

# fuel testing equipment

Koehler Instrument Company's line of analyzers and testers for fuels can be used to test for quality and a wide range of characteristics of various types of fuels, including gasoline, diesel, and aviation fuel. Please inquire with your Koehler sales representative to learn more about our instruments and how they can provide a solution for your specific application. Or visit our website at [www.koehlerinstrument.com](http://www.koehlerinstrument.com) to find detailed specifications on each of the products you see listed here.



## K77000/K77001

### Automatic Cloud and Pour Point Analyzer

ASTM D5771, D5950 with Excellent Correlation to: ASTM D97, D2500, D5853, D6074, D6158; ISO 3015, 3016; IP 15, 219; DIN 51597; FTM 791-201; NF T 60-105; JIS K2269

The Automatic Cloud and Pour Point Analyzer is a state-of-the-art piece of equipment for measuring cloud point by optical detection and pour point with automatic tilt. The cloud point is an index of the lowest temperature of a petroleum product or a biodiesel fuel's utility for certain applications. Wax crystals of sufficient quantity can plug filters used in some fuel systems. The pour point of a petroleum product is an index of the lowest temperature of its utility for certain applications. Flow characteristics, such as pour point, can be critical for the correct operation of lubricating oil systems, fuel systems, and petroleum blending and pipeline operations.



## K45703-TS & K45704-TS ADA5000

### Automatic Distillation Analyzer w/ Touch Screen Display

ASTM D86, D285, D850, D1078, D4737; D189 Section 10; DIN 51751; ISO 3405; IP 123; IP 195; JIS K0066; JIS K2254; NF M 07-002

The Koehler Automatic Distillation Analyzer is designed to perform optimal distillation analyses of gasolines, fuels, oils, solvents, aromatics, naphthas, kerosenes, hydrocarbons, and other volatile products to ensure conformity to rigid quality control standards. The analyzer automatically performs tests, processes results, and produces standard reports according to ASTM, ISO, and related specifications. An easy-to-use Windows®-based PC communication software expands user capabilities for data analysis and unit control and distillation methods and parameters can be easily created or modified. The heater compartment is rapidly cooled at the completion of a distillation run to reduce operator downtime. The analyzers are of rugged construction for instrument longevity with a modular design for easy routine maintenance.

## K33900

### Existent Gum Evaporation Bath

ASTM D381; IP 131; IP 540; ISO 6246; DIN 51784; FTM 791-3302; NF M 07-004

Gum formed during fuel storage can deposit on induction system surfaces, intake valves, stems and guides. The Koehler Existent Gum Evaporation Bath is a fully insulated aluminum block bath designed to assure safe and efficient high temperature operation. Stainless steel jets deliver air or steam flow to the test wells through removable brass conical adapters. Microprocessor PID control provides quick temperature stabilization without overshoot and the bath is protected by an over-temperature control circuit that interrupts power should the bath temperature exceed a programmed cut-off point. Dual LED displays provide actual and setpoint temperature values in °C/°F format.



## K71000

### Automatic Pensky-Martens Closed Cup Flash Point Tester

ASTM D93 Procedure A, B and C; IP 34; ISO 2719; DIN EN 22719; JIS K2265; NF M 07-019

The Automatic Pensky-Martens Closed Cup Flash Point Analyzer represents a perfect union of next-generation technology with traditional robust quality. The 8.4" touch screen interface fully displays all operator parameters and results on a single screen. A three (3) position mechanical lift system for the cover and motor assembly is fully automated and software selectable: Open – Clean – Test for one touch positioning of the test cup. The instrument comes standard with two flash detector systems including a thermocouple and ionization ring detection. Over 65,000 results of data can be stored on the local hard drive. Integrated Dual Fan System directly cools the test cup and the environment around test cup. An unlimited number of user programs can be applied, including a quick test that safely tests from ambient, puts the flash point result into the EFP of the official run, and prompts user to refresh the sample, virtually assuring no fires ever occur. In addition, the instrument comes standard with an inert gas fire suppression system. For a full list of our Flash Point products, visit [www.koehlerinstrument.com/products/category/flash-point/](http://www.koehlerinstrument.com/products/category/flash-point/)

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## K90901 Combination Octane Rating Unit Engine

ASTM D2699 and ASTM D2700

The K90901 Standard Model Combination Octane Rating Unit is the latest model of octane engines with many easy-to-use features including automatic functions and enhanced documentation capabilities, conforming to the latest ASTM D2699 (RON) and ASTM D2700 (MON) test methods. Through the engine's operating panel, the parameters are adjustable according to the ASTM D2699 and D2700 specifications. The professional and clear design of the operating area makes the octane rating operation convenient and the data is easy to read and record. The auto-setting function of the octane engine effectively simplifies operational procedures and improves the efficiency of octane testing. The operating panel is equipped with a protect system and push-button switches to avoid improper operation. The engine also allows for easy conversion between MON and RON methods is accomplished by use of the dual speed motor, with no need to change the flywheel.

## K24870 Automatic Microscale Vapor Pressure Analyzer

ASTM D5191, D6378

Excellent Correlation to: ASTM D323, D4953; EN 13016-1; IP 394; JIS K2258-2; SH/T 0794, SH/T 0769; GB/T 8017; SN/T 2932

The design of the K24870 Microscale Vapor Pressure Analyzer is based on the Triple-Expansion Principal for vapor pressure determination. The sample of known volume is injected into a temperature-controlled measuring chamber with a piston in it, which is then sealed. The volume of the sample is expanded by X times in three steps. The total pressure after every expansion step is measured and the dissolved partial pressure of the air and dissolved partial pressure of air in the sample are calculated. The temperature is then raised to a certain value and the total pressure is measured at the temperature. By taking the difference of the total pressure after final expansion and the partial pressure from dissolved air, the vapor pressure of the sample is calculated. The analyzer is fully automatic and features a small required sample size, a touch screen user interface, USB and other network connections, and software with storage capacity of up to 1,000 results.



## K24900 Portable Fuel Property Analyzer

ASTM E1655

The Portable Fuel Property Analyzer (PFPA) provides rapid fuel analysis anywhere it's needed: the plant, port, or field. Analysis is obtained in seconds using only a 2 mL fuel sample. The PFPA uses Near Infrared Spectroscopy combined with Advanced Multivariate Analysis to determine key fuel properties that influence engine performance. The PFPA property determinations were developed and validated according to ASTM E1655 "Standard Practice for Infrared Multivariate Quantitative Analysis" using the property values of a diverse matrix of over 800 fuels from around the world determined by traditional ASTM methods.

## K23900 Kinematic Viscosity Bath

ASTM D445, D6074, D6158; IP 71; ISO 3104; DIN 51550; FTM 791-305; NF T 60-100

Kinematic viscosity is of primary importance in the design and selection of a wide range of petroleum products. Calibrated capillary viscometers are used to measure flow under gravity or vacuum at precisely controlled temperatures. Constant temperature bath with advanced temperature control circuitry for convenient, accurate glass capillary viscometry determinations. Microprocessor PID circuitry assures precise, reliable temperature control within ASTM specified stability and uniformity throughout the operating range of the bath. Simple push-button controls and dual digital displays permit easy setting and monitoring of bath temperature. Baths accommodate seven glass capillary viscometers of various types. Below is a listing of the various types of viscometers that we offer.



Part No.	Type	Application
378-XXX-C01	Cannon®-Fenske Routine	For kinematic viscosity of transparent liquids up to 100,000cSt.
378-XXX-C02	Cannon®-Fenske Opaque	Reverse-flow viscometer for measurement of transparent and dark liquids having kinematic viscosities of up to 100,000cSt.
378-XXX-C03	Ubbelohde	Suspended-level type viscometer for kinematic viscosities of transparent liquids of up to 100,000cSt.
378-XXX-C16	Cannon®-Ubbelohde Four-Bulb Shear Dilution	Suspended level viscometer for the measurement of intrinsic viscosity extrapolated to zero shear rate.
378-XXX-C11	Cannon®-Ubbelohde	Suspended level viscometer for transparent liquids.
378-XXX-C15	Cannon®-Ubbelohde Dilution	Suspended level viscometer for the measurement of intrinsic viscosity of transparent liquids.
378-XXX-C12	Cannon®-Ubbelohde Semi-Micro	For transparent liquids.
378-XXX-C10	Cannon®-Manning Semi-Micro	For transparent liquids.
378-XXX-C17	Cannon®-Manning Semi-Micro Extra Low Charge	For transparent liquids.
378-XXX-C09	Cross-Arm	Reverse-flow type viscometer for transparent and dark liquids having kinematic viscosities of up to 100,000cSt.
378-XXX-C08	BS/IP/RF U-Tube Opaque	Reverse-flow viscometer for opaque liquids having kinematic viscosities of up to 300,000cSt.
378-XXX-C08	BS/U-Tube Transparent	U-Tube viscometer for transparent liquids having kinematic viscosities of up to 10,000cSt.
378-XXX-C18	BS/U/M Miniature U-Tube	Miniature U-Tube viscometer for transparent liquids having kinematic viscosities of up to 100cSt.
378-XXX-C19	BS/IP/MSL Miniature Suspended Level	Miniature suspended level viscometer for transparent liquids having kinematic viscosities of up to 3,000cSt.
378-XXX-C20	BS/IP/SL Suspended Level	Suspended level viscometer for transparent liquids having kinematic viscosities of up to 100,000cSt.
378-XXX-C21	BS/IP/SL(S) Suspended Level	Shortened suspended level viscometer for transparent liquids having kinematic viscosities of up to 100,000cSt.
378-XXX-C13	Cannon®-Manning Vacuum	For highly viscous materials, including asphalt cement at 140°F (60°C) in accordance with ASTM D2171.
378-XXX-C14	Asphalt Institute Vacuum	Similar to Cannon®-Manning Vacuum type, but with graduated capillary instead of two timing bulbs.
378-XXX-C06	Modified Koppers Vacuum	For highly viscous materials in accordance with ASTM D2171

For a complete list of Koehler products to suit your fuel testing requirements, please contact your Koehler Sales Representative or visit us at [www.koehlerinstrument.com/product-packages/fuels](http://www.koehlerinstrument.com/product-packages/fuels)