



MICRO & MINI-SHEDS

PRINCIPLE OF OPERATION

The Analytical Process Systems, Inc. Micro and Mini-SHEDs (Sealed Housing for Evaporative Determination) are environmental test chambers with separate electrical control and pneumatic sections. Configurable for a variety of applications related to emissions testing, the mini-SHED is commonly used for small engines, canister preconditioning, and permeation testing of fuel system components.

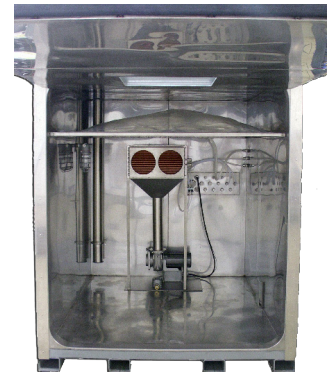
Based on specific application needs, the mini-SHED is available with a stainless steel or aluminum test chamber and a heavy-duty, all-steel welded frame and enclosure. APS also includes convenience items such as heavy-duty lockable casters and fork lift tubes.

TEST CHAMBER

The environmentally sealed and isolated test chamber is sized to meet customer specifications and testing requirements. Specifically designed for your application, APS provides observation windows as required. Bulkheads are provided for tubing in sampling and process use plus signal connections for instrumentation within the test chamber.

CONTROL SYSTEM COMPONENTS //

- PC based control system
- Data acquisition and automated control
- Emergency stop system
- Power for devices under test
- Optional Variable Volume (VV) type lung control system based on test chamber pressure - internal for mini-SHED and external for micro-SHED
- Temperature controller - heating and cooling capacity
- Safety systems -
 - Hazardous gas monitoring
 - Pre-test chamber purging
 - Interlocks
 - Optional hydrocarbon



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The APS mini-SHED offers a cost-effective and convenient method for smaller testing requirements where a full-sized SHED is too costly or large for the application. Systems are available for permeation testing, evaporative emission monitoring, ORVR testing, canister testing or a combination of these applications. APS's engineering team will work with you to develop a system that meets all your requirements.

APS MINI-SHED FEATURES

CHAMBER ENCLOSURE	<ul style="list-style-type: none"> • All internal surfaces compatible with Methanol, Ethanol and Gasoline Vapor. • Insulated to minimize heat transfer to ambient surroundings. • Air Tight - all joints and seams are either welded or sealed. • Tube penetrations for extracting samples to measure the mass of hydrocarbon and/or methanol in the enclosure as well as diagnostic purposes.
CHAMBER DOOR	<ul style="list-style-type: none"> • Outward opening with heavy-duty hinges and latch. • Inflatable seal to provide an airtight seal. • Limit switches and automatic latches for status indication.
VIEWING WINDOWS (OPTIONAL)	<ul style="list-style-type: none"> • All windows are OPTIONAL. • Windows are heat tempered, screen reinforced glass. • Window location to be determined.
ENCLOSURE - ELECTRIC	<ul style="list-style-type: none"> • Lighting to illuminate the interior with the door "open" or "closed." • Explosion-proof / Intrinsically Safe push buttons for door control and emergency alarm activation. (Human entry enclosures only). • One spare explosion proof 115 VAC, 60 Hz power receptacle. • Optional: 240 VAC 50 Hz Power Receptacle. • Two RTD's mounted at the mid-span of the enclosure wall. • Explosion-proof / spark resistant mixing blower with a minimum of one CFM per cubic foot of interior volume. • One internal LEL Sensor.
VOLUME CONTROL	<ul style="list-style-type: none"> • Capable of maintaining a fixed volume for testing. • Bag type "Lung System" capable of compensating for a +/- 15% of volume change.
TEMPERATURE CONTROL	<ul style="list-style-type: none"> • The "Heating/Cooling" system requires 480 VAC, 3 Phase, 60 Hz. <ul style="list-style-type: none"> - International requires 380 VAC, 3 Phase 50 Hz. - Optional: 208 VAC, 3 Phase, 60 Hz.
AQUISITION & CONTROL	<ul style="list-style-type: none"> • PC based operator interface and control program. • Analog calibration routines provided in the software.