



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:

$\mu = \eta / \rho$ (μ - Kinematic Viscosity; η - Dynamic Viscosity; ρ - 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)
Level	up to 30 m (100 ft.)

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)
Level	±2 mm(±0.008")

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)
Level	±1 mm(±1/16")

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 30 meters (100 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)
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

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
- Record level of liquid
- Rigid construction for heavy duty outdoor operation
- Local results storage and Bluetooth data transfer

Applications

- Spot density and viscosity or density/viscosity/level profile in storage tanks
- 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 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-process.com



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