



A Chris Alston's Chassisworks, Inc. Brand

**VAS 13MX1FX**

## Bolt-On Front ShockWave® Conversion for Early Mustangs and Fords/Mercury Vehicles



### Features and Benefits

- Bolt-in installation with TCP or OEM upper control arms
- Year/model specific modular shock-tower adapters with choice of stock or lowered ride height
- Greaseable spherical-stem upper shock mount
- Heavy-duty urethane-bushed lower crossbar
- Available in 16-position single-adjustable or 256-combination double-adjustable versions
- Works with TCP shock tower brace

## Bolt-On Front ShockWave® Conversion

Converting the stock front suspension of your 1960 to 1977 Ford/Mercury to air suspension is now a simple bolt-on procedure. Our exclusive modular shock-tower-adapter system and spherical-stem assembly can give you a choice of stock or lowered ride-height range and can be used for a broad variety of vehicles and performance applications. The tower adapter and lower crossbar replaces the factory shock mount and lower spring perch respectively. Lightweight billet-aluminum VariShock ShockWaves® are available in 16-position single-adjustable or 256-combination double-adjustable versions and provide 6" of suspension travel. Kits include ShockWave® air spring/shocks, 90-degree air fitting, tower adapters with reinforcement plate, mounting hardware, and spot weld removal tool.

## VariShock ShockWave®

To simplify installation a complete custom combination air-spring/shock-absorber was developed specifically for the application. Installed height, travel, valving range, and mounting configuration are built to our exact specifications.

Variable shock valving gives you up to 256 different combinations of “instant adjustment” – without unbolting your VariShock! During five years of intense research and development every shortcoming of conventional racing shocks was successfully corrected. Designed from a clean sheet of paper, VariShock’s QuickSet 2 combines sophisticated shock valving with all-new, American-made components. Never before have so much performance, repeatability, and adjustability been offered to vintage Mustangs and classic Fords.

### The Truth About 16 vs. 24 Clicks

Don’t be fooled by shocks offering more adjustment clicks. They are actually 1/2-click adjustments. The manufacturer merely added more detents to the mechanism without increasing the range of adjustment. This practice gives more clicks, but the adjustment is so slight that your vehicle will not respond to the change. A 16-position VariShock actually has a broader range of adjustable force with the added benefit of a more manageable number of adjustments to try.

### Double-Adjustable 16-Position Knobs

VariShock’s double-adjustable design is also easier to tune: 256 different settings are attainable simply by rotating two fully accessible, 16-position knobs. All adjustments are made in seconds, without removing or unbolting the VariShock. One knob sets the bump (compression) range; the other sets rebound (extension). Both knobs are laser-etched with directional arrows and “plus/minus” symbols that clearly indicate which direction achieves the desired adjustment. Additional arrows etched into the QuickSet 2’s base reveal which knob sets bump and which sets rebound.

### Double- or Single-Adjustable

Our double-adjustable QuickSet 2 allows you to control vehicle separation (rebound) and settling (bump) independent of each other. This allows you to tune your suspension to track conditions for ultimate performance. In the single-adjustable model you have 16 settings where both bump and rebound are adjusted simultaneously. This offers a good compromise between the ultimate tunability of the QuickSet 2 and affordability of the QuickSet 1.

### Controlled Quality

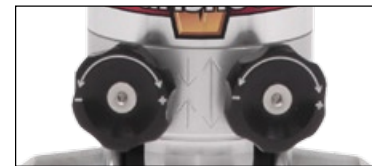
Repeatability is unprecedented! By controlling the quality of the components, assembling them in-house, and dyno-testing every assembly, Chris Alston’s Chassisworks can deliver a pair of VariShocks that perform virtually identically — throughout the entire range of travel. Whereas other brands in this price range rely on cheaper offshore or OEM parts, American-made VariShocks are engineered systems of premium components, all designed to meet your specific needs.

### Revolutionary Adjustment Mechanism

A revolutionary adjustment mechanism, smaller than any previous design, allows our billet aluminum body to be both shorter and lighter. The shocks use deflective disk valving in the pistons to eliminate spring fatigue. Internal connections and return paths use a unique machined configuration and added seals to prevent bypassing. During low piston speeds the damping action of the shock is dominated by bypassing flows. VariShock eliminates the bypassing of internal leakage to give the shock repeatable control even at low piston speeds. Custom valving is also available.

### Durability

In addition to consistent performance, durability is of utmost importance. Internal shaft seals specifically designed and manufactured for these shock absorbers produce a longer-lasting seal that helps keep dirt out of the shock absorber. Piston rods are made from 5/8” centerless-ground hard-chrome steel for wear resistance and long service life. VariShock models are even rebuildable in the event they get bent or damaged.



**QuickSet 2**  
Double Adjustable



**QuickSet 1**  
Single Adjustable

## Spherical Stem Mount

Our free-pivoting, deflection-free mount allows precise suspension tuning by eliminating compliant rubber or urethane bushings. The VariShock-exclusive, spherical-stem assembly attaches the coil-over shock to the chassis at the factory mounting location. The swedged steel mount base effectively captures and houses the spherical bearing of the stem. An additional extension at the base lowers the upper spring seat for additional tire clearance. The stem mounts directly to the chassis and is secured by a 5/8" locknut.



is secured by a 5/8" locknut. An integral hex at the top of the stem enables the stem to be securely held as the locknut is tightened during installation. An easily accessible zerk fitting mounted at the tip of the stem injects grease directly onto the bearing contact surfaces.

## Double-Convolutd Air Spring

ShockWave® units use a series of air springs that were originally developed for extremely high-mileage service-vehicle applications. Borrowing technology from that segment of the industry enables us to provide you with an exceptionally reliable fiber-reinforced air spring that will last the life of the vehicle when properly installed. Our front suspension ShockWaves® utilize a ring reinforced, double-convoluted air spring specifically designed to carry the additional weight of the engine.

## Billet Lower Crossbar

The lower cross-bar assembly replaces the factory spring perch and can be mounted directly to a TCP or factory upper control arm. A 1/2" stud and crush washer are used to thread the two billet crossbar halves together and apply the proper amount of bushing preload. To improve spring and shock absorber performance we chose a premium urethane that has much higher load capacity and longer service life than the poly bushings from other manufacturers. The lower



cross-bar bushings have up to 350% more urethane material than common 1/2" shock eyes offered by other brands.



## Shock Tower Adapter System

Ford/Mercury vehicles from 1960 to 1977 while very similar with respect to suspension design, have varying shock tower configurations and cannot share a common shock mount. Our exclusive shock tower adapter system is used to position the shock at the correct height for your specific vehicle and performance application. Three different adapters enable us to offer a stock or lowered ride-height option for most compact and intermediate sized Fords throughout the 1960s and '70s.

The upper mount utilizes the factory shock tower mounting holes and is a direct bolt-on for most applications. Some installations may require removal of the upper coil-spring seat, for which a spot-weld removal bit is supplied. Adapter plates mount on top of the shock tower with a steel reinforcement backup ring to sandwich the shock-tower sheet metal, helping to evenly distribute loads.

Adapter mounts are black powder coated and can be fit with an optional polished-stainless-steel cap for an extremely clean and finished appearance.



Polished-Billet-Stainless Cap (optional)



### Zero Offset Adapter

- 1967-1973 Mustang (stock height)



### 1" Offset Adapter

- 1967-1973 Mustang (1" lowered)
- 1965-1966 Mustang (stock height)



### 2" Offset Adapter

- 1965-1966 Mustang (1" lowered)



## Compressor Systems for VariShock ShockWaves®

To enable care-free operation of your ShockWave® suspension, we offer RidePro e2® and LevelPro™ electronic control systems by Air Ride Technologies. Each system uses a soft-touch 4-switch control panel, 3-gallon reservoir tank, 150 psi compressor, 4-way air-valve, and DOT approved 1/4" airline and fittings. Specially designed, high-quality air valves are "bubble-tight", ensuring completely leak-free operation. The 4-way control system enables independent operation of each wheel, with visual pressure and ride height display, three user-programmed ride-height presets, and the popular ride-height-on-start feature. The

LevelPro™ system also includes ride-height sensors to automatically compensate individual airspring pressures for changes in vehicle weight, such as passengers, fuel, and cargo. Versatile installation design allows the compressor, solenoid unit, and tank to be placed anywhere in the vehicle, with only the wiring harness and smaller air lines routed into the cabin. The compact control panel can be conveniently mounted for driver visibility and fingertip operation. Keychain remotes are optionally available for preset ride height operation from outside the vehicle. Estimated rise time for each system is 3 to 5 seconds.



### Plug & Play Installation

Whether you're doing a fresh installation or retrofitting an existing RidePro™ system, the RidePro e™ is a plug-in! Weatherpak connections are used where the wiring harness will be exposed to the elements. All connectors are self-indexing and self-locking to ensure proper connections.

### Programmable Air-Pressure Settings

Every RidePro e™ system includes the "ride-height-on-start" feature. This preset function gets your vehicle up to a safe, user-programmable air pressure each time it is started. Now, you don't have to worry about letting friends take your ride for a spin; just turn the key and go!

### Remote Control Operation

Optional plug-in feature allows you to raise and lower your vehicle from a key fob. Also allows you to activate the "ride-height-on-start" function, so your ride is ready to go when you are!

### Sleek, Compact Design

State-of-the-art membrane switches and digital readouts are encased in a small, easily mountable case that can be flush- or surface-mounted, or left unmounted. Mounting locations are hard to find in a nice hot rod or street machine. Here is your solution!



Part Number	Description	Price
ART REM7500	Keychain remotes for RidePro e2™ or LevelPro™ control systems. Enables selection of preset ride heights from outside the vehicle	\$150. <sup>00</sup>
VAS 310-4331	RidePro e2® 4-way, electronic control system, 3-gallon air tank, 150-psi compressor with 1/4" lines	1495. <sup>00</sup>
VAS 310-4431	LevelPro™ 4-way, electronic control system with ride-height sensors, 3-gallon air tank, 150-psi compressor with 1/4" lines	1995. <sup>00</sup>

## Applications and Pricing

Make	Model	Year	QuickSet 1	QuickSet 2
			\$1139-up	\$1339-up
Ford	Fairlane	1966-1967	VAS 13M21F1	VAS 13M21F2
		1968-1971	VAS 13M21F1	VAS 13M21F2
	Falcon	1960-1963	VAS 13M11F1	VAS 13M11F2
		1964-1965	VAS 13M11F1	VAS 13M11F2
		1966-1967	VAS 13M21F1	VAS 13M21F2
		1968-1970	VAS 13M21F1	VAS 13M21F2
		Maverick	1970-1977	VAS 13M21F1
	Mustang	1964-1966	VAS 13M11F1	VAS 13M11F2
		1967	VAS 13M21F1	VAS 13M21F2
		1968-1973	VAS 13M21F1	VAS 13M21F2
	Ranchero	1960-1963	VAS 13M11F1	VAS 13M11F2
		1964-1965	VAS 13M11F1	VAS 13M11F2
		1966-1967	VAS 13M21F1	VAS 13M21F2
		1968-1971	VAS 13M21F1	VAS 13M21F2
	Torino	1968-1971	VAS 13M21F1	VAS 13M21F2

Make	Model	Year	QuickSet 1	QuickSet 2
			\$1139-up	\$1339-up
Mercury	Comet	1960-1963	VAS 13M11F1	VAS 13M11F2
		1964-1965	VAS 13M11F1	VAS 13M11F2
		1966-1967	VAS 13M21F1	VAS 13M21F2
		1971-1977	VAS 13M21F1	VAS 13M21F2
	Cougar	1967	VAS 13M21F1	VAS 13M21F2
		1968-1973	VAS 13M21F1	VAS 13M21F2
	Cyclone	1964-1965	VAS 13M11F1	VAS 13M11F2
		1966-1967	VAS 13M21F1	VAS 13M21F2
		1968-1971	VAS 13M21F1	VAS 13M21F2
	Montego	1968-1971	VAS 13M21F1	VAS 13M21F2

Options	Price
Lowered ride height	\$0 <sup>00</sup>
Polished-stainless tower-adapter caps	79 <sup>00</sup>
Upgrade to QuickSet 2, double-adjustable shocks	\$200 <sup>00</sup>

## Related Products

### ShockWave® Equipped AirBar® Systems

The AirBar® system enables instant ride-height and ride-quality adjustment. AirBar® is packaged with the patented ShockWave® air spring, in single- or double-adjustable versions. When fully deflated, the vehicle rests 5-6" inches below stock ride height and can be raised to driving height at the push of a button. A RidePro™ compressor system (available separately) is required for operation. A detailed product datasheet is available through our online document library at [www.totalcontrolproducts.com](http://www.totalcontrolproducts.com).



Shown with AirBar® poly-eye links, sliding-link anti-roll bar, and factory 9" housing

All prices subject to change. Current pricing available at [www.varishock.com](http://www.varishock.com).



A Chris Alston's Chassisworks, Inc. Brand

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