

# Quintix®

## **Benefits**

- PC-Direct Feature
- Automatic Internal Adjustment
- Top Performance
- Intuitive Operation
- Ergonomic Draft Shield



## **Product Information**

The Sartorius Quintix® sets new benchmarks in every aspect for standard lab balances. A number of features make Your workflow much more efficient, such as fully automatic internal adjustment, direct data transfer, ergonomic style and, above all, the entirely new touchscreen user interface with built-in application programs.

The self-explanatory icons and plain-text prompts on the large touchscreen show you all the information you need to know for the procedure – no more, no less.

## **Technical Specifications**

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

| Balance           |  |
|-------------------|--|
| Power supply      | only via Sartorius AC adaptor<br>module 6971790                              |
| Input voltage     | 12.0 – 15.0 V DC   |
| Power consumption | 2.0 W (typically)<br>4.5 W (typically), only for<br>125D-1×, 65-1× and 35-1× |

| Ambient Conditions                         |   |
|--|---|
| The specifications apply who are in place: | en the following ambient conditions   |
| Environment                                | for indoor use only   |
| Ambient temperature*                       | +10 °C to +30 °C  |
| Operational capacity                       | guaranteed between<br>+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/<br>IEC 61010-1. Safety requirements<br>for electrical equipment for mea<br>surement, control, and laboratory<br>use – Part 1: General requirements |
| Electromagnetic compatibility              | in accordance with EN 61326-1/<br>IEC 61326-1. Electrical equipment<br>for measurement, control, and<br>laboratory use – EMC requirements<br>- 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).                                   |

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

The device can therefore be

used in both areas.

<sup>\*</sup> 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                    |  |
|---------------------------------------|--|
| Levelling                             | Glass level indicator with air bubble for centering  |
| Calibration                           | nternal calibration isoCAL,<br>External calibration  |
| Selectable weight units <sup>1)</sup> | Gram, kilogram, carat, pound,<br>ounce, troy ounce, Hong Kong tael,<br>Singapore tael, Taiwan tael, grain,<br>pennyweights, milligram, parts<br>per pound, China tael, mommes,<br>Austrian carat, tola, baht, mesghal<br>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   |
| Standard built-in applications        | Weighing, Density, Percentage,<br>Checkweighing, Peak Hold,<br>Counting, Unstable Conditions  <br>Animal weighing  |

| Standard Equipment                |  |
|-----------------------------------|--|
| Special built-in lab applications | Mixing, Components, Statistics, Conversion   |
| Languages                         | English, French, German, Hungarian,<br>Italian, Polish, Portuguese, Russian,<br>Spanish, Turkish, Chinese, Japanese,<br>Korean   |
| Protection                        | <ul> <li>Chemical resistant finish of the top housing</li> <li>Glass parts of the draft shield are coated to reduce electrostatic influences</li> <li>In-use cover</li> <li>Dust cover for balances with draft shield</li> </ul> |
| Password protection               | Supervisor lock for protection against unintentional changes   |
| Anti-theft lock                   | Kensington lock and lockdown capability for cable or chain   |

<sup>1)</sup> Limited for verified models



## **Standard Models**

| Model   |         | 125D-1x <sup>1)</sup>                        | 65-1x <sup>1)</sup>                    | 35-1x <sup>1)</sup>                          |
|---|---------|--|--|--|
| Design  |         | 1  | 1                                      | 1  |
| Weighing capacity   | g       | 40   60   120                                | 40   60                                | 30   |
| Readability   | mg      | 0.01   0.01   0.1                            | 0.01   0.01                            | 0.01   |
| Repeatability (standard deviation)                          | mg      | 0.03   0.04   0.07                           | 0.03   0.04                            | 0.03   |
| Repeatability (standard deviation), typical                 | mg      | 0.02   0.04   0.07                           | 0.02   0.04                            | 0.03   |
| Linearity deviation   | mg      | 0.1   0.1   0.2                              | 0.1   0.1                              | 0.1  |
| Typical starting point of the operating range <sup>2)</sup> | mg      | 25*  | 25*                                    | 25*  |
| Optimal starting point of the operating range 2)            | mg      | 8.2*   | 8.2*                                   | 8.2*   |
| Sensitivity drift between +10 °C and +30 °C                 | ± ppm/K | 1  | 1                                      | 1  |
| Typical stabilization time                                  | S       | 6   6   2                                    | 6   6                                  | 6  |
| isoCAL:  - Temperature change  - Time interval              | K<br>h  | 1.5<br>4                                     | 1.5<br>4                               | 1.5<br>4                                     |
| Display result (depending on the set filter level)          | S       | 0.2   0.4                                    | 0.2   0.4                              | 0.2   0.4                                    |
| Weighing pan size   | mm      | $\varnothing$ 80 (optional $\varnothing$ 90) | arnothing 80 (optional $arnothing$ 90) | $\varnothing$ 80 (optional $\varnothing$ 90) |
| Weighing chamber height**                                   | mm      | 218  | 218                                    | 218  |
| Net weight, approx.   | kg      | 7.8  | 7.8                                    | 7.8  |
| IP protection class   |         | IP43   | IP43                                   | IP43   |

| Model   |         | 224-1x <sup>1)</sup> | 124-1x <sup>1)</sup> | 64-1x <sup>1)</sup> |
|---|---------|----------------------|----------------------|---------------------|
| Design  |         | 2                    | 2                    | 2                   |
| Weighing capacity   | g       | 220                  | 120                  | 60                  |
| Readability   | mg      | 0.1                  | 0.1                  | 0.1                 |
| Repeatability (standard deviation)                          | mg      | 0.1                  | 0.1                  | 0.1                 |
| Linearity deviation   | mg      | 0.2                  | 0.2                  | 0.2                 |
| Typical starting point of the operating range 2)            | mg      | 120                  | 120                  | 120                 |
| Optimal starting point of the operating range <sup>2)</sup> | mg      | 82                   | 82                   | 82                  |
| Sensitivity drift between +10 °C and +30 °C                 | ± ppm/K | 1.5                  | 1.5                  | 1.5                 |
| Typical stabilization time                                  | S       | 2                    | 2                    | 2                   |
| isoCAL:<br>– Temperature change<br>– Time interval          | K<br>h  | 1.5<br>4             | 1.5<br>4             | 1.5<br>4            |
| Display result (depending on the set filter level)          | S       | 0.2                  | 0.2                  | 0.2                 |
| Weighing pan size   | mm      | Ø 90                 | Ø 90                 | Ø 90                |
| Weighing chamber height**                                   | mm      | 209                  | 209                  | 209                 |
| Net weight, approx.   | kg      | 4.9                  | 4.9                  | 4.9                 |









Design 1 Desi

Design 2

Design 3

Design 4

| Model  |                           | 613-1x <sup>1)</sup>  | 513-1x <sup>1)</sup>  | 313-1x <sup>1)</sup>  | 213-1x <sup>1)</sup>   | 6102-1x <sup>1)</sup>  | 5102-1x <sup>1)</sup>  | 3102-1x <sup>1)</sup>  | 2102-1x <sup>1)</sup>  |
|--|---------------------------|---|---|---|--|--|--|--|--|
| Design   |                           | 3   | 3   | 3   | 3  | 4  | 4  | 4  | 4  |
| Weighing capacity  | g                         | 610   | 510   | 310   | 210  | 6,100  | 5,100  | 3,100  | 2,100  |
| Readability  | mg                        | 1   | 1   | 1   | 1  | 10   | 10   | 10   | 10   |
| Repeatability (standard deviation)   | mg                        | 1   | 1   | 1   | 1  | 10   | 10   | 10   | 10   |
| Linearity deviation  | mg                        | 2   | 2   | 2   | 2  | 20   | 20   | 20   | 30   |
| Typical starting point of the operating range <sup>2)</sup>  | g                         | 1.5   | 1.5   | 1.5   | 1.5  | 12   | 12   | 12   | 12   |
| Optimal starting point of the operating range <sup>2)</sup>  | g                         | 0.82  | 0.82  | 0.82  | 0.82   | 8.2  | 8.2  | 8.2  | 8.2  |
| Sensitivity drift between +10 °C and +30 °C  | ± ppm/K                   | 3   | 3   | 3   | 3  | 3  | 3  | 3  | 5  |
| Typical stabilization time   | S                         | 1   | 1   | 1   | 1  | 1  | 1  | 1  | 1.5  |
| isoCAL:  – Temperature change  – Time interval   | K<br>h                    | 2   | 2 6   | 4<br>12   | 4<br>12  | 2  | 2  | 4<br>12  | 4<br>12  |
| 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  | 0.1   0.2  |
| Weighing pan size  | mm                        | Ø 120   | Ø 120   | Ø 120   | Ø 120  | Ø 180  | Ø 180  | Ø 180  | Ø 180  |
| Weighing chamber height**  | mm                        | 209   | 209   | 209   | 209  | -  | -  | -  | -  |
| Net weight, approx.  | kg                        | 4.9   | 4.9   | 4.9   | 4.9  | 5.2  | 5.2  | 5.2  | 4.7  |
|  |                           |   |   |   |  |  |  |  |  |
| Model  |                           | 1102-1x <sup>1)</sup>   | 612-1x <sup>1)</sup>  | 412-1x <sup>1)</sup>  | 6101-1x <sup>1)</sup>  | 5101-1x <sup>1)</sup>  | 2101-1x <sup>1)</sup>  | 6100-1x <sup>1)</sup>  | 5100-1x <sup>1)</sup>  |
|  |                           | 1102-1x <sup>1)</sup>   | 612-1x <sup>1)</sup>  | 412-1x <sup>1)</sup>  | 6101-1x <sup>1)</sup>  | 5101-1x <sup>1)</sup>  | 2101-1x <sup>1)</sup>  | 6100-1x <sup>1)</sup>  | 5100-1x <sup>1)</sup>  |
| Design   | g                         |   |   |   |  |  |  |  |  |
| Model Design Weighing capacity Readability   | g<br>mg                   | 4   | 4   | 4   | 4  | 4  | 4  | 4  | 4  |
| Design Weighing capacity Readability Repeatability   |                           | 4<br>1,100  | 4<br>610  | 4<br>410  | 4<br>6,100   | 4<br>5,100   | 4<br>2,100   | 4<br>6,100   | 4<br>5,100   |
| Design Weighing capacity Readability Repeatability (standard deviation)  | mg                        | 4<br>1,100<br>10  | 4<br>610<br>10  | 4<br>410<br>10  | 4<br>6,100<br>100  | 4<br>5,100<br>100  | 4<br>2,100<br>100  | 4<br>6,100<br>1,000  | 4<br>5,100<br>1,000  |
| Design Weighing capacity Readability Repeatability (standard deviation) Linearity deviation Typical starting point of  | mg<br>mg                  | 4<br>1,100<br>10<br>10  | 4<br>610<br>10<br>10  | 4<br>410<br>10<br>10  | 4<br>6,100<br>100<br>100   | 4<br>5,100<br>100<br>100   | 4<br>2,100<br>100<br>100   | 4<br>6,100<br>1,000<br>500   | 4<br>5,100<br>1,000<br>500   |
| Design Weighing capacity Readability Repeatability (standard deviation) Linearity deviation Typical starting point of the operating range <sup>2)</sup> Optimal starting point of  | mg<br>mg                  | 4<br>1,100<br>10<br>10<br>30  | 4<br>610<br>10<br>10<br>30  | 4<br>410<br>10<br>10<br>30  | 4<br>6,100<br>100<br>100<br>300  | 4<br>5,100<br>100<br>100<br>300  | 4<br>2,100<br>100<br>100<br>300  | 4<br>6,100<br>1,000<br>500   | 4<br>5,100<br>1,000<br>500<br>1,000  |
| Design Weighing capacity Readability Repeatability (standard deviation) Linearity deviation Typical starting point of the operating range <sup>2)</sup> Optimal starting point of the operating range <sup>2)</sup> Sensitivity drift between  | mg<br>mg<br>mg<br>g       | 4<br>1,100<br>10<br>10<br>30<br>12  | 4<br>610<br>10<br>10<br>30<br>12  | 4<br>410<br>10<br>10<br>30<br>12  | 4<br>6,100<br>100<br>100<br>300<br>82  | 4<br>5,100<br>100<br>100<br>300<br>82  | 4<br>2,100<br>100<br>100<br>300<br>82  | 4<br>6,100<br>1,000<br>500<br>1,000<br>820   | 4<br>5,100<br>1,000<br>500<br>1,000<br>820   |
| Design<br>Weighing capacity  | mg<br>mg<br>g<br>g        | 4<br>1,100<br>10<br>10<br>30<br>12<br>8.2                                     | 4<br>610<br>10<br>10<br>30<br>12<br>8.2                                     | 4<br>410<br>10<br>10<br>30<br>12<br>8.2                                     | 4<br>6,100<br>100<br>100<br>300<br>82<br>82                                      | 4<br>5,100<br>100<br>100<br>300<br>82<br>82                                      | 4<br>2,100<br>100<br>100<br>300<br>82<br>82                                      | 4<br>6,100<br>1,000<br>500<br>1,000<br>820   | 4<br>5,100<br>1,000<br>500<br>1,000<br>820   |
| Design  Weighing capacity  Readability  Repeatability (standard deviation)  Linearity deviation  Typical starting point of the operating range <sup>2)</sup> Optimal starting point of the operating range <sup>2)</sup> Sensitivity drift between +10 °C and +30 °C  Typical stabilization time isoCAL:  – Temperature change   | mg mg g g ± ppm/K         | 4<br>1,100<br>10<br>10<br>30<br>12<br>8.2                                     | 4<br>610<br>10<br>10<br>30<br>12<br>8.2                                     | 4<br>410<br>10<br>10<br>30<br>12<br>8.2                                     | 4<br>6,100<br>100<br>100<br>300<br>82<br>82                                      | 4<br>5,100<br>100<br>100<br>300<br>82<br>82                                      | 4<br>2,100<br>100<br>100<br>300<br>82<br>82                                      | 4<br>6,100<br>1,000<br>500<br>1,000<br>820<br>820                                      | 4<br>5,100<br>1,000<br>500<br>1,000<br>820<br>820                                      |
| Design  Weighing capacity  Readability  Repeatability (standard deviation)  Linearity deviation  Typical starting point of the operating range <sup>2)</sup> Optimal starting point of the operating range <sup>2)</sup> Sensitivity drift between +10 °C and +30 °C  Typical stabilization time isoCAL:  - Temperature change  - Time interval  Display result (depending                         | mg mg g g ± ppm/K s K     | 4<br>1,100<br>10<br>10<br>30<br>12<br>8.2<br>5<br>1.5                         | 4<br>610<br>10<br>10<br>30<br>12<br>8.2<br>5<br>1.5                         | 4<br>410<br>10<br>10<br>30<br>12<br>8.2<br>5<br>1.5                         | 4<br>6,100<br>100<br>100<br>300<br>82<br>82<br>10<br>1.5                         | 4<br>5,100<br>100<br>100<br>300<br>82<br>82<br>10<br>1.5                         | 4<br>2,100<br>100<br>100<br>300<br>82<br>82<br>10<br>1.5                         | 4<br>6,100<br>1,000<br>500<br>1,000<br>820<br>820<br>10<br>1.5                         | 4<br>5,100<br>1,000<br>500<br>1,000<br>820<br>820<br>10<br>1.5                         |
| Design Weighing capacity Readability Repeatability (standard deviation) Linearity deviation Typical starting point of the operating range <sup>2)</sup> Optimal starting point of the operating range <sup>2)</sup> Sensitivity drift between +10 °C and +30 °C  | mg mg g g ± ppm/K s K     | 4<br>1,100<br>10<br>10<br>30<br>12<br>8.2<br>5<br>1.5                         | 4<br>610<br>10<br>10<br>30<br>12<br>8.2<br>5<br>1.5                         | 4<br>410<br>10<br>10<br>30<br>12<br>8.2<br>5<br>1.5                         | 4<br>6,100<br>100<br>100<br>300<br>82<br>82<br>10<br>1.5                         | 4<br>5,100<br>100<br>100<br>300<br>82<br>82<br>10<br>1.5                         | 4<br>2,100<br>100<br>100<br>300<br>82<br>82<br>10<br>1.5                         | 4<br>6,100<br>1,000<br>500<br>1,000<br>820<br>820<br>10<br>1.5                         | 4<br>5,100<br>1,000<br>500<br>1,000<br>820<br>820<br>10<br>1.5                         |
| Design  Weighing capacity  Readability  Repeatability (standard deviation)  Linearity deviation  Typical starting point of the operating range <sup>2)</sup> Optimal starting point of the operating range <sup>2)</sup> Sensitivity drift between +10 °C and +30 °C  Typical stabilization time isoCAL:  — Temperature change — Time interval  Display result (depending on the set filter level) | mg mg g g ± ppm/K s K h s | 4<br>1,100<br>10<br>10<br>30<br>12<br>8.2<br>5<br>1.5<br>4<br>24<br>0.1   0.2 | 4<br>610<br>10<br>10<br>30<br>12<br>8.2<br>5<br>1.5<br>4<br>24<br>0.1   0.2 | 4<br>410<br>10<br>10<br>30<br>12<br>8.2<br>5<br>1.5<br>4<br>24<br>0.1   0.2 | 4<br>6,100<br>100<br>100<br>300<br>82<br>82<br>10<br>1.5<br>4<br>24<br>0.1   0.2 | 4<br>5,100<br>100<br>100<br>300<br>82<br>82<br>10<br>1.5<br>4<br>24<br>0.1   0.2 | 4<br>2,100<br>100<br>100<br>300<br>82<br>82<br>10<br>1.5<br>4<br>24<br>0.1   0.2 | 4<br>6,100<br>1,000<br>500<br>1,000<br>820<br>820<br>10<br>1.5<br>4<br>24<br>0.1   0.2 | 4<br>5,100<br>1,000<br>500<br>1,000<br>820<br>820<br>10<br>1.5<br>4<br>24<br>0.1   0.2 |

In combination with weighing pan, 80 mm, slotted YSP01SQP Upper edge of the weighing pan to the lower edge of the upper draft shield panel

<sup>1)</sup> Possible terms for country-specific models:

Possible terms for country-specific models:
x = S: Standard balances without country-specific additions
x = SAR: Standard balances with country-specific additions for Argentina
x = SJP: Standard balances with country-specific additions for Japan
x = SKR: Standard balances with country-specific additions for South Korea

According to USP (United States Pharmacopeia) Chapter 41, the optimal operating range is defined from 820d to maximum weighing capacity. Depending on the installation location and environmental conditions, the value could be higher.

## Verified Models with Country-specific Type Approval Certificate

Net weight, approx.

| Model  |             | 125D-1x <sup>2)</sup>                     | 65-1x <sup>2)</sup>                          | 35-1x <sup>2)</sup>                       |
|--|-------------|---|--|---|
| Design   |             | 1   | 1  | 1   |
| Accuracy class   |             | I   | I  | I   |
| Type 3)  |             | SQP-F                                     | SQP-F  | SQP-F                                     |
| Max  | g           | 60   120                                  | 60   | 30  |
| Scale interval d   | g           | 0.00001   0.0001                          | 0.00001                                      | 0.00001                                   |
| Verification scale interval e  | g           | 0.001                                     | 0.001  | 0.001                                     |
| Min  | g           | 0.001                                     | 0.001  | 0.001                                     |
| Min (only for Models10IN)  | g           | 0.1                                       | 0.1  | 0.1                                       |
| Tare (subtractive)   |             | <100 % of the max. weight                 | hing capacity                                |   |
| Typical starting point of the operating range 4)   | g           | 0.025*                                    | 0.025*                                       | 0.025*                                    |
| Optimal starting point of the operating range 4)   | g           | 0.0082*                                   | 0.0082*                                      | 0.0082*                                   |
| Typical stabilization time   | S           | 6   2                                     | 6  | 6   |
| isoCAL:  |             |   |  |   |
| <ul><li>Temperature change</li><li>Time interval</li></ul>   | K           | 1.5                                       | 1.5  | 1.5                                       |
|  | h           | 4   | 4  | 4   |
| Display result (depending on the set filter level)   | S           | 0.2   0.4                                 | 0.2   0.4                                    | 0.2   0.4                                 |
| Weighing pan size  | mm          | arnothing 80<br>(optional $arnothing$ 90) | $\varnothing$ 80 (optional $\varnothing$ 90) | arnothing 80<br>(optional $arnothing$ 90) |
| Weighing chamber height**  | mm          | 218                                       | 218  | 218                                       |
| Net weight, approx.  | kg          | 7.8                                       | 7.8  | 7.8                                       |
| IP protection class  |             | IP43                                      | IP43   | IP43                                      |
| Model  |             | 224-1x <sup>2)</sup>                      | 124-1x <sup>2)</sup>                         | 64-1x <sup>2)</sup>                       |
| Design   |             | 2   | 2  | 2   |
| Accuracy class   |             | I   | I  |   |
| Type 3)  |             | SQP-A                                     | SQP-A  | SQP-A                                     |
| Max  | g           | 220                                       | 120  | 60  |
| Scale interval d   | mg          | 0.1                                       | 0.1  | 0.1                                       |
| Verification scale interval e  | mg          | 1   | 1  | 1   |
| Min  | g           | 0,01                                      | 0,01   | 0,01                                      |
| Min (only for Models10IN)  | g           | 0.1                                       | 0.1  | 0.1                                       |
| Tare (subtractive)   |             | <100 % of the max. wei                    | ghing capacity                               |   |
| Typical starting point of the operating range 4)   | g           | 0.12                                      | 0.12   | 0.12                                      |
| Optimal starting point of the operating range 4)   | g           | 0.082                                     | 0.082  | 0.082                                     |
| Typical stabilization time   | S           | 2   | 2  | 2   |
|  | 3           |   |  |   |
| isoCAL:  |             | 1.5                                       | 1.5  | 1.5                                       |
| isoCAL:  - Temperature change  | K           | 1.5<br>4                                  | 1.5<br>4                                     | 1.5<br>4                                  |
| isoCAL:  |             | 1.5<br>4<br>0.2                           | 1.5<br>4<br>0.2                              | 1.5<br>4<br>0.2                           |
| isoCAL:  - Temperature change  - Time interval Display result                                      | K<br>h      | 4   | 4  | 4   |
| isoCAL:  - Temperature change  - Time interval  Display result (depending on the set filter level) | K<br>h<br>s | 4<br>0.2                                  | 4<br>0.2                                     | 4<br>0.2                                  |

4.9

4.9

4.9

| Model  |        | 613-1x <sup>2)</sup> | 513-1x <sup>2)</sup> | 313-1x <sup>2)</sup> | 213-1x <sup>2)</sup> | 6102-1x <sup>2)</sup> | 5102-1x <sup>2)</sup> | 3102-1x <sup>2)</sup> | 2102-1x <sup>2)</sup> |
|--|--------|----------------------|----------------------|----------------------|----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Design   |        | 3                    | 3                    | 3                    | 3                    | 4                     | 4                     | 4                     | 4                     |
| Accuracy class                                     |        |                      |                      |                      |                      |                       |                       |                       |                       |
| Type 3)  |        | SQP-B                | SQP-B                | SQP-B                | SQP-B                | SQP-C                 | SQP-C                 | SQP-C                 | SQP-D                 |
| Max  | g      | 610                  | 510                  | 310                  | 210                  | 6,100                 | 5,100                 | 3,100                 | 2,100                 |
| Scale interval d                                   | mg     | 1                    | 1                    | 1                    | 1                    | 10                    | 10                    | 10                    | 10                    |
| Verification scale interval e                      | mg     | 10                   | 10                   | 10                   | 10                   | 100                   | 100                   | 100                   | 100                   |
| Min  | g      | 0.02                 | 0.02                 | 0.02                 | 0.02                 | 0.5                   | 0.5                   | 0.5                   | 0.5                   |
| Min (only for Models10IN)                          | g      | 0.2                  | 0.2                  | 0.2                  | 0.2                  | 5                     | 5                     | 5                     | 5                     |
| Tare (subtractive)                                 |        | < 100 % of t         | he max. weighi       | ng capacity          |                      |                       |                       |                       |                       |
| Typical starting point of the operating range 4)   | g      | 1.5                  | 1.5                  | 1.5                  | 1.5                  | 12                    | 12                    | 12                    | 12                    |
| Optimal starting point of the operating range 4)   | g      | 0.82                 | 0.82                 | 0.82                 | 0.82                 | 8.2                   | 8.2                   | 8.2                   | 8.2                   |
| Typical stabilization time                         | S      | 1                    | 1                    | 1                    | 1                    | 1                     | 1                     | 1                     | 1.5                   |
| isoCAL:  - Temperature change  - Time interval     | K<br>h | 2 4                  | 2 4                  | 2                    | 2                    | 2                     | 2                     | 2                     | 2                     |
| 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             | 0.1   0.2             |
| Weighing pan size                                  | mm     | Ø 120                | Ø 120                | Ø 120                | Ø 120                | Ø 180                 | Ø 180                 | Ø 180                 | Ø 180                 |
| Weighing chamber height**                          | mm     | 209                  | 209                  | 209                  | 209                  | _                     | -                     | -                     | -                     |
| Net weight, approx.                                | kg     | 4.9                  | 4.9                  | 4.9                  | 4.9                  | 5.2                   | 5.2                   | 5.2                   | 4.7                   |

| Model  |        | 1102-1x <sup>2)</sup> | 612-1x <sup>2)</sup> | 6101-1x <sup>2)</sup> | 5101-1x <sup>2)</sup> | 6100-1x <sup>2)</sup> | 5100-1x <sup>2)</sup> |
|--|--------|-----------------------|----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Design   |        | 4                     | 4                    | 4                     | 4                     | 4                     | 4                     |
| Accuracy class                                     |        |                       |                      |                       |                       |                       |                       |
| Type 3)  |        | SQP-D                 | SQP-D                | SQP-E                 | SQP-E                 | SQP-E                 | SQP-E                 |
| Max  | g      | 1,100                 | 610                  | 6,100                 | 5,100                 | 6,100                 | 5,100                 |
| Scale interval d                                   | mg     | 10                    | 10                   | 100                   | 100                   | 1,000                 | 1,000                 |
| Verification scale interval e                      | mg     | 100                   | 100                  | 1,000                 | 1,000                 | 1,000                 | 1,000                 |
| Min  | g      | 0.5                   | 0.5                  | 5                     | 5                     | 50                    | 50                    |
| Min (only for Models10IN)                          | g      | 5                     | 5                    | 5                     | 5                     | 50                    | 50                    |
| Tare (subtractive)                                 |        | < 100 % of the        | max. weighing cap    | acity                 |                       |                       |                       |
| Typical starting point of the operating range 4)   | g      | 12                    | 12                   | 82                    | 82                    | 820                   | 820                   |
| Optimal starting point of the operating range 4)   | g      | 8.2                   | 8.2                  | 82                    | 82                    | 820                   | 820                   |
| Typical stabilization time                         | S      | 1.5                   | 1.5                  | 1.5                   | 1.5                   | 1.5                   | 1.5                   |
| isoCAL:  – Temperature change  – Time interval     | K<br>h | 2<br>6                | 2<br>6               | 2<br>6                | 2<br>6                | 2                     | 2<br>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             |
| Weighing pan size                                  | mm     | Ø 180                 | Ø 180                | Ø 180                 | Ø 180                 | Ø 180                 | Ø 180                 |
| Net weight, approx.                                | kg     | 4.7                   | 4.7                  | 4.7                   | 4.7                   | 4.7                   | 4.7                   |

In combination with weighing pan, 80 mm, slotted YSP01SQP Upper edge of the weighing pan to the lower edge of the upper draft shield panel

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

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 = CN: CMC Type Approval Certificate for China x = OJP: Balance with Type Approval Certificate for Japan x = OBR: Balance with Type Approval Certificate for Brazil x = ORU: Balance with Type Approval Certificate for Russia x = OIN: Balance with Type Approval Certificate for India x = OAU: Balance with Type Approval Certificate for Australia

<sup>3)</sup> All models with "...CN": type "SQP"

According to USP (United States Pharmacopeia) Chapter 41, the optimal operating range is defined from 820d to maximum weighing capacity. Depending on the installation location and environmental conditions, the value could be higher.

## **Optional Accessories**

| Printers and Communications   |                               |
|---|-------------------------------|
| Premium GLP Laboratory Printer  – Printer paper for GLP laboratory printer  – Endless labels for GLP laboratory printer | YDP30<br>69Y03285<br>69Y03286 |
| Standard Laboratory Printer  – Printer paper for standard laboratory printer  | YDP40<br>69Y03287             |
| Data communication cable, USB   USB A   | YCC04-D09                     |
| Data communication cable, mini<br>USB   RS232, 9-pin  | YCC03-D09                     |
| Data communication cable, mini<br>USB   RS232, 25-pin   | YCC03-D25                     |

| General  |          |
|--|----------|
| Battery Pack for Standard Lab Balances                             | YRB11Z   |
| Draft shield for balances with a readability of 10 mg              | YDS01SQP |
| Round glass draft shield for balances with a readability of 1 mg   | YDS02SQP |
| In-use cover for balances with a readability of 0.01 mg            | 6960SE05 |
| In-use cover for balances with a readability of 0.1 mg $\mid$ 1 mg | 6960SE01 |
| In-use cover for balances with a readability of 10 mg              | 6960SE02 |
| Dust cover for balances with a readability of 0.1 mg   1 mg        | 6960SE03 |
| Dust cover for balances with a readability of 0.01 mg              | 6960SE04 |
|  |          |

| Weighing Pans (for balances design 1)        |          |
|--|----------|
| Weighing pan, 80 mm, slotted                 | YSP01SQP |
| Weighing pan, 90 mm; includes conversion kit | YWP01SQP |
| Filter weighing pan, 130 mm                  | YFW01SQP |

| Density Determination  |        |
|--|--------|
| Density kit for balances with a readability of 0.01 mg       | VF4601 |
| Density kit for balances with a readability of 0.1 mg   1 mg | YDK03  |
| Density kit for balances with a readability of 10 mg         | YDK04  |

| Calibration Weights  |              |
|--|--------------|
| Calibration for lab balance<br>model 224; 313; 213<br>– Proof Line knob weight 200 g,<br>OIML class E2, with DAkkS certificate         | YCW522-AC-02 |
| 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<br>model 125D; 65; 64<br>– Proof Line knob weight 50 g,<br>OIML class E2, with DAkkS certificate           | YCW452-AC-02 |
| Calibration for lab balance model 35 – Proof Line knob weight 20 g, OIML class E2, with DAkkS certificate                              | YCW422-AC-02 |
| Calibration for lab balance model 613; 513  – Proof Line knob weight 500 g, OIML class E2, with DAkkS certificate                      | YCW552-AC-02 |
| Calibration for lab balance<br>model 6102; 5102<br>– Proof Line knob weight 5 kg,<br>OIML class E2, with DAkkS certificate             | YCW652-AC-02 |
| Calibration for lab balance<br>model 3102; 2102<br>– Proof Line knob weight 2 kg,<br>OIML class F1, with DAkkS certificate             | YCW623-AC-02 |
| Calibration for lab balance model 1102  – Proof Line knob weight 1 kg, OIML class F1, with DAkkS certificate                           | YCW613-AC-02 |
| Calibration for lab balance model 612  – Proof Line knob weight 500 g, OIML class F1, with DAkkS certificate                           | YCW553-AC-02 |
| Calibration for lab balance model 412  – Proof Line knob weight 200 g, OIML class F1, with DAkkS certificate                           | YCW523-AC-02 |
| Calibration for lab balance<br>model 6101; 5101; 6100; 5100<br>– Proof Line knob weight 5 kg, OIML class<br>F2, with DAkkS certificate | YCW654-AC-02 |
| Calibration for lab balance model 2101  – Proof Line knob weight 2 kg, OIML class F2, with DAkkS certificate                           | YCW624-AC-02 |
|  |              |

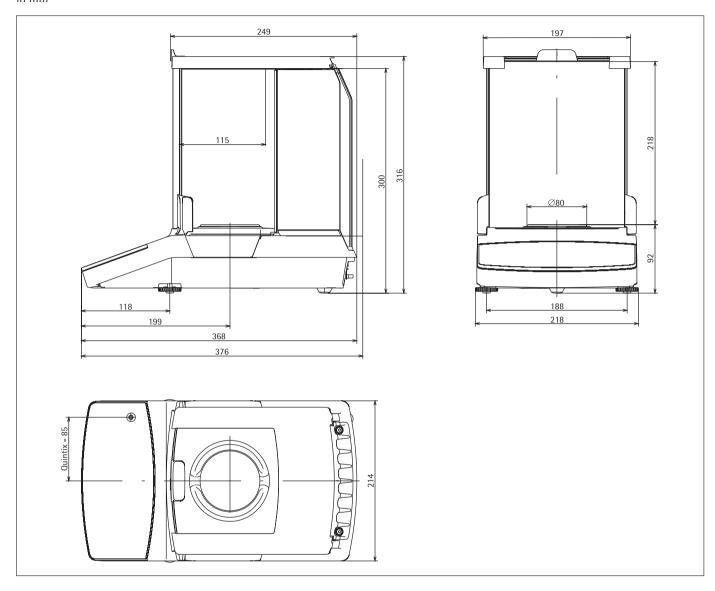




Calibration Weights

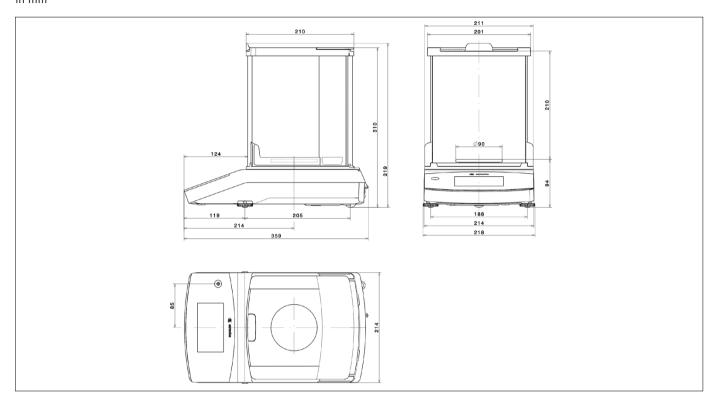
## **Technical Drawings**

Models with a readability of 0.01 mg, in mm

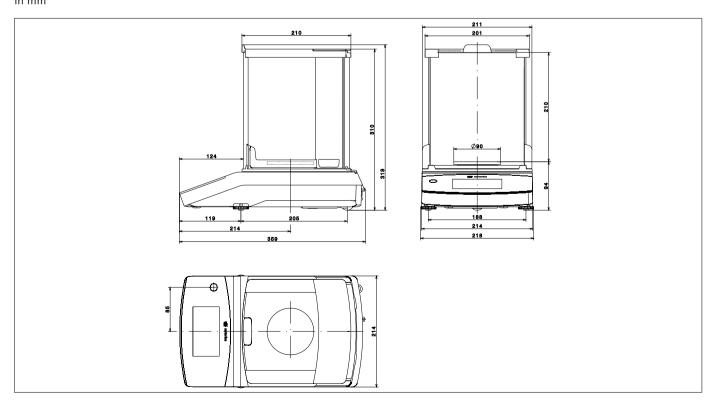


## **Technical Drawings**

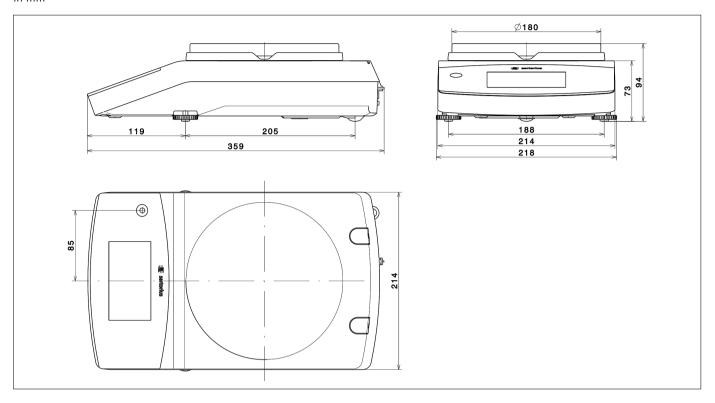
Models with a readability of 0.1 mg, in mm



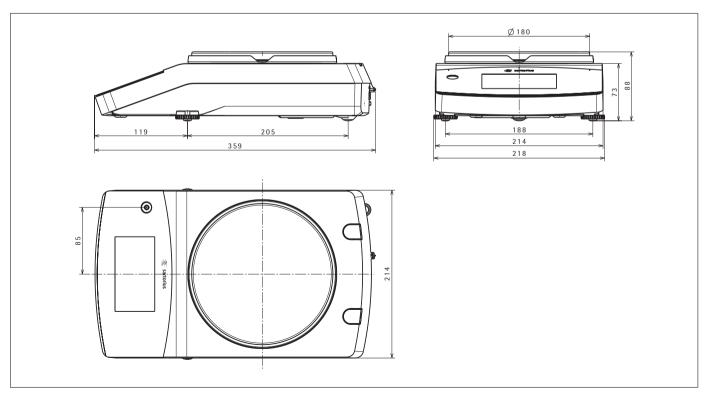
Models with a readability of 1 mg, in mm



Models with a readability of 10 mg and a capacity of  $\geq$ 3,100 g, in mm



Models with a readability of ≥10 mg (exclude 3102, 5102, 6102), in mm



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