

XC-30B Automated MercSampler Console

The **XC-30B MercSampler Console**, designed especially for performing Method 30B, the determination of total vapor phase mercury emissions from coal-fired combustion sources using carbon sorbent traps. The XC-30B simplifies sampling requirements by automating data acquisition, sample flow adjustments, leak checks, calculations, temperature control, and calibrations. Data is easily transferred to a Windows based PC through USB Interface. The XC-30B MercSampler performs dual sorbent trap sampling at flow rates up to 2.5 lpm. It can be operated with your choice of probes and gas conditioning systems, including our popular SGC-4000HGP Stirling Gas Conditioner.

The XC-30B system is used to perform RATA testing on both the XC-6000 STM and CEMs systems



Features

- Fully Automated for Paired Sampling
- Dual Dry Gas Meters and Mass Flow Sensors
- Simple Data Export
- Compact Portable System
- USB Interface
- Easily Configured with Windows Based PC

XC-30B Consoles

Model	Description
XC-30B	Source Sampler flow rates up to 2.5 lpm (120 VAC)
XC-30B-V	Source Sampler flow rates up to 2.5 lpm (240 VAC)

Specifications

Dry Gas Meters:

- Dual dry gas meters with integrated optical encoders, resolution to 2 cc
- Model SK25EX positive displacement type.
- 0.7 liter per revolution.
- Optical encoder sensor with quadrature pulse output.

Sample Flow Control:

- Stainless steel sample manifolds fitted with mass flow sensors, vacuum sensors, & proportional valves.
- Constant flow sampling <250 ccm.
- Mass Air Flow: Flow control, 300 to 2500 ccm
- Proportional Valve: Voltage Sensitive Orifice (VSO)

Data Acquisition Control Board (DAC):

- Enhanced Flash 16 bit RISC based microcontrollers; main and Digital Signal Processing (DS). Real time clock with auto backup and write protection to external SRAM.
- High Speed 14bit A/D convertor with parallel DSP interface.

Data Acquisition Control Board (DAC):

- Memory Card for data storage – stores up to 99 tests
- USB 2.0 Comm Input connection.

Communications:

- PC user interface via USB

Thermocouple Multiplexer:

- Accepts Type K Thermocouple inputs; input protection includes gas discharge tubes for ESD and surge protection.
- 11 Pic Microcontrollers, 1 for each channel and MUX circuitry
- MUX Circuitry to receive multiple inputs and transmit selected output.
- 10 microcontrollers, one for each optically isolated channel.

Sample Pumps:

- Dual Head Miniature Diaphragm Pumps with 12 VDC motors, Max Vac. 22" Hg.

Integrated Temperature Control:

- Designed into DAC for single probe/trap heater control output via 25 amp SSR.

Pressure:

Barometric Pressure

- 600 to 1100 mbar, 17.7 to 32.4"Hg, temperature compensated, amplified output.

Vacuum

- 0 to 30" Hg, 0 to 101 kPa, 2% accuracy.

Durable UHMW Polyethylene Case:

- Built-In Handles (Size 10U)
- 19" Rack Mount Panel

AC Power: 120 Vac 60Hz. / 220 Vac 50Hz

- **Dimensions:** 23in x 21in x 12in (58cm x 53cm x 30.5cm)

- **Weight:** 39 lbs. (17.7kg)

For more information, contact us :

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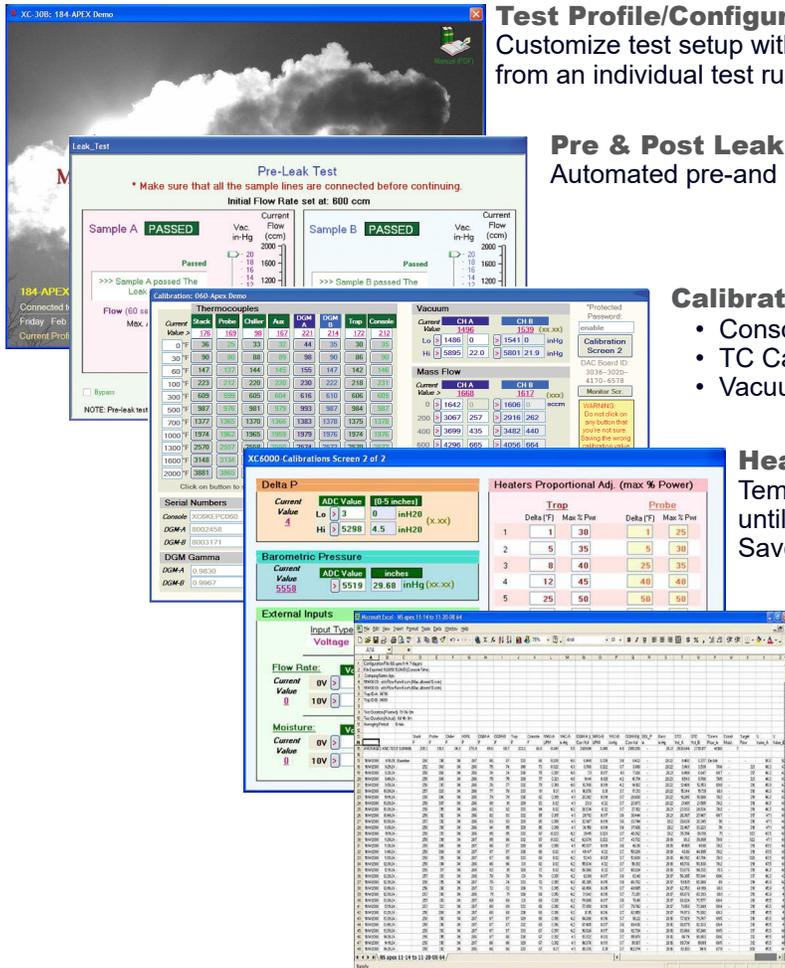
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XC-30B MercSampler SOFTWARE

XC-30B MercSampler Automated Software works with a windows based platform. It allows the operator to quickly set up test profiles, perform sample runs, sensor calibration, DGM calibration, run quarterly audits and download test data at any time during or after a test run. Software can be purchased separately for use with customer supplied computer. Intuitive windows based operator interface may be run from local PC or remote network connection.



Test Profile/Configuration Set-up

Customize test setup with the user defined profiles containing all of information from an individual test run. Once created or loaded a profile may be edited.

Pre & Post Leak Test

Automated pre-and post-test leak check.

Calibration Screen

- Console Information
- Mass Flow Calibration
- TC Calibration
- Load and Save Cal. Files
- Vacuum Calibration
- Manual Pump/Valve Control

Heater Profile

Temperature fine tuning, and prevent runs until the traps have reached their set point. Save and load heater profiles as needed.

Data Export

- Temperatures
- Profile Name
- Logged Events
- Averages
- Standard Volumes
- Pre & Post Leak Check
- Flow Rate
- Vacuum
- Start, Stop & Event Times
- Test Configuration

Portable Stirling Gas Cooler For METHOD 30B

The SGC-4000HGP Stirling Gas Cooler & Conditioner is a Portable Unit that comes with a top handle for easy transport and a durable UHMW polyethylene 6U case. Cooler comes with condensate collection bottles for use with the XC-30B Mercury Sorbent Trap Sampling System.

Dimensions: HxWxD: 22" x 13" x 23".
55.88 cm x 33.02 cm x 58.42 cm

Weight: 32 lbs (14.5 kg).

Portable Unit SGC-4000

SGC-4000HGP (110V)
SGC-4000HGP-V (240V)



Portable SGC-4000HGP Front, Back View

For more information, contact us :
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