Liquid Density Balance - Digital Liquid Densimeter - 0.001 g/cm3 Resolution, 5 Second Reading

Model **MSELD-300SWISS** | Brand **Master Science**





The Master Science Liquid Density Balance joins the Archimedes displacement principle to modern electronics, so the density of a liquid appears directly on the digital display. A reading takes about five seconds, and only around 50 cc of sample is needed.

KEY HIGHLIGHTS

- Direct density reading
- Fast
- Small sample
- Handles difficult liquids
- Easy cleaning

Request a Quotation
Contact us for pricing, configuration options and delivery details.

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www.themsci.com

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Overview

Compared with the traditional Westphal balance and pycnometer methods, the Master Science Liquid Density Balance needs no fiddly adjustment and is far less affected by outside factors and temperature. It is useful for quality management, cost control and formula research on products such as solvents, adhesives, paints, resins, chemical and edible oils, food additives, drinks and dairy products.

Key Benefits

Direct density reading
: the Master Science Liquid Density Balance shows the value after one step.

Fast
: about 5 seconds per measurement.

Small sample
: roughly 50 cc is enough.

Handles difficult liquids
: volatile, viscous, corrosive, strong acid and strong alkali.

Easy cleaning
: open measuring cup with no narrow pycnometer neck.

For the U-tube oscillating method, see the Master Science digital density meter.

Technical Specifications

GENERAL

General	Specifications of the Master Science Liquid Density Balance are listed below.
Brand	Master Science
Model Number	MSELD-300SWISS
SKU	MSELD-300SWISS
Density Resolution	0.001 g/cm3
Density Range	**0.001 to 99.999 g/cm3**
Sample Types	Free-flowing, viscous, volatile, corrosive and high-temperature liquids, suspensions and emulsions
Example Samples	Alcohol, essence, sodium chloride solution, glycerol, electrolyte, diesel, refrigerant, hydrofluoric acid, dichloromethane, sulphuric acid
Measuring Principle	Archimedes principle, displacement method
Measuring Mode	1 group
Measuring Time	About 5 seconds
Specific Gravity Measuring Frame	Stainless steel
Settings	Temperature, solution density, weight of the measuring weight in standard liquid and in water
Calibration	One-button automatic correction with auto-detection
Power	AC 220 V / 50 Hz

DISPLAY & DATA

Memory Mode	Stored in one step
Result Display	Density value
Output	Standard RS-232 interface for data output and printing

COMMON PROBLEMS THIS BALANCE SOLVES

Common Problems This Balance Solves	Traditional liquid density methods are slow and delicate.
Pycnometers are tedious to fill, weigh and clean	: an open beaker and one key press replace them.
Viscous samples will not pass a narrow neck	: the displacement method has no such limit.
Results have to be calculated by hand	: density is displayed directly.
Aggressive liquids attack the hardware	: an anti-corrosive measuring assembly is available as an option.

Applications

The Master Science Liquid Density Balance is applied in
Chemical solutions and reagents Modern energy and oil fuels Fine chemical engineering Chemistry research laboratories Food, drink and dairy quality control

Measurement

- Density value shown in one procedure, with rapid repeated measurements
- Digital display with high measuring accuracy; simple, stable and durable
- Samples from room temperature up to 100°C can be measured
- Works with a thermostatic bath to measure at a required temperature
- Quick measurement of volatile, corrosive and viscous liquids, strong acids and strong alkalis

Handling

- Convenient sampling: about 50 cc is sufficient
- No cumbersome set-up compared with Westphal balance and pycnometer methods
- Measuring cup is easy to clean and not limited by pycnometer neck size
- One-piece wind and dust cover for convenient, durable assembly
- RS-232C interface for connection to a PC or printer

Measuring Procedure

- Place the beaker with sample on the test board and tare the hook
- Hang the standard weight on the hook fully submerged in the liquid, then press ENTER to store; the density is displayed

Standard Accessories Included

- Main unit
- Measuring frame
- Standard liquid measuring assembly (two stainless steel hooks, one glass weight, one glass beaker)
- Tweezers
- Thermometer
- 100 g weight
- Wind and dust cover
- Measuring support
- Power transformer

Optional Accessories

- Printer
- Anti-corrosive liquid measuring assembly