

## TECH BULLETIN

## **Mechanical Roller Lifters for Street and Competition!**

Crane Cams offers engine builders the choice of using the familiar "Crane Classic" mechanical roller lifters or the premium "Ultra-Pro" series. Today's "Classic" design represents an ongoing evolution of Crane's original patented design, and it is ideally positioned as an economical —yet quality— roller lifter for street and competition applications where moderately aggressive camshaft profiles are employed.

The "Ultra-Pro" is unquestionably the best roller lifter on the market today for racing, and has undergone rigorous Spintron®, dynamometer and ontrack testing—and demonstrated significantly increased levels of performance and dependability under the most demanding racing conditions.

## **CRANE CLASSIC ROLLER LIFTERS**

Refined over the years, the "Classic" has proven to perform reliably with



valve spring seat pressures up to 240 lbs. (closed) for drag racing and 220 lbs. for sustained oval track competition. The lifter bodies are machined from 8620 steel and feature both horizontal and vertical guide bar designs. An added benefit of the spring-loaded horizontal guidebar setup is the ability to change cams without intake manifold removal (providing a "rev kit" is not used)—great for dyno and ontrack testing.

Crane Classic roller lifters represent an outstanding value and have many important features not found in competitor's lifters in the same price range.

## **ULTRA-PRO SERIES LIFTERS**

Crane's engineering team combined decades of racing experience with contemporary technology to develop the remarkable Ultra-Pro Series lifters. Finite Element Analysis (FEA) was employed to design a lifter body that provides exceptional strength and rigidity at the absolute minimum weight. They're made of carburized 8620 steel alloy and finished to have optimal lifter bore contact and surface integrity.

To assure perfect tracking on the cam lobes the bodies are precisely aligned and connected with heat-treated steel guide bars that are captured with .188" diameter Monel pins and large washers.

Offset pushrod seats are offered for many applications. These seats are machined into the body itself (as opposed to using separate discs) to provide extra strength and long-term reliability.

With a light weight that increases RPM potential and reduces valve train wear, plus perfect alignment, Crane's Ultra-Pro lifters give engine builders maximum performance and durability.

Both models feature Crane's innovative Bearing Focused Oiling™. Two passages are machined in the lifter body to conduct the oil that is pushed up from the cam lobe/roller wheel contact to lubricate the needle bearings. This exclusive method assures a constant supply of oil to the bearings without sacrificing engine oil pressure or a loss of lubrication from a plugged orifice as can often be the case with lifters that have small drilled passages. Crane's method assures a continuous oil flow to the bearing, roller wheel and axle.

You should also know that all Crane lifters are precision machined and assembled at our own facilities to ensure the highest levels of accuracy and quality control.

Application	Crane Classic	Ultra- Pro
American Motors V-8 (1966–91) 290–401 c.i.d		X
Arias/Fontana V-8 (all) 8.3L		X
BAE, Keith Black, Rodeck TFX-92 (426 Hemi)		X
Buick/Dart Race Head V-8 302-350 c.i.d.		X
Chevrolet 90° V-6 (1978–86) 200–262 c.i.d.	X	
Chevrolet V-8 (1955–2000) 262–400 c.i.d., aftermarket SBC (except LS1 & SB2)	X	X
Chevrolet V-8 (1955–2000) 262–400 c.i.d. with SB2 cylinder heads		X
Chevrolet V-8 (1988–2000) 305–350 c.i.d. LS1 5.7L (except SB2)	X	
Chevrolet V-8 (2000–up) 5.7L LS1/LS2, LS3/L92, LS6 & Vortec 4800, 5300, 6000	X	X
Chevrolet V-8 (1998–2005) 5.7L SB2 (for canted lifter bore blocks)		X
Chevrolet V-8 (1958–65) 348–427 (Z-11) c.i.d.	X	
Chevrolet V-8 (1965–2000) 396-502 c.i.d. (including Gen V & VI, aftermarket)	X	X
Chevrolet V-8 (1996–2000) 454–502 c.i.d. (8.2L) Gen VI	X	
Chrysler V-8 (1955–58) 301–392 c.i.d. (early Hemi)	X	X
Chrysler V-8 (1964–2000) "LA" 273-360 c.i.d.	X	X
Chrysler V-8 "LA" block 318–360 c.i.d. w/48° lifter bank angle		X
Chrysler V-8 (1958–78) "B" 350–440 c.i.d.	X	X
Chrysler V-8 (1964–71) 426 Hemi	X	X
Donovan V-8 (all) 417 c.i.d. Hemi	X	X
Ford V-8 (1962–2000) 221–351W c.i.d.	X	X
Ford V-8 (1970–82) Boss 351, 351C, 351M–400 c.i.d.	X	X
Ford V-8 (all) SVO 302 and SVO 351	X	X
Ford V-8 (1963–76) "FE" 352-428 c.i.d.	X	X
Ford V-8 (1968–97) 370–460 c.i.d. (except 429 Boss Hemi)	X	X
Ford V-8 (1969–70) Boss Hemi 429 c.i.d.		X
Holden V-8 (1969–99) 253–308-350 c.i.d.	X	X
Johnson (AJPE)/Rodeck V-8 481X		X
Oldsmobile V-8 (1964–84) 260–455 c.i.d.		X
Pontiac V-8 (1955–81) 287–455 c.i.d.		X
Rodeck V-8 (except 481X) 481 c.i.d.		X

Lifter bodies designed using FEA to provide an ideal balance of high strength at minimum weight

Precision CNC machined from heat-treated and carburized 8620 steel billet and surfaceprocessed

Exclusive Bearing-Focused™ oil system utilizes small channels in lifter body to lubricate needles.



Extra-strong heat-treated premium steel guide bars captured using .188" diameter Monel steel pins

Integral pushrod seats
— serve to strengthen the
lifter body and assure correct valve train geometry

Roller wheel/bearing/axle combinations optimized per lifter diameter (i.e. .904" lifter has . 815" wheel)