

METTLER TOLEDO

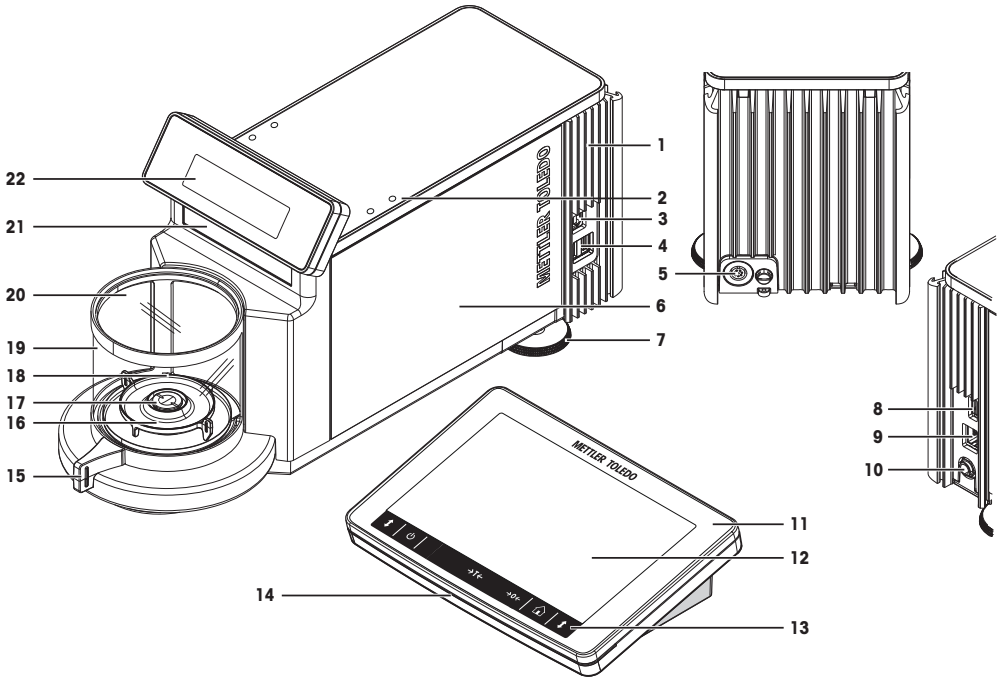


This User Manual is a brief instruction that provides information to handle with the first steps of the instrument in a safe and efficient manner. Personnel must have carefully read and understood this manual before performing any tasks.

For full information, always consult and download the Reference Manual (RM).

► www.mt.com/XPR-micro-RM

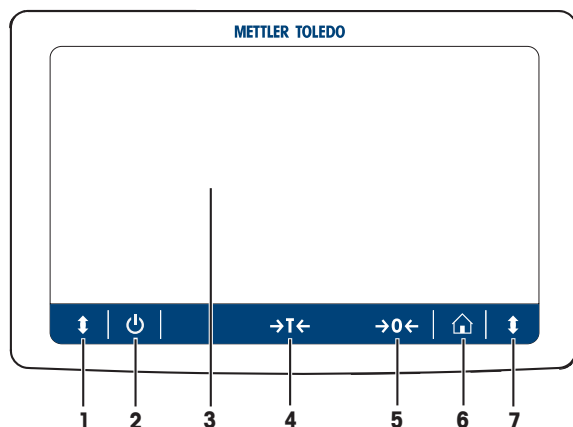
Overview balance










Legend balance

1	Cooling element	12	7 inch capacitive color TFT touchscreen
2	SmartSens	13	Terminal buttons
3	USB device port	14	Terminal StatusLight
4	USB host port	15	Door handle
5	Socket for terminal connection cable	16	Drip tray
6	Weighing unit	17	Weighing pan
7	Leveling foot	18	Weighing chamber
8	USB host port	19	Glass draft shield
9	Ethernet port	20	Glass draft shield cover
10	Socket for AC/DC adapter	21	Model plate
11	Terminal with protective cover	22	Weighing display (SmartView)

Overview terminal



Legend terminal

No.	Key	Name	Explanation
1		Door open	Opens the weighing chamber door to the left (default value).
2		ON/OFF	Switches the balance on and off. By tapping  , the balance is not completely switched off but goes into standby mode. To switch the balance completely off, it must be unplugged from the power supply. Note Do not disconnect the balance from the power supply unless the balance is not used for an extended period of time.
3		7 inch capacitive TFT touchscreen	The touchscreen shows information about the current weighing process.
4		Tare	Tares the balance. This function is used when the weighing process involves containers. After taring the balance, the screen shows Net which indicates that all displayed weights are net.
5		Zero	Zeros the balance. The balance must always be zeroed before starting the weighing process. After zeroing, the balance sets a new zero point.
6		Home	To return from any menu level to the main weighing screen.
7		Door open	Opens the weighing chamber door to the right (default value).

1 Safety Information

Two documents named "User Manual" and "Reference Manual" are available for this instrument.

- The User Manual is printed and delivered with the instrument.
- The electronic Reference Manual contains a full description of the instrument and its use.
- Keep both documents for future reference.
- Include both documents if you transfer the instrument to other parties.

Only use the instrument according to the User Manual and the Reference Manual. If you do not use the instrument according to these documents or if the instrument is modified, the safety of the instrument may be impaired and Mettler-Toledo GmbH assumes no liability.

Finding more information



For full information, always consult and download the Reference Manual (RM).

► www.mt.com/XPR-micro-RM

Search for software downloads

► www.mt.com/labweighing-software-download

► www.mt.com/library

1.1 Definition of signal 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.



General hazard



Electrical shock

WARNING

A hazardous situation with medium risk, possibly resulting in death or severe injury if not avoided.

CAUTION

A hazardous situation with low risk, resulting in minor or moderate injury if not avoided.

NOTICE

A hazardous situation with low risk, resulting in damage to the instrument, other material damage, malfunctions and erroneous results, or loss of data.

Personal protective equipment



Chemical resistant safety gloves are intended to protect hands against aggressive chemicals.



The protective goggles protect the eyes from flying parts and liquid splashes.

1.2 Product specific safety notes

Intended use

This instrument is intended to be used by trained staff. The instrument is intended for weighing purposes. 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.

Intended use also includes compliance with all the instruction in this User Manual and the Reference Manual (RM).

Responsibilities of the instrument owner

The instrument owner is the person holding the legal title to the instrument and who uses the instrument or authorizes any person to use it, or the person who is deemed by law to be the operator of the instrument. The instrument owner is responsible for the safety of all users of the instrument and third parties.

METTLER TOLEDO assumes that the instrument owner trains users to safely use the instrument in their workplace and deal with potential hazards. METTLER TOLEDO assumes that the instrument owner provides the necessary protective gear.

Trained personnel

Persons performing weighing processes must fulfill the following basic knowledge requirements regarding the handling of METTLER TOLEDO instruments and associated software:

- Are able to complete the tasks entrusted to them and independently detect and avoid any possible dangers.
- Have expertise and experience as well as their familiarity with all applicable regulations.
- Able to prove that they have undergone training.

1.2.1 Safety notes



WARNING

Risk of death or serious injury due to electric shock

Contact with parts that carry a live current can lead to death or injury.

- 1 Only use the approved METTLER TOLEDO power supply cable and AC/DC adapter with a current-limited SELV output.
- 2 Connect the power cable to a grounded power outlet, ensure correct polarity.
- 3 Keep all electrical cables and connections away from liquids and moisture.
- 4 Check the cables and power plug for damage and replace damaged cables and power plugs.

1.2.2 Accessories and spare parts



NOTICE

Damage in due to the wrong parts are used

Through the use of the wrong or defective parts, dangers for personnel can occur and damage, malfunction or total instrument failure can occur.

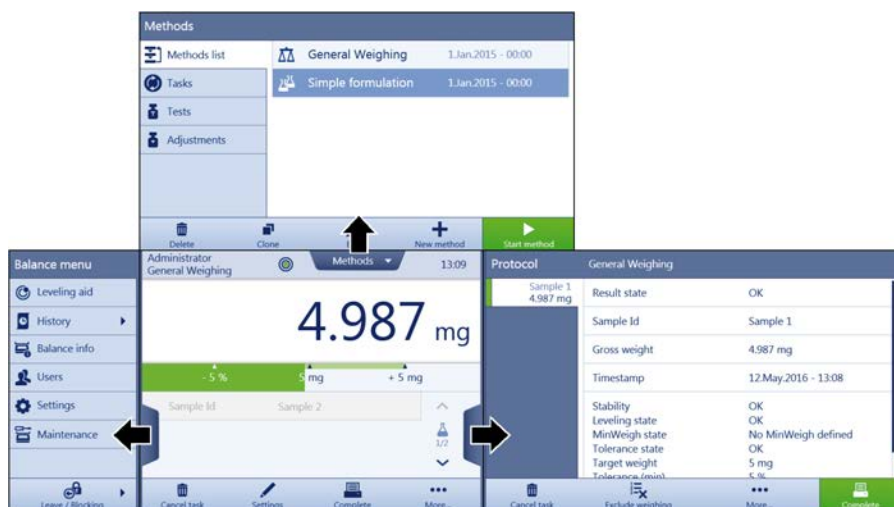
- 1 Use only original parts supplied or approved by the manufacturer.
- 2 Always contact the manufacturer if there are questions.

Only purchase parts from Mettler-Toledo GmbH. A listing of all parts can be found in the Reference Manual (RM).

2 Basic Navigation

2.1 Main sections at a glance

The method work screen is the central navigation point where all the menus and settings can be reached (the picture shows the method work screen of the method **General Weighing**). The sections **Balance menu**, **Methods** and **Protocol** can be opened by tapping the drawers along the method work screen.



2.2 Method work screen

The method work screen is the basic screen that appears when working with the balance. Depending on the method, the method work screen can slightly differ, but the basic elements appear for all methods.

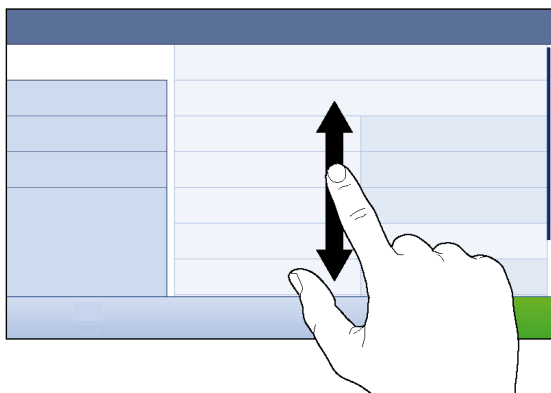


No.	Name	Explanation
1	User name	Shows the name of the current user.
2	Level indicator	Indicates if the balance is leveled.

No.	Name	Explanation
3	Weighing value field	Shows the current weighing value.
4	Info weight	Shows the current weighing value in another unit.
5	Drawer Protocol	In this section the weighing results are being shown.
6	Sample status OK	The weighing result was within the defined tolerances.
7	Sample status Not OK	The weighing result was out of the defined tolerances.
8	Button Add to protocol	Adds the result to the protocol. Depending on the selected method the button can have different functions.
9	Weighing action field	This field contains actions referring to the current task.
10	Method information area	Contains information about sample IDs, method IDs or task IDs.
11	Weighing-in aid	Defines a target weight with upper and lower tolerances.
12	Weighing value area	In this area the result of the current weighing process is shown.
13	Method name	Shows the name of the current method.

2.3 Scrolling

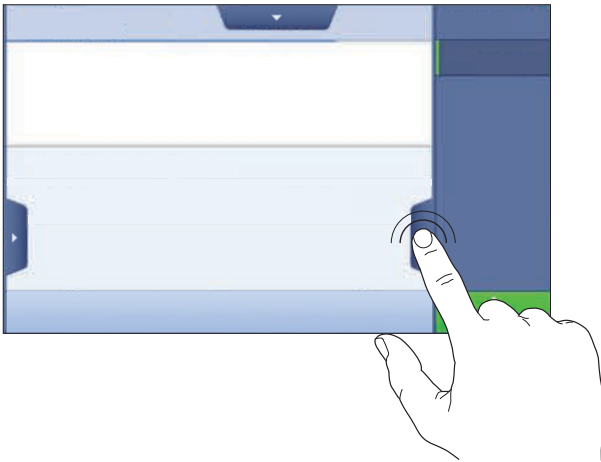
If a list of available options or results is longer than the size of the screen, a scroll bar appears on the right side of the list. Place the finger on the list and move the finger up and down to scroll through the list.



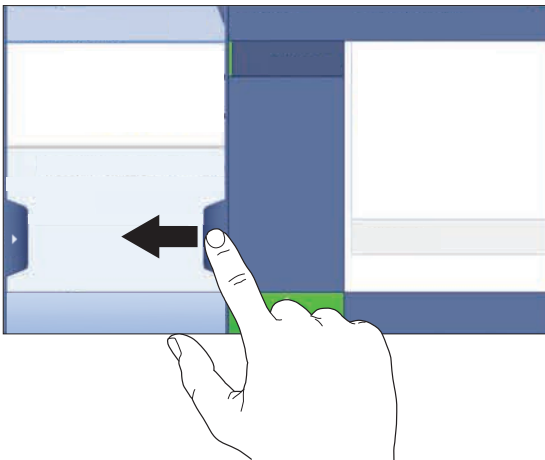
2.4 Using the drawer

This section explains how to use the drawers. The drawers are placed along the sides of the method work screen.

1 Place the finger on the drawer [◀] along the right side of the screen.



2 Keep the finger on the drawer and move it to the left.



 **Note**

The sections can also be opened or closed by tapping the drawer symbol.

3 Installation and Putting into Operation

Disclaimer for comparators

In this document, the term "balance" is used to describe both balances and comparators.

Comparators are characterized by their higher resolution compared to balances and are mainly used for differential weighing application, such as the calibration of standard weights. Beside standard balance tests, comparators have also been tested with differential repeatability (ABA repeatability) during production.

This information is valid for models of the line/s:

- XPR6U

Finding more information



For full information, always consult and download the Reference Manual (RM).

► www.mt.com/XPR-micro-RM

► www.mt.com/library

3.1 Unpacking

Open the balance packaging and check for transportation damage or missing parts. Please inform a METTLER TOLEDO representative in the event of missing or defective parts.

We recommend retaining the original box with its packaging elements. The packaging elements are designed to protect the balance. Use the packaging elements and the original box to store and transport the balance.

3.2 Scope of delivery



NOTICE

Risk of damage to the instrument due to the use of unsuitable parts!

Using unsuitable parts with the instrument can damage the instrument or cause it to malfunction.

- Only use parts from METTLER TOLEDO that are intended to be used with your instrument.

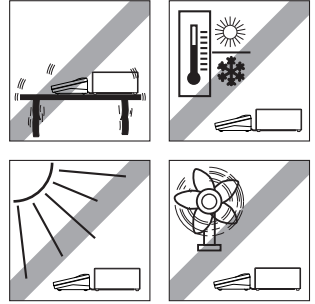
	XPR2	XPR2U	XPR6U	XPR6UD5	XPR10
Weighing unit	✓	✓	✓	✓	✓
Terminal	✓	✓	✓	✓	✓
Terminal connection cable	✓	✓	✓	✓	✓
Weighing pan Ø 16 mm	-	✓	✓	-	-
Weighing pan Ø 27 mm	✓	-	-	✓	✓
Hook weighing pan	-	-	✓	-	-
Drip tray XPR	✓	-	-	✓	✓
Drip tray XPRU	-	✓	✓	-	-
Weighing chamber plate	✓	✓	✓	✓	✓
Draft shield cover glass	✓	✓	✓	✓	✓
Table set with tweezers, cleaning brush, pen and USB storage device	✓	✓	✓	✓	✓
Universal AC adapter with country-specific power cable	✓	✓	✓	✓	✓
User Manual	✓	✓	✓	✓	✓

	XPR2	XPR2U	XPR6U	XPR6UD5	XPR10
EC declaration of conformity	✓	✓	✓	✓	✓
Production certificate	✓	✓	✓	✓	✓

3.3 Selecting the location

A balance is a sensitive precision instrument. The location where it is placed will have a profound effect on the accuracy of the weighing results.

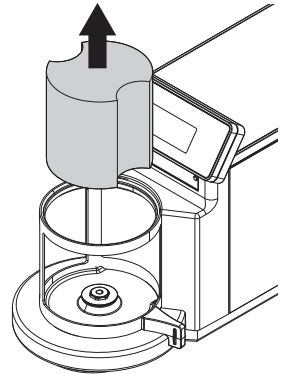
- Choose a solid table that is as horizontal as possible. Choose the table according to the maximum capacity of the balance.
- The balance must only be used indoors and up to a maximum altitude of 4,000 m above sea level.
- Before switching on the balance, wait until all parts are at room temperature (10 °C to 30 °C).
The humidity must be between 10% and 80% non-condensing.
- The power plug must be accessible
- Firm, horizontal and vibration-free location
- No direct sunlight.
- No excessive temperature fluctuations
- No strong drafts



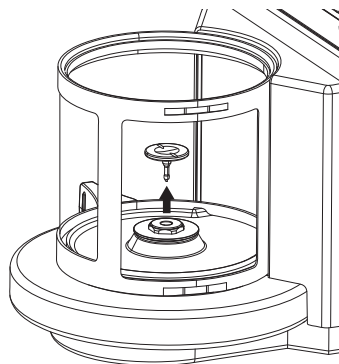
3.4 Assembling the balance

After checking the scope of delivery, unpacking the balance and after finding a proper location the balance must be assembled. The assembly parts described in this section can be found in the cardboard box at the top of the package.

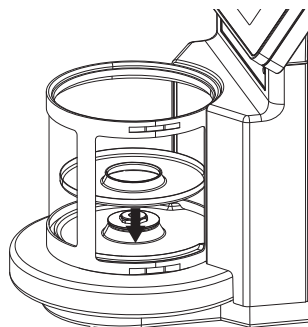
- 1 Remove the shipping lock from the weighing chamber.



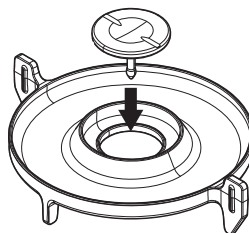
- 2 Open the weighing chamber door and remove the weighing pan from the weighing chamber.



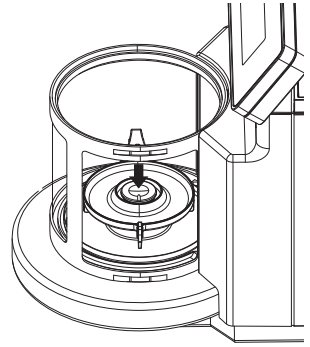
- 3 Place the weighing chamber plate into the weighing chamber.



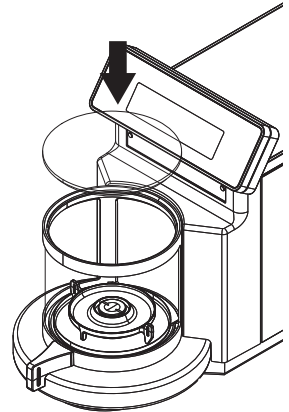
- 4 Place the weighing pan in the middle of the drip tray.



- 5 Center the drip tray with the weighing pan in the middle of the weighing chamber.



- 6 Close the weighing chamber and place the draft shield cover glass on top of the weighing chamber.



3.5 Connecting

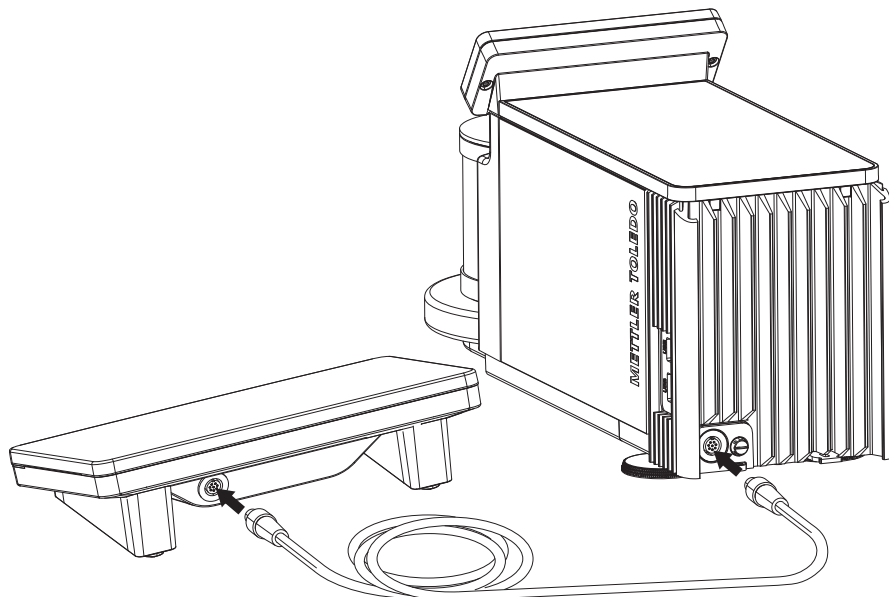
3.5.1 Connecting the terminal with the weighing unit



NOTICE

Don't unplug the terminal during operation.

Unplugging the terminal during operation can cause data loss and can affect the functionality of the balance. Wait until the operation has finished, put the balance into stand-by mode and unplug the balance from the mains.



- Use the terminal connection cable to connect the terminal with the weighing unit.

3.5.2 Connecting the balance to the mains

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 To connect the balance, only use the supplied three-core power cable with equipment grounding conductor.
- 2 Only use a three-pin power socket with earthing contact.
- 3 Only use standardized extension cable with equipment grounding conductor.
- 4 Do not disconnect the equipment grounding conductor.

NOTICE



Damage to the balance due to short circuit!

Damage to the insulation on the AC/DC adapter can result in a short circuit and damage the balance.

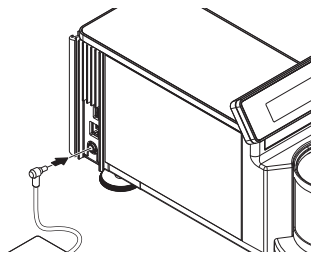
- 1 Only use the original AC/DC adapter supplied with your balance.
- 2 Route the cable so that it cannot be damaged by external influences.
- 3 Make sure that the power plug is always accessible.

Note

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.

Connect the balance to the mains as follows:

- 1 Check whether your local power supply falls within the range of the delivered AC/DC adapter. If this is not the case, under no circumstances connect the AC/DC adapter to the power supply, but contact a METTLER TOLEDO representative.
 - 2 Connect the AC/DC adapter to the AC/DC socket of the balance.
 - 3 Use the power cable to connect the AC/DC adapter to the mains.
- ⇒ The balance performs a self-test after connection to the power supply and is then ready to use.



3.6 Setting up the Balance

3.6.1 Switching on the balance

When the balance is connected to the mains it starts automatically.

EULA (End User License Agreement)

When the balance is switched on for the first time, the EULA (End User License Agreement) appears on the screen. Read the conditions, tap **I accept the terms in the license agreement.** and tap **✓ OK.**

Note

Before the balance can be used, it must warm up first. The warm-up time is at least 24 hours after connecting the balance to the power supply. When the balance was switched on from standby-mode, the balance is ready for operation immediately.

3.6.2 Leveling the balance

When the balance is switched on for the first time or when it is switched on after the location of the balance has been changed, the message **Balance is out of level** appears. By tapping ► the function **Leveling aid** opens. Follow the instructions on the screen to level the balance.

Navigation: ► **Balance menu** >  **Leveling aid**

Note

A leveled balance and a stable installation are prerequisites for accurate weighing results.

3.6.3 Performing a simple weighing

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

When the balance is switched on for the first time, the method work screen of the method **General Weighing** opens (the method work screen is described in more detail in the section [Method work screen ► Page 7]).

Zeroing

- 1 Open the weighing chamber.
- 2 Clear the weighing pan.
- 3 Close the weighing chamber.
- 4 Tap **→0←** to zero the balance.

Taring

If a weighing container is used, the balance must be tared.

- 1 Open the weighing chamber.
- 2 Clear the weighing pan.
- 3 Close the weighing chamber.
- 4 Tap **→0←** to zero the balance.
- 5 Open the weighing chamber.
- 6 Place the container on the weighing pan
- 7 Close the weighing chamber.

8 Tap →T← to tare the balance.

⇒ The balance is tared.

Performing General Weighing

1 Open the weighing chamber.

2 Place the weight on top of the weighing pan.

3 Close the weighing chamber and wait until the balance is stable.

4 Tap + Add to protocol.

⇒ The weighing process was successful. The weight value has been transferred to the section **Protocol**.

3.6.4 Setting the balance to standby mode

The balance can be set to standby mode by holding ⏻. The standby mode can be finished by holding ⏻ again.

3.6.5 Switching off the balance

To completely switch off the balance it must be disconnected from the mains. By holding ⏻ the balance goes only into standby mode.

Note

When the balance was completely switched off for some time it must be warmed up at least 24 hours before the balance can be used.

4 Maintenance

4.1 Cleaning

We recommend periodically cleaning the draft shield, the weighing platform, and the terminal. For cleaning the weighing chamber use the brush supplied with it. The maintenance interval depends on your standard operating procedure (SOP). The balance is made of high-quality, resistant materials and can therefore be cleaned with a commercially available, mild cleaning agent.



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 device cannot be shut down in an emergency situation, people can be injured or the device can be damaged.

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



NOTICE

Damage of the balance due to the use of inappropriate cleaning agents!

- On no account use cleaning agents which contain solvents or abrasive ingredients, as this can result in damage to the terminal overlay.



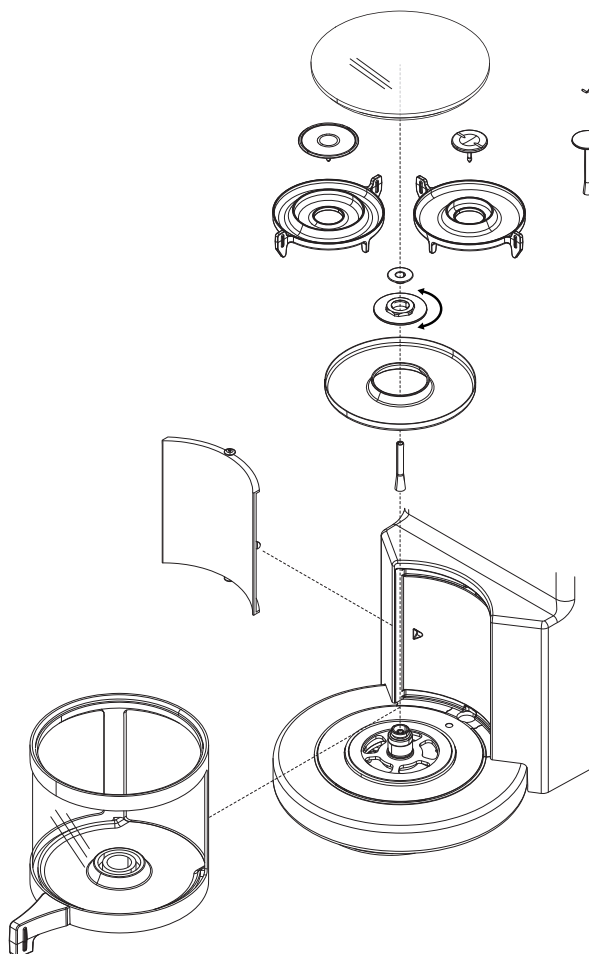
Note

Please contact your METTLER TOLEDO dealer for details of the available service options. Regular servicing by an authorized service engineer ensures constant accuracy for years to come and prolongs the life of your balance.

 **Note**

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

- 1 To clean the weighing chamber thoroughly, remove the weighing chamber plate with the weighing pan and the drip tray from the weighing chamber, unscrew the draft shield nut and remove the weighing chamber.
- 2 For re-assembling these parts make sure that they are in the same order.



4.2 Disposal

In conformance with the European Directive 2002/96/EC 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

Power supply

AC adapter:	Primary: 100 – 240 V AC, 50/60 Hz Secondary: 12 V DC $\pm 3\%$, min. 2.5 A, max. 6.0 A (with electronic overload protection)
Cable for AC adapter:	3-core, with country-specific plug
Balance power consumption:	12 V DC $\pm 3\%$, 2.25 A, maximum ripple: 80 mVpp
Polarity:	 with a current limited SELV (Safety Extra Low Voltage) output

Protection and standards

Overvoltage category:	II
Degree of pollution:	2
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:	10–30 °C
Relative air humidity:	Max. 80%, noncondensing
Warm-up time:	24 hours after connecting the balance to the power supply; when switched on from standby-mode, the balance is ready for operation immediately.

Environmental conditions for XPR6U

Ambient temperature:	18 - 27 °C ± 0.3 °C / 1h; ± 0.5 °C / 12h
Relative air humidity:	40% up to 60% $\pm 5\%$ / 4h
Maximum air speed	0.15 m / sec

Materials

Housing:	Die-cast aluminum, plastic, chrome steel and glass
Terminal:	Die-cast zinc, chromed and plastics
Weighing pan:	Aluminum, chromed (AlMgSi1 coated chem Ni 15 μm , Cr 0.3 – 0.5 μm)
Drip tray	Die-cast zinc, chromed

GWP®

Good Weighing Practice™

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

www.mt.com/xpr-microbalances

For more information

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