



PORTABLE ViscoDens

VDM-250.1

IN PROCESS TO EXCELLENCE

VDM-250 is a unique combination of Viscometer and Density meter.

Resonance technology, based on the changes of frequency of vibration element in the measured liquid, allows to receive highly accurate Kinematic Viscosity measurements in seconds.

VDM-250 measures Density and Dynamic Viscosity and calculates Kinematic Viscosity:

$$\mu = \eta / \rho \quad (\mu - \text{Kinematic Viscosity}; \eta - \text{Dynamic Viscosity}; \rho - \text{Density})$$

Specifications

Measuring range:

| | |
|-------------------|---|
| Density | 0... 3 g/cm ³ (0... 3000 kg/m ³) |
| Dynamic Viscosity | Up to 10000 mPa·s(cP) |
| Temperature | -40... +85°C (-40... +185°F) |

Accuracy:

| | |
|-------------------|--|
| Density | ±0.0003 or ±0.0005 g/cm ³ (±0.3 or ±0.5 kg/m ³) |
| Dynamic Viscosity | ±1% of span |
| Temperature | ±0.1°C (±0.2°F) or ±0.2°C (±0.4°F) |

Repeatability:

| | |
|-------------------|--|
| Density | ±0.00015 or ±0.00025 g/cm ³ (±0.15 or ±0.25 kg/m ³) |
| Dynamic Viscosity | ±0,5% of span |
| Temperature | ±0.1°C (±0.2°F) |

Supported measuring units

Real Density: g/cm³, kg/m³, lb/gal, lb/ft³; API; SG
 Dynamic Viscosity: mPa·s, cP
 Kinematic Viscosity: mm²/s, cSt
 Tables ASTM D 1250
 Alcohol Tables
 Referred Density: at 15°C, 20°C, 60°F; API60; SG60
 Temperature in °C or °F

Ambient temperature -40... +85°C (-40... +185°F)

Depth of submersion Up to 6 meters (20 ft.)

Sensor:

| | |
|----------|---|
| Type | Vibrating element (Resonance principle) |
| Material | Stainless steel SS 316 L; NiSpan C; Hastelloy C22 |

Intrinsically safe:

| | |
|------------|---------------------------------|
| Controller | ATEX II (2G) EEx ib [ia] IIB T4 |
| Sensor | ATEX II 1G EEx ia IIB T4 |

Power supply NiMH 3.6V-1500 mAh

Operating time without charging Appr. 12 hours

Dimensions, weight:

| | |
|------------|--|
| Controller | 180 x 80 x 40 mm (7.1 x 3.2 x 1.6"), 0.6 kg (1.3 lb) |
| Sensor | 220 x ø42 mm (8.7 x ø1.7"), 1 kg (2.2 lb) |

Temperature compensation Automatic

Viscosity compensation Automatic

Reporting formats Dynamic viscosity in mPa·s or cP; temperature in °C or °F

Data handling Backlighted LCD display (2x16)
 Local memory up to 2000 results
 Build in Bluetooth for data transfer to printer or PC
 Optional Windows - based software

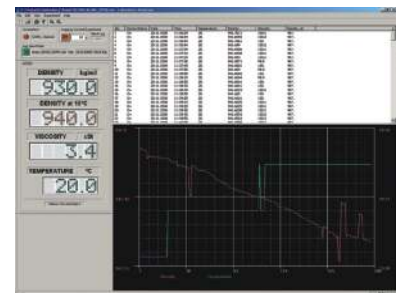
Delivery Delivered in compact carrying case

Advantages

- Direct density and viscosity measurement
- Density, reference density, specific gravity, API, ...
- Automatic temperature compensation
- No sampling required
- ATEX, IEC Hazloc certification
- Safe operation, low maintenance
- At any depths up to 6 meters
- Rigid construction for heavy duty outdoor operation
- Local results storage and Bluetooth data transfer

Applications

- Density, Viscosity & Temperature profile in storage tank
- Product consistency and adulteration check
- Density and viscosity control at outlets and delivery points
- In-tank blending and mixing control
- Molasses Density & Viscosity control in ethanol production
- Food, milk and dairy products
- % alcohol check in beverage industry
- Petroleum products, fuels, lubricants



SOFTWARE

Data transmission to PC, pocket PC or portable printer via Bluetooth connection. Compatible for a Windows XP/Vista/7.

For more information please visit www.lemis-process.com



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