

New

BEEHIVE VALVE SPRINGS

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Ferrea Racing Components introduces our new **PAC Alloy Beehive Valve Spring** series for the domestic performance street/strip and racing applications. These single Beehive form valve springs are designed and optimized to reduce valvetrain harmonics, provide greater spring stability, and reduce spring and retainer masses for increase performance and durability in today's harsh racing engines.

PAC Alloy Beehive Valve Springs are developed from premium grade super-clean **PAC Alloy** material designed for racing applications. These valve springs are crafted using the latest technology in manufacturing and processing techniques through the use of state-of-the-art equipment unmatched throughout the industry. Our springs are progressively coiled with tighter tolerances, heat treated, stress relieved, and multistage shot peen for extended life and durability. Strict quality control procedures and cycle testing ensures consistency from batch-to-batch.

We have expanded our valve spring line offering **PAC Alloy Beehive Ovate (Oval/Multi-Radius) wire shape** designed to withstand aggressive endurance requirements. Key advantages in using an ovate wire shape are better heat dissipation for longer life, and valvetrain stresses are more effectively distributed over the entire wire shape extending spring life and enabling more horsepower. They have the highest level of fatigue resistance available, while minimizing load loss for today's aggressive valvetrain combinations.

PAC Racing develops beehive springs with aid of RPD (Rapid Prototype Development) technique to ensure that the engine runs as expected. Numerous spring designs are evaluated and tested before the final spring shape is determined.



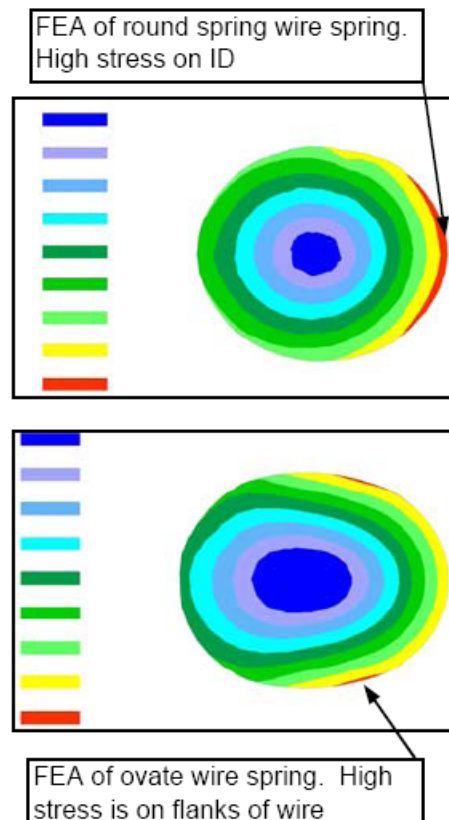
BEEHIVE VALVE SPRINGS



Part N°	Type/Material/ Application	O.D.	I.D.	Seat Press.	Open Press.	Rate Inch	Coil Bind	Max Net Lift
CHEVROLET BIG BLOCK								
S2003	Single Beehive. PAC Alloy Flat tappet or Hydraulic Roller	1.080 1.445	.650 1.000	155 lbs @ 1.880"	377 lbs @ 1.280"	370 lbs	1.210"	.600"
This Spring requires Ferrea Titanium Retainer #E12003 OR #E12006 and Ferrea Spring Seat Locator #SL1074 OR #SL1077								
S2004	Single Beehive. Ovate. PAC Alloy Nitrided High Lift Extreme Application	1.100 1.445	.650 1.000	155 lbs @ 1.880"	405 lbs @ 1.230"	370 lbs	1.180"	.650"
Features additional processing for Extreme application. This Spring requires Ferrea Titanium Retainer #E12003 OR #E12006 and Ferrea Spring Seat Locator #SL1074 OR #SL1077								
CHEVROLET SMALL BLOCK - LS1 / LT1								
S2000	Single Beehive. PAC Alloy Performance OEM replacement	1.050 1.290	.650 .885	105 lbs @ 1.800"	293 lbs @ 1.200"	313 lbs	1.140"	.600"
This Spring requires Ferrea Steel Retainer #E10029 OR Ferrea Titanium Retainer # E12014 and Ferrea Spring Seat Locator #SL1080								
S2001	Single Beehive. Ovate. PAC Alloy High Performance	1.050 1.290	.650 .885	130 lbs @ 1.800"	318 lbs @ 1.200"	313 lbs	1.140"	.600"
This Spring requires Ferrea Steel Retainer #E10029 OR Ferrea Titanium Retainer #E12014 and Ferrea Spring Seat Locator #SL1080								
S2002	Single Beehive. Ovate. PAC Alloy Nitrided High Lift Extreme Application	1.050 1.290	.650 .885	130 lbs @ 1.800"	337 lbs @ 1.150"	313 lbs	1.080"	.650"
Features additional processing for Extreme application. This Spring requires Ferrea Steel Retainer #E10029 OR Ferrea Titanium Retainer #E12014 and Ferrea Spring Seat Locator #SL1080								

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FEA diagram illustrates the benefits of Beehive Ovate wire over standard round wire spring. This wire more effectively distributes the stress over the entire wire shape.





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CHRYSLER/DODGE HEMI 5.7L/6.1L								
S2009	Single Beehive Ovate. PAC Alloy Performance OEM replacment	1.035 1.210	.630 .805	135 lbs @1.800"	350 lbs @1.200"	358 lbs	1.160"	.600"
This Spring requires Ferrea Steel Retainer #E10031 OR Ferrea Titanium Retainer #E12008 and Ferrea Spring Seat Locator # SL1079								
ENDURANCE HIGH LIFT								
S2006	Single Beehive Ovate. PAC Alloy High Lift application	1.175 1.589	.731 1.135	150 lbs @2.000"	385 lbs @1.250"	313 lbs	1.180"	.750"
This Spring requires Ferrea Titanium Retainer #E12012 OR #E12023 and Ferrea Spring Seat Locator #SL1075								
FLAT TAPPET & HYDRAULIC ROLLER								
S2005	Single Beehive Ovate. PAC Alloy High Lift Extreme application	1.165 1.445	.731 .990	160 lbs @1.950"	425 lbs @1.300"	408 lbs	1.220"	.700"
This Spring requires Ferrea Titanium Retainer #E12012 OR #E12023 and Ferrea Spring Seat Locator #SL1083								
FORD 4.6L - 16 VALVE								
S2010	Single Beehive Ovate. PAC Alloy Performance OEM replacment	.950 1.061	.636 .738	80 lbs @1.640"	185 lbs @1.090"	191 lbs	1.020"	.550"
This Spring requires Ferrea Steel Retainer #E10033 OR Ferrea Titanium Retainer #E12005 and Ferrea Spring Seat Locator #SL1076 OR Factory Seat Locator								
S2011	Single Beehive Ovate. PAC Alloy High Lift application	.985 1.061	.636 .698	100 lbs @1.640"	265 lbs @1.080"	275 lbs	1.040"	.600"
This Spring requires Ferrea Titanium Retainer #E12005 and Ferrea Spring Seat Locator # SL1076 OR Factory Seat Locator								
FORD 4.6L/5.7L - SOHC V8 - 24 VALVE - 2005-2007								
S2007	Single Beehive Ovate. PAC Alloy Performance OEM replacment	.915 1.025	.567 .662	105 lbs @1.670"	270 lbs @1.120"	300 lbs	1.060"	.550"
This Spring requires Ferrea Steel Retainer #E10032 OR Ferrea Titanium Retainer #E12015 and Ferrea Spring Seat Locator # SL1088 OR Factory Seat Locator								
FORD 4.6L - 32 VALVE								
S2008	Single Beehive Ovate. PAC Alloy Performance OEM replacment	.940 1.105	.580 .742	90 lbs @1.470"	252 lbs @.970"	324 lbs	.900"	.500"
This Spring requires Ferrea Steel Retainer # E10030 OR Ferrea Titanium Retainer # E12010 and Ferrea Spring Seat Locator #SL1086 OR Factory Seat Locator								
FORD GT 5.4L - 32 VALVE - 2005-2007								
S2016	Single Beehive Ovate. PAC Alloy High Lift application (INTAKE) - 16 pieces)	.985 1.061	.636 .698	100 lbs @1.700"	220 lbs @1.280"	285 lbs	1.000"	.600"
This Spring requires Ferrea Titanium Retainer #E12022 and Ferrea Spring Seat Locator #SL1087 OR Factory Seat Locator								
S2017	Single Beehive Ovate. PAC Alloy High Lift application (EXHAUST) - 16 pieces)	.950 1.061	.636 .738	100 lbs @1.530"	190 lbs @1.080"	200 lbs	.970"	.500"
This Spring requires Ferrea Titanium Retainer #E12022 and Ferrea Spring Seat Locator #SL1087 OR Factory Seat Locator								
STOCK ELIMINATOR								
S2012	Single Beehive Ovate. PAC Alloy	1.043 1.250	.650 .845	150 lbs @1.800"	390 lbs @1.250"	436 lbs	1.190"	.550"
Features additional processing for increase performance and durability This Spring requires Ferrea Steel Retainer #E10034 OR Ferrea Titanium Retainer # E12024, #E12025 OR #E12007 and Ferrea Spring Seat Locator # SL1078, #SL1081 OR #SL1085								