LF Series Torsional Coupling

The LF Series coupling is designed with a unique and highly versatile elastomeric element. These can be easily integrated into a variety of coupling configurations to meet several application needs. LF Style elements are available in a variety of materials to match the necessary coupling dampening characteristics for tuning the systems critical speed away from the application operating speed. The element can be connected axially to a flywheel adapter plate or flanged hub and radially to a cylindrical center hub using the appropriate bolts. Axial bolt styles include either socket head bolts with a special dry adhesive, or S-Style bolts, which are similar to dowel pins (seen picture below). The radial bolts are used to connect the element to the cylindrical hub. This unique design is remarkably simple, highly effective and gives the LF torsional coupling unmatched performance capabilities. The coupling selection should be verified with a Torsional Vibration Analysis (TVA) of the system. The information required to perform a TVA can be found in the Coupling Selection Worksheet on page T-10.

Features

- Wide range of standard designs and materials
- Application versatility
- Shaft to shaft or flywheel to shaft designs
- Designed to accommodate substantial shock loads, vibration, and misalignment
- Low moment of inertia
- Electrically insulating
- No lubrication, maintenance free
- Unique air-flow cooling design
- Different element stiffness values allow for torsional tuning of applications with diesel engines
- Economic design allows for cost effective solutions for torsional applications
- Proven L-LOC spline-clamping hub virtually eliminates spline shaft profile wear and "fretting"
- Oil, heat, and corrosion resistant elements (Hytrel®, Zytel®)
- When used with S-bolts, the coupling can accommodate some end float.
- S-bolts accommodate applications requiring "blind" assembly
- Model 6 unique spacer designs span gaps between equipment in excess of the normal equipment separation
- Model 6 design available with bearings for high speeds and large amounts of equipment separation

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Standard **S-Style**

Lovejoy's LF product line supports both standard style elements (above left) and the S-Style elements (above right). The standard style elements bolt to the cylindrical (center) hub and the flywheel, flywheel adapter, or flange hub. The S-Style utilizes bolts which look like dowel pins and are designed for "blind" installations, where the axial bolts may not be accessible for tightening during the installation process. One application would be inside a bell housing when all the components are assembled and the bolts cannot be reached. The S-Style bolts also accommodate a small amount of end float when necessary to prevent unnecessary axial stress on the element. When looking to replace elements, please note the difference in the axial holes. The standard elements have stepped holes to accommodate the cap screws (above left) which are used to mount the element. The S-Style elements have straight holes (above right) to accommodate the S-Style pins.

Further installation instructions can be found at www.lovejoy-inc.com in the Technical Resources section.

LF Series Torsional Elements

The focus of any coupling is the flexible elements, or the "working component". The element must effectively absorb the shock loads, misalignment forces, and torsional vibrations, under a variety of environmental conditions. The following materials are used to accommodate the different conditions and environments where the couplings are used.

High Temperature Rubber (HTR)

There are two different rubber element materials available, High Temperature Rubber (HTR) and Neoprene (CR). Both elements are torsionally soft and are placed into compression during assembly. Rubber under compression can carry up to 5 times the amount of torque as non-compressed elements. The elements effectively accommodate shock, misalignment, and vibration plus minimize harmful radial and axial forces on the connected equipment. Neoprene (CR) is used in environments that are hostile to High Temperature Rubber (HTR).

Available Durometer Hardness :	50, 60 (Shore A scale)	
Operating Temperature Range:	HTR:	-40° to 194° F
	CR:	-40° to 175° F
Maximum Angular Misalignment:	Up to 3°	

HTR

Hytrel®

Elements made of DuPont's Hytrel® elastomer compound are torsionally much stiffer than natural rubber (20 times stiffer) and were developed for combustion engine / hydraulic pump applications. Hytrel® elements have 20% greater torque capacity as compared to rubber elements. The torsionally stiff Hytrel® element moves the harmful vibration resonance frequency above the operating RPM range. The element design also reduces harmful radial and axial reactionary forces.

Operating Temperature Range:	-60° to 250° F
Maximum Angular Misalignment:	0.25°

Hytrel®

Zytel®

Elements made of DuPont's highly stressable Zytel® elastomeric compound have excellent chemical compatibility and corrosion resistance. The element composition is 3-times stiffer then Hytrel® elements. Zytel® elements exhibit less than 1° wind up at normal torque and zero backlash. Most suited for applications where heat, moisture, high torque / high speed, and corrosion resistance are critical factors in the coupling selection.

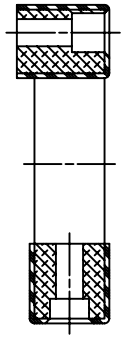
Operating Temperature Range:	-40° to 300° F
Maximum Angular Misalignment:	1°

Zytel®

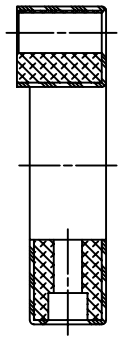
The following are standard LF Series torsional coupling models. The simple, unique design permits a wide range of models from common components to meet each application requirement.

Base Element

The heart of the LF Series coupling is the flexible base element. This element allows the customer to make their own shaft hubs from steel bar stock or use existing hubs. Ideal for quick prototype testing, retrofit and high volume applications.



Standard Base Element

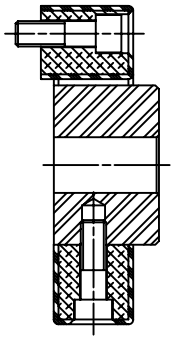


S-Style Base Element

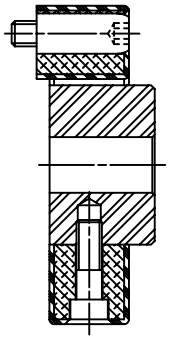
Model 1 and 1/S

Consists of the flexible base element with a simple steel cylindrical hub.

The 1/S is shown with the S-Style axial screw (similar to a dowel) for quick blind assembly of the drive package. The same combinations available in Model 1 are also available in the Model 1/S.



Model 1



Model 1/S

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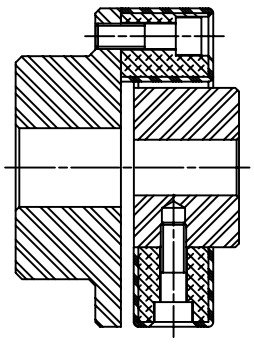
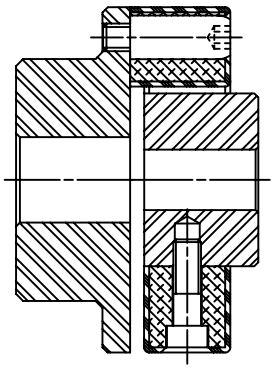
Model 2 and 2/S

Provides a complete shaft-to-shaft coupling in a range of sizes for all industrial power transmission applications. It is similar to Model 1 shown above, except a flanged hub is added to make the shaft to shaft connection.

Model 2/S allows the drive package to be “blind” connected. As with all S-Style models, axial end float of equipment shafts can be accommodated without harmful push-pull force.



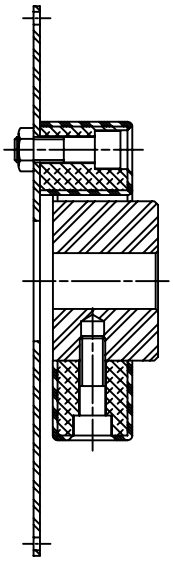
Model 2



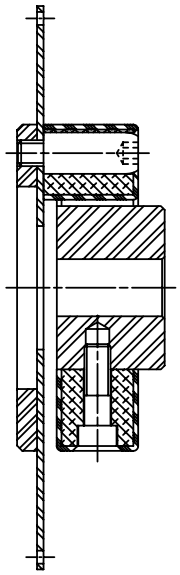
Model 2/S

Model 3 and 3/S

A Model 1 or 1/S with the addition of an engine mounting plate becomes a Model 3 or 3/S. It is available in standard SAE flywheel sizes as well as made-to-order sizes. The standard cylindrical hub is available in a variety of ANSI (SAE), DIN, JIS, and agricultural spline bores for hydraulic pumps and other applications. Various standard flexible element materials are available for specific torsional, misalignment and environmental requirements.



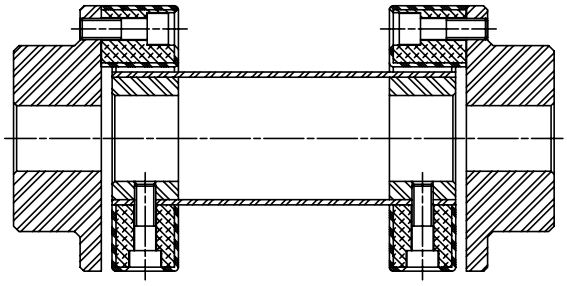
Model 3



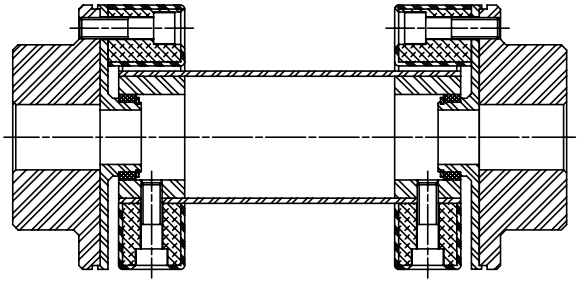
Model 3/S

Model 6, 6/S and 6B

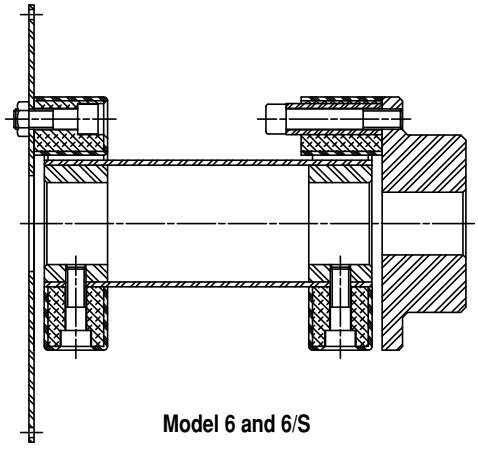
The Model 6 is available with floating shafts at customer specified assembly lengths, with special corrosion and heat resistant elements and materials. This model surpasses all other floating shaft designs in assembly, simplicity and reliability. Model 6/S accommodates free endplay without harmful push-pull reaction forces. Model 6/B is a highly elastic floating shaft coupling with accurate, maintenance free centering flanges for applications with long spans and high misalignment and or speed requirements.



Model 6



Model 6B



Model 6 and 6/S

LF Series Performance Data

Size	Element Material	Nominal Torque T_{KN} in-lb	Nominal Torque T_{KN} Nm	Maximum Torque T_{Kmax} in-lb	Maximum Torque T_{Kmax} Nm	Max Speed N_{max} RPM	Allowable Continuous Vibratory Trq T_{KW} in-lb	Allowable Continuous Vibratory Trq T_{KW} Nm	Dynamic Torsional Stiffness C_{Tdyn} Rubber 60 Shore (Standard) in-lb/rad	Rubber 60 Shore (Standard) Nm/rad	Rubber 50 Shore (Optional) in-lb/rad	Rubber 50 Shore (Optional) Nm/rad	Hytrel®1 in-lb/rad	Hytrel®1 Nm/rad	Zytel® in-lb/rad	Zytel® Nm/rad
LF1	HTR	90	10	200	25	10,000	44	5	1,240	140	800	90	—	—	—	—
LF2	HTR	180	20	530	60	8,000	89	10	2,570	290	1,600	180	—	—	—	—
	Zytel®	265	30	530	60	10,000	N/A	N/A	—	—	—	—	—	—	55,150	6 230
LF4	HTR	440	50	1,100	125	7,000	180	20	7,500	850	4,870	550	—	—	—	—
LF8	HTR	885	100	2,480	280	6,500	355	40	13,300	1 500	7,970	900	—	—	—	—
	Zytel®	1,060	120	2,480	280	7,000	N/A	N/A	—	—	—	—	—	—	414,370	46 820
LF12	HTR	1,240	140	3,190	360	6,500	440	50	38,900	4 400	23,900	2 700	—	—	—	—
LF16	HTR	1,770	200	4,960	560	6,000	710	80	30,100	3 400	17,700	2 000	—	—	—	—
	Hytrel®	1,770	200	4,960	560	5,500	N/A	N/A	—	—	—	—	320,000	36 000	—	—
	Zytel®	2,120	240	4,960	560	6,000	N/A	N/A	—	—	—	—	—	—	654,800	74 000
LF22	HTR	2,430	275	6,640	750	6,000	885	100	79,600	9 000	54,000	6 100	—	—	—	—
LF25	HTR	2,790	315	7,740	875	5,000	1,100	125	39,800	4 500	4,800	2 800	—	—	—	—
LF28	HTR	3,700	420	10,600	1 200	5,000	1,330	150	106,200	12 000	66,400	7 500	—	—	—	—
LF30	HTR	4,400	500	12,400	1 400	4,000	1,770	200	69,000	7 800	42,500	4 800	—	—	—	—
	Hytrel®	4,400	500	12,400	1 400	4,000	N/A	N/A	—	—	—	—	780,000	88 000	—	—
LF50	HTR	6,200	700	18,600	2 100	4,000	2,650	300	168,100	19 000	106,200	12 000	—	—	—	—
	Hytrel®	7,100	800	17,700	2 000	4,000	N/A	N/A	—	—	—	—	2,300,000	262 000	—	—
LF80	HTR	7,960	900	18,600	2 100	4,000	2,830	320	221,200	25 000	141,600	16 000	—	—	—	—
LF90	HTR	9,700	1 100	27,900	3 150	3,600	3,980	450	141,600	16 000	92,900	10 500	—	—	—	—
LF140	HTR	15,000	1 700	43,400	4 900	3,600	6,200	700	354,000	40 000	234,500	26 500	—	—	—	—
LF250	HTR	26,500	3 000	77,400	8 750	3,000	11,000	1 250	592,900	67 000	380,500	43 000	—	—	—	—

Notes:
- 1 indicates: For Hytrel, dynamic torsional stiffness values are non-linear with respect to torque. Value given is for 100% of nominal torque.
- N/A indicates: Not Applicable.
- HTR is High Temperature Rubber.

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LF Series Performance Data *Continued*

Size	Element Material	Max Allowable Misalignment*							Wind Up (angle of twist)		Static Stiffness					
		Angular ΔK_w	Parellel ΔK_r		Axial (End Float) Standard ΔK_a		Axial (End Float) S-Style**		at Nominal Torque	at Maximum Torque	Axial C_a		Radial C_r		Angular C_w	
		Degrees	in	mm	in	mm	in	mm	Degrees	Degrees	lb/in	N/mm	lb/in	N/mm	in-lb/deg	Nm/deg
LF1	HTR	3.00	0.060	1.5	+/-0.08	+/-2	+0.18 / -0.08	+4.6 / -2	6	17.0	220	38	860	150	2.66	0.3
LF2	HTR	3.00	0.060	1.5	+/-0.12	+/-3	+0.12 / -0.12	+3 / -3	6	17.0	130	22	860	150	2.66	0.3
	Zytel®	1.00	0.004	0.1	+/-0.02	+/-0.5	+0.12 / -0.02	+3 / -0.5	—	—	—	—	—	—	—	—
LF4	HTR	3.00	0.060	1.5	+/-0.12	+/-3	+0.17 / -0.12	+4.3 / -3	5	12.0	430	75	2,860	500	21.30	2.4
LF8	HTR	3.00	0.080	2.0	+/-0.16	+/-4	+0.20 / -0.16	+5 / -4	5	14.0	430	75	2,860	500	31.90	3.6
	Zytel®	1.00	0.004	0.1	+/-0.02	+/-0.5	+0.20 /-0.02	+5 / -0.5	—	—	—	—	—	—	—	—
LF12	HTR	2.00	0.080	2.0	+/-0.12	+/-3	+0.20 /-0.16	+5 / -4	3	7.5	1,430	250	5,710	1 000	80.00	9.0
LF16	HTR	3.00	0.080	2.0	+/-0.20	+/-5	+0.23 / -0.20	+5.8 / -5	5	14.0	570	100	2,860	500	44.00	5.0
	Hytrel®	0.25	0.000	0.0	+0.12 / -0.08	+3 / -2	N/A	N/A	—	—	—	—	—	—	—	—
	Zytel®	1.00	0.004	0.1	+/-0.02	+/-0.5	+0.23 /-0.02	+5.8 / -0.5	—	—	—	—	—	—	—	—
LF22	HTR	2.00	0.080	2.0	+/-0.12	+/-3	+0.23 /-0.20	+5.8 / -5	3	7.5	2,860	500	7,420	1 300	106.00	12.0
LF25	HTR	3.00	0.080	2.0	+/-0.20	+/-5	+0.26 / -0.20	+6.6 / -5	5	14.0	800	140	3,400	600	62.00	7.0
LF28	HTR	2.00	0.080	2.0	+/-0.12	+/-3	+0.26 / -0.20	+6.6 / -5	3	7.5	3,140	550	8,000	1 400	150.00	17.0
LF30	HTR	3.00	0.080	2.0	+/-0.20	+/-5	+0.26 / -0.20	+6.6 / -5	5	14.0	1,090	190	4,280	750	80.00	9.0
	Hytrel®	0.25	0.000	0.0	+0.12 / -0.08	+3 / -2	N/A	N/A	—	—	—	—	—	—	—	—
LF50	HTR	3.00	0.080	2.0	+/-0.20	+/-5	+0.26 / -0.20	+6.6 / -5	3	7.5	3,700	650	12,600	2 200	230.00	26.0
	Hytrel®	0.25	0.000	0.0	+0.12 / -0.08	+3 / -2	N/A	N/A	—	—	—	—	—	—	—	—
LF80	HTR	2.00	0.060	1.5	+/-0.20	+/-5	+0.26 / -0.12	+6.6 / -3	3	7.5	4,850	850	16,600	2 900	300.00	34.0
LF90	HTR	3.00	0.080	2.0	+/-0.20	+/-5	+0.34 / -0.20	+8.6 / -5	5	14.0	1,260	220	5,700	1 000	150.00	17.0
LF140	HTR	2.00	0.080	2.0	+/-0.20	+/-5	+0.34 / -0.20	+8.6 / -5	3	7.5	3,700	650	13,100	2 300	336.00	38.0
LF250	HTR	2.00	0.080	2.0	+/-0.20	+/-5	+0.40 / -0.20	+10 / -5	3	7.5	6,570	1 150	23,400	4 100	600.00	68.0

Notes:
- * indicates: Angular and parallel misalignment values are dependent on speed, and for rubber elements, should be adjusted according to figure 4 on page T-9. Hytrel® elements are only for applications where the driven component is piloted to the driver for SAE and DIN established alignments (i.e. Hydraulic pump flange-mounted to engine flywheel housing).
- ** indicates: The "S-Style" design is not constrained axially and allows the hubs to move apart without creating axial force on the connected equipment.
- N/A indicates: Not Applicable.
- Hytrel® elements are only for applications where the driven component is piloted to the driver for essentially perfect alignment (hydraulic pump flange-mounted to engine housing).
- Special length S-Style fastener sleeves can further increase the allowable end float.
- HTR is High Temperature Rubber.

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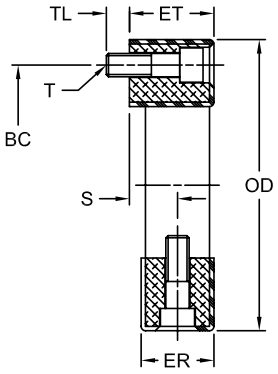
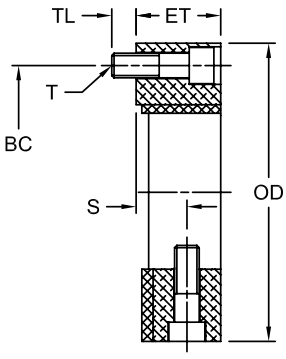
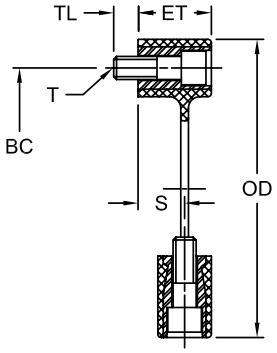


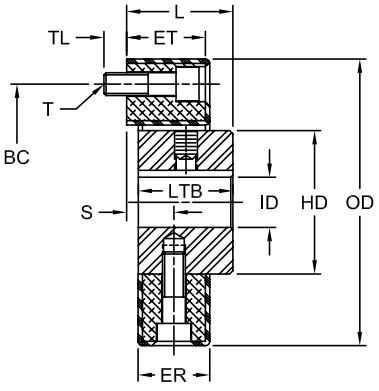
Base Element (HTR)



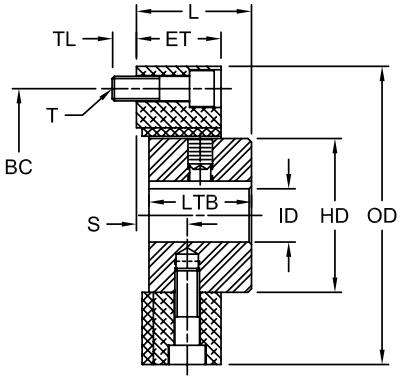
Base Element (Hytrel®)



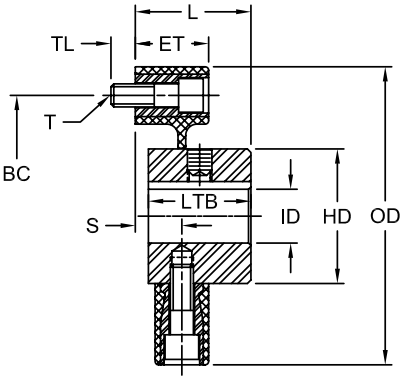
Base Element (Zytrel®)



Model 1 (HTR)



Model 1 (Hytrel®)

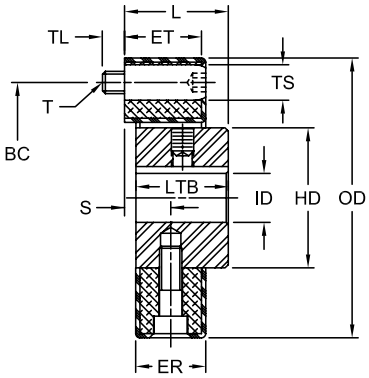


Model 1 (Zytel®)

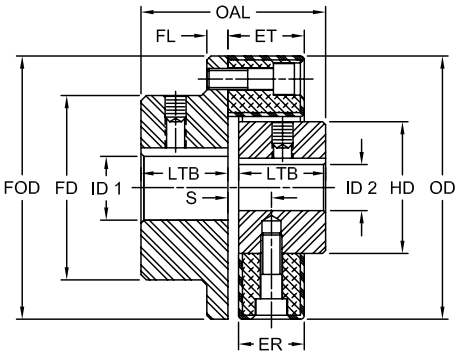
LF Series Base Element and Model 1 Dimensional Data

	ID 1 (Cylindrical Hub)				ID 2 (Flange Hub)				OD						FOD		ET						OAL		L					
	Min Bore		Max Bore		Min Bore		Max Bore		HTR		Hytrel®		Zytel®				HTR		Hytrel®		Zytel®				HTR		Hytrel®		Zytel®	
Size	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
LF1	0.31	8	0.63	19	0.31	8	0.88	25	2.20	56	—	—	—	—	2.20	56	0.94	24	—	—	—	—	1.97	50.0	1.02	26	—	—	—	—
LF2	0.44	10	0.88	26	0.50	12	1.38	38	3.35	85	—	—	3.48	32	3.35	85	0.94	24	—	—	0.94	32	2.36	60.0	1.26	32	—	—	1.26	32.0
LF4	0.47	12	1.00	30	0.63	15	1.75	45	3.94	100	—	—	—	—	3.94	100	1.10	28	—	—	—	—	2.52	64.0	1.34	34	—	—	—	—
LF8	0.50	12	1.38	38	0.75	18	2.00	55	4.72	120	—	—	4.92	45	4.72	120	1.26	32	—	—	1.18	45	3.46	88.0	1.81	46	—	—	1.77	45.0
LF12	0.50	12	1.38	38	0.75	18	2.00	55	4.80	122	—	—	—	—	4.72	120	1.26	32	—	—	—	—	3.46	88.0	1.81	46	—	—	—	—
LF16	0.63	15	1.63	48	0.81	20	2.63	70	5.91	150	6.10	155	6.10	53	5.91	150	1.65	42	1.69	58	1.38	53	4.17	106.0	2.20	56	2.28	58	2.08	53.0
LF22	0.63	15	1.63	48	0.81	20	2.63	70	5.91	150	—	—	—	—	5.91	150	1.65	42	—	—	—	—	4.17	106.0	2.20	56	—	—	—	—
LF25	0.63	15	2.13	55	0.81	20	2.75	85	6.69	170	7.17	182	—	—	6.69	170	1.81	46	1.85	62	—	—	4.57	116.0	2.40	61	2.44	62	—	—
LF28	0.63	15	2.13	55	0.81	20	2.75	85	6.69	170	—	—	—	—	6.69	170	1.81	46	—	—	—	—	4.57	116.0	2.40	61	—	—	—	—
LF30	0.81	20	2.44	65	1.00	25	3.75	100	7.87	200	8.07	205	—	—	7.87	200	2.28	56	2.28	76	—	—	5.51	140.0	2.91	74	2.99	76	—	—
LF50	0.81	20	2.44	65	1.00	25	3.75	100	7.87	200	8.07	205	—	—	7.87	200	2.28	56	2.28	76	—	—	5.51	140.0	2.91	74	2.99	76	—	—
LF80	0.81	20	2.44	65	1.00	25	3.75	100	8.07	205	—	—	—	—	7.87	200	2.56	65	—	—	—	—	5.51	141.5	2.97	76	—	—	—	—
LF90	1.19	30	3.35	85	1.19	30	4.25	110	10.24	260	—	—	—	—	10.24	260	2.76	70	—	—	—	—	6.61	168.0	3.46	88	—	—	—	—
LF140	1.19	30	3.35	85	1.19	30	4.25	110	10.24	260	—	—	—	—	10.24	260	2.76	70	—	—	—	—	6.61	168.0	3.46	88	—	—	—	—
LF250	1.63	40	4.25	105	1.63	40	5.00	130	13.38	340	—	—	—	—	13.38	340	3.34	84	—	—	—	—	8.18	208.0	4.25	108	—	—	—	—

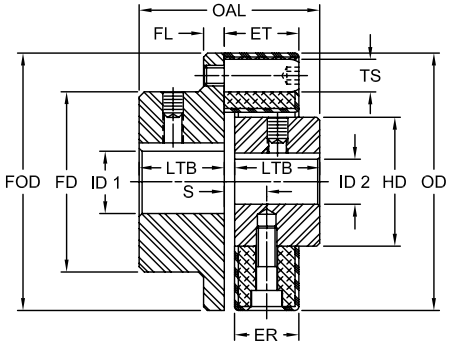
Note: ■ HTR is High Temperature Rubber.



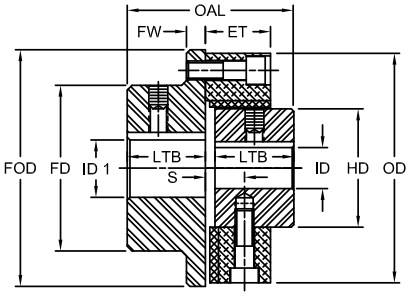
Model 1S (HTR)



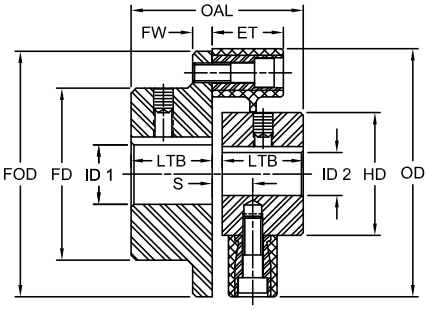
Model 2 (HTR)



Model 2/S (HTR)



Model 2 (Hytrel®)

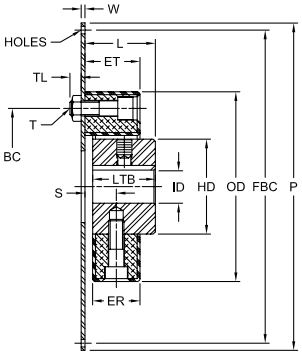


Model 2 (Zytel®)

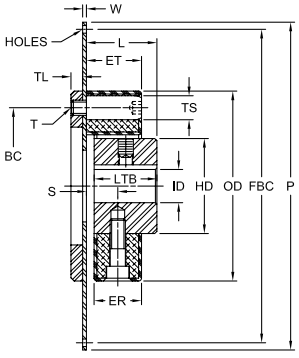
LF Series Base Element and Model 1 Dimensional Data — *Continued*

Size	LTB in	LTB mm	HD in	HD mm	FD in	FD mm	FW in	FW mm	BE in	BE mm	S* (+/-0.11) in	S* (+/-3) mm	ER** in	ER** mm	R in	R mm	BC in	BC mm	Axial Hole and Division	T	TS HTR in	TS HTR mm	TS Zytel® in	TS Zytel® mm	TL in	TL mm
LF1	0.94	24	1.18	30	1.44	36	0.27	7	0.08	2	—	—	0.87	22	0.43	11.0	1.73	44	2@180°	M6	0.39	10	—	—	0.28	7
LF2	1.10	28	1.57	40	2.17	55	0.31	8	0.16	4	—	—	0.79	20	0.39	10.0	2.68	68	2@180°	M8	0.55	14	0.59	15	0.31	8
LF4	1.18	30	1.77	45	2.56	65	0.31	8	0.16	4	—	—	0.94	24	0.47	12.0	3.15	80	3@120°	M8	0.55	14	—	—	0.31	8
LF8	1.65	42	2.36	60	3.15	80	0.39	10	0.16	4	—	—	1.10	28	0.55	14.0	3.94	100	3@120°	M10	0.67	17	0.75	19	0.39	10
LF12	1.65	42	2.36	60	3.15	80	0.39	10	0.16	4	—	—	1.10	28	0.55	14.0	3.94	100	4@ 90°	M11	0.67	17	—	—	0.39	10
LF16	1.97	50	2.76	70	3.94	100	0.47	12	0.24	6	1.02	26	1.42	36	0.71	18.0	4.92	125	3@120°	M12	0.75	19	0.86	22	0.47	12
LF22	1.97	50	2.76	70	3.94	100	0.47	12	0.24	6	—	—	1.42	36	0.71	18.0	4.92	125	4@ 90°	M12	0.75	19	—	—	0.47	12
LF25	2.16	55	3.35	85	4.53	115	0.55	14	0.24	6	1.06	27	1.57	40	0.79	20.0	5.51	140	3@120°	M14	0.86	22	—	—	0.55	14
LF28	2.16	55	3.35	85	4.53	115	0.55	14	0.24	6	—	—	1.57	40	0.79	20.0	5.51	140	4@ 90°	M14	0.86	22	—	—	0.55	14
LF30	2.60	66	3.94	100	5.51	140	0.63	16	0.31	8	1.38	35	1.97	50	0.98	25.0	6.50	165	3@120°	M16	0.98	25	—	—	0.63	16
LF50	2.60	66	3.94	100	5.51	140	0.63	16	0.31	8	1.38	35	1.99	50	0.98	25.0	6.50	165	4@ 90°	M16	0.98	25	—	—	0.63	16
LF80	2.60	66	3.94	100	5.51	140	0.63	16	0.31	8	—	—	2.40	61	1.20	30.5	6.50	165	4@ 90°	M16	0.98	25	—	—	0.63	16
LF90	3.15	80	4.92	125	6.30	160	0.75	19	0.31	8	—	—	2.44	62	1.22	31.0	8.46	215	3@120°	M20	1.26	32	—	—	0.79	20
LF140	3.15	80	4.92	125	6.30	160	0.75	19	0.31	8	—	—	2.44	62	1.22	31.0	8.46	215	4@ 90°	M20	1.26	32	—	—	0.79	20
LF250	3.94	100	6.30	160	7.68	195	0.75	19	0.31	8	—	—	3.03	77	0.89	22.5	11.02	280	4@ 90°	M20	1.26	32	—	—	0.79	20

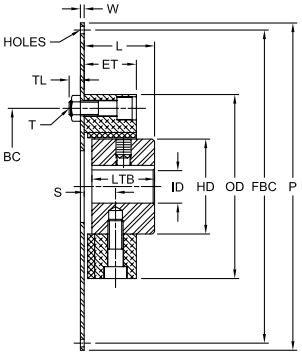
Notes:
- * indicates: Dimenstion S for Hytrel® only.
- ** indicates: Dimension ER for HTR (rubber) only.
- Dimensions for basic Models 1, 2, 3 and 6.
- HTR is High Temperature Rubber.



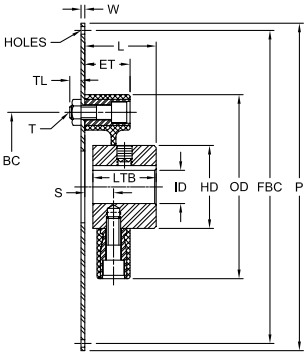
Model 3 (HTR)



Model 3/S (HTR)



Model 3 (Hytrel®)



Model 3 and 3/S (Zytel®)

LF Series Flywheel Models 3 and 3/S Dimensional Data

	ID				OD						ET						TL		L						W	
	Min		Max		HTR		Hytrel®		Zytel®		HTR		Hytrel®		Zytel®				HTR		Hytrel®		Zytel®			
Size	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
LF1	0.31	8	0.63	19	2.20	56	—	—	—	—	0.94	24	—	—	—	—	0.28	7	1.02	26.0	—	—	—	—	—	—
LF2	0.44	10	0.88	26	3.35	85	—	—	3.48	88	0.94	24	—	—	0.94	24	0.31	8	1.26	32.0	—	—	1.26	32	—	—
LF4	0.47	12	1.00	30	3.94	100	—	—	—	—	1.10	28	—	—	—	—	0.31	8	1.34	34.0	—	—	—	—	—	—
LF8	0.50	12	1.38	38	4.72	120	—	—	4.92	125	1.26	32	—	—	1.18	30	0.39	10	1.81	46.0	—	—	1.77	45	0.19	5
LF12	0.50	12	1.38	38	4.80	122	—	—	—	—	1.26	32	—	—	—	—	0.39	10	1.81	46.0	—	—	—	—	0.19	5
LF16	0.63	15	1.63	48	5.91	150	6.10	155	6.10	155	1.65	42	1.69	43	1.38	36	0.47	12	2.20	56.0	2.28	58	2.08	53	0.19	5
LF22	0.63	15	1.63	48	5.91	150	—	—	—	—	1.65	42	—	—	—	—	0.47	12	2.20	56.0	—	—	—	—	0.19	5
LF25	0.63	15	2.13	55	6.69	170	—	—	—	—	1.81	46	—	—	—	—	0.55	14	2.40	61.0	—	—	—	—	0.19	5
LF28	0.63	15	2.13	55	6.69	170	—	—	—	—	1.81	46	—	—	—	—	0.55	14	2.40	61.0	—	—	—	—	0.19	5
LF30	0.81	20	2.44	65	7.87	200	8.07	205	—	—	2.28	58	2.28	58	—	—	0.63	16	2.91	74.0	2.99	76	—	—	0.19	5
LF50	0.81	20	2.44	65	7.87	200	8.07	250	—	—	2.28	58	2.28	58	—	—	0.46	12	2.91	74.0	2.99	76	—	—	0.19	5
LF80	0.81	20	2.44	65	8.07	205	—	—	—	—	2.56	65	—	—	—	—	0.63	16	2.97	75.5	—	—	—	—	0.19	5
LF90	1.19	30	3.35	85	10.24	260	—	—	—	—	2.76	70	—	—	—	—	0.79	20	3.46	88.0	—	—	—	—	0.19	5
LF140	1.19	30	3.35	85	10.24	260	—	—	—	—	2.76	70	—	—	—	—	0.79	20	3.46	88.0	—	—	—	—	0.19	5
LF250	1.63	40	4.25	105	13.38	340	—	—	—	—	3.34	85	—	—	—	—	0.79	20	4.25	108.0	—	—	—	—	0.50	13

Notes:
- * indicates: Dimension ER for HTR (rubber) only.
- HTR is High Temperature Rubber.

Typical Flywheel Housing Combinations

SAE J620D Flywheel Size	LF Series Size	LK Series Size	SAE J617C Flywheel Housing 6	5	4	3	2	1
6.5	8 thru 28	100	▲	▲				
7.5	8 thru 28	100	●	●				
8	8 thru 30	100			▲			
10	8 thru 140	100, 125			●	▲	▲	
11.5	16 thru 140	100, 125, 150, 150D				●	●	▲
14	28 thru 250	150, UNIV						●
18	250	UNIV						●

Notes: ▲ indicates: Preferred combinations.
● indicates: Optional sizes available.

LF Series Flywheel Models 3/S Dimensional Data

SAE Flywheel Size	P Pilot Diameter in	P Pilot Diameter mm	FBC Bolt Circle Diameter in	FBC Bolt Circle Diameter mm	Thru Holes Nominal Qty	Thru Holes Nominal Dia	LF Coupling Size for SAE Flywheel Sizes HTR Model 3 & 3/S	Hytrel® Model 3	Zytel® Model 3
6.5	8.499	215.90	7.875	200.02	6	0.31	8, 16	8, 16	8, 16
7.5	9.499	241.30	8.750	222.25	8	0.31	8, 16	8, 16	8, 16
8	10.374	263.52	9.625	244.47	6	0.41	16, 25	6, 30	16, 25, 30
10	12.374	314.32	11.625	295.27	8	0.41	25, 30, 50, 90	30, 50	25, 30
11.5	13.874	352.42	13.125	333.37	8	0.41	30, 50, 90, 140, 250	50, 140, 250	30
14	18.374	466.72	17.250	438.15	8	0.53	90, 140, 250	140	N/A
16	20.374	517.50	19.250	488.95	8	0.53	250	250	N/A

Notes: ■ SAE J620 Flywheel dimensions.
■ N/A indicates: Not Applicable.
■ HTR is High Temperature Rubber.

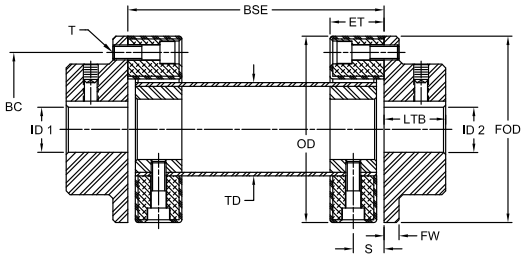
LF Series Flywheel Models 3 and 3/S Dimensional Data *Continued*

Size	LTB in	LTB mm	BE in	BE mm	S* (±0.11) (+/-3) in	S* (±0.11) (+/-3) mm	ER* in	ER* mm	R in	R mm	HD in	HD mm	BC in	BC mm	Axial Hole and Division	T	TS HTR in	TS HTR mm	TS Zytel® in	TS Zytel® mm
LF1	0.94	24	0.08	2	—	—	0.87	22	0.43	11.0	1.18	30	1.73	44	2@180°	M6	0.39	10	—	—
LF2	1.10	28	0.16	4	—	—	0.79	20	0.39	10.0	1.57	40	2.68	68	2@180°	M8	0.55	14	0.59	15
LF4	1.18	30	0.16	4	—	—	0.94	24	0.47	12.0	1.77	45	3.15	80	3@120°	M8	0.55	14	—	—
LF8	1.65	42	0.16	4	—	—	1.10	28	0.55	14.0	2.36	60	3.94	100	3@120°	M10	0.67	17	0.75	19
LF12	1.65	42	0.16	4	—	—	1.10	28	0.55	14.0	2.36	60	3.94	100	4@ 90°	M11	0.67	17	—	—
LF16	1.97	50	0.24	6	1.02	26	1.42	36	0.71	18.0	2.76	70	4.92	125	3@120°	M12	0.75	19	0.86	22
LF22	1.97	50	0.24	6	—	—	1.42	36	0.71	18.0	2.76	70	4.92	125	4@ 90°	M12	0.75	19	—	—
LF25	2.16	55	0.24	6	1.06	27	1.57	40	0.79	20.0	3.35	85	5.51	140	3@120°	M14	0.86	22	—	—
LF28	2.16	55	0.24	6	—	—	1.57	40	0.79	20.0	3.35	85	5.51	140	4@ 90°	M14	0.86	22	—	—
LF30	2.60	66	0.31	8	1.38	35	1.97	50	0.98	25.0	3.94	100	6.50	165	3@120°	M16	0.98	25	—	—
LF50	2.60	66	0.31	8	1.38	35	1.97	50	0.98	25.0	3.94	100	6.50	165	4@ 90°	M16	0.98	25	—	—
LF80	2.60	66	0.16	4	—	—	2.40	61	1.20	30.5	3.94	100	6.50	165	4@ 90°	M16	0.98	25	—	—
LF90	3.15	80	0.31	8	—	—	2.44	62	1.22	31.0	4.92	125	8.46	215	3@120°	M20	1.26	32	—	—
LF140	3.15	80	0.31	8	—	—	2.44	62	1.22	31.0	4.92	125	8.46	215	4@ 90°	M20	1.26	32	—	—
LF250	3.94	100	0.31	8	—	—	3.03	77	0.89 2.15	22.5 54.5	6.30	160	11.02	280	4@ 90°	M20	1.26	32	—	—

Notes: ■ * indicates: Hytrel® only.
■ HTR is High Temperature Rubber.

Model 6 and 6/S (Rubber Base Elements HTR and CR)

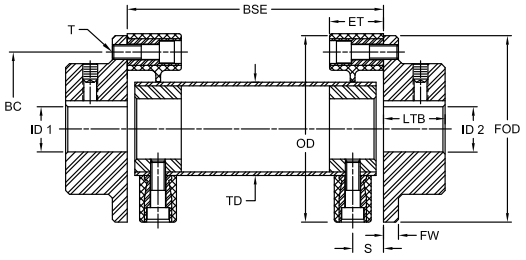
This model compensates for considerable axial, radial and angular misalignment. The rubber elements torsionally soft. Lengths are made to customer requirements. S-Style axial mounting screws allow the hubs to have free end float without exerting axial loads on the connected equipment, while allowing for quick assembly.



Model 6 (HTR)

Model 6 and 6/S (Zytel® Elements)

Elements made of DuPont's super-tough, corrosion resistant Zytel® are torsionally stiff without backlash, with less than 1° windup. Large spans, equal to all-metal couplings, can be accommodated without internal support bearings when lightweight Zytel® are used. Hubs, hardware and tubes are available in stainless steel or with plating and corrosion resistant coatings. S-Style, axial mounting screws allow for free end-float without harmful reactionary forces.



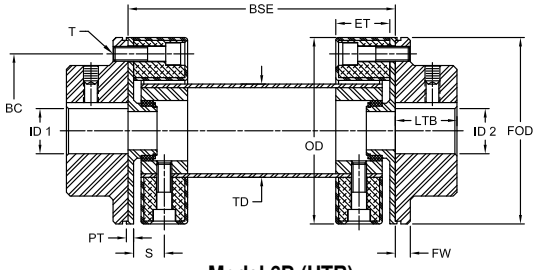
Model 6 (Zytel®)

Model 6B (HTR Elements)

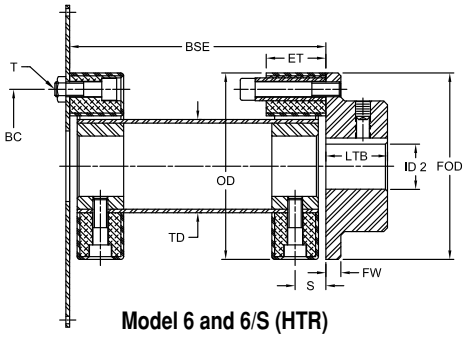
Similar to Model 6 except the center shaft is supported by internal maintenance free bearing material. This allows greater equipment separation and high speeds, as well as high angular misalignment, which can be obtained with rubber elements.

The drawing at the lower left shows one of the many special designs available. A standard flywheel adapter plate (see model 3) is used to couple to a diesel engine flywheel. The flanged hub on the other end is supplied with extra long S-Style connecting screws (Notice the element is reversed from its normal direction). This arrangement permits extensive axial movement (free end float) of the drive package.

One of the many features of the Model 6 is the center floating shaft can be radially removed without displacing the coupled machines. Flexible elements may be pre-assembled to the center segment and then final assembled to the hubs quickly, with little hardware.



Model 6B (HTR)



Model 6 and 6/S (HTR)

LF Series Models 6, 6/S and 6/B Dimensional Data

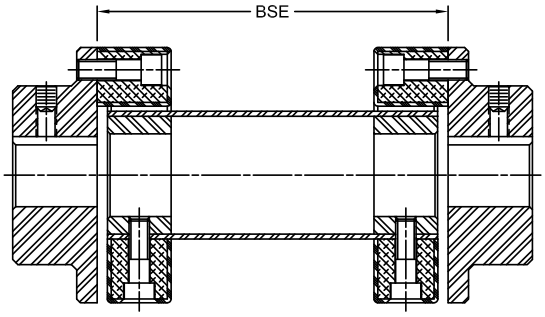
Size	Nominal Torque HTR in-lb	Nominal Torque HTR Nm	Nominal Torque Zytel® in-lb	Nominal Torque Zytel® Nm	ID1 - ID2 Min Bore in	ID1 - ID2 Min Bore mm	ID1 - ID2 Max Bore in	ID1 - ID2 Max Bore mm	OD Element HTR in	OD Element HTR mm	OD Element Zytel® in	OD Element Zytel® mm	BC in	BC mm	Axial Hole and Division
LF1	90	10	—	—	0.31	8	0.88	25	2.20	56	—	—	1.73	44	2@180°
LF2	180	20	265	30	0.50	12	1.38	38	3.35	85	3.48	88	2.68	68	2@180°
LF4	440	50	—	—	0.63	15	1.75	45	3.94	100	—	—	3.15	80	3@120°
LF8	885	100	1,060	120	0.75	18	2.00	55	4.72	120	4.92	125	3.94	100	3@120°
LF12	1,240	140	—	—	0.75	18	2.00	55	4.80	122	—	—	3.94	100	4@ 90°
LF16	1,770	200	2,120	240	0.81	20	2.63	70	5.91	150	6.1	155	4.92	125	3@120°
LF22	2,430	275	—	—	0.81	20	2.63	70	5.91	150	—	—	4.92	125	4@ 90°
LF25	2,790	315	—	—	0.81	20	2.75	85	6.69	170	—	—	5.51	140	3@120°
LF28	3,700	420	—	—	0.81	20	2.75	85	6.69	170	—	—	5.51	140	4@ 90°
LF30	4,425	500	—	—	1.00	25	3.75	100	7.87	200	—	—	6.50	165	3@120°
LF50	6,195	700	—	—	1.00	25	3.75	100	7.87	200	—	—	6.50	165	4@ 90°
LF80	7,960	900	—	—	1.00	25	3.75	100	8.07	205	—	—	6.50	165	4@ 90°
LF90	9,735	1 100	—	—	1.19	30	4.25	110	10.24	260	—	—	8.46	215	3@120°
LF140	15,000	1 700	—	—	1.19	30	4.25	110	10.24	260	—	—	8.46	215	4@ 90°
LF250	26,500	3 000	—	—	1.63	40	5.00	130	13.38	340	—	—	11.02	280	4@ 90°

Note: ■ Refer to Speed and Length Performance Data table (page T-24) for maximum and minimum values.

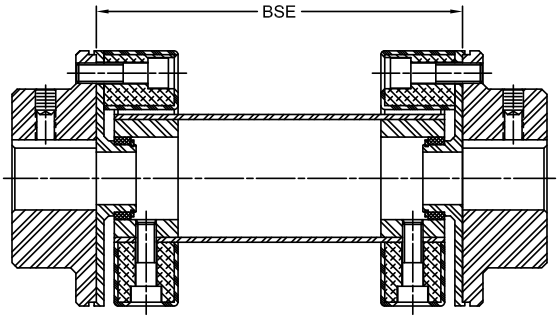
LF Series Models 6, 6/S and 6/B Dimensional Data *Continued*

Size	FOD Flange in	FOD Flange mm	LTB Hub in	LTB Hub mm	BSE Span	S in	S mm	PT in	PT mm	FW in	FW mm	TD in	TD mm	ET HTR in	ET HTR mm	ET Zytel® in	ET Zytel® mm
LF1	2.20	56	0.94	24	*	0.51	13	0.20	5	0.28	7	1.18	30	0.94	24	—	—
LF2	3.35	85	1.10	28	*	0.55	14	0.20	5	0.31	8	1.62	40	0.94	24	0.94	24
LF4	3.94	100	1.18	30	*	0.63	16	0.20	5	0.31	8	1.81	45	1.10	28	—	—
LF8	4.72	120	1.65	42	*	0.71	18	0.20	5	0.39	10	2.38	60	1.26	32	1.18	30
LF12	4.80	120	1.65	42	*	0.71	18	0.20	5	0.39	10	2.38	60	1.26	32	—	—
LF16	5.91	150	1.97	50	*	0.94	24	0.20	5	0.47	12	2.75	70	1.65	42	1.38	36
LF22	5.91	150	1.97	50	*	0.94	24	0.20	5	0.47	12	2.75	70	1.65	42	—	—
LF25	6.69	170	2.16	55	*	1.02	26	0.20	5	0.55	14	3.38	85	1.81	46	—	—
LF28	6.69	170	2.16	55	*	1.02	26	0.20	5	0.55	14	3.38	85	1.81	46	—	—
LF30	7.87	200	2.60	66	*	1.30	33	0.20	5	0.63	16	4.00	100	2.28	58	—	—
LF50	7.87	200	2.60	66	*	1.30	33	0.20	5	0.63	16	4.00	100	2.28	58	—	—
LF80	8.07	200	2.60	80	*	1.36	35	0.20	5	0.63	16	4.00	100	2.56	65	—	—
LF90	10.24	260	3.15	80	*	1.54	39	0.20	5	0.75	19	5.00	125	2.76	70	—	—
LF140	10.24	260	3.15	100	*	1.54	39	0.20	5	0.75	19	5.00	125	2.76	70	—	—
LF250	13.38	340	3.94	125	*	1.81	46	0.39	10	0.75	19	6.25	160	3.35	85	—	—

Notes: ■ * indicates: Contact Lovejoy Technical Support when specifying shaft separation.
■ Refer to Speed and Length Performance Data table (page T-24) for maximum and minimum values.



Model 6



Model 6B

LF Series Models 6 and 6/B Speed and Length Performance Data

Size	Maximum Speed (short length only) HTR Model 6 RPM	Maximum Speed (short length only) HTR Model 6B RPM	Maximum Speed (short length only) Zytel® Model 6 RPM	BSE Minimum Length (all versions) in	BSE Minimum Length (all versions) mm	BSE Maximum Length @ 1750 RPM HTR Model 6 in	BSE Maximum Length @ 1750 RPM HTR Model 6 mm	BSE Maximum Length @ 1750 RPM HTR Model 6B in	BSE Maximum Length @ 1750 RPM HTR Model 6B mm	BSE Maximum Length @ 1750 RPM Zytel® Model 6 in	BSE Maximum Length @ 1750 RPM Zytel® Model 6 mm
LF1	1,500	6,000	—	3.10	79	45	1140	52	1320	—	—
LF2	1,500	6,000	10,000	3.10	79	52	1320	58	1475	58	1475
LF4	2,900	6,000	—	3.61	92	59	1500	62	1575	—	—
LF8	2,900	6,000	7,000	4.17	106	64	1625	72	1830	72	1830
LF12	2,900	6,000	—	4.17	106	64	1625	72	1830	—	—
LF16	2,900	6,000	6,000	5.42	138	65	1650	77	1955	77	1955
LF22	2,900	6,000	—	5.42	138	65	1650	77	1955	—	—
LF25	2,900	5,000	—	5.98	152	58	1475	84	2130	—	—
LF28	2,900	5,000	—	5.98	152	58	1475	84	2130	—	—
LF30	2,900	4,000	—	7.47	190	59	1500	91	2310	—	—
LF50	2,500	4,000	—	7.47	190	83	2100	91	2310	—	—
LF80	2,500	4,000	—	7.47	190	83	2100	91	2310	—	—
LF90	1,500	3,600	—	9.03	230	34	865	99	2515	—	—
LF140	1,500	3,600	—	9.03	230	73	1855	99	2515	—	—
LF250	1,500	3,000	—	10.80	274	86	2185	117	2970	—	—

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*LF Series Model 6 (HTR) Maximum Length "BSE" at Various Speeds - Dimensional Data**

	Maximum Span Length "BSE"																	
Speed (RPM) →	500		600		720		750		900		1000		1200		1500		1800	
Size	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
LF1	94	2390	86	2185	78	1980	76	1930	69	1750	65	1650	58	1470	51	1300	45	1140
LF2	109	2770	99	2515	89	2260	88	2235	79	2000	74	1880	66	1680	57	1450	52	1320
LF4	116	2950	106	2690	96	2440	94	2390	86	2190	81	2060	73	1850	64	1630	59	1500
LF8	134	3400	121	3070	110	2795	107	3720	97	2460	91	2370	81	2060	70	1780	64	1630
LF12	134	3400	121	3070	110	2795	107	2720	97	2460	91	2370	81	2060	70	1780	64	1630
LF16	144	3660	129	2375	117	2970	114	2900	103	2610	96	2440	85	2160	72	1830	65	1650
LF22	144	3660	129	3275	117	2970	114	2900	103	2610	96	2440	85	2160	72	1930	65	1650
LF25	154	3970	138	3505	123	3125	120	3050	106	2690	98	2490	83	2110	64	1630	58	1470
LF28	154	3970	138	3505	123	3125	120	3050	106	2690	98	2490	83	2110	64	1630	58	1470
LF30	168	4270	151	3835	134	3400	131	3330	115	2920	106	2690	90	2290	68	1730	59	1500
LF50	173	4395	157	3990	143	3630	139	3530	126	3200	119	3020	106	2670	92	2340	83	2100
LF80	173	4395	157	3990	143	3630	139	3530	126	3200	119	3020	106	2690	92	2340	83	2100
LF90	177	4495	155	3940	134	3400	130	3300	107	2720	94	2390	69	1750	38	965	34	860
LF140	187	4750	169	4290	151	3835	147	3730	130	3300	121	3070	104	2640	83	2100	73	1860
LF250	211	5360	190	4830	171	4340	167	4240	148	3760	137	3480	118	3000	94	2390	86	2190

Notes: ■ * indicates: Longer span length for given speed is possible with model 6B.
■ Please consult Lovejoy Technical Support for maximum span for higher speeds.

*LF Series Model 6 (Zytrel®) Maximum Length "BSE" at Various Speeds - Dimensional Data**

	LF Series Model 6 with (Zytrel®) Maximum Span Length "BSE"																	
Speed (RPM) →	500		600		720		750		900		1000		1200		1500		1800	
Size	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
LF2X	110	2794	101	2565	92	2337	90	2286	82	2083	82	2083	71	1803	64	1626	58	1473
LF8X	136	3454	124	3150	113	2870	110	2794	101	2565	101	2565	87	2210	78	1981	72	1829
LF16X	147	3734	134	3404	122	3099	120	3048	109	2769	109	2769	94	2388	84	2134	72	1829

Note: ■ * indicates: Maximum span length is based on tube deflection and a critical speed 1.5 times above operating speed.

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LF Series Weight and Mass Moment of Inertia for Couplings with HTR Elements

	Weights*										Inertia**									
	Base Element		Model 1		Model 1/S		Model 2		Model 2/S		Base Element		Model 1		Model 1/S		Model 2		Model 2/S	
Size	lb	kg	lb	kg	lb	kg	lb	kg	lb	kg	lb-in²	kg-cm²	lb-in²	kg-cm²	lb-in²	kg-cm²	lb-in²	kg-cm²	lb-in²	kg-cm²
LF1	0.13	0.06	0.46	0.21	0.53	0.24	1.04	0.47	1.08	0.49	0.12	0.35	0.26	0.75	0.29	0.86	0.55	1.60	0.58	1.70
LF2	0.33	0.15	1.01	0.46	1.08	0.49	2.34	1.06	2.40	1.09	0.43	1.25	0.85	2.5	1.13	3.3	2.5	7.3	2.8	8.1
LF4	0.46	0.21	2.89	1.31	1.54	0.70	5.09	2.31	3.75	1.70	1.13	3.30	1.71	5.0	2.22	6.5	3.9	11.3	4.4	12.8
LF8	0.71	0.32	2.98	1.35	3.17	1.44	7.61	3.45	7.80	3.54	2.39	7.0	5.13	15.0	6.36	18.6	14.0	41.0	15.2	44.6
LF12	0.77	0.35	3.20	1.45	3.44	1.56	7.83	3.55	8.07	3.66	2.87	8.4	6.22	18.2	6.83	20.0	15.1	44.2	15.8	46.1
LF16	1.43	0.65	5.03	2.28	5.14	2.33	13.58	6.16	13.69	6.21	8.00	23.4	14.5	42.5	16.8	49.1	40.6	118.8	42.9	125.4
LF22	1.54	0.70	5.56	2.52	5.78	2.62	14.15	6.42	14.59	6.62	9.09	26.6	17.2	50.4	24.0	70.2	43.2	126.5	50.0	146.3
LF25	1.85	0.84	7.91	3.59	8.31	3.77	20.53	9.31	20.92	9.49	17.2	50.2	31.0	90.7	35.1	102.7	73.5	215.0	77.6	227.0
LF28	2.09	0.95	8.36	3.79	8.93	4.05	20.97	9.51	21.52	9.76	19.0	55.6	35.0	102.4	38.7	113.2	84.7	247.8	88.3	258.5
LF30	3.15	1.43	12.48	5.66	13.27	6.02	33.53	15.21	34.33	15.57	34.9	102.0	68.3	200.0	75.3	220.4	186.4	545.5	193.4	565.9
LF50	3.53	1.60	13.32	6.04	14.33	6.50	34.39	15.60	35.38	16.05	35.5	104.0	70.1	205.0	86.6	253.4	188.1	550.5	204.7	598.9
LF80	4.63	2.10	15.10	6.85	15.98	7.25	36.60	16.60	37.48	17.00	45.0	131.8	82.1	240.3	90.2	263.9	200.1	585.5	208.1	609.1
LF90	7.28	3.30	25.46	11.55	26.96	12.23	63.21	28.67	64.71	29.35	153.8	450.0	224.7	657.5	259.4	759.2	557.0	1630.1	591.8	1731.8
LF140	8.05	3.65	27.18	12.33	29.15	13.22	64.93	29.45	66.93	30.36	195.5	573.0	263.1	770.0	298.3	873.0	595.5	1742.6	630.7	1845.6
LF250	15.65	7.10	41.84	18.98	44.11	20.01	97.93	44.42	100.18	45.44	599.4	1754.0	821.5	2404.0	864.2	2529.0	1798.8	5264.0	18471.5	5389.0

Notes: ■ * To obtain Weight of Model-3:
1. Select weight of flywheel plate (from chart below labeled SAE Flywheel Adapter Plates)
2. Select weight of Model 1 or 1/S coupling (from chart above)
3. Add flywheel plate and coupling weight together

■ ** To obtain Inertia of Model-3:
1. Select inertia of flywheel plate (from chart below labeled SAE Flywheel Adapter Plates)
2. Select inertia of Model 1 or 1/S coupling (from chart above)
3. Add flywheel plate and coupling inertia together

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LF Series Weight and Mass Moment of Inertia for Couplings with Hytrel® Elements

	Weight						Inertia					
	Model 1		Model 2		Hytrel®		Model 1		Model 2		Hytrel®	
Size	lb	kg	lb	kg	lb	kg	lb-in²	kg-cm²	lb-in²	kg-cm²	lb-in²	kg-cm²
LF16	5.07	2.30	10.58	4.80	–	–	17.7	206.6	43.7	512.0	–	–
LF30	11.46	5.20	29.32	13.30	14.33	6.50	68.4	800.7	186.5	2183.2	150.3	1759.4 (SAE10)
LF50	12.35	5.60	30.20	13.70	15.43	7.00	80.5	942.3	198.7	2326.0	197.4	2310.8 (SAE 11.5)

LF Series Weight and Mass Moment of Inertia for Couplings with Zytel® Elements

	Weight						Inertia					
	Base Element		Model 1/1S		Model 2/2S		Base Element		Model 1/1S		Model 2/2S	
Size	lb	kg	lb	kg	lb	kg	lb-in²	kg-cm²	lb-in²	kg-cm²	lb-in²	kg-cm²
LF2X	0.2	0.1	0.9	0.4	2.2	1.0	17.7	206.6	43.7	512.0	–	–
LF8X	0.6	0.3	3.3	1.5	7.7	3.5	68.4	800.7	186.5	2183.2	150.3	1759.4 (SAE10)
LF16X	1.0	0.5	4.6	2.1	13.1	5.9	80.5	942.3	198.7	2326.0	197.4	2310.8 (SAE 11.5)

SAE Flywheel Adapter Plates (3/16" thick)

SAE Flywheel Size (J620)	Weight		Inertia	
	lb	kg	lb-in²	kg-cm²
6.5	2.6	1.2	26	76
7.5	3.4	1.5	42	123
8	4.1	1.9	60	176
10	6.0	2.7	122	357
11.5	7.7	3.5	193	565
14	12.8	5.8	589	1724

LF Series Floating-Shaft – Models 6 and 6B

The following guidelines cover additional considerations unique to the floating-shaft versions of the LF coupling. Use them together with the selection information for engine applications or general applications found on pages T-6 through T-8.

Step 1: Torque Capacity
Values for normal torque T_{KN}, maximum torque T_{Kmax}, and continuous vibratory torque T_{Kw} remain the same and are found in the table of Performance Data on page 16 and 23.

Step 2: Stiffness Values and Wind-Up
Since 2 torsional rubber elements are used together in series, values from the Performance Data table on page 16 and 17 for dynamic torsional stiffness C_{Tdyn}, static angular stiffness C_w and static axial stiffness C_a, should be multiplied by 1/2. Values for wind-up should be multiplied by 2.

Step 3: Misalignment
Performance Data table values for allowable axial misalignment are doubled for the standard element design. Values for the S-Style version will be the same but can be increased by use of special-length sleeves (consult Lovejoy Technical Support).

Angular misalignment will be equal at both ends and should be kept within the limits given in the Performance Data table. Allowable parallel misalignment is related to the angular misalignment and the distance between shaft ends (BSE). It is calculated by applying one of the following equations:

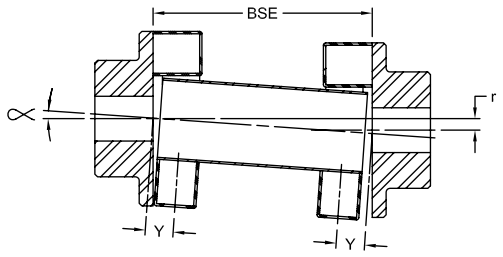
Model 6: **$r=(L-2Y)\tan(\propto)$**

Model 6B: **$r=[(L-2(Y+BT)]\tan(\propto)$**

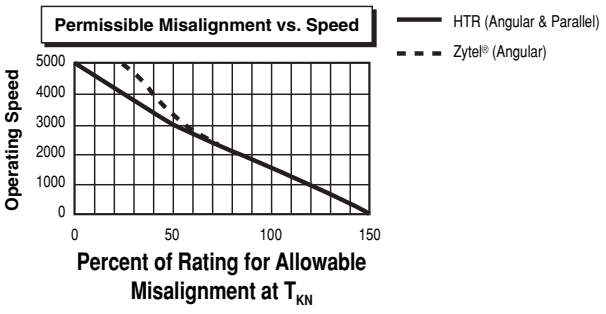
$\propto$ = angular misalignment (degrees)

r = parallel misalignment inches (mm)

and BSE,Y, and BT inches (mm) are from the dimension table.



The angular and parallel misalignment values are dependent on speed.



Step 4: Selecting Model 6 or Model 6B (HTR only)
The basic model 6 is suitable for most short or medium length spans (distance between shaft ends). Longer spans and higher speeds will require the bearing-supported floating shaft feature of Model 6B. Regardless of length, some applications will require the Model 6B design based on speed alone. Use the Maximum Speed and Length table to guide your choice or consult Lovejoy Technical Support for assistance.