



MA160

Fully Automatic Infrared Moisture Analyzer for Managing Complex Tasks

Advantages

- 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 MA150 and MA35



Product Description

The MA160 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 MA160 is perfect for those of you users who need an especially flexible and reliable moisture analyzer.

Applications

The MA160 moisture analyzer is designed for quick and reliable determination of the moisture content of liquids, pastes and solids using the thermogravimetric method. The MA160 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 MA160 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 MA160. 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 MA160 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 MA160 can be verified at any time within a mere 5 minutes using its built-in performance testing function with a ReproEasy pad.

Technical Specifications

Max. weighing capacity	200 g
Reproducibility, typical	For initial sample weights of approx. ≥ 1 g: $\pm 0.2\%$ For initial sample weights of approx. ≥ 5 g: $\pm 0.05\%$
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, MA35 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.)

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
YDP40	Standard laboratory printer
YDP30	Premium GLP laboratory printer
YCC03-D09	Adapter cable for connecting the YDP20-OCE printer
YDP20-OCE	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

Equipment Supplied

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

* DAkkS = German accreditation body recognized throughout Europe

Sales and Service Contacts

For further contacts, visit www.sartorius.com

Europe

Germany
Sartorius Lab Instruments
GmbH & Co. KG
Otto-Brenner-Strasse 20
37079 Goettingen
Phone +49.551.308.0
Fax +49.551.308.3289

France & Suisse Romande
Sartorius France
2, rue Antoine Laurent de Lavoisier
ZA de la Gaudrée
91410 Dourdan
Phone +33.1.70.62.50.00
Fax +33.1.64.59.76.39

Austria
Sartorius Austria GmbH
Modecenterstrasse 22
1030 Vienna
Phone +43.1.7965760.0
Fax +43.1.7965760.24

Belgium
Sartorius Belgium N.V.
Rue Colonel Bourg 105
1030 Bruxelles
Phone +32.2.756.06.90
Fax +32.2.481.84.11

Finland & Baltics
Sartorius Biohit Liquid Handling Oy
Laippatie 1
00880 Helsinki
Phone +358.9.755.951
Fax +358.9.755.95.200

Hungary
Sartorius Hungária Kft.
Kagyló u. 5.
2092 Budakeszi
Phone +3623.457.227
Fax +3623.457.147

Ireland
Sartorius Ireland Ltd.
Unit 41, The Business Centre
Stadium Business Park
Ballycoolin Road
Dublin 11
Phone +353.1.8089050
Fax +353.1.8089388

Italy
Sartorius Italy S.r.l.
Viale A. Casati, 4
20835 Muggiò (MB)
Phone +39.039.4659.1
Fax +39.039.4659.88

Netherlands
Sartorius Netherlands B.V.
Phone +31.30.60.53.001
Fax +31.30.60.52.917
info.netherlands@sartorius.com

Poland
Sartorius Poland sp.z o.o.
ul. Wrzesinska 70
62-025 Kostrzyn
Phone +48.61.6473830
Fax +48.61.6473839

Russian Federation
LLC "Sartorius RUS"
Uralskaya str. 4, Lit. B
199155 St. Petersburg
Phone +7.812.327.53.27
Fax +7.812.327.53.23

Spain & Portugal
Sartorius Spain, S.A.
Avda. de la Industria, 32
Edificio PAYMA
28108 Alcobendas (Madrid)
Phone Spain +34.913.586.095
Phone Portugal +351.800.855.800
Fax Spain +34.913.589.623
Fax Portugal +351.800.855.799

Switzerland
Sartorius Mechatronics Switzerland AG
Ringstrasse 24a
8317 Tagelswangen (ZH)
Phone +41.44.746.50.00
Fax +41.44.746.50.50

U.K.
Sartorius UK Ltd.
Longmead Business Centre
Blenheim Road, Epsom
Surrey KT19 9QQ
Phone +44.1372.737159
Fax +44.1372.726171

Ukraine
LLS "Sartorius RUS"
Post Box 440 "B"
01001 Kiev, Ukraine
Phone +380.44.411.4918
Fax +380.50.623.3162

Americas

USA
Sartorius Corporation
5 Orville Drive, Suite 200
Bohemia, NY 11716
Phone +1.631.254.4249
Toll-free +1.800.635.2906
Fax +1.631.254.4253

Argentina
Sartorius Argentina S.A.
Int. A. AVALOS 4251
B1605ECS Munro
Buenos Aires
Phone +54.11.4721.0505
Fax +54.11.4762.2333

Brazil
Sartorius do Brasil Ltda
Avenida Senador Vergueiro 2962
São Bernardo do Campo
CEP 09600-000 - SP- Brasil
Phone +55.11.4362.8900
Fax +55.11.4362.8901

Canada
Sartorius Canada Inc.
2179 Dunwin Drive #4
Mississauga, ON L5L 1X2
Phone +1.905.569.7977
Toll-Free +1.800.668.4234
Fax +1.905.569.7021

Mexico
Sartorius de México, S.A. de C.V.
Libramiento Norte de Tepetzotlan s/n,
Colonia Barrio Tlacateco,
Municipio de Tepetzotlan,
Estado de México,
C.P. 54605
Phone +52.55.5562.1102
Fax +52.55.5562.2942
leadsmex@sartorius.com

Peru
Sartorius Peru S.A.C.
Av. Emilio Cavenecia 264 San Isidro
15073 Lima, Perú
Phone +51.1.441 0158
Fax +51.1.422 6100

Asia | Pacific

Australia
Sartorius Australia Pty. Ltd.
Unit 5, 7-11 Rodeo Drive
Dandenong South Vic 3175
Phone +61.3.8762.1800
Fax +61.3.8762.1828

China
Sartorius (Shanghai) Trading Co., Ltd.
3rd Floor, North Wing, Tower 1
No. 4560 Jinke Road
Zhangjiang Hi-Tech Park
Pudong District
Shanghai 201210, P.R. China
Phone +86.21.6878.2300
Fax +86.21.6878.2882

Hong Kong
Sartorius Hong Kong Ltd.
Unit 1012, Lu Plaza
2 Wing Yip Street
Kwun Tong
Kowloon, Hong Kong
Phone +852.2774.2678
Fax +852.2766.3526

India
Sartorius Weighing India Pvt. Ltd.
#69/2-69/3, NH 48, Jakkasandra,
Nelamangala Tq
562 123 Bangalore, India
Phone +91.80.4350.5250
Fax +91.80.4350.5253

Japan
Sartorius Japan K.K.
4th Fl., Daiwa Shinagawa North Bldg.
8-11, Kita-Shinagawa 1-chome
Shinagawa-ku, Tokyo, 140-0001 Japan
Phone +81.3.3740.5408
Fax +81.3.3740.5406

Malaysia
Sartorius Malaysia Sdn. Bhd
Lot L3-E-3B, Enterprise 4
Technology Park Malaysia
Bukit Jalil
57000 Kuala Lumpur, Malaysia
Phone +60.3.8996.0622
Fax +60.3.8996.0755

Singapore
Sartorius Singapore Pte. Ltd
1 Science Park Road,
The Capricorn, #05-08A,
Singapore Science Park II
Singapore 117528
Phone +65.6872.3966
Fax +65.6778.2494

South Korea
Sartorius Korea Ltd.
8th Floor, Solid Space B/D,
PanGyoYeok-Ro 220, Bundang-Gu
SeongNam-Si, GyeongGi-Do, 463-400
Phone +82.31.622.5700
Fax +82.31.622.5799

Thailand
Sartorius (Thailand) Co. Ltd.
129 Rama 9 Road,
Huaykwang
Bangkok 10310
Phone +66.2643.8361-6
Fax +66.2643.8367



◀ www.sartorius.com