

***KELFORD* CAMS**

2020 CATALOGUE



***GIVING YOU THE
POWER TO WIN***

www.kelfordcams.com

About **KELFORD** CAMS

Kelford Cams was established in Christchurch, New Zealand over 50 years ago in 1968. The Kelford name comes from the two founding owners Norm Kelly and Ron Rutherford. Today the company is still privately owned but has grown substantially. Kelford Cams export to over twenty countries with most products heading to the USA, Australia, Malaysia, UAE, UK and Europe. All of our camshafts are designed and machined to surpass industry standards. We use state of the art bespoke CAE software and CNC manufacturing processes in-house to maintain total control over of the quality of our products.

Our Vision is for Kelford Cams to be industry leaders in design, manufacture and distribution of camshafts for use in high performance turbocharged and naturally aspirated multi valve engines.

Our Values It's all about winning! We do everything possible for our customers to help them achieve their expected results. We are about 'Giving You the Power to Win! We strive to be better than we are today to push design and innovation for tomorrow.

Why Choose a Kelford Cam?

50 years of designing and refining cams means that we provide the most comprehensive catalogue for motorsport and performance street applications worldwide.

We take pride in ensuring that all of our profiles are world class and fully engineered to give the best power output for the application while still retaining longevity and durability in operation.

The large majority of our catalogue camshaft range comes with an available selection of performance matched valve springs and other valvetrain components to give you peace of mind in selecting the correct package that ensures complete valvetrain control in your setup.

We genuinely care about your results. Our satisfaction comes from seeing our customers achieving their goals whilst proving our technical capabilities are ahead of the competition. We want to give you the power to win.

Our state of the art in-house design systems and multiple master less CNC camshaft grinders allows us to design and engineer custom camshafts and complete valvetrain packages to suit your individual requirements at a level unmatched by our competitors.

Our Catalogue range of camshafts has been formulated to cover a wide variety of motorsport applications, the lobe designs are ultra-modern and proven to perform. As well as our catalogue range of cams, we will continue to offer the one-off custom designed cams that we have been well known for over the last 50 years. New products will be added to this print copy on regular basis but to keep up to date with our latest additions you will be able to access a pdf version of this catalogue on our website and if you subscribe to our newsletter, you will receive new product releases as they happen.

To keep ahead of the competition visit www.kelfordcams.com

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Chevrolet 262-400ci Small Block V8



The selection of camshafts below are to suit small block Chevrolet V8 engines from 1958 to 1998, excluding LT1 and LT4. Our catalogue range caters for hydraulic flat tappet and hydraulic roller camshafts. Our SX profiles feature ultra modern lobe designs with low advertised duration and maximum lobe area, giving great throttle response and lots of power through the RPM range. Our range of solid lifter flat tappet cams, and solid roller lifter cams is too extensive to list; these are made to order to suit your requirements.



Hydraulic Flat Tappet Cams

Camshaft Part No	Application	Advertised Duration @ .006" Cam Lift		Duration @ .050" Cam Lift		Valve Lift @ 1.5:1 Rocker Ratio		Suggested Centrelines		Pushrod Lift @ TDC		Valve Spring Part Number
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	
105-A	252 degree single pattern cam for strong torque in heavy vehicles or towing, retaining good economy.	252	252	206	206	.401"	.401"	108	114	.036"	.022"	KVS4843
SX105-B	SX-256 for applications needing high torque while retaining smooth idle.	256	264	212	218	.459"	.459"	106	114	.050"	.036"	KVS4843
SX105-C	SX-262 mild performance cam to suit stock compression engines. Great performance in heavy cars with tall diff gears. Slightly noticeable idle change.	262	272	218	225	.470"	.470"	106	114	.059"	.046"	KVS4843
SX105-D	SX-268 high performance cam. Most popular street rod specification. Suits 9:1+ compression. Largest cam for stock converter. Noticeable idle change.	268	276	224	230	.486"	.486"	106	114	.068"	.053"	KVS4843
SX105-E	SX-274 street / strip performance cam for very strong midrange power. Suits 2200 converter, 383-400 ci. Rough idle.	274	284	232	238	.500"	.500"	106	114	.081"	.064"	986-16
SX105-F	SX-280 street / strip high performance cam for very strong midrange power, 2600 converter. Rough idle.	280	288	236	240	.507"	.507"	106	112	.088"	.074"	986-16
SX105-G	SX-286 street / strip high performance cam delivering very strong mid-top end power. Super lumpy idle.	286	294	242	248	.515"	.515"	105	111	.102"	.091"	986-16
105-X	Custom hydraulic lifter flat tappet camshaft for Chevrolet small block V8 engines. Contact us for specifications to suit you as there are too many to list.											

Retro-fit - Hydraulic Roller Cams

Camshaft Part No	Application	Advertised Duration @ .006" Cam Lift		Duration @ .050" Cam Lift		Valve Lift @ 1.5:1 Rocker Ratio		Suggested Centrelines		Pushrod Lift @ TDC		Valve Spring Part Number
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	
SX105-252HR	High torque cam for good economy. Suits heavy cars / trucks and towing	252	252	200	200	.470"	.470"	109	115	.027"	.019"	KVS4915
SX105-264HR	Mild performance cam for near stock engines. Good torque, idle quality and mileage.	264	270	212	218	.500"	.480"	107	115	.046"	.034"	KVS4915
SX105-270HR	High performance cam for mild engines. Great for weekend cruiser street machines. Largest cam with stock converter. Noticeable idle sound.	270	276	220	226	.515"	.500"	106	114	.061"	.047"	KVS4918
SX105-282HR	Street / strip cam for strong midrange and top end power. Rough idle.	282	290	230	238	.520"	.520"	105	111	.082"	.073"	KVS4918
SX105-X-HR	Custom specification hydraulic roller camshaft for Chevrolet small block V8 engines. We can manufacture cams to your specifications or design a profile for your specific application.											



OEM Fitment - Hydraulic Roller Cams

Camshaft Part No	Application	Advertised Duration @ .006" Cam Lift		Duration @ .050" Cam Lift		Valve Lift @ 1.5:1 Rocker Ratio		Suggested Centrelines		Pushrod Lift @ TDC		Valve Spring Part Number
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	
SX106-252HR	High torque cam for good economy. Suits heavy cars / trucks and towing	252	252	200	200	.470"	.470"	109	115	.027"	.019"	KVS4915
SX106-264HR	Mild performance cam for near stock engines. Good torque, idle quality and mileage.	264	270	212	218	.500"	.480"	107	115	.046"	.034"	KVS4915
SX106-270HR	High performance cam for mild engines. Great for weekend cruiser street machines. Largest cam with stock converter. Noticeable idle sound.	270	276	220	226	.515"	.500"	106	114	.061"	.047"	KVS4918
SX106-282HR	Street / strip cam for strong midrange and top end power. Rough idle.	282	290	230	238	.520"	.520"	105	111	.082"	.073"	KVS4918
SX106-X-HR	Custom specification hydraulic roller camshaft for Chevrolet small block V8 engines. We can manufacture cams to your specifications or design a profile for your specific application.											

Matching Components for Chevrolet 262-400 Small Block V8

We stock a full range of valve train parts to compliment our Chevrolet camshaft range. Lifters are from Delphi or Comp Cams, and valve springs are from PAC Racing Springs or Comp Cams.

Part No	Description
HT817	Genuine GM hydraulic lifter set made by Delphi. Featuring the anti-wear hard pad, this is the best hydraulic flat tappet lifter available.
KVS4843	Single valve springs with a flat wound damper for Chevrolet V8, to suit mild hydraulic lifter camshafts. For use with OEM cast heads and retainers. 95lb @ 1.750" / 290lb @ 1.250" / Coil bind 1.180".
KVS4915	High performance PACALOY™ beehive valve spring set, suits hydraulic roller cams. Install at 125lb @ 1.750" / Coil Bind @ 1.100"
KVS4918	High quality PACALOY™ beehive valve spring set. 130lb @ 1.800" / Coil Bind at 1.060"
986-16	Chevrolet V8 high performance dual valve spring set from Comp Cams. Machining required in stock heads.
740-16	Chrome-moly retainers to suit 986 valve springs.
787-16	Chrome-moly valve spring retainers to suit 4915 and 4918 beehive valve springs used with 11/32 diameter valves.
613-16	11/32 valve stem, 10 degree superlocks to suit 986 valve springs and 740 retainers.
648-16	11/32 valve stem, 7 degree valve locks to suit 4915-4918 springs with 787 retainers.
853-16	Retro-fit hydraulic roller lifter for early blocks originally fitted with Flat Tappet cam. Tall body fits standard blocks and Tall Lifter Bore aftermarket blocks.
4705-16	4705-16 Spring seat locator to suit KVS4915 and KVS4918 when fitting to Small Block Chev 262-400ci. 0.570" I.D.
3100	Comp Cams multi-keyway, adjustable timing gear and chain set to suit engines using non factory roller cams (no step on the front journal).
3136	Comp Cams multi-keyway, adjustable timing gear and chain set to suit OEM hydraulic roller cam engines 1987-98, except LT1 & LT4 (step on the front journal).



Chevrolet LS Series V8



The catalogue cams listed here come from many years of design, development and testing. We have some of the best lobe designs in the industry. Our profiles feature more duration at .200" (for the same at .050"), while retaining the desired level of valve-train control. This results in greater power over a wider RPM range for our customers.

All of our camshafts are made using three-bolt cores, however most profiles are available as a single-bolt cam upon request; please specify your requirement when ordering.



Street Performance Series - Hydraulic Roller Lifter

Camshaft Part No	Application	Advertised Duration @ .006" Cam Lift		Duration @ .050" Cam Lift		Valve Lift @ 1.7:1 Rocker Ratio		Lobe Separation	Pushrod Lift @ TDC		Valve Spring Part Number
		In	Ex	In	Ex	In	Ex		In	Ex	
108-K	Replacement cam for Callaway HSV 300KW engines. This cam eliminates the harmonic spike that the original has, therefore extending valve spring life.	274	278	218	222	.561"	.561"	115	.043"	.038"	KVS4918
SS108-A	5.7-6.2L Great all-round performance cam upgrade for auto or manual transmission LS engines. Smooth idle, good economy.	270	276	222	226	.575"	.575"	114	.047"	.042"	KVS4918
SS108-D	5.7 - 6.2L Great all round performance cam upgrade for auto or manual transmission LS engines. Smooth idle, good economy	274	282	226	232	.580"	.580"	114	.054"	.052"	KVS4918
SS108-J	Designed to improve midrange throttle response in engines using rectangle port heads. Great in applications where strong midrange RPM is more important than top end. Rough idle.	274	282	226	232	.600"	.600"	110	.069"	.063"	KVS4918
SS108-C	5.7-6.2L Blower cam. High performance cam with low overlap for use in supercharged street applications.	276	288	228	238	.600"	.600"	116	.047"	.057"	KVS1518 or PAC1204-X
SS108-B	5.7-6.2L Strong mid-level performance cam for auto or manual transmission. This is the largest cam for LS1 engines using stock pistons and stock head deck height.	278	286	230	236	.600"	.600"	113	.064"	.059"	KVS1518
SS108-B12	Back By Popular Demand. The B-12 features increased overlap to give great midrange power in 5.7L LS1 engines. Designed specifically to produce a rough idle!	282	290	230	236	.600"	.600"	112	.065"	.062"	KVS1518
HS108-C12	The C12 features increased overlap to give great midrange power while retaining tune-ability. This is the cam you need if you seek an aggressive idle sound.	280	288	232	238	.620"	.620"	112	.069"	.067"	KVS1518
HS108-D	High performance cam to suit those wanting plenty of top end power using rectangle port heads. Suits manual transmission or automatic with 2500 stall. Rough idle.	284	292	236	242	.630"	.610"	112	.071"	.071"	KVS1518 or PAC1204-X
108-X	Custom camshaft for Chevrolet LS series engines. We can manufacture to your specifications or design a camshaft to suit your specific application.										

Racer Series - Hydraulic Roller Lifter

Camshaft Part No	Application	Advertised Duration @ .006" Cam Lift		Duration @ .050" Cam Lift		Valve Lift @ 1.7:1 Rocker Ratio		Lobe Separation	Pushrod Lift @ TDC		Valve Spring Part Number
		In	Ex	In	Ex	In	Ex		In	Ex	
SS108-D1	Racing cam specifically designed for midrange throttle response in L98-LS3 engines. Ideal for track racing and drift competition engines. Rough idle.	284	302	236	250	.630"	.630"	109	.075"	.099"	PAC1204-X
SS108-R1	Racing cam specifically designed for midrange throttle response in LS7 engines. Ideal for track racing and drift competition engines. Rough idle.	284	306	236	254	.630"	.630"	111	.072"	.095"	PAC1204-X
TS108-P	Suits a professionally built high HP turbocharged LS. Best in large cubic inch drag racing engine. Valve spring will depend on RPM and boost level.	290	302	240	246	.630"	.630"	117	.066"	.067"	PAC1204-X or PAC1209-X



Racer Series - Hydraulic Roller Lifter (Continued)

Camshaft Part No	Application	Advertised Duration @ .006" Cam Lift		Duration @ .050" Cam Lift		Valve Lift @ 1.7:1 Rocker Ratio		Lobe Separation	Pushrod Lift @ TDC		Valve Spring Part Number
		In	Ex	In	Ex	In	Ex		In	Ex	
SS108-R2	Racing cam for mid-level competition engines using cathedral port heads. Street, strip, track or marine applications.	292	306	244	252	.630"	.630"	111	.085"	.095"	PAC1204-X
SS108-R3	LS7, C5R Corvette, short track GT racing spec cam. Upgrade for GM III *The lift stated is using a 1.8 rocker ratio.	294	316	246	264	.670"	.650"	108	.099"	.126"	PAC1204-X or PAC1209-X
SS108-R4	LS7 drag racing cam. Requires high stall, trans brake or manual shift.	298	312	250	260	.680"	.650"	115	.089"	.090"	PAC1209-X
108-X	Custom camshaft for Chevrolet LS series engines. We can manufacture to your specifications or design a camshaft to suit your specific application.										

Racer Series - Solid Roller Lifter

Camshaft Part No	Application	Advertised Duration @ .006" Cam Lift		Duration @ .050" Cam Lift		Valve Lift @ 1.7:1 Rocker Ratio		Lobe Separation	Pushrod Lift @ TDC		Valve Spring Part Number
		In	Ex	In	Ex	In	Ex		In	Ex	
RX108-A8	Solid roller lifter cam to suit multiple motorsport applications: drift, circuit, muscle car, street / strip. Tight separation for massive midrange torque.	288	304	252	266	.650"	.650"	108	.108"	.131"	PAC1209X
RX108-A11	Solid roller lifter cam to suit multiple motorsport applications: drift, circuit, muscle car, street / strip. Wide lobe separation to extend top end RPM.	288	304	252	266	.650"	.650"	111	.100"	.116"	PAC1209X
RX108-B	Solid roller lifter cam for 6.0-7.0L+ engines. Suits top street or super sedan style racing. Suits heavy full body car with well modified engine, 10:1+ compression, high stall with trans brake or manual transmission. Carburettor or EFI.	300	308	262	270	.660"	.660"	108	.129"	.125"	PAC1209X
RX108-SP	Baseline solid lifter camshaft for turbocharged competition motors running launch limiters and / or flat shift. Valve spring will depend on RPM and boost level.	296	302	258	264	.650"	.660"	115	.092"	.101"	Call for options
108-X	Custom camshaft for Chevrolet LS series engines. We can manufacture to your specifications or design a camshaft to suit your specific application.										

Matching Components for Chevrolet LS Series V8

We stock the following parts to compliment our Chevrolet LS series camshaft range.

Part No	Description
KVS4918	High quality PACALOY™ beehive valve spring set to suit LS engines (except L7). Can be used with OEM retainers, 774 steel retainers or 772 titanium retainers. 130lb @ 1.800" / Coil bind @ 1.140"
KVS1518	Premium quality gold nitrided PACALOY™ beehive valve spring set. For use with OEM retainers, 774 steel retainers or 772 titanium retainers. 140lb @ 1.800" / Coil bind @ 1.140". Requires a custom spring base if used in LS7.
KVSLSDBL	Dual Valve Spring, Retainer, Seat, Lock and Seal Kit. 145lb @ 1.800", coilbind 1.000"
KVSLSDBL TURBO	Dual Valve Spring, Retainer, Seat, Lock and Seal Kit. 160lb @ 1.800", coilbind 1.000"
PAC1204X	PAC Racing RPM Series dual valve spring set. Requires either R335 steel retainers or R435 titanium retainers. 145lb @ 1.800" / Coil bind @ 1.000"
PAC1209X	PAC Racing RPM Series dual valve spring set. Requires either R335 steel retainers or R435 titanium retainers. 160lb @ 1.800" / Coil bind @ 1.000"
774	Steel retainers to suit the, KVS4918 and KVS1518 valve springs.
772	Titanium retainers to suit the KVS4918 and KVS1518 valve springs.
R335	Steel retainers to suit PAC1204X and PAC1209X valve springs.
R435	Titanium retainers to suit PAC1204X and PAC1209X valve springs.
7102	LS1 and LS2 double row timing set for three bolt camshaft, 1 post (half moon).
7105	LS2 double row timing set for single bolt camshaft, 4 post (half moon).
7106	LS1-3 double row timing set to convert from single to three bolt camshaft, 4 post.
S129	Spring Seat to suit 1204X / 1209X valve springs.
511	LS Stem seal to suit S103 Spring Seats when running Dual Valve Springs.
13702	LS Rocker Trunnion Kit.
7956.16	Hi Tech Pushrods 7.450"
7796.16	Hi Tech Pushrods 7.425"
HT2148	Genuine GM hydraulic roller lifter set to suit LS engines.



Chrysler Hemi 245-265ci 6 Cylinder



This Kelford Cams catalogue selection of camshafts to suit the Chrysler Hemi 6 has been developed over fifty years of working with these engines. Whether your build is a daily driven classic or a full competition engine, we can supply the correct camshaft and related valve-train parts for your build. Please note: All of our Hemi 6 cams must use a 15 tooth oil pump gear.



Hydraulic Lifter Cams

Camshaft Part No	Application	Advertised Duration @ .006" Cam Lift		Duration @ .050" Cam Lift		Valve Lift @ 1.7:1 Rocker Ratio		Suggested Centrelines		Pushrod Lift @ TDC		Valve Spring Part Number
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	
115-A	Cam upgrade for low end torque. Suits stock engines with automatic or manual transmission.	250	250	205	205	.454"	.454"	107	115	.037"	.018"	KVS265
115-B	Midrange street performance cam. Suits stock converter automatic, or manual transmission.	270	270	218	218	.484"	.484"	106	114	.056"	.034"	KVS265
115-C	High performance cam to suit mildly modified Hemi 6 engines. Best with a manual transmission.	284	284	225	225	.507"	.507"	106	112	.068"	.047"	KVS265
115-D	Kelford E49 upgrade. A well proven higher performance version of the original. Suits triple carbs or four barrel carb.	294	294	234	234	.496"	.496"	105	113	.085"	.056"	KVS265
115-X	Custom camshaft for Chrysler Hemi 6 engines. We can custom design a cam to suit your needs, or grind to your supplied specifications.											

Solid Lifter Cams

Camshaft Part No	Application	Advertised Duration @ .016" Cam Lift		Duration @ .050" Cam Lift		Valve Lift @ 1.7:1 Rocker Ratio		Suggested Centrelines		Pushrod Lift @ TDC		Valve Spring Part Number
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	
115-SB	Racing cam to suit well developed Hemi 6. Suits 11:1+ compression, 4 barrel or triple carbs. Must use solid lifters.	296	300	249	253	.570"	.550"	103	109	.102"	.083"	Call for options
115-SC	Racing cam to suit well developed Hemi 6. Suits 12:1+ compression, triple carbs and CHI head. Must use solid lifters.	302	306	256	260	.582"	.582"	103	107	.115"	.104"	Call for options
115-X	Custom camshaft for Chrysler Hemi 6 engines. We can custom design a cam to suit your needs, or grind to your supplied specifications.											

Matching Components for Chrysler Hemi 6 Cylinder

We stock a full range of valve train parts to compliment our Chrysler Hemi 6 camshaft range. Lifters are from Johnson or Comp Cams, and valve springs are from PAC Racing Springs.

Part No	Description
KVS265	High performance single valve spring set for Chrysler Hemi 6 engines, to suit mild hydraulic lifter camshafts. Fits the OEM head and retainer, no machining required. 105lb @ 1.700" / Maximum lift .500" / Coil bind @ 1.100"
60062	15 Tooth oil pump drive gear. All of our new Chrysler Hemi 6 camshafts MUST use a 15 tooth oil pump gear to mesh properly with the cam.
CS6265	Chrysler Hemi 6, multi-keyway adjustable, double row timing chain and gear set. Made by Rollmaster.
HT2011	Genuine U.S.A. Johnson Hydraulic lifter set.
2901-12	Comp solid lifters with EDM oil hole in the face for superior cam and lifter lubrication.



Ford 109E-116E 997-1600cc



Bred from many years of modifying and racing these engines ourselves, the Kelford camshaft range is among the best you will find anywhere in the world for this classic engine.



Camshaft Part No	Application	Advertised Duration @ .015" Cam Lift		Duration @ .050" Cam Lift		Valve Lift @ 1.54:1 Rocker		Suggested Centrelines		Valve Lift @ TDC		Valve Clearances		Valve Spring Part Number
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	
150-GT	Ford GT spec cam. MSNZ Formula Ford logged cams also available on request.	247	296	203	207	.341"	.337"	109	109			.014"	.022"	KVS401
150-A	Mild performance cam, one step up from a GT.	258	258	216	216	.388"	.388"	107	109	.068"	.059"	.012"	.014"	KVS401
150-B	Fast road cam, suits single down draught or twin side draught carbs.	278	283	230	232	.402"	.400"	105	109	.091"	.079"	.018"	.018"	KVS401
150-C	Club race or rally cam, suits twin 40's, 145HP engine.	290	295	242	247	.452"	.439"	104	110	.132"	.114"	.016"	.016"	KVS402
150-D	Rally and race cam, suits well built engine 150-160HP range.	290	300	248	252	.480"	.480"	103	110	.152"	.123"	.016"	.016"	KVS402
150-J	Formula Junior single seater cam (between A6 & A8).	310	310	253	253	.430"	.430"	103	103	.145"	.145"	.016"	.016"	KVS402
150-E	Full race cam, suits light car, professionally built high-spec engine.	305	305	262	262	.470"	.470"	100	106	.198"	.167"	.016"	.016"	KVS402
150-F	Full race cam, suits high compression, light car, close ratio gearbox.	320	320	264	264	.485"	.485"	100	104	.195"	.175"	.016"	.016"	KVS402
150-X	Custom camshaft for Ford 109E - 116E 997-1600cc engines. We can manufacture cams to your specifications or design a profile for your specific application.													

Matching Components for Ford 109E-116E 997-1600cc

We stock various valve train parts to compliment our Ford 109E-116E pushrod engines camshaft range.

Part No	Description
KVS401	High performance single valve spring set to suit 105E-116E & Formula Ford and OEM retainers. 67lb seat pressure @ 1.260" / Coil bind is at .708"
KVS402	High performance PACALOY™ dual valve spring set to suit the 105E-116E racing camshafts. Requires cylinder head machining and requires retainer part number RET1600. 82lb seat pressure @ 1.260" / Coil bind @ .670"
RET1600	Chrome-moly spring retainers, to suit KVS401 & 402 valve spring sets. Standard weight for Formula Ford legality.
CS41500	Double row timing gear and chain set. Multi-keyway adjustable.



Ford 1.6 & 2.0L SOHC



Originally made in Germany and used in Ford Cortina, Escort and Sierra cars through the 1970's and 80's, these engines remain a popular choice for classic racing today.



Camshaft Part No	Application	Advertised Duration @ .006" Cam Lift		Duration @ .050" Cam Lift		Valve Lift @ 1.6:1 Rocker Ratio		Suggested Centrelines		Valve Lift @ TDC		Valve Spring Part Number
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	
145-A	Mild street performance cam to suit a stock engine. No valve spring upgrade required.	256	264	226	234	.395"	.400"	108	110	.060"	.068"	Stock or KVS2004-K
145-B2	Club race cam for mildly tuned engines, will suit either single or twin carbs.	264	272	234	242	.430"	.430"	105	109	.081"	.085"	KVS42-K or KVS2004-K
145-D	Hill climb, rally and Targa cam to suit well built competition engines with 10:1+ compression, side drafts or IR fuel injection.	282	286	250	254	.480"	.480"	104	108	.137"	.122"	KVS42-K or KVS2004-K
145-E2	Full race cam to suit professionally built, high compression, competition engines. Suits lightweight cars with close ratio gearbox.	296	296	264	264	.512"	.512"	103	110	.174"	.140"	KVS42-K
145-F	Full race cam to suit professionally built, high compression, competition engines well over 200HP. Suits lightweight cars with close ratio gearbox, such as FF2000 single seaters.	306	306	272	272	.520"	.520"	100	107	.211"	.176"	KVS42-K
145-TB	Turbo specific grind with wider lobe separation to suit forced induction.	248	256	218	226	.400"	.400"	108	114	.049"	.040"	KVS42-K
145-X	Custom solid lifter camshaft for Ford 1.6 and 2.0L SOHC engines. We can manufacture to your specifications or design a profile for your specific application.											

Matching Components for Ford 1.6 and 2.0L SOHC

We stock the following valve train components to compliment our Ford 1.6 and 2.0L SOHC camshaft range.

Part No	Description
KVS42-K	Ovate wire PACALOY™ beehive valve spring and titanium retainer set. The ultimate valve spring for your classic 1970's-80's Ford Pinto engine. 95lb seat pressure @ 38.00mm (1.496") / 225lb @ 12.00mm valve lift / Maximum lift is 15.00mm.
KVS2004-K	High Performance single valve spring and Chrome Moly retainer set. Suits mid level performance camshafts, up to 13mm lift in 1970's-80's Pinto engines. 80lb seat pressure, 185lb at 11mm lift. Maximum lift 13.00mm.
RA2000	Long Pad Cam Followers with Carbide Inserted Pad.



Ford AU Falcon



The range of Kelford performance cams for the Ford AU Falcon engine includes everything from a mild drop-in to improve the factory engine to a range of cams to suit heavily modified engines. All these cams are to suit the factory hydraulic lifter. The 217-D cam has been designed to maximise performance in dirt track engines which use a carburettor conversion.

Camshaft Part No	Application	Duration @ .004" Cam Lift		Duration @ .050" Cam Lift		Cam Lift		Advertised Duration 0.1mm Valve Lift		Duration at 1mm Valve (0.040" Valve)		Valve Lift @ 1.8:1 Rocker Ratio		Suggested Centreline	
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	In	Ex
217-EZ	Drop-in cam to suit factory valvetrain and automatic transmission. We are able to grind over your stock cam, or from a new billet.	251	265	194	206	0.263"	0.263"	262	268	220	230	0.470"	0.470"	112	116
217-B	Race cam or spicy street cam. For well modified engines. Manual transmission or high stall converter required.	272	286	216	227	0.314"	0.300"	278	286	240	252	0.560"	0.535"	106	110
217-T1	Specifically designed for high horsepower boosted engines.	266	274	210	215	0.291"	0.280"	270	278	234	240	0.520"	0.500"	110	118
217-D	Dirt oval cam. Suits NZ stockcar class rules. 0.500" max valve lift.	280	284	221	224	0.280"	0.280"	290	294	246	250	0.500"	0.500"	104	108
217-X	Custom cams for AU Falcon engines available on request. We can design application specific profiles if required.														

Matching Components for Ford AU Falcon

We stock the following valve train components to compliment our Ford AU Camshaft range.

Part No	Description
VTKAU-R	Crow Cams valve spring and retainer set.
CS6EA-V	Crow Cams adjustable timing set.



Ford Barra 24 Valve BA-FG



The Kelford range of camshafts for the Ford 4.0L Barra engine have been developed and tested with proven results. These camshafts and the matching PAC Racing beehive valve springs suit mild street performance through to pro drag racing applications. The intake 218-A and 218-B camshafts, are designed with a slight difference in lobe duration and phasing to further promote swirl and tumble for proven cylinder filling efficiency and throttle response.



Camshaft Part No	Application	Advertised Duration		Duration @ 1mm Valve Lift		Valve Lift		Suggested Centrelines		Lift @ TDC		Valve Spring Part Number
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	
BA	Spec of the stock BA cam for reference only	255	247	209	202	11.00mm	11.00mm	Vari	Vari	Vari	Vari	
FG	Spec of the stock FG-F6 cam for reference only	258	258	213	213	11.00mm	11.00mm	Vari	Vari	Vari	Vari	
218-EZ	EZ Power stage 1 plug and play cams to suit near stock engines. Easy on the stock spring with boost up to 2 bar	262 258	262	218 214	218	11.00mm	11.00mm	Vari	Vari	Vari	Vari	Stock
218-A	High performance cams that give great power gains in engines with stock FG size turbo. Retains good idle tuneability and low end driveability. The original Ford valve spring can be used if you retain stock RPM limit and under 1.1 bar. Past that, the KVS40-K spring set is required.	268 262	268	224 218	224	11.50mm	11.50mm	Vari	Vari	Vari	Vari	KVS40 or KVS40-K
218-B	Racing cams to suit well built engines for competition use. Suits turbo sizing and motorsport applications in the 700-1000HP range. Requires our KVS40-K valve spring kit	280 274	280	236 230	236	11.88mm	11.88mm	Vari	Vari	Vari	Vari	KVS40 or KVS40-K
218-C	These cams still use hydraulic lifters, and suit competition cars only. Use this specification cam for engines around the 1200-1800HP range. Use on fixed cam timing or mechanically limited cam advance/retard	296 290	296	250 244	250	12.40mm	12.40mm	113	118	2.30mm	1.63mm	KVS40-K
218-SP	Solid lifter pro drag racing cams to suit high RPM competition cars only. Use on fixed cam timing (not variable)	294	302	250	258	12.40mm	12.40mm	113	118	2.93mm	2.46mm	KVS40-K
218-X	Custom hydraulic or solid camshafts for Ford Barra 24 Valve BA-FG engines.											

Matching Components for Ford Barra 24 Valve BA-FG

We stock the following valve train components to compliment our Ford Barra 24 Valve BA-FG camshafts.

Part No	Description
KVS40	KVS40 Ford BA/FG Six Cylinder. High performance valve spring set to suit the OEM retainer and seat. Drops into standard cylinder head setup with OE fitment. 110lb at 38.0mm install height. 205lbs at 11.50mm valve lift. Coil bind at 24.7mm.
KVS40-K	FORD 4.0L 6CYL (BARRA). PACALOY™ Beehive valve spring and Titanium retainer set. 105lb seat pressure at 38.70mm, 200lb @ 12mm Coil bind at 24.70mm.



Ford Cleveland 302-351 V8 (1970-1982)



This range of camshafts to suit Ford 302-351 Cleveland V8 flat tappet hydraulic lifter engines all feature profiles with ultra modern lobe designs. The catalogue range encompasses only our most popular hydraulic cams, the full range of profiles for these engines is too extensive to list. Contact us to discuss your requirements. We can make custom cams for both hydraulic and solid lifter flat tappet engines, as well as solid and hydraulic roller lifter engines.



Camshaft Part No	Application	Advertised Duration @ .006" Cam Lift		Duration @ .050" Cam Lift		Valve Lift @ 1.73:1 Rocker Ratio		Suggested Centrelines		Cam Lift @ TDC		Valve Spring Part Number
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	
130-A	High torque cam, great for towing, smooth idle.	252	252	206	206	.465"	.465"	106	114	.040"	.022"	351K
130-B	Mild performance cam, smooth idle, good torque.	260	264	212	218	.500"	.500"	106	114	.050"	.030"	351K
130-C	Mild street performance cam, noticeable idle.	264	272	218	225	.515"	.515"	106	114	.060"	.046"	351K
130-D	Our most popular Clevo cam, great midrange power.	272	278	225	230	.530"	.530"	106	114	.066"	.051"	351K
130-E	Street / strip cam, rough idle, 2000+ stall.	278	286	230	236	.550"	.550"	105	111	.082"	.072"	924
130-F	Race cam, rough idle, 3000+ stall.	288	294	240	246	.575"	.575"	105	111	.102"	.086"	924
130-X	Custom hydraulic lifter flat tappet camshaft for Ford 8 cylinder 302-351 Cleveland engines. Contact us for specifications to suit you as there are too many to list.											
130-X-S	Custom solid lifter flat tappet camshaft for Ford 8 cylinder 302-351 Cleveland engines. Contact us for specifications to suit you as there are too many to list.											
130-X-HR	Custom hydraulic roller lifter camshaft for Ford 8 cylinder 302-351 Cleveland engines. Contact us for specifications to suit you as there are too many to list.											
130-X-SR	Custom solid roller lifter camshaft for Ford 8 cylinder 302-351 Cleveland engines. Contact us for specifications to suit you as there are too many to list.											

Matching Components for Ford Cleveland 302-351 V8 1970-1982

We stock a full range of valve-train parts to compliment our Cleveland camshafts.

Part No	Description
357K	Complete replacement valve spring set, including retainers and replacement four groove locks.
924	Comp dual valve spring set. Requires cylinder head machining if using stock heads.
741	Chrome-moly valve spring retainers to suit 924 valve springs.
611	10 degree super locks to suit single groove 11/32 stem valves.
624	10 degree super locks to suit stock style multi groove valves.
3121	Ford 302-351 Cleveland 3-keyway, double row timing set.
HT900	Sealed Power or Johnson hydraulic lifter set.



Ford Cosworth BDA



The BDA was originally developed by Cosworth in association with Ford in 1969. Since then it has been used in many different configurations for many different racing classes. Today the 'BD' resurgence is bigger than ever and at Kelford Cams we still make many sets of these cams for all applications. This catalogue range is a mix of popular profiles from the past, and some modern profile designs that we have found work really well. RPM range and optimum lobe centrelines will vary depending on engine combination.



Camshaft Part No	Application	Advertised Duration @ .010" Cam Lift		Duration @ .050" Valve Lift		Valve Lift		Suggested Centrelines		Valve Lift @ TDC		Valve Clearances		Valve Spring Part Number
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	
147-A	1600 BDA stage 1 fast road cams.	290	296	241	237	.380"	.334"	106	108	.111"	.088"	.010"	.010"	KVS1800RS
147-C	The famous Cosworth L1 / BD3 rally cam combination.	308	295	252	237	.402"	.334"	104	108	.144"	.087"	.010"	.010"	KVS1800RS
147-D	Kelford 1600 BDA rally cams.	310	298	256	243	.418"	.398"	102	108	.164"	.110"	.010"	.010"	KVS1800RS
147-E	Kelford 2.0L BDG rally cams L146 / DA10.	300	310	258	258	.435"	.400"	102	108	.171"	.136"	.008"	.010"	KVS1800RS
147-H	Cosworth EA1 / BD4 cams.	325	328	269	261	.448"	.426"	100	106	.201"	.155"	.010"	.010"	KVS1800RS
147-I	Cosworth F1 BDD Formula Atlantic cams.	325	325	269	269	.400"	.400"	100	103	.188"	.176"	.010"	.010"	KVS1800RS
147-J	Race cams with high lift intake and F1 exhaust.	328	325	271	269	.432"	.400"	100	103	.210"	.176"	.010"	.010"	KVS1800RS
147-X	Custom solid lifter camshaft for Ford 4 cylinder Cosworth BDA engines. We can manufacture cams to your specifications or design a profile for your specific application.													

Matching Components for Ford Cosworth BDA

We stock the following valve train components to compliment our Ford Cosworth BDA camshafts.

Part No	Description
KVS1800RS	High Performance valve spring and retainer set. 85lb seat pressure at 33.00mm install height. 210lb at 10.00mm valve lift. Maximum lift 13.00mm.



Ford Cosworth YB



The YB Cosworth cams listed below cover a range of uses, from modified Sierra RS road and race cars, to High HP naturally aspirated rally, circuit and dirt track applications. These camshaft profiles are modern and well proven. Kelford Cams for Ford Cosworth YB are made on the 4WD cam casting.

Hydraulic Lifter Cams for Turbocharged Applications

Camshaft Part No	Application	Advertised Duration		Duration @ 1.00mm Valve Lift		Valve Lift		Suggested Centrelines		Valve Lift @ TDC		Valve Clearances	
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	In	Ex
146-A	Stage 1 turbo cams, BD15 upgrade.	264	264	222	222	10.25mm	10.25mm	108	115	1.30mm	0.66mm	HYD	HYD
146-B	Stage 2 turbo cams to suit engine builds with larger turbocharger, 450-650HP.	272	272	232	232	11.12mm	11.12mm	110	117	1.90mm	1.11mm	HYD	HYD
146-X	Custom hydraulic or solid lifter camshaft set for Ford Cosworth YB engines. We can manufacture cams to your specifications or design a profile for your specific application.												

Solid Lifter Cams

Camshaft Part No	Application	Advertised Duration		Duration @ 1.00mm Valve Lift		Valve Lift		Suggested Centrelines		Valve Lift @ TDC		Valve Clearances	
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	In	Ex
146-E	Solid lifter cams for turbo, street / strip, or rally engines up to 650HP.	270	270	228	228	10.90mm	10.90mm	108	115	1.85mm	1.30mm	0.30mm	0.30mm
146-F	Solid lifter cams for well built turbo engines with 650+HP.	282	282	240	240	11.50mm	11.50mm	110	118	2.31mm	1.22mm	0.20mm	0.25mm
146-C	Solid lifter rally or track racing cams. Requires head machining to fit.	314	304	263	258	12.75mm	11.20mm	102	106	4.95mm	3.60mm	0.25mm	0.25mm
146-D	Solid lifter racing cams for professionally built competition engines over 320HP.	336	326	277	265	14.22mm	11.95mm	102	98	5.38mm	4.47mm	0.25mm	0.25mm
146-X	Custom hydraulic or solid lifter camshaft set for Ford Cosworth YB engines. We can manufacture cams to your specifications or design a profile for your specific application.												



Ford Duratec (Non-VCT)



The 4 cylinder Ford Duratec 2.0L engine continues to be a popular retro-fit choice for many Mk1 and Mk2 Escort owners. The Kelford Cams range is designed to cover mild to wild Duratec engine builds.

Camshaft Part No	Application	Advertised Duration		Duration @ 1mm Cam Lift		Valve Lift		Suggested Centrelines		Lift @ TDC		Valve Clearances		Valve Spring Part Number
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	
240-A	Mild track day or street performance cam for near stock Duratec 2.0L engines.	276	270	240	232	9.90mm	9.60mm	103	107	2.80mm	1.92mm	0.25mm	0.30mm	KVS43
240-B	Mid-range performance camshaft for mild club race / rally car applications with limited modifications.	284	276	248	240	10.50mm	10.20mm	103	105	3.45mm	2.70mm	0.25mm	0.30mm	KVS43
240-C	Racing camshafts for well prepared engines. Suits higher compression after market plenum manifold or Individual runners.	296	284	258	248	11.20mm	10.50mm	100	104	4.50mm	3.37mm	0.25mm	0.30mm	KVS43
240-T	272 degree camshafts for turbocharged Duratec engines built for the 350-550HP range.	272	272	232	232	9.60mm	9.60mm	108	116	1.80mm	0.95mm	0.25mm	0.30mm	KVS43
240-X	Custom cams for Ford Duratec engines. We can manufacture cams to your specifications or design a profile for your specific application.													

Matching Components for Ford Duratec 20-HE

We stock the following valve springs to compliment our Ford Duratec 20-HE camshafts.

Part No	Description
KVS43	Ovate wire, PACALOY™ Beehive valve spring set. To suit competition engines. 75lb at 38.00mm installed height. Coil bind at 22.00mm (not suitable for variable valve timing motors).



Ford EcoBoost 3.5 Litre (Gen 1) Dual Variable V6



The First Generation Ford 3.5 Litre V6 Ecoboost is a dual overhead cam, quad variable shimless bucket engine for the 2011-2016 Ford F Trucks. This engine has proven to be a strong and reliable producer of power. The Kelford catalogue range of cams are designed to suit any level of build from an easy upgrade designed to take advantage of the engine in its stock format, through to fully built drag racing engines. The first generation engine is split into two models with the early 2011-2012 engines having the basic setup while the later 2013-2016 engines have a camshaft driven vacuum pump. Please call for options if you are unsure which set you need.



Camshaft Part No	Application	Advertised Duration		Duration @ 1mm Valve Lift		Valve Lift		Suggested Centrelines		Lift @ TDC		Valve Clearances		Valve Timing	Valve Spring Part Number
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	In	Ex		
Stock OEM	Standard profiles for comparison.	246	246	210	205	9.15mm	9.0mm	Vari	Vari	Vari	Vari	0.3mm	0.5mm	Vari	OEM
252-EZP	Easy power drop in cams, Designed to work with stock valve springs on near stock engines. Great power-up to suit bolt on's.	250	250	220	220	9.35mm	9.35mm	Vari	Vari	Vari	Vari	0.3mm	0.3mm	Vari	OEM
252-A	Stage1 performance cams, suited to 500-700hp, 8000rpm and 30psi when matched with our KVS252 spring kit.	262	268	230	234	10.0mm	10.0mm	Vari	Vari	Vari	Vari	0.3mm	0.3mm	Vari	KVS252
252-B	Stage two Street/Strip cams, Suited to 700-1000hp, Great with twin 62mm turbos and E85.	272	276	238	242	10.5mm	10.5mm	Vari	Vari	Vari	Vari	0.3mm	0.3mm	Vari	KVS252
252-C	Drag cams, Great for 4.0ltr stroker builds and alcohol blended fuels. Suits professionally built race engines. Suits fixed timing or can be run as variable, great care needed checking Piston to Valve. Rated 1200-1600hp.	280	284	242	250	11.0mm	11.0mm	110	118	2.18mm	1.70mm	0.3mm	0.3mm	11/51 63/7	KVS252
252-X	Custom cams for Ford engines 3.5 Gen 1. We can manufacture cams to your specifications or design a profile for your specific application.														

Matching Components for Ford EcoBoost 3.5 Litre (Gen 1) Dual Variable V6

We stock the below valve springs parts to compliment our Ford EcoBoost 3.5 Litre (Gen 1) Dual Variable V6 camshaft range.

Part No	Description
KVS252	Ford Gen 1 3.5 litre V6 Ecoboost. High performance, progressively wound PACALOY™ beehive valve spring Kit. This kit was engineered to match our camshafts for ultimate quality, performance and reliability. 90lb seat pressure @ 36.5mm Installed height / 193lb @ 11mm lift / Coil bind is at 23.6mm.
KVS252-BT	Ford Gen 1 3.5 litre V6 Ecoboost. High performance, progressively wound PACALOY™ beehive valve spring and Titanium Retainer Kit. This kit was engineered to match our camshafts for ultimate quality, performance and reliability. 90lb seat pressure @ 36.5mm Installed height / 193lb @ 11mm lift / Coil bind is at 23.6mm.



Ford 3.5 Litre Ecoboost V6 Generation 2



The Second Generation Ford 3.5 Litre V6 Ecoboost is a dual overhead cam, quad variable Hydraulic roller, finger follower engine for the 2017-Present Ford F Trucks. The Kelford catalogue range of cams are designed to suit any level of build from an easy upgrade designed to take advantage of the engine in its stock format, through to fully built drag racing engines. The valve train sporting a large base circle and hydraulic roller setup lends itself well to a large range of catalogue and custom options.

Camshaft Part No	Application	Advertised Duration		Duration @ 1mm Valve Lift		Valve Lift		Suggested Centrelines		Lift @ TDC		Valve Spring Part Number
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	
Stock OEM	Standard profiles for comparison.	243	248	200	206	10.1mm	10.1mm	Vari	Vari	Vari	Vari	OEM
253-EZP	Easy power drop in cams, designed to work with stock valve springs on near stock engines. Great power-up to suit stock engines with bolt on's.	256	256	218	218	10.5mm	10.5mm	Vari	Vari	Vari	Vari	OEM
253-A	Stage1 performance cams, suited to 500-700hp, 8000rpm and 30psi when matched with our KVS253 spring kit.	264	270	226	230	11.0mm	11.0mm	Vari	Vari	Vari	Vari	KVS253
253-B	Stage two Street/Strip cams, Suited to 700-1000hp, Great with twin 62mm turbos and E85.	272	276	232	238	12.0mm	11.5mm	Vari	Vari	Vari	Vari	KVS253
253-C	Drag cams, Great for 4.0ltr stroker builds and alcohol blended fuels. Suits professionally built engines. Suits fixed timing or can be run as variable, great care needed checking Piston to Valve. Rated 1200-1600hp.	280	284	240	246	13.0mm	12.5mm	110	118			KVS253
253-X	Custom cams for Ford EcoBoost engines. We can manufacture cams to your specifications or design a profile for your specific application.											

Matching Components for Ford 3.5 Litre Ecoboost V6 Generation 2

We stock the below parts to compliment our Ford 3.5 Litre Ecoboost V6 Generation 2 camshaft range.

Part No	Description
KVS253	Ford Gen 2 3.5 litre V6 Ecoboost. High performance, progressively wound PACALOY™ beehive valve spring. This kit was engineered to go with high performance camshaft upgrades and high boost applications. 90lb seat pressure @ 43.0mm Installed height / 246lb @ 13mm lift / Coil bind is at 25.0mm



Ford Essex 3.0L V6 (1966-1981)



This Kelford Cams catalogue selection to suit the Ford Essex 3.0L V6 from 1966 to 1981, has been developed over more than forty-five years of grinding these camshafts for the New Zealand market. Whether your build is a daily driver or a full competition engine, we can supply the correct camshaft profile for your application. Custom camshafts are also available; talk to us about the right specifications for your application.

Camshaft Part No	Application	Duration @ .015" Cam Lift		Duration @ .050" Cam Lift		Valve Lift @ 1.47:1 Rocker Ratio		Suggested Centreline		Cam Lift @TDC		Valve Clearance	
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	In	Ex
152-A	Mild road cam (Genuine Capri GT specification).	264	300	216	220	.396"	.396"	109	109	.047"	.052"	.018"	.024"
152-B	High performance stage 1 cam to suit a classic road-going Capri with a stock engine.	276	283	230	232	.420"	.386"	107	111	.071"	.062"	.014"	.016"
152-D	Racing cam to suit a mildly tuned engine. Ideal for clubsport or classic rally cars.	295	295	247	245	.441"	.422"	105	111	.097"	.082"	.015"	.015"
152-E	Racing cam to suit a purpose built classic racing engine with increased compression, ported heads, improved induction etc.	302	302	252	252	.458"	.458"	104	110	.109"	.091"	.015"	.015"
152-F	Racing cam to suit a purpose built high RPM racing engine with increased compression, ported heads, improved induction etc.	305	305	262	262	.449"	.449"	103	109	.132"	.109"	.016"	.016"
152-X	Custom camshaft for Ford 3.0L Essex V6 engines. We can manufacture cams to your specifications or design a profile for your specific application.												



Ford Falcon X/Flow 4.1L



This range is to suit the Ford Falcon X/Flow 4.1L engine and caters for everything from fuel economy cams for cars towing the caravan, through to street stock racing and hot street performance engines.

Camshaft Part No	Application	Advertised Duration @ 0.006"		Duration @ 0.050" Cam Lift		Valve Lift @ 1.7:1 Rocker Ratio		Suggested Centrelines		Cam Lift @ TDC		Valve Spring Part Number
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	
155-B	Cam for high torque and good fuel economy, suits highway driving.	258	258	204	204	.450"	.450"	108	112	.035"	.026"	250K
155-C	Cam for high torque, good acceleration and strong midrange power.	264	264	212	212	.475"	.475"	106	114	.052"	.030"	250K
155-F	NZ street stock (CHEATSTOCK) cam.	280	280	218	218	.438"	.438"	106	110	.059"	.049"	250K
155-E	Fast street cam with great midrange power and a rough idle.	272	272	224	224	.505"	.505"	106	114	.067"	.045"	250K
155-J	Cam for restrictor plate stock car with 10:1 compression to suit 0.500" lift rule.	288	288	224	224	.495"	.495"	106	110	.065"	.055"	250K
155-X	Custom camshaft for Ford Falcon X/Flow 4.1L engines. We can manufacture cams to your specifications or design a profile for your specific application.											

Matching Components for Ford Falcon X/Flow 4.1L

We stock the following components to compliment our Ford Falcon X/Flow 4.1L camshaft range.

Part No	Description
250K	Complete replacement valve spring set, including retainers and replacement locks.
HT900-12	Sealed Power or Johnson hydraulic lifter set.



Ford Lotus 4 Cylinder Twin Cam



The Ford Lotus twin cam was made from 1963-1974 and powered the Lotus Elan, Europa, Lotus Seven, Ford Cortina and Escort twin cam. We have been modifying and producing camshafts for this engine for forty years so we can help you achieve your desired result from your twin cam. This is a range of the most popular camshafts we have used in Lotus engines. RPM range and optimum lobe centrelines will vary depending on engine combination.

Camshaft Part No	Application	Duration @ .010" Cam Lift		Duration @ 0.050" Cam Lift		Valve Lift		Suggested Centrelines		Valve Lift @ TDC		Valve Clearances	
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	In	Ex
148-B	Performance cams for mild-mannered road car engines.	278	288	235	235	.417"	.405"	105	110	.114"	.080"	.008"	.010"
148-C	Stage 2 high performance street car cams	292	292	243	244	.422"	.404"	103	110	.128"	.106"	.008"	.008"
148-D	Club race or mild rally car cams.	302	302	253	253	.425"	.401"	103	108	.153"	.130"	.010"	.010"
148-F	Race or rally cams to suit well built competition engines.	318	328	257	260	.444"	.426"	102	106	.183"	.154"	.010"	.010"
148-G	Race cams to suit higher compression engines in light weight racing saloons.	328	328	264	264	.444"	.444"	100	104	.193"	.175"	.010"	.010"
148-I	Race cams for serious engine builds with lager displacement and higher compression to suit light weight single seater race cars.	335	335	273	273	.484"	.484"	98	102	.222"	.206"	.010"	.010"
148-X	Custom cam for Ford 4 cylinder Lotus twin cam engines. We can manufacture cams to your specifications or design a profile for your specific application.												



Ford Windsor 221, 260, 289 & 302 V8 (1963-1985)



This Kelford range of camshafts to suit Ford 221-302 Windsor V8 flat tappet hydraulic lifter engines (1963-1985) all have our SX profiles. The SX profiles feature ultra modern lobe designs, giving you great throttle response and loads of power through the entire RPM range.

Custom camshafts are also available, either designed for your application, or manufactured to your specifications. We can make cams for both hydraulic and solid lifter flat tappet engines, and both hydraulic and solid roller lifter engines.



Camshaft Part No	Application	Advertised Duration @ .006" Cam Lift		Duration @ .050" Cam Lift		Valve Lift @ 1.6:1 Rocker Ratio		Suggested Centrelines		Cam Lift @ TDC		Valve Spring Part Number
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	
125-B	SX256, Fuel economy cam for mild performance upgrade.	256	256	206	206	.445"	.445"	107	113	.039"	.025"	942
125-C	SX260 Stage 1 performance cam to suit heavy automatic cars with tall diff gears.	260	260	212	212	.445"	.445"	106	114	.050"	.030"	942
125-D	SX264 Hot street cam, strong midrange power in near stock engines.	264	270	218	224	.480"	.480"	106	114	.060"	.046"	942
125-E	SX268 Our most popular street muscle profile for strong performance and a noticeable idle. Largest cam with stock converter.	268	276	224	230	.500"	.500"	106	114	.065"	.051"	942
125-F	SX274 Street / strip cam to suit manual or auto with 2500 stall, rough idle.	274	286	230	236	.515"	.515"	106	112	.079"	.069"	Call for options
125-G	SX284 Street / strip cam, suits 347 or larger, 3000 converter, rough idle.	284	296	240	246	.540"	.540"	106	112	.098"	.083"	Call for options
125-X	Custom hydraulic lifter flat tappet camshaft for Ford 221-302 Windsor engines. Contact us for specifications to suit you as there are too many to list.											
125-X-S	Custom solid lifter flat tappet camshaft for Ford 221-302 Windsor engines. Contact us for specifications to suit you as there are too many to list.											
125-X-HR	Custom hydraulic roller lifter camshaft for Ford 221-302 Windsor engines (uses late model firing order). Contact us for specifications to suit you as there are too many to list.											
125-X-SR	Custom solid roller lifter camshaft for Ford 221-302 Windsor engines (uses late model firing order). Contact us for specifications to suit you as there are too many to list.											

Matching Components for Ford 221, 260, 289 & 302 V8 (1963-1985)

We stock the below valve train parts to compliment our Ford 221-302 Windsor V8 camshaft range.

Part No	Description
942	Ford 221/302 Windsor single valve spring set with damper to suit stock cylinder heads.
768	Chrome-moly retainers to suit 942 valve springs
3120	Ford Windsor, double row, adjustable timing chain set
HT900	Sealed Power or Johnson hydraulic lifter set



Ford Windsor 351 V8



This Kelford range of camshafts to suit Ford Windsor 351 V8 flat tappet hydraulic lifter engines all feature our SX profiles with ultra modern lobe designs, giving you great throttle response and loads of power through the entire RPM range.

Custom camshafts are also available, either designed for your application, or manufactured to your specifications. We can make cams for both hydraulic and solid lifter flat tappet engines, and both hydraulic and solid roller lifter engines.



Camshaft Part No	Application	Advertised Duration @ .006" Cam Lift		Duration @ .050" Cam Lift		Valve Lift @ 1.6:1 Rocker Ratio		Suggested Centrelines		Cam Lift @ TDC	
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex
122-B	SX250 Mild upgrade cam for stock engines, suits heavy vehicles and towing. Gives smooth idle and good fuel economy.	252	252	206	206	.445"	.445"	108	114	.037"	.025"
122-C	SX260 Stage 1 performance cam to suit heavy automatic cars with tall diff gears.	260	260	212	212	.445"	.445"	106	114	.050"	.030"
122-D	SX264 Hot street cam, strong midrange power in near stock engines.	264	270	218	224	.480"	.480"	106	114	.060"	.046"
122-E	SX268 Our most popular street muscle profile for strong performance and a noticeable idle. Largest cam with stock converter.	268	276	224	230	.500"	.500"	106	114	.065"	.051"
122-F	SX274 Street / strip cam to suit manual or auto with 2500 stall, rough idle.	274	286	230	236	.515"	.515"	106	112	.079"	.069"
122-G	SX284 Street / strip cam, suits good heads, higher compression etc., 3000 converter, rough idle.	284	296	240	246	.540"	.540"	106	112	.098"	.083"
122-X	Custom hydraulic lifter flat tappet camshaft for Ford Windsor 351 engines. Contact us for specifications to suit you as there are too many to list.										
122-X-S	Custom solid lifter flat tappet camshaft for Ford Windsor 351 engines. Contact us for specifications to suit you as there are too many to list.										
122-X-HR	Custom hydraulic roller lifter camshaft for Ford Windsor 351 engines. Contact us for specifications to suit you as there are too many to list.										
122-X-SR	Custom solid roller lifter camshaft for Ford Windsor 351 engines. Contact us for specifications to suit you as there are too many to list.										

Matching Components for Ford Windsor 351 V8

We stock the below valve train parts to compliment our Ford Windsor 351 V8 camshaft range.

Part No	Description
3135	Ford Windsor 351 V8 (1969-1984) double row, 3 keyway, adjustable timing chain set.
HT900	Sealed Power or Johnson, hydraulic lifters for Ford Windsor V8 with flat tappet camshafts



Ford Zetec



The 4 cylinder Ford Zetec engine is a popular performance engine. The Kelford Cams range is designed to cover mild to wild Zetec engine builds. These camshafts suit the Hydraulic bucket models only. Solid lifter options available on request.

Camshaft Part No	Application	Advertised Duration @0.1mm		Duration @ 1mm Cam Lift		Valve Lift		Suggested Centrelines		Lift @ TDC		Valve Timing	Spring Number
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex		
254-A	Mild track day or street performance cams to suit near stock Ford Zetec engines.	262	262	224	224	9.9mm	9.9mm	106	110	1.57mm	1.19mm	6/38 42/2	KVS27
254-B	Mid-range performance camshaft for mild club race / rally car applications with limited modifications.	272	272	232	232	10.25mm	10.25mm	104	108	2.24mm	1.78mm	12/40 44/8	KVS27
254-C	Racing camshafts for well prepared engines. Suits higher compression after market plenum manifold or Individual runners.	282	282	242	242	10.8mm	10.8mm	104	106	2.79mm	2.54mm	17/45 47/15	KVS27
254-T	Camshafts for turbocharged Zetec engines built for the 300-500HP range.	262	272	224	232	9.9mm	9.9mm	110	116	1.19mm	0.99mm	2/42 52/0	KVS27
254-X	Custom cams for Ford Zetec engines available on request. We can design application specific profiles if required.												

Matching Components for Ford Zetec

We stock the below valve springs parts to compliment our Ford Zetec camshaft range.

Part No	Description
KVS27	High performance PACALOY™ valve spring set (16) to suit the OEM retainer and spring base. 65lb seat pressure @ 36.5mm (1.437") installed height / Coil bind is at 22.00mm.

Holden 179-202 Straight 6



The Kelford Cams range of camshafts to suit Holden 179-202 Straight Six are equipped with our modern lobe designs, featuring lower 'seat to seat duration' and maximum lobe area, offering great power spread and drivability.



Hydraulic Lifter Cams

Camshaft Part No	Application	Advertised Duration		Duration @ .050" Cam Lift		Valve Lift @ 1.5:1 Rocker Ratio		Suggested Centrelines		Cam Lift @ TDC		Valve Spring Part Number
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	
Stock	OEM Camshaft Numbers	245	250	179	179	0.306"	0.306"	108	108	0.020"	0.018"	OEM
166-A	High torque, good economy, one step up from stock	250	250	206	206	0.423"	0.423"	106	114	0.043"	0.024"	186 202
166-B	Mild performance upgrade for near stock engines	260	260	212	212	0.417"	0.417"	106	114	0.050"	0.029"	186 202
166-C	Strong street performance, manual or 2000 converter, noticeable idle	270	270	225	225	0.470"	0.470"	106	114	0.070"	0.046"	186 202
166-D	Suits 9.5 compression, Manual or 2500 stall. Rough Idle	280	280	230	230	0.488"	0.488"	106	112	0.080"	0.060"	186 202
166-X	Custom hydraulic lifter camshaft for Holden 179-202 Straight Six. Contact us for specifications to suit you as there are too many to list. We can manufacture cams to your specifications or design a profile for your specific application.											

Solid Lifter Conversion Cams

Camshaft Part No	Application	Advertised Duration		Duration @ .050" Cam Lift		Valve Lift @ 1.5:1 Rocker Ratio		Suggested Centrelines		Cam Lift @ TDC		Valve Clearance		Valve Spring Part Number
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	
S-166-A	10.5/1 comp, side drafts, good head race cam	306	314	242	242	0.440"	0.440"	104	108	0.102"	0.089"	0.016"	0.016"	Ring for options
S-166-B	11.5/1 comp, high performance race engine.	316	316	250	252	0.490"	0.472"	102	106	0.114"	0.104"	0.016"	0.016"	Ring for options
S-166-C	12.5/1 comp, professionally built engine.	318	326	256	260	0.505"	0.505"	102	104	0.125"	0.124"	0.016"	0.016"	Ring for options
166-X	Custom solid lifter camshaft for Holden 179-202 Straight Six. Contact us for specifications to suit you as there are too many to list. We can manufacture cams to your specifications or design a profile for your specific application.													

Matching Components for Holden 179-202 Straight Six

We stock the below parts to compliment our Holden 179-202 Straight Six camshaft range.

Part No	Description
186	Single spring to suit Holden 6 Cylinder 'Red motor'. Installed height 1.625" 120lbs on seat, 250lbs @ 0.500" lift, .950" Coil Bind.
202	Single spring to suit Holden 6 Cylinder 'Blue & Black motor'. Installed height 1.500" 88lbs on seat, 230lbs @ 0.500" lift, .880" Coil Bind.
HT969	Genuine GM Lifter for Holden 6 Engines



Holden 253-308 V8 (1970-1988)

The modern SX cams are our latest technology designs, featuring lower 'seat to seat duration' and maximum lobe area, offering great power spread and driveability.



Camshaft Part No	Application	Advertised Duration @ .006" Cam Lift		Duration @ .050" Cam Lift		Valve Lift @ 1.6:1 Rocker Ratio		Suggested Centrelines		Cam Lift @ TDC		Valve Spring Part Number
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	
SX165-A	SX250, High torque, good economy, one step up from stock.	250	250	206	206	.445"	.445"	107	117	.039"	.018"	KVS4843
SX165-B	SX260, Mild performance upgrade for near stock engines .	260	260	212	212	.445"	.446"	106	114	.050"	.029"	KVS4843
SX165-C	SX266, All-round performer for mild engine, stock converter, mild idle.	266	266	218	218	.488"	.488"	106	114	.059"	.039"	KVS4843
SX165-D	SX270, Strong street performance, manual or 2000 converter, noticeable idle.	270	270	225	225	.500"	.500"	106	114	.070"	.046"	KVS4843
SX165-E	SX280, Suits 9.5/1 compression, four barrel, headers, manual or 2500 converter, rough idle.	280	280	230	230	.518"	.518"	105	113	.082"	.057"	KVS4843
SX165-X	Custom camshaft for Holden 253-308 V8 engines. Contact us for specifications to suit you as there are too many to list. We can manufacture cams to your specifications or design a profile for your specific application.											

Matching Components for Holden 253-308 V8 (1970-1988)

We stock the below parts to compliment our Holden 253-308 V8 camshaft range.

Part No	Description
HT969	Genuine GM set of lifters for Holden V8 engines, made by Delphi.
KVS4843	Single valve spring set with a flat wound damper to suit mild hydraulic lifter camshafts. For use with cast heads and OEM retainers. 95lb @ 1.750" / 290lb @ 1.250" / Coil bind @ 1.180"
CS8308	Holden 253-308 adjustable timing chain and gear set.
742	Retainer set to suit KVS4843 valve springs.
743	Retainer set to suit 986 valve springs.
986	Dual valve spring set (requires head machining).



Holden EFI 304 V8



The Holden 304 V8 EFI engine uses a different camshaft casting to the 253-308 engine. The Kelford range for Holden 304 engines is endless. We can manufacture the catalogue cams below, and of course can design and manufacture any other specification as a hydraulic, solid or roller lifter camshaft. The catalogue range is made on centrelines to suit EFI; if you are using a carburettor, the cams in this range can be ordered on tighter lobe separation, simply specify carburettor or EFI when ordering.

Camshaft Part No	Application	Advertised Duration @ .006" Cam Lift		Duration @ .050" Cam Lift		Valve Lift @ 1.6:1 Rocker Ratio		Suggested Centrelines		Cam Lift @ TDC		Valve Spring Part Number
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	
170-A	Suitable cam for standard engines.	256	256	206	206	.427"	.427"	110	118	.031"	.016"	KVS4843
170-B	Ideal replacement cam for more performance in an automatic. Reflash ECU for better results.	264	264	212	212	.446"	.446"	110	116	.040"	.026"	KVS4843
170-C	Performance cam, suits manual or auto. Requires ECU reflash.	268	268	216	216	.490"	.490"	107	117	.050"	.026"	KVS4843
170-D	Lopey idle cam, requires hi-stall or manual. Requires ECU reflash.	272	272	224	224	.480"	.480"	107	117	.065"	.037"	KVS4843
170-E	Our biggest hydraulic grind for standard inlet manifolds, requires hi-stall or manual and ECU Reflash. Still streetable.	284	284	234	234	.520"	.520"	105	115	.084"	.053"	986
170-X	Custom hydraulic lifter flat tappet camshaft for Holden EFI 304 V8 engines. Contact us for specifications to suit you.											
170-S	Custom solid lifter flat tappet camshaft for Holden EFI 304 V8 engines. Contact us for specifications to suit you.											
170-SR	Custom solid roller lifter camshaft for Holden EFI 304 V8 engines. Contact us for specifications to suit you.											

Matching Components for Holden EFI 304 V8

We stock the below parts to compliment our Holden EFI 304 V8 camshaft range.

Part No	Description
HT969	Genuine GM set of lifters for Holden V8 engines, made by Delphi.
KVS4843	Single valve spring set with a flat wound damper to suit mild hydraulic lifter camshafts. For use with cast heads and OEM retainers. 95lb @ 1.750" / 290lb @ 1.250" / Coil bind @ 1.180"
742	Retainer set to suit KVS4843 valve springs.
743	Retainer set to suit 986 valve springs.
986	Dual valve spring set (requires head machining).
CS8308	Holden 253-308 adjustable timing chain and gear set.



Honda B16A/B18C VTEC



This range of camshafts is dyno and race proven. All profiles have a good balance between aggression and stability and can be used at very high RPM when combined with the correct valve train components.

The Kelford range of B series camshafts has been designed and refined over many years of racing. We cover the range of requirements from street performance to track racing to monster All Motor builds and turbo applications. Of course, we can also make any other specification you desire or design one to suit your specific application.

Camshaft Part No	Application	Advertised Duration @ 0.1mm Valve Lift		Duration @ 1mm Valve Lift		Nett Valve Lift @ 1.55:1 Rocker Ratio		Suggested Centrelines		Valve Lift @ TDC		Valve Clearances		Valve Spring Part Number
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	
176-B	The ultimate stage 1 performance cams for B Series, requires KVS18K valve spring, ECU and exhaust upgrades.	284	280	254	248	11.80mm	11.30mm	104	106	3.96mm	3.10mm	0.30mm	0.30mm	KVS18 or KVS18K
	Primary lobes for 176-B Intermediate lobes for 176-B	242 242	236 246	198 200	186 202	6.00mm 8.40mm	5.8mm 7.8mm	107 107	103 107	0.56mm 0.56mm	0.48mm 0.64mm	0.30mm 0.30mm	0.30mm 0.30mm	
176-C	B Series racing cams. Large low lobe spec for improved torque in lower RPM range. Super strong midrange power, rough idle on plenum manifolds.	294	286	264	256	11.80mm	11.30mm	102	104	4.70mm	3.86mm	0.30mm	0.30mm	KVS18 or KVS18K
	Primary lobes for 176-C Intermediate lobes for 176-C	270 270	262 262	230 230	220 220	11.00mm 11.00mm	10.00mm 10.00mm	104 104	104 104	2.26mm 2.26mm	1.52mm 1.52mm	0.30mm 0.30mm	0.30mm 0.30mm	
176-R1	VTEC ALL Motor drag racing cams. Head modifications are required to avoid valve to valve contact. Ideal for long stroke engines.	304	298	274	266	13.00mm	11.30mm	101	104	5.68mm	4.40mm	0.30mm	0.30mm	KVS18 or KVS18K
	Primary lobes for 176-R1 Intermediate lobes for 176-R1	270 270	262 262	230 230	220 220	11.00mm 11.00mm	10.00mm 10.00mm	104 104	104 104	2.26mm 2.26mm	1.52mm 1.52mm	0.30mm 0.30mm	0.30mm 0.30mm	
176-TS	The ultimate street turbo cams to suit 350-600HP engines. Valve timing is optimised for turbo setups helping produce a broader power band compared to OEM cams.	274	274	236	236	11.25mm	11.00mm	108	114	2.48mm	1.14mm	0.30mm	0.30mm	KVS18 or KVS18K
	Primary lobes for 176-TS Intermediate lobes for 176-TS	242 242	246 246	200 200	202 202	8.40mm 8.40mm	7.8mm 7.8mm	104 104	107 107	0.78mm 0.78mm	0.64mm 0.64mm	0.30mm 0.30mm	0.30mm 0.30mm	
176-T	Special design cams, to suit high power turbocharged B series engines in the 600-1000HP range.	284	274	254	246	11.25mm	11.00mm	108	115	3.07mm	1.84mm	0.30mm	0.30mm	KVS18 or KVS18K
	Primary lobes for 176-T Intermediate lobes for 176-T	250 254	250 250	208 214	208 208	7.00mm 8.60mm	7.00mm 7.00mm	102 102	105 105	1.20mm 1.55mm	1.01mm 1.01mm	0.30mm 0.30mm	0.30mm 0.30mm	



176-T2	Pro Import 1200HP-1600HP Cams. Best suited for alcohol fuels. 50lb+ of boost and 10,500rpm when used with KVS18K spring kit.	294	298	264	266	11.80mm	11.30mm	110	118	3.91mm	2.18mm	0.30mm 0.30mm	0.30mm 0.30mm	KVS18 or KVS18K
	Primary lobes for 176-T2 Intermediate lobes for 176-T2	270 270	262 262	230 230	220 220	11.00mm 11.00mm	10.00mm 10.00mm	106 106	108 108	2.12mm 2.12mm	0.96mm 0.96mm	0.30mm 0.30mm	0.30mm 0.30mm	
176-X	Custom mechanical camshafts for Honda B16A/B18C VTEC engines. We can manufacture cams to your specifications or design a profile for your specific application.													

Matching Components for Honda B16A/B18C VTEC

We stock the below parts to compliment our Honda B16A/B18C VTEC mechanical camshaft range.

Part No	Description
KVS18	High performance dual valve spring set to fit OEM retainers. Install at 34.00mm (1.338") to give seat pressure of 85lb. Coil bind is at 18.50mm
KVS18-K	High performance valve spring and titanium retainer set for Honda B16A/B18C VTEC mechanical engines. 90lbs @ 33.52mm installed height / Coil bind @ 18.3mm
VG176 In	Honda B16A/B18C Kelford Bronze Valve Guide Intake 12.06mm O/D 5.45mm I/D
VG176 Ex	Honda B16A/B18C Kelford Bronze Valve Guide Exhaust 12.06mm O/D 5.45mm I/D
VS-H5.5I	Honda Valve Stem Seal Intake
VS-H5.5E	Honda Valve stem seal Exhaust
KCGB16	Honda B16/18 Kelford Adjustable Cam Gears
F6044	Ferrea 6000 Series +1mm Intake 34mm 5.47mm 102.35mm 2.5mm
F6045	Ferrea 6000 Series +1mm Exhaust 29mm 5.45mm 102.5mm 2.5mm



Honda B18A1/B20B NON VTEC



The Kelford range for the Honda B18-B20 NON VTEC engines feature maximum area designs to achieve superior performance. From mild street performance to full race engines, Kelford Cams are the first choice for many racers and engine builders worldwide.

Camshaft Part No	Application	Advertised Duration		Duration @ 1mm Valve Lift		Valve Lift @ 1.73:1 Rocker Ratio		Suggested Centrelines		Valve Lift @ TDC		Valve Spring Part Number
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	
238-A	Mild performance cams for naturally aspirated engines with limited modifications.	268	260	226	218	11.00mm	10.50mm	104	108	1.80mm	1.08mm	KVS13D
238-B	High performance cams to suit modified engines. Requires a programmable ECU.	288	280	244	238	11.00mm	10.50mm	103	105	2.72mm	2.31mm	KVS13D
238-C	Top end performance cams to suit highly modified racing engines.	296	286	254	244	11.50mm	10.50mm	100	104	3.89mm	2.74mm	KVS13D
238-T	272 degree cams for turbocharged street, strip and track racing engines.	268	268	226	226	11.00mm	11.00mm	110	114	1.24mm	0.93mm	KVS13D
238-X	Custom camshafts for Honda B18-B20 NON VTEC engines. We can manufacture cams to your specifications or design a profile for your specific application.											

Matching Components for Honda B18A1/B20B NON VTEC

We stock the below valve train parts to compliment our Honda B18-B20 NON VTEC camshaft range.

Part No	Description
KVS13D	High performance PACALOY™ dual valve spring set for Honda B18-B20 NON VTEC performance engines. Installed spring pressure is 66lb @ 34.00mm (1.338") / Coil bind @ 17.00mm



Honda H22A VTEC



H22 VTEC engines are fantastic for the tuner market; they offer large displacement, fantastic bore stroke combinations, great airflow and have huge power potential in turbo and naturally aspirated form. The Kelford range of H22 camshafts feature the same lobe designs as our popular B series cams to cover the needs of most motorsport uses.

Camshaft Part No	Application	Advertised Duration @ 0.1mm Valve Lift		Duration @ 1mm Valve Lift		Nett Valve Lift @ 1.55:1 Rocker Ratio		Suggested Centrelines		Valve Lift @ TDC		Valve Clearances Hot @ Valve		Valve Spring Part Number
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	
H176-B	Ultimate street performance H Series cams, require ECU and exhaust upgrades.	284	280	254	248	11.80mm	11.30mm	104	106	3.96mm	3.10mm	0.30mm	0.30mm	KVS08
	Primary lobes for H176-B Intermediate lobes for H176-B	250 254	250 250	208 214	208 208	7.00mm 8.60mm	7.00mm 7.00mm	102 102	105 105	1.20mm 1.55mm	1.01mm 1.01mm	0.30mm 0.30mm	0.30mm 0.30mm	
H176-C	H Series racing cams. Super strong midrange power, rough idle on plenum manifolds.	294	286	264	256	11.80mm	11.30mm	102	104	4.70mm	3.86mm	0.30mm	0.30mm	KVS08
	Primary lobes for H176-C Intermediate lobes for H176-C	250 254	250 250	208 214	208 208	7.00mm 8.60mm	7.00mm 7.00mm	102 102	105 105	1.20mm 1.55mm	1.01mm 1.01mm	0.30mm 0.30mm	0.30mm 0.30mm	
H176-T	Special design camshafts for turbocharged H series engines in the 600-1000HP range.	284	274	254	246	11.25mm	11.00mm	108	115	3.07mm	1.84mm	0.30mm	0.30mm	KVS08
	Primary lobes for H176-T Intermediate lobes for H176-T	250 254	250 250	208 214	208 208	7.00mm 8.60mm	7.00mm 7.00mm	102 102	105 105	1.20mm 1.55mm	1.01mm 1.01mm	0.30mm 0.30mm	0.30mm 0.30mm	
176-X	Custom mechanical camshafts for Honda H22A VTEC mechanical engines. We can manufacture cams to your specifications or design a profile for your specific application.													

Matching Components for Honda H22A VTEC

We stock the below parts to compliment our Honda H22A VTEC mechanical camshaft range.

Part No	Description
KVS08	Kelford PACALOY™ premium quality gold nitride, dual valve spring set for use with stock retainers. 85lb seat pressure @ 37.00mm / Coil bind @ 20.00mm.



Honda K20A & K24A i-VTEC



Kelford camshafts for the mega popular Honda K series engines feature the best design technology in the industry. With a focus on customer results, Kelford has engineered camshafts to meet power expectations while retaining reliability of timing components and valve springs.



Camshaft Part No	Application	Advertised Duration @ 0.1mm Valve Lift		Duration @ 1mm Valve Lift		Nett Valve Lift		Suggested Centrelines		Valve Lift @ TDC		Valve Clearances Hot @ Valve		Valve Spring Part Number
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	
179-A	Stage 1 racing cams to suit 2.0L and 2.4L builds for many applications. Great power gains in the whole range over the TSX cams.	296	292	258	248	12.50mm	11.15mm	Vari	105	Vari	2.51mm	0.30mm	0.30mm	KVS79-K
	Primary lobes for 179-A Intermediate lobes for 179-A	246 252	258	202 208	202	7.55mm 8.55mm	7.40mm	Vari	105	Vari	0.76mm	0.30mm 0.30mm	0.30mm 0.30mm	
179-B	Stage 2 racing cams to suit well modified 2.0L and 2.4L engines for street/strip and track racing.	306	302	260	244	13.50mm	12.20mm	Vari	104	Vari	2.46mm	0.30mm	0.30mm	KVS79-K
	Primary lobes for 179-B Intermediate lobes for 179-B	258 272	256 258	208 218	200 202	8.50mm 9.20mm	7.15mm 7.40mm	Vari	105	Vari	0.84mm	0.30mm 0.30mm	0.30mm 0.30mm	
179-B2	K20-24 racing cams, designed for track racing applications. Large low lobes require idle tuning by TPS. Super strong midrange power, rough idle on plenum manifolds.	306	302	266	246	13.50mm	12.00mm	Vari	104	Vari	2.48mm	0.30mm	0.30mm	KVS79-K
	Primary lobes for 179-B2 Intermediate lobes for 179-B2	258 272	258 262	226 230	204 206	11.20mm 11.30mm	8.15mm 8.40mm	Vari	104	Vari	0.86mm	0.30mm 0.30mm	0.30mm 0.30mm	
179-C	Racing cams to suit professionally built, large displacement K series drag race engines and alcohol injected midget car racing engines.	316	308	272	268	14.70mm	13.00mm	Vari	102	Vari	4.32mm	0.30mm	0.30mm	KVS79-KX
	Primary lobes for 179-C Intermediate lobes for 179-C	280 282	264	240 242	218	11.60mm 12.25mm	10.00mm	Vari	104	Vari	1.46mm	0.30mm 0.30mm	0.30mm 0.30mm	
179-S1	K20-24 cams specifically designed for engines fitted with a supercharger.	300	292	254	250	12.25mm	11.20mm	Vari	112	Vari	1.96mm	0.30mm	0.30mm	KVS79-K or KVS79-KX
	Primary lobes for 179-S1 Intermediate lobes for 179-S1.	246 252	262	202 208	210	7.75mm 8.55mm	8.30mm	Vari	115	Vari	0.54mm	0.30mm 0.30mm	0.30mm 0.30mm	
179-T1	K series race cams featuring lobe profiles designed specifically to suit high HP turbo charged applications.	300	292	254	250	12.25mm	11.20mm	Vari	113	Vari	1.91mm	0.30mm	0.30mm	KVS79-KX
	Primary lobes for 179-T1 Intermediate lobes for 179-T1	264 274	258 262	210 220	206 210	8.60mm 9.25mm	8.00mm 8.30mm	Vari	110	Vari	0.76mm	0.30mm 0.30mm	0.30mm 0.30mm	
179-X	Custom mechanical camshafts for Honda K20A & K24A i-VTEC mechanical engines. We can manufacture cams to your specifications or design a profile for your specific application. Tool steel cams are available on request.													



Matching Components for Honda K20A & K24A i-VTEC

We stock the following products to compliment our Honda K series camshaft range.

Part No	Description
KVS79-K	Premium quality ovate wire, PACALOY™ beehive valve spring set with titanium retainers. Featuring nano-peen and gold nitride surface finish processes for ultimate strength. Suits naturally aspirated motors with our cams up to 9000 RPM. Drop in on the OEM spring base to give 88lb seated pressure / Maximum lift 15.00mm.
KVS79-KX	PACALOY™ beehive valve spring set with titanium retainers. Suits high RPM naturally aspirated motors and high boost turbo charged motors. Install @ 95lb seat pressure. / Maximum lift 14.50mm.
VG179 In	Honda K Series Kelford Bronze Valve Guide Intake 11.06mm O/D 5.45mm I/D
VG179 Ex	Honda K Series Kelford Bronze Valve Guide Exhaust 11.06mm O/D 5.45mm I/D
VS-H5.5I	Honda K Series Valve Stem Seal Intake
VS-H5.5E	Honda K Series Valve Stem Seal Exhaust
F6074	Ferrea 6000 Series +1mm Intake 36mm 5.47mm 109.3mm 2.5mm
F6072	Ferrea 6000 Series +1mm Exhaust 31mm 5.45mm 109.15mm 2.5mm



Mazda B6 & B6T



This Kelford Cams range of camshafts for Mazda B6 and B6T are our most popular profiles to suit these engines as they were originally manufactured, with hydraulic lifters. We can also manufacture camshafts to suit solid lifters on request; simply contact us to discuss.

If our catalogue offerings don't fit your needs, we can also make any other specification you desire or design one to suit your specific application.

Naturally Aspirated

Camshaft Part No	Application	Advertised Duration		Duration @ 1mm Valve Lift		Valve Lift		Suggested Centrelines		Lift @ TDC		Valve Spring Part Number
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	
203-A	Hot street cams to suit stock engine with stock ECU	256	250	216	210	8.60mm	8.60mm	110	110	0.85mm	0.68mm	KVS12
203-B	Stage 2 performance cams to suit mild engine builds	264	256	222	216	9.00mm	9.00mm	108	110	1.32mm	0.80mm	KVS12
203-C	272 Degree high performance cams to suit mild race and rally car engines. Requires programmable ECU. Reduced Base Circle.	272	264	230	222	10.00mm	9.00mm	106	108	2.10mm	1.32mm	KVS12
203-D	Stage 3 racing cams to suit well modified B6 engines. Reduced Base Circle.	280	272	238	230	10.20mm	10.00mm	104	106	2.90mm	1.95mm	KVS12
203-X	Custom camshaft for Mazda Miata naturally aspirated engines. We can manufacture cams to your specifications or design a profile for your specific application. Solid lifter cams are available on request.											

Turbo Charged

Camshaft Part No	Application	Advertised Duration		Duration @ 1mm Valve Lift		Valve Lift		Suggested Centrelines		Lift @ TDC		Valve Spring Part Number
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	
T203-A	Fast street cams to suit stock turbo and stock ECU	250	256	210	216	8.70mm	8.50mm	110	112	0.80mm	0.56mm	KVS12
T203-B	High performance cams to suit hot street or rally applications. Requires KVS12 valve springs	264	264	222	222	8.95mm	8.95mm	110	112	1.10mm	0.96mm	KVS12
T203-C	Top end performance race cams to suit well modified engines. Reduced Base Circle.	272	272	230	230	10.00mm	9.00mm	108	114	1.84mm	1.10mm	KVS12
T203-D	Drag race cam for well modified engines with large turbo. Reduced Base Circle.	280	280	238	238	10.20mm	10.20mm	106	115	2.10mm	1.03mm	KVS12
T203-X	Custom camshaft for Mazda Miata turbo charged engines. We can manufacture cams to your specifications or design a profile for your specific application. Solid lifter cams are available on request.											

Matching Components for Mazda Miata 323 B6

We stock the below parts to compliment our Mazda B6 camshaft range.

Part No	Description
KVS12	High performance PACALOY™ valve spring set for Mazda B6 and B6T, drop in on stock retainers. Installed pressure is 66lbs.



Mazda MZR 2.0L LF-VE



Kelford has designed a range of mild performance camshafts to suit the Mazda MZR engines. The 211 range suit the 2L LF-VE engines with variable intake timing. For more radical builds, please contact us to discuss your requirements.

2.0L LF-VE (Non-DISI) Engines

Camshaft Part No	Application	Advertised Duration		Duration @ 1mm Valve Lift		Valve Lift		Suggested Centrelines		Lift @ TDC		Valve Clearances		Valve Spring Part Number
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	
OEM	OEM specification for reference only	256	238	207	190	9.15mm	7.80mm	Vari	110	Vari	0.10mm	0.30mm	0.35mm	
211-B	Stage 1 performance cams for near stock engines. Suits OEM valve spring	260	242	221	210	9.80mm	8.50mm	Vari	108	Vari	0.73mm	0.25mm	0.30mm	KVS17
211-T	Stage 1 cams for turbocharged MZR engines. Suits OEM valve spring if using 1bar boost or less	264	264	224	224	9.80mm	9.80mm	Vari	116	Vari	0.66mm	0.25mm	0.30mm	KVS17
211-T2	Stage 2 cams for turbocharged MZR engines. Must Use KVS17X valve spring kit. Best suited for engines above 500hp.	266	276	228	236	10.55mm	10.55mm	Vari	116	Vari	1.19mm	0.30mm	0.35mm	KVS17X
211-X	Custom camshafts for Mazda MZR 2.0L LF-VE engines. We can manufacture cams to your specifications or design a profile for your specific application.													

Matching Components for Mazda MZR 2.0L LF-VE

We stock the following valve train parts to compliment our Mazda MZR camshaft range.

Part No	Description
KVS17	Mazda L3 PACALOY™ beehive spring set. Suits naturally aspirated engines and turbo engines up to 1 bar boost. Install at OEM 37.00mm (1.456") to give 62lb closed pressure. Coil bind 21.00mm.
KVS17-X	Mazda L3 PACALOY™ beehive spring set. Suits high horsepower high RPM turbo charged engines. Install at OEM 37.00mm (1.456") to give 84lb closed pressure. Coil bind 24.00mm.



Mazda MZR 2.3L L3-VDT (DISI Turbo)



Kelford has designed a range of mild performance camshafts to suit the Mazda MZR engines. The 247 range suits the popular, award-winning 2.3L L3-VDT DISI turbo engine. For more radical builds, please contact us to discuss your requirements.

2.3L L3-VDT Direct Injection Spark Ignition (DISI) Engines

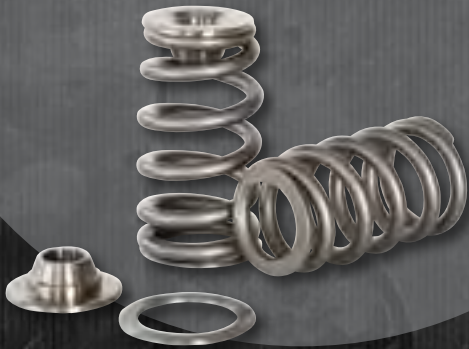
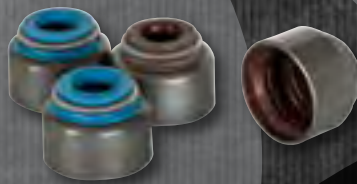
Camshaft Part No	Application	Advertised Duration		Duration @ 1mm Valve Lift		Valve Lift		Suggested Centrelines		Lift @ TDC		Valve Clearances		Valve Spring Part Number
		In	Ex	In	Ex	In	Ex	In	Ex	In Ret/Adv	Ex	In	Ex	
OEM	OEM specification for reference only	246	230	205	189	9.10mm	8.00mm	124/88	108	0.01mm 2.65mm	0.15mm	0.30mm	0.35mm	
247-A	E-Z power, drop in cams. Can be used with stock springs. Suits mild turbo upgrade.	252	252	212	212	9.50mm	9.50mm	124/88	110	0.06mm 3.24mm	0.62mm	0.30mm	0.35mm	KVS17
247-B	Ultimate stage 2 cams to suit engine builds in the 350-500HP range.	260	268	220	228	10.25mm	10.50mm	128/92	114	0.08mm 3.27mm	0.99mm	0.30mm	0.35mm	KVS17 or KVS17X
247-C	Stage 3 turbo cams, 500-750HP range, great with E85.	266	276	228	236	10.55mm	10.55mm	130/94	114	0.16mm 3.28mm	1.37mm	0.30mm	0.35mm	KVS17X
247-D	Stage 4 Drag Cams, best suited for professionally built engines. 750-1000HP.	282	292	242	248	11.25mm	11.25mm	112	118	1.96mm	1.56mm	0.30mm	0.35mm	KVS17X
247-X	Custom camshafts for Mazda MZR 2.3L L3-VDT Direct Injection Spark Ignition (DISI) engines. We can manufacture cams to your specifications or design a profile for your specific application.													

Matching Components for Mazda MZR 2.3L L3-VDT

We stock the following valve train parts to compliment our Mazda MZR camshaft range.

Part No	Description
KVS17	Mazda L3 PACALOY™ beehive spring set. Suits naturally aspirated engines and turbo engines up to 1 bar boost. Install at OEM 37.00mm (1.456") to give 62lb closed pressure. Coil bind 21.00mm.
KVS17-X	Mazda L3 PACALOY™ beehive spring set. Suits high horsepower high RPM turbo charged engines. Install at OEM 37.00mm (1.456") to give 84lb closed pressure. Coil bind 24.00mm.

KELFORD CAMS



COMPLETE
high performance kits





Mitsubishi 4G63 VR4 Evo 1-3



The Kelford Cams TX range of camshafts for Mitsubishi 4G63 DOHC engines are renowned worldwide for their superior results. Due to popular demand, we now offer a range of catalogue designs to cater for 4G63 engines with a solid lifter conversion; this range is ideal for those serious motorsport applications where use of aggressive limiters for launch, shift, anti-lag may cause hydraulic lifter pump up.



Hydraulic Lifter Cams

Camshaft Part No	Application	Advertised Duration		Duration @ 1mm Valve Lift		Valve Lift @ 1.73:1 Rocker Ratio		Suggested Centrelines		Valve Lift @ TDC		Valve Spring Part Number
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	
1-TX272-L	272 Degree high performance cams designed for use with the stock valve spring	272	272	226	226	10.00mm	10.00mm	107	115	1.83mm	1.12mm	KVS63 or KVS63-BTK or KVS63-BTK-X
1-TX258	Cams for fast street engines with stock or small turbocharger, or restrictor plate rally engines up to 8000 RPM and 25lb boost with our recommended valve spring	258	264	208	220	10.50mm	10.50mm	107	111	0.81mm	0.96mm	KVS63 or KVS63-BTK or KVS63-BTK-X
1-TX264	The ultimate cam for street, strip and track engines from 300-500HP running up to 25lb boost and 8000 rpm with our recommended valve spring	264	260	216	216	11.00mm	10.35mm	107	113	1.10mm	0.70mm	KVS63 or KVS63-BTK or KVS63-BTK-X
1-TX272	The best all round performance cams to suit 400-600HP racing engines	272	272	226	226	11.00mm	11.00mm	107	113	1.52mm	1.00mm	KVS63 or KVS63-BTK or KVS63-BTK-X
1-TX280R	High HP racing cams, suits well built time attack and drag racing engines using E85 fuel	280	288	238	242	11.50mm	11.50mm	107	116	2.09mm	1.29mm	KVS63-BTK or KVS63-BTK-X
1-TX288	Drag racing cams to suit high horsepower professionally built drag racing engines up to 50lb boost and 9500 RPM with our recommended valve spring	288	280	242	238	12.00mm	11.50mm	105	117	2.40mm	1.32mm	KVS63-BTK or KVS63-BTK-X
1-TX294	Drag racing cams to suit extreme boost, high RPM engines that use ethanol / methanol and/or nitrous	294	300	250	256	12.00mm	12.00mm	110	118	2.39mm	1.88mm	KVS63-BTK or KVS63-BTK-X
1-177-X	Custom camshaft for Mitsubishi 4G63 VR4 Evolution 1-3 engines. Please specify hydraulic lifter when ordering. We can manufacture cams to your specifications or design a profile for your specific application.											

Solid Lifter Conversion Cams

Camshaft Part No	Application	Advertised Duration		Duration @ 1mm Valve Lift		Valve Lift @ 1.73:1 Rocker Ratio		Suggested Centrelines		Valve Lift @ TDC		Valve Spring Part Number
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	
1-SLX260	Solid lifter cams to suit 32-40mm restrictor plate and GPA rally engines	260	264	212	220	10.50mm	10.50mm	107	113	0.91mm	0.76mm	KVS63-BTK-X
1-SLX272	272 Degree cams for motors with solid lifter conversion. A solid version of our mega popular TX272	272	274	228	230	11.00mm	11.00mm	108	115	1.45mm	1.00mm	KVS63-BTK-X
1-SLX282	High HP racing cams, suit well built time attack and drag racing engines. Ideal for motors over 700HP using E85	282	288	240	244	11.50mm	11.50mm	109	116	1.96mm	1.45mm	KVS63-BTK-X
1-SLX294	Drag racing cams to suit extreme boost, high RPM engines that use ethanol / methanol and/or nitrous	294	300	251	258	12.00mm	12.00mm	110	118	2.40mm	1.90mm	KVS63-BTK-X
1-177-X	Custom camshaft for Mitsubishi 4G63 VR4 Evolution 1-3 engines. Please specify solid lifter when ordering. We can manufacture cams to your specifications or design a profile for your specific application.											



Matching Components for Mitsubishi 4G63 VR4 Evo 1-3

We stock a full range of valve train parts to compliment our Mitsubishi 4G63 VR4 Evo 1-3 camshaft range.

Part No	Description
KVS63	High performance PACALOY™ single valve spring set (16) to suit OEM retainer and spring base. 83lb seat pressure @ 39.00mm / Coil bind @ 24.00mm.
KVS63-BTK	High performance PACALOY™ beehive valve spring and titanium retainer set (16). Suits high RPM, high boost competition engines. Install @ 90lb / Maximum valve lift 13.50mm.
KVS63-BTK-X	Premium quality PACALOY™ beehive valve spring and titanium retainer set (16). Suits high RPM, high boost competition engines. Install @ 90lb / Maximum valve lift 13.50mm.
KCG63	Pair of adjustable cam gears for Mitsubishi 4G63 engines.
VG63 In	Mitsubishi 4G Kelford Bronze Valve Guide Intake 12.06mm O/D 6.55mm I/D
VG63 Ex	Mitsubishi 4G Kelford Bronze Valve Guide Exhaust 12.06mm O/D 6.55mm I/D
VS-M6.6I	Mitsubishi 4G Valve Stem Seal Intake
VS-M6.6E	Mitsubishi 4G Valve Stem Seal Exhaust
F1454P	Ferrea Comp Plus +1mm Exhaust 31.5mm 6.55mm 109.7mm 3.8mm
F1452P	Ferrea Comp Plus +1mm Intake 35mm 6.57mm 109.7mm 3.8mm



Mitsubishi 4G63 Evo 4-7



The Kelford Cams TX range of camshafts for Mitsubishi 4G63 DOHC engines are renowned worldwide for their superior results. Due to popular demand, we now offer a range of catalogue designs to cater for 4G63 engines with a solid lifter conversion; this range is ideal for those serious motorsport applications where use of aggressive limiters for launch, shift, anti-lag may cause hydraulic lifter pump up. The only difference between Evo 8 and Evo 4-7 cams is the diameter of the bolt hole in the back of the exhaust cam; For Evo 4-7 it is 8mm, for Evo 8 it is 12mm.



Hydraulic Lifter Cams

Camshaft Part No	Application	Advertised Duration		Duration @ 1mm Valve Lift		Valve Lift @ 1.73:1 Rocker Ratio		Suggested Centrelines		Valve Lift @ TDC		Valve Spring Part Number
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	
4-TX272-L	272 Degree high performance cams designed for use with the stock valve spring	272	272	226	226	10.00mm	10.00mm	107	115	1.83mm	1.12mm	KVS63 or KVS63-BTK or KVS63-BTK-X
4-TX258	Cams for fast street engines with stock or small turbocharger, or restrictor plate rally engines up to 8000 RPM and 25lb boost with our recommended valve spring	258	264	208	220	10.50mm	10.50mm	107	111	0.81mm	0.96mm	KVS63 or KVS63-BTK or KVS63-BTK-X
4-TX264	The ultimate cam for street, strip and track engines from 300-500HP running up to 25lb boost and 8000 rpm with our recommended valve spring	264	260	216	216	11.00mm	10.35mm	107	113	1.10mm	0.70mm	KVS63 or KVS63-BTK or KVS63-BTK-X
4-TX272	The best all round performance cams to suit 400-600HP racing engines	272	272	226	226	11.00mm	11.00mm	107	113	1.52mm	1.00mm	KVS63 or KVS63-BTK or KVS63-BTK-X
4-TX272R	The Ultimate 272 on the market, dyno proven to be the best available to date. Suited for 450-700hp, 40lb and 9500RPM with our recommended valve spring.	272	272	232	232	11.75mm	11.75mm	107	113	1.83mm	1.07mm	KVS63-BTK or KVS63-BTK-X
4-TX280R	High HP racing cams, suits well built time attack and drag racing engines using E85 fuel	280	288	238	242	11.50mm	11.50mm	107	116	2.09mm	1.29mm	KVS63-BTK or KVS63-BTK-X
4-TX288	Drag racing cams to suit high horsepower professionally built drag racing engines up to 50lb boost and 9500 RPM with our recommended valve spring	288	280	242	238	12.00mm	11.50mm	105	117	2.40mm	1.32mm	KVS63-BTK or KVS63-BTK-X
4-TX294	Drag racing cams to suit extreme boost, high RPM engines that use ethanol / methanol and/or nitrous	294	300	250	256	12.00mm	12.00mm	110	118	2.39mm	1.88mm	KVS63-BTK or KVS63-BTK-X
4-177-X	Custom camshaft for Mitsubishi 4G63 Evo 4-7. Please specify hydraulic lifter when ordering. We can manufacture cams to your specifications or design a profile for your specific application.											



Solid Lifter Conversion Cams

Camshaft Part No	Application	Advertised Duration		Duration @ 1mm Valve Lift		Valve Lift @ 1.73:1 Rocker Ratio		Suggested Centrelines		Valve Lift @ TDC		Valve Spring Part Number
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	
4-SLX260	Solid lifter cams to suit 32-40mm restrictor plate and GPA rally engines	260	264	212	220	10.50mm	10.50mm	107	113	0.91mm	0.76mm	KVS63-BTK-X
4-SLX272	272 Degree cams for motors with solid lifter conversion. A solid version of our mega popular TX272	272	274	228	230	11.00mm	11.00mm	108	115	1.45mm	1.00mm	KVS63-BTK-X
4-SLX282	High HP racing cams, suit well built time attack and drag racing engines. Ideal for motors over 700HP using E85	282	288	240	244	11.50mm	11.50mm	109	116	1.96mm	1.45mm	KVS63-BTK-X
4-SLX294	Drag racing cams to suit extreme boost, high RPM engines that use ethanol / methanol and/or nitrous	294	300	251	258	12.00mm	12.00mm	110	118	2.40mm	1.90mm	KVS63-BTK-X
4-177-X	Custom camshaft for Mitsubishi 4G63 Evo 4-7. Please specify solid lifter when ordering. We can manufacture cams to your specifications or design a profile for your specific application.											

Matching Components for Mitsubishi 4G63 Evo 4-7

We stock a full range of valve train parts to compliment our Mitsubishi 4G63 Evo 4-7 camshaft range.

Part No	Description
KVS63	High performance PACALOY™ single valve spring set (16) to suit OEM retainer and spring base. 83lb seat pressure @ 39.00mm / Coil bind @ 24.00mm.
KVS63-BTK	High performance PACALOY™ beehive valve spring and titanium retainer set (16). Suits high RPM, high boost competition engines. Install @ 90lb / Maximum valve lift 13.50mm.
KVS63-BTK-X	Premium quality PACALOY™ beehive valve spring and titanium retainer set (16). Suits high RPM, high boost competition engines. Install @ 90lb / Maximum valve lift 13.50mm.
KCG63	Pair of adjustable cam gears for Mitsubishi 4G63 engines.
VG63 In	Mitsubishi 4G Kelford Bronze Valve Guide Intake 12.06mm O/D 6.55mm I/D
VG63 Ex	Mitsubishi 4G Kelford Bronze Valve Guide Exhaust 12.06mm O/D 6.55mm I/D
VS-M6.6I	Mitsubishi 4G Valve Stem Seal Intake
VS-M6.6E	Mitsubishi 4G Valve Stem Seal Exhaust
F1454P	Ferrea Comp Plus +1mm Exhaust 31.5mm 6.55mm 109.7mm 3.8mm
F1452P	Ferrea Comp Plus +1mm Intake 35mm 6.57mm 109.7mm 3.8mm



Mitsubishi 4G63 Evo 8



The Kelford Cams TX range of camshafts for Mitsubishi 4G63 DOHC engines are renowned worldwide for their superior results. Due to popular demand, we now offer a range of catalogue designs to cater for 4G63 engines with a solid lifter conversion; this range is ideal for those serious motorsport applications where use of aggressive limiters for launch, shift, anti-lag may cause hydraulic lifter pump up. The only difference between Evo 8 and Evo 4-7 cams is the diameter of the bolt hole in the back of the exhaust cam; For Evo 4-7 it is 8mm, for Evo 8 it is 12mm.



Hydraulic Lifter Cams

Camshaft Part No	Application	Advertised Duration		Duration @ 1mm Valve Lift		Valve Lift @ 1.73:1 Rocker Ratio		Suggested Centrelines		Valve Lift @ TDC		Valve Spring Part Number
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	
8-TX272-L	272 Degree high performance cams designed for use with the stock valve spring.	272	272	226	226	10.00mm	10.00mm	107	115	1.83mm	1.12mm	KVS63-BK or KVS63-BTK or KVS63-BTK-X
8-TX258	Fast street engines with stock or small turbocharger, or restrictor plate rally engines up to 8000 RPM and 25lb boost with our recommended valve spring	258	264	208	220	10.50mm	10.50mm	107	111	0.81mm	0.96mm	KVS63-BK or KVS63-BTK or KVS63-BTK-X
8-TX264	The ultimate cam for street, strip and track engines from 300-500HP running up to 25lb boost and 8000 rpm with our recommended valve spring	264	260	216	216	11.00mm	10.35mm	107	113	1.10mm	0.70mm	KVS63-BK or KVS63-BTK or KVS63-BTK-X
8-TX272	The best all round performance cams to suit 400-600HP racing engines running up to 35lb boost and 8500rpm with our valve spring	272	272	226	226	11.00mm	11.00mm	107	113	1.52mm	1.00mm	KVS63-BK or KVS63-BTK or KVS63-BTK-X
8-TX272R	The Ultimate 272 on the market, dyno proven to be the best available to date. Suited for 450-700hp, 40lb and 9500RPM with our recommended valve spring.	272	272	232	232	11.75mm	11.75mm	107	113	1.83mm	1.07mm	KVS63-BTK or KVS63-BTK-X
8-TX280R	High HP racing cams, suits well built time attack and drag racing engines using E85 fuel	280	288	238	242	11.50mm	11.50mm	107	116	2.09mm	1.29mm	KVS63-BTK or KVS63-BTK-X
8-TX288	Drag racing cams to suit high horsepower professionally built drag racing engines up to 50lb boost and 9500 RPM with our recommended valve spring	288	280	242	238	12.00mm	11.50mm	105	117	2.40mm	1.32mm	KVS63-BTK or KVS63-BTK-X
8-TX294	Drag racing cams to suit extreme boost, high RPM engines that use ethanol / methanol and/or nitrous	294	300	250	256	12.00mm	12.00mm	110	118	2.39mm	1.88mm	KVS63-BTK or KVS63-BTK-X
8-177-X	Custom camshaft for Mitsubishi 4G63 Evo 8. Please specify hydraulic lifter when ordering. We can manufacture cams to your specifications or design a profile for your specific application.											



Solid Lifter Conversion Cams

Camshaft Part No	Application	Advertised Duration		Duration @ 1mm Valve Lift		Valve Lift @ 1.73:1 Rocker Ratio		Suggested Centrelines		Valve Lift @ TDC		Valve Spring Part Number
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	
8-SLX260	Solid lifter cams to suit 32-40mm restrictor plate and GPA rally engines	260	264	212	220	10.50mm	10.50mm	107	113	0.91mm	0.76mm	KVS63-BTK-X
8-SLX272	272 Degree cams for motors with solid lifter conversion. A solid version of our mega popular TX272	272	274	228	230	11.00mm	11.00mm	108	115	1.45mm	1.00mm	KVS63-BTK-X
8-SLX282	High HP racing cams, suit well built time attack and drag racing engines. Ideal for motors over 700HP using E85	282	288	240	244	11.50mm	11.50mm	109	116	1.96mm	1.45mm	KVS63-BTK-X
8-SLX294	Drag racing cams to suit extreme boost, high RPM engines that use ethanol / methanol and/or nitrous	294	300	251	258	12.00mm	12.00mm	110	118	2.40mm	1.90mm	KVS63-BTK-X
8-177-X	Custom camshaft for Mitsubishi 4G63 Evo 8. Please specify solid lifter when ordering. We can manufacture cams to your specifications or design a profile for your specific application.											

Matching Components for Mitsubishi 4G63 Evo 8

We stock a full range of valve train parts to compliment our Mitsubishi 4G63 Evo 8 camshaft range.

Part No	Description
KVS63-BK	High performance PACALOY™ beehive valve spring set (16) to suit stock retainers. Suits high RPM, high boost competition engines. Install @ 90lb / Maximum valve lift is 13.50mm.
KVS63-BTK	High performance PACALOY™ beehive valve spring and titanium retainer set (16). Suits high RPM, high boost competition engines. Install @ 90lb / Maximum valve lift 13.50mm.
KVS63-BTK-X	Premium quality PACALOY™ beehive valve spring and titanium retainer set (16). Suits high RPM, high boost competition engines. Install @ 90lb / Maximum valve lift 13.50mm.
KCG63	Pair of adjustable cam gears for Mitsubishi 4G63 engines.
VG63 In	Mitsubishi 4G Kelford Bronze Valve Guide Intake 12.06mm O/D 6.55mm I/D
VG63 Ex	Mitsubishi 4G Kelford Bronze Valve Guide Exhaust 12.06mm O/D 6.55mm I/D
VS-M6.6I	Mitsubishi 4G Valve Stem Seal Intake
VS-M6.6E	Mitsubishi 4G Valve Stem Seal Exhaust
F1454P	Ferrea Comp Plus +1mm Exhaust 31.5mm 6.55mm 109.7mm 3.8mm
F1452P	Ferrea Comp Plus +1mm Intake 35mm 6.57mm 109.7mm 3.8mm



Mitsubishi 4G63 Evo 9 MIVEC



The Kelford Cams TX range of camshafts for Mitsubishi 4G63 DOHC engines are renowned worldwide for their superior results. Due to popular demand, we now offer a range of catalogue designs to cater for 4G63 engines with a solid lifter conversion; this range is ideal for those serious motorsport applications where use of aggressive limiters for launch, shift, anti-lag may cause hydraulic lifter pump up.

Please note: The lift at TDC figure is with the cam at full retard on factory centreline.



Hydraulic Lifter Cams

Camshaft Part No	Application	Advertised Duration		Duration @ 1mm Valve Lift		Valve Lift @ 1.73:1 Rocker Ratio		Suggested Centrelines		Valve Lift @ TDC		Valve Spring Part Number
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	
9-TX272-L	272 Degree high performance cams designed for use with the stock valve spring	272	272	226	226	10.00mm	10.00mm	130/100	115	0.14mm	1.12mm	KVS63-BK or KVS63-BTK or KVS63-BTK-X
9-TX258	Fast street engines with stock or small turbocharger, or restrictor plate rally engines up to 8000 RPM and 25lb boost with our recommended valve spring	258	264	208	220	10.50mm	10.50mm	130/100	111	0.05mm	0.96mm	KVS63-BK or KVS63-BTK or KVS63-BTK-X
9-TX264	The ultimate cam for street, strip and track engines from 300-500HP running up to 25lb boost and 8000 rpm with our recommended valve spring	264	260	216	216	11.00mm	10.35mm	130/100	113	0.12mm	0.70mm	KVS63-BK or KVS63-BTK or KVS63-BTK-X
9-TX272	The best all round performance cams to suit 400-600HP racing engines running up to 35lb boost and 8500rpm with our valve spring	272	272	226	226	11.00mm	11.00mm	130/100	113	0.23mm	1.00mm	KVS63-BK or KVS63-BTK or KVS63-BTK-X
9-TX272R	The Ultimate 272 on the market, dyno proven to be the best available to date. Suited for 450-700hp, 40lb and 9500RPM with our recommended valve spring.	272	272	232	232	11.75mm	11.75mm	130/100	113	0.25mm	1.07mm	KVS63-BTK or KVS63-BTK-X
9-TX280R	High HP racing cams, suits well built time attack and drag racing engines using E85 fuel	280	288	238	242	11.50mm	11.50mm	130/100	116	0.37mm	1.29mm	KVS63-BTK or KVS63-BTK-X
9-TX288	Drag racing cams to suit high horsepower professionally built drag racing engines up to 50lb boost and 9500 RPM with our recommended valve spring	288	280	242	238	12.00mm	11.50mm	130/100	117	0.48mm	1.32mm	KVS63-BTK or KVS63-BTK-X
9-177-X	Custom camshaft for Mitsubishi 4G63 Evo 9 MIVEC. Please specify hydraulic lifter when ordering. We can manufacture cams to your specifications or design a profile for your specific application.											



Solid Lifter Conversion Cams

Camshaft Part No	Application	Advertised Duration		Duration @ 1mm Valve Lift		Valve Lift @ 1.73:1 Rocker Ratio		Suggested Centrelines		Valve Lift @ TDC		Valve Spring Part Number
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	
9-SLX260	Solid lifter cams to suit 32-40mm restrictor plate and GPA rally engines	260	264	212	220	10.50mm	10.50mm	130/100	113	0.13mm 1.42mm	0.76mm	KVS63-BTK-X
9-SLX272	272 Degree cams for motors with solid lifter conversion. A solid version of our mega popular TX272	272	274	228	230	11.00mm	11.00mm	130/100	115	0.18mm 2.03mm	1.00mm	KVS63-BTK-X
9-SLX282	High HP racing cams, suit well built time attack and drag racing engines. Ideal for motors over 700HP using E85	282	288	240	244	11.50mm	11.50mm	130/100	116	0.43mm 2.64mm	1.45mm	KVS63-BTK-X
9-177-X	Custom camshaft for Mitsubishi 4G63 Evo 9 MIVEC. Please specify solid lifter when ordering. We can manufacture cams to your specifications or design a profile for your specific application.											

Matching Components for Mitsubishi 4G63 Evo 9

We stock a full range of valve train parts to compliment our Mitsubishi 4G63 Evo 9 MIVEC camshaft range.

Part No	Description
KVS63-BK	High performance PACALOY™ beehive valve spring set (16) to suit stock retainers. Suits high RPM, high boost competition engines. Install @ 90lb / Maximum valve lift is 13.50mm.
KVS63-BTK	High performance PACALOY™ beehive valve spring and titanium retainer set (16). Suits high RPM, high boost competition engines. Install @ 90lb / Maximum valve lift 13.50mm.
KVS63-BTK-X	Premium quality PACALOY™ beehive valve spring and titanium retainer set (16). Suits high RPM, high boost competition engines. Install @ 90lb / Maximum valve lift 13.50mm.
KCG63 Single	Adjustable cam gear for Mitsubishi 4G63 Evo 9 engines.
VG63 In	Mitsubishi 4G Kelford Bronze Valve Guide Intake 12.06mm O/D 6.55mm I/D
VG63 Ex	Mitsubishi 4G Kelford Bronze Valve Guide Exhaust 12.06mm O/D 6.55mm I/D
VS-M6.6I	Mitsubishi 4G Valve Stem Seal Intake
VS-M6.6E	Mitsubishi 4G Valve Stem Seal Exhaust
F1454P	Ferrea Comp Plus +1mm Exhaust 31.5mm 6.55mm 109.7mm 3.8mm
F1452P	Ferrea Comp Plus +1mm Intake 35mm 6.57mm 109.7mm 3.8mm



Mitsubishi 4B11-T Evo X



Continuously variable intake and exhaust valve timing allows tuners to achieve great power gains and driveability from the 4B11-T. A popular engine for motorsport applications the benefits gained from installing Kelford Cams in 4B11-T engines are widely recognised. Utilising ultramodern design principles, casting techniques and state of the art CNC grinding the Kelford range of camshafts set the performance standard in the 4B-11 platform.

Camshaft Part No	Application	Advertised Duration		Duration @ 1mm Valve Lift		Valve Lift		Suggested Centrelines		Valve Clearances		Valve Spring Part Number
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	
214-R	Cams to suit 36mm restricted rally motors. Featuring our split lobe design for superior efficiency. Requires the use of our KVS11 valve spring set	260 254	262	214 210	220	10.00mm 9.75mm	10.00mm	Vari	Vari	0.25mm	0.35mm	KVS11
214-A	Stage 1 high performance cams. These can run with the stock valve spring at stock RPM limit, or use our spring to run up to 32lb boost and 9000 RPM	264	252	226	212	10.00mm	9.30mm	Vari	Vari	0.30mm	0.35mm	KVS11
214-B	Stage 2 high performance cams. These suit 350-550HP engine builds, up to 32lbs boost and 9000 RPM with the Kelford valve spring	270	262	228	220	11.00mm	10.00mm	Vari	Vari	0.30mm	0.35mm	KVS11
214-C	Stage 3 racing cams to suit high HP engine builds up to 32lb boost and 9000 RPM with the Kelford valve spring	278	272	236	230	11.50mm	11.00mm	Vari	Vari	0.30mm	0.35mm	KVS11
214-D	Stage 4 Drag Cams to suit Professionally built drag engines. Great on E85/Meth, 1000hp+ Cams for the serious user.	282	288	242	248	11.50mm	11.00mm	Vari	Vari	0.30mm	0.35mm	KVS11
214-X	Custom camshaft for Mitsubishi 4B11-T Evo X. We can manufacture cams to your specifications or design a profile for your specific application.											

Matching Components for Mitsubishi 4B11-T Evo X

We stock the following parts to compliment our Mitsubishi 4B11-T Evo X camshaft range.

Part No	Description
KVS11	High performance PACALOY™ valve spring set (16) to suit the OEM retainer and spring base. 75lb seat pressure @ 35.00mm (1.378") installed height / Coil bind is at 22.00mm.
KVS11-BT	MITSUBISHI EVO X PACALOY™ Beehive valve spring set with titanium retainers. This spring set has been designed for the serious racer for high rpm, high boost racing applications. 85lb seat pressure @ 34.2MM. 185lb at 11.5mm lift. Coil bind 21MM. Suits 10,000rpm and 50lb+ boost.
VG214 In	Mitsubishi 4B11 Kelford Bronze Valve Guide Intake 11.05mm O/D 5.45mm I/D
VG214 Ex	Mitsubishi 4B11 Kelford Bronze Valve Guide Exhaust 11.05mm O/D 5.45mm I/D
VS214	Mitsubishi Evo 4B11 Valve Stem Seals
F2176P	Ferrea Comp Plus +1mm Intake 36mm 5.47mm 113.25mm 4.24mm
F2174P	Ferrea Comp Plus +1mm Exhaust 30mm 5.46mm 105.90mm 2.32mm

KELFORD CAMS



GIVING YOUR THE POWER TO WIN



Nissan / Datsun L14-L20 (OHC) 4 Cylinder

This is the Kelford Cams range for the Nissan / Datsun both the 4 and 6 cylinder L Series engines, which remain popular choices for those restoring classic race cars. This range features ultra modern lobe designs for the very best performance. We have developed a proven range of camshafts for both naturally aspirated and turbocharged versions of these engines to suit the most common applications over the past 40 years. However, if you can't find your perfect camshaft within our catalogue, designing custom profiles is our speciality.



Camshaft Part No	Application	Advertised Duration @ 0.1mm Valve Lift		Duration @ 1mm Valve Lift		Valve Lift		Suggested Centrelines		Valve Lift @ TDC		Lash (set at the cam)		Valve Spring Part Number
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	
185-A	Stage 1 upgrade cam to suit near stock engines.	270	270	236	236	11.80mm	11.80mm	107	111	2.20mm	1.93mm	0.20mm	0.20mm	KVS4200
185-B	Mild performance cam to suit fast road cars on side draught carburettors. This cam can also run on the stock carburettors but is rough at idle.	280	280	245	245	11.80mm	11.80mm	104	108	2.59mm	2.46mm	0.15mm	0.15mm	KVS4200
185-C	Midrange performance cam to suit well built motors on 45mm side draught carburettors or individual runner fuel injection, ideal all-round performance for club level rally or track racing.	296	296	256	256	11.60mm	11.60mm	102	104	3.76mm	3.50mm	0.15mm	0.20mm	KVS4200
185-D	Top end performance cam to suit professionally built L series racing engines (not suitable for road cars).	304	304	263	263	14.43mm	14.43mm	100	102	4.72mm	4.58mm	0.20mm	0.20mm	KVS4200
185-T	High performance cam made on wider lobe separation to reduce overlap for turbocharged applications.	264	264	232	232	10.90mm	10.90mm	108	116	1.93mm	1.00mm	0.20mm	0.20mm	KVS4200
185-X	Custom camshaft for Nissan / Datsun L14 - L20 OHC 4 cylinder engines. We can manufacture cams to your specifications or design a profile for your specific application.													

Matching Components for Nissan / Datsun L Series

We stock the following valve train components to compliment our Nissan / Datsun L series camshaft range.

Part No	Description
KVS4200	High performance dual valve spring set for use with OEM retainer and spring base. 90lb Seat pressure @ 41.2mm / 225lb @11.00mm lift / Maximum lift is 15.00mm.



Nissan / Datsun L20-L28 (OHC) 6 Cylinder



This is the Kelford Cams range for the Nissan / Datsun both the 4 and 6 cylinder L Series engines, which remain popular choices for those restoring classic race cars. This range features ultra modern lobe designs for the very best performance. We have developed a proven range of camshafts for both naturally aspirated and turbocharged versions of these engines to suit the most common applications over the past 40 years. However, if you can't find your perfect camshaft within our catalogue, designing custom profiles is our specialty.



Camshaft Part No	Application	Advertised Duration @ 0.1mm Valve Lift		Duration @ 1mm Valve Lift		Valve Lift		Suggested Centrelines		Valve Lift @ TDC		Lash (set at the cam)		Valve Spring Part Number
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	
222-A	Stage 1 upgrade cam to suit near stock engines.	270	270	236	236	11.80mm	11.80mm	107	111	2.20mm	1.93mm	0.20mm	0.20mm	KVS4206
222-B	Mild performance cam to suit fast road cars on side draught carburettors. This cam can also run on the stock carburettors but is rough at idle.	280	280	245	245	11.80mm	11.80mm	104	108	2.59mm	2.46mm	0.15mm	0.15mm	KVS4206
222-C	Midrange performance cam to suit well built motors on 45mm side draught carburettors or individual runner fuel injection, ideal all-round performance for club level rally or track racing.	296	296	256	256	11.60mm	11.60mm	102	104	3.76mm	3.50mm	0.15mm	0.20mm	KVS4206
222-D	Top end performance cam to suit professionally built L series racing engines (not suitable for road cars).	304	304	263	263	14.43mm	14.43mm	100	102	4.72mm	4.58mm	0.20mm	0.20mm	KVS4206
222-T	High performance cam made on wider lobe separation to reduce overlap for turbocharged applications.	264	264	232	232	10.90mm	10.90mm	108	116	1.93mm	1.00mm	0.20mm	0.20mm	KVS4206
222-X	Custom camshaft for Nissan / Datsun L20 - L28 OHC 6 cylinder engines. We can manufacture cams to your specifications or design a profile for your specific application.													

Matching Components for Nissan / Datsun L Series

We stock the following valve train components to compliment our Nissan / Datsun L series camshaft range.

Part No	Description
KVS4206	High performance dual valve spring set for use with OEM retainer and spring base. 90lb Seat pressure @ 41.2mm / 225lb @11.00mm lift / Maximum lift is 15.00mm.



Nissan KA24DE/DET



The Kelford Cams range for Nissan KA24DE and KA24DET engines features cutting edge design technology for increased performance and extended component reliability. Adjustable cam gears must be used to achieve the correct valve timing. Please also note that while our camshafts do suit FWD and RWD vehicles, for RWD applications, you will need to machine the rear of the camshaft slightly. Custom designed, larger or naturally aspirated profiles are available by special request.

Part No	Application	Advertised Duration @ 0.30mm Cam Lift		Duration @ 1mm Valve Lift		Valve Lift		Suggested Centrelines		Valve Lift @ TDC		Valve Clearances	
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	In	Ex
213-A	Stage 1 drop in cams for turbocharged or naturally aspirated applications.	260	260	222	222	9.38mm	9.38mm	110	112	1.20mm	1.00mm	0.20mm	0.20mm
213-B	Stage 2 cams to suit turbocharged engines with over 400HP.	272	272	232	232	9.80mm	9.80mm	110	116	1.70mm	1.02mm	0.25mm	0.25mm
213-C	Stage 3 cams to suit turbocharged engines. These cams require cylinder head clearancing in order for the cams to rotate.	278	278	236	236	11.00mm	11.00mm	110	116	1.83mm	1.20mm	0.25mm	0.25mm
213-D	Stage 4 Cams to suit professionally built race engines, upwards of 1000+hp, great on alcohol base fuels. Head clearancing required.	282	288	244	250	11.50mm	11.00mm	112	118	2.05mm	1.67mm	0.25mm	0.25mm
213-X	Custom camshaft for Nissan KA24DE & KA24DET engines. We can manufacture cams to your specifications or design a profile for your specific application.												

Matching Components for Nissan KA24DE/DET

We stock the following valve train parts to compliment our Nissan KA24DE/DET camshaft range.

Part No	Description
KVS24	High performance PACALOY™ "drop in" single valve spring set to suit OEM retainer and spring base. 80lb seat pressure @ 34.90mm installed height. 185lb @ 23.90mm open height. Coil bind 20.30mm. Maximum valve lift is 13.50mm.



Nissan RB20-25DE/DET



The Kelford Cams range of camshafts for Nissan RB20 and RB25 engines has come from many years of racing RB engines down here in New Zealand and Australia. The HL series are popular because there is no head clearancing required, but the more serious engine builder uses the higher lift, split lobe profiles. This catalogue range is designed for hydraulic lifter engines. Please note that camshafts for RB25 NEO and NVCS engines are available. When selecting a valve spring for your RB build, it is recommended that you contact us for advice.



Camshaft Part No	Application	Advertised Duration @ 0.1mm Valve Lift		Duration @ 1mm Valve Lift		Valve Lift		Suggested Centrelines		Valve Lift @ TDC		Valve Spring Part Number
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	
Low Lift												
HL182-A	Drift spec, low duration, low overlap, maximum velocity, for ultimate throttle response. No cylinder head clearancing needed.	262	262	222	222	9.30mm	9.30mm	108	114	1.37mm	0.85mm	KVS20 or KVS25-R
HL182-B	272 Degree street / strip cams. No cylinder head clearancing needed.	272	272	226	226	9.35mm	9.35mm	110	114	1.19mm	0.85mm	KVS20 or KVS25-R
HL182-C	RB20/25DE-T hydraulic 280 degree racing camshafts, no cylinder head clearancing needed.	280	280	234	234	9.35mm	9.35mm	110	114	1.59mm	1.20mm	KVS20 or KVS25-R
High Lift												
H182-SC	Split lobe design, High lift Racing camshafts, low seat duration, maximum velocity to suit street, drift & track applications, requires machining for lobes to clear head casting.	272 264	272	232 226	232	10.00mm 10.00mm	10.00mm	110 112	114	1.70mm	1.20mm	KVS20 or KVS25-R
H182-SD	Split lobe design, High lift street / strip racing camshafts, suit large turbo, built engine, requires machining for lobes to clear head casting.	278 272	278	238 232	238	10.00mm 10.00mm	10.00mm	110 112	116	1.84mm	1.31mm	KVS20 or KVS25-R
H182-X	Custom camshafts for Nissan Nissan RB20 and RB25 turbocharged or naturally aspirated engines. We can manufacture cams to your specifications or design a profile for your specific application.											

Matching Components for Nissan RB20-25DE/DET

We stock the following valve train components to compliment our Nissan RB20-25DE/DET camshafts.

Part No	Description
KVS20	High performance PACALOY™ "drop in" valve spring set to suit OEM retainer and spring base and our cams up to 30lbs of boost and 8000RPM. This valve spring fits RB20DE/T and early (series 1) RB25DE/T heads that did not have variable valve timing originally. 85lb Seat pressure @ 36.00mm installed height / Coil bind is at 22.00mm.
KVS25-R	High performance PACALOY™ single valve spring, light weight retainer and spring base kit to suit series 2 RB25 heads originally equipped with short intake and long exhaust springs. These are for use with our cams up to 30lbs of boost and 8500RPM. If you use more boost and or rpm than this please contact us to discuss the correct parts choice for your engine. 83lb Seat pressure @ 30.40mm installed height / Maximum lift is at 10.50mm.
KCG25	Nissan RB20/25/26 Adjustable Cam Gears.



Spline & Half Moon Style Trigger



Yoke Style Trigger



Nissan R33 GTS25T RB25 NVCS



The Kelford Cams range of camshafts for Nissan RB25 NVCS/VCT engines are based upon many years of development. As with all Kelford profiles we have maximised power output. The RB25 NVCS engine was brought out in Nissan's R33 Skyline AKA the "BOAT". This catalogue range is designed for hydraulic lifter engines, however solid profiles are available on request. The low lift lobe designs on the A and A2 cams have proved very popular because there is no requirement for head clearancing. RB camshafts are also fitted with two different kinds of triggers; by default we fit the spline and half moon type, if you need the "yoke shaped" type please let us know when ordering.

Part No	Application	Advertised Duration @ 0.1mm Valve Lift		Duration @ 1mm Valve Lift		Valve Lift		Suggested Centrelines		Valve Lift @ TDC		Valve Spring Part Number
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	
246-A	Low duration, low overlap, maximum velocity, for ultimate throttle response. No cylinder head clearancing needed. OEM spring can be used with 7500rpm and 1bar of boost.	262	262	222	222	9.30mm	9.30mm	Vari	114	Vari	0.81mm	OEM or KVS25-R
246-A2	272 Degree street/strip cams. No cylinder head clearancing needed. OEM spring can be used with 7500rpm and 1bar of boost.	262	272	222	226	9.30mm	9.35mm	Vari	114	Vari	0.85mm	OEM or KVS25-R
246-B	RB25 NVCS 272 degree high lift profiles for high performance race builds. Machining is needed for cam swing. Must use KVS25R spring.	264	272	226	232	10.00mm	10.00mm	Vari	116	Vari	1.04mm	KVS25-R
246-X	Custom camshafts for Nissan Nissan RB25 NVCS (VCT) turbocharged or naturally aspirated engines. We can manufacture cams to your specifications or design a profile for your specific application.											

Matching Components for Nissan RB25 NVCS

We stock the following valve train components to compliment our Nissan RB25 NVCS camshafts.

Part No	Description
KVS25R	High performance PACALOY™ single valve spring, light weight retainer and spring base kit to suit series 2 RB25 heads originally equipped with short intake and long exhaust springs. These are for use with our cams up to 30lbs of boost and 8500RPM. If you use more boost and or rpm than this please contact us to discuss the correct parts choice for your engine. 83lb Seat pressure @ 30.40mm installed height / Maximum lift is at 10.50mm.
VG237 In	Nissan RB25 Kelford Bronze Valve Guide 10.02mm O/D 5.95mm I/D.
VG237 Ex	Nissan RB25 Kelford Bronze Valve Guide 10.02mm O/D 5.95mm I/D.
VS-N6I	Nissan RB25 Valve Stem Seal Intake.
VS-N6E	Nissan RB25 Valve Stem Seal Exhaust.
KCG25 Exhaust	Nissan RB/25/26 Adjustable Exhaust Cam Gear.
F2150P	Ferrea Comp Plus +1mm Exhaust 30.6mm 5.96mm 88.95mm 3.2mm.
F2152P	Ferrea Comp Plus +1mm Intake 35.12mm 5.97mm 86.7mm 3.5mm.



Spline & Half Moon Style Trigger



Yoke Style Trigger



Nissan R34 GTT RB25 Neo



The Kelford Cams range of camshafts for Nissan RB25NEO engines have been designed to work with the stock variable VCT intake cam gear, this allows our customers to retain lower rpm torque where a large fixed timing cam is not required. This catalogue range of cams features our drop in street profiles with no head clearancing required. High lift and custom cams that retain the NVCS/VCT are available upon request.

Camshaft Part No	Application	Advertised Duration @ 0.1mm Valve		Duration @ 1mm Valve Lift		Valve Lift		Suggested Centrelines		Valve Lift @ TDC		Valve Clearances		Valve Spring Part Number
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	
244-A	264 Degree street performance cams. No cylinder head clearancing required. Can run stock valve spring up to 7500rpm and 1bar of boost.	264	264	226	226	8.95mm	8.90mm	Vari	114	Vari	0.87mm	0.25mm	0.30mm	OEM or KVS25NEO
244-A2	272 Degree street/strip performance cams. No cylinder head clearancing required. Can run stock valve spring up to 7500rpm and 1bar of boost.	264	272	226	234	8.95mm	8.90mm	Vari	114	Vari	1.20mm	0.25mm	0.30mm	OEM or KVS25NEO
244-B	272 Degree high lift camshafts to suit high performance well built engines. Great with the use of a 3ltr bottom end and E85. Must use KVS25NEO spring kit.	264	272	230	238	9.60mm	9.60mm	Vari	116	Vari	1.27mm	0.25mm	0.30mm	KVS25NEO
244-X	Custom camshafts for Nissan RB25NEO engines. We can manufacture cams to your specifications or design a profile for your specific application.													

Matching Components for Nissan RB25 Neo

We stock the following valve train components to compliment our Nissan RB25 Neo camshaft range.

Part No	Description
KVS25NEO	KVS25-NEO NISSAN RB25-NEO High performance valve spring set with titanium retainers. Ovate wire PACALLOY™ Beehive springs. 90lb seat pressure / 175lb at 10mm lift. 12.50mm Maximum lift.
F1934P	Ferrea Comp Plus +1mm Exhaust 30.65mm 5.96mm 97.95 3.7mm.
F1936P	Ferrea Comp Plus +1 Intake 35.15mm 5.98mm 104.2mm 6.25mm.
KCG25 Exhaust	Nissan RB20/25/26 Adjustable Exhaust Cam Gear.



Nissan RB26DETT



The Kelford Cams range of camshafts for Nissan RB26DETT engines has been designed to suit a range of applications, from mild street cams with no head clearancing required, right through to the most aggressive, no-expense-spared race builds. RB camshafts are fitted with two different kinds of triggers; by default we fit the spline and half moon type, if you need the "yoke shaped" type please let us know when ordering.



Camshaft Part No	Application	Advertised Duration		Duration @ 1mm Valve Lift		Valve Lift		Suggested Centrelines		Valve Lift @ TDC		Valve Clearances		Base Circle		Valve Spring Part Number
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	
Low Lift																
L182-A	264 Degree street performance cams. No cylinder head clearancing required.	264	264	226	226	8.95mm	8.90mm	110	114	1.27mm	0.87mm	0.25mm	0.30mm	1.273"	1.261"	KVS15 or KVS1855-BT
L182-B	272 Degree street / strip performance cams. No cylinder head clearancing required.	272	272	234	234	8.95mm	8.90mm	110	114	1.60mm	1.20mm	0.25mm	0.30mm	1.273"	1.261"	KVS15 or KVS1855-BT
High Lift																
182-B	260 Degree, high lift cams. Best split between response and horsepower, Requires head clearancing.	260	260	226	226	10.00mm	9.95mm	110	114	1.35mm	0.92mm	0.25mm	0.30mm	1.273"	1.261"	KVS15 or KVS1855-BT
182-C	272 Degree performance cams delivering low end power and fast spool up, Requires head clearancing.	272	272	234	234	10.00mm	9.95mm	110	116	1.73mm	1.05mm	0.25mm	0.30mm	1.273"	1.261"	KVS15 or KVS1855-BT
182-S	274/270 Degree split lobe high performance cams to suit a range of motorsport applications. These are especially effective with engines running E85 fuel.	274 270	274	236 230	236	10.55mm 10.50mm	10.50mm	110 112	116	1.88mm	1.18mm	0.25mm	0.30mm	1.237"	1.237"	KVS15 or KVS1855-BT
182-SE	274/270 Degree split intake lobe, 280 Degree exhaust lobe to suit engines 3.0ltr and bigger. Great on E85 with 750+ engine HP.	274 270	280	236 230	242	10.55mm 10.50mm	10.50mm	110 112	118	1.88mm	1.34mm	0.25mm	0.30mm	1.237"	1.237"	KVS15 or KVS1855-BT
182-SF	288/280 Degree split lobe cams to suit high RPM, high HP engines, especially good with E85 fuel.	288 280	292	248 242	254	11.10mm 10.55mm	11.10mm	112 114	120	2.29mm	1.64mm	0.25mm	0.25mm	1.195"	1.195"	KVS1855-BT
182-SG	292 Degree split lobe drag racing cams. These suit high boost alcohol engines.	292 288	300	254 248	260	11.10mm 11.10mm	11.10mm	111 113	120	2.66mm	1.93mm	0.25mm	0.30mm	1.195"	1.195"	KVS1855-BT
182-X	Custom camshafts for Nissan RB26DETT engines. We can manufacture cams to your specifications or design a profile for your specific application.															



Matching Components for Nissan RB26DETT

We stock the following valve train components to compliment our Nissan RB26DETT camshaft range.

Part No	Description
KVS15	High performance PACALOY™ "drop in" valve spring set to suit OEM retainer and spring base. 80lb Seat pressure @ 39.10mm installed height / Coil bind is at 24.00mm.
KVS1855-BT	High performance nitrided, nano peened PACALOY™ beehive valve spring and high-grade titanium retainer kit. This kit was designed specifically by Kelford for RB26DETT engines and we believe it is the best valve spring kit in the world for these engines. 105lb Seat pressure @ 39.10mm installed height / Coil bind is at 26.50mm.
VG104 In	Nissan RB26 Kelford Bronze Valve Guide Intake 10.03mm O/D 5.95mm I/D
VG104 Ex	Nissan RB26 Kelford Bronze Valve Guide Exhaust 11.02mm O/D 6.9mm I/D
VS-N6I	Nissan RB26 Valve Stem Seal Intake
VS-N7E	Nissan RB26 Valve Stem Seal Exhaust
KCG25	Nissan RB20/25/26 Adjustable Cam Gears
CF-31/2.7	Chrome-Moly 31mm Nitrided RB26 Buckets
CF-31/3.78	Chrome-Moly 31mm Nitrided RB26 Buckets "for reduced base circle"
F2132P	Ferrea Comp Plus +1mm Exhaust 31.15mm 6.9mm 101.52mm 3.5mm
F2134P	Ferrea Comp Plus +1mm Intake 35.6mm 5.98mm 102.33 3.5mm



**Spline & Half Moon
Style Trigger**



**Yoke Style
Trigger**



Nissan SR16-20VE



Kelford Cams have always been the innovator when it comes to camshafts for Nissan SR16-20-VE/T engines. These engines have the potential to make plenty of power, but it doesn't come easy. We continue to research and develop, working with the best SR engine builders in the world to bring you the best camshafts for these motors. Our catalogue range caters for both naturally aspirated and turbocharged applications. Custom cams to your specification and VVL eliminator cams are also available on request.



Camshaft Part No	Application	Advertised Duration @ 0.1mm Valve Lift		Duration @ 1mm Valve Lift		Valve Lift @ 1.6:1 Rocker Ratio		Suggested Centrelines		Lift @ TDC		Valve Clearances		Valve Spring Part Number
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	
184-D	Nissan N1 main lobe with 20V spec side lobes	324	300	255	252	12.00mm	11.90mm	102	104	3.70mm	2.80mm	0.20mm	0.40mm	KVS10 or KVS10-BT
	Primary lobe specification for 184-D.	252	248	210	204	10.20mm	8.30mm	102	104	1.42mm	0.91mm	0.20mm	0.40mm	
184-C	SR20VE Racing cams to suit well modified, high compression motors. Ideal for strokers and IR manifolds.	314	312	266	258	12.50mm	11.80mm	104	100	4.24mm	3.70mm	0.20mm	0.40mm	KVS10 or KVS10-BT
	Primary lobe specification for 184-C.	252	248	210	204	10.20mm	8.30mm	102	104	1.42mm	.91mm	0.20mm	0.40mm	
184-C4	SR20VE cams to suit track and drag racing cars. Large duration low lobes to enhance midrange transition onto the high lobes.	314	312	266	258	12.50mm	11.80mm	101	98	4.67mm	3.94mm	0.20mm	0.40mm	KVS10 or KVS10-BT
	Primary lobe specification for 184-C4.	260	252	228	214	10.20mm	10.20mm	102	104	1.90mm	1.83mm	0.20mm	0.40mm	
184-E	Racing cams to suit large capacity, IR drag or track racing engines. Ideal in a light car with close ratio gears. Not for street cars.	318	312	274	258	13.00mm	11.80mm	101	98	5.05mm	3.94mm	0.20mm	0.40mm	KVS10 or KVS10-BT
	Primary lobe specification for 184-E.	260	252	228	214	10.20mm	10.20mm	102	104	1.90mm	1.83mm	0.20mm	0.40mm	
184-LT	Ultimate Street Performance Turbo cams. Suits 350HP-550HP engines.	274	274	236	236	10.60mm	10.60mm	108	114	1.84mm	1.28mm	0.20mm	0.40mm	KVS10 or KVS10-BT
	Primary lobe specification for 184-LT.	252	248	210	204	10.20mm	8.30mm	102	104	1.42mm	0.91mm	0.20mm	0.40mm	
184-ST	Nissan SR20VE-T cams for high performance, turbocharged street cars.	290	290	246	246	10.60mm	10.60mm	108	116	2.10mm	1.42mm	0.20mm	0.40mm	KVS10 or KVS10-BT
	Primary lobe specification for 184-ST.	252	248	210	204	10.20mm	8.30mm	102	104	1.42mm	0.91mm	0.20mm	0.40mm	
184-STK	Nissan SR20VE-T cams for high performance, turbocharged street cars running VVL Delete. Center lobes removed, big profile on side lobes.	290	290	246	246	10.60mm	10.60mm	108	116	2.10mm	1.42mm	0.20mm	0.40mm	KVS10 or KVS10-BT
184-T	Nissan SR20VE-T cams for high HP turbocharged engines for drag racing.	292	303	250	256	11.40mm	11.40mm	108	116	2.79mm	1.74mm	0.20mm	0.27mm	KVS10 or KVS10-BT
	Primary lobe specification for 184-T.	260	260	228	228	10.20mm	10.15mm	104	114	1.95mm	1.00mm	0.20mm	0.23mm	
184-TK	Nissan SR20VE-T cams for high HP turbocharged engines for drag racing running VVL Delete. Center lobes removed, big profile on side lobes.	292	303	250	256	11.40mm	11.40mm	108	116	2.79mm	1.74mm	0.20mm	0.27mm	KVS10 or KVS10-BT
184-X	Custom cams for Nissan SR16-20VE/T engines. We can manufacture cams to your specifications or design a profile for your specific application.													



Matching Components for Nissan SR16-20VE

We stock the below parts to compliment our Nissan SR16-20VE/T camshaft range.

Part No	Description
KVS10	Premium quality PACALOY™ dual valve spring set for use with stock retainers. 85lb Seat pressure @ 37.00mm / Coil bind is 20.00mm.
KVS10-BT	Premium quality PACALOY™ beehive valve spring and titanium retainer kit. 85lb Seat pressure / Maximum lift is 15.00mm.
KCG20	Pair of adjustable cam gears to suit Nissan SR20 engines.



Nissan RB30 (SOHC)



The single over head cam Nissan RB30 engine was made from 1985-1991, originally for the Nissan Skyline and Patrol. Holden bought the rights to use the engine for the very popular VL Commodore. This Kelford Cams range has been used with great success in many hot street, track racing and drag racing engines.



Naturally Aspirated Cams

Camshaft Part Number	Application	Advertised Duration		Duration @ 1mm Valve Lift		Valve Lift @ 1.6:1 Rocker ratio		Suggested Centrelines		Lift @ TDC		Valve Clearances	
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	In	Ex
	OEM specification for reference only.	242	242	208	208	10.00mm	10.00mm	110	111	0.56mm	0.51mm	HYD	HYD
226-A	Stage 1 cam to suit stock engine, stock ECU and stock valve springs.	260	260	224	224	10.90mm	10.90mm	108	112	1.40mm	1.00mm	HYD	HYD
226-B	Stage 2 cam to suit slightly modified engines. Requires ECU re-tune.	270	270	233	233	11.30mm	11.30mm	106	112	2.08mm	1.42mm	HYD	HYD
226-CS	Solid lifter racing cam to suit street / strip or track day car.	290	292	247	253	12.20mm	12.20mm	106	110	2.97mm	2.87mm	0.40mm	0.45mm
226-DS	Solid lifter racing cam to suit well modified, high RPM street / strip or track day car.	304	314	264	267	13.70mm	13.85mm	104	110	3.76mm	3.50mm	0.40mm	0.40mm
226-X	Custom camshaft for Nissan RB30 OHC engines. We can manufacture cams to your specifications or design a profile for your specific application.												

Turbocharged Cams

Camshaft Part Number	Application	Advertised Duration		Duration @ 1mm Valve Lift		Valve Lift @ 1.6:1 Rocker ratio		Suggested Centrelines		Lift @ TDC		Valve Clearances	
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	In	Ex
226-E	Stage 1 cam to suit mild turbocharged street performance applications.	260	260	224	224	10.90mm	10.90mm	112	114	1.09mm	0.70mm	HYD	HYD
226-F	Stage 2 cam to suit street / strip applications. Suits 350-500HP turbo range. Good midrange performance.	274	274	241	241	12.95mm	12.95mm	110	116	2.05mm	1.37mm	HYD	HYD
226-G	Stage 3 cam to suit well modified street / strip engines. This cam is a great choice for motors using E85.	284	292	249	255	13.70mm	13.70mm	110	118	2.69mm	2.13mm	HYD	HYD
226-HS	Solid lifter cam to suit various high RPM racing applications. Suits well built competition engines with large turbo.	296	304	260	264	13.70mm	13.70mm	112	118	2.69mm	2.15mm	0.40mm	0.40mm
226-IS	Solid lifter cam for top end HP. This cam suits well built competition engines with large turbo, high stall, nitrous etc. for drag racing applications.	304	314	264	267	13.70mm	13.85mm	112	118	2.81mm	2.51mm	0.40mm	0.40mm
226-X	Custom camshaft for Nissan RB30 OHC engines. We can manufacture cams to your specifications or design a profile for your specific application.												



Nissan SR20-DET GTi-R (Solid Lifter)

The GTi-R was developed as a WRC homologation engine. It has quad throttle bodies, a Garrett T28 turbocharger, larger injectors, and a large top-mount intercooler. The cylinder head features solid lifter camshafts. The Kelford range of camshafts for this engine has been well proven on circuits and drag strips around the world.



Camshaft Part No	Application	Advertised Duration		Duration @ 1mm Valve Lift		Valve Lift @ 1.55 Rocker Ratio		Suggested Centrelines		Valve Lift @ TDC		Valve Clearances (Set at cam)		Valve Spring Part Number
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	
186-A	Wild GTi-R street performance cams to suits turbo and ECU upgrade.	270	270	232	232	11.78mm	11.70mm	108	116	1.80mm	0.95mm	0.15mm	0.20mm	KVS22
186-B	GTi-R racing cams for midrange and top end power.	272	276	232	238	12.10mm	11.70mm	108	117	1.85mm	1.09mm	0.15mm	0.20mm	KVS22
186-C	Racing cams to suit well built competition engines above 600HP.	284	290	242	248	12.50mm	12.10mm	110	118	2.17mm	1.62mm	0.15mm	0.20mm	KVS22
186-D	Ultimate drag race cams for High RPM, high boost methanol engines.	294	300	250	256	12.50mm	12.10mm	110	120	2.57mm	1.54mm	0.15mm	0.20mm	KVS22
186-X	Custom camshaft for Nissan SR20DET GTi-R solid lifter engines. We can manufacture cams to your specifications or design a profile for your specific application.													

Matching Components for Nissan SR20-DET GTi-R (Solid Lifter)

We stock the following valve train components to compliment our Nissan SR20DET GTi-R solid lifter camshaft range.

Part No	Description
KVS22	High performance PACALOY™ dual valve spring set to suit OEM retainers. Please note these fit the GTi-R solid lifter heads only. These springs are ideal for use with our cams up to 9800 RPM and 30lb of boost. If you use more boost and/or RPM than this, please contact us to discuss the correct parts choice for your engine. 85lb Seat pressure @ 38.05mm installed height, 245lb @ 12mm / Coil bind is 23.30mm.
KCG20	Pair of adjustable cam gears to suit Nissan SR20 engines.



Nissan SR20-DET Non-NVCS

This Kelford Cams range of street and race track proven camshafts are for the SR20DET non-NVCS hydraulic lifter engines. This range of cams give our customers the benefits of increasing power and extending the life of parts. Our catalogue offering cater for a range of applications, including our ultimate drift specification which features low seat to seat duration for fast spool and lots of top end power.



Camshaft Part No	Application	Advertised Duration @ 0.1mm Valve Lift		Duration @ 1mm Valve Lift		Valve Lift @ 1.55 Rocker Ratio		Suggested Centrelines		Valve Lift @ TDC		Valve Spring Part Number
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	
188-EZ	Drop-in cam to suit factory valve springs. Must retain stock rev limit and not exceed 1.5bar of boost.	254	254	220	220	11.30mm	11.30mm	108	112	1.17mm	0.84mm	Stock
188-A	Street performance cams to suit small turbo upgrade. High lift and low duration for great low end, and midrange power. Require KVS93 valve springs.	260	266	218	222	11.80mm	11.00mm	108	112	1.12mm	0.92mm	KVS93
188-A2	High performance "drop in" cams to suit stock valve springs. Requires ECU re-tune.	266	270	224	228	11.00mm	11.00mm	108	114	1.47mm	0.96mm	KVS93 or KVS93-BT
188-B	Ultimate drift spec cams featuring maximum lobe area and low duration for fast spool and lots of top end power. Requires KVS93 or KVS93-BT valve springs if using over 2 bar boost.	268	272	226	230	12.00mm	11.50mm	108	115	1.52mm	1.06mm	KVS93 or KVS93-BT
188-C	280 Degree racing cams to suit street / strip engines with a large turbo. Requires KVS93 or KVS93-BT valve springs if using over 2 bar boost.	280	280	236	236	12.50mm	12.00mm	110	115	1.82mm	1.28mm	KVS93 or KVS93-BT
188-D	284/290 Degree drag racing cams to suit large turbo, high boost SR20 motors using E85 or Methanol. Requires KVS93-BT valve springs.	284	290	240	246	12.50mm	12.00mm	110	118	2.06mm	1.47mm	KVS93-BT
188-X	Custom camshaft for Nissan SR20-DET Non-NVCS hydraulic lifter engines. We can manufacture cams to your specifications or design a profile for your specific application.											

Matching Components for Nissan SR20-DET Non-NVCS

We stock the following valve train components to compliment our Nissan SR20-DET Non-NVCS hydraulic lifter camshaft range.

Part No	Description
KVS93	High performance PACALOY™ "drop in" valve spring set to suit OEM retainer and spring base. 85lb Seat pressure @ 40.50mm installed height / Coil bind is 25.00mm.
KVS93-BT	Premium quality PACALOY™ ovate wire beehive valve spring and titanium retainer kit to suit high RPM, high boost turbo motors. These valve springs feature a nano peened and gold nitrided surface finish process for the ultimate strength. Drop in on the OEM spring base to give 95lb Seat pressure / Maximum lift is 15.00mm.
KCG20	Pair of adjustable cam gears to suit Nissan SR20 engines.
F2130P	Ferrea Comp Plus +1mm Exhaust 31.15mm 6.95mm 102.4mm 3.5mm.
F1868P	Ferrea Comp Plus +1mm Intake 35.15mm 5.96mm 101.4mm 3.5mm.
VS-N6I	Nissan SR20 Valve Stem Seal Intake.
VS-N7E	Nissan SR20 Valve Stem Seal Exhaust.
VG104 In	Nissan SR20 Kelford Bronze Valve Guide Intake 10.03mm O/D 5.95mm I/D.
VG104 Ex	Nissan SR20 Kelford Bronze Valve Guide Exhaust 11.02mm O/D 6.9mm I/D.



Nissan SR20-DET NVCS



This Kelford Cams range of street and race track proven camshafts are for the Nissan SR20DET NVCS hydraulic lifter engines and feature low seat to seat duration producing fast spool and ultimate street / strip, track and drift performance.

Camshaft Part No	Application	Advertised Duration @ 0.1mm Valve Lift		Duration @ 1mm Valve Lift		Valve Lift @ 1.55 Rocker Ratio		Suggested Centrelines		Valve Lift @ TDC		Valve Spring Part Number
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	
V-188-EZ	Drop-in cam to suit factory valve springs. Must retain stock rev limit and not exceed 1.5bar of boost.	254	254	220	220	11.30mm	11.30mm	130	112	0mm	0.84mm	Stock
V-188-A	Street performance cams to suit small turbo upgrade. High lift and low duration for great low end, and midrange power. Require KVS93 valve springs.	260	266	218	222	11.80mm	11.00mm	130	112	0.06mm	0.92mm	KVS93
V-188-A2	High performance "drop in" cams to suit stock valve springs. Requires ECU re-tune.	266	270	224	228	11.00mm	11.00mm	132	114	0.02mm	0.96mm	KVS93 or KVS93-BT
V-188-B	Ultimate drift spec cams featuring maximum lobe area and low duration for fast spool and lots of top end power. Requires KVS93 or KVS93-BT valve springs if using over 2 bar boost.	268	272	226	230	12.00mm	11.50mm	132	115	0.05mm	1.06mm	KVS93 or KVS93-BT
V-188-C	280 Degree racing cams to suit street / strip engines with a large turbo. Requires KVS93 or KVS93-BT valve springs if using over 2 bar boost.	280	280	236	236	12.50mm	12.00mm	134	115	0.14mm	1.28mm	KVS93 or KVS93-BT
V-188-X	Custom camshaft for Nissan SR20DET NVCS hydraulic lifter engines. We can manufacture cams to your specifications or design a profile for your specific application.											

Matching Components for Nissan SR20DET NVCS

We stock the following valve train components to compliment our Nissan SR20DET NVCS hydraulic lifter camshaft range.

Part No	Description
KVS93	High performance PACALOY™ "drop in" valve spring set to suit OEM retainer and spring base. 85lb Seat pressure @ 40.50mm installed height / Coil bind is at 25.00mm.
KVS93-BT	Premium quality PACALOY™ ovate wire beehive valve spring and titanium retainer kit to suit high RPM, high boost turbo motors. These valve springs feature a nano peened and gold nitrided surface finish process for the ultimate strength. Drop in on the OEM spring base to give 95lb Seat pressure / Maximum lift is 15.00mm.
KCG20	Pair of adjustable cam gears to suit Nissan SR20 engines.
F2130P	Ferrea Comp Plus +1mm Exhaust 31.15mm 6.95mm 102.4mm 3.5mm.
F1868P	Ferrea Comp Plus +1mm Intake 35.15mm 5.96mm 101.4mm 3.5mm.
VS-N6I	Nissan SR20 Valve Stem Seal Intake.
VS-N7E	Nissan SR20 Valve Stem Seal Exhaust.
VG104 In	Nissan SR20 Kelford Bronze Valve Guide Intake 10.03mm O/D 5.95mm I/D.
VG104 Ex	Nissan SR20 Kelford Bronze Valve Guide Exhaust 11.02mm O/D 6.9mm I/D.



Nissan TB48 DOHC 24 Valve



Kelford Cams' range of camshafts to suit Nissan TB48 DOHC engines have proven to be popular for street and sand racing applications in the U.A.E. These cams have been designed and refined through careful research and development with racers and tuners.



Camshaft Part No	Application	Advertised Duration		Duration @ 1mm Valve Lift		Valve Lift		Lift @ TDC		Suggested Centrelines		Valve Clearances		Valve Spring Part Number
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	
223-A	Stage 1 performance camshaft set to suit near stock TB48 engines.	264	264	225	225	9.60mm	9.55mm	WT	1.24mm	126/104	110	0.25mm	0.30mm	KVS04
223-C	Stage 2 camshafts to suit mid range performance engines with limited modifications. For street and offroad applications.	286	286	244	244	10.80mm	10.75mm	WT	2.26mm	126/104	110	0.25mm	0.30mm	KVS04
223-D	Stage 3 camshafts to suit highly modified naturally aspirated stroker engines with high compression, ported heads and improved intake manifold etc.	308	294	264	256	12.10mm	11.80mm	WT	3.65mm	126/104	106	0.25mm	0.25mm	KVS04
223-T	Stage 1 Turbo cams for road and off road racing applications.	264	264	225	225	9.60mm	9.55mm	WT	1.24mm	132/110	116	0.25mm	0.30mm	KVS04
223-T1	Camshafts specifically designed to suit high HP turbocharged TB48 competition engines.	278	278	238	238	10.40mm	10.35mm	WT	1.42mm	132/110	115	0.25mm	0.30mm	KVS04
223-T2	Pro drag racing camshafts to suit high boost high HP alcohol motors. For use without vt. Requires adjustable gears.	292	302	252	260	10.80mm	10.80mm	2.44mm	1.96mm	112	120	0.25mm	0.25mm	KVS04
223-X	Custom cams for Nissan TB48 engines. We can manufacture cams to your specifications or design a profile for your specific application.													

Matching Components for Nissan TB48 DOHC 24 Valve

We stock the following valve train components to compliment our Nissan TB48 DOHC 24 Valve camshaft range.

Part No	Description
KVS04	High performance PACALOY™ valve spring set. 80lb Seat pressure @ 37.00mm / Coil bind is @ 22.00mm



Nissan VK56DE



The VK56 is an emerging engine that drifters are now starting to turn to. With its lightweight aluminium block and headers the Nissan VK56DE is a responsive engine that has the ability to produce an abundance of power. Kelford Cams range for Nissan VK56DE engines feature modern design principles to achieve the ultimate performance while maintaining proper control of the valve-train and camshaft drive chain systems. From mild upgrades, to twin-turbocharged, high horsepower applications, Kelford have the camshafts and valve springs to suit your needs.

Naturally Aspirated Cams

Camshaft Part No	Application	Advertised Duration		Duration @ 1mm Valve Lift		Valve Lift		Suggested Centrelines		Valve Lift @ TDC		Valve Clearances		Valve Spring Part Number
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	
STOCK	Stock specification for reference only.	232	230	195	195	8.80mm	8.80mm	113	113			0.3mm	0.35mm	
237-A	Mild enhancement cams for near stock engines. Requires ECU re-tune and KVS56 valve springs.	268 264	264	228 224	224	10.65mm 10.20mm	10.20mm	108 110	110	1.60mm	1.20mm	0.25mm	0.25mm	KVS56
237-B	Racing cams to suit slightly modified VK56-DE engines. Strong torque and midrange power.	288 278	278	248 240	236	11.55mm 11.05mm	11.00mm	106	110	3.35mm	2.13mm	0.25mm	0.30mm	KVS56
237-C	Racing cams to suit high compression, well modified VK56-DE racing engines. These cams deliver good midrange and top end power.	300 290	288	260 250	248	12.55mm 11.55mm	11.50mm	101	106	5.33mm	3.33mm	0.25mm	0.30mm	KVS56-BT
237-X	Custom camshafts for Nissan VK56 naturally aspirated engines. We can manufacture cams to your specifications or design a profile for your specific application.													

Turbocharged Cams

Camshaft Part No	Application	Advertised Duration		Duration @ 1mm Valve Lift		Valve Lift		Suggested Centrelines		Valve Lift @ TDC		Valve Clearances		Valve Spring Part Number
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	
237-T1	VK56 Stage 1 turbo cams, suits engines designed to run in the 550-750hp range. Requires KVS56-BT valve springs	272 264	264	232 224	224	10.70mm 10.55mm	10.55mm	113	115	1.35mm	0.66mm	0.25mm	0.30mm	KVS56-BT
237-T2	VK56 cams to suit single or twin turbo street / strip or marine applications, requires KVS56-BT valve springs	282 274	280	240 234	240	11.50mm 11.05mm	10.90mm	114	117	1.73mm	1.27mm	0.25mm	0.30mm	KVS56-BT
237-T3	VK56 cams to suit well built twin turbo drag racing engine, suits E85+, requires KVS56-BT valve springs	294 288	294	252 248	252	11.95mm 11.50mm	11.95mm	114	120	2.14mm	1.47mm	0.25mm	0.30mm	KVS56-BT
237-X	Custom camshafts for Nissan VK56 turbocharged engines. We can manufacture cams to your specifications or design a profile for your specific application.													

Matching Components for Nissan VK56DE

We stock the following valve train components to compliment our Nissan VK56DE camshaft range.

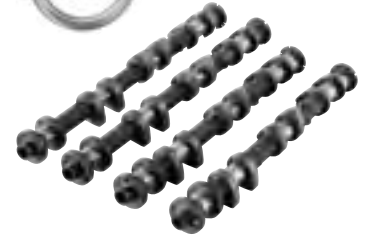
Part No	Description
KVS56	High performance PACALOY™ valve spring set to suit OEM retainers. These springs feature nano-peen and gold nitride surface finishing for superior strength and performance. 62lb Seat pressure / Maximum lift is 12.50mm.
KVS56-BT	High performance PACALOY™ ovate wire beehive valve spring and titanium retainer set. These springs feature nano-peen and gold nitride surface finishing for superior strength and performance. These suit high RPM, high boost racing applications. 95lb Seat pressure / 195lb @ 12.00mm lift / Maximum lift is 12.50mm.
VG237 In	Kelford Bronze Valve Guide 10.02mm O/D 5.95mm I/D Intake.
VG237 Ex	Kelford Bronze Valve Guide 10.02mm O/D 5.95mm I/D Exhaust.



Nissan VQ35DE Gen 1



This range of Kelford Cams is to suit the first generation of VQ35-DE engines that have variable intake cam timing only. We have developed our catalogue range to cater for the most common requirements for both naturally aspirated and turbocharged engines.



Naturally Aspirated Cams

Camshaft Part No	Application	Advertised Duration		Duration @ 1mm Valve Lift		Valve Lift		Suggested Centrelines		Valve Lift @ TDC		Valve Clearances		Valve Spring Part Number
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	
189-A	Stage 1 cam to suit mild naturally aspirated engine builds for fast street performance.	266	260	222	216	10.75mm	10.35mm	125	116	0.15mm	0.29mm	0.25mm	0.30mm	KVS35
189-B	Stage 2 cam to suit strong naturally aspirated engine builds. Ideal specification for fast street performance and time attack competition.	282	272	240	232	11.50mm	11.00mm	125	112	0.60mm	1.39mm	0.25mm	0.30mm	KVS35 or KVS35-BT
189-C	Stage 3 cam to suit ultimate, fully modified naturally aspirated engine builds with high compression, Cosworth manifold or IR system. Suitable for racing only.	302	292	256	250	11.50mm	11.00mm	125	110	1.31mm	2.62mm	0.25mm	0.30mm	KVS35 or KVS35-BT
189-X	Custom camshaft for Nissan VQ35DE Gen 1 naturally aspirated engines. We can manufacture cams to your specifications or design a profile for your specific application.													

Turbocharged Cams

Camshaft Part No	Application	Advertised Duration		Duration @ 1mm Valve Lift		Valve Lift		Suggested Centrelines		Valve Lift @ TDC		Valve Clearances		Valve Spring Part Number
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	
T-189-A	Stage 1 cam to suit turbocharged engine build for fast street performance.	262	258	222	222	10.75mm	10.70mm	125	116	0.21mm	0.56mm	0.25mm	0.30mm	KVS35
T-189-B	Stage 2 cam to suit turbocharged engine builds for super lap or wild street performance.	272	272	232	232	11.00mm	11.00mm	125	116	0.35mm	0.98mm	0.25mm	0.30mm	KVS35 or KVS35-BT
T-189-C	Stage 3 cam to suit fully built, turbocharged competition racing engine builds.	288	288	246	246	11.50mm	11.50mm	125	120	0.78mm	1.20mm	0.25mm	0.30mm	KVS35 or KVS35-BT
T-189-X	Custom camshaft for Nissan VQ35DE Gen 1 turbocharged engines. We can manufacture cams to your specifications or design a profile for your specific application.													

Matching Components for Nissan VQ35DE Gen 1

We stock the following valve train components to compliment our Nissan VQ35DE Gen 1 camshaft range.

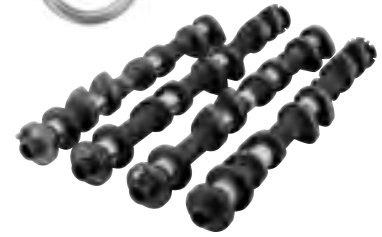
Part No	Description
KVS35	High performance PACALOY™ valve spring set to suit OEM retainers. These springs feature nano-peen and gold nitride surface finishing for superior strength and performance. 62lb Seat pressure / Maximum lift is 12.50mm.
KVS35-BT	High performance PACALOY™ ovate wire beehive valve spring and titanium retainer set. These springs feature nano-peen and gold nitride surface finishing for superior strength and performance. These suit high RPM, high boost racing applications with VVT disabled. 95lb Seat pressure / 195lb @ 12.00mm lift / Maximum lift is 12.50mm.



Nissan VQ35DE REV UP Gen 2



This range of Kelford Cams is to suit the second generation of VQ35-DE engines that have variable cam timing on both the intake and exhaust. We have developed our catalogue range to cater for the most common requirements for both naturally aspirated and turbocharged engines.



Naturally Aspirated Cams

Camshaft Part No	Application	Advertised Duration		Duration @ 1mm Valve Lift		Valve Lift		Suggested Centrelines		Valve Lift @ TDC		Valve Clearances		Valve Spring Part Number
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	
2-189-A	Stage 1 cam to suit mild naturally aspirated engine builds for fast street performance.	266	260	222	216	10.75mm	10.35mm	125	125	0.15mm	0.07mm	0.25mm	0.30mm	KVS35
2-189-B	Stage 2 cam to suit strong naturally aspirated engine builds. Ideal specification for fast street performance and time attack competition.	282	272	240	232	11.50mm	11.00mm	125	125	0.60mm	0.31mm	0.25mm	0.30mm	KVS35 or KVS35-BT
2-189-C	Stage 3 cam to suit ultimate, fully modified naturally aspirated engine builds with high compression, Cosworth manifold or IR system. Suitable for racing only.	302	292	256	250	11.50mm	11.00mm	125	125	1.31mm	0.98mm	0.25mm	0.30mm	KVS35 or KVS35-BT
2-189-X	Custom camshaft for Nissan VQ35DE REV UP Gen 2 naturally aspirated engines. We can manufacture cams to your specifications or design a profile for your specific application.													

Turbocharged Cams

Camshaft Part No	Application	Advertised Duration		Duration @ 1mm Valve Lift		Valve Lift		Suggested Centrelines		Valve Lift @ TDC		Valve Clearances		Valve Spring Part Number
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	
T2-189-A	Stage 1 cam to suit turbocharged engine build for fast street performance.	262	258	222	222	10.75mm	10.70mm	125	125	0.21mm	0.15mm	0.25mm	0.30mm	KVS35
T2-189-B	Stage 2 cam to suit turbocharged engine builds for super lap or wild street performance.	272	272	232	232	11.00mm	11.00mm	125	125	0.35mm	0.32mm	0.25mm	0.30mm	KVS35 or KVS35-BT
T2-189-C	Stage 3 cam to suit fully built, turbocharged competition racing engine builds.	288	288	246	246	11.50mm	11.50mm	125	125	0.78mm	0.73mm	0.25mm	0.30mm	KVS35 or KVS35-BT
T2-189-X	Custom camshaft for Nissan VQ35DE REV UP Gen 2 turbocharged engines. We can manufacture cams to your specifications or design a profile for your specific application.													

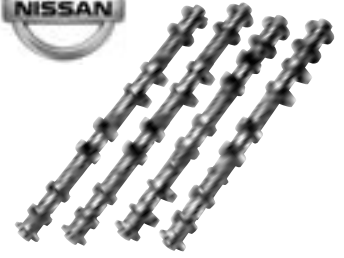
Matching Components for Nissan VQ35DE REV UP Gen 2

We stock the following valve train components to compliment our Nissan VQ35DE REV UP Gen 2 camshaft range.

Part No	Description
KVS35	High performance PACALOY™ valve spring set to suit OEM retainers. These springs feature nano-peen and gold nitride surface finishing for superior strength and performance. 62lb Seat pressure / Maximum lift is 12.50mm.
KVS35-BT	High performance PACALOY™ ovate wire beehive valve spring and titanium retainer set. These springs feature nano-peen and gold nitride surface finishing for superior strength and performance. These suit high RPM, high boost racing applications with VVT disabled. 95lb Seat pressure / 195lb @ 12.00mm lift / Maximum lift is 12.50mm.



Nissan VR38DETT R35 GTR



Kelford Cams continue to set the standard when it comes to high performance camshafts and valve springs for the GTR engine. Since their release in 2010, Kelford camshafts have powered the majority of race winning and record breaking GTR's worldwide. Catalogue offerings cater for a range of applications, from stock engines to well-built competition monsters. Our brand promise of 'Giving You The Power To Win' has led to some recent changes to further enhance performance and reliability. The KVS38-BT valve spring set has been engineered specifically to suit the intricacies of the VR38DETT engine.

Camshaft Part No	Application	Advertised Duration		Duration @ 1mm Valve Lift		Valve Lift		Suggested Centrelines		Valve Lift @ TDC		Valve Clearances		Valve Spring Part Number
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	
231-A	Stage 1 EZ-Power cams to suit stock engines. Can use O.E.M. valve springs if boost and RPM limit are kept original.	266	266	226	226	10.00mm	9.25mm	126	115	0.13mm	0.78mm	0.30mm	0.33mm	KVS38-BT
231-B2	Stage 2 high lift cams for street and motorsport applications. Superior performance and timing chain system reliability when used with our valve spring set.	274	274	233	233	10.60mm	10.55mm	130	115	0.21mm	1.17mm	0.25mm	0.30mm	KVS38-BT
231-S6	Split lobe design cams, to promote swirl and maximise efficiency. Suits street, track and endurance racing applications.	274 266	274	232 226	232	10.60mm 10.55mm	10.55mm	126 128	115	0.38mm	1.17mm	0.30mm	0.33mm	KVS38-BT
231-C	Stage 3 racing cams to suit well built racing engines. Suitable for many types of motorsport applications.	276	276	236	236	11.00mm	10.97mm	130	115	0.23mm	1.28mm	0.30mm	0.33mm	KVS38-BT
231-D	Serious race cams to suit drag racing engines using E85 or methanol fuel. The lobe designed to suit high RPM, high boost applications.	284	290	240	244	10.60mm	10.57mm	130	118	0.38mm	1.37mm	0.30mm	0.33mm	KVS38-BT
231-E	Ultimate race cams for methanol burning pro drag racing motors, 6 second 2000HP+ type builds.	292	306	246	260	11.00mm	11.00mm	130	118	0.51mm	2.08mm	0.30mm	0.33mm	Call for Options
231-X	Custom camshafts for Nissan VR38DETT engines. We can manufacture cams to your specifications or design a profile for your specific application.													

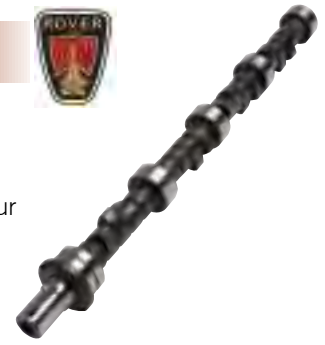
Matching Components for Nissan VR38DETT R35 GTR

We stock the following valve train components to compliment our Nissan VR38DETT R35 GTR camshaft range.

Part No	Description
KVS38-BT	High Performance, progressively wound PACALOY™ Beehive Valve spring set with titanium retainers. Engineered to match our camshafts for the ultimate in quality, performance and reliability. Intake: 36.75mm Installed height 80lb closed pressure. 180lb at 11mm lift. 24mm coil bind height. Exhaust: 33.75mm installed height, 80lb closed pressure. 180lb at 11mm lift. 21mm coil bind height.
F2237P	Ferrea Comp Plus +1mm Intake 38mm 5.98mm 95mm 4.8mm.
F2235P	Ferrea Comp Plus +1mm Exhaust 33.2mm 5.97mm 92mm 2.1mm.
VG231-IN	Nissan VR38 Kelford Bronze Guide 10.03mm O/D 5.95mm I/D.
VG231-EX	Nissan VR38 Kelford Bronze Guide 10.03mm O/D 5.95mm I/D.
VS-N6I	Nissan VR38 Valve Stem Seal Intake.
VS-N6E	Nissan VR38 Valve Stem Seal Exhaust.



Rover 3.5L V8



This Kelford Cams catalogue selection to suit Rover 3.5L V8 engines, has been developed over many years of grinding these camshafts for the New Zealand market. Whether your build is a daily driver or a full competition engine, we can supply the correct camshaft profile for your application. Custom camshafts are also available; talk to us about the right specifications for your application.

Hydraulic Lifter Cams

Camshaft Part No	Application	Advertised Duration @ .015" Cam Lift		Duration @ .050" Cam Lift		Valve Lift @ 1.6:1 Rocker Ratio		Cam Lift @ TDC		Suggested Centrelines	
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex
190-A	Cam to suit 4WD off roading and towing.	248	248	202	202	.413"	.413"	.258"	.258"	110	112
190-B	Mild performance cam to suit stock engine.	256	256	206	206	.432"	.432"	.270"	.270"	110	110
190-C	High torque cam to suit mildly modified engine.	264	264	212	212	.445"	.445"	.278"	.278"	107	113
190-D	Performance cam to suit hot street application.	274	274	224	224	.484"	.484"	.298"	.298"	106	114
190-X	Custom camshaft for Rover 3.5L V8 engines. We can manufacture to your specifications or design a profile for your specific application.										

Solid Lifter Cams

Camshaft Part No	Application	Advertised Duration @ .015" Cam Lift		Duration @ .050" Cam Lift		Valve Lift @ 1.6:1 Rocker Ratio		Cam Lift @ TDC		Suggested Centrelines	
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex
S190-A	Rally or race cams	285	298	242	248	.526"	.504"	.100"	.085"	104	110
S190-B	Rally or race cams	298	302	248	252	.522"	.501"	.108"	.094"	103	109
S190-X	Custom camshaft for Rover 3.5L V8 engines using solid lifters. We can manufacture to your specifications or design a profile for your specific application.										

Matching Components for Rover 3.5L V8

We stock the following valve train parts to compliment our Rover 3.5L V8 camshaft range.

Part No	Description
HT969	Genuine GM set of lifters for Rover V8 engines, made by Delphi.
CS8P76	Rollmaster timing chain and gear set.



Subaru EJ20 WRX STi Non-AVCS (Version 5-6)



This range of Kelford Camshafts suits the Version 5-6 STi engines that do not have AVCS. We list camshafts to suit the stock bucket with shim on top and also some higher lift versions that suit engines with shim under or 'shimless' buckets. The cams for shimless buckets cannot be used on the conventional shim on top system. High performance camshafts for Subaru EJ engines are our second most popular product and they are found in race engines all over the world. We believe that Kelford Cams make the best high performance Subaru camshafts available. All of these cams are manufactured in-house using ultra modern design systems and ground using masterless CNC grinders with CBN cutting wheel technology for superior quality and consistency.



Camshaft Part No	Application	Advertised Duration		Duration @ 1mm Valve Lift		Valve Lift		Suggested Centrelines		Lift @ TDC		Valve Clearances		Valve Spring Part Number
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	
199-B	High torque cams to suit near stock engines. Ideal in 36mm restrictor classes.	256 252	264	218 212	222	9.35mm 9.35mm	9.35mm	110 113	112	0.91mm 0.47mm	0.92mm	0.20mm	0.25mm	KVS109-STi or KVS1847-BT
199-C	264 degree camshafts to suit street strip and track applications, requires ecu and turbo upgrade.	268 264	264	226 222	222	10.30mm 10.00mm	10.00mm	110 112	112	1.36mm 0.91mm	0.92mm	0.20mm	0.25mm	KVS109-STi or KVS1847-BT
199-E	272 degree high performance camshafts to suit most motorsport applications. Suits well built engines on E85	274 270	270	232 228	228	10.60mm 10.60mm	10.60mm	110 112	113	1.68mm 1.22mm	1.13mm	0.20mm	0.25mm	KVS109-STi or KVS1847-BT
199-J	Race and Rally camshafts. High lift, low duration design for great throttle response. Must have shimless buckets.	264 260	260	225 222	222	10.70mm 10.20mm	10.20mm	110 112	113	1.28mm 0.92mm	0.83mm	0.20mm	0.25mm	KVS1847-BT
199-K	High lift 272 degree racing camshafts. Requires cylinder head modification to fit. Suits well built competition motors. Good on E85 fuel. Must have shimless buckets.	272 268	268	232 228	228	11.30mm 10.50mm	10.50mm	110 112	113	1.66mm 1.22mm	1.11mm	0.20mm	0.25mm	KVS1847-BT
199-L	High lift 282 degree racing duration racing camshafts, Requires cylinder head modification to fit. Suits well built motors with larger intake manifolds. Good on E85 fuel. Must have shimless buckets.	282 278	278	240 236	236	11.50mm 11.00mm	11.00mm	110 112	116	2.10mm 1.64mm	1.23mm	0.20mm	0.25mm	KVS1847-BT
199-M	290 degree camshafts to suit high boost, high rpm Drag racing engines. Must be run with fixed timing, not suitable in variable situations.	292 288	294	250 246	252	11.00mm 11.00mm	11.00mm	112	118	2.42mm	1.85mm	0.20mm	0.25mm	KVS1847-BT
199-X	Custom camshafts for Subaru EJ20 WRX Sti Non-AVCS (Version 5-6) engines. We can manufacture cams to your specifications or design a profile for your specific application.													

Matching Components for Subaru EJ20 WRX STi Non-AVCS (Version 5-6)

We stock the following valve train components to compliment our Subaru EJ20 WRX Sti Non-AVCS (Version 5-6) camshaft range.

Part No	Description
KVS109-STI	High performance PACALOY™ valve spring set to suit OEM retainers. 85lb Seat pressure @ 36.00mm installed height / Coil bind is at 22.00mm.
KVS1847-BT	High performance PACALOY™ ovate wire beehive valve spring and titanium retainer kit. These springs feature nano peen and gold nitride surface finishing treatments for superior endurance. This kit was designed specifically for the Subaru flat four engine, with high frequency, increased seat pressure and low open pressure. 100lb Seat pressure @ 35.50mm installed height / Coil bind is at 23.00mm / Maximum lift is 12.00mm.
VG199 In	Subaru EJ Kelford Bronze Valve Guide 11.07mm O/D 5.95mm I/D Intake
VG199 Ex	Subaru EJ Kelford Bronze Valve Guide 11.07mm O/D 5.95mm I/D Exhaust.
VS-TS6I	Subaru Valve Stem Seal Intake.
VS-TS6E	Subaru Valve Stem Seal Exhaust.
F1965P	Ferrea Comp Plus +1mm Intake 37mm 5.97mm 104.44mm 3.5mm.
F1966P	Ferrea Comp Plus +1mm Exhaust 33mm 5.96mm 104.75mm 3.5mm.



Subaru EJ20 WRX STI with AVCS (Versions 6 onwards)



This range of Kelford high performance camshafts is to suit the Version 6+ EJ20 engines with Subaru's awesome AVCS (Active Valve Control System). The cams are easily identified by the triggers on the rear of the intake cams, they are machined to have four protruding 'paddle wheel' style triggers. If your engine has the three 'keyway / slot' style triggers, you need to see our EJ25 range with the R-199 part numbers. This range of camshafts feature high velocity lobes that have a wider 'sweep' across the cam bucket, therefore these camshafts can only be used on shimless buckets or buckets that have the shim underneath. These profiles cannot run on the earlier 1999-2001 Version 5-6 buckets that have the shim on top.



Camshaft Part No	Application	Advertised Duration		Duration @ 1mm Valve Lift		Valve Lift		Suggested Centrelines		Lift @ TDC		Valve Clearances		Valve Spring Part Number
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	
V2-199-A	High torque camshafts to suit near stock engines. Ideal in 36 mm restrictor classes.	256 252	260	218 212	222	9.55mm 9.55mm	9.50mm	130	113	0.00mm	0.83mm	0.20mm	0.25mm	KVS109-STI or KVS1847-BT
V2-199-B	Race and Rally camshafts. High lift, low duration design for great throttle response. Must have shimless buckets and aftermarket ECU.	264 260	260	225 222	222	10.70mm 10.20mm	10.20mm	130	113	0.03mm	0.83mm	0.20mm	0.25mm	KVS109-STI or KVS1847-BT
V2-199-C	High lift 272 degree racing camshafts. Requires cylinder head modification to fit. Suits well built competition motors. Good on E85 fuel. Must have shimless buckets and aftermarket ECU.	272 268	268	232 228	228	11.30mm 10.50mm	10.50mm	130	113	0.12mm	1.11mm	0.20mm	0.25mm	KVS1847-BT
V2-199-D	High Lift 282 degree duration racing cams. These cams require cylinder head modification to fit. Suits well built motors with larger intake manifolds. Good on E85 fuel. Must have shimless buckets and aftermarket ECU.	282 278	278	240 236	236	11.50mm 11.00mm	11.00mm	130	113	0.49mm	1.23mm	0.20mm	0.25mm	KVS1847-BT
V2-199-E	290 degree camshafts to suit high boost, high rpm Drag racing engines. Must be run with fixed timing, not suitable in variable situations.	292 288	294	250 246	252	11.00mm 11.00mm	11.00mm	112	118	2.42mm	1.85mm	0.20mm	0.25mm	KVS1847-BT
V2-199-X	Custom camshafts for Subaru EJ20 WRX STI with AVCS (Versions 6 onwards) engines. We can manufacture cams to your specifications or design a profile for your specific application.													

Matching Components for Subaru EJ20 WRX STI with AVCS (Versions 6 onwards)

We stock the following valve train components to compliment our Subaru EJ20 WRX STI with AVCS (Versions 6 onwards) camshaft range.

Part No	Description
KVS109-STI	High performance PACALOY™ valve spring set to suit OEM retainers. 85lb Seat pressure @ 36.00mm installed height / Coil bind is at 22.00mm.
KVS1847-BT	High performance PACALOY™ ovate wire beehive valve spring and titanium retainer kit. These springs feature nano peen and gold nitride surface finishing treatments for superior endurance. This kit was designed specifically for the Subaru flat four engine, with high frequency, increased seat pressure and low open pressure. 100lb Seat pressure @ 35.50mm installed height / Coil bind is at 23.00mm / Maximum lift is 12.00mm.
VG199 In	Subaru EJ Kelford Bronze Valve Guide 11.07mm O/D 5.95mm I/D Intake.
VG199 Ex	Subaru EJ Kelford Bronze Valve Guide 11.07mm O/D 5.95mm I/D Exhaust.
VS-TS6I	Subaru Valve Stem Seal Intake.
VS-TS6E	Subaru Valve Stem Seal Exhaust.
F1965P	Ferrea Comp Plus +1mm Intake 37mm 5.97mm 104.44mm 3.5mm.
F1966P	Ferrea Comp Plus +1mm Exhaust 33mm 5.96mm 104.75mm 3.5mm.

These camshafts have AVCS (variable cam timing) on the intake side only and are identified by triggers at the rear of the intake cams consisting of four raised 'choppers' at 90 degrees apart.





Subaru EJ25 WRX STi with AVCS (2004 - Current)



This range of Kelford high performance camshafts is to suit Subaru EJ25 engine (2004 - current) equipped with Subaru's awesome AVCS (Active Valve Control System) on the intake cams only. The cams are easily identified by the triggers on the rear of the intake cams which will be machined to have three 'keyway / slot' style triggers.



Camshaft Part No	Application	Advertised Duration		Duration @ 1mm Valve Lift		Valve Lift		Suggested Centrelines		Lift @ TDC		Valve Clearances		Valve Spring Part Number
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	
R-199-A	High torque camshafts to suit near stock engines. Ideal in 36 mm restrictor classes.	256 252	260	218 212	222	9.55mm 9.55mm	9.50mm	130	113	0.00mm	0.83mm	0.20mm	0.25mm	KVS109STi or KVS1847-BT
R-199-B	Race and Rally camshafts. High lift, low duration design for great throttle response. Must have shimless buckets and aftermarket ECU.	264 260	260	225 222	222	10.70mm 10.20mm	10.20mm	130	113	0.03mm	0.83mm	0.20mm	0.25mm	KVS109STi or KVS1847-BT
R-199-C	High lift 272 degree racing camshafts. Requires cylinder head modification to fit. Suits well built competition motors. Good on E85 fuel. Must have shimless buckets and aftermarket ECU.	272 268	268	232 228	228	11.30mm 10.50mm	10.50mm	130	113	0.12mm	1.11mm	0.20mm	0.25mm	KVS1847-BT
R-199-D	High lift 282 degree racing duration racing camshafts, Requires cylinder head modification to fit. Suits well built motors with larger intake manifolds. Good on E85 fuel. Must have shimless buckets and aftermarket ECU.	282 278	278	240 236	236	11.50mm 11.00mm	11.00mm	130	113	0.25mm	1.23mm	0.20mm	0.25mm	KVS1847-BT
R-199-E	290 degree camshafts to suit high boost, high rpm Drag racing engines. Must be run with fixed timing, not suitable in variable situations.	292 288	294	250 246	252	11.00mm 11.00mm	11.00mm	112	118	2.42mm	1.85mm	0.20mm	0.25mm	KVS1847-BT
R-199-X	Custom camshafts for Subaru EJ20 WRX STi with AVCS (Version 7-10) engines. We can manufacture cams to your specifications or design a profile for your specific application.													

Matching Components for Subaru EJ25 WRX STi with AVCS (2004 - Current)

We stock the following valve train components to compliment our Subaru EJ25 WRX STi with AVCS (2004 - Current) camshaft range.

Part No	Description
KVS109-STI	High performance PACALOY™ valve spring set to suit OEM retainers. 85lb Seat pressure @ 36.00mm installed height / Coil bind is at 22.00mm.
KVS1847-BT	High performance PACALOY™ ovate wire beehive valve spring and titanium retainer kit. These springs feature nano peen and gold nitride surface finishing treatments for superior endurance. This kit was designed specifically for the Subaru flat four engine, with high frequency, increased seat pressure and low open pressure. 100lb Seat pressure @ 35.50mm installed height / Coil bind is at 23.00mm / Maximum lift is 12.00mm.
VG199 In	Subaru EJ Kelford Bronze Valve Guide 11.07mm O/D 5.95mm I/D Intake
VG199 Ex	Subaru EJ Kelford Bronze Valve Guide 11.07mm O/D 5.95mm I/D Exhaust.
VS-TS6I	Subaru Valve Stem Seal Intake.
VS-TS6E	Subaru Valve Stem Seal Exhaust.
F1965P	Ferrea Comp Plus +1mm Intake 37mm 5.97mm 104.44mm 3.5mm.
F1966P	Ferrea Comp Plus +1mm Exhaust 33mm 5.96mm 104.75mm 3.5mm.



Subaru EJ25 AVCS
Intake Cam
Trigger Identification



Subaru EJ257B WRX STi with DUAL-AVCS (2008 - Current)



This range of Kelford Camshafts to suit the Subaru WRX STi EJ257B dual AVCS features the same successful lobe designs used on the earlier engines. The Dual AVCS on this engine is a great tool for the tuner to provide a greater operating range. The Kelford range of camshafts feature a unique camshaft design technology called "ICE" or Improved Combustion Efficiency. This "ICE" split duration design has in turn created a significant combustion efficiency gain for these engines. No other aftermarket camshaft company offers this unique technology.



Camshaft Part No	Application	Advertised Duration		Duration @ 1mm Valve Lift		Valve Lift		Suggested Centrelines		Lift @ TDC		Valve Clearances		Valve Spring Part Number
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	
220-A	High torque cams to suit near stock engines. Ideal in 36mm restrictor classes.	256 252	260	218 212	222	9.55mm 9.55mm	9.50mm	130	126	0.00mm	0.00mm	0.20mm	0.25mm	KVS109-STI or KVS1847-BT
220-B	Race and rally cams with high lift and low duration for great throttle response.	264 260	260	225 222	222	10.70mm 10.20mm	10.20mm	130	126	0.03mm	0.07mm	0.20mm	0.25mm	KVS109-STI or KVS1847-BT
220-C	High lift 272 degree racing cams to suit well built competition engines. These cams work particularly well with E85 fuel. Requires cylinder head modification to fit.	272 268	268	232 228	228	11.30mm 10.50mm	10.50mm	130	126	0.12mm	0.24mm	0.20mm	0.25mm	KVS1847-BT
220-D	High lift 272 degree racing cams to suit well built competition engines with larger intake manifolds. These cams work particularly well with E85 fuel. Requires cylinder head modification to fit.	282 278	278	240 236	236	11.50mm 11.00mm	11.00mm	130	126	0.25mm	0.43mm	0.20mm	0.25mm	KVS1847-BT
220-E	290 degree camshafts to suit high boost, high rpm Drag racing engines. Must be run with fixed timing, not suitable in variable situations.	292 288	294	250 246	252	11.00mm 11.00mm	11.00mm	112	118	2.42mm	1.85mm	0.20mm	0.25mm	KVS1847-BT
220-X	Custom camshafts for Subaru EJ257B WRX STi with DUAL-AVCS (2008 - Current) engines. We can manufacture cams to your specifications or design a profile for your specific application.													

Matching Components for Subaru EJ257B WRX STi with DUAL-AVCS (2008 - Current)

We stock the following valve train components to compliment our Subaru EJ257B WRX STi with DUAL-AVCS (2008 - Current) camshaft range.

Part No	Description
KVS109-STI	High performance PACALOY™ valve spring set to suit OEM retainers. 85lb Seat pressure @ 36.00mm installed height / Coil bind is at 22.00mm.
KVS1847-BT	High performance PACALOY™ ovate wire beehive valve spring and titanium retainer kit. These springs feature nano peen and gold nitride surface finishing treatments for superior endurance. This kit was designed specifically for the Subaru flat four engine, with high frequency, increased seat pressure and low open pressure. 100lb Seat pressure @ 35.50mm installed height / Coil bind is at 23.00mm / Maximum lift is 12.00mm.
VG199 In	Subaru EJ Kelford Bronze Valve Guide 11.07mm O/D 5.95mm I/D Intake.
VG199 Ex	Subaru EJ Kelford Bronze Valve Guide 11.07mm O/D 5.95mm I/D Exhaust.
VS-TS6I	Subaru Valve Stem Seal Intake.
VS-TS6E	Subaru Valve Stem Seal Exhaust.
F1965P	Ferrea Comp Plus +1mm Intake 37mm 5.97mm 104.44mm 3.5mm
F1966P	Ferrea Comp Plus +1mm Exhaust 33mm 5.96mm 104.75mm 3.5mm

These camshafts have AVCS (variable cam timing) on the intake and exhaust side. The intake triggers consist of three slots. The exhaust triggers consist of a raised ring with two machined slots located just behind the front journal.



Subaru EJ257B Dual AVCS Intake Cam Trigger Identification



Subaru EJ257B Dual AVCS Exhaust Cam Trigger Identification



Toyota 1FZ-FE



The Kelford range of cams for the Toyota 1FZ-FE 24 valve, 4.5L DOHC engine, caters for everything from near stock engines right through to serious, high HP stoker engine builds. You will mostly find our 1FZ-FE camshafts and valve springs used in Toyota Land Cruisers, raced on and off road by our good friends in the U.A.E.



Camshaft Part No	Application	Advertised Duration		Duration @ 1mm Valve Lift		Valve Lift		Suggested Centrelines		Lift @ TDC		Valve Clearances		Valve Spring Part Number
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	
225-A	Stage 1 mild performance cams to suit a near stock engine.	264	264	225	225	9.70mm	9.65mm	107	107	1.52mm	1.48mm	0.25mm	0.30mm	KVS04
225-B	Stage 2 cams to suit mildly modified engines.	270	270	232	232	9.65mm	9.65mm	107	107	1.94mm	1.96mm	0.25mm	0.30mm	KVS04
225-C	Stage 3 cams for well modified 1FZ engines.	284	284	246	246	10.60mm	10.55mm	104	107	3.09mm	2.68mm	0.25mm	0.30mm	KVS04
225-T1	1FZ-FE Turbo cams for high HP engine builds.	276	284	238	246	10.35mm	10.55mm	110	115	1.91mm	1.77mm	0.25mm	0.30mm	KVS04
225-X	Custom camshafts for Toyota 1FZ-FE DOHC 6 cylinder engines. We can manufacture cams to your specifications, or design to suit your application.													

Matching Components for Toyota 1FZ-FE

We stock the below valve springs parts to compliment our Toyota 1FZ-FE DOHC camshaft range.

Part No	Description
KVS04	High performance PACALOY™ valve spring to suit OEM retainers. These valve springs suit naturally aspirated and mild turbocharged engines. For high HP turbocharged applications, please contact us for valve spring options. 80lb Seat pressure @ 37.00mm installed height / Coil bind is at 22.00mm.



Toyota 1JZ-GTE



This Kelford range of cams for the Toyota 1JZ-GTE engine, are designed to run with the stock cam bucket with shim on top unless the description specifies otherwise. For engines that have shimless or shim-under-cam bucket valve-train conversions, we have an endless range of profile designs available so please contact us to discuss your requirements.



Camshaft Part No	Application	Advertised Duration		Duration @ 1mm Valve Lift		Valve Lift		Suggested Centrelines		Lift @ TDC		Valve Clearances		Valve Spring Part Number
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	
229-A	High performance street cams for a near stock engine to suit up to 30 lb boost and 7500 RPM with our recommended valve spring. Will suit stock valve spring with stock redline.	248	248	210	210	8.70mm	8.70mm	109	116	0.68mm	0.06mm	0.25mm	0.25mm	KVS109-1JZ
229-B	Street performance cams to suit turbo and ECU upgrade. Suits up to 30 lb boost and 7500 RPM with our recommended valve spring. Will suit stock valve spring with stock redline.	260	260	222	222	9.35mm	9.35mm	108	116	1.31mm	0.26mm	0.25mm	0.25mm	KVS109-1JZ
229-C	264/272 Degree street, strip or track day cams for good response and midrange power. Suits up to 30 lb boost and 8000 RPM with our recommended valve spring. Requires valve spring upgrade, KVS109-1JZ	264	272	228	232	9.65mm	9.65mm	107	116	1.73mm	0.94mm	0.25mm	0.25mm	KVS109-1JZ
229-D	272/278 Degree racing cams. These are our most popular cam specifications for a vast range of motorsport applications. Requires valve spring upgrade, KVS109-1JZ	272	278	236	240	9.95mm	9.95mm	110	120	1.83mm	0.94mm	0.25mm	0.25mm	KVS109-1JZ
229-F	282/286 Degree racing cams to suit engines using an E85 blend. These cams require a shimless bucket or shim-under-bucket conversion. Cylinder head may need to be clearanced for cam swing. Requires valve spring upgrade, KVS109-1JZ	282	286	244	248	11.00mm	11.00mm	112	120	2.36mm	1.40mm	0.25mm	0.25mm	KVS109-1JZ
229-E	Drag racing cams for top end performance. These are designed to keep the valve-train stable, even on stock buckets. Cylinder head may need to be clearanced for cam swing. Requires valve spring upgrade, KVS109-1JZ	290	290	252	252	10.60mm	10.20mm	110	120	2.67mm	1.60mm	0.25mm	0.25mm	KVS109-1JZ
229-G	Pro-import cams to suit extreme boost, high RPM motors using alcohol. Shimless buckets are preferred with these cams. Cylinder head may need to be clearanced for cam swing. Requires valve spring upgrade, KVS109-1JZ	292	302	252	260	10.80mm	10.80mm	112	120	2.44mm	1.96mm	0.25mm	0.25mm	Call for options
229-X	Custom camshafts for Toyota 1JZ-GTE non VVTi engines. We can manufacture cams to your specifications, or design to suit your application.													



VVTi Cams

Camshaft Part No	Application	Advertised Duration		Duration @ 1mm Valve Lift		Valve Lift		Suggested Centrelines		Lift @ TDC		Valve Clearances		Valve Spring Part Number
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	
V229-A	High performance street cams for a near stock engine. Suits up to 30 lb boost and 7000 RPM with our recommended valve spring. Will suit stock valve spring with stock redline.	248	248	210	210	8.70mm	8.70mm	Vari	116	Vari	0.06mm	0.25mm	0.25mm	KVS109-1JZ
V229-B	Street performance cams to suit turbo and ECU upgrade. Suits up to 30 lb boost and 7500 RPM with our recommended valve spring. Will suit stock valve spring with stock redline.	260	260	222	222	9.35mm	9.35mm	Vari	116	Vari	0.26mm	0.25mm	0.25mm	KVS109-1JZ
V229-C	264/272 Degree street / strip or track day cams for good response and midrange power. Suits up to 30lb boost and 8000 RPM with our recommended valve spring. Requires valve spring upgrade, KVS109-1JZ	264	272	228	232	9.65mm	9.65mm	Vari	116	Vari	0.94mm	0.25mm	0.25mm	KVS109-1JZ
V229-D	272/278 Degree racing cams. These are our most popular cams for a vast range of motorsport applications. Requires valve spring upgrade, KVS109-1JZ	272	278	236	240	9.95mm	9.95mm	Vari	120	Vari	0.94mm	0.25mm	0.25mm	KVS109-1JZ
V229-X	Custom camshafts for Toyota 1JZ-GTE VVTi engines. We can manufacture cams to your specifications, or design to suit your application.													

Matching Components for Toyota 1JZ-GTE

We stock the below valve springs parts to compliment our Toyota 1JZ-GTE camshaft range.

Part No	Description
KVS109-1JZ	High performance PACALOY™ valve spring to suit OEM retainers. 95lb Seat pressure @ 34.00mm installed height / Coil bind is at 22.00mm.
KCG1JZ	Toyota 1JZ/2JZ Adjustable Cam Gears.
KCG1JZ Single	Toyota 1JZ/2JZ Adjustable Exhaust Cam Gear for VVTi.



Toyota / Lexus 1UZ-FE-3UZ-FE VVTi V8



The Kelford catalogue range of cams for the 1UZ-3UZ VVTi V8 engine is extensive, but if you don't see what you're looking for we can easily produce a custom cam for you. Kelford has been designing cams for these engines for a long time and for every application imaginable. We will have a design for anything you can throw at us, whether it is a twin turbo drag car, supercharged boat or road car, NZ super stock, or a street machine. We know these engines inside out.

Camshaft Part No	Application	Advertised Duration		Duration @ 1mm Valve Lift		Valve Lift		Centrelines		Maximum 5mm lift at TDC		Valve Clearances		Valve Spring Part Number
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	
208-A	Performance "Drop in cams" to suit the Stock Spring and full VVTi movement. Requires tuned ECU	251	251	218	218	8.35mm	8.30mm	130 74	110	4.42mm	0.94mm	0.25mm	0.35mm	KVS1UZ
208-B	Fast road cams, Suits upgraded intake & exhaust, needs tuneable ECU. Designed to work with stock head casting. Requires KVS1UZ spring.	264	258	232	226	9.60mm	9.50mm	136 80	110	4.85mm	1.3mm	0.25mm	0.35mm	KVS1UZ
208-C	10.5/1+ Comp, ITB's or good manifold, 8000rpm. Head needs clearance around bucket bores for cams to turn. Requires spring upgrade & retainer to seal modification.	272	270	240	236	11.2mm	10.6mm	142 86	106	5.0mm	2.25mm	0.25mm	0.35mm	KVS1UZ
208-D	NZ Stock Car 450hp cams, requires head clearance, valve spring upgrade and VVTi Deleted. Retainer to seal clearance needs to be taken into account.	282	276	248	242	11.6mm	11.0mm	104	106	3.20mm	2.59mm	0.25mm	0.35mm	KVS1UZ or KVS208
208-E	550hp 9500RPM racing cams. Designed to suit professionally built race engines. Requires Beehive spring and Ti retainer kit!	292	290	258	254	12.0mm	11.4mm	102	106	4.01mm	3.18mm	0.25mm	0.35mm	KVS208
Boosted Engines														
208-FI	Forced Induction Cams, Designed to suit stock head Casting, Needs KVS1UZ spring upgrade	254	264	220	232	9.60mm	9.50mm	132 76	114	4.90mm	1.19mm	0.25mm	0.35mm	KVS1UZ
208-T	Serious Turbo engines 750+hp, Great with the use of E85. Spring upgraded needed, KVS208 is required when using more than 30+ psi of boost and 8000rpm.	265	270	232	238	10.6mm	10.6mm	138 82	114	4.93mm	1.50mm	0.25mm	0.35mm	KVS1UZ or KVS208
208-X	Custom cams for Toyota 1UZ-VVTi engines. We have a massive range of camshaft profiles available for these engines, so we can manufacture cams to your desired figures or design a profile to suit your individual application.													

Matching Components for Toyota / Lexus VVTi V8

We stock the below valve springs parts to compliment our Toyota / Lexus VVTi V8 camshaft range.

Part No	Description
KVS1UZ	High performance PACALOY™ valve spring to suit OEM retainers. These springs feature Nano peened and gold nitrided surface finish treatment, giving the highest quality 1UZ valve spring on the market that suits the standard retainer. 80lb Seat pressure @ 33.00mm installed height / Coil bind is at 20.50mm.
KVS208	High performance, progressively wound PACALOY™ beehive valve spring and high-grade titanium retainer kit. This kit was engineered to match our camshafts for ultimate quality, performance and reliability. 80lb seat pressure @ 34.30mm Installed height / 190lb @ 12mm lift / Coil bind is at 21.0mm



Toyota / Lexus 1UZ-FE 4.0L V8



The Kelford catalogue range of cams for the fantastic 1UZ-FE 4.0L V8 engine is extensive, but if you don't see what you're looking for we can easily produce a custom cam for you. Kelford has been designing cams for these engines for a long time and for every application imaginable. We will have a design for anything you can throw at us, whether it is a twin turbo drag car, supercharged boat or road car, NZ super stock, or a street machine. We know these engines inside out.

Camshaft Part No	Application	Advertised Duration		Duration @ 1mm Valve Lift		Valve Lift		Suggested Centrelines		Lift @ TDC		Valve Clearances		Valve Spring Part Number
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	
207-A	Mild road or jet boat upgrade drop in cams to suit stock valve springs.	268	274	206	222	8.12mm	8.00mm	109	111	0.54mm	0.93mm	0.25mm	0.30mm	Stock or KVS1UZ
207-C	264 Degree mild performance cams. ECU upgrade required.	264	264	224	224	9.36mm	9.36mm	108	108	1.37mm	1.37mm	0.25mm	0.30mm	KVS1UZ
207-D	272 Degree cams for strong midrange performance. ECU upgrade required.	272	272	232	232	9.60mm	9.60mm	106	108	2.05mm	1.83mm	0.25mm	0.30mm	KVS1UZ
207-E	Racing cams to suit engines with a good exhaust, raised compression, eight throttles etc.	286	286	246	246	9.65mm	9.65mm	104	104	3.00mm	3.00mm	0.25mm	0.30mm	KVS1UZ
207-F	NZ super stock stage 1 racing cams to suit engines with stock cam buckets.	298	298	243	246	10.35mm	9.30mm	102	104	2.92mm	2.92mm	0.25mm	0.30mm	KVS1UZ
207-G	NZ super stock cams to suit fully modified racing engines with 430+HP. Must use shimless or shim under bucket.	294	294	249	243	10.70mm	10.35mm	100	102	3.56mm	3.15mm	0.25mm	0.30mm	KVS1UZ
207-SC	Supercharger cams. Requires ECU upgrade.	260	268	220	228	9.55mm	9.50mm	110	117	1.02mm	0.74mm	0.25mm	0.30mm	KVS1UZ
207-T1	High performance cams for mild turbocharged engines.	264	264	224	224	9.35mm	9.35mm	109	114	1.26mm	0.77mm	0.25mm	0.30mm	KVS1UZ
207-X	Custom camshafts for Toyota / Lexus 1UZ-3UZ engines. We can manufacture cams to your specifications, or design to suit your application.													

Matching Components for Toyota / Lexus 1UZ-FE 4.0L V8

We stock the below valve springs parts to compliment our Toyota / Lexus 1UZ-FE 4.0L V8 camshaft range.

Part No	Description
KVS1UZ	High performance PACALOY™ valve spring to suit OEM retainers. These springs feature nano peened and gold nitrided surge finish treatment, giving the highest quality 1UZ valve spring on the market. 80lb Seat pressure @ 33.00mm installed height / Coil bind is at 20.50mm.
KVS208	High performance, progressively wound PACALOY™ beehive valve spring and high-grade titanium retainer kit. This kit was engineered to match our camshafts for ultimate quality, performance and reliability. 80lb seat pressure @ 33.95mm Installed height / 190lb @ 12mm lift / Coil bind is at 21.0mm.
VG207	Toyota 1UZ Kelford Bronze Valve Guide 11.03mm O/D 5.95mm ID Exhaust.
VG208	Toyota 1UZ Kelford Bronze Valve Guide 11.03mm O/D 5.95mm ID Intake.



Toyota Supra Mk 5 B58



The Fifth Generation of Toyota Supra officially went on sale in May 2019. The car is a collaboration between BMW and Toyota and as such is equipped with the BMW B58 inline six that can also be found in the G29 BMW Z4. In its standard form the B58 provides the Supra with 250kw which, while healthy, leaves plenty of room for improvement. The Kelford range of catalogue camshafts are currently in production and set to become available in 2020. Our custom spring and Titanium retainer kit is already available.

Camshaft Part No	Application	Advertised Duration		Duration @ 1mm Valve Lift		Valve Lift		Suggested Centrelines		Lift @ TDC		Valve Spring Part Number
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	
OEM	Standard Valve motion	256	264	206	210	9.17mm	9.80mm	Vari	Vari	Vari	Vari	OEM
COMING EARLY 2020												

Matching Components for Toyota Supra Mk 5 B58

We stock the following parts to compliment our Toyota Supra Mk 5 B58 Camshaft range.

Part No	Description
KVS58-BT	Toyota Mk5 Supra, 3.0l B58 inline 6. High performance, progressively wound PACALOY™ beehive valve spring and Titanium Retainer Kit. This kit was engineered to match our camshafts for ultimate quality, performance and reliability. 90lb seat pressure @ 36.5mm Installed height / 193lb @ 11mm lift / Coil bind is at 23.6mm.



Toyota 2AZ-FE



The Kelford range of cams for the Toyota 2AZ-FE engine feature modern lobe designs with maximum area for the ultimate performance in your Scion TC. We can also manufacture cams to your specifications, or design a profile to suit your specific application.



Camshaft Part No	Application	Advertised Duration		Duration @ 1mm Valve Lift		Valve Lift		Suggested Centrelines		Lift @ TDC		Valve Clearances	
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	In	Ex
239-A	Mild street performance cams to suit stock valve springs.	264	260	218	216	9.35mm	8.75mm	Vari	110	Vari	0.81mm	0.20mm	0.25mm
239-B	272 Degree high performance cams to suit stock valve springs.	272	266	230	222	9.35mm	8.75mm	Vari	110	Vari	1.10mm	0.20mm	0.25mm
239-C	Naturally aspirated race cams for street / strip and track day applications.	286	278	244	236	10.80mm	10.00mm	Vari	106	Vari	2.29mm	0.20mm	0.25mm
239-T	272 degree camshafts to suit turbocharged 2AZ-FE racing engines.	272	270	232	228	10.00mm	10.00mm	Vari	114	Vari	1.01mm	0.20mm	0.25mm
239-X	Custom camshafts for Toyota 2AZ-FE engines. We can manufacture cams to your specifications, or design to suit your application.												



Toyota 2JZ-GTE



This Kelford range of cams for the Toyota 2JZ-GTE engine, are designed to run with the stock cam bucket with shim on top. For engines that have shimless or shim under cam bucket valve train conversions, we have an endless range of profile designs available so please contact us to discuss your requirements.

Non-VVTi Cams

Camshaft Part No	Application	Advertised Duration		Duration @ 1mm Valve Lift		Valve Lift		Suggested Centrelines		Lift @ TDC		Valve Clearances		Valve Spring Part Number
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	
T202-A	High performance street cams for a near stock engine. Suits up to 30 lb boost and 7500 RPM with our recommended valve spring. Will also drop in on stock spring.	248	248	210	210	8.70mm	8.70mm	109	116	0.68mm	0.06mm	0.25mm	0.25mm	KVS02 or KVS02-BT
T202-B	Street performance cams to suit engines with turbo and ECU upgrades. Suits up to 30lb boost and 7500 RPM with our recommended valve spring. Will also drop in on stock spring.	260	260	222	222	9.35mm	9.35mm	108	116	1.31mm	0.26mm	0.25mm	0.25mm	KVS02 or KVS02-BT
T202-C	264/272 Degree street/strip or track day cams for good response and midrange power. Suits up to 30lb boost and 8000 RPM with our recommended valve spring Requires valve spring upgrade, KVS02.	264	272	228	232	9.65mm	9.65mm	107	116	1.73mm	0.94mm	0.25mm	0.25mm	KVS02-BT
T202-D	272/278 Degree racing cams. These are our most popular cams for a vast range of motorsport applications. Requires valve spring upgrade, KVS02-BT.	272	278	236	240	9.95mm	9.95mm	110	120	1.83mm	0.94mm	0.25mm	0.25mm	KVS02-BT
T202-F	282/286 Degree racing cams to suit engines running an E85 blend. These cams require shimless bucket or shim-under-bucket conversion. Cylinder head may need to be clearanced for cam swing. Requires valve spring upgrade, KVS02-BT.	282	286	244	248	11.00mm	11.00mm	112	120	2.36mm	1.40mm	0.25mm	0.25mm	KVS02-BT
T202-E	Drag racing cams for top end performance, designed to keep the valve-train stable even on stock buckets. Cylinder head may need to be clearanced for cam swing. Requires valve spring upgrade, KVS02-BT.	290	290	252	252	10.60mm	10.20mm	110	120	2.67mm	1.60mm	0.25mm	0.25mm	KVS02-BT
T202-G	Pro-import cams to suit extreme boost, high RPM motors running on Alcohol. Shimless buckets are preferred for these cams. Cylinder head may need to be clearanced for cam swing. Requires valve spring upgrade, KVS02-BT.	292	302	252	260	10.80mm	10.80mm	112	120	2.44mm	1.96mm	0.25mm	0.25mm	Call for options
T202-X	Custom camshafts for Toyota 2JZ-GTE non VVTi engines. We can manufacture cams to your specifications, or design to suit your application.													



VVTi Cams

Camshaft Part No	Application	Advertised Duration		Duration @ 1mm Valve Lift		Valve Lift		Suggested Centrelines		Lift @ TDC		Valve Clearances		Valve Spring Part Number
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	
V202-A	High performance street cams for a near stock engine. Suits up to 30 lb boost and 7500 RPM with our recommended valve spring. Will also drop in on stock spring.	248	248	210	210	8.70mm	8.70mm	Vari	116	Vari	0.06mm	0.25mm	0.25mm	KVS02 or KVS02-BT
V202-B	Street performance cams to suit engines with turbo and ECU upgrades. Suits up to 30lb boost and 7500 RPM with our recommended valve spring. Will also drop in on stock spring.	260	260	222	222	9.35mm	9.35mm	Vari	116	Vari	0.26mm	0.25mm	0.25mm	KVS02 or KVS02-BT
V202-C	264/272 Degree street / strip or track day cams for good response and midrange power. Suits up to 30lb boost and 8000 RPM with our recommended valve spring. Requires spring upgrade, KVS02.	264	272	228	232	9.65mm	9.65mm	Vari	116	Vari	0.94mm	0.25mm	0.25mm	KVS02-BT
V202-D	272/278 Degree racing cams. These are our most popular cams for a vast range of motorsport applications. Requires valve spring upgrade, KVS02-BT.	272	278	236	240	9.95mm	9.95mm	Vari	120	Vari	0.94mm	0.25mm	0.25mm	KVS02-BT
V202-X	Custom camshafts for Toyota 2JZ-GTE VVTi engines. We can manufacture cams to your specifications, or design to suit your application.													

Matching Components for Toyota 2JZ-GTE

We stock the below valve springs parts to compliment our Toyota 2JZ-GTE camshaft range.

Part No	Description
KVS02	High performance PACALOY™ valve spring to suit OEM retainers. These springs feature nano peened and gold nitrided surface finish treatment for superior endurance. 80lb Seat pressure / Maximum lift is 11.50mm.
KVS02-BT	Ultimate PACALOY™ beehive valve spring and titanium retainer kit. These springs feature nano peened and gold nitrided surface finish treatment for ultimate strength. 105lb Seat pressure @ 35.00mm installed height / Coil bind is at 23.00mm.
VG202 In	Toyota 2JZ Kelford Bronze Valve Guide 11.05mm O/D 5.97mm I/D.
VG202 Ex	Toyota 2JZ Kelford Bronze Valve Guide 11.05mm O/D 5.97mm I/D.
VS-T6I	Toyota 2JZ Valve Stem Seal Intake.
VS-T6E	Toyota 2JZ Valve Stem Seal Exhaust.
KCGJZ	Pair of adjustable Cam Gears for Toyota 1JZ/2JZ.
F1496P	Ferrea Comp Plus +1mm Intake 34.6mm 5.98mm 98.55mm 3.5mm.
F1497P	Ferrea Comp Plus +1mm Exhaust 30mm 5.98mm 99.1mm 3.5mm.



Toyota 3RZ-FE DOHC



This Kelford range of cams for the Toyota 3RZ-FE DOHC engine are designed to run with the stock cam bucket with shim on top. For engines that have shimless or shim-under cam bucket valve train conversions, we have an endless range of profile designs available so please contact us to discuss your requirements.



Camshaft Part No	Application	Advertised Duration		Duration @ 1mm Valve Lift		Valve Lift		Suggested Centrelines		Lift @ TDC		Valve Clearances	
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	In	Ex
180-A	Stage 1 high performance cams for mildly tuned, turbocharged 3RZ-FE engine builds.	264	272	228	232	9.65mm	9.65mm	107	116	1.73mm	0.94mm	0.25mm	0.25mm
180-B	Stage 2 racing cams for well modified, turbocharged 3RZ-FE engine builds.	272	278	236	240	9.95mm	9.95mm	110	118	1.83mm	1.30mm	0.25mm	0.25mm
180-C	Drag racing cams to suit top end, high HP Turbocharged 3RZ-FE engines.	290	290	252	252	10.60mm	10.20mm	110	118	2.67mm	1.96mm	0.25mm	0.25mm
180-D	Drag racing cams to suit high boost engines in the 800-1000 HP range. These cams must use shimless buckets.	280	286	240	246	11.00mm	11.00mm	110	118	2.13mm	1.53mm	0.25mm	0.25mm
180-E	Drag racing cams to suit high boost race engine using alcohol. These cams must use shimless buckets.	288	306	250	263	11.55mm	11.60mm	112	118	2.49mm	2.49mm	0.25mm	0.25mm
180-X	Custom camshafts for Toyota 3RZ-FE DOHC engines. We can manufacture cams to your specifications, or design to suit your application.												



Toyota 3S-GE/GTE Gen 2



This Kelford Cams range of camshafts suits the generation 2 Toyota 3S-GE and 3S-GTE engines, produced from 1990 to 1993. These engines have the tappet shim on top of the cam bucket. Kelford cams for these engines feature modern max area lobe design and are proven performers.

Camshaft Part No	Application	Advertised Duration		Duration @ 1mm Valve Lift		Valve Lift		Suggested Centrelines		Lift @ TDC		Valve Clearances		Valve Spring Part Number
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	
2-195-A	Ultimate street or club race cams.	276	270	240	232	9.90mm	9.60mm	103	107	2.80mm	1.92mm	0.25mm	0.30mm	KVS109-3S
2-195-B	Rally cams for good midrange power in mild engines.	290	274	252	236	10.60mm	9.90mm	100	105	3.82mm	2.51mm	0.25mm	0.30mm	KVS109-3S
2-195-C	Rally or circuit racing cams to suit ported head, 45mm throttles etc.	300	286	260	248	10.60mm	9.90mm	99	104	4.30mm	3.28mm	0.25mm	0.30mm	KVS109-3S
2-195-D	Super race cams to suit light car, increased compression, big valves etc.	314	302	272	262	10.60mm	10.25mm	99	102	4.78mm	4.40mm	0.25mm	0.30mm	KVS109-3S
2-195-TA	3S-GTE Turbo cams for street performance engines with stock turbo.	258	258	222	222	9.30mm	9.30mm	110	112	1.13mm	0.85mm	0.25mm	0.30mm	KVS109-3S
2-195-TB	3S-GTE Turbo cams for serious street performance. Turbo and ECU upgrade required.	270	270	232	232	9.60mm	9.60mm	108	116	1.80mm	0.95mm	0.25mm	0.30mm	KVS109-3S
2-195-TC	3S-GTE Turbo drag racing cams for high HP and top end RPM.	278	278	240	240	9.90mm	9.90mm	105	115	2.58mm	1.47mm	0.25mm	0.30mm	KVS109-3S
2-195-X	Custom camshafts for Toyota 3S-GE/GTE second generation engines with the tappet shim on top of the cam bucket. We can manufacture cams to your specifications, or design to suit your application.													

Matching Components for Toyota 3S-GE/GTE Gen 2

We stock the below valve spring parts to compliment our Toyota 3S-GE/GTE Gen 2 camshaft range.

Part No	Description
KVS109-3S	High performance PACALOY™ valve spring to suit OEM retainers. 85lb Seat pressure @ 36.00mm installed height / Coil bind is at 22.00mm.



Toyota 3S-GE/GTE Gen 3



This Kelford Cams range of camshafts suits the generation 3 Toyota 3S-GE and 3S-GTE engines, produced from 1994 to 1999. These engines have the tappet shim on top of the valve tip so can benefit from higher lift cam profiles compared to the Gen 2 engines. Contact us if you need something special for your application.

Camshaft Part No	Application	Advertised Duration		Duration @ 1mm Valve Lift		Valve Lift		Suggested Centrelines		Lift @ TDC		Valve Clearances		Valve Spring Part Number
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	
3-195-A	Rally cams to suits big valve head, increased compression etc.	284	276	248	240	10.50mm	10.20mm	103	105	3.45mm	2.70mm	0.25mm	0.30mm	KVS109-3S
3-195-B	Race cams to suits professionally built competition engines.	296	284	258	248	11.20mm	10.50mm	100	104	4.50mm	3.37mm	0.25mm	0.30mm	KVS109-3S
3-195-C	All motor drag race or lightweight race car cams to suit 12.5/1+ compression and close ratio gearbox.	307	300	273	261	12.25mm	10.65mm	98	102	5.12mm	4.50mm	0.25mm	0.30mm	KVS109-3S
3-195-TA	3S-GTE Turbo cams for serious street performance engines with 400HP turbo.	262	262	224	224	10.50mm	10.00mm	110	114	1.22mm	0.78mm	0.25mm	0.30mm	KVS109-3S
3-195-TB	3S-GTE Turbo cams for well built engines with 450-600HP turbo	272	272	232	232	10.80mm	10.80mm	108	114	1.88mm	1.15mm	0.25mm	0.30mm	KVS109-3S
3-195-TC	3S-GTE Turbo cams for all out drag racing, high RPM, 700HP+ turbo	280	280	240	240	11.30mm	10.80mm	108	116	2.35mm	1.38mm	0.25mm	0.30mm	KVS109-3S
3-195-X	Custom camshafts for Toyota 3S-GE/GTE third generation engines with the tappet shim on top of the valve tip. We can manufacture cams to your specifications, or design to suit your application.													

Matching Components for Toyota 3S-GE/GTE Gen 3

We stock the below valve springs parts to compliment our Toyota 3S-GE/GTE Gen 3 camshaft range.

Part No	Description
KVS109-3S	High performance PACALOY™ valve spring to suit OEM retainers. 85lb Seat pressure @ 36.00mm installed height / Coil bind is at 22.00mm.



Toyota 3S-GTE Gen 4



This Kelford Cams range of camshafts suits the non-variable generation 4 Toyota 3S-GTE engines as found in the 1997 Caldina. These engines have full sequential ignition with a coil on plug setup as well as individual port injection. Contact us if you need something special for your application.

Camshaft Part No	Application	Advertised Duration		Duration @ 1mm Valve Lift		Valve Lift		Suggested Centrelines		Lift @ TDC		Valve Clearances		Valve Spring Part Number
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	
4-195-TA	3S-GTE Turbo cams for serious street performance engines with 400HP turbo.	262	262	224	224	10.50mm	10.00mm	110	114	1.22mm	0.78mm	0.25mm	0.30mm	KVS109-3S
4-195-TB	3S-GTE Turbo cams for well built engines with 450-600HP turbo	272	272	232	232	10.80mm	10.80mm	108	114	1.88mm	1.15mm	0.25mm	0.30mm	KVS109-3S
4-195-TC	3S-GTE Turbo cams for all out drag racing, high RPM, 700HP+ turbo	280	280	240	240	11.30mm	10.80mm	108	116	2.35mm	1.38mm	0.25mm	0.30mm	KVS109-3S
4-195-X	Custom camshafts for Toyota 3S-GTE fourth generation engines. We can manufacture cams to your specifications, or design to suit your application.													

Matching Components for Toyota 3S-GTE Gen 4

We stock the below valve springs parts to compliment our Toyota 3S-GTE Gen 4 camshaft range.

Part No	Description
KVS109-3S	High performance PACALOY™ valve spring to suit OEM retainers. 85lb Seat pressure @ 36.00mm installed height / Coil bind is at 22.00mm.



Toyota 4A-GE 16V



Kelford cams has developed a catalogue range for Toyota 4A-GE 16 valve engines with standard shims, and also a high velocity range to cater for engines with a shimless or shim under bucket conversion. The 193 range for stock shim engines features maximum area design and the highest lift in the industry, while working perfectly with the stock diameter shim. The 193HV range feature a high velocity design and must be used with a shimless cam bucket, or a shim-under-bucket conversion.

Camshaft Part No	Application	Advertised Duration		Duration @ 1mm Valve Lift		Valve Lift		Suggested Centrelines		Lift @ TDC		Valve Clearances		Valve Spring Part Number
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	
193-A	Fast street cams, can run stock ECU.	266	262	226	220	8.59mm	8.20mm	108	110	1.58mm	1.00mm	0.25mm	0.30mm	KVS101-16
193-B	Rally cams for great midrange power.	284	278	244	236	9.20mm	8.50mm	104	106	2.70mm	2.06mm	0.25mm	0.30mm	KVS101-16
193-C	Race cams to suit increased compression, ported head etc.	298	288	254	244	9.52mm	9.15mm	100	104	3.56mm	2.80mm	0.25mm	0.30mm	KVS101-16
193-D	Full race cams to suit single seater or sports car.	314	308	272	266	10.00mm	9.35mm	99	104	4.47mm	3.63mm	0.25mm	0.30mm	KVS101-16
193-T	Turbo cams with reduced overlap to suit street and race applications	262	266	220	226	8.25mm	8.25mm	108	116	1.19mm	0.73mm	0.25mm	0.30mm	KVS101-BT
193-X	Custom camshafts for Toyota 4A-GE 16V stock shim engines. We can manufacture cams to your specifications, or design to suit your application.													

Shimless, or Shim-Under-Bucket Cams

Camshaft Part No	Application	Advertised Duration		Duration @ 1mm Valve Lift		Valve Lift		Suggested Centrelines		Lift @ TDC		Valve Clearances		Valve Spring Part Number
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	
193HV-A	Rally cams to suit big valve head, increased compression etc.	290	282	248	240	10.30mm	10.10mm	99	105	3.60mm	2.53mm	0.25mm	0.30mm	KVS101-BT
193HV-B	Race cams to suit professionally built competition engines.	300	294	258	248	10.50mm	10.25mm	99	103	4.22mm	3.32mm	0.25mm	0.30mm	KVS101-BT
193HV-C	All motor drag race or single seater circuit car cams.	318	304	272	262	11.00mm	10.10mm	98	103	5.08mm	3.68mm	0.25mm	0.30mm	KVS101-BT
193HV-T	Turbo cams for all out drag racing.	272	280	232	240	10.00mm	10.00mm	108	118	1.86mm	1.16mm	0.25mm	0.30mm	KVS101-BT
193HV-X	Custom camshafts for Toyota 4A-GE 16V engines with a shimless or shim under bucket conversion. We can manufacture cams to your specifications, or design to suit your application.													

Matching Components for Toyota 4A-GE 16V

We stock the below valve springs parts to compliment our Toyota 4A-GE 16V camshaft range.

Part No	Description
KVS101-BT	Toyota 4AGE Beehive Spring & Titanium Retainer Set. 80lb Seat Pressure @ 33.85mm Installed Height, 168lb @ 10mm lift. Coil bind at 22mm.
KVS101-16	High performance PACALOY™ valve spring to suit OEM retainers. 43lb Seat pressure @ 35.00mm installed height / Coil bind is at 22.00mm.
KCG4AGE	Kelford 4AGE Cam Gears.



Toyota 4A-GE 20V



This Kelford range for Toyota 4A-GE engines features purpose built profiles that maximise lobe area on these small bucket engines. Some cams work with the VVT and others can either utilise the VVT or you can use adjustable gears if you wish to set fixed timing. These cams suit both the generation 4 silver top engines produced from '91 to '95, and the generation 5 black top engines produced from '95 to '98.

Camshaft Part No	Application	Advertised Duration		Duration @ 1mm Valve Lift		Valve Lift		Suggested Centrelines		Lift @ TDC		Valve Clearances		Valve Spring Part Number
		In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	In	Ex	
194-A	Stage 1 high performance cams for a fast street car with a stock engine.	264	264	228	228	8.20mm	8.15mm	120 100	106	0.58mm 2.25mm	1.75mm	0.25mm	0.30mm	KVS51-B
194-B	Rally cams for great power gains across the entire RPM range in mildly tuned engines.	270	270	232	232	8.70mm	8.65mm	120 100	105	0.63mm 2.52mm	2.00mm	0.25mm	0.30mm	KVS51-B
194-C	Racing cams to suit slightly modified engines. These cams can run VVT or use adjustable gears to set fixed timing.	284	278	248	242	9.30mm	8.50mm	120 100	105	1.29mm 3.02mm	2.52mm	0.25mm	0.30mm	KVS51-B
194-D	Racing cams for well optimised engines, great with 7A short block. These cams are not for use with VVT.	290	284	250	248	10.00mm	9.95mm	102	105	3.16mm	2.74mm	0.25mm	0.30mm	KVS51-B
194-E	Racing cams to suit high compression, high RPM professionally built competition engine in a light car. Great with 7A short block. These cams are not for use with VVT.	302	290	266	250	10.50mm	10.00mm	100	105	4.08mm	2.87mm	0.25mm	0.30mm	KVS51-B
194-TA	Turbo cams specifically designed for turbocharged 4A-GE 20V engines. These cams can use VVT or adjustable gears to set fixed timing.	264	264	228	228	8.20mm	8.20mm	111	113	1.30mm	1.10mm	0.25mm	0.30mm	KVS51-B
194-X	Custom camshafts for Toyota 4A-GE 20 valve engines. We can manufacture cams to your specifications, or design to suit your application.													

Matching Components for Toyota 4A-GE 20V

We stock the below valve springs parts to compliment our Toyota 4A-GE 20V camshaft range.








Part No	Description
KVS51-B	High performance PACALOY™ valve spring to suit OEM retainers. 58lb Seat pressure @ 36.60mm installed height / Coil bind is at 23.00mm.

KELFORD VALVE SPRINGS


Matching the correct valve spring to the correct camshaft and to your application is of significant importance. When selecting a valve spring for you we consider crucial factors such as valve train weights, stiffness, valve acceleration curve, camshaft drive type and RPM. Kelford Cams specialises in valve train design and our innovative designs cater for the intricacies and unique requirements of a range of engines.

We are proud to release a new range of valve springs created specifically to suit Kelford camshafts and the various applications they are used in. Designed here at Kelford and manufactured using the finest spring wire and latest surface finishing techniques by PAC Racing in the USA, you're selecting the highest quality product to protect your investment.






Chevrolet

Part No	Application
 KVS1518	CHEVROLET LS SERIES V8. Premium quality gold nitrided PACALOY™ beehive valve spring set. For use with OEM retainers, 774 steel retainers or 772 titanium retainers. 140lb @ 1.800" / Coil bind @ 1.140". Requires a custom spring base if used in LS7.
 KVS4843	CHEVROLET / HOLDEN V8. Single spring with a flat wound damper to suit mild hydraulic lifter camshafts. For use with cast heads and OEM retainers 95lb @ 1.750" / 290lb @ 1.250" Coil bind 1.180"
 KVS4915	CHEVROLET 262-400 High Performance PACALOY™ Beehive Valve spring set. Suits hydraulic roller. Install at 125lb @ 1.750" / Coil Bind @ 1.100"
 KVS4916	CHEVROLET LS High Performance PACALOY™ Beehive Valve spring set Install at 110lb @ 1.800" / Coil Bind @ 1.100"
 KVS4918	CHEVROLET LS SERIES V8. (except LS7). High quality PACALOY™ Beehive Valve spring set. Can be used with OEM retainers, Titanium retainers are also available. 130lb at 1.800" Coil Bind at 1.140"
 KVSLDBL	CHEVROLET LS SERIES V8. Dual Valve Spring, Retainer, Seat, Lock and Seal Kit. 145lb @ 1.800", coilbind 1.000"
 KVSLDBL TURBO	CHEVROLET LS SERIES V8. (Dual Valve Spring, Retainer, Seat, Lock and Seal Kit. 160lb @ 1.800", coilbind 1.000"

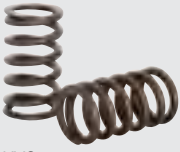






Chrysler

Part No	Application
 KVS265	CHRYSLER HEMI 215-265ci Six cylinder. High performance single valve spring set to suit mild hydraulic lifter camshafts. Fits the OEM head and retainer, no machining required. 105lb at 1.700" Maximum lift .500" / Coil bind @ 1.100"


Ford

Part No	Application
 KVS1800RS	COSWORTH FORD BDA, BDD, BDG. High Performance valve spring and retainer set. 85lb seat pressure at 33.00mm install height. 210lb at 10.00mm valve lift. Maximum lift 13.00mm. To fit our KVS1800RS spring it is required that you machine your O.E.M retainer slightly on the step that locates inside the outer spring.
 KVS2004-K	FORD 2000 OHC. (PINTO) High Performance single valve spring and Chrome Moly retainer set. Suits mid level performance camshafts, up to 13mm lift in 1970's-80's Pinto engines. 80lb seat pressure, 185lb at 11mm lift. Maximum lift 13.00mm
 KVS252	FORD GEN 1 3.5 LITRE V6 ECOBOOST. High performance, progressively wound PACALOY™ beehive valve spring Kit. This kit was engineered to match our camshafts for ultimate quality, performance and reliability. 90lb seat pressure @ 36.5mm Installed height / 193lb @ 11mm lift / Coil bind is at 23.6mm.
 KVS252-BT	FORD GEN 1 3.5 LITRE V6 ECOBOOST. High performance, progressively wound PACALOY™ beehive valve spring and Titanium Retainer Kit. This kit was engineered to match our camshafts for ultimate quality, performance and reliability. 90lb seat pressure @ 36.5mm Installed height / 193lb @ 11mm lift / Coil bind is at 23.6mm.
 KVS253	FORD GEN 2 3.5 LITRE V6 ECOBOOST. High performance, progressively wound PACALOY™ beehive valve spring. This kit was engineered to go with high performance camshaft upgrades and high boost applications. 90lb seat pressure @ 43.0mm Installed height / 246lb @ 13mm lift / Coil bind is at 25.0mm


Ford

Part No	Application
 KVS27	FORD ZETEC. High performance PACALOY™ valve spring set (16) to suit the OEM retainer and spring base. 65lb seat pressure @ 36.5mm (1.437") installed height / Coil bind is at 22.00mm.
 KVS40	FORD BARRA 24 VALVE BA-FG. High performance beehive valve spring set. Drop in on stock retainer and seat with O.E fitment. 110lbs seat pressure at 38.0mm installed height. Coil bind at 24.7mm
 KVS40-K	FORD 4.0L 6CYL (BARRA) BA-FG. Turbo and non Turbo. High performance Ovate wire, PACALOY™ Beehive valve spring set. 105lb seat pressure at 38.70mm, 200lb @ 12mm, Coil bind at 24.70mm
 KVS401	FORD 105E-116E & Formula Ford. High Performance single valve spring set to suit OEM retainers. 67lb seat pressure at 1.260". Coil bind is at .708"
 KVS402	FORD 105E-116E. High Performance PACALOY™ Dual valve spring set to suit racing camshafts. Requires cylinder head machining and requires retainer part number RET1600. 82lb seat pressure at 1.260" Coil bind at .670"
 KVS42-K	FORD 2000 OHC. Ovate wire, Beehive valve spring and Titanium retainer set. The ultimate valve spring for your classic 1970's-80's Pinto engine. 95lb seat pressure at 38.00mm (1.496"), 225lb at 12.00mm valve lift. Maximum lift is 15.00mm
 KVS43	FORD DURATEC 2.0L. (not suitable for variable valve timing motors) Ovate wire, PACALOY™ Beehive valve spring set. To suit competition engines. 75lb at 38.00mm installed height. Coil bind at 22.00mm







Holden

Part No	Application
 KVS3800	HOLDEN ECOTEC V6. High performance Beehive valve spring set. Drop n on stock retainers at 1.700" to give 110lb seat pressure. Coil bind at 1.115"




Holden

Part No	Application
 KVS4843	CHEVROLET / HOLDEN V8. Single spring with a flat wound damper to suit mild hydraulic lifter camshafts. For use with cast heads and OEM retainers 95lb @ 1.750" / 290lb @ 1.250" Coil bind 1.180"






Honda

Part No	Application
 KVS08	HONDA H22A. Kelford PACALOY™ premium quality gold nitride, dual valve spring set for use with stock retainers. (Titanium also available). 85lb seat pressure at 37.00mm. Coil bind at 20.00mm
 KVS13D	HONDA B18/B20B. High performance PACALOY™ dual valve spring set. Installed spring pressure is 66lb at 34.00mm (1.338") Coil is bind at 17.00mm
 KVS18	HONDA B16A/18C. High performance dual valve spring set to fit OEM retainers. Install at 34.00mm (1.338") to give seat pressure of 85lb. Coil bind is at 18.50mm
 KVS18-K	HONDA B16A/18C. High Performance dual valve spring and Titanium retainer set. Install at 34.00mm to give seat pressure of 85lb. Coil bind is at 18.50mm
 KVS79-K	HONDA K20A2. Premium quality ovate wire, Beehive valve spring set with Titanium retainers. Featuring nano-peen and gold nitride surface finish process' for the ultimate strength. Suits high RPM N/A motors and High boost Turbo motors. Drop in on the OEM spring base to give 88lb seated pressure. 15.00mm Maximum lift.
 KVS79-KX	KVS79-KX HONDA K Series PACALOY™ Beehive spring and Titanium retainer set for High RPM N/A and Turbo applications. Install at 95lb seat pressure. Maximum lift is 14.50mm


Mazda

Part No	Application
 KVS12	MAZDA B6, BP & BPT. High performance PACALOY™ valve spring set to suit OEM retainers. Installed spring pressure is 66lb.
 KVS17	KVS17 MAZDA L3 2.3 PACALOY™ Beehive spring set. Suits N/A engines and turbo engines up to 1 bar boost. Install at O.E.M 37.00mm (1.456") to give 62lb closed pressure. Coil bind 21.00mm
 KVS17X	KVS17-X MAZDA L3 2.3 PACALOY™ Beehive spring set. Suits high horsepower high rpm turbocharged engines. Install at O.E.M 37.00mm (1.456") to give 84lb closed pressure. Coil bind 24.00mm








Mitsubishi

Part No	Application
 KVS11	MITSUBISHI 4B11-T EVO X. High performance PACALOY™ valve spring set to suit the OEM retainer and spring base. 75lb seat pressure at 35.00mm (1.378") install height. Coil bind is at 22.00mm.
 KVS11-BT	MITSUBISHI EVO X PACALOY™ Beehive valve spring set with titanium retainers. This spring set has been designed for the serious racer for high rpm, high boost racing applications. 85lb seat pressure @ 34.2MM. 185lb at 11.5mm lift. Coil bind 21MM. Suits 10,000rpm and 50lb+ boost.
 KVS63	MITSUBISHI 4G63 DOHC VR4-EVO7. High Performance PACALOY™ single valve spring set to suit OEM retainer and spring base. 83lb seat pressure at 39.00mm. Coil Bind is at 24.00mm
 KVS63-BK	MITSUBISHI 4G63 DOHC EVO 8-9. High Performance PACALOY™ Beehive spring to suit stock retainers. Suits high RPM, high boost competition engines. Install at 90lb. Maximum valve lift is 13.50mm.
 KVS63-BTK	MITSUBISHI 4G63 DOHC EVO 1-9. High Performance PACALOY™ Beehive spring and Titanium retainer set. Suits high RPM, high boost competition engines. Install at 90lb. Maximum valve lift is 13.50mm.









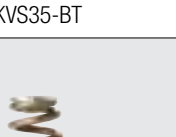
Mitsubishi

Part No	Application
 KVS63-BTK-X	MITSUBISHI 4G63 DOHC EVO 1-9. High Performance PACALOY™ Beehive spring and Titanium retainer set. Suits high RPM, high boost competition engines. Install at 90lb. Maximum valve lift is 13.50mm.





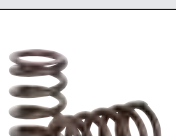
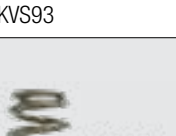
Nissan

Part No	Application
 KVS04	NISSAN TB48. High Performance PACALOY™ valve spring set to suit OEM retainers. Suits N/A and mild turbocharged engines. 67lb seat pressure at 37.00mm install height. Coil bind is at 22.00mm
 KVS10	NISSAN SR16/20VE. Kelford designed PACALOY™ dual valve spring set. Nanopeen and Gold nitride surface process' for the ultimate strength. For use with stock retainers. 85lb seat pressure at 37.00mm installed height. Coil bind is at 20.00mm
 KVS10-BT	NISSAN SR16/20-VE. PACALOY™ Beehive valve spring and Titanium retainer set. Nano-peen and gold nitride surface finishing treatments for superior endurance, 37501 CPM Natural frequency. Designed specifically for Nissan SR-VE racing engines. 95lb seat pressure, 15.00mm Maximum lift.
 KVS14	NISSAN A12-A15. High performance PACALOY™ single valve spring set to suit OEM retainers. Suits most street and race applications including NZ Ministock racing. 70lb seat pressure at 38.00mm. Coil bind is at 25.50mm
 KVS14D	NISSAN A12-A15. High performance dual valve spring set to suit OEM retainers. This spring set only suits full race A series engines with aggressive camshafts (not for street motors). 95lb seat pressure at 38.00mm Install height. Coil bind is at 25.50mm
 KVS15	NISSAN RB26DETT. 'Drop in' High Performance PACALOY™ single valve spring set to suit OEM retainers and spring base. 80lb seat pressure at 39.10mm installed height. Coil bind is at 24.00mm.
 KVS16	KVS16 NISSAN CA18DET High performance PACALOY™ single valve spring set to suit OEM retainer. 70lb seat pressure at 31.50mm installed height. 165lb @ 21.50mm open height. Coil bind 19.00mm. Maximum valve lift is 11.50mm.



Nissan

Part No	Application
 KVS1855-BT	NISSAN RB26DETT. The ultimate racing valve spring and retainer set. Specifically made by Kelford for competition RB26 engines. PACALOY™ Beehive valve springs featuring nitride and nano-peen process' for the ultimate strength. 105lb seat pressure at 39.10mm installed height. Coil bind is at 26.50mm
 KVS20	NISSAN RB20DE -DET. High performance PACALOY™ valve spring set to suit OEM retainers and spring base. Also fits Early RB25 heads that did not have variable valve timing. 85lb seat pressure at 36.00mm install height. Coil bind is at 22.00mm.
 KVS22	NISSAN GTI-R. High performance PACALOY™ dual valve spring set to suit OEM retainers. (Fits Nissan Gti-R solid lifter cylinder head only). 85lb seat pressure at 38.05mm installed height, 245lb @ 12mm. Coil bind is at 23.30mm
 KVS24	KVS24 NISSAN KA24DE/DET High performance PACALOY™ single valve spring set to suit OEM retainer and spring base. 80lb seat pressure at 34.90mm installed height. 185lb @ 23.90mm open height. Coil bind 20.30mm. Maximum valve lift is 13.50mm.
 KVS25-NEO	NISSAN RB25-NEO High performance valve spring set with titanium retainers. Ovate wire PACALOY™ Beehive springs. 90lb seat pressure / 175lb at 10mm lift. 12.50mm Maximum lift.
 KVS25R	NISSAN RB25DE-DET (with NVCS). High performance valve spring set. Includes 24 springs and 12 spring bases for the exhaust side to even up the install heights. 83lb at 30.40mm installed height on intake, 80lb at 30.65mm on the exhaust. 10.50mm maximum lift.
 KVS35	NISSAN VQ35DE-(T). High Performance PACALOY™ valve spring. Featuring nano-peen and gold nitride surface finishing for superior strength and performance. Suits OEM retainers. 62lb seat pressure. 12.50mm maximum lift.
 KVS35-BT	NISSAN VQ35DE-(T). High Performance, progressively wound PACALOY™ Beehive Valve spring set with titanium retainers. Engineered to match our camshafts for the ultimate in quality, performance and reliability. Intake: 36.75mm Installed height 80lb closed pressure. 180lb at 11mm lift. 24mm coil bind height. Exhaust: 33.75mm installed height, 80lb closed pressure. 180lb at 11mm lift. 21mm coil bind height.
 KVS38-BT	NISSAN VR38DETT. Progressively wound PACALOY™ Beehive Valve spring set with titanium retainers. Engineered to match our camshafts for the ultimate in quality, performance and reliability. Intake:36.75mm Installed height 80lb closed pressure. 180lb at 11mm lift. 24mm coil bind height. Exhaust: 33.75mm installed height, 80lb closed pressure. 180lb at 11mm lift. 21mm coil bind height.

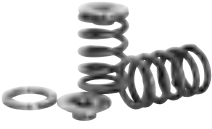



Nissan

Part No	Application
 KVS4200	NISSAN L16-L20 (4cyl). High Performance dual valve spring set, for use with OEM retainers and spring base. 90lb seat pressure at 41.2mm, 225lb at 11.00mm lift. Maximum lift 15.00mm
 KVS4206	NISSAN L20-L28 (4cyl). High Performance dual valve spring set, for use with OEM retainers and spring base. 90lb seat pressure at 41.2mm, 225lb at 11.00mm lift. Maximum lift 15.00mm
 KVS56	NISSAN VK56DE-(T). High Performance PACALOY™ valve spring. Featuring nano-peen and gold nitride surface finishing for superior strength and performance. Suits OEM retainers. 62lb seat pressure. 12.50mm maximum lift.
 KVS56-BT	NISSAN VK56DE-(T). Ovate wire, PACALOY™ Beehive valve spring set. Featuring nano-peen and gold nitride surface finishing for superior strength and performance. This spring and retainer set suits high rpm high boost racing applications with vvt disabled. 95lb seat pressure, 195lb at 12.00mm lift. Maximum lift 12.50mm
 KVS93	NISSAN SR20DE/T. 'Drop in' PACALOY™ High performance single valve spring set. For use with OEM retainers and spring base. 85lb seat pressure at 40.50mm installed height. Coil Bind is at 25.00mm
 KVS93-BT	NISSAN SR20-DET. Premium quality ovate wire, Beehive valve spring set with Titanium retainers. Featuring nano-peen and gold nitride surface finish process' for the ultimate strength. Suits high RPM, high boost turbo motors. Drop in on the OEM spring base to give 95lb seat pressure. 15.00mm Maximum lift.


Subaru

Part No	Application
 KVS109-STI	SUBARU EJ20/25 High performance PACALOY™ valve spring set. 'Drop in fit' on the OEM retainer. 85lb seat pressure at 36.00mm install height. Coil bind is at 22.00mm
 KVS1847-BT	SUBARU EJ20/25 2000- Current. Ovate wire, PACALOY™ Beehive valve spring set with Titanium retainers. Nano-peen and gold nitride surface finishing treatments for superior endurance. High frequency, increased seat pressure, low open pressure. Designed specifically for the Subaru flat four. 100lb seat pressure at 35.50mm installed height. Coil bind is at 23.00mm. 12.00mm maximum lift.

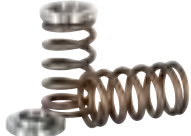

Subaru

Part No	Application
 KVS30	SUBARU EZ30 High Performance valve spring set to suit stock retainer. Short spring installs on intake side to give 76lb at 31.2mm, coil bind 19.05mm . Add base supplied to Exhaust side on top of OEM base to give 90lb @ 37.0mm, coil bind 26mm.
 KVS86	SUBARU BRZ High performance PACALLOY™ valve spring set. 68lb seat pressure at 32.6mm installed height using OEM retainer and base. 166lb open pressure at 11.5mm lift, maximum lift is 13.00mm
 KVS96	SUBARU EJ20 Version 3-4. Spring and retainers to suit engines with shim over bucket or shimless buckets. 87lb seat pressure at 42.00mm Installed Height.
 KVS97	SUBARU WRX Version 3 - 4 (STI). High performance valve spring set. The OEM STi retainer needs slight machining to fit these springs. 87lb seat pressure at 42.00mm Installed Height.










Suzuki

Part No	Application
 KVS05	High Performance valve spring set featuring progressively wound, high frequency, beehive design valve springs and lightweight titanium retainers. 60lb seat pressure @34.70mm. Coil bind is at 20.50mm





Toyota

Part No	Application
 KVS01-24	TOYOTA 1GR-FE . Kelford Racing, High performance PACALLOY™ valve spring set for turbocharged and supercharged 1GR-FE engines.
 KVS02	TOYOTA 2JZ-GTE. 'Drop in' PACALLOY™ valve spring set to suit OEM retainers. Featuring Nano-peen and Gold nitride surface finish treatment for superior endurance. 80lb seat pressure. 11.50mm Maximum lift.

Toyota

Part No	Application
 KVS02-BT	TOYOTA 2JZ-GTE. The ultimate 2J racing valve spring and Titanium retainer set. PACALLOY™ Beehive valve springs featuring nitride and nano-peen process' for the ultimate strength. 105lb seat pressure at 35.00mm installed height. Coil bind is at 23.00mm
 KVS04	TOYOTA 1FZ. High Performance PACALLOY™ valve spring set to suit OEM retainers. Suits N/A and mild turbocharged engines. 80lb seat pressure at 37.00mm install height. Coil bind is at 22.00mm
 KVS101-16	TOYOTA 4A-GE. 'Drop In' PACALLOY™ Valve spring set to suit OEM retainers. 43lb seat pressure at 35.00mm installed height. Coil Bind is at 22.00mm
 KVS101-BT	Toyota 4A-GE Beehive Spring & Titanium Retainer Set. 80lb Seat Pressure @ 33.85mm Installed Height, 168lb @ 10mm lift. Coil bind at 22mm.
 KVS109-1JZ	Toyota 1JZ-GTE High performance PACALLOY™ valve spring set. 'Drop in fit' on the OEM retainer. 95lb seat pressure at 34.00mm install height. Coil bind is at 22.00mm
 KVS109-3S	TOYOTA 3S-GE / GTE Generation 2-3 Engines. 'Drop In' PACALLOY™ valve spring set to suit OEM retainers. 85lb seat pressure at 36.00mm installed height. Coil bind is at 22.00mm
 KVS1UZ	TOYOTA 1UZ-FE. 'Drop in' PACALLOY™ valve spring set to suit OEM retainers. Featuring Nano-peen and Gold nitride surface finish treatment, this is the highest quality 1UZ spring on the market. 80lb seat pressure at 33.00mm installed height. Coil bind is at 20.50mm
 KVS208	1UZ-3UZ VVTi High performance, progressively wound PACALLOY™ beehive valve spring and high-grade titanium retainer kit. This kit was engineered to match our camshafts for ultimate quality, performance and reliability. 80lb seat pressure @ 34.30mm Installed height / 190lb @ 12mm lift / Coil bind is at 21.0mm
 KVS4K	TOYOTA 3K, 4K & 5K. 'Drop In' Performance valve spring set to suit OEM retainers. 80lb seat pressure at 36.50mm installed height. Coil bind is at 22.00mm

Toyota

Part No	Application
 KVS51-B	TOYOTA 4A-GE 20 Valve, High Performance valve spring set. 58lb seat pressure at 36.60mm installed height. Coil bind is at 23.00mm
 KVS58-BT	TOYOTA MK5 SUPRA, 3.0L B58 INLINE 6. High performance, progressively wound PACALOY™ beehive valve spring and Titanium Retainer Kit. This kit was engineered to match our camshafts for ultimate quality, performance and reliability. 90lb seat pressure @ 36.5mm Installed height / 193lb @ 11mm lift / Coil bind is at 23.6mm.
 KVS86	TOYOTA 86 (FA20) High performance PACALOY™ valve spring set. 68lb seat pressure at 32.6mm installed height using OEM retainer and base. 166lb open pressure at 11.5mm lift, maximum lift is 13.00mm
 KVS929	TOYOTA ALTEZZA (BEAMS Engine). 'Drop In' High performance valve spring set to suit OEM retainers. 75lb seat pressure at 40mm installed height. Coil bind is at 26.00mm

KELFORD CAM GEARS

By using modern CNC machinery and small batch runs with strict QA processes employed at each step in the production process we have been able to deliver a product with the best tolerances and quality levels in the industry.

The gears have been CNC machined from highest quality 6061 T6 aluminium to more precise tolerances than original OEM gears. The tooth edges have been bevelled to increase belt life and then hard anodised to ensure strength and longevity. Precise degree markings are then laser etched onto the cam gear to assist in the tuning of engines.

To finish we have used high quality fasteners and a heli-coil thread insert in the ring gear to allow enough torque to be applied while tightening fasteners. They can be adjusted multiple times with confidence that the threads will not stretch or fatigue.

Part No	Engines
 KCGB16	HONDA B16/18
 KCG63	MITSUBISHI 4G63
 KCG25	NISSAN RB20/25/26
 KCG1JZ	TOYOTA 1JZ/2JZ
 KCG4AG	TOYOTA 4AGE
 KCG20	NISSAN SR20

KELFORD VALVE TRAIN COMPONENTS

VALVE GUIDES

Part No	Make	Engine	Description
VG104 IN	NISSAN	RB26	10.03mm O/D 5.95mm I/D
VG104 EX	NISSAN	RB26	11.02mm O/D 6.9mm I/D
VG176 IN	HONDA	B16/18	12.06mm O/D 5.45mm I/D
VG176 EX	HONDA	B16/18	12.06mm O/D 5.45mm I/D
VG179 IN	HONDA	K20	11.06mm O/D 5.45mm I/D
VG 179 EX	HONDA	K20	11.06mm O/D 5.45mm I/D
VG199 IN	SUBARU	EJ	11.07mm O/D 5.95mm I/D
VG199 EX	SUBARU	EJ	11.07mm O/D 5.95mm I/D
VG202 IN	TOYOTA	2JZ	11.05mm O/D 5.97mm I/D
VG202 EX	TOYOTA	2JZ	11.05mm O/D 5.97mm I/D
VG214 IN	MITSUBISHI	EVO X	11.05mm O/D 5.45mm I/D
VG214 EX	MITSUBISHI	EVO X	11.05mm O/D 5.45mm I/D
VG231 IN	NISSAN	VR VQ	10.03mm O/D 5.95mm I/D 10.03mm O/D 5.95mm I/D
VG231 EX	NISSAN	VR VQ	10.03mm O/D 5.95mm I/D 10.03mm O/D 5.95mm I/D
VG237 IN	NISSAN	VK56 RB20 RB25	10.02mm O/D 5.95mm I/D 10.02mm O/D 5.95mm I/D 10.02mm O/D 5.95mm I/D
VG237 EX	NISSAN	VK56 RB20 RB25	10.02mm O/D 5.95mm I/D 10.02mm O/D 5.95mm I/D 10.02mm O/D 5.95mm I/D
VG63 IN	MITSUBISHI	4G63	12.06mm O/D 6.55mm I/D
VG63 EX	MITSUBISHI	4G63	12.06mm O/D 6.55mm I/D
VG207	TOYOTA	1UZ EXHAUST	11.03mm O/D 5.95mm I/D
VG208	TOYOTA	1UZ INTAKE	11.03mm O/D 5.95mm I/D



STEM SEALS

Part No	Make	Engine
VS-N6I	NISSAN	RB26
VS-N7E	NISSAN	RB26
VS-H5.5I	Honda	B16/18
VS-H5.5E	Honda	B16/18
VS-H5.5I	Honda	K20
VS-H5.5E	Honda	K20
VS-TS6I	Subaru	EJ
VS-TS6E	Subaru	EJ
VS-T6I	Toyota	2JZ
VS214	Mitsubishi	EVO X
VS214	Mitsubishi	EVO X
VS-N6I	Nissan	VR VQ VK RB25
	Toyota	4AGE
VS-N6E	Nissan	VR VQ VK RB25
	Toyota	4AGE
VS-M6.6I	Mitsubishi	4G63
VS-M6.6E	Mitsubishi	4G63



VALVES

Part No	Make	Engine	Description
F2131P	Nissan	RB26	Exhaust 30.15mm 6.9mm 101.52mm 3.5mm
F2133P	Nissan	RB26	Intake 34.6mm 5.98mm 102.33 3.5mm
F2132P	Nissan	RB26	Exhaust 31.15mm 6.9mm 101.52mm 3.5mm
F2134P	Nissan	RB26	Intake 35.6mm 5.98mm 102.33 3.5mm
F2130P	Nissan	SR20	Exhaust 31.15mm 6.95mm 102.4mm 3.5mm
F1868P	Nissan	SR20	Intake 35.15mm 5.96mm 101.4mm 3.5mm
F2150P	Nissan	RB25DET	Exhaust 30.6mm 5.96mm 88.95mm 3.2mm
F2152P	Nissan	RB25DET	Intake 35.12mm 5.97mm 86.7mm 3.5mm
F1936P	Nissan	RB25NEO	Exhaust 30.65mm 5.96mm 97.95 3.7mm
F1934P	Nissan	RB25NEO	Intake 35.15mm 5.98mm 104.2mm 6.25mm
F1489P	Honda	B16/18	Exhaust 29mm 5.45mm 102.5mm 2.5mm
F1444P	Honda	B16/18	Intake 34mm 5.47mm 102.35mm 2.5mm
F6045	Honda	B16/18	Exhaust 29mm 5.45mm 102.5mm 2.5mm
F6044	Honda	B16/18	Intake 34mm 5.47mm 102.35mm 2.5mm
F6072	Honda	K20	Exhaust 31mm 5.45mm 109.15mm 2.5mm
F6074	Honda	K20	Intake 36mm 5.47mm 109.3mm 2.5mm
F1968P	Subaru	EJ	Exhaust 32mm 5.96mm 104.75mm 3.5mm

VALVES

Part No	Make	Engine	Description
F1967P	Subaru	EJ	Intake 36mm 5.97mm 104.44mm 3.5mm
F1966P	Subaru	EJ	Exhaust 33mm 5.96mm 104.75mm 3.5mm
F1965P	Subaru	EJ	Intake 37mm 5.97mm 104.44mm 3.5mm
F6097	Toyota	2JZ	Exhaust 30mm 5.98mm 99.1mm 3.5mm
F6096	Toyota	2JZ	Intake 34.6mm 5.98mm 98.55mm 3.5mm
F1497P	Toyota	2JZ	Exhaust 30mm 5.98mm 99.1mm 3.5mm
F1496P	Toyota	2JZ	Intake 34.6mm 5.98mm 98.55mm 3.5mm
F2174P	Mitsubishi	EVO X	Exhaust 30mm 5.46mm 105.90mm 2.32mm
F2176P	Mitsubishi	EVO X	Intake 36mm 5.47mm 113.25mm 4.24mm
F1454P	Mitsubishi	4G63	Exhaust 31.5mm 6.55mm 109.7mm 3.8mm
F1452P	Mitsubishi	4G63	Intake 35mm 6.57mm 109.7mm 3.8mm



You can view a range of technical articles compiled from comments and suggestions from a number of our clients and our own experience online at: <http://www.kelfordcams.com/Technical-advice>.

The Sole Purpose of Degreeing Your Cam is to achieve the correct valve opening and closing points for your engine. When you are installing an aftermarket camshaft it is essential that you degree it correctly to get the most gain. This article explains exactly how to properly degree your cam using the proper equipment and methods and addresses common problems and misconceptions.

Checking Piston to Valve Clearance is crucial when you install a high performance cam as it is possible that there may not be sufficient clearance between valves and pistons when near TDC on overlap. For specific details please view our technical articles webpage.

Camshaft Run in Procedure will vary depending on engine type. Engines with flat tappet, pushrod or direct acting over head cam on the bucket style cams will require much more careful running in procedure than a camshaft that runs on a roller lifter. For specific details of each please view our technical articles webpage.

Valve Spring Selection needs to be carefully considered to work safely and effectively with your camshaft, boost levels and RPM. For guidelines on how to select the proper valve spring for your engine combination, and installation instructions (including installed height and proper fit to the retainer and spring base) please view our technical articles webpage.

Camshaft Selection is one of the last and most important decisions you will make when building your engine. Choosing the correct cam for your application should be a decision based on proper integration with the engine parts combination and the desired application. Please view our technical articles webpage for more information on how to choose the correct camshaft to give your engine the ideal valve timing events.

Camshaft notation, Left and Right

Here at Kelford cams we often get calls from a customer needing a specific replacement camshaft out of an opposed or V configuration engine. This requires accurate identification of which bank or head they will need the camshaft for. We hear all sorts of different ideas and terminologies used to try and convey this information such as driver/passenger side camshafts or front bank versus rear bank or long camshafts versus short camshafts. Although these descriptions can be helpful, they also require extra information to make sure the correct camshaft is selected, for example; If you tell us you need a driver's side intake, we then need to know whether your vehicle is right- or left-hand drive.

The best way to give the information is to ask for either a right- or left-hand intake or exhaust camshaft. However, this also creates confusion as to which side of an engine is which. The engine is always considered to have the crank pulley on the front and flywheel on the back. So, if you are the engine, facing forward from the gearbox, left is left and right is right.

With this method, it does not matter if your engine is longitudinal or transverse, Opposed or V, Subaru or Nissan, you can rest assured that you will order and be delivered the correct part.

ADDITIONAL CAMSHAFT TYPES WE HAVE AVAILABLE ON REQUEST

As well as our catalogue camshaft selection, we keep a range of camshaft billets to suit the engine models below. For all of these engines we have a library of popular cam profiles that we have developed over the years, plus we have the ability to design and grind to any custom specification to suit your application.

BMC A Series	Fiat 125-132 DOHC	Honda K20A3 / K24
BMC B Series	Ford 429-460	Pontiac V8
Chevrolet 396-454 Big Block	Ford Falcon EA SOHC	Rover 4.6 V8
Chrysler 225 6cyl	Ford Falcon XA 250	Toyota 1GR-FE
Chrysler 273-360	Ford FE 390-427	Toyota 4K
Chrysler 361-440	Holden Ecotec V6	
Datsun A12	Holden V6 Series 2	



To order a custom camshaft using any of these cam cores
please complete the adjacent form and send it to us via email.

CAMSHAFT RECOMMENDATION FORM

NAME _____	PHONE NUMBER _____
ADDRESS _____	FAX NUMBER _____
_____	E MAIL _____
CITY _____	WEBSITE _____
COUNTRY _____	

WHAT IS THE VEHICLE / ENGINE USED FOR _____

PLEASE LIST ANY SPECIFIC CLASS ENGINE RULES _____

ENGINE MAKE _____ MODEL _____ YEAR _____

NUMBER OF CYLINDERS _____ BORE SIZE _____

STROKE _____ CONROD LENGTH _____

COMPRESSION RATIO _____ FUEL TYPE & OCTANE _____

AUTO / MANUAL _____	CONVERTER STALL SPEED _____
TRANS BRAKE YES NO _____	GEAR BOX RATIOS _____
LAUNCH RPM _____	TYRE SIZE _____
FINAL DRIVE RATIO _____	VEHICLE WEIGHT _____
JET / DIRECT DRIVE / STERN LEG _____	JET UNIT TYPE _____

EXHAUST SYSTEM TYPE: STOCK CUSTOM _____	COLLECTOR TYPE _____
HEADER LENGTH _____	HEADER DIAMETER _____
SYSTEM LENGTH _____	SYSTEM DIAMETER _____

HEAD FLOW FIGURES @ _____" H2O	CYLINDER HEAD MAKE AND TYPE _____																											
<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:15%;"></th> <th style="width:35%;">INT</th> <th style="width:35%;">EXH</th> </tr> </thead> <tbody> <tr><td style="text-align:center;">.100"</td><td></td><td></td></tr> <tr><td style="text-align:center;">.200"</td><td></td><td></td></tr> <tr><td style="text-align:center;">.300"</td><td></td><td></td></tr> <tr><td style="text-align:center;">.400"</td><td></td><td></td></tr> <tr><td style="text-align:center;">.500"</td><td></td><td></td></tr> <tr><td style="text-align:center;">.600"</td><td></td><td></td></tr> <tr><td style="text-align:center;">.700"</td><td></td><td></td></tr> <tr><td style="text-align:center;">.800"</td><td></td><td></td></tr> </tbody> </table>		INT	EXH	.100"			.200"			.300"			.400"			.500"			.600"			.700"			.800"			VALVE SIZE INT _____ EXH _____ ROCKER RATIO INT _____ EXH _____ PORT VOLUME INT _____ EXH _____ SMALLEST CROSS SECTION INT _____ EXH _____ MANIFOLD MAKE AND TYPE _____ CARB MAKE AND CFM _____ COMPUTER MAKE _____ PROGRAMMABLE Y N _____ BLOWER TYPE _____ PRESSURE _____ TURBO TYPE _____ PRESSURE _____ NITROUS TYPE _____ HP SHOT _____
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WHAT CAMSHAFT DO YOU CURRENTLY USE _____

DURATION @ .050" _____ CAM LIFT _____ CENTRELINES _____

ADVERTISED DURATION _____ CURRENT VALVE SPRING USED _____

WHAT IDLE QUALITY DO YOU WANT _____

DO YOU NEED MORE: LOW END MID RANGE TOP END

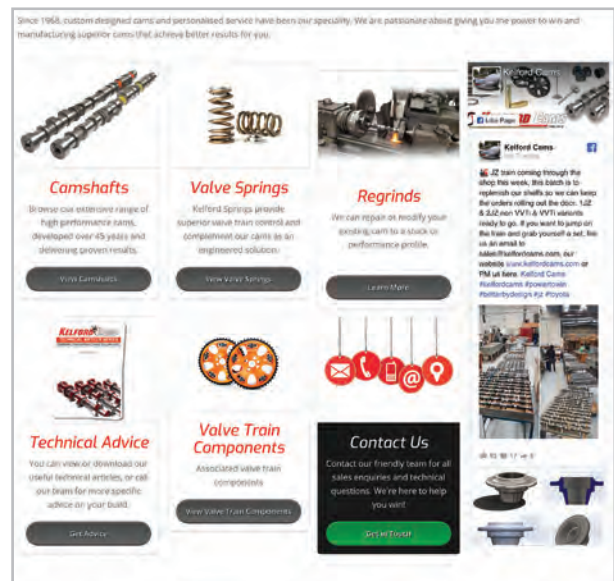
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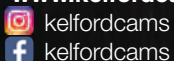
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