



sartorius
mechatronics

Complete Catalogue Laboratory Mechatronics



turning science into solutions

pH/ATC electrode
pH 0...14 / -5...80°C / 3M KCl

D982211 001

pH/ATC electrode
pH 0...14 / -5...80°C / 3M KCl



CAUTION HIGH
TEMPERATURE

12.57%L

7 8
4 5
1 2
0
+ -



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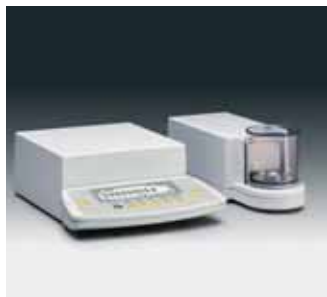
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Weighing Equipment for the Laboratory

Premium Ultra-micro- and Microbalances: SE2, ME5 and ME36S Maximum Accuracy – Even for Minimum Sample Quantities



Design 1



Design 2



Design 3



Sartorius premium microbalances meet the highest requirements when it's a matter of obtaining fast and exceptionally accurate results. These balances offer maximum support when used as inspection, measuring and test equipment within a quality system. The following performance features make your quality assurance procedures much easier:

SQmin function displays the allowable minimum sample weight according to the United States Pharmacopeia (can be activated by Sartorius Service)

Fully automatic calibration and adjustment feature, isoCAL

ISO | GLP-compliant recording

Input capability for alphanumeric sample IDs

All-glass draft shield

The motorized draft shield on the SE2 and ME5 is exclusively made of glass without any frame construction to obstruct your view of the weighing chamber. A special coating on the glass inside the chamber eliminates interfering factors – such as those caused by electrostatically charged objects.

Cleaning as easy as 1–2–3

In just one easy step, you can completely remove the draft shield. The weighing chamber base plate features smooth, easy-to-clean surfaces. Design features that really pay for themselves whenever absolute cleanliness is the No. 1 priority.

Easy to operate

The generously sized opening of the draft shield moves to any position desired – you can choose to operate the draft shield at the press of an ergonomic key using the ball of your hand, a foot switch (optional) or an external computer.

Fast results

With stabilization times of only 10 seconds, the SE2 and ME5 will save you valuable time during each weighing operation.

Bright display

The weight readouts are exceptionally easy to read on the backlit, high-contrast graphical display. Text prompts in plain English (and your choice of other languages) guide you quickly and confidently in configuring the balance, whenever you'd like to "do quite a bit more than just weigh."

Flexible

Each ultra-micro- and microbalance has 14 built-in application programs as standard features, such as:

Air buoyancy correction

Differential weighing program for up to 999 samples

Statistical evaluation

Featuring a readability of 1 µg, the new ME36S offers an exceptionally wide weighing range up to a capacity of 31 g, along with outstanding metrological specifications. As a result, it is ideal for highly accurate microweighing and for weighing micro-quantities into heavy tare containers, such as in ashing processes.

All balance-generated data can be logged via the standard RS-232C interface port.

Filter weighing

Models ME5-F and SE2-F have been specially designed for weighing filters of up to 90 mm in diameter. The draft shield specifically constructed for this application is made completely of metal, thereby minimizing the interfering effects of static electricity.

Specifications

Model		SE2***	ME5***	ME36S***	SE2-F Filter balance	ME5-F Filter balance
Weighing capacity	g	2.1	5.1	31	2.1	5.1
Readability	µg	0.1	1	1	0.1	1
Repeatability (±)	µg	0.25	1	2	0.25*	1**
Max. linearity (≤ ±)	µg	0.9	4	10	0.9*	4**
Response time (average)	s	10	10	14–18	10*	10**
Weighing pan diameter	mm	20	30	30	50 or 20 (75 and 90 optional)	50 or 30 (75 and 90 optional)
Design		1	1	3	2	2

* with standard weighing pan 20 mm Ø

** with standard weighing pan 30 mm Ø

*** Models SE2, ME5 and ME36S are available in verified versions for use in legal metrology in the European Economic Area

Premium Semi-micro- and Analytical Balances: ME Series When Results Count



Incomparably fast

An outstanding feature of the Sartorius ME series is speed: stable readouts with five decimal places in just eight seconds.

Operation of the ME draft shield is also designed for fast weighing. Controlled by palm-operable keys or by custom programming, the draft shield closes quietly, precisely and quickly. Its opening and closing position can be adapted to every weighing situation.

Incomparably stable accuracy

Repeatability of the weights measured is an additional strength of the Sartorius ME. Plus, the results are just as stable as the robotically etched 21st century weigh cell in the ME. For accuracy every time, all the time.

The Sartorius ME is amazingly impervious to the surrounding environment. Interfering static electricity on samples and tare containers can be neutralized at the touch of a key.

Incomparably reliable

Sartorius ME stands for reliability, year in, year out. That's why we are offering a three-year warranty, which we will extend on request for up to a total of five years.

Facts, and more facts

Exceptionally fast, rugged monolithic weigh cell

Three-part, motorized draft shield system

User-friendly palm-activated keys for draft shield operation; foot switch optional for applications where you need your hands free

Neutralizes static electricity

Prompts in clear English for operator guidance

Alphanumeric input capability for sample IDs

Software support for use in quality management systems

SQmin function displays the minimum allowable sample quantity in accordance with the United States Pharmacopeia (can be activated by Sartorius Service)

Display of the uncertainty of measurement according to the German Calibration Service (DKD)

ISO/GLP-compliant, user-configurable records|printouts

Built-in applications

Built-in software supports all key laboratory weighing applications. As a result, this ensures smooth, time-saving lab procedures and reliable results.

Density determination

Calculation of weights using a definable factor or equation

Statistical evaluation

Differential weighing

Air buoyancy correction

Air density determination

Specifications

Model	ME235S	ME235P	ME614S	ME414S	ME254S	ME235P-SD*
Weighing capacity (g)	230	60 110 230	610	410	250	60 110 230
Readability (mg)	0.01	0.01 0.02 0.05	0.1	0.1	0.1	0.01 0.02 0.05
Repeatability (≤mg)	0.015 (0–60 g) 0.025 (60–230 g)	0.015 (0–60 g) 0.040 (60–110 g) 0.040 (110–230 g)	0.1	0.1	0.07	0.015 (0–60 g) 0.040 (60–110 g) 0.040 (110–230 g)
Max. linearity (≤mg)	0.1	0.15	0.4	0.3	0.15	0.15
Response time (≤s)	8	8	3	2.5	2.5	8
Off-center load at ½ max. capacity (≤mg) (Positions acc. to OIML R76)	0.15	0.2	0.6	0.4	0.3	0.2
Weighing pan diameter (mm)	90	90	90	90	90	90
Clearance above weighing pan (mm)	253	253	253	253	253	195

All models can be supplied in verified versions for use in legal metrology in the European Economic Area (except for *)
* with short-design draft shield and pipette opening, 60 mm Ø, with cover

Premium Analytical and Precision Balances: LA Reference Series Get What's Really Important



The next generation succeeding the legendary Master^{pro} LA series of lab balances is aptly named: the new LA Reference. Building upon the reputation of the former series that have become bywords for reliability in many laboratories throughout the world, this new series is The Reference when it comes to accomplishing lab weighing tasks proficiently.

Reliability spelled in capital letters

The LA Reference offers reliability without any compromises. This means there is no room for error, either during operation or display of the results thanks to a range of features. These extend from the error-free input capability of data and parameters to user-friendly, tactile keys, to the clear, high-contrast graphical display. Plain-text prompts in a choice of languages for all settings make it easy to quickly select the functions needed.



For use in regulated areas and quality management systems, the new LA offers a complete range of functions that you can rely on. For example, the fully automatic function, isoCAL, makes sure that calibration and adjustment are performed at regular intervals as required. ISO/GLP-compliant data logging and printers provide ideal support in ensuring that you meet documentation requirements. The printout can be individually customized to fulfill your application-specific demands.

Ruggedness and high-tech design – not a contradiction!

Just once glance, and you can tell that the LA Reference offers the highest quality and resistance. The sleek metal housing, the robotically etched monolithic weigh cell technology and the high-grade keypad overlay give the balance the level of ruggedness it needs to stand up to tough daily use in the lab.



Precise manufacturing processes for the highest accuracy in the lab

The LA Reference provides you with the same maximum, consistent precision for their measurements that goes into the manufacture of the balance itself at Sartorius. The balance's highly innovative monolithic weigh cell together with cutting-edge microprocessor technology ensures the most accurate – and on top of this – the fastest weight readouts anytime, all the time.

LA Reference – The Reference in standard features as well

The pan and weighing chamber base plate are made of high-grade stainless steel. As a result, they are chemically resistant and easy to clean. The especially large-sized draft shield chamber offers ample space for accommodating tall laboratory containers and for placing samples next to the pan to acclimatize them to the temperature inside. The display and operating unit that can be set up separately offers additional flexibility for special weighing tasks, such as below-balance weighing.

The standard built-in application software provides practically all programs ever needed for accomplishing weighing tasks reliably and accurately in the lab; e.g., density determination of solid and liquid substances; differential weighing of up to 999 samples with convenient management of the data measured; statistics; and time-controlled functions to mention just a few.

The SQmin function for displaying the allowable minimum sample weight according to the United States Pharmacopeia and the S.U.R.E. function for continuously displaying the measurement uncertainty ensure ideal dependability for use of the balance in regulated areas.



Design 1



Design 2



Design 3



Design 4



Design 5

Specifications

Model	Read-ability (mg)	Weighing capacity (g)	Pan size (mm)	Response time (average) (≤ s)	Repeat-ability (≤ ± mg)	Linearity (≤ ± mg)	Design
Analytical balances							
LA120S*	0.1	120	Ø 90	2	0.1	0.2	1
LA230S*	0.1	230	Ø 90	2	0.1	0.2	1
LA230P*	0.1 0.2 0.5	60 120 230	Ø 90	2	0.1 0.2 0.5	0.2 0.2 0.5	1
LA310S*	0.1	310	Ø 90	2	0.2	0.3	1
LA130S-F	0.1	150	208×264	4	0.2	0.2	5
Precision balances							
LA1200S*	1	1,200	Ø 130	1.5	1	2	2
LA620S*	1	620	Ø 130	1.5	1	2	2
LA220S*	1	220	Ø 130	1.5	1	2	2
LA2000P*	1 10	1010 2000	Ø 130	1.5	1 10	2 10	2
LA620P	1 2 5	120 240 620	Ø 130	1.5	1 1 3	2 2 5	2
LA5200D	1 10	1010 5200	Ø 130	2.5	1 10	2 10	2
LA3200D	1 10	1,000 3,200	Ø 130	1.5	1 10	2 10	2
LA8200S	10	8,200	216×200	2	10	20	3
LA6200S*	10	6,200	216×200	1.5	10	20	3
LA4200S*	10	4,200	216×200	1.5	10	20	3
LA2200S*	10	2,200	216×200	1.5	10	20	3
LA820*	10	820	216×200	1.5	10	10	3
LA420	10	420	216×200	1.5	10	10	3
LA2200P*	10 20 50	400 800 2,200	216×200	1.5	10 20 30	20 20 50	3
LA5200P*	10 20 50 100	1,200 2,400 3,800 5,200	216×200	1.5	10 20 50 50	20 20 50 100	3
LA8200P*	10 20 50	2,000 4,000 8,200	216×200	2	10 10 30	20 20 50	3
LA64001S	100	64,000	400×300	1.5	100	500	4
LA34001S*	100	34,000	400×300	1.5	100	200	4
LA16001S*	100	16,000	400×300	1.5	100	200	4
LA12000S*	100	12,000	216×200	1	50	100	3
LA6200*	100	6,200	216×200	1	50	100	3
LA4200	100	4,200	216×200	1	50	100	3
LA2200*	100	2,200	216×200	1	50	100	3
LA34001P*	100 200 500	8,000 16,000 34,000	400×300	1.5	50 100 100	200 200 500	4
LA12000P*	100 200 500	3,000 6,000 12,000	216×200	1	100 100 300	100 200 500	3
LA34000*	1,000	34,000	400×300	1	500	500	4

* These models can also be supplied in versions already verified at the factory.

Premium Micro-, Semi-micro, Analytical and Precision Balances: Expert Series

Weighing Technology – Perfect Price | Performance



The new models make a great first impression with their high-quality, attractive design, which is based on the successful concept of the Sartorius Competence series. And when you look a little closer, the "internal virtues" and amazing price | performance ratio of these balances will impress you as well.

Technical highlights of the new Sartorius Expert series:

LE26P: the microbalance with a continuous fine range of 5 g readable to 2 µg and a maximum weighing capacity of 21 g; ideal for minimum sample quantities between 5 and 10 mg for compliance with USP. Large round weighing pan (50 mm Ø) for secure positioning of samples.

LE225D: the semi-microbalance with the unusually broad fine range of 100 g and 0.01-mg readability

LE1003S: 1,010 g capacity with 0.001-g readability – superb technology becomes the standard

LE6202S: the top model in the 0.01-g class. 6,200-g capacity with uncompromising accuracy.

The "mechanical heart" of each LE model is a patented, monolithic weigh cell that provides for reliable and extremely accurate weighing results.

Of course, the name "premium" also stands for outstanding product quality and long-lasting reliability.

LE models are excellent for use as testing and measuring instruments in well-known quality systems, such as GLP | GMP, ISO9000:2000 or EN17025.

Featuring the isoCAL automatic calibration and adjustment function

All models are equipped with the isoCAL internal calibration and adjustment function. If a certain level of temperature difference is detected in the environment following a factory-set interval, this function independently calibrates and subsequently adjusts the balance. This feature provides two decisive advantages for use in the laboratory:

1. It ensures regular calibration and adjustment, which are requirements when these balances are used in quality systems. In addition, performance of these procedures is ensured "fully automatically."
2. The balances always operate at the same high level of accuracy.

The balance can also be internally calibrated or adjusted whenever necessary at the simple touch of a key.

ISO | GLP-compliant recording

In addition to measurement data and raw data, every calibration and adjustment that is performed on the balance is automatically recorded, either by an optional printer to which data are transferred via the data interface or by a PC. These records include all required IDs, such as date, time, balance model, serial number and signature block for the operator.

Brilliant readability

The eye-catching display provides unmistakable readouts. It is high-contrast, has large digits (16.5 mm), and is clear and easy to read under all lighting conditions thanks to blue backlighting (except for LE225D and LE26P models). And here's a unique feature: the intensity of the backlighting can be adjusted to the operator's individual requirements at the weighing location.

Flexible draft shield design

The draft shield on the semi-microbalance and analytical balances is made entirely of glass and features wide-opening doors for optimal access to the weighing pan. The spacious weighing chamber enables any type of sample to be placed quickly and securely onto the weighing pan. For easy cleaning of the draft shield, all parts of the weighing chamber base can simply be removed. If necessary, the entire draft shield can be lifted off.

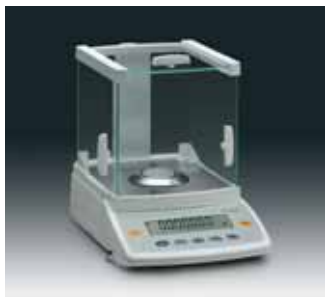
The triangular draft shield on models with 1-mg readability provides flexibility in working with these balances. The individually removable panels of the draft shield (left, right or front) ensure that both left-handed and right-handed users have excellent access to the weighing pan.

Weighing and more

Sartorius Expert balances are perfectly suited to all weighing applications. Moreover, their standard features make them flexible, enabling them to be adapted for extended requirements.

A bidirectional RS-232C data interface provides the ideal basis for communication.

The following, integrated application programs are available: weighing in percent, net-total formulation, dynamic weighing | animal weighing, toggling between two weight units.



Design 1



Design 2



Design 3



Design 4



Design 5

Specifications

Model	Read-ability (mg)	Weighing capacity (g)	Pan size (mm)	Response time (average) (≤ s)	Repeat-ability (± mg)	Linearity (≤ ± mg)	Design
Microbalance							
LE26P	0.002 0.01	5 21	Ø 50	10	0.004	0.008	1
Semi-microbalance							
LE225D	0.01 0.01 0.1	40 100 220	Ø 80*	6 6 3	0.02 0.05 0.1	0.03 0.1 0.2	2
Analytical balances							
LE324S	0.1	320	Ø 80*	3	0.2	0.3	2
LE244S	0.1	240	Ø 80*	2	0.1	0.2	2
Precision balances							
LE1003S	1	1,010	Ø 110*	2	1	2	2
LE623S	1	620	Ø 110*	1.5	1	2	3
LE323S	1	320	Ø 110*	1.5	1	2	3
LE1003P	1 10	500 1,010	Ø 110*	2	1 2	1 2	2
LE623P	1 2 5	120 240 620	Ø 110*	1.5	1 1 3	2 2 5	3
LE6202S	10	6,200	190×204	1.5	10	20	4
LE5202S-DS**	10	5,200	Ø 130	1.5	10	20	2
LE4202S	10	4,200	190×204	1.5	10	20	4
LE2202S	10	2,200	190×204	1.5	10	20	4
LE2202S-DS*	10	2,200	Ø 130	1.5	10	20	2
LE6202P	10 20 50	1,500 3,000 6,200	190×204	1.5	10 10 30	20 20 50	4
LE10001	100	10,000	190×204	1	100	200	4
LE5201	100	5,200	190×204	1	100	200	4
LE34001S	100	34,000	400×300	2	100	200	5
LE34001P	100 200 500	8,000 16,000 34,000	400×300	1.5	100 200 500	300 300 300	5
LE16001S	100	16,000	400×300	1.5	100	200	5

All models can also be supplied in versions already verified at the factory.

* Triangular weighing pan shape; Ø = diameter of the inner circle;

** Analytical balances come standard with an all-glass draft shield chamber.

Standard Micro-, Semi-micro-, Analytical and Precision Balances: Competence Series Innovative Product Variety for Today's Laboratory Needs



The Sartorius Competence Series – CP for short – is the widest array of basic balances for professional lab use in the world.

Twenty-five models – from 0.001 mg to 34 kg – offer high value for a variety of laboratory weighing applications. They provide an excellent return on your investment all down the line.

Just one glance tells you that the bold design of the balance provides the highest level of user-friendliness. For instance, the unique new triangular weighing pan on many CP models features a space-age design with down-to-earth usefulness. That means it provides more space than most common pan shapes.

All models feature 21st century weighing technology.

Competence for more convenience

We developed the functional design for the real world to ensure easy and reliable operation.

The highly practical draft shield on the 0.01-mg and 0.1-mg models allows easy access for rapidly loading and unloading any sample because the smooth-action doors open extremely wide. All parts of the draft shield are simple to remove for especially easy cleaning.

The draft shield on the 0.001-mg model has been designed for especially user-friendly weighing of the smallest sample quantities.

For weighing filters, the Competence series offers a new microbalance with a draft shield specially designed for this application.

The draft shield on the 1-mg models features a new design for high flexibility during weighing. The hinged cover attached on one side ensures optimal loading of samples. The removable side panels provide easy access to the pan from the sides.

The backlit display with its exceptionally large digits is especially easy to read (CP2P, CP2P-F and CP225D without backlighting).

Activated at the touch of a key, the built-in motorized calibration weight in the 0.001-mg, 0.01-mg and 0.1-mg models ensures the highest weighing accuracy at any time.

Competence in the variety of applications

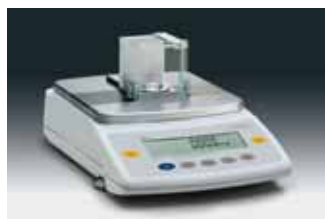
The standard features and accessories provide the flexibility you need as your requirements change.

All CP balances have an RS-232C port for communication with a PC, an analytical instrument or a robot.

All balance-generated data can be recorded or printed out in compliance with ISO | GLP protocols so that the CP can be used in a quality management system.

For additional applications, such as weighing in %, net-total formulation, dynamic weighing or animal weighing, mass unit conversion by toggling, and counting, the CP offers these easy-to-run application programs as standard features.





Design 1



Design 2



Design 3



Design 4



Design 5



Design 6



Design 7

Specifications and accessories

Model	Read-ability (mg)	Weighing capacity (g)	Pan size (mm)	Response time (average) (≤ s)	Repeat-ability (± mg)	Linearity (± mg)	Design
Microbalances							
CP2P**	0.001 0.002 0.005	0.5 1 2	Ø 20	10	0.001 0.002 0.003	0.002 0.004 0.005	1
CP2P-F**	0.001 0.002 0.005	0.5 1 2	Ø 20 Ø 125 Filter pan	10	0.002 0.003 0.004	0.002 0.004 0.005	2
Semi-microbalance							
CP225D	0.01 0.01 0.1	40 80 220	Ø 80*	12 12 3	0.02 0.05 0.1	0.03 0.1 0.2	3
Analytical balances							
CP324S	0.1	320	Ø 80*	3	0.2	0.3	3
CP224S	0.1	220	Ø 80*	2	0.1	0.2	3
CP124S	0.1	120	Ø 80*	2	0.1	0.2	3
CP64	0.1	64	Ø 80*	2	0.1	0.2	3
Model	Read-ability (g)	Weighing capacity (g)	Pan size (mm)	Response time (average) (≤ s)	Repeat-ability (± g)	Linearity (± g)	Design
Precision balances							
CP423S	0.001	420	Ø 110*	1.5	0.001	0.002	4
CP323S	0.001	320	Ø 110*	1.5	0.001	0.002	4
CP323P	0.001 0.002 0.005	80 160 320	Ø 110*	1.5	0.001 0.001 0.003	0.002 0.002 0.005	4
CP153	0.001	150	Ø 110*	1.5	0.001	0.001	4
CP4202S	0.01	4,200	190×204	1.5	0.01	0.02	5
CP3202S	0.01	3,200	190×204	1.5	0.01	0.02	5
CP3202P	0.01 0.02 0.05	800 1,600 3,200	190×204	1.5	0.01 0.01 0.03	0.02 0.02 0.05	5
CP2202S	0.01	2,200	190×204	1.5	0.01	0.02	5
CP622***	0.01	620	Ø 154*	1	0.01	0.02	6
CP8201	0.1	8,200	190×204	1	0.1	0.2	5
CP6201	0.1	6,200	190×204	1	0.1	0.2	5
CP4201**	0.1	4,200	190×204	1	0.1	0.2	5
CP2201	0.1	2,200	190×204	1	0.1	0.2	5
CP34001S	0.1	34,000	400×300	2	0.1	0.2	7
CP34001P	0.1 0.2 0.5	8,000 16,000 34,000	400×300	1.5	0.1 0.2 0.5	0.3 0.3 0.3	7
CP16001S	0.1	16,000	400×300	1.5	0.1	0.2	7
CP12001S	0.1	12,000	400×300	1.5	0.1	0.2	7
CP34000	1	34,000	400×300	1.5	0.5	1	7

All models can be supplied in verified versions for use in legal metrology in the European Economic Area (except for **).

* Triangular weighing pan shape; Ø = diameter of the inner circle;

*** Pan size on verified models 190×204 mm

Standard Analytical and Precision Balances: Extend Series The New Achievers for Your Lab



If you compare the specifications of many lab balances on paper, they all look the same – if you've seen one, you've seen them all. But in the real world there is more to a lab balance than just its technical specifications.

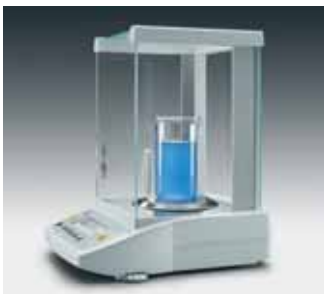
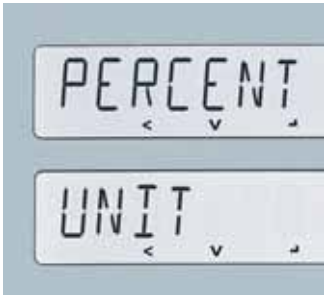
The new Sartorius Extend series has been specially designed for effective and reliable weighing in daily lab routines. This is where more powerful technology and application-oriented operation and features make all the difference.

The latest technology

More versatility in high resolution applications: 1 mg to 620 g and 10 mg to 6,200 g. Sartorius makes top-of-the-line technology available at a reasonable price.

Sartorius utilizes 21st century technology, such as the unique robotically etched monolithic weigh cell, which ensures long-term high accuracy.

The Extend series features the latest powerful microprocessor technology, shortening response times for faster results. Reliable weighing results are achieved all of the time – even under less than ideal ambient conditions, thanks to the Extend's highly sophisticated digital compensation algorithms.



Ease of use

When you need to get a heavy workload of repetitive applications done fast and reliably, day in and day out, the last thing you need is a lab balance so complicated that it causes operating errors and wastes your valuable time as a result.

Welcome to your new Extend balance comfort zone: a simple, easy-to-understand control panel, key function assignments and the easy-to-read display are ideal for efficient weighing in your lab.

User-friendly operation: short, plain-English text prompts and cursor keys for navigation make it simple for you to configure the balance to meet your individual requirements.

Outstanding readouts thanks to the backlit and high-contrast display (height of digits: 15 mm).

The level indicator is positioned conveniently right next to the display so that checking whether the balance is level becomes "second nature" to the operator.

The range of features

Add up all features of the new Sartorius Extend, and you'll find all the advantages that only a genuine Sartorius lab balance can offer: features that pay for themselves, time and again.

A built-in, motorized calibration weight is standard in all precision balances with the –CW suffix and in all analytical balances. Applied at a touch of a key it ensures the highest weighing accuracy at any time.

Whenever you need ISO | GLP-compliant printouts of raw data and | or calibration and adjustment data, the Sartorius Extend balance will generate them – at the touch of a key when connected to a data printer, the YDP03-OCE.

The draft shield chamber on the analytical balances provides optimal lighting conditions inside, thanks to its nearly frameless all-glass design.

The following additional built-in application programs come standard:
Weighing in %, net-total formulation, animal weighing | dynamic weighing, mass unit conversion by toggling, calculation (multiplication and division).



Design 1



Design 2



Design 3



Design 4

Specifications

Model	Read- ability (g)	Weighing capacity (g)	Pan size (mm)	Repeat- ability (g)	Linearity (g)	Response time (avg., sec.)	Design
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Analytical balances

ED224S	0.0001	220	Ø 90	0.0001	0.0002	2.5	1
ED124S	0.0001	120	Ø 90	0.0001	0.0002	2.5	1

Precision balances and scales

ED153	0.001	150	Ø 115	0.001	0.002	1.3	2
ED153-CW	0.001	150	Ø 115	0.001	0.002	1.3	2
ED323S	0.001	320	Ø 115	0.001	0.002	1	2
ED323S-CW	0.001	320	Ø 115	0.001	0.002	1	2
ED423S	0.001	420	Ø 115	0.001	0.002	1	2
ED423S-CW	0.001	420	Ø 115	0.001	0.002	1	2
ED623S	0.001	620	Ø 115	0.001	0.002	1	2
ED623S-CW	0.001	620	Ø 115	0.001	0.002	1	2
ED822	0.01	820	Ø 150	0.01	0.02	1	2
ED822-CW	0.01	820	Ø 150	0.01	0.02	1	3
ED2202S	0.01	2,200	180 × 180	0.01	0.02	1.1	3
ED2202S-CW	0.01	2,200	180 × 180	0.01	0.02	1.1	4
ED3202S	0.01	3,200	180 × 180	0.01	0.02	1.1	4
ED3202S-CW	0.01	3,200	180 × 180	0.01	0.02	1.1	4
ED4202S	0.01	4,200	180 × 180	0.01	0.02	1.1	4
ED4202S-CW	0.01	4,200	180 × 180	0.01	0.02	1.1	4
ED6202S	0.01	6,200	180 × 180	0.01	0.02	1.1	4
ED6202S-CW	0.01	6,200	180 × 180	0.01	0.02	1.1	4
ED2201	0.1	2,200	180 × 180	0.1	0.1	1	4
ED2201-CW	0.1	2,200	180 × 180	0.1	0.1	1	4
ED5201	0.1	5,200	180 × 180	0.1	0.1	1	4
ED5201-CW	0.1	5,200	180 × 180	0.1	0.1	1	4
ED8201	0.1	8,200	180 × 180	0.1	0.1	1	4
ED8201-CW	0.1	8,200	180 × 180	0.1	0.1	1	4

Budget Class Analytical and Precision Balances: Talent Series

The Affordable Way to Enter the World of Sartorius Weighing Technology



Sartorius Talent series balances are the alternative for all your simple weighing operations: economically priced yet with an uncompromisingly high degree of quality, reliability and sophisticated weighing technology. Whether you need to operate a balance in the lab, at school or a university, or in the field using the battery function, a balance from the Sartorius Talent series will always be the No. 1 choice.

Nineteen models – one design

The right weighing capacity for every application and every budget? No problem with the Talent series. It offers you 3 analytical balances with weighing capacities of 60 g, 120 g and 210 g, respectively, and a total of 16 precision balances – ranging from the top-of-the-line model with a 3,100-g weighing capacity and 0.01-g readability to the high-capacity model featuring a 12-kg capacity accurate to one gram.

Easy to operate for reliable results

When it comes to strictly weighing, easy operation is top priority. The balances of the new series prove to be particularly talented in this area: just set up the balance, turn it on, and you'll be "on your weigh." It couldn't be any easier than this! The clarity of the display and the "one-key-to-a-function" design of the keypad ensure error-free operation.

Dependable and accurate

The innovative weigh cell technology, the rugged construction of the balance housing, the sleek stainless steel weighing pan and the keypad sealed by a membrane overlay assure high dependability and accuracy, even during frequent use.

Portability is standard

Many of the Talent series balances are also battery-operable, providing an alternative to line current operation. The built-in "power-saver" feature extends the life of the battery, whether it's non-rechargeable or rechargeable. This function will automatically shut off the balance if a key has not been pressed after 2 minutes. An added benefit of this portable application: the balance is compact and lightweight.

Built-in application software

Talent series balances offer various application programs as standard features to make routine work easy: weighing in percent, net-total formulation, weigh averaging | dynamic weighing, counting of small parts and mass unit conversion by toggling between two weight units.

RS-232C interface port

Each model comes standard with a bidirectional RS-232C interface port. This means no extra cost if you need to log the balance-generated results on an optional printer or connect a remote display for use in the educational sector.



Design 1



Design 2



Design 3



Design 4

Specifications

Model	Read- ability (g)	Weighing capacity (g)	Pan size (mm)	Response time average (s)	Repeat- ability (\pm g)	Linearity ($\leq \pm$ g)	Design
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Analytical balances

TE214S	0.0001	210	Ø 90	3	0.0001	0.0002	1
TE124S	0.0001	120	Ø 90	3	0.0001	0.0002	1
TE64	0.0001	60	Ø 90	3	0.0001	0.0002	1

Precision balances

TE313S	0.001	310	Ø 100	2.5	0.001	0.002	2
TE313S-DS	0.001	310	Ø 100	2.5	0.001	0.002	1
TE153S	0.001	150	Ø 100	2.5	0.0015	0.003	2
TE153S-DS	0.001	150	Ø 100	2.5	0.0015	0.003	1
TE3102S	0.01	3,100	174 × 143	2.5	0.01	0.02	4
TE1502S	0.01	1,500	174 × 143	2.5	0.015	0.03	4
TE612	0.01	610	Ø 116	2	0.01	0.02	3
TE412	0.01	410	Ø 116	2	0.01	0.02	3
TE212	0.01	210	Ø 116	2	0.01	0.02	3
TE6101	0.1	6,100	174 × 143	2	0.1	0.2	4
TE4101	0.1	4,100	174 × 143	2	0.1	0.2	4
TE2101	0.1	2,100	174 × 143	1.5	0.1	0.2	4
TE601	0.1	610	174 × 143	1.5	0.1	0.2	4
TE12000	1	12,000	174 × 143	1.5	1	2	4
TE6100	1	6,100	174 × 143	1.5	1	2	4
TE4100	1	4,100	174 × 143	1.5	1	2	4

Accessories



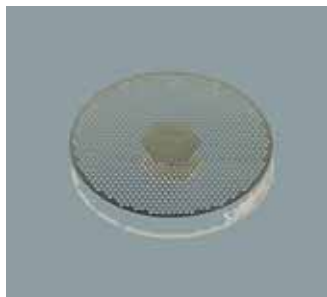
Accessories for All ME, SE, LA, LE, CP, ED and TE Models	Order No.
Data printer , suitable for use in legal metrology; with date, time, statistics and transaction counter functions	YDP03-0CE
Paper rolls , for YDP03-0CE; 5 units, each with 50 m	6906937
Ink ribbon cartridge , for YDP03-0CE	6906918
SartoConnect , data transfer software; for direct transfer of weights to an application (e.g., Excel)	
with RS-232C connecting cable, length 1 m	YSC01L
with RS-232C connecting cable, length 5 m	YSC01L5
with RS-232C connecting cable, length 15 m	YSC01L15
Balance table , for precise, reliable weighing operations	YWT01
Balance table , cast stone, with vibration dampeners	YWT03
Wall console	YWT04
Remote displays: LCD; height of digits: 13 mm; reflective	YRD12Z
Hand switch , incl. T-connector	YHS02
Foot switch , incl. T-connector	YFS01
Ionizing blower , for electrostatically charged samples, 220 V	YIB01-ODR
Ionizing blower , for electrostatically charged samples, 110 V	YIB01-OUR
Stat-Pen ionizing probe for neutralization of electrostatic charges on samples	YSTP01
T-connector for connecting 2 peripherals	YTC01
RS-232C USB interface cable , for connecting the balance to a PC with USB port; length 1.5 m	YCC01-USBM2
RS-232C interface cable , for connecting the balance to a PC with a 25-pin COM port; length approx. 1.5 m	7357312
RS-232C interface cable , for connecting the balance to a PC with a 9-pin COM port; length approx. 1.5 m	7357314
Standard Operating Procedure (SOP)	YSL01E



Accessories for ME and SE2 Models	Order No.
Rechargeable battery pack , external, with battery level indicator for SE2, ME5 and all ME models	YRB05Z
Anti-static weighing pan for electrostatically charged samples for ME235S, ME235P, ME254S, ME414S and ME614S for ME5	YWP01ME YWP01MC
Density determination kit , for ME235S, ME235P, ME254S, ME414S and ME614S	YDK01
Glass plate support , for conditioning samples inside the weighing chamber, for all models (except ME5)	YGS01ME
Weighing scoop made of chrome-nickel steel, 90 mm × 32 mm × 8 mm	641214
Foot switch , incl. T-connector; for all ME models and SE2	YPE01RC
Bar code scanner , for all ME models and SE2 (YCC01-0024M01 required)	YBR02FC
Cable with T-connector , for connecting a bar code scanner	YCC01-0024M01
RS-232C adapter with <i>Bluetooth</i>® wireless technology and external antenna; for point-to-point connection only*	YBT01
USB adapter with <i>Bluetooth</i>® wireless technology for point-to-multipoint connections*	YBT02

* The equipment may be used only in the following countries: Austria, Belgium, Denmark, Finland, France (indoor use only), Germany, Greece, Iceland, Ireland, Liechtenstein, Luxembourg, Norway, Portugal, Spain, Sweden, Switzerland, The Netherlands, United Kingdom.

Accessories



Accessories for LA Models	Order No.
Carrying case for all LA models up to 12.1 kg	YDB01LP
Anti-static weighing pan , for LA120S, LA230P, LA310S	YWP01LA
Extension cord , weighing platform to remote display and control unit (length 2.7 m) for LA models up to 64 kg	YCC01-19M3
3-segment checkweighing display Red-green-red, for over-under checkweighing, incl. T-connector	YRD11Z
Column display holder (post for raised mounting of display and control unit) for models with a weighing capacity up to 12 kg for models with a weighing capacity from 16 kg and up	YDH01LP YDH02LP
Bar code scanner , for all LA models (YCCC01-0024M01 required)	YBR02FC
Cable with T-connector , for connecting a bar code scanner	YCC01-0024M01
Rechargeable battery pack , external, with battery level indicator	YRB06Z
Analytical draft shield chamber for all LA models with 1 mg readability	YDS01LP
Protective in-use dust covers for LA models with a round weighing pan for LA models with a rectangular weighing pan, up to 12.1 kg	6960LP01 6960LP02
Weighing bowls pans trays made of chrome-nickel steel For all balances with a weighing capacity > 400 g; bowl capacity 1,000 ml Capacity 500 ml Capacity 3,000 ml	641211 641212 641213
Weighing scoop made of chrome-nickel steel, 90 mm × 32 mm × 8 mm	641214
Density determination kit for all 1-mg LA models for all 0.1-mg LA models	YDK01LP YDK01
RS-232C adapter with <i>Bluetooth</i>® wireless technology and external antenna; for point-to-point connection only*	YBT01
USB adapter with <i>Bluetooth</i>® wireless technology for point-to-multipoint connections*	YBT02

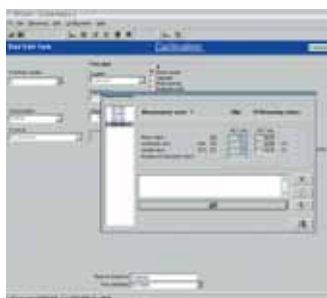
* The equipment may be used only in the following countries: Austria, Belgium, Denmark, Finland, France (indoor use only), Germany, Greece, Iceland, Ireland, Liechtenstein, Luxembourg, Norway, Portugal, Spain, Sweden, Switzerland, The Netherlands, United Kingdom.



Accessories for LE, CP and ED Models	Order No.
Rechargeable battery pack , external, with battery level indicator for models with a weighing capacity of up to 10 kg for models with a weighing capacity from 16 kg to 34 kg	YRB05Z YRB06Z
Analytical draft shield chamber for LE323S, LE623S, LE623P, CP423S, CP323S, CP323P, CP153	YDS01CP
Anti-static weighing pan for LE225D, LE324S, LE244S, CP225D, CP324S, CP224S, CP124S, CP64	YWP01CP
Density determination kit for LE225D, CP225D for LE324S, LE244S, CP324S, CP224S, CP124S, ED224S, ED124S	YDK01 YDK01LP
Draft shield cover with opening (30 mm Ø) for LE623S, LE323S, LE623P, CP423S, CP323S, CP323P, CP153	YDS02CP
Hanger for below-balance weighing , threaded fitting for LE16001S, LE34001S, LE34001P, CP16001S, CP12001S, CP34000, CP34001S, CP34001P	69EA0040
RS-232C adapter with <i>Bluetooth</i>® wireless technology and external antenna; for point-to-point connection only*	YBT01
USB adapter with <i>Bluetooth</i>® wireless technology for point-to-multipoint connections*	YBT02
Accessories for TE Models	
Protective in-use dust covers for display unit TE214S, TE124S, TE64, TE313S-DS, TE153S-DS for models TE313S, TE153S, TE612, TE412, TE212 for models TE3102S, TE1502S, TE601, TE6101, TE4101, TE2101, TE12000, TE6100, TE4100	6960TE01 6960TE02 6960TE03
Rechargeable battery pack (hours of operation: 20 or 40, depending on the model)	YRB08Z
Data printer	YDP04

* The equipment may be used only in the following countries: Austria, Belgium, Denmark, Finland, France (indoor use only), Germany, Greece, Iceland, Ireland, Liechtenstein, Luxembourg, Norway, Portugal, Spain, Sweden, Switzerland, The Netherlands, United Kingdom.

Sartorius Pipette Calibration: Totally Accurate, Efficient and Independent – with the YCP03-1 Pipette Calibration Set



Save time and money

Pipettes are gauges used as inspection, measuring and test equipment. GLP standards and European Standards require pipettes to be tested at defined intervals to ensure their continued proper functioning. Quick testing must also be performed between these intervals. Having pipette calibration performed externally can be expensive and time-consuming. Reserve pipettes must also be available to maintain routine operations. The equipment for performing the required quick tests is not even available in many cases.

Now you can calibrate your pipettes yourself quickly and inexpensively with the YCP03-1 Pipette Calibration Set from Sartorius.

Procedure

The liquid taken up in the pipette is weighed on a balance. The volume of the liquid is calculated from its weight and density and compared with the nominal volume for the pipette. The evaporation trap maintains the humidity at 60–90%, thus preventing loss of liquid from the sampling chamber. The balance transmits the weight to the PC, where the Picaso software performs all the required calculations automatically. At the end of each measurement, the calibration results are printed out as a GLP-compliant report.

Performance features at a glance

Measurement data saved at a click of the mouse

Program includes specifications on more than 400 pipette types

Measurements in accordance with ASTM, British Standard and ISO 8655

Individual pipettes inventoried

Data records are GLP-compliant and include mean, (in)accuracy, (im)precision, and standard deviation

Statistics displayed in graphs

Time-controlled functions for monitoring calibration cycles

On-line help for all functions

Equipment supplied

CD with Picaso software

Evaporation trap

Balance adapter

Reduction fitting for 6-ml sampling chamber

Reduction fitting for 21-ml sampling chamber

Three 6-ml sampling chambers

Three 21-ml sampling chambers

Cable for connecting the balance to a PC

Centering disk for the evaporation trap

Carrying case

System requirements

Picaso requires a Windows® 95/98/NT/2000/XP compatible PC with two RS-232C interface ports for the mouse and interface cable, 64 MB RAM and at least 20 MB of free hard disk space.

Optimize your pipette calibration workstation

With the YCP03-1 Pipette Calibration Set, you can save time, money, and work. Of course, you need to choose the best balance for your needs to benefit from all these advantages.

If you need a balance for other uses as well...

...the Sartorius microbalances and semi-microbalances are the right answer for you. The evaporation trap can be installed quickly and easily, and just as conveniently removed again.

If your balance will mainly be used for pipette calibration...

...then you can have an ME series balance equipped at the factory with a top-opening, short-design draft shield.

For measuring the smallest volumes...

...Sartorius offers the ME5 microbalance, for calibrating pipettes with volumes <10 µl. For the first time, you can calibrate pipettes with the smallest volumes.

Specifications

Model	Weighing capacity (g)	Readability (mg)
ME235S*	230	0.01
ME235P*	60/110/230	0.01/0.02/0.05
ME235P-SD (with short-design draft shield)	60/110/230	0.01/0.02/0.05
ME414S*	410	0.1
CP225D*	80/220	0.01/0.1
ME5*	5	0.001
Accessories		Order number
Special draft shield and evaporation trap for ME5 balances		VF988
Short-design draft shield for CP225D		VF2396

* Models ME235S, ME235P, ME414S, CP225D and ME5 can also be supplied in versions verified for legal metrology.

Sartorius Density Determination The Optimum Equipment for All Methods



Whether you use the buoyancy technique, the displacement principle or the pycnometer method for determining solid, powdery or liquid samples – Sartorius offers you the technical equipment for performing these applications simply, quickly and precisely.

This includes:

1. Micro-, analytical and precision balances.
2. The YDK01 or YDK01LP density kit
3. An integrated application program built into the balance for density determination (standard software in all ME and LA balances).

Easy to use

Nothing is more annoying in laboratory applications than complicated operating sequences with delicate and sensitive instruments. This is why our density kits have been built to be especially rugged and uncomplicated.

Perfect technology and practical accessories

Large and easily accessible sample holders are supplied so that you can perform measurements in air or in a medium causing buoyancy. The special design prevents air bubbles from adhering, which could otherwise distort your results.

If you weigh a substance with a density less than that of the liquid causing buoyancy – forget the extra work. The specially shaped sieve lets you immerse your sample effortlessly below the surface of the liquid.

And determination of the density of liquids couldn't be easier with our standardized glass plummet.

The integrated application software controls the measurements and evaluates them for you.

The application software integrated into the balances of the ME and LA series provides you with the ultimate in user convenience.

Just select your preferred method of measurement by menu, weigh your samples and the balance does all the number crunching for you. In the process, it automatically takes into account all important factors that influence the measurement. For example, after you have entered the temperature, the balance directly determines the density of the selected immersion medium.

Results in black and white

A record of your results is printed out on the interfaced data printer – if you wish, in compliance with ISO/GLP.

The printout shows data on:

Temperature and density of the medium causing buoyancy

Sample weight in air and in the medium

The volume and the density of the sample

Which density kit for which balance?

YDK01 density kit:

For ME models with 0.01-mg and 0.1-mg readability

For LA models with 0.1-mg readability

For LE225D and CP225D

YDK01LP density kit:

For LA models with 1-mg readability

For LE/CP/ED models with 0.1-mg readability

Bluetooth® Technology* Wireless Weighing and Communication



Bluetooth® wireless technology, widely used for laptops and mobile telephones, offers real advantages for both measurement and data storage processes. With a range of up to 100 meters, wireless connection of measuring stations, PCs and peripheral devices is now completely feasible for laboratory use.

No more cables to trip over, no more cable ducts collecting dust, no more inconvenient restrictions when positioning devices that have to be connected to one another.

Not only for mobile weighing, but also for clean room conditions or contaminated environments, Bluetooth® wireless technology presents a real alternative that eliminates connection problems before they occur.

Another major advantage of Bluetooth® wireless technology is the ability to connect multiple weighing stations in individual networks.

Installation of Sartorius communication modules featuring Bluetooth® wireless technology is as easy as can be. This technology uses the 2.45 GHz ISM band (for industrial, scientific, and medical usage). No fees are charged for this frequency, which means no added recurring costs for the user.

Data security is a high priority in Bluetooth® wireless technology. Data communication in both directions is protected by the use of frequency hopping, and other encryption techniques are also available. Thus, even sensitive areas are reliably secured.

With the YBT01 module for connection to the RS-232C port on the weighing instrument, and the YBT02 module for connection to the computer's USB port, Sartorius presents a solution that meets the most sophisticated requirements, with the same high quality as our Premium balances designed for use in the chemical and pharmaceutical industries.

The communication module has a stainless steel housing for optimal observance of the strictest standards of cleanability. The data and data record transfer procedures will be familiar to anyone who has used RS-232C data interfaces.

So put the bite on cable spaghetti with Bluetooth® wireless technology. The YBT01 and YBT02 modules are perfect for use with any of our Premium balances series, Premium ME, Master^{pro} LA or Expert LE.

The equipment may be used only in the following countries: Austria, Belgium, Denmark, Finland, France (indoor use only), Germany, Greece, Iceland, Ireland, Liechtenstein, Luxembourg, Norway, Portugal, Spain, Sweden, Switzerland, The Netherlands, United Kingdom.

Specifications

YBT01: RS-232C adapter with external antenna; for point-to-point connection only

Transmission power	In accordance with Class 1
Profiles supported	Serial port
Transmission speeds	1,200 to 115,000 bit/s (configured by Sartorius Service)
Temperature range	0 to +40°C (+32 to +104°F)
IP rating	IP65
Dimensions (L × W × H)	121 mm × 84 mm × 32 mm (without antenna, cable, wall bracket)

YBT02: USB adapter; for point-to-multipoint connections

Transmission power	In accordance with Class 1
Specification	Bluetooth® wireless technology V.1.1
Software	Bluetooth® device driver
Operating system	Windows® 98/2000, XP

* The brand name and logo for Bluetooth® wireless technology are owned by Bluetooth SIG Inc., USA. The use of this trademark by Sartorius is under license.

Equipment for Neutralizing Static Electricity Quickly and Reliably

Static electricity in the lab can block the entire sequence. When samples are weighed, particularly non-conductive samples, such as plastic, glass or porcelain, an electrostatic field may build up between the sample and the stationary parts of the balance. As a rule, this effect is seen when the digits of a weight readout seem to "race out of control." This makes reliable weighing, particularly in the analytical field, very difficult. By ionization of samples using the Sartorius StatFan or Stat-Pen ionizing blower, static electricity is neutralized within just a few seconds, making it unnecessary to increase the humidity of the air. Elimination of static electricity can be performed instantly wherever needed.

Sartorius ionizing blowers can be used anywhere undesirable electrostatic charges are generated, for example, in production areas and photography labs. The flow rate of the ionizing stream can be continuously adjusted. For StatPen, the flow rate is altered by moving it closer or further away from a sample.

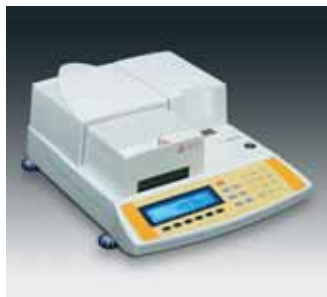
Specifications

Model	Power requirements	AC adapter	Neutralization	Flow rate	Weight
Ionizing blower StatFan YIB01-ODR	230 V/50 Hz	18 V/50 Hz	Up to ± 20 V	Up to 1,000 ccm/min	Approx. 0.6 kg
Ionizing blower StatFan YIB01-OUR	110 V/50 Hz	18 V/50 Hz	Up to ± 20 V	Up to 1,000 ccm/min	Approx. 0.6 kg
StatPen YSTP01	100 V... 230 V 50... 60 Hz		Up to ± 30 V		Approx. 0.8 kg



Moisture and Water Analysis





Infrared drying – fast and precise

Infrared dryers from the Sartorius Moisture Analyzer Series are increasingly used as a fast alternative to the classic oven drying method. These compact analyzers are designed for routine applications in production and incoming inspection. With the resolution of an analytical balance, they are also ideal for research and development. Whether you need an analyzer with an EC type-approval certificate or one tested for applications in legal metrology, Sartorius offers a customized solution for nearly every requirement. With their wide selection of infrared heat sources, including halogen lamp, CQR (coiled quartz radiator) or ceramic heating element, these moisture analyzers can be optimally adapted to the intended application.

Sartorius MA35

Easy... very easy!

The MA35 is the new basic model in the moisture analyzer series from Sartorius. Its performance functions and operating concept are geared toward daily routine processes, such as repetitive QC monitoring of samples as performed during in-process control and incoming goods inspection. To make the MA35 even more user-friendly, we have done away with seldom-used programming options without compromising flexibility or measurement accuracy.

Sartorius MA150

For routine operation

A rugged design with low space requirements and easy operation are the major features of these analyzers. Fully automatic drying of a sample until a constant weight is reached eliminates the need for programming an endpoint shutoff parameter. A total of 20 drying routines can be saved to give you the flexibility you need when measuring the moisture content of additional, out-of-the-ordinary samples.

Customizable and fast

Now you can choose between two different infrared analyzers that cover a diverse range of moisture measurement requirements. Whichever heat source you opt for, both analyzers deliver results within minutes. The ceramic heating element ensures especially gentle heating of temperature-sensitive samples. Alternately, the ultrafast CQR quartz-glass heater optimizes the analysis times even further.

Application-specific solutions

Practical accessories round off the entire lineup of Sartorius moisture analyzers: These include an in-use dust cover, supplied as standard equipment, and type approval for applications in legal metrology. Also available is a special moisture analyzer version without openly accessible glass components, making you compliant with the stringent FDA and HACCP requirements that ban the use of glass in production.

Sartorius MA100

As accurate as an analytical balance

The MA100 is the only infrared dryer in the world that features a built-in weighing system with 0.1-mg resolution and an EC type-approval certificate. A motorized heating unit moves over the sample to open or close the sample chamber. This reduces interfering effects when a sample is placed on the pan or a measurement is started. The pacesetter design enables the MA100 to achieve a measuring accuracy well beyond that provided by conventional infrared dryers.

Automatic adaptation to reference values

The MA100 features SPRM, or Swift Parameter Adjustment to a given Reference Method. This function enables the operating parameters of MA100 to be adapted to the results of an available reference method and saved as a drying routine. Optimization of operating parameters doesn't get any faster than this.

Flexible and modular

The Sartorius MA100 analyzers give you a choice of three different infrared heat sources: a halogen lamp for standard applications, a ceramic heating element for gentle heating of temperature-sensitive samples and a CQR quartz glass heater. The CQR combines the fast drying capability of a halogen lamp with the gentle heating capability of a ceramic heater for drying samples evenly over their entire surface. A printer that can be optionally integrated into the housing eliminates the familiar cable spaghetti of an external printer, while helping keep your work area tidy.

A clean solution

Did you accidentally spill a sample? Are there spatters of grease inside the sample chamber? No problem with the MA100! The Plug & Dry® feature lets you slide out the heater cover easily for thorough cleaning and without letting any dirt get inside the housing.

Specifications MA35 | MA100 | MA150

	MA35	MA100	MA150
Max. weighing capacity (g)	35	100	150
Accuracy of the weighing system (mg)	1	0.1	1
Weighing system with EC type-approval certificate		•	
Repeatability, average (%)			
for initial sample weight approx. ≥ 1 g	± 0.2	± 0.1	± 0.2
for initial sample weight approx. ≥ 5 g	± 0.05	± 0.02	± 0.05
Readability (%)	0.01	0.001	0.01
Display mode for results			
% moisture	•	•	•
% dry weight (solids)	•	•	•
% RATIO	•	•	•
g residue	•	•	•
g/kg residue		•	•
mg weight loss		•	
Calculated value (measured value \times factor)		•	
Temperature range and settings			
– 30°C–230°C, adjustable in 1-degree increments		•	
– 40°C–220°C, adjustable in 1-degree increments			•
– 40°C–160°C, adjustable in 1-degree increments	•		
Heating mode			
– Standard drying	•	•	•
– Quick drying		•	
– Gentle drying		•	•
– Phase drying		3 \times 0.1–999 min.	1 \times 0.1–999 min.
– MA30-compatible		•	
Analysis mode			
– Fully automatic	•	•	•
– Semi-automatic		1–50 mg 5–300 sec. 0.1–5.0% 5–300 sec.	1–50 mg 5–300 sec. 0.1–5.0% 5–300 sec.
– Timer settings	1 \times 0.1–99 min.	3 \times 0.1–999 min.	
– Timer mode + fully semi-automatic		2 \times 0.1–999 min. + automatic	
SPRM mode for parameter recognition		•	
Optional heating unit			
– Ceramic IR heating element (infrared)		•	•
– Halogen lamp (infrared)		•	
– CQR heater (coiled quartz radiator)		•	•
– Infrared heating using metal tubular-shaped heating elements	•		
– Later exchange of the heating unit by Plug & Dry®*		•	
Access to the sample chamber			
– via hinged cover	•		•
– via motorized cover		•	
Optional version compliant with FDA/HACCP regulations**	•		•
with aluminum panel inserts instead of glass panels			
Built-in calibration weight		•	

* Does not apply to the CQR quartz heating element

** Not available with halogen or CQR quartz heating element

	MA35	MA100	MA150
Operator guidance features			
– Context-sensitive menu with alphanumeric interactive prompts and icons	•	•	•
– Text input for sample identification using soft-key prompts		•	
– Numeric keypad for sample identification and parameter input		•	
– Parameter input using soft-key prompts			•
reproTEST for determining the repeatability of the weighing system		•	
Number of program memories	1	30	20
Memory for data storage			
– Statistics of the last 9,999 measurements		•	
– End point up to the next moisture analysis run	•	•	•
Parameter settings password-protected against unauthorized access		•	•
Manual input of tare weights		•	
Data printer			
– Integratable (optionally retrofittable)		•	
– External (optional)	•	•	•
GLP-compliant printout			
– User-configurable		•	•
– Inalterable standard configuration template	•		
– Short report	•		
Data interface port			
– RS-232C unidirectional	•	•	•
– RS-232C bidirectional		•	
Bar code scanner can be connected		•	
In-use dust cover for keypad		•	•
Housing dimensions (mm)			
Width × depth × height	224 × 366 × 191	350 × 453 × 156	213 × 320 × 180.5
Weight, approx. (kg)	5.8	8.0	5.5

Accessories MA35 | MA100 | MA150

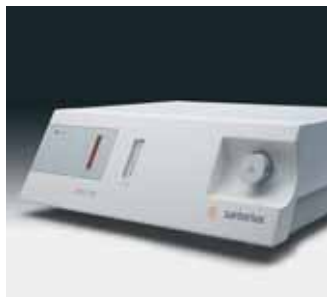


Accessories	MA35	MA100	MA150
Disposable sample pans 80 units, aluminum, round, 90 mm Ø	6965542	6965542	6965542
Glass fiber filters for analysis of liquid, pasty and fatty samples, 80 units	6906940	6906940	6906940
Panel replacement set Aluminum panel inserts for replacing glass panels to meet FDA/HACCP regulations (conversion kit)	YDS05MA	YDS03MA	YDS04MA
Windows®-compatible software for data collection and for programming drying programs incl. interface cable, 9/25-pin		YMW02MA	YMW02MA
Carrying case		YDB03MA	YDB05MA
Data printer Integratable External	YDP03-OCE	YDP01MA YDP03-OCE	YDP03-OCE
Ink ribbon cartridge for data printer	6906918	6906918	6906918
Paper rolls for data printer, 5 rolls, 50 m each	690693	690693	690693
External calibration weight 1 × 30 g ± 0.3 mg 1 × 50 g (E2) 1 × 100 g (E2)	YSS43	YCW452-00	YCW512-00
Temperature adjustment set with manufacturer's certificate	YTM01MA	YTM03MA	YTM03MA
Standard operating procedure (SOP)	YSL02MA	YSL02MA	YSL02MA

Interested in receiving more information about our moisture analyzers?
Visit www.sartorius.com/moisture. There you will find our applications database that contains plenty more information about which analyzer is suitable for which application and which operating parameters Sartorius recommends you use. Moreover, you will find many publications of technical articles that you can download as PDF files.

Water Detection System: WDS400

Selective Detection of Surface Water, Capillary Water and Water of Crystallization



Water, not moisture

Thermogravimetric methods, such as the oven-drying method, use the weight loss of a sample to determine the total content of all volatile components and not, however, the pure water content. As a rule, the latter task is performed using electrochemical techniques that are based on the principle of coulometry (coulomb = electric charge). The most commonly known methods are coulometric Karl Fisher titration for solid and liquid samples and the phosphorus pentoxide method for trace analysis of gases. However, both methods require complicated equipment; moreover, KF titration necessitates the use of additional chemicals in order to perform an analysis. The WDS 400 Water Detection System from Sartorius combines these three standard methods into a high-resolution and easy procedure for selective detection of water in solids and pastes.

Get all three in one

The WDS 400 adopts the principle of convection heating from the oven drying method in order to drive out the entire moisture from a sample.

A ceramic disc coated with extremely hygroscopic phosphorus pentoxide P_2O_5 completely absorbs the water from the resulting gas mixture and bonds water molecules to phosphoric acid H_3PO_4 on the disc surface in a chemical reaction. By coulometry, i.e., by an electric current generated at the ceramic disc, phosphoric acid is broken down into phosphorus pentoxide P_2O_5 , hydrogen H and oxygen O. Based on Faraday's law, it is known how much current is necessary to split off all hydrogen atoms from a chemical compound. Thus, the WDS 400 uses the amount of electric current to calculate the quantity of water driven out of a sample.

Highly accurate and selective

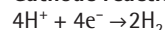
This combination method works so accurately that it is even possible to detect one single microgram of water. Beyond that, the WDS 400 enables the water fractions to be differentiated according to surface water, capillary water and water of crystallization (the latter is chemically bound water).

Easy operation

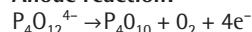
All the user has to do is just weigh-in a sample. The WDS 400 does not require any complicated handling of detection reagents, many of which are toxic. Optionally, you can choose from the carrier gases nitrogen N_2 (Class 5.0) or room air, i.e. using an integrated air pump and drying filter.

Electrolysis of phosphoric acid

Cathode reaction:



Anode reaction:



Faraday's law:

The electrodeposited mass is proportional to the amount of charge "Q":

$$M = A \cdot Q = A \cdot I \cdot t$$

I: Impedance, t: time

A: Electrochemical equivalent

Electrochemical equivalent of water

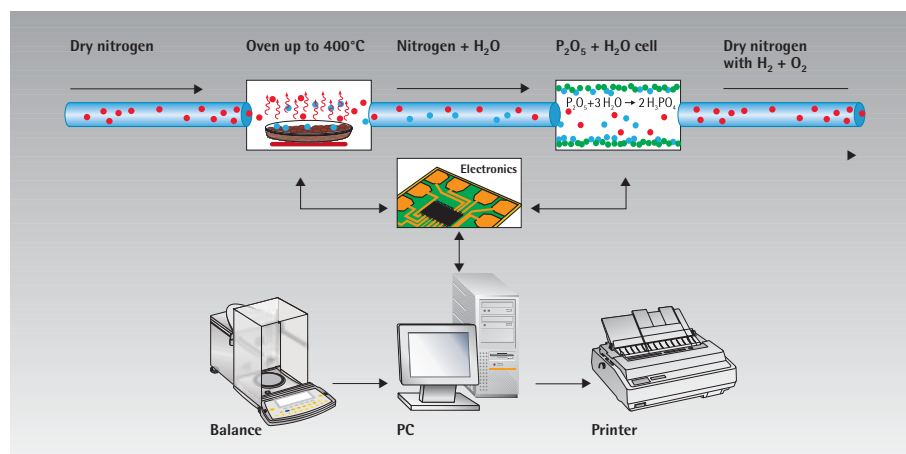
"A" is the mass of the ions in grams which are liberated by the passage of 1 coulomb of electricity [C = As].

"Q" is the charge of 1 mol of water (18 g) with 2 electrons per water molecule.

$$Q = 2 \cdot N_A \cdot e = 2 \cdot F$$

(Faraday's constant $F = 96487 \text{ C/valence}$)

$$A = m/Q = 18 \text{ g}/2 \cdot F = 0.0933 \text{ mg/C}$$



Technical Specifications | Accessories

Water Detection System WDS400



Technical specifications

Moisture analysis method	Thermal analysis followed by coulometric measurement
Sample heating in the built-in stainless steel oven (convection heating)	From room temperature up to 400 °C; in increments of 1 °C
Detection limit	1 µg of water
Reproducibility	± 2% of the absolute water value measured (depends on sample)
Measuring range	1 ppm to approx. 40% water (depends on sample)
Sample weight, average	15–2,000 mg
Display	ppm, % and µg water, mA current
Analysis time	Average: 10–20 min adjustable in increments of 1 min – 10 h
Operator guidance Software	English, for PCs with Windows® 2000 NT XP
Data storage	On the hard drive of the interfaced PC
Number of measuring programs	Limited only by the PC's hard drive memory
Power requirements	230 V ± 10%
Frequency	50 ... 60 Hz
Carrier gas, choice of:	– Dry room air (using integrated air pump with molecular sieve) – Nitrogen, N ₂ (Class 5.0) from a gas cylinder or supply line
Gas prepressure	1 bar (15 psi)
Gas consumption	100 – 200 ml/min
Power consumption	Standby 100 W At full power 600 W
Dimensions (mm) W × D × H	500 × 500 × 180
Weight, approx.	20 kg

Accessories

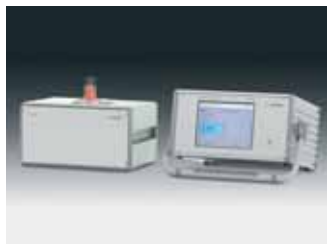
Regeneration kit for the electrolytic cell	69MA0224
Calibration standard	69MA0225
PTFE particle-removing filters up to serial no. 19070049	69MA0226
PTFE particle-removing filters starting from serial no. 19170000	69MA0292
Nickel scoop	69MA0228
Sensor, uncoated	69MA0232
Temperature adjustment set	6740-86
Molecular sieve for drying unit	69MA0293
Flexible gas tubing, stainless steel, for external gas supply	69MA0229

Recommended balance models

Semi-microbalances	ME235S	ME235P	CP225D		
Weighing range structure	SuperRange	PolyRange	DualRange		
Weighing capacity g	230	60 110 230	80 220		
Readability mg	0.01	0.01 0.02 0.05	0.1 0.01 0.01		
Microbalances	SE2	ME5	ME36S	CP2P	LE26
Weighing range structure	SuperRange	SuperRange	SuperRange	PolyRange	PolyRange
Weighing capacity g	2.1	5.1	31	0.5 1 2	5 21 g
Readability µg	0.1	1	1	1 2 5	2 10 g

Sartorius LMA300P Laboratory Moisture Analyzer

Moisture Analysis Within a Split Second



The **LMA300P** works with microwave resonance technology. In this indirect measurement method, a harmonic electromagnetic resonator field is built up by a microwave generator in a sensor (applicator). When the applicator is filled with a sample, the water in the sample interferes with the oscillation behavior (resonance) of the microwave, or interacts with the resonance field, changing the height and width of the resonance frequency peak.

Calibration

This change in resonance field is detected by a sensor, and the analyzer CPU calculates the moisture content of the sample based on the calibration previously carried out. The basic analyzer calibration required can be done by the classic oven drying method or, of course, using an infrared moisture analyzer from the Sartorius MA series.

Measurement

The microwave resonance method offers the advantage of particularly fast measurement in under one second. At the same time, it is non-destructive, which means that samples can be further used for subsequent tests. Changes in the color and surface structure of the sample, as is frequently the case, for instance, in natural raw materials, does not have any effect on calibration or thus on

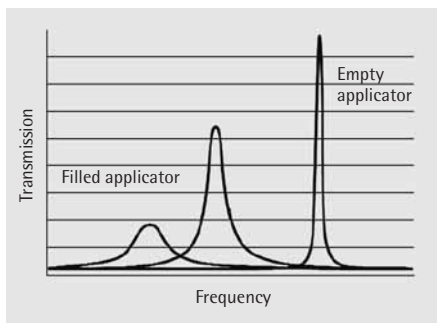
the measured result, unlike near infrared spectroscopy. The microwave resonance method is not limited to measurement of the surface moisture; rather, it also determines the core moisture thanks to its operating principle.

Application areas

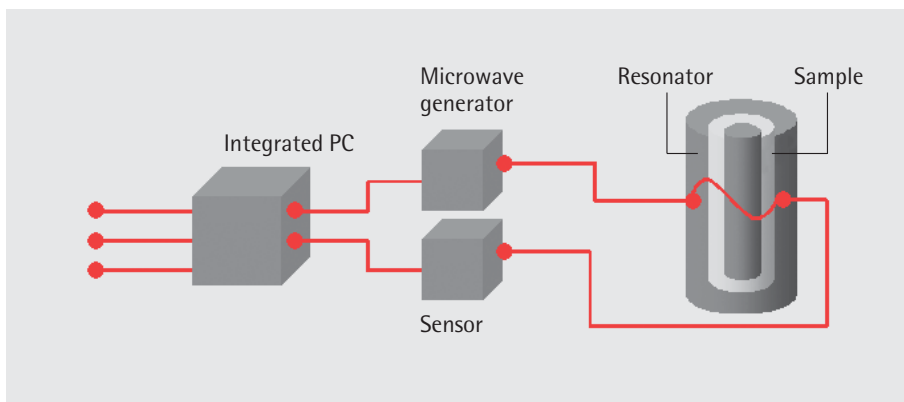
The **LMA300P** can be used for nearly all pourable and granulated products as well as viscous liquids, such as whitewash and other similar materials. The measuring range is between approx. 0.1–85% moisture. The prerequisite for operating the analyzer is to calibrate measurements on the basis of measurement procedure providing absolute accuracy. The major application area for the **LMA300P** is incoming and in-process quality control.

Design

The LMA300P is a modular-designed system consisting of a control and evaluation unit, **LMA300PA**, and a resonator module, **LMA300PR**. This type of modular design allows a different resonator type to be used (available on request), and enables the analyzer to be easily adapted to customer-specific applications.



Two-parameter measurement: shift of the resonance frequency peak (Δf) and decrease of magnitude (Δm)



Specifications*

Measuring range (%)	Approx. 0.1–85
Readability (%)	0.01
Measuring accuracy (%) (depends on calibration and type of sample)	± 0.05
Measuring time (s)	<1
Display of measured value	% moisture, % dry weight (solids)
Measurement method	Microwave measurement technology
Allowable sample temperature (°C)	Approx. 0–70
Operator guidance	Touch screen with demand-driven menu based on alphanumeric prompts (dialogue text and symbols)
Memory for number of measurement programs	40 programs for articles
Data printer	External (option)
GLP-compliant report	Yes, with optionally available external printer, YDP03-OCE
Interface port	2 × RS-232C for printer and PC USB port + 128 MB USB memory stick
Housing dimensions (in mm)	
Control unit LMA300PA	Width 500, depth 430, height 200
Sensor module LMA300PR	Width 370, depth 390, height 280
Weight approx. (kg)	
Control unit LMA300PA	11.5
Sensor module LMA300PR	11.0

* In addition to the LMA300PR sensor module, other sensors are also available on request.
Depending on the desired application, however, the technical specifications will have to be
agreed on with a Sartorius applications technician.

Optional accessories	Order no.
Data printer for external connection	YDP03-OCE
Ink ribbon cassette for YDP03-OCE	6906918
Printer paper, 5 rolls, each with 50 m, for YDP03-OCE	6906939
Applicator, 60 mm	69MA0294
Applicator, 140 mm	69MA0295





Metrology:

Mass Comparators

Test, Calibration
and Adjustment
Weights

OEM Products

Mass Comparators (CC...)



Weighing at the limits of technology – and beyond

Mass comparators and micro- and ultra-microbalances incorporate the most sophisticated weighing technology. Sartorius is one of the few manufacturers capable of designing and producing these instruments. Superb craftsmanship in mechanical and electronic engineering and expert knowledge of the parameters that can affect weight measurements are essential for weighing at the limits of technology.



Mass comparators

These are designed for determining the difference between weights (working standards) and known reference weights (mass standards). The instruments are commonly used at institutes of metrology (weights and measures offices) for standardization and calibration of weights. Beyond these applications, mass comparators are utilized in industrial manufacturing for highly accurate checkweighing of parts, such as those for combustion engines, or used in aeronautics or the manufacture of high-precision weights.

Weighing from 0.1 µg to 3,000 kg

Sartorius offers 4 groups of mass comparators as follows:

- Dissemination of the mass scale
- Analytical range up to 1 kg
- Universal range from 1 kg and up
- Research and testing range (up to 3,000 kg)

Our metrology experts will be happy to advise you, offering the best solution available to cover your needs. Just ask us!

Specifications

Model	Maximum capacity (g)	Readability (mg)	Average Repeatability (s in mg)*	A = automatic load alternator M = manual
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Dissemination of the mass scale

CCL1007	1,011	0.0001	0.0001	A 8 positions
CCE6	6.1	0.0001	0.00015	M
CC111	111	0.001	0.002	M
CC1000S-L	1,002	0.001	0.001	A 4 positions
CC10000U-L	10,050	0.01	0.02	A 4 positions
CC10000S-L	10,050	0.1	0.05	A 4 positions
CC20000S-L	20,050	0.1	0.1	A 4 positions
CC50001S-L	51,000	1	2	A 2 positions

Analytical range

CCE36	31	0.001	0.001	M
CC50	51	0.001	0.001	M
CC310	310	0.01	0.01	M
CC500	505	0.01	0.01	M

Universal range

CCE1004	1,200	0.1	0.05	M
CCE2004	2,500	0.1	0.1	M
CCE5004	5,100	0.2	0.3	M
CCE5003	5,100	1	0.5	M
CC10000S	10,050	0.1	0.1	M
CC10000	10,050	1	0.5	M
CC20000	20,050	1	1	M
CCE40K3	41,000	2	4	M
CCE60K3	61,000	2	5	M
CCE60K2	61,000	10	7	M

Research and testing range

CC64K	64,000	50	150	M
CC150K	151,000	100	300	M
CC300K	303,000	1,000	500	M
CCS600K	605,000	1,000	2,000	M
CCS1000K	1,510,000	5,000	5,000	M
CCS3000K	3,010,000	10,000	10,000	M

* Repeatability is the standard deviation "s"; it is calculated from 6 ABA cycles (M) or ABBA cycles (A), after drift has been eliminated.

Metrological Weights and Weight Sets (YCW, YCS)



The complete line ranging from weights to certified testing services

Regular inspection and testing of weighing instruments are a must to ensure reliable weighing results.

Sartorius offers highly accurate metrological weights and weight sets with nominal mass values from 1 mg to 1,000 kg, special and test weights, as well as the accessories required for correct handling and storage of weights.

Sartorius weights and weight sets are calibrated by the DKD* and comply with the International Recommendation OIML-R111. Therefore, they are suitable for legal and general metrological applications in research and industry.

Sartorius weights meet the requirements for traceability to the national "kilogram" prototype in conformance with the International Standard ISO 9000 concerning the quality element "Inspection, measuring and test equipment." These weights help support your quality management and quality assurance systems, and fulfill GLP and GMP requirements.

Your DKD partner for mass units

Sartorius has DKD* laboratories for both weights and electronic laboratory balances and industrial scales. Sartorius calibration laboratories have been inspected and accredited for compliance with the regulations of the German calibration service, DKD, concerning mass units. These laboratories meet the international standard for testing laboratories, ISO IEC 17025, which has been adopted as a European Standard under EN ISO IEC 17025.

* DKD= German Calibration Service whose certificates are officially recognized in all countries belonging to the Western European Calibration Cooperation (WECC), such as Denmark, Finland, Great Britain, Italy, the Netherlands, Sweden and Switzerland; Sartorius is accredited as a DKD calibration laboratory.

Recalibration for any brand names, manufacturers and designs

Depending on how frequently weights are used, they must be recalibrated on a regular basis so that they meet the requirements for reliable measuring, inspection and test equipment. Sartorius offers recalibration service along with DKD calibration certificates for all weights ranging from 1 mg to 50 kg, regardless of their design or brand name, and up to 500 kg for F2 and M1 weights.

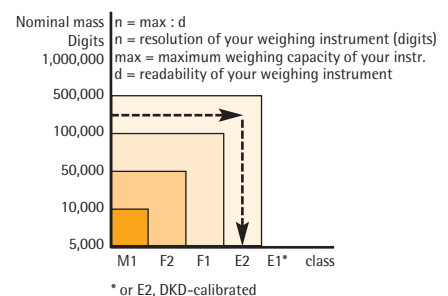
Here's how to find the right test weight

Just determine the number of digits specified for your weighing instrument's resolution, then read off the particular accuracy class that your test weight must have on the graph provided below.

The weight value of your test weight should be more than 80% of the maximum capacity of your weighing instrument.

Use the following chart to determine whether you need an individual weight or a weight set by comparing the nominal mass values.

Example: Suppose your weighing instrument has a capacity of 2,200 g and a readability of 0.01 g. This yields 220,000 digits, which correspond to a class E2 test weight. Since 80% of 2,200 g is 1,760 g, you need to round it to a weight value of 2,000 g.



Weight Sets (YCS)



Features of Sartorius weight sets

The weights in Sartorius sets have the same features as do the individual weights of their corresponding class, which are described on the following page. Sartorius weight sets are supplied in a wooden case (except for service weights, which are in a plastic case), along with the matching accessories (gloves, forceps, brushes, etc.); please refer to our individual weights.

Class E1 and E2 weights sets with wire weights up to 500 mg

Class F1, F2 and M1 weights sets with leaf weights up to 500 mg

Nominal mass	E1	E2	F1
From 1 mg to 5 g	YCS011-351-0X	YCS011-352-0X	
From 1 mg to 100 g	YCS011-511-0X	YCS011-512-0X	YCS01-513-0X
From 1 mg to 200 g	YCS011-521-0X	YCS011-522-0X	YCS01-523-0X
From 1 mg to 1 kg	YCS011-611-0X	YCS011-612-0X	YCS01-613-0X
From 1 mg to 5 kg	YCS011-651-0X	YCS011-652-0X	YCS01-653-0X
From 1 g to 1 kg	YCS31-611-0X	YCS31-612-0X	YCS31-613-0X
From 1 g to 5 kg	YCS31-651-0X	YCS31-652-0X	YCS31-653-0X
From 1 g to 10 kg	YCS31-711-0X	YCS31-712-0X	YCS31-713-0X

Nominal mass	F2	M1
From 1 mg to 100 g	YCS01-514-0X	YCS01-515-0X
From 1 mg to 200 g	YCS01-524-0X	YCS01-525-0X
From 1 mg to 1 kg	YCS01-614-0X	YCS01-615-0X
From 1 mg to 5 kg	YCS01-654-0X	YCS01-655-0X
From 1 g to 1 kg	YCS31-614-0X	YCS31-615-0X
From 1 g to 5 kg	YCS31-654-0X	YCS31-655-0X
From 1 g to 10 kg	YCS31-714-0X	YCS31-715-0X

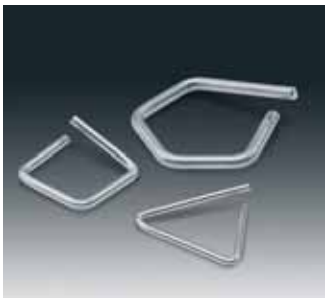
Service weight set	E2	F1
From 100 g to 5 kg	YSS5128-6528-0X	
From 1 g to 5 kg		YSS3138-6538-0X

Options:

X = 0: weights without DKD certificate

X = 2: weights with DKD certificate

Metrological Milligram Weights (YCW)



Features of Sartorius metrological weights

Class F1 leaf weights
(F2, M1 in weight sets)
1–5 mg aluminum; density 2.7 g/cm³
10–500 mg nickel silver; density 8.7 g/cm³

Class E1 and E2 wire weights
1-mg special steel, non-magnetizable
E1: density 8.0 g/cm³
E2: density 7.9 g/cm³

Nominal mass	Wire weights Class E1	Wire weights Class E2	Wire weights Class F1
1 mg	YCW0111-0X	YCW0121-0X	YCW013-0X
2 mg	YCW0211-0X	YCW0221-0X	YCW023-0X
5 mg	YCW0511-0X	YCW0521-0X	YCW053-0X
10 mg	YCW1111-0X	YCW1121-0X	YCW053-0X
20 mg	YCW1211-0X	YCW1221-0X	YCW123-0X
50 mg	YCW1511-0X	YCW1521-0X	YCW153-0X
100 mg	YCW2111-0X	YCW2121-0X	YCW213-0X
200 mg	YCW2211-0X	YCW2221-0X	YCW223-0X
500 mg	YCW2511-0X	YCW2521-0X	YCW253-0X

Options:
X = 0: weights without DKD certificate
X = 2: weights with DKD certificate

Metrological Weights (YCW)



Class E1, E2, F1 and F2 knob weights
1 g to 50 kg, special steel, non-magnetizable
E1; density: 8.0 g/cm³
E2, F1, F2: density: 7.9 g/cm³
M1: 1–10 kg, brass/galvanized, polished

Packaging of the weights:
Up to 20 g in a plastic case
From 50 g and up in a wooden case
From 1 kg and up additionally with glove

Knob weights from 100 kg cylindrical weights

Nominal mass	E1 (1)	E2 (1)	F1 (1)	F2 (1)	M1 (2)	M2 (3)
1 g	YCW311-0X	YCW312-0X	YCW313-0X	YCW314-0X		YCW316-0X
2 g	YCW321-0X	YCW322-0X	YCW323-0X	YCW324-0X		YCW326-0X
5 g	YCW351-0X	YCW352-0X	YCW353-0X	YCW354-0X		YCW356-0X
10 g	YCW411-0X	YCW412-0X	YCW413-0X	YCW414-0X		YCW416-0X
20 g	YCW421-0X	YCW422-0X	YCW423-0X	YCW424-0X		YCW426-0X
50 g	YCW451-0X	YCW452-0X	YCW453-0X	YCW454-0X		YCW456-0X
100 g	YCW511-0X	YCW512-0X	YCW513-0X	YCW514-0X		YCW516-0X
200 g	YCW521-0X	YCW522-0X	YCW523-0X	YCW524-0X		YCW526-0X
500 g	YCW551-0X	YCW552-0X	YCW553-0X	YCW554-0X		YCW556-0X
1 kg	YCW611-0X	YCW612-0X	YCW613-0X	YCW614-0X	YCW615-0X	YCW616-0X
2 kg	YCW621-0X	YCW622-0X	YCW623-0X	YCW624-0X	YCW625-0X	YCW626-0X
5 kg	YCW651-0X	YCW652-0X	YCW653-0X	YCW654-0X	YCW655-0X	YCW656-0X
10 kg	YCW711-0X	YCW712-0X	YCW713-0X	YCW714-0X	YCW715-0X	YCW716-0X
20 kg	YCW721-0X	YCW722-0X	YCW723-0X	YCW724-0X		
50 kg	YCW751-0X	YCW752-0X	YCW753-0X	YCW754-0X		
100 kg*			YCW813-00	YCW814-0X		
200 kg*			YCW823-00	YCW824-0X		
500 kg*			YCW853-00	YCW854-0X		
1,000 kg*			YCW913-00	YCW914-00		

Nominal mass value	Rectangular bar weights (1) M1	Rectangular bar weights (4) M1	Cylindrical weights (4) M1
5 kg	YCW6554-0X	YCW6559-0X	
10 kg	YCW7154-0X	YCW7159-0X	
20 kg	YCW7254-0X	YCW7259-0X	
50 kg	YCW7554-0X	YCW7559-0X	
100 kg		YCW8159-0X	YCW8157-0X
200 kg**		YCW8259-0X	YCW8257-0X
500 kg**		YCW8559-0X	YCW8557-0X
1,000 kg**		YCW9159-00	YCW9157-00

* Weight with lug for crane

** Weight with lug for crane, stackable

Materials:

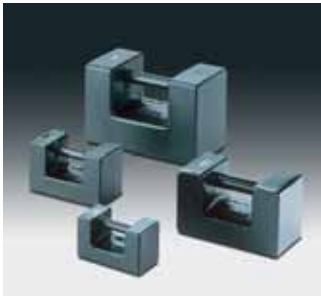
(1) stainless steel, (2) galvanized brass, (3) brass, precision lathed surface

(4) gray casting, painted black

Options:

X = 0: weights with DKD certificate issued to Sartorius (F1, E2, F2 up to 50 kg)

X = 2: weights with DKD certificate issued to the customer or company requesting certification



Test Weights (YCW...8)



Features of Sartorius test weights

Stainless steel, non-magnetizable, density 7.9 g/cm³, polished; packaging of the weights: up to 1 kg, in a plastic case; from 2 kg and up, in a wooden case

Nominal mass	E2	F1	F2
1 g	YCW3128-0X	YCW3138-0X	
2 g	YCW3228-0X	YCW3238-0X	
5 g	YCW3528-0X	YCW3538-0X	
10 g	YCW4128-0X	YCW4138-0X	
20 g	YCW4228-0X	YCW4238-0X	
50 g	YCW4528-0X	YCW4538-0X	
100 g	YCW5128-0X	YCW5138-0X	YCW5148-0X
200 g	YCW5228-0X	YCW5238-0X	YCW5248-0X
500 g	YCW5528-0X	YCW5538-0X	YCW5548-0X
1 kg	YCW6128-0X	YCW6138-0X	YCW6148-0X
2 kg	YCW6228-0X	YCW6238-0X	YCW6248-0X
5 kg	YCW6528-0X	YCW6538-0X	YCW6548-0X
10 kg		YCW7138-0X	YCW7148-0X

Options:

X = 0: weights with DKD certificate issued to Sartorius

X = 2: weights with DKD certificate issued to the customer or company requesting certification

Accessories for Weights (YAW)



Accessories for Sartorius weights

Sartorius offers glass bell jars with a support plate, brushes, gloves, forceps with silicone-coated tips, weight forks, handles for lifting weights and a permeability indicator (for checking magnetic properties of weights of accuracy classes E1, E2, F1 and F2).

In addition, Sartorius supplies susceptometers for easy and convenient determination of the susceptibility and magnetization of weights in accordance with OIML R111, 2004.

Accessories		Order no.
Glass bell jar with support plate	For 1 mg – 5 g	YAW00
	For 1 mg – 50 g	YAW01
	(100 g or 200 g)	
	For 100 g – 1 kg (2 kg)	YAW02
	For 2 kg – 5 kg	YAW03
	For 10 kg	YAW04
	For 20 kg	YAW05
	For 50 kg	YAW06
Brush	Small, 100 mm	YAW11
	Medium, 115 mm	YAW12
	Large, 150 mm	YAW13
	Extra-large, 250 mm	YAW14
Pair of gloves	Cotton	YAW21
	Fine leather	YAW22
Forceps with silicone-coated tips	115 mm for 1 mg – 5 g	YAW31
	160 mm for 1 g – 200 g	YAW32
	230 mm for 1 g – 1 kg	YAW33
Weight fork	For 500 g	YAW41
	For 1 kg	YAW42
	For 2 kg	YAW43
Handle for lifting weights	For 5 kg	YAW50
	For 10 kg	YAW51
	For 20 kg	YAW52
	For 50 kg	YAW53
Permeability indicator	For checking magnetic properties of weights of accuracy classes E1, E2, F1 and F2; supplied in a wooden case	YAW61
Susceptometer	For testing the magnetic properties of weights for accuracy classes E1, E2, F1 and F2 acc. to OIML R111.	
	Resolution: 10 µg	YSZ01C
	Resolution: 1 µg	YSZ02C
Reference susceptibility standard	1 kg	YSZ01RSC
Calibration set for susceptometer		YSZ01RMC

OEM Products



Sartorius offers components, such as load cells, electronic modules, keypads and indicators, which can be integrated into other equipment and/or connected to an instrument in which weighing is a necessary function to ensure its operability (OEM=original equipment manufacturer).



In manufacture, our OEM products are most commonly used in batching and filling systems, continuous checkweighers for checking foods, chemicals, tobacco and pharmaceutical products and tensiometers, thermogravimetric systems, magnetic suspension balances for quality assurance and research, etc.

To request a price quotation, just give Sartorius your specification, including, for example, the weighing capacity, resolution, repeatability, weight of installed equipment, operating temperature, sample throughput – for continuous checkweighers – and the number of units you plan to order.



Specifications

Capacity (g)	Readability (mg)	Repeatability (mg)	Models				
			Individual components without CE mark	Encapsulated components with CE mark			Optional integrated calibration weight
				IP20	IP44	Explosion- protected IP44	IP65
0.5 ...2	0.001 ... 0.005	0.002 ... 0.004	WZ2P-CW				
80 210	0.01 0.1	0.02 0.1	WZ215-CW				
60	0.01	0.03	WZA65-CW				
220	0.01	0.03	WZA225-CW				
60	0.1	0.1	WZ64S				
60	0.1	0.1	WZ64-CW				
60	0.1	0.1	WZA64				...-CW
60	0.1	0.1	WZA64-X				
120	0.1	0.1	WZ124S				
120	0.1	0.1	WZ124-CW				
120	0.1	0.1	WZA124				...-CW
210	0.1	0.1	WZ214S				
220	0.1	0.1	WZ224-CW				
220	0.1	0.1	WZA224				...-CW
600	0.1	0.1	WZ614-CW				
320	1	1	WZ323	WZA323			...-CW
520	1	1	WZ523	WZA523			...-CW
620	1	1	WZA623-X				
1,000	10	20	WZG1				
1,200	1	1	WZ1203	WZA1203			...-CW
2,000	20	40	WZG2				
6,200	10	10	WZA6202-X				
8,200	10	10	WZ8202	WZA8202			...-CW
10,000	100	200	WZG10				
12,000	100	100	WZ12001	WZA12001	WZA12001-X		
20,000	200	400	WZG20				

Examples of order number combinations

WZ523	Weigh cell with single components and without internal calibration weight
WZ523-CW	Weigh cell with single components and internal calibration weight
WZA523	Weigh cell with encapsulated components and without internal calibration weight
WZA523-CW	Weigh cell with encapsulated components and internal calibration weight

For more information on our weigh cells, visit our Sartorius home page:
<http://www.sartorius.com/index.php?id=1215>



Laboratory Equipment for Electrochemical Analysis



Sartorius DocuClip® & Docu-pH_{Meter}

The New Standard for Reliability in Electrochemical Analysis



Reliability starts with easy and comprehensible operation. With the newly developed Docu-pH_{Meter} instruments, Sartorius is setting new standards in the determination and management of measured values. Equipped with a graphic display and easy-to-use soft keys, all Docu-pH_{Meter} models are practical meters that make even complex laboratory tasks simple.

You can choose between "intelligent" electrodes connected to DocuClip® and standard electrodes with a BNC connector.

Comprehensive features – simple results

Graphical display and soft keys

Easy-to-understand menu-driven prompts in plain language

Defined function keys for the most common applications; no double-assigned keys

Fast mode for rapid results

Automatic recognition of DocuClip®

Automatic recognition of a variety of temperature probes

Serial interface for data transfer to computer or printer (Docu-pH_{Meter}⁺)

Memory capacity for 500 data records (Docu-pH_{Meter}⁺)

Give each of your electrodes their own identity. DocuClip® is a unique device that makes an electrode uniquely identifiable, in just seconds. Equipped with built-in memory for calibration data, DocuClip® works together with the Sartorius Docu-pH_{Meter} to store essential electrode specifications over its entire service life.

Electrode data is automatically logged 100% at each measurement, and can be sent to a printer or exported to a computer for further processing.

Specifications

Temperature Measurement	Docu-pH _{Meter}	Docu-pH _{Meter} ⁺
Temperature range in °C	–5° to 105°C (23 to 221°F)	
Readability in °C	0.1	
Accuracy in °C	± 0.2	
Temperature compensation	Automatic or manual from –5° to 105°C	
Buffer recognition	Automatic: technical buffers, DIN NIST buffers	
Calibration points, max.	3	
Date time battery-supplied	–	×
Sample IDs	–	×
Calibration reminder	–	×
Complete GLP-compliant record/printout	–	×
Memory for measurement data	–	×
Communication with DocuClip®	×	×
Input for pH combination electrodes	BNC	BNC
Input for temperature probe:		
ATC 10 kΩ, ATC 30 kΩ, Pt1000	2.5 mm phone plug	2.5 mm phone plug
RS-232C interface	–	×
Dimensions in mm	89 × 229 × 145	
Weight in kg	1	

Specifications

pH Measurement	Docu-pH _{Meter}	Docu-pH ⁺ _{Meter}
Measuring range	-2.000 to 20.000	-2.000 to 20.000
Readability	0.001 0.01 0.1 configurable	0.001 0.01 0.1 configurable
Accuracy	± 0.005	± 0.005

mV Measurement

Measurement range in mV	-2,000 to 2,000	-2,000 to 2,000
Readability in mV	0.1 1 configurable	0.1 1 configurable
Accuracy in mV	± 0.2 < 1,000 ± 1 > 1,000	± 0.2 < 1,000 ± 1 > 1,000

Choice of Standard Features

Docu-pH _{Meter}	Order Number	
Measuring instrument incl. technical buffer, power supply, operating instructions	Docu-pH	Docu-pH+
...with electrodes and DocuClip® for unique, 100% traceable data recording		
pH electrodes with:		
Plastic body, refillable, fiber junction, ATC 10 kΩ	Docu-pH PT10doc	Docu-pH+ PT10doc
Glass body, refillable, platinum junction, ATC 10 kΩ		Docu-pH+ P11doc
Plastic body, gel-filled, fiber junction, ATC 10 kΩ	Docu-pH P12doc	Docu-pH+ P12doc
Plastic body, gel-filled, fiber junction	Docu-pH P20doc	Docu-pH+ P20doc
Glass body, refillable, platinum junction		Docu-pH+ P11doc
...with conventional electrodes		
pH electrodes with:		
Plastic body, refillable, fiber junction, ATC 10 kΩ	Docu-pH P10	Docu-pH+ P10
Glass body, refillable, platinum junction, ATC 10 kΩ		Docu-pH+ P11
Plastic body, gel-filled, fiber junction, ATC 10 kΩ	Docu-pH P12	Docu-pH+ P12
Plastic body, gel-filled, fiber junction	Docu-pH P20	Docu-pH+ P20
Glass body, refillable, platinum junction		Docu-pH+ P11
DocuClip®		
...for unique, 100% traceable documentation of calibration for any pH electrodes; initialization by the user with Docu-pH _{Meter} (Docu-pH ⁺ _{Meter}) required	DocuClip®	

Professional Meters – Multi-talented Instruments for the Most Sophisticated Measurement Tasks



pH | mV meters, ion meters, conductivity meters. Four models – with all options to meet the highest requirements.

Large, backlit multifunction graphical VGA 5.7" display

Measuring accuracy down to ± 0.1 mV

Automatic temperature compensation

Menu-driven operation with plain language prompts

Automatic recognition of 26 standard buffers (NIST and DIN, among others)

Automatic checking of your combination electrode

Automatic calibration reminder

Stability icon: stability parameters can be adapted to the measuring task at hand

Alarm alerts user to out-of-tolerance values

Help function always available by soft keys

Clear functions – clear advantages

Simultaneous display of a measured value and the temperature, also for parallel measurements of the pH and conductivity, for example

Research-grade – i.e., the highest – accuracy covering a broad range of concentrations

Excellent reliability and repeatability of the measured results

GLP | GMP | ISO-compliant documentation of the calibrations and results

Interface port for connecting a printer or a PC



PP-15 | pH meter for pH and ORP measurements

High resolution ensures even greater accuracy in electrochemical analysis.



PP-20 | pH and conductivity meter

In addition to pH measurement, the high-end PP-20 Professional Meter offers research-grade conductivity measurements.



PP-25 | pH and ion-selective meter

In addition to convenient pH measurement, the PP-25 features the added capability of research-grade ion-selective analysis for a wide range of concentrations.



PP-50 | pH meter, ion-selective meter and conductivity meter all in one unit

The fully professional PP-50 combines all features of the models presented in this catalogue. This convenient Professional Meter is designed for use in a broad range of applications in the field of potentiometric analysis.

Specifications

pH measurement	PP-15	PP-20	PP-25	PP-50
Measuring range	-2.000 ... 20.000	-2.000 ... 20.000	-2.000 ... 20.000	-2.000 ... 20.000
Calibration standards, max. number	5	5	5	5
mV measurement				
Measuring range in mV	± 2,000	± 2,000	± 2,000	± 2,000
Temperature measurement				
Measuring range in °C	-5 ... +105	-5 ... +105	-5 ... +105	-5 ... +105
Ion-selective analysis				
Measuring range	-	-	1.00 · 10 ⁻⁹ ... 9.99 · 10 ⁹	
Direct potentiometric measurement and incremental modes	-	-	×	×
Calibration standards, max. number	-	-	7	7
Conductivity measurement*				
Measuring range in µS/cm	-	0.5 ... 20,000	-	0.5 ... 20,000
Specific electrical resistivity Measuring range in Ω · cm	-	50 ... 2.0 · 10 ⁶	-	50 ... 2.0 · 10 ⁶
Salinity Measuring range in ppt	-	0.01 ... 42.0	-	0.01 ... 42.0
NaCl concent Measuring range in ppt	-	0.01 ... 70.0	-	0.01 ... 70.0
TDS Measuring range in mg/l	-	0.005 ... 300,000	-	0.005 ... 300,000
Calibration standards, max. number	-	5	-	5
Manual temperature entry	×	×	×	×
Inputs for pH combination and ion-selective electrodes	BNC	BNC	2 BNC	2 BNC
Input for conductivity cells	-	DIN	-	DIN
Date & time stamp, non-volatile memory	×	×	×	×
Data memories	620	620	620	620
Meter dimensions in mm	265 × 200 × 100			

* Specifications based on a cell constant of 2.54 cm

pH/mV Meters – Reliable in All Applications



Basic Meter –
A strong basis featuring Sartorius quality
 Four buttons do it all!

The user-friendly prompts and messages guide you fast and reliably through laboratory routines.

PB-11 Basic Meter
 Easy 1-key calibration of 1, 2 or 3 calibration standards

Automatic buffer recognition

Automatic electrode test during calibration

Automatic temperature compensation

Easy-to-understand symbols and icons for reliable readings

Two kits are available with a choice of different equipment:

Meter with electrode holding arm, technical buffers, AC adapter and operating instructions plus

- Refillable pH electrode, PY-P10, with plastic body and integrated temperature sensor PB-11-P10
- Low maintenance pH electrode, PY-P20, with gel electrolyte PB-11-P20

Portable Meter –
Compact design – solid performance

It's easy to operate anywhere in the field where you need accurate measurements on the spot.

PT-10 Portable Meter
 Independent of AC line current thanks to 9-volt battery operation (AC adapter optionally available)

Waterproof in conformance with IP65

Easy 1-key calibration of 1, 2 or 3 calibration standards

Automatic buffer recognition

Automatic electrode test during calibration

Automatic temperature compensation

Easy-to-understand symbols and clear liquid-crystal display ensure error-free reading

Weighs only 270 g

Two kits are available with a choice of different equipment:

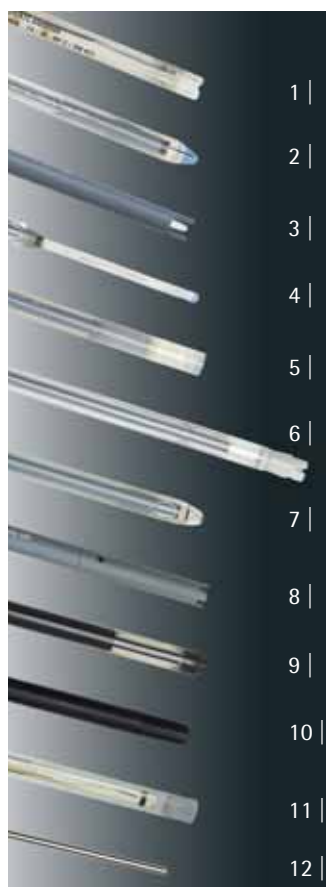
Meter in a carrying case with 9-volt DC battery, technical buffers (90 ml with pH 7 and 90 ml with pH 4), 2 plastic sample containers, each with 60 ml, as well as

- With low maintenance combination electrode, PY-P12, gel-filled, fiber junction, built-in temperature sensor PT-10P
- With low-maintenance electrode, PY-P20, gel-filled, fiber junction PT-10-P20

Specifications

	Basic Meter PB-11	Portable Meter PT-10
pH measurement		
Measuring range	–1.99 ... 19.99	0.00 ... 14.00
Calibration standards, maximum number	3	3
mV measurement		
Measuring range in mV	–1,800 ... +1,800	–1,800 ... +1,800
Temperature measurement		
Measuring range in °C	–5 ... +105	–5 ... +105
Inputs for pH combination electrodes	BNC	BNC
Power source	AC adapter	9-volt battery or AC adapter
Meter dimensions in mm	230 × 120 × 80	165 × 95 × 33
Weight	1,390 g	270 g incl. battery

Sensors for the Highest Quality Measurements



pH | ATC combination electrodes – glass membrane electrodes

All pH combination electrodes have an Ag | AgCl reference. The electrodes are supplied with a fixed cable and BNC connector; electrodes with a built-in temperature sensor additionally have a 2.5 mm phone plug.

Figure number	Order number	Construction	Built-in temperature sensor	pH range	Application
1	PY-P10	Plastic body; electrolyte: KCl 3 mol/l; free of silver ions; fiber junction	Yes	0 ... 14	Simple standard applications
2	PY-P11	Glass body; electrolyte: KCl 3 mol/l; free of silver ions; platinum junction; toughened, low-resistance glass	Yes	0 ... 14	All standard applications; TRIS-compatible
3	PY-P12	Plastic body, gel-filled, fiber junction	Yes	0 ... 14	Simple standard applications
3	PY-P20	Plastic body; gel-filled; fiber junction	No	0 ... 14	Simple standard applications
2	PY-P21	Glass body; electrolyte: KCl 3 mol/l; free of silver ions; platinum junction; toughened, low-resistance glass	No	0 ... 14	All standard applications; TRIS-compatible
4	PY-P22	Micro electrode (length 110 mm, No diameter 5 mm); electrolyte: KCl 3 mol/l; free of silver ions; platinum junction; low-resistance glass	No	0 ... 14	Small sample quantity
5	PY-P23	Flat membrane electrode; glass body; gel-filled; annular gap junction; low-resistance glass	No	2 ... 13	Surface measurements; low sample quantity
6	PY-P24	High-performance electrode; glass body; electrolyte: KCl 3 mol/l, free of silver ions; adjustable sleeve junction for control of the flow rate of the KCl solution; low-resistance glass membrane	No	0 ... 14	Samples with a low ionic concentration; emulsions, suspensions with extreme pH values

ORP combination (redox) electrodes

This type of electrode has an Ag | AgCl reference. It is supplied with a permanently attached cable and a BNC connector.

Figure number	Order number	Construction	Built-in temperature sensor	pH range
7	PY-R01	Glass body; porous ceramic reference junction; platinum disc sensing element (4 mm diameter); electrolyte: KCl 3mol/l; free of silver ions	No	0 ... 14

Conductivity cells and multi-sense cell (pH, conductivity, temperature)

The conductivity cells are supplied with a permanently attached cord and an 8-pin DIN connector.

Figure number	Order number	Recommended measuring range	Construction	Built-in temperature sensor
8	PY-C01	0.5 µS/cm ... 2,000 µS/cm	4-band conductivity cell (platinum)	Yes
8	PY-C02	0.01 mS/cm ... 5 mS/cm	4-band conductivity cell (platinum)	Yes
8	PY-C03	1 mS/cm ... 200 mS/cm	4-band conductivity cell (platinum)	Yes
	PY-C12	1 µS/cm ... 300,000 µS/cm	4-band conductivity cell (graphite)	Yes
3	PY-PC1	0.01 mS/cm ... 5 mS/cm pH 0 ... 14	Combination electrode, 2-band cell (platinum); pH electrode with gel-filled electrode; temperature sensor; 12 mm diameter; 120 mm length	Yes

Ion-selective pH combination electrodes

All ion-selective electrodes are combination electrodes. They are supplied with a permanently attached cord and BNC connector.

Figure number	Order number	Ion	Measuring range in ppm	pH range
9	PY-I01	Fluoride (F ⁻)	0.05 ... 500	5 ... 5.5
10	PY-I02	Ammonia (NH ₃)	0.02 ... 17,000	~ 8.5
11	PY-I03	Sodium (Na ⁺)	0.02 ... saturated solution	9 ... 12
9	PY-I04	Chloride (Cl ⁻)	1.8 ... 35,000	2 ... 12
9	PY-I05	Nitrate (NO ₃ ⁻)	0.4 ... 62,000	2.5 ... 11
9	PY-I06	Potassium (K ⁺)	0.04 ... 39,000	2 ... 12
9	PY-I07	Calcium (Ca ²⁺)	0.2 ... 40,000	2.5 ... 11
9	PY-I08	Silver/sulfide (Ag ⁺ /S ²⁻)	0.003 ... 32,000 S ²⁻ 0.01 ... 108,000 Ag ⁺	>12 S ²⁻ 2 ... 8 Ag ⁺

Temperature compensating probe

NTC 10 kΩ stainless steel sensor with permanently attached cord and a 2.5 mm phone plug.

Figure number	Order number	Recommended for	Construction
12	PY-T01	Temperature measurement and automatic temperature compensation – for use with all electrodes without a built-in temperature sensor	Stainless steel body; 4.7 mm diameter; 120 mm length

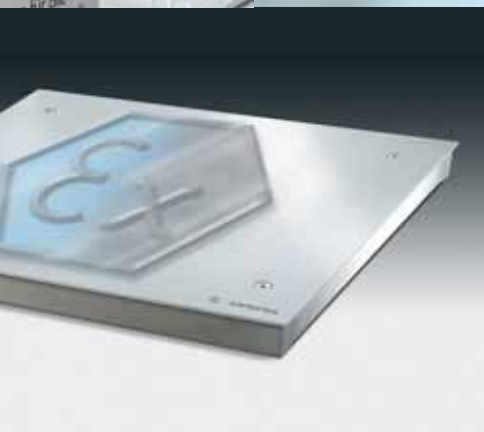
Accessories



Printer for Professional Meter and Docu-pH _{Meter} Docu-pH ⁺ _{Meter}		Order number
Rolls of paper, set of 5, each with 50 m		YDP05-PH
Ink ribbon cassette		6906937
Ink ribbon cassette		6906918
pH buffers		
50 capsules per pkg.; dissolve contents of each capsule in 100 ml of distilled water		
pH = 4.01 ± 0.02 at 25°C		PY-Y01
pH = 7.00 ± 0.02 at 25°C		PY-Y02
pH = 9.00 ± 0.02 at 25°C		PY-Y03
pH = 10.00 ± 0.02 at 25°C		PY-Y04
Color-coded buffer solution in a twin-neck bottle; eliminates the need for using a beaker during calibration; traceable to NIST standards		
pH = 4.00 ± 0.01 at 25°C, 500 ml		PY-Y21
pH = 4.00 ± 0.01 at 25°C, 6×90 ml		PY-Y21-6
pH = 7.00 ± 0.01 at 25°C, 500 ml		PY-Y22
pH = 7.00 ± 0.01 at 25°C, 6×90 ml		PY-Y22-6
pH = 10.00 ± 0.01 at 25°C, 500 ml		PY-Y23
Storage solution , for pH combination electrodes, 500 ml		PY-Y05
Cleaning solution , pepsin hydrochloric acid, 500 ml		PY-Y06
Electrolyte solution , KCl (3 mol/l), free of silver ions, 500 ml		PY-Y07
Conductivity standards, traceable to NIST Standards		
0.084 mS/cm ± 1.0% at 25°C (KCl 0.0001 mol/l), 500 ml		PY-Y10
0.147 mS/cm ± 1.0% at 25°C, (KCl 0.001 mol/l), 500 ml		PY-Y11
1.413 mS/cm ± 1.0% at 25°C, (KCl 0.01 mol/l), 500 ml		PY-Y12
12.88 mS/cm ± 1.0% at 25°C, (KCl 0.1 mol/l), 500 ml		PY-Y13
Equipment Qualification – IQ OQ PQ		
pH Meter Qualification (IQ OQ)		8407pH
For each additional parameter		8407Para



Weighing Equipment for Industry



Weighing in Industrial Processes – Reliable Weighing Equipment Based on Experience



Within our Process Weighing & Control business area, we offer an especially wide range of products and services for many industrial branches and applications. This extends from rugged industrial platform scales and precision scales to automatic checkweighers as well as from weigh and load cells, batching and filling equipment to metal detectors. We see ourselves as specialists and highly capable partners for optimizing weight- and lot-based processes. At Sartorius, we offer more than just products. We provide technical consulting services and problem-solving expertise that focus on your processes and add value.

Our solutions for your process

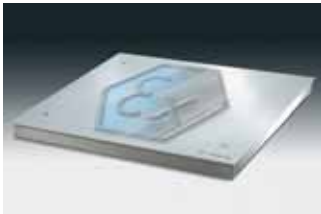
Process optimization is one of the main driving forces for innovation at Sartorius. Our sales and service specialists who are highly knowledgeable of customers' processes and applications are available to serve your needs.

Technical consultation is our calling

Production processes may be similar; however, no two installations are ever the same. This is why we offer our customers individual consultation to develop solutions that are precisely custom-designed for their specific application.

- : Systems for accurate, on-target batching of individual components with intelligent control of the shut-off setpoints for nozzles to ensure fast and precise filling
- : Recipe management systems ranging from stand-alone manual recipe systems all the way to fully automatic process control; for direct and simple management of data on recipes and materials
- : Process controllers with integrated PLCs and recipe databases; ideal for batching and recipe management processes
- : Beltweighers available in various versions for reliable monitoring of conveyed bulk-material quantities as well as for weigh-feeding and discharge control for any area of installation

- : Dynamic checkweighers for 100% traceable average weight control of individual or packaged products
- : Average weight control systems for prepackages, or checking the net content of packages
- : Metal detectors for all types of packaged and unpackaged products and liquid product feed
- : Simple paint scales to complex, networkable color-matching and paint-mixing systems with outstanding product features, such as the recalculation function
- : Weigh cells, load cells, mounting kits and electronic units – these optimally matched components cover the entire spectrum of vessel weighing



Whether for the chemical and cosmetics industries or the food and beverage industry, we offer systems that accurately weigh, detect and control the flow of materials from incoming goods to production and quality assurance all the way to dispatch. As a result, our systems keep our customers informed at all times about where every individual kilo has gone and reliably trace batches thanks to extensive logging and reporting capabilities. Systems from Sartorius ensure that the use of materials and product output are precisely controlled.

The selection of materials, finishes and industrial types of protection permits reliable operation of Sartorius scales even in mission-critical production sites and tough environments. For industries subject to compliance with regulations – the pharmaceutical and food industries – Sartorius offers series with the following performance features:

Excellent cleanability

Dust-tight | washdown resistance | protection against immersion

Compatibility of the materials with aggressive substances

IQ | OQ | PQ documents

HACCP compliance

GMP compliance

Designs that meet EHEDG requirements

Designs available for use in hazardous areas of the various zone classifications with ATEX and international approvals

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