JFA-70X*i*-PC Jet & Diesel Fuel Analyzer

BREAKING NEWS!

ASTM has updated D1655 jet fuel specification to include Phase Technology's ASTM D7945, as used in the JFA-70Xi jet fuel analyzer

freeze point, viscosity & density of jet fuels / pour & cloud point of diesel fuels

from Phase Technology

Scientifically Designed for Workflow Optimization

- SUPER FAST SPEED
 Three different tests in less than 15 minutes.
- ADVANCED VISCOSITY CAPABILITY
 The only automatic method capable of testing jet fuel viscosity @ -40°C in addition to -20°C; temperature @12 cSt also calculated
- APPROVED FOR JET FUEL CERTIFICATION Fully compliant with ASTM D1655, the specification used for release of jet fuel
- AUTOMATIC SAMPLE INPUT
 No pipette required. New vial injection system loads sample automatically.
- SELF CLEANING NO SOLVENT REQUIRED
 No messy clean up. Automatic flush cycle rinses
 and disposes of remaining sample.
- NO EXTERNAL CHILLER
 Quiet, cool, self-contained thermoelectric cooler; no hazardous liquid bath medium
- NO BREAKABLE GLASSWARE Internal capillary system eliminates need for fragile glass viscosity tubes
- SUPERIOR PRECISION
 Best measured repeatability and reproducibility of any automatic or manual method
- ONE-TOUCH PRESET FAVORITES
 Frequently-used test settings can be stored in the analyzer for quick access.
- OPTIMIZED FOR QUALITY CONTROL
 Automatic QC runs with built-in control charts.

Freeze Point - Pour Point - Cloud Point - Jet Viscosity - Jet Density

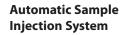
Five Tests In One Analyzer!

Phase Technology does it again – another "first" for the petroleum industry.

Phase Technology's new JFA-70Xi analyzer is the world's first and only instrument that performs three crucial jet fuel tests in one unit—freeze point, viscosity and density.

And, it does it all in less than 15 minutes!

Add cloud and pour point for diesel and you've got the most complete cold flow analyzer available!



The JFA-70Xi features a new, side loaded automatic sample injection port. There's no longer a need to manually pipette. The analyzer always draws the precise amount of sample as required by the ASTM method.

The JFA is completely selfcleaning; no need of solvents.

Energy Corporation

Save time and hassle of cleaning, and avoid any risk of damage to the sample cup.



The JFA-70Xi's ASTM D7945 viscosity method exceeds D445 with repeatability of <0.20%. And unlike other viscometers, with the JFA-70Xi there's no bulky external chiller needed.

Freeze point is tested according to ASTM D5972, the most precise method in the world, with zero bias and 99% contamination detection. Density is measured by ASTM

D4052, with repeatability < 0.0001 g/mL @ 15°C.



The new JFA analyzer is built on the 70Xi series platform, so all the same time-saving, productivityboosting features are included.









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Phase Technology is our instrument of choice. Louis A. Delgado, Lab Manager, Valero

JFA-70Xi-PC Jet & Diesel Analyzer

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TEST METHODS	Freeze Point	ASTM D5972 (IP 435) ASTM D2386 (IP 16/ISO 3013) equivalent or better	
	Kinematic Viscosity	ASTM D7945 @ -20 °C, @ -40 °C and @ 12cSt ASTM D445 (IP 71/ISO 3104) equivalent or better	
	Density	ASTM D4052 (IP 365/ISO 12185) @ 15 ℃	
	Pour Point	ASTM D5949 ASTM D97 (IP 15/ISO 3016) equivalent or better	
	Cloud Point	ASTM D5773 (IP 446) ASTM D2500 (IP 219/ISO 3015) equivalent or better	
STATED PRECISION: REPEATABILITY & REPRODUCIBILITY		Repeatability	Reproducibility
	Freeze Point	0.5 ℃	0.8 ℃
	Kinematic Viscosity	0.011cSt @ -20 °C 0.0018 X ^{1.4} cSt @ -40 °C T @ 12cSt: 0.14°C	0.021cSt @ -20 °C 0.0021 X ^{1.4} cSt @ -40 °C T @ 12cSt: 0.17°C
	Density	0.0001 g/mL	0.0005 g/mL
	Pour Point	1.6 ℃	3.2 ℃
	Cloud Point	1.3 ℃	2.5 °C
BIAS	0 (relative to ASTM manual methods)		
CONTAMINATION DETECTION	99% (highest measured value in ASTM study)		
FREEZE, CLOUD & POUR POINT SAMPLE TEMPERATURE RANGE	-80 °C to 70 °C		
SYSTEM CLEANING	Automatic flush cycle; no solvent required		
	Freeze Point only 8 to 10 minutes		
	Viscosity 8	Viscosity & density combined <10 minutes	
TEST DURATION	Freeze/cloud, viscosity & density combined <15 minutes		
REQUIRED OPERATOR TIME	0.25 minutes		
SAMPLE SIZE	0.15 mL required for test minimum 20 mL including cleaning		
DETECTION METHOD	Patented Diffusive Light Scattering (DLS) technology for freeze point, cloud point, pour point; horizontal capillary with motive force for KV		
COOLING SYSTEM	Integrated Peltier device cooling system		
DISPLAY	Full-color, touch-sensitive, 15" high resolution LCD touch screen		
OUTPUTS	(3) USB A ports for optional peripherals: flash drive, label printer, barcode scanner, keyboard, mouse; (1) USB B port (3) RS-232 serial ports for optional peripherals & networking: external computer, Phase Technology LTB diagnostic software; (1) dedicated Service port; (1) 10/100Base-T Ethernet (RJ45) port for networking: LIMS, local area network (LAN)		
TEMPERATURE MEASUREMENT	°C or °F (User selectable)		
ALERTS	Buzzer for alarms warnings and prompts (User selectable)		
INTERNAL MEMORY	Storage up to 5000 test runs		
AMBIENT OPERATING ROOM TEMPERATURE	10 to 30 °C (50 to 86 °F) Extremes not recommended		
DIMENSIONS (W x D x H)	Unit	Length x Width x Height 21.5 x 13.25 x 17.5 inches 54.6 x 33.7 x 44.5 cm	
	Boxed	29 x 23 x 19 inches 74 x 58 x 48 cm	
WEIGHT	Unit	53 lbs / 24 kg	
	Boxed	62 lbs ,	/ 28 kg
		90 – 260 VAC, 47 – 63 Hz 350 watts	
UTILITY REQUIREMENTS	Electrical		

Applications

Freeze point, viscosity and density are three critical measurements for jet fuel. Freeze point affects fuel pumpability at low temperatures during flight. Viscosity has an effect on pumpability over the operating temperature range. Viscosity is important because it influences the droplet size and spray pattern of fuel that injected into the jet engines. It also affects pressure in the fuel system lines and the fuel pump. Density is a required measurement that is used in weight loading calculations for aircraft.

Options

Phase Technology JFA-70Xi analyzers give you complete flexibility — choose the test options you need for a customized solution. Available JFA-70Xi configurations include:

JFA-70Xi Freeze point, viscosity, density for jet fuels

JFA-70Xi-AS Freeze point, viscosity, density for jet fuels; with autosampler