SuperFlow® TECHNOLOGIES GROUP

AXILINE • HICKLIN • SUPERFLOW • TCRS

AutoDyn 30

Compact, High-Performance 30" Auto Chassis Dynamometer

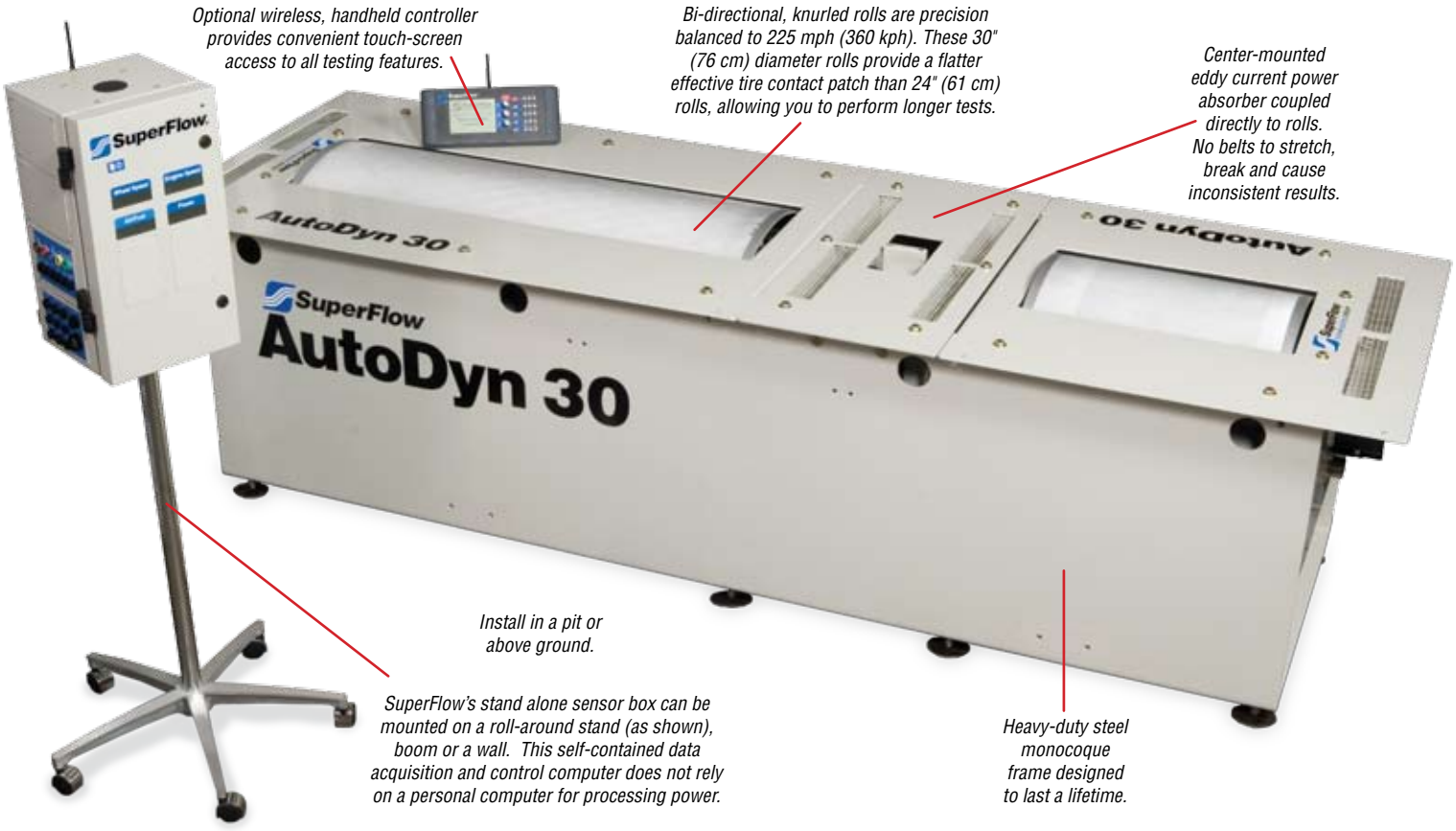
FEATURES:

- *Test capacity over 1,200 hp (895 kW) and up to 225 mph (362 kph).*
- *Center-mounted eddy current power absorber, load cell and software allow you to run built-in and configurable loaded tests.*
- *WinDyn dynamometer software.*
- *Built-in weather station (air temperature, barometric pressure, humidity).*
- *Choice of several different engine speed sensors.*
- *Air-actuated roll lock.*
- *Handheld remote (wireless optional).*
- *One year warranty, including parts and labor.*
- *All-wheel-drive model accepts wheelbases from 92"–140" (234–356 cm).*
- *Emissions-grade AC motoring upgrade option.*

Get Outstanding Performance in a Compact Package at a Very Reasonable Price!

SuperFlow's AutoDyn 30 was designed for a variety of automobile, light truck, ATV and motorcycle applications. Test vehicles with over 1,200 horsepower at speeds up to 225 mph (362 kph). Add a second power absorber for higher-power applications. The AutoDyn 30's standard center-mounted power absorber places the rolls only 26" (66 cm) apart. This allows you to test narrow-axle drag race vehicles and provides an extremely compact footprint to help conserve valuable shop floor space. SuperFlow provides all this power and efficiency for a very affordable price.

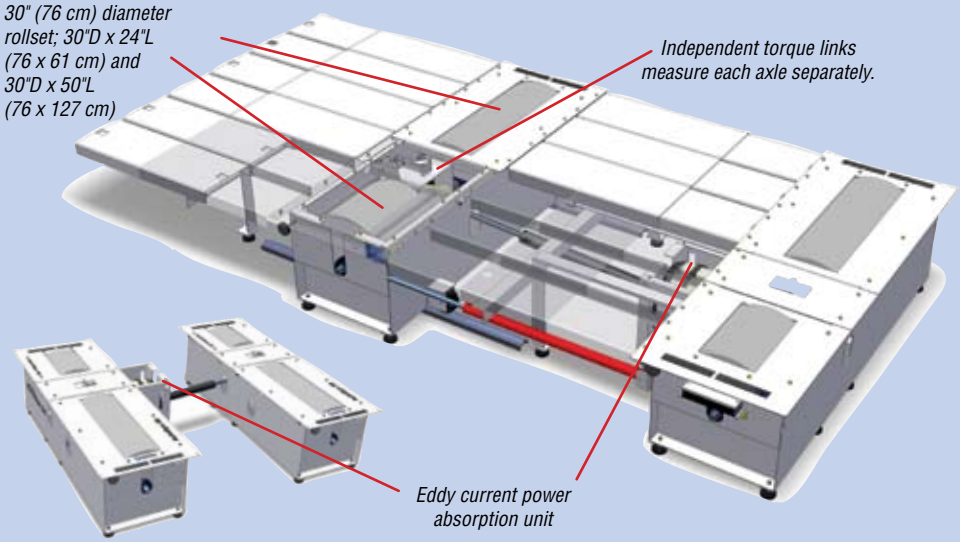
The AutoDyn 30:
Designed for High-Performance Imports, Muscle Cars and Light-Duty Diesel Trucks.



The AutoDyn 30's Chassis is Powerful and Compact.

The AutoDyn 30 tests vehicles with up to and over 1,200 hp (894 kW) at speeds up to 225 mph (360 kph). It can perform loaded tests on vehicles with up to and over 900 hp (671 kW). You can add a second power absorber for higher power applications. Add SuperFlow's electric motor and you can motor the test vehicle to perform emissions drive cycles, inertia simulations, evaluate frictional losses and conduct many other engineering-grade test procedures. WinDyn's drivers' trace features assist you in performing emissions validation and OEM-level ECU mapping. The all-wheel drive model accommodates wheelbases from 92"–140" (233–355 cm). All AutoDyn 30s have 100" (254 cm) outer roll width, which is wide and strong enough to test dual-rear-wheel pickup trucks and other large vehicles. SuperFlow Test Engineers measure system inertia and parasitic losses for your AutoDyn 30 and calibrate it so you get the most accurate and repeatable test results.

SuperFlow AutoDyn 30 All-Wheel Drive



Test 4WD, AWD and models with modern anti-lock braking systems requiring all four wheels to turn at similar speeds. Single-power absorber model is perfect for most passenger vehicles, even modified high performance vehicles. Trunnion-mounted differentials hold the front and rear roll sets, allowing you to measure torque at each axle individually to evaluate center differential torque bias. Computer-controlled hydraulic ram adjusts the wheelbase.

WinDyn Software Helps Make the AutoDyn 30 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. Protect your operators and equipment with WinDyn's advanced Safety Limits. Accurately replicate race track laps on the dyno using data collected from 3rd-party on-board data acquisition equipment.

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.

With the AutoDyn 30 You Can…

- *Perform acceleration, step and steady-state tests at all throttle settings.*
- *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.*
- *Identify drivetrain frictional losses.*
- *Troubleshoot driveability issues.*
- *Control the entire test from a handheld controller inside the test vehicle.*
- *Run track lap simulations.*

Here, the operator uses the AutoDyn 30's wireless handheld in the car to select a step test he'll use to map fuel and timing.

You can use the advanced features of the AutoDyn's WinDyn software to tune stand alone control units to extract maximum power and driveability.

WinDyn has the data analysis tools you need to get the job done right. Create reliable 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 a 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.

The AutoDyn 30 Gives You 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 torque, power, roll or engine speed. It's perfect for fuel injection tuning or simple road-load tests for vehicle diagnostics, right out of the box.

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 30'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.

SuperFlow provides multiple engine speed pickups to make sure you get a good engine speed signal.

Imports like this 600 hp turbocharged Honda CX hatchback rapidly find their way onto the new AutoDyn 30. Loading most vehicles is fast and easy. Large 30" (76 cm) diameter rolls provide ample surface area for this 600 hp Honda to apply its power.

Specifications

Speed Rating	up to 225 mph (362 kph)
Control Accuracy	± 0.1 mph (0.2 kph)
Maximum Wheel Power[1] (inertia test)	1200+ hp (894 kW)
Peak Power Absorption[1] (cold)	
Single eddy current	over 900 hp (671 kW)
Dual eddy current	1,800 hp (1043 kW)
Roll Lock	air actuated
Air Requirements	50 – 100 psi (345 – 690 kPa)
Maximum Axle Load	8,000 lbs (3,629 kg)
Power Requirements	110VAC/15A or 250VAC/8A and 208 – 250VAC/20A
Shipping Weights (approximate)	
2WD Single eddy current	5,000 lbs (2268 kg)
AWD Single eddy current	12,000 lbs (5443 kg)
Wheel Bases	
AWD wheelbase accommodation[2]	92" – 140" (234 – 356 cm)

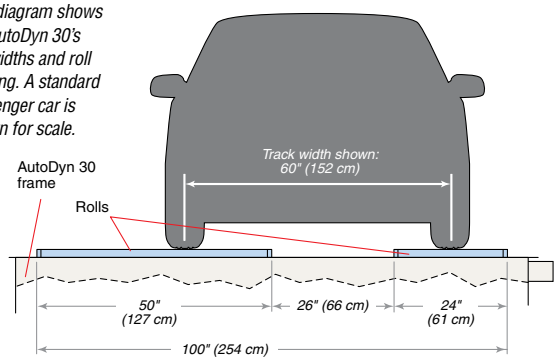
Warranty and Support

- One year warranty, including parts and labor.
- Two days on-site training included[3].
- Extended warranties available.
- Scheduled maintenance contracts available.

[1] Traction limited.
[2] AWD model supports two different wheelbase ranges, via two interchangeable half-shafts:
Range 1: ~92 – 131.5" (234 – 334 cm)
Range 2: ~100.5 – 140" (255 – 356 cm)
[3] Travel and expenses not included.

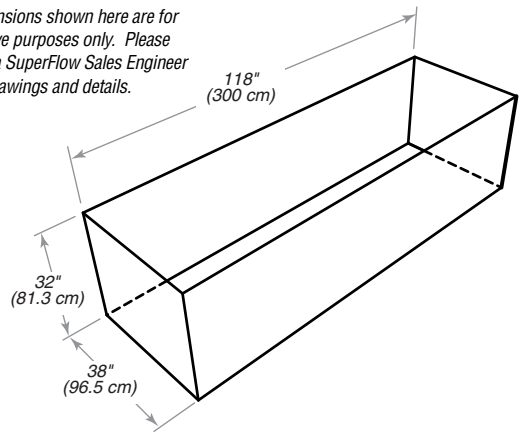
Track Width Diagram

This diagram shows the AutoDyn 30's roll widths and roll spacing. A standard passenger car is shown for scale.

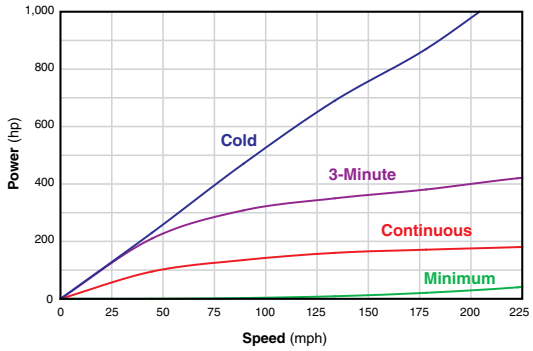


Rough Pit Dimensions

Pit dimensions shown here are for illustrative purposes only. Please contact a SuperFlow Sales Engineer for pit drawings and details.



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 above show these relationships graphically. These curves are for a single-absorber. Additional power absorbers can be added for high-power applications. Call a Sales Engineer for more information.

SPECIFICATIONS

Compact, High-Performance 30" Auto Chassis Dynamometer

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