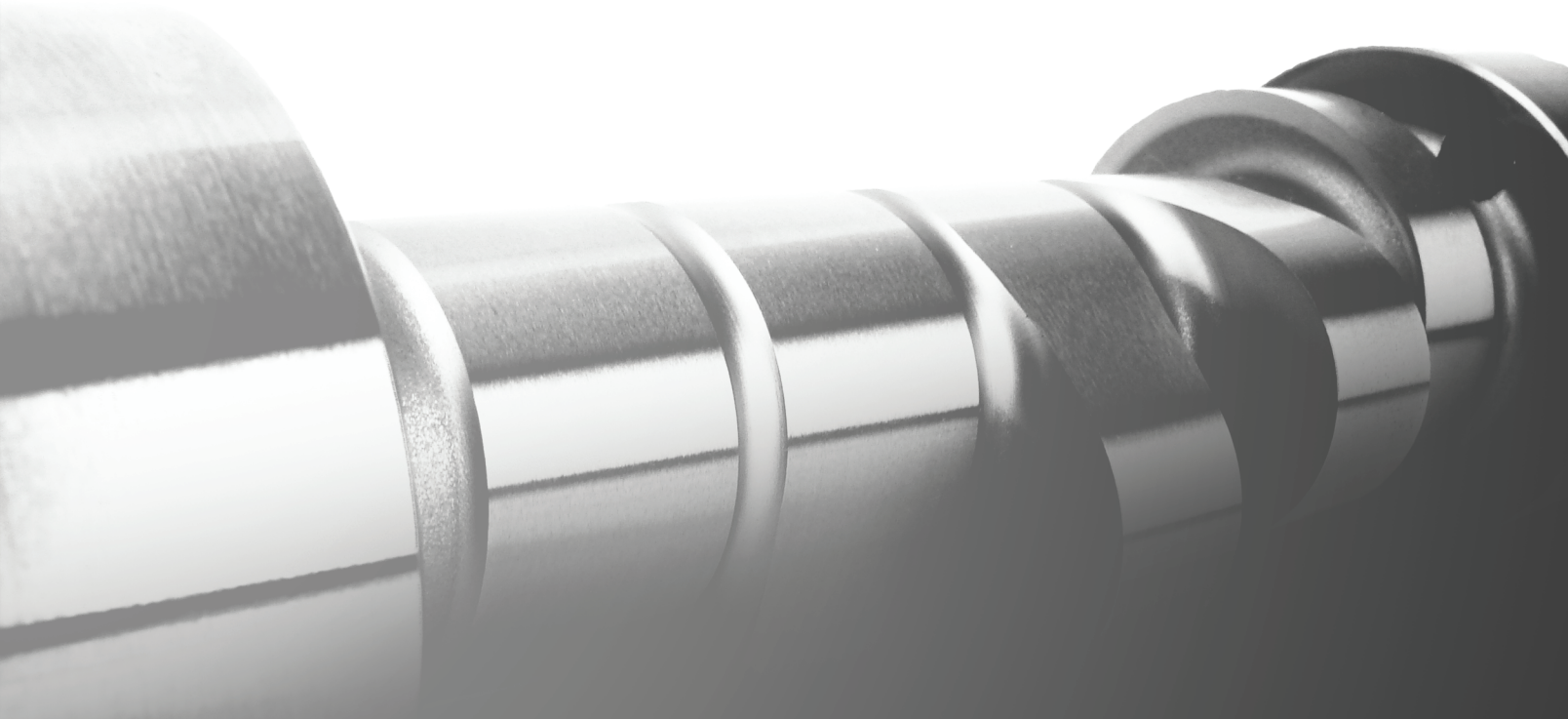
*Engineered To Finish First.*

COMP CAMS®



# MASTER LOBE PROFILE CATALOG

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TABLE OF CONTENTS

**COMP Cams® leads the industry in camshaft lobe offerings. With thousands of active lobes in the COMP® library, the combinations are infinite for any given engine. That means that you can have a cam ground to your specific needs, and you have the broadest selection of lobes available anywhere.**

## 4 CHOOSING A CAM FOR YOUR SPECIFIC APPLICATION IS A FOUR-STEP PROCESS:

***1. Select a core.***
***2. Select the lobes.***
***3. Select a lobe separation angle.***
***4. Determine the part number and grind number, and order the cam.***

## 1. SELECTING A CORE

Within the parameter of core applications, we have fifteen cores that cover many engine applications. They are designated as follows:

**-0 Steel Billet Round Lobe**
**-5 Flat Tappet *(Either Hydraulic or Solid Lifter)***
**-5RR Reverse Rotation Flat Tappet**
**-7 Special Flat Tappet**
**-8 Street Roller *(Either Hydraulic or Solid Roller)***
**Special Material – *Bronze Distributor Gear***
***Not Required on Most Applications***
**-9 Steel Billet Roller**
**-9L OHC Roller Left**
**-9R OHC Roller Right**
**-9W Welded Steel Billet Flat Tappet**
**-10 Steel Billet Roller**
**-11 Steel Billet Roller**
**-12 Steel Billet Roller**
**-14 4/7 Swap Steel Billet Roller**
**-16 Steel Flat Tappet**
**-47 4/7 Swap Cast Flat Tappet**

*Special Note: The -0 core is a round lobe core that is not heat-treated. These cores must be roughed and then heat-treated before finished lobe grinding takes place.*

The complete core list follows on pages 5-10. The list is separated into the different cam core types. The part number in front of each core is used in ordering a custom ground cam for a particular engine type. It consists of a two-digit prefix designating the engine type, followed by a dash (-) and three consecutive zeros. The zeros indicate a custom ground cam. Next are a dash and number from the core designations previously listed.

***Example:***

| Engine Prefix | Part # | Core Type |
|---|---|---|
| 12- | 000 | -9 |

**The number 12- indicates Small Block Chevy (found on the core listing pages 5-10).**

**The 000 indicates a custom grind.**

**The -9 indicates steel billet roller core.**

## 2. SELECTING LOBES

The lobes are listed on pages 8-61 and represent the most current library of lobes offered by COMP Cams®. They are arranged in groups, each of which is unique in its application. Along with each group is a description of each type, which is intended to help clarify each family of lobes so that you may accurately select lobes for your application.

Some lobes specifically designated to be intake or exhaust lobes do not necessarily have to be run on the valve for which they were designed. If an exhaust lobe has the desired spec for intake (or vise versa) they may be used in that manner.

Keep in mind while viewing the listings that certain flat tappet lobes are designed to be used only with correct diameter lifters.

## 3. CHOOSING LOBE SEPARATION ANGLE

Lobe separation angles (the angle in cam degrees between the intake and exhaust lobe are also referred to as "lobe centers") are very engine combination dependent. In general, a tighter separation (ex. 104°-106°) results in a "peakier" torque curve more suited to stick-shift cars with multiple gear ratios to change between. Wider lobe separation (ex. 110°-112°) results in a broader, flatter torque curve that is more suited to automatic transmission cars with fewer gears from which to choose. Therefore, engines have to be more powerful over a broader RPM range. Also, as lobes get larger at .050" duration (275° and up), it is necessary to begin widening separation angles to lessen the amount of overlap that accumulates from the larger lobes.

One final note about lobe separation angles – the cam cores that are available for each application are designed for nominal, standard lobe separation angles. Straying from this nominal angle too far in one direction or another can result in the heat-treated surface of the core being ground through to the soft material underneath. Soft lobes will fail in an engine if allowed to run for very long. Whether or not the heat-treated surface is ground through also is obviously dependent on the lobe being ground on the core.

The bottom line is that not all grinds can go on every core that is available. More popular engines, like the Small Block Chevy, have a variety of cores available with varying lobe separation angles that can accommodate almost any grind. Less popular applications, like the Flathead Ford V8, only have one core available. Therefore, they are somewhat limited in terms of what grind will fit on the single existing core.

## 4. DETERMINING A PART NUMBER/GRIND NUMBER AND ORDERING

With the part number determined in the core selection process, the grind number is the final step prior to ordering the cam. This process is simple and is accomplished by picking up the "lobe number" that appears in the left column of the lobe selection chart.

The intake lobe will be first and the exhaust lobe will be second, followed by the lobe separation angle.

For example, if lobe 5201 is selected as the intake and 5203 is selected as the exhaust, with a 106° lobe separation angle and this configuration is to be ground on a Small Block Chevy core, the full number for ordering that cam would be:

| Part #: | Grind #: |
|---|---|
| 12-000-5 | CS 5201/5203-H106 |

## ROLLER CAM LOBE SUFFIX CODES

When it comes to ordering a roller cam, there are two things that need to be considered: journal diameter and roller lifter wheel diameter. Journal size and wheel diameter are very important in making sure the lobe is performing to the specifications you require.

For example, if you were selecting lobes for a custom grind Big Block Chevrolet cam then you would need to make sure the lobes were designed for a Big Block Chevrolet journal diameter (1.948"). If Small Block Chevrolet lobes were used instead, the specifications of the cam would be inaccurate. The journal diameter of a Small Block Chevrolet is 1.868". The lobes on the big block cam would "grow" approximately 2° if ground using small block lobe designs. The same principle applies to various roller lifter wheel diameters.

COMP Cams® has done the math for you, so all you need to do is make sure you order the lobes with the correct suffixes to signify the proper journal diameter and roller lifter wheel diameter.

### MASTER SUFFIX CODES FOR VARIOUS ROLLER CAM JOURNAL DIAMETERS:

| | |
|---|---|
| **T** | **1.750"** ***(Very Small-V6 Buick, etc.)*** |
| **N** | **0.900" Base Circle Diameter** ***(Any Journal Size)*** |
| **S** | **1.868"** ***(Small Block Chevrolet)*** |
| **B** | **1.948" or 1.968"** ***(Big Block Chevrolet or 50mm)*** |
| **F** | **2.036", 2.051" or 2.081"** ***(Small Block Ford and Cleveland)*** |
| **R** | **2.1653" or 2.1234"** ***(55mm, LS1 or Big Block Ford)*** |
| **M** | **2.3622"** ***(60mm)*** |

### MASTER SUFFIX CODES FOR VARIOUS ROLLER LIFTER WHEEL DIAMETERS:

| | |
|---|---|
| **E** | **0.812"** ***(from 0.792" to 0.832")*** |
| **G** | **0.850"** ***(from 0.830" to 0.870")*** |
| **H** | **0.950"** ***(from 0.930" to 0.970")*** |
| **U** | **2.000"** ***(1.000" Radius Sliding Tappet)*** |
| *No Suffix* | **Standard** ***(from 0.750" to 0.790")*** |

## EXAMPLES:

If you wanted to order a cam using lobe #4314 on the intake and lobe #4074 on the exhaust for a Big Block Chevy cam with standard journals, standard .750" lifter wheel diameter and a 110° lobe separation, your grind number would be: **CB 4314B/4074B R110**

However, if you wanted to order a cam with the same specs for a Big Block Chevy but with 55mm journals and a .812" lifter wheel diameter, your grind number would be: **CB 4314RE/4074RE R110**

## CORE LISTINGS NON-STANDARD JOURNAL SIZE

| CHEVROLET SMALL BLOCK | |
|---|---|
| 1.868" | Stock Chevy Bearing Size |
| 1.875" | Stock Block with Roller Bearings |
| 1.948" | Stock Size Rocket Block or Big Block |
| 1.968" or 50mm | Rocket Block with Roller Bearing |
| 2.165" or 55mm | Large Roller Bearing |
| **CHEVROLET BIG BLOCK** | |
| 1.948" | Stock Chevy Bearing Size |
| 1.968" | Stock Block with Roller Bearings |
| 2.124" | Pro Stock Roller Bearing (Same Size as Big Block Ford) |
| 2.165" or 55mm | Large Roller Bearing "Jesel Core" |
| 2.362" or 60mm | Large Roller Bearing |
| **FORD SMALL BLOCK, 351 WINDSOR & SVO BLOCK** | |
| Journal #1 – 2.080" | Stock Ford Bearing Size |
| Journal #2 – 2.065" | Stock Ford Bearing Size |
| Journal #3 – 2.050" | Stock Ford Bearing Size |
| Journal #4 – 2.035" | Stock Ford Bearing Size |
| Journal #5 – 2.020" | Stock Ford Bearing Size |
| Journal #1, 2, 3 & 4 – 2.165" | Roller Bearing – "Large Roller Bearing" or "Roush Roller Bearing" |
| Journal #5 – 1.968" | Roller Bearing – "Large Roller Bearing" or "Roush Roller Bearing" |
| All Journals – 2.051" | Roller Bearing – "Ford Motorsports" or "SVO Design Roller Bearing" |
| All Journals – 2.081" | Roller Bearing – New Design Ford SVO |
| **CHRYSLER SMALL BLOCK** | |
| Journal #1 – 1.998" | Stock Chrysler Bearing Size |
| Journal #2 – 1.982" | Stock Chrysler Bearing Size |
| Journal #3 – 1.967" | Stock Chrysler Bearing Size |
| Journal #4 – 1.951" | Stock Chrysler Bearing Size |
| Journal #5 – 1.561" | Stock Chrysler Bearing Size |
| Journal #1, 2, 3, & 4 – 1.969" | Joey Arrington Style Roller Bearing |
| Journal #5 – 1.575" | Joey Arrington Style Roller Bearing |
| All Journals – 1.968" | Mopar Performance Roller Bearing |
| 2.362" or 60mm | Roller Bearing |

**A partial listing of the most common high end treatments and special processes you can order for your COMP Cams® camshaft. Additional services are available; contact us for any special needs.**

## CAMSHAFT SURFACE PREPARATIONS

### NITRIDING *PART #1-111-1*

This is the most effective process for extending the life of a high performance flat tappet camshaft. Nitriding increases the hardness of the camshaft surface metal by physically injecting nitrogen "needles" into the surface of the lobes and journals to increase their resistance to wear.

### CAMSHAFT MICROPOLISHING *PART #1-114-1*

This procedure removes microscopic imperfections in the surface of the metal. Micropolishing can further increase the durability of the camshaft and can be performed to only the camshaft lobes or all wear surfaces.

### XTREME SURFACE FINISH ENHANCEMENT *PART #1-137-1*

Our highest-quality finishing process involving considerably more polishing than any other procedure. This is most commonly used in steel-on-steel contact valve train situations, such as high end circle track flat tappet camshafts where billet materials have repeated contact in extremely high RPM environments.

## PRECISION CAMSHAFT MEASUREMENT

### BASIC CAMSHAFT PROFILING *PART #1-126-1*

Performed on two lobes of any camshaft, the component is measured to determine its lift, duration and lobe centerline specifications.

### ADCOLE CAMSHAFT PROFILING *PART #1-125-1*

Our highest precision camshaft measuring device, the Adcole, checks all 16 camshaft lobes to determine that the cam meets all specifications requested by the customer. The Adcole measures camshaft specifications to 0.00001 of an inch.

## SPECIAL OPERATIONS

### REPLACEMENT OF THE CAMSHAFT DOWEL PIN *PART #1-120-1*

This is a process which repairs camshafts when the current dowel pin has either been sheared off or damaged in some manner. The old dowel pin (or remaining part) is removed by machining and a new dowel pin is inserted.

### INSTALLATION OF DUAL DOWEL PINS *PART #1-121-1*

For certain applications, dual dowel pins can be installed to further ensure that the camshaft and timing gear connection are secure. This is most commonly done with early model Ford V8s and classic Chrysler Hemi engines. The timing gear can also be machined to adapt to this new configuration.

### DRILLING & TAPPING CAMSHAFT NOSE *PART #1-136-1*

A process performed on Viper camshafts, the nose of the camshaft is drilled and then tapped to convert from a single timing gear bolt-up to a three-bolt aftermarket timing chain set. This allows for a wider selection of timing sets.

### MACHINING A REAR CAMSHAFT JOURNAL GROOVE *PART #1-119-1*

A process commonly performed on 1965-66 Big Block 396c.i. Chevrolet engines, which features oiling systems that require a groove be cut into the rear journal of the camshaft. This was a two-year only condition, not required in all 1967 and newer Big Block Chevrolet engines.

### MACHINING OF THE REAR PUMP DRIVE *PART #1-116-1*

Allows sprint car-style engines to run the fuel pump from the rear of the camshaft rather than traditional placements.

### SIDE CUTTING OF CAMSHAFT LOBES *PART #1-127-1*

A process often requested that helps to keep the lifters from making contact with adjacent lobes when the engine's lifter bores have been enlarged.

### SLEEVING OF THE CAMSHAFT JOURNAL *PART #1-132-1*

Most popular with Ford Windsor engine roller bearing camshaft applications, a sleeve is placed around the standard rear journal to increase the size of the journal, making it compatible with rear roller bearing usage.

### FUEL PUMP LOBE REGRINDING *PART #9-999-1*

A refinishing process used to clean up a fuel pump lobe which may have been damaged or is showing excessive wear.

| CORE # | CORE DESCRIPTION | ENGINE |
|---|---|---|
| **FLAT TAPPET CAM CORES (HYDRAULIC OR SOLID)** | | |
| 10-000-5 | AMC | 290-401 V8 (1966-91) |
| 68-000-5 | AMC | 199-258 L6 (1964-95) |
| 114-000-5 | AMC | 2.5L |
| 63-000-5 | BUICK | 198-225 V6 Odd Fire (1962-67) |
| 69-000-5 | BUICK | 3.0L-4.1L V6 (1978-87) |
| 75-000-5 | BUICK | Buick V6 |
| 90-000-5 | BUICK | 215 Aluminum V8 |
| 91-000-5 | BUICK | 364-401-425 V8 |
| 92-000-5 | BUICK | 350 V8 (1968-80) |
| 96-000-5 | BUICK | 400-430-455 V8 (1967-76) |
| 94-000-5 | CADILLAC | 368-425-472-500 V8 |
| 11-000-5 | CHEVROLET | 396-454 V8 (1967-96) |
| 11-000-5RR | CHEVROLET | 396-454 V8 Reverse Rotation (Marine Applications) |
| 12-000-5[A] | CHEVROLET | 262-400 V8 (1957-98) |
| 12-000-5RR | CHEVROLET | 262-400 V8 Reverse Rotation (Marine Applications) |
| 13-000-5 | CHEVROLET | Corvair (1964-69) |
| 15-000-5 | CHEVROLET | 200-229 V6 (1978-84) |
| 16-000-5 | CHEVROLET | 2.8L, 3.1L and 3.4L (1980-95) |
| 18-000-5 | CHEVROLET | 4.3L V6 (1983-97) |
| 48-000-5 | CHEVROLET | 348-409 V8 (1958-65) |
| 60-000-5 | CHEVROLET | 235 L6 Blue Flame (1952-62) |
| 61-000-5 | CHEVROLET | 195-250 L6 (1962-85) |
| 62-000-5 | CHEVROLET | 292 L6 (1963-90) |
| 77-000-5 | CHEVROLET | Chevette 1400cc (1976-77)/1600cc (1976-87) |
| 89-000-5 | CHEVROLET | Vega L4 140c.i. (1971-77) |
| 148-000-5 | CHEVROLET | 1994-01 2.2L Chevy 4 Cyl. |
| 20-000-5[A] | CHRYSLER | 273-360 V8 (1968-99) |
| 21-000-5 | CHRYSLER | 383-440 V8 Single-Bolt (1958-78) |
| 23-000-5 | CHRYSLER | 383-440 V8 Three-Bolt (1958-78) |
| 24-000-5 | CHRYSLER | 426 Hemi V8 (1966-71) |
| 26-000-5 | CHRYSLER | 392 Hemi V8 |
| 64-000-5 | CHRYSLER | 225 L6 (1960-85) |
| 163-000-5 | CHRYSLER | 1999-2001 Chrysler/Jeep 4.0 6 Cyl. |
| 31-000-5 | FORD | 289-302 V8 (1962-99) |
| 32-000-5 | FORD | 351C, 351M-400M V8 (1970-82) |
| 33-000-5 | FORD | 352-428 V8 FE (1963-95) |
| 34-000-5 | FORD | 429-460 V8 (1968-99) |
| 35-000-5 | FORD | 302 HO (1985-95), 351W V8 (1969-95) |
| 35-000-5RR | FORD | 351W Reverse Rotation (Marine Applications) |
| 36-000-5 | FORD | 2600, 2800 V6 |
| 37-000-5 | FORD | 272-292-312V8 Y-Block (1955-62) |
| 38-000-5 | FORD | 2800 V6 (1983-85) |
| 41-000-7 | FORD | Flathead V8 (1949-53) |
| 44-000-5 | FORD | 3.8L (1984-87) Only |
| 65-000-5 | FORD | 144-250 (1960-83) |
| 66-000-5 | FORD | 240-300 L6 (1965-95) |
| 104-000-5 | FORD | V8 "FE" (1958-62) |
| 81-000-5 | HOLDEN | 6 Cyl. Flat Tappet 186 |
| 82-000-5 | HOLDEN | 252-308 V8 (1970-88) |
| 83-000-5 | INTERNATIONAL | 304-392 V8 (1970-78) |
| 42-000-5 | OLDSMOBILE | 260-455 V8 91967-84) |
| 103-000-5 | OLDSMOBILE | V8 45° Bank Angle (1964-68) |

**A. Different journal sizes available**

*Continued on page 6*

| CORE # | CORE DESCRIPTION | ENGINE |
|---|---|---|
| **FLAT TAPPET CAM CORES (HYDRAULIC OR SOLID)** *continued* | | |
| 14-000-5 | PONTIAC | 151 L4 (1977-78) |
| 51-000-5 | PONTIAC | 265-455 V8 (1955-81) |
| 52-000-5 | PONTIAC | 151 L4 Iron Duke (1978-89) |
| 73-000-5 | VOLKSWAGEN | 1200, 1600 4 Cyl. |
| **SPECIAL FLAT TAPPET CAM CORES** | | |
| 12-000-7A | CHEVROLET | 262-400 V8 Special Pro Core |
| 20-000-7A | CHRYSLER | "R" Block W/ 48° Lifter Bore |
| 21-000-7 | CHRYSLER | 383-440 V8 Single-Bolt (1958-78) |
| 32-000-7 | FORD | 351C, 351M-400M V8 (1970-82) |
| 35-000-7A | FORD | SVO V8 |
| 39-000-7 | FORD | SVO V6 Odd Fire |
| 41-000-7 | FORD | Flathead V8 |
| **STREET ROLLER CAM CORES (HYDRAULIC OR SOLID ROLLER)** (Special Material – Works W/ Most Std Dist. Gears) | | |
| 69-000-8 | BUICK | 3.0L-4.1L V6 (1978-87) |
| 01-000-8 | CHEVROLET | 454-502 Generation VI Big Block |
| 07-000-8 | CHEVROLET | LT1 Engine (1992-98) |
| 08-000-8 | CHEVROLET | 262-400 V8 W/ Roller Cam (1987-98) |
| 09-000-8 | CHEVROLET | 4.3L V6 W/ Roller Cam (1987-98) |
| 11-000-8 | CHEVROLET | 396-454 V8 (1967-96) |
| 12-000-8 | CHEVROLET | 262-400 V8 (1957-98) |
| 18-000-8 | CHEVROLET | 4.3L V6 (1985-99) |
| 56-000-8 | CHEVROLET | 4.3L V6 (1992-99) W/ Balance Shaft |
| 148-000-8 | CHEVROLET | 1994-01 2.2L Chevy 4CYL |
| 97-000-10 | CHRYSLER | V10 Viper |
| 98-000-10 | CHRYSLER | V10 Truck |
| 111-000-10 | CHRYSLER | 2003 & Up Viper Three-Bolt |
| 112-000-11 | CHRYSLER | 5.7 & 6.1L Hemi V8 |
| 149-000-8 | CHRYSLER | 238 CID 3.9L V6 |
| 31-000-8 | FORD | 289-302 V8 (1962-99) |
| 32-000-8 | FORD | 351C, 351M-400M V8 (1970-82) |
| 35-000-8 | FORD | 302 HO (1985-95), 351W V8 (1969-99) |
| **RACE ROLLER CAM CORES – STEEL BILLET** | | |
| 10-000-9 | AMC | 390-401 V8 (1966-79) |
| 10-000-13 | AMC | 390-401 V8 (1966-79) |
| 93-000-9 | BUICK | Stage II Even Fire |
| 94-000-10 | CADILAAC | V8 |
| 02-000-9 | CHEVROLET | 200-229 V6 Odd Fire W/ Splayed Valve Head |
| 08-000-9 | CHEVROLET | 262-400 V8 (1987-98) |
| 07-000-9 | CHEVROLET | LT1 Engine (1992-98) |
| 11-000-9A | CHEVROLET | 396-454 V8 (1967-96) |
| 01-000-9 | CHEVROLET | 454-502 Generation VI Big Block |
| 12-000-9A | CHEVROLET | 262-400 V8 (1957-98) |
| 03-000-9A | CHEVROLET | Standard Chevrolet Block W/ SB2 Heads |
| 04-000-10A | CHEVROLET | SB2 Block W/ SB2 Heads |
| 14-000-9 | CHEVROLET | 153 L4 (1962-1972) |
| 15-000-9 | CHEVROLET | 220-229 V6 Even Fire |
| 17-000-9 | CHEVROLET | V6 Odd Fire Race |
| 19-000-9 | CHEVROLET | 262-400 V8 W/ Splayed Valve or Buick Head |
| 28-000-9 | CHEVROLET | Gaerte L4 |

**A. Different journal sizes available**

*Continued on page 7*

| CORE # | CORE DESCRIPTION | ENGINE |
|---|---|---|
| **RACE ROLLER CAM CORES – STEEL BILLET** *continued* | | |
| 29-000-9 | CHEVROLET | Gaerte L4 W/ Splayed Valve Head |
| 48-000-9 | CHEVROLET | 348-409 V8 (1958-65) |
| 76-000-9 | GM | 3800/3.8L V6 (1996-Present) |
| 54-000-11 | GM LS | LS1 Engine (1997-Present) |
| 146-000-13 | GM LS | Chevy Gen IV, LS2 |
| 156-000-13 | GM LS | Gen IV LS2 W/ Cam Phaser |
| 189-000-13 | GM LS | LY6 Gen IV |
| 224-000-13 | GM LS | 2014 GM Gen V LT1 |
| 624-000-15 | GM LS | 2014 GM LT1 AFM |
| 646-000-13 | GM LS | Chevy Gen IV, LS2 AFM |
| 656-000-13 | GM LS | Gen IV LS2 W/ Cam Phaser & AFM |
| 689-000-13 | GM LS | LY6 Gen IV AFM |
| 46-000-9 | GM | 8.1L V8 |
| 117-000-9 | GM | 6.5L Diesel |
| 109-000-10 | GM | R99/R03 |
| 116-000-12 | GM | DRCE3 Pro Stock |
| 132-000-12 | GM | Duramax 6.6L Diesel |
| 144-000-14 | GM | R07-2 GM Race NASCAR Core |
| 20-000-9A | CHRYSLER | 273-360 V8 (1968-99) |
| 23-000-9 | CHRYSLER | 383-440 V8 Three-Bolt (1958-78) |
| 24-000-9A | CHRYSLER | 426 Hemi V8 (1966-71) |
| 26-000-9 | CHRYSLER | 392 Hemi V8 |
| 115-000-10 | CHRYSLER | 9 Bearing Hemi Pro Stock |
| 195-000-12 | CHRYSLER | Gen 1V Viper 8.4L |
| 31-000-9 | FORD | 289-302 V8 (1962-95) |
| 32-000-9 | FORD | 351C, 351M-400M V8 (1970-82) |
| 33-000-9 | FORD | 352-428 V8 FE (1963-76) |
| 34-000-9 | FORD | 429-460 V8 (1968-99) |
| 35-000-9A | FORD | 302 HO (1985-95), 351W V8 (1969-99) |
| 39-000-9 | FORD | SVO V6 Odd Fire |
| 40-000-9 | FORD | SVO V6 Even Fire |
| 49-000-8 | FORD | 4.0L V6 (1990-97) |
| 118-000-9 | FORD | 7.3L Ford Power Stroke Diesel Core |
| 82-000-9 | HOLDEN | 252-308 V8 (1970-88) |
| 282-000-9 | HOLDEN | Holden V8 (1986-Present) |
| 42-000-9 | OLDSMOBILE | 260-455 V8 (1965-90) |
| 51-000-9 | PONTIAC | 265-455 V8 (1955-81) |
| 52-000-9 | PONTIAC | 151 L4 Iron Duke |
| 120-000-12 | STERLING | Sterling V12 |
| **OHC DIRECT ACTING CAM CORES (HYDRAULIC OR SOLID)** | | |
| 10800E | FORD | 2.0L Zetec Exhaust |
| 10800I | FORD | 2.0L Zetec Intake |
| 121-000-8E | FORD | Ford Duratech 2.3L DOHC Exhaust |
| 121-000-8I | FORD | Ford Duratech 2.3L DOHC Intake |
| 53-000-5I | OLDSMOBILE | 2.3 Quad 4 Intake |
| 53-000-5E | OLDSMOBILE | 2.3 Quad 4 Exhaust |
| 74-000-5 | TOYOTA | 2TC-3TC L4 OHV 1588-1700cc (1970-82) |
| 168-000-15E | TOYOTA | Toyota 2JZ-GTE DOHC |
| 168-000-15I | TOYOTA | Toyota 2JZ-GTE DOHC |
| 85-000-5 | VOLKSWAGEN | 1457, 1788 SOHC 4 Cyl. (1974-89) |

**A. Different journal sizes available**

*Continued on page 8*

| CORE # | CORE DESCRIPTION | ENGINE |
|---|---|---|
| **OHC SLIDING FINGER CAM CORES (HYDRAULIC OR SOLID)** | | |
| 57-000-9E | HONDA | DOHC B16A/B18C |
| 57-000-9I | HONDA | DOHC B16A/B18C |
| 59000 | HONDA | D16Z6 SOHC V-TEC |
| 105000 | HONDA | D16Y8 SOHC V-TEC |
| 70-000-0 | FORD | 2000, 2300 OHC L4 (1983-87) |
| 71-000-5 | FORD | 1600 L4 OHC (1965-85) |
| 72-000-5 | FORD | 2000 L4 OHC (1970-77) 3-Bearing Journal |
| 95-000-5 | MITSUBISHI | 2000, 2600 L4 RWD & FWD (1979-87) |
| 222-000-5 | MITSUBISHI | 1983-1990 4CYL, C222-4 |
| 58-000-9E | NISSAN | SR20-DE |
| 58-000-9I | NISSAN | SR20-DE |
| 79-000-5 | NISSAN | 1600, 1800 L4 (1969-84) |
| 80-000-5 | NISSAN | 6 Cyl. SOHC |
| 84-000-5 | NISSAN | 2200-2800 (1970-84) Gun Drilled |
| 88-000-5 | NISSAN | NAP Z L4 (1981-89) |
| 87-000-5 | TOYOTA | 20R, 22R L4 (1975-89) |
| **OHC ROLLER TAPPET CAM CORES (HYDRAULIC OR SOLID)** | | |
| 22-000-5 | CHRYSLER | 2.2L, 2.5L L4 OHC (1981-93) |
| 107-000-8 | CHRYSLER | Neon SOHC 2.0L (1995-01) |
| 135-000-8E | CHRYSLER | Neon "Y" Engine Code Exhaust |
| 135-000-8I | CHRYSLER | Neon "Y" Engine Code Intake |
| 217-000-15 | CHRYSLER | Mopar Midget, Stanton New Head (Tool Steel) |
| 113-000-9I | GM | Ecotech 2.2L DOHC Intake |
| 113-000-9E | GM | Ecotech 2.2L DOHC Exhaust |
| 200-000-5E | GM | ECOTEC Equal Length |
| 200-000-5I | GM | ECOTEC Equal Length |
| 138-000-9L | FORD | 427 SOHC Left Hand |
| 138-000-9R | FORD | 427 SOHC Right Hand |
| 102-000-9R | FORD | 4.6L SOHC Right Side Cam Set |
| 102-000-9L | FORD | 4.6L SOHC Left Side Cam Set |
| 106-000-9LE | FORD | 4.6L & 5.4L DOHC Left Exhaust |
| 106-000-9LI | FORD | 4.6L & 5.4L DOHC Left Intake |
| 106-000-9RE | FORD | 4.6L & 5.4L DOHC Right Exhaust |
| 106-000-9RI | FORD | 4.6L & 5.4L DOHC Right Intake |
| 127-000-9L | FORD | 4.6L 3 Valve Left |
| 127-000-9R | FORD | 4.6L 3 Valve Right |
| 140-000-9L | FORD | V10 DOHC LEFT |
| 140-000-9R | FORD | V10 DOHC RIGHT |
| 191-000-9LE | FORD | 5.0 2011-14 Coyote |
| 191-000-9LI | FORD | 5.0 2011-14 Coyote |
| 191-000-9RE | FORD | 5.0 2011-14 Coyote |
| 191-000-9RI | FORD | 5.0 2011-14 Coyote |
| 243-000-11LE | FORD | 5.0 2015 & Up Coyote |
| 243-000-11LI | FORD | 5.0 2015 & Up Coyote |
| 243-000-11RE | FORD | 5.0 2015 & Up Coyote |
| 243-000-11RI | FORD | 5.0 2015 & Up Coyote |
| 269-000-9L | FORD | Modular 2V, TFS Heads, Left |
| 269-000-9R | FORD | Modular 2V, TFS Heads, Right |
| 101-000-8E | MITSUBISHI | Intake Cam Set for 4G63 |
| 101-000-8I | MITSUBISHI | Exhaust Cam Set for 4G63 |

**A. Different journal sizes available**

*Continued on page 9*

| CORE # | CORE DESCRIPTION | ENGINE |
|---|---|---|
| **OHC ROLLER TAPPET CAM CORES (HYDRAULIC OR SOLID)** *continued* | | |
| 119-000-8E | MITSUBISHI | 4G63 Evolution VIII Exhaust (2003 & Up) |
| 119-000-8I | MITSUBISHI | 4G63 Evolution VII Intake (2003 & Up) |
| 145-000-8E | MITSUBISHI | 2006 MIT. 2.0L EVO IX MIVEC INT |
| 145-000-8I | MITSUBISHI | 2006 MIT. 2.0L EVO IX MIVEC EXH |
| **RACE ROLLER CAM CORES – STEEL BILLET (ROUND)** | | |
| 10-000-0 | AMC | 390-401 V8 (1966-79) |
| 123-000-0 | ARIAS | Arias 10 Round |
| 122-000-0 | BMW | Mini Cooper |
| 67-000-0 | BUICK | 231 V6 Odd Fire (1975-77) |
| 92-000-0 | BUICK | 350 V8 |
| 93-000-0 | BUICK | BV6 Stage II |
| 96-000-0 | BUICK | 400-430-455 V8 (1967-76) |
| 61-000-0 | CHEVROLET | 194-230-250-292-L6 (1962-84) |
| 03-000-0 | CHEVROLET | Standard Chevrolet Block W/ SB2 Heads |
| 07-000-0 | CHEVROLET | LT1 Engine (1992-98) |
| 11-000-0 | CHEVROLET | 396-454 V8 (1967-96) |
| 12-000-0 | CHEVROLET | 262-400 V8 (1957-98) |
| 54-000-0 | CHEVROLET | LS1 Engine (1997-99) |
| 189-000-13 | CHEVROLET | GM LY6 |
| 14-000-0 | CHEVROLET | 153 L4 (1962-72) |
| 15-000-0 | CHEVROLET | 200-229 V6 Even Fire |
| 129-000-0 | CHEVROLET | 3.4L V6 (2001 & Up) |
| 20-000-0 | CHRYSLER | 273-360 V8 (1968-99) |
| 21-000-0 | CHRYSLER | 383-440 V8 Single-Bolt (1958-78) |
| 24-000-0 | CHRYSLER | 426 Hemi V8 (1966-71) |
| 26-000-0 | CHRYSLER | Donovan Block |
| 134-000-0 | CHRYSLER | 70MM Hemi Pro Stock |
| 72-000-0 | FORD | 2000 L4 OHC (1970-77) |
| 66-000-0 | FORD | 240-300 L6 (1965-Present) |
| 31-000-0 | FORD | 289-302 V8 (1962-95) and SVO V8 |
| 05-000-0 | FORD | SVO V8 W/ Mirror Image Heads |
| 32-000-0 | FORD | 351C, 351M-400M V8 (1970-82) |
| 34-000-0 | FORD | 429-460 Vi (1968-99) |
| 142-000-12 | GM | Holden V8 Special Spacing Round Lobe |
| 30-000-0 | HARLEY DAVIDSON | 80" Evolution |
| 42-000-0 | OLDSMOBILE | 260-455 V8 (1965-90) |
| 51-000-0 | PONTIAC | 265-455 Vi (1955-81) |
| 52-000-0 | PONTIAC | 151 L4 Iron Duke |
| **RACE ROLLER CAM CORES – SPECIAL 8620** | | |
| 147-000-15 | GM | 5.2 Bore Spacing GM |
| 166-000-15 | GM | DRCE2 9 Bearing 4 Cyl. |
| 172-000-15 | GM | CS 4500 Bore Spacing Brodix Block |
| 175-000-15 | GM | BBC 5" Bore C&N Blocks |
| 177-000-16 | GM | BBC 70MM 5300 Bore Spacing N Head/A.J. 45/60 |
| 196-000-15 | GM | SBC Mid Deck Block, Same As C183-12 |
| 209-000-15 | GM | SBC 4.5" Chuck Nuytten Block-Devito |
| 212-000-15 | GM | BBC 5" Brodix Block |
| 178-000-15 | GM | CS-LS-WP Motown SBC |

**A. Different journal sizes available**

*Continued on page 10*

| CORE # | CORE DESCRIPTION | ENGINE |
|---|---|---|
| **RACE ROLLER CAM CORES – TOOL STEEL BILLET** | | |
| 155-000-15 | ARIAS | 8.3 Aries |
| 55-000-16 | CHRYSLER | R5 Block/P7 Head – Steel |
| 157-000-16 | CHRYSLER | Dodge R6/P8 Tool Steel Semi FT |
| 201-000-17 | CHRYSLER | VVT Hemi 5.7 & 6.4 |
| 217-000-15 | CHRYSLER | Mopar Midget, Stanton New Head |
| 226-000-17 | CHRYSLER | SB Hemi |
| 04-000-16A | GM | SB2 Block/Heads – Steel |
| 11-000-15 | GM | BBC Tool Steel |
| 54-000-15 | GM | LS1 Tool Steel 3 Bolt |
| 224-000-15 | GM | 2014+ GM Gen V & LT1 |
| 153-000-17 | GM | Pro Stock DRCE2 9-Bearing Round Lobe |
| 154-000-16 | GM | Nimar Pro Stock |
| 164-000-17 | GM | BBC Dart X Block |
| 170-000-17 | GM | 5300 BS Chevrolet Dart 53 |
| 208-000-16 | GM | SBC Sprint Car Core, Lightened Journals |
| 201-000-17 | GM | Chrysler VVT Hemi 5.7 & 6.4 |
| 208-000-16 | GM | SBC Sprint Car Core, Lightened Journals |
| 35-000-16 | FORD | SVO V8 – Tool Steel |
| 126-000-16 | FORD | Ford Hemi Pro Stock, Not Gundrilled |
| 180-000-16 | FORD | FR9 NASCAR Flat Tappet |
| 181-000-16 | FORD | FORD 70MM Pro Stock 9 Bearing BB 4/7 FO |
| 236-000-17 | FORD | 60mm SBF D3 Head |
| 266-000-17 | FORD | 7.3 Powerstroke Diesel (1997-2002) |
| 110-000-16 | TOYOTA | TRD9 5160 Semi 6 BRNG |

**A. Different journal sizes available**

## HIGH ENERGY™ HYDRAULICS

These lobes are to be used in applications where torque, mileage and vacuum are primary considerations. High Energy™ Hydraulics can be used as intake or exhaust lobes. They are simple street performance stock improvement lobes. This group must use a minimum tappet diameter of .842" (Chevrolet) or larger.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| High Energy™ Rated Duration @ .006" Tappet Lift .842" Min. Dia.<br><br>MI 25.7 (12.3/13.4) | 5224 | 240-4 | 192 | 96 | .2600 | .024 | .017 | .390 | .416 | .442 |
| | 5225 | 244-1 | 196 | 97 | .2567 | .028 | .020 | .385 | .411 | .436 |
| | 5223 | 244-2 | 196 | 101 | .2666 | .028 | .020 | .400 | .427 | .453 |
| | 5226 | 248-2 | 200 | 102 | .2600 | .034 | .025 | .390 | .416 | .442 |
| | 5206 | 252-5 | 206 | 109 | .2706 | .041 | .031 | .406 | .433 | .460 |
| | 5200 | 252-4 | 206 | 113 | .2835 | .041 | .031 | .425 | .454 | .482 |
| | 5211 | 260-7 | 212 | 119 | .2933 | .049 | .038 | .440 | .469 | .499 |
| | 5205 | 260-8 | 212 | 117 | .2795 | .049 | .038 | .419 | .447 | .475 |
| | 5207 | 260-9 | 212 | 122 | .2960 | .050 | .039 | .444 | .474 | .503 |
| | 5212 | 268-4 | 222 | 130 | .3090 | .064 | .052 | .464 | .494 | .525 |
| | 5232 | 268-5 | 218 | 124 | .2853 | .059 | .047 | .428 | .456 | .485 |
| | 5222 | 268-6 | 218 | 128 | .3026 | .060 | .048 | .454 | .484 | .514 |
| | 5215 | 268-9 | 218 | 128 | .2960 | .059 | .047 | .444 | .474 | .503 |

## MAGNUM HYDRAULICS

Magnum Hydraulics are to be used in high performance applications with a minimum tappet diameter of .842" (Chevrolet) or larger. These lobes are more aggressive in their design characteristics and can be used as intake or exhaust lobes. They are a big brother to the High Energy™ family and are frequently used by the budget minded Saturday Night racer. They also provide a very "throaty" sound.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| Magnum Rated Duration @ .006" Tappet Lift .842" Min. Dia. | 5201 | 270-4 | 224 | 135 | .3130 | .069 | .057 | .470 | .501 | .532 |
| | 5202 | 270-5 | 224 | 132 | .3000 | .068 | .056 | .450 | .480 | .510 |
| | 5239 | 276-3 | 228 | 140 | .3160 | .077 | .064 | .474 | .506 | .537 |
| | 5213 | 276-4 | 226 | 136 | .3090 | .072 | .060 | .464 | .494 | .525 |
| | 5216 | 280-3 | 230 | 137 | .3063 | .077 | .064 | .459 | .490 | .521 |
| | 5203 | 280-4 | 230 | 140 | .3200 | .079 | .066 | .480 | .512 | .544 |
| | 5240 | 280-9 | 232 | 142 | .3220 | .080 | .067 | .483 | .515 | .547 |
| | 5241 | 284-3 | 236 | 146 | .3160 | .091 | .078 | .474 | .506 | .537 |
| | 5208 | 286-3 | 236 | 148 | .3270 | .089 | .075 | .491 | .523 | .556 |
| | 5229 | 288-9 | 237 | 148 | .3220 | .090 | .076 | .483 | .515 | .547 |
| | 5214 | 292-2 | 244 | 153 | .3340 | .101 | .087 | .501 | .534 | .568 |
| | 5204 | 292-3 | 244 | 151 | .3235 | .101 | .087 | .485 | .518 | .550 |
| | 5209 | 296-3 | 246 | 158 | .3400 | .106 | .092 | .510 | .544 | .578 |
| | 5210 | 305-3 | 253 | 163 | .3500 | .118 | .104 | .525 | .560 | .595 |
| | 5217 | 305-4 | 253 | 162 | .3380 | .118 | .104 | .507 | .541 | .575 |

## DUAL ENERGY™ HYDRAULICS

Designed for the Dual Energy Cam™ Series, these lobes are good for every day driving where a broad torque curve is necessary. Very easy on related components. Designed as intake and exhaust lobes but could be used either way. Minimum tappet diameter of .842" is necessary. These lobes produce good power for a daily driver or a weekend toy used as an occasional bracket race car.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| Dual Energy™ Rated Duration @ .006" Tappet Lift .842" Min. Dia. | 5110A | 255 | 203 | 110 | .281 | .036 | .028 | .422 | .450 | .478 |
| | 5146 | 255 | 203 | 110 | .281 | .036 | .028 | .422 | .450 | .478 |
| | 5310 | 254 | 204 | 109 | .271 | .037 | .027 | .407 | .434 | .461 |
| | 5128 | 265 | 211 | 117 | .295 | .049 | .039 | .443 | .472 | .502 |
| | 5312 | 265 | 211 | 112 | .280 | .049 | .039 | .420 | .448 | .476 |
| | 5128 | 273 | 211 | 117 | .295 | .049 | .039 | .443 | .472 | .502 |
| | 5166 | 265 | 211 | 117 | .295 | .049 | .039 | .443 | .472 | .502 |
| | 5120A | 261 | 212 | 121 | .301 | .049 | .039 | .452 | .482 | .512 |
| | 5311 | 261 | 213 | 120 | .286 | .046 | .039 | .429 | .458 | .486 |
| | 5000 | 263 | 216 | 123 | .292 | .052 | .042 | .438 | .467 | .496 |
| | 5126A | 275 | 219 | 125 | .308 | .057 | .047 | .462 | .493 | .524 |
| | 5326 | 275 | 219 | 123 | .298 | .057 | .048 | .447 | .477 | .507 |
| | 5163 | 275 | 219 | 125 | .308 | .057 | .047 | .462 | .493 | .524 |
| | 5130 | 275 | 219 | 125 | .308 | .057 | .047 | .462 | .493 | .524 |
| | 5127 | 269 | 221 | 129 | .310 | .062 | .051 | .465 | .496 | .527 |
| | 5315 | 272 | 221 | 124 | .298 | .062 | .051 | .447 | .477 | .507 |
| | 5006 | 275 | 223 | 128 | .304 | .057 | .050 | .456 | .486 | .517 |
| | 5129 | 276 | 227 | 134 | .308 | .074 | .062 | .462 | .493 | .524 |
| | 5136A | 277 | 229 | 137 | .321 | .074 | .062 | .482 | .514 | .546 |
| | 5327 | 283 | 229 | 136 | .313 | .074 | .062 | .470 | .501 | .532 |
| | 5002 | 283 | 233 | 146 | .320 | .074 | .070 | .480 | .512 | .544 |
| | 5135 | 284 | 235 | 139 | .321 | .082 | .070 | .482 | .514 | .546 |

## THUMPR™ HYDRAULICS

The Thumpr™ lobe profiles are designed to optimize the character and sound, while providing excellent stability and a very wide power range in hydraulic flat tappet applications. Specific profiles are developed uniquely for the intake and exhaust.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| Thumpr™ Int. Rated Duration @ .006" Tappet Lift .842" Min. Dia. | 5038 | 271 | 219 | 130 | .312 | .061 | .049 | .468 | .499 | .530 |
| | 5039 | 275 | 223 | 134 | .316 | .067 | .055 | .474 | .506 | .537 |
| | 5040 | 279 | 227 | 138 | .319 | .074 | .061 | .479 | .510 | .542 |
| | 5042 | 287 | 235 | 146 | .326 | .088 | .074 | .489 | .522 | .554 |
| | 5044 | 295 | 243 | 154 | .333 | .101 | .088 | .500 | .533 | .566 |
| Thumpr™ Int. CB Rated Duration @ .006" Tappet Lift .842" Min. Dia. | 5020 | 279 | 227 | 132 | .293 | .073 | .060 | .440 | .469 | .498 |
| | 5022 | 287 | 235 | 141 | .300 | .086 | .073 | .450 | .480 | .510 |
| | 5024 | 295 | 243 | 149 | .307 | .100 | .086 | .461 | .491 | .522 |
| Thumpr™ Int. FW Rated Duration @ .006" Tappet Lift .875" Min. Dia. | 5520 | 279 | 227 | 137 | .306 | .073 | .060 | .459 | .490 | .520 |
| | 5522 | 287 | 235 | 145 | .313 | .087 | .073 | .470 | .501 | .532 |
| | 5524 | 295 | 243 | 153 | .320 | .101 | .087 | .480 | .512 | .544 |

*Continued on page 11*

## THUMPR™ HYDRAULICS *Continued*

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| Thumpr™ Int. CRS Rated Duration @ .006" Tappet Lift .904" Min. Dia. | 5820 | 279 | 227 | 142 | .324 | .075 | .062 | .486 | .518 | .551 |
| | 5822 | 287 | 235 | 150 | .331 | .089 | .075 | .497 | .530 | .563 |
| | 5824 | 295 | 243 | 158 | .338 | .103 | .089 | .507 | .541 | .575 |
| Thumpr™ Exh. Rated Duration @ .006" Tappet Lift .842" Min. Dia. | 5055 | 297 | 241 | 148 | .310 | .094 | .082 | .465 | .496 | .527 |
| | 5057 | 305 | 249 | 156 | .317 | .107 | .094 | .476 | .507 | .539 |
| | 5059 | 313 | 257 | 164 | .324 | .120 | .107 | .486 | .518 | .551 |
| Thumpr™ Exh. CB Rated Duration @ .006" Tappet Lift .842" Min. Dia. | 5031 | 297 | 241 | 140 | .284 | .093 | .080 | .426 | .454 | .483 |
| | 5033 | 305 | 249 | 148 | .291 | .107 | .093 | .437 | .466 | .495 |
| | 5035 | 313 | 257 | 157 | .298 | .120 | .107 | .447 | .477 | .507 |
| Thumpr™ Exh. FW Rated Duration @ .006" Tappet Lift .875" Min. Dia. | 5531 | 297 | 241 | 143 | .297 | .093 | .080 | .446 | .475 | .505 |
| | 5533 | 305 | 249 | 152 | .304 | .107 | .094 | .456 | .486 | .517 |
| | 5535 | 313 | 257 | 160 | .311 | .121 | .107 | .467 | .498 | .529 |
| Thumpr™ Exh. CRS Rated Duration @ .006" Tappet Lift .904" Min. Dia. | 5831 | 297 | 241 | 149 | .315 | .094 | .081 | .473 | .504 | .536 |
| | 5833 | 305 | 249 | 157 | .322 | .109 | .094 | .483 | .515 | .547 |
| | 5835 | 313 | 257 | 165 | .329 | .123 | .108 | .494 | .526 | .559 |

## NEW NOSTALGIA PLUS™ HYDRAULICS

Designed to mimic the sound of the great engines of the past while improving performance by applying today's design techniques, these profiles are used in our Nostalgia Plus™ Series to capture the essence of the factory muscle cars of the 60s and 70s. These profiles are slightly slower off the seat than the Xtreme Energy™ profiles but have excellent area under the curve for outstanding power.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| New Nostalgia Plus™ Rated Duration @ .006" Tappet Lift .842" Min. Dia. | 5066 | 258 | 211 | 120 | .284 | .048 | .036 | .426 | .454 | .483 |
| | 5067 | 265 | 218 | 124 | .280 | .057 | .045 | .420 | .448 | .476 |
| | 5068 | 276 | 229 | 140 | .312 | .078 | .064 | .468 | .499 | .530 |
| | 5069 | 283 | 236 | 147 | .308 | .088 | .074 | .462 | .493 | .524 |
| | 5070 | 286 | 239 | 151 | .322 | .095 | .081 | .483 | .515 | .547 |
| | 5071 | 293 | 246 | 157 | .318 | .105 | .091 | .477 | .509 | .541 |

## RACE HYDRAULICS

These are the largest hydraulic designs COMP Cams® offers. With a minimum tappet diameter of .842" or larger needed, these designs are intended for all out racing only. The larger lobes (268°, 270°, 276° @ .050" duration) were designed with large cubic inch motors in mind in a high RPM environment. These lobes have smooth ramps, making it easier for the spring to control the valve.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| Rated Duration @ .006" Tappet Lift .842" Min. Dia. MI 25.8 (12.9/12.9) | 5195 | 312-5 | 260 | 169 | .3600 | .128 | .114 | .540 | .576 | .612 |
| | 5221 | 312-6 | 260 | 171 | .3530 | .131 | .117 | .530 | .565 | .600 |
| | 5196 | 320-5 | 268 | 178 | .3600 | .143 | .129 | .540 | .576 | .612 |
| | 5197 | 320-9 | 268 | 175 | .3530 | .141 | .128 | .530 | .565 | .600 |
| | 5198 | 320-10 | 270 | 180 | .3675 | .147 | .133 | .551 | .588 | .625 |
| | 5199 | 328-8 | 276 | 185 | .3675 | .156 | .142 | .551 | .588 | .625 |

## XTREME ENERGY™ HYDRAULICS

Designed to maximize torque, acceleration and throttle response while providing excellent high RPM horsepower. A faster intake valve opening increases engine vacuum and enhances throttle response. Special intake closing ramps close the valve sooner, providing more cylinder pressure and torque without resulting in excessive valve train noise. Faster ramps achieve maximum velocity sooner, increasing the area under the lift curve and providing maximum horsepower. Smoother exhaust designs allow for a more effective purge of spent gasses from the combustion chamber to further increase horsepower.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| Xtreme Energy™ Int. Rated Duration @ .006" Tappet Lift .842" Min. Dia.<br><br>MI 22.9 (11.1/11.8) | 5437 | 240 | 196 | 106 | .275 | .026 | .018 | .413 | .440 | .468 |
| | 5440 | 250 | 206 | 117 | .288 | .041 | .030 | .432 | .461 | .490 |
| | 5430 | 250 | 206 | 114 | .277 | .041 | .030 | .416 | .443 | .471 |
| | 5441 | 256 | 212 | 124 | .298 | .050 | .038 | .447 | .477 | .507 |
| | 5431 | 256 | 212 | 120 | .283 | .050 | .038 | .425 | .453 | .481 |
| | 5442 | 262 | 218 | 130 | .308 | .060 | .047 | .462 | .493 | .524 |
| | 5432 | 262 | 218 | 128 | .297 | .060 | .047 | .446 | .475 | .505 |
| | 5443 | 268 | 224 | 137 | .318 | .070 | .056 | .477 | .509 | .541 |
| | 5433 | 268 | 224 | 134 | .303 | .070 | .056 | .455 | .485 | .515 |
| | 5444 | 270 | 226 | 139 | .321 | .073 | .060 | .482 | .514 | .546 |
| | 5414 | 270 | 226 | 136 | .303 | .073 | .060 | .455 | .485 | .515 |
| | 5445 | 274 | 230 | 143 | .325 | .080 | .066 | .488 | .520 | .553 |
| | 5435 | 274 | 230 | 140 | .303 | .080 | .066 | .455 | .485 | .515 |
| | 5446 | 278 | 234 | 147 | .332 | .087 | .073 | .498 | .531 | .564 |
| | 5447 | 284 | 240 | 153 | .338 | .097 | .084 | .507 | .541 | .575 |
| | 5418 | 288 | 244 | 157 | .335 | .104 | .091 | .503 | .536 | .570 |
| | 5448 | 290 | 246 | 159 | .344 | .108 | .094 | .516 | .550 | .585 |
| | 5438 | 294 | 250 | 163 | .360 | .115 | .101 | .540 | .576 | .612 |
| | 5449 | 294 | 250 | 163 | .346 | .115 | .101 | .519 | .554 | .588 |
| | 5439 | 298 | 254 | 167 | .360 | .122 | .108 | .540 | .576 | .612 |
| | 5419 | 298 | 254 | 166 | .338 | .122 | .108 | .507 | .541 | .575 |
| Xtreme Energy™ Exh. Rated Duration @ .006" Tappet Lift .842" Min. Dia. | 5207 | 260 | 212 | 121 | .296 | .050 | .040 | .444 | .474 | .503 |
| | 5205 | 260 | 212 | 117 | .280 | .050 | .040 | .420 | .448 | .476 |
| | 5230 | 268 | 218 | 128 | .303 | .059 | .048 | .455 | .485 | .515 |
| | 5232 | 268 | 218 | 124 | .285 | .059 | .047 | .428 | .456 | .485 |
| | 5212 | 268 | 222 | 130 | .309 | .064 | .052 | .464 | .494 | .525 |
| | 5201 | 270 | 224 | 133 | .313 | .067 | .056 | .470 | .501 | .532 |
| | 5202 | 270 | 224 | 132 | .300 | .068 | .056 | .450 | .480 | .510 |
| | 5203 | 280 | 230 | 140 | .320 | .078 | .065 | .480 | .512 | .544 |
| | 5216 | 280 | 230 | 138 | .306 | .078 | .066 | .459 | .490 | .520 |
| | 5208 | 286 | 236 | 144 | .327 | .085 | .072 | .491 | .523 | .556 |
| | 5238 | 286 | 236 | 143 | .306 | .086 | .073 | .459 | .490 | .520 |
| | 5214 | 292 | 244 | 154 | .334 | .100 | .087 | .501 | .534 | .568 |
| | 5209 | 296 | 246 | 154 | .340 | .101 | .088 | .510 | .544 | .578 |
| | 5210 | 305 | 253 | 160 | .350 | .111 | .098 | .525 | .560 | .595 |
| | 5231 | 308 | 256 | 165 | .350 | .120 | .106 | .525 | .560 | .595 |
| | 5234 | 316 | 264 | 170 | .285 | .132 | .118 | .428 | .456 | .485 |
| | 5233 | 316 | 264 | 173 | .353 | .133 | .120 | .530 | .565 | .600 |

## XTREME ENERGY XFI™ HYDRAULICS

The Xtreme Energy XFI™ Series is designed for use with modern induction systems, heads, springs and rockers. The XFI™ intake lobes have more lift than the base Xtreme series, and the XFI™ exhaust lobes have more area under the curve, for better exhaust flow, than the base exhaust series. These are the first hydraulic flat tappet profiles designed for use with COMP Cams® Beehive™ Valve Springs, such as the #26915, #26918 and #26120. The combination of these profiles, the Beehive™ Springs, and our Ultra Pro Magnum™ Rocker Arms in higher ratios, makes for the most revolutionary improvement in hydraulic flat tappet design to date by bringing the latest race winning technology to the street.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| Xtreme XFI™ Int. Rated Duration @ .006" Tappet Lift .842" Min. Dia. MI 23.1 (11.2/11.9) | 5082 | 252 | 208 | 121 | .298 | .044 | .032 | .447 | .477 | .507 |
| | 5083 | 256 | 212 | 125 | .305 | .050 | .038 | .458 | .488 | .519 |
| | 5084 | 260 | 216 | 129 | .312 | .056 | .044 | .468 | .499 | .530 |
| | 5085 | 262 | 218 | 131 | .315 | .060 | .047 | .473 | .504 | .536 |
| | 5086 | 268 | 224 | 138 | .325 | .070 | .057 | .488 | .520 | .553 |
| | 5087 | 274 | 230 | 143 | .336 | .081 | .067 | .504 | .538 | .571 |
| | 5088 | 280 | 236 | 150 | .345 | .091 | .077 | .518 | .552 | .587 |
| | 5089 | 286 | 242 | 156 | .355 | .102 | .088 | .533 | .568 | .604 |
| | 5090 | 292 | 248 | 162 | .365 | .112 | .098 | .548 | .584 | .621 |
| Xtreme XFI™ Exh. Rated Duration @ .006" Tappet Lift .842" Min. Dia. MI 25.0 (12.1/12.9) | 5101 | 266 | 217 | 127 | .295 | .059 | .047 | .443 | .472 | .502 |
| | 5103 | 272 | 223 | 134 | .308 | .068 | .056 | .462 | .493 | .524 |
| | 5105 | 280 | 231 | 143 | .322 | .082 | .068 | .483 | .515 | .547 |
| | 5107 | 290 | 241 | 154 | .342 | .099 | .085 | .513 | .547 | .581 |
| | 5109 | 302 | 253 | 166 | .362 | .120 | .106 | .543 | .579 | .615 |

## PURPLE PLUS HYDRAULICS (.904" MIN. TAPPET)

These use the same ramps as the New Nostalgia Plus™ lobes but have more velocity for use with Chrysler/Mopar .904" minimum tappet diameters.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| Purple Plus Rated Duration @ .006" Tappet Lift .904" Min. Dia. MI 24.0 (11.6/12.4) | 6882 | 280 | 233 | 148 | .316 | .086 | .071 | .474 | .506 | .537 |
| | 6883 | 287 | 240 | 153 | .316 | .096 | .082 | .474 | .506 | .537 |
| | 6884 | 284 | 239 | 154 | .323 | .097 | .082 | .485 | .517 | .549 |
| | 6885 | 291 | 246 | 159 | .323 | .107 | .092 | .485 | .517 | .549 |
| | 6886 | 292 | 247 | 163 | .339 | .111 | .097 | .509 | .542 | .576 |
| | 6887 | 299 | 254 | 169 | .339 | .123 | .108 | .509 | .542 | .576 |

## XTREME MOPAR HYDRAULICS (.904" MIN. TAPPET)

Xtreme Mopar Hydraulics are optimized for use with .904" minimum tappet diameters. The additional velocity allowed with the Chrysler/Mopar .904" tappet results in more area and lift than any of our other comparable hydraulic designs. These are the best large tappet hydraulics ever.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| Xtreme Mopar Int. Rated Duration @ .006" Tappet Lift .904" Min. Dia. MI 23.1 (11.2/11.9) | 5964 | 275 | 231 | 149 | .350 | .083 | .069 | .525 | .560 | .595 |
| | 5962 | 279 | 235 | 153 | .356 | .089 | .075 | .534 | .570 | .605 |
| | 5965 | 285 | 241 | 159 | .363 | .101 | .087 | .545 | .581 | .617 |
| | 5960 | 289 | 245 | 163 | .356 | .109 | .094 | .534 | .570 | .605 |
| | 5961 | 295 | 251 | 169 | .356 | .120 | .105 | .534 | .570 | .605 |
| | 5966 | 295 | 251 | 169 | .376 | .120 | .105 | .564 | .602 | .639 |
| Xtreme Mopar Exh. Rated Duration @ .006" Tappet Lift .904" Min. Dia. MI 25.0 (12.1/12.9) | 5984 | 287 | 237 | 151 | .350 | .090 | .076 | .525 | .560 | .595 |
| | 5985 | 297 | 247 | 161 | .363 | .107 | .093 | .545 | .581 | .617 |
| | 5980 | 301 | 251 | 166 | .360 | .115 | .101 | .540 | .576 | .612 |
| | 5981 | 307 | 257 | 171 | .360 | .126 | .111 | .540 | .576 | .612 |
| | 5986 | 307 | 257 | 171 | .376 | .126 | .111 | .564 | .602 | .639 |

## XTREME 4X4 HYDRAULICS (.904" MIN. TAPPET)

The Xtreme 4x4 for .904" are similar to the XE Mopar .904" designs but optimized for AMC I6 off-road applications for great torque, responsiveness and a wide power range. For use with .904" or larger OD hydraulic tappets and 1.948" or larger journal diameter. Slightly softer off the seat than the XFI .842" series but with greatly increased area for a given seat timing by taking advantage of the larger .904" tappet. Quiet, stable and great torque. Nitriding recommended, especially on shorter duration, for enhanced durability.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| Xtreme 4x4 .904 Rated Duration @ .006" Tappet Lift 1.948"+ Journal .904"+ Tappet OD MI 23.5 (11.3/12.2) Low Lift | 5900 | 250 | 205 | 122 | .305 | .047 | .036 | .458 | .488 | .519 |
| | 5901 | 254 | 209 | 126 | .311 | .052 | .041 | .467 | .498 | .529 |
| | 5902 | 258 | 213 | 130 | .317 | .057 | .046 | .476 | .507 | .539 |
| | 5903 | 262 | 217 | 134 | .321 | .062 | .051 | .482 | .514 | .546 |
| | 5904 | 266 | 221 | 138 | .325 | .067 | .056 | .488 | .520 | .553 |
| | 5852 | 258 | 213 | 117 | .270 | .052 | .039 | .405 | .432 | .459 |

## MPM STOCKER HYDRAULICS (.842" MIN. TAPPET)

These are high RPM hydraulic flat tappets designed around a minimum tappet diameter of .842" or larger. Intended for all out racing only.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| MPM Stocker Rated Duration @ .006" Tappet Lift .842" Min. Dia. MI 29.1 (13.8/15.3) | 6622 | 315 | 260 | 167 | .324 | .127 | .113 | .486 | .518 | .551 |
| | 6624 | 319 | 264 | 171 | .324 | .134 | .120 | .486 | .518 | .551 |
| | 6626 | 323 | 268 | 174 | .324 | .141 | .127 | .486 | .518 | .551 |
| | 6628 | 327 | 272 | 178 | .324 | .147 | .134 | .486 | .518 | .551 |

## CRL STOCKER HYDRAULICS (.842" MIN. TAPPET)

These hydraulic flat tappet Stocker/Lift Rule profiles are quicker than the MPMs, while designed around a minimum tappet diameter of .842" or larger. These designs are intended for all out racing only.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| CRL Stocker Rated Duration @ .006" Tappet Lift .842" Min. Dia. MI 29.3 (13.7/15.6) | 6592 | 312 | 258 | 168 | .325 | .128 | .114 | .488 | .520 | .553 |
| | 6593 | 314 | 260 | 170 | .325 | .132 | .117 | .488 | .520 | .553 |
| | 6594 | 316 | 262 | 172 | .325 | .135 | .121 | .488 | .520 | .553 |
| | 6575 | 318 | 264 | 173 | .325 | .139 | .125 | .488 | .520 | .553 |
| | 6595 | 320 | 266 | 175 | .325 | .143 | .128 | .488 | .520 | .553 |
| | 6596 | 322 | 268 | 177 | .325 | .146 | .132 | .488 | .520 | .553 |
| | 6576 | 324 | 270 | 179 | .325 | .150 | .135 | .488 | .520 | .553 |
| | 6577 | 326 | 272 | 181 | .325 | .153 | .139 | .488 | .520 | .553 |
| | 6578 | 328 | 274 | 183 | .325 | .156 | .143 | .488 | .520 | .553 |

## USI USX UPI UPX STOCKER HYDRAULICS

These are new designs for high RPM stocker applications.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| USI Rated Duration @ .020" Tappet Lift | 5538 | 294 | 262 | 166 | .345 | .123 | .110 | .552 | .587 | .621 |
| | 5540 | 298 | 266 | 170 | .345 | .130 | .116 | .552 | .587 | .621 |
| USX Rated Duration @ .020" Tappet Lift | 5544 | 301 | 268 | 174 | .365 | .134 | .121 | .584 | .621 | .657 |
| | 5546 | 305 | 272 | 178 | .365 | .141 | .128 | .584 | .621 | .657 |
| Thumpr™ Int. FW Rated Duration @ .006" Tappet Lift .875" Min. Dia. | 5520 | 279 | 227 | 137 | .306 | .073 | .060 | .459 | .490 | .520 |
| | 5522 | 287 | 235 | 145 | .313 | .087 | .073 | .470 | .501 | .532 |
| | 5524 | 295 | 243 | 153 | .320 | .101 | .087 | .480 | .512 | .544 |
| USI Rated Duration @ .020" Tappet Lift | 5840 | 298 | 266 | 157 | .267 | .125 | .113 | .401 | .427 | .454 |
| USX Rated Duration @ .020" Tappet Lift | 5846 | 305 | 272 | 166 | .277 | .136 | .124 | .416 | .443 | .471 |
| UPI Rated Duration @ .020" Tappet Lift | 5854 | 294 | 263 | 157 | .267 | .124 | .111 | .401 | .427 | .454 |
| UPX Rated Duration @ .020" Tappet Lift | 5862 | 300 | 269 | 164 | .277 | .135 | .122 | .416 | .443 | .471 |

## HIGH ENERGY™ & MAGNUM HYDRAULIC ROLLERS – LOW & HIGH LIFT

The low lift profiles were designed for street and marine use. The low lift adds dependability and reliability for extended use applications. The high lift versions of the hydraulic rollers are designed for all out applications where high lift is desired because of cylinder head or engine modifications. They function well for street/strip. These lobes run well in big cubic inch marine engines.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| Hydraulic Roller Low Lift Rated Duration @ .006" Tappet Lift Low Lift Journal = S,B,F,R… MI 28.7 (13.8/14.9) | 3100 | 230 | 178 | 93 | .2700 | .014 | .009 | .405 | .432 | .459 |
| | 3101 | 240 | 188 | 103 | .2850 | .022 | .015 | .428 | .456 | .485 |
| | 3102 | 242 | 191 | 97 | .2600 | .024 | .017 | .390 | .416 | .442 |
| | 3103 | 246 | 192 | 110 | .3000 | .024 | .017 | .450 | .480 | .510 |
| | 3104 | 254 | 199 | 116 | .3000 | .032 | .024 | .450 | .480 | .510 |
| | 3105 | 256 | 200 | 118 | .3100 | .035 | .026 | .465 | .496 | .527 |
| | 3106 | 262 | 206 | 116 | .3000 | .041 | .032 | .450 | .480 | .510 |
| | 3160 | 266 | 210 | 116 | .2853 | .047 | .037 | .428 | .456 | .485 |
| | 3050 | 264 | 210 | 127 | .3200 | .047 | .037 | .480 | .512 | .544 |
| | 3168 | 273 | 215 | 119 | .2853 | .052 | .041 | .428 | .456 | .485 |
| | 3161 | 276 | 220 | 123 | .2853 | .060 | .049 | .428 | .456 | .485 |
| | 3051 | 274 | 220 | 134 | .3200 | .061 | .050 | .480 | .512 | .544 |
| | 3162 | 292 | 230 | 128 | .2853 | .075 | .064 | .428 | .456 | .485 |
| | 3052 | 284 | 230 | 142 | .3200 | .077 | .064 | .480 | .512 | .544 |
| | 3163 | 302 | 240 | 135 | .2853 | .090 | .078 | .428 | .456 | .485 |
| | 3053 | 296 | 240 | 148 | .3200 | .091 | .078 | .480 | .512 | .544 |
| | 3164 | 312 | 250 | 142 | .2853 | .104 | .092 | .428 | .456 | .485 |
| Hydraulic Roller High Lift Rated Duration @ .006" Tappet Lift High Lift Journal = S,B,F,R… MI 28.7 (13.8/14.9) | 3118 | 260 | 206 | 126 | .3330 | .041 | .032 | .500 | .533 | .566 |
| | 3107 | 266 | 210 | 130 | .3330 | .047 | .037 | .500 | .533 | .566 |
| | 3108 | 270 | 215 | 133 | .3330 | .055 | .044 | .500 | .533 | .566 |
| | 3114 | 281 | 220 | 134 | .3200 | .060 | .048 | .480 | .512 | .544 |
| | 3109 | 276 | 220 | 138 | .3400 | .060 | .049 | .510 | .544 | .578 |
| | 3110 | 284 | 224 | 136 | .3330 | .066 | .054 | .500 | .533 | .566 |
| | 3119 | 280 | 224 | 144 | .3500 | .066 | .054 | .525 | .560 | .595 |
| | 3112 | 290 | 230 | 143 | .3400 | .075 | .063 | .510 | .544 | .578 |
| | 3111 | 286 | 230 | 152 | .3760 | .076 | .063 | .564 | .602 | .639 |
| | 3511 | 286 | 230 | 153 | .3760 | .079 | .065 | .564 | .602 | .639 |
| | 3122 | 290 | 236 | 160 | .3800 | .091 | .076 | .570 | .608 | .646 |
| | 3113 | 304 | 242 | 158 | .3670 | .101 | .087 | .551 | .587 | .624 |
| | 3150 | 307 | 244 | 158 | .3600 | .100 | .087 | .540 | .576 | .612 |
| | 3120 | 304 | 244 | 161 | .3830 | .101 | .087 | .575 | .613 | .651 |
| | 3115 | 304 | 244 | 164 | .4000 | .104 | .090 | .600 | .640 | .680 |
| | 3170 | 315 | 248 | 161 | .3600 | .105 | .091 | .540 | .576 | .612 |
| | 3151 | 318 | 252 | 164 | .3600 | .111 | .097 | .540 | .576 | .612 |
| | 3116 | 314 | 252 | 169 | .4000 | .115 | .100 | .600 | .640 | .680 |
| | 3171 | 325 | 258 | 169 | .3600 | .122 | .108 | .540 | .576 | .612 |
| | 3152 | 329 | 262 | 172 | .3600 | .127 | .113 | .540 | .576 | .612 |
| | 3117 | 324 | 262 | 177 | .4200 | .130 | .115 | .630 | .672 | .714 |

## TRI-POWER XTREME™ HYDRAULIC ROLLERS

The Tri-Power Xtreme™ lobes are designed to deliver the best combination of torque, horsepower and fuel effeciency. These designs have quick seat timing and excellent area under the curve but allow reduced spring force for less frictional losses compared to other members of the Xtreme family. These are sized especially for the required timing of the Tri-Power series to provide optimum valve timing to reduce the parisitic losses of pumping the intake charge in past the throttle blades and pushing out spent exhaust.e

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| Tri-Power Xtreme™ Rated Duration @ .006" Tappet Lift<br><br>Hydraulic Roller Journal = J,S,B,R… MI 27.1 (13.3/13.8) | 3590 | 246 | 194 | 111 | .294 | .028 | .020 | .441 | .470 | .500 |
| | 3591 | 254 | 202 | 118 | .298 | .036 | .028 | .447 | .477 | .507 |
| | 3592 | 262 | 210 | 125 | .302 | .047 | .036 | .453 | .483 | .513 |
| | 3595 | 258 | 206 | 118 | .290 | .043 | .034 | .435 | .464 | .493 |
| | 3596 | 264 | 212 | 124 | .294 | .051 | .041 | .441 | .470 | .500 |
| | 3597 | 270 | 218 | 130 | .298 | .060 | .049 | .447 | .477 | .507 |
| | 3604 | 246 | 194 | 115 | .312 | .028 | .020 | .468 | .499 | .530 |
| | 3605 | 254 | 202 | 123 | .318 | .036 | .028 | .477 | .509 | .541 |
| | 3606 | 262 | 210 | 130 | .324 | .047 | .037 | .486 | .518 | .551 |
| | 3608 | 258 | 206 | 124 | .309 | .043 | .034 | .464 | .494 | .525 |
| | 3609 | 264 | 212 | 130 | .314 | .052 | .041 | .471 | .502 | .534 |
| | 3611 | 270 | 218 | 136 | .320 | .060 | .049 | .480 | .512 | .544 |
| | 3594 | 262 | 210 | 129 | .320 | .047 | .037 | .480 | .512 | .544 |
| Tri-Power Xtreme™ Rated Duration @ .006" Tappet Lift<br><br>Hydraulic Roller Journal = J,S,B,R… | 13390 | 262 | 210 | 129 | .325 | .047 | .037 | .488 | .520 | .553 |
| | 13391 | 264 | 212 | 131 | .325 | .050 | .039 | .488 | .520 | .553 |
| | 13392 | 266 | 214 | 132 | .325 | .053 | .042 | .488 | .520 | .553 |
| | 13393 | 268 | 216 | 134 | .325 | .056 | .045 | .488 | .520 | .553 |
| | 13394 | 270 | 218 | 136 | .325 | .059 | .047 | .488 | .520 | .553 |
| | 13395 | 272 | 220 | 137 | .325 | .062 | .050 | .488 | .520 | .553 |
| | 13396 | 274 | 222 | 139 | .325 | .065 | .053 | .488 | .520 | .553 |
| | 13397 | 276 | 224 | 141 | .325 | .068 | .056 | .488 | .520 | .553 |
| | 13398 | 278 | 226 | 143 | .325 | .071 | .059 | .488 | .520 | .553 |

## THUMPR™ HYDRAULIC ROLLERS

The Thumpr™ lobe profiles are designed to optimize the character and sound, while providing excellent stability and a very wide power range in hydraulic roller applications. Specific profiles are developed uniquely for intake and exhaust.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| Thumpr™ Int. Rated Duration @ .006" Tappet Lift<br>Journal = N,S,B,R…<br>MI 29.7 (14.7/15.0) | 3028 | 275 | 219 | 134 | .335 | .058 | .047 | .503 | .536 | .570 |
| | 3022 | 283 | 227 | 142 | .341 | .070 | .058 | .512 | .546 | .580 |
| | 3024 | 291 | 235 | 150 | .347 | .082 | .070 | .521 | .555 | .590 |
| | 3026 | 299 | 243 | 157 | .354 | .096 | .082 | .531 | .566 | .602 |
| | 3056 | 307 | 251 | 165 | .361 | .110 | .096 | .542 | .578 | .614 |
| | 3058 | 315 | 259 | 173 | .368 | .125 | .110 | .552 | .589 | .626 |
| | 3528 | 275 | 219 | 133 | .325 | .058 | .047 | .488 | .520 | .553 |
| | 3532 | 283 | 227 | 140 | .331 | .070 | .058 | .497 | .530 | .563 |
| | 3534 | 291 | 235 | 148 | .337 | .082 | .070 | .506 | .539 | .573 |
| | 3536 | 299 | 243 | 156 | .344 | .096 | .082 | .516 | .550 | .585 |
| | 3538 | 307 | 251 | 164 | .350 | .111 | .096 | .525 | .560 | .595 |
| | 3552 | 283 | 227 | 139 | .321 | .070 | .058 | .482 | .514 | .546 |
| | 3554 | 291 | 235 | 146 | .327 | .082 | .070 | .491 | .523 | .556 |
| | 3556 | 299 | 243 | 154 | .334 | .096 | .082 | .501 | .534 | .568 |
| Thumpr™ Exh. Rated Duration @ .006" Tappet Lift<br>Journal = N,S,B,R…<br>MI 32.0 (14.7/17.3) | 3031 | 295 | 233 | 142 | .325 | .082 | .070 | .488 | .520 | .553 |
| | 3043 | 303 | 241 | 149 | .331 | .094 | .082 | .497 | .530 | .563 |
| | 3045 | 311 | 249 | 157 | .338 | .107 | .094 | .507 | .541 | .575 |
| | 3047 | 319 | 257 | 165 | .345 | .120 | .107 | .518 | .552 | .587 |
| | 3541 | 295 | 233 | 139 | .315 | .082 | .070 | .473 | .504 | .536 |
| | 3543 | 303 | 241 | 147 | .321 | .094 | .082 | .482 | .514 | .546 |
| | 3545 | 311 | 249 | 155 | .328 | .107 | .094 | .492 | .525 | .558 |
| | 3547 | 319 | 257 | 164 | .335 | .120 | .107 | .503 | .536 | .570 |
| | 3563 | 303 | 241 | 145 | .311 | .094 | .082 | .467 | .498 | .529 |
| | 3565 | 311 | 249 | 153 | .318 | .106 | .093 | .477 | .509 | .541 |
| | 3567 | 319 | 257 | 161 | .325 | .119 | .106 | .488 | .520 | .553 |

## QND HYDRAULIC ROLLERS

The QND series is based off the popular LXL series profiles but are optimized to be used in smaller journal applications including standard (1.868") Small Block Chevy engines with lower (1.5:1 to 1.65:1) rocker ratios. These lobes have a softer closing ramp than the Xtreme Energy™ series and are a great choice for either marine or industrial applications where lift is important, as well as low seat erosion over time and low valve noise. Also a great choice for the exhaust lobe in any application.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| QND Rated Duration @ .006" Tappet Lift<br>Journal = S,B,F,R…<br>MI 28.0 (13.5/14.5) | 13354 | 266 | 211 | 133 | .365 | .049 | .038 | .548 | .584 | .621 |
| | 13355 | 270 | 215 | 137 | .365 | .054 | .034 | .548 | .584 | .621 |
| | 13356 | 274 | 219 | 141 | .365 | .061 | .049 | .548 | .584 | .621 |
| | 13357 | 278 | 223 | 145 | .365 | .067 | .055 | .548 | .584 | .621 |
| | 13358 | 282 | 227 | 148 | .365 | .074 | .061 | .548 | .584 | .621 |

## SLW HYDRAULIC ROLLER SERIES

The SLW Hydraulic Rollers are very smooth designs, slower than the Thumpr™ exhaust, intended for high RPM use with heavy valves and more flexible rocker systems.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.6 | 1.7 | 1.8 |
| SLW Rated Duration @ .006" Tappet Lift MI 35.0 (16.6/18.4) | 13531 | 316 | 244 | 150 | .349 | .092 | .080 | .558 | .593 | .628 |
| | 13533 | 324 | 252 | 158 | .355 | .105 | .092 | .568 | .604 | .639 |
| | 20535 | 332 | 260 | 166 | .360 | .119 | .105 | .576 | .612 | .648 |

## XTREME ENERGY™ HYDRAULIC ROLLERS

These designs share all of the characteristics of the flat tappet lobes but we have added the new technology of CRC (Constant Radius of Curvature) inverted radius of curvature ramp designs. COMP Cams® has enhanced this technique to ensure durability with these most aggressive hydraulic roller designs. The high lift versions that have lobe numbers in the 3100s are more aggressive over the nose and will require more spring or less RPM. These lobes run well in street/strip and marine applications. With more agressive and faster ramps they also provide good vacuum.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| Xtreme Energy™ Rated Duration @ .006" Tappet Lift Small Block Journal Journal = I,S,B,R… MI 27.1 (13.4/13.7) | 3322 | 244 | 192 | 89 | .245 | .026 | .018 | .368 | .392 | .417 |
| | 3323 | 249 | 198 | 104 | .265 | .032 | .024 | .398 | .424 | .451 |
| | 3304 | 252 | 200 | 113 | .285 | .034 | .026 | .428 | .456 | .485 |
| | 3310 | 252 | 200 | 122 | .315 | .034 | .026 | .473 | .504 | .536 |
| | 3305 | 256 | 204 | 116 | .285 | .039 | .030 | .428 | .456 | .485 |
| | 3302 | 258 | 206 | 124 | .305 | .041 | .032 | .458 | .488 | .519 |
| | 3311 | 258 | 206 | 128 | .320 | .041 | .032 | .480 | .512 | .544 |
| | 3300 | 262 | 210 | 126 | .305 | .046 | .036 | .458 | .488 | .519 |
| | 3312 | 264 | 212 | 133 | .325 | .049 | .039 | .488 | .520 | .553 |
| | 3301 | 266 | 214 | 129 | .305 | .052 | .041 | .458 | .488 | .519 |
| | 3313 | 270 | 218 | 139 | .330 | .058 | .046 | .495 | .528 | .561 |
| | 3314 | 276 | 224 | 145 | .335 | .068 | .055 | .503 | .536 | .570 |
| | 3315 | 282 | 230 | 151 | .340 | .078 | .064 | .510 | .544 | .578 |
| | 3316 | 288 | 236 | 157 | .347 | .089 | .075 | .521 | .555 | .590 |
| | 3317 | 294 | 242 | 164 | .360 | .101 | .086 | .540 | .576 | .612 |
| | 3318 | 300 | 248 | 171 | .375 | .114 | .097 | .563 | .600 | .638 |
| | 3319 | 306 | 254 | 178 | .387 | .127 | .110 | .581 | .619 | .658 |
| Xtreme Energy™ Rated Duration @ .006" Tappet Lift Small Block Journal Journal = S,B,R… | 3188 | 258 | 206 | 132 | .336 | .042 | .032 | .504 | .538 | .571 |
| | 3190 | 266 | 214 | 141 | .353 | .053 | .042 | .530 | .565 | .600 |
| | 3192 | 276 | 224 | 152 | .378 | .069 | .056 | .567 | .605 | .643 |
| | 3194 | 282 | 230 | 157 | .389 | .078 | .064 | .584 | .622 | .661 |
| | 3196 | 288 | 236 | 162 | .390 | .090 | .075 | .585 | .624 | .663 |
| Big Block Journal Journal = B,R… MI 27.1 (13.4/13.7) | 3340 | 252 | 200 | 118 | .300 | .034 | .026 | .450 | .480 | .510 |
| | 3341 | 258 | 206 | 123 | .300 | .042 | .032 | .450 | .480 | .510 |
| | 3342 | 264 | 212 | 127 | .300 | .050 | .039 | .450 | .480 | .510 |
| | 3343 | 270 | 218 | 131 | .300 | .058 | .047 | .450 | .480 | .510 |
| | 3344 | 276 | 224 | 136 | .300 | .068 | .055 | .450 | .480 | .510 |
| | 3345 | 282 | 230 | 141 | .300 | .078 | .065 | .450 | .480 | .510 |
| | 3346 | 288 | 236 | 147 | .306 | .089 | .075 | .459 | .490 | .520 |

*Continued on page 22*

## XTREME ENERGY™ HYDRAULIC ROLLERS *Continued*

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| Big Block Journal Journal = B,R… MI 27.1 (13.4/13.7) | 3347 | 294 | 242 | 155 | .318 | .100 | .085 | .477 | .509 | .541 |
| | 3348 | 300 | 248 | 162 | .329 | .111 | .096 | .494 | .526 | .559 |
| | 3349 | 306 | 254 | 170 | .341 | .123 | .108 | .512 | .546 | .580 |
| | 3414 | 310 | 258 | 173 | .341 | .130 | .115 | .512 | .546 | .580 |
| | 3415 | 312 | 260 | 174 | .341 | .133 | .118 | .512 | .546 | .580 |
| Ford Journal Journal = F,R… MI 25.9(12.7/13.2) | 3628 | 256 | 208 | 133 | .333 | .044 | .033 | .500 | .533 | .566 |
| | 3610 | 264 | 212 | 131 | .320 | .050 | .039 | .480 | .512 | .544 |
| | 3630 | 266 | 216 | 140 | .340 | .056 | .044 | .510 | .544 | .578 |
| | 3611 | 270 | 218 | 136 | .320 | .058 | .047 | .480 | .512 | .544 |
| | 3612 | 276 | 224 | 140 | .320 | .068 | .055 | .480 | .512 | .544 |
| | 3632 | 274 | 224 | 148 | .347 | .069 | .056 | .521 | .555 | .590 |
| | 3633 | 278 | 228 | 152 | .352 | .076 | .062 | .528 | .563 | .598 |
| | 3613 | 288 | 230 | 144 | .320 | .078 | .065 | .480 | .512 | .544 |
| | 3634 | 282 | 232 | 155 | .353 | .084 | .069 | .530 | .565 | .600 |
| | 3635 | 286 | 236 | 159 | .356 | .092 | .076 | .534 | .570 | .605 |
| | 3636 | 290 | 240 | 162 | .359 | .099 | .084 | .539 | .574 | .610 |
| | 3637 | 294 | 244 | 166 | .362 | .107 | .091 | .543 | .579 | .615 |
| | 3638 | 298 | 248 | 169 | .365 | .115 | .099 | .548 | .584 | .621 |

## XTREME 4X4™ HYDRAULIC ROLLERS

Due to the allowances of lower engine speed, these designs are slightly faster than the original Xtreme Energy™ Hydraulic Rollers. Great low and mid-range torque. They are our most aggressive hydraulic roller lobes and run well in street, off-road and four-wheeling.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| Xtreme 4x4™ Rated Duration @ .006" Tappet Lift Small Block Journal Journal = S,B,F,R… MI 25.9(12.7/13.2) | 3324 | 259 | 210 | 131 | .316 | .047 | .036 | .474 | .506 | .537 |
| | 3326 | 263 | 214 | 134 | .316 | .052 | .041 | .474 | .506 | .537 |
| | 3303 | 265 | 216 | 136 | .316 | .056 | .044 | .474 | .506 | .537 |
| | 3306 | 269 | 220 | 138 | .316 | .062 | .049 | .474 | .506 | .537 |
| | 3307 | 273 | 224 | 141 | .316 | .069 | .056 | .474 | .506 | .537 |
| | 3308 | 279 | 230 | 145 | .316 | .079 | .065 | .474 | .506 | .537 |
| | 3309 | 283 | 234 | 148 | .316 | .087 | .072 | .474 | .506 | .537 |

## XTREME ENERGY XFI™ HYDRAULIC ROLLERS

The Xtreme Energy XFI™ series is designed for use with modern induction systems, heads, springs and rockers. The XFI™ intake lobes have more lift than the base Xtreme series, and the XFI™ exhaust lobes have more area under the curve, for better exhaust flow, than the base exhaust series. These are the first hydraulic roller profiles designed for use with COMP Cams® Beehive™ Valve Springs such as the #26915, #26918 & #26120. The combination of these profiles, the springs and our very stiff Ultra Pro Magnum™ Rocker Arms in higher ratios, makes for the most revolutionary improvement in hydraulic roller design to date by bringing the latest race winning technology to the street.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| Xtreme XFI™ Int. Rated Duration @ .006" Tappet Lift<br><br>Hydraulic Roller Journal = J,S,B,R… MI 26.6 (13.1/13.5) | 3004 | 250 | 200 | 126 | .342 | .034 | .025 | .513 | .547 | .581 |
| | 3010 | 252 | 202 | 128 | .344 | .036 | .027 | .516 | .550 | .585 |
| | 3005 | 254 | 204 | 130 | .345 | .039 | .029 | .518 | .552 | .587 |
| | 3011 | 256 | 206 | 132 | .347 | .041 | .032 | .521 | .555 | .590 |
| | 3002 | 258 | 208 | 134 | .348 | .044 | .034 | .522 | .557 | .592 |
| | 3012 | 260 | 210 | 136 | .350 | .047 | .036 | .525 | .560 | .595 |
| | 3003 | 262 | 212 | 137 | .352 | .049 | .039 | .528 | .563 | .598 |
| | 3013 | 264 | 214 | 139 | .353 | .052 | .041 | .530 | .565 | .600 |
| | 3006 | 266 | 216 | 141 | .354 | .055 | .044 | .531 | .566 | .602 |
| | 3014 | 268 | 218 | 143 | .356 | .058 | .047 | .534 | .570 | .605 |
| | 3007 | 270 | 220 | 145 | .357 | .062 | .049 | .536 | .571 | .607 |
| | 3008 | 272 | 222 | 147 | .357 | .065 | .052 | .536 | .571 | .607 |
| | 3015 | 274 | 224 | 149 | .358 | .068 | .055 | .537 | .573 | .609 |
| | 3009 | 276 | 226 | 150 | .359 | .072 | .058 | .539 | .574 | .610 |
| | 13080 | 278 | 228 | 152 | .360 | .075 | .062 | .540 | .576 | .612 |
| | 3016 | 280 | 230 | 154 | .360 | .079 | .065 | .540 | .576 | .612 |
| | 13081 | 282 | 232 | 156 | .361 | .083 | .068 | .542 | .578 | .614 |
| | 13082 | 284 | 234 | 157 | .361 | .087 | .072 | .542 | .578 | .614 |
| | 3017 | 286 | 236 | 159 | .362 | .090 | .075 | .543 | .579 | .615 |
| | 13083 | 288 | 238 | 161 | .363 | .094 | .079 | .545 | .581 | .617 |
| | 13084 | 290 | 240 | 163 | .364 | .098 | .083 | .546 | .582 | .619 |
| | 3018 | 292 | 242 | 165 | .365 | .102 | .087 | .548 | .584 | .621 |
| | 13085 | 294 | 244 | 166 | .366 | .106 | .090 | .549 | .586 | .622 |
| | 13086 | 296 | 246 | 168 | .366 | .110 | .094 | .549 | .586 | .622 |
| | 3019 | 298 | 248 | 170 | .367 | .115 | .098 | .551 | .587 | .624 |
| | 13087 | 300 | 250 | 172 | .368 | .119 | .102 | .552 | .589 | .626 |
| | 13088 | 302 | 252 | 174 | .369 | .123 | .106 | .554 | .590 | .627 |
| | 3020 | 304 | 254 | 176 | .370 | .127 | .111 | .555 | .592 | .629 |
| | 13089 | 306 | 256 | 178 | .371 | .131 | .115 | .557 | .594 | .631 |
| | 13090 | 308 | 258 | 180 | .372 | .136 | .119 | .558 | .595 | .632 |
| | 3021 | 310 | 260 | 182 | .373 | .140 | .123 | .560 | .597 | .634 |
| Xtreme XFI™ Exh. Rated Duration @ .006" Tappet Lift<br><br>Hydraulic Roller Journal = I,S,B,R… MI 27.3 (13.4/13.9) | 3030 | 256 | 204 | 128 | .333 | .040 | .031 | .500 | .533 | .566 |
| | 13130 | 258 | 206 | 130 | .335 | .043 | .033 | .503 | .536 | .570 |
| | 13131 | 260 | 208 | 131 | .337 | .045 | .035 | .506 | .539 | .573 |
| | 13132 | 262 | 210 | 133 | .339 | .048 | .038 | .509 | .542 | .576 |
| | 3033 | 264 | 212 | 135 | .341 | .050 | .040 | .512 | .546 | .580 |
| | 13133 | 266 | 214 | 137 | .343 | .053 | .043 | .515 | .549 | .583 |
| | 13134 | 268 | 216 | 139 | .345 | .056 | .045 | .518 | .552 | .587 |
| | 3034 | 270 | 218 | 141 | .347 | .059 | .048 | .521 | .555 | .590 |

*Continued on page 24*

## XTREME ENERGY XFI™ HYDRAULIC ROLLERS *Continued*

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| Xtreme XFI™ Exh. Rated Duration @ .006" Tappet Lift<br><br>Hydraulic Roller Journal = I,S,B,R… MI 27.3 (13.4/13.9) | 13135 | 272 | 220 | 143 | .349 | .063 | .051 | .524 | .558 | .593 |
| | 13136 | 274 | 222 | 145 | .351 | .066 | .053 | .527 | .562 | .597 |
| | 3035 | 276 | 224 | 147 | .353 | .069 | .056 | .530 | .565 | .600 |
| | 13137 | 278 | 226 | 148 | .353 | .072 | .059 | .530 | .565 | .600 |
| | 13138 | 280 | 228 | 151 | .354 | .076 | .063 | .531 | .566 | .602 |
| | 3036 | 282 | 230 | 152 | .355 | .080 | .066 | .533 | .568 | .604 |
| | 13139 | 284 | 232 | 154 | .356 | .083 | .069 | .534 | .570 | .605 |
| | 13140 | 286 | 234 | 156 | .356 | .087 | .072 | .534 | .570 | .605 |
| | 3037 | 288 | 236 | 158 | .357 | .091 | .076 | .536 | .571 | .607 |
| | 13141 | 290 | 238 | 160 | .358 | .094 | .079 | .537 | .573 | .609 |
| | 13142 | 292 | 240 | 162 | .359 | .098 | .083 | .539 | .574 | .610 |
| | 3038 | 294 | 242 | 163 | .360 | .102 | .087 | .540 | .576 | .612 |
| | 13143 | 296 | 244 | 165 | .361 | .106 | .091 | .542 | .578 | .614 |
| | 13144 | 298 | 246 | 167 | .361 | .110 | .094 | .542 | .578 | .614 |
| | 3039 | 300 | 248 | 169 | .362 | .114 | .098 | .543 | .579 | .615 |
| | 13145 | 302 | 250 | 171 | .363 | .118 | .102 | .545 | .581 | .617 |
| | 13146 | 304 | 252 | 172 | .363 | .122 | .106 | .545 | .581 | .617 |
| | 3040 | 306 | 254 | 174 | .364 | .126 | .110 | .546 | .582 | .619 |
| | 13147 | 308 | 256 | 176 | .365 | .130 | .114 | .548 | .584 | .621 |
| | 13148 | 310 | 258 | 178 | .366 | .134 | .118 | .549 | .586 | .622 |
| | 3041 | 312 | 260 | 180 | .367 | .138 | .122 | .551 | .587 | .624 |

## QXI HYDRAULIC ROLLERS

The QXI Series lobe profiles are designed to provide the highest available valve lift for modern cylinder head ports, along with excellent stability and the broadest possible power range in hydraulic roller applications. Designed for both street and racing use, these lobes were developed in two degree intervals to allow small tuning variations between the long and short runners of single 4bbl type manifolds.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| QXI Rated Duration @ .006" Tappet Lift<br><br>Journal = S,B,F,R… MI 27.4 (13.4/14.0) | 13440 | 267 | 215 | 137 | .373 | .054 | .043 | .560 | .597 | .634 |
| | 13441 | 269 | 217 | 139 | .375 | .057 | .046 | .563 | .600 | .638 |
| | 13442 | 271 | 219 | 141 | .377 | .060 | .049 | .566 | .603 | .641 |
| | 13443 | 273 | 221 | 142 | .379 | .063 | .051 | .569 | .606 | .644 |
| | 13444 | 275 | 223 | 144 | .381 | .067 | .054 | .572 | .610 | .648 |
| | 13445 | 277 | 225 | 146 | .383 | .070 | .057 | .575 | .613 | .651 |
| | 13446 | 279 | 227 | 148 | .385 | .073 | .060 | .578 | .616 | .655 |
| | 13447 | 281 | 229 | 150 | .387 | .077 | .064 | .581 | .619 | .658 |
| | 13448 | 283 | 231 | 152 | .389 | .080 | .067 | .584 | .622 | .661 |
| | 13449 | 285 | 233 | 154 | .391 | .084 | .070 | .587 | .626 | .665 |
| | 13450 | 287 | 235 | 156 | .393 | .087 | .073 | .590 | .629 | .668 |
| | 13451 | 289 | 237 | 158 | .395 | .091 | .077 | .593 | .632 | .672 |
| | 13452 | 291 | 239 | 160 | .397 | .095 | .080 | .596 | .635 | .675 |
| | 13453 | 293 | 241 | 162 | .398 | .099 | .084 | .597 | .637 | .677 |

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## QXI HYDRAULIC ROLLERS *Continued*

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| QXI Rated Duration @ .006" Tappet Lift<br><br>Journal = S,B,F,R…<br>MI 27.4 (13.4/14.0) | 13454 | 295 | 243 | 164 | .399 | .103 | .087 | .599 | .638 | .678 |
| | 13455 | 297 | 245 | 166 | .399 | .106 | .091 | .599 | .638 | .678 |
| | 13456 | 299 | 247 | 168 | .399 | .110 | .095 | .599 | .638 | .678 |
| | 13457 | 301 | 249 | 170 | .399 | .114 | .099 | .599 | .638 | .678 |
| | 13458 | 303 | 251 | 172 | .399 | .118 | .103 | .599 | .638 | .678 |
| | 13459 | 305 | 253 | 174 | .399 | .122 | .106 | .599 | .638 | .678 |
| | 13460 | 307 | 255 | 176 | .399 | .126 | .110 | .599 | .638 | .678 |
| | 13461 | 309 | 257 | 177 | .399 | .130 | .114 | .599 | .638 | .678 |
| | 13462 | 311 | 259 | 179 | .399 | .134 | .118 | .599 | .638 | .678 |
| | 13948 | 283 | 231 | 151 | .374 | .080 | .067 | .561 | .598 | .636 |
| | 13950 | 287 | 235 | 155 | .376 | .087 | .073 | .564 | .602 | .639 |
| | 13952 | 291 | 239 | 159 | .378 | .095 | .080 | .567 | .605 | .643 |
| | 13954 | 295 | 243 | 163 | .382 | .103 | .087 | .573 | .611 | .649 |
| | 13956 | 299 | 247 | 167 | .384 | .110 | .095 | .576 | .614 | .653 |
| | 13958 | 303 | 251 | 171 | .384 | .118 | .103 | .576 | .614 | .653 |
| | 13960 | 307 | 255 | 174 | .384 | .126 | .110 | .576 | .614 | .653 |
| | 13962 | 311 | 259 | 178 | .384 | .134 | .118 | .576 | .614 | .653 |
| | 13964 | 315 | 263 | 182 | .384 | .142 | .126 | .576 | .614 | .653 |
| | 13966 | 319 | 267 | 185 | .384 | .149 | .133 | .576 | .614 | .653 |

## QXX HYDRAULIC ROLLERS

The QXX Series lobe profiles are based off of the QXI series but are even more stable, have slightly less lobe lift and are softer off the seat for either exhaust lobe use or as intakes in even higher engine speed applications. Designed for both street and racing use, these lobes were developed in two degree intervals to allow small tuning variations between the long and short runners of single 4bbl type manifolds.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| QXX Rated Duration @ .006" Tappet Lift<br><br>Journal = S,B,F,R…<br>MI 28.1 (13.7/14.4) | 13470 | 277 | 223 | 142 | .363 | .066 | .054 | .545 | .581 | .617 |
| | 13471 | 279 | 225 | 144 | .365 | .070 | .057 | .548 | .584 | .621 |
| | 13472 | 281 | 227 | 146 | .367 | .073 | .060 | .551 | .587 | .624 |
| | 13473 | 283 | 229 | 148 | .369 | .076 | .063 | .554 | .590 | .627 |
| | 13474 | 285 | 231 | 150 | .371 | .080 | .066 | .557 | .594 | .631 |
| | 13475 | 287 | 233 | 152 | .373 | .083 | .070 | .560 | .597 | .634 |
| | 13476 | 289 | 235 | 154 | .375 | .087 | .073 | .563 | .600 | .638 |
| | 13477 | 291 | 237 | 156 | .377 | .090 | .076 | .566 | .603 | .641 |
| | 13478 | 293 | 239 | 158 | .379 | .094 | .080 | .569 | .606 | .644 |
| | 13479 | 295 | 241 | 160 | .381 | .098 | .083 | .572 | .610 | .648 |
| | 13480 | 297 | 243 | 162 | .383 | .101 | .087 | .575 | .613 | .651 |
| | 13481 | 299 | 245 | 164 | .385 | .105 | .090 | .578 | .616 | .655 |
| | 13482 | 301 | 247 | 166 | .387 | .109 | .094 | .581 | .619 | .658 |
| | 13483 | 303 | 249 | 168 | .388 | .113 | .098 | .582 | .621 | .660 |
| | 13484 | 305 | 251 | 170 | .389 | .117 | .101 | .584 | .622 | .661 |
| | 13485 | 307 | 253 | 172 | .389 | .121 | .105 | .584 | .622 | .661 |

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## QXX HYDRAULIC ROLLERS *Continued*

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| QXX Rated Duration @ .006" Tappet Lift<br><br>Journal = S,B,F,R… MI 28.1 (13.7/14.4) | 13486 | 309 | 255 | 174 | .389 | .125 | .109 | .584 | .622 | .661 |
| | 13487 | 311 | 257 | 175 | .389 | .128 | .113 | .584 | .622 | .661 |
| | 13488 | 313 | 259 | 177 | .389 | .132 | .117 | .584 | .622 | .661 |
| | 13489 | 315 | 261 | 179 | .389 | .136 | .120 | .584 | .622 | .661 |
| | 13490 | 317 | 263 | 181 | .389 | .140 | .124 | .584 | .622 | .661 |
| | 13491 | 319 | 265 | 183 | .389 | .144 | .128 | .584 | .622 | .661 |
| | 13492 | 321 | 267 | 185 | .389 | .148 | .132 | .584 | .622 | .661 |

## QNI HYDRAULIC ROLLERS

The QNI series lobe profiles are based off of the QXI series but are softened just enough to grind accurately even with lobe base circle sizes as small as .900" diameter, as is sometimes required in long stroke Small Block Chevy applications.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| QNI Rated Duration @ .006" Tappet Lift<br><br>Journal = N,I,J… MI 28.5 (14.0/14.5) | 13540 | 279 | 226 | 147 | .384 | .071 | .059 | .576 | .614 | .653 |
| | 13541 | 281 | 228 | 149 | .386 | .075 | .062 | .579 | .618 | .656 |
| | 13542 | 283 | 230 | 151 | .388 | .078 | .065 | .582 | .621 | .660 |
| | 13543 | 285 | 232 | 153 | .390 | .082 | .068 | .585 | .624 | .663 |
| | 13544 | 287 | 234 | 155 | .392 | .085 | .072 | .588 | .627 | .666 |
| | 13545 | 289 | 236 | 157 | .394 | .089 | .075 | .591 | .630 | .670 |
| | 13546 | 291 | 238 | 159 | .396 | .092 | .078 | .594 | .634 | .673 |
| | 13547 | 293 | 240 | 161 | .397 | .096 | .082 | .596 | .635 | .675 |
| | 13548 | 295 | 242 | 163 | .398 | .100 | .085 | .597 | .637 | .677 |
| | 13549 | 297 | 244 | 165 | .398 | .104 | .089 | .597 | .637 | .677 |
| | 13550 | 299 | 246 | 167 | .398 | .108 | .092 | .597 | .637 | .677 |
| | 13551 | 301 | 248 | 169 | .398 | .112 | .096 | .597 | .637 | .677 |
| | 13552 | 303 | 250 | 170 | .398 | .115 | .100 | .597 | .637 | .677 |
| | 13553 | 305 | 252 | 172 | .398 | .119 | .104 | .597 | .637 | .677 |
| | 13554 | 307 | 254 | 174 | .398 | .123 | .108 | .597 | .637 | .677 |
| | 13555 | 309 | 256 | 176 | .398 | .127 | .111 | .597 | .637 | .677 |
| | 13556 | 311 | 258 | 178 | .398 | .131 | .115 | .597 | .637 | .677 |
| | 13557 | 313 | 260 | 180 | .398 | .135 | .119 | .597 | .637 | .677 |
| | 13558 | 315 | 262 | 182 | .398 | .139 | .123 | .597 | .637 | .677 |

## QNX HYDRAULIC ROLLERS

The QNX Series lobe profiles are based off of the QXX series but are softened just enough to grind accurately even with lobe base circle sizes as small as .900" diameter as is sometimes required in long stroke Small Block Chevy applications.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| QNX<br>Rated Duration @<br>.006" Tappet Lift<br><br>Journal = N,I,J…<br>MI 29.1 (14.2/14.9) | 13570 | 289 | 234 | 153 | .374 | .084 | .070 | .561 | .598 | .636 |
| | 13571 | 291 | 236 | 155 | .376 | .087 | .074 | .564 | .602 | .639 |
| | 13572 | 293 | 238 | 157 | .378 | .091 | .077 | .567 | .605 | .643 |
| | 13573 | 295 | 240 | 159 | .380 | .094 | .080 | .570 | .608 | .646 |
| | 13574 | 297 | 242 | 161 | .382 | .098 | .084 | .573 | .611 | .649 |
| | 13575 | 299 | 244 | 163 | .384 | .101 | .087 | .576 | .614 | .653 |
| | 13576 | 301 | 246 | 165 | .386 | .105 | .091 | .579 | .618 | .656 |
| | 13577 | 303 | 248 | 167 | .387 | .109 | .094 | .581 | .619 | .658 |
| | 13578 | 305 | 250 | 169 | .388 | .113 | .098 | .582 | .621 | .660 |
| | 13579 | 307 | 252 | 171 | .388 | .116 | .101 | .582 | .621 | .660 |
| | 13580 | 309 | 254 | 172 | .388 | .120 | .105 | .582 | .621 | .660 |
| | 13581 | 311 | 256 | 174 | .388 | .124 | .109 | .582 | .621 | .660 |
| | 13582 | 313 | 258 | 176 | .388 | .128 | .113 | .582 | .621 | .660 |
| | 13583 | 315 | 260 | 178 | .388 | .132 | .116 | .582 | .621 | .660 |
| | 13584 | 317 | 262 | 180 | .388 | .136 | .120 | .582 | .621 | .660 |
| | 13585 | 319 | 264 | 182 | .388 | .140 | .124 | .582 | .621 | .660 |
| | 13586 | 321 | 266 | 183 | .388 | .143 | .128 | .582 | .621 | .660 |
| | 13587 | 323 | 268 | 185 | .388 | .147 | .132 | .582 | .621 | .660 |
| | 13588 | 325 | 270 | 187 | .388 | .151 | .135 | .582 | .621 | .660 |

## XTREME MARINE™ HYDRAULIC ROLLERS

These profiles use the same design techniques of the base Xtreme Energy™ Hydraulic Rollers but have been optimized to increase power and durability when run at steady RPM for extended periods of time. Specifically designed for Big Blocks with heavier valve train components..

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| Xtreme Marine™<br>Rated Duration @<br>.006" Tappet Lift<br>Big Block Journal<br>Journal = G,I,S,B,R…<br>MI 28.6 (13.7/15.0) | 3354 | 286 | 230 | 142 | .322 | .074 | .062 | .483 | .515 | .547 |
| | 3355 | 292 | 236 | 146 | .322 | .085 | .071 | .483 | .515 | .547 |
| | 3356 | 298 | 242 | 153 | .333 | .095 | .081 | .500 | .533 | .566 |
| | 3357 | 304 | 248 | 159 | .333 | .106 | .092 | .500 | .533 | .566 |
| | 3358 | 310 | 254 | 163 | .338 | .116 | .101 | .507 | .541 | .575 |
| | 3359 | 316 | 260 | 169 | .338 | .126 | .112 | .507 | .541 | .575 |
| | 3362 | 322 | 266 | 174 | .342 | .136 | .122 | .513 | .547 | .581 |
| | 3363 | 328 | 272 | 179 | .347 | .146 | .132 | .521 | .555 | .590 |
| | 3364 | 334 | 278 | 185 | .353 | .155 | .142 | .530 | .565 | .600 |

## XTREME MARINE™ HYDRAULIC ROLLERS – HIGH LIFT

These have the same ramp designs as the lower lift Xtreme Marine™ designs but have higher lift to enhance power output with cylinder head and engine modifications.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| Xtreme Marine™ High Lift Rated Duration @ .006" Tappet Lift<br><br>Journal = G,I,S,B,R..<br>MI 28.6 (13.7/15.0) | 3473 | 290 | 234 | 152 | .360 | .081 | .068 | .540 | .576 | .612 |
| | 3474 | 292 | 236 | 154 | .360 | .085 | .071 | .540 | .576 | .612 |
| | 3410 | 294 | 238 | 154 | .350 | .088 | .075 | .525 | .560 | .595 |
| | 3475 | 294 | 238 | 156 | .360 | .088 | .075 | .540 | .576 | .612 |
| | 3376 | 296 | 240 | 157 | .360 | .092 | .078 | .540 | .576 | .612 |
| | 3411 | 300 | 244 | 159 | .350 | .099 | .085 | .525 | .560 | .595 |
| | 3479 | 300 | 244 | 163 | .380 | .100 | .085 | .570 | .608 | .646 |
| | 3370 | 304 | 248 | 167 | .380 | .107 | .092 | .570 | .608 | .646 |
| | 3377 | 306 | 250 | 166 | .360 | .111 | .096 | .540 | .576 | .612 |
| | 3371 | 308 | 254 | 171 | .380 | .119 | .103 | .570 | .608 | .646 |
| | 3372 | 314 | 258 | 175 | .380 | .126 | .111 | .570 | .608 | .646 |
| | 3373 | 318 | 262 | 179 | .380 | .134 | .118 | .570 | .608 | .646 |
| | 3374 | 322 | 266 | 182 | .380 | .142 | .126 | .570 | .608 | .646 |
| | 3375 | 326 | 270 | 186 | .380 | .149 | .134 | .570 | .608 | .646 |
| | 3447 | 330 | 274 | 190 | .380 | .157 | .141 | .570 | .608 | .646 |

## HUC HYDRAULIC ROLLERS

These have the same ramp designs as the lower lift Xtreme Marine™ designs but have higher lift to enhance power output with cylinder head and engine modifications.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.6 | 1.7 | 1.8 |
| HUC High Lift Rated Duration @ .006" Tappet Lift<br><br>Journal = S,B,F,R…<br>MI 28.7 (13.9/14.8) | 13033 | 278 | 223 | 141 | .336 | .066 | .054 | .538 | .571 | .605 |
| | 13034 | 282 | 227 | 145 | .344 | .072 | .059 | .550 | .585 | .619 |
| | 13037 | 282 | 227 | 146 | .352 | .072 | .060 | .563 | .598 | .634 |
| | 13045 | 286 | 231 | 149 | .352 | .079 | .066 | .563 | .598 | .634 |
| | 13046 | 288 | 233 | 152 | .355 | .082 | .069 | .568 | .604 | .639 |
| | 13047 | 290 | 235 | 154 | .359 | .086 | .072 | .574 | .610 | .646 |
| | 13048 | 292 | 237 | 156 | .359 | .089 | .075 | .574 | .610 | .646 |
| | 13050 | 294 | 239 | 158 | .365 | .093 | .079 | .584 | .621 | .657 |
| | 13051 | 298 | 243 | 162 | .369 | .100 | .086 | .590 | .627 | .664 |
| | 13052 | 302 | 247 | 166 | .372 | .108 | .093 | .595 | .632 | .670 |
| | 13053 | 306 | 251 | 169 | .372 | .115 | .100 | .595 | .632 | .670 |
| | 13054 | 310 | 255 | 173 | .372 | .123 | .108 | .595 | .632 | .670 |
| | 13055 | 314 | 259 | 177 | .372 | .131 | .115 | .595 | .632 | .670 |
| | 13056 | 318 | 263 | 181 | .372 | .139 | .123 | .595 | .632 | .670 |
| | 13057 | 322 | 267 | 184 | .372 | .147 | .131 | .595 | .632 | .670 |
| | 13058 | 326 | 271 | 188 | .372 | .155 | .139 | .595 | .632 | .670 |
| | 13059 | 330 | 275 | 191 | .372 | .162 | .146 | .595 | .632 | .670 |
| | 13360 | 334 | 279 | 195 | .372 | .169 | .154 | .595 | .632 | .670 |
| | 13361 | 338 | 283 | 198 | .372 | .176 | .161 | .595 | .632 | .670 |

*Continued on page 29*

## HUC HYDRAULIC ROLLERS *Continued*

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.6 | 1.7 | 1.8 |
| HUC High Lift Rated Duration @ .006" Tappet Lift<br><br>Journal = S,B,F,R… MI 28.7 (13.9/14.8) | 13861 | 298 | 243 | 163 | .392 | .100 | .086 | .627 | .666 | .706 |
| | 13862 | 302 | 247 | 167 | .396 | .108 | .093 | .634 | .673 | .713 |
| | 13863 | 306 | 251 | 171 | .400 | .116 | .100 | .640 | .680 | .720 |
| | 13064 | 310 | 255 | 175 | .400 | .124 | .108 | .640 | .680 | .720 |
| | 13065 | 314 | 259 | 179 | .400 | .132 | .116 | .640 | .680 | .720 |
| | 13066 | 318 | 263 | 183 | .400 | .140 | .124 | .640 | .680 | .720 |
| | 13067 | 322 | 267 | 187 | .400 | .148 | .132 | .640 | .680 | .720 |
| | 13068 | 326 | 271 | 190 | .400 | .156 | .140 | .640 | .680 | .720 |
| | 13069 | 330 | 275 | 194 | .400 | .164 | .148 | .640 | .680 | .720 |
| | 13074 | 334 | 279 | 198 | .400 | .172 | .156 | .640 | .680 | .720 |
| | 13075 | 338 | 283 | 202 | .400 | .180 | .164 | .640 | .680 | .720 |

## XTREME RPM FOR LS1

Designed with Xtreme Energy™ technology to provide excellent power with the LS1's enhanced cylinder head design and high RPM performance. These provide outstanding low RPM torque with increased stability when coupled with the LS1's larger base circle and 1.7:1+ rocker ratios. High lift versions are excellent for use with improved heads, manifolds and COMP #26915 and #26918 valve springs.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| Xtreme RPM for LS1 Rated Duration @ .006" Tappet Lift<br><br>Journal = I,S,B,R… MI 27.8 (13.9/13.9) | 3750 | 260 | 206 | 121 | .302 | .043 | .034 | .453 | .483 | .513 |
| | 3751 | 266 | 212 | 126 | .306 | .051 | .040 | .459 | .490 | .520 |
| | 3766 | 270 | 216 | 130 | .308 | .056 | .045 | .462 | .493 | .524 |
| | 3752 | 272 | 218 | 132 | .310 | .059 | .048 | .465 | .496 | .527 |
| | 3767 | 274 | 220 | 134 | .312 | .062 | .051 | .468 | .499 | .530 |
| | 3753 | 278 | 224 | 137 | .314 | .069 | .056 | .471 | .502 | .534 |
| | 3754 | 280 | 226 | 139 | .315 | .072 | .059 | .473 | .504 | .536 |
| | 3755 | 282 | 228 | 141 | .316 | .075 | .062 | .474 | .506 | .537 |
| | 3735 | 284 | 230 | 142 | .317 | .078 | .065 | .476 | .507 | .539 |
| | 3756 | 286 | 232 | 144 | .318 | .082 | .069 | .477 | .509 | .541 |
| | 3757 | 290 | 236 | 147 | .320 | .088 | .075 | .480 | .512 | .544 |
| | 3659 | 309 | 256 | 166 | .325 | .123 | .109 | .488 | .520 | .553 |
| Xtreme RPM for LS1 High Lift Rated Duration @ .006" Tappet Lift<br><br>Journal = S,B,F,R… MI 27.8 (13.9/13.9) | 3707 | 261 | 208 | 128 | .326 | .045 | .036 | .489 | .522 | .554 |
| | 3708 | 263 | 210 | 129 | .327 | .048 | .039 | .491 | .523 | .556 |
| | 3709 | 265 | 212 | 131 | .328 | .051 | .041 | .492 | .525 | .558 |
| | 3710 | 267 | 214 | 133 | .329 | .054 | .043 | .494 | .526 | .559 |
| | 3711 | 269 | 216 | 135 | .330 | .056 | .045 | .495 | .528 | .561 |
| | 3712 | 271 | 218 | 136 | .331 | .059 | .048 | .497 | .530 | .563 |
| | 3713 | 273 | 220 | 138 | .332 | .062 | .051 | .498 | .531 | .564 |
| | 3714 | 275 | 222 | 140 | .333 | .066 | .054 | .500 | .533 | .566 |
| | 3715 | 277 | 224 | 142 | .334 | .069 | .056 | .501 | .534 | .568 |
| | 3716 | 279 | 226 | 143 | .335 | .072 | .059 | .503 | .536 | .570 |
| | 3717 | 281 | 228 | 145 | .336 | .075 | .062 | .504 | .538 | .571 |
| | 3718 | 283 | 230 | 147 | .337 | .079 | .066 | .506 | .539 | .573 |
| | 3719 | 285 | 232 | 148 | .338 | .082 | .069 | .507 | .541 | .575 |

*Continued on page 30*

## XTREME RPM FOR LS1 *Continued*

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| Xtreme RPM for LS1 High Lift Rated Duration @ .006" Tappet Lift<br><br>Journal = S,B,F,R… MI 27.8 (13.9/13.9) | 3706 | 287 | 234 | 150 | .339 | .086 | .072 | .509 | .542 | .576 |
| | 3705 | 289 | 236 | 152 | .340 | .089 | .075 | .510 | .544 | .578 |
| | 3652 | 291 | 238 | 154 | .344 | .093 | .079 | .516 | .550 | .585 |
| | 3653 | 293 | 240 | 156 | .346 | .096 | .082 | .519 | .554 | .588 |
| | 3654 | 295 | 242 | 158 | .348 | .100 | .085 | .522 | .557 | .592 |
| | 3655 | 297 | 244 | 160 | .350 | .103 | .089 | .525 | .560 | .595 |
| | 3656 | 299 | 246 | 162 | .350 | .107 | .092 | .525 | .560 | .595 |
| | 3657 | 301 | 248 | 164 | .350 | .111 | .097 | .525 | .560 | .595 |
| | 3658 | 303 | 250 | 166 | .350 | .114 | .100 | .525 | .560 | .595 |
| | 3660 | 305 | 252 | 168 | .350 | .118 | .103 | .525 | .560 | .595 |
| | 3661 | 307 | 254 | 169 | .350 | .122 | .107 | .525 | .560 | .595 |
| | 3662 | 309 | 256 | 170 | .350 | .125 | .110 | .525 | .560 | .595 |
| | 3663 | 311 | 258 | 172 | .350 | .129 | .114 | .525 | .560 | .595 |
| | 3666 | 315 | 262 | 174 | .350 | .135 | .120 | .525 | .560 | .595 |
| | 3667 | 319 | 266 | 177 | .350 | .141 | .127 | .525 | .560 | .595 |
| | 3668 | 323 | 270 | 180 | .350 | .147 | .133 | .525 | .560 | .595 |

## XTREME RPR HYDRAULIC ROLLERS

These profiles use the Xtreme RPM opening with the faster XE-R style closing. These should be stable to higher RPM than the XE-R and the controlled opening rates may work well in some applications.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| Xtreme RPR Rated Duration @ .006" Tappet Lift<br><br>Journal = B,F,R,Q… MI 27.1 (13.9/13.2) | 3669 | 269 | 217 | 137 | .331 | .059 | .048 | .497 | .530 | .563 |
| | 3670 | 271 | 219 | 139 | .332 | .062 | .051 | .498 | .531 | .564 |
| | 3671 | 273 | 221 | 140 | .333 | .066 | .054 | .500 | .533 | .566 |
| | 3672 | 275 | 223 | 142 | .334 | .069 | .056 | .501 | .534 | .568 |
| | 3673 | 277 | 225 | 144 | .335 | .072 | .059 | .503 | .536 | .570 |
| | 3674 | 279 | 227 | 145 | .336 | .075 | .062 | .504 | .538 | .571 |
| | 3675 | 281 | 229 | 147 | .337 | .079 | .066 | .506 | .539 | .573 |
| | 3676 | 283 | 231 | 149 | .338 | .082 | .069 | .507 | .541 | .575 |

## XTREME ENERGY™ XE-R FOR LS1

The XE-R designs are the most aggressive COMP Cams® hydraulic roller ramps to date. They are quicker off and on the seat than the original Xtreme Energy™ Series, yet they are still stable with rigid valve train and optimized spring selection. These profiles provide even more area than the comparable Small Block Chevrolet designs that are often used by other companies to "grow" a more aggressive lobe for LS1 applications.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| XE-R for LS1 Rated Duration @ .006" Tappet Lift LS1 55mm Journal Journal = B,F,R,Q… MI 25.9 (12.7/13.2) | 3720 | 269 | 220 | 143 | .342 | .062 | .049 | .513 | .547 | .581 |
| | 3721 | 271 | 222 | 144 | .342 | .065 | .052 | .513 | .547 | .581 |
| | 3722 | 273 | 224 | 146 | .342 | .069 | .055 | .513 | .547 | .581 |
| | 3723 | 275 | 226 | 147 | .344 | .073 | .059 | .516 | .550 | .585 |
| | 3724 | 277 | 228 | 149 | .346 | .076 | .062 | .519 | .554 | .588 |

*Continued on page 31*

## XTREME ENERGY™ XE-R FOR LS1 *Continued*

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| XE-R for LS1<br>Rated Duration @<br>.006" Tappet Lift<br>LS1 55mm Journal<br>Journal = B,F,R,Q…<br>MI 25.9 (12.7/13.2) | 3725 | 279 | 230 | 151 | .348 | .080 | .065 | .522 | .557 | .592 |
| | 3726 | 281 | 232 | 153 | .350 | .083 | .069 | .525 | .560 | .595 |
| | 3727 | 283 | 234 | 155 | .352 | .087 | .072 | .528 | .563 | .598 |
| | 3728 | 285 | 236 | 157 | .354 | .091 | .076 | .531 | .566 | .602 |
| | 3729 | 287 | 238 | 159 | .356 | .095 | .079 | .534 | .570 | .605 |
| | 3730 | 289 | 240 | 161 | .358 | .099 | .083 | .537 | .573 | .609 |
| | 3731 | 291 | 242 | 163 | .359 | .102 | .087 | .539 | .574 | .610 |
| | 3732 | 293 | 244 | 165 | .360 | .106 | .091 | .540 | .576 | .612 |
| | 3733 | 295 | 246 | 167 | .361 | .110 | .095 | .542 | .578 | .614 |
| | 3734 | 297 | 248 | 169 | .362 | .114 | .098 | .543 | .579 | .615 |

## XTREME ENERGY™ LSL HYDRAULIC ROLLERS FOR LS1

The LSL Series has been designed with enhanced characteristics from our latest professional drag racing profiles. These have excellent ramp quickness but are designed in a way to improve stability over other designs with such short seat timing. The increased lift works well with the latest Gen III and LS cylinder head port designs by providing excellent area above 1/2" valve lift.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.6 | 1.7 | 1.8 |
| LSL for LS1<br>Rated Duration @<br>.006" Tappet Lift<br><br>Journal = F,R,Q…<br>MI 26.0 (12.8/13.2) | 13013 | 261 | 211 | 135 | .353 | .048 | .037 | .565 | .600 | .635 |
| | 13093 | 263 | 213 | 137 | .354 | .051 | .040 | .566 | .602 | .637 |
| | 13014 | 265 | 215 | 139 | .355 | .054 | .042 | .568 | .604 | .639 |
| | 13094 | 267 | 217 | 141 | .356 | .057 | .045 | .570 | .605 | .641 |
| | 13015 | 269 | 219 | 143 | .357 | .060 | .048 | .571 | .607 | .643 |
| | 13095 | 271 | 221 | 145 | .358 | .064 | .051 | .573 | .609 | .644 |
| | 13016 | 273 | 223 | 147 | .359 | .067 | .054 | .574 | .610 | .646 |
| | 13096 | 275 | 225 | 149 | .360 | .071 | .057 | .576 | .612 | .648 |
| | 13017 | 277 | 227 | 151 | .361 | .074 | .060 | .578 | .614 | .650 |
| | 13097 | 279 | 229 | 152 | .362 | .078 | .064 | .579 | .615 | .652 |
| | 13018 | 281 | 231 | 154 | .363 | .081 | .067 | .581 | .617 | .653 |
| | 13041 | 283 | 233 | 156 | .364 | .085 | .071 | .582 | .619 | .655 |
| | 13019 | 285 | 235 | 158 | .365 | .089 | .074 | .584 | .621 | .657 |
| | 13099 | 287 | 237 | 160 | .366 | .093 | .078 | .586 | .622 | .659 |
| | 13020 | 289 | 239 | 162 | .367 | .096 | .081 | .587 | .624 | .661 |
| | 13230 | 291 | 241 | 164 | .367 | .101 | .085 | .587 | .624 | .661 |
| | 13021 | 293 | 243 | 166 | .367 | .105 | .089 | .587 | .624 | .661 |
| | 13231 | 295 | 245 | 167 | .367 | .109 | .093 | .587 | .624 | .661 |
| | 13022 | 297 | 247 | 169 | .367 | .113 | .097 | .587 | .624 | .661 |
| | 13232 | 299 | 249 | 171 | .367 | .117 | .101 | .587 | .624 | .661 |
| | 13023 | 301 | 251 | 173 | .367 | .121 | .105 | .587 | .624 | .661 |
| | 13233 | 303 | 253 | 174 | .367 | .125 | .109 | .587 | .624 | .661 |
| | 13024 | 305 | 255 | 176 | .367 | .129 | .113 | .587 | .624 | .661 |
| | 13234 | 307 | 257 | 178 | .367 | .133 | .117 | .587 | .624 | .661 |
| | 13025 | 309 | 259 | 180 | .367 | .137 | .121 | .587 | .624 | .661 |
| | 13235 | 311 | 261 | 181 | .367 | .141 | .125 | .587 | .624 | .661 |

*Continued on page 32*

## XTREME ENERGY™ LSL HYDRAULIC ROLLERS FOR LS1 *Continued*

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.6 | 1.7 | 1.8 |
| LSL for LS1 Rated Duration @ .006" Tappet Lift<br><br>Journal = F,R,Q… MI 26.0 (12.8/13.2) | 13026 | 313 | 263 | 183 | .367 | .145 | .129 | .587 | .624 | .661 |
| | 13236 | 315 | 265 | 185 | .367 | .149 | .133 | .587 | .624 | .661 |
| | 13027 | 317 | 267 | 187 | .367 | .153 | .137 | .587 | .624 | .661 |
| | 13237 | 319 | 269 | 188 | .367 | .156 | .141 | .587 | .624 | .661 |
| | 13028 | 321 | 271 | 190 | .367 | .160 | .144 | .587 | .624 | .661 |
| | 13238 | 323 | 273 | 192 | .367 | .163 | .148 | .587 | .624 | .661 |
| | 13029 | 325 | 275 | 193 | .367 | .167 | .151 | .587 | .624 | .661 |
| LSL 1.8 VM Rated Duration @ .006" Tappet Lift | 13123 | 260 | 209 | 130 | .333 | .045 | .035 | .533 | .566 | .599 |
| | 13125 | 268 | 217 | 137 | .337 | .057 | .045 | .539 | .573 | .607 |
| LSL LL Rated Duration @ .006" Tappet Lift | 13321 | 293 | 243 | 163 | .350 | .104 | .089 | .560 | .595 | .630 |
| | 13322 | 297 | 247 | 167 | .350 | .112 | .096 | .560 | .595 | .630 |
| | 13323 | 301 | 251 | 170 | .350 | .120 | .104 | .560 | .595 | .630 |
| | 13324 | 305 | 255 | 174 | .350 | .127 | .111 | .560 | .595 | .630 |
| | 13325 | 309 | 259 | 177 | .350 | .135 | .119 | .560 | .595 | .630 |
| | 13326 | 313 | 263 | 181 | .350 | .143 | .127 | .560 | .595 | .630 |

## XTREME ENERGY™ LSG HYDRAULIC ROLLERS FOR LS1

The LSG series is based of the LSL but with slightly softer ramps and less lift. Can be quieter and more stable at high engine speeds or with 1.8:1 ratios than the LSL base profiles.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.6 | 1.7 | 1.8 |
| LSG for LS1 Rated Duration @ .006" Tappet Lift<br><br>Journal = F,R,Q… MI 25.8 (12.7/13.1) | 13115 | 267 | 218 | 140 | .350 | .057 | .045 | .560 | .595 | .630 |
| | 13116 | 271 | 222 | 144 | .351 | .064 | .051 | .562 | .597 | .632 |
| | 13117 | 275 | 226 | 148 | .352 | .071 | .058 | .563 | .598 | .634 |
| | 13118 | 279 | 230 | 151 | .353 | .078 | .064 | .565 | .600 | .635 |
| | 13119 | 283 | 234 | 155 | .354 | .086 | .071 | .566 | .602 | .637 |
| | 13120 | 287 | 238 | 159 | .355 | .093 | .078 | .568 | .604 | .639 |
| | 13121 | 291 | 242 | 162 | .356 | .101 | .086 | .570 | .605 | .641 |
| | 13122 | 295 | 246 | 166 | .357 | .109 | .093 | .571 | .607 | .643 |

## XTREME ENERGY™ LXL HYDRAULIC ROLLERS FOR LS1

The LXL Series is based off the popular LSL profiles but are optimized with lower acceleration and a softer closing ramp for less valve train noise and better stability with higher (1.8:1+) ratio rocker arms. These profiles are an excellent choice on the exhaust when used with an LSL intake and perform well for both the intake and exhaust when used in either LS7 or other high ratio applications. These also are a great choice for road race type engines that require extended use at high engine speeds.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.6 | 1.7 | 1.8 |
| LXL for LS1<br>Rated Duration @<br>.006" Tappet Lift<br><br>Journal = B,F,R,Q…<br>MI 26.9 (13.1/13.8) | 13155 | 266 | 214 | 136 | .350 | .053 | .042 | .560 | .595 | .630 |
| | 13156 | 270 | 218 | 139 | .352 | .059 | .047 | .563 | .598 | .634 |
| | 13157 | 274 | 222 | 143 | .354 | .065 | .053 | .566 | .602 | .637 |
| | 13172 | 276 | 224 | 145 | .355 | .068 | .056 | .568 | .604 | .639 |
| | 13158 | 278 | 226 | 147 | .356 | .072 | .059 | .570 | .605 | .641 |
| | 13173 | 280 | 228 | 149 | .357 | .075 | .062 | .571 | .607 | .643 |
| | 13159 | 282 | 230 | 151 | .358 | .079 | .065 | .573 | .609 | .644 |
| | 13174 | 284 | 232 | 153 | .359 | .082 | .068 | .574 | .610 | .646 |
| | 13160 | 286 | 234 | 155 | .360 | .086 | .072 | .576 | .612 | .648 |
| | 13175 | 288 | 236 | 157 | .361 | .090 | .075 | .578 | .614 | .650 |
| | 13161 | 290 | 238 | 159 | .362 | .094 | .079 | .579 | .615 | .652 |
| | 13176 | 292 | 240 | 161 | .362 | .097 | .082 | .579 | .615 | .652 |
| | 13162 | 294 | 242 | 162 | .362 | .101 | .086 | .579 | .615 | .652 |
| | 13262 | 296 | 244 | 164 | .362 | .105 | .090 | .579 | .615 | .652 |
| | 13163 | 298 | 246 | 166 | .362 | .109 | .093 | .579 | .615 | .652 |
| | 13263 | 300 | 248 | 168 | .362 | .113 | .097 | .579 | .615 | .652 |
| | 13164 | 302 | 250 | 170 | .362 | .117 | .101 | .579 | .615 | .652 |
| | 13264 | 304 | 252 | 171 | .362 | .121 | .105 | .579 | .615 | .652 |
| | 13165 | 306 | 254 | 173 | .362 | .124 | .109 | .579 | .615 | .652 |
| | 13265 | 308 | 256 | 174 | .362 | .128 | .112 | .579 | .615 | .652 |
| | 13166 | 310 | 258 | 176 | .362 | .132 | .116 | .579 | .615 | .652 |
| | 13266 | 312 | 260 | 178 | .362 | .136 | .120 | .579 | .615 | .652 |
| | 13167 | 314 | 262 | 179 | .362 | .139 | .124 | .579 | .615 | .652 |
| | 13267 | 316 | 264 | 181 | .362 | .143 | .127 | .579 | .615 | .652 |
| | 13168 | 318 | 266 | 182 | .362 | .146 | .131 | .579 | .615 | .652 |
| | 13268 | 320 | 268 | 184 | .362 | .150 | .135 | .579 | .615 | .652 |
| | 13169 | 322 | 270 | 186 | .362 | .153 | .138 | .579 | .615 | .652 |
| | 13269 | 324 | 272 | 187 | .362 | .157 | .142 | .579 | .615 | .652 |
| | 13170 | 326 | 274 | 189 | .362 | .160 | .145 | .579 | .615 | .652 |

## XTREME ENERGY™ LSK HYDRAULIC ROLLERS FOR LS1

The LSK Series has been designed with enhanced characteristics from our latest professional drag racing profiles. **These have excellent ramp quickness. They are VERY hard on parts and not generally recommended in street applications!**

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.6 | 1.7 | 1.8 |
| LSK for LS1 Rated Duration @ .006" Tappet Lift<br><br>Journal = B,F,R,Q…<br>MI 26.6 (13.1/13.5) | 2124 | 265 | 215 | 142 | .370 | .054 | .042 | .592 | .629 | .666 |
| | 2125 | 269 | 219 | 145 | .372 | .060 | .048 | .595 | .632 | .670 |
| | 2126 | 273 | 223 | 149 | .374 | .066 | .054 | .598 | .636 | .673 |
| | 2127 | 277 | 227 | 153 | .376 | .074 | .060 | .602 | .639 | .677 |
| | 2128 | 281 | 231 | 156 | .378 | .081 | .067 | .605 | .643 | .680 |
| | 2129 | 285 | 235 | 160 | .380 | .089 | .074 | .608 | .646 | .684 |
| | 2130 | 289 | 239 | 164 | .382 | .096 | .081 | .611 | .649 | .688 |
| | 2131 | 293 | 243 | 168 | .384 | .104 | .089 | .614 | .653 | .691 |
| | 2132 | 297 | 247 | 171 | .386 | .113 | .096 | .618 | .656 | .695 |
| | 2133 | 301 | 251 | 175 | .388 | .121 | .104 | .621 | .660 | .698 |
| | 2134 | 305 | 255 | 179 | .390 | .130 | .113 | .624 | .663 | .702 |
| | 2135 | 309 | 259 | 183 | .390 | .138 | .121 | .624 | .663 | .702 |
| | 2136 | 313 | 263 | 186 | .390 | .146 | .129 | .624 | .663 | .702 |

## XTREME ENERGY™ VVI HYDRAULIC ROLLERS

The VVI Series is based off the popular LSL profiles but are optimized for increase piston to valve clearance and more allowable advance in variable valve timing applications (GM LS and Dodge Hemi). These are intended as intake lobes and result in approximately .008" more tappet clearance at TDC compared to a 1° larger LSL profile or about the same clearance as a 5° smaller LSL design.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.6 | 1.7 | 1.8 |
| Xtreme Energy™ VVI Rated Duration @ .006" Tappet Lift<br>Journal = R,Q…<br>MI 25.3 (12.5/12.8) | 13180 | 258 | 210 | 133 | .356 | .041 | .030 | .570 | .605 | .641 |
| | 13181 | 262 | 214 | 137 | .358 | .046 | .035 | .573 | .609 | .644 |
| | 13182 | 266 | 218 | 141 | .360 | .052 | .040 | .576 | .612 | .648 |
| | 13183 | 270 | 222 | 145 | .362 | .058 | .046 | .579 | .615 | .652 |
| | 13184 | 274 | 226 | 149 | .364 | .065 | .052 | .582 | .619 | .655 |

## LSN & LSD HYDRAULIC ROLLERS FOR DOD

These two series are designed for GM LS applications with Displacement on Demand. Because of extra travel of the deactivation lifter seat before it locks in lock mode, these profiles must be designed differently than the non-cylinder deactivation lobes. The result is that the LSD "Deac" profiles look more like solid lifter profiles as that motion is akin to about .005" lash at the tappet. The LSN "non-Deac" profiles are more like standard hydraulic roller designs at the seat but matched to the LSN profiles over the nose. Note: Cylinders 1-4-6-7 are the "Deac" or Deactivation cylinders and 2-3-5-6 are the "non-Deac" cylinders.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.6 | 1.7 | 1.8 |
| LSN (Non-Deac Cyls) Rated Duration @ .006" Tappet Lift 55mm Journal .7756" BCR<br><br>MI 26.7 (13.1/13.6) | 13299 | 258 | 206 | 119 | .294 | .042 | .031 | .470 | .500 | .529 |
| | 13300 | 262 | 210 | 123 | .294 | .047 | .037 | .470 | .500 | .529 |
| | 13301 | 266 | 214 | 126 | .294 | .053 | .042 | .470 | .500 | .529 |
| | 13302 | 270 | 218 | 130 | .294 | .059 | .048 | .470 | .500 | .529 |
| | 13303 | 274 | 222 | 133 | .294 | .065 | .053 | .470 | .500 | .529 |
| | 13304 | 278 | 226 | 137 | .294 | .072 | .059 | .470 | .500 | .529 |
| | 13305 | 282 | 230 | 140 | .294 | .079 | .065 | .470 | .500 | .529 |
| | 13306 | 286 | 234 | 144 | .294 | .086 | .072 | .470 | .500 | .529 |
| | 13307 | 290 | 238 | 147 | .294 | .092 | .079 | .470 | .500 | .529 |
| LSN (Non-Deac) Rated Duration @ .006" Tappet Lift 55mm Journal .750" BCR<br><br>MI 26.7 (13.1/13.6) | 13330 | 262 | 210 | 127 | .318 | .047 | .037 | .509 | .541 | .572 |
| | 13331 | 266 | 214 | 130 | .318 | .053 | .042 | .509 | .541 | .572 |
| | 13332 | 270 | 218 | 134 | .318 | .059 | .048 | .509 | .541 | .572 |
| | 13333 | 274 | 222 | 137 | .318 | .065 | .053 | .509 | .541 | .572 |
| | 13334 | 278 | 226 | 140 | .318 | .071 | .058 | .509 | .541 | .572 |
| | 13335 | 282 | 230 | 144 | .318 | .078 | .065 | .509 | .541 | .572 |
| LSD (Deac Cyls) Rated Duration @ .006" Tappet Lift 55mm Journal .7756" BCR<br><br>MI 29.0 (13.9/15.1) | 13310 | 274 | 212 | 123 | .294 | .047 | .037 | .470 | .500 | .529 |
| | 13311 | 278 | 216 | 127 | .294 | .053 | .042 | .470 | .500 | .529 |
| | 13312 | 282 | 220 | 130 | .294 | .059 | .048 | .470 | .500 | .529 |
| | 13313 | 286 | 224 | 133 | .294 | .065 | .053 | .470 | .500 | .529 |
| | 13314 | 290 | 228 | 137 | .294 | .072 | .059 | .470 | .500 | .529 |
| | 13315 | 294 | 232 | 140 | .294 | .079 | .065 | .470 | .500 | .529 |
| | 13316 | 298 | 236 | 144 | .294 | .086 | .072 | .470 | .500 | .529 |
| | 13317 | 302 | 240 | 147 | .294 | .092 | .079 | .470 | .500 | .529 |
| | 13318 | 306 | 244 | 151 | .294 | .099 | .085 | .470 | .500 | .529 |
| LSD (Deac Cyls) Rated Duration @ .006" Tappet Lift 55mm Journal .750" BCR<br><br>MI 29.0 (13.9/15.1) | 13340 | 274 | 212 | 127 | .318 | .051 | .041 | .509 | .541 | .572 |
| | 13341 | 278 | 216 | 131 | .318 | .056 | .045 | .509 | .541 | .572 |
| | 13342 | 282 | 220 | 134 | .318 | .062 | .051 | .509 | .541 | .572 |
| | 13343 | 286 | 224 | 137 | .318 | .068 | .056 | .509 | .541 | .572 |
| | 13344 | 290 | 228 | 141 | .318 | .074 | .061 | .509 | .541 | .572 |
| | 13345 | 294 | 232 | 144 | .318 | .080 | .067 | .509 | .541 | .572 |

## EHI EHX HYDRAULIC ROLLERS

The EHI (intake) and EHX (exhaust) Series are higher ratio versions of the DHI and DHX hybrid hydraulic/solid roller designs. These are intended for race applications that may see some street use or for other special applications with their primary emphasis on performance without compromise for noise concerns. 27 MAI intake and 30 MAI exhaust. 2.036" Journal **MINIMUM**.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.7 | 1.8 | 1.9 |
| EHI Rated Duration @ .006" Tappet Lift<br><br>Journal = F,R,Q,M<br>MI 26.8 (12.9/13.9) | 12854 | 270 | 219 | 143 | .371 | .060 | .048 | .631 | .668 | .705 |
| | 12856 | 274 | 223 | 147 | .373 | .067 | .054 | .634 | .671 | .709 |
| | 12858 | 278 | 227 | 151 | .375 | .073 | .060 | .638 | .675 | .713 |
| | 12668 | 282 | 231 | 154 | .375 | .081 | .067 | .638 | .675 | .713 |
| | 12670 | 286 | 235 | 158 | .375 | .088 | .073 | .638 | .675 | .713 |
| | 12672 | 290 | 239 | 162 | .375 | .096 | .081 | .638 | .675 | .713 |
| | 12674 | 294 | 243 | 165 | .375 | .104 | .088 | .638 | .675 | .713 |
| | 12676 | 298 | 247 | 169 | .375 | .112 | .096 | .638 | .675 | .713 |
| | 12678 | 302 | 251 | 173 | .375 | .120 | .104 | .638 | .675 | .713 |
| | 12680 | 306 | 255 | 176 | .375 | .128 | .112 | .638 | .675 | .713 |
| | 12682 | 310 | 259 | 180 | .375 | .136 | .120 | .638 | .675 | .713 |
| | 12684 | 314 | 263 | 183 | .375 | .144 | .128 | .638 | .675 | .713 |
| | 12686 | 318 | 267 | 187 | .375 | .152 | .136 | .638 | .675 | .713 |
| | 12846 | 322 | 271 | 190 | .375 | .159 | .143 | .638 | .675 | .713 |
| | 12848 | 326 | 275 | 194 | .375 | .166 | .151 | .638 | .675 | .713 |
| EHX Rated Duration @ .006" Tappet Lift<br><br>Journal = B,F,R,M<br>MI 29.8 (14.1/15.7) | 12864 | 292 | 233 | 153 | .373 | .082 | .069 | .634 | .671 | .709 |
| | 12866 | 296 | 237 | 157 | .375 | .090 | .076 | .638 | .675 | .713 |
| | 12868 | 300 | 241 | 161 | .375 | .096 | .082 | .638 | .675 | .713 |
| | 12690 | 304 | 245 | 164 | .375 | .105 | .090 | .638 | .675 | .713 |
| | 12692 | 308 | 249 | 168 | .375 | .112 | .097 | .638 | .675 | .713 |
| | 12694 | 312 | 253 | 172 | .375 | .120 | .105 | .638 | .675 | .713 |
| | 12696 | 316 | 257 | 176 | .375 | .128 | .112 | .638 | .675 | .713 |
| | 12698 | 320 | 261 | 179 | .375 | .136 | .120 | .638 | .675 | .713 |
| | 12700 | 324 | 265 | 183 | .375 | .144 | .128 | .638 | .675 | .713 |
| | 12702 | 328 | 269 | 186 | .375 | .151 | .135 | .638 | .675 | .713 |
| | 12704 | 332 | 273 | 190 | .375 | .159 | .143 | .638 | .675 | .713 |
| | 12874 | 336 | 277 | 193 | .375 | .166 | .150 | .638 | .675 | .713 |
| | 12876 | 340 | 281 | 197 | .375 | .173 | .158 | .638 | .675 | .713 |
| | 12878 | 344 | 285 | 200 | .375 | .180 | .165 | .638 | .675 | .713 |

## DHI DHX HYDRAULIC ROLLERS

The DHI (intake) and DHX (exhaust) Series are a hybrid hydraulic or tight lash solid roller design, based primarily on performance without compromise for noise concerns. These are intended for race applications that may see some street use or for other special applications. 26 MAI intake and 29 MAI exhaust. 55mm Journal **MINIMUM**.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.6 | 1.7 | 1.8 |
| DHI<br>Rated Duration @<br>.006" Tappet Lift<br><br>Journal = R,Q,M…<br>MI 26.2 (12.6/13.6) | 13596 | 267 | 217 | 144 | .377 | .057 | .045 | .603 | .641 | .679 |
| | 13598 | 271 | 221 | 148 | .381 | .064 | .051 | .610 | .648 | .686 |
| | 12600 | 275 | 225 | 152 | .385 | .071 | .057 | .616 | .655 | .693 |
| | 12602 | 279 | 229 | 156 | .389 | .078 | .064 | .622 | .661 | .700 |
| | 12608 | 283 | 233 | 160 | .393 | .085 | .071 | .629 | .668 | .707 |
| | 12610 | 287 | 237 | 164 | .397 | .093 | .078 | .635 | .675 | .715 |
| | 12612 | 291 | 241 | 167 | .397 | .102 | .085 | .635 | .675 | .715 |
| | 12614 | 295 | 245 | 171 | .397 | .110 | .093 | .635 | .675 | .715 |
| | 12616 | 299 | 249 | 175 | .397 | .118 | .102 | .635 | .675 | .715 |
| | 12618 | 303 | 253 | 178 | .397 | .127 | .110 | .635 | .675 | .715 |
| | 12104 | 307 | 257 | 182 | .397 | .136 | .118 | .635 | .675 | .715 |
| | 12106 | 311 | 261 | 186 | .397 | .144 | .127 | .635 | .675 | .715 |
| | 12108 | 315 | 265 | 189 | .397 | .152 | .135 | .635 | .675 | .715 |
| | 12110 | 319 | 269 | 193 | .397 | .160 | .143 | .635 | .675 | .715 |
| | 12112 | 323 | 273 | 197 | .397 | .168 | .152 | .635 | .675 | .715 |
| | 13634 | 327 | 277 | 199 | .397 | .175 | .159 | .635 | .675 | .715 |
| | 13636 | 331 | 281 | 203 | .397 | .183 | .167 | .635 | .675 | .715 |
| | 13638 | 335 | 285 | 206 | .397 | .189 | .173 | .635 | .675 | .715 |
| | 13640 | 339 | 289 | 210 | .397 | .196 | .181 | .635 | .675 | .715 |
| | 13642 | 343 | 293 | 214 | .397 | .203 | .188 | .635 | .675 | .715 |
| DHX<br>Rated Duration @<br>.006" Tappet Lift<br><br>Journal = B,F,R,M<br>MI 29.3 (13.9/15.4) | 13632 | 289 | 231 | 154 | .381 | .080 | .067 | .610 | .648 | .686 |
| | 12642 | 293 | 235 | 158 | .385 | .087 | .073 | .616 | .655 | .693 |
| | 12644 | 297 | 239 | 162 | .389 | .095 | .080 | .622 | .661 | .700 |
| | 12646 | 301 | 243 | 166 | .393 | .102 | .087 | .629 | .668 | .707 |
| | 12630 | 305 | 247 | 170 | .397 | .110 | .094 | .635 | .675 | .715 |
| | 12632 | 309 | 251 | 174 | .397 | .118 | .102 | .635 | .675 | .715 |
| | 12634 | 313 | 255 | 178 | .397 | .126 | .110 | .635 | .675 | .715 |
| | 12636 | 317 | 259 | 182 | .397 | .135 | .119 | .635 | .675 | .715 |
| | 12638 | 321 | 263 | 185 | .397 | .144 | .127 | .635 | .675 | .715 |
| | 12134 | 325 | 267 | 189 | .397 | .152 | .135 | .635 | .675 | .715 |
| | 12136 | 329 | 271 | 193 | .397 | .160 | .143 | .635 | .675 | .715 |
| | 12138 | 333 | 275 | 196 | .397 | .168 | .152 | .635 | .675 | .715 |
| | 12140 | 337 | 279 | 200 | .397 | .176 | .160 | .635 | .675 | .715 |
| | 12142 | 341 | 283 | 204 | .397 | .184 | .168 | .635 | .675 | .715 |
| | 13644 | 345 | 287 | 207 | .397 | .190 | .174 | .635 | .675 | .715 |
| | 13646 | 349 | 291 | 210 | .397 | .197 | .182 | .635 | .675 | .715 |
| | 13648 | 353 | 295 | 214 | .397 | .204 | .189 | .635 | .675 | .715 |
| | 13650 | 357 | 299 | 218 | .397 | .210 | .196 | .635 | .675 | .715 |
| | 13652 | 361 | 303 | 221 | .397 | .216 | .202 | .635 | .675 | .715 |

## DTL HYDRAULIC ROLLER

The DTL Hydraulic Roller designs are intended for high lift and high RPM with light valves, COMP .750" wheel Sportsman Series Hydraulic Roller Lifters, Dual Conical Valve Springs and 1.7:1 to 1.8:1 ratios.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.6 | 1.7 | 1.8 |
| DTL Rated Duration @ .006"Tappet Lift<br><br>Journal = R,Q,M…<br>MI 26.4 (13.0/13.4) | 13976 | 285 | 235 | 162 | .432 | .088 | .074 | .691 | .734 | .778 |
| | 13978 | 289 | 239 | 166 | .436 | .096 | .081 | .698 | .741 | .785 |
| | 13980 | 293 | 243 | 170 | .440 | .104 | .088 | .704 | .748 | .792 |
| | 13982 | 297 | 247 | 174 | .444 | .113 | .096 | .710 | .755 | .799 |
| | 13984 | 301 | 251 | 177 | .444 | .121 | .104 | .710 | .755 | .799 |
| | 13986 | 305 | 255 | 181 | .444 | .130 | .113 | .710 | .755 | .799 |
| | 13988 | 309 | 259 | 185 | .444 | .139 | .121 | .710 | .755 | .799 |
| | 13990 | 313 | 263 | 189 | .444 | .148 | .130 | .710 | .755 | .799 |
| | 13992 | 317 | 267 | 193 | .444 | .156 | .139 | .710 | .755 | .799 |
| | 13994 | 321 | 271 | 197 | .444 | .165 | .147 | .710 | .755 | .799 |

## CHEATER HR LIFT RULE COMPETITION HYDRAULIC ROLLERS

The Cheater HR Lift Rule profiles can be run with either hydraulic roller lifters or with solid roller lifters and tight (.010" to .016") lash settings. These are very popular in Mustang lift rule class racing. These lobes are very aggressive and are "race only" designed lobes.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| Cheater HR Lift Rule Rated Duration @ .006" Tappet Lift RACE ONLY!<br><br>MI 29.1 (14.2/14.9) | 3390 | 289 | 236 | 148 | .312 | .085 | .072 | .468 | .499 | .530 |
| | 3391 | 291 | 238 | 150 | .312 | .088 | .075 | .468 | .499 | .530 |
| | 3392 | 293 | 240 | 152 | .312 | .091 | .078 | .468 | .499 | .530 |
| | 3393 | 295 | 242 | 154 | .312 | .095 | .081 | .468 | .499 | .530 |
| | 3394 | 297 | 244 | 156 | .312 | .098 | .085 | .468 | .499 | .530 |
| | 3395 | 299 | 246 | 158 | .312 | .102 | .088 | .468 | .499 | .530 |
| | 3396 | 301 | 248 | 160 | .312 | .105 | .091 | .468 | .499 | .530 |
| | 3397 | 303 | 250 | 162 | .312 | .109 | .095 | .468 | .499 | .530 |
| | 3335 | 321 | 268 | 180 | .312 | .142 | .127 | .468 | .499 | .530 |
| | 3496 | 325 | 272 | 184 | .312 | .149 | .134 | .468 | .499 | .530 |
| | 3497 | 327 | 274 | 186 | .312 | .153 | .138 | .468 | .499 | .530 |
| | 3498 | 329 | 276 | 188 | .312 | .157 | .142 | .468 | .499 | .530 |
| | 3336 | 307 | 254 | 166 | .316 | .116 | .102 | .474 | .506 | .537 |
| | 3338 | 311 | 258 | 170 | .316 | .123 | .109 | .474 | .506 | .537 |
| | 3337 | 319 | 266 | 178 | .316 | .138 | .123 | .474 | .506 | .537 |
| | 3339 | 329 | 270 | 182 | .316 | .146 | .139 | .474 | .506 | .537 |
| | 3284 | 307 | 254 | 167 | .323 | .116 | .102 | .485 | .517 | .549 |
| | 3282 | 311 | 258 | 171 | .323 | .124 | .109 | .485 | .517 | .549 |
| | 3285 | 319 | 266 | 179 | .323 | .139 | .124 | .485 | .517 | .549 |
| | 3283 | 323 | 270 | 183 | .323 | .146 | .131 | .485 | .517 | .549 |
| | 3299 | 289 | 236 | 150 | .329 | .085 | .072 | .494 | .526 | .559 |
| | 3297 | 297 | 244 | 158 | .329 | .098 | .085 | .494 | .526 | .559 |
| | 3298 | 305 | 252 | 166 | .329 | .113 | .098 | .494 | .526 | .559 |
| | 3295 | 297 | 244 | 159 | .334 | .099 | .085 | .501 | .534 | .568 |

*Continued on page 39*

## CHEATER HR LIFT RULE COMPETITION HYDRAULIC ROLLERS *Continued*

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| Cheater HR Lift Rule Rated Duration @ .006" Tappet Lift RACE ONLY!<br><br>MI 29.1 (14.2/14.9) | 3296 | 301 | 248 | 163 | .334 | .106 | .092 | .501 | .534 | .568 |
| | 3404 | 285 | 232 | 147 | .341 | .078 | .065 | .512 | .546 | .580 |
| | 3400 | 289 | 236 | 151 | .341 | .085 | .072 | .512 | .546 | .580 |
| | 3398 | 293 | 240 | 155 | .341 | .091 | .078 | .512 | .546 | .580 |
| | 3384 | 297 | 244 | 159 | .341 | .098 | .085 | .512 | .546 | .580 |
| | 3399 | 301 | 248 | 163 | .341 | .106 | .091 | .512 | .546 | .580 |
| | 3385 | 305 | 252 | 167 | .341 | .113 | .098 | .512 | .546 | .580 |
| | 3386 | 309 | 256 | 171 | .341 | .120 | .106 | .512 | .546 | .580 |
| | 3387 | 313 | 260 | 175 | .341 | .128 | .113 | .512 | .546 | .580 |
| | 3388 | 317 | 264 | 179 | .341 | .136 | .120 | .512 | .546 | .580 |
| | 3389 | 321 | 268 | 183 | .341 | .143 | .128 | .512 | .546 | .580 |
| | 3405 | 325 | 272 | 187 | .341 | .151 | .136 | .512 | .546 | .580 |
| | 3288 | 307 | 254 | 171 | .365 | .118 | .103 | .548 | .584 | .621 |
| | 3286 | 311 | 258 | 175 | .365 | .125 | .110 | .548 | .584 | .621 |
| | 3289 | 319 | 266 | 183 | .365 | .141 | .125 | .548 | .584 | .621 |
| | 3287 | 323 | 270 | 187 | .365 | .149 | .133 | .548 | .584 | .621 |

## MUSTANG R LIFT RULE COMPETITION HYDRAULIC ROLLERS

These are very similar to the Cheater HR series but more aggressive off the seat and provide more area.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| Mustang R Lift Rule Rated Duration @ .006" Tappet Lift RACE ONLY!<br><br>MI 25.9(12.7/13.2) | 3329 | 273 | 224 | 140 | .312 | .069 | .056 | .468 | .499 | .530 |
| | 3330 | 279 | 230 | 145 | .312 | .079 | .065 | .468 | .499 | .530 |
| | 3331 | 285 | 236 | 149 | .312 | .090 | .076 | .468 | .499 | .530 |
| | 3332 | 291 | 242 | 153 | .312 | .101 | .086 | .468 | .499 | .530 |
| | 3333 | 297 | 248 | 158 | .312 | .111 | .097 | .468 | .499 | .530 |
| | 3334 | 303 | 254 | 162 | .312 | .121 | .107 | .468 | .499 | .530 |

## ESI ESX STOCKER HYDRAULIC ROLLERS

The ESI/ESX & EKI/EKX lobes are stocker versions of the EHI/EHX designs.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.6 | 1.7 | 1.8 |
| ESI Rated Duration @ .006" Tappet Lift<br><br>MI 26.8 (12.9/13.9) | 13196 | 258 | 207 | 128 | .326 | .042 | .032 | .522 | .554 | .587 |
| | 13600 | 270 | 219 | 142 | .342 | .060 | .048 | .547 | .581 | .616 |
| | 12926 | 318 | 267 | 175 | .297 | .143 | .129 | .475 | .505 | .535 |
| | 12688 | 298 | 247 | 161 | .306 | .110 | .095 | .490 | .520 | .551 |
| | 12689 | 300 | 249 | 163 | .306 | .114 | .099 | .490 | .520 | .551 |
| | 12655 | 302 | 251 | 164 | .306 | .177 | .102 | .490 | .520 | .551 |
| | 12656 | 306 | 255 | 168 | .306 | .125 | .110 | .490 | .520 | .551 |
| | 12657 | 310 | 259 | 172 | .306 | .132 | .117 | .490 | .520 | .551 |
| | 12658 | 314 | 263 | 175 | .306 | .139 | .124 | .490 | .520 | .551 |
| | 12927 | 322 | 271 | 180 | .306 | .150 | .136 | .490 | .520 | .551 |
| | 12706 | 298 | 247 | 161 | .314 | .110 | .095 | .502 | .534 | .565 |
| | 12708 | 282 | 231 | 148 | .323 | .801 | .664 | .517 | .549 | .581 |
| | 13686 | 278 | 224 | 147 | .353 | .072 | .058 | .565 | .600 | .635 |
| | 13688 | 286 | 236 | 154 | .353 | .086 | .072 | .565 | .600 | .635 |
| | 13690 | 294 | 242 | 161 | .353 | .101 | .086 | .565 | .600 | .635 |
| | 13692 | 302 | 250 | 169 | .353 | .117 | .101 | .565 | .600 | .635 |
| | 12916 | 318 | 267 | 188 | .354 | .153 | .137 | .566 | .602 | .637 |
| | 12917 | 322 | 271 | 191 | .354 | .158 | .142 | .566 | .602 | .637 |
| | 12918 | 324 | 273 | 193 | .354 | .164 | .148 | .566 | .602 | .637 |
| | 12919 | 326 | 275 | 195 | .354 | .168 | .152 | .566 | .602 | .637 |
| | 12920 | 328 | 277 | 197 | .354 | .171 | .156 | .566 | .602 | .637 |
| | 12923 | 330 | 279 | 199 | .354 | .175 | .160 | .566 | .602 | .637 |
| | 13751 | 282 | 230 | 151 | .363 | .078 | .065 | .581 | .617 | .653 |
| | 13752 | 286 | 234 | 155 | .363 | .086 | .072 | .581 | .617 | .653 |
| | 13754 | 294 | 242 | 162 | .363 | .101 | .086 | .581 | .617 | .653 |
| | 12710 | 302 | 251 | 172 | .363 | .120 | .104 | .581 | .617 | .653 |
| | 13696 | 314 | 263 | 184 | .363 | .144 | .128 | .581 | .617 | .653 |
| | 13698 | 318 | 267 | 188 | .363 | .152 | .136 | .581 | .617 | .653 |
| | 13700 | 320 | 269 | 190 | .364 | .156 | .140 | .582 | .619 | .655 |
| | 13702 | 324 | 273 | 193 | .364 | .164 | .148 | .582 | .619 | .655 |
| | 13704 | 328 | 277 | 197 | .364 | .171 | .155 | .582 | .619 | .655 |
| | 12718 | 318 | 267 | 188 | .367 | .153 | .137 | .587 | .624 | .661 |
| | 12712 | 310 | 259 | 181 | .378 | .137 | .120 | .605 | .643 | .680 |
| | 14700 | 302 | 251 | 174 | .390 | .120 | .104 | .624 | .663 | .702 |
| | 14702 | 306 | 255 | 178 | .390 | .128 | .112 | .624 | .663 | .702 |
| ESX Rated Duration @ .006" Tappet Lift<br><br>MI 29.8 (14.1/15.7) | 13011 | 272 | 215 | 128 | .306 | .056 | .045 | .490 | .520 | .551 |
| | 13197 | 272 | 214 | 128 | .309 | .054 | .043 | .494 | .525 | .556 |
| | 12711 | 312 | 253 | 169 | .343 | .119 | .104 | .549 | .583 | .617 |
| | 12719 | 328 | 269 | 185 | .345 | .150 | .135 | .552 | .587 | .621 |
| | 12773 | 340 | 281 | 197 | .354 | .173 | .158 | .566 | .602 | .637 |
| | 12720 | 344 | 285 | 201 | .354 | .180 | .166 | .566 | .602 | .637 |
| | 12729 | 348 | 289 | 205 | .354 | .188 | .173 | .566 | .602 | .637 |

*Continued on page 41*

## ESI ESX STOCKER HYDRAULIC ROLLERS *Continued*

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.6 | 1.7 | 1.8 |
| ESX Rated Duration @ .006" Tappet Lift<br><br>MI 29.8 (14.1/15.7) | 13707 | 324 | 265 | 182 | .363 | .143 | .128 | .581 | .617 | .653 |
| | 13709 | 328 | 269 | 186 | .363 | .151 | .135 | .581 | .617 | .653 |
| | 13711 | 332 | 273 | 190 | .363 | .159 | .143 | .581 | .617 | .653 |
| | 13717 | 344 | 285 | 201 | .364 | .181 | .166 | .582 | .619 | .655 |
| | 13719 | 348 | 289 | 205 | .364 | .188 | .173 | .582 | .619 | .655 |
| | 12713 | 324 | 265 | 183 | .370 | .143 | .127 | .592 | .629 | .666 |
| | 12786 | 299 | 240 | 160 | .375 | .094 | .080 | .600 | .638 | .675 |
| | 12787 | 311 | 252 | 170 | .375 | .118 | .103 | .600 | .638 | .675 |
| | 14711 | 328 | 269 | 188 | .390 | .152 | .136 | .624 | .663 | .702 |
| EKI EKX Rated Duration @ .006" Tappet Lift | 13194 | 256 | 205 | 126 | .326 | .040 | .030 | .522 | .554 | .587 |
| | 13198 | 258 | 207 | 128 | .327 | .043 | .033 | .523 | .556 | .589 |
| | 13195 | 271 | 213 | 128 | .309 | .050 | .040 | .494 | .525 | .556 |
| | 13199 | 273 | 215 | 130 | .310 | .053 | .043 | .496 | .527 | .558 |

## DSI STOCKER HYDRAULIC ROLLERS

The DSI , DJI and DJX lobes are stocker versions of the DHI/DHX designs.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| DSI Rated Duration @ .006" Tappet Lift<br><br>MI 26.2 (12.6/13.6) | 13010 | 255 | 205 | 128 | .324 | .039 | .030 | .486 | .518 | .551 |
| | 12662 | 279 | 229 | 149 | .323 | .078 | .063 | .485 | .517 | .549 |
| | 12914 | 315 | 265 | 187 | .372 | .150 | .134 | .558 | .595 | .632 |
| | 12922 | 319 | 269 | 191 | .367 | .158 | .142 | .551 | .587 | .624 |
| | 12915 | 319 | 269 | 191 | .372 | .158 | .142 | .558 | .595 | .632 |
| DJI DJX Rated Duration @ .006" Tappet Lift | 13592 | 311 | 260 | 184 | .389 | .141 | .124 | .584 | .622 | .661 |
| | 13595 | 333 | 274 | 194 | .389 | .165 | .148 | .584 | .622 | .661 |

## CEI STOCKER HYDRAULIC ROLLERS

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.6 | 1.7 | 1.8 |
| CEI Rated Duration @ .006" Tappet Lift | 13602 | 271 | 219 | 141 | .342 | .060 | .048 | .547 | .581 | .616 |

## CZK HYDRAULIC ROLLERS

The CZK is a stocker version of the CSZ.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| CZK Rated Duration @ .020" Tappet Lift MI 26.3 (12.9/13.4) | 13070 | 262 | 213 | 134 | .316 | .051 | .040 | .474 | .506 | .537 |
| | 13071 | 264 | 215 | 136 | .316 | .054 | .042 | .474 | .506 | .537 |
| | 13072 | 266 | 217 | 138 | .316 | .057 | .045 | .474 | .506 | .537 |
| | 12537 | 280 | 228 | 147 | .323 | .075 | .061 | .485 | .517 | .549 |

## DSK HYDRAULIC ROLLERS

The DSK is a stocker version of the DSZ.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| DSK Rated Duration @ .020" Tappet Lift MI 27.7 (13.4/14.3) | 13800 | 281 | 254 | 167 | .306 | .122 | .107 | .459 | .490 | .520 |
| | 13801 | 283 | 256 | 169 | .306 | .126 | .111 | .459 | .490 | .520 |
| | 13802 | 285 | 258 | 171 | .306 | .130 | .115 | .459 | .490 | .520 |
| | 12594 | 290 | 262 | 180 | .323 | .139 | .123 | .485 | .517 | .549 |
| | 12597 | 302 | 274 | 192 | .323 | .163 | .148 | .485 | .517 | .549 |

## FSHR STOCKER HYDRAULIC ROLLER

Very quick hydraulic roller stocker.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| FSH Rated Duration @ .006" Tappet Lift MI 24.4 (12.0/12.4) | 3576 | 301 | 256 | 170 | .292 | .129 | .114 | .438 | .467 | .496 |
| | 3577 | 303 | 258 | 172 | .292 | .133 | .118 | .438 | .467 | .496 |
| | 3578 | 305 | 260 | 174 | .292 | .137 | .122 | .438 | .467 | .496 |
| | 3579 | 307 | 262 | 176 | .292 | .140 | .126 | .438 | .467 | .496 |
| | 3580 | 309 | 264 | 178.0000 | .292 | .144 | .129 | .438 | .467 | .496 |
| FSX Rated Duration @ .006" Tappet Lift MI 24.5 (12.1/12.4) | 3561 | 298 | 252 | 166 | .292 | .123 | .108 | .438 | .467 | .496 |
| FHL Rated Duration @ .006" Tappet Lift Q Size MI 24.0 (11.9/12.1) | 3582 | 279 | 235 | 164 | .378 | .095 | .079 | .567 | .605 | .643 |
| | 3584 | 283 | 239 | 168 | .378 | .105 | .087 | .567 | .605 | .643 |
| | 3585 | 285 | 241 | 170 | .378 | .109 | .092 | .567 | .605 | .643 |
| | 3586 | 287 | 243 | 172 | .378 | .113 | .096 | .567 | .605 | .643 |
| | 3588 | 291 | 247 | 176 | .378 | .122 | .104 | .567 | .605 | .643 |

## XTREME ENERGY™ HARLEY HYDRAULIC ROLLERS

Designed to maximize torque, acceleration and throttle response for V-twins while providing excellent high RPM horsepower. A faster valve opening increases engine vacuum and enhances throttle response, providing improved roll on power. Special closing ramps close the valve sooner, providing more cylinder pressure and torque without resulting in excessive valve train noise. The faster Xtreme Energy™ ramps achieve maximum velocity sooner, increasing the area under the lift curve and providing maximum airflow and horsepower.

| CAMSHAFT TYPE | LOBE # | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | | THEORETICAL VALVE LIFT ROCKER RATIO | |
|---|---|---|---|---|---|---|---|---|---|
| | | @ .053 | @ .200 | | 98° | 102° | 106° | 1.625 | 1.65 |
| Xtreme Energy™ Harley Rated Duration @ .053" Tappet Lift<br><br>MI 30.2 (14.8/15.4) | 3822 | 228 | 148 | .360 | .103 | .089 | .076 | .585 | .594 |
| | 3809 | 230 | 147 | .346 | .106 | .091 | .079 | .562 | .571 |
| | 3810 | 236 | 153 | .350 | .117 | .102 | .088 | .569 | .578 |
| | 3823 | 236 | 155 | .360 | .118 | .103 | .089 | .585 | .594 |
| | 3832 | 244 | 160 | .350 | .134 | .118 | .103 | .569 | .578 |
| | 3824 | 244 | 162 | .360 | .134 | .118 | .103 | .585 | .594 |
| | 3833 | 252 | 167 | .350 | .149 | .132 | .118 | .569 | .578 |
| | 3825 | 252 | 169 | .360 | .149 | .132 | .118 | .585 | .594 |
| | 3834 | 260 | 174 | .350 | .161 | .146 | .131 | .569 | .578 |
| | 3826 | 260 | 176 | .360 | .163 | .147 | .133 | .585 | .594 |
| | 3816 | 264 | 180 | .370 | .170 | .156 | .140 | .601 | .611 |
| | 3835 | 268 | 181 | .350 | .174 | .160 | .146 | .569 | .578 |
| | 3827 | 268 | 183 | .360 | .176 | .162 | .147 | .585 | .594 |
| | 3817 | 268 | 183 | .370 | .177 | .162 | .147 | .601 | .611 |
| | 3818 | 272 | 187 | .370 | .184 | .170 | .155 | .601 | .611 |
| | 3819 | 276 | 191 | .370 | .191 | .176 | .162 | .601 | .611 |

## HIGH ENERGY™ & MAGNUM SOLIDS

The High Energy™ Solid is the mechanical version of the High Energy™ Hydraulic. Because these designs incorporate a mechanical (solid) lifter, the valve actuation is quicker than the High Energy™ Hydraulics, thus producing slightly more power than its hydraulic counterpart. The Magnum Solid Lifter Series is designed to allow the valve lash to be varied from .015" to .030". This tuning tool can be used to fine tune any high performance application to a razor sharp edge.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| High Energy™ Rated Duration @ .015" Tappet Lift .842" Min. Dia. | 5190 | 240-3 | 190 | 104 | .2660 | .031 | .023 | .399 | .426 | .452 |
| | 6114 | 244-3 | 200 | 108 | .2660 | .031 | .023 | .399 | .426 | .452 |
| | 6038 | 264-1 | 220 | 130 | .2933 | .062 | .050 | .440 | .469 | .499 |
| Magnum Rated Duration @ .015" Tappet Lift .842" Min. Dia. MI 37.6 (19.1/18.5) | 6017 | 270-3 | 224 | 135 | .3120 | .064 | .054 | .468 | .499 | .530 |
| | 6002 | 282-2 | 236 | 145 | .3300 | .082 | .069 | .495 | .528 | .561 |
| | 6007 | 294-3 | 248 | 154 | .3500 | .096 | .084 | .525 | .560 | .595 |
| | 6003 | 306-5 | 260 | 164 | .3700 | .119 | .100 | .555 | .592 | .629 |

## NEW NOSTALGIA PLUS™ SOLIDS

These lobes are designed to mimic the sound of the great engines of the past while improving performance by applying today's design techniques. The solid lifter design allows more precise valve control and allows further tuning through lash adjustment. When lashed at .015" these designs provide that distinct metallic, mechanical sound made famous by the most powerful of the great factory muscle cars.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| New Nostalgia Plus™ Rated Duration @ .015" Tappet Lift .842" Min. Dia. MI 28.8 (13.8/15.0) | 6068 | 276 | 239 | 149 | .320 | .094 | .080 | .480 | .512 | .544 |
| | 6069 | 283 | 246 | 155 | .317 | .104 | .090 | .476 | .507 | .539 |
| | 6070 | 284 | 247 | 158 | .336 | .108 | .094 | .504 | .538 | .571 |
| | 6071 | 291 | 254 | 164 | .332 | .118 | .104 | .498 | .531 | .564 |

## XTREME ENERGY™ SOLIDS

The Xtreme Energy™ Solids are designed with similar characteristics to the Xtreme Energy™ Hydraulics to maximize torque, acceleration and throttle response while providing even more high RPM horsepower by taking advantage of the increased stability of a solid design. The Xtreme Energy™ Solids have ramps that provide shorter seat timing than all but the most aggressive race solids but feature a special closing section to eliminate excessive noise.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| Xtreme Energy™ Rated Duration @ .015" Tappet Lift .842" Min. Dia. MI 28.8 (13.8/15.0) | 6052 | 256 | 218 | 129 | .311 | .057 | .046 | .467 | .498 | .529 |
| | 6083 | 262 | 224 | 135 | .313 | .067 | .054 | .470 | .501 | .532 |
| | 6053 | 262 | 224 | 135 | .319 | .067 | .054 | .479 | .510 | .542 |
| | 6084 | 268 | 230 | 140 | .313 | .077 | .064 | .470 | .501 | .532 |
| | 6054 | 268 | 230 | 141 | .326 | .077 | .064 | .489 | .522 | .554 |
| | 6055 | 274 | 236 | 147 | .335 | .087 | .073 | .503 | .536 | .570 |
| | 6056 | 280 | 242 | 153 | .341 | .097 | .083 | .512 | .546 | .580 |
| | 6057 | 282 | 244 | 156 | .347 | .101 | .087 | .521 | .555 | .590 |
| | 6089 | 290 | 252 | 164 | .352 | .115 | .101 | .528 | .563 | .598 |
| | 6059 | 290 | 252 | 164 | .361 | .115 | .101 | .542 | .578 | .614 |
| | 6091 | 298 | 260 | 171 | .352 | .129 | .155 | .528 | .563 | .598 |
| | 6061 | 298 | 260 | 172 | .373 | .129 | .155 | .560 | .597 | .634 |

## THUMPR™ SOLIDS

The Thumpr™ lobe profiles are designed to optimize the character and sound, while providing excellent stability and a very wide power range in solid flat tappet applications. Specific profiles are developed uniquely for the intake and exhaust.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| Thumpr™ Int. Rated Duration @ .015" Tappet Lift .842" Min. Dia. MI 28.9 (13.3/15.6) | 6440 | 268 | 231 | 140 | .319 | .079 | .066 | .479 | .510 | .542 |
| | 6442 | 276 | 239 | 148 | .326 | .092 | .079 | .489 | .522 | .554 |
| | 6444 | 284 | 247 | 156 | .333 | .106 | .092 | .500 | .533 | .566 |
| Thumpr™ Exh. Rated Duration @ .015" Tappet Lift .842" Min. Dia. MI 32.0 (13.3/18.7) | 6455 | 287 | 245 | 152 | .313 | .101 | .088 | .470 | .501 | .532 |
| | 6457 | 295 | 253 | 160 | .320 | .115 | .101 | .480 | .512 | .544 |
| | 6459 | 303 | 261 | 168 | .327 | .128 | .115 | .491 | .523 | .556 |

## HIGH TORQUE SOLIDS

The High Torque Solid is designed to be used on .842" or larger tappet diameters. These are our most winning, all around solid designs. Tappet acceleration rates are high to produce maximum torque vs. horsepower in an all out racing engine. Works well as exhaust when coupled with TL or XTQ intake designs.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| High Torque Rated Duration @ .020" Tappet Lift .842" Min. Dia. .018" Lash MI 36.9 (18.4/18.5) | 6015 | 270-1 | 235 | 144 | .330 | .082 | .068 | .495 | .528 | .561 |
| | 6001 | 280-1 | 242 | 152 | .338 | .094 | .080 | .507 | .541 | .575 |
| | 6014 | 285-1 | 250 | 156 | .355 | .104 | .092 | .533 | .568 | .604 |
| | 6016 | 290-1 | 255 | 160 | .360 | .111 | .098 | .540 | .576 | .612 |
| | 6009 | 295-1 | 260 | 164 | .370 | .119 | .100 | .555 | .592 | .629 |
| | 6018 | 300-1 | 265 | 169 | .375 | .126 | .113 | .563 | .600 | .638 |
| | 6000 | 305-1 | 270 | 175 | .385 | .136 | .123 | .578 | .616 | .655 |
| | 6010 | 310-1 | 275 | 177 | .390 | .142 | .129 | .585 | .624 | .663 |
| | 6004 | 310-2 | 270 | 175 | .375 | .143 | .129 | .563 | .600 | .638 |
| | 6011 | 320-1 | 283 | 184 | .392 | .163 | .149 | .588 | .627 | .666 |
| | 6005 | 320-2 | 280 | 182 | .375 | .156 | .142 | .563 | .600 | .638 |

## HIGH RPM SOLIDS

These designs are to be used primarily on motors with 1.7 or greater rocker ratios. Design rates have been carefully chosen to allow these designs to run higher engine speeds than their high torque counterparts.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| High RPM Rated Duration @ .020" Tappet Lift .842" Min. Dia. .018" Lash MI 37.6 (17.9/19.7) | 6019 | 284-1 | 246 | 152 | .326 | .097 | .083 | .489 | .522 | .554 |
| | 6012 | 294-1 | 256 | 162 | .341 | .114 | .100 | .512 | .546 | .580 |
| | 6013 | 304-1 | 266 | 172 | .356 | .131 | .117 | .534 | .570 | .605 |
| | 6006 | 314-1 | 276 | 182 | .371 | .148 | .134 | .557 | .594 | .631 |
| | 6027 | 324-1 | 286 | 191 | .386 | .165 | .151 | .579 | .618 | .656 |
| | 6028 | 328-3 | 290 | 184 | .400 | .168 | .154 | .600 | .640 | .680 |
| | 6029 | 334-2 | 296 | 200 | .400 | .182 | .168 | .600 | .640 | .680 |

## HI-TECH™ SOLIDS

These designs represent an excellent mix of horsepower, torque, RPM and durability. They work with .842" or larger diameter tappets, producing very good results. These have been used successfully in everything from Sprint Cup and endurance applications to drag racing and hobby stocks.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| Hi-Tech™ Rated Duration @ .020" Tappet Lift .842" Min. Dia. .018" Lash<br><br>MI 38.2 (19.1/19.1) | 6030 | 300-4 | 262 | 166 | .365 | .121 | .108 | .548 | .584 | .621 |
| | 6031 | 304-4 | 266 | 170 | .370 | .128 | .114 | .555 | .592 | .629 |
| | 6032 | 308-4 | 270 | 174 | .375 | .134 | .120 | .563 | .600 | .638 |
| | 6033 | 312-4 | 274 | 177 | .380 | .140 | .127 | .570 | .608 | .646 |
| | 6034 | 316-4 | 278 | 181 | .385 | .147 | .133 | .578 | .616 | .655 |
| | 6035 | 320-4 | 282 | 186 | .390 | .154 | .140 | .585 | .624 | .663 |
| | 6036 | 324-4 | 286 | 192 | .400 | .163 | .149 | .600 | .640 | .680 |

## TIGHT LASH SOLIDS

The designs for the tight lash solid .842" diameter lifters feature shorter seat timing and more area than other similar designs. Good in restricted or open rules circle track racing. The larger designs perform very well in drag racing.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| Tight Lash Rated Duration @ .020" Tappet Lift .842" Min. Dia. .018" Lash<br><br>MI 28.1 (13.4/14.7) | 6312 | TL264 | 234 | 143 | .3300 | .083 | .070 | .495 | .528 | .561 |
| | 6313 | TL268 | 238 | 147 | .3350 | .089 | .077 | .503 | .536 | .570 |
| | 6314 | TL272 | 242 | 151 | .3400 | .096 | .083 | .510 | .544 | .578 |
| | 6301 | TL276 | 246 | 154 | .3476 | .102 | .089 | .521 | .556 | .591 |
| | 6302 | TL280 | 250 | 158 | .3534 | .109 | .095 | .530 | .565 | .601 |
| | 6303 | TL284 | 254 | 162 | .3600 | .114 | .101 | .540 | .576 | .612 |
| | 6304 | TL288 | 259 | 166 | .3667 | .121 | .108 | .550 | .587 | .623 |
| | 6305 | TL292 | 262 | 169 | .3734 | .127 | .113 | .560 | .597 | .635 |
| | 6306 | TL296 | 266 | 173 | .3800 | .133 | .119 | .570 | .608 | .646 |
| | 6307 | TL300 | 270 | 177 | .3867 | .139 | .125 | .580 | .619 | .657 |
| | 6308 | TL304 | 274 | 181 | .3934 | .143 | .130 | .590 | .629 | .669 |
| | 6310 | TL312 | 282 | 191 | .4067 | .162 | .148 | .610 | .651 | .691 |

## HIGH RPM II SOLIDS

High RPM Series II Solids are more aggressive than the original High RPM and Hi-Tech™ Solid profiles. They are designed for use in applications that need the area of an XTQ style lobe, but are required to operate at higher engine speeds than that fast of a ramp will allow. HTL Lifters are highly recommended with these profiles. Note: Cams using these lobes should have provisions for increased oiling. Please consult with our tech representative.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| High RPM II Rated Duration @ .020" Tappet Lift .842" Min. Dia. .018" Lash<br><br>MI 30.3 (13.9/16.4) | 6330 | 287 | 256 | 167 | .367 | .121 | .107 | .551 | .587 | .624 |
| | 6331 | 291 | 260 | 171 | .371 | .128 | .114 | .557 | .594 | .631 |
| | 6332 | 295 | 264 | 175 | .376 | .135 | .121 | .564 | .602 | .639 |
| | 6333 | 299 | 268 | 179 | .380 | .142 | .128 | .570 | .608 | .646 |
| | 6334 | 303 | 272 | 183 | .384 | .149 | .135 | .576 | .614 | .653 |
| | 6335 | 307 | 276 | 187 | .389 | .156 | .142 | .584 | .622 | .661 |
| | 6336 | 311 | 280 | 191 | .393 | .163 | .149 | .590 | .629 | .668 |

## XTQ SOLIDS

The XTQ Solid design sets the new standard for aggressive .842" lifter designs. With seat timing as low as our original tight lash series and more area than our famous "XX" .875" series, these designs give their racers a clear edge over the competition. Smaller designs are intended for restricted applications; larger designs can be used in open applications with an optimized valve spring selection and lighter valve train. **NOTE:** Cams using these lobes should have provisions for increased oiling. Please consult with our tech representative.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| XTQ Rated Duration @ .020" Tappet Lift .842" Min. Dia. .018" Lash<br><br>MI 28.8 (13.8/15.0) | 6275 | 248XTQ | 218 | 129 | .310 | .057 | .046 | .465 | .496 | .527 |
| | 6276 | 254XTQ | 224 | 135 | .318 | .067 | .054 | .477 | .509 | .541 |
| | 6277 | 260XTQ | 230 | 141 | .325 | .077 | .064 | .488 | .520 | .553 |
| | 6258 | 266XTQ | 236 | 147 | .334 | .087 | .073 | .501 | .534 | .568 |
| | 16258 | 268XTQ | 238 | 150 | .337 | .090 | .077 | .506 | .539 | .573 |
| | 6259 | 270XTQ | 240 | 152 | .340 | .094 | .080 | .510 | .544 | .578 |
| | 16259 | 272XTQ | 242 | 154 | .343 | .097 | .083 | .515 | .549 | .583 |
| | 6260 | 274XTQ | 244 | 156 | .346 | .101 | .087 | .519 | .554 | .588 |
| | 16260 | 276XTQ | 246 | 158 | .350 | .104 | .090 | .525 | .560 | .595 |
| | 6261 | 278XTQ | 248 | 160 | .354 | .108 | .094 | .531 | .566 | .602 |
| | 16261 | 280XTQ | 250 | 162 | .357 | .111 | .097 | .536 | .571 | .607 |
| | 6262 | 282XTQ | 252 | 164 | .360 | .115 | .101 | .540 | .576 | .612 |
| | 16262 | 284XTQ | 254 | 166 | .363 | .118 | .104 | .545 | .581 | .617 |
| | 6263 | 286XTQ | 256 | 168 | .366 | .122 | .108 | .549 | .586 | .622 |
| | 16263 | 288XTQ | 258 | 170 | .369 | .125 | .111 | .554 | .590 | .627 |
| | 6264 | 290XTQ | 260 | 172 | .372 | .129 | .115 | .558 | .595 | .632 |
| | 16264 | 292XTQ | 262 | 174 | .375 | .132 | .118 | .563 | .600 | .638 |
| | 6265 | 294XTQ | 264 | 176 | .378 | .136 | .122 | .567 | .605 | .643 |
| | 16265 | 296XTQ | 266 | 178 | .382 | .139 | .125 | .573 | .611 | .649 |
| | 6266 | 298XTQ | 268 | 180 | .386 | .143 | .129 | .579 | .618 | .656 |
| | 16266 | 300XTQ | 270 | 182 | .389 | .146 | .132 | .584 | .622 | .661 |
| | 6267 | 302XTQ | 272 | 184 | .392 | .150 | .136 | .588 | .627 | .666 |
| | 16267 | 304XTQ | 274 | 186 | .395 | .153 | .139 | .593 | .632 | .672 |
| | 6268 | 306XTQ | 276 | 188 | .398 | .157 | .143 | .597 | .637 | .677 |
| | 16268 | 308XTQ | 278 | 190 | .401 | .160 | .146 | .602 | .642 | .682 |
| | 6269 | 310XTQ | 280 | 192 | .404 | .164 | .150 | .606 | .646 | .687 |
| | 6270 | 314XTQ | 284 | 196 | .410 | .171 | .157 | .615 | .656 | .697 |

## XTX SOLIDS

The XTX Solids are an excellent choice for exhaust profiles to be coupled with either the XTQ or MH profiles or can be used for both intake and exhaust in high RPM applications. The closing side is similar to the High Torque profiles, but this design incorporates a faster opening side to increase torque and provide more area. The lifts are slightly less than the High Torque profiles to increase the nose radius and reduce wear. Note: Cams using these lobes should have provisions for increased oiling. Please consult with our tech representative.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| XTX Rated Duration @ .020" Tappet Lift .842" Min. Dia. .018" Lash<br><br>MI 34.0 (16.2/17.8) | 6400 | 272 | 238 | 145 | .335 | .086 | .074 | .503 | .536 | .570 |
| | 6402 | 276 | 242 | 149 | .341 | .092 | .080 | .512 | .546 | .580 |
| | 6404 | 280 | 246 | 153 | .347 | .099 | .086 | .521 | .555 | .590 |
| | 6406 | 284 | 250 | 157 | .351 | .105 | .092 | .527 | .562 | .597 |
| | 6408 | 288 | 254 | 161 | .355 | .112 | .098 | .533 | .568 | .604 |
| | 6410 | 292 | 258 | 165 | .359 | .118 | .105 | .539 | .574 | .610 |
| | 6412 | 296 | 262 | 169 | .363 | .125 | .111 | .545 | .581 | .617 |
| | 6414 | 300 | 266 | 173 | .367 | .132 | .118 | .551 | .587 | .624 |
| | 6416 | 304 | 270 | 177 | .371 | .139 | .125 | .557 | .594 | .631 |
| | 6418 | 308 | 274 | 181 | .375 | .146 | .132 | .563 | .600 | .638 |
| | 6420 | 312 | 278 | 185 | .379 | .153 | .139 | .569 | .606 | .644 |

## JF .330" LIFT SOLIDS

The JF .330" Lift Solids are designed for use in lift rule classes that require higher RPM or lighter springs than needed with the Max Area Lift Rule Series. The JF designs are also good for use with very high rockers in more open applications. Can also be run in hydraulic lifter applications.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| JF .330" Lift Rated Duration @ .020" Tappet Lift .842" Min. Dia.<br><br>MI 29.3 (14.2/15.1) | 6158 | 269 | 240 | 149 | .327 | .100 | .087 | .491 | .523 | .556 |
| | 6159 | 271 | 242 | 151 | .329 | .100 | .087 | .494 | .526 | .559 |
| | 6160 | 273 | 244 | 153 | .330 | .100 | .087 | .495 | .528 | .561 |
| | 6170 | 275 | 246 | 155 | .330 | .100 | .087 | .495 | .528 | .561 |
| | 6161 | 277 | 248 | 157 | .330 | .107 | .094 | .495 | .528 | .561 |
| | 6162 | 281 | 252 | 161 | .330 | .114 | .100 | .495 | .528 | .561 |
| | 6172 | 283 | 254 | 163 | .330 | .118 | .104 | .495 | .528 | .561 |
| | 6163 | 285 | 256 | 164 | .330 | .121 | .107 | .495 | .528 | .561 |
| | 6173 | 287 | 258 | 166 | .330 | .123 | .110 | .495 | .528 | .561 |
| | 6164 | 289 | 260 | 167 | .330 | .126 | .113 | .495 | .528 | .561 |
| | 6157 | 291 | 262 | 168 | .330 | .129 | .116 | .495 | .528 | .561 |
| | 6165 | 293 | 264 | 170 | .330 | .132 | .119 | .495 | .528 | .561 |
| | 6166 | 295 | 266 | 172 | .330 | .136 | .122 | .495 | .528 | .561 |
| | 6167 | 297 | 268 | 174 | .330 | .139 | .126 | .495 | .528 | .561 |
| | 6168 | 299 | 270 | 176 | .330 | .143 | .129 | .495 | .528 | .561 |
| | 6169 | 301 | 272 | 178 | .330 | .146 | .133 | .495 | .528 | .561 |
| | 6184 | 303 | 274 | 180 | .330 | .149 | .136 | .495 | .528 | .561 |
| | 6185 | 305 | 276 | 182 | .330 | .152 | .139 | .495 | .528 | .561 |
| | 6186 | 307 | 278 | 183 | .330 | .156 | .142 | .495 | .528 | .561 |
| | 6187 | 309 | 280 | 185 | .330 | .159 | .146 | .495 | .528 | .561 |
| | 6188 | 311 | 282 | 187 | .330 | .162 | .149 | .495 | .528 | .561 |

## HF & JF LIFT RULE SOLIDS

Based on the JF series except expressly for Lift Rule classes.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| HF .285" Lift Rated Duration @ .020" Tappet Lift .842" Min. Dia. | 16230 | 282 | 252 | 148 | .285 | .110 | .097 | .428 | .456 | .485 |
| | 16231 | 286 | 256 | 151 | .285 | .116 | .103 | .428 | .456 | .485 |
| JF .308" Lift Rated Duration @ .020" Tappet Lift .842" Min. Dia. | 16234 | 279 | 250 | 155 | .308 | .110 | .095 | .462 | .493 | .524 |
| | 16235 | 281 | 252 | 157 | .308 | .113 | .100 | .462 | .493 | .524 |
| | 16236 | 283 | 254 | 158 | .308 | .116 | .103 | .462 | .493 | .524 |
| | 16226 | 285 | 256 | 160 | .308 | .119 | .106 | .462 | .493 | .524 |
| | 16237 | 287 | 258 | 162 | .308 | .123 | .109 | .462 | .493 | .524 |
| JF .301" Lift Rated Duration @ .020" Tappet Lift .842" Min. Dia. | 16246 | 295 | 266 | 167 | .301 | .135 | .122 | .452 | .482 | .512 |
| | 16248 | 299 | 270 | 171 | .301 | .141 | .128 | .452 | .482 | .512 |

## JF SOLIDS

The JF Solids are higher lift versions of the JF .330" series. These lobes are easier on parts and more stable at high RPM than the TL series. The JF designs are best with 1.65+ rockers in both circle track and drag race applications where durability is required. Can also be run in hydraulic lifter applications.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| JF .330" Lift Rated Duration @ .020" Tappet Lift .842" Min. Dia. MI 29.5 (14.3/15.2) | 16104 | 275 | 246 | 155 | .343 | .102 | .089 | .515 | .549 | .583 |
| | 16106 | 279 | 250 | 159 | .349 | .109 | .095 | .524 | .558 | .593 |
| | 16108 | 283 | 254 | 163 | .355 | .116 | .102 | .533 | .568 | .604 |
| | 16110 | 287 | 258 | 167 | .361 | .123 | .109 | .542 | .578 | .614 |
| | 16112 | 291 | 262 | 171 | .367 | .130 | .116 | .551 | .587 | .624 |
| | 16114 | 295 | 266 | 175 | .373 | .136 | .123 | .560 | .597 | .634 |
| | 16116 | 299 | 270 | 179 | .379 | .143 | .130 | .569 | .606 | .644 |
| | 16118 | 303 | 274 | 183 | .385 | .150 | .136 | .578 | .616 | .655 |

## MAX AREA (MA) SOLIDS

The Max Area Series is designed for 2bbl and stock intake applications which are airflow limited. This series of lobes utilizes low seat timing with maximum area under the curve. These lobes perform best with a 1.7 or 1.8 rocker ratio and can be used with an .842" lifter. Note: Cams using these lobes should have provisions for increased oiling. Please consult with our tech representative.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| Max Area Rated Duration @ .020" Tappet Lift .842" Min. Dia. MI 26.7 (13.0/13.7) | 6208 | MA251-1 | 225 | 135 | .319 | .064 | .053 | .479 | .510 | .542 |
| | 6209 | MA255-1 | 229 | 139 | .326 | .072 | .059 | .489 | .522 | .554 |
| | 6210 | MA259-1 | 232 | 143 | .330 | .076 | .064 | .495 | .528 | .561 |
| | 6211 | MA263-1 | 236 | 147 | .331 | .090 | .077 | .497 | .530 | .563 |
| | 6212 | MA267-1 | 240 | 151 | .333 | .097 | .083 | .500 | .533 | .566 |
| | 6213 | MA271-1 | 244 | 155 | .340 | .104 | .091 | .510 | .544 | .578 |
| | 6214 | MA275-1 | 248 | 159 | .340 | .109 | .096 | .510 | .544 | .578 |
| | 6215 | MA279-1 | 252 | 161 | .340 | .116 | .103 | .510 | .544 | .578 |
| | 6216 | MA283-1 | 256 | 164 | .340 | .123 | .109 | .510 | .544 | .578 |
| | 6217 | MA287-1 | 260 | 168 | .340 | .129 | .116 | .510 | .544 | .578 |
| | 6218 | MA291-1 | 264 | 171 | .340 | .136 | .123 | .510 | .544 | .578 |
| | 6219 | MA295-1 | 268 | 176 | .345 | .143 | .129 | .518 | .552 | .587 |
| | 6222 | MA299-1 | 272 | 179 | .345 | .149 | .136 | .518 | .552 | .587 |

## MAX AREA LIFT RULE SOLIDS

The Max Area Lift Rule lobes can be run with solid lifters or Pro Magnum™-style hydraulic lifters. They are more aggressive off the seat than the parent Max Area Series for tighter lash and less rocker. They work well in lift rule oval track, road race and high RPM NHRA Stock Eliminator classes. Will check 21° larger at .006" than .020". Specifically designed to optimize dynamic valve motion and produce maximum power, these lobes use the experience gained from racing the MA profile and the techniques we learn from our Spintron testing to provide the best performance in all lift rule applications. Grouped in lobe lift increments for convenient selection. Note: Cams using these lobes should have provisions for increased oiling. Please consult with our tech representative.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| Max Area Low Lift Rated Duration @ .020" Tappet Lift .842" Min. Dia. .010"-.020" Lash MI 26.7 (13.0/13.7) | 5695 | 273 | 246 | 124 | .237 | .100 | .088 | .356 | .379 | .403 |
| | 5696 | 277 | 250 | 127 | .237 | .106 | .094 | .356 | .379 | .403 |
| | 5704 | 283 | 256 | 142 | .242 | .117 | .105 | .363 | .387 | .411 |
| | 5718 | 275 | 248 | 140 | .252 | .103 | .090 | .378 | .403 | .428 |
| | 5720 | 279 | 252 | 144 | .252 | .109 | .096 | .378 | .403 | .428 |
| | 5719 | 283 | 256 | 148 | .252 | .115 | .103 | .378 | .403 | .428 |
| | 5708 | 293 | 266 | 159 | .255 | .131 | .119 | .383 | .408 | .434 |
| | 5645 | 257 | 230 | 124 | .260 | .076 | .063 | .390 | .416 | .442 |
| | 5744 | 261 | 234 | 129 | .260 | .083 | .070 | .390 | .416 | .442 |
| | 5746 | 265 | 238 | 133 | .260 | .089 | .076 | .390 | .416 | .442 |
| | 5550 | 267 | 240 | 134 | .260 | .093 | .080 | .390 | .416 | .442 |
| | 5517 | 269 | 242 | 138 | .260 | .096 | .083 | .390 | .416 | .442 |
| | 5518 | 271 | 244 | 140 | .260 | .100 | .086 | .390 | .416 | .442 |
| | 5519 | 273 | 246 | 142 | .260 | .103 | .090 | .390 | .416 | .442 |
| | 5553 | 274 | 248 | 142 | .260 | .107 | .093 | .390 | .416 | .442 |
| | 5547 | 277 | 250 | 145 | .260 | .109 | .096 | .390 | .416 | .442 |
| | 5556 | 279 | 252 | 146 | .260 | .112 | .099 | .390 | .416 | .442 |
| | 5643 | 281 | 254 | 148 | .260 | .115 | .102 | .390 | .416 | .442 |

*Continued on page 51*

## MAX AREA LIFT RULE SOLIDS *Continued*

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| Max Area Low Lift Rated Duration @ .020" Tappet Lift .842" Min. Dia. .010"-.020" Lash<br><br>MI 26.7 (13.0/13.7) | 5548 | 285 | 258 | 151 | .260 | .121 | .109 | .390 | .416 | .442 |
| | 5537 | 287 | 260 | 153 | .260 | .124 | .112 | .390 | .416 | .442 |
| | 5551 | 289 | 262 | 155 | .260 | .127 | .115 | .390 | .416 | .442 |
| | 5549 | 293 | 266 | 158 | .260 | .133 | .121 | .390 | .416 | .442 |
| | 5801 | 297 | 270 | 161 | .260 | .139 | .127 | .390 | .416 | .442 |
| | 5802 | 301 | 274 | 164 | .260 | .144 | .133 | .390 | .416 | .442 |
| | 5644 | 265 | 238 | 134 | .266 | .089 | .076 | .399 | .426 | .452 |
| | 5649 | 273 | 246 | 143 | .266 | .103 | .090 | .399 | .426 | .452 |
| | 5646 | 275 | 248 | 145 | .266 | .106 | .093 | .399 | .426 | .452 |
| | 5650 | 277 | 250 | 146 | .266 | .109 | .096 | .399 | .426 | .452 |
| | 5651 | 281 | 254 | 150 | .266 | .115 | .102 | .399 | .426 | .452 |
| | 5652 | 285 | 258 | 154 | .266 | .122 | .110 | .399 | .426 | .452 |
| | 5653 | 289 | 262 | 159 | .266 | .129 | .116 | .399 | .426 | .452 |
| | 5647 | 291 | 264 | 161 | .266 | .132 | .120 | .399 | .426 | .452 |
| | 5654 | 293 | 266 | 163 | .266 | .135 | .123 | .399 | .426 | .452 |
| | 5655 | 297 | 270 | 167 | .266 | .141 | .129 | .399 | .426 | .452 |
| | 5657 | 301 | 274 | 170 | .266 | .147 | .135 | .399 | .426 | .452 |
| | 5692 | 283 | 256 | 156 | .273 | .121 | .108 | .410 | .437 | .464 |
| | 5694 | 291 | 264 | 165 | .273 | .134 | .121 | .410 | .437 | .464 |
| | 5777 | 292 | 266 | 167 | .274 | .137 | .124 | .411 | .438 | .466 |
| | 5778 | 294 | 268 | 169 | .274 | .140 | .127 | .411 | .438 | .466 |
| | 5779 | 296 | 270 | 170 | .274 | .143 | .130 | .411 | .438 | .466 |
| | 5698 | 297 | 270 | 171 | .278 | .144 | .131 | .417 | .445 | .473 |
| | 5697 | 303 | 276 | 176 | .275 | .152 | .140 | .413 | .440 | .468 |
| | 5667 | 257 | 230 | 135 | .283 | .078 | .064 | .425 | .453 | .481 |
| | 5668 | 265 | 238 | 142 | .283 | .091 | .077 | .425 | .453 | .481 |
| | 5669 | 269 | 242 | 145 | .283 | .098 | .084 | .425 | .453 | .481 |
| | 5670 | 273 | 246 | 148 | .283 | .104 | .090 | .425 | .453 | .481 |
| | 5656 | 276 | 250 | 152 | .283 | .110 | .097 | .425 | .453 | .481 |
| | 5658 | 283 | 256 | 156 | .283 | .121 | .107 | .425 | .453 | .481 |
| | 5659 | 286 | 260 | 161 | .283 | .127 | .113 | .425 | .453 | .481 |
| | 5666 | 290 | 264 | 165 | .283 | .136 | .123 | .425 | .453 | .481 |
| | 5663 | 295 | 268 | 171 | .283 | .144 | .131 | .425 | .453 | .481 |
| | 5800 | 297 | 270 | 173 | .283 | .145 | .132 | .425 | .453 | .481 |
| | 5664 | 301 | 274 | 172 | .283 | .149 | .136 | .425 | .453 | .481 |
| | 5665 | 303 | 276 | 174 | .283 | .151 | .139 | .425 | .453 | .481 |
| | 5687 | 299 | 272 | 159 | .283 | .136 | .125 | .425 | .453 | .481 |
| | 5660 | 283 | 256 | 162 | .288 | .123 | .109 | .432 | .461 | .490 |
| | 5661 | 287 | 260 | 166 | .288 | .130 | .116 | .432 | .461 | .490 |
| | 5662 | 291 | 264 | 169 | .288 | .136 | .122 | .432 | .461 | .490 |
| | 5678 | 279 | 252 | 152 | .290 | .113 | .100 | .435 | .464 | .493 |
| | 5680 | 286 | 259 | 158 | .294 | .121 | .108 | .441 | .470 | .500 |
| | 5679 | 294 | 267 | 167 | .296 | .134 | .121 | .444 | .474 | .503 |
| | 5892 | 244 | 218 | 127 | .300 | .058 | .046 | .450 | .480 | .510 |

*Continued on page 52*

## MAX AREA LIFT RULE SOLIDS *Continued*

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| Max Area Low Lift Rated Duration @ .020" Tappet Lift .842" Min. Dia. .010"-.020" Lash<br><br>MI 26.7 (13.0/13.7) | 5676 | 263 | 236 | 143 | .300 | .088 | .074 | .450 | .480 | .510 |
| | 5677 | 267 | 240 | 147 | .300 | .095 | .081 | .450 | .480 | .510 |
| | 5738 | 268 | 242 | 151 | .300 | .097 | .083 | .450 | .480 | .510 |
| | 5682 | 275 | 248 | 155 | .300 | .109 | .095 | .450 | .480 | .510 |
| | 5683 | 279 | 252 | 158 | .300 | .116 | .102 | .450 | .480 | .510 |
| | 5684 | 283 | 256 | 162 | .300 | .123 | .109 | .450 | .480 | .510 |
| | 5685 | 287 | 260 | 166 | .300 | .130 | .116 | .450 | .480 | .510 |
| | 5686 | 291 | 264 | 170 | .300 | .136 | .123 | .450 | .480 | .510 |
| | 5783 | 295 | 268 | 177 | .300 | .145 | .131 | .450 | .480 | .510 |
| | 5784 | 299 | 272 | 180 | .300 | .152 | .138 | .450 | .480 | .510 |
| | 5681 | 271 | 244 | 151 | .300 | .102 | .088 | .450 | .480 | .510 |
| | 6174 | 274 | 248 | 158 | .304 | .109 | .095 | .456 | .486 | .517 |
| | 5713 | 280 | 254 | 158 | .306 | .116 | .103 | .459 | .490 | .520 |
| | 5714 | 282 | 256 | 160 | .306 | .119 | .106 | .459 | .490 | .520 |
| | 5715 | 284 | 258 | 162 | .306 | .123 | .109 | .459 | .490 | .520 |
| | 6192 | 266 | 240 | 150 | .312 | .095 | .081 | .468 | .499 | .530 |
| | 6193 | 270 | 244 | 154 | .312 | .102 | .088 | .468 | .499 | .530 |
| | 6194 | 274 | 248 | 158 | .312 | .109 | .095 | .468 | .499 | .530 |
| | 6195 | 278 | 252 | 162 | .312 | .116 | .102 | .468 | .499 | .530 |
| | 6196 | 282 | 256 | 166 | .312 | .123 | .109 | .468 | .499 | .530 |
| | 6197 | 286 | 260 | 170 | .312 | .130 | .116 | .468 | .499 | .530 |
| | 6198 | 290 | 264 | 174 | .312 | .137 | .123 | .468 | .499 | .530 |
| | 6199 | 294 | 268 | 178 | .312 | .144 | .130 | .468 | .499 | .530 |
| | 6200 | 298 | 272 | 182 | .312 | .151 | .137 | .468 | .499 | .530 |
| | 5893 | 252 | 226 | 135 | .315 | .070 | .058 | .473 | .504 | .536 |
| | 5813 | 295 | 268 | 176 | .317 | .143 | .129 | .476 | .507 | .539 |
| | 5814 | 303 | 276 | 184 | .317 | .143 | .129 | .476 | .507 | .539 |
| | 6231 | 262 | 236 | 148 | .322 | .088 | .075 | .483 | .515 | .547 |
| | 6232 | 266 | 240 | 152 | .322 | .095 | .081 | .483 | .515 | .547 |
| | 6234 | 274 | 248 | 160 | .322 | .109 | .095 | .483 | .515 | .547 |
| | 6257 | 276 | 250 | 162 | .322 | .113 | .099 | .483 | .515 | .547 |
| | 6235 | 278 | 252 | 164 | .322 | .116 | .102 | .483 | .515 | .547 |
| | 6278 | 280 | 254 | 166 | .322 | .120 | .106 | .483 | .515 | .547 |
| | 6236 | 282 | 256 | 168 | .322 | .124 | .109 | .483 | .515 | .547 |
| | 6237 | 286 | 260 | 172 | .322 | .131 | .116 | .483 | .515 | .547 |
| | 6238 | 290 | 264 | 176 | .322 | .138 | .124 | .483 | .515 | .547 |
| | 6239 | 294 | 268 | 180 | .324 | .145 | .131 | .486 | .518 | .551 |
| | 6246 | 296 | 270 | 182 | .320 | .148 | .134 | .480 | .512 | .544 |
| | 6240 | 300 | 274 | 186 | .324 | .155 | .141 | .486 | .518 | .551 |
| | 6249 | 304 | 278 | 190 | .324 | .162 | .148 | .486 | .518 | .551 |
| | 6241 | 262 | 236 | 149 | .330 | .088 | .075 | .495 | .528 | .561 |
| | 6242 | 266 | 240 | 152 | .330 | .095 | .081 | .495 | .528 | .561 |
| | 6243 | 270 | 244 | 156 | .330 | .102 | .088 | .495 | .528 | .561 |
| | 6244 | 274 | 248 | 160 | .330 | .109 | .095 | .495 | .528 | .561 |

*Continued on page 53*

## MAX AREA LIFT RULE SOLIDS *Continued*

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| Max Area Low Lift Rated Duration @ .020" Tappet Lift .842" Min. Dia. .010"-.020" Lash<br><br>MI 26.7 (13.0/13.7) | 6294 | 276 | 250 | 162 | .330 | .113 | .099 | .495 | .528 | .561 |
| | 6245 | 278 | 252 | 164 | .330 | .116 | .102 | .495 | .528 | .561 |
| | 6247 | 282 | 256 | 167 | .330 | .124 | .109 | .495 | .528 | .561 |
| | 6229 | 286 | 260 | 170 | .330 | .132 | .116 | .495 | .528 | .561 |
| | 6228 | 288 | 262 | 174 | .330 | .134 | .120 | .495 | .528 | .561 |
| | 6227 | 290 | 264 | 176 | .330 | .138 | .124 | .495 | .528 | .561 |
| | 6230 | 292 | 266 | 178 | .330 | .141 | .127 | .495 | .528 | .561 |
| | 6224 | 294 | 268 | 180 | .330 | .145 | .131 | .495 | .528 | .561 |
| | 6226 | 298 | 272 | 184 | .330 | .152 | .138 | .495 | .528 | .561 |
| | 6225 | 302 | 276 | 188 | .330 | .159 | .145 | .495 | .528 | .561 |

## USI USX UPI UPX STOCKER FLAT SOLIDS

These are designs for high RPM stocker applications.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.6 | 1.7 | 1.8 |
| USI Rated Duration @ .020" Tappet Lift MI 32.4 (15.7/16.7) | 5854 | 294 | 263 | 157 | .267 | .124 | .111 | .401 | .427 | .454 |
| | 5840 | 298 | 266 | 157 | .267 | .125 | .113 | .401 | .427 | .454 |
| | 5538 | 294 | 262 | 166 | .345 | .123 | .110 | .552 | .587 | .621 |
| | 5540 | 298 | 266 | 170 | .345 | .130 | .116 | .552 | .587 | .621 |
| USX Rated Duration @ .020" Tappet Lift MI 32.6 (15.8/16.8) | 5862 | 300 | 269 | 164 | .277 | .135 | .122 | .416 | .443 | .471 |
| | 5846 | 305 | 272 | 166 | .277 | .136 | .124 | .416 | .443 | .471 |
| | 5544 | 301 | 268 | 174 | .365 | .134 | .121 | .584 | .621 | .657 |
| | 5546 | 305 | 272 | 178 | .365 | .141 | .128 | .584 | .621 | .657 |

## MH SOLIDS

MH Solids are the most aggressive .842" solid lifter profiles available. These are best in restricted applications where maximum torque and power are required and valve train rules are open except for requiring .842" flat tappets. The COMP Cams® #26094 valve spring, 3/8" minimum pushrod diameters, Hi-Tech™ late oiling tappets and shaft mounted rockers are all highly recommended. Please consult with a COMP Cams® CAM HELP® technician or one of our Engine Builder Sales personnel before using these profiles to reduce the risk from improper component selection. **NOTE:** Cams using these lobes should have provisions for increased oiling. Please consult with our tech representative.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| MH Rated Duration @ .020" Tappet Lift .842" Min. Dia. .018" Lash<br><br>MI 25.6 (12.3/13.3) | 6252 | 262 | 236 | 149 | .345 | .088 | .075 | .518 | .552 | .587 |
| | 6286 | 264 | 238 | 151 | .348 | .092 | .078 | .522 | .557 | .592 |
| | 6253 | 266 | 240 | 153 | .350 | .095 | .081 | .525 | .560 | .595 |
| | 6289 | 268 | 242 | 155 | .354 | .099 | .085 | .531 | .566 | .602 |
| | 6282 | 270 | 244 | 157 | .357 | .102 | .088 | .536 | .571 | .607 |
| | 6251 | 272 | 246 | 159 | .360 | .106 | .092 | .540 | .576 | .612 |
| | 6281 | 274 | 248 | 161 | .362 | .109 | .095 | .543 | .579 | .615 |
| | 6250 | 276 | 250 | 163 | .365 | .113 | .099 | .548 | .584 | .621 |
| | 6280 | 278 | 252 | 165 | .367 | .116 | .102 | .551 | .587 | .624 |
| | 6254 | 280 | 254 | 167 | .368 | .120 | .106 | .552 | .589 | .626 |
| | 6283 | 282 | 256 | 169 | .370 | .124 | .109 | .555 | .592 | .629 |
| | 6284 | 284 | 258 | 171 | .372 | .127 | .113 | .558 | .595 | .632 |
| | 6255 | 286 | 260 | 173 | .375 | .131 | .116 | .563 | .600 | .638 |
| | 6285 | 288 | 262 | 175 | .377 | .134 | .120 | .566 | .603 | .641 |
| | 6256 | 290 | 264 | 177 | .380 | .138 | .124 | .570 | .608 | .646 |

## GRI SOLIDS

The GRI Series .842" solid lifter profiles are designed using the latest techniques to fill in the gap between the XTQ and MH families while providing better dynamics than either other design. These should be used only on nitrided camshafts. Also, the mating lifters should be inspected and sorted by the chamfer with only small chamfer lifters used on these designs. Please consult with a COMP Cams® CAM HELP® technician or one of our Engine Builder Sales personnel before using these profiles to reduce the risk from improper component selection. Note: Cams using these lobes should have provisions for increased oiling. Please consult with our tech representative.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| GRI Rated Duration @ .020" Tappet Lift<br><br>MI 27.1 (13.1/14.0) | 16200 | 265 | 238 | 150 | .346 | .091 | .078 | .519 | .554 | .588 |
| | 16202 | 269 | 242 | 154 | .353 | .098 | .084 | .530 | .565 | .600 |
| | 16203 | 271 | 244 | 156 | .357 | .102 | .088 | .536 | .571 | .607 |
| | 16204 | 273 | 246 | 158 | .360 | .105 | .091 | .540 | .576 | .612 |
| | 16206 | 277 | 250 | 162 | .367 | .112 | .098 | .551 | .587 | .624 |
| | 16208 | 281 | 254 | 166 | .373 | .119 | .105 | .560 | .597 | .634 |
| | 16210 | 285 | 258 | 170 | .379 | .126 | .112 | .569 | .606 | .644 |
| | 16212 | 289 | 262 | 174 | .385 | .133 | .119 | .578 | .616 | .655 |
| | 16214 | 293 | 266 | 178 | .391 | .140 | .126 | .587 | .626 | .665 |
| | 16216 | 297 | 270 | 182 | .397 | .147 | .133 | .596 | .635 | .675 |
| | 16218 | 301 | 274 | 186 | .403 | .154 | .140 | .605 | .645 | .685 |
| | 16220 | 305 | 278 | 190 | .409 | .161 | .147 | .614 | .654 | .695 |
| | 16222 | 309 | 282 | 194 | .415 | .168 | .154 | .623 | .664 | .706 |
| | 16188 | 281 | 254 | 166 | .360 | .119 | .105 | .540 | .576 | .612 |

## MEM SOLIDS

The MEM Series .842" solid lifter profiles were designed for the first Engine Masters competition. May work on minimum chamfer .842" lifters for a short period of time but would be much safer on .875" tappets. 1.948" minimum journal diameter. Nitriding and increased oiling are highly recommended.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| MEM Rated Duration @ .020" Tappet Lift<br><br>MI 25.5 (12.4/13.1) | 6780 | 262 | 237 | 152 | .363 | .092 | .078 | .545 | .581 | .617 |
| | 6782 | 266 | 241 | 156 | .369 | .099 | .085 | .554 | .590 | .627 |
| | 6784 | 270 | 245 | 160 | .375 | .106 | .092 | .563 | .600 | .638 |
| | 6786 | 274 | 249 | 164 | .381 | .113 | .099 | .572 | .610 | .648 |
| | 6788 | 278 | 253 | 168 | .387 | .120 | .106 | .581 | .619 | .658 |

## MHF SOLIDS

MHF Solids are similar to the MH Series but have even more velocity and more area to take complete advantage of the larger .875" Ford lifter. Please consult with a COMP Cams® CAM HELP® technician or one of our Engine Builder Sales personnel before using these profiles to reduce the risk from improper component selection. **NOTE:** Cams using these lobes should have provisions for increased oiling. Please consult with our tech representative.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| MHF Rated Duration @ .020" Tappet Lift .875" Min. Dia. .018" Lash<br><br>MI 25.6 (12.4/13.2) | 7393 | 260 | 234 | 150 | .355 | .085 | .071 | .533 | .568 | .604 |
| | 7394 | 262 | 236 | 152 | .357 | .089 | .075 | .536 | .571 | .607 |
| | 7395 | 264 | 238 | 154 | .359 | .093 | .078 | .539 | .574 | .610 |
| | 7404 | 266 | 240 | 156 | .361 | .096 | .082 | .542 | .578 | .614 |
| | 7405 | 268 | 242 | 158 | .362 | .100 | .085 | .543 | .579 | .615 |
| | 7406 | 270 | 244 | 160 | .364 | .104 | .089 | .546 | .582 | .619 |
| | 7408 | 274 | 248 | 164 | .369 | .111 | .096 | .554 | .590 | .627 |
| | 7409 | 278 | 252 | 168 | .373 | .118 | .104 | .560 | .597 | .634 |
| | 7411 | 282 | 256 | 172 | .380 | .126 | .111 | .570 | .608 | .646 |
| | 7412 | 286 | 260 | 176 | .385 | .133 | .118 | .578 | .616 | .655 |
| | 7413 | 290 | 264 | 180 | .390 | .141 | .126 | .585 | .624 | .663 |
| | 7414 | 294 | 268 | 184 | .395 | .148 | .133 | .593 | .632 | .672 |
| | 7415 | 296 | 270 | 186 | .397 | .152 | .137 | .596 | .635 | .675 |
| | 7416 | 298 | 272 | 188 | .400 | .156 | .141 | .600 | .640 | .680 |

## FL & SQ SOLIDS

The FL Series is designed to provide excellent area under the curve with an .875" tappet. These work well in place of TLs where .875" lifters can be used. Excellent in restricted applications with 1.65:1 to 1.75:1 rocker arms. Increased valve spring loads are recommended for higher RPM. The SQ designs are the larger cousins of the FL series and can be used in higher RPM applications with increased spring loads. Note: Cams using these lobes should have provisions for increased oiling. Please consult with our tech representative.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| FL .875" Rated Duration @ .020" Tappet Lift .875" Min. Dia. MI 29.2 (14.6/14.6) | 7130 | FL268 | 239 | 153 | .356 | .091 | .078 | .534 | .570 | .605 |
| | 7131 | FL272 | 243 | 157 | .361 | .098 | .084 | .542 | .578 | .614 |
| | 7132 | FL276 | 247 | 161 | .366 | .106 | .091 | .549 | .586 | .622 |
| | 7133 | FL280 | 251 | 165 | .371 | .113 | .098 | .557 | .594 | .631 |
| | 7134 | FL284 | 254 | 169 | .381 | .120 | .106 | .572 | .610 | .648 |
| SQ .875" Rated Duration @ .020" Tappet Lift .875" Min. Dia. MI 29.2 (14.6/14.6) | 7250 | 289 | 260 | 175 | .385 | .132 | .117 | .578 | .616 | .655 |
| | 7262 | 291 | 262 | 177 | .385 | .135 | .120 | .578 | .616 | .655 |
| | 7260 | 293 | 264 | 179 | .390 | .138 | .123 | .585 | .624 | .663 |
| | 7263 | 295 | 266 | 181 | .390 | .142 | .127 | .585 | .624 | .663 |
| | 7261 | 297 | 268 | 183 | .400 | .146 | .131 | .600 | .640 | .680 |
| | 7265 | 300 | 270 | 185 | .400 | .150 | .135 | .600 | .640 | .680 |
| | 7266 | 302 | 272 | 187 | .400 | .154 | .139 | .600 | .640 | .680 |
| | 7267 | 304 | 274 | 189 | .400 | .158 | .143 | .600 | .640 | .680 |

## HIGH RPM DASH 12 SOLIDS

Designed to turn high engine speed while maintaining control of the valve. Must use .875" diameter lifter. For use with 1.65 to 1.7+ rocker arms. Easy on valve train components. Intake designs have faster opening ramps and can be used on intake or exhaust. Exhaust designs have symmetric ramps and are smoother. Note: Cams using these lobes should have provisions for increased oiling. Please consult with our tech representative.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| High RPM Dash 12 Int. Rated Duration @ .020" Tappet Lift .875" Min. Dia. MI 35.0 (16.5/18.5) | 7160 | 292-12 | 258 | 168 | .375 | .120 | .106 | .563 | .600 | .638 |
| | 7161 | 296-12 | 262 | 171 | .380 | .128 | .113 | .570 | .608 | .646 |
| | 7162 | 300-12 | 266 | 176 | .390 | .130 | .116 | .585 | .624 | .663 |
| | 7163 | 302-12 | 268 | 179 | .395 | .134 | .119 | .593 | .632 | .672 |
| | 7164 | 304-12 | 270 | 180 | .395 | .138 | .123 | .593 | .632 | .672 |
| | 7165 | 306-12 | 272 | 182 | .400 | .142 | .127 | .600 | .640 | .680 |
| | 7166 | 308-12 | 274 | 183 | .400 | .145 | .130 | .600 | .640 | .680 |
| | 7168 | 312-12 | 278 | 188 | .408 | .153 | .138 | .612 | .653 | .694 |
| | 7158 | 314-12 | 280 | 190 | .410 | .156 | .142 | .615 | .656 | .697 |
| | 7159 | 318-12 | 284 | 194 | .410 | .164 | .149 | .615 | .656 | .697 |
| High RPM Dash 12 Exh. Rated Duration @ .020" Tappet Lift .875" Min. Dia. MI 37.0 (18.5/18.5) | 7169 | 312-11 | 276 | 184 | .400 | .148 | .134 | .600 | .640 | .680 |
| | 7170 | 316-12 | 280 | 188 | .408 | .155 | .141 | .612 | .653 | .694 |
| | 7174 | 318-11 | 282 | 190 | .410 | .159 | .145 | .615 | .656 | .697 |
| | 7171 | 320-12 | 284 | 192 | .410 | .163 | .148 | .615 | .656 | .697 |
| | 7172 | 322-12 | 286 | 194 | .410 | .167 | .152 | .615 | .656 | .697 |

## DASH 13 SOLIDS

Dash 13 Solids are very similar to both the Dash 12 and XX open designs. These provide a more modern, in-between series that can handle more rocker ratio than either of the two earlier families. Note: Cams using these lobes should have provisions for increased oiling.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.6 | 1.7 | 1.8 |
| Dash 13 Rated Duration @ .020" Tappet Lift .875" Min. Dia. MI 33.8 (16.6/16.9) | 7185 | 310-13 | 276 | 186 | .392 | .151 | .136 | .627 | .666 | .706 |
| | 9185 | 310 | 276 | 186 | .402 | .151 | .136 | .643 | .683 | .724 |
| | 7186 | 312-13 | 278 | 188 | .394 | .155 | .140 | .630 | .670 | .709 |
| | 9186 | 312 | 278 | 188 | .404 | .155 | .140 | .646 | .687 | .727 |
| | 7187 | 314-13 | 280 | 190 | .396 | .159 | .144 | .634 | .673 | .713 |
| | 9187 | 314 | 280 | 190 | .406 | .159 | .144 | .650 | .690 | .731 |
| | 7188 | 316-13 | 282 | 192 | .398 | .163 | .148 | .637 | .677 | .716 |
| | 9188 | 316 | 282 | 192 | .408 | .163 | .148 | .653 | .694 | .734 |
| | 7189 | 318-13 | 284 | 194 | .400 | .166 | .151 | .640 | .680 | .720 |
| | 9189 | 318 | 284 | 194 | .410 | .166 | .151 | .656 | .697 | .738 |
| | 7190 | 320-13 | 286 | 196 | .402 | .170 | .155 | .643 | .683 | .724 |
| | 9190 | 320 | 286 | 196 | .412 | .170 | .155 | .659 | .700 | .742 |
| | 7191 | 322-13 | 288 | 198 | .403 | .174 | .159 | .645 | .685 | .725 |
| | 9191 | 322 | 288 | 198 | .414 | .174 | .159 | .662 | .704 | .745 |
| | 7192 | 324-13 | 290 | 200 | .404 | .178 | .163 | .646 | .687 | .727 |
| | 9192 | 324 | 290 | 200 | .416 | .178 | .163 | .666 | .707 | .749 |
| | 7193 | 326-13 | 292 | 202 | .405 | .182 | .167 | .648 | .689 | .729 |
| | 9193 | 326 | 292 | 202 | .418 | .182 | .167 | .669 | .711 | .752 |
| | 7194 | 328-13 | 294 | 204 | .406 | .186 | .171 | .650 | .690 | .731 |
| | 9194 | 328 | 294 | 204 | .420 | .186 | .171 | .672 | .714 | .756 |
| | 7015 | 330-13 | 296 | 206 | .407 | .189 | .174 | .651 | .692 | .733 |
| | 9195 | 330 | 296 | 206 | .422 | .189 | .174 | .675 | .717 | .760 |
| | 7016 | 332-13 | 298 | 208 | .408 | .193 | .178 | .653 | .694 | .734 |

## F3 EXHAUST SOLIDS

The F3 Exhaust Solids are like the Dash 13 high lift lobes, but they have a faster opening ramp design to help increase torque while increasing opening area to reduce pumping losses. **NOTE:** Cams using these lobes should have provisions for increased oiling.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.6 | 1.7 | 1.8 |
| F3 Exh. Rated Duration @ .020" Tappet Lift .875" Min. Dia. MI 31.9 (15.0/16.9) | 9158 | 314 | 283 | 194 | .410 | .166 | .151 | .656 | .697 | .738 |
| | 9159 | 316 | 285 | 196 | .412 | .170 | .155 | .659 | .700 | .742 |
| | 9160 | 318 | 287 | 198 | .414 | .174 | .159 | .662 | .704 | .745 |
| | 9161 | 320 | 289 | 200 | .416 | .178 | .163 | .666 | .707 | .749 |
| | 9162 | 322 | 291 | 202 | .418 | .182 | .167 | .669 | .711 | .752 |

## D3C SOLIDS

D3C Solids are like the Dash 13 designs but with slightly less velocity for coated tappets.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.6 | 1.7 | 1.8 |
| D3C Rated Duration @ .020" Tappet Lift .875" Min. Dia. MI 33.8 (16.6/16.9) | 9384 | 312 | 278 | 187 | .390 | .154 | .140 | .624 | .663 | .702 |
| | 9385 | 314 | 280 | 189 | .392 | .158 | .144 | .627 | .666 | .706 |
| | 9386 | 316 | 282 | 191 | .394 | .162 | .147 | .630 | .670 | .709 |
| | 9387 | 318 | 284 | 193 | .396 | .166 | .151 | .634 | .673 | .713 |
| | 9388 | 320 | 286 | 195 | .398 | .169 | .155 | .637 | .677 | .716 |
| | 9389 | 322 | 288 | 197 | .400 | .173 | .158 | .640 | .680 | .720 |

## XX SOLIDS

The smaller Restricted Designs are very aggressive. The larger Open Designs are for continuous high RPM, providing stability over 8500 with good related components. Both require proper spring selection and regular maintenance. Very good horsepower curves. Proper break-in is very critical with these lobe designs. Best when used with COMP® HTL Lifters and 1.6-1.7 rocker ratios. Note: Cams using these lobes should have provisions for increased oiling. Please consult with our tech representative.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| XX Rated Duration @ .020" Tappet Lift .875" Min. Dia. MI 30.0 (13.6/16.4) | 7110 | 278XX | 246 | 159 | .365 | .102 | .088 | .548 | .584 | .621 |
| | 7113 | 280XX | 248 | 160 | .365 | .103 | .090 | .548 | .584 | .621 |
| | 7114 | 282XX | 250 | 162 | .370 | .106 | .092 | .555 | .592 | .629 |
| | 7115 | 284XX | 254 | 166 | .366 | .114 | .100 | .549 | .586 | .622 |
| | 7136 | 286XX | 256 | 168 | .378 | .118 | .104 | .567 | .605 | .643 |
| | 7116 | 288XX | 258 | 170 | .380 | .120 | .107 | .570 | .608 | .646 |
| | 7118 | 294XX | 262 | 175 | .390 | .129 | .115 | .585 | .624 | .663 |
| | 7117 | 298XX | 266 | 180 | .400 | .137 | .122 | .600 | .640 | .680 |
| Open Designs Rated Duration @ .020" Tappet Lift .875" Min. Dia. MI 32.7 (16.4/16.4) | 7068 | 292XX | 260 | 170 | .390 | .124 | .110 | .585 | .624 | .663 |
| | 7069 | 296XX | 264 | 174 | .395 | .133 | .119 | .593 | .632 | .672 |
| | 7071 | 300XX | 268 | 178 | .400 | .139 | .122 | .600 | .640 | .680 |
| | 7072 | 302XX | 270 | 180 | .403 | .141 | .124 | .605 | .645 | .685 |
| | 7073 | 304XX | 272 | 182 | .406 | .145 | .126 | .609 | .650 | .690 |
| | 7074 | 306XX | 274 | 184 | .408 | .148 | .131 | .612 | .653 | .694 |
| | 7075 | 308XX | 276 | 186 | .410 | .153 | .133 | .615 | .656 | .697 |
| | 7125 | 310XX | 278 | 190 | .415 | .158 | .139 | .623 | .664 | .706 |
| | 7077 | 312XX | 280 | 191 | .415 | .161 | .143 | .623 | .664 | .706 |
| | 7078 | 314XX | 282 | 193 | .418 | .165 | .150 | .627 | .669 | .711 |
| | 7127 | 316XX | 284 | 196 | .420 | .169 | .146 | .630 | .672 | .714 |
| | 7135 | 320XX | 288 | 200 | .420 | .177 | .154 | .630 | .672 | .714 |

## HIGH ROCKER RATIO SOLIDS

Specially designed for NASCAR Sprint Cup restrictor plate engines. Use with 2.0:1 intake rocker and 1.9:1 exhaust along with a COMP Cams® #927 valve spring. Very smooth for 2.0:1 design and very easy on other valve train parts. Note: Cams using these lobes should have provisions for increased oiling. Please consult with our tech representative.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.9 | 2.0 | 2.1 |
| High Rocker Ratio Rated Duration @ .020" Tappet Lift .875" Min. Dia. MI 32.3 (15.7/16.6) | 7380 | 261 | 230 | 141 | .325 | .075 | .063 | .618 | .650 | .683 |
| | 7381 | 265 | 234 | 144 | .325 | .081 | .069 | .618 | .650 | .683 |
| | 7382 | 270 | 238 | 146 | .325 | .087 | .075 | .618 | .650 | .683 |
| | 7388 | 272 | 240 | 149 | .335 | .090 | .078 | .637 | .670 | .704 |
| | 7383 | 274 | 242 | 152 | .335 | .094 | .081 | .637 | .670 | .704 |
| | 7386 | 276 | 244 | 153 | .335 | .097 | .084 | .637 | .670 | .704 |
| | 7384 | 278 | 246 | 154 | .335 | .100 | .087 | .637 | .670 | .704 |
| | 7387 | 280 | 248 | 157 | .340 | .104 | .090 | .646 | .680 | .714 |
| | 7385 | 282 | 250 | 158 | .340 | .107 | .094 | .646 | .680 | .714 |
| | 7389 | 286 | 254 | 163 | .350 | .114 | .100 | .665 | .700 | .735 |
| | 7396 | 292 | 260 | 169 | .355 | .125 | .111 | .675 | .710 | .746 |
| | 7399 | 298 | 266 | 175 | .360 | .136 | .121 | .684 | .720 | .756 |

## HIGH ROCKER RATIO II SOLIDS

Specially designed for NASCAR Sprint Cup restrictor plate engines. Use with 2.0:1 intake rocker and 1.9:1 exhaust along with a COMP Cams® #927 valve spring. More aggressive than earlier 2.0:1 design but still very easy on valve train parts.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.9 | 2.0 | 2.1 |
| High Rocker Ratio II Rated Duration @ .020" Tappet Lift .875" Min. Dia. MI 29.9 (14.6/15.3) | 7353 | 266 | 236 | 148 | .332 | .087 | .063 | .631 | .664 | .697 |
| | 7354 | 268 | 238 | 150 | .335 | .090 | .076 | .637 | .670 | .704 |
| | 7355 | 270 | 240 | 152 | .338 | .093 | .080 | .642 | .676 | .710 |
| | 7356 | 272 | 242 | 154 | .342 | .097 | .083 | .650 | .684 | .718 |
| | 7357 | 274 | 244 | 157 | .345 | .101 | .087 | .656 | .690 | .725 |
| | 7358 | 276 | 246 | 158 | .345 | .104 | .090 | .656 | .690 | .725 |
| | 7359 | 278 | 248 | 160 | .345 | .108 | .093 | .656 | .690 | .725 |
| | 7362 | 280 | 250 | 162 | .345 | .111 | .097 | .656 | .690 | .725 |
| | 7363 | 282 | 252 | 164 | .345 | .115 | .100 | .656 | .690 | .725 |
| | 7364 | 284 | 254 | 166 | .345 | .119 | .104 | .656 | .690 | .725 |
| | 7365 | 286 | 256 | 167 | .345 | .122 | .108 | .656 | .690 | .725 |
| | 7366 | 288 | 258 | 169 | .345 | .126 | .111 | .656 | .690 | .725 |
| | 7367 | 290 | 260 | 170 | .345 | .129 | .115 | .656 | .690 | .725 |
| | 7368 | 292 | 262 | 172 | .345 | .133 | .118 | .656 | .690 | .725 |

## N SOLIDS

Our most popular NASCAR Sprint Cup designs, these provide excellent power and reliability. Very stable at high RPM (9400+) with COMP Cams® #927 valve springs and proper valve train selection. Excellent high end power with slightly less low-end torque than XX series. Needs .875" HTL tappet and true lifter bores with very careful break-in.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| N Rated Duration @ .020" Tappet Lift .875" Min. Dia. MI 31.8 (15.0/16.8) | 7020 | 294N-1 | 262 | 174 | .401 | .129 | .115 | .602 | .642 | .682 |
| | 7021 | 298N-2 | 266 | 176 | .410 | .134 | .120 | .615 | .656 | .697 |
| | 7022 | 300N-1 | 268 | 173 | .406 | .132 | .121 | .609 | .650 | .690 |
| | 7028 | 302N-1 | 270 | 181 | .410 | .143 | .128 | .615 | .656 | .697 |
| | 7023 | 304N-1 | 272 | 183 | .412 | .147 | .132 | .618 | .659 | .700 |
| | 7084 | 306N-1 | 274 | 186 | .411 | .151 | .136 | .617 | .658 | .699 |
| | 7085 | 308N-1 | 276 | 187 | .411 | .155 | .141 | .617 | .658 | .699 |
| | 7086 | 310N-1 | 278 | 189 | .411 | .158 | .143 | .617 | .658 | .699 |
| | 7087 | 312N-1 | 280 | 191 | .411 | .161 | .147 | .617 | .658 | .699 |
| N Rated Duration @ .020" Tappet Lift .875" Min. Dia. MI 38.7 (20.6/18.1) | 7120 | 304N-3E | 266 | 174 | .390 | .128 | .114 | .585 | .624 | .663 |
| | 7121 | 308N-1E | 270 | 179 | .400 | .133 | .119 | .600 | .640 | .680 |
| | 7122 | 310N-1E | 271 | 178 | .390 | .137 | .123 | .585 | .624 | .663 |
| | 7123 | 314N-1E | 276 | 183 | .400 | .145 | .131 | .600 | .640 | .680 |
| | 7124 | 318N-1E | 280 | 186 | .405 | .149 | .135 | .608 | .648 | .689 |

## OVAL+ SOLIDS

These profiles have their design based on the ever popular N-1 series but have been optimized for the higher rocker ratios, tighter lash settings and lower compression used in today's NASCAR Sprint Cup engines. For use with 1.7 to 1.8:1 rockers (or more in qualifying). Requires the same care as the N-1 for break-in.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.7 | 1.75 | 1.8 |
| Oval+ Rated Duration @ .020" Tappet Lift .875" Min. Dia. MI 32.5 (15.6/16.9) | 7037 | 299 | 266 | 177 | .399 | .136 | .122 | .678 | .698 | .718 |
| | 7038 | 301 | 268 | 179 | .401 | .140 | .125 | .682 | .702 | .722 |
| | 7039 | 303 | 270 | 181 | .403 | .143 | .128 | .685 | .705 | .725 |
| | 7040 | 305 | 272 | 183 | .405 | .147 | .132 | .689 | .709 | .729 |
| | 7041 | 307 | 274 | 185 | .407 | .151 | .136 | .692 | .712 | .733 |
| | 7042 | 309 | 276 | 187 | .409 | .154 | .140 | .695 | .716 | .736 |
| | 7043 | 311 | 278 | 189 | .411 | .158 | .143 | .699 | .719 | .740 |
| | 7044 | 313 | 280 | 191 | .413 | .162 | .147 | .702 | .723 | .743 |
| | 7049 | 315 | 282 | 193 | .415 | .165 | .151 | .706 | .726 | .747 |

## FE .875" SOLIDS

These profiles have their design based on the ever popular N-1 series but have been optimized for the higher rocker ratios, tighter lash settings and lower compression used in today's NASCAR Sprint Cup engines. For use with 1.7 to 1.8:1 rockers (or more in qualifying). Requires the same care as the N-1 for break-in.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.7 | 1.75 | 1.8 |
| FE .875" Rated Duration @ .020" Tappet Lift .875" Min. Dia. MI 32.0 (15.0/17.0) | 7665 | 299 | 267 | 178 | .398 | .138 | .123 | .677 | .697 | .716 |
| | 7666 | 301 | 269 | 180 | .400 | .141 | .127 | .680 | .700 | .720 |
| | 7667 | 303 | 271 | 182 | .402 | .145 | .130 | .683 | .704 | .724 |
| | 7668 | 305 | 273 | 184 | .405 | .149 | .134 | .689 | .709 | .729 |
| | 7669 | 307 | 275 | 186 | .408 | .153 | .137 | .694 | .714 | .734 |
| | 7670 | 309 | 277 | 188 | .411 | .156 | .141 | .699 | .719 | .740 |
| | 7671 | 311 | 279 | 190 | .413 | .159 | .145 | .702 | .723 | .743 |

## TDLC SOLIDS

The TDLC Solids are a cross between the Oval+ and FE designs but with lower velocity for use with coated tappets.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.9 | 2.0 | 2.1 |
| TDLC Rated Duration @ .020" Tappet Lift .875" Min. Dia. MI 31.8 (15.5/16.3) | 9374 | 297 | 266 | 176 | .384 | .134 | .120 | .730 | .768 | .806 |
| | 9375 | 299 | 268 | 178 | .386 | .138 | .124 | .733 | .772 | .811 |
| | 9376 | 301 | 270 | 180 | .388 | .142 | .127 | .737 | .776 | .815 |
| | 9377 | 303 | 272 | 182 | .390 | .145 | .131 | .741 | .780 | .819 |

## T1N – VERY HIGH RPM .875" FLAT

The T1N series is the next step in the evolution of the N1, Oval+ and FE series. These are optimized for use on tool steel cams and work very well with the popular DLC tappet coatings. T1N profiles have been used very successfully on both the intake and exhaust side.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.8 | 1.9 | 2.0 |
| T1N High RPM .875" Flat Rated Duration @ .020" Tappet Lift .875" Min. Dia. MI 32.6 (15.7/16.9) | 9360 | 303 | 270 | 181 | .394 | .142 | .128 | .709 | .749 | .788 |
| | 9361 | 305 | 272 | 183 | .396 | .146 | .131 | .713 | .752 | .792 |
| | 9362 | 307 | 274 | 185 | .398 | .150 | .135 | .716 | .756 | .796 |
| | 9363 | 309 | 276 | 187 | .400 | .153 | .139 | .720 | .760 | .800 |
| | 9364 | 311 | 278 | 189 | .402 | .157 | .142 | .724 | .764 | .804 |
| | 9365 | 313 | 280 | 191 | .404 | .161 | .146 | .727 | .768 | .808 |
| | 9366 | 315 | 282 | 193 | .406 | .164 | .150 | .731 | .771 | .812 |
| | 9367 | 317 | 284 | 195 | .408 | .168 | .153 | .734 | .775 | .816 |
| | 9368 | 319 | 286 | 197 | .410 | .172 | .157 | .738 | .779 | .820 |
| | 9369 | 321 | 288 | 199 | .412 | .176 | .161 | .742 | .783 | .824 |
| | 9370 | 323 | 290 | 201 | .414 | .179 | .164 | .745 | .787 | .828 |

## TCT – HIGH RATIO .875" FLAT

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 2.0 | 2.1 | 2.2 |
| TCT High Ratio .875" Flat Rated Duration @ .020" Tappet Lift MI 33.3 (16.4/16.9) | 9771 | 298 | 265 | 173 | .372 | .130 | .116 | .744 | .781 | .818 |
| | 9772 | 300 | 267 | 175 | .374 | .133 | .119 | .748 | .785 | .823 |
| | 9773 | 302 | 269 | 177 | .376 | .137 | .123 | .752 | .790 | .827 |

## NRX SOLIDS

The NRX Solids are designed for use in NASCAR Spring Cup engines with 55mm or larger journals. They are designed with higher lobe lifts than the standard journal families to allow either less ratio or higher lift. Use in applications with less than 55mm journals will result in a small nose radius and premature wear.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.7 | 1.75 | 1.8 |
| NRX Rated Duration @ .020" Tappet Lift .875" Min. Dia. MI 32.6 (15.5/17.1) | 7203 | 299 | 266 | 179 | .414 | .139 | .124 | .704 | .725 | .745 |
| | 7204 | 301 | 268 | 181 | .416 | .143 | .128 | .707 | .728 | .749 |
| | 7205 | 303 | 270 | 183 | .418 | .147 | .132 | .711 | .732 | .752 |
| | 7206 | 305 | 272 | 185 | .420 | .151 | .136 | .714 | .735 | .756 |
| | 7207 | 307 | 274 | 187 | .422 | .155 | .139 | .717 | .739 | .760 |
| | 7208 | 309 | 276 | 189 | .424 | .158 | .143 | .721 | .742 | .763 |
| | 9709 | 311 | 278 | 191 | .426 | .162 | .147 | .724 | .746 | .767 |
| | 9710 | 313 | 280 | 193 | .428 | .166 | .151 | .728 | .749 | .770 |
| | 9711 | 315 | 282 | 195 | .430 | .170 | .155 | .731 | .753 | .774 |
| | 9712 | 317 | 284 | 197 | .432 | .174 | .158 | .734 | .756 | .778 |
| | 9713 | 319 | 286 | 199 | .434 | .177 | .162 | .738 | .760 | .781 |
| | 9714 | 321 | 288 | 201 | .436 | .181 | .166 | .741 | .763 | .785 |

## DIR 2.3 RATIO CONVERSIONS – .875" FLAT

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 2.20 | 2.30 | 2.40 |
| DIR High Lift Rated Duration @ .020" Tappet Lift MI 34.0 (16.0/18.0) | 17574 | 290 | 256 | 166 | .378 | .115 | .101 | .832 | .869 | .907 |
| | 17600 | 294 | 259 | 167 | .379 | .119 | .105 | .834 | .872 | .910 |
| | 17382 | 294 | 260 | 169 | .376 | .121 | .108 | .827 | .865 | .902 |
| | 17525 | 292 | 260 | 172 | .375 | .126 | .112 | .825 | .863 | .900 |
| | 17576 | 294 | 260 | 169 | .380 | .122 | .108 | .836 | .874 | .912 |
| | 17549 | 314 | 279 | 186 | .380 | .154 | .140 | .836 | .874 | .912 |
| | 17537 | 312 | 280 | 189 | .382 | .158 | .144 | .840 | .879 | .917 |
| | 17570 | 316 | 281 | 185 | .374 | .153 | .139 | .823 | .860 | .898 |
| | 17538 | 314 | 282 | 191 | .384 | .162 | .147 | .845 | .883 | .922 |
| | 17605 | 318 | 282 | 187 | .379 | .156 | .142 | .834 | .872 | .910 |
| | 17572 | 320 | 285 | 189 | .376 | .159 | .146 | .827 | .865 | .902 |

## BB GG .875" PLATE

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 2.2 | 2.3 | 2.4 |
| BB & GG COT Rated Duration @ .875" Min. Dia. MI 33.1 (16.1/17.0) | 17238 | 280 | 247 | 158 | .369 | .102 | .088 | .812 | .849 | .886 |
| | 17239 | 282 | 249 | 160 | .370 | .105 | .092 | .814 | .851 | .888 |
| | 17240 | 284 | 251 | 162 | .371 | .109 | .095 | .816 | .853 | .890 |
| | 17241 | 286 | 253 | 163 | .372 | .112 | .098 | .818 | .856 | .893 |
| | 17242 | 288 | 255 | 165 | .373 | .116 | .102 | .821 | .858 | .895 |
| BB & GG COT Rated Duration @ .875" Min. Dia. MI 34.1 (16.5/17.6) | 17244 | 290 | 256 | 165 | .376 | .115 | .101 | .827 | .865 | .902 |
| | 17245 | 292 | 258 | 167 | .377 | .118 | .104 | .829 | .867 | .905 |
| | 17246 | 294 | 260 | 169 | .378 | .121 | .108 | .832 | .869 | .907 |
| | 17248 | 298 | 264 | 173 | .380 | .128 | .114 | .836 | .874 | .912 |

## TDP FLAT PLATE

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 2.0 | 2.1 | 2.2 |
| TDP Flat Plate Rated Duration @ .020" Tappet Lift .875" Min. Dia. MI 29.6 (14.4/15.2) | 9635 | 270 | 241 | 154 | .354 | .094 | .081 | .708 | .743 | .779 |
| | 9636 | 272 | 243 | 156 | .356 | .098 | .084 | .712 | .748 | .783 |
| | 9637 | 274 | 245 | 158 | .358 | .102 | .088 | .716 | .752 | .788 |
| | 9638 | 276 | 247 | 160 | .360 | .105 | .091 | .720 | .756 | .792 |
| | 9639 | 278 | 249 | 162 | .362 | .109 | .095 | .724 | .760 | .796 |

## TDP 2 FLAT PLATE

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 2.0 | 2.1 | 2.2 |
| TDP 2 Flat Plate Rated Duration @ .020" Tappet Lift .875" Min. Dia. MI 29.6 (14.4/15.2) | 9631 | 270 | 241 | 154 | .344 | .094 | .081 | .688 | .722 | .757 |
| | 9632 | 272 | 243 | 156 | .346 | .098 | .084 | .692 | .727 | .761 |
| | 9633 | 274 | 245 | 158 | .348 | .102 | .088 | .696 | .731 | .766 |

## TDP FLAT PLATE – LOWER LOBE LIFT

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 2.0 | 2.1 | 2.2 |
| TDP – LLL Rated Duration @ .020" Tappet Lift .875" Min. Dia. MI 29.6 (14.4/15.2) | 9602 | 270 | 241 | 153 | .334 | .094 | .081 | .668 | .701 | .735 |
| | 9603 | 272 | 243 | 155 | .336 | .098 | .084 | .672 | .706 | .739 |
| | 9604 | 274 | 245 | 157 | .338 | .102 | .088 | .676 | .710 | .744 |
| | 9605 | 276 | 247 | 159 | .340 | .105 | .091 | .680 | .714 | .748 |
| | 9606 | 278 | 249 | 161 | .342 | .109 | .095 | .684 | .718 | .752 |
| | 9608 | 280 | 251 | 163 | .344 | .112 | .098 | .688 | .722 | .757 |

## HY SERIES FLAT PLATE

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 2.0 | 2.1 | 2.2 |
| HY Flat Plate Rated Duration @ .020" Tappet Lift .875" Min. Dia. MI 29.0 (14.1/14.9) | 9829 | 273 | 244 | 159 | .348 | .103 | .089 | .696 | .731 | .766 |
| | 9830 | 275 | 246 | 161 | .350 | .107 | .092 | .700 | .735 | .770 |
| | 9831 | 277 | 248 | 163 | .352 | .110 | .096 | .704 | .739 | .774 |
| | 9832 | 279 | 250 | 165 | .354 | .114 | .099 | .708 | .743 | .779 |
| | 9833 | 281 | 252 | 167 | .356 | .118 | .103 | .712 | .748 | .783 |
| | 9834 | 283 | 254 | 169 | .358 | .121 | .107 | .716 | .752 | .788 |
| | 9835 | 285 | 256 | 171 | .360 | .125 | .110 | .720 | .756 | .792 |
| | 9837 | 289 | 260 | 175 | .364 | .133 | .118 | .728 | .764 | .801 |

## CHRYSLER SPECIAL SOLIDS

These lobes are for use only in Chrysler Corporation engines with .904" tappet diameter. The "Specials" are to be used in 426c.i. or larger engines. Developed for the Top Fuel drag racing program, these designs offer excellent torque and horsepower.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| Chrysler Special Rated Duration @ .020" Tappet Lift .904" Min. Dia. MI 37.8 (16.8/21.0) | 6129 | 324-7 | 290 | 200 | .433 | .176 | .161 | .650 | .693 | .736 |
| | 6130 | 328-10 | 296 | 208 | .425 | .193 | .178 | .638 | .680 | .723 |
| | 6132 | 330-1 | 290 | 200 | .410 | .170 | .154 | .615 | .656 | .697 |
| | 6133 | 330-2 | 292 | 200 | .395 | .175 | .160 | .592 | .632 | .671 |
| | 6131 | 334-1 | 296 | 203 | .413 | .186 | .171 | .620 | .660 | .702 |
| | 6134 | 335-1 | 300 | 207 | .438 | .193 | .177 | .657 | .700 | .745 |

## MP SOLIDS

The MP Series uses a design similar to the TL Series except these have more area due to being designed with more velocity for a .904" minimum tappet diameter. They are very good in Late Model Stock applications where rules allow the larger tappet diameter. Note: Cams using these lobes should have provisions for increased oiling. Please consult with our tech representative.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| MP Solids Rated Duration @ .020" Tappet Lift .904" Min. Dia. .018" Lash | 6610 | 274 | 247 | 162 | .345 | .108 | .093 | .518 | .552 | .587 |
| | 6611 | 284 | 251 | 166 | .355 | .115 | .100 | .533 | .568 | .604 |
| | 6612 | 288 | 256 | 171 | .365 | .123 | .108 | .548 | .584 | .621 |

## MM SOLIDS

MM solids are similar to the MH and MHF Series but have even more velocity and more area to take complete advantage of the larger .904" Chrysler/Mopar lifter. Please consult with a COMP Cams® CAM HELP® technician or one of our Engine Builder Sales personnel before using these profiles to reduce the risk from improper component selection. Note: Cams using these lobes should have provisions for increased oiling. Please consult with our tech representative.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| MM<br>Rated Duration @<br>.020" Tappet Lift<br>.904" Min. Dia.<br>.018" Lash<br>MI 25.6 (12.3/13.3) | 6580 | 261 | 235 | 153 | .350 | .089 | .075 | .525 | .560 | .595 |
| | 6581 | 265 | 239 | 157 | .358 | .096 | .082 | .537 | .573 | .609 |
| | 6582 | 269 | 243 | 161 | .366 | .104 | .089 | .549 | .586 | .622 |
| | 6579 | 271 | 245 | 163 | .370 | .108 | .093 | .554 | .591 | .628 |
| | 6583 | 273 | 247 | 165 | .373 | .111 | .096 | .560 | .597 | .634 |
| | 6584 | 277 | 251 | 169 | .380 | .119 | .104 | .570 | .608 | .646 |
| | 6585 | 281 | 255 | 173 | .388 | .126 | .111 | .582 | .621 | .660 |
| | 6586 | 285 | 259 | 177 | .396 | .134 | .119 | .594 | .634 | .673 |
| | 6587 | 289 | 263 | 181 | .404 | .142 | .126 | .606 | .646 | .687 |
| | 6588 | 293 | 267 | 185 | .411 | .149 | .134 | .617 | .658 | .699 |
| | 6589 | 297 | 271 | 189 | .418 | .157 | .142 | .627 | .669 | .711 |
| | 6590 | 301 | 275 | 193 | .426 | .164 | .149 | .639 | .682 | .724 |
| | 6591 | 305 | 279 | 197 | .433 | .172 | .157 | .650 | .693 | .736 |

# SOLID ROLLER (A = BASE FOR STD JOURNAL)

## HIGH ENERGY™ STREET ROLLER

Designed specifically for street use, these Street Rollers offer unique approach ramps, allowing the use of lower seat pressure to ensure long life. These lobes are very "soundy" or "throaty" because of the opening and closing ramp designs.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| High Energy™ Street Rated Duration @ .015" Tappet Lift Valve Lash .020" MI 35.0 (17.5/17.5) | 1496 | 268HER-2 | 224 | 141 | .3500 | .068 | .056 | .525 | .560 | .595 |
| | 4002 | 272HER-2 | 228 | 144 | .3500 | .073 | .061 | .525 | .560 | .595 |
| | 1498 | 276HER-2 | 232 | 148 | .3500 | .078 | .066 | .525 | .560 | .595 |
| | 1474 | 280HER-2 | 236 | 152 | .3666 | .085 | .072 | .550 | .587 | .623 |
| | 1476 | 288HER-4 | 244 | 158 | .3666 | .098 | .084 | .550 | .587 | .623 |
| | 4220 | 300HER-2 | 255 | 170 | .3833 | .119 | .104 | .575 | .613 | .652 |
| | 4221 | 308HER-4 | 262 | 176 | .3833 | .130 | .115 | .575 | .613 | .652 |

## XTREME ENERGY™ STREET ROLLER

This newest addition to the Xtreme family of lobes delivers the responsiveness, torque and reliability only available with COMP Cams® Xtreme designs coupled with the high RPM power of modern race roller designs. Our development test included Spintron dynamics evaluations, engine dyno testing, chassis dyno testing and three Hot Rod Power Tours. Coupled with the COMP Cams® Endure-X™ Roller Lifters, these profiles bring street roller technology into the new millennium.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| Xtreme Energy™ Street Roller Standard Ratio Rated Duration @ .015" Tappet Lift Valve Lash .014"-.018" Journal = I,S,B,R… MI 28.9 (13.9/15.0) | 4870 | 256XSR | 218 | 141 | .360 | .056 | .045 | .540 | .576 | .612 |
| | 4871 | 262XSR | 224 | 147 | .360 | .066 | .053 | .540 | .576 | .612 |
| | 4872 | 268XSR | 230 | 153 | .368 | .076 | .062 | .552 | .589 | .626 |
| | 4873 | 274XSR | 236 | 159 | .376 | .087 | .072 | .564 | .602 | .639 |
| | 4874 | 280XSR | 242 | 164 | .380 | .098 | .083 | .570 | .608 | .646 |
| | 4875 | 286XSR | 248 | 170 | .384 | .110 | .094 | .576 | .614 | .653 |
| | 4876 | 292XSR | 254 | 176 | .388 | .122 | .106 | .582 | .621 | .660 |
| | 4877 | 298XSR | 260 | 181 | .392 | .135 | .118 | .588 | .627 | .666 |
| | 4878 | 304XSR | 266 | 187 | .398 | .137 | .130 | .597 | .637 | .677 |
| | 4879 | 310XSR | 272 | 193 | .404 | .159 | .143 | .606 | .646 | .687 |
| Xtreme Energy™ Street Roller High Ratio Rated Duration @ .015" Tappet Lift Valve Lash .014"-.018" Journal = I,T,S,R… MI 32.0 (14.7/17.3) | 4850 | 259 | 219 | 131 | .330 | .055 | .045 | .495 | .528 | .561 |
| | 4851 | 265 | 225 | 136 | .330 | .064 | .053 | .495 | .528 | .561 |
| | 4855 | 267 | 227 | 138 | .330 | .067 | .055 | .495 | .528 | .561 |
| | 4854 | 270 | 230 | 140 | .330 | .070 | .058 | .495 | .528 | .561 |
| | 4852 | 274 | 234 | 144 | .330 | .076 | .064 | .495 | .528 | .561 |
| | 4853 | 280 | 240 | 149 | .335 | .086 | .053 | .503 | .536 | .570 |
| | 4856 | 284 | 244 | 152 | .335 | .092 | .079 | .503 | .536 | .570 |
| | 4857 | 288 | 248 | 155 | .335 | .099 | .085 | .503 | .536 | .570 |
| | 4858 | 292 | 252 | 161 | .346 | .106 | .092 | .519 | .554 | .588 |
| | 4859 | 296 | 256 | 164 | .346 | .112 | .099 | .519 | .554 | .588 |
| | 4860 | 300 | 260 | 167 | .346 | .119 | .105 | .519 | .554 | .588 |
| | 4861 | 308 | 268 | 173 | .346 | .132 | .118 | .519 | .554 | .588 |

## XTREME ENERGY™ DURAMAX STREET ROLLERS

These lobes are similar to the Xtreme Energy™ Street Rollers and are optimized for the GM Duramax applications. Intake profiles are designed around a 1.37:1 ratio and exhaust profiles for a 1.69:1 ratio. The exhaust lobes are slightly less aggressive for the Duramax valve train system. These profiles are designed for .006" to .010" cold lash. The exhaust lobes go up in 14° increments compared to 12° for the intakes in order to reduce exhaust pumping losses in higher RPM applications.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO |
|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.37 |
| Xtreme Energy™ Duramax Int. Rated Duration @ .006" Tappet Lift<br><br>MI 28.4 (13.6/14.8) | 4884 | 246 | 185 | 106 | .306 | .019 | .014 | .419 |
| | 4910 | 245 | 185 | 111 | .346 | .019 | .014 | .474 |
| | 4886 | 258 | 197 | 119 | .329 | .030 | .022 | .451 |
| | 4911 | 257 | 197 | 123 | .366 | .030 | .022 | .501 |
| | 4888 | 270 | 209 | 132 | .350 | .044 | .034 | .480 |
| | 4912 | 269 | 209 | 135 | .381 | .044 | .034 | .522 |
| | 4904 | 281 | 221 | 144 | .363 | .062 | .050 | .497 |
| | 4913 | 281 | 221 | 147 | .396 | .062 | .050 | .543 |
| | | | @ .050 | @ .200 | | 106° | 110° | 1.69 |
| Xtreme Energy™ Duramax Exh. Rated Duration @ .006" Tappet Lift<br><br>MI 32.4 (15.7/16.7) | 4894 | 254 | 188 | 84 | .249 | .028 | .022 | .421 |
| | 4915 | 254 | 188 | 95 | .281 | .028 | .022 | .475 |
| | 4896 | 268 | 202 | 101 | .266 | .041 | .033 | .450 |
| | 4916 | 268 | 202 | 110 | .297 | .041 | .033 | .502 |
| | 4898 | 282 | 216 | 117 | .284 | .057 | .047 | .480 |
| | 4917 | 282 | 216 | 123 | .309 | .057 | .047 | .522 |
| | 4908 | 294 | 228 | 129 | .294 | .073 | .062 | .497 |
| | 4918 | 297 | 228 | 136 | .321 | .073 | .062 | .542 |

## BASE DESIGN ROLLERS

A twenty year culmination of design and research, these lobes range from extra gentle to very aggressive. Included in this group are the High Torque Roller and High Torque Oval Roller Series used in the early 80s.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| Base Design Rated Duration @ .020" Tappet Lift | 1460 | 285-2 | 252 | 164 | .375 | .110 | .096 | .563 | .600 | .638 |
| | 1462 | 286-1 | 250 | 162 | .392 | .112 | .096 | .588 | .627 | .666 |
| | 1464 | 295-2 | 262 | 174 | .366 | .128 | .114 | .549 | .586 | .622 |
| | 1465 | 295-3 | 262 | 176 | .390 | .128 | .113 | .585 | .624 | .663 |
| | 4034 | 295-5 | 260 | 170 | .394 | .116 | .102 | .591 | .630 | .670 |
| | 1473 | 296-1 | 260 | 173 | .393 | .124 | .108 | .590 | .629 | .668 |
| | 1466 | 296-2 | 265 | 180 | .400 | .137 | .121 | .600 | .640 | .680 |
| | 1677 | 302-1 | 265 | 177 | .395 | .132 | .117 | .593 | .632 | .672 |
| | 4000 | 305-2 | 272 | 186 | .366 | .146 | .132 | .549 | .586 | .622 |
| | 1609 | 305-3 | 270 | 186 | .418 | .146 | .130 | .627 | .669 | .711 |
| | 4035 | 305-4 | 272 | 184 | .394 | .151 | .135 | .591 | .630 | .670 |
| | 4059 | 306-1 | 270 | 186 | .400 | .145 | .130 | .600 | .640 | .680 |
| | 4242 | 306-2 | 273 | 190 | .416 | .153 | .137 | .624 | .666 | .707 |
| | 1611 | 308-2 | 275 | 191 | .452 | .156 | .139 | .678 | .723 | .768 |
| | 1612 | 309-2 | 276 | 196 | .420 | .163 | .146 | .630 | .672 | .714 |
| | 1613 | 310-2 | 280 | 195 | .545 | .165 | .147 | .818 | .872 | .927 |
| | 1479 | 312-2 | 279 | 197 | .425 | .167 | .150 | .638 | .680 | .723 |
| | 4066 | 316-1 | 276 | 186 | .413 | .150 | .134 | .620 | .661 | .702 |
| | 4244 | 316-2 | 284 | 200 | .433 | .176 | .159 | .650 | .693 | .736 |
| | 1617 | 316-3 | 282 | 200 | .454 | .173 | .156 | .681 | .726 | .772 |
| | 1628 | 324-4 | 287 | 201 | .423 | .174 | .159 | .635 | .677 | .719 |
| | 1658 | 320-1 | 281 | 196 | .450 | .164 | .148 | .675 | .720 | .765 |
| | 1620 | 320-2 | 288 | 201 | .434 | .179 | .163 | .651 | .694 | .738 |
| | 1486 | 321-4 | 284 | 196 | .440 | .170 | .154 | .660 | .704 | .748 |
| | 4025 | 322-1 | 282 | 193 | .427 | .163 | .147 | .641 | .683 | .726 |
| | 1469 | 322-2 | 288 | 204 | .458 | .185 | .165 | .687 | .733 | .779 |
| | 4062 | 323-5 | 287 | 202 | .460 | .180 | .164 | .690 | .736 | .782 |
| | 4087 | 324-2 | 286 | 197 | .454 | .171 | .155 | .681 | .726 | .772 |
| | 1630 | 325-4 | 288 | 198 | .440 | .176 | .160 | .660 | .704 | .748 |
| | 1394 | 327-5 | 290 | 204 | .460 | .179 | .163 | .690 | .736 | .782 |
| | 1659 | 328-1 | 286 | 192 | .413 | .163 | .145 | .620 | .661 | .702 |
| | 1639 | 329-5 | 292 | 200 | .440 | .177 | .161 | .660 | .704 | .748 |
| | 1619 | 319-2 | 285 | 202 | .456 | .179 | .161 | .684 | .730 | .775 |
| | 1392 | 319-3 | 285 | 200 | .460 | .173 | .156 | .690 | .736 | .782 |

## HI-TECH™ ROLLERS

These designs are typically used with high rocker ratios (1.65-1.75) and efficient cylinder heads. The Hi-Tech™ .400" is great for Big Block Chevy, Big Block Fords and Clevelands. Due to their lower acceleration rates, these lobe designs are also very well suited for small block, high endurance applications.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| Hi-Tech™ Rated Duration @ .020" Tappet Lift MI 36.5 (18.8/17.7) | 1461 | 288-7 | 251 | 167 | .400 | .116 | .102 | .600 | .640 | .680 |
| | 4210 | 296-7 | 259 | 175 | .400 | .129 | .114 | .600 | .640 | .680 |
| | 4211 | 306-7 | 269 | 182 | .400 | .146 | .131 | .600 | .640 | .680 |
| | 4058 | 316-7 | 279 | 190 | .400 | .161 | .146 | .600 | .640 | .680 |

## HI-TECH™ .420" EXHAUST ROLLERS

These designs are used primarily on the exhaust side of the motor. The Hi-Tech™ .420" Exhaust Rollers offer controlled valve opening which promotes torque over broad ranges.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| Hi-Tech™ .420" Exh. Rated Duration @ .020" Tappet Lift<br><br>Journal = N,S,B,R… MI 37.0 (18.5/18.5) | 4005 | 294-6 | 256 | 171 | .420 | .117 | .103 | .630 | .672 | .714 |
| | 4007 | 296-6 | 258 | 173 | .420 | .123 | .108 | .630 | .672 | .714 |
| | 4003 | 298-6 | 260 | 175 | .420 | .125 | .111 | .630 | .672 | .714 |
| | 4027 | 300-6 | 262 | 177 | .420 | .130 | .115 | .630 | .672 | .714 |
| | 4029 | 302-6 | 264 | 179 | .420 | .133 | .117 | .630 | .672 | .714 |
| | 4023 | 304-6 | 266 | 180 | .420 | .137 | .122 | .630 | .672 | .714 |
| | 4046 | 306-6 | 268 | 182 | .420 | .141 | .126 | .630 | .672 | .714 |
| | 4045 | 308-6 | 270 | 183 | .420 | .144 | .129 | .630 | .672 | .714 |
| | 4047 | 310-6 | 272 | 185 | .420 | .148 | .133 | .630 | .672 | .714 |
| | 4019 | 312-6 | 274 | 187 | .420 | .151 | .136 | .630 | .672 | .714 |
| | 4049 | 316-6 | 278 | 189 | .420 | .158 | .142 | .630 | .672 | .714 |

## HI-TECH™ .420" ROLLERS

The Hi-Tech™ .420" Rollers are primarily used in oval track racing with good cylinder heads. The ramp designs are easy on valve springs yet produce good power. They are great for long rod motors. They are also popular in bracket and marine applications where power with durability is a must. Also available in Small Block Ford and Big Block Chevy or 50mm sizes to prevent "cam growth" in the grinding process, allowing the engine builder to have more control over the tuning process.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| Hi-Tech™ .420" Exh. Rated Duration @ .020" Tappet Lift<br><br>Journal = N,S,B,R… MI 37.0 (18.5/18.5) | 4001 | 284-5 | 248 | 165 | .420 | .108 | .094 | .630 | .672 | .714 |
| | 4004 | 286-5 | 250 | 167 | .420 | .112 | .098 | .630 | .672 | .714 |
| | 4006 | 288-5 | 252 | 169 | .420 | .116 | .101 | .630 | .672 | .714 |
| | 4009 | 290-5 | 254 | 171 | .420 | .119 | .105 | .630 | .672 | .714 |
| | 4008 | 292-5 | 256 | 173 | .420 | .123 | .108 | .630 | .672 | .714 |
| | 4013 | 294-5 | 258 | 175 | .420 | .127 | .112 | .630 | .672 | .714 |
| | 4017 | 296-5 | 260 | 177 | .420 | .131 | .116 | .630 | .672 | .714 |
| | 4015 | 298-5 | 262 | 179 | .420 | .136 | .120 | .630 | .672 | .714 |
| | 4022 | 300-5 | 264 | 181 | .420 | .140 | .124 | .630 | .672 | .714 |
| | 4020 | 302-5 | 266 | 183 | .420 | .143 | .127 | .630 | .672 | .714 |
| | 4024 | 304-5 | 268 | 184 | .420 | .146 | .130 | .630 | .672 | .714 |
| | 4018 | 306-5 | 270 | 186 | .420 | .150 | .134 | .630 | .672 | .714 |
| | 4026 | 308-5 | 272 | 188 | .420 | .154 | .138 | .630 | .672 | .714 |
| | 4016 | 310-5 | 274 | 189 | .420 | .157 | .141 | .630 | .672 | .714 |
| | 4028 | 312-5 | 276 | 190 | .420 | .160 | .144 | .630 | .672 | .714 |
| | 4030 | 314-5 | 278 | 192 | .420 | .163 | .148 | .630 | .672 | .714 |
| | 4031 | 316-5 | 280 | 193 | .420 | .166 | .151 | .630 | .672 | .714 |
| | 4032 | 318-5 | 282 | 195 | .420 | .170 | .154 | .630 | .672 | .714 |

## HI-TECH™ .440" INTAKE ROLLERS

These lobes are to be used in medium to large cubic inch engines. The Hi-Tech .440" are designed with ported cylinder heads in mind and are easy on springs. These designs are very stable at high engine speeds.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| Hi-Tech™ .440" Int. Rated Duration @ .020" Tappet Lift<br><br>Journal = N,S,B,R… MI 36.7 (19.0/17.7) | 3207 | 296-16 | 260 | 178 | .440 | .132 | .116 | .660 | .704 | .748 |
| | 4076 | 301-6 | 264 | 181 | .440 | .141 | .125 | .660 | .704 | .748 |
| | 4119 | 303-6 | 266 | 183 | .440 | .144 | .129 | .660 | .704 | .748 |
| | 4077 | 305-6 | 268 | 184 | .440 | .147 | .132 | .660 | .704 | .748 |
| | 4078 | 309-6 | 272 | 187 | .440 | .153 | .137 | .660 | .704 | .748 |
| | 4079 | 313-6 | 276 | 189 | .440 | .157 | .142 | .660 | .704 | .748 |
| | 4080 | 317-6 | 280 | 192 | .440 | .161 | .146 | .660 | .704 | .748 |
| | 4081 | 321-6 | 284 | 195 | .440 | .168 | .153 | .660 | .704 | .748 |
| | 4082 | 325-6 | 287 | 198 | .440 | .173 | .158 | .660 | .704 | .748 |

## HIGH TORQUE .420" EXHAUST ROLLERS

The High Torque .420" Exhaust series is primarily used in drag racing applications with or without ported heads and can be used with a variety of rocker ratios.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| High Torque .420" Exh. Rated Duration @ .020" Tappet Lift Journal = N,S,B,R… MI 34.3 (14.8/19.5) | 1660 | 307-4 | 275 | 192 | .420 | .165 | .152 | .630 | .672 | .714 |
| | 1480 | 311-4 | 279 | 194 | .420 | .173 | .156 | .630 | .672 | .714 |
| | 4070 | 317-2 | 283 | 197 | .420 | .172 | .156 | .630 | .672 | .714 |
| | 4065 | 323-6 | 288 | 200 | .420 | .177 | .161 | .630 | .672 | .714 |

## HIGH TORQUE .460" ROLLERS

The High Torque .460" series is primarily used in drag racing applications with or without ported heads. They are less aggressive than the High Torque .440" designs.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| High Torque .460" Rated Duration @ .020" Tappet Lift Journal = S,B,F,R… MI 32.6 (16.3/16.3) | 1393 | 319-7 | 285 | 200 | .460 | .180 | .163 | .690 | .736 | .782 |
| | 4075 | 323-7 | 287 | 202 | .460 | .185 | .169 | .690 | .736 | .782 |
| | 1395 | 327-7 | 290 | 205 | .460 | .192 | .176 | .690 | .736 | .782 |

## HIGH RATIO - HIGH RPM SUPER STOCK ROLLERS

These profiles are designed to increase high RPM performance in NHRA Super Stock applications when coupled with a 1.8:1 to 2.0:1+ rocker arm. Optimized for the higher RPM capability of the latest Super Stock cylinder heads.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.8 | 1.9 | 2.0 |
| High Ratio-High RPM Super Stock Rated Duration @ .020" Tappet Lift Journal = N,S,B,R… MI 32.0 (14.7/17.3) | 4480 | 298 | 266 | 182 | .414 | .136 | .119 | .745 | .787 | .828 |
| | 4482 | 302 | 270 | 186 | .414 | .143 | .127 | .745 | .787 | .828 |
| | 4483 | 304 | 272 | 188 | .414 | .147 | .131 | .745 | .787 | .828 |
| | 4484 | 306 | 274 | 189 | .414 | .151 | .135 | .745 | .787 | .828 |
| | 4485 | 308 | 276 | 191 | .416 | .155 | .139 | .749 | .790 | .832 |
| | 4486 | 310 | 278 | 193 | .418 | .160 | .143 | .752 | .794 | .836 |

## NC ROLLERS

Designed with aggressive opening side of the RT Series lobes and the easier closing rate of the ever popular Hi-Tech™ -5 series, the NC series allows good engine speed, stability and durability. This fast open, slower closing design works very well on the exhaust side of many applications.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| NC Rated Duration @ .020" Tappet Lift<br>Journal = S,B,F,R…<br>MI 32.0 (14.5/17.5) | 4151 | 284 | 252 | 172 | .405 | .115 | .099 | .608 | .648 | .689 |
| | 4152 | 286 | 254 | 173 | .405 | .117 | .101 | .608 | .648 | .689 |
| | 4150 | 288 | 256 | 177 | .415 | .123 | .107 | .623 | .664 | .706 |
| | 4153 | 290 | 258 | 178 | .415 | .125 | .109 | .623 | .664 | .706 |
| | 4149 | 292 | 260 | 181 | .421 | .131 | .114 | .632 | .674 | .716 |
| | 4145 | 295 | 262 | 183 | .421 | .138 | .122 | .632 | .674 | .716 |
| | 4147 | 296 | 264 | 183 | .421 | .140 | .123 | .632 | .674 | .716 |
| | 4144 | 298 | 266 | 185 | .425 | .143 | .127 | .638 | .680 | .723 |
| | 4146 | 300 | 268 | 187 | .430 | .146 | .130 | .645 | .688 | .731 |
| | 4143 | 302 | 270 | 190 | .430 | .153 | .136 | .645 | .688 | .731 |
| | 4148 | 304 | 272 | 192 | .430 | .158 | .141 | .645 | .688 | .731 |

## NSC ROLLERS

The NSC series is very similar to the original NC series but uses a smoother -6 style closing ramp. This fast open, slower closing design works very well on the exhaust side of many applications, especially those that are larger displacement or higher engine speeds than where the original NC designs would be used.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| NSC Rated Duration @ .020" Tappet Lift<br>Journal = N,S,B,R…<br>MI 33.0 (14.4/18.6) | 4163 | 309 | 276 | 195 | .440 | .167 | .150 | .660 | .704 | .748 |
| | 4167 | 311 | 278 | 196 | .440 | .170 | .154 | .660 | .704 | .748 |
| | 4168 | 313 | 280 | 198 | .440 | .174 | .158 | .660 | .704 | .748 |
| | 4162 | 315 | 282 | 200 | .440 | .178 | .162 | .660 | .704 | .748 |
| | 4160 | 317 | 284 | 201 | .440 | .181 | .165 | .660 | .704 | .748 |
| | 4164 | 319 | 286 | 203 | .440 | .185 | .169 | .660 | .704 | .748 |
| | 4165 | 321 | 288 | 205 | .440 | .189 | .173 | .660 | .704 | .748 |
| | 4166 | 323 | 290 | 207 | .440 | .193 | .177 | .660 | .704 | .748 |

## RZ ROLLERS

The RZ Rollers are designed for high RPM circle track, drag race and endurance applications that benefit from higher lift while requiring stability and reliability. Designed for 1.6:1 to 1.8:1 rockers, these profiles incorporate the latest developments in high RPM and high rocker ratio developments.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| RZ Rated Duration @ .020" Tappet Lift<br><br>Journal = S,B,F,R… MI 33.0 (15.0/18.0) | 4260 | RZ293 | 260 | 174 | .428 | .122 | .107 | .642 | .685 | .728 |
| | 4261 | RZ295 | 262 | 176 | .430 | .126 | .111 | .645 | .688 | .731 |
| | 4262 | RZ297 | 264 | 178 | .430 | .129 | .114 | .645 | .688 | .731 |
| | 4264 | RZ301 | 268 | 182 | .432 | .137 | .122 | .648 | .691 | .734 |
| | 4265 | RZ303 | 270 | 184 | .433 | .141 | .125 | .650 | .693 | .736 |
| | 4266 | RZ305 | 272 | 186 | .434 | .145 | .129 | .651 | .694 | .738 |
| | 4267 | RZ307 | 274 | 188 | .435 | .149 | .133 | .653 | .696 | .740 |
| | 4268 | RZ309 | 276 | 190 | .436 | .153 | .137 | .654 | .698 | .741 |
| | 4269 | RZ311 | 278 | 192 | .437 | .157 | .141 | .656 | .699 | .743 |
| | 4270 | RZ313 | 280 | 194 | .438 | .161 | .145 | .657 | .701 | .745 |
| | 4271 | RZ315 | 282 | 196 | .439 | .164 | .148 | .659 | .702 | .746 |
| | 4272 | RZ317 | 284 | 197 | .440 | .168 | .152 | .660 | .704 | .748 |
| | 4273 | RZ319 | 286 | 199 | .441 | .172 | .156 | .662 | .706 | .750 |
| | 4274 | RZ321 | 288 | 201 | .442 | .176 | .160 | .663 | .707 | .751 |
| | 4276 | RZ325 | 292 | 205 | .444 | .183 | .167 | .666 | .710 | .755 |
| | 4277 | RZ329 | 296 | 208 | .446 | .191 | .175 | .669 | .714 | .758 |

## RZ LOW LIFT ROLLERS

These lower lift versions of the RZ family work very well in high endurance applications where maximum valve lift needs to be limited to ensure maximum valve spring life.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| RZ Low Lift Rated Duration @ .020" Tappet Lift<br><br>Journal = S,B,F,R… MI 33.0 (15.0/18.0) | 2314 | 283 | 250 | 161 | .370 | .103 | .089 | .555 | .592 | .629 |
| | 2315 | 287 | 254 | 164 | .370 | .110 | .096 | .555 | .592 | .629 |
| | 4294 | 289 | 256 | 167 | .390 | .113 | .099 | .585 | .624 | .663 |
| | 2318 | 291 | 258 | 168 | .370 | .117 | .103 | .555 | .592 | .629 |
| | 4293 | 291 | 258 | 171 | .400 | .118 | .103 | .600 | .640 | .680 |
| | 4295 | 293 | 260 | 171 | .390 | .121 | .106 | .585 | .624 | .663 |
| | 4283 | 295 | 262 | 171 | .370 | .124 | .110 | .555 | .592 | .629 |
| | 4286 | 295 | 262 | 175 | .400 | .125 | .110 | .600 | .640 | .680 |
| | 4284 | 297 | 264 | 174 | .375 | .128 | .113 | .563 | .600 | .638 |
| | 4278 | 299 | 266 | 178 | .400 | .133 | .118 | .600 | .640 | .680 |
| | 4285 | 301 | 268 | 178 | .380 | .135 | .121 | .570 | .608 | .646 |
| | 4287 | 301 | 268 | 180 | .400 | .136 | .121 | .600 | .640 | .680 |
| | 4296 | 303 | 270 | 181 | .385 | .139 | .125 | .578 | .616 | .655 |
| | 4279 | 305 | 272 | 182 | .380 | .143 | .128 | .570 | .608 | .646 |
| | 2735 | 315 | 282 | 194 | .420 | .164 | .148 | .630 | .672 | .714 |
| | 2298 | 317 | 284 | 193 | .380 | .163 | .149 | .570 | .608 | .646 |

## AS ENDURANCE ROLLERS

The AS Endurance Roller lobe family is for use in 24-hour or longer endurance roller cam applications or where a slow camshaft is desired to reduce power or shape the torque curve.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.6 | 1.7 | 1.8 |
| ASI Rated Duration @ .020" Tappet Lift MI 33.1 (15.7/17.4) | 20540 | 277 | 244 | 153 | .360 | .094 | .082 | .576 | .612 | .648 |
| | 20541 | 281 | 248 | 157 | .360 | .101 | .088 | .576 | .612 | .648 |
| | 20542 | 285 | 252 | 161 | .360 | .108 | .094 | .576 | .612 | .648 |
| | 20519 | 289 | 256 | 167 | .380 | .115 | .101 | .608 | .646 | .684 |
| | 20520 | 293 | 260 | 171 | .380 | .122 | .108 | .608 | .646 | .684 |
| ASX Rated Duration @ .020" Tappet Lift | 20525 | 300 | 266 | 175 | .380 | .132 | .118 | .608 | .646 | .684 |
| ALI Rated Duration @ .020" Tappet Lift | 20515 | 284 | 252 | 166 | .400 | .111 | .097 | .640 | .680 | .720 |
| | 20521 | 288 | 256 | 170 | .400 | .117 | .103 | .640 | .680 | .720 |
| | 20522 | 292 | 260 | 173 | .400 | .125 | .110 | .640 | .680 | .720 |
| ALX Rated Duration @ .020" Tappet Lift | 20527 | 300 | 266 | 177 | .400 | .134 | .119 | .640 | .680 | .720 |
| ALL Rated Duration @ .020" Tappet Lift | 20572 | 255 | 222 | 133 | .336 | .061 | .050 | .538 | .571 | .605 |
| | 20574 | 263 | 230 | 140 | .336 | .078 | .066 | .538 | .571 | .605 |

## SRI SRX HIGH RATIO ROLLER

The SRI and SRX are extremely smooth high rocker ratio designs, especially suited for engines with very high ratios or any application than needs a very smooth profile.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.9 | 2.1 | 2.3 |
| SRI Rated Duration @ .020" Tappet Lift MI 35.6 (17.1/18.5) | 12260 | 291 | 255 | 163 | .3925 | .111 | .098 | .746 | .824 | .903 |
| | 12261 | 293 | 257 | 165 | .3925 | .115 | .101 | .746 | .824 | .903 |
| | 12262 | 295 | 259 | 167 | .3925 | .118 | .105 | .746 | .824 | .903 |
| SRX Rated Duration @ .020" Tappet Lift MI 35.2 (17.0/18.2) | 12266 | 305 | 270 | 178 | .4050 | .136 | .122 | .770 | .851 | .932 |
| | 12267 | 307 | 272 | 180 | .4050 | .140 | .125 | .770 | .851 | .932 |
| | 12268 | 309 | 274 | 182 | .4050 | .143 | .129 | .770 | .851 | .932 |

# SOLID ROLLER (B = BASE FOR STD JOURNAL)

## RT ROLLERS

The RT Series provides shorter seat timing and more area than our Hi-Tech™ .420" Series. This results in great torque and power potential. Available in Small Block Ford and Big Block Chevy or 50mm sizes to prevent "cam growth" in the grinding process, allowing the engine builder to have more control over the tuning process of the cam.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| RT<br>Rated Duration @ .020" Tappet Lift<br><br>Journal = N,S,B,R…<br>MI 30.6 (14.4/16.2) | 4121 | RT274-1 | 244 | 167 | .410 | .101 | .086 | .615 | .656 | .697 |
| | 4123 | RT276-2 | 246 | 169 | .412 | .105 | .089 | .618 | .659 | .700 |
| | 4124 | RT278-3 | 248 | 171 | .414 | .107 | .092 | .621 | .662 | .704 |
| | 4126 | RT280-1 | 250 | 173 | .416 | .113 | .097 | .624 | .666 | .707 |
| | 4127 | RT282-1 | 252 | 175 | .418 | .117 | .101 | .627 | .669 | .711 |
| | 4130 | RT284-1 | 254 | 177 | .421 | .120 | .104 | .632 | .674 | .716 |
| | 4128 | RT286-1 | 256 | 179 | .423 | .125 | .109 | .635 | .677 | .719 |
| | 4129 | RT288-1 | 258 | 181 | .426 | .131 | .114 | .639 | .682 | .724 |
| | 4131 | RT290-1 | 260 | 183 | .430 | .134 | .117 | .645 | .688 | .731 |
| | 4132 | RT292-1 | 262 | 185 | .430 | .140 | .123 | .645 | .688 | .731 |
| | 4133 | RT294-1 | 264 | 186 | .430 | .142 | .125 | .645 | .688 | .731 |
| | 4134 | RT296-1 | 266 | 189 | .430 | .148 | .130 | .645 | .688 | .731 |
| | 4135 | RT298-1 | 268 | 190 | .435 | .150 | .132 | .653 | .696 | .740 |
| | 4136 | RT300-1 | 270 | 191 | .435 | .154 | .137 | .653 | .696 | .740 |
| | 4137 | RT302-1 | 272 | 193 | .435 | .158 | .141 | .653 | .696 | .740 |
| | 4139 | RT304-1 | 274 | 195 | .435 | .162 | .144 | .653 | .696 | .740 |
| | 4138 | RT308-1 | 278 | 197 | .435 | .168 | .151 | .653 | .696 | .740 |

## CR ROLLERS

The CR Series profiles are excellent for high RPM, high rocker ratio applications where good valve train components can be used. The smaller profiles work well in restricted applications where extended life is required, and the larger profiles are excellent in high RPM open applications.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.7 | 1.75 | 1.8 |
| CR<br>Rated Duration @ .020" Tappet Lift<br><br>Journal = S,B,F,R…<br>MI 31.2 (14.5/16.7) | 4345 | CR281 | 250 | 168 | .395 | .111 | .096 | .672 | .691 | .711 |
| | 4346 | CR283 | 252 | 170 | .395 | .115 | .100 | .672 | .691 | .711 |
| | 4347 | CR285 | 254 | 172 | .395 | .119 | .104 | .672 | .691 | .711 |
| | 4348 | CR287 | 256 | 174 | .395 | .123 | .107 | .672 | .691 | .711 |
| | 4349 | CR289 | 258 | 176 | .395 | .127 | .111 | .672 | .691 | .711 |
| | 4382 | CR291 | 260 | 178 | .395 | .131 | .115 | .672 | .691 | .711 |
| | 4383 | CR293 | 262 | 179 | .395 | .135 | .119 | .672 | .691 | .711 |
| | 4384 | CR295 | 264 | 181 | .395 | .139 | .123 | .672 | .691 | .711 |
| | 4385 | CR297 | 266 | 183 | .395 | .143 | .127 | .672 | .691 | .711 |
| | 4386 | CR299 | 268 | 185 | .395 | .147 | .131 | .672 | .691 | .711 |
| | 2486 | 299 | 268 | 186 | .420 | .147 | .131 | .714 | .735 | .756 |
| | 4387 | CR301 | 270 | 186 | .395 | .150 | .134 | .672 | .691 | .711 |
| | 4388 | CR303 | 272 | 188 | .395 | .154 | .138 | .672 | .691 | .711 |
| | 2488 | 303 | 272 | 190 | .420 | .156 | .139 | .714 | .735 | .756 |
| | 4389 | CR305 | 274 | 190 | .395 | .158 | .142 | .672 | .691 | .711 |
| | 2489 | 305 | 274 | 192 | .420 | .160 | .143 | .714 | .735 | .756 |
| | 4390 | CR307 | 276 | 192 | .395 | .161 | .146 | .672 | .691 | .711 |
| | 2490 | 307 | 276 | 194 | .420 | .164 | .147 | .714 | .735 | .756 |
| | 4391 | CR309 | 278 | 193 | .395 | .165 | .149 | .672 | .691 | .711 |
| | 4682 | CR311 | 280 | 195 | .395 | .169 | .153 | .672 | .691 | .711 |
| | 2492 | 311 | 280 | 198 | .420 | .172 | .155 | .714 | .735 | .756 |
| | 4683 | CR313 | 282 | 197 | .395 | .172 | .157 | .672 | .691 | .711 |
| | 4684 | CR315 | 284 | 199 | .395 | .176 | .161 | .672 | .691 | .711 |
| | 2494 | 315 | 284 | 201 | .420 | .180 | .163 | .714 | .735 | .756 |
| | 4685 | CR317 | 286 | 200 | .395 | .180 | .165 | .672 | .691 | .711 |
| | 4686 | CR319 | 288 | 202 | .395 | .183 | .168 | .672 | .691 | .711 |
| | 4687 | CR321 | 290 | 204 | .395 | .187 | .172 | .672 | .691 | .711 |

## CR LIFT RULE ROLLERS

These low lift designs are based on the CR Rollers and are specifically designed for lift rule application such as Rev-Oil Pro Cup. Typically they will be used with either 1.65:1 or 1.7:1 rocker ratios, but would be stable with up to 1.8:1 ratios.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.9 | 2.1 | 2.3 |
| CR Lift Rule .367" Rated Duration @ .020" Tappet Lift<br><br>Journal = N,S,B,R…<br>MI 31.2 (14.5/16.7) | 4436 | 275 | 244 | 161 | .367 | .100 | .085 | .587 | .606 | .624 |
| | 4427 | 279 | 248 | 165 | .367 | .107 | .092 | .587 | .606 | .624 |
| | 4428 | 283 | 252 | 168 | .367 | .115 | .100 | .587 | .606 | .624 |
| | 4429 | 287 | 256 | 172 | .367 | .123 | .107 | .587 | .606 | .624 |
| | 4430 | 291 | 260 | 175 | .367 | .130 | .115 | .587 | .606 | .624 |
| | 4431 | 295 | 264 | 179 | .367 | .138 | .122 | .587 | .606 | .624 |
| | 4432 | 299 | 268 | 182 | .367 | .146 | .130 | .587 | .606 | .624 |
| | 4433 | 303 | 272 | 186 | .367 | .153 | .137 | .587 | .606 | .624 |
| | 4438 | 307 | 276 | 189 | .367 | .159 | .145 | .587 | .606 | .624 |
| CR Lift Rule .378" Rated Duration @ .020" Tappet Lift Journal = S,B,F,R… | 4445 | 283 | 252 | 168 | .378 | .115 | .100 | .605 | .624 | .643 |
| | 4447 | 287 | 256 | 172 | .378 | .123 | .107 | .605 | .624 | .643 |
| | 4449 | 291 | 260 | 175 | .378 | .131 | .115 | .605 | .624 | .643 |
| | 4451 | 295 | 264 | 179 | .378 | .138 | .123 | .605 | .624 | .643 |

## RX ROLLERS

These are similar to the RT Series but are designed for a higher RPM operating range. These were developed to allow the performance of RT designs in applications that operate well over 8400 RPM, such as the NASCAR engines. RX profiles were developed using dynamic testing to ensure stability over 9000 RPM, even when coupled with a 1.7:1 rocker arm.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| RX<br>Rated Duration @ .020" Tappet Lift<br><br>Journal = N,S,B,R…<br>MI 32.6 (15.5/17.1) | 4301 | 286 | 253 | 172 | .427 | .114 | .099 | .641 | .683 | .726 |
| | 4302 | 288 | 255 | 174 | .428 | .118 | .103 | .642 | .685 | .728 |
| | 4303 | 290 | 257 | 176 | .429 | .122 | .107 | .644 | .686 | .729 |
| | 4304 | 292 | 259 | 177 | .430 | .126 | .110 | .645 | .688 | .731 |
| | 4305 | 294 | 261 | 179 | .431 | .130 | .114 | .647 | .690 | .733 |
| | 4308 | 296 | 263 | 181 | .432 | .134 | .118 | .648 | .691 | .734 |
| | 4309 | 298 | 265 | 183 | .433 | .139 | .122 | .650 | .693 | .736 |
| | 4310 | 300 | 267 | 185 | .434 | .143 | .126 | .651 | .694 | .738 |
| | 4311 | 302 | 269 | 187 | .435 | .147 | .130 | .653 | .696 | .740 |
| | 4312 | 304 | 271 | 189 | .436 | .151 | .134 | .654 | .698 | .741 |
| | 4313 | 306 | 273 | 191 | .437 | .155 | .138 | .656 | .699 | .743 |
| | 4314 | 308 | 275 | 193 | .438 | .160 | .143 | .657 | .701 | .745 |
| | 4315 | 310 | 277 | 195 | .439 | .164 | .147 | .659 | .702 | .746 |
| | 4316 | 312 | 279 | 197 | .440 | .168 | .151 | .660 | .704 | .748 |
| | 4317 | 314 | 281 | 199 | .440 | .172 | .155 | .660 | .704 | .748 |
| | 4318 | 316 | 283 | 201 | .440 | .176 | .159 | .660 | .704 | .748 |
| | 4319 | 318 | 285 | 203 | .440 | .180 | .163 | .660 | .704 | .748 |
| | 4340 | 320 | 287 | 205 | .440 | .185 | .167 | .660 | .704 | .748 |
| | 4341 | 322 | 289 | 207 | .440 | .189 | .172 | .660 | .704 | .748 |

## TC ROLLERS

The TC lobes are specially designed to be stable in small base circle applications or where short duration and high lift are required.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| TC<br>Rated Duration @<br>.020" Tappet Lift<br><br>Journal = N,S,B,R…<br>MI 31.3 (15.4/15.9) | 11460 | 267 | 236 | 156 | .420 | .085 | .072 | .630 | .672 | .714 |
| | 11462 | 271 | 240 | 160 | .424 | .092 | .079 | .636 | .678 | .721 |
| | 11464 | 275 | 244 | 164 | .428 | .099 | .085 | .642 | .685 | .728 |
| | 11466 | 279 | 248 | 168 | .432 | .106 | .092 | .648 | .691 | .734 |
| | 11468 | 283 | 252 | 172 | .436 | .114 | .099 | .654 | .698 | .741 |
| | 11470 | 287 | 256 | 176 | .440 | .122 | .106 | .660 | .704 | .748 |
| | 11472 | 291 | 260 | 180 | .444 | .130 | .114 | .666 | .710 | .755 |
| | 11474 | 295 | 264 | 184 | .448 | .138 | .122 | .672 | .717 | .762 |
| | 11476 | 299 | 268 | 188 | .452 | .146 | .130 | .678 | .723 | .768 |

## ZT ROLLERS

The ZT Rollers are a high rocker ratio, high RPM series designed to take advantage of valve spring developments that allow valve lifts up to and above .750" in endurance applications. These are designed for NASCAR and other endurance applications that have similar RPM and lift requirements.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.7 | 1.75 | 1.8 |
| ZT<br>Rated Duration @<br>.020" Tappet Lift<br><br>Journal = N,S,B,R…<br>MI 31.5 (15.4/16.2) | 4814 | 290 | 258 | 175 | .406 | .124 | .110 | .690 | .711 | .731 |
| | 4815 | 292 | 260 | 177 | .407 | .128 | .114 | .692 | .712 | .733 |
| | 4816 | 294 | 262 | 179 | .408 | .133 | .117 | .694 | .714 | .734 |
| | 4817 | 296 | 264 | 181 | .409 | .137 | .121 | .695 | .716 | .736 |
| | 4818 | 298 | 266 | 182 | .410 | .141 | .125 | .697 | .718 | .738 |
| | 4819 | 300 | 268 | 184 | .411 | .145 | .129 | .699 | .719 | .740 |
| | 4820 | 302 | 270 | 186 | .412 | .149 | .133 | .700 | .721 | .742 |
| | 4821 | 304 | 272 | 188 | .413 | .153 | .137 | .702 | .723 | .743 |
| | 4822 | 306 | 274 | 190 | .412 | .157 | .141 | .700 | .721 | .742 |
| | 4823 | 308 | 276 | 192 | .416 | .161 | .144 | .707 | .728 | .749 |
| | 4824 | 310 | 278 | 194 | .418 | .165 | .149 | .711 | .732 | .752 |
| | 4826 | 312 | 280 | 196 | .418 | .169 | .152 | .711 | .732 | .752 |
| | 4827 | 314 | 282 | 198 | .420 | .173 | .157 | .714 | .735 | .756 |

## ZS ROLLERS

The ZS Rollers are a high ratio roller series for restricted applications limited to below 8400 RPM. These are very good for applications that benefit from higher lift than the HRR series. These profiles work well with the new generation valve springs such as COMP Cams® #26099 and #26091. The ZS II lobes are the same as the .413" lobe lift versions except these have increasing lobe lift as the duration increases.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.7 | 1.75 | 1.8 |
| ZS .413" Lift Rated Duration @ .020" Tappet Lift<br><br>Journal = N,S,B,R…<br>MI 30.4 (14.8/15.6) | 4402 | 284 | 254 | 175 | .413 | .122 | .106 | .702 | .723 | .743 |
| | 4404 | 288 | 258 | 179 | .413 | .130 | .114 | .702 | .723 | .743 |
| | 4405 | 290 | 260 | 181 | .413 | .134 | .118 | .702 | .723 | .743 |
| | 4406 | 292 | 262 | 183 | .413 | .139 | .122 | .702 | .723 | .743 |
| | 4407 | 294 | 264 | 184 | .413 | .143 | .126 | .702 | .723 | .743 |
| | 4408 | 296 | 266 | 186 | .413 | .147 | .130 | .702 | .723 | .743 |
| | 4409 | 298 | 268 | 188 | .413 | .151 | .134 | .702 | .723 | .743 |
| | 4416 | 302 | 272 | 192 | .413 | .159 | .142 | .702 | .723 | .743 |
| | 4418 | 306 | 276 | 195 | .413 | .167 | .150 | .702 | .723 | .743 |
| ZS II Rated Duration @ .020" Tappet Lift<br><br>Journal = S,B,F,R…<br>MI 30.4 (14.8/15.6) | 2950 | 280 | 250 | 172 | .420 | .114 | .098 | .714 | .735 | .756 |
| | 2952 | 284 | 254 | 176 | .424 | .122 | .106 | .721 | .742 | .763 |
| | 2953 | 286 | 256 | 178 | .426 | .126 | .110 | .724 | .746 | .767 |
| | 2954 | 288 | 258 | 180 | .428 | .131 | .114 | .728 | .749 | .770 |
| | 14255 | 290 | 260 | 182 | .430 | .135 | .118 | .731 | .753 | .774 |
| | 14256 | 292 | 262 | 184 | .432 | .139 | .122 | .734 | .756 | .778 |
| | 14257 | 294 | 264 | 186 | .433 | .143 | .126 | .736 | .758 | .779 |
| | 2958 | 296 | 266 | 188 | .434 | .147 | .130 | .738 | .760 | .781 |

## TD, TJ & TJS ROLLERS

These TD designs are excellent for high ratio, four gauge, 390 carb rules, such as NASCAR applications. The TJs have slightly more lift but are a little smoother while the TJS rollers are very similar to the TJs except for a slightly softer closing ramp.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.7 | 1.75 | 1.8 |
| TD Rated Duration @ .020" Tappet Lift<br><br>Journal = N,S,B,R…<br>MI 30.5 (14.8/15.7) | 2978 | 288 | 258 | 176 | .411 | .127 | .112 | .699 | .719 | .740 |
| | 2979 | 290 | 260 | 178 | .412 | .131 | .116 | .700 | .721 | .742 |
| | 2980 | 292 | 262 | 180 | .413 | .135 | .119 | .702 | .723 | .743 |
| | 2981 | 294 | 264 | 182 | .414 | .139 | .123 | .704 | .725 | .745 |
| | 2982 | 296 | 266 | 184 | .415 | .143 | .127 | .706 | .726 | .747 |
| | 4321 | 298 | 268 | 186 | .416 | .147 | .131 | .707 | .728 | .749 |
| | 2983 | 300 | 270 | 188 | .418 | .151 | .135 | .711 | .732 | .752 |
| | 2984 | 302 | 272 | 190 | .420 | .156 | .139 | .714 | .735 | .756 |
| | 2985 | 304 | 274 | 192 | .421 | .159 | .143 | .716 | .737 | .758 |
| | 4327 | 306 | 276 | 193 | .424 | .163 | .147 | .721 | .742 | .763 |
| | 4328 | 308 | 278 | 195 | .426 | .167 | .151 | .724 | .746 | .767 |
| | 4329 | 310 | 280 | 197 | .428 | .171 | .155 | .728 | .749 | .770 |
| | 2989 | 312 | 282 | 199 | .430 | .175 | .159 | .731 | .753 | .774 |

*Continued on page 80*

## TD, TJ & TJS ROLLERS *Continued*

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.7 | 1.75 | 1.8 |
| TJ Rated Duration @ .020" Tappet Lift Journal = S,B,F,R… | 2962 | 296 | 266 | 184 | .420 | .143 | .127 | .714 | .735 | .756 |
| | 2963 | 298 | 268 | 185 | .422 | .147 | .131 | .717 | .739 | .760 |
| | 2964 | 300 | 270 | 187 | .424 | .151 | .135 | .721 | .742 | .763 |
| | 2965 | 302 | 272 | 189 | .426 | .156 | .139 | .724 | .746 | .767 |
| TJS Rated Duration @ .020" Tappet Lift | 2881 | 297 | 266 | 183 | .419 | .412 | .126 | .712 | .733 | .754 |
| | 2882 | 299 | 268 | 185 | .421 | .146 | .130 | .716 | .737 | .758 |
| | 2885 | 305 | 274 | 191 | .427 | .158 | .142 | .726 | .747 | .769 |

## TS ROLLERS

These are an additional series of high rocker ratio profiles that are similar to both the ZT and ZS series, but these are designed for slightly less rocker ratio.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.7 | 1.75 | 1.8 |
| TS Rated Duration @ .020" Tappet Lift Journal = N,S,B,R… MI 31.0 (15.4/15.6) | 4837 | 295 | 264 | 183 | .422 | .141 | .125 | .717 | .739 | .760 |
| | 4838 | 297 | 266 | 185 | .423 | .145 | .129 | .719 | .740 | .761 |
| | 4839 | 299 | 268 | 187 | .425 | .149 | .133 | .723 | .744 | .765 |
| | 4840 | 301 | 270 | 189 | .426 | .153 | .137 | .724 | .746 | .767 |
| | 4841 | 303 | 272 | 191 | .427 | .157 | .141 | .726 | .747 | .769 |
| | 4842 | 305 | 274 | 192 | .428 | .161 | .145 | .728 | .749 | .770 |

## HIGH RATIO RESTRICTED ROLLERS

The HRR designs, when coupled with high rocker ratios, result in extremely quick valve action. 8100 RPM maximum with light valve train. Very good in restricted applications.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.7 | 1.75 | 1.8 |
| High Ratio Restricted Rated Duration @ .020" Tappet Lift<br><br>Journal = N,S,B,R… MI 30.0 (14.0/16.0) | 4358 | HRR260 | 230 | 152 | .374 | .078 | .065 | .636 | .655 | .673 |
| | 4359 | HRR262 | 232 | 154 | .377 | .082 | .068 | .641 | .660 | .679 |
| | 4361 | HRR264 | 234 | 156 | .380 | .085 | .071 | .646 | .665 | .684 |
| | 4362 | HRR266 | 236 | 158 | .383 | .089 | .075 | .651 | .670 | .689 |
| | 4363 | HRR268 | 238 | 160 | .386 | .093 | .078 | .656 | .676 | .695 |
| | 4364 | HRR270 | 240 | 162 | .389 | .097 | .082 | .661 | .681 | .700 |
| | 4198 | 272 | 242 | 163 | .380 | .101 | .085 | .646 | .665 | .684 |
| | 4365 | HRR272 | 242 | 164 | .392 | .101 | .085 | .666 | .686 | .706 |
| | 4366 | HRR274 | 244 | 166 | .396 | .105 | .089 | .673 | .693 | .713 |
| | 4199 | 276 | 246 | 167 | .380 | .109 | .093 | .646 | .665 | .684 |
| | 4367 | HRR276 | 246 | 168 | .396 | .109 | .093 | .673 | .693 | .713 |
| | 4196 | 278 | 248 | 169 | .380 | .113 | .097 | .646 | .665 | .684 |
| | 4368 | HRR278 | 248 | 170 | .396 | .113 | .097 | .673 | .693 | .713 |
| | 4370 | HRR282 | 252 | 173 | .396 | .121 | .104 | .673 | .693 | .713 |
| | 4371 | HRR284 | 254 | 175 | .396 | .125 | .108 | .673 | .693 | .713 |
| | 4372 | HRR286 | 256 | 177 | .396 | .129 | .112 | .673 | .693 | .713 |
| | 4373 | HRR288 | 258 | 179 | .396 | .133 | .116 | .673 | .693 | .713 |
| | 4374 | HRR290 | 260 | 180 | .396 | .137 | .120 | .673 | .693 | .713 |
| | 4375 | HRR292 | 262 | 182 | .396 | .141 | .124 | .673 | .693 | .713 |
| | 4376 | HRR294 | 264 | 184 | .396 | .145 | .128 | .673 | .693 | .713 |
| | 4377 | HRR296 | 266 | 186 | .396 | .149 | .133 | .673 | .693 | .713 |
| | 4378 | HRR298 | 268 | 188 | .396 | .153 | .137 | .673 | .693 | .713 |

## RC ROLLERS

The RC rollers are designed to be faster off the seat than the RT profiles with more area than the High Torque .440" profiles. These are slightly less aggressive than the TK profiles. Very good for Sprint Car and Late Model applications. Also used in some hydraulic roller applications.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| RC<br>Rated Duration @ .020" Tappet Lift<br><br>Journal = N,S,B,R… MI 30.0 (14.0/16.0) | 4176 | 280 | 250 | 175 | .425 | .118 | .101 | .638 | .680 | .723 |
| | 4178 | 284 | 254 | 178 | .425 | .127 | .110 | .638 | .680 | .723 |
| | 4180 | 288 | 258 | 182 | .430 | .136 | .118 | .645 | .688 | .731 |
| | 4181 | 290 | 260 | 184 | .430 | .140 | .122 | .645 | .688 | .731 |
| | 4182 | 292 | 262 | 186 | .430 | .144 | .127 | .645 | .688 | .731 |
| | 4183 | 294 | 264 | 188 | .430 | .149 | .131 | .645 | .688 | .731 |
| | 4184 | 296 | 266 | 190 | .435 | .153 | .135 | .653 | .696 | .740 |
| | 4185 | 298 | 268 | 192 | .435 | .158 | .140 | .653 | .696 | .740 |
| | 4186 | 300 | 270 | 194 | .435 | .162 | .144 | .653 | .696 | .740 |

## RP ROLLERS

The RP Rollers are a high ratio roller series for restricted applications limited to below 8400 RPM. These are based off of the latest flat tappet restrictor plate designs but have increased area as allowed with roller tappets. For use with 1.8 to 1.95:1 rocker ratios.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.8 | 1.85 | 1.9 |
| RP<br>Rated Duration @<br>.020" Tappet Lift<br><br>Journal = N,S,B,R…<br>MI 30.0 (15.0/15.0) | 2507 | 270 | 240 | 159 | .381 | .093 | .080 | .686 | .705 | .724 |
| | 2508 | 272 | 242 | 161 | .381 | .097 | .083 | .686 | .705 | .724 |
| | 2509 | 274 | 244 | 163 | .381 | .101 | .086 | .686 | .705 | .724 |
| | 2510 | 276 | 246 | 165 | .381 | .104 | .090 | .686 | .705 | .724 |
| | 2511 | 278 | 248 | 166 | .381 | .108 | .093 | .686 | .705 | .724 |
| | 2512 | 280 | 250 | 168 | .381 | .112 | .097 | .686 | .705 | .724 |
| | 2513 | 282 | 252 | 170 | .381 | .115 | .101 | .686 | .705 | .724 |
| | 2514 | 284 | 254 | 172 | .381 | .119 | .104 | .686 | .705 | .724 |
| | 2515 | 286 | 256 | 173 | .381 | .123 | .108 | .686 | .705 | .724 |
| | 2516 | 288 | 258 | 175 | .381 | .127 | .112 | .686 | .705 | .724 |
| | 2517 | 290 | 260 | 177 | .381 | .131 | .115 | .686 | .705 | .724 |
| | 2518 | 292 | 262 | 179 | .381 | .135 | .119 | .686 | .705 | .724 |
| | 2519 | 294 | 264 | 180 | .381 | .138 | .123 | .686 | .705 | .724 |
| | 2520 | 296 | 266 | 182 | .381 | .142 | .127 | .686 | .705 | .724 |

## SP ROLLERS

The SP Rollers are a high ratio roller series for restricted applications limited to below 8200 RPM. These lobes are more aggressive than the RP series and can be used successfully with lower rocker ratios. For use with 1.7 to 1.9:1 rocker ratios. Also used in some hydraulic roller applications.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.7 | 1.8 | 1.9 |
| SP<br>Rated Duration @<br>.020" Tappet Lift<br><br>Journal = S,B,F,R…<br>MI 28.2 (13.8/14.4) | 1514 | 264 | 236 | 158 | .374 | .089 | .074 | .636 | .673 | .711 |
| | 1515 | 268 | 240 | 161 | .374 | .096 | .081 | .636 | .673 | .711 |
| | 4793 | 273 | 245 | 166 | .378 | .108 | .092 | .643 | .680 | .718 |
| | 4784 | 275 | 247 | 168 | .380 | .112 | .096 | .646 | .684 | .722 |
| | 4785 | 277 | 249 | 170 | .382 | .116 | .100 | .649 | .688 | .726 |
| | 4788 | 279 | 251 | 172 | .384 | .120 | .104 | .653 | .691 | .730 |
| | 4789 | 281 | 253 | 174 | .386 | .124 | .108 | .656 | .695 | .733 |
| | 4830 | 283 | 255 | 176 | .388 | .128 | .112 | .660 | .698 | .737 |
| | 4831 | 285 | 257 | 178 | .390 | .133 | .116 | .663 | .702 | .741 |

## HIGH TORQUE .406" ROLLERS

The High Torque .406", when coupled with higher rocker ratios (1.7 and up), result in very aggressive valve motion. These provide excellent torque curves and great responsiveness. The smaller lobes are great for restricted applications and the larger lobes provide stronger alternatives to the High Torque .440" profiles when coupled with higher rocker ratios to achieve equivalent valve lift..

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| High Torque .406" Rated Duration @ .020" Tappet Lift<br><br>Journal = N,S,B,R… MI 32.8 (16.4/16.4) | 4600 | 280-6 | 248 | 169 | .406 | .106 | .091 | .609 | .650 | .690 |
| | 4601 | 284-6 | 252 | 172 | .406 | .114 | .098 | .609 | .650 | .690 |
| | 1477 | 288-6 | 256 | 176 | .406 | .122 | .106 | .609 | .650 | .690 |
| | 4209 | 292-6 | 260 | 180 | .406 | .131 | .114 | .609 | .650 | .690 |
| | 4206 | 296-4 | 264 | 184 | .406 | .139 | .122 | .609 | .650 | .690 |
| | 4207 | 300-7 | 268 | 188 | .406 | .148 | .131 | .609 | .650 | .690 |
| | 4208 | 304-7 | 272 | 192 | .406 | .156 | .136 | .609 | .650 | .690 |
| | 4205 | 308-7 | 276 | 195 | .406 | .164 | .147 | .609 | .650 | .690 |
| | 1481 | 312-14 | 280 | 199 | .406 | .173 | .156 | .609 | .650 | .690 |

## HIGH TORQUE .440" ROLLERS

The High Torque .406", when coupled with higher rocker ratios (1.7 and up), result in very aggressive valve motion. These provide excellent torque curves and great responsiveness. The smaller lobes are great for restricted applications and the larger lobes provide stronger alternatives to the High Torque .440" profiles when coupled with higher rocker ratios to achieve equivalent valve lift..

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| High Torque .440" Rated Duration @ .020" Tappet Lift<br><br>Journal = N,S,B,R… MI 32.6 (16.3/16.3) | 4217 | 278-8 | 250 | 174 | .440 | .115 | .099 | .660 | .704 | .748 |
| | 4216 | 280-8 | 252 | 176 | .440 | .119 | .102 | .660 | .704 | .748 |
| | 4240 | 284-8 | 256 | 178 | .440 | .122 | .105 | .660 | .704 | .748 |
| | 4241 | 288-8 | 260 | 182 | .440 | .131 | .114 | .660 | .704 | .748 |
| | 4243 | 292-8 | 264 | 186 | .440 | .140 | .123 | .660 | .704 | .748 |
| | 4245 | 296-8 | 268 | 190 | .440 | .149 | .131 | .660 | .704 | .748 |
| | 4252 | 300-8 | 272 | 194 | .440 | .157 | .139 | .660 | .704 | .748 |
| | 4253 | 304-8 | 276 | 197 | .440 | .177 | .160 | .660 | .704 | .748 |
| | 4213 | 308-8 | 280 | 201 | .440 | .185 | .167 | .660 | .704 | .748 |
| | 4214 | 312-8 | 284 | 205 | .440 | .191 | .174 | .660 | .704 | .748 |
| | 4254 | 316-8 | 288 | 210 | .440 | .198 | .180 | .660 | .704 | .748 |

## HXL ROLLERS

The HXL Rollers are intended for high lift applications that require maximum torque and extended RPM. These fall somewhere in between the RX and TK Series in terms of aggressiveness but provide more lobe lift. They are closest to the High Torque .440" lobes but have incorporated our latest profile advancements that should allow higher engine speeds and improved dynamics.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.6 | 1.7 | 1.8 |
| HXL<br>Rated Duration @<br>.020" Tappet Lift<br><br>Journal = S,B,F,R…<br>MI 29.7 (14.6/15.1) | 2222 | 281 | 252 | 175 | .434 | .118 | .102 | .694 | .738 | .781 |
| | 2223 | 283 | 254 | 177 | .436 | .122 | .106 | .698 | .741 | .785 |
| | 2224 | 285 | 256 | 179 | .438 | .126 | .110 | .701 | .745 | .788 |
| | 2225 | 287 | 258 | 181 | .440 | .130 | .114 | .704 | .748 | .792 |
| | 2226 | 289 | 260 | 183 | .442 | .135 | .118 | .707 | .751 | .796 |
| | 2227 | 291 | 262 | 185 | .444 | .139 | .122 | .710 | .755 | .799 |
| | 2228 | 293 | 264 | 187 | .446 | .144 | .126 | .714 | .758 | .803 |
| | 2229 | 295 | 266 | 189 | .448 | .148 | .130 | .717 | .762 | .806 |
| | 2230 | 297 | 268 | 191 | .450 | .152 | .135 | .720 | .765 | .810 |
| | 2231 | 299 | 270 | 193 | .452 | .157 | .139 | .723 | .768 | .814 |
| | 2232 | 301 | 272 | 195 | .454 | .161 | .143 | .726 | .772 | .817 |
| | 2233 | 303 | 274 | 197 | .454 | .166 | .148 | .726 | .772 | .817 |
| | 2234 | 305 | 276 | 199 | .454 | .170 | .152 | .726 | .772 | .817 |
| | 2235 | 307 | 278 | 201 | .454 | .174 | .156 | .726 | .772 | .817 |
| | 2236 | 309 | 280 | 202 | .454 | .178 | .161 | .726 | .772 | .817 |
| | 2237 | 311 | 282 | 204 | .454 | .183 | .165 | .726 | .772 | .817 |
| | 2208 | 313 | 284 | 206 | .454 | .187 | .169 | .726 | .772 | .817 |
| | 2209 | 315 | 286 | 208 | .454 | .191 | .173 | .726 | .772 | .817 |
| | 2210 | 317 | 288 | 210 | .454 | .195 | .177 | .726 | .772 | .817 |

## QRI ROLLERS

The QRI series are higher lift lobe profiles based off a modern optimized combination of the TK, TC, HXL and new QNI designs. Designed for STD CS journals and/or 0.900" BCD and up to 1.7:1 ratios.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| QRI Rated Duration @ .020" Tappet Lift<br><br>Journal = N,S,B,R…<br>MI 28.3 (13.9/14.4) | 11534 | 262 | 234 | 160 | .441 | .086 | .071 | .662 | .706 | .750 |
| | 11535 | 264 | 236 | 162 | .443 | .089 | .075 | .665 | .709 | .753 |
| | 11536 | 266 | 238 | 164 | .445 | .093 | .078 | .668 | .712 | .757 |
| | 11537 | 268 | 240 | 166 | .447 | .097 | .082 | .671 | .715 | .760 |
| | 11508 | 270 | 242 | 168 | .449 | .101 | .086 | .674 | .718 | .763 |
| | 11509 | 272 | 244 | 170 | .451 | .105 | .089 | .677 | .722 | .767 |
| | 11510 | 274 | 246 | 172 | .453 | .109 | .093 | .680 | .725 | .770 |
| | 11511 | 276 | 248 | 174 | .455 | .114 | .097 | .683 | .728 | .774 |
| | 11512 | 278 | 250 | 176 | .457 | .118 | .101 | .686 | .731 | .777 |
| | 11513 | 280 | 252 | 178 | .459 | .122 | .105 | .689 | .734 | .780 |
| | 11514 | 282 | 254 | 180 | .461 | .127 | .109 | .692 | .738 | .784 |
| | 11515 | 284 | 256 | 182 | .463 | .131 | .114 | .695 | .741 | .787 |
| | 11516 | 286 | 258 | 184 | .465 | .136 | .118 | .698 | .744 | .791 |
| | 11517 | 288 | 260 | 186 | .467 | .140 | .122 | .701 | .747 | .794 |
| | 11518 | 290 | 262 | 188 | .469 | .145 | .127 | .704 | .750 | .797 |
| | 11519 | 292 | 264 | 190 | .471 | .149 | .131 | .707 | .754 | .801 |
| | 11520 | 294 | 266 | 192 | .473 | .154 | .136 | .710 | .757 | .804 |

## HXX ROLLERS

The HXX Rollers are exhaust optimized versions of our popular HXL Intake lobes..

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| HXX Rated Duration @ .020" Tappet Lift<br><br>Journal = N,S,B,R…<br>MI 29.7 (14.6/15.1) | 12404 | 286 | 256 | 179 | .445 | .126 | .110 | .668 | .712 | .757 |
| | 12406 | 290 | 260 | 183 | .445 | .135 | .118 | .668 | .712 | .757 |
| | 12198 | 294 | 264 | 187 | .445 | .143 | .126 | .668 | .712 | .757 |
| | 12199 | 296 | 266 | 189 | .445 | .147 | .130 | .668 | .712 | .757 |
| | 12200 | 298 | 268 | 191 | .445 | .152 | .134 | .668 | .712 | .757 |
| | 12201 | 300 | 270 | 193 | .445 | .156 | .139 | .668 | .712 | .757 |
| | 12202 | 302 | 272 | 194 | .445 | .161 | .143 | .668 | .712 | .757 |
| | 12203 | 304 | 274 | 196 | .445 | .165 | .147 | .668 | .712 | .757 |
| | 12204 | 306 | 276 | 198 | .445 | .169 | .152 | .668 | .712 | .757 |
| | 12205 | 308 | 278 | 200 | .445 | .174 | .156 | .668 | .712 | .757 |
| | 12206 | 310 | 280 | 202 | .445 | .178 | .161 | .668 | .712 | .757 |
| | 12207 | 312 | 282 | 204 | .445 | .183 | .165 | .668 | .712 | .757 |
| | 12208 | 314 | 284 | 206 | .445 | .187 | .169 | .668 | .712 | .757 |

## HXX HL ROLLERS

Higher lift versions on the HXX lobes..

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| HXX HL Rated Duration @ .020" Tappet Lift | 12410 | 299 | 269 | 193 | .469 | .155 | .137 | .704 | .750 | .797 |

## HXX LL ROLLERS

These are softer ramp designs like the HXL designs but with lower lift. Work well for AL block applications with higher ratios or anywhere as an exhaust lobe.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.6 | 1.7 | 1.8 |
| HXX LL Rated Duration @ .020" Tappet Lift | 12050 | 292 | 262 | 180 | .390 | .135 | .119 | .585 | .663 | .702 |
| | 12052 | 296 | 266 | 184 | .392 | .143 | .127 | .588 | .666 | .706 |
| | 12054 | 300 | 270 | 188 | .394 | .151 | .134 | .591 | .670 | .709 |

## IXL ROLLERS

The IXL Series is very similar to the HXL but is optimized for higher rocker ratios. This family also incorporates a design characteristic which should improve stability at very high RPM. These are quicker off the seat than the RX profiles, but the IXL nose shape will provide better stability with high ratios.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.7 | 1.8 | 1.9 |
| IXL Rated Duration @ .020" Tappet Lift<br><br>Journal = N,S,B,R… MI 30.0 (14.5/15.5) | 12129 | 275 | 245 | 163 | .400 | .102 | .088 | .680 | .720 | .760 |
| | 12131 | 279 | 249 | 167 | .404 | .110 | .095 | .687 | .727 | .768 |
| | 12133 | 283 | 253 | 171 | .408 | .117 | .102 | .694 | .734 | .775 |
| | 2535 | 287 | 257 | 175 | .412 | .125 | .110 | .700 | .742 | .783 |
| | 2536 | 289 | 259 | 177 | .414 | .129 | .113 | .704 | .745 | .787 |
| | 2537 | 291 | 261 | 179 | .416 | .133 | .117 | .707 | .749 | .790 |
| | 2538 | 293 | 263 | 181 | .418 | .136 | .121 | .711 | .752 | .794 |
| | 2539 | 295 | 265 | 182 | .420 | .140 | .125 | .714 | .756 | .798 |
| | 2540 | 297 | 267 | 184 | .422 | .144 | .128 | .717 | .760 | .802 |
| | 2541 | 299 | 269 | 186 | .424 | .148 | .132 | .721 | .763 | .806 |
| | 2542 | 301 | 271 | 188 | .426 | .152 | .136 | .724 | .767 | .809 |
| | 2543 | 303 | 273 | 190 | .428 | .156 | .140 | .728 | .770 | .813 |
| | 2544 | 305 | 275 | 192 | .430 | .160 | .144 | .731 | .774 | .817 |
| | | | @ .050 | @ .200 | | 106° | 110° | 1.8 | 1.9 | 2.0 |
| IXLL Rated Duration @ .020" Tappet Lift | 14502 | 282 | 252 | 167 | .387 | .114 | .100 | .697 | .735 | .774 |
| | 14504 | 286 | 256 | 171 | .389 | .122 | .107 | .700 | .739 | .778 |
| | 14506 | 291 | 260 | 175 | .391 | .129 | .114 | .704 | .743 | .782 |
| | 14508 | 295 | 264 | 179 | .393 | .137 | .122 | .707 | .747 | .786 |

## TK ROLLERS

The TK Series is our most aggressive standard rocker ratio series. These designs get from .020" to .050" tappet lift and back from .050" to .020" tappet lift in only 28°. That quickness provides more duration at .200" and more area than comparable profiles. Excellent for all out Sprint Car and Late Model applications. Please consult with a COMP Cam® CAM HELP® technician or one of our Engine Builder salesmen for proper component selection.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| TK<br>Rated Duration @ .020" Tappet Lift<br><br>Journal = S,B,F,R…<br>MI 28.2 (13.8/14.4) | 4639 | TK258 | 230 | 156 | .405 | .078 | .064 | .608 | .648 | .689 |
| | 4640 | TK262 | 234 | 160 | .410 | .085 | .071 | .615 | .656 | .697 |
| | 4641 | TK266 | 238 | 164 | .415 | .093 | .078 | .623 | .664 | .706 |
| | 4642 | TK270 | 242 | 168 | .420 | .101 | .085 | .630 | .672 | .714 |
| | 4643 | TK274 | 246 | 172 | .425 | .109 | .093 | .638 | .680 | .723 |
| | 4609 | TK277 | 249 | 175 | .430 | .118 | .101 | .645 | .688 | .731 |
| | 4610 | TK279 | 251 | 177 | .430 | .122 | .105 | .645 | .688 | .731 |
| | 4611 | TK281 | 253 | 179 | .430 | .127 | .109 | .645 | .688 | .731 |
| | 4612 | TK283 | 255 | 180 | .430 | .131 | .114 | .645 | .688 | .731 |
| | 4613 | TK285 | 257 | 182 | .430 | .135 | .118 | .645 | .688 | .731 |
| | 4614 | TK287 | 259 | 184 | .430 | .140 | .122 | .645 | .688 | .731 |
| | 4572 | TK289-420 | 261 | 184 | .420 | .147 | .129 | .630 | .672 | .714 |
| | 4615 | TK289 | 261 | 186 | .430 | .144 | .126 | .645 | .688 | .731 |
| | 4573 | TK291-420 | 263 | 186 | .420 | .149 | .131 | .630 | .672 | .714 |
| | 4616 | TK291 | 263 | 188 | .430 | .149 | .131 | .645 | .688 | .731 |
| | 4574 | TK293-420 | 265 | 188 | .420 | .151 | .134 | .630 | .672 | .714 |
| | 4617 | TK293 | 265 | 190 | .430 | .153 | .135 | .645 | .688 | .731 |
| | 4575 | TK295-420 | 267 | 190 | .420 | .155 | .138 | .630 | .672 | .714 |
| | 4618 | TK295 | 267 | 191 | .430 | .157 | .140 | .645 | .688 | .731 |
| | 4576 | TK297-420 | 269 | 191 | .420 | .159 | .142 | .630 | .672 | .714 |
| | 4619 | TK297 | 269 | 193 | .430 | .162 | .144 | .645 | .688 | .731 |
| | 4620 | TK299 | 271 | 195 | .430 | .166 | .148 | .645 | .688 | .731 |
| | 4621 | TK301 | 273 | 197 | .430 | .170 | .154 | .645 | .688 | .731 |
| | 4622 | TK303 | 275 | 199 | .430 | .174 | .157 | .645 | .688 | .731 |
| | 4623 | TK305 | 277 | 201 | .430 | .178 | .161 | .645 | .688 | .731 |
| | 4624 | TK307 | 279 | 202 | .430 | .183 | .165 | .645 | .688 | .731 |
| | 4625 | TK309 | 281 | 204 | .430 | .187 | .169 | .645 | .688 | .731 |
| | 4627 | TK311 | 283 | 206 | .430 | .191 | .173 | .645 | .688 | .731 |
| | 4628 | TK313 | 285 | 208 | .430 | .195 | .178 | .645 | .688 | .731 |

## TK LIFT RULE ROLLERS

These low lift designs are based on the TK series rollers and are specifically designed for lift rule applications such as Rev-Oil Pro Cup. Typically they will be used with 1.8:1 ratios.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.75 | 1.8 | 1.85 |
| TK Lift Rule .347" Rated Duration @ .020" Tappet Lift<br><br>Journal = S,B,F,R… MI 28.2 (13.8/14.4) | 1416 | 263 | 235 | 154 | .347 | .089 | .074 | .607 | .625 | .642 |
| | 1417 | 267 | 239 | 158 | .347 | .096 | .081 | .607 | .625 | .642 |
| | 1418 | 271 | 243 | 161 | .347 | .104 | .089 | .607 | .625 | .642 |
| | 1419 | 275 | 247 | 165 | .347 | .111 | .096 | .607 | .625 | .642 |
| | 4421 | 279 | 251 | 168 | .347 | .119 | .104 | .607 | .625 | .642 |
| | 4422 | 283 | 255 | 171 | .347 | .126 | .111 | .607 | .625 | .642 |
| | 4423 | 287 | 259 | 174 | .347 | .134 | .118 | .607 | .625 | .642 |
| | 4424 | 291 | 263 | 177 | .347 | .141 | .126 | .607 | .625 | .642 |
| | 1427 | 295 | 267 | 180 | .347 | .147 | .133 | .607 | .625 | .642 |
| | 1429 | 299 | 271 | 184 | .347 | .154 | .140 | .607 | .625 | .642 |

## SPL ROLLERS

The SPL Rollers are very similar to the TK family but have special ramps designed to be used with looser lash values. These lobes are designed for hot lash settings in the .022" to .028" range. Otherwise, they should perform as well as the TK family in high torque applications that respond well to aggressive lobe profiles.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.6 | 1.7 | 1.8 |
| SPL<br>Rated Duration @ .020" Tappet Lift<br>Journal = S,B,F,R… MI 30.6 (15.2/15.4) | 2906 | 291 | 260 | 184 | 0.435 | .137 | .120 | .696 | .740 | .783 |
| | 2907 | 295 | 264 | 188 | 0.435 | .146 | .128 | .696 | .740 | .783 |
| | 2908 | 299 | 268 | 192 | 0.435 | .154 | .137 | .696 | .740 | .783 |
| | 2909 | 303 | 272 | 195 | 0.435 | .163 | .145 | .696 | .740 | .783 |

## VK LIFT RULE ROLLERS

These low lift designs are similar to the low lift TKs but optimized with quicker ramps for the lower lobe lift. Designed for lift rule solid roller applications including revised NMRA specs.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.55 | 1.6 | 1.65 |
| VK Lift Rule .323" Rated Duration @ .020" Tappet Lift<br><br>Journal = S,B,F,R… MI 27.2 (13.3/13.9) | 2688 | 276 | 249 | 161 | .323 | .112 | .098 | .501 | .517 | .533 |
| | 2689 | 280 | 253 | 164 | .323 | .119 | .105 | .501 | .517 | .533 |
| | 2690 | 284 | 257 | 167 | .323 | .126 | .112 | .501 | .517 | .533 |
| | 2691 | 288 | 261 | 171 | .323 | .133 | .119 | .501 | .517 | .533 |
| | 2692 | 292 | 265 | 174 | .323 | .140 | .126 | .501 | .517 | .533 |
| | 2693 | 296 | 269 | 178 | .323 | .147 | .133 | .501 | .517 | .533 |
| | 2694 | 300 | 273 | 181 | .323 | .153 | .139 | .501 | .517 | .533 |

## CSZ ROLLERS

The CSZ Rollers are "tweaked" versions of the DSZ profiles for use in standard journal Small Block Chevy applications and higher lift Big Block Chevy or 50mm. These are not quite as quick as the DSZ profiles, and they give up a little area and stability compared to the larger journal versions. However, this as close to a DSZ as you can get with a smaller journal. Also good for hydraulic rollers if noise is not a primary concern.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| CSZ Rated Duration @ .020" Tappet Lift<br><br>Journal = S<br>MI 27.7 (13.5/14.2) | 12540 | 240 | 212 | 133 | .325 | .049 | .039 | .488 | .520 | .553 |
| | 12581 | 242 | 214 | 135 | .325 | .052 | .041 | .488 | .520 | .553 |
| | 12582 | 244 | 216 | 137 | .325 | .055 | .044 | .488 | .520 | .553 |
| | 12588 | 252 | 224 | 144 | .325 | .068 | .055 | .488 | .520 | .553 |
| | 12543 | 252 | 224 | 147 | .348 | .068 | .055 | .522 | .557 | .592 |
| | 12583 | 254 | 226 | 148 | .348 | .071 | .058 | .522 | .557 | .592 |
| | 12584 | 256 | 228 | 150 | .348 | .075 | .061 | .522 | .557 | .592 |
| | 12589 | 260 | 232 | 154 | .348 | .082 | .068 | .522 | .557 | .592 |
| | 12543 | 252 | 224 | 147 | .348 | .068 | .055 | .522 | .557 | .592 |
| | 12550 | 268 | 240 | 165 | .394 | .098 | .082 | .591 | .630 | .670 |
| | 12552 | 272 | 244 | 169 | .398 | .106 | .090 | .597 | .637 | .677 |
| | 12554 | 276 | 248 | 173 | .402 | .114 | .098 | .603 | .643 | .683 |
| | 12555 | 278 | 250 | 175 | .404 | .118 | .102 | .606 | .646 | .687 |
| | 12556 | 280 | 252 | 177 | .406 | .123 | .106 | .609 | .650 | .690 |
| | 12558 | 284 | 256 | 181 | .410 | .132 | .114 | .615 | .656 | .697 |
| | 12560 | 288 | 260 | 185 | .414 | .140 | .123 | .621 | .662 | .704 |
| CSZ H Rated Duration @ .020" Tappet Lift<br><br>Journal = S, B<br>MI 27.7 (13.5/14.2) | 12564 | 256 | 228 | 154 | .399 | .075 | .061 | .599 | .638 | .678 |
| | 12566 | 260 | 232 | 158 | .403 | .082 | .068 | .605 | .645 | .685 |
| | 12568 | 264 | 236 | 162 | .407 | .090 | .075 | .611 | .651 | .692 |
| | 12570 | 268 | 240 | 166 | .411 | .098 | .082 | .617 | .658 | .699 |
| | 12571 | 270 | 242 | 168 | .413 | .102 | .086 | .620 | .661 | .702 |
| | 12572 | 272 | 244 | 170 | .415 | .106 | .090 | .623 | .664 | .706 |
| | 12573 | 274 | 246 | 172 | .417 | .110 | .094 | .626 | .667 | .709 |
| | 12574 | 276 | 248 | 174 | .419 | .114 | .098 | .629 | .670 | .712 |
| | 12575 | 278 | 250 | 176 | .421 | .119 | .102 | .632 | .674 | .716 |
| | 12576 | 280 | 252 | 178 | .423 | .123 | .106 | .635 | .677 | .719 |
| | 12577 | 282 | 254 | 180 | .425 | .127 | .110 | .638 | .680 | .723 |
| | 12578 | 284 | 256 | 182 | .427 | .132 | .114 | .641 | .683 | .726 |
| | 12580 | 288 | 260 | 186 | 0.431 | .141 | .123 | .647 | .690 | .733 |

# SOLID ROLLER (C = LARGE JOURNAL MULTI-USE)

## DSZ ROLLERS

The DSZ Rollers are tight lash designs based on our high lift DSP and DSS series but optimized with quicker ramps for shorter duration applications. These lobes have shorter seat timing than even the TK series. DSZ Rollers provide great torque and power in limited engine speed or limited ratio applications. DSZ profiles are also very good with limited travel hydraulic roller lifters if noise is not a primary concern.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| DSZ Series Rated Duration @ .020" Tappet Lift<br><br>Journal = B, F, R, M<br>MI 27.1 (13.0/14.1) | 12500 | 267 | 240 | 166 | .394 | .098 | .083 | .591 | .630 | .670 |
| | 12502 | 271 | 244 | 170 | .398 | .106 | .090 | .597 | .637 | .677 |
| | 12504 | 275 | 248 | 174 | .402 | .115 | .098 | .603 | .643 | .683 |
| | 12506 | 279 | 252 | 177 | .406 | .123 | .106 | .609 | .650 | .690 |
| | 12508 | 283 | 256 | 181 | .410 | .132 | .115 | .615 | .656 | .697 |
| | 12510 | 287 | 260 | 185 | .414 | .141 | .123 | .621 | .662 | .704 |
| DSZ H Series Rated Duration @ .020" Tappet Lift<br><br>Journal = F, R, M<br>MI 27.1 (13.0/14.1) | 12522 | 271 | 244 | 170 | .415 | .106 | .090 | .623 | .664 | .706 |
| | 12524 | 275 | 248 | 174 | .419 | .115 | .098 | .629 | .670 | .712 |
| | 12526 | 279 | 252 | 178 | .423 | .124 | .106 | .635 | .677 | .719 |
| | 12527 | 281 | 254 | 180 | .425 | .128 | .111 | .638 | .680 | .723 |
| | 12528 | 283 | 256 | 182 | .427 | .132 | .115 | .641 | .683 | .726 |
| | 12530 | 287 | 260 | 186 | .431 | .141 | .124 | .647 | .690 | .733 |

## TK .455" ROLLERS

These higher lift designs are based on the original TK series rollers, but with higher lobe lift for applications with larger journals only.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| TK - .455" Rated Duration @ .020" Tappet Lift<br><br>Journal = B,F,R,M<br>MI 28.2 (13.8/14.4) | 1528 | 273 | 245 | 172 | .455 | .109 | .093 | .683 | .728 | .774 |
| | 1530 | 277 | 249 | 176 | .455 | .118 | .101 | .683 | .728 | .774 |
| | 1532 | 281 | 253 | 179 | .455 | .127 | .109 | .683 | .728 | .774 |
| | 1534 | 285 | 257 | 183 | .455 | .135 | .118 | .683 | .728 | .774 |
| | 1536 | 289 | 261 | 187 | .455 | .144 | .126 | .683 | .728 | .774 |
| | 1538 | 293 | 265 | 190 | .455 | .153 | .135 | .683 | .728 | .774 |
| | 1540 | 297 | 269 | 194 | .455 | .162 | .144 | .683 | .728 | .774 |
| | 1542 | 301 | 273 | 198 | .455 | .170 | .154 | .683 | .728 | .774 |

## TK HL & SP-TK HI LIFT ROLLERS

These higher lift designs are based on the TK .455" series rollers, but have faster opening side velocities and more lobe lift. For use with 1.948" or larger journals only.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| SP-TK Rated Duration @ .020" Tappet Lift<br><br>Journal = B,F,R,M<br>MI 28.2 (13.8/14.4) | 1519 | 276 | 248 | 175 | .470 | .114 | .097 | .705 | .752 | .799 |
| | 1520 | 280 | 252 | 179 | .470 | .123 | .105 | .705 | .752 | .799 |
| | 1521 | 284 | 256 | 183 | .470 | .131 | .113 | .705 | .752 | .799 |
| | 1522 | 288 | 260 | 187 | .470 | .140 | .122 | .705 | .752 | .799 |
| | 1523 | 292 | 264 | 190 | .470 | .149 | .131 | .705 | .752 | .799 |
| | 1524 | 296 | 268 | 194 | .470 | .158 | .140 | .705 | .752 | .799 |

## DIX ROLLERS

The DIX series is similar to the RX but with substantially more area under the curve..

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.6 | 1.7 | 1.8 |
| DIX Rated Duration @ .020" Tappet Lift<br>MI 29.6 (14.2/15.4)<br>Journal = B,F,R,M | 12100 | 304 | 274 | 196 | .439 | .165 | .147 | .702 | .746 | .790 |
| | 12102 | 306 | 276 | 198 | .439 | .169 | .151 | .702 | .746 | .790 |
| | 12103 | 308 | 278 | 200 | .439 | .173 | .155 | .702 | .746 | .790 |

## UB ROLLERS

The UB Series Rollers are based on some of our most popular high RPM, NASCAR-style .875" flat tappet designs but are optimized to take advantage of the additional tappet velocity allowed with roller lifters. These are quicker off the seat than the HXL Series but have slightly less high lift area. Performance will be similar to the HXL, but certain port designs and valve train systems will have a clear preference.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.6 | 1.7 | 1.8 |
| UB Rated Duration @ .020" Tappet Lift<br>Journal = B,F,R,M<br>MI 29.4 (14.4/15.0) | 2214 | 287 | 257 | 179 | .446 | .126 | .110 | .714 | .758 | .803 |
| | 2215 | 289 | 259 | 181 | .447 | .130 | .114 | .715 | .760 | .805 |
| | 2246 | 291 | 261 | 183 | .448 | .135 | .118 | .717 | .762 | .806 |
| | 2247 | 293 | 263 | 185 | .449 | .139 | .122 | .718 | .763 | .808 |
| | 2238 | 295 | 265 | 186 | .450 | .143 | .128 | .720 | .765 | .810 |
| | 2239 | 297 | 267 | 188 | .451 | .147 | .130 | .722 | .767 | .812 |
| | 2240 | 299 | 269 | 190 | .452 | .152 | .135 | .723 | .768 | .814 |
| | 2241 | 301 | 271 | 192 | .453 | .156 | .139 | .725 | .770 | .815 |
| | 2242 | 303 | 273 | 194 | .454 | .160 | .143 | .726 | .772 | .817 |
| | 2243 | 305 | 275 | 196 | .455 | .164 | .147 | .728 | .774 | .819 |
| | 2244 | 307 | 277 | 198 | .456 | .168 | .151 | .730 | .775 | .821 |
| | 2245 | 309 | 279 | 200 | .457 | .172 | .155 | .731 | .777 | .823 |
| | 2380 | 311 | 281 | 202 | .458 | .177 | .159 | .733 | .779 | .824 |
| | 2381 | 313 | 283 | 204 | .459 | .181 | .164 | .734 | .780 | .826 |
| | | | @ .050 | @ .200 | | 106° | 110° | 1.7 | 1.8 | 1.9 |
| IXLL Rated Duration @ .020" Tappet Lift | 2265 | 285 | 255 | 176 | .423 | .122 | .106 | .719 | .761 | .804 |
| | 2267 | 287 | 257 | 178 | .424 | .126 | .110 | .721 | .763 | .806 |
| | 2273 | 289 | 259 | 179 | .425 | .130 | .114 | .723 | .765 | .808 |
| | 2274 | 291 | 261 | 181 | .426 | .134 | .118 | .724 | .767 | .809 |
| | 2275 | 293 | 263 | 183 | .427 | .138 | .122 | .726 | .769 | .811 |
| | 2276 | 295 | 265 | 185 | .428 | .142 | .126 | .728 | .770 | .813 |
| | 2277 | 297 | 267 | 187 | .430 | .146 | .130 | .731 | .774 | .817 |
| | 2278 | 299 | 269 | 189 | .432 | .150 | .134 | .734 | .778 | .821 |
| | 2279 | 301 | 271 | 191 | .434 | .155 | .138 | .738 | .781 | .825 |
| | 2280 | 303 | 273 | 193 | .436 | .159 | .142 | .741 | .785 | .828 |
| | 2281 | 305 | 275 | 195 | .438 | .163 | .146 | .745 | .788 | .832 |

## UBL ROLLERS

The UBL Rollers are based on the UB Roller designs but are faster off the seat for improved performance in limited engine speed and lower lobe lift applications.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.6 | 1.7 | 1.8 |
| UBL Rated Duration @ .020" Tappet Lift<br>Journal = B,F,R,M<br>MI 29.4 (14.4/15.0) | 2195 | 283 | 254 | 174 | .410 | .120 | .105 | .656 | .697 | .738 |
| | 2196 | 287 | 258 | 179 | .410 | .128 | .113 | .656 | .697 | .738 |
| | 2198 | 295 | 266 | 185 | .410 | .144 | .128 | .656 | .697 | .738 |
| | 2199 | 299 | 270 | 189 | .410 | .152 | .136 | .656 | .697 | .738 |

## UBA ROLLERS

The UBA Series is based on the UB design but is faster off the seat for improved performance in limited engine speed applications.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.6 | 1.7 | 1.8 |
| UBA Rated Duration @ .020" Tappet Lift<br>Journal = B,F,R,M<br>MI 28.6 (13.9/14.7) | 2248 | 285 | 256 | 179 | .444 | .126 | .110 | .710 | .755 | .799 |
| | 2249 | 287 | 258 | 181 | .446 | .131 | .114 | .714 | .758 | .803 |
| | 2250 | 289 | 260 | 183 | .448 | .135 | .118 | .717 | .762 | .806 |
| | 2251 | 291 | 262 | 185 | .450 | .139 | .122 | .720 | .765 | .810 |
| | 2252 | 293 | 264 | 187 | .452 | .144 | .126 | .723 | .768 | .814 |
| | 2253 | 295 | 266 | 189 | .454 | .148 | .131 | .726 | .772 | .817 |
| | 2254 | 297 | 268 | 191 | .456 | .153 | .135 | .730 | .775 | .821 |
| | 2255 | 299 | 270 | 193 | .458 | .157 | .139 | .733 | .779 | .824 |
| | 2256 | 301 | 272 | 195 | .460 | .161 | .144 | .736 | .782 | .828 |
| | 2257 | 303 | 274 | 197 | .462 | .166 | .148 | .739 | .785 | .832 |
| | 2258 | 305 | 276 | 199 | .464 | .170 | .152 | .742 | .789 | .835 |
| | 2259 | 307 | 278 | 201 | .465 | .175 | .157 | .744 | .791 | .837 |

## UBLL ROLLERS

The UBLL Rollers are based on the UB Roller designs but are faster off the seat for improved performance in limited engine speed and lower lobe lift applications.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.9 | 2.0 | 2.1 |
| UBLL Rated Duration @ .020" Tappet Lift<br>Journal = B,F,R,M<br>MI 28.6 (13.9/14.7) | 2201 | 289 | 260 | 177 | .389 | .131 | .116 | .739 | .778 | .817 |
| | 2202 | 291 | 262 | 179 | .390 | .135 | .119 | .741 | .780 | .819 |
| | 2203 | 293 | 264 | 181 | .391 | .139 | .123 | .743 | .782 | .821 |

## GCI & GCX ROLLERS

The GCI and GCX lobes have a bit more ramp than some of the other modern profiles but have excellent area.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| GCI Rated Duration @ .020" Tappet Lift<br>Journal = B,F,R,M<br>MI 28.7 (13.8/14.9) | 2682 | 290 | 261 | 185 | .453 | .139 | .122 | .680 | .725 | .770 |
| | 2683 | 292 | 263 | 187 | .455 | .143 | .126 | .683 | .728 | .774 |
| | 2570 | 294 | 265 | 189 | .457 | .147 | .130 | .686 | .731 | .777 |
| | 2582 | 296 | 267 | 191 | .459 | .152 | .134 | .689 | .734 | .780 |
| | 2583 | 298 | 269 | 193 | .461 | .156 | .139 | .692 | .738 | .784 |
| GCX Rated Duration @ .020" Tappet Lift<br>Journal = B,F,R,M<br>MI 27.5 (13.2/14.3) | 2730 | 295 | 268 | 191 | .457 | .155 | .137 | .686 | .731 | .777 |
| | 2731 | 297 | 270 | 193 | .459 | .159 | .142 | .689 | .734 | .780 |
| | 2571 | 299 | 272 | 195 | .461 | .163 | .145 | .692 | .738 | .784 |
| | 2590 | 301 | 274 | 197 | .463 | .167 | .150 | .695 | .741 | .787 |
| | 2591 | 303 | 276 | 199 | .465 | .172 | .154 | .698 | .744 | .791 |

## ULG UVX HIGH RATIO ROLLERS

The ULG and UVX are smoother than the UBLL for even higher rocker ratios, especially for converting older NASCAR Cup engines with very high ratios over to roller cams.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 2.1 | 2.2 | 2.3 |
| ULG Rated Duration @ .020" Tappet Lift MI 30.4 (14.8/15.6) | 14004 | 282 | 252 | 167 | .388 | .114 | .100 | .815 | .854 | .892 |
| | 14006 | 286 | 256 | 171 | .388 | .122 | .107 | .815 | .854 | .892 |
| | 14008 | 290 | 260 | 175 | .388 | .129 | .114 | .815 | .854 | .892 |
| UVX Rated Duration @ .020" Tappet Lift | 14013 | 304 | 272 | 183 | .388 | .145 | .131 | .815 | .854 | .892 |

## LDP XDP ENDURANCE ROLLERS

The LPD and XPD are faster 24 hour endurance roller cam applications or where quicker profiles can be used in well optimized applications.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.8 | 1.9 | 2.0 |
| LDP Rated Duration @ .020" Tappet Lift MI 28.7 (13.6/15.1) | 20400 | 268 | 239 | 163 | .397 | .094 | .079 | .715 | .754 | .794 |
| | 20401 | 270 | 241 | 164 | .397 | .098 | .083 | .715 | .754 | .794 |
| | 20402 | 272 | 243 | 166 | .397 | .102 | .087 | .715 | .754 | .794 |
| | 20404 | 276 | 247 | 170 | .397 | .110 | .094 | .715 | .754 | .794 |
| XDP Rated Duration @ .006" Tappet Lift MI 29.9 (14.2/15.7) | 20410 | 269 | 239 | 159 | .369 | .093 | .079 | .664 | .701 | .738 |
| | 20412 | 273 | 243 | 162 | .369 | .101 | .086 | .664 | .701 | .738 |
| | 20413 | 275 | 245 | 164 | .369 | .105 | .090 | .664 | .701 | .738 |
| | 20414 | 277 | 247 | 166 | .369 | .109 | .093 | .664 | .701 | .738 |

## HPX ROLLERS

The HPX Rollers are higher lift, more aggressive versions of the HXX lobes for use in larger journal applications. These also work well with less rocker ratio and can be used on the intake or exhaust.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| HPX Rated Duration @ .020" Tappet Lift<br><br>Journal = B,R,M<br>MI 28.5 (14.0/14.5) | 12183 | 288 | 260 | 187 | .471 | .140 | .122 | .707 | .754 | .801 |
| | 12185 | 292 | 264 | 191 | .475 | .150 | .131 | .713 | .760 | .808 |
| | 12187 | 294 | 266 | 193 | .477 | .154 | .135 | .716 | .763 | .811 |
| | 12188 | 296 | 268 | 195 | .479 | .159 | .140 | .719 | .766 | .814 |
| | 12189 | 298 | 270 | 197 | .481 | .164 | .144 | .722 | .770 | .818 |
| | 12190 | 300 | 272 | 199 | .483 | .169 | .150 | .725 | .773 | .821 |
| | 12191 | 302 | 274 | 201 | .485 | .174 | .154 | .728 | .776 | .825 |
| | 12192 | 304 | 276 | 203 | .487 | .179 | .159 | .731 | .779 | .828 |
| | 12193 | 306 | 278 | 205 | .489 | .183 | .164 | .734 | .782 | .831 |
| | 12194 | 308 | 280 | 207 | .491 | .189 | .169 | .737 | .786 | .835 |
| | 12195 | 310 | 282 | 209 | .493 | .193 | .174 | .740 | .789 | .838 |
| | 12196 | 312 | 284 | 211 | .495 | .199 | .179 | .743 | .792 | .842 |
| | 12197 | 314 | 286 | 213 | .495 | .203 | .183 | .743 | .792 | .842 |
| | 12230 | 316 | 288 | 215 | .495 | .208 | .188 | .743 | .792 | .842 |
| | 12231 | 318 | 290 | 217 | .495 | .213 | .193 | .743 | .792 | .842 |
| | 12232 | 320 | 292 | 219 | .495 | .218 | .198 | .743 | .792 | .842 |
| | 12233 | 322 | 294 | 221 | .495 | .222 | .203 | .743 | .792 | .842 |
| | 12234 | 324 | 296 | 223 | .495 | .227 | .207 | .743 | .792 | .842 |

## DLB ROLLERS

The DLB rollers are very smooth, higher RPM profiles similar to both the TS and DRZ Drag profiles. These are a very good choice for any extremely high RPM drag racing or mid-endurance application that require high lift, high RPM and a wide power range. Require high rate valve springs.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.6 | 1.7 | 1.8 |
| DLB Rated Duration @ .020" Tappet Lift<br><br>Journal = R,M<br>MI 30.6 (15.0/15.6) | 12476 | 297 | 266 | 188 | .519 | .144 | .127 | .830 | .882 | .934 |
| | 12478 | 301 | 270 | 192 | .525 | .153 | .135 | .840 | .893 | .945 |
| | 12480 | 305 | 274 | 196 | .531 | .162 | .144 | .850 | .903 | .956 |
| | 12482 | 309 | 278 | 200 | .537 | .171 | .153 | .859 | .913 | .967 |
| | 12483 | 311 | 280 | 202 | .540 | .176 | .158 | .864 | .918 | .972 |
| | 12484 | 313 | 282 | 204 | .543 | .181 | .162 | .869 | .923 | .977 |
| | 12485 | 315 | 284 | 206 | .546 | .185 | .167 | .874 | .928 | .983 |
| | 12486 | 317 | 286 | 208 | .549 | .190 | .171 | .878 | .933 | .988 |
| DLB LL Rated Duration @ .020" Tappet Lift<br><br>Journal = B,R,M<br>MI 30.6 (15.0/15.6) | 14280 | 297 | 266 | 186 | .473 | .143 | .126 | .757 | .804 | .851 |
| | 14282 | 301 | 270 | 190 | .477 | .151 | .135 | .763 | .811 | .859 |
| | 14284 | 305 | 274 | 194 | .481 | .160 | .143 | .770 | .818 | .866 |
| | 14285 | 307 | 276 | 196 | .483 | .165 | .147 | .773 | .821 | .869 |
| | 14286 | 309 | 278 | 198 | .485 | .169 | .152 | .776 | .825 | .873 |
| | 14288 | 313 | 282 | 202 | .489 | .178 | .160 | .782 | .831 | .880 |

## DNW ROLLERS

The DNW rollers are similar to the DLB series but work well in longer endurance applications that use lower rate valve springs. Very good for short duration applications that operated under 9500 RPM.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| DNW Pro Rated Duration @ .020" Tappet Lift<br><br>Journal = F,R,M<br>MI 30.8 (15.0/15.8) | 11888 | 292 | 261 | 186 | .518 | .136 | .119 | .777 | .881 | .984 |
| | 11889 | 294 | 263 | 188 | .520 | .140 | .123 | .780 | .884 | .988 |
| | 11890 | 296 | 265 | 190 | .522 | .145 | .127 | .783 | .887 | .992 |
| | 11891 | 298 | 267 | 192 | .524 | .150 | .131 | .786 | .891 | .996 |
| | 11892 | 300 | 269 | 194 | .526 | .154 | .136 | .789 | .894 | .999 |
| | 11902 | 300 | 269 | 194 | .555 | .155 | .136 | .833 | .944 | 1.055 |
| | 11903 | 302 | 271 | 196 | .557 | .159 | .140 | .836 | .947 | 1.058 |
| | 11904 | 304 | 273 | 198 | .559 | .164 | .145 | .839 | .950 | 1.062 |
| | 11906 | 308 | 277 | 202 | .563 | .174 | .155 | .845 | .957 | 1.070 |
| | 11908 | 312 | 281 | 206 | .567 | .184 | .164 | .851 | .964 | 1.077 |

## DSP ROLLERS

The DSP Rollers fit nicely between the UBA and DSS families. These profiles work great either in lower ratio, high RPM applications or in lower engine speed applications where you can use a faster lobe.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.6 | 1.7 | 1.8 |
| DSP Rated Duration @ .020" Tappet Lift<br><br>Journal = B,R,M<br>MI 28.5 (13.8/14.7) | 12170 | 279 | 250 | 175 | .461 | .115 | .099 | .738 | .784 | .830 |
| | 12171 | 281 | 252 | 177 | .463 | .120 | .103 | .741 | .787 | .833 |
| | 12172 | 283 | 254 | 179 | .465 | .124 | .107 | .744 | .791 | .837 |
| | 12174 | 287 | 258 | 183 | .467 | .133 | .115 | .747 | .794 | .841 |
| | 12176 | 291 | 262 | 187 | .469 | .142 | .124 | .750 | .797 | .844 |
| | 12177 | 293 | 264 | 189 | .470 | .146 | .128 | .752 | .799 | .846 |
| | 12178 | 295 | 266 | 191 | .471 | .151 | .133 | .754 | .801 | .848 |
| | 12179 | 297 | 268 | 193 | .472 | .155 | .137 | .755 | .802 | .850 |
| | 12180 | 299 | 270 | 195 | .473 | .160 | .142 | .757 | .804 | .851 |
| | 12181 | 301 | 272 | 197 | .474 | .165 | .146 | .758 | .806 | .853 |
| | 12182 | 303 | 274 | 199 | .475 | .169 | .151 | .760 | .808 | .855 |

## DSS ROLLERS

The DSS Rollers are based off the best aspects of the HXL and DR Series. These work very well in high torque applications that can take advantage of an aggressive high lobe lift design. The DSS series is a very good choice for applications where valve motion similar to that of an aggressive high ratio lobe is desired without going with an extreme rocker ratio. Available for 1.948" and larger journal sizes but cannot be ground on standard journal Small Block Chevy or small base circle cores.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| DSS Rated Duration @ .020" Tappet Lift<br><br>Journal = B,R,M<br>MI 28.0 (13.6/14.4) | 11503 | 276 | 248 | 175 | .466 | .113 | .096 | .699 | .746 | .792 |
| | 11504 | 278 | 250 | 177 | .468 | .117 | .100 | .702 | .749 | .796 |
| | 11505 | 280 | 252 | 179 | .470 | .121 | .104 | .705 | .752 | .799 |
| | 11506 | 282 | 254 | 181 | .472 | .126 | .109 | .708 | .755 | .802 |
| | 2531 | 284 | 256 | 183 | .474 | .130 | .113 | .711 | .758 | .806 |
| | 2545 | 286 | 258 | 185 | .475 | .135 | .117 | .713 | .760 | .808 |
| | 2551 | 288 | 260 | 187 | .476 | .139 | .121 | .714 | .762 | .809 |
| | 2555 | 299 | 262 | 189 | .477 | .143 | .125 | .716 | .763 | .811 |
| | 2557 | 292 | 264 | 191 | .478 | .148 | .130 | .717 | .765 | .813 |
| | 2559 | 294 | 266 | 192 | .479 | .153 | .134 | .719 | .766 | .814 |
| | 2560 | 296 | 268 | 194 | .480 | .157 | .139 | .720 | .768 | .816 |
| | 2521 | 298 | 270 | 196 | .481 | .162 | .143 | .722 | .770 | .818 |
| | 2522 | 300 | 272 | 198 | .482 | .166 | .148 | .723 | .771 | .819 |
| | 2523 | 302 | 274 | 200 | .483 | .171 | .152 | .725 | .773 | .821 |
| | 2524 | 304 | 276 | 202 | .484 | .176 | .157 | .726 | .774 | .823 |
| | 2525 | 306 | 278 | 204 | .485 | .180 | .161 | .728 | .776 | .825 |
| | 2526 | 308 | 280 | 206 | .486 | .185 | .166 | .729 | .778 | .826 |
| | 2527 | 310 | 282 | 208 | .487 | .189 | .170 | .731 | .779 | .828 |
| | 2528 | 312 | 284 | 210 | .488 | .194 | .175 | .732 | .781 | .830 |
| | 2529 | 314 | 286 | 212 | .489 | .199 | .180 | .734 | .782 | .831 |

## DSL ROLLERS

The DSL Rollers are based off the DSP and DSS Series but with increased lobe lift. The DSL Series is a very good choice for applications where valve motion similar to that of an aggressive high ratio lobe is desired without going with a high ratio. Available for 55mm/2.165" and larger journal sizes but cannot be ground on standard journal Big Block Chevy, Small Block Chevy or small base circle cores.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| DSL Rated Duration @ .020" Tappet Lift<br><br>Journal = R,M<br>MI 28.4 (13.6/14.7) | 12374 | 286 | 258 | 185 | .502 | .135 | .117 | .753 | .803 | .853 |
| | 12376 | 290 | 262 | 189 | .506 | .144 | .126 | .759 | .810 | .860 |
| | 12378 | 294 | 266 | 193 | .510 | .154 | .135 | .765 | .816 | .867 |
| | 12380 | 298 | 270 | 197 | .514 | .163 | .144 | .771 | .822 | .874 |
| | 12382 | 302 | 274 | 201 | .518 | .173 | .154 | .777 | .829 | .881 |
| | 12384 | 306 | 278 | 205 | .522 | .183 | .163 | .783 | .835 | .887 |
| | 12385 | 308 | 280 | 207 | .524 | .188 | .168 | .786 | .838 | .891 |
| | 12386 | 310 | 282 | 209 | .526 | .193 | .173 | .789 | .842 | .894 |
| | 14387 | 312 | 284 | 211 | .528 | .198 | .178 | .792 | .845 | .898 |
| | 14388 | 314 | 286 | 213 | .530 | .203 | .183 | .795 | .848 | .901 |
| | 14490 | 298 | 270 | 198 | .535 | .164 | .144 | .803 | .856 | .910 |
| | 14492 | 302 | 274 | 202 | .535 | .174 | .154 | .803 | .856 | .910 |
| | 14494 | 306 | 278 | 206 | .535 | .184 | .164 | .803 | .856 | .910 |
| | 14496 | 310 | 282 | 209 | .535 | .193 | .173 | .803 | .856 | .910 |

## DTT ROLLERS

The DTT is like a slower opening version of the DSS with a closing ramp like the DSL. These should be smoother and better in high RPM applications.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.6 | 1.7 | 1.8 |
| DTT Rated Duration @ .020" Tappet Lift<br>Journal = R,M<br>MI 28.9 (14.0/14.9) | 14020 | 300 | 271 | 195 | .480 | .164 | .146 | .720 | .768 | .816 |
| | 14021 | 302 | 273 | 197 | .482 | .168 | .150 | .723 | .771 | .819 |
| | 14022 | 304 | 275 | 199 | .484 | .173 | .155 | .726 | .774 | .823 |
| | 14023 | 306 | 277 | 201 | .486 | .177 | .159 | .729 | .778 | .826 |
| | 14024 | 308 | 279 | 203 | .488 | .182 | .164 | .732 | .781 | .830 |
| | 14025 | 310 | 281 | 205 | .490 | .186 | .168 | .735 | .784 | .833 |
| | 14026 | 312 | 283 | 207 | .492 | .191 | .173 | .738 | .787 | .836 |

## DPC & DPD ROLLERS

The DPD lobes are for 2.125", 55mm or larger journals and are slightly quicker than the aggressive DSS Series. The DPC can be used on smaller journals and give approximately the same valve motion when used with about +0.15 more rocker ratio.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.7 | 1.8 | 1.9 |
| DPC Rated Duration @ .020" Tappet Lift<br>Journal = R,M<br>MI 28.6 (13.6/15.0) | 12648 | 278 | 249 | 174 | .440 | .114 | .098 | .748 | .792 | .836 |
| | 12649 | 280 | 251 | 176 | .440 | .118 | .102 | .748 | .792 | .836 |
| | 12650 | 282 | 253 | 177 | .440 | .122 | .106 | .748 | .792 | .836 |
| | 12652 | 286 | 257 | 182 | .440 | .131 | .114 | .748 | .792 | .836 |
| | 12654 | 290 | 261 | 185 | .440 | .140 | .122 | .748 | .792 | .836 |
| | | | @ .050 | @ .200 | | 106° | 110° | 1.65 | 1.75 | 1.85 |
| DPD Rated Duration @ .020" Tappet Lift<br>Journal = R,M<br>MI 27.8 (13.2/14.6) | 11728 | 260 | 232 | 161 | .4677 | .082 | .068 | .772 | .818 | .865 |
| | 11730 | 264 | 236 | 165 | .4697 | .090 | .075 | .775 | .822 | .869 |
| | 11732 | 268 | 240 | 169 | .4717 | .098 | .082 | .778 | .825 | .873 |
| | 11734 | 272 | 244 | 173 | .4737 | .106 | .090 | .782 | .829 | .876 |
| | 12746 | 276 | 248 | 177 | .4757 | .115 | .098 | .785 | .832 | .880 |
| | 12748 | 280 | 252 | 181 | .4777 | .124 | .106 | .788 | .836 | .884 |
| | 12749 | 282 | 254 | 183 | .4777 | .128 | .110 | .788 | .836 | .884 |
| | 12750 | 284 | 256 | 185 | .4777 | .133 | .115 | .788 | .836 | .884 |
| | 12751 | 286 | 258 | 187 | .4777 | .137 | .119 | .788 | .836 | .884 |
| | 12752 | 288 | 260 | 188 | .4777 | .142 | .124 | .788 | .836 | .884 |
| | 12753 | 290 | 262 | 190 | .4777 | .147 | .128 | .788 | .836 | .884 |
| | 12754 | 292 | 264 | 192 | .4777 | .152 | .133 | .788 | .836 | .884 |
| | 11736 | 294 | 266 | 194 | .4777 | .156 | .137 | .788 | .836 | .884 |
| | 11737 | 296 | 268 | 196 | .4777 | .161 | .142 | .788 | .836 | .884 |
| | 11710 | 284 | 256 | 185 | .484 | .133 | .115 | .799 | .847 | .895 |

## HOI & HOX ROLLERS

The HOI design is like the UBA but faster without the lobe lift of the DSS. The HOX fits in between the HPX and HXX series in terms of lift but is almost as aggressive as the high lift HPX family. These work very well with either lower ratios or with less extreme engine speed.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| HOI<br>Rated Duration @<br>.020" Tappet Lift<br><br>Journal = R,M<br>MI 27.3 (13.2/14.1) | 12899 | 274 | 247 | 174 | .461 | .112 | .095 | .692 | .738 | .784 |
| | 12900 | 276 | 249 | 176 | .462 | .116 | .099 | .693 | .739 | .785 |
| | 12901 | 278 | 251 | 178 | .463 | .120 | .103 | .695 | .741 | .787 |
| | 12905 | 282 | 255 | 182 | .465 | .129 | .112 | .698 | .744 | .791 |
| | 12907 | 286 | 259 | 186 | .465 | .138 | .120 | .698 | .744 | .791 |
| | 12908 | 288 | 261 | 188 | .465 | .143 | .125 | | | |
| | 12909 | 290 | 263 | 190 | .465 | .147 | .129 | .698 | .744 | .791 |
| | 12910 | 292 | 265 | 192 | .465 | .152 | .133 | | | |
| | 12604 | 294 | 267 | 194 | .465 | .157 | .138 | .698 | .744 | .791 |
| HOX<br>Rated Duration @<br>.020" Tappet Lift<br><br>Journal = R,M<br>MI 28.5 (14.0/14.5) | 12322 | 297 | 269 | 194 | .452 | .159 | .140 | .678 | .723 | .768 |
| | 12324 | 301 | 273 | 198 | .452 | .168 | .149 | .678 | .723 | .768 |
| | 12300 | 297 | 269 | 195 | .465 | .159 | .141 | .698 | .744 | .791 |
| | 12301 | 299 | 271 | 197 | .465 | .164 | .145 | .698 | .744 | .791 |
| | 12303 | 301 | 273 | 199 | .465 | .169 | .150 | .698 | .744 | .791 |
| | 12304 | 303 | 275 | 201 | .465 | .173 | .155 | .698 | .744 | .791 |
| | 12305 | 305 | 277 | 203 | .465 | .175 | .159 | .698 | .744 | .791 |
| | 12306 | 307 | 279 | 205 | .465 | .182 | .164 | .698 | .744 | .791 |
| | 12307 | 309 | 281 | 206 | .465 | .187 | .169 | .698 | .744 | .791 |
| | 11711 | 301 | 273 | 199 | .471 | .169 | .150 | .707 | .754 | .801 |

## XDP ROLLERS

The XDP Rollers are based off the DPD and HPX series, with short lash ramps for tight lash applications. Can be used for either intake or exhaust side and provide outstanding area along with short seat timing.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| XDP Series<br>Rated Duration @<br>.020" Tappet Lift<br><br>MI 26.9 (13.1/13.8) | 11607 | 280 | 253 | 181 | .465 | .127 | .109 | .698 | .744 | .791 |
| | 11609 | 284 | 257 | 185 | .465 | .136 | .118 | .244 | .260 | .277 |
| | 11611 | 288 | 261 | 189 | .465 | .145 | .127 | .244 | .260 | .277 |
| | 11113 | 292 | 265 | 193 | .465 | .155 | .136 | .244 | .260 | .277 |
| | 11115 | 296 | 269 | 197 | .465 | .164 | .145 | .244 | .260 | .277 |
| | 11116 | 298 | 271 | 199 | .465 | .169 | .150 | .244 | .260 | .277 |
| | 11117 | 300 | 273 | 201 | .465 | .174 | .155 | .244 | .260 | .277 |
| | 11119 | 304 | 277 | 205 | .465 | .183 | .164 | .244 | .260 | .277 |

## UL ROLLERS

The UL Roller lobes are extremely aggressive for 55mm+ journal sizes, .850" roller wheels, and lower rocker ratios. Best for use in either applications like Super Stock class racing when component life may be 2-4 passes or limited engine speed applications. These are not for the faint of heart.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| UL Rollers Rated Duration @ .020" Tappet Lift<br>Journal = RG,M<br>MI 25.6 (12.6/13.0) | 11918 | 295 | 269 | 205 | .545 | .178 | .156 | .818 | .872 | .927 |
| | 11919 | 297 | 271 | 206 | .545 | .184 | .161 | .818 | .872 | .927 |
| | 11920 | 299 | 273 | 208 | .545 | .190 | .167 | .818 | .872 | .927 |
| | 11922 | 303 | 277 | 212 | .545 | .201 | .178 | .818 | .872 | .927 |
| | 11924 | 307 | 281 | 216 | .545 | .213 | .190 | .818 | .872 | .927 |
| | 11926 | 311 | 285 | 220 | .545 | .224 | .201 | .818 | .872 | .927 |
| | 11928 | 315 | 289 | 224 | .545 | .235 | .212 | .818 | .872 | .927 |

## KZU ROLLERS

The KZU Roller lobes are extremely aggressive for 55mm+ journal sizes, .900" roller wheels, and lower rocker ratios. These are even one step past the UL series.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| KZU Rollers Rated Duration @ .020" Tappet Lift<br>Journal = RN,RH,M<br>MI 24.9 (12.3/12.6) | 11954 | 299 | 274 | 211 | .547 | .199 | .175 | .821 | .875 | .930 |
| | 11955 | 301 | 276 | 213 | .547 | .205 | .181 | .821 | .875 | .930 |
| | 11956 | 303 | 278 | 215 | .547 | .210 | .187 | .821 | .875 | .930 |
| | 11957 | 305 | 280 | 217 | .547 | .216 | .193 | .821 | .875 | .930 |
| | 11958 | 307 | 282 | 219 | .547 | .222 | .198 | .821 | .875 | .930 |

# SOLID ROLLER (D = DRAG BASE INTAKE)

## CE DRAG RACE INTAKE ROLLERS

The CE Drag Race Intake profiles are intended for very large port, high flow cylinder head applications. They work well in the high RPM range where Comp Eliminator and similar high RPM small displacement engines operate.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.6 | 1.7 | 1.8 |
| CE Drag Race Rated Duration @ .020" Tappet Lift<br>Journal = N,S,B,R…<br>MI 40.0 (20.0/20.0) | 1286 | 310 | 274 | 189 | .484 | .154 | .138 | .774 | .823 | .871 |
| | 1288 | 314 | 278 | 192 | .484 | .162 | .146 | .774 | .823 | .871 |
| | 1295 | 316 | 280 | 194 | .484 | .166 | .150 | .774 | .823 | .871 |
| | 1260 | 318 | 282 | 194 | .474 | .160 | .144 | .758 | .806 | .853 |
| | 1278 | 318 | 282 | 196 | .484 | .170 | .153 | .774 | .823 | .871 |
| | 1268 | 320 | 284 | 196 | .476 | .165 | .148 | .762 | .809 | .857 |
| | 1271 | 320 | 284 | 198 | .484 | .174 | .157 | .774 | .823 | .871 |
| | 1272 | 322 | 286 | 198 | .478 | .169 | .152 | .765 | .813 | .860 |

## HIGH RPM INTAKE ROLLERS

The High RPM Intake Roller is used on highly modified, high RPM drag race motors. They are used primarily with ported heads that incorporate lightweight valves and high spring loads.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| High RPM Intake Rated Duration @ .020" Tappet Lift<br><br>MI 40.0 (20.0/20.0) | 1301 | 318-6 | 278 | 195 | .465 | .161 | .144 | .698 | .744 | .791 |
| | 1309 | 324-7 | 284 | 198 | .456 | .171 | .154 | .684 | .730 | .775 |
| | 1302 | 324-6 | 284 | 200 | .471 | .172 | .155 | .707 | .754 | .801 |
| | 4107 | 328-6 | 288 | 201 | .456 | .177 | .161 | .684 | .730 | .775 |
| | 4068 | 328-5 | 288 | 203 | .476 | .180 | .163 | .714 | .762 | .809 |
| | 4085 | 328-11 | 288 | 203 | .483 | .179 | .162 | .725 | .773 | .821 |
| | 4091 | 330-10 | 287 | 203 | .480 | .180 | .163 | .720 | .768 | .816 |
| | 4063 | 332-7 | 292 | 204 | .456 | .184 | .167 | .684 | .730 | .775 |
| | 1490 | 332-6 | 292 | 206 | .476 | .188 | .171 | .714 | .762 | .809 |
| | 4118 | 336-4 | 296 | 209 | .476 | .195 | .178 | .714 | .762 | .809 |
| High RPM Intake Rated Duration @ .020" Tappet Lift<br><br>MI 35.0 (14.3/20.7) | 1030 | 324-30 | 288 | 207 | .510 | .188 | .171 | .765 | .816 | .867 |
| | 1046 | 326-30 | 293 | 211 | .510 | .198 | .180 | .765 | .816 | .867 |

## DASH 31 ROLLERS

The Dash 31 Rollers are a more aggressive cousin of the original -30 lobes that were popular in Pro Stock in the early 90s. These have been used successfully in Pro Stock but are preferred for use in applications operating below 9000 RPM. These profiles result in excellent torque and make very good power up to the limiting speed of the valve train.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.6 | 1.7 | 1.8 |
| Dash 31 Rollers Rated Duration @ .020" Tappet Lift MI 31.0 (15.5/15.5)MI 24.9 (12.3/12.6) | 1186 | 306-31 | 275 | 198 | .520 | .166 | .147 | .832 | .884 | .936 |
| | 1188 | 308-31 | 277 | 200 | .520 | .171 | .152 | .832 | .884 | .936 |
| | 1176 | 310-31 | 279 | 202 | .520 | .176 | .157 | .832 | .884 | .936 |
| | 1180 | 312-31 | 281 | 204 | .520 | .181 | .162 | .832 | .884 | .936 |

## MOUNTAIN MOTOR ROLLERS

These are assorted intake profiles that have been developed for large cubic inch, blown, and/or nitrous applications that respond favorably to more area and are not required to run over 9000 RPM. These have been used with high rocker ratios to result in over 1.000" valve lift in lower RPM applications.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.7 | 1.8 | 1.9 |
| Mountain Motor Rated Duration @ .020" Tappet Lift MI 29.6 (14.1/15.5) | 1027 | 322 | 292 | 214 | .517 | .206 | .187 | .879 | .931 | .982 |
| | 1028 | 326 | 296 | 218 | .525 | .216 | .197 | .893 | .945 | .998 |
| | 1240 | 324 | 294 | 214 | .520 | .201 | .182 | .884 | .936 | .988 |

## REV DRAG RACE INTAKE ROLLERS

The REV Drag Race Rollers use some of the latest ramp designs to provide excellent torque, power and high speed stability for high RPM competition drag race applications. When coupled with high rocker ratios, these profiles provide more area than comparable standard ratio designs.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.6 | 1.7 | 1.8 |
| REV Drag Race Rated Duration @ .020" Tappet Lift<br><br>Journal = N,S,B,R… MI 32.6 (15.5/17.1) | 1770 | 301 | 268 | 188 | .460 | .147 | .130 | .736 | .782 | .828 |
| | 1771 | 303 | 270 | 190 | .460 | .152 | .135 | .736 | .782 | .828 |
| | 1839 | 305 | 272 | 192 | .460 | .156 | .139 | .736 | .782 | .828 |
| | 1840 | 307 | 274 | 194 | .460 | .160 | .143 | .736 | .782 | .828 |
| | 1841 | 309 | 276 | 196 | .460 | .164 | .147 | .736 | .782 | .828 |
| | 1842 | 311 | 278 | 198 | .460 | .169 | .151 | .736 | .782 | .828 |
| | 1843 | 313 | 280 | 199 | .460 | .173 | .156 | .736 | .782 | .828 |
| | 1844 | 315 | 282 | 201 | .460 | .177 | .160 | .736 | .782 | .828 |
| | 1845 | 317 | 284 | 203 | .460 | .181 | .164 | .736 | .782 | .828 |
| | 1846 | 319 | 286 | 205 | .460 | .186 | .168 | .736 | .782 | .828 |

## RX DRAG RACE INTAKE ROLLERS

The RX Drag Race Rollers are similar to the REV designs, except they have more lift and use sections of our popular RX ramp. These designs have proven to provide an outstanding combination of high RPM power and stability while not sacrificing torque. Excellent in applications from high end bracket engines to Comp Eliminator and Pro Stock.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.6 | 1.7 | 1.8 |
| RX Drag Race .470" Lobe Lift Rated Duration @ .020" Tappet Lift<br><br>Journal = N,S,B,R… MI 32.6 (15.5/17.1) | 1806 | 294 | 261 | 181 | .470 | .131 | .114 | .752 | .799 | .846 |
| | 1807 | 296 | 263 | 183 | .470 | .135 | .118 | .752 | .799 | .846 |
| | 1808 | 298 | 265 | 185 | .470 | .139 | .122 | .752 | .799 | .846 |
| | 1809 | 300 | 267 | 187 | .470 | .143 | .127 | .752 | .799 | .846 |
| | 1810 | 302 | 269 | 189 | .470 | .148 | .131 | .752 | .799 | .846 |
| | 1811 | 304 | 271 | 191 | .470 | .152 | .135 | .752 | .799 | .846 |
| | 1812 | 306 | 273 | 193 | .470 | .156 | .139 | .752 | .799 | .846 |
| | 1813 | 308 | 275 | 195 | .470 | .161 | .143 | .752 | .799 | .846 |
| | 1814 | 310 | 277 | 196 | .470 | .165 | .147 | .752 | .799 | .846 |
| | 1815 | 312 | 279 | 198 | .470 | .169 | .152 | .752 | .799 | .846 |
| | 1816 | 314 | 281 | 200 | .470 | .174 | .156 | .752 | .799 | .846 |
| | 1817 | 316 | 283 | 202 | .470 | .178 | .160 | .752 | .799 | .846 |
| | 1718 | 318 | 285 | 204 | .470 | .183 | .165 | .752 | .799 | .846 |
| | 1819 | 320 | 287 | 206 | .470 | .186 | .169 | .752 | .799 | .846 |
| | 1820 | 322 | 289 | 208 | .470 | .191 | .173 | .752 | .799 | .846 |
| RX Drag Race .484" Lobe Lift Rated Duration @ .020" Tappet Lift<br><br>Journal = N,S,B,R… MI 32.6 (15.5/17.1) | 1826 | 310 | 277 | 197 | .484 | .165 | .148 | .774 | .823 | .871 |
| | 1827 | 312 | 279 | 199 | .484 | .170 | .152 | .774 | .823 | .871 |
| | 1828 | 314 | 281 | 201 | .484 | .174 | .156 | .774 | .823 | .871 |
| | 1829 | 316 | 283 | 203 | .484 | .179 | .161 | .774 | .823 | .871 |
| | 1719 | 318 | 285 | 204 | .484 | .183 | .165 | .774 | .823 | .871 |
| | 1831 | 320 | 287 | 206 | .484 | .188 | .169 | .774 | .823 | .871 |
| | 1832 | 322 | 289 | 208 | .484 | .191 | .174 | .774 | .823 | .871 |

## RX PRO DRAG RACE INTAKE ROLLERS

These use the same ramps as the RX Drag Race .484" lobes but have more lift for all out applications.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.6 | 1.7 | 1.8 |
| RX Pro Drag Race Rated Duration @ .020" Tappet Lift<br><br>Journal = S,B,F,R…<br>MI 32.6 (15.5/17.1) | 1722 | 308 | 275 | 195 | .488 | .161 | .143 | .781 | .830 | .878 |
| | 1724 | 310 | 277 | 197 | .491 | .165 | .148 | .786 | .835 | .884 |
| | 1726 | 312 | 279 | 199 | .492 | .170 | .152 | .787 | .836 | .886 |
| | 1727 | 314 | 281 | 201 | .493 | .175 | .156 | .789 | .838 | .887 |
| | 1728 | 316 | 283 | 203 | .496 | .180 | .160 | .794 | .843 | .893 |
| | 1729 | 318 | 285 | 205 | .497 | .184 | .165 | .795 | .845 | .895 |
| | 1730 | 320 | 287 | 207 | .499 | .188 | .170 | .798 | .848 | .898 |
| | 1739 | 322 | 289 | 209 | .500 | .193 | .174 | .800 | .850 | .900 |
| RX Drag Race .515" Lobe Lift Rated Duration @ .020" Tappet Lift<br><br>Journal = B,F,R,M…<br>MI 32.6 (15.5/17.1) | 1742 | 310 | 277 | 197 | .515 | .166 | .148 | .824 | .876 | .927 |
| | 1743 | 312 | 279 | 199 | .515 | .170 | .152 | .824 | .876 | .927 |
| | 1744 | 314 | 281 | 201 | .515 | .175 | .157 | .824 | .876 | .927 |
| | 1736 | 316 | 283 | 203 | .515 | .180 | .161 | .824 | .876 | .927 |
| | 1745 | 318 | 285 | 205 | .515 | .184 | .166 | .824 | .876 | .927 |
| | 1737 | 320 | 287 | 207 | .515 | .189 | .170 | .824 | .876 | .927 |
| | 1746 | 322 | 289 | 209 | .515 | .193 | .175 | .824 | .876 | .927 |
| | 1747 | 326 | 293 | 213 | .515 | .202 | .184 | .824 | .876 | .927 |
| | 1748 | 330 | 297 | 217 | .515 | .211 | .192 | .824 | .876 | .927 |
| | 1749 | 334 | 301 | 220 | .515 | .220 | .201 | .824 | .876 | .927 |

# SOLID ROLLER (E = DRAG BASE EXHAUST)

## HIGH RPM EXHAUST ROLLERS

These lobes are used on the exhaust side of highly modified, high RPM race engines. The cylinder head efficiency directly determines the design used.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| High RPM Exhaust Rated Duration @ .020" Tappet Lift<br><br>MI 40.0 (20.0/20.0) | 4050 | 319-1 | 280 | 185 | .400 | .152 | .137 | .600 | .640 | .680 |
| | 4067 | 322-3 | 284 | 190 | .420 | .160 | .145 | .630 | .672 | .714 |
| | 4074 | 326-4 | 288 | 194 | .420 | .166 | .151 | .630 | .672 | .714 |
| | 1495 | 328-2 | 291 | 222 | .427 | .181 | .165 | .641 | .683 | .726 |
| | 4055 | 330-1 | 292 | 196 | .420 | .168 | .152 | .630 | .672 | .714 |
| | 1484 | 330-5 | 292 | 196 | .420 | .173 | .158 | .630 | .672 | .714 |
| | 1320 | 332-2 | 292 | 203 | .440 | .182 | .166 | .660 | .704 | .748 |
| | 1485 | 334-3 | 296 | 200 | .420 | .179 | .165 | .630 | .672 | .714 |
| | 4247 | 336-5 | 296 | 205 | .440 | .188 | .172 | .660 | .704 | .748 |
| | 1487 | 338-2 | 300 | 204 | .420 | .185 | .171 | .630 | .672 | .714 |
| | 1306 | 340-3 | 300 | 208 | .440 | .193 | .177 | .660 | .704 | .748 |
| | 1489 | 342-2 | 302 | 207 | .420 | .192 | .177 | .630 | .672 | .714 |
| | 4051 | 342-3 | 302 | 210 | .460 | .198 | .182 | .690 | .736 | .782 |
| | 4064 | 344-3 | 304 | 214 | .470 | .207 | .190 | .705 | .752 | .799 |
| | 1494 | 344-4 | 304 | 211 | .440 | .201 | .185 | .660 | .704 | .748 |
| | 4052 | 344-5 | 304 | 214 | .460 | .207 | .190 | .690 | .736 | .782 |
| | 4053 | 348-1 | 308 | 217 | .460 | .212 | .195 | .690 | .736 | .782 |
| | 1152 | 352-1 | 312 | 222 | .477 | .222 | .205 | .716 | .763 | .811 |
| | 4056 | 356-5 | 316 | 227 | .480 | .231 | .214 | .720 | .768 | .816 |
| | 4057 | 360-5 | 320 | 230 | .480 | .238 | .221 | .720 | .768 | .816 |

## JX DRAG RACE EXHAUST ROLLERS

The JX Drag Race Exhaust profiles are good complements to either the CE, REV or RX intake designs. They are intended for very large port, high flow cylinder head applications and work well in the high RPM range where Comp Eliminator and similar high RPM small displacement engines operate.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.6 | 1.7 | 1.8 |
| JX Drag Race Rated Duration @ .020" Tappet Lift<br><br>Journal = N,S,B,R…<br>MI 41.5 (20.7/20.7) | 1285 | 333 | 292 | 196 | .460 | .167 | .152 | .736 | .782 | .828 |
| | 1261 | 335 | 294 | 198 | .446 | .171 | .156 | .714 | .758 | .803 |
| | 1287 | 335 | 294 | 198 | .460 | .171 | .156 | .736 | .782 | .828 |
| | 1291 | 337 | 296 | 200 | .460 | .175 | .160 | .736 | .782 | .828 |
| | 1263 | 339 | 298 | 201 | .446 | .179 | .163 | .714 | .758 | .803 |
| | 1289 | 339 | 298 | 202 | .460 | .179 | .163 | .736 | .782 | .828 |
| | 1269 | 341 | 300 | 203 | .448 | .183 | .167 | .717 | .762 | .806 |
| | 1293 | 341 | 300 | 203 | .460 | .183 | .167 | .736 | .782 | .828 |
| | 1273 | 343 | 302 | 205 | .450 | .187 | .171 | .720 | .765 | .810 |

## XCX DRAG RACE EXHAUST ROLLERS

The XCX Rrollers provide state-of-the-art ramp designs with the ramp characteristics required to decrease pumping losses and allow exhaust gasses from overlap to provide signal to accelerate the intake charge into the cylinder in large port, drag race applications. These modern designs are very stable and respond well to rocker ratio increases.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.6 | 1.7 | 1.8 |
| XCX Drag Race Rated Duration @ .020" Tappet Lift<br><br>Journal = N,S,B,R… MI 38.0 (19.0/19.0) | 1850 | 320 | 282 | 194 | .460 | .162 | .146 | .736 | .782 | .828 |
| | 1960 | 324 | 286 | 198 | .450 | .170 | .154 | .720 | .765 | .810 |
| | 1860 | 326 | 288 | 200 | .470 | .175 | .158 | .752 | .799 | .846 |
| | 1962 | 328 | 290 | 202 | .450 | .179 | .162 | .720 | .765 | .810 |
| | 1861 | 328 | 290 | 202 | .470 | .179 | .162 | .752 | .799 | .846 |
| | 1862 | 330 | 292 | 204 | .470 | .183 | .166 | .752 | .799 | .846 |
| | 1964 | 332 | 294 | 206 | .450 | .187 | .170 | .720 | .765 | .810 |
| | 1864 | 334 | 296 | 208 | .470 | .192 | .175 | .752 | .799 | .846 |
| | 1966 | 336 | 298 | 210 | .450 | .195 | .178 | .720 | .765 | .810 |
| | 1866 | 338 | 300 | 212 | .470 | .200 | .183 | .752 | .799 | .846 |
| | 1968 | 340 | 302 | 214 | .450 | .203 | .186 | .720 | .765 | .810 |
| | 1868 | 342 | 304 | 216 | .470 | .209 | .191 | .752 | .799 | .846 |
| | 1970 | 344 | 306 | 217 | .450 | .211 | .194 | .720 | .765 | .810 |
| | 1870 | 346 | 308 | 220 | .470 | .217 | .200 | .752 | .799 | .846 |
| XCX .484 Drag Rated Duration @ .020" Tappet Lift<br><br>Journal = S,B,F,R… MI 38.0 (19.0/19.0) | 1751 | 318 | 280 | 193 | .484 | .159 | .142 | .774 | .823 | .871 |
| | 1752 | 322 | 284 | 197 | .484 | .167 | .150 | .774 | .823 | .871 |
| | 1753 | 326 | 288 | 201 | .484 | .175 | .158 | .774 | .823 | .871 |
| | 1758 | 330 | 292 | 205 | .484 | .184 | .167 | .774 | .823 | .871 |
| | 1759 | 334 | 296 | 209 | .484 | .192 | .175 | .774 | .823 | .871 |
| | 1760 | 338 | 300 | 212 | .484 | .201 | .184 | .774 | .823 | .871 |
| | 1761 | 342 | 304 | 216 | .484 | .210 | .192 | .774 | .823 | .871 |
| | 1763 | 344 | 306 | 218 | .484 | .214 | .196 | .774 | .823 | .871 |
| | 1772 | 346 | 308 | 220 | .484 | .218 | .200 | .774 | .823 | .871 |
| | 1785 | 348 | 310 | 222 | .484 | .222 | .205 | .774 | .823 | .871 |
| | 1773 | 350 | 312 | 224 | .484 | .226 | .209 | .774 | .823 | .871 |
| | 1777 | 356 | 318 | 230 | .484 | .239 | .222 | .774 | .823 | .871 |
| XCX Pro Drag Race Rated Duration @ .020" Tappet Lift<br><br>Journal = B,F,R,M… MI 38.0 (19.0/19.0) | 1871 | 330 | 292 | 205 | .500 | .184 | .167 | .800 | .850 | .900 |
| | 1872 | 332 | 294 | 207 | .502 | .188 | .171 | .803 | .853 | .904 |
| | 1873 | 334 | 296 | 209 | .504 | .193 | .175 | .806 | .857 | .907 |
| | 1874 | 336 | 298 | 211 | .506 | .197 | .180 | .810 | .860 | .911 |
| | 1875 | 338 | 300 | 213 | .508 | .202 | .184 | .813 | .864 | .914 |
| | 1876 | 340 | 302 | 215 | .510 | .206 | .188 | .816 | .867 | .918 |
| | 1877 | 342 | 304 | 217 | .512 | .211 | .193 | .819 | .870 | .922 |
| | 1878 | 344 | 306 | 219 | .514 | .215 | .197 | .822 | .874 | .925 |
| | 1879 | 346 | 308 | 221 | .516 | .220 | .202 | .826 | .877 | .929 |
| | 1869 | 348 | 310 | 223 | .520 | .224 | .206 | .832 | .884 | .936 |
| | 1893 | 350 | 312 | 225 | .522 | .229 | .210 | .835 | .887 | .940 |

## XJX DRAG EXHAUST ROLLERS

The XJX Drag Race lobes are like the XCX but with higher acceleration rates, more lift, and more area under the curve. The asymmetric design with higher opening acceleration helps move more exhaust gas at bottom dead center, reducing losses as the piston comes up, driving the remaining exhaust from the cylinder. These profiles are designed for very stiff valve train systems with 60mm journals and larger, 0.850" diameter roller lifter wheels.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.6 | 1.7 | 1.8 |
| XJX Drag Exh. Rated Duration @ .020" Tappet Lift<br><br>Journal = B,F,R,M… MI 37.6 (18.1/19.5) | 1880 | 324 | 286 | 204 | .502 | .179 | .161 | .803 | .853 | .904 |
| | 1884 | 332 | 294 | 212 | .522 | .199 | .180 | .835 | .887 | .940 |
| | 11000 | 334 | 296 | 213 | .502 | .201 | .183 | .803 | .853 | .904 |
| | 11001 | 334 | 296 | 214 | .517 | .203 | .184 | .827 | .879 | .931 |
| | 2054 | 334 | 296 | 214 | .526 | .203 | .184 | .842 | .894 | .947 |
| | 11002 | 334 | 296 | 214 | .532 | .204 | .185 | .851 | .904 | .958 |
| | 1680 | 334 | 296 | 214 | .538 | .204 | .184 | .861 | .915 | .968 |
| | 1886 | 336 | 298 | 216 | .532 | .209 | .189 | .851 | .904 | .958 |
| | 1681 | 336 | 298 | 216 | .540 | .209 | .189 | .864 | .918 | .972 |
| | 1108 | 338 | 300 | 218 | .521 | .212 | .193 | .834 | .886 | .938 |
| | 1682 | 338 | 300 | 218 | .542 | .214 | .194 | .867 | .921 | .976 |
| | 1110 | 339 | 301 | 218 | .522 | .215 | .195 | .835 | .887 | .940 |
| | 1111 | 340 | 302 | 219 | .523 | .217 | .198 | .837 | .889 | .941 |
| | 1239 | 340 | 302 | 220 | .535 | .218 | .198 | .856 | .910 | .963 |
| | 1683 | 340 | 302 | 220 | .544 | .219 | .199 | .870 | .925 | .979 |
| | 11103 | 340 | 302 | 220 | .561 | .219 | .199 | .898 | .954 | 1.010 |
| | 1112 | 341 | 303 | 220 | .524 | .219 | .200 | .838 | .891 | .943 |
| | 11003 | 341 | 303 | 221 | .543 | .214 | .194 | .869 | .923 | .977 |
| | 1227 | 342 | 304 | 221 | .525 | .222 | .202 | .840 | .893 | .945 |
| | 1684 | 342 | 304 | 222 | .546 | .224 | .204 | .874 | .928 | .983 |
| | 11104 | 342 | 304 | 222 | .563 | .224 | .204 | .901 | .957 | 1.013 |
| | 1245 | 344 | 306 | 223 | .525 | .226 | .207 | .840 | .893 | .945 |
| | 1685 | 344 | 306 | 224 | .548 | .229 | .209 | .877 | .932 | .986 |
| | 11105 | 344 | 306 | 224 | .565 | .229 | .209 | .904 | .961 | 1.017 |
| | 1686 | 346 | 308 | 226 | .550 | .234 | .214 | .880 | .935 | .990 |
| | 11106 | 346 | 308 | 226 | .567 | .234 | .214 | .907 | .964 | 1.021 |
| | 1687 | 348 | 310 | 228 | .552 | .240 | .220 | .883 | .938 | .994 |
| | 11107 | 348 | 310 | 228 | .569 | .240 | .220 | .910 | .967 | 1.024 |
| | 1688 | 350 | 312 | 230 | .554 | .245 | .225 | .886 | .942 | .997 |
| | 1699 | 352 | 314 | 232 | .556 | .249 | .230 | .890 | .945 | 1.001 |

## XJS EXHAUST DRAG RACE ROLLERS

The XJS Drag Race lobes are like the XJX but possibly a touch smoother with higher lift.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.7 | 1.8 | 1.9 |
| XJS Drag Race Rated Duration @ .020" Tappet Lift Journal = R,M,K… MI 37.6 (18.1/19.5) | 14049 | 348 | 310 | 228 | .569 | .239 | .219 | .967 | 1.024 | 1.081 |
| | 14050 | 350 | 312 | 230 | .571 | .244 | .224 | .971 | 1.028 | 1.085 |
| | 14051 | 352 | 314 | 232 | .573 | .249 | .229 | .974 | 1.031 | 1.089 |
| | 14052 | 354 | 316 | 234 | .575 | .254 | .234 | .978 | 1.035 | 1.093 |
| | 14053 | 356 | 318 | 236 | .577 | .259 | .239 | .981 | 1.039 | 1.096 |
| | 14054 | 358 | 320 | 238 | .579 | .264 | .244 | .984 | 1.042 | 1.100 |

## PRO MOD EXHAUST ROLLERS

The Pro Mod Exhaust Series is very similar to the original High RPM Exhaust Series but with higher lifts and larger durations. These are excellent for either Mountain Motors or Pro Mod applications where more time and more area are required to scavenge the cylinder.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.6 | 1.7 | 1.8 |
| Pro Mod Exh. Rated Duration @ .020" Tappet Lift Journal = B,F,R,M… MI 39.6 (19.8/19.8) | 1181 | 352 | 312 | 226 | .510 | .231 | .212 | .816 | .867 | .918 |
| | 1183 | 356 | 316 | 228 | .510 | .235 | .217 | .816 | .867 | .918 |
| | 1185 | 360 | 320 | 232 | .510 | .244 | .226 | .816 | .867 | .918 |
| | 1187 | 364 | 324 | 235 | .510 | .250 | .233 | .816 | .867 | .918 |
| | 1189 | 368 | 328 | 240 | .510 | .259 | .242 | .816 | .867 | .918 |

# SOLID ROLLER (F = LARGE JOURNAL INTAKE)

## VOI PRO DRAG RACE ROLLERS

The VOI Pro Drag lobes are a newer family, smoother than the DR and TSP lobes. They are used in professional class drag racing or similar applications and are excellent for use at very high RPM.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.8 | 1.9 | 2.0 |
| VOI Pro Rated Duration @ .020" Tappet Lift MI 30.7 (15.1/15.6) | 11166 | 313 | 282 | 203 | .529 | .183 | .165 | .952 | 1.005 | 1.058 |
| | 11170 | 317 | 286 | 207 | .531 | .192 | .174 | .956 | 1.009 | 1.062 |
| | 11171 | 319 | 288 | 209 | .532 | .197 | .178 | .958 | 1.011 | 1.064 |
| | 11172 | 321 | 290 | 211 | .533 | .201 | .183 | .959 | 1.013 | 1.066 |

## DR PRO DRAG INTAKE ROLLERS

The DR Pro Drag lobes are more aggressive than the RX Pro Drag lobes. They are used in professional class drag racing or similar applications and are not recommended for use above 10,000 RPM. These use our latest design techniques to provide excellent area and improved dynamics over similar profiles.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.7 | 1.8 | 1.9 |
| DR Pro Drag Int. Rated Duration @ .020" Tappet Lift<br><br>Journal = B,F,R,M…<br>MI 31.0 (15.3/15.7) | 1912 | 301 | 270 | 193 | .507 | .155 | .137 | .862 | .913 | .963 |
| | 1914 | 305 | 274 | 197 | .509 | .164 | .146 | .865 | .916 | .967 |
| | 1924 | 307 | 276 | 199 | .520 | .169 | .150 | .884 | .936 | .988 |
| | 1925 | 309 | 278 | 201 | .521 | .173 | .155 | .886 | .938 | .990 |
| | 1926 | 311 | 280 | 203 | .521 | .178 | .159 | .886 | .938 | .990 |
| | 1927 | 313 | 282 | 205 | .522 | .183 | .164 | .887 | .940 | .992 |
| | 1928 | 315 | 284 | 207 | .523 | .188 | .169 | .889 | .941 | .994 |
| | 1929 | 317 | 286 | 209 | .524 | .193 | .173 | .891 | .943 | .996 |
| | 1930 | 319 | 288 | 211 | .525 | .198 | .178 | .893 | .945 | .998 |
| | 1931 | 321 | 290 | 213 | .526 | .202 | .183 | .894 | .947 | .999 |
| | 1932 | 323 | 292 | 215 | .527 | .207 | .188 | .896 | .949 | 1.001 |
| | 1933 | 325 | 294 | 217 | .528 | .212 | .192 | .898 | .950 | 1.003 |
| | 1934 | 327 | 296 | 219 | .529 | .217 | .197 | .899 | .952 | 1.005 |

## RS DRAG INTAKE ROLLERS

The RS Drag Intake Rollers are similar to the DR designs, except with slightly quicker opening, more lift and a new controlled velocity design. These will be excellent in high rocker/high lift/high RPM applications, such as Comp Eliminator and Pro Stock classes where cylinder heads require .900" to 1.050" valve lift to perform. For use with 2.125" or larger cam bearings..

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.7 | 1.8 | 1.9 |
| RS Drag Int. Rated Duration @ .020" Tappet Lift<br><br>Journal = R,M,K…<br>MI 30.5 (14.9/15.6) | 1577 | 306 | 276 | 199 | .532 | .169 | .151 | .904 | .958 | 1.011 |
| | 1578 | 308 | 278 | 201 | .534 | .174 | .155 | .908 | .961 | 1.015 |
| | 1579 | 310 | 280 | 203 | .536 | .179 | .160 | .911 | .965 | 1.018 |
| | 1580 | 312 | 282 | 205 | .538 | .183 | .165 | .915 | .968 | 1.022 |
| | 1581 | 314 | 284 | 207 | .540 | .188 | .169 | .918 | .972 | 1.026 |
| | 1582 | 316 | 286 | 209 | .542 | .193 | .174 | .921 | .976 | 1.030 |
| | 1585 | 318 | 288 | 211 | .544 | .198 | .179 | .925 | .979 | 1.034 |

## PQ PRO STOCK DRAG ROLLERS

The PQ Pro Drag lobes are slightly smoother, higher lift designs based loosely on the DR Pro Drag lobes. They are use in professional class drag racing or similar applications.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.6 | 1.7 | 1.8 |
| PQ Pro Stock Drag Rated Duration @ .020" Tappet Lift<br>MI 30.5 (14.9/15.6) | 1901 | 304 | 273 | 196 | .562 | .161 | .143 | .899 | .955 | 1.012 |
| | 1903 | 306 | 275 | 198 | .564 | .166 | .147 | .902 | .959 | 1.015 |
| | 1936 | 308 | 277 | 200 | .566 | .170 | .152 | .906 | .962 | 1.019 |
| | 1937 | 310 | 279 | 202 | .568 | .175 | .156 | .909 | .966 | 1.022 |

## TS PRO ROLLERS

The TS Pro Series is an aggressive Pro Stock series with faster ramps than the DR Drag Series. These designs get from .020" to .050" tappet lift and back in only 30°, resulting in the quickest drag race rollers COMP Cams® has released.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.7 | 1.8 | 1.9 |
| TS Pro Rated Duration @ .020" Tappet Lift<br>Journal = F,R,M,K…<br>MI 30.3 (14.7/15.6) | 1402 | 307 | 276 | 200 | .543 | .172 | .153 | .923 | .977 | 1.032 |
| | 1372 | TS309 | 278 | 202 | .535 | .176 | .157 | .910 | .963 | 1.017 |
| | 1403 | 309 | 278 | 202 | .545 | .177 | .158 | .927 | .981 | 1.036 |
| | 1373 | TS311 | 280 | 204 | .537 | .181 | .162 | .913 | .967 | 1.020 |
| | 1398 | 311 | 280 | 204 | .547 | .182 | .162 | .930 | .985 | 1.039 |
| | 1374 | TS313 | 282 | 206 | .539 | .186 | .167 | .916 | .970 | 1.024 |
| | 1399 | 313 | 282 | 206 | .549 | .187 | .167 | .933 | .988 | 1.043 |
| | 1375 | TS315 | 284 | 208 | .541 | .191 | .172 | .920 | .974 | 1.028 |
| | 1400 | 315 | 284 | 208 | .551 | .192 | .172 | .937 | .992 | 1.047 |
| | 1376 | TS317 | 286 | 210 | .543 | .196 | .176 | .923 | .977 | 1.032 |
| | 1377 | TS319 | 288 | 212 | .545 | .201 | .181 | .927 | .981 | 1.036 |

## TS+ PRO ROLLERS

The TS+ PRO series is based off the TS lobe series, but with even faster ramps and higher acceleration (almost like the early motion that would be achived with the TS and a 10% higher rocker ratio). Excellent for Pro Stock style drag racing applications.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.7 | 1.8 | 1.9 |
| TS+ Pro Rated Duration @ .020" Tappet Lift<br>Journal = R,M,K…<br>MI 29.2 (14.1/15.1) | 1382 | 307 | 278 | 204 | .540 | .182 | .162 | .918 | .972 | 1.026 |
| | 1383 | 309 | 280 | 206 | .542 | .187 | .167 | .921 | .976 | 1.030 |
| | 1384 | 311 | 282 | 208 | .544 | .192 | .172 | .925 | .979 | 1.034 |
| | 1385 | 313 | 284 | 210 | .546 | .197 | .177 | .928 | .983 | 1.037 |
| | 1386 | 315 | 286 | 212 | .548 | .202 | .182 | .932 | .986 | 1.041 |
| | 1388 | 317 | 288 | 215 | .624 | .211 | .189 | 1.061 | 1.123 | 1.186 |

## TSP PRO ROLLERS

The TSP Rollers are very modern, all purpose drag race lobes based loosely on the High RPM TS Pro Stock Drag lobes but with slightly lower acceleration and lift. These are an excellent choice for 2.165" and smaller journal camshafts where very high lobe lift lobes can compromise the base circle diameter, core strength and stability under high loads. These have shorter seat timing than older Fuel/Blown Alc lobes but should be very good in their place if run with tighter lash.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.7 | 1.8 | 1.9 |
| TSP Pro Rated Duration @ .020" Tappet Lift<br>Journal = R,M,K…<br>MI 30.6 (14.8/15.8) | 11124 | 318 | 287 | 209 | .529 | .191 | .172 | .899 | .952 | 1.005 |
| | 11126 | 322 | 291 | 213 | .531 | .201 | .182 | .903 | .956 | 1.009 |
| | 11128 | 326 | 295 | 217 | .533 | .211 | .191 | .906 | .959 | 1.013 |
| | 11130 | 330 | 299 | 221 | .535 | .221 | .201 | .910 | .963 | 1.017 |
| | 11132 | 334 | 303 | 225 | .537 | .231 | .211 | .913 | .967 | 1.020 |

## DRZ PRO STOCK DRAG ROLLERS

These profiles are high RPM Pro Stock designs for use in modern professional drag race classes.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.8 | 1.9 | 2.0 |
| DRZ Pro Stock Drag Rated Duration @ .020" Tappet Lift<br><br>Journal = R,M,K,A… MI 30.6 (14.9/15.7) | 1975 | 306 | 275 | 200 | .560 | .168 | .149 | 1.008 | 1.064 | 1.120 |
| | 1976 | 308 | 277 | 201 | .562 | .172 | .154 | 1.012 | 1.068 | 1.124 |
| | 1977 | 310 | 279 | 203 | .564 | .177 | .158 | 1.015 | 1.072 | 1.128 |
| | 1978 | 312 | 281 | 205 | .566 | .182 | .163 | 1.019 | 1.075 | 1.132 |
| | 1979 | 314 | 283 | 206 | .568 | .186 | .167 | 1.022 | 1.079 | 1.136 |
| | 1980 | 316 | 285 | 208 | .570 | .191 | .172 | 1.026 | 1.083 | 1.140 |

## DQS PRO STOCK DRAG ROLLERS

These profiles are high RPM Pro Stock designs for use in modern professional drag race classes.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.8 | 1.9 | 2.0 |
| DQS Pro Stock Drag Rated Duration @ .020" Tappet Lift<br><br>MI 29.7 (14.6/15.1) | 1939 | 309 | 279 | 204 | .566 | .180 | .160 | 1.019 | 1.075 | 1.132 |
| | 1943 | 311 | 281 | 206 | .568 | .185 | .166 | 1.022 | 1.079 | 1.136 |
| | 1945 | 313 | 283 | 208 | .570 | .190 | .170 | 1.026 | 1.083 | 1.140 |

## DRS DRAG ROLLERS

The DRS Drag Rollers are the "evil cousin" of the DR drags. These are designed for very stiff valve train systems incorporating 60mm or larger cam journals. The major intensity of these are less than 30°, and these lobes provide more area under the curve than earlier DR designs.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.8 | 1.9 | 2.0 |
| DRS Drag Rated Duration @ .020" Tappet Lift<br><br>Journal = R,M,K,A… MI 29.6 (14.4/15.2) | 1986 | 302 | 273 | 199 | .560 | .168 | .148 | 1.008 | 1.064 | 1.120 |
| | 1987 | 304 | 275 | 201 | .563 | .173 | .153 | 1.013 | 1.070 | 1.126 |
| | 1988 | 306 | 277 | 203 | .566 | .178 | .158 | 1.019 | 1.075 | 1.132 |
| | 1989 | 308 | 279 | 205 | .569 | .183 | .163 | 1.024 | 1.081 | 1.138 |
| | 1990 | 310 | 281 | 207 | .572 | .188 | .167 | 1.030 | 1.087 | 1.144 |
| | 1991 | 312 | 283 | 209 | .575 | .193 | .172 | 1.035 | 1.093 | 1.150 |
| | 1992 | 314 | 285 | 211 | .578 | .198 | .177 | 1.040 | 1.098 | 1.156 |
| | 1993 | 316 | 287 | 213 | .581 | .203 | .182 | 1.046 | 1.104 | 1.162 |
| | 1982 | 320 | 291 | 217 | .585 | .213 | .192 | 1.053 | 1.112 | 1.170 |

## DRD PRO STOCK DRAG ROLLERS

The DRD Drag Race lobes are basically slightly improved higher lift versions of the DRS series that were developed on a later generation of design software. 60mm or larger cam journals. The major intensity of these are below 30 degrees, and these lobes provide outstanding area and surprising control at high RPM.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.8 | 1.9 | 2.0 |
| DRD Pro Stock Drag Rated Duration @ .020" Tappet Lift Journal = R,M,K,A… MI 29.3 (14.4/14.9) | 11975 | 302 | 273 | 200 | .572 | .170 | .150 | 1.030 | 1.087 | 1.144 |
| | 11976 | 304 | 275 | 202 | .574 | .175 | .155 | 1.033 | 1.091 | 1.148 |
| | 11977 | 306 | 277 | 204 | .576 | .180 | .160 | 1.037 | 1.094 | 1.152 |
| | 11978 | 308 | 279 | 206 | .578 | .185 | .165 | 1.040 | 1.098 | 1.156 |
| | 11979 | 310 | 281 | 208 | .580 | .190 | .170 | 1.044 | 1.102 | 1.160 |

## DRM PRO STOCK DRAG ROLLERS

These profiles are modern Pro Stock style designs for use in professional drag race classes with increased area and acceleration compared to the DRD. These are outstanding if applications that do not require higher RPM or spring life compared to the DRD.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.8 | 1.9 | 2.0 |
| DRM Pro Stock Drag Rated Duration @ .020" Tappet Lift Journal = M,K,A… MI 29.0 (14.2/14.8) | 2387 | 303 | 274 | 202 | .570 | .175 | .155 | 1.026 | 1.083 | 1.140 |
| | 2390 | 305 | 276 | 204 | .572 | .180 | .160 | 1.030 | 1.087 | 1.144 |
| | 2391 | 307 | 278 | 206 | .574 | .185 | .165 | 1.033 | 1.091 | 1.148 |
| | 2399 | 308 | 279 | 207 | .575 | .188 | .167 | 1.035 | 1.093 | 1.150 |
| | 2392 | 309 | 280 | 208 | .576 | .190 | .170 | 1.037 | 1.094 | 1.152 |
| | 2393 | 311 | 282 | 210 | .578 | .196 | .175 | 1.040 | 1.098 | 1.156 |

## DRI PRO STOCK DRAG ROLLERS

The DRI Pro Stock designs fill the gap between current Pro Stock and Mountain Motor designs. For 60mm+ journals and .850" roller wheels.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.8 | 1.9 | 2.0 |
| DRI Pro Stock Drag Rated Duration @ .020" Tappet Lift<br><br>Journal = RG,M,K,…<br>MI 28.9 (14.2/14.7) | 2037 | 308 | 279 | 208 | .575 | .190 | .169 | 1.035 | 1.093 | 1.150 |
| | 2039 | 309 | 280 | 209 | .576 | .192 | .171 | 1.037 | 1.094 | 1.152 |
| | 2041 | 310 | 281 | 210 | .577 | .195 | .174 | 1.039 | 1.096 | 1.154 |
| | 2042 | 312 | 283 | 212 | .579 | .200 | .179 | 1.042 | 1.100 | 1.158 |
| | 2043 | 314 | 285 | 214 | .581 | .205 | .184 | 1.046 | 1.104 | 1.162 |
| | 2044 | 316 | 287 | 216 | .583 | .211 | .189 | 1.049 | 1.108 | 1.166 |
| | 2045 | 318 | 289 | 218 | .585 | .216 | .195 | 1.053 | 1.112 | 1.170 |
| | 12060 | 320 | 291 | 220 | .587 | .222 | .200 | 1.057 | 1.115 | 1.174 |
| | 12061 | 322 | 293 | 222 | .589 | .227 | .205 | 1.060 | 1.119 | 1.178 |
| | 2290 | 306 | 277 | 206 | .582 | .185 | .164 | 1.048 | 1.106 | 1.164 |
| | 2291 | 308 | 279 | 208 | .584 | .190 | .169 | 1.051 | 1.110 | 1.168 |
| | 2292 | 310 | 281 | 210 | .586 | .195 | .174 | 1.055 | 1.113 | 1.172 |
| | 2293 | 312 | 283 | 212 | .588 | .201 | .179 | 1.058 | 1.117 | 1.176 |
| | 2294 | 314 | 285 | 214 | .590 | .206 | .184 | 1.062 | 1.121 | 1.180 |
| | 2295 | 316 | 287 | 216 | .592 | .212 | .190 | 1.066 | 1.125 | 1.184 |
| | 2296 | 318 | 289 | 218 | .594 | .217 | .195 | 1.069 | 1.129 | 1.188 |
| | 2297 | 320 | 291 | 220 | .596 | .223 | .201 | 1.073 | 1.132 | 1.192 |
| | 2299 | 322 | 293 | 222 | .598 | .229 | .206 | 1.076 | 1.136 | 1.196 |
| | | | | | | | | 1.7 | 1.8 | 1.9 |
| DRI Pro Stock Drag Rated Duration @ .020" Tappet Lift | 1568 | 310 | 281 | 210 | .632 | .197 | .175 | 1.074 | 1.138 | 1.201 |
| | 1570 | 314 | 285 | 214 | .636 | .208 | .186 | 1.081 | 1.145 | 1.208 |
| | 1572 | 318 | 289 | 218 | .640 | .220 | .197 | 1.088 | 1.152 | 1.216 |

## DZI PRO STOCK DRAG ROLLERS

These profiles are higher RPM versions of the DRI designs for use in modern professional drag race classes. These are very much like a higher lift DRS.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.8 | 1.9 | 2.0 |
| DZI Pro Stock Rated Duration @ .020" Tappet Lift<br>Journal = M,K,A…<br>MI 29.8 (14.6/15.2) | 2057 | 305 | 275 | 201 | .571 | .173 | .154 | 1.028 | 1.085 | 1.142 |
| | 2058 | 307 | 277 | 204 | .573 | .179 | .159 | 1.031 | 1.089 | 1.146 |
| | 2095 | 309 | 279 | 206 | .575 | .184 | .164 | 1.035 | 1.093 | 1.150 |
| | 2182 | 311 | 281 | 208 | .577 | .189 | .169 | 1.039 | 1.096 | 1.154 |
| | 2184 | 313 | 283 | 209 | .579 | .194 | .173 | 1.042 | 1.100 | 1.158 |

## DRP PRO STOCK DRAG ROLLERS

These profiles are a Pro Stock style design very close to the DRD series but would achieve basically the same motion with a slightly lower rocker ratio. For use in modern professional drag race classes.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.7 | 1.8 | 1.9 |
| DRP Pro Stock Drag Rated Duration @ .020" Tappet Lift Journal = M,K,A… MI 29.8 (14.6/15.2) | 2385 | 309 | 281 | 210 | .593 | .195 | .174 | 1.008 | 1.067 | 1.127 |
| | 2586 | 311 | 283 | 212 | .595 | .201 | .180 | 1.012 | 1.071 | 1.131 |
| | 2587 | 313 | 285 | 214 | .597 | .206 | .185 | 1.015 | 1.075 | 1.134 |
| | 2588 | 315 | 287 | 216 | .599 | .212 | .190 | 1.018 | 1.078 | 1.138 |
| | 2589 | 317 | 289 | 218 | .601 | .217 | .196 | 1.022 | 1.082 | 1.142 |

## DKL PRO DRAG ROLLERS

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.8 | 1.9 | 2.0 |
| DKL Pro Stock Drag Rated Duration @ .020" Tappet Lift MI 28.6 (14.1/14.5) | 2430 | 301 | 272 | 201 | .578 | .171 | .151 | 1.040 | 1.098 | 1.156 |
| | 2419 | 303 | 274 | 203 | .581 | .176 | .156 | 1.046 | 1.104 | 1.162 |
| | 2420 | 305 | 276 | 205 | .584 | .182 | .161 | 1.051 | 1.110 | 1.168 |

## TDS PRO STOCK DRAG ROLLERS

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.8 | 1.9 | 2.0 |
| TDS Pro Stock Drag Rated Duration @ .020" Tappet Lift MI 29.4 (14.5/14.9) | 12066 | 305 | 276 | 202 | .569 | .176 | .156 | 1.024 | 1.081 | 1.138 |
| | 12067 | 307 | 278 | 204 | .571 | .181 | .161 | 1.028 | 1.085 | 1.142 |
| | 12068 | 309 | 280 | 206 | .573 | .186 | .166 | 1.031 | 1.089 | 1.146 |

## HDZ PRO STOCK DRAG ROLLERS

The HDZ series is a very high RPM Pro Stock style design with design influences from the HXL series used in high RPM Super Stock type applications but with increased area and far more lift.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.8 | 1.9 | 2.0 |
| HDZ Pro Stock Drag Rated Duration @ .020" Tappet Lift Journal = M,K,A… MI 28.3 (13.9/14.4) | 11230 | 303 | 275 | 204 | .579 | .179 | .158 | 1.042 | 1.100 | 1.158 |
| | 11231 | 305 | 277 | 206 | .581 | .184 | .163 | 1.046 | 1.104 | 1.162 |
| | 11232 | 307 | 279 | 208 | .583 | .189 | .168 | 1.049 | 1.108 | 1.166 |
| | 11236 | 303 | 275 | 204 | .605 | .180 | .159 | 1.089 | 1.150 | 1.210 |

## PRI PLI PRO STOCK DRAG ROLLERS

The PRI and PLI are great baseline Pro Stock intake style drag race roller lobes with excellent area under the curve and require less valve relief than lobes with similar ramp quickness and area.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.75 | 1.85 | 1.95 |
| PRI Pro Stock Drag Rated Duration @ .020" Tappet Lift<br>Journal = RE,M,K…<br>MI 28.4 (14.0/14.4) | 12416 | 296 | 268 | 193 | .563 | .153 | .135 | .985 | 1.042 | 1.098 |
| | 12417 | 298 | 270 | 195 | .565 | .158 | .139 | .989 | 1.045 | 1.102 |
| | 12418 | 300 | 272 | 197 | .567 | .163 | .144 | .992 | 1.049 | 1.106 |
| | 12419 | 302 | 274 | 199 | .569 | .167 | .148 | .996 | 1.053 | 1.110 |
| | 12420 | 304 | 276 | 201 | .571 | .172 | .153 | .999 | 1.056 | 1.113 |
| | 12421 | 306 | 278 | 203 | .573 | .177 | .158 | 1.003 | 1.060 | 1.117 |
| | 12422 | 308 | 280 | 205 | .575 | .182 | .163 | 1.006 | 1.064 | 1.121 |
| | 12423 | 310 | 282 | 207 | .577 | .187 | .167 | 1.010 | 1.067 | 1.125 |
| | 12424 | 312 | 284 | 209 | .579 | .192 | .172 | 1.013 | 1.071 | 1.129 |
| | 12425 | 314 | 286 | 211 | .581 | .197 | .177 | 1.017 | 1.075 | 1.133 |
| | 12426 | 316 | 288 | 213 | .583 | .202 | .182 | 1.020 | 1.079 | 1.137 |
| | | | | | | | | 1.75 | 1.85 | 1.95 |
| PGI Pro Stock Drag Rated Duration @ .020" Tappet Lift | 12310 | 302 | 274 | 201 | .584 | .117 | .151 | .993 | 1.051 | 1.110 |
| | 12311 | 304 | 276 | 203 | .586 | .176 | .156 | .996 | 1.055 | 1.113 |
| | 12312 | 306 | 278 | 205 | .588 | .181 | .161 | 1.000 | 1.058 | 1.117 |
| PGI Pro Stock Rated Duration @ .020" Tappet Lift<br>Journal = M,K,A…<br>MI 27.8 (13.7/14.1) | 12408 | 288 | 260 | 187 | .570 | .138 | .120 | .969 | 1.026 | 1.083 |
| | 12400 | 302 | 274 | 201 | .603 | .171 | .152 | 1.025 | 1.085 | 1.146 |
| | 12393 | 304 | 276 | 203 | .605 | .176 | .156 | 1.029 | 1.089 | 1.150 |
| | 12394 | 306 | 278 | 205 | .607 | .181 | .161 | 1.032 | 1.093 | 1.153 |
| | 12412 | 310 | 282 | 209 | .607 | .192 | .172 | 1.032 | 1.093 | 1.153 |
| POI Pro Stock Drag Rated Duration @ .020" Tappet Lift<br>Journal = M,K,A…<br>MI 27.6 (13.6/14.0) | 14240 | 302 | 274 | 202 | .581 | .175 | .155 | .988 | 1.046 | 1.104 |
| | 14241 | 304 | 276 | 204 | .583 | .180 | .160 | .991 | 1.049 | 1.108 |
| | 14242 | 306 | 278 | 206 | .585 | .186 | .165 | .995 | 1.053 | 1.112 |
| | 14243 | 308 | 280 | 208 | .587 | .191 | .170 | .998 | 1.057 | 1.115 |
| | 14244 | 310 | 282 | 210 | .589 | .196 | .175 | 1.001 | 1.060 | 1.119 |
| | 14245 | 312 | 284 | 212 | .591 | .202 | .180 | 1.005 | 1.064 | 1.123 |
| | 14246 | 314 | 286 | 214 | .593 | .207 | .186 | 1.008 | 1.067 | 1.127 |
| PLI Pro Stock Drag Rated Duration @ .020" Tappet Lift<br>Journal = M,K,A…<br>MI 27.2 (13.4/13.8) | 12428 | 298 | 271 | 199 | .613 | .167 | .147 | .981 | 1.042 | 1.103 |
| | 12429 | 300 | 273 | 201 | .615 | .172 | .152 | .984 | 1.046 | 1.107 |
| | 12430 | 302 | 275 | 203 | .617 | .178 | .157 | .987 | 1.049 | 1.111 |
| | 12431 | 304 | 277 | 205 | .619 | .183 | .162 | .990 | 1.052 | 1.114 |
| | 12432 | 306 | 279 | 207 | .621 | .188 | .167 | .994 | 1.056 | 1.118 |
| | 12433 | 308 | 281 | 209 | .623 | .193 | .172 | .997 | 1.059 | 1.121 |
| | 12434 | 310 | 283 | 211 | .625 | .199 | .178 | 1.000 | 1.063 | 1.125 |
| | 12435 | 312 | 285 | 213 | .627 | .204 | .183 | 1.003 | 1.066 | 1.129 |
| | 12436 | 314 | 287 | 215 | .629 | .210 | .188 | 1.006 | 1.069 | 1.132 |

## PZI PRO STOCK DRAG ROLLERS

The PZI series is a tweaked version of the PRI & PLI Series that should perform better in applications running very close to coil bind, but these do require just a bit more valve clearance.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.7 | 1.8 | 1.9 |
| PZI Rated Duration @ .020" Tappet Lift Journal = M,K,A… MI 27.8 (13.6/14.2) | 12716 | 298 | 270 | 198 | .572 | .165 | .145 | .972 | 1.030 | 1.087 |
| | 12721 | 300 | 272 | 200 | .574 | .170 | .150 | .976 | 1.033 | 1.091 |
| | 12722 | 302 | 274 | 202 | .576 | .175 | .155 | .979 | 1.037 | 1.094 |
| | 12723 | 304 | 276 | 204 | .578 | .180 | .160 | .983 | 1.040 | 1.098 |
| | 12724 | 306 | 278 | 206 | .580 | .185 | .165 | .986 | 1.044 | 1.102 |
| | 12725 | 308 | 280 | 208 | .582 | .190 | .170 | .989 | 1.048 | 1.106 |
| | 12726 | 310 | 282 | 210 | .584 | .196 | .175 | .993 | 1.051 | 1.110 |
| | 12727 | 312 | 284 | 212 | .586 | .201 | .180 | .996 | 1.055 | 1.113 |
| | 12728 | 314 | 286 | 214 | .588 | .206 | .185 | 1.000 | 1.058 | 1.117 |
| PZI Mid Lift Rated Duration @ .020" Tappet Lift Journal = M,K,A… MI 27.8 (13.6/14.2) | 12842 | 302 | 274 | 202 | .591 | .175 | .155 | 1.005 | 1.064 | 1.123 |
| | 12843 | 304 | 276 | 204 | .593 | .180 | .160 | 1.008 | 1.067 | 1.127 |
| | 12844 | 306 | 278 | 206 | .595 | .185 | .165 | 1.012 | 1.071 | 1.131 |
| | 12850 | 302 | 274 | 202 | .606 | .175 | .155 | 1.030 | 1.091 | 1.151 |
| | 12851 | 304 | 276 | 204 | .608 | .180 | .160 | 1.034 | 1.094 | 1.155 |
| | 12852 | 306 | 278 | 206 | .610 | .185 | .165 | 1.037 | 1.098 | 1.159 |
| PZI Rated Duration @ .020" Tappet Lift Journal = M,K,A… MI 27.7 (13.6/14.1) | 12740 | 306 | 278 | 206 | .605 | .186 | .165 | 1.029 | 1.089 | 1.150 |
| | 12741 | 308 | 280 | 208 | .607 | .191 | .170 | 1.032 | 1.093 | 1.153 |
| | 12742 | 310 | 282 | 210 | .609 | .196 | .175 | 1.035 | 1.096 | 1.157 |
| | 12893 | 312 | 284 | 212 | .611 | .202 | .180 | 1.039 | 1.100 | 1.161 |
| | 12894 | 314 | 286 | 214 | .613 | .207 | .186 | 1.042 | 1.103 | 1.165 |
| | 12895 | 316 | 288 | 216 | .615 | .213 | .191 | 1.046 | 1.107 | 1.169 |
| | 12896 | 318 | 290 | 218 | .617 | .218 | .196 | 1.049 | 1.111 | 1.172 |
| | 12743 | 302 | 274 | 202 | .612 | .175 | .155 | 1.040 | 1.102 | 1.163 |
| | 12744 | 304 | 276 | 204 | .614 | .180 | .160 | 1.044 | 1.105 | 1.167 |
| | 12745 | 306 | 278 | 206 | .616 | .185 | .165 | 1.047 | 1.109 | 1.170 |
| | 12495 | 302 | 274 | 202 | .627 | .175 | .155 | 1.066 | 1.129 | 1.191 |
| | 12496 | 304 | 276 | 204 | .629 | .181 | .160 | 1.069 | 1.132 | 1.195 |
| | 12497 | 306 | 278 | 206 | .931 | .186 | .165 | 1.583 | 1.676 | 1.769 |
| PZJ Rated Duration @ .020" Tappet Lift MI 27.0 (13.3/13.7) | 12759 | 301 | 274 | 204 | .616 | .180 | .159 | 1.047 | 1.109 | 1.170 |
| | 12768 | 303 | 276 | 206 | .618 | .185 | .164 | 1.051 | 1.112 | 1.174 |
| | 12756 | 305 | 278 | 208 | .620 | .191 | .169 | 1.054 | 1.116 | 1.178 |
| | 12757 | 307 | 280 | 210 | .622 | .196 | .174 | 1.057 | 1.120 | 1.182 |
| | 12758 | 309 | 282 | 212 | .624 | .202 | .180 | 1.061 | 1.123 | 1.186 |
| PZJ Rated Duration @ .020" Tappet Lift Journal = K,A… | 12209 | 301 | 274 | 204 | .631 | .180 | .159 | 1.073 | 1.136 | 1.199 |
| | 12210 | 303 | 276 | 206 | .633 | .185 | .164 | 1.076 | 1.139 | 1.203 |
| | 12211 | 305 | 278 | 208 | .635 | .191 | .169 | 1.080 | 1.143 | 1.207 |
| | 12212 | 307 | 280 | 210 | .637 | .196 | .174 | 1.083 | 1.147 | 1.210 |
| | 12213 | 309 | 282 | 212 | .639 | .202 | .180 | 1.086 | 1.150 | 1.214 |

*Continued on page 116*

## PZI PRO STOCK DRAG ROLLERS *Continued*

The PZI series is a tweaked version of the PRI & PLI Series that should perform better in applications running very close to coil bind, but these do require just a bit more valve clearance.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.7 | 1.8 | 1.9 |
| PZJ Rated Duration @ .020" Tappet Lift MI 27.0 (13.3/13.7) Journal = K,A… | 12991 | 301 | 274 | 204 | .643 | .180 | .159 | 1.093 | 1.157 | 1.222 |
| | 12992 | 303 | 276 | 206 | .645 | .185 | .164 | 1.097 | 1.161 | 1.226 |
| | 12993 | 305 | 278 | 208 | .647 | .191 | .169 | 1.100 | 1.165 | 1.229 |
| | 12994 | 307 | 280 | 210 | .649 | .197 | .175 | 1.103 | 1.168 | 1.233 |
| | 12995 | 309 | 282 | 212 | .651 | .202 | .180 | 1.107 | 1.172 | 1.237 |
| PZL Rated Duration @ .020" Tappet Lift MI 27.0 (13.3/13.7) | 12984 | 301 | 274 | 203 | .579 | .178 | .157 | .984 | 1.042 | 1.100 |
| | 12985 | 303 | 276 | 205 | .581 | .183 | .162 | .988 | 1.046 | 1.104 |
| | 12769 | 305 | 278 | 207 | .583 | .188 | .167 | .991 | 1.049 | 1.108 |
| | 12987 | 307 | 280 | 209 | .585 | .194 | .173 | .995 | 1.053 | 1.112 |
| | 12988 | 309 | 282 | 211 | .587 | .199 | .178 | .998 | 1.057 | 1.115 |
| PZM Rated Duration @ .020" Tappet Lift MI 26.6 (13.1/13.5) | 12982 | 302.5 | 276 | 206 | .583 | .186 | .165 | .991 | 1.049 | 1.108 |

## PEZ PFZ PZZ PRO STOCK ROLLERS

The PEZ, PZF and PZZ series are progressively smoother than the PZI & PZL series and should perform extremely well in applications stretching engine speed above what could be achived with earlier high lift and high area series.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.7 | 1.8 | 1.9 |
| PEZ Rated Duration @ .020" Tappet Lift MI 27.9 (13.7/14.2) | 12730 | 304 | 276 | 204 | .581 | .180 | .160 | .988 | 1.046 | 1.104 |
| | 12737 | 306 | 278 | 206 | .583 | .185 | .165 | .991 | 1.049 | 1.108 |
| | 12738 | 308 | 280 | 208 | .585 | .191 | .170 | .995 | 1.053 | 1.112 |
| | 11740 | 308 | 280 | 208 | .593 | .191 | .170 | 1.008 | 1.067 | 1.127 |
| | 11748 | 308 | 280 | 208 | .617 | .191 | .170 | 1.049 | 1.111 | 1.172 |
| PFZ Rated Duration @ .020" Tappet Lift MI 27.5 (13.5/14.0) | 11743 | 308 | 280 | 208 | .593 | .192 | .171 | 1.008 | 1.067 | 1.127 |
| PZM Rated Duration @ .020" Tappet Lift MI 26.6 (13.1/13.5) | 11526 | 316 | 288 | 215 | .564 | .210 | .190 | .959 | 1.015 | 1.072 |
| | 11480 | 308 | 280 | 208 | .586 | .190 | .170 | .996 | 1.055 | 1.113 |
| | 11494 | 316 | 288 | 216 | .636 | .213 | .191 | 1.081 | 1.145 | 1.208 |
| | 11495 | 318 | 290 | 218 | .638 | .218 | .196 | 1.085 | 1.148 | 1.212 |
| | 11496 | 320 | 292 | 220 | .640 | .224 | .202 | 1.088 | 1.152 | 1.216 |
| | 11530 | 316 | 288 | 216 | .668 | .214 | .192 | 1.136 | 1.202 | 1.269 |
| | 11531 | 318 | 290 | 218 | .670 | .220 | .197 | 1.139 | 1.206 | 1.273 |
| | 11532 | 320 | 292 | 220 | .672 | .225 | .203 | 1.142 | 1.210 | 1.277 |

## SPH & SPI PRO STOCK DRAG ROLLERS

The PZI series is a tweaked version of the PRI & PLI Series that should perform better in applications running very close to coil bind, but these do require just a bit more valve clearance.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.8 | 1.9 | 2.0 |
| SPH Pro Stock Drag Rated Duration @ .020" Tappet Lift Journal = M,K,A… MI 28.3 (13.9/14.4) | 12254 | 303 | 275 | 203 | .569 | .177 | .157 | 1.024 | 1.081 | 1.138 |
| | 12255 | 305 | 277 | 205 | .571 | .183 | .162 | 1.028 | 1.085 | 1.142 |
| | 12256 | 307 | 279 | 207 | .573 | .188 | .167 | 1.031 | 1.089 | 1.146 |
| | 12257 | 309 | 281 | 209 | .575 | .193 | .173 | 1.035 | 1.093 | 1.150 |
| | 12258 | 311 | 283 | 211 | .577 | .198 | .178 | 1.039 | 1.096 | 1.154 |
| SPI Pro Stock Drag Rated Duration @ .020" Tappet Lift Journal = M,K,A… MI 28.3 (13.9/14.4) | 12214 | 303 | 275 | 203 | .577 | .178 | .158 | 1.039 | 1.096 | 1.154 |
| | 12215 | 305 | 277 | 205 | .579 | .183 | .163 | 1.042 | 1.100 | 1.158 |
| | 12216 | 307 | 279 | 207 | .581 | .188 | .167 | 1.046 | 1.104 | 1.162 |
| | 12217 | 309 | 281 | 209 | .583 | .193 | .173 | 1.049 | 1.108 | 1.166 |
| | 12218 | 311 | 283 | 211 | .585 | .198 | .178 | 1.053 | 1.112 | 1.170 |
| | 12219 | 313 | 285 | 213 | .587 | .204 | .183 | 1.057 | 1.115 | 1.174 |
| | 12220 | 315 | 287 | 215 | .589 | .209 | .188 | 1.060 | 1.119 | 1.178 |

## JI PRO STOCK DRAG ROLLERS

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.8 | 1.9 | 2.0 |
| JI Pro Stock Drag Rated Duration @ .020" Tappet Lift MI 27.2 (13.4/13.8) | 12390 | 301 | 274 | 205 | .574 | .180 | .159 | 1.033 | 1.091 | 1.148 |
| | 12391 | 303 | 276 | 207 | .576 | .186 | .164 | 1.037 | 1.094 | 1.152 |
| | 12392 | 305 | 278 | 209 | .578 | .191 | .170 | 1.040 | 1.098 | 1.156 |

## PNI PRO STOCK DRAG ROLLERS

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.8 | 1.9 | 2.0 |
| PNI Pro Stock Drag Rated Duration @ .020" Tappet Lift Journal = M,K,A… MI 29.0 (14.3/14.7) | 12294 | 315 | 286 | 215 | .628 | .208 | .186 | 1.130 | 1.193 | 1.256 |
| | 12295 | 317 | 288 | 217 | .630 | .214 | .192 | 1.134 | 1.197 | 1.260 |
| | 12296 | 319 | 290 | 219 | .632 | .220 | .197 | 1.138 | 1.201 | 1.264 |
| | 12297 | 321 | 292 | 221 | .634 | .225 | .203 | 1.141 | 1.205 | 1.268 |
| | 12298 | 323 | 294 | 223 | .636 | .231 | .208 | 1.145 | 1.208 | 1.272 |

## DKN PRO STOCK DRAG ROLLERS

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.8 | 1.9 | 2.0 |
| DKN Pro Stock Drag Rated Duration @ .020" Tappet Lift Journal = M,K,A… MI 27.8 (13.7/14.1) | 11258 | 299 | 271 | 201 | .583 | .171 | .150 | 1.049 | 1.108 | 1.166 |
| | 11259 | 301 | 273 | 203 | .585 | .176 | .155 | 1.053 | 1.112 | 1.170 |
| | 11260 | 303 | 275 | 205 | .587 | .181 | .160 | 1.057 | 1.115 | 1.174 |
| | 11261 | 305 | 277 | 207 | .589 | .187 | .166 | 1.060 | 1.119 | 1.178 |
| | 11262 | 307 | 279 | 209 | .591 | .192 | .171 | 1.064 | 1.123 | 1.182 |
| | 11263 | 309 | 281 | 211 | .593 | .198 | .176 | 1.067 | 1.127 | 1.186 |
| | 11265 | 311 | 283 | 213 | .595 | .203 | .182 | 1.071 | 1.131 | 1.190 |

## FPI PRO STOCK DRAG ROLLERS

The FPI profiles are very high acceleration Pro Stock/Pro Mod style designs faster than any of the "D" or "P" series. Can provide great power with very stiff valve train and high valve spring loads but require care.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.7 | 1.8 | 1.9 |
| FPI Pro Stock Drag Rated Duration @ .020" Tappet Lift Journal = K,A… MI 27.9 (13.7/14.2) | 12044 | 304 | 276 | 206 | .612 | .183 | .162 | 1.040 | 1.102 | 1.163 |
| | 12045 | 306 | 278 | 208 | .614 | .188 | .167 | 1.044 | 1.105 | 1.167 |
| | 12046 | 308 | 280 | 210 | .616 | .194 | .172 | 1.047 | 1.109 | 1.170 |
| | 12047 | 310 | 282 | 212 | .618 | .199 | .178 | 1.051 | 1.112 | 1.174 |
| | 12048 | 312 | 284 | 214 | .620 | .205 | .183 | 1.054 | 1.116 | 1.178 |

## FOS PRO STOCK DRAG ROLLERS

The FOS Series is like the FPI but a smoother design that can provide good control at high engine speed with a very stiff valve train system and tight lash settings.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.7 | 1.8 | 1.9 |
| FOS Pro Stock Drag Rated Duration @ .020" Tappet Lift Journal = K,A… MI 29.1 (14.1/15.0) | 12022 | 307 | 278 | 207 | .617 | .191 | .170 | 1.049 | 1.111 | 1.172 |
| | 12023 | 309 | 280 | 209 | .619 | .197 | .176 | 1.052 | 1.114 | 1.176 |
| | 12094 | 311 | 282 | 211 | .621 | .202 | .181 | 1.056 | 1.118 | 1.180 |
| | 12095 | 313 | 284 | 213 | .623 | .208 | .186 | 1.059 | 1.121 | 1.184 |
| | 12127 | 317 | 288 | 217 | .623 | .219 | .197 | 1.059 | 1.121 | 1.184 |
| | 12149 | 321 | 292 | 221 | .623 | .229 | .208 | 1.059 | 1.121 | 1.184 |

## FSL PRO STOCK DRAG ROLLERS

The FLS is like the FOS but for systems that require looser lash or do not have as stiff of a valve train system. Work well on the exhaust in smaller cubic inch and as an intake in larger cubic inch applications.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.7 | 1.8 | 1.9 |
| FSL Pro Stock Rated Duration @ .020" Tappet Lift MI 30.5 (14.7/15.8) | 11192 | 323 | 292 | 219 | .620 | .221 | .199 | 1.054 | 1.116 | 1.178 |
| | 11194 | 327 | 296 | 223 | .622 | .232 | .210 | 1.057 | 1.120 | 1.182 |
| | 11195 | 329 | 298 | 225 | .623 | .237 | .215 | 1.059 | 1.121 | 1.184 |
| | 11196 | 331 | 300 | 227 | .624 | .243 | .221 | 1.061 | 1.123 | 1.186 |

## FDZ PRO STOCK DRAG ROLLERS

The FDZ is even faster than the FPI for maximum area in controlled engine speed applications or to obtain the area associated with high rocker ratios with lower ratio systems.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.7 | 1.8 | 1.9 |
| FDZ Pro Stock Rated Duration @ .020" Tappet Lift Journal = K,A,0… MI 26.7 (13.1/13.6) | 11060 | 303 | 276 | 209 | .620 | .190 | .168 | 1.054 | 1.116 | 1.178 |
| | 11061 | 305 | 278 | 211 | .622 | .196 | .173 | 1.057 | 1.120 | 1.182 |
| | 11062 | 307 | 280 | 211 | .624 | .207 | .179 | 1.061 | 1.123 | 1.186 |
| | 11066 | 303 | 276 | 209 | .639 | .190 | .168 | 1.086 | 1.150 | 1.214 |

## FGZ PRO STOCK DRAG ROLLERS

The FGZ are smoothed out versions on the FGZ for similar type applications but are definitely more stable as engine speeds increase. These work very well achiving outstanding area in lower ratio applications.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.7 | 1.8 | 1.9 |
| FGZ Pro Stock Rated Duration @ .020" Tappet Lift Journal = A,0… MI 26.8 (13.1/13.7) | 11064 | 301 | 274 | 207 | .660 | .190 | .168 | 1.122 | 1.188 | 1.254 |
| | 11075 | 303 | 276 | 209 | .662 | .196 | .173 | 1.125 | 1.192 | 1.258 |
| | 11076 | 305 | 278 | 211 | .664 | .202 | .179 | 1.129 | 1.195 | 1.262 |
| | 11077 | 307 | 280 | 213 | .666 | .208 | .185 | 1.132 | 1.199 | 1.265 |
| | 11078 | 309 | 282 | 215 | .668 | .214 | .190 | 1.136 | 1.202 | 1.269 |

## FPJ PRO STOCK DRAG ROLLERS

The FPJ fast ramp with almost constant positive acceleration design philosophy in between the "D", "S" and "P" families. Slightly quicker than the FPI.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.7 | 1.8 | 1.9 |
| FPJ Pro Stock Drag Rated Duration @ .020" Tappet Lift MI 27.0 (13.2/13.8) | 12488 | 302 | 275 | 206 | .596 | .184 | .163 | 1.013 | 1.073 | 1.132 |
| | 12489 | 304 | 277 | 208 | .598 | .190 | .168 | 1.017 | 1.076 | 1.136 |
| | 12490 | 306 | 279 | 210 | .600 | .195 | .173 | 1.020 | 1.080 | 1.140 |

## DJP ROLLERS

The DJP is a newer entry in the "D" series of Pro Stock style lobes with faster ramps than all the earlier designs. Require tight lash and very stiff rocker arm systems.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.7 | 1.9 |
| DJP Rated Duration @ .020" Tappet Lift Journal = M,K,A… MI 26.3 (13.0/13.3) | 11268 | 296 | 270 | 202 | .611 | .172 | .151 | .917 | 1.039 | 1.161 |
| | 11269 | 298 | 272 | 204 | .613 | .178 | .156 | .920 | 1.042 | 1.165 |
| | 11270 | 300 | 274 | 206 | .615 | .183 | .161 | .923 | 1.046 | 1.169 |
| | 11271 | 302 | 276 | 208 | .617 | .188 | .167 | .926 | 1.049 | 1.172 |
| | 11272 | 304 | 278 | 210 | .619 | .194 | .172 | .929 | 1.052 | 1.176 |
| | 11273 | 306 | 280 | 212 | .621 | .200 | .177 | .932 | 1.056 | 1.180 |
| | 11275 | 308 | 282 | 214 | .623 | .205 | .183 | .935 | 1.059 | 1.184 |

## PVI PRO STOCK DRAG ROLLERS

The PVI series is actually a bit like both a faster "P" series lobe and an offset version of the DJP. The offset design results in more piston to valve on the intake than other desings with similar .200" specs.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.7 | 1.8 | 1.9 |
| PVI Pro Stock Drag Rated Duration @ .020" Tappet Lift MI 27.0 (13.2/13.8) | 12488 | 302 | 275 | 206 | .596 | .184 | .163 | 1.013 | 1.073 | 1.132 |
| | 12489 | 304 | 277 | 208 | .598 | .190 | .168 | 1.017 | 1.076 | 1.136 |
| | 12490 | 306 | 279 | 210 | .600 | .195 | .173 | 1.020 | 1.080 | 1.140 |

## PSB PBM PBL PRO MOD DRAG ROLLERS

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.8 | 1.9 | 2.0 |
| PSB Pro Mod Drag Rated Duration @ .020" Tappet Lift Journal = L,K,A… MI 29.1 (14.2/14.9) | 12399 | 314 | 285 | 213 | .656 | .204 | .182 | 1.181 | 1.246 | 1.312 |
| | 12341 | 316 | 287 | 215 | .658 | .209 | .187 | 1.184 | 1.250 | 1.316 |
| | 12342 | 318 | 289 | 217 | .660 | .215 | .193 | 1.188 | 1.254 | 1.320 |
| | 12343 | 320 | 291 | 219 | .662 | .221 | .198 | 1.192 | 1.258 | 1.324 |
| | 12344 | 324 | 293 | 221 | .664 | .227 | .204 | 1.195 | 1.262 | 1.328 |
| | 11352 | 318 | 289 | 217 | .688 | .216 | .193 | 1.238 | 1.307 | 1.376 |
| | 11353 | 320 | 291 | 219 | .690 | .222 | .199 | 1.242 | 1.311 | 1.380 |
| | 11354 | 324 | 293 | 221 | .692 | .227 | .204 | 1.246 | 1.315 | 1.384 |
| PBM Pro Mod Drag Rated Duration @ .020" Tappet Lift MI 30.3 (14.5/15.8) | 11368 | 317 | 287 | 214 | .653 | .208 | .186 | 1.175 | 1.241 | 1.306 |
| | 11369 | 319 | 289 | 216 | .655 | .214 | .191 | 1.179 | 1.245 | 1.310 |
| | 11370 | 321 | 291 | 218 | .657 | .219 | .197 | 1.183 | 1.248 | 1.314 |
| PBL Pro Mod Drag Rated Duration @ .020" Tappet Lift MI 30.9 (14.7/16.2) | 11375 | 316 | 285 | 211 | .622 | .208 | .186 | 1.120 | 1.182 | 1.244 |
| | 11376 | 318 | 287 | 213 | .624 | .214 | .191 | 1.123 | 1.186 | 1.248 |
| | 11377 | 320 | 289 | 215 | .626 | .219 | .197 | 1.127 | 1.189 | 1.252 |

## PSA PRO STOCK DRAG ROLLERS

The PSA series is a smoother version than the PSB with otherwise similar characteristics for higher RPM applications that require more spring life than provided with the PSB.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.8 | 1.9 | 2.0 |
| PSA Pro Stock Drag Rated Duration @ .020" Tappet Lift Journal = MG,K,A… MI 29.4 (14.4/15.0) | 12330 | 313 | 284 | 211 | .632 | .198 | .177 | 1.138 | 1.201 | 1.264 |
| | 12331 | 315 | 286 | 213 | .634 | .203 | .182 | 1.141 | 1.205 | 1.268 |
| | 12332 | 317 | 288 | 215 | .636 | .209 | .187 | 1.145 | 1.208 | 1.272 |
| | 12333 | 319 | 290 | 217 | .638 | .215 | .193 | 1.148 | 1.212 | 1.276 |
| | 12334 | 321 | 292 | 219 | .640 | .220 | .197 | 1.152 | 1.216 | 1.280 |

## PMZ PRO MOD DRAG ROLLERS

The PMZ Pro Mod style designs are similar to the PSB Series with increased area for lower RPM applications.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.8 | 1.9 | 2.0 |
| PMZ Pro Mod Drag Rated Duration @ .020" Tappet Lift Journal = L,K,A… MI 27.3 (13.1/14.2) | 12352 | 314 | 287 | 219 | .666 | .220 | .196 | 1.199 | 1.265 | 1.332 |
| | 12353 | 316 | 289 | 221 | .668 | .226 | .202 | 1.202 | 1.269 | 1.336 |
| | 12356 | 318 | 291 | 223 | .670 | .232 | .208 | 1.206 | 1.273 | 1.340 |
| | 12357 | 320 | 293 | 225 | .672 | .239 | .214 | 1.210 | 1.277 | 1.344 |
| | 12358 | 322 | 295 | 227 | .674 | .245 | .220 | 1.213 | 1.281 | 1.348 |

## PIC PRO STOCK DRAG ROLLERS

Lower ratio intake design for 70mm, 75mm or 78mm effective journal size cams and low (1.5:1 to 1.7 ratios).

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| PIC Pro Stock Drag Rated Duration @ .020" Tappet Lift Journal = A,C,O… MI 27.8 (13.6/14.2) | 11080 | 312 | 284 | 215 | .718 | .209 | .186 | 1.077 | 1.149 | 1.221 |
| | 11081 | 314 | 286 | 217 | .720 | .215 | .192 | 1.080 | 1.152 | 1.224 |
| | 11082 | 316 | 288 | 219 | .722 | .221 | .197 | 1.083 | 1.155 | 1.227 |
| | 11083 | 318 | 290 | 221 | .724 | .228 | .203 | 1.086 | 1.158 | 1.231 |
| | 11084 | 320 | 292 | 223 | .726 | .234 | .209 | 1.089 | 1.162 | 1.234 |

# SOLID ROLLER (G = LARGE JOURNAL EXH.)

## DRX DRAG EXHAUST ROLLERS

The DRX Drag Exhaust lobes are a faster version of our XCX designs. They have a faster opening to increase torque and have more area under the curve. These work well with DRS intake lobes on 60mm or larger cores.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.8 | 1.9 | 2.0 |
| DRX Drag Exh. Rated Duration @ .020" Tappet Lift Journal = R,M,K… MI 35.0 (16.0/19.0) | 1995 | 335 | 300 | 215 | .529 | .202 | .185 | .952 | 1.005 | 1.058 |
| | 1996 | 337 | 302 | 217 | .531 | .207 | .189 | .956 | 1.009 | 1.062 |
| | 1997 | 339 | 304 | 219 | .533 | .212 | .193 | .959 | 1.013 | 1.066 |
| | 1998 | 341 | 306 | 221 | .535 | .216 | .198 | .963 | 1.017 | 1.070 |
| | 1999 | 343 | 308 | 223 | .537 | .221 | .202 | .967 | 1.020 | 1.074 |

## XK PRO STOCK DRAG ROLLERS

These profiles are high RPM Pro Stock designs for use in modern professional drag race classes. The XK series is two steps faster than the XCX and one step faster than the XJX series.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.8 | 1.9 | 2.0 |
| XK Pro Stock Drag Rated Duration @ .020" Tappet Lift Journal = R,M,K… MI 36.2 (18.0/18.2) | 1734 | 334 | 297 | 217 | .566 | .215 | .194 | 1.019 | 1.075 | 1.132 |
| | 1735 | 336 | 299 | 219 | .566 | .220 | .199 | 1.019 | 1.075 | 1.132 |
| | 1723 | 337 | 300 | 220 | .566 | .222 | .202 | 1.019 | 1.075 | 1.132 |
| | 1695 | 338 | 301 | 222 | .566 | .225 | .204 | 1.019 | 1.075 | 1.132 |
| | 2724 | 340 | 303 | 223 | .568 | .229 | .208 | 1.022 | 1.079 | 1.136 |
| | 2725 | 342 | 305 | 225 | .570 | .234 | .213 | 1.026 | 1.083 | 1.140 |
| | 2726 | 344 | 307 | 227 | .572 | .239 | .218 | 1.030 | 1.087 | 1.144 |
| | 2727 | 346 | 309 | 229 | .574 | .244 | .223 | 1.033 | 1.091 | 1.148 |
| | 2728 | 348 | 311 | 231 | .576 | .249 | .228 | 1.037 | 1.094 | 1.152 |

## XKL PRO STOCK DRAG ROLLERS

These profiles are increased lift versions of the original XK series.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.7 | 1.8 | 1.9 |
| XKL Pro Stock Drag Rated Duration @ .020" Tappet Lift<br><br>Journal = M,K,A… MI 36.0 (17.9/18.1) | 1833 | 334 | 298 | 220 | .588 | .220 | .200 | 1.000 | 1.058 | 1.117 |
| | 1834 | 336 | 300 | 222 | .590 | .226 | .205 | 1.003 | 1.062 | 1.121 |
| | 1775 | 338 | 302 | 224 | .592 | .231 | .210 | 1.006 | 1.066 | 1.125 |
| | 1835 | 340 | 304 | 226 | .594 | .236 | .215 | 1.010 | 1.069 | 1.129 |
| | 1836 | 342 | 306 | 228 | .596 | .242 | .220 | 1.013 | 1.073 | 1.132 |
| | 1837 | 344 | 308 | 230 | .598 | .247 | .226 | 1.017 | 1.076 | 1.136 |
| | 1847 | 346 | 310 | 232 | .600 | .253 | .231 | 1.020 | 1.080 | 1.140 |
| | 1848 | 348 | 312 | 234 | .602 | .258 | .236 | 1.023 | 1.084 | 1.144 |
| | 1849 | 350 | 314 | 236 | .604 | .264 | .242 | 1.027 | 1.087 | 1.148 |
| | 1858 | 352 | 316 | 238 | .606 | .269 | .247 | 1.030 | 1.091 | 1.151 |
| | 1859 | 354 | 318 | 240 | .608 | .275 | .253 | 1.034 | 1.094 | 1.155 |

## XK .635" PRO STOCK DRAG EXHAUST ROLLERS

The XK Pro Stock Drag Exhaust lobes are a faster version of our XCX designs. The .635" lift series is optimized for big inch applications and 62.85 or 65mm journals.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.7 | 1.8 | 1.9 |
| XK .635" Pro Stock Drag Exh. Rated Duration @ .020" Tappet Lift<br><br>Journal = M,K,A… MI 36.0 (17.9/18.1) | 11560 | 344 | 307 | 228 | .635 | .242 | .220 | 1.080 | 1.143 | 1.207 |
| | 11561 | 346 | 309 | 230 | .635 | .248 | .226 | 1.080 | 1.143 | 1.207 |
| | 1562 | 348 | 311 | 232 | .635 | .254 | .232 | 1.080 | 1.143 | 1.207 |
| | 1563 | 352 | 315 | 236 | .635 | .264 | .242 | 1.080 | 1.143 | 1.207 |
| | 11563 | 354 | 317 | 238 | .635 | .270 | .248 | 1.080 | 1.143 | 1.207 |
| | 1564 | 356 | 319 | 240 | .635 | .275 | .253 | 1.080 | 1.143 | 1.207 |
| | 1565 | 360 | 323 | 244 | .635 | .286 | .264 | 1.080 | 1.143 | 1.207 |
| | 1569 | 362 | 325 | 246 | .635 | .291 | .269 | 1.080 | 1.143 | 1.207 |
| | 1571 | 364 | 327 | 248 | .635 | .296 | .274 | 1.080 | 1.143 | 1.207 |

## XKH EXHAUST ROLLERS

These profiles are increased lift versions of the XK .635" series.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.7 | 1.8 | 1.9 |
| XKH Exh. Rated Duration @ .020" Tappet Lift<br><br>Journal = L,K,A… MI 34.3 (16.9/17.4) | 1825 | 344 | 310 | 233 | .673 | .258 | .236 | 1.144 | 1.211 | 1.279 |
| | 1789 | 356 | 322 | 245 | .685 | .293 | .270 | 1.165 | 1.233 | 1.302 |
| | 1792 | 360 | 326 | 249 | .689 | .304 | .281 | 1.171 | 1.240 | 1.309 |
| | 1823 | 362 | 328 | 251 | .691 | .310 | .287 | 1.175 | 1.244 | 1.313 |
| | 1794 | 364 | 330 | 253 | .693 | .316 | .292 | 1.178 | 1.247 | 1.317 |
| | 1790 | 357 | 323 | 247 | .700 | .299 | .276 | 1.190 | 1.260 | 1.330 |

## XM PRO EXHAUST ROLLERS

The XM Pro Exhaust profiles are similar to the XKX but have higher acceleration and more area.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.7 | 1.8 | 1.9 |
| XM Pro Exh. Rated Duration @ .020" Tappet Lift MI 35.3 (17.5/17.8) | 2078 | 331 | 296 | 219 | .553 | .217 | .197 | .940 | .995 | 1.051 |
| | 2079 | 333 | 298 | 221 | .555 | .222 | .202 | .944 | .999 | 1.055 |
| | 2055 | 335 | 300 | 222 | .557 | .227 | .206 | .947 | 1.003 | 1.058 |

## ZLX PRO STOCK DRAG EXHAUST ROLLERS

The ZLX Pro Stock Drag Exhaust Series is based off of the popular XKX Exhaust Series but is quicker off the seat.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.8 | 1.9 | 2.0 |
| ZLX Pro Stock Drag Exh. Rated Duration @ .020" Tappet Lift Journal = R,M,K,A… MI 33.0 (15.8/17.2) | 12823 | 336 | 303 | 225 | .570 | .233 | .213 | 1.026 | 1.083 | 1.140 |
| | 12825 | 340 | 307 | 229 | .570 | .244 | .223 | 1.026 | 1.083 | 1.140 |
| | 12827 | 344 | 311 | 233 | .570 | .254 | .234 | 1.026 | 1.083 | 1.140 |
| | 12829 | 348 | 315 | 236 | .570 | .264 | .244 | 1.026 | 1.083 | 1.140 |
| | 12831 | 352 | 319 | 240 | .570 | .274 | .254 | 1.026 | 1.083 | 1.140 |
| | 12833 | 356 | 323 | 244 | .570 | .284 | .264 | 1.026 | 1.083 | 1.140 |
| | 12835 | 360 | 327 | 248 | .570 | .294 | .274 | 1.026 | 1.083 | 1.140 |
| | 12836 | 362 | 329 | 251 | .570 | .298 | .278 | 1.026 | 1.083 | 1.140 |
| | 12837 | 364 | 331 | 253 | .570 | .303 | .283 | 1.026 | 1.083 | 1.140 |
| | 12839 | 368 | 335 | 257 | .570 | .312 | .293 | 1.026 | 1.083 | 1.140 |

## NX PRO STOCK DRAG EXHAUST ROLLERS

Like the XM series, the NX Pro Exhaust profiles are similar to the XKX but with higher acceleration and more area. These also have slightly shorter ramps that work very well with steeper valve seats.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.8 | 1.9 | 2.0 |
| NX Pro Stock Drag Exh. Rated Duration @ .020" Tappet Lift Journal = R,M,K,A… MI 31.2 (15.1/16.1) | 2577 | 332 | 301 | 224 | .562 | .230 | .211 | 1.012 | 1.068 | 1.124 |
| | 2578 | 334 | 303 | 226 | .564 | .235 | .215 | 1.015 | 1.072 | 1.128 |
| | 2579 | 336 | 305 | 228 | .566 | .240 | .220 | 1.019 | 1.075 | 1.132 |
| | 2580 | 338 | 307 | 230 | .568 | .246 | .226 | 1.022 | 1.079 | 1.136 |
| | 2581 | 340 | 309 | 232 | .570 | .251 | .231 | 1.026 | 1.083 | 1.140 |

## NXX ROLLERS

The NXX is similar to the XKX Drag Rollers but optimized for lower RPM applications. They work especially well in nitrous applications; the increased area under the curve (compared to most exhaust designs) reduces exhaust pumping losses. These asymmetric designs have lower opening acceleration to provide a wide power band and limit loading when opening against high cylinder pressures.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.6 | 1.7 | 1.8 |
| NXX Rated Duration @ .020" Tappet Lift Journal = B,R,M,K… MI 30.8 (14.9/15.9) | 11302 | 323 | 292 | 213 | .516 | .202 | .183 | .826 | .877 | .929 |
| | 11304 | 327 | 296 | 217 | .520 | .211 | .192 | .832 | .884 | .936 |
| | 11306 | 331 | 300 | 221 | .524 | .220 | .183 | .838 | .891 | .943 |
| | 11308 | 335 | 304 | 225 | .528 | .229 | .211 | .845 | .898 | .950 |
| | 11310 | 339 | 308 | 229 | .532 | .239 | .220 | .851 | .904 | .958 |
| | 11312 | 343 | 312 | 233 | .536 | .248 | .229 | .858 | .911 | .965 |
| | 11314 | 347 | 316 | 237 | .540 | .257 | .239 | .864 | .918 | .972 |
| NXH Rated Duration @ .020" Tappet Lift Journal = R,M,K,A… MI 30.6 (14.8/15.8) | 11340 | 341 | 310 | 231 | .550 | .247 | .228 | .880 | .935 | .990 |
| | 11342 | 345 | 314 | 235 | .554 | .257 | .237 | .886 | .942 | .997 |
| | 11344 | 349 | 318 | 239 | .558 | .266 | .247 | .893 | .949 | 1.004 |
| | 11346 | 353 | 322 | 243 | .562 | .276 | .257 | .899 | .955 | 1.012 |
| | 11348 | 357 | 326 | 247 | .566 | .285 | .266 | .906 | .962 | 1.019 |
| NXL Rated Duration @ Journal = M,L,K,A… MI 29.6 (14.3/15.3) | 12338 | 355 | 325 | 250 | .630 | .302 | .281 | 1.008 | 1.071 | 1.134 |
| | 12339 | 357 | 327 | 252 | .630 | .307 | .286 | 1.008 | 1.071 | 1.134 |
| | 12349 | 359 | 329 | 254 | .630 | .312 | .291 | 1.008 | 1.071 | 1.134 |
| | 11363 | 361 | 331 | 256 | .630 | .317 | .296 | 1.008 | 1.071 | 1.134 |
| | 11364 | 363 | 333 | 258 | .630 | .322 | .301 | 1.008 | 1.071 | 1.134 |

## VOX PRO DRAG RACE ROLLERS

The VOX Rollers are designed to work with the VOI intakes and are quicker than most exhaust lobes and could be used as an intake if needed.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.8 | 1.9 | 2.0 |
| VOX Pro Rated Duration @ .020" Tappet Lift MI 31.1 (15.3/15.8)MI 30.8 (14.9/15.9) | 11173 | 328 | 297 | 217 | .529 | .207 | .189 | .952 | 1.005 | 1.058 |
| | 11175 | 332 | 301 | 221 | .531 | .217 | .198 | .956 | 1.009 | 1.062 |
| | 11177 | 336 | 305 | 225 | .533 | .226 | .207 | .959 | 1.013 | 1.066 |

## TSX PRO ROLLERS

These are an excellent choice for 2.165" and smaller journal camshafts where very high lobe lift lobes can compromise the base circle diameter, core strength and stability under high loads. These have shorter seat timing than older Fuel/Blown ALC lobes but should be very good in their place if run with tighter lash.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.7 | 1.8 | 1.9 |
| TPX Pro<br>Rated Duration @<br>.020" Tappet Lift<br><br>Journal = R,M…<br>MI 32.7 (15.7/17.0) | 11145 | 330 | 297 | 216 | .525 | .209 | .190 | .893 | .945 | .998 |
| | 11147 | 334 | 301 | 220 | .527 | .218 | .199 | .896 | .949 | 1.001 |
| | 11149 | 338 | 305 | 224 | .529 | .228 | .209 | .899 | .952 | 1.005 |
| | 11151 | 342 | 309 | 228 | .531 | .237 | .218 | .903 | .956 | 1.009 |
| | 11153 | 346 | 313 | 232 | .533 | .246 | .227 | .906 | .959 | 1.013 |
| | 11155 | 350 | 317 | 236 | .535 | .256 | .237 | .910 | .963 | 1.017 |
| | 11157 | 354 | 321 | 240 | .537 | .265 | .246 | .913 | .967 | 1.020 |

## PRX PLX PRO STOCK DRAG ROLLERS

The PRX and PLX are great baseline Pro Stock exhaust style drag race roller lobes with excellent area under the curve and require less valve relief than lobes with similar ramp quickness and area.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.75 | 1.85 | 1.95 |
| PRX Pro Stock Drag Rated Duration @ .020" Tappet Lift<br><br>Journal = R,M,K,A…<br>MI 31.2 (14.9/16.3) | 12731 | 305 | 274 | 197 | .540 | .164 | .145 | .945 | .999 | 1.053 |
| | 12732 | 307 | 276 | 199 | .542 | .169 | .150 | .949 | 1.003 | 1.057 |
| | 12733 | 309 | 278 | 201 | .544 | .174 | .155 | .952 | 1.006 | 1.061 |
| | 12735 | 313 | 282 | 205 | .548 | .183 | .164 | .959 | 1.014 | 1.069 |
| | 12736 | 315 | 284 | 207 | .550 | .188 | .169 | .963 | 1.018 | 1.073 |
| | 12437 | 317 | 286 | 209 | .552 | .193 | .173 | .966 | 1.021 | 1.076 |
| | 12438 | 319 | 288 | 211 | .554 | .198 | .178 | .970 | 1.025 | 1.080 |
| | 12439 | 321 | 290 | 213 | .556 | .203 | .183 | .973 | 1.029 | 1.084 |
| | 12440 | 323 | 292 | 215 | .558 | .208 | .188 | .977 | 1.032 | 1.088 |
| | 12441 | 325 | 294 | 217 | .560 | .213 | .193 | .980 | 1.036 | 1.092 |
| | 12442 | 327 | 296 | 219 | .562 | .218 | .198 | .984 | 1.040 | 1.096 |
| | 12443 | 329 | 298 | 221 | .564 | .223 | .203 | .987 | 1.043 | 1.100 |
| | 12444 | 331 | 300 | 223 | .566 | .228 | .208 | .991 | 1.047 | 1.104 |
| | 12445 | 333 | 302 | 225 | .568 | .234 | .213 | .994 | 1.051 | 1.108 |
| | 12446 | 335 | 304 | 227 | .570 | .239 | .218 | .998 | 1.055 | 1.112 |
| | 12447 | 337 | 306 | 229 | .572 | .244 | .223 | 1.001 | 1.058 | 1.115 |
| | 12448 | 339 | 308 | 231 | .574 | .249 | .228 | 1.005 | 1.062 | 1.119 |
| | 12449 | 341 | 310 | 233 | .576 | .254 | .233 | 1.008 | 1.066 | 1.123 |
| | 12450 | 343 | 312 | 235 | .578 | .259 | .239 | 1.012 | 1.069 | 1.127 |
| | 12451 | 345 | 314 | 237 | .580 | .264 | .244 | 1.015 | 1.073 | 1.131 |
| | | | | | | | | 1.6 | 1.7 | 1.8 |
| PLX Pro Stock Drag Rated Duration @ .020" Tappet Lift<br><br>Journal = M,K,A…<br>MI 30.3 (14.4/16.9) | 12455 | 327 | 297 | 223 | .608 | .231 | .209 | .973 | 1.034 | 1.094 |
| | 12456 | 329 | 299 | 225 | .610 | .237 | .215 | .976 | 1.037 | 1.098 |
| | 12457 | 331 | 301 | 227 | .612 | .253 | .231 | .979 | 1.040 | 1.102 |
| | 12458 | 333 | 303 | 229 | .614 | .248 | .226 | .982 | 1.044 | 1.105 |
| | 12459 | 335 | 305 | 231 | .616 | .253 | .231 | .986 | 1.047 | 1.109 |
| | 12460 | 337 | 307 | 233 | .618 | .259 | .237 | .989 | 1.051 | 1.112 |
| | 12461 | 339 | 309 | 235 | .620 | .265 | .242 | .992 | 1.054 | 1.116 |
| | 12462 | 341 | 311 | 237 | .622 | .270 | .248 | .995 | 1.057 | 1.120 |
| | 12463 | 343 | 313 | 239 | .624 | .276 | .253 | .998 | 1.061 | 1.123 |
| | 12264 | 345 | 315 | 241 | .626 | .281 | .259 | 1.002 | 1.064 | 1.127 |
| | 12265 | 347 | 317 | 243 | .628 | .287 | .264 | 1.005 | 1.068 | 1.130 |

## PRZ PRO STOCK DRAG ROLLERS

Like lower PLX but could achieve similar motion with lower rocker ratios or achieve more lift, and acceleration if used with the same ratio.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.7 | 1.8 | 1.9 |
| PRZ Pro Stock Drag Rated Duration @ .020" Tappet Lift<br>MI 30.1 (14.2/15.9) | 12470 | 334 | 304 | 230 | .596 | .249 | .228 | 1.013 | 1.073 | 1.132 |
| | 12471 | 336 | 306 | 232 | .598 | .255 | .233 | 1.017 | 1.076 | 1.136 |
| | 12472 | 338 | 308 | 234 | .600 | .260 | .238 | 1.020 | 1.080 | 1.140 |

## PVX PRO STOCK DRAG ROLLERS

Like PLX but with some offset to increase PTV clearance by about .006" at the tappet on the exhaust.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.60 | 1.70 | 1.80 |
| PVX Pro Stock Drag Rated Duration @ .020" Tappet Lift MI 29.0 (13.9/15.1) | 12776 | 328 | 299 | 226 | .610 | .231 | .209 | .976 | 1.037 | 1.098 |
| | 12778 | 332 | 303 | 230 | .614 | .242 | .220 | .982 | 1.044 | 1.105 |

## SPX PRO STOCK DRAG ROLLERS

The SPX exhaust series is simmilar to the XJX, NX and NXX while optimized to work extremely well with the SPH and SPI Intake Series.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.8 | 1.9 | 2.0 |
| SPX Pro Stock Drag Rated Duration @ .020" Tappet Lift<br>Journal = R,M,K,A…<br>MI 35.8 (17.6/18.2) | 12221 | 328 | 292 | 211 | .555 | .199 | .180 | .999 | 1.055 | 1.110 |
| | 12222 | 330 | 294 | 213 | .557 | .204 | .185 | 1.003 | 1.058 | 1.114 |
| | 12223 | 332 | 296 | 215 | .559 | .209 | .189 | 1.006 | 1.062 | 1.118 |
| | 12224 | 334 | 298 | 217 | .561 | .214 | .194 | 1.010 | 1.066 | 1.122 |
| | 12225 | 336 | 300 | 219 | .563 | .219 | .199 | 1.013 | 1.070 | 1.126 |
| | 12226 | 338 | 302 | 221 | .565 | .224 | .204 | 1.017 | 1.074 | 1.130 |
| | 12227 | 340 | 304 | 223 | .567 | .229 | .209 | 1.021 | 1.077 | 1.134 |
| | 12228 | 342 | 306 | 225 | .569 | .234 | .214 | 1.024 | 1.081 | 1.138 |
| | 12229 | 344 | 308 | 227 | .571 | .239 | .219 | 1.028 | 1.085 | 1.142 |

## XCM PRO STOCK DRAG ROLLERS

The XCM exhaust series is simmilar to the SPX except faster with more lift, area and acceleration.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.8 | 1.9 | 2.0 |
| XCM Pro Stock Drag Rated Duration @ .020" Tappet Lift MI 35.0 (17.2/17.8) | 12398 | 341 | 306 | 228 | .601 | .242 | .221 | 1.082 | 1.142 | 1.202 |
| | 12402 | 343 | 308 | 230 | .603 | .248 | .226 | 1.085 | 1.146 | 1.206 |
| | 12403 | 345 | 310 | 232 | .605 | .253 | .231 | 1.089 | 1.150 | 1.210 |

## XNR ROLLERS

New exhaust profile like PRX but with almost no ramp.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.7 | 1.8 | 1.9 |
| XNR Rated Duration @ .020" Tappet Lift Journal = M,K,A… MI 30.5 (14.9/15.6) | 12804 | 331 | 300 | 223 | .588 | .229 | .208 | 1.000 | 1.058 | 1.117 |
| | 12805 | 333 | 302 | 225 | .590 | .234 | .214 | 1.003 | 1.062 | 1.121 |
| | 12806 | 335 | 304 | 227 | .592 | .240 | .219 | 1.006 | 1.066 | 1.125 |
| | 12807 | 337 | 306 | 229 | .594 | .245 | .224 | 1.010 | 1.069 | 1.129 |
| | 12808 | 339 | 308 | 231 | .596 | .250 | .229 | 1.013 | 1.073 | 1.132 |

## SXZ PRO STOCK DRAG ROLLERS

The SXZ series is our experiment with a fast opening, slower closing, high accleration exhaust series. These are designed to dealay the exhaust opening for increased torque while opening very quickly to minimize exhaust pumping losses. May be very sensitive to headers and collector configuration.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.8 | 1.9 | 2.0 |
| SXZ Pro Stock Drag Rated Duration @ .020" Tappet Lift MI 28.5 (13.8/14.7) | 12795 | 333 | 305 | 232 | .577 | .251 | .230 | 1.039 | 1.096 | 1.154 |
| | 12796 | 335 | 307 | 234 | .579 | .256 | .235 | 1.042 | 1.100 | 1.158 |
| | 12797 | 337 | 309 | 236 | .581 | .261 | .241 | 1.046 | 1.104 | 1.162 |

## XRX PRO STOCK DRAG ROLLERS

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.7 | 1.8 | 1.9 |
| XRX Pro Stock Drag Rated Duration @ .020" Tappet Lift MI 30.8 (15.0/15.8) | 2383 | 331 | 300 | 224 | .565 | .231 | .211 | .961 | 1.017 | 1.074 |
| | 2384 | 333 | 302 | 226 | .567 | .237 | .216 | .964 | 1.021 | 1.077 |
| | 2369 | 335 | 304 | 228 | .569 | .242 | .221 | .967 | 1.024 | 1.081 |

## PVS PRO STOCK DRAG EXHAUST ROLLERS

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.75 | 1.85 | 1.95 |
| PVS Pro Stock Drag Exh. Rated Duration @ .020" Tappet Lift MI 33.8 (16.4/17.4) | 12474 | 334 | 300 | 220 | .560 | .219 | .200 | .980 | 1.036 | 1.092 |
| | 12475 | 336 | 302 | 222 | .562 | .224 | .204 | .984 | 1.040 | 1.096 |
| | 12467 | 338 | 304 | 224 | .564 | .229 | .209 | .987 | 1.043 | 1.100 |

## ZZX PRO STOCK DRAG EXHAUST ROLLERS

The ZZX Exhaust lobes have a special ramp offset to give slightly more piston to valve clearance while otherwise behaving very much like the fast ramp PZN series.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.75 | 1.85 | 1.95 |
| ZZX Pro Stock Drag Exh. Rated Duration @ .020" Tappet Lift Journal = M,K,A… MI 27.8 (13.6/14.2) | 12951 | 326 | 298 | 226 | .576 | .234 | .212 | 1.008 | 1.066 | 1.123 |
| | 12952 | 328 | 300 | 228 | .578 | .239 | .217 | 1.012 | 1.069 | 1.127 |
| | 12953 | 330 | 302 | 230 | .580 | .245 | .222 | 1.015 | 1.073 | 1.131 |
| | 12954 | 332 | 304 | 232 | .582 | .250 | .228 | 1.019 | 1.077 | 1.135 |
| | 12955 | 334 | 306 | 234 | .584 | .255 | .234 | 1.022 | 1.080 | 1.139 |

## PZN PZJ PYJ PRO STOCK DRAG ROLLERS

The PZN, PZJ and PYJ quicker ramp Pro Stock Exhaust designs have proven themselves as an upgrade over the older XJX & XKX style designs in steep seat angle applications. The PZNs are the fastest and most aggressive, while the PZJ and PYJ lobes are smoother and better at high engine speed.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.75 | 1.85 | 1.95 |
| PZN Pro Stock Drag Rated Duration @ .020" Tappet Lift<br>Journal = M,K,A…<br>MI 28.6 (13.8/14.8) | 12538 | 320 | 291 | 218 | .561 | .214 | .193 | .982 | 1.038 | 1.094 |
| | 12539 | 322 | 293 | 220 | .563 | .219 | .198 | .985 | 1.042 | 1.098 |
| | 12541 | 324 | 295 | 222 | .565 | .224 | .203 | .989 | 1.045 | 1.102 |
| | 12542 | 326 | 297 | 224 | .567 | .230 | .209 | .992 | 1.049 | 1.106 |
| | 12544 | 328 | 299 | 226 | .569 | .235 | .214 | .996 | 1.053 | 1.110 |
| | 12545 | 330 | 301 | 228 | .571 | .240 | .219 | .999 | 1.056 | 1.113 |
| | 12546 | 332 | 303 | 230 | .573 | .245 | .224 | 1.003 | 1.060 | 1.117 |
| | 12547 | 334 | 305 | 232 | .575 | .251 | .229 | 1.006 | 1.064 | 1.121 |
| | 12548 | 336 | 307 | 234 | .577 | .256 | .235 | 1.010 | 1.067 | 1.125 |
| | 12549 | 338 | 309 | 236 | .579 | .261 | .240 | 1.013 | 1.071 | 1.129 |
| | 12551 | 340 | 311 | 238 | .581 | .266 | .245 | 1.017 | 1.075 | 1.133 |
| | 12590 | 336 | 307 | 234 | .595 | .258 | .237 | 1.041 | 1.101 | 1.160 |
| PZJ Pro Stock Drag Rated Duration @ .020" Tappet Lift<br>Journal = M,K,A…<br>MI 29.1 (14.3/14.8) | 12605 | 328 | 299 | 223 | .569 | .227 | .206 | .996 | 1.053 | 1.110 |
| | 12606 | 330 | 301 | 225 | .571 | .232 | .212 | .999 | 1.056 | 1.113 |
| | 12596 | 331 | 302 | 226 | .572 | .235 | .214 | 1.001 | 1.058 | 1.115 |
| | 12607 | 332 | 303 | 227 | .573 | .238 | .217 | 1.003 | 1.060 | 1.117 |
| | 12619 | 334 | 305 | 229 | .575 | .242 | .222 | 1.006 | 1.064 | 1.121 |
| | 12620 | 336 | 307 | 231 | .577 | .248 | .227 | 1.010 | 1.067 | 1.125 |
| | 12621 | 338 | 309 | 233 | .579 | .253 | .232 | 1.013 | 1.071 | 1.129 |
| | 12629 | 340 | 311 | 235 | .581 | .259 | .238 | 1.017 | 1.075 | 1.133 |
| PYJ Pro Stock Drag Rated Duration @ .020" Tappet Lift<br>Journal = M,K,A…<br>MI 29.7 (14.4/15.3) | 12611 | 329 | 299 | 223 | .569 | .225 | .205 | .996 | 1.053 | 1.110 |
| | 12623 | 331 | 301 | 225 | .571 | .230 | .210 | .999 | 1.056 | 1.113 |
| | 12624 | 333 | 303 | 227 | .573 | .235 | .215 | 1.003 | 1.060 | 1.117 |
| | 12625 | 335 | 305 | 229 | .575 | .241 | .220 | 1.006 | 1.064 | 1.121 |
| | 12626 | 337 | 307 | 231 | .577 | .246 | .225 | 1.010 | 1.067 | 1.125 |

## DXP PRO STOCK DRAG ROLLERS

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.7 | 1.8 | 1.9 |
| DXP Pro Stock Drag Rated Duration @ .020" Tappet Lift<br>MI 30.0 (14.5/15.5) | 12114 | 334 | 304 | 228 | .566 | .241 | .221 | .962 | 1.019 | 1.075 |
| | 12116 | 338 | 308 | 232 | .570 | .251 | .231 | .969 | 1.026 | 1.083 |
| | 12117 | 340 | 310 | 234 | .572 | .257 | .236 | .972 | 1.030 | 1.087 |
| | 12118 | 342 | 312 | 236 | .574 | .262 | .241 | .976 | 1.033 | 1.091 |

## XCH PRO STOCK DRAG ROLLERS

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.8 | 1.9 | 2.0 |
| XCH Pro Stock Drag Rated Duration @ .020" Tappet Lift<br>MI 28.4 (13.8/14.6) | 11282 | 328 | 300 | 227 | .562 | .239 | .218 | 1.012 | 1.068 | 1.124 |
| | 11283 | 330 | 302 | 229 | .564 | .244 | .223 | 1.015 | 1.072 | 1.128 |
| | 11284 | 332 | 304 | 231 | .566 | .249 | .229 | 1.019 | 1.075 | 1.132 |

## TXJ PRO STOCK DRAG ROLLERS

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.8 | 1.9 | 2.0 |
| TXJ Pro Stock Drag Rated Duration @ .020" Tappet Lift MI 33.5 (16.3/17.2) | 12072 | 330 | 297 | 218 | .551 | .214 | .194 | .992 | 1.047 | 1.102 |
| | 12073 | 332 | 299 | 220 | .553 | .219 | .199 | .995 | 1.051 | 1.106 |
| | 12074 | 334 | 301 | 222 | .555 | .224 | .204 | .999 | 1.055 | 1.110 |

## PNX PRO STOCK DRAG ROLLERS

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.8 | 1.9 | 2.0 |
| PNX Pro Stock Drag Rated Duration @ .020" Tappet Lift<br>Journal = MG,K,A… MI 32.1 (15.0/17.1) | 12325 | 351 | 319 | 241 | .595 | .276 | .255 | 1.071 | 1.131 | 1.190 |
| | 12313 | 353 | 321 | 243 | .597 | .281 | .260 | 1.075 | 1.134 | 1.194 |
| | 12314 | 355 | 323 | 245 | .599 | .286 | .266 | 1.078 | 1.138 | 1.198 |
| | 12315 | 357 | 325 | 247 | .601 | .291 | .271 | 1.082 | 1.142 | 1.202 |
| | 12316 | 359 | 327 | 249 | .603 | .296 | .276 | 1.085 | 1.146 | 1.206 |
| | 12317 | 361 | 329 | 251 | .605 | .301 | .281 | 1.089 | 1.150 | 1.210 |
| | 12318 | 363 | 331 | 253 | .607 | .306 | .286 | 1.093 | 1.153 | 1.214 |

## XMZ XJZ PRO MOD EXHAUST DRAG ROLLERS

The XMZ and XJZ lobes are outstanding in Pro Mod type applications where one needs maximum area under the curve to remove spent gasses and reduce exhaust pumping losses. The XJZ lobes are just a bit smoother for higher RPM applications where spring life is a concern.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.8 | 1.9 | 2.0 |
| XMZ Pro Mod Exh. Rated Duration @ .020" Tappet Lift<br>Journal = L,K,A… MI 27.7 (13.5/14.2) | 12328 | 349 | 321 | 250 | .627 | .309 | .287 | 1.129 | 1.191 | 1.254 |
| | 12329 | 351 | 323 | 252 | .629 | .315 | .292 | 1.132 | 1.195 | 1.258 |
| | 12361 | 353 | 325 | 254 | .631 | .321 | .299 | 1.136 | 1.199 | 1.262 |
| | 12362 | 355 | 327 | 256 | .633 | .327 | .305 | 1.139 | 1.203 | 1.266 |
| | 12367 | 357 | 329 | 258 | .635 | .333 | .310 | 1.143 | 1.207 | 1.270 |
| | 12368 | 359 | 331 | 260 | .637 | .337 | .315 | 1.147 | 1.210 | 1.274 |
| | 12369 | 361 | 333 | 263 | .639 | .343 | .321 | 1.150 | 1.214 | 1.278 |
| | 12387 | 357 | 329 | 259 | .660 | .335 | .312 | 1.188 | 1.254 | 1.320 |
| | 12388 | 359 | 331 | 261 | .662 | .340 | .317 | 1.192 | 1.258 | 1.324 |
| | 12389 | 361 | 333 | 263 | .664 | .346 | .323 | 1.195 | 1.262 | 1.328 |
| | 12401 | 365 | 337 | 267 | .668 | .358 | .334 | 1.202 | 1.269 | 1.336 |
| XJZ Pro Mod. Exh. Rated Duration @ .020" Tappet Lift<br>Journal = L,K,A… MI 29.5 (14.4/15.1) | 14038 | 350 | 320 | 246 | .638 | .292 | .270 | 1.148 | 1.212 | 1.276 |
| | 14039 | 352 | 322 | 248 | .640 | .297 | .275 | 1.152 | 1.216 | 1.280 |
| | 14040 | 354 | 324 | 250 | .642 | .303 | .281 | 1.156 | 1.220 | 1.284 |
| | 14042 | 358 | 328 | 254 | .644 | .313 | .291 | 1.159 | 1.224 | 1.288 |
| | 14044 | 362 | 332 | 258 | .646 | .324 | .302 | 1.163 | 1.227 | 1.292 |

## PXC PRO STOCK DRAG ROLLERS

Lower ratio exhaust design for 70mm, 75mm or 78mm effective journal size cams and low (1.5:1 to 1.7) ratios.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| PXC Pro Stock Drag Rated Duration @ .020" Tappet Lift Journal = A,C,O… MI 33.9 (16.3/17.6) | 11090 | 348 | 314 | 238 | .698 | .276 | .252 | 1.047 | 1.117 | 1.187 |
| | 11091 | 350 | 316 | 240 | .700 | .282 | .258 | 1.050 | 1.120 | 1.190 |
| | 11092 | 352 | 318 | 242 | .702 | .288 | .264 | 1.053 | 1.123 | 1.193 |
| | 11093 | 354 | 320 | 244 | .704 | .294 | .270 | 1.056 | 1.126 | 1.197 |
| | 11094 | 356 | 322 | 246 | .706 | .300 | .276 | 1.059 | 1.130 | 1.200 |

# SOLID ROLLER (H = TOP FUEL & ALK)

## UDR FUEL & ALC INTAKE ROLLERS

The UDR designs take advantage of our latest design techniques and provide higher lift and more area than older designs while improving stability for higher RPM operation, even with the Hemi style valve train geometry. Work extremely well in any application that needs excellent area and durability, especially those that cannot run as stiff or light of a valve train & rocker system as might be found in Pro Stock.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.68 | 1.73 | 1.78 |
| UDR Rollers Rated Duration @ .020" Tappet Lift Journal = B,R,M… MI 32.9 (16.2/16.7) | 2067 | 306 | 273 | 192 | .520 | .154 | .137 | .874 | .900 | .926 |
| | 2069 | 308 | 275 | 194 | .521 | .158 | .141 | .875 | .901 | .927 |
| | 2068 | 310 | 277 | 196 | .523 | .162 | .145 | .879 | .905 | .931 |
| | 2047 | 312 | 279 | 198 | .525 | .167 | .149 | .882 | .908 | .935 |
| | 2073 | 314 | 281 | 199 | .526 | .171 | .153 | .884 | .910 | .936 |
| | 2048 | 316 | 283 | 202 | .526 | .176 | .158 | .884 | .910 | .936 |
| | 2074 | 318 | 285 | 203 | .526 | .180 | .162 | .884 | .910 | .936 |
| | 2049 | 320 | 287 | 205 | .526 | .185 | .167 | .884 | .910 | .936 |
| | 2075 | 322 | 289 | 207 | .526 | .189 | .171 | .884 | .910 | .936 |
| | 2050 | 324 | 291 | 209 | .526 | .194 | .175 | .884 | .910 | .936 |
| | 2076 | 326 | 293 | 211 | .526 | .199 | .180 | .884 | .910 | .936 |
| | 2051 | 328 | 295 | 213 | .526 | .203 | .185 | .884 | .910 | .936 |
| | 2077 | 330 | 297 | 215 | .526 | .208 | .189 | .884 | .910 | .936 |

## FDR FUEL & ALC INTAKE ROLLERS

The FDR designs are similar to the UDR designs but have more lift and faster ramps. These are designed for slightly lower RPM than the UDR series but should be stable in most applications. For 2.124"+ journals and .800"+ roller wheels.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.68 | 1.73 | 1.78 |
| FDR Fuel & ALC Int. Rated Duration @ .020" Tappet Lift Journal = R,M… MI 32.4 (16.1/16.3) | 2082 | 319 | 287 | 207 | .536 | .187 | .169 | .900 | .927 | .954 |
| | 2083 | 323 | 291 | 211 | .536 | .197 | .178 | .900 | .927 | .954 |
| | 2084 | 327 | 295 | 215 | .536 | .206 | .187 | .900 | .927 | .954 |
| | 2085 | 331 | 299 | 219 | .536 | .216 | .197 | .900 | .927 | .954 |
| | 2086 | 333 | 301 | 221 | .536 | .221 | .202 | .900 | .927 | .954 |
| | 2094 | 335 | 303 | 223 | .536 | .226 | .206 | .900 | .927 | .954 |

## FCX FUEL & ALC EXHAUST ROLLERS

The FCX designs are based on our popular XCX exhaust designs but have limited opening acceleration to accommodate the increased cylinder pressures seen at exhaust opening in these applications. These will work on the intake side but are optimized for the exhaust. For 2.124"+ journals and .800"+ roller wheels.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.68 | 1.73 | 1.78 |
| FCX Fuel Rollers Rated Duration @ .020" Tappet Lift<br>Journal = B,R,M…<br>MI 38.5 (19.0/19.5) | 2171 | 316 | 277 | 191 | .512 | .154 | .138 | .860 | .886 | .911 |
| | 2169 | 320 | 281 | 195 | .512 | .163 | .146 | .860 | .886 | .911 |
| | 2162 | 324 | 285 | 199 | .512 | .171 | .154 | .860 | .886 | .911 |
| | 2163 | 328 | 289 | 203 | .512 | .180 | .162 | .860 | .886 | .911 |
| | 2164 | 332 | 293 | 207 | .512 | .189 | .171 | .860 | .886 | .911 |
| | 2165 | 336 | 297 | 211 | .512 | .198 | .180 | .860 | .886 | .911 |
| | 2166 | 340 | 301 | 215 | .512 | .206 | .188 | .860 | .886 | .911 |
| | 2167 | 344 | 305 | 219 | .512 | .215 | .197 | .860 | .886 | .911 |

## EF FUEL & ALC INTAKE ROLLERS

These profiles are Top Fuel designs for use in modern professional drag race classes.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.68 | 1.73 | 1.78 |
| EF Fuel & ALC Int. Rated Duration @ .020" Tappet Lift<br>Journal = B,R,M…<br>MI 34.2 (15.5/18.7) | 2096 | 329 | 295 | 211 | .475 | .198 | .180 | .798 | .822 | .846 |
| | 2097 | 329 | 295 | 212 | .500 | .200 | .182 | .840 | .865 | .890 |
| | 2098 | 335 | 301 | 217 | .475 | .210 | .193 | .798 | .822 | .846 |
| | 2099 | 335 | 301 | 218 | .500 | .213 | .195 | .840 | .865 | .890 |

## FLI FUEL INTAKE ROLLERS

These profiles are Top Fuel designs for use in modern professional drag race classes.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.68 | 1.73 | 1.78 |
| FLI Fuel Int. Rated Duration @ .020" Tappet Lift<br>MI 33.2 (16.0/17.2) | 2114 | 329 | 296 | 214 | .513 | .203 | .185 | .862 | .887 | .913 |
| | 2115 | 333 | 300 | 218 | .515 | .212 | .194 | .865 | .891 | .917 |
| | 2116 | 337 | 304 | 221 | .517 | .221 | .202 | .869 | .894 | .920 |

## FLX FUEL EXHAUST ROLLERS

These profiles are Top Fuel designs for use in modern professional drag race classes.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.68 | 1.73 | 1.78 |
| FLX Fuel Exh. Rated Duration @ .020" Tappet Lift<br>Journal = B,R,M…<br>MI 35.0 (16.7/18.3) | 2138 | 333 | 298 | 213 | .510 | .203 | .186 | .857 | .882 | .908 |
| | 2139 | 337 | 302 | 217 | .512 | .212 | .195 | .860 | .886 | .911 |
| | 2140 | 341 | 306 | 221 | .514 | .221 | .203 | .864 | .889 | .915 |

## NFV TOP FUEL PRO DRAG ROLLERS (2012/2013)

The FCX designs are based on our popular XCX exhaust designs but have limited opening acceleration to accommodate the increased cylinder pressures seen at exhaust opening in these applications. These will work on the intake side but are optimized for the exhaust. For 2.124"+ journals and .800"+ roller wheels.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.70 | 1.75 | 1.80 |
| NFV Pro Rated Duration @ .020" Tappet Lift Journal = B,R,M… MI 32.3 (15.8/16.5) | 14154 | 332 | 300 | 217 | .500 | .213 | .196 | .850 | .875 | .900 |
| | 14155 | 333 | 301 | 218 | .501 | .216 | .198 | .852 | .877 | .902 |
| | 14156 | 334 | 302 | 219 | .502 | .218 | .200 | .853 | .879 | .904 |
| | 14157 | 335 | 303 | 220 | .503 | .220 | .203 | .855 | .880 | .905 |
| | 14158 | 336 | 304 | 221 | .504 | .222 | .205 | .857 | .882 | .907 |
| NFV Pro Higher Lift Rated Duration @ .020" Tappet Lift Journal = R,M… MI 32.3 (15.8/16.5) | 14164 | 332 | 300 | 217 | .514 | .214 | .197 | .874 | .900 | .925 |
| | 14165 | 333 | 301 | 218 | .515 | .216 | .199 | .876 | .901 | .927 |
| | 14166 | 334 | 302 | 219 | .516 | .218 | .201 | .877 | .903 | .929 |
| | 14167 | 335 | 303 | 220 | .517 | .221 | .203 | .879 | .905 | .931 |
| | 14168 | 336 | 304 | 221 | .518 | .223 | .205 | .881 | .907 | .932 |

## CHRYSLER SPECIAL RACE ROLLERS

These designs are for Chryslers only. The "Special Roller" offers a variety of lobes used primarily on 383-426W-426 Hemis and 440 motors in Super Street, Super Stock, Pro Stock and Alcohol burning Hemis.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| Chrysler Specials Rated Duration @ .020" Tappet Lift Journal = S,B,R,M… MI 38.0 (19.0/19.0) | 1661 | 314-1 | 274 | 190 | .480 | .148 | .132 | .720 | .768 | .816 |
| | 1625 | 320-8 | 282 | 202 | .500 | .179 | .161 | .750 | .800 | .850 |
| | 1634 | 327-2 | 286 | 198 | .500 | .175 | .159 | .750 | .800 | .850 |
| | 4248 | 324-8 | 286 | 204 | .500 | .186 | .167 | .750 | .800 | .850 |
| | 4083 | 333-1 | 292 | 202 | .500 | .174 | .168 | .750 | .800 | .850 |
| | 1642 | 330-9 | 292 | 208 | .500 | .193 | .176 | .750 | .800 | .850 |
| | 1635 | 327-3 | 290 | 206 | .485 | .186 | .169 | .728 | .776 | .825 |
| | 1491 | 331-3 | 294 | 208 | .485 | .191 | .174 | .728 | .776 | .825 |
| | 1649 | 335-4 | 294 | 212 | .485 | .199 | .183 | .728 | .776 | .825 |
| | 1650 | 336-3 | 298 | 214 | .500 | .204 | .186 | .750 | .800 | .850 |
| | 1662 | 342-4 | 304 | 217 | .500 | .214 | .197 | .750 | .800 | .850 |

## FORD MODULAR XTREME ENERGY™ 4.6 & 5.4L – SOHC OR DOHC

These profiles are developed for use in Ford Modular engines. The .550" versions are more aggressive off the seat and have more area. The .500" lift versions will work in '98 and earlier SOHC engines without cylinder head modifications. They also work very well in DOCH applications that have been modified to accept .500" valve lift. The .425" versions are best suited DOHC applications with '99 or later PI cylinder heads and can be used with stock valve train. Valve durations and lift given for stock valve, lifter and rocker arm geometry.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | VALVE LIFT |
|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | |
| XE F4.6 Rated Duration @ .006" Valve Lift Valve Lift Given w/ Stock Geometry | 9240 | 254 | 218 | 164 | .236 | .425 |
| | 9241 | 258 | 222 | 171 | .236 | .425 |
| | 9242 | 262 | 226 | 177 | .236 | .425 |
| | 9243 | 266 | 230 | 179 | .236 | .425 |
| | 9244 | 270 | 234 | 182 | .236 | .425 |
| | 9245 | 274 | 238 | 186 | .236 | .425 |
| | 9320 | 256 | 220 | 165 | .250 | .450 |
| | 9321 | 260 | 224 | 168 | .250 | .450 |
| | 9322 | 264 | 228 | 172 | .250 | .450 |
| | 9323 | 268 | 232 | 176 | .250 | .450 |
| | 9324 | 272 | 236 | 179 | .250 | .450 |
| | 9325 | 276 | 240 | 183 | .250 | .450 |
| | 9341 | 258 | 222 | 169 | .263 | .475 |
| | 9342 | 262 | 226 | 172 | .263 | .475 |
| | 9343 | 266 | 230 | 176 | .263 | .475 |
| | 9344 | 270 | 234 | 180 | .263 | .475 |
| | 9345 | 274 | 238 | 183 | .263 | .475 |
| | 9346 | 278 | 242 | 186 | .263 | .475 |
| | 9254 | 254 | 216 | 164 | .274 | .500 |
| | 9256 | 262 | 224 | 171 | .274 | .500 |
| | 9257 | 268 | 230 | 177 | .274 | .500 |
| | 9258 | 270 | 232 | 179 | .274 | .500 |
| | 9259 | 274 | 236 | 182 | .274 | .500 |
| | 9260 | 278 | 240 | 186 | .274 | .500 |
| | 9266 | 262 | 226 | 177 | .300 | .550 |
| | 9267 | 266 | 230 | 181 | .300 | .550 |
| | 9268 | 270 | 234 | 185 | .300 | .550 |
| | 9269 | 274 | 238 | 189 | .300 | .550 |
| | 9270 | 278 | 242 | 192 | .300 | .550 |
| | 9271 | 282 | 246 | 196 | .300 | .550 |
| | 9272 | 286 | 250 | 199 | .300 | .550 |
| | 9273 | 290 | 254 | 203 | .300 | .550 |

## MODULAR STOCKER

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | VALVE LIFT |
|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | |
| SE Rated Duration @ .006" Valve Lift | 9291 | 268 | 235 | 178 | .217 | .387 |
| | 9292 | 276 | 243 | 185 | .217 | .387 |
| | 9293 | 282 | 249 | 191 | .217 | .387 |
| | 9294 | 288 | 255 | 198 | .217 | .387 |
| | 9295 | 294 | 261 | 204 | .217 | .387 |
| | 9296 | 296 | 263 | 206 | .217 | .387 |
| | 9297 | 300 | 267 | 210 | .217 | .387 |
| | 19307 | 273 | 239 | 183 | .225 | .402 |
| | 19305 | 286 | 253 | 196 | .225 | .402 |
| | 19291 | 290 | 257 | 200 | .225 | .402 |
| | 19292 | 294 | 261 | 205 | .225 | .402 |
| | 19306 | 299 | 265 | 209 | .225 | .402 |
| | 19295 | 260 | 227 | 170 | .230 | .412 |
| | 19296 | 268 | 235 | 178 | .230 | .412 |
| | 19301 | 272 | 239 | 182 | .230 | .412 |
| | 19297 | 276 | 243 | 186 | .230 | .412 |
| | 19293 | 290 | 257 | 201 | .230 | .412 |
| | 19294 | 294 | 261 | 205 | .230 | .412 |
| | 9298 | 298 | 265 | 209 | .230 | .412 |
| | 9299 | 308 | 275 | 219 | .230 | .412 |
| | 19298 | 260 | 227 | 172 | .244 | .438 |
| | 19299 | 268 | 235 | 180 | .244 | .438 |
| | 19300 | 276 | 243 | 188 | .244 | .438 |
| | 9300 | 268 | 235 | 182 | .262 | .472 |
| | 9283 | 270 | 237 | 285 | .262 | .472 |
| | 9284 | 272 | 239 | 187 | .262 | .472 |
| | 9303 | 274 | 241 | 189 | .262 | .472 |
| | 9301 | 278 | 245 | 192 | .262 | .472 |
| | 9304 | 284 | 251 | 198 | .262 | .472 |
| | 9302 | 288 | 255 | 202 | .262 | .472 |
| | 9306 | 292 | 259 | 206 | .262 | .472 |
| | 9307 | 294 | 261 | 208 | .262 | .472 |
| | 9371 | 298 | 265 | 212 | .262 | .472 |
| | 9373 | 302 | 269 | 216 | .262 | .472 |
| | 9310 | 286 | 253 | 201 | .282 | .510 |
| | 9311 | 288 | 255 | 203 | .282 | .510 |
| | 9312 | 290 | 257 | 205 | .282 | .510 |
| | 9313 | 292 | 259 | 207 | .282 | .510 |
| | 9314 | 296 | 263 | 211 | .282 | .510 |
| | 9315 | 300 | 267 | 215 | .282 | .510 |
| | 19314 | 296 | 263 | 212 | .302 | .550 |
| | 19315 | 300 | 267 | 215 | .302 | .550 |

## MHS MODULAR STOCKER

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES @ .050 | DURATION IN DEGREES @ .200 | LOBE LIFT | VALVE LIFT |
|---|---|---|---|---|---|---|
| MHS Rated Duration @ .006" Valve Lift | 19235 | 290 | 248 | 195 | .276 | .500 |
| | 19236 | 294 | 252 | 197 | .276 | .500 |

## MH 2V & 4V MODULAR RACE

The MH Series designs are for Ford Modular 2V & 4V race type applications. These can be used either with a standard hydraulic lash adjuster or a solid adjuster conversion. In solid applications, the recommended lash is .010" to .016" at the valve tip or .006" to .010" in between the cam and roller follower. These are stable at higher engine speeds than the standard street lobe profiles but do not have long street style closing ramps for idle noise reduction. Cylinder head modifications are highly recommended to take advantage of the additional lift.

| CAMSHAFT TYPE | LOBE # | GROSS VALVE LIFT | DURATION IN DEGREES @ .006 | DURATION IN DEGREES @ .050 | DURATION IN DEGREES @ .200 | VALVE LIFT @ TDC 106° | VALVE LIFT @ TDC 110° | CHECKING DURATION @ .050/.750 Wheel | LOBE LIFT |
|---|---|---|---|---|---|---|---|---|---|
| XE F4.6 .940" BCR Rated Duration @ .006" Valve Lift | 19262 | .585 | 278 | 236 | 183 | .105 | .083 | 218 | .320 |
| | 19263 | .585 | 282 | 240 | 187 | .117 | .094 | 222 | .320 |
| | 19264 | .585 | 286 | 244 | 191 | .129 | .105 | 226 | .320 |
| | 19265 | .585 | 290 | 248 | 195 | .142 | .117 | 230 | .320 |
| | 19266 | .585 | 294 | 252 | 199 | .155 | .129 | 234 | .320 |
| | 19267 | .585 | 298 | 256 | 203 | .168 | .142 | 238 | .320 |
| | 19268 | .585 | 302 | 260 | 207 | .182 | .155 | 242 | .320 |
| | 19269 | .585 | 306 | 264 | 211 | .195 | .168 | 246 | .320 |
| | 19370 | .585 | 314 | 272 | 218 | .221 | .194 | 254 | .320 |
| XE F4.6 .920" BCR Rated Duration @ .006" Valve Lift | 19272 | .625 | 278 | 236 | 183 | .105 | .083 | 218 | .341 |
| | 19273 | .625 | 282 | 240 | 187 | .117 | .094 | 222 | .341 |
| | 19274 | .625 | 286 | 244 | 191 | .129 | .105 | 226 | .341 |
| | 19275 | .625 | 290 | 248 | 195 | .142 | .117 | 230 | .341 |
| | 19276 | .625 | 294 | 252 | 199 | .155 | .129 | 234 | .341 |
| | 19277 | .625 | 298 | 256 | 203 | .169 | .142 | 238 | .341 |
| | 19278 | .625 | 302 | 260 | 207 | .183 | .156 | 242 | .341 |
| | 19279 | .625 | 306 | 264 | 211 | .197 | .169 | 246 | .341 |
| | 19280 | .625 | 310 | 268 | 215 | .210 | .183 | 250 | .341 |
| | 19380 | .625 | 314 | 272 | 219 | .224 | .196 | 254 | .341 |

## MS SERIES 2V & 4V MODULAR RACE

The MS series designs are for Ford Modular 2V & 4V race type applications. These are even one step smoother than the MH series for applications that regularly exceed 8500 RPM.

| CAMSHAFT TYPE | LOBE # | GROSS VALVE LIFT | DURATION IN DEGREES @ .006 | DURATION IN DEGREES @ .050 | DURATION IN DEGREES @ .200 | VALVE LIFT @ TDC 106° | VALVE LIFT @ TDC 110° | CHECKING DURATION @ .050/.750 Wheel | LOBE LIFT |
|---|---|---|---|---|---|---|---|---|---|
| MS XE F4.6 .930" BCR .006" Valve Lift Rated Duration @ | 19341 | .600 | 292 | 248 | 193 | .139 | .115 | 229 | .328 |
| | 19342 | .600 | 294 | 250 | 195 | .145 | .121 | 231 | .328 |
| | 19343 | .600 | 296 | 252 | 197 | .151 | .127 | 233 | .328 |
| | 19344 | .600 | 298 | 254 | 199 | .158 | .133 | 235 | .328 |
| | 19345 | .600 | 300 | 256 | 201 | .165 | .139 | 237 | .328 |
| | 19334 | .600 | 302 | 258 | 203 | .171 | .145 | 239 | .328 |
| | 19346 | .600 | 304 | 260 | 205 | .178 | .152 | 241 | .328 |

## FORD MODULAR XTREME ENERGY™ 4.6 & 5.4L – 3V

These profiles are developed for use in 3V Ford Modular engines. Note that the effective rocker ratio is much higher in this application than in the 2V or 4V. The base circles are also smaller, hence the other profiles are not recommended in 3V applications. Also, these 3V intake profiles are quicker than the exhaust due to the much lighter valves.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | VALVE LIFT | LOBE LIFT | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | @ .006 | @ .200 | | | 2.0 | 2.05 | 2.1 |
| XE 3V Mod Int. Rated Duration @ .006" Valve Lift | 9234 | 253 | 214 | 161 | .480 | .236 | .472 | .484 | .496 |
| | 9236 | 261 | 222 | 169 | .490 | .241 | .482 | .494 | .506 |
| | 9237 | 265 | 226 | 173 | .500 | .246 | .492 | .504 | .517 |
| | 9238 | 269 | 230 | 177 | .510 | .251 | .502 | .515 | .527 |
| | 9239 | 273 | 234 | 181 | .520 | .255 | .510 | .523 | .536 |
| XE 3V Mod Exh. Rated Duration @ .006" Valve Lift | 9246 | 270 | 227 | 169 | .470 | .234 | .468 | .480 | .491 |
| | 9247 | 274 | 231 | 173 | .475 | .235 | .470 | .482 | .494 |
| | 9248 | 278 | 235 | 177 | .480 | .237 | .474 | .486 | .498 |
| | 9251 | 282 | 239 | 181 | .485 | .240 | .480 | .492 | .504 |
| | 9252 | 286 | 243 | 185 | .490 | .243 | .486 | .498 | .510 |
| XE 3V LL Mod Int. Rated Duration @ .006" Valve Lift | 19202 | 253 | 214 | 160 | .450 | .222 | .444 | .455 | .466 |
| | 19203 | 257 | 218 | 163 | .450 | .222 | .444 | .455 | .466 |
| | 19204 | 261 | 222 | 167 | .450 | .222 | .444 | .455 | .466 |
| | 19205 | 265 | 226 | 171 | .450 | .222 | .444 | .455 | .466 |
| | 19207 | 273 | 234 | 179 | .450 | .222 | .444 | .455 | .466 |
| | 19209 | 281 | 242 | 186 | .450 | .222 | .444 | .455 | .466 |
| XE 3V LL Mod Exh. Rated Duration @ .006" Valve Lift | 19213 | 270 | 227 | 169 | .450 | .223 | .446 | .457 | .468 |
| | 19214 | 274 | 231 | 173 | .450 | .223 | .446 | .457 | .468 |
| | 19215 | 278 | 235 | 176 | .450 | .223 | .446 | .457 | .468 |
| | 19216 | 282 | 239 | 180 | .450 | .223 | .446 | .457 | .468 |
| XE 3V LL THMP-X Rated Duration @ .006" Valve Lift Faster Intake | 19221 | 298 | 246 | 186 | .450 | .223 | .446 | .457 | .468 |
| | 19223 | 306 | 254 | 193 | .450 | .223 | .446 | .457 | .468 |
| | 19225 | 314 | 262 | 201 | .450 | .223 | .446 | .457 | .468 |
| | 19194 | 264 | 228 | 176 | .500 | .246 | .492 | .504 | .517 |
| XE 3V TVK Int. Rated Duration @ .006" Valve Lift | 19240 | 256 | 221 | 171 | .523 | .256 | .512 | .525 | .538 |
| | 19242 | 264 | 229 | 179 | .535 | .262 | .524 | .537 | .550 |
| | 19244 | 272 | 237 | 187 | .547 | .267 | .534 | .547 | .561 |
| | 19246 | 280 | 245 | 195 | .559 | .273 | .546 | .560 | .573 |
| XE 3V TVK Exh. Rated Duration @ .006" Valve Lift | 19251 | 267 | 228 | 176 | .538 | .265 | .530 | .543 | .557 |
| | 19253 | 275 | 236 | 184 | .550 | .271 | .542 | .556 | .569 |
| | 19254 | 279 | 240 | 188 | .555 | .273 | .546 | .560 | .573 |
| | 19255 | 283 | 244 | 192 | .560 | .275 | .550 | .564 | .578 |
| | 19256 | 287 | 248 | 195 | .560 | .275 | .550 | .564 | .578 |
| | 19258 | 295 | 256 | 203 | .560 | .275 | .550 | .564 | .578 |

## FORD MODULAR RSS RACE – 3V

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | VALVE LIFT | LOBE LIFT | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | @ .006 | @ .200 | | | 2.0 | 2.05 | 2.1 |
| XE 3V RSS Int. Solid Rated Duration @ .010" Valve Lift | 19400 | 298 | 260 | 204 | .650 | .316 | .632 | .648 | .664 |
| | 19402 | 306 | 268 | 212 | .650 | .316 | .632 | .648 | .664 |
| | 19404 | 314 | 276 | 220 | .650 | .316 | .632 | .648 | .664 |
| XE 3V RSS Exh. Solid Rated Duration @ .010" Valve Lift | 19409 | 317 | 272 | 213 | .700 | .340 | .680 | .697 | .714 |
| | 19411 | 325 | 280 | 221 | .700 | .340 | .680 | .697 | .714 |
| | 19413 | 333 | 288 | 229 | .700 | .340 | .680 | .697 | .714 |

## FORD COYOTE NSRI & NSRX STREET – 4V

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | VALVE LIFT | LOBE LIFT | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | @ .006 | @ .200 | | | 2.0 | 2.05 | 2.1 |
| NSRI Int. Rated Duration @ .004" Valve Lift | 19554 | 267 | 220 | 167 | .492 | .244 | .488 | .500 | .512 |
| | 19556 | 275 | 228 | 175 | .492 | .244 | .488 | .500 | .512 |
| | 19558 | 283 | 236 | 183 | .492 | .244 | .488 | .500 | .512 |
| NSRX Exh. Rated Duration @ .004" Valve Lift | 19564 | 276 | 223 | 167 | .453 | .225 | .450 | .461 | .473 |
| | 19565 | 280 | 227 | 171 | .453 | .225 | .450 | .461 | .473 |
| | 19566 | 284 | 231 | 175 | .453 | .225 | .450 | .461 | .473 |
| | 19567 | 288 | 235 | 179 | .453 | .225 | .450 | .461 | .473 |
| | 19568 | 292 | 239 | 183 | .453 | .225 | .450 | .461 | .473 |
| | 19569 | 296 | 243 | 186 | .453 | .225 | .450 | .461 | .473 |
| Thumpr Exh. Rated Duration @ .004" Valve Lift | 19766 | 307 | 234 | 175 | .470 | .234 | .467 | .479 | .490 |
| | 19767 | 311 | 238 | 179 | .470 | .234 | .467 | .479 | .490 |
| | 19768 | 315 | 242 | 183 | .470 | .234 | .467 | .479 | .490 |
| | 19769 | 319 | 246 | 187 | .470 | .234 | .467 | .479 | .490 |

## FORD COYOTE CY-R

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | VALVE LIFT | LOBE LIFT | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | @ .006 | @ .200 | | | 2.0 | 2.05 | 2.1 |
| CY-R Int. Rated Duration @ .004" Valve Lift | 19820 | 265 | 223 | 173 | .516 | .2552 | .510 | .523 | .536 |
| | 19821 | 269 | 227 | 177 | .516 | .2552 | .510 | .523 | .536 |
| | 19822 | 273 | 231 | 180 | .516 | .2552 | .510 | .523 | .536 |
| | 19823 | 277 | 235 | 184 | .516 | .2552 | .510 | .523 | .536 |
| | 19824 | 281 | 239 | 188 | .516 | .2552 | .510 | .523 | .536 |
| | 19825 | 285 | 243 | 192 | .516 | .2552 | .510 | .523 | .536 |
| CY-R Exh. Rated Duration @ .004" Valve Lift | 19830 | 273 | 225 | 174 | .514 | .2542 | .508 | .521 | .534 |
| | 19831 | 277 | 229 | 178 | .514 | .2542 | .508 | .521 | .534 |
| | 19832 | 281 | 233 | 181 | .514 | .2542 | .508 | .521 | .534 |
| | 19833 | 285 | 237 | 185 | .514 | .2542 | .508 | .521 | .534 |
| | 19834 | 289 | 241 | 189 | .514 | .2542 | .508 | .521 | .534 |
| | 19835 | 293 | 245 | 193 | .514 | .2542 | .508 | .521 | .534 |
| | 19836 | 297 | 249 | 197 | .514 | .2542 | .508 | .521 | .534 |

## FORD COYOTE CRI & CRX RACE – 4V

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | VALVE LIFT | LOBE LIFT | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | @ .006 | @ .200 | | | 2.0 | 2.05 | 2.1 |
| CRI Int. Rated Duration @ .004" Valve Lift | 19575 | 278 | 232 | 180 | .512 | .2532 | .506 | .519 | .532 |
| | 19576 | 282 | 236 | 184 | .512 | .2532 | .506 | .519 | .532 |
| | 19577 | 286 | 240 | 188 | .512 | .2532 | .506 | .519 | .532 |
| | 19578 | 290 | 244 | 191 | .512 | .2532 | .506 | .519 | .532 |
| | 19579 | 294 | 248 | 195 | .512 | .2532 | .506 | .519 | .532 |
| | 19580 | 298 | 252 | 199 | .512 | .2532 | .506 | .519 | .532 |
| | 19581 | 302 | 256 | 203 | .512 | .2532 | .506 | .519 | .532 |
| | 19582 | 278 | 232 | 181 | .561 | .2760 | .552 | .566 | .580 |
| | 19583 | 282 | 236 | 185 | .565 | .2779 | .556 | .570 | .584 |
| | 19584 | 286 | 240 | 189 | .571 | .2806 | .561 | .575 | .589 |
| | 19585 | 290 | 244 | 193 | .576 | .2829 | .566 | .580 | .594 |
| | 19586 | 294 | 248 | 197 | .576 | .2829 | .566 | .580 | .594 |
| | 19587 | 298 | 252 | 201 | .576 | .2829 | .566 | .580 | .594 |
| | 19588 | 302 | 256 | 205 | .576 | .2829 | .566 | .580 | .594 |
| CRX Exh. Rated Duration @ .004" Valve Lift | 19592 | 287 | 234 | 179 | .502 | .2486 | .497 | .510 | .522 |
| | 19593 | 291 | 238 | 183 | .507 | .2509 | .502 | .514 | .527 |
| | 19594 | 295 | 242 | 187 | .512 | .2532 | .506 | .519 | .532 |
| | 19595 | 299 | 246 | 191 | .512 | .2532 | .506 | .519 | .532 |
| | 19596 | 303 | 250 | 194 | .512 | .2532 | .506 | .519 | .532 |
| | 19597 | 307 | 254 | 198 | .512 | .2532 | .506 | .519 | .532 |
| | 19598 | 311 | 258 | 202 | .512 | .2532 | .506 | .519 | .532 |
| | 19599 | 315 | 262 | 206 | .512 | .2532 | .506 | .519 | .532 |
| CRI Int. Stocker Rated Duration @ .004" Valve Lift | 19608 | 290 | 244 | 190 | .470 | .2335 | .467 | .479 | .490 |
| | 19609 | 294 | 248 | 194 | .470 | .2335 | .467 | .479 | .490 |
| | 19610 | 298 | 252 | 198 | .470 | .2335 | .467 | .479 | .490 |
| | 19611 | 302 | 256 | 202 | .470 | .2335 | .467 | .479 | .490 |
| CRX Exh. Stocker Rated Duration @ .004" Valve Lift | 19615 | 299 | 246 | 190 | .470 | .2335 | .467 | .479 | .490 |
| | 19616 | 303 | 250 | 194 | .470 | .2335 | .467 | .479 | .490 |
| | 19617 | 307 | 254 | 198 | .470 | .2335 | .467 | .479 | .490 |
| | 19618 | 311 | 258 | 202 | .470 | .2335 | .467 | .479 | .490 |

## FORD 2000-2300 OHC STREET

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | LOBE LIFT | VALVE LIFT |
|---|---|---|---|---|---|
| | | @ .010 | @ .050 | | |
| Street Hydraulic Valve Lift Given w/ Stock Geometry | 8022 | 240 | 200 | .240 | .400 |
| | 8023 | 252 | 210 | .246 | .406 |
| | 8024 | 260 | 218 | .252 | .420 |
| | 8025 | 268 | 226 | .264 | .440 |
| | 8026 | 280 | 236 | .277 | .460 |
| Street Solid .010" Lash | 8006 | 272 | 242 | .282 | .445 |
| | 8007 | 294 | 264 | .292 | .463 |
| | 8008 | 300 | 278 | .350 | .580 |

## FORD 2000-2300 OHC RACE

These profiles are designed for use in Ford 2000-2300 OHC (Pinto) applications with factory style sliding followers. Cams must be nitrided after grinding and will require extra time. Valve durations and lift given for stock valve, lifter and rocker geometry.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES @ .050 | LOBE LIFT | VALVE LIFT |
|---|---|---|---|---|---|
| Race Base Solid .010" Lash Valve Lift Given w/ Stock Geometry | 8064 | 270 | 238 | .280 | .460 |
| | 8066 | 280 | 248 | .300 | .500 |
| | 8098 | 280 | 248 | .270 | .460 |
| | 8096 | 288 | 256 | .300 | .500 |
| | 8090 | 300 | 268 | .345 | .575 |
| Race .480" Lift Rule Solid .010" Lash | 8312 | 288 | 260 | .284 | .480 |
| | 8314 | 292 | 264 | .284 | .480 |
| | 8316 | 296 | 268 | .284 | .480 |
| Race Base Solid .010" Lash | 8304 | 294 | 272 | .297 | .516 |
| | 8306 | 300 | 278 | .297 | .516 |
| | 8325 | 314 | 282 | .297 | .516 |
| | 8327 | 320 | 288 | .297 | .516 |

## FORD 2000-2300 OHC RACE ROLLER FOLLOWER

These profiles are designed for use in Ford 2000-2300 OHC (Pinto) applications with roller followers.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES @ .050 | LOBE LIFT | VALVE LIFT |
|---|---|---|---|---|---|
| | Intake-Exhaust | | | | |
| Hi-Tech™ Roller Race .010" Lash | 8374-8375 | 279 | 246 | .344 | .620 |
| | 8376-8377 | 283 | 250 | .344 | .620 |
| | 8380-8381 | 291 | 258 | .344 | .620 |
| | 8382-8383 | 295 | 262 | .344 | .620 |
| | 8384-8385 | 299 | 266 | .344 | .620 |
| | 8386-8387 | 303 | 270 | .344 | .620 |
| | Intake | | @ .050 | | |
| RT Style Roller Race .010" Lash | 8360 | 286 | 258 | .355 | .645 |
| | 8362 | 290 | 262 | .360 | .655 |
| | 8364 | 294 | 266 | .363 | .660 |
| | 8366 | 298 | 270 | .363 | .660 |

## FORD 2300 – FP ROLLER

These profile are designed at the valve for a .500" base circle radius Ford 2300 with roller followers. Use an "I" suffix for intake profiles and an "E" suffix for exhaust profiles.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | VALVE LIFT | LOBE LIFT | LOBE CHECK DURATION |
|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | | @ .050 |
| 2300 FP Roller Race Rated Duration @ .020" Valve Lift | 8410 | 313 | 284 | 221 | .658 | .360 | 261 |
| | 8411 | 317 | 288 | 225 | .664 | .363 | 265 |
| | 8412 | 321 | 292 | 229 | .670 | .366 | 269 |
| | 8413 | 325 | 296 | 233 | .676 | .369 | 273 |
| | 8414 | 329 | 300 | 237 | .682 | .372 | 277 |
| | 8420 | 313 | 284 | 221 | .710 | .387 | 261 |
| | 8421 | 317 | 288 | 225 | .710 | .387 | 265 |
| | 8422 | 321 | 292 | 229 | .710 | .387 | 269 |
| | 8423 | 325 | 296 | 233 | .710 | .387 | 273 |
| | 8424 | 329 | 300 | 237 | .710 | .387 | 277 |
| 2300 FPS Roller Race Rated Duration @ .020" Valve Lift | 8552 | 322 | 291 | 226 | .745 | .405 | 267 |
| | 8553 | 326 | 295 | 230 | .745 | .405 | 271 |
| | 8554 | 330 | 299 | 234 | .745 | .405 | 275 |
| | 8555 | 334 | 303 | 238 | .745 | .405 | 279 |
| | 8556 | 338 | 307 | 242 | .745 | .405 | 283 |

## GM ECOTEC – XTREME ENERGY™ HYDRAULIC ROLLER OHC

These profiles are designed for use in GM ECOTEC applications. Valve durations and lift given for stock valve, lifter and rocker arm geometry.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | VALVE LIFT | LOBE LIFT | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | | 1.685 | 1.7 | 1.715 |
| Int. Street Hydraulic Rated Duration @ .006" Valve Lift | 8754 | 240 | 198 | 141 | .251 | .423 | .423 | .427 | .430 |
| | 8756 | 246 | 204 | 146 | .251 | .423 | .423 | .427 | .430 |
| | 8758 | 252 | 210 | 151 | .251 | .423 | .423 | .427 | .430 |
| | 8760 | 258 | 216 | 157 | .260 | .440 | .438 | .442 | .446 |
| | 8762 | 264 | 222 | 164 | .270 | .456 | .455 | .459 | .463 |
| Exh. Street Hydraulic Rated Duration @ .006" Valve Lift | 8755 | 244 | 200 | 140 | .248 | .419 | .418 | .422 | .425 |
| | 8757 | 250 | 206 | 145 | .248 | .419 | .418 | .422 | .425 |
| | 8759 | 256 | 212 | 150 | .248 | .419 | .418 | .422 | .425 |
| | 8761 | 262 | 218 | 156 | .258 | .436 | .435 | .439 | .442 |
| | 8763 | 268 | 224 | 163 | .268 | .453 | .452 | .456 | .460 |
| Race Int. Rated Duration @ .006" Valve Lift | 8766 | 292 | 247 | 186 | .294 | .499 | .495 | .500 | .504 |
| | 8768 | 296 | 255 | 195 | .325 | .550 | .548 | .553 | .557 |
| | 8770 | 303 | 259 | 198 | .300 | .511 | .506 | .510 | .515 |
| | 8776 | 303 | 260 | 200 | .350 | .591 | .590 | .595 | .600 |
| | 8778 | 307 | 264 | 204 | .350 | .591 | .590 | .595 | .600 |
| | 8780 | 310 | 267 | 207 | .350 | .591 | .590 | .595 | .600 |
| | 8786 | 318 | 275 | 215 | .355 | .600 | .598 | .604 | .609 |
| | 8698 | 322 | 279 | 219 | .355 | .600 | .598 | .604 | .609 |
| | 8699 | 326 | 283 | 223 | .355 | .600 | .598 | .604 | .609 |
| | 8692 | 326 | 283 | 223 | .370 | .625 | .623 | .629 | .635 |
| Race Exh. Rated Duration @ .006" Valve Lift | 8767 | 294 | 249 | 187 | .294 | .499 | .495 | .500 | .504 |
| | 8696 | 301 | 255 | 194 | .325 | .550 | .548 | .553 | .557 |
| | 8771 | 306 | 261 | 199 | .300 | .512 | .506 | .510 | .515 |
| | 8777 | 310 | 264 | 203 | .330 | .565 | .556 | .561 | .566 |
| | 8781 | 314 | 268 | 208 | .350 | .591 | .590 | .595 | .600 |
| | 8791 | 320 | 276 | 215 | .355 | .600 | .598 | .604 | .609 |
| | 8792 | 324 | 280 | 219 | .355 | .600 | .598 | .604 | .609 |
| | 8793 | 328 | 284 | 222 | .355 | .600 | .598 | .604 | .609 |

## MITSUBISHI 4G63 – XTREME ENERGY™ HYDRAULIC ROLLER OHC

These profiles are designed for use in Mitsubishi 4G63 applications. Valve durations and lift given for stock valve, lifter and rocker arm geometry.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES @ .050 | LOBE LIFT | VALVE LIFT | INTAKE/EXHAUST |
|---|---|---|---|---|---|---|
| Mitsubishi 4G63 Street Hydraulic Rated Duration @ .004" Valve Lift | 8735 | 251 | 204 | .237 | .407 | Int. |
| | 8736 | 250 | 204 | .229 | .391 | Exh. |
| | 8737 | 259 | 212 | .239 | .411 | Int. |
| | 8738 | 258 | 212 | .232 | .395 | Exh. |
| | 8739 | 259 | 212 | .239 | .411 | Int. |
| | 8740 | 258 | 212 | .232 | .395 | Exh. |
| | 8741 | 266 | 220 | .242 | .415 | Int. |
| | 8742 | 266 | 220 | .234 | .399 | Exh. |
| | 8745 | 256 | 210 | .255 | .434 | Int. |
| | 8746 | 257 | 210 | .239 | .411 | Exh. |

## NISSAN L16, 18, 20B

These profiles are designed for use in Nissan L16, 18, 20B applications. Valve durations and lift given for stock valve and rocker arm geometry.

| CAMSHAFT TYPE | LOBE # | RATED DURATION @ .010 | DURATION IN DEGREES @ .050 | LOBE LIFT | VALVE LIFT |
|---|---|---|---|---|---|
| Street | 8250 | 240 | 194 | .285 | .400 |
| | 8255 | 252 | 204 | .293 | .410 |
| | 8251 | 260 | 214 | .301 | .420 |
| | 8252 | 268 | 222 | .308 | .430 |
| | 8253 | 280 | 236 | .330 | .460 |
| | 8254 | 292 | 246 | .344 | .480 |
| Race | 8260 | 294 | 258 | .395 | .573 |
| | 8261 | 300 | 264 | .400 | .580 |
| | 8262 | 306 | 270 | .405 | .587 |

## TOYOTA 20R-22RE

These profiles are designed for use in Toyota 20R-22RE applications. Valve durations and lift given for stock valve and rocker arm geometry.

| CAMSHAFT TYPE | LOBE # INTAKE–EXHAUST | RATED DURATION @ .010 | DURATION IN DEGREES @ .050 | LOBE LIFT | VALVE LIFT |
|---|---|---|---|---|---|
| Street | 8216-8217 | 247 | 206 | .282 | .419 |
| | 8218-8219 | 255 | 214 | .288 | .429 |
| | 8202-8203 | 263 | 222 | .295 | .440 |
| | 8204-8205 | 271 | 230 | .301 | .450 |
| | 8206-8207 | 279 | 238 | .321 | .484 |
| Race | 8232-8233 | 317 | 275 | .308 | .460 |
| | 8234-8235 | 321 | 279 | .305 | .457 |
| | 8236-8237 | 325 | 283 | .305 | .457 |
| | 8240-8241 | 321 | 279 | .328 | .505 |
| | 8242-8243 | 325 | 283 | .328 | .505 |

## SOH OHC ROLLERS FOR FORD 427 SOHC

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.685 | 1.7 | 1.715 |
| 427 SOHC Lobes Std. Lift – Street Rated Duration @ .015" Tappet Lift | 8430 | 278 | 244 | 178 | .464 | .111 | .092 | .580 | .592 | .603 |
| | 8432 | 286 | 252 | 185 | .470 | .130 | .111 | .588 | .599 | .611 |
| | 8434 | 294 | 260 | 193 | .476 | .150 | .130 | .595 | .607 | .619 |
| | 8436 | 302 | 268 | 200 | .482 | .170 | .150 | .603 | .615 | .627 |
| 427 SOHC Lobes High Lift – Race Rated Duration @ .015" Tappet Lift | 8440 | 310 | 276 | 211 | .538 | .196 | .174 | .673 | .686 | .699 |
| | 8442 | 318 | 284 | 218 | .542 | .216 | .194 | .678 | .691 | .705 |
| | 8444 | 326 | 292 | 226 | .546 | .234 | .213 | .683 | .696 | .710 |

## VM OHC ROLLERS FOR FORD 427 SOHC

The VM series Ford 427 SOHC profiles are designed first "at the valve" with optimized motion for the Right Intake and Left Exhaust "A" pairs and also the left intake and right exhaust "B" pairs. This valve motion is then converted back to a lobe checking file for manufacturing and inspection. By "reverse engineering" the camshaft backwards from the desired valve motion, more area under the curve along with better stability and improved motion symmetry from intake to exhaust and from bank to bank is achieved. Use an "RI" prefix for the right intake, an "RE" perfect for the right exhaust, an "LI" prefix for the left intake and an "LE" prefix for the left exhaust all before the desire ID number when ordering individual cams.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | VALVE LIFT | VALVE LIFT @ TDC | | CHECK DURATION TAPPET | CHECK LIFT TAPPET | LIFT W/ FIXED RATIO |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | @ .050 | | 1.27 |
| Ford 427 SOHC Std. Lift – Street Rated Duration @ .020" Valve Lift | 8560 | 288 | 264 | 207 | .543 | .184 | .160 | 252 | .431 | .547 |
| | 8564 | 288 | 264 | 208 | .592 | .188 | .162 | 252 | .472 | .599 |
| | 8566 | 296 | 272 | 216 | .598 | .214 | .188 | 260 | .477 | .606 |
| | 8568 | 304 | 280 | 224 | .604 | .240 | .214 | 268 | .482 | .612 |
| Ford 427 SOHC High Lift – Race Rated Duration @ .020" Valve Lift | 8590 | 284 | 261 | 206 | .696 | .180 | .150 | 249 | .559 | .710 |
| | 8592 | 292 | 269 | 214 | .702 | .210 | .180 | 257 | .564 | .716 |
| | 8594 | 300 | 277 | 222 | .708 | .240 | .210 | 265 | .569 | .723 |
| | 8596 | 308 | 285 | 230 | .714 | .270 | .240 | 273 | .574 | .729 |
| | 8598 | 316 | 293 | 238 | .720 | .300 | .270 | 281 | .579 | .735 |

## VW OR DIRECT 1" TAPPET

| CAMSHAFT TYPE | LOBE # | RATED DURATION @ .010" | DURATION IN DEGREES @ .050" | DURATION IN DEGREES @ .200" | LOBE LIFT | MINIMUM TAPPET O.D. | MINIMUM BCR |
|---|---|---|---|---|---|---|---|
| VW or Direct 1" Tappet Direct – Bucket | 6800 | 216 | 180 | 95 | .260 | 1.000 | .640 |
| | 6801 | 226 | 190 | 109 | .280 | 1.000 | .620 |
| | 6802 | 236 | 200 | 122 | .300 | 1.000 | .600 |
| | 6803 | 246 | 210 | 134 | .320 | 1.000 | .580 |
| | 6804 | 256 | 220 | 145 | .340 | 1.000 | .560 |
| | 6805 | 266 | 230 | 153 | .360 | 1.000 | .540 |
| | 6806 | 276 | 240 | 162 | .380 | 1.000 | .520 |
| | 6807 | 286 | 250 | 169 | .400 | 1.000 | .500 |
| | 6808 | 296 | 260 | 179 | .420 | 1.000 | .480 |

## OHC – MULTIPURPOSE BUCKET

| CAMSHAFT TYPE | LOBE # | RATED DURATION @ .010" | DURATION IN DEGREES @ .050" | DURATION IN DEGREES @ .200" | LOBE LIFT | MINIMUM TAPPET O.D. | MINIMUM BCR |
|---|---|---|---|---|---|---|---|
| OHC Direct – Bucket | 9048 | 248 | 215 | 146 | .365 | 1.080 | .550 |
| | 9042 | 256 | 222 | 150 | .360 | 1.020 | .550 |
| | 9045 | 274 | 228 | 144 | .320 | .900 | .500 |
| | 9044 | 264 | 230 | 158 | .360 | 1.000 | .500 |
| | 9046 | 273 | 238 | 162 | .360 | .980 | .500 |

## QUAD 4 – BUCKET

| CAMSHAFT TYPE | LOBE # | RATED DURATION @ .010" | DURATION IN DEGREES @ .050" | DURATION IN DEGREES @ .200" | LOBE LIFT | MINIMUM TAPPET O.D. | MINIMUM BCR |
|---|---|---|---|---|---|---|---|
| Quad 4 Direct – Bucket | 9013 | 260 | 226 | 160 | .410 | 1.100 | .650 |
| | 9014 | 266 | 232 | 166 | .420 | 1.100 | .650 |
| | 9015 | 272 | 238 | 172 | .430 | 1.100 | .650 |

## OHZ – STREET/STRIP BUCKET

| CAMSHAFT TYPE | LOBE # | RATED DURATION @ .006" | DURATION IN DEGREES @ .050" | DURATION IN DEGREES @ .200" | LOBE LIFT | MINIMUM TAPPET O.D. | MINIMUM BCR |
|---|---|---|---|---|---|---|---|
| OHZ Direct – Bucket .400 Lift | 9090 | 258 | 214 | 149 | .400 | 1.180 | .680 |
| | 9091 | 262 | 218 | 153 | .400 | 1.180 | .660 |
| | 9092 | 268 | 224 | 158 | .400 | 1.180 | .640 |
| | 9093 | 274 | 230 | 163 | .400 | 1.180 | .620 |
| | 9086 | 280 | 236 | 168 | .400 | 1.180 | .600 |
| | 9087 | 286 | 242 | 173 | .400 | 1.180 | .600 |
| OHZ Direct – Bucket .320-.380 Lift | 9094 | 264 | 220 | 153 | .380 | 1.180 | .650 |
| | 9095 | 272 | 228 | 160 | .380 | 1.180 | .630 |
| | 9109 | 280 | 235 | 150 | .320 | 1.025 | .500 |
| | 9096 | 280 | 236 | 166 | .380 | 1.180 | .610 |
| | 9108 | 284 | 239 | 163 | .360 | 1.025 | .500 |

## OHRX – HIGH RPM BUCKET

| CAMSHAFT TYPE | LOBE # | RATED DURATION @ .006" | DURATION IN DEGREES @ .050" | DURATION IN DEGREES @ .200" | LOBE LIFT | MINIMUM TAPPET O.D. | MINIMUM BCR |
|---|---|---|---|---|---|---|---|
| OHRX Int. Direct – Bucket | 9072 | 294 | 260 | 199 | .480 | 1.200 | .530 |
| | 9073 | 300 | 266 | 204 | .490 | 1.200 | .530 |
| | 9074 | 306 | 272 | 210 | .500 | 1.200 | .530 |
| | 9102 | 279 | 245 | 186 | .510 | 1.325 | .650 |
| | 9103 | 285 | 251 | 192 | .510 | 1.325 | .650 |
| | 9104 | 283 | 249 | 192 | .550 | 1.458 | .690 |
| | 9105 | 289 | 255 | 198 | .550 | 1.458 | .690 |
| | 9122 | 294 | 260 | 198 | .500 | 1.200 | .580 |
| | 9124 | 306 | 272 | 210 | .530 | 1.200 | .580 |
| OHRX Exh. | 9141 | 336 | 274 | 208 | .490 | 1.200 | .530 |

## OHRXV – HIGH LIFT

| CAMSHAFT TYPE | LOBE # | RATED DURATION @ .006" | DURATION IN DEGREES @ .050" | DURATION IN DEGREES @ .200" | LOBE LIFT | MINIMUM TAPPET O.D. | MINIMUM BCR |
|---|---|---|---|---|---|---|---|
| OHRXV Direct – Bucket | 9116 | 306 | 273 | 212 | .553 | 1.200 | .530 |
| | 9117 | 310 | 277 | 216 | .560 | 1.200 | .530 |
| | 9118 | 314 | 281 | 220 | .565 | 1.200 | .530 |

## XCOH – EXHAUST HIGH LIFT

| CAMSHAFT TYPE | LOBE # | RATED DURATION @ .006" | DURATION IN DEGREES @ .050" | DURATION IN DEGREES @ .200" | LOBE LIFT | MINIMUM TAPPET O.D. | MINIMUM BCR |
|---|---|---|---|---|---|---|---|
| XCOH Direct – Bucket | 9132 | 317 | 270 | 205 | .495 | 1.200 | .530 |
| | 9133 | 321 | 274 | 209 | .500 | 1.200 | .530 |
| | 9134 | 325 | 278 | 213 | .505 | 1.200 | .530 |
| | 9135 | 329 | 282 | 217 | .510 | 1.200 | .530 |

## OHRXA – STREET INTAKE

| CAMSHAFT TYPE | LOBE # | RATED DURATION @ .006" | DURATION IN DEGREES @ .050" | DURATION IN DEGREES @ .200" | LOBE LIFT | MINIMUM TAPPET O.D. | MINIMUM BCR |
|---|---|---|---|---|---|---|---|
| OHRXA Int. Direct – Bucket | 9126 | 285 | 251 | 187 | .475 | 1.180 | .530 |
| | 9127 | 291 | 257 | 194 | .490 | 1.180 | .530 |
| | 9128 | 297 | 263 | 200 | .505 | 1.180 | .530 |

## OHRXA – STREET EXHAUST

| CAMSHAFT TYPE | LOBE # | RATED DURATION @ .006" | DURATION IN DEGREES @ .050" | DURATION IN DEGREES @ .200" | LOBE LIFT | MINIMUM TAPPET O.D. | MINIMUM BCR |
|---|---|---|---|---|---|---|---|
| OHRXA Exh. Direct – Bucket | 9146 | 295 | 246 | 180 | .440 | 1.150 | .500 |
| | 9147 | 301 | 252 | 186 | .452 | 1.150 | .500 |
| | 9148 | 307 | 258 | 193 | .464 | 1.150 | .500 |

## PCI INTAKE – LIMITED RPM OHC 33MM BUCKET

Fast Intake OHC Lift Rule & RPM Limited – 33mm Bucket, 0.738" BCR. Can be used with Hydraulic Bucket and zero lash or with Solid Bucket and .005" to .010" lash.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | | | LOBE LIFT | TAPPET LIFT @ TDC | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | @ .006 | @ .010 | @ .020 | @ .050 | @ .200 | | 106° | 110° | 114° |
| PCI 33 Int. Rated Duration @ .006" Tappet Lift | 19701 | 293 | 282 | 267 | 248 | 192 | .498 | .144 | .122 | .100 |
| | 19702 | 297 | 286 | 271 | 252 | 196 | .498 | .155 | .133 | .111 |
| | 19703 | 301 | 290 | 275 | 256 | 200 | .498 | .166 | .144 | .122 |

## PCX EXHAUST – LIMITED RPM OHC 33MM BUCKET

Exhaust OHC Lift Rule & RPM Limited – 33mm Bucket, 0.738" BCR. Can be used with Hydraulic Bucket and zero lash or with Solid Bucket and .005" to .010" lash.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | | | LOBE LIFT | TAPPET LIFT @ TDC | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | @ .006 | @ .010 | @ .020 | @ .050 | @ .200 | | 106° | 110° | 114° |
| PCX 33 Exh. Rated Duration @ .006" Tappet Lift | 19704 | 290 | 280 | 264 | 242 | 185 | .498 | .126 | .104 | .083 |
| | 19705 | 294 | 284 | 268 | 246 | 189 | .498 | .137 | .115 | .093 |
| | 19706 | 298 | 288 | 272 | 250 | 193 | .498 | .148 | .126 | .104 |
| | 19707 | 302 | 292 | 276 | 254 | 197 | .498 | .159 | .137 | .115 |
| | 19708 | 306 | 296 | 280 | 258 | 201 | .498 | .170 | .148 | .126 |

## PDI INTAKE – LIMITED RPM OHC 33MM BUCKET

Fast Intake OHC Lift Rule & RPM Limited – 31.5mm Bucket, 0.748" BCR. Can be used with Hydraulic Bucket and zero lash or with Solid Bucket and .005" to .010" lash.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | | | LOBE LIFT | TAPPET LIFT @ TDC | |
|---|---|---|---|---|---|---|---|---|---|
| | | @ .006 | @ .010 | @ .020 | @ .050 | @ .200 | | 106° | 110° |
| PDI 31.5 Int. Rated Duration @ .006" Tappet Lift | 19712 | 284 | 274 | 261 | 243 | 186 | .497 | .129 | .108 |
| | 19713 | 288 | 278 | 265 | 247 | 190 | .497 | .140 | .118 |
| | 19714 | 292 | 282 | 269 | 251 | 194 | .497 | .150 | .129 |

## PDX EXHAUST – LIMITED RPM OHC 31.5MM BUCKET

Exhaust OHC Lift Rule & RPM Limited – 31.5mm Bucket, 0.748" BCR. Can be used with Hydraulic Bucket and zero lash or with Solid Bucket and .005" to .010" lash.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | | | LOBE LIFT | TAPPET LIFT @ TDC | |
|---|---|---|---|---|---|---|---|---|---|
| | | @ .006 | @ .010 | @ .020 | @ .050 | @ .200 | | 106° | 110° |
| PDX 31.5 Exh. Rated Duration @ .006" Tappet Lift | 19717 | 293 | 279 | 263 | 244 | 187 | .496 | .132 | .110 |
| | 19718 | 297 | 283 | 267 | 248 | 191 | .496 | .142 | .121 |
| | 19719 | 301 | 287 | 271 | 252 | 195 | .496 | .153 | .132 |

## OVH INTAKE 38 TO 40MM BUCKET

These are based on the OHRX Series and maximized for .500" + BCR and 38mm or larger buckets.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | |
|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 114° |
| OVH 38+ Int. Rated Duration @ .020" Tappet Lift | 9418 | 296 | 276 | 223 | .645 | .238 | .212 | .187 |
| | 9419 | 300 | 280 | 227 | .660 | .251 | .225 | .200 |
| | 9420 | 304 | 284 | 231 | .675 | .264 | .238 | .212 |

## XCO EXHAUST 35-40MM BUCKET

These are based on an exhaust series that is similar to the OVH intakes but with softer ramps. Will work with 35mm or larger buckets.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | |
|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 114° |
| XCO 35+ Exh. Rated Duration @ .020" Tappet Lift | 19425 | 290 | 262 | 201 | .550 | .169 | .146 | .124 |
| | 9423 | 304 | 276 | 216 | .600 | .211 | .188 | .164 |
| | 9424 | 308 | 280 | 220 | .610 | .223 | .200 | .176 |
| | 9425 | 312 | 284 | 224 | .620 | .236 | .212 | .188 |

## XCO INTAKE 38-40MM BUCKET

These lobes are similar to the XCO 35 Series but optimized for 38mm or larger buckets and have more lift.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | |
|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 114° |
| XCO 38+ Int. Rated Duration @ .020" Tappet Lift | 9444 | 310 | 282 | 224 | .640 | .238 | .212 | .187 |
| | 9445 | 314 | 286 | 228 | .650 | .251 | .225 | .200 |
| | 9446 | 318 | 290 | 232 | .660 | .264 | .238 | .212 |

## THUMPR™ FLATHEAD FORD – DIRECT SOLID 1" TAPPET (CCW ROTATION)

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | MINIMUM TAPPET O.D. | MINIMUM BCR |
|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | | |
| Intake 1" Tappet Direct | 19520 | 267 | 227 | 160 | .354 | 1.000 | .540 |
| | 19522 | 275 | 235 | 169 | .368 | 1.000 | .526 |
| | 19524 | 283 | 243 | 177 | .382 | 1.000 | .512 |
| Exhaust 1" Tappet Direct | 19531 | 299 | 241 | 151 | .350 | 1.000 | .544 |
| | 19533 | 307 | 249 | 160 | .364 | 1.000 | .530 |
| | 19535 | 315 | 257 | 168 | .378 | 1.000 | .516 |

*Can also be used in VW applications.*

## FC SOLIDS

The FC Solid designs can be used in many smaller solid lifter applications including OHV, flathead direct and OHC direct applications. Requires a minimum .780" tappet face diameter.

| CAMSHAFT TYPE | LOBE # | RATED DURATION | DURATION IN DEGREES | | LOBE LIFT | TAPPET LIFT @ TDC | | THEORETICAL VALVE LIFT @ "0" LASH ROCKER ARM RATIO | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | @ .050 | @ .200 | | 106° | 110° | 1.5 | 1.6 | 1.7 |
| FC Rated Duration @ .020" Tappet Lift .780" Min. Dia. .012" Lash | 6703 | FC244-1 | 212 | 102 | .250 | .050 | .040 | .375 | .400 | .425 |
| | 6704 | FC248-1 | 216 | 110 | .260 | .056 | .045 | .390 | .416 | .442 |
| | 6705 | FC252-1 | 220 | 118 | .270 | .061 | .050 | .405 | .432 | .459 |
| | 6706 | FC258-1 | 225 | 122 | .280 | .067 | .056 | .420 | .448 | .476 |
| | 6707 | FC262-1 | 229 | 127 | .285 | .073 | .062 | .428 | .456 | .485 |
| | 6708 | FC266-1 | 232 | 130 | .290 | .079 | .067 | .435 | .464 | .493 |
| | 6709 | FC270-1 | 236 | 135 | .300 | .084 | .073 | .450 | .480 | .510 |
| | 6710 | FC274-1 | 240 | 139 | .300 | .091 | .079 | .450 | .480 | .510 |
| | 6711 | FC278-1 | 244 | 143 | .310 | .097 | .085 | .465 | .496 | .527 |
| | 6712 | FC282-1 | 248 | 146 | .310 | .102 | .090 | .465 | .496 | .527 |
| | 6713 | FC286-1 | 252 | 152 | .320 | .112 | .099 | .480 | .512 | .544 |
| | 6714 | FC290-1 | 256 | 154 | .320 | .116 | .103 | .480 | .512 | .544 |
| | 6715 | FC294-1 | 260 | 160 | .330 | .124 | .112 | .495 | .528 | .561 |
| | 6716 | FC298-1 | 264 | 165 | .330 | .131 | .118 | .495 | .528 | .561 |
| | 6717 | FC302-1 | 268 | 169 | .340 | .136 | .123 | .510 | .544 | .578 |
| | 6718 | FC306-1 | 272 | 173 | .340 | .144 | .131 | .510 | .544 | .578 |
| | 6730 | FC314-1 | 280 | 163 | .300 | .142 | .131 | .450 | .480 | .510 |
| | 6720 | FC314-2 | 280 | 180 | .350 | .157 | .144 | .525 | .560 | .595 |
| | 6724 | FC324-2 | 290 | 188 | .350 | .171 | .159 | .525 | .560 | .595 |

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