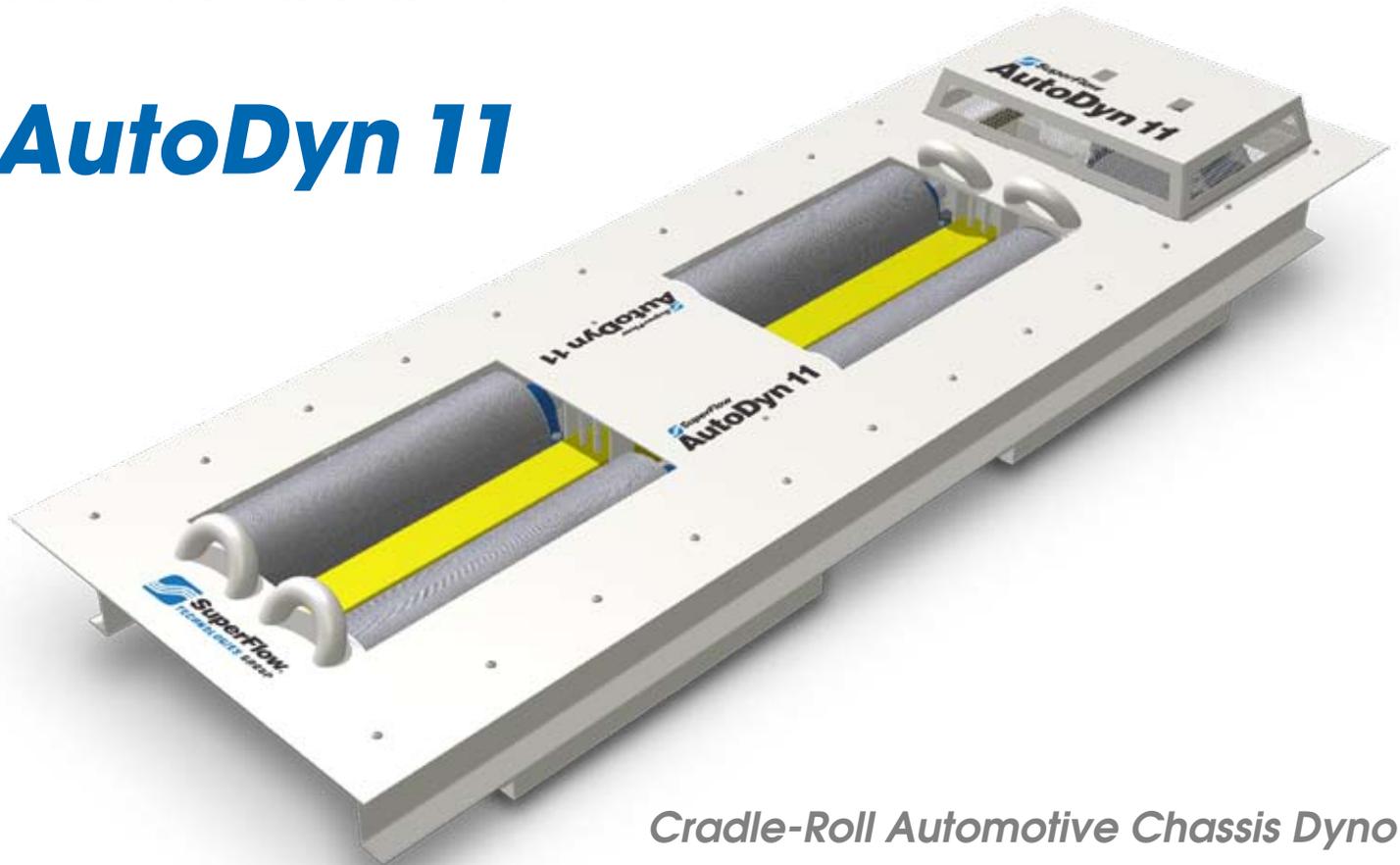


# AutoDyn 11



## Cradle-Roll Automotive Chassis Dyno

### Powerful, Compact and Affordable

SuperFlow's AutoDyn 11 is a compact cradle-roll chassis dynamometer with an eddy current power absorption unit. The cradle-roll design makes it easy to load and unload vehicles. The AutoDyn 11 fits in shallow pits or above ground with a ramp kit. It is very affordable and yet has all the data acquisition and control power of SuperFlow's premium models.

The AutoDyn 11 allows you to test vehicles with over 1,100 horsepower at speeds up to 150 mph. Its standard power absorption unit holds up to 650 hp at the tire patch. The AutoDyn 11's rolls are only 23" (58 cm) apart so you can test narrow-track drag race vehicles.

Its 7,700 lbs (3500 kg) per axle test capacity and generous 97" outer roll width allow you to test large vehicles. Its durable construction, 10-year bearings and first rate customer service department help make the AutoDyn 11 a low-cost, long term investment.

SuperFlow Test Engineers measure every AutoDyn 11's inertia and parasitic losses and calibrate it so you get the most accurate and reproducible test results.

#### Features

- Test capacity over 1,100 hp and up to 150 mph<sup>1</sup>. 650 hp peak absorption.
- 10.7" diameter cradle rollset with pneumatic vehicle lift and integrated roll brake makes it fast and easy to load and unload vehicles.
- Compact design saves valuable floor space, whether mounted in the floor, or above-ground.
- Standard eddy current power absorption unit, load cell and software allow you to run built-in and configurable loaded tests.
- WinDyn dynamometer software makes it easy for you to configure, run, save and analyze dynamometer tests.
- Built-in weather station (air temperature, barometric pressure, humidity).
- Inductive ignition sensor clip (user adjustable gain).
- Handheld remote provides complete control of the test.
- Side travel restrictors help keep the tires in the cradle and accelerate loading procedures.
- 76 data acquisition input channels.
- Shop banners and decal kit, web site listing.
- One year warranty, including parts and labor.<sup>2</sup>

<sup>1</sup> Cold, intermittent rating. Test up to 130 mph (210 kph) continuously.

<sup>2</sup> Does not include travel costs, travel time and expenses.

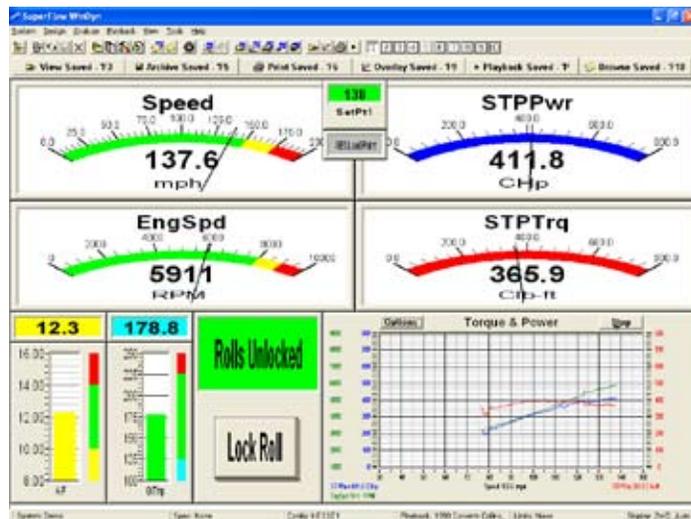
# The AutoDyn 11: Compact, affordable chassis dyno designed for a variety of automobile and light truck applications

## WinDyn Software Helps Make the AutoDyn 11 Powerful and Easy to Use.

Enter all common test settings (notes, specifications, etc.) from a single location for fast test setup. Use built-in road-load simulation tests, screen designs and reports for immediate results. WinDyn comes ready to use, but almost everything is configurable. Write custom tests as your requirements change. Easily create your own data screens and tailor reports to your specific needs. You can even configure the entire test system with a single command, using WinDyn Test Groups.

Protect your operators and equipment with WinDyn's advanced Safety Limits. Use WinDyn's data analysis tools to carefully scrutinize data. Create baselines by averaging multiple tests together. Evaluate changes quickly by overlaying back-to-back pulls, in normal and percent-change modes. Enhance data output repeatability using ProFilter data processing. Select an industry standard correction factor or build your own.

Finally, impress your customers with advanced presentation features. Replay customer tests in both real-time and slow-motion. Offer professional numeric and graphical hardcopy reports. And, effortlessly create 'DataPacks' that allow your customers to analyze computer test data at home.



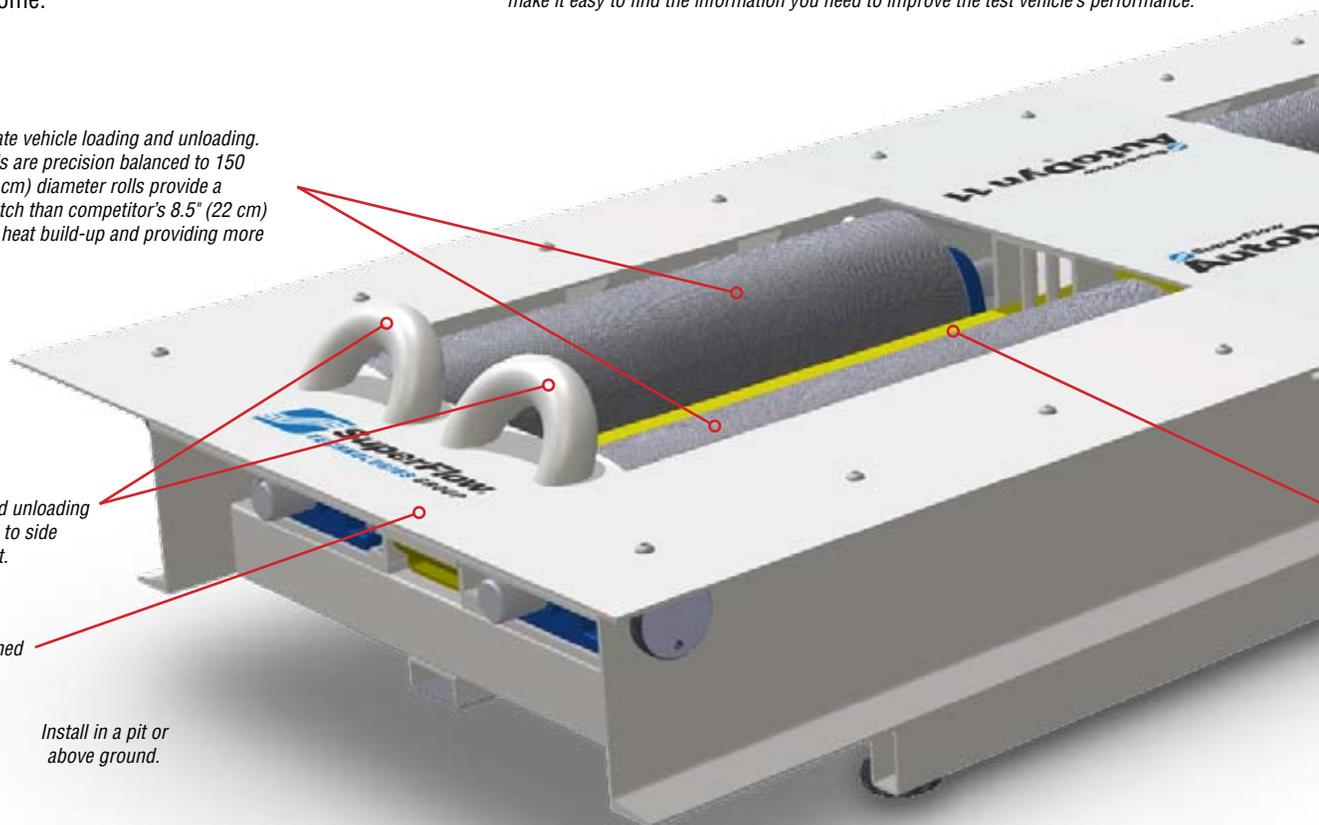
SuperFlow's WinDyn software is the 'front-end' to your dynamometer. It comes fully-equipped with ready-to-run test sequences. It's easy to select one of the standard sequences and begin testing immediately. Colorful gauges bar graphs and data plots make it easy to find the information you need to improve the test vehicle's performance.

*Recessed cradle rolls accelerate vehicle loading and unloading. The AutoDyn 11's knurled rolls are precision balanced to 150 mph (240 kph). Its 10.7" (27 cm) diameter rolls provide a flatter effective tire contact patch than competitor's 8.5" (22 cm) rolls, reducing tire deflection, heat build-up and providing more consistent data.*

*Tire guides help in loading and unloading vehicles and help restrict side to side wheel movement during a test.*

*Heavy-duty steel frame designed to last a lifetime.*

*Install in a pit or above ground.*



## Precise Control, Right at Your Fingertips.

SuperFlow's Data Acquisition and Control System performs controlled acceleration, controlled deceleration, step, steady-state, and road-load tests right out of the box. Steady-state and road-load tests can be performed at full or part throttle. Many tests can be run through multiple gears. You can control to torque, power, roll or engine speed. It's perfect for fuel injection tuning or simple road-load tests for vehicle diagnostics.

The entire test sequence can be controlled from the handheld controller. Its stand alone data acquisition computer doesn't rely on a personal computer host for processing power. It allows you to gather data from up to 76 sensor inputs, including temperatures, pressures,

analog and digital inputs. The DAC computer reads input data at 1.2 KHz, and records data at 100 Hz.

Modular data-acquisition panels can be easily added to the sensor box after the initial purchase to enhance your testing abilities. The handheld remote controller provides access to all test features. The optional wireless controller frees you for more efficient testing and movement. The AutoDyn 11's optical tachometer allows you to verify tire slippage and distortion and obtain engine speed on engines (like diesels) that have no spark plugs. The built-in weather station automatically gathers ambient air temperature, barometric pressure and humidity.

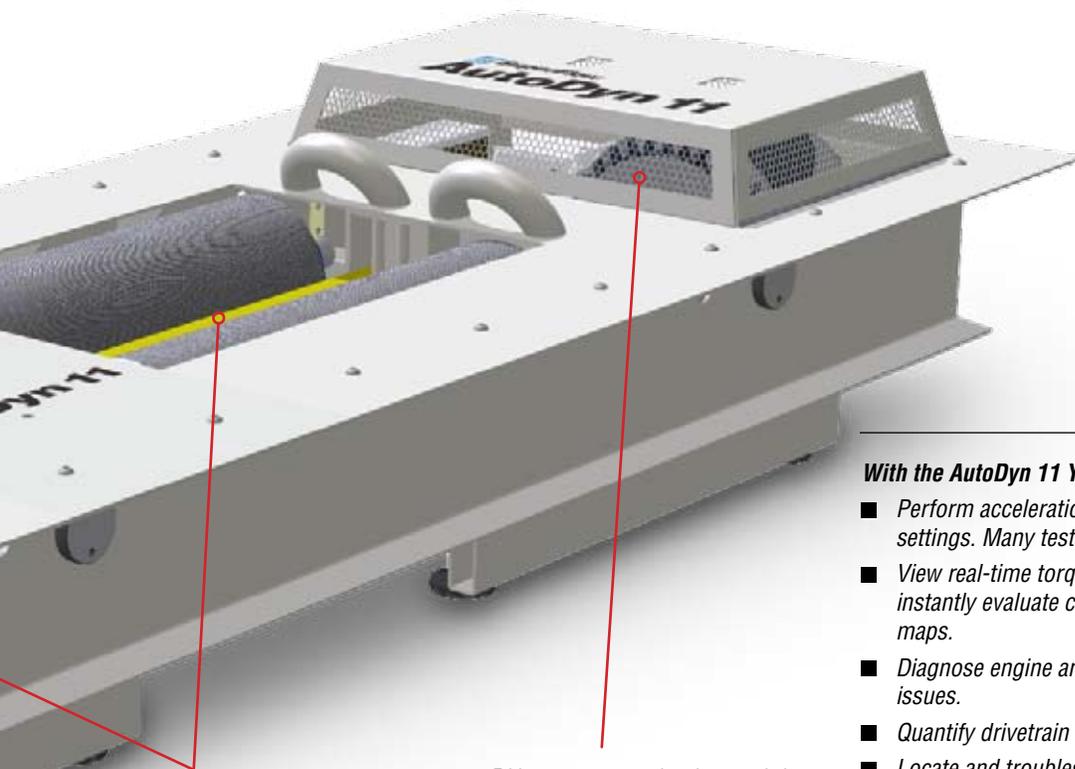


Optional wireless, handheld controller provides convenient touch-screen access to all testing features. You can control the entire test from a handheld controller inside the test vehicle. Three knobs allow rapid adjustments to test parameters such as load and speed control points.

The AutoDyn 11's Sensor Box includes 76 input channels. This stand alone sensor box can be mounted on a roll-around stand (as shown), boom or a wall. Its self-contained data acquisition and control computer does not rely on a personal computer for processing power.

Six expansion bays for optional thermocouple, pressure, or analog inputs. Two Lambda sensor inputs included.

With optional equipment, SuperFlow Data Acquisition and Control systems can control test cell functions such as room lighting, fans, pumps, etc.



Air actuated lift bars with integrated brake rises to lock the rolls and provide a platform for the vehicle's tires. The bar is lowered once the vehicle is in place, releasing the rolls and lowering the tires into the cradle.

Eddy current power absorber coupled directly to rear rollset. No belts to stretch, break or cause inconsistent results.

### With the AutoDyn 11 You Can...

- Perform acceleration, step and steady-state tests at all throttle settings. Many tests can be run through multiple gears.
- View real-time torque output, at steady and changing speeds, to instantly evaluate changes you've made to the engine's fuel or timing maps.
- Diagnose engine and drivetrain problems. Troubleshoot driveability issues.
- Quantify drivetrain frictional losses.
- Locate and troubleshoot engine and driveline problems.
- Simulate aerodynamic loads.
- Evaluate exhaust systems, lubricants, performance coatings, pinion angle alignment, axle bearings, rear ends, and U-joints.
- Quantify tire, clutch, or torque converter slip.
- Simulate hills of varying grades, constant or variable speeds, and around-town stoplight-to-stoplight driving.

## Specifications

**Maximum Speed**  
 Intermittent ..... up to 150 mph (240 kph)  
 Continuous ..... up to 130 mph (210 kph)

**Control Accuracy** ..... ± 0.1 mph (0.2 kph)

**Maximum Measurable Power<sup>1</sup>** ..... 1,100+ hp (820 kW)

**Peak Power Absorption<sup>1</sup>**

Cold ..... over 650 hp (485 kW)  
 Continuous ..... 200 hp (150 kW)

**Roll Lock/Lift System** ..... air actuated

**Air Requirements** ..... 50 – 100 psi (345 – 690 kPa)

**Track Width**

Minimum ..... 23" (58 cm)  
 Maximum ..... 97" (246 cm)

**Base System Inertia** ..... 770 lbs (350 kg)

**Maximum Axle Load** ..... 7,700 lbs (3,500 kg)/axle

**Maximum Drive Over Capacity** ..... 11,000 lbs (5,000 kg)/axle

**Electrical Requirements** ..... 110VAC/15A or 250VAC/8A  
 ..... and 208 – 250VAC/20A

**Shipping Weight (approximate)** ..... 4,000 lbs (1814 kg)

## Warranty and Support

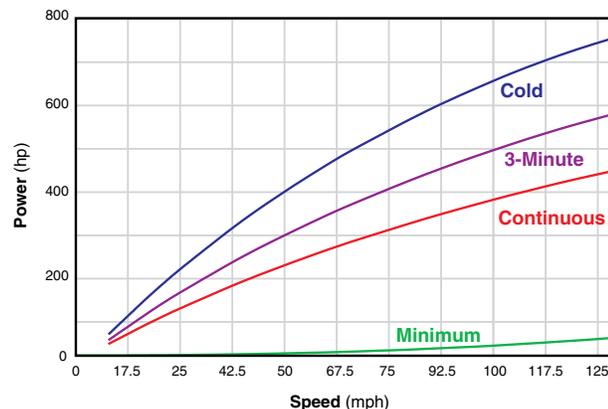
- One year warranty, including parts and labor.
- Two days on-site training included<sup>2</sup>.
- Extended warranties available.
- Scheduled maintenance contracts available.

<sup>1</sup> Traction limited.

<sup>2</sup> Travel costs, travel time and expenses not included.

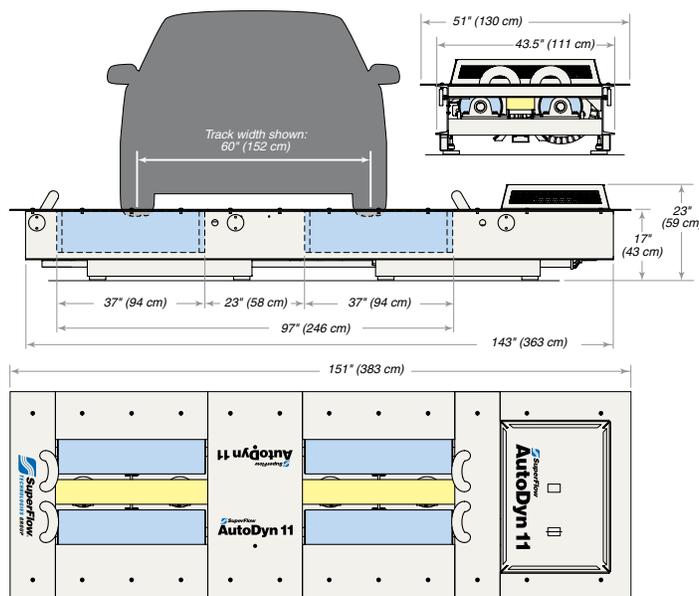
## Power Absorption Graph

Eddy current power absorbers are heat-sensitive. As they get hotter, their ability to absorb power diminishes. Additionally, their ability to absorb power varies with the absorber's rotational speed. The curves below show these relationships graphically.



## Dimensions

This diagram shows the AutoDyn 11's roll widths and roll spacing and external dimensions. A standard passenger car is shown for scale.



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For information on **Flowbenches, Engine Dynamometers, Chassis Dynamometers, Towing Dynamometers, Dynamometer Software and Data Acquisition and Control Systems**, contact: 3512 North Tejon, Colorado Springs CO 80907  
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For information on **Transmission Dynamometers, Transmission Testers, Torque Converter Rebuilding Systems, Driveshaft Rebuilding Equipment and Brake Dynamometers**, contact: 4060 Dixon Street, Des Moines IA 50313  
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