SuperFlow
DYNAMOMETERS & FLOWBENCHES

AutoDyn Series
Chassis Dynamometers

Actual products may differ
from images shown

Hand Held Controller

Simple and accessible control while testings

Eddy Current Absorbers

To simulate real-world drivingconditions

Versatile

With upgradeable options and adjustable wheel base

superflow.com
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Sussex, Wisconsin USA

Superflow® The Industry Standard

Since 1972, SuperFlow® has been designing and manufacturing industry leading flowbenches, engine dynamometers, chassis dynamometers and advanced Windows® based data acquisition systems. Today, with more than 10,000 products in the field, SuperFlow® is far and away the most experienced and well rounded manufacturer in the industry offering the most complete selection of test equipment. SuperFlow's® four major brands, Axiline®, Hicklin® Engineering, SuperFlow® and TCRS®, test or rebuild every component of the drive train from the engine and transmission to the torque converter. Come see why thousands have already trusted SuperFlow® for all of their testing needs.

Superflow's Many Industry Firsts

We Were the
FIRST

- To offer true mechancial AWD synchronization
- To offer a Windows® based data acquisition system
- With independent torque measurement at front & rear axle

AutoDyn™ - Engineered To Be Better

The SuperFlow® AutoDyn™ chassis dynamometers were designed with one goal: to provide the most accurate and repeatable testing possible. Every square inch of the AutoDyn's™ were engineered to be better from the true Mechanical AWD Synchronization system to the solid steel frame construction, which reduces noise and vibration, no detail has been spared.

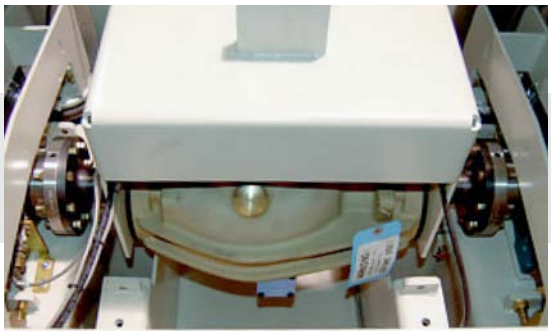
It is no coincidence that our chassis dynamometers are used all over Europe at the best Audi®, Mercedes® and BMW® tuners and also throughout the United States at the companies that define the automotive performance and racing industries. You might actually be surprised to learn who all uses a SuperFlow® AutoDyn™, as they're probably the best kept secret in performance chassis dynamometers.

Come and see why hundreds of companies trust the SuperFlow® AutoDyn's™ for all of their testing needs.

Features That Matter

Push-Button Wheel Base Adjustment

Push-button wheel base adjustment is not only convenient; it's also the right way to accommodate AWD vehicles because it allows the vehicles to be loaded in the same position on the rolls every time. Non-adjustable cradle rolls systems that simply stack rolls together to accommodate AWD vehicles produce inconsistencies in testing as one vehicle might land between rolls and another may land on top of the rolls, creating a different testing environment for each vehicle.

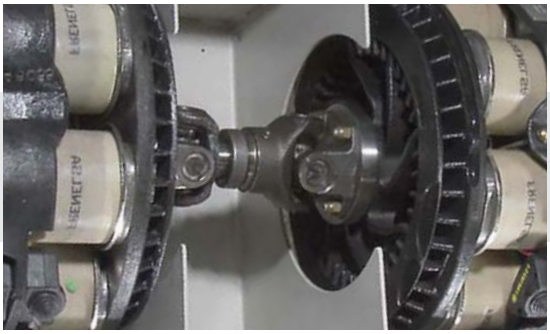


Trunnion Mounted Differentials

Precision, trunnion mounted differentials allow individual torque measurement of each axle (AWD models) so you can see total torque through the RPM range and also the torque split between the front and rear axles to tune for driveability. They also allow accurate measurement of dyno losses so the inertia of the dyno does not affect the test results. Further, it means SuperFlow® dynos are not susceptible to inaccuracies based on heat in the dyno components like the differentials and couplings.

Eddy Current Absorption

High capacity eddy current absorbers allow for both inertia and loaded testing. On all models, they're coupled to each other and to the rolls with positive mechanical couplings like differentials and driveshafts. This allows accurate measurement of parasitic horsepower losses in each individual dyno that we manufacture. WinDyn® is loaded with this data at the factory to compensate for the losses and provide accurate readings.



Large Contact Patch

Our large 30" and 42" diameter, single-roll dynamometers provide superior traction with minimum tire deflection. Vehicles can be secured to the dyno in a linear fashion without adding unneeded down-force (which won't be there on the track). This reduces heat build-up during testing so tires are not put through damaging heat cycles. Comparative cradle roll systems cause tire deflection in two points at each tire producing more heat in the tires, and less accurate measurement by the dyno.

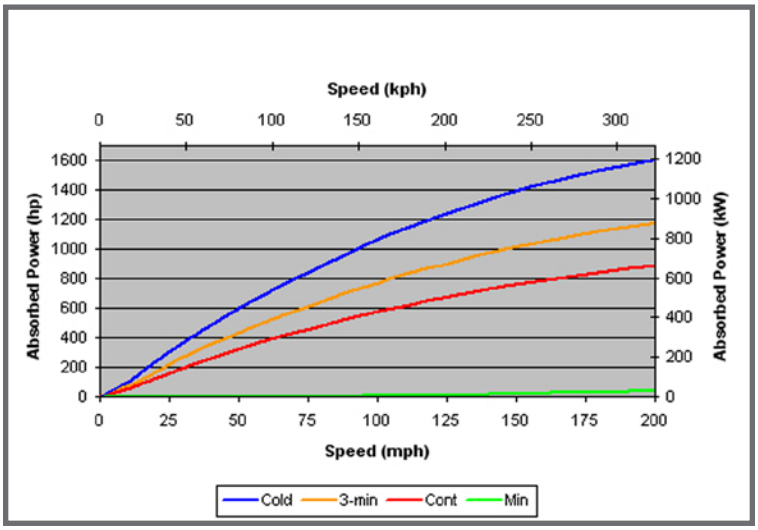
SF-880E AWD

Chassis Dyno

Specifications

- Roll Diameter: 42 in (107 cm)
- Peak Power 2,500 hp (1,864 kW)
- Peak Absorbed Power 1,600 hp (1,193 kW)
- Maximum Speed 200 mph (322 kph)
- Track Width[1] (inside-outside) 40-84 in (102-213 cm)
- Dimensions[2] 102 x 47 x 158 in (inside) - 173 in (outside) (259 x 119 x 401-439 cm)
- Wheelbase 88-134 in (224-340 cm)
- Base System Inertia[3] 3,467 lb (1,573 kg)
- Axle Weight 14,000 lb (6,350 kg)
- Air Requirements 50-100 psi (345-690 kPa)
- Power Requirements 110-250 VAC / 15-8 amps, 208-250 VAC / 40 amps

[1] Other track widths available, call for more details
[2] Different track widths change dimensions
[3] Other inertia's available, call for more details



There is a reason that the AutoDyn 880E AWD is used all over the world by some of the most respected names in automotive performance. That reason is simple: SuperFlow has perfected the art of accurate road simulation via a simple and reliable mechanical linkage. SuperFlow's Road Simulation Technology (RST) utilizes heavy-duty differentials and a steel drive shaft to synchronize the front and rear roll speeds along with eddy-current brakes to accurately load vehicles according to their inertia, aerodynamic losses and rolling losses. SuperFlow RST prevents damage to the differentials and viscous couplings of AWD vehicles and removes the chance of activating a vehicles traction control system or ABS while accurately loading each vehicle as if it were traveling down the road or track.

SuperFlow RST is much simpler and more accurate than complicated belt systems that stretch and break or inconsistent electronically synced systems that allow the front and rear rollers to spin at different speeds, causing driveline windup and damaging driveline components. Differentials and driveshafts allow SuperFlow to accurately measure and compensate for the parasitic losses of every dyno produced so that each one leaves the factory calibrated with its own inertia and parasitic data. The end result is the most accurate torque and power measurement available. Further, torque is measured using two temperature-compensated load cells, one at each roll set, so you're not only able to see total torque across the rpm range, but also the torque split between the front and rear axles.

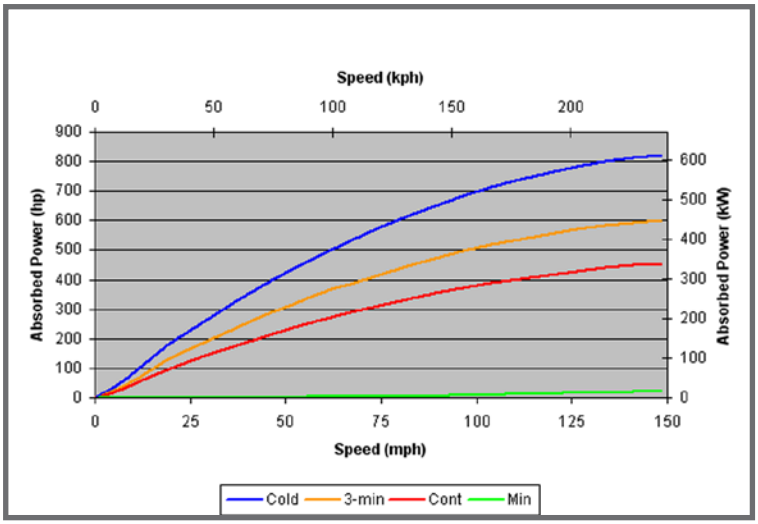
The AutoDyn 880E AWD's large 42" knurled rolls provide superior traction and minimal tire deflection so testing is as close to real world conditions as possible. Cradle roll systems deflect the tire in two locations which builds more heat in the tire and results in less accurate hp measurement than large single roll dynos like the AutoDyn 880E AWD.

SF-832 AWD

Chassis Dyno

Specifications

- Roll Diameter: 30 in (76.2 cm)
- Peak Power 2,500 hp (1,864 kW)
- Peak Absorbed Power 850 hp (633.8 kW)
- Maximum Speed 175 mph (282 kph)
- Track Width (inside-outside) 26-100 in (102-213 cm)
- Dimensions 102 x 35 x 133 in (inside) - 170 in (outside) (305 x 89 x 338-432 cm)
- Wheelbase 92-130 in (234-330 cm)
- Base System Inertia 2,400 lb per axle (1,089 kg)
- Axle Weight 8,000 lb (3,629 kg)
- Air Requirements 50-100 psi (345-690 kPa)
- Power Requirements 110 VAC / 15 amps or 250 VAC / 8 amps and 208-250 VAC / 20 amps



Just like the AutoDyn 880E AWD, the SF-832 AWD uses SuperFlow Road Simulation Technology (RST) to mechanically synchronize the front and rear roll speeds and accurately load each vehicle. This is done with precise, race-inspired differentials and a steel drive shaft that connects the front and rear rollers along with an eddy-current brake to accurately load vehicles according to their inertia, aerodynamic losses and rolling losses. SuperFlow RST prevents damage to the differentials of AWD vehicles and removes the chance of activating the traction control system or ABS, while accurately loading each vehicle as if it were traveling down the road or track.

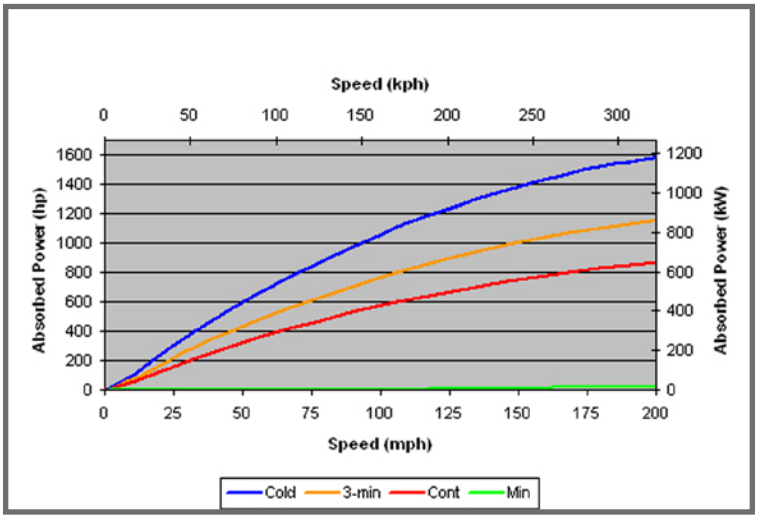
SuperFlow does not use complicated belt systems that stretch and break or inconsistent electronically synced systems that allow the front and rear rollers to spin at different speeds, causing driveline windup and damaging driveline components. Differentials and driveshafts allow SuperFlow to measure and compensate for the parasitic losses of every dyno produced so that each one leaves the factory calibrated with its own inertia and parasitic data. The end result is the most accurate torque and power measurement available. Further, torque is measured using two temperature-compensated load cells, one at each roll set, so you can see total torque across the rpm range, and also the torque split between the front and rear axles.

The 30" knurled rolls provide superior traction and minimal tire deflection so testing is accurate and repeatable. It combines the low profile frame commonly found on cradle roll systems with the added traction benefits of a large single roll dyno so it works perfect in a pit with a 4-post lift. It features push-button wheel base adjustment so it easily accommodates most AWD vehicles on the road today.

SF-849
Chassis Dyno

Specifications

- Roll Diameter: 42 in (107 cm)
- Peak Power 2,500 hp (1,864 kW)
- Peak Absorbed Power 1,600 hp (1,193 kW)
- Maximum Speed 200 mph (322 kph)
- Track Width (inside-outside) 28-96 in (71-243 cm)
- Dimensions 102 x 54 x 47 in (259 x 137 x 119 cm)
- Wheelbase N/A
- Base System Inertia 2,550 lb (1,157 kg)
- Axle Weight 14,000 lb (6,350 kg)
- Air Requirements 50-100 psi (345-690 kPa)
- Power Requirements 110-250 VAC / 15-8 amps, 208-250 VAC / 40 amps



The AutoDyn™ 849 two-wheel-drive chassis dyno is unrivaled in the marketplace. Its dual eddy current absorbers provide 1,600 horsepower of absorption capability and its large 42" diameter rolls create one of the largest contact patches available to the market. The size of the rolls and their knurled surface generate superior traction and cause minimal tire deflection so testing is as close to real world conditions as possible. These features make the AutoDyn™ 849 perfect for anyone who is serious about tuning high horsepower vehicles. It has the low end torque to handle the biggest diesel pickup trucks and the high end horsepower to handle turbocharged and nitrous equipped two wheel drive cars.

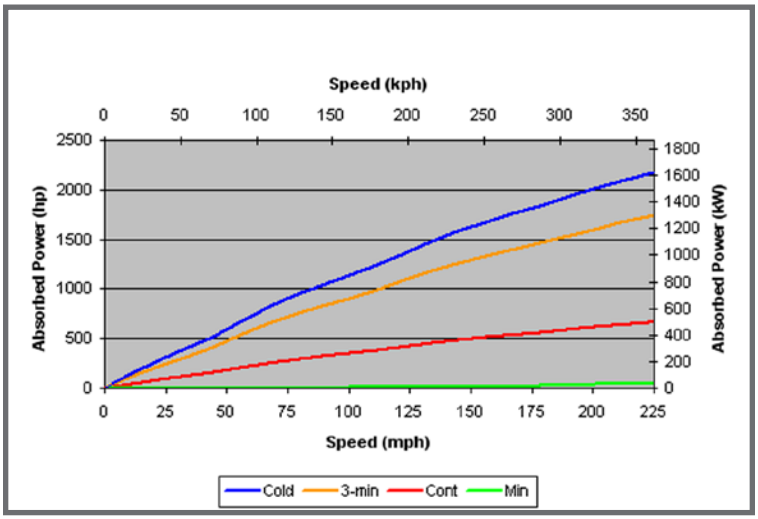
The dual eddy current absorbers let you perform loaded testing to make EFI tuning simple and fast. The absorbers are coupled directly to the rolls through a heavy-duty differential for the most accurate testing possible. You can simulate circle track, road course, and high performance street applications or use SuperFlow Road Simulation Technology (RST) to reproduce real-world driving conditions. SuperFlow (RST) accurately loads vehicles according to their inertia, aerodynamic losses and rolling losses so you know that when you get to the track your vehicle will perform just like it did on the dyno.

The AutoDyn 849 is also easily upgradeable to AWD if your testing needs were to change down the road. With the addition of a second roll set and a driveshaft to synchronize the front and rear rolls, the SF-849 quickly and affordably becomes the SF-880 AWD chassis dynamometer. This grants you the peace of mind to know that you can start with a top of the line 2WD dynamometer and easily turn it into the best AWD chassis dynamometer on the market when the time is right for you.

SF-832
Chassis Dyno

Specifications

- Roll Diameter: 30 in (76.2 cm)
- Peak Power 2,500 hp (1,864 kW)
- Peak Absorbed Power 1,100 hp (SEC) / 2,200 hp (DEC) (820 / 1,641 kW)
- Maximum Speed 225 mph (362 kph)
- Track Width (inside-outside) 26-100 in (66-254 cm)
- Dimensions 120 x 40.5 x 35 in (305 x 103 x 89 cm)
- Wheelbase N/A
- Base System Inertia 1,200lb (544 kg)
- Axle Weight 8,000 lb (3,629 kg)
- Air Requirements 50-100 psi (345-690 kPa)
- Power Requirements 110 VAC / 15 amps or 250 VAC / 8 amps and 208-250 VAC / 20 amps



The SF-832 is quite possibly the most versatile chassis dynamometer on the market today. It comes standard with SuperFlow Road Simulation Technology (RST) to accurately load vehicles according to their inertia, aerodynamic losses and rolling losses. The 2,500 hp measurement capacity and its available 2,200 hp absorption capability allow you to test just about anything a customer would bring through your door. The SF-832 was the first chassis dyno on the market to feature the innovative center mounted eddy current design. This design makes the footprint of the SF-832 very small, saving you valuable shop space without losing any of the benefits of the eddy current absorber. Adding to it's versatility is the available upgrade paths for the SF-832. Should your testing needs change, the SF-832 can be upgraded to AWD and/or AC Motoring at any time. Adding a second roll set and a driveshaft to synchronize the front and rear rolls transforms the SF-832 into the SF-832 AWD.

Adding SuperFlow's AC electric motor allows you to motor the test vehicle to perform emissions drive cycles, inertia simulations, evaluate frictional losses and conduct many other engineering test procedures. These available upgrade paths give you great flexibility and peace of mind so that if your testing needs were to change in the future you won't need to buy an entirely new piece of equipment, simply upgrade the dyno to meet your new requirements. Its 30" knurled rolls provide superior traction and minimal tire deflection so testing is accurate and repeatable. The SF-832 combines the low profile frame commonly found on cradle roll systems with the added traction benefits of a large single roll dyno so it works perfect in a pit with a 4-post lift.

The SF-832 is upgradable to an AWD version, ask your sales person

Performance Chassis Dynamometers

Model	Drivetrain	Roll Diameter	Track Width (Inside-Outside)	Adjustable Wheelbase	System Inertia	Peak Power	Absorber Power	Maximum Speed
SF-832	2WD	30 in (76 cm)	26-100 in (66-254 cm)	N/A	1,200 lb (544 kg)	2,500 hp (1,864 kW)	1,100 hp (820 kW)	225 mph (362 kph)
SF-849	2WD	42 in (107 cm)	28-96 in (71-243 cm)	N/A	2,550 lb (1,157 kg)	2,500 hp (1,864 kW)	1,600 hp (1,193 kW)	200 mph (322 kph)
SF-832-AWD	AWD	30 in (76 cm)	26-100 in (66-254 cm)	92-130 in (234-330 cm)	2,400 lb (1,089 kg)	2,500 hp (1,864 kW)	850 hp (634 kW)	175 hp (282 kph)
SF-880E	AWD	42 in (107 cm	40-84 in (101-213 cm)	88-134 in (224-340 cm)	3,467 lb (1,572 kg)	2,500 hp (1,864 kW)	1,600 hp (1,193 kW)	200 mph (322 kph)
SF-883	AWD	42 in (107 cm	Front: 40-84 in (101-213 cm) Rear: 28-84 in (71-213 cm)	98-149 in (249-378 cm)	3,806 lb (1,726)	2,500 hp (1,864 kW)	1,600 hp (1,193 kW)	200 mph (322 kph)
SF-888	AWD	42 in (107 cm	Front: 40-84 in (101-213 cm) Rear: 40-96 in (101-243 cm)	98-149 in (249-378 cm)	3,886 lb (1,762 kg)	2,500 hp (1,864 kW)	1,600 hp (1,193 kW)	200 mph (322 kph)
SF-889	AWD	42 in (107 cm	28-96 in (71-243 cm)	98-149 in (249-378 cm)	4,925 lb (2,234 kg)	2,500 hp (1,864 kW)	1,600 hp (1,193 kW)	200 mph (322 kph)

Standard Equipment

Hand Held Controller

The hand-held controller is enclosed in a durable, impact-resistant enclosure and offers both wired and wireless compatibility. It comes equipped with a 9.3-inch IPS liquid crystal and touchscreen interface. The fourteen soft-keys are automatically labeled according to their function during each test. The display can present any of a hundred different measurements in real time, offering the operator prompts and options for conducting the test.

Sensor Box

The powerful Sensor Box collects data at over 1000 Hz and displays it at a rate of 100 lines per second. Two set-point controllers can be operated in either open or closed loop modes. A built in weather station measures atmospheric conditions during the test so WinDyn can correct recorded data to world wide standards (ECE, DIN, SAE, STP, etc.). The modular sensor box design allows easy expansion for optional sensors including OBDII, air flow, fuel flow, pressure, temperature, lambda and several emissions measurement devices at any time.

WinDyn® 5 Data Acquisition System

SuperFlow's advanced WinDyn 5 Data Acquisition System provides a wealth of pre-defined tests along with a user-friendly test editor to easily write custom tests. Standard tests can be performed and at part or wide open throttle. These include: controlled acceleration, controlled deceleration, step, steady-state, and track lap, break-in and mapping.

Optional Equipment

OBD-II Interface Module

With SuperFlow's OBD-II Interface Module you can easily monitor and record any OBD-II data that the ECM makes available directly in our dynamometer software. The device plugs directly into the OBD-II port and automatically shows you the available PIDs for that vehicle. You can then quickly configure the system to display the channels that you want to monitor live. With SuperFlow's high speed data acquisition you can close-loop control to OBD-II channels and save any of them you want for post test analysis and graphing. With the OBD-II Interface Module you're also able to read Diagnostic Trouble Codes (DTC's) and clear them once they are resolved.

AFR / Lamda Sensor Packages

SuperFlow offers several AFR (air fuel ratio) and Lamda packages and optional tailpipe probes available. These packages integrate with WinDyn® for live monitoring and post test graphing and analysis.

Diesel Exhaust Opacity Meter

SuperFlow's Diesel Exhaust Opacity Meter measures the opacity of visible smoke coming from the exhaust. It's rugged and portable design provides years of easy use. Contact SuperFlow today for more information on this and all the available options for your SuperFlow chassis dyno.

Optional Equipment

Above-Ground Installation Options

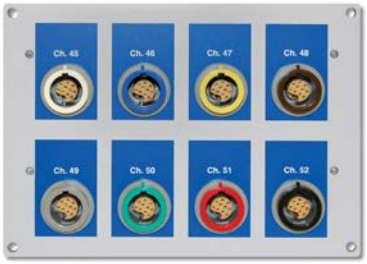
SuperFlow chassis dynos are designed to be installed in a pit as standard. We offer optional accessories including heavy alum ramps and extended platforms and four post vehicle lifts. SuperFlow offers lightweight aluminum ramp kits for the SF-832 and SF832-AWD chassis dynos. Kits include heavy-duty aluminum ramps and extended platforms that support the vehicle during testing. Because they are light-weight these ramps work great for portable dyno applications and they are easy to move in and out of place. Ramps are perfect if you are unable to install your chassis dyno in a pit or when shop space is limited because they stack neatly out of the way when not in use.

Pressure Panel

Pressure sensor expansion panels are available. High and low pressure transducers available individually.

Temperature Panel

Additional 16 channel thermocouple panels available. Extra Type K transducers sold separately.



Analog Panel

Additional 8 channel analog panel is available to integrate exhaust gas analyzers, lambda sensors, 02 sensors, etc. Select 0-1V, 0-5V, 0-10V, 0-20V or 0-30V in any combination.

SuperFlow is part of Power Test, LLC, an industry leader in the design, manufacture and sales of dynamometers, specialized test systems, and related data acquisition and control systems. Power Test, LLC, offers a portfolio of brands that have long been the standard bearer for quality in the testing industry. As your equipment testing partner for innovative products and comprehensive lifecycle services and support, we are dedicated to delivering an exceptional experience by offering specialized solutions to Make Your Testing Easy.

TEST WITH THE BEST™

Chassis Dynos	**Flowbenches**	**DriveShaft Rebuilding Equipment**
Engine Dynos	**Solenoid Testers**	**Torque Converter Rebuilding Systems**
Transmission Dynos	**Valve Body Testers**	**Transmission Testers**

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