

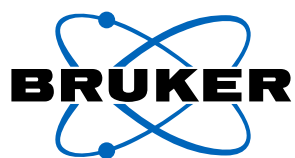


■ ■ ■ [BRING IT TOGETHER]

SPECIALISTS IN SPECIALTIES

Chemicals and Lab Equipment





BRUKER OPTICS

TANGO-R



BRAVO handheld Raman



LUMOS II FT-IR Microscope



MPA II Dairy Analyzer



Alpha II – ATR module



Bruker Optics is the leading international manufacturer of FT-IR spectrometers, with decades of experience and development in the most demanding applications and the first preference of the pharmaceutical industries.

Their selection of Near, Mid and Far infrared and Raman spectrometers is unrivalled across the industry. Bruker's portfolio includes compact, portable routine as well as powerful research spectrometers. Their solutions cover the entire spectral range from Near infrared, Mid infrared, Far infrared to THz applications.

Applications

- Academia
- Pharma/Biopharma & Cosmetics
- Food & Feed Industry
- Dairy
- Chemicals & Petrochemicals
- Polymers
- Art Conservation & Archaeometry



THERMO SCIENTIFIC NITON ANALYZERS: PORTABLE ED-XRF ANALYZERS

Thermo Scientific NITON portable analytical instruments deliver instant, actionable data for quick decision making in critical situations. Combining sophisticated technologies including X-ray Fluorescence Spectroscopy (XRF) and Laser Induced Breakdown Spectroscopy (LIBS), and an incredibly easy-to-use interface, our portable analyzers provide rapid, reliable material verification and quantification to increase throughput, raise quality and reduce risk—in virtually any location, field environment, or weather conditions.

Featuring vivid displays, advanced electronics and robust performance, Thermo Scientific is built to help you attain increased profitability and quality assurance. Whether in the field, or in the lab, analyze with confidence using Thermo Scientific solutions.

Applications

- Scrap metal recycling
- Manufacturing & metal fabrication
- Positive material identification (PMI)
- Precious metals & jewelry analysis
- Mining & exploration
- Environmental remediation
- Consumer goods testing
- Electronics & medical devices
- Art & archaeometry



*XL2 XRF
Analyzer*

*XL5 Plus
Handheld XRF Analyzer*



*XL3t XRF
Analyzer*

*Niton Apollo
Handheld LIBS Analyzer
for Carbon Equivalency Testing*



*Niton DXL
Precious Metal Analyzer*



EDWARDS VACUUM

Edwards are a global leader in the design, technology, manufacture and service of vacuum pumps for a wide range of applications, tailoring solutions to the customers' needs. For more than 100 years Edwards has been at the forefront of vacuum pump technology, help make manufacturing and service cleaner, smarter, economical and environmentally friendly. Their scientific, industrial and chemical vacuum pumps are integral to R&D and manufacturing processes for an increasingly diverse range of industries.

Edwards has developed comprehensive vacuum systems and solutions for scientific, industrial and chemical industries to address the challenges unique to the respective industry. Their vacuum technologies provide real cost benefits and environmentally friendly operations.

Edwards' combination of applications' expertise, product portfolio, engineering strength and global service presence puts them in a unique position to be able to deliver or work with you to design the best solution for your application.

A grasp out of the wide range of applications that vacuum enables

- Analytical Instruments
- Chemical Process Industry
- Research & Development, Universities & Laboratory
- Power Generation
- Glass & Coating applications
- Semiconductor
- Petrochemical & Pharmaceutical Industries
- Plastics & Recycling



*nXRi
Dry Multi-stage Roots Pumps*

*APG200 High Performance
Compact Pirani Gauge*



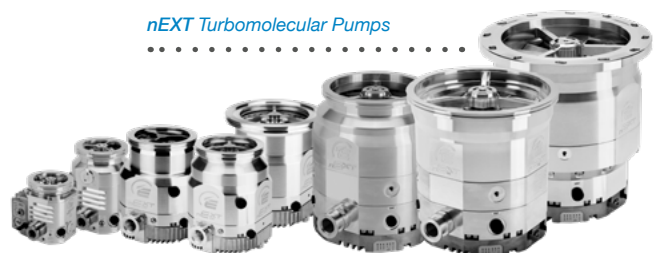
EH Mechanical Booster



*nES220 Single Stage
Rotary Vane Pump*



nEXT Turbomolecular Pumps



BELLINGHAM + STANLEY, EXPERTS IN POLARIMETRY AND REFRACTOMETRY



ADP600 Series of polarimeters are available as multiple, dual, or single wavelength models

Surcose Solutions

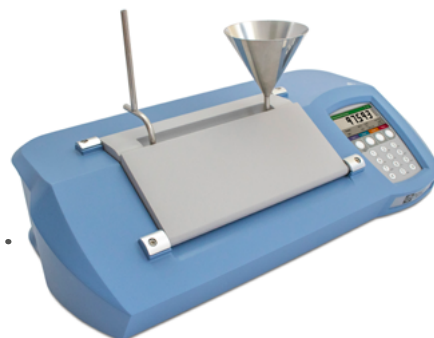


Eclipse Brix 50 Optical
Handheld Refractometer,

OPTi Digital Handheld
Refractometer



ADS400 Series
Saccharimeter



Bellingham + Stanley is a Xylem Brand. Xylem Analytics is a leading provider of premium field, portable, on-line and laboratory analytical instrumentation serving water & wastewater, ocean/coastal, food & beverage, environmental, chemical and pharmaceutical markets through brands including (but not limited to) SI Analytics, WTW, YSI, OI Analytical, and ebrio.

Bellingham + Stanley is a manufacturer of high quality digital refractometers, polarimeters and density meters used globally in industries including food & beverage, chemical, petrochemical, and pharmaceutical.

Applications

■ Agriculture

- water quality, flow and level testing and monitoring
- fruit ripeness (or Brix measurement)
- acidity and sugar content

■ Industry

- viscosity of polymers and oils
- development of fine or chiral chemicals

- monitoring the concentration of blended product like urea based diesel exhaust fluids
- measuring TAN, COD, hydrogen peroxide
- trace oil analysis
- turbidity meters
- photometers

■ Life Science

- pH, conductivity, dissolved oxygen, salt content and temperature
- bacteria or fungi
- biomass determination
- sugar content

■ Food & Beverage

- Water Monitoring
- Livestock & Aquaculture
- Fruit & Vegetables
- Flavours & Essences
- Sugar & Edible Oils
- Drinks
- Beer, Cider, Wine
- HACCP

UPGRADE YOUR LAB WITH AUTOMATED TESTING

CAV 4.1 A fully automated, single bath, benchtop viscometer with two 14-position sample handlers for unattended D445 processing



CCS-2100
A cold-cranking simulator for measuring apparent viscosity of engine oils from -35 °C to -5 °C



ULTRAVIS® 192 High Speed, Solvent-Free Kinematic Viscometer



CANNON miniAV-X
A fully automated, single-bath, benchtop viscometer with a 10-position sample handler for unattended D445 processing



CMRV-5000
The semi-automated CMRV-5000 is a compact and completely self-contained mini-rotary viscometer for measuring low temperature pumping viscosity from -5 °C to -40 °C



CANNON INSTRUMENT COMPANY has earned international acclaim for the quality of its viscosity-related products and services since its founding in 1938 by scientist, inventor, and educator Dr. Michael R. Cannon. The company's longstanding emphasis on production of premier-quality test equipment has kept CANNON at the cutting-edge of research and development.

Quality/Traceability

Use of high quality standards and reference materials ensures test reliability and accuracy. This is why the National Institute of Standards and Technology (NIST) delegated responsibility to CANNON for U.S. national standards for certified liquid viscosity reference standards in 2003.

CANNON's Quality System Scope

- The design, manufacture and certification of viscosity standards and the viscosity certification of customer-supplied materials.
- The design, and manufacture of flash point reference materials.
- The provision of calibration services for viscometers.

CANNON accepts complaints and handles them according to the requirements of ISO 9001, ISO/IEC 17025 and ISO 17034.

PETROLEUM TESTING EQUIPMENT

Providing quality testing instrumentation and technical support services for research and testing laboratories has been their specialty since 1925. Meeting your testing needs is the primary focus of their business, which is why Koehler Instrument Company is a leading producer and supplier of petroleum, synfuels and petrochemical instrumentation worldwide.

At Koehler, they pride themselves in innovation. In a time of continuous technological advancement and transition they are constantly implementing new and improved ways to surpass the needs of an ever-evolving industry. Koehler products are backed by their staff of technically knowledgeable, trained specialists who are experienced in both petroleum products testing and instrument service, which is carried out either on site or at a Koehler service center.

We are pleased to present their comprehensive line of petroleum laboratory instrumentation, both manual and automatic, as well as standards and accessories conforming to the latest ASTM, ISO, IP and related international standards.

We invite you to look through their extensive product offerings for instrumentation and services to meet your testing needs, or contact us for custom solutions for your specialized requirements.

Committed to providing you with full support for your laboratory testing needs, Koehler Instrument Company is more than just an instrument manufacturer. They take care of you through the whole process. They have many satisfied customers worldwide and continue to build new relationships every day because of their attention to customer needs.

Application/Industry

- Automotive
- Aviation
- Biodiesel
- Bitumen, Asphalt & Waxes
- Chemicals & Solvents
- Cosmetics & Fragrances
- Crude Oil
- Edible Oils
- Food & Beverage
- Greases
- Lubricants
- Marine & Bunker Fuels
- Paints & Varnishes
- Petrochemicals
- Petroleum

Automatic Pensky-Martens
Closed Cup Flash Point Tester



Automatic Cloud and
Pour Point Analyzer



Automated Air Release
Value Analyzer



Benchtop Four Ball
Wear and EP Tester



Kinematic Viscosity Bath



A LEADING WORLD-WIDE SUPPLIER FOR UNITS AND SYSTEMS FOR THERMAL SEPARATION

The PILODIST GmbH is a world leading manufacturer of lab scale distillation systems according to various ASTM norms as well as customized research systems dealing with rectification, thermal separation, molecular distillation, thin film evaporation and many others.

Having at own disposal glassblowing, mechanical electric, software and RnD departments the company offers 100 % inhouse manufactured systems by long term experienced team.

PILODIST is offering a wide range of standard products and systems but is also capable to offer tailor-made solutions according to special requirements. The very long experience and the extended list of worldwide users in many different industries guarantees a continuous development of all products to the most actual state of the art technologies.

The company has been six times awarded as a fastest growing company on the distillation systems market and continues to grow developing new instruments and making the existing ones even better.

The lineup of the PILODIST consists of following instruments:

- The PD100-series are manual, semi-automatic and fully automatic distillation systems according to ASTM D2892

- The PD200-series are manual, semi-automatic and fully automatic distillation systems according to ASTM D5236
- The PILODIST PD400-series are semi-automatic and fully automatic systems combined from associated PD100 and PD200 modules to provide the distillation of crude oil through both D2892 and D5236 test methods.
- The PD300-series are manual, semi-automatic and fully automatic distillation systems according to ASTM D1160
- The PD300-series has two customized solutions which operates over the ASTM D1160 requirements, but designed to solve similar tasks with higher performance. : the PD350CC, equipped with fraction collector for 5 final receivers 200 ml each; and the PD300CC-HT, which employs the distillation and column made of stainless steel with maximum operation temperature up to 650°C and max. AET of approx. 850°C.
- The PILODIST PD1120CC is the single fully automatic instrument according to ASTM D1120
- The PILODIST PD 4929 S is the fully automatic crude oil distillation system used for Naphtha fraction distillation as a part of ASTM D4929
- The PILODIST QD500CC is an ultra-fast distillation system for fully automatic fractionation of small quantities of stabilized petroleum, natural and synthetic products, except liquified petroleum gases, very light naphtha and fractions having initial boiling points above 500°C AET



PETRODIST 100 CC
Fully Automatic
Methods: ASTM D2892

Quickdist 500CC
Fully Automatic
Methods: ASTM D-2892



PETRODIST 350CC
Fully Automatic
Methods: ASTM D1160



PETROLEUM TESTING & BEYOND

Automated Abel Closed Cup Flash Point Tester
Methods: ISO 13736, IP 170, ISO 1516, ISO 1523

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Automated Micro Carbon Residue Tester
Methods: ISO 10370, ASTM D4530, etc.

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Automated Distillation Tester
Methods: ASTM D86, ASTM D850,
ASTM D1078, ISO 3405, IP 123,
JIS K 2254a

.....



Automatic Pour / Cloud Point Tester
Methods: ASTM D6749, D7683

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Since the foundation in 1892, Tanaka Scientific Limited has been engaged in manufacturing and sales of scientific instruments, through which they have contributed to the progress of science and technology. During the latter half of 1950s, Tanaka drew its main focus to the petroleum testing apparatus, and ever since then we have been delivering high quality and user friendly instruments to mostly the quality testing laboratories at refineries, as well as other selected scientific instruments for non-petroleum sectors.

Another area Tanaka Scientific has been committed is the standardization of petroleum test methods. TANAKA has been actively involved in the standard making and maintenance processes at Japan Industrial Standard(JIS) since 1968, ISO TC28 since 1983, and ASTM International since 1982.

As a leading manufacturer, Tanaka Scientific has proposed some new test methods at these organizations, and some have been adopted and now preferred by number of world-class users for the better precision and higher laboratory productivity.

Tanaka's product range covers testing of volatility such as flash point, distillation, and vapor pressure; flow properties such as kinematic viscosity, pour/cloud point, and CFPP; elemental analysis such as sulfur content; and hydrocarbon analysis such as aniline point.

They continuously strive to maintain and improve on their "Made in Japan" quality and service.

PRECISION LABORATORY INSTRUMENTS

for Routine Testing and Advanced Research & Development of Engine Oils, Lubricants, and Related Fluids



Quantum Oxidation Tester
Methods: ASTM D2272, D2112,
D4742, D7098, D942, IP229



TFAB Tannas Foam Air Bath
Methods: ASTM D892, D6082, D1881, D7840

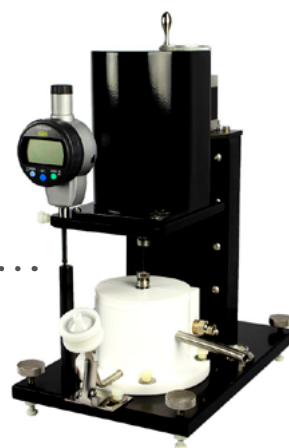
Noack S2
Volatility Test
Methods: ASTM D5800, CEC L-40-93



TBS 3000 HTHS
Tapered Bearing
Simulator Viscometer
Methods: ASTM D4683,
D6616



TBS 2100 E-F
HTHS Tapered Bearing Simulator Viscometer
Methods: ASTM D4683, D6616



King MRV TP-1
Mini-Rotary Viscometer
Methods: ASTM D3829, D4684, D6821, D6896



Reliability. Precision. Performance. You deserve the best instruments for your research, and the most accurate data for your customers. For over 35 years, our innovative instruments have met specific testing needs expressed by oil companies, OEMs and additive manufacturers for measuring properties critical to high quality lubricants.

Tannas commit to create and deliver the highest quality instruments available in the market for identifying, characterizing, and understanding the properties and behavior of modern

fluids and lubricants. Many of their patented bench instruments meet international specifications for lubricant testing.

All instruments manufactured by Tannas Co. & King Refrigeration undergo rigorous laboratory testing and earn certification prior to shipment. Tannas offer on-site installation and customer training with each instrument through one of our Certified Instrument Engineers, or a global distributor.

Their Quality Management System is ISO 9001 certified.

XENICS IS A SUPPLIER OF LEADING-EDGE INFRARED SOLUTIONS

Established in Belgium in 2000, Xenics is a designer and manufacturer of infrared sensors, cores and cameras. Xenics offers in-house design and manufacturing SWIR (Short-Wave Infrared) image sensors.

Xenics designs and markets SWIR image sensors, cores and cameras of best-in-class image, both line-scan and area-scan. Worldwide Xenics is a market leader for SWIR imaging where it holds a unique position with the combination of high speed and low noise imagers.

Xenics not only specializes in the development of SWIR InGaAs detectors and cameras, but also offers an extensive portfolio of LWIR (Long-Wave Infrared) imagers.

Applications

■ Machine Vision

- Infrared Semiconductor Inspection
- Solar Ingot Inspection
- Food Sorting
- Recycling

■ Process Monitoring

- Industrial Thermographic Inspections
- Optical Coherence Tomography

■ Safety & Security

- Forest Fire Detection
- Situational Awareness

■ Scientific & Advanced Research

- Art Analysis
- Adaptive Optics
- Infrared Laser Beam Analysis

■ Transportation

- Driver Vision Enhancement

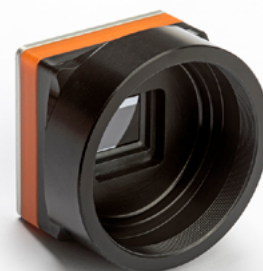
■ Medical

- Chemical & Biological Analysis
- Optical Coherence Tomography



Cheetah 640
World's fastest SWIR area-scan
imaging up to 1700 Hz

Dione 640 CAM Series
Low SWaP (Size, Weight and Power)
640×480 microbolometer detector
with 12 μ m pixel pitch



Ceres T 1280
Compact, high resolution camera
with superior on-board thermographic
performance (stability, accuracy)



Wildcat 640
Small, high performance InGaAs camera
with low noise and high dynamic range





XOS IS A LEADING MANUFACTURER OF APPLICATION-SPECIFIC X-RAY ANALYZERS

XOS is offering elemental analysis solutions that improve public safety and customer efficiency in industries like petroleum and environmental compliance.

For petroleum applications, XOS offers portable, lab, and process analyzers with unrivaled precision at the push of a button. XOS also offers High Definition XRF (HDXRF®) analyzers for the detection of toxic elements in areas of environmental regulation, like soil and water.

XOS' advanced optics and OEM sub-systems can increase precision, speed, and spatial resolution, while decreasing the size, complexity, and cost of the instrument.

Industries

- XRF Analyzers for the Petroleum Industry
Analysis Solutions for Measuring Sulfur, Chlorine and Other Critical Elements
- Renewable fuels
Rapid & Accurate Analysis Solutions for Sulphur & Chlorine in Biofuels
- X-ray Optics & Sources

Petra 4294
Ultra-Low Sulfur Analysis
Methods: ASTM D4294, ISO 8754
& IP 336
*Petra with and without Autosampler



Petra MAX
Rapid Measurement of S, Ni, V & Fe Plus 9 Elements
Methods: ASTM D4294, ISO 8754 & IP 336
*PetraMax with and without Autosampler



Sindie +Cl
Measure Both Sulfur & Chlorine
with One Instrument
Methods: ASTM D2622, D7039,
D4929, D7536 & ISO 20884



Sindie 7039 G3
Sulfur Analysis as Low as 0.15 ppm
Methods: ASTM D7039 & ISO 20884



Signal
Total Silicon Analysis as Low as 0.65 ppm
Method: ASTM D7757



Clora 2XP
Sub-ppm Chlorine Analysis
Methods: ASTM D7536 & D4929

ZEMATRA IS THE REAL SPECIALIST

in the field of analytical instrumentation and supplies for measuring and checking products from the (petro)chemical, pharmaceutical, food, paint and shipping industry.

*Automated Stability Analyser
Method: ASTM D7060-12*



*Total Sediment Tester
Methods: ASTM D4870, IP375, ISO 10307*



Zematra B.V. instruments measure the physical properties of different products, evaluate the performance of fuels and lubricants, and give you an accurate composition of the fuel. Besides Zematra also has a line for analyzing trace elements.

Another area of their expertise is condition monitoring. For several decades, using the industrial world benefited from their own Zematra B.V. range portable test equipment, to monitor the efficient operation of plants aboard ships, off-shore platforms, power plants, wind farms and more.

Together with their service and marketing department, responsible for the line of laboratory equipment to full size, which is used in the (Petro) chemical industry, Zematra B.V. develops most of its portable equipment in-house. This collaboration within Zematra B.V. results in high-quality products that deliver highly accurate results.

Did you know Zematra sells many Certified Reference Materials?

Single and multi-element standards (both aqueous and oil-based) We specialize in custom blends, should the stock products not suit your specific needs.

- Petroleum standards for analysis by ICP, ICP-MS, XRF, RDE, UVF, physical testing instruments and other oil analysis instruments
- Analytical reference standards for both new and in-service oil applications
- Standards for ASTM, DIN, IP, ISO, JIS and ANFOR methods, including EPA Tier 3 methods
- Certified Quality | ISO 9001:2015 | ISO 17034 | ISO/IEC 17025 | ISO/IEC 17043



 [BRING IT TOGETHER]

KRAHN Hellas A. E

9 Kodrou str., Athens 105 58, Greece

Tel.: (+30) 210 322 9856 | (+30) 210 325 6100

info.gr@krahne.eu

www.interactive.com.gr