



# SF-250A CYCLEDYN

## FREQUENTLY ASKED QUESTIONS

## What's the difference between a CycleDyn and a Dynojet?

*The SuperFlow CycleDyn was designed for performance and engineering testing from the beginning. The CycleDyn can be ordered with the eddy brake option to provide more sophisticated testing than you can get with an inertia-only dynamometer. SuperFlow measures the system inertia and the system parasitic losses for every CycleDyn; these numbers are unique for each CycleDyn produced.*

## Why do I need an Eddy Brake on my CycleDyn?

*An eddy brake provides the means to load a vehicle during tests. As vehicles become more sophisticated, inertia-only testing masks more problems than it shows. Nowadays you need to be able to test a vehicle for driveability and that means you need to provide a load. Another advantage of the eddy brake is its ability to hold a steady speed or RPM while testing. This makes fuel injection mapping easier and faster. The CycleDyn uses a load cell to measure actual torque produced during a test, and our software can display horsepower and torque readings during a test, even under steady load.*

## How does the Commander make testing easier?

*The Commander is a handheld control unit that enables the CycleDyn operator to control the entire system while seated on or in the vehicle. Using the Commander, you can select tests to run, view data during a test, change vehicle specifications, and many other operator commands. This saves time because only one person is required to operate the CycleDyn, and they can do it without running back and forth from the vehicle to the computer.*

## How do you measure tire slip on the CycleDyn?

*The more power a vehicle makes, the greater the chance the tires will slip on the rolls. When this happens, the dynamometer sees less power than it would without the slip. Some companies recommend tying the vehicle down tighter, but this can inhibit tire growth, which also reduces the power that the dynamometer sees. SuperFlow uses a non-contact infrared optical wheel speed tachometer to compare roll speed to tire speed; the difference in speeds equates to wheel slip. The software can monitor this number and save it for later analysis.*

## Does the CycleDyn take atmospheric conditions into account?

*Every CycleDyn ships with automatic atmospheric measurement standard. Our Sensor Box constantly measures ambient air temperature, relative humidity, and barometric pressure. It uses the data it collects to provide real-time power correction factors such as Society of Automotive Engineers (SAE), Standard Temperature and Pressure (STP), German Industry Standards (DIN), and the European Community (ECE). You can view data uncorrected, corrected, or both through WinDyn®.*

## What is the difference between manual load control and computer load control?

*Although it is always possible to simply apply a percentage of load using manual input, the CycleDyn is equipped with a computer-controlled unit for accuracy. Computerized systems can control faster and with more accuracy than manual control could ever hope to achieve. Using computer control allows the operator to choose from several automated tests such as step tests and controlled acceleration tests. These types of tests are difficult, if not impossible, with a manual control set-up.*

## Can I use my lambda sensor or exhaust gas analyzer with the CycleDyn?

*A variety of lambda sensors or exhaust gas analyzers can be used with the CycleDyn. Because of the differences in voltages supplied by different manufacturers, the CycleDyn can be equipped with an analog voltage input panel which can accept the most common voltages. The WinDyn® software can be configured to interpret the analog voltage to lambda or to a gas reading for ease of analysis. We also offer a variety of lambda and exhaust gas analyzers ready to use with the CycleDyn.*

## What types of tests can I do with the CycleDyn?

*The CycleDyn comes with several pre-scripted tests depending upon the model you have:*

**SF-210:** *Inertia Acceleration*

**SF-250:** *Inertia Acceleration, Controlled Acceleration, Speed Step, Road Load, Data Collection (every 0.1 seconds, 0.5 seconds, or 1.0 seconds)*

*In addition, SuperFlow provides advanced users the ability to script their own tests in WinDyn®.*

## What type of horsepower can the CycleDyn handle?

*The CycleDyn can measure over 500 wheel horsepower in inertia acceleration mode. A CycleDyn can measure a maximum of 300 wheel horsepower under load with an eddy brake and a test duration of 3 minutes. The eddy brake can handle more power for a shorter duration test.*

## How accurate is the CycleDyn?

*SuperFlow has developed highly accurate electrical measuring technology for its EIS emissions dynamometers. This sophisticated technology guarantees the most accurate power measurements of any comparable system. Our measuring technology allows us to determine the equivalent vehicle inertia values to the nearest pound. Aerodynamic loss (roll windage) is determined as a function of air density for the greatest accuracy.*

## YOUR SF-CYCLEDYN CAN:

- Identify new driveline problems leading to additional shop work
- Verify shop repairs are done right the first time
- Simulate real-world load conditions and varying terrain
- Eliminate liability and time of road testing
- Document test results and generate performance graphs
- Conduct controlled break-ins after engine rebuild
- Determine trade-in value and upsell extended warranties with confidence



# TEST WITH THE BEST

*Rugged Construction. Accurate, Repeatable Results. Builds New Business.*