



# SPECIFICATIONS

## 70X SERIES LAB ANALYZERS

PSA-70X	Pour, Cloud & Freeze Point
PPA-70X	Pour Point
CPA-70X	Cloud Point
FPA-70X	Freeze Point
PCA-70X	Pour & Cloud Point
PFA-70X	Pour & Freeze Point
FCA-70X	Freeze & Cloud Point
GPA-70X	Specialty analyzer for gel, titer, antifreeze, solid point

## 70X SERIES AUTOSAMPLER SYSTEMS

APA-70X	Lube Oil Only Pour Point
APC-70X	Lube Oil Only Pour & Cloud Point
CPA-70XAS	Fuels Only Cloud Point
FPA-70XAS	Fuels Only Freeze Point
PSA-70XAS	Fuels Only Pour, Cloud & Freeze Point
PCA-70XAS	Fuels Only Pour & Cloud Point
PFA-70XAS	Fuels Only Freeze & Pour Point
FCA-70XAS	Fuels Only Freeze & Cloud Point

## PORTABLE CLOUD POINT ANALYZER

CPA-T30	Cloud Point
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*NOTE FOR BIODIESEL CUSTOMERS: ASTM D7397 (CPA-T30) and D5773 (70X Series) are the only automatic cloud point methods allowed in ASTM D6751, the specification used to control pure biodiesel (B100) quality prior to blending with conventional diesel fuels.*

### KEY FEATURES

- Best measured precision and fastest operating speed of any automatic or manual test method
- Intuitive, easy-to-use, full-color LCD touch screen displays valuable test result data, graphics and real-time phase plots
- Single button to perform test run saves operator time – preset “favorites” with run mode, sample type, temperature mode, and estimated result
- World’s only combined pour, cloud and freeze point in one unit (PSA-70X)
- Batch processing – load and go!
- Fully automatic, high-throughput sequencing – avoid bottlenecks in workflow and eliminate many unnecessary, time-consuming steps.
- Less operator involvement – reduce chance of user-introduced error and frees up staff resources
- Unlimited flexibility – change sample order without stopping current test run. Perfect for shifting, “need-this-now” priorities.
- Self cleaning – automatic rinse and flush

- Unsurpassed precision in a small, easily portable package – the least expensive automatic cloud point analyzer available
- Perfect quality control tool for fuel distributors; biodiesel producers, blenders and users; truck fleets; terminals; pipelines; military; educational and R&D labs
- Exclusive on-screen “blends” function calculates approximate ratio for target cloud point of fuels and additives

### TEST METHODS

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	ASTM D7397
Freeze Point	ASTM D5972 (IP 435); ASTM D2386 (IP 16/ISO 3013) equivalent	—

### STATED PRECISION: REPEATABILITY & REPRODUCIBILITY

	Repeatability	Reproducibility	Repeatability	Reproducibility
Pour Point	1.6 °C	3.2 °C	—	—
Cloud Point	1.3 °C	2.5 °C	as low as 0.4 °C 0.8 °C typical*	as low as 0.5 °C 1.1 °C typical*
Freeze Point	0.5 °C	0.8 °C	—	—

### BIAS

0 (relative to ASTM manual methods)

### CONTAMINATION DETECTION

99% (highest measured value in ASTM study)

### SAMPLE TEMPERATURE RANGE

-80 °C to 50 °C

-75 °C to 50 °C

-40 °C to 20 °C

### TEST RESOLUTION

0.1 °C

0.1 °C

### TEST DURATION

Pour Point	8 to 20 minutes	—
Cloud Point	3 to 8 minutes	3 to 5 minutes
Freeze Point	8 to 10 minutes	—

### REQUIRED OPERATOR TIME

0.5 minutes

### SAMPLE SIZE

0.15 mL

30 mL

### DISPLAY

Full-color, touch-sensitive, 10.4” high resolution LCD touch screen

Touch-sensitive 3.25” (8.3 cm) LCD screen

### OUTPUTS

(3) USB ports for optional peripherals: flash drive, label printer, barcode scanner, keyboard, mouse;  
(3) RS-232 serial ports for optional peripherals & networking: external computer, Phase Technology LTB software;  
(1) 10/100Base-T Ethernet (RJ45) port for networking: LIMS, local area network (LAN)

none

### TEMPERATURE MEASUREMENT

°C or °F (User selectable)

### ALERTS

Buzzer for alarms warnings and prompts (User selectable)

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### INTERNAL MEMORY

Storage up to 5000 test runs (minimum)

Storage up to 100 test runs

### AMBIENT OPERATING ROOM TEMPERATURE

10 to 30 °C (50 to 86 °F)  
Extremes not recommended

10 to 30 °C (50 to 86 °F)  
Extremes not recommended  
Do not expose to excessive moisture (rain or snow)

### DIMENSIONS (W x D x H)

Analyzer Unit	10 x 21 x 12 inches (27 x 54 x 31 cm)	Analyzer Unit	10 x 21 x 12 inches 9 (27 x 54 x 31 cm)	10 x 5.5 x 5 inches (27 x 54 x 31 cm)
		Autosampler	10 x 16 x 17 inches (27 x 41 x 44 cm)	—

### WEIGHT

Analyzer Unit	46 lbs (21 kg)	Analyzer Unit	46 lbs (21 kg)	3 lbs (1.3 kg)
		Autosampler	22 lbs (10 kg)	—

### UTILITY REQUIREMENTS

Electrical	90 – 280 VAC, 47 – 63 Hz (350 watts)	100 – 240 VAC, 50 – 60 Hz; or 12 VDC input
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**OPTIONS & ACCESSORIES**

**70X SERIES LAB ANALYZERS**

**70X SERIES AUTOSAMPLER SYSTEMS**

**PORTABLE CLOUD POINT ANALYZER**

ANALYZER MODEL NUMBER	PSA-70X	PPA-70X	PCA-70X	PFA-70X	CPA-70X	FPA-70X	FCA-70X	GPA-70X	APA-70X	APC-70X	PSA-70XAS	PCA-70XAS	PFA-70XAS	CPA-70XAS	FPA-70XAS	FCA-70XAS	CPA-T30	
TEST MODES									LUBES ONLY		FUELS ONLY							
<b>Pour Point ASTM D5949</b>	YES	YES	YES	YES	no	no	no	+	YES	YES	YES	YES	YES	no	no	no		no
<b>Cloud Point ASTM D5773</b>	YES	no	YES	no	YES	no	YES	+	no	YES	YES	YES	no	YES	no	YES		YES* (*ASTM D7397)
<b>Freeze Point ASTM D5972</b>	YES	no	no	YES	no	YES	YES	+	no	no	YES	no	YES	no	YES	YES		no
<b>Antifreeze Freeze Point ASTM D6660</b>	+	no	no	+	no	YES	+	+	no	no	no	no	no	no	no	no		no
<b>Solid Point</b>	+	+	+	+	no	no	no	+	+	+	+	+	+	no	no	no		no
<b>Gel Point</b>	no	no	no	no	no	no	no	+	no	no	no	no	no	no	no	no		no
<b>Titer &amp; Melting Point</b>	no	no	no	no	no	no	no	+	no	no	no	no	no	no	no	no		no
SOFTWARE OPTIONS																		
<b>Black Oil (Pour Point Only)</b>	+	+	+	+	no	no	no	no	no	no	no	no	no	no	no	no		no
<b>Crude Oil (Pour Point Only)</b>	+	+	+	+	no	no	no	no	no	no	no	no	no	no	no	no		no
<b>Phase Separation Graphics (LTB) Software</b>	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		no
<b>Phase Temperature Control (PTCS) Software</b>	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		no
<b>LIMS interface</b>	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		no
ACCESSORIES																		
<b>LLP-70A Label Printer</b>	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	<b>BAT-T30 Rechargeable Battery Pack</b>	+
<b>BSC-70X Barcode Scanner</b>	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	<b>DCA-T30 DC Power Adapter (with cigarette plug)</b>	+

KEY TO AVAILABLE OPTIONS AND ACCESSORIES

- YES = included on analyzer model
- no = not available on analyzer model
- +

FOR MORE INFORMATION:  
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