94.8	128.00	14.46
5½	910	573.3	64.78	3,900	0.111	2.8	7.375	7.625	202	520	236	12779.9	146.7	161.00	18.19
6	1190	749.7	84.71	3,600	0.080	2.0	8.000	8.500	225	650	295	17258.7	198.1	222.00	25.08
7	1600	1,008.0	113.90	3100	0.091	2.3	9.000	9.750	254	950	431	32162.1	369.2	341.00	38.53

- Notes:** 1. Maximum speed is based on safe rim stresses and assembly balanced. Angular misalignment is reduced to $\pm 3/4^\circ$ per gear mesh for sizes 1 through 5½ and $\pm 1/2^\circ$ per gear mesh for sizes 6 and 7.
2. Weight and inertia are based on maximum bore. Torsional stiffness is based on nominal bore equal to coupling size.

"FHSA" High Speed Standard

Size FHSA	Capacity			Max. Speed RPM	Maximum Bore Keys		Nominal BSE		Weight		Inertia		Torsional Stiffness (x 10 ⁶)	
	100 RPM	Torque			1 Sq. inch	Metric mm	inch	mm	lb	kg	WR ² lb-in ²	GD ² Nm ²	in-lb radian	Nm radian
		in-lb x 10 ³	Nm x 10 ³											
1½	20	12.6	1.42	18,000	1.500	38	5.00	127.0	12.0	5.4	25.7	0.3	2.00	0.23
2	36	22.6	2.55	17,000	2.000	52	5.00	127.0	20.1	9.1	85.4	1.0	5.10	0.58
2½	74	46.6	5.27	16,000	2.500	65	5.00	127.0	35.2	16.0	163.5	1.9	10.80	1.22
3	108	68.0	7.68	15,000	3.000	81	5.00	127.0	56.0	25.4	325.0	3.7	18.30	2.07
3½	215	135.5	15.31	14,000	3.500	95	5.00	127.0	77.1	35.0	706.4	8.1	31.00	3.50
4	333	209.9	23.72	13,000	4.000	107	7.00	177.8	128.7	58.4	1573.9	18.1	43.70	4.94
4½	493	310.7	35.11	11,000	4.500	114	7.00	177.8	184.8	83.8	2997.3	34.4	68.90	7.79
5	700	441.0	49.83	10,000	5.000	137	7.00	177.8	242.6	110.0	4639.7	53.3	89.70	10.14
5½	937	590.5	66.72	9,600	5.500	150	8.00	203.2	362.1	164.2	8758.4	100.5	120.00	13.56
6	1160	731.0	82.60	9,000	6.000	162	8.00	203.2	470.1	213.2	13797.7	158.4	157.30	17.77

- Note:** 1. Weight, inertia, and torsional stiffness are based on nominal BSE and maximum bore.

"FHSA" High Speed Precision

Size FHSA	Capacity			Max. Speed RPM	Maximum Bore Keys		Nominal BSE		Weight		Inertia		Torsional Stiffness (x 10 ⁶)	
	100 RPM	Torque			1 Sq. inch	Metric mm	inch	mm	lb	kg	WR ² lb-in ²	GD ² Nm ²	in-lb radian	Nm radian
		in-lb x 10 ³	Nm x 10 ³											
1½	30	18.9	2.14	20,000	1.625	42	5.00	127.0	15.2	6.9	35.5	0.4	1.70	0.19
2	45	28.3	3.20	18,700	2.125	56	5.00	127.0	25.9	11.8	76.9	0.9	4.00	0.45
2½	100	63.0	7.12	17,600	2.625	70	5.00	127.0	36.9	16.8	189.8	2.2	9.00	1.02
3	160	100.8	11.39	16,500	3.125	84	7.00	177.8	60.2	27.3	389.8	4.5	12.20	1.38
3½	240	151.2	17.08	15,400	3.625	97	7.00	177.8	78.5	35.6	659.3	7.6	20.20	2.28
4	350	220.6	24.93	14,300	4.125	111	8.00	203.2	113.3	51.4	1169.4	13.4	29.70	3.36
4½	525	330.8	37.38	12,100	4.625	124	8.00	203.2	163.2	74.0	2178.2	25.0	47.20	5.33
5	760	479.0	54.12	11,000	5.125	140	10.00	254.0	239.5	108.6	4116.6	47.3	69.40	7.84
5½	980	617.6	69.79	10,500	5.625	150	10.00	254.0	317.6	144.1	6719.7	77.1	92.10	10.41
6	1290	813.0	91.86	9,900	6.125	170	10.00	254.0	398.4	180.7	8993.1	103.2	123.30	13.93

- Note:** 1. Weight, inertia, and torsional stiffness are based on nominal BSE and maximum bore.

HP

High Performance Gear Couplings



"FHSPAA" High Speed Ultra Precision

Size FHS PAA	Capacity			Max. Speed RPM	Maximum Bore		Nominal BSE		Weight		Inertia		Torsional Stiffness (x 10 ⁶)	
	HP 100 RPM	Torque			1 Sq. inch	Metric mm	inch	mm	lb	kg	WR ² lb-in ²	GD ² Nm ²	in-lb radian	Nm radian
		in-lb x 10 ³	Nm x 10 ³											
1½	30	18.9	2.14	20,000	1.625	42	5.00	127.0	15.2	6.9	35.5	0.4	1.70	0.19
2	45	28.3	3.20	18,700	2.125	56	5.00	127.0	25.9	11.8	76.9	0.9	4.00	0.45
2½	100	63.0	7.12	17,600	2.625	70	5.00	127.0	36.9	16.8	189.8	2.2	9.00	1.02
3	160	100.8	11.39	16,500	3.125	84	7.00	177.8	60.2	27.3	389.8	4.5	12.20	1.38
3½	240	151.2	17.08	15,400	3.625	97	7.00	177.8	78.5	35.6	659.3	7.6	20.20	2.28
4	350	220.6	24.93	14,300	4.125	111	8.00	203.2	113.3	51.4	1169.4	13.4	29.70	3.36
4½	525	330.8	37.38	12,100	4.625	124	8.00	203.2	163.2	74.0	2178.2	25.0	47.20	5.33
5	760	479.0	54.12	11,000	5.125	140	10.00	254.0	239.5	108.6	4116.6	47.3	69.40	7.84
5½	980	617.6	69.79	10,500	5.625	150	10.00	254.0	317.6	144.1	6719.7	77.1	92.10	10.41
6	1290	813.0	91.86	9,900	6.125	170	10.00	254.0	398.4	180.7	8993.1	103.2	123.30	13.93

Note: 1. Weight, inertia, and torsional stiffness are based on nominal BSE and maximum bore.

"FHSMa" High Speed Marine

Size FHSMa	Capacity			Max. Speed RPM	Maximum Bore		Nominal BSE		Weight		Inertia		Torsional Stiffness (x 10 ⁶)	
	HP 100 RPM	Torque			1 Sq. inch	Metric mm	inch	mm	lb	kg	WR ² lb-in ²	GD ² Nm ²	in-lb radian	Nm radian
		in-lb x 10 ³	Nm x 10 ³											
1½	30	18.9	2.14	18,000	2.125	56	5.00	127.0	16.6	7.5	41.2	0.5	3.30	0.37
2	45	28.3	3.20	17,000	2.625	70	5.00	127.0	26.6	12.1	95.0	1.1	7.00	0.79
2½	100	63.0	7.12	16,000	3.125	84	5.00	127.0	43.0	19.5	219.6	2.5	13.70	1.55
3	160	100.8	11.39	15,000	3.625	97	7.00	177.8	68.2	30.9	464.0	5.3	20.40	2.31
3½	240	151.2	17.08	14,000	4.625	124	7.00	177.8	95.1	43.2	885.2	10.2	34.20	3.86
4	350	220.6	24.93	13,000	5.125	140	8.00	203.2	156.3	70.9	1926.0	22.1	54.60	6.17
4½	525	330.8	37.38	11,000	5.625	150	8.00	203.2	229.9	104.3	3695.7	42.4	86.20	9.74
5	760	479.0	54.12	10,000	6.625	186	10.00	254.0	301.3	136.7	6459.5	74.2	118.10	13.34
5½	980	617.6	69.79	9,600	7.125	192	10.00	254.0	396.6	179.9	10200.7	117.1	165.80	18.73
6	1290	813.0	91.86	9,000	7.625	208	10.00	254.0	596.3	270.5	19736.0	226.6	216.70	24.49

Note: 1. Weight, inertia, and torsional stiffness are based on nominal BSE and maximum bore.

"FAC" Engineered Centrifugal Pump Type

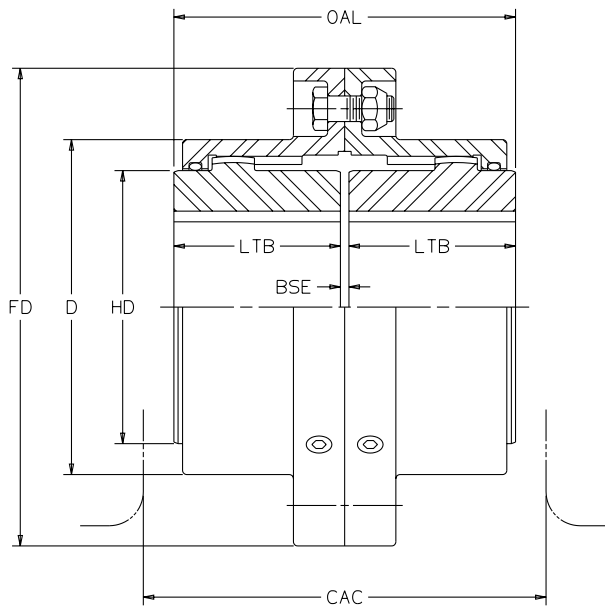
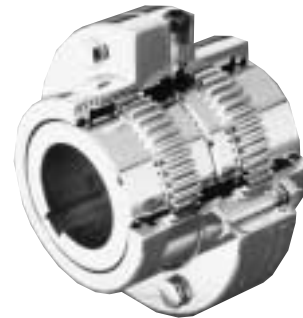
Size FAC	Capacity			Max. Speed		Maximum Bore		Key			Nominal BSE		Weight - Solid		Inertia	
	HP 100 RPM	Torque		Balanced RPM	Unbal. RPM	Parallel Misalignment		1 Sq. inch	1 Red. inch	Metric mm	inch	mm	lb	kg	WR ² lb-in ²	GD ² Nm ²
		in-lb x 10 ³	Nm x 10 ³			inch	mm									
1	18	11.3	1.28	16,700	10,500	0.04	1.0	2.125	2.250	56	5.00	127.0	19.4	8.8	37.1	0.4
1½	36	22.7	2.56	12,700	9,000	0.06	1.5	2.813	3.000	76	7.00	177.8	42.2	19.1	138.9	1.6
2	62	39.0	4.41	10,900	8,100	0.06	1.5	3.500	3.750	95	7.00	177.8	68.7	31.2	298.7	3.4
2½	110	69.3	7.83	9,100	7,200	0.06	1.5	4.250	4.500	114	7.00	177.8	122.0	55.3	767.3	8.8
3	187	118.0	13.33	8,100	6,500	0.08	2.0	4.875	5.250	134	10.00	254.0	184.8	83.8	1398.1	16.0
3½	281	177.0	20.00	6,900	5,950	0.08	2.0	5.625	6.125	157	10.00	254.0	288.0	130.6	3052.7	35.0

Note: Weight and inertia are based on nominal BSE and solid rigid hubs.

Lovejoy/Sier-Bath "F" Series High Speed

High Speed Close-Coupled—"FHS"

This coupling is made from AISI 1045 steel. The design is similar to the standard "F" except the components are machined to tighter tolerances and controlled fits to allow higher operating speeds. The maximum speed is for assembly balanced couplings. Component balancing is available and may result in lower maximum speeds.



Size F	Maximum Bore		OAL inch	FD inch	D inch	HD inch	LTB inch	BSE inch	CAC inch
	sq. key inch	metric key mm							
1	1.625	42	3.50	4.56	3.06	2.31	1.69	0.13	4.19
1½	2.125	56	4.00	6.00	3.97	3.00	1.94	0.13	4.75
2	2.750	73	5.00	7.00	4.91	4.00	2.44	0.13	6.00
2½	3.250	88	6.25	8.38	5.91	4.63	3.03	0.19	7.13
3	4.000	107	7.38	9.44	6.91	5.63	3.59	0.19	8.13
3½	4.625	124	8.63	11.00	7.91	6.50	4.19	0.25	9.38
4	5.375	147	9.75	12.50	9.25	7.50	4.75	0.25	10.25
4½	6.000	167	10.94	13.63	10.38	8.50	5.31	0.31	11.50
5	6.500	176	12.38	15.31	11.56	9.50	6.03	0.31	13.00
5½	7.375	202	14.13	16.75	12.81	10.50	6.91	0.31	14.38
6	8.000	225	15.13	18.00	14.00	11.50	7.41	0.31	17.00
7	9.000	254	17.75	20.75	15.75	13.00	8.69	0.38	20.00
8	11.000	312	22.38	23.25	18.50	15.50	11.00	0.38	25.00
9	12.000	340	23.50	26.00	20.38	17.00	11.50	0.50	26.50

- Notes:**
1. Shrouded bolts are standard on sizes 1 through 5½. Exposed bolts are standard on sizes 6 through 9.
 2. For Performance Data see page HP-7.

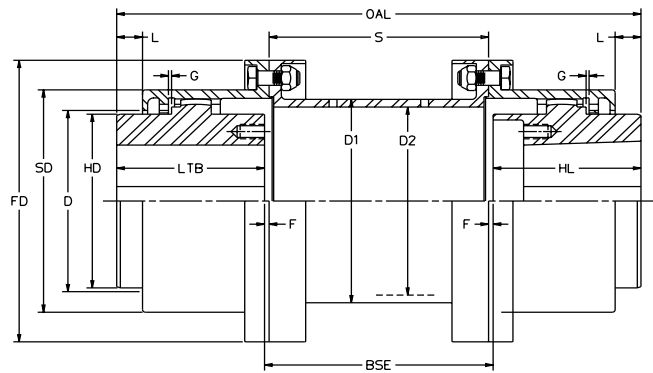
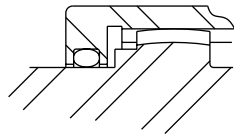
When ordering, please specify:

1. Required bore diameter of both hubs, with tolerance.
2. Sizes of keyways, if desired. Set screws not supplied unless specified.
3. Speed and Horsepower of driving unit.

High Performance Gear Couplings

Lovejoy/Sier-Bath "F" Series High Speed High Speed Standard—"FHSA"

The Lovejoy/Sier-Bath High Speed Standard gear couplings are made of alloy steel with a core hardness of HRC 30-35, and they are magnetic particle inspected. They are precision manufactured with ground bores and concentricity for dynamic stability. In addition, gear couplings are dynamically balanced, have a piloted gear fit, and have body-fitted bolts in reamed holes. For nitrided gear teeth, specify Class AN and a surface hardness of 85.5 minimum on the Rockwell 15N scale.



Size FHSA	Capacity		Max RPM	Max. Bore	FD	SD	D	HD	LTB	HL	F	BSE	S	D1	D2	L	OAL	G	Bolts Per Flange
	HP 100 RPM	Torque in-lb.																	
1 1/2	20	12,600	18,000	1.500	4 ^{9/16}	3 ^{1/16}	2 ^{3/8}	2 ^{3/16}	2 ^{1/16}	2 ^{1/16}	3/32	5	4 ^{13/16}	3	2 ^{13/32}	1/2	9 ^{1/8}	1/16	6-1/4
2	36	22,600	17,000	2.000	6	3 ^{1/32}	3 ^{1/16}	2 ^{7/8}	2 ^{7/16}	2 ^{7/16}	3/32	5	4 ^{13/16}	3 ^{3/4}	3 ^{1/8}	2 ^{1/32}	9 ^{7/8}	1/16	8-3/8
2 1/2	74	46,600	16,000	2.500	7	4 ^{29/32}	3 ^{7/8}	3 ^{5/8}	3 ^{1/32}	3 ^{1/32}	3/32	5	4 ^{13/16}	4 ^{3/4}	4	3/4	1 ^{11/16}	1/16	10-3/8
3	108	68,000	15,000	3.000	8 ^{3/8}	5 ^{29/32}	4 ^{11/16}	4 ^{1/4}	3 ^{19/32}	3 ^{19/32}	3/32	5	4 ^{13/16}	5 ^{1/2}	4 ^{25/32}	1 ^{3/16}	1 ^{23/16}	3/32	10-1/2
3 1/2	215	135,500	14,000	3.500	9 ^{7/16}	6 ^{29/32}	5 ^{5/8}	5 ^{1/4}	4 ^{3/16}	4 ^{3/16}	3/32	5	4 ^{13/16}	6 ^{1/2}	5 ^{3/4}	1	1 ^{33/8}	3/32	12-1/2
4	333	209,900	13,000	4.000	11	7 ^{29/32}	6 ^{3/8}	6	4 ^{3/4}	4 ^{3/4}	1/8	7	6 ^{3/4}	7 ^{3/8}	6 ^{5/8}	1 ^{1/16}	1 ^{61/2}	3/32	12-5/8
4 1/2	493	310,700	11,000	4.500	12 ^{1/2}	9 ^{1/4}	7 ^{1/4}	6 ^{7/8}	5 ^{5/16}	5 ^{5/16}	1/8	7	6 ^{3/4}	8 ^{5/8}	7 ^{3/4}	1 ^{1/8}	1 ^{75/8}	1/8	14-5/8
5	700	441,000	10,000	5.000	13 ^{5/8}	10 ^{3/8}	8 ^{1/4}	7 ^{3/4}	6 ^{1/32}	6 ^{1/32}	1/8	7	6 ^{3/4}	9 ^{3/8}	8 ^{1/2}	1 ^{5/16}	1 ^{91/16}	1/8	14-5/8
5 1/2	937	590,500	9,600	5.500	15 ^{5/16}	11 ^{9/16}	9 ^{1/4}	8 ^{3/4}	6 ^{5/8}	6 ^{5/8}	1/8	8	7 ^{3/4}	10 ^{3/8}	9 ^{9/16}	1 ^{3/8}	2 ^{11/4}	1/8	14-3/4
6	1,160	731,000	9,000	6.000	16 ^{3/4}	12 ^{13/16}	10 ^{1/4}	9 ^{5/8}	7 ^{3/8}	7 ^{3/8}	1/8	8	7 ^{3/4}	11 ^{7/16}	10 ^{9/16}	1 ^{1/2}	2 ^{23/4}	1/8	16-3/4

Size FHSA	Weights (lb)					
	Hub	Sleeve	Spacer Per Dim. S	Bolts & Nuts—One Flange	Complete Cplg. Per Dim. BSE	Spacer Body Per Inch
1 1/2	1.48	1.84	5.10	.13	12.00	.71
2	2.84	2.83	7.76	.51	20.12	.95
2 1/2	6.23	4.83	11.78	.63	35.16	1.46
3	10.03	8.68	15.64	1.47	56.00	1.64
3 1/2	18.02	10.80	15.97	1.76	77.13	2.04
4	26.94	17.79	32.09	3.58	128.71	2.33
4 1/2	41.12	27.03	40.15	4.18	184.81	3.18
5	62.41	31.09	47.24	4.18	242.60	3.48
5 1/2	86.69	51.34	72.53	6.77	362.10	3.60
6	120.66	63.27	86.78	7.74	470.12	4.28

Size FHSA	WR ² (lb-in ²)				
	Hub	Sleeve	Spacer Per Dim. S	Complete Cplg. Per Dim. BSE	Spacer Body Per Inch
1 1/2	1.4	5.2	12.5	25.7	1.3
2	4.9	18.9	37.8	85.4	2.8
2 1/2	17.2	27.1	74.9	163.5	7.0
3	39.1	49.5	147.8	325.0	10.9
3 1/2	100.1	145.3	215.6	706.4	19.2
4	195.9	318.2	545.7	1,573.9	28.6
4 1/2	393.2	632.7	945.5	2,997.3	53.5
5	767.1	901.1	1,303.3	4,639.7	69.5
5 1/2	1,308.0	1,846.0	2,450.4	8,758.4	89.5
6	2,225.0	2,787.0	3,773.7	13,797.7	129.6

Size FHSA	Torsional Stiffness in-lb/Radian x 10 ⁶	
	Spacer Cplg. Per Dim. BSE (ks)	Spacer Body Per Inch (ki)
1 1/2	2.0	55
2	5.1	120
2 1/2	10.8	298
3	18.3	462
3 1/2	31.0	815
4	43.7	1,215
4 1/2	68.9	2,269
5	89.7	2,950
5 1/2	120.0	3,799
6	157.3	5,499

To find the Stiffness Factor for a coupling assembly with a spacer "n" inches longer than standard:

- Let k_x = new stiffness factor
- n = number of additional inches of spacer
- k_s = stiffness factor for standard coupling from table
- k_i = Stiffness factor for 1" length of standard spacer body from table.

Then $1/k_x = 1/k_s + n/k_i$

Example: What is new stiffness factor for size 1 1/2 coupling if spacer length is 3" longer than standard?

$$1/k_x = 1/2 + 3 \times 1/55 = .55454 \dots k_x = 1.803$$

If coupling spacer is shorter than standard, the formula becomes $1/k_x = 1/k_s - n/k_i$

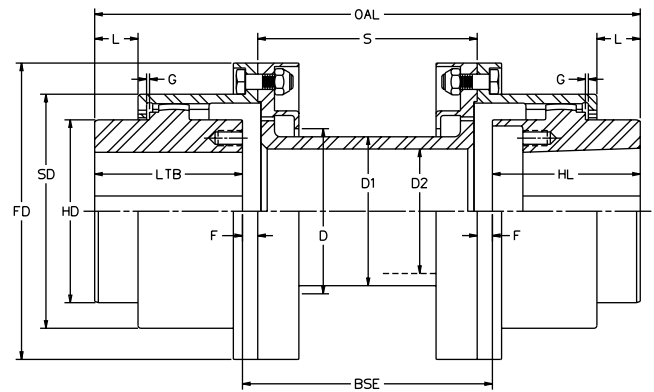
Note: All weights, WR² and Torsional Stiffness based on maximum bore.

High Performance Gear Couplings

Lovejoy/Sier-Bath "F" Series High Speed

High Speed Precision—"FHSAA"

The Lovejoy/Sier-Bath High Speed Precision gear couplings are made of alloy steel with a core hardness of HRC 30-35 and are magnetic particle inspected. They have close tolerances and precision manufactured mating surfaces with bores ground to accurate tolerance. In addition, gear couplings are dynamically balanced, have a piloted gear fit, and have body-fitted bolts in reamed holes. The low overhung moment reduces bearing loads. They also have low moment of inertia and are extremely light weight. Balancing bands will be included, if required. For nitrided gear teeth, specify Class AAN and a surface hardness of 85.5 minimum in the Rockwell 15N scale.



Size FHSAA	Capacity		Max RPM	Max. Bore	FD	SD	D	HD	LTB	HL	F	BSE	S	D1	D2	L	OAL	G	Bolts Per Flange
	HP 100 RPM	Torque in-lb.																	
1 1/2	30	18,900	20,000	1.625	5	3 1/2	2 1/2	2 9/16	2 1/8	2 1/8	9/32	5	4 7/16	2	1 1/2	3 1/16	9 1/4	1 1/16	8-5/16
2	45	28,300	18,700	2.125	5 7/8	4 5/16	3 3/16	3 3/16	2 1/2	2 1/2	9/32	5	4 7/16	2 5/8	2 1/8	1 1/4	10	1 1/16	8-3/8
2 1/2	100	63,000	17,600	2.625	6 7/8	5 5/16	4	4	3 1/8	3 1/8	9/32	5	4 7/16	3 3/8	2 7/8	1 1/4	11 1/4	1 1/16	10-3/8
3	160	100,800	16,500	3.125	8 3/16	6 1/8	4 11/16	4 3/4	3 5/8	3 5/8	9/32	7	6 7/16	4	3 3/8	1 1/4	14 1/4	3/32	10-1/2
3 1/2	240	151,200	15,400	3.625	9	7	5 9/16	5 1/2	4 1/4	4 1/4	9/32	7	6 7/16	4 7/8	4 1/4	1 1/4	15 1/2	3/32	12-1/2
4	350	220,600	14,300	4.125	10	7 7/8	6 3/4	6 3/8	4 7/8	4 7/8	9/32	8	7 7/16	5 7/8	5 1/4	1 1/4	17 3/4	3/32	12-5/8
4 1/2	525	330,800	12,100	4.625	11 5/8	9 1/8	7 3/8	7	5 1/2	5 1/2	9/32	8	7 7/16	6 1/2	5 5/8	3 8/16	19	3/32	12-5/8
5	760	479,000	11,000	5.125	13	10 1/2	8 3/4	7 1/8	6 1/4	6 1/4	9/32	10	9 7/16	7 3/4	6 3/4	1 1/2	22 1/2	3/32	14-5/8
5 1/2	980	617,600	10,500	5.625	14 1/2	11 1/2	9 1/2	8 3/4	6 3/4	6 3/4	9/32	10	9 7/16	8 1/2	7 1/2	1 1/2	23 1/2	3/32	14-3/4
6	1,290	813,000	9,900	6.125	15 3/4	12 3/4	10 7/16	9 3/8	7 1/4	7 1/4	9/32	10	9 7/16	9 1/4	8 1/4	1 1/2	24 1/2	3/32	16-3/4

Size FHSAA	Weights (lb)					
	Hub	Sleeve	Spacer Per Dim. S	Bolts & Nuts—One Flange	Complete Cplg. Per Dim. BSE	Spacer Body Per Inch
1 1/2	2.22	2.18	5.48	.47	15.22	.39
2	3.81	5.00	7.28	.51	25.92	.52
2 1/2	6.96	5.63	10.50	.63	36.94	.69
3	11.79	8.69	16.32	1.47	60.22	1.02
3 1/2	18.31	10.34	17.72	1.76	78.54	1.27
4	28.50	13.80	25.20	3.58	113.32	1.54
4 1/2	39.99	19.76	36.50	4.18	163.16	2.36
5	59.82	29.48	52.54	4.18	239.50	3.23
5 1/2	79.84	38.06	68.26	6.77	317.60	3.56
6	99.66	52.87	77.86	7.74	398.40	3.89

Size FHSAA	WR ² (lb-in ²)				
	Hub	Sleeve	Spacer Per Dim. S	Complete Cplg. Per Dim. BSE	Spacer Body Per Inch
1 1/2	2.8	7.5	14.9	35.5	.3
2	7.7	16.2	29.1	76.9	.7
2 1/2	23.7	40.0	62.4	189.8	1.7
3	51.1	82.7	122.2	389.8	3.5
3 1/2	104.6	141.1	167.9	659.3	6.6
4	218.0	204.7	324.0	1,169.4	11.9
4 1/2	387.3	408.5	586.4	2,178.2	21.7
5	738.9	797.8	1,043.1	4,116.6	42.5
5 1/2	1,196.3	1,259.6	1,807.7	6,719.7	57.1
6	1,774.2	2,089.4	2,465.8	8,993.1	74.6

Size FHSAA	Torsional Stiffness in-lb/Radian x 10 ⁶	
	Spacer Cplg. Per Dim. BSE (ks)	Spacer Body Per Inch (ki)
1 1/2	1.7	12
2	4.0	31
2 1/2	9.0	72
3	12.2	148
3 1/2	20.2	281
4	29.7	508
4 1/2	47.2	923
5	69.4	1804
5 1/2	92.1	2422
6	123.3	3167

To find the Stiffness Factor for a coupling assembly with a spacer "n" inches longer than standard:

Let k_x = new stiffness factor
 n = number of additional inches of spacer
 k_s = stiffness factor for standard coupling from table
 k_i = Stiffness factor for 1" length of standard spacer body from table.

Then $1/k_x = 1/k_s + n/k_i$

Example: What is new stiffness factor for size 1 1/2 coupling if spacer length is 3" longer than standard?

$$1/k_x = 1/1.7 + 3 \times 1/12 = .83823 \dots k_x = 1.192$$

If coupling spacer is shorter than standard, the formula becomes $1/k_x = 1/k_s - n/k_i$

Note: All weights, WR² and Torsional Stiffness based on maximum bore.

$$1/k_x = 1/1.7 + 3 \times 1/12 = .83823 \dots k_x = 1.192$$

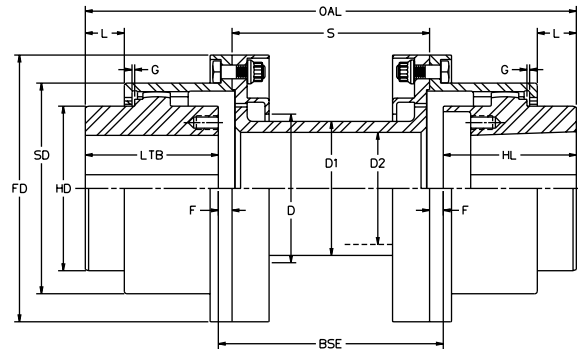
HP

High Performance Gear Couplings



Lovejoy/Sier-Bath "F" Series High Speed High Speed Ultra Precision—"FHSPAA"

The Lovejoy/Sier-Bath High Speed Ultra Precision gear couplings are made of Nitralloy 135 modified with a core hardness of HRC 32-36 and they are magnetic particle inspected. They have close tolerances and precision manufactured mating surfaces with bores precision-ground for extremely high accuracy. In addition, they have body-fitted bolts with reamed holes. These gear couplings are dynamically balanced and have a piloted gear fit to insure balance integrity during operation. The low overhung moment reduces bearing loads. They also have low moment of inertia and are extremely lightweight. Balancing bands will be included, if required. For nitrided gear teeth, specify class PAAN and a surface hardness of 90 minimum on the Rockwell 15N scale.



Size FHS PAA	Capacity		Max RPM	Max. Bore	FD	SD	D	HD	LTB	HL	F	BSE	S	D1	D2	L	OAL	G	Bolts Per Flange
	HP 100 RPM	Torque in.-lb.																	
1 1/2	30	18,900	20,000	1.625	5	3 1/2	2 1/2	2 9/16	2 1/8	2 1/8	9/32	5	4 7/16	2	1 1/2	3/16	9 1/4	1/16	8-5/16
2	45	28,300	18,700	2.125	5 7/8	4 5/16	3 3/16	3 3/16	2 1/2	2 1/2	9/32	5	4 7/16	2 5/8	2 1/8	1/4	10	1/16	8-3/8
2 1/2	100	63,000	17,600	2.625	6 7/8	5 5/16	4	4	3 1/8	3 1/8	9/32	5	4 7/16	3 3/8	2 7/8	1/4	11 1/4	1/16	10-3/8
3	160	100,800	16,500	3.125	8 3/16	6 1/8	4 11/16	4 3/4	3 5/8	3 5/8	9/32	7	6 7/16	4	3 3/8	1/4	14 1/4	3/32	10-1/2
3 1/2	240	151,200	15,400	3.625	9	7	5 9/16	5 1/2	4 1/4	4 1/4	9/32	7	6 7/16	4 7/8	4 1/4	1/4	15 1/2	3/32	12-1/2
4	350	220,600	14,300	4.125	10	7 7/8	6 3/4	6 3/8	4 7/8	4 7/8	9/32	8	7 7/16	5 7/8	5 1/4	1/4	17 3/4	3/32	12-5/8
4 1/2	525	330,800	12,100	4.625	11 5/8	9 1/8	7 3/8	7	5 1/2	5 1/2	9/32	8	7 7/16	6 1/2	5 5/8	3/8	19	3/32	12-5/8
5	760	479,000	11,000	5.125	13	10 1/2	8 3/4	7 1/8	6 1/4	6 1/4	9/32	10	9 7/16	7 3/4	6 3/4	1/2	22 1/2	3/32	14-5/8
5 1/2	980	617,600	10,500	5.625	14 1/2	11 1/2	9 1/2	8 3/4	6 3/4	6 3/4	9/32	10	9 7/16	8 1/2	7 1/2	1/2	23 1/2	3/32	14-3/4
6	1,290	813,000	9,900	6.125	15 3/4	12 3/4	10 7/16	9 3/8	7 1/4	7 1/4	9/32	10	9 7/16	9 1/4	8 1/4	1/2	24 1/2	3/32	16-3/4

Size FHS PAA	Weights (lb)					
	Hub	Sleeve	Spacer Per Dim. S	Bolts & Nuts—One Flange	Complete Cplg. Per Dim. BSE	Spacer Body Per Inch
1 1/2	2.22	2.18	5.48	.47	15.22	.39
2	3.81	5.00	7.28	.51	25.92	.52
2 1/2	6.96	5.63	10.50	.63	36.94	.69
3	11.79	8.69	16.32	1.47	60.22	1.02
3 1/2	18.31	10.34	17.72	1.76	78.54	1.27
4	28.50	13.80	25.20	3.58	113.32	1.54
4 1/2	39.99	19.76	36.50	4.18	163.16	2.36
5	59.82	29.48	52.54	4.18	239.50	3.23
5 1/2	79.84	38.06	68.26	6.77	317.60	3.56
6	99.66	52.87	77.86	7.74	398.40	3.89

Size FHS PAA	WR ² (lb-in ²)				
	Hub	Sleeve	Spacer Per Dim. S	Complete Cplg. Per Dim. BSE	Spacer Body Per Inch
1 1/2	2.8	7.5	14.9	35.5	.3
2	7.7	16.2	29.1	76.9	.7
2 1/2	23.7	40.0	62.4	189.8	1.7
3	51.1	82.7	122.2	389.8	3.5
3 1/2	104.6	141.1	167.9	659.3	6.6
4	218.0	204.7	324.0	1,169.4	11.9
4 1/2	387.3	408.5	586.4	2,178.2	21.7
5	738.9	797.8	1,043.1	4,116.6	42.5
5 1/2	1,196.3	1,259.6	1,807.7	6,719.7	57.1
6	1,774.2	2,089.4	2,465.8	8,993.1	74.6

Size FHS PAA	Torsional Stiffness in.-lb/Radian x 10 ⁶	
	Spacer Cplg. Per Dim. BSE (ks)	Spacer Body Per Inch (kl)
1 1/2	1.7	12
2	4.0	31
2 1/2	9.0	72
3	12.2	148
3 1/2	20.2	281
4	29.7	508
4 1/2	47.2	923
5	69.4	1804
5 1/2	92.1	2422
6	123.3	3167

To find the Stiffness Factor for a coupling assembly with a spacer "n" inches longer than standard:

Let k_x = new stiffness factor
 n = number of additional inches of spacer
 k_s = stiffness factor for standard coupling from table
 k_i = Stiffness factor for 1" length of standard spacer body from table.

Then $1/k_x = 1/k_s + n/k_i$

Example: What is new stiffness factor for size 1 1/2 coupling if spacer length is 3" longer than standard?

$$1/k_x = 1/1.7 + 3 \times 1/12 = .83823 \dots k_x = 1.192$$

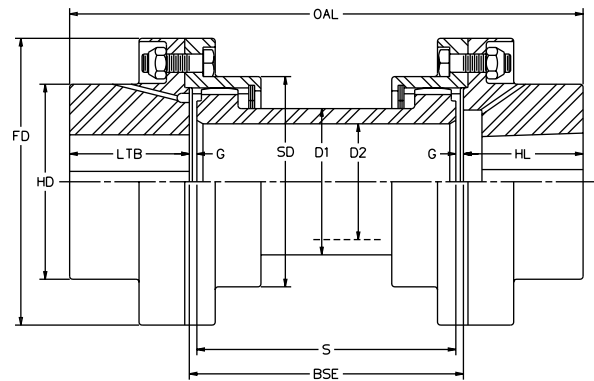
If coupling spacer is shorter than standard, the formula becomes $1/k_x = 1/k_s - n/k_i$

Note: All weights, WR² and Torsional Stiffness based on maximum bore.

High Performance Gear Couplings

Lovejoy/Sier-Bath "F" Series High Speed High Speed Marine—"FHSMA"

The Lovejoy/Sier-Bath High Speed Marine gear couplings have a core hardness of HRC 30-35 and are magnetic particle inspected. They are precision manufactured with ground bores and close concentricity for dynamic stability. These couplings are dynamically balanced, have piloted gear fit, and have body-fitted bolts in reamed holes. They also have a larger shaft capacity. For nitrided gear teeth, specify Class MAN and a surface hardness of 85.5 minimum on the Rockwell 15N scale.



Size FHSMA	Capacity		Max RPM	Max. Bore	FD	SD	HD	LTB	HL	G	BSE	S	D1	D2	OAL	Bolts Per Flange
	HP 100 RPM	Torque in.-lb.														
1 1/2	30	18,900	18,000	2.125	5	3 1/2	3 3/16	2 1/2	2 1/2	3/32	5	4 13/16	2 3/8	1 3/4	10	8-5/16
2	45	28,300	17,000	2.625	5 7/8	4 5/16	4	3 1/8	3 1/8	3/32	5	4 13/16	3	2 3/8	11 1/4	8-3/8
2 1/2	100	63,000	16,000	3.125	6 7/8	5 5/16	5	3 5/8	3 5/8	3/32	5	4 13/16	3 3/4	3 1/8	12 1/4	10-3/8
3	160	100,800	15,000	3.625	8 3/16	6 1/8	5 3/4	4 1/4	4 1/4	3/32	7	6 13/16	4 1/2	3 3/4	15 1/2	10-1/2
3 1/2	240	151,200	14,000	4.625	9 7/16	7	6 3/4	5 1/4	5 1/4	1/8	7	6 3/4	5 1/8	4 3/8	17 1/2	12-1/2
4	350	220,600	13,000	5.125	11	7 7/8	7 3/4	6	6	1/8	8	7 3/4	6	5	20	12-5/8
4 1/2	525	330,800	11,000	5.625	12 1/2	9 1/8	9	6 5/8	6 5/8	1/8	8	7 3/4	7	5 7/8	21 1/4	14-5/8
5	760	479,000	10,000	6.625	13 5/8	10 1/2	10 1/8	7 1/8	7 1/8	5/32	10	9 11/16	7 3/4	6 5/8	24 1/4	14-5/8
5 1/2	980	617,600	9,600	7.125	15 5/16	11 1/2	11	8	8	5/32	10	9 11/16	8 1/2	7 1/2	26	14-3/4
6	1,290	813,000	9,000	7.625	16 3/4	12 3/4	12 1/2	8 3/4	8 3/4	5/32	10	9 11/16	9 1/4	8 1/4	27 1/2	16-3/4

Size FHSMA	Weights (lb)					
	Hub	Sleeve	Spacer Per Dim. S	Bolts & Nuts—One Flange	Complete Cplg. Per Dim. BSE	Spacer Body Per Inch
1 1/2	4.03	1.92	3.72	.47	16.56	.57
2	7.39	2.82	5.20	.51	26.64	.75
2 1/2	13.20	3.84	7.70	.63	43.04	.95
3	20.32	5.54	13.52	1.47	68.18	1.38
3 1/2	31.03	5.92	17.72	1.76	95.14	1.59
4	49.66	11.06	27.70	3.58	156.30	2.45
4 1/2	76.53	15.50	37.44	4.18	229.86	3.22
5	98.66	19.12	57.40	4.18	301.32	3.61
5 1/2	123.24	32.42	69.72	6.77	396.56	4.52
6	209.20	39.42	83.54	7.74	596.26	4.93

Size FHSMA	WR ² (lb-in ²)				
	Hub	Sleeve	Spacer Per Dim. S	Complete Cplg. Per Dim. BSE	Spacer Body Per Inch
1 1/2	10.9	7.3	4.8	41.2	.62
2	27.2	14.7	11.2	95.0	1.37
2 1/2	67.3	28.8	27.4	219.6	2.85
3	141.7	57.7	65.2	464.0	5.90
3 1/2	305.9	78.1	117.2	885.2	8.99
4	635.4	208.4	238.4	1,926.0	18.64
4 1/2	1248.4	378.7	411.5	3,696.7	33.60
5	2216.7	578.3	869.5	6,459.5	46.70
5 1/2	3,190.6	1,249.5	1,320.5	10,200.7	74.95
6	7,096.1	1,807.1	1,929.6	19,736.0	97.58

Size FHSMA	Torsional Stiffness in/lb/Radian x 10 ⁶	
	Spacer Cplg. Per Dim. BSE (ks)	Spacer Body Per Inch (ki)
1 1/2	3.3	26
2	7.0	57
2 1/2	13.7	120
3	20.4	250
3 1/2	34.2	381
4	54.6	790
4 1/2	86.2	1,425
5	118.1	1,980
5 1/2	165.8	3,178
6	216.7	4,139

To find the Stiffness Factor for a coupling assembly with a spacer "n" inches longer than standard:

Let k_x = new stiffness factor
 n = number of additional inches of spacer
 k_s = stiffness factor for standard coupling from table
 k_i = Stiffness factor for 1" length of standard spacer body from table.

Then $1/k_x = 1/k_s + n/1/k_i$

Example: What is new stiffness factor for size 1 1/2 coupling if spacer length is 3" longer than standard?

$$1/k_x = 1/3.3 + 3 \times 1/26 = .41841 \dots k_x = 2.389$$

If coupling spacer is shorter than standard, the formula becomes $1/k_x = 1/k_s - n/1/k_i$

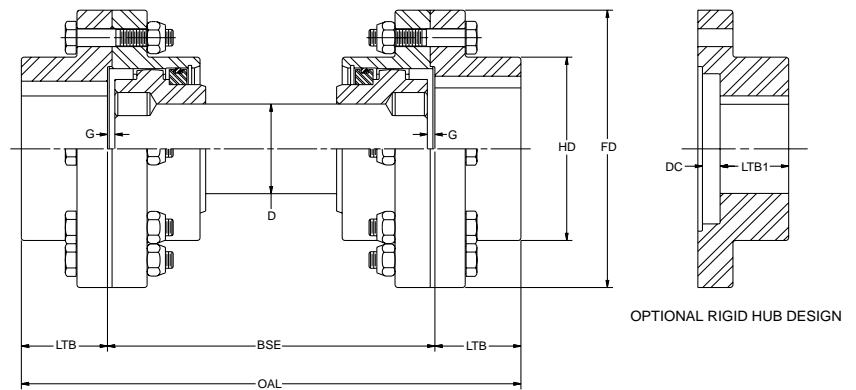
Note: All weights, WR² and Torsional Stiffness based on maximum bore.

Lovejoy Engineered Series

Engineered Centrifugal Pump Type — “FAC”

This coupling is designed specifically for centrifugal pumps and compressors. It is easy to install and replace, efficiently designed to reduce spare part inventory, and is precision manufactured.

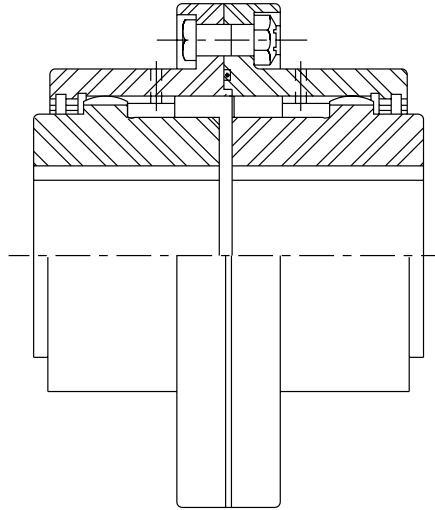
Individual components are easy to assemble and easy to replace. Component balanced parts eliminate your need to keep complete couplings in stock. Grease seals are replaceable without major disassembly. Four sizes accommodate 80% of all normally used shaft diameters. Other features include extended time between lubrications, infinitely adjustable BSE, M-F pilot for proper fit, vertical modification, center assembly independently replaceable, and conforms to API 610 - 6th edition. Its precision balanced parts are made of high strength alloy 4140 steel. Bolts are weigh-balanced as sets.



HP

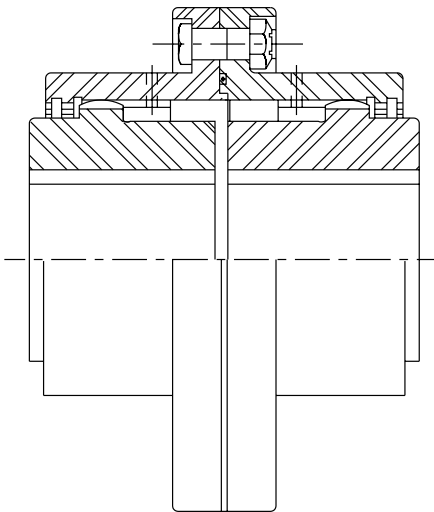
Size FAC	HP 100 RPM	Max. Speed RPM	Max. Bore		FD inch	HD inch	D inch	LTB inch	G inch	BSE inch	OAL inch
			Sq. Key inch	Metric Key mm							
1	18	16,700	2.125	56	4.56	3.06	1.25	1.56	.16	5.00	8.12
1½	36	12,700	2.813	76	6.00	3.97	1.94	1.84	.16	7.00	10.69
2	62	10,900	3.500	95	7.00	4.91	2.50	2.28	.16	7.00	11.56
2½	110	9,100	4.250	114	8.38	5.91	3.00	2.91	.19	7.00	12.81
3	187	8,100	4.875	134	9.44	6.91	3.75	3.41	.19	10.00	16.81
3½	281	6,900	5.625	157	11.00	7.91	4.50	3.97	.22	10.00	17.88

Lovejoy/Sier-Bath "F" Series High Speed Standard Couplings *Additional Standard Designs*



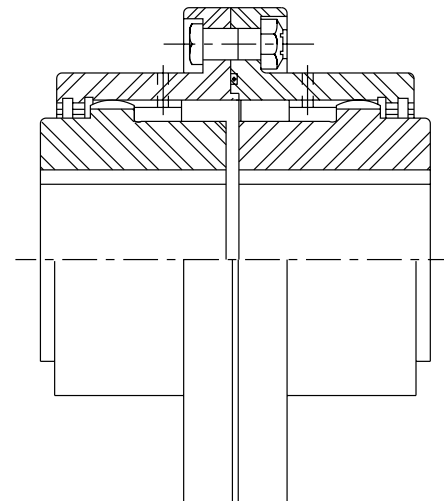
Standard High Speed Flanged Coupling
Continuously Lubricated

For close coupled, continuously lubricated, high speed applications.
Sizes and specifications similar to those shown on the previous pages.



Standard High Speed Continuous Sleeve Coupling
Continuously Lubricated

For lighter weight, close coupled, continuously lubricated applications where flange joint is not required. Materials, heat treatments, and precision manufacturing methods outlined on previous pages apply.



Standard High Speed Continuous Sleeve Coupling
Grease Packed

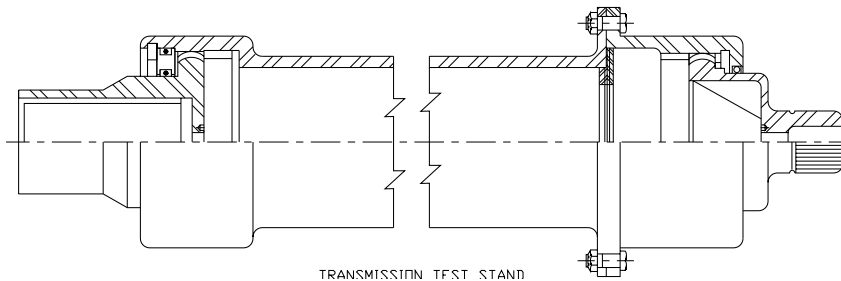
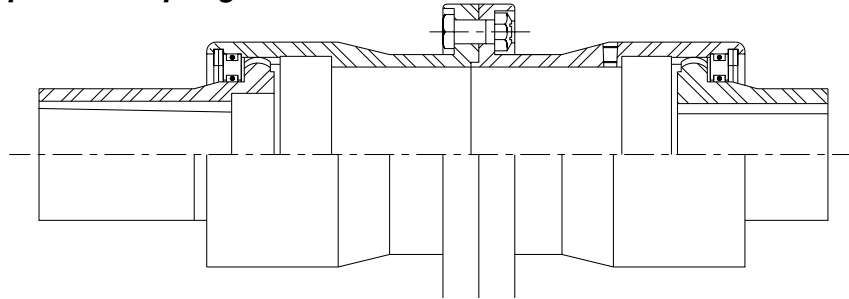
For lighter weight, close coupled, grease packed applications where flange joint is not required. Materials, heat treatments, and precision manufacturing methods outlined on previous pages apply.

Lovejoy/Sier-Bath High Speed Special Couplings

Transmission Test Stand

High Speed Spacer Coupling

Self-contained oil lubrication, normal speed 16,000 RPM, maximum speed 25,000 RPM. The dimensions are similar to a size 2 $\frac{1}{2}$, with an overall length of 35" and a total weight 29 lbs.



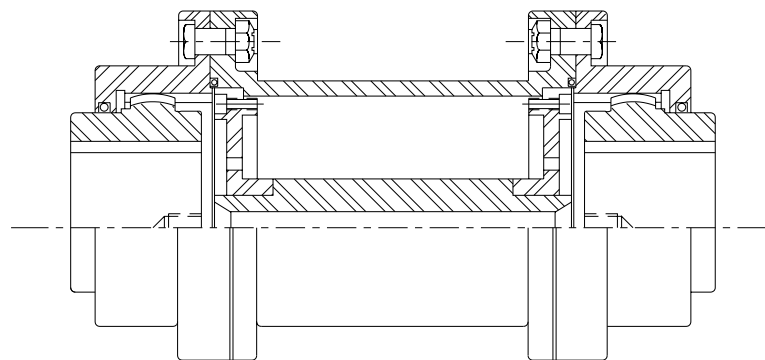
Light Weight Coupling

Made of extremely light weight, vacuum melted, AMS material with magnetic particle inspection. The overall length is 29.5" and the weight is 19.4 lbs. Transmission Test Stand

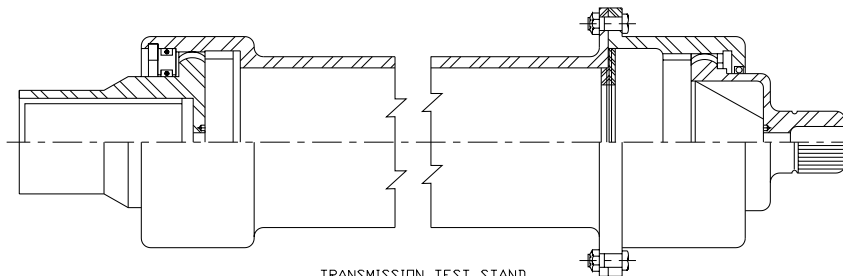
TRANSMISSION TEST STAND

Test Stand

High Speed Spacer coupling with internal support for instrumentation wires. Maximum speed of 7,000 RPM.



TEST STAND HIGH SPEED SPACER COUPLING



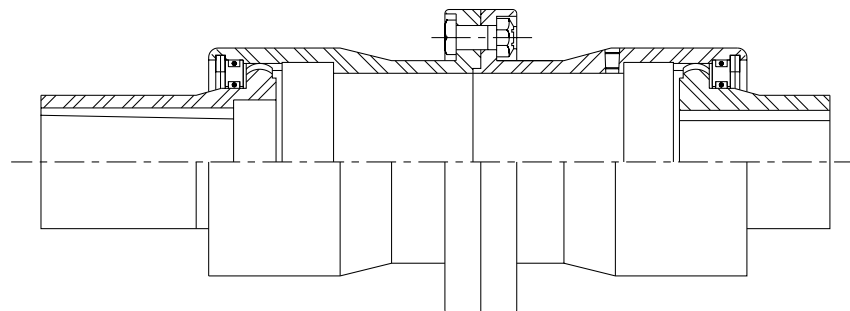
TRANSMISSION TEST STAND HIGH SPEED SPACER COUPLING

Transmission Test Stand

This High Speeds Spacer coupling is grease packed and operate at a maximum speed of 6,000 RPM. Based on a size 3, the overall length is 55".

Single Flange

This High Speed Spacer coupling is grease packed and operates at a maximum speed of 8,000 RPM. The total assembly weighs 19 lbs with an overall length of 19".



SINGLE FLANGE HIGH SPEED SPACER COUPLING

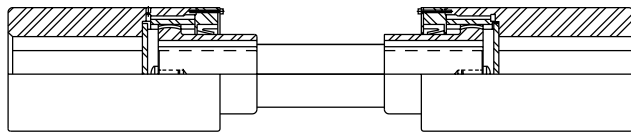
HP

Lovejoy/Sier-Bath Flanged Sleeve Series Spindle Couplings

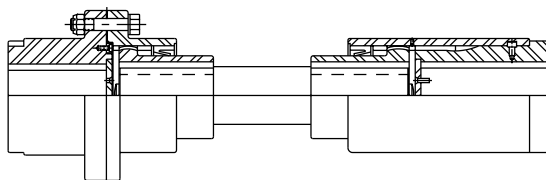
Special Load and No Load Applications

For cases where a spindle coupling operates under a load at a given misalignment angle and requires a higher no load misalignment angle, we design special Vari-Crown tooth forms. Such forms have compound curvature wherein the Vari-Crown is used for maximum radii of curvature at the load angle. At no load conditions the tooth ends are designed to eliminate edge loading and give proper tangential contact.

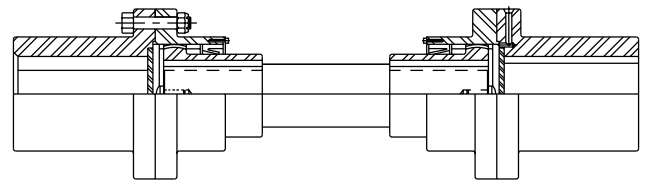
Available in several designs up to 40-inch diameter. Any variations of the designs shown can be incorporated to fit your application.



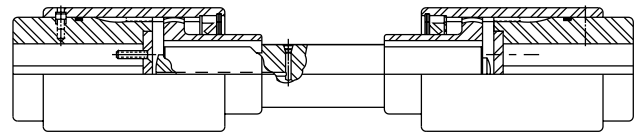
**Replaceable Gearing
Spindle Coupling**



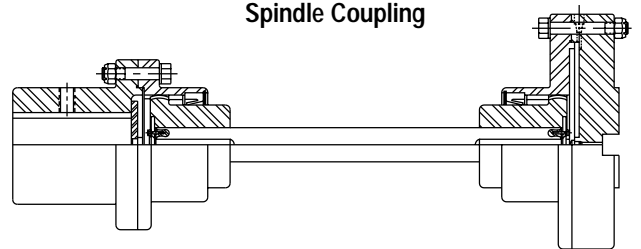
**Special Indexing
Spindle Coupling**



**Flanged Sleeve Main Drive
Spindle Coupling**



**Leveling and Pinch Roll
Spindle Coupling**



**Special Roll Drive
Spindle Coupling**

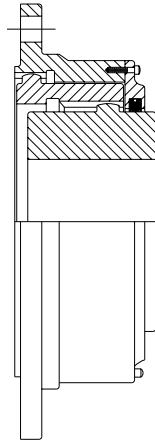
Only a few special types of couplings are illustrated. Additional special types are available on request.

Lovejoy Engineered Special Couplings

Lovejoy has the qualified expertise to take you beyond standard catalogued gear couplings. A few examples, from a large library of standard and special variations, are shown on this page. In addition to those shown as examples, we welcome the opportunity to design special couplings to suit your specific requirements. Consult us with complete details of the application.

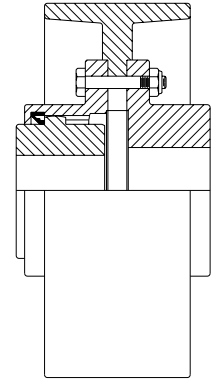
Double Engagement, Half Gear Coupling

Both internal and external teeth in a single sleeve. Can be bolted to a rotating fly-wheel, shaft, or drum to connect driver or driven machine with a shaft extension. This coupling has the same features, ratings, and misalignment capability as the standard group of couplings.



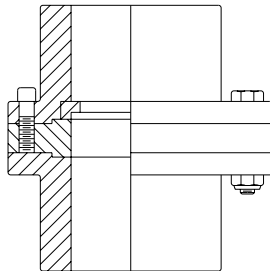
Brakewheel Gear Coupling

Replaceable brakewheel piloted on outside diameter of a standard sleeve and rigid hub. Offers choice of applying braking effort to the load or driving motor. Consult Lovejoy for other variations.



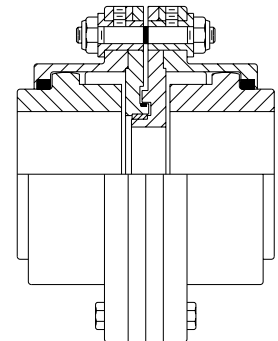
Vertical Adjustable Rigid Gear Coupling

Offers vertical adjustment by rotating a threaded center ring. This allows the driver and driven shafts to be positioned to suit the application. Commonly used on vertical pumps where impeller position is critical.



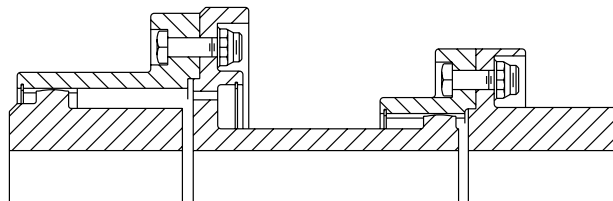
Shear Bolt Gear Coupling

Primarily used under heavy torque loads where bolt replacement without disassembly is mandatory. Will maintain shaft alignment after bolts shear. Generally used on low speed applications.



Combination High Speed Gear Coupling

This coupling is a combination of two High Speed coupling sizes. Allows bolting to an existing rigid flange, if desired. Larger bore capacity is available without increasing coupling size. Large size coupling half can be used at one end to accommodate even larger shafts or a specific mass elastic requirement.



Other Gear Coupling Types:

- Differential Tooth
- Jordan Type
- Oil Collector
- Misalignment Measuring Systems for Spacer Couplings

HP