



**SUPERTECH**

-  VALVES
-  PISTONS
-  RODS
-  HEAD GASKETS
-  COMPONENTS

**2020**



# "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 superior valves and valve train components 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 VALVES

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.



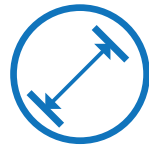
## ONE PIECE VALVE

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.



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

## STEEL

Our intake valves are made exclusively from an enhanced versions 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

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.





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

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

## 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 VALVES

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 VALVES

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	205@ 10	14.80	20.70	11.50	RET-BMS14-T1 + SEAT-H1002-S14
SPR-H1022D/S14	29.00	21.80	21.00	15.50	110 @ 37.6	220 @ 10	15.60	22.00	11.20	RET-H70/T1 + SEAT-H1002-S14

### ENGINE COMPONENTS

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



## BMW M20, B25

2.5L 12V / E30 / E34 / 325 / 525 '77-'92

INTAKE VALVES			
Head Diam	Stem Diam	Length	Black Nitride/Inconel
42mm (std)	6.97 mm	102.50 mm	BMIVN - 1084
43mm (+1)			BMIVN - 1085
EXHAUST VALVES			
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			
<b>VALVE LOCK</b>	KPR-VW7-T (Triple Groove)		

## BMW S42, M42, M50, S50, S52, M52, M54

1.8 / 2.5 LTS [16V] / 2.8-3.0 LTS [24V]

INTAKE VALVES										
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 VALVES										
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	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/BM	30.20	22.20	22.20	16.80	67 @ 35.70	192 @ 10	13.50	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	12.70	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	12.70	20.70	11.50	RET-AU5VE/T1 + SEAT-BM60 (x24)
ENGINE COMPONENTS										
<b>CAM FOLLOWERS</b>	CF-33/14 CF-35/14.7LC (M42)			<b>VALVE</b>						
<b>SEALS</b>	NTAKE: VS-VBM6-1 / EXHAUST: VS-VBM6-E									
<b>VALVE GUIDES</b>	FOR INTAKE AND EXHAUST GDE-BMW-M50-EI									
<b>VALVE LOCKS</b>	KPR-VW6-T (triple groove) / KPR-6S/7 (single groove)									

## BMW S42 2.0L

### INTAKE VALVES

Head Diam	Stem Diam	Length	Black Nitride/Titanium
35.00mm (std)	4.98 mm	110.6 mm	BMIVT-1060SM

### EXHAUST VALVES

Head Diam	Stem Diam	Length	Black Nitride/Titanium
30.60mm (std)	4.97 mm	110.3 mm	BMEVT-1060SM

## BMW S50 B30 EURO VERSION E36 M3 3.0LTS

### INTAKE VALVES

Head Diam	Stem Diam	Length	Black Nitride/Inconel
34.00mm (std)	6.97 mm	119.75 mm	BMIVN-1036

### EXHAUST VALVES

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)

### 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 LOCKS** - KPR-VW7-T (Triple groove)

**VALVE SEALS** - INTAKE: VS-VW7-I / EXHAUST: VS-VW7-E

**CAM FOLLOWERS** - CF-37.5/ 6.5

## BMW S50 B32 EURO VERSION E36 M3 3.2LTS

### INTAKE VALVES

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 VALVES

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-H1000D/ BM-B32E	29.65	21.85	20.50	15.50	73 @ 36.3	189 @ 10	15.50	20.70	11.50	RET-K20A2/T2-BM+ SEAT-BM80(x24)
SPR-H1005D/ BM-B32E	29.65	21.85	20.50	15.50	85 @ 36.3	202 @ 10	16.20	20.70	11.20	RET-K20A2/T2-BM + SEAT-BM80(x24)

### ENGINE COMPONENTS

**VALVE SEALS** - INTAKE: VS-VBM6-I / EXHAUST: VS-VBM6-E

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

## BMW S54

24V 3.2LTS / M3 / 2001 +

INTAKE VALVES										
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 VALVES										
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					
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										
<b>VALVE SEALS</b>	INTAKE: VS-BM6-I					EXHAUST: VS-BM6-E				
<b>VALVE LOCK</b>	KPR-VW6-T (triple groove) / KPR-6S/7 (single groove)									
<b>VALVE GUIDE</b>	GDE-BMW-S54-EI (intake+exhaust)									

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

## BMW S54

24V 3.2LTS / M3 / 2001 + [To be used with lash caps - no OEM shims]

INTAKE VALVES										
Head Diam	Stem Diam		Length		Black Nitride/Inconel					
35.00mm (std)	5.97 mm		117.50 mm		BMIVN - 1040S-LC					
EXHAUST VALVES										
Head Diam	Stem Diam		Length		Black Nitride/Inconel					
35.00mm (std)	5.97 mm		119.10 mm		BMEVI - 1040S-LC					
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										
<b>VALVE SEALS</b>	LC-60-Thickness									
<b>VALVE LOCK</b>	KPR-6S/7 (single groove)									



## BMW N54 TURBO 3.0L

INTAKE VALVES										
Head Diam	Stem Diam				Length		Black Nitride/ <b>Inconel</b>			
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 VALVES										
Head Diam	Stem Diam				Length		Black Nitride / <b>Sodium</b>			
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)
SPRK-FE20N54-BE-2 (Conical)	24.40	17.60	21	14.2	88 @ 36.5	160 @ 10	12	23.2	7.25	RET-BMN54-TI (5mm) / RET-BMN54-TE (6mm)
ENGINE COMPONENTS										
<b>VALVE SEALS</b>	INTAKE: VSI-BM50					EXHAUST: VSI-BM60-E				
<b>VALVE LOCK</b>	INTAKE VALVE: KPR-5.0/7S (single groove)					EXHAUST VALVE: KPR-6S/7 (single groove)				

## BMW N55 / S55 TURBO 3.0L 24V 335I E92 2007 +

INTAKE VALVES										
Head Diam	Stem Diam				Length		Black Nitride/ <b>Inconel</b>			
32.00mm (std)	4.97 mm				104.9 mm		BMIVN - 1055S (ONE GROOVE)			
EXHAUST VALVES										
Head Diam	Stem Diam				Length		Black Nitride/ <b>Inconel</b>			
28.00mm (std)	5.96 mm				112.9 mm		BMEVI - 1055 (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)
SPRK-FE20N54-BE-2 (Conical)	24.40	17.60	21	14.2	88 @ 36.5	160 @ 10	12	23.2	7.25	RET-BMN54-TI (5mm) / RET-BMN54-TE (6mm)
ENGINE COMPONENTS										
<b>VALVE SEALS</b>	INTAKE: VSI-BM50					EXHAUST: VSI-BM60-E				
<b>VALVE LOCK</b>	INTAKE VALVE: KPR-5.0/7S (single groove)					EXHAUST VALVE: KPR-6S/7 (single groove)				



## BMW S65 / S85

V8 4.0L 32V / S85 V10 5.0L 40V - E90 / E92 / E93 / E60 / E61 / E63 / E64 [2005 - 2011]

### INTAKE VALVES

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

### EXHAUST VALVES

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

<b>VALVE SEALS</b>	OEM
<b>VALVE LOCK</b>	OEM Single groove locks

## BMW B38 / B48 / B58

TURBO (3/4/6 CYLINDER) 2015 +

### INTAKE VALVES

Head Diam	Stem Diam	Length	Black Nitride/Inconel
30.10 mm (std)	4.96 mm	99.50 mm (single groove)	MCIVN - 1400S

### EXHAUST VALVES

Head Diam	Stem Diam	Length	Black Nitride/Inconel
28.50 mm (std)	5.95 mm	100.1mm (single groove)	MCEVI-1400S-HS

**SINGLE GROOVE VALVE LOCKS** Intake KPR-5.0/7S (can use Factory retainer and spring) / Exhaust KPR-6S/7 (can use factory retainer and spring)

### 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-MCB48	26.5	18.7	21.6	13.8	77 @ 40.10	180 @ 10	12.2	27	10.3	SPR-FE20BE + RET-BMB48/TE + RET-BMB48/TI

### ENGINE COMPONENTS

<b>VALVE GUIDES</b>	
<b>VALVE SEALS</b>	INTAKE: VSI-BM50-I EXHAUST: VSI-BM60-E



**FERRARI 250 / 275**  
V12 24V [1954-1968]

<b>INTAKE VALVES</b>			
Head Diam	Stem Diam	Length	Black Nitride/ <b>Inconel</b>
38.00mm	7.98 mm	97 mm	FEIVN-380897
<b>EXHAUST VALVES</b>			
Head Diam	Stem Diam	Length	Black Nitride/ <b>Inconel</b>
32.5mm	7.98 mm	95.20 mm	FEEVN-325895
<b>ENGINE COMPONENTS</b>			
<b>VALVE GUIDES</b> INTAKE AND EXHAUST: GDE-FE275			

**FERRARI 330**  
V12 24V [1963-1968]

<b>INTAKE VALVES</b>			
Head Diam	Stem Diam	Length	Black Nitride/ <b>Inconel</b>
42.00mm	7.98 mm	98.10 mm	FEIVC-330-209
<b>EXHAUST VALVES</b>			
Head Diam	Stem Diam	Length	Black Nitride/ <b>Inconel</b>
37.40mm	7.97 mm	98.10 mm	FEEVC-330-209

**FERRARI 335 / 360**  
5-VALVE V8 [1994-2005]

<b>INTAKE VALVES</b>			
Head Diam	Stem Diam	Length	Black Nitride/ <b>Inconel</b>
26.50mm	5.96 mm	98.3 mm	FEIVN-2500
<b>EXHAUST VALVES</b>			<b>EXHAUST VALVE PART NUMBER</b>
Head Diam	Stem Diam	Length	Black Nitride/ <b>Inconel</b>
28.5 mm	5.96 mm	100.40 mm	FEEVN-2500
<b>ENGINE COMPONENTS</b>			
<b>VALVE GUIDES</b> - INTAKE AND EXHAUST: GDE-FIA2500			



## FERRARI / MASERATI F136

V8 32V / V12 48V FERRARI 430-458 / MASERATI A1GP (2000-2011)

INTAKE VALVES										
Head Diam		Stem Diam		Length		Black Nitride/Inconel				
37.80mm		5.970 mm		97.85 mm		FEIVC-F136				
EXHAUST VALVES										
Head Diam		Stem Diam		Length		Black Nitride/Inconel				
31.00mm (std)		5.96 mm		97.70 mm		FEEVC-F136				
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 - F136	27.5	20.00	20.00	15.20	72 @ 34.70	193 @ 10	13.50	20.70	12.10	RET-NRB60 / TS-2 (OEM seat)
ENGINE COMPONENTS										
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 VALVES										
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				FIVN - 1037				
34.00 mm (+2.0)		6.035 mm				FIVN - 1038				
EXHAUST VALVES										
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				FEVN - 1037				
30.00 mm (+2.0)		6.012 mm				FEVI - 1038				



## FORD DURATEC / MAZDA

MAZDA 2.0 - 2.3 - 2.5LTS FOCUS / MAZDA 3

### INTAKE VALVES

Head Diam	Stem Diam	Length	Black Nitride/ <b>Inconel</b>
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 VALVES

Head Diam	Stem Diam	Length	Black Nitride / <b>Inconel</b> / <b>Sodium</b>
30.00mm (std) Flat	5.48 mm	104.70mm (std)	MAEVN-2301D / FEVI-2501F-HS
30.00mm (std) Flat	5.48 mm		MAEVN - 2301F
30.00mm (std) Flat	5.48 mm		<b>MAEVI - 2301F</b>
31.00 mm (+1.0) Flat	5.48 mm		MAEVN - 2304F
31.00 mm (+1.0) Dish	5.48 mm		<b>MAEVI-2304D</b>
31.00 mm (+1.0) Dish	5.48 mm		<b>MAEVI - 2304D</b>
32.00 mm (+2.0) Dish	5.48 mm		<b>MAEVI - 2306D</b>
31.00 mm (+1.0) Dish	5.95 mm	105.9mm (+1.2mm)	MAEVI-2304-6MM-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
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-FE20BE (Conical)	24.30	17.50	21.20	14.40	78 @ 37.90	150@ 10	12.00	23.00	7.25	Use with OEM RETAINER + OEM SEAT
SPR-TS1015-BE-DUR1 (Beehive)	27.70	19.70	23.20	15.20	60 @ 35.5	164@ 10	13.00	21.80	10.40	RET-TS5.5/T1F-BE + Factory Seat + SEAT-DUR1
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	27.70	19.70	23.20	15.20	82 @ 34.5	209@ 10	11.75	21.80	12.70	RET-TS55/T1EX-BE +

### ENGINE COMPONENTS

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



## FORD ZETEC

2.0 LTS DOHC / FOCUS

INTAKE VALVES											
Head Diam		Stem Diam		Length		Black Nitride/ <b>Inconel</b>					
30.10 mm (std)		4.96 mm		98.8 mm		FIVN-2401D					
EXHAUST VALVES											
Head Diam		Stem Diam		Length		Black Nitride/ <b>Sodium</b>					
24.9mm (std)		4.95 mm		99.65 mm		FEVI-2401F-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	
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											
<b>CAM FOLLOWERS</b>		CF-28/2.9+ (shims) requires to cut the valve length by 1.65mm									
<b>VALVE SEALS</b>		USE OEM									
<b>KEEPERS</b>		KPR-5.0/7S									

## FORD ECOBOOST

1.5L - 1.6L DI FUSION / FIESTA

INTAKE VALVES											
Head Diam		Stem Diam		Length		Black Nitride/ <b>Inconel</b>					
30.10 mm (std)		4.96 mm		98.8 mm		FIVN-2401D					
EXHAUST VALVES											
Head Diam		Stem Diam		Length		Black Nitride/ <b>Sodium</b>					
24.9mm (std)		4.95 mm		99.65 mm		FEVI-2401F-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	
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											
<b>CAM FOLLOWERS</b>		CF-28/2.9+ (shims) requires to cut the valve length by 1.65mm									
<b>VALVE SEALS</b>		USE OEM									
<b>KEEPERS</b>		KPR-5.0/7S									



## FORD ECOBOOST

2.0 DI 2015 FOCUS / FUSION L4-2.0L TURBO

INTAKE VALVES										
Head Diam	Stem Diam		Length		Black Nitride/ <b>Inconel</b>					
32.50mm (std)	5.47 mm		103.3 mm		FIVN - 2501D					
EXHAUST VALVES										
Head Diam	Stem Diam		Length		Black Nitride/ <b>Sodium</b>					
28.00mm (std)	5.45 mm		104.6 mm		FEVI-2500F-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
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-FE20BE - 2 (Conical)	24.00	17.20	21.00	14.20	83 @ 37.20	155 @ 10	12.00	23.00	7.25	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-DUR1 + 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-DUR1
ENGINE COMPONENTS										
<b>CAM FOLLOWERS</b>	CF-31/2.5+ (shims) requires to cut the valve length by approximately 1.65mm									
<b>VALVE SEALS</b>	Intake: VSI-FECO-I				Exhaust: VSI-FECO-E					
<b>KEEPERS</b>	OEM or KPR-5.5/7A-ST									

## FORD ECOBOOST

2.3L DI MUSTANG / FOCUS L4-2.3L TURBO

### INTAKE VALVES

Head Diam	Stem Diam	Length	Black Nitride/ <b>Inconel</b>
32.5mm (std)	5.47 mm	103.3 mm	FIVN -2501D
33.5mm (+1)	5.47 mm	103.3 mm	FIVN -2502D

### EXHAUST VALVES

Head Diam	Stem Diam	Length	Black Nitride/ <b>Sodium</b>
30.00mm (std)	5.45 mm	104.70 mm	FEVI-2501F-HS
31.00mm +1)	5.45 mm	104.70 mm	FEVI-2502F-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-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-FE20BE-2 (Conical)	24.00	17.20	21.00	14.20	83@ 37.20	155 @ 10	12.00	23.00	7.25	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 @3 4.30	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 aprox 1.65mm

**VALVE SEALS** INTAKE: VSI-FECO-I / EXHAUST: VSI-FECO-E

**KEEPERS** OEM or KPR-5.5/7A-ST

## FORD ECOBOOST

3.5L 24V - 6CYL TWIN TURBO F150 / TAURUS SHO / LINCOLN MKS

### INTAKE VALVES

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

### EXHAUST VALVES

Head Diam	Stem Diam	Length	Black Nitride/ <b>Sodium</b>
31.00mm (std)	5.46 mm	95.30 mm	FEVI-3501F-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
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
SPR-FE20BE-2 (Conical)	24.00	17.20	21.00	14.20	83 @ 37.2	155 @ 10	12.00	23.00	7.25	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

<b>INTAKE VALVES</b>										
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										
<b>EXHAUST VALVES</b>										
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										
<b>SPRING KITS</b>										
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)
<b>ENGINE COMPONENTS</b>										
<b>VALVE SEALS</b>	INTAKE: GDE-EC60-SM / Use VALVE SEAL: VS-T6SM				EXHAUST: GDE-EC60-SM / Use VALVE SEAL: VS-T6SM					
<b>TITANIUM VALVES</b>	PLEASE CALL / ** CAN USE RET-TS5.5/T1 THAT INSTALLS @33mm									
<b>VALVE LOCKS</b>	KPR-6S/7 (single groove valves)									

**GM VORTEC**

4 / 5 / 6 CYL 2002-2006

<b>INTAKE VALVES</b>							
Head Diam		Stem Diam		Length		Black Nitride/Inconel	
39mm (+2mm)		5.97 mm		105.30mm (single groove)		GIVN - 3920S	
<b>EXHAUST VALVES</b>							
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 VALVES

Head Diam	Stem Diam	Length	Black Nitrided/ <i>Inconel</i>
36.00mm (std)	5.48 mm	109.85 mm	HIVN - 1030D
36.00mm (std)			HIVN - 1030F
36.50mm (+0.5)			HIVN - 1033D
36.50mm (+0.5)			HIVN - 1033F
37.00mm (+1.0) Dish			HIVN - 1035D

### EXHAUST VALVES

31.00mm (std)	5.45 mm	108.80 mm	HEVN - 1030D
31.00mm (std)			HEVN - 1030F
31.00mm (std)			<b>HEVI - 1030D</b>
31.50mm (+0.5)			HEVN - 1033F
31.50 mm (+0.5) Dish			<b>HEVI - 1033D</b>
32.00 mm (+1.0) Dish			<b>HEVI - 1035D</b>

### 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-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

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

## HONDA K20 / K24

2.0LTS DOHC VTEC / RSX-S / TSX / CIVIC-SI

### INTAKE VALVES

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 VALVES

Head Diam	Stem Diam	Length	Black Nitride/Inconel
30.00mm (std) Dish	5.45 mm	108.65 mm	HEVN-1020D
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		108.80 mm	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)			HEVI-1033D

### 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	16.00	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	15.30	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

### ENGINE COMPONENTS

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



## HONDA K20 / K24 TITANIUM VALVES

INTAKE VALVES										
Head Diam	Stem Diam				Length			Titanium		
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 VALVES										
Head Diam	Stem Diam				Length			Titanium		
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										
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	29.65	21.85	20.50	15.50	60@ 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-AU5VE/T1 + SEAT-H1021TF

## HONDA K24 Z7 2.0LTS DOHC VTEC CIVIC / CR-V 2012

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

## HONDA CIVIC TYPE R K20C / K20C1 2015

### INTAKE VALVES

Head Diam	Stem Diam	Length	Black Nitride/Inconel
35mm	5.48 mm	117.25mm	HIVN-1060D

### EXHAUST VALVES

Head Diam	Stem Diam	Length	
29mm	5.47 mm	114.7mm	HEVI-1060D-HS (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-K20C-1	23.70	16.30	Single		77 @ 40.6	176 @ 10	13.80	27.30	9.90	SPR-H1003S + RET-1003-C + SEAT-1003-CI + SEAT-1003-CE

### ENGINE COMPONENTS

<b>VALVE SEALS</b>	INTAKE: VS-H5.5I	ECHAUST: VS-H5.5E
<b>KEEPERS</b>	KPR-5.5/7A-ST	





## HONDA B16A / B17A / B18C

1.6 / 1.7 / 1.8 DOHC VTEC / GSR / ACURA INTEGRA / DEL SOL / CIVIC SI 1992-2000

### INTAKE VALVES

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 VALVES

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	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-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 (Street Performance)	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
SPR-H1002D-BE (Beehive)	29.01	21.30	23.00	15.65	72@ 33.5	170 @ 10	13.50	19.00	9.70	RET-H55BE-T1-B Seat-TS15/LS-IN

### ENGINE COMPONENTS

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

# PERFORMANCE VALVES, SPRINGS, COMPONENTS



## HONDA D16A6 / D15B

1.6 LTS SOHC NON VTEC / CIVIC / CRX 1988 - 1992

INTAKE VALVES										
Head Diam	Stem Diam		Length		Black Nitride/Inconel					
29mm (std)	5.48 mm		115.00mm		HIVN-1003					
EXHAUST VALVES										
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	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-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										
<b>VALVE GUIDES</b>	INTAKE: GDE-HD55-I				EXHAUST: GDE-HD55-E					
<b>VALVE LOCK</b>	KPR-5.5/7A-ST									
<b>VALVE SEALS</b>	INTAKE: VS-H5.5I				EXHAUST: VS-H5.5E					
<b>BLOCK GUARDS</b>	BG-D15/D16									

## HONDA D16Z6 / Y6 / Y7 / Y8 / D15B / D17A

1.6 / 1.7 LTS SOHC VTEC / CIVIC / CRX / DEL SOL 1992 - 2005

INTAKE VALVES										
Head Diam	Stem Diam		Length		Black Nitride/Inconel					
30.00mm (std)	5.48 mm		118.50 mm		HIVN-1012					
30.5mm (+0.5)					HIVN-1002					
31.0mm (+1)					HIVN-1102					
EXHAUST VALVES										
Head Diam	Stem Diam		Length		Black Nitride/Inconel					
26.00mm (std)	5.45 mm		116.00 mm		HEVN-1012					
26.50mm (+0.5)					HEVN-1002					
27.00mm (+1)					HEVI-1102					
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-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										
<b>STEEL RETAINER</b>	RET-H1002/ST									
<b>VALVE GUIDES</b>	INTAKE: GDE-HD55-I				EXHAUST: GDE-HD55-E					
<b>VALVE LOCK</b>	KPR-5.5/7A-ST									
<b>VALVE SEALS</b>	INTAKE: VS-H5.5I				EXHAUST: VS-H5.5E					
<b>BLOCK GUARDS</b>	BG-D15/D16 / BG-D17A									

## HONDA B18A / B18B / B20

1.8 / 2.0 LTS DOHC NON-VTEC / LS / ACURA INTEGRA LS / CRV 1992 - 2003

### INTAKE VALVES

Head Diam	Stem Diam	Length	Black Nitride/ <b>Inconel</b>
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 VALVES

Head Diam	Stem Diam	Length	Black Nitride/ <b>Inconel</b>
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	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/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

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



## HONDA ZC // D16A1 / D16A9 DOHC INTEGRA 1988-1989

INTAKE VALVES										
Head Diam	Stem Diam		Length		Black Nitride/Inconel					
30.5mm (+0.5)	6.57 mm		105.40 mm		HIVN-1005					
EXHAUST VALVES										
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	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-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										
<b>VALVE SEALS</b>	INTAKE: VS-H6.6-I				EXHAUST: VS-H6.6-E					
<b>VALVE LOCK</b>	KPR-6.6/LS									
<b>BLOCK GUARDS</b>	BG-16ZC / BG-D16A1									

## HONDA F22A

2.2 LTS SOHC NON-VTEC ACCORD / PRELUDE 1992-1996

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					HIVN-F22A-BM					
Head Diam	Stem Diam		Length		Black Nitride/Inconel					
30.00mm (+1.0)	5.54 mm		123.50 mm		HEVN-F22A-BM					
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-F22AB	23.70	16.20	SINGLE INTAKE		74 @ 41	171 @ 10	12.70	28.30	9.90	RET-H1003/T1 + Seat-H1003-R18-3.5
SPRK-F22AB	23.70	16.20	SINGLE EXHAUST		74 @ 41	171 @ 10	12.70	28.30	9.90	RET-H1003/T1 + Seat-H1003-R18

## HONDA H22A

2.2LTS VTEC / PRELUDE

1993-2000

### INTAKE VALVES

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 VALVES

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	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	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

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

## HONDA H23A

DOHC NON-VTEC / PRELUDE

1992-1996

### INTAKE VALVES

Head Diam	Stem Diam	Length	Black Nitride/Inconel
35.00mm (+1.0)	6.58 mm	103.50 mm	HIVN-1042D

### EXHAUST VALVES

Head Diam	Stem Diam	Length	Black Nitride/Inconel
30.00mm (+1.0)	6.54 mm	102.70 mm	HEVN-1042D

### ENGINE COMPONENTS

<b>VALVE SPRINGS</b>	PLEASE CALL	
<b>VALVE GUIDES</b>	INTAKE: GDE-H66-I	EXHAUST: GDE-H66-E



## HONDA / ACURA NSX 3.2LTS 24V / ACURA NSX

INTAKE VALVES										
Head Diam	Stem Diam		Length		Black Nitride/Inconel					
36.00 mm (std)	5.48 mm		112.15 mm		HIVN-NSX/C1					
EXHAUST VALVES										
Head Diam	Stem Diam		Length		Black Nitride/Inconel					
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	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/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										
<b>VALVE SEALS</b>	INTAKE: VS-H5.5-I				EXHAUST: VS-H5.5-E					
<b>VALVE GUIDES</b>	INTAKE: GDE-HNSX-I				EXHAUST: GDE-HNSX-E					
<b>VALVE LOCK</b>	KPR-5.5/7A-ST									

## HONDA / ACURA J30 - J32

V6 SOHC VTEC

INTAKE VALVES										
Head Diam	Stem Diam		Length		Black Nitride/Inconel					
34.00mm	5.48 mm		114.7 mm		HIVN-3234					
EXHAUST VALVES										
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	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-H1003S-J32	23.70	16.20	SINGLE		60 @ 42.00	161 @ 10.0	12.30	27.60	9.90	RET-H1003/T1+ Use OEM Spring Locator
<b>VALVE LOCK</b>	KPR-5.5/7A-ST									

# PERFORMANCE VALVES, SPRINGS, COMPONENTS



## HONDA / ACURA J35 V6 SOHC VTEC J30 / J32 / J35A

INTAKE VALVES										
Head Diam	Stem Diam		Length		Black Nitride/Inconel					
36.00mm	5.48 mm		116.9 mm		HIVN-3536					
EXHAUST VALVES										
Head Diam	Stem Diam		Length		Black Nitride/Inconel					
30.00 mm	5.45 mm		114.20 mm		HEVI - 3530					
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-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
<b>VALVE LOCK</b>	KPR-5.5/7A-ST									

## HONDA CR-Z 1.5L LEA 4CYL 16V / HONDA HYBRID CR-Z 2011

INTAKE VALVES										
Head Diam	Stem Diam		Length		Black Nitride/Inconel					
28.00 mm (std)	5.48 mm		118.85 mm		HIVN-1050					
EXHAUST VALVES										
Head Diam	Stem Diam		Length		Black Nitride/Inconel					
23.00 mm (std)	5.46 mm		117.55 mm		HEVI-1050					
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-H2416	24.00	16.50	SINGLE		Int:61@ 40.20	164 @ 10	15.3	24.90	9.90	RET-H2416 + SEAT-A2416-IN
					Exh:56@40.60	160 @ 10	15.8			RET-H2416 + SEAT-A2416-EX
ENGINE COMPONENTS										
<b>VALVE SEALS</b>	INTAKE: VS-H5.5-I				EXHAUST: VS-H5.5-E					
<b>VALVE LOCK</b>	Factory 6 Degree Keepers									

# PERFORMANCE VALVES, SPRINGS, COMPONENTS

## HONDA R18A SOHC I-VTEC CIVIC / 2006+

INTAKE VALVES										
Head Diam	Stem Diam		Length		Black Nitride/Inconel					
32.00 mm (std)	5.48 mm		116.7 mm		HIVN-1018					
EXHAUST VALVES										
Head Diam	Stem Diam		Length		Black Nitride/Inconel					
26.00 mm (std)	5.45 mm		115.95 mm		HEVN-1012					
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	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-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										
<b>VALVE SEALS</b>	INTAKE: VS-H5.5I					EXHAUST: VS-H5.5E				



## HYUNDAI GENESIS

2.0L 16V TURBO G4KF THETA L4 - SONATA / GENESIS COUPE / KIA FORTE / KIA OPRIMA 2010

### INTAKE VALVES

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 VALVES

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 Part Number
	O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)	Seat	Open (lift)				
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)	27.70	19.70	23.20	15.20	67@35.5	182 @ 11.5	10.00	21.50	10.00	RET-TS5.5/T9F-BE + FACTORY Seat + Seat-M1015-2

### ENGINE COMPONENTS

**VALVE GUIDES** INTAKE: GDE-MEVOX-OS (oversized) EXHAUST: GDE-MEVOX-OS (oversized)

## HYUNDAI GENESIS

3.8L 24V

### 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-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 1988-1995

INTAKE VALVES			
Head Diam	Stem Diam	Length	Black Nitride/Inconel
34.40 mm (std)	6.98 mm	128.80 mm	LIVN-1001
EXHAUST VALVES			
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 B6

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)				
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	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-MM16S	27.50	20.00	SINGLE		65 @ 33.6	158 @ 10	12.90	20.70	9.40	RET-TS60/MA2 + SEAT-TS/MA18I + OEM seat
SPR-MM16D2	27.50	20.00	20.00	15.20	74 @35	195 @ 10	14.30	20.70	12.10	RET-TS60/MA2 + SEAT-TS/MA18E + OEM seat
ENGINE COMPONENTS										
<b>VALVE SEALS</b>	INTAKE: VS-T6I					EXHAUST: VS-T6E				
<b>CAM FOLLOWERS</b>	CF-30/16LC To be use with 5.5mm Lash Caps installed on the CF inner post.									
<b>VALVE GUIDES</b>	INTAKE & EXHAUST: GDE-MA16-IE									

## MAZDA MIATA

1.8 LTS DOHC BP / MIATA / MX5 PROTEGE 90-99 / FORD ESCORT GT 91-96

### INTAKE VALVES

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	102.0 mm (std)	MAIVN-1208(std flo)
34.00mm (+1.0)	5.97 mm	102.6 mm (+0.6)	MAIVN-1206(hi flo)

### EXHAUST VALVES

Head Diam	Stem Diam	Length	Black Nitride/Inconel
28.00mm (std)	5.94 mm	102.6 mm (+0.6)	MAEVN-1204
28.00mm (std)	5.94 mm	102.6 mm (+0.6)	MAEVI-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	160 @ 10	12.90	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	79 @ 33.6	175 @ 10	12.90	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	89 @33.6	210 @ 10	12.90	20.70	12.10	RET-TS60/MA2 + (16) SEAT-TS MA181 +OEM (use '96 + Cotters)

### ENGINE COMPONENTS

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



## MAZDA PROTEGE

MX6 2.0LTS / FORD PROBE / PROTEGE / MX6 / 626 1993-2003

### INTAKE VALVES

Head Diam	Stem Diam	Length	Black Nitride/Inconel
32.50 mm (+1)	5.97 mm	89.9 mm	MEAVN-2002

### EXHAUST VALVES

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	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-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 VALVES

Head Diam	Stem Diam	Length	Black Nitride/ <b>Inconel</b>
35.00mm (std) Flat	5.48 mm	103.40mm (std)	MAIVN-2301F or D
36.00mm (+1.0) Dish			MAIVN-2304D
36.0mm (+1.0) Flat			MAIVN-2304F
37.50mm (+2.5) Dish			MAIVN-2308D
35.00mm (std) Dish	5.97 mm (5mm tip)		MAIVN-2301D-6mm

### EXHAUST VALVES

Head Diam	Stem Diam	Length	Black Nitride / <b>Inconel</b> / 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			<b>MAEVI-2301D</b>
31.00mm (+1.0) Flat			MAEVN-2304F
<b>31.00mm (+1.0) Dish</b>			<b>MAEVI-2304 *</b>
<b>32.00mm (+2.0) Dish</b>			<b>MAEVI-2306 *</b>
<b>30.00mm (std) Dish</b>	6.00 mm	104.70mm	<b>MAEVI-2301D-6mm *</b>
<b>31.00mm (+1.0) Dish</b>	5.95 mm	105.9 mm (+1.2MM)	<b>MAEVI-2304 -6mm-HS</b>

### 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	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-TS1012-BE-DUR1 (Beehive)	27.70	19.70	23.20	15.20	60@35.5	164 @ 10	13.00	21.80	10.40	RET-TS5.5/T1F-BE + Factory Seat + SEAT-DUR1
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

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





## MINI COOPER 1.6 LTS / MINI COOPER S (TRITEC ENGINE)

Head Diam	Stem Diam	Length	Black Nitride/Inconel
30.70mm (+0.5)	5.94 mm	109.58 mm	MCIVN-1005S
32.00mm (+1.8)			MCIVN-1008S *

Head Diam	Stem Diam	Length	Black Nitride/Inconel
24.20mm (+1.0)	5.92 mm	118.37 mm	MCEVI-1007FS
24.20mm (+2.3)			MCEVN-1010FS
25.50mm (+2.3)			MCEVI-1010FS *
27.00mm (+3.8)			MCEVI-1012D

### 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/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-TS60/MA2 + 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

### SPRING KITS

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



## MINI COOPER R56

PRINCE ENGINE PEUGEOT EP6 207GT / 308 GTI / 408 / CITROEN C4 / DS3 W/THP150 / 175 ENGINE

INTAKE VALVES										
Head Diam	Stem Diam		Length		Black Nitride/Inconel					
28.8mm (std)	4.96 mm		105.80 mm		MCIVN-1200S (1groove)					
29.8mm (+1mm)			105.80 mm		MCIVN-1201S (1groove)					
29.8mm (std)			95.00 mm		MCIVN-1301S (1groove)					
EXHAUST VALVES										
Head Diam	Stem Diam		Length		Black Nitride/Inconel/ Sodium					
26.2mm	4.95 mm		110.15 mm		MCEVI-1200-HS (1groove)					
27.00mm (+0.8mm)					MCEVI-1202-HS (1groove)					
26.2mm					MCEVI-1200-HS (1groove)					
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-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
ENGINE COMPONENTS										
<b>VALVE GUIDES</b>	INTAKE AND EXHAUST: GDE-MIN-R56-STD									
<b>VALVE SEALS</b>	INTAKE & EXHAUST: VSI-MIN-R56									

## MINI COOPER / BMW B48

MINI COOPER TURBO 2015+

INTAKE VALVES										
Head Diam	Stem Diam		Length		Black Nitride/Inconel					
30.10 (std)	4.96 mm		99.50 mm (SINGLE GROOVE)		MCIVN-1400S					
INTAKE KPR-5.0/7S (CAN USE FACTORY RETAINER AND SPRING)										
EXHAUST VALVES										
Head Diam	Stem Diam		Length		Black Nitride/Inconel					
28.5 (std)	5.95 mm (SODIUM FILLED)		100.1 mm (SINGLE GROOVE)		MCEVI-1400S-HS					
EXHAUST KPR-6S/7 (CAN USE FACTORY RETAINER AND SPRING)										
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
SPRK-MCB48	24.40	17.60	21.00	14.20	75 @ 37MM	155@10MM	12.2	23.20	8.00	SPR-FE20BE(16) + RET-BMB48/TE(8) + RET-BMB48/TI(8)
SPRK-MCB48	24.40	17.60	21.00	14.20	84 @ 37MM	157@10MM	12.2	23.20	7.25	SPR-FE20BE-2 + RET-BMB48/TE + RET-BMB48/TI
ENGINE COMPONENTS										
<b>VALVE GUIDES</b>										
<b>VALVE SEALS</b>	INTAKE: VSI-BM50-I					EXHAUST: VSI-BM60-E				



## MITSUBISHI 4G63

3.20LTS DOHC TURBO / ECLIPSE / TALON / LANCER EVO

### INTAKE VALVES

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 VALVES

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
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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
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

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

2.0LTS DOHC TURBO / TITANIUM VALVES

### INTAKE VALVES

Head Diam	Stem Diam	Length	TITANIUM
36.00mm (+2)	6.57 mm	108.10 mm	MIVT-1010

### EXHAUST VALVES

32.00mm (+1.5)	6.54 mm	108.1 mm	MEVT-1009
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NOTE: Needs to be used with steel Lash Caps p/n: LC-55-1.5-OD

### 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/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



# PERFORMANCE VALVES, SPRINGS, COMPONENTS



## MITSUBISHI 4B11 2.0LTS DOHC TURBO / EVO X

INTAKE VALVES											
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 VALVES											
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	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-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											
<b>VALVE GUIDES</b>	INTAKE: GDE-MEVOX-OS (oversized)						EXHAUST: GDE-MEVOX-OS (oversized)				
<b>CAM GUIDES</b>	INTAKE - GDE-MEVOX						EXHAUST - GDE-MEVOX				
<b>VALVE SEALS</b>	INTAKE & EXHAUST: VSI-M5.5V										
<b>CAM FOLLOWER</b>	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

Head Diam	Stem Diam				Length		Black Nitride/Inconel			
35.000 mm (std)	5.96 mm				111.70 mm		MIVN-1420			
Head Diam	Stem Diam				Length		Black Nitride/Inconel			
30.70 mm (std)	5.95 mm				110.0 mm		MEVN-1420			
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
SPRT-TS1015/NE	27.50	20.00	20.00	15.20	84 @ 34.6	202 @ 24.6	13.90	20.70	12.10	RET-M60/T1 + OEM SEAT+ SEAT-FC1015
ENGINE COMPONENTS										
<b>VALVE SEALS</b>	INTAKE: VSI-M6E						EXHAUST: VSI-M6E			



**MITSUBISHI 6G72**

3.0 LTS V6 DOHC / 3000GT 1991 - 1998

<b>INTAKE VALVES</b>										
Head Diam	Stem Diam		Length		Black Nitride/Inconel					
36.00mm (1.0)	6.57 mm		106.35 mm		MIVN-1012					
<b>EXHAUST VALVES</b>										
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					
<b>SPRING KITS</b>										
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-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 DOHC / ECLIPSE 2000-2005 / MONTERO 1995-2003

<b>SPRING KITS</b>										
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-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 1991-1998

### INTAKE VALVES

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 VALVES

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	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-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

<b>VALVE GUIDES</b>	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)
<b>VALVE SEALS</b>	INTAKE: VS-N6I	EXHAUST: VS-N6E for the DE / VS-N7E for the DET
<b>VALVE LOCK</b>	KPR-6N-6-ST	



## NISSAN SR20 VE 2.0 LTS DOHC

### INTAKE VALVES

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 VALVES

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

### ENGINE COMPONENTS

<b>VALVE GUIDES</b>	INTAKE: GDE-NSR6-I	EXHAUST: GDE-NSR6-E
<b>VALVE SEALS</b>	INTAKE: VS-N6I	EXHAUST: VS-N6E
<b>VALVE LOCK</b>	KPR-6N-6-ST	



## NISSAN PULSAR GTI-R RNN14

INTAKE VALVES										
Head Diam	Stem Diam		Length		Black Nitride/ <b>Inconel</b>					
35.15 mm (+1)	5.97 mm		102.10mm		NIVN-1007GTIR					
EXHAUST VALVES										
Head Diam	Stem Diam		Length		Black Nitride/ <b>Inconel</b>					
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										
<b>VALVE SEALS</b>	INTAKE: VS-N6I				EXHAUST: VS-N7E					
<b>VALVE LOCK</b>	KPR-6N-6-ST									

\*\*\* Retainer will hit the guide at aprox 12.1mm of lift

## NISSAN 300 BG30D 3.0 LTS DOHC / 300 ZX 1990-1996

INTAKE VALVES										
Head Diam	Stem Diam		Length		Black Nitride/ <b>Inconel</b>					
34.5 mm (+0.5)	5.97 mm		103.15mm		NIVN-1017					
EXHAUST VALVES										
Head Diam	Stem Diam		Length		Black Nitride/ <b>Inconel</b>					
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	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-TS1015/2	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										
<b>VALVE SEALS</b>	INTAKE: VS-N6I				EXHAUST: VS-N6E					
<b>VALVE LOCK</b>	KPR-6N-6-ST									

## NISSAN 240

KA24DE 2.4LTS DOHC / 240 SX / ALTIMA 1991-1999

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

## NISSAN SKYLINE RB20

24V DOHNC / HYDRAULIC LIFTER / SKYLINE RB20 DET 6CYL / 24V

INTAKE VALVES										
Head Diam	Stem Diam		Length		Black Nitride/Inconel					
31.10 mm (+1.0)	5.97 mm		90.70 mm		NIVN-1042					
EXHAUST VALVES										
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	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/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										
<b>VALVE SEALS</b>	INTAKE: VS-N6I					EXHAUST: VS-N6E				
<b>CAM FOLLOWERS</b>	Factory Hydraulic Cam Follower									
<b>VALVE LOCK</b>	KPR-6N-6-ST									

## NISSAN SKYLINE RB20

24V DOHC / SOLID LIFTER CONVERSION / SKYLINE RB20 DE 6CYL / 24V

INTAKE VALVES										
Head Diam	Stem Diam		Length		Black Nitride/ <b>Inconel</b>					
31.10 mm (+1.0)	5.97 mm		107.5 mm		NIVN-1042-SL					
EXHAUST VALVES										
Head Diam	Stem Diam		Length		Black Nitride/ <b>Inconel</b>					
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	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-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										
<b>VALVE SEALS</b>			INTAKE: VS-N6I				EXHAUST: VS-N6E			
<b>CAM FOLLOWERS</b>			For standard Base Circle: CF-31/2.5+ SHIMS / For reduced Base Circle CF-31/3.28+ SHIM							
<b>VALVE LOCK</b>			KPR-6N-6-ST							

## NISSAN SKYLINE RB25

24V DOHC / HYDRAULIC LIFTER / SKYLINE RB25 DET 6CYL / 24V 1992-2001

INTAKE VALVES										
Head Diam	Stem Diam		Length		Black Nitride/ <b>Inconel</b>					
35.15 mm (+1.0)	5.97 mm		86.75 mm		NIVN-1052					
EXHAUST VALVES										
Head Diam	Stem Diam		Length		Black Nitride/ <b>Inconel</b>					
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	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-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										
<b>VALVE SEALS</b>			INTAKE: VS-N6I				EXHAUST: VS-N6E			
<b>CAM FOLLOWERS</b>			Factory Hydraulic Cam Follower							
<b>VALVE LOCK</b>			KPR-6N-6-ST							



## NISSAN SKYLINE RB25

24V DOHC / SOLID LIFTER CONVERSION / SKYLINE RB25 DET 6CYL / 24V 1992-2001

INTAKE VALVES										
Head Diam	Stem Diam		Length		Black Nitride/Inconel					
31.15 mm (+1.0)	5.97 mm		103.55 mm		NIVN-1052-SL					
EXHAUST VALVES										
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	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-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										
<b>VALVE SEALS</b>	INTAKE: VS-N6I					EXHAUST: VS-N6E				
<b>CAM FOLLOWERS</b>	For standard Base Circle: CF-31/2.5+ SHIMS / For reduced Base Circle CF-31/3.28+ SHIM									
<b>VALVE LOCK</b>	KPR-6N-6-ST									

## NISSAN SKYLINE RB25

24V DOHC NEO

INTAKE VALVES										
Head Diam	Stem Diam		Length		Black Nitride/Inconel					
35.15 mm (+1.0)	5.97 mm		104.15 mm		NIVN-1052-NEO					
EXHAUST VALVES										
Head Diam	Stem Diam		Length		Black Nitride/Inconel					
30.65 mm (+1.0)	5.96 mm		97.6 mm		NEVI-1052-NEO					
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
SPRK-M1007BE -RB25N	28.00	18.80	24.20	14.50	78@38.70	200 @ 10	15.30	22.80	12.80	RET-N55/TBE + SEAT-SS3030
ENGINE COMPONENTS										
<b>VALVE SEALS</b>	INTAKE: VS-N6I					EXHAUST: VS-N6E				
<b>VALVE LOCK</b>	Factory 5.5mm Locks									



## NISSAN SKYLINE RB26

24V DOHC 6CYL / 24V 1992-2001

INTAKE VALVES										
Head Diam	Stem Diam		Length		Black Nitride/ <b>Inconel</b>					
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 VALVES										
Head Diam	Stem Diam		Length		Black Nitride / <b>Inconel</b> / 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	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-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										
<b>VALVE SEALS</b>	INTAKE: VS-N6I					EXHAUST: VS-N7E				
<b>VALVE GUIDES</b>	INTAKE: GDE-NSR6-I					EXHAUST: GDE-NSR7-E				
<b>CAM FOLLOWERS</b>	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 )									
<b>VALVE LOCK</b>	KPR-6N-6-ST									



## NISSAN 350Z / TITAN / ARMADA

TITAN 5.6LTS / ARMADA VK56D / VQ35 6CLY 24V / VK 56 V8 32V

### INTAKE VALVES

Head Diam	Stem Diam	Length	Black Nitride/Inconel
37.15mm (std)	5.96 mm	96.6 mm	NIVN-1025
38.15mm (+1.0)			NIVN-1028
38.15 mm (+1.0)		99.10mm	NIVN-1028L(+2.5)

### EXHAUST VALVES

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)			NEVN-1028
32.35 mm (+1.0)			NEVI-1028F *
33.35 mm (+2)			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

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

# PERFORMANCE VALVES, SPRINGS, COMPONENTS



## NISSAN 370Z

V6 - 3.7L [VQ37VHR]

INTAKE VALVES										
Head Diam		Stem Diam		Length		Black Nitride/Inconel				
37.7 mm (+1.0)		5.97 mm		100.2 mm		NIVN-1038				
EXHAUST VALVES										
Head Diam		Stem Diam		Length		Black Nitride/Inconel				
31.4 mm (+1.0)		5.96 mm		94.7 mm		NEVI-1038F				
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-N370Z-1 Intake	28.00	18.80	24.20	14.50	70@39.40	197@10	14.00	22.80	12.70	SPR-HM1007BE + RET-H55BE-T1 + KPR-5.5/7A-ST (use OEM seat)
SPRK-N370Z-1 Exhaust	27.70	19.70	23.20	15.20	60@36.50	186@10	13.50	21.80	12.70	SPR-TS1015-BE + RET-TS5.5/T1F-BE + KPR-5.5/7A-ST (use OEM seat)
ENGINE COMPONENTS										
<b>VALVE SEALS</b>	INTAKE: VS-N6I					EXHAUST: VS-N6E				
<b>CAM FOLLOWERS</b>	CF-34/ 6.5+ (+ shims)									
<b>VALVE GUIDES</b>	INTAKE: GDE-NSR6-I					EXHAUST: GDE-NSR6-E				
<b>KEEPERS</b>	KPR-5.5/7A-ST									

## NISSAN CA18

DET

INTAKE VALVES										
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 VALVES										
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*				
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/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)
ENGINE COMPONENTS										
<b>VALVE SEALS</b>	INTAKE: VS-N6I					EXHAUST: VS-N6E				
<b>VALVE LOCK</b>	KPR-6N-6-ST									

GOAL

Quality / Performance / Reliability

CONTACT

supertechperformance.com

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## NISSAN PATROL I6 / TB48 / TB48DE

24V

### INTAKE VALVES

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 VALVES

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	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-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-N71 EXHAUST: VS-N7E

**CAM FOLLOWERS** CF 34/3.5+



## NISSAN VR38DETT

3.8L V6 24V / NISSAN GT-R 2007-2011

INTAKE VALVES										
Head Diam	Stem Diam		Length		Black Nitride/Inconel					
38.15mm (+1)	5.96 mm		95.00 mm		NIVN-1062					
38.15mm (+1)			95.00 mm		NIVN-1063					
38.15mm (+1)			94.65mm(-0.35MM)		NIVN-1062-S					
EXHAUST VALVES										
Head Diam	Stem Diam		Length		Black Nitride/Inconel/ Sodium					
32.15 mm (STD)	5.95 mm		92.0 mm		NEVI-1060					
33.15 mm (+1)					NEVI-1062					
33.15 mm (+1)					NEVI-1062-S					
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-TSS.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-TSS.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-TSS.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-TSS.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-TSS.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-TSS.5/T9F-BE + SEAT-TS-GTR-3
ENGINE COMPONENTS										
<b>VALVE SEALS</b>	INTAKE: VS-N6I					EXHAUST: VS-N6E				
<b>VALVE GUIDES</b>	INTAKE: GDE-NVR38-I-OS1 (.002" oversize)					EXHAUST: GDE NVR38-E-OS1 (.002" oversize)				
<b>CAM FOLLOWERS</b>	CF-34/ 6.5+ (+ shims) (Minimum shim thickness to use on the Exhaust is 1.6mm) CANNOT BE USED WITH FACTORY RETAINERS (EXHAUST RETAINER).									



**OPEL VAUXHALL**

## OPEL / VAUXHALL C20XE / C20LET

CALIBRA / VECTRA / ASTRA 1988-1996

### INTAKE VALVES

Head Diam	Stem Diam	Length	Black Nitride/Inconel
34 mm (+1)	6.96 mm	105 mm	GIVN-3303F

### EXHAUST VALVES

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

#### 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



# PERFORMANCE VALVES, SPRINGS, COMPONENTS



OPEL / VAUXHALL / GM ECOTEC / Z20LET / LEH  
OPEL ASTRA / SPEEDSTER / ZAFIRA

INTAKE VALVES										
Head Diam		Stem Diam			Length		Black Nitride/Inconel			
32.0 mm (STD)		5.96mm			102.15mm		GIVN-3311S			
32.5 mm (+0.5)							GIVN-3312S			
33.0 mm (+1)							GIVN-3313S			
EXHAUST VALVES										
Head Diam		Stem Diam			Length		Black Nitride/Inconel			
29.0mm (STD)		5.95 mm			92.3 mm		GEVI-3311S			
29.5mm (+0.5)							GEVI-3312S			
30.0mm (+1)							GEVI-3313S			
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-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										
<b>VALVE SEALS</b>	INTAKE: VS-VBM6-I					INTAKE: VS-VBM6-I				
<b>CAM FOLLOWERS</b>	CF-32/15-LC6									
<b>KEEPERS</b>	KPR-6S/7 - Valves have been converted to Single groove for high performance.									

OPEL  
Z16 / Z18 / LER / A18XER

INTAKE VALVES										
Head Diam		Stem Diam			Length		Black Nitride/Inconel			
31.3 mm		4.96 mm			118.38 mm		GIVN-3320S			
EXHAUST VALVES										
Head Diam		Stem Diam			Length		Black Nitride/Inconel			
27.5mm (+0.5)		4.95 mm			113.15 mm		GEVI-3320S			
* Use With Valve Locks KPR-50/7S										
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-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										
<b>VALVE GUIDE</b>	GDE-OP50									
<b>CAM FOLLOWERS</b>	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									
<b>VALVE SEAL</b>	VSI-GM50-E INTAKE + EXHAUST									



**PEUGEOT**

**PEUGEOT**

106 / 206 / 306 / 307 / CITROEN SAXO 16V TU514 1996-2003

<b>INTAKE VALVES</b>			
Head Diam	Stem Diam	Length	Black Nitride/ <b>Inconel</b>
28.75 mm	5.96 mm	104.40 mm	PEIVN-28065
29.75 mm (+1)	5.96 mm	104.40 mm	PEIVN-29368
<b>EXHAUST VALVES</b>			
Head Diam	Stem Diam	Length	Black Nitride/ <b>Inconel</b>
24.50 mm	5.96 mm	104.40 mm	<b>PEEVI-28066</b>
24.50 mm	5.96 mm	104.40 mm	PEEVN-28604

**PEUGEOT**

206 TU5JP4

<b>INTAKE VALVES</b>			
Head Diam	Stem Diam	Length	Black Nitride/ <b>Inconel</b>
31.30 mm	5.96 mm	103.80 mm	PEIVN-28603
<b>EXHAUST VALVES</b>			
Head Diam	Stem Diam	Length	Black Nitride/ <b>Inconel</b>
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

<b>INTAKE VALVES</b>			
Head Diam	Stem Diam	Length	Black Nitride/ <b>Inconel</b>
41.50 mm	7.97 mm	108.00 mm	PEIVN-70032
<b>EXHAUST VALVES</b>			
Head Diam	Stem Diam	Length	Black Nitride/ <b>Inconel</b>
34.5 mm	7.97 mm	108.00 mm	PEEVN-70033

## PEUGEOT

206 / 306 EW10J4 2009+

INTAKE VALVES			
Head Diam	Stem Diam	Length	Black Nitride/ <b>Inconel</b>
33.30 mm	5.98 mm	106.20 mm	PEIVN-28594

EXHAUST VALVES			
Head Diam	Stem Diam	Length	Black Nitride/ <b>Inconel</b>
29.00 mm	5.97 mm	103.35 mm	PEEVN-28595

## PEUGEOT

206 / 307 EW10J4S

INTAKE VALVES			
Head Diam	Stem Diam	Length	Black Nitride/ <b>Inconel</b>
35.00 mm	5.97 mm	106.10mm	PEIVN-28704

EXHAUST VALVES			
Head Diam	Stem Diam	Length	Black Nitride/ <b>Inconel</b>
31.00mm	5.95mm	102.85mm	PEEVN-28705

## PEUGEOT

306 XU10J4 1996-2003

INTAKE VALVES			
Head Diam	Stem Diam	Length	Black Nitride/ <b>Inconel</b>
34.60 mm	6.98 mm	106.40mm (triple gr)	PEIVN-28055F

EXHAUST VALVES			
Head Diam	Stem Diam	Length	Black Nitride/ <b>Inconel</b>
29.60 mm	6.96 mm	104.90mm (triple gr)	PEEVN-28056F
29.60 mm	6.96 mm	104.90mm (triple gr)	PEEVI-28056F

## PEUGEOT

306 XU10J4RS 1996-2003

INTAKE VALVES			
Head Diam	Stem Diam	Length	Black Nitride/ <b>Inconel</b>
34.10 mm	5.97 mm	106.50mm	PEIVN-28692

EXHAUST VALVES			
Head Diam	Stem Diam	Length	Black Nitride/ <b>Inconel</b>
30.80 mm	5.96 mm	105.30 mm	PEEVN-28693

## PEUGEOT EP6

207GT / 308GTI / 408 / CITROEN C4 / DS3 W/THP150 / 175 ENGINE

INTAKE VALVES										
Head Diam	Stem Diam				Length		Black Nitride/Inconel			
28.8 mm	4.96 mm				105.80mm		MCIVN-1200S (1 grve)			
EXHAUST VALVES										
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	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-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
ENGINE COMPONENTS										
<b>VALVE GUIDES</b> INTAKE AND EXHAUST: GDE-MIN-R56-STD										



## RENAULT F4R RS

2.0LTS 16V . RENAULT CLIO RS 2.0 LTS 1993-2013

INTAKE VALVES										
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 VALVES										
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/TSR + 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/TSR + SEAT-F4R-IN + SEAT-F4R-EX (OEM seal)
ENGINE COMPONENTS										
<b>VALVE SEALS</b> USE OEM SEAL										

## RENAULT MEGANE F4RT

2.0LTS 16V / RENAULT MEGANE 250/265

### INTAKE VALVES

Head Diam	Stem Diam	Length	Black Nitride/ <b>Inconel</b>
32.30mm	5.47 mm	110mm	RIVN-28337-1
33.5 mm (+1.2)	5.47 mm	110 mm	RIVN-28337-2

### EXHAUST VALVES

Head Diam	Stem Diam	Length	Black Nitride/ <b>Inconel</b>
29.00 mm	5.97mm (tip 5.5mm)	108.9 mm	<b>REVI-28338F-2-6</b>
30.00 mm (+1)	5.97mm (tip 5.5mm)	108.9 mm	<b>REVI-28338F-3-6</b>

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 1991-1999

### INTAKE VALVES

Head Diam	Stem Diam	Length	Black Nitride/ <b>Inconel</b>
32.20 mm	6.97 mm	108.90 mm	RIVN-28069

### EXHAUST VALVES

Head Diam	Stem Diam	Length	Black Nitride/ <b>Inconel</b>
28.45 mm (std)	6.97 mm	110.1 mm	REVN-28070





## SUBARU

EJ20 / EJ25 / WRX / STI TURBO DOHC / IMPREZA WRX / STI

### INTAKE VALVES

Head Diam	Stem Diam	Length	Black Nitride/Inconel
36 mm (std)	5.96 MM	104.35mm (std)	SIVN-1010
36.50mm (+0.5)		104.35mm (std)	SIVN-1012
37.00mm (+0.5)		103.85mm	SIVN-1012/2
37.00mm (+1.0)		104.35mm (std)	SIVN-1014
37.00mm (+1.0)		104.35mm (std)	SIVN-1014
		103.85mm	SIVN-1014 -2

### EXHAUST VALVES

Head Diam	Stem Diam	Length	Black Nitride/Inconel
32 mm (std)	5.96 MM	104.7mm (std)	SEVN-1010
32 mm (std)		104.7mm (std)	SEVI-1010 *
32.50 mm (+0.5)		104.7mm (std)	SEVI-1012 *
32.50mm (+0.5)		104.20 (-0.5)mm	SEVN-1012-2 / SEVI1012-2
33.00mm (+1.0)		104.7mm (std) or 104.20mm	SEVN-1014/2 / SEVI-1014 *
33.00mm (+1.0)		104.2mm (-0.5)mm	SEVI-1014-2

### SODIUM FILLED INCONEL VALVES

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	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/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

<b>VALVE GUIDES</b>	INTAKE: GDE-SUEJ6-I	EXHAUST: GDE-SUEJ6-E
<b>VALVE SEALS</b>	INTAKE: VS-TS6I	EXHAUST: VS-TS6E
<b>CAM FOLLOWERS</b>	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	
<b>STEEL RETAINER</b>	STEEL RETAINER AVAILABLE RET-TS60-WRX-ST	
<b>SHIM UNDER BUCKET RETAINER</b>	RET-TS60/STI	
<b>KEEPERS</b>	KPR-6T-ST	



## SUBARU EJ25 NON TURBO DOHC 1999-2005

INTAKE VALVES			
Head Diam	Stem Diam	Length	Black Nitride/ <b>Inconel</b>
36.00mm (std)	5.96 mm	105.9mm (std)	SIVN-1016
37.00mm (+1.0)	5.96 mm	108.10mm (oversize)	SIVN-1015

EXHAUST VALVES			
Head Diam	Stem Diam	Length	Black Nitride/ <b>Inconel</b>
32.00mm (std)	5.96 mm	106.2mm (std)	SEVN-1016
32.00mm (std)	5.96 mm	106.2mm (std)	<b>SEVI-1016</b>
33.00mm (+1.0)	5.96 mm	108.35mm (oversize)	<b>SEVI-1015</b>
33.00mm (+1.0)	5.96 mm	108.35mm (oversize)	SEVN-1015

## SUBARU EJ25 EJ25 NON TURBO SOHC 1999-2005

INTAKE VALVES									
Head Diam	Stem Diam	Length	Black Nitride/ <b>Inconel</b>						
37.00 mm (+1.0)	5.96 mm	120.60 mm	SIVN-1025						

EXHAUST VALVES									
Head Diam	Stem Diam	Length	Black Nitride/ <b>Inconel</b>						
33.00 mm (+1.5)	5.96 mm	121.70 mm	<b>SEVI-1026</b>						

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/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									
<b>VALVE SEALS</b>	INTAKE: VS-TS6I				EXHAUST: VS-TS6E				
<b>CAM FOLLOWERS</b>	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)			
<b>TITANIUM VALVES</b>	PLEASE CALL								
<b>KEEPERS</b>	KPR-6T-ST								

## SUBARU

EZ30 H6 24V / EZ30 H6 (1ST GEN) / EZ30 W/AVCS (2ND GEN)

### INTAKE VALVES

Head Diam	Stem Diam	Length	Black Nitride/Inconel
35 mm (std)	5.48 MM	103.4 mm	SIVN-2301F
36.00mm (+1.0)			SIVN-2304D
35.00mm (std)		99.8 mm	SIVN-1043

### EXHAUST VALVES

Head Diam	Stem Diam	Length	Black Nitride/Inconel
30.5mm (std)	5.45 MM	105.25 MM	SEVN-1021D
31.00mm (+0.5)			SEVN-1030D
31.50mm (+1.0)			SEVN-1033D
31.50mm (+1.0)			SEVI-1033D
30.50mm (std)			SEVI-1043D
31.50mm (+1.0)			SEVI-1045D

### 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/SU6	27.50	20.00	20.00	15.20	63@36.10	184 @ 10	15.20	20.70	12.10	RET-TS5.5/T1 + SEAT-TS/SUB

## SUBARU

EZ30 H6CYL W/AVCS (2ND GEN)

### 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-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-TS5.5/T2 + SEAT-TS/SUH6E

### ENGINE COMPONENTS

**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

**VALVE SEALS** VS-SU5.5-EI (intake + Exhaust)

## SUBARU

EG33 H6 24V / SVX 3.3LTS

### INTAKE VALVES

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 VALVES

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 / TOYOTA GT86

### INTAKE VALVES

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 VALVES

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	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-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

<b>VALVE SEALS</b>	INTAKE: VS-T5.5-I	EXHAUST: VS-T5.5-E
<b>VALVE GUIDES</b>	INTAKE: GDE-TFRS55-I	EXHAUST: GDE-TFRS55-E

## SUBARU WRX

WRX 2015 / FA20F (DITURBO)

### INTAKE VALVES

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 VALVES

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	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-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

<b>VALVE SEALS</b>	INTAKE: VS-T5.5-I	EXHAUST: VS-T5.5-E
<b>VALVE GUIDES</b>	INTAKE: GDE-TFRS55-I	EXHAUST: GDE-TFRS55-E



## TOYOTA

4AGE 16V / ATLANTIC / COROLLA

### INTAKE VALVES

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)			TIVN-1020

### EXHAUST VALVES

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)			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

### ENGINE COMPONENTS

<b>VALVE GUIDES</b>	INTAKE: GDE-4AGE-SM + VS-T6SM	EXHAUST: GDE-4AGE-SM + VS-T6SM
<b>VALVE SEALS</b>	INTAKE: VS-TS6I	EXHAUST: VS-TS6E
<b>CAM FOLLOWERS</b>	CF-28/3.65+	
<b>KEEPERS</b>	KPR-6T-ST	

## TOYOTA

4AGE 20V SILVER TOP OR BLACK TOP / COROLLA

### INTAKE VALVES

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)			TIVN-1018 (12)

### EXHAUST VALVES

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

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

## TOYOTA

7MGTE 3.0LTS 24V / SUPRA 1986-1992

### INTAKE VALVES

Head Diam	Stem Diam	Length	Black Nitride/ <b>Inconel</b>
32.5 mm (STD)	5.98 mm	98.10mm	TIVC-1006
32.5 mm (+0.50)	5.98 mm	98.10mm	TIVN-1007

### EXHAUST VALVES

Head Diam	Stem Diam	Length	Black Nitride/ <b>Inconel</b>
27.50 mm (STD)	5.97 mm	98.20mm	TEVC-1006
28.00 mm (+0.50)	5.97 mm	98.20mm	<b>TEVI-1007</b>

### 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/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 +

### 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

**KEEPERS** KPR-6T-ST



## TOYOTA SUPRA

2JZ-GE / GTE 3.0 LTS 24V DOHC 1994-1998

INTAKE VALVES										
Head Diam		Stem Diam			Length		Black Nitride/Inconel			
33.50 mm (std)		5.98 mm			98.55 mm		TIVN-1014			
34.50mm (+1.0)							TIVN-1016			
EXHAUST VALVES										
Head Diam		Stem Diam			Length		Black Nitride/Inconel/Sodium			
29.00 mm (std)		5.97 mm			99.10 mm		TIVI-1014			
30.00mm (+1.0)							TIVN-1016			
30.00mm (+1.0)							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	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-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										
<b>VALVE SEALS</b>	INTAKE: VS-T6I					EXHAUST: VS-T6E				
<b>CAM FOLLOWERS</b>	CF-31/ 3.28+ (+ shims 1.5mm to 3.2mm thick)									
<b>VALVE GUIDES</b>	INTAKE: GDE-T2JZ-1					EXHAUST: GDE-T2JZ-E				
<b>TITANIUM VALVES</b>	PLEASE CALL									
<b>KEEPERS</b>	KPR-6T-ST									

## TOYOTA SUPRA 1JZ-GE / GTE 3.0 LTS 24V DOHC

### INTAKE VALVES

Head Diam	Stem Diam	Length	Black Nitride/ <b>Inconel</b>
32.00 mm	5.94 mm	97.50 mm	TIVN-1008
33.00 mm (+1)	5.94 mm	97.50 mm	TIVN-1009 (+1)

### EXHAUST VALVES

Head Diam	Stem Diam	Length	Black Nitride/ <b>Inconel</b>
30.00 mm	5.97 mm	98.10 mm	<b>TEVI-1008</b>
31.00 mm(+)	5.97 mm	98.10 mm	<b>TEVI-1009</b>

### 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-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)
KEEPERS	KPR-6T-ST







**TOYOTA SUPRA 588B**  
3.0LTS 24V DOHC

<b>INTAKE VALVES</b>										
Head Diam	Stem Diam		Length		Black Nitride/ <b>Inconel</b>					
30.10 (STD)	4.96 mm		99.50 (SINGLE GROOVE)		TIVN-1058					
<b>EXHAUST VALVES</b>										
Head Diam	Stem Diam		Length		Black Nitride/ <b>Inconel</b>					
28.5 mm (STD)	5.95 mm (SODIUM FILLED)		100.10 mm (SINGLE GROOVE)		TEVI-1058-HS					
24.40 mm (STD)	5.95 mm		100.10 mm (SINGLE GROOVE)		TEVI-1058					
<b>SPRING KITS</b>										
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-B58B	24.40	17.60	21.00	14.20	75@37	155@10.0	12.2	23.20	8.0	SPR-FE20BE(24) + RET-BMB48/ TE(12)+RET-BMB48/TI(12)
SPRK-B58B-2	24.40	17.60	21.00	14.20	84@37	157@10.0	12.2	23.20	7.25	SPR-FE20BE-2(24) + RET-BMB48/ TE(12) + RET-BMB48/TI(12)
<b>ENGINE COMPONENTS</b>										
<b>VALVE GUIDES</b>										
<b>VALVE SEALS</b>										
INTAKE: VSI-BM50-IKEEPERS					EXHAUST: VSI-BM60-E					

**TOYOTA 2TC / 3TC**

<b>INTAKE VALVES</b>					
Head Diam	Stem Diam		Length		Black Nitride/ <b>Inconel</b>
44.00 (+3.0)	8 mm		110.00 mm		TIVN-1063
<b>EXHAUST VALVES</b>					
Head Diam	Stem Diam		Length		Black Nitride/ <b>Inconel</b>
39.00mm (+3.0)	8 mm		110.00 mm		TEVN-1063



## TOYOTA 3SGTE

2.0LTS DOHC / CELICA / MR2 TURBO 1990-1995

### INTAKE VALVES

Head Diam	Stem Diam	Length	Black Nitride/ <b>Inconel</b>
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 VALVES

Head Diam	Stem Diam	Length	Black Nitride / <b>Inconel</b> / 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	<b>TEVI-1016</b>
30.00 mm (+1.0)	5.97 mm	99.10 mm	TEVI-1016-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
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

<b>VALVE SEALS</b>	INTAKE: VS-TS6-I	EXHAUST: VS-TS6-E
<b>CAM FOLLOWERS</b>	CF-31/ 3.28+ (+ shims 1.5mm to 2.7mm thick)	
<b>KEEPERS</b>	KPR-6T-ST	

## TOYOTA 1ZZ-FE CLEICA GT / MATRIX 2000+

INTAKE VALVES										
Head Diam	Stem Diam				Length		Black Nitride/Inconel			
32.00mm (std)	5.48 mm				88.67 mm		TIVN-1021			
EXHAUST VALVES										
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
ENGINE COMPONENTS										
<b>VALVE SEALS</b>	INTAKE: VS-T5.5-I					EXHAUST: VS-T5.5-E				
<b>CAM FOLLOWERS</b>	CF-31/ 3.28+ (+ shims 1.5mm to 2.7mm thick)									

## TOYOTA 2ZZ-GE CLEICA GTS 2000+ / LOTUS ELISE

INTAKE VALVES										
Head Diam	Stem Diam				Length		Black Nitride/Inconel			
34.00mm (std)	5.48 mm				111.45 mm		TIVN-1031			
EXHAUST VALVES										
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										
<b>VALVE SEALS</b>	INTAKE: VS-T5.5-I					EXHAUST: VS-T5.5-E				
<b>BLOCK GUARDS</b>	BG-T2ZZ									

# PERFORMANCE VALVES, SPRINGS, COMPONENTS



## TOYOTA SCION 2AZ-FE / SCION TC

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

## TOYOTA TACOMA 2RZ / 3RZ 16V / TACOMA PICKUP TRUCK

INTAKE VALVES										
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 VALVES										
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										
<b>VALVE SEALS</b>	INTAKE: VS-T6I					EXHAUST: VS-T6E				
<b>CAM FOLLOWERS</b>	CF-31/ 3.28+ (+ shims 1.5mm to 3.2mm thick)									
<b>KEEPERS</b>	KPR-6T-ST									

## TOYOTA TACOMA 2TR-FE 16V

INTAKE VALVES										
Head Diam	Stem Diam		Length		Black Nitride/ <b>Inconel</b>					
37.50 mm (std)	5.47 mm		106.3 mm		TIVN-2045					
38.50 mm (+1.0)	5.47 mm		106.3 mm		TIVN-2047					
EXHAUST VALVES										
Head Diam	Stem Diam		Length		Black Nitride/ <b>Inconel</b>					
31.50 mm (std)	5.47 mm		103.60 mm		TEVN-2045					
32.50 mm (+1.0)	5.47 mm		103.60 mm		TEVI-2047					
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		76@33.60	126@ 11	12.00	23.00	5.00	RET-OEM + Spring base (OEM)
SPRK-EC3025/2TR	26.60	19.60	19.40	14.20	65@33.60	197@11	11.70	21.80	13.50	RET-EC3020/T55 + SEAT-3020-2RZ (+OEM SHIM)
SPRK-EC3027/2TR	26.60	19.60	19.40	14.20	85@33.60	203@11	11.50	22.20	11.70	RET-EC3020/T55 + SEAT-3020-2RZ (+OEM SHIM)
<b>VALVE SEALS</b> INTAKE: VS-T5.5I EXHAUST: VS-T5.5E										

## TOYOTA TACOMA / TUNDRA V6 5VZ-FE DOHC

INTAKE VALVES										
Head Diam	Stem Diam		Length		Black Nitride/ <b>Inconel</b>					
34.00mm (std)	5.97 mm		95.15 mm		TIVN-1040					
EXHAUST VALVES										
Head Diam	Stem Diam		Length		Black Nitride/ <b>Inconel</b>					
27.50mm (std)	5.96 mm		94.90 mm		TEVN-1040					

## TOYOTA LAND CRUISER 1FZ-FE 16 24V / 4.5LTS DOHC

INTAKE VALVES										
Head Diam	Stem Diam		Length		Black Nitride/ <b>Inconel</b>					
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 VALVES										
Head Diam	Stem Diam		Length		Black Nitride/ <b>Inconel</b>					
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	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-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										
<b>VALVE SEALS</b>	INTAKE: VS-T7E					EXHAUST: VS-T7E				
<b>CAM FOLLOWERS</b>	CF-34/ 3.5+ (+ shims 1.5mm to 3.2mm thick)									

## TOYOTA LAND CRUISER / LEXUS / TRUNDRA 2UZ-FE - 4.7LTS V8 32V 1998-2009

INTAKE VALVES										
Head Diam	Stem Diam		Length		Black Nitride/ <b>Inconel</b>					
36.00mm (+1.5)	5.48 mm		95.05 mm		TIVN-1093D					

EXHAUST VALVES										
Head Diam	Stem Diam		Length		Black Nitride/ <b>Inconel</b>					
30.50mm (+1.50)	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										
<b>VALVE SEALS</b>	VS-T5.5I					VS-T5.5E				
<b>CAM FOLLOWERS</b>	CF-31/ 3.28+ shim 2.15mm thick (Lash can be adjusted with 8mm bucket shims or OEM 11mm shims)									

## TOYOTA LAND CRUISER / TRUNDR

1GR-FE / 4.0LTS V6 24V / FJ / 2003-2010

### INTAKE VALVES

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 VALVES

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

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

## TOYOTA VENZA

1AR-FE 4CYL 2.7L

### 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

<b>VALVE SEALS</b>	INTAKE: VS-T5.5I	EXHAUST: VS-T5.5E
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## TOYOTA SCION FR-S / SUBARU BRZ

SCION FR-S 4AU-GSE / SUBARU BRZ GT86

### INTAKE VALVES

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 VALVES

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	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-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

<b>VALVE SEALS</b>	INTAKE: VS-T5.5-I	EXHAUST: VS-T5.5-E
<b>VALVE GUIDES</b>	INTAKE: GDE-TFRS55-I	EXHAUST: GDE-TFRS55-E





## VW JETTA / GTI / PASSATT 2.8LTS VR6 12V 1992-1999

### INTAKE VALVES

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 VALVES

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	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-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

### ENGINE COMPONENTS

<b>VALVE SEALS</b>	INTAKE: VS-VW7-I	EXHAUST: VS-VW7-E
<b>CAM FOLLOWERS</b>	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.	
<b>KEEPERS</b>	Triple Groove: KPR-VW7-T	



## VW

1.8T AEB / 2.7T 5V/CYL / VW / AUDI / SEAT

### INTAKE VALVES

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 VALVES

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 Sodium Filled	103.90 mm	AEVI-1103S-HS
30.90 mm (+1)			AEVI-1106S-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
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

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

## AUDI A8 / S4 / RS6 V8 40V 4.2L 2003-2008

INTAKE VALVES										
Head Diam		Stem Diam		Length		Black Nitride/ <i>Inconel</i>				
27.90mm (+1.0)		5.96 mm		96.55 mm		AIVN-1206S				
EXHAUST VALVES										
Head Diam		Stem Diam		Length		Black Nitride/ <i>Inconel</i>				
30.90mm (+1.0)		5.94 mm		94.80 mm		AEVI-1206S				
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 (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)
<b>VALVE SEALS</b>	INTAKE: VS-VBM6-I					EXHAUST: VS-VBM6-E				
<b>KEEPERS</b>	KPR-6S/7									



## VW - GOLF / JETTA / GTI / GLI

1.8 / 2.0LTS 16V / 2.2LTS 5 CYL 20V / KR7A - 9A ABF

INTAKE VALVES										
Head Diam	Stem Diam		Length		Black Nitride/Inconel					
32.00 mm (std)	6.97 mm		95.50 mm		VWIVN-1034F					
32.00 mm (std)					VWIVN-1034					
32.50 mm (+0.5)					VWIVN-1035					
34.00 mm (+2)					VWIVN-1038					
EXHAUST VALVES										
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)					VWEVN-1034					
28.00 mm (std -KR/9A)					VWEVI-1034F					
28.50 mm (+0.5)					VWEVN-1035					
28.50 mm (+0.5)					VWEVI-1035 *					
29.50 mm (+1.5)					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	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-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										
<b>VALVE SEALS</b>	INTAKE: VS-VW7-I					EXHAUST: VS-VW7-E				
<b>VALVE GUIDES</b>	GDE-VW8V-7A									
<b>CAM FOLLOWERS</b>	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.									
<b>KEEPERS</b>	Single Groove: KPR-VW7-S									

## VW - GOLF / JETTA / PASSATT / BEETLE 1.8 / 2.0LTS 8V / 1985-2003

INTAKE VALVES										
Head Diam	Stem Diam				Length		Black Nitride/ <b>Inconel</b>			
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)	6.97 mm				98.60 mm		VWIVN-1024			
41.00mm (+1.0)							VWIVN-1027			
42.00mm (+2)							VWIVN-1029			

EXHAUST VALVES										
Head Diam	Stem Diam				Length		Black Nitride/ <b>Inconel</b>			
33.00mm (std)	6.96 mm				90.95 mm		VWEVN-1014			
33.50mm (+0.5)							<b>VWEVI-1015</b>			
34.00mm (+1.0)							VWEVN-1017			
35.00mm (+2.0)	6.96 mm				98.40 mm		VWEVN-1019			
33.00mm (std)							VWEVN-1024			
34.00mm (+1.0)							VWEVN-1027			
35.00mm (+2)	6.96 mm				98.40 mm		VWEVN-1029			

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

## VW VR6

R32 24V / GOLF GTI 3.2LTS

INTAKE VALVES										
Head Diam	Stem Diam		Length		Black Nitride/ <b>Inconel</b>					
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 VALVES										
Head Diam	Stem Diam		Length		Black Nitride/ <b>Inconel</b>					
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
ENGINE COMPONENTS										
<b>KEEPERS</b>	KPR-6S/7									

## VW / AUDI

2.0T FSI EA113 / VW / AUDI / SEAT

INTAKE VALVES										
Head Diam	Stem Diam		Length		Black Nitride/ <b>Inconel</b>					
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 VALVES										
Head Diam	Stem Diam		Length		Black Nitride/ <b>Inconel/Sodium</b>					
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 Exhaust	73 @ 38.60 85 @ 37.20	178 @ 10 190 @ 10	12.50 11.00	24.90	10.50	RET-A2416/T1 (optional 0.060" Intake Spring shim SS-C202)	
ENGINE COMPONENTS										
<b>VALVE SEALS</b>	INTAKE: VS-VBM6-I				EXHAUST: VS-VBM6-E					
<b>KEEPERS</b>	KPR-6S/7									
<b>VALVE GUIDE</b>	GDE-AU18T (oversized available also) for Intake & Exhaust									



**VW**  
2.5L 5CYL [20V] / VW RABBIT 2005+

INTAKE VALVES									
Head Diam		Stem Diam	Length		Black Nitride/ <b>Inconel</b>				
32.35 mm (std)		5.98 mm	103.9 mm		N/A				
33.00 mm (+0.65)					VWIVN-1001S				
33.85 mm (+1.5 & Turbo)					VWIVN-1002S				
EXHAUST VALVES									
Head Diam		Stem Diam	Length		Black Nitride/ <b>Inconel</b> /Sodium				
28.00 mm (std)		5.96 mm	101.80 mm		VWEVI-1002S (+locks)				
29.00 mm (+1)					VWEVI-1004S (+lock)				
30.00 mm (+2)					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	Coil Bind	Rate	Titanium Retainer	
	O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	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" Intake Spring shim SS-C202
			EXHAUST	85@37.20	190@10	11.00			
ENGINE COMPONENTS									
<b>VALVE SEALS</b>	INTAKE: VS-VBM6-I			EXHAUST: VS-VBM6-E					
<b>KEEPERS</b>	KPR-6S/7								
<b>VALVE GUIDE</b>	GDE-AU18T (oversized available also) for intake & Exhaust								

## AUDI R8 4.2L V8 / 5.2L V10

INTAKE VALVES										
Head Diam		Stem Diam		Length		Black Nitride/ <b>Inconel</b>				
33.85 mm (std)		5.98 mm		103.9 mm		VWIVN-1002S (+locks)				
34.85 mm (+1)						VWIVN-1004S (+locks)				
EXHAUST VALVES										
Head Diam		Stem Diam		Length		Black Nitride/ <b>Inconel</b> / <b>Sodium</b>				
28.00 mm (std)		5.96 mm		101.80 mm		VWEVI-1002S (+locks)				
29.00 mm (+1)						VWEVI-1004S (+locks)				
30.00 mm (+2)						VWEVI-1006S (+locks)				
SODIUM FILLED										
28.00mm (+2)		5.96 mm (Sodium Filled)		101.80 mm		VWEVI-1002S - HS				
SPRING KITS										
VALVE SPRINGS		Outer Spring		Pressure (lbs@mm)		Max Net lift	Coil Bind	Rate	Titanium Retainer	
Part Number		O.D. (mm)	I.D. (mm)	Seat	Open (lift)	mm	mm	lbs./mm	Part Number	
SPRK-A2416-V8 / SPRK-A2416-V10		24.00	16.50	Intake Exhaust	73 @ 37.40 85 @ 36.00	178 @ 10 190 @ 10	12.50 11.00	24.90	10.50	RET-A2416-N2 (optional 0.060" Intake Spring shim SS-C202)
ENGINE COMPONENTS										
<b>VALVE SEALS</b>	INTAKE: VS-VBM6-1			EXHAUST: VS-VBM6-E						
<b>VALVE GUIDES</b>	GDE-AU18T (oversized available also) for Intake & Exhaust									
<b>KEEPERS</b>	KPR-6S/7									



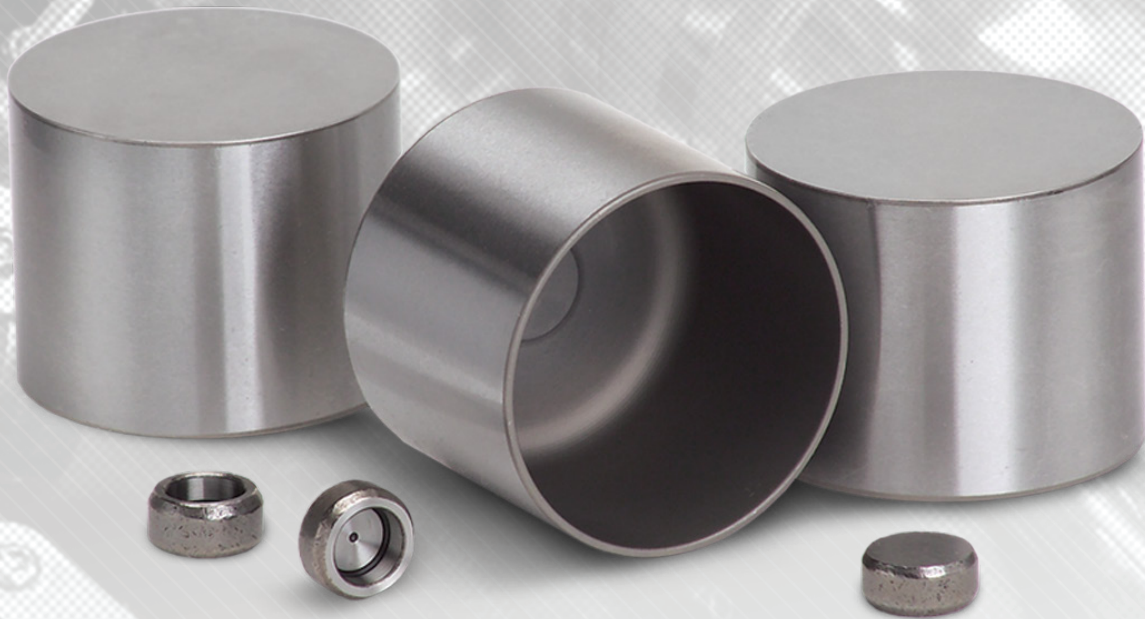


**INSINGER**  
PERFORMANCE



# PERFORMANCE VALVES, SPRINGS, COMPONENTS





## **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.

- WPC treatment or DLC coatings are available upon request.

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.

**“This is why Supertech lifters are REAL RACING lifters, and should be the only choice for your racing engine.”**

## FEATURES OF OUR SUPERTECH LIFTERS

AEROSPACE CERTIFIED CHROME-MOLYBDENUM-VANADIUM

CNC MACHINED FROM HEAT TREATED BILLET

LIFTERS ARE NITRIDED AND POLISHED FOR DURABILITY

LOW SURFACE ROUGHNESS FOR LOWER FRICTION

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	23mm	16mm	3.0mm	13.7 grs
KAWASAKI 250 exhaust	CF-24/2.7	24mm	17mm	2.7mm	14.7 grs
Honda CRF 250 oversize	CF-24.5/3.0	24.5mm	16mm	3.0mm	15.9 grs
Honda CRF 250 oversize	CF-24.5 /3.0	25mm	16mm	3.0mm	15.9 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-33/14	33mm	24.5mm	5.10mm	33 grs
BMW	CF-33/5.10	33mm	26mm	2.5mm + Shim 1.45 - 3.50mm	40.3 grs
Nissan / Subaru H6 (1st Gen)	CF-34/2.5+	34mm	26mm	3.5mm + 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

CAM FOLLOWERS					
Application	Part Number	Diameter	Length	Pad Thickness	Weight
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 short skirt	CF-37.5/3.1S+	37.50mm	28mm	3.1mm + Shim 1.45-3.50mm	39.2 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	47.6grs
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
BMW S54	GDE-BMW-S54-EI	12.04mm	48mm	BMW S54 Intake & Exhaust 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 motorcycle 5mm stem	GDE-H50	10.03mm	44.1mm	Honda Motorcycle	VS-SZH50
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

VALVE GUIDES					
Application	Part Number	OD	Length	Description	Part Number
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 + Exh	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	VSI-M6E
MINI COOPER R56	GDE-MIN-R56-STD	9.022mm	44.90mm	Intake and Exhaust valve guide bronze 4.95mm	OEM
MINI COOPER R56	GDE-MIN-R56-OS	9.06mm	42mm	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
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	VST5.5I
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

\* 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 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
RB26 SHIM	RB26-SHIM-(size)	Diam 12.15mm / Thickness : 2.50mm to 4.50mm (0.05mm increments)	
VALVE SEALS			
Part Number	Item Description	Guide OD	Seal OD
VS-H5.0-E8R	Honda motorcycle 5mm stem seal/ All rubber w/ring / Viton	7.6 to 8.7mm	10.8mm
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-N5.5E	Nissan 5.5mm Valve stem seal / Viton	9.5mm/.374"	12.1mm / .478"
VS-SU5.5-EI	Subaru BRZ / Toyota FRS 5.5mm Viton	9.90mm / .389"	12.2mm / .480"
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-K20	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-EJ20	Block Guard for Subaru EJ20
BG-T2ZZ	Block Guard for Toyota Celica GT 2ZZ-GE
BG-EJ20	Block Guard for Subaru EJ20







## **PERFORMANCE PISTONS**

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 improved 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 ensure flatness of the ring grooves. All supertech pistons feature contact reduction grooves and hones & 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 lasted technology for high performance applications.

# PERFORMANCE PISTONS



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
<b>BMW S52 B32 E36 M3</b>													
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
<b>BMW S54 B32 M3</b>													
87.50mm	.5mm	12.5:1			1.259"932mm)		R	5.315"	21mm (.826")	306	P6-BMS5487.5-CR12	GNH8750	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
<b>FORD ZETEC 2.0 (SVT)</b>											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
<b>FORD ECOBOOST 1.6L (OEM Gasket 0.5mm)</b>											PIN WEIGHT		87 GRS
79 mm	std	10:1 (std)	-5.4		1.179" (28.65mm)	81.4mm	X	134mm	21mm (.826")	275	P4-FECO16-79-N5H13	GNH7900	T/N
79.50 mm	+ 0.5mm	10:1 (std)	-5.4		1.179" (28.65mm)	81.4mm	X	134mm	21mm (.826")	281	P4-FECO16-795-N5H13	GNH7950	T/N
<b>FORD ECOBOOST 2.0L (OEM Gasket 0.71mm)</b>											PIN WEIGHT		119 GRS
87.5 mm	std	9.3:1 (std)	-7		1.289" (32.75mm)	83.1mm	X	155.9mm	22.5mm	364	P4-FECO20-875-N7H13	GNH8700	T/N
88.00 mm	+ 0.5mm	9.3:1 (std)	-7		1.289" (32.75mm)	83.1mm	X	155.9mm	22.5mm	368	P4-FECO20-88-N7H13	GNH8800	T/N
<b>FORD ECOBOOST 2.3L (OEM Gasket 0.71mm)</b>											PIN WEIGHT		119 GRS
87.5 mm	std	9.5:1 (std)	-6.3	53	1.289" (32.75mm)	94mm	X	149.3mm	22.5mm	360	P4-FECO23-875-N6H13	GNH8700	T/N
88.00 mm	+ 0.5mm	9.5:1 (std)	-6.3	53	1.289" (32.75mm)	94mm	X	149.3mm	22.5mm	366	P4-FECO23-88-N6H13	GNH8800	T/N

# PERFORMANCE PISTONS



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
<b>HONDA / ACURA B16A DOHC VTEC</b>										<b>PIN WEIGHT 74 GRS</b>			
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
81.50mm	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
81.50mm	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
<b>HONDA / ACURA B18C1 DOHC VTEC Integra GSR</b>										<b>PIN WEIGHT 74 GRS</b>			
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

# PERFORMANCE PISTONS



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
<b>HONDA / ACURA B18A/B Integra LS Non-VTEC</b>										<b>PIN WEIGHT</b>		<b>74 GRS</b>	
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
<b>HONDA / ACURA B18C5 VTEC Integra Type R</b>										<b>PIN WEIGHT</b>		<b>74 GRS</b>	
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

# PERFORMANCE PISTONS



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
<b>HONDA / ACURA B18A Integra LS with B16A head (+ 0.3 w/GSR B18C head)</b>											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
<b>HONDA / ACURA B20 with B16A Head (+ 0.3 w/GSR B18C head)</b>											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 +	11:01	-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
<b>HONDA CIVIC D16Z6/ A6 (Gasket 0.030 - Deck Height 0.010"). Add +0.3:1 if used in a Y8 engine.</b>											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

# PERFORMANCE PISTONS



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
<b>HONDA / ACURA K20A2 (+ 0.7 w / K20A3 head) (Gasket 0.030" - Deck height: 0.002")</b>											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
87.50mm	1.5mm+	12:5:1	11.4	50.7	1.181" (30mm)	3.386"	X	5.472"	22mm (.866")		P4-HK875-P15	GNH8750	A/N
<b>HONDA / ACURA K24A2 w/ K20 Head (Gasket 0.030" - Deck height: 0.002")</b>											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
87mm	Std.	14:4:1	11.4	50.7	1.181" (30mm)	3.897"	X	5.984"	22mm (.866")	325	P4-HK87-P15	GNH8700	A/N
87.50mm	0.50mm+	11:5:1	-0.5	50.7	1.181" (30mm)	3.897"	X	5.984"	22mm (.866")	280	P4-HK875-N0	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
87.50mm	0.50mm+	14:4:1	11.4	50.7	1.181" (30mm)	3.897"	X	5.984"	22mm (.866")	315	P4-HK875-P15	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



# PERFORMANCE PISTONS



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
<b>MAZDA / FORD Duratec 2.0L / 2.3L / 2.5L (Gasket 0.027" - Deck height: 0.030")</b>										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
<b>MAZDA / FORD Duratec 2.0L / 2.3L / 2.5L (Gasket 0.027" - Deck height: 0.030")</b>										PIN WEIGHT 73.4 GRS			
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

# PERFORMANCE PISTONS



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
<b>MAZDASPEED 2.3 lts 2010+ (Gasket 0.027" - Deck height: 0.030")</b>										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
<b>MAZDA Miata 1.6 lt (gasket + Deck height 0.043")</b>										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
<b>MAZDA Miata 1.8 lts / "BP" engine ( gasket + deck height 0.060")</b>										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

# PERFORMANCE PISTONS



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
<b>MINI COOPER R53 1.6L 16v Turbo engine 2002 - 2006</b>											PIN WEIGHT 86 GRS		
77.50mm	0.5mm+	8.3	-1 (std)	33	26.5mm	85.8mm	R	Std	21mm (.827")	211	P4-MIN53-775-N1	GNH7750	T/N
78.00mm	1mm+	8.3	-1 (std)	33	26.5mm	85.8mm	R	Std	21mm (.827")	215	P4-MIN53-78-N1	GNH7800	T/N
<b>MINI COOPER R56 1.6L 16v Turbo engine 2007+</b>											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
<b>MINI COOPER R56 JCW 1.6L 16v Turbo engine 2007+</b>											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
<b>MINI COOPER R56 N18 1.6L 16v Turbo engine 2011+</b>											PIN WEIGHT 86 GRS		
77mm	Std	10.5	Std	37.6	28.70mm	85.8mm	X	5.454"	20mm (.787")	260	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")	264	P4-MIN56-N18-77.5-CR10.5	GNH7750	T/N
<b>MINI COOPER R56 N18 JCW 1.6L 16v Turbo engine 2011+</b>											PIN WEIGHT 86 GRS		
77mm	Std	10	Std	37.6	27.5mm	85.8mm	X	5.454"	20mm (.787")	245	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")	251	P4-MIN56-N18-77.5-CR10	GNH7750	T/N
<b>MINI COOPER R56 N14/N18 1.6L 16v Low Compression</b>											PIN WEIGHT 86 GRS		
77mm	Std	9.5	-5.5	37.6	28.5mm	85.8mm	X	5.454"	20mm (.787")	259	P4-MIN56-77-CR9.5	GNH7700	T/N
77.50mm	0.5mm+	9.5	-5.5	37.6	28.5mm	85.8mm	X	5.454"	20mm (.787")	264	P4-MIN56-77.5-CR9.5	GNH7750	T/N
<b>BMW MINI B48 2.0L 16v</b>											PIN WEIGHT 114 GRS		
82mm	Std	10.2	std		33.2mm	94.6mm	X	148.3mm	22mm	298	P4-MINB48-82-CR10.2	GNH8200	T/N
82mm	Std	11	std		33.2mm	94.6mm	X	148.3mm	22mm	298	P4-MINB48-82-CR11	GNH8200	T/N
82.5mm	0.5mm+	11	std		33.2mm	94.6mm	X	148.3mm	22mm	305	P4-MINB48-825-CR11	GNH8200	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
<b>MITSUBISHI 4G63 1st Generation</b> ( 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
<b>MITSUBISHI 4G63 2nd Generation</b> ( 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
<b>MITSUBISHI 4G63 2nd Generation/ STROKER 100mm</b> ( 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
<b>MITSUBISHI EVO X / 4B11T</b> (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



# PERFORMANCE PISTONS



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
<b>NISSAN 240 SX 95 - 98/ KA24DE</b>											<b>PIN WEIGHT 90 GRS</b>		
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
<b>NISSAN SR20DET</b>													
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
<b>NISSAN SR20VE</b>													
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
<b>NISSAN 350Z VQ35 (Gasket + Deck height 0.082)</b>													
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
<b>NISSAN RB25 2.5 Lts</b>											<b>PIN WEIGHT 126 GRS</b>		
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
<b>NISSAN RB26 2.6 Lts</b>											<b>PIN WEIGHT 103 GRS</b>		
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
<b>NISSAN RB20 2.0 Lts</b>											<b>PIN WEIGHT 103 GRS</b>		
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
<b>NISSAN CA18DET</b>											<b>PIN WEIGHT 103 GRS</b>		
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
<b>PEUGEOT 207 GTI 1.6L 16v Turbo engine 2007+</b>											<b>PIN WEIGHT 86 GRS</b>		
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
<b>SUBARU WRX STi EJ25 2004 ( gasket: 0.60mm / Piston deck height: 0.38mm)</b>											<b>PIN WEIGHT 109 GRS</b>		
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
<b>SUBARU WRX EJ20 / Spec C crown style (gasket: 0.60mm / Piston deck height: 1.48mm)</b>											<b>PIN WEIGHT 125 GRS</b>		
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
<b>SUBARU H6 EZ30 (gasket: 0.60mm / Piston deck height: 0.38mm)</b>											<b>PIN WEIGHT 113 GRS</b>		
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

# PERFORMANCE PISTONS



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
<b>TOYOTA Corolla 3TC</b>											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
<b>TOYOTA Corolla 2TC</b>											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
<b>TOYOTA 4AGE 16v (Gasket 0.8mm - Deck Height: 0.7mm) / 18mm Pin</b>											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
<b>TOYOTA 4AGE 16v (Gasket 1.2mm - Deck Height: 0) / 20mm Pin</b>											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
<b>TOYOTA FRS /SUBARU BRZ 16v (Gasket 0.5mm - Deck height 0.2mm)</b>											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
<b>VW 2.0L 16v ABF (gasket thickness 1.6mm)</b>											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
<b>VW - AUDI 1.8T 20v AEB</b>											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
<b>VW - AUDI 1.8T 20v STROKER 95.5mm</b>											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
<b>VW - AUDI 1.8T 20v STROKER 92.8mm</b>											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
<b>VW 2.0T FSI 16v</b>											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
<b>VW 2.0T FSI 16v STROKER 95.5m</b>											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



# 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.

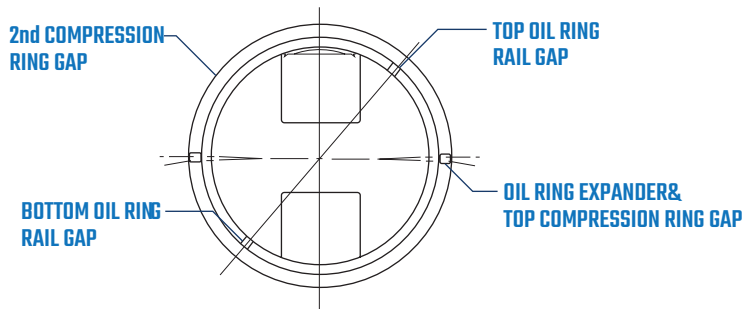
## RECOMMENDED RING GAP

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	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 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.



## PERFORMANCE HEAD GASKETS

Supertech has developed a new line of high performance MLS and high boost copper ring head gaskets designed to outperform other gaskets currently available in the market.

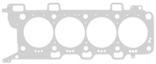
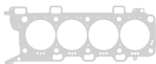
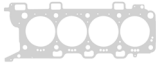


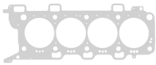
LASER CUT





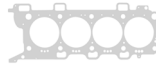
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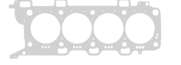
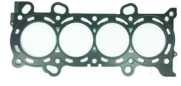

STAINLESS STEEL / COPPER

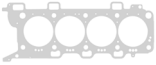
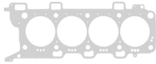
# PERFORMANCE HEAD GASKETS




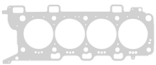
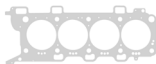

BMW					
ENGINE	MLS / COPPER	GASKET BORE (MM)	THICKNESS (MM)	PART NUMBER	PICTURE
BMW M50	Copper Ring	86	0.060" (1.6mm)	HG-BMW-M50-86-1.6T	 NOT ACTUAL PICTURE
	Copper Ring	86	0.080" (2mm)	HG-BMW-M50-86-2T	
	Copper Ring	87	0.080" (2mm)	HG-BMW-M50-87-2T	
BMW M52	Copper Ring	86	0.059" (1.5mm)	HG-BMW-M52-86-1.5T	 NOT ACTUAL PICTURE
	Copper Ring	87.6	0.080" (1.5mm)	HG-BMW-M52-87.6-1.5T	
BMW S50/B30 S52/B32 EURO MODELS ONLY	Copper Ring	87.6	0.080" (1.5mm)	HG-BMW-M52-87.6-1.5T	 NOT ACTUAL PICTURE
BMW S14	Copper Ring	95	0.060" (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
	Copper Ring	88	0.047" (1.2mm)	HG-BMW-S54-88-1.2TC	
BMW S54	Copper Ring	86	0.080" (1.5mm)	HG-BMW-M52-87.6-1.5T	 NOT ACTUAL PICTURE




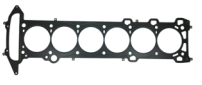
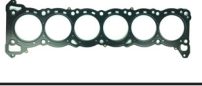



FORD					
ENGINE	MLS / COPPER	GASKET BORE (MM)	THICKNESS (MM)	PART NUMBER	PICTURE
FORD Duratec 2.0/2.3L	MLS	89	0.029" (0.75mm)	HG-FDUR23-89-075T	 NOT ACTUAL PICTURE
		91	0.080" (1.00mm)	HG-FDUR23-89-1T	
		91	0.029" (0.75mm)	HG-FDUR23-91-075T	
		91	0.080" (1.00mm)	HG-FDUR23-91-1T	
FORD Duratec 2.5L	MLS	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



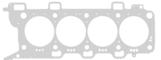
HONDA					
ENGINE	MLS / COPPER	GASKET BORE (MM)	THICKNESS (MM)	PART NUMBER	PICTURE
HONDA B16A / B18C VTEC	MLS	83	0.033" (0.85mm)	HG-HB16A-83-085T	
		84	0.033" (0.85mm)	HG-HB16A-84-085T	
		85	0.033" (0.85mm)	HG-HB16A-85-085T	
HONDA B18A/B Non VTEC	MLS	82	0.033" (0.85mm)	HG-HB18A-82-0.85T	
		83	0.033" (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	 <b>NOT ACTUAL PICTURE</b>
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	 <b>NOT ACTUAL PICTURE</b>





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	


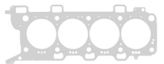

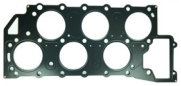
MINI COOPER					
ENGINE	MLS / COPPER	GASKET BORE (MM)	THICKNESS (MM)	PART NUMBER	PICTURE
MINI COOPER R56 1.6L	MLS	77	0.035" (0.90mm)	HG-MCR56-78-0.9T	 NOT ACTUAL PICTURE

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)	
NISSAN CA18	MLS	85	0.51"(1.3MM)	HG-NCA18-85-1.3T	 <b>NOT ACTUAL PICTURE</b>

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	
	COPPER RING (BCB)	95	0.047" (1.2mm)	HG-SUEJ20-95-1.2TBB	
SUBARU EJ235	COPPER RING (BCB)	99	0.047" (1.2mm)	HG-SUEJ235-99-1.2TBB	 NOT ACTUAL PICTURE
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	
	COPPER RING (BCB)	101.3	0.047" (1.2mm)	HG-SUEJ25-101.3-1.2TBB	
	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					
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	 <b>NOT ACTUAL PICTURE</b>
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	







# PERFORMANCE RODS



Supertech has developed a new line of high performance MLS and high boost copper ring head gaskets designed to outperform other gaskets currently available in the market.

**ARP2000 BOLTS**





**FORGED 4340 ALLOY**



**H BEAM**


BMW								
ENGINE	MATERIAL	C-C (MM)	PE BORE (MM)	PE WIDTH (MM)	BE BORE (MM)	BE WIDTH (MM)	PART NUMBER	PICTURE
BMW M50/S50 / M52 /S52	Forged 4340 Alloy	135mm	22 Full Float	21.9 mm	48mm	21.90mm	CR-BMM52-H135	 NOT ACTUAL PICTURE
BMW S54	Forged 4340 Alloy	139mm	21 Full Float	19.9mm	53mm	19.90mm	CR-BMS54-H139	 NOT ACTUAL PICTURE




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 2.3L	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	20mm	48mm	20.88mm	CR-MINR56-H138.54	 NOT ACTUAL PICTURE
MINI COOPER B48	Forged 4340 Alloy	148.30mm	22 Full Float	21mm	53.66mm	23.9mm	CR-MINB48-H148.3	 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								
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	Forged 4340 Alloy	159mm	21 Full Float	24.90mm straight	50.61mm	24.90mm	CR-VW159-21	
VW/ AUDI TFSI	Forged 4340 Alloy	144mm	21 Full Float	24.90mm straight	50.61mm	24.90mm	CR-VW144-21	 NOT ACTUAL PICTURE

# POWERSPORTS PARTS



OFF ROAD

STREET

SXS

WATERCRAFT







**HONDA CRF450 / CRF250X**  
CRF250R 2004-2007 / CRF250X 2004-2013

<b>INTAKE VALVES</b>										
Head Diam		Stem Diam		Length		Black Nitride/Titanium				
31.00 mm		4.95 mm		83.37 mm		HIVN-CRF250				
31.00 mm		4.95 mm		83.37 mm		HIVT-CRF250				
<b>EXHAUST VALVES</b>										
Head Diam		Stem Diam		Length		Black Nitride/Titanium				
26.00mm		4.95 mm		82.25 mm		HEVN-CRF250				
<b>SPRING KITS</b>										
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-H3058	19.00	13.00	SINGLE		30@34.00	115 @ 10	15.30mm	19mm	8.5	OEM RETAINER + OEM SEAT
<b>ENGINE COMPONENTS</b>										
<b>CAM FOLLOWERS</b> 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

<b>INTAKE VALVES</b>										
Head Diam		Stem Diam		Length		Black Nitride/ Titanium				
31.00 mm		4.98 mm		83.31 mm		HIVT-CRF250-08				
<b>EXHAUST VALVES</b>										
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)				
<b>ENGINE COMPONENTS</b>										
<b>CAM FOLLOWERS</b> CF-22.5/3.0 / CF-22.5/3.0-DLC (DLC coated) / CF-24.5/3.0 (OVERSIZED)										



**HONDA CRF250R**  
2010-2017

<b>INTAKE VALVES</b>			
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

<b>EXHAUST VALVES</b>			
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

<b>SPRING KITS</b>										
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-H3058	19.00	13.00	SINGLE		30@34.00	115 @ 10	15.30mm	19mm	8.5	OEM RETAINER + OEM SEAT

<b>EXHAUST VALVES</b>										
<b>CAM FOLLOWERS</b> 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**  
2018

<b>INTAKE VALVES</b>			
Head Diam	Stem Diam	Length	Black Nitride/Titanium
33.00 mm	4.95 mm	88.00 mm	HIVT-CRF-2018

<b>EXHAUST VALVES</b>			
Head Diam	Stem Diam	Length	Black Nitride/Titanium
26.00mm	4.97 mm	80.80 mm	HIVT-CRF-2018

**HONDA CRF450R  
2002-2008**

<b>INTAKE VALVES</b>										
Head Diam		Stem Diam		Length		Black Nitride/Titanium				
36.00 mm		5.47 mm		87.7 mm		HIVT-CRF450				
<b>EXHAUST VALVES</b>										
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				
<b>SPRING KITS</b>										
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-H450	23.50	16.50	SINGLE		45@35.75	155 @ 10	12.75mm	23mm	11	OEM RETAINER + OEM SEAT
<b>ENGINE COMPONENTS</b>										
<b>CAM FOLLOWERS</b> CF-26/3.0 / CF-26/3.0-DLC (DLC coated) / CF-28-3.0 (OVERSIZED)										

**HONDA CRF450R  
2009-2012**

<b>INTAKE VALVES</b>										
Head Diam		Stem Diam		Length		Black Nitride/Titanium				
36.00 mm		4.97 mm		78.7 mm		HIVT-CRF450-09				
<b>EXHAUST VALVES</b>										
Head Diam		Stem Diam		Length		Black Nitride/Titanium				
30.00 mm		4.96 mm		80.51 mm		HEVN-CRF-450-09				
<b>SPRING KITS</b>										
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-H450-09	23.50	16.50	SINGLE		53@34.10	141 @ 10	12.10mm	22mm	8.80	OEM RETAINER
<b>ENGINE COMPONENTS</b>										
<b>CAM FOLLOWERS</b> CF-26/3.0 / CF-26/3.0-DLC (DLC coated) / CF-28-3.0 (OVERSIZED)										

**HONDA CRF450X**  
2005-2013

<b>INTAKE VALVES</b>			
Head Diam	Stem Diam	Length	Black Nitride/Titanium
35.00 mm	5.48 mm	84.6 mm	HIVN-CF450X



**KAWASAKI KX250F**  
2003-2013

<b>INTAKE VALVES</b>			
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-KX250F-50
31.00 mm	4.48 mm	79.24 mm	KWIVN-KX250F

<b>EXHAUST VALVES</b>			
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

<b>ENGINE COMPONENTS</b>	
<b>CAM FOLLOWERS</b>	CF-24.5/3.0 CF-24.5/3.0DLC (DLC-Coating) / CF-26.5/2.7

**KAWASAKI KX250F**  
2017

<b>INTAKE VALVES</b>			
Head Diam	Stem Diam	Length	Black Nitride/Titanium
31.00 mm	4.48 mm	88.25 mm	KWIVT-KX250F-17

<b>EXHAUST VALVES</b>			
Head Diam	Stem Diam	Length	Black Nitride/Titanium
25.00mm	4.47 mm	80.45 mm	KWEVT-KX250F-17

<b>ENGINE COMPONENTS</b>	
<b>CAM FOLLOWERS</b>	CF-24.5/3.0 CF-24.5/3.0DLC (DLC-Coating) / CF-26.5/2.7

**KAWASAKI KX-450F  
2006-2008**

<b>INTAKE VALVES</b>										
Head Diam		Stem Diam		Length		Black Nitride/Titanium				
36.00 mm		5.47 mm		83.31 mm		KWIVT-KX450F-08				
<b>EXHAUST VALVES</b>										
Head Diam		Stem Diam		Length		Black Nitride/Titanium				
31.00mm		5.46 mm		82.00 mm		KWEVT-KX450F-08				
<b>SPRING KITS</b>										
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-KX450	25.60	19	19.0	14.0	60@31.50	150@24.50	14.00mm	17.50mm	12.80	OEM RETAINER + OEM SEAT
<b>ENGINE COMPONENTS</b>										
<b>CAM FOLLOWERS</b> CF-28/3.0 CF-28/3.0DLC (DLC-Coating)										

**KAWASAKI KX-450F  
2009-2013**

<b>INTAKE VALVES</b>										
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				
<b>EXHAUST VALVES</b>										
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				
<b>SPRING KITS</b>										
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-KX450	25.60	19	19.0	14.0	60@31.50	150@24.50	14.00mm	17.50mm	12.80	OEM RETAINER + OEM SEAT
<b>ENGINE COMPONENTS</b>										
<b>CAM FOLLOWERS</b> CF-28/3.0 CF-28/3.0DLC (DLC-Coating)										

**KAWASAKI NINJA ZX12  
WATERCRAFT 1.5L**

<b>INTAKE VALVES</b>			
Head Diam	Stem Diam	Length	Black Nitride/Titanium
37.50 mm	4.98 mm	97.60 mm	KWIVN-3340

<b>EXHAUST VALVES</b>			
Head Diam	Stem Diam	Length	Black Nitride/Titanium
28.30mm	4.95 mm	97.90 mm	KWEVI-2830T



**KTM 250SX-F  
2005-2012**

<b>INTAKE VALVES</b>										
Head Diam	Stem Diam		Length		Black Nitride/Titanium					
30.90 mm	4.95 mm		99.40 mm		KTIVT-250SX-08					
30.90 mm	4.95 mm		99.40 mm		KTIVN-250SX					

<b>EXHAUST VALVES</b>										
Head Diam	Stem Diam		Length		Black Nitride/Titanium					
26.70 mm	4.96 mm		92.90 mm		KTEVT-250SX-12					
26.70 mm	4.96 mm		92.90 mm		KTEVN-250SX					

<b>SPRING KITS</b>										
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-KTM250-05	25.50	18.30	21.80	14.0	55@34.3	170@24.3	12.60mm	21.7mm	11.50	OEM RETAINER + OEM SEAT

**KTM 250SX-F  
2012-2017**

<b>INTAKE VALVES</b>										
Head Diam	Stem Diam		Length		Black Nitride/Titanium					
32.50 mm	4.97 mm		96 mm		KTIVT-250SX-17					

<b>EXHAUST VALVES</b>										
Head Diam	Stem Diam		Length		Black Nitride/Titanium					
26.50mm	4.98 mm		98.5 mm		KTEVT-250SX-17					

<b>SPRING KITS</b>										
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-KTM250-08	20.80	14.2	SINGLE		58@34.3	160@24.3	13.80mm	20.5mm	10.20	OEM RETAINER + OEM SEAT

**KTM 450  
2002-2012**

<b>INTAKE VALVES</b>			
Head Diam	Stem Diam	Length	Black Nitride/Titanium
40.25 mm	5.98 mm	87.90 mm	KTIVN-450SX-12

<b>EXHAUST VALVES</b>			
Head Diam	Stem Diam	Length	Black Nitride/Titanium
31.70mm	5.98 mm	89.70 mm	KTEVT-450SX12

**KTM 450  
2013-2017**

<b>INTAKE VALVES</b>			
Head Diam	Stem Diam	Length	Black Nitride/Titanium
40.00 mm	5.98 mm	93.70 mm	KTIVN-450SX-17

<b>EXHAUST VALVES</b>			
Head Diam	Stem Diam	Length	Black Nitride/Titanium
33.10mm	5.98 mm	92.85 mm	KTEVT-450SX-17

**POLARIS**

**POLARIS  
XP900**

<b>INTAKE VALVES</b>										
Head Diam	Stem Diam		Length		Black Nitride/Titanium					
34.50mm	5.47mm		95.70mm		POLIVN-3450					
37.80mm	5.47mm		95.70mm		POLIVN-3780					

<b>EXHAUST VALVES</b>										
Head Diam	Stem Diam		Length		Black Nitride/Titanium					
32.40mm	5.45mm		96.60mm		POLEVN-3240					

<b>SPRING KITS</b>										
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-TSLS-IFL (no OEM seat)

<b>ENGINE COMPONENTS</b>	
<b>CAM FOLLOWER</b>	CF-31.15/2.50
<b>VALVE GUIDES</b>	GDE-POL55-LC + VS-5.5E

**POLARIS  
XP900**

<b>INTAKE VALVES</b>										
Head Diam	Stem Diam		Length		Black Nitride/Titanium					
34.50mm	5.47mm		95.70mm		POLIVN-3450					
37.80mm	5.47mm		95.70mm		POLIVN-3780					
<b>EXHAUST VALVES</b>										
Head Diam	Stem Diam		Length		Black Nitride/Titanium					
32.40mm	5.45mm		96.60mm		POLEVN-3240					
<b>SPRING KITS</b>										
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-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-TSLS-1FL (no OEM seat)
<b>ENGINE COMPONENTS</b>										
<b>CAM FOLLOWER</b>	CF-31.15/2.50									
<b>VALVE GUIDES</b>	GDE-POL55-LC + VS-5.5E									

**POLARIS  
XP1000**

<b>INTAKE VALVES</b>									
Head Diam	Stem Diam		Length		Black Nitride/Titanium				
37.80mm(std)	5.48mm		95.80mm		POLIVN-3780				
38.80mm(+1)	5.48mm		95.80mm		POLIVN-3880				
<b>EXHAUST VALVES</b>									
Head Diam	Stem Diam		Length		Black Nitride/Titanium				
29.20mm(std)	5.46mm		96.60mm		POLEVN-2920				
30.20mm(+1)	5.46mm		96.60mm		POLEVI-3020				
<b>ENGINE COMPONENTS</b>									
<b>CAM FOLLOWER</b>	CF-31.15/2.50								
<b>VALVE GUIDES</b>	GDE-POL55-LC + VS-5.5E								

**POLARIS RANGER / SPORTMAN  
RZR-800 / XP-700 / SORTMAN 800TTV**

<b>SPRING KITS</b>										
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-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

# SEEDOO

## SEEDOO

4TEC 12V RXP / RXT

### INTAKE VALVES

Head Diam	Stem Diam	Length	Black Nitride/ <b>Inconel</b>
38.00mm	5.96mm	90.25	SEAIVC3860S

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

### EXHAUST VALVES

Head Diam	Stem Diam	Length	Black Nitride/ <b>Inconel</b>
31.00mm	5.95mm	90.70mm	SEAEVI-3160S

### 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-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



## SUZUKI RM-Z 250

2004-2006

### INTAKE VALVES

Head Diam	Stem Diam	Length	Black Nitride/ <b>Titanium</b>
31.00mm	4.46 mm	79.24 mm	SZIVT-250-06

### EXHAUST VALVES

Head Diam	Stem Diam	Length	Black Nitride/ <b>Titanium</b>
25.00mm	4.46mm	79.24mm	SZEVV-250-06



**SUZUKI RM-Z 250**  
2007-2013

<b>INTAKE VALVES</b>			
Head Diam	Stem Diam	Length	Black Nitride/Titanium
31.00mm	4.48mm	80.64mm	SZIVT-250-13

<b>EXHAUST VALVES</b>			
Head Diam	Stem Diam	Length	Black Nitride/Titanium
25.00mm	4.47mm	80.90mm	SZEVN-250-13

**SUZUKI RM-Z 450**  
2005-2007

<b>INTAKE VALVES</b>			
Head Diam	Stem Diam	Length	Black Nitride/Titanium
36.00mm	4.97mm	82.42mm	SZIVT-450-07

<b>EXHAUST VALVES</b>			
Head Diam	Stem Diam	Length	Black Nitrided/Titanium
29.00mm	4.96mm	81.28mm	SZEVN-450-07

<b>SPRING KITS</b>										
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-RM450 (int)	25.00	17.70	SINGLE		34@29.50	96 @ 29.50	12.50mm	15mm	10.6	OEM RETAINER + OEM SEAT
SPR-RM450E (exh)	23.20	17.00	SINGLE		34@29.50	96 @29.50	14.50mm	15mm	8.90	OEM RETAINER + OEM SEAT

**SUZUKI RM-Z 450**  
2008-2012

<b>INTAKE VALVES</b>			
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

<b>EXHAUST VALVES</b>			
Head Diam	Stem Diam	Length	Black Nitride/Titanium
29.00mm	5.46mm	81.00mm	SZEVN-LT450

<b>SPRING KITS</b>										
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-RM450 (int)	25.00	17.70	SINGLE		34@29.50	96 @ 29.50	12.50mm	15mm	10.6	OEM RETAINER + OEM SEAT
SPR-RM450E (exh)	23.20	17.00	SINGLE		34@29.50	96 @29.50	14.50mm	15mm	8.90	OEM RETAINER + OEM SEAT



**YAMAHA 250F**  
2001-2013

<b>INTAKE VALVES</b>			
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
<b>EXHAUST VALVES</b>			
Head Diam	Stem Diam	Length	Black Nitride/Titanium
24.50mm	4.46mm	77.97	YEVT-250

**YAMAHA 250F**  
2015

<b>INTAKE VALVES</b>			
Head Diam	Stem Diam	Length	Black Nitride/Titanium
3100mm	4.98mm	83.60mm	YIVT-YZ250/15-50
32mm (+1mm)	4.98mm	83.60mm	YIVT-YZ250/15-50-1
<b>EXHAUST VALVES</b>			
Head Diam	Stem Diam	Length	Black Nitride/Titanium
25mm	4.46mm	82.4mm	YIVT-YZ250/15-50
25.00mm (+1mm)	4.46mm	82.4mm	YEVT-YZ250-15-50-1

**YAMAHA 450F**  
2003-2010

<b>INTAKE VALVES</b>			
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
27.00mm	4.48 mm	76.30mm	YIVN-YZ450-1
27.00mm	4.48 mm	77.2mm	YIVN-YZ450-2
<b>EXHAUST VALVES</b>			
Head Diam	Stem Diam	Length	Black Nitride/Titanium
28.00mm	4.95mm	75.10mm	YEVN-YZ450

**YAMAHA 450F**  
2010-2013

<b>INTAKE VALVES</b>										
Head Diam		Stem Diam		Length		Black Nitride/Titanium				
36.00mm		5.48mm		83.80mm		YIVN-YZ450F-10				
36.00mm		5.48mm		83.80mm		YIVT-YZ450F-10				

<b>EXHAUST VALVES</b>										
Head Diam		Stem Diam		Length		Black Nitride/Titanium				
30.00mm		5.47mm		86.00mm		YEVN-YZ450F-10				

<b>SPRING KITS</b>										
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-YZ450-10I (int)	22.80	15.30	SINGLE		75@34.80	215 @24.80	11.80mm	23mm	14.00	OEM RETAINER + OEM SEAT
SPR-YZ450-10E(exh)	19.50	13.50	SINGLE		50@30.80	130@20.80	11.30mm	19.50mm	8.00	OEM RETAINER + OEM SEAT

**YAMAHA 450F**  
2010-2017

<b>INTAKE VALVES</b>										
Head Diam		Stem Diam		Length		Black Nitride/Titanium				
37.00mm		5.48mm		89.95mm		YIVT-YZ450-17				

<b>EXHAUST VALVES</b>										
Head Diam		Stem Diam		Length		Black Nitrided/Titanium				
30.50mm		5.47mm		80.65mm		YEVY-YZ450-17				

**YAMAHA R6**

<b>INTAKE VALVES</b>										
Head Diam		Stem Diam		Length		Black Nitride/Titanium				
27.00mm		4.47mm		94.50mm		YIVT-YZF-R6				

<b>EXHAUST VALVES</b>										
Head Diam		Stem Diam		Length		Black Nitrided/Titanium				
23.00mm		4.46mm		95.00mm		YEVY-YZF-R6				

**YAMAHA FRZ / SVHO  
1800 16V WATERCRAFT**

<b>INTAKE VALVES</b>										
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				
<b>EXHAUST VALVES</b>										
Head Diam		Stem Diam		Length		Black Nitride/Titanium				
29.00 (std)		5.47mm		89.95mm		YEVI-FZR29				
30.00 (+1)		5.47mm		89.95mm		YEVI-FZR30				
<b>SPRING KITS</b>										
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-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
<b>ENGINE COMPONENTS</b>										
<b>CAM Follower</b> <b>CF-30/3.3</b>										

**YAMAHA YXZ1000R / TR1 / TEXTRON WILDCAT XX  
2019**

<b>INTAKE VALVES</b>										
Head Diam		Stem Diam		Length		Black Nitride/Titanium				
31.00mm (std)		4.45mm		88.85mm		YIVN-YXZ1000R				
<b>EXHAUST VALVES</b>										
Head Diam		Stem Diam		Length		Black Nitride/Titanium				
26.00 (std)		4.45mm		88.85mm		YEVN-YXZ1000R				
27.00 (+1)		4.45mm		88.85mm		YEVI-YXZ1000R-1				
<b>SPRING KITS</b>										
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-YXZ1000-1	21.45mm	15.250mm	SINGLE		47@34.7	145 @ 10	11.30	23.6mm	8.90	RET-YXZ1000 (OEM Seat)
<b>ENGINE COMPONENTS</b>										
<b>CAM Follower</b> For Conversion to Shim inside the Bucket: CF-26.5/3.0+7.5. Requires machining of OEM retainer.										
<b>VALVE STEM SEAL</b> VS-YXZ4.5E										
<b>VALVE GUIDE</b> GDE-YXZ-4.5E (Intake & Exhaust)										



## PISTON - T

Made from ultra-soft ring-spun cotton. Supertech artwork is soft hand screen printed with special foil application. This shirt is tag less and is sized perfectly for people that want to win.



- Tshirt-Piston-S
- Tshirt-Piston-M
- Tshirt-Piston-L
- Tshirt-Piston-XL
- Tshirt-Piston-2XL



## WINDY

Lightweight Packable Windbreaker Jacket has water resistant 82gm 100% polyester body fabric with a zip front closure, scuba neck, mesh lined 3 panel hood, and welt pockets.

- ST-Jacket-S
- ST-Jacket-M
- ST-Jacket-L
- ST-Jacket-XL
- ST-Jacket-2XL

## MULTICAM

60% Polyester / 39% Cotton / 1% PU Spandex.  
Size: One Size Fits All  
Embroidery: 3D Puff

Hat-Multicam-OS



## DARKSIDE

80% Acrylic / 20% Wool \*White colorway (100% Acrylic)  
Size: One Size Fits All  
Embroidery: 3D Puff

Hat-Darkside-OS



## 2TONE

65% Polyester / 35% Cotton. Classic trucker cap with premium mesh panels • Hard buckram, Structured • Matching plastic snapback closure • Matching undervisor  
Size: One Size Fits All  
Embroidery: 3D Puff

Hat-2Tone-OS





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# RETURN AUTHORIZATION

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JEN

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FORSBERG

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JEN  
INDUCTION SYSTEMS

FORSBERG 64

Black  
Magic

VBC  
RACING

NOS  
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