

A wireframe image of a car is positioned on a dynamometer. The car is shown from a front-three-quarter view, with its chassis and wheels visible. The dynamometer is a large, dark, industrial-looking machine with various components and sensors. The background is dark, and the overall image has a high-tech, automotive feel.

# **Dynojet<sup>®</sup>**

**2011 AUTOMOTIVE  
DYNAMOMETERS**  
AND DIAGNOSTIC TEST EQUIPMENT

# AUTOMOTIVE DYNAMOMETERS

## MODEL 224x AUTOMOTIVE CHASSIS DYNAMOMETER

The Dynojet Automotive Model 224x Dynamometer features 24" knurled, precision balanced drums. The large drum diameters provide a virtually flat, stable surface for tire contact, eliminating unnecessary slippage and tire deformation. The result is precise, repeatable results every time.

The Model 224x is rated at 2000 hp+, 2000 ft/lbs torque and up to 200 mph making it perfect for diagnosing engine and driveline problems, tuning and repair on most street driven vehicles.

**The Model 224x has quickly become Dynojet's best selling automotive dynamometer due to its affordable price, power measurement capacity, compact size for easier installation, and ability to grow with a shop's needs.**



### Model 224x Specifications

Maximum Horsepower	2000 hp
Maximum Speed	200 MPH
Maximum Torque	2000 ft/lbs
Drums	1
Wheelbase Minimum	N/A
Wheelbase Maximum	N/A
Drum Diameter	24 Inches
Drum Width	81 Inches
Minimum Axle Width	N/A
Maximum Axle Width	81 Inches
Maximum Axle Weight	3000 lbs

224x Shown with Above Ground Kit



## Model 224x

CHASSIS DYNAMOMETER

### STANDARD FEATURES AND EQUIPMENT

- Measures up to 2000 hp+, 2000 ft/lbs torque, and 200 mph
- WinPep 7 Software and Hardware to interface (PC, printer, etc. not included)
- Automatic Conditions Measurement (absolute pressure, air temp, humidity)
- Ignition wire inductive tachometer pickup leads
- Auto Tie Down Package (straps, ratchets and ground hooks)
- Wheel Chocks
- Air Actuated Brake System
- Remote Software and Brake Control Pendant
- Installation and operation manuals
- One year replacement parts warranty
- 24/7 Tech Support via winpep.com



**AS THE MOST POPULAR CHASSIS DYNO IN THE INDUSTRY, THE 224X IS UP TO THE TASK FOR POWER PULLS, TUNING, AND DIAGNOSING ENGINE / DRIVELINE EFFICIENCY.**

### WIDE BAND AIR FUEL RATIO

Every dyno run can show the horsepower and torque, and now the exact air/fuel ratio. This system is one of the most insightful tuning tools available today! You can easily identify lean or rich trends from idle to redline. Whether tuning a naturally aspirated "all motor" car, or a forced induction screamer, you will know the tune is right. Any Shop involved with EFI mapping shouldn't be without this Dynojet Wide Band Air/Fuel Ratio System.

### 4 POST LIFT

Dynojet Dynamometers can be installed above-ground using a four-post lift. Now you can make changes to exhaust, gears, driveshafts and other drivetrain modifications right on the dyno during test sessions because the drive-on hoist makes under chassis work between tests easy.

### MODEL 224x PIT

The 224x can be configured in a pit or above ground



### MODEL 224xLC PIT

The 224xLC can be configured in a pit or above ground



## Model 224xLC

LOAD CONTROL DYNAMOMETER

### STANDARD FEATURES AND EQUIPMENT

- Measures up to 2000 hp+, 2000 ft/lbs torque, and 200 mph
- Eddy Current Load Absorption Unit, Torque Cell, and dynamic load control software. Perform advanced tests, including step, sweep, and "road load simulations"
- WinPep 7 Software and Hardware to interface (PC, printer, etc. not included)
- Automatic Conditions Measurement (absolute pressure, air temp, humidity)
- Ignition wire inductive tachometer pickup leads
- Auto Tie Down Package (straps, ratchets and ground hooks)
- Wheel Chocks
- Air Actuated Brake System
- Remote Software and Brake Control Pendant
- Installation and operation manuals
- One year replacement parts warranty
- 24/7 Tech Support via winpep.com

**MONITOR "REALTIME TORQUE" FOR  
MAXIMUM GAINS WHILE TUNING**



### DYNOJET DATALINK MODULE

Provides real time data from the OBDII port on all 1996 and newer vehicles. This data is available to be viewed live in the dynamometer software, WinPEP 7, and is also recorded into the dyno run. Review OBDII data, such as spark advance, throttle position, engine coolant temperatures, inlet air temperature, calculated load, and numerous other parameters right along side your dyno results.

### 4 CHANNEL ANALOG MODULE

This feature allows 4 additional 0-5v based sensors to be logged during dyno runs. Now you can display data such as boost and fuel pressure, along side the HP/TRQ channels. WinPEP 7 has a built-in sensor calibration routine that makes the set up simple. You can choose from various supported sensors, or input the data from any 0-5v sensor on the market.

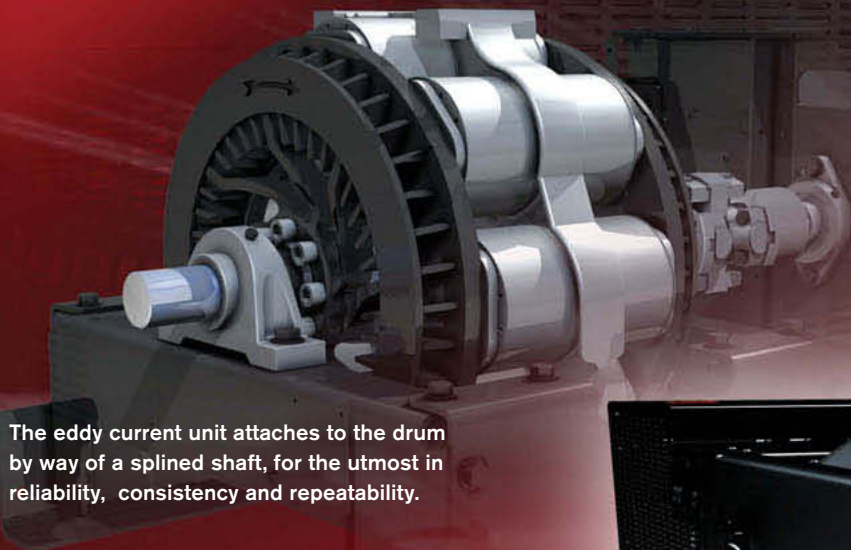




# MODEL 224xLC

## AUTOMOTIVE

### LOAD CONTROL DYNAMOMETER



The eddy current unit attaches to the drum by way of a splined shaft, for the utmost in reliability, consistency and repeatability.

#### Model 224xLC Specifications

Maximum Horsepower	2000 hp
Maximum Speed	200 MPH
Maximum Torque	2000 ft/lbs
Drums	1
Wheelbase Minimum	N/A
Wheelbase Maximum	N/A
Drum Diameter	24 Inches
Drum Width	81 Inches
Minimum Axle Width	N/A
Maximum Axle Width	81 Inches
Maximum Axle Weight	3000 lbs

The highly versatile Model 224xLC is the perfect choice for modern EFI Tuning Shops. Based on the 224x dyno, the 224xLC offers the simplicity and ease of use of an "inertia only dyno", along with advanced testing capabilities of a Eddy Current load style dyno. Perform A-to-B comparison tests to quantify gains from various performance products, or enable the load control feature to perform step, sweep, or road load simulations. Spend more time tuning vehicles, as opposed to tuning your dyno.

*When performing loaded testing, the Eddy Current Load Absorption Unit option utilizes an integrated Torque Cell to quantify power absorption in an ultra precise and consistent manner. Loaded test files are then available for review and analysis in the WinPEP 7 software. Additional highlights of this system include a quick and effective calibration routine that can be accomplished in under a minute.*



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# MODEL 424x

## AUTOMOTIVE

### AWD CHASSIS DYNAMOMETER

The Model 424x is comprised of two industry standard 224x's, capable of measuring 2000+ horsepower at each axle! Horsepower and torque are measured at each drum and can be displayed and/or logged independently, or combined. This features allows you to assess the vehicles power split, and can also aid in troubleshooting drivetrain issues. The 424x is designed to grow with you as your testing needs change in the future. You can easily upgrade at any point with dual Eddy Current Load Absorption Units and/or the new 424 Linx System (see page 12 for more information).

The Model 424x dyno can accommodate up to a 140" wheelbase with just the touch of a button. Whether you are troubleshooting a 4-wheel drive pickup or tuning an all wheel drive vehicle, this is a system you should seriously consider.

**DYNOJET WAS THE FIRST TO DEVELOP AN AWD INERTIA STYLE CHASSIS DYNO, AND THE 424x HAS EVOLVED INTO THE PREMIER SOLUTION FOR SERIOUS TUNING SHOPS.**



All Dynojet chassis dynamometers are multi-directional. Both front and rear wheel drive vehicles can be tested in either direction.



Adjustable wheelbase from  
88" to 130" -STANDARD  
or 98" to 140" -OPTIONAL

#### Model 424x Specifications

Maximum Horsepower	2000 Hp (PER DRUM)
Maximum Speed	200 MPH
Maximum Torque	2000 ft/lbs (PER DRUM)
Drums	2
Wheelbase Minimum	88 Inches
Wheelbase Maximum	140 Inches
Drum Diameter	24 Inches
Drum Width	81 Inches
Minimum Axle Width	N/A
Maximum Axle Width	81 Inches
Maximum Axle Weight	3000 lbs (PER DRUM)

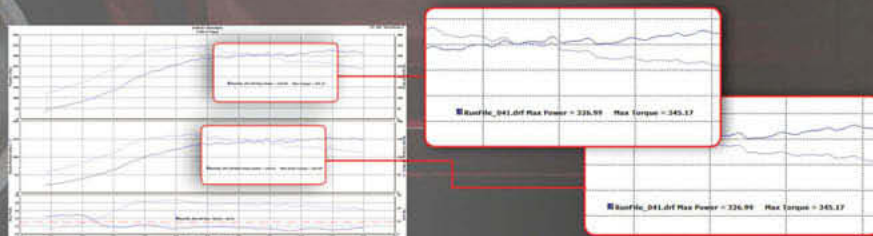


## Model 424x

### LOAD CONTROL DYNAMOMETER

#### STANDARD FEATURES AND EQUIPMENT

- Measures up to 2000 hp+, 2000 ft/lbs torque (per drum), and 200 mph
- Tests vehicles in either two-wheel or all-wheel drive modes
- Above-Ground or Pit installation accessories included
- Consists of two Model 224x chassis dynamometers
- WinPep 7 Software and Hardware to interface (PC, printer, etc. not included)
- Automatic Conditions Measurement (absolute pressure, air temp, humidity)
- Ignition wire inductive tachometer pickup leads
- Auto Tie Down Package (straps, ratchets and ground hooks)
- Wheel Chocks
- Air Actuated Brake System
- Remote Software and Brake Control Pendant
- Installation and operation manuals
- One year replacement parts warranty
- 24/7 Tech Support via winpep.com



#### EZ RPM MODULE

The EZ RPM Module allows a quick, non-intrusive means to acquire a tachometer signal. Some modern vehicles make it very difficult for dynamometer operators to get a tachometer signal because physical barriers in the engine bay, or poor accessibility to the coils. Simply plug in the Dynojet EZ RPM Module into the cigarette lighter, or attach the leads to the battery, and select the number of cylinders for the vehicle.

#### WIDE BAND AIR FUEL RATIO

Every dyno run can show the horsepower and torque, and the exact air/fuel ratio. This system is one of the most insightful tuning tools available today! You can easily identify lean or rich trends from idle to redline. Whether tuning a naturally aspirated "all motor" car, or a forced induction screamer, you will know the tune is right. Any Shop involved with EFI mapping shouldn't be without this Dynojet Wide Band Air/Fuel Ratio System.

#### MODEL 424x PIT

The 424x can be configured in a pit or above ground



#### AWD GRAPH SHOWING BOTH FRONT AND REAR WHEEL HORSEPOWER



## MODEL 424xLC<sup>2</sup> PIT

The 424xLC<sup>2</sup> can be configured in a pit or above ground



## Model 424xLC<sup>2</sup>

AWD LOAD CONTROL DYNAMOMETER

### STANDARD FEATURES AND EQUIPMENT

- Measures up to 2000 hp+, 2000 ft/lbs torque (per drum), and 200 mph
- Tests vehicles in either two-wheel or all-wheel drive modes
- Two Eddy Current Load Absorption Units, Torque Cell, and dynamic load control software.
- Perform loaded tests, including step, sweep, and closed loop
- Above-Ground or Pit installation accessories included
- Consists of two Model 224xlc chassis dynamometers
- WinPep 7 Software and Hardware to interface (PC, printer, etc. not included)
- Automatic Conditions Measurement (absolute pressure, air temp, humidity)
- Ignition wire inductive tachometer pickup leads
- Auto Tie Down Package (straps, ratchets and ground hooks)
- Wheel Chocks
- Air Actuated Brake System
- Remote Software and Brake Control Pendant
- Installation and operation manuals
- One year replacement parts warranty
- 24/7 Tech Support via winpep.com

### DYNOJET DATALINK MODULE

Provides real time data from the OBDII port on all 1996 and newer vehicles. This data is available to be viewed live in the dynamometer software, WinPEP 7, and is also recorded into the dyno run. Review OBDII data, such as spark advance, throttle position, engine coolant temperatures, inlet air temperature, calculated load, and numerous other parameters right along side your dyno results.

### 4 CHANNEL ANALOG MODULE

This feature allows 4 additional 0-5v based sensors to be logged during dyno runs. Now you can display data such as boost and fuel pressure, along side the HP/TRQ channels. WinPEP 7 has a built-in sensor calibration routine that makes the set up simple. You can choose from various supported sensors, or input the data from any 0-5v sensor on the market.



# MODEL 424xLC<sup>2</sup>

## AUTOMOTIVE

### AWD LOAD CONTROL DYNAMOMETER

The 424xLC2 is a versatile AWD chassis dyno that offers unparalleled features at an affordable price. At any time you can operate the dyno in "inertia only" mode for assessing gains from bolt-on modifications, or utilize the dual eddy current absorbers for advanced load testing. The wheelbase is adjusted with the touch of button and can handle all the popular AWD vehicles on the road today. Along with offering the precise control from the eddy current load absorption units, the system also eliminates any potential speed bias between the two drums with "Speed Balance Technology". You can also easily upgrade to the new 424 Linx System at any time for a complete, all-in-one testing solution.

*As with the 224xLC, load tests can be performed including step, sweep and "road load simulations". Closed loop load testing is also available and is extremely helpful for tuning engines by targeting RPM, speed, or percentage of load. A simple click of the mouse can switch the 424xLC2 back and forth between an inertia only, or load style chassis dynamometer. The torque cell calibration routine takes less than a minute to perform and guarantees that you can spend more time tuning vehicles, instead of the dyno.*

Monitor "real time torque" on each drum for maximum gains while tuning.

Adjustable wheelbase from  
88" to 130" -STANDARD  
or 98" to 140" -OPTIONAL

#### Model 424xLC<sup>2</sup> Specifications

Maximum Horsepower	2000 Hp (PER DRUM)
Maximum Speed	200 MPH
Maximum Torque	2000 ft/lbs (PER DRUM)
Drums	2
Wheelbase Minimum	88 Inches
Wheelbase Maximum	140 Inches
Drum Diameter	24 Inches
Drum Width	81 Inches
Minimum Axle Width	N/A
Maximum Axle Width	81 Inches
Maximum Axle Weight	3000 lbs (PER DRUM)



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## 424LINX ALL WHEEL DRIVE LINKING SYSTEM

The Dynojet 424 Linx System is a simple, highly efficient design that incorporates a high speed Multi-V Rib Belt and pulleys that eliminates potential speed differentials between the dyno drums. This technology will allow you to test modern AWD vehicles without the fear of potentially damaging the center differentials, or activating intrusive stability control systems. It is also useful for those 2wd performance vehicles that require all four wheels to be rotating in order to avoid "reduced power mode". The 424 Linx will also retain the full flexibility of your 424x or 424xLC2, just simply press a button to set the desired wheelbase.

*The 424 Linx is not just an "automotive treadmill" like other mechanically linked systems on the market, rather, it's a highly repeatable, reliable, and consistent means of testing performance.*

**JUST LIKE YOU'D EXPECT FROM DYNOJET.**



### 424 Linx Specifications

Maximum Horsepower	2000 Hp (PER DRUM)
Maximum Speed	180 MPH
Maximum Torque	2000 ft/lbs (PER DRUM)
Belt	1 Multi-V Rib
Pulleys	4 Multi-V Rib

## 224XAWD ALL WHEEL DRIVE ATTACHMENT

The most versatile option, the 224xAWD attachment can be added to any existing Dynojet 224x or 248\* dynamometer to make it all-wheel-drive capable. Horsepower and torque are measured at each drum and can be displayed and / or logged independently, or combined. This attachment results in a system that can accommodate wheelbases from 88" to 140" with just the touch of a button. The 224x AWD Attachment is available in an above ground or pit configuration when upgrading from a 224x or 224xLC models.

*The 224xAWD upgrade for the 248 is available for in ground installation only.*



Adjustable wheelbase from  
88" to 130" -STANDARD  
or 98" to 140" -OPTIONAL

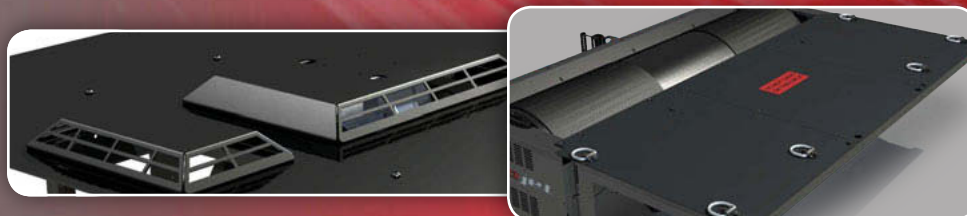


Shown with  
optional above  
ground kit.

## PIT COVERS / ABOVE GROUND KIT

Pit Covers shield open areas of pits, exposing the rollers only. This option is a standard feature for Model 424x and Model 424xLC2 and available for all other Dynojet Dynamometer Models to upgrade.

The Above Ground Kit when use in conjunction with a four-post lift, allows you to make changes to exhaust, gears, driveshafts and other drivetrain modifications right on the dyno during test sessions. (4 post lift sold separately)





# AUTOMOTIVE DYNAMOMETER FEATURES AND OPTIONS

## DATALINK MODULE FOR OBDII APPLICATIONS

This new device, (DJ-DLM) provides real time data from the OBDII port on all 1996 and newer vehicles. This data is available to be viewed live in the dynamometer software, WinPEP 7, and is also recorded into the dyno run. Imagine being able to review OBDII data, such as spark advance, throttle position, engine coolant temperatures, inlet air temperature, calculated load, and numerous other parameters right along side your dyno results.

In order to see the full spectrum when it comes to tuning a vehicle, your results are only as good as your data. The data from a Dynojet dyno is the baseline against which all other results must be measured. Powertrain management systems in modern vehicles are very complex and can make it difficult to attain repeatable results. Luckily, thanks to another industry first innovation, Dynojet has a solution to give you confidence in your test results. The Dynojet Datalink Module (DJ-DLM) for OBDII applications will allow you to monitor and record critical channels from a test vehicle at speeds up to 200 times per second. This isn't just a typical OBDII datalogger, but rather a device that covers all 1996+ vehicles and protocols with unparalleled speed.

### PC Connectivity Options

RJ45 Ethernet for distances < 300ft

802.11 WiFi for wireless vehicle communications

### Vehicle Communications

Generic OBD2

Communicates over the following OBD2 protocols: J1850PWM,

J1850VPM, ISO9141, KWP2000, ISO15765

Supports all 1996-newer OBD2 compliant vehicles

Read/clear check engine light

### Enhanced parameters

Ford High-Speed SCP Communications

Chrysler SCI Support

Support for Mixed Mode CAN

Supports enhanced communications

with many import vehicles

GM Fast Data rate

Second CAN channel

Support for Can 2.0b (ISO11898)



## EZ RPM MODULE

The EZ RPM Module makes acquiring a tachometer signal a breeze. Dynojet dynos already use an unparalleled RPM (revolutions per minute) acquisition technology, but this technology will allow a quick, non-intrusive means to acquire a tachometer signal. Some modern vehicles make it very difficult for dynamometer operators to get a tachometer signal because physical barriers in the engine bay, or poor accessibility to the coils. Simply plug in the Dynojet EZ RPM Module into the cigarette lighter, or attach the leads to the battery, and select the number of cylinders for the vehicle. This innovative feature is a great value and further solidifies Dynojet as the leader in chassis dynamometer technology.

## OPTICAL RPM PICKUP

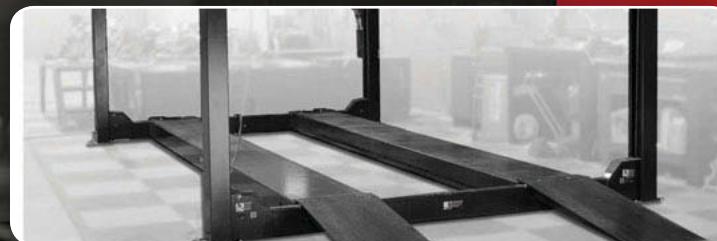
It is used when the standard method of RPM pickup is not available such as with diesel motors. It can compensate for a wide variance of ignition systems. The feature enables the shop to correlate the instantaneous dynamic motion of the driveshafts at various points on a powertrain and obtain the diagnostic data during live tuning.

## 4 POST LIFT

Dynojet acts as a liaison to provide you with the proper 4 post application. Any technical questions should be directed to Rotary at (800) 532-6973.

## CUSTOM TUNING PACKAGES

Save time and money! Popular tuning packages and software suites are now available directly from Dynojet. Shops that are interested in the ability to scan and flash late model Ford and GM vehicles can purchase tuning solutions from Diablosport, Superchips Custom Tuning, HP Tuners and EFI Live. When combined with the purchase of a Dynojet dynamometer, shops will be equipped with the necessary tools to maximize revenue potential. In addition to offering various tuning solutions, WinPEP 7 (dynamometer control software) can actually communicate with 1996 and newer OBDII vehicles. Dyno operators can display, review, and graph OBD parameters along side horsepower and torque curves. This feature ensures that tuners and dyno operators are armed with the knowledge necessary to create safe, yet powerful tunes.





# DYNAMOMETER HARDWARE

## AND OPTIONAL MODULES

### DYNAMOMETER EX+ HARDWARE

Dynaware EX+ dynamometer hardware uses the latest high speed technology to link your computer to the dyno. Every dyno system comes standard with 4 modules (listed below), and the Dynaware EX+ is easily upgraded to accommodate your needs. The modular design allows you to expand your testing capabilities as new modules are released.



Dynamometer Hardware installed in a 250i Above Ground Motorcycle Dyno and Hardware Cart for Pit Model Motorcycle Dynos.

#### • Atmospheric Sensing Module:

The Atmospheric Sensing Module measures absolute pressure, air temperature, and relative humidity. These measurements are used by the WinPEP dynamometer software to correct power and torque measurements to standard atmospheric conditions according to an SAE, Standard, DIN, JIS, or EEC formula.

#### • RPM Module:

The RPM Module receives and processes signals from up to 2 inductive pickups for measurement of engine RPM. Each input has an automatic gain circuit to compensate for a wide variance of ignition systems.

#### • Dynamometer I/O Module:

The Dynamometer Input/Output Module sends and receives data from the dynamometer and the handheld pendant. The module also contains a buzzer and light which are activated when either the tire or dynamometer speed limit is approached.

#### • CPU Module:

The CPU Module contains a 32-bit processor which acquires data from the expansion modules and communicates the data to the computer running the WinPEP software. The processor queries the expansion modules to determine which modules are connected. The CPU Module fastens to an attractive stand for placement on the computer or work bench. Each additional module then plugs conveniently into the one below it, providing expansion for future modules.





## WIDE BAND AIR/FUEL RATIO SYSTEM

Tuning with a Dynojet dynamometer has never been easier! With the addition of our Wide Band Air/Fuel Ratio System, every dyno run can show you horsepower and torque, and the exact air/fuel ratio. This system is one of the most insightful tuning tools available today! You can easily identify lean or rich trends from idle to redline. Whether tuning a naturally aspirated "all motor" car, or a forced induction screamer, you will know the tune is right. Any shop involved with EFI mapping shouldn't be without the Dynojet Wide Band Air/Fuel Ratio System.



## EDDY CURRENT LOAD ABSORPTION UNIT

When performing loaded testing, the Eddy Current Load Absorption Unit option utilizes an integrated Torque Cell to quantify power absorption in an ultra precise and consistent manner. Loaded test files are then available for review and analysis in the WinPEP 7 software. During a steady state test the dynamometer operator can view torque in "real time", a great feature when performing live ECM tuning. Additional highlights of this system include a quick and effective calibration routine that can be accomplished in under a minute.



## 4 CHANNEL ANALOG MODULE

The analog module allows (4) additional 0-5v based sensors to be logged during dyno runs. This allows you to display data such as boost and fuel pressure, along side the HP / TRQ channels.

WinPEP 7 has a built in sensor calibration routine that makes the set up simple. You can choose from various supported sensors, or input the data from any 0-5v sensor on the market. The module simply mounts to the top of the Dynoware EX+ System and also includes a 5v reference output.

*Manifold Pressure (boost) and Fuel Pressure sensors sold separately.*

## THERMOCOUPLE AMP

Enhancing the capabilities of the Analog module, the new Dynojet Thermocouple Amp Module is able to convert any Type K Thermocouple into a 0-5v based analog signal. The kit comes with the module, as well as a plug-n-play harness that connects to the Analog Module. There are two different kits available, one that has a range of 0-500 degree F and then a 0-2000 degree F version. Set up is quick and easy, and as always, this device is fully supported in our innovative dynamometer control software, WinPEP 7.





**Dynojet**<sup>®</sup>

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