sartorius
mechatronics

Cubis®. The New Benchmark

turning science into solutions

Cubis®.

The Definition of a New Class.

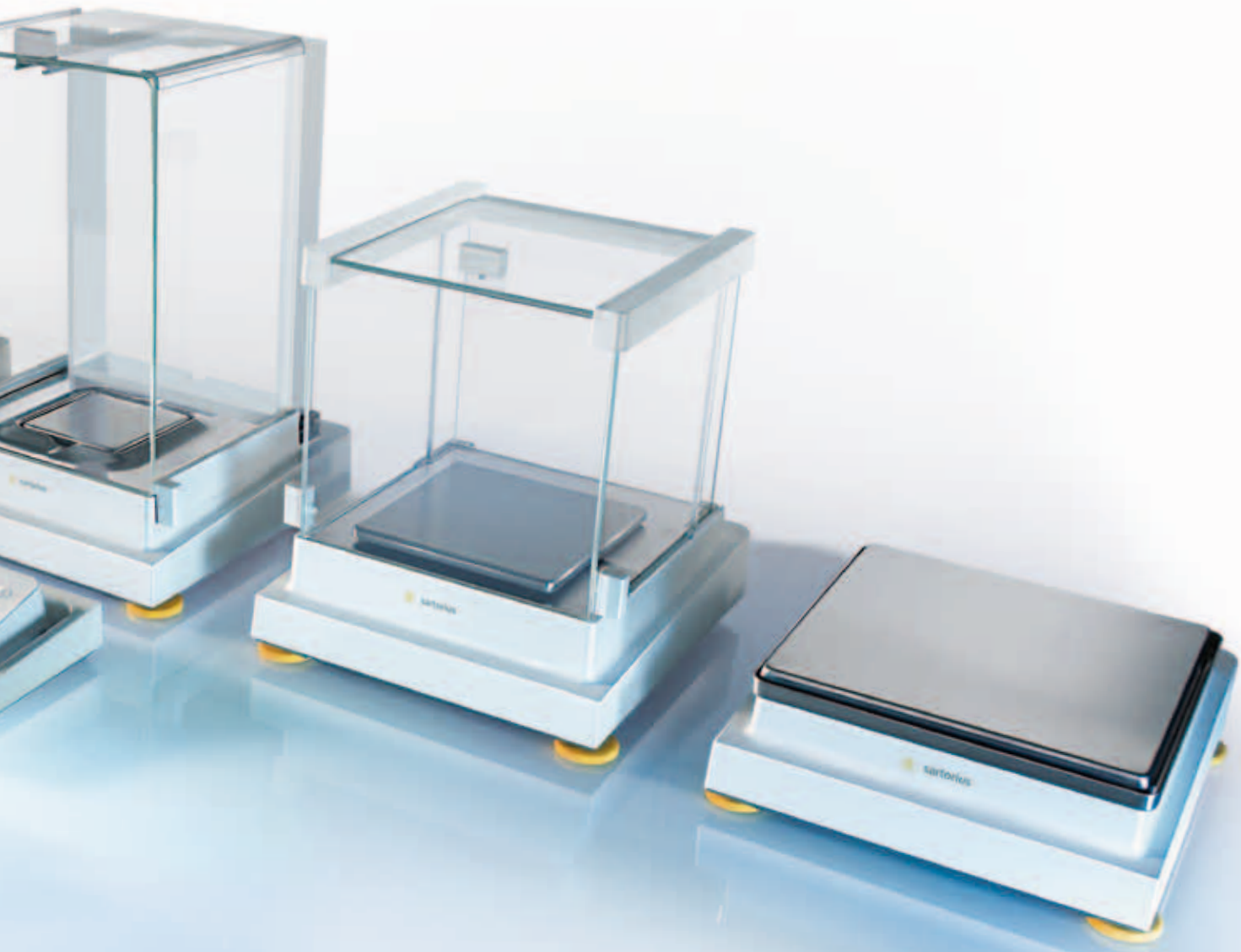
The Cubis® was developed for users, who expect the best possible performance from a lab balance across the board but only want to invest in what is necessary. For this reason, Sartorius has gone far beyond simply further developing what already exists. The new Cubis® represents a groundbreaking new concept:

Cubis® is the first lab balance of an entirely modular design which means that display and control units, weighing models, draft shield models, interfaces, and much more can be freely combined.

But it doesn't end there. Even the technological innovations and features included in this lab balance for the first time place the Cubis® far beyond the current standards for premium lab balances.

It offers the user never before seen freedom of choice. The user can configure his or her lab balance to suit his or her individual needs.

This makes every Cubis® a unique and unrivaled balance because every Cubis® is tailored to an individual profile of specifications without compromising a thing.



CUBIS MODULAR DESIGN

Safe and Easy to Use with Q-Guide

In addition to aspects strictly involving metrological specifications, preparing for and performing a weighing procedure and meeting the relevant regulatory standards are gaining ever-increasing importance.

With the Q-Guide user interface, work tasks are not only faster but Q-Guide eliminates the need for the user to follow time-consuming working steps.

The Q-Guide is designed so that the user only ever sees what is needed for carrying out the task in hand. Once a task has been defined, Q-guide guides the user interactively through the settings and hides information that is not relevant.

MSU – Classic and Universal
- High-resolution, generously sized, monochrome graphic display.
- Keys that feature positive click action and precise activation of functions.
- For users who wish to combine classic key-operated control with the widest possible range of performance features.

MSA – The Ultimate Solution
- Top-of-the-line technology and information design.
- Touch screen featuring high-resolution color TFT for brilliant reproduction of text and graphics.
- Outstanding ease of use and display quality, especially for complex applications.

MSE – Weighing Pure and Simple
- Large, high-contrast liquid crystal display.
- Easy-to-understand menu guidance with short text prompts.
- Clearly structured keys for precise activation of functions.

Consistently Precise Leveling with the Automatic Q-Level Function

Exact leveling of a lab balance is the key element in inspection equipment monitoring and is essential for reliable readings. This is where Q-Level can provide valuable support because with Q-Level the user can define which tasks the balance should carry out and which the user will perform himself/herself. This is possible regardless of which of the three display | control units is chosen.

Cubis® is the first lab balance that automatically checks, performs and documents its exact leveling. There's no easier way to ensure that a lab balance is set up properly. This lifts the burden on the user and allows more time for the actual tasks as well as being safer.

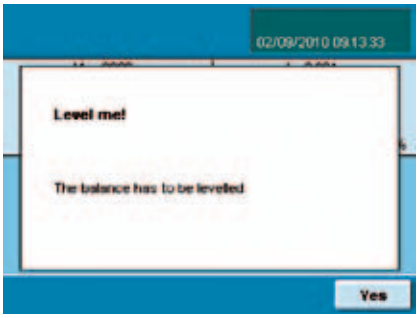
In pharmaceutical laboratories balances are often installed into safety weighing cabinets or workbenches to protect the user and prevent the sample from being contaminated. With conventional balances leveling often presents the problem that the mechanical level indicator is poorly visible or cannot be seen at all and the protective compartment must not be opened. With Q-Level this is no longer a problem. With the touch of a button, the Cubis® balance is leveled, quickly, safely and with a significantly reduced risk of contamination for the user.

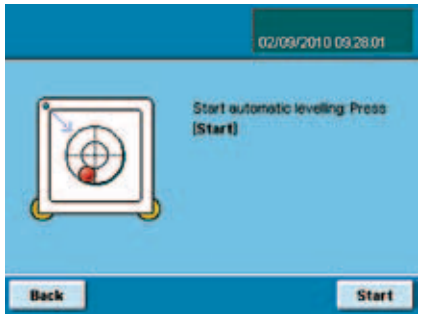
Leveling Procedure	Check	Alert message	Leveling
Automatic	☐	☐	☐ 1)
Automatic once started by the user	☐	☐	☐ 1)
Manual with operator guidance	☐	☐	☐

1) motorized leveling feet

☐ Automatic
☐ By pressing a button
☐ Manual, with guidance via the display

Monitoring Leveling
Alongside manual leveling as standard with operator guidance, Cubis® offers the option of automatic leveling at the touch of a button[2]. If the Cubis® balance's constant monitoring function detects that it is no longer leveled, an alert message will appear and the user will be prompted to start the leveling process. Once started, internal motors level the balance in a matter of seconds.





2) not available on models with weighing capacity > 6.2 kg and models with readabilities ≤ 0.001 mg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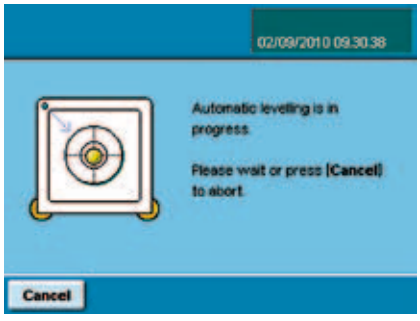
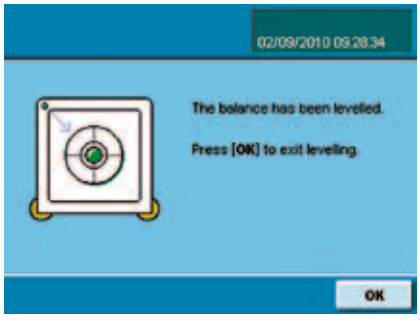
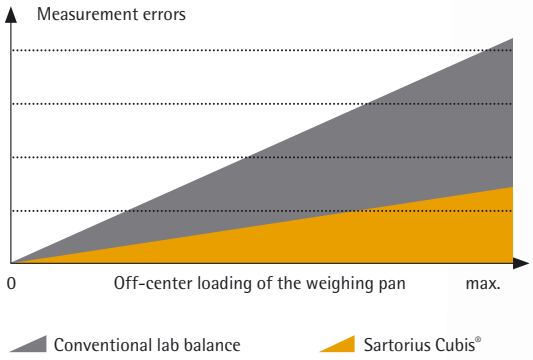

02/09/2010 09:30:38
Automatic levelling is in progress.
Please wait or press [Cancel] to abort.
Cancel


02/09/2010 09:28:34
The balance has been levelled.
Press [OK] to exit levelling.
OK

More Safety,
More Application Possibilities

The first lab balance with Q-Pan off-center load compensation
The Cubis® is the first lab balance that compensates for off-center loading of the weighing pan. Q-Pan simultaneously offers the user two advantages: A significant reduction in the off-center load error and consequently the use of larger weighing pans.



Q-Grid
The Q-Grid grid pan (accessory YWP03MS) is available for all Cubis® models with a readability of 10 or 100 mg (apart from model 5202S). Foremost it allows the use of a balance with a larger pan with the same laminar flow as safety weighing cabinets, workbenches, or even laboratory hoods without restricting the performance of the balance. As a result, an application often encountered in pharmaceutical labs is made easier.

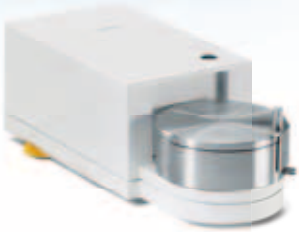
Q-Grip
Q-Grip (accessory YFH01MS) is a flexible and adaptable "one-size-fits-all" holder for bottles, test tubes, reaction containers or filters (up to 120 mm) for all Cubis® semi-microbalances and analytical balances. Simply use it in place of the original weighing pan of the balance. Its individually adjustable angle always ensures ergonomic work during filling processes or using pipettes to transfer samples into various containers.


0-Stat
38.4219

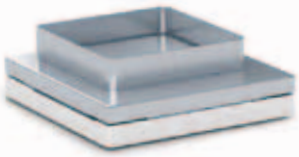
The Right Draft Shield for Any Task

All draft shield models for the Cubis® offer noticeable, practical advantages over conventional lab balances.
Despite their high mechanical stability, the draft shields of the Cubis® run very smoothly thanks to their new materials. They allow outstanding visibility over the entire weighing chamber and protect it against external impact factors. Contrary to conventional lab balances, where an electrostatically charged draft shield can lead to measuring errors, the Cubis® eliminates these potential sources for error through a conductive coating on the glass panels.

DM Draft Shield
Automatic ultramicrobalance and microbalance draft shield with learning capability; for models with 0.001 mg, 0.0001 mg readability (weighing modules 6.6S, 3.6P, 2.7S)



DF Filter Balance Draft Shield
Manual stainless-steel draft shield specially for weighing of filters; for models with 0.001 mg, 0.0001 mg readability (weighing modules 6.6S, 2.7S; not for 3.6P)



DR Draft Shield
Removable, flat draft shield made of stainless steel for all models with 1 mg readability and for model 5202S

Cleaning
For cleaning purposes, all doors of the draft shield can be disassembled in just a few steps, without compromising the stability of the unit as a whole.

Opening the Draft Shield
The motorized draft shield can be opened and closed without being touched simply by using the infrared switch (YHS01MS). This offers additional safety, especially for applications involving toxic substances.

Q-Stat
At the touch of a button, the Q-Stat ionizer integrated into the DI draft shield can quickly dissipate electrostatic charges on sample containers and substances, which would affect the weighing measurements. The effective principle of four ion jets achieves this without disruptive air streams. As a result, stable and accurate weighing results can be guaranteed regardless of external influences.

DE Draft Shield
Manual draft shield for all models with 1 mg readability and for model 5202S

DU Draft Shield
Manual analytical balance draft shield for all models with 0.01 mg, 0.1 mg, and 1 mg readability and for model 5202S

DA Draft Shield
Automatic analytical balance draft shield for all models with 0.01 mg, 0.1 mg, and 1 mg readability and for model 5202S

DI Draft Shield
Automatic analytical balance draft shield with an integrated ionizer for all models with 0.01 mg, 0.1 mg, and 1 mg readability and for model 5202S

The Highest Precision for the Smallest Sample Sizes

The high precision requirements in analytical testing and quantitative analyses in the pharmaceutical industry make the use of high-resolution balances indispensable. FDA-compliant working is only possible with laboratory balances that meet the minimum accuracy requirements of the US Pharmacopeia. This leads to the fact that, for weighing-in of less than 10 mg, microbalances or even ultramicrobalances often need to be used.

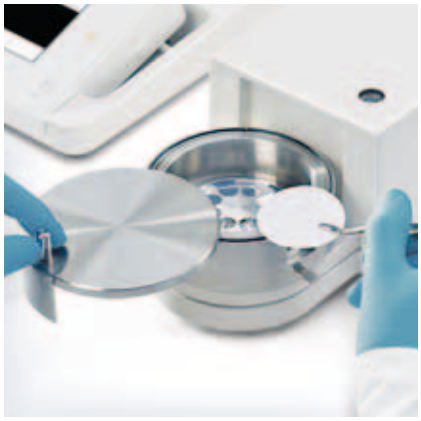
In addition, the substances to be analyzed are often available only in very small quantities and are correspondingly expensive. Alternatively, they are so potently effective that only minimum quantities can be worked with, so as not to endanger the user. Cubis microbalances and ultramicrobalances fulfill the most stringent requirements. They offer the user the highest level of safety in terms of result reliability and standard conformity.

Short measurement times result in time gained – for every single measurement. In particular, the motorized 100% glass draft shield means that working with minimum sample sizes is fast and effortless. An intelligent learning capability allows adaptation to every workflow.

Efficient Cleaning
Easy and fast cleaning is especially important when working with minute sample sizes so as to prevent cross-contamination. All parts of the draft shield can be removed easily. After cleaning, the balance is ready to be used again just as quickly.

Making High-end Balances Easy to Use
If the user does not have any complex application requirements, but nevertheless requires uncompromising reliability in the weighing results, the MSE control head in conjunction with the weighing modules of the microbalances and ultramicrobalances offers a perfect and cost-effective solution.

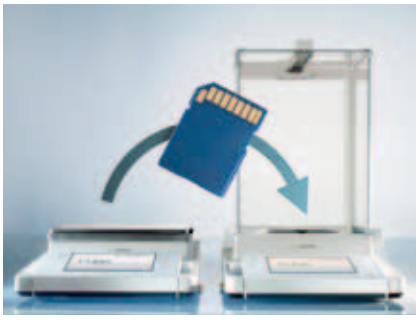
Filter Weighing
The special DF stainless-steel filter draft shield is optimized for ultraprecise weighing of filters. This filter draft shield minimizes electrostatic effects. Different weighing pan diameters are available for different filter sizes (50 mm as standard | 75 mm and 90 mm optional).



Optional Accessories
Weighing scoop: 6566-50

Q-Com for Unlimited Communication

Ready to Use in Seconds
All data, such as the user's master data or tasks, can be transferred easily and safely from one Cubis® to another using an SD card (not on the MSE). The time needed for configuration, especially when many un-networked balances are in use, is therefore significantly reduced.

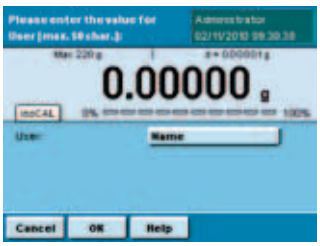


GLP-compliant, Configurable Printout
When Cubis® is used in contaminated areas (enclosed protected areas), a wireless transmission option (*Bluetooth*®) is also available.

Interface Options
Three fixed (USB, RS232C, Ethernet [not for MSE]) and three optional interface ports make almost all forms of bidirectional communication possible. Up to four interface ports can be used simultaneously.

Web Communication
Web services offer a new communication platform that allows external software systems to directly show and use information, entry fields, menus, or complex operations on the touch screen of the MSA display and control unit. This eliminates the need for installing PCs, laptops, or terminals in the area directly around the balance.

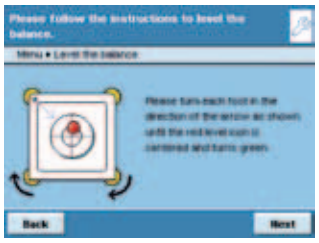
Communication with External Software
It is possible to connect Cubis® to external software systems. Using the balance's default standardized SICS communication protocol, it is also possible to communicate with software from other manufacturers.



Advanced Pharma Compliance
for Use in Regulated Sectors

Balance Monitoring

The first balance with automatic leveling: Q-Level



Q-Level combines novel sensors with the most advanced display technology, making it easier and faster to level the balance accurately. A standard feature of Cubis MSA and MSU display and control units, interactive prompting guides you during manual leveling. The display provides all the necessary information: the position of the air bubble and instructions regarding which leveling foot must be turned in which direction (with MSE there are symbols only).

Q-Level offers the option for automatic motorized leveling at the touch of a button. This means that Cubis® can always check that balance leveling is perfect and informs the user immediately if any corrections are needed.

Process Monitoring

User Management

Username | password management for tamper-proof security.

Action Hierarchy

Cubis® has warning and reminder functions with a configurable action hierarchy for leveling, minimum initial weighing, and calibration | adjustment.

Compatibility and Retraceability

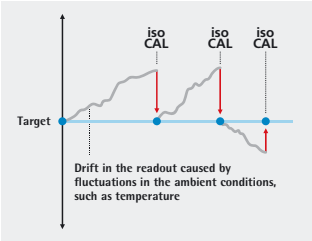
Cleaning Validation

It is easy to clean Cubis® quickly and thoroughly. Only high-grade materials with smooth, structure-free surfaces are used.

Audit Trail

The audit trail function logs major changes to the device. In this way, errors can be tracked quickly.

Fully Automatic Calibration | Adjustment with isoCAL



The isoCAL calibration and adjustment function will activate after a preset or configurable time period. Exceeding a preset or configurable temperature difference triggers a recalibration | re-adjustment.

Linearity

So-called linearity errors occur when there are deviations from the theoretical linear path of the balance's characteristic curve. Optimal linearization is a requirement for the balance to fulfill its high accuracy criteria. Cubis® corrects linearity errors automatically.

Reproducibility Test

Cubis® allows the user to measure the reproducibility of the balance directly at the place of installation with just the press of a button. With reproTEST it is possible to quickly establish if the environment at the place of installation is suitable, so that the balance consistently provides optimal, reliable weighing results.

SQmin Function

During the weighing process, Cubis® monitors compliance of the mandatory minimum initial weight set by the FDA according to USP. Once the minimum initial weight has been set at the place of installation, Cubis® warns the user when the value falls below this level and identifies unacceptable weight measurements.

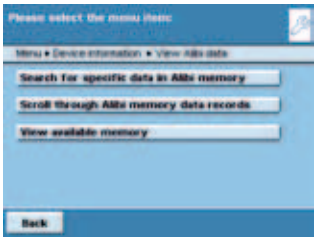
DKD Measurement Uncertainty

In conjunction with a DKD calibration by Sartorius Service, the characteristic curve of the measurement uncertainty can also be integrated into the Cubis® software. For each weight value, you can then optionally display the absolute or relative measurement uncertainty or the process accuracy.

Task Management

With task management, Cubis® allows application processes to be shown during weighing. Once the task has been set up, the user is interactively guided through the weighing process. Information that is not relevant is hidden, meaning no errors in the work process and the ability to concentrate on what is important.

Alibi Memory



An integrated Alibi memory for traceable transfer of legal-fortrade weighing data to a PC.

GLP Certificate

As an example, for many models in the Cubis® series with an MSA display and control unit the usability in GLP areas was tested and evaluated by an independent institution. Usability could be fully certified.

Risk Analysis

As a basis for the GLP suitability review and cleaning validation, many models with MSA display and control units, for example, had a risk analysis according to the methods set by the Failure Mode and Effect Analysis (FMEA). The analysis is available on request.

Systematic Personnel Safety and Result Reliability

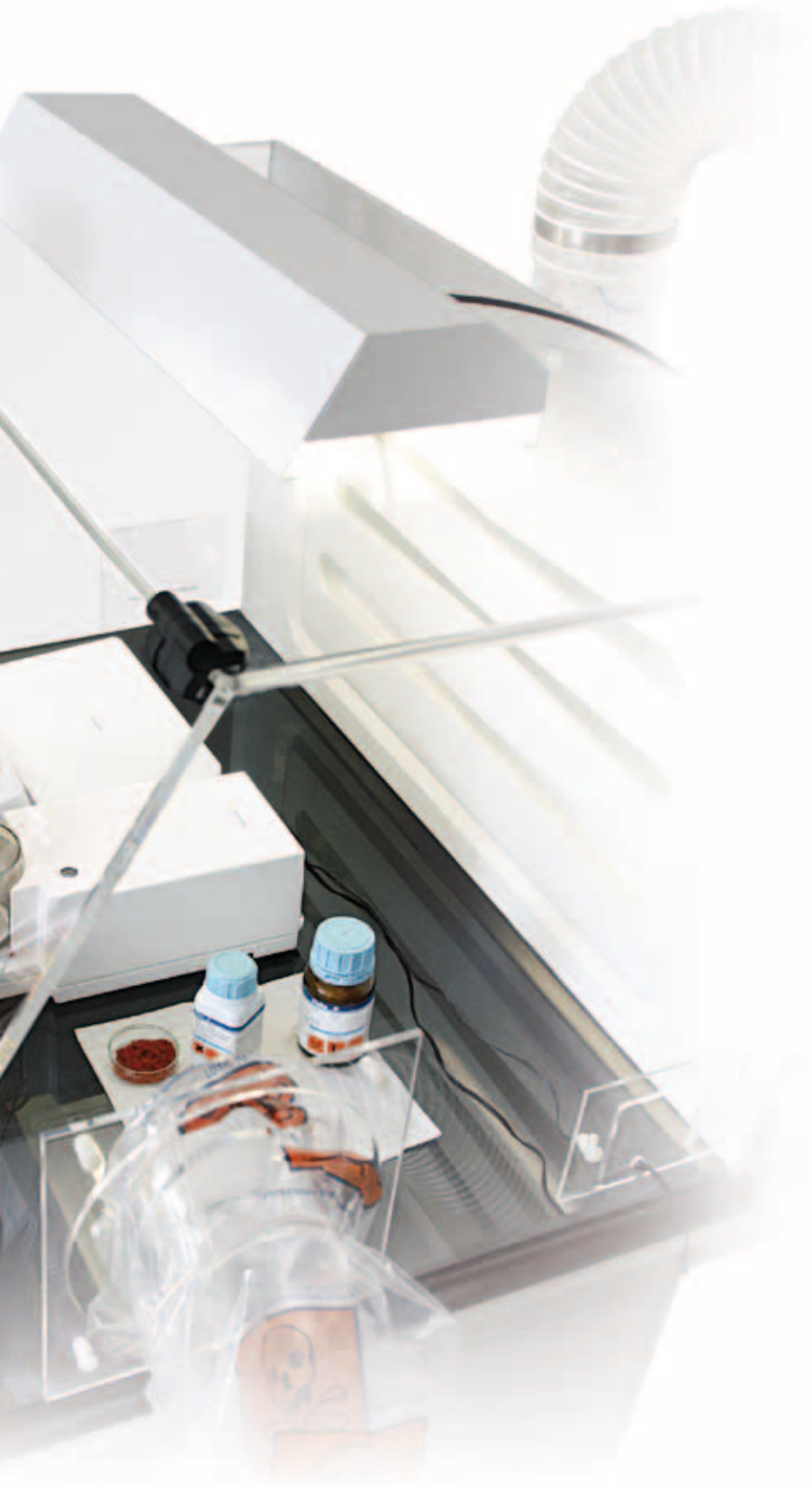
Safety in weighing toxic, powdery substances and accuracy of weighing-in are requirements that have become inseparably linked in modern laboratory environments.

The Sartorius safety weighing station, consisting of the safety weighing cabinet SWC and Cubis® lab balance, is the professional solution to both of these requirements.

The safety weighing cabinet creates a contained area around the lab balance which prevents any air or finely powdered particulates from escaping into the breathing zone of the user. At the same time, due to the constant inlet air velocity of the air current and the low-turbulence flow within the cabinet, consistent and reproducible weighing results are guaranteed.

The balance and weighing cabinet are a coordinated system that meets both requirements – maximum user protection and secure weighing results.

Sartorius guarantees that balances used inside the SWC will fulfill their technical specifications such as reproducibility and USP minimum weighing-in.



The application-oriented performance features of Cubis lab balances make the entire system even more safe:

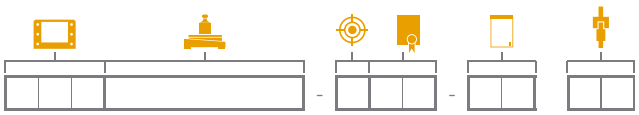
- The mechanical level indicator of a balance is often difficult or even impossible to see inside a cabinet. This leads to parallax errors in leveling and ultimately to incorrect measurement results. With Q-Level (optional, only for models with weighing capacity ≤ 6.2 kg and readability > 0.001 mg), leveling can be performed automatically in the cabinet with motorization.
- With the optional infrared sensor YHS01MS, the draft shield can be opened contactlessly and the balance can be tared. This reduces the risk of contamination.
- With the Bluetooth interface module, the printer YDP10BT can be operated wirelessly outside the cabinet, which limits the use of possibly contaminated cables.
- With the Q-Stat ionizer integrated into the draft shield DI, not only electrostatic influences on the weighing results are reduced. The "stubborn" behavior of the sample during handling with a spatula is reduced and contamination due to spilt samples is prevented.
- With the sample holder YFH01MS, you ensure the best ergonomics for weighing-in under the difficult conditions in the cabinet.
- With the grid weighing balance YWP03MS, even lab balances without draft shields (readability of 10 mg or 100 mg) can be operated in the air flow of the cabinet without any problems.

Sartorius Safety weighing cabinets are available in four different sizes:

SWC900	W 890 × D 750 × H 510 mm
SWC1200	W 1230 × D 750 × H 510 mm
SWC900T	W 890 × D 750 × H 770 mm
SWC1200T	W 1230 × D 750 × H 770 mm

All models consist of:
Safety weighing cabinet with a separate HEPA H14 filter unit, data logging alarm, lighting unit, waste disposal system, airflow smoke test kit and anti-static cleaning wipes.

Technical Specifications



Please use the adjacent fields to enter the selection made with the icon.

Cubis® Display and Control Units
Select the display and control unit and enter it in the field marked with the icon.

Types	MSA	MSU	MSE
Operation	Touch screen, keys for central basic functions	Keys	Keys
Display	High-resolution color TFT, 5.7" graphic display	High-resolution black | white 5.7" graphic display	Liquid crystal display, black | white
Adaptation of the display and control unit	Tiltable display, removable display and control unit	Tiltable display, removable display and control unit	Removable display and control unit
Standard data interfaces	– USB (integrated into weighing module) – RS232C accessory interface, 25-pin (integrated into weighing module) - Ethernet (integrated into display and control unit) – Various data protocols available (can also be connected to software designed for external manufacturers)		– USB (integrated into weighing module) – RS232C accessory interface, 25-pin (integrated into weighing module)
SD card reader	Integrated as standard into display and control unit	Integrated as standard into display and control unit	–
Operation of motorized draft shield (only applies to DA or DI draft shield)	Activated by side keys or touch-free using IR switch (optional); learning capability	Activated by side keys or touch-free using IR switch (optional); learning capability	Activated by key or touch-free using IR switch (optional); learning capability
Applications	Unit conversion, SQmin function for minimum initial weight according to USP, isoCAL automatic calibration | adjustment function, individual identifiers, density determination, statistics, calculations, averaging, formulation, weighing in percent, time-controlled functions, totalizing, DKD measurement uncertainty, second tare memory, counting, checkweighing, Alibi memory, audit trail	Unit conversion, SQmin function for minimum initial weight according to USP, isoCAL automatic calibration | adjustment function, individual identifiers, density determination, statistics, calculations, averaging, formulation, weighing in percent, time-controlled functions, totalizing, DKD measurement uncertainty, second tare memory, counting, checkweighing, Alibi memory, audit trail	Unit conversion, isoCAL automatic calibration | adjustment function, density determination (buoyancy method only), calculations, averaging, net | total formulation, weighing in percent, counting

Cubis® Weighing Modules
Please enter the model name, starting from the left, in the field identified by the icon.

	Readability [mg]	Weighing Capacity [g]	Weighing Pan (W × D) [mm]	Typical Stabilization Time [≤s]	Typical Measurement Time [≤s]	Repeatability [≤±mg]	Linearity [≤±mg]	Corner Load [mg]* (Test Load [g])	Minimum-Initial Weight [g]**
Ultramicrobalances 0.0001 mg									
2.7S	0.0001	2.1	∅ 20	7	10	0.00025	0.0009	0.0025 (1)	0,001
Microbalances 0.001 mg									
6.6S	0.001	6.1	∅ 30	5	8	0.001	0.004	0.004 (2)	0,002
3.6P	0.001 | 0.002 | 0.005	1.1 | 2.1 | 3.1	∅ 30	5	8	0.003 | 0.004 | 0.005	0.004	0.005 (1)	0,004
Semi-microbalances 0.01 mg									
225S	0.01	220	85 × 85	2	6	0...60 g: 0.015 60...220 g: 0.025	0.1	0.15 (100)	0.02
225P	0.01 | 0.02 | 0.05	60 | 120 | 220	85 × 85	2	6	0...60 g: 0.015 60...220 g: 0.04	0.15	0.2 (100)	0.02
125P	0.01 | 0.1	60 | 120	85 × 85	2	6	0...60 g: 0.015 60...120 g: 0.06	0.15	0.15 (50)	0.02
Analytical Balances 0.1 mg									
524S	0.1	520	85 × 85	1	3	0.1	0.4	0.3 (200)	0.12
524P	0.1 | 0.2 | 0.5	120 | 240 | 520	85 × 85	1	3	0.15 | 0.2 | 0.4	0.5	0.4 (200)	0.12
324S	0.1	320	85 × 85	1	3	0.1	0.3	0.3 (200)	0.12
324P	0.1 | 0.2 | 0.5	80 | 160 | 320	85 × 85	1	3	0.1 | 0.2 | 0.4	0.5	0.4 (200)	0.12
224S	0.1	220	85 × 85	1	3	0.07	0.2	0.2 (100)	0.12
124S	0.1	120	85 × 85	1	3	0.1	0.2	0.2 (50)	0.12

* Position according to OIML R76 ** Typical minimum initial weight according to USP (United States Pharmacopeia), USP31–NF26

Cubis® Weighing Modules

Please enter the model name, starting from the left, in the field identified by the icon.

	Readability [mg]	Weighing Capacity [g]	Weighing Pan (W × D) [mm]	Typical Stabilization Time [≤s]	Typical Measurement Time [≤s]	Repeatability [≤±mg]	Linearity [≤±mg]	Corner Load [mg]* (Test Load [g])	Minimum Initial Weight [g]**
Precision Balances									
5203S	1	5,200	140 × 140	1	2	1	5	2 (2,000)	1.5
5203P	1 | 2 | 5	1,200 | 2,400 | 5,200	140 × 140	1	2	1	5	2 (2,000)	1.5
3203S	1	3,200	140 × 140	1	2	1	5	2 (1,000)	1.5
2203S	1	2,200	140 × 140	1	1.5	1	3	2 (1,000)	1.5
2203P	1 | 10	1,010 | 2,200	140 × 140	1	1.5	1 | 6	5	3 (1,000)	1.5
1203S	1	1200	140 × 140	1	1.5	0.7	2	2 (500)	1.5
623S	1	620	140 × 140	0.8	1	0.7	2	2 (200)	1.5
623P	1 | 2 | 5	150 | 300 | 620	140 × 140	0.8	1	1 | 2 | 4	5	4 (200)	1.5
323S	1	320	140 × 140	0.8	1	0.7	2	2 (200)	1.5
14202S	10	14,200	206 × 206	1	1.5	10	30	20 (5,000)	15
14202P	10 | 20 | 50	3,500 | 7,000 | 14,200	206 × 206	1	1.5	10 | 20 | 40	50	40 (5,000)	15
10202S	10	10,200	206 × 206	1	1.5	7	20	20 (5,000)	12
8202S	10	8,200	206 × 206	1	1.5	7	20	20 (5,000)	12
6202S	10	6,200	206 × 206	1	1.5	7	20	20 (2,000)	12
6202P	10 | 20 | 50	1,500 | 3,000 | 6,200	206 × 206	1	1.5	7 | 20 | 40	50	50 (2,000)	12
5202S	10	5,200	140 × 140	0.8	1	6	10	10 (2,000)	10
4202S	10	4,200	206 × 206	0.8	1	7	20	30 (2,000)	12
2202S	10	2,200	206 × 206	0.8	1	7	20	20 (1,000)	12
1202S	10	1,200	206 × 206	0.8	1	7	20	20 (500)	12
12201S	100	12,200	206 × 206	0.8	1	50	100	200 (5,000)	100
8201S	100	8,200	206 × 206	0.8	1	50	100	200 (5,000)	100
5201S	100	5,200	206 × 206	0.8	1	50	100	200 (2,000)	100

* Position according to OIML R76 ** Typical minimum initial weight according to USP (United States Pharmacopeia), USP31–NF26

Cubis® Leveling
Select the type of leveling and enter the identifier "Ø" or "1" in the field marked by the icon.

Ø	Cubis® shows the level indicator on the display and provides support for rapid leveling (a standard feature on MSA and MSU display and control units; for MSE units, only symbols are provided as an aid for manual leveling).
1	Fully automatic, motorized Q-Level leveling at the touch of a button (available for all Cubis® weighing modules with a weighing capacity > 6.1 g and ≤ 6,200 g).

Test Certificates and Permits
Select a test certificate | permit and enter the identifier in the field marked with the icon.

ØØ	Standard certificate of conformity to specifications
TR	Like ØØ, but with a detailed test protocol
CE	Factory-calibrated with European calibration permit (not for models with DF draft shield)

Cubis® Draft Shields
Select a draft shield and enter the corresponding identifier in the field marked with the icon.

DO	No draft shield. Please always enter this identifier for weighing modules with the weighing pan size 206 × 206 mm.
DR	Flat stainless-steel weighing pan draft shield (removable, without glass components) for all precision balances with a readability of 1 mg and weighing module 5202s.
DE	Manual glass draft shield for precision balances with a readability of 1 mg and weighing module 5202S.
DU	Manual analytical balance draft shield with smooth-running, wide-opening doors, unimpeded access to the weighing chamber without interfering braces. For all models with 0.01 mg, 0.1 mg and 1 mg readability and weighing module 5202S.
DA	Automatic, motorized draft shield with learning capability for ergonomic working and individual adaptation to different applications. For all models with 0.01 mg, 0.1 mg and 1 mg readability and weighing module 5202S.
DI	Like the DA draft shield, but with the addition of an integrated ionizer to eliminate the impact of electrostatic charges in samples and containers.
DM	Automatic, motorized, round 100% glass draft shield with learning capability for ultramicrobalances and microbalances with a readability of 0.0001 mg and 0.001 mg (2.7S, 6.6S and 3.6P weighing modules).
DF	Manual draft shield for weighing filters with diameters of up to 50 mm (75 mm and 90 mm optionally) made from stainless steel. Reduction of electrostatic effects to the minimum (not for weighing module 3.6P).

Optional Interface Modules
Depending on the balance, it may be possible to select an additional interface module.

IR	RS232 interface, 25-pin
IB	*Bluetooth*® interface
IP	RS232 interface, 9-pin, incl. PS/2 interface

Cubis® Optional Accessories

Printers and Communication

Verifiable data printer for connection to RS-232, 25-pin accessory interface	YDP10-0CE
Verifiable data printer with *Bluetooth*® data transmission (with YDO01MS-B or IB option only)	YDP10BT-0CE
Color ribbon for YDP10-0CE and YDP10BT-0CE	6906918
Paper rolls for printer YDP10-0CE; 5 rolls 50 m each	6906937
Bluetooth® data interface for wireless connection of data printer YDP10BT	YDO01MS-B
RS232C data interface, 9-pin including PS/2 for connecting a PC or keyboard	YDO01MS-P
RS232C data interface, 25-pin for connection of Cubis® accessories	YDO01MS-R
Display cable 3 m for Cubis® MSA and MSU models, for separate setup of display and weighing unit (Installation by Sartorius Service or in factory [order VF4016])	YCC01-MSD3
Display cable 3 m for Cubis® MSE models, for separate setup of display and weighing unit (Installation by Sartorius Service or ex works [order VF4016])	YCC01-MSED3
Cable 3 m between weighing module and electronics module for Cubis® models with 0.01 mg readability	YCC01-MSM3
Installation display cable 3 m for Cubis® models, for separate setup of display and weighing unit	VF4016
RS232C connection cable to connect PC with 9-pin COM interface, length 1.5 m	7357314
SartoCollect software for data communication between balance and PC	YSC02
Sartorius OPC Server for connecting all Sartorius Cubis® balances Requires 32-bit Microsoft Windows 2000 or XP with current service packs. (free download of a 30-day trial version from the Sartorius website)	
– Initial license	6289OPC
– Each additional license within an order	6289OPC-L

Displays and Input | Output Elements

MSA control unit with color TFT graphic display and touch screen	YAC01MSA
MSE display unit with backlit LC display and tactile keys	YAC01MSE
MSU control unit with backlit b	w graphic display and tactile navigation keys	YAC01MSU
Barcode reader with connection cable, 120 mm reading range	YBR03PS2
Foot switch for printing, taring, or using function keys, selection via menu, incl. T connector	YFS01
Infrared sensor for touch-free activation of functions (e.g., draft shield control)	YHS01MS
Hand switch for printing, taring, or using function keys, selection via menu, incl. T connector	YHS02
Foot switch for the draft shield OPEN	CLOSED functions (only in combination with DA and DI draft shield), taring and printing	YPE01RC
Additional display, LCD, figure size 13 mm, backlit	YRD03Z
3-segment control display, red – green – red, for plus	minus measurements, incl. T connector	YRD11Z

Pipette Calibration Hardware and Software	
Pipette calibration kit (hardware) for models with 0.1 mg and 0.01 mg readability Consists of moisture trap and all required adapters	YCP04MS
Pipette calibration kit (hardware) for microbalance weighing modules 6.6S and 3.6P Consists of moisture trap and all required adapters	VF988
Pipette Tracker pipette calibration software. Software and user manual in English only.	YCP04-PT
Pipette Tracker Pro pipette calibration software, for use in regulated areas, networkable and validatable, according to the 21 CFR Part 11 regulations. Software and user manual in English only.	YCP04-PTPro
Documentation basis for validation (IQ, OQ) of Pipette Tracker PRO version. All documents are in English only.	YCP04-VTK

Filter Weighing and Antistatic Accessories	
Antistatic weighing pan, diameter 130 mm, for weighing modules with a readability of 0.1 mg or 0.01 mg	YWP01MS
Filter weighing pan ∅ 75 mm, for ultramicrobalance or microbalance models (weighing modules 6.6S, 2.7S; only together with DF draft shield)	VF2562
Filter weighing pan ∅ 90 mm, for ultramicrobalance or microbalance models (weighing modules 6.6S, 2.7S; only together with DF draft shield)	VF2880
Ionization blower to eliminate electrostatic charges on sample containers and samples	YIB01-DR
Stat-Pen ionization probe for discharging electrostatically charged samples and filters	YSTP01

Special Applications	
Density determination kit for solids and liquids for weighing modules with a readability < 1 mg	YDK01MS
Density determination kit for solids and liquids for weighing modules with a readability of 1 mg	YDK02MS
Q-Grip, flexible holder for weigh-in containers and filters up to 120 mm diameter (replaces the original weighing pan, for Cubis® models with 0.01 and 0.1 mg readability)	YFH01MS
Q-Grid grid weighing pan for Cubis® models with a readability of 10 mg or 100 mg for weighing in laboratory hoods, safety weighing cabinets or workbenches (reduced wind attack surface of the weighing pan; replaces the standard weighing pan)	YWP03MS

Weighing Tables	
Weighing table made from synthetic stone, with vibration dampening	YWT03
Wall console	YWT04
Weighing table made from wood with synthetic stone for precise, reliable measurements	YWT09

Weighing Accessories	
Weighing scoop made from chrome nickel steel , 90 × 32 × 8 mm	641214
Aluminum weighing scoop, 4.5 mg (250 pieces) for ultramicrobalance and microbalance models	6565-250
Aluminum weighing scoop, 52 mg (50 pieces) for ultramicrobalance and microbalance models	6566-50
Support arm for 10/100 mg precision weighing modules for raising the control units MSE, MSU, MSA	YDH01MS

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