Cubis® II

The New Generation of Modular Premium Balances

Highlights

- Leading performance. Monolithical weighing system, integrated climate sensors, individual sample holders
- Error-free operation. Individual QApp workflows, motorized auto-leveling*
- Full end-to-end data integrity. 21 CFR Part 11 compliance, integrated audit-trail, state-of-the-art user management
- Oustanding service support. Integrated status center, integrated service functions preventive maintenance on accredited standards

* For all models up to a maximum capacity of 8.2 kg

Product Information

The modular weighing system Cubis® II can be individually configured from different components. The combinability of the display unit, weighing module, draft shield, software packages for various applications and functions and a comprehensive range of accessories allows the individual adaptation of the Cubis® II balance to all weighing tasks. The Cubis® II range of premium laboratory balances with a maximum load between 2.1 g and 70 kg and a readability between 0.1 µg to 1 g provide the ideal model for every application.

Cubis® II Display and Control Units

Type	MCA
Display	Large high end 7" color touch TFT display in 16:9 format with new user interface
Software	Factory installed basic set of essential weighing applications (license free) and Packages with special weighing applications and function extensions (license required)
Operation	Activated by touch key, touch-free using IR sensor (draft shield M) or gesture sensor (optional), learning capability

Type	MCE
Display	State of the art TFT touch screen operation with brilliant, readable, display but uncomplex, easy to operate user interface
Software	Factory installed basic set of essential weighing applications
Operation	Activated by touch key, touch-free using IR sensor (draft shield M) or gesture sensor (optional), learning capability

Technical Specifications

Cubis® II Weighing Modules
Ultra-Micro Balances 0.0001 mg

		2.7S
Scale interval (d)	mg	0.0001
Maximum capacity (Max)	g	2.1
Repeatability at 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 USP (United States Pharmacopeia), Chap. 41		
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, acc. to OIML R111-1		E2
Dimensions		
MCE/MCA Weighing module (L × W × H)*	mm	340 x 139 x 129
MCE Electronics module (L × W × H)	mm	315 x 240 x 61
MCA Electronics module (L x W x H)	mm	355 x 240 x 61
Weighing pan size	mm	Ø 20
Filter weighing pan	mm	Ø 50
Weight, approx.*	kg	6.4/7.1

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

Cubis® II Weighing Modules
Micro Balances 0.001 mg

		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 at 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	0.0005	0.0005	0.0005
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), Chap. 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	5	5	5
Typical measurement time	s	8	8	8
Recommended calibration weight				
External test load	g	10	5	3
Accuracy class, acc. to OIML R111-1		E2	E2	E2
Dimensions				
MCE/MCA Weighing module (L × W × H)*	mm	340 x 139 x 129	340 x 139 x 129	340 x 139 x 129
MCE Electronics module (L × W × H)	mm	315 x 240 x 61	315 x 240 x 61	315 x 240 x 61
MCA Electronics module (L x W x H)	mm	355 x 260 x 61	355 x 260 x 61	355 x 260 x 61
Weighing pan size	mm	Ø 30	Ø 30	Ø 30
Filter weighing pan	mm	Ø 50	Ø 50	Ø 50
Weight, approx.*	kg	6.4/7.1	6.4/7.1	6.4/7.1

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

Cubis® II Weighing Modules
Semi-Micro Balances 0.01 mg

		225S	225P	125S	125P
Scale interval (d)	mg	0.01	0.01 | 0.02 | 0.05	0.01	0.01 | 0.1
Maximum capacity (Max)	g	220	60 | 120 | 220	120	60 | 120
Repeatability at 5 % load					
Standard deviation of the load values, tolerance	mg	0.015	0.015	0.015	0.015
Standard deviation of the load values, typical value	mg	0.01	0.01	0.01	0.01
Repeatability near Max					
Standard deviation of the load values, tolerance	mg	0.025	0.04	0.025	0.06
Standard deviation of the load values, typical value	mg	0.02	0.02	0.02	0.02
Linearity Deviation					
Tolerance	mg	0.1	0.15	0.1	0.15
Typical value	mg	0.065	0.1	0.065	0.1
Deviation when load is off-center, positions according to OIML R76					
Test weight	g	100	100	50	50
Tolerance	mg	0.15	0.2	0.15	0.2
Typical value	mg	0.1	0.1	0.1	0.1
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	1	1	1	1
Minimum weight according to USP (United States Pharmacopeia), Chap. 41					
Optimum minimum weight	mg	8.2	8.2	8.2	8.2
Typical minimum weight	mg	13	13	13	13
Typical stabilization time	s	2	2	2	2
Typical measurement time	s	6	6	6	6
Recommended calibration weight					
External test load	g	200	200	100	100
Accuracy class, acc. to OIML R111-1		E2	E2	E2	E2
Dimensions					
MCE/MCA Weighing module (L × W × H)*	mm	404 x 240 x 373			
MCE Electronics module (L × W × H)	mm	315 x 240 x 61			
MCA Electronics module (L x W x H)	mm	355 x 240 x 61			
Weighing pan size	mm	85 x 85			
Weight, approx.*	kg	10.2/11.7			

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

Cubis® II Weighing Modules
Analytical Balances 0.1 mg

		524S	524P	324S	324P	224S	124S
Scale interval (d)	mg	0.1	0.1 | 0.2 | 0.5	0.1	0.1 | 0.2 | 0.5	0.1	0.1
Maximum capacity (Max)	g	520	120 | 240 | 520	320	80 | 160 | 320	220	120
Repeatability at 5 % load							
Standard deviation of the load values, tolerance	mg	0.08	0.08	0.08	0.08	0.07	0.1
Standard deviation of the load values, typical value	mg	0.04	0.04	0.04	0.04	0.05	0.05
Repeatability near Max							
Standard deviation of the load values, tolerance	mg	0.1	0.15	0.1	0.1	0.07	0.1
Standard deviation of the load values, typical value	mg	0.05	0.05	0.05	0.05	0.05	0.05
Linearity Deviation							
Tolerance	mg	0.4	0.5	0.3	0.5	0.2	0.2
Typical value	mg	0.2	0.2	0.2	0.2	0.13	0.13
Deviation when load is off-center, positions according to OIML R76							
Test weight	g	200	200	200	200	100	50
Tolerance	mg	0.3	0.4	0.3	0.4	0.2	0.2
Typical value	mg	0.2	0.2	0.2	0.2	0.12	0.12
Sensitivity drift between +10 °C and +30 °C	ppm/K	1	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	I
Verification scale interval (e) according to Directive 2014/31/EU	mg	1	1	1	1	1	1
Minimum load (Min) according to Directive 2014/31/EU	mg	10	10	10	10	10	10
Minimum weight according to USP (United States Pharmacopeia), Chap. 41							
Optimum minimum weight	mg	82	82	82	82	82	82
Typical minimum weight	mg	82	82	82	82	100	100
Typical stabilization time	s	1	1	1	1	1	1
Typical measurement time	s	3	3	3	3	3	3
Recommended calibration weight							
External test load	g	500	500	300	300	200	100
Accuracy class, acc. to OIML R111-1		E2	E2	E2	E2	E2	E2
Dimensions							
Weighing module (L × W × H)*	mm	425 x 240 x 373					
Weighing pan size	mm	85 x 85					
Weight, approx.*	kg	8.2/10.0					

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

Cubis® II Weighing Modules
Precision Balances

		5203S	5203P	3203S	2203S	2203P	1203S
Scale interval (d)	mg	1	1 | 2 | 5	1	1	1 | 10	1
Maximum capacity (Max)	g	5200	1200 | 2400 | 5200	3200	2200	1010 | 2200	1200
Repeatability at 5 % load							
Standard deviation of the load values, tolerance	mg	1	1	1	0.7	0.7	0.7
Standard deviation of the load values, typical value	mg	0.6	0.6	0.6	0.5	0.5	0.5
Repeatability near Max							
Standard deviation of the load values, tolerance	mg	1	1	1	1	1	0.7
Standard deviation of the load values, typical value	mg	0.6	0.6	0.6	0.6	0.6	0.6
Linearity Deviation							
Tolerance	mg	5	5	5	3	5	2
Typical value	mg	2	3	2	2	3	1
Deviation when load is off-center, positions according to OIML R76							
Test weight	g	2000	2000	1000	1000	1000	500
Tolerance	mg	2	2	2	2	3	2
Typical value	mg	1	1	1	1	2	1
Sensitivity drift between +10 °C and +30 °C	ppm/K	1	1	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	I	I
Verification scale interval (e) according to Directive 2014/31/EU	mg	10	10	10	10	10	10
Minimum load (Min) according to Directive 2014/31/EU	mg	100	100	100	100	100	100
Minimum weight according to USP (United States Pharmacopeia), Chap. 41							
Optimum minimum weight	mg	820	820	820	820	820	820
Typical minimum weight	mg	1200	1200	1200	1000	1000	1000
Typical stabilization time	s	1	1	1	1	1	1
Typical measurement time	s	2	2	2	1.5	1.5	1.5
Recommended calibration weight							
External test load	g	5000	5000	3000	2000	1000	1000
Accuracy class, acc. to OIML R111-1		E2	E2	E2	E2	E2	E2
Dimensions							
Weighing module (L × W × H)*	mm	425 x 240 x 122/284/373					
Weighing pan size	mm	140 x 140					
Weight, approx.*	kg	5.9/7.5/9.4/10.2					

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

Cubis® II Weighing Modules
Precision Balances

		623S	623P	323S	14202S	14202P
Scale interval (d)	mg	1	1 / 2 / 5	1	10	10 | 20 | 50
Maximum capacity (Max)	g	620	150 | 300 | 620	320	14200	3500 | 7000 | 14200
Repeatability at 5 % load						
Standard deviation of the load values, tolerance	mg	0.7	1	0.7	10	10
Standard deviation of the load values, typical value	mg	0.4	0.4	0.4	5	5
Repeatability near Max						
Standard deviation of the load values, tolerance	mg	0.7	1	0.7	10	10
Standard deviation of the load values, typical value	mg	0.5	0.5	0.5	5	5
Linearity Deviation						
Tolerance	mg	2	5	2	30	50
Typical value	mg	0.6	1.5	0.6	10	20
Deviation when load is off-center, positions according to OIML R76						
Test weight	g	200	200	200	5000	5000
Tolerance	mg	2	4	2	20	40
Typical value	mg	1	3	1	10	10
Sensitivity drift between +10 °C and +30 °C	ppm/K	2	2	2	1.5	1.5
Tare maximum capacity: Less than 100 % of maximum capacity						
Accuracy class according to Directive 2014/31/EU		II	II	II	II	II
Verification scale interval (e) according to Directive 2014/31/EU	mg	10	10	10	100	100
Minimum load (Min) according to Directive 2014/31/EU	mg	20	20	20	1000	1000
Minimum weight according to USP (United States Pharmacopeia), Chap. 41						
Optimum minimum weight	mg	820	820	820	8200	8200
Typical minimum weight	mg	820	820	820	8200	8200
Typical stabilization time	s	0.8	0.8	0.8	0.8	0.8
Typical measurement time	s	1	1	1	1.5	1.5
Recommended calibration weight						
External test load	g	500	500	200	14000	14000
Accuracy class, acc. to OIML R111-1		E2	E2	E2	E2	E2
Dimensions						
Weighing module (L × W × H)*	mm	425 x 240 x 122/284/373			425 x 240 x 95	
Weighing pan size	mm	140 x 140			206 x 206	
Weight, approx.*	kg	5.9/7.5/9.4/10.2			5.4	

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

Cubis® II Weighing Modules
Precision Balances

		10202S	8202S	6202S	6202P	5202S	4202S	2202S
Scale interval (d)	mg	10	10	10	10 | 20 | 50	10	10	10
Maximum capacity (Max)	g	10200	8200	6200	1500 | 3000 |6200	5200	4200	2200
Repeatability at 5 % load								
Standard deviation of the load values, tolerance	mg	7	7	7	7	6	7	7
Standard deviation of the load values, typical value	mg	5	4	4	4	2	4	4
Repeatability near Max								
Standard deviation of the load values, tolerance	mg	7	7	7	40	6	7	7
Standard deviation of the load values, typical value	mg	5	4	4	15	2	4	4
Linearity Deviation								
Tolerance	mg	20	20	20	50	10	20	20
Typical value	mg	6	6	6	20	5	6	6
Deviation when load is off-center, positions according to OIML R76								
Test weight	g	5000	5000	2000	2000	2000	2000	1000
Tolerance	mg	20	20	20	50	10	30	20
Typical value	mg	10	10	10	30	5	10	10
Sensitivity drift between +10 °C and +30 °C	ppm/K	1.5	2	2	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	I	II	II
Verification scale interval (e) according to Directive 2014/31/EU	mg	100	100	100	100	100	100	100
Minimum load (Min) according to Directive 2014/31/EU	mg	1000	500	500	500	1000	500	500
Minimum weight according to USP (United States Pharmacopeia), Chap. 41								
Optimum minimum weight	mg	8200	8200	8200	8200	8200	8200	8200
Typical minimum weight	mg	8200	8200	8200	8200	8200	8200	8200
Typical stabilization time	s	0.8	1	1	1	0.8	1	0.8
Typical measurement time	s	1.5	1.5	1.5	1.5	1	1	1.5
Recommended calibration weight								
External test load	g	10000	7000	5000	5000	5000	3000	1500
Accuracy class, acc. to OIML R111-1		E2	E2	E2	E2	E2	E2	E2
Dimensions								
Weighing module (L × W × H)*	mm	425 x 240 x 95				425 x 240 x 122/284/373	425 x 240 x 95	
Weighing pan size	mm	206 x 206				140 x 140	206 x 206	
Weight, approx.*	kg	5.4				5.9/ 7.5/9.4/10.2	5.4	

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

Cubis® II Weighing Modules
Precision Balances

		1202S	12201S	8201S	5201S
Scale interval (d)	mg	10	100	100	100
Maximum capacity (Max)	g	1200	12200	8200	5200
Repeatability at 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	2000	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 USP (United States Pharmacopeia), Chap. 41					
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, acc. to OIML R111-1		E2	F1	F1	F1
Dimensions					
Weighing module (L × W × H)*	mm	425 x 240 x 95			
Weighing pan size	mm	206 x 206			
Weight, approx.*	kg	5.4			

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

Cubis® II Weighing Modules
High Capacity Balances

		32202P	70201S	50201S	36201S	36201P
Scale interval (d)	mg	10 | 100	100	100	100	100|1000
Maximum capacity (Max)	g	4200 | 32200	70200	50200	36200	10200 | 36200
Repeatability at 5 % load						
Standard deviation of the load values, tolerance	mg	40	100	100	100	100
Standard deviation of the load values, typical value	mg	20	40	40	20	20
Repeatability near Max						
Standard deviation of the load values, tolerance	mg	40 | 100	100	100	100	100
Standard deviation of the load values, typical value	mg	20 | 50	40	40	50	20
Linearity Deviation						
Tolerance	mg	20	500	500	200	200
Typical value	mg	10	150	150	100	100
Deviation when load is off-center, positions according to OIML R76						
Test weight	g	10000	20000	20000	10000	10000
Tolerance	mg	200	500	500	300	300
Typical value	mg	100	150	150	200	200
Sensitivity drift between +10 °C and +30 °C	ppm/K	2	4	4	4	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 USP (United States Pharmacopeia), Chap. 41						
Optimum minimum weight	mg	8200	82000	82000	82000	82000
Typical minimum weight	mg	8200	82000	82000	82000	82000
Typical stabilization time	s	2	1.5	1.5	1.5	1.5
Typical measurement time	s	2	1.5	1.5	2	2
Recommended calibration weight						
External test load	g	30000	70000	50000	30000	30000
Accuracy class, acc. to OIML R111-1		F1	F1	F1	F1	F1
Dimensions						
Weighing module (L × W × H)*	mm	412 x 400 x 126/159				
Weighing pan size	mm	400 x 300/Ø 233				
Weight, approx.*	kg	15.8/17.1				

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

Cubis® II Weighing Modules
High Capacity Balances

		20201S	11201S	70200S	36200S
Scale interval (d)	mg	100	100	1000	1000
Maximum capacity (Max)	g	20200	11200	70200	36200
Repeatability at 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	20	20
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	20	20
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 USP (United States Pharmacopeia), Chap. 41					
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, acc. to OIML R111-1		F1	F1	F1	F1
Dimensions					
Weighing module (L × W × H)*	mm	412 x 400 x 126/159			
Weighing pan size	mm	400 x 300/Ø 233			
Weight, approx.*	kg	15.8/17.1			

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

Accessories

Cubis® II Power Supply Unit

Only by Sartorius AC Adapter YEPS03-15V0	Unit	Value
Primary		
AC voltage	V	100–240 (±10%)
Frequency	Hz	50–60 (±5%)
Current consumption, maximum	A	1.0
Secondary		
DC voltage at 2 A output current	V	14.25–15.75
Power, maximum	W	30
Short circuit protection: Electronic		
Protection class according to IEC 62368-1		I
Pollution level according to IEC 61010-1		2
Overvoltage category according to IEC 606641-1		II
Installation site according to IEC 62368-1, maximum altitude above sea level	m	5000
Temperature		
In operation	°C	0 – +40
During storage and transport	°C	-20 – +80
Connector for mains connection according to IEC 60320-1/C14: 3-pin		
Power supply cable		
Power supply cable according to IEC 60320-1/C14: Country-specific, 3-pin, two-sided plug		
Other data: See label on AC adapter		

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 resistance
Suitable for use in industrial areas

Transient emissions
Class B
Suitable for use in residential areas and areas that are connected to a low voltage network that also supplies residential buildings.

Materials

Housing: Die-cast aluminum, plastic PBT, Optiwhite float glass and stainless steel 1.4401/1.4404, PA handles, aluminum trim
Control unit: Die-cast aluminum, painted, float glass and plastic PBT, PP

Integrated Clock

Maximum deviation per month (RTC): 30s

Backup Battery

Lithium battery: type CR2032
Service life at room temperature, minimum: 10 Years

Alibi Memory Value

Maximum number of data records: 150,000

Specifications for the COM-RS232 Interface

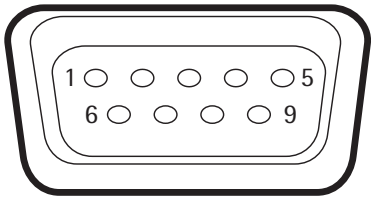
Type of interface: Serial interface

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

Ambient Conditions

	Unit	Value
Installation Site		
AC voltage	V	100–240 (±10%)
Frequency	Hz	50–60 (±5%)
Current consumption, maximum	A	1.0
Secondary		
Standard laboratory rooms		
Installation site according to IEC 60259-1, maximum altitude above sea level	m	3000
For indoor use only		
Temperature		
In operation	°C	+5 – +40
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
Then linear decrease from 80 % at 31 °C to 50 % at 40 °C		
No heat from heating systems or direct sunlight		
No drafts from open windows, AC systems, or doors		
No vibrations		
No "heavy traffic" areas (personnel)		
No electromagnetic fields		
No dry air		

Meteorological Data

Code	Item
SØØ	Standard version non-verified, all units
S01	Standard version non-verified, metric units only
CCN	Balance with Type Approval Certificate for China
CEU	Verified balance with EC Type Approval Certificate (for EU except France)
CFR	Verified balance with EC Type Approval Certificate for France only
OBR	Balance with Type Approval Certificate for Brazil
OIN	Balance with Type Approval Certificate for India
OJP	Balance with Type Approval Certificate for Japan
ORU	Balance with Type Approval Certificate for Russia

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.
E	Manual glass draft shield for precision balances.
F	Manual stainless steel draft shield for weighing filters with diameters of up to 50 mm (75 mm and 90 mm pans optional).
I	Identical to the A draft shield, but also includes an integrated ionizer to eliminate interfering electrostatic charges on samples and sample containers.
M	Automatic, motorized, round 100% glass draft shield with learning capability for ultra-microbalance and microbalances.
R	Flat, stainless steel weighing pan draft shield (removable, with no glass components) for all precision balances
U	Manual glass analytical draft shield chamber, with smooth-action doors that open wide and provide unimpeded access to the weighing chamber without interfering braces.

Software

Code	Item
QP1	Q-App Package Pharma
QP2	Q-App Package Advanced Applications
QP3	Q-App Package Utilities
QP4	Q-App Package Connectivity

Accessories

Printers and Communication	Quantity	Order number
Thermal transfer | thermal printer for GLMP printouts on continuous paper and labels	1	YDP30
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
Display cable, 3 m, for separate installation of display and weighing units, installation by Sartorius Service or at the factory	1	On request
RS232C connection cable, 9-pin, 3 m, for connection to a PC with 9-pin COM interface	1	On request
Sartorius Wedge, software for data communication between the PC and balance	1	YSW02

Accessories (continued)

Displays and Input/Output Elements	Quantity	Order number
MCE Display and control unit with color TFT display, touch screen, and keys	1	69ME0212
MCA Display and control unit with high-contrast display, touch screen, and keys	1	69MA0218
Motion sensor for triggering a maximum of 4 functions via gesture control, selection via menu	1	YHS02MS
Display stand for weigh cells with scale interval of 100 mg | 1 g and weighing capacity > 20 kg for raising the operating unit	1	YDH04MS
Display stand for weigh cells with scale interval of 10 mg | 100 mg for raising the operating unit	1	YDH03MS

Hardware for Pipette Calibration (Semi-Micro and Analytical balances)	Quantity	Order number
Pipette calibration kit (hardware). Consists of moisture trap and all required adapters	1	YCP04MS

Density Determination Kits	Quantity	Order number
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	Quantity	Order number
Grid pan for model with a scale interval of 10 mg or 100 mg for weighing in laboratory hoods, safety barries 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-mnicrobalance 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
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
Ionization blower for electrostatically charged samples	1	YIB01-ODR
Ionizer with u-shaped electrode for 230 V	1	YIB02-230V
Ionizer with u-shaped electrode for 115 V	1	YIB02-115V
Stat-Pen ionization pen for discharging electrostatically charged samples	1	YSTP01
Aluminum weighing scoop, 4.5 mg for ultramicrobalance and microbalance models	250	6565-250
Aluminum weighing scoop, 52 mg for ultramicrobalance and microbalance models	50	6566-50
Weighing scoop made from chrome-nickel steel, L 90 mm x W 32 mm x H 8 mm	1	641214

Other Accessories	Quantity	Order number
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

Weighing Tables	Quantity	Order number
Made from synthetic stone, with vibration dampening	1	YWT03
Made from wood with synthetic stone	1	YWT09
Wall console	1	YWT04

Accessories (continued)

Climate Modules (available July 2019)	Quantity	Order number
Climate module, uncalibrated, for draft shield A or I 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 or I and user interface MCA	1	YCM20MC-DAkkS
Tower for climate module, for mounting YCM20MC; can be ported to all Cubis II weighing modules with user interface MCA	1	YCM20MC Tower

Flexible Sample Holder (available July 2019)	Quantity	Order number
For weighing vessels and filters with diameters of up to 120 mm, replaces the original weighing pan, for semi-microbalance and analytical balance	1	YFH01MS

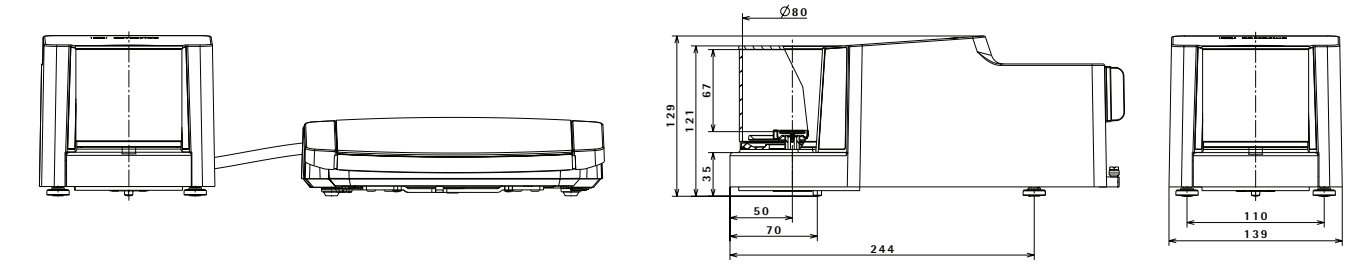
Titanium Holders for Ultra-Micro Balances and Micro Balances (available July 2019)		Quantity	Order number
For coronary stents (up to 38 mm)		1	YSH10
For save-lock tubes, 1.5 ml - 2 ml		1	YSH13

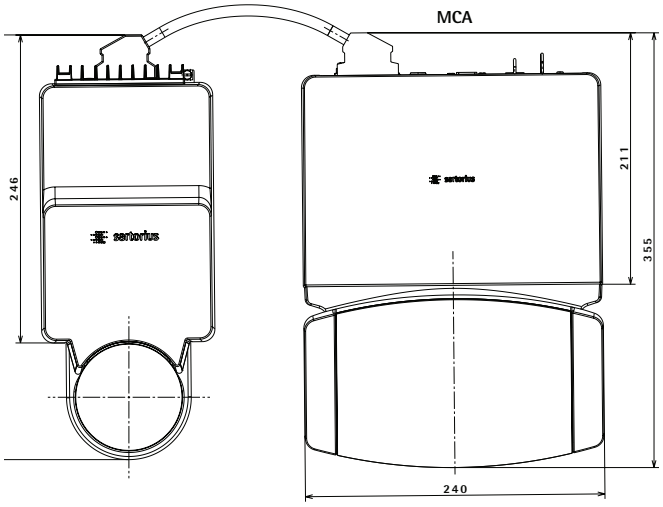
Titanium Holders for Semi-Micro Balances and Analytical Balances (available July 2019)		Quantity	Order number
Q-Grid weighing pan for 10 mg or 100 mg balances		1	YWP07MS
For save-lock tubes, 1.5 ml – 2 ml		1	YSH15
For save-lock tubes up to 5 ml		1	YSH19
For vials		1	YSH23
For weighing boats		1	YSH26
For filters, 150 mm diameter		1	YSH30
For titration vessels and round bottom flasks		1	YSH37
For syringes, vertical		1	YSH46

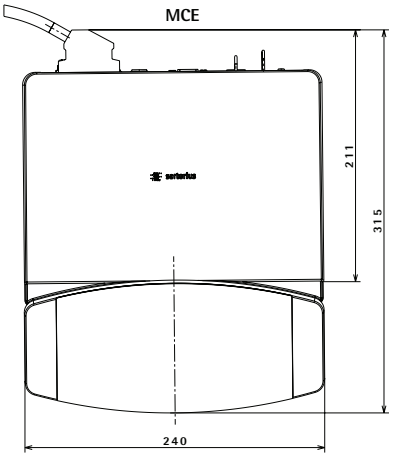
Balance Dimensions

Ultra-Micro Balance

All dimensions are given in millimeters

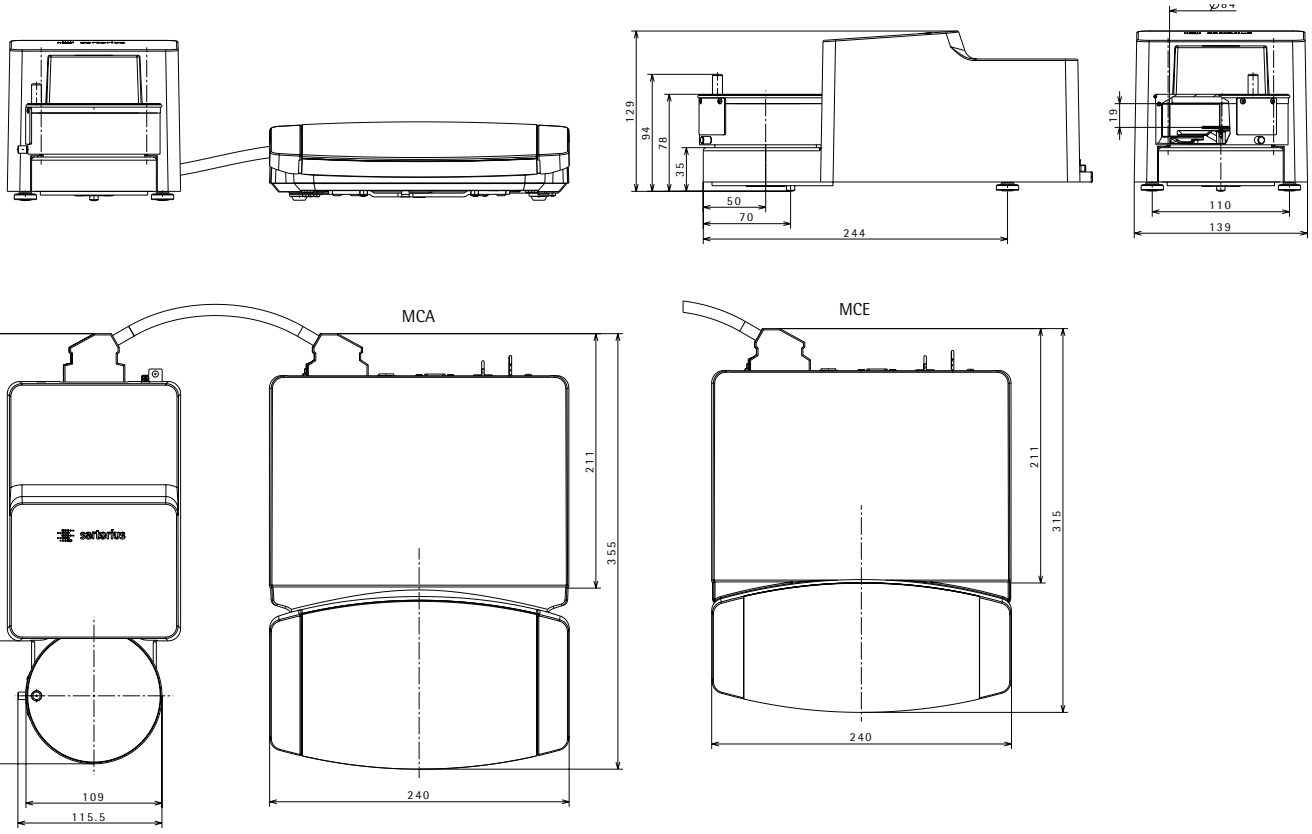






Micro Balance

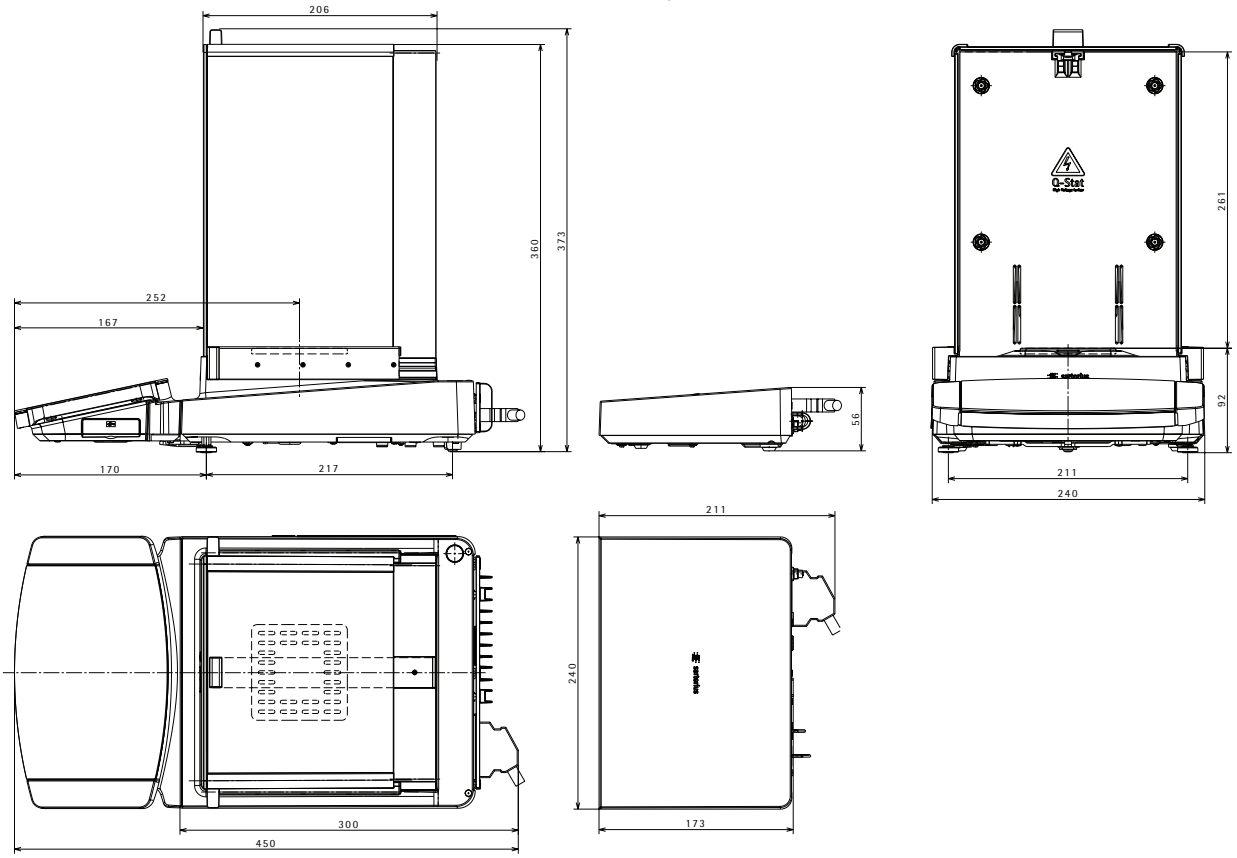
All dimensions are given in millimeters



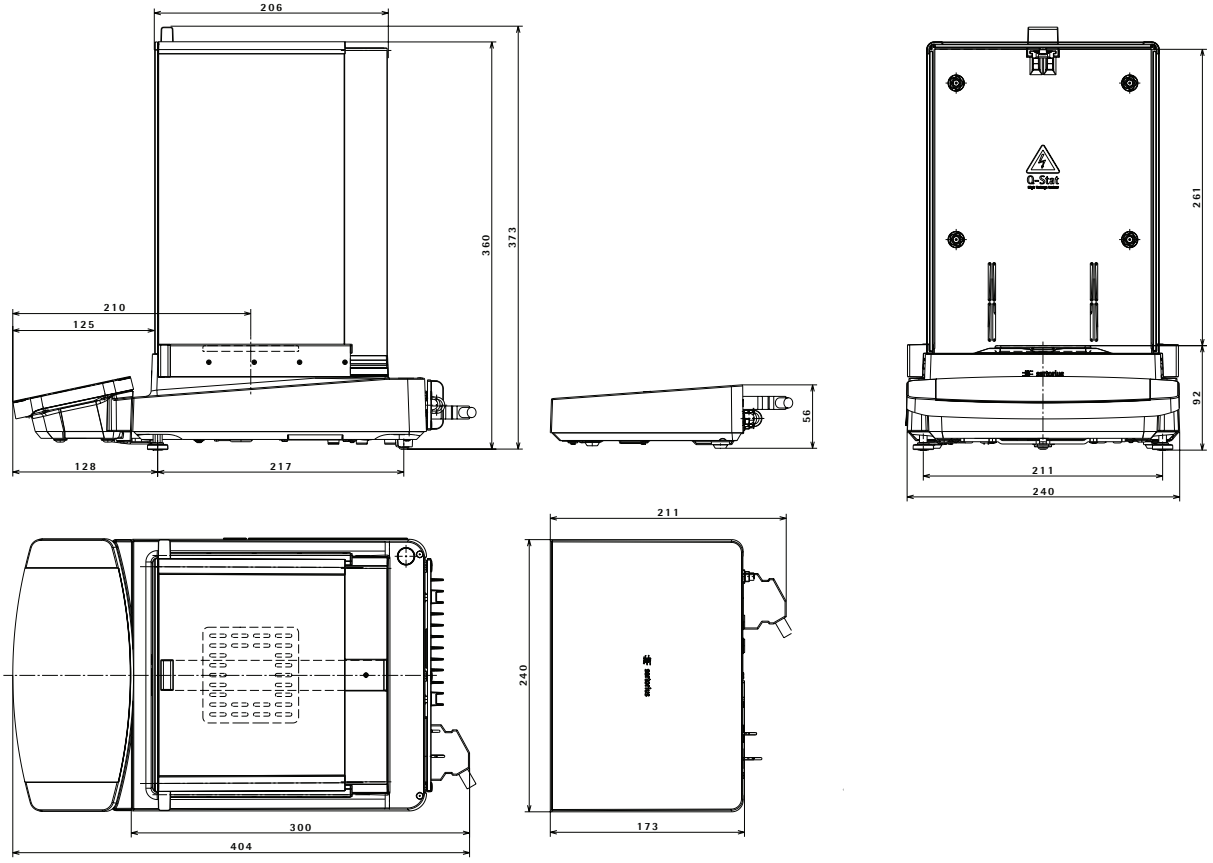
Semi-Micro Balance

All dimensions are given in millimeters

MCA



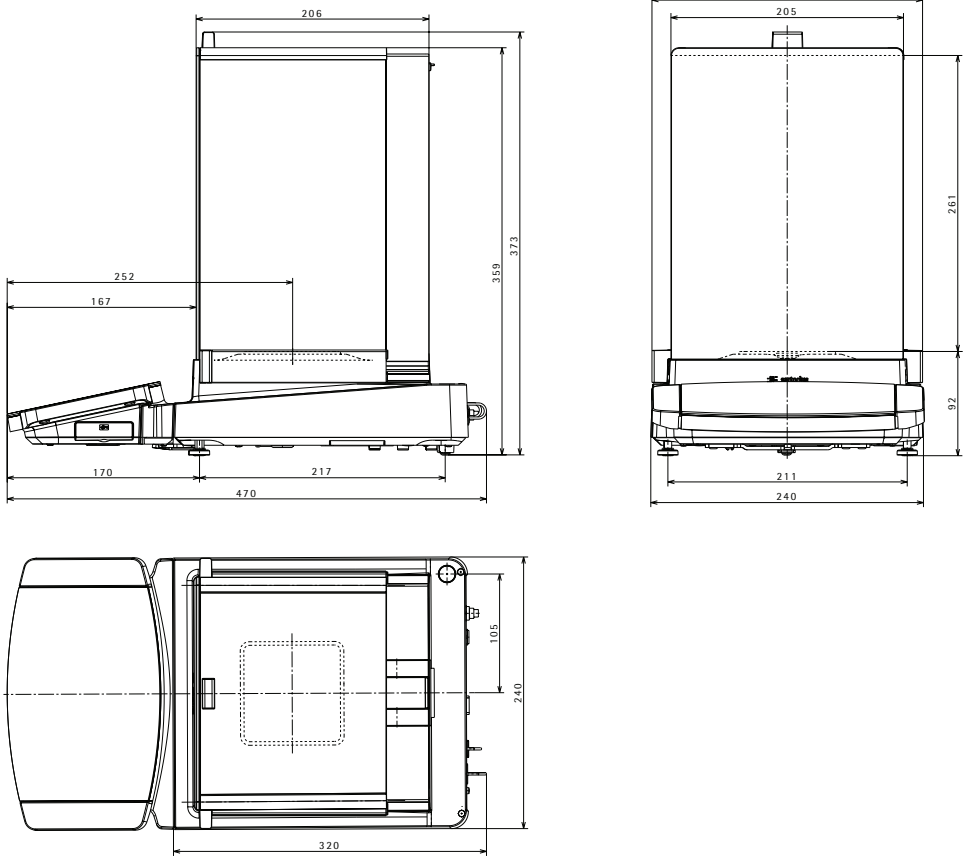
MCE



Analytical Balance

All dimensions are given in millimeters

MCA



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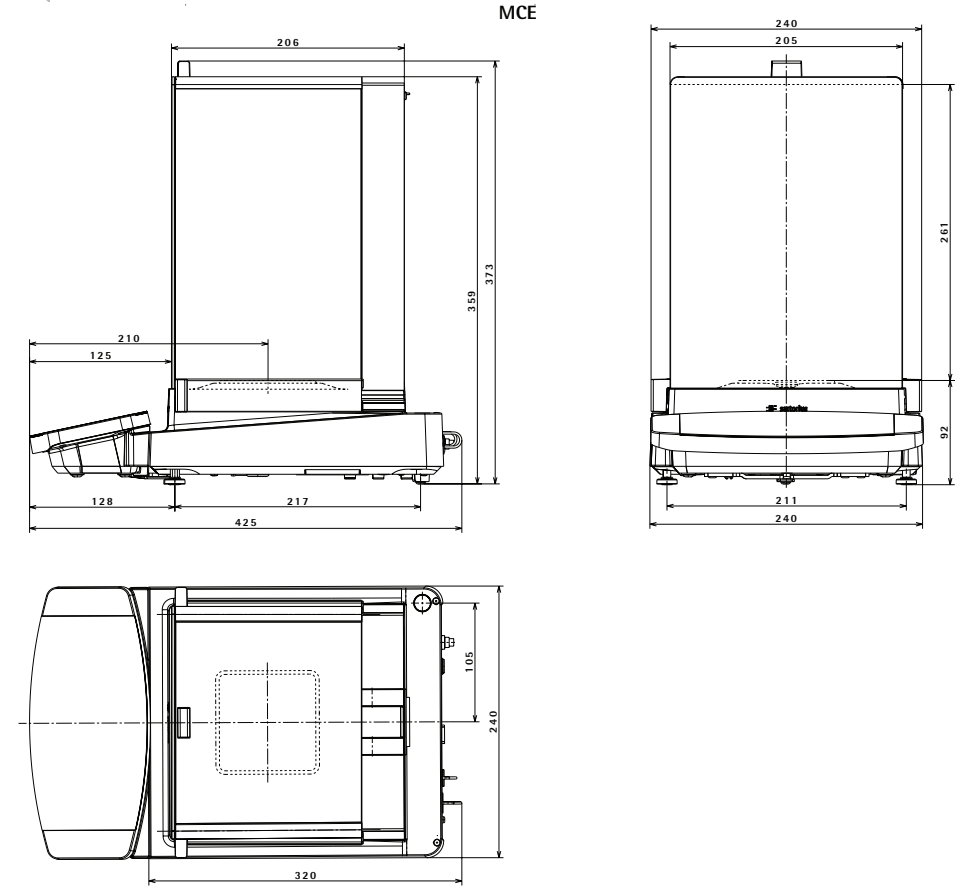
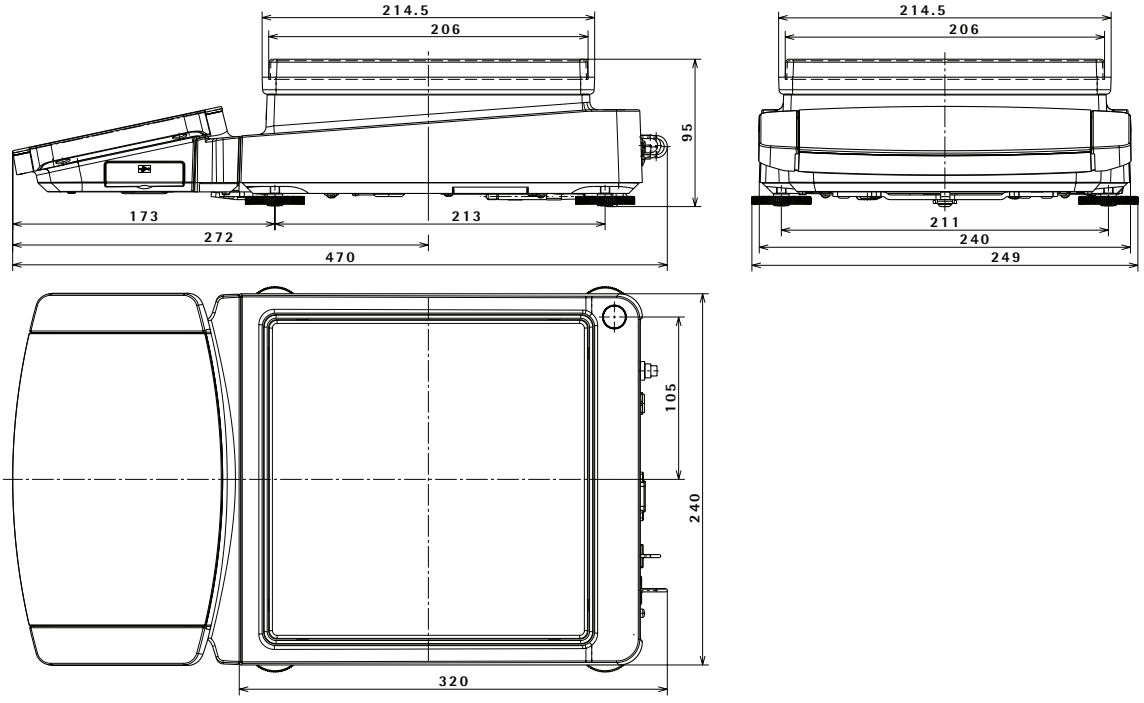


Precision Balance

All dimensions are given in millimeters

MCA



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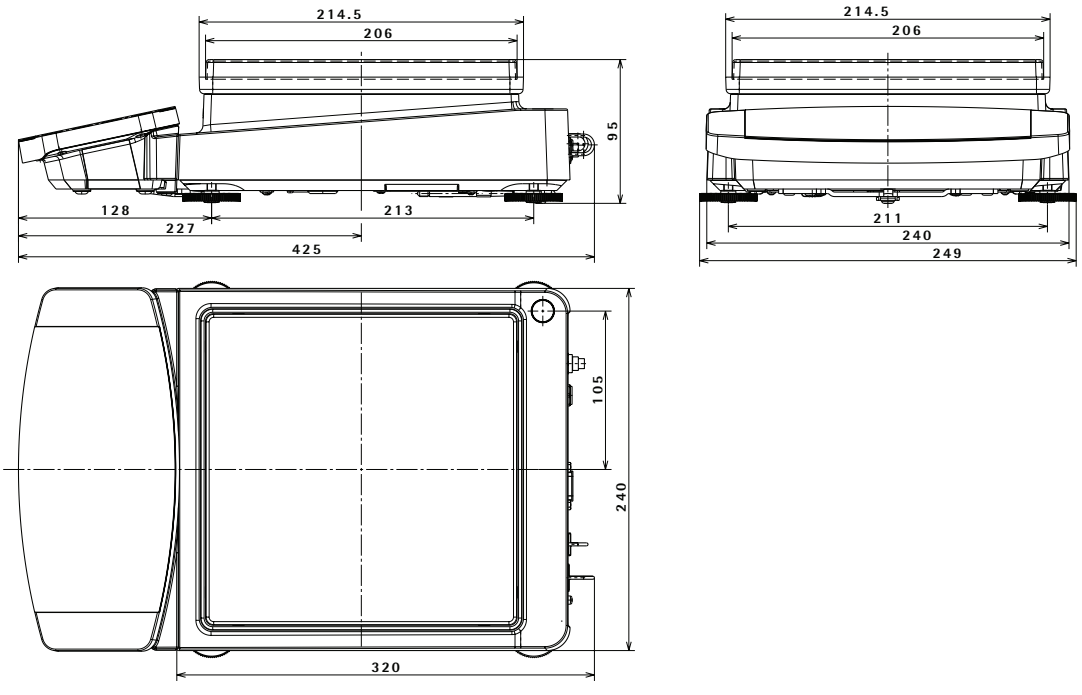
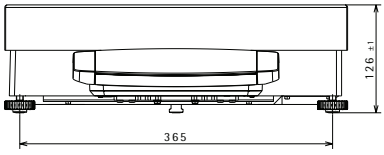
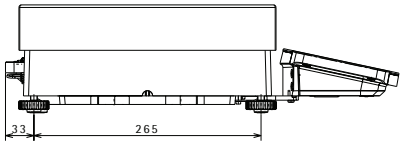
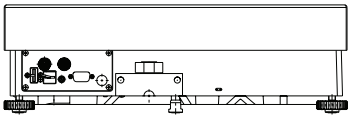


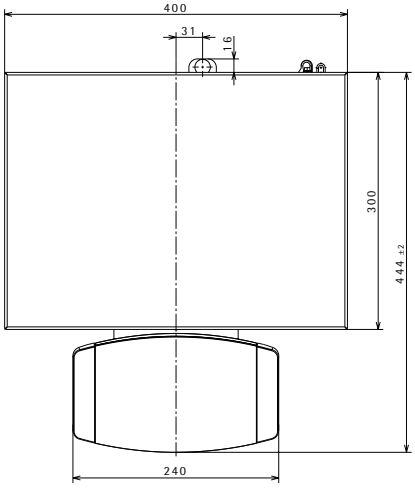
High-Capacity Balance

All dimensions are given in millimeters

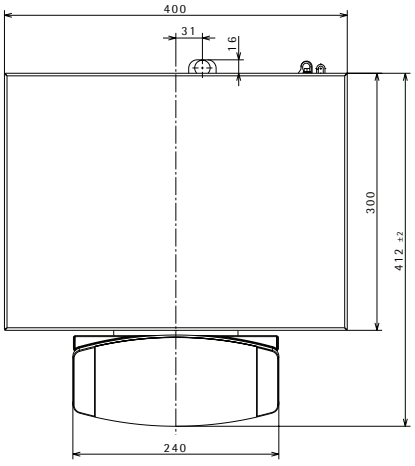








MCA



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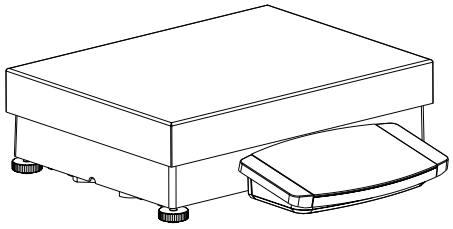

WolfLabs

Pricing on any accessories shown can be found by keying the part number into the search box on our website.

The specifications listed in this brochure are subject to change by the manufacturer and therefore cannot be guaranteed to be correct.
If there are aspects of the specification that must be guaranteed, please provide these to our sales team so that details can be confirmed.

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Please contact us if this literature doesn't answer all your questions.