ISL VIDA Density Meter

Accurate, precise, and automated density analysis of liquids

- Proven Technology With Automation for Enhanced Performance
- Ease of Use for Increased Laboratory Efficiency
- Compliant with ASTM D4052, ASTM D5002, ASTM D5931, ISO 12185, ISO 15212-1, DIN 51757 and JIS K2249-1
The VIDA density meter provides 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.

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

**KEY ADVANTAGES**

**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
- A reference oscillator allows for better stability (VIDA 80H)
- Maintain the apparatus inlets/outlets warm up to 70°C
- Internal waste circuit also kept warm
- Prevent freezing of the sample during whole test cycle run

**EASE OF USE FOR INCREASED LABORATORY EFFICIENCY**

True “push button” solution requiring minimal training or analytical knowledge
- Perform accurate density analysis with only 3 steps: sample loading, measurement and cleaning
- Automatic cleaning reduces cleaning time and consumption of solvents, even for difficult samples
- 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, lubricants, alcohols, acids, alkalis and sugars (VIDA 80H)
- Customizable tables

**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 shows when calibration adjustment is required
- Troubleshoot system with event log and diagnostic features
- IRIS/LIMS capability

“We chose the VIDA because we got more for our money. Our technicians are extremely pleased with its ease of use and fast analysis. It is extremely simple to start a sample since it only takes 60 seconds of hands on time for sample prep to start the test. All we do is put in the syringe and hit go.”

Ralph Guidry
Chemist, Valero Refinery Lab
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.

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 SAMPLE INTRODUCTION
- Push-piston with automatic force sensor and viscosity correction simulates the manual direct injection with better repeatability
- Adjust injection speed to prevent errors due to air bubbles

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

UNIQUE ADVANCED FEATURES
- Automatic bubble detection
- Metal measuring cell
- Vertical injection

SELF-CONTAINED SYSTEM
- No risk of sample cross-contamination
- Minimal operator exposure to solvents
- Optimal VOC emissions control

APPLICATIONS

REFINING & PETROCHEMICAL INDUSTRIES
Light and Mid Distillates - VIDA 40
- Gasoline
- Diesel
- Jet fuel

Heavy Oils - VIDA 40H & VIDA 80H
- Residual wax fractions
- Paraffin crude oil
- Heavy fuel oil
- Bitumen samples

INDUSTRIAL, PHARMACEUTICAL, FOOD AND BEVERAGE INDUSTRIES
VIDA 80H
- Sugar and alcohol content
- Solvents
- Dyes
- Surfactants
- Glycols
### SPECIFICATIONS

**VIDA™ Density Meters**

<table>
<thead>
<tr>
<th>Model</th>
<th>VIDA 40</th>
<th>VIDA 40H</th>
<th>VIDA 80H</th>
<th>VIDA 40SC</th>
<th>VIDA 40SCH</th>
<th>VIDA 80SCH</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Analytical Principle</strong></td>
<td>Oscillating U-Tube</td>
<td></td>
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<tr>
<td><strong>Measurement Range</strong></td>
<td>0 to 3 g/cm³</td>
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<tr>
<td><strong>Temperature Range</strong></td>
<td>0°C to +100°C (32 to 212°F)</td>
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<tr>
<td><strong>Pressure Range</strong></td>
<td>0 to 10 bar (0 to 145 psig)</td>
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</tr>
<tr>
<td><strong>Temperature Accuracy</strong></td>
<td>0.03°C</td>
<td>0.01°C</td>
<td>0.01°C</td>
<td>0.03°C</td>
<td>0.01°C</td>
<td>0.01°C</td>
</tr>
<tr>
<td><strong>Density Accuracy</strong></td>
<td>0.00001 g/cm³</td>
<td>0.000005 g/cm³</td>
<td>0.000005 g/cm³</td>
<td>0.00001 g/cm³</td>
<td>0.000005 g/cm³</td>
<td>0.000005 g/cm³</td>
</tr>
<tr>
<td><strong>Density Repeatability s.d.</strong></td>
<td>0.0002 g/cm³</td>
<td>0.00001 g/cm³</td>
<td>0.00001 g/cm³</td>
<td>0.00002 g/cm³</td>
<td>0.00001 g/cm³</td>
<td>0.00001 g/cm³</td>
</tr>
</tbody>
</table>

#### Operation

<table>
<thead>
<tr>
<th>Feature</th>
<th>VIDA 40</th>
<th>VIDA 40H</th>
<th>VIDA 80H</th>
<th>VIDA 40SC</th>
<th>VIDA 40SCH</th>
<th>VIDA 80SCH</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>User Interface</strong></td>
<td>7-inch Color TFT Touch Screen</td>
<td></td>
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</tr>
<tr>
<td><strong>Sample Loading</strong></td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Sample Change</strong></td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Sample Keep Warm</strong></td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Bubbles Detection</strong></td>
<td>Automatic (by pressure)</td>
<td></td>
<td></td>
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<tr>
<td><strong>Cleaning and Drying</strong></td>
<td>Automatic (by two solvents)</td>
<td></td>
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<tr>
<td><strong>Viscosity Correction</strong></td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Temperature Compensation</strong></td>
<td>Yes (API conversion acc. to ASTM-D1250)</td>
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</tr>
<tr>
<td><strong>Tables</strong></td>
<td>(alcohol, acid, alkali, sugar, customizable)</td>
<td>No</td>
<td>Option</td>
<td>Yes</td>
<td>No</td>
<td>Option</td>
</tr>
<tr>
<td><strong>Calibration</strong></td>
<td>By Air / Water</td>
<td>Multi-Temp</td>
<td>By Air / Water</td>
<td>Multi-Temp</td>
<td></td>
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</tr>
</tbody>
</table>

#### Results Management

<table>
<thead>
<tr>
<th>Feature</th>
<th>VIDA 40</th>
<th>VIDA 40H</th>
<th>VIDA 80H</th>
<th>VIDA 40SC</th>
<th>VIDA 40SCH</th>
<th>VIDA 80SCH</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Documentation</strong></td>
<td>Results instant report in g/ml ; kg/m³; Rel. Density; °API. Detailed report on local screen; Print-out reports</td>
<td></td>
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<tr>
<td><strong>Statistics</strong></td>
<td>Auto calculation of max/min. values; mean and sdt. dev.</td>
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<tr>
<td><strong>Built-in Local Memory</strong></td>
<td>2GB non removable SD card. Up to 40 products with associated specification. Up to 200 complete test results.</td>
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<tr>
<td><strong>Special functions</strong></td>
<td>Pass/Fail Indication; QC chart; Event Log; 2x Measurement</td>
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<tr>
<td><strong>PAC IRIS Software features</strong></td>
<td>Run Control; Result Management; Reporting; Quality Control</td>
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<tr>
<td><strong>Communication Interface</strong></td>
<td>2 x USB, Ethernet, 1 x RS-232</td>
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<tr>
<td><strong>PC Software</strong></td>
<td>Windows based PC software is available for data acquisition, database management, results comparison, run control, flexible LIMS protocols and other functions</td>
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<tr>
<td><strong>Ambient Conditions</strong></td>
<td>Operation: 10 to 35°C (50 to 95°F) - Humidity: 20 to 85% (not condensing)</td>
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<tr>
<td><strong>Power Requirement</strong></td>
<td>AC 100 to 240V; 50/60Hz; 400W</td>
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<tr>
<td><strong>Dimensions (W x L x H)</strong></td>
<td>251 x 405 x 375 mm (9.9 x 15.9 x 14.7 inches)</td>
<td>331 x 540 x 375mm (13 x 21 x 15 inch)</td>
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<tr>
<td><strong>Weight</strong></td>
<td>16.8 kg (37.3 pounds)</td>
<td>20kg (44 pounds)</td>
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</tbody>
</table>

#### Patents and Certifications

| Patents and Certifications | Fr. Patents #1055362, #1055357, #1055354 - CE & CSA Certifications | | | | | |

### 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.

### HEADQUARTERS

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Our solutions are from industry-leading brands: AC Analytical Controls, Advanced Sensors, Alcor, Antek, Herzog, ISL, Cambridge Viscosity, PSPI, and PetroSpec. 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 Industries, Inc., a diversified growth company and a constituent of S&P 500, Fortune 1000, and Russell 1000 indices.

Contact us for more details.

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