



# PETROLEUM ANALYZERS







### VP VISION - VAPOR PRESSURE TESTER

- ♦ Best-in-class precision and a pressure range of 0-2000 kPa.
- ♦ Measures gasoline, jet fuel, crude oil, LPG and solvents.
- ♦ Automatic sample introduction and cell cleaning through piston-based design
- ♦ Built-in shaker to generate rapid equilibrium for crude oil and V/L tests
- ♦ Smallest sample size: 1 ml w/o rinsing ; Fast measurements: Results in 5 minutes
- ♦ Full calibration history and calibration backup function
- ♦ According to ASTM D5191 , D5188 , D6377 , D6378 , D6897
- ♦ Cockpit software for remote device configuration, remote diagnostics, online support etc



### IR VISION - FTIR FUEL ANALYZER

- ♦ Comprehensive and automatic measurement of gasoline, jet and diesel fuels.
- ♦ 100+ Preconfigured Parameters measured
- ♦ Temperature and Laser Regulated, 2+1 Cell-FTIR
- ♦ Thermoelectric Temperature Regulation of Filler, Density Meter and Cells
- ♦ 10" full color touch screen
- ♦ ASTM D5845 for oxygenates, ASTM D6277 and EN 238 for Benzene
- ♦ EN 14078 for Biodiesel blends.
- ♦ Predicted: RON, MON, AKI, Cetane number, Cetane index, RVP, Distillation Properties etc.
- ♦ Partial Least Square (PLS) analysis and advanced chemometric models following ASTM E1655.



### FP VISION AUTOMATIC FLASH POINT TESTER

- ♦ Flashpoint according to ASTM D6450 and ASTM D7094
- ♦ Approved for Diesel Fuel and Kerosene specifications ASTM D975, D396, D2880, D3699
- ♦ Automatic ignition cleaning method.
- ♦ Excellent thermoelectric heating and cooling through Peltier Protection Technology™
- ♦ 1-2 ml sample size
- ♦ Continuous closed cup - No Open Flame, no offensive vapors in the lab.
- ♦ Portable for Mobile and Field Use.
- ♦ Go / No Go Flashpoint Testing , Fast Screening Methods.
- ♦ Worldwide standard method for the flavors and fragrances industry.



### ADXPRT MINI DISTILLATION ANALYZER

- ♦ Performs exclusively to the new standard ASTM D7344
- ♦ Excellent correlation to ASTM D86, D850 and D1078
- ♦ ISO 3405 and IP 123 (groups 0 to 4)
- ♦ True atmospheric distillation \* Dry point detection
- ♦ Automatic temp. controlled sample introduction
- ♦ Measuring sample volume of only 6 mL
- ♦ Disposable metal sample cups for highest safety
- ♦ Small and portable design for laboratory and field applications



### MINITEST FFK - GREASE TESTER

- ♦ Flow-properties of Lubricating Grease
- ♦ According to the DIN 51805 Kesternich Method
- ♦ Automatic measurement
- ♦ Thermoelectric cooling to -50°C.
- ♦ Reproducible determination of the flow-pressure
- ♦ No accessories needed



### SV10 AUTOMATED S-VALUE TESTER

- ♦ Intrinsic Stability of Asphaltenes in Oil
- ♦ Fully automated instrument complying with ASTM D7157
- ♦ Automated: dilution (up to 100°C), titration & cleaning
- ♦ Low level of asphaltenes capability <0.4%
- ♦ 3 positions, standalone compact design
- ♦ Measures at controlled temperature



### SP-20 AUTOMATIC SMOKE POINT TESTER

- ♦ ASTM D 1322, D1655, ISO 3014, IP 57, DEF STAN 91/91, JIS K 2537 & more
- ♦ Digital imaging technology
- ♦ Automatic detection & adjustment of flame height with the help of a video camera and an actuator
- ♦ Instrument has dedicated software with built in data base of results that can be transferred via USB stick
- ♦ Ethernet, LIMS & LAN Connectivity ; Very compact design
- ♦ Test- result in less than 10 minutes ♦ Applications: Aviation / Jet fuels



### TO10 - JET FUEL THERMAL OXIDATION STABILITY TEST RIG

- ♦ ASTM D3241, IP 323, ISO 6249 Up to 21 programmable test methods
- ♦ State of the art automation level.
- ♦ Dual 5 mL syringe fuel pumping system, perfect fuel flow control, no pulse.
- ♦ Automatic fuel aeration control
- ♦ Didactic and intuitive man-machine interface.
- ♦ Independent bus bar temperature control, no cooling liquid.
- ♦ DR10 – ITR connectivity for automatic result storage.
- ♦ No operator exposure to fuel vapours with safety door and fume extraction



### DR-10 TUBE DEPOSIT RATER

- ♦ ASTM D 3241, ASTM D 655, Def Stan 91-91, ISO 6249, IP 323
- ♦ Interferometry technique ♦ Quick ,easy and Objective rating
- ♦ Automatic measurement of deposit thickness ♦ Displays 3D Mapping of deposit formed
- ♦ Built - in touch screen, USB & Ethernet; Very compact design
- ♦ Test result with in 15 minutes
- ♦ Applications: Jet fuel, Turbine fuels, Aviation Industry.



### ST10 ON-SITE FUEL STABILITY AND COMPATIBILITY TESTER

- ♦ ASTM D4740
- ♦ Programmable : Fuel Stability or Fuel Compatibility
- ♦ A complete automated system self-contained in a carrying case
- ♦ Multi-applications instrument, lab, on-site, on-board
- ♦ Standard test method used by conventional laboratories.
- ♦ Fully automated, no training or analytical knowledge required



### DT-100 DISPERSANCY TESTER FOR OCM

- ♦ Automatic Dispersancy measurement ♦ Soot content quantification
- ♦ Only tester that Automatically & Simultaneously measures Contamination Index & Dispersancy of the lubricant-oil
- ♦ On site calibration; Data output by USB Stick & LAN by Ethernet
- ♦ Built-in digital (CCD) camera
- ♦ Applications: Stationary Diesel Engines, Transportation fleet (Buses, trucks Locomotives, cars, etc), Construction Equipment, Marine Engines, etc.



### AUTOREID -AUTOMATED REID VAPOR PRESSURE ANALYZER

- ♦ ASTM D 323, ASTM D 4953, ISO 3007, IP 69 ♦ Direct REID vapor pressure measurement
- ♦ Highest level of test automation; Modern user-friendly interface.
- ♦ Two independent measurements positions simultaneously
- ♦ Perfectly suited for testing viscous and difficult products
- ♦ Full traceability, complete result documenting ♦ Small foot print, fast warm up, precise measurements
- ♦ Applications: Refineries, Pipelines, Oil terminals, Testing & Research Laboratories



### CT-10 AUTOMATED CORROSIVENESS TESTER

- ♦ ASTM D665, D7548, NACETM0172, IP135, ISO 7120, JISK 2510 ♦ Quick, accurate and objective rating
- ♦ Automatic specimen diameter verification ♦ Compact design, robust construction, installed in minutes
- ♦ The results are saved in an internal database and can be printed, transferred to a
- ♦ USB memory stick and/or sent to a LIMS ♦ Every test is fully documented and traceable



## 70Xi SERIES LABORATORY ANALYZERS



- ♦ Pour Point : ASTM D5949, D97, (IP 15 / ISO 3016)
- ♦ Cloud Point: ASTM D5773 (IP 446) ASTM D2500 (IP 219 / ISO 3015)
- ♦ Freeze Point ASTM D5972 (IP 435) ASTM D2386 (IP 16 / ISO 3013)
- ♦ Full-color, 15" high resolution touch screen ♦ Easy-to-use interface
- ♦ USB and Ethernet connectivity ♦ Optimized for quality control

Models available:

- ♦ PSA-70Xi Pour, Cloud & Freeze Point ♦ PPA-70Xi Pour Point ♦ CPA-70Xi Cloud Point
- ♦ FPA-70Xi Freeze Point ♦ PCA-70Xi Pour & Cloud Point
- ♦ PFA-70Xi Pour & Freeze Point ♦ FCA-70Xi Freeze & Cloud Point
- ♦ GPA-70Xi Single function specialty analyzer for gel, titer, antifreeze, or solid point"



## JFA-70Xi-PC JET & DIESEL FUEL ANALYZER

- ♦ Five Tests In One Analyzer;
- ♦ Freeze Point ASTM D5972 - Pour Point ASTM D5949 - Cloud Point ASTM D5773-
- ♦ Jet Viscosity ASTM D7945- Jet Density ASTM D4052;
- ♦ The JFA-70Xi's ASTM D7945 viscosity method exceeds D445 with repeatability of <0.20%.
- ♦ No external chiller needed; ♦ 15" LCD Touch screen;
- ♦ Storage upto 5000 test runs; ♦ Automatic flush cycle - no solvent required"



## WAT-70Xi CRUDE & MARINE FUEL ANALYZER

- ♦ for wax appearance temperature/cloud point and wax disappearance temperature
- ♦ ASTM D5773 (IP 446) ASTM D2500 (IP 219 / ISO 3015) equivalent
- ♦ Wax Appearance Test (WAT) and Wax Disappearance Test (WDT) ♦ No set up or cleaning
- ♦ Patented Diffusive Light Scattering (DLS) technology ♦ Integrated Peltier device cooling system
- ♦ 15" high resolution LCD colour touch screen ♦ Storage upto 5000 test runs"



## DFA-70Xi DIESEL FUEL ANALYZER

- ♦ Cloud Point: ASTM D5773 (IP 446), ASTM D2500 (IP 219 / ISO 3015) equivalent or better
- ♦ Pour Point: ASTM D5949, ASTM D97 (IP 15 / ISO 3016) equivalent or better
- ♦ Kinematic Viscosity: ASTM D7945 @ 40 °C, ASTM D445 (IP 71/ISO 3104) equivalent or better
- ♦ Density: ASTM D4052 (IP 365/ISO 12185) @ 15 °C
- ♦ Four different tests in less than 25 minutes – Cloud & Pour Point, Viscosity and Density
- ♦ No pipette required. New vial injection system loads sample automatically.
- ♦ Self cleaning – no solvent required .



## 6000 SERIES NITROGEN/SULFUR/CHLORINE ANALYZERS



- ♦ SULFUR: ASTM D5453, D6667 and D7183 CHLORINE: ASTM D4929, D5194, D5808
- ♦ Trace level analyser for quick, reliable and accurate data Matrix independent
- ♦ Working range: 0.03-5000 mg/kg (liquids), 0.5-5000 mg/kg (solids)
- ♦ Software controlled Boat introduction module for heavy hydrocarbons and solid samples
- ♦ Productivity - works around the clock, equipped with a HR 7000 liquid auto sampler directly into the boat module;



## 7000 SERIES NITROGEN /SULFUR / CHLORINE ANALYZERS

- ♦ Delivers low detection limits for when sensitivity matters
- ♦ Vertical furnace Configuration ♦ Easily analyzes almost any type of sample
- ♦ Working range: 0.03 - 5000 mg/kg
- ♦ Delivered with the HR 7000 liquids auto sampler" ♦ Gas and LPG Sampler
- ♦ Semi Automatic & Multi Sampler options Available



## GASMIX - The intelligent mixer, diluter & injector



- ♦ The GasMix™ provides an automated, cost effective way of on-site gas preparation
- ♦ By mixing and / or diluting two to four gases the system generates calibration gas on site at the desired concentration, even to very low levels.
- ♦ High accuracy and reproducibility of the prepared gas standards
- ♦ Full automation: by synchronizing dilutions, injection, flushing timings with an external analyzer
- ♦ Improved accuracy: multipoint MFC calibration curves for each used gas
- ♦ Complies to ISO 6145-7.
- ♦ Dedicated software controls the operation of the system, calculate the mixtures, handle the calibration tables
- ♦ Available in Gas and Gas/Liquid Diluting-Mixing-Injection configuration , Bench-top, portable or analyzer rack mounted.



### STARDIST - AUTO DISTILLTION

- ♦ ASTM D86, D1078, D850, E123, IP195, DIN51751, ISO 3405.
- ♦ Large IPAD touch interface. Fast Easy operation.
- ♦ Solid state Condenser with Peltier elements - No liquid cooling. 0 - 65°C. Resolution 0.1°C.
- ♦ Vapour temperature Range: 0 - 450°C ASTM / 0 - 500°C absolute.
- ♦ Low mass/low voltage heater. Heating Control with Kalman filter technology.
- ♦ Smart HD CCD camera for accurate volume measurement
- ♦ Optical Dry Sense: IR sensor for automatic detection of the dry point.
- ♦ UV sensor for fire detection. Built-in fire extinguisher.



### AIRSTAR CFPP - COLD FILTER PLUG POINT ANALYZER

- ♦ EN 116, IP 309, ASTM D6371, JIS K 2288, EN 16329.
- ♦ Integrated microprocessor-controlled vacuum pump for constant -2.0 kPa pressure
- ♦ Powercast® technology for wireless power to CFPP Head
- ♦ PT-100 easy click-connect, built in storage for calibration data & unique ID
- ♦ Temperature Range ; +65°C down to -105°C ♦ Sample flow detection : 3 laser beam detection barriers
- ♦ Monitor and record sample cooling rate , Quick report of anomalous aspiration



### S-FLOW IV+ HOUILLON VISCOMETER SYSTEM

- ♦ Complies fully with in ASTM D7279 ♦ Full correlation to ASTM D445.
- ♦ Automated Houillon Viscometer
- ♦ Compact, bench-top automatic viscometry systems
- ♦ Designed for maximum throughput and ease of use
- ♦ Minimum sample quantity and solvent consumption.
- ♦ Ideal viscometer for quick and accurate results
- ♦ For the analysis of Newtonian fluids - Ideal for used oil analysis to test a wide range of lubricant viscosities.



### U-VISC KINEMATIC AUTOMATED VISCOMETER

- ♦ Full compliance with ASTM D445 D446,
- ♦ Cover 100-fold range, e.g. from 1 to 100 mm<sup>2</sup>/s.
- ♦ Modified Ubbelohde - Easy tube exchange, Easy maintenance
- ♦ Very easy to use - Unattended operation - High throughput
- ♦ Advanced software ♦ Single or Dual bath – 1 or 2 tubes per bath ♦ Preheat 150 °C
- ♦ Fully automatic heating, sampling, measurement and cleaning



### BITUVISC AUTOMATIC VISCOMETRY SYSTEM FOR HIGH VISCOUS SAMPLES

- ♦ Applicable for fuels, base oils, formulated oils, bitumen, vacuum residue etc.
- ♦ Complies with ASTM D445, ASTM D446, ASTM D2170, AASHTO T201
- ♦ Extremely accurate temperature control
- ♦ Extremely accurate flow-time measurement independent of fluid type
- ♦ Viscometer filling by vacuum method
- ♦ Innovative and efficient viscometer tube cleaning
- ♦ Easy viscometer tube exchange
- ♦ Chemically resistant to an extended range of fluids and solvents

Choice Analytical, Inc.



### AUTOMATIC COLOR, HAZE AND CLARITY METER

- ♦ Automatic Color, Haze and Clarity measurement ♦ ASTM D8148 Haze in Fuels
- ♦ Color tests ASTM D1500, Saybolt D156, D6045, D1209, D5386, ISO 2049, IP 196
- ♦ Correlates to ASTM D 4176 Procedure 2 Haze rating
- ♦ Instrument Haze Rating (IHR) 1-6
- ♦ Proprietary Haze Clarity Index (HCI) 50-100 Quantification
- ♦ Haze Trending-Time/Temp/HCI/IHR
- ♦ Simple touch screen. ♦ Easy to use, calibrate and maintain
- ♦ Output to LIMS, printer, PC or external





## VACUUM & CRUDE OIL DISTILLATION SYSTEMS

Crude Oil Distillation as per ASTM - D2892, D5236

- ♦ PC Controlled with Windows OS for easy operation
- ♦ Modular design - easy to exchange the distillation modules
- ♦ Fully Automatic & Semi-Automatic models
- ♦ Mini & Micro models for small sample sizes

**Vacuum Distillation as per ASTM D1160**

- ♦ Fully Automatic, Semi Automatic & Manual Models



## ZX-101SQ PORTABLE FUEL ANALYZER

- ♦ 45 Second Analysis with lab accuracy for RON, MON, R+M/2
- ♦ Diesel Cetane Index and Number
- ♦ Biodiesel percentage, Ethanol percentage.
- ♦ Precalibrated for unleaded and Ethanol blended fuels.
- ♦ Automatic temperature compensation
- ♦ Stores data for up to 100 samples.
- ♦ Small, lightweight, and easy to use



## MICROSEPAROMETER

- ♦ Water Separation Characteristic, Free water and Particulate Testing
- ♦ ASTM Standard Test Methods D3948, D7224, D7261 & D4860
- ♦ Electro-mechanical instrument used to perform four discrete tests; Water separation characteristics as per ASTM D3948 (Jet), D7224 (Jet) and D7261 (Diesel);
- ♦ Detects and numerically rates free water and particulate contamination as per ASTM D4860 (Jet or Diesel);
- ♦ Performs each of the four tests above simply by using one of the four "Six Packs" containing the proper coalescer cells."



## DIGITAL CONDUCTIVITY METER

- ♦ ASTM D 2624
- ♦ Continuous standard electrical conductivity range from 0 to 1999 in increments of 1 pS/m
- ♦ Large digital, liquid crystal display
- ♦ Reliable advanced integrated circuit design technology
- ♦ Self check calibration with field adjustment capability



## FAMESPEC – FAME IN JET FUEL ANALYZER

- ♦ Based on QCL-IR technology
- ♦ FAMESPEC Analyzer complies with ASTM D8290
- ♦ Detects all types of FAME
- ♦ High precision (Repeatability of 0.8 mg/kg at 5 mg/kg)
- ♦ Wide measurement range (10-400 mg/kg)
- ♦ Fast measurement (<25 min)
- ♦ Automated sample preparation.
- ♦ Modern, portable and rugged design



## OIL CENTRIFUGES

- ♦ First oilfield centrifuge with Class I, Division 2 certification.
- ♦ State of the art Fully insulated centrifuge is perfect for laboratory settings or refineries using long cone (C) or short cone (D) tube configurations.
- ♦ High speed capability (2300 RPM) for experimentation and Better data
- ♦ Digital temperature control (Ambient to 200°F) for Better process control for testing heavy crude oil
- ♦ Integrated timer Reduces variation in testing
- ♦ Internal motor control - Linear acceleration results in more consistent testing
- ♦ Specifically designed collars and cushions ensures Less tube breakage at higher G-Forces

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