

# XC-30B

## Automated MercSampler™ Console

The **XC-30B MercSampler™ Console**, designed especially for performing Method 30B, simplifies sampling requirements by automating data acquisition, sample flow adjustments, leak checks, calculations, temperature control, and calibrations. Data is easily transferred to a Microsoft 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.

**Method 30B - Determination of Total Vapor Phase Mercury Emissions from Coal-Fired Combustion Sources using Carbon Sorbent Traps.**

### Features

- Fully Automated for Paired Sampling
- Dual Dry Gas Meters and Mass Flow Sensors
- Alerts for Port and Traverse Point Changes
- Simple Data Export
- Compact Portable System
- Eight Isolated Type K Thermocouple Channels
- 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) |

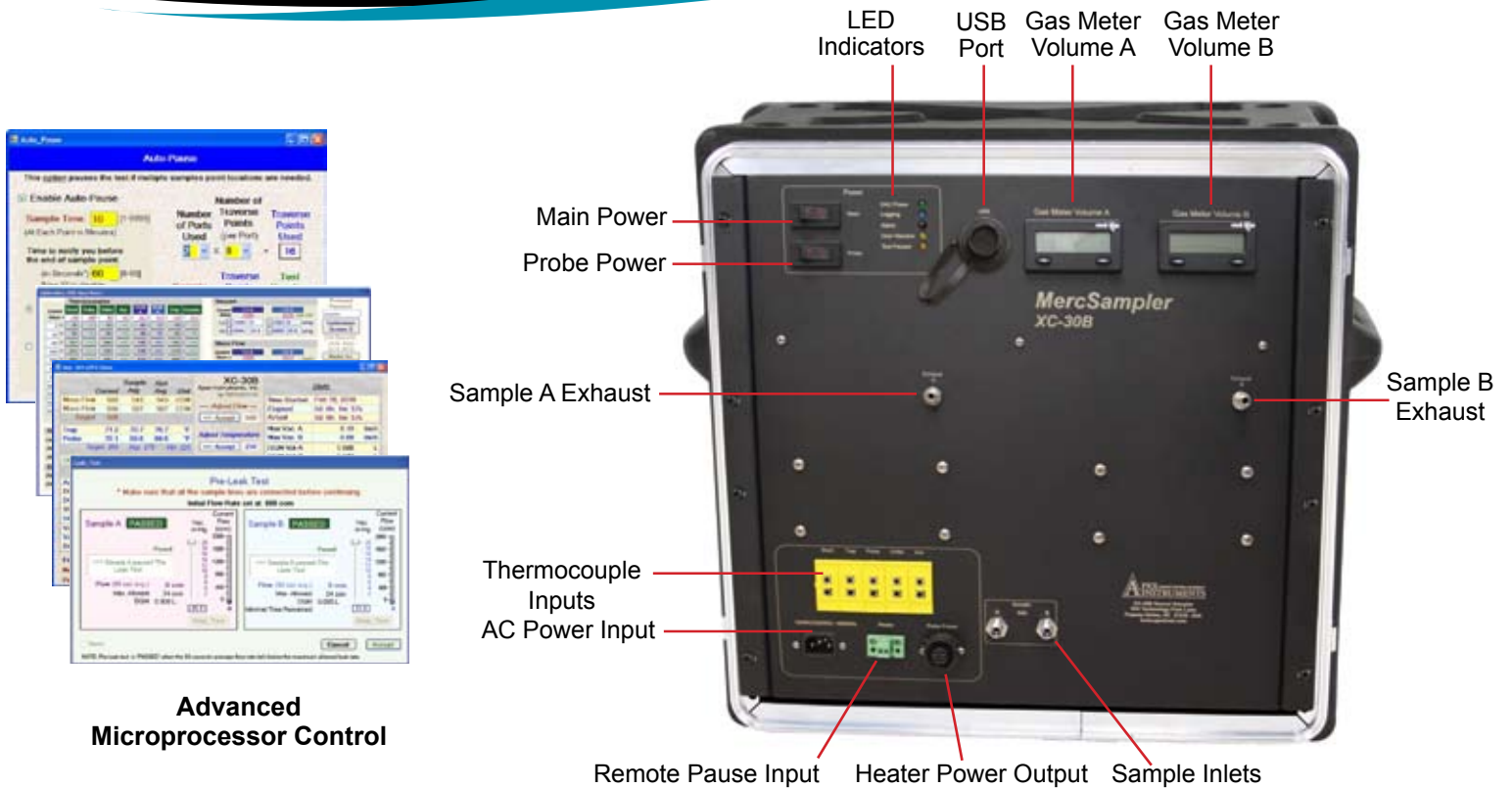
*Please contact your sales representative for more details.*

### A Typical System Includes:

- Automatic Console:  
XC-30B Sampling Console with Netbook
- Gas Conditioner: Portable Versions
- Stainless Steel Probe: Optional Length with Single Heater, for Dual Sample Traps
- Umbilical: Heated Line, Specify Length

**Automated XC-30B MercSampler™ Console with Netbook Computer**





**Advanced  
Microprocessor Control**

## Specifications

### Dry Gas Meters:

- Dual dry gas meters with integrated optical encoders, resolution to 1 cc
- Model K2 positive displacement type.
- 0.4 liter per revolution.
- Optical encoder sensor with quadrature pulse output.

### Sample Pumps:

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

### Sample Flow Control:

- Stainless steel sample manifolds fitted with mass flow sensors, vacuum sensors, and proportional valves.
- Constant flow sampling <300 ccm.
- Mass Air Flow: Flow control, 300 to 2500 ccm
- Proportional Valve: Voltage Sensitive Orifice (VSO), 12 Vdc.

### 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.
- 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.

### 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)