

*A gas turbine ducting system for the significant reduction of inlet and exit sound levels.*



### **Product Summary**

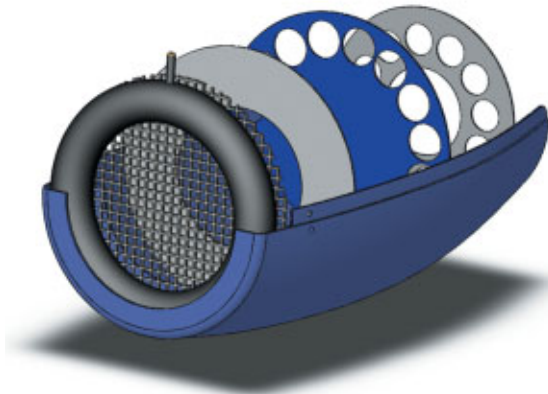
- Complete SR-30™ Gas Turbine Sound Suppressor System
- Typically Provides 84%~16dB(A) Intake and 75%~12dB(A) Exhaust Sound Reduction
- Aircraft Style, Nacelle Shaped Fiberglass Intake Suppressor Housing
- Stainless Steel Exhaust Suppressor Housing With Flame Plume Sight Window
- Installation Does Not Interfere with Engine Operation or Sensor Measurement
- Quick Installation Requires No MiniLab™ System Modifications
- Compatible with All Typical User Installations
- Requires No Operator Manipulation
- Supplied with Comprehensive Installation and Usage Instructions
- Industry Leading Warranty with Unsurpassed End-User Support
- Designed and Manufactured in the USA

## Description

The HushKit™ Gas Turbine Sound Suppressor System is an optional silencer assembly available for installation in the MiniLab™ Gas Turbine Power System. Designed to reduce the sound level of the SR-30™ Gas Turbine Engine, the HushKit™ is effective in both the academic and research setting and capable of retrofit to existing installations.

The HushKit™ system is composed of individual intake and exhaust suppressor units. The aircraft style, nacelle shaped intake suppressor housing is designed to reduce acoustic energy associated with compressor intake flow. Molded from aerospace quality fiberglass, the intake suppressor mounts to the SR-30™ Engine with a pneumatic friction seal system. This seal permits rapid installation and removal of the suppressor allowing full access to the engine inlet and compressor face for teaching and instructional purposes. The exhaust suppressor assembly is manufactured from stainless steel to maximize heat dissipation and durability. A positive pressure clamping system requires no modification of the existing MiniLab™ for installation. The suppressor exhaust ducting incorporates a glass sight window for flame plume visibility during starting operation. An acoustic expansion chamber on the end of the duct provides a convenient transition to facility specific exhaust ducting and integrates well with already existing installations. Neither the intake or exhaust suppressor assemblies interfere with engine operation.

Comprehensive installation and usage instructions are provided. Once installed, no additional operator manipulation is required. A free, two-year warranty is provided.



## Details

### Dimensions

Intake Suppressor:	10 inches $\varnothing$ x 32 inches (25 x 81 cm)
Exhaust Ducting:	6 inches $\varnothing$ x 36 inches (15 x 91 cm)
Exhaust Expansion Chamber:	10 inches $\varnothing$ x 10 inches (25 x 25 cm)

*Expansion Chamber is integral to, and mounts over Exhaust Ducting*

### Weight

Intake Suppressor:	6 lbs (3 kg)
Exhaust Suppressor:	15 lbs (7 kg)

### Operating Performance

Decibel (dB) Levels Without and With Suppressor System Installed in MiniLab

Position	Engine Speed 50,000 RPM			Engine Speed 84,000 RPM		
	3 feet	10 feet	25 feet	3 feet	10 feet	25 feet
Controller Side	97/90	94/88	91/79	107/98	102/94	99/90
Intake Side	120/103	112/91	103/86	124/113	121/106	108/96
Exhaust Side	113/93	100/88	92/80	116/104	107/100	103/92

### Operating Conditions

Typical Laboratory Setting

## Experimental Opportunities

The HushKit™ is primarily offered as an operational accessory to the MiniLab™ Gas Turbine Power System. With a growing sensitivity to noise and a greater emphasis placed on environmentally friendly engineering, the MiniLab™ / HushKit™ combination provides a platform for the further study of gas turbine noise.

- Gas turbine noise sources.
- Isolation and measurement of engine core and jet exhaust noise.
- Turbulence induced ambient air mixing in jet exhaust plume.
- Acoustic energy absorption and dissipation techniques.
- Engine performance degradation with various noise suppression methods.

## Purchase Specifications

- A complete sound suppression system designed to reduce both engine core and jet noise.
- Inlet suppressor manufactured from molded fiberglass.
- Exhaust suppressor manufactured from stainless steel.
- Exhaust suppressor duct to be equipped with flame plume viewing window.
- Inlet and exhaust assemblies to be readily removable to allow access to engine.
- Inlet and exhaust assemblies to be mounted in such a way as to not interfere with any operation of the engine.
- To require no modifications of existing MiniLab™ unit.
- Provided with a comprehensive installation and usage instructions.
- To be covered by a free two-year warranty.