

SARTORIUS

# Cubis<sup>®</sup> II

Your Balance, Your Way



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# 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 fully 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.

### Customizable Modularity

- Thousands of hardware and software configurations supporting your personal preferences.
- Thematically structured software packages for your optimized workflows.
- Seamless connectivity to diverse laboratory information systems without the need of additional software.
- Long-term flexibility guarantees adaptation of software and accessories to evolving regulatory and laboratory needs.

### Intelligence by Design

- Build-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 functions.
- 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.

### 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.

### Trusted Results

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

\*available with the MCA interface



Connectivity



Pharma Compliance



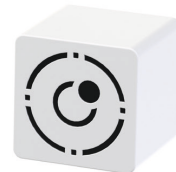
Climate Monitoring



Integrated Ionizer



Workflow Integration with QApps



Automatic Motorized Leveling



# Customizable Modularity – Thousands of Configurations

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

## Weighing Modules

Choose from a range of 45 different weighing modules that best fit your preferences.

## Draft Shields

Choose from 7 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 optional software applications clustered into QApp packages, and with continuous software development, we support your workflows now and in the future.



### 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 Semi-Micro & Analytical Balances

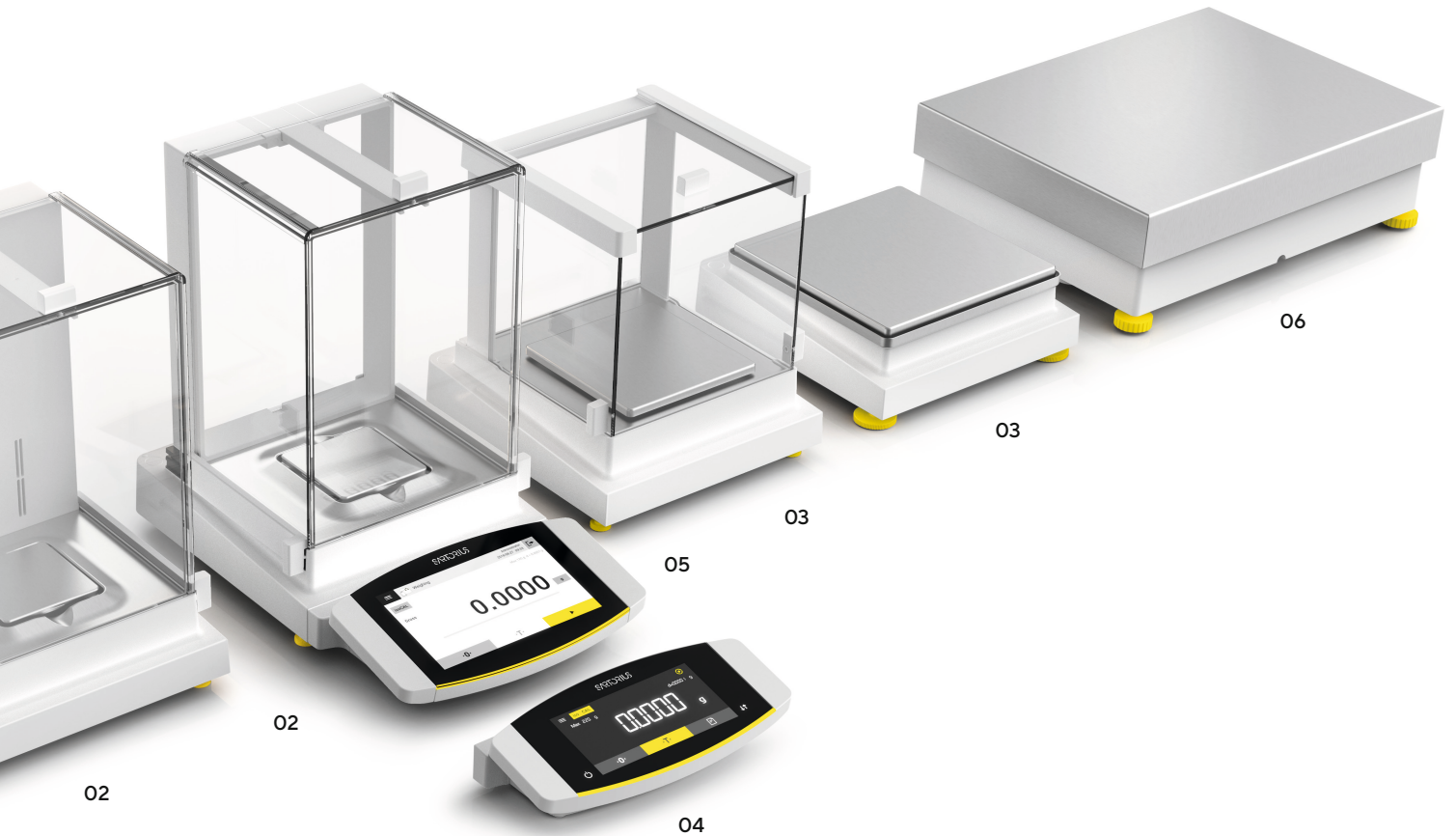
Max. capacity between 120 g and 520 g | scale interval with a range of 0.01 mg to 0.1 mg.

- 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.

### 03 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).



**04 MCE Essential User Interface**

Large, high-contrast touch display with factory-installed essential weighing applications for easy operation.

**05 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.

**06 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
- 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-leveling 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 leveling, gesture controlled and illuminated draft shield, and titanium inner parts. Weighing ranges from 0.1 µg to 10.1 g.





### 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.



### Climate Monitoring\*

The climate sensor monitors influencing variables of the environment and ensures that temperature, pressure, and humidity do not negatively affect your results.



### Status Center Notifications\*

The Status Center shows all information about your balance and environmental conditions, e.g. calibration, leveling, temperature, humidity, air pressure and service, 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.



\* available with the MCA interface

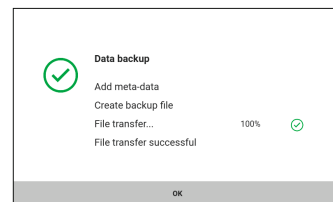
# Confident Compliance – Complete Traceability

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.



Fully Compliant



## 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.



## 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.

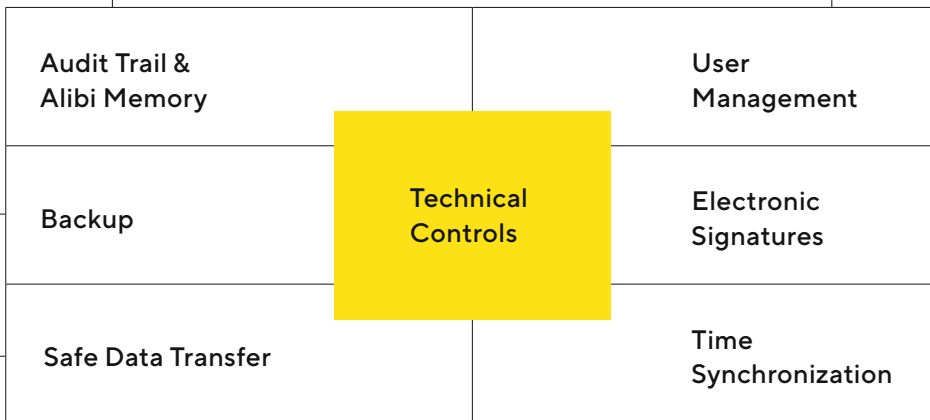


Audit trail				
2019-02-27	11:58:12 (UTC)	Administrator	isoCAL	CALIBRATIONADJUSTMENT
2019-02-27	11:55:47 (UTC)	Administrator	Created	TASKMANAGEMENT
2019-02-27	11:54:50 (UTC)	Administrator	Created	QAPPMANAGEMENT
2019-02-27	10:20:41 (UTC)	Administrator	Operation End	CONNECTORMANAGEMENT
2019-02-27	10:05:44 (UTC)	Administrator	Electronic Signature	ACCESSCONTROL
2019-02-27	10:03:52 (UTC)	Administrator	Operation End	CONNECTORMANAGEMENT

**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	
<b>Administrator</b>	User account for configuration and management
<b>Guest</b>	User account with restricted access
<b>Operator</b>	User account for everyday work
<b>Service</b>	User account for service technicians

**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.



NTP configuration	
NTP operating status	Enabled
Server IP	172.125.14.39

**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 signature	
Sign report	On

**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			
M	C	A	225S		2	S	0	0	I	QP1	QP2	QP3

Balance type Weighing module*	Leveling		Approval			Draft shield						Software packages***		
	automatic	manual	S00, S01, CEU, CFR, CCN, OBR, OIN, OJP, ORU			A	E	F	I	M	R	U	O	QP1, QP2, QP3, QP4 or QP99
<b>Ultramicro</b> 2.7S	■		■					■		■				■
<b>Micro</b> 10.6S, 6.6S, 3.6P	■		■					■		■				■
<b>Semimicro</b> 225S, 225P, 125S, 125P	■		■			■			■			■		■
<b>Analytical</b> 524S, 524P, 324S, 324P, 224S, 124S	■		■			■			■			■		■
<b>Precision 1 mg</b> 5203S, 5203P, 3203S, 2203S, 2203P, 1203S, 623S, 623P, 323S	■		■			■	■		■		■	■		■
<b>Precision 10 mg</b> 5202S	■		■			■	■		■		■	■		■
<b>Precision 10 mg</b> 8202S, 6202S, 6202P, 4202S, 2202S, 1202S	■		■										■	■
<b>Precision 10 mg</b> 32202P**, 14202S, 14202P, 10202S		■	■										■	■
<b>Precision 100 mg</b> 5201S, 8201S	■		■										■	■
<b>Precision 100 mg</b> 12201S		■	■										■	■
<b>High Capacity</b> 70201S, 50201S, 36201S, 36201P, 20201S, 11201S, 70200S, 36200S		■	■										■	■

\* All weighing modules available with MCA or MCE display

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

\*\*\*Software packages available for balances with MCA display only

User Interface	Description	Draft Shield	Description	Approval	Description
MCA	Advanced user interface	0	Balance without draft shield	S00	Standard version worldwide
MCE	Essential user interface	E	Small glass draft shield	S01	Standard only metric units
		R	Stainless steel draft shield frame	CEU	Verified version Europe (except FR)
		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
				ORU	Verifiable Version Russia



#### QP1

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

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, sieve analysis, filter weighing, checkweighing, formulation, averaging, etc.



#### QP3

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



#### QP4

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

#### 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)).

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