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TECHNOLOGY



70Xe

S E R I E S

Ultimate Performance
in Flow Properties Testing





70Xe

S E R I E S



Complete Flow Properties Testing for Jet Fuels and Diesels

The World's First Integrated Analyzer Platform for Jet Fuel and Diesel Testing

The 70Xe Series Analyzers represent the next evolution in fuel property testing. Designed to consolidate critical flow and cold property measurements into a single, integrated platform, 70Xe enables faster testing, higher precision, and more efficient use of laboratory space. From conventional fuels to next-generation renewable and sustainable fuels, the 70Xe platform is built to meet today's and tomorrow's testing demands.

Multi-Function Performance

- Consolidate up to six critical fuel property tests into one streamlined analyzer platform
- Generate complete freeze point, cloud point, pour point, viscosity, and density data in a single workflow
- Optimized platform for SAF, renewable diesel, and biodiesel testing capability

Method Compliance

- High-precision results fully compliant with ASTM, IP, and global standards
- Approved in ASTM D1655, D7566, and DEF STAN 91-091 jet fuel specifications
- Accepted across ASTM diesel and biodiesel fuel specifications worldwide
- Referee freezing point method for co-processed SAF testing applications

Low Cost of Ownership

- Eliminate ongoing solvent costs for routine operation and cleaning
- Simplify installation with a fully self-contained system that requires no external chiller bath
- Onsite calibration feature enabling easier servicing and maintenance
- Reduce training and operator time significantly with intuitive, redesigned user interface
- Minimal maintenance requirements lower long-term operating costs overall

High Productivity

- Simultaneous cold properties, viscosity, and density testing in minutes
- Automatic sample loading for consistent and highly repeatable results
- Optional 30-position autosampler for high-throughput laboratories



Flow Properties Testing

MODELS

IFA-70Xe | JFA-70Xe | DFA-70Xe



Next-Generation Integrated Platform

IFA-70Xe defines a new standard in fuel analysis as the world's first fully integrated analyzer designed to simultaneously measure six critical properties for jet fuels and diesels, consolidating advanced testing into a single platform.

- **Integrated Workflow Maximizes Uptime**
- **Rapid Testing with Results in Minutes**
- **Maximizes Limited Bench Space**

Included Functions	IFA-70Xe	JFA-70Xe	DFA-70Xe
D5972 Freezing Point	✓	✓	—
D5773 Cloud Point	✓	—	✓
D5949 Pour Point	✓	—	✓
D7945 Viscosity @ -20°C & -40°C	✓	✓	—
D7945 Viscosity @ 40°C	✓	—	✓
D7777 Density	✓	✓	✓
Renewable Diesel (HVO)	✓	—	✓
Sustainable Aviation Fuel (SAF)	✓	✓	—
Sample Introduction	Automatic Single Injection		
Optional	30-Position Autosampler		

Viscosity & Density Testing

MODELS

KVD-70Xe



Purpose-Built for Viscosity & Density

KVD-70Xe is a dedicated analyzer engineered to provide highly precise viscosity and density measurement for jet fuels and diesels, supporting laboratories that demand exceptional accuracy, stability, and confidence in their results.

- **Method-Driven Performance**
- **Designed for Jet fuel & Diesel Laboratories**
- **Compact Footprint for Efficient Integration**

Included Functions	KVD-70Xe
D7945 Viscosity @ -20°C & -40°C	✓
D7945 Viscosity @ 40°C	✓
D7777 Density	✓
Renewable Diesel (HVO)	✓
Sustainable Aviation Fuel (SAF)	✓
Sample Introduction	Automatic Single Injection
Optional	30-Position Autosampler



Cold Properties Testing

MODELS

Freezing Point, Cloud Point, Pour Point Configurations



Advanced Cold Property Testing

PSA-70Xe is a specialized cold properties analyzer engineered for demanding low-temperature environments, delivering accurate freezing point, cloud point, and pour point measurement across a wide range of fuels and fluids, including base oils and lubricants.

- Ultra-Low Cooling Below -100 °C
- ASTM Compliant Operation
- Configurable Testing Options

Included Functions	PSA-70Xe	PCA-70Xe	PFA-70Xe	FCA-70Xe	PPA-70Xe	CPA-70Xe	FPA-70Xe
D5972 Freezing Point	✓	—	✓	✓	—	—	✓
D5773 Cloud Point	✓	✓	—	✓	—	✓	—
D5949 Pour Point	✓	✓	✓	—	✓	—	—
Renewable Diesel (HVO)	✓	✓	✓	✓	✓	✓	—
Sustainable Aviation Fuel (SAF)	✓	—	✓	✓	—	—	✓
Sample Introduction	Manual Pipette						
Optional	Automatic Loading with Single Injection or 30-position Autosampler (Fuels Only)						
Add-on Functions	Engine Coolants (Antifreeze), Pour Point Black Oil, Pour Point Crude Oil, Phase Temperature Control Software (PTCS)						

Technical Information

Test Methods	Freezing Point	ASTM D5972 / IP 435 / SH/T 0770 compliant ASTM D2386 / IP 16 / ISO 3013 equivalent
	Cloud Point	ASTM D5773 / IP 446 compliant ASTM D2500 / IP 219 / ISO 3015 equivalent
	Pour Point	ASTM D5949 / SH/T 0771 / ISO/TS 23877-2 compliant ASTM D97 / IP 15 / ISO 3016 equivalent
	Kinematic Viscosity	ASTM D7945 / IP 641 / ISO 18335 compliant ASTM D445 / IP 71 / ISO 3104 equivalent
	Density	ASTM D7777 compliant ASTM D4052 / IP 365 / ISO 12185 correlation
Detection Technology	Cold Properties	Patented diffusive light scattering (DLS)
	Viscosity	Patented constant pressure with horizontal capillary
Sample Volume	Manual Pipette	0.15 mL
	Auto Loading	30 mL
System Cleaning	Manual Pipette	Manual cleaning
	Auto Loading	Automatic flush cycle; no solvent required
Test Duration	Cold Properties + Viscosity + Density	As low as 15 minutes
	Viscosity + Density	As low as 10 minutes
	Cold Properties	As low as 5 minutes
Sample Temperature	-100 °C to 70 °C	
Operator Time	< 1 minute	
Cooling System	Integrated Peltier device cooling system; no external cooling bath needed	
Display	Full-color, touch-sensitive, 13.3" high resolution LCD touch screen	
Operating Conditions	10 °C to 30 °C (50 °F to 86 °F) ; recommended 15 °C to 25 °C (59 °F to 77 °F); < 80% RH non-condensing	
Electrical	100 to 240 VAC +/- 10% switchable; 50 - 60Hz ; 450W	
Weight	IFA / JFA/ DFA - 106 lbs; KVD - 87 lbs; PSA / PCA / PFA / FCA / PPA / CPA / FPA - 85 lbs.; Autosampler - 23 lbs	
Dimensions	(W x D x H): Manual Pipette - 38 x 60 x 50 cm; Auto Loading with Single Injection - 45 x 60 x 50 cm; Auto Loading with Autosampler - 56 x 60 x 50 cm	
Outputs	3 x USB-A port for peripherals: flash drive, printer, barcode scanner 1 x Autosampler port for power & communication 1 x RJ45 Ethernet port for network 1 x RS-232 serial port for LIMS output	



70Xe empowers labs by leveraging the power of PACE to enhance productivity and overall throughput.

Unbeatable Instrument Uptime

Receive real-time alerts from every instrument connected to PACE, to a desktop, tablet, or mobile device. This will allow you to see optimization opportunities in throughput and instrument irregularities for efficient decision-making without manually visiting each instrument.

Maximize Lab Throughput

Around-the-clock status monitoring to reach the desired annual throughput and to identify hidden instrument capacities.





Services, Support, and Training

Our individualized instrument service programs help our customers ensure maximum quality and repeatability, while complying with standards and regulatory requirements.

In addition to service programs, we also offer individual services for preventative maintenance, calibration, and relocation services. Our Service Repair Centers, located around the world, are ISO-9001 accredited. All work is performed by skilled certified service technicians.

PAC offers a wide selection of training and educational programs to support our customers throughout the range of industries that our instruments serve. Our training programs may take place in one of our PAC facilities worldwide or right at the customer's facility. We also offer webinars of some of our key technologies online.



About PAC

PAC empowers global customers across various industry sectors, enhancing their efficiency through innovative solutions by designing, manufacturing, and marketing advanced lab and online analytical instruments, along with a digital platform for real-time analytics.

With decades of knowledge and expertise, our instruments consistently deliver unmatched performance and value, backed by comprehensive global support consisting of 13 sales and support offices and a network of over 140 distributors, contributing to the safe and sustainable advancement of industries worldwide.

PAC is a part of the Indicor family of companies. Indicor is a family of 15 diversified industrial solutions companies. These companies provide specialized, mission-critical products for manufacturers, and a global portfolio of proven, best-in-class companies for shareholders.



Headquarters

PAC LP | 8824 Fallbrook Drive | Houston, Texas 77064 | USA
T: +1 800.444.8378 | F: +1 281.580.0719



Contact us for more details.

Visit our website to find the PAC representative closest to you.



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