

# B SERIES VTEC-TWIN CAM

# Honda/Acura

B16A / B18C / B17A - TWIN CAM

Description	Part Number	C.I.D. Group	Lobe Sep.	Advised Duration (.010")		Duration @ .050"		Lobe Lift		Gross Lift		Suitable Component Kit
				Intake	Exhaust	Intake	Exhaust	Intake	Exhaust	Intake	Exhaust	
STOCK CIVIC Si (1999-2000)	Civic Si	Mid		284°	282°	224°	220°	.265"	.244"	.412"	.379"	Stock
STOCK GSR (94-up)	GSR	Mid		290°	292°	236°	224°	.273"	.244"	.423"	.378"	Stock
JDM SPEC CIVIC TYPE R (98-up)	CTR	Mid		294°	305°	240°	232°	.289"	.269"	.447"	.416"	Stock
STAGE 1 Performance oriented street use. CTR+ profile that will work with Type R valve springs. Also works with mild turbo. RPM Power Range: 1500 - 8500+	63401-2	Mid Sec Pri	102°	296° 278° 259°	306° 288° 230°	242° 200° 176°	234° 201° 179°	.290" .214" .141"	.270" .204" .131"	.449" .321" .204"	.418" .306" .190"	84161 84161S
STAGE 2 Forced Induction Special. Designed specifically for turbo/blower. Features short duration, low overlap and high valve lift. Requires kit #84161. RPM Power Range: 1500 - 9500+. Horsepower varies w/boost.	63401T-2	Mid Sec Pri	112°	308° 278° 259°	309° 288° 230°	233° 200° 176°	235° 201° 179°	.301" .214" .141"	.287" .204" .131"	.466" .321" .204"	.445" .306" .190"	84161 84161S
STAGE 2 Stock idle lobes (sec/pri) with #63402 VTEC (mid) lobes. Recommend #84163 spring unless stock rev limit. 18+ hp over B18C. RPM Power Range: 1800 - 9250+. 18+ HP over built B18C.	63402A-2	Mid Sec Pri	102°	311° 278° 259°	308° 288° 230°	255° 200° 176°	248° 201° 179°	.301" .214" .141"	.301" .204" .131"	.466" .321" .204"	.466" .306" .190"	84161S
STAGE 3 Race Road/Rally Race and Street/Strip. Requires #84161 kit with rev limiter mod. V-tec & ECU tuning req. 20+ hp over built B18C. RPM Power Range: 2500 - 9500+.	63402-2	Mid Sec Pri	102°	311° 284° 269°	308° 273° 259°	255° 215° 196°	248° 213° 193°	.301" .243" .181"	.301" .234" .174"	.466" .364" .262"	.466" .351" .252"	84161 84161S
STAGE 4 - Full Race, All Motor / Turbo Drag Race and rough Street/Strip. Requires #84161 kit with modified revs. 22+ over built B18C. RPM Power Range: 1200 - 9750+	63403-2	Mid Sec Pri	100°	305° 282° 291°	305° 284° 283°	263° 216° 198°	255° 214° 199°	.302" .243" .215"	.302" .234" .203"	.468" .364" .311"	.468" .351" .294"	84161 84161S
CUSTOM GRIND Crower can custom grind cams to your desired specs, also proprietary applications.	00063-2			Refer to <a href="http://www.crower.com">www.crower.com</a> for camshaft recommendation								

Note: These cams use .006" intake (cold), .008" exhaust valve lash (cold).

Duration figures are taken at the valve. Gross lift calculated by using the following rocker ratios: Mid (VTEC) - 1.55, Secondary - 1.50, Primary - 1.45.

**CROWER strongly recommends bolt upgrade # 86063-2 for all cams**

## ENGINEERED COMPONENT KITS

Part No.	Springs	Retainers	Remarks
<b>84161</b>	68188-16	87093-16	Titanium retainer. High pressure spring for rpm over 9500
<b>84161D</b>	68188-16	87093D-16	Titanium retainer. High press. spring, high lift cams (+.060"). Mach work req.
<b>84161DS</b>	68188-16	87093DS-16	Steel retainer. High press. spring, high lift cams (+.060"). Mach work req.
<b>84161S</b>	68188-16	87093S-16	Steel retainer for street use.

### REMEMBER!

When installing new camshaft please remember that the contact surface of the follower must be free of wear/smooth surface

**\*Note: Some machine work may be required on the underside of rocker using 87093D retainer to allow clearance.**

86115-16 Premium steel billet valve keepers (locks) available in standard or +.050" inst ht (#86115X1-16).

86115T-16 Premium titanium billet valve keepers (locks) available in standard installed height. Half the weight of steel.

## ACCESSORIES

Part No.	Description
<b>68188-16</b>	Valve Springs Valve Springs Dual Honda B16A Acura 1.8 GSR VTEC (Set of 16)
<b>86063-2</b>	Upgraded cam bolts (set 2) - CROWER strongly recommends these bolt for all cams
<b>97400I-8</b>	Stainless steel valves - 33 mm head dia (8 only int)
<b>97400E-8</b>	Stainless steel valves - 28 mm head dia (8 only exh)
<b>97401I-8</b>	Stainless steel valves - 33.5 mm head dia (8 only int)
<b>97401E-8</b>	Stainless steel valves - 28.5 mm head dia (8 only exh)
<b>97402I-8</b>	Stainless steel valves - 34 mm head dia (8 only int)



## FEATURES STRONGER CORE DESIGN

Description	Part Number	C.I.D. Group	Lobe Sep.	Advertised Duration (.010")		Duration @ .050"		Lobe Lift		Gross Lift		Suitable Component Kit
				Intake	Exhaust	Intake	Exhaust	Intake	Exhaust	Intake	Exhaust	
<b>STOCK Type SH</b>	<b>SH</b>	Mid		288°	308°	231°	234°	.289"	.268"	.448"	.415"	<b>Stock</b>
<b>STOCK JDM Type S</b>	<b>JDM</b>	Mid		306°	310°	230°	230°	.303"	.283"	.469"	.438"	<b>Stock</b>
<b>STAGE 1</b> Proven performer in all motor applications on the street. No ECU mods or aftermarket valve springs required. RPM Power Range: Idle - 7500+	<b>63421-2</b>	Mid Sec Pri	110°	307° 214° 210°	318° 285° 276°	238° 183° 175°	234° 191° 183°	.296" .215" .179"	.276" .208" .169"	.459" .323" .260"	.428" .312" .245"	<b>Stock</b>
<b>STAGE 2 - Forced Induction Special</b> Excellent for turbo or supercharged applications. Features short duration and high lift. Requires spring #68184-16. RPM Power Range: Idle - 8000+	<b>63421T-2</b>	Mid Sec Pri	112°	308° 214° 210°	309° 285° 276°	233° 183° 175°	235° 191° 183°	.299" .215" .179"	.289" .208" .169"	.463" .323" .260"	.448" .312" .245"	<b>84167</b> <b>84167S</b>
<b>STAGE 2</b> Stock idle lobes (sec/pri) with similar #63422 VTEC (mid) lobes. Recommend kit #84167 unless stock revs. RPM Power Range: Idle - 8000	<b>63422A-2</b>	Mid Sec Pri	106°	311° 214° 210°	308° 285° 276°	255° 183° 175°	248° 191° 183°	.302" .215" .179"	.301" .208" .169"	.468" .323" .260"	.467" .312" .245"	<b>84167</b> <b>84167S</b>
<b>STAGE 3 Race - All Motor / Turbo</b> Road/Rally Race and Street/Strip. Most popular profile. Requires #84167 kit. V-tec & ECU tuning recommended. RPM Power Range: 1000 - 8000+	<b>63422-2</b>	Mid Sec Pri	106°	311° 280° 278°	308° 289° 256°	255° 199° 198°	248° 201° 199°	.302" .216" .196"	.301" .204" .182"	.468" .324" .284"	.467" .306" .263"	<b>84167</b> <b>84167S</b>
<b>STAGE 4 - Full Race, All Motor / Turbo</b> Drag Race and rough Street/Strip. Requires #84167 kit. Not for inexperienced tuner. Head Mods, V-tec & ECU tuning req. RPM Power Range: 1100 - 8200+	<b>63423-2</b>	Mid Sec Pri	102°	305° 267° 262°	305° 269° 254°	263° 216° 198°	255° 210° 193°	.302" .243" .184"	.302" .236" .176"	.468" .365" .267"	.468" .354" .255"	<b>84167</b> <b>84167S</b>
<b>CUSTOM GRIND</b> Crower can custom grind cams to your desired specs, also proprietary applications.	<b>00065-2</b>	Mid Sec Pri		<b>Refer to <a href="http://www.crower.com">www.crower.com</a> for camshaft recommendation</b>								

Note: These cams use .006" intake (cold), .008" exhaust valve lash (cold).

Duration figures are taken at the valve.  
Gross lift calculated by using the following rocker ratios: Mid Lobe (VTEC) - 1.55, Secondary Lobe - 1.50, Primary Lobe - 1.45.

## ENGINEERED COMPONENT KITS

Part No.	Springs	Retainers	Remarks
<b>84187</b>	68174-16	87093D-16	Titanium retainer is +.060" inst. ht. Rocker machining may be required.
<b>84187S</b>	68174-16	87093DS-16	Steel retainer, for daily street use.

**Note:** "MTO" denotes that this item is not usually stocked but is **Made To Order** in 2-3 days.

### Spring pressure:

68184-16 Seat: 1.460" @ 89 lbs / Nose: 0.950" @ 220 lbs / Coil bind: 0.790" (No machine work required).

Optional spring:

**Note:** Some machine work may be required on the underside of rocker to allow retainer clearance.

86115-16 Premium steel billet valve keepers (locks) available in standard or +.050" inst ht (#86115X1-16).

86115T-16 Premium titanium billet valve keepers (locks) available in standard installed height. Half the weight of steel.

### REMEMBER!

When installing new camshaft please remember that the contact surface of the follower must be free of wear/smooth surface.

### STAINLESS STEEL VALVES

Made from the highest grade stainless steel, this new Crower valve is a must for high horsepower, high boost and high rpm applications. The exclusive "Pro Flo" head design delivers a significant increase in cylinder head flow figures, while the tip area is hardened to RC50, including past the critical keeper groove area for added strength. Fully CNC machined and swirl polished to insure that you will get the best performance valve available on the market. Choose from standard, 1/2 mm, 1 mm and 2 mm oversize. Titanium valves also available. Contact Crower for availability. When ordering sprockets, be sure to specify two.

## ACCESSORIES

Part No.	Description
<b>97415I-8</b>	Stainless steel valves - 35 mm head dia (8 only int)
<b>97415E-8</b>	Stainless steel valves - 30 mm head dia (8 only exh)
<b>97416I-8</b>	Stainless steel valves - 35.5 mm head dia (8 only int)
<b>97416E-8</b>	Stainless steel valves - 30.5 mm head dia (8 only exh)
<b>97417I-8</b>	Stainless steel valves - 36 mm head dia (8 only int)
<b>97417E-8</b>	Stainless steel valves - 31 mm head dia (8 only int)
<b>97418I-8</b>	Stainless steel valves - 37 mm head dia (8 only int)

**Note:** When ordering valves, be sure to specify one set int and one set exh.

**Note:** When ordering sprockets, be sure to specify two.

**Note:** Valve guides may require honing to size. All Crower VTEC valves are 5.5mm stem diameter. Factory guides may vary depending on specific engine.

# B18A/B SERIES NON-VTEC TWIN-CAM

# Honda/Acura

## New Improved Cam Core Technology

Description	Part Number	Lobe Sep.	Advertised Duration @ .010"		Duration @ .050"		Lobe Lift		Gross Lift 1.75 / 1.75		Suitable Component Kit
			Intake	Exhaust	Intake	Exhaust	Intake	Exhaust	Intake	Exhaust	
<b>FACTORY OEM SPECS (B18B - LS)</b>	<b>Stock</b>		220° Lobe 265° Valve	222° 267°	185° Lobe 194° Valve	187° 196°	.225" .217"	.394" .380"			<b>Stock</b>
<b>STAGE 1</b> Street use with emphasis on mid range power. Slight lobe at idle. RPM Power Range: Idle - 7250+	<b>62402-2</b>	110°	245° Lobe 290° Valve	251° 296°	193° Lobe 203° Valve	198° 208°	.238" .228"	.417" .399"			<b>Stock</b>
<b>STAGE 2 - Forced Induction Special</b> Turbo Special. Short duration and high lift grind. Requires #84162 kit. RPM Power Range: 900 - 8000+	<b>62402T-2</b>	113°	256° Lobe 301° Valve	256° 301°	193° Lobe 203° Valve	193° 203°	.268" .268"	.469" .469"			<b>84162 84162S</b>
<b>STAGE 2</b> Street/Strip package. Most popular N/A profile. Requires #84162 kit. RPM Power Range: 1000 - 8000+	<b>62403-2</b>	110°	250° Lobe 295° Valve	250° 295°	211° Lobe 221° Valve	210° 220°	.241" .235"	.422" .411"			<b>84162 84162S</b>
<b>STAGE 3 - Race</b> Recommended for mostly strip use in N/A applications. Rough idle. RPM Power Range: 1100 - 8200+	<b>62404-2</b>	110°	263° Lobe 308° Valve	258° 303°	216° Lobe 226° Valve	214° 224°	.254" .248"	.445" .434"			<b>84162 84162S</b>
<b>STAGE 3 - Full Race All Motor</b> All out, all motor drag profile. RPM Range: 1500 to 8500+	<b>62405-2</b> <b>62405A-2</b>		308° Lobe 353° Valve	305° 350°	230° Lobe 241° Valve	227° 238°	.273" .268"	.478" .469"			<b>84162 84162S</b>
<b>CUSTOM GROUND B18A/B CAMS</b> Special order custom ground profiles available for an additional charge. Proprietary and confidential profiles also available.	<b>00062-2</b>		<b>Refer to <a href="http://www.crower.com">www.crower.com</a> for camshaft recommendation</b>								

Note: **62402 HC-2** Approved cams for Honda Challenge

Note: These cams use .006" intake (cold), .008" exhaust valve lash (cold).

## ENGINEERED COMPONENT KITS

Part No.	Springs	Retainers	Remarks
<b>84162</b>	68181-16	87092-16	Titanium retainer. Fits B18A and B18B. For limited street use.
<b>84162S</b>	68181-16	87092S-16	Steel Retainer, for daily street use.

### Spring pressure:

68181-16 Seat: 1.400" @ 48 lbs / Nose: 0.950" @ 148 lbs / Coil bind: 0.710" (No machine work required).

### Optional spring:

68182-16 Seat: 1.400" @ 70 lbs / Nose: 0.950" @ 202 lbs / Coil bind: 0.800" (No mach work / High pressure design).

**Note:** Crower titanium retainers weigh 5.5 grams vs. 12 grams stock.

**Factory installed height on intake = 1.320", exhaust = 1.425"**

### REMEMBER!

When installing new camshaft please remember that the contact surface of the follower must be free of wear/smooth surface.

### Crower Recommends ZDDPlus for all Flat Tappet Cams

**ZDDPlus™** contains 42,700 ppm of phosphorus and 57,300 ppm of zinc. When a 4-ounce bottle of ZDDPlus™ is added to 5 quarts of oil, it is diluted 41:1, which contributes 1047 ppm of phosphorus and 1397ppm of zinc to whatever the oil may or may not already contain.

**Part #86092 - 4oz Bottle of ZDDPlus & Paste**

## ACCESSORIES

Part No.	Description
<b>97407I-8</b>	Stainless steel valves - 31 mm head dia (8 only int)
<b>97407E-8</b>	Stainless steel valves - 28 mm head dia (8 only exh)
<b>97408I-8</b>	Stainless steel valves - 31.5 mm head dia (8 only int)
<b>97408E-8</b>	Stainless steel valves - 28.5 mm head dia (8 only exh)

Note: When ordering valves, be sure to specify one set int and one set exh.  
Note: When ordering sprockets, be sure to specify two.

**Aweis Adde @ TB Motorworx**  
**9's V6 All Motor**



**DON'T SEE YOUR  
FAVORITE PART # ?**  
IT MAY STILL BE AVAILABLE  
**CALL THE CROWER**  
TECH. DEPT FOR INFO.



## New Improved Cam Core Technology

Description	Part Number	Lobe	Lobe Sep.	Advertised Duration (.010")		Duration @ .050"		Lobe Lift		Gross Lift		Suitable Component Kit
				Intake	Exhaust	Intake	Exhaust	Intake	Exhaust	Intake	Exhaust	
<b>STOCK D16Z6 SOHC VTEC (92-95)</b>	<b>Stock</b>	Int Mid / Exh		304°	303°	212°	204°	.246"	.207"	.394"	.373"	<b>Stock</b>
<b>STOCK D16Y8 SOHC VTEC (96-up)</b>	<b>Stock</b>	Int Mid / Exh		310°	302°	210°	212°	.258"	.259"	.451"	.453"	<b>Stock</b>
<b>STOCK REPLACEMENT</b> Similar to stock profile. Excellent for mild turbo and nitrous on the street with no other mods. RPM Range: Idle - 7000+	<b>63440Z</b>	Mid	110°	288°	299°	220°	207°	.243"	.203"	.389"	.365"	<b>Stock</b>
	<b>63440Y</b>	Sec	111°	293°	-	197°	-	.205"	-	.328"	-	
		Pri		293°	-	197°	-	.205"	-	.328"	-	
<b>STAGE 1</b> Features far more aggressive ramp rates than stock with added duration. Idle lobes remain same as stock. RPM Range: Idle - 7200+	<b>63441Z</b>	Mid	111°	292°	302°	228°	208°	.254"	.214"	.406"	.385"	<b>84166</b>
	<b>63441Y</b>	Sec	110°	293°	-	197°	-	.205"	-	.328"	-	
		Pri		293°	-	197°	-	.205"	-	.328"	-	
<b>STAGE 2 - Forced Induction Special</b> Designed specifically for turbo or supercharged engines. Short duration reduces overlap, for more cylinder pressure. RPM Range: Idle - 8000+	<b>63444ZT</b>	Mid	112°	312°	318°	234°	217°	.269"	.237"	.430"	.427"	<b>84166</b>
	<b>63444YT</b>	Sec	112°	293°	-	197°	-	.205"	-	.328"	-	
		Pri		293°	-	197°	-	.205"	-	.328"	-	
<b>STAGE 2 - Race</b> Street/Strip. Rough lobe at idle due to increased sec/pri lobe specifications. Most popular all-motor profile. RPM Range: 1000 - 7500+	<b>63442Z</b>	Mid	109°	319°	310°	235°	223°	.270"	.242"	.432"	.436"	<b>84166</b>
	<b>63442Y</b>	Sec	109°	295°	-	204°	-	.205"	-	.332"	-	
		Pri		295°	-	204°	-	.205"	-	.332"	-	
<b>STAGE 3 - Full Race</b> Race cams. Requires extensive cylinder head modifications. Not for inexperienced tuner. V-tec & ECU tuning required. RPM Range: 1200 - 8000+	<b>63443Z</b>	Mid	113°	329°	317°	239°	226°	.276"	.260"	.442"	.468"	<b>84166</b>
	<b>63443Y</b>	Sec	113°	295°	-	204°	-	.210"	-	.332"	-	
		Pri		295°	-	204°	-	.210"	-	.332"	-	
<b>CUSTOM GRIND</b> Crower can custom grind cams to your desired specs, also proprietary applications.	<b>00067</b>	Mid Sec Pri		<b>Refer to <a href="http://www.crower.com">www.crower.com</a> for camshaft recommendation</b>								

Note: These cams use .006" intake (cold), .008" exhaust valve lash (cold).

**Note:** Specify "Z" after part number if D16Z6 (92-95) or "Y" after part number if D16Y8 (96-up). All duration figures listed above are specific to the D16Y8. Gross lift calculated by using the following rocker ratios: Int Mid Lobe (VTEC) - 1.60, Int Sec Lobe - 1.60, Int Pri Lobe - 1.60, Exhaust - 1.80.

## ENGINEERED COMPONENT KITS

Part No.	Springs	Retainers	Remarks
<b>84166</b>	68180-16	87096-16	Fits D16Z6 (92-95) and D16Y8 (96-up) cylinder heads
<b>84166S</b>	68180-16	87096S-16	Steel Retainer for Daily Street Use.

### Spring pressure:

68180-16 Seat: 1.975" @ 58 lbs / Nose: 1.500" @ 154 lbs / Coil bind: 1.320" (No machine work required).

86115-16 Premium steel billet valve keepers (locks) available in standard or +.050" inst ht (#86115X1-16).

86115T-16 Premium titanium billet valve keepers (locks) available in standard installed height. Half the weight of steel.

## ACCESSORIES

Part No.	Description
<b>86066</b>	Upgraded Cam Bolt
<b>97403I-8</b>	Stainless steel valves - 30 mm head dia (8 only int)
<b>97403E-8</b>	Stainless steel valves - 26 mm head dia (8 only exh)
<b>97404I-8</b>	Stainless steel valves - 30.5 mm head dia (8 only int)
<b>97404E-8</b>	Stainless steel valves - 26.5 mm head dia (8 only exh)

### ADJUSTABLE SPROCKETS

Crower's new cam sprockets are made from premium 6061-T6 billet aluminum and incorporate a four bolt ARP® fastening system to prevent the slippage found in other brands. For the ultimate tuner, Crower sprockets feature 5/16" diameter, 12 point ARP® fasteners with a hardened washer to prevent galling and stripping. The lightweight design (367g) reduces unwanted harmonics which could cause valve train failure.

### REMEMBER!

When installing new camshaft please remember that the contact surface of the follower must be free of wear/smooth surface.

**Note:** When ordering sprockets, Y = D16Y8 (96-up), Z = D16Z6 (92-95).

**Note:** When ordering valves, be sure to specify one set int and one set exh.