

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

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



* USP - United States Pharmacopoeia
 ** 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

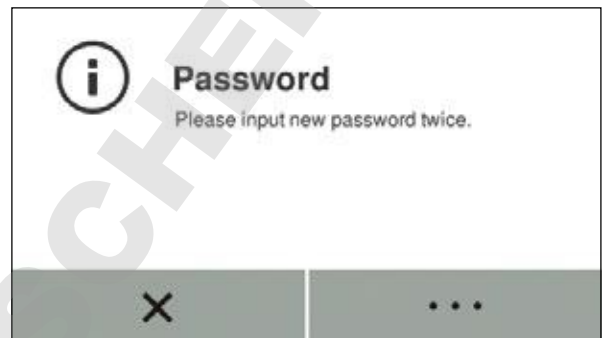
Reliably protect the system settings of your balance from any unintentional changes by activating the tamper-proof supervisor lock on Quintix®.





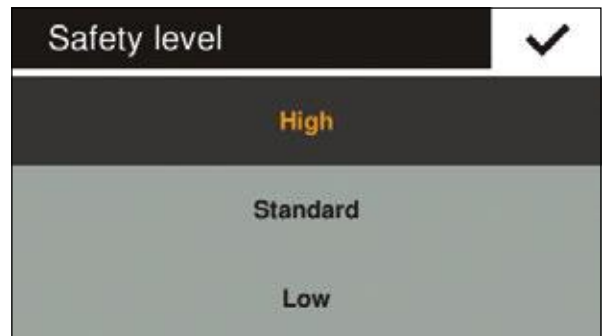
Password-Protected Menu Settings

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.



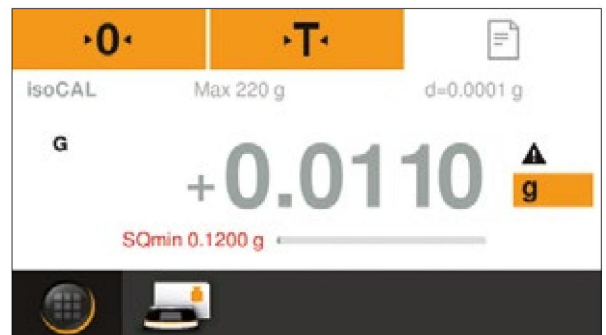
Secure Weighing Data at All Times

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.

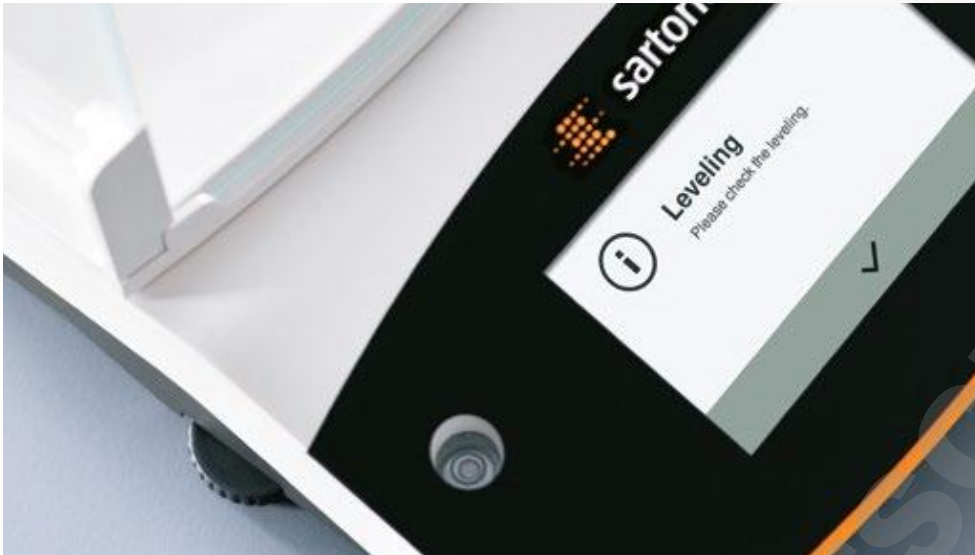


SQmin: USP-Compliant Weighing Results

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.





Leveling

The balance needs to be leveled

Sartorius

X

START

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

Unmatched Linearity and Repeatability

Maximize the efficiency of your lab work: the unique temperature management system ensures stable climate conditions within the weighing chamber.

Compensation of Ambient Effects

The user-friendly draft shield featuring One-Touch technology is convenient to use and compensates for even the slightest ambient effects.





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.



Pipette Calibration

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 µg 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.

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.





Weighing Pan and Pan Draft Shield Rings Made of High-Grade Titanium

The Secura® micro balance really shines with its unique titanium weighing pan and its two titanium pan draft shield rings supplied as standard equipment. The raised rim of the pan draft shield ring enables you to perform high-precision measurements successfully, even when the balance is exposed to interfering air flow under a laboratory fume hood. Non-magnetic and absolutely inert in contact with aggressive substances, the titanium components of the Secura® micro balance ensure 100% protected weighing.



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 lifecycle 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 be up and running 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

- 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.



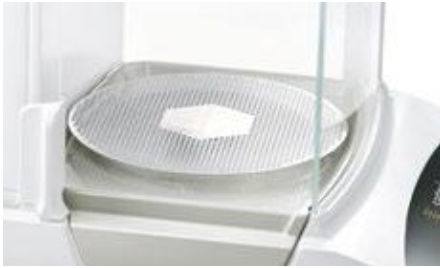
YDS01SQ

Draft shield for balances with a readability of 10 mg.



YDS02SQ

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

**YFW01SQP**

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

**YSP01SQP**

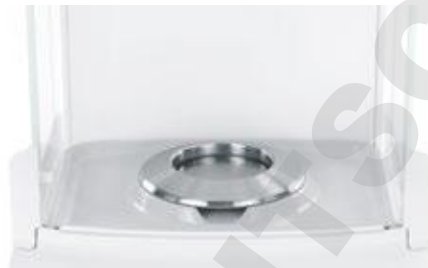
Weighing pan with an 80 mm diameter, slotted; for increasing the weighing performance of balances with a readability of 0.01 mg.

**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 |
| 69Y03286 | Self-adhesive paper and ink ribbon set for YDP30 laboratory printer |
| 69Y03287 | Standard paper for YDP 30 YDP40 lab printers |
| 69Y03288 | Self-adhesive paper for direct thermal printing for YDP30 YDP40 laboratory printer |

| | |
|------------------|------------------------------------|
| YCC04-D09 | Data cable, mini USB USB A |
| YCC03-D09 | Data cable, mini USB RS232, 9-pin |
| YCC03-D25 | Data cable, mini USB RS232, 25-pin |

| | |
|---------------------|---|
| YDB-SECURA-5 | Demo box for 0.01 mg or 0.002 mg balances |
| YDB-SECURA | Demo box for 0.0001 g or 0.001 g balances |
| YDB-SECURA-P | Demo box for 0.01 g balances |

| | |
|-----------------|--|
| 6960SE05 | In-use covers for balances with a readability of 0.01 mg or 0.002 mg |
| 6960SE01 | In-use covers for balances with a readability of 0.1 mg or 1 mg |
| 6960SE02 | In-use covers for balances with a readability of 0.01 g 0.1 g 1 g |

| | |
|-----------------|---|
| 6960SE04 | Dust cover for balances with a readability of 0.01 mg or 0.002 mg |
| 6960SE03 | Dust cover for balances with a readability of 0.1 mg or 1 mg |

| | |
|------------------|--|
| YIB01-OUR | Ionizing blower for eliminating electrostatic charges on sample containers and samples |
| YSTP01 | Stat-Pen ionizing probe for neutralizing electrostatic charges on samples and filters |

| | |
|--------------|--|
| YWT09 | Wooden balance table with natural stone inset for precise, reliable weighing |
| YWT03 | Balance table made of natural stone, with vibration dampeners |
| YWT04 | Wall console for micro, analytical and precision balances |

| | |
|-----------------|---|
| 641214 | Weighing scoop made of chrome nickel steel, 90 mm × 32 mm × 8 mm |
| 6565-250 | Aluminum weighing scoops, 4.5 mg (pkg. of 250) for micro balances |
| 6566-50 | Aluminum weighing scoops, 52 mg (pkg. of 50) for micro balances |

Quintix® Technical Specifications

| Model | Semi-Micro Balances | | | Analytical Balances | |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| | 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 |
| Interface port | | Mini USB | | | |
| | | Precision Balances | | | |
| Model | | 5102-1x ¹⁾ | 3102-1x ¹⁾ | 2102-1x ¹⁾ | 1102-1x ¹⁾ |
| Design | | 4 | 4 | 4 | 4 |
| Weighing capacity | g | 5,100 | 3,100 | 2,100 | 1,100 |
| Readability | mg | 10 | 10 | 10 | 10 |
| Repeatability (standard deviation) | mg | 10 | 10 | 10 | 10 |
| Repeatability (standard deviation), typical | mg | 10 | 10 | 10 | 10 |
| Linearity | mg | 20 | 20 | 30 | 30 |
| Optimal starting point of the operating range* | g | 8.2 | 8.2 | 8.2 | 8.2 |
| Sensitivity drift between +10°C and +30°C | ± ppm/K | 3 | 3 | 4 | 4 |
| Typical stabilization time | s | 1 | 1 | 1.5 | 1.5 |
| isoCAL: | | | | | |
| – Temperature change | K | 2 | 2 | 2 | 2 |
| – Time interval | h | 6 | 6 | 6 | 6 |
| Weighing pan size | mm | Ø 180 | Ø 180 | Ø 180 | Ø 180 |
| Weighing chamber height ²⁾ | mm | - | - | - | - |
| Net weight, approx. | kg | 5.2 | 5.2 | 4.7 | 4.7 |
| Dimensions, D x W x H | mm | 359 x 214 x 94 | | | 359 x 214 x 88 |
| | inches | 14.1 x 8.4 x 3.7 | | | 14.1 x 8.4 x 3.5 |
| Version verified for legal metrology available | | Yes | Yes | Yes | Yes |
| Interface port | | Mini USB | | | |

* 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

** Used together with the slotted 80 mm weighing pan, YSP01SQP



Design 1

Design 2

Design 3

Design 4

Milligram Balances

Precision Balances

| 124-1x ¹⁾ | 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 14.1 x 8.4 x 3.7 |
| Yes | Yes | Yes | Yes | Yes | Yes | Yes |

| 612-1x ¹⁾ | 412-1x ¹⁾ | 6101-1x ¹⁾ | 5101-1x ¹⁾ | 2101-1x ¹⁾ | 6100-1x ¹⁾ | 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 |
| 4 | 4 | 8 | 8 | 8 | 8 | 8 |
| 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1 | 1 |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| Ø 180 | Ø 180 | Ø 180 | Ø 180 | Ø 180 | Ø 180 | Ø 180 |
| - | - | - | - | - | - | - |
| 4.7 | 4.7 | 4.7 | 4.7 | 4.7 | 4.7 | 4.7 |
| Yes | - | Yes | Yes | - | Yes | Yes |

¹⁾ Placeholder for possible names of country-specific model versions

²⁾ Top edge of the weighing pan to the bottom edge of the uppermost draft shield plate

Secura® Technical Specifications

| Model | | Micro Balance | Semi-Micro Balances | |
|--|--------------|--------------------------------------|-----------------------|----------------------|
| | | 26-1x ¹⁾ | 225D-1x ¹⁾ | 125-1x ¹⁾ |
| 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 | | |

| Model | | Milligram Balances | Precision Balances | |
|--|--------------|--------------------------------------|------------------------------------|-----------------------|
| | | 213-1x ¹⁾ | 6102-1x ¹⁾ | 5102-1x ¹⁾ |
| Design | | 4 | 5 | 5 |
| Weighing capacity | g | 210 | 6,100 | 5,100 |
| Readability | mg | 1 | 10 | 10 |
| Repeatability (standard deviation) | mg | 1 | 10 | 10 |
| Repeatability (standard deviation), typical | mg | 1 | 10 | 10 |
| Linearity | mg | 2 | 20 | 20 |
| Optimal starting point of the operating range* | g | 0.82 | 8.2 | 8.2 |
| Sensitivity drift between +10°C and +30°C | ± ppm/K | 2 | 2 | 2 |
| Typical stabilization time | s | 1 | 1 | 1 |
| isoCAL: | | | | |
| – Temperature change | K | 2 | 2 | 2 |
| – Time interval | h | 6 | 6 | 6 |
| Weighing pan size | mm | Ø 120 | Ø 180 | Ø 180 |
| Weighing chamber height ²⁾ | mm | 209 | - | - |
| Net weight, approx. | kg | 5.1 | 5.2 | 5.2 |
| Dimensions, D x W x H | mm inches | 359 x 214 x 319 14.1 x 8.4 x 12.6 | 359 x 214 x 94 14.1 x 8.4 x 3.7 | |
| Version verified for legal metrology available | | Yes | Yes | Yes |
| Interface port | | Mini USB | | |

* 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

** Used together with the interior glass draft shield, YHK01QP

*** Used together with the slotted 80 mm weighing pan, YSP01SQP



Analytical Balances

Milligram Balances

| 324-1x¹⁾ | 224-1x¹⁾ | 124-1x¹⁾ | 1103-1x¹⁾ | 613-1x¹⁾ | 513-1x¹⁾ | 313-1x¹⁾ |
|----------------------------|--------------------------------------|----------------------------|-----------------------------|----------------------------|----------------------------|----------------------------|
| 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 |

| 3102-1x¹⁾ | 2102-1x¹⁾ | 1102-1x¹⁾ | 612-1x¹⁾ | 6101-1x¹⁾ | 3101-1x¹⁾ |
|-----------------------------|-----------------------------|-----------------------------|----------------------------|-----------------------------|-----------------------------|
| 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 |

¹⁾ Placeholder for possible names of country-specific model versions

²⁾ Top edge of the weighing pan to the bottom edge of the uppermost draft shield plate

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