

## Quintix® and Secura® Standard Laboratory Balances: Reliable Weighing for Faster and Better Results



### More Efficient Workflows with Quintix® and Secura®

### ... Based on Intuitive Operation:

The Start Assistant function and SmartTouch user interface will enable you to operate the balance straight away and feel right at ease using all the functions available. Both the convenient operating design with its easy-to-understand menu structure and the ergonomic balance design have already won several awards. These features will significantly help accelerate your workflows right from the start for error-free results.

### ... Using Integrated Applications:

Built-in standard applications let you instantly extend the options for using the balance, turning special, often complicated, lab tasks into efficient routines. These applications are set up for intuitive use, quiding you in simple steps throughout each of your workflows. This will save you valuable time and increase the reliability of your results.

... Made to Deliver the Best Results: Quickly and easily transfer, evaluate, further process or save and document weighing results in perfect compliance with legal requirements – just by using Plug & Play technology, without needing any extra software or complicated settings. In this way, you can unlock the full potential of your lab data and reliably save it. As a result, you will have more time for new, intriguing analytical procedures, while being on the safe side. We use Quintix® non-stop – it gives us the greatest support like no other even for our most unusual applications. Quintix

	Quintix <sup>®</sup>	Secura®
Reliability and Data Security		
isoCAL: internal calibration and adjustment function	(+)	+
CAL audit trail function	(+)	+
Menu protection	(+)	+
Password protection		<b>(+)</b>
SQmin: monitoring the minimum sample weight for compliance with the USP* operating range		<b>(+)</b>
Individual security levels		+
Data Transfer and Documentation		
Plug & Play functionality via mini USB port	(+)	+
PC-Direct feature for data transfer to a computer	(+)	+
Sample and batch identification		<b>(+)</b>
Monitored data transfer		<b>(+)</b>
Leveling		
Leveling guided by the level indicator	(+)	
Continuous real-time level monitoring		<b>(+)</b>
Models		
Semi-micro balances	(+)	+
Micro balance		<b>(+)</b>
Higher weighing capacity levels**		<b>(+)</b>

Secura® makes it particularly easy for me to ensure I reliably comply with special requirements, such as those in regulated areas.









<sup>\*</sup> USP - United States Pharmacopeia

<sup>\*\*</sup> See Technical Specifications

### Monitoring Functions and Security

### isoCAL: Reliability Guaranteed

Temperature fluctuations can distort the accuracy of your weighing results. Quintix® and Secura® rule out this risk right from the start with their temperature- and time-controlled calibration and adjustment function, isoCAL. In addition, the internal Cal Audit Trail function documents each calibration and adjustment procedure, generating a 100% traceable audit trail for your quality assurance.

### Menu Access Protection

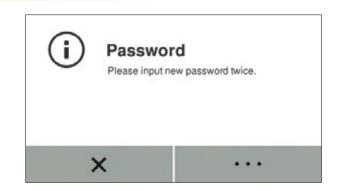
Reliably protect the system settings of your balance from any unintentional changes by activating the tamper-proof supervisor lock on Quintix<sup>®</sup>.





### Password-Protected Menu Settings

Secura® offers you customizable security: Once entered, a password prevents any changes to the menu settings that could alter the metrological performance of the balance. In this way, Secura® restricts access to the menu to exclusively authorized persons, ensuring fully controlled protection of your weighing procedures.



## Secure Weighing Data at All Times

Benefit from the different safety level settings that you can select on Secura® for controlled data transfer. You can optimally adapt the automatic monitoring systems of Secura® to your security needs. Whichever level you opt for – high, standard or low – you can be sure that with Secura®, you will be processing only data that is correct.

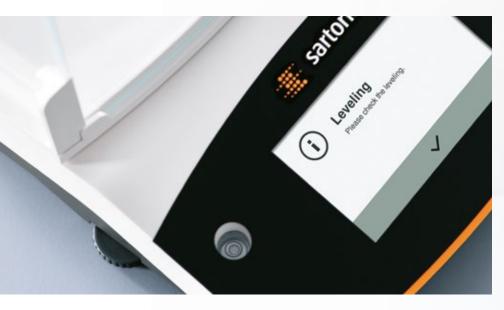


## SQmin: USP-Compliant Weighing Results

Compliance with USP guidelines along with absolute process reliability? This is guaranteed by Secura®: the SQmin function checks that your sample quantity is within the operating range of your balance. Secura® will alert you whenever your sample is below the minimum net weight and will temporarily block transfer of data to a printer or a computer. Secura® ensures that only permissible weighing data will be further processed.



### **Correct Leveling**



### Level Status at a Glance

Quintix® makes it so simple for you to check on your own whether your balance is correctly level – just one quick glance at the ergonomically positioned level indicator is all it takes. Plus, the two large and easy-to-adjust feet on the front enable you to readily level Quintix®. Your weighing results will always be "rock-steady" with Quintix®.



### Continuous Real-Time Level Monitoring

The Secura® LevelControl function ensures that your balance is perfectly level. It continuously monitors the level status in real time, instantly detecting any tilt. In this case, it will respond immediately to ensure data integrity: You will be alerted, and data transfer to a printer or computer will be temporarily blocked. Secura® will then reliably guide you in real time throughout the leveling procedure. With Secura® LevelControl, you will have total peace of mind knowing that your measurements are fully accurate.





# Documentation and Data Transfer: Easy, Fast and Reliable



## Data Transfer: Direct and Correct

Quickly and easily connect your Quintix® or Secura® to your computer or lab printer using the mini USB interface port and Plug & Play technology of the balance. Its PC-Direct feature will transfer your measurement results, without the need for additional software, to the desired Microsoft® Office program – in the format of your choice and ready for calculation in spreadsheets.

## Data Documentation: Fast and Easy

Directly connected to a Sartorius laboratory printer, Quintix® and Secura® generate fast and accurate printouts of your weighing results. You can use standard printer paper or practical, continuous-length paper label rolls or even fade-resistant paper for reliable records with unique identification of your samples.







## Sample Identification: Even More Reliable and Precise with Secura®

Do you work with samples requiring unique identification in regulated environments? Then you will benefit from the built-in sample identification feature on Secura®: this function enables you to customize the printout information to your specific needs. With an interactive touch-screen display and an alphanumeric input capability, Secura® will make it easy for you to enter complicated sample IDs. Generate sample records reliably and precisely with Secura®.





### Quintix® and Secura® Semi-Micro Balances





### Prevention of Cross-Contamination

Quintix® and Secura® semi-micro balances make it easy for you to prevent cross-contamination: For fast, thorough and effortless cleaning, just a few steps are all it takes to dismantle the draft shield and completely remove the rimmed base plate from the weighing chamber. Moreover, this base plate is specially designed to catch all spills. Quintix® and Secura® semi-micro balances enable you to successfully perform even the most sensitive analyses reliably and accurately – to five decimal places.

### **Applications**

### Filter Weighing

Quintix® and Secura® semi-micro balances are ideal for high-precision filter weighing. Their ergonomic draft shield and special weighing pan permit easy and reliable operating sequences for weighing filters to an accuracy of five decimal places.



Calibrate your pipettes quickly and accurately at any time with Quintix® and Secura® semi-micro balances. They provide convenient access to the weighing chamber, both from the front and from the side. Used together with a specially matched pipette calibration kit, these balances make calibration of your pipettes as easy as 1-2-3.





### Secura® Micro Balance

Do you place extremely high requirements on accurate results for analytical weighing? Obtain the highest quality of results in your analytical weight measurements with perfectly reliable accuracy of six decimal places. Featuring a maximum capacity of 21 g and a resolution of 2  $\mu$ g over the entire weighing range, the Secura® micro balance determines the exact weight of the smallest quantities – and therefore delivers unsurpassed performance unique throughout the world.

Secura



With the Secura® micro balance, you will meet your high standards on accurate results for analytical weighing, even under difficult ambient conditions. The reason: Secura® combines a number of ergonomic features specially designed for user-friendly weighing on high-resolution balances. These include a built-in temperature management system, the proven One-Touch draft shield for convenient, yet well-protected weighing procedures and an easy-to-remove weighing chamber base plate for effortless cleaning. A Secura® micro balance will give you security, speed and six-decimal-place accuracy down to the lowest analytical weighing ranges.



## **Integrated Applications**

Whether you need to perform common weighing procedures or run dedicated laboratory applications, Quintix® and Secura® will give you the best of both. They provide built-in applications as standard features and offer the widest array of accessories and options to choose from.



#### Weighing



Perform high-precision weight measurements fast and professionally. Custom-configure the weight unit and number of decimal places. Your Quintix® or Secura® balance will do all of the above in the Weighing app.

### Mixing



One formula. Several individual components. Objective: Weigh all into only one container, while keeping an eye on the total weight. Quintix® and Secura® let you weigh in each component sequentially with 100% traceability.

#### Components



One formula. Several individual components. Objective: Weigh all components independently of one another. At the same time, check the entire amount weighed in. Quintix® and Secura® enable you to easily keep track of it all for perfect weighing results.

### **Statistics**



Generate statistics on a relatively large sample size at the touch of a button? Yes, you can! Quintix® and Secura® have an internal statistics memory that saves all weighing results so you can retrieve a well-organized list of your key statistics.

#### Conversion



No time for complicated conversions? Quintix® and Secura® will save you from doing all the number-crunching. Just enter a conversion factor, weigh and instantly read off the weight or value along with the converted result.

#### Density



High-precision density determination of liquids and solids – easy. Just select the Density app and use the accessory density determination kit. This winning combination permits Quintix® and Secura® to accurately determine the quality of precious metals or plastic parts, for example.

#### Peak Hold



Does an oversized object on the balance hide the display or is a reading displayed only for a split second? The solution: Quintix® and Secura® lock in the reading so you can view it later, taking all the time you need.

### Checkweighing



Are your samples still within the allowable tolerance range? Quintix® and Secura® will give you the answer – on a straightforward color-coded bar graph. You will know at a glance whether your samples get the "green light" so you can proceed.

#### Counting



A bag with an unknown number of identical small parts: Forget counting by hand. Quintix® and Secura® will show you the exact count along with the total weight of all parts – two easy weighing steps are all it takes.

### Percentage



Need to compare different samples and determine their difference from a reference standard in percent? Quintix® and Secura® along with their Percentage app will take care of all this for you in no time.

#### **Unstable Conditions**



Is your work environment extremely hectic, with coworkers running in and out? Or do you have to weigh a mouse that just won't sit still? No problem with Quintix® and Secura®. They will give you absolutely rock-steady results even under unstable ambient conditions.

### A Full Range of Services: Our Mission Is Your Productivity

From installation to a full range of services covering the entire lifecyle of our products – our global Services team focuses on maximizing the reliability and availability of your lab balances, as well as on guaranteeing confidence in your weighing results at all times. Our service specialists regularly complete in-depth training to make sure you obtain the best possible service on site and to meet your specific requirements.

### Optimum Equipment Performance

- · Our installation service ensures that your lab balances will will be up and runing perfectly right from the start and deliver full performance without any compromises.
- Reliably trained staff is essential for accurate and efficient work. That's why our service technicians will see to it that your lab personnel is optimally trained to work with laboratory balances and related equipment.

### Quality of Results

- Rely on the accuracy and precision of your weighing results by having regular professional calibration performed on your balances.
- · Sartorius offers a number of ISO 17025 accredited USP and manufacturer's certificates that ensure the traceability of weighing results to your national standard and meet the requirements of the widest variety of quality management systems.

## Compliance with the Standards of the Regulated Industry

- $\cdot$  Sartorius equipment qualification services (IQ|OQ) will provide you with the quality documents you require to operate your equipment in a highly regulated environment.
- Our calibration services include issuing documents that verify the quality and traceability of measurement results in compliance with ISO 17025, GLP | GMP and FDA standards.

### Trouble-Free Operation

- · Regular maintenance will ensure that your lab balances will continue to operate reliably at peak performance throughout their entire life time, giving you the best cost of ownership.
- · Professional repair service, including the use of original spare parts, will enable you to avoid unnecessary downtime.



### Installation Service

For maximum equipment performance, rely on our regularly trained service technicians.

### **Extended Warranty**

Reliably protect your investment and obtain full cost transparency with our extended warranty packages.

### Equipment Qualification (IQ|OQ)

Our comprehensive and product-specific qualification documents provide proof of the suitability of your equipment, as required by GLP | GMP and FDA standards.

## Preventive Maintenance and Service Contracts

Sartorius maintenance service ensures that your equipment will deliver dependable performance you can trust, as well as the reliable quality of your measurement results.

### Calibration Service

Our calibration certificates document the quality and traceability of your measurement results in compliance with the requirements of leading quality management systems.

### User Training | Academies

Sign up for professional training programs and courses so you and your staff can stay ahead of the curve to successfully meet the fast-paced challenges of evolving technologies and work efficiently.



### Accessories

Extend the performance capabilities of your Quintix® and Secura® with accessories from our comprehensive range:



#### YDP30

Thermal transfer printer\* for GxP printouts on standard paper, continuous-length label paper rolls or individual labels; for connection to a USB port or an RS232 port.



#### YDP40

Direct thermal printer for printouts on standard paper or continuous-length paper label rolls; for connection to a USB port or an RS232 interface port.



YRB11Z

External rechargeable battery pack for standard laboratory balances.



### VF4601

Density determination kit for solids and liquids; for balances with a readability of 0.01 mg.



### YDK03

Density determination kit for solids and liquids; for balances with a readability of 0.1 mg or 1 mg.



### YDK04

Density determination kit for solids and liquids; for balances with a readability of 10 mg (supplied without a balance).



#### YCP06SQ

Pipette calibration kit (hardware) for balances with a readability of 0.01 mg. The kit consists of a moisture trap and all required adapters.



### YDS01SQP

Draft shield for balances with a readability of 10 mg.



#### YDS02SQP

Round glass draft shield for balances with a readability of 1 mg (supplied without a balance).

<sup>\*</sup> White Paper entitled "GxP-compliant Printing and Archiving of Initial Weights and Related Weighing Data" available free of charge on request



### YFW01SQP

Special pan with a 130 mm diameter for weighing filters; for balances with a readability of 0.01 mg.



### YSP01SQP

Weighing pan with an 80 mm diameter, slotted; for increasing the weighing performance of balances with a readability of 0.01 mg.



### YWP01SQP

Weighing pan with a 90 mm diameter; includes conversion kit; for balances with a readability of 0.01 mg.



#### YHK01SQP

Interior glass draft shield for increasing the weighing performance of balances with a readability of 0.002 mg (supplied without a balance).



#### VF4589

Stainless steel weighing pan with a 50 mm diameter for balances with a readability of 0.002 mg. The set consists of a weighing pan, a low-design and a high-design round pan draft shield (supplied without a balance).

### **Additional Accessories:**

69Y03285	Standard paper and ink ribbon set for YDP30 laboratory printer	6960SE04	Dust cover for balances with a readability of 0.01 mg or 0.002 mg
69Y03286	Self-adhesive paper and ink ribbon set for YDP30 laboratory printer	6960SE03	Dust cover for balances with a readability of 0.1 mg or 1 mg
69Y03287	Standard paper for YDP 30   YDP40 lab printers	VID04 OUD	
69Y03288	Self-adhesive paper for direct thermal printing for YDP30   YDP40 laboratory printer	YIB01-0UR	lonizing blower for eliminating electro- static charges on sample containers and samples
YCC04-D09	Data cable, mini USB USB A	YSTP01	Stat-Pen ionizing probe for neutralizing electrostatic charges on samples and filters
YCC03-D09	Data cable, mini USB RS232, 9-pin	YWT09	Wooden balance table with natural stone inset
YCC03-D25	Data cable, mini USB RS232, 25-pin		for precise, reliable weighing
YDB-SECURA-5	Demo box for 0.01 mg or 0.002 mg balances	YWT03	Balance table made of natural stone, with vibration dampeners
YDB-SECURA YDB-SECURA-P	Demo box for 0.0001 g or 0.001 g balances  Demo box for 0.01 g balances	YWT04	Wall console for micro, analytical and precision balances
6960SE05	In-use covers for balances with a readability of 0.01 mg or 0.002 mg	641214	Weighing scoop made of chrome nickel steel, $90 \text{ mm} \times 32 \text{ mm} \times 8 \text{ mm}$
6960SE01	In-use covers for balances with a readability of 0.1 mg or 1 mg	6565-250	Aluminum weighing scoops, 4.5 mg (pkg. of 250) for micro balances
6960SE02	In-use covers for balances with a readability of 0.01 g $ 0.1$ g $ 1$ g	6566-50	Aluminum weighing scoops, 52 mg (pkg. of 50) for micro balances

## Quintix® Technical Specifications

Semi-Micro Balances					Analytical Balances
Model		125D-1x 1)	65-1x 1)	35-1x 1)	224-1x 1)
Design		1	1	1	2
Weighing capacity   Capacity levels	g	40   60   120	40   60	30	220
Readability	mg	0.01 0.01 0.1	0.01 0.01	0.01	0.1
Repeatability (standard deviation)	mg	0.03 0.04 0.07	0.03   0.04	0.03	0.1
Repeatability (standard deviation), typical	mg	0.02 0.04 0.07	0.02   0.04	0.03	0.1
Linearity	mg	0.1 0.1 0.2	0.1 0.1	0.1	0.1
Optimal starting point of the operating range*	g	0.0082**	0.0082**	0.0082**	0.082
Sensitivity drift between +10°C and +30°C	± ppm/K	1	1	1	1.5
Typical stabilization time	S	6 6 2	6 6	6	2
isoCAL:					
- Temperature change	K	1.5	1.5	1.5	1.5
- Time interval	h	4	4	4	4
Weighing pan size	mm	Ø 80	Ø 80	Ø 80	Ø 90
Weighing chamber height 2)	mm	218	218	218	209
Net weight, approx.	kg	7.8	7.8	7.8	4.9
Dimensions, D x W x H	mm	376 x 214 x 316			359 x 214 x 319
	inches	14.8 x 8.4 x 12.4			14.1 x 8.4 x 12.6
Version verified for legal metrology available		_	-	-	Yes
		Mini USB			
Interface port		Mini USB			
Interface port		Mini USB  Precision Balance	s		
			s 3102-1x <sup>1)</sup>	2102-1x <sup>1)</sup>	1102-1x <sup>1)</sup>
Model		Precision Balance		2102-1x 1)	1102-1x <sup>1)</sup>
Model	g	Precision Balance	3102-1x 1)		
<b>Model</b> Design	g mg	Precision Balance 5102-1x <sup>1)</sup> 4	3102-1x 1) 4	4	4
Model Design Weighing capacity Readability		Precision Balance: 5102-1x <sup>1)</sup> 4 5,100	3102-1x <sup>1)</sup> 4 3,100	4 2,100	4 1,100
<b>Model</b> Design Weighing capacity	mg	Precision Balance 5102-1x <sup>1)</sup> 4 5,100	3102-1x <sup>1)</sup> 4 3,100 10	4 2,100 10	4 1,100 10
Model  Design  Weighing capacity  Readability  Repeatability (standard deviation)  Repeatability (standard deviation), typical	mg mg	Precision Balance: 5102-1x <sup>1)</sup> 4 5,100 10 10	3102-1x <sup>1)</sup> 4 3,100 10 10	4 2,100 10 10	4 1,100 10 10
Model  Design  Weighing capacity  Readability  Repeatability (standard deviation)  Repeatability (standard deviation), typical	mg mg mg	Precision Balance: 5102-1x <sup>1)</sup> 4 5,100 10 10	3102-1x <sup>1)</sup> 4 3,100 10 10	4 2,100 10 10 10	4 1,100 10 10
Model  Design  Weighing capacity  Readability  Repeatability (standard deviation)  Repeatability (standard deviation), typical  Linearity  Optimal starting point of the operating range*	mg mg mg g	Precision Balance 5102-1x <sup>1)</sup> 4 5,100 10 10 20	3102-1x <sup>1)</sup> 4 3,100 10 10 10 20	4 2,100 10 10 10 30	4 1,100 10 10 10 30
Model Design Weighing capacity Readability Repeatability (standard deviation) Repeatability (standard deviation), typical Linearity Optimal starting point of the operating range* Sensitivity drift between +10°C and +30°C	mg mg mg	Precision Balance: 5102-1x <sup>1)</sup> 4 5,100 10 10 10 20 8.2	3102-1x <sup>1)</sup> 4 3,100 10 10 10 20 8.2	4 2,100 10 10 10 30 8.2	4 1,100 10 10 10 30 8.2
Readability Repeatability (standard deviation) Repeatability (standard deviation), typical Linearity Optimal starting point of the operating range* Sensitivity drift between +10°C and +30°C Typical stabilization time	mg mg mg g ± ppm/K	Precision Balance 5102-1x <sup>1)</sup> 4 5,100 10 10 20 8.2 3	3102-1x 1) 4 3,100 10 10 10 20 8.2 3	4 2,100 10 10 10 30 8.2 4	4 1,100 10 10 10 30 8.2 4
Model  Design  Weighing capacity  Readability  Repeatability (standard deviation)  Repeatability (standard deviation), typical  Linearity  Optimal starting point of the operating range*  Sensitivity drift between +10°C and +30°C	mg mg mg g ± ppm/K	Precision Balance 5102-1x <sup>1)</sup> 4 5,100 10 10 20 8.2 3	3102-1x 1) 4 3,100 10 10 10 20 8.2 3	4 2,100 10 10 10 30 8.2 4	4 1,100 10 10 10 30 8.2 4
Model  Design  Weighing capacity  Readability  Repeatability (standard deviation)  Repeatability (standard deviation), typical  Linearity  Optimal starting point of the operating range*  Sensitivity drift between +10°C and +30°C  Typical stabilization time  isoCAL:	mg mg mg g ± ppm/K s	Precision Balance 5102-1x <sup>1)</sup> 4 5,100 10 10 10 20 8.2 3	3102-1x <sup>1)</sup> 4 3,100 10 10 10 20 8.2 3 1	4 2,100 10 10 10 30 8.2 4 1.5	4 1,100 10 10 10 30 8.2 4 1.5
Model  Design  Weighing capacity  Readability  Repeatability (standard deviation)  Repeatability (standard deviation), typical  Linearity  Optimal starting point of the operating range*  Sensitivity drift between +10°C and +30°C  Typical stabilization time  isoCAL:  - Temperature change  - Time interval	mg mg mg g ± ppm/K s	Precision Balance 5102-1x <sup>1)</sup> 4 5,100 10 10 20 8.2 3 1	3102-1x 1) 4 3,100 10 10 10 20 8.2 3 1	4 2,100 10 10 10 30 8.2 4 1.5	4 1,100 10 10 10 30 8.2 4 1.5
Model  Design  Weighing capacity  Readability  Repeatability (standard deviation)  Repeatability (standard deviation), typical  Linearity  Optimal starting point of the operating range*  Sensitivity drift between +10°C and +30°C  Typical stabilization time  isoCAL:  - Temperature change  - Time interval  Weighing pan size	mg mg mg g ± ppm/K s	Precision Balance: 5102-1x <sup>1)</sup> 4 5,100 10 10 10 20 8.2 3 1	3102-1x 1) 4 3,100 10 10 10 20 8.2 3 1	4 2,100 10 10 10 30 8.2 4 1.5	4 1,100 10 10 10 30 8.2 4 1.5
Model  Design  Weighing capacity  Readability  Repeatability (standard deviation)  Repeatability (standard deviation), typical  Linearity  Optimal starting point of the operating range*  Sensitivity drift between +10°C and +30°C  Typical stabilization time  isoCAL:  - Temperature change  - Time interval  Weighing pan size  Weighing chamber height 2)	mg mg mg g ± ppm/K s	Precision Balance 5102-1x <sup>1)</sup> 4 5,100 10 10 20 8.2 3 1 2 6 Ø 180	3102-1x 1) 4 3,100 10 10 10 20 8.2 3 1 2 6 Ø 180	4 2,100 10 10 10 30 8.2 4 1.5	4 1,100 10 10 10 30 8.2 4 1.5
Model  Design  Weighing capacity  Readability  Repeatability (standard deviation)  Repeatability (standard deviation), typical  Linearity  Optimal starting point of the operating range*  Sensitivity drift between +10°C and +30°C  Typical stabilization time  isoCAL:  - Temperature change  - Time interval  Weighing pan size  Weighing chamber height 2)  Net weight, approx.	mg mg mg g ± ppm/K s  K h mm	Precision Balance 5102-1x <sup>1)</sup> 4 5,100 10 10 10 20 8.2 3 1 2 6 Ø 180	3102-1x 1) 4 3,100 10 10 10 20 8.2 3 1 2 6 Ø 180	4 2,100 10 10 10 30 8.2 4 1.5	4 1,100 10 10 10 30 8.2 4 1.5 2 6 Ø 180 - 4.7
Model  Design  Weighing capacity  Readability  Repeatability (standard deviation)  Repeatability (standard deviation), typical  Linearity  Optimal starting point of the operating range*  Sensitivity drift between +10°C and +30°C  Typical stabilization time  isoCAL:  Temperature change  Time interval	mg mg mg mg g ± ppm/K s  K h mm mm	Precision Balance 5102-1x <sup>1)</sup> 4 5,100 10 10 10 20 8.2 3 1 2 6 Ø 180 - 5.2	3102-1x 1) 4 3,100 10 10 10 20 8.2 3 1 2 6 Ø 180	4 2,100 10 10 10 30 8.2 4 1.5 2 6 Ø 180	4 1,100 10 10 10 30 8.2 4 1.5 2 6 Ø 180 - 4.7

<sup>\*</sup> The USP (United States Pharmacopeia) Chapter 41 defines the optimal operating range as being from 820 d to the maximum capacity; This value can typically be greater, depending on the place where the balance is set up and on the ambient conditions

 $<sup>\</sup>ensuremath{^{**}}$  Used together with the slotted 80 mm weighing pan, YSP01SQP



		Milligram Balan	ces			Precision Balar
124-1x <sup>1)</sup>	64-1x 1)	613-1x 1)	513-1x 1)	313-1x 1)	213-1x 1)	6102-1x 1)
2	2	3	3	3	3	4
120	60	610	510	310	210	6,100
0.1	0.1	1	1	1	1	10
0.1	0.1	1	1	1	1	10
0.1	0.1	1	1	1	1	10
0.1	0.1	2	2	2	2	20
0.082	0.082	0.82	0.82	0.82	0.82	8.2
1.5	1.5	3	3	3	3	3
2	2	1	1	1	1	1
1.5	1.5	2	2	2	2	2
4	4	6	6	6	6	6
Ø 90	Ø 90	Ø 120	Ø 120	Ø 120	Ø 120	Ø 180
209	209	209	209	209	209	-
4.9	4.9	4.9	4.9	4.9	4.9	5.2
						359 x 214 x 94
Yes	Yes	Yes	Yes	Yes	Yes	Yes
612-1x 1)	412-1x 1)	6101-1x <sup>1)</sup>	5101-1x 1)	2101-1x <sup>1)</sup>	6100-1x <sup>1)</sup>	5100-1x 1)
4	4	4	4	4	4	4
610	410	6,100	5,100	2,100	6,100	5,100
10	10	100	100	100	1,000	1,000
10	10	100	100	100	500	500
10	10	100	100	100	500	500
30	30	300	300	300	1,000	1,000
8.2	8.2	82	82	82	820	820
			0	0	0	0
4	4	8	8	8	8	8

2

6

Ø 180

4.7

Yes

2

6

Ø 180

4.7

2

6

4.7

Yes

Ø 180

2

6

Ø 180

4.7

Yes

2

6

4.7

Yes

Ø 180

2

6

Ø 180

4.7

Yes

2

6

4.7

Ø 180

<sup>&</sup>lt;sup>1)</sup> Placeholder for possible names of country-specific model versions

 $<sup>^{\</sup>mbox{\tiny 2)}}$  Top edge of the weighing pan to the bottom edge of the uppermost draft shield plate

## Secura® Technical Specifications

		Micro Balance	Semi-Micro Balance	S
Model		26-1x <sup>1)</sup>	225D-1x <sup>1)</sup>	125-1x <sup>1)</sup>
Design		1	2	2
Weighing capacity   Capacity levels	g	21	60  120 220	60 120
Readability	mg	0.002	0.01 0.01 0.1	0.01 0.01
Repeatability (standard deviation)	mg	0.004	0.03 0.04 0.07	0.03 0.07
Repeatability (standard deviation), typical	mg	0.003	0.02 0.04 0.07	0.02 0.07
Linearity	mg	0.01	0.1 0.1 0.2	0.1 0.1
Optimal starting point of the operating range*	g	0.00164**	0.0082***	0.0082***
Sensitivity drift between +10°C and +30°C	± ppm/K	1	1	1
Typical stabilization time	S	8	6 6 2	6 6
isoCAL:				
- Temperature change	K	1.5	1.5	1.5
- Time interval	h	4	4	4
Weighing pan size	mm	Ø 50	Ø 80	Ø 80
Weighing chamber height 2)	mm	218	218	218
Net weight, approx.	kg	8.0	7.8	7.8
Dimensions, D x W x H	mm inches	376 x 214 x 316 14.8 x 8.4 x 12.4		
Version verified for legal metrology available		Yes	Yes	Yes
Interface port		Mini USB		
		Milligram Balances	Precision Balances	
Model		Milligram Balances	Precision Balances	5102-1x <sup>-1)</sup>
Model Design		213-1x 1)	6102-1x 1)	5102-1x <sup>1)</sup>
Design	a	213-1x <sup>1)</sup>	6102-1x <sup>1)</sup>	5
Design Weighing capacity	g ma	213-1x <sup>1)</sup> 4 210	6102-1x <sup>1)</sup> 5 6,100	5 5,100
Design Weighing capacity Readability	mg	213-1x <sup>1)</sup> 4 210 1	6102-1x <sup>1)</sup> 5 6,100 10	5 5,100 10
Design Weighing capacity Readability Repeatability (standard deviation)	mg mg	213-1x <sup>1)</sup> 4 210 1	6102-1x <sup>1)</sup> 5 6,100 10 10	5 5,100 10 10
Design Weighing capacity Readability Repeatability (standard deviation) Repeatability (standard deviation), typical	mg mg mg	213-1x <sup>1)</sup> 4 210 1 1	6102-1x <sup>1)</sup> 5 6,100 10 10	5 5,100 10 10 10
Design Weighing capacity Readability Repeatability (standard deviation) Repeatability (standard deviation), typical Linearity	mg mg mg	213-1x <sup>1)</sup> 4 210 1 1 2	6102-1x <sup>1)</sup> 5 6,100 10 10 20	5 5,100 10 10 10 20
Design Weighing capacity Readability Repeatability (standard deviation) Repeatability (standard deviation), typical Linearity Optimal starting point of the operating range*	mg mg mg mg	213-1x <sup>1)</sup> 4 210 1 1 1 2 0.82	6102-1x <sup>1)</sup> 5 6,100 10 10 10 20 8.2	5 5,100 10 10 10 20 8.2
Design Weighing capacity Readability Repeatability (standard deviation) Repeatability (standard deviation), typical Linearity Optimal starting point of the operating range* Sensitivity drift between +10°C and +30°C	mg mg mg g t ppm/K	213-1x <sup>1)</sup> 4 210 1 1 1 2 0.82	6102-1x <sup>1)</sup> 5 6,100 10 10 10 20 8.2	5 5,100 10 10 10 20 8.2 2
Design Weighing capacity Readability Repeatability (standard deviation) Repeatability (standard deviation), typical Linearity Optimal starting point of the operating range* Sensitivity drift between +10°C and +30°C Typical stabilization time	mg mg mg mg	213-1x <sup>1)</sup> 4 210 1 1 1 2 0.82	6102-1x <sup>1)</sup> 5 6,100 10 10 10 20 8.2	5 5,100 10 10 10 20 8.2
Design Weighing capacity Readability Repeatability (standard deviation) Repeatability (standard deviation), typical Linearity Optimal starting point of the operating range* Sensitivity drift between +10°C and +30°C	mg mg mg g t ppm/K	213-1x <sup>1)</sup> 4 210 1 1 1 2 0.82	6102-1x <sup>1)</sup> 5 6,100 10 10 10 20 8.2	5 5,100 10 10 10 20 8.2 2
Design Weighing capacity Readability Repeatability (standard deviation) Repeatability (standard deviation), typical Linearity Optimal starting point of the operating range* Sensitivity drift between +10°C and +30°C Typical stabilization time isoCAL:	mg mg mg g t ppm/K s	213-1x <sup>1)</sup> 4 210 1 1 1 2 0.82 2 1	6102-1x <sup>1)</sup> 5 6,100 10 10 10 20 8.2 2	5 5,100 10 10 10 20 8.2 2
Design Weighing capacity Readability Repeatability (standard deviation) Repeatability (standard deviation), typical Linearity Optimal starting point of the operating range* Sensitivity drift between +10°C and +30°C Typical stabilization time isoCAL: - Temperature change	mg mg mg g t ppm/K s	213-1x <sup>1)</sup> 4 210 1 1 1 2 0.82 2 1	6102-1x <sup>1)</sup> 5 6,100 10 10 20 8.2 2 1	5 5,100 10 10 10 20 8.2 2 1
Design Weighing capacity Readability Repeatability (standard deviation) Repeatability (standard deviation), typical Linearity Optimal starting point of the operating range* Sensitivity drift between +10°C and +30°C Typical stabilization time isoCAL: - Temperature change - Time interval	mg mg mg g	213-1x <sup>1)</sup> 4 210 1 1 1 2 0.82 2 1	6102-1x <sup>1)</sup> 5 6,100 10 10 10 20 8.2 2 1	5 5,100 10 10 10 20 8.2 2 1
Design Weighing capacity Readability Repeatability (standard deviation) Repeatability (standard deviation), typical Linearity Optimal starting point of the operating range* Sensitivity drift between +10°C and +30°C Typical stabilization time isoCAL: - Temperature change - Time interval Weighing pan size	mg mg mg g ############################	213-1x <sup>1)</sup> 4 210 1 1 1 2 0.82 2 1 2 6 Ø 120	6102-1x <sup>1)</sup> 5 6,100 10 10 10 20 8.2 2 1 2 6 Ø 180	5 5,100 10 10 10 20 8.2 2 1 2 6 Ø 180
Design Weighing capacity Readability Repeatability (standard deviation) Repeatability (standard deviation), typical Linearity Optimal starting point of the operating range* Sensitivity drift between +10°C and +30°C Typical stabilization time isoCAL: - Temperature change - Time interval Weighing pan size Weighing chamber height <sup>2)</sup>	mg mg mg mg g ± ppm/K s	213-1x <sup>1)</sup> 4 210 1 1 1 2 0.82 2 1 2 6 Ø 120 209	6102-1x <sup>1)</sup> 5 6,100 10 10 10 20 8.2 2 1 2 6 Ø 180	5 5,100 10 10 10 20 8.2 2 1 2 6 Ø 180
Design Weighing capacity Readability Repeatability (standard deviation) Repeatability (standard deviation), typical Linearity Optimal starting point of the operating range* Sensitivity drift between +10°C and +30°C Typical stabilization time isoCAL: - Temperature change - Time interval Weighing pan size Weighing chamber height 2) Net weight, approx.	mg mg mg mg g ± ppm/K s  K h mm mm kg mm	213-1x <sup>1)</sup> 4 210 1 1 1 2 0.82 2 1 2 6 Ø 120 209 5.1 359 x 214 x 319	6102-1x 1)  5 6,100  10 10 10 20 8.2 2 1 2 6 Ø 180 - 5.2 359 x 214 x 94	5 5,100 10 10 10 20 8.2 2 1 2 6 Ø 180

<sup>\*</sup>The USP (United States Pharmacopeia) Chapter 41 defines the optimal operating range as being from 820 d to the maximum capacity; This value can typically be greater, depending on the place where the balance is set up and the ambient conditions

<sup>\*\*</sup> Used together with the interior glass draft shield, YHK01QP

<sup>\*\*\*</sup> Used together with the slotted 80 mm weighing pan, YSP01SQP



Analytical Balances			Milligram Balances				
324-1x 1)	224-1x 1)	124-1x <sup>1)</sup>	1103-1x 1)	613-1x 1)	513-1x 1)	313-1x 1)	
2	3	3	4	4	4	4	
320	220	120	1,100	610	510	310	
0.1	0.1	0.1	1	1	1	1	
0.1	0.1	0.1	1	1	1	1	
0.1	0.1	0.1	1	1	1	1	
0.3	0.2	0.2	2	2	2	2	
0.082	0.082	0.082	0.82	0.82	0.82	0.82	
1	1.5	1.5	1,5	2	2	2	
2	2	2	1,5	1	1	1	
1.5	1.5	1.5	1.5	2	2	2	
4	4	4	4	6	6	6	
Ø 90	Ø 90	Ø 90	Ø 120	Ø 120	Ø 120	Ø 120	
218	209	209	209	209	209	209	
7.9	5.1	5.1	5.9	5.1	5.1	5.1	
	359 x 214 x 319 14.1 x 8.4 x 12.6						
Yes	Yes	Yes	Yes	Yes	Yes	Yes	

3102-1x <sup>1)</sup>	2102-1x 1)	1102-1x 1)	612-1x <sup>1)</sup>	6101-1x 1)	3101-1x <sup>1)</sup>
5	5	5	5	5	5
3,100	2,100	1,100	610	6,100	3,100
10	10	10	10	100	100
10	10	10	10	50	50
10	10	10	10	50	50
20	20	20	20	100	100
8.2	8.2	8.2	8.2	82	82
2	2	2	2	2	2
1	1	1	1	1	1
2	2	2	2	2	2
6	6	6	6	6	6
Ø 180	Ø 180	Ø 180	Ø 180	Ø 180	Ø 180
-	-	-	-	-	-
5.2	5.2	5.2	4.7	5.2	5.2
Yes	Yes	Yes	Yes	Yes	Yes

<sup>&</sup>lt;sup>1)</sup> Placeholder for possible names of country-specific model versions

 $<sup>^{\</sup>mbox{\tiny 2)}}$  Top edge of the weighing pan to the bottom edge of the uppermost draft shield plate

### Europe

Germany

Sartorius Lab Instruments GmbH & Co. KG Otto-Brenner-Strasse 20 37079 Goettingen

Phone +49.551.308.0 Fax +49.551.308.3289

France & Suisse Romande

Sartorius France 2, rue Antoine Laurent de Lavoisier ZA de la Gaudrée 91410 Dourdan

Phone +33.1.70.62.50.00 Fax +33.1.64.59.76.39

Austria

Sartorius Austria GmbH Modecenterstrasse 22 1030 Vienna

Phone +43.1.7965760.0 Fax +43.1.7965760.24

Belgiun

Sartorius Belgium N.V. Rue Colonel Bourg 105 1030 Bruxelles

Phone +32.2.756.06.90 Fax +32.2.481.84.11

Finland & Baltics

Sartorius Biohit Liquid Handling Oy Laippatie 1 00880 Helsinki

Phone +358.9.755.951 Fax +358.9.755.95.200

Hungary

Sartorius Hungária Kft. Kagyló u. 5. 2092 Budakeszi

Phone +3623.457.227 Fax +3623.457.147

Ireland

Sartorius Ireland Ltd. Unit 41, The Business Centre Stadium Business Park Ballycoolin Road Dublin 11

Phone +353.1.8089050 Fax +353.1.8089388 Italy

Sartorius Italy S.r.l. Viale A. Casati, 4 20835 Muggiò (MB)

Phone +39.039.4659.1 Fax +39.039.4659.88

Netherlands

Sartorius Netherlands B.V. Phone +31.30.60.53.001 Fax +31.30.60.52.917

info.netherlands@sartorius.com

Poland

Sartorius Poland sp.z o.o. ul. Wrzesinska 70 62-025 Kostrzyn

Phone +48.61.6473830 Fax +48.61.6473839

**Russian Federation** 

LLC "Sartorius RUS" Uralskaya str. 4, Lit. B 199155 St. Petersburg

Phone +7.812.327.53.27 Fax +7.812.327.53.23

Spain & Portugal

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

Phone Spain +34.913.586.095 Phone Portugal +351.800.855.800 Fax Spain +34.913.589.623 Fax Portugal +351.800.855.799

Switzerland

Sartorius Mechatronics Switzerland AG Ringstrasse 24a 8317 Tagelswangen (ZH)

Phone +41.44.746.50.00 Fax +41.44.746.50.50

U.K.

Sartorius UK Ltd. Longmead Business Centre Blenheim Road, Epsom Surrey KT19 9QQ

Phone +44.1372.737159 Fax +44.1372.726171

Ukraine

LLS "Sartorius RUS" Post Box 440 "B" 01001 Kiev, Ukraine

Phone +380.44.411.4918 Fax +380.50.623.3162 **Americas** 

USA

Sartorius Corporation 5 Orville Drive, Suite 200 Bohemia, NY 11716

Phone +1.631.254.4249 Toll-free +1.800.635.2906 Fax +1.631.254.4253

Argentina

Sartorius Argentina S.A. Int. A. Ávalos 4251 B1605ECS Munro Buenos Aires

Phone +54.11.4721.0505 Fax +54.11.4762.2333

Brazil

Sartorius do Brasil Ltda Avenida Senador Vergueiro 2962 São Bernardo do Campo CEP 09600-000 - SP- Brasil

Phone +55.11.4362.8900 Fax +55.11.4362.8901

Canada

Sartorius Canada Inc. 2179 Dunwin Drive #4 Mississauga, ON L5L 1X2

Phone +1.905.569.7977 Toll-Free +1.800.668.4234 Fax +1.905.569.7021

Mexico

Sartorius de México, S.A. de C.V. Libramiento Norte de Tepotzotlan s/n, Colonia Barrio Tlacateco, Municipio de Tepotzotlan, Estado de México, C.P. 54605

Phone +52.55.5562.1102 Fax +52.55.5562.2942

leadsmex@sartorius.com

Peru

Sartorius Peru S.A.C. Av. Emilio Cavenecia 264 San Isidro 15073 Lima, Perú

Phone +51.1.441 0158 Fax +51.1.422 6100

### Asia | Pacific

Australia

Sartorius Australia Pty. Ltd. Unit 5, 7-11 Rodeo Drive Dandenong South Vic 3175

Phone +61.3.8762.1800 Fax +61.3.8762.1828

China

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

Phone +86.21.6878.2300 Fax +86.21.6878.2882 Hong Kong

Sartorius Hong Kong Ltd. Unit 1012, Lu Plaza 2 Wing Yip Street Kwun Tong Kowloon, Hong Kong

Phone +852.2774.2678 Fax +852.2766.3526

India

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

Phone +91.80.4350.5250 Fax +91.80.4350.5253

Japan

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

Phone +81.3.3740.5408 Fax +81.3.3740.5406

Malaysia

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

Phone +60.3.8996.0622 Fax +60.3.8996.0755

Singapore

Sartorius Singapore Pte. Ltd 1 Science Park Road, The Capricorn, #05-08A, Singapore Science Park II Singapore 117528

Phone +65.6872.3966 Fax +65.6778.2494

South Korea

Sartorius Korea Ltd. 8th Floor, Solid Space B/D, PanGyoYeok-Ro 220, BunDang-Gu SeongNam-Si, GyeongGi-Do, 463-400

Phone +82.31.622.5700 Fax +82.31.622.5799

Thailand

Sartorius (Thailand) Co. Ltd. 129 Rama 9 Road, Huaykwang Bangkok 10310

Phone +66.2643.8361-6 Fax +66.2643.8367