

2018



VALVES



PISTONS



RODS



HEAD GASKETS



COMPONENTS

WHO IS SUPERTECH



QUALITY / PERFORMANCE / RELIABILITY

“Supertech fuses this technology with passionate people...”

Located in San Jose, California in the heart of Silicon Valley, Supertech was born from the same fertile ground as many other companies in this area utilizing cutting edge technology to fuel growth.

Supertech fuses this technology with passionate people and over 30 years of experience in creating the highest performance valves and valve train components available.

Supertech provides the racing market with valve train components and performance engine parts for virtually every type of racing. Whether it's Drag Racing, Rally, Road Racing or any other type of motorsport, Supertech is sure to have the perfect performance solution for your application. If not, we are always willing to work with you to custom manufacture the solution that is just right for you.

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▶ MANUFACTURING

Production of our racing valves begins with a one piece forging, where the head of the valve is forged under a slow two step process to keep a good material grain flow. The forging is then CNC machined in several steps to ensure the precision of the final dimensions. We then do another heat treatment for stress relieving followed by a nitride hardening treatment (or coating process depending on the application). Lastly, we do one more grinding, followed by our patented Superfinishing of the surface to ensure that each valve is free of any imperfections and the dimensions are precise.

▶ ENGINE VALVE

We apply more than 30 years of experience in the development of each and every Supertech racing valve we sell. Combine this experience with state of the art equipment such as ultrasonic tests, x-rays, laser measurement equipment, and applications like computerized Finite Element Analysis (FEA) and it is no wonder why supertech has some of the best performance products on the market.

While this is more than most manufacturers we don't stop there. We also do extensive testing working very closely with many of today's top engine builders in order to continuously improve our products. All of this is meant to insure Supertech's industry leading reputation for high flow rates, durability and uncompromising quality.

ENGINE VALVE MANUFACTURING



QUALITY / PERFORMANCE / RELIABILITY



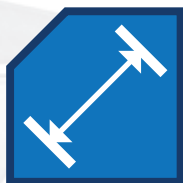
ONE PIECE VALVE

Our valves are not finished from generic blanks rather they are specifically designed for each and every application. We work relentlessly, testing and researching every aspect trying to improve the air flow of our designs.



DURABILITY

With every valve design we strive to maximize durability through higher fatigue resistance and tensile strength. Each valve tip is hardened beyond 52HRC.



STRICT DIMENSIONAL TOLERANCES

It's unlikely you will find any of our competitor's valves with stricter dimensional tolerances than our Supertech valves. Combine that with finished seats with equally strict run out tolerances and you won't find a better sealing, better performing and easier to install solution anywhere!



SUPERFINISH

In 2006 we introduced our stem Superfinishing as a standard addition to all of our valves and provided it at no additional cost. When our Superfinish is combined with our Black Nitrided valve it reduces the surface roughness to 1/3 of our chrome coated valve. The end result... unsurpassed performance and durability.



HIGHER FLOW RATES

Optimum high flow rates are achieved by ensuring that our valves are manufactured with the best angles for each application. We consider back cut, under cut and valve head angles for each application to produce the optimum high flow rates for each application.



► MATERIALS

We manufacture our racing valves using only the highest quality materials available. We have spent countless hours studying these different materials as well as your applications to create just the right valve. Because of thermal fatigue the proper choice of material will greatly determine the valve performance and reliability. Supertech relentlessly tests new materials to provide valves with unsurpassed fatigue resistance. Below you will find a list of materials that we use in the production of our valves.

VALVE MATERIALS

“We manufacture our racing valves using only the highest quality materials available.”

► STEEL

Our intake valves are made exclusively from an enhanced version of EV8 (21-4N) steel. This is the highest grade of steel available and provides the strength to withstand just about any application. Our exhaust valves are made from EV16 (21-8N) or EV8-Nb/w for greater strength at higher temperatures. Some applications call for us to harden certain areas such as the tips and or the seats. For these applications we will often times weld other hard metal alloys to the valve for increased durability.

BENEFITS OF BLACK NITRIDE

► STEEL

This is a hardening treatment that has been steadily growing in popularity over the last several years. These black Nitride coated valves feature harder surfaces and smoother finishes, providing less friction and subsequently longer life. Please see below for more benefits of our Black Nitride valves.





BLACK NITRADE COATING

We manufacture our racing valves using only the highest quality materials available. We have spent countless hours studying these different materials as well as your applications to create just the right valve. Because of thermal fatigue the proper choice of material will greatly determine the valve performance and reliability. Supertech relentlessly tests new materials to provide valves with unsurpassed fatigue resistance. Below you will find a list of materials that we use in the production of our valves.

- The micro hardness is higher than the stainless steel base material
- Good ductility beneath the hard nitrided layer (micro hardness is 8000HV minimum)
- Surface finish is smoother than with chromed stems
- Less friction between stem and guide
- Harder valve seat surface, lasting longer with lead free fuels, alcohols, nitro or other "explosive" mixes
- Matches any kind of seats (nodular iron, steel powder metal, hard aluminum-copper or be ryllium copper)
- Less valve guide friction = reduced power loss
- Nitride layer is adhered to the base material at a microscope level, so it will not "flake" or brake
- Nitride is applied to the whole valve while the chrome coating is only applied to the stem
- All valves are swirl polished, have stem undercuts, a hardened tip and more

INCONEL 751 / NIMONIC 80A

These Nickel base Super Alloy materials are used for exhaust valves in engines that reach very high temperatures, such as applications with turbo and superchargers.

VALVE MATERIALS

Magnetic friction welded wafer.
Hardened to 52 HRC min

One piece forged valve
(non-magnetic)

Black Nitride for superior hardness
keeping core ductility. Improves
durability and reduces carbon build up.

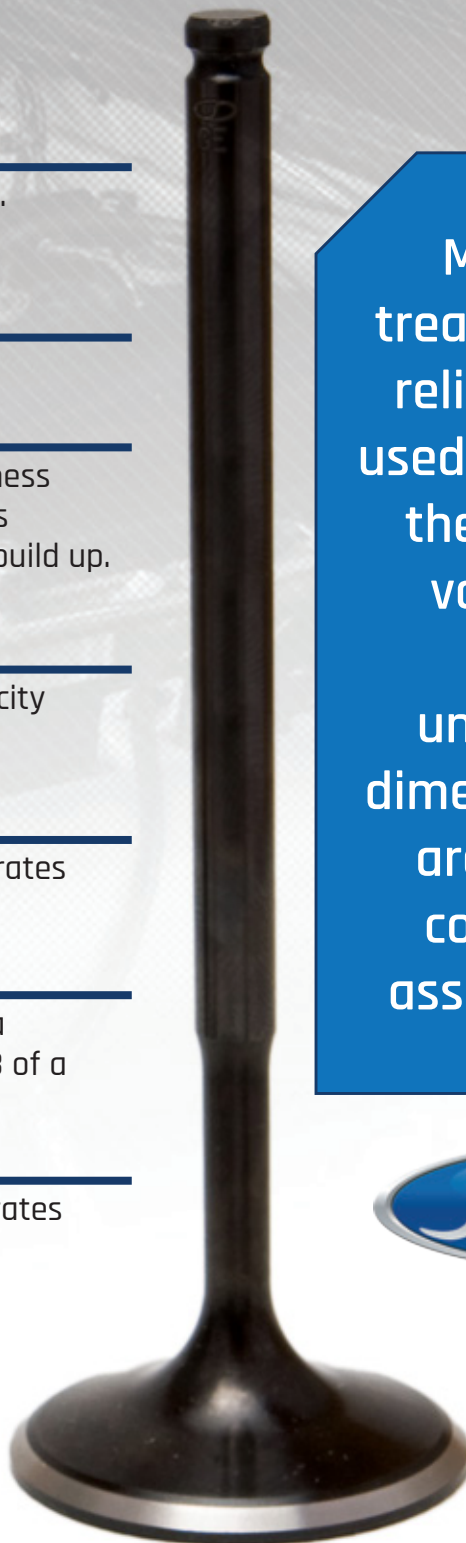
Unmatched valve seat eccentricity
for better sealing & durability

Back-cut angle for better flow rates

"Superfinish" valve stem with a
surface roughness of about 1/3 of a
regular valve

Undercut stem increases flow rates

Multi stage heat treatments and stress relieving process are used to greatly improve the longevity of the valve and engine. Additionally unmatched overall dimensional tolerances are used to ensure consistency in the assembly clearances.





▶ SODIUM FILLED VALVES MADE FROM INCONEL/NIMONIC ALLOY

Supertech sodium filled valves made of Inconel/Nimonic alloy offer a significant reduction in valve head temperatures that are required for today's modern turbo engines.

A cooler valve improves the material strength and durability while allowing the tuner more flexibility and a wider range of spark timing advances. Combine that with an average weight reduction of 10% and there isn't a cooler valve on the market



INCONEL 751 / NIMONIC 80A

These Nickel base Super Alloy materials are used for exhaust valves in engines that reach very high temperatures, such as applications with turbo and superchargers.

▶ TITANIUM

Our one piece forged high temperature titanium alloys are used when light weight valves are of relevance to achieve very high RPM's. These valves are recommended for professionally built high rpm racing engines. When matched with Supertech keepers (locks, cotters) and spring retainers you can use a more aggressive cam profile without the loss of valve control. This results in a broader torque curve with an increase in horsepower at higher RPM equaling more power.

TITANIUM COATINGS



▶ YELLOW TITANIUM NITRIDE - TIN

This thin coating is much harder than the Molybdenum coating (equivalent to 85Rc) and covers the entire valve. The stem, the tip and the valve seat are coated to decrease valve wear on high performance applications. This coating is applied by PVD (physical Vapor Deposition) providing the valve with a very hard, frictionless protective coating. We have tested this coating with many successful engine builders worldwide and found that this coating works very well with the Manganese Bronze valve guides for engines with bucket type tappets where there is no need for a welded or pressed tip, consequently eliminating the risk of breakage.



▶ CHROME NITRIDE - CRN

A silver color coating also applied by PVD (physical Vapor Deposition) and with similar characteristics as the TiN, which works better with factory steel guides.

OTHER COATINGS

▶ MOLYBDENUM COATING

This is a widely used coating and recommended when necessary in accordance to guide materials.



VALVE SPRING TECHNOLOGY

The design and manufacturing of valve springs is more than achieving the required pressure and lift. There are many other factors to consider when it comes to achieving a superior spring design and when done correctly it makes a big difference in the reliability and successful operation of the spring.

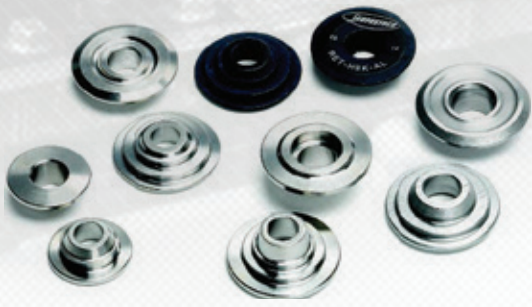
Our valve springs are computer designed to ensure that wire stress levels do not surpass the limits of stress defined in the diagrams of fatigue for long durability under extreme conditions. It's also extremely important to account for the natural harmonics of spring. We measure the natural harmonics to make sure they are away from the normal engine operation. We then confirm that the inner and outer springs counter each other for good control of the valvetrain operation.

The first step in the manufacturing process to ensure we manufacture a superior spring is to begin with superior materials. For most of our applications we use wire in Superclean Chrome Silicon Vanadium alloy. The addition of Vanadium increases the tensile strength and improves the life of the spring. In some cases for high stress spring applications we often use Chrome Silicon Vanadium Molybdenum+Ni that offers higher tensile strength and provides more durability for the application.

We also include a gas nitriding process before shot peening that helps improve the fatigue life of the spring.

BEEHIVE SPRINGS are also available for some applications. These springs offer a lower alternative mass and a lower variable natural frequency rate.

COMPONENTS



▶ RETAINERS

Supertech offers CNC machined retainers from high strength and hardened aerospace certified titanium alloy. Designed to add strength while offering weight reduction, all of our titanium retainers are finished to precise tolerances.

For certain applications we also offer retainers in high strength and hardness Aluminum alloy as well as chrome molly steel.

These retainers work best when paired with our high quality valve springs.

▶ VALVE GUIDE

Our valve guides are precision machined to exact tolerances from high quality Manganese Bronze material or Copper alloy. These guides in conjunction with our low friction black nitride valves provide an unsurpassed solution for high performance and sustained durability.

We also offer copper alloy for exhaust valve guides for high powered engines that require a higher thermal coefficient.



▶ VALVE SEALS

Supertech intake valve seals are made from a high quality rubber compound, while our exhaust application features a special hi temperature compound for improved durability.



▶ LASH CAPS

Supertech intake valve seals are made from a high quality rubber compound, while our exhaust application features a special hi temperature compound for improved durability.





BMW S14 16V / S38 24V / E30 M3 87-91			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Inconel
37.00 mm (std.)	6.98 mm	123.00 mm	BMIVN - 1006 / L
38.00 mm (+1.0 mm)		121.40 mm	BMIVN - 1008
38.50 mm (+1.5 mm)		121.40 mm	BMIVN - 1009
38.50 mm (+1.5 mm)		123.80 mm	BMIVN - 1009 / Long
39.00 mm (+2.0 mm)		121.40 mm	BMIVN - 1010
39.00 mm (+2.0 mm)		123.80 mm	BMIVN - 1010 / Long
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Inconel
32.00 mm (std.)	6.95 mm	125.00 mm	BMEVI-1006/L
32.50 mm (+.5 mm)		123.70 mm (std.)	BMEVN-1009
32.50 mm (+.5 mm)		126.10 mm	BMEVN-1009 / LONG
33.00 mm (+1.0 mm)		126.10 mm	BMEVN-1010/ LONG
33.00 mm (+1.0 mm)		123.70 mm (std)	BMEVN-1010
33.00 mm (+1.0 mm)		123.70 mm (std)	BMEVI-1010

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPR-H1005D/S14	29.65	21.85	20.50	15.50	90 @ 35.5	230 @ 13	14.80	21.50	11.50	RET-BMS14-T1 + SEAT-H1002-S14
SPR-H1022D/S14	29.00	21.80	21.00	15.50	110 @ 37.6	231 @ 11	16.60	21.00	11.20	RET-H70/T1 + SEAT-H1002-S14

ENGINE COMPONENTS

VALVE GUIDES	FOR INTAKE AND EXHAUST GDE-BMS14-7 (Standard and Oversize OD available)
CAM FOLLOWERS	CF-37.5/3.1+ (+Shims) TO BE USED WITH LONG VALVES (No Lash Caps are necessary)
CAM FOLLOWERS	CF-37.5/5.65+ (+Shims) TO BE USED WITH SHORT VALVES
CAM FOLLOWERS	CF-37.5/4.5 TO BE USED WITH LONG VALVES + 7mm LASH CAPS
CAM FOLLOWERS	CF-38/3.1+ Oversized
VALVE LOCKS	KPR-VW7-T (Tripple Groove)
VALVE SEAL	INTAKE: VS-VW7-1 EXHAUST: VS-VW7-E

BMW M20 B25 2.5L 12v / E30/E34 325/525 '77-'92			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Inconel
42mm (std)	6.97 mm	102.50 mm	BMIVN - 1084
43mm (+1)			BMIVN - 1085
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Inconel
36 mm (std)	6.95 mm	102.50 mm	BMEVN - 1084
37 mm (+1)			BMEVI - 1085

ENGINE COMPONENTS

VALVE LOCK	KPR-VW7-T (Triple Groove)
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BMW S42 / M42 / M50 / S50 / S52 / M52 / M54 / 1.8/2.5 lts (16v) / 2.8-3.0 lts (24v)			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
33.00mm (std)	5.97 mm	106.10 mm	BMIVN-1030
33.00mm (std)	5.97 mm	106.10 mm	BMIVN-1030S
34.00 mm (+1.0)	5.97 mm	106.10 mm	BMIVN-1031S
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
30.50 mm (std.)	5.96 mm	105.65 mm	BMEVN - 1030
30.50 mm (std.)	5.96 mm	105.65 mm	BMEVN - 1030S
30.50 mm (std.)	5.96 mm	105.65 mm	BMEVI-1030S
31.50 mm (+1.0)	5.96 mm	105.65 mm	BMEVN - 1031S
31.50 mm (+1.0)	5.96 mm	105.65 mm	BMEVI-1031S

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift mm	Coil Bind mm	Rate lbs./mm	Titanium Retainer Part Number
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)				
SPR-H1005DR/BM	30.20	22.20	22.20	16.80	67 @ 35.70	192 @ 10	17.20	18.50	12.90	RET-K20A2/T2 + SEAT-BM50 (x24)
SPR-H1000D/BM	29.65	21.85	20.50	15.50	80@ 35.70	195 @ 10	14.50	20.70	11.50	RET-AU5VE/T1 + SEAT-BM60 (x24)
SPR-H1005D/BM	29.65	21.85	20.50	15.50	94@35.70	209 @ 10	15.00	20.70	11.50	RET-AU5VE/T1 + SEAT-BM60 (x24)

ENGINE COMPONENTS

CAM FOLLOWERS - CF-33/14
VALVE SEALS - INTAKE: VS-VBM6-1 / EXHAUST: VS-VBM6-E
VALVE GUIDES - FOR INTAKE AND EXHAUST GDE-BMW-M50-EI
VALVE LOCKS - KPR-VW6-T (triple groove) / KPR-6S/7 (single groove)

BMW S42 2.0L			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
35.00mm (std)	4.98 mm	110.6 mm	BMIVT-1060SM
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
30.60mm (std)	4.97 mm	110.3 mm	BMEVT-1060SM

BMW S50 B30 EURO VERSION / E36 M3 3.0lts			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
34.00mm (std)	6.97 mm	119.75 mm	BMIVN-1036
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
30.60mm (std)	6.96 mm	121 mm	BMEVI-1036
VALVE LOCKS - KPR-VW7-T (Triple groove)			

BMW S50 B32 EURO VERSION / E36 M3 3.2lts			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Inconel
35.00mm (std)	5.97 mm	119.75 mm	BMIVN - 1037
35.65mm (+65)	5.97 mm	121.30 mm (oversize)	BMIVN - 1033SL
EXHAUST VALVE PART NUMBER			
Head Diam	Stem Diam	Length	Black Nitride/Inconel
30.60mm (std)	5.96 mm	121.3 mm	BMEVN - 1037
31mm (+0.40)	5.96 mm	122.8 mm (oversize)	BMEVI - 1030PSL

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPR-H1005DR/ S50-B30E	29.65	21.85	20.50	15.50	90 @ 35.70	205 @ 10	14.80	20.70	11.50	RET-BMS14-T1 + SEAT-OEM
SPR-H1000D/ S50-B30E	29.00	21.85	21.50	15.50	105 @ 38.00	211 @ 10	16.00	22.00	11.20	RET-H70/T1 + SEAT-OEM

ENGINE COMPONENTS

VALVE SEALS - INTAKE: VS-VBM6-1 / EXHAUST: VS-VBM6-E

VALVE LOCKS - * KPR-VW6-T (triple groove) / KPR-6S/7 (single groove)

BMW S54 24v 3.2 Lts / M3 / 2001 +			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Inconel
35.00mm (std)	5.97 mm	117.50 mm	BMIVN - 1040
35.00mm (std)	5.97 mm	117.50 mm	BMIVN - 1040S
36.00mm (+1)	5.97 mm	117.50 mm	BMIVN - 1045S
EXHAUST VALVE PART NUMBER			
Head Diam	Stem Diam	Length	Black Nitride/Inconel
30.50mm (std)	5.95 mm	119.10 mm	BMEVN-1040
30.50mm (std)	5.95 mm	119.10 mm	BMEVI-1040S
31.50mm (+1)	5.95 mm	119.10 mm	BMEVI-1045S

NOTE: Oversized valves are not recommended to be used with VANOS due to risk of clipping valves

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPR-2521/2BM-T1	26.40	19.30	19.30	14.50	82 @ 41	186 @ 10	14.50	25.50	10.00	RET-BM2521/T1S + SEAT-BMS54
SPRK-HM1007BE-S54 (Beehive)	28.00	18.80	24.20	14.50	76 @ 39	204 @ 10	14.00	25.80	12.80	RET-BM2521/T1-BE + SEAT-BMS54-BE (2mm)

ENGINE COMPONENTS

VALVE SEALS INTAKE: VS-BM6-I

EXHAUST: VS-BM6-E

VALVE LOCK KPR-VW6-T (triple groove) / KPR-6S/7 (single groove)

VALVE GUIDE GDE-BMW-S54-EI (intake+exhaust)

BMW S54 24v 3.2 Lts / M3 / 2001 + (to be used with Lash Caps - No OEM Shims)			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Inconel
35.00mm (std)	5.97 mm	117.50 mm	BMIVN - 1040S-LC
EXHAUST VALVE PART NUMBER			
Head Diam	Stem Diam	Length	Black Nitride/Inconel
35.00mm (std)	5.97 mm	119.10 mm	BMEVI - 1040S-LC

BMW S54 24v 3.2 Lts / M3 / 2001 + (to be used with Lash Caps - No OEM Shims)

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPR-2521/2BM-T1S-LC	26.40	19.30	19.30	14.50	82 @ 41	182 @ 10	15.50	25.50	10.00	RET-BM2521/T1S-LC + SEAT-BMS54

ENGINE COMPONENTS

VALVE SEALS LC-60-Thickness

VALVE LOCK KPR-6S/7 (single groove)

BMW N54 Turbo 3.0L 24v

INTAKE VALVE PART NUMBER

Head Diam	Stem Diam	Length	Black Nitride/ Inconel
31.40mm (std)	4.96 mm	106.70 mm	BMIVN - 1054S- (one grv)
31.90mm (+0.5mm)	4.96 mm	106.70 mm	BMIVN - 1054S-1

EXHAUST VALVE PART NUMBER

Head Diam	Stem Diam	Length	Black Nitride / Sodium
28.00mm (std)	5.95 mm	114.90 mm	BMEVI - 1054S- HS (sodium filled)
28.50mm (+0.5mm)	5.95 mm	114.90 mm	BMEVI - 1054S- HS-1 (sodium filled)

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPRK-FE20N54-BE (Conical)	24.40	17.60	21	14.2	75 @ 36.5	155 @ 10	12	23.2	8	RET-BMN54-TI (5mm) / RET-BMN54-TE (6mm)

ENGINE COMPONENTS

VALVE SEALS OEM

VALVE LOCK INTAKE VALVE: KPR-5.0/7S (single groove) EXHAUST VALVE: KPR-6S/7 (single groove)

BMW S65 V8 4.0L 32v / S85 V10 5.0L 40v

INTAKE VALVE PART NUMBER

Head Diam	Stem Diam	Length	Black Nitride/ Inconel
35.40mm (std)	4.97 mm	111.75 mm	BMIVN - 1065

EXHAUST VALVE PART NUMBER

Head Diam	Stem Diam	Length	Black Nitride/ Inconel
30.50mm (std)	4.95 mm	110.20 mm	BMEVI - 1065

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPR-BMS65-BE1	26.5	18.7	21.6	13.8	77 @ 40.10	180 @ 10	12.2	27	10.3	OEM RETAINER (Optional RET-BMS65-BE1) / OEM seat

ENGINE COMPONENTS

VALVE SEALS OEM

VALVE LOCK OEM Single groove locks



FERRARI 250 / 275 V12 24v / Ferrari 250 / 275 (1954 - 1968)			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Inconel
38.00mm	7.98 mm	97 mm	FEIVN-380897
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Inconel
32.5mm	7.98 mm	95.20 mm	FEEVN-325895
VALVE GUIDES INTAKE AND EXHAUST: GDE-FE275			

FERRARI 330 V12 24v / Ferrari 330 V12 24v (1963-1968)			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Inconel
42.00mm	7.98 mm	98.10 mm	FEIVC-330-209
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Inconel
38.00mm	7.97 mm	98.10 mm	FEIVC-330-209

FERRARI 335/360 5-VALVE V8 (1994 - 2005)			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Inconel
26.50mm	5.96 mm	98.3 mm	FEIVN-2500
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Inconel
28.5 mm	5.96 mm	100.40 mm	FEIVN-2500
VALVE GUIDES - INTAKE AND EXHAUST: GDE-FIA2500			

FERRARI & Maserati F136 Engine V8 32v / V12 48v / Ferrari 430-458 / Maserati / A1GP 2000-2011			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Inconel
37.80mm	5.970 mm	97.85 mm	FEIVC-F136
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Inconel
31.00mm (std)	5.96 mm	97.60 mm	FEEVC-F136
CAM FOLLOWERS - CF - 35/16.7LC to be used with lash caps (7mm) installed on the CF inner post.			



FORD ZETEC 2.0 LTS DOHC / FOCUS			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
32.00mm (std)	6.035 mm	97.10 mm	FIVN - 1035
33.00mm (+1.0)	6.035 mm	97.10 mm	FIVN - 1037
34.00 mm (+2.0)	6.035 mm	97.10 mm	FIVN - 1038
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
28.00 mm (std)	6.012 mm	96.70 mm	FEVN - 1035
29.00 mm (+1.0)	6.012 mm	96.70 mm	FEVN - 1037
30.00 mm (+2.0)	6.012 mm	96.70 mm	FEVI - 1038

FORD Duratec / Mazda MZR 2.0 - 2.3 - 2.5 LTS / FOCUS / Mazda 3			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
35.00mm (std) Flat	5.48 mm	103.40mm (std)	MAIVN - 2301D
35.00mm (std) Flat	5.48 mm		MAIVN - 2301F
36.00 mm (+1.0) Dish	5.48 mm		MAIVN - 2304D
36.00 mm (+1.0) Flat	5.48 mm		MAIVN - 2304F
36.75 mm (+1.75) Flat	5.48 mm		MAIVN - 2306
37.50 mm (+2.5) Dish	5.48 mm		MAIVN - 2308D
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride / Inconel / Sodium
30.00mm (std) Flat	5.48 mm	104.70mm (std)	MAEVN-2301D
30.00mm (std) Flat	5.48 mm		MAEVN - 2301F
30.00mm (std) Flat	5.48 mm		MAEVI - 2301D
31.00 mm (+1.0) Flat	5.48 mm		MAEVN - 2304F
31.00 mm (+1.0) Dish	5.48 mm		MAEVI-2304D
31.00 mm (+1.0) Dish	5.48 mm		MAEVI - 2304
32.00 mm (+2.0) Flat	5.48 mm		MAEVI - 2306
31.00 mm (+1.0) Dish	5.95 mm	105.9mm (+1.2mm)	MAEVI-2304-6MM-HS

FORD Duratec / Mazda MZR 2.0 - 2.5 LTS / FOCUS / Mazda 3

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPR-TS/DUR-D1	27.50	20.00	20.00	15.20	83 @ 35.00	208@ 10	14.30	20.70	12.10	RET-TS5.5/T1+ Factory Seat+SEAT-DUR1
SPR-TS/DUR-D2	27.50	20.00	20.00	15.20	70@ 36.20	190@ 10	15.20	20.70	12.10	RET-TS5.5/T1+ Factory Seat+SEAT-DUR2
SPR-TS/DUR-DS	27.50	20.00	SINGLE		55@ 35.00	150@ 10	14.30	20.70	9.60	RET-TS5.5/T1+ Factory Seat+SEAT-DUR1
SPR-FE20BE (Conical)	24.30	17.50	21.20	14.40	67 @ 37.90	144@ 10	12.80	23.20	7.70	Use with OEM RETAINER + OEM SEAT
SPR-TS1015-BE-DUR1 (Beehive)	27.70	19.70	23.20	15.20	70 @ 35.5	197@ 10	12.50	21.80	12.70	RET-TS5.5/T9F-BE + Factory Seat + SEAT-DUR1
SPR-TS1015-BE-DUR2 (Beehive)	27.70	19.70	23.20	15.20	82 @ 34.5	209@ 10	11.75	21.80	12.70	RET-TS55/T1EX-BE + Factory Seat + SEAT-DUR1

ENGINE COMPONENTS

VALVE SEALS	INTAKE: VSI-D5.5E (same as OEM)	EXHAUST: VSI-D5.5E (same as OEM)
VALVE GUIDES	INTAKE and EXHAUST: GDE-DUR16	
CAM FOLLOWERS	CF-31/2.5+ (+ shims / to be use with 1mm shorter valves)	

FORD 1.5 - 1.6L ECOBOOST DI FORD FUSION - FIESTA			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Inconel
30.10 mm (std)	4.96 mm	98.8 mm	FIVN-2401D
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Sodium
24.9mm (std)	4.95 mm	99.65 mm	FEVI-2401F-HS

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPRK-FE56BE (single beehive)	23.30	16.80	18.80	12.30	57 @ 34.4	155 @ 10	12.20	22.20	9.80	RET-MC56/T1(OEM seal) Optional shim SS-B202

ENGINE COMPONENTS

CAM FOLLOWERS	CF-28/2.9+ (shims) requires to cut the valve length by 1.65mm
VALVE SEALS	USE OEM
KEEPERS	KPR-5.0/7S

FORD EcoBoost 2.0 DI 2015 Focus / Fusion L4-2.0L Turbo			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Inconel
32.50mm (std)	5.47 mm	103.3 mm	FIVN - 2501D
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Sodium
30.00mm (std)	5.45 mm	104.7 mm	FEVI-2500F-HS

FORD EcoBoost 2.0 DI 2015 Focus / Fusion L4-2.0L Turbo

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift mm	Coil Bind mm	Rate lbs./mm	Titanium Retainer Part Number
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)				
SPR-FE20BE (Conical)	24.00	17.20	21.00	14.20	72 @ 37.20	150 @ 10	12.00	23.00	7.80	Use with OEM RETAINER + OEM SEAT
SPR-TS1012-FE2	27.50	20.00	20.00	15.20	77 @ 34.30	173 @ 10	13.00	20.00	9.60	RET-TS55-T1+SEAT-DURI + OEM SEAL
SPR-TS1015-FE2	27.50	20.00	20.00	15.20	84 @ 34.30	205 @ 10	13.00	20.70	12.10	RET-TS55-T1+SEAT-DURI + OEM SEAL

ENGINE COMPONENTS

CAM FOLLOWERS CF-31/2.5+ (shims) requires to cut the valve length by approximately 1.65mm

VALVE SEALS OEM

KEEPERS OEM or KPR-5.5/7A-ST

FORD EcoBoost 2.3 DI 2015 Ford Mustang / Focus L4-2.3L Turbo

INTAKE VALVE PART NUMBER

Head Diam	Stem Diam	Length	Black Nitride/ Inconel
32.50mm (std)	5.47 mm	103.3 mm	FIVN - 2501D

EXHAUST VALVE PART NUMBER

Head Diam	Stem Diam	Length	Black Nitride/ Sodium
30.00mm (std)	5.45 mm	104.7 mm	FEVI-2501F-HS

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift mm	Coil Bind mm	Rate lbs./mm	Titanium Retainer Part Number
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)				
SPR-FE20BE (Conical)	24.00	17.20	21.00	14.20	72 @ 37.20	150 @ 10	12.00	23.00	7.70	Use with OEM RETAINER + OEM SEAT
SPR-TS1012-FE2	27.50	20.00	20.00	15.20	77 @ 34.30	173 @ 10	13.00	20.00	9.60	RET-TS55-T1+SEAT-DURI + OEM SEAL
SPR-TS1015-FE2	27.50	20.00	20.00	15.20	84 @ 34.30	205 @ 10	13.00	20.70	12.10	RET-TS55-T1+SEAT-DURI + OEM SEAL

ENGINE COMPONENTS

CAM FOLLOWERS CF-31/2.5+ (shims) requires to cut the valve length by 1.65mm

VALVE SEALS OEM

KEEPERS OEM or KPR-5.5/7A-ST

FORD EcoBoost 3.5L 24v - 6cyl (Twin Turbo)

INTAKE VALVE PART NUMBER

Head Diam	Stem Diam	Length	Black Nitride/ Inconel
36.9mm (std)	5.47 mm	97.7 mm	FIVN-3501D

EXHAUST VALVE PART NUMBER

Head Diam	Stem Diam	Length	Black Nitride/ Sodium
31.00mm (std)	5.46 mm	95.30 mm	FEVI-3501F-HS (Sodium Filled)

FORD Ecoboost 3.5L 24v - 6cyl (Twin Turbo)

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPR-FE20BE (Conical)	24.00	17.20	21.00	14.20	72 @ 37.2	150 @ 10	12.00	23.00	7.70	Use with OEM RETAINER + OEM SEAT

ENGINE COMPONENTS

CAM FOLLOWERS 5 Thicknesses to choose from: CF-32/3.10 ; CF-32/3.25 ; CF-32/3.35 ; CF-32/3.55 ; CF-32/3.70

VALVE SEALS USE OEM

KEEPERS OEM or KPR-5.5/7A-ST



GM ECOTEC LSJ 2.0 / 2.2 / 2.4 LTS / Cavalier / Cobalt / Solstice / Opel / Vauxhall

INTAKE VALVE PART NUMBER

Head Diam	Stem Diam	Length	Black Nitride/Inconel
35.10mm	5.97 mm	102.05 mm	GIVN-0010
35.60 (+0.5)mm	5.97 mm	102.05 mm	GIVN-0012S
Tripple Or Single Groove			

EXHAUST VALVE PART NUMBER

Head Diam	Stem Diam	Length	Black Nitride/Inconel
30.10 mm	5.96 mm	101.30 mm	GEVN-0010
30.60 (+0.5) mm	5.96 mm	101.30 mm	GEVI-0012S
Tripple Or Single Groove			

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPR-TS1012/EC	27.50	20.00	20.00	15.20	75@ 33.90	193 @ 12.5	13.00	20.00	9.60	RET-TS5.5/T5 R+ OEM SEAT + SEAT-EC1015 (inner spr)
SPR-EC3025	26.60	19.60	19.40	14.20	76@ 34.60	217 @ 12.5	15.60	19.00	11.30	RET-EC3020/T1 + SEAT-EC3020 (Requires new smaller seal)
SPR-EC3027	26.60	19.60	19.60	14.20	94@34.60	232 @ 12.5	13.90	20.70	11.10	RET-EC3020/T1 + SEAT-EC3020 (Requires new smaller seal)

ENGINE COMPONENTS

VALVE SEALS INTAKE: GDE-EC60-SM / Use VALVE SEAL: VS-T6SM EXHAUST: GDE-EC60-SM / Use VALVE SEAL: VS-T6SM

TITANIUM VALVES PLEASE CALL / ** CAN USE RET-TS5.5/T1 THAT INSTALLS @33mm

VALVE LOCKS KPR-6S/7 (single groove valves)

GM VORTEC 4 / 5 / 6 Cyl / 2002 - 2006

INTAKE VALVE PART NUMBER

Head Diam	Stem Diam	Length	Black Nitride/Inconel
39mm (+2mm)	5.97 mm	105.30mm (single groove)	GIVN - 3920S

EXHAUST VALVE PART NUMBER

Head Diam	Stem Diam	Length	Black Nitride/Inconel
34mm (+3.5mm)	5.96 mm	107.9mm (single groove)	GEVN - 3435S



HONDA S2000 / F20C / F22C			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitrided/ Inconel
36.00mm (std)	5.48 mm	109.85 mm	HIVN - 1030D
36.00mm (std)	5.48 mm	109.85 mm	HIVN - 1030F
36.50mm (+0.5)	5.48 mm	109.85 mm	HIVN - 1033D
36.50mm (+0.5)	5.48 mm	109.85 mm	HIVN - 1033F
37.00mm (+1.0) Dish	5.48 mm	109.85 mm	HIVN - 1035D
			EXHAUST VALVE PART NUMBER
31.00mm (std)	5.45 mm	108.80 mm	HEVN - 1030D
31.00mm (std)	5.45 mm	108.80 mm	HEVN - 1030F
31.00mm (std)	5.45 mm	108.80 mm	HEVI - 1030D
31.50mm (+0.5)	5.45 mm	108.80 mm	HEVN - 1033F
31.50 mm (+0.5) Dish	5.45 mm	108.80 mm	HEVI-1033D
32.00 mm (+1.0) Dish	5.45 mm	108.80 mm	HEVI-1035D

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift mm	Coil Bind mm	Rate lbs./mm	Titanium Retainer
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)				Part Number
SPR-H1019D	30.00	21.80	21.30	15.60	97 @ 40.4	275@12	17.70	22.70	14.80	RET-K20A2/T2 + SEAT-H1020D
SPR-H1021D	30.00	21.80	21.30	15.50	95 @ 40.40	253@12	17.70	22.70	13.20	RET-K20A2/T2 + SEAT-H1020D
SPR-H1022D	30.00	21.80	21.00	15.50	80 @ 40.40	215@12	18.30	22.00	11.20	RET-K20A2/T2 + SEAT-H1020D
SPR-M1007D/K2	28.10	20.00	20.00	15.20	82@ 39.80	238@12	15.10	24.70	13.00	RET-K20A3/T1 + SEAT-HKA3
SPR-H1007BE-1 BEEHIVE	28.00	18.80	24.20	14.50	75 @39.0	230@12	16.20	22.80	12.70	RET-H55BE-T1 + SEAT-HKBE1
SPR-H1007BE-2 BEEHIVE	28.00	18.80	24.20	14.50	90 @37.8	248@12	15.00	22.80	12.70	RET-H55BE-T1 + SEAT-HKBE2

ENGINE COMPONENTS

VALVE GUIDES	INTAKE: GDE-HS255-I	EXHAUST: GDE-HS255-E
VALVE LOCK	KPR-5.5/7A-ST	
VALVE SEALS	INTAKE: VS-H55-I	EXHAUST: VS-H55-E
BLOCK GUARDS	BG-S2000	
TITANIUM VALVES	PLEASE CALL	

HONDA K20 / K24 2.0lts / 2.4 lts DOHC VTEC / RSX-S / TSX/ CIVIC-SI			INTAKE VALVE PART NUMBER	
Head Diam	Stem Diam	Length	Black Nitride/Inconel	
35.00mm (std) Dish	5.48 mm	108.85 mm	HIVN-1020	
35.00 mm (std) Flat			HIVN-1020F	
35.50 mm (+0.5) Dish			HIVN-1021D	
35.50 mm (+0.5) Flat			HIVN-1021F	
36.00 mm (+1.0) Dish			HIVN-1022D	
36.00 mm (+1.0) Flat			HIVN-1022F	
36.50 mm (+1.5) Flat			HIVN-1022.5F	
37.00 mm (+2.0) Flat			HIVN-1023F	
			EXHAUST VALVE PART NUMBER	
Head Diam	Stem Diam	Length	Black Nitride/Inconel	
30.00mm (std) Dish	5.45 mm	108.65 mm	HEVN-1020	
30.00 mm (std) Flat			HEVN-1020F	
30.00 mm (std) Dish			HEVI-1020D	
30.50 mm (+0.5) Dish			HEVN-1021D	
30.50 mm (+0.5) Flat			HEVN-1021F	
30.50 mm (+0.5) Dish			HEVI-1021D	
31.00 mm (+1.0) Dish			HEVN-1030D	
31.00mm (+1.0) Flat		HEVN-1030F		
31.00mm (+1.0) Dish		HEVI-1030D		
31.50mm (+1.5) Flat		HEVN-1033F		
31.50mm (+1.5) Dish		HEVI-1033D		
		108.80 mm		

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift mm	Coil Bind mm	Rate lbs./mm	Titanium Retainer Part Number
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)				
SPR-H1019D (K20A2/Z1/Z3)	30.00	21.80	21.30	15.60	97 @ 40.4	275@ 12	17.70	22.70	14.80	RET-K20A2/T2 + SEAT-H1020D
SPR-H1021D (K20A2/Z1/Z3)	30.00	21.80	21.30	15.50	95 @ 40.40	261@ 12	17.70	22.70	13.20	RET-K20A2/T2 + SEAT-H1020D
SPR-H1022D (K20A2/Z1/Z3)	30.00	21.80	21.00	15.50	80 @ 40.40	215@ 12	18.30	22.00	11.20	RET-K20A2/T2 + SEAT-H1020D
SPR-M1007D/K2 (K20A3/2/Z1/Z3)	28.10	20.00	20.00	15.20	82@ 39.80	238@ 12	15.10	24.70	13.00	RET-K20A3/T1 + SEAT-HKA3
SPR-H1007BE-1 (K20 ALL) BEEHIVE	28.00	18.80	24.20	14.50	75 @39.0	230@12	16.20	22.80	12.70	RET-H55BE-T1 + SEAT-HKBE1
SPR-H1007BE-2 (K20 ALL) BEEHIVE	28.00	18.80	24.20	14.50	90 @37.8	248@12	15.00	22.80	12.70	RET-H55BE-T1 + SEAT-HKBE2

HONDA K20 / K24 2.0lts / 2.4 lts DOHC VTEC / RSX-S / TSX/ CIVIC-SI

ENGINE COMPONENTS

VALVE GUIDES	INTAKE: GDE-HK55-I	EXHAUST: GDE-HK55-E
VALVE SEALS	INTAKE: VS-H55-I	EXHAUST: VS-H55-E
VALVE LOCK	KPR-5.5/7A-ST	
BLOCK GUARDS	BG-K20 / BG-K24	
TITANIUM VALVES	PLEASE CALL	

HONDA K20 / K24 TITANIUM VALVES			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
36.0mm (+1) DISH	5.48 mm	106.95 mm (-1.9)	HIVT-1022D
36.5mm (+1.5) Flat			HIVT-1022.5F
37mm (+2) Flat			HIVT-1023F
37mm (+2) Flat			HIVT-1023F-50
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
30mm (std) Flat	5.45 mm	106.75 mm (-1.9)	HEVT - 1020F
31mm (+1) Flat			HEVT - 1022F
LASH CAP Need to use Lash Cap 1.9-2.0mm thick / 5.5mm diam			

SPRING KITS FOR TITANIUM VALVES

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift mm	Coil Bind mm	Rate lbs./mm	Titanium Retainer Part Number
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)				
SPR-H1000D	29.65	21.85	20.50	15.50	67@ 37.0	203@12.5	16.30	20.70	11.50	RET-K20A2/T2 + SEAT-H1020DS
SPR-H1005D	29.65	21.85	20.50	15.50	73 @ 37	213@12.5	16.30	20.70	11.50	RET-K20A2/T2 + SEAT-H1020DS
SPR-H100DR	30.20	22.20	22.20	16.80	78 @ 34	234@12.5	15.50	18.50	12.50	RET-K20A2/T2 + SS-3011-3+ SEAT-H1020DS
SPR-3073-2034	29.65	21.85	21.30	15.50	84 @ 37.7	236@12.5	16.20	21.50	12.20	RET-H1000/T2 + SEAT-H1021TF
SPR-H1022D/K20TI	30.00	21.80	21.00	15.50	88 @ 39	228@12.5	17.80	21.20	11.20	RET-AUSVE/T1 + SEAT-H1021TF

HONDA K24Z7 2.0Lts / 2.4 Lts DOHC VTEC 2012 Civic - CR-V			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
36.0mm std) DISH	5.48 mm	108.85 mm	HIVN-1022D
36.0mm (std) Flat			HIVN-1022F
36.5mm (+0.5) Flat			HIVN-1022.5F
37mm (+1.0) Flat			HIVN-1023F
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
31.0mm (std)	5.45 mm	108.80	HEVN - 1030D
31.0mm (std)			HEVN - 1030F
31.0mm (std)			HEVI - 1030D
31.50 mm (+0.5)			HEVN - 1033F
31.50 mm (+0.5)			HEVI - 1033D
32.00 mm (+1mm)			HEVI - 1035D

HONDA K24Z7 2.0Lts / 2.4 Lts DOHC VTEC 2012 Civic - CR-V

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPR-H1000D-Z7	29.65	21.85	20.50	15.50	67 @ 36.4	210 @ 12.5	15.70	20.70	11.50	RET-K24Z7/T1 + SEAT-H1020DS (+KPR)
SPR-H1005D-Z7	29.65	21.85	20.50	15.50	80 @ 36.4	220 @ 12.5	15.70	20.70	11.50	RET-K24Z7/T1 + SEAT-H1020DS (+KPR)
SPR-H100DR-Z7	30.20	22.20	22.20	16.80	86 @ 33.4	234 @ 12.5	14.90	18.50	12.50	RET-K24Z7/T1 + SS-3011-3+ SEAT-H1020DS (+KPR)

ENGINE COMPONENTS

VALVE GUIDES	INTAKE: GDE-HK55-I	EXHAUST: GDE-HK55-E
VALVE SEALS	INTAKE: VS-H55-I	EXHAUST: VS-H55-E
VALVE LOCK	KPR-5.5/7A-ST	

HONDA B16A / B17A / B18C 1.6 / 1.7 / 1.8 DOHC VTEC / GSR / Acura Integra / Del Sol / Civic Si / 92-00			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
33.00mm (std) Flat	5.48 mm	102.5 mm	HIVN-200F
3.00 mm (std) Flat			HIVN-100F
33.00 mm (std) Dish			HIVN-1000
33.50 mm (+0.5) Dish			HIVN-1000D
33.50 mm (+0.5) Flat			HIVN-1000F
34.00 mm (+1.0) Dish			HIVN-1001
34.00 mm (+1.0) Flat			HIVN-1001F

EXHAUST VALVE PART NUMBER			
Head Diam	Stem Diam	Length	Black Nitride/ Inconel / Sodium
28.00mm (std) Flat	5.45 mm	102.5 mm	HEVN-200F
28.00 mm (std) Flat			HEVN-100F
28.00 mm (std) Dish			HEVN-1000
28.50 mm (+0.5) Flat			HEVN-1001F
28.50 mm (+0.5) Dish			HEVN-1001D
29.00 mm (+1.0) D or F			HEVN-1001/2F
28.00 mm (std) Dish			HEVI-1000 *
28.50 mm (+0.5) Dish			HEVI-1001 *
29.00 mm (+1) Dish			HEVI-1001 / 2 *
28.00 mm (std)			6.00mm (Sodium Filled)

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift mm	Coil Bind mm	Rate lbs./mm	Titanium Retainer Part Number
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)				
SPR-H200DR (DRAG ONLY)	30.20	22.20	22.20	16.80	100@ 33.5	222 @ 10	13.00	20.00	12.20	RET-K20A2/T2 + OEM seat or SEAT-H1002D
SPR-H100DR (turbo/hi lift)	30.20	22.20	22.20	16.80	85 @ 35.5	210 @ 10	15.00	18.50	12.50	RET-K20A2/T2 + OEM seat or SEAT-H1002D
SPR-H1002D (All motor)	29.05	21.85	20.50	15.50	70@ 33.5	170 @ 10	14.00	19.50	10.00	RET-K20A2/T2 + OEM seat or SEAT-H1002D

ENGINE COMPONENTS

VALVE GUIDES	INTAKE: GDE-HB55-1	EXHAUST: GDE-HB55-E
VALVE SEALS	INTAKE: VS-H5.5I	EXHAUST: VS-H5.5E
VALVE LOCK	KPR-5.5/7A-ST	
BLOCK GUARDS	BG-B16	
VTEC TITANIUM LOCKING PIN	LP-HB (7 grams weight reduction)	
LOSS MOTION ASSEMBLY	LP-HB (7 grams weight reduction)	

HONDA D16A6 / D15B 1.6 lts SOHC Non VTEC / Civic / CRX 88-92			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Inconel
29mm (std)	5.48 mm	115.00mm	HIVN-1003
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Inconel
25.00mm (std)	5.45 mm	118.75mm	HEVN-1003

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift mm	Coil Bind mm	Rate lbs./mm	Titanium Retainer
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)				Part Number
SPR-H1003S	23.70	16.30	SINGLE		73 @ 40.60	192 @ 12	13.30	27.30	9.90	RET-H1003/T1+Requires Factory seat + Exhaust seat(8)H-1003E

ENGINE COMPONENTS

VALVE GUIDES	INTAKE: GDE-HD55-I	EXHAUST: GDE-HD55-E
VALVE LOCK	KPR-5.5/7A-ST	
VALVE SEALS	INTAKE: VS-H5.5I	EXHAUST: VS-H5.5E
BLOCK GUARDS	BG-D15/D16	

HONDA D16Z6 / Y6 /Y7/Y8 / D15B/ D17A - 1.6 / 1.7 lts SOHC VTEC / Civic / CRX/ Del Sol 92-05			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Inconel
30.00mm (std)	5.48 mm	118.50 mm	HIVN-1012
30.5mm (+0.5)	5.48 mm	118.50 mm	HIVN-1002
31.0mm (+1)	5.48 mm	118.50 mm	HIVN-1102
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Inconel
26.00mm (std)	5.45 mm	116.0 mm	HEVN-1012
26.50mm (+0.5)	5.45 mm	116.0 mm	HEVN-1002
27.00mm (+1)	5.45 mm	116.0 mm	HEVI-1102

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift mm	Coil Bind mm	Rate lbs./mm	Titanium Retainer
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)				Part Number
SPR-H1002S	22.70	15.20	Single		60 @ 49.5	166 @ 12.5	14.90	34.60	8.50	RET-H1002/T1+ Factory Seat (optional SEAT-HD/F)

ENGINE COMPONENTS

STEEL RETAINER	RET-H1002/ST	
VALVE GUIDES	INTAKE: GDE-HD55-I	EXHAUST: GDE-HD55-E
VALVE LOCK	KPR-5.5/7A-ST	
VALVE SEALS	INTAKE: VS-H5.5I	EXHAUST: VS-H5.5E
BLOCK GUARDS	BG-D15/D16 / BG-D17A	

HONDA B18A / B18B / B20 1.8/2.0lts DOHC Non-VTEC / LS / Acura Integra LS/ CRV 92-03			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
31.00mm (std)	6.57 mm	105.40 mm	HIVN-1004/0
31.5mm (+0.5)	6.57 mm	105.40 mm	HIVN-1004
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
28.00mm (std)	6.55 mm	105.80 mm	HEVN-1004/0
28.50mm (+0.5)	6.55 mm	105.80 mm	HEVN-1004

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift mm	Coil Bind mm	Rate lbs./mm	Titanium Retainer
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)				Part Number
SPR-TS1015/LS	27.50	20.00	20.00	15.50	77 @ 34.5	211 @ 11	13.80	20.70	12.10	RET-TS66/T1 + (8) SEAT-TS15/LS-IN + (8) SEAT-TS15/LS-EX (No OEM)
SPR-TS2081/LS	27.50	20.00	SINGLE		54 @ 34.5	152 @ 11	13.80	20.70	9.60	RET-TS66/T1 + (8) SEAT-TS15/LS-IN + (8) SEAT-TS15/LS-EX (No OEM)

ENGINE COMPONENTS

VALVE GUIDES	INTAKE: GDE-H66-I	EXHAUST: GDE-H66-E
VALVE SEALS	INTAKE: VS-H6.6-I	EXHAUST: VS-H6.6-E
VALVE LOCK	KPR-6.6/LS	
BLOCK GUARDS	BG-B16	

HONDA ZC / D16A1 / D16A9 DOHC / Integra 88-89			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
30.5mm (+0.5)	6.57 mm	105.40 mm	HIVN-1005
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
27.5mm (+0.5)	6.45 mm	105.80 mm	HEVN-1005

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift mm	Coil Bind mm	Rate lbs./mm	Titanium Retainer
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)				Part Number
SPR-EC3027S - ZC	26.60	19.60	Single		65 @ 33.8	135 @ 10	11.60	20.70	7.00	RET-TS66/T1 + SEAT-TS/MA18-I

ENGINE COMPONENTS

VALVE SEALS	INTAKE: VS-H6.6-I	EXHAUST: VS-H6.6-E
VALVE LOCK	KPR-6.6/LS	
BLOCK GUARDS	BG-16ZC / BG-D16A1	

HONDA F22A 2.2 lts SOHC Non-VTEC Accord - Prelude 92-96			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
35.00mm (+1.0) Dish	5.48 mm	112.00 mm	HIVN-F22A-1
37.00mm (+3.0) Flat	5.48 mm	112.00 mm	HIVN-F22A-BM
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
30.00mm (+1.0)	5.54 mm	123.50 mm	HEVN-F22A-BM

HONDA H22A 2.2 lts VTEC / Prelude 93-00			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
35.00mm (std) Dish	5.48 mm	106.85 mm	HIVN-1006
35.00mm (std) Flat	5.48 mm	106.85 mm	HIVN-1006F
35.5mm (+0.5)	5.48 mm	106.85 mm	HIVN-1007
36.00mm (+1.0)	5.48 mm	106.85 mm	HIVN-1008
37.00mm (+2.0)	5.48 mm	106.85 mm	HIVN-1009
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
30.00mm (std) Dish	5.45 mm	106.45 mm	HEVN-1006D
30.00mm (std) Dish	5.45 mm	106.45 mm	HEVN-1006F
30.00mm (std) Flat	5.45 mm	106.45 mm	HEVI-1006F
30.5mm (+0.5)	5.45 mm	106.45 mm	HEVN-1007
31.00mm (+1.0)	5.45 mm	106.45 mm	HEVI-1008

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift mm	Coil Bind mm	Rate lbs./mm	Titanium Retainer Part Number
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)				
SPR-H1000D	29.65	21.85	20.50	15.50	80 @ 35.5	223 @ 12.5	14.80	20.70	11.50	RET-K20A2/T2 + Factory Seat
SPR-H1005D	29.65	21.85	20.50	15.50	93 @ 35.5	239 @ 12.5	13.80	20.70	11.50	RET-K20A2/T2 + Factory Seat

ENGINE COMPONENTS

VALVE GUIDES	INTAKE: GDE-HB55-I	EXHAUST: GDE-HB55-E
VALVE SEALS	INTAKE: VS-H5.5-I	EXHAUST: VS-H5.5-E
VALVE LOCK	KPR-5.5/7A-ST	
BLOCK GUARDS	BG-H22A	

HONDA H23A DOHC Non-VTEC / Prelude 92-96			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
35.00mm (+1.0)	6.58 mm	103.50 mm	HIVN-1042D
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
30.00mm (+1.0)	6.54 mm	102.70 mm	HEVN-1042D

HONDA H23A DOHC Non-VTEC / Prelude 92-96

ENGINE COMPONENTS

VALVE SPRINGS PLEASE CALL

VALVE GUIDES INTAKE: GDE-H66-I

EXHAUST: GDE-H66-E

HONDA / ACURA NSX 3.2 lts 24V / Acura NSX			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Inconel
36.00 mm (std)	5.48 mm	112.15 mm	HIVN-NSX/C1
HONDA / ACURA NSX 3.2 lts 24V / Acura NSX			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Inconel
30.00 mm (std)	5.45 mm	111.00 mm	HEVN-NSX
30.00 mm (std)	5.45 mm	111.00 mm	HEVI-NSX/C1

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift mm	Coil Bind mm	Rate lbs./mm	Titanium Retainer
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)				Part Number
SPR-H1000D/NSX	29.70	21.90	20.50	15.50	67 @ 36.4	205 @ 12	15.70	20.70	11.50	RET-K20A2/T2-NS + SEAT-H1020DS
SPR-H1005D/NSX	29.65	21.85	20.50	15.50	80 @ 36.4	234 @ 12	15.70	20.70	11.50	RET-K20A2/T2-NS + SEAT-H1020DS

ENGINE COMPONENTS

VALVE SEALS INTAKE: VS-H5.5-I

EXHAUST: VS-H5.5-E

VALVE GUIDES INTAKE: GDE-HNSX-I

EXHAUST: GDE-HNSX-E

VALVE LOCK KPR-5.5/7A-ST

HONDA / ACURA J30 - J32 V6 SOHC VTEC			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Inconel
34.00mm	5.48 mm	114.7 mm	HIVN-3234
HONDA / ACURA J30 - J32 V6 SOHC VTEC			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Inconel
28.00 mm	5.45 mm	117.70 mm	HEVI - 3228

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift mm	Coil Bind mm	Rate lbs./mm	Titanium Retainer
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)				Part Number
SPR-H1003S-J32	23.70	16.20	SINGLE		60 @ 42.00	161 @ 10.0	12.30	27.60	9.90	RET-H1003/T1+ SEAT-J32-H1003

HONDA / ACURA J35 - V6 SOHC VTEC J30 -J32 - J35A						INTAKE VALVE PART NUMBER			
Head Diam		Stem Diam		Length		Black Nitride/Inconel			
36.00mm		5.48 mm		116.9 mm		HIVN-3536			
EXHAUST VALVE PART NUMBER						Black Nitride/Inconel			
Head Diam		Stem Diam		Length		HEVI - 3530			
30.00 mm		5.45 mm		114.20 mm					

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift mm	Coil Bind mm	Rate lbs./mm	Titanium Retainer Part Number
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)				
SPR-H1003S-J32	23.70	16.20	SINGLE		60 @ 42.00	161 @ 10.0	12.30	27.60	9.90	RET-H1003/T1+ SEAT-J32-H1003

HONDA CR-Z 1.5L LEA 4 cyl. 16v / Honda Hybrid CR-Z 2011						INTAKE VALVE PART NUMBER			
Head Diam		Stem Diam		Length		Black Nitride/Inconel			
28.00 mm (std)		5.48 mm		118.85 mm		HIVN-1050			
EXHAUST VALVE PART NUMBER						Black Nitride/Inconel			
Head Diam		Stem Diam		Length		HEVI-1050			
23.00 mm (std)		5.46 mm		117.55 mm					

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift mm	Coil Bind mm	Rate lbs./mm	Titanium Retainer Part Number
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)				
SPRK-H2416	24.00	16.50	SINGLE		Int:61@ 40.20	164 @ 10	15.3	24.90	9.90	RET-H2416 + SEAT-A2416-IN RET-H2416 + SEAT-A2416-EX
					Exh:56@40.60	160 @ 10				

ENGINE COMPONENTS

VALVE SEALS	INTAKE: VS-H5.5-I	EXHAUST: VS-H5.5-E
VALVE LOCK	Factory 6 Degree Keepers	

HONDA R18A SOHC I-VTEC Civic / 2006 +						INTAKE VALVE PART NUMBER			
Head Diam		Stem Diam		Length		Black Nitride/Inconel			
32.00 mm (std)		5.48 mm		116.7 mm		HIVN-1018			
EXHAUST VALVE PART NUMBER						Black Nitride/Inconel			
Head Diam		Stem Diam		Length		HEVN-1012			
26.00 mm (std)		5.45 mm		115.95 mm					
27.00 mm (+1)		5.45 mm		115.95 mm		HEVI-1112			

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift mm	Coil Bind mm	Rate lbs./mm	Titanium Retainer Part Number
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)				
SPR-H1003S-R18	23.70	16.30	SINGLE		Int:68@ 41.15	167 @ 10	14.20	27.30	9.90	RET-H1003-T1-R18+ SEAT-H1003-R18 + KPR-5.5/7A-ST

ENGINE COMPONENTS

VALVE SEALS	INTAKE: VS-H5.5I	EXHAUST: VS-H5.5E
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Hyundai Genesis 2.0L 16v Turbo G4KF Theta L4			Hyundai Sonata 2010 / Genesis coupe 2010 Kia Forte 2010 / Kia Opirma 2010	INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel	
35.00mm (std)	5.47 mm	113.25 mm	MIVN-1017	
36.00mm (+1.0)	5.47 mm	113.25 mm	MIVN-1019	
			EXHAUST VALVE PART NUMBER	
Head Diam	Stem Diam	Length	Black Nitride/ Inconel	
29.00mm (std)	5.46 mm	105.9 mm	MEVI-1017	
30.00mm (+1.0)	5.46 mm	105.9 mm	MEVI-1019	

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift mm	Coil Bind mm	Rate lbs./mm	Titanium Retainer
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)				Part Number
SPR-HY1015-S	27.50	20.00	SINGLE		57@ 34.80	144 @ 10	14.50	20.70	7.00	RET-TS5.5/T1 + Factory Seat +SEAT-M1015-2
SPR-HY1012-D	27.50	20.00	20.00	15.20	75@ 34.50	170 @ 10	14.50	20.70	9.60	RET-TS5.5/T1EX + Factory Seat +SEAT-M1015-1
SPR-HY1015-2	27.50	20.00	20.00	15.20	75@ 35.30	196 @ 10	14.50	20.70	12.10	RET-TS5.5/T1EX + Factory Seat + SEAT-M1015-1
SPR-HY1015-3	27.50	20.00	20.00	15.20	85@34.50	211 @ 10	13.80	20.70	12.10	RET-TS5.5/T1EX + Factory Seat +SEAT-M1015-2
SPR-HY250 (Beehive)	25.50	18.30	21.80	14.60	58@34.50	172 @ 10	10.00	19.50	11.80	RET-BM5-RR + OEM SEAT

ENGINE COMPONENTS

VALVE GUIDES	INTAKE: GDE-MEVOX-OS (oversized)	EXHAUST: GDE-MEVOX-OS (oversized)
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Hyundai Genesis 3.8L 24v

ENGINE COMPONENTS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift mm	Coil Bind mm	Rate lbs./mm	Titanium Retainer
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)				Part Number
SPRK-H1002D-HY	29.05	21.85	20.50	15.50	76 @ 34.30	184 @ 10.0	13.00	19.50	10.00	RET-K20A2/T2 + OEM SEAL + SEAT-GEN/2



Lancia Delta Integrale 2.0 16v Turbo / Alfa Romeo 155 Q4 16v Turbo 88-95			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
34.40 mm (std)	6.98 mm	128.80 mm	LIVN-1001
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
28.40 mm (std)	6.97 mm	126.00 mm	LEVI-1001



MAZDA MIATA 1.6 lts DOHC B6D / Miata / MX 5 90-93			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
31.00mm (std)	5.96 mm	105.35 mm	MAIVN-1100(hi flo)
32.00mm (+1.0)	5.96 mm	105.35 mm	MAIVN-1102 (hi flo)
31.00mm (std)	5.96 mm	106.55 (+1.25 mm)	MAIVN-1100-2 (Std Flow)
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
26.20mm (std)	5.94 mm	105.35 mm	MAEVN-1100
27.20mm (+1.0)	5.94 mm	105.35 mm	MAEVN-1102

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift mm	Coil Bind mm	Rate lbs./mm	Titanium Retainer Part Number
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)				
SPR-MM16S	27.50	20.00	SINGLE		58@ 34.10	157 @ 10.5	13.40	20.70	9.40	RET-TS60/MA2 + SEAT-TS/MA18I + OEM seat
SPR-MM16D2	27.50	20.00	20.00	15.20	70@35.50	197 @ 10.5	14.80	20.70	12.10	RET-TS60/MA2 + SEAT-TS/MA18E + OEM seat

ENGINE COMPONENTS

VALVE SEALS	INTAKE: VS-T6I	EXHAUST: VS-T6E
CAM FOLLOWERS	CF-30/16LC To be use with 5.5mm Lash Caps installed on the CF inner post.	
VALVE GUIDES	INTAKE & EXHAUST: GDE-MA16-IE	

MAZDA MIATA 1.8 lts DOHC "BP" / Ford Escort GT			Miata / MX 5 Protégé 90-99 Ford Escort GT 91-96	INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Inconel	
30.00mm (std)	5.97 mm	102.6 mm (+0.6)	MAIVN-1204 (hi flo)	
33.00mm (std)	5.97 mm	102.6 mm (+0.6)	MAIVN-1208(std flo)	
34.00mm (+1.0)	5.97 mm	102.6 mm (+0.6)	MAIVN-1206(hi flo)	
				EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Inconel	
28.00mm (std)	5.94 mm	102.6 mm (+0.6)	MAEVN-1204	
29.00mm (+1.0)	5.94 mm	102.6 mm (+0.6)	MAEVN-1206	
29.00mm (+1.0)	5.94 mm	102.6 mm (+0.6)	MAEVI-1206	

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift mm	Coil Bind mm	Rate lbs./mm	Titanium Retainer Part Number
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)				
SPR-MM18S	27.50	20.00	SINGLE		56@ 34.2	154@ 10.5	13.50	20.70	9.40	RET-TS60/MA2 + RET-TS60/MA2 +OEM (use '96 + Cotters)
SPR-1012-M18D	27.50	20.00	20.00	15.20	63@ 34.2	164 @ 10.5	14.20	20.00	9.60	RET-TS60/MA2 + (16) SEAT-TS/ MA181 +OEM (use '96 + Cotters)
SPR-MM18D	27.50	20.00	20.00	15.20	74@34.2	177 @ 10.5	13.00	20.70	12.10	RET-TS60/MA2 + (16) SEAT-TS MA181 +OEM (use '96 + Cotters)

ENGINE COMPONENTS

VALVE SEALS	INTAKE: VS-T6I	EXHAUST: VS-T6E
CAM FOLLOWERS	CF-30/16LC To be use with 5.5mm Lash Caps installed on the CF inner post.	
VALVE GUIDES	INTAKE: GDE-MA18-I	EXHAUST: GDE-MA16-IE

MAZDA PROTÉGÉ / MX6 2.0lts FS / Ford Probe / Protégé / MX6 / 626 (1993-2003)			INTAKE VALVE PART NUMBER	
Head Diam	Stem Diam	Length	Black Nitride/Inconel	
32.50 mm (+1)	5.97 mm	89.9 mm	MEAVN-2002	
				EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Inconel	
28.6 mm (+1)	5.96 mm	89.9 mm	MAEVI-2002	

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift mm	Coil Bind mm	Rate lbs./mm	Titanium Retainer Part Number
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)				
SPR-MP20S	25.00	18.00	SINGLE		58 @ 34.8	142 @ 11	13.80	21.00	7.60	RET-2500/T1 + Factory seat
SPR-TC25D/MP	25.00	18.00	18.00	13.00	85 @ 34.8	233 @ 11	13.80	21.00 17.00	12.60	RET-2500/T1 + Spring base SS-3012 Oil Seal VS-T6SM (machine guard)

ENGINE COMPONENTS

VALVE SEALS	INTAKE: VS-T6I / For Dual Spring Smaller diam.: VS-T6SM (requires machining of guide tip)		EXHAUST: VS-T6E / For Dual Spring Smaller diam.: VS-T6SM (requires machining of guide tip)
VALVE GUIDES	INTAKE: GDE-MA20FS		EXHAUST: GDE-MA20FS

MAZDA MZR / FORD Duratec 2.0 - 2.3 - 2.5 lts / Focus / Mazda 3			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
35.00mm (std) Flat	5.48 mm	103.40mm (std)	MAIVN-2301F or D
36.00mm (+1.0) Dish	5.48 mm		MAIVN-2304D
36.0mm (+1.0) Flat	5.48 mm		MAIVN-2304F
37.50mm (+2.5) Dish	5.48 mm		MAIVN-2308D
35.00mm (std) Dish	5.97 mm (5mm tip)		MAIVN-2301D-6mm
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride / Inconel / Sodium
30.00mm (std) Dish	5.48 mm	104.70mm (std)	MAEVN-2301D
31.00mm (+1.0) Flat			MAEVN-2301F
31.00mm (+1.0) Dish			MAEVI-2301D
31.00mm (+1.0) Flat			MAEVN-2304F
31.00mm (+1.0) Dish			MAEVI-2304 *
32.00mm (+2.0) Dish			MAEVI-2306 *
30.00mm (std) Dish	6.00mm	104.70mm	MAEVI-2301D-6mm *
31.00mm (+1.0) Dish	5.95 mm	105.9 mm (+1.2MM)	MAEVI-2304 -6mm-HS

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift mm	Coil Bind mm	Rate lbs./mm	Titanium Retainer
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)				Part Number
SPR-TS/DUR-D1	27.50	20.00	20.00	15.20	83@ 35.00	233 @ 12	14.30	20.70	12.10	RET-TS5.5/T1+Factory Seat +SEAT-DUR1
SPR-TS/DUR-D2	27.50	20.00	20.00	15.20	70@ 36.20	215 @ 12	15.50	20.70	12.10	RET-TS5.5/T1+Factory Seat +SEAT-DUR2
SPR-TS/DUR-DS	27.50	20.00	SINGLE		55@35.00	150 @ 10	14.30	20.70	9.60	RET-TS5.5/T1+Factory Seat +SEAT-DUR1
SPR-FE20BE (Conical)	24.30	17.50	21.20	14.40	67@37.90	144 @ 10	12.80	23.20	7.70	Use with OEM RETAINER + OEM SEAT
SPR-TS1015-BE-DUR1 (Beehive)	27.70	19.70	23.20	15.20	70@35.5	197 @ 10	12.50	21.80	12.70	RET-TS5.5/T1F-BE + Factory Seat + SEAT-DUR1
SPR-TS1015-BE-DUR2 (Beehive)	27.70	19.70	23.20	15.20	82@34.5	209 @ 10	11.75	21.80	12.70	RET-TS55/EX-BE Factory Seat + SEAT-DUR1

ENGINE COMPONENTS

VALVE SEALS	INTAKE: VSI-D5.5E	EXHAUST: VSI-D5.5E
VALVE GUIDES (5.5mm)	INTAKE AND EXHAUST: GDE-DUR16 for 5.5mm valves only.	
VALVE GUIDES (6mm)	INTAKE AND EXHAUST: GDE-DUR16-6MM for 6mm valves only - Use factory valve stem seal	
CAM FOLLOWERS	CF-31/2.5+ (+ shims / to be use with 1mm shorter valves)	



MINI COOPER 2002-2007 + 1.6 lts / Mini Cooper S (Tritec engine)			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
30.70mm (+0.5)	5.94 mm	109.58 mm	MCIVN-1005S
32.00mm (+1.8)	5.94 mm	Triple or single groove	MCIVN-1008S *
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
24.20mm (+1.0)	5.92 mm	118.37 mm	MCEVI-1007FS
24.20mm (+2.3)	5.92 mm	118.37mm	MCEVN-1010FS
25.50mm (+2.3)	5.92 mm	118.37mm	MCEVI-1010FS *

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift mm	Coil Bind mm	Rate lbs./mm	Titanium Retainer
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)				Part Number
SPR-TS1015/MC (Triple groove)	27.50	20.00	20.00	15.20	76 @ 34.8	210 @ 11	14.00	20.70	12.10	RET-TS60MA2 + SEAT-MC1015D + OEM)
SPR-TS1015/MC-2 (single groove)	27.50	20.00	20.00	15.20	76 @ 34.8	210 @ 11	14.00	20.70	12.10	RET-TS60MA2 + SEAT-MC1015D + OEM +KPR-6T
SPR-EC3025D/MC (single groove only)	26.60	19.60	19.40	14.20	70 @ 34.2	215 @ 11	14.10	20.70	12.80	RET-EC3020T1 + SEAT-MC1015D + OEM+ KPR-6S/7
SPR-EC3027D/MC (single groove only) DRAG	26.60	19.60	19.40	14.20	95 @ 34.2	220 @ 11	14.10	20.70	11.30	RET-EC3020T1 + SEAT-MC1015D + OEM+ KPR-6S/7
SPR-HM1007BE/MC (triple groove valve)	28.00	18.80	24.20	14.20	75 @ 39	203 @ 10	16.20	22.80	12.80	RET-M65-TBE + SEAT-SS2717-2 + OEM seat & Keeper
SPR-HM1007BE/MC2 (single groove valve)	28.00	18.80	24.20	14.20	75 @ 39	203 @ 10	16.20	22.80	12.80	RET-M65-TBE + SEAT-SS2717-2 + OEM seat + KPR-6T

ENGINE COMPONENTS

VALVE GUIDES	GDE-MIN-R53 (in & Ex)
VALVE SEALS	INTAKE: VSI-M6E EXHAUST : VSI-M6E

MINI COOPER R56 2007-2012 - PRINCE ENGINE (Peugeot EP6 207GT/308GTi/408 - Citroen C4/ DS3 w/ THP150 /175 engine)			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
28.8mm (std)	4.96 mm	105.80 mm	MCIVN-1200S (1grve)
29.8mm (+1mm)	4.96 mm	105.80 mm	MCIVN-1201S (1grve)
29.8mm (std)	4.96 mm	95.00 mm	MCIVN-1301S (1grve)
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel/ Sodium
26.2mm	4.95 mm	110.15 mm	MCEVI-1200-HS (1grve)
27.00mm	4.95 mm	110.15 mm	MCEVI-1202-HS (1grve)
26.2mm	4.95 mm	110.15 mm	MCEVI-1200-HS (1grve)

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift mm	Coil Bind mm	Rate lbs./mm	Titanium Retainer
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)				Part Number
SPR-MC56BE (single beehive)	23.50	16.50	19.30	12.30	70 @ 33.6	163 @ 10	11.40	22.20	9.70	OEM RETAINER + OEM SEAT Op. Titanium retainer RET-MC56/T1

VALVE GUIDES	INTAKE AND EXHAUST: GDE-MIN-R56-STD
VALVE SEALS	INTAKE & EXHAUST: VSI-MIN-R56



MITSUBISHI 4G63 2.0 Lts DOHC TURBO / Eclipse / Talon / Lancer EVO			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Inconel
34.00mm (std)	6.57 mm	109.6 mm	MIVN-1007
34.50mm (+0.5)			MIVN-1008
35.00 mm (+1.0)			MIVN-1009
36.00 mm (+2.0)			MIVN-1010
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Inconel
30.50 mm (std)	6.54 mm	109.6 mm	MEVN-1007
31.00 mm (+0.5)			MEVN-1008
31.50 mm (+1.0)			MEVN-1009
30.50 mm (std)			MEVI-1007
31.00 mm (+0.5)			MEVI-1008
31.50 mm (+1.0)			MEVI-1009
32.5 mm (+2.0)			MEVI-1010
SODIUM FILLED INCONEL VALVE			
31.5mm (+1.0)	6.54mm (Sodium Filled)	109.6mm	MEVI-1009-HS

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift mm	Coil Bind mm	Rate lbs./mm	Titanium Retainer
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)				Part Number
SPR-M1007S	28.10	20.00	SINGLE		76@ 39.6	200 @ 11.5	14.90	24.70	10.50	RET-M65/T1 + Factory seat
SPR-M1005D	28.10	20.00	20.00	15.20	80 @ 39.6	200@ 11.5	16.00	23.50	10.50	RET-M65/T1 + SEAT-M1007D + valve seal VS-H6.6 *
SPR-M1007D	28.10	20.00	20.00	15.20	92 @ 39.6	235@ 11.5	14.90	24.70	12.50	RET-M65/T1 + SEAT-M1007D + valve seal VS-H6.6 *
SPR-M1007D-2	28.10	20.00	20.00	15.20	100 @ 39	243@ 11.5	14.30	24.70	12.50	RET-M65/TSTD + SEAT-M1007D+ valve seal VS-H6.6 *
SPR-M1007D-3	28.10	20.00	20.00	15.20	110 @ 38.1	253@ 11.5	13.40	24.70	12.50	RET-M65/TSTD + SEAT-M1007D/ FP+ valve seal VS-H6.6 *
SPR-M1007BE-1 BEEHIVE	28.00	18.80	24.20	14.50	80 @ 38.6	230 @ 11.5	15.30	22.80	12.80	RET-M65-TBE + SEAT-M65BE-1
SPR-M1007BE-2 BEEHIVE	28.00	18.80	24.20	14.50	98 @ 37.2	248@ 11.5	14.00	22.80	12.80	RET-M65-TBE + SEAT-M65BE-2

ENGINE COMPONENTS

VALVE GUIDES	INTAKE: GDE-MI66-I (+0.03mm/ .001")	EXHAUST: GDE-MI66-E (+0.03mm/ .001")
VALVE GUIDES	INTAKE: GDE-MI66-STI (standard size)	EXHAUST: GDE-MI66-STE (Standard size)
STEEL RETAINER	RET-M65 / ST	
VALVE SEALS	INTAKE: VS-H6.6-I (reduced OD diameter)	EXHAUST: VS-H6.6-E (reduced OD diameter)
VALVE SEALS	INTAKE: VS-M6.6-I EXHAUST: VS-M6.6-E	

* Same 1st Gen castings may need to use a different seat locator SEAT-M1006D due to a taller valve guide boss.

MITSUBISHI 4G63 2.0 Lts DOHC TURBO / TITANIUM VALVES			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	TITANIUM
36.00mm (+2)	6.57 mm	108.10 mm	MIVT-1010
			EXHAUST VALVE PART NUMBER
32.00mm (+1.5)	6.54 mm	108.1 mm	MEVT-1009

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift mm	Coil Bind mm	Rate lbs./mm	Titanium Retainer Part Number
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)				
SPR-TS1012/MI1	27.50	20.00	20.00	15.20	55@ 36.40	151 @ 10	16.40	20.00	9.60	RET-TS55/TIEX + Factory Seat+ SEAT-M1015-2
SPR-TS1012/MI2	27.50	20.00	20.00	15.20	64@ 35.65	160 @ 10	15.65	20.00	9.60	RET-TS55/TIEX + Factory Seat+ SEAT-M1015-1
SPR-TS1015/MI3	27.50	20.00	20.00	15.20	65@36.40	186 @ 10	15.70	20.70	12.10	RET-TS55/TIEX + Factory Seat+ SEAT-M1015-2
SPR-TS1015/MI4	27.50	20.00	20.00	15.20	74@35.65	191 @ 10	14.95	20.70	12.10	RET-TS5.5/T1 + Factory Seat +SEAT-M1015-2

MITSUBISHI 4B11 2.0 Lts DOHC TURBO / EVO X			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Inconel
35.00mm (std)	5.47 mm	113.25 mm	MIVN-1017
36.00mm (+1.0)	5.47 mm	113.25 mm	MIVN-1019
			EXHAUST VALVE PART NUMBER
29.00mm (std)	5.46 mm	105.9 mm	MEVI-1017
30.00mm (+1.0)	5.46 mm	105.9 mm	MEVI-1019

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift mm	Coil Bind mm	Rate lbs./mm	Titanium Retainer Part Number
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)				
SPR-M1012/EX1	27.50	20.00	20.00	15.20	75@ 34.50	185@ 11.5	14.50	20.00	9.60	RET-TS55/TIEX + Factory Seat+ SEAT-M1015-2
SPR-M1015/EX2	27.50	20.00	20.00	15.20	75@ 35.30	215 @ 11.5	14.50	20.70	12.10	RET-TS55/TIEX + Factory Seat+ SEAT-M1015-1
SPR-M1015/EX3	27.50	20.00	20.00	15.20	85@34.50	228 @ 11.5	13.80	20.70	12.10	RET-TS55/TIEX + Factory Seat+ SEAT-M1015-2
SPR-M1015/EX-S	27.50	20.00	SINGLE		57@34.80	144 @ 10	14.50	20.70	7.00	RET-TS5.5/T1 + Factory Seat +SEAT-M1015-2
SPR-M1012/EX1-BE (Beehive)	27.70	19.70	23.20	15.20	67@35.50	182 @ 11.5	13.00	21.50	10.00	RET-TS5.5/T9F-BE + Factory +SEAT-M1015-2

ENGINE COMPONENTS

VALVE GUIDES	INTAKE: GDE-MEVOX-OS (oversized)	EXHAUST: GDE-MEVOX-OS (oversized)
CAM GUIDES	INTAKE - GDE-MEVOX	EXHAUST - GDE-MEVOX
VALVE SEALS	INTAKE & EXHAUST: VSI-M5.5V	
CAM FOLLOWER	5 OPTIONS TO CHOOSE FROM CF-32/3.10 ; CF32/3.25 ; CF32/3.35 ; CF-32/3.55 ; CF-32/3.70	

MITSUBISHI 420A			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
35.000 mm (std)	5.96 mm	111.70 mm	MIVN-1420
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
30.70 mm (std)	5.95 mm	110.0 mm	MEVN-1420

MITSUBISHI 6G72 3.0 lts V6 DOHC / 3000 GT 91-98			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
36.00mm (1.0)	6.57 mm	106.35 mm	MIVN-1012
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
31.00mm (+0.5)	6.54 mm	105.5 mm	MEVN-1011
31.00mm (+0.5)	6.54 mm	105.5 mm	MEVI-1011
31.50mm (+1.0)	6.54 mm	105.5 mm	MEVI-1012 *
32.5mm (+2.0)	6.54 mm	105.5 mm	MEVN-1013
32.5mm (+2.0)	6.54 mm	105.5 mm	MEVI-1013

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift mm	Coil Bind mm	Rate lbs./mm	Titanium Retainer
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)				Part Number
SPR-M1007S-6G72	28.10	20.00	Single		100@37.15	224@ 11.5	12.40	24.70	10.50	RET-M65/T1 (Use factory seat)
SPR-M1005S-6G72	28.10	20.00			92@ 37.15	207 @11.5	13.60	23.50	10.00	RET-M65/T1 (Use factory seat)
SPR-M1007BE BEEHIVE	28.00	18.80	24.50	14.50	92@37.15	224 @11.5	14.35	22.80	12.70	RET-M65-TBE (Use factory seat)

MITSUBISHI 6G72 3.0 lts V6 SOHC / Eclipse 00-05 Montero 95-03										
VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift mm	Coil Bind mm	Rate lbs./mm	Titanium Retainer
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)				Part Number
SPR-M2521/T1	26.40	19.30	19.30	14.50	75@ 41.36	178 @ 10	16.40	24.70	10.00	RET-M2521/T1 + SEAT-TS-SUB4



NISSAN SR20 DE / DET 2.0 Lts DOHC / SX / NX SENTRA / G20 91-98			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Inconel
34.15mm (std)	5.97 mm	101.40 mm	NIVN-1005
34.65mm (0.5)	5.97 mm	101.40 mm	NIVN-1006
35.15mm (+1.0)	5.97 mm	101.40 mm	NIVN-1007
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Inconel
30.65 mm (+0.5)	5.94 mm (DE)	102.40 mm	NEVN-1006
31.15 mm (+1.0)	5.94 mm (DE)	102.40 mm	NEVI-1007 *
30.15 mm (std)	6.94 mm (DET)	102.40 mm	NEVI-1005/7 *
31.15 mm (+1.0)	6.94 mm (DET)	102.40 mm	NEVI-1007/7 *

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift mm	Coil Bind mm	Rate lbs./mm	Titanium Retainer Part Number
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)				
SPR-H1021S/SR20	30.00	21.80	SINGLE		68@ 40.5	147 @ 10	15.00	22.70	7.90	RET-NSR20/T1 + Factory Seat
SPR-H1022D/SR20	30.00	21.80	20.50	15.50	90@ 40.5	202 @ 10	16.00	19.50	11.20	RET-NSR20/T1 + SEAT-SR20/6 + SEAT-H/N240 OEM SEAT
SPR-H1021D/SR20	30.00	21.80	21.30	15.50	106@40.5	238@ 10	15.50	25.00	13.20	RET-NSR20/T1 + SEAT-SR20/6 + SEAT-H/N240 OEM SEAT

ENGINE COMPONENTS

VALVE GUIDES	INTAKE: GDE-NSR6	EXHAUST: GDE-NSR6-E
		EXHAUST: GDE-NSR6-ET (7mm to 6mm Guide conversion - Use Seal VS-N6E)
		EXHAUST: GDE-NSR7-E (Use Seal VS-N7E)
VALVE SEALS	INTAKE: VS-N6I	EXHAUST: VS-N6E for the DE / VS-N7E for the DET

NISSAN SR20 VE 2.0 Lts DOHC			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
34.15mm (std)	5.97 mm	99.70 mm	NIVN-1005-VE
35.15mm (+1)	5.97 mm	99.70 mm	NIVN-1007-VE
36.00mm (+1.85)	5.97 mm	99.70 mm	NIVC-1008-VE
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
29.15mm (std)	5.97 mm	100.5 mm	NEVI-1004-VE *
31.15mm (+2)	5.97 mm	100.5 mm	NEVI-1007-VE *
31.50mm (+2.35)	5.97 mm	100.5 mm	NEVI-1008-VE *

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPR-2035-2022	30.00	21.80	20.50	15.50	93@ 37.5	187@ 10	14.90	22.00	9.40	RET-NSR20/T1 + Factory Seat
SPR-H1022D-VE	30.00	21.80	20.50	15.50	123@ 37.5	238 @ 10	11.20	22.00	11.20	RET-NSR20/T1 + OEM SEAT Machine inner spring boss to increase Net Lift
SPR-H1021D-VE	30.00	21.80	21.30	15.50	138@37.5	270 @ 10	10.00	23.10	13.20	RET-NSR20/T1 + OEM SEAT Machine inner spring boss to increase Net Lift

ENGINE COMPONENTS

VALVE GUIDES	INTAKE: GDE-NSR6-I	EXHAUST: GDE-NSR6-E
VALVE SEALS	INTAKE: VS-N6I	EXHAUST: VS-N6E

NISSAN Pulsar GTi-R / RNN14		Nissan Pulsar GTi-R		INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel	
35.15 mm (+1)	5.97 mm	102.10mm	NIVN-1007GTIR	
				EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel	
31.15 mm (+1)	6.94 mm	103 mm	NEVI-1007-7GTIR *	

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPR-H1005D/GTIR	29.65	21.85	20.50	15.50	75@ 38.6	190 @ 10	17**(10.6)	20.70	11.50	RET-NSR20/T1 + OEM seat

ENGINE COMPONENTS

VALVE SEALS	INTAKE: VS-N6I	EXHAUST: VS-N7E
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** ** Retainer will hit the guide at approx 12.1mm of lift

NISSAN 300 - VG30D 3.0 lts DOHC / 300 ZX 90-96			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Inconel
34.5 mm (+0.5)	5.97 mm	103.15mm	NIVN-1017
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Inconel
30.0mm (+0.5)	5.97 mm	103.70mm	NEVI-1017

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift mm	Coil Bind mm	Rate lbs./mm	Titanium Retainer Part Number
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)				
SPR-TS1015/2	27.50	20.00	20.00	15.20	84@ 35	202 @ 10	12.00	20.70	12.70	RET-NVG1015/T1+ SEAT-TS1015
SPR-TS1012/2	27.50	20.00	20.00	15.20	74@ 35	192@ 10	12.00	20.70	12.70	RET-NVG1015/T1+ SEAT-TS1015

ENGINE COMPONENTS

VALVE SEALS	INTAKE: VS-N6I	EXHAUST: VS-N6E
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NISSAN 240 - KA24DE 2.4 lts DOHC / 240 SX / Altima 91-99			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Inconel
36.60mm (std)	6.97 mm	101.32 mm	NIVN-1009
37.10mm (+.5)	6.97 mm	101.32 mm	NIVN-1010
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Inconel
31.8mm (+0.5)	6.94 mm	99.00 mm	NEVN-1010
32.00mm (+0.7)	6.94 mm	99.00 mm	NEVI-1011 *

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift mm	Coil Bind mm	Rate lbs./mm	Titanium Retainer Part Number
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)				
SPR-H1000D/240	29.65	21.85	20.50	15.50	96@ 34.85	240@ 11.8	14.00	20.70	12.80	RET-H70/T1 + SEAT-H/N240
SPR-H100DR/240	30.20	22.20	22.20	16.80	84@ 34.85	225@11.80	14.20	20.50	12.00	RET-H70/T1 + SEAT-H/N240
SPR-H1002D/240	29.05	21.85	20.50	15.50	73@ 34.85	225@11.80	15.30	19.50	10.00	RET-H70/T1 + SEAT-H/N240

ENGINE COMPONENTS

VALVE SEALS	INTAKE: VS-N7E	EXHAUST: VS-N7E
VALVE GUIDES	INTAKE & EXHAUST: GDE-NKA24-7-EI	
CAM FOLLOWERS	CF-34/ 3.5+ (+ shims 1.5mm to 2.7mm thick)	

NISSAN SKYLINE RB20 24v DOHC / HYDRAULIC LIFTER / Skyline RB20 DET 6Cyl / 24v						INTAKE VALVE PART NUMBER			
Head Diam		Stem Diam		Length		Black Nitride/Inconel			
31.10 mm (+1.0)		5.97 mm		90.70 mm		NIVN-1042			
						EXHAUST VALVE PART NUMBER			
Head Diam		Stem Diam		Length		Black Nitride/Inconel			
27.50mm(+1.0)		5.94 mm		89.90 mm		NEVI-1042 *			

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift mm	Coil Bind mm	Rate lbs./mm	Titanium Retainer
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)				Part Number
SPR-2081/RB20	27.50	20.00	SINGLE		70@32.8	156 @ 9	12.10	20.70	9.60	RET-NVG1015/T1 + SEAT SS-2820-2.2

ENGINE COMPONENTS

VALVE SEALS	INTAKE: VS-N6I	EXHAUST: VS-N6E
CAM FOLLOWERS	Factory Hydraulic Cam Follower	

NISSAN SKYLINE RB20 24v DOHC / SOLID LIFTER CONVERSION / Skyline RB20 DE 6cyl / 24v						INTAKE VALVE PART NUMBER			
Head Diam		Stem Diam		Length		Black Nitride/Inconel			
31.10 mm (+1.0)		5.97 mm		107.5 mm		NIVN-1042-SL			
						EXHAUST VALVE PART NUMBER			
Head Diam		Stem Diam		Length		Black Nitride/Inconel			
27.50 mm (+1.0)		5.94 mm		106.7 mm		NEVI-1042-SL *			

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift mm	Coil Bind mm	Rate lbs./mm	Titanium Retainer
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)				Part Number
SPR-M1005/RB20	28.00	20.00	20.00	15.20	84@39.50	197 @ 11	16.00	23.50	10.30	RET-NVG1015/T1+ SEAT-RB25-E (24)

ENGINE COMPONENTS

VALVE SEALS	INTAKE: VS-N6I	EXHAUST: VS-N6E
CAM FOLLOWERS	For standard Base Circle: CF-31/2.5+ SHIMS / For reduced Base Circle CF-31/3.28+ SHIM	

NISSAN SKYLINE RB25 24v DOHC / HYDRAULIC LIFTER / Skyline RB25 DET 6Cyl / 24v 92-01						INTAKE VALVE PART NUMBER	
Head Diam		Stem Diam		Length		Black Nitride/ Inconel	
35.15 mm (+1.0)		5.97 mm		86.75 mm		NIVN-1052	
						EXHAUST VALVE PART NUMBER	
Head Diam		Stem Diam		Length		Black Nitride/ Inconel	
30.65 mm (+1.0)		5.94 mm		89.00 mm		NEVI-1052	

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift mm	Coil Bind mm	Rate lbs./mm	Titanium Retainer
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)				Part Number
SPR-1012S/RB25	27.50	20.00	SINGLE		78@30.6	143@9	10.60	20.00	7.30	RET-NVG1015/T1 + Intake OE seat + Exhaust SS-2820-E+OE
SPR-2081/RB25	27.50	20.00	SINGLE		85@30.6	171@9	9.90	20.70	9.60	RET-NVG1015/T1 + Intake OE seat + Exhaust SS-2820-E+OE

ENGINE COMPONENTS

VALVE SEALS	INTAKE: VS-N6I	EXHAUST: VS-N6E
CAM FOLLOWERS	Factory Hydraulic Cam Follower	

NISSAN SKYLINE RB25 24v DOHC / SOLID LIFTER CONVERSION / Skyline RB25 DET 6cyl / 24v 92-01						INTAKE VALVE PART NUMBER	
Head Diam		Stem Diam		Length		Black Nitride/ Inconel	
31.15 mm (+1.0)		5.97 mm		103.55 mm		NIVN-1052-SL	
						EXHAUST VALVE PART NUMBER	
Head Diam		Stem Diam		Length		Black Nitride/ Inconel	
30.65 mm (+1.0)		5.94 mm		105.8 mm		NEVI-1052/SL *	

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift mm	Coil Bind mm	Rate lbs./mm	Titanium Retainer
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)				Part Number
SPR-TS1015/RB25	27.50	20.00	20.00	15.20	83@35.00	216 @ 11	14.30	20.70	12.10	RET-NVG1015/T1+ SEAT-RB25-I (12)+SEAT-RB25-E(12)

ENGINE COMPONENTS

VALVE SEALS	INTAKE: VS-N6I	EXHAUST: VS-N6E
CAM FOLLOWERS	For standard Base Circle: CF-31/2.5+ SHIMS / For reduced Base Circle CF-31/3.28+ SHIM	

NISSAN SKYLINE RB26 24v DOHC / Skyline RB26 DET 6Cyl/24v 92-01			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
34.65 mm (std)	5.97 mm	102.3 mm	NIVN-1030
35.65 mm (+1.0)	5.97 mm	102.3 mm	NIVN-1032
35.65 mm (+1.0)	5.97 mm	103.8 mm	NIVN-1032 - L
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride / Inconel / Sodium
30.15mm (std)	6.94 mm	101.2 mm	NEVI-1030/7 *
31.15 mm (+1.0)	6.94 mm	101.2 mm	NEVI-1032/7 *
31.15 mm (+1.0)	6.94 mm	103.10 mm	NEVI-1032/7 - L*
31.15 mm (+1.0)	6.94 mm	101.20 mm	NEVI-1032/7 - HS (Sodium Filled)

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift mm	Coil Bind mm	Rate lbs./mm	Titanium Retainer Part Number
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)				
SPR-M1005S/RB	28.10	20.00	SINGLE		62@ 39.9	176 @ 11	16.00	23.5	10.35	RET-NRB60/TS + factory seat + SS-3025
SPR-M1007S/RB	28.10	20.00	SINGLE		70@ 40.7	188 @ 11	16.00	24.70	10.50	RET-NRB60/TS + factory seat (opt. spring shim SS-3025)
SPR-M1007D/RB	28.10	20.00	20.00	15.20	IN:92@40.7	IN:232@11	15.30	24.70	12.50	RET-NRB60/TS + OEM seat + SEAT-TS1015 (Int) + SEAT-TS1015/2 (Exh)
					EX:82@40.7	EX:222@11				
SPR-TS1015/RB26	27.50	20.00	20.00	15.20	92@33	225 @ 11	12.30	20.70	12.10	RET-NRB60/TS + SEAT-RB26/TS9

ENGINE COMPONENTS

VALVE SEALS	INTAKE: VS-N6I	EXHAUST: VS-N7E
VALVE GUIDES	INTAKE: GDE-NSR6-I	EXHAUST: GDE-NSR7-E
CAM FOLLOWERS	CF-31/2.7 or CF-31/3.78 (OE is 3mm thick / use OE shims) or CF-31 / 3.28+ (+ Supertech Shims / require our Retainer RET-NRB60/TS-2 / NO OE SHIMS)	



NISSAN 350Z / Titan 5.6lts V8 / ARMADA VK56DE / VQ35 6cyl 24v / VK 56 V8 32v			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Inconel
37.15mm (std)	5.96 mm	96.6 mm	NIVN-1025
38.15mm (+1.0)		96.6mm	NIVN-1028
38.15 mm (+1.0)		99.10mm	NIVN-1028L(+2.5)
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Inconel
30.50mm (-0.8)	5.97 mm	95.0 mm (+1)	NEVI-1023F *
31.35mm (std)		94.0 mm	NEVI-1025F *
32.35 mm (+1.0)		94.0 mm	NEVN-1028
32.35 mm (+1.0)		94.0 mm	NEVI-1028F *
33.35 mm (+2)		94.0 mm	NEVI-1029F-V2 *

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPR-TS1015/N35	27.50	20.00	20.00	15.20	82@35	202 @ 10	14.50	20.70	12.10	RET-TS5.5/T6 + SEAT-TS1015 + Factory seat
SPR-TS1015/N352	27.50	20.00	20.00	15.20	70@36	187 @ 10	15.50	20.70	12.10	RET-TS5.5/T8 + SEAT-TS1015 + Factory seat
SPR-TS1012/N35	27.50	20.00	20.00	15.20	58@36	153 @ 10	16.00	20.00	9.60	RET-TS5.5/T8 + SEAT-TS1015 + Factory seat
SPR-TS1012/N35	27.50	20.00	SINGLE		55@35	150 @ 10	14.50	20.70	9.60	RET-TS5.5/T6 + + Factory seat

ENGINE COMPONENTS

VALVE SEALS	INTAKE: VS-N6I	EXHAUST: VS-N6E
VALVE GUIDE	GDE-NVQ35 INTAKE AND EXHAUST	
CAM FOLLOWERS	CF-34/ 6.5+ (+ shims)	
BLOCK GUARDS	BG-VQ35DET	

NISSAN CA18 DET			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Inconel
34.15 mm (std)	5.97 mm	88.9 mm	NIVN-1001
35.15 mm (+1mm)	5.97 mm	88.9 mm	NIVN-1002
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Inconel
28.15 mm (std)	5.95 mm	89.30 mm	NEVI-1001*
29.15 mm (+1mm)	5.95 mm	89.30 mm	NEVI-1002*

NISSAN CA18 DET

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift mm	Coil Bind mm	Rate lbs./mm	Titanium Retainer Part Number
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)				
SPR-TS2081/NCA	27.50	20.00	SINGLE		55 @ 35	150 @ 10	13.50	20.70	9.60	RET-NVG1015/T1+OEM Seat + Seat SS-3025
SPR-TS1012/NCA	27.50	20.00	20.00	15.20	73 @ 35	175 @ 10	15.00	20.00	10.20	RET-NVG1015/T1+OEM Seat +inner SEAT-1015/2 (optional)
SPR-TS1015/NCA	27.50	20.00	20.00	15.20	82 @ 35	207 @ 10	14.30	20.70	12.50	RET-NVG1015/T1+OEM Seat +inner SEAT-1015/2 (optional)

VALVE SEALS

INTAKE: VS-N6I

EXHAUST: VS-N6E

NISSAN PATROL I6 / TB48 (24v) / TB48DE

INTAKE VALVE PART NUMBER

Head Diam	Stem Diam	Length	Black Nitride/Inconel
40.00 mm (+1.5)	6.97 mm	100.10 mm	NIVN-4070D / Flat
40.00 mm (+1.5)	6.97 mm	100.10 mm	NIVT-4070F (Titanium)

EXHAUST VALVE PART NUMBER

Head Diam	Stem Diam	Length	Black Nitride/Inconel
34.80 mm (+1.5)	6.95 mm	98.30 mm	NEVN-3470D / Flat
34.80 mm (+1.5)	6.95 mm	98.30 mm	NEVT-3470F (Titanium)

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift mm	Coil Bind mm	Rate lbs./mm	Titanium Retainer Part Number
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)				
SPRK-H1022S-TB48	30.00	21.80	SINGLE		55@ 39.00	121 @ 10	19.00	20.00	6.6	RET-H60/T1 + SEAT-TB1020D
SPRK-M1005S-TB48	28.00	20.00	SINGLE		78@ 38.50	180 @ 10	15.00	23.50	10.20	RET-OEM + factory seat (opt. spring shim SS-3025)
SPRK-H1021S-TB48	30.00	21.80	SINGLE		77@ 39	167 @ 10	17.00	22.00	9.00	RET-H60/T1 + SEAT-TB1020D
SPRK-M1007S-TB48	28.10	20.00	SINGLE		88@38.50	192 @ 10	14.50	24.00	10.50	RET-OEM + factory seat (opt. spring shim SS-3025)
SPRK-H1020+2024	30.00	21.80	20.20	15.50	102@39	221 @ 10	16.00	22.70	11.90	RET-H60/T1 + SEAT-TB1020D

ENGINE COMPONENTS

VALVE SEALS

INTAKE: VS-N7I

EXHAUST: VS-N7E

CAM FOLLOWERS

CF 34/3.5+

NISSAN VR38DETT 3.8L V6 24v / Nissan GT-R 2007- '11

INTAKE VALVE PART NUMBER

Head Diam	Stem Diam	Length	Black Nitride/Inconel
38.15mm (+1)	5.96 mm	95.00 mm	NIVN-1062
38.5mm (+1.35)	5.96 mm	94.80 mm	NIVN-1063

EXHAUST VALVE PART NUMBER

Head Diam	Stem Diam	Length	Black Nitride/Inconel/ Sodium
33.15 mm (+1)	5.95 mm	92.00 mm	NEVI-1062
31.7 mm (-0.45)	5.95 mm	92.00 mm	NEVI-1059
33.15 mm (+1)	5.95 mm (hollow)	92.00 mm	NEVI-1062-HS

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPRK-TS1012/GTR Intake	27.50	20.00	20.00	15.20	78 @34.2	185 @ 10	14.20	20.00	10.50	RET-TS5.5/T8 + SEAT-TS/GTR-2
SPRK-TS1012/GTR Exhaust	27.50	20.00	20.00	15.20	78 @34.2	185 @ 10	14.20	20.00	10.50	RET-TS5.5/T9 + SEAT-TS/GTR
SPRK-TS1015/GTR Intake	27.50	20.00	20.00	15.20	88 @34.2	212 @ 10	13.50	20.70	12.10	RET-TS5.5/T8 + SEAT-TS/GTR-2
SPRK-TS1015/ GTR Exhaust	27.50	20.00	20.00	15.20	88 @34.2	212 @ 10	13.50	20.70	12.10	RET-TS5.5/T9 + SEAT-TS/GTR
SPRK-TS1012/GTR-BE Intake (Beehive)	27.70	19.70	23.20	15.20	65 @35.7	165 @ 10	12.50	21.50	10	RET-TS5.5/T9F-BE + SEAT-TS-GTR-4
SPRK-TS1012/GTR-BE Exhaust (Beehive)	27.70	19.70	23.20	15.20	78 @34.6	178 @ 10	11.50	21.50	10	RET-TS5.5/T9F-BE + SEAT-TS-GTR-3

ENGINE COMPONENTS

VALVE SEALS	INTAKE: VS-N6I	EXHAUST: VS-N6E
VALVE GUIDES	FOR INTAKE AND EXHAUST GDE-NVR38-EI	
CAM FOLLOWERS	CF-34/ 6.5+ (+ shims) (Minimum shim thickness to use on the Exhaust is 1.6mm)	



OPEL VAUXHALL

OPEL / VAUXHALL C20XE - C20LET engine / Calibra/Vectra/ Astra '88-96			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Inconel
34 mm (+1)	6.96 mm	105 mm	GIVN-3303F
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Inconel
30 mm (+1)	6.95 mm	105 mm	GEVI-3303F

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPR-TS1012-C20	27.50	20.00	20.00	15.20	80@33.50	188 @ 10	13.90	19.60	11.80	RET-OEM + SEAT-TS15-LS-IN
SPR-H1002-C20	29.05	21.85	20.50	15.50	70@ 34	177@ 10	14.50	19.50	10.00	RET-H70/T1 +SEAT-H1020DS
SPR-H1001D-C20	29.35	21.85	20.50	15.50	80 @ 34	191@10	14.00	20.00	11.00	RET-H70/T1 +SEAT-H1020DS

ENGINE COMPONENTS

VALVE SEALS	INTAKE: VS-N7I	EXHAUST: VS-N7I
NOTE	Please advise cylinder head using due to variation in Guide OD (Kolbensmidt 11mm / Coscast 12.8mm) in order to supply the correct spring seat locator.	
KEEPERS	KPR-VW7-T	
CAM FOLLOWERS	CF-32/15-LC6	

OPEL / VAUXHALL / GM Ecotec Z20LET / LEH / Opel Astra / Speedster/ Zafira			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
32.5 mm (+0.5)	5.96 mm	102.15 mm	GIVN-3312S
33.0 mm (+1)	5.96 mm	102.15 mm	GIVN-3313S
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
29.5mm (+0.5)	5.95 mm	92.3 mm	GEVI-3312S
30.0mm (+1)	5.95 mm	92.3 mm	GEVI-3313S

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift mm	Coil Bind mm	Rate lbs./mm	Titanium Retainer Part Number
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)				
SPR-TS1015-Z20	27.50	20.00	20.00	15.20	75@35.10	195 @ 10	14.40	20.70	12.10	RET-TS55/T5 + SEAT-TS-Z20
SPR-TS1012-Z20	27.50	20.00	20.00	15.20	64@35.10	180@ 10	15.10	20.00	9.60	RET-TS55/T5 + SEAT-TS-Z20

ENGINE COMPONENTS

VALVE SEALS	INTAKE: VS-VBM6-I	INTAKE: VS-VBM6-I
CAM FOLLOWERS	CF-32/15-LC6	
KEEPERS	KPR-6S/7 - Valves have been converted to Single groove for high performance.	

OPEL Z16 / Z18 LER/ A18XER			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
31.3 mm	4.96 mm	118.38 mm	GIVN-3320S
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
27.5mm (+0.5)	4.95 mm	113.15 mm	GEVI-3320S

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift mm	Coil Bind mm	Rate lbs./mm	Titanium Retainer Part Number
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)				
SPR-MC56BE (single beehive)	23.30	16.80	18.80	12.30	62@34.60	150 @ 10	11.40	22.20	9.70	OEM RETAINER + OEM SEAT
SPR-TS1012-Z18	27.50	20.00	20.00	15.20	63@34.30	167 @ 10	14.00	20.00	10.40	RET-TS50/T1 + Factory seat (seal)

ENGINE COMPONENTS

VALVE GUIDE	GDE-OP50
CAM FOLLOWERS	5 Thicknesses to choose from: CF-32/3.10 ; CF-32/3.25 ; CF-32/3.35 ; CF-32/3.55 ; CF-32/3.70
VALVE SEAL	VSI-GM50-E INTAKE + EXHAUST



PEUGEOT

Peugeot 106-206-306-307 / Citroen Saxo 16v TU514 96-03			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Inconel
28.75 mm	5.96 mm	104.40 mm	PEIVN-28065
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Inconel
24.50 mm	5.96 mm	104.40 mm	PEEVI-28066

Peugeot 206 TU5JP4			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Inconel
31.30 mm	5.96 mm	103.80 mm	PEIVN-28603
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Inconel
24.50 mm	5.96 mm	104.40 mm	PEEVN-28604
25.50 mm (+1)	5.96 mm	104.40 mm	PEEVN-28606

Peugeot 205 GTI Group A			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Inconel
41.50 mm	7.97 mm	108.00 mm	PEIVN-70032
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Inconel
34.5 mm	7.97 mm	108.00 mm	PEEVN-70033

Peugeot 206 / 306 EW10J4 '09+			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Inconel
33.30 mm	5.98 mm	106.20 mm	PEIVN-28594
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Inconel
29.00 mm	5.97 mm	103.35 mm	PEEVN-28595

Peugeot 206/307 EW10J4S			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
35.00 mm	5.97 mm	106.10mm	PEIVN-28704
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
31.00mm	5.95mm	102.85mm	PEEVN-28705

Peugeot 306 XU10J4 '96-'03			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
34.60 mm	6.98 mm	106.40mm (tripple gr)	PEIVN-28055F
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
29.60 mm	6.96 mm	104.90mm (tripple gr)	PEEVN-28056F
29.60 mm	6.96 mm	104.90mm (tripple gr)	PEEVI-28056F

Peugeot 306 XU10J4RS 96-'03			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
34.10 mm	5.97 mm	106.50mm	PEIVN-28692
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
30.80 mm	5.96 mm	105.30 mm	PEEVN-28693

Peugeot EP6 207GT/308GTi/408 - Citroen C4/ DS3 w/ THP150 /175 engine			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
28.8 mm	4.96 mm	105.80mm	MCIVN-1200S (1 grve)
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Sodium
26.2 mm	4.95 (sodium filled)	110.15 mm	MCEVI-1200-HS (1 groove)

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift mm	Coil Bind mm	Rate lbs./mm	Titanium Retainer Part Number
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)				
SPR-MC56BE (single beehive)	23.30	16.80	18.80	12.30	65 @33.6	163 @ 10	11.40	22.20	9.80	OEM RETAINER + OEM SEAT
VALVE GUIDES INTAKE AND EXHAUST: GDE-MIN-R56-STD										



RENAULT F4R RS 2.0LTS 16V / Renault Clio RS 2.0lts '93-'13							INTAKE VALVE PART NUMBER			
Head Diam	Stem Diam		Length		Black Nitride/Inconel					
33.5mm	5.47 mm		110.5 mm		RIVN-28337-2					
35 mm (+1.5)	5.47 mm		110.5 mm		RIVN-28337-4					
							EXHAUST VALVE PART NUMBER			
Head Diam	Stem Diam		Length		Black Nitride/Inconel					
29.00 mm	5.44 mm		108.9 mm		REVI-28338F-2					
30.00 mm (+1)	5.44 mm		108.9 mm		REVN-28338F-3					
30.00 mm (+1)	5.44 mm		108.9 mm		REVI-28338D-3					
SPRING KITS										
VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPR-TS1012/FR4	27.50	20.00	20.00	15.20	72 @34	168 @ 10	13.30	20.70	9.60	RET-TS55/T5R + SEAT-F4R-IN + SEAT-F4R-EX (OEM seal)
SPR-TS1015/FR4	27.50	20.00	20.00	15.20	83 @34	204@ 10	13.30	20.70	12.10	RET-TS55/T5R + SEAT-F4R-IN + SEAT-F4R-EX (OEM seal)
VALVE SEALS USE OEM SEAL										

RENAULT Megane F4RT 2.0LTS 16V / Renault Megane 250 / 265							INTAKE VALVE PART NUMBER			
Head Diam	Stem Diam		Length		Black Nitride/Inconel					
32.30mm	5.47 mm		110mm		RIVN-28337-1					
33.5 mm (+1.2)	5.47 mm		110 mm		RIVN-28337-2					
							EXHAUST VALVE PART NUMBER			
Head Diam	Stem Diam		Length		Black Nitride/Inconel					
29.00 mm	5.97mm (tip 5.5mm)		108.9 mm		REVI-28338F-2-6					
30.00 mm (+1)	5.97mm (tip 5.5mm)		108.9 mm		REVI-28338F-3-6					
NOTE: INTAKE VALVES USE OEM SINGLE GROOVE KEEPERS EXHAUST VALVE USE SUPERTech SINGLE GROOVE KEEPERS (KPR-6S/7)										

RENAULT CLIO F7R-710 Clio Williams 2.0L / 91 - '99							INTAKE VALVE PART NUMBER			
Head Diam	Stem Diam		Length		Black Nitride/Inconel					
32.20 mm	6.97 mm		108.90 mm		RIVN-28069					
							EXHAUST VALVE PART NUMBER			
Head Diam	Stem Diam		Length		Black Nitride/Inconel					
28.45 mm (std)	6.97 mm		110.1 mm		REVN-28070					



SUBARU EJ20 / EJ25 WRX / STi Turbo DOHC / Impreza WRX / STi			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Inconel
36 mm (std)	5.96 mm	104.35mm (std)	SIVN-1010
36.50mm (+0.5)	5.96 mm	104.35mm (std)	SIVN-1012
37.00mm (+0.5)	5.96 mm	103.85mm	SIVN-1012/2
37.00mm (+1.0)	5.96 mm	104.35mm (std)	SIVN-1014
37.00mm (+1.0)	5.96 mm	103.85mm	SIVN-1014 -2
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Inconel
32 mm (std)	5.96 mm	104.7mm (std)	SEVN-1010
32 mm (std)	5.96 mm	104.7mm (std)	SEVI-1010 *
32.50 mm (+0.5)	5.96 mm	104.7mm (std)	SEVI-1012 *
32.50mm (+0.5)	5.96 mm	104.20 (-0.5)mm	SEVN-1012-2 / SEVI1012-2
33.00mm (+1.0)	5.96 mm	104.7mm (std) or 104.20mm	SEVN-1014/2 / SEVI-1014 *
33.00mm (+1.0)	5.96 mm	104.2mm (-0.5)mm	SEVI-1014-2
SODIUM FILLED INCONEL VALVES			EXHAUST VALVE PART NUMBER
32.00mm (std)	5.95 mm Sodium Filled	104.7mm (std)	SEVI-1010-HS *
33.00mm (+1.0)	5.95 mm Sodium Filled	104.7mm (std)	SEVI-1014-HS *

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift mm	Coil Bind mm	Rate lbs./mm	Titanium Retainer Part Number
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)				
SPR-TS1015/SU3	27.50	20.00	20.00	15.20	64 @36	199 @ 11.5	15.30	20.70	12.10	RET-TS60/WRX1 + SEAT-TS/SUB3 (no OEM)
SPR-TS1015/SU1	27.50	20.00	20.00	15.20	70 @35.5	209@11.5	14.80	20.70	12.10	RET-TS60/WRX1 + SEAT-TS/SUB (no OEM)
SPR-TS1015/SU4	27.50	20.00	20.00	15.20	82 @34.25	220 @11.5	13.50	20.70	12.10	RET-TS60/WRX1 + SEAT-TS/SUB4 (no OEM)
SPR-TS1015/IN-SU4 (Drag only)	27.50	20.00	20.00	14.20	100@34.25	273@ 11.5	13.50	20.70	14.90	RET-TS60IN2/WRX1 + SEAT-TS/SUB4 (no OEM)
SPR-TS1015-BE/SU3 (BEEHIVE)	27.70	19.70	23.20	15.20	65@36	211@ 11.5	14.20	21.80	12.70	RET-TS60/WRX-BE + SEAT-TS/SUB3 (no OEM)
SPR-TS1015-BE/SU1 (BEEHIVE)	27.70	19.70	23.20	15.20	70@35.5	217@ 11.5	12.50	21.80	12.70	RET-TS60/WRX-BE + SEAT-TS/SUB (no OEM)
SPR-TS1015-BE/SU4 (BEEHIVE)	27.70	19.70	23.20	15.20	85@34.25	234@ 11.5	11.50	21.80	12.70	RET-TS60/WRX-BE + SEAT-TS/SUB4 (no OEM)

ENGINE COMPONENTS

VALVE GUIDES	INTAKE: GDE-SUEJ6-I	EXHAUST: GDE-SUEJ6-E
VALVE SEALS	INTAKE: VS-TS61	
CAM FOLLOWERS	CF-35/2.7+ or CF-35/3.7+ (+ Shims 1.5mm to 3.2mm thick) Both Versions of retainers for over the bucket and under the bucket shims are available	
STEEL RETAINER	STEEL RETAINER AVAILABLE RET-TS60-WRX-ST	
SHIM UNDER BUCKET RETAINER	RET-TS60/STI	
KEEPERS	KPR-6T-ST	

SUBARU EJ25 Non Turbo DOHC / EJ25 Non Turbo DOHC 99-05			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
36.00mm (std)	5.96 mm	105.9mm (std)	SIVN-1016
37.00mm (+1.0)	5.96 mm	108.10mm (oversize)	SIVN-1015
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
32.00mm (std)	5.96 mm	106.2mm (std)	SEVN-1016
32.00mm (std)	5.96 mm	106.2mm (std)	SEVI-1016
33.00mm (+1.0)	5.96 mm	108.35mm (oversize)	SEVI-1015
33.00mm (+1.0)	5.96 mm	108.35mm (oversize)	SEVN-1015
SUBARU EJ25 Non Turbo DOHC / EJ25 Non Turbo SOHC 99-05			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
37.00 mm (+1.0)	5.96 mm	120.60 mm	SIVN-1025
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
33.00 mm (+1.5)	5.96 mm	121.70 mm	SEVI-1026

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift mm	Coil Bind mm	Rate lbs./mm	Titanium Retainer Part Number
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)				
SPR-TS1015/SU5	27.50	20.00	20.00	15.20	70 @ 33.5	209 @11.5	13.80	20.70	12.10	RET-TS60/WRX+ SEAT-TS/SUB-5 (no OEM)

ENGINE COMPONENTS

VALVE SEALS	INTAKE: VS-TS6I	EXHAUST: VS-TS6E
CAM FOLLOWERS	CF-35/2.7+ or CF-35/3.7+ (+ Shims 1.5mm to 3.2mm thick)	/ RET-TS60/STI available for Under the Bucket Shim (JDM)
TITANIUM VALVES	PLEASE CALL	

SUBARU EZ30 H6 24v / EZ30 H6 (1st Gen) / EZ30 w/AVCS (2nd Gen)			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
35 mm (std)	5.48 mm	103.4 mm	SIVN-2301F
36.00mm (+1.0)	5.48mm	103.4 mm	SIVN-2304D
35.00mm (std)	5.45mm	99.8 mm	SIVN-1043
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
30.5mm (std)	5.45 mm	103.25 mm	SEVN-1021D
31.00mm (+0.5)	5.45mm	103.25 mm	SEVN-1030D
31.50mm (+1.0)	5.45mm	103.25 mm	SEVN-1033D
31.50mm (+1.0)	5.45mm	103.25 mm	SEVI-1033D
30.50mm (std)	5.45mm	105.25 mm	SEVI-1043D
31.50mm (+1.0)	5.45mm	105.25 mm	SEVI-1045D

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift mm	Coil Bind mm	Rate lbs./mm	Titanium Retainer Part Number
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)				
SPR-TS1015/SU6	27.50	20.00	20.00	15.20	63@36.10	184 @ 10	15.20	20.70	12.10	RET-TSS.5/T1 + SEAT-TS/SUB

EZ30 H6cyl W/ AVCS Variable intake lift (2nd Gen)

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift mm	Coil Bind mm	Rate lbs./mm	Titanium Retainer Part Number
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)				
SPR-H1002D (intake)	29.10	21.90	20.50	15.20	85@31.90	195 @ 11	12.40	19.50	10.00	RET-H1000/T2 + Factory seat
SPR-TS1015 (exhaust)	27.50	20.00	20.00	15.20	60@36.10	193 @ 11	15.40	20.70	12.10	RET-TSS.5/T2 + SEAT-TS/SUH6E

CAM FOLLOWERS (1st Gen) CF-34/2.5+ or CF-34/3.5+ (+ Shims 1.5mm to 2.7mm thick)

CAM FOLLOWERS (2nd Gen) Diam 33mm

SUBARU EG33 H6 24v / SVX 3.3lts			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
36.00 mm (std)	5.96 mm	92.10mm (+2.0 / 4.5MM TIP)	SIVN-1080
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
32.00 mm (std)	5.96 mm	92.70mm (+2.0 / 4.5MM TIP)	SEVI-1080

Subaru BRZ FA20 / TOYOTA SCION FR-S Subaru BRZ / Scion FRS/ Toyota GT86			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
35.00 mm (std)	5.46 mm	103.3mm	SIVN-1050
35.00 mm (std)	5.46 mm	105.00mm	SIVN-1050-2
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
29.00 mm (std)	5.45 mm	95.15mm	SEVI-1050
29.00 mm (std)	5.45 mm	97.70mm	SEVI-1050-2

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift mm	Coil Bind mm	Rate lbs./mm	Titanium Retainer Part Number
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)				
SPRK-1002-BRZ	29.05	21.85	20.50	15.50	74@33.5	174 @ 10	14.00	19.50	10.00	RET-H1000-BRZ + SEAT-H1002D-BRZ
SPRK-100-BRZ	30.20	22.20	22.20	16.80	87@33.5	212@ 10	15.00	18.50	12.50	RET-H1000-BRZ + SEAT-H1002D-BRZ

ENGINE COMPONENTS

VALVE SEALS	INTAKE: VS-T5.5-I	EXHAUST: VS-T5.5-E
VALVE GUIDES	INTAKE: GDE-TFRS55-I	EXHAUST: GDE-TFRS55-E

SUBARU WRX 2015 FA20F (DIT) Subaru WRX 2015 FA20F (DITurbo)			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
34.00 mm (std)	5.46 mm	105.00mm	SIVN-1049-2
35.00 mm (+1)	5.46 mm	105.00mm	SIVN-1050-2
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
29.00 mm (std)	5.45 mm	97.7mm	SEVI-1050-2
30.00 mm (+1mm)	5.45 mm	97.7mm	SEVI-1052-2

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift mm	Coil Bind mm	Rate lbs./mm	Titanium Retainer Part Number
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)				
SPRK-1002-BRZ	29.05	21.85	20.50	15.50	74@33.5	174 @ 10	14.00	19.50	10.00	RET-H1000-BRZ + SEAT-H1002D-BRZ
SPRK-100-BRZ	30.20	22.20	22.20	16.80	87@33.5	212@ 10	15.00	18.50	12.50	RET-H1000-BRZ + SEAT-H1002D-BRZ

VALVE SEALS	INTAKE: VS-T5.5-I	EXHAUST: VS-T5.5-E
VALVE GUIDES	INTAKE: GDE-TFRS55-I	EXHAUST: GDE-TFRS55-E



TOYOTA 4AGE 16v / Atlantic / Corolla			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
30.50 mm (std)	5.98 mm	99.6 mm	TIVN-1019
32.00 mm (+1.5)	5.98 mm	99.6 mm	TIVN-1020
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
25.50 mm (std)	5.97 mm	99.75 mm	TEVN-1019
27.50 mm (+2.0)	5.97 mm	99.75 mm	TEVN-1020

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPR-TC25D	25.00	18.00	18.00	13.00	73@35.40	202 @ 10.5	14.40	21.00 17.00	12.60	RET-2500/T1 + Spring base SS-3012 Oil Seal VS-T6SM/guide GDE-4AGE-SM
SPR-TC25 S	25.00	18.00	SINGLE		55@35.40	130 @ 10.5	14.40	21.00	7.60	RET-2500/T1 + Spring base SS-3012
VALVE GUIDES	INTAKE: GDE-4AGE-SM + VS-T6SM					EXHAUST: GDE-4AGE-SM + VS-T6SM				
VALVE SEALS	INTAKE: VS-TS6I					EXHAUST: VS-TS6E				
CAM FOLLOWERS	CF-28/3.65+									

TOYOTA 4AGE 20v SILVER TOP or BLACK TOP / Corolla			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
26.50 mm (std)	4.98 mm	98.6 mm	TIVN-1017 (12)
27.50 mm (+1.0)	4.98 mm	98.6 mm	TIVN-1018 (12)
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
27.00 mm (+1.0)	4.97 mm	108.40 mm	TEVN-1018 (8)

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPR-A2095- ST (Silver Top)	20.60	14.40	SINGLE		54@36.6	123@ 10.5	13.60	23.00	6.70	RET-TC50/T1 + Factory Seat
SPR-A2095-BT (Black Top)	20.60	14.40	SINGLE		54@36.6	123@10.5	13.60	23.00	6.70	RET-TC50/T1 + SEAT SS-3021 (no OEM)

ENGINE COMPONENTS

VALVE GUIDES	INTAKE: GDE-T20V-I (12)	EXHAUST: GDE-T20V-E (8)
VALVE SEALS	VS-TY5E	

TOYOTA 7MGTE 3.0lts 24v / Supra 86-92			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
32.5 mm (STD)	5.98 mm	98.10mm	TIVC-1006
32.5 mm (+0.50)	5.98 mm	98.10mm	TIVN-1007

TOYOTA 7MGTE 3.0lts 24v / Supra 86-92						EXHAUST VALVE PART NUMBER			
Head Diam		Stem Diam		Length		Black Nitride/Inconel			
27.50 mm (STD)		5.97 mm		98.20mm		TEVC-1006			
28.00 mm (+0.50)		5.97 mm		98.20mm		TEVI-1007			

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift mm	Coil Bind mm	Rate lbs./mm	Titanium Retainer
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)				Part Number
SPR-TC25D/24	25.00	18.00	18.00	13.00	67@36	200@ 10.5	14.40	21/17	12.60	RET-2500/T1 + Spring base SS-3012 Oil Seal VS-T6SM ***
SPR-TC25 S/24	25.00	18.00	SINGLE		51@36	131@10.5	14.40	21.00	7.60	RET-TC50/T1 + SEAT SS-3021 (no OEM)

ENGINE COMPONENTS

VALVE GUIDES	INTAKE & EXHAUST for smaller diameter Oil Seal: GDE-4AGE-SM (required for Dual Spring) and stem oil seal VS-T6SM	
VALVE SEALS	INTAKE: VS-TS6-I	EXHAUST: VS-TS6-E
CAM FOLLOWERS	INTAKE & EXHAUST for smaller diameter Oil Seal: GDE-4AGE-SM (required for Dual Spring) and stem oil seal VS-T6SM	

TOYOTA SUPRA 2JZGE / GTE 3.0 lts 24v DOHC / Supra 94-98Gen)						INTAKE VALVE PART NUMBER			
Head Diam		Stem Diam		Length		Black Nitride/Inconel			
33.50 mm (std)		5.98mm		98.55mm		TIVN-1014			
34.50mm (+1.0)		5.98mm		98.55 mm		TIVN-1016			
						EXHAUST VALVE PART NUMBER			
Head Diam		Stem Diam		Length		Black Nitride/Inconel/Sodium			
29.00 mm (std)		5.97mm		99.10 mm		TIVI-1014			
30.00mm (+1.0)		5.97mm		99.10 mm		TIVN-1016			
30.00mm (+1.0)		5.97mm		99.10 mm		TEVI-1016 *			
SODIUM FILLED INCONEL VALVES									
30.00mm (+1.0)		5.97mm sodium filled		99.10 mm		TEVI-1016-HS *			

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift mm	Coil Bind mm	Rate lbs./mm	Titanium Retainer
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)				Part Number
SPR-2081-SP	27.50	20.00	SINGLE		60 @33.60	165@ 11	12.90	20.70	9.60	RET-NVG1015/T1 (OEM Seat)
SPR-TS1012	27.50	20.00	20.00	15.20	80 @33.60	185@11	13.60	20.00	9.60	RET-TS60/T1 + SEAT-TS1015/2 + OEM
SPR-TS1012-BE BEEHIVE	27.70	19.70	23.20	15.20	82 @33.60	196@11	11.70	21.80	10.40	RET-TS60/T1-BE (OEM Seat)
SPR-TS1015	27.50	20.00	20.00	15.20	91 @33.60	224 @11	12.90	20.70	12.10	RET-TS60/T1 + SEAT-TS1015/2 + OEM
SPR-TS1015-BE BEEHIVE	27.70	19.70	23.20	15.20	91 @33.60	224 @11	12.90	20.70	12.10	RET-TS60/T1B+ SEAT-TS1015/2 + OEM
SPR-TS100 (Drag only)	27.50	20.00	20.00	14.20	118@33.60	277@ 11	12.10	20.7/19.5	14.50	RET-TS60/T1-2 + OEM SEAT (no inner seat)

ENGINE COMPONENTS

VALVE SEALS	INTAKE: VS-T6I	EXHAUST: VS-T6E
CAM FOLLOWERS	CF-31/ 3.28+ (+ shims 1.5mm to 3.2mm thick)	
VALVE GUIDES	INTAKE: GDE-T2JZ-I	EXHAUST: GDE-T2JZ-E
TITANIUM VALVES	PLEASE CALL	

TOYOTA SUPRA 1JZ-GE / GTE 3.0 lts 24v DOHC			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Inconel
32.00mm	5.94 mm	97.50 mm	TIVN-1008
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Inconel
30.00mm	5.97 mm	98.10 mm	TEVI-1008

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift mm	Coil Bind mm	Rate lbs./mm	Titanium Retainer Part Number
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)				
SPR-2081-P	27.50	20.00	SINGLE		60@33.60	165@ 11	12.90	20.70	9.60	RET-NVG1015/T1 (OEM SEAT)
SPR-TS1012-BE BEEHIVE	27.70	19.70	23.20	15.20	82@33.60	196@11	11.70	21.80	10.40	RET-TS60/T1-BE (OEM SEAT)
SPR-TS1015-BE BEEHIVE	27.70	19.70	23.20	15.20	91@33.60	230@11	11.10	21.80	12.70	RET-TS60/T1-BE (OEM SEAT)

ENGINE COMPONENTS

TITANIUM VALVES	PLEASE CALL
CAM FOLLOWERS	CF-31/ 3.28+ (+ shims 1.5mm to 2.7mm thick)

TOYOTA 2TC / 3TC			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Inconel
44.00 (+3.0)	8 mm	110.00 mm	TIVN-1063
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Inconel
39.00mm (+3.0)	8 mm	110.00 mm	TEVN-1063

TOYOTA 3SGTE 2.0lts DOHC / Celica / MR2 Turbo 90-95			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Inconel
34.00 mm (+0.5)	5.98 mm	100.50 mm	TIVN-1011
34.50 mm (+1.0)	5.98 mm	100.50 mm	TIVN-1012
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride / Inconel / Sodium
29.50 mm (+0.5)	5.97 mm	99.50 mm	TEVN-1011
30.00 mm (+1.0)	5.97 mm	99.10 mm	TEVN-1016
30.00 mm (+1.0)	5.97 mm	99.10 mm	TEVI-1016
30.00 mm (+1.0)	5.97 mm	99.10 mm	TEVI-1016-HS

TOYOTA 3SGTE 2.0lts DOHC / Celica / MR2 Turbo 90-95

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPR-2081/MR	27.50	20.00	SINGLE		59@34.75	175@12	13.25	20.70	9.60	RET-TS60/MA2 (or RET-TS60/MA2R) + SS-3025+ OE seat
SPR-TS1015/MR	27.50	20.00	20.00	15.20	77@35.50	222@12	14.00	20.70	12.10	RET-TS60/MA2 Req. Flatening of valve guide boss +SEAT-TS1015/2 + OE SEAT

ENGINE COMPONENTS

VALVE SEALS INTAKE: VS-TS6-I EXHAUST: VS-TS6-E

CAM FOLLOWERS CF-31/ 3.28+ (+ shims 1.5mm to 2.7mm thick)

TOYOTA 1ZZ-FE / Celica GT/ Matrix '00+

INTAKE VALVE PART NUMBER

Head Diam	Stem Diam	Length	Black Nitride/Inconel
32.00mm (std)	5.48 mm	88.67 mm	TIVN-1021

EXHAUST VALVE PART NUMBER

Head Diam	Stem Diam	Length	Black Nitride/Inconel
27.50mm (std)	5.46 mm	88.74 mm	TEVN-1021

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPR-TS2081/TC	27.50	20.00	SINGLE		60@33.60	165@11	12.90	20.70	9.60	RET-TS5.5/TC-S + SEAT-TS/TC
SPR-TS1015/TC	27.50	20.00	20.00	15.20	81@34.00	226@12	13.30	20.70	12.10	RET-TS5.5/TC + SEAT-TS/TC

ENGINE COMPONENTS

VALVE SEALS INTAKE: VS-T5.5-I EXHAUST: VS-T5.5-E

CAM FOLLOWERS CF-31/ 3.28+ (+ shims 1.5mm to 2.7mm thick)

TOYOTA 2ZZ-GE / Celica GTS 00+ / Lotus Elise

INTAKE VALVE PART NUMBER

Head Diam	Stem Diam	Length	Black Nitride/Inconel
34.00mm (std)	5.48 mm	111.45 mm	TIVN-1031

EXHAUST VALVE PART NUMBER

Head Diam	Stem Diam	Length	Black Nitride/Inconel
29.00mm (std)	5.46 mm	111.65 mm	TEVN-1031

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPR-T2ZS	24.50	17.00	SINGLE		70@38.50	166@10	13.00	25.50	9.60	RET-T2Z/T1 (use OEM seat)

ENGINE COMPONENTS

VALVE SEALS INTAKE: VS-T5.5-I EXHAUST: VS-T5.5-E

BLOCK GUARDS BG-T2ZZ

TOYOTA SCION TC 2AZ-FE / Scion tc			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
34.00 mm (std)	5.48 mm	101.85 mm	TIVN-1035
35.00 mm (+1.0)	5.48 mm	101.85 mm	TIVN-1037
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
29.50 mm (std)	5.46 mm	101.20 mm	TEVI-1035
30.50 mm (+1.0)	5.46 mm	101.20 mm	TEVI-1037

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPR-TS2081/TC	27.50	20.00	SINGLE		58 @34	157@ 11	12.50	20.70	9.00	RET-TS5.5/TC-S + SEAT-TS/TC
SPR-TS1015/TC	27.50	20.00	20.00	15.20	81@34	226@12	12.50	20.70	12.10	RET-TS5.5/TC + SEAT-TS/TC

ENGINE COMPONENTS

VALVE GUIDES	INTAKE: GDE-TS55-I	EXHAUST: GDE-TS55-E
VALVE SEALS	INTAKE: VS-T5.5-I	EXHAUST: VS-T5.5-E
CAM FOLLOWERS	CF-31/ 2.5+ (+ shims 1.5mm to 3.5mm thick)	

TOYOTA TACOMA 2RZ / 3RZ 16v / Tacoma Pick Up			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
37.50 mm (std)	5.97 mm	103.60 mm	TIVN-1045
38.50 mm (+1.0)	5.97 mm	103.60 mm	TIVN-1047
39.50 mm (+2.0)	5.97 mm	103.60 mm	TIVN-1048
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
30.50 mm (std)	5.96 mm	103.60 mm	TEVN-1045
31.50 mm (+1.0)	5.96 mm	103.60 mm	TEVI-1047
32.50 mm (+2.0)	5.96 mm	103.60 mm	TEVI-1048

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPR-EC3025/2RZ	26.60	19.60	19.40	14.20	77@35.60	212@ 10	13.80	21.80	13.50	RET-EC3020/T6P + SEAT-3020-2RZ (+ OEM shim)
SPR-EC3027/2RZ	26.60	19.60	19.60	14.20	108@35.6	225@10	13.40	22.20	11.70	RET-EC3020/T6P + SEAT-3020-2RZ (+OEM shim)

ENGINE COMPONENTS

VALVE SEALS	INTAKE: VS-T6I	EXHAUST: VS-T6E
CAM FOLLOWERS	CF-31/ 3.28+ (+ shims 1.5mm to 3.2mm thick)	

TOYOTA V6 5VZ-FE DOHC / Tacoma / Tundra			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
34.00mm (std)	5.97 mm	95.15 mm	TIVN-1040
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
27.50mm (std)	5.96 mm	94.90 mm	TEVN-1040

TOYOTA 1FZ-FE I6 24v / 4.5lt DOHC / Landcruiser			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
39.50mm (+1.5)	6.97 mm	98.80 mm	TIVN-1083F
39.50mm (+1.5)	6.97 mm	98.80 mm	TIVT-1083F (Titanium)
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
33.50mm (std)	6.97 mm	98.10 mm	TEVN-1083F
33.50mm (std)	6.97 mm	98.10 mm	TEVT-1083F (Titanium)

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift mm	Coil Bind mm	Rate lbs./mm	Titanium Retainer Part Number
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)				
SPR-H1002D/1FZ	29.10	21.85	20.50	15.50	50 @36.20	160 @ 11	14.00	19.50	10.00	RET-H70/T1 + SEAT-H/N240 + OEM
SPR-H100DR/1FZ	30.20	22.20	22.20	16.80	65 @36.20	197@11	15.50	20.50	12.00	RET-H70/T1 + SEAT-H/N240 + OEM
SPR-H1000D/1FZ	29.65	21.85	20.50	15.50	82 @36.20	208 @11	15.50	20.70	11.50	RET-H70/T1 + SEAT-H/N240+ OEM
SPR-H1005D/1FZ	29.65	21.85	20.50	15.50	100@36.20	226@ 11	14.70	21.50	11.50	RET-H70/T1 + SEAT-H/N240+ OEM

ENGINE COMPONENTS

VALVE SEALS	INTAKE: VS-T7E	EXHAUST: VS-T7E
CAM FOLLOWERS	CF-34/ 3.5+ (+ shims 1.5mm to 3.2mm thick)	

TOYOTA 2UZ-FE - 4.7lts. V8 32v / Landcruiser/ Lexus/ Tundra 1998-2009						INTAKE VALVE PART NUMBER			
Head Diam		Stem Diam		Length		Black Nitride/ Inconel			
36.00mm (+1.5)		5.48 mm		95.05 mm		TIVN-1093D			
						EXHAUST VALVE PART NUMBER			
Head Diam		Stem Diam		Length		Black Nitride/ Inconel			
30.50mm (+1.5)		5.47 mm		95.10 mm		TEVI-1093D			

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPR-TU24	24.50	17.90	SINGLE		80@35.00	130 @10	12.00	23.00	5.00	RET-TU24/T1 (OEM style shim under the bucket)

ENGINE COMPONENTS

VALVE SEALS	VS-T5.5I	VS-T5.5E
CAM FOLLOWERS	CF-31/ 3.28+ shim 2.15mm thick (Lash can be adjusted with 8mm bucket shims or OEM 11mm shims)	

TOYOTA 1GR-FE / 4.0 lts V6 24v / FJ / Land Cruiser/ Tundra /2003 - 2010						INTAKE VALVE PART NUMBER			
Head Diam		Stem Diam		Length		Black Nitride/ Inconel			
37.50 mm (+1.0)		5.47 mm		107.00 mm		TIVN-1052F			
38.00 mm (+1.5)		5.47 mm		107.00 mm		TIVN-1053F			
						EXHAUST VALVE PART NUMBER			
Head Diam		Stem Diam		Length		Black Nitride/ Inconel			
30.50 mm (+1.0)		5.46 mm		105.90 mm		TEVN-1052F			

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPR-TS1012/T1GR	27.50	20.00	20.00	15.20	61@35.20	173@10	15.00	20.00	9.60	RET-K20A3/T1+ SEAT-TS/1GR
SPR-TS1015/T1GR	27.50	20.00	20.00	15.20	71@35.20	198@10	14.30	20.70	12.70	RET-K20A3/T1+ SEAT-TS/1GR
SPR-H1007BE/T1GR (Beehive)	28.00	18.80	24.20	14.50	120@35.90	255@10	13.70	22.80	13.50	RET-H55BE-T1 + OEM SEAT

ENGINE COMPONENTS

VALVE SEALS	INTAKE: VS-T5.5-I	EXHAUST: VS-T5.5-E
CAM FOLLOWERS	CF-31/ 3.38+ (SHIM under)	
VALVE GUIDES	INTAKE: GDE-TS55-I	EXHAUST: GDE-TS55-E

TOYOTA 1AR-FE 4 Cyl. 2.7L (Venza)					
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SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPRK-EC3027-1AR	26.60	19.60	19.60	14.20	74@38.6	185 @10	15.30	20.70	11.10	RET-EC3020/T1 (use OEM seat)

ENGINE COMPONENTS

VALVE SEALS	INTAKE: VS-T5.5I	EXHAUST: VS-T5.5E
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TOYOTA SCION FR-S 4U-GSE / Subaru BRZ Toyota GT86 / Scion FRS/ Subaru BRZ			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Inconel
35.00 (STD) mm	5.46mm	103.3 mm	SIVN-1050
35.00 (STD) mm	5.46mm	105.0 mm	SIVN-1050-2
36.00MM (+1)	5.46mm	105.0 mm	SIVN-1052-2
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Inconel
29.00mm (STD)	5.45 mm	95.10 mm	SEVI-1050
29.00mm (STD)	5.45 mm	97.70mm	SEVI-1050-2
30.00mm (+1)	5.45 mm	97.70mm	SEVI-1052-2

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift mm	Coil Bind mm	Rate lbs./mm	Titanium Retainer Part Number
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)				
SPRK-1002-BRZ	29.05	21.85	20.50	15.50	74@35.50	174@10	14.00	19.50	10.0	RET-H1000-BRZ + SEAT-H1002D-BRZ
SPRK-100-BRZ	30.20	22.20	22.20	16.80	87@33.50	212@10	15.00	18.50	12.50	RET-H1000-BRZ + SEAT-H1002D-BRZ

ENGINE COMPONENTS

VALVE SEALS	INTAKE: VS-T5.5-I	EXHAUST: VS-T5.5-E
VALVE GUIDES	INTAKE: GDE-TFRS55-I	EXHAUST: GDE-TFRS55-E



VW 2.8 lts VR6 12v / Jetta/ GTI/ Passatt VR6 92-99			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Inconel
39.00 mm (std)	6.97 mm	105.95 mm	VWIVN-1007
41.00 mm (+2.0)	6.97 mm	105.95 mm	VWIVN-1010
42.00 mm (+3.0)	6.97 mm	105.95 mm	VWIVN-1011
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Inconel
34.20 mm (std)	6.95 mm	106.95 mm	VWEVN-1007
36.00 mm (+1.8)	6.95 mm	106.95 mm	VWEVN-1010
36.00 mm (+1.8)	6.95 mm	106.95 mm	VWEVI-1010

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift mm	Coil Bind mm	Rate lbs./mm	Titanium Retainer Part Number
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)				
SPR-V2093/4-12	30.40	23.20	21.90	16.50	77@33.00	229 @12	14.30	18.7/15.3	12.70	RET-021 (triple Groove) Factory seats

VALVE SEALS	INTAKE: VS-VW7-I	EXHAUST: VS-VW7-E
CAM FOLLOWERS	CF-35/14.7LC (for std base circle) or CF-35/16.7LC (for reground cams). To be use with Lash Caps (7mm) installed on the CF inner post.	
KEEPERS	Triple Groove: KPR-VW7-T	

VW 1.8T AEB / 2.7T 5v/cyl / VW / Audi / SEAT			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
26.90 mm (std)	5.96 mm	105.10 mm	AIVN-1103
26.90 mm (std)	5.96 mm	105.10 mm	AIVN-1103S
27.90 mm (+1.0)	5.96 mm	105.10 mm	AIVN-1106S
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
29.90 mm (std)	5.94 mm	103.90mm	AEVN-1103
29.90 mm (std)	5.94 mm	103.90mm	AEVI-1103
29.90 mm (std)	5.94 mm	103.90mm	AEVI-1103S
30.90 mm (+1.0)	5.94 mm	103.90 mm	AEVI-1106S
SODIUM FILLED VALVES			EXHAUST VALVE PART NUMBER
29.90 mm (std)	5.94 mm	103.90 mm	AEVI-1103S-HS
30.90 mm (+1)	Sodium Filled		AEVI-1106S-HS

SPRING KITS

VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPR-A2095 (intake)	20.60	14.40	SINGLE		56@36.60	125@ 10.5	13.60	23.00	6.70	RET-AU5VI/T2 (12)
SPR-H1002D/AU (exhaust)	29.10	21.90	20.50	15.50	80@33.20	185@10.5	13.70	19.50	10.00	RET-AU5VE/T1+ SEAT-H1000 (8)
SPR-H100DR/AU (exhaust optional)	30.20	22.20	22.20	16.80	91@33.20	216@10	14.70	18.50	12.50	RET-AU5VE/T1+ SEAT-H1000 (8)

ENGINE COMPONENTS

VALVE SEALS	INTAKE: VS-VBM6-I	EXHAUST: VS-VBM6-E
CAM FOLLOWERS	INTAKE: CF-24/15	EXHAUST: CF-33.5/15.5
VALVE GUIDES	GDE-AU18T (oversized available also)	GDE-AU18T (oversize available also)
KEEPERS	Single groove: KPR-6S/7S - Triple Groove: KPR-VW6-T	

Audi V8 40v 4.2L / Audi A8 / S4 / RS6 2003 - 2008			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
27.90mm (+1.0)	5.96 mm	96.55 mm	AIVN-1206S
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
30.90mm (+1.0)	5.94 mm	94.80 mm	AEVI-1206S

SPRING KITS

VALVE SPRINGS	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
Part Number	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPR-A2095 (intake)	20.60	14.40	SINGLE		56@36.6	125@ 10.5	13.60	23.00	6.70	RET-AU5VI/T2 (24)
SPR-H1002D/AU (exhaust)	29.10	21.90	20.50	15.50	75@33.7	180@10.5	14.20	19.50	10.00	RET-AU5VE/T4+ SEAT-H1000 (16)
VALVE SEALS	INTAKE: VS-VBM6-I		EXHAUST: VS-VBM6-E							
KEEPERS	KPR-6S/7									

VW 1.8 / 2.0lts 16v / 2.2 lts 5 cyl. 20v / Golf/ Jetta/ GTI / GLI (KR 7A - 9A ABF)			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Inconel
32.00 mm (std)	6.97 mm	95.50 mm	VWIVN-1034F
32.00 mm (std)	6.97 mm	95.50 mm	VWIVN-1034
32.50 mm (+0.5)	6.97 mm	95.50 mm	VWIVN-1035
34.00 mm (+2)	6.97 mm	95.50 mm	VWIVN-1038
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Inconel
27.00mm (std ABF)	6.96 mm	98.20 mm	VWEVI-1032F
28.00 mm (std -KR/9A)	6.96 mm	98.20 mm	VWEVN-1034
28.00 mm (std -KR/9A)	6.96 mm	98.20 mm	VWEVI-1034F
28.50 mm (+0.5)	6.96 mm	98.20 mm	VWEVN-1035
28.50 mm (+0.5)	6.96 mm	98.20 mm	VWEVI-1035 *
29.50 mm (+1.5)	6.96 mm	98.20 mm	VWEVI-1037
SODIUM FILLED VALVES			EXHAUST VALVE PART NUMBER
28.50 mm (+0.5)	6.96 mm (sodium Filled)	98.20 mm	VWEVI-1035-HS

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift mm	Coil Bind mm	Rate lbs./mm	Titanium Retainer
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)				Part Number
SPR-V2093/4-16	30.40	23.20	21.90	16.50	82@31.70	224 @11.5	13.00	18.70	12.50	RET-027 (single groove) + SEAT-V2093-16
SPR-V2093/4-20	30.40	23.20	21.90	16.50	82@31.70	224 @11.5	13.00	18.70	12.50	RET-027 (single groove) + SEAT-V2093-16

ENGINE COMPONENTS

VALVE SEALS	INTAKE: VS-VW7-I	EXHAUST: VS-VW7-E
VALVE GUIDES	GDE-VW8V-7A	
CAM FOLLOWERS	CF-35/14.7LC (for std base circle) or CF-35/16.7LC (for reground cams). To be use with Lash Caps (7mm) installed on the CF inner post.	
KEEPERS	Single Groove: KPR-VW7-S	

VW 1.8 / 2.0lts 8v / Golf / Jetta / Passatt / Beetle 85-03			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Inconel
40.00mm (std)	6.97 mm	91.60 mm	VWIVN-1014
41.00mm (+1.0)			VWIVN-1017
42.00mm (+2.0)			VWIVN-1019
40.00mm (std)		98.60 mm	VWIVN-1024
41.00mm (+1.0)			VWIVN-1027
42.00mm (+2)			VWIVN-1029
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Inconel
33.00mm (std)	6.96 mm	90.95 mm	VWEVN-1014
33.50mm (+0.5)			VWEVI-1015
34.00mm (+1.0)			VWEVN-1017
35.00mm (+2.0)		VWEVN-1019	
33.00mm (std)		98.40 mm	VWEVN-1024
34.00mm (+1.0)			VWEVN-1027
35.00mm (+2)	VWEVN-1029		

VW 1.8 / 2.0lts 8v / Golf / Jetta / Passatt / Beetle 85-03

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPR-V2091/4	30.40	23.20	21.90	16.50	80@33.00	192@10	14.00	18.70	11.20	RET-021 (triple Groove) + SEAT-VW8V-1
SPR-V1107 (dual)	31.10	23.10	23.10	17.40	92@39.75	200@10	15.00	22.00	11.17	RET-026 (8mm stem) RET-021 (7mm stem)

ENGINE COMPONENTS

VALVE SEALS	INTAKE: VS-VW7-I	EXHAUST: VS-VW7-E
VALVE GUIDES	INTAKE: GDE-VW8V-7A (8mm to 7mm valve conversion)	EXHAUST: GDE-VW8V-7A (8mm to 7mm valve conversion) VALVE
KEEPERS	Triple Groove: KPR-VW7-T	

VW VR6 - R32 24v / Golf GTI 3.2lts			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
33.15 mm (std)	5.97 mm	136.40 mm (std)	VWIVN-1044SL (6)
31.15 mm (std)	5.97 mm	102.5 mm (std)	VWIVN-1044SS (6)
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
30.15 mm (std)	5.96 mm	136.10 mm (std)	VWEVI-1044SL (6)
30.15 mm (std)	5.96 mm	102.2 mm (std)	VWEVI-1044SS (6)

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPR-TC25D/VR6	25.00	18.00	18.00	13.00	80@36.00	205 @10	13.90mm	12/17	12.60	RET-K20A3/TC25 + SEAT-VR624
KEEPERS	KPR-6S/7									

VW - AUDI 2.0T FSI EA113 / VW / AUDI / SEAT			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
33.85 mm (std)	5.98 mm	103.9 mm (std)	VWIVN-1002S (+locks)
34.85 mm (+1)	5.98 mm	103.9 mm (std)	VWIVN-1004S (+locks)
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel / Sodium
28.00 mm (std)	5.96 mm	101.80 mm	VWEVI-1002S (+locks)
29.00 mm (+1)	5.96 mm	101.80 mm	VWEVI-1004S (+locks)
30.00 mm (+2)	5.96 mm	101.80 mm	VWEVI-1006S (+locks)
			SODIUM FILLED
28.00mm (+2)	5.96 mm (Sodium Filled)	101.80 mm	VWEVI-1002S - HS

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring			Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
	O.D. (mm)	I.D. (mm)		Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPR-A2416-N2	24.00	16.50	Intake	73 @ 38.60	178 @ 10	12.50	24.90	10.50	RET-A2416/T1 (optional 0.060" Intake Spring shim SS-C202)
			Exhaust	85 @ 37.20	190 @ 10	11.00			

ENGINE COMPONENTS

VALVE SEALS	INTAKE: VS-VBM6-I	EXHAUST: VS-VBM6-E
KEEPERS	KPR-6S/7	

VW 2.5L 5 cyl (20v) / VW Rabbit 2005 +			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
32.35 mm (std)	5.98 mm	103.9 mm	N/A
33.00 mm (+0.65)	5.98 mm	103.9 mm	VWIVN-1001S
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel /Sodium
28.00 mm (std)	5.96 mm	101.80 mm	VWEVI-1002S (+locks)
29.00 mm (+1)	5.96 mm	101.80 mm	VWEVI-1004S (+lock)
30.00 mm (+2)	5.96 mm	101.80 mm	VWEVI-1006S (+locks)
SODIUM FILLED VALVES			
28.00 mm (Std)	5.96 mm SODIUM FILLED	101.80 mm	VWEVI-1002S (HS)

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring			Pressure (lbs@mm)		Max Net lift mm	Coil Bind mm	Rate lbs./mm	Titanium Retainer
	O.D. (mm)	I.D. (mm)		Seat	Open (lift)				Part Number
SPR-A2416-5	24.00	16.50	INTAKE	73@38.60	178@10	12.50	24.90	10.50	RET-A2416/T1 (optional 0.060"
			EXHAUST	85@37.20	190@10				Intake Spring shim SS-C202

ENGINE COMPONENTS

VALVE SEALS	INTAKE: VS-VBM6-I	EXHAUST: VS-VBM6-E
KEEPERS	KPR-6S/7	

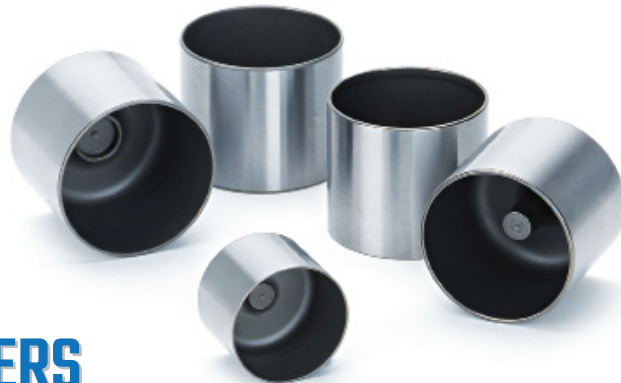
AUDI R8 4.2L V8 - 5.2L V10			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
33.85 mm (std)	5.98 mm	103.9 mm (std)	VWIVN-1002S (+locks)
34.85 mm (+1)	5.98 mm	103.9 mm (std)	VWIVN-1004S (+locks)
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel /Sodium
28.00 mm (std)	5.96 mm	101.80 mm	VWEVI-1002S (+locks)
29.00 mm (+1)	5.96 mm	101.80 mm	VWEVI-1004S (+locks)
30.00 mm (+2)	5.96 mm	101.80 mm	VWEVI-1006S (+locks)
SODIUM FILLED			
28.00mm (+2)	5.96 mm (Sodium Filled)	101.80 mm	VWEVI-1002S - HS

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring			Pressure (lbs@mm)		Max Net lift mm	Coil Bind mm	Rate lbs./mm	Titanium Retainer
	O.D. (mm)	I.D. (mm)		Seat	Open (lift)				Part Number
SPRK-A2416-V8 / SPRK-A2416-V10	24.00	16.50	Intake	73 @ 37.40	178 @ 10	12.50	24.90	10.50	RET-A2416-N2 (optional 0.060"
			Exhaust	85 @ 36.00	190 @ 10				Intake Spring shim SS-C202)

ENGINE COMPONENTS

VALVE SEALS	INTAKE: VS-VBM6-I	EXHAUST: VS-VBM6-E
VALVE GUIDES	GDE-AU18T (oversized available also) for Intake & Exhaust	
KEEPERS	KPR-6S/7	



▶ BUCKET TYPE CAM FOLLOWERS

Supertech buckets are designed using the latest CATIA CAD software along with Finite Element Analysis (FEA) to ensure the utmost performance and durability under the most demanding racing conditions. Utilizing these methods to analyze the stresses associated with the off centered application of loads enables us to maximize the strength of our buckets while reducing weight.

Supertech ensures that each and every part is manufactured using only the highest quality materials, strict tolerances, and high quality coatings. The end result is an undeniable improvement in durability and performance that cannot be compared in any sense with less expensive, extruded or factory supplied lifters.

- WPC treatment or DLC coatings are available upon request.

FEATURES OF OUR SUPERTECH LIFTERS

- Aerospace certified Chrome-Molybdenum-Vanadium alloy from Austria. This is a much
- Completely CNC machined from heat treated billet provides only the necessary and calculated thickness of the walls with very special shapes, providing better rigidity with an important reduction in weight.
- The lifters are fully Nitrided and polished to harden the surface to about 60Rc for low wear. Higher cam lifts and rpms will submit conventional lifters to be susceptible to increased wear.
- Surface is carefully finished by grinding it to a much lower surface roughness for lower friction with the cams and cylinder head bore, providing improved durability.
- Overall improvement in durability.

This is why Supertech lifters are REAL RACING lifters, and should be the only choice for your racing engines.

CAM FOLLOWERS

CAM FOLLOWERS					
Application	Part Number	Diameter	Length	Pad Thickness	Weight
Honda CRF 250	CF-22.5/3.0	22.5mm	16mm	3.0mm	11.2 grs
Honda CFR-250 oversize	CF-24.5/3.0	24.5mm	16mm	3.0mm	15.9 grs
KAWASAKI 250 exhaust	CF-24/2.7	24mm	17mm	2.7mm	14.7 grs
KAWASAKI 250 intake	CF-26.5/2.7	26.50mm	19mm	2.70mm	17.8 grs
Honda CRF 450	CF-26/3.0	26mm	18mm	3.0mm	16.5 grs
Audi 1.8T / 2.7T	Intake: CF-24 / 15	24mm	24.2mm	15mm	27.5 grs
	Exh: CF-33.5 / 15.5	33.5mm	25.8mm	15.50mm	45.9 grs
Suzuki Hayabusa	CF-28/3.0	28mm	20mm	3.0mm	22.1 grs
Suzuki Hayabusa (w/shim)	CF-28/3.0+	28mm	20mm	3mm + Shim 1.45-3.50mm	23.4 grs
Toyota 4AGE 16v / 5E-FE	CF-28/3.65+	28mm	23mm	3.65mm + Shim 1.45-3.50mm	26.3 grs
YAMAHA FZR 1800	CF-30/3.3	30mm	23.5mm	3.30mm	25.5 grs
MAZDA Miata	CF-30/15.5LC	30mm	26mm	15.5 mm for 5.5mm Lash Caps	34 grs
MAZDA Miata	CF-30/16LC	30mm	26mm	16mm for 5.5mm Lash Caps	34.2 grs
Toyota / Nissan RB26	CF-31/2.7	31mm	24.8mm	2.70mm	28.6 grs
Toyota / Nissan RB26	CF-31/2.78	31mm	25.5mm	2.78mm	28.6 grs
Toyota / Nissan RB26	CF-31/3.0	31mm	24.8mm	3.00mm	28.8 grs
Toyota / Nissan	CF-31/3.78	31mm	25.5mm	3.78mm	30.9 grs
Toyota / Nissan / Mazda Duratec	CF-31/2.5+	31mm	25.5mm	2.50mm + Shim 1.45- 3.50mm	29.5 grs
Toyota 2JZ / 3SGTE/ 1ZZ / Scion / Tacoma 2RZ-3RZ / Nissan RB26	CF-31/3.28+	31mm	25.5mm	3.28mm + Shim 1.45-3.50mm	31 grs
Nissan RB26	CF-31/4.20	31mm	25.5mm	4.2mm	30.4 grs
Nissan RB26	CF-31/4.80+	31mm	25.5mm	4.80mm + Shim 1.45mm-3.50mm	34 grs
Polaris	CF-31.15/ 2.50	31.15mm	20.2	2.50mm	24.9 grs
Mitsubishi EVO X / OPEL Z16-Z18	CF-32/3.10	32mm	24.5mm	3.10mm	29.1 grs
Mitsubishi EVO X / OPEL Z16-Z18	CF-32/3.25	32mm	24.5mm	3.25mm	29.2 grs
Mitsubishi EVO X / OPEL Z16-Z18	CF-32/3.35	32mm	24.5mm	3.35mm	29.3 grs
Mitsubishi EVO X / OPEL Z16-Z18	CF-32/3.55	32mm	24.5mm	3.55mm	29.5 grs
Mitsubishi EVO X / OPEL Z16-Z18	CF-32/3.70	32mm	24.5mm	3.70mm	29.8 grs
Opel / Peugeot oversize	CF-32.5/2.5	32.50mm	23.1mm	2.50mm	26.3 grs
Opel C20XE /Z20LET -Proton	CF-32/15-LC6	32mm	26mm	15mm	36.3 grs
BMW	CF-33/ 14	33mm	26mm	14mm	40.3 grs
BMW	CF-33/3.0	33mm	26mm	3.0mm	33.2 grs
Ferrari / Lamborghini	CF-33/5.10	33mm	24.5mm	5.10mm	33 grs
Nissan / Subaru H6 (1st Gen)	CF-34/2.5+	34mm	26mm	2.5mm + Shim 1.45- 3.50mm	32.4 grs
Nissan KA24	CF34/3.5+	34mm	26mm	3.5mm + Shim 1.45- 3.50mm	33.5 grs
Nissan 350Z/ VQ35	CF34/6.5+	34mm	21mm	6.5mm + Shim 1.45-3.50mm	34 grs
VW / Subaru	CF-35/2.8	35mm	26mm	2.80mm	36.5 grs
VW / Subaru / Sierra Cosworth	CF-35/3.3	35mm	26mm	3.30mm	36.6 grs
VW	CF-35/5.5	35mm	26mm	5.50mm	38.8 grs
VW / Subaru EJ20-EJ25	CF-35/ 2.7+	35mm	25mm	2.7mm + Shim 1.45- 3.50mm	35.2 grs
VW / Subaru EJ20-EJ25	CF-35/ 3.7+	35mm	25mm	3.7mm + Shim 1.45-3.50mm	38.2 grs
VW 16v	CF-35/ 14.7LC	35mm	26mm	14.7mm for 7mm Lash Caps	43.8 grs
VW 16v / Ferrari F136	CF-35/ 16.7LC	35mm	26mm	16.7mm for 7mm Lash Caps	45.3 grs
BMW M12 / VW Golf 16v	CF-37/3.3	37mm	26mm	3.30mm	40 grs
BMW M12 / VW Golf 16v	CF-37/3.6	37mm	26mm	3.68mm	40.6 grs
BMW M12 / VW Golf 16v	CF-37/3.9	37mm	26mm	3.90mm	40.9 grs
BMW S14 / S38	CF-37.5/3.1	37.5mm	28mm	3.1mm	41.8 grs
BMW S14/ S38	CF-37.5/3.1+	37.50mm	28mm	3.1mm + Shim 1.45-3.50mm	45.3 grs
BMW S14/S38 - Maserati	CF-37.5/4.5	37.50mm	28mm	4.50mm	46 grs
BMW S14 / S38	CF-37.5/5.65+	37.50mm	28mm	5.65mm + Shim 1.45-3.50mm	47.6 grs

CAM FOLLOWERS					
Application	Part Number	Diameter	Length	Pad Thickness	Weight
BMW S14 / S38	CF-38/3.1+	38mm	28mm	3.1mm + Shim 1.45-3.50mm	48 grs
BMW S50 B30 EURO	CF-37.5/6.5	37.50mm	28mm	6.50mm	
BMW S14 / S38	CF-38/3.1+	38mm	28mm	3.1mm + Shim 1.45-3.50mm	48 grs

VALVE GUIDES					
Application	Part Number	OD	Length	Description	Part Number
Audi 1.8T/2.7T int & Ex	GDE-AU18T	11.05	36.15mm	Audi 1.8T /2.7T int & exh valve, Oversized, Manganese Bronze	VS-VBM-I / VS-VBM-E
Audi 1.8T/2.7T int & Ex	GDE-AU18T-OS	11.075mm	36.15mm	Audi 1.8T /2.7T int & exh valve, Oversized, Manganese Bronze - OVERSIZE	VS-VBM-I / VS-VBM-E
BMW S14 / S38	GDE-BMWS14-7	12.03mm	45mm	BMW S14/S36 Int & Exh valve guide, Manganese Bronze - Tip diam 9.90mm	VS-VW7-E / VS-VW7-I
BMW S14 / S38 Oversize	GDE-BMWS14-7/OS	12.03mm	45mm	BMW S14/S36 Int & Exh valve guide, Manganese Bronze - Tip diam 9.90mm	VS-VW7-E / VS-VW7-I
BMW M50 / S50 / S52	GDE-BMW-M50-EI	12.56mm	43.3mm	BMW M50 / S50 / S52 Int & Exh valve guide, Manganese Bronze - 6mm stem	VS-VBM-I / VS-VBM-E
Ford Duratec/ Mazda MZR	GDE-DUR16	11.05mm	39mm	Intake and Exhaust valve guide, Manganese Bronze ID 5.5mm	VS-I-D5.5E
Mazdaspeed MZR	GDE-DUR16-6mm	11.05mm	39mm	Intake and Exhaust valve guide, Manganese Bronze ID 6mm	Factory
GM ECOTEC	GDE-EC60-SM	10.04mm	35mm	Intake and Exhaust valves guide Bronze ID 6mm	VS-T6SM
FERRARI 355/360	GDE-FIA2500	11.03mm	41.35mm	Intake and exhaust valve guide Bronze 6mm	OEM
HONDA B/H SERIES Exhaust	GDE-HB55-E	12.07mm	46.6mm	B/H Series 5.5mm Exh valve guide, Manganese Bronze	VS-H5.5-E
HONDA B/H SERIES Exhaust	GDE-HB55-E-6	12.07mm	46.6mm	B/H Series 6mm Exhaust valve guide, Manganese Bronze	VS-H5.5-E
HONDA B/H SERIES Intake	GDE-HB55-I	12.07mm	41.7mm	B/H Series 5.5mm Exh valve guide, Manganese Bronze	VS-H5.5-I
HONDA B/H SERIES Exhaust	GDE-HBCO55-E-6	12.07mm	46.6mm	B/H Series 6mm Exhaust valve guide, Manganese Copper	VS-H5.5-E
HONDA B/H SERIES Exhaust	GDE-HBCO55-E	12.07mm	46.6mm	B/H Series 5.5mm Exhaust valve guide, Manganese Copper	VS-H5.5-E
HONDA D SERIES Exhaust	GDE-HD55-E	11.07mm	46.7mm	D Series 5.5mm Exhaust valve guide, Manganese Bronze	VS-H5.5-E
HONDA D SERIES Intake	GDE-HD55-I	11.07mm	44.8mm	D Series 5.5mm Exhaust valve guide, Manganese Bronze	VS-H5.5-I
HONDA K SERIES Exhaust	GDE-HK55-E	11.07mm	46.7mm	K Series 5.5mm Exhaust valve guide, Manganese Bronze	VS-H5.5-E
HONDA K SERIES Intake	GDE-HK55-I	11.07mm	42mm	K Series 5.5mm Exhaust valve guide, Manganese Bronze	VS-H5.5-I
HONDA LS / H23 Intake	GDE-H66-I	12.07mm	46.5mm	Honda LS/B18A/ H23 6.6mm Intake valve guide, Manganese Bronze	VS-H6.6-E
HONDA LS / H23 Exhaust	GDE-H66-E	12.07mm	46.5mm	Honda LS/B18A/ H23 6.6mm Exh valve guide, Manganese Bronze	VS-H6.6-I
HONDA S2000 Exhaust	GDE-HS255-E	11.07mm	41.60mm	Honda S2000 5.5mm Exhaust Valve guide, Manganese Bronze	VS-H5.5-E
HONDA S2000 Intake	GDE-HS255-I	11.07mm	41.60mm	Honda S2000 5.5mm Intake Valve Guide, Manganese Bronze	VS-H5.5-I
HONDA NSX Intake	GDE-HNSX-I	11.65mm	47.4mm	Honda NSX 5.5mm Intake Valve Guide, Manganese Bronze	VS-H5.5-I
HONDA NSX Exhaust	GDE-HNSX-E	11.65mm	49.2mm	Honda NSX 5.5mm Intake Valve Guide, Manganese Bronze	VS-H5.5-I
MAZDA 1.6L Intake+ Exh	GDE-MA16-IE	11.057mm	48.7mm	Mazda Miata 1.6L Int & exh / 1.8L Exh 6mm valve guide, Manganese Bronze	VS-T6I/ VS-T6E
MAZDA 1.8L Intake	GDE-MA18-I	11.057mm	45.25mm	Mazda Miata 1.8L 6mm Intake valve guide, Manganese Bronze	VS-T6I
MAZDA 2.0 Intake + Exhaust	GDE-MA20FS	11.065mm	38mm	Mazda Protégé 2.0 6mm Intake and exhaust valve guide, Manganese Bronze	VS-T6SM
MITSUBISHI EVO +.001" In + Ex	GDE-MEVOX	11.06mm	43.65mm	5.5mm int & exh valve guide, Manganese Bronze (+0.03mm/.001") Oversized OD	OEM
MITSUBISHI EVO X +.009"	GDE-MEVOX-OS9	11.28mm	43.65mm	5.5mm int & exh valve guide, Manganese Bronze (+0.22mm/.009") Oversized OD	OEM
MITSUBISHI 4G63 Exhaust	GDE-MI66-E	12.10mm	50.5mm	6.6mm Exhaust valve guide, Manganese Bronze (+0.03mm/.001") OVERSIZE OD	VS-M6.6-E / VS-H6.6-E
MITSUBISHI 4G63 Intake	GDE-MI66-I	12.10mm	45.4mm	6.6mm Intake valve guide, Manganese Bronze (+0.03mm/.001") OVERSIZE OD	VS-M6.6-I / VS-H6.6-I
MITSUBISHI 4G63 Exhaust Std	GDE-MI66-STE	12.08mm	50.5mm	6.6mm Exh valve guide, Manganese Brnz (+0.03mm/.001") STANDARD OD	VS-M6.6-E / VS-H6.6-E
MITSUBISHI 4G63 Intake Std	GDE-MI66-STI	12.08mm	45.5mm	6.6mm Int valve guide, Manganese Brnz (+0.03mm/.001") STANDARD OD	VS-M6.6-I / VS-H6.6-I
MINI COOPER S R53	GDE-MIN-R53	11.06mm	42mm	Intake and exhaust valve guide Bronze 5.96mm	VS-I-M6E
MINI COOPER R56	GDE-MIN-R56-STD	9.022mm	44.90mm	Intake and Exhaust valve guide bronze 4.95mm	OEM
Nissan SR20DE 6mm Exhaust	GDE-NSR6-E	10.30mm	43mm	6mm exh valve guide, Manganese Bronze Nissan SR20	VS-N6E
Nissan SR20DET 6mm Exhaust	GDE-NSR6-ET	11.03mm	43mm	Nissan SR20DET 6mm Exh guide, Mang. Bronze	VS-N6E
Nissan SR20DET/RB26 Exhaust	GDE-NSR7-ET	11.03mm	43mm	Nissan SR20DET/ RB26- 7mm Exh valve guide, Manganese Bronze	VS-N7E
Nissan SR20DET/RB26 Intake	GDE-NSR6-I	10.03mm	40mm	Nissan SR20DE/ DET / RB26 6mm Int valve guide, Mang. Bronze	VS-N6I
Nissan KA24DE	GDE-NKA24-7-EI	11.03mm	39.6mm	Nissan KA24DE - 7mm Int and Exh valve guide, Manganese Bronze	VS-N7E
Nissan VQ35	GDE-NVQ35	10.07mm	42mm	Nissan VQ35 - 6mm Int and Exh valve guide, Manganese Bronze	VS-N6I / VS-N6E
Nissan GT-R / VR38 Exhaust	GDE-NVR38-E-OS111	10.065mm	36.2mm	6mm Exhaust valve Guide/ High thermal transfer copper alloy	VS-N6E
Nissan GT-R / VR38 Intake	GDE-NVR38-I-OS1	10.065mm	39.25mm	6mm Intake valve Guide/ High thermal transfer copper alloy	VS-N6I

* Valve Guides are precision-Machined from high quality, Magnanese Bronze material . Interference fit in cylinder head should be about 0.04mm (0.0015"). Inner bore needs

VALVE GUIDES

VALVE GUIDES					
Application	Part Number	OD	Length	Description	Part Number
OPEL Z16/18	GDE-OP50	10.06mm	36.80mm	Intake and Exhaust valve guide manganese Bronze 4.98mm	VSI-GM50-E
Subaru EJ20/25	GDE-SUEJ6-E	11.08mm	47.5mm	6mm Exhaust valve guide, Manganese Bronze	VS-TS6E
Subaru EJ20/25	GDE-SUEJ6-I	11.08mm	39.50mm	6mm Intake valve guide, Manganese Bronze	VS-TS6E
Toyota 4AGE 20v Intake	GDE-T20V-I	9.73mm	37.5mm	5mm Intake Valve Guide, Manganese Bronze	VS-TY5E
Toyota 4AGE 20v Exhaust	GDE-T20V-E	9.73mm	42.5mm	5mm Intake Valve Guide, Manganese Bronze	VS-TY5E
Toyota Supra Intake	GDE-T2JZ-I	11.03mm	38.5mm	Toyota Supra 2JZ 6mm Intake Valve Guide, Manganese Bronze	VS-T6I
Toyota Supra Exhaust	GDE-T2JZ-E	11.03mm	40.5mm	Toyota Supra 2JZ 6mm Exhaust Valve Guide, Manganese Bronze	VS-T6E
Toyota FRS /Subaru BRZ Intake	GDE-TFRS55-I	10.05mm	37mm	Intake valve guide Manganese Bronze 5.48mm	VS-T5.5-I
Toyota FRS /Subaru BRZ Exh	GDE-TFRS55-E	10.05mm	41.30mm	Exhaust valve guide manganese Bronze 5.48mm	VS-T5.5E
Toyota 4AGE 16v	GDE-T4AGE-SM	11.03mm	40.5mm	6mm Intake & Exhaust valve guide, Manganese Bronze Use Seal VS-T6SM	VS-T6SM
Toyota Scion Exhaust	GDE-TS55-E	10.30mm	40.5mm	Toyota Scion 5.5mm Exhaust Valve Guide, Manganese Bronze	VS-T5.5E
Toyota Scion Intake	GDE-TS55-I	10.30mm	38.5mm	Toyota Scion 5.5mm Intake Valve Guide, Manganese Bronze	VS-T5.5I
VW 8v EV/ PB Int & Exh	GDE-VW8V-7A	12.06mm	40mm	VW 8v Int & Exh Guide conversion from 8mm to 7mm valve stem	VS-VW8E / VS-VW8I
Toyota 4AGE 20v Exhaust	GDE-T20V-E	9.73mm	42.5mm	5mm Intake Valve Guide, Manganese Bronze	VS-TY5E
Toyota Scion Exhaust	GDE-TS55-E	10.33mm	40.5mm	Toyota Scion 5.5mm Exhaust Valve Guide, Manganese Bronze	VS-T5.5E
Toyota Scion Intake	GDE-TS55-I	10.33mm	38.5mm	Toyota Scion 5.5mm Intake Valve Guide, Manganese Bronze	VS-T5.5I
Toyota Supra Intake	GDE-T2JZ-I	11.03mm	38.5mm	Toyota Supra 2JZ 6mm Intake Valve Guide, Manganese Bronze	VS-T6I
Toyota Supra Exhaust	GDE-T2JZ-E	11.03mm	40.5mm	Toyota Supra 2JZ 6mm Exhaust Valve Guide, Manganese Bronze	VS-T6E
Audi 1.8T/2.7T int & Ex	GDE-AU18T-OS	11.075mm	36.15mm	Audi 1.8T /2.7T intake & exhaust valve, Oversized, Manganese Bronze	VS-VBM-I / VS-VBM-E
VW 8v EV/ PB Int & Exh	GDE-VW8V-7A	12.06mm	40mm	VW 8v Intake & Exhaust Guide conversion from 8mm to 7mm valve stem	VS-VW8E / VS-VW8I

LASH CAPS / CAM FOLLOWER SHIMS

Valve Lash Caps	LC-55 /LC-60 /LC-65/ LC/70	5.5mm / 6mm / 6.5mm / 7.0mm	Several thicknesses	1.2 - 1.6 grs
Cam Follower Shims	CF-SHIM	Diam 8mm / Thickness: 1.45mm to 3.20mm (0.05mm increments)		0.5-1.1 grs

VALVE SEALS

Part Number	Item Description	Guide OD	Seal OD
VS-TY5-E	Toyota 4AGE 20v 5mm valve stem seal / Viton	9.7mm/.381"	11.5mm/.452"
VS-KA5-5.5	Kawasaki 5mm to 5.5mm Valve stem seal / Viton	8.4mm/.329"	10.5mm/.415"
VS-KA 5NS	Kawasaki 5mm Valve stem seal / Viton (no spring)	8.4mm/.329"	11mm/.433"
VS-H5.5E	Honda B/D/H/K series Exhaust Valve stem seal 5.5mm / Viton.	11mm/.433"	12.9mm/.507"
VS-H5.5I	Honda B/D/H/K series Intake Valve stem seal 5.5mm / Polyacr.	11mm/.433"	12.9mm/.507"
VS-T5.5E	Toyota Scion Tc 2AZFE/ Celica 1ZZ /2ZZ Exhaust 5.5mm stem/ Viton	10.6mm/.400"	12.5mm/.493"
VS-T5.5I	Toyota Scion Tc 2AZFE/ Celica 1ZZ /2ZZ Intake 5.5mm stem/ Polyacr.	10.6mm/.400"	12.5mm/.493"
VSI-D5.5E	Ford Duratec / Mazda 5.5mm- Integral w/ spring seat- Viton	11mm/.433"	14.7mm & 17mm
VSI-M5.5V	Mitsubishi EVO X 5.5mm stem - Intergal valve stem seal	11mm/.433"	14.7mm & 16.8mm
VS-T6SM	6mm Small OD valve stem seal / Viton	9.4mm/.371"	12.1mm/.478"
VS-N6E	Nissan (all) 6mm Exhaust Valve stem seal / Viton	10mm/.395"	12.6mm/.495"
	Small Diam Toyota 4AGE 16v but requires Guide OD reduction		
VS-N6I	Nissan (all) 6mm Intake Valve stem seal / Polyacrylic	10mm/.395"	12.6mm/.495"
	Small Diam. Toyota 4AGE 16v but requires Guide OD reduction		
VS-T6E	Toyota Supra 2JZE/Tacoma/Mazda 6mm Exhaust Valve stem seal / Viton	11mm/.435"	13.4mm/.529"
VS-T6I	Toyota Supra 2JZE/ Tacoma/Mazda 6mm Intake Valve stem seal / Polyacrylic.	11mm/.435"	13.4mm/.529"
VS-TS6E	Toyota (3SGTE/ 4AGE 16v/7MGTE) 6mm Exhaust Valve stem seal/ Viton.	11mm/.435"	13.2mm/.521"
	Subaru EJ20 / EJ25		
VS-TS6I	Toyota (3SGTE/ 4AGE 16v/7MGTE) 6mm Intake Valve stem seal / Polyacr.	11mm/.435"	13.2mm/.521"
	Subaru EJ20 / EJ25		
VS-VBM6E	Audi 1.8T -VW - BMW 6mm Exhaust Valve stem seal / Viton	8.8mm/.347"	12.2mm/.480"
VS-VBM6I	Audi 1.8T - VW - BMW 6mm Intake Valve stem seal / Polyacr.	8.8mm/.347"	12.2mm/.480"
VSI-M6E	Mini Cooper/Neon/ Mitsu 420A 6mm INTEGRAL valve stem seal/ Viton	11mm/.435"	.551"/ .670"(bottom
VS-H6.6E	Honda LS B18A - H23 Exhaust Valve stem seal 6.6 mm. Viton.	12mm/.472"	13.7mm/.540"
	Mitsubishi 4G63 reduced OD for Dual Spring		
VS-H6.6I	Honda LS B18A & H23 Intake Valve stem seal 6.6 mm/ Polyacr.	12mm/.472"	13.7mm/.540"
	Mitsubishi 4G63 reduced OD for Dual Spring		
VS-M6.6E	Mitsubishi 4G63 / 6G72 Exhaust Valve stem std. size seal 6.6 mm / Viton.	12mm/.472"	14.8mm/.582"
VS-M6.6I	Mitsubishi 4G63 / 6G72 6.6mm Intake Valve stem std size seal / Polyacr.	12mm/.472"	14.8mm/.582"
VS-N7E	Nissan 7mm (KA24/ SR20DETT/ RB26) Valve stem seal / Viton	11mm/.435"	14mm/.550"
VS-T7E	Toyota 7mm Valve stem seal / Viton	11.6mm/.456"	14mm/.550"
VS-VW7E	VW 7mm Exhaust Valve stem seal / Viton	9.8mm/.385"	13.2mm/.520"
VS-VW7I	VW 7mm Intake Valve stem seal / Polyacrylic	9.8mm/.385"	13.2mm/.520"
VS-VW8E	VW 8mm Exhaust Valve stem seal / Viton	10.8mm/.425"	14.4mm/.566"
VS-VW8I	VW 8mm Intake Valve stem seal / Polyacrylic	10.8mm/.425"	14.4mm/.566"
VSI-GM50-E	GM/OPEL 5.0mm - Integral w/ spring seat		

BLOCK GUARDS

Part Number	Application
BG-B16	Block Guard for Honda B16A/B18C/B18A/B18B (LS)
BG-B20	Block Guard for Honda B20
BG-D15/D16	Block Guard for D15B - D16Z single cam
BG-D16A1	Block Guard for D16A1
BG-D16ZC	Block Guard for Honda D16ZC Integra dual cam
BG-D17	Block Guard for Honda D17 Single cam 2001+
BG-H22/F22	Block Guard For Honda H22 / H23 and F22 Single cam
BG-H22A	Block Guard for Honda H22A
BG-H22A	Block Guard for Honda K20
BG-K24	Block Guard For Honda K24
BG-S2000	Block Guard for Honda S2000
BG-QR25DE	Block Guard for Nissan QR25DE
BG-VQ35DET	Block Guard for Nissan 350Z / VQ35DET
BG-T2ZZ	Block Guard for Toyota Celica GT 2ZZ-GE





REDEFINING PERFORMANCE

Supertech has more than 40 Years of experience in the design and manufacturing of racing pistons. Utilizing the latest CAD software and Finite Element Analysis (FEA) Supertech combines experience and creativity to provide you with the best parts for your application.



PISTON MANUFACTURING

Our pistons are manufactured from extruded high silicon, enhanced 4032 alloy (with additional Cu, Ni & Mg) featuring low thermal expansion, excellent wear resistance and higher thermal conductivity. Normally aspirated or high boost turbo pressure applications are available.

We use a 2 or 3 step forging process (depending on the application) which yields the finest structural grain orientating the fibers in the same direction as the stresses. This is done to insure greater stress resistance and improve durability. Additionally we provide several heat treatments to the piston with a high tensile strength and evenly distributed hardness.

The pistons are then subjected to several machining steps by specially designed CNC machines. We use special diamond tools for dimensional precision, perpendicularity and to insure flatness of the ring grooves. All Supertech pistons feature contact reduction grooves and honed & reamed pin bores for precise fit.

Wrist pins are constructed of cold extruded chrome molly steel for high strength.

PISTON SURFACE FINISH

Finally our "phosphate dry lubricant" coating is applied to protect the rings against "micro welding" and enhance lubrication on the skirt/cylinder area.

Piston Rings are manufactured in Japan with the latest technology for high performance applications.



BORE (mm)	Oversize	Comp. Ratio	Dome /Dish Volume CC's	Head CC's	Comp Height	Stroke	Skirt Style	ROD Length	Pin Dia	Weight Grams	Piston P/N	Ring P/N	Application
BMW S52 B32 E36 M3													
87 mm	0.60mm	11:1	-12		1.220" (31mm)	89.6mm	R	5.315"	22mm (.866")	306	P6-BM87-N12	GNH8700	A/N
87 mm	0.60mm	8.5:1	-25		1.220" (31mm)	89.6mm	R	5.315"	22mm (.866")	306	P6-BM87-N25	GNH8700	T/N



BORE (mm)	Oversize	Comp. Ratio	Dome /Dish Volume CC's	Head CC's	Comp Height	Stroke	Skirt Style	ROD Length	Pin Dia	Weight Grams	Piston P/N	Ring P/N	Application
FORD ZETEC 2.0 (SVT)										PIN WEIGHT		74 GRS	
85 mm	0.07mm	8.7:1 (9.5:1)	-9	48 (42)	1.161" (29.5mm)	3.465	R	5.480	20mm (.787")	302	P4-FZ85-N9	GNH8500	T/N
85 mm	0.07mm	10.6:1 (11.9:1)	3.5	48 (42)	1.161" (29.5mm)	3.465	X	5.480	20mm (.787")	283	P4-FZ85-P3	GNH8500	A/N



BORE (mm)	Oversize	Comp. Ratio	Dome /Dish Volume CC's	Head CC's	Comp Height	Stroke	Skirt Style	ROD Length	Pin Dia	Weight Grams	Piston P/N	Ring P/N	Application
HONDA / ACURA B16A DOHC VTEC										PIN WEIGHT		74 GRS	
81mm(81.02mm)	Std	10.5:1	5.9	42.7	1.181" (30mm)	3.047"	X	5.290"	21mm (.827")	285	P4-H81-P6	GNH8100	A/N
81mm(81.02mm)	Std	11:1	7.5	42.7	1.181" (30mm)	3.047"	X	5.290"	21mm (.827")	246	P4-H81-P7	GNH8100	A/N
81mm(81.02mm)	Std	9.0 : 1	-2.5	42.7	1.181" (30mm)	3.047"	R	5.290"	21mm (.827")	302	P4-H81-N2R	GNH8100	T/N
81.50 mm	0.50mm +	10.5:1	5.9	42.7	1.181" (30mm)	3.047"	X	5.290"	21mm (.827")	261	P4-H815-P6	GNH8150	A/N
81.5mm	0.50mm +	11:1	7.5	42.7	1.181" (30mm)	3.047"	X	5.290"	21mm (.827")	250	P4-H815-P7	GNH-8150	T/N
81.50mm	0.50mm +	9.0:1	-2.5	42.7	1.181" (30mm)	3.047"	X	5.290"	21mm (.827")	235	P4-H815-N2	GNH8150	T/N
82.00mm	1mm+	9.0:1	-2.5	42.7	1.181"(30mm)	3.047"	X	5.290"	21mm (.827")	250	P4-H82-N2	GNH8200	T/N
82.00mm	1mm+	10.6:1	5.7	42.7	1.181"(30mm)	3.047"	X	5.290"	21mm (.827")	290	P4-H82-P6	GNH8200	T/N
82.00mm	1mm+	11.1:1	7.5	42.7	1.181"(30mm)	3.047"	X	5.290"	21mm (.827")	257	P4-H82-P7	GNH8200	T/N
83.00mm	2mm+	10.6:1	5.7	42.7	1.181"(30mm)	3.047"	X	5.290"	21mm (.827")	300	P4-H83-P6	GNH8300	T/N
84.00mm	3mm+	8.6:1	-2.5	42.7	1.181"(30mm)	3.047"	X	5.290"	21mm (.827")	295	P4-H84-N10R	GNH8400	T/N
84.00mm	3mm+	9.5:1	-10.3	42.7	1.181"(30mm)	3.047"	X	5.290"	21mm (.827")	295	P4-H84-N2R	GNH8400	T/N
84.00mm	3mm+	10.2:1	1.4	42.7	1.181"(30mm)	3.047"	X	5.290"	21mm (.827")	285	P4-H84-P1	GNH8400	A/N
84.00mm	3mm+	11:2:1	5.5	42.7	1.181"(30mm)	3.047"	X	5.290"	21mm (.827")	310	P4-H84-P5	GNH8400	A/N
84.50mm	3.5mm+	9.6:1	-2.5	42.7	1.181"(30mm)	3.047"	R	5.290"	21mm (.827")	295	P4-H845-N2R	GNH8450	T/N
85.00mm	4mm+	9.7:1	-2.5	42.7	1.181"(30mm)	3.047"	R	5.290"	21mm (.827")	295	P4-H85-N2R	GNH8500	T/N

BORE (mm)	Oversize	Comp. Ratio	Dome /Dish Volume CC's	Head CC's	Comp Height	Stroke	Skirt Style	ROD Length	Pin Dia	Weight Grams	Piston P/N	Ring P/N	Application
HONDA / ACURA B18C1 DOHC VTEC Integra GSR										PIN WEIGHT 74 GRS			
81mm(81.02mm)	Std	10.1:1	-2.5	41.5	1.181" (30mm)	3.433"	R	5.429"	21mm (.827")	302	P4-H81-N2R	GNH8100	T/N
81mm(81.02mm)	Std	11.9:1	5.9	41.5	1.181" (30mm)	3.433"	X	5.429"	21mm (.827")	246	P4-H81-P6	GNH8100	A/N
81mm(81.02mm)	Std.	12.4:1	7.5	41.5	1.181" (30mm)	3.433"	X	5.429"	21mm (.827")	241	P4-H81-P7	GNH8100	A/N
81.50 mm	0.50mm+	11.9:1	5.9	41.5	1.181" (30mm)	3.433"	X	5.429"	21mm (.827")	261	P4-H815-P6	GNH8150	A/N
81.5mm	0.50mm +	12.4:1	7.5	41.5	1.181" (30mm)	3.433"	X	5.429"	21mm (.827")	250	P4-H815-P7	GNH-8150	T/N
81.50mm	0.50mm +	10.1:1	-2.5	41.5	1.181" (30mm)	3.433"	X	5.429"	21mm (.827")	235	P4-H815-N2	GNH8150	A/N
82.00mm	1mm+	10.1:1	-2.5	41.5	1.181" (30mm)	3.433"	X	5.429"	21mm (.827")	250	P4-H82-N2	GNH820	T/N
82.00mm	1mm+	12:1	5.9	41.5	1.181" (30mm)	3.433"	X	5.429"	21mm (.827")	290	P4-H82-P6	GNH8200	A/N
82.00mm	1mm+	12.5:1	7.5	41.5	1.181" (30mm)	3.433"	X	5.429"	21mm (.827")	257	P4-H82-P7	GNH8200	A/N
83.00mm	2mm+	12:1	5.9	41.5	1.181" (30mm)	3.433"	X	5.429"	21mm (.827")	300	P4-H83-P6	GNH8300	A/N
84.00mm	3mm+	9.4:1	-10.3	41.5	1.181" (30mm)	3.433"	X	5.429"	21mm (.827")	295	P4-H84-N10	GNH8400	T/N
84.00mm	3mm+	10.8:1	-2.5	41.5	1.181" (30mm)	3.433"	R	5.429"	21mm (.827")	295	P4-H84-N2R	GNH8400	T/N
84.00mm	3mm+	11.6:1	1.4	41.5	1.181" (30mm)	3.433"	X	5.429"	21mm (.827")	285	P4-H84-P1	GNH8400	A/N
84.00mm	3mm+	12.6:1	5.5	41.5	1.181" (30mm)	3.433"	X	5.429"	21mm (.827")	310	P4-H84-P5	GNH8400	A/N
84.50mm	3.5mm+	11:1	-2.5	41.5	1.181" (30mm)	3.433"	R	5.429"	21mm (.827")	295	P4-H845-N2R	GNH8450	T/N
85.00mm	4mm+	11.1:1	-2.5	41.5	1.181" (30mm)	3.433"	R	5.429"	21mm (.827")	295	P4-H85-N2R	GNH8500	T/N
HONDA / ACURA B18C5 VTEC Integra Type R										PIN WEIGHT 74 GRS			
81mm (81.02mm)	Std.	9.9:1	-2.5	42.7	1.181" (30mm)	3.433"	R	5.429"	21mm (.827")	302	P4-H81-N2R	GNH8100	T/N
81mm (81.02mm)	Std.	11.6:1	5.9	42.7	1.181" (30mm)	3.433"	X	5.429"	21mm (.827")	246	P4-H81-P6	GNH8100	A/N
81mm (81.02mm)	Std.	12.1:1	7.5	42.7	1.181" (30mm)	3.433"	X	5.429"	21mm (.827")	241	P4-H81-P7	GNH8100	A/N
81.50 mm	0.50mm +	11.6:1	5.9	42.7	1.181" (30mm)	3.433"	X	5.429"	21mm (.827")	261	P4-H815-P6	GNH8150	A/N
81.5mm	0.50mm +	12.1:1	7.5	42.7	1.181" (30mm)	3.433"	X	5.429"	21mm (.827")	250	P4-H815-P7	GNH-8150	T/N
81.50mm	0.50mm +	9.9:1	-2.5	42.7	1.181" (30mm)	3.433"	X	5.429"	21mm (.827")	235	P4-H815-N2	GNH8150	A/N/T
82.00mm	1mm+	9.9:1	-2.5	42.7	1.181" (30mm)	3.433"	X	5.429"	21mm (.827")	250	P4-H82-N2	GNH8200	T/N
82.00mm	1mm+	11.8:1	5.9	42.7	1.181" (30mm)	3.433"	X	5.429"	21mm (.827")	290	P4-H82-P6	GNH8200	A/N
82.00mm	1mm+	12.4:1	7.5	42.7	1.181" (30mm)	3.433"	X	5.429"	21mm (.827")	257	P4-H82-P7	GNH8200	A/N
83.00mm	2mm+	12.1:1	5.9	42.7	1.181" (30mm)	3.433"	X	5.429"	21mm (.827")	300	P4-H83-P6	GNH8300	A/N
84.00mm	3mm+	9.2:1	-10.3	42.7	1.181" (30mm)	3.433"	R	5.429"	21mm (.827")	290	P4-H84-N10R	GNH8400	T/N
84.00mm	3mm+	10.6:1	-2.5	42.7	1.181" (30mm)	3.433"	R	5.429"	21mm (.827")	290	P4-H84-N2R	GNH8400	T/N
84.00mm	3mm+	11.3:1	1.4	42.7	1.181" (30mm)	3.433"	X/R	5.394"	21mm (.827")	275 / 317	P4-H84-P1 / R	GNH8400	A/N
84.00mm	3mm+	12.5:1	5.5	42.7	1.181" (30mm)	3.433"	x	5.429"	21mm (.827")	319	P4-H84-P5	GNH8400	A/N
84.50mm	3.5mm+	10.7:1	-2.5	42.7	1.181" (30mm)	3.433"	R	5.429"	21mm (.827")	290	P4-H845-N2R	GNH8450	T/N
85.00mm	4mm+	10.8:1	-2.5	42.7	1.181" (30mm)	3.433"	R	5.429"	21mm (.827")	290	P4-H85-N2R	GNH8500	T/N

BORE (mm)	Oversize	Comp. Ratio	Dome /Dish Volume CC's	Head CC's	Comp Height	Stroke	Skirt Style	ROD Length	Pin Dia	Weight Grams	Piston P/N	Ring P/N	Application
HONDA / ACURA B18A/B Integra LS Non-VTEC										PIN WEIGHT		74 GRS	
81mm(81.02mm)	Std.	9.6:1	-2.5	45	1.181" (30mm)	3.504"	R	5.394"	21mm (.827")	302	P4-H81-N2R	GNH8100	T/N
81mm(81.02mm)	Std.	11.4:1	5.9	45	1.181" (30mm)	3.504"	X	5.394"	21mm (.827")	246	P4-H81-P6	GNH8100	A/N
81mm(81.02mm)	Std.	12:1	7.5	45	1.181" (30mm)	3.504"	X	5.394"	21mm (.827")	241	P4-H81-P7	GNH8100	A/N
81.50 mm	0.50mm +	11.4:1	5.9	45	1.181" (30mm)	3.504"	X	5.394"	21mm (.827")	261	P4-H815-P6	GNH8150	A/N
81.5mm	0.50mm +	12.1:1	7.5	45	1.181" (30mm)	3.504"	X	5.394"	21mm (.827")	250	P4-H815-P7	GNH-8150	T/N
81.50mm	0.50mm +	9.6:1	-2.5	45	1.181" (30mm)	3.504"	X	5.394"	21mm (.827")	235	P4-H815-N2	GNH8150	A/N/T
82.00mm	1mm+	9.6:1	-2.5	45	1.181" (30mm)	3.504"	X	5.394"	21mm (.827")	250	P4-H82-N2	GNH820	T/N
82.00mm	1mm+	11.5:1	5.9	45	1.181" (30mm)	3.504"	X	5.394"	21mm (.827")	290	P4-H82-P6	GNH8200	A/N
82.00mm	1mm+	12.2:1	7.5	45	1.181" (30mm)	3.504"	X	5.394"	21mm (.827")	257	P4-H82-P7	GNH8200	A/N
83.00mm	2mm+	11.5:1	5.9	45	1.181" (30mm)	3.504"	X	5.394"	21mm (.827")	300	P4-H83-P6	GNH8300	A/N
84.00mm	3mm+	9.1:1	-10.3	45	1.181" (30mm)	3.504"	R	5.394"	21mm (.827")	290	P4-H84-N10R	GNH8400	T/N
84.00mm	3mm+	10.3:1	-2.5	45	1.181" (30mm)	3.504"	R	5.394"	21mm (.827")	290	P4-H84-N2R	GNH8400	T/N
84.00mm	3mm+	11:1	1.4	45	1.181" (30mm)	3.504"	X / R	5.394"	21mm (.827")	275 / 317	P4-H84-P1/ R	GNH8400	A/N
84.00mm	3mm+	11.9:1	5.5	45	1.181" (30mm)	3.504"	X	5.394"	21mm (.827")	319	P4-H84-P5	GNH8400	A/N
84.50mm	3.5mm+	10.4:1	-2.5	45	1.181" (30mm)	3.504"	R	5.394"	21mm (.827")	290	P4-H845-N2R	GNH8450	T/N
85.00mm	4mm+	10.5:1	-2.5	45	1.181" (30mm)	3.504"	R	5.394"	21mm (.827")	290	P4-H85-N2R	GNH8500	T/N
HONDA / ACURA B18A Integra LS with B16A head (+ 0.3 w/GSR B18C head)										Pin Weight 71 GRS			
81mm(81.02mm)	Std.	10.1:1	-2.5	42.7	1.181" (30mm)	3.504"	R	5.394"	21mm (.827")	302	P4-H81-N2R	GNH8100	T/N
81mm(81.02mm)	Std.	11.9:1	5.9	42.7	1.181" (30mm)	3.504"	X	5.394"	21mm (.827")	246	P4-H81-P6	GNH8100	A/N
81mm(81.02mm)	Std.	12:4	7.5	42.7	1.181" (30mm)	3.504"	X	5.394"	21mm (.827")	241	P4-H81-P7	GNH8100	A/N
81.50 mm	0.50mm +	11.9:1	5.9	42.7	1.181" (30mm)	3.504"	X	5.394"	21mm (.827")	261	P4-H815-P6	GNH8150	A/N
81.5mm	0.50mm +	12.4:1	7.5	42.7	1.181" (30mm)	3.504"	X	5.394"	21mm (.827")	250	P4-H815-P7	GNH8150	T/N
81.50mm	0.50mm +	10.1:1	-2.5	42.7	1.181" (30mm)	3.504"	X	5.394"	21mm (.827")	235	P4-H815-N2	GNH8150	A/N
82.00mm	1mm+	10.1:1	-2.5	42.7	1.181" (30mm)	3.504"	X	5.394"	21mm (.827")	250	P4-H82-N2	GNH8200	T/N
82.00mm	1mm+	12:1	5.9	42.7	1.181" (30mm)	3.504"	X	5.394"	21mm (.827")	290	P4-H82-P6	GNH8200	A/N
82.00mm	1mm+	12.5:1	7.5	42.7	1.181" (30mm)	3.504"	X	5.394"	21mm (.827")	257	P4-H82-P7	GNH8200	A/N
83.00mm	2mm+	12:1	5.9	42.7	1.181" (30mm)	3.504"	X	5.394"	21mm (.827")	300	P4-H83-P6	GNH8300	A/N
84.00mm	3mm+	9.5:1	-10.3	42.7	1.181" (30mm)	3.504"	R	5.394"	21mm (.827")	290	P4-H84-N10R	GNH8400	A/N/T
84.00mm	3mm+	10.8:1	-2.5	42.7	1.181" (30mm)	3.504"	R	5.394"	21mm (.827")	290	P4-H84-N2R	GNH8400	T/N
84.00mm	3mm+	11.5:1	1.4	42.7	1.181" (30mm)	3.504"	X / R	5.394"	21mm (.827")	275 / 317	P4-H84-P1/ R	GNH8400	A/N
84.00mm	3mm+	12.5:1	5.5	42.7	1.181" (30mm)	3.504"	X	5.394"	21mm (.827")	319	P4-H84-P5	GNH8400	A/N
84.50mm	3.5mm+	10.9:1	-2.5	42.7	1.181" (30mm)	3.504"	R	5.394"	21mm (.827")	290	P4-H845-N2R	GNH8450	T/N
85.00mm	4mm+	11:01	-2.5	42.7	1.181" (30mm)	3.504"	R	5.394"	21mm (.827")	290	P4-H85-N2R	GNH8500	T/N

BORE (mm)	Oversize	Comp. Ratio	Dome /Dish Volume CC's	Head CC's	Comp Height	Stroke	Skirt Style	ROD Length	Pin Dia	Weight Grams	Piston P/N	Ring P/N	Application
HONDA / ACURA B20 with B16A Head (+ 0.3 w/GSR B18C head)											Pin Weight 71 GRS		
84.00mm	Std.	9:5:1	-10.3	42.7	1.181" (30mm)	3.504"	R	5.394"	21mm (.827")	295	P4-H84-N10	GNH8400	A/T/N
84.00mm	Std.	10.8:1	-2.5	42.7	1.181" (30mm)	3.504"	R	5.394"	21mm (.827")	295	P4-H84-N2R	GNH8400	A/N/T
84.00mm	Std.	11.5:1	1.4	42.7	1.181" (30mm)	3.504"	X/R	5.394"	21mm (.827")	285	P4-H84-P1	GNH8400	A/N
84.00mm	Std.	12.5:1	5.5	42.7	1.181" (30mm)	3.504"	X	5.394"	21mm (.827")	310	P4-H84-P5	GNH8400	A/N
84.50 mm	0.50mm +	9:5:1	-10.3	42.7	1.181" (30mm)	3.504"	X/R	5.394"	21mm (.827")	270	P4-H845-N10	GNH8450	A/N/T
84.50mm	0.5mm +	10.9:1	-2.5	42.7	1.181" (30mm)	3.504"	X / R	5.394"	21mm (.827")	290	P4-H845-N2R	GNH8450	A/N/T
84.5mm	0.50mm +	11.5:1	1.4	42.7	1.181" (30mm)	3.504"	X	5.394"	21mm (.827")	306	P4-H845-P1	GNH8450	A/N
84.50mm	0.50mm +	12.5:1	5.5	42.7	1.181" (30mm)	3.504"	X	5.394"	21mm (.827")	310	P4-H845-P5	GNH8450	A/N
85.00mm	1mm+	9:5:1	-10.3	42.7	1.181" (30mm)	3.504"	X/R	5.394"	21mm (.827")	275	P4-H85-N10	GNH8500	A/N/T
85.00mm	1 mm +	11:0:1	-2.5	42.7	1.181" (30mm)	3.504"	R	5.394"	21mm (.827")	275	P4-H85-N2R	GNH8500	A/N/T
85.00mm	1mm+	11.5:1	1.4	42.7	1.181" (30mm)	3.504"	X	5.394"	21mm (.827")	318	P4-H85-P1	GNH8500	A/N
85.00mm	1mm+	12.5:1	5.5	42.7	1.181" (30mm)	3.504"	X	5.394"	21mm (.827")	318	P4-H85-P5	GNH8500	A/N
85.00mm	1mm+	13.5:1	8	42.7	1.181" (30mm)	3.504"	X	5.394"	21mm (.827")	322	P4-H85-P8	GNH8500	A/N
86.00mm	2mm+	11.5:1	1.4	42.7	1.181" (30mm)	3.504"	X / R	5.394"	21mm (.827")	318	P4-H86-P1	GNH8600	A/N
86.00mm	2mm+	12.7:1	4.5	42.7	1.181" (30mm)	3.504"	X	5.394"	21mm (.827")	290	P4-H86-P4	GNH8600	A/N
86.00mm	2mm+	13.5:1	8	42.7	1.181" (30mm)	3.504"	R	5.394"	21mm (.827")	322	P4-H86-P8	GNH8600	A/N
86.50mm	2.50 mm +	13.5:1	8	42.7	1.181" (30mm)	3.504"	X	5.394"	21mm (.827")	322	P4-H8650-P8	GNH8650	A/N
HONDA CIVIC D16Z6/ A6 (Gasket 0.030 - Deck Height 0.010"). Add +0.3:1 if used in a Y8 engine.											Pin Weight 71 GRS		
75.50mm	0.50mm+	8:8:1	-12.5	34.6	1.173" (29.8mm)	3.543"	R	5.394"	19mm (.748")	220	P4-HD755-N12	GNH7550	A/N/T
75.50mm	0.50mm+	10.5:1	-3	34.6	1.173" (29.8mm)	3.543"	R	5.394"	19mm (.748")	231	P4-HD755-N3	GNH7550	A/N
HONDA / ACURA K20A2 (+ 0.7 w / K20A3 head) (Gasket 0.030" - Deck height: 0.002")											Pin Weight 76 GRS		
86mm(86.02mm)	Std.(+0.02mm)	9:1	-6	50.7	1.181" (30mm)	3.386"	X	5.472"	22mm (.866")	277	P4-HK86-N6	GNH8600	A/N/T
86mm(86.02mm)	Std.(+0.02mm)	11.2:1	6.5	50.7	1.181" (30mm)	3.386"	X	5.472"	22mm (.866")	304	P4-HK86-P6	GNH8600	A/N
86mm(86.02mm)	Std.(+0.02mm)	11.6:1	8	50.7	1.181" (30mm)	3.386"	X	5.472"	22mm (.866")	306	P4-HK86-P8	GNH8600	A/N
86mm(86.02mm)	Std.(+0.02mm)	12:1	11	50.7	1.181" (30mm)	3.386"	X	5.472"	22mm (.866")	314	P4-HK86-P11	GNH8600	A/N
86.00 mm	std.	12.5:1	11.4	50.7	1.181" (30mm)	3.386"	X	5.472"	22mm (.866")	296	P4-HK86-P15	GNH8600	A/N
86.50mm	0.50mm +	9:1	-6	50.7	1.181" (30mm)	3.386"	X	5.472"	22mm (.866")	281	P4-HK8650-N6	GNH8650	A/N/T
86.50mm	0.50mm +	11.2:1	6.5	50.7	1.181" (30mm)	3.386"	X	5.472"	22mm (.866")	306	P4-HK865-P6	GNH8650	A/N
86.50mm	0.50mm+	11.6:1	8	50.7	1.181"(30mm)	3.386"	X	5.472"	22mm (.866")	308	P4-HK8650-P8	GNH-8650	A/N
86.50mm	0.50mm +	12:1	11	50.7	1.181" (30mm)	3.386"	X	5.472"	22mm (.866")	316	P4-HK8650-P11	GNH8650	A/N
86.50mm	0.50mm +	12.5:1	11.4	50.7	1.181" (30mm)	3.386"	X	5.472"	22mm (.866")	309	P4-HK8650-P15	GNH8650	A/N
87.00mm	1mm+	11.5:1	8	50.7	1.181" (30mm)	3.386"	X	5.472"	22mm (.866")	322	P4-HK87-P8	GNH8700	A/N
87.00mm	1mm+	12.5:1	11.4	50.7	1.181" (30mm)	3.386"	X	5.472"	22mm (.866")	325	P4-HK87-P15	GNH8700	A/N
HONDA / ACURA K24A2 w/ K20 Head (Gasket 0.030" - Deck height: 0.002")											Pin Weight 76 GRS		
87mm	Std.	11.5:1	-0.5	50.7	1.181" (30mm)	3.897"	X	5.984"	22mm (.866")	277	P4-HK87-N0	GNH8700	A/N
87mm	Std.	12.5:1	4.5	50.7	1.181" (30mm)	3.897"	X	5.984"	22mm (.866")	312	P4-HK87-P4	GNH8700	A/N
87mm	Std.	13.2:1	8	50.7	1.181" (30mm)	3.897"	X	5.984"	22mm (.866")	322	P4-HK87-P8	GNH8700	A/N
87.50mm	0.50mm+	12.5:1	4	50.7	1.181" (30mm)	3.897"	X	5.984"	22mm (.866")	315	P4-HK875-P4	GNH8750	A/N
87.50mm	0.50mm+	12.5:1	4	50.7	1.181" (30mm)	3.897"	X	5.984"	22mm (.866")	315	P4-HK875-P4	GNH8750	A/N
88mm	1mm +	12.5:1	3.5	50.7	1.181" (30mm)	3.897"	X	5.984"	22mm (.866")	317	P4-HK88-P4	GNH8800	A/N



BORE (mm)	Oversize	Comp. Ratio	Dome /Dish Volume CC's	Head CC's	Comp Height	Stroke	Skirt Style	ROD Length	Pin Dia	Weight Grams	Piston P/N	Ring P/N	Application
MAZDA / FORD Duratec 2.0L / 2.3L/ 2.5L (Gasket 0.027" - Deck height: 0.030")										PIN WEIGHT 73.4 GRS			
87.50 mm	Std	9.7 / 10.9:1	-6	42	28.50mm	83.1/94/100	X	6.094"	21mm (.827")	300	P4-DU875-N6	GNH8750	A/N
87.50 mm	Std	10.4 / 11.6:1	-2	42	28.50mm	83.1/94/100	X	6.094"	21mm (.827")	300	P4-DU875-N2	GNH8750	A/N
87.50mm	Std	11.2/ 12.5:1	1.5	42	28.50mm	83.1/94/100	X	6.094"	21mm (.827")	303	P4-DU875-P1	GNH8750	A/N
87.50mm	Std	12.2 / 13.6:1	6.1	42	28.50mm	83.1/94/100	X	6.094"	21mm (.827")	295	P4-DU875-P7	GNH8750	A/N
87.50mm	Std	8 / 9:1	-20	42	28.50mm	83.1/94/100	X	6.094"	21mm (.827")	277	P4-DU875-N20	GNH8750	T/N
88.00mm	0.5mm+	8.1 / 9.1:1	-20	42	28.50mm	83.1/94/100	X	6.094"	21mm (.827")	283	P4-DU880-N20	GNH8800	T/N
88.00mm	0.5mm+	9.8 / 11:1	-6	42	28.50mm	83.1/94/100	X	6.094"	21mm (.827")	303	P4-DU88-N6	GNH8800	A/N
88.00mm	0.5mm+	10.5 / 11.6:1	-2	42	28.50mm	83.1/94/100	X	6.094"	21mm (.827")	303	P4-DU88-N2	GNH8800	A/N
88.00mm	0.5mm+	11.3 / 12.5:1	1	42	28.50mm	83.1/94/100	X	6.094"	21mm (.827")	308	P4-DU88-P1	GNH8800	A/N
88.00mm	0.5mm+	12.4 / 13.7:1	6.1	42	28.50mm	83.1/94/100	X	6.094"	21mm (.827")	303	P4-DU88-P7	GNH8800	A/N
88.50mm	1mm+	11.3 / 12.5:1	1	42	28.50mm	83.1/94/100	X	6.094"	21mm (.827")	308	P4-DU8850-P1	GNH8850	A/N
89.00mm	1.5mm	8.2 / 9.2 / 9.7	-20	42	28.50mm	83.1/94/100	X	6.094"	21mm (.827")	303	P4-DU89-N20	GNH8900	A/N
89.00mm	1.5mm	9.8 / 11 / 11.7	-7	42	28.50mm	83.1/94/100	X	6.094"	21mm (.827")	303	P4-DU89-N7	GNH8900	A/N
89.00mm	1.5mm	11.5/ 12.8/ 13.3	0.5	42	28.50mm	83.1/94/100	X	6.094"	21mm (.827")	303	P4-DU89-P1	GNH8900	A/N
89.50mm	2.0mm	8.3 / 9.3/ 9.8	-20	42	28.50mm	83.1/94/100	X	6.094"	21mm (.827")	330	P4-DU8950-N20	GNH8950	A/N
89.50mm	2.0mm	9.9 / 11.1/ 11.8	-7	42	28.50mm	83.1/94/100	X	6.094"	21mm (.827")	330	P4-DU8950-N7	GNH8950	A/N
90.00mm	2.5mm	10.8/ 12.2/ 13	-2	42	28.50mm	83.1/94/100	X	6.094"	21mm (.827")	330	P4-DU90-N2	GNH9000	A/N
90.00mm	2.5mm	12.6:1	-2	42	1.063" (27.0mm)	97mm	X	6.094"	21mm (.827")	309	P4-DU900-N2Z	GNH9000	A/N
91.00mm	3.5mm	11/ 12.3/ 13.1	-2	42	28.50mm	83.1/94/100	X	6.094"	21mm (.827")	324	P4-DU91-N2	GNH9100	A/N

Connecting Rod 2.0/2.3L CR-FDUR23-H154.8 / Forged 4340 alloy / H Beam / ARP 2000 BOLTS / C-C Length 154.8mm / PE Bore 21mm full float

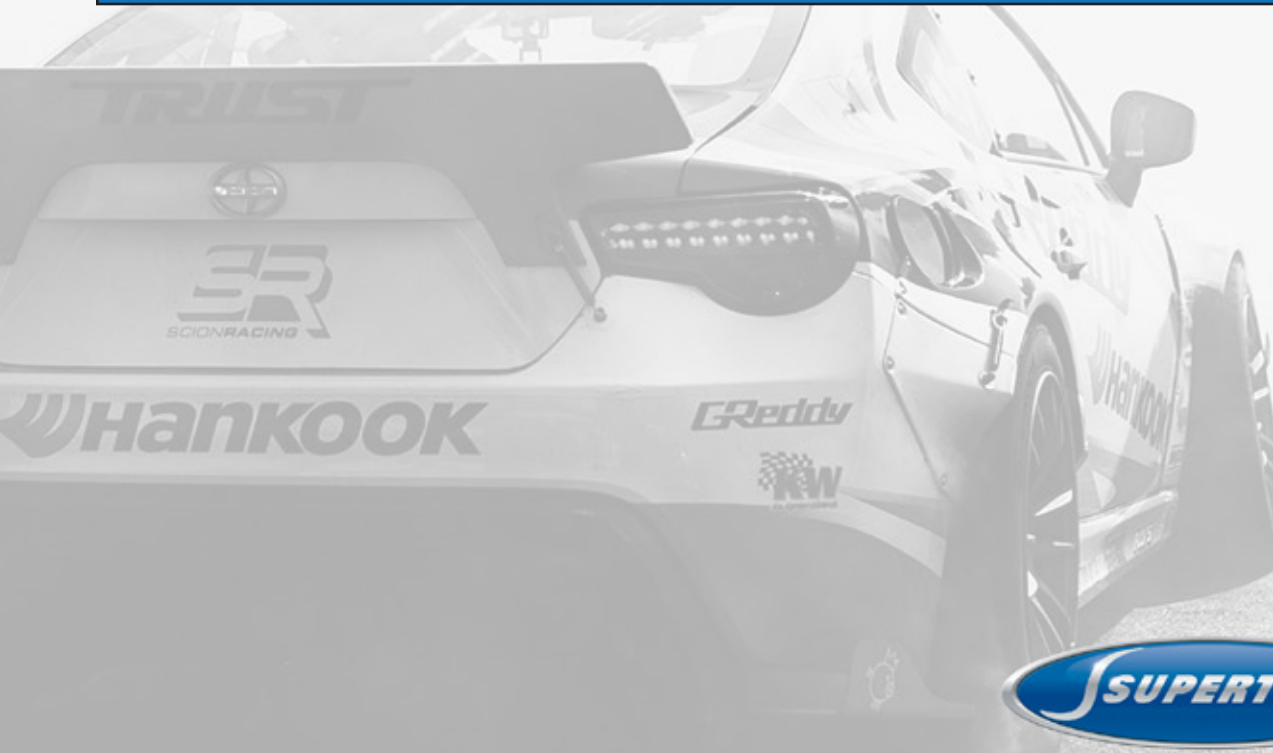
MAZDASPEED 2.3 lts 2010+ (Gasket 0.027" - Deck height: 0.030")										PIN WEIGHT 71 GRS			
87.50mm	Std	9:5	-14	42	1.280" (32.50mm)	3.7"(3.271")	X	6.094"	22.5mm (.885")	308	P4-MAS875-10H13	GNH8750	T/N
88.00mm	0.5mm+	9:5	-14	42	1.280" (32.50mm)	3.7"(3.271")	X	6.094"	22.5mm (.885")	315	P4-MAS88-10H13	GNH8800	T/N

Connecting Rod CR-MZR23T-H150.7 / Forged 4340 alloy / H Beam / ARP 2000 BOLTS / C-C Length 150.7mm / PE Bore 22.5mm full float

MAZDA Miata 1.6 lt (gasket + Deck height 0.043")										PIN WEIGHT 71 GRS			
78.50mm	0.50mm+	8:8:1	-11	36	1.260" (32mm)	3.287"	R	5.228"	20mm (.787")	353	P4-MA7850-N10	GNH7850	T/N
79.00mm	1mm+	8:8:1	-11	36	1.260" (32mm)	3.287"	R	5.228"	20mm (.787")	260	P4-MA790-N10	GNH7900	T/N
79.00mm	1mm+	8:8:1	-1	36	1.260" (32mm)	3.287"	R	5.228"	20mm (.787")	258	P4-MA790-N1	GNH7900	T/N
MAZDA Miata 1.8 lts / "BP" engine (gasket + deck height 0.060")										PIN WEIGHT 74 GRS			
83.50mm	0.5mm+	8.6:1	-4	50	1.201" (30.5mm)	3.346"	R	5.228"	20mm (.787")	293	P4-MA8350-N4	GNH8350	T/N
83.50mm	0.5mm+	9.5:1	2.5	50	1.201" (30.5mm)	3.346"	R	5.228"	20mm (.787")	311	P4-MA8350-P2	GNH8350	T/N
83.50mm	0.5mm+	11:1	10.5	50	1.201" (30.5mm)	3.346"	R	5.228"	20mm (.787")	320	P4-MA8350-P10	GNH8350	A/N
84.00mm	1 mm+	8.6:1	-4	50	1.201" (30.5mm)	3.346"	R	5.228"	20mm (.787")	296	P4-MA84-N4	GNH8400	T/N
84.00mm	1 mm+	9:1	-4	50	1.208" (30.7mm)	3.346"	R	5.228"	20mm (.787")	317	P4-MA84-CR9	GNH8400	T/N
84.00mm	1 mm+	9.5:1	2.5	50	1.201" (30.5mm)	3.346"	R	5.228"	20mm (.787")	317	P4-MA84-P2	GNH8400	T/N
84.00mm	1 mm+	11:1	10.5	50	1.201" (30.5mm)	3.346"	R	5.228"	20mm (.787")	CALL	P4-MA84-P10	GNH8400	A/N
85.00mm	2mm+	9:1	-3.5	50	1.201" (30.5mm)	3.346"	R	5.228"	20mm (.787")	CALL	P4-MA85-N3	SWM31017-0	T/N
85.00mm	2 mm+	11:1	10	50	1.201" (30.5mm)	3.346"	R	5.228"	20mm (.787")	CALL	P4-MA85-P10	GNH8500	A/N
85.50mm	2.5mm+	9:1	-3.5	50	1.201" (30.5mm)	3.346"	R	5.228"	20mm (.787")	CALL	P4-MA855-N3	SWM31071-2	T/N
85.50mm	2.5mm+	11:1	8.8	50	1.201" (30.5mm)	3.346"	R	5.228"	20mm (.787")	CALL	P4-MA855-P8	GNH8550	A/N

Connecting Rod 1.6/1.8L

CR-MMX5-H133 / Forged 4340 alloy / H Beam / ARP 2000 BOLTS / C-C Length 133mm / PE Bore 20mm full float





BORE (mm)	Oversize	Comp. Ratio	Dome /Dish Volume CC's	Head CC's	Comp Height	Stroke	Skirt Style	ROD Length	Pin Dia	Weight Grams	Piston P/N	Ring P/N	Application
MINI COOPER R53 1.6L 16v Turbo engine 2002 - 2006											PIN WEIGHT 86 GRS		
77.50mm	0.5mm+	8.3	-1 (std)	33	26.5mm	85.8mm	R	Std	21mm (.827")		P4-MIN53-775-N1	GNH7750	T/N
78.00mm	1mm+	8.3	-1 (std)	33	26.5mm	85.8mm	R	Std	21mm (.827")		P4-MIN53-78-N1	GNH7800	T/N
MINI COOPER R56 1.6L 16v Turbo engine 2007+											PIN WEIGHT 86 GRS		
77mm	std	10:5	std	37.6	28.70 mm	85.8mm	X	std	20mm (.787")	262	P4-MIN56-77-CR10.5	GNH7700	T/N
77.50mm	0.50mm+	10:5	std	37.6	28.70 mm	85.8mm	X	std	20mm (.787")	267	P4-MIN56-77.5-CR10.5	GNH7550	T/N
MINI COOPER R56 JCW 1.6L 16v Turbo engine 2007+											PIN WEIGHT 86 GRS		
77mm	std	10	std	37.6	28.70 mm	85.8mm	X	std	20mm (.787")	250	P4-MIN56-77-CR10	GNH7700	T/N
77.50mm	0.50mm+	10	std	37.6	28.70 mm	85.8mm	X	std	20mm (.787")	256	P4-MIN56-77.5-CR10	GNH7550	T/N
MINI COOPER R56 N18 1.6L 16v Turbo engine 2011+											PIN WEIGHT 86 GRS		
77mm	Std	10.5	Std	37.6	28.70mm	85.8mm	X	5.454"	20mm (.787")		P4-MIN56-N18-77-CR10.5	GNH7700	T/N
77.50mm	0.5mm+	10.5	Std	37.6	28.70mm	85.8mm	X	5.454"	20mm (.787")		P4-MIN56-N18-77.5-CR10.5	GNH7750	T/N
MINI COOPER R56 N18 JCW 1.6L 16v Turbo engine 2011+											PIN WEIGHT 86 GRS		
77mm	Std	10	Std	37.6	27.5mm	85.8mm	X	5.454"	20mm (.787")		P4-MIN56-N18-77-CR10	GNH7700	T/N
77.50mm	0.5mm+	10	Std	37.6	27.5mm	85.8mm	X	5.454"	20mm (.787")		P4-MIN56-N18-77.5-CR10	GNH7750	T/N



BORE (mm)	Oversize	Comp. Ratio	Dome /Dish Volume CC's	Head CC's	Comp Height	Stroke	Skirt Style	ROD Length	Pin Dia	Weight Grams	Piston P/N	Ring P/N	Application
MITSUBISHI 4G63 1st Generation (Gasket 0.042" - Deck Height 0)											PIN WEIGHT 99 GRS		
85mm	0.5mm +	9:1	-9.5	47	1.378" (35mm)	3.465"	R	5.905"	21mm (.827")	299	P4-MI1-8550-N9	GNH8550	T
MITSUBISHI 4G63 2nd Generation (For EVO8/9 add +0.5 to C.R.) (Gasket 0.042" - Deck Height 0)											PIN WEIGHT 99 GRS		
85mm	std	8:3:1	-15	47	1.378" (35mm)	3.465"	R	5.905"	22mm (.866")	295	P4-MI2-85-N15	GNH8500	T/N
85mm	std	9:1	-9.5	47	1.378" (35mm)	3.465"	R	5.905"	22mm (.866")	300	P4-MI2-85-N9	GNH8500	T/N
85.50mm	0.5mm+	9:1	-9.5	47	1.378" (35mm)	3.465"	R	5.905"	22mm (.866")	303	P4-MI2-8550-N9	GNH8550	T/N
85.50mm	0.5mm+	8:3:1	-15	47	1.378" (35mm)	3.465"	R	5.905"	22mm (.866")	299	P4-MI2-8550-N15	GNH8550	T/N
86.00mm	0.5mm+	8:3:1	-15	47	1.378" (35mm)	3.465"	R	5.905"	22mm (.866")	3118	P4-MI2-86-N15	GNH8600	T/N
MITSUBISHI 4G63 2nd Generation/ STROKER 100mm (For EVO8/9 add +0.5 to C.R.) Deck Height 0.3mm											PIN WEIGHT 100 GRS		
85.50mm	0.5mm+	9:1	-4.6	49	28.70 mm	100mm	R	5.905"	22mm (.866")	303	P4-MI2-855-N20ST	GNH8500	T/N
MITSUBISHI EVO X / 4B11T (Gasket 1.2mm - Deck Height 0) 850 HP.											PIN WEIGHT 124 GRS		
86.00mm	std	9:1	-4.6	49	33.33 mm	86mm	R	143.75	23mm	335	P4-MIX86-CR9	GNH8600	T/N
86.50mm	0.5mm+	9:1	-4.6	49	33.33mm	86mm	R	143.75	23mm	342	P4-MIX865-CR9	GNH8650	T/N



BORE (mm)	Oversize	Comp. Ratio	Dome /Dish Volume CC's	Head CC's	Comp Height	Stroke	Skirt Style	ROD Length	Pin Dia	Weight Grams	Piston P/N	Ring P/N	Application
NISSAN 240 SX 95 - 98/ KA24DE											PIN WEIGHT 90 GRS		
89.00 mm	Std	10:5:1	-11	46	1.339" (34mm)	3.780"	R	6.946"	21mm (.827")	395	P4-N8900-N11	GNH8900	A/N
89.50mm	0.5mm+	8:4:1	-29	46	1.339" (34mm)	3.780"	R	6.946"	21mm (.827")	395	P4-N895-N29	GNH8950	A/N
89.50mm	0.5mm+	8:6:1	-27	46	1.339" (34mm)	3.780"	R	6.946"	21mm (.827")	395	P4-N895-N27	GNH8950	A/N
89.50mm	0.5mm+	9:1	-23	46	1.339" (34mm)	3.780"	R	6.946"	21mm (.827")	389	P4-N895-N23	GNH8950	T/N
89.50mm	0.5mm+	10:5:1	-11	46	1.339" (34mm)	3.780"	R	6.946"	21mm (.827")	389	P4-N895-N11	GNH8950	T/N
90.00mm	1.0mm+	8:6:1	-27	46	1.339" (34mm)	3.780"	R	6.946"	21mm (.827")	CALL	P4-N900-N27	GNH9000	A/N
NISSAN SR20DET													
86.50mm	0.5mm	9:1	-10	46	1.25"(32mm)	3.386"	R	5.366	22mm (.866")	303	P4-NSR20/86.5CR9	GNH8650	T/N
87.00mm	1.0mm+	9:1	-10	46	1.25"(32mm)	3.386"	R	5.366	22mm (.866")	306	P4-NSR20/87CR9	GNH8700	T/N
87.50mm	1.5mm+	9:1	-10	46	1.25"(32mm)	3.386"	R	5.366	22mm (.866")	307	P4-NSR20/87.5CR9	GNH8750	T/N
NISSAN SR20VE													
86.50mm	0.5mm	9:5:1	-10	42	1.25"(32mm)	3.386"	R	5.366	22mm (.866")	303	P4-NSR20/86.5CR9	GNH8650	T/N
87.00mm	1.0mm+	9:6:1	-10	42	1.25"(32mm)	3.386"	R	5.366	22mm (.866")	306	P4-NSR20/87CR9	GNH8700	T/N
87.50mm	1.5mm+	9:7:1	-10	42	1.25"(32mm)	3.386"	R	5.366	22mm (.866")	307	P4-NSR20/87.5CR9	GNH8750	T/N
NISSAN 350Z VQ35 (Gasket + Deck height 0.082)													
95.50mm	std	8:7:1	-10	57	1.168"(29.6mm)	3.205"	R	5.669	22mm (.866")	370	P6-N35-955-N10	SWN30131-0	T/N
96.00mm	0.50mm+	8:8:1	-10	57	1.168"(29.6mm)	3.205"	R	5.669	22mm (.866")	370	P6-N35-96-N10	SWN30131-2	T/N
NISSAN RB25 2.5 Lts											PIN WEIGHT 126 GRS		
86.50mm	0.5mm+	9:1	-15.5	64	1.24" (31.5mm)	2.822"	R	4.783	21mm (.827")	349	P6-RB25/86.5-CR9	GNH8650	T/N
NISSAN RB26 2.6 Lts											PIN WEIGHT 103 GRS		
86.50mm	0.5mm+	8:5:1	-15.5	70	1.181"(30mm)	2.901"	R	4.783	21mm (.827")	347	P6-RB26/86.5-CR8.5	GNH8650	T/N
87.00mm	1mm+	8:5:1	-15.5	70	1.181"(30mm)	2.901"	R	4.783	21mm (.827")	355	P6-RB26/87-CR8.5	GNH8700	T/N
NISSAN RB20 2.0 Lts											PIN WEIGHT 103 GRS		
78.5mm	0.5mm+	8:5:1	-1.3		1.260"(32mm)	2.744"	R		21mm (.827")	277	P6-RB20/78.5-CR8.5	GNH7850	T/N
79.00mm	1mm+	8:5:1	-1.3		1.260"(32mm)	2.744"	R		21mm (.827")	285	P6-RB20/79-CR8.5	GNH7900	T/N
NISSAN CA18DET											PIN WEIGHT 103 GRS		
83.50mm	0.5mm+	8:5:1	FT(-0.9)	53	1.181"(30mm)	3.291"	R	5.236"	20mm (.787")	292	P4-NCA18-835-CR8.5	GNH8350	T/N
84.00mm	1mm+	8:5:1	FT(-0.9)	53	1.181"(30mm)	3.291"	R	5.236"	20mm (.787")	296	P4-NCA18-84-CR8.5	GNH8400	T/N



PEUGEOT

BORE (mm)	Oversize	Comp. Ratio	Dome /Dish Volume CC's	Head CC's	Comp Height	Stroke	Skirt Style	ROD Length	Pin Dia	Weight Grams	Piston P/N	Ring P/N	Application
PEUGEOT 207 GTI 1.6L 16v Turbo engine 2007+											PIN WEIGHT 86 GRS		
77.00 mm	std	10:5	std		28.70mm	85.8mm	R		20mm (.787")	262	P4-MIN56-77-CR10.5	GNH7700	T/N
77.50 mm	0.5mm +	10:5	std		28.70mm	85.8mm	R		20mm (.787")	267	P4-MIN56-77.5-CR10.5	GNH7750	T/N



SUBARU

BORE (mm)	Oversize	Comp. Ratio	Dome /Dish Volume CC's	Head CC's	Comp Height	Stroke	Skirt Style	ROD Length	Pin Dia	Weight Grams	Piston P/N	Ring P/N	Application
SUBARU WRX STi EJ25 2004 (gasket: 0.60mm / Piston deck height: 0.38mm)											PIN WEIGHT 109 GRS		
99.50 mm	std	10:5:1	-1	56	1.208" (30.7mm)	3.110"	R	5.137"	23mm (.905")	390	P4-SU9950-N1	SWF-20068	T/N
99.50 mm	std	8:2:1	-20.5	56	1.208" (30.7mm)	3.110"	R	5.137"	23mm (.905")	390	P4-SU9950-N20	SWF-20068	T/N
100 mm	0.5mm	8:2:1	-20.5	56	1.208" (30.7mm)	3.110"	R	5.137"	23mm (.905")	400	P4-SU100-N20B	SWF-20068-2	T/N
SUBARU WRX EJ20 / Spec C crown style (gasket: 0.60mm / Piston deck height: 1.48mm)											PIN WEIGHT 125 GRS		
92.00mm	std	8:3:1	-5	49	1.240"(31.5mm)	2.952"	R	5.137"	23mm (.905")	380	P4-SU9200-N5	SWF-20062-0	T/N
92.50mm	0.50mm	8:4:1	-5	49	1.240"(31.5mm)	2.952"	R	5.137"	23mm (.905")	390	P4-SU9250-N5	SWF-20062-2	T/N
93.00mm	1mm +	8:5:1	-5	49	1.240"(31.5mm)	2.952"	R	5.137"	23mm (.905")	400	P4-SU9250-N5	SWF-20057-4	T/N
SUBARU H6 EZ30 (gasket: 0.60mm / Piston deck height: 0.38mm)											PIN WEIGHT 113 GRS		
89.20mm	std	8:5:1	-18	42	1.193"(30.3mm)	2.149"	R	std	22mm (.905")	321	P6-SU8920-N18	SWF-20070-0	T/N



BORE (mm)	Oversize	Comp. Ratio	Dome /Dish Volume CC's	Head CC's	Comp Height	Stroke	Skirt Style	ROD Length	Pin Dia	Weight Grams	Piston P/N	Ring P/N	Application
TOYOTA Corolla 3TC											PIN WEIGHT 95 GRS		
87.00 mm	2mm+	10:01	28	63	1.377"(35mm)	3.070"	R	4.835"	22mm (.866")	360	P4-T3TC87-CR10	GNH8700	A/N
88.00 mm	3mm +	10:01	28	63	1.377"(35mm)	3.070"	R	4.835"	22mm (.866")	370	P4-T3TC88-CR10	GNH8800	A/N
TOYOTA Corolla 2TC											PIN WEIGHT 95 GRS		
87.00mm	1mm+	10:1	28	63	1.535"(39mm)	2.756"	R	4.835"	22mm (.866")	360	P4-T2TC87-CR10	GNH8700	A/N
88.00mm	2mm+	10:1	28	63	1.535"(39mm)	2.756"	R	4.835"	22mm (.866")	365	P4-T2TC88-CR10	GNH8800	A/N
TOYOTA 4AGE 16v (Gasket 0.8mm - Deck Height: 0.7mm) / 18mm Pin											PIN WEIGHT 59 GRS		
81.50mm	0.5mm	11:1	3.1	35	1.208"(30.7mm)	3.031"	X	4.803"	18mm (.866")	260	P4-T4AG-81.5-CR11.5	GNH8150	A/N
88.00mm	1mm+	11:1	3.1	35	1.208"(30.7mm)	3.031"	X	4.803"	18mm (.866")	265	P4-T4AG-82-CR11.5	GNH8200	A/N
TOYOTA 4AGE 16v (Gasket 1.2mm - Deck Height: 0) / 20mm Pin											PIN WEIGHT 59 GRS		
81mm	0.5mm	11:1	3.1	35	1.208"(30.5mm)	3.031"	X	4.803"	20MM	260	P4-T4AG16-20-81-CR11	GNH8100	A/N
81.50mm	1mm+	11:1	3.1	35	1.208"(30.5mm)	3.031"	X	4.803"	20MM	265	P4-T4AG16-20-81.5-CR11	GNH8150	A/N
82.00mm	1mm+	11:1	3.1	35	1.208"(30.5mm)	3.031"	X	4.803"	20MM	265	P4-T4AG16-20-82-CR11	GNH8200	A/N

BORE (mm)	Oversize	Comp. Ratio	Dome /Dish Volume CC's	Head CC's	Comp Height	Stroke	Skirt Style	ROD Length	Pin Dia	Weight Grams	Piston P/N	Ring P/N	Application
TOYOTA FRS /SUBARU BRZ 16v (Gasket 0.5mm - Deck height 0.2mm)											PIN WEIGHT 95 GRS		
86.00 mm	STD	12.5:1	-0.2	39	1.279"(32.5mm)	3.38"	X	5.093"	22mm		P4-TFRS-86-CR12.5	GNH8600	A/N
86.00 mm	STD	9.5:1	-15.5	39	1.279"(32.5mm)	3.38"	X	5.093"	22mm		P4-TFRS-86-CR9.5	GNH8600	A/N



BORE (mm)	Oversize	Comp. Ratio	Dome /Dish Volume CC's	Head CC's	Comp Height	Stroke	Skirt Style	ROD Length	Pin Dia	Weight Grams	Piston P/N	Ring P/N	Application
VW 2.0L 16v ABF (gasket thickness 1.6mm)											PIN WEIGHT 98 GRS		
82.50mm	Std	11:6	10.3	48	31.35mm	92.80	X	159	21		P4-VW16-ABF-82.5	895052-00	A/N
81.50mm	1.5mm	11:7	10.3	48	31.35mm	92.80	X	159	21		P4-VW16-ABF-82.7	895052-25	A/N
82.00mm	2mm	11:8	10.3	48	31.35mm	92.80	X	159	21		P4-VW16-ABF-83	895052-50	A/N
VW - AUDI 1.8T 20v AEB											PIN WEIGHT 98 GRS		
81.00mm	Std	9.3:1	-4	44	32.7mm	86.4	R	144	20	280	P4-VW18T81-N4	GNH8100	T/N
81.50mm	0.5mm	9.3:1	-4	44	32.7mm	86.4	R	144	20	285	P4-VW18T815-N4	GNH8150	T/N
82.00mm	1mm	9.3:1	-4	44	32.7mm	86.4	R	144	20	292	P4-VW18T82-N4	GNH8150	T/N
82.50mm	1.5mm	9.5:1	-4	44	32.7mm	86.4	R	144	20	292	P4-VW18T8250-N4	GNH8150	T/N
83.00mm	2mm	9.6:1	-4	44	32.7mm	86.4	R	144	20	292	P4-VW18T83-N4	GNH8300	T/N
VW - AUDI 1.8T 20v STROKER 95.5mm											PIN WEIGHT 98 GRS		
82.50mm	1.5mm+	8:7	-17	44	28.15mm	95.5	R	144	20	268	P4-VW20T825-N13	GNH8250	T/N
VW - AUDI 1.8T 20v STROKER 92.8mm											PIN WEIGHT 98 GRS		
82.50mm	1.5mm+	9:1	-15	44	29.5	92.8	R	144	20	298	P4-VW18T825-N15ST-H13	GNH8300	T/N
83.00mm	2mm+	8:7	-15	45	29.5	92.8	R	144	20	298	P4-VW18T83-N15ST	GNH8300	T/N
83.50mm	2.5mm+	8:7	-15	45	29.5	92.8	R	144	20	298	P4-VW18T83-N15ST	GNH8350	T/N
VW 2.0T FSI 16v											PIN WEIGHT 97 GRS		
82.50mm	Std	9:1	-12.5	45	29.6	92.8	R	144	20	302	P4-VW20T825-N13	GNH8250	T/N
83.00mm	0.5mm	9:1	-13	45	29.6	92.8	R	144	20	308	P4-VW20T83-N13	GNH8300	T/N
VW 2.0T FSI 16v STROKER 95.5m											PIN WEIGHT 98 GRS		
82.50mm	Std	9:1	-14	45	28.25	95.5	R	144	20	288	P4-VW20T825-N14ST	GNH8250	T/N
83.00mm	0.5mm	9:1	-14	45	28.25	95.5	R	144	20	295	P4-VW20T83-N14ST	GNH8300	T/N
Connecting Rod pin 20				CR-VW144-20 / Forged 4340 alloy / H Beam / ARP 2000 BOLTS / C-C Length 144mm / PE Bore 20mm full float									
Connecting Rod pin 21				CR-VW144-21 / Forged 4340 alloy / H Beam / ARP 2000 BOLTS / C-C Length 144mm / PE Bore 21mm full float									



PISTON TO CYLINDER WALL CLEARANCE

Please read the specification sheet provided with your pistons. Piston Diameter must be measured at the gauge point indicated in the diagram. Required clearance depends on diameter, alloy, type of forging (full, skirt or slipper), application, operating, conditions, etc.

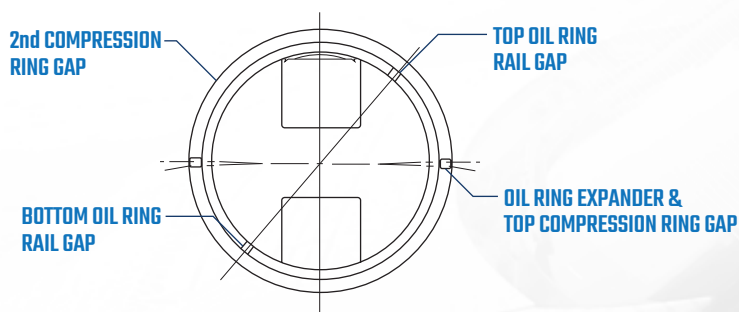
RECOMMENDED RING GAP

It is important to recognize that some end gaps for individual engines may vary from this standard because of engine manufacture's requirements, type of application, fuels, etc. The top ring gap should be as small as possible to avoid blow-by. The table appearing below is for reference only.

TOP RING

Multiply the Bore diameter in inches by the following factor:

Application	Factor
Street Performance	0.0045
Moderate Turbo / Nitrous	0.0050
Drag / Oval Track	0.0055
Turbo / Nitrous Race only	0.0065



SECOND RING

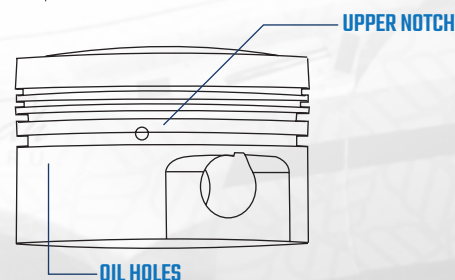
Multiply the First Ring Gap x 1.25

OIL RING

Minimum Gap 0.015

OIL RING INSTALLATION

Example: Subaru oil Ring With Rotational locking detent.



The oil ring side rails are supplied with one or two tabs. One is installed with the tab facing the side of the groove designed to lock the rail using one of the grooves in the piston. The other tab (if applicable) is designed to lock the middle expander. Use at the top or the bottom is the same.

- Install the middle expander with end gap about 90 degrees from the wrist pin centerline.
- Locate the upper notch in the oil ring groove. Install Lower Oil Ring Side Rail and rotate it until the tab falls in one of the oil grooves opposite to the upper notch.
- Install the top oil Ring Side Rail and rotate it until the tab falls in the upper notch.

WIRE LOCK INSTALLATION





Insert one end of the lock into the groove and continue spiral feeding until the lock is fully seated.








HEAD GASKET

Supertech has developed a new line of MLS head gaskets for high performance that outperforms other gaskets in the market.

The MLS gaskets are laser cut to avoid the formation of burrs, made in stainless steel, with an array of carefully designed gas stopper embossments, stress relieved and uniformly coated with a series of polymer mixtures for improved sealing properties under extreme conditions, much higher than OE gaskets and in less than perfect surface conditions on any type of block and cylinder head materials.


BMW					
ENGINE	MLS / COPPER	GASKET BORE (MM)	THICKNESS (MM)	PART NUMBER	PICTURE
BMW M50	Copper Ring	86	0.080" (2mm)	HG-BMW-M50-86-2TC	
	Copper Ring	87	0.080" (2mm)	HG-BMW-M50-87-2TC	NOT ACTUAL PICTURE
BMW S50	Copper Ring	87.1	0.070" (1.8mm)	HG-BMW-S50-87.1-18TC	 NOT ACTUAL PICTURE
BMW S14	Copper Ring	95	0.080" (2mm)	HG-BMW-S14-95-2TC	 NOT ACTUAL PICTURE
BMW S54	Copper Ring	87.5	0.047" (1.2mm)	HG-BMW-S54-87.5-1.2TC	 NOT ACTUAL PICTURE




FORD					
ENGINE	MLS / COPPER	GASKET BORE (MM)	THICKNESS (MM)	PART NUMBER	PICTURE
FORD Duratec 2.0/2.3L	MLS	89	0.029" (0.75mm)	HG-FDUR23-89-075T	 NOT ACTUAL PICTURE
		91	0.080" (1.00mm)	HG-FDUR23-89-1T	
		91	0.029" (0.75mm)	HG-FDUR23-91-075T	
		91	0.080" (1.00mm)	HG-FDUR23-91-1T	
FORD Duratec 2.5L	MLS	91	0.029" (0.75mm)	HG-FDUR25-91-0.75 T	 NOT ACTUAL PICTURE
FORD ECOBOOST 1.6L	MLS	80	0.080" (1.00mm)	HG-FECO16-80-1T	 NOT ACTUAL PICTURE
FORD ECOBOOST 2.0L	MLS	89	0.047" (1.20mm)	HG-FECO20-89-1.2T	 NOT ACTUAL PICTURE
FORD ECOBOOST 2.0L	MLS	89	0.051" (1.30mm)	HG-FECO23-1.3T	 NOT ACTUAL PICTURE








HEAD GASKETS

HONDA					
ENGINE	MLS / COPPER	GASKET BORE (MM)	THICKNESS (MM)	PART NUMBER	PICTURE
HONDA B16A / B18C VTEC	MLS	81.5	0.033" (0.85mm)	HG-HB16A-81.5-085T	
		82	0.033" (0.85mm)	HG-HB16A-82-085T	
		83	0.033" (0.85mm)	HG-HB16A-83-085T	
		84	0.033" (0.85mm)	HG-HB16A-84-085T	
		85	0.033" (0.85mm)	HG-HB16A-85-085T	
HONDA B18A/B Non VTEC	MLS	82	0.033" (0.85mm)	HG-HB18A-82-0.85T	
		83	0.033" (0.85mm)	HG-HB18A-83-0.85T	
		84	0.033" (0.85mm)	HG-HB18A-84-0.85T	
		85	0.033" (0.85mm)	HG-HB18A-85-0.85T	
HONDA B18A/B VTEC	MLS	82	0.033" (0.85mm)	HG-HB18A-V-82-0.85T	
		83	0.033" (0.85mm)	HG-HB18A-V-83-0.85T	
		84	0.033" (0.85mm)	HG-HB18A-V-84-0.85T	
		85	0.033" (0.85mm)	HG-HB18A-V-85-0.85T	
HONDA B20B4/Z2	MLS	85	0.033" (0.85mm)	HG-HB20B-85-0.85T	
HONDA D16A D15B1-B8/ 16A6-A7/ 16Z1-Z2	MLS	76	0.033" (0.85mm)	HG-HD16A-76-0.85T	
HONDA D15Z1 Y5-Y8/ / 16Z6	MLS	76	0.033" (0.85mm)	HG-HD16YZ-75-0.85T	 NOT ACTUAL PICTURE
HONDA K20 / K24	MLS	87	0.033" (0.85mm)	HG-HK87-0.85T	
		88.5	0.033" (0.85mm)	HG-HK88.5-0.85T	
		89.5	0.033" (0.85mm)	HG-HK89.5-0.85T	
HONDA S2000	MLS	89	0.033" (0.85mm)	HG-HS2000-89-0.85T	 NOT ACTUAL PICTURE



MAZDA					
ENGINE	MLS / COPPER	GASKET BORE (MM)	THICKNESS (MM)	PART NUMBER	PICTURE
Mazda Miata 1.8T BP	MLS	85	0.040" (1.00mm)	HG-MM18BP-85-1T	 NOT ACTUAL PICTURE
Mazda MZR 2.0/2.3L	MLS	89	0.029" (0.75mm)	HG-MMZR20-89-0.75T	 NOT ACTUAL PICTURE
		90	0.029" (0.75mm)	HG-MMZR20-90-0.75T	





MINI COOPER					
ENGINE	MLS / COPPER	GASKET BORE (MM)	THICKNESS (MM)	PART NUMBER	PICTURE
MINI COOPER R56 1.6L	MLS	77	0.035" (0.90mm)	HG-MCR56-78-0.9T	 NOT ACTUAL PICTURE





MITSUBISHI					
ENGINE	MLS / COPPER	GASKET BORE (MM)	THICKNESS (MM)	PART NUMBER	PICTURE
MITSUBISHI 4G63 Evo 4-8	MLS	86.3	0.051" (1.3mm)	HG-MI4G63-86.3-1.3T	 NOT ACTUAL PICTURE
		86.3	0.040" (1mm)	HG-MI4G63-86.3-1T	
MITSUBISHI 4G63 Evo 9	MLS	86.3	0.040" (1.00mm)	HG-MI4G63-9-86.3-1T	 NOT ACTUAL PICTURE
MITSUBISHI 4B11	MLS	87.5	0.040" (1.00mm)	HG-MI4B11-87.5-1T	 NOT ACTUAL PICTURE

NISSAN					
ENGINE	MLS / COPPER	GASKET BORE (MM)	THICKNESS (MM)	PART NUMBER	PICTURE
NISSAN SR20 VVL (w/ 1 Oil Hole)	MLS	87.5	0.040" (1mm)	HG-NSR20-87.5-1T-VVL	
NISSAN SR20 FWD (No Extra Oil Hole)	MLS	88.5	0.033" (0.85mm)	HG-NSR20-88.5-0.85T-FWD	
NISSAN SR20 RWD (W/ 2 Oil Hole)	MLS	88.5	0.040" (1.00mm)	HG-NSR20-88.5-1T-RWD	
NISSAN TB48	MLS	102.5	0.047" (1.20mm)	HG-NTB48-102.5-1.2T	
NISSAN RB26	MLS	87.5	0.047" (1.20mm)	HG-NTB48-102.5-1.2T	
		87.5	0.059" (1.50mm)	HG-NRB26-87.5-1.5T	
NISSAN VR38 GTR	MLS	100.5	0.037" (0.95mm)	HG-NVR38-100.5-0.95T-L (Left Side)	
		100.5	0.037" (0.95mm)	HG-NVR38-100.5-0.95T-R (Right Side)	
NISSAN VR38 GTR	COPPER	100.5	0.040" (1.00mm)	HG-NVR38-100.5-1TC-L (Left Side)	
		100.5	0.040" (1.00mm)	HG-NVR38-100.5-1TC-R (Right Side)	

HEAD GASKETS

SUBARU					
ENGINE	MLS / COPPER	GASKET BORE (MM)	THICKNESS (MM)	PART NUMBER	PICTURE
SUBARU EJ20	COPPER	93.5	0.047" (1.2mm)	HG-SUEJ20-93.5-1.2T	
	MLS	94	0.040" (1mm)	HG-SUEJ20-94-1T	
		94	0.051" (1.3mm)	HG-SUEJ20-94-1.3T	
SUBARU EJ25	MLS	100	0.051" (1.3mm)	HG-SUEJ25-100-1.3T	 NOT ACTUAL PICTURE
		101	0.037" (0.95mm)	HG-SUEJ25-101-0.95T	
		101.3	0.040" (1.0mm)	HG-SUEJ25-101.3-1.T	
	COPPER	101.3	0.047" (1.2mm)	HG-SUEJ25-101.3-1.2TC	

TOYOTA					
ENGINE	MLS / COPPER	GASKET BORE (MM)	THICKNESS (MM)	PART NUMBER	PICTURE
TOYOTA 4AGE	MLS	83	0.040" (1.0mm)	HG-T4GE-83-1T	
		83	0.051" (1.3mm)	HG-T4GE-83-1.3T	
TOYOTA 3SG	MLS	87	0.041" (1.2mm)	HG-T3SG-87-1.2T	
		87	0.055" (1.4mm)	HG-T3SG-87-1.4T	
TOYOTA 2JZ	MLS	87	0.051" (1.3mm)	HG-T2JZ-87-1.5T	
	COPPER	87	0.062" (1.6mm)	HG-T2JZ-87-1.6TC	
	MLS	87.7	0.059" (1.50mm)	HG-T2JZ-87.7-1.5T	
TOYOTA 1FZ	MLS	103	0.045" (1.15mm)	HG-T1FZ-103-1.15T	

AUDI / VW					
ENGINE	MLS / COPPER	GASKET BORE (MM)	THICKNESS (MM)	PART NUMBER	PICTURE
AUDI 18T 20v	MLS	83	0.055" (1.4mm)	HG-VW18T-83-1.4T	
AUDI 2.0 TFSI	MLS	84	0.033" (.85mm)	HG-VW20TFSI-84-085T	 NOT ACTUAL PICTURE
VW 16v KR-PL 1978+	MLS	83.8	0.055" (1.4mm)	HG-VW16V-83.8-1.4T	
VW VR6 2.8-2.9L 12v	MLS	82.5	0.0255" (0.65mm)	HG-VWVR6-82.5-0.65T	
		84.1	0.0255" (0.65mm)	HG-VWVR6-84.1-0.65T	



Rods



REDEFINING PERFORMANCE


- ARP2000 Bolts
- Forged 4340 Alloy
- H Beam







FORD								
ENGINE	MATERIAL	C-C (MM)	PE BORE (MM)	PE WIDTH (MM)	BE BORE (MM)	BE WIDTH (MM)	PART NUMBER	PICTURE
FORD DURATEC 2.0L	Forged 4340 Alloy	146.25mm	21 Full Float	18.90mm	50.03mm	21.80mm	CR-FDUR20-H146.25	 NOT ACTUAL PICTURE
FORD DURATEC 2.3L	Forged 4340 Alloy	154.80mm	21 Full Float	18.90mm	53.027mm	21.82mm	CR-FDUR23-H154.8	 NOT ACTUAL PICTURE
FORD ECO-BOOST 1.6L	Forged 4340 Alloy	134.02mm	21 Full Float	18.89mm	47.04mm	20.82mm	CR-FECO16-H134	 NOT ACTUAL PICTURE
FORD ECO-BOOST 2.0L	Forged 4340 Alloy	155.87mm	22.5 Full Float	21.82mm	55.03mm	21.82mm	CR-FECO20-H155.9	 NOT ACTUAL PICTURE
FORD ECO-BOOST	Forged 4340 Alloy	149.30mm	22.5 Full Float	21.82mm	55.03mm	21.82mm	CR-FECO23-H149.3	 NOT ACTUAL PICTURE


HONDA								
ENGINE	MATERIAL	C-C (MM)	PE BORE (MM)	PE WIDTH (MM)	BE BORE (MM)	BE WIDTH (MM)	PART NUMBER	PICTURE
HONDA 16A	Forged 4340 Alloy	134.4mm	21 Full Float	22.90mm	48.00mm	23.75mm	CR-HB16A-H134.4	 NOT ACTUAL PICTURE
HONDA 18C	Forged 4340 Alloy	138mm	21 Full Float	22.90mm	48.00mm	21.80mm	CR-HB18C-H138	
HONDA K20 B18A/B	Forged 4340 Alloy	137mm	21 Full Float	22.60mm	48.00mm	23.70mm	CR-HB20B-H137	
HONDA K20	Forged 4340 Alloy	139mm	22 Full Float	19.80mm	51.00mm	19.80mm	CR-HK20-H139	 NOT ACTUAL PICTURE
HONDA K24	Forged 4340 Alloy	152mm	22 Full Float	19.80mm	51.00mm	19.80mm	CR-HK24-H152	 NOT ACTUAL PICTURE



MAZDA								
ENGINE	MATERIAL	C-C (MM)	PE BORE (MM)	PE WIDTH (MM)	BE BORE (MM)	BE WIDTH (MM)	PART NUMBER	PICTURE
FORD DURATEC 2.0L	Forged 4340 Alloy	146.25mm	21 Full Float	18.90mm Straight	50.03mm	21.80mm	CR-FDUR20-H146.25	
FORD DURATEC 2.3L	Forged 4340 Alloy	154.80mm	21 Full Float	18.90mm Straight	53.027mm	21.82mm	CR-FDUR23-H154.8	
MAZDA MIATA 1.6 /1.8L	Forged 4340 Alloy	133mm	20 Full Float	21.85mm Straight	48.00mm	21.85mm	CR-MMX5-H133	
MAZDASPEED MZR 2.3L	Forged 4340 Alloy	150.7mm	22.5 Full Float	21.82mm	55.02mm	21.82mm	CR-MZR23T-H150.7	 NOT ACTUAL PICTURE

MINI COOPER								
ENGINE	MATERIAL	C-C (MM)	PE BORE (MM)	PE WIDTH (MM)	BE BORE (MM)	BE WIDTH (MM)	PART NUMBER	PICTURE
MINI COOPER R56	Forged 4340 Alloy	138.54mm	20 Full Float		48mm	20.88mm	CR-MINR56-H138.54	 NOT ACTUAL PICTURE

MITSUBISHI								
ENGINE	MATERIAL	C-C (MM)	PE BORE (MM)	PE WIDTH (MM)	BE BORE (MM)	BE WIDTH (MM)	PART NUMBER	PICTURE
MITSUBISHI 4G63	Forged 4340 Alloy	150mm	20 Full Float	26.36mm	48mm	26.36mm	CR-MI4G63-H150	

NISSAN								
ENGINE	MATERIAL	C-C (MM)	PE BORE (MM)	PE WIDTH (MM)	BE BORE (MM)	BE WIDTH (MM)	PART NUMBER	PICTURE
NISSAN KA24	Forged 4340 Alloy	165mm	21 Full Float	25.4mm Straight	53.00mm	24.70mm	CR-NKA24-H165	
NISSAN NSR20	Forged 4340 Alloy	136.25mm	22 Full Float	23.60mm	51mm	22.75mm	CR-NSR20-H136.5	
NISSAN RB26	Forged 4340 Alloy	121.50mm	21 Full Float	22.86mm Straight	51.00mm	21.80mm	CR-NRB26-H121.5	 NOT ACTUAL PICTURE

TOYOTA								
ENGINE	MATERIAL	C-C (MM)	PE BORE (MM)	PE WIDTH (MM)	BE BORE (MM)	BE WIDTH (MM)	PART NUMBER	PICTURE
TOYOTA FRS/BRZ	Forged 4340 Alloy	129.38mm	22 Full Float	21.40mm	53mm	21.4mm	CR-FA20-H129.3	 NOT ACTUAL PICTURE

VW / AUDI								
ENGINE	MATERIAL	C-C (MM)	PE BORE (MM)	PE WIDTH (MM)	BE BORE (MM)	BE WIDTH (MM)	PART NUMBER	PICTURE
VW	Forged 4340 Alloy	144mm	20 Full Float	24.90mm straight	50.61mm	24.90mm	CR-VW144-20	
VW/ AUDI TFSI	Forged 4340 Alloy	144mm	21 Full Float	24.90mm straight	50.61mm	24.90mm	CR-VW144-21	

SUPERTECH



POWERSPORTS





HONDA CRF250R 2004-2007 / CRF250X 2004-2013			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Titanium
31.00 mm	4.95 mm	83.37 mm	HIVT-CRF250
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Titanium
26.00mm	4.95 mm	82.25 mm	HEVN-CRF250
CAM FOLLOWERS CF-22.5/3.0 / CF-22.5/3.0-DLC (DLC coated) / CF-23/3.0-DLC (Oversized) / CF-24.5/3.0 (Oversized)			

HONDA CRF250R 2008-2009			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Titanium
31.00 mm	4.98 mm	83.31 mm	HIVT-CRF250-08
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Titanium
26.00mm	4.45 mm	82.25 mm	HEVN-CRF250-08
26.00mm	4.45 mm	82.25 mm	HEVN-CRF250-08F (Flat)
CAM FOLLOWERS CF-22.5/3.0 / CF-22.5/3.0-DLC (DLC coated) / CF-24.5/3.0 (OVERSIZED)			

HONDA CRF250R 2010-2013			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Titanium
30.50 mm	4.98 mm	89.00mm	HIVT-CRF250-10
31.50 mm (+1mm)	4.98 mm	89.00 mm	HIVT-CRF250-10-50-1
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Titanium
25.00mm	4.47 mm	84.23 mm	HEVN-CRF250-10
25.00mm	4.97 mm (+0.5mm)	84.23 mm	HEVT-CRF250F-10-50
26.00mm (+1mm)	4.97 mm (+0.5mm)	84.23 mm	HEVT-CRF250F-10-50-1
CAM FOLLOWERS CF-22.5/3.0 / CF-22.5/3.0-DLC (DLC coated) / CF-23/3.0-DLC (Oversized) / CF-24.5/3.0 (Oversized)			

HONDA CRF450 2002-2008			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Titanium
36.00 mm	5.47 mm	87.7 mm	HIVT-CRF450
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Titanium
31.00 mm	4.96 mm	84.28 mm	HEVN-CRF-450
31.00 mm	4.96 mm	84.28 mm	HEVT-CRF-450
CAM FOLLOWERS CF-26/3.0 / CF-26/3.0-DLC (DLC coated) / CF-28-3.0 (OVERSIZED)			

HONDA CRF450 2009-2012			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Titanium
36.00 mm	4.97 mm	78.7 mm	HIVT-CRF450-09
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Titanium
30.00 mm	4.96 mm	80.51 mm	HEVN-CRF-450-09
CAM FOLLOWERS CF-26/3.0 / CF-26/3.0-DLC (DLC coated) / CF-28-3.0 (OVERSIZED)			

HONDA CRF450 2013			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Titanium
36.00 mm	4.97 mm	78.7 mm	HIVT-CF450-13
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Titanium
30.00 mm	4.96 mm	80.51 mm	HEVN-CRF450-13
CAM FOLLOWERS CF-26/3.0 / CF-26/3.0-DLC (DLC coated) / CF-28-3.0 (OVERSIZED)			



KAWASAKI 250F 2003-2013			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Titanium
31.00 mm	4.48 mm	79.24 mm	KWIVT-KX250F
31.00 mm	4.48 mm	79.24 mm	KWIVT-250F-50
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Titanium
25.00mm	4.46 mm	79.00 mm	KWEVT-KX250F
25.00mm	4.46 mm	79.00 mm	KWEVT-KX250F-50
CAM FOLLOWERS CF-24.5/3.0 CF-24.5/3.0DLC (DLC-Coating) / CF-26.5/2.7			

KAWASAKI 450 2006-2008 KX-450F			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Titanium
36.00 mm	5.47 mm	83.31 mm	KWIVT-KX450F-08
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Titanium
31.00mm	5.46 mm	82.00 mm	KWEVT-KX450F-08
CAM FOLLOWERS CF-28/3.0 CF-28/3.0DLC (DLC-Coating)			

KAWASAKI 450 2009-2013 KX-450F			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Titanium
36.00 mm	5.47 mm	78.23 mm	KWIVT-KX450F-13
36.00 mm	5.47 mm	78.23 mm	KWIVT-KX450F-13-50
36.00 mm	5.4 mm	78.23 mm	KWIVT-KX450F-13-50F-1
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Titanium
31.00mm	5.46 mm	76.96 mm	KWEVT-KX450F-13
31.00mm	5.46 mm	76.96 mm	KWEVT-KX450F-13-50F
31.00mm (-0.5mm)	5.46 mm	76.96 mm	KWEVT-KX450F-13-50-05
CAM FOLLOWERS			CF-28/3.0 CF-28/3.0DLC (DLC-Coating)



KTM 250SX-F 2005-2007			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Titanium
30.90mm	4.95 mm	99.40 mm	KTIVT-250SX-08
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitrided/Titanium
26.60mm	4.96 mm	92.90 mm	KTEVN-250SX-08

KTM 250SX-F - 2008 -2011			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Titanium
31.00mm	4.97 mm	99.31 mm	KTIVT-250SX-11
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Titanium
31.00mm	4.96 mm	93.09 mm	KTVEN-250SX-11

KTM 250SX-F - 2012			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Titanium
30.95mm	4.95 mm	99.31 mm	KTIVT-250SX-12
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Titanium
26.06mm	4.96 mm	93.01 mm	KTVEN-250SX-12

POWERSPORTS



TEAM: Team 100
RIDER: Josh Hansen
BIKE: KX250F

KTM 450 2002-2007			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Titanium
35.00	5.97 mm	96.90 mm	KTIVN-450
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Titanium
30.00mm	5.97 mm	96.9 mm	KTEVN-450



SUZUKI RM-Z250 2004-2006			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Titanium
31.00mm	4.46 mm	79.24 mm	SZIVT-250-06
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Titanium
25.00mm	4.46mm	79.24mm	SZEVN-250-06

SUZUKI RM-Z250 2007-2013			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Titanium
31.00mm	4.48mm	80.64mm	SZIVT-250-13
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Titanium
25.00mm	4.47mm	80.90mm	SZEVN-250-13

SUZUKI RM-Z450 2005-2007			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Titanium
36.00mm	4.97mm	82.42mm	SZIVT-450-07
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitrided/Titanium
29.00mm	4.96mm	81.28mm	SZEVN-450-07

SUZUKI RM -Z450 2008-2012			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Titanium
36.00mm	5.47mm	81.95mm	SZIVT-450-12
36.00mm	5.47mm	81.95mm	SZIVN-LT450
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Titanium
29.00mm	5.46mm	81.00mm	SZEVN-LT450



YAMAHA 250F 2001- 2013			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Titanium
23.00mm	3.98mm	78.60mm	YIVT-250-1
23.00mm	3.98mm	80.15mm	YIVT-250-2
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Titanium
24.50mm	4.46mm	77.97	YEVT-250

YAMAHA 250F 2015			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Titanium
31.00mm	4.98mm	83.60mm	YIVT-YZ250/15-50
32mm (+1mm)	4.98mm	83.60mm	YIVT-YZ250/15-50-1
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Titanium
25mm	4.46mm	82.4mm	YIVT-YZ250/15-50
25.50mm (+0.5mm)	4.46mm	82.4mm	YIVT-YZ250/15-50-5

YAMAHA 450F 2003 -2010			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Titanium
27.00mm	4.48 mm	76.30mm	YIVT-YZ450-1
27.00mm	4.48 mm	77.2mm	YIVT-YZ450-2
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Titanium
28.00mm	4.95mm	75.10mm	YEVN-YZ450

YAMAHA 450F - 2010 - 2013			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Inconel
36.00mm	5.48mm	83.80mm	YIVT-YZ450F-10
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/Inconel
30.00mm	5.47mm	86.00mm	YEVN-YZ450F-10

YAMAHA YZF-R6			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Titanium
27.00mm	4.47mm	94.50mm	YIVT-YZF-R6
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitrided/ Titanium
23.00mm	4.46mm	95.00mm	YEVY-YZF-R6

YAMAHA FZR 1800 V6 WATERCRAFT			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Titanium
34.00mm (std)	5.48mm	90.80mm	YIVN-FZR34
35.00mm (+1)	5.48mm	90.80mm	YIVN-FZR35
			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Titanium
29.00 (std)	5.47mm	89.95mm	YEVY-FZR29
30.00 (+1)	5.47mm	89.95mm	YEVY-FZR30

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift mm	Coil Bind mm	Rate lbs./mm	Titanium Retainer Part Number
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)				
SPR-EC3025D-FZR	26.60mm	19.60mm	19.40mm	14.20mm	75@34.7	198 @ 10	15.70	19mm	12.30	RET-YA3020 + SEAT-YA3020
SPR-EC3027S-FZR	26.60mm	19.60mm	SINGLE		58 @ 34.7	143 @ 10	14.00	20.7mm	8.50	RET-YA3020 + SEAT-YA3020

CAM Follower CF-30/3.3

SEEDOO 4TEC RXP RXT			INTAKE VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
38.00mm	5.96mm	90.25	SEAIVC3860S

VALVES ARE SINGLE GROOVE AND REQUIRE SINGLE GROOVE KEEPERS KPR-6S/7

			EXHAUST VALVE PART NUMBER
Head Diam	Stem Diam	Length	Black Nitride/ Inconel
31.00mm	5.95mm	90.70mm	SEAEVI-3160S

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift mm	Coil Bind mm	Rate lbs./mm	Titanium Retainer Part Number
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)				
SPRK-EC3025D-SE	26.60mm	19.60mm	19.60mm	14.20mm	85@34.10	198 @ 10	15.70	19mm	12.30	RET-EC3020/SE + OEM SEAT
SPRK-EC3027-SE	26.60mm	19.60mm	19.60mm	14.20mm	58@34.10	143 @ 10	14.00	20.7mm	8.5	RET-EC3020/SE + OEM SEAT
SPRK-EC3027D-SE	26.60mm	19.60mm	19.60mm	14.20mm	98@34.70	212 @ 10	14.00	20.7mm	11.50	RET-EC3020/SE + OEM SEAT

POLARIS XP900

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPR-TS1012-POL	27.50mm	20.00mm	20.00mm	15.20mm	68@34.30	171 @ 10	15.00	20mm	10.40	RET-TS55-POL + SEAT-TSLS-1FL (no OEM seat)

POLARIS RANGER RZR-800--XP-700 --SPORTMAN-800TTV

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPR-H100DR-POL	29.70mm	21.90mm	21.90mm	16.90mm	67@35.50	190 @ 10	17.00	18mm	12.35	RET-H100-POL + SEAT-H100-POL + OEM seat

POLARIS XP900

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPR-TS1012	27.5 mm	20.00mm	20.00	15.20	68 @ 34.3	171 @ 10	15.00	20.00mm	10.40	RET-TS55-POL + SEAT-TSL5-1FL (no OEM seat)

CAM FOLLOWER CF-31.15/2.50

POLARIS RANGER RZR-800--XP-700 --SPORTMAN-800TTV

SPRING KITS

VALVE SPRINGS Part Number	Outer Spring		Inner Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number
SPR-H100DR-POL	29.7 mm	21.9mm	21.90	16.90	67 @ 35.50	190 @ 10	17.00	18.00mm	12.35	RET-H100-POL + SEAT-H100-POL + OEM seat

CAM FOLLOWER





CIRCLE

- * 100% ringspun cotton
- * Preshrunk to minimize shrinkage

T-CRLO2 - M
T-CRLO3 - L
T-CRLO4 - XL
T-CRLO5 - 2XL

T-CRLO5 - 2XL



CREST

- * 100% ringspun cotton
- * Preshrunk to minimize shrinkage

T-CRST02 - M
T-CRST03 - L
T-CRST04 - XL
T-CRST05 - 2XL



PISTON

- * 100% ringspun cotton
- * Preshrunk to minimize shrinkage

T-PST02 - M
T-PST03 - L
T-PST04 - XL
T-PST05 - 2XL



FLEX-FIT HAT

- * Flexfit Pro-Baseball Fit
- * 6 Panel high profile 3 3/4"
- * 63% Polyester - 34% cotton 3% spandex

FLX01 - S/M (6 3/4" - 7 1/4")
FLX02 - L/XL (7 1/8" - 7 5/8")