

Dynamometer Upgrades

Easily upgrade existing engine and chassis dynamometers to the latest SuperFlow Data Acquisition and Control system. Get more data channels, higher sampling rates, state of the art electronics, precise control and fully custom testing capabilities for a fraction of the cost of a new system.



THE ONLY SOURCE FOR ALL OF YOUR TESTING NEEDS

Data Acquisition & Control Upgrades

Overview • WinDyn Software • Sensor Box • Control Consoles

Overview

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 new, 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. By replacing your existing servo valve or eddy current controllers with our own we can control any 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.



WinDyn™ Software

WinDyn is SuperFlow's Windows® based software system that provides an easy-to-use graphical user interface with unlimited potential for customization. WinDyn's powerful tools let you quickly design custom tests, view real-time test data, and conveniently manage saved tests. WinDyn is pre-configured for standard tests including step, steady state, acceleration, deceleration, drive cycle, and track lap. WinDyn utilizes ten preset screens to show all the data being recorded by the sensor box. These screens are fully configurable so you can always monitor the data you need in a layout that works for you.

WinDyn™ Features

- Standard pre-configured tests for easy setup and consistent testing procedures
- Ability to write custom, user-defined tests
- Standard and user-defined test groups to control every aspect of the test environment including: data screens, calculations, limits, test profiles, control parameters, relay switching and reports
- Safety limits to automatically handle problematic situations like overheating or low oil pressure
- Post mortem feature takes a snapshot of the data before and after a limit was tripped to assist in determining why the limit was tripped
- Real-time test data display
- WinDyn™ Data Viewer: view, graph and print data
- Interpolation tables and strip charts
- Powerful post test data analysis tools
- Graph overlays for multiple test comparisons
- 10 fully configurable screens for real time monitoring
- File management system for convenient test data management
- Customer data packs: send customers home with all of their test data plus the WinDyn™ data view to view, graph and print test data



Choose a Controller

Common Features

Data acquisition rate greater than 1,000 Hz • Data can be displayed at a rate of 100 lines per second • Up to 76 input sensors • Pre-configured with standard test profiles • Real-time test data display • Full integration with WinDyn

XConsole

- Compact, table-top design
- 2 touch-screen LCD's for viewing live test data, selecting, starting and stopping tests, and setting start, end and cool down speeds
- 2 dial meters for power, torque, speed or any channel that you prefer – 20 scales are available
- Up to 4 LCD touch-screen controllers to set engine speed, torque, oil temperature or coolant temperature 8 programmed switches
- 8 programmed switches control function like ignition, fuel, starter, and room fan – they can be programmed for sequence and interlock
- Up to 9 custom, user defined switches to control engine and test cell equipment and accessories without leaving the console
- Rugged, industrial grade enclosure for professional appearance
- 16 bit ADC's
- 16 digital I/O's
- Key power switch to prevent equipment tampering
- Large emergency kill switch
- Extra panels to integrate your own switches or controls into the XConsole



*only available with engine dynos

XConsole Classic

- Stand alone console with integrated throttle handle
- 2 touch-screen LCD's for viewing live test data, selecting, starting and stopping tests, and setting start, end and cool down speeds
- 2 panel meters for power, torque, speed or any channel that you prefer – 20 scales are available
- Up to 4 dial gauges for items like boost, oil pressure, water pressure and fuel pressure
- Up to 3 LCD touch-screen controllers to set engine speed, torque, oil temperature or coolant temperature
- 4 programmed switches control ignition, fuel, starter, and room fan – they can be programmed for sequence and interlock
- Up to 9 custom, user defined switches to control engine and test cell equipment and accessories without leaving the console
- Rugged, industrial grade enclosure for professional appearance
- 16 bit ADC's
- 16 digital I/O's
- Key power switch to prevent equipment tampering
- Large emergency kill switch



*only available with engine dynos

XConsole Compact

- Compact, table-top design
- 2 touch-screen LCD's for viewing live test data, selecting, starting and stopping tests, and setting start, end and cool down speeds
- Up to 2 LCD touch-screen controllers to set engine speed, torque, oil temperature or coolant temperature
- 4 programmed switches control ignition, fuel, starter, and room fan – they can be programmed for sequence and interlock
- Rugged, industrial grade enclosure for professional appearance
- 16 bit ADC's
- 16 digital I/O's
- Key power switch to prevent equipment tampering
- Large emergency kill switch
- Extra panels to integrate your own switches or controls into the XConsole Compact

*only available with engine dynos



NetDyn

- Software based controller designed to run on 8.9" touch screen netbook
- Compact, table-top design
- 4 programmed buttons control ignition, fuel, starter and room fan
- 2 user-defined analog meters to show any channel that is defined in the system configuration
- 8 configurable digital meters to display test data
- 2 set point controllers for load and throttle – each controller can have up to five closed-loop control modes, plus a manual mode
- System control buttons for functions like test setup, autotest, limits, calibrate, etc.
- System log displays messages to keep operators informed of status changes or events
- Soft keys – defined by the test profile to perform specific autotest functions like starting and stopping tests



Handheld Controller

- Compact, handheld design in a rugged impact resistant enclosure
- 1 LCD screen for viewing live test data, selecting, starting and stopping tests, and setting start, end and cool down speeds
- Continuous prompts and choices for running tests
- Display screen that shows any of a hundred separate measurements in real time
- 10 software defined keys, automatically labeled for function during test



SuperFlow 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. 76 input channels handle temperature, pressure and lambda and 35 additional channels handle calculations, interpolation tables and memory. The included real time weather station uses a barometric pressure transducer, air temperature sensor and humidity sensor to provide constant atmospheric updates to WinDyn so WinDyn 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 allows either the dyno or throttle to control to speed, torque, power and manifold pressure. Sophisticated high-speed PID loops let each controller use up to four different control modes and parameter settings. The sensor box is modular so it can easily be configured for different sensor arrangements, with additional sensor panels or with options like OBDII and emissions measuring equipment. Up to 8 Liquid Crystal Displays (LCD) can be added to the front of the sensor box to show power, torque, engine speed, or any channels you select, live in the test cell. For convenience, the sensor box is mounted on a sturdy, roll-around stand with a five-spoke cast aluminum base and multidirectional casters. It can optionally be mounted on a boom or directly to the wall.





SuperFlow

DYNAMOMETERS & FLOWBENCHES



THE ONLY SOURCE FOR ALL OF YOUR TESTING NEEDS

SuperFlow is a global market leader specializing in high-performance automotive testing and rebuilding equipment. Since the early 1970's SuperFlow products have been used daily by professional engine builders, the military, technical schools, professional race teams, speed shops, transmission rebuilders, universities, and leading automotive manufacturers to produce powerful and efficient vehicles. 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. Come see why thousands of businesses have already chosen SuperFlow for all of their testing needs.

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