RUDOLPH RESEARCH ANALYTICAL

DDM29 HANDHELD

Laboratory Accuracy Everywhere You Need to Measure

Rudolph DDM 29 – Density Meter

Untethered Portability | Temperature Controlled | Laboratory Accuracy

LIFETIME CELL WARRANTY

ISO 17025 ACCREDITATION

20 YEAR Service Guarantee

ISO 9001 CERTIFIED

nqa ISO 9001 QUALITY MANAGEMENT

ANAB ACCREDITED ISO/IEC 17025 MANAGEMENT SYSTEMS CERTIFICATION BODY

nqa ISO 9001 QUALITY MANAGEMENT

UKAS MANAGEMENT SYSTEMS 015

NVLAP CALIBRATION
NVLAP LAB CODE: 200898-0
Accreditation to ISO/IEC 17025
www.rudolphresearch.com/resources/quality

ilac-MRA

Rudolph Research Analytical serving it's customers with Integrity, Quality, and Innovation for over 50 years.

Unmatched Capabilities in a Fully Portable Density Meter

Temperature Controlled Measurements at 20° and 25°C

The problem with most handheld Density Meters is they drift because they do not control temperature. Density Meter measurements are highly sensitive to temperature and mathematically correcting for temperature may not be good enough for some applications. Only temperature control will result in the accuracy many users require. The Rudolph DDM 29 utilizes powerful and compact Peltier technology to control the sample temperature for precise heating and cooling this ensures stable and accurate measurements at either 20° or 25°C.

Rugged U-Tube for durability in the Field

The Rudolph DDM29 has a 316 Stainless Steel, W-Tube instead of a glass U-Tube which is extremely durable, corrosion resistant and cannot be broken. This type of durability is preferable for customers who are tired of replacing glass U-Tubes in other manufactures' handhelds. Rudolph's W-Tube facilitates excellent accuracies and measurement speeds demonstrating 3 decimal place measurement readings in 30 seconds, and 4 decimal measurements in 60 seconds. An Internal Barometer permits Automatic Calibration.

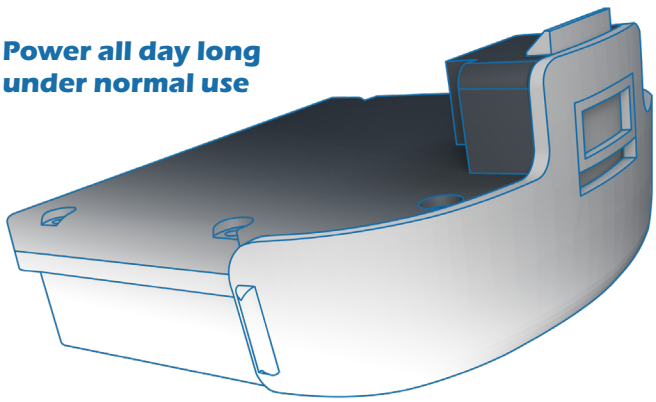
User friendly GUI and Bright, Back Lit, Touch Screen Display

Extremely easy to use Graphic User Interface (GUI) and the availability of 10 different Languages on a brightly lit 7 inch(128mm) touch screen makes this the most User Friendly Density Meter in the market today. The interface is a bright, LED touchscreen, with large easy to navigate GUI. No more difficulties reading measurements in bright or dark environments.

Laboratory Accuracy - Everywhere You Need to Measure

Most Handheld Density Meters provide for 2 or 3 digit accuracy and measurements are prone to drift. By combining state of the art design, and Peltier Temperature Control, Rudolph provides accuracy to the 4th decimal place. Laboratory accuracy in the field eliminates rechecking of materials in the Lab allowing users to test right in the field, on the receiving dock, or in a formulations area.

Power all day long under normal use



Portability and Flexibility

The DDM29 is powered by a Lithium-Ion battery that is easily recharged, your DDM 29 is ready to go everywhere you need to make measurements. This might be at the loading dock when receiving incoming raw goods or out on a distillery floor. The Lithium Ion battery can be charged in approximately 2 hours providing up to 4 hours of constant measurements under heavy usage or 8 hours of normal usage. Included is a Charging Station for convenient stationary charging.

Rudolph Research Analytical 55 Newburgh Road, Hackettstown, NJ 07840 USA ▪ Phone: 973-584-1558 ▪ Fax: 973-584-5440 ▪ E-mail: info@rudolphresearch.com ▪ Internet: www.rudolphresearch.com

Flexible Method Management

Factory installed measurement methods cover a wide group of industries and applications. Instrument is factory configured with over 50 density to concentration tables which include Brix, Alcohol, API, and most common chemicals, as well as unlimited number of additional tables, polynomials, and formulas may be added.

- Essential Oils
- Chemicals
- Beer, wort, and fermentation monitoring
- Raw material soft drink monitoring
- Monomers, Polymers and Elastometers
- Pharmaceutical raw materials and finished products
- Wort, juice, fermentation, spirits safe monitoring
- Blending, bottling, spirits and liquors packaging
- Sulfuric Acid in lead-acid batteries
- Adhesives, glues
- Agriculture, chemicals and fertilizers
- Colloids, nanotechnology
- Surfactants, detergents
- Emulsions
- Paints, Inks, Toners
- Organic, inorganic chemicals
- Fuel cells, power generation, sustainable fuels
- Soft drinks, juices, tea, coffee
- Petroleum samples according to ASTM methods

For unique measurement applications, easily create a measurement method for your sample. You may use Concentration Tables, Formulas and Polynomials to match the measurement methods used in your laboratory or field application.

Industry Applications

Alcoholic Beverages, Spirits, Wines

Food, Flavor, Fragrance

Pharmaceutical

Petroleum, Chemical

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Technical Specifications

Handheld Rudolph DDM 29	
Accuracy	Density: 0.0005 g/cm3* | Temperature: ±0.1°C
Repeatability * (Standard Deviation)	Density: 0.0003 g/cm3 | Temperature: ±0.02 °C
Temperature Control (Controlled via Peltier)	20°C or 25°C
Ambient temperature	0°C to 35°C (32°F-95°F)
Pressure Range	0 to 10 bar (145 psi)
Measurement Modes	Continuous, Single, Multiple
Measurement Technique	Mechanical Oscillating Principle
Measurement Range	Density: 0-3 g / cm^3
Minimum Sample Volume	Approximately 1-2 mL, depending on the injection method
Wetted Materials	316 Stainless steel, Teflon PTFE, ECTFE, PVD, FFKM
Supported scales	Density, Specific Gravity, Alcohol Tables, Sugar/Extract, API functions, H2SO4 tables, acids, bases, organic and inorganic chemicals, virtually unlimited programmable and custom specific scales
Operating System	Flexible and capable Android OS
Measurement Time	Typically 10 - 15 seconds after thermal equilibration
Display	Bright LED - 7" touchscreen, 1024x600 resolution
Display resolution	Density: 0.0001 g/cm3 Temperature: 0.01°C
Communication Interfaces	USB-C, WiFi, Bluetooth®, Manual Entry, RFID, and Barcode Reader for entering sample IDs. Wireless Printing via Airprint
Remote Support	Troubleshooting, Diagnostics, Software Updates available via the Internet
Internal Data Storage	Approximately 3,000 Measurements
Operating Dimensions	7.28" (L) x 4.83" (W) x 13.59" (H) 18.49 cm (L) x 12.27 cm (W) x 34.52 cm (H)
Shipping Dimensions	24.5" (L) x 17.5" (W) x 22" (H) 62cm (L) x 44cm (W) x 56cm (H)
Operating Weight	3.6 lbs
Power Supply & Charging	Rechargeable Lithium Ion Battery
Battery Longevity	4-8 Hours depending on usage level
Included with Instrument	Battery charging station, syringes, calibration certificate, & operating instructions
Warranty	1 Year Warranty

*According to ISO 5725 and under ideal conditions

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