

XC-53

Isokinetic Source Sampling Console

Features:

- Rugged and lightweight case
- Precision dry gas meter
- Internal sampling pump
- Peak 32 - microcontroller module
- Booster pump (optional)

The new **XC-53** from Apex Instruments is designed as a low-cost entry level metering console for Isokinetic Sampling featuring our advanced Peak 32 microcontroller module (MCM) for measuring and displaying stable pressures and temperatures. The transfective LCD screen displays the elapsed time, the pitot velocity pressure (ΔP), the venturi sample flow pressure (ΔH) and the temperature of the selected thermocouple. The rotary switch monitors up to 6 different temperatures. The sample volume is displayed via the mechanical totalizer. The coarse and fine valves are used to control the sample flow rate and to adjust the vacuum during leak checks. The quick connects provide convenient connections for the sample vacuum line and the pitot tubes.

The **XC-53 Isokinetic Source Sampler** console allows the operator to monitor gas velocities, temperatures, pressures, sample flow rates and volumes for maintaining isokinetic sampling conditions. The Source Sampler system is easily adapted to test for a wide range of pollutants from stationary sources, such as particulate matter including PM 2.5 and PM10 fractions, metals, polychlorinated biphenyls (PCBs), dioxins/furans, polycyclic aromatic hydrocarbons (PAHs) and many more pollutants with adaptations of this basic isokinetic test method.

The **Peak 32 Microcontroller Module** allows the console to utilize a backlit, sunlight readable screen, an easy-to-use 4 button keypad, and sensors for measuring temperatures and pressures. The Peak 32 MCM also allows for user-adjustable dampening for stable display of the ΔP and ΔH values. A USB interface is used for sensor calibration and firmware updates.



Model XC-53P Console

XC-53 LEGEND

XC-53 -

Pump Options:

BLANK = Internal Pump Only
(Standard)

P = Fittings for Additional
Pump Installed (Female/Female)

XP = No Internal Pump (Male and Female)

Power Output Option:

BLANK = 4 Pin Amphenol (END OF LIFE)
(Size 14S Shell - Female/97 Series)

A = 5 Pin Amphenol
(Size 14S Shell - Male/97 Series)

B = 5 Pin Amphenol
(Size 14 Shell - Bayonet Style/PT Series)

C = 5 Pin Amphenol
(Size 16S Shell - Male/97 Series)

D = 4 Pin Amphenol
(Size 14S Shell - Male/97 Series)

Gas Meter Display Options:

BLANK = Mechanical

D = Digital

Temperature Controller Option:

BLANK = English

M = Metric

Analyzer Output Option:

BLANK = None

A = 1/4" Valved Female
Quick Connect

Pitot Quick Connects:

BLANK = 1/4" Instrumental

QS6 = 3/8" Instrumental

Voltage:

BLANK = 120V

V = 240V

INTERNAL SAMPLING PUMP

PEAK 32 MCM ELECTRONICS PACKAGE DISPLAY



Backlit, Sunlight-readable Display of Timer, $\Delta P/\Delta H$ Pressures, and Temperatures

Peak 32 MCM Electronics Package

Display User Buttons

Mechanical Dry Gas Meter Display

LIGHTWEIGHT AND RUGGED HARD PLASTIC CASE

Specifications:

Dry Gas Meter (DGM): SK25EX, measurement principle-gas displacement, easy to read numeric index with leak check wheel, Qmax 41 lpm at 150 Pa., Qmin 0.26 lpm. Totalizer capacity 9999 cubic meter, resolution 0.2 Liter. Cyclic volume 0.7 liters. Type K thermocouple for exit temperature.

Display: 4x20 Character Back-lit Transflective Liquid Crystal Display, viewing area 74 mm x 45 mm, operating temperature -20 to 70°C.

Flow Meter: Precision Stainless Steel Venturi.

Internal Sample Pump: Dual Head Diaphragm, 70 lpm free flow, 21 lpm @ -50kPa, max vacuum -85 kPa, 24 VDC Brushless Motor

Temperature Measurement: Cold junction compensated type K Thermocouple-to-Digital converter °C/°F selectable, -200°C to 1372°C range. (-328°F to 2502°F). 6 channel rotary switch, up to 5 addition Type-K thermocouple inputs, standard size jacks.

Probe and Oven Temperature Control: Fuji PXR3 Compact, 1/32 DIN self-tuning PID

temperature controller with 3 button keypad, SSR Driver for 25 amp solid state relay. Type-K thermocouple jack for input.

Digital pressure transducers:

ΔP Low +/- 1.0" (+/-249 Pa) range bi-directional with 0.001" (0.1 Pa) resolution
 ΔP High +/- 10.0" (+/-2491 Pa) range bi-directional with 0.01" (1 Pa) resolution
 ΔH 5.0" (1245 Pa) range with 0.01" (1 Pa) resolution
 (ΔP automatically selects appropriate transducer for current flow)

Vacuum Gauge: Bourdon tube, Dual Scale, 0 to -30" Hg, 0 to -100kPa.

Umbilical Connection: Electrical multi-conductor circular connector. Instrumental grade stainless steel quick-connects Sample Inlet: 1/2", Pitot Connections: 1/4". Type K Thermocouples inputs: Aux, Stack, Probe, Oven, Exit.

Power: Supply 120VAC/60 Hz 15 amps max. or 240VAC 50 Hz 10 amps max., IEC C-13 Inlet.

