Cubis® II
Your Balance, Your Way

Simplifying Progress

SARTORIUS

imLab   @ www.imlab.eu - info@imlab.eu   📞 🇫🇷 +33(0)3 20 55 19 11   🇧🇪 +32(0)16 73 55 72

Cubis® II

The New Generation of Modular Premium Balances

For scientists in R&D or analytical laboratories needing the most reliable lab weighing results, the Cubis® II platform from Sartorius is a completely configurable, high-performance portfolio of both lab weighing hardware and software. The Cubis® II will align with your unique demands and compliance requirements to help maximize your operational efficiency and experimental outcomes.

The Cubis® II platform is the only laboratory balance with customizable hardware, software, and connectivity. It offers modern user interfaces, pharmaceutical and GxP compliance, including data handling, data integrity and connectivity, ergonomic sample handling, easy process integration, and unlimited communication at the highest level of accuracy and precision.

Trusted Results
- Leading Performance
- High Speed Accuracy
- Error-Free Operations
- Full End-to-End Data
- Integrity Reliable Support

Customizable Modularity
- Thousands of hardware and software configurations supporting your personal preferences
- Thematically structured software packages for your optimized workflows
- Seamless connectivity and digital data management to diverse laboratory information systems without the need of additional software
- Long-term flexibility guarantees adaptation of software and accesories to evolving regulatory and laboratory needs
- After purchase hardware upgradeability of Cubis® II MCA high-capacity and semi-micro balances

Intelligence by Design
- Built-in applications guide you through your workflows
- Fast and easy leveling guaranteed with automatic, motorized leveling function
- Innovative draft shield technology with motion | gesture sensor and memory function
- Climate sensor for environmental monitoring
- Built-in ionizer for automatic electrostatic elimination
- Status Center for user notifications and alerts*
- Ultramicro– and micro balances with innovative technology for top-edge performance
- High-capacity micro balances offer benchmarking performance under real laboratory conditions

Confident Compliance*
- Full data integrity following ALCOA+ principles
- Complete traceability via advanced audit trail and reporting function for efficient reviews
- Submission-ready data with remote data selection on web browser
- User management including centralized password management support ("single-sign-on" via LDAP), high security password configuration, login rules
- Electronic signature in compliance with 21 CFR Part 11

*available with the MCA interface

Connectivity

Pharma
Compliance

Climate
Monitoring

Integrated
Ionizer

Workflow
Integration
with QApps

Automatic
Motorized
Leveling

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Customizable Modularity –
Thousands of Configurations

In 2009, Sartorius introduced the first modular balance with the Cubis®, and today continues that tradition by offering the Cubis® II lab balance series featuring a completely modular design:

Weighing Modules

Choose from a range of more than 50 different weighing modules that best fit your preferences.

Draft Shields

Choose from 8 different options, depending on your balance type – each with unique features to support maximal balance performance and user-centric design.
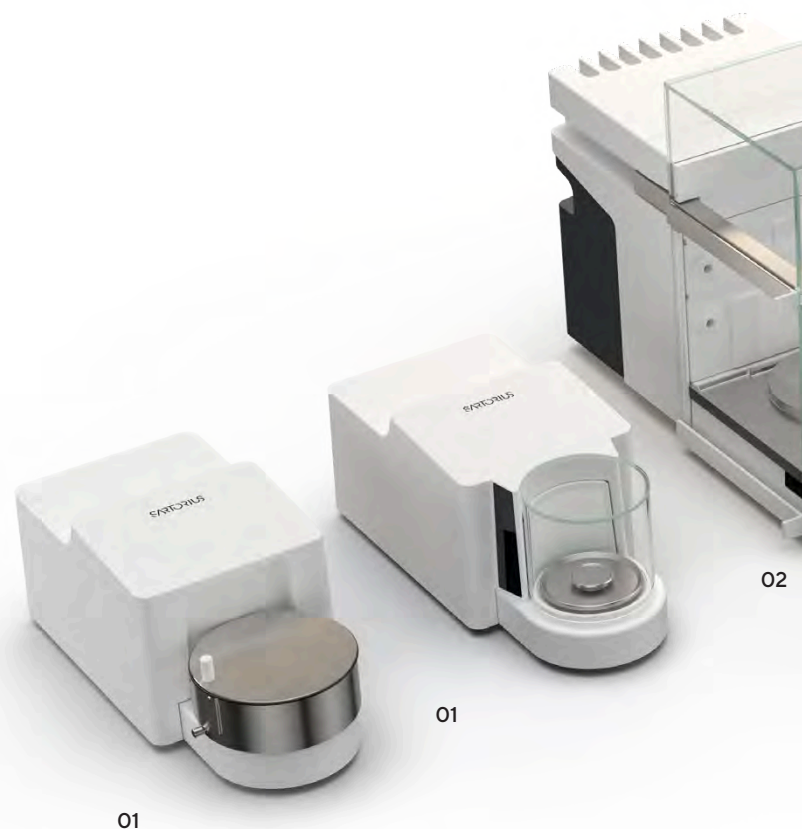
Display

Choose between advanced and essential user interface, based on your weighing applications and requirements.

Software

With up to 60 QApps, and with continuous software development, we support your workflows now and in the future.

Hardware

High-capacity micro and semi-micro balances are equipped with licensable motorized draft shield and ionizer. A manual or automatic inner draft shield is available as an accessory.

01 Ultra-Micro & Micro Balances

Max. capacity between 2.1 g and 10.1 g | scale interval with a range of 0.1 µg to 1 µg.

- Automatic, motorized, round, glass draft shield with learning capability, illumination and integrated motion sensor
- Manual stainless steel draft shield for filter weighing applications

02 High-capacity Micro & Semi-Micro Balances

Max. capacity between 32 g and 220 g | scale interval with a range of 0.001 mg to 0.001 mg.

- Glass draft shield with licensable built-in ionizer to eliminate electrostatic charges and licensable automatic draft shield function for fast and easy operation
- Automated inner draft shield offered as an offered as an accessory guarantees performance under challenging environmental conditions
- Integrated motion sensor for touch free operation

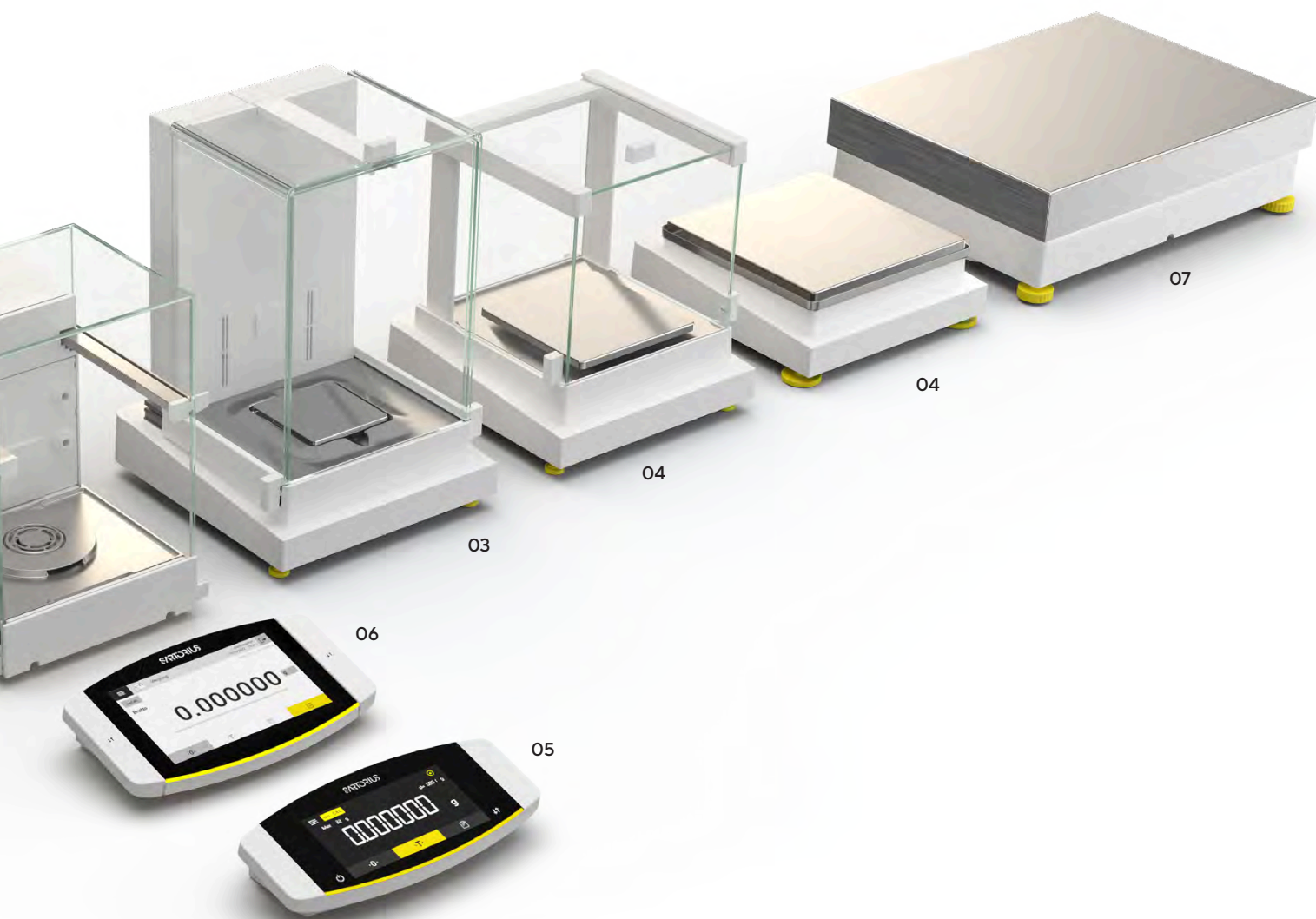**03 Analytical Balances & Semi-Micro Balance 125P**

Max. capacity between 120 g and 520 g | scale interval with a range of 0.01 mg to 0.1 mg.

- Automatic glass draft shield with or without integrated ionizer to eliminate interfering electrostatic charges on samples and sample containers
- Manual glass draft shield with smooth-action doors

04 Precision Balances

Max. capacity between 320 g and 14,200 g | scale interval with a range of 1 mg to 100 mg.

- Easy to use manual glass draft shield
- Removable flat stainless steel draft shield frame (not shown in the picture)

05 MCE Essential User Interface

Touch display with factory-installed essential weighing applications for easy operation.

06 MCA Advanced User Interface

Large 7" color touch display including touch, scroll, swipe functionality with factory-installed essential weighing applications and diverse QApp Packages for optional software extension.

07 High-Capacity Balances

Max. capacity between 11200 g and 70,200 g | scale interval with a range of 100 mg to 1 g.

Software Options

Choose between different packages to fulfill your demands. Each package contains powerful applications or functions to enhance and individualize your balance for your workflows.

- QApp Package Pharma
- QApp Package Advanced Applications
- QApp Package Utilities
- QApp Package Connectivity
- QApp Package Hardware for High-Capacity Micro and Semi-Micro Balances
- All Inclusive QApp Package (with new orders only)

Intelligence by Design –
Adaptable Lab Balance
to Your Specific Needs

Onboard QApp Center
Choose your applications or individual balance functions from QApp packages clustered by different topics. License your selected package and integrate them into the tasks you can run on the balance.

Automatic, Motorized Leveling
Avoid the burdensome process of preparing your balance for use with the Cubis® II balance's quick and easy, motorized, auto-levelling function.

Gesture Control
The gesture sensor recognizes four gestures and can be positioned near the balance, directly in the flow of motion at your work space. It allows you to open and close the automatic draft shield, start the ionizer, or send a document to a device.

Ultra-Micro and Micro Balances
The world's first ultra-micro and micro balances with automatic motorized levelling, gesture controlled and illuminated draft shield, and titanium inner parts. Weighing ranges from 0.1 µg to 10.1 g.

High-Capacity Micro and Semi-Micro Balances
These balances offer outstanding weighing performance under real laboratory conditions, low minimum sample weight and fast stabilization time. Automatic motorized leveling and titanium inner parts. Weighing ranges from 1 µg to 220 g.

Device information

2019-01-25 14:14

Model name
MCA224S-2S00-A

Serial number
0000110114

Package number
09-03-01.12.01 CN:b236

QApp Center version
02.00.05

IP address
172.16.68.236

s leveled

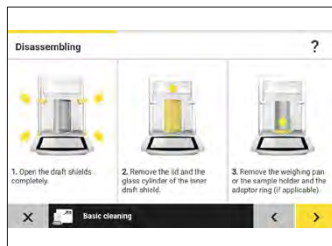leveling   **Service information**

Built-in Ionizer for Electrostatic Elimination

Remove balance stabilization frustrations caused by electrostatic effects with the built-in ionizing technology of the Cubis® II balance. Electrostatic charges on samples and vessels are removed effectively, just by pressing one key or automatically when the draft shield door closes.

Cleanability

Cleaning has never been easier with Cubis® II Balances. All MCA models offer tool-free disassembly and the Cleaning QApp that with its in-built guidance makes the cleaning process easy and traceable. Optional, the Cleaning kit with all necessary components is available as an accessory.

Status Center Notifications*

The Status Center shows all information about your balance such as calibration, leveling, service and cleaning status and environmental conditions (temperature, humidity, air pressure) centralized in a dashboard.
In case of warnings or errors, you get detailed help and support.

Sample Holders

The great variety of sample holders ensure that samples of various types (e.g. safe-lock tubes, vials, flask, syringes) can be weighed directly on the balance. In this way workflows can be executed much easier, safer and faster. Made of titanium, not only the highest material quality is guaranteed, but notably the repeatability is not jeopardized because of the non-magnetic properties.
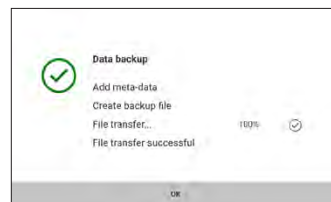
Confident Compliance –
Complete Traceability

All data generated by the Cubis® II balance follow the key principles ALCOA (+), which defines data integrity standards and relates to GxPs. Therefore, the Cubis® II balance ensures safe and accurate data storage and supports all requirements for FDA directive 21 CFR part 11 and EU Annex 11 compliance.

The Cubis® II balance, with pharma package, contains all the technical controls to support compliance with common regulations. Full compliance can be achieved with additional procedural controls and systems for long-term data storage.
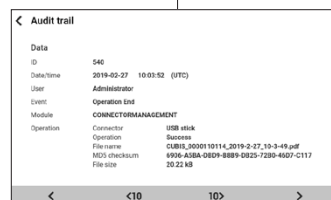
Backup
Cubis® II can automatically execute time-controlled actions for backup.
The system is able to upload data on a file share or export the data to other systems. Archiving is easily possible and fully compliant.

Fully Compliant

Safe Data Transfer
An electronic record should be protected against any manipulation. The Cubis® II balance saves all files, together with a calculated MD5 checksum which is stored in the audit trail files and additionally in a separate MD5 file.
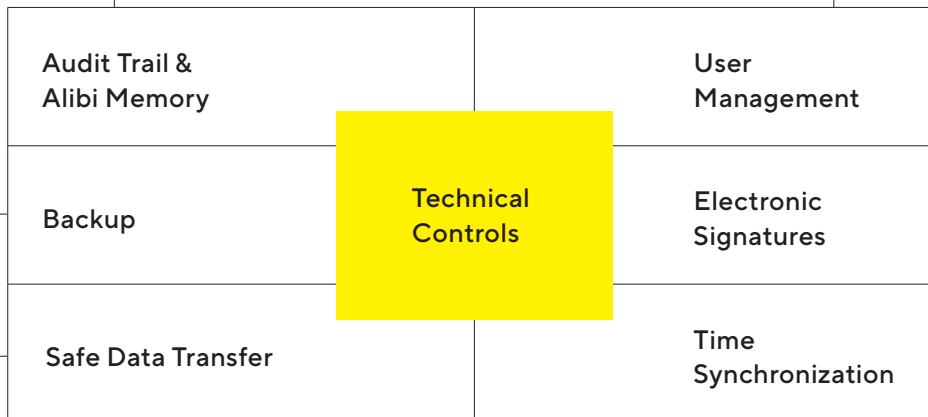
Audit Trail & Alibi Memory
The Cubis® II balance's audit trail is a tamper-protected time-stamped electronic logfile, that allows reconstruction of events related to the creation, modification, and | or deletion of records. The data can be displayed, filtered, and exported in an easy way. Additionally, the Cubis® II balance contains an "Alibi Memory". The system automatically stores weighing data in a ring buffer.

User Management
The Cubis® II balance provides two options for complete user management with access control. The local user management can be configured in accordance with your password policy.
The password rules for 21 CFR Part 11 compliance are easily implemented. Moreover, Cubis® II can be integrated in the company's domain to allow single sign-on. In this case the company defined password rules are implemented automatically.

Audit Trail & Alibi Memory	User Management
Backup	**Technical Controls**	**Electronic Signatures**
Safe Data Transfer	Time Synchronization

Time Synchronization
The Cubis® II balance supports automatic time synchronization via Network Time Protocol (NTP).
An accurate time stamp is elemental for trustable records.

Electronic Signatures
In the Cubis® II balance, an electronic signature can be used to sign the final report for weighing processes. Based on a secure password, the combination of username and password is fully compliant with 21 CFR.

Configure Your Cubis® II Balance

User interface	Weighing module	Approval	Draft shield	QApp Packages	Hardware Options
M C A	116	– 3* S 0 0 –	D	QP1 QP2 QP3	HWL

Balance type / Weighing module***	Leveling automatic	Leveling manual	Approval S00, S01, CEU, CFR, CCN, OBR, OIN, OJP, or ORU	A	D	E	F	I	M	R	U	0	Software packages*** QP1, QP2, QP3, QP4 or QP99	Hardware options****** HWL, ION or MDS
Ultramicro & micro 2.7S, 10.6S, 6.6S, 3.6P	■		■				■	■					■	
High-capacity micro 36S, 36P, 66S, 66P, 116S	■		■****		■								■	■
Semi-micro 125P *******	■		■					■		■			■	
Semi-micro 226S, 225S, 225P, 125S	■		■****		■								■	■
Analytical 524S, 524P, 324S, 324P, 224S, 124S	■		■	■				■		■			■	
Precision 1 mg 5203S, 5203P, 3203S, 2203S, 2203P, 1203S, 623S, 623P, 323S	■		■	■		■		■	■	■			■	
Precision 10 mg 5202S	■		■	■		■		■	■	■			■	
Precision 10 mg 8202S, 6202S, 6202P, 4202S, 2202S, 1202S	■		■										■	■
Precision 10 mg 32202P**, 14202S, 14202P, 10202S		■	■										■	■
Precision 100 mg 5201S, 8201S	■		■										■	■
Precision 100 mg 12201S		■	■										■	■
High Capacity 70201S, 50201S, 36201S, 36201P, 20201S, 11201S, 70200S, 36200S		■	■										■	■

* Generation code 3 for High-capacity & semi-micro balances (except module 125P), code 2 for all other balance categories

** Weighing module 32202P available with approvals S00 or S01 only

*** Software packages available for balances with MCA display only (weighing module 125P available with QP99 only)

**** Weighing module 116S & 226S available with MCA display only

***** No ORU approval

****** Hardware Options available for High-capacity & semi-micro balances only (except module 125P)

******* Weighing module 125P available with approvals S00, S01 & CCN only

User Interface	Description	Draft Shield	Description	Approval	Description	Hardware Options	Description
MCA	Advanced user interface	0	Balance without draft shield	S00	Standard version worldwide	HWL	All hardware licenses
MCE	Essential user interface	E	Small glass draft shield	S01	Standard only metric units	ION	Ionizer
		R	Stainless steel draft shield frame	CEU	Verified version Europe (except FR)	MDS	Motorized draft shield
		U	Manual glass draft shield	CFR	Verified Version France		
		A	Motorized draft shield	CCN	Verified Version China		
		I	Motorized draft shield & Ionizer	OBR	Verifiable Version Brazil		
		M	Motorized draft shield micro balances	OIN	Verifiable Version India		
		F	Filter draft shield micro balances	OJP	Verifiable Version Japan		
		D	Draft shield for High-capacity micro balances with upgradable hardware	ORU	Verifiable Version Russia		

QP1 Pharma

The Pharma software application package contains applications concerning the topic compliance with pharmaceutical-relevant guidelines as 21 CFR Part 11 and USP 39, Chapter 41. The Pharma package includes applications such as user management, digital signatures, audit trail, USP minimum weight.

QP2 Advanced Applications

The Advanced software application package includes various complex weighing applications incl. evaluation. This includes applications used for density determination, percentage weighing, counting, backweighing, residual dirt analysis, residue on ignition, filter weighing, checkweighing, formulation, averaging, etc.

QP3 Utilities

The Utility software application package contains weighing applications and function extensions such as bootscreen, color scheme, free formula, fiber coarseness, diameter determination, air buyoancy correction, paper weight, statistics and printing of QR | bar codes.

QP4 Connectivity

The Connectivity software application package includes applications for data exchange, for example to Windows file server, FTPS, etc.

QP10 Hardware

The Hardware package offers licensable hardware functions such as motorized draft shield and ionizer at high-capacity micro & semi-micro balances (except for weighing module 125P)

QP99

The software application package All inclusive includes 4 different sub-packages for compliance (Pharma (QP1)), complex weighing applications (Advanced (QP2)), weighing applications and helpful tools (Utilities (QP3)) and connectors for data exchange (Connectivity (QP4)).