APEX SOURCE TESTING EQUIPMENT INSTRUMENTS

ISOKINETIC ACCESSORIES

DELUXE METHOD 5 GLASSWARE SET WITH TRANSPORT CASE

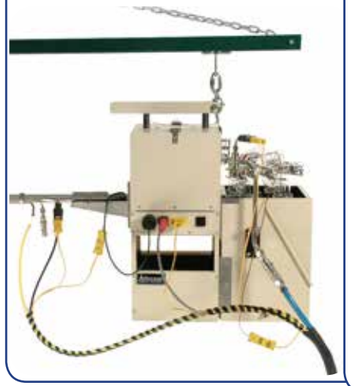
Deluxe Method 5 Glassware Set with Transport Case (GN-DGS)
Contains all the glassware plus spares for a full test series.

METHOD 5 PUMP ASSEMBLIES

XE-0523

XE-DAA

MONORAIL



UNHEATED SAMPLE LINES

HEATED SAMPLE LINES (JUMPERS)

FILTER MEDIA

IMPINGER CASES (COLD BOXES)

SB-3 SB-4 SB-4SD SB-5

NOZZLE SETS

PM2.5 Cyclone Set

PM2-K

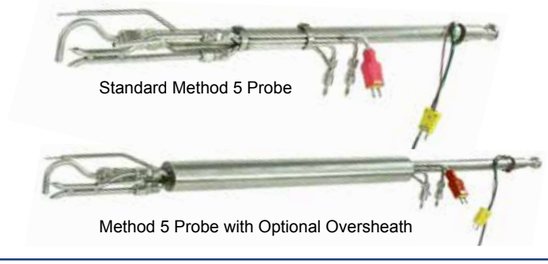
PM10 Cyclone Set

PM10-K

PM10/2.5 Cyclone Set

PM2.5-10K

STANDARD METHOD 5 HEATED PROBES



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ISOKINETIC

SOURCE SAMPLING EQUIPMENT

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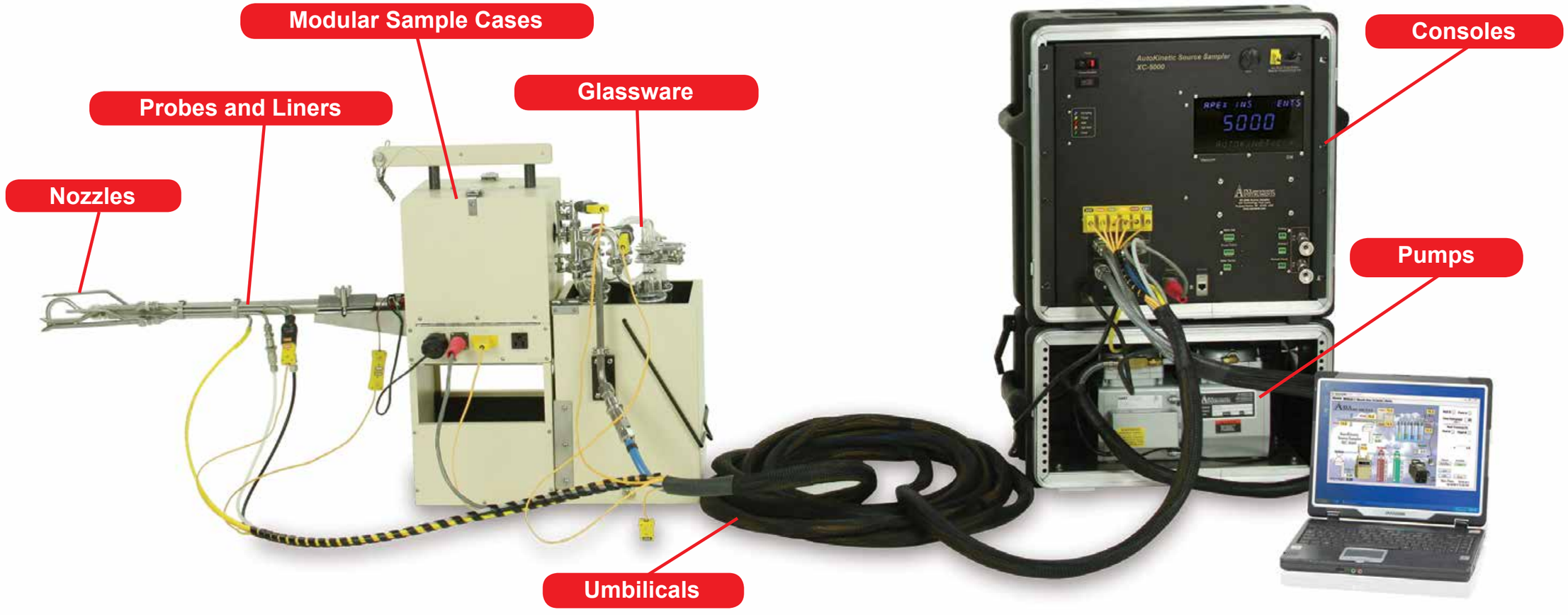
Apex Instruments

Isokinetic

Source Sampling Equipment



Apex Isokinetic Source Sampling Systems are rugged versatile equipment designed for extracting a representative flue gas sample from a source to determine particulate & toxic emissions in accordance with U.S. EPA Reference Methods as published in CFR 40 Part 60 Appendix A. Choose between automated or manual systems.

APEX SOURCE TESTING EQUIPMENT INSTRUMENTS

For Over 25 Years

XC-5000 AUTOKINETIC™ SAMPLER CONSOLE

Our **XC-5000 AutoKinetic™ Series** is designed for conducting US EPA Method 5 and associated isokinetic methods. Take the worry out of isokinetic sampling and the human error out of manual data entries and calculations. The new XC-5000 Series is compatible with your existing Method 5 stack sampling components. Report preparation is streamlined with accurate data downloadable to files for easy report preparation.

Advantages of XC-5000

- **Quality Data**
- **Easy to Use**
- **Streamline Reporting**

Features and Benefits:

- Fully Automated Isokinetic Sampler improves data integrity
- Intuitive Windows Interface guides you through the Sampling protocol
- Calculates traverse points, optimum nozzle diameter, and isokinetic rate
- Accepts standard modules for various EPA Methods
- Automated Pre & Post Leak Checks
- Automatically pauses at the end of point or traverse
- Notifies you to move the probe
- Alarms for user attention
- Continuous Sampling Validation

ISOKINETIC SOURCE SAMPLING METER CONSOLE OPTIONS

XC-5000-□□□

Calibration Units
Blank = English Units
M = Metric Units

Quick Connects
Blank = 1/4" Pitot
QC6 = 3/8" Pitot

Voltage
Blank = 120V/60Hz
V = 240V/50Hz

XC-5000 Isokinetic Source Sampler Console

Model	Description
XC-5000	AutoKinetic™ Sampler Console, 110V
XC-5000-V	AutoKinetic™ Sampler™ Console, 240V

Simplfy many of the routine tasks in particulate sampling.

Specifications

Gas Meter: Precision DGM, 0.7 liters per revolution, Digital Encoder, 1cc resolution.

Temperature Control: Integrated temperature control via the Control and Data Acquisition Board, probe and oven with solid state relays.

Thermocouple Display: 7 temperatures displayed simultaneously on the PC User Interface, °F or °C, Probe, Stack, Oven, Filter, Exit, AUX and DGM.

Digital Pressure Transducers: For ΔH, and ΔP (Bi-Directional), Barometric.

Pitot ΔP	+/- 2.5" +/- 63mm	0.01" resolution 0.1 mm resolution
Orifice ΔH	0"-5" 0mm-127mm	0.01" resolutions 0.1mm resolution
Barometric resolution	17.7 inHg – 32.5 inHg 450 mmHg – 825 mmHg	0.01 inHg 0.1m mmHg
Vacuum Sensor	0 to 30" Hg, 0 to 101 kPa, 2% accuracy	

Umbilical Connections:
Electrical: 4 conductor circular connector grounded shell.
Sample line: Stainless Steel 1/2" Quick Connector.
Pitot Line: Stainless Steel 1/4" Quick Connectors (optional 3/8").
External pump: Stainless Steel 3/8" Quick Connect.
Thermocouples: Type-K standard size.

Communication:
Wireless and Ethernet.

Dimensions:
H23" x W21" x D12" (58 cm x 53 cm x 30.5 cm).

Weight: 39 lbs. (17.7 kg).

Optional:
4 channel analog input module for logging external data (4-20ma, 0-10V, 1-5V).

Power: 120V / 60 Hz. 220V / 50 Hz (optional).

Console Power Requirements:
120V 15amp max.

AutoKinetic™ Software

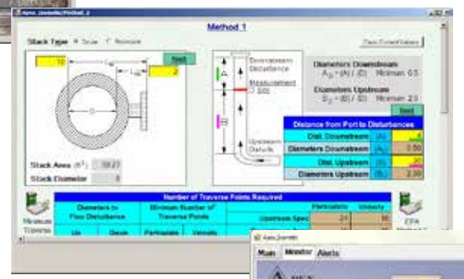
The AutoKinetic proprietary software is designed to be intuitive and user friendly. The stepwise functionality of the windows based program guides the user through creating a test profile ensuring all test parameters are met, increasing data integrity. Software allows for easy data export for report generation.

Main Screen

- Access system functions
- Progress status
- Simple user interface
- Tabs to toggle between main, monitor & alert set-up screens

Pre-test screens

- Calculates
  - Stack diameter & travers points
  - Stack velocity & molecular weight
  - Ideal nozzle size & k-factor calculation

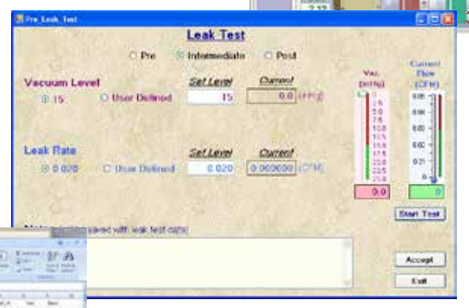


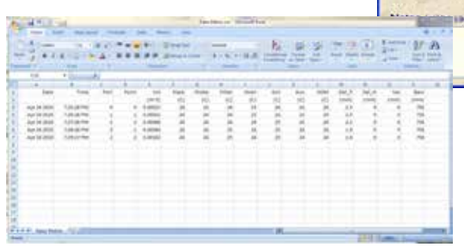
Test Run Screen

- Monitor current temperature & pressure values
- Displays current sampling

Leak Test Screen

- Performs pre, intermediate & post leak check
- Automatically controls vacuum
- Pass or fail indicator





Test Data & Reporting

- Exports
  - Test run data
  - Leak check data
  - Logged events
  - Console audit data
- Data exported in single CSV file
- Data displayed in both summarized & detailed format
- Export file automatically named with project name and date

Apex Instruments, Inc. offers an extensive line of equipment and supplies for sampling stationary source emissions for pollutants in accordance with US EPA Reference Methods. The majority of the methods are generally classified as either Isokinetic or Gaseous Sampling Methods. This section includes the Apex Instrument line of Isokinetic equipment and accessories. Isokinetic sampling requires the sample to withdrawn from the gas stream at the same rate it is moving through the stack or duct.

Apex Isokinetic Source Sampler systems allow the operator to monitor gas velocities, temperatures, pressures and sample flow rates for maintaining isokinetic sampling conditions. The Isokinetic Source Sampler system is easily adapted to test for a wide range of pollutants from stationary sources, such as dust including particle size distributions, metals, polychlorinated biphenyls (PCBs), dioxins/furans, polycyclic aromatic hydrocarbons (PAHs) and an ever increasing group of pollutants tested for with adaptations of this basic isokinetic test method.

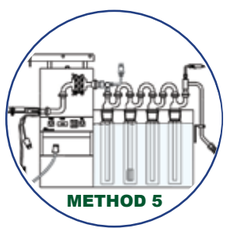
Our Isokinetic equipment is designed to be modular, where you choose your meter console, pump and components of choice to meet your particular needs.

The Apex Method 5 Isokinetic Sampler System provides a reliable and versatile foundation for performing most isokinetic testing methods. Contact our friendly knowledgeable sales staff for assistance in selecting a system to meet your needs

Method 5

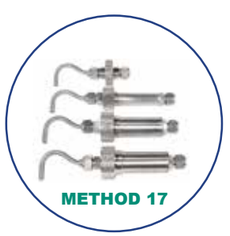
Flexible Arrangement

METHOD SPECIFIC SAMPLING KITS



METHOD 5

Particulate Emissions from Stationary Sources - The professional source sampling company must be prepared for a wide variety of conditions and locations. Apex recommends the “Deluxe Plus” system, which can be used in both rigid and flexible configurations. Even with the classic rigid arrangement, the additional glassware allows you to have pre-measured and filled impingers, pre-weighed filter assemblies, and minimum turnaround time between runs.

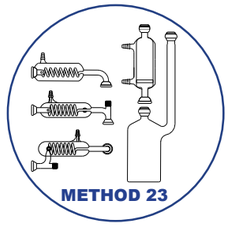


METHOD 17

Particulate Emissions by In-Stack Filtration - Add an in-stack filter assembly and longer pitot tip to a Method 5 system. The Apex Instruments Method 17 Sampling Kit is a convenient package for sampling particulate matter.

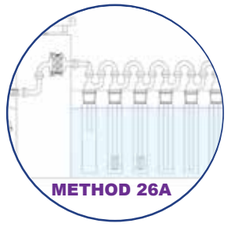
ISOKINETIC SOURCE SAMPLING EQUIPMENT

VERSATILE SYSTEM FOR MULTIPLE METHODS



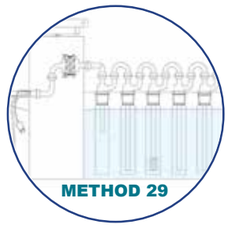
METHOD 23

Dioxins / Furans - The Apex Instruments Method 23 (Modified Method 5) Source Sampler Kit is utilized for Method 23 determination of dioxins and furans (D/F’s) and/or Method 0010 Determination of Semi-Volatile Organic Compounds. Add a water-cooled glass condenser, an XAD absorbent module and a knockout impinger to the Method 5 system.



METHOD 26A (HCl)

Hydrogen Halide & Halogen Emissions - Add impingers, reagents and PTFE coated glass fiber filter media to a Method 5 train. The Apex Instruments Method 26A Sampling Train is used for determination of hydrogen halide and halogen emissions. Method 26A is the isokinetic alternative to Method 26. This method is particularly suited for sampling sources controlled by wet scrubbers emitting acid particulate matter.

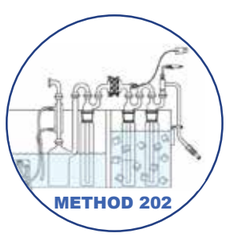


METHOD 29 (Multiple Metals)

Metal Emissions - Add up to three impingers. The SB-4 impinger case, glass nozzles, probe liners and non-metallic union to a Method 5 train. The method has been validated for the collection of 17 different metals.

METHOD 201A

Particle Sizing - Add cyclones to a Method 5 system. The purpose of Method 201A is to measure particulate matter emissions equal to or less than given nominal aerodynamic diameter(s). In general, a gas sample is extracted from a stationary combustion source at a predetermined constant flow rate through in-stack sizing devices. As amended, Method 201A now combines the existing method (PM10) with a PM2.5 cyclone to create a sampling train that includes a total of two cyclones.



METHOD 202

Condensate Particulate Matter (CPM), Dry Impinger Method - This isokinetic method is used to measure Condensable Particulate Matter (CPM) from stationary source emissions after particulate matter has been removed by a heated filter, such as in Method 5, 17 or 201A. The CPM is collected in dry impingers.