Manley Valve Locks... *simply the best!*

Conventional vs. Bead Loc® Valve Stem Grooves

The groove in a valve stem, seemingly unimportant, in reality is vital to the success of a valve's performance. Imperfectly formed grooves, inferior or mismatched locks, and improper retainers can lead to catastrophic failure.

The so called "conventional" or square groove design has enjoyed enormous success. But the success of a "conventional" groove is dependent upon precise machining. First, the surface finish of the groove must be outstanding to guarantee against failure due to residual machining marks.

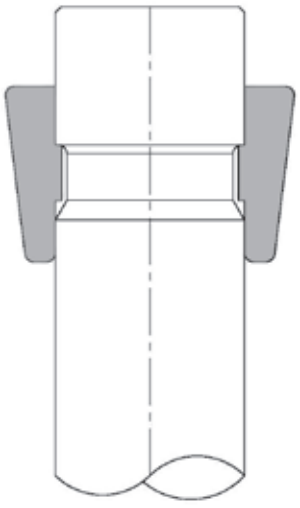
Next, the groove must have a precise .013" radius in the upper corner. Too small a radius leaves the groove subject to the dangers of a sharp fillet. Too large a radius leaves open the possibility of the groove being abraded in this area by the upper inside edge of the tang of the lock. Also, an oversized radius leaves a reduced horizontal shelf in the groove which is, or should be, the only contact point with the tang of the lock. Contact by the lock in the root of the groove is a disaster waiting to happen.

Perfectly formed "conventional" grooves with proper locks and retainers will deliver good service. However, there are sub-standard components on the market that can conspire to destroy a correctly machined groove.

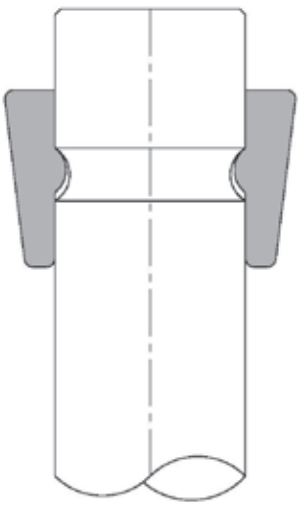
The essence of the Bead Loc® groove is its simplicity and forgiveness. The groove itself is a straightforward .110" full radius. The contact points with a Bead Loc® radius lock are approximately 2:00 and 10:00 o'clock, not at the root of the groove. This system affords minimal vertical movement, especially when valve float is present, which means reduced erosion of the valve for enhanced service life.

Manley Performance supports both the "conventional" groove system and the Bead Loc® system with the most extensive line-up of the highest quality locks in the industry.

Conventional Groove



Bead Loc® Groove



7° Stamped Valve Locks

BULK PRICING AVAILABLE

- Stamped locks are recommended ONLY for mild performance engines

Part No.	Quantity	Valve Stem	Groove Type	Wgt./Pr.
13238-16	16 pr.	5/16"	Conventional	2.9 gms
13127-16	16 pr.	11/32"	Conventional	3.2 gms

7° Machined Valve Locks

BULK PRICING AVAILABLE

- Highest quality steel alloy
- Heat treated and black oxide finished

Part No.	Quantity	Valve Stem	Groove Type	Wgt./Pr.
13086-32	32 pr.	.2345"	Bead Loc® Ford 5.0L "Coyote" (4 Valve)	1.3 gms
13088-24	24 pr.	.2345"-.2355"	Bead Loc® Ford Modular 4.6L (3 Valve)	1.3 gms
13089-16	16 pr.	.2740"-.2755"	Bead Loc® Ford Modular 4.6L/5.4L (2 Valve)	1.9 gms
13089-32	32 pr.	.2740"-.2755"	Bead Loc® Ford Modular 4.6L/5.4L (4 Valve)	1.9 gms
13087-16	16 pr.	5/16" (.3120")	Bead Loc® Ford 6.2L "Raptor" (2 Valve)	2.2 gms
13093-16	16 pr.	5/16" (.3125")	Bead Loc® Chrysler Hemi 5.7L, 6.1L and 6.4L	2.2 gms
13094-16	16 pr.	8mm (.3135")	Single Radius Chevy LS, LT1 (.050" less)	2.6 gms
13098-16	16 pr.	8mm (.3135")	Single Radius Chevy LS, LT1 (Std.)	2.6 gms
13095-16	16 pr.	8mm (.3135")	Single Radius Chevy LS, LT1 (.050" more)	2.6 gms
13090-16	16 pr.	5/16" (.3100")	Conventional	3.2 gms
13091-16	16 pr.	11/32"	Conventional	3.0 gms
13092-16	16 pr.	3/8"	Conventional	3.5 gms

Super 7° Valve Locks

Steel Material

- Heat treated and black oxide finished
- Highest quality steel alloy
- Thicker for greater strength

BULK PRICING AVAILABLE

Part No.	Quantity	Valve Stem	Installed Height	Groove Type	Wgt. / Pr.
13050-8	8 pr.	.3110"	.050" less	Bead Loc®	8.2 gms
13051-8	8 pr.	.3110"	Standard	Bead Loc®	8.2 gms
13052-8	8 pr.	.3110"	.050" more	Bead Loc®	8.2 gms
13080-16	16 pr.	.3110"	Standard	Conventional	8.3 gms
13085-16	16 pr.	.3110"	.050" more	Conventional	8.2 gms
13060-8	8 pr.	.3415"	.050" less	Bead Loc®	7.4 gms
13061-8	8 pr.	.3415"	Standard	Bead Loc®	7.4 gms
13062-8	8 pr.	.3415"	.050" more	Bead Loc®	7.4 gms
13081-16	16 pr.	.3415"	.050" less	Conventional	9.9 gms
13083-16	16 pr.	.3415"	Standard	Conventional	7.5 gms
13084-16	16 pr.	.3415"	.050" more	Conventional	7.6 gms

Super 7° Valve Locks

Titanium Material

- Lightweight titanium material
- PVD coated locks for easier disassembly in high spring pressure/high RPM applications

BULK PRICING AVAILABLE

Uncoated Titanium	PVD Coated Titanium	Quantity	Valve Stem	Installed Height	Groove Type	Wgt. / Pr.
13030T-8	- - - - - -	8 pr.	7mm /.2740"	.050" less	Bead Loc®	5.6 gms
13037T-8	- - - - - -	8 pr.	7mm /.2740"	Standard	Bead Loc®	4.9 gms
13038T-8	- - - - - -	8 pr.	7mm /.2740"	.050" more	Bead Loc®	4.6 gms
13050T-8	- - - - - -	8 pr.	.3110"	.050" less	Bead Loc®	4.5 gms
13051T-8	13051TC-8	8 pr.	.3110"	Standard	Bead Loc®	4.5 gms
13052T-8	- - - - - -	8 pr.	.3110"	.050" more	Bead Loc®	4.5 gms
13061T-8	- - - - - -	8 pr.	.3415"	Standard	Bead Loc®	4.1 gms
13062T-8	- - - - - -	8 pr.	.3415"	.050" more	Bead Loc®	4.1 gms
13081T-16	- - - - - -	16 pr.	.3415"	.050" less	Conventional	5.5 gms
13083T-16	- - - - - -	16 pr.	.3415"	Standard	Conventional	4.2 gms
13084T-16	- - - - - -	16 pr.	.3415"	.050" more	Conventional	4.1 gms

Super 7° "Captiv-Loc" Valve Locks

- Developed by Keith Dorton
- Encapsulates hard tip in titanium valve if it comes loose
- Use with valves with .290" to .330" tip lengths
- Available in steel and titanium material
- PVD coated locks for easier disassembly in high spring pressure/high RPM applications

BULK PRICING AVAILABLE

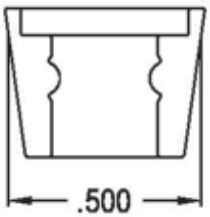
Steel	Uncoated Titanium	PVD Coated Titanium	Quantity	Valve Stem	Installed Height	Groove Type	Wgt. / Pr.
- - - - - -	13039T-8	13039TC-8	8 pr.	.3110"	.050" less	Bead Loc®	5.7 gms
13033-8	13033T-8	13033TC-8	8 pr.	.3110"	Standard	Bead Loc®	9.5 / 5.6 gms
13034-8	13034T-8	13034TC-8	8 pr.	.3110"	.050" more	Bead Loc®	9.4 / 5.3 gms
- - - - - -	13040T-8	13040TC-8	8 pr.	.3415"	.050" less	Bead Loc®	5.0 gms
13035-8	13035T-8	13035TC-8	8 pr.	.3415"	Standard	Bead Loc®	8.6 / 4.9 gms
13036-8	13036T-8	13036TC-8	8 pr.	.3415"	.050" more	Bead Loc®	8.5 / 4.7 gms
13031-16	13031T-16	- - - - - -	16 pr.	.3415"	Standard	Conventional	9.2 / 5.3 gms
13032-16	13032T-16	- - - - - -	16 pr.	.3415"	.050" more	Conventional	9.3 / 5.0 gms

8° Pro "900" Series

Titanium Material

- 0.500" Gage Diameter
- Lash Cap Recess
- PVD coated locks for easier disassembly in high spring pressure/high RPM applications

PVD Coated Titanium	Quantity	Valve Stem	Installed Height	Groove Type	Wgt. / Pr.
13980TC-8	8 pr.	7mm /.2754"	Standard	Bead Loc®	2.7
13981TC-8	8 pr.	7mm /.2754"	.050" more	Bead Loc®	2.6
13993TC-8	8 pr.	5/16" /.3100"	Standard	.048" Radius*	2.4
13994TC-8	8 pr.	5/16" /.3100"	.050" more	.048" Radius*	2.3



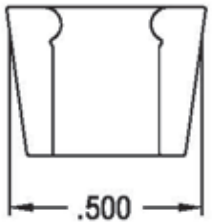
8° Pro "Top Loc" Series

*Not compatible with Manley Bead Loc grooves.

Titanium Material

- 0.500" Gage Diameter
- PVD coated locks for easier disassembly in high spring pressure/high RPM applications

PVD Coated Titanium	Quantity	Valve Stem	Installed Height	Groove Type	Wgt. / Pr.
13810TC-8	8 pr.	7mm /.2754"	Top Loc	Bead Loc®	3.1
13811TC-8	8 pr.	5/16" /.3100"	Top Loc	.048" Radius*	2.6



A better understanding of the 8° Pro "900" and "Top Loc" Series valve locks...

- Although 8°, these are NOT compatible with traditional Super 7° retainers. These MUST be paired with compatible .500" gage retainers.

- The Top Loc Series design places the locating tang at the top of the lock, resulting in all clamping BELOW the keeper groove of the valve.

- Both the Top Loc and the 900 Series utilize a thinner lock dimension (compared to Super 7°) which provides better conformability to the valve stem and allows for increased retainer cross-section, a plus when designing for smaller diameter valvesprings.

- The 900 Series features the same "thinner" design as the Top Loc but provides engine builders with installed height options they have enjoyed with Super 7° style locks for years.

- Lastly, make sure you order valves with the correct keeper groove specification as some locks work with traditional Manley Bead Loc grooves (.055" radius) while others mate with .048"radius grooves.

Precision Crafted 10° Machined Valve Locks

Steel Material

- Highest quality steel alloy
- Heat treated and black oxide finished

Part No.	Quantity	Valve Stem	Installed Height	Groove Type	Wgt. / Pr.
13171-8	8 pr.	7mm /.2740"	.050" less	Bead Loc®	7.4 gms
13170-8	8 pr.	7mm /.2740"	Standard	Bead Loc®	6.7 gms
13172-8	8 pr.	7mm /.2740"	.050" more	Bead Loc®	6.5 gms
13190-8	8 pr.	.3075"	Standard	Bead Loc®	6.7 gms
13191-8	8 pr.	.3085"	Standard	Bead Loc®	6.7 gms
13193-16	16 pr.	.3085"	Standard	Conventional	6.7 gms
13150-8	8 pr.	.3110"	.050" less	Bead Loc®	7.4 gms
13151-8	8 pr.	.3110"	Standard	Bead Loc®	7.0 gms
13152-8	8 pr.	.3110"	.050" more	Bead Loc®	6.4 gms
13096-16	16 pr.	.3110"	Standard	Conventional	6.7 gms
13196-16	16 pr.	.3110"	.050" more	Conventional	6.0 gms
13153-16	16 pr.	8mm (.3135")	Standard	Single Radius Chevy LS	6.6 gms
13160-8	8 pr.	.3415"	.050" less	Bead Loc®	6.8 gms
13161-8	8 pr.	.3415"	Standard	Bead Loc®	6.3 gms
13162-8	8 pr.	.3415"	.050" more	Bead Loc®	6.3 gms
13097-16	16 pr.	.3415"	Standard	Conventional	6.8 gms
13194-16	16 pr.	.3415"	Standard	Conventional	6.1 gms
13198-16	16 pr.	.3415"	.050" more	Conventional	5.6 gms
13192-8	8 pr.	.3715"	Standard	Bead Loc®	5.0 gms
13195-16	16 pr.	.3715"	Standard	Conventional	5.0 gms

BULK PRICING AVAILABLE

P/N 13097 is NOT recessed to accept a wear cap

Precision Crafted 10° Machined Valve Locks

Titanium Material

- Durable and lightweight
- PVD coated locks for easier disassembly in high spring pressure/high RPM applications

Uncoated Titanium	PVD Coated Titanium	Quantity	Valve Stem	Installed Height	Groove Type	Wgt. / Pr.
13171T-8	------	8 pr.	7mm /.2740"	.050" less	Bead Loc®	4.3 gms
13151T-8	13151TC-8	8 pr.	.3110"	Standard	Bead Loc®	3.9 gms
13152T-8	13152TC-8	8 pr.	.3110"	.050" more	Bead Loc®	3.6 gms
13096T-16	------	16 pr.	.3110"	Standard	Conventional	3.8 gms
13196T-16	------	16 pr.	.3110"	.050" more	Conventional	3.8 gms
13153T-16	------	16 pr.	8mm (.3135")	Standard	Single Radius Chevy LS	3.8 gms
13161T-8	13161TC-8	8 pr.	.3415"	Standard	Bead Loc®	3.6 gms
13162T-8	13162TC-8	8 pr.	.3415"	.050" more	Bead Loc®	3.6 gms
13194T-16	13194TC-16	16 pr.	.3415"	Standard	Conventional	3.5 gms
13198T-16	------	16 pr.	.3415"	.050" more	Conventional	3.5 gms
13195T-16	------	16 pr.	.3715"	Standard	Conventional	3.5 gms

BULK PRICING AVAILABLE

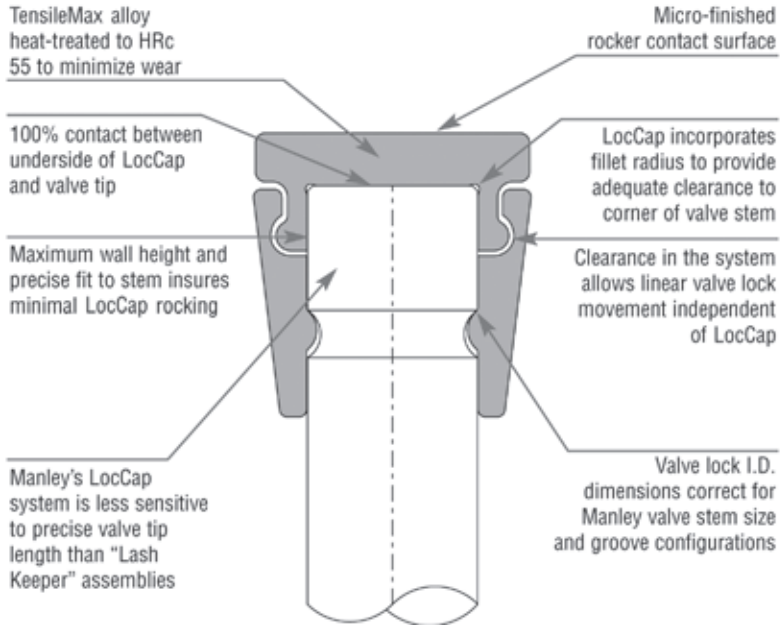
Manley Performance LocCap System

- The ULTIMATE valve lock/wear cap assembly
- Designed specifically for Fuel, Alcohol and Pro Mod Racers

First developed by our engineering team in the late 1990s for NASCAR applications, Manley's LocCap system is designed to retain the wear cap on the tip of the valve by employing an external bead on the wear cap that —when the system is assembled— resides within an internal "retention channel" located on the I.D. of the valve locks. Manley's valve train components group, headed by Manley GM Michael Tokarchik, refined the original designs combining a state-of the-art steel alloy and ultra precise manufacturing techniques to achieve the goal of delivering a no compromises valve lock/wear cap assembly for the supercharged classes.

Manley's LocCap systems are available in true 7° as well as 10° and Super 7° assemblies for 3/8", 11/32" and 5/16" stem valves in both Manley Bead Loc® and conventional square groove configurations. In addition, Manley's LocCap system retrofits to competitors' "Lash Keeper" assemblies, maintaining original valve spring installed height, valve overall length, valve tip length (0.250") and retainer designs.

Both the LocCap valve locks and wear caps are precision machined using Manley's TensileMax UHSS (ultra high strength steel). The wear caps are thru-hardened to HRc 55 (harder than typical tool steel) to minimize wear due to aggressive rocker contact. Manley's proprietary heat treatment processes minimize distortion, thereby improving the fit of the wear cap and valve locks to the valve stem.



Valve Locks

Valve Stem Size	7° Bead Loc	7° Square Groove	10° Bead Loc	10° Square Groove	Super 7° Bead Loc
5/16" (.3100")	- - - - - -	- - - - - -	13441-8	- - - - - -	- - - - - -
5/16" (.3110")	- - - - - -	- - - - - -	- - - - - -	- - - - - -	13551-8
11/32" (.3415")	13361-8	13394-8	13461-8	13494-8	13561-8
3/8" (.3715")	13392-8	13395-8	13492-8	13495-8	- - - - - -

Note: -8 indicates one set of 8 pairs.

Valve Lock Weights (per pair): 13361 (5.0 gms), 13392 (4.4 gms), 13394 (5.0 gms), 13395 (4.2 gms), 13441 (6.9 gms), 13461 (6.5 gms), 13492 (5.7 gms), 13494 (6.4 gms), 13495 (5.6 gms), 13551 (10.1 gms), 13561 (9.3 gms)

LocCaps

Valve Stem Size	Part No.	Weight
5/16" (.3100")	42441-8	4.4 gms
5/16" (.3110")	42439-8	4.3 gms
11/32" (.3415")	42404-8	4.1 gms
3/8" (.3715")	42408-8	3.4 gms

Note: LocCap thickness above valve tip is .106"

Titanium Retainers

Valve Spring Type	Valve Spring Part No.	7° +.100" Part No.	7° +.100" Tensile Max Part No.	10° Std. Part No.	10° +.100" Part No.	10° +.100" Tensile Max Part No.	10° +.170" Part No.	Super 7° Part No.
Steel Double Springs	221420, 1455, 1456, 1457, 1460, 1461	23675-16 23677-16*	23675TM-16	23684-16	23676-16 23679-16*	23676TM-16	23683-16*	23701-16*
Steel Triple Springs	221447, 1448, 1449, 1450	23673-16	- - - - - -	- - - - - -	23653-16 23753-16*	- - - - - -	- - - - - -	23708L-16*
Titanium Double Spring		- - - - - -	- - - - - -	- - - - - -	23668-16*	- - - - - -	- - - - - -	- - - - - -

Note: -16 indicates 16 pieces.

* Lightweight design high strength Ti-17 titanium material

See pages 82-86 for retainer gram weights

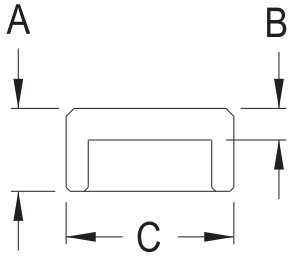
WEAR CAPS

Inserted Tips

- Wear resistant thru-hardened H-13 tool steel alloy
- Ideal titanium valve tip protection

Part No.	Quantity	Material	Description	Knurl Diameter	Post Length	O.D.
42311-8	8 pcs.	H-13	Fits .3085"-.3130" valves	.183"	.120"	.316"
42413-8	8 pcs.	H-13	Fits .3133"-.3136" valves	.183"	.120"	.318"
42105-8	8 pcs.	H-13	Fits 11/32" valves	.193"	.120"	.347"

Wear Caps



- Thru-hardened 4140 alloy steel
- Special heat treatment to HRc 50-54
- Non rotating caps afford less valve tip erosion

Part No.	Quantity	Description	Minimum Tip	Type	A	B	C	Weight
42263-8	8 pcs.	.2165" stem valves (5.5mm)	.095"	Standard	.090"	.040"	.300"	0.6 gms
42254-8	8 pcs.	.2360" stem valves (6mm)	.275"	Non Rotating	.235"	.060"	.385"	2.5 gms
42264-8	8 pcs.	.2360" stem valves (6mm)	.095"	Standard	.090"	.040"	.320"	0.6 gms
42100-8	8 pcs.	.2740" stem valves (7mm)	.250"	Standard	.225"	.085"	.425"	2.9 gms
42118-8	8 pcs.	.2740" stem valves (7mm)	.290"	Non Rotating	.270"	.080"	.385"	2.5 gms
42110-8	8 pcs.	.2754" stem valves (7mm)	.250"	Standard	.225"	.085"	.425"	2.9 gms
42101-16	16 pcs.	.3085" stem valves (5/16")	.250"	Standard	.225"	.080"	.425"	2.6 gms
42139-8	8 pcs.	.3110" stem valves (5/16")	.250"	Standard	.210"	.080"	.425"	2.4 gms
42300-8	8 pcs.	.3110" stem valves (5/16")	.250"	Non Rotating	.210"	.080"	.425"	2.3 gms
42125-8	8 pcs.	.3130" stem valves (8mm)	.130"	Standard	.170"	.080"	.425"	2.1 gms
42104-16	16 pcs.	.3415" stem valves (11/32")	.250"	Standard	.210"	.080"	.455"	2.7 gms
42301-8	8 pcs.	.3415" stem valves (11/32")	.250"	Non Rotating	.210"	.080"	.455"	2.6 gms
42108-16	16 pcs.	.3715" stem valves (3/8")	.220"	Standard	.175"	.080"	.485"	2.7 gms

TensileMax Wear Caps

- Precision machined from TensileMax UHSS (Ultra High Strength Steel)
- Thru-hardened to HRc55 to minimize wear due to aggressive rocker contact
- Proprietary heat treatment processes minimize distortion

Part No.	Quantity	Description	Minimum Tip	Type	A	B	C	Weight
42100TM-8	8 pcs.	.2740" stem valves (7mm)	.250"	Standard	.225"	.085"	.425"	3.0 gms
42139TM-8	8 pcs.	.3110" stem valves (5/16")	.250"	Standard	.210"	.080"	.425"	2.6 gms
42104TM-16	16 pcs.	.3415" stem valves (11/32")	.250"	Standard	.210"	.080"	.455"	2.9 gms

Viton Material Valve Stem Seals

- A necessity when using NexTek® triple valve springs.
- Special design allows clearance inside small I.D. springs.

Part No.	Quantity	Description	Guide O.D.	Installed Seal O.D	Use Cutter No.
24041-8	8 pcs.	.274" / 7mm valves	.431"	.566"	41410
24040-8	8 pcs.	5/16" / 8mm valves	.420"	.566"	41510
24042-8	8 pcs.	5/16" / 8mm valves	.500"	.608"	41610
24047-8	8 pcs.	5/16" / 8mm valves	.530"	.677"	41710
24043-8	8 pcs.	11/32" valves	.500"	.620"	41611
24045-8	8 pcs.	11/32" valves	.530"	.674"	41711
24044-8	8 pcs.	3/8" valves	.500"	.623"	41612
24046-8	8 pcs.	3/8" valves	.530"	.677"	41712

All Teflon Valve Stem Seals

- Spring loaded wiper to remove excess oil

Part No.	Quantity	Description	Guide O.D.	Use Cutter No
24029-16	16 pcs.	5/16" valves	.500"	41610
24034-16	16 pcs.	5/16" valves	.530"	41710
24037-16	16 pcs.	11/32" valves	.500"	41611
24035-16	16 pcs.	11/32" valves	.530"	41711
24039-16	16 pcs.	3/8" valves	.500"	41612
24036-16	16 pcs.	3/8" valves	.530"	41712

Valve Guide Seal Cutters

- Carbide tipped cutters
- Due to the severe use to which these cutters are subjected, we are not able to warranty damaged goods

Part No.	Quantity	Pilot Size	Seal No.	Guide O.D.
41410	1	.274" / 7mm	24041	.431"
41510	1	5/16" / 8mm valves	24040	.420"
41610	1	5/16" / 8mm valves	24029 / 24042	.500"
41710	1	5/16" / 8mm valves	24034 / 24047	.530"
41611	1	11/32"	24037 / 24043	.500"
41711	1	11/32"	24035 / 24045	.530"
41612	1	3/8"	24039 / 24044	.500"
41712	1	3/8"	24036 / 24046	.530"

Valve Guide Seal Cutter Pilot

- For use with any spring seat or seal cutter

Part No.	Quantity	Description
41274	1	7mm cutter pilot
41516	1	5/16" cutter pilot
41132	1	11/32" cutter pilot
41138	1	3/8" cutter pilot

Bronze Valve Guides

- .502" O.D.
- 1.625" length under flange
- Threaded seal area above flange

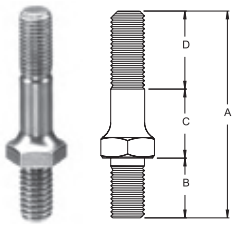
Part No.	Quantity	Description
12081-8	8 pcs.	Bronze insert guide - .274" I.D.
12084-8	8 pcs.	Bronze insert guide - .311" I.D.

ROCKER STUDS

Professional Rocker Arm Screw-In Studs

- 8740 material with 190,000 psi tensile strength
- Rolled threads
- Large radii
- Flat poly lock surface

BULK PRICING AVAILABLE

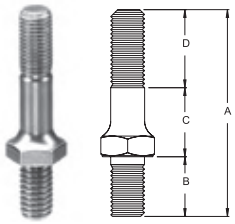


Part No.	Quantity	Application	Roller Rockers	Stud Girdles	Upper Threads	Dimensions A	B	C	D
42276-16	16 pcs.	SB Chevy & Ford	Yes	No	3/8"	2.425"	.670"	.945"	.810"
42277-16	16 pcs.	SB Chevy & Ford	Yes	No	7/16"	2.440"	.660"	.890"	.890"
42287-16	16 pcs.	SB Chevy w/ 18° head	Yes	Yes	7/16"	2.850"	.750"	1.300"	.800"
42288-16	16 pcs.	SB & BB Chevy	Yes	Yes	7/16"	2.810"	.740"	1.020"	1.050"
42290-8	8 pcs.	SB & BB Chevy	Yes	Yes	7/16"	2.810"	.740"	1.020"	1.050"
42287-16	16 pcs.	BB Chevy	Yes	Yes	7/16"	2.850"	.750"	1.300"	.800"
42278-16	16 pcs.	BB Chevy	No	No	7/16"	2.580"	.820"	.900"	.860"
42256-16	16 pcs.	BB Chevy w/ tall springs	Yes	Yes	7/16"	3.200"	.850"	1.550"	.800"
42266-16	16 pcs.	BB Chevy Mark V w/ 3/8" lower threads converting to Mark IV heads	Yes	No	7/16"	2.600"	.775"	.885"	1.000"
42293-8	8 pcs.	BB Chevy w/ Dart aluminum	Yes	Yes	7/16"	3.300"	1.300"	1.000"	1.000"

Street Master Rocker Arm Screw-In Studs

- Special maxalloy steel
- Rolled threads

BULK PRICING AVAILABLE



Part No.	Quantity	Description	Upper Threads	Dimensions A	B	C	D
42106-16	16 pcs.	SB Chevy & Ford	3/8"	2.560"	.690"	.840"	1.030"
42147-16	16 pcs.	SB Chevy & Ford with poly locks	3/8"	2.420"	.690"	.920"	.810"
42103-16	16 pcs.	SB Chevy, BB Chevy & Ford	7/16"	2.550"	.790"	.890"	.870"

Professional Rocker Arm Adjusting Nuts

- Special chrome moly hex material
- Heat treated and black oxide
- Set screws and allen wrench included

Part No.	Quantity	Description
42107-16	16 pcs.	All 3/8" stud Chevys, Fords, Pontiacs
42112-16	16 pcs.	All 7/16" stud Chevys and Fords (.580" Body Diameter)

Small Block Chevrolet Stamped Steel Rocker Arm Kits

- Highest quality steel
- Heat treated
- Long slots to avoid stud interference
- Kits include oil grooved rocker balls and nuts

These rockers are the non "self-aligning" type used from 1955 to 1989.

Part No.	Quantity	Description	Stud Diameter
43140	1 set for 1 head	Small Block - Long Slot 1.5 Ratio	3/8"
43150	1 set for 1 head	Small Block - Long Slot 1.6 Ratio	3/8"

ROCKER ARM KIT COMPONENTS

Note: Individual rockers only are sold as -8, and rocker balls and rocker nuts are sold as -16. Kits include only 8 pieces of each part.

Kit	Rocker	Ball	Nut
43140	43141-8	43142-16	43143-16
43150	43151-8	43142-16	43143-16

Steel Guide Plates

- Meticulously crafted stamping
- Heat treated and black oxide finished

BULK PRICING AND PRIVATE LABEL

Small Block Chevrolet
Raised Guide Plate

Part No.	Quantity	Description	Slots	Pushrods
42151-8	8 pcs.	Small Block Chevy	On-Center	5/16"
42150-8	8 pcs.	Small Block Chevy	On-Center	3/8"

Small Block Chevrolet
Flat Guide Plate

Part No.	Quantity	Description	Slots	Pushrods
42355-8	8 pcs.	Small Block Chevy	On-Center	5/16"
42356-8	8 pcs.	Small Block Chevy	On-Center	3/8"

Big Block Chevrolet

Part No.	Quantity	Description	Pushrods
42164-8	8 pcs.	Big Block Chevy	3/8"
42149-8	8 pcs.	Big Block Chevy	7/16"

Ford 289 - 302 - 351W
Pre 1977 Heads

Part No.	Quantity	Description	Pushrods
42152-8	8 pcs.	289, 302 W, 351 W Ford	5/16"

Ford 302 Boss - 351C
With Modified Heads

Part No.	Quantity	Description	Pushrods
42163-8	8 pcs.	302 Boss, 351 C Modified	5/16"
42156-8	8 pcs.	302 Boss, 351 C Modified	3/8"

To convert Ford 351C engines to adjustable rocker arms and pushrod guide plates, machine the old rocker stanchions down to a height of .550" as measured from the adjacent head bolt spot face with cutter 41860. Drill and tap the old screw hole to accept stud 42277.

Ford 429 - 460

Part No.	Quantity	Description	Pushrods
42166-8	8 pcs.	429, 460 Ford	5/16"
42160-8	8 pcs.	429, 460 Ford	3/8"

Superior Head Bolts

- 180,000 psi tensile strength
- Longer than stock for use with washers
- Improved wrenchability with 1/2" hex head

Part No.	Quantity	Description
42193	1 set for 1 head	Chevrolet V-6
42171	1 set for 1 head	SB Chevy V-8
42312	1 set for 1 head	SB Chevy, Brodix - 12 and Pontiac 10093328 castings
42313	1 set for 1 head	SB Chevy, Brodix aluminum and Pontiac 10033867
42170	1 set for 1 head	BB Chevy
42180	1 set for 1 head	BB Chevy with Dart Pro 1 heads
42192	1 set for 1 head	BB Chevy with Brodix heads, Merlin II Aluminum
42322	1 set for 1 head	BB Chevy with Chevy Bow Tie, Dart Aluminum and Merlin heads
42178	1 set for 1 head	Chrysler 383-440
42198	1 set for 1 head	Indy Cylinder Head 440-1 BB Chrysler head

Single Head Bolts

- Bolts used in above pre-packaged sets

Part No.	Quantity	Under Head Length
Bolt 1	1 pc.	4.210"
Bolt 2	1 pc.	2.100"
Bolt 3	1 pc.	1.685"
Bolt 4	1 pc.	3.125"
Bolt 5	1 pc.	3.840"
Bolt 6	1 pc.	5.200"

Hardened Head Bolt Washers

- Special heat treatment to prevent galling

Part No.	Quantity	Description
42102	34 pcs.	All Chevys, 289-351 Fords, .760" O.D., 7/16" I.D., .125" thick
42127	20 pcs.	All Chryslers, Pontiacs, 390-427 Fords, .875" O.D., 1/2" I.D., .105" thick
42136	34 pcs.	Ideal washers for aluminum heads. 7/16" I.D. but larger .935" O.D. for better fit in aftermarket aluminum heads, .125" thick

Hard To Find "AN" Washers

- .060" thick

Part No.	Quantity	I.D.	O.D.
42194	12 pcs.	5/16"	9/16"
42195	12 pcs.	3/8"	5/8"
42196	12 pcs.	7/16"	3/4"

Note: New part numbers are ***BOLD & ITALICIZED***

Hex Head Intake Manifold Bolts

- P/N 42175 and 42176 have gold irridite finished bolts and hardened washers
- P/N 42177 has black oxide finished bolts and hardened washers

Black Oxide Finish

Gold Irridite Finish

Part No.	Quantity	Description	Underhead Length
42176	1 set	Small Block Chevrolet	1.250"
42177	1 set	Small Block Chevrolet using thin casting hi-rise manifolds	1.000"
42175	1 set	Big Block Chevrolet	1.250"
42294-16	16 pcs.	Hardened washers for 42175 & 42176 bolts. .100" thick. Gold Irridite	
42299-16	16 pcs.	Hardened washers for 42177 bolts. .125" thick. Black oxide	

12 Point Head Intake Manifold Bolts

- Bolts and washers with gold irridite finish
- Shipped with hardened washers

Part No.	Quantity	Description	Underhead Length
42292	1 set	Small Block Chevrolet, Chrysler "A" and "B" engines	1.125"
42291	1 set	Big Block Chevrolet using thin casting hi-rise manifolds	1.125"
42294-16	16 pcs.	Hardened washers for above bolts. .100" thick. Gold Irridite	

Front Timing Cover Bolts

- Special flange for greater "wrenchability"
- Integral lock washer

Part No.	Quantity	Description
42174	1 set	Small and Big Block Chevys-black oxide
42179	1 set	Small and Big Block Chevys-gold irridite

Oil Pan Bolts

- Special flange for greater "wrenchability"
- Integral lock washer

Part No.	Quantity	Description
42173	1 set	Small Block Chevrolet - black oxide
42189	1 set	Small Block Chevrolet - gold irridite
42172	1 set	Big Block Chevrolet - black oxide
42188	1 set	Big Block Chevrolet - gold irridite

NexTek® Series Valve Springs

...Better By Design

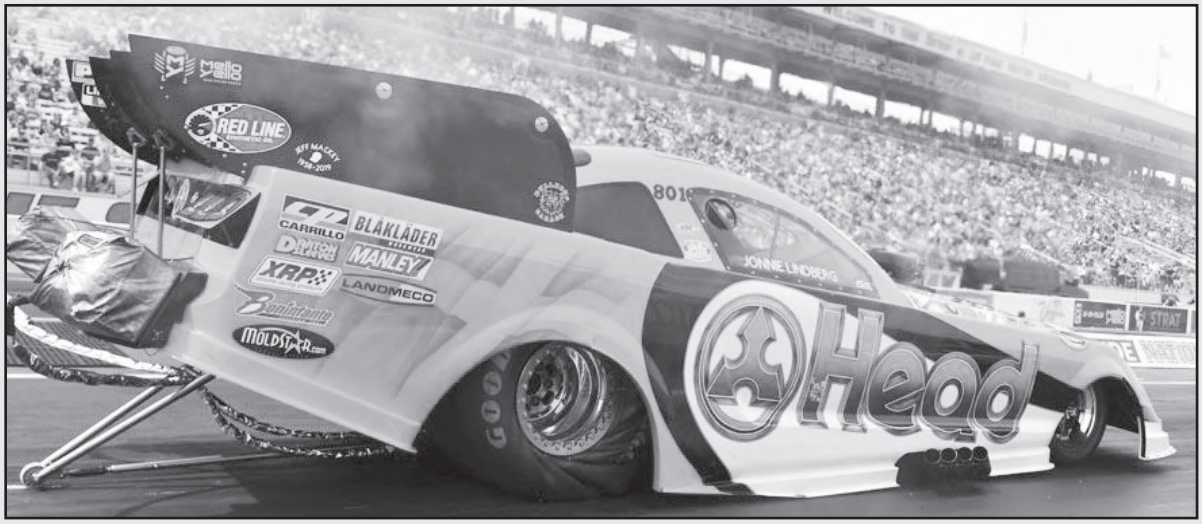
Manufactured from "super clean" Hi-Tensile Chrome Silicon steel

Tip thickness designed to eliminate overload breakage

Many part numbers available fully polished or Super Finished

Shot-peened to MIL spec for maximum fatigue life

Computer-aided modeling or designs minimizes valve bounce and valve gear separation



Nitro F/C Driver: Jonnie Lindberg

Tightly controlled open end flatness reduces valve stem side loading

Proprietary multi-step heat treating minimizes load loss

Optimized "Select Size Fitting" betweenouter and inner springs to maximizeharmonic dampening and reduce heat generated during operation

Many offerings are a damperless design which eliminates unnecessary damper weight and reduces retainer wear

NexTek® Series

Lightweight Dual Drag Race Valve Springs

- Higher natural frequency and lower active mass provides improved valvetrain control and higher RPM potential
- Dual spring design reduces friction, which generates less heat and translates into greatly reduced load loss
- Extensively tested on the Spintron, dyno and race track (including blown nitro engines) and proven highly effective
- Smaller diameter, lightweight dual design allows engine to rev higher with improved valve train control
- Accepts smaller, lighter retainers which also promotes higher revs
- Ultra clean, high tensile strength chrome silicon material
- Super Finished multi-step surface enhancement significantly improves fatigue strength
- Ideal loads for multiple applications with minimal load loss

Part No.	Description	Maximum Valve Lift	O.D.	I.D.	Installed / Open Pressure	Rate (lbs. / in.)	Coil Bind	Weight (grams)	Component Code
221420-16	Super Stock Competition Eliminator	.850	1.500	.710	275 @ 2.050 940 @ 1.200	780	1.130	136	A
221455-16	Competition Eliminator Alcohol & Fuel Classes	1.000	1.500	.710	450 @ 2.175 1250 @ 1.175	797	1.130	143	A
221456-16	Super Stock Competition Eliminator	.900	1.500	.710	330 @ 2.100 1050 @ 1.200	800	1.130	139	A
221457-16	Super Stock Competition Eliminator	.950	1.500	.710	405 @ 2.150 1165 @ 1.200	800	1.130	150	A
221460-16	Alcohol & Fuel Classes, Pro Mod	.950	1.522	.710	440 @ 2.250 1340 @ 1.300	948	1.255	154	A
221461-16	Alcohol & Fuel Classes, Pro Mod	1.000	1.540	.710	425 @ 2.300 1389 @ 1.300	964	1.215	154	A

See pages 78-79 for comprehensive load charts

See page 88 for available Valve Spring Shims

Component Code	Titanium Retainers	Description	TensileMax Retainers		I.D. Spring Locators	O.D.	I.D.	Thickness	Seat Cutter
A	23675-16	7° (+.100 for 7° LocCap)	23675TM-16	7° (+.100)	42347-16	1.535	.570	.062	41856
	23677-16	7° (+.100 for 7° LocCap) TI-17 Alloy			42318-16	1.610	.570	.062	41857
	23684-16	10° Std. Installed			42344-16	1.535	.635	.035	41835
	23676-16	10° (+.100)	23676TM-16	10° (+.100)	42335-16	1.535	.635	.062	41835
	23679-16	10° (+.100) Lightweight TI-17 Alloy			42120-16	1.610	.635	.062	41855
	23683-16	10° (+.170) Lightweight TI-17 Alloy							
	23701-16	Super 7° Lightweight TI-17 Alloy							

NexTek® Series

Drag Race Valve Springs

- Unequalled performance
- All springs are triple except 221424, 221425 & 221454 which are double w/o damper
- Better valve train stability and component life
- Ideally suited for Sportsman Drag Racing applications

All Manley NexTek® valve springs listed below are available in Polished versions to reduce friction, improve fatigue life and minimize load loss. For example 221449P-16.

Part No.	Polished Part No.	Description	Maximum Valve Lift	O.D.	I.D.	Installed / Open Pressure	Rate (lbs. / in.)	Coil Bind	Weight (grams)	Component Code
221424-16	221424P-16	Sportsman and Bracket Classes	.880	1.640	.860	250 @ 2.000 800 @ 1.150	647	1.070	149	A
221454-16	221454P-16	Sportsman and Bracket Classes	.850	1.650	.855	290 @ 2.000 825 @ 1.150	635	1.105	155	A
221425-16	221425P-16	Sportsman and Bracket Classes	.900	1.640	.860	280 @ 2.100 795 @ 1.250	604	1.150	160	A
221447-16*	221447P-16*	Sportsman and Bracket Classes	.800	1.677	.635	350 @ 2.000 895 @ 1.270	746	1.160	195	B
221448-16*	221448P-16*	Sportsman and Bracket Classes	.900	1.677	.635	350 @ 2.100 1010 @ 1.200	733	1.142	196	B
221449-16*	221449P-16*	Sportsman and Bracket Classes	1.000	1.677	.632	350 @ 2.200 1070 @ 1.200	720	1.142	195	B
221450-16*	221450P-16*	Sportsman and Bracket Classes	1.000	1.677	.632	370 @ 2.200 1140 @ 1.200	770	1.142	193	B

* Advertised pressures are achieved after springs have been pressed solid three times

See page 88 for available Valve Spring Shims

See pages 78-79 for comprehensive load charts

Ancillary Components
For Springs On Page 68

Component Code	Super 7° & 10° Titanium Retainers	Super 7° Tensile Max Retainers	Description	Spring Cups & Locators	Type	Cup O.D.	Cup I.D.	Seat Cutter
A	23649-16		10° Standard Installed	42121-16	OD	1.740	.635	41851
	23640-16		10° (+.100)	42128-16*	OD	1.740	.635	41851
	23540-16		10° (+.100) Lightweight	42379-16*	OD	1.740	.570	41859
		23685TM-16	Super 7°	* 42128 & 42379 have a wall height of .250 instead of .150				
				42337-16	ID	1.570	.570	41857
				42437-16*	ID	1.570	.567	41857
				* Pro Series Locators				
B	23673-16		7° (+.100)					
	23708L-16		Super 7°	42371-16	OD	1.740	.635	41851
	23663-16		10° Standard Installed	42372-16	OD	1.740	.570	41859
	23653-16		10° (+.100)	42364-16	ID	1.660	.570	41858
	23553-16		10° (+.100) Lightweight					
	23553I-16		10° (+.100) Lightweight Impinged					
	23753-16		10° (+.100) Lightweight TI-17 Alloy					

Valve Spring & Titanium Retainer Kits

- Large savings over purchasing items separately

Kit No.	Quantity	Application	NexTek® Spring No.	10° Titanium Retainer No.
261424	1 kit	Super Gas, Super Comp., Big Block Bracket Engines	221424-16	23640-16
261424L	1 kit	Same, except lightweight titanium retainers	221424-16	23540-16
261454	1 kit	Super Gas, Super Comp., Big Block Bracket Engines	221454-16	23640-16
261454L	1 kit	Same, except lightweight titanium retainers	221454-16	23540-16
261425	1 kit	Super Gas, Super Comp., Big Block Bracket Engines	221425-16	23640-16
261425L	1 kit	Same, except lightweight titanium retainers	221425-16	23540-16

NexTek® Series

Drag Race, Oval Track & Endurance Valve Springs

- No degradation of spring pressure in the later stages of a race
- Specially processed premium-grade chrome silicon that is virtually free of impurities or surface irregularities
- NexTek® Series valve springs have been tested by leading engine builders and are confirmed to be the best performing valve springs on the market today

Part No.	Polished Part No.	Super Finished Part No.	Description	Maximum Valve Lift	O.D.	I.D.	Installed / Open Pressure	Rate (lbs. / in.)	Coil Bind	Weight (grams)	Component Code
221432-16	--------	--------	Late Model Stock w/ Flat Tappet	.630	1.530	.750 Double With Damper	150 @ 1.900 425 @ 1.270	435	1.170	152	A
--------	221440P-16	--------	Solid Roller	.700	1.570	.760 Double With Damper	255 @ 2.000 630 @ 1.300	534	1.190	165	B
--------	221441P-16	--------	Solid Roller	.730	1.570	.750 Double With Damper	280 @ 2.030 700 @ 1.300	575	1.215	170	C
--------	221442-16	--------	Solid Roller	.750	1.560	.812 Double Without Damper	260 @ 2.000 660 @ 1.250	533	1.200	155	D
221443-16	221443P-16	--------	Solid Roller	.730	1.580	.832 Double Without Damper	235 @ 1.950 610 @ 1.250	535	1.170	150	E
221444-16	221444P-16	--------	Solid Roller	.750	1.610	.842 Double Without Damper	235 @ 2.050 645 @ 1.300	546	1.220	161	F
--------	221445P-16	--------	Solid Roller	.800	1.620	.852 Double Without Damper	280 @ 2.050 680 @ 1.250	500	1.200	168	G
--------	--------	221446SF-16	Solid Roller	.800	1.400	.700 Double Without Damper	240 @ 2.050 700 @ 1.250	575	1.150	125	H
--------	--------	221452SF-16	Solid Roller	.825	1.550	.800 Double Without Damper	250 @ 2.025 750 @ 1.200	618	1.150	144	I

See page 78-79 for comprehensive load charts

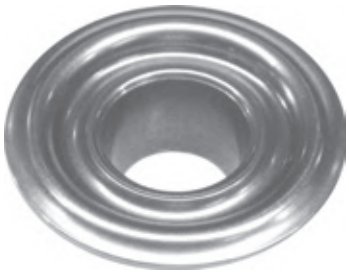
See page 88 for available Valve Spring Shims

Ancillary Components For Springs On Page 70

Component Code	Super 7° & 10° Titanium Retainers	Super 7° Lightweight Titanium Retainers	Super 7° +.050 Titanium Retainers	Super 7° TensileMax Retainers	H-13 Tool Steel Retainers	Spring Cups & Locators	Type	Cup O.D.	Cup I.D.	Cup Thickness	Seat Cutter
A	23672-16 (Super 7°) 23644-16 (10° Ti Std.) 23650-16 (10° Ti +.100)			23672TM-16	23650TS-16 (10° +.100)	42330-16 42326-16* 42426-16* 42466-16*	ID ID ID ID	1.535 1.535 1.535 1.535	.635 .570 .567 .567	.062 .062 .062 .045	41835 41856 41856 41856
B	23644-16 (10° Ti Std.) 23650-16 (10° Ti +.100)	23705L-16 23705LI-16	23706L-16 23706LI-16	23705TM-16 23705LTM-16	23650TS-16 (10° +.100)	42331-16	ID	1.530	.570	.062	41856
C	23672-16 (Super 7°) 23672I-16 (Super 7°) 23647-16 (10° Ti +.100)	23672L-16		23672TM-16	23647TS-16 (10° +.100) 23672TS-16 (Super 7°)	42330-16 42326-16 42426-16* 42466-16*	ID ID ID ID	1.535 1.535 1.535 1.535	.635 .570 .567 .567	.062 .062 .062 .045	41835 41856 41856 41856
D	23682-16 (Super 7°) 23682I-16 (Super 7°) 23643-16 (10° Ti +.100)	23682L-16 23682LI-16		23682TM-16	23643TS-16 (10° +.100) 23682TS-16 (Super 7°)	42343-16 42443-16*	ID ID	1.550 1.550	.570 .567	.062 .062	41856 41856
E	23681-16 (Super 7°) 23681I-16 (Super 7°) 23648-16 (10° Ti +.100)	23681L-16 23681LI-16	23691-16		23648TS-16 (10° +.100) 23681TS-16 (Super 7°)	42370-16 42369-16 42373-16 42573-16* 42438-16*	OD ID ID ID ID	1.687 1.570 1.570 1.570 1.570	.570 .635 .570 .567 .567	.062 .062 .062 .062 .045	41858 41856 41856 41856 41856
F	23681-16 (Super 7°) 23681I-16 (Super 7°) 23648-16 (10° Ti +.100)	23681L-16 23681LI-16	23691-16		23648TS-16 (10° +.100) 23681TS-16 (Super 7°)	42365-16 42367-16 42368-16	OD ID ID	1.740 1.610 1.610	.570 .570 .635	.062 .062 .062	41859 41857 41855
G	23685-16 (Super 7°) 23685I-16 (Super 7°)	23685L-16 23685LI-16		23685TM-16		42342-16	ID	1.610	.570	.062	41857
H		23746L-16		23746TM-16	23746TS-16 (Super 7°) 23747TS-16 (10° +.100)	42446-16*	ID	1.410	.567	.062	41850
I		23702L-16		23702LTM-16	23702TS-16 (Super 7°)	42402-16*	ID	1.540	.567	.062	41856

SUFFIX CODE: I : Impinged L : Lightweight LI : Lightweight and Impinged LTM : Lightweight TensileMax TM: TensileMax TS: Tool Steel

* Pro Series Locators



NexTek® Series

High Performance Valve Springs

• Chevy LS/LT1/LT4

Part No.	Description	Maximum Valve Lift	O.D.	I.D.	Installed / Open Pressure	Rate (lbs. / in.)	Coil Bind	Weight (grams)	Component Code
221428-16	SBC LS-Series, LT1 & Early Model LT-1 / LT-4 / L-98 High Performance Hydraulic Roller	.600	1.076 Top 1.311 Bottom	.650 Top .885 Bottom Single Conical Ovate Wire	150 @ 1.800 355 @ 1.200	341	1.085	79	A
221438-16	SBC LS-Series, LT1, LT4 & Early Model LT-1 / LT-4 / L-98 High Performance Hydraulic Roller	.650	1.076 Top 1.311 Bottom	.650 Top .885 Bottom Super Finished Single Conical Ovate Wire	150 @ 1.800 380 @ 1.150	353	1.100	73	A
221436-16	SBC LS-Series, LT1, LT4 & Early Model LT-1 / LT-4 / L-98 High Performance Hydraulic Roller	.660	1.295	.676 Fully Polished Double Without Damper	155 @ 1.810 405 @ 1.150	379	1.100	93	B
221435-16	SBC LS-Series, LT1, LT4 & Early Model LT-1 / LT-4 / L-98 High Performance Hydraulic Roller	.700	1.340	.726 Fully Polished Double Without Damper	170 @ 1.810 450 @ 1.110	394	1.050	94	C
221421-16	SBC LS-Series, LT1 High Performance Hydraulic Roller	.800	1.324	.676 Fully Polished Double Without Damper	165 @ 1.800 515 @ 1.000	435	.900	90	D
221422-16	SBC LS-Series, LT1 High Performance Solid Roller	.780	1.335	.622 Super Finished Double Without Damper	270 @ 1.800 870 @ 1.020	780	.960	109	E

See page 80 for comprehensive load charts

See page 88 for available Valve Spring Shims

LS/LT1/LT4 Valve Spring Kits

- Large savings over purchasing items separately

Kit No.	Application / Max. Lift	NexTek® Spring No.	7° Steel Retainer No.	I.D. Valve Spring Locator No.	7° Machined Valve Lock No.	Viton Valve Stem Seals No.
26382038KS	LS / .600"	221438-16	23620-16	42338-16	13098-16	24042-16
26362134KS	LS / .660"	221436-16	23621-16	42334-16	13098-16	24042-16
26351048KS	LS / .700"	221435-16	23610-16	42348-16	13098-16	24042-16

Kit No.	Application / Max. Lift	NexTek® Spring No.	7° Titanium Retainer No.	I.D. Valve Spring Locator No.	7° Machined Valve Lock No.	Viton Valve Stem Seals No.
26382538KS	LS / .650"	221438-16	23625-16	42338-16	13098-16	24042-16
2638LT4KS	LT4 / .650"	221438-16	23601-16	42148-8 (Int.) 42161-8 (Exh.)	13098-16	24042-16
26361734KLS	LS / .560" - LT1 / .660"	221436-16	23617-16	42334-16	13094-16	24042-16
26362334KS	LS / .660"	221436-16	23623-16	42334-16	13098-16	24042-16
2636LT4KS	LT4 / .660"	221436-16	23602-8 (Int.) 23623-8 (Exh.)	42162-8(Int.) 42165-8 (Exh.)	13098-16	24042-16
26351148KS	LS / .700"	221435-16	23611-16	42348-16	13098-16	24042-16
2635LT4KS	LT4 / .700"	221435-16	23603-16	42168-8(Int.) 42169-8 (Exh.)	13098-16	24042-16

Kit No.	Application / Max. Lift	NexTek® Spring No.	10° Tool Steel Retainer No.	I.D. Valve Spring Locator No.	10° Machined Valve Lock No.	Viton Valve Stem Seals No.
26380638KS	LS / .600"	221438-16	23606TS-16	42338-16	13153-16	24042-16
26361634KS	LS / .660"	221436-16	23616TS-16	42334-16	13153-16	24042-16

Note: Max. lift figures above may vary depending upon the cylinder head and installed height.

Note: New part numbers are ***BOLD & ITALICIZED***

Ancillary Components For Springs On Page 72

Component Code	Retainer Part No.	Description	I.D. Locator Part No.	Int./Exh.	Cup O.D.	Cup I.D.	Cup Thickness	Seat Cutter
A	23620-16	7° Steel for Manley 13098 or factory LS valve lock and factory spring seat						
	23606TS-16	10° H-13 Tool Steel Standard Height for Manley 13153 valve lock						
	23622-16	7° Titanium for Manley 13098 or factory LS valve lock and factory spring seat						
	23625-16	7° Titanium +.050 for Manley 13098 or factory LS valve lock and factory spring seat						
	23626-16	7° Titanium +.050 for early model LT-1 and standard type valve lock						
	23601-16	7° Titanium (LT4 Int/Exh) for Manley 13098 or factory LS/LT4 valve lock						
			42338-16	Int./Exh.	1.290	.505	.035	None
			42148-8	Int. (LT4)	1.290	.520	.035	None
			42336-16	Int./Exh.	1.290	.505	.062	None
			42349-16	Int./Exh.	1.290	.570	.062	41850
			42161-8	Exh. (LT4)	1.290	.520	.190	None
B	23621-16	7° Steel +.050 for Manley 13098 or factory LS valve lock						
	23616TS-16	10° H-13 Tool Steel +.050 for Manley 13153 valve lock						
	23617-16	7° Titanium for Manley 13098 or factory LS valve lock						
	23623-16	7° Titanium +.050 for Manley 13098 or factory LS valve lock						
	23624-16	7° Titanium +.050 for early model LT-1 and standard type valve lock						
	23623-8	7° Titanium (LT4 Exh) for Manley 13098 or factory LS/LT4 valve lock						
	23602-8	7° Titanium (LT4 Int) for Manley 13098 or factory LS/LT4 valve lock						
			42334-16	Int./Exh.	1.270	.505	.035	None
			42162-8	Int. (LT4)	1.270	.520	.035	None
			42124-16	Int./Exh.	1.270	.570	.062	41850
			42138-16	Int./Exh.	1.270	.505	.062	None
			42165-8	Exh. (LT4)	1.270	.520	.150	None
C	23610-16	7° Steel +.050 for Manley 13098 or factory LS valve lock						
	23611-16	7° Titanium +.050 for Manley 13098 or factory LS valve lock						
	23615TS-16	10° H-13 Tool Steel Standard Height for early model LT-1						
	23603-16	7° Titanium (LT4 Int/Exh) for Manley 13098 or factory LS/LT4 valve lock						
			42348-16	Int./Exh.	1.320	.505	.035	None
			42168-8	Int. (LT4)	1.320	.520	.035	None
			42135-16	Int./Exh.	1.320	.567	.035	None
			42169-8	Exh. (LT4)	1.320	.520	.150	None
D	23618-16	7° Titanium + .050 for Manley 13098 or factory LS valve lock						
			42117-16	Int./Exh.	1.300	.505	.035	None
			42130-16	Int./Exh.	1.300	.567	.035	None
E	23619-16	10° Titanium + .050 for Manley 13153 valve lock						
	23619TS-16	10° H-13 Tool Steel +.050" for Manley 13153 valve lock						
			42129-16	Int./Exh.	1.310	.505	.035	None
			42131-16	Int./Exh.	1.310	.567	.035	None

Factory OEM Installed Heights

Application	Installed Hgt.
LS-1	1.750"
LS-3	1.800"
LT1	1.870"
LT4 Int.	1.810"
LT4 Exh.	1.870"

LS/LT1/LT4 7° Valve Locks for 8mm Stem Valves

Part No.	Description
13094-16	.050" less installed hgt.
13098-16	Standard installed hgt.
13095-16	.050" more installed hgt.

Manley manufactures standard and +.050" retainers as well as standard, +.050" and -.050" valve locks enabling engine builders to achieve proper installed heights for the Manley NexTek® Springs above depending upon the chosen LS, LT1 or LT4 cylinder head. If required, spring shims may also need to be utilized to achieve the proper installed height.

NexTek® Series

High Performance Valve Springs

• Chrysler Hemi

Part No.	Description	Maximum Valve Lift	O.D.	I.D.	Installed / Open Pressure	Rate (lbs. / in.)	Coil Bind	Weight (grams)	Component Code
221431-16*	Chrysler Hemi 5.7L, 6.1L High Performance Hydraulic Roller	.650	1.076 Top 1.311 Bottom	.650 Top .885 Bottom	145 @ 1.811 370 @ 1.161	353	1.100	72	A
	Super Finished Single Conical Ovate Wire								
221439-16	Chrysler Hemi 6.4L High Performance Hydraulic Roller	.650	1.076 Top 1.311 Bottom	.650 Top .885 Bottom	145 @ 1.811 380 @ 1.150	353	1.100	72	A
	Super Finished Single Conical Ovate Wire								

* These Chrysler Hemi springs come with shims which are ONLY needed for 6.1L applications on the intake side in order to achieve the correct installed height. Each set also includes a set of piloting rings that install over the factory "Top Hat" integral valve seal to properly locate the ID of the spring on early 5.7L (thru 2008) and 6.1L applications. P/N 221431X-16 which does not include any shims or piloting rings is also available for the Hemi Drag Pak engines.

NexTek® Series

High Performance Valve Springs

• Ford Modular/Coyote

Part No.	Description	Maximum Valve Lift	O.D.	I.D.	Installed / Open Pressure	Rate (lbs. / in.)	Coil Bind	Weight (grams)	Component Code
221427-16	Ford 4.6L, 5.4L SOHC 2 Valves per Cylinder Stock Diameter Hydraulic Roller	.580	1.020 Top 1.125 Bottom	.642 Top .748 Bottom	95 @ 1.680 240 @ 1.130	264	1.080	52	B
	Single Conical Ovate Wire								
221437-16	Ford 4.6L, 5.4L SOHC 2 Valves per Cylinder Stock Diameter Ideal for Boosted Applications	.580	1.030 Top 1.175 Bottom	.642 Top .787 Bottom	125 @ 1.680 265 @ 1.130	255	1.080	56	B
	Single Conical Ovate Wire								
221433-24	Ford 4.6L, 5.4L 3 Valve 3 Valves per Cylinder High Performance Hydraulic Roller	.580	1.013 Top 1.101 Bottom	.650 Top .738 Bottom	110 @ 1.670 260 @ 1.090	258	1.020	49	C
	Single Conical Ovate Wire								
221434-32	Ford 4.6L, 5.4L DOHC 4 Valves per Cylinder Stock Diameter High Performance Hydraulic Roller	.525	1.016 Top 1.126 Bottom	.640 Top .750 Bottom	95 @ 1.420 270 @ .895	330	.860	45	D
	Single Conical Ovate Wire								
221418-32	Ford 5.0L DOHC Coyote Gen I/II 4 Valves per Cylinder Stock Diameter Hydraulic Roller	.570	.841 Top 1.014 Bottom	.533 Top .706 Bottom	90 @ 1.570 225 @ 1.000	236	.904	36	E
	Super Finished Single Conical Ovate Wire								
221419-32	Ford 5.0L DOHC Coyote Gen I/II 4 Valves per Cylinder High Performance Hydraulic Roller Ideal for Boosted Applications	.600	1.013 Top 1.101 Bottom	.650 Top .738 Bottom	120 @ 1.640 275 @ 1.040	258	.970	49	F
	Single Conical Ovate Wire								

See page 80 for comprehensive load charts

See page 88 for available Valve Spring Shims

Ancillary Components For Springs On Page 74

Component Code	Retainer Part No.	Description	Spring Cup Part No.	Type	Cup O.D.	Cup I.D.	Cup Thickness	Seat Cutter
A	23612-16 23613-16	7° Steel for Manley 13093 or factory valve lock 7° Titanium for Manley 13093 or factory valve lock Must use ID locator P/N 42324-16 for the 2009 and up Hemi 5.7L and all 6.4L	42324-16	ID	1.300	.812	.205	None
B	23627-16 23667-16	7° Titanium for Manley 13089 or factory valve lock 7° Titanium + .060 for Manley 13089 or factory valve lock						
C	23614-24	7° Titanium for Manley 13088 or factory valve lock						
D	23627-32 23667-32	7° Titanium for Manley 13089 or factory valve lock 7° Titanium + .060 for Manley 13089 or factory valve lock						
E	23604-32	7° Steel for Manley 13086 or factory valve lock and factory spring seat						
F	23605-32 23605TS-32	7° Titanium +.070 for Manley 13086 or factory valve lock 7° H-13 Tool Steel +.070 for Manley 13086 or factory valve lock	42153-32	ID	1.080	.440	.045	None

Addiction Motorsports

Street Master Valve Springs

- Chrome silicon material
- Designed for low stress and long service life

Part No.	Type	Application	Size OD/ID	Pressures	Rate (lbs./in.)	Weight (grams)	7° Steel Retainer	10° Steel Retainer	Titanium Retainer
22409-16	Outer w/ damper	SB Chevy Street Use	1.250" .865"	110 @ 1.700" 285 @ 1.210" Coil Bind: 1.180"	357	87	23651-16 (Std.) 23652-16 (+.050") 23652TS-16 (+.050" H-13)		23642-16 (7° x 11/32" +.050")
22408-16	Double w/ damper	SB Chevy, LS-1 Chevy, Ford, Chrysler	1.437" .720"	115 @ 1.800" 330 @ 1.250" 350 @ 1.200" Coil Bind: 1.100"	392	117	23645-16 (11/32") 23646-16 (11/32" +.100") 23666-16 (3/8")	23635-16 (+.060") 23635TS-16 (+.060" H-13)	23630-16 (10 Degree) 23638-16 (7° x 5/16" LS-1) 23639-16 (7° x 5/16" +.050" LS-1)
22407-16	Double w/ damper	SB & BB Chevy	1.437" .720"	135 @ 1.800" 365 @ 1.250" 385 @ 1.200" Coil Bind: 1.085"	418	121	23645-16 (11/32") 23646-16 (11/32" +.100") 23666-16 (3/8")	23635-16 (+.060") 23635TS-16 (+.060" H-13)	23630-16 (10 Degree)
22406-16	Outer w/ damper	BB Chevy, Chrysler	1.550" 1.080"	125 @ 1.875" 355 @ 1.375" Coil Bind: 1.190"	460	121	23645-16 (11/32") 23646-16 (11/32" +.100") 23666-16 (3/8")	23635-16 (+.060") 23635TS-16 (+.060" H-13)	23630-16 (10 Degree)

See page 77 for comprehensive load charts

See page 88 for available Valve Spring Shims

Professional Valve Springs

- Chrome silicon material for oval track and drag racing

Part No.	Type	Application	Size OD/ID	Pressures	Rate (lbs. / in)	Weight Grams	Super 7° Retainer	7°x11/32" Retainer	10° Steel Retainer	10° Titanium Retainer
22410-16	Outer w/ damper	Oval track Stock Class Chrome Silicon	1.260" .876"	130 @ 1.750" 335 @ 1.200" 1.095" Coil Bind	370	82		23651-16 (Std. Steel) 23652-16 (+.050" Steel) 23652TS-16 (+.050" H-13) 23642-16 (+.050" Titanium)		
22411-16	Outer w/ damper	SB Chevy Stock Diameter Chrome Silicon	1.255" .870"	115 @ 1.750" 390 @ 1.175" 1.100" Coil Bind	470	81		23651-16 (Std. Steel) 23652-16 (+.050" Steel) 23652TS-16 (+.050" H-13) 23642-16 (+.050" Titanium)		
22441-16	Double w/ damper	Oval Track Chrome Silicon	1.550" .740"	170 @ 1.900" 500 @ 1.200" 1.150" Coil Bind	471	152	23670-16 (Titanium) 23670TM -16 (Tensile Max) 23670TS-16 (H-13)	23659-16 (+.100") 23660TS-16 (+.100" H-13)		23658-16 (Std.) 23660-16 (+.100")
22429-16	Double w/ damper	Oval Track Chrome Silicon	1.550" .740"	150 @ 1.880" 425 @ 1.280" 1.180" Coil Bind	458	109	23672-16 (Titanium) 23672TM-16 (Tensile Max) 23672TS-16 (H-13)	23656-16 (+.100") 23647TS-16 (+.100" H-13)		23657-16 (Std.) 23661-16 (+.100")
22430-16	Double w/ damper	Oval Track Chrome Silicon	1.550" .735"	210 @ 1.900" 525 @ 1.250" 1.200" Coil Bind	484	156	23672-16 (Titanium) 23672TM-16 (Tensile Max) 23672TS-16 (H-13)	23656-16 (+.100") 23647TS-16 (+.100" H-13)		23657-16 (Std.) 23661-16 (+.100")
22431-16	Double w/ damper	Oval / Drag Chrome Silicon	1.550" .725"	225 @ 1.950" 580 @ 1.250" 1.190" Coil Bind	507	159	23670-16 (Titanium) 23670TM-16 (Tensile Max) 23670TS-16 (H-13)	23659-16 (+.100") 23660TS-16 (+.100" H-13)		23658-16 (Std.) 23660-16 (+.100")
22440-16	Double w/ damper	Drag Race Chrome Silicon	1.550" .720"	250 @ 1.850" 680 @ 1.150" 1.090" Coil Bind	614	147	23670-16 (Titanium) 23670TM-16 (Tensile Max) 23670TS-16 (H-13)	23659-16 (+.100") 23660TS-16 (+.100" H-13)		23658-16 (Std.) 23660-16 (+.100")

See page 77 for comprehensive load charts

See page 88 for available Valve Spring Shims

Street Master / Professional Series

Street/Strip, Oval Track & Drag Race Valve Springs

Load Chart

P/N Type of Spring	22406 Single	22407 Double	22408 Double	22409 Single	22410 Single	22411 Single	22429 Double	22430 Double	22431 Double	22440 Double	22441 Double
Installed Ht. Inst. Pressure	1.875 125	1.800 135	1.800 115	1.700 110	1.750 130	1.750 115	1.880 150	1.900 210	1.950 225	1.850 250	1.900 170
Open Ht. Open Pressure	1.375 355	1.250 350	1.200 350	1.210 285	1.200 335	1.175 390	1.280 425	1.250 525	1.250 580	1.150 680	1.200 500
Spring Rate	460	418	392	357	370	470	458	484	507	614	471
O.D. of Outer I.D. of Outer I.D. of Inner	1.550 1.080 N/A	1.437 1.060 0.720	1.437 1.060 0.720	1.250 0.865 N/A	1.260 0.876 N/A	1.255 0.870 N/A	1.550 1.130 0.740	1.550 1.130 0.735	1.550 1.115 0.725	1.550 1.115 0.720	1.550 1.115 0.740
Coil Bind Ht.	1.190	1.085	1.100	1.180	1.095	1.100	1.180	1.200	1.190	1.090	1.100
Damper	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SPRING HEIGHT Inches											
2.150									124		
2.100								113	149		76
2.050	45						72	137	174	127	99
2.000	68	51	37				95	162	200	158	123
1.950	91	72	56		56	21	118	186	225	189	146
1.900	114	93	76	39	75	45	141	210	250	219	170
1.850	137	114	95	56	93	68	164	234	276	250	194
1.800	160	135	115	74	112	92	187	258	301	281	217
1.750	183	156	135	92	130	115	210	283	326	311	241
1.700	206	177	154	110	149	139	233	307	352	342	264
1.650	229	198	174	128	167	162	256	331	377	373	288
1.600	252	219	193	146	186	186	279	355	402	404	311
1.550	275	240	213	164	204	209	301	379	428	434	335
1.500	298	260	233	181	223	233	324	404	453	465	358
1.450	321	281	252	199	241	256	347	428	479	496	382
1.400	344	302	272	217	260	280	370	452	504	526	406
1.350	367	323	291	235	278	303	393	476	529	557	429
1.300	390	344	311	253	297	327	416	500	555	588	453
1.250	413	365	331	271	315	350	439	525	580	618	476
1.200		386	350	289	335	374	462			649	500
1.150		407	370		352	397				680	523
	LOAD (LBS.)										

NexTek® Series

Drag Race, Oval Track & Endurance Valve Springs

Load Chart

P/N Type of Spring Color Code	221420 Double Super Finished	221424/P Double Blue/ Polished	221425/P Double Green/ Polished	221432 Double Silver	221440P Double Polished	221441P Double Polished	221442 Double Polished	221443/P Double White/ Polished	221444/P Double Yellow/ Polished	221445P Double Polished	221446SF Double Super Finished
Installed Ht. Inst. Pressure	2.050 275	2.000 250	2.100 280	1.900 150	2.000 255	2.030 280	2.000 260	1.950 235	2.050 235	2.050 280	2.050 240
Open Ht. Open Pressure	1.200 940	1.150 800	1.250 795	1.270 425	1.300 630	1.300 700	1.250 660	1.250 610	1.300 645	1.250 680	1.250 700
Spring Rate	780	647	604	435	534	575	533	535	546	500	575
O.D. of Outer I.D. of Outer I.D. of Inner	1.500 1.050 0.710	1.640 1.185 0.860	1.640 1.185 0.860	1.530 1.141 0.750	1.570 1.137 0.760	1.570 1.121 0.750	1.560 1.127 0.812	1.580 1.147 0.832	1.610 1.161 0.842	1.620 1.187 0.852	1.400 0.990 0.700
Coil Bind Ht.	1.130	1.070	1.150	1.170	1.190	1.215	1.200	1.170	1.220	1.200	1.150
Damper	No	No	No	Yes	Yes	Yes	No	No	No	No	No
SPRING HEIGHT Inches											
2.350	41										
2.300	80		159								
2.250	119		189						126	180	125
2.200	158	121	220		148	182	153		153	205	154
2.150	197	153	250		175	211	180	128	180	230	183
2.100	236	185	**280**	63	202	240	207	155	208	255	211
2.050	**275**	218	310	85	228	268	233	182	**235**	**280**	**240**
2.000	314	**250**	340	107	**255**	**297**	**260**	208	262	305	269
1.950	353	282	371	128	282	326	287	**235**	290	330	298
1.900	392	315	401	**150**	308	355	313	262	317	355	326
1.850	431	347	431	172	335	383	340	289	344	380	355
1.800	470	379	461	194	362	412	367	315	372	405	384
1.750	509	412	491	215	389	441	393	342	399	430	413
1.700	548	444	522	237	415	470	420	369	426	455	441
1.650	587	476	552	259	442	498	447	396	453	480	470
1.600	626	509	582	281	469	527	473	422	481	505	499
1.550	665	541	612	302	495	556	500	449	508	530	528
1.500	704	574	642	324	522	585	527	476	535	555	556
1.450	743	606	673	346	549	613	553	503	563	580	585
1.400	782	638	703	368	575	642	580	529	590	605	614
1.350	821	671	733	389	602	671	606	556	617	630	643
1.300	860	703	763	411	**630**	**700**	633	583	**645**	655	671
1.250	899	735	**795**	**433**	656	728	**660**	**610**	672	**680**	**700**
1.200	**940**	768	824	455				636			729
1.150	977	**800**									
1.100		832									
	LOAD (LBS.)										

Note: **BOLD** loads correspond to installed and open pressures.

NexTek® Series

Drag Race, Oval Track & Endurance Valve Springs

Load Chart

P/N Type of Spring Color Code	221447/P Triple Pink/ Polished	221448/P Triple Orange/ Polished	221449/P Triple Red/ Polished	221450/P Triple Purple/ Polished	221452SF Double Super Finished	221454/P Double Orange/ Polished	221455 Double Super Finished	221456 Double Super Finished	221457 Double Super Finished	221460 Double Super Finished	221461 Double Super Finished
Installed Ht. Inst. Pressure	2.000 350	2.100 350	2.200 350	2.200 370	2.025 250	2.000 290	2.175 450	2.100 330	2.150 405	2.250 440	2.300 425
Open Ht. Open Pressure	1.270 895	1.200 1010	1.200 1070	1.200 1140	1.200 750	1.150 825	1.175 1250	1.200 1050	1.200 1165	1.300 1340	1.300 1389
Spring Rate	746	733	720	770	618	635	797	800	800	948	964
O.D. of Outer I.D. of Outer I.D. of Middle I.D. of Inner	1.677 1.203 0.874 0.635	1.677 1.203 0.874 0.635	1.677 1.203 0.874 0.632	1.677 1.203 0.874 0.632	1.550 1.130 N/A 0.800	1.650 1.185 N/A 0.860	1.500 1.050 N/A 0.710	1.500 1.050 N/A 0.710	1.500 1.050 N/A 0.710	1.522 1.050 N/A 0.710	1.540 1.050 N/A 0.710
Coil Bind Ht.	1.160	1.142	1.142	1.142	1.150	1.105	1.130	1.130	1.130	1.255	1.215
Damper	No	No	No	No	No	No	No	No	No	No	No
Inches											
2.500											233
2.450										250	281
2.400			206	216						298	329
2.350			242	255			311		245	345	377
SPRING HEIGHT 2.300		203	278	293			350	170	285	393	**425**
2.250		240	314	332	111	390	210	325	440	473	
2.200	201	277	**350**	**370**	142	161	430	250	365	487	521
2.150	238	313	386	409	173	193	**470**	290	**405**	535	570
2.100	275	**350**	422	447	204	225	510	**330**	445	582	618
2.050	313	387	458	486	235	256	550	370	485	630	666
2.000	**350**	423	494	524	**266**	**290**	590	410	525	677	714
1.950	387	460	530	563	297	320	629	450	565	724	762
1.900	425	497	566	601	328	352	669	490	605	772	811
1.850	462	533	602	640	359	383	709	530	645	819	859
1.800	499	570	638	678	390	415	749	570	685	867	907
1.750	537	607	674	717	420	447	789	610	725	914	955
1.700	574	643	710	755	451	479	829	650	765	961	1003
1.650	611	680	746	794	482	510	869	690	805	1009	1052
1.600	648	717	782	832	513	542	908	730	845	1056	1100
1.550	686	753	818	871	544	574	948	770	885	1104	1148
1.500	723	790	854	909	575	606	988	810	925	1151	1196
1.450	760	826	890	948	606	637	1028	850	965	1198	1244
1.400	798	863	926	986	637	669	1068	890	1005	1246	1293
1.350	835	900	962	1025	668	701	1108	930	1045	1293	1341
1.300	872	936	998	1063	699	733	1147	970	1085	**1340**	**1389**
1.250	**910**	973	1034	1102	719	764	1187	1010	1125		1437
1.200	947	**1010**	**1070**	**1140**	**750**	796	1227	**1050**	**1165**		
1.150						**828**	**1267**	1090	1205		
	LOAD (LBS.)										

Note: **BOLD** loads correspond to installed and open pressures.

NexTek® Series

High Performance Valve Springs

- Chevy LS/LT1
- Late Model Chrysler Hemi
- Ford Modular
- Ford Coyote

Load Chart

P/N Type of Spring Color Code	221418 Conical Super Finished	221419 Conical Plain	221421 Double Polished Finished	221422 Double Super	221427 Conical Gold	221428 Conical Salmon	221431 221439 Conical Super Finished	221433 Conical Super Finished	221434 Conical Plain	221435 Double Polished	221436 Double Polished	221437 Conical Plain	221438 Conical Super Finished
Installed Ht. Inst. Pressure	1.570 90	1.640 120	1.800 165	1.800 270	1.680 95	1.800 150	1.811 145	1.670 110	1.420 95	1.810 170	1.810 155	1.680 125	1.800 150
Open Ht. Open Pressure	1.000 225	1.040 275	1.000 515	1.020 870	1.130 240	1.200 355	1.161 370	1.090 260	0.895 270	1.110 450	1.150 405	1.130 265	1.150 375
Spring Rate	236	258	435	780	264	341	353	258	330	394	379	255	353
O.D. of Outer I.D. of Outer I.D. of Inner	1.014 .533 N/A	1.101 .650 N/A	1.324 0.920 0.676	1.335 0.907 0.622	1.125 0.642 N/A	1.311 0.650 N/A	1.311 0.650 N/A	1.101 0.650 N/A	1.126 0.640 N/A	1.340 0.994 0.726	1.295 0.949 0.676	1.175 0.642 N/A	1.311 0.650 N/A
Coil Bind Ht.	.904	.970	0.900	0.960	1.080	1.085	1.100	1.020	0.860	1.050	1.100	1.080	1.100
Damper	No	No	No	No	No	No	No	No	No	No	No	No	No
SPRING HEIGHT Inches													
2.000						82	79			95	83		79
1.950						99	97			115	102		97
1.900					37	116	115			135	121	69	115
1.850		63	143	231	50	133	132	63		154	140	82	132
1.800		76	165	270	64	150	150	76		174	159	95	150
1.750	48	89	187	309	77	167	168	89		194	178	107	168
1.700	59	102	209	348	90	184	185	102		213	197	120	185
1.650	71	115	230	387	103	201	203	115		233	216	133	203
1.600	83	128	252	426	116	218	221	128	36	253	235	146	221
1.550	95	141	274	465	130	235	238	141	53	273	254	158	238
1.500	107	154	296	504	143	252	256	154	69	292	273	171	256
1.450	118	167	317	543	156	269	274	167	86	312	292	184	274
1.400	130	180	339	582	169	286	291	180	102	332	311	197	291
1.350	142	192	361	621	182	303	309	192	119	351	330	209	309
1.300	154	205	383	660	196	321	327	205	135	371	349	222	327
1.250	166	218	404	699	209	338	344	218	152	391	367	235	344
1.200	177	231	426	738	222	355	362	231	168	410	386	248	362
1.150	189	244	448	777	235	372	379	244	185	430	405	260	379
1.100	201	257	470	816	248	389		257	201	450		273	
1.050	213	270	491	855				270	218				
1.000	225	283	513	894					234				
0.950	236		535						251				
0.900									267				
	LOAD (LBS.)												

Manley Retainers

....simply the best!

- Engineered using finite element analysis
  - Specially heat treated titanium material
- Exclusive "impingement" finishing process
  - TensileMax steel and H-13 tool steel alloys
- CNC machined to exacting tolerances and jewel-like surface finishes

TensileMax Steel

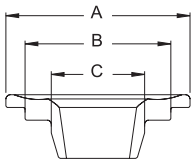
Lightweight Titanium

H-13 Tool Steel

7° & 10° Titanium

7° Titanium Retainers

- Special 6AL-4V titanium for maximum strength
- CAD designed for ultimate reduction in mass without sacrificing strength
- Must use 7° valve locks



Part No.	Quantity	Spring	Height	Spring O.D.	Dimensions A	Dimensions B	Dimensions C	Keeper Degree x Valve Stem	Wgt/ Grams
23614-24	24 pcs.	Manley 221433	Std.	1.013"	.875"	.640"	.440"	7° x 6mm	5
23605-32	32 pcs.	Manley 221419	+.070"	1.013"	.875"	.640"	.440"	7° x 6mm	5
23627-16	16 pcs.	Manley 221427/221437	Std.	1.020"/1.030"	.875"	.627"	.465"	7° x 7mm	5
23667-16	16 pcs.	Manley 221427/221437	+.060"	1.020"/1.030"	.875"	.627"	.465"	7° x 7mm	5
23629-16	16 pcs.	PSI 1511ML	Std.	1.056"	.915"	.620"	.540"	7° x 5/16"	5
23613-16	16 pcs.	Manley 221431, 221439	Std.	1.076"	.935"	.640"	.570"	7° x 5/16"	6
23622-16	16 pcs.	Manley 221428/221438	Std.	1.076"	.935"	.640"	.570"	7° x 8mm	5
23625-16	16 pcs.	Manley 221428/221438	+.050"	1.076"	.935"	.640"	.570"	7° x 8mm	5
23626-16	16 pcs.	Manley 221428/221438	+.050"	1.076"	.935"	.640"	.575"	7° x 11/32"	6
23601-16	16 pcs.	Manley 221428/221438	+.095"	1.076"	.935"	.640"	.570"	7° x 8mm	6
23642-16	16 pcs.	Manley 22409, 22410, 22411	+.050"	1.250"	1.150"	.865"	.620"	7° x 11/32"	9
23617-16	16 pcs.	Manley 221436	Std.	1.295"	1.155"	.950"	.675"	7° x 8mm	10
23623-16	16 pcs.	Manley 221436	+.050"	1.295"	1.155"	.950"	.675"	7° x 8mm	10
23624-16	16 pcs.	Manley 221436	+.050"	1.295"	1.155"	.950"	.675"	7° x 11/32"	10
23602-8	8 pcs.	Manley 221436	+.105"	1.295"	1.155"	.950"	.675"	7° x 8mm	10
23618-16	16 pcs.	Manley 221421	+.050"	1.324"	1.200"	.910"	.666"	7° x 8mm	11
23611-16	16 pcs.	Manley 221435	+.050"	1.340"	1.200"	.985"	.715"	7° x 8mm	11
23603-16	16 pcs.	Manley 221435	+.105"	1.340"	1.200"	.985"	.715"	7° x 8mm	11
23638-16	16 pcs.	Manley 22408	Std.	1.437"	1.340"	1.050"	.700"	7° x 8mm	14
23639-16	16 pcs.	Manley 22408	+.050"	1.437"	1.340"	1.050"	.700"	7° x 8mm	14
23675-16	16 pcs.	Manley 221420, 1455, 1456, 1457, 1460, 1461	+.100"	1.500"	1.325"	1.035"	.705"	7° x 11/32", 3/8"	14
23677-16*	16 pcs.	Manley 221420, 1455, 1456, 1457, 1460, 1461	+.100"	1.500"	1.325"	1.035"	.705"	7° x 11/32", 3/8"	15
23673-16	16 pcs.	Manley 221447, 221448, 221449, 221450	+.100"	1.660"	1.500"	1.185"	.860"	7° x 11/32", 3/8"	20

* Made from our high strength TI-17 Titanium Material

P/N's 23601, 23602, 23603, 23611, 23617, 23618, 23622, 23623, 23625, 23638, and 23639 must use Manley P/N 13098 or factory Chevrolet LS valve locks

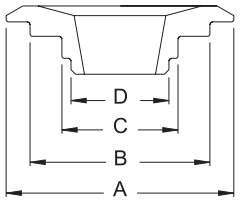
P/N's 23624, 23626, and 23642 are for the following engine models: LT-1 / LT-4 / L-98 and must use Manley P/N 13091

Super 7° Titanium Retainers

- Super 7° angle is actually 8°
- Heat treated titanium material for maximum strength
- Available with or without our exclusive impingement surface enhancement process
- Impingement results in a 20% improvement in resistance to abrasion, a 30% improvement in fatigue strength, and an overall improvement in surface finish
- "L" Suffix indicates Lightweight version which is 3-4 grams lighter than standard part number

Ti-17 ALLOY

BULK PRICING AVAILABLE

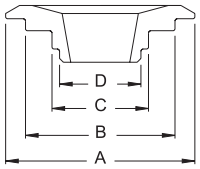


Part No.	Part No. w/ Impinge	Quantity	Spring Type	Spring	Spring O.D.	Dimensions A	B	C	D	Wgt/ Grams
23746L-16	--------	16 pcs.	Double	Manley 221446SF	1.400"	1.260"	.980"	.690"	---	12
23701-16	--------	16 pcs.	Double	Manley 221420, 1455, 1456, 1457, 1460, 1461	1.500"	1.325"	1.035"	.705"	---	14
23700L-16	23700LI-16	16 pcs.	Double	PSI CT1040	1.500"	1.450"	1.080"	.785"	---	16
23670-16	--------	16 pcs.	Double	Manley 22431, 22440, 22441	1.550"	1.500"	1.105"	.710"	---	19
23702L-16	--------	16 pcs.	Double	Manley 221452SF	1.550"	1.450"	1.120"	.790"	---	17
23672-16	23672I-16	16 pcs.	Double	Manley 221441P, 22429, 22430	1.550"	1.500"	1.125"	.730"	---	18
23672L-16	--------	16 pcs.	Double	20% lighter than 23672	1.550"	1.450"	1.125"	.730"	---	14
23674L-16	23674LI-16	16 pcs.	Double	Comp. 927	1.550"	1.450"	1.140"	.730"	---	17
23669-16	--------	16 pcs.	Double	Comp 26099	1.550"/1.625"	1.500"	1.175"	.765"	---	21
23705L-16	23705LI-16	16 pcs.	Double	Manley 221440P	1.560"	1.450"	1.140"	.745"	---	16
23706L-16	23706LI-16	16 pcs.	Double	.050" more installed than 23705L	1.560"	1.450"	1.140"	.745"	---	16
23682-16	--------	16 pcs.	Double	Manley 221442	1.560"	1.500"	1.120"	.805"	---	21
23682L-16	--------	16 pcs.	Double	16% lighter than 23682	1.560"	1.450"	1.120"	.805"	---	17
23681-16	--------	16 pcs.	Double	Manley 221443, 221444	1.580" / 1.610"	1.500"	1.150"	.825"	---	21
23681L-16	23681LI-16	16 pcs.	Double	17% lighter than 23681	1.580" / 1.610"	1.450"	1.150"	.825"	---	18
23691-16	--------	16 pcs.	Double	.050" more installed than 23681	1.580" / 1.610"	1.500"	1.150"	.825"	---	20
23685-16	23685I-16	16 pcs.	Double	Manley 221445P	1.620"	1.500"	1.175"	.840"	---	20
23685L-16	23685LI-16	16 pcs.	Double	16% lighter than 23685	1.620"	1.460"	1.175"	.840"	---	17
23708L-16	--------	16 pcs.	Triple	Manley 221447, 221448 221449, 221450	1.660"	1.450"	1.185"	.870"	.635"	17

Please call with your custom retainer requirements

Lightweight 10° Titanium Retainers

- Squeeze more RPM's out of your engine
- Avoid valve float
- Lightweight retainer does not sacrifice reliability
- 16 grams - compared to normal 19 to 21 grams
- Special heat treated titanium for maximum strength
- Must use 10° valve locks



BULK PRICING AVAILABLE

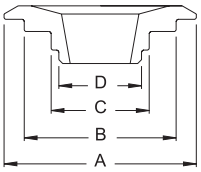
Part No.	Quantity	Spring Type	Spring	Height	Spring O.D.	Dimensions A	B	C	D	Wgt/ Grams
23540-16	16 pcs.	Double	Manley 221424, 221425, 221454	+.100"	1.625"	1.430"	1.175"	.850"	- - -	17
23562-16	16 pcs.	Triple	Pacaloy Comp 946, 947, 948	+.100"	1.625" / 1.650"	1.430"	1.190"	.875"	.640"	16
23553-16	16 pcs.	Triple	Manley 221447, 221448, 221449, 221450	+.100"	1.660"	1.430"	1.185"	.860"	.620"	16
23553I-16	16 pcs.	Triple	Manley 221447, 221448, 221449, 221450	+.100"	1.660"	1.430"	1.185"	.860"	.620"	16
	23553 I retainer is impinged.									
23679-16*	16 pcs.	Double	Manley 221420, 1455, 1456, 1457, 1460, 1461	+.100"	1.500"	1.325"	1.035"	.705"	- - -	14
23683-16*	16 pcs.	Double	Manley 221420, 1455, 1456, 1457, 1460, 1461	+.170"	1.500"	1.325"	1.035"	.705"	- - -	14
23753-16*	16 pcs.	Triple	Manley 221447, 221448, 221449, 221450	+.100"	1.660"	1.430"	1.185"	.860"	.620"	17
	* Made from our high strength TI-17 Titanium Material									

ATI Racings J.C. Beattie Jr.

10° Titanium Retainers

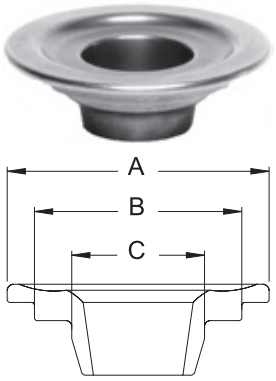
- Special 6AL-4V titanium for maximum strength
- Excellent value for all forms of racing

BULK PRICING AVAILABLE



Part No.	Quantity	Spring Type	Spring	Height	Spring O.D.	Dimensions A	B	C	D	Wgt/ Grams
23630-16	16 pcs.	Outer-Inner	22406, 22407, 22408	Std.	1.437"/1.550"	1.440"	1.050"	.700"	---	15
23684-16	16 pcs.	Double	Manley 221420, 1455, 1456, 1457, 1460, 1461	Std.	1.500"	1.325"	1.035"	.705"	---	14
23644-16	16 pcs.	Double	Manley 221432, Manley 221440P, Comp. 927	Std.	1.550"	1.500"	1.140"	.740"	---	17
23658-16	16 pcs.	Double	Manley 22431, 22440, 22441	Std.	1.550"	1.500"	1.105"	.710"	---	16
23657-16	16 pcs.	Double	Manley 22429, 22430	Std.	1.550"	1.500"	1.120"	.705"	---	18
23649-16	16 pcs.	Double	Manley 221424, 221425, 221454	Std.	1.625"	1.500"	1.175"	.850"	---	19
23654-16	16 pcs.	Double	Comp. 26099	Std.	1.625"	1.500"	1.175"	.765"	---	17
23663-16	16 pcs.	Triple	Manley 221447, 221448, 221449, 221450	Std.	1.660"	1.500"	1.185"	.860"	.620"	21
23619-16	16 pcs.	Double	Manley 221422	+.050"	1.335"	1.235"	.900"	.615"	---	11
23676-16	16 pcs.	Double	Manley 221420, 1455, 1456, 1457, 1460, 1461	+.100"	1.500"	1.325"	1.035"	.705"	---	13
23641-16	16 pcs.	Triple	Crane 99882	+.100"	1.550"	1.500"	1.130"	.735"	.640"	17
23650-16	16 pcs.	Double	Manley 221432, Manley 221440P, Comp. 927	+.100"	1.530"/1.570"	1.500"	1.140"	.740"	---	18
23660-16	16 pcs.	Double	Manley 22431, 22440, 22441	+.100"	1.550"	1.500"	1.105"	.710"	---	17
23661-16	16 pcs.	Double	Manley 22429, 22430	+.100"	1.550"	1.500"	1.120"	.705"	---	17
23647-16	16 pcs.	Double	Manley 221441P, Comp. 938, K-950	+.100"	1.550"	1.500"	1.120"	.730"	---	18
23643-16	16 pcs.	Double	Manley 221442	+.100"	1.560"	1.500"	1.120"	.805"	---	19
23648-16	16 pcs.	Double	Manley 221443, 221444 Comp. 951	+.100"	1.580"/1.610"	1.500"	1.150"	.825"	---	20
23655-16	16 pcs.	Double	Comp. 26099	+.100"	1.625"	1.500"	1.175"	.750"	---	17
23640-16	16 pcs.	Double	Manley 221424, 221425, 221454	+.100"	1.625"	1.500"	1.175"	.850"	---	20
23662-16	16 pcs.	Triple	Comp. 948	+.100"	1.625"	1.500"	1.190"	.875"	.640"	19
23665-16	16 pcs.	Triple	K-1400	+.100"	1.625"	1.500"	1.185"	.765"	.645"	18
23653-16	16 pcs.	Triple	Manley 221447, 221448, 221449, 221450	+.100"	1.660"	1.500"	1.185"	.860"	.620"	19

TensileMax Steel Retainers



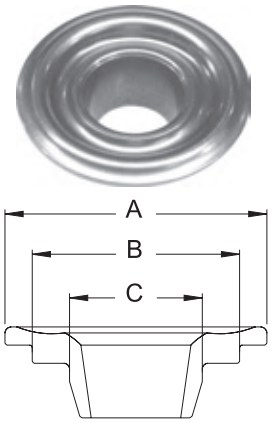
These are serious retainers for serious engine builders who *DEMAND THE VERY BEST...*

- Manufactured from our incredibly tough TensileMax alloy
- Designed to be as light as standard titanium retainers and very close in weight to lightweight titanium versions (within 2-4 grams)
- Specially heat treated to provide a hardness of Rc 52-54 and prevent retainer wear
- Exclusive process yields a part that provides the optimum balance between ultimate strength, fatigue strength, hardness and ductility
- Unique impingement process developed specifically for our TensileMax alloy and hardness range to improve fatigue strength and promote better oiling between the spring and retainer

Part No.	Quantity	Spring Type	Spring	Spring O.D.	Keeper Degree	Dimensions A	Dimensions B	Dimensions C	Wgt/ Grams
23746TM-16	16 pcs.	Double	Manley 221446SF	1.400"	Super 7°	1.260"	.980"	.690"	16
23675TM-16	16 pcs.	Double	Manley 221420, 1455, 1456, 1457, 1460, 1461	1.500"	7° (+.100")	1.325"	1.035"	.705"	18
23676TM-16	16 pcs.	Double	Manley 221420, 1455, 1456, 1457, 1460, 1461	1.500"	10° (+.100")	1.325"	1.035"	.705"	17
23670TM-16	16 pcs.	Double	Manley 22431, 22440, 22441	1.550"	Super 7°	1.420"	1.105"	.710"	20
23702LTM-16	16 pcs.	Double	Manley 221452SF	1.550"	Super 7°	1.440"	1.120"	.790"	20
23674TM-16	16 pcs.	Double	Comp. 927	1.550"	Super 7°	1.440"	1.140"	.730"	22
23682TM-16	16 pcs.	Double	Manley 221442	1.560"	Super 7°	1.440"	1.120"	.805"	23
23672TM-16	16 pcs.	Double	Manley 221441P, 22429, 22430	1.570"	Super 7°	1.440"	1.125"	.730"	20
23705TM-16	16 pcs.	Double	Manley 221440P	1.570"	Super 7°	1.440"	1.140"	.745"	22
23705LTM-16	16 pcs.	Double	14% lighter than 23705TM	1.570"	Super 7°	1.440"	1.140"	.745"	19
23685TM-16	16 pcs.	Double	Manley 221445P	1.620"	Super 7°	1.460"	1.175"	.840"	23

CNC Retainer Machining

Lightweight H-13 Tool Steel Retainers



For those searching for a slightly more economical alternative to titanium retainers, either to help solve a "wear problem" or because of "class rules," Manley lightweight H-13 Tool Steel retainers are your solution! H-13 tool steel allows for better processing than "other" tool steels typically utilized; thus yielding a stronger, more durable product.

- Up to 33% lighter than standard 10° steel retainers
- Only 2-4 grams heavier than titanium versions
- Heat treated to provide a hardness of Rc 56

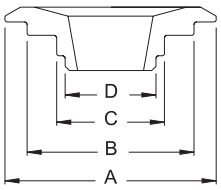
Part No.	Quantity	Spring Type	Spring	Spring O.D.	Keeper Degree	Dimensions A	Dimensions B	Dimensions C	Wgt/ Grams
23605TS-32	32 pcs.	Single	Manley 221419	1.013"	7° x 6mm	.875"	.640"	.440"	8
23606TS-16	16 pcs.	Single	Manley 221428, 221438	1.076"	10° (Std.)	.935"	.640"	-----	8
23652TS-16	16 pcs.	Single	Manley 22409, 22410, 22411	1.255"	7° x 11/32" (+.050")	1.120"	.865"	.538"	13
23616TS-16	16 pcs.	Double	Manley 221436	1.290"	10° (+.050")	1.155"	.950"	.675"	15
23615TS-16	16 pcs.	Double	Manley 221435	1.340"	10° (Std.)	1.190"	.985"	.715"	16
~~23619TS-16~~	16 pcs.	Double	Manley 221422	1.335"	10° (+.050")	1.235"	.900"	.615"	TBA
23746TS-16	16 pcs.	Double	Manley 221446SF	1.400"	Super 7°	1.245"	.980"	.690"	17
23747TS-16	16 pcs.	Double	Manley 221446SF	1.400"	10° (+.100")	1.245"	.980"	.690"	18
23635TS-16	16 pcs.	Single/Double	Manley 22406, 22407, 22408	1.437"/1.550"	10° (+.060")	1.420"	1.050"	.700"	20
23650TS-16	16 pcs.	Double	Manley 221432, 221440P	1.530"/1.570"	10° (+.100")	1.440"	1.140"	.740"	23
23660TS-16	16 pcs.	Double	Manley 22431, 22440, 22441	1.550"	10° (+.100")	1.440"	1.105"	.710"	21
23670TS-16	16 pcs.	Double	Manley 22431, 22440, 22441	1.550"	Super 7°	1.440"	1.105"	.710"	22
23702TS-16	16 pcs.	Double	Manley 221452SF	1.550"	Super 7°	1.440"	1.120"	.790"	23
23643TS-16	16 pcs.	Double	Manley 221442	1.560"	10° (+.100")	1.440"	1.120"	.805"	23
23682TS-16	16 pcs.	Double	Manley 221442	1.560"	Super 7°	1.440"	1.120"	.805"	23
23647TS-16	16 pcs.	Double	Manley 221441P, 22429, 22430	1.570"	10° (+.100")	1.440"	1.120"	.730"	22
23672TS-16	16 pcs.	Double	Manley 221441P, 22429, 22430	1.570"	Super 7°	1.440"	1.125"	.730"	20
23648TS-16	16 pcs.	Double	Manley 221443, 221444	1.580"/1.610"	10° (+.100")	1.440"	1.150"	.825"	24
23681TS-16	16 pcs.	Double	Manley 221443, 221444	1.580"/1.610"	Super 7°	1.440"	1.150"	.825"	24

Call your Manley salesman to inquire about custom H-13 tool steel retainers

Street Master Steel Valve Spring Retainers

- CNC machined to exacting tolerances
- Thru-hardened 4140 chrome moly

BULK PRICING AVAILABLE



Part No.	Quantity	Spring	Spring Height	Spring O.D.	Keeper Degree x Valve Stem	Dimensions A	B	C	D	Wgt/ Grams
23604-32	32 pcs.	221418	Std.	.841"	7° x 6mm	.795"	.525"	---	---	7
23612-16	16 pcs.	221431, 221439	Std.	1.076"	7° x 5/16"	.935"	.640"	---	---	10
23620-16	16 pcs.	221428, 221438	Std.	1.076"	7° x 8mm	.935"	.640"	---	---	10
23651-16	16 pcs.	22409, 22410, 22411	Std.	1.250"	7° x 11/32"	1.245"	.865"	.680"	---	21
23652-16	16 pcs.	22409, 22410, 22411	+.050"	1.250"	7° x 11/32"	1.245"	.865"	.680"	---	21
23621-16	16 pcs.	221436	+.050"	1.290"	7° x 8mm	1.155"	.950"	.675"	---	17
23610-16	16 pcs.	221435	+.050"	1.340"	7° x 8mm	1.200"	.985"	.715"	---	19
23645-16	16 pcs.	22406, 22407, 22408	Std.	1.437"/1.550"	7° x 11/32"	1.440"	1.050"	.700"	---	28
23635-16	16 pcs.	22406, 22407, 22408	+.060"	1.437"/1.550"	10° x All	1.440"	1.050"	.700"	---	31
23666-16	16 pcs.	22406, 22407, 22408	Std.	1.437"/1.550"	7° x 3/8"	1.440"	1.050"	.700"	---	31
23646-16	16 pcs.	22406, 22407, 22408	+.100"	1.437"/1.550"	7° x 11/32"	1.440"	1.050"	.700"	---	30
23636-16	16 pcs.	Crane 99882	Std.	1.550"	10° x All	1.500"	1.130"	.735"	.640"	29
23659-16	16 pcs.	Manley 22431, 22440, 22441	+.100"	1.550"	10° x All	1.500"	1.105"	.710"	---	31
23656-16	16 pcs.	Manley 22429, 22430	+.100"	1.550"	10° x All	1.500"	1.120"	.705"	---	31

P/N 23610, 23620 and 23621 must use Manley 13098 or factory Chevrolet LS valve locks

Valve Spring Shims

- Available in .060", .030" and .015" thickness
- Heat treated to resist wear

Part Numbers .060"	.030"	.015"	Quantity	O.D.	I.D.	Type	Description
02236-50	02233-50	02231-50	50 pcs.	1.250"	.812"	Hard	SB Chevy-stock size springs
03236-50	03233-50	03231-50	50 pcs.	1.480"	.703"	Hard	BB Chevrolet
03256-50	03253-50	03251-50	50 pcs.	1.437"	.785"	Hard	SB Chevrolet w/ larger springs
03266-50	03263-50	03261-50	50 pcs.	1.500"	.645"	Hard	Chevrolet - Chrysler
03276-50	03273-50	03271-50	50 pcs.	1.625"	.645"	Hard	Chevrolet - Chrysler -Ford

O.D. Valve Spring Cups

- CNC machined
- Accurate and durable .062" thick
- Heat treated and black oxide finished

BULK PRICING AVAILABLE

Part No.	Quantity	Fits Spring O.D.	Cup O.D.	Cup I.D.	Wall Shoulder Height	Manley Spring	Use Cutter Number
42142-16	16 pcs.	1.250"	1.390"	.570"	.150"	22409, 22410, 22411	41850
42126-16	16 pcs.	1.437"	1.550"	.687"	.150"	22407, 22408	41835
42122-16	16 pcs.	1.550"	1.680"	.635"	.150"	22429, 22430, 22431, 22440, 22441	41852
42377-16	16 pcs.	1.550"	1.680"	.577"	.150"	22429, 22430, 22431, 22440, 22441	41858
42370-16	16 pcs.	1.580"	1.687"	.570"	.140"	221443	41858
42365-16	16 pcs.	1.610"	1.740"	.570"	.140"	221444	41859
42121-16	16 pcs.	1.625"	1.740"	.635"	.150"	221424, 221425, 221454	41851
42128-16	16 pcs.	1.625"	1.740"	.635"	.250"	221424, 221425, 221454	41851
42379-16	16 pcs.	1.650"	1.740"	.570"	.250"	221424, 221425, 221454	41859
42371-16	16 pcs.	1.677"	1.740"	.635"	.140"	221447, 221448, 221449 221450	41851
42372-16	16 pcs.	1.677"	1.740"	.570"	.140"	221447, 221448, 221449 221450	41859

Pro Series I.D. Valve Spring Locators

- CNC machined to tolerances ± .002"
- Excellent surface finish
- 8620 material heat treated and black oxide finished

BULK PRICING AVAILABLE

Part No.	Quantity	Fits Spring O.D.	Locator O.D.	Locator I.D.	Locator Thickness	Wall Shoulder Height	Shoulder Diameter	Manley Spring	Use Cutter Number
42446-16	16 pcs.	1.400"	1.410"	.567"	.062"	.163"	.690"	221446SF	41850
42426-16	16 pcs.	1.550"	1.535"	.567"	.062"	.163"	.740"	221432, 221441P	41856
42466-16	16 pcs.	1.550"	1.535"	.567"	.045"	.163"	.740"	221432, 221441P	41856
42402-16	16 pcs.	1.550"	1.540"	.567"	.062"	.163"	.795"	221452SF	41856
42443-16	16 pcs.	1.560"	1.550"	.567"	.062"	.163"	.802"	221442	41856
42573-16	16 pcs.	1.580"	1.570"	.567"	.062"	.163"	.828"	221443	41856
42438-16	16 pcs.	1.580"	1.570"	.567"	.045"	.163"	.828"	221443	41856
42437-16	16 pcs.	1.625"	1.570"	.567"	.062"	.163"	.850"	221424, 221425, 221454	41857

Please call with your custom spring locator requirements

I.D. Valve Spring Locators

- CNC machined
- Accurate and durable
- Heat treated and black oxide finished

BULK PRICING AVAILABLE

Part No.	Quantity	Fits Spring O.D.	Locator O.D.	Locator I.D.	Locator Thickness	Wall Shoulder Height	Shoulder Diameter	Spring	Use Cutter Number
42460-16	16 pcs.	.870"	.845"	.555"	.057"	.100"	.600"	Manley 22160 Inner Spring	None
42153-32	32 pcs.	1.013"	1.080"	.445"	.045"	.100"	.725"	Manley 221419	None
42115-16	16 pcs.	1.160"	1.100"	.500"	.095"	.200"	.610"	Manley 22115	None
42141-16	16 pcs.	1.255"	1.240"	.577"	.035"	.145"	.865"	Manley 22411	41850
42143-16	16 pcs.	1.255"	1.240"	.577"	.180"	.145"	.865"	Manley 22411	41850
42123-16	16 pcs.	1.255"	1.250"	.780"	.180"	.090"	.880"	Manley 22411	None
42334-16	16 pcs.	1.290"	1.270"	.505"	.035"	.145"	.675"	Manley 221436	None
42162-8	8 pcs.	1.290"	1.270"	.520"	.035"	.145"	.675"	Manley 221436	None
42138-16	16 pcs.	1.290"	1.270"	.505"	.062"	.145"	.675"	Manley 221436	None
42165-8	8 pcs.	1.290"	1.270"	.520"	.150"	.145"	.675"	Manley 221436	None
42124-16	16 pcs.	1.290"	1.270"	.570"	.062"	.145"	.675"	Manley 221436	41850
42338-16	16 pcs.	1.311"	1.290"	.505"	.035"	.145"	.875"	Manley 221428, 221438	None
42148-8	8 pcs.	1.311"	1.290"	.520"	.035"	.145"	.875"	Manley 221428, 221438	None
42336-16	16 pcs.	1.311"	1.290"	.505"	.062"	.145"	.875"	Manley 221428, 221438	None
42349-16	16 pcs.	1.311"	1.290"	.570"	.062"	.145"	.875"	Manley 221428, 221438	41850
42161-8	8 pcs.	1.311"	1.290"	.520"	.190"	.145"	.875"	Manley 221428, 221438	None
42324-16	16 pcs.	1.311"	1.300"	.812"	.205"	.145"	.875"	Manley 221431	None
42117-16	16 pcs.	1.324"	1.300"	.505"	.035"	.145"	.665"	Manley 221421	None
42130-16	16 pcs.	1.324"	1.300"	.567"	.035"	.145"	.665"	Manley 221421	None
42129-16	16 pcs.	1.335"	1.310"	.505"	.035"	.145"	.615"	Manley 221422	None
42131-16	16 pcs.	1.335"	1.310"	.567"	.035"	.145"	.615"	Manley 221422	None
42348-16	16 pcs.	1.340"	1.320"	.505"	.035"	.145"	.715"	Manley 221435	None
42168-8	8 pcs.	1.340"	1.320"	.520"	.035"	.145"	.715"	Manley 221435	None
42135-16	16 pcs.	1.340"	1.320"	.567"	.035"	.145"	.715"	Manley 221435	None
42169-8	8 pcs.	1.340"	1.320"	.520"	.150"	.145"	.715"	Manley 221435	None
42344-16	16 pcs.	1.550"	1.535"	.635"	.035"	.140"	.705"	Manley 221420, 1455, 1456, 1457, 1460, 1461	41835
42335-16	16 pcs.	1.550"	1.535"	.635"	.062"	.140"	.705"	Manley 221420, 1455, 1456, 1457, 1460, 1461	41835
42347-16	16 pcs.	1.550"	1.535"	.570"	.062"	.140"	.705"	Manley 221420, 1455, 1456, 1457, 1460, 1461	41856
42119-16	16 pcs.	1.550"	1.535"	.635"	.062"	.140"	.720"	Manley 22430, 22431, 22440, Isky 9385	41835
42317-16	16 pcs.	1.550"	1.535"	.570"	.062"	.140"	.720"	Manley 22430, 22431, 22440	41856
42330-16	16 pcs.	1.550"	1.535"	.635"	.062"	.140"	.740"	Manley 221432, 221441P	41835
42326-16	16 pcs.	1.550"	1.535"	.570"	.062"	.140"	.740"	Manley 221432, 221441P	41856
42378-16	16 pcs.	1.550"	1.535"	.570"	.062"	.140"	.765"	Isky 9685	41856
42331-16	16 pcs.	1.550"	1.530"	.570"	.062"	.140"	.750"	Manley 221440P	41856
42332-16	16 pcs.	1.550"	1.535"	.570"	.062"	.140"	.810"	Comp 943	41856
42333-16	16 pcs.	1.550"	1.535"	.635"	.062"	.140"	.810"	Comp 943	41835

Please call with your custom spring locator requirements

I.D. Valve Spring Locators (Continued)

- CNC machined
- Accurate and durable
- Heat treated and black oxide finished

Part No.	Quantity	Fits Spring O.D.	Locator O.D.	Locator I.D.	Cup Thickness	Wall Shoulder Height	Shoulder Diameter	Spring	Use Cutter Number
42343-16	16 pcs.	1.560"	1.550"	.567"	.062"	.163"	.802"	Manley 221442	41856
42373-16	16 pcs.	1.580"	1.570"	.570"	.062"	.140"	.825"	Manley 221443	41856
42369-16	16 pcs.	1.580"	1.570"	.635"	.062"	.140"	.825"	Manley 221443	41856
42367-16	16 pcs.	1.610"	1.610"	.570"	.062"	.140"	.825"	Manley 221444	41857
42368-16	16 pcs.	1.610"	1.610"	.635"	.062"	.140"	.825"	Manley 221444	41855
42342-16	16 pcs.	1.620"	1.610"	.570"	.062"	.140"	.840"	Manley 221445P	41857
42337-16	16 pcs.	1.625"	1.570"	.570"	.062"	.140"	.850"	Manley 221424, 221425, 221454	41857
42120-16	16 pcs.	1.625"	1.610"	.635"	.062"	.140"	.705"	Manley 221420, 1455, 1456, 1457, 1460, 1461 K Motion K1000, K1000H	41855
42318-16	16 pcs.	1.625"	1.610"	.570"	.062"	.140"	.705"	Manley 221420, 1455, 1456, 1457, 1460, 1461 K Motion K1000, K1000H	41857
42374-16	16 pcs.	1.625"	1.610"	.570"	.062"	.140"	.765"	Comp 26099	41857
42376-16	16 pcs.	1.625"	1.615"	.570"	.062"	.140"	.675"	Crane 99877	41857
42375-16	16 pcs.	1.625"	1.625"	.635"	.062"	.140"	.760"	Isky 9685	41855
42364-16	16 pcs.	1.677"	1.660"	.570"	.062"	.140"	.630"	Manley 221447, 221448, 221449, 221450	41858

Please call with your custom spring locator requirements

Double Spindle CNC Turning

Rocker Stud Boss Cutters

- Extra large diameter cutter to completely clean stud bosses while reducing height
- Due to the severe use to which these cutters are subjected, we are not able to warranty damaged goods

Part No.	Quantity	Description
41860	1	Use for Fords and Small Block Chevys

Cylinder Head Spring Seat Cutters

- Extra strength carbide cutters
- Due to the severe use to which these cutters are subjected, we are not able to warranty damaged goods

Replacement pilots: 7mm/.274" - 41274, 5/16" - 41516, 11/32" - 41132, 3/8" - 41138

Part No.	Quantity	Description
41824	1	Cuts 1.260" O.D., .742" I.D. with 11/32" pilot
41850	1	Cuts 1.445" O.D., .565" I.D. with 11/32" pilot
41835	1	Cuts 1.565" O.D., .625" I.D. with 11/32" pilot
41856	1	Cuts 1.585" O.D., .562" I.D. with 11/32" pilot
41857	1	Cuts 1.635" O.D., .570" I.D. with 11/32" pilot
41855	1	Cuts 1.635" O.D., .625" I.D. with 11/32" pilot
41858	1	Cuts 1.690" O.D., .570" I.D. with 11/32" pilot
41852	1	Cuts 1.690" O.D., .625" I.D. with 11/32" pilot
41859	1	Cuts 1.755" O.D., .570" I.D. with 11/32" pilot
41851	1	Cuts 1.755" O.D., .625" I.D. with 11/32" pilot

Valve Guide Seal Cutters

- Extra strength carbide cutters
- Due to the severe use to which these cutters are subjected, we are not able to warranty damaged goods

Part No.	Quantity	Pilot Size	Seal No.	Guide O.D.
41410	1	7mm (.274")	24041	.431"
41510	1	5/16"	24040	.420"
41610	1	5/16"	24029	.500"
41710	1	5/16"	24034	.530"
41611	1	11/32"	24037	.500"
41711	1	11/32"	24035	.530"
41612	1	3/8"	24039	.500"
41712	1	3/8"	24036	.530"

Valve Guide Seal Cutter Pilot

- For use with any spring seat or seal cutter

Part No.	Quantity	Description
41274	1	7mm cutter pilot
41516	1	5/16" cutter pilot
41132	1	11/32" cutter pilot
41138	1	3/8" cutter pilot