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LS
ENGINE
catalog



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WE MANUFACTURE MORE **LS ENGINE** SPRINGS THAN ANYONE IN THE WORLD. GUARANTEED.



LS ENGINE

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ABOUT

PAC Racing Springs is the Racing and Aftermarket Division of the Peterson Spring Company. With more than 10 divisions around the world, Peterson Spring is the largest privately held, family owned Spring Company in the USA.

SERVICE AND COMMITMENT

We understand the demands of racing and provide a commitment to all of our customers to provide the best service possible. We continue to expand products, and offer expanded onsite technical services at various racing events. We believe these interactions allow us to provide the latest product advancements and respond to additional future requirements. Because we are the manufacturer we are able to design, build, and supply parts within days if needed.

CUSTOM PRODUCTS

We believe in providing custom products for every product line. This philosophy is a premium option to allow our customers an enhanced product unique to the application. Private label programs are also available to many companies looking to better their own brand identity. We honor proprietary agreements and are dedicated to providing any aftermarket company a superior American made product at sustainable market pricing.

100+
years of operation



FIND US IN
THE MOTOR
CAPITAL OF
THE USA

DETROIT

We make
springs.
LOTS AND LOTS
OF SPRINGS.



Ask us
about our

LS POWERED
**>>> PROJECT
CONDOR**



RacingSprings.com

RPM SERIES

NEW FOR
2015

PAC Racing Springs developed this new process using all the latest advancements from our circle track and drag racing successes. We have applied this new method to great designs that will allow for a performance increase that exceeds all demands. If you don't see your application with the RPM process, please contact us for available options.

RPM Series Dual Spring Kits

Kit Number	Application	Spring Loads		Spring Rate	Max Coil Bind	Max Lift	Kit Contents
		Installed Height (Valve Closed)	Installed Height (Valve Open)				
PAC-KS023	LS Engine Kit	145 @ 1.800	385 @1.500	369	1.000	0.700	PAC-1204X, PAC-R335, PAC-S129, PAC-L8113 and economy seals
PAC-KS024	LS Engine Kit	155 @ 1.800	410 @1.500	392	1.000	0.700	PAC-1205X, PAC-R335, PAC-S129, PAC-L8113 and economy seals
PAC-KS025	LS Engine Kit	145 @ 1.800	385 @1.500	369	1.000	0.700	PAC-1204X, PAC-R435, PAC-S129, PAC-L8113 and economy seals
PAC-KS026	LS Engine Kit	155 @ 1.800	410 @1.500	392	1.000	0.700	PAC-1205X, PAC-R435, PAC-S129, PAC-L8113 and economy seals
PAC-KS027	LS Engine Kit	145 @ 1.800	385 @1.500	369	1.000	0.700	PAC-1204X, PAC-R435, PAC-S129, PAC-L8113 and premium seals
PAC-KS028	LS Engine Kit	155 @ 1.800	410 @1.500	392	1.000	0.700	PAC-1205X, PAC-R435, PAC-S129, PAC-L8113 and premium seals
PAC-KS029	LS9 Engine Kit	155 @ 1.815	528 @ 1.065	500	1.000	0.750	PAC-1209X, PAC-R450, PAC-S136, PAC-L8142 and premium seals
PAC-KS031	LS Engine Kit	145 @ 1.800	411 @1.500	409	1.000	0.700	PAC-1206X, PAC-R435, PAC-S129, PAC-L8113 and economy seals
PAC-KS032	LS Engine Kit	155 @ 1.800	436 @1.500	433	1.000	0.700	PAC-1207X, PAC-R435, PAC-S129, PAC-L8113 and economy seals
PAC-KS033	LS Engine Kit	160 @ 1.800	482 @1.100	460	1.000	0.750	PAC-1208X, PAC-R435, PAC-S129, PAC-L8113 and economy seals
PAC-KS034	LS Engine Kit	160 @ 1.800	510 @1.100	500	1.000	0.750	PAC-1209X, PAC-R435, PAC-S129, PAC-L8113 and economy seals

RPM Series Beehive LS Engine Spring Kits

Kit Number	Application	Spring Loads		Spring Rate	Max Coil Bind	Max Lift	Kit Contents
		Installed Height (Valve Closed)	Installed Height (Valve Open)				
PAC-KS021	LS Engine Kit	140 @ 1.800	328 @ 1.175	318	1.140	0.600	PAC-1218X, PAC-R311, PAC-S111, PAC-L8113 and economy seals
PAC-KS022	LS Engine Kit	145 @ 1.800	358 @ 1.200	340	1.100	0.625	PAC-1219X, PAC-R311, PAC-S111, PAC-L8113 and economy seals

Aftermarket Cylinder Heads (with larger valve guides)							
PAC-KS035	LS Engine Kit	145 @ 1.800	411 @ 1.500	409	1.000	0.700	PAC-1206X, PAC-R435, PAC-S135, PAC-L8113 and economy seals
PAC-KS036	LS Engine Kit	155 @ 1.800	436 @ 1.500	433	1.000	0.700	PAC-1207X, PAC-R435, PAC-S135, PAC-L8113 and economy seals
PAC-KS037	LS Engine Kit	160 @ 1.800	482 @ 1.100	460	1.000	0.750	PAC-1208X, PAC-R435, PAC-S135, PAC-L8113 and economy seals
PAC-KS038	LS Engine Kit	160 @ 1.800	510 @ 1.100	500	1.000	0.750	PAC-1209X, PAC-R435, PAC-S135, PAC-L8113 and economy seals

Buying
SPRING KITS
 saves you
**MONEY &
 TIME!**



HOT ROD SERIES KITS

Hotrod Series Dual LS Spring Kits

Our most economical kit

Kit Number	Application	Spring Loads		Spring Rate	Max Coil Bind	Max Lift	Kit Contents
		Installed Height (Valve Closed)	Installed Height (Valve Open)				
PAC-KS011	LS Engine Kit	150 @ 1.800	400 @ 1.125	370	1.010	0.625	PAC-1904, PAC-R335, PAC-S129, OE locks and economy seals
PAC-KS012	LS Engine Kit	160 @ 1.800	425 @ 1.125	392	1.020	0.650	PAC-1905, PAC-R335, PAC-S129, OE locks and economy seals
PAC-KS015	LS Engine Kit	150 @ 1.800	400 @ 1.125	370	1.010	0.625	PAC-1904, PAC-R335, PAC-S129, PAC-L8113 and economy seals
PAC-KS016	LS Engine Kit	160 @ 1.800	425 @ 1.125	392	1.020	0.650	PAC-1905, PAC-R335, PAC-S129, PAC-L8113 and economy seals
PAC-KS017	LS Engine Kit	150 @ 1.800	400 @ 1.125	370	1.010	0.625	PAC-1904, PAC-R435, PAC-S129, PAC-L8113 and economy seals
PAC-KS018	LS Engine Kit	160 @ 1.800	425 @ 1.125	392	1.020	0.650	PAC-1905, PAC-R435, PAC-S129, PAC-L8113 and economy seals
PAC-KS019	LS Engine Kit	150 @ 1.800	400 @ 1.125	370	1.010	0.625	PAC-1904, PAC-R435, PAC-S129, PAC-L8113 and premium seals
PAC-KS020	LS Engine Kit	160 @ 1.800	425 @ 1.125	392	1.020	0.650	PAC-1905, PAC-R435, PAC-S129, PAC-L8113 and premium seals
Aftermarket Cylinder Heads- with larger valve guides							
PAC-KS006	LS Engine Kit	150 @ 1.800	400 @ 1.125	370	1.010	0.625	PAC-1904, PAC-R435, PAC-S135, PAC-L8113 and economy seals
PAC-KS007	LS Engine Kit	160 @ 1.800	425 @ 1.125	392	1.020	0.650	PAC-1905, PAC-R435, PAC-S135, PAC-L8113 and economy seals

Hotrod Series Beehive LS Spring Kits

Kit Number	Application	Spring Loads		Spring Rate	Max Coil Bind	Max Lift	Kit Contents
		Installed Height (Valve Closed)	Installed Height (Valve Open)				
PAC-KS013	LS Engine Kit	135 @ 1.800	348 @ 1.175	340	1.100	0.625	PAC-1219, PAC-R311, PAC-S111, PAC-L8113 and economy seals
PAC-KS014	LS Engine Kit	130 @ 1.800	318 @ 1.200	313	1.140	0.600	PAC-1218, PAC-R311, PAC-S111, PAC-L8113 and economy seals



PAC-KS016



PAC-KS014



PAC-KS020

PAC
RACING SPRINGS

01'1900

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PAC-KS018

VALVE SPRINGS

DUALS

Part Number	Spring Diameters				Spring Loads		Spring Rate	Max Coil Bind	Max Lift	Recommended Matching Components				Comments
	OD Outer	ID Outer	Damper	ID Inner	Installed Height (Valve Closed)	Open Load (Valve Open)				Note *** is 0.030 thick				
										Titanium Retainers	Steel Retainers	Spring Seats	Spring Cups	
RPM Series Dual Springs (Street, Strip and Mild Racing)														
PAC-1204X	1.290	0.950	No	0.694	145 @ 1.800	385 @ 1.150	369	1.000	0.700	PAC-R435 PAC-R450 PAC-R550	PAC-R335 PAC-R635 PAC-R650	PAC-S129 PAC-S135 PAC-S136***	NA	RPM Series Dual LS Engine Spring
PAC-1205X	1.304	0.950	No	0.694	155 @ 1.800	410 @ 1.150	392	1.000	0.700	PAC-R435 PAC-R450 PAC-R550	PAC-R335 PAC-R635 PAC-R650	PAC-S129 PAC-S135 PAC-S136***	NA	RPM Series Dual LS Engine Spring
PAC-1206X	1.290	0.950	No	0.680	145 @ 1.800	411 @ 1.150	409	1.000	0.700	PAC-R435 PAC-R450 PAC-R550	PAC-R335 PAC-R635 PAC-R650	PAC-S129 PAC-S135 PAC-S136***	NA	RPM Series Dual LS Engine Spring
PAC-1207X	1.304	0.950	No	0.680	155 @ 1.800	436 @ 1.150	433	1.000	0.700	PAC-R435 PAC-R450 PAC-R550	PAC-R335 PAC-R635 PAC-R650	PAC-S129 PAC-S135 PAC-S136***	NA	RPM Series Dual LS Engine Spring
PAC-1208X	1.324	0.950	No	0.694	160 @ 1.800	482 @ 1.100	460	1.000	0.750	PAC-R435 PAC-R450 PAC-R550	PAC-R335 PAC-R635 PAC-R650	PAC-S129 PAC-S135 PAC-S136***	NA	RPM Series Dual LS Engine Spring
PAC-1209X	1.324	0.950	No	0.680	160 @ 1.800	510 @ 1.100	500	1.000	0.750	PAC-R435 PAC-R450 PAC-R550	PAC-R335 PAC-R635 PAC-R650	PAC-S129 PAC-S135 PAC-S136***	NA	RPM Series Dual LS Engine Spring
PAC-1221X	1.300	0.895	No	0.655	160 @ 1.800	424 @ 1.150	408	1.080	0.650	PAC-R416 PAC-R516	PAC-R616	PAC-S121	NA	Ovate Wire Dual LS Spring
PAC-1222X	1.280	0.925	No	0.655	180 @ 1.800	480 @ 1.100	425	1.055	0.700	PAC-R455	PAC-R355 PAC-R655	PAC-S121	NA	RPM Series Dual LS Engine Spring Aftermarket Cylinder Heads Upgrade Spring
PAC-1236X	1.310	0.925	No	0.665	156 @ 1.800	495 @ 1.150	520	1.080	0.650	PAC-R455	PAC-R355 PAC-R655	PAC-S121	NA	RPM Series Dual LS Engine Spring Aftermarket Cylinder Heads Upgrade Spring
STD Duty Dual Springs														
PAC-1904	1.290	0.950	N	0.694	150 @ 1.800	400 @ 1.125	370	1.010	0.625	PAC-R435 PAC-R450 PAC-R550	PAC-R335 PAC-R635 PAC-R650	PAC-S129 PAC-S135 PAC-S136***	NA	LS Dual Spring
PAC-1905	1.305	0.950	No	0.694	160 @ 1.800	425 @ 1.125	392	1.020	0.650	PAC-R435 PAC-R450 PAC-R550	PAC-R335 PAC-R635 PAC-R650	PAC-S129 PAC-S135 PAC-S136***	NA	LS Dual Spring
PAC-1221	1.300	0.895	No	0.655	135 @ 1.800	400 @ 1.150	408	1.080	0.650	PAC-R416 PAC-R516	PAC-R616	PAC-S121	NA	Dual LS Spring made from Ovate Wire for Street Applications
Extreme Duty Dual Springs														
PAC-1529	1.284	0.900	No	0.630	180 @ 1.900	600 @ 1.150	560	1.085	0.750	PAC-R532 PAC-R432	PAC-R632	PAC-S128 PAC-S138	NA	High Performance Endurance LS Circle Track Spring This spring is a High Frequency High RPM capable Spring
PAC-1530	1.284	0.900	No	0.616	160 @ 2.000	580 @ 1.250	560	1.180	0.750	PAC-R532 PAC-R432	PAC-R632	PAC-S128 PAC-S138	NA	High Performance High Endurance LS Circle Track Spring This spring is a High Frequency High RPM capable Spring
PAC-1335	1.300	0.900	No	0.616	250 @ 1.800	860 @ 1.050	813	0.985	0.800	PAC-R532 PAC-R432	PAC-R632	PAC-S128 PAC-S138	NA	This is a High Rate Dual LS Spring used For Drag Racing Solid Roller Cam Applications
PAC-1237X	1.274	0.900	No	0.630	200 @ 1.800	585 @ 1.100	550	1.045	0.700	PAC-R532 PAC-R432	PAC-R632	PAC-S128 PAC-S138	NA	High rate High Frequency Dual LS spring Used for Drag Racing, Street Strip Application
PAC-1238X	1.274	0.900	No	0.630	250 @ 1.800	700 @ 1.050	600	0.985	0.750	PAC-R532 PAC-R432	PAC-R632	PAC-S128 PAC-S138	NA	High rate High Frequency Dual LS spring Used for Drag Racing

*** 0.030 Thick Spring Seat

SPECIFICATIONS: SPRING LOADS AND HEIGHTS

PN	PAC-1904	PAC-1905	PAC-1221	PAC-1204X	PAC-1205X	PAC-1206X	PAC-1207X	PAC-1208X	PAC-1209X	PAC-1222X	PAC-1236X	PAC-1237X	PAC-1238X	PAC-1221X	PAC-1529	PAC-1530	PAC-1335
Mass (g)	85	90	102	85	89	86	90	93	94	93	100	93	87	102	100	111	94
Outer Freq	29975	29344	29745	29930.0	29352	29930	29352	31797	31797	27620	33349	33101	35938	29745	32185	29735	40679
Inner Freq	30890	30890	28480	30877.0	30877	33662	33662	30870	33662	33143	32433	35380	38918	28480	34200	32847	44180
Coil Bind	1.010	1.020	1.080	1.000	1.000	1.000	1.000	1.000	1.000	1.055	1.080	1.050	0.985	1.080	1.085	1.180	1.990
2.300																5	
2.250										18						22	
2.200	8	8		3	3	3	3			30			18		15	45	
2.150	21	23		16	18	14	16	2		42		13	40	17	40	73	
2.100	39	42	13	34	37	26	29	22	14	55		35	70	38	68	100	19
2.050	58	62	33	53	57	43	47	45	35	74	26	62	100	58	96	128	47
2.000	76	82	53	71	77	63	69	68	60	95	52	90	130	78	124	156	87
1.950	95	101	74	90	96	84	90	91	85	116	78	118	160	99	152	184	128
1.900	113	121	94	108	116	104	112	114	110	137	104	145	190	119	180	212	169
1.850	132	140	115	127	135	125	133	137	135	159	130	173	220	140	208	240	209
1.800	150	160	135	145	155	145	155	160	160	180	156	200	250	160	236	268	250
1.750	168	180	155	163	175	165	177	183	185	201	182	228	280	180	264	296	291
1.700	187	199	176	182	194	186	198	206	210	223	208	255	310	201	292	323	331
1.650	205	219	196	200	214	206	220	229	235	244	234	283	340	221	320	351	372
1.600	224	238	217	219	233	227	241	252	260	265	260	310	370	242	348	379	413
1.550	242	258	237	237	253	247	263	275	285	286	286	338	400	262	376	407	453
1.500	261	278	257	256	273	268	285	298	310	308	313	365	430	282	404	435	494
1.450	279	297	278	274	292	288	306	321	335	329	339	393	460	303	432	463	535
1.400	298	317	298	293	312	309	328	344	360	350	365	420	490	323	460	491	575
1.350	316	337	318	311	332	329	350	367	385	372	391	448	520	343	488	519	616
1.300	335	356	339	330	351	350	371	390	410	393	417	475	550	364	516	546	657
1.250	353	376	359	348	371	370	393	413	435	414	443	503	580	384	544	574	697
1.200	372	395	380	367	390	391	414	436	460	435	469	530	610	405	572	602	738
1.150	390	415	400	385	410	411	436	459	485	457	495	558	640	425	600		779
1.100	409	435	420	403	430	432	458	482	510	478	521	585	670	445	628		819
1.050	427	454	441	422	449	452	479	505	535			613	700	466			860
1.000	446			440	469	473	501	528	560				730				901
0.950																	

VALVE SPRINGS

BEEHIVE

Part Number	Spring Diameters				Spring Loads		Spring Rate	Max Coil Bind	Max Lift	Recommended Matching Components				Comments
	Large End		Small End		Installed Height (Valve Closed)	Open Load (Valve Open)				Titanium Retainers	Steel Retainers	Spring Seats	Spring Cups	
	OD	ID	OD	ID										
PAC-1215	1.290	0.885	1.055	0.650	105 @ 1.800	293 @ 1.200	313	1.140	0.600	PAC-R510 PAC-R511	PAC-R310 PAC-R311	PAC-S111	NA	OEM type LS1 ovate beehive valve spring for applications up to 0.600 lift. This is a drop-in spring that fits stock seats and retainers.
PAC-1218	1.290	0.885	1.055	0.650	130 @ 1.800	318 @ 1.200	313	1.140	0.600	PAC-R510 PAC-R511	PAC-R310 PAC-R311	PAC-S111	NA	Performance LS1 ovate beehive valve spring for applications up to 0.600 lift. This is a drop-in spring that fits stock seats & retainers.
PAC-1219	1.307	0.885	1.072	0.650	135 @ 1.800	348 @ 1.175	340	1.100	0.625	PAC-R510 PAC-R511	PAC-R310 PAC-R311	PAC-S111	NA	LS Ovate beehive spring that has increased loads, rates and frequencies for more aggressive cams. This remains a drop-in spring for stock parts but will handle increased lifts.
RPM Series Beehives														
PAC-1211X	1.290	0.906	1.034	0.650	130 @ 1.800	370 @ 1.175	385	1.100	0.625	PAC-R510 PAC-R511	PAC-R310 PAC-R311	PAC-S111	NA	Round Wire Beehive
PAC-1218X	1.290	0.885	1.055	0.650	140 @ 1.800	328 @ 1.200	313	1.140	0.600	PAC-R510 PAC-R511	PAC-R310 PAC-R311	PAC-S111	N/A	Same as the PAC-1218 but with premium processing and higher loads to withstand the vigors of street and strip use.
PAC-1219X	1.307	0.885	1.072	0.650	145 @ 1.800	358 @ 1.175	340	1.100	0.625	PAC-R510 PAC-R511	PAC-R310 PAC-R311	PAC-S111	N/A	Same as the PAC-1219 but with premium processing and higher loads to withstand the vigors of street and strip use.



WHY BEEHIVE?

PAC Racing was first to manufacture beehive valve springs. Our knowledge and expertise behind beehive springs comes from our core company where we manufacture millions of beehive springs for OE Car manufacturers.

Reduced retainer weight and mass over dual springs. The beehive design allows for optimizing the weight of the retainer. Lower mass improves RPM ability and Dynamic Stability

PAC Racing developed shaped wire that optimizes the stress distribution more evenly. What does this mean to you? **Using the ovate wire improves durability and dynamic stability** which allows for a lower chance of failure when compared to round wire equivalent springs.

Variable frequency and Spring Rate- Ovate wire and beehive springs allow more space to improve the dynamic performance using rate and frequency changing technology. This **improves the springs ability to withstand higher RPM and dynamic surge** seen.

SPECIFICATIONS: SPRING LOADS AND HEIGHTS

PN	PAC-1215	PAC-1218	PAC-1219	PAC-1211X	PAC-1218X	PAC-1219X
Mass (g)	75	75	67	75	75	67
Outer Freq	29277	29277	31258	32952	29277	31258
Inner Freq	NA	NA	NA	NA	NA	NA
Coil Bind	1.140	1.140	1.100	1.100	1.140	1.100
2.300		4				
2.250		15				
2.200		22		9	15	9
2.150	14	40	16	26	30	26
2.100	27	53	33	43	46	43
2.050	40	66	50	60	62	60
2.000	53	79	67	77	77	77
1.950	66	92	84	94	93	94
1.900	79	105	101	111	109	111
1.850	92	118	118	128	124	128
1.800	106	131	135	145	140	145
1.750	119	145	152	162	156	162
1.700	132	158	169	179	171	179
1.650	145	172	186	196	187	196
1.600	159	187	203	213	203	213
1.550	174	202	220	230	218	230
1.500	189	218	237	247	234	247
1.450	206	234	254	264	250	264
1.400	222	251	271	281	265	281
1.350	239	267	288	298	281	298
1.300	257	283	305	315	297	315
1.250	275	300	322	332	312	332
1.200	294	318	339	349	328	349
1.150	313	337	356	366	344	366
1.100	456	354	373	383	359	383
1.050						
1.000						
0.950						

TOOLS & ACCESSORIES

LS On-Head Valve Spring Changers



P/N: PAC-T925

On-Head Spring Changer for
LS Cathedral Port

P/N: PAC-T926

On-Head Spring Changer for
LS Square Port



LS Rocker Trunnion Upgrade Kit



P/N: PAC-KS030

Rocker Arm Trunnion Upgrade Kit



P/N: PAC-T915

Rocker Arm Trunnion Bearing Press Tool

SPRING INSTALLED HEIGHT GAGES

- Stainless steel construction for extremely long life
- Non-magnetic to avoid pulling shims when using
- Increased accuracy and precision with finer pitch threads
- Several models to choose from



Part Number	Height Range	ID	per turn	Use	Color
PAC-T901	1.400 to 2.000	0.760	0.050	Beehive springs	Blue
PAC-T902	1.800 to 2.500	1.200	0.050	Pro Series & Drag Race	Red
PAC-T903	1.400 to 1.900	1.200	0.050	Engine Builders	Orange
PAC-T904	1.400 to 2.000	0.975	0.050	LS Dual Springs	Purple

VALVE TRAIN COMPONENTS

LS Pushrods

Tie Bar
LS Lifters



Push Rods



Warhawk
Tie Bar



Direct
Drop-ins



Part Number	Length 5/16 Inch OD	Type	OD	Wall Thickness
5/16 Inch OD				
PAC-PR200-LS	7.375	Straight- Stock	5/16	0.080
PAC-PR201-LS	7.400	Straight- Stock	5/16	0.080
PAC-PR202-LS	7.425	Straight- Stock	5/16	0.080
PAC-PR203-LS	7.450	Straight- Stock	5/16	0.080
PAC-PR204-LS	7.475	Straight- Stock	5/16	0.080
PAC-PR205-LS	7.500	Straight- Stock	5/16	0.080
PAC-PR206-LS	7.300	0.210 Radius Heavy Wall	5/16	0.105
PAC-PR207-LS	7.350	0.210 Radius Heavy Wall	5/16	0.105
PAC-PR208-LS	7.400	0.210 Radius Heavy Wall	5/16	0.105
PAC-PR209-LS	7.450	0.210 Radius Heavy Wall	5/16	0.105
PAC-PR210-LS	7.500	0.210 Radius Heavy Wall	5/16	0.105
3/8 Inch OD				
PAC-PR224-LS	7.300	Straight- Stock	3/8	0.080
PAC-PR225-LS	7.350	Straight- Stock	3/8	0.080
PAC-PR211-LS	7.375	Straight- Stock	3/8	0.080
PAC-PR212-LS	7.400	Straight- Stock	3/8	0.080
PAC-PR213-LS	7.425	Straight- Stock	3/8	0.080
PAC-PR214-LS	7.450	Straight- Stock	3/8	0.080
PAC-PR215-LS	7.475	Straight- Stock	3/8	0.080
PAC-PR216-LS	7.500	Straight- Stock	3/8	0.080
PAC-PR217-LS	7.300	0.210 Radius Heavy Wall	3/8	0.135
PAC-PR218-LS	7.350	0.210 Radius Heavy Wall	3/8	0.135
PAC-PR219-LS	7.400	0.210 Radius Heavy Wall	3/8	0.135
PAC-PR220-LS	7.425	0.210 Radius Heavy Wall	3/8	0.135
PAC-PR221-LS	7.450	0.210 Radius Heavy Wall	3/8	0.135
PAC-PR222-LS	7.475	0.210 Radius Heavy Wall	3/8	0.135
PAC-PR223-LS	7.500	0.210 Radius Heavy Wall	3/8	0.135

LS Lifters

Part Number	T-Bar Style	Style	Type	OD	Application	Plunger travel STD or Limited	Restrictions	Comments
PAC-LFT101-LS	NA	Stock Lifter Tray	Hydraulic	0.842	LS Engine	STD Travel	NA	STD and Hi Lift Applications
PAC-LFT102-LS	NA	Stock Lifter Tray	Hydraulic	0.842	LS Engine	Limited Travel	NA	STD and Hi Lift Applications
PAC-LFT103-LS	Straight	T-Bar Style	Hydraulic	0.842	LS Engine	STD Travel	NA	Street Performance Lifter
PAC-LFT104-LS	Straight	T-Bar Style	Hydraulic	0.842	LS Engine	STD Travel	NA	Street Performance Lifter + Motown Block
PAC-LFT105-LS	Straight	T-Bar Style	Hydraulic	0.842	LS Engine	STD Travel	NA	Race + Motown Block - Most Popular
PAC-LFT106-LS	Straight	T-Bar Style	Hydraulic	0.842	LS Engine	Limited Travel	NA	Will Fit Motown Block
PAC-LFT107-LS	Angled	T-Bar Style	Hydraulic	0.842	LS Engine	STD Travel	NA	Will Fit Warhawk Block
PAC-LFT108-LS	Angled	T-Bar Style	Hydraulic	0.842	LS Engine	Limited Travel	NA	Will Fit Warhawk Block
PAC-LFT109-LS	Straight	T-Bar Style	Hydraulic	0.842	LS Engine	STD Travel	Do not use oil heavier than 5W30	Hi RPM on Center
PAC-LFT110-LS	Angled	T-Bar Style	Hydraulic	0.842	LS Engine	STD Travel		Hi RPM on Center will fit Warhawk Block
PAC-LFT111-LS	Straight	T-Bar Style	Hydraulic	0.903	LS Engine	STD Travel		Hi RPM on Center roller Pin oiling
PAC-LFT112-LS	Angled	T-Bar Style	Hydraulic	0.903	LS Engine	STD Travel		Hi RPM on Center roller Pin oiling fit Warhawk Block
PAC-LFT113-LS	NA	Stock Lifter Tray	Mechanical	0.842	LS Engine	NA	NA	STD and Hi Lift Applications
PAC-LFT114-LS	Straight	T-Bar Style	Mechanical	0.842	LS Engine	NA	NA	
PAC-LFT115-LS	Straight	T-Bar Style	Mechanical	0.842	LS Engine	NA	NA	Performance
PAC-LFT116-LS	Angled	T-Bar Style	Mechanical	0.842	LS Engine	NA	NA	Performance will fit Warhawk Block

RETAINERS

300 SERIES Spring Retainers

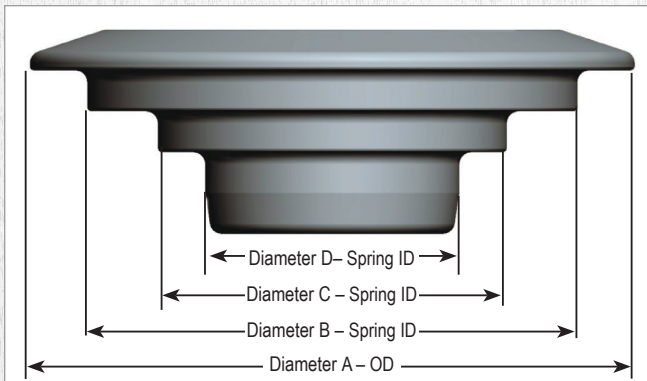
These retainers are made from 4140 chrome moly steel, primarily designed for smaller beehive springs. These retainers are heat treated, black oxide finished and processed to maintain high strength with lightweight designs.

300 Series Chrome Moly Steel							
Part No.	Retainer Dimensions (in.)				Lock Angle (deg.)	Weight (grams)	Notes and Applications *other applications may apply call for tech support
	Diameter A	Diameter B	Diameter C	Diameter D			
Beehive 300 Series							
PAC-R310	1.035	0.640	N/A	N/A	STD 10	10.2	Retainer for 1215,1218,1219,1220 and other beehives
PAC-R311	1.035	0.640	N/A	N/A	LS (7°)	10.4	Steel Beehive LS Retainer for 1218 and more
PAC-R363	1.035	0.640	N/A	N/A	STD 7	12.8	Retainer for 1218, 1220 and others with STD 7 degree lock
Dual Spring 300 Series							
PAC-R316	1.235	0.880	0.640	N/A	LS (7°)	19.3	Steel LS retainer for 1221(X),1521
PAC-R335	1.300	0.940	0.680	N/A	LS (7°)	20.0	Steel retainer for LS RPM 1204X-1209X Series Duals
PAC-R355	1.225	0.920	0.650	N/A	LS (7°)	19.0	Steel retainer for 1222X LS spring

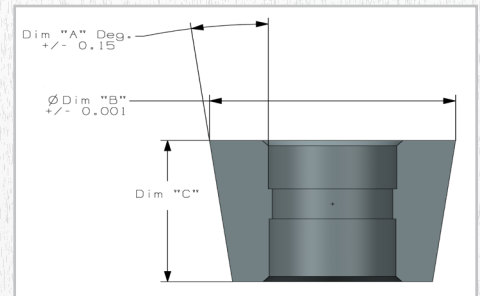
400 SERIES Spring Retainers

PAC-Tuff™ Retainers are made from the best 6AL-4V Titanium alloy and completely sonic tested to aerospace standards prior to being machined. These retainers are designed for standard to high durability use and are designed to be very robust.

400 Series PAC-TUFF 64 Titanium							
Part No.	Retainer Dimensions (in.)				Lock Angle (deg.)	Weight (grams)	Notes and Applications *other applications may apply call for tech support
	Diameter A	Diameter B	Diameter C	Diameter D			
Dual Spring 400 Series							
PAC-R416	1.235	0.880	0.640	N/A	LS (7°)	10.9	Steel LS retainer for 1221(X),1521
PAC-R432	1.200	0.890	0.600	N/A	Mini 8	10.4	Titanium LS retainer for 1237X, 1238X, 1335, 1529 and 1530
PAC-R435	1.300	0.940	0.680	N/A	LS (7°)	11.1	Titanium retainer for LS RPM 1204X-1209X Series Duals
PAC-R450	1.240	0.940	0.685	N/A	Mini 8	11.7	Titanium retainer for LS RPM 1204X-1209X Series Duals (mini 8)
PAC-R455	1.225	0.920	0.650	N/A	LS (7°)	11.1	Titanium retainer for 1222X spring



VALVE LOCK STANDARDS			
Lock Type	Dim. A (Angle)	Dim. B (Cone Top)	Dim. C (Lock Height)
STD 10	10.00°	0.6100	0.400
STD 8	8.00°	0.6000	0.400
Mini 8	8.00°	0.5200	0.380
LS-1	7.00°	0.4700	0.300
STD 7°	7.00°	0.4950	0.360



500 SERIES Spring Retainers

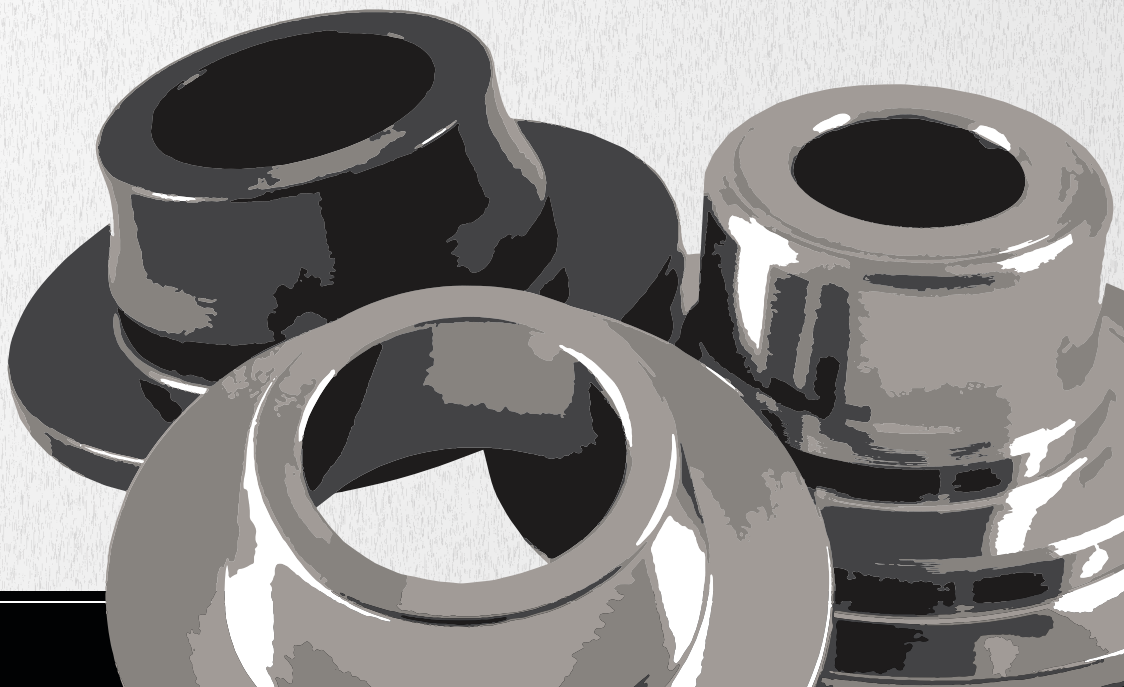
Titanium spring retainers made from Ti-17 alloy. This alloy has shown greater tensile properties over other titanium products with its high strength and deep hardening alloys. These retainers are micropolished for enhanced fatigue life and are laser engraved for PN and batch identification.

500 Series Ti-17 Titanium							
Part No.	Retainer Dimensions (in.)				Lock Angle (deg.)	Weight (grams)	Notes and Applications *other applications may apply call for tech support
	Diameter A	Diameter B	Diameter C	Diameter D			
Beehive 500 Series							
PAC-R511	0.990	0.640	N/A	N/A	LS (7°)	5.7	Titanium Beehive LS Retainer for 1218 and more
Dual Spring 500 Series							
PAC-R516	1.235	0.880	0.640	N/A	LS (7°)	7.7	Steel LS retainer for 1221(X),1521
PAC-R532	1.200	0.890	0.600	N/A	Mini 8	10.2	Titanium LS retainer for 1237X, 1238X, 1335, 1529 and 1530
PAC-R550	1.240	0.940	0.685	N/A	Mini 8	11.7	RPM Series Dual Springs (mini 8 Locks), 1204X-1209X Series Duals

600 SERIES Spring Retainers

PACALOY® BILLET TOOL STEEL RETAINERS - These are the latest developments from PAC Racing Springs. These retainers feature ultra lightweight designs from valve spring type alloys. Sophisticated processing such as micropolishing and Nano Peen™ technology are used to enhance the retainer life. The high hardness of the steel has greater wear resistance properties.

600 Series Tool Steel							
Part No.	Retainer Dimensions (in.)				Lock Angle (deg.)	Weight (grams)	Notes and Applications *other applications may apply call for tech support
	Diameter A	Diameter B	Diameter C	Diameter D			
Beehive 600 Series <i>Some require special spring seats for proper installation</i>							
PAC-R633	0.875	0.640	N/A	N/A	7	6.0	Ultra Light Weight Steel for LS Beehives (Racing Only)
PAC-R643	0.950	0.640	N/A	N/A	Mini 8	8.4	Ultra Light Weight Steel for LS Beehives (Racing Only)
Dual Spring 600 Series <i>Some require special spring seats for proper installation</i>							
PAC-R616	1.235	0.880	0.640	N/A	LS (7°)	12.6	Tool Steel retainer for LS Dual Springs, 1221(X)
PAC-R632	1.250	0.890	0.600	N/A	mini 8	Call	Tool Steel LS retainer for 1237X, 1238X, 1335, 1529 and 1530
PAC-R635	1.200	0.940	0.685	N/A	LS (7°)	13.4	Tool Steel retainer for LS RPM 1204X-1209X Series Duals
PAC-R650	1.250	0.940	0.685	N/A	mini 8	15.9	Tool Steel retainer for LS RPM 1204X-1209X Series Duals (Mini 8 Locks)
PAC-R655	1.225	0.920	0.650	N/A	LS (7°)	Call	Tool Steel retainer for 1222X spring



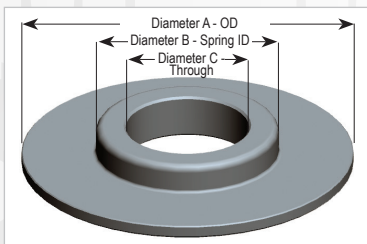
SPRING SEATS

VALVE LOCKS

CHROME MOLY Spring SEATS (0.060 THICKNESS)

Part No.	Diameters (in.)			Dim "E" Thickness
	Diameter A (OD)	Diameter B (Spring ID)	Diameter C (ID)	
PAC-S111	1.270	0.870	0.570	0.060
PAC-S121	1.270	0.640	0.520	0.060
PAC-S128	1.270	0.600	0.520	0.060
PAC-S129	1.270	0.680	0.520	0.060
PAC-S135	1.270	0.680	0.570	0.060
PAC-S136	1.270	0.680	0.510**	0.030
PAC-S138	1.270	0.615	0.575	0.060

**0.030 thick seats. These are a great way to get more installed height.
Tool Steel Seats also available, to order add a "-X" to the Chrome Moly Seat Part number.

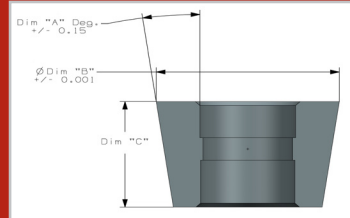


Chrome Moly Spring Seat

Part No.	Listed Valve Size	Type	Lock Angle	Valve Groove Type	Installation Height	Material
PAC-L8117	8mm	Mini 8	8°	Radius	STD	Titanium
PAC-L8118	8mm	Mini 8	8°	Radius	+0.050	Titanium
PAC-L8141	8mm	Mini 8	8°	Radius	STD	Steel
PAC-L8142	8mm	Mini 8	8°	Radius	+0.050	Steel
PAC-L8113	8mm	LS-1	7°	Radius	STD	Steel
PAC-L8114	8mm	LS-1	7°	Radius	+0.050	Steel
PAC-L8116	8mm	LS-1	7°	Radius	-0.050	Steel
PAC-L8152	8mm	STD 7	7°	Radius	STD	Steel
PAC-L8153	8mm	STD 7	7°	Radius	+0.050	Steel
PAC-L8159	8mm	STD 10	STD 10°	Radius	STD	Steel
PAC-L8160	8mm	STD 10	STD 10°	Radius	+0.050	Steel

VALVE LOCK STANDARDS

Lock Type	Dim. A (Angle)	Dim. B (Cone Top)	Dim. C (Lock Height)
STD 10	10.00°	0.6100	0.400
STD 8	8.00°	0.6000	0.400
Mini 8	8.00°	0.5200	0.380
LS-1	7.00°	0.4700	0.300
STD 7°	7.00°	0.4950	0.360



SPRING TESTING EQUIPMENT

Load Testers

Part No.	Load Capacity
PAC-T930	750
PAC-T935	1,500
PAC-T931	Accessory for use with both load testers. Use this for repeated testing and batch sorting multiple springs.
PAC-T936	Use this to accurately check and consistently measure solid heights and bind heights.

PAC T935
(Load tester)

with **PAC T931**
installed



PAC T931
Load tester accessory for repeated testing



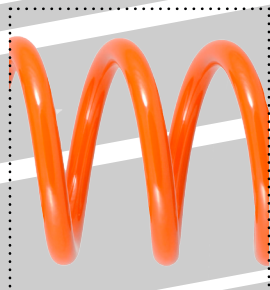
PAC T936
Solid height checker



STREET CAR SHOCKS

Part Number	Application	Description
PAC-100-4-139-2CR	C5/C6 Corvette	Front - Double Adjustable
PAC-100-4-152-XX	Coilover Conversion	Front - Non Adjustable w/2.50" Spring Hardware
PAC-100-4-151-XX	Coilover Conversion	Rear - Non Adjustable w/2.50" Spring Hardware
PAC-100-4-149-XX	Coilover Conversion	Front - Non Adjustable w/2.50" Spring Hardware
PAC-100-4-148-XX	Coilover Conversion	Front - Non Adjustable w/2.50" Spring Hardware
PAC-100-4-185-2CR	Coilover Conversion	Front - Double Adj. Remote Reservoir w/2.50" Spring Hardware
PAC-100-4-173-2CR	Coilover Conversion	Rear - Double Adj. w/2.50" Spring Hardware
PAC-100-4-172-2CR	Coilover Conversion	Rear - Double Adj. Remote Reservoir w/2.50" Spring Hardware
PAC-100-4-142-CX	Coilover Conversion	Front - Single Adj. w/2.50" Spring Hardware
PAC-100-4-141-CX	Coilover Conversion	Rear - Single Adj. w/2.50" Spring Hardware
PAC-100-6-155-CX	Coilover Conversion	Rear - Single Adj. w/2.50" Spring Hardware
PAC-100-3.75-137-CR	C5/C6 Corvette	Rear - Double Adjustable
PAC-100-4.75-146-XX	Coilover Conversion	Rear - Non Adjustable w/2.50" Spring Hardware
PAC-100-4.75-182-2CR	Coilover Conversion	Rear - Double Adj. w/2.50" Spring Hardware
PAC-100-4.75-181-2CR	Coilover Conversion	Rear - Double Adj. Remote Reservoir w/2.50" Spring Hardware
PAC-100-4.75-145-CX	Coilover Conversion	Rear - Single Adj. w/2.50" Spring Hardware
PAC-100-5.5-200-2CR	5th Gen Camaro Platform	Double Adj Platform Including Springs and Mounting Hardware
PAC-100-6.5-201-2CX	S-197 Platform	Double Adj Platform Including Springs and Mounting Hardware

See Master Suspension Catalog for more information



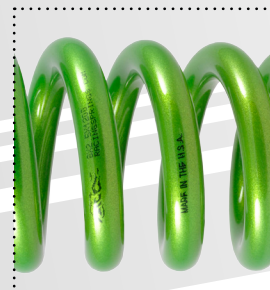
ORANGE



SILVER



BLACK



**SPARKLE
GREEN**



**BOMBER
OR**



Shock Body Finish	Spring Inside DIA	Stroke	Extended Length (in)	Collapsed Length (in)	Compression Settings	Rebound Settings
Threaded	Call	4.0	17.375	13.375	30	12
Threaded	2.5	4.0	14.25	10.25	0	0
Threaded	2.5	4.0	14.25	10.25	0	0
Threaded	2.5	4.0	15.1	11.1	0	0
Threaded	2.5	4.0	15.1	11.1	0	0
Threaded	2.5	4.0	15.1	11.1	30	12
Threaded	2.5	4.0	15.1	11.1	30	12
Threaded	2.5	4.0	15.1	11.1	30	12
Threaded	2.5	4.0	15.1	11.1	50	0
Threaded	2.5	4.0	15.1	11.1	50	0
Threaded	2.5	6.0	19.625	13.625	50	0
Threaded	Call	3.8	17.5	13.75	30	12
Threaded	2.5	4.8	16.125	11.375	0	0
Threaded	2.5	4.8	16.125	11.375	30	12
Threaded	2.5	4.8	16.125	11.375	30	12
Threaded	2.5	4.8	16.125	11.375	50	0
Threaded	2.5	5.5/4	23.750/15.625	18.250/11.625	30	12
Threaded	2.5/2.25	6.50/6.25	25.30/20	18.80/13.750	30	0

SPRING POWDER COAT OPTIONS



**SPARKLE
ORANGE**



RUST BROWN



**NEAR
CHROME**



RED

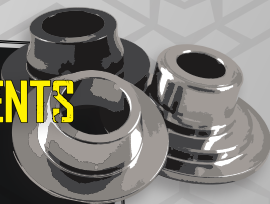


BLUE

MANUFACTURERS OF:

VALVE TRAIN COMPONENTS

- Titanium Retainers
- Pacaloy® Steel Retainers
- Titanium & Steel Locks
- Spring Cups & Locators
- Custom Applications



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