

# WinDyn5





## **Upgrade Quickly**

Expand functionality and increase testing capabilities



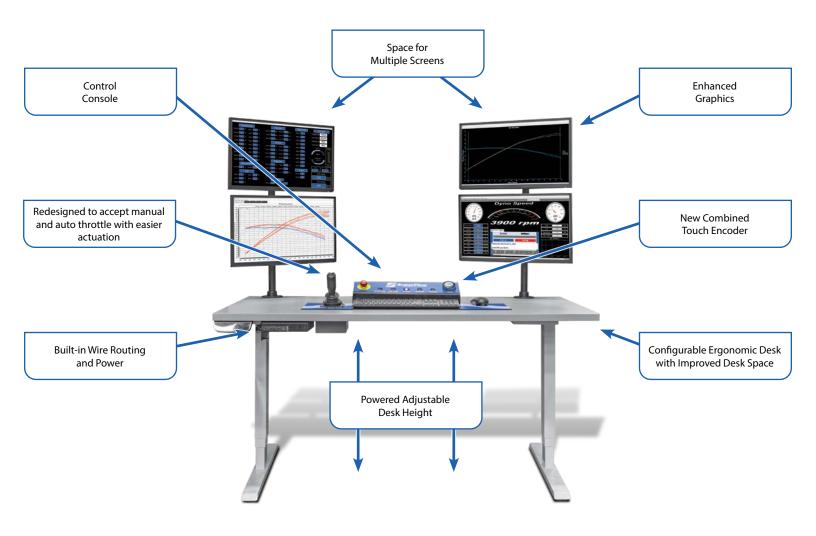
#### **Versatile**

Retrofit dynos from nearly any manufacturer

#### **Overview**

#### WinDyn® 5 Data Acquisition Software and Control Conversions

More often than not, older dynamometers are mechanically sound, but their data acquisition system is dated and slow. SuperFlow® will quickly upgrade the entire data acquisition and control system with modern technology to make the dyno perform like modern dynamometers, expand its functionality and increase your testing capabilities. Because SuperFlow Data Acquisition and Control Systems are extremely versatile they can also retrofit engine and chassis dynos from nearly any manufacturer. Depending on system, replacing your existing servo valve or eddy current controllers with our own we can control most manufacturers' dyno accurately and precisely. With a data acquisition upgrade from SuperFlow you can have the legendary accuracy and repeatability that SuperFlow dynamometers are known for without having to replace all of the mechanical components of your existing dyno. A simple data acquisition upgrade is an easy way to increase the productivity and revenue possibilities of your dyno, for a fraction of the cost of a new system.



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## **Compatibility**

#### **Available for These SuperFlow Products**

We've always taken pride in building machines to last. Fortunately for you we've done that, as many of our original 801 and 901 engine dynos are decades old and they're still being used daily. Let us bring your existing SuperFlow dyno up to date with the latest WinDyn 5 Data Acquisition and Control System for a fraction of the cost of a new system. WinDyn 5 Conversion Kits are already available for the following SuperFlow dynamometers:

#### **SuperFlow Engine Dynos**

- SF-901
- SF-902
- · SF-3000BW (Black Widow)

#### **SuperFlow Chassis Dynos**

- SF-849
- SF-832 AWD
- SF-880E AWD
- SF-832
- SF-250A Powersport (CycleDyn)

#### Available for These Manufacturer's Products

You may not own a SuperFlow dyno, but you're not prohibited from the legendary accuracy, repeatability and control that SuperFlow dynos offer. We upgrade many different manufacturers' dynos often. If you're struggling with a dyno that does not repeat or if you want modern technology, contact SuperFlow to learn how affordable it is to upgrade your dyno with the latest WinDyn 5 Data Acquisition System and get results you can count on. Below are the dynamometers that we can currently upgrade, however, if your dyno is not listed please contact us; as it's likely something we can do.

## Other Manufacturer's Engine Dynos

- Stuska
- · Power Test
- · Taylor Dynamometer
- · Dyne Systems
- · Go Power
- Froude

## Other Manufacturer's Chassis Dynos

- Clayton
- Maha
- Mustang
- DynoJet
- Dynocom
- Power Test
- DynoDynamics

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## **Standard Equipment**



#### **Sensor Box**

The SuperFlow Sensor Box features state of the art electronics to measure, condition and digitize high-resolution data and then broadcast it over an Ethernet network for live display in WinDyn 5. 500+ input channels handle temperature, pressure lambda and several other third-party sensors or devices. The included real time weather station uses a barometric pressure transducer, air temperature sensor and humidity sensor to provide constant atmospheric updates to WinDyn 5 so it can apply the right correction factors (ECE, DIN, SAE, STP, etc.). The sensor box also handles closed loop PID (proportional, integral and differential) control for accurate loaded testing, its flexible dual-mode control scheme allows either the dyno or throttle to control to speed, torque, power and manifold pressure. Sophisticated logic lets each controller use up to four different control modes and parameter settings. The sensor box is modular, allowing for easy adaptation for various sensor configurations, including the addition of sensor panels and the incorporation of features such as OBDII and emissions measurement equipment. For convenience, the sensor box can be mounted in various configurations - mobile stand, wall mount or mounted on the boom for cleaner sensor wiring in the cell.



#### **Control Console**

SuperFlow's control console features a new combined touch encoder and a redesigned manual throttle with easier actuation. Up to ten PID controllers with default load and throttle set up available on every system. Four push buttons allow for easier control of water pump, fuel pump, ignition and starter. Load is easily controlled by a combined touch encoder.

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## **Optional Equipment**

#### **Water Brakes**

WinDyn 5 Conversion Kits are available for several different manufacturers engine dynamometers. It doesn't matter if the brake uses inlet control, outlet control or dual valve control, we can do it all. By replacing the existing servo motor(s) with our own, we can control any manufacturers dyno with the same precision and repeatability that SuperFlow dynos are known for.





#### **Eddy Currents**

WinDyn 5 Conversion Kits are available for all types of eddy current dynamometers. We've put WinDyn 5 on air cooled eddy currents, water cooled eddy currents and even eddy current chassis dynamometers with 3 power absorbers. By replacing the existing eddy current controllers with our own, we can control any manufacturers' dyno with the same precision and repeatability that SuperFlow dynos are known for.

#### 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.



#### **Post Test Analysis**

WinDyn 5 is packed with data analysis tools that make analyzing your engine or vehicles performance easy. The built-in post test graphing and data analysis capabilities allow you to view up to 10 user-defined pages in tabular format, graphical format or side-by-side at the same time. Tabular data and graphical data can appear side by side on the screen for easy comparison. Additionally, up to 10 saved tests can be overlaid on a graph enabling you to make informed decisions quickly.

#### **In-Test Monitoring**

WinDyn 5 offers 10 custom test screens to monitor realtime test data on meters, digital readouts, bar graphs and plots. Real-time data on every screen continuously updates even when the screen is not in actively selected. Like all other WinDyn 5 features, all the data viewing capabilities are customizable. The test group defines which data is on each of the ten pages and on each page's graphs. You can change this at any time, even after the test is completed.

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## **Performance Enhancement Packages**

Performance software packages offer seamless integration with SuperFlow® dynamometer equipment and data acquisition software, offering an end to end solution. The software packages offer the flexibility to utilize the functionalities to best meet customer needs and applications. Our performance software packages deliver the capabilities of our legacy WinDyn® Data Acquisition and Control System on a modern platform. WinDyn 5 offers the software, components, and computer platform to support you now and into the future. There are several ways Performance Software Packages can increase your business.

- · High quality dynamometer data enables you to measure the enhanced performance of your engines accurately
- · Consistent testing assists with detecting and addressing quality issues prior to engine shipment, thus minimizing rework and warranty expenses
- Providing break-in services can add increased value for your customers
- · Customized screens and reports allow you to personalize the dynamometer and reports to enhance your business's image
- · High quality repeatable test data will reduce both research and development time and costs

#### Standard WinDyn 5

The Standard WinDyn 5 package, included with all sales of WinDyn 5 hardware, offers a simple and basic dynamometer operation. Designed for straightforward use, it ensures user-friendly functionality for essential testing and calibration needs. While it provides the standard features needed for effective dynamometer operation, some enhanced and advanced features and benefits of SuperFlow controls are either disabled or significantly reduced. This default package is ideal for users who require standard, simple, reliable, and efficient testing performance.

#### **Enhanced WinDyn 5**

The Enhanced WinDyn 5 package offers customizable user-friendly functionality with easy-to-use capabilities for operators to calibrate and test parameters, ensuring effective utilization of your dynamometer system. Designed for the enhanced user, this package offers a standard library of CAN channel data, along with channel and screen editing capabilities, to efficiently support critical testing and calibration requirements. This package is ideal for users who require user friendly editing functionality to perform accurate, reliable and repeatable test results without the complexity of advanced features.

This package is available through an annual subscription or the purchase of a perpetual license. Both options offer the same functionality, the annual subscription provides an advantage to amortize your investment over time to fit your business needs, additionally the subscription offers access to all new WinDyn5 software updates as they become available. Both the perpetual license and the annual subscription include critical service software updates\*.

#### Advanced WinDyn 5

The Advanced WinDyn 5 software package delivers innovative user configurable functionality for data acquisition power users. This advanced, user-friendly package provides robust, easy-to-use editing tools, allowing operators to modify, customize, and adjust test parameters, enabling you to refine your testing processes as your business grows and evolves. CAN functionality includes the CAN editor and ability to configure other CAN channels and software expansion capabilities, enabling improved data analysis and reporting. The Advanced package increases the functionality needed to perform accurate and extremely repeatable performance tests.

The Advanced WinDyn5 software package includes all of the features of the Core and Enhanced WinDyn5 software packages. This package is available through an annual subscription or the purchase of a perpetual license. Both options offer the same functionality, the annual subscription provides an advantage with access to all new WinDyn5 software updates as they become available. Both the perpetual license and the annual subscription include critical service software updates\*.

If the Advanced or Enhanced package subscription is canceled or not renewed the system operation will return to Standard WinDyn5 software capabilities.

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<sup>\*</sup> New features may be included with service releases at the sole discretion of Power Test

## **SuperFlow The Industry Standard**

uperFlow is a global engineering leader specializing in test and remanufacturing equipment for vehicle drivelines. Since 1972, SuperFlow has been designing and manufacturing industry leading flowbenches, engine dynamometers, chassis dynamometers and advanced Windows® based data acquisition systems. Our products are used daily by performance engine builders, engine and transmission remanufacturers, the U.S. Military and allies worldwide, technical schools, race teams, speed shops, universities, and leading automotive manufacturers to produce powerful and efficient vehicles.

Today, with more than 10,000 products in the field, SuperFlow is the most experienced 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. Our commitment to providing the best products and service at a great value has given us the opportunity to work with some of the most notable companies in the automotive industry. Experience why thousands have trusted SuperFlow for all of their testing needs.



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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** 

