



# VIDA ML Density Meter

Accurate, precise, and automated density analysis of liquids

- 🌐 Proven Technology With Automation for Enhanced Performance
- 🌐 Ease of Use for Increased Efficiency in Mobile Lab Applications
- 🌐 Compliant with ASTM D4052, ISO 12185, ISO 15212-1, DIN 51757 and JIS K2249-1

# VIDA ML Density Meter

## PROVEN AUTOMATED TECHNOLOGY WITH THE HIGHEST LEVEL OF QUALITY COMPLIANCE

The VIDA ML density meter is specifically designed for mobile laboratory applications providing accurate and repeatable density analysis for a wide range of liquids according to ASTM D4052. It combines the proven oscillating U-tube technology with unique automated features such as bubble detection and sample injection. This automation improves repeatability, ease of use, and laboratory efficiency to achieve the highest level of quality compliance. Equipped with the same user interface as other PAC VIDA models, VIDA ML offers high operational efficiency.

## KEY ADVANTAGES

### MOBILE LAB FRIENDLY

Design for the constraints of a mobile laboratory

- No solvents needed for fuels
- No waste or solvent bottles
- Stand alone instrument
- 10 ml syringe size
- Syringe filling: 6 ml (min.) to 8 ml (max.)
- Lockable syringe holder
- Optional fixing holder to lock analyzer in place

### EASE OF USE FOR INCREASED LABORATORY EFFICIENCY

True “push button” solution requiring minimal training or analytical knowledge

- Accurate density analysis with only 2 steps: sample loading and measurement
- Intuitive smart software that displays test progress in real time
- Quick and advanced test setup for quality control and customized tests
- Integrated tables for automatic conversions of density output for: API crude oil, refined products and lubricants

### HIGH LEVEL OF COMPLIANCE

Immediate access to critical information

- Programmable duplicate measurement in one test run for more accurate analysis
- Automatic pass/fail validation
- Quality control chart for calibration
- Troubleshoot system with event log and diagnostic features
- IRIS/LIMS capability
- Compliant with ASTM D4052, DIN 51757, ISO 12185, ISO 15212-1 and JIS K2249-1

### PROVEN TECHNOLOGY FOR ENHANCED PERFORMANCE

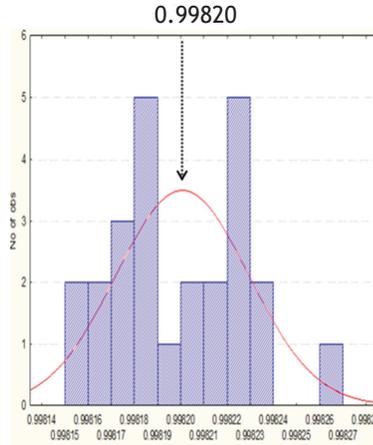
Advanced technology based on robust oscillating U-tube

- Can withstand aggressive samples and solvents due to unique stainless steel cell
- Better repeatability due to push-piston automatic vertical sample injection that mimics manual direct injection
- No operator visual check required due to automated bubble detection

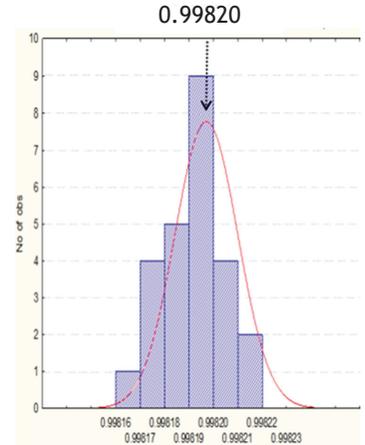
## IMPROVED REPEATABILITY

With the higher accuracy and repeatability of the VIDA density results, operators are able to run their processes tighter to the specification limits.

The graphs on the right compare results of a manual injection density meter and the automated VIDA analyzing ~25 consecutive tests of the same sample.



Manual Injection



Automatic Injection

## APPLICATIONS

### REFINING & PETROCHEMICAL INDUSTRIES

#### Light and Mid Distillates

- Gasoline
- Diesel
- Jet fuel

## FULLY AUTOMATED RELIABILITY

VIDA's high level of automation –powered by embedded smart software– allows non-assisted operation during the whole test cycle, providing a significant reduction of operators' workload, together with repeatable and consistent measurements one can rely on.

### AUTOMATIC PUSH PISTON

- Automatic push-piston with force sensor allows double injection
- Automatic injection prevents errors caused by air bubbles

### INTUITIVE TOUCH SCREEN

- Real-time display of test progress
- Easy configuration of test methods
- Straightforward navigation menu

### UNIQUE ADVANCED FEATURES

- Lockable syringe holder
- Metal measuring cell
- Vertical injection





## SPECIFICATIONS

VIDA ML	
Analytical Principle	Oscillating U-Tube
Measurement Range	0 to 3 g/cm <sup>3</sup>
Temperature Range	0 °C to +100 °C (32 to 212 °F)
Temperature Accuracy	0.03 °C
Viscosity at loading temperature	<15000 mm <sup>2</sup> /sec
Density Accuracy	0.0001 g/cm <sup>3</sup>
Density Repeatability s.d.	0.00002 g/cm <sup>3</sup>
Operation	
User Interface	7-inch Color TFT Touch Screen
Sample Loading	Automatic by push piston
Sample Changer	No
Sample Keep Warm	No
Bubbles Detection	Automatic (by pressure)
Viscosity Correction	No
Temperature Compensation	Yes (API conversion acc. to ASTM-D1250)
Calibration	By Air / Water / Referent product
Results Management	
Documentation	Results instant report in g/ml ; kg/m <sup>3</sup> ; Rel. Density; °API. Detailed report on local screen; Print-out reports
Statistics	Auto calculation of max/min. values; mean and sdt. dev.
Built-in Local Memory	2GB non removable SD card. Up to 40 products with associated specification. Up to 200 complete test results.
Special functions	Pass/Fail Indication; QC chart; Event Log; 2x Measurement
PAC IRIS Software features	Run Control; Result Management; Reporting; Quality Control
Communication Interface	2 x USB (optional), Ethernet, 1 x RS-232
PC Software	Windows based PC software is available for data acquisition, database management, results comparison, run control, flexible LIMS protocols and other functions
Ambient Conditions	Operation: 10 to 35 °C (50 to 95 °F) - Humidity: 20 to 85% (not condensing)
Power Requirement	AC 100 to 240V; 50/60Hz; 400W
Dimensions (W x L x H)	251 x 560 x 375 mm (9.9 x 22 x 14.7 inches)
Weight	16,8 kg (37.3 pounds)
Patents and Certifications	Fr. Patents #1055362, #1055357, #1055354 - CE Certification. CSA or other NRTL certification by request.

Continuing research and development may result in specifications or appearance changes at any time

### ABOUT PAC

PAC develops advanced instrumentation for lab and process applications based on strong **Analytical Expertise** that ensures **Optimal Performance** for our clients. Our analyzers help our clients meet complex industry challenges by providing a low cost of ownership, safe operation, high performance with fast, accurate, and actionable results, high uptime through reliable instrumentation, and compliance with standard methods.

Our solutions are from industry-leading brands: AC Analytical Controls, Advanced Sensors, Alcor, Antek, Herzog, ISL, Cambridge Viscosity, PetroSpec and Phase Technology. We are committed to delivering superior and local customer service worldwide with 16 office locations and a network of over 50 distributors. PAC operates as a unit of Roper Technologies, Inc., a diversified technology company and a constituent of S&P 500, Fortune 1000, and Russell 1000 indices.

### HEADQUARTERS

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