The New Secura®:
Easy, Reliable Weighing in Regulated Areas

turning science into solutions

Reliable Weighing Easier Than Ever Before

The new Secura® is a laboratory balance that does far more than set new standards in metrological specifications. Beyond its technical specs, Secura® also gives you the security and serenity of knowing that you have done everything right according to best practices to ensure the quality of your measurement results, compliance with regulatory requirements and your efficiency as well.

First, the new operating concept of Secura® will noticeably ease your daily workload during weighing and, second, its APC function – Advanced Pharma Compliance – will relieve you from tedious and time-consuming documentation and monitoring tasks.
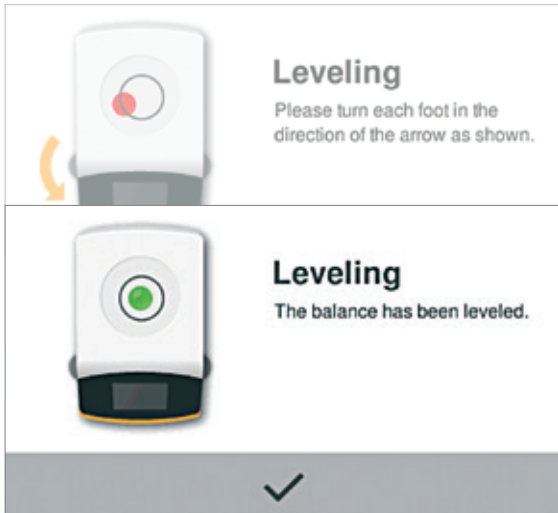
These two benefits, in combination with legendary Sartorius quality, make reliable weighing in regulated areas easier than ever before.

reddot design award
winner 2013

iF
product
design award
2013

iF
communication
design award
2013 GOLD

Secura

+4.2098

Always Correctly Leveled with Sartorius LevelControl

Secura® has an optoelectronic sensor that continuously checks to see if the balance is perfectly level. If it detects any out-of-tolerances, you will be immediately alerted to this pending risk and see specific guidance prompts to help you level the balance. Output of the weighing data over the interface port will be temporarily interrupted until the balance has been correctly leveled again.

This means you can rest assured knowing that only correct data is transmitted. During leveling, you will not have to change your seated position. More importantly, when working with toxic substances under a laboratory fume hood, you will not have to lean over the balance while leveling it. As a result, Secura® rules out the risk of health hazards.

Regulatory Compliance with Expert Support

Do you use your Secura® or other instruments in a regulated area and have to comply with a multitude of requirements, regulations and directives? Relax. Sartorius Lab Products & Services will provide you with the appropriate expert services specifically tailored to ensure compliance with the strict requirements of the pharmaceutical industry – and not just for balances.

Risk Minimization – IQ | OQ Documentation

Do you need qualification documents as proof of suitability to be able to use your Secura® in a regulated area? Sartorius Lab Products & Services will support you by providing trained specialists on site. We will generate the documents you need according to risk-based test plans and test reports for installation and operational qualification.
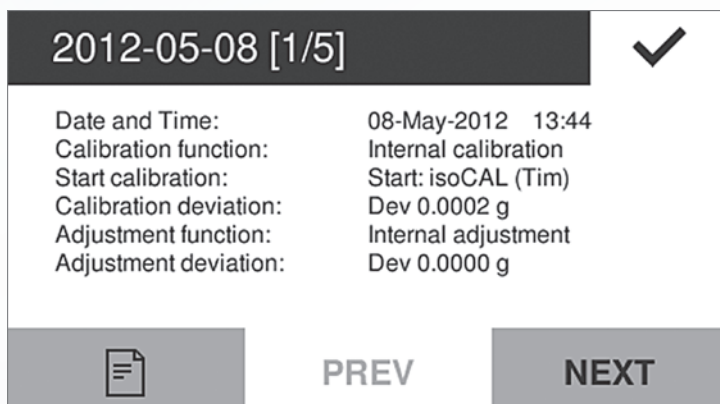
Stress-Free USP Minimum Sample Weight Measurement

Compliance with the USP minimum sample weight requirements with absolute process reliability? No problem for the new Secura®.

The display clearly indicates when the minimum sample weight is below the required minimum limit. In addition, the balance will temporarily block data transfer to a printer or a device connected to its interface port. This gives you peace of mind knowing that inadequate data cannot be inadvertently processed further.

Our specially trained service staff will determine the minimum sample weight for you right at the balance's site of installation, program it into your Secura® and attach a corresponding verification seal to the balance.

2012-05-08 [1/5] ✓

Date and Time:	08-May-2012 13:44
Calibration function:	Internal calibration
Start calibration:	Start: isoCAL (Tim)
Calibration deviation:	Dev 0.0002 g
Adjustment function:	Internal adjustment
Adjustment deviation:	Dev 0.0000 g

📄   PREV   **NEXT**

Best Results – Quality Documentation Made Easy

Secura® features a Cal Audit Trail function to document the quality of each weigh-in procedure you perform. Each adjustment procedure, including any non-conformities, are recorded by the balance, can be viewed on the touch screen and, if necessary, can be transferred over the balance's interface to a computer or to a Sartorius laboratory printer.
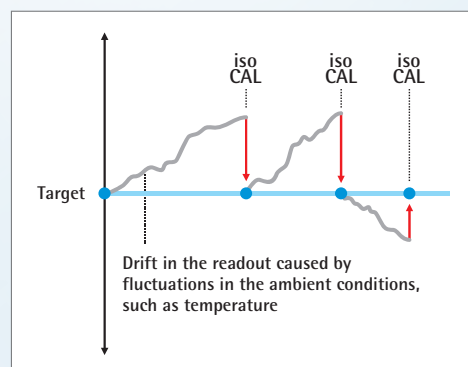
No Risk Due to Temperature Fluctuations

Temperature fluctuations have an influence on the accuracy of your weighing results.

This is why every Secura® comes equipped with the internal adjustment function isoCAL that ensures consistently accurate results.

Secura® can be configured to prompt you to launch this procedure or to have isoCAL take care of this as soon as an activation threshold is reached.

The Cal Audit Trail function records each isoCAL procedure performed so it can be traced for your quality assurance.

iso CAL   iso CAL   iso CAL

Target

Drift in the readout caused by fluctuations in the ambient conditions, such as temperature

Cleanability to Secure the Best Results

Cleanliness is one of the main prerequisites in the laboratory to prevent contamination and ensure work area safety.

That's why Sartorius placed a premium on designing Secura® to enable easy and thorough cleaning.

Sleek, resistant surfaces plus clear contours and few edges ensure that Secura® will help you stay compliant with all hygiene requirements.

Security by Password Protection

Secura® comes with password protection to restrict adjustment of the balance settings only to authorized persons. If you set a password, all functions that could change the metrological performance specifications are inactivated.

Interactive User Guidance for Fast GLP- | GMP-Compliant Printouts

If you require traceable documents, Secura® will guide you through the steps for obtaining GLP- | GMP-compliant printouts. The novel user guidance will support you especially for working with traceable sample identification.

Used in conjunction with the new premium YDP30 laboratory printer, which is automatically detected by Secura®, the balance generates printouts of the results on standard printer paper or on continuous labels.

```
2013-02-21        14:46
      Sartorius
Mod.    SECURA224-1S
SerNo.    0027703716
BAC:        00-50-02
APC:        01-70-02
Comp1 +      1.7082 g
Comp2 +      1.5017 g
Comp3 +      0.0510 g
T-Comp+      3.2608 g

2013-02-21        14:47
Name:
```

Secura® Technical Specifications

Model		224	124	513	313	213	5102	3102	2102	1102
Weighing capacity	g	220	120	510	310	210	5,100	3,100	2,100	1,100
Readability	mg	0.1	0.1	1	1	1	10	10	10	10
Repeatability	mg	0.1	0.1	1	1	1	10	10	10	10
Linearity	mg	0.2	0.2	2	2	2	20	20	20	20
Min. sample weight according to USP, typical	g	0.12	0.12	1.5	1.5	1.5	12	12	12	12
Temperature limits for verified models with activated isoCAL		+10°C | +30°C								
Typical stabilization time	s	2	2	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Weighing pan size	mm	⌀ 90	⌀ 90	⌀ 120	⌀ 120	⌀ 120	⌀ 180	⌀ 180	⌀ 180	⌀ 180
Weighing chamber height	mm	209	209	209	209	209	–	–	–	–
Net weight, approx.	kg (lb)	5.1 (11.2)	5.1 (11.2)	5.1 (11.2)	5.1 (11.2)	5.1 (11.2)	5.2 (11.5)	5.2 (11.5)	5.2 (11.5)	5.2 (11.5)
Dimensions, D × W × H mm (Inches)		360 × 216 × 320 (14.1 × 8.5 × 12.6)					360 × 216 × 95 (14.1 × 8.5 × 3.75)			
Interface		mini USB – Automatic recognition of Sartorius printer models YDP30 or YDP40 – Direct data transfer to Microsoft® Windows programs – Programmable interval for data output – Choice of SBI, xBPI, table format or text format data transfer protocols								
APC functions (Advanced Pharma Compliance)		– Monitoring of compliance with the USP minimum sample weight limits – SQmin – Password protection of setup settings – Fully automatic temperature- and time-controlled internal adjustment – isoCAL – Temporary blockage of data transfer to printer or computer when uncertain weighing results are detected, such as when the result is below the USP minimum sample weight limit, the balance is not levelled or isoCAL adjustment needs to be performed – Storage of all data of adjustment procedures – Cal Audit Trail								
Leveling		Intelligent, optoelectronic level sensor with alarm function and interactive user guidance for reliable and safe leveling								
Display		Touch screen with Sartorius graphical user interface optimized for users in pharmaceutical laboratories								
Built-in application programs		Special lab applications such as Mixing, Components, Statistics and Conversion; plus standard lab applications such as Weighing, Density, Percentage, Checkweighing, Peak Hold, Counting and Unstable Conditions								
Accessories		See Secura® list of accessories								

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The New Secura®

Easy, Reliable Weighing in Regulated Areas.

No Risk!

Blocked data transfer to printer or computer if …

■ the balance is not leveled correctly

■ the SQmin value is not observed

■ the balance is not calibrated correctly

AC Adapter

Sartorius AC adaptor module	6971790 with interchangeable country-specific plug-in AC adaptors
Primary	100 – 240 V~, −10% │ +10%, 50 – 60 Hz, 0.2 A
Secondary	15 V DC, ± 5%, 530 mA (max.) │ 8 Watt (max.): 0 to +40 °C and 15 V DC, ± 5%, 330 mA (max.) │ 5 Watt (max.): 0 to +50 °C
Other data	protection class II, in accordance with EN│IEC 60950-1 up to 3000 m above sea level; IP40 as per EN│IEC 60529

Balance

Power supply	only via Sartorius AC adaptor module 6971790
Input voltage	12.0 … 18.0 V DC
Power consumption	2 W (typically)

Ambient Conditions

The specifications apply when the following ambient conditions are in place:

Environment	for indoor use only
Ambient temperature *	+10 °C to +30 °C
Operational capacity	guaranteed between +5 °C and +45 °C
Storage and shipping	−10 °C to +60 °C
Elevation	up to 3000 m above sea level
Relative humidity**	15% to 80% for temperatures up to 31 °C; non-condensing, decreasing linearly to 50% relative humidity at 40 °C and 20% at 50 °C
Safety of electrical equipment	in accordance with EN 61010-1/IEC 61010-1. Safety requirements for electrical equipment for mea surement, control, and laboratory use – Part 1: General requirements
Electromagnetic compatibility	in accordance with EN 61326-1/IEC 61326-1. Electrical equipment for measurement, control, and laboratory use – EMC requirements - Part 1: General requirements
Defined immunity to interference	Suitable for use in industrial areas
Interference emission	Class B (suitable for use in residential areas and areas that are connected to a low voltage network that also supplies residential buildings). The device can therefore be used in both areas.

Balances verified for use in legal metrology comply with the requirements of Council Directive 2009/23/EC, EN 45501:1992, and OIML R76:2006.

* For balances verified for use in legal metrology in accordance with EU requirements, refer to the information on the balance.

** For balances verified for use in legal metrology in accordance with EU requirements, the legal regulations apply.

Standard Equipment

APC Features	– Monitoring of compliance with the USP minimum sample weight limits – SQmin – Password protection of set-up settings – Fully automatic temperature- and time-controlled internal calibration and adjustment – isoCAL – Temporary blockage of data transfer to a printer or a computer when uncertain weighing results are detected, such as a result is below the USP minimum sample weight limit, the balance is not level or isoCAL calibration | adjustment needs to be performed – Storage of all data of calibration procedures – Cal Audit Trail
Safety Level	Three configurable levels of security
Levelling	Intelligent, optoelectronic leveling sensor with alarm function and interactive user guidance for reliable leveling
Calibration	Internal calibration isoCAL, External calibration
Selectable weight units[1]	Gram, kilogram, carat, pound, ounce, troy ounce, Hong Kong tael, Singapore tael, Taiwan tael, grain, pennyweights, milligram, parts per pound, China tael, mommes, Austrian carat, tola, baht, mesghal and Newton
Interface	mini USB – Automatic recognition of Sartorius printer models YDP30 or YDP40 – Direct data transfer to Microsoft® Windows programs – Programmable interval for data output – Data transfer protocols SBI, xBPI, table format, text format
Display	Touch screen with Sartorius graphical user interface optimized for users in pharmaceutical laboratories
Standard built-in applications	Weighing, Density, Percentage, Checkweighing, Peak Hold, Counting, Unstable Conditions
Special built-in lab applications	Mixing, Components, Statistics, Conversion
Languages	English, German, French, Spanish, Italian, Russian, Chinese, Polish, Japanese, Portuguese
Protection	– Chemical resistant finish of the housing – In-use cover – Dust cover for analytical balances
Anti-theft lock	Kensington lock and lockdown capability for cable or chain

[1] Limited for verified models

Analytical Balances Secura®

Model		224	124
Weighing capacity	g	220	120
Readability	mg	0.1	0.1
Repeatability (standard deviation)	mg	0.1	0.1
Linearity deviation	mg	0.2	0.2
Minimum weight as per USP, typical	g	0.12	0.12
Sensitivity drift between +10 °C and +30 °C	± ppm/K	1.5	1.5
Typical stabilization time	s	2	2
isoCAL: – Temperature change – Time interval	K h	1.5 4	1.5 4
Display result (depending on the set filter level)	s	0.2	0.2
Weighing pan size	mm	⌀ 90	⌀ 90
Weighing chamber height	mm	209	209
Net weight, approx.	kg	5.1	5.1
Dimensions, D × W × H	mm Inch	360 × 216 × 320 14.1 × 8.5 × 12.6	

Precision Balances Secura®

Model		513	313	213	5102	3102	2102	1102
Weighing capacity	g	510	310	210	5100	3100	2100	1100
Readability	mg	1	1	1	10	10	10	10
Repeatability (standard deviation)	mg	1	1	1	10	10	10	10
Linearity deviation	mg	2	2	2	20	20	20	20
Minimum weight as per USP, typical	g	1.5	1.5	1.5	12	12	12	12
Sensitivity drift between +10 °C and +30 °C	± ppm/K	3	3	3	3	3	3	3
Typical stabilization time	s	1.5	1.5	1.5	1.5	1.5	1.5	1.5
isoCAL: – Temperature change – Time interval	K h	2 6	4 12	4 12	2 6	4 12	4 12	4 24
Display result (depending on the set filter level)	s	0.1 │ 0.2	0.1 │ 0.2	0.1 │ 0.2	0.1 │ 0.2	0.1 │ 0.2	0.1 │ 0.2	0.1 │ 0.2
Weighing pan size	mm	⌀ 120	⌀ 120	⌀ 120	⌀ 180	⌀ 180	⌀ 180	⌀ 180
Weighing chamber height	mm	209	209	209	–	–	–	–
Net weight, approx.	kg	5.1	5.1	5.1	5.2	5.2	5.2	5.2
Dimensions, D × W × H	mm Inch	360 × 216 × 320 14.1 × 8.5 × 12.6			360 × 216 × 95 14.1 × 8.5 × 3.75			

Verified Models with Country–specific Type Approval Certificate

Analytical Balances Secura®

Model		224-1x[1]	124-1x[1]
Accuracy class		Ⓘ	Ⓘ
Type[2]		SQP-A	SQP-A
Max	g	220	120
Scale interval d	mg	0.1	0.1
Verification scale interval e	mg	1	1
Min	mg	10	10
Tare (subtractive)		<100 % of the max. weighing capacity	
Minimum sample weight as per USP, typical	g	0.12	0.12
Typical stabilization time	s	2	2
isoCAL: – Temperature change – Time interval	K h	1.5 4	1.5 4
Display result (depending on the set filter level)	s	0.2	0,2
Weighing pan size	mm	∅ 90	∅ 90
Weighing chamber height	mm	209	209
Net weight, approx.	kg	5.1	5.1
Dimensions, D × W × H	mm Inch	360 × 216 × 320 14.1 × 8.5 × 12.6	

Precision Balances Secura®

Model		513-1x[1]	313-1x[1]	213-1x[1]	5102-1x[1]	3102-1x[1]	2102-1x[1]	1102-1x[1]
Accuracy class		Ⅱ	Ⅱ	Ⅱ	Ⅱ	Ⅱ	Ⅱ	Ⅱ
Type[2]		SQP-B	SQP-B	SQP-B	SQP-C	SQP-C	SQP-D	SQP-D
Max	g	510	310	210	5100	3100	2100	1100
Scale interval d	mg	1	1	1	10	10	10	10
Verification scale interval e	mg	10	10	10	100	100	100	100
Min	mg	20	20	20	500	500	500	500
Tare (subtractive)		<100 % of the max. weighing capacity						
Minimum sample weight as per USP, typical	g	1.5	1.5	1.5	12	12	12	12
Typical stabilization time	s	1.5	1.5	1.5	1.5	1.5	1.5	1.5
isoCAL: – Temperature change – Time interval	K h	2 6	2 6	2 6	2 6	2 6	2 6	2 6
Display result (depending on the set filter level)	s	0.1│0.2	0.1│0.2	0.1│0.2	0.1│0.2	0.1│0.2	0.1│0.2	0.1│0.2
Weighing pan size	mm	∅ 120	∅ 120	∅ 120	∅ 180	∅ 180	∅ 180	∅ 180
Weighing chamber height	mm	209	209	209	–	–	–	–
Net weight, approx.	kg	5.1	5.1	5.1	5.2	5.2	5.2	5.2
Dimensions, D × W × H	mm Inch	360 × 216 × 320 14.1 × 8.5 × 12.6			360 × 216 × 95 14.1 × 8.5 × 3.75			

[1] Possible terms for country-specific models:
x = CEU: Verified balances with EC Type Approval Certificate D12-09-014 (for EU except France, Italy, and Switzerland)
x = CFR: Verified balances with EC Type Approval Certificate D12-09-014 for France only

x = CIT: Verified balances with EC Type Approval Certificate D12-09-014 for Italy only
x = CCH: Verified balances with EC Type Approval Certificate D12-09-014 for Switzerland only
x = NUS: NTEP Certificate for USA
x = CN: CMC Type Approval Certificate for China

x = 0JP: Balance with Type Approval Certificate for Japan
x = 0BR: Balance with Type Approval Certificate for Brazil
x = 0AR: Balance with Type Approval Certificate for Argentina
x = 0KR: Balance with Type Approval Certificate for South Korea

x = 0RU: Balance with Type Approval Certificate for Russia
x = 0IN: Balance with Type Approval Certificate for India
x = 0CA: Balance with Type Approval Certificate for Canada
[2] All models with "…CN": type "SQP"

Optional Accessories

Printers and Communications

Premium GLP Laboratory Printer	YDP30
– Printer paper for GLP laboratory printer	69Y03285
– Endless labels for GLP laboratory printer	69Y03286
Standard Laboratory Printer	YDP40
– Printer paper for standard laboratory printer	69Y03287
Data Cable Mini USB	USB A	YCC04-D09
Date Cable Mini USB / RS232 9-pin	YCC03-D09

General

Battery Pack for Standard Lab Balances	YRB11Z
Draft ring for analytical balances	YDS01SQP
In-use cover for analytical balances	6960SE01
In-use cover for precision balances	6960SE02
Dust cover for analytical balances with draft shield	6960SE03
Certificate of USP minimum weight	on request

Density Determination

Density kit for analytical balances	YDK03

Calibration Weights

|	
Calibration for lab balance model 124 – Proof Line knob weight 100 g, OIML class E2, with DAkkS certificate	YCW512-AC-02
Calibration for lab balance model 224; 313; 213 – Proof Line knob weight 200 g, OIML class E2, with DAkkS certificate	YCW522-AC-02
Calibration for lab balance model 513 – Proof Line knob weight 500 g, OIML class E2, with DAkkS certificate	YCW552-AC-02
Calibration for lab balance model 1102 – Proof Line knob weight 1 kg, OIML class E2, with DAkkS certificate	YCW612-AC-02
Calibration for lab balance model 3102; 2102 – Proof Line knob weight 2 kg, OIML class E2, with DAkkS certificate	YCW622-AC-02
Calibration for lab balance model 5102 – Proof Line knob weight 5 kg, OIML class E2, with DAkkS certificate	YCW652-AC-02

YDP30, Premium GLP Laboratory Printer

Technical Drawings
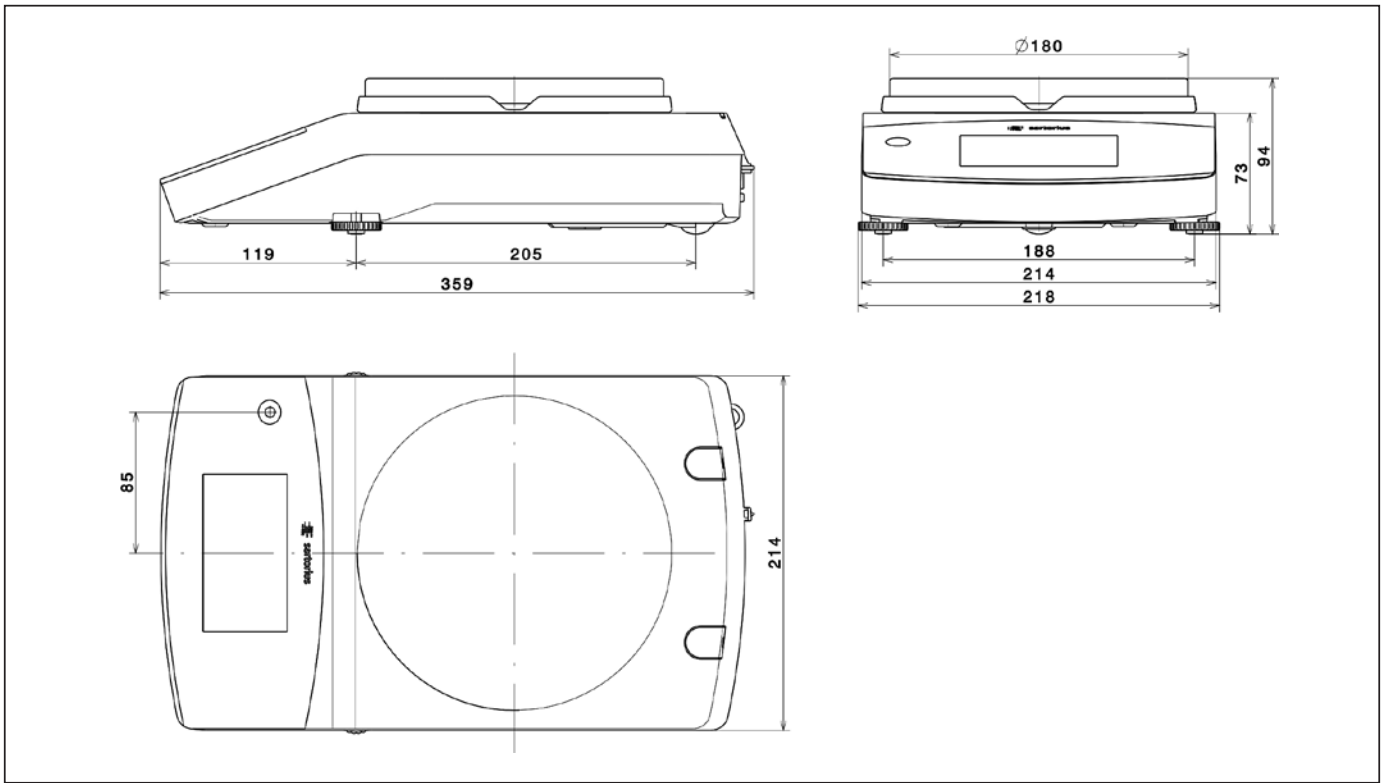
Models with a readability of 0.1 mg, in mm
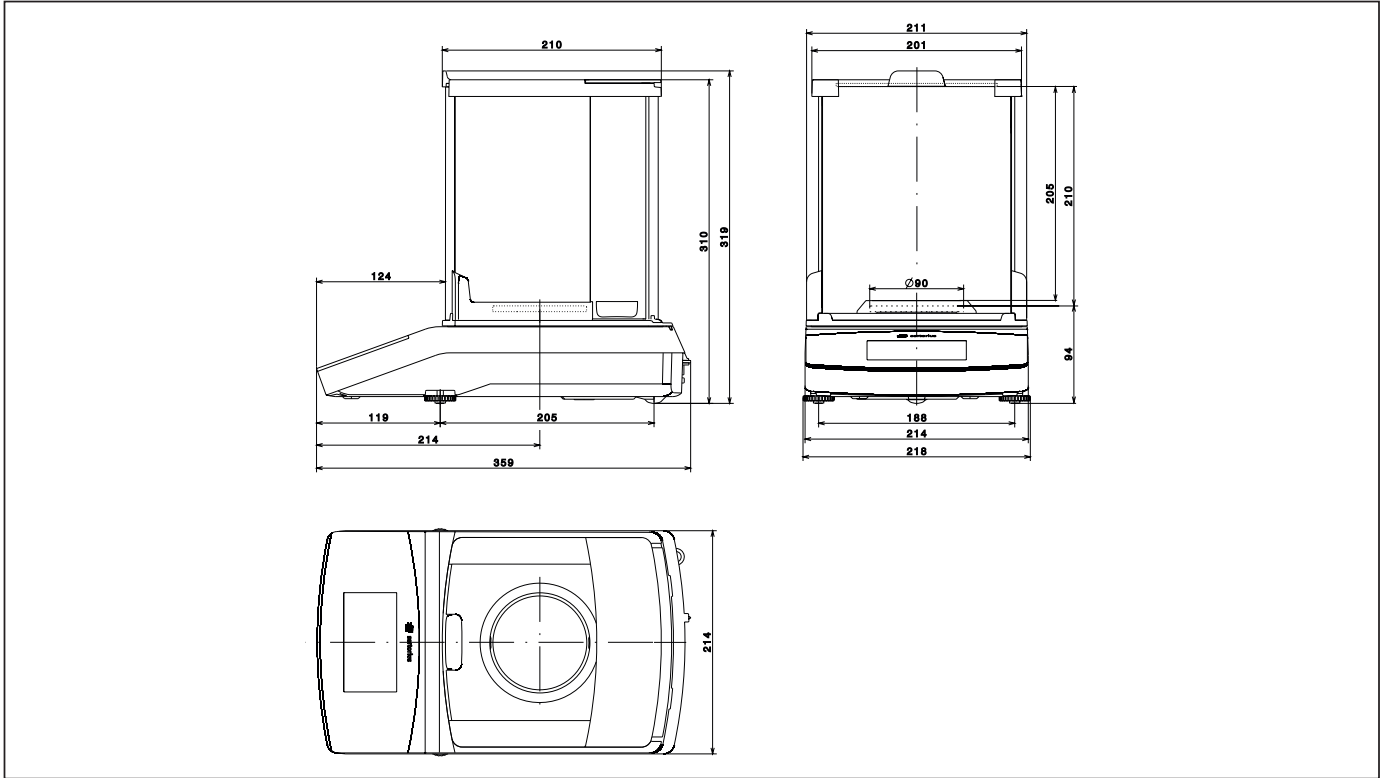
Models with a readability of 1 mg, in mm
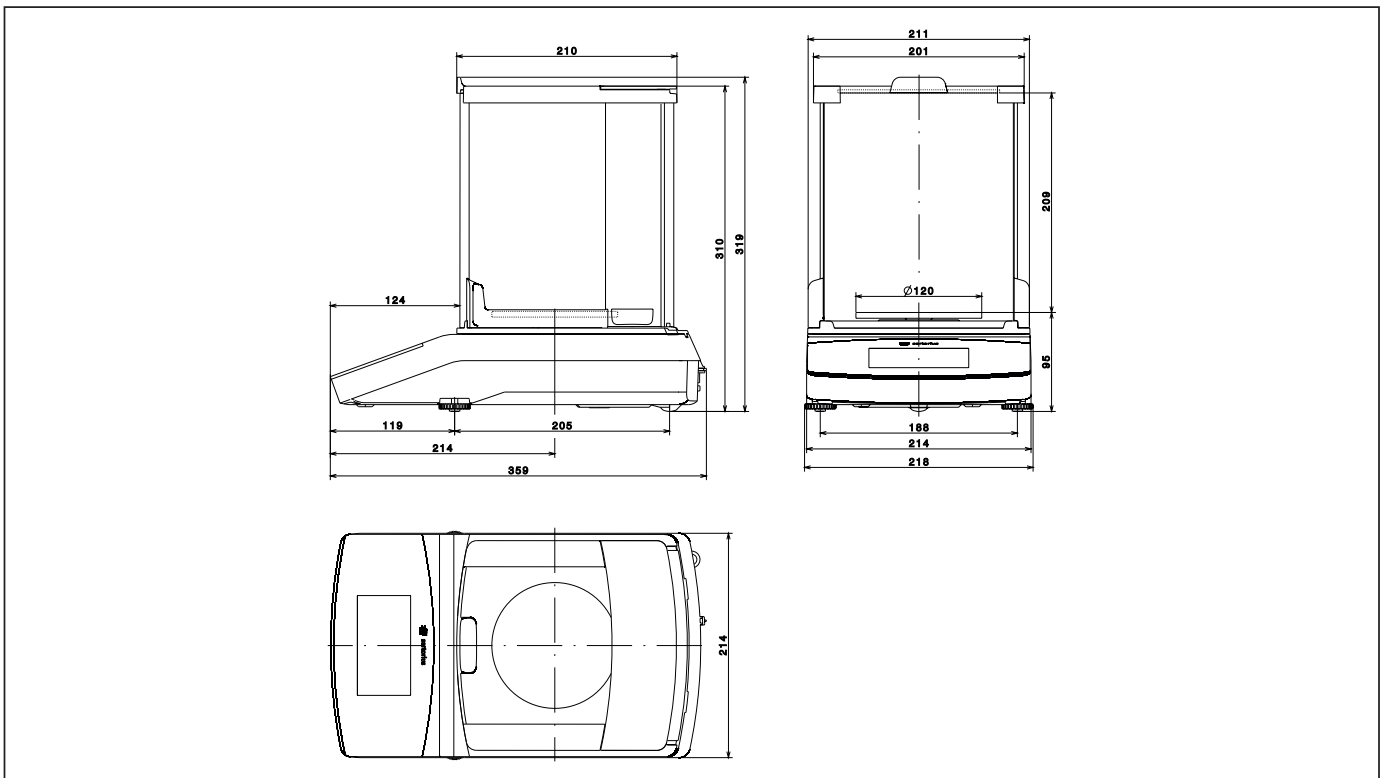
Models with a readability of ≥ 10 mg, in mm