

Operating Instructions | Betriebsanleitung | Mode d'emploi | Instrucciones de manejo |
Manuale d'uso | Instruções de Operação

Original Operating Instructions | Original-Betriebsanleitung | Mode d'emploi original |
Instrucciones de manejo originales | Manuale d'uso originale | Instruções de Operação Originais

Quintix[®] Pro

Model QTX | Modelle QTX | Modèles QTX | Modelos QTX | Modelli QTX | Modelos QTX
Analytical and Precision Balances | Analysen- und Präzisionswaagen | Balances d'analyse et de précision |
Balanças analíticas y de precisión | Balance analitiche e di precisione | Balanças Analíticas e de Precisão



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1 About These Instructions

1.1 Validity

These instructions are part of the device; they must be read in full and kept in a safe place. These instructions apply to the device in the following versions:

Device	Model ^{1) 2)}
Quintix® Pro analytical balance (90 mm)	QTX324lxy-1z QTX224lxy-1z QTX124lxy-1z
Quintix® Pro precision balance (120 mm)	QTX1503lxy-1z QTX1203lxy-1z QTX623lxy-1z QTX423lxy-1z QTX323lxy-1z
Quintix® Pro precision balance (182 x 182 mm)	QTX6202lxy-1z QTX4202lxy-1z QTX3202lxy-1z QTX2202lxy-1z QTX1202lxy-1z QTX12201lxy-1z QTX10201lxy-1z QTX8201lxy-1z QTX6201lxy-1z QTX3201lxy-1z

1) Model-typical marking

I	Devices with internal calibration and adjustment function
x =	
R	Device with real-time LevelSupport
M	Device with motorized feet
y =	
U	Device with manual draft shield
O	Device without draft shield
-1	Product version

2) Country-specific marking in model, z=

S	Standard balance without country-specific additions
SAR	Standard balance with country-specific additions in Argentina
SJP	Standard balance with country-specific additions in Japan
SKR	Standard balance with country-specific additions in South Korea
CEU	Conformity-assessed balances with EU type examination certificate without country-specific additions
CFR	Conformity-assessed balances with EU type examination certificate only for France
OCN	Balances with approval for China
OBR	Balances with approval for Brazil
OIN	Balances with approval for India
OJP	Balances with approval for Japan
ORU	Balances with approval for Russia

1.2 Related Documents

► In addition to these instructions, observe the following documents: Instructions for the accessories, e.g. printer.

1.3 Target Groups

These instructions are addressed to the following target groups. The target groups must possess the specified knowledge.

Target Group	Knowledge and Qualifications
Operator	The operator is familiar with the device and the associated work processes. The operator understands the hazards which may arise when working with the device and knows how to prevent them.*

* If a person in the target group operates the software interface of the device, they are also the “user”.

1.4 Symbols Used

1.4.1 Warnings in Operation Descriptions

WARNING

Denotes a hazard that may result in death or serious injury if it is **not** avoided.

CAUTION

Denotes a hazard that may result in moderate or minor injury if it is **not** avoided.

NOTICE

Denotes a hazard that may result in property damage if it is **not** avoided.

1.4.2 Other Symbols Used

►	Required action: Describes activities that must be carried out. The activities in the sequence must be carried out in succession.
▷	Result: Describes the result of the activities carried out.
[]	Refers to operating and display elements. Indicates status, warning, and error messages.
	Indicates information for legal metrology for conformity-assessed (verified) devices. Conformity-assessed devices are referred to as “verified” in these instructions.

Figures in These Instructions

Depending on the device configuration, the figures depicting the device and operating display may differ slightly from the supplied device. The variants shown in these instructions are examples.

2 Safety Instructions

2.1 Intended Use

The device is a high-resolution balance, which can be used in laboratory settings. The device is intended for accurately measuring materials in liquid, paste, powder, or solid form.

Appropriate containers must be used for loading each type of material.

The device is intended solely for use in accordance with these instructions. Any other use is considered **improper** and can interfere with the device's protective functions.

Operating Conditions for the Device

Do **not** use the device in potentially explosive environments. Only use the device indoors.

Do **not** use physical measures to alter the as-delivered state of the device, and only connect approved accessories.

The device may only be used with the equipment and under the operating conditions described in the Technical Data section of these instructions.

2.1.1 Modifications to the Device

If the device is modified: Persons may be put at risk. Device-specific documents and product approvals may lose their validity.

Contact Sartorius if you have any questions concerning modifications.

2.1.2 Maintenance and Repairs on the Device

Device maintenance and repairs may only be carried out by persons with specialized knowledge of the device. If the device is **not** maintained or repaired by a specialist: Persons may be put at risk. Device-specific documents and product approvals may lose their validity.

Only the maintenance tasks described in these instructions should be carried out. For maintenance tasks that need to be carried out by Sartorius Service, contact Sartorius Service.

2.2 Qualifications of Personnel

Persons who do not possess adequate knowledge about how to use the device safely may injure themselves and other persons.

If a particular qualification is required for an activity: The target group is specified. If **no** qualification is specified: The activity can be performed by the "Operator" target group.

2.3 Functionality of the Device Parts

Non-functioning device parts, e.g., as a result of damage or wear, can cause malfunctions. There is a risk of injury to persons.

► If device parts are **not** functioning: Do **not** use the device.

2.4 Safety Information on the Device

Symbols, e.g., warnings and safety stickers, are safety information for handling the device. Missing or illegible safety information may result in this information **not** being observed. There is a risk of injury to persons.

- ▶ Do **not** conceal, remove, or modify the symbols.
- ▶ Replace the symbols if they become illegible.

2.5 Electrical Equipment

2.5.1 Power Supply Unit and Power Supply Cable

The use of an **unauthorized** power supply unit or power supply cable may cause life-threatening injuries as a result of electric shocks, for example.

- ▶ Only use the original power supply unit and power supply cable.
- ▶ If the power supply unit or power supply cable needs to be replaced: Contact Sartorius Service. Do **not** repair or modify the power supply unit or power supply cable.

2.6 Conduct in an Emergency

If an emergency occurs, e.g., due to malfunctions of the device or dangerous situations: Persons may be injured. The device must be immediately taken out of operation:

- ▶ Disconnect the device from the power supply.
- ▶ Prevent the device from recommissioning.

2.7 Accessories, Consumables, and Spare Parts

The use of unsuitable accessories can affect the functionality and safety of the device and has the following consequences:

- Risk of injury to persons
- Damage, malfunctions, or failure of the device
- ▶ Only use accessories that have been approved by Sartorius for this device.

2.8 Risk of Injury During Transporting

If the device is **not** transported correctly: The device could fall and cause an injury, e.g. a foot injury. If the device is not placed down correctly, e.g., on a laboratory table: Fingers may be crushed.

- ▶ Disconnect the device from all connections at the installation site.
- ▶ Use both hands when transporting the device and setting it down. To do this, reach sideways under the device with both hands.
- ▶ Do not carry the device by the draft shield.

2.9 Glass Breakage

Glass components can break if they fall or are handled incorrectly. Glass fragments can cause cuts.

- ▶ Only operate the operating display with your fingers. Do **not** use pointed or sharp objects.
- ▶ Do **not** allow items to fall onto the operating display.
- ▶ In the event of damage to the operating display or draft shield, do **not** use the device. Contact Sartorius Service.

3 Device Description

3.1 Device Overview

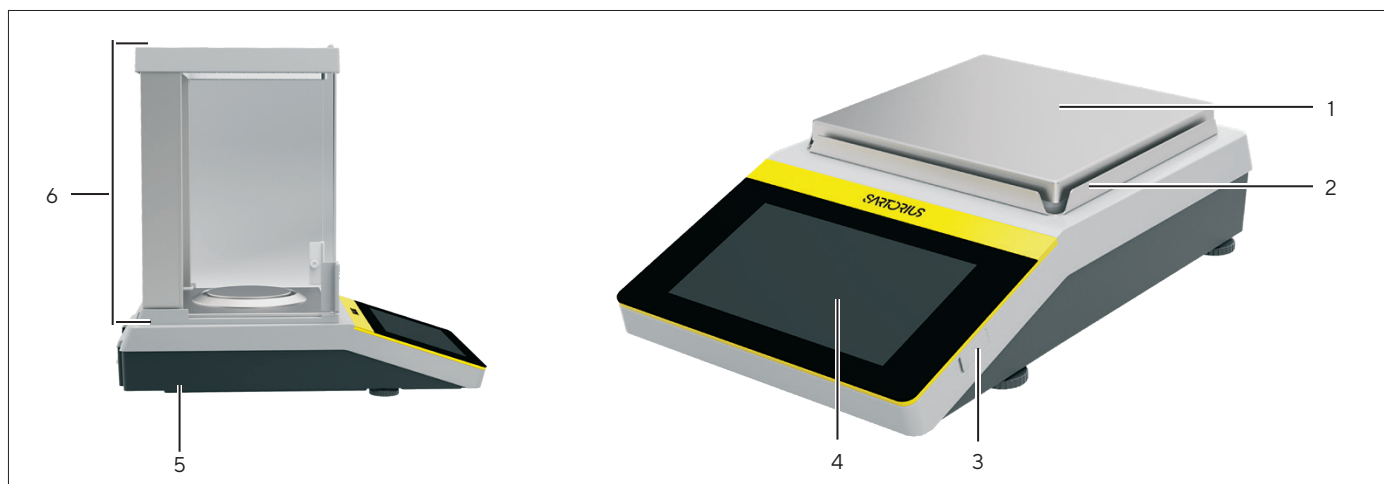


Fig. 1: Quintix® Pro, precision balances (example)

Pos.	Name	Description
1	Weighing pan	For placing the sample on the balance.
2	Draft shield frame	
3	Leveling foot	Used to level the balance.
4	Operating display	
5	Manufacturer's ID label	Marking manufacturer's ID label
6	Draft shield	

3.2 Draft shield

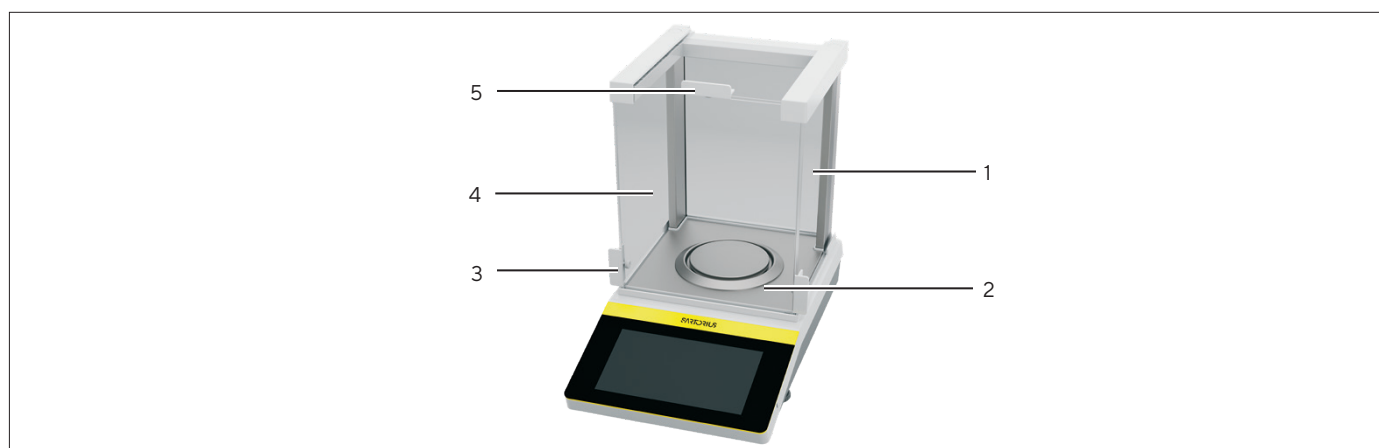


Fig.2: Quintix® Pro, analytical and precision balances (example)

Pos.	Name	Description
1	Right side panel	
2	Base plate	
3	Door handle	For manually opening the side panels.
4	Left side panel	
5	Upper draft shield panel	For manually opening the upper panel.

3.2.1 Weighing Pan and Associated Components

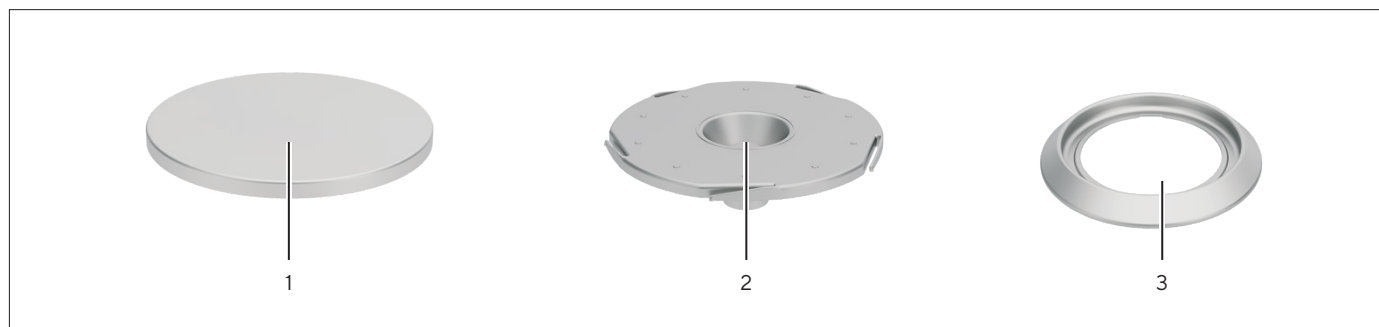


Fig.3: Weighing pan and associated components (example)

Pos.	Name	Description
1	Weighing pan	
2	Pan support	For inserting a weighing pan.
3	Shield disk	For inserting a 90-mm weighing pan.

3.3 Connections

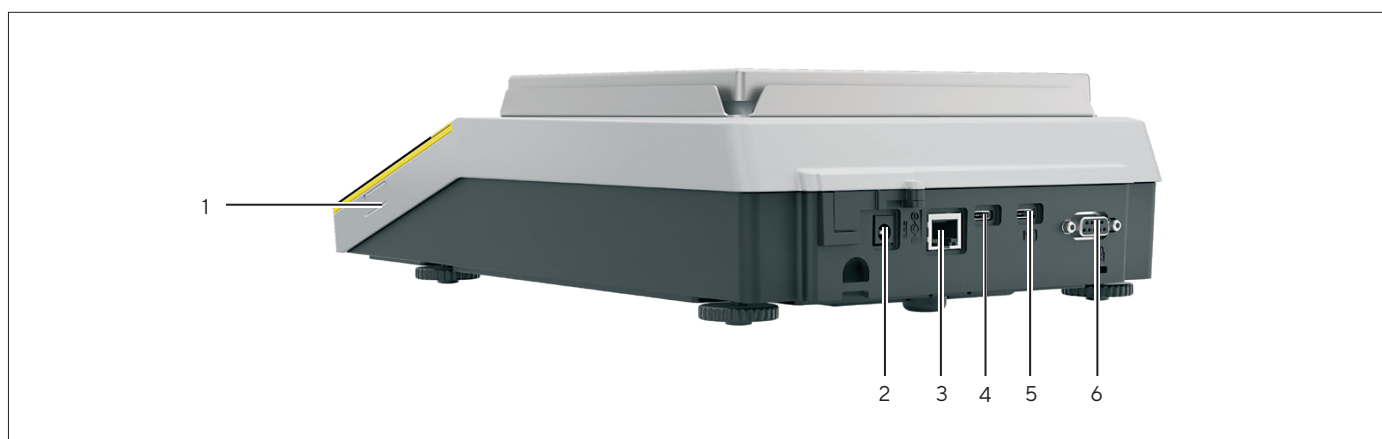


Fig. 4: Rear of Quintix® Pro (example)

Pos.	Name	Description
1	USB-C connection	For connecting accessories.
2	Power supply	
3	Ethernet connection	For connection to a network.
4	USB-C connection	For connecting accessories.
5	PC USB connection	For connection to a PC.
6	RS232 connection	For connection to a PC or an accessory.

3.4 Conformity-assessed Devices

Some settings of conformity-assessed models are protected against operator changes, e.g., “external adjustment”. This measure is intended to ensure the suitability of the devices for use in legal metrology.

3.5 Accessories

Accessories are available for the device. These enable the device to be customized to the specific conditions during weighing procedures, e.g. printer.

3.6 Below-balance Weighing

The device can be configured for below-balance weighing. Samples can be suspended for weighing using below-balance weighing, e.g. samples, which do not fit on the weighing pan.

For below-balance weighing, the hook must be installed in the device base and the device set up on a weighing table with recess.

M

In legal metrology:

- The below-balance weighing equipment may **not** be used.
- The cover of the below-balance weighing equipment may **not** be opened.

4 Operating Design

4.1 Operating Elements in the Main Menu

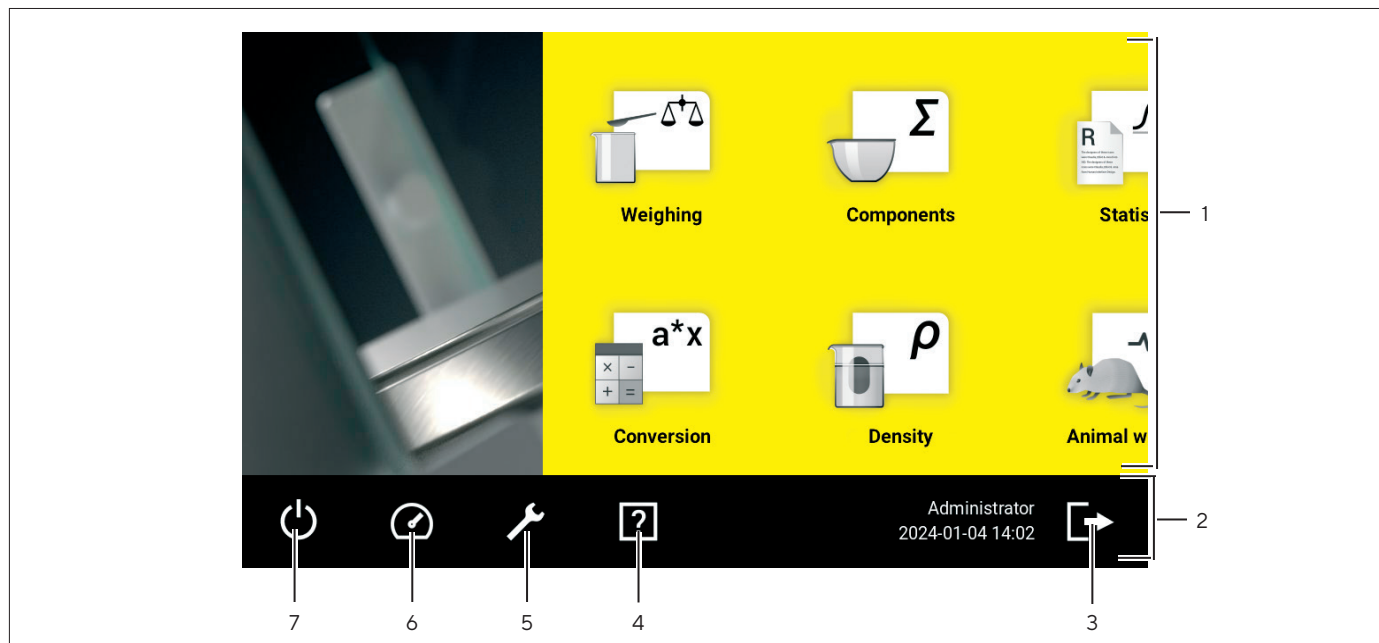


Fig. 5: Home screen (example)

Pos.	Name	Description
1	Applications	Displays all applications available for the active user.
2	Toolbar	- Shows available submenus and functions. - Shows the logged-in user. - Shows the date and time.
3	[Log out] button	
4	[Help] button	Opens the help function.
5	[Settings] button	The “Settings” menu is opened.
6	[Status Center] button	Opens the Status Center.
7	[On Off] button	

4.2 Status Center

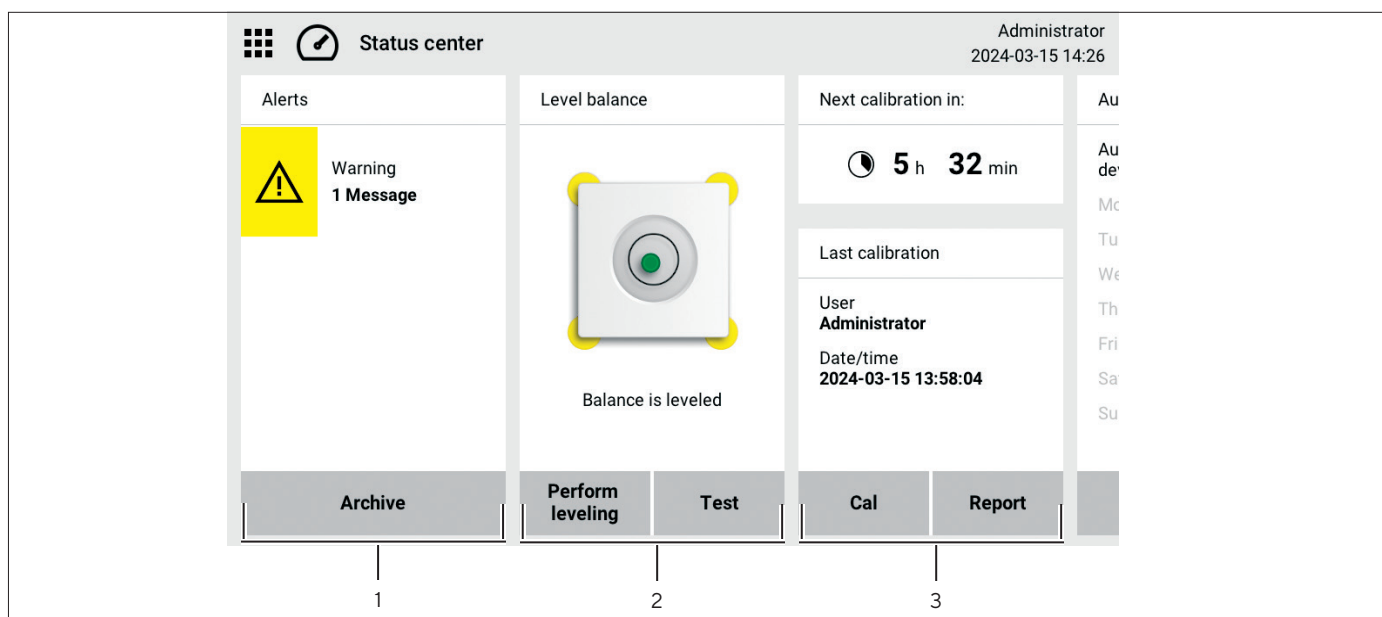


Fig. 6: Status Center (example)

Pos.	Name	Description
1	Messages	Displays information, warning, and error messages.
2	Leveling status	Displays the status of level.
3	Calibration status	Displays the calibration status.

4.3 Keypad

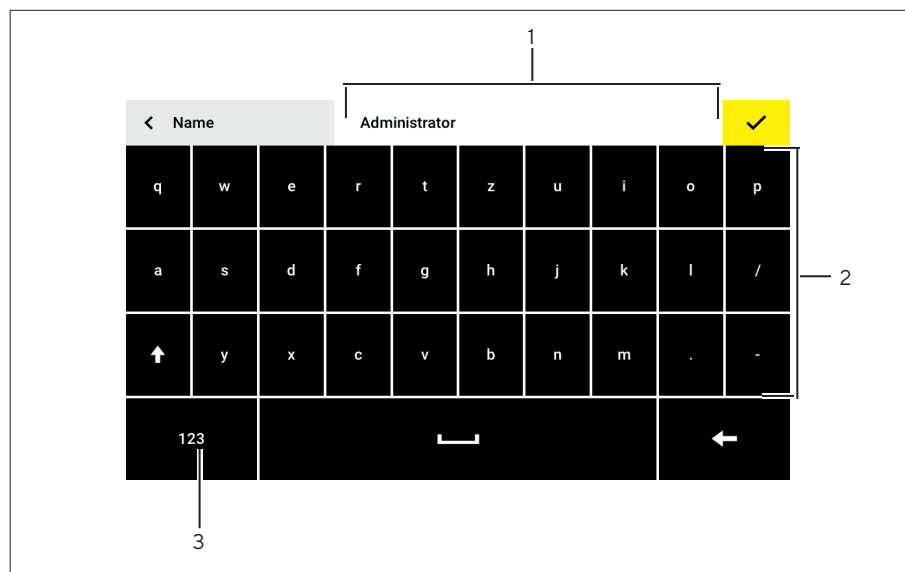


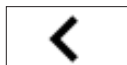
Fig. 7: Alphanumeric keypad (example)

Pos.	Name	Description
1	Input field	
2	Alphanumeric keypad	
3	[Numeric keypad]	Switch to the numeric keypad.

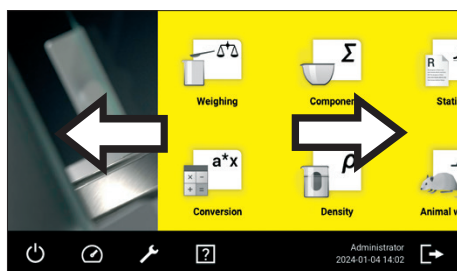
4.4 Navigating the Menus

Procedure

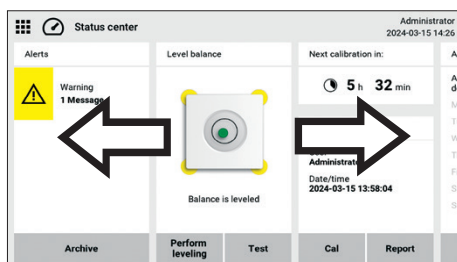
- ▶ To open an application from the main menu: Press the button for the desired application.
- ▶ The application is opened.
- ▶ To quit the application: Press the [Menu] button.



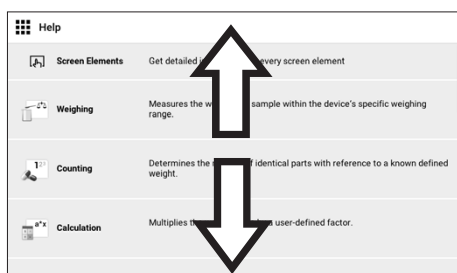
- ▶ To return to the next higher menu level: Press the [Back] button.



- ▶ To scroll through the applications available in the main menu: Swipe to the left or right on the operating display.



- ▶ To scroll in the Status Center: Swipe to the left or right on the operating display.



- ▶ To scroll through the list in a vertical menu: Swipe down or up on the operating display.

5 Installation

5.1 Scope of Delivery

Item	Quantity
Device	1
Analytical balance:	
90-mm weighing pan	1
Pan support	1
Shield plate	1
Precision balance (120 mm):	
120-mm weighing pan	1
Pan support	1
Precision balance (182 x 182 mm):	
Weighing pan	1
Shock absorber	4
Draft shield frame	1
For devices with draft shield:	
Draft shield	1
Draft shield base plate	1
Power supply unit (country-specific)	1
Dust cover	1
In-use dust cover	1
Operating Instructions	1

5.2 Selecting an Installation Site

Procedure

- Ensure that the installation conditions have been met (see Chapter “12.2 Ambient Conditions During Storage and Transport”, page 25).

5.3 Unpacking

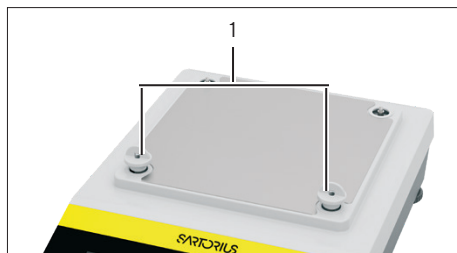
The device is packed in recyclable foam padding.

Procedure

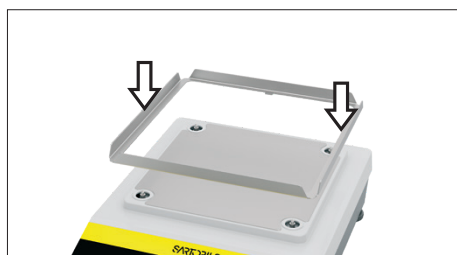
- Unpack the device and device components.
- Install the device at the intended installation site.
- Sartorius recommends keeping the original packaging to return the device appropriately, e.g., for repairs.

5.4 Mounting the Weighing Pan (Precision Balance)

Procedure



- Remove the transport locks (1) and retain them for later use.



- Position the draft shield frame.



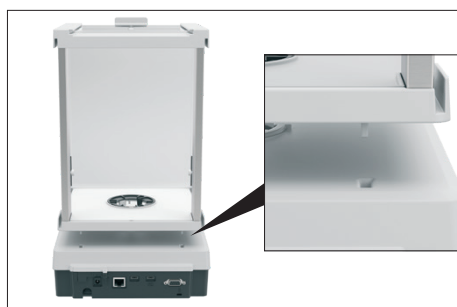
- Insert the four shock absorbers.



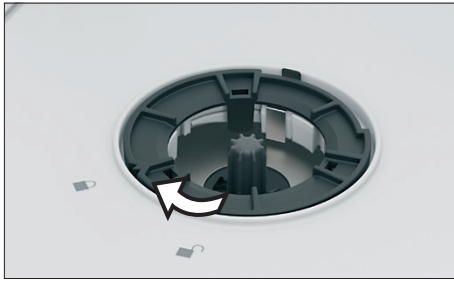
- Position the weighing pan.

5.5 Installing the Draft Shield

Procedure



- Position the draft shield on the balance housing with both hands.
- Insert the pins on the back of the draft shield in the recesses on the balance.
- Open both side panels of the draft shield.



- To secure the draft shield: Turn the clamping ring in the direction of the marking .



- Tilt the base plate towards the rear wall of the draft shield and insert it.

5.5.1 Insert the weighing pan and associated components (only devices with draft shield)

Procedure

- Position the shield disk (3).
- Insert the pan support (2).
- Insert the weighing pan (1).



5.6 Acclimatizing

When a cold device is brought into a warm environment: The temperature difference can lead to condensation from humidity in the device (moisture formation). Moisture in the device can lead to malfunctions.

Procedure

- Allow the device to acclimatize at the installation site (see Chapter “12.6 Warm-up Time”, page 28). The device must be disconnected from the power supply during that time.

6 Commissioning

6.1 Connecting the Device to the Power Supply

Procedure

- ▶ **⚠ WARNING** Serious injuries caused by using defective power supply cables! Check the power supply cable for damage, e.g. cracks in the insulation.
 - ▶ Only connect the device to the power supply using the power supply unit supplied.
 - ▶ If required: Contact Sartorius Service.
- ▶ Check whether the country-specific power plug matches the power supplies at the installation site.
 - ▶ If required: Contact Sartorius Service.
- ▶ Connect the plug to the power supply connection (1).
- ▶ Connect power plug to the power supply at the installation site.



6.2 Performing System Settings

Default settings can be adjusted for the device and the applications in order to align with the ambient conditions and individual operating requirements.

Settings can be implemented to set up the device, e.g.:

- Set the behavior of the isoCAL function
- Set the behavior of the Autostart function
- Creation of user profiles

Procedure

- ▶ Open the main menu.
- ▶ Press the [Settings] button.
- ▶ To adjust settings: Open the desired submenu.
- ▶ Define the desired configuration value.
- ▶ Exit the menu.

6.3 Using the Help Function

If help texts are available in a menu: The [Help] button is displayed.

Procedure



- ▶ Press the [Help] button.
- ▶ The help texts are displayed.
- ▶ To navigate through the help text: Swipe the text downwards or upwards.

7 Operation

7.1 Observing Warm-up Time

After connecting to the power supply, the warm-up time must be observed. This enables the device to reach its required operating temperature and ensures accurate values during weighing processes.

Procedure

- ▶ Ensure that the warm-up time is observed. The duration of the warm-up time is displayed on the operating display.

7.2 Switching the Device On | Off and Activating Standby Mode

Procedure

- ▶ Connect the device to the power supply.
- ▶ The device's operating display lights up.
- ▶ **NOTICE** Pointed or sharp-edged objects may damage the operating display! Only touch the operating display with your fingertips.
- ▶ To switch the device off: Press the [On | Off] button for more than 2 seconds.
- ▶ To activate standby mode: Press the [On | Off] button.
- ▶ The device displays the time.

7.3 User Login

Requirements

The user selection is only displayed when at least one user is created.

Procedure

- ▶ Press the user selection (1).
- ▶ Select a user, e.g., Administrator.
- ▶ Press the [Apply] button (2).
- ▶ If a password is assigned: The input screen for the password opens.
- ▶ Enter the password and confirm with the [Confirm] button.



- ▶ To log in a different user: In the main menu, press the [Log Out] button.
- ▶ Log in a new user.

7.4 Opening and Closing the Manual Draft Shield

Procedure

- ▶ To open the manual draft shield, e.g. the right side panel: Take the corresponding door handle and push backwards.
- ▶ To close the manual draft shield, e.g. the right-hand door: Take the corresponding door handle and push it fully forwards.

7.5 Leveling the Device

Leveling compensates any inclines at the device's installation site. For devices with motorized leveling feet: the device levels itself automatically.

For models with motorized leveling feet: The device levels itself automatically.

7.5.1 Manually Leveling the Device

Procedure

- ▶ **⚠ CAUTION** Danger of grazing fingers when adjusting the leveling feet. Place one finger on the leveling foot and slowly turn in the indicated direction.
- ▶ Follow the instructions on the operating display.

8 Cleaning and Maintenance

8.1 Dismounting the Weighing Pan and Associated Components (Only for Analytical Balances)

Procedure

- ▶ Open the side doors of the draft shield.
- ▶ Remove the weighing pan (1).
- ▶ Remove the pan support (2).
- ▶ Remove the shield disk (3).



8.2 Dismounting the Draft Shield

Requirements

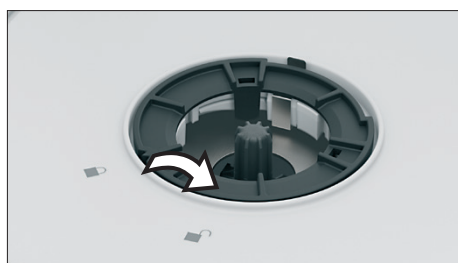
- The side doors of the draft shield are opened.
- The weighing pan and the associated components have been dismantled.

Procedure

- ▶ Lift the front of the draft shield base plate and remove.



- ▶ To release the draft shield: Turn the clamping ring in the direction of the marking .
- ▶ Remove the draft shield from the device with both hands.



8.3 Cleaning the Device

Procedure

- ▶ Disconnect the power supply cable from the power supply at the installation site.
- ▶ Only use suitable cleaning agents and cleaning procedures and observe the product information for the cleaning agent used (see Chapter “12.10 Cleaning Agents and Cleaning Procedures”, page 29).
- ▶ Remove dust and powdery sample residue with a brush.
- ▶ Wipe the device and the associated components with a slightly damp cloth. Use a suitable cleaning agent for more severe contaminations (see Chapter “12.10 Cleaning Agents and Cleaning Procedures”, page 29).

8.4 Software Update

Procedure

- ▶ To perform a software update, contact Sartorius Service.

9 Decommissioning

Procedure

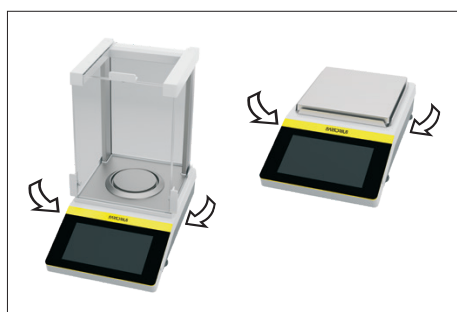
- ▶ Disconnect the power supply cable from the power supply at the installation site.
- ▶ Remove the weighing pan and the corresponding components from the device (see Chapter "8.1 Dismounting the Weighing Pan and Associated Components (Only for Analytical Balances)", page 21).
- ▶ If the device with draft shield is used: Dismount the draft shield (see Chapter "8.2 Dismounting the Draft Shield", page 22).
- ▶ Clean the device (see Chapter "8.3 Cleaning the Device", page 22).

10 Transport

10.1 Transporting the Device

Procedure

- ▶ Disconnect the power supply cable from the power supply at the installation site.
- ▶ **⚠ CAUTION** Risk of cuts from broken glass when lifting or transporting!
 - ▶ Do **not** carry the device by the draft shield.
 - ▶ Use both hands to carry the device. To do this, reach sideways under the device with both hands.
 - ▶ Do **not** use the device if the draft shield is damaged.
 - ▶ If required: Contact Sartorius Service.
- ▶ Reach sideways under the device with both hands.



11 Disposal

11.1 Disposing of the Device and Parts

The device and the device accessories must be disposed of properly by disposal facilities.

A lithium cell battery, type CR2032, is installed inside the device. Batteries must be disposed of properly by disposal facilities.

Many of the packaging materials are recyclable to promote sustainability and to contribute to reducing global waste volumes.

Procedure

- ▶ Dispose of the device in accordance with local government regulations. Inform the disposal facility that there is a lithium cell battery, type CR2032, installed inside the device.
- ▶ Dispose of the packaging in accordance with local government regulations. Utilize the recycling options available locally.

12 Technical Data

12.1 Dimensions and Weight

		Analytical balance (90-mm weighing pan)	Precision balance (120-mm weighing pan)	Precision balance (182 x 182-mm weighing pan)
	Unit	Value	Value	Value
Dimensions (L x W x H)	mm	377 x 220 x 346	377 x 220 x 346	377 x 215 x 95
Dimensions, opened draft shield (L x W x H)	mm	435 x 220 x 346	435 x 220 x 346	-
Weighing pan size (diameter)	mm	Ø 90	Ø 120	182 x 182
Width of door opening, with fully opened side door	mm	126	126	-
Usable height	mm	240	240	-
Weight, with draft shield mounted, approx.	kg	6.70	8.10 ¹ 6.70 ²	6.20
Weight incl. packaging, approx.	kg	8.65	10.03 ¹ 8.65 ²	8.40

¹= for models: 1503lxy-1z | 1203lxy-1z

²= for models: 623lxy-1z | 423lxy-1z | 323lxy-1z

12.2 Ambient Conditions During Storage and Transport

	Unit	Value
Temperature		
During storage and transport	°C	-20 – +60
Storage, dry		

12.3 Installation Conditions

12.3.1 Installation Site

	Unit	Value
For indoor use only, max. height above sea level	m	3000
Temperature		
No potentially explosive atmospheres		
Access to operation-relevant parts is guaranteed		
In operation	°C	+5 – +40
To ensure the metrological data	°C	+10 – +30
Relative humidity**		
At temperatures up to 31°C, non-condensing	%	80
At temperatures of 31°C to 40°C, decreasing linearly	%	> 50
No heat from heating systems or direct sunlight		
No electromagnetic fields		
Storage, dry		
* For conformity-assessed (verified) balances in accordance with EU requirements, refer to the information on the balance.		
** For conformity-assessed (verified) balances in accordance with EU requirements, the legal regulations apply.		

12.3.2 Ambient Conditions at the Installation Site

	Unit	Value
Temperature		
In operation	°C	+5 – +40
In operation, with isoCAL function, scope of application as per Directive 2014/31/EU	°C	+10 – +30
In operation, without isoCAL function, scope of application as per Directive 2014/31/EU	°C	-17 – +17
In operation, with conformity-assessed devices, as per specifications on the device ID label		
Relative humidity, in operation		
At temperatures up to 31°C, maximum	%	80
Decreasing linearly thereafter, maximum	%	> 50
In operation, with conformity-assessed devices, as per specifications on the device ID label		

12.4 Power Supply

12.4.1 Power Supply Unit

	Unit	Value
Sartorius power supply unit, type: YEPS01-PS8 YEPS01-PS9 YEPS01-PS10		
Primary (power supply unit)		
AC voltage	V _{AC}	100 – 240 V (±10%)
Frequency	Hz	50 – 60
Current consumption, maximum	A	0.2
Secondary (device)		
Voltage	V _{DC}	15
Current, maximum	A	0.53
Short-circuit protection		Electronic
Overvoltage category according to IEC 61010-1		II
Protection class according to IEC 60950-1		II

12.5 Electromagnetic Compatibility

Interference Immunity

Suitable for use in industrial areas

Interference

Class B

Suitable for use in residential areas and areas that are directly connected to a low voltage network that also supplies residential buildings.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver
- Consult the dealer or an experienced radio/TV technician for help.

Shielded Cables: Connections between the devices and peripherals must be made using shielded cables in order to maintain compliance with FCC radio frequency emission limits.

Modifications: Any modifications made to this devices that are not approved by Sartorius may void the authority granted to the user by the FCC to operate this equipment.

12.6 Warm-up Time

	Unit	Value
Device, approx.	h	2

12.7 Battery (Backup Battery)

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

12.8 Interfaces

12.8.1 Specifications for the USB-C Interface (Side and Rear)

	Unit	Value
Communication: USB host		
Connectable devices: Sartorius printer, Sartorius second display, FTDI cable, or USB stick (max. 32 GB with FAT32 format)		
Transmission rates		
USB-C connection, side: USB 2.0 HS	mA	250
USB-C connection, rear: USB 2.0 FS	mA	250

12.8.2 Specifications for the PC-USB Interface (Rear)

Communication: USB device
Connectable devices: PC

12.8.3 Specifications for the RS232 Interface (Rear)

Type of interface: Serial interface

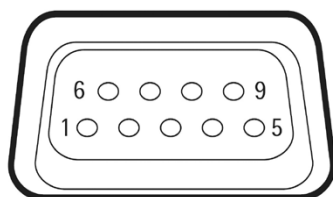
Interface operation: Full duplex

Level: RS232

Connection: D-sub connector, 9-pin

Maximum cable length: 10 m

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

12.9 Materials

Housing: Polybutylene terephthalate (PBT)

Control unit: Glass

Draft shield: Glass / polybutylene terephthalate (PBT)

Pan support: Stainless steel

Weighing pan, shield plate, draft shield frame: Stainless steel

12.10 Cleaning Agents and Cleaning Procedures

Approved cleaning agents

Suitable for device housing and draft shield components at a temperature of 20–25°C

Isopropyl alcohol (C₃H₈O), 70%

Ethanol (C₂H₆OH), min. 70%

Acetone (CH₃COCH₃), 100%

Citric acid (C₆H₈O₇), 10%

Hydrogen peroxide (C₆H₈O₇), 3.5%

Sodium hydroxide (NaOH), 32%

Tested cleaning procedures

Spraying the device surfaces with an approved cleaning agent, contact time:*	Min	min. 5
Wipe the device surfaces with a slightly moistened, soft cleaning cloth.*	Min	min. 5

*= The cleaning procedure can be repeated 5 times.

12.11 Metrological Data

12.11.1 Models QTX3241x | QTX2241x | QTX1241x

Model		QTX3241xx-1x	QTX2241xx-1x	QTX1241xx-1x
	Unit	Value	Value	Value
Scale interval (d)	mg	0.1	0.1	0.1
Maximum capacity (Max)	g	320	220	120
Weighing system		EMC	EMC	EMC
Repeatability				
At 5% load, typical value	± mg	0.08	0.08	0.08
At approx. the maximum load, typical value	± mg	0.1	0.1	0.1
Linearity deviation				
Limits	± mg	0.2	0.2	0.2
Typical value	± mg	0.06	0.06	0.06
Eccentricity deviation: Deviation when load is off-center, positions according to OIML R76				
Test weight	g	200	100	50
Tolerance	± mg	0.4	0.4	0.4
Typical value	± mg	0.2	0.12	0.1
Sensitivity drift between +10°C and +30°C	± ppm/K	1	1	1
Tare maximum capacity (subtractive)				
isoCAL:				
Temperature change	K	1.5	1.5	1.5
Time interval	h	4	4	4
Only for models with approval:				
Accuracy class		I	I	I
Type		BC-QA	BC-QB	BC-QB
Verification scale interval (e)	mg	1	1	1
Minimum initial weight according to USP (United States Pharmacopeia), Chap. 41				
Optimum minimum initial weight	g	0.082	0.082	0.082
Typical minimum initial weight	g	0.16	0.16	0.16
Typical measurement time	s	≤2.0	≤2.0	≤2.0
Typical stabilization time	s	≤1.5	≤1.5	≤1.5

12.11.2 Models QTX1503Ix | QTX1203Ix | QTX623Ix | QTX423Ix | QTX323Ix

Model		QTX1503Ix-Ix	QTX1203Ix-Ix	QTX623Ix-Ix	QTX423Ix-Ix	QTX323Ix-Ix
	Unit	Value	Value	Value	Value	Value
Scale interval (d)	mg	1	1	1	1	1
Maximum capacity (Max)	g	1,500	1,200	620	420	320
Weighing system		EMC	EMC	EMC	EMC	EMC
Repeatability						
At 5% load, typical value	± mg	0.5	0.5	0.5	0.5	0.5
At approx. the maximum load, typical value	± mg	1	1	1	1	1
Linearity deviation						
Limits	± mg	2	2	2	2	2
Typical value	± mg	0.6	0.6	0.6	0.6	0.6
Eccentricity deviation: Deviation when load is off-center, positions according to OIML R76						
Test weight	g	500	500	200	200	200
Tolerance	± mg	2	2	2	2	2
Typical value	± mg	1	1	1	1	1
Sensitivity drift between +10°C and +30°C	± ppm/K	1.5	1.5	2	2	2
Tare maximum capacity (subtractive)						
isoCAL:						
Temperature change	K	1.5	1.5	2	2	2
Time interval	h	4	4	6	6	6
Only for models with approval:						
Accuracy class		I	I	II	II	II
Type		BC-QC	BC-QC	BC-QD	BC-QD	BC-QD
Verification scale interval (e)	mg	10	10	10	10	10
Minimum load (Min)	mg	100	100	20	20	20
Minimum initial weight according to USP (United States Pharmacopeia), Chap. 41						
Optimum minimum initial weight	g	0.82	0.82	0.82	0.82	0.82
Typical minimum initial weight	g	1	1	1	1	1
Typical measurement time	s	≤1.5	≤1.5	≤1.5	≤1.5	≤1.5
Typical stabilization time	s	≤1.0	≤1.0	≤1.0	≤1.0	≤1.0

12.11.3 Models QTX62021x | QTX42021x | QTX32021x | QTX22021x | QTX12021x

Model		QTX62021xx-1x	QTX42021xx-1x	QTX32021xx-1x	QTX22021xx-1x	QTX12021xx-1x
	Unit	Value	Value	Value	Value	Value
Scale interval (d)	mg	10	10	10	10	10
Maximum capacity (Max)	g	6,200	4,200	3,200	2,200	1,200
Weighing system		EMC	EMC	EMC	EMC	EMC
Repeatability						
At 5% load, typical value	± mg	5	5	5	5	5
At approx. the maximum load, typical value	± mg	10	10	10	10	10
Linearity deviation						
Limits	± mg	20	20	20	20	20
Typical value	± mg	6	6	6	6	6
Eccentricity deviation: Deviation when load is off-center, positions according to OIML R76						
Test weight	g	2,000	2,000	2,000	1,000	500
Tolerance	± mg	20	20	20	20	20
Typical value	± mg	10	10	10	10	10
Sensitivity drift between +10°C and +30°C	± ppm/K	2	2	2	2	2
Tare maximum capacity (subtractive)						
isoCAL:						
Temperature change	K	2	2	2	2	2
Time interval	h	6	6	6	6	6
Only for models with approval:						
Accuracy class		II	II	II	II	II
Type		BC-QE	BC-QE	BC-QE	BC-QE	BC-QE
Verification scale interval (e)	mg	100	100	100	100	100
Minimum load (Min)	mg	500	500	500	500	500
Minimum initial weight according to USP (United States Pharmacopeia), Chap. 41						
Optimum minimum initial weight	g	8.2	8.2	8.2	8.2	8.2
Typical minimum initial weight	g	10	10	10	10	10
Typical measurement time	s	≤1.0	≤1.0	≤1.0	≤1.0	≤1.0
Typical stabilization time	s	≤0.9	≤0.9	≤0.9	≤0.9	≤0.9

12.11.4 Models QTX12201lx | QTX10201lx | QTX8201lx | QTX6201lx | QTX3201lx

Model		QTX12201lx-1x	QTX10201lx-1x	QTX8201lx-1x	QTX6201lx-1x	QTX3201lx-1x
	Unit	Value	Value	Value	Value	Value
Scale interval (d)	mg	100	100	100	100	100
Maximum capacity (Max)	g	12,200	10,200	8,200	6,200	3,200
Weighing system		EMC	EMC	EMC	EMC	EMC
Repeatability						
At 5% load, typical value	± mg	50	50	50	50	50
At approx. the maximum load, typical value	± mg	100	100	100	50	50
Linearity deviation						
Limits	± mg	100	100	100	100	100
Typical value	± mg	60	60	60	60	60
Eccentricity deviation: Deviation when load is off-center, positions according to OIML R76						
Test weight	g	5,000	5,000	5,000	2,000	2,000
Tolerance	± mg	200	200	200	200	200
Typical value	± mg	100	100	100	100	100
Sensitivity drift between +10°C and +30°C	± ppm/K	4	4	4	2	2
Tare maximum capacity (subtractive)						
isoCAL:						
Temperature change	K	2	2	2	2	2
Time interval	h	6	6	6	6	6
Only for models with approval:						
Accuracy class		II	II	II	II	II
Type		BC-QG	BC-QG	BC-QG	BC-QG	BC-QE
Verification scale interval (e)	mg	1,000	1,000	1,000	100	100
Minimum load (Min)	mg	5,000	5,000	5,000	5,000	5,000
Minimum initial weight according to USP (United States Pharmacopeia), Chap. 41						
Optimum minimum initial weight	g	82	82	82	82	82
Typical minimum initial weight	g	100	100	100	100	100
Typical measurement time	s	≤1.0	≤1.0	≤1.0	≤1.0	≤1.0
Typical stabilization time	s	≤0.9	≤0.9	≤0.9	≤0.9	≤0.9

13 Sartorius Service

Sartorius Service is available for queries regarding the device. Visit the Sartorius website (www.sartorius.com) for information about the service addresses, services provided, or to contact a local representative.

For inquiries about the device or when contacting Sartorius Service in the event of a malfunction, ensure that you have the device information, e.g., serial number, hardware, firmware, configuration, close at hand so you can pass it on to Sartorius Service. To do this, refer to the information on the manufacturer's ID label and [in the "Settings" main function | in the "Device Information" menu].

14 Conformity Documents

M

The attached documents declare the conformity of the device with the designated directives or standards.

The Declaration of Conformity supplied here is for conformity-assessed (verified) balances for use in the EEA. Please keep the enclosed Conformity Declaration in a safe place.

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