

SPRAYVIEW™ FUEL ATOMIZATION VERIFICATION SYSTEM LAB



Portable Laboratory-Grade Fuel Atomization Verification System

- Clear-View Spray Observation Chamber with Spray Verification Impingement Plates
- Supplied with a Jet Engine Spray Manifold with Precision Variable Flow Control
- Helps students gain an understanding of the Brayton Power Cycle as well as research fuel formulations for performance and emissions results.
- Instrumented with Fuel Delivery Pressure and Digital Fuel Flow Meters
- Requires No Tools, Facilities Modifications or Special Support to Operate
- Integrated Fuel Spray Vacuum Capture / Drain System
- Suitable for University, Technical and Military Education, Training and Research
- Supplied with Comprehensive Instructions
- Industry Leading Warranty with Unsurpassed End-User Support
- Designed and Manufactured in the USA

SprayView™ spray testing system for the SR-30™ Gas Turbine Engine

SprayView™ is an optional fuel spray testing system for the SR-30™ Gas Turbine Engine manufactured by Turbine Technologies, Ltd. It has been designed with a built-in engine spray manifold to allow MiniLab™ operators the ability to test the atomization characteristics of fuels before they are actually burned in the engine. Proper atomization verification is especially important for testing of alternative fuel formulations such as bio-diesels. Improper spray patterns signify fuel formulations that are not compatible with the existing engine fuel injection system. Attempting to run an engine with these non-conforming fuel formulations could potentially damage it.

The SprayView™ system also allows MiniLab™ operators to remove their actual SR-30™ Engine Fuel Spray Manifold and test it for proper operation. Injector nozzles can be inspected for any build-up of contaminants and can be conveniently cleaned for continued reliable performance when reinstalled on the engine. Periodic checks in this manner, especially when testing experimental fuel formulations, can reduce the chances of injector clogging, essentially eliminating potential engine operating problems.

SprayView™ features a clear view spray observation chamber allowing the operator to visually inspect the fuel spray pattern. Integrated impingement plates can be lined up under each spray nozzle to verify their spray integrity. The built-in fuel capture system pulls the injected fuel into a collection tank, which can be conveniently drained after the tests. An integrated spray throttling system allows the operator to vary the fuel spray to determine the optimum spray atomization “cloud” for a particular fuel. For students and researchers alike, the ability to actually see the fuel spray patterns, combined with concurrent readouts of system pressure and flow information provide a unique ability to verify fuel atomization integrity.

SprayView™ is self-contained and requires only 110V power for operation (220 Volt upon request) . The system arrives fully assembled, tested and ready to use. Comprehensive utilization instructions are provided as well as a free, two-year warranty

Experimental Opportunites

SprayView™ is primarily offered as an accessory to the MiniLab™ Gas Turbine Power System. With the growing need to do more with existing equipment, the MiniLab™ Gas Turbine. Power System finds itself being used by undergraduate students working to gain and understanding of the **Brayton Power Cycle** as well as researchers testing alternative fuel formulations for performance and emissions results. The ability to verify fuel integrity and to check an existing SR-30™ engine fuel manifold for potential fuel injector clogging contaminants are major considerations for using the SprayView™.

- Check spray pattern and Integrity of various heavy fuel formulations.
- Verify proper operational integrity of in-service engine spray manifold.
- Suitable for integrating various atomization sensors such as lasers for advanced research.



Specifications

Dimensions

- SprayView™: 29" x 22" x 63"H (74 x 56 x 160 cm)
- As Shipped: 35" x 28" x 69"H (89 x 71 x 175 cm)

Weight

- SprayView™: 160 lbs (73kg)
- As Shipped: 220 lbs (100kg)

Operators Panel

- Digital Fuel Flow Meter
- Analog Fuel Pressure Gauge
- Keyed Master Switch
- Test Chamber Vacuum Switch
- Fuel Pump Switch

Electrical

- 120 Volt (220 Volt upon request) 50 / 60 Hz 8 Amp

