



# Cubis<sup>®</sup> II Manual Mass Comparators

A New Benchmark  
in Mass Metrology

Simplifying Progress

**SARTORIUS**

# Introducing the New Cubis® II Manual Mass Comparators

## Uncompromised Performance Under Real Laboratory Conditions

In its international recommendations R111-1, the OIML defines metrological and technical requirements. Its primary aim is the global harmonization of mass determination. Especially the pharmaceutical industry demands that greater accuracies based on global regulations are transferred to production.

The Cubis® II Manual Mass Comparators are the latest addition to the portfolio of the Sartorius Mass Comparators. They bring mass determination to a new level by uniting metrological weighing competence and newest hardware technology with an integrated control of workflows in line with the recommendations of the International Organization of Legal Metrology (OIML) and are compliant with ASTM.

## Your Benefits

- Next generation monolithic weighing system guarantees the highest level of accuracy
- Reduced influence of air drafts and ease of use thanks to optimized weighing chamber size and automated draft shields
- Environment adaptation capability and fast stabilization time ensured by novel engineering solutions
- Integrated workflows for error-free mass calibration using the MassCal App
- Integrated climate sensor further support measurement accuracy
- Traceable cleaning process guidance with the help of the Cleaning QApp – NEW!

# Outstanding Performance Meets Your Requirements for Weight Calibration

Cubis® II Manual Mass Comparators are specifically designed for determining the conventional value of mass and its standard uncertainty without compromising on performance. The latest generation of monolithic weighing systems offer fast stabilization times and low repeatability even under F class conditions.

## Environmental Monitoring

The built-in climate module ensures that parameters for temperature, humidity and atmospheric pressure are measured at the exact location of the mass determination, therefore guaranteeing the most accurate correction for air buoyancy.

Additionally the use of a climate tower enables to monitor the climate in the calibration laboratory ensuring complete compliance to OIML or ASTM regulations.

## Lab-Verified Performance

The 4<sup>th</sup> generation of monolithic weighing system ensures that the Cubis® II manual mass comparators offer uncompromised accuracy under real laboratory conditions.

Thanks to the motorized inner draft shield (mass comparators with a readability of 1 µg) or a height reducing plate (mass comparators with a readability of 10 and 100 µg) the latest generation of Cubis® II Mass Comparators can easily perform even in busier environment.

The teaching functionality of the automated draft shields allows for customizable door opening. Together with the comparably small volume of the weighing chamber, this leads to minimum effects of air drafts and short acclimatization times.



# New Design and User Interface

The Cubis® II Manual Mass Comparators feature the latest design and technology. The MCA display together with the well-chosen material and construction design of the Cubis® II product family ensure instrument durability and robustness.

## Data Integrity and Connectivity

The manual mass comparators can seamlessly be integrated in the infrastructure of mass standards laboratory.

Latest digital interfaces together with integrity features like an alibi memory or password-verified user logon ensure traceable calibration results.

# Intuitive Software Guidance

## Easy and Traceable Workflow Process

The new manual mass comparators come with preinstalled applications which give illustrated workflow guidance for error-free processes.

## MassCal App

The new version of MassCal App is now preinstalled on all Cubis® II Manual Mass Comparators. The App is designed to provide a guided workflow for compliant calibration process according to latest OIML and ASTM standards.

## Device Cleaning App

Follow the steps in the new cleaning QApp for correct cleaning execution. It supports your daily and advanced cleaning routines, shows the cleaning status and informs the user when the comparator needs to be cleaned. The cleaning QApp comes with every Cubis® II Manual Mass Comparator.



# Technical Specifications

## Metrological Specifications

Comparator	MCA36MC	MCA66MC	MCA106MC	MCA206MC	MCA605MC	MCA1005MC	MCA1004MC
Maximum Capacity	32 g	61 g	111 g	211 g	610 g	1,110 g	1,110 g
Application Range	0–32 g	0–61 g	0–111 g	0–211 g	0–610 g	0–1,110 g	0–1,110 g
Electronic weighing range and tare range	32 g	61 g	111 g	111 g	610 g	610 g	610 g
Substitution weight	–	–	–	100 g	–	500 g	500 g
Readability	1 µg	1 µg	1 µg	1 µg	10 µg	10 µg	100 µg
<b>Repeatability [s]</b>							
Typical	1 µg	1 µg	1.5 µg	2.5 µg	10 µg	15 µg	50 µg
At nominal load (5x ABA)	1.5 µg (20 g)	2 µg (50 g)	2 µg (100 g)	4 µg (200 g)	20 µg (500 g)	20 µg (1,000 g)	70 µg (1,000 g)
At low load (5x ABA)	0.7 µg (2 g)	0.7 µg (2 g)	1.5 µg (10 g)	3 µg (100 g)	10 µg (50 g)	15 µg (100 g)	50 µg (100 g)
Linearity, tolerance	6 µg	8 µg	8 µg	10 µg	100 µg	100 µg	150 µg
Eccentric load deviation, typical	0.64 µg/mm (10 g)	0.8 µg/mm (20 g)	1.6 µg/mm (50 g)	3.2 µg/mm (50 g)	8.88 µg/mm (500 g)	11.11 µg/mm (500 g)	13.33 µg/mm (500 g)
Weighing pan size	Ø 50 mm	Ø 50 mm	Ø 50 mm	Ø 50 mm	Ø 90 mm	Ø 90 mm	Ø 90 mm
Stabilization time, typical	3.5 s	3.5 s	3.5 s	3.5 s	3.5 s	3.5 s	3.5 s

For detailed specifications and information about the application ranges according to OIML R111 and ASTM E617 please scan the data sheet QR codes



## Optional Accessories

External calibration weight	20 g   E2 YCW422-02 50 g   E2 YCW452-02 100 g   E2 YCW512-02 500 g   E2 YCW552-02
Climate module, uncalibrated	YCM20MC
Calibration of a YCM20MC climate module with DAkkS calibration certificate	YCM20DAkks
Climate module with DAkkS calibration certificate	YCM20MC-DAkks
Internal motorized draft shield	YDS125A
Glass base, for height reduction of weighing compartment	YDSHR
Weighing table	YWT03

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