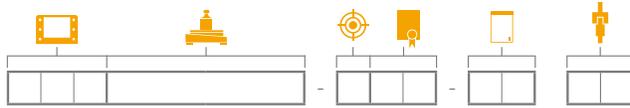


Technical Specifications

Order Code



Note: Please use the adjacent fields to enter the selection made for each icon.

Example



Cubis® Display and Control Units

Select the display and control unit and enter it in the field identified by the icon in the order code.

Types	MSA	MSU	MSE
Operation	Touch screen, keys for important basic functions	Keys	Keys
Display	High-resolution color TFT, 5.7" graphical display	High-resolution black white, 5.7" graphical display	Liquid crystal display, black white
Adaptation of the display and control unit	Tiltable display, removable display and control unit	Tiltable display, removable display and control unit	Removable display and control unit
Standard data interfaces	<ul style="list-style-type: none"> – USB port (integrated into weighing module) – RS-232C accessory interface, 25-pin (integrated into weighing module) – Ethernet (integrated into display and control unit) – Choice of data protocols available (also enables connection to software designed for external manufacturers) – <i>Bluetooth</i>® (optional accessory) 	<ul style="list-style-type: none"> – USB port (integrated into weighing module) – RS-232C accessory interface, 25-pin (integrated into weighing module) – <i>Bluetooth</i>® (optional accessory) 	<ul style="list-style-type: none"> – USB port (integrated into weighing module) – RS-232C accessory interface, 25-pin (integrated into weighing module) – <i>Bluetooth</i>® (optional accessory)
SD card reader	Integrated as standard into display and control unit	Integrated as standard into display and control unit	–
Operation of motorized draft shield (only for DA, DI or DM draft shields)	Activated by side keys or touch-free using IR sensor (optional); learning capability	Activated by side keys or touch-free using IR sensor (optional); learning capability	Activated by key or touch-free using IR sensor (optional); learning capability
Applications	Mass unit conversion, SQmin function for operating range starting point according to USP, isoCAL automatic calibration adjustment function, individual identifiers, density determination, statistics, calculation, averaging, formulation, weighing in percent, time-controlled functions, totalizing, DAkKS measurement uncertainty, second tare memory, counting, checkweighing, alibi memory, audit trail	Mass unit conversion, SQmin function for operating range starting point according to USP, isoCAL automatic calibration adjustment function, individual identifiers, density determination, statistics, calculation, averaging, formulation, weighing in percent, time-controlled functions, totalizing, DAkKS measurement uncertainty, second tare memory, counting, checkweighing, alibi memory, audit trail	Mass unit conversion, isoCAL automatic calibration adjustment function, density determination (buoyancy method only), calculation, averaging, net total formulation, weighing in percent, counting, totalizing
Personalizable with Q-Apps	<ul style="list-style-type: none"> – Downloadable Q-Apps – Customer-specific modifications on request 	–	–



Cubis® Weighing Modules

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

	Readability [mg]	Weighing capacity [g]	Weighing pan (W × D) [mm]	Typical stabiliza- tion time [s]	Typical response time [s]	Repeatability [≤±mg]	Linearity [≤±mg]	Eccentric load [mg]* (Test load [g])	Optimum starting point of the operating range [mg]**
Ultra-Micro Balances									
0.0001 mg									
2.7S	0.0001	2.1	∅ 20	7	10	0.00025	0.0009	0.0025 (1)	0.082***
Micro Balances									
0.001 mg									
6.6S	0.001	6.1	∅ 30	5	8	0.001	0.004	0.004 (2)	0.82***
3.6P	0.001 0.002 0.005	1.1 2.1 3.1	∅ 30	5	8	0.003 0.004 0.005	0.004	0.005 (1)	0.82***
Semi-Micro Balances									
0.01 mg									
225S	0.01	220	85 × 85	2	6	0...60 g: 0.015 60...220 g: 0.025	0.1	0.15 (100)	8.2
225P	0.01 0.02 0.05	60 120 220	85 × 85	2	6	0...60 g: 0.015 60...220 g: 0.04	0.15	0.2 (100)	8.2
125P	0.01 0.1	60 120	85 × 85	2	6	0...60 g: 0.015 60...120 g: 0.06	0.15	0.15 (50)	8.2
Analytical Balances									
0.1 mg									
524S	0.1	520	85 × 85	1	3	0.1	0.4	0.3 (200)	82
524P	0.1 0.2 0.5	120 240 520	85 × 85	1	3	0.15 0.2 0.4	0.5	0.4 (200)	82
324S	0.1	320	85 × 85	1	3	0.1	0.3	0.3 (200)	82
324P	0.1 0.2 0.5	80 160 320	85 × 85	1	3	0.1 0.2 0.4	0.5	0.4 (200)	82
224S	0.1	220	85 × 85	1	3	0.07	0.2	0.2 (100)	82
124S	0.1	120	85 × 85	1	3	0.1	0.2	0.2 (50)	82

* Position according to OIML R76

** According to USP (United States Pharmacopeia) Chapter 41, the optimal operating range is defined as the range from 820 d to the maximum weighing capacity. Depending on the installation location and environmental conditions, the value may be higher.

*** With DM draft shield



Cubis® Weighing Modules

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

	Readability [mg]	Weighing capacity [g]	Weighing pan (W × D) [mm]	Typical stabiliza- tion time [≤s]	Typical response time [≤s]	Repeatability [≤±mg]	Linearity [≤±mg]	Eccentric (off- center) [mg]* (Test load [g])	Optimum starting point of the operating range [g]**
Precision Balances									
5203S	1	5,200	140 × 140	1	2	1	5	2 (2,000)	0.82
5203P	1 2 5	1,200 2,400 5,200	140 × 140	1	2	1	5	2 (2,000)	0.82
3203S	1	3,200	140 × 140	1	2	1	5	2 (1,000)	0.82
2203S	1	2,200	140 × 140	1	1.5	1	3	2 (1,000)	0.82
2203P	1 10	1,010 2,200	140 × 140	1	1.5	1 6	5	3 (1,000)	0.82
1203S	1	1,200	140 × 140	1	1.5	0.7	2	2 (500)	0.82
623S	1	620	140 × 140	0.8	1	0.7	2	2 (200)	0.82
623P	1 2 5	150 300 620	140 × 140	0.8	1	1 2 4	5	4 (200)	0.82
323S	1	320	140 × 140	0.8	1	0.7	2	2 (200)	0.82
14202S	10	14,200	206 × 206	1	1.5	10	30	20 (5,000)	8.2
14202P	10 20 50	3,500 7,000 14,200	206 × 206	1	1.5	10 20 40	50	40 (5,000)	8.2
10202S	10	10,200	206 × 206	1	1.5	7	20	20 (5,000)	8.2
8202S	10	8,200	206 × 206	1	1.5	7	20	20 (5,000)	8.2
6202S	10	6,200	206 × 206	1	1.5	7	20	20 (2,000)	8.2
6202P	10 20 50	1,500 3,000 6,200	206 × 206	1	1.5	7 20 40	50	50 (2,000)	8.2
5202S	10	5,200	140 × 140	0.8	1	6	10	10 (2,000)	8.2
4202S	10	4,200	206 × 206	0.8	1	7	20	30 (2,000)	8.2
2202S	10	2,200	206 × 206	0.8	1	7	20	20 (1,000)	8.2
1202S	10	1,200	206 × 206	0.8	1	7	20	20 (500)	8.2
12201S	100	12,200	206 × 206	0.8	1	50	100	200 (5,000)	82
8201S	100	8,200	206 × 206	0.8	1	50	100	200 (5,000)	82
5201S	100	5,200	206 × 206	0.8	1	50	100	200 (2,000)	82
High-capacity Balances									
70201S	100	70,200	400 × 300		1.5	100	500	500 (20,000)	82
36201S	100	36,200	400 × 300		1.5	100	200	300 (10,000)	82
36201P	100 1,000	10,200 36,200	400 × 300		1.5	100 500	200	300 (10,000)	82
20201S	100	20,200	400 × 300		1.5	100	200	300 (5,000)	82
70200S	1,000	70,200	400 × 300		1	500	1,000	1,000 (20,000)	820
36200S	1,000	36,200	400 × 300		1	500	1,000	1,000 (10,000)	820

* Position according to OIML R76

** According to USP (United States Pharmacopeia) Chapter 41, the optimal operating range is defined as the range from 820 g to the maximum weighing capacity. Depending on the installation location and environmental conditions, the value may be higher.

**Cubis® Leveling**

Select the type of leveling mode and enter "0" or "1" in the field identified by the icon in the order code.

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

**Test Certificates**

Select a test certificate and enter the certificate type in the field identified by the icon in the order code.

-
- 00 Standard certificate of conformity to specifications
-
- TR Like 00, but with a detailed test report



Cubis® Draft Shields

Select a draft shield and enter the identifier in the field identified by the corresponding icon in the order code.

DO	Flat, stainless steel weigh pan with no draft shield for weighing modules with a pan size of 206 × 206 mm and 400 × 300 mm.
DR	Flat, stainless steel weighing pan draft shield (removable, with no glass components) for all precision balances with a readability of 1 mg and weighing module 5202S.
DE	Manual, glass draft shield for all precision balances with a readability of 1 mg and weighing module 5202S.
DU	Manual, glass analytical draft shield with smooth-action doors that open wide and provide unimpeded access to the weighing chamber without interfering braces. For all models with 0.01 mg, 0.1 mg, and 1 mg readability and weighing module 5202S.
DA	Automatic, glass motorized draft shield with learning capability for user-friendly operation and easy customization to the changing requirements of different applications. For all models with 0.01 mg, 0.1 mg, and 1 mg readability and weighing module 5202S.
DI	Identical to the DA draft shield, but also includes an integrated ionizer to eliminate interfering electrostatic charges on samples and sample containers.
DM	Automatic, motorized, round 100% glass draft shield with learning capability for ultra-micro and micro balances with a readability of 0.0001 mg and 0.001 mg (2.7S, 6.6S and 3.6P weighing modules).
DF	Manual, stainless steel draft shield for weighing filters with diameters of up to 50 mm (75 mm and 90 mm pans optional) in ultra-micro and micro balances with a readability of 0.0001 mg and 0.001 mg (not for weighing module 3.6P). Designed to minimize the effects of static electricity.



Interface Module Options

For every balance, you can select an additional interface module.

IR	RS-232 interface, 25-pin
IB	<i>Bluetooth</i> ® interface
IP	RS-232 interface, 9-pin, incl. PS/2 interface

Cubis® Optional Accessories

Printers and Communication

Verifiable data printer for connection to RS-232, 25-pin accessory interface	YDP10-OCE
Verifiable data printer with <i>Bluetooth</i> ® data transmission (with YD001MS-B or option IB only)	YDP10BT-OCE
Ink ribbon for YDP10-OCE and YDP10BT-OCE	6906918
Paper rolls for printer YDP10-OCE; 5 rolls, each with 50 m	6906937
Data interface <i>Bluetooth</i> ® for wireless connection of data printer YDP10BT-OCE	YD001MS-B
RS-232C data interface, 9-pin including PS/2 for connecting a computer or keyboard	YD001MS-P
RS-232C data interface, 25-pin for connection of Cubis® accessories	YD001MS-R
Display cable, 3 m, for Cubis® MSA and MSU models, for detached setup of display and weighing unit (installation by Sartorius Service or in factory [order VF4016])	YCC01-MSD3
Display cable, 3 m, for Cubis® MSE models, for detached setup of display and weighing unit (installation by Sartorius Service or in factory [order VF4016])	YCC01-MSED3
Cable, 3 m, between weighing module and electronics module for Cubis® models with 0.01 mg 0.001 mg 0.0001 mg readability	YCC01-MSM3
Installation display cable, 3 m, for Cubis® models, for detached setup of display and weighing unit	VF4016
25-pin RS232 to USB cable	YCC01-USBM2
RS-232C connection cable to connect computer with 9-pin; COM interface, length 5 ft	YCC05-001M2
WinWedge, software for data communication between balance and computer (via RS232)	YSW05
WinWedge, software for data communication (via Ethernet)	YSW06

Displays and Input|Output Elements

MSA control unit with color TFT graphic display and touch screen	YAC01MSA
MSE control unit with backlit liquid-crystal display and tactile keys	YAC01MSE
MSU control unit with backlit black white graphic display and tactile navigation keys	YAC01MSU
Barcode scanner with connecting cable, 120 mm reading range	YBR03PS2
Foot switch for printing, taring, or using a different function key; key function selectable by menu code, incl. T-connector	YFS01
Infrared sensor for touch-free activation of functions (e.g., controlling the draft shield)	YHS01MS
Hand switch for printing, taring, or using a different function key; key function selectable by menu code, incl. T-connector	YHS02
Foot switch for activating the OPEN CLOSE draft shield functions (only in combination with DA and DI draft shield), taring and printing	YPE01RC
Additional display, LCD, digit height 13 mm, backlit	YRD03Z
3-segment checkweighing display, red – green – red, for plus minus measurements, incl. T-connector	YRD11Z

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Pipette Calibration Hardware

Pipette calibration kit (hardware) for models with 0.1 mg and 0.01 mg readability Consists of moisture trap and all required adapters	YCP04MS
Pipette calibration kit (hardware) for micro balance weighing modules 6.6S and 3.6P Consists of moisture trap and all required adapters	VF988

Filter Weighing and Anti-static Accessories

Anti-static weighing pan, 130 mm diameter, for weighing modules with a readability of 0.1 mg or 0.01 mg	YWP01MS
Filter weighing pan, 75 mm diameter, for ultra-micro and micro balance models (weighing modules 6.6S, 2.7S; only for DF draft shield)	VF2562
Filter weighing pan, 90 mm diameter, for ultra-micro and micro balance models (weighing modules 6.6S, 2.7S; only for DF draft shield)	VF2880
Ionization blower to eliminate electrostatic charges on sample containers and samples	YIB01-OUR
Stat-Pen ionization probe for discharging electrostatically charged samples and filters	YSTP01

Special Applications

Density determination kit for solids and liquids: for weighing modules with a readability < 1 mg	YDK01MS
Density determination kit for solids and liquids: for weighing modules with a readability = 1 mg	YDK02MS
Q-Grip, universal holder for containers used for weighing and filters up to a diameter of 120 mm (replaces the original weighing pan; for Cubis® models with 0.01 and 0.1 mg readability)	YFH01MS
Q-Grid weighing pan for Cubis® models with a readability of 10 mg or 100 mg (pan size of 206 × 206 mm) for weighing in laboratory hoods, safety powder hoods or workbenches (reduces exposure of the weighing pan to lift by strong air current; replaces standard weighing pan)	YWP03MS

Anti-Vibration Solutions

Balance table made of cast stone, for weighing with vibration dampening	YWT03
Wall console	YWT04
Balance table made of wood with cast-stone inset for precise, reliable weight measurements	YWT09
Granite Platform (13" × 15") with vibration isolators	U1-21201315
Granite Platform (16" × 21") with vibration isolators	U1-24201621

Weighing Accessories

Weighing scoop of chrome nickel steel, 90 × 32 × 8 mm	641214
Aluminum weighing scoop, 4.5 mg (pack of 250) for ultra-micro and micro balance models	U1-6565-250
Support arm for 10 100 mg precision weighing modules for raised mounting of MSE, MSU and MSA display and control units	YDH01MS
Support arm for precision weighing modules with 100 mg 1 g readability and weighing capacity ≥ 20 kg for raised mounting of MSE, MSU and MSA display and control units	YDH02MS
Hook for below-balance weighing; for precision weighing modules with 100 mg 1 g readability and weighing capacity ≥ 20 kg	69EA0040

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Cubis[®] MCM Manual Mass Comparators

Up to 111 g



Order number, with uncalibrated climate sensors	MCM6.7	MCM36	MCM66	MCM106
Order number, with calibrated climate sensors and DAkkS certificate	MCM6.7-DAkkS	MCM36-DAkkS	MCM66-DAkkS	MCM106-DAkkS
Maximum capacity	6.1 g	31 g	61 g	111 g
Readability	0.1 µg	1 µg	1 µg	1 µg
Range of use	0 – 6 g	0 – 30 g	0 – 60 g	0 – 111 g

Repeatability "s"

– under optimal conditions ¹⁾	0.15 µg	1 µg	1 µg	1 µg
– under standard conditions E ²⁾	0.3 µg	1.5 µg	2 µg	2 µg
– at 1/3 load ²⁾	0.2 µg			
– at 1/10 load ²⁾		0.7 µg	0.7 µg	0.7 µg
– under standard conditions F ³⁾	0.6 µg	4 µg	5 µg	5 µg
Electronic weighing tare range	6.1 g	31 g	61 g	61 g
Substitution weights				50 g
Linearity	1 µg	6 µg	8 µg	8 µg
Eccentric (off-center) load deviation	0.25 µg/mm	1 µg/mm	1 µg/mm	1 µg/mm
Stabilization time	10 s	3 s	3 s	5 s
Cycle time (ABA)	90 s	90 s	90 s	90 s

Standard Accessories

Data interfaces	RS-232C, USB, Ethernet, SD card (optional RS-232C, PS2, Bluetooth [®])			
Draft shield	•	•	•	•
Additional application programs	Weighing, mass unit conversion, individual identifiers, density determination, statistics			
Port for below-balance weighing hook	•	•	•	•
Climate sensors	Integrated into draft shield			

Optional Accessories

Calibration weight	5 g E2 YCW352-00	20 g E2 YCW422-00	50 g E2 YCW452-00	50 g E2 YCW452-00
Climate module	YMC20MC	YMC20MC	YMC20MC	YMC20MC
Calibrated climate module	YMC20MC-DAkkS	YMC20MC-DAkkS	YMC20MC-DAkkS	YMC20MC-DAkkS
2nd draft shield	YDS20C	YDS24C	YDS24C	YDS24C
Balance table	YWT03	YWT03	YWT03	YWT03

Dimensions

Weighing pan size	∅ 16 mm	∅ 30 mm	∅ 30 mm	∅ 50 mm
Maximum object size (D×H)	16×70 mm	30×120 mm	30×120 mm	50×120 mm
Weigh cell (W×D×H)	122×343×141 mm	222×431×301 mm	222×431×301 mm	222×431×301 mm
Electronic unit (W×D×H)	239×320×56 mm	239×320×56 mm	239×320×56 mm	239×320×56 mm

Repeatability is the standard deviation "s"; it is calculated from 5 ABA cycles under the following conditions:

¹⁾ Optimal conditions: Automatic measurement without operator influence measured in a laboratory under E1 conditions, on a decoupled weighing stone, no drafts from above

²⁾ Standard conditions E: Measurement performed manually under a laboratory under E1 conditions, on a decoupled weighing stone, no drafts from above

³⁾ Standard conditions F: Measurement performed manually under a laboratory under at least F1 conditions, on a non-decoupled weighing stone, air conditioning and minimal drafts from above

Cubis[®] MCM Manual Mass Comparators

600 g to 10 kg



Order number, with uncalibrated climate sensors	MCM605	MCM1005	MCM1004
Order number, with calibrated climate sensors and DAkkS certificate	MCM605-DAkkS	MCM1005-DAkkS	MCM1004-DAkkS
Maximum capacity	610 g	1,110 g	1,110 g
Readability	0.01 mg	0.01 mg	0.1 mg
Range of use	0 – 610 g	0 – 1,110 g	0 – 1,110 g

Repeatability "s"

– under optimal conditions ¹⁾	10 µg	15 µg	0.05 mg
– under standard conditions E ²⁾	20 µg	20 µg	0.07 mg
– at 1/3 load ²⁾	15 µg		
– at 1/10 load ²⁾	10 µg	15 µg	0.05 mg
– under standard conditions F ³⁾	30 µg	50 µg	0.2 mg
Electronic weighing taring range	610 g	610 g	610 g
Substitution weights		500 g	500 g
Linearity	100 µg	100 µg 600 g	0.1 mg 600 g
Eccentric (off-center) load deviation	10 µg/mm	15 µg/mm	30 µg/mm
Stabilization time	5 s	5 s	3 s
Cycle time (ABA)	90 s	90 s	90 s

Standard Accessories

Data interfaces	RS-232C, USB, Ethernet, SD card (optional RS-232C, PS2, Bluetooth [®])		
Draft shield	•	•	•
Additional application programs	Weighing, mass unit conversion, individual identifiers, density determination, statistics		
Port for below-balance weighing hook	•	•	•
Climate sensors	Integrated into draft shield		

Optional Accessories

Calibration weight	500 g E2 YCW552-00	500 g E2 YCW552-00	500 g E2 YCW552-00
Climate module	YMC20MC	YMC20MC	YMC20MC
Calibrated climate module	YMC20MC-DAkkS	YMC20MC-DAkkS	YMC20MC-DAkkS
2nd draft shield	YDS24C	YDS24C	YDS24C
Balance table	YWT03	YWT03	YWT03

Dimensions

Weighing pan size	Ø 90 mm	Ø 90 mm	Ø 90 mm
Maximum object size (D×H)	135×140 mm	135×140 mm	135×140 mm
Weigh cell (W×D×H)	222×431×301 mm	222×431×301 mm	222×431×301 mm
Electronic unit (W×D×H)	239×320×56 mm	239×320×56 mm	239×320×56 mm

Repeatability is the standard deviation "s"; it is calculated from 5 ABA cycles under the following conditions:

¹⁾ Optimal conditions: automatic measurement without operator influence measured in a laboratory under E1 conditions, on a decoupled weighing stone, no drafts from above

²⁾ Standard conditions E: measurement performed manually in a laboratory under E1-conditions, on a decoupled weighing stone, no drafts from above

³⁾ Standard conditions F: measurement performed manually in a laboratory under at least F1 conditions, on a non-decoupled weighing stone, air conditioning and minimal drafts from above



Order number, with uncalibrated climate sensors	MCM2004	MCM5004	MCM5003	MCM10K3
Order number, with calibrated climate sensors and DAkkS certificate	MCM2004-DAkkS	MCM5004-DAkkS	MCM5003-DAkkS	MCM10K3-DAkkS
Maximum capacity	2,500 g	5,100 g	5,100 g	11 kg
Readability	0.1 mg	0.1 mg	1 mg	1 mg
Range of use	0 – 2,500 g	0 – 5,100 g	0 – 5,100 g	0 – 11 kg

Repeatability "s"

– under optimal conditions ¹⁾	0.05 mg	0.3 mg	0.5 mg	0.8 mg
– under standard conditions E ²⁾	0.1 mg	0.5 mg	0.8 mg	1 mg
– at 1/3 load ²⁾				
– at 1/10 load ²⁾	0.07 mg	0.3 mg	0.5 mg	0.8 mg
– under standard conditions F ³⁾	0.3 mg	0.8 mg	1.5 mg	3 mg
Electronic weighing tare range	2,500 g	5,100 g	5,100 g	11 kg
Substitution weights		50 g		
Linearity	1 mg	2 mg	3 mg	6 mg
Eccentric (off-center) load deviation	30 µg/mm	151 µg/mm	300 µg/mm	0.5 mg/mm
Stabilization time	3 s	3 s	3 s	3 s
Cycle time (ABA)	90 s	90 s	90 s	90 s

Standard Accessories

Data interfaces	RS-232C, USB, Ethernet, SD card (optional RS-232C, PS2, Bluetooth®)			
Draft shield	•	•	•	
Additional application programs	Weighing, mass unit conversion, individual identifiers, density determination, statistics			
Port for below-balance weighing hook	•	•	•	•
Climate sensor	Integrated into draft shield			Can be connected externally

Optional Accessories

Calibration weight	2 kg E2 YCW622-00	5 kg E2 YCW652-00	5 kg E2 YCW652-00	10 kg E2 YCW712-00
Climate module	YMC20MC	YMC20MC	YMC20MC	YMC20MC
Calibrated climate module	YMC20MC-DAkkS	YMC20MC-DAkkS	YMC20MC-DAkkS	YMC20MC-DAkkS
2nd draft shield	YDS24C	YDS24C	YDS24C	YDS24C
Balance table	YWT03	YWT03	YWT03	YWT03
Lifting device for 10 kg				YAW51
Lifting device for 20 kg				

Dimensions

Weighing pan size (W×D)	136×136 mm	136×136 mm	136×136 mm	200×200 mm
maximum object size (D×H)	130×200 mm	130×200 mm	130×200 mm	
Weigh cell (W×D×H)	240×276×373 mm	240×276×373 mm	240×276×373 mm	240×276×102 mm
Electronic unit (W×D×H)	239×320×56 mm	239×320×56 mm	239×320×56 mm	239×320×56 mm

Repeatability is the standard deviation "s"; it is calculated from 5 ABA cycles under the following conditions:

¹⁾ Optimal conditions: automatic measurement without operator influence measured in a laboratory under E1 conditions, on a decoupled weighing stone, no drafts from above.

²⁾ Standard conditions E: measurement performed manually in a laboratory under E1 conditions, on a decoupled weighing stone, no drafts from above

³⁾ Standard conditions F: measurement performed manually in a laboratory under at least F1 conditions, on a non-decoupled weighing stone, air conditioning and minimal drafts from above

Cubis[®] MCM Manual Mass Comparators

40 kg – 60 kg



Order number, with uncalibrated climate sensors	MCM40K3	MCM60K3	MCM60K2
Order number, with calibrated climate sensors with DAkkS certificate	MCM40K3-DAkkS	MCM60K3-DAkkS	MCM60K2-DAkkS
Maximum capacity	41 kg	64 kg	64 kg
Readability	1 mg	2 mg	10 mg
Range of use	0 – 41 kg	0 – 64 kg	0 – 64 kg

Repeatability s

– under optimal conditions ¹⁾	2 mg	4 mg	6 mg
– under standard conditions E ²⁾	3 mg	6 mg	10 mg
– at 1/3 load ²⁾			
– at 1/10 load ²⁾	2 mg	4 mg	
– under standard conditions F ³⁾	6 mg	10 mg	25 mg
Electronic weighing tare range	41 kg	64 kg	64 kg
Linearity	20 mg	40 mg	50 mg
Eccentric (off-center) load deviation	3.5 mg/mm	3.5 mg/mm	3.5 mg/mm
Stabilization time	5 s	5 s	5 s
Cycle time (ABA)	120 s	120 s	120 s

Standard Accessories

Data interfaces	RS-232C, USB, Ethernet, SD card (optional RS-232C, PS2, Bluetooth [®])		
Additional application programs	Weighing, mass unit conversion, individual identifiers, density determination, statistics		
Port for below-balance weighing hook	with opt. accessories 69EA0040	with opt. accessories 69EA0040	with opt. accessories 69EA0040
Climate sensor	Can be connected externally		

Optional Accessories

Calibration weight	20 kg E2 YCW722-00	50 kg E2 YCW752-00	50 kg E2 YCW752-00
Climate module	YMC20MC	YMC20MC	YMC20MC
Calibrated climate module	YMC20MC-DAkkS	YMC20MC-DAkkS	YMC20MC-DAkkS
2nd draft shield	YDS05C YDS03C	YDS05C YDS03C	YDS05C YDS03C
Lifting device for 10 kg	YAW51	YAW51	YAW51
Lifting device for 20 kg	YAW52	YAW52	YAW52
Lifting device for 50 kg		YAW53	YAW53
Crane with chain hoist		YLD01C	YLD01C
Gripper for weights with handle		YLD02C	YLD02C
Floor-mounted column, stainless steel			

Dimensions

Weighing pan size (W × D)	400 × 300 mm	400 × 300 mm	400 × 300 mm
Weigh cell (W × D × H)	400 × 326 × 126 mm	400 × 326 × 126 mm	400 × 326 × 126 mm
Electronic unit (W × D × H)	239 × 320 × 56 mm	239 × 320 × 56 mm	239 × 320 × 56 mm

Repeatability is the standard deviation "s"; it is calculated from 5 ABA cycles under the following conditions:

¹⁾ Optimal conditions: automatic measurement without operator influence measured in a laboratory under E1 conditions, on a decoupled weighing stone, no drafts from above.

²⁾ Standard conditions E: measurement performed manually in a laboratory under E1 conditions, on a decoupled weighing stone, no drafts from above

³⁾ Standard conditions F: measurement performed manually in a laboratory under at least F1 conditions, on a non-decoupled weighing stone, air conditioning and minimal drafts from above

Accessories for Cubis® MCM Mass Comparators

Climate module, uncalibrated, for all MCM models	YCM20MC
Calibration of a climate module YCM20MC with DAkkS calibration certificate	YCM20DAkkS
Climate module with DAkkS calibration certificate for all MCM models	YCM20MC-DAkkS
Hook for below-balance weighing, for models MCM40K3, MCM60K3, MCM60K2, MCM40K3-DAkkS, MCM60K3-DAkkS and MCM60K2-DAkkS	69EA0040
Tower for climate module, for mounting YCM20MC; can be ported to the following models: MCM10K3, MCM40K3, MCM60K3, MCM60K2, MCM10K3-DAkkS, MCM40K3-DAkkS, MCM60K3-DAkkS and MCM60K2-DAkkS, connecting cable included	YCM20MC Tower

