

In early 2000 Dynocom Industries was formed as a division of its parent company which has been successfully operating since 1975. At Dynocom Industries we saw a need to make an affordable chassis dynamometer system with all the options utilizing the latest technologies (wireless, 3D, USB, etc). Historically the automotive industry has been slow to adopt cutting edge data acquisition controls. Coming from the high-tech sector where speed-to-market is critical we took the same ideologies and transformed them into Dynocom Industries. Utilizing Dynocom's parent company (Chemical/Manufacturing) know-how, Dynocom evolved into the fastest growing dynamometer company in the world. From our two years in Beta testing to our 7th year in business we have doubled in size every year (both in square footage and in personnel).

We pride ourselves on our commitment to customer service; we survey our existing customers every six months for their feedback on our systems. We have set up a free user forum on our website which is available 24 hours a day, 7 days a week. We strive to provide the best quality (now industry leader with 2 year warranty) and the best service. Contact our sales department for a list of customers you can contact for references. We understand that a dynamometer purchase is a substantial investment and we are proud to support our customers and their business for the years to come.

On September 1st, 2006 Dynocom Industries opened our United States Headquarters in Fort Worth, Texas. Texas is the perfect location with the DFW hub and easy access for our international and domestic customers. This location is great step forward for Dynocom Industries. We need to be where our customers are and Fort Worth, Texas as our American headquarters is a perfect place to be. With the opening of our new Training and Technical Center, new and existing customers can visit us easily. Now with offices in Japan, New Zealand, Australia and South East Asia our products have global support and recognition. Call or visit www.dynocom.net for the latest news, products updates and technical bulletins.

OTHER DYNOCOM MODELS



DC-1500x



DC-2400x



DC-1800sz



DC-TUNER

DYNOCOM INDUSTRIES INC.

AUTOMOTIVE DYNAMOMETERS & DIAGNOSTIC TEST EQUIPMENT



Automobiles



Trucks



Motorcycles



DYNOCOM INDUSTRIES INC.

PRICE. PERFORMANCE. PERIOD.



DC-POD Stabilizing Feet

- Integrated safety support pads and fold down arm support beams for uneven surfaces and maximum torque arm restraint footprint.
- Hybrid modular construction using aluminum for heat dissipation, stainless steel covers, and steel bottom plate for corrosion resistance and durability.



DC-POD Shaft

- Massive stepped down 2 15/16" (75 mm) 1045 shaft with integrated polygon tapered shaft to hub engagement from the aerospace industry. This provides much higher torque capabilities than standard spline shafts while allowing easy alignment and positive engagement.
- Dual 2 7/16" high speed flange bearings providing maximum load ratings for truck and heavy vehicle testing abilities
- Integrated spring quick disconnect roller bearing coupling for quick engagement, hub to shaft alignment and minimum shaft deflection



DC-POD Tool Tray

- Integrated patented eddy brake retarder specifically designed for dynamometer testing with air-cooled machined rotor balanced to a specification of G2.5 (turbine specification)
- Removable tool tray top cover allowing motorcycle dyno testing.
- Integrated tie down points and handles allow for easy of use, mobility, and transport.



- Unlike the competitor units who offer expensive hub adaptors; with Dynocom's DC-POD you can purchase spline wheel adaptor plates (4, 5, 6 and 8 lug metric/SAE) at a great price.

DC-POD Compact Design

- Compact design with centered shaft within body allowing vehicle doors to be opened and closed when DC-POD is mounted to vehicle.
- Exposed 2 7/16" keyed shaft allowing direct mechanical linkage using Dynocom's synchro-drive linkage system for AWD models.
- Built in embedded electronics with serial output and large VFD display for standalone usage and OEMs (master unit).



Dynocom's DC-POD is a revolutionary Portable On-Vehicle Dynamometer that is vastly different from standard chassis roller dynamometers providing the main benefit of utmost in portability in a small package. The DC-POD bolts up to the vehicles wheel hub and eliminates the frictional drag forces due to tire to roll contact area and downward restraining force variations due to differences in ratchet strap hook ups common with many conventional roller dynamometers.

Dynocom's DC-POD also differs from other competitor type units which typically use hydraulic brakes and pumps. These units use the hydraulic brakes to apply load and usually are low in inertia. Typically most competitors using this older technology claim that the low inertia allows their systems to magnify and see small changes in power variations. However with the technological advances in electronics, the semiconductor industry and metallurgical superconductive materials today, Dynocom has evolved our POD to use the latest in high power eddy-current retarders specifically designed for vehicle testing which was not previously possible just a few years ago. These new patented eddy-current brakes, developed by Dynocom provide higher absorption capabilities for extended durations which was not previously possible. The latest generation in electrical eddy-current retarders not only provide higher load absorption but can be controlled at the speed of electricity which is of course many times greater than the current rate at which electro-mechanical systems can control hydraulics. The use of high speed electronics and the latest eddy current brakes allow for the utmost in precise speed synchronization for modern vehicle AWD transfers cases and differentials and almost instant control currently unmatched with the hydraulic systems being used today. The latest generation eddy current retarders are virtually maintenance free having no seals and very few moving parts.

With the advances in electronics measurement capabilities in each of our PODs the so called "low-inertia" effect the competition claims is advantageous is immaterial and can be dangerous. In fact, our PODs have a base inertia allowing them to be truly portable and the ability to do conventional inertia pulls without using the internal eddy-brake. The constant base load can also limit any potential damages to the newer vehicles limited slip differentials and/or transfer cases.

When doing steady state testing the base inertia of the system has no effect as illustrated by the following simplified basic formula negating frictional losses used by engineers:

$$T = I \times \Phi + F \times d$$

Or

$$T = \text{Torque due to Acceleration} + \text{Torque due to Applied Load}$$

Where,

T = Torque

I = Inertia of Rolling Mass (constant in most dynamometers)



- Dynocom's DC-POD is the next generation Portable On-Vehicle Dynamometer providing outstanding performance, leading edge features and maximum flexibility. The new DC-POD has redefined the portable dyno system by providing intelligent technology and has now become the new technological standard in portable vehicle dynamometers.

Φ = angular acceleration of rolling mass
 F = force applied
 d = moment arm or radial distance force is applied to from center

Therefore not using any loading device other than the (Fxd) component would be zero and then only torque can be measured would be based on the angular acceleration and the inertia due to rotation of the rolling mass. This is how traditional chassis dynamometers measure torque with the absence of any other loading device.

In steady state testing, the angular acceleration (Φ) is zero, since we are trying to hold a constant speed or power level, thus the torque due to acceleration has no effect in measuring torque and the only component used in measurement is the Torque due to the Applied Load or F x d. This component is measured using high speed electronics and a highly accurate load cell sensor.

With the built in inertia the DC-POD system can run in basic inertia mode on battery power only for the electronics and computer. Dynocom's DC-PODs are the only portable units that can do both steady state testing and basic inertia pulls as with a roller dynamometer.

Furthermore, the DC-PODs integrated top cover/tool tray can be removed exposing the patented dynamometer eddy brake and roller allowing conventional motorcycle dyno testing.

For AWD testing the combination are endless. You can purchase four pods, one for each wheel, or with Dynocom's flexible modular design allows two DC-PODs to be matched with one of our roller chassis dynamometers. This allows a user to provide AWD testing capabilities while giving them the best of both worlds. The chassis roller dynamometer is unmatched in simplicity and is best for dyno days where multiple dissimilar vehicles must be tested within a short period of time while the DC-PODs portability allows 2WD testing at various locations.

Not only can Dynocom's DC-PODs be configured for AWD vehicle testing, but one may purchase our optional mechanical synchro-drive linkage allowing the front and rear DC-PODs to be positively linked together – currently this is only possible with some roller chassis dynamometers. Each DC-POD exposes a keyed shaft which allows two DC-PODs to be coupled for the most demanding applications or where the front and rear vehicle axles must be mechanically coupled for specific vehicles and/or testing – this is an industrial first not offered by the competition and gives the DC-POD owner the flexibility to upgrade there system as modern vehicle drive train components are introduced (i.e. modern electronic transfer cases and advanced traction control systems).

At Dynocom we did not invent the dynamometer, we only CHANGED it... and change is POWER.

SPECIFICATIONS

Maximum Horsepower ¹	900+ HP per pod (1800+ HP pair)
Max Torque Absorption ²	2750 ft lbs per pod (5500 ft lbs pair)
Max RPM	3000 RPM
Max Axle Load	4000 lbs per pod w/support pads
Max Operating Current ³	25 A per pod
Typical Operating Current	10 A per pod
Approx Shipping Weight	750 lbs per pod

¹ The actual maximum HP is based on many factors including RPM, operating mode, and system configuration. The specified Max HP is based on the braking torque at an operating speed of approximately 2000 RPM.
² Max Torque is based on the maximum steady state braking torque of the integrated eddy brake.
³ Max Operating Current is the peak in rush current at the specified maximum braking torque specified. Average current usage is between 8-15 amps in a typical usage scenario with load.