SARTORIUS

Product Datasheet

# Cubis® III

## Balances Made to Connect to Your Lab

Find it at **eu.fishersci.com**

fisher scientific
part of Thermo Fisher Scientific

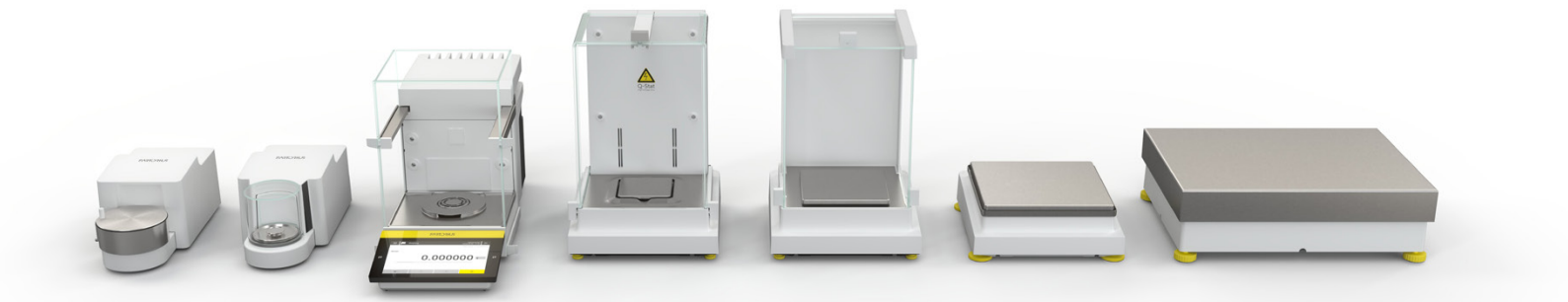
# Product Information

Cubis® III premium laboratory balances deliver precise, reliable weighing results for virtually any regulated lab application, with capacities from 2.1 g to 70 kg and readabilities from 0.1 µg to 1 g.

A flexible range of weighing modules, draft shields, and software options lets customers tailor the balances to their workflow, compliance, and integration needs.

Upgradeable hardware and software protect your investment and keep your solution ready for future requirements. Built for digital labs, Cubis® III enables secure, plug-and-play integration with LIMS, ELN, and other lab systems via standards such as OPC UA, LADS, and SiLA. This helps simplify onboarding of new balances, accelerates validation, and reduces integration costs, while providing a scalable foundation for automation.

As connectivity becomes essential to GxP operations, Cubis® III delivers real business value by strengthening data integrity, improving audit readiness, accelerating batch release, reducing deviations, and lowering costs. Cubis® III fits seamlessly into connected labs for a more efficient, integrated, future-ready workflow.



# Best-in-Class Weighing Performance, from Standalone Simplicity to Deep Integration

## Cubis® III — Standalone Optimized

**Best-in-class weighing performance with powerful standalone operation**

- Precise, reliable weighing with greater process control
- Versatile documentation options that fits best, from print to fully digital records
- Simplifies secure access with built-in user management and fast RFID one-tap login
- RFID-based, one-tap login
- Ensures safe weighing with digital guidance for tasks such as cleaning and calibration

**Digital-Driven Performance**
Top-tier accuracy and trusted reliability, ready to use out of the box.

**Designed for Non-Regulated Labs**
Ideal for labs that demand precise and secure weighing – no compliance burden, no added complexity.

**Future-ready**
Easily expandable with compliance features and advanced connectivity options whenever you need them.

## Cubis® III Max — Integration Optimized

**Best-in-class weighing performance built for connected, regulated laboratories**

- Engineered for the most demanding regulated environments in pharma, medtech, and beyond.
- Comprehensive connectivity — from simple result transfer to full system integration
- Enables automation of complex workflows directly on the balance
- Built for seamless global deployment across sites with minimal IT effort

| | Cubis® III | Cubis ®III Max |
|---|---|---|
| **System Functions** | | |
| Network Time Sync. (NTP) | X | X |
| (Automatic) Backup | X | X |
| Export of Audit Trail (Max only), Alibi Memory and configuration | X (no Audit Trail) | X |
| Support File Types for Report Export | PDF, CSV, TXT with MD5 checksum | PDF, CSV, TXT with MD5 checksum |
| Remote Access and Control via web browser | X | X |
| Failure protection in the event of network issues | X | X |
| Simple Software Update | X | X |
| **User Management** | | |
| Local User Management | X | X |
| Configurable Role management | X | X |
| Configurable local Password & logout policies | X | X |
| Login with RFID | X (optional reader required) | X (optional reader required) |
| Network User Management via LDAP(S) | | X |
| **Compliance** | | |
| Audit Trail | | X (500.000 local entries) |
| Electronic Signature | | X |
| Advanced features to comply with USP, Ph.Eur., JP and ChP guidlines | | X |

| | Cubis® III | Cubis ®III Max |
|---|---|---|
| Measurement Uncertainty Display | | X |
| Alibi Memory | X (500.000 local entries) | X (500.000 local entries) |
| **Weighing Performance** | | |
| User Calibration | X | X |
| Cleaning Guidance | X | X |
| **QAPP Workflows (Check out our QAPP Guide for more details)** | | |
| 45+ Weighing Workflows | X | X |
| Standard Preparation | | X |
| Tablet Checker acc. to Pharmacopoeia. | | X |
| Average Weight Control acc. to 76/211/EEC | | X |
| Average Weight Control F&B acc. to 76/211/EEC | | X |
| Filterability Testing of Wine | | X (France & Italy only) |
| Pipette Check Advanced acc. to DIN EN ISO 8655 | | X |
| Fogging Test acc. to DIN EN ISO 75201 | | X |
| Final Pharma Filling with gravimetrical control of peristaltic pumps | | X |
| MYCAP CCX Cell Passaging | | X |
| Linkit AX | | X |
| **Supported Connectivity Protocols** | | |
| OPC UA Server | X | X |
| REST API | X | X |
| SBI \| SICS Protocol | X | X |
| FTP(S) File Transfer | X (PDF/CSV/Text) | X (PDF/CSV/Text) |
| SMB (Windows File Share) | X (PDF/CSV/Text) | X (PDF/CSV/Text) |
| Network Time Protocol (NTP) | X | X |
| Metrohm Omnis Connector | | X |
| MES/LIMS/SCADA triggered QAPP execution via Unit Operations | | X |

# Technical Specifications - Cubis® III Weighing Modules

## Ultra-Micro Balances 0.0001 mg

| | Units | 2.7S |
|---|---|---|
| Scale interval (d) | mg | 0.0001 |
| Maximum capacity (Max) | g | 2.1 |
| **Repeatability up to 5% load** | | |
| Standard deviation of the load values, tolerance | mg | 0.0002 |
| Standard deviation of the load values, typical value | mg | 0.00015 |
| **Repeatability near Max** | | |
| Standard deviation of the load values, tolerance | mg | 0.00025 |
| Standard deviation of the load values, typical value | mg | 0.00018 |
| **Linearity deviation** | | |
| Tolerance | mg | 0.0009 |
| Typical value | mg | 0.0007 |
| **Deviation at eccentric loading, positions according to OIML R76** | | |
| Test weight | g | 1 |
| Tolerance | mg | 0.0007 |
| Typical value | mg | 0.0005 |
| Sensitivity drift between +10° C and +30° C | ppm/K | 1 |
| **Tare maximum capacity: Less than 100% of maximum capacity** | | |
| Accuracy class according to Directive 2014 \| 31 \| EU | | I |
| Verification scale interval (e) according to Directive 2014 \| 31 \| EU | mg | 1 |
| Minimum load (Min) according to Directive 2014 \| 31 \| EU | mg | 0.01 |
| **Minimum weight according to Pharmacopoeia (USP Chapter 41, PhEur Chapter 2.1.7, JP Chapter 9.62, ChP Guideline 9032)** | | |
| Optimum minimum weight | mg | 0.082 |
| Typical minimum weight | mg | 0.3 |
| Typical stabilization time | s | 7 |
| Typical measurement time | s | 10 |
| **Recommended calibration weight** | | |
| External test load | g | 2 |
| Accuracy class, according to OIML R111-1 | | E2 |
| **isoCAL** | | |
| Temperature change | K | 1.5 |
| Time span | h | 12 |
| **Dimensions** | | |
| Weighing module (L × W × H)* | mm | 340 \| 345 × 139 × 129 |
| Electronics module incl. display (L × W × H) | mm | 340 × 240 × 61 |
| Weighing pan size | mm | Ø 20 |
| Filter weighing pan | mm | Ø 50 |
| Weight, approx.* | kg | 7.2 \| 7.9 |

* depending upon weighing pan size, filter weighing pan and draft shield

## Micro Balances 0.001 mg

| | Units | 10.6S | 6.6S | 3.6P |
|---|---|---|---|---|
| Scale interval (d) | mg | 0.001 | 0.001 | 0.001 \| 0.002 \| 0.005 |
| Maximum capacity (Max) | g | 10.1 | 6.1 | 1.1 \| 2.1 \| 3.1 |
| **Repeatability up to 5% load** | | | | |
| Standard deviation of the load values, tolerance | mg | 0.001 | 0.001 | 0.003 |
| Standard deviation of the load values, typical value | mg | 0.0004 | 0.0004 | 0.0004 |
| **Repeatability near Max** | | | | |
| Standard deviation of the load values, tolerance | mg | 0.001 | 0.001 | 0.005 |
| Standard deviation of the load values, typical value | mg | 0.0006 | 0.0006 | 0.0006 |
| **Linearity deviation** | | | | |
| Tolerance | mg | 0.004 | 0.004 | 0.004 |
| Typical value | mg | 0.003 | 0.003 | 0.003 |
| **Deviation at eccentric loading, positions according to OIML R76** | | | | |
| Test weight | g | 5 | 2 | 1 |
| Tolerance | mg | 0.004 | 0.004 | 0.005 |
| Typical value | mg | 0.003 | 0.003 | 0.003 |
| Sensitivity drift between +10° C and +30° C | ppm/K | 1 | 1 | 1 |
| **Tare maximum capacity: Less than 100% of maximum capacity** | | | | |
| Accuracy class according to Directive 2014 \| 31 \| EU | | I | I | I |
| Verification scale interval (e) according to Directive 2014 \| 31 \| EU | mg | 1 | 1 | 1 |
| Minimum load (Min) according to Directive 2014 \| 31 \| EU | mg | 0.1 | 0.1 | 0.1 |
| **Minimum weight according to USP (United States Pharmacopeia), Chapter 41** | | | | |
| Optimum minimum weight | mg | 0.82 | 0.82 | 0.82 |
| Typical minimum weight | mg | 0.82 | 0.82 | 0.82 |
| Typical stabilization time | s | 3 | 3 | 3 |
| Typical measurement time | s | 6 | 6 | 6 |
| **Recommended calibration weight** | | | | |
| External test load | g | 10 | 5 | 3 |
| Accuracy class, according to OIML R111-1 | | E2 | E2 | E2 |
| **isoCAL** | | | | |
| Temperature change | K | 1.5 | 1.5 | 1.5 |
| Time span | h | 12 | 12 | 12 |
| **Dimensions** | | | | |
| Weighing module (L × W × H)* | mm | 340 x 139 x 129 | 340 \| 345 x 139 x 129 | 340 x 139 x 129 |
| Electronics module incl. display (L × W × H) | mm | | 340 × 240 × 61 | |
| Weighing pan size | mm | | Ø 30 | |
| Filter weighing pan | mm | | Ø 50 | |
| Weight, approx.* | kg | | 7.2 \| 7.9 | |

* depending upon weighing pan size, filter weighing pan and draft shield

## High-Capacity Micro Balances 0.001 - 0.002 mg

| | Units | 26P | 36S | 36P | 66S |
|---|---|---|---|---|---|
| Scale interval (d) | mg | 0.001 \| 0.01 | 0.001 | 0.001 \| 0.01 | 0.001 |
| Maximum capacity (Max) | g | 5.1 \| 22 | 32 | 10.1 \| 32 | 61 |
| **Repeatability up to 5% load** | | | | | |
| Standard deviation of the load values, tolerance | mg | 0.002 | 0.0015 | 0.002 | 0.0015 |
| Standard deviation of the load values, typical value | mg | 0.0007 | 0.0007 | 0.0007 | 0.0007 |
| **Repeatability near Max** | | | | | |
| Standard deviation of the load values, tolerance | mg | 0.0007 | 0.0025 | 0.007 | 0.004 |
| Standard deviation of the load values, typical value | mg | 0.0005 | 0.0018 | 0.005 | 0.0025 |
| **Linearity deviation** | | | | | |
| Tolerance | mg | 0.015 | 0.012 | 0.015 | 0.02 |
| Typical value | mg | 0.006 | 0.005 | 0.006 | 0.005 |
| **Deviation when load is off-center, positions according to OIML R76** | | | | | |
| Test weight | g | 10 | 10 | 10 | 20 |
| Tolerance | mg | 0.02 | 0.015 | 0.02 | 0.02 |
| Typical value | mg | 0.01 | 0.006 | 0.008 | 0.01 |
| Sensitivity drift between +10° C and +30° C | ppm/K | 1 | 1 | 1 | 1 |
| **Tare maximum capacity: Less than 100% of maximum capacity** | | | | | |
| Accuracy class according to Directive 2014 \| 31 \| EU | | I | I | I | I |
| Verification scale interval (e) according to Directive 2014 \| 31 \| EU | mg | 1 | 1 | 1 | 1 |
| Minimum load (Min) according to Directive 2014 \| 31 \| EU | mg | 0.1 | 0.1 | 0.1 | 0.1 |
| **Minimum weight according to Pharmacopoeia (USP Chapter 41, PhEur Chapter 2.1.7, JP Chapter 9.62, ChP Guideline 9032)** | | | | | |
| Optimum minimum weight | mg | 0.82 | 0.82 | 0.82 | 0.82 |
| Typical minimum weight | mg | 2.0 | 1.4 | 1.4 | 1.4 |
| Typical stabilization time | s | 3.5 \| 2.5 | 3.5 | 3.5 \| 2.5 | 3.5 |
| Typical measurement time | s | 10 \| 6 | 10 | 10 \| 6 | 10 |
| **Recommended calibration weight** | | | | | |
| External test load | g | 20 | 20 | 20 | 50 |
| Accuracy class, according to OIML R111-1 | | E2 | E2 | E2 | E2 |
| **isoCAL** | | | | | |
| Temperature change | K | 1.5 | 1.5 | 1.5 | 1.5 |
| Time span | h | 12 | 12 | 12 | 12 |
| **Dimensions** | | | | | |
| Weighing module incl. display (L × W × H)* | mm | 500 x 227 x 302 | | | |
| Weighing pan size | mm | Ø 50 | | | |
| Weight, approx.* | kg | 14.3 | | | |

* depending upon weighing pan size, filter weighing pan and draft shield

## High-Capacity Micro Balances 0.001 - 0.002 mg

| | Units | 66P | 116S2 |
|---|---|---|---|
| Scale interval (d) | mg | 0.001 \| 0.01 | 0.002 |
| Maximum capacity (Max) | g | 12 \| 61 | 111 |
| **Repeatability up to 5% load** | | | |
| Standard deviation of the load values, tolerance | mg | 0.002 | 0.004 |
| Standard deviation of the load values typical value | mg | 0.0007 | 0.0025 |
| **Repeatability near Max** | | | |
| Standard deviation of the load values, tolerance | mg | 0.01 | 0.01 |
| Standard deviation of the load values, typical value | mg | 0.006 | 0.005 |
| **Linearity deviation** | | | |
| Tolerance | mg | 0.02 | 0.03 |
| Typical value | mg | 0.008 | 0.02 |
| **Deviation when load is off-center, positions according to OIML R76** | | | |
| Test weight | g | 20 | 50 |
| Tolerance | mg | 0.03 | 0.03 |
| Typical value | mg | 0.012 | 0.02 |
| Sensitivity drift between +10° C and +30° C | ppm/K | 1 | 1 |
| **Tare maximum capacity: Less than 100% of maximum capacity** | | | |
| Accuracy class according to Directive 2014 \| 31 \| EU | | I | I |
| Verification scale interval (e) according to Directive 2014 \| 31 \| EU | mg | 1 | 1 |
| Minimum load (Min) according to Directive 2014 \| 31 \| EU | mg | 0.1 | 0.2 |
| **Minimum weight according to Pharmacopoeia (USP Chapter 41, PhEur Chapter 2.1.7, JP Chapter 9.62, ChP Guideline 9032)** | | | |
| Optimum minimum weight | mg | 0.82 | 1.64 |
| Typical minimum weight | mg | 1.4 | 5.0 |
| Typical stabilization time | s | 3.5 \| 2.5 | 3.5 |
| Typical measurement time | s | 10 \| 6 | 8 |
| **Recommended calibration weight** | | | |
| External test load | g | 50 | 100 |
| Accuracy class, according to OIML R111-1 | | E2 | E2 |
| **isoCAL** | | | |
| Temperature change | K | 1.5 | 1.5 |
| Time span | h | 12 | 12 |
| **Dimensions** | | | |
| Weighing module incl. display (L × W × H) | mm | 500 x 227 x 302 | |
| Weighing pan size | mm | Ø 50 | |
| Weight, approx. | kg | 14.3 | |

## Semi-Micro Balances 0.005 - 0.01 mg

| | Units | 226S5 | 225S | 225P | 125S | 125P |
|---|---|---|---|---|---|---|
| Scale interval (d) | mg | 0.005 | 0.01 | 0.01 \| 0.1 | 0.01 | 0.01 \| 0.1 |
| Maximum capacity (Max) | g | 220 | 220 | 120 \| 220 | 120 | 60 \| 120 |
| **Repeatability up to 5% load** | | | | | | |
| Standard deviation of the load values, tolerance | mg | 0.01 | 0.015 | 0.015 | 0.015 | 0.015 |
| Standard deviation of the load values, typical value | mg | 0.004 | 0.0065 | 0.0065 | 0.0065 | 0.01 |
| **Repeatability near Max** | | | | | | |
| Standard deviation of the load values, tolerance | mg | 0.025 | 0.025 | 0.04 | 0.025 | 0.06 |
| Standard deviation of the load values, typical value | mg | 0.015 | 0.015 | 0.02 | 0.015 | 0.02 |
| **Linearity deviation** | | | | | | |
| Tolerance | mg | 0.07 | 0.07 | 0.1 | 0.07 | 0.15 |
| Typical value | mg | 0.03 | 0.03 | 0.03 | 0.03 | 0.1 |
| **Deviation when load is off-center, positions according to OIML R76** | | | | | | |
| Test weight | g | 100 | 100 | 100 | 50 | 50 |
| Tolerance | mg | 0.12 | 0.15 | 0.2 | 0.12 | 0.2 |
| Typical value | mg | 0.04 | 0.05 | 0.06 | 0.04 | 0.1 |
| Sensitivity drift between +10° C and +30° C | ppm/K | 1 | 1 | 1 | 1 | 1 |
| **Tare maximum capacity: Less than 100% of maximum capacity** | | | | | | |
| Accuracy class according to Directive 2014 \| 31 \| EU | | I | I | I | I | I |
| Verification scale interval (e) according to Directive 2014 \| 31 \| EU | mg | 1 | 1 | 1 | 1 | 1 |
| Minimum load (Min) according to Directive 2014 \| 31 \| EU | mg | 0.5 | 1 | 1 | 1 | 1 |
| **Minimum weight according to Pharmacopoeia (USP Chapter 41, PhEur Chapter 2.1.7, JP Chapter 9.62, ChP Guideline 9032)** | | | | | | |
| Optimum minimum weight | mg | 4.1 | 8.2 | 8.2 | 8.2 | 8.2 |
| Typical minimum weight | mg | 8.0 | 13.0 | 13.0 | 13.0 | 13.0 |
| Typical stabilization time | s | 1.5 | 1.5 | 1.5 | 1.5 | 2 |
| Typical measurement time | s | 6 | 4 | 4 | 4 | 6 |
| **Recommended calibration weight** | | | | | | |
| External test load | g | 200 | 200 | 200 | 100 | 100 |
| Accuracy class, according to OIML R111-1 | | E2 | E2 | E2 | E2 | E2 |
| **isoCAL** | | | | | | |
| Temperature change | K | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| Time span | h | 12 | 12 | 12 | 12 | 12 |
| **Dimensions** | | | | | | |
| Weighing module incl. display (except 125P) (L×W×H)* | mm | 500 x 227 x 302 | | | | 450 \| 404×240×373 |
| Electronics module (L×W×H) | mm | - | - | - | - | 211×240×56 |
| Weighing pan size | mm | Ø 50 | Ø 90 | | | 85×85 |
| Weight, approx.* | kg | 14.3 | | | | 10.2 \| 11.7 |

* depending upon weighing pan size, filter weighing pan and draft shield
** Module 125P is based on Cubis® II and has different dimensions than other 5-digit balances (please see Balance Dimensions)

## Analytical Balances 0.005 - 0.1 mg

| | Units | 225S5 | 524S | 324S | 224S | 124S |
|---|---|---|---|---|---|---|
| Scale interval (d) | mg | 0.05 | 0.1 | 0.1 | 0.1 | 0.1 |
| Maximum capacity (Max) | g | 220 | 520 | 320 | 220 | 120 |
| **Repeatability up to 5% load** | | | | | | |
| Standard deviation of the load values, tolerance | mg | 0.04 | 0.08 | 0.08 | 0.07 | 0.1 |
| Standard deviation of the load values, typical value | mg | 0.02 | 0.04 | 0.04 | 0.05 | 0.05 |
| **Repeatability near Max** | | | | | | |
| Standard deviation of the load values, tolerance | mg | 0.06 | 0.1 | 0.1 | 0.07 | 0.1 |
| Standard deviation of the load values, typical value | mg | 0.025 | 0.05 | 0.05 | 0.05 | 0.05 |
| **Linearity Deviation** | | | | | | |
| Tolerance | mg | 0.1 | 0.4 | 0.3 | 0.2 | 0.2 |
| Typical value | mg | 0.05 | 0.2 | 0.2 | 0.13 | 0.13 |
| **Deviation when load is off-center, positions according to OIML R76** | | | | | | |
| Test weight | g | 100 | 200 | 200 | 100 | 50 |
| Tolerance | mg | 0.2 | 0.3 | 0.3 | 0.2 | 0.2 |
| Typical value | mg | 0.1 | 0.2 | 0.2 | 0.12 | 0.12 |
| Sensitivity drift between +10° C and +30° C | ppm/K | 1 | 1 | 1 | 1 | 1 |
| **Tare maximum capacity: Less than 100% of maximum capacity** | | | | | | |
| Accuracy class according to Directive 2014 \| 31 \| EU | | I | I | I | I | I |
| Verification scale interval (e) according to Directive 2014 \| 31 \| EU | mg | 1 | 1 | 1 | 1 | 1 |
| Minimum load (Min) according to Directive 2014 \| 31 \| EU | mg | 1 | 10 | 10 | 10 | 10 |
| **Minimum weight according to Pharmacopoeia (USP Chapter 41, PhEur Chapter 2.1.7, JP Chapter 9.62, ChP Guideline 9032)** | | | | | | |
| Optimum minimum weight | mg | 41 | 82 | 82 | 82 | 82 |
| Typical minimum weight | mg | 41 | 82 | 82 | 100 | 100 |
| Typical stabilization time | s | 1.5 | 1 | 1 | 1 | 1 |
| Typical measurement time | s | 4 | 3 | 3 | 3 | 3 |
| **Recommended calibration weight** | | | | | | |
| External test load | g | 200 | 500 | 300 | 200 | 100 |
| Accuracy class, according to OIML R111-1 | | E2 | E2 | E2 | E2 | E2 |
| **isoCAL** | | | | | | |
| Temperature change | K | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| Time span | h | 12 | 6 | 12 | 12 | 12 |
| **Dimensions** | | | | | | |
| Weighing module incl. display (L × W × H)* | mm | 500 x 227 x 302 | 402 × 240 × 373 | | | |
| Weighing pan size | mm | Ø 90 | 85 × 85 | | | |
| Weight, approx.* | kg | 14.3 | 9.0 \| 10.8 | | | |

* depending upon weighing pan size, filter weighing pan and draft shield

## Precision Balances 1 - 100 mg

| | Units | 5203S | 3203S | 2203S | 1203S |
|---|---|---|---|---|---|
| Scale interval (d) | mg | 1 | 1 | 1 | 1 |
| Maximum capacity (Max) | g | 5200 | 3200 | 2200 | 1200 |
| **Repeatability up to 5% load** | | | | | |
| Standard deviation of the load values, tolerance | mg | 1 | 1 | 0.7 | 0.7 |
| Standard deviation of the load values, typical value | mg | 0.5 | 0.5 | 0.5 | 0.5 |
| **Repeatability near Max** | | | | | |
| Standard deviation of the load values, tolerance | mg | 1 | 1 | 1 | 0.7 |
| Standard deviation of the load values, typical value | mg | 0.6 | 0.6 | 0.6 | 0.6 |
| **Linearity Deviation** | | | | | |
| Tolerance | mg | 5 | 5 | 3 | 2 |
| Typical value | mg | 2 | 2 | 2 | 1 |
| **Deviation when load is off-center, positions according to OIML R76** | | | | | |
| Test weight | g | 2000 | 1000 | 1000 | 500 |
| Tolerance | mg | 2 | 2 | 2 | 2 |
| Typical value | mg | 1 | 1 | 1 | 1 |
| Sensitivity drift between +10° C and +30° C | ppm/K | 1 | 1 | 1 | 1.5 |
| **Tare maximum capacity: Less than 100% of maximum capacity** | | | | | |
| Accuracy class according to Directive 2014 \| 31 \| EU | | I | I | I | I |
| Verification scale interval (e) according to Directive 2014 \| 31 \| EU | mg | 10 | 10 | 10 | 10 |
| Minimum load (Min) according to Directive 2014 \| 31 \| EU | mg | 100 | 100 | 100 | 100 |
| **Minimum weight according to Pharmacopoeia (USP Chapter 41, PhEur Chapter 2.1.7, JP Chapter 9.62, ChP Guideline 9032)** | | | | | |
| Optimum minimum weight | mg | 820 | 820 | 820 | 820 |
| Typical minimum weight | mg | 1000 | 1000 | 1000 | 1000 |
| Typical stabilization time | s | 1 | 1 | 1 | 1 |
| Typical measurement time | s | 2 | 2 | 1.5 | 1.5 |
| **Recommended calibration weight** | | | | | |
| External test load | g | 5000 | 3000 | 2000 | 1000 |
| Accuracy class, according to OIML R111-1 | | E2 | E2 | E2 | E2 |
| **isoCAL** | | | | | |
| Temperature change | K | 1.5 | 1.5 | 1.5 | 1.5 |
| Time span | h | 6 | 6 | 12 | 12 |
| **Dimensions** | | | | | |
| Weighing module incl. display (L × W × H)* | mm | 402 × 240 × 122 \| 366 \| 372 | | | |
| Weighing pan size | mm | 140 × 140 | | | |
| Weight, approx.* | kg | 6.7 \| 10.2 \| 11.0 | | | |

* depending upon weighing pan size, filter weighing pan and draft shield

## Precision Balances 1 -100 mg

| | Units | 623S | 323S | 14202S |
|---|---|---|---|---|
| Scale interval (d) | mg | 1 | 1 | 10 |
| Maximum capacity (Max) | g | 620 | 320 | 14200 |
| **Repeatability up to 5% load** | | | | |
| Standard deviation of the load values, tolerance | mg | 0.7 | 0.7 | 10 |
| Standard deviation of the load values, typical value | mg | 0.4 | 0.4 | 4 |
| **Repeatability near Max** | | | | |
| Standard deviation of the load values, tolerance | mg | 0.7 | 0.7 | 10 |
| Standard deviation of the load values, typical value | mg | 0.5 | 0.5 | 5 |
| **Linearity deviation** | | | | |
| Tolerance | mg | 2 | 2 | 30 |
| Typical value | mg | 0.6 | 0.6 | 10 |
| **Deviation when load is off-center, positions according to OIML R76** | | | | |
| Test weight | g | 200 | 200 | 5000 |
| Tolerance | mg | 2 | 2 | 20 |
| Typical value | mg | 1 | 1 | 10 |
| Sensitivity drift between +10° C and +30° C | ppm/K | 2 | 2 | 1.5 |
| **Tare maximum capacity: Less than 100% of maximum capacity** | | | | |
| Accuracy class according to Directive 2014 \| 31 \| EU | | II | II | I |
| Verification scale interval (e) according to Directive 2014 \| 31 \| EU | mg | 10 | 10 | 100 |
| Minimum load (Min) according to Directive 2014 \| 31 \| EU | mg | 20 | 20 | 1000 |
| **Minimum weight according to Pharmacopoeia (USP Chapter 41, PhEur Chapter 2.1.7, JP Chapter 9.62, ChP Guideline 9032)** | | | | |
| Optimum minimum weight | mg | 820 | 820 | 8200 |
| Typical minimum weight | mg | 820 | 820 | 8200 |
| Typical stabilization time | s | 0.8 | 0.8 | 0.8 |
| Typical measurement time | s | 1 | 1 | 1.5 |
| **Recommended calibration weight** | | | | |
| External test load | g | 500 | 200 | 14000 |
| Accuracy class, according to OIML R111-1 | | E2 | E2 | E2 |
| **isoCAL** | | | | |
| Temperature change | K | 2 | 2 | 1.5 |
| Time span | h | 12 | 12 | 6 |
| **Dimensions** | | | | |
| Weighing module incl. display (L × W × H)* | mm | 402 × 240 × 122 \| 366 \| 372 | | 402 x 240 x 95 |
| Weighing pan size | mm | 140 × 140 | | 206 x 206 |
| Weight, approx.* | kg | 6.7 \| 10.2 \| 11.0 | | 6.0 |

* depending upon weighing pan size, filter weighing pan and draft shield

## Precision Balances 1 - 100 mg

| | Units | 10202S | 8202S | 6202S | 6202P | 4202S | 2202S |
|---|---|---|---|---|---|---|---|
| Scale interval (d) | mg | 10 | 10 | 10 | 10\|20\|50 | 10 | 10 |
| Maximum capacity (Max) | g | 10200 | 8200 | 6200 | 1500\| 3000\| 6200 | 4200 | 2200 |
| **Repeatability up to 5% load** | | | | | | | |
| Standard deviation of the load values, tolerance | mg | 7 | 7 | 7 | 7 | 7 | 7 |
| Standard deviation of the load values, typical value | mg | 4 | 4 | 4 | 4 | 4 | 4 |
| **Repeatability near Max** | | | | | | | |
| Standard deviation of the load values, tolerance | mg | 7 | 7 | 7 | 40 | 7 | 7 |
| Standard deviation of the load values, typical value | mg | 5 | 4 | 4 | 15 | 4 | 4 |
| **Linearity deviation** | | | | | | | |
| Tolerance | mg | 20 | 20 | 20 | 50 | 20 | 20 |
| Typical value | mg | 6 | 6 | 6 | 20 | 6 | 6 |
| **Deviation when load is off-center, positions according to OIML R76** | | | | | | | |
| Test weight | g | 5000 | 5000 | 2000 | 2000 | 2000 | 1000 |
| Tolerance | mg | 20 | 30 | 20 | 30 | 30 | 20 |
| Typical value | mg | 10 | 10 | 10 | 30 | 10 | 10 |
| Sensitivity drift between +10° C and +30° C | ppm/K | 1.5 | 2 | 2 | 2 | 2 | 2 |
| **Tare maximum capacity: Less than 100% of maximum capacity** | | | | | | | |
| Accuracy class according to Directive 2014 \| 31 \| EU | | I | II | II | II | II | II |
| Verification scale interval (e) according to Directive 2014 \| 31 \| EU | mg | 100 | 100 | 100 | 100 | 100 | 100 |
| Minimum load (Min) according to Directive 2014 \| 31 \| EU | mg | 1000 | 500 | 500 | 500 | 500 | 500 |
| **Minimum weight according to Pharmacopoeia (USP Chapter 41, PhEur Chapter 2.1.7, JP Chapter 9.62, ChP Guideline 9032)** | | | | | | | |
| Optimum minimum weight | mg | 8200 | 8200 | 8200 | 8200 | 8200 | 8200 |
| Typical minimum weight | mg | 8200 | 8200 | 8200 | 8200 | 8200 | 8200 |
| Typical stabilization time | s | 0.8 | 1 | 1 | 1 | 1 | 0.8 |
| Typical measurement time | s | 1.5 | 1.5 | 1.5 | 1.5 | 1 | 1 |
| **Recommended calibration weight** | | | | | | | |
| External test load | g | 10000 | 7000 | 5000 | 5000 | 3000 | 1500 |
| Accuracy class, according to OIML R111-1 | | E2 | E2 | E2 | E2 | E2 | E2 |
| **isoCAL** | | | | | | | |
| Temperature change | K | 1.5 | 2 | 2 | 2 | 2 | 2 |
| Time span | h | 6 | 12 | 12 | 12 | 12 | 12 |
| **Dimensions** | | | | | | | |
| Weighing module incl. display (L × W × H)* | mm | 402 x 240 x 95 | | | | 402 × 240 × 95 | |
| Weighing pan size | mm | 206 x 206 | | | | 206 × 206 | |
| Weight, approx.* | kg | 6.0 | | | | 6.0 | |

* depending upon weighing pan size, filter weighing pan and draft shield

## Precision Balances 1 - 100 mg

| | Units | 1202S | 12201S | 8201S | 5201S |
|---|---|---|---|---|---|
| Scale interval (d) | mg | 10 | 100 | 100 | 100 |
| Maximum capacity (Max) | g | 1200 | 12200 | 8200 | 5200 |
| **Repeatability up to 5% load** | | | | | |
| Standard deviation of the load values, tolerance | mg | 7 | 50 | 50 | 50 |
| Standard deviation of the load values, typical value | mg | 4 | 20 | 20 | 20 |
| **Repeatability near Max** | | | | | |
| Standard deviation of the load values, tolerance | mg | 7 | 50 | 50 | 50 |
| Standard deviation of the load values, typical value | mg | 4 | 20 | 20 | 20 |
| **Linearity deviation** | | | | | |
| Tolerance | mg | 20 | 100 | 100 | 100 |
| Typical value | mg | 6 | 30 | 30 | 20 |
| **Deviation when load is off-center, positions according to OIML R76** | | | | | |
| Test weight | g | 500 | 5000 | 5000 | 2000 |
| Tolerance | mg | 20 | 200 | 200 | 200 |
| Typical value | mg | 10 | 100 | 100 | 100 |
| Sensitivity drift between +10° C and +30° C | ppm/K | 2 | 4 | 4 | 4 |
| **Tare maximum capacity: Less than 100% of maximum capacity** | | | | | |
| Accuracy class according to Directive 2014 \| 31 \| EU | | II | II | II | II |
| Verification scale interval (e) according to Directive 2014 \| 31 \| EU | mg | 100 | 1000 | 1000 | 1000 |
| Minimum load (Min) according to Directive 2014 \| 31 \| EU | mg | 500 | 5000 | 5000 | 5000 |
| **Minimum weight according to Pharmacopoeia (USP Chapter 41, PhEur Chapter 2.1.7, JP Chapter 9.62, ChP Guideline 9032)** | | | | | |
| Optimum minimum weight | mg | 8200 | 82000 | 82000 | 82000 |
| Typical minimum weight | mg | 8200 | 82000 | 82000 | 82000 |
| Typical stabilization time | s | 0.8 | 0.8 | 0.8 | 0.8 |
| Typical measurement time | s | 1 | 1 | 1 | 1 |
| **Recommended calibration weight** | | | | | |
| External test load | g | 700 | 12000 | 8000 | 5000 |
| Accuracy class, according to OIML R111-1 | | E2 | F1 | F1 | F1 |
| **isoCAL** | | | | | |
| Temperature change | K | 2 | 4 | 4 | 4 |
| Time span | h | 12 | 12 | 12 | 12 |
| **Dimensions** | | | | | |
| Weighing module incl. display (L × W × H)* | mm | | 402 × 240 × 95 | | |
| Weighing pan size | mm | | 206 × 206 | | |
| Weight, approx.* | kg | | 6.0 | | |

* depending upon weighing pan size, filter weighing pan and draft shield

## High Capacity Balances 100 - 1000 mg

| | Units | 70201S | 50201S | 36201S | 36201P |
|---|---|---|---|---|---|
| Scale interval (d) | mg | 100 | 100 | 100 | 100 \| 1000 |
| Maximum capacity (Max) | g | 70200 | 50200 | 36200 | 10200 \| 36200 |
| **Repeatability up to 5% load** | | | | | |
| Standard deviation of the load values, tolerance | mg | 100 | 100 | 100 | 100 |
| Standard deviation of the load values, typical value | mg | 40 | 40 | 20 | 20 |
| **Repeatability near Max** | | | | | |
| Standard deviation of the load values, tolerance | mg | 100 | 100 | 100 | 100 |
| Standard deviation of the load values, typical value | mg | 40 | 40 | 20 | 20 |
| **Linearity deviation** | | | | | |
| Tolerance | mg | 500 | 500 | 200 | 200 |
| Typical value | mg | 150 | 150 | 100 | 100 |
| **Deviation when load is off-center, positions according to OIML R76** | | | | | |
| Test weight | g | 20000 | 20000 | 10000 | 10000 |
| Tolerance | mg | 500 | 500 | 300 | 300 |
| Typical value | mg | 300 | 300 | 200 | 200 |
| Sensitivity drift between +10° C and +30° C | ppm/K | 2 | 2 | 2 | 2 |
| **Tare maximum capacity: Less than 100% of maximum capacity** | | | | | |
| Accuracy class according to Directive 2014 \| 31 \| EU | | II | II | II | II |
| Verification scale interval (e) according to Directive 2014 \| 31 \| EU | mg | 1000 | 1000 | 1000 | 1000 |
| Minimum load (Min) according to Directive 2014 \| 31 \| EU | mg | 5000 | 5000 | 5000 | 5000 |
| **Minimum weight according to Pharmacopoeia (USP Chapter 41, PhEur Chapter 2.1.7, JP Chapter 9.62, ChP Guideline 9032)** | | | | | |
| Optimum minimum weight | mg | 82000 | 82000 | 82000 | 82000 |
| Typical minimum weight | mg | 82000 | 82000 | 82000 | 82000 |
| Typical stabilization time | s | 1.5 | 1.5 | 1.5 | 1.5 |
| Typical measurement time | s | 1.5 | 1.5 | 2 | 2 |
| **Recommended calibration weight** | | | | | |
| External test load | g | 70000 | 50000 | 30000 | 30000 |
| Accuracy class, according to OIML R111-1 | | F1 | F1 | F1 | F1 |
| **isoCAL** | | | | | |
| Temperature change | K | 2 | 2 | 4 | 4 |
| Time span | h | 12 | 12 | 12 | 12 |
| **Dimensions** | | | | | |
| Weighing module incl. display(L × W × H)* | mm | 453 × 400 × 126 | | | |
| Weighing pan size | mm | 400 × 300 | | | |
| Weight, approx.* | kg | 15.8 | | | |

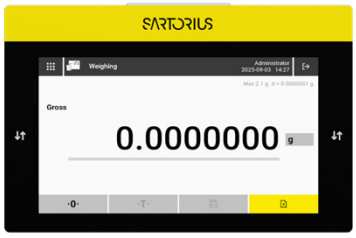
* depending upon weighing pan size, filter weighing pan and draft shield

## High Capacity Balances 100 - 1000 mg

| | Units | 20201S | 11201S | 70200S | 36200S |
|---|---|---|---|---|---|
| Scale interval (d) | mg | 100 | 100 | 1000 | 1000 |
| Maximum capacity (Max) | g | 20200 | 11200 | 70200 | 36200 |
| **Repeatability up to 5% load** | | | | | |
| Standard deviation of the load values, tolerance | mg | 100 | 100 | 500 | 500 |
| Standard deviation of the load values, typical value | mg | 20 | 20 | 200 | 200 |
| **Repeatability near Max** | | | | | |
| Standard deviation of the load values, tolerance | mg | 100 | 100 | 500 | 500 |
| Standard deviation of the load values, typical value | mg | 20 | 20 | 200 | 200 |
| **Linearity Deviation** | | | | | |
| Tolerance | mg | 200 | 200 | 1000 | 1000 |
| Typical value | mg | 60 | 60 | 200 | 200 |
| **Deviation when load is off-center, positions according to OIML R76** | | | | | |
| Test weight | g | 5000 | 5000 | 20000 | 10000 |
| Tolerance | mg | 300 | 300 | 1000 | 1000 |
| Typical value | mg | 200 | 200 | 600 | 500 |
| Sensitivity drift between +10° C and +30° C | ppm/K | 2 | 2 | 3 | 3 |
| **Tare maximum capacity: Less than 100% of maximum capacity** | | | | | |
| Accuracy class according to Directive 2014 \| 31 \| EU | | II | II | II | II |
| Verification scale interval (e) according to Directive 2014 \| 31 \| EU | mg | 1000 | 1000 | 10000 | 1000 |
| Minimum load (Min) according to Directive 2014 \| 31 \| EU | mg | 5000 | 5000 | 50000 | 50000 |
| **Minimum weight according to Pharmacopoeia (USP Chapter 41, PhEur Chapter 2.1.7, JP Chapter 9.62, ChP Guideline 9032)** | | | | | |
| Optimum minimum weight | mg | 82000 | 82000 | 820000 | 820000 |
| Typical minimum weight | mg | 82000 | 82000 | 820000 | 820000 |
| Typical stabilization time | s | 1.5 | 1.5 | 1 | 1 |
| Typical measurement time | s | 2 | 2 | 1.2 | 1.2 |
| **Recommended calibration weight** | | | | | |
| External test load | g | 20000 | 10000 | 70000 | 30000 |
| Accuracy class, according to OIML R111–1 | | F1 | F1 | F1 | F1 |
| **isoCAL** | | | | | |
| Temperature change | K | 4 | 4 | 2 | 4 |
| Time span | h | 12 | 12 | 12 | 12 |
| **Dimensions** | | | | | |
| Weighing module (L × W × H)* | mm | 453 × 400 × 126 | | | |
| Weighing pan size | mm | 400 × 300 | | | |
| Weight, approx.* | kg | 15.8 | | | |

* depending upon weighing pan size, filter weighing pan and draft shield

# Technical Specifications - Cubis® III




## Display

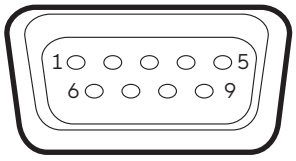
| | |
|---|---|
| **Display Type** | High-resolution (1024 x 600 px) 7" color touch TFT display in 16:9 format with intuitive user interface and illuminated touch sensors for operating automatic draft shields. |

## Electrical data

| | | **Ultra-micro, micro, analytical, precision and high capacity balances** | **High-capacity micro and semi-micro balances** |
|---|---|---|---|
| | **Units** | **Value** | **Value** |
| **Installation Site** | | | |
| AC voltage | V | 100–240 (±10%) | 100–240 (±10%) |
| Frequency | Hz | 50–60 (±5%) | 47–63 |
| Current consumption, maximum | A | 1.0 | 0.8 |
| Overvoltage category according to IEC 60664-1 | | II | II |
| Pollution level according to IEC 61010-1\| IEC 60664-1 | | 2 | 2 |
| **Device power supply (secondary)** | | | |
| Max. DC voltage | V | 14.25–15.75 at 2 A output current | 15 ± 15% at 4.3 A output current |
| **Power Consumption** | | | |
| Power Maximum | W | 30 | 64.5 |
| Normal weighing mode | W | 5.0 | 8.0 |
| Standby mode | W | 5.0 | 6.9 |
| Deep standby mode | W | 3.2 | 6.0 |
| Power supply cable | | According to IEC 60320-1/C14: Country-specific, 3-pin, two-sided plug | According to IEC 60320-1 C13 \| C14, with IEC plug, 3-pin, and with country-specific power plug |
| **Safety of Electrical Equipment** | | According to EN 61010-1 / IEC 61010-1 Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 1: General Requirements | |
| **Electromagnetic Compatibility** | | | |
| Interference Immunity | | Suitable for use in industrial areas | |
| Transient emissions | | Class B; suitable for use in residential areas and areas that are directly connected to a low voltage network that (also) supplies residential buildings. | |

| Ambient conditions | | | |
|---|---|---|---|
| Standard laboratory rooms | | | |
| Installation site according to IEC 60259-1, maximum altitude above sea level | m | 3000 | 3000 |
| For indoor use only | | | |
| Temperature | | | |
| In operation | ° C | +5 – +40 | +10 – +30 |
| In operation for conformity-assessed devices: see information on the device's ID plate | | | |
| During storage and transport | ° C | –20 – +60 | |
| **Relative humidity** | | | |
| At temperatures of up to 31° C | % | 80 | 80 |
| Then linear decrease from 80% at 31° C to 50% at 40° C | | | |
| No heat from heating systems or direct sunlight, drafts from open windows, AC systems, or doors, vibrations, "heavy traffic" areas (personnel) electromagnetic fields, dry air | | | |

## Interfaces

| Specifications for the COM-RS232 Interface | |
|---|---|
| Type of interface: Serial interface | |
| Interface operation: Full duplex | |
| Level: RS232 | |
| Connection: D-sub connector, 9-pin | |
| Pin assignment:   | Pin 1: Not assigned |
| | Pin 2: Data output (TxD) |
| | Pin 3: Data input (RxD) |
| | Pin 4: Not assigned |
| | Pin 5: Internal ground |
| | Pin 6: Not assigned |
| | Pin 7: Clear to Send (CTS) |
| | Pin 8: Request to Send (RTS) |
| | Pin 9: Not assigned |

| Specifications for the USB-A Interface |
|---|
| Communication: USB host (master) |
| Connectable devices: Sartorius printers, USB sticks with software update |

| Specifications for the USB-B Interface |
|---|
| Communication: USB device (slave) |
| Type of interface: Virtual serial interface (virtual COM-port, VCP) and "PC direct" communication |

| Specifications for the USB-C Interface |
|---|
| Communication: Downstream-facing port (DFP), USB host (Master) |
| Communication: RS232 connection with accessory YCC-USB-C-D09M* |

* RS232 adapter cable YCC-USB-C-D09M available for high-capacity micro and semi-micro balance

## Materials

Housing: Plastic PBT | PA, Optiwhite float glass, Stainless steel 1.4401 | 1.4404, Die-cast aluminum

Control unit: Plastic PA, float glass

Weighing compartment: Titanium 3.7035 | 3.7165, Stainless steel 1.4401 | 1.4404, zinc oxide, brass

## Integrated Clock

Maximum deviation per month (RTC): 30 s

## Backup Battery

Lithium battery: type CR2032

Service life at room temperature, minimum: 10 Years

## Software Packages

| Code | Item |
|---|---|
| QP99 | Complete Software Package |

## Draft Shields

| Code | Item |
|---|---|
| 0 | Flat, stainless steel weight pan with no draft shield for weighing modules |
| A | Automatic, glass motorized draft shield with learning capability for user-friendly operation and easy customization to the changing requirements of different applications |
| I | Identical to draft shield version A, but also includes an integrated ionizer to eliminate interfering electrostatic charges on samples and sample containers |
| F | Manual stainless steel draft shield for weighing filters with diameters of up to 50 mm (75 mm and 90 mm pans optional) |
| R | Flat, stainless steel weighing pan draft shield (removable, with no glass components) for all precision balances |
| U | Manual glass draft shield chamber, with smooth-action doors that open wide and provide unimpeded access to the weighing chamber without interfering braces. At high-capacity & semi-micro balances with licensable draft shield motors or ionizer. |

## Draft Shield Inner Dimensions

| Draft Shield Version | Depth (mm) | Height (mm) | Width (mm) |
|---|---|---|---|
| **F** | - | 33 | Ø 109 |
| **A (micro)** | - | 67 | Ø 80 |
| **U, A and I (high-capacity micro & semi-micro)** | 159 | 234 | 185 |
| **U, A* and I (analytical & *precision)** | 154 | 261 | 192 |
| **U (precision)** | 191 | 253 | 193 |
| **R** | 154 | 27.5 | 154 |

### Approvals

| Code | Item |
|---|---|
| S0 | Standard version non-verified, all units (European version with cables for EU, CH, IT, UK) |
| S1 | Standard version non-verified, metric units only |
| S2 | Standard version non-verified, all units (North American version with US cable) |
| S3 | Standard version non-verified, all units (International version with cables for AR, IL, AU) |
| EU | Verified balance with EC Type Approval Certificate (for EU except France) |
| FR | Verified balance with EC Type Approval Certificate for France only |
| CN | Balance with Type Approval Certificate for China |
| BR | Balance with Type Approval Certificate for Brazil |
| IN | Balance with Type Approval Certificate for India |
| JP | Balance with Type Approval Certificate for Japan |

# Accessories

| Printers and Communication | Quantity | Cat. No. |
|---|---|---|
| Thermal transfer \| thermal printer for GMP \| GLP printouts on continuous paper and labels | 1 | YDP30 |
| Laboratory thermal transfer printer YDP30 with USB and ethernet connection | 1 | YDP30-NET |
| | | |
| Wireless Nano USB Adapter (Available in the EU only) | 1 | YWLAN01MS |
| WIFI Nano Router (Available in the EU only) | 1 | YWLAN02MS |
| Standard paper and ink ribbon, set, 90 m, for YDP30 | 1 | 69Y03285 |
| Self-adhesive paper and ink ribbon, 90 m, for YDP30 | 1 | 69Y03286 |

| | | |
|---|---|---|
| Standard thermal paper, 24 m roll, for YDP30 \| YDP40 | 5 | 69Y03287 |
| Self-adhesive thermal paper, 13 m roll, for YDP30 | 5 | 69Y03288 |
| Self-adhesive labels for YDP30 | | |
| 58 mm × 100 mm | 350 | 69Y03094 |
| 58 mm × 76 mm | 500 | 69Y03093 |
| 58 mm × 30 mm | 1000 | 69Y03092 |
| **Displays and Input \| Output Elements** | | |
| Motion sensor with USB connection cable | 1 | YHS02USB |
| Display stand for weigh cells with scale interval of 100 mg \| 1 g and weighing capacity > 20 kg for raising the operating unit | 1 | YDH04CUB |
| Display stand for weigh cells with scale interval of 10 mg \| 100 mg for raising the operating unit | 1 | YDH03CUB |
| Barcode and QR Reader with USB-A connector | 1 | YBR05 |
| Foot switch for draft shield, tara, print | 1 | YFS02 |
| RFID Reader with USB-A connector | 1 | YRFID01 |

## Accessories (continued)

| **Hardware for Pipette Calibration (Analytical Balances)** | **Quantity** | **Cat. No.** |
|---|---|---|
| Pipette calibration kit (hardware). Consists of moisture trap and all required adapters | 1 | YCP04MS |
| **Density Determination Kits** | | |
| Density determination kit for solids and liquids for 0.1 and 0.01 mg weighing modules | 1 | YDK03MS |
| Density determination kit for solids and liquids for 1 mg weighing modules | 1 | YDK04MS |
| **Filter Pans, Ionizer and Weighing Scoops** | | |
| Grid pan for model with a scale interval of 10 mg or 100 mg for weighing in laboratory hoods, safety weighing cabinets and workbenches, reduced wind attack surface of the weighing pan, replaces standard pan | 1 | YWP07MS |
| Anti-static weighing pan, 100 mm diameter, for weighing module for semi-micro balance and analytical balances with 0.1 mg or 0.01 mg scale interval | 1 | YWP04MS |
| Filter weighing pan made of titanium, diameter 52 mm, for ultra-micro and micro balances only together with F draft shield | 1 | YSH34 |
| Filter weighing pan made of titanium, diameter 75 mm, for ultra-micro balance or micro balance models only together with F draft shield | 1 | YSH35 |

| | | |
|---|---|---|
| Safe-lock Tube Holder for reaction tubes up to 2 mL volume, for ultra-micro or micro balances only together with draft shield F | 1 | YSH13 |
| Safe-lock Tube Holder for reaction tubes, up to 2 mL volume, for analytical balances | 1 | YSH15 |
| Safe-lock Tube Holder for bigger reaction tubes up to 5 mL volume, for analytical balances | 1 | YSH19 |
| Vial Holder for conical -, centrifuge-, round bottom- and test tubes up to 40 mL volume, for analytical balances | 1 | YSH23 |
| Holder for titration vessels, round bottom flasks and test tubes with diameter up to 50 mm, for analytical balances | 1 | YSH37 |
| Filter weighing pan made of titanium, diameter 90 mm, for ultra-micro balance or micro balance models only together with F draft shield | 1 | YSH36 |
| Ionizer with U-shaped electrode for 115 V | 1 | YIB02-115V |
| Ionizer with U-shaped electrode for 230 V | 1 | YIB02-230V |
| Compact U-shaped ionizer for 230 V/115 V | 1 | YIB03-C |
| Aluminum weighing scoop, 4.5 mg for ultra-micro balance and micro balance models | 250 | 6565-250 |
| Aluminum weighing scoop, 52 mg for ultra-micro balance and micro balance models | 50 | 6566-50 |
| Weighing scoop made from chrome-nickel steel, L 90 mm × W 32 mm × H 8 mm | 1 | 641214 |

## Accessories (continued)

| Other Accessories | Quantity | Cat. No. |
|---|---|---|
| Display cable, 3 m, for separate installation of CUB display and weighing unit, installation by Sartorius Service or at the factory | 1 | YCC01-CUB-2 |
| Cable RS232 9-pin to M12 inlet for connecting Watson-Marlow pumps 530DuN and 630DuN, 2 m | 1 | YCC-D09M-M12F-2M |
| Cable RS232 9-pin (male) to 9-pin (male) for connecting e.g. Watson-Marlow 323Du pump, 2.9 m | 1 | YCC-D09MM-EC-2.9M |
| Cable DSUB25 DIO to USB for connecting e.g. signal light, 0.5 m | 1 | YCC01-MC05 |
| Ethernet extension cable, 1 m | 1 | YCC-RJ45-CAT7 |
| RS232C connection cable, 9 pin male to 9 pin female, 1.5 m | 1 | YCC-D09MF |
| USB connection cable 3 m, USB-B to USB-A, to connect balances to a computer | 1 | 69MS0099 |
| Below-balance weighing hook for precision balances with scale interval of 100 mg \| 1 g and weighing capacity > 20 kg, not for verified models | 1 | 69EA0040 |
| Pipette calibration set micro balances | 1 | YCP08MC |
| Signal light | 1 | VF4763 |
| Connection cable for eBox 1.2 m \| 2.5 m | 1 | VF4755 |
| Extension cable for climate tower 0.8 m | 1 | VF4756 |
| Extension cable for motion sensor 0.8 m | 1 | VF4757 |
| Connection cable for fermenter | 1 | VF4758 |
| RS232 analog converter | 1 | VF4759 |
| **Weighing Tables** | | |
| Made from synthetic stone, with vibration dampening | 1 | YWT03 |
| Made from wood with synthetic stone | 1 | YWT09 |
| Wall console | 1 | YWT04 |
| **Climate Modules** | | |
| Climate module, uncalibrated, for draft shield A and user interface MCA | 1 | YCM20MC |
| Calibration of a climate module YCM20MC with DAkkS calibration certificate | 1 | YCM20DAkkS |
| Climate module with DAkkS calibration certificate for draft shield A and user interface MCA | 1 | YCM20MC-DAkkS |
| Tower for climate module, for mounting YCM20MC; incl. climate module YCM20MC; can be ported to all Cubis® III weighing modules with user interface MCA | 1 | YCM20MC-TOWER |

## Accessories for semi-micro and high-capacity micro balances
**or weighing modules 26P, 36S, 36P, 66S, 66P, 116S2, 226S5, 225S, 225P, 125S and 225S5**

| Hardware options* | Quantity | Cat. No. |
|---|---|---|
| Ionizer & motorized draft shield license | 1 | QP10 |
| Ionizer licence | 1 | QAPP1001 |
| Motorized draft shield license | 1 | QAPP1002 |
| **Inner Draft Shield** | | |
| Motorized | 1 | YDS125A |
| Manual | 1 | YDS125U |
| Glass base, for height reduction of weighing compartment | 1 | YDSHR |
| **Outer Draft Shield** | | |
| Left door outer draftshield | 1 | YCCDSL |
| Right door outer draftshield | 1 | YCCDSR |
| Cover slide outer draftshield | 1 | YCCDSU |
| Front panel outer draftshield | 1 | YCCDSF |
| **Displays and Input \| Output Elements** | | |
| Motion sensor with USB connection cable | 1 | YHS02USB |
| **Density Determination Kit** | | |
| Density determination set for solids and liquids (for weighing modules 116S2, 125S, 225S, 225P, 226S5 and 225S5) | 1 | YDK03MC |
| **Hardware for Pipette Calibration** | | |
| Pipette calibration kit. Consists of moisture trap and all required adapters | 1 | YCP07MC |
| Click-in pipette calibration module | 1 | YCP01MPS |
| **Titanium Weighing Pans & Sample Holders** | | |
| 90 mm weighing pan, slotted | 1 | YWP10-3 |
| 50 mm weighing pan, slotted, with protective plate for 50 mm | 1 | YWP09-3 |
| Adjustable sample holder for vessels of up to 50 mL | 1 | YSH02-3 |
| For coronary stents (up to 38 mm) | 1 | YSH12-3 |
| For save-lock tubes, 1.5 mL – 2 mL | 1 | YSH14-3 |
| For save-lock tubes up to 5 mL | 1 | YSH18-3 |
| For vials | 1 | YSH22-3 |
| For weighing boats | 1 | YSH26-3 |
| For filters, 150 mm diameter | 1 | YSH30-3 |
| For filters up to 75 mm | 1 | YSH35-3 |
| For titration vessels and round bottom flasks | 1 | YSH47-3 |
| For syringes, vertical | 1 | YSH46-3 |
| **Other Accessories** | | |
| Connection cable for operating display, length 3 m | 1 | YCC01-CUB-3 |
| Dust cover | 1 | 6960MS09 |
| Cleaning Kit | 1 | YCK01MC |
| Infusion pump testing conversion kit ultra-high resolution | 1 | YIP-3 |
| Underfloor weighing hook | 1 | 69MS0307 |
| Power supply 60W | 1 | 69MS0320 |

*After purchase licensing of hardware options for high-capacity micro and semi-micro balances with MCA Display only

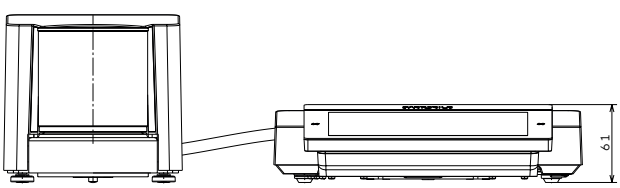
## Accessories (continued)

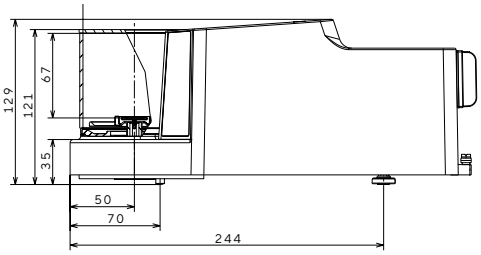
| Sample Holders Made of Titanium | | Quantity | Cat. No. | Balance type |
|---|---|---|---|---|
| Adjustable sample holder for vessels of up to 50 mL | | 1 | YSH02-3 | High capacity micro and semi-micro |
| For coronary stents (up to 38 mm) | | 1 | YSH12-3 | High capacity micro and semi-micro |
| | | | YSH10 | Ultra-micro and micro |
| For save-lock tubes, 1.5 mL – 2 mL | | 1 | YSH14-3 | High capacity micro and semi-micro |
| | | | YSH13 | Ultra-micro and micro |
| | | | YSH15 | Analytical and weighing module 125P |
| For save-lock tubes up to 5 mL | | 1 | YSH18-3 | High capacity micro and semi-micro |
| | | | YSH19 | Analytical and weighing module 125P |
| For vials | | 1 | YSH22-3 | High capacity micro and semi-micro |
| | | | YSH23 | Analytical and weighing module 125P |
| For weighing boats | | 1 | YSH26-3 | High capacity micro and semi-micro |
| | | | YSH26 | Analytical and weighing module 125P |
| For filters, 150 mm diameter | | 1 | YSH30-3 | High capacity micro and semi-micro |
| | | | YSH30 | Analytical and weighing module 125P |
| For filters up to 75 mm | | 1 | YSH35-3 | High capacity micro and semi-micro |
| | | | YSH35 | Ultra-micro and micro |
| For filters up to 50 mm | | | YSH34 | Ultra-micro and micro |
| For filters up to 90 mm | | | YSH34 | Ultra-micro and micro |
| For titration vessels and round bottom flasks | | 1 | YSH47-3 | High capacity micro and semi-micro |
| | | | | Analytical and weighing module 125P |
| For syringes, vertical | | 1 | YSH46-3 | High capacity micro and semi-micro |
| | | | YSH46 | Analytical and weighing module 125P |

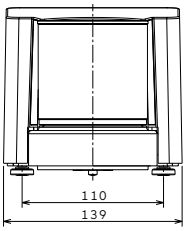
# Balance Dimensions

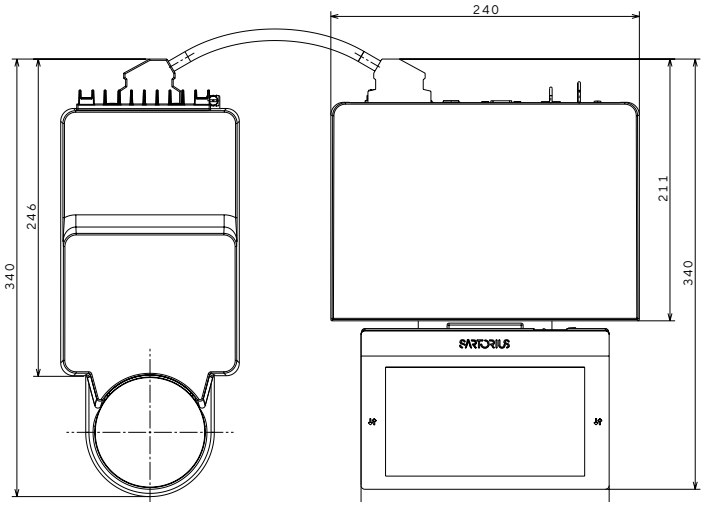
## Ultra-Micro and Micro Balance | All dimensions are given in millimeters

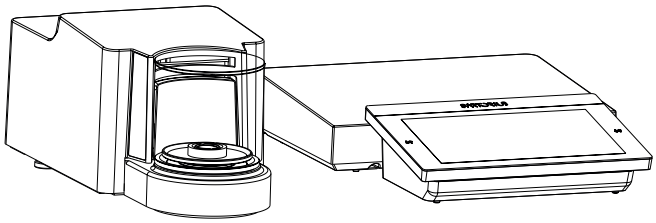
Draft Shield A



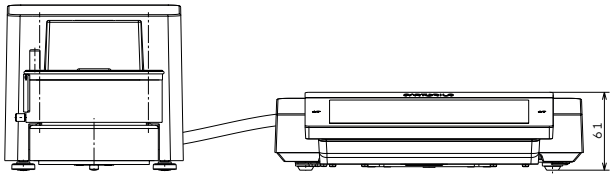



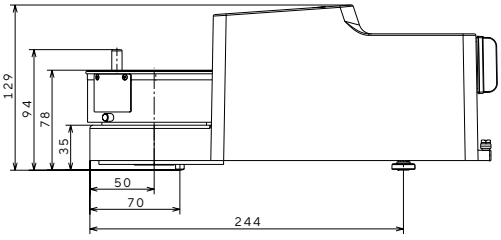



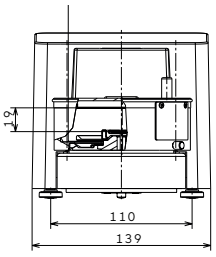



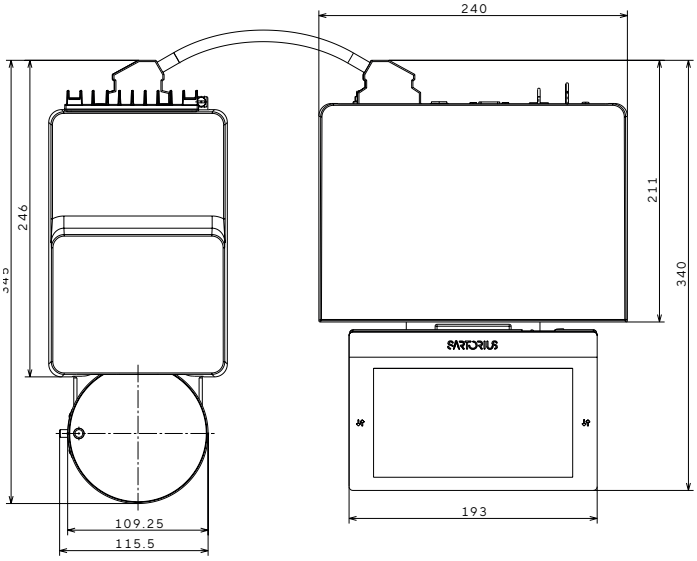
## Ultra-Micro and Micro Filter Balance | All dimensions are given in millimeters

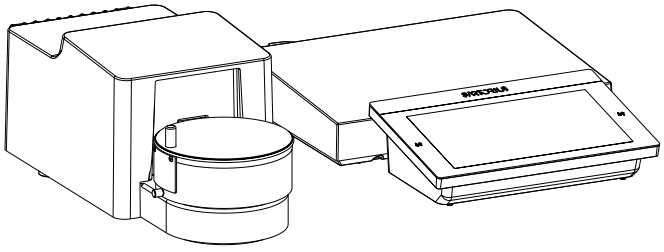
Draft Shield F



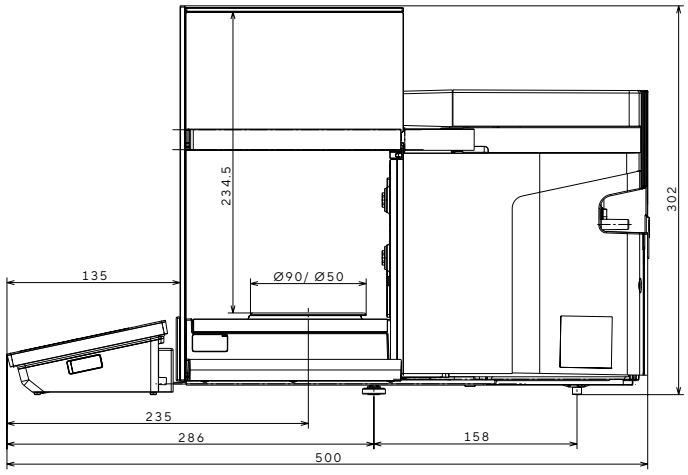



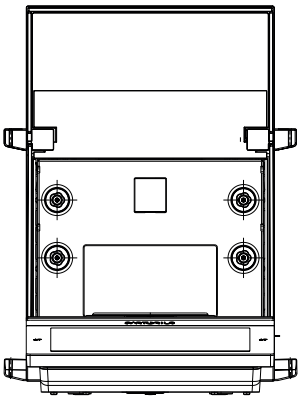



## High Capacity and Semi-Micro Balances | All dimensions are given in millimeters

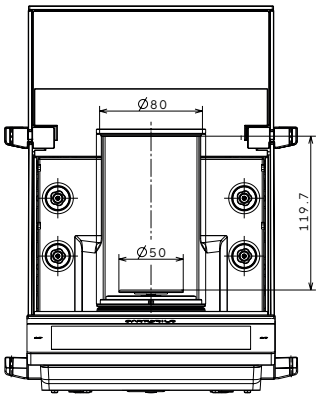
Weighing modules 26P, 36S, 36P, 66S, 66P, 116S2, 226S5, 225S, 225P, 125S and 225S5

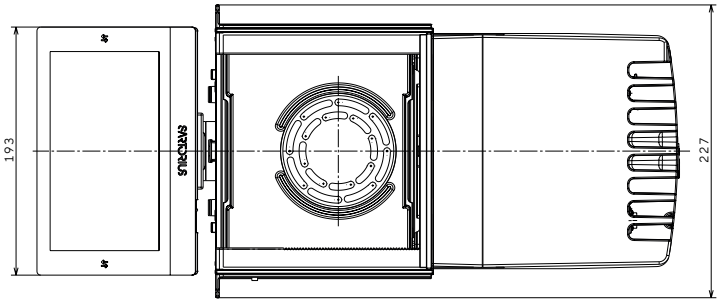
Draft Shield U, A and I



mit motorischem Innenwindschutz
with motorized interior Draftshild



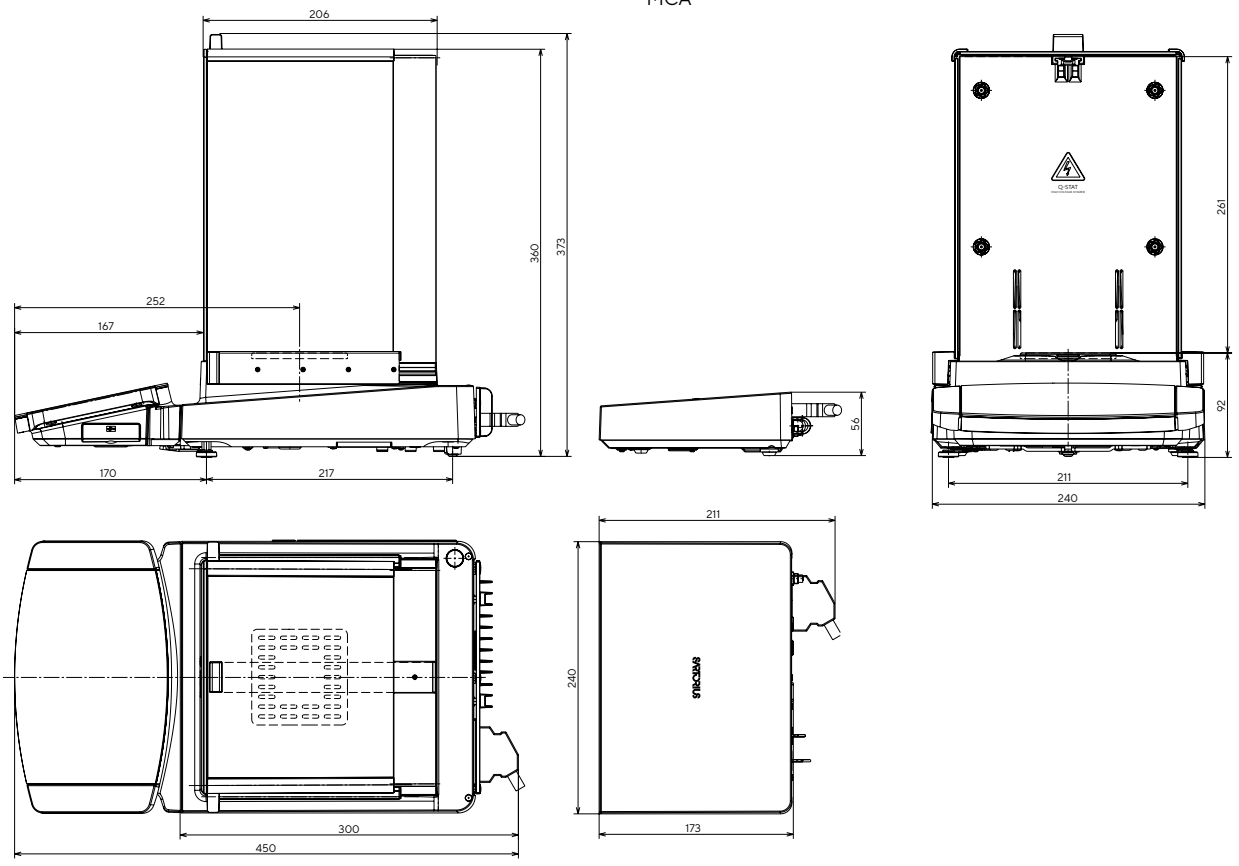



**Semi-Micro Balance 125P** | All dimensions are given in millimeters

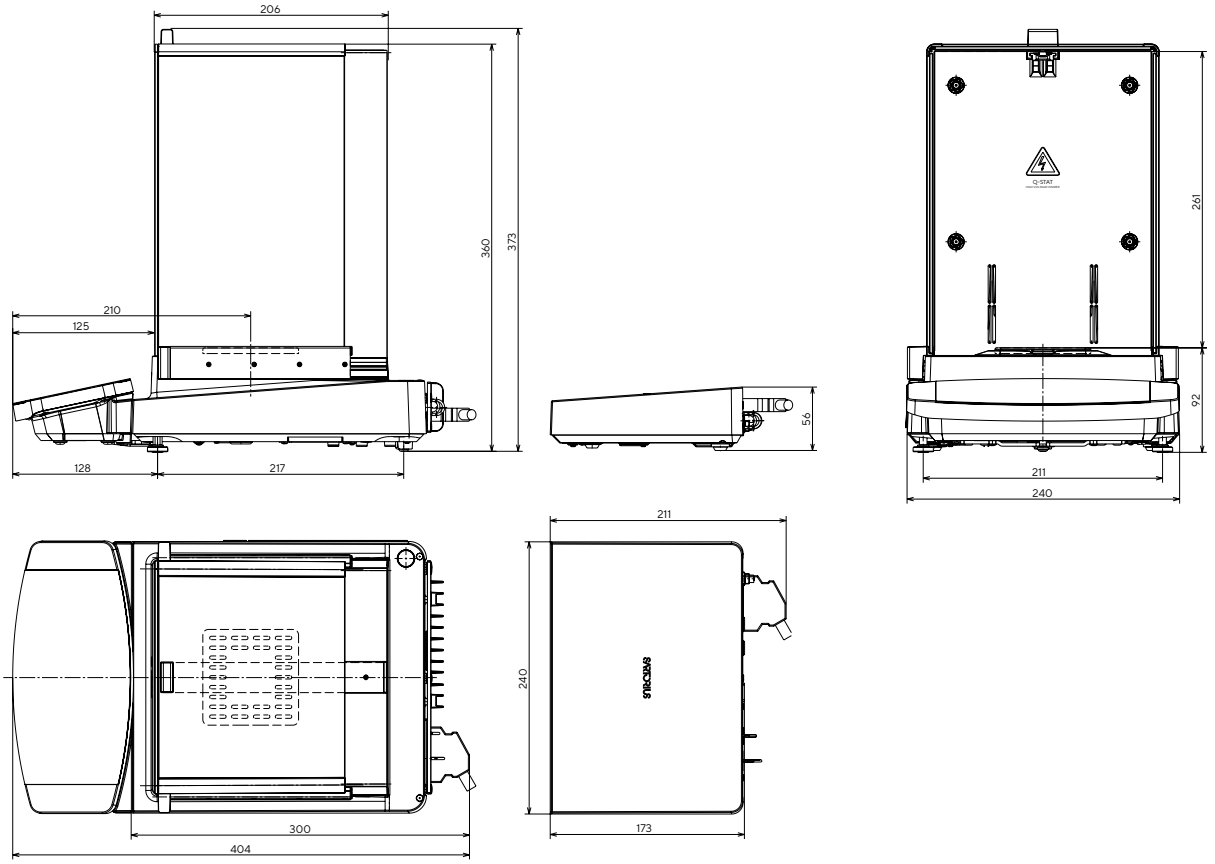
(Weighing Module 125P is based on the Cubis® II balance series)

Draft Shield U, A and I

MCA

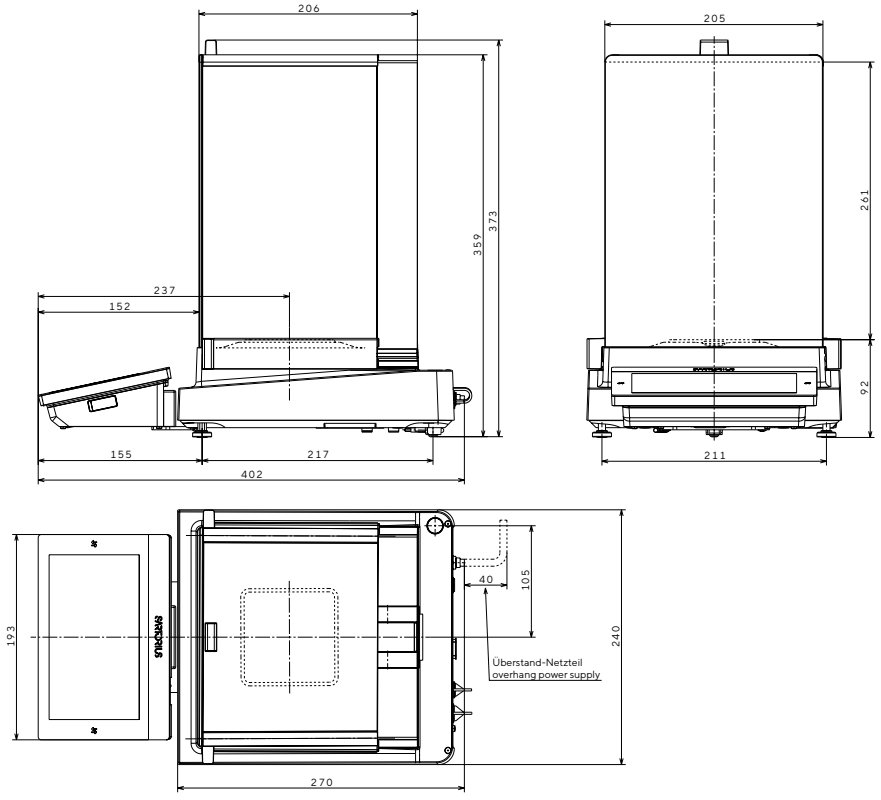



MCE



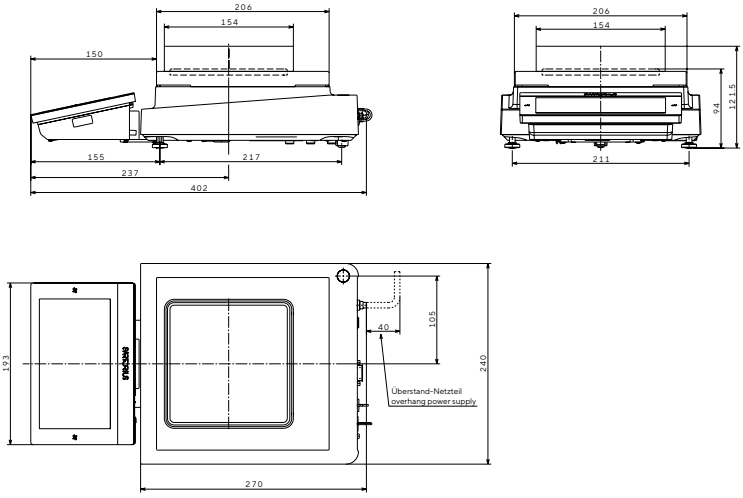
## Analytical Balance | All dimensions are given in millimeters

Draft shields U, A and I

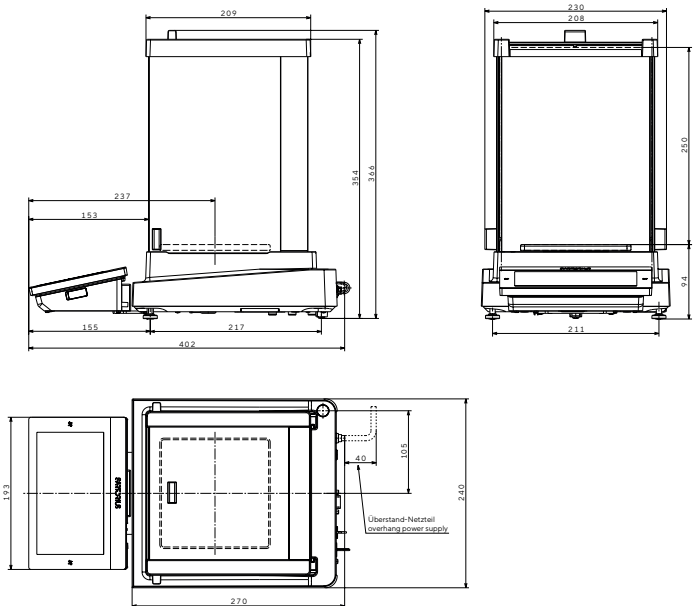


## Small Precision Balance | All dimensions are given in millimeters

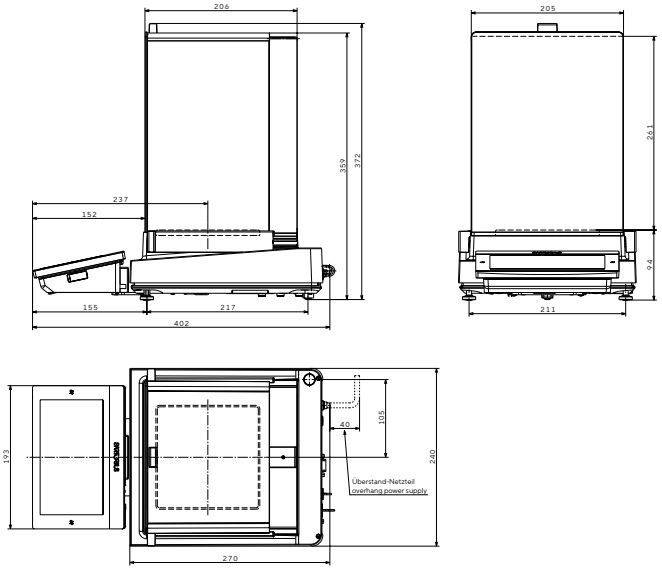
Draft Shield R



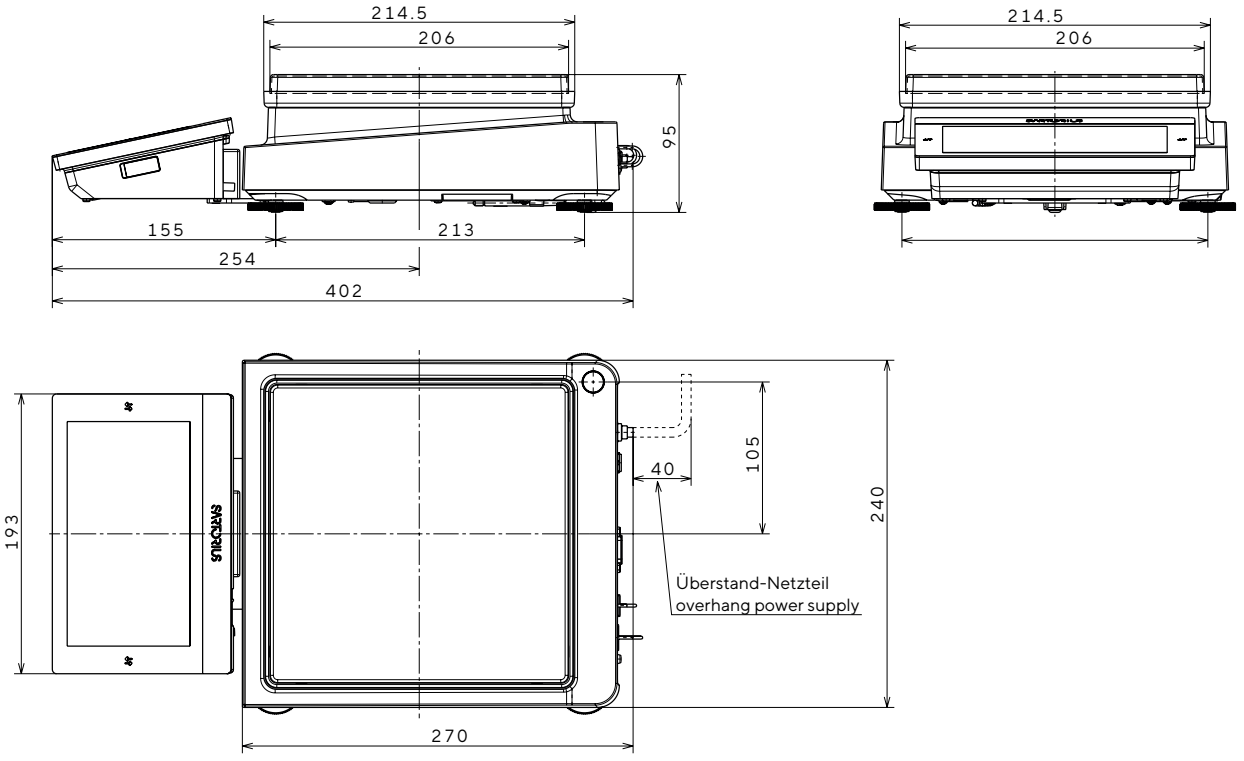

Draft Shield U



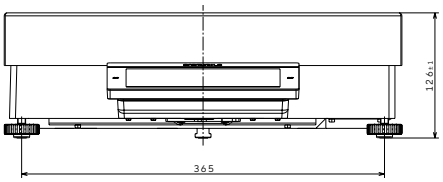

Draft Shield A

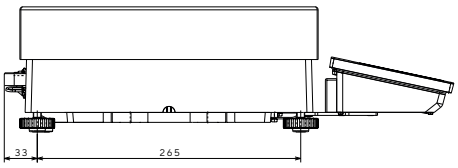


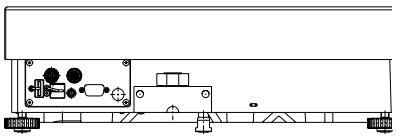
## Large Precision Balance | All dimensions are given in millimeters

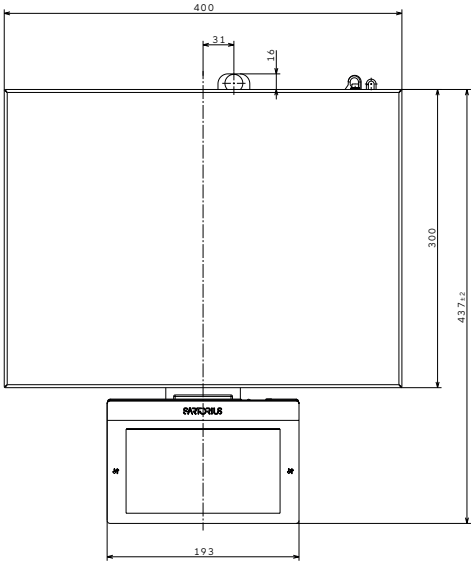


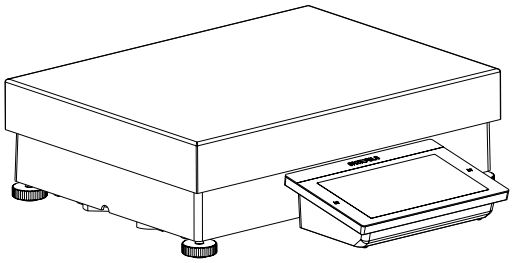
## High-Capacity Balance | All dimensions are given in millimeters





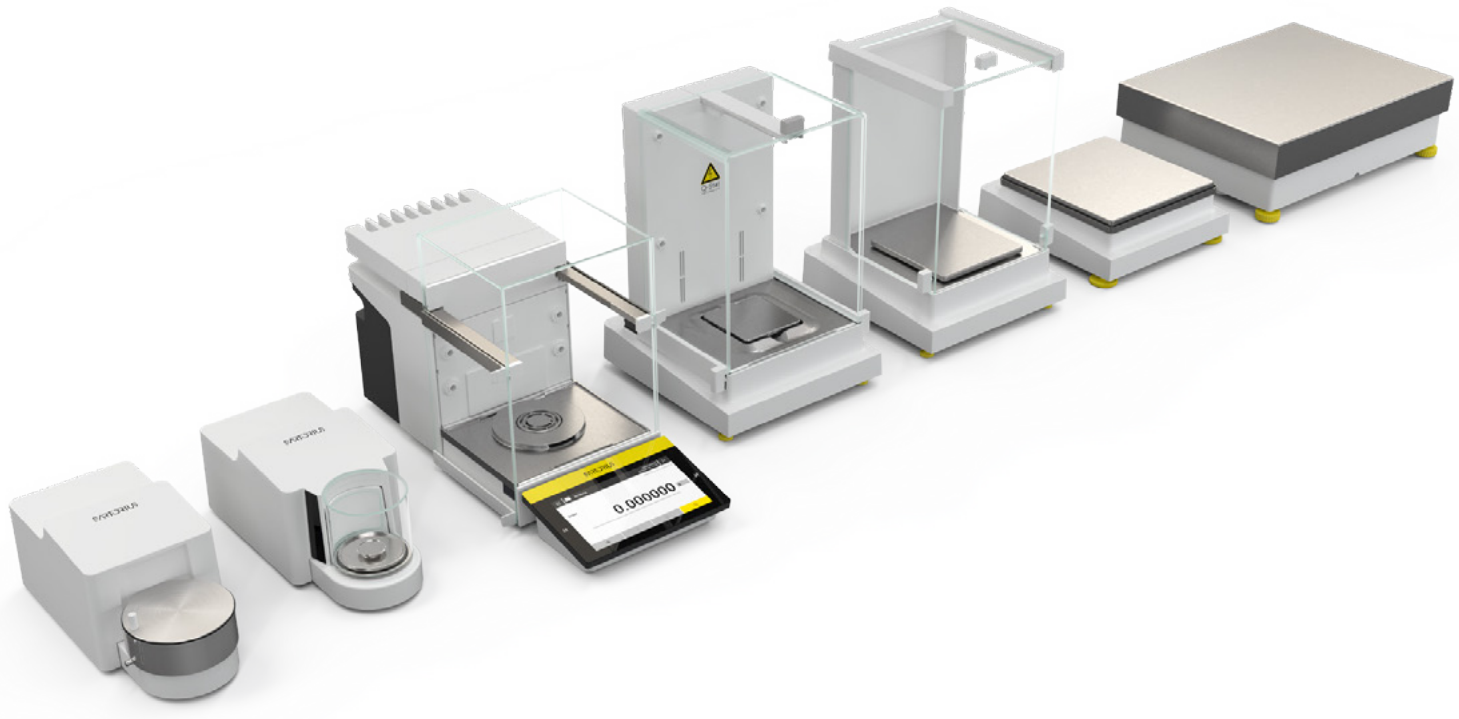



SARTORIUS

Product Datasheet

# Cubis® III

## Balances Made to Connect to Your Lab



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