

**MD**<sup>®</sup>

**MUSTANG**

**DYNAMOMETER**

**AUTOMOTIVE  
PERFORMANCE DYNAMOMETERS**





Known as the best - by the best!

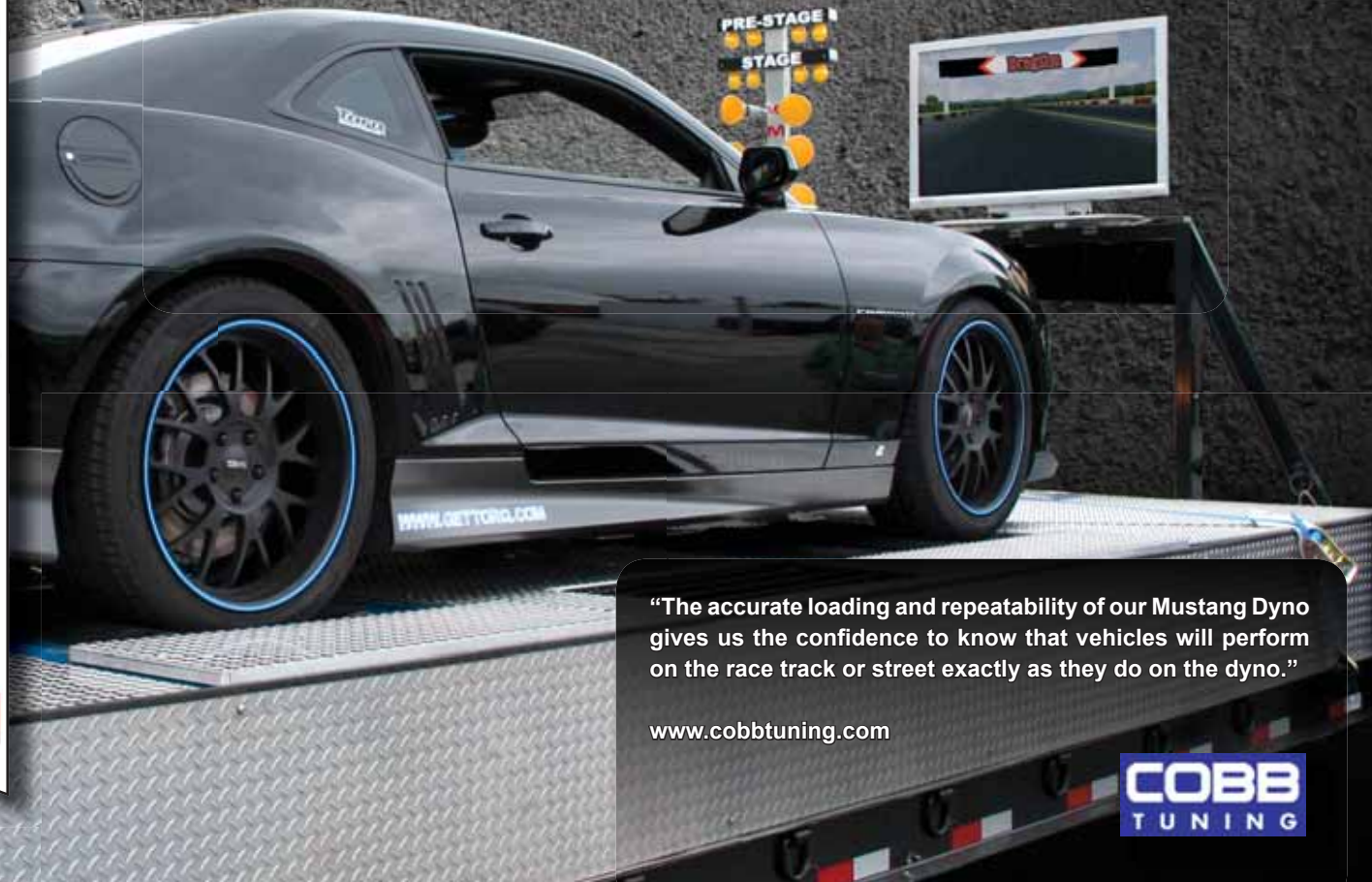


## Proven Accurate Performance Curves

Over the past 30 years, Mustang Dynamometer has built and sold more chassis dynamometers than all of the other manufacturers combined. The reason is simple: Mustang helps make our customers more successful. Mustang has perfected the art and science of vehicle loading and dynamometer control and has a complete lineup of performance tuning products.

Mustang is the dynamometer of choice for serious performance tuners and aftermarket product developers for a reason: they know the facts. Fact is, in order to get the best tuning results, you need a dyno that applies an accurate load, like the car would see on the road or track. Other dynos don't compare, and will give higher horsepower readings to try to impress. But if the power you thought you found on your dyno wasn't based on actual real-world loading, chances are it won't be there when you need it at the track.

The best tuners and power product developers in the world know the facts: Mustang Dynamometer is the most accurate and reliable dyno because it provides real-world loading and precise control. That's why they chose Mustang and you should too.



"The accurate loading and repeatability of our Mustang Dyno gives us the confidence to know that vehicles will perform on the race track or street exactly as they do on the dyno."

[www.cobb tuning.com](http://www.cobb tuning.com)





# Technology Leaders

## Philosophy

Mustang Dynamometer has always focused on our guiding principles: build the best equipment, deliver the best service and help our customers become the best in their field. It's simple: superior tools give superior results. Mustang is the market leader and continues to set the standard for advanced dynamometer technology.

## Flexibility

Mustang specializes in performance dynamometers that exceed customers' requirements, no matter where they work. Engine dynamometers, transmission dynamometers, chassis dynamometers - Mustang does it all. From heavy equipment manufacturers to arenas such as NASCAR and the Indy Racing League, Mustang delivers accurate, high-performance testing and tuning abilities that professionals demand. In fact, many of the world's foremost performance tuners swear by their Mustang dynamometers and would not tune on any other piece of equipment. We have also developed custom applications for clients such as NASA, Richard Childress Racing, Caterpillar, Harley-Davidson, and The U.S. Military - just to name a few.

## Quality

Mustang Dynamometer is the only dynamometer manufacturer in the industry to attain ISO 9001:2015 quality certification. All of Mustang's research and development, software design, manufacturing, electrical, and fabrication operations are done in-house to ensure that the dynamometers we produce are state-of-the-art and deliver on our promise to be the best dynamometers in the industry.

# Vehicle Simulation Experts

Eddy current dynamometers use an electromagnetic brake to apply variable loading to the test vehicle. An eddy current power absorber (PAU) is a frictionless, air-cooled device controlled entirely by electric current. A torque arm, extending perpendicular to the PAU and attached to a load cell, provides precise real-time torque data feedback and precise calibration. Eddy current PAUs provide the extremely fast response times required for precise vehicle simulations. Mustang Dynamometer has the most sophisticated closed-loop controllers in the industry and has perfected the art and science of dynamic vehicle loading and dynamometer control.

Any dyno company can bolt on an eddy current and claim to offer accurate loading, but not all can truly deliver what Mustang does. Some brands claim to offer vehicle simulation, but instead only allow you to adjust load from 0 to 100 percent. That's not vehicle simulation.



*Mustang's Vehicle Simulation capabilities are made possible by using powerful eddy current brakes and torque-sensing load cells that provide an ultra-fast, closed-loop signal to the dyne controller. Mustang's dynamometer control technology is recognized around the world as the industry's best.*





# Company Overview

For nearly 40 years, creative thinking and opportunity has been the driving force behind Mustang's tremendous growth and continued success. Since the very beginning, back in 1975, Mustang has keenly focused on anticipating, identifying and following the key industrial market trends that shape its businesses. Predicting and reacting to constant changes in government regulations, safety and emissions standards, technological advancements and the ever-present desire for increased performance is not an easy business, but it is precisely what has propelled Mustang to become a global leader in the development and delivery of today's most sophisticated dynamometer technologies and advanced engineering capabilities. Starting from humble beginnings as an importer of electromagnetic braking mechanisms, Mustang has steadily grown over the years, adding capabilities and product lines year after year to get where it stands today – as one of the world's premiere manufacturers of automotive, industrial and aerospace testing systems and a leader in dynamometers and testing technologies. Much more than the typical dynamometer manufacturer, Mustang has slowly and steadily grown into a highly-diversified, technology-based engineering firm with world-class design, manufacturing, software and controls, and integration capabilities that position Mustang as a very unique supplier to the industry. In addition to a team of experienced software engineers, mechanical engineers, and electrical engineers who develop all of the company's products and systems in-house, Mustang's versatility and speed are its best strengths. A relatively small, privately-owned company, Mustang has the ability to react quickly to customer demands and the ever-present changes in market conditions. Located in Twinsburg, Ohio, Mustang is organized into two divisions according to the markets they serve and the products they offer, Mustang Dynamometer and Mustang Advanced Engineering.

Mustang Dynamometer is the "original" Mustang company and currently offers the company's off-the-shelf eddy current chassis dynamometers for rear-wheel-drive, front-wheel-drive, all-wheel-drive and motorcycle/ATV applications. Mustang Dynamometer offers a complete line-up of systems, ranging in roll diameter from 8.75-inches to 50-inches, with horsepower measurement capabilities of up to 3,000+ horsepower. Mustang Dynamometer also produces a range of eddy current engine dynamometer systems and a complete line-up of dynamometer hardware, software, and accessories. Mustang Dynamometer also offers a number of software packages including Hole Shot, our standard dyne control and data acquisition package, a complete virtual drag-racing simulator package called DragSim and a variety of custom systems for very specialized applications. Mustang Dynamometer has experienced substantial growth over the past 10 years and has positioned itself as the leading dynamometer company in the performance aftermarket.

## Focus on the Future

Both Mustang Dynamometer and Mustang Advanced Engineering continue to keep an eye to the future and a focus on anticipating, identifying and following the key market trends that shape their businesses. Mustang Dynamometer will continue to develop, expand and refine its line-up of standard dynamometer products and work to respond quickly to the shifts and changes in the high-performance aftermarket and government regulated emission programs worldwide. Mustang Advanced Engineering will continue to focus its attention on the growing needs for advanced hybrid and electric vehicle development solutions, wind turbine gearbox testing, military vehicle development test stands and advanced testing and simulation systems for tomorrow's future technologies.





## Our Customers Often Say It Best!



As President of AWE Tuning, I spent considerable time researching and evaluating AWD chassis dynamometers when we were in the market to purchase one in 2001. Previously, we had purchased an MD-250 2WD chassis dynamometer from Mustang Dynamometer in 1998. However, our client base had evolved to include more and more AWD cars over the years. By 2001, nearly half of all the vehicles we worked on were available in AWD configuration from the factory. One of the main OEM brands that we work with is Porsche, and the high powered late model AWD turbo 911 is a specialty. Given that the center differential of these cars is viscous based, we were concerned about front to rear axle speeds. We had information that suggested that large speed differences between front and rear axles at high wheel speeds could produce overheating of the center differential, resulting in expensive and catastrophic failure.

While our experience with our MD-250 2WD had been very positive, I was not ready to purchase an AWD dyne until I had done extensive research on all currently available AWD dynes at the time. My research included long distance travel to see various brand AWD dynes in action, including Dynojet, Dyno Dynamics, MAHA, and Dynapack. I learned that AWD chassis dyne design seemed to focus greatly on the ability to accommodate various chassis wheelbases, and most AWD chassis dynes achieved this by allowing one set of rollers to be moved to align it properly with the vehicle's wheelbase. However, having two separate rollers meant that they somehow had to be linked in order to record overall wheel power. In the case of chassis dynes with moveable rollers, this meant recording each roller separately, and in the case of a dyne that had load ability (the Dynojet did not), roll to roll speed could also be somewhat controlled via automatic load application by the dyne software.

This was all in contrast to the Mustang AWD-500-SE model that we also were examining. The AWD-500-SE uses multiple small rollers on one end of the vehicle to accommodate wheel base variances. One axle of the vehicle can sit squarely between the two large rollers on one end, and the other axle of the vehicle can land anywhere within the series of smaller rollers on the other end. Wheelbase is then accounted for. Since there are no moving rollers to accommodate for wheelbase lengths, the front and rear rollers on the AWE-500-SE are mechanically linked with a very large cogged belt and wheel power is recorded and load is applied via the large rollers (or via both in the case of the dual eddy current model, AWD-500-DE).



In reality, we could plainly see how the non-mechanically linked dynes, such as the Dynojet, Dyno Dynamics, MAHA, and Dynapack, had less than sufficient roll-to-roll speed control during power pulls. It was very apparent that until the dyne loading software could independently load the one roller spinning faster than the other, there was a very obvious speed difference between the two rollers. This is because of the torque split found on OEM differentials, which is not always 50/50. My concern was that the software roll speed control was not sophisticated enough to entirely eliminate roll to roll speed differentials, permitting the possibility of catastrophic center diff failure to remain present. Further, to even come close to controlling roll to roll speed on most of these dynes, the exact torque split of the factory diff had to be inputted so that load could be properly applied to the front versus rear rollers. This was info that was not always readily available, and it also presented a point of user error that could have dire consequences. In the face of less than adequate roll to roll speed control observed on competitor brands, Mustang's design became the only alternative for a 100% guarantee of no roll-to-roll speed differentials. The large belt connecting the two ends of the dyne eliminated the issue entirely.

Even considering all the other features that the other dynes offered, there was no single feature or combination of features that overrode the one flaw of uncontrolled roll to roll speed. Given the extreme cost involved if we were ever to experience a center differential failure on a vehicle during a dynamometer test, we just could not risk it. However, we do not feel that we have sacrificed in any other area of dyne performance, given how sophisticated Mustang's current software control is, and how robust their physical construction is.

In the final analysis, we just could not make a case to look at any other dyne except the mechanically-linked Mustang AWD-500-SE chassis dyne. If you have any questions, please do not hesitate to contact me.



Vehicle Weight:	3750
Pwr @ 50 MPH:	15.0
Simulated Inertia:	
% Grade:	0.0



### Mustang's Patented Virtual Inertia™ Control Technology

Mustang's Virtual Inertia™ control technology is a patented method of simulating driving conditions on a chassis dynamometer. This technology makes true road testing and accurate elapsed time simulations possible, and separates Mustang from the rest of the competition.

Mustang's software and dyne controller take into account a test vehicle's weight and its Pwr @ 50-mph drag coefficient figure to dynamically adjust its loading, reproducing the forces a vehicle would experience on the road or track. The "Pwr @ 50 mph" is an EPA figure that represents the horsepower required to maintain a constant speed of 50-mph on a flat and windless road surface. This number varies according to aerodynamic characteristics of different vehicles and represents the effect that wind has on a vehicle at increasing speed - higher speed equals higher wind drag, and thus, a need to increase load to accurately simulate the resistance.

Mustang's vehicle simulation capabilities allow you to accurately simulate ¼ mile runs to within .01 seconds from actual time slips from the track. Racers and tuners benefit by having confidence in knowing that their cars will perform at the track exactly as they did on the dyno because they were tested under real-world conditions. Tuning on a dyno that is not capable of dynamically loading a vehicle to reproduce real world conditions can often result in a setup that runs too rich or lean, or even worse, a blown motor at the track.

### Solid Design & Solid Construction

Mustang Dynamometer offers the industry's most comprehensive lineup of 2WD and AWD dynos and has engineered its products to be the toughest equipment on the planet. All Mustang Dynamometers are constructed with a heavy-duty structural steel frame as the backbone, ensuring it will withstand a lifetime of use and abuse. Mustang use oversized shafts, rugged and durable drive belts, precision bearings, and the most accurate electronic components available, to deliver a dyno that will outlast anything you can throw at it.

### Leave Nothing To Chance

Mustang's AWD dynamometers incorporate a mechanically-linked, internal drive system that synchronizes the front and back rollers to simulate a flat, dry road condition. Synchronization, or linkage, insures that the front and rear rollers are always spinning at precisely the same speed. This process eliminates the possibility of activating a vehicle's traction control system and also insures that a vehicle's torque management system is operating under the assumption that the vehicle is not skidding, turning or slipping.



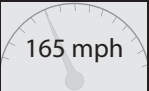



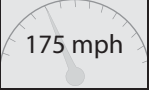



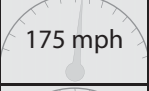



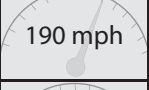



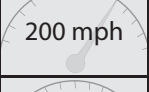



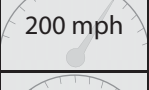



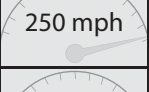



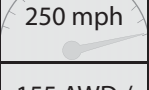



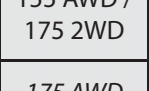




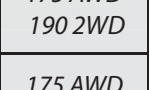


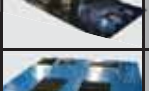

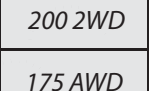




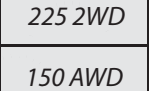




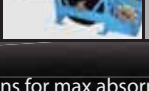

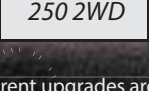




Mustang has a number of different mechanical linkage designs that are all field-proven to synchronize front and rear roller speeds. Some of our fixed wheelbase designs incorporate multiple rollers and extreme-duty belts, while others utilize a moveable wheelbase design that incorporate OEM-grade gear and driveline-based transmissions to synch the rollers. All of Mustang's high performance AWD dynos are designed to be as simple and efficient as possible, while providing a fail-proof linkage system that virtually eliminates the potential for catastrophic damage to sophisticated and expensive center differentials.

Note: Actual product appearance and vehicle direction may vary.



2WD

AWD

		Upgradeable to AWD	Max HP	Inertia	Max Speed	Roll Diameter	Max Axle Weight
MD-100		✗	900 HP	 2,000 lbs.	 165 mph	 8.575"	6,000 lbs.
MD-150		✓	1,200 HP	 630 lbs.	 175 mph	 8.575"	6,000 lbs.
MD-250		✗	1,500 HP	 2,000 lbs.	 175 mph	 10.7"	12,000 lbs./ 24,000 lbs.
MD-500		✓	1,500 HP	 1,190 lbs.	 190 mph	 12.625"	6,000 lbs.
MD-600		✗	2,000 HP	 2,000 lbs.	 200 mph	 19.75"	6,000 lbs.
MD-800		✓	2,000 HP	 900 lbs.	 200 mph	 24"	10,000 lbs.
MD-1100		✓	3,000 HP	 1,500 lbs.	 250 mph	 30"	10,000 lbs.
MD-1750		✓	3,500 HP	 2,530 lbs.	 250 mph	 50"	10,000 lbs.
AWD-150			2,000 HP AWD / 1,200 HP 2WD	 1,260 lbs. AWD / 630 lbs. 2WD	 155 AWD / 175 2WD	 8.575" 	6,000 lbs.
AWD-500			3,000 HP AWD / 1,500 HP 2WD	 2,152 lbs. AWD / 1,190 lbs. 2WD	 175 AWD 190 2WD	 12.625" 	6,000 lbs.
AWD-800			3,000 HP AWD / 2,000 HP 2WD	 1,800 lbs. AWD / 900 lbs. 2WD	 175 AWD 200 2WD	 24" 	10,000 lbs.
AWD-1100			3,500 HP AWD / 3,000 HP 2WD	 3,300 lbs. AWD / 1,500 lbs. 2WD	 175 AWD 225 2WD	 30"   12.625" 	10,000 lbs.
AWD-1750			3,500 HP AWD / 3,500 HP 2WD	 3,300 lbs. AWD / 2,530 2WD	 150 AWD 250 2WD	 50"   12.625" 	10,000 lbs.

Note: All specifications for max absorption assume single-eddy-current configuration. Dual-eddy-current upgrades are available and will double the dyno's max absorption. Max Speeds on AWD models are for AWD mode. Higher max speeds can be achieved while the dyno is in 2WD mode (reference the equivalent 2WD model). All standard products can be customized to fit your needs. Call us for a quote on a standard product with any variations.

Not sure which model is right for you? Take a look at some of our most popular standard products to see which one will best fit your needs.

If you have any questions, give us a call! Every sales engineer at Mustang Dynamometer has been trained to not sell you the most expensive dyno they can, but to help you find the dyno that will fit your needs perfectly. That's what makes customers happy, and that's why people all over the world trust Mustang Dynamometer.

Our standard products are really more of a starting point for most of our customers. We aren't a cookie-cutter company, because our customers' needs vary so greatly. We're more than happy to add or remove features on a case-by-case basis. Each dynamometer is made to order anyway, so there's no special charge for customizations beyond the normal price of the upgrade.

Give us a call today and let us build your perfect dynamometer!

Standard Products At a Glance





### AWD-150 Series\*

<b>Horsepower:</b>	2,000-hp peak measurement (AWD) 1,200-hp peak measurement (2WD) 625/1,250-hp peak absorption (SE/DE)
<b>Loading Device:</b>	Air-cooled eddy current PAU
<b>Inertia:</b>	1,260 lbs / 630 lbs AWD / 2WD
<b>Max Speed:</b>	165-mph (2WD) / 155-mph (AWD)
<b>Controls:</b>	Closed Loop Digital Controller with web based HoleShot Software. Includes patented Virtual Road Simulation Technology. Mechanically Linked Rolls
<b>Rolls Wheelbase:</b>	Knurled Finish Bi-directional 8.575" diameter 35" face length 30" inner track width 86" outer track width 96"-122" wheelbase (89"-127" & 96"-148" also available. Custom sizes available upon request.)
<b>Roll Lock/Lift:</b>	Between roll lift with roll lock
<b>Air Required:</b>	100-110 PSI, dry, regulated, oil-free
<b>Power Required:</b>	230VAC, 1 Phase, 60 Hz, 40A - SE 230VAC, 3 Phase, 60 Hz, 40A - DE
<b>Axle Weight:</b>	6,000 lbs. max.

\* Note: shown with optional light weight aluminum center section



### AWD-500 Series

<b>Horsepower:</b>	3,000-hp peak measurement (AWD) 1,500-hp peak measurement (2WD) 900/1,800-hp peak absorption (SE/DE)
<b>Loading Device:</b>	Air-cooled eddy current PAU
<b>Inertia:</b>	2,152 lbs / 1,190 lbs / 600 lbs AWD / 2WD / Bike
<b>Max Speed:</b>	190-mph (2WD) / 175-mph (AWD)
<b>Controls:</b>	Closed Loop Digital Controller with web based HoleShot Software. Includes patented Virtual Road Simulation Technology.
<b>Rolls Wheelbase:</b>	Mechanically Linked Rolls Knurled Finish Bi-directional 12.625" diameter 31" face length 18" inner track width 80" outer track width (98" optional) 88"-118" wheelbase (longer avail.)
<b>Roll Lock/Lift:</b>	Between roll lift with roll lock
<b>Air Required:</b>	100-110 PSI, dry, regulated, oil-free
<b>Power Required:</b>	230VAC, 1 Phase, 60 Hz, 40A - SE 230VAC, 3 Phase, 60 Hz, 40A - DE
<b>Axle Weight:</b>	6,000 lbs. max.



### AWD-800 Series

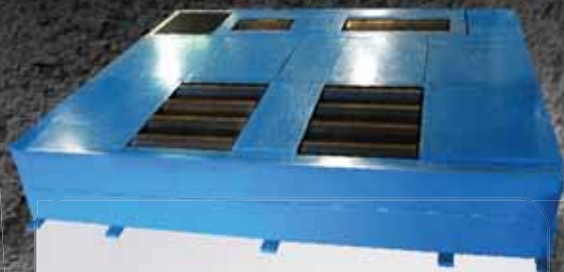
<b>Horsepower:</b>	3,000-hp peak measurement (AWD) 2,000-hp peak measurement (2WD) 900/1,800-hp peak absorption (SE/DE)
<b>Loading Device:</b>	Air-cooled eddy current PAU
<b>Inertia:</b>	1,800 lbs / 900 lbs / 500 lbs AWD / 2WD / Bike
<b>Max Speed:</b>	200-mph (2WD) / 175-mph (AWD)
<b>Controls:</b>	Closed Loop Digital Controller with web based HoleShot Software. Includes patented Virtual Road Simulation Technology.
<b>Rolls Wheelbase:</b>	Mechanically Linked Rolls Knurled Finish Bi-directional 24" diameter 2 x 29" face length (Split-roll) 28" inner track width 86" outer track width 89"-126" wheelbase
<b>Roll Lock/Lift:</b>	Between roll lift with roll lock
<b>Air Required:</b>	100-110 PSI, dry, regulated, oil-free
<b>Power Required:</b>	230VAC, 1 Phase, 60 Hz, 80A or 230VAC, 3 Phase, 60 Hz, 50A
<b>Axle Weight:</b>	10,000 lbs. max.

"Tuning is an art. To tune for optimal performance is to tune for a careful combination of speed, strength and agility that varies as driver tastes vary. GIAC exists to tune cars for the way people like to drive. The MD-AWD-500 may be the finest tuning dynamometer on the market today, with the ability to plot power as load is applied to the wheels."



—Garrett Lim, President  
Garrett Integrated Automotive Corp. (GIAC)





## AWD-1100 Series

<b>Horsepower:</b>	3,500-hp peak measurement (AWD) 2,500-hp peak measurement (2WD) 900/1,800-hp peak absorption (SE/DE)
<b>Loading Device:</b>	Air-cooled eddy current PAU
<b>Inertia:</b>	3,300 lbs / 1,500 lbs / 700 lbs AWD / 2WD / Bike
<b>Max Speed:</b>	225-mph (2WD) / 175-mph (AWD)
<b>Controls:</b>	Closed Loop Digital Controller with web based HoleShot Software. Includes patented Virtual Road Simulation Technology.
<b>Rolls Wheelbase:</b>	Mechanically Linked Rolls Knurled Finish Bi-directional 30" rear / 12.625" front diameter 28"/50" face length rear roll set 37" face length front roll set 30"/24" inner track width (2WD/AWD) 108"/98" outer track width (2WD/AWD) 80" - 134" Wheelbase Range
<b>Roll Lock/Lift:</b>	Between roll lift with roll lock
<b>Air Required:</b>	100-110 PSI, dry, regulated, oil-free
<b>Power Required:</b>	230VAC, 1 Phase, 60 Hz, 40A - SE 230VAC, 3 Phase, 60 Hz, 40A - DE
<b>Axle Weight:</b>	10,000 lbs. max.



## AWD-1750 Series

<b>Horsepower:</b>	3,500-hp peak measurement (AWD) 3,000-hp peak measurement (2WD) 600/1,200-hp peak absorption (SE/DE)
<b>Loading Device:</b>	Air-cooled eddy current PAU
<b>Inertia:</b>	3,300 lbs / 2,530 lbs AWD / 2WD
<b>Max Speed:</b>	250-mph (2WD) / 150-mph (AWD)
<b>Controls:</b>	Closed Loop Digital Controller with web based HoleShot Software. Includes patented Virtual Road Simulation Technology.
<b>Rolls Wheelbase:</b>	Mechanically Linked Rolls Knurled Finish Bi-directional 50" / 12.625" diameter 28" face length 30" inner track width 84" outer track width 96" outer track width optional 88" - 118" Wheelbase Range
<b>Roll Lock/Lift:</b>	Between roll lift with roll lock
<b>Air Required:</b>	100-110 PSI, dry, regulated, oil-free
<b>Power Required:</b>	230VAC, 1 Phase, 60 Hz, 40A - SE 230VAC, 3 Phase, 60 Hz, 40A - DE
<b>Axle Weight:</b>	10,000 lbs. max.

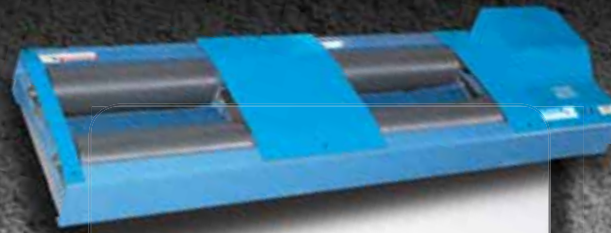
**Standard systems include:** Chassis dynamometer system, direct-drive eddy current module with load cell, Hole Shot high-speed web based digital controller, 16-channels of data acquisition, Hole Shot Software, data harness, anchor pods, ratchet straps, all frame covers and pit cover plates, thunderstuds for anchoring dynamometer, listing on Mustang's web-based dyno locator, shop banner, set of manuals, lifetime frame warranty, lifetime toll-free phone technical support, 12-month warranty on all other components, weather station, computer with display monitor, and roll-around shop cart.





## 100 Series

<b>Horsepower:</b>	900 HP peak measurement
<b>Loading Device:</b>	Air-cooled eddy current PAU
<b>Inertia:</b>	2,000 lbs. base inertia
<b>Max Speed:</b>	165 mph
<b>Controls:</b>	Closed Loop Digital Controller with web based HoleShot Software. Includes patented Virtual Road Simulation Technology.
<b>Rolls/Wheelbase:</b>	Knurled Finish Bi-directional 8.575" diameter 35" face length 30" inner track 100" outer track 17.1" roll spacing
<b>Roll Lock/Lift:</b>	Between roll lift with roll lock
<b>Air Required:</b>	100 PSI, dry, regulated, oil-free
<b>Power Required:</b>	115VAC, single phase, 15A 230VAC, single phase, 40A
<b>Axle Weight:</b>	6,000 lbs. max.



## 150 Series

<b>Horsepower:</b>	1,200 HP peak measurement
<b>Loading Device:</b>	Air-cooled eddy current PAU
<b>Inertia:</b>	630 lbs. base inertia
<b>Max Speed:</b>	175 mph
<b>Controls:</b>	Closed Loop Digital Controller with web based HoleShot Software. Includes patented Virtual Road Simulation Technology.
<b>Rolls/Wheelbase:</b>	Knurled Finish Bi-directional 8.575" diameter 35" face length 30" inner track 100" outer track 17.1" roll spacing
<b>Roll Lock/Lift:</b>	Between roll lift with roll lock
<b>Air Required:</b>	100 PSI, dry, regulated, oil-free
<b>Power Required:</b>	115VAC, single phase, 15A 230VAC, single phase, 40A
<b>Axle Weight:</b>	6,000 lbs. max.



## 250 Series

<b>Horsepower:</b>	1,500 HP peak measurement
<b>Loading Device:</b>	Air-cooled eddy current PAU
<b>Inertia:</b>	2,000 lbs. base inertia
<b>Max Speed:</b>	175 mph
<b>Controls:</b>	Closed Loop Digital Controller with web based HoleShot Software. Includes patented Virtual Road Simulation Technology.
<b>Rolls/Wheelbase:</b>	Knurled Finish Bi-directional 10.7" diameter 40" face length 28" inner track 108" outer track 19.6" roll spacing
<b>Roll Lock/Lift:</b>	Between roll lift with roll lock
<b>Air Required:</b>	100 PSI, dry, regulated, oil-free
<b>Power Required:</b>	115VAC, single phase, 15A 230VAC, single phase, 40A
<b>Axle Weight:</b>	12,000 lbs. max.

*Upgradable to AWD*



## 1100 Series

<b>Horsepower:</b>	3,000 HP peak measurement	<b>Roll Lock/Lift:</b>	Industrial brake pad in contact with roll
<b>Loading Device:</b>	Air-cooled eddy current power absorber	<b>Air Required:</b>	100 PSI, dry, regulated, oil-free
<b>Inertia:</b>	1,500 lbs. equivalent base inertia	<b>Power Required:</b>	115VAC, single phase, 15A 230VAC, single phase, 40A
<b>Max Speed:</b>	250 mph	<b>Axle Weight:</b>	10,000 lbs. maximum
<b>Controls:</b>	Closed Loop Digital Controller with web based HoleShot Software. Includes patented Virtual Road Simulation Technology.		
<b>Rolls/Wheelbase:</b>	Knurled Finish rolls 30" diameter 50" & 28" face length 30" inner track width 108" outer track width		

*Upgradable to AWD*

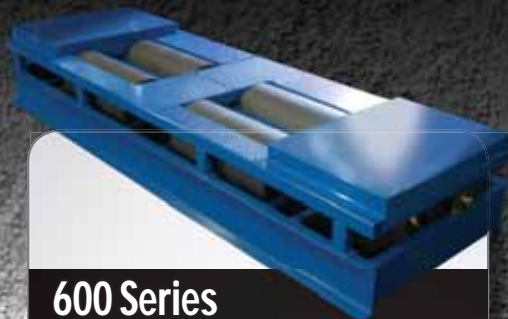




## 500 Series

<b>Horsepower:</b>	†,500 HP peak measurement
<b>Loading Device:</b>	Air-cooled eddy current PAU
<b>Inertia:</b>	1,190 lbs. base inertia
<b>Max Speed:</b>	190 mph
<b>Controls:</b>	Closed Loop Digital Controller with web based HoleShot Software. Includes patented Virtual Road Simulation Technology.
<b>Rolls/Wheelbase:</b>	Knurled Finish Bi-directional 12.625" diameter 31" face length 18" inner track 80" outer track
<b>Roll Lock/Lift:</b>	Between roll lift with roll lock
<b>Air Required:</b>	100 PSI, dry, regulated, oil-free
<b>Power Required:</b>	115VAC, single phase, 15A 230VAC, single phase, 40A
<b>Axle Weight:</b>	6,000 lbs. max.

*Upgradable to AWD*



## 600 Series

<b>Horsepower:</b>	2,000 HP peak measurement
<b>Loading Device:</b>	Air-cooled eddy current PAU
<b>Inertia:</b>	2,000 lbs. base inertia
<b>Max Speed:</b>	200 mph
<b>Controls:</b>	Closed Loop Digital Controller with web based HoleShot Software. Includes patented Virtual Road Simulation Technology.
<b>Rolls/Wheelbase:</b>	Knurled Finish Bi-directional 19.75" diameter 41" face length 26" inner track 108" outer track
<b>Roll Lock/Lift:</b>	Between roll lift with roll lock
<b>Air Required:</b>	100 PSI, dry, regulated, oil-free
<b>Power Required:</b>	115VAC, single phase, 15A 230VAC, single phase, 40A
<b>Axle Weight:</b>	6,000 lbs. max.



## 800 Series

<b>Horsepower:</b>	2,000 HP peak measurement
<b>Loading Device:</b>	Air-cooled eddy current PAU
<b>Inertia:</b>	900 lbs. base inertia
<b>Max Speed:</b>	200 mph
<b>Controls:</b>	Closed Loop Digital Controller with web based HoleShot Software. Includes patented Virtual Road Simulation Technology.
<b>Rolls/Wheelbase:</b>	Knurled Finish Bi-directional 24" diameter 28.5" face length 29" inner track 86" outer track
<b>Roll Lock/Lift:</b>	Between roll lift with roll lock
<b>Air Required:</b>	100 PSI, dry, regulated, oil-free
<b>Power Required:</b>	115VAC, single phase, 15A 230VAC, single phase, 40A
<b>Axle Weight:</b>	10,000 lbs. max.

*Upgradable to AWD*



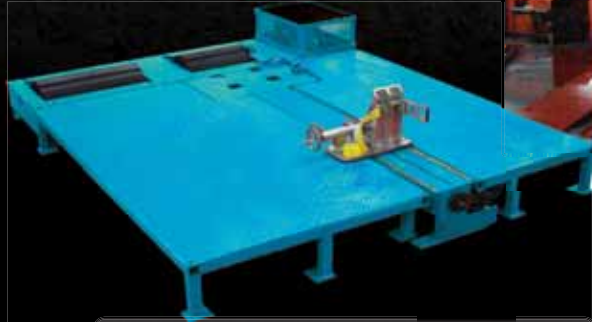
## 1750 Series

<b>Horsepower:</b>	3,500 HP peak measurement	<b>Roll Lock/Lift:</b>	Industrial brake pad in contact with roll
<b>Loading Device:</b>	Air-cooled eddy current power absorber	<b>Air Required:</b>	100 PSI, dry, regulated, oil-free
<b>Inertia:</b>	2,530 lbs. equivalent base inertia	<b>Power Required:</b>	115VAC, single phase, 15A 230VAC, single phase, 40A
<b>Max Speed:</b>	250 mph	<b>Axle Weight:</b>	10,000 lbs. maximum
<b>Controls:</b>	Closed Loop Digital Controller with web based HoleShot Software. Includes patented Virtual Road Simulation Technology.		
<b>Rolls/Wheelbase:</b>	Knurled Finish rolls 50" diameter 28" face length 28" inner track width 84" outer track width		

*Upgradable to AWD*



# POWERSPORTS Dynamometers



Our Dynamic Load Control capabilities are made possible by using powerful eddy current power absorbers and torque sensing load cells that provide an ultra-fast closed loop signal to the dyne controller. Mustang's dynamometer control technology is recognized around the world as the industry's best.



Mustang Dynamometer's MC/QUAD Dyno is a specially designed, high-speed, low-inertia motorcycle/QUAD/Kart combination dyno. The low inertia design and eddy current loading features are perfect for precision tuning and diagnostic applications. The base mechanical inertia of the EC997 MC/QUAD is perfectly matched for testing lightweight cycles and quads, while the powerful eddy current power absorption unit provides enough muscle to apply a serious load for steady state testing applications. Quickly and easily diagnose performance problems, break in engines, perform EFI mapping and much more.



The EC997 Series, our standard eddy current motorcycle chassis dynamometer, takes motorcycle performance tuning to the next level. The EC997 Series uses the industry's most advanced electronics and Dynamic Load Control technology, featuring precision closed-loop torque feedback – a standard feature with every Mustang dyno. Competitive dynos on the market allow you to apply a "percent brake" manual load as a "work around," but Mustang has perfected the art and science of Dynamic Load Control, and proudly offers the most sophisticated Dynamic Load Control dynamometer available at any price. Our superior control technology combined with our ultra-low inertia design allows you to precisely control loading, enabling RPM settling on target RPM in less than 1.5 seconds. Try doing that with a heavy drive roller and insufficient control technology - You simply can't!





**EC997-13 Low-Inertia Model**

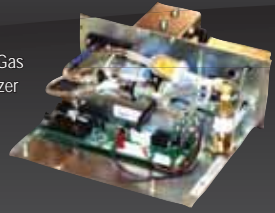
<b>Horsepower:</b>	750 HP peak measurement
<b>Loading Device:</b>	Air-cooled eddy current power absorber
<b>Inertia:</b>	174 lbs. base inertia
<b>Max Speed:</b>	200 mph
<b>Controls:</b>	Closed Loop Digital Controller with web based HoleShot Software. Includes patented Virtual Road Simulation Technology.
<b>Rolls/Wheelbase:</b>	Knurled Finish rolls 12.625" diameter 12" roll width 96" wheelbase

**EC997-20 High-Speed Model**

<b>Horsepower:</b>	1,000 HP peak measurement
<b>Loading Device:</b>	Air-cooled eddy current power absorber
<b>Inertia:</b>	233 lbs. base inertia
<b>Max Speed:</b>	225 mph
<b>Controls:</b>	Closed Loop Digital Controller with web based HoleShot Software. Includes patented Virtual Road Simulation Technology.
<b>Rolls/Wheelbase:</b>	Knurled Finish rolls 19.75" diameter 12" roll width (19.88" optional) 96" wheelbase (longer available)

**Optional Hardware & Accessories**

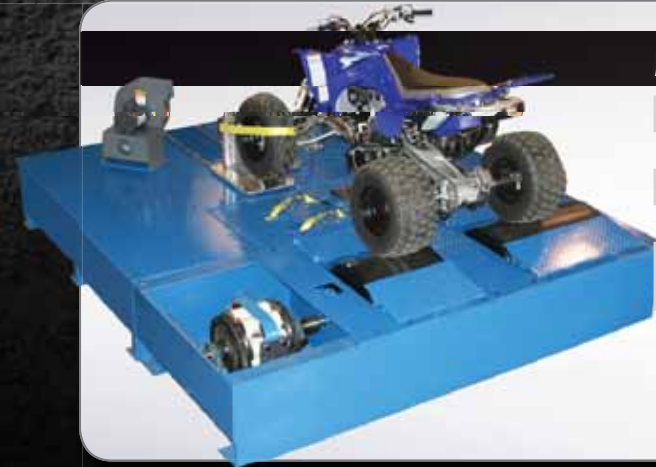
Integrated 5 Gas Analyzer



Power wheelbase adjustment



Dual Cooling Fans



**EC997 MC/QUAD-13 Low-Inertia Model**

<b>Horsepower:</b>	750 HP peak measurement
<b>Loading Device:</b>	Air-cooled eddy current power absorber
<b>Inertia:</b>	407 lbs. base inertia
<b>Max Speed:</b>	200 mph
<b>Controls:</b>	Closed Loop Digital Controller with web based HoleShot Software. Includes patented Virtual Road Simulation Technology.
<b>Rolls/Wheelbase:</b>	Knurled Finish rolls 12.625" diameter 19.88" roll width 96" wheelbase (longer available)

**EC997 MC/QUAD-20 High-Speed Model**

<b>Horsepower:</b>	1,000 HP peak measurement
<b>Loading Device:</b>	Air-cooled eddy current power absorber
<b>Inertia:</b>	500 lbs. base inertia
<b>Max Speed:</b>	225 mph
<b>Controls:</b>	Closed Loop Digital Controller with web based HoleShot Software. Includes patented Virtual Road Simulation Technology.
<b>Rolls/Wheelbase:</b>	Knurled Finish rolls 19.75" diameter 19.88" / 30.5" roll width 96" wheelbase (longer available)





Trailer-mounted MD-AWD-500 shown here with optional drag racing tree and monitors.

### Portable Dynamometer Systems

Mustang manufactures several portable dynamometer systems designed specifically for customers interested in taking their performance testing, simulations and tuning operations on the road. Mustang's portable systems include every item needed – from wheel chocks to an advanced computer control system – to ensure successful portable dyno operation. A Mustang portable system incorporates every desirable aspect of a traditional eddy current chassis dynamometers into a portable system that can be moved and set-up in a matter of minutes by a crew of only one or two guys.

Perfect for trade events, marketing campaigns, equipment-sharing arrangements, rental agreements, portable emissions testing... you name it!

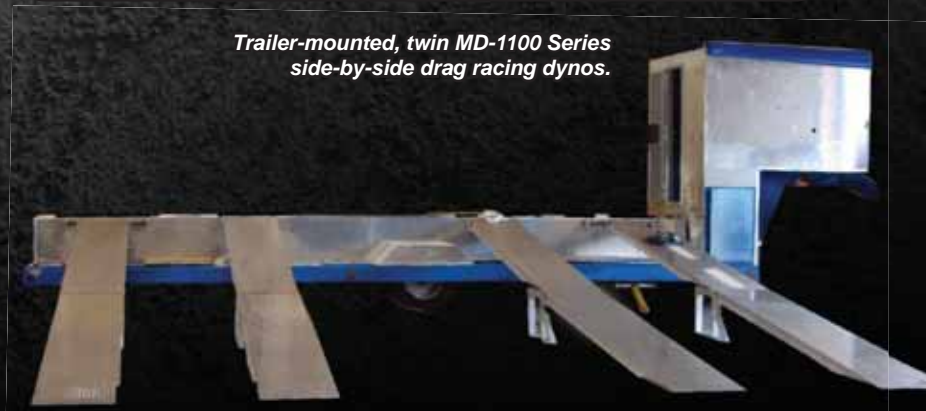
Mustang makes slight modifications to existing product specifications – including utilizing lighter materials, shorter frames, and incorporating additional safety measures to achieve the same level of product quality and durability in a portable systems that is traditionally associated with any Mustang product.

Each portable system includes a Hole Shot control system, roll-around cart, a fully-equipped dyno transport system, vehicle restraint kit, air compressor, and electric power generator.

Depending upon the dynamometer that is selected, Mustang can offer an enclosed trailer design or a flatbed trailer-mounted portability system to meet your specific application requirements.



Trailer-mounted, twin MD-1100 Series side-by-side drag racing dynos.



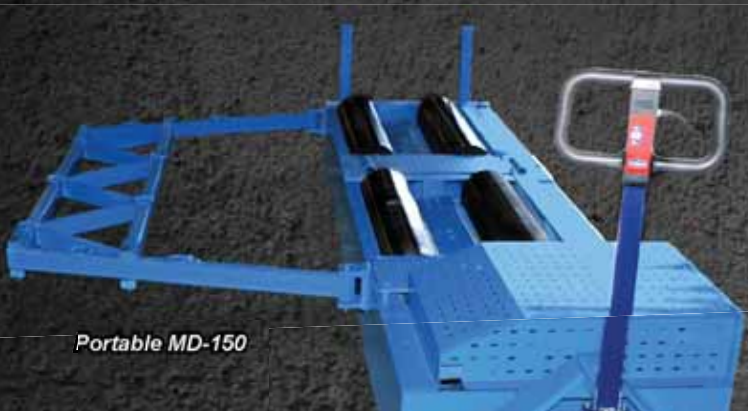


## Enclosed Trailer Design

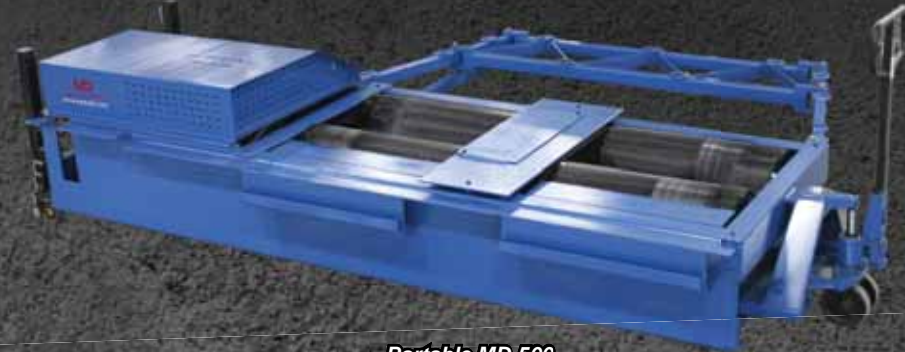
A popular portable dyno setup is to incorporate a pallet jack and caster sets into the frame of the dyno, allowing it to be easily raised and pulled around the shop floor or moved from one location to another inside an enclosed trailer. An electric winch is often used to pull a portable dyno up a set of ramps and into an enclosed trailer.

## Flatbed Trailer Design

For larger systems, such as an AWD-500, the dynamometer is built directly into the chassis of a flatbed trailer. All components of the system are also cleverly designed into the flatbed trailer making setup of the system effortless. Simply park the trailer, lower the ramps, plug everything in, strap it down, and you are off and running in no time at all. A portable MD-AWD-500 is a true show-stopper. Add a drag racing tree and a few large screen monitors running Mustang's DragSim Drag Racing Simulator and you will draw a large crowd to watch real-world simulations of 1/4 mile and 1/8 mile drag racing. A trailer-mounted MD-AWD-500 is the ultimate promotional tool.



Portable MD-150



Portable MD-500



Portable MD-500





## HOLE SHOT

Mustang's latest software package, Hole Shot, transforms your chassis dynamometer from a tool into a business opportunity. Hole Shot utilizes web based techniques, a HD camera, social media and the latest technology to help you turn your Mustang dynamometer into a self promoting digital business.

Customers can schedule runs, obtain their performance data and share results via a provided app making data entry a thing of the past; simply enter the user's handle or email address, click on their icon and start testing. Your shop branded videos, runs, and photos are automatically delivered to your customer by Hole Shot eliminating the need to print results.

Hole Shot also offers an advanced DragSim feature that includes custom 3D drag strips, vehicle avatars, and playback modules that allows your customers to share their experience with others.

### Hole Shot Features:

- Linux powered 4U industrial rackmount chassis with powerful micro PC
- Mustang's GEN4 DAC32 32 bit digital controller
- Remote camera kit - auto run record with your watermark
- Wi-fi OBDII
- JBox data acquisition solution with:
  - MAP
  - Dual AFR inputs
  - Weather station
  - EGT inputs
  - Six (6) analog inputs
  - Two (2) TTL inputs
  - Digital tachometer probe
- Angular4 based Hole Shot web interface
- Powerful data graphing utilities
- Multiple run graph overlay
- Full database facility for storage/retrieval of test info
- Export data to your favorite programs
- Customizable test reports with your company logo
- Easily export graphs as .jpg files



*Hole Shot allows you to control the dyne and provides all of the hardware to begin your testing and tuning 'out of the box'.*



*and provides the perfect place to house all of your dyne hardware.*





### Advanced Performance Curve Capabilities

Mustang's Hole Shot Software provides you with a number of tests for performance testing and tuning. Using tests such as programmed force and programmed speed in conjunction with analog inputs gives you the ability to precisely tune a vehicle's engine for optimum performance.

### Elapsed Time Testing Under "Real World" Road Load

All of the timing tests available with the Hole Shot Software package use Mustang's patented Virtual Inertia™ Technology. The term Virtual Inertia means that dynamometer control software takes into consideration the test vehicle's weight and aerodynamic characteristics to apply the exact loading to simulate actual 'real world' driving conditions. So the results you see on the dynamometer are practically identical to the results you will see on the road or race track.

### The Power and Flexibility Your Customers Demand

Just as important as providing accurate and reliable results is having them in an easy-to-read and interpretable format. Mustang's Hole Shot Software provides a wide range of graphing functions, enabling you to perform the tests you need in a format you are comfortable with. The software allows you to graph any number of output values you wish. In addition to graphing capabilities, all information collected during testing can be exported to other popular software programs (e.g. Microsoft Excel™) for further manipulation and data analysis.

### The Most Powerful Diagnostic Tool at Any Price

Included in the Hole Shot Software package is a complete battery of tests for diagnosing vehicle performance and driveability problems. Diagnostic tests allow you to diagnose driveability complaints quickly and easily without ever leaving the shop. Set the dyne controller to vehicle simulation, then hop in and drive the vehicle as if you were on the road. Shift through the gears, simulate an uphill grade or simulate towing a load. The possibilities are only limited by your imagination.





## User-Configurable Display

Hole Shot allows the operator to configure the display to their liking. The operator can select from a list of predefined screen configurations to choose from and can also modify the display formats and display colors for the indicators that make up the configurations.



## Vehicle Simulation Test

The Vehicle Simulation Test allows the operator to drive the vehicle on the dynamometer with the same loading that the vehicle would experience on the road. This test is useful for performing road tests on the dynamometer and for diagnosing cruise-speed problems.

In "Vehicle Simulation" mode, the "Vehicle Wt", "Pwr @ 50" and "Simulated Inertia" data associated with the vehicle are all used to automatically control the load applied during the test. The "Road Grade" field allows the operator to adjust this value to simulate different road grade values. The "Trailer Weight" allows the operator to simulate the vehicle pulling a trailer.



## Horsepower Curve Test

The Horsepower Curve Test allows the operator to perform a sweep-type power measurement test on the vehicle. This test routine supports both a fixed sweep time mode and a vehicle simulation loading mode. The vehicle simulation loading mode will most accurately reflect the actual power that the vehicle will deliver in use, while a fixed sweep time mode test can be used for comparing against test stand dyno values.



## Timed Quarter Mile Sprint Test

The Timed Quarter Mile Sprint Test allows the operator to accurately simulate a 1/4-mile sprint run on the dyno. The results of these tests are generally within 0.1 to 0.2 seconds of the actual times recorded by a vehicle at a drag strip (when accurate vehicle simulation loading parameters are used). For this test, the following additional data is saved with the final test results record: Time to 1/4 mile, 60 feet, 100, 200, 300, and 400 yards, speeds at same intervals, and reaction time. The test can also be configured to perform 1/8 and 1/16 mile runs.





### Constant Speed Test

The Constant Speed Test allows the operator to hold the vehicle at a specific speed. This test is useful for full-throttle tuning at specific speeds, durability testing, and PID loop tuning. This test has no fixed ending time or structure. The vehicle is simply driven at the specified speed regardless of throttle position. Once the target speed is reached the dyno will increase load in response to increased throttle position to hold the vehicle at the target speed.



### Timing Test

The Timing Test allows the operator to edit and create new speed-based profiles. The points in these profiles specify a starting speed value and an ending speed value. The test measures the time taken by the vehicle to travel through the profile. The "Road Grade" and "Trailer Weight" fields can also be used in this test.



### Trace Graph Viewer

The Trace Graph Viewer allows the operator to perform multiple functions with test results. The operator has the ability to overlay up to three test runs at once, modify the colors of each test run, as well as define the channel that is display against on the Y-axis. The operator also has the ability to enter specific X-axis or Y-axis scale limits, zoom in and out on the graph, show specific values for each data point on the graph, perform smoothing, and display the minimum/maximum/average values for all loaded tests. Display setting can be saved as default settings for future graph viewing. Graphs are also easily exported as .jpg files for sharing on the web or emailing to your customers.



### Auxiliary Analog Input Setup

The Auxiliary Analog Input Setup menu item allows access to the setup screen used to configure the auxiliary inputs used for extra data acquisition hardware such as exhaust gas oxygen sensors, pressure sensors, EGT sensors, etc.



## JBox

Mustang's JBox addresses all data acquisition needs with one highly advanced solution - the JBox. The JBox is equipped with two (2) air fuel inputs, a universal tachometer input, two (2) K-type temperature inputs, two (2) TTL inputs, six (6) spare analog inputs, a built in MAP sensor, and an onboard advanced weather station. The JBox connects to the Hole Shot server via a standard USB cable and is powered by the vehicle's 12 VDC power supply, or the optional AC/DC power supply. Several different styles of RPM pick-ups are offered including a coil/injector wire clamp, spark plug style pick-up, and a non-intrusive inductive probe. Oxygen sensor options include both Bosch and NTK sensors. The JBox's circuitry is specifically designed for chassis dynamometer applications and we've never seen better, more stable readings from an automotive data acquisition system.

- CNC etched front plate with sturdy, rugged case
- XS12 style aviation plugs for the two (2) wide-band inputs and the tachometer input
- Bosch or NTK oxygen sensors available (optional)
- Inductive RPM pick-up for older gen vehicles available (optional)
- Injector wire RPM pick-up available (optional)
- Built-in weather station
- 100 psi built-in MAP sensor
- Two (2) mini-jack K-type temperature inputs, configurable
- Two (2) TTL inputs
- Two (2) 5-pin detachable blocks for six (6) spare analog inputs
- Rocker style on/off switch with fuse
- Cigarette lighter style 12 VDC power cable (AC power supply optional)
- USB communication to Hole Shot server
- Power indicator
- Fan cooled



### Inductive RPM Pickup Sensor

Measure engine speed by clamping the Inductive Pickup Sensor around a Secondary Ignition cable. While traditionally used on a Spark Plug wire, it can also be used on a coil wire to achieve improved measurement response. Inductive Pickup Sensors ship with a 12-foot cable.

### TachSensor

The TachSensor is available for those situations where measurement of engine speed via an inductive probe is required. Just clamp the TachSensor around an Ignition Primary wire anywhere between the coil and the Electronic Control Unit. The TachSensor is available with a 12-foot cable or 30-foot cable.

### Optical RPM Pickup Sensor

The Optical RPM Pickup works by monitoring light as it bounces off of a piece of reflective tape applied to a rotating object. Unaffected by electromagnetic interference, the Optical RPM Pickup works in many applications where inductive pickups may not.

### Air/Fuel Ratio Exhaust Sensors

Accurately determine exhaust gas mixture over a wide range of engine operating conditions with ultra-fast response time. Seamlessly integrates with your JBox Data Acquisition System for graphing AFR against horsepower, torque and engine RPM.





## Pressure Sensors

Designed to provide a highly stable and accurate measurement of fluid and/or gas pressures. Enables you to graph various pressures against power, torque and engine rpm curves. (-15 to 15-psi, 30-psi, 60-psi, 100-psi, 0-2,000 psi).

## Exhaust Gas Temperature Sensor

Developed specially for on-track racing and dyno applications, these EGTs have an exposed tip design to provide quick response. Installs using weld-type compression fitting (included). Range: 32°- 1,830°F.

## Oil Temperature Sensor

Accurately measure and monitor engine oil temperature. Closely monitoring engine oil temperature ensures your dyno runs are comparable and increases repeatability.

## Intake Air Temperature Sensor

The Intake Air Temperature Sensor determines the temperature of the incoming air stream and feeds this data into Hole Shot for graphing against speed, power and torque figures.

## OBD-II Interface Module

The OBD-II Module is a direct connection to the vehicle's OBD-II port and allows you to capture virtually every critical engine parameter directly from your vehicle's computer into the PowerDyne Software. This convenient link is a "must have" piece of hardware for your dyno.

## Integrated 5-Gas Exhaust Analyzer

Accurately measure the 5 major gases contained in vehicle exhaust stream. Seamlessly integrated with your Hole Shot Controller and Data Acquisition System for graphing each gas against horsepower, torque and engine RPM. Microprocessor controlled, meets or exceeds BAR97.

## Diesel Opacity Smoke Meter

Mustang's Diesel Opacity Smoke Meter is designed to measure particle content of a diesel engine exhaust. The analyzer is interfaced to the computer via RS-232 allowing automated testing and accurate smoke opacity analysis. The diesel opacity meter is designed as a reliable portable meter for light and heavy-duty diesel vehicles.



Mustang's DragSim has three (3) new 3D tracks - A drag strip, warehouse district, and a city scene. You can select the camera view you prefer; watch from the stands, the vehicle interior, the hood, or the wheel. Mustang will be adding more 3D environments for you to enhance your customer's experience. The dyno supplies real drag strip data too: reaction time, 60-foot time, 1/8-mile time & trap speed, and 1/4-mile time & trap speed, as well as torque and horsepower readings!







32,000 CFM Cooling Fan

10,800 CFM Cooling Fan

Mobile cart-mounted exhaust removal system.

### **Vehicle Engine Cooling Fans**

When positioned in front of the test vehicle radiator, Mustang's Vehicle Cooling Fans generate sufficient air flow to simulate on road conditions for engine cooling purposes. Our most popular fan, the 10,800 Series Fan generates air flow of 10,800 CFM, while the 32,000 Series puts out 32,000 CFM. Additional options include automatic fan speed controller and adjustable fan height. Mustang offers a number of additional vehicle cooling fan sizes and configurations to fit virtually any application requirement.

### **Vehicle Exhaust Removal Systems**

The best way to protect mechanics and garage employees from the potentially harmful gases released from vehicles running on the dyno is to capture it at the source: directly at the tailpipe.

This process involves the capture of the fumes through suction hose, nozzles, hose storage mechanisms and LEV fans. Mustang offers a number of exhaust removal systems. The most common systems use a hose reel, as reels are proven space saving devices and go along way in protecting the hose from abuse over time. These solutions are typically ordered with the appropriate hoses to suit the applications and can be further enhanced through the addition of optional tail-pipe adapters, extension booms & fans.

### **Above-Ground Ramp Packages**

Mustang offers several designs of above ground ramp packages for above ground and mobile installations. Ramp packages are available for all low-profile chassis dynamometer models upon request. Manufactured from steel, light weight industrial composite and high-strength aluminum material, Mustang's ramp packages are light-weight and easy to move in and out of position by a single person. We offer straight 14' ramps, ramp and platform combinations which allow you to test the vehicle in a level position, and two-sided ramps that allow you to pull cars onto the equipment from either direction. Ask a sales engineer for more details and a drawing of available ramp packages to fit your application.







### Motorcycle Testing Kit

Mustang offers several designs of motorcycle testing restraint kits that allow your automotive dyno to double as a motorcycle dyno. Mustang can supply motorcycle kits for both in-ground and above-ground applications. Above-ground kits are fabricated from high strength, lightweight aluminum and can be easily moved in and out of position for fast changeovers. Adjustment of the tire restraint positioning can be either a manual or electric system.



### Axle Pull-Down Kit

Mustang's Axle Pull-Down Kit allows you to apply increased downward pressure to the vehicle restraint system for superior traction to help prevent your wheels from slipping when boost kicks in or when nitrous oxide is used.



### AWD "On-Off" Coupler

Switching between 2WD and AWD mode on the AWD-500 and AWD-1100 Series dynamometers is done with a simple click of the mouse. Mustang Dynamometer engineered an automatic "On-Off" coupler that is both robust and easy to control. An air piston and arm combination opens and closes a toothed coupling assembly. Engaging the system places the dynamometer in AWD mode, disengaging the coupling places the dynamometer in traditional 2WD mode. A real time-saving feature.





### **Above-Ground 4-Post Lifts**

As an alternative to pit-mounted, flush-floor installations, Mustang offers several four-post lift options for above-ground installations. Shops with the space to accommodate a four-post lift can enjoy the advantages and extra utility that this installation can offer. Making adjustments and modifications right on the dyno allows you to see the results instantly without moving the vehicle.

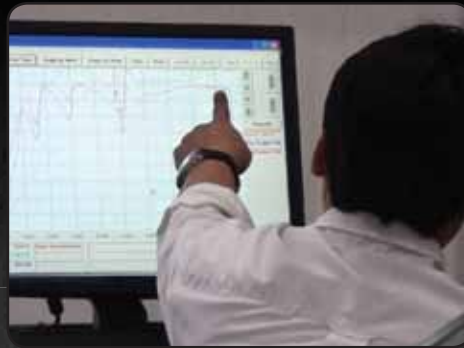
Mustang is proud to offer one-stop shopping for your dyno and lift requirements, saving you time and money and ensuring 100% compatibility. The lift option pictured here comes complete with stairs, platforms, swing-out tie-down arms and a heavy-duty railing system for added safety. Mustang also offers an economical, base 4-post lift package that does not include the stairs, railings and extra platforms that are shown here.



### **Above-Ground Vehicle Restraint Arms**

Above ground installations can be equipped with a collapsible swing-out restraint arm system to make strapping vehicles down simple and quick. The restraint arms are equipped with numerous "D" rings for attaching ratchet straps or chains, and can be collapsed when not in use to save space in your shop.





### On-Site Installation Assistance & Hands-On Operator Training

Mustang Dynamometer has a team of highly-skilled technicians on staff to assist you with your dyno installation. Once your dyno arrives at your facility, one of our highly trained experts will be on site for a full two days to assist you every step of the way to ensure that your dyno is installed properly, is running flawlessly, and your staff is familiar with its operation. This service is available worldwide and is your assurance of a flawless and quick installation.

While on-site for installation assistance, a Mustang technician will train your entire staff on the proper use of the dynamometer hardware and software. Mustang factory technicians know the dyno systems inside and out, and will fully train your staff, performing hands-on training, including vehicle set-up and restraint, HoleShot Software instruction, proper testing methods, troubleshooting, sensor and data acquisition usage, and tips on getting the most from your dyno.

### EFI Tuning Training Seminars

Mustang Dynamometer is excited to announce that we have partnered with the pros at The Tuning School to offer our customers Live EFI Tuning Seminars. The Tuning School teaches you the basics and beyond of Electronic Fuel Injection (EFI) systems, including all the theory and mechanics in an live, interactive, and easy to understand classroom setting. During training, you'll learn how to tune like a pro with hands-on experience using the leading software and tuning products and the advanced features of a Mustang Dynamometer.

The live class seminar consists of two full days of training that teaches you how to use the HP Tuners Software AND how to tune the right way!

Visit our website for a list of upcoming Tuning School seminars or visit [www.thetuningschool.com](http://www.thetuningschool.com) for more information.



Dear Gentlemen,

I should start this e-mail with our first hand experience with our new dyno, but actually our first real impression of MD product came with Mr. Don Trinh. Nobody believed that he right after the flight insisted to visit our shop and during the next 6 !!! hours he finished all his work (wiring, air connections, belt installing and adjusting, software install, etc..) and got our dyno ready for use the same day! Have to mention there was NO rest, no shower no nothing.... just hard work on more than 30deg. outside temperature! How is it possible!? But that's not the end (lucky we!) The same continued during the next two days. He did a lot of training and different tests. I would say some time it started to looks like a dyno day. We got our first hand experience with all kind of vehicles- 2WD, 4WD, and even for bikes. I can say we're happy having Don here. He is real PROFESSIONAL and very good man.

About the MD500SE, what I could say? Everything was perfect so far and as promised. No glitches, no malfunctions, no problems. We have great traction and load control. We did few 1/4 mile tests and the show was incredible, especially with our "Christmas tree".

At the end, just want to THANK YOU for all your efforts to make us happy with our dyno. Now I'm sure MD's success is based not only on the quality of your product but mostly on the people who work there.

Best regards!  
I.Angelov

[www.overdrive.bg](http://www.overdrive.bg)



Don't take our word for it, read what our customers say about us.

Customer Testimonials



I've been in business for 19 years, racing and tuning turbocharged 4 cylinders. In this time we've attempted to tune on other dynos and even owned another brand. After learning that our time spent on these other dynos was worthless when we'd get to the track, we decided to try the Mustang Dyno. After a lot of looking around we decided on the MD-AWD-500-SE dyno. I've never looked back since. It has been dead reliable for the last 3 years with not a single problem. We now tune every single car we build on the dyno and find no need for street tuning. When the cars hit the race track they are tuned correctly. Instead of spending time doing further tuning like we had to do in the past, now we can just concentrate on setting more records.

David Buschur  
Buschur Racing, Inc.



We have had our MD-IMP dyno for three years now and after getting to know the system and software we have found that the dynamometer is a part of our daily lives at AEM. We use it daily and it has performed very well and has been very reliable. Most importantly, we have found that Mustang has been an excellent partner with respect to helping us with the servicing of the dynamometer. The customer service group has been VERY responsive and helpful whenever we have needed help. The new software with the diagnostic link input is outstanding and quite an improvement over the original software. For the last 3 years, the dynamometer has been bullet-proof and we have not even had a hint of a problem, and if we do experience a problem, it usually is an input error on our part. We are quite pleased with the dynamometer and Mustang as a company. Mustang Dynamometer has been a pleasure to work with and we look forward to continuing to work with them in the future.

John P. Concialdi  
AEM



Granatelli Motor Sports is proud to have a Mustang Dynamometer chassis dynamometer at our California facility. In the twenty years that GMS has engineered, tested and tuned performance parts and automobiles, nothing has performed better the Mustang brand dynamometer. The dynamometer performs as it should every time, and each run is repeatable again and again. Mustang's innovation and dedication to us, the customer, makes it our number one choice for dynamometer equipment.

J.R. Granatelli  
Granatelli Motor Sports

We here at Evolution Motorsports currently use the MD-AWD-500 dynamometer at our facility. It has been a vital tool in engineering, tuning, and testing our exclusive performance packages. The consistency and versatility of the MD-AWD-500 is far above any other dyno we have used. We have been able to tune and test our packages with precision and accuracy due to the calculated load simulation that the dyno system offers. It has proven to be the best 'on road' simulation dyno on the market.

Another key feature that has been an invaluable tool to us is the ability to log real-time data such as all the vital functions of the engine management. It enables us to tune for maximum power while maintaining safe engine conditions. These functions are a must while tuning high-horsepower systems.

We currently use our dyno at a minimum of 25 hours per week and it has proven to be a very reliable tool. Also, Mustang continues to lend us their first-class support with extremely knowledgeable techs and unsurpassed customer support. We have never been left in the dark, nor had any downtime while we add systems to the dyno as we continue to take advantage of the tools this dyno makes available to us. In-house visits have been set up with a tech that has all the answers to our questions and makes sure the systems of the dyno are working properly all day, every day.

Evolution Motorsports will always continue to use Mustang Dynamometers and their products. Our company is currently looking at a standalone engine dyno from Mustang and we are excited to use it in our facility. We are 110% satisfied with our MD-AWD-500 and all of Mustang's products!

John Bray  
Evolution Motorsports







I am the owner of a company called The Tuning School, Inc. We began our search for a dyno back in 2005 to use primarily for research & development of our courses, as well as for teaching our students with. We shopped around, looking at the prices and software features of the various dyno manufacturers. We spent time at SEMA and PRI, talking with the vendors in their booths, examining the hardware and even having our staff evaluate the software and rate the software on the features promised.

However, despite all of our best efforts, we made a decision that we would later regret. We bought a dyno that promised "all the features of the Mustang Dyno, but at a fraction of the price." The dyno was supposed to be fully functional with 1/4 mile testing, software-controlled eddy brake loading, etc... all things you need to do a good job tuning a vehicle.

Needless to say, we got what we paid for. We just didn't know it until it was too late.

We will save you from reading about all of our pain in trying to get the features to work as promised, as they never worked as promised. Because of what we do, we require a dyno that is repeatable, accurate and easy to use. We are happy to report that we are now involved with the great people at Mustang Dynamometer. We installed a Mustang MD-1750 with a single eddy brake. The software works fantastic, the roller is balanced perfectly, the eddy brake controls the vehicle properly with the software exactly as the vehicle would be loaded on the road. We can even simulate going up an incline, or do part-throttle vehicle simulation for driveability tuning that is so important. The 1/4 mile drag racing works great and is also a great tool to use when tuning for optimal shift points, since you can see improved 1/4 mile ET and MPH.

I can't even describe how much easier it is to operate a dyno that was designed and built by professionals on the premise that everything should work as promised. When you are trying to do a great job tuning a vehicle for a customer (or teaching students who are learning to tune) you need to have a good tool that will provide you the ability to tune from part-throttle to full-throttle without problems. We can say without hesitation that Mustang Dynos are the best you will find.

If anyone is reading this before buying a new dyno and you are still undecided about which brand to go with (I know there are other, "cheaper" brands) please take my advice: We spent 2 years trying to make our "cheaper" dyno actually do what they promised it would. Save yourself all that headache, lost time and extra labor expense and just buy the right brand one time. That is why we recommend and teach on Mustang Dynamometers - they are a bargain for every feature you get. It does everything they say it will do. And that's 100% more than the other brands will ever deliver.

Bob Morreale  
The Tuning School, Inc



My business is located 40 miles northeast of Atlanta. We have a 10,000 square foot facility and our main focus is Ford Performance Racing and Tuning. Combined with over 30 years of race proven experience, MV has the ability to serve today's racing community to the fullest. Our race-proven abilities can be recognized throughout many sanctioning bodies. MV-sponsored cars have had no less than twenty top ten points winners in FFW and NMRA, as well as our own car winning the 2004 and 2007 NMRA Real Street championship, and finishing 2nd in 2005 and 2006.

By far, the most important tool in MV's shop is the Mustang Dynamometer MD-1750-SE chassis dynamometer. Purchased new in 1999, this piece of equipment has operated flawlessly for years and has enabled us to find problems that we never would have known existed.

In particular, the real-world loading capabilities allow us to tune naturally aspirated and forced induction vehicles as if we were tuning on the street. As the owner and resident tuner at MV, I spend most of my day on the dyno tuning customers' cars and the overall experience on the Mustang system far exceeds the expectations I placed on the system when we ordered it 9 years ago. Our relationship with Mustang Dynamometer the company has been excellent as well. Mustang Dynamometer has been the primary sponsor for our NMRA Real Street car and thus far it has been a very successful partnership - particularly in 2004 and 2007 given the championship wins and the attention the car has drawn from various forums, such as Muscle Mustangs and Fast Fords Magazine. We fully endorse the Mustang Dynamometer system and our doors are always open for a shop tour and a demonstration on our chassis dynamometer. Feel free to give me a call any time if you have questions.

Tim Matherly  
MV Performance





# MD<sup>®</sup> MUSTANG DYNAMOMETER

Mustang Dynamometer  
US Headquarters  
2300 Pinnacle Parkway  
Twinsburg, Ohio 44087

Ph: 330.963.5400  
Toll free: 888.468.7826  
Fax: 330.425.3310

Email: [sales@mustangdyne.com](mailto:sales@mustangdyne.com)

**888-468-7826**



[facebook.com/mustangdyne](https://facebook.com/mustangdyne)



[@mustangdyne](https://twitter.com/mustangdyne)



[youtube.com/mustangdyne](https://youtube.com/mustangdyne)

Broadcast Yourself™



Serving the Motor  
Vehicle Aftermarket  
MEMBER

