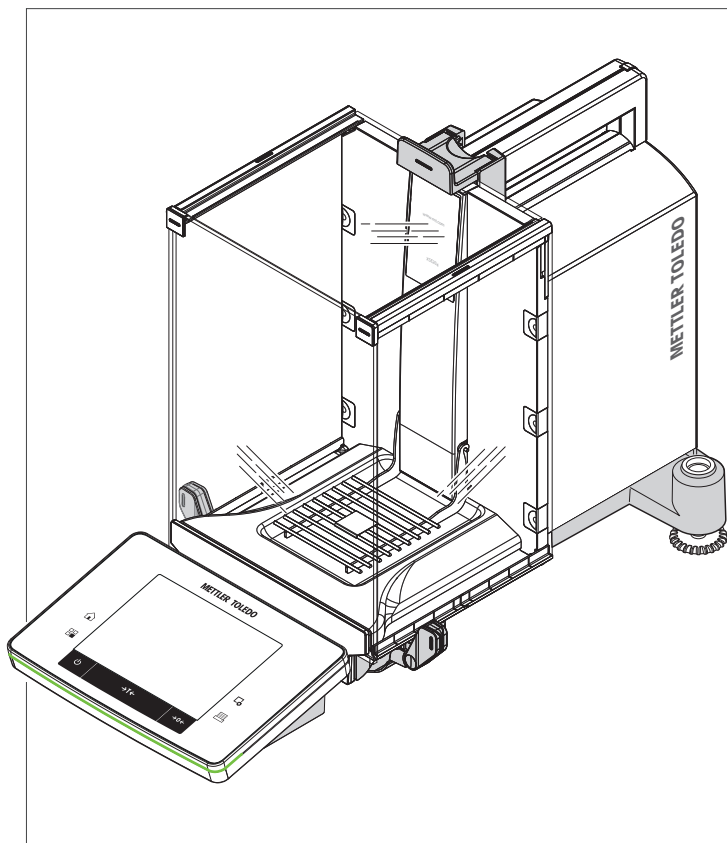


## Analytical Balances

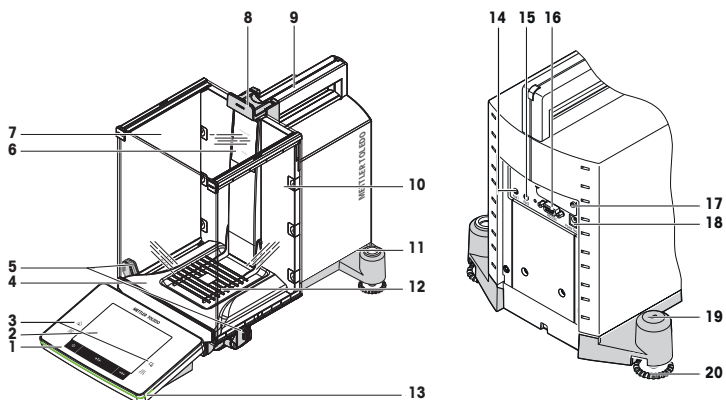
XSE models



**METTLER TOLEDO**



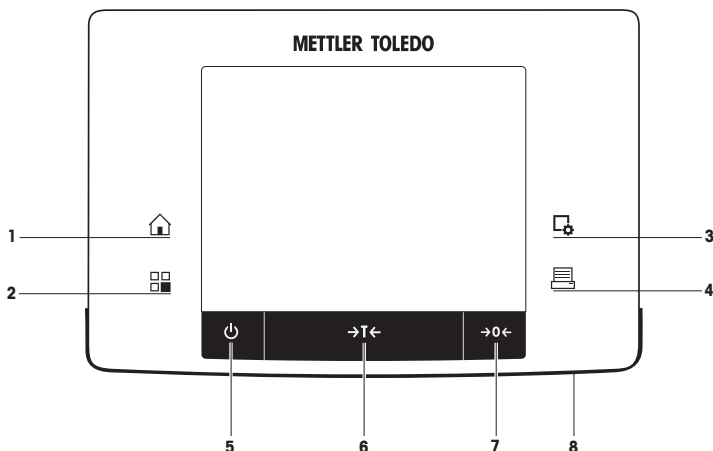
## Overview Balance










### Legend

<b>1</b>	Terminal	<b>2</b>	Display ("Touch screen")
<b>3</b>	Operating keys	<b>4</b>	Drip tray
<b>5</b>	Handle for operating the draft shield side doors	<b>6</b>	Type designation
<b>7</b>	Glass draft shield	<b>8</b>	Handle for operation of the top draft shield door
<b>9</b>	Guide for top draft shield door and transport handle	<b>10</b>	Removable clips for feeding cables or tubes
<b>11</b>	Level indicator/Level sensor	<b>12</b>	SmartGrid weighing pan
<b>13</b>	StatusLight	<b>14</b>	Aux 1 (connection for "ErgoSens", hand or foot switch)
<b>15</b>	Aux 2 (connection for "ErgoSens", hand or foot switch)	<b>16</b>	RS232C serial interface
<b>17</b>	Slot for second interface (optional)	<b>18</b>	Socket for AC adapter
<b>19</b>	Fastening point for anti-theft device	<b>20</b>	Foot screw

## Overview Terminal



Key assignments and terminal connection.

	Designation	Explanation
1	 Home	This key is used to return to the user profile from any menu level in any application. All changes made and confirmed up to this point are automatically stored.
2	 Select application	This key is used to select a required application.
3	 Configuration	For displaying menus for the configuration of a current application. The application can be adjusted to a specific task via numerous settings.
4	 Print	This key is used to transfer data via the interface, e.g. to a printer. Other devices, e.g. a PC can also be connected. The data to be transferred can be freely defined.
5	 On/Off	For switching the balance on and off (standby mode). <b>Important</b> It is recommended not to disconnect the balance from the power supply unless it is not used for an extended period.
6	 Tare	This key is used to tare the balance manually (only necessary for normal weighings). When the balance has been tared, the <b>Net</b> symbol is displayed to indicate that all displayed weights are net.
7	 Zeroing	This key is used for setting a new zero point manually (only required if the balance is used for normal weighings).
8	StatusLight	Indicates the current balance status. The status light shows that the balance is ready to use.

## 1 Safety Information

- Read and understand the instructions in this manual before you use the balance.
- Keep this manual for future reference.
- Include this manual if you pass on the balance to other parties.

If the balance is not used according to the instructions in this manual or if it is modified, the safety of the user may be impaired and Mettler-Toledo GmbH assumes no liability.

## 1.1 Definition of signal words and warning symbols

Safety notes are marked with signal words and warning symbols. These show safety issues and warnings. Ignoring the safety notes may lead to personal injury, damage to the instrument, malfunctions and false results.

### Signal words

<b>WARNING</b>	for a hazardous situation with medium risk, possibly resulting in death or severe injury if not avoided.
<b>CAUTION</b>	for a hazardous situation with low risk, resulting in minor or moderate injury if not avoided.
<b>NOTICE</b>	for a hazardous situation with low risk, resulting in damage to the instrument, other material damage, malfunctions and erroneous results, or loss of data.
<b>Note</b>	(no symbol) for useful information about the product.

### Warning symbols



General hazard



Electrical shock

## 1.2 Product specific safety notes

Your balance represents state-of-the-art technology and complies with all recognized safety rules, however, certain hazards may arise in extraneous circumstances. Do not open the housing of the balance; it does not contain any parts that can be maintained, repaired or replaced by the user. If you experience problems with your balance, contact your authorized METTLER TOLEDO dealer or service representative.

The balance has been tested for the experiments and intended purposes documented in the appropriate manual. However, this does not absolve you from the responsibility of performing your own tests of the products supplied by us regarding their suitability for the methods and purposes you intend to use them for.

### Intended use

This balance is designed to be used in analytical laboratories by qualified staff. Your balance is used for weighing. Use the balance exclusively for this purpose.

Any other type of use and operation beyond the limits of technical specifications without written consent from Mettler-Toledo GmbH, is considered as not intended.

### Site requirements

The balance has been developed for indoor operation in a well-ventilated area. Avoid the following environmental influences:

- Conditions outside of the ambient conditions specified in the technical data
- Powerful vibrations
- Direct sunlight
- Corrosive gas atmosphere
- Explosive atmosphere of gases, steam, fog, dust and flammable dust
- Powerful electric or magnetic fields

### Staff qualification

Incorrect use of the balance or the chemicals used in the analysis can lead to death or injury. The following experience is needed for operating the balance.

- Knowledge and experience in working with toxic and caustic substances.

- Knowledge and experience in working with standard laboratory equipment.
- Knowledge and experience in working in accordance with general lab safety rules.

### Responsibilities of the balance owner

The balance owner is the person that uses the balance for commercial use or places the balance at the disposal of his staff. The balance owner is responsible for product safety and the safety of staff, user(s) and third party.

The operator has the following responsibilities:

- Know the rules for safety at the workplace that are in effect and enforce them.
- Ensure that only qualified staff uses the balance.
- Define the responsibilities for installation, operation, cleaning, troubleshooting and maintenance and ensure that the tasks are done.
- Train the staff in regular intervals and inform them about dangers.
- Provide the necessary protective gear for the staff.

### Shut down of the balance in emergency situations

- Pull the plug from the electrical outlet.

### Protective clothing

Wear protective clothing in the laboratory when working with hazardous or toxic substances.



Use appropriate gloves when handling chemicals or hazardous substances and check their integrity before use.

### Safety notes



#### **WARNING**

#### **Danger of death or serious injury due to electric shock!**

Contact with parts that contain a live current can lead to injury and death. If the balance cannot be shut down in an emergency situations, people can be injured or the balance can be damaged.

- 1 Only use the supplied three-core power cable with equipment grounding conductor to connect your balance.
- 2 Check that the voltage printed on it is the same as your local power supply voltage.
  - ⇒ If this is not the case, under no circumstances connect the AC adapter to the power supply, but contact a METTLER TOLEDO representative.
- 3 Only connect the balance to a three-pin power socket with earthing contact.
- 4 Only standardized extension cable with equipment grounding conductor must be used for operation of the balance.
- 5 Do not disconnection the equipment grounding conductor.
- 6 Check the cables and the plug for damage and replace damaged cables and plugs.
- 7 Make sure that the cables are arranged so that they cannot be damaged or interfere with the operation.
- 8 Keep all electrical cables and connections away from liquids.
- 9 Make sure that the power plug is accessible at all times.



## NOTICE

### Environment

Only use indoors in dry locations.



## NOTICE

### Danger of damaging the touch screen with pointed or sharp objects!

Do not use pointed or sharp objects to navigate on the touch screen. This may damage the surface of the touch screen.

- Operate the touch screen with your fingers.



## NOTICE

### Danger of damage to the balance!

Never open the balance. The balance contains no user-serviceable parts.

- In the event of problems, please contact a METTLER TOLEDO representative.



## NOTICE

### Danger of damage to the balance due to incorrect parts!

Using incorrect parts with the balance can damage the balance or cause the balance to malfunction.

- Only use parts supplied with the balance, listed accessories and spare parts from Mettler-Toledo GmbH.

## Finding more information



Refers to an external document.

## FCC Rules

This device complies with Industry Canada licence-exempt RSS standard(s) and part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

## 2 User interface

### 2.1 Display



#### NOTICE

**Danger of damaging the touch screen with pointed or sharp objects!**

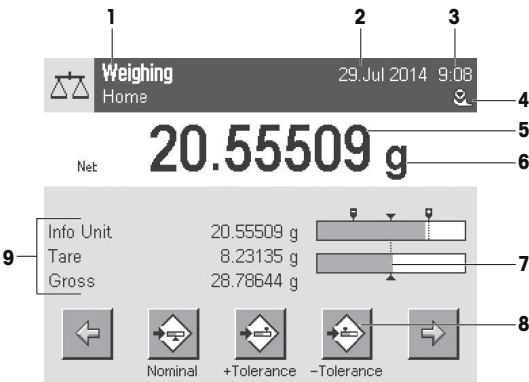
Do not use pointed or sharp objects to navigate on the touch screen. This may damage the surface of the touch screen.

- Operate the touch screen with your fingers.

The illuminated, color display of the terminal is a touch screen, i.e. a touch-sensitive screen. It can be used for displaying data, entering settings and selecting functions by tapping the screen.

**Important**

Depending on country-specific requirements, non-calibrated decimal places are highlighted on approved balances.



	Designation	Explanation
1	Application name	Select application. The application menu can be selected by touching this zone. The application can be selected here. This menu can also be displayed by pressing [MODE].
2	Date	The date can be changed by tapping this zone.
3	Time	The time can be changed by tapping this zone.
4	Status icons	These status icons indicate special balance statuses (e.g. service due, adjustment required, battery replacement, out of level). If you tap the icon, the function is explained.
5	Weight value	Tapping the weight displays a window showing the result in a large format. This is useful for reading a weight from a certain distance.
6	Weighing unit	The required weighing unit can be changed by tapping the weighing unit, e.g. from <b>mg</b> to <b>g</b> .
7	SmartTrac	SmartTrac is a graphic weighing-in aid, which shows at a glance an already used and still available weighing range.
8	Function keys	This area is reserved for <b>Function Keys</b> enabling direct access to frequently required functions and application settings. If more than 5 function keys are activated, these can be selected with the arrow keys.



9	Information fields	This area is used for displaying additional information ( <b>information fields</b> ) relating to an active application. Tapping the information field enables <b>Information fields</b> and <b>Function Keys</b> to be displayed directly via menu selection. The leveling assistant can also be started.
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### Large display

By pressing the function key **[Display]**, the weighing result can be displayed larger and still allow the use of the terminal function keys.

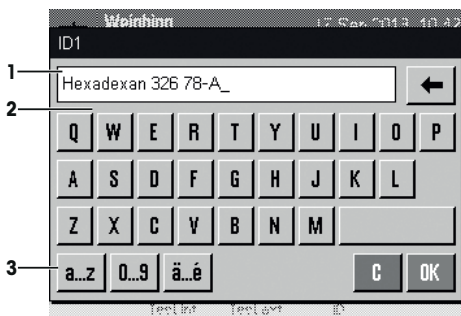


### Screen saver

If the balance is not used for 15 minutes, the display is automatically dimmed and the pixels are inverted about every 15 seconds. When the balance is used again (e.g. load weight, press key), the display returns to a normal state.

## 2.2 Input dialog boxes

The keyboard dialog box is used to enter characters such as letters, numbers and special characters.



	Designation	Explanation
1	Data field	Displays (entered) alphanumeric and numeric characters.
2	Keyboard	Data input area
3	Selection	Select various keyboard layouts.

1 Enter the designation.

2 Confirm with **[OK]**.

	Function
	Delete last character Tap once to place the cursor at the end of the data field.

## 2.3 Firmware

The firmware controls all balance functions. It enables the balance to be adjusted to a specific working environment.

The firmware is divided as follows:

- System settings
- User-specific settings
- Applications
- Application-specific settings

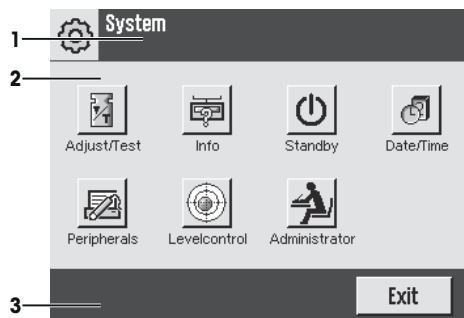
### Note

A displayed menu can be left at any time by repressing the same menu key.

### 2.3.1 System settings

System settings (e.g. settings for peripheral devices) are independent of the applications and apply to the entire weighing system. System settings can be displayed by pressing [Menu] and subsequently the [System] button.

Navigation: [Menu] > System



	Designation	Explanation
1	Title bar	The title bar displays elements for user orientation and information.
2	Contents area	The contents area is the main work area for menus and applications. The contents depend on the specific application or initiated action.
3	Action bar	The action bar contains action buttons for performing specific actions required in the active dialog box and are available (e.g. [Exit], [STD], [C], [OK]).

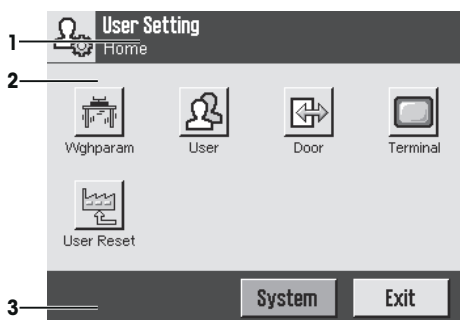
1 Settings can be changed by tapping the respective button.

2 To leave the settings, tap [Exit].

### 2.3.2 User-specific settings

These settings can be used to adjust the balance to suit the tasks and work techniques of user.

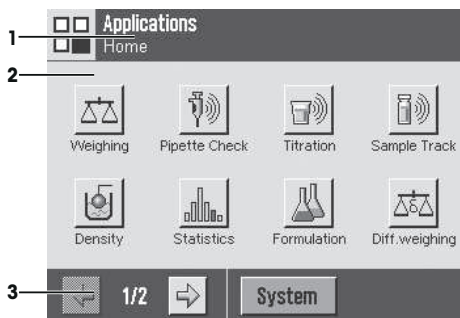
Navigation: [F4] > [System] > [User Setting]



### Applications

Applications are firmware modules for performing specific weighing tasks. The balance is delivered with various applications pre-installed. After switching on the balance, the last active user profile and last used application are loaded. The applications are available under the [F4] key. Instructions for working with standard applications are provided in the respective sections.

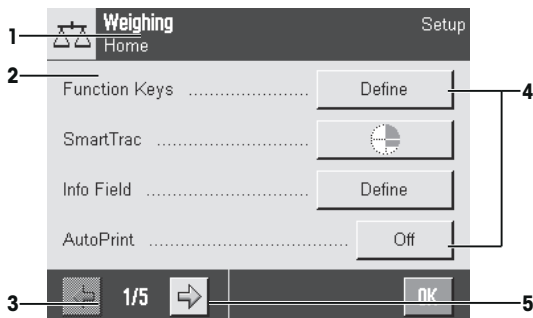
Navigation: [F4]



### Application-specific settings

These settings can be used to adjust the applications to suit specific requirements. The available setting options depend on the selected application. Pressing the [F4] key opens the multipage menu with settings for a currently active application. Information on the individual setting options is provided in the section relating to the respective application.

Navigation: [F4]



	Designation	Explanation
1	Title bar	The title bar displays elements for user orientation and information.
2	Contents area	The contents area is the main work area for menus and applications. The contents depend on the specific application or initiated action.
3	Action bar	The action bar contains action buttons for performing specific actions required in the active dialog box and are available (e.g. <b>[Exit]</b> , <b>[STD]</b> , <b>[C]</b> , <b>[OK]</b> ).
4	Button	Edit/Select settings (e.g. <b>[Define]</b> , <b>[On]</b> , <b>[Off]</b> ). The contents depend on the application.
5	Arrow	The arrow buttons are used to page forward or back.

- 1 Settings can be changed by tapping the respective button.
- 2 Confirm with **[OK]**.
- 3 To leave the settings, select **[Exit]**.
- 4 To change the system settings, tap **[System]**.

## 2.4 Security system




### NOTICE

#### Remember IDs and passwords!

- Protected menu areas cannot be accessed without ID or password.
- Note IDs and passwords and keep them in a safe place.

The balance has a comprehensive security system with which individual access rights can be defined at administrator and user level. Access to protected menu areas requires the entry of an identification (ID) and a password. On delivery of the balance, only the **[Administrator]** settings in the system settings are protected.

When an ID and password protected menu area is selected, an alphanumeric keyboard is initially displayed for entry of the ID.

- 1 Enter your ID.
  - Case sensitive, tap the **[a...z]** and **[A...Z]** button to switch between upper and lower case.
  - To enter numbers, tap the **[0...9]** button.
  - Incorrect entries can be deleted character by character with the arrow key .

#### Note

Entry can be interrupted at any time by tapping **[C]**.

- 2 After entering the full ID, tap **[OK]**.
  - ⇒ A further dialog box is displayed for entering the password.
- 3 Enter the password (for security reasons, this is displayed with asterisks instead of plain text) and confirm with **[OK]**.
  - ⇒ If the ID and password are correct, the selected menu area is displayed or the required action initiated. If these are incorrect, an error message is displayed with a request to enter them again.

## 3 Installation and Putting into Operation

### Finding more information

► [www.mt.com/xse-analytical](http://www.mt.com/xse-analytical)

### 3.1 Unpacking

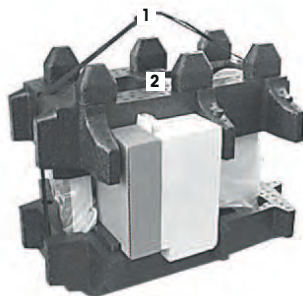
Open the balance packaging. Check the balance for transport damage. Immediately inform a METTLER TOLEDO representative in the event of complaints or missing accessories.

### Important

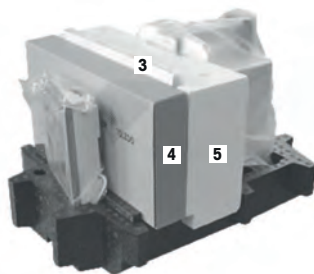
Retain all parts of the packaging. This packaging offers the best possible protection for transporting the balance.

- Use the lifting strap to lift the balance out of the packaging box.

- 1 Remove the lifting strap (1).
- 2 Remove the top packaging (2).



- 1 Remove the operating instructions (3).
- 2 Remove the set with AC adapter (4), power supply cable, drip tray, SmartGrid, SmartGrid cover, SmartPrep single-use funnel and ErgoClip "Basket" (basket for small weighing objects).
- 3 Remove the set with draft shield doors (5) and terminal support.



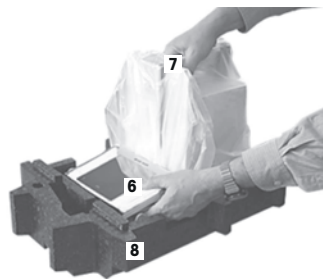
- 1 Carefully remove the terminal (6) from the bottom packaging.
- 2 Remove the protective cover.

### Note

Since the terminal is connected to the balance with a cable, only withdraw the balance slightly from the packaging in order to remove the protective cover.



- 1 Place the terminal (6) at the front of the balance.
- 2 Hold the balance (7) by the guide or handle. Hold the terminal firmly with the other hand. Pull out both components together from the bottom packaging (8).



- 1 Place the balance with the terminal at the site of use.
- 2 Remove the cover from the balance.
- 3 Remove the transport protection (9) of the weighing pan support.



### 3.2 Scope of delivery



#### NOTICE

##### **Danger of damage to the balance due to incorrect parts!**

Using incorrect parts with the balance can damage the balance or cause the balance to malfunction.

- Only use parts supplied with the balance, listed accessories and spare parts from Mettler-Toledo GmbH.

Check the delivery for completeness. The following accessories are part of the standard equipment of the balance:

- Balance with terminal
  - RS232C interface
  - Slot for second interface (optional)
  - Feedthroughs for below-the-balance weighing and for antitheft device
- Set with draft-shield doors and terminal support
- SmartGrid
- SmartGrid cover, chromium-nickel steel
- SmartPrep single-use funnel (2 pieces)
- Drip tray
- AC adapter with country-specific power cable
- Protective cover for the terminal
- Cleaning brush
- ErgoClip "Basket" (basket for small weighing objects)

- Production certificate
- CE declaration of conformity
- Operating instructions or User Manual; printed or on CD-ROM, depending on country of use

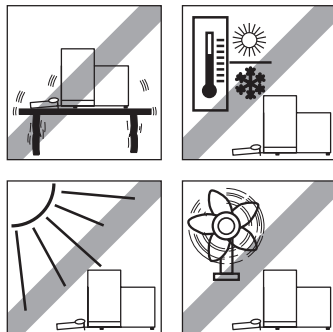
### 3.3 Selecting the location

An optimal location will ensure accurate and reliable operation of the balance. The surface must be able to safely take the weight of the balance when fully loaded. The following local conditions must be observed:

#### Important

If the balance is not horizontal at the outset, it must be leveled during commissioning.

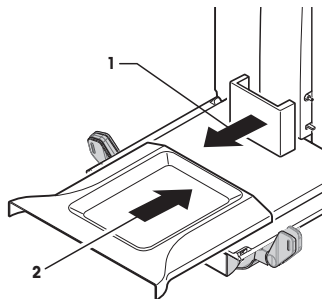
- The balance must only be used indoors and up to a maximum altitude of 4,000 m above sea level.
- Before switching on the balance, wait until all parts are at room temperature (+5 to 40 °C).  
The humidity must be between 10% and 80% non-condensing.
- The power plug must be accessible at all times.
- Firm, horizontal and vibration-free location.
- Avoid direct sunlight.
- No excessive temperature fluctuations.
- No strong drafts.



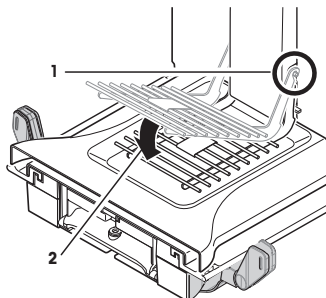
Further information can be found in Weighing the Right Way.

### 3.4 Assembling the balance

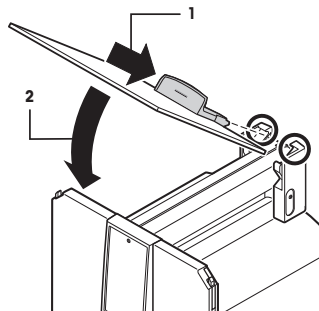
- 1 Remove the transport protection (1).
- 2 Insert the drip tray (2).  
Insert the tray from the front above the bottom plate up to the partition.



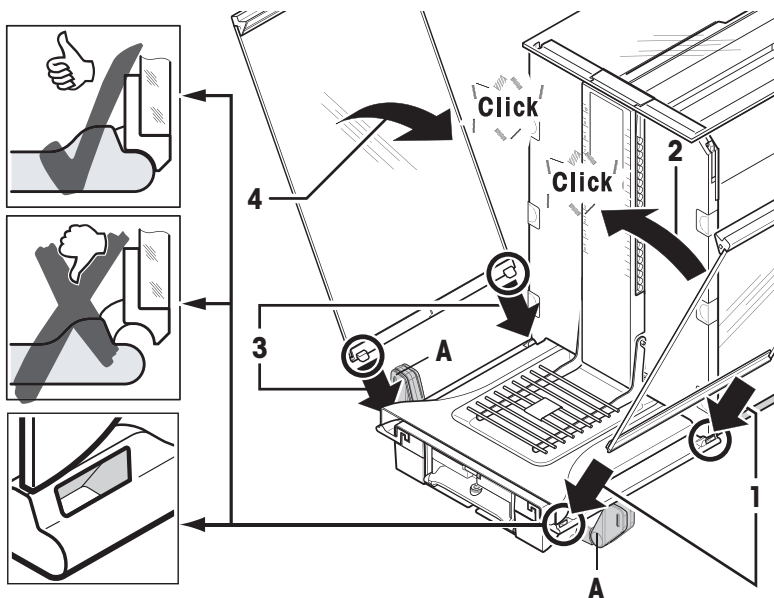
- 1 Insert the SmartGrid from the front.
- 2 Check that the SmartGrid (1) (2) is correctly hooked in on both sides.



- 1 Insert the top draft shield door (1) at an angle (slightly below 30 degrees) into the **rear** guide.
- 2 Carefully fold the draft shield door (2) downwards, **see** figure.

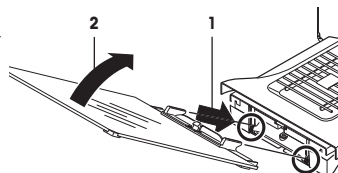


- The handles (A) must be folded outwards to mount the side draft shield doors.
- 1 Mount the draft shield side doors according to the following instructions, **see** figure below.
  - 2 Mount the side doors at an angle of about 30° in the 2 openings, **see** following figure.
  - 3 Check that the side doors are correctly mounted as described.
  - 4 Mount the side door so that it clicks in place in the balance.
  - The side door will move easily when correctly mounted.
  - 5 Fold the handle of the side draft shield door inwards.
  - 6 Mount the second draft shield side door. The procedure is identical.
  - 7 Move the side doors fully back.

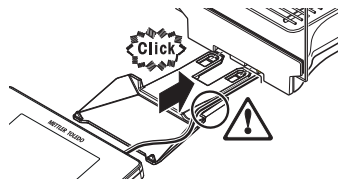




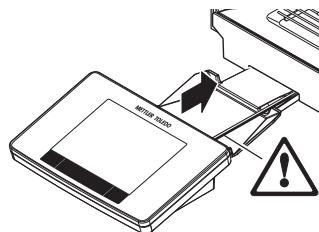
- 1 Fit the front draft shield glass (2).  
Insert the glass at an angle into the bottom of the balance at the front until the two hooks of the front draft shield glass rest on the rollers (1).
- 2 Move the front draft shield glass upwards until it engages.



- 1 Insert the terminal support.
- 2 Place the cable in the guide of the terminal support.
- 3 Insert the terminal support into the opening in the front draft shield glass.  
⇒ The terminal support must engage with a click.



- 1 Mount the terminal.
- 2 Place the terminal in the center of the support.
- 3 Push the terminal against the balance until it folds down easily at the front of the terminal support.
- 4 Insert the cable into the balance.



## NOTICE

### **Danger of damage to the terminal!**

- The balance and terminal are not connected by the terminal support!
- Always hold the balance and terminal firmly during transport.

## Note

The Terminal cable is of sufficient length to allow repositioning of the terminal in the area around the balance.

### 3.5 Connecting the balance



#### **WARNING**

##### **Danger of death or serious injury due to electric shock!**

Contact with parts that contain a live current can lead to injury and death. If the balance cannot be shut down in an emergency situations, people can be injured or the balance can be damaged.

- 1 Only use the supplied three-core power cable with equipment grounding conductor to connect your balance.
- 2 Check that the voltage printed on it is the same as your local power supply voltage.
  - ⇒ If this is not the case, under no circumstances connect the AC adapter to the power supply, but contact a METTLER TOLEDO representative.
- 3 Only connect the balance to a three-pin power socket with earthing contact.
- 4 Only standardized extension cable with equipment grounding conductor must be used for operation of the balance.
- 5 Do not disconnection the equipment grounding conductor.
- 6 Check the cables and the plug for damage and replace damaged cables and plugs.
- 7 Make sure that the cables are arranged so that they cannot be damaged or interfere with the operation.
- 8 Keep all electrical cables and connections away from liquids.
- 9 Make sure that the power plug is accessible at all times.



#### **NOTICE**

##### **Danger of damage to the AC adapter due to overheating!**

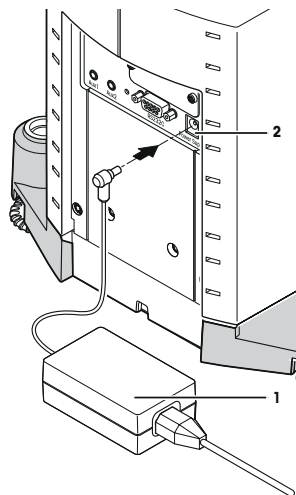
If the AC adapter is covered or in a container, it is not sufficiently cooled and overheats.

- 1 Do not cover the AC adapter.
- 2 Do not put the AC adapter in a container.

The balance is supplied with an AC/DC adapter and a country-specific power cable. The AC/DC adapter is suitable for use with the following voltage range:

100 – 240 V AC, 50/60 Hz.

- Balance and terminal are at the final location.
- 1 Connect the AC adapter (1) to the connection socket (2) at the rear of the balance.
- 2 Connect the AC adapter (1) to the power supply.
- ⇒ The balance performs a self-test after connection to the power supply and is then ready to use.



### 3.6 Setting up the balance

#### Switching on the balance

- Balance is connected to the power supply.
- Terminal and balance are interconnected.
- To switch on, press [⏻].
- ⇒ Display appears.
- ⇒ Balance is ready to use.



#### Leveling the balance

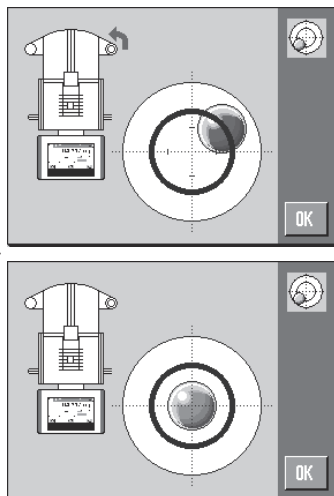
The balance has a built-in level sensor which permanently monitors correct horizontal alignment.

If the balance is not exactly level, a warning text is generated after switching on the balance with the request to level the balance.

If the level sensor detects incorrect leveling, the status light at the terminal shows red. A warning text is displayed and an audible warning generated. A status icon also appears in the top right corner of the display.



- 1 To start the leveling assistant, tap [**LevelGuide**] in the warning message.  
⇒ Window with level indicator is displayed in real-time.
- 2 Observe the level indicator on the screen.  
⇒ The air bubble in the level indicator shows red with incorrect alignment.  
⇒ The leveling assistant indicates with red arrows the direction in which the two foot screws at the rear of the balance must be turned.
- 3 Turn the foot screw until the air bubble is located in the inner circle of the level indicator.  
⇒ The air bubble in the level indicator shows green with correct alignment.  
⇒ The status light at the terminal shows green.
- 4 Tap [**OK**].  
⇒ A message recommending adjustment of the balance is displayed.
- 5 Tap [**Adjust.int**] to adjust the balance.



### 3.6.1 Handle for operation of the side draft shield doors

The draft shield of the balance can be adjusted to the ambient conditions, weighing method and material to be weighed.

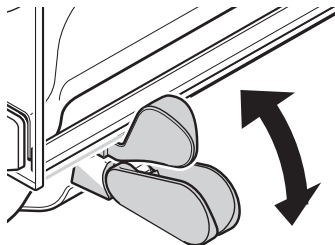
The position of the handles determines which draft shield doors (left, right or both) are opened.

Try out different combinations by moving the handles up or down. We recommend setting the glass draft shield so that only the door required for loading is opened. The balance then operates faster due to less disturbing air flows than with a fully open glass draft shield.

#### Note

It is recommended to make connections when the draft shield is closed.

- 1 Move the side door handle downwards.
- 2 Move the doors fully back.



### 3.6.2 Performing a simple weighing

After commissioning of the new balance, the first weighing can be performed.

To perform a simple weighing, only the keys in the lower part of the terminal are required. The balance has separate keys for zeroing [**→0←**] and taring [**→T←**].

#### Zeroing

- Press [**→0←**].
- ⇒ Zeroing

After zeroing, all weights also the tare weight apply to this new zero point and the following apply:  
tare weight = 0, net weight = gross weight = 0.

## Taring

### Important

A negative weight is not permitted. An error message is generated. When the stability detector icon extinguishes (small ring left of the weight display), the indication is stable. The weight is displayed.

- If a weighing container is used, the balance must first be set to zero.

1 Place the container on the balance.

2 Press [→T←].

⇒ The balance is tared.

⇒ The weight of the container is set as the new tare weight and the previous tare (if available) is overwritten.

⇒ The **Net** display signals that all indicated weights are net weights.



## 4 Maintenance

### 4.1 Cleaning

Periodically clean the weighing pan, the drip tray, the housing, and the terminal of your balance using the brush supplied with it. The maintenance interval depends on your standard operating procedure (SOP).

**Please observe the following notes:**



#### **WARNING**

##### **Danger of death or serious injury due to electric shock!**

Contact with parts that contain a live current can lead to injury and death. If the balance cannot be shut down in an emergency situations, people can be injured or the balance can be damaged.

- 1 Disconnect the balance from the power supply prior to cleaning and maintenance.
- 2 Only use METTLER TOLEDO power cable, if these need to be replaced.
- 3 Make sure that no liquid enters into the balance, terminal or AC adapter.
- 4 Do not open the balance, terminal or AC adapter.  
These contain no user-serviceable parts.



#### **NOTICE**

##### **Danger of damage to the balance due to inappropriate cleaning methods!**

The balance is made from high quality, resistant materials and can be damaged by certain cleaning agents, solvents or abrasives. If liquids enter the housing they can damage the balance.

- 1 Use only water and a mild detergent to clean the balance or terminal.
- 2 Wipe off any spills immediately.
- 3 Make sure that no liquid enters the interior of the balance.

### Cleaning

Your balance is made from high quality, resistant materials and can therefore be cleaned with a commercially available, mild cleaning agent.

### Important

All removable non-coated parts of the outer draft shield are dishwasher safe to 80 degrees.

- 1 To clean the weighing chamber thoroughly, swing out the draft shield glass panels from the balance and remove them from their fastening points.
- 2 Carefully lift the front of the weighing pan and lift it out of the guide.
- 3 Remove the drip tray from the balance.
- 4 Ensure that these parts are correctly positioned when refitted.

### Important

Contact a METTLER TOLEDO representative to find about the service options available – regular maintenance by an authorized service engineer will ensure consistent weighing accuracy over the long term and extend the service life of the balance.

## 4.2 Disposal

In conformance with the European Directive 2012/19/EU on Waste Electrical and Electronic Equipment (WEEE) this device may not be disposed of in domestic waste. This also applies to countries outside the EU, per their specific requirements.

Please dispose of this product in accordance with local regulations at the collecting point specified for electrical and electronic equipment. If you have any questions, please contact the responsible authority or the distributor from which you purchased this device. Should this device be passed on to other parties (for private or professional use), the content of this regulation must also be related.

Thank you for your contribution to environmental protection.



## 5 Technical Data

### 5.1 General data



#### **WARNING**

##### **Danger of death or serious injury due to electric shock!**

Contact with parts that contain a live current can lead to injury and death.

- 1 Only use an approved AC adapter with a current-limited SELV output.
- 2 Ensure correct polarity 

#### **Power supply**

AC adapter:

Primary: 100 – 240 V AC, -15%/+10%, 50/60 Hz  
Secondary: 12 V DC  $\pm 3\%$ , 2.5 A (with electronic overload protection)

Cable for AC adapter:

3-core, with country-specific plug

Balance power supply:

12 V DC  $\pm 3\%$ , 2.5 A, maximum ripple: 80 mVpp

#### **Protection and standards**

Overvoltage category:

II

Degree of pollution:

2

Protection:

Protected against dust and water

Standards for safety and EMC:

See Declaration of Conformity

Range of application:

For use only in closed interior rooms

#### **Environmental conditions**

Height above mean sea level:

Up to 4000 m

Ambient temperature:

5–40 °C

Relative air humidity:

Max. 80% up to 31 °C, linearly decreasing to 50% at 40 °C, noncondensing

Warm-up time:

At least **120** minutes after connecting the balance to the power supply; when switched on from standby-mode, the balance is ready for operation immediately

### **Materials**

Housing:

Die-cast aluminum, plastic, chrome steel and glass

Terminal:

Die-cast zinc, chromed and plastics

SmartGrid:

Chrome-Nickel-Molybdenum steel X2CrNiMo17













Good Weighing Practice™

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GWP® is the global weighing standard, ensuring consistent accuracy of weighing processes, applicable to all equipment from any manufacturer. It helps to:

- Choose the appropriate balance or scale
- Calibrate and operate your weighing equipment with security
- Comply with quality and compliance standards in laboratory and manufacturing

 [www.mt.com/GWP](http://www.mt.com/GWP)

[www.mt.com/xse-analytical](http://www.mt.com/xse-analytical)

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