



SCS-II SAMPLE COLLECTION SYSTEM

PRINCIPLE OF OPERATION

The Analytical Process Systems SCS-II is a Sample Collection System for collecting alcohol and aldehyde samples with speciation for alternative fuel vehicles. This addresses both R&D and certification processes necessary to meet increasing worldwide environmental regulatory standards.

By using the highest quality flow control components and electrical equipment, the SCS-II delivers fast, accurate, and repeatable measurements.

With four (4) separate sampling phases, plus a single ambient phase or up to four (4) ambient phases for continuous sampling throughout the entire test, the sample collection device can be varied according to the test phase. Bypass circuits for initial stabilization of the sampling system have also been integrated.

USER-FRIENDLY INTERFACE

The SCS-II uses an industrial touch screen PC-based control system and operator interface running Windows 7. APS's SureTest™ software provides an intuitive graphical user interface for ease of system operation. This flexibility allows the system to be run stand-alone, delayed start, or as slave to a typical emissions host computer via AK Command.

SCS-II SOFTWARE OFFERS //

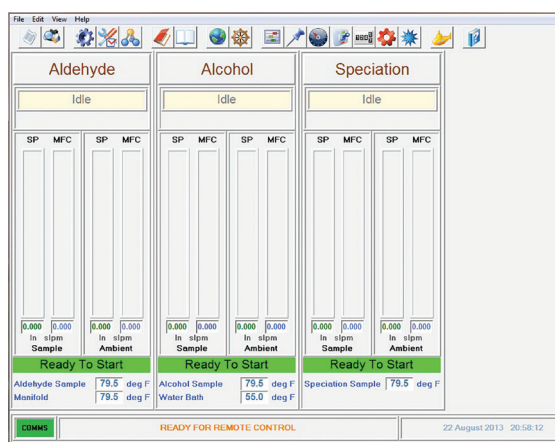
- Time interval configurable test reports
- Automatic test setup
- Calibration procedures
- Diagnostic functions
- Automatic leak check
- Bar graph visual aides
- Dial-up diagnostics

MODES OF OPERATION //

- Idle
- Bypass (pretest)
- Calibration
- Test (phases 1-4)
- Leak check
- Purge samplelines
- Evac/purge bags with zero gas

SCS-II HARDWARE //

- Industrial PC with 15" touch screen
- 4 USB ports
- 10/100 network port



ANALYTICAL PROCESS SYSTEMS, INC.

1771 Harmon Road // Auburn Hills, MI 48326

T: 248.393.0700 // F: 248.393.0800

www.aps-mich.com // sales@aps-mich.com

TYPICAL APPLICATIONS

METHANOL AND ALDEHYDE ANALYSIS	The SCS-II is typically used in conjunction with HPLC analysis to determine alcohol and formaldehyde levels found in the diluted exhaust stream of internal combustion engines. Also used for SHED sampling.
SPECIATION SAMPLING (OPTIONAL)	The SCS-II collects into sample bags from the vehicle exhaust for speciation.
SAMPLE VOLUME MEASUREMENT	Total sample volume is determined using electronic mass flow measurement. Using one mass flow controller per sample stream, the SCS-II measures the flow rate of the collected sample. The continuous flow is then converted to the total volume of the sample being collected for each phase.
REGULATORY STANDARDS	The SCS-II complies with EPA standards defined in 40 CFR 86.109, as well as revisions to these regulations dated June 28, 1994.
FOUR PHASE TESTING	The standard SCS-II system provides up to four (4) sampling phases, plus an ambient phase for Methanol and Aldehyde. The system can also be supplied with single or four (4) phase ambient speciation bag samples.

GENERAL SPECIFICATIONS

FLOW RATES

Methanol	2 slpm (up to 4 phases)	(Optional 0-5 slpm)
Aldehyde	1 slpm (up to 4 phases)	(Optional 0-5 slpm)
Speciation	Up to 3 slpm	

MASS FLOW CONTROLLERS //

Accuracy +/- 1% of full scale
 Repeatability +/- 0.2% of full scale

ENCLOSURE DIMENSIONS //

83"H x 24"W x 46"D

POWER REQUIREMENTS //

120/60VAC, Single Phase, 20 A circuit
 220/60VAC, Single Phase

WETTED PARTS //

Stainless steel, Teflon®, Viton®, or PVC

SAMPLE COLLECTION DEVICES //

Aldehyde - Millipore cartridges filled with DNPH
 Alcohol - Glass impingers
 Speciation - Kynar bags