

# MA160

Fully Automatic Infrared Moisture Analyzer  
for Managing Complex Tasks

## Advantages

- Simple method development
- Ultra-high-speed measurements
- Reliable performance testing
- Effortless cleaning
- User-friendly operation



## Product Description

The MA160 moisture analyzer is easy to use and provides very fast and repeatable results. Its assistant function supports the user in developing new methods, while its file management facilitates the administration of various methods for the different products. The MA160 enables the transfer of these methods between individual instruments. Thanks to its BetterClean design, it is easy to clean. The status light indicates the process status and the menu function "Performance Test" simplifies tests for repeatability. The MA160 is ideal for users who need a more flexible and reliable moisture analyzer.

### Applications

The moisture analyzer can be used for quick and reliable determination of the moisture content of liquid, pasty and solid substances using the thermogravimetric method. The MA160 is designed for a variety of samples and varying requirements, each requiring its own method and effective methods management, such as in QA laboratories and process control. Typical areas of applications for the MA160 include the testing of foods, beverages, pharmaceuticals, chemicals, sugar, paper materials and environmental protection products.

### Performance

Fully automatic endpoint determination eliminates the cumbersome capture of termination criteria for the MA160. The moisture analyzer monitors the drying process and stops the measurement once the sample weight is constant.

Assistant software guides users to develop new methods for the analysis of different samples. New methods like these are developed and finally released with three easy test cycles. Up to 100 methods can be stored on the MA160.

Two high-performance AURI heating elements with 600 watts of power uniformly heat samples in the MA160. These heating elements are fast, extremely rugged and durable. Compared to glass heating lamps, e.g. infrared lamps or halogen heaters, they are especially resistant to dirt and vibrations.

The functionality of the MA160 can be verified at any time with the performance testing function.

## Technical Specifications

Max. weighing capacity	200 g
Repeatability, average	for initial sample weight approx. > 1 g: $\pm 0.2\%$ for initial sample weight approx. > 5 g: $\pm 0.05\%$
Readability	1 mg, 0.01 %
Typical sample quantity	5 – 15 g
Result display	Moisture content in %M and g   dry weight in %S and g   ATRO in %M/S
Temperature range and settings	40°C–160°C, stand-by temperature selectable from 40–100°C in increments of 1°C
Sample heating	Infrared radiation by an AURI heater, 600 W
Heating programs	Standard drying, gentle drying
Shutoff parameter	Optional: – Fully automatic – Semiautomatic mg (1–50 mg   5–300 sec.) – Semiautomatic % (0.1–5.0 %   5–300 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 guidance – Weighing-in help and target value attainment function – Curve display
Language selection	English, German, French, Spanish, Italian, Russian, Chinese, Polish, Japanese, Portuguese, Turkish
Methods	100 methods saved in non-volatile memory
Method development	Assistant software guides users to develop new methods in approx. 3 easy test cycles
Methods management	Method menu with file management option, generation of a method library, up to 100 methods
Data transfer	SD card, method import and export function
Sample forceps	Easy-to-handle sample dish
Performance test	Menu function to test the device's repeatability using the ReproEasy pad
Memory 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, inspection window with grid and sample chamber plate for easy cleaning in the dishwasher
Log 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   paper-saving short record
Monitoring of inspection and testing equipment	External calibration using optional calibration weight
Data interface	Mini USB – Automatic detection of the Sartorius printers YDP30 and YDP40 – Direct data transfer to Microsoft® Windows programs without any additional software – Programmable data output interval – Data transfer protocols SBI, table format, text format
Frequency	50/60 Hz
Power consumption	Max. 640 VA
Temperature range	10°C–30°C
Housing dimensions (W × D × H)	215 × 400 × 210 mm
Weight	Approx. 6.2 kg

**Available Models**

MA160 115V/230V Automatic voltage detection 115V/230V

**Accessories**

6965542	Disposable sample pans, 80 pcs., aluminum, Ø 90mm
6906940	Glass fiber pad for analysis of pasty and fatty samples, hard quality, 80 pcs., Ø 90 mm
6906941	Glass fiber pad for analysis of liquid and fatty samples, soft quality, 200 pcs., Ø 90 mm
YHP01MA	ReproEasy pads, 10 pcs. for performance testing to verify the repeatability of the analyzer
YCW512-AC-02	External calibration weight, 100 g (E2) with DKD certificate
YDP40	Standard printer
YDP30	Premium GLP laboratory printer
YCC03-D09	Adapter cable for connecting the YDP20-OCE printer

**Equipment Supplied**

Moisture analyzer, power cord, user manual, glass fiber filters, aluminum sample pans, sample forceps, performance test pads

# Sales and Service Contacts

For further contacts, visit [www.sartorius.com](http://www.sartorius.com)

## Europe

### Germany

Sartorius Lab Instruments  
GmbH & Co. KG  
Weender Landstrasse 94-108  
37075 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  
Franzosengraben 12  
1030 Vienna

Phone +43.1.7965760.0  
Fax +43.1.7965760.24

### Belgium

Sartorius Belgium N.V.  
Leuvensesteenweg, 248/B  
1800 Vilvoorde

Phone +32.2.756.06.71  
Fax +32.2.253.45.95

### 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](mailto: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 & Ukraine

LLC "Sartorius ICR"  
and LLC "Biohit"  
Uralskaya str. 4, Lit. B  
199155, Saint-Petersburg

Phone +7.812.327.5.327  
Fax +7.812.327.5.323

LLC "Biohit"  
Post Box 440 "B"  
01001 Kiev, Ukraine

Phone +380.44.411.4918  
Fax +380.50.623.3162

### Spain & Portugal

Sartorius Spain, S.A.  
Avda. de la Industria, 32  
Edificio PAYMA  
28108 Alcobendas (Madrid)

Phone Spain +34.902.123.367  
Phone Portugal +351.800.855.800  
Fax Spain +34.91.358.96.23  
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

## America

### 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. Ávalos 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.  
Circuito Circunvalación Poniente  
No. 149  
Ciudad Satélite  
53100, Estado de México  
México

Phone +52.5555.62.1102  
Fax +52.5555.62.2942

## 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 Scientific  
Instruments (Beijing) Co., Ltd.  
33 Yu An Road, Airport Industrial Park  
Zone B,  
Shunyi District, Beijing 101300,  
P.R.China

Phone +86.10.8042.6300  
Fax +86.10.8042.6486

### Hong Kong

Sartorius Hong Kong Ltd.  
Unit 1012, Lu Plaza  
2 Wing Yip Street  
Kwung 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 Stedim Japan K.K.  
4th Fl., Daiwa Shinagawa North Bldg.  
8-11, Kita-Shinagawa 1-chome  
Shinagawa-ku, Tokyo, 140-0001 Japan

Phone +81.3.4331.4300  
Fax +81.3.4331.4301

### 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](http://www.sartorius.com)