



**250 SERIES**



**PORTABLE ViscoDens**

**VDM-250.2**

**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:

$\mu = \eta/\rho$  ( $\mu$  - Kinematic Viscosity;  $\eta$  - Dynamic Viscosity;  $\rho$  - Density)

## Specifications



<b>Measuring range:</b>	
Density	0... 3 g/cm <sup>3</sup> (0... 3000 kg/m <sup>3</sup> )
Dynamic Viscosity	up to 10000 mPa·s (cP)
Temperature	-40... +85°C (-40... +185°F)
<b>Accuracy:</b>	
Density	±0.0003 or ±0.0005 g/cm <sup>3</sup> (±0.3 or ±0.5 kg/m <sup>3</sup> )
Dynamic Viscosity	±1% of span
Temperature	±0.1°C (±0.2°F) or ±0.2°C (±0.4°F)
<b>Repeatability:</b>	
Density	±0.00015 or ±0.00025 g/cm <sup>3</sup> (±0.15 or ±0.25 kg/m <sup>3</sup> )
Dynamic Viscosity	±0,5% of span
Temperature	±0.1°C (±0.2°F)
Supported measuring units	Real Density: g/cm <sup>3</sup> , kg/m <sup>3</sup> , lb/gal, lb/ft <sup>3</sup> ; API; SG Dynamic Viscosity: mPa·s, cP Kinematic Viscosity: mm <sup>2</sup> /s, cSt Tables ASTM D 1250 Alcohol Tables Temperature in °C or °F Referred Density: at 15°C, 20°C, 60°F; API60; SG60
Ambient temperature	-40... +85°C (-40... +185°F)
Depth of submersion	Up to 30 meters (100 ft.)
<b>Sensor:</b>	
Type	Vibrating element (Resonance principle)
Material	Stainless steel SS 316 L; NiSpan C; Hastelloy C22
<b>Intrinsically safe:</b>	
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
<b>Dimensions, weight:</b>	
Controller	180 x 80 x 40 mm (7.1 x 3.2 x 1.6"), 0.6 kg (1.3 lb)
Level block with density/viscosity meter	420 x 245 x 140 mm (16.5 x 9.6 x 5.5"), 4 kg (8.8 lb)
Sensor	220 x ø45 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 30 meters
- Record level, density and viscosity; average per tank
- Rigid construction for heavy duty outdoor operation
- Local results storage and Bluetooth data transfer

### Applications

- Density, Viscosity & Temperature profile in storage tank
- Products consistency and adulteration check
- Density, viscosity and level control at outlets and delivery points
- Level gauge calibration
- 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

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-usa.com](http://www.lemis-usa.com)**



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