

Electronic Densimeter MDS series consist of 2 models, MDS-300 upgraded from previous model MD-300S, and MDS-3000 with maximum capacity up to 3kg. New features 1.Accuracy increased 5 times than previous model 2.High stability weighing sensor 3.Auto-weighing function 4.Powder Density, which improves working efficiency and accuracy. They inherit the easy operation "Sample on the container, then into the water". Highly developed Densimeter to industrial standard.

Types of Industry & Typical Users

- Main Industry**
 Automobile, Aircraft, Electric, Electron, Rubber, Plastic, Sinter, Nonferrous Metals, Glass, Paper, Foods, Woods, Laboratories, University, Medical, Oil, etc...
- Main User (random order)**
 - Rubber** / Bridgestone, JSR, Sumitomo Rubber Industries, Yokohama Rubber, Mitsubishi Chemical, Toyoda Gosei, Dow Corning Toray Silicone, Shinetsu, Ohtsuka Poli-Tech, Mizuno, Bando, Mitsuboshi, Moon Star, Inaba, Inaki etc...
 - Plastic** / Sumitomo Chemical, Mitsubishi Chemical, Toray, Asahi Chemical, Fuji Film, Hitachi Chemical, Daicel Chemical Industries, Sekisui, Idemitsu, Kureha, Unitika, Toppan, Starlite, Tosoh etc...
 - Automobile, Aircraft, Ships** / Toyota, Nissan, Honda, Mitsubishi, Mazda, Toyota Central R&D Labs, Daihatsu, Denso, Aisin Seiki, IHI, Mitsubishi Heavy Industries, Sumitomo Precision Products, Yamaha, NHK Spring etc...

| Samples | EW-300SG | MD-300S | MDS-300 | SD-200L | MDS-3000 |
|------------|----------|---------|---------|---------|----------|
| Solid | ○ | ○ | ○ | ○ | ○ |
| Floatings | ○ | ○ | ○ | ○ | ○ |
| Absorbents | ○ | ○ | ○ | ○ | ○ |
| Pellets | ○ | ○ | ○ | ○ | ○ |
| Films | ○ | ○ | ○ | ○ | ○ |
| Liquid *1 | × | △ | △ | △ | △ |
| Powders*2 | × | × | △ | × | △ |

*1 Liquid viscosity less than 100 cP can be measured. *2 Powder density can be measured by original substituted method.

| Features | EW-300SG | MD-300S | MDS-300 | SD-200L | MDS-3000 |
|-----------------------------------|----------|------------|------------|------------|------------|
| Solid Density Mode | | | | | |
| Density Variation | ○ | ○ | ○ | ○ | ○ |
| Volume Variation | × | ○ | ○ | ○ | ○ |
| Comparator Mode | ○ | ○ | ○ | × | ○ |
| Optional Measuring Mode | × | × | ○ | × | ○ |
| Compensation of Water Temperature | ○ | ○ | ○ | ○ | ○ |
| Other Medium Adaptable | ○ | ○ | ○ | ○ | ○ |
| Auto-weighing Function | × | × | ○ | × | ○ |
| New Sensor | ○ | ○ | ○ | × | ○ |
| Reference Value | × | × | ○ | × | ○ |
| Error Tolerance | × | × | ○ | ○ | ○ |
| Measuring Time | 10sec. | Selectable | Selectable | Selectable | Selectable |
| Liquid Density Mode | | | | | |
| Room Temperature Mode | - | ○ | ○ | ○ | ○ |
| Compensate Temperature Mode | - | × | ○ | × | ○ |
| Repeat Measurement | - | × | ○ | × | ○ |
| Measuring Time | - | 20sec. | Selectable | 20sec. | Selectable |

| Functions | EW-300SG | MD-300S | MDS-300 | SD-200L | MDS-3000 |
|---|---|---------------------------|--------------------------|--------------------------|---------------------------|
| Density Resolution (g/cm ³) | 0.01 | 0.001 | 0.001 (0.0001) | 0.0001 | 0.01 (0.001) |
| Volume Display (cm ³) | 0.01 | 0.001 | 0.001 | 0.0001 | 0.001 |
| Scale Capacity (g) | 0.01~300 | 0.01~300 | 0.001 (0.0001)~300 | 0.0001~200 | 0.01 (0.001)~3000 |
| Repeatability (g/cm ³) | ±0.01 | ±0.001 | ±0.001 | ±0.0001 | ±0.01 |
| **Necessary weight against density | | | | | |
| Measurable Density (g/cm ³) | 0.01~ | 0.001~ | 0.001~ | 0.0001~ | 0.01~ |
| Measurable Maximum Size (mm) | (D)100X(W)70X(H)25 | (D)120X(W)70X(H)30 | (D)100X(W)70X(H)25 | (D)120X(W)70X(H)30 | (D)120X(W)100X(H)35 |
| Necessary Amount of Liquid (cc) | - | 50 | 50 | 50 | 50 |
| Measuring Method | Conform to Pycnometer and Hydrostatic Method | | | | |
| Adaptable Standards | JIS K6268A, JIS K6350 (rubber), JIS K7112 (plastic) etc / USA ASTM D297-93-16 (rubber), D797-00 (plastic) etc / JIS, UL, ISO standard etc | | | | |
| ISO | ○ | ○ | ○ | ○ | ○ |
| CE | ○ | ○ | ○ | ○ | ○ |
| Power Source (International) | AC100 ~ AC240V | | | | |
| Dimensions (kg/mm) | 1.6/(D)218X(W)190X(H)170 | 1.54/(D)218X(W)190X(H)170 | 2.8/(D)260X(W)190X(H)200 | 5.8/(D)319X(W)213X(H)301 | 4.2/(D)260 X(W)240X(H)240 |

| Optional Parts | EW-300SG | MD-300S | MDS-300 | SD-200L | MDS-3000 |
|---------------------------|----------|----------|----------|----------|----------|
| Terminal Printer AD-8121B | ○ | ○ | ○ | ○ | ○ |
| Compact Printer AL2-58 | ○ | ○ | ○ | ○ | ○ |
| Interface RS232C | Equipped | Equipped | Equipped | ○ | Equipped |
| Liquid Density Kit | - | ○ | ○ | ○ | ○ |
| Airtight Windshield | ○ | Equipped | Equipped | Equipped | ○ |
| Calibration 2kg weight | - | - | - | - | ○ |
| ISO Document | ○ | ○ | ○ | ○ | ○ |

Optional Parts



Printer AD-8121B



Compact Printer AL2-58



Liquid Density Kit



Airtight Windshield



High precision with new designed Sensor and Auto-weighing function ELECTRONIC DENSIMETER

MDS-300
Density Resolution 0.001g/cm³



MDS-3000
Density Resolution 0.01g/cm³

Produced by

 3-2-19, Miyakojima hondori, Miyakojima-ku,
 Osaka, 534-0021, JAPAN
 TEL. +81-6-6924-2631 FAX. +81-6-6924-2044
 U R L : <http://www.alfamirage.com>
 E-mail : sales@alfamirage.com

Please Contact



www.alfamirage.com



EW-300SG

Only 10 seconds to measure

Features

Only 10 seconds to measure density and volume, just putting the sample into the water. Ideal machine for the interval testing of production line.

Functions

◆Solid Mode

- Minimum density and volume resolution 0.01g/cm³.
- Maximum measuring range up to 300g.
- Result judgments with Comparator Mode is available.
- Easy connection to PC with standard equipped Interface RS232C.
- Ethanol can be used as a liquid medium with improved Styrol Water Tank.
- Floating objects can be measured.
- Measuring the change rate of density.

Specification

| | |
|-------------|---|
| Model | EW-300SG |
| Resolution | 0.01g/cm ³ |
| Capacity | 0.01~300g |
| Feature | Solid |
| Weight | 1.6kg |
| Dimensions | (D)218×(W)190×(H)170mm |
| Accessories | Tweezers, Thermometer, 200g Calibration Weight Steel Angle, AC Adapter, Interface RS232C |



EW-300SG
Resolution 0.01g/cm³
Solid Density

MD-300S

Industrial Standard

Features

Popular model with resolution 0.001g/cm³ which upgraded from previous model MD-200S. Compact body and accurate density measurement for solid and liquid sample.

Functions

◆Solid Mode

- Minimum density and volume resolution 0.001g/cm³.
- Maximum measuring range up to 300g.
- More smooth and easy operation with redesigned Container and chemical resistant Styrol Water Tank.
- Only 10 seconds to measure.
- Measuring the change rate of density and volume are possible.
- Result judgments with Comparator Mode is available.
- Optional Setting Mode is available for distinction of uncertain sample or development of new material.
- Easy connection to PC with standard equipped Interface RS232C.

◆Liquid Mode ※Optional kit required

- MD-300S can measure the compensated liquid density by setting compensated liquid temperature and compensating temperature rate.

Specification

| | |
|-------------|--|
| Model | MD-300S |
| Resolution | 0.001g/cm ³ |
| Capacity | 0.01~300g |
| Feature | Solid, Liquid |
| Weight | 1.6kg |
| Dimensions | (D)218×(W)190×(H)170mm |
| Accessories | Tweezers, Thermometer, 200g Calibration Weight Steel Angle, AC Adapter, Interface RS232C, Airtight windshield |



MD-300S
Resolution 0.001g/cm³
Solid/Liquid Density

MDS-300



Various functions of precision model
Electronic Densimeter

Features

Easy density measurement of not only solid, and liquid sample density, but also new function of powder density measurement added with resolution of 0.001g/cm³ and reference value of 0.0001g/cm³. New designed Sensor and Auto-weighing function improve accuracy and working efficiency.

Functions

◆Solid Mode

- Higher accuracy with resolution of 0.001g/cm³, and reference value of 0.0001g/cm³ can be displayed.
- No need to open and close the lid with new designed Sensor. Smaller size lid brings less error value, and less operation time.
- Improves working efficiency and repeatability with Auto-weighing function. (Semiautomatic measurement)
- New function of powder density substituted measurement.
- Floating objects and pellets can be measured easily.
- Density variation of absorbent sample can be measured.
- Selectable measuring time from 5 kinds.

◆Liquid Mode ※Optional kit required

- Density resolution 0.001g/cm³ and reference value 0.0001g/cm³
- Liquid density temperature compensation by setting liquid coefficient value depending on temperature.
- Selectable measuring time.

Specification

| | |
|-------------|--|
| Model | MDS-300 |
| Resolution | 0.001g/cm ³ (0.0001g/cm ³) |
| Capacity | 0.001~300g (0.0001~300g) |
| Feature | Solid, Liquid, Powder |
| Weight | 2.8kg |
| Dimensions | (D)260×(W)190×(H)200mm |
| Accessories | Tweezers, Thermometer, 200g Calibration Weight Steel Angle, AC Adapter, Interface RS232C, Airtight Windshield |



MDS-300
Resolution 0.001 (0.0001) g/cm³
Solid/Liquid/Powder (Substituted) Density

SD-200L

Top precision model with 0.0001 Density

Features

Top precision model with density resolution at 4 decimal places for both Solid and Liquid. Easy operation, as same as the other models. Suitable for Plastic Pellets, Films, Rubbers, Fabric, advanced materials, and Liquid density in the field of Medical, Food and Chemical that need to be measured to avoid the error on the third decimal.

Functions

◆Solid Mode

- Minimum density and volume resolution 0.0001g/cm³.
- Selectable measuring time from 4 kinds.
- Error tolerance can be shown.
- Measuring the change rate of density and volume are possible.
- Floating objects and pellets can be measured easily.

◆Liquid Mode ※Optional kit required

- One push operation to change Solid and Liquid Mode.
- Minimum density resolution 0.0001g/cm³.
- Only 20 seconds is needed to test.
- Only 50cc of liquid sample is needed.
- Changing liquid sample by replacing the beaker only.

Specification

| | |
|-------------|---|
| Model | SD-200L |
| Resolution | 0.0001g/cm ³ |
| Capacity | 0.0001~200g |
| Feature | Solid, Liquid |
| Weight | 5.8kg |
| Dimensions | (D)319×(W)213×(H)301mm |
| Accessories | Tweezers, Thermometer, 200g Calibration Weight Steel Angle, AC Adapter |



SD-200L
Resolution 0.0001g/cm³
Solid/Liquid Density

MDS-3000



Measuring capacity up to 3kg

Features

MDS-3000 can measure maximum capacity up to 3kg. Wide measuring capacity enables to measure the samples without cutting, and it gives the whole sample average density. Sensor & Water tank size can be customized depending on the sample size. Easy and convenient "Auto-weighing Function" is a standard feature.

Functions

◆Solid Mode

- Bigger sample which could not fit in previous models, with weight up to 3kg can be measured.
- Minimum resolution of 0.01g/cm³ and reference value of 0.001g/cm³ can be displayed.
- Improves working efficiency and repeatability with Auto-weighing function. (Semiautomatic measurement)
- New function of powder density substituted measurement.
- Floating objects and pellets can be measured easily.

◆Liquid Mode ※Optional kit required

- Density resolution 0.01g/cm³ and reference value 0.001g/cm³.
- Liquid density temperature compensation by setting liquid coefficient value depends on temperature.
- Selectable measuring time.

Specification

| | |
|-------------|--|
| Model | MDS-3000 |
| Resolution | 0.01g/cm ³ (0.001g/cm ³) |
| Capacity | 0.01~3000g (0.001~3000g) |
| Feature | Solid, Liquid, Powder |
| Weight | 4.2kg |
| Dimensions | (D)260×(W)240×(H)240mm |
| Accessories | Tweezers, Thermometer, Steel Angle AC Adapter, Interface RS232C |



MDS-3000
Resolution 0.01 (0.001) g/cm³
Solid/Liquid/Powder (Substituted) Density