SARTORIUS

Product Datasheet

MA 160

Fully Automatic Infrared Moisture Analyzer For Managing Complex Tasks



DOMINIQUE DUTSCHER SAS

Benefits

- Exceptionally high-speed measurements (up to 30% faster)
- Method Development Assistant function
- Memory capacity for storage of methods and results
- Method import and export via SD card
- Reliable performance testing
- Effortless cleaning
- User-friendly operation
- Downward compatibility with MA 150 and MA 35

Product Information

The MA 160 offers high flexibility, making it ideal for use in the widest range of sectors, such as laboratories, incoming goods and production departments. Its integrated Methods Development Assistant function will enable you to develop new methods that you can save in the memory for easy management of your methods library. The intuitive user interface reliably guides you step by step by text prompts through the measuring cycle of your method. The MA 160 is perfect for those of you users who need an especially flexible and reliable moisture analyzer.

Applications

The MA 160 moisture analyzer is designed for quick and reliable determination of the moisture content of liquids, pastes and solids using the thermogravimetric method. The MA 160 accommodates a variety of samples and changing requirements by enabling you to use specific methods and efficiently manage all your method parameters, such as in QA laboratories and process control. Typical areas of application for the MA 160 include testing of foods, beverages, pharmaceuticals, chemicals, sugar, paper materials and products for environmental protection.

Performance

Fully automatic endpoint determination eliminates the inconvenience of time-consuming screening of shutoff parameters for the MA 160. The moisture analyzer monitors the drying process and ends the measurement once it detects a constant sample weight. The Methods Development Assistant function gives you valuable support in developing new methods for analysis of the widest variety of samples.

Three easy test runs are all it takes to develop such methods and approve them for final release. The MA 160 has the capacity to store up to 100 methods and a library for convenient management of your methods. The analyzer additionally features a memory where the results of the last 999 measurements are automatically saved. The data of both memories for methods and results can be exported via the SD card.

The high-performance, 600-watt AURI heating unit heats the sample evenly, while ensuring homogeneous drying. These heating elements are fast, extremely rugged and durable. Compared with glass heating lamps, such as infrared lamps or halogen heaters, they are especially resistant to dirt and vibration.

The functionality of the MA 160 can be verified at any time within a mere 5 minutes using its built-in performance testing function with a ReproEasy pad.

DOMINIQUE DUTSCHER SAS

Technical Specifications

Max. weighing capacity	200 g
Reproducibility, typical	For initial sample weights of approx. > 1 g: ±0.2% For initial sample weights of approx. > 5 g: ±0.05%
Readability	1 mg, 0.01%
Typical sample quantity	5 g – 15 g
Display modes for results	Moisture content in %M and g | dry weight in %S and g | ATRO (ratio) in %M/S
Temperature range and settings	40 °C – 200 °C, in increments of 1 °C Standby temperature selectable from 50 °C – 120 °C
Sample heating	Infrared radiation by an AURI heating unit, 600 W
Heating programs	Standard drying, gentle drying, MA 35 mode
Shutoff parameter	Choice of modes: ■ Fully automatic ■ Semiautomatic mg (1 mg – 50 mg | 5 sec. – 300 sec.) ■ Semiautomatic % (0.1% – 5.0% | 5 sec. – 300 sec.) ■ Timer settings (02:00 – 99.59 min.) ■ Manual

Access to sample chamber	Removable hood with wide opening angle; SoftClose mechanism
Operator guidance features	■ Intuitive user interface, including touch screen and easy-to-understand menu prompts ■ Bar graph for weighing in sample; target attainment function ■ Display of curves
Languages selectable in menu	English set as the default; can be changed in the menu to Chinese, French, Italian, Japanese, Polish, Portuguese, Russian, Spanish and Turkish
Methods	100 methods saved in the non-volatile memory
Method development	The Method Development Assistant function enables users to readily develop new methods by performing just three test runs
Management of methods	Menu for creating methods and managing a library containing up to 100 methods
Data transfer	SD card; function for importing and exporting methods and results
Forceps for samples	For easy handling of sample pans
Performance test	Menu function for testing the analyzer's performance using a ReproEasy pad
Memory capacity for data storage	Results are saved for the last 999 measurements
Status light	Displays the status "analysis running / START," "analysis completed / STOP" or "analysis error"
Sample inspection	LED-illuminated sample chamber, inspection window with grid above the hood
Draft shield	Integrated draft shield
Cleaning	Removable hood, grid and sample chamber plate for easy cleaning in a laboratory dishwasher
Printout	■ Printout using the optional, internal printer YDP30; alternatively, the printer YDP20-OCE can be used with an adapter (YCC03-D09) ■ GLP-compliant, inalterable standard or user-configurable printout | paper-saving mode for short record
Monitoring and control of the accuracy of the analyzer as inspection, measuring and test equipment	External calibration using optional calibration weights; Temperature adjustment with optional adjustment set
Data interface	Mini USB port ■ Automatic detection of the Sartorius printers YDP30 and YDP40 ■ Direct data transfer to Microsoft® Office programs without any additional software ■ Programmable data output interval ■ SBI data transfer protocol
Frequency	50 | 60 Hz
Power consumption	Max. 640 VA
Temperature range	10 °C – 30 °C
Housing dimensions (W × D × H)	215 × 400 × 210 mm (8.5" × 15.7" × 8.3")
Weight	Approx. 6.2 kg (13.6 lbs.)

DOMINIQUE DUTSCHER SAS

Available Models

MA160-1	Standard model without country-specific additions and with automatic voltage recognition of 115 V | 230 V
MA160-1US	Standard model with country-specific additions for the USA

Accessories

6965542	Disposable sample pans, 80 units, aluminum, 90 mm Ø
6906940	Glass fiber pads for analysis of pasty and fatty samples, hard quality; 80 units; 90 mm Ø
6906941	Glass fiber pads for analysis of liquid and fatty samples, soft quality; 200 units; 90 mm Ø
YHP01MA	ReproEasy pads, 10 units, for performance testing to check the functionality of the heating unit and weighing system of the analyzer
YCW512-AC-02	External calibration weight, 100 g (E2) with DAkkS* calibration certificate
YDP30	Premium GLP laboratory printer
YCC03-D09	Adapter cable for connecting the YDP20-OCE printer
YDP20-0CE	Data printer
YTM15MA	Temperature adjustment set
YST01MA	Forceps for samples
YMD02B (incl. short report)	Customer-specific service for individual method development at the Sartorius Application Laboratory in Goettingen, Germany, or in the USA

* DAkkS = German accreditation body recognized throughout Europe

Equipment Supplied

Moisture analyzer; power cord; user manual; glass fiber pads – hard quality; aluminum sample pans; forceps for samples; ReproEasy pads

DOMINIQUE DUTSCHER SAS

Germany
Sartorius Lab Instruments GmbH & Co. KG
Otto-Brenner-Straße 20
37079 Göttingen
Phone +49 551 308 0

USA
Sartorius Corporation
565 Johnson Avenue
Bohemia, NY 11716
Phone +1 631 254 4249
Toll-free +1 800 635 2906

For further information, visit www.sartorius.com

Specifications subject to change without notice.
Copyright Sartorius Lab Instruments GmbH & Co. KG.
Status: 11 | 2021