

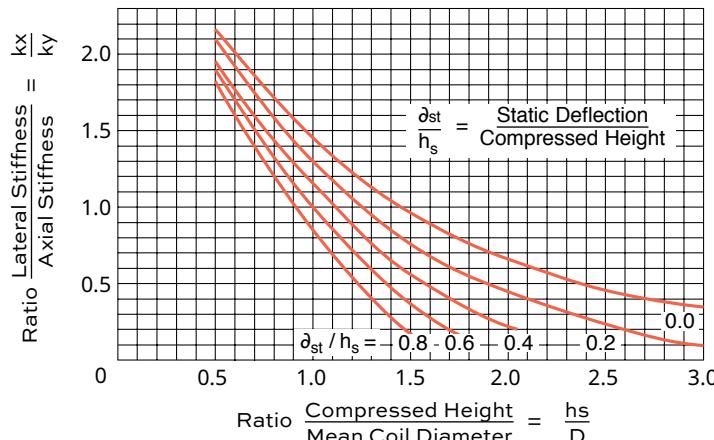
FREE STANDING SPRING MOUNTS & HEIGHT SAVING BRACKETS

SLF

The Type SLF spring design evolved after many years of experience using springs within guided housing as the primary isolator. Since the old housing acted telescopically, the internal springs were designed for vertical stiffness and deflection only. Early attempts to use these tall slender springs out of their housing failed as the springs showed immediate instability or they fell over when subjected to minor horizontal forces.

It was important to eliminate the housing as they had a tendency to bind whenever they were cocked and to transmit vibration in the horizontal directions. We knew that if the springs were unhampered, they would not only do better vertically, but do an equally fine job in isolating the horizontal disturbances.

Our research showed that springs could be designed with horizontal stiffnesses as high, or even higher than the vertical by carefully adhering to the ratios of the spring's compressed height to the mean coil diameter, and the static deflection to the compressed height as shown in the graph.



Starting with the 1" (25mm) deflection series, we paid great attention to these design factors and our springs became short stable columns. When we had tested and were completely satisfied with the 1" (25mm) designs, we moved on to the 2" (51mm), 3" (76mm), 4" (102mm) and 5" (127mm) deflection series. Every spring table now includes data on the ratio of the spring diameter to the compressed height, and the ratio of the horizontal to the vertical spring constants. Our specifications suggest a minimum ratio of 0.75 between the spring diameter and the compressed height as a good working rule, although some of our designs exceed this number.

All of these springs are designed so as not to exceed the elastic limit when the coils are closed up and the springs are compressed solid. This prevents damage when the springs are overloaded and assures a return to the spring's free height. The rated loads and deflections allow for 50% additional travel to



SINGLE SPRING
1" (25mm) DEFLECTION
SLF MOUNT



SINGLE SPRING
1" (25mm) DEFLECTION
SLFH MOUNT



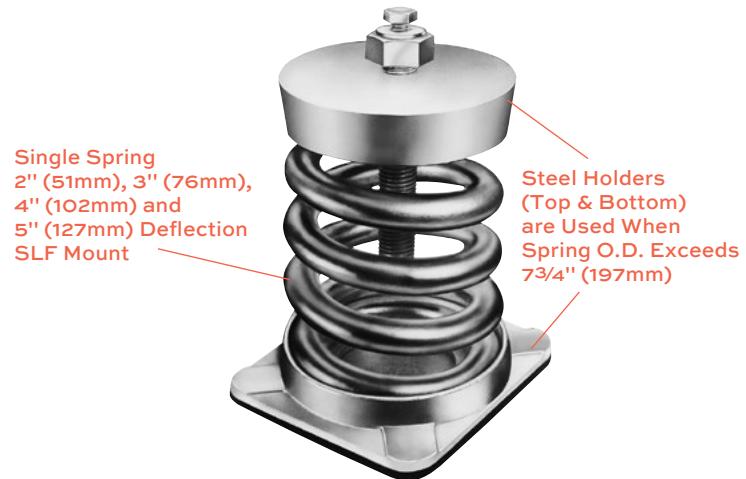
MULTIPLE SPRING
1" (25mm) DEFLECTION
SLF MOUNT

solid to accommodate weight distribution errors and to keep the springs operating in a low stress range. In our Nominal 1" (25mm) Deflection A, B, and C Spring Series, the smallest rated deflection is 1" (25mm) although some of the lighter springs can deflect as much as 2" (51mm). The springs are used individually or in clusters to develop greater capacity. Some of our B2 and C2 springs only meet competitive criteria and do not have 50% additional travel. This is clearly noted on page 5-07.

In an effort to develop a foolproof simple isolator using these sophisticated springs, we have merely added a neoprene friction pad on the bottom to help prevent the passage of noise and a spring loading and adjustment bolt at the top with a locking cap screw. You will find that these adjustment bolts are very substantial because they must be made rigid enough to maintain the alignment of the top of the spring with the base plate, and the head of the bolt is actually the equipment supporting surface. The bolts are tapped to receive the locking cap screw as this method makes it easy to remove the isolator for servicing. The 5" (127mm) deflection springs are sometimes furnished with three adjustment bolts in a tripod arrangement to maintain the top plate stability. Other stabilizing methods use single oversized bolts or pull-down brackets. In some cases, SLF mountings with smaller deflections are similarly designed when there are large horizontal forces such as in the isolation of a horizontal compressor. There is no need to bolt this mounting down in most cases because of the friction pad and the spring's reduction of the horizontal forces before they get down to the base plate.

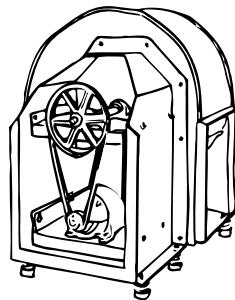
SLF mountings of the proper deflection are recommended for all vibration control applications where it is not necessary to cope with weight removal, or seismic and wind load problems. Excessive discharge pressures can be dealt with by adding mass through the use of floating inertia bases or where mass is not a practical solution, by the addition of horizontal thrust restraints.

The SLFH series of mounts are identical to the style SLF except for having two or four holes in the base to allow for bolting to the structure. Since it is expensive to bolt mountings down, and any bolting procedure tends to bypass the acoustical action of the neoprene pad on the bottom of the mounting, it is strongly recommended that you use the Type SLF unless the SLFH must be used because of elevated installations on steel beams, etc.



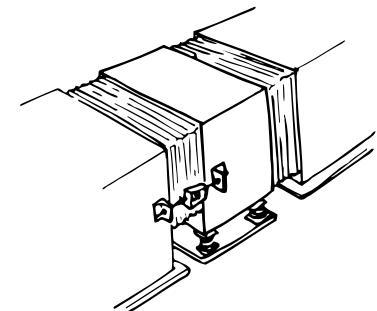
BELT DRIVEN CENTRIFUGAL FAN AND MOTOR

SLF springs are used to isolate all kinds of fan equipment. Deflections are determined by fan speed, size, motor horse-power and equipment location as discussed in the VCS-I00 Engineering Specification and Selection Guide. Bases may be made of structural steel or concrete. The sketch shows a centrifugal fan on a Type WFSL base with 3" (76mm) deflection springs.



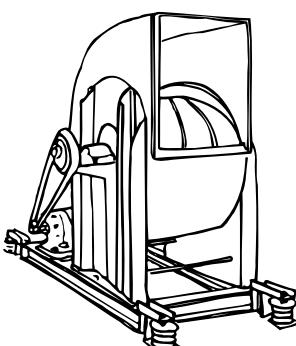
FAN HEAD

A fan head develops high horizontal thrust because of the negative pressure on the very large inlet area. The SLF springs cannot handle this thrust without Horizontal Thrust Restraints as sketched, or massive concrete-filled bases to increase the resistive weight and spring constants.



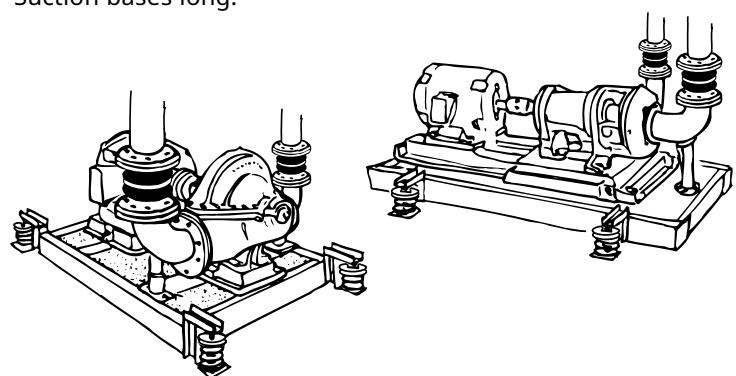
UTILITY SET

Utility sets are normally direct mounted on 1" (25mm) deflection SLF springs as illustrated. ICS rails are used in conjunction with the springs when higher deflections are required or there is an unsupported fan scroll that causes overbalancing. KSL concrete-filled bases are recommended for outdoor locations because of the need for wind resistance.



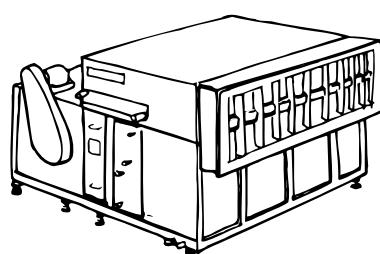
END SUCTION PUMP OR DOUBLE SUCTION PUMP

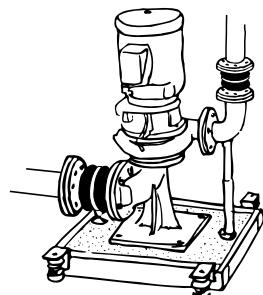
SLF spring mountings of the proper deflection are recommended for all pump isolation problems. While steel bases may be used, concrete is preferred for greater rigidity and the possibility of grouting in the pump base. Bases should be made large enough to support the suction and discharge elbows whenever possible. Thus, Double Suction bases become wide and End Suction bases long.



FACTORY ASSEMBLED AIR HANDLING EQUIPMENT

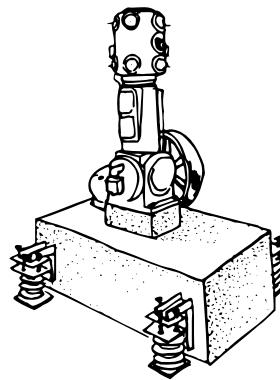
Factory assembled air handling equipment may be direct mounted as shown or placed on ICS rails when higher deflections are called for. It is important to study the equipment base or legs to determine whether rails are needed for structural reinforcement.





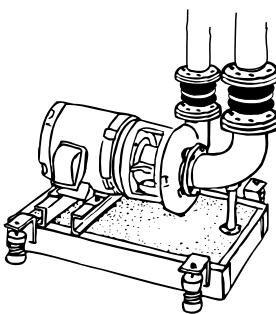
VERTICAL PUMPS

Vertical pump bases using SLF mountings should be made large enough for stability and extended as required to support the piping before attachment to the pump flanges. This piping support reduces the strain on the pump casing.



VERTICAL TANK TYPE AIR COMPRESSOR

It is important to exercise caution when applying spring mountings to tall machines with small base dimensions. The use of a concrete-filled Type K base with SLF mountings lowers the center of gravity in addition to enlarging the base dimensions. Thus, the installation becomes much more stable.

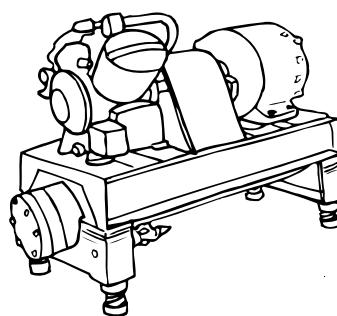


CLOSE COUPLED PUMP

Close coupled pumps are generally unstable when mounted directly on SLF mountings because they are small in configuration and have a severe overhang on the pump end. A concrete base makes them less sensitive to external forces so the installation becomes much more workmanlike and practical. SLF deflections depend on location and pump size.

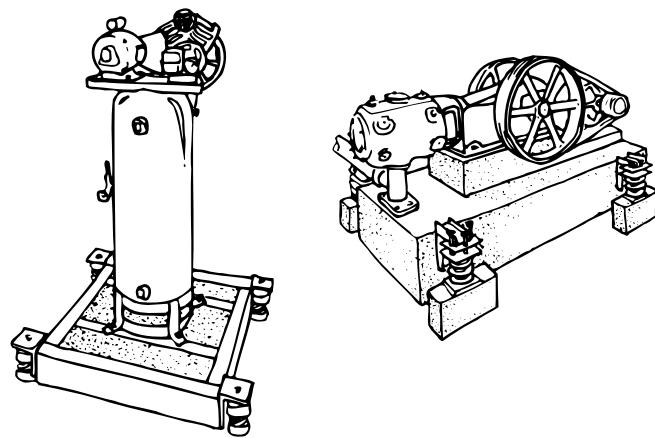
DIRECTLY DRIVEN REFRIGERATION COMPRESSOR UNIT

1" (25mm) deflection SLF mountings can be directly attached to the isolated equipment. Mountings of different capacities would be used at the two ends to compensate for the uneven weight distribution and provide reasonably uniform deflection. This use of springs of different capacity but the same potential deflection applies to all isolator selections.



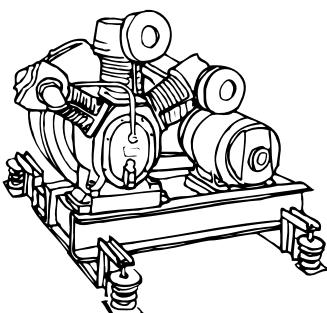
SLOW SPEED VERTICAL OR HORIZONTAL COMPRESSOR OR VACUUM PUMP

Slow speed, large bore and stroke reciprocating compressors or vacuum pumps have large residual unbalanced forces that make direct mounting impossible because of excessive motion. The concrete inertia block mass is calculated from unbalanced force data supplied by the manufacturer. It is often as much as seven times the equipment weight. Vertical compressors are located over the combined vertical center of gravity. The springs under horizontal compressors are elevated to the horizontal CG. Three adjustment bolts are most important to maintain horizontal SLF stiffness.



BELT DRIVEN AIR COMPRESSOR

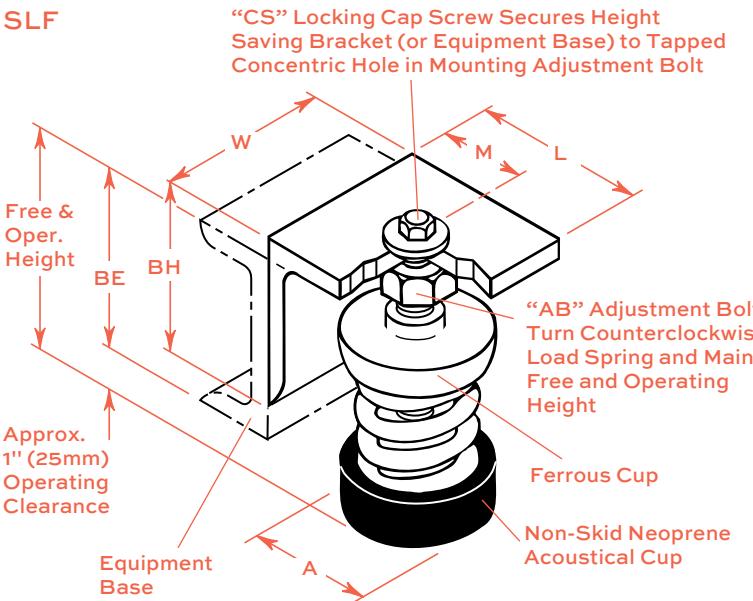
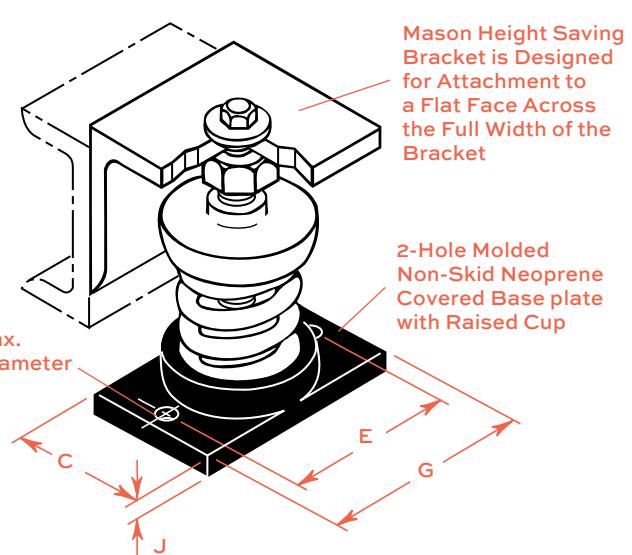
When 2" (51mm) or higher deflection SLF mountings are used, we normally recommend ICS rails to minimize elevations. In this particular case the rails project beyond the flywheel to compensate for the overhang. The higher deflections are used to increase efficiency at the low operating speed.



SLF applications are by no means limited to these sketches. We have merely tried to illustrate the many modes of application and some of the design considerations.

SLF Single Spring Mounts

Change designation to SLFH when base plate with bolt holes is required.

SLF**SLFH****1" (25mm) Deflection SLF & SLFH Single Spring Mounts****MATCHING HEIGHT SAVING BRACKET**

Type	Size	L (in) (mm)	M (in) (mm)	W (in) (mm)	Bracket Elevation BE (in) (mm)	Bracket Height BH (in) (mm)
SLF-	X	21/2 64	2 51	3 76	23/4 70	21/2 64
	A-45 - 400	21/2 64	2 51	3 76	31/4 83	21/2 64
SLFH-	A-510 - 625	21/2 64	2 51	3 76	35/8 92	21/2 64
	B & C	4 102	23/4 70	3 76	5 127	4 102

All springs have additional travel to solid equal to 50% of the rated deflection.
Solid Spring Height = Free Height minus 1.5 times Rated Deflection.

SPRING ONLY

Size	Spring OD (in) (mm)	Free Height (in) (mm)
X	11/2 38	21/2 64
A-45 - 400	13/4 44	3 76
A-510	13/4 44	31/8 79
A-625	13/4 44	33/8 86
B	23/8 60	4 102
C	21/4 73	41/8 105

See page 5-10 for Spring Characteristics.

TYPE SLF & SLFH DIMENSIONS

Type	Size	Free & Oper. Height (in) (mm)	A (in) (mm)	C (in) (mm)	E (in) (mm)	G (in) (mm)	Max Bolt Dia. H (in) (mm)	J (in) (mm)	Adjustment Bolt AB (in) (mm)	Locking Cap Screw CS (in) (mm)
SLF-	X	33/4 95	2 51	— —	— —	— —	— —	— —	1/2 x 21/2 x 64	1/4 x 1 x 25
	A-45 - 400	41/4 108	21/8 54	21/4 57	3 76	33/4 95	1/4 6	3/8 10	5/8 x 21/2 x 64	3/8 x 1 x 25
SLFH-	A-510 - 625	45/8 117	21/8 54	21/4 57	3 76	33/4 95	1/4 6	3/8 10	5/8 x 21/2 x 64	3/8 x 1 x 25
	B	6 152	23/4 70	27/8 73	41/8 105	53/8 137	1/2 13	3/8 10	7/8 x 41/4 x 108	1/2 x 11/4 x 32
	C	6 152	31/4 83	33/8 86	43/4 121	61/8 156	1/2 13	3/8 10	7/8 x 41/4 x 108	1/2 x 11/4 x 32

TYPE SLF & SLFH RATINGS

Type	Size	Rated Capacity (lb) (kg)	Rated Defl. (in) (mm)	Spring Constant (lb/in) (kg/mm)	Spring Color
SLF-	X-12 ^t	12 5	1.25 32	10 0.18	Orange
	X-23 ^t	23 10	1.50 38	18 0.26	Brown
	X-33 ^t	33 15	1.30 33	30 0.45	Red
	X-54 ^t	54 24	1.40 36	45 0.67	White
	X-76 ^t	76 34	1.22 31	73 1.10	Black
	X-113 ^t	113 51	1.20 30	113 1.70	Yellow
	X-130 ^t	130 59	1.20 30	130 1.97	Purple
	X-175 ^t	175 79	1.20 30	175 2.63	Silver
	X-210 ^t	210 95	1.20 30	210 3.17	Blue
	A-45	45 20	1.60 41	28 0.49	Blue
SLFH-	A-75	75 34	1.50 38	50 0.89	Orange
	A-125	125 57	1.33 34	94 1.68	Brown
	A-200	200 91	1.15 29	174 3.14	Black
	A-310	310 141	1.00 25	310 5.64	Yellow
	A-400	400 181	1.00 25	400 7.24	Green
	A-510	510 231	1.00 25	510 9.24	Red

TYPE SLF & SLFH RATINGS (continued)

Type	Size	Rated Capacity (lb) (kg)	Rated Defl. (in) (mm)	Spring Constant (lb/in) (kg/mm)	Spring Color/ Stripe
SLF-	A-625	625 283	1.00 25	625 11.32	White
	B-65	65 29	2.10 53	31 0.55	Brown
	B-85	85 39	2.10 53	40 0.74	White ^{††}
	B-115	115 52	2.00 51	57 1.02	Silver
	B-150	150 68	2.00 51	75 1.33	Orange
	B-280	280 127	1.60 41	174 3.10	Green
	B-450	450 204	1.31 33	344 6.18	Red
	B-750	750 340	1.12 28	670 12.14	White
	B-1000	1000 454	1.00 25	1000 18.16	Blue
	C-1000	1000 454	1.00 25	1000 18.16	Black
SLFH-	C-1350	1350 612	1.00 25	1350 24.48	Yellow
	C-1750	1750 794	1.00 25	1750 31.76	Black [*]
	C-2100	2100 953	1.00 25	2100 38.12	Yellow [*]
	C-2385	2385 1082	1.00 25	2385 43.28	Yellow ^{**}
	C-2650	2650 1202	1.00 25	2650 48.08	Red [*]
	C-2935	2935 1331	1.00 25	2935 53.24	Red ^{**}

^tSLFH not available ^{††}with black stripe *with red inner spring **with green inner spring

2" (51mm) Deflection SLF & SLFH Single Spring Mounts

MATCHING HEIGHT SAVING BRACKET

Type	Size	L (in) (mm)	M (in) (mm)	W (in) (mm)	Bracket Elevation BE (in) (mm)	Bracket Height BH (in) (mm)
SLF-	B	4 102	23/4 70	3 76	5 127	4 102
	B2	4 102	23/4 70	3 76	53/4 146	4 102
SLFH-	C2	4 102	23/4 70	3 76	53/4 146	4 102

SPRING ONLY

Spring Size	OD (in) (mm)	Free Height (in) (mm)
B	23/8 60	4 102
B2	23/8 60	4 1/2 114
C2	27/8 73	5 127

See page 5-10 for Spring Characteristics.

TYPE SLF & SLFH DIMENSIONS

Type	Size	Free & Oper Height (in) (mm)	A (in) (mm)	C (in) (mm)	E (in) (mm)	G (in) (mm)	Max Bolt Dia. H (in) (mm)	J (in) (mm)	Adjustment Bolt AB (in) (mm)	Locking Cap Screw CS (in) (mm)
SLF-	B	6 152	23/4 70	27/8 73	41/8 105	53/8 137	1/2 13	3/8 10	7/8 x 41/4 x 108	1/2 x 11/4 x 32
	B2	63/4 171	23/4 70	27/8 73	41/8 105	53/8 137	1/2 13	3/8 10	7/8 x 41/4 x 108	1/2 x 11/4 x 32
SLFH-	C2	63/4 171	31/8 79	33/8 86	43/4 121	61/8 156	1/2 13	3/8 10	7/8 x 41/4 x 108	1/2 x 11/4 x 32

TYPE SLF & SLFH RATINGS

Type	Size	Rated Capacity (lb) (kg)	Rated Defl. (in) (mm)	Spring Constant (lb/in) (kg/mm)	Spring Color/Stripe
SLF-	B-20	20 9	2.40 61	8 0.15	Tan
	B-26	26 12	2.18 55	12 0.22	White/Blue
	B-35	35 16	2.20 56	16 0.29	Purple
	B-50	50 23	2.20 56	24 0.41	White/Red
	B-65	65 29	2.10 53	31 0.55	Brown
	B-85	85 39	2.10 53	40 0.74	White/Black
	B-115	115 52	2.00 51	57 1.02	Silver
	B-150	150 68	2.00 51	75 1.33	Orange
SLFH-	B2-210	210 95	2.12 54	99 1.76	Silver
	B2-290	290 132	2.00 51	144 2.59	Blue
	B2-450 [*]	450 204	2.00 51	224 4.00	Tan
	B2-680 [*]	680 308	2.00 51	340 6.04	Gray

All springs without "‡" have additional travel to solid equal to 50% of the rated deflection.

*Published ratings allow minimum 25% additional travel to solid.

For a full 50% specified minimum use the following ratings:

Size	Derated Capacity (lb) (kg)	Defl. (in) (mm)	Size	Derated Capacity (lb) (kg)	Defl. (in) (mm)
B2-450	410 186	1.83 46	C2-1210	1010 458	1.67 42
B2-680	565 256	1.67 42	C2-1540	1285 583	1.67 42
C2-880	800 363	1.82 46	C2-1870	1560 708	1.67 42

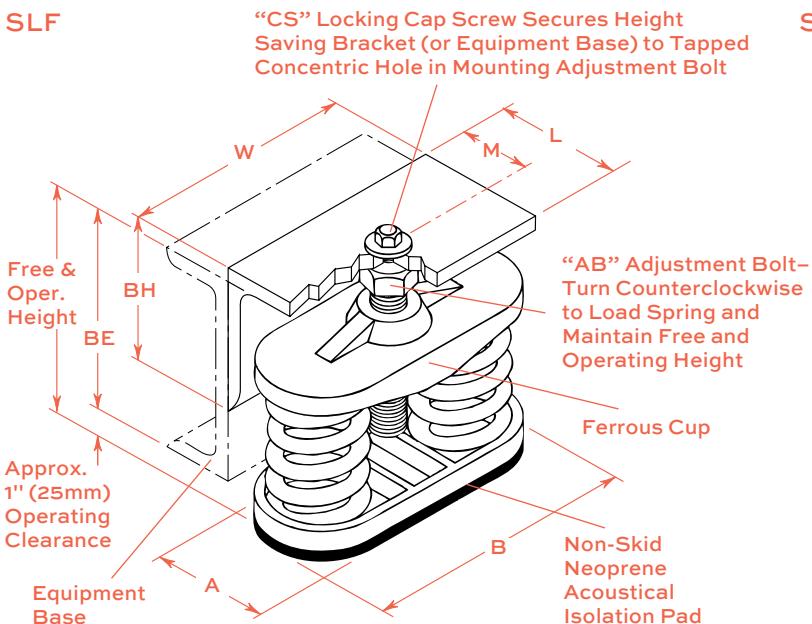
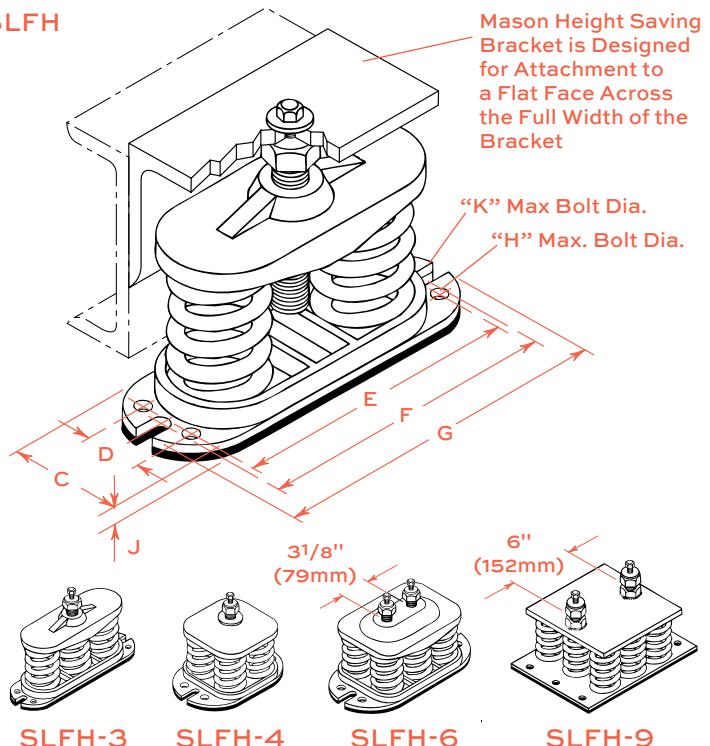
TYPE SLF & SLFH RATINGS (continued)

Type	Size	Rated Capacity (lb) (kg)	Rated Defl. (in) (mm)	Spring Constant (lb/in) (kg/mm)	Spring Color/Stripe
SLF-	C2-125	125 57	2.50 64	50 0.89	Purple
	C2-170	170 77	2.40 61	70 1.26	Brown
	C2-210	210 95	2.30 58	90 1.64	Red
	C2-260	260 118	2.20 56	120 2.11	White
SLFH-	C2-330	330 150	2.00 51	165 2.94	Black
	C2-460	460 209	2.00 51	230 4.10	Blue
	C2-610	610 277	2.00 51	305 5.43	Green
	C2-880 [‡]	880 399	2.00 51	440 7.82	Gray
	C2-1210 [‡]	1210 549	2.00 51	605 10.76	Silver
	C2-1540 [‡]	1540 699	2.00 51	770 13.71	Gray*
	C2-1870 [‡]	1870 848	2.00 51	935 16.63	Silver*

*with red inner spring

SLF Multiple Spring Mounts

Change designation to SLFH when base plate with bolt holes is required.

SLF**SLFH****1" (25mm) Deflection SLF Multiple Spring Mounts****MATCHING HEIGHT SAVING BRACKET**

Type	Size	L (in) (mm)	M (in) (mm)	W (in) (mm)	Bracket Elevation BE (in) (mm)	Bracket Height BH (in) (mm)	
SLF-	2	4 102	2 1/2 64	6 152	5 127	4 102	
	3	4 102	2 1/2 64	7 178	5 127	4 102	
	4	6 152	4 102	8 1/2 216	5 127	6 152	
SLFH-	6	7 178	5 127	11 3/4 298	5 127	7 178	
	9	8 203	5 1/2 140	11 3/4 298	5 1/4 133	7 178	
		Mounts have 2 adjustment bolts and special brackets are required.					

SPRING ONLY

Size	Spring OD (in) (mm)	Free Height (in) (mm)
C	27/8 73	41/8 105

See page 5-10 for Spring Characteristics.

All springs have additional travel to solid equal to 50% of the rated deflection.
Solid Spring Height = Free Height minus 1.5 times Rated Deflection.

Multiple spring mounts have C size springs.
SLF-2, SLF-3, SLF-4, SLF-6, SLF-9, SLF-12 & SLF-16 have 2, 3, 4, 6, 9, 12 & 16 springs respectively.

TYPE SLF & SLFH DIMENSIONS

Type	Size	Free & Oper Height (in) (mm)	A (in) (mm)	B (in) (mm)	C (in) (mm)	D (in) (mm)	E (in) (mm)	F (in) (mm)	G (in) (mm)	Hole Max Bolt Dia. (in) (mm)	J (in) (mm)	Slot Max Bolt Dia. (in) (mm)
SLF-	2	6 152	3 1/4 83	7 3/4 197	3 1/4 83	13/4 44	8 1/4 210	8 1/2 216	10 254	5/16 8	1/2 13	3/8 10
	3	6 152	3 3/8 86	9 1/2 241	3 3/8 86	13/4 44	10 254	10 1/4 260	11 3/4 298	5/16 8	1/2 13	3/8 10
	4	6 152	6 1/4 159	6 1/4 159	6 1/4 159	21/4 57	7 1/2 191	7 1/2 191	9 3/8 238	1/2 13	1/2 13	1/2 13
SLFH-	6	6 152	6 3/8 161	9 1/2 241	6 3/8 161	21/4 57	10 3/4 273	10 3/4 273	12 5/8 321	1/2 13	1/2 13	1/2 13
	9	7 178	9 229	9 229	9 229	6 152	11 279	—	12 1/2 318	1/2 13	1/2 13	—
	12	7 178	9 229	12 305	9 229	6 152	14 356	—	15 1/2 394	1/2 13	1/2 13	—
	16	8 203	12 305	13 330	12 305	6 152	15 381	—	16 1/2 419	1/2 13	1/2 13	—

Mounts in gray area have steel holders top and bottom.

Type	Size	Adjustment Bolt AB (in) (mm)	Locking Cap Screw CS (in) (mm)
SLF-	2 - 12	7/8 x 41/4 x 108	1/2 x 11/4 x 32
SLFH-	16	11/4 x 31/2 x 89	5/8 x 11/4 x 32



1" (25mm) Deflection SLF Multiple Spring Mounts (continued)**TYPE SLF & SLFH RATINGS**

Type	Size	Rated Capacity (lb) (kg)	Rated Defl. (in) (mm)	Spring Constant (lb/in) (kg/mm)	Spring Color/Stripe
SLF-SLFH-	2-2700	2700 1225	1.00 25	2700 49.00	Yellow
	2-3500	3500 1588	1.00 25	3500 63.52	Black*
	2-4200	4200 1905	1.00 25	4200 76.20	Yellow*
	3-5250	5252 2381	1.00 25	5250 95.24	Black*
	3-6300	6300 2858	1.00 25	6300 114.32	Yellow*
	3-7155	7155 3245	1.00 25	7155 129.80	Yellow**
	3-7950	7950 3606	1.00 25	7950 144.24	Red*
	4-5400	5400 2449	1.00 25	5400 97.96	Yellow
	4-7000	7000 3175	1.00 25	7000 127.00	Black*
	4-8400	8400 3810	1.00 25	8400 152.40	Yellow*

*with red inner spring **with green inner spring

Mounts in gray area have steel holders top and bottom.

TYPE SLF & SLFH RATINGS (continued)

Type	Size	Rated Capacity (lb) (kg)	Rated Defl. (in) (mm)	Spring Constant (lb/in) (kg/mm)	Spring Color/Stripe
SLF-SLFH-	6-12600	12600 5715	1.00 25	12600 228.60	Yellow*
	6-14310	14310 6491	1.00 25	14310 259.64	Yellow**
	6-15900	15900 7212	1.00 25	15900 288.48	Red*
	6-17610	17610 7988	1.00 25	17610 319.52	Red**
	9-18900	18900 8573	1.00 25	18900 342.92	Yellow*
	9-21465	21465 9736	1.00 25	21465 389.44	Yellow**
	9-23850	23850 10818	1.00 25	23850 432.72	Red*
	12-25200	25200 11431	1.00 25	25200 457.24	Yellow*
	12-28620	28620 12982	1.00 25	28620 519.28	Yellow**
	12-31800	31800 14424	1.00 25	31800 576.96	Red*
	16-33600	33600 15241	1.00 25	33600 609.64	Yellow*
	16-38160	38160 17309	1.00 25	38160 692.36	Yellow**

Mounts in gray area have steel holders top and bottom.

2" (51mm) Deflection SLF Multiple Spring Mounts**MATCHING HEIGHT SAVING BRACKET**

Type	Size	L (in) (mm)	M (in) (mm)	W (in) (mm)	Bracket Elevation BE (in) (mm)	Bracket Height BH (in) (mm)
SLF-SLFH-	2	4 102	21/2 64	6 152	53/4 146	4 102
	3	4 102	21/2 64	7 178	53/4 146	4 102
	4	6 152	4 102	81/2 216	53/4 146	6 152
	6	7 178	5 127	113/4 298	53/4 146	7 178

SPRING ONLY

Size	Spring OD (in) (mm)	Free Height (in) (mm)
C2	27/8 73	5 127

See page 5-10 for Spring Characteristics.

Multiple spring mounts have C2 size springs. SLF-2, SLF-3, SLF-4, & SLF-6 have 2, 3, 4 & 6 springs respectively. Illustrations show SLFH versions.

TYPE SLF & SLFH DIMENSIONS

Type	Size	Free & Oper Height (in) (mm)	A (in) (mm)	B (in) (mm)	C (in) (mm)	D (in) (mm)	E (in) (mm)	F (in) (mm)	G (in) (mm)	H (in) (mm)	J (in) (mm)	K (in) (mm)
SLF-SLFH-	2	63/4 171	31/4 83	73/4 197	31/4 83	13/4 44	81/4 210	81/2 216	10 254	5/16 8	1/2 13	3/8 10
	3	63/4 171	33/8 86	91/2 241	33/8 86	13/4 44	10 254	101/4 260	113/4 298	5/16 8	1/2 13	3/8 10
	4	63/4 171	61/4 159	61/4 159	61/4 159	21/4 57	71/2 191	71/2 191	93/8 229	1/2 13	1/2 13	1/2 13
	6	63/4 171	63/8 162	91/2 241	63/8 162	21/4 57	103/4 273	103/4 273	125/8 321	1/2 13	1/2 13	1/2 13

TYPE SLF & SLFH RATINGS

Type	Size	Rated Capacity (lb) (kg)	Rated Defl. (in) (mm)	Spring Constant (lb/in) (kg/mm)	Spring Color/Stripe
SLF-SLFH-	2-C2-340	340 154	2.40 61	140 2.52	Brown
	2-C2-420	420 191	2.30 58	180 3.30	Red
	2-C2-520	520 236	2.20 56	240 4.21	White
	2-C2-660	660 299	2.00 51	330 5.86	Black
	2-C2-920	920 417	2.00 51	460 8.18	Blue
	2-C2-1220	1220 553	2.00 51	610 10.84	Green
	2-C2-1760 ^t	1760 798	2.00 51	880 15.65	Gray
	2-C2-2420 ^t	2420 1098	2.00 51	1210 21.53	Silver
	2-C2-3080 ^t	3080 1397	2.00 51	1540 27.39	Gray*
	2-C2-3740 ^t	3740 1696	2.00 51	1870 33.25	Silver*

TYPE SLF & SLFH RATINGS (continued)

Type	Size	Rated Capacity (lb) (kg)	Rated Defl. (in) (mm)	Spring Constant (lb/in) (kg/mm)	Spring Color/Stripe
SLF-SLFH-	3-C2-2640 ^t	2640 1197	2.00 51	1320 23.47	Gray
	3-C2-3630 ^t	3630 1647	2.00 51	1815 32.29	Silver
	3-C2-4620 ^t	4620 2096	2.00 51	2310 41.10	Gray*
	3-C2-5610 ^t	5610 2545	2.00 51	2805 49.90	Silver*
	4-C2-4840 ^t	4840 2195	2.00 51	2420 43.04	Silver
	4-C2-6160 ^t	6160 2794	2.00 51	3080 54.78	Gray*
	4-C2-7480 ^t	7480 3393	2.00 51	3740 66.53	Silver*
	6-C2-7260 ^t	7260 3293	2.00 51	3630 64.57	Silver
	6-C2-9240 ^t	9240 4191	2.00 51	4620 82.18	Gray*
	6-C2-11220 ^t	11220 5089	2.00 51	5610 99.78	Silver*

*with red inner spring

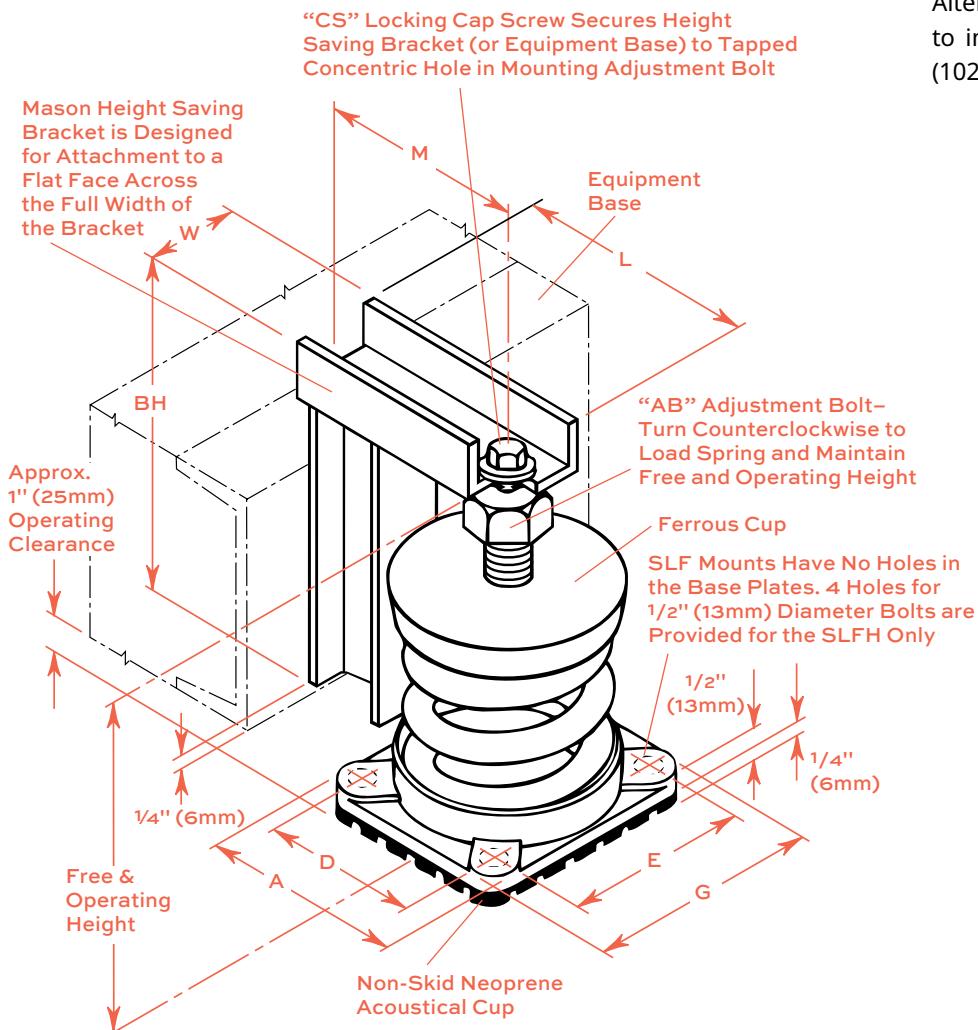
^tPublished ratings allow minimum 25% additional travel to solid. For a full 50% specified minimum use the following ratings:

Size	Derated Capacity (lb) (kg)	Defl. (in) (mm)	Size	Derated Capacity (lb) (kg)	Defl. (in) (mm)	Size	Derated Capacity (lb) (kg)	Defl. (in) (mm)
2-C2-1760	1600 726	1.83 46	3-C2-2640	2400 1089	1.67 42	4-C2-4840	4040 1833	1.67 42
2-C2-2420	2020 916	1.67 42	3-C2-3630	3030 1374	1.67 42	4-C2-6160	5145 2334	1.67 42
2-C2-3080	2570 1166	1.67 42	3-C2-4620	3860 1751	1.67 42	4-C2-7480	6245 2833	1.67 42
2-C2-3740	3120 1415	1.67 42	3-C2-5610	4685 2125	1.67 42	6-C2-7260	6060 2749	1.67 42
						6-C2-9240	7715 3499	1.67 42
						6-C2-11220	9370 4250	1.67 42

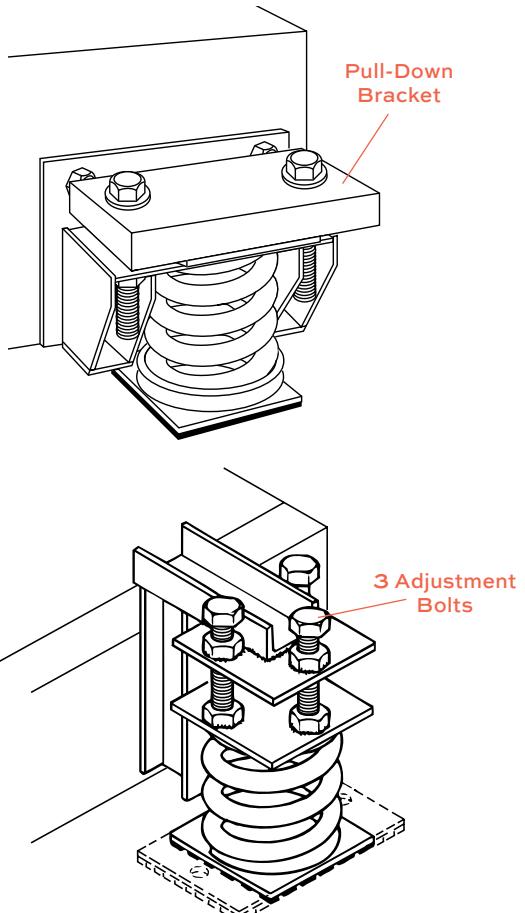


Deflection 100 Series SLF Spring Mounts

Change designation to SLFH when base plate with bolt holes is required.



Alternate bracket and spring adjustment methods to improve stability and appearance when using 4" (102mm), 5" (127mm) and greater deflection springs.



All springs have additional travel to solid equal to 50% of the rated deflection.
Solid Spring Height = Free Height minus 1.5 times Rated Deflection.

PRODUCT FINISHES

All standard products have a painted or powder-coated finish unless otherwise indicated. Springs are powder-coated or zinc electroplated.

All mounts can be manufactured in stainless steel or hot dipped galvanized at additional cost.

SPRING CHARACTERISTICS

Spring Size	Rated Deflection (in)	Ratio (Kx/Ky)	Ratio (OD/OH)
X	1.00 - 1.30	0.75 - 1.00	0.92 - 1.40
A	1.00 - 1.60	0.50 - 0.90	0.74 - 1.25
B	1.00 - 2.10	0.70 - 0.90	0.80 - 1.25
C & Multiples	1.00	0.90 - 1.10	0.92
101-118	2.00 - 2.55	0.71 - 1.10	0.82 - 1.15
126-143	3.25	0.72 - 1.00	0.85 - 1.36
150-169	4.38	0.80 - 1.10	0.85 - 1.33
174-198	5.27 - 5.38	0.70 - 1.00	0.92 - 1.31

2" (51mm) Deflection 100 Series SLF Spring Mounts

MATCHING HEIGHT SAVING BRACKET

Type	Size	L (in) (mm)	M (in) (mm)	W (in) (mm)	Bracket Height BH (in) (mm)
SLF-	101 - 107	6 152	5 127	3 76	9 229
	108 - 109	8 1/2 216	7 1/2 191	4 102	10 3/4 273
	110 - 111	9 229	8 203	4 102	11 3/4 298
	112 - 113	12 305	10 1/2 267	6 152	14 356
	114 - 115	12 305	10 1/2 267	6 152	15 1/4 416
	116	12 1/2 318	11 279	6 152	16 7/8 429
	117 - 118	Mounts have special adjustment bolts and brackets as required.			

TYPE 100 SERIES SLF & SLFH DIMENSIONS

Type	Size	Free & Oper Height (in) (mm)	A (in) (mm)	D (in) (mm)	E (in) (mm)	G (in) (mm)	Adjustment Bolt AB (in) (mm)	Locking Cap Screw CS (in) (mm)
SLF-	101 - 107	7 1/4 184	4 1/4 108	3 3/8 86	3 7/8 98	4 3/4 120	7/8 x 53/4 x 146	1/2 x 11/4 x 34
	108	8 3/8 213	5 127	4 102	4 1/4 108	5 1/4 133	7/8 x 53/4 x 146	1/2 x 11/4 x 34
	109	9 229	5 127	4 102	4 1/4 108	5 1/4 133	7/8 x 53/4 x 146	1/2 x 11/4 x 34
	110 - 111	9 229	5 1/2 140	4 1/4 108	5 1/4 133	6 1/2 165	7/8 x 53/4 x 146	1/2 x 11/4 x 34
	112	10 1/8 257	6 152	4 3/4 121	5 3/4 146	7 178	1 x 6 x 152	1/2 x 11/4 x 34
	113	10 1/2 267	6 5/8 168	5 1/4 133	6 152	7 1/2 191	1 x 6 x 152	1/2 x 11/4 x 34
	114	12 305	7 1/2 191	6 1/4 159	6 1/4 159	7 1/2 191	1 x 6 x 152	1/2 x 11/4 x 34
SLFH-	115	12 305	7 1/2 191	6 1/4 159	6 1/4 159	7 1/2 191	11 4/6 x 152	5/8 x 11/2 x 38
	116	13 330	8 1/2 216	7 1/4 184	7 1/4 184	8 1/2 216	1 1/2 x 8 x 203	3/4 x 2 x 51
	117	16 406	9 1/2 241	8 203	8 203	9 1/2 241	11 2/8 x 203	3/4 x 2 x 51
	118	16 406	10 1/2 267	9 1/2 241	9 1/2 241	10 1/2 267	2 x 8 x 203	1 x 21/2 x 64

Mounts in gray area have steel holders top and bottom.

TYPE 100 SERIES SLF & SLFH RATINGS

Type	Size	Rated Capacity (lb) (kg)	Rated Defl. (in) (mm)	Mount Constant (lb/in) (kg/mm)	Spring Color/Stripe
SLF-	101	125 57	2.50 64	50 0.89	Purple
	102	200 91	2.50 64	80 1.42	Brown
	103	310 141	2.50 64	125 2.20	Pink
	104	500 227	2.50 64	200 3.55	Green
	105	740 336	2.40 61	310 5.51	Red
	106	1050 476	2.10 53	500 8.98	White
	107	1400 635	2.00 51	700 12.45	Blue
	108	1660 753	2.05 52	810 14.48	Silver
	109	2250 1021	2.00 51	1125 20.02	Orange
	110	3000 1361	2.00 51	1500 26.69	Gray
	111	4000 1814	2.00 51	2000 35.57	Tan
	112	5300 2404	2.00 51	2665 47.14	Black
	113	7100 3221	2.00 51	3550 63.16	Yellow
	114	9300 4218	2.00 51	4650 82.71	Blue/Orange
	115	12600 5715	2.00 51	6300 112.06	Blue/Red
	116	16800 7620	2.00 51	8400 149.41	Blue/White
	117	28500 12927	2.55 65	11175 198.88	Blue/Silver
	118	40000 18144	2.10 53	19000 342.34	Blue/Gray

Mounts in gray area have steel holders top and bottom.

SPRING ONLY

Size	Spring OD (in) (mm)	Free Height (in) (mm)
101 - 105	33/4 95	53/4 146
106 - 107	33/4 95	57/8 149
108	41/2 114	63/4 171
109	41/2 114	71/2 191
110 - 111	5 127	71/2 191
112	5 1/2 140	8 1/2 216
113	6 152	8 3/4 222
114 - 115	6 3/4 171	10 254
116	7 3/4 197	10 1/8 257
117	8 3/4 222	13 1/8 333
118	9 3/8 238	13 1/8 333

See page 5-10 for Spring Characteristics.

3" (76mm) Deflection 100 Series SLF Spring Mounts

MATCHING HEIGHT SAVING BRACKET

Type	Size	L (in) 216	M (in) 191	W (in) 102	Bracket Height BH (in) 273
	126 - 131	8 1/2	216	4	102
	132	9	229	4	102
	133 - 136	9 1/2	241	4	102
	137 - 138	12 1/2	318	6	152
	139	12 1/2	318	6	152
	140	13	330	6	152
	141 - 143	Mounts have special adjustment bolts and brackets as required.			

TYPE 100 SERIES SLF & SLFH DIMENSIONS

Type	Size	Free & Oper Height (in) (mm)	A (in) (mm)	D (in) (mm)	E (in) (mm)	G (in) (mm)	Adjustment Bolt AB (in) (mm)	Locking Cap Screw CS (in) (mm)
	126	8 203	4 1/4 108	3 1/4 83	4 102	4 3/4 121	7/8 x 53/4 x 146	1/2 x 11/4 x 32
	127	8 203	4 1/4 108	3 1/4 83	4 102	4 3/4 121	7/8 x 53/4 x 146	1/2 x 11/4 x 32
	128	8 203	4 1/2 114	3 5/8 92	4 1/4 108	5 1/4 133	7/8 x 53/4 x 146	1/2 x 11/4 x 32
	129	8 1/2 216	4 1/2 114	3 5/8 92	4 1/4 108	5 1/4 133	7/8 x 53/4 x 146	1/2 x 11/4 x 32
	130	9 229	5 127	4 102	4 1/4 108	5 1/4 133	7/8 x 53/4 x 146	1/2 x 11/4 x 32
	131	9 229	5 127	4 102	4 1/4 108	5 1/4 133	7/8 x 53/4 x 146	1/2 x 11/4 x 32
	132	9 1/2 241	5 1/2 140	4 1/4 108	5 1/4 133	6 1/2 165	7/8 x 53/4 x 146	1/2 x 11/4 x 32
	133	11 279	6 152	4 3/4 121	5 3/4 146	7 178	1 x 6 x 152	1/2 x 11/4 x 32
	134	11 279	6 152	4 3/4 121	5 3/4 146	7 178	1 x 6 x 152	1/2 x 11/4 x 32
	135	11 1/8 283	6 5/8 168	5 1/4 133	6 152	7 1/2 191	1 x 6 x 152	1/2 x 11/4 x 32
	136	11 3/4 298	7 1/2 191	6 1/4 159	6 1/4 159	7 1/2 191	1 x 6 x 152	1/2 x 11/4 x 32
	137	13 1/4 337	8 1/2 216	7 1/4 184	7 1/4 184	8 1/2 216	11/4 x 8 x 203	5/8 x 11/2 x 38
	138	13 1/4 337	8 1/2 216	7 1/4 184	7 1/4 184	8 1/2 216	11/4 x 8 x 203	5/8 x 11/2 x 38
	139	14 3/8 365	8 1/2 216	7 1/4 184	7 1/4 184	8 1/2 216	11/4 x 8 x 203	5/8 x 11/2 x 38
	140	15 1/2 394	9 1/2 241	8 203	8 203	9 1/2 241	11/4 x 8 x 203	5/8 x 11/2 x 38
	141	16 1/2 419	10 1/2 267	9 1/2 241	9 1/2 241	10 1/2 267	13/4 x 8 x 203	3/4 x 2 x 51
	142	18 457	11 279	10 254	10 254	11 279	2 x 8 x 203	1 x 2 x 51
	143	19 483	12 305	11 279	11 279	12 305	2 x 8 x 203	1 x 2 x 51

Mounts in gray area have steel holders top and bottom.

TYPE 100 SERIES SLF & SLFH RATINGS

Type	Size	Rated Capacity (lb) (kg)	Rated Defl. (in) (mm)	Mount Constant (lb/in) (kg/mm)	Spring Color/Stripe
	126	195 88	3.25 83	60 1.06	Purple
	127	280 127	3.25 83	85 1.53	Brown
	128	390 177	3.25 83	120 2.13	Orange
	129	520 236	3.25 83	160 2.84	Green
	130	710 322	3.25 83	220 3.88	Red
	131	940 426	3.25 83	290 5.13	White
	132	1280 581	3.25 83	395 7.00	Blue
	133	1770 803	3.25 83	545 9.67	Black
	134	2490 1129	3.25 83	765 13.60	Yellow
	135	3300 1497	3.25 83	1000 18.04	Gray
	136	4500 2041	3.25 83	1370 24.59	Blue/Brown
	137	6200 2818	3.25 83	1900 33.88	Blue/Orange
	138	8300 3765	3.25 83	2560 45.36	Blue/Red
	139	11400 5171	3.25 83	3500 62.30	Blue/White
	140	15200 6895	3.25 83	4685 83.07	Blue/Silver
	141	20300 9208	3.25 83	6245 110.94	Blue/Gray
	142	28400 12882	3.25 83	8750 155.20	Blue/Green
	143	39000 17690	3.25 83	12000 213.13	Blue/Yellow

Mounts in gray area have steel holders top and bottom.

SPRING ONLY

Size	Spring OD (in) (mm)	Free Height (in) (mm)
126	3 3/4 95	6 3/8 162
127	3 3/4 95	6 1/2 165
128	4 102	6 1/2 165
129	4 102	7 178
130	4 1/2 114	7 1/4 184
131	4 1/2 114	7 1/2 191
132	5 127	7 7/8 200
133	5 1/2 140	9 1/4 235
134	5 1/2 140	9 1/4 235
135	6 152	9 1/2 241
136	6 3/4 171	9 3/4 235
137	7 3/4 197	10 7/8 274
138	7 3/4 197	11 279
139	7 3/4 197	12 1/4 311
140	8 3/4 222	12 3/4 324
141	9 1/2 241	13 1/2 343
142	10 1/4 260	15 381
143	11 279	16 1/8 410

See page 5-10 for Spring Characteristics.



4" (102mm) Deflection 100 Series SLF Spring Mounts**MATCHING HEIGHT SAVING BRACKET**

Type	Size	L (in) (mm)	M (in) (mm)	W (in) (mm)	Bracket Height BH (in) (mm)
SLF-	150 - 153	7 178	6 152	4 102	10 ³ / ₈ 264
	154 - 155	9 ¹ / ₂ 241	8 ¹ / ₂ 216	4 102	12 305
	156 - 158	9 ¹ / ₂ 241	8 ¹ / ₂ 216	4 102	13 ¹ / ₄ 337
	159	9 ¹ / ₂ 241	8 ¹ / ₂ 216	4 102	14 ¹ / ₄ 362
	160 - 162	11 ¹ / ₈ 283	9 ⁵ / ₈ 244	4 102	16 ¹ / ₂ 420
	163 - 165	13 ¹ / ₂ 343	12 305	6 152	20 ¹ / ₄ 514
	166 - 167	14 ¹ / ₂ 368	13 330	6 152	22 ¹ / ₂ 572
	168 - 169	Alternate brackets as required. (See page 5-10)			

TYPE 100 SERIES SLF & SLFH DIMENSIONS

Type	Size	Free & Oper. Height (in) (mm)	A (in) (mm)	D (in) (mm)	E (in) (mm)	G (in) (mm)	Adjustment Bolt AB (in) (mm)	Locking Cap Screw CS (in) (mm)
SLF-	150 - 153	10 254	5 ¹ / ₂ 140	4 ¹ / ₄ 108	5 ¹ / ₄ 133	6 ¹ / ₂ 165	7 ⁸ / ₈ x 203	1 ² x 11 ¹ / ₄ x 32
	154 - 155	10 ³ / ₄ 273	6 ⁵ / ₈ 168	5 ¹ / ₄ 133	6 152	7 ¹ / ₂ 191	1 x 8 x 203	1 ² x 11 ¹ / ₄ x 32
	156 - 157	12 305	6 ⁵ / ₈ 168	5 ¹ / ₄ 133	6 152	7 ¹ / ₂ 191	1 x 8 x 203	1 ² x 11 ¹ / ₄ x 32
	158	12 ¹ / ₈ 308	7 ¹ / ₂ 191	6 ¹ / ₄ 159	6 ¹ / ₄ 159	7 ¹ / ₂ 191	1 x 8 x 203	5 ⁸ / ₈ x 11 ¹ / ₂ x 38
	159	13 330	7 ¹ / ₂ 191	6 ¹ / ₄ 159	6 ¹ / ₄ 159	7 ¹ / ₂ 191	1 x 8 x 203	5 ⁸ / ₈ x 11 ¹ / ₂ x 38
	160	13 330	8 ¹ / ₂ 216	7 ¹ / ₄ 184	7 ¹ / ₄ 184	8 ¹ / ₂ 216	11 ⁴ / ₈ x 203	5 ⁸ / ₈ x 11 ¹ / ₂ x 38
	161	13 ¹ / ₂ 343	8 ¹ / ₂ 216	7 ¹ / ₄ 184	7 ¹ / ₄ 184	8 ¹ / ₂ 216	11 ⁴ / ₈ x 203	5 ⁸ / ₈ x 11 ¹ / ₂ x 38
	162	14 356	9 ¹ / ₂ 241	8 203	8 203	9 ¹ / ₂ 241	11 ² / ₈ x 203	3 ⁴ x 2 x 51
SLFH-	163 - 164	16 406	9 ¹ / ₂ 241	8 203	8 203	9 ¹ / ₂ 241	11 ² / ₈ x 203	3 ⁴ x 2 x 51
	165	17 432	10 ¹ / ₂ 267	9 ¹ / ₂ 241	9 ¹ / ₂ 241	10 ¹ / ₂ 267	13 ⁴ / ₈ x 203	3 ⁴ x 2 x 51
	166	19 483	11 279	10 254	10 254	11 279	13 ⁴ / ₈ x 203	3 ⁴ x 2 x 51
	167	19 483	12 305	11 279	11 279	12 305	13 ⁴ / ₈ x 203	3 ⁴ x 2 x 51
	168	20 508	12 305	11 279	11 279	12 305	2 x 8 x 203	1 x 21 ¹ / ₂ x 76
	169	21 533	13 330	12 305	12 305	13 330	2 x 8 x 203	1 x 21 ¹ / ₂ x 76

Mounts in gray area have steel holders top and bottom.

TYPE 100 SERIES SLF & SLFH RATINGS

Type	Size	Rated Capacity (lb) (kg)	Rated Defl. (in) (mm)	Mount Constant (lb/in) (kg/mm)	Spring Color/Stripe
SLF-	150	240 109	4.38 121	55 0.90	Purple
	151	330 150	4.38 121	75 1.24	Brown
	152	420 191	4.38 121	95 1.58	Orange
	153	530 240	4.38 121	120 1.98	Green
	154	680 308	4.38 121	155 2.55	Red
	155	880 399	4.38 121	200 3.30	White
	156	1120 508	4.38 121	255 4.20	Blue
	157	1420 644	4.38 121	325 5.32	Black
SLFH-	158	1840 835	4.38 121	420 6.90	Yellow
	159	2370 1075	4.38 121	540 8.88	Gray
	160	3000 1361	4.38 121	695 11.25	Blue/Brown
	161	3900 1769	4.38 121	895 14.62	Blue/Red
	162	5100 2313	4.38 121	1155 19.12	Blue/Orange
	163	6500 2948	4.38 121	1485 24.36	Blue/White
	164	8400 3810	4.38 121	1910 31.49	Blue/Silver
	165	10800 4899	4.38 121	2455 40.49	Blue/Gray
	166	13800 6260	4.38 121	3160 51.74	Blue/Green
	167	17800 8074	4.38 121	4065 66.73	Blue/Yellow
	168	22900 10387	4.38 121	5235 85.84	Blue/Pink
	169	30000 13608	4.38 121	6730 112.46	Blue/Tan

Mounts in gray area have steel holders top and bottom.

SPRING ONLY

Size	Spring OD (in) (mm)	Free Height (in) (mm)
150	5 127	8 ³ / ₈ 213
151	5 127	8 ¹ / ₂ 216
152	5 127	8 ³ / ₈ 213
153	5 127	8 ³ / ₈ 213
154	6 152	8 ⁷ / ₈ 225
155	6 152	9 ¹ / ₈ 232
156	6 152	9 ⁷ / ₈ 251
157	6 152	10 254
158	6 ³ / ₄ 171	10 ³ / ₈ 264
159	6 ³ / ₄ 171	11 ¹ / ₈ 283
160	7 ³ / ₄ 197	10 ⁷ / ₈ 276
161	7 ³ / ₄ 197	11 ³ / ₈ 289
162	8 ³ / ₄ 222	11 ¹ / ₂ 292
163	8 ³ / ₄ 222	13 ¹ / ₄ 337
164	8 ³ / ₄ 222	13 ³ / ₈ 340
165	9 ³ / ₈ 238	14 ¹ / ₈ 359
166	10 254	15 ³ / ₈ 391
167	11 279	15 ⁷ / ₈ 403
168	11 279	17 432
169	11 ⁵ / ₈ 295	18 457

See page 5-10 for Spring Characteristics.

5" (127mm) Deflection 100 Series SLF Spring Mounts**MATCHING HEIGHT SAVING BRACKET**

Type	Size	L (in) (mm)	M (in) (mm)	W (in) (mm)	Bracket Height BH (in) (mm)
SLF-	174 - 198				
SLFH-					Matching Height Saving Bracket as shown in illustration on page 5-8. Pulldown Brackets or three Adjustment Bolts are designed for each special application as required. (See page 5-10)

TYPE 100 SERIES SLF & SLFH DIMENSIONS

Type	Size	Free & Oper Height (in) (mm)	A (in) (mm)	D (in) (mm)	E (in) (mm)	G (in) (mm)	Adjustment Bolt AB (in) (mm)	Locking Cap Screw CS (in) (mm)
SLF- SLFH-	174 - 177	12 305	65/8 168	51/4 133	6 152	71/2 191	1 x 9 x 229	1/2 x 11/4 x 32
	178	125/8 321	65/8 168	51/4 133	6 152	71/2 191	1 x 10 x 254	1/2 x 11/4 x 32
	179 - 182	131/4 337	71/2 191	61/4 159	61/4 159	71/2 191	1 x 10 x 254	1/2 x 11/4 x 32
	183 - 186	15 381	81/2 216	71/4 184	71/4 184	81/2 216	11/4 x 10 x 254	5/8 x 11/2 x 38
	187	151/2 394	91/2 241	8 203	8 203	91/2 241	11/2 x 10 x 254	3/4 x 2 x 51
	188	16 406	91/2 241	8 203	8 203	91/2 241	11/2 x 10 x 254	3/4 x 2 x 51
	189	16 406	91/2 241	81/2 216	81/2 216	91/2 241	11/2 x 10 x 254	3/4 x 2 x 51
	190	17 432	101/2 267	91/2 241	91/2 241	101/2 267	11/2 x 10 x 254	3/4 x 2 x 51
	191	171/2 445	101/2 267	91/2 241	91/2 241	101/2 267	11/2 x 10 x 254	3/4 x 2 x 51
	192 - 193	18 457	11 279	10 254	10 254	11 279	13/4 x 10 x 254	3/4 x 2 x 51
	194	19 483	12 305	11 279	11 279	12 305	2 x 10 x 254	1 x 21/2 x 64
	195	20 508	12 305	11 279	11 279	12 305	2 x 10 x 254	1 x 21/2 x 64
	196	21 533	13 330	12 305	12 305	13 330	2 x 10 x 254	1 x 21/2 x 64
	197 - 198	23 584	14 356	13 330	13 330	14 356	2 x 10 x 254	1 x 21/2 x 64

Mounts in gray area have steel holders top and bottom.

TYPE 100 SERIES SLF & SLFH RATINGS

Type	Size	Rated Capacity (lb) (kg)	Rated Defl. (in) (mm)	Mount Constant (lb/in) (kg/mm)	Spring Color/Stripe
SLF- SLFH-	174	70 122	5.31 135	13 0.24	Purple
	175	320 145	5.31 135	60 1.07	Brown
	176	370 168	5.31 135	70 1.24	Orange
	177	460 209	5.38 137	85 1.53	Green
	178	560 254	5.38 137	105 1.85	Red
	179	670 304	5.38 137	125 2.22	White
	180	830 376	5.38 137	155 2.74	Blue
	181	1000 454	5.38 137	185 3.31	Black
	182	1240 562	5.37 136	230 4.13	Yellow
	183	1500 680	5.37 136	280 5.00	Gray
	184	1830 830	5.37 136	340 6.10	Pink
	185	2230 1012	5.37 136	415 7.44	Silver
	186	2710 1229	5.37 136	505 9.04	Tan
	187	3300 1497	5.37 136	615 11.01	Blue/Orange
	188	4100 1860	5.37 136	755 13.68	Blue/Red
	189	4900 2223	5.37 136	915 16.35	Blue/White
	190	6000 1852	5.37 136	1120 20.01	Blue/Yellow
	191	7300 2252	5.37 136	1365 24.35	Blue/Silver
	192	9000 2777	5.37 136	1670 30.01	Blue/Gray
	193	11000 3395	5.37 136	2040 36.69	Blue/Tan
	194	13300 6033	5.37 136	2482 44.36	Blue/Brown
	195	16300 7394	5.37 136	3028 54.37	Blue/Pink
	196	19800 8981	5.37 136	3694 66.04	Blue/Black
	197	24200 10977	5.37 136	4506 80.71	Blue/Green
	198	29000 13154	5.37 136	5500 98.16	Blue/Purple

Mounts in gray area have steel holders top and bottom.

SPRING ONLY

Size	Spring OD (in) (mm)	Free Height (in) (mm)
174	6 152	97/8 251
175 - 176	6 152	10 254
177	6 152	101/2 267
178	6 152	103/4 273
179 - 181	63/4 171	111/8 283
182	63/4 171	113/8 289
183	73/4 197	121/2 318
184	73/4 197	117/8 302
185	73/4 197	12 305
186	73/4 197	123/4 324
187	83/4 222	123/4 324
188	83/4 222	133/8 340
189	91/8 232	131/2 343
190	91/2 241	145/8 371
191	91/2 241	151/4 387
192	101/4 260	155/8 397
193	101/4 260	16 406
194	11 279	161/4 413
195	113/8 289	171/8 435
196	115/8 295	18 457
197	13 330	191/2 495
198	13 330	191/8 486

See page 5-10 for Spring Characteristics.

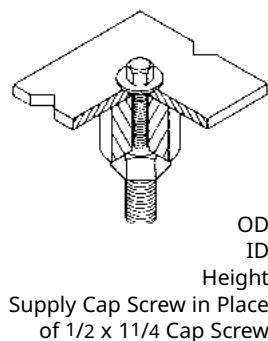


100 Series Ductile Iron Extension Tops

100 SERIES HEIGHT MATCHING METHODS SIZES 100 - 116

SLF Size	Adjustment Bolt (in)	Cap Screw (in)	Spring OD (in) (mm)	Normal Assembly Height (in) (mm)	To Increase Height to Match (in mm)							
					108		109 - 110 - 111		112		113	
					Height	Solution	Height	Solution	Height	Solution	Height	Solution
101 - 107	7/8 x 5 3/4	1/2 x 11 1/4	3 3/4 (95)	7 1/4 (184)	8 203	Raise Bolt an Add'l 3/4" (19mm)	9 229	Dwg. A-14303	10 254	Dwg. A-14303 + 1" (25mm) spacer	10 1/2 267	Dwg. A-14303 + 1 1/2" (38mm) spacer
					109 - 110 - 111		112		113		114 - 115	
108	7/8 x 5 3/4	1/2 x 11 1/4	4 1/2 (114)	8 (203)	9 229	1" (25mm) spacer	10 254	11 1/2" (38mm) spacer	10 1/2 267	Dwg. A-14304	12 305	A-14304 + 1 1/2" (38mm) sp
					112		113		114 - 115			
109	7/8 x 5 3/4	1/2 x 11 1/4	4 1/2 (114)	9 (229)	10 254	1" (25mm) spacer	10 1/2 267	11 1/2" (38mm) spacer	12 305	Dwg. A-14304		
					112		113		114 - 115			
110 - 111	7/8 x 5 3/4	1/2 x 11 1/4	5 (127)	9 (229)	10 254	1" (25mm) spacer	10 1/2 267	Dwg. A-14305	12 305	A-14305 + 1 1/2" (38mm) sp		
					113		114 - 115		116			
112	1 x 6	1/2 x 11 1/4	5 1/2 (140)	10 (254)	10 1/2 67	Raise 1 1/2" (13mm)	12 305	Dwg. A-14478	13 330	A-14478 + 1 1/2" (38mm) sp		
					114 - 115		116					
113	1 x 6	1/2 x 11 1/4	6 (152)	10 1/2 (267)	12 305	11 1/2" (38mm) spacer	13 330	11 1/2" (38mm) spacer				
					116							
114 - 115	1 x 6	1/2 x 11 1/4	6 3/4 (171)	12 (305)	13 330	1" (25mm) spacer						
116	11/4 x 8	5/8 x 11/2	7 3/4 (197)	13 (330)								

SPACERS REQUIRED



OD	1" (25mm) Spacer	11 1/2" (38mm) Spacer
ID	11 1/2" (38mm)	11 1/2" (38mm)
Height	5 8/8" (16mm)	5 8/8" (16mm)
	1" (25mm)	11 1/2" (38mm)
	1/2 x 2 1/4	1/2 x 2 3/4

PROCEDURE

Select the Heaviest Capacity (Tallest) SLF Mount size in the set. This sets the standard for the entire set. Modify the Lighter Capacity (Shorter) SLF Mount sizes as per the tables above to match the tallest selection.

EXAMPLES

Set consists of 2 SLF-111, 1 SLF-108 and 1 SLF-107, use:

2 SLF-111 - Standard

1 SLF-108 - Standard & 1" (25mm) Spacer

1 SLF-107 - Refer to Drawing No. A-14303

Set consists of 1 SLF-113, 1 SLF-111, 1 SLF-108 and 1 SLF-106, use:

1 SLF-113 - Standard

1 SLF-111 - Refer to Drawing No. A-14305

1 SLF-108 - Refer to Drawing No. A-14304

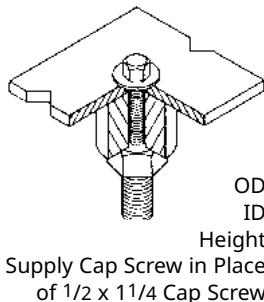
1 SLF-106 - Refer to Drawing No. A-14303 & 11 1/2" (38mm) Spacer

<p>Cement 1" Pad 65 - 70 Duro 65/8" x 7 1/2" (168mm x 181mm)</p> <p>1"</p> <p>(25mm)</p>	<p>Drawing Number A-14303</p> <p>3 3/4" (95mm) OD Spring 13/4" (44mm) Extension Drill & Tap — 7/8"- 9UNC OD — 4 1/4" (108mm) ID — 3 13/16" (97mm) Weight — 1.8 lb (.8kg) Material — Gray Cast Iron</p>	<p>Drawing Number A-14304</p> <p>4 1/2" (113mm) OD Spring 2 1/2" (64mm) Extension Drill & Tap — 7/8"- 9UNC OD — 5" (127mm) ID — 49/16" (116mm) Weight — 2.5 lb (1.1kg) Material — Gray Cast Iron</p>	<p>Drawing Number A-14305</p> <p>5" (127mm) OD Spring 1 1/2" (38mm) Extension Drill & Tap — 7/8"- 9UNC OD — 5 1/2" (140mm) ID — 513/16" (148mm) Weight — 2.85 lb (1.3kg) Material — Gray Cast Iron</p>	<p>Drawing Number A-14478</p> <p>5 1/2" (140mm) OD Spring 1 1/2" (38mm) Extension Drill & Tap — 1"- 8UNC OD — 6 1/8" (156mm) ID — 53/4" (146mm) Weight — 3.4 lb (1.5kg) Material — Gray Cast Iron</p>

100 SERIES HEIGHT MATCHING METHODS SIZES 126 - 136

SLF Size	Adjustment Bolt (in)	Cap Screw (in)	Spring OD (in) (mm)	Normal Assembly Height (in) (mm)	To Increase Height to Match (inches, mm)										
					129 - 130		131		132		133 - 134 - 135		136		
						Hgt	Solution	Hgt	Solution	Hgt	Solution	Hgt	Solution	Hgt	Solution
126 - 127	7/8 x 53/4	1/2 x 11/4	33/4 95	8 203	81/2 216	Raise 1/2" 13mm	9 229	1" 25mm spacer	91/2 241	11 1/2" 38mm spacer	11 279	Dwg. A-14303 + 1" 25mm spacer	113/4 298	Dwg. A-14303 + 11/2" 38mm spacer	
128	7/8 x 53/4	1/2 x 11/4	4 102	8 203	81/2 216	Raise 1/2" 13mm	9 229	1" 25mm spacer	91/2 241	11 1/2" 38mm spacer	11 279	Dwg. A-24256	113/4 298	A-24256 + 1" 25mm sp	
129	7/8 x 53/4	1/2 x 11/4	4 102	81/2 100	9 229	Raise 1/2" 13mm	91/2 241	1" 25mm spacer	11 279	A-24256	113/4 298	A-24256 + Raise 3/4" 19mm			
130	7/8 x 53/4	1/2 x 11/4	41/2 114	81/2 100	9 229	Raise 1/2" 13mm	91/2 241	1" 25mm spacer	11 279	A-14304	113/4 298	A-14304 + Raise 3/4" 19mm			
131	7/8 x 53/4	1/2 x 11/4	41/2 114	9 229	91/2 241	Raise 1/2" 13mm	11 279	11 1/2" 38mm spacer	113/4 298	A-14304					
132	7/8 x 53/4	1/2 x 11/4	5 127	91/2 241	11 279	A-14305	113/4 298	A-14305 + Raise 3/4" 19mm							
133 - 134	1 x 6	1/2 x 11/4	51/2 140	11 279	113/4 298	Raise 3/4" 19mm									
135	1 x 6	1/2 x 11/4	6 152	11 279	113/4 298	Raise 3/4" 19mm									
136	1 x 6	1/2 x 11/4	63/4 171	113/4 298											

SPACERS REQUIRED



1" (25mm) Spacer	11/2" (38mm) Spacer
11/2" (38mm)	11/2" (38mm)
5/8" (16mm)	5/8" (16mm)
1" (25mm)	11/2" (38mm)
1/2 x 21/4	1/2 x 23/4

PROCEDURE

Select the Heaviest Capacity (Tallest) SLF Mount size in the set. This sets the standard for the entire set. Modify the Lighter Capacity (Shorter) SLF Mount sizes as per the tables above to match the tallest selection.

EXAMPLES

Set consists of 2 SLF-133, 1 SLF-130 and 1 SLF-127, use:
2 SLF-133 - Standard

1 SLF-130 - Refer to Drawing No. A-14304

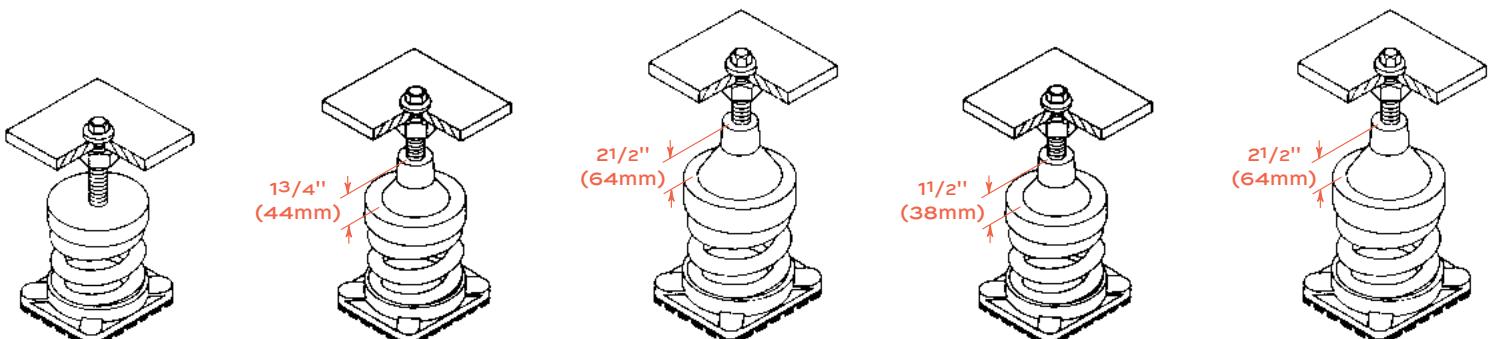
1 SLF-127 - Refer to Drawing No. A-14303 & 1" (25mm) Spacer

Set consists of 1 SLF-134, 1 SLF-132, 1 SLF-129 and 1 SLF-126, use:
1 SLF-134 - Standard

1 SLF-132 - Refer to Drawing No. A-14305

1 SLF-129 - Refer to Drawing No. A-24256

1 SLF-126 - Refer to Drawing No. A-14303 & 1" (25mm) Spacer



Raise Adjustment Bolt an Additional 3/4" (19mm)

Drawing Number
A-14303

33/4" (95mm) OD Spring
13/4" (44mm) Extension

Drill & Tap — 7/8"- 9UNC
OD — 41/4" (108mm)
ID — 313/16" (97mm)
Weight — 1.8 lb (.8kg)
Material — Gray Cast Iron

Drawing Number
A-14304

41/2" (114mm) OD Spring
21/2" (64mm) Extension

Drill & Tap — 7/8"- 9UNC
OD — 5" (127mm)
ID — 49/16" (116mm)
Weight — 2.5 lb (1.1kg)
Material — Gray Cast Iron

Drawing Number
A-14305

5" (127mm) OD Spring
11/2" (38mm) Extension

Drill & Tap — 7/8"- 9UNC
OD — 51/2" (140mm)
ID — 513/16" (148mm)
Weight — 2.85 lb (1.3kg)
Material — Gray Cast Iron

Drawing Number
A-24256

4" (102mm) OD Spring
21/2" (64mm) Extension

Drill & Tap — 7/8"- 9UNC
OD — 41/2" (114mm)
ID — 41/16" (103mm)
Weight — 2.35 lb (1.1kg)
Material — Gray Cast Iron