

## ME Analytical Balances Everyday Essentials



### High Quality Weighing Cell

With METTLER TOLEDO's EMFC weighing cell, you can be sure of accurate and reliable performance. The high stability provides fast results so you can get your tasks done quickly and with confidence.



### Convenient Levelling

Levelling your balance is easy thanks to the large adjusting feet. The level indicator is at the front so it is easy to check the level and ensure your balance is working accurately.



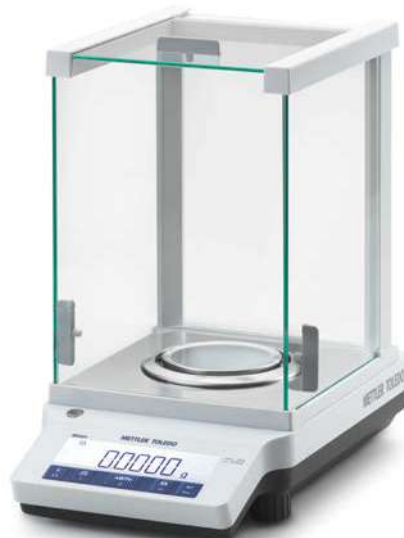
### Made for Intense Use

With a metal base, stainless steel weighing pan and overload protection, these balances can withstand intense use in tough environments. Smooth surfaces and rounded edges make them easy to clean and maintain.



### Built-In Adjustment

Maintain accuracy without external calibration weights. Internal test weights make it simple for you to test and adjust your balance at any time with just the touch of a button.



### All the Basic Functions You Need For Everyday Weighing

ME analytical balances offer you all the essential functionalities you need to carry out your daily weighing tasks accurately and efficiently. One-touch balance adjustment and robust construction mean you can be sure of consistently reliable results, day after day.

High quality components, practical features and an affordable price tag make ME analytical balances an essential in every laboratory.

# ME Analytical Balances — Model Overview

Technical Specifications	ME54	ME104	ME204
<b>Limit Values</b>			
Capacity	52 g	120 g	220 g
Readability	0.1 mg	0.1 mg	0.1 mg
Repeatability	0.1 mg	0.1 mg	0.1 mg
Linearity deviation	0.2 mg	0.2 mg	0.2 mg
<b>Typical Values</b>			
Repeatability	0.08 mg	0.08 mg	0.08 mg
Linearity deviation	0.06 mg	0.06 mg	0.06 mg
Sensitivity offset (at nominal load) <sup>1)</sup>	0.5 mg	0.6 mg	0.8 mg
Minimum weight (USP, tolerance = 0,10%) <sup>2)</sup>	160 mg	160 mg	160 mg
Minimum weight (tolerance = 1%) <sup>2)</sup>	16 mg	16 mg	16 mg
Settling time	2 s	2 s	2 s
<b>Dimensions</b>			
Weighing Pan (mm)	Ø 90	Ø 90	Ø 90
Balance Size, W × D × H (mm)	210 × 344 × 344	210 × 344 × 344	210 × 344 × 344

All models are available as Legal for Trade versions. Models without internal test weights are also available (ExCal).

<sup>1)</sup> after adjustment with internal weight

<sup>2)</sup> determined at 5% load, k = 2

## Features

<b>Accurate Results</b>	Electromagnetic Force Compensation (EMFC) weighing cell Internal adjustment OIML/NTEP approved
<b>Efficient Operation</b>	Bright and clear LCD display Menu protection Date and time Secondary display option Front level indicator 16 weighing units Hook for weighing below the balance 10 built-in applications
<b>Quality</b>	Metal base Stainless steel platform and pan Overload protection Small footprint
<b>Connectivity</b>	RS232 interface Bluetooth option Built-in PC direct function for easy data transfer



## Applications

Formulation, Totalling, Dynamic Weighing, Piece Counting, Density Determination, Percent Weighing, Check Weighing, Statistics, Multiplication Factor, Division Factor

## Accessories



**RS-P25 Printer**  
Ensure accurate documentation.



**Density Kit**  
For quick and easy determination of solid samples.



**Bluetooth Adapter**  
Wirelessly transfer data between the balance and a printer or PC.



**CarePac Test Weights**  
Routine testing with just two weights ensures ongoing accuracy.



**Protective Cover**  
Extra protection against dust and dirt.

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

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# For Your Essential Needs Worry-Free Weighing



### Easy to Use

Ten embedded applications including checkweighing, totaling and formulation allow operators to start working right away. Sample IDs and passcode protection make sure settings are not changed by unauthorized personnel.



### Accuracy Ensured

An Electromagnetic Force Compensation (EMFC) weighing cell with FACT technology automatically adjusts the balance whenever there is a change in ambient temperature, ensuring your results remain accurate and reliable. Built-in overload protection helps to ensure long balance life.



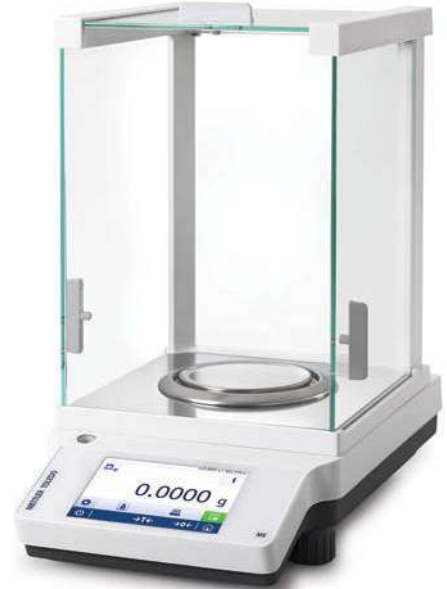
### Intuitive Touch Operation

The unit's bright 4.5" color TFT touchscreen with clear icons and intuitive guidance enables users to operate it quickly—even while wearing cloth or rubber gloves. Multilingual text and graphics walk you through every step of your weighing procedures.



### Easy Data Handling

Multiple interfaces support barcode reader, printer and PC connections for easy traceability and data handling. USB and RS232 connectivity along with an optional Bluetooth adapter simplify data upload and transfer.



## ME-T Analytical Balances

### Essential Functionality, Solid Performance

Every lab needs a balance that combines essential weighing functions with ease of use to deliver accurate, reliable results day after day.

METTLER TOLEDO's ME-T analytical balance is ideal for your lab's sensitive yet routine weighing procedures. An intuitive touchscreen makes daily tasks as simple as possible while built-in features give operators everything they need to weigh with the accuracy, repeatability and traceability required.

The metal base and a high quality finish make ME-T robust enough for tough environments and the smooth surfaces make it easy to clean. This precise scale is built to perform—and last!

# ME-T Analytical Balances, 0.1 mg Readability

Technical Specifications	ME54T	ME104T	ME204T
<b>Limit Values</b>			
Capacity	52 g	120 g	220 g
Readability	0.1 mg	0.1 mg	0.1 mg
Repeatability (at 5% load)	0.1 mg	0.1 mg	0.1 mg
Linearity deviation	0.2 mg	0.2 mg	0.2 mg
<b>Typical Values</b>			
Repeatability (at 5% load)	0.08 mg	0.08 mg	0.08 mg
Linearity deviation	0.06 mg	0.06 mg	0.06 mg
Sensitivity offset (at nominal load)	0.1 mg (50 g)	0.2 mg (100 g)	0.24 mg (200 g)
Minimum weight (USP, tolerance = 0.10%)	160 mg	160 mg	160 mg
Minimum weight (tolerance = 1%)	16 mg	16 mg	16 mg
Settling time	2 s	2 s	2 s
<b>Dimensions</b>			
Weighing pan (mm)	∅ 90	∅ 90	∅ 90
Balance size, W × D × H (mm)	210 × 344 × 344	210 × 344 × 344	210 × 344 × 344

Models without internal test weights are also available (ExCal).



## Features

Accurate Results	Efficient Operation	Quality	Connectivity
<ul style="list-style-type: none"> <li>• Electromagnetic Force Compensation (EMFC)</li> <li>• FACT internal adjustment or external calibration</li> <li>• Metal base</li> <li>• OIML/NTEP approved</li> </ul>	<ul style="list-style-type: none"> <li>• Bright 4.5" color TFT touchscreen</li> <li>• 10 built-in applications</li> <li>• Front level indicator</li> <li>• Statistical data analysis</li> <li>• Overload protection</li> </ul>	<ul style="list-style-type: none"> <li>• Input of up to 4 sample IDs</li> <li>• Passcode protection</li> <li>• 15 available languages</li> </ul>	<ul style="list-style-type: none"> <li>• 3 interfaces: USB device, USB host, RS232</li> <li>• Bluetooth option</li> <li>• Built-in PC direct function for easy data transfer</li> </ul>

## Accessories

### RS P25 Printer



Fast, high quality printouts on paper, self-adhesive labels and continuous self-adhesive paper (including barcodes).

### Bluetooth Adapter



Wirelessly send data between the balance and a PC, tablet or printer. No additional software needed.

### SmartPrep™



Single-use, antistatic funnels enable safe and fast weighing-in of powders. Simply weigh, transfer and rinse.

### Density kit



Dedicated kit for determining the density of solid and liquid substances with the built-in application.

### U-electrode



The freestanding U-Electrode removes electrostatic charges on samples and containers.

For further information on accessories, please visit

► [www.mt.com/lab-accessories](http://www.mt.com/lab-accessories)

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For more information

# ML-T Analytical Balances

## Compact, Intuitive, Reliable



### Comfortable touchscreen for easy operation

The easy-to-read 4.5" color capacitive touchscreen with clear icons and straightforward guidance enables users to operate the balance quickly even while wearing cloth or rubber gloves. Multilingual text options and graphics walk you through every step of your weighing process.



### Convenient applications increase productivity

10 built-in applications including density determination and formulation support your weighing and data-management procedures to increase productivity and reduce errors.



### Simplified balance leveling

The built-in LevelControl function issues a warning when the balance is not leveled and provides onscreen guidance to help you level the balance correctly within seconds.



### Flexible connectivity for simplified data management

Multiple interfaces including LAN and optional WLAN enable simple data handling. Transfer data to PC, FTP server, memory stick or printer in formats including XML and CSV files.



## ML-T Analytical Balances Convenient Weighing

The very compact design of the ML-T Analytical Balances makes the most of your workspace while offering powerful functionalities via an intuitive user interface to support you in your daily tasks. And if once power is unavailable, simply operate the balance with batteries.

The high-performance MonoBloc weighing cell in combination with fully automatic internal adjustment delivers the accuracy you need at any time.

The ML-T delivers consistently reliable results, which you can easily transfer to wherever needed thanks to future-proof connectivity and data-management functionalities.

# ML-T Analytical Balances, 0.1 mg Readability

Technical Specifications	ML54T	ML104T	ML204T	ML304T
<b>Limit Values</b>				
Capacity	52 g	120 g	220 g	320 g
Nominal load	50 g	100 g	200 g	300 g
Readability	0.1 mg	0.1 mg	0.1 mg	0.1 mg
Repeatability	0.1 mg	0.1 mg	0.1 mg	0.1 mg
Linearity deviation	0.2 mg	0.2 mg	0.2 mg	0.2 mg
<b>Typical Value</b>				
Repeatability	0.08 mg	0.08 mg	0.08 mg	0.08 mg
Linearity deviation	0.06 mg	0.06 mg	0.06 mg	0.06 mg
Sensitivity offset (at nominal load) <sup>1)</sup>	0.5 mg	0.6 mg	0.8 mg	1.5 mg
Minimum weight (USP, tolerance = 0.10%) <sup>2)</sup>	160 mg	160 mg	160 mg	160 mg
Minimum weight (tolerance = 1%) <sup>2)</sup>	16 mg	16 mg	16 mg	16 mg
Settling time	2 s	2 s	2 s	3 s
<b>Dimensions</b>				
Weighing pan dimension Ø	90 mm	90 mm	90 mm	90 mm

<sup>1)</sup> after adjustment with internal weight

<sup>2)</sup> determined at 5% load, k = 2



## Accurate Results

- Capacity from 52 to 320 g
- Readability 0.1 mg
- Minimum sample weight 16 mg (tolerance = 1%)
- MonoBloc weighing cell

## Efficient and Intuitive Operation

- 4.5" color capacitive touchscreen, glove compatible
- 10 different applications (weighing, counting, check weighing, dynamic weighing, percent weighing, formulation, totaling, back-weighing, density, factor weighing)
- Statistics option
- Target and tolerance setting including weighing-in aid
- Battery operation

## Quality Assurance

- Temperature and time controlled automatic internal adjustment (FACT)
- LevelControl: Level warning with leveling guide
- Configurable sample and task IDs
- User management for up to 10 users
- ISO Log for adjustments, tests and setting changes

## Easy Data Transfer

- Easy connectivity and data export: LAN, USB, RS232 and optional WLAN/Bluetooth
- Easy connection of peripheral devices: Printer, PC, USB memory stick, barcode reader and keyboard
- Advanced reporting and publishing capabilities
- Export of measurement results to USB memory stick or FTP server as XML, CSV or TXT file
- PC-Direct to easily transfer weight values to PC
- Comprehensive data management in connection with EasyDirect™ Balance software

## Sustainable Value

- Metal bottom housing
- Overload protection
- Glass panels with QuickLock release for easy cleaning

## Accessories

Accessories like EasyDirect™ Balance data management software, printers, calibration weights, a density determination kit and a wireless dongle help you enhance performance, improve ergonomics and handle your data efficiently.

► [www.mt.com/lab-accessories](http://www.mt.com/lab-accessories)

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# MS-TS Analytical Balances

## Reliable, Intuitive, Robust



### Proven weighing cell delivers reliable results

Our renowned MonoBloc weighing cell, with automatic internal adjustment delivers consistently reliable results. Built-in overload protection ensures a long balance lifetime.



### Convenient applications to increase productivity

11 built-in applications, including differential weighing, formulation and density determination support your weighing process and data management to increase productivity and reduce errors.



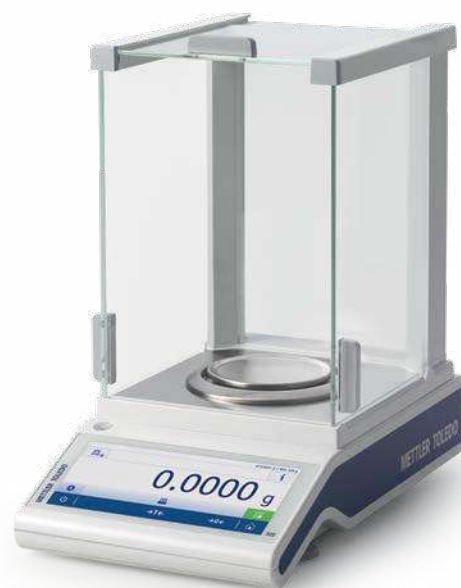
### Metal housing ensures long service life

The full die-cast aluminum housing not only protects the weighing cell from environmental influences and impacts, it is also resistant to harsh chemicals, including acetone.



### Get connected for easy data management

Multiple interfaces including LAN and optional WLAN enable simple data handling. Transfer data to PC, FTP server, memory stick or printer in formats including PDF reports and XML/CSV files.



## MS-TS Analytical Balances Convenient Weighing

The high-performance MonoBloc weighing cell in combination with the fully automatic internal adjustment delivers the accuracy you need at any time.

The 7 inch extra-large color capacitive touchscreen display with its intuitive user interface and 18 millimeter high digits brings comfort and convenience to daily weighing tasks.

The MS-TS Analytical Balances are designed to deliver consistently reliable results. These results can be easily transferred wherever needed thanks to future-proof connectivity and data-management functionalities.

## MS-TS Analytical Balances, 0.1 mg Readability

Technical Specifications	MS104TS	MS204TS	MS304TS
<b>Limit Values</b>			
Capacity	120 g	220 g	320 g
Nominal load	100 g	200 g	300 g
Readability	0.1 mg	0.1 mg	0.1 mg
Repeatability	0.1 mg	0.1 mg	0.1 mg
Linearity deviation	0.2 mg	0.2 mg	0.2 mg
<b>Typical Values</b>			
Repeatability	0.08 mg	0.08 mg	0.08 mg
Linearity deviation	0.06 mg	0.06 mg	0.06 mg
Sensitivity offset (at nominal load) <sup>1)</sup>	0.6 mg	0.8 mg	1.5 mg
Minimum weight (USP, tolerance = 0.10%) <sup>2)</sup>	160 mg	160 mg	160 mg
Minimum weight (tolerance = 1%) <sup>2)</sup>	16 mg	16 mg	16 mg
Settling time	2 s	2 s	3 s
<b>Dimensions</b>			
Weighing pan dimension ∅	90 mm	90 mm	90 mm

<sup>1)</sup> after adjustment with internal weight

<sup>2)</sup> determined at 5% load, k = 2



### Accurate Results

- Capacity from 120 to 320 g
- Readability 0.1 mg
- Minimum sample weight 16 mg (tolerance = 1%)
- MonoBloc weighing cell

### Efficient and Intuitive Operation

- 7" color capacitive touchscreen, glove compatible
- 18 mm high digits
- 11 different applications (weighing, counting, check weighing, dynamic weighing, percent weighing, formulation, totaling, back-weighing, differential weighing, density, factor weighing)
- Statistics option and graphical results representation
- Target and tolerance setting including weighing-in aid

### Quality Assurance

- Temperature and time controlled automatic internal adjustment (FACT)
- LevelControl: Level warning with leveling guide
- Configurable sample and task IDs
- User management for up to 20 users
- ISO Log for adjustments, tests and setting changes

### Easy Data Transfer

- Easy connectivity and data export: LAN, USB, RS232 and optional WLAN/Bluetooth
- Easy connection of peripheral devices: Printer, PC, USB memory stick, barcode reader and keyboard
- Advanced reporting and publishing capabilities
- Web access for remote control and second screen from any web browser
- Export of measurement results to USB memory stick or FTP server as XML, PDF, CSV or TXT file
- PC-Direct to easily transfer weight values to PC
- Comprehensive data management in connection with EasyDirect™ Balance software

### Sustainable Value

- Robust and chemical-resistant full metal housing
- Overload protection
- Draft shield and glass panels with QuickLock release for easy cleaning

### Accessories

Accessories like EasyDirect™ Balance data management software, printers, calibration weights, and a wireless dongle help you enhance performance, improve ergonomics and handle your data efficiently.

► [www.mt.com/lab-accessories](http://www.mt.com/lab-accessories)

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## MS Semi-Microbalances

0.01 mg and 0.1 mg



### Precise Results

The High Resolution Technology (HRT) weighing cell provides up to 5-place readability. With two built-in weights, combined with FACT (fully automatic time and temperature-controlled internal adjustment), the balance carries out adjustment and linearization automatically.



### Efficient Handling

Reduce the number of movements needed for every weighing. E.g. open the draft shield ErgoDoor with your left hand whilst dosing your sample with the right.



### Space Saving

Save working space thanks to split draft shield doors that do not project beyond the balance, and sideways mounted connectors at the back of the balance.



### Easy Cleaning

Cleaning has never been this easy: dismantle the QuickLock draft shield in a few short steps, then wash all glass panels and the drip tray in the dishwasher.



### Designed for You

Right Down to the Last Detail

Whether you are carrying out a simple routine task or a complicated weighing procedure, every little detail has been thought about to ensure your weighing tasks are comfortable and efficient so that you can maximize your productivity.

MS semi-microbalances provide you with fast settling times and consistently reliable results. The Swiss high precision HRT weighing cell guarantees accuracy over the entire weighing range. The built-in date and time function enables GLP/GMP compliant printouts, ensuring full control and traceability.

## Semi-Microbalances



Technical data	MS105	MS105DU	MS205DU	MS204
<b>Limit values</b>				
Maximum capacity	120 g	120 g	220 g	220 g
Maximum capacity, fine range	-	42 g	82 g	-
Readability	0.01 mg	0.1 mg	0.1 mg	0.1 mg
Readability, fine range	-	0.01 mg	0.01 mg	-
Repeatability (at nominal load)	0.04 mg	0.08 mg	0.08 mg	0.09 mg
Repeatability (at low load)	0.02 mg (20 g)	-	-	0.07 mg (20 g)
Repeatability, fine range (at nominal load)	-	0.03 mg	0.05 mg	-
Repeatability, fine range (at low load)	-	0.02 mg (20 mg)	0.02 mg (20 mg)	-
Linearity deviation	0.1 mg	0.15 mg	0.2 mg	0.2 mg
Sensitivity offset (test weight)	0.4 mg (100 g)	0.4 mg (100 g)	0.8 mg (200 g)	0.8 mg (200 g)
<b>Typical values</b>				
Repeatability (at nominal load)	0.03 mg	0.06 mg	0.07 mg	0.07 mg
Repeatability (at low load)	0.015 mg (20 g)	0.015 mg (20 g)	0.015 mg (20 g)	0.05 mg (20 g)
Linearity deviation (within 10 g)	0.02 mg	0.02 mg	0.02 mg	-
USP Minimum Weight <sup>1)</sup>	30 mg	30 mg	30 mg	100 mg
Minimum sample weight (U=1 %, k=2)	3 mg	3 mg	3 mg	10 mg
Settling time	8 s	4 s	4 s	2 s
Settling time, fine range	-	8 s	8 s	-
Balance dimensions (WxDxH)	247x358x331 mm	247x358x331 mm	247x358x331 mm	247x358x331 mm
Weighing pan dimensions	∅ 80 mm	∅ 80 mm	∅ 80 mm	∅ 80 mm
Usable height of draft shield	234 mm	234 mm	234 mm	234 mm
Weight of balance	6.8 kg	6.8 kg	6.8 kg	6.8 kg

<sup>1)</sup> Typical minimum sample weight according to USP <41>; measurement at ≤ 5% load

### Features



#### HRT weighing cell

With two built-in weights, for constant accuracy over the entire weighing range



#### FACT

Fully automatic time- and temperature-controlled internal adjustment



#### Diagnostics

Easy execution of balance diagnostics e.g. keypad and repeatability tests



#### ErgoDoor

The right door can be opened from the left side and vice versa



#### SmartTrac

Shows how much of the entire weighing range has been used



#### SmartKeys

Programmable keys for shortcut access to preferred applications



#### QuickLock

Fast and convenient dismantling of the draft shield



#### Protection

Balance settings can be password protected



#### Protective cover

Encloses the entire balance housing to protect against stains and scratches



#### ErgoSens

For touch-free operation of the balance



#### Connectivity

RS232 to connect to PC, printer or bar code reader; USB to connect to PC



#### Green MT

Just 1 Watt in standby, PVC and mercury free, energy efficient manufacture

### Approval

Approved versions of all models available

### Applications

Formulation, piece counting, percent weighing, statistics, totaling, free factor, density, pipette check, dosing, recall

### Accessories



#### Fast, smart printers

Archive quality printouts on paper, labels and continuous labels: P-58, P-56.



#### Density kit

For determining the density of solids and liquids.



#### PipetteCheck

Balance and stand-alone pipette check-station combined, for checking pipette accuracy.

**GWP**<sup>®</sup>  
Good Weighing Practice™  
[www.mt.com/GWP](http://www.mt.com/GWP)



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## XSR Analytical Balances Simplified Weighing Processes



### Efficient Weighing

The motorized draft shield doors can be configured to open and close according to your requirements to simplify and speed up repetitive weighing operations.



### Intuitive User Interface

The color touchscreen user interface provides clear icons and easy access menus. Save your own customized weighing methods to make it quick to start daily tasks. Easy to use, even whilst wearing thick, protective gloves.



### Easy Cleaning

The draft shield and weighing pan dismantle easily in seconds, and the tray underneath simply slides out. No tools are needed and all parts are dishwasher-safe for fast and efficient cleaning.



### Ergonomic Design

The weighing chamber is designed to provide easy access from both the left and right hand sides. The low-positioned weighing pan allows you to rest your hand on the bench for more comfortable dosing.



### XSR Analytical Balances Fast and Accurate Results

XSR analytical balances deliver the high weighing accuracy you want whilst providing the convenient operation you need. Clever features, such as SmartGrid, automated doors and the results protocol, simplify your routine weighing tasks and take the stresses and strains out of weighing.

Built-in applications support you with everyday weighing tasks. Your own weighing methods can be saved on the balance and conveniently started from the method window. StatusLight™ checks that all the conditions for correct weighing have been met to ensure your results are reliable.

# XSR Analytical Balances – Technical Specifications

	XSR105	XSR105DU	XSR205DU	XSR225DU	XSR64	XSR104	XSR204	XSR204DR	XSR304
Material number	30355059	30355435	30355396	30355364	30355481	30355485	30355500	30355491	30355496
<b>Limit values</b>									
Maximum capacity (full range/fine range)	120 g	120 g/ 41 g	220 g/ 81 g	220 g/ 121 g	61 g	120 g	220 g	220 g/ 81 g	320 g
Readability (full range/fine range)	0.01 mg	0.1 mg/ 0.01 mg	0.1 mg/ 0.01 mg	0.1 mg/ 0.01 mg	0.1 mg	0.1 mg	0.1 mg	1 mg/ 0.1 mg	0.1 mg
Repeatability, 5% load	0.02 mg	0.02 mg	0.02 mg	0.02 mg	0.07 mg	0.07 mg	0.07 mg	0.1 mg	0.08 mg
Linearity deviation	0.2 mg	0.2 mg	0.2 mg	0.2 mg	0.2 mg	0.2 mg	0.2 mg	0.5 mg	0.3 mg
<b>Typical values</b>									
Repeatability, 5% load	0.008 mg	0.01 mg	0.01 mg	0.01 mg	0.04 mg	0.04 mg	0.04 mg	0.04 mg	0.04 mg
Linearity deviation	0.06 mg	0.06 mg	0.06 mg	0.06 mg	0.06 mg	0.06 mg	0.06 mg	0.15 mg	0.1 mg
Sensitivity offset, nominal load	0.08 mg	0.2 mg	0.16 mg	0.16 mg	0.12 mg	0.2 mg	0.24 mg	0.24 mg	0.24 mg
Minimum weight (k = 2, U = 1%) <sup>1)</sup>	1.6 mg	2 mg	2 mg	2 mg	8.2 mg	8.2 mg	8.2 mg	8.2 mg	8.2 mg
Minimum weight (according to USP) <sup>1)</sup>	16 mg	20 mg	20 mg	20 mg	82 mg	82 mg	82 mg	82 mg	82 mg
Settling time	3 s	1.5 s	1.5 s	1.5 s	1.5 s	1.5 s	1.5 s	1.5 s	1.5 s
<b>Dimensions</b>									
Weighing pan size (mm)	78×73	78×73	78×73	78×73	78×73	78×73	78×73	78×73	78×73
Draft shield, W×D×H (mm)	160×137 ×235	160×137 ×235	160×137 ×235	160×137 ×235	160×137 ×235	160×137 ×235	160×137 ×235	160×137 ×235	160×137 ×235

<sup>1)</sup> Minimum weight typical at 5% load

## Features

Accurate Results	Efficient Operation	Quality Assurance	Seamless Process
<ul style="list-style-type: none"> <li>proFACT Advanced internal adjustment</li> <li>Compact ionizer (with stand) ready</li> </ul>	<ul style="list-style-type: none"> <li>Color touchscreen (glove compatible)</li> <li>ErgoClip for direct dosing</li> <li>ErgoSens ready</li> <li>SmartTrac dosing guide</li> <li>SmartGrid weighing pan</li> <li>Results protocol</li> <li>Storage of methods</li> <li>Automatic draft shield side doors</li> </ul>	<ul style="list-style-type: none"> <li>GWP Approved</li> <li>MinWeigh warning function</li> <li>Balance ready StatusLight</li> <li>LevelControl: Level warning with graphical levelling guide</li> <li>Tolerance profiles</li> <li>Password protection</li> <li>Adjustment and routine test history</li> </ul>	<ul style="list-style-type: none"> <li>LabX ready</li> <li>Calibry ready</li> <li>Multiple ports for easy connectivity and data export: 4×USB, 1×LAN</li> </ul>

## Accessories Included:

1× ErgoClip Basket small (11106747)  
2× SmartPrep weighing funnel (30061260, 50pcs)

## Other Selected Accessories

Compact ionizer with stand	30215452	Bluetooth adapter for printer (P-58, P-56, P-52)	30086494
ErgoSens USB, optical sensor for remote operation	30300915	Bluetooth USB adapter for balance	30416089
P-58RUE printer (thermal printer for label and protocol printing)	30094674	Barcode reader USB	30417466
P-56RUE printer (thermal printer for protocol printing)	30094673	USB-RS232 converter	64088427
P-52RUE printer (dot matrix printer for protocol printing)	30237290	CarePacs, more information at <a href="http://www.mt.com/carepacs">www.mt.com/carepacs</a>	

View the full range of accessories online at [www.mt.com/lab-accessories](http://www.mt.com/lab-accessories)

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## XPR Micro-Analytical Balances

### Direct Dosing of Very Small Samples



#### Static-Free Samples

StaticDetect™ measures the weighing error due to electrostatic charging and provides a warning if tolerances are exceeded. In combination with the optional external ionizer, you have a unique solution that guarantees static-free weighing.



#### Right-First-Time Results

The integrated StatusLight™, LevelControl and GWP Approved work actively together to ensure all the relevant conditions for correct weighing are satisfied, giving you the reassurance that your results are valid.



#### Economical Sample Use

XPR micro-analytical balances are capable of weighing down to USP minimum weights of 1.2 mg at 52 g capacity. You only need to use the tiniest amounts of expensive, rare and potent substances.



#### Effortless Data Integrity

Connect all your Excellence laboratory instruments to LabX software for full support with regulatory compliance. LabX helps you meet FDA ALCOA+ requirements for data integrity.



### XPR Micro-Analytical Balances Go Beyond Weighing

With capacity up to 52 g, samples as small as of 1.2 mg (according to USP) can be conveniently weighed out into larger containers or labware of different sizes, simplifying weighing processes and avoiding the need for sample transfer. The extremely high accuracy and low minimum weight lead to considerable material and cost savings.

Optional accessories make it easy to customize your XPR micro-analytical balance to perfectly fit your process needs.

# XPR Micro-Analytical Balances – Technical Specifications

	XPR36C	XPR36	XPR36DR	XPR56C	XPR56	XPR56DR
Material number	30594503	30594493	30594498	30355547	30355535	30355539
<b>Limit values</b>						
Maximum capacity (full range/fine range)	32 g	32 g	32 g/8.1 g	52 g	52 g	52 g/11 g
Readability (full range/fine range)	0.001 mg	0.001 mg	0.01 mg/ 0.001 mg	0.001 mg	0.001 mg	0.01 mg/ 0.001 mg
Repeatability, 5% load	0.001 mg	0.0015 mg	0.002 mg	0.001 mg	0.0012 mg	0.002 mg
Linearity deviation	0.012 mg	0.012 mg	0.02 mg	0.02 mg	0.02 mg	0.03 mg
<b>Typical values</b>						
Repeatability, 5% load	0.0006 mg	0.0007 mg	0.001 mg	0.0006 mg	0.0007 mg	0.001 mg
Linearity deviation	0.005 mg	0.005 mg	0.008 mg	0.005 mg	0.005 mg	0.008 mg
Sensitivity offset, nominal load	0.06 mg	0.06 mg	0.08 mg	0.08 mg	0.08 mg	0.08 mg
Minimum weight (k=2, U=1%) <sup>1)</sup>	0.12 mg	0.14 mg	0.2 mg	0.12 mg	0.14 mg	0.2 mg
Minimum weight (according to USP) <sup>1)</sup>	1.2 mg	1.4 mg	2 mg	1.2 mg	1.4 mg	2 mg
Settling time	3.5 s	3.5 s	2.5 s	3.5 s	3.5 s	2.5 s
<b>Dimensions</b>						
Weighing pan size (mm)	∅ 35; 40×40	40×40	40×40	∅ 35; 40×40	40×40	40×40
Draft shield, W×D×H (mm)	83×83×115	83×83×115	83×83×115	83×83×115	83×83×115	83×83×115
Weighing pan type	SmartGrid, Hanging weighing pan	SmartGrid	SmartGrid	SmartGrid, Hanging weighing pan	SmartGrid	SmartGrid

<sup>1)</sup> Minimum weight typical at 5% load

## Features

Accurate Results	Efficient Operation	Quality Assurance	Seamless Process
<ul style="list-style-type: none"> <li>Active Temperature Control system (ATC™)</li> <li>proFACT Advanced internal adjustment</li> <li>Compact ionizer ready</li> <li>StaticDetect™</li> </ul>	<ul style="list-style-type: none"> <li>7" color touchscreen with gesture control (glove compatible)</li> <li>ErgoClip for direct dosing</li> <li>SmartSens for touch-less door operation</li> <li>SmartTrac dosing guide</li> <li>SmartGrid weighing pan</li> <li>Built-in results notepad</li> <li>Storage of methods</li> <li>Automatic draft shield doors</li> </ul>	<ul style="list-style-type: none"> <li>GWP Approved built-in quality monitoring</li> <li>MinWeigh warning function</li> <li>Balance ready StatusLight</li> <li>LevelControl: Level warning with graphical levelling guide</li> <li>Tolerance profiles</li> <li>User management</li> <li>Adjustment and routine test history</li> <li>Change history function</li> </ul>	<ul style="list-style-type: none"> <li>LabX ready</li> <li>Calibry ready</li> <li>Multiple ports for easy connectivity and data export: 4 × USB, 1 × LAN</li> </ul>

## Other Selected Accessories

Compact external ionizer with stand	30499859
P-58RUE printer (thermal printer for label and protocol printing)	30094674
P-56RUE printer (thermal printer for protocol printing)	30094673
P-52RUE printer (dot matrix printer for protocol printing)	30237290
Bluetooth adapter for printer (P-58, P-56, P-52)	30086494
Bluetooth USB adapter for balance	30416089
Barcode reader USB	30417466
USB-RS232 converter	64088427

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## XPR Analytical Balances Valid Results Every Time



### Eliminate Static

StaticDetect measures the weighing error due to electrostatic charging and provides a warning if tolerances are exceeded. In combination with the optional ionizer, you have a unique solution that guarantees static-free weighing.



### Right-First-Time Results

The integrated StatusLight™, LevelControl and GWP Approved work actively together to ensure all the relevant conditions for correct weighing are satisfied, giving you the reassurance that your results are valid.



### Easy Automation Upgrade

Optional modules make it easy for you to quickly upgrade your balance to provide automated powder and/or liquid dosing. Automated dosing enables you to achieve a level of accuracy that is impossible to match in a manual process.



### Effortless Data Integrity

Connect all your Excellence laboratory instruments to LabX software for full support with regulatory compliance. LabX helps you meet FDA ALCOA+ requirements for data integrity.



### XPR Analytical Balances Go Beyond Weighing

With a range of intelligent quality assurance functions, you can depend on XPR to deliver right-first-time results. The patented StaticDetect™ technology, used in combination with the optional ionizing module, offers a complete electrostatic detection and elimination system to ensure accurate weighing results and highest process security.

Optional modules and accessories make it easy to customize your XPR analytical balance to perfectly fit your process needs and improve comfort of everyday weighing.

Even in highly regulated environments, XPR balances integrate seamlessly into your processes.

# XPR Analytical Balances—Technical Specifications

	XPR106DUH	XPR226CDR	XPR226DR	XPR205	XPR205DU
Material number	30532226	30594507	30594478	30355411	30469076
<b>Limit values</b>					
Maximum capacity (full range/fine range)	120 g/41 g	220 g/121 g	220 g/121 g	220 g	220 g/81 g
Readability (full range/fine range)	0.005 mg/ 0.002 mg	0.01 mg/ 0.005 mg	0.01 mg/ 0.005 mg	0.01 mg	0.1 mg/0.01 mg
Repeatability, 5% load	0.005 mg	0.01 mg	0.01 mg	0.015 mg	0.015 mg
Linearity deviation	0.1 mg	0.1 mg	0.1 mg	0.1 mg	0.2 mg
<b>Typical values</b>					
Repeatability, 5% load	0.003 mg	0.004 mg	0.005 mg	0.007 mg	0.01 mg
Linearity deviation	0.03 mg	0.03 mg	0.03 mg	0.03 mg	0.06 mg
Sensitivity offset, nominal load	0.15 mg	0.25 mg	0.25 mg	0.25 mg	0.4 mg
Minimum weight (k=2, U=1%) <sup>1)</sup>	0.6 mg	0.8 mg	1 mg	1.4 mg	2 mg
Minimum weight (according to USP) <sup>1)</sup>	6 mg	8 mg	10 mg	14 mg	20 mg
Settling time	4 s	5 s	2 s	2 s	1.5 s
<b>Dimensions</b>					
Weighing pan size (mm)	64×56	78×73	78×73	78×73	78×73
Draft shield, W×D×H (mm)	160×137×159	160×137×235	160×137×235	160×137×235	160×137×235

<sup>1)</sup> Minimum weight typical at 5% load

	XPR225DR	XPR225DU	XPR105DR	XPR205D5	XPR305D5	XPR204
Material number	30594483	30594488	30355342	30469150	30469154	30355419
<b>Limit values</b>						
Maximum capacity (full range/fine range)	220 g/121 g	220 g/121 g	120 g/41 g	220 g	320 g	220 g
Readability (full range/fine range)	0.1 mg/0.01 mg	0.1 mg/0.01 mg	0.1 mg/0.01 mg	0.05 mg	0.05 mg	0.1 mg
Repeatability, 5% load	0.015 mg	0.015 mg	0.015 mg	0.04 mg	0.06 mg	0.05 mg
Linearity deviation	0.15 mg	0.2 mg	0.15 mg	0.2 mg	0.3 mg	0.2 mg
<b>Typical values</b>						
Repeatability, 5% load	0.007 mg	0.007 mg	0.007 mg	0.02 mg	0.02 mg	0.04 mg
Linearity deviation	0.03 mg	0.05 mg	0.05 mg	0.06 mg	0.1 mg	0.06 mg
Sensitivity offset, nominal load	0.3 mg	0.4 mg	0.25 mg	0.4 mg	0.6 mg	0.4 mg
Minimum weight (k=2, U=1%) <sup>1)</sup>	1.4 mg	1.4 mg	1.4 mg	4.1 mg	4.1 mg	8.2 mg
Minimum weight (according to USP) <sup>1)</sup>	14 mg	14 mg	14 mg	41 mg	41 mg	82 mg
Settling time	1.5 s	1.5 s	1.5 s	1.5 s	1.5 s	1.5 s
<b>Dimensions</b>						
Weighing pan size (mm)	78×73	78×73	78×73	78×73	78×73	78×73
Draft shield, W×D×H (mm)	160×137×235	160×137×235	160×137×235	160×137×235	160×137×235	160×137×235

<sup>1)</sup> Minimum weight typical at 5% load

## Features

Accurate Results	Efficient Operation	Quality Assurance	Seamless Process
<ul style="list-style-type: none"> <li>• Active Temperature Control system (ATC™)</li> <li>• proFACT Advanced internal adjustment</li> <li>• Compact ionizer ready</li> <li>• StaticDetect™</li> </ul>	<ul style="list-style-type: none"> <li>• 7" color touchscreen with gesture control (glove compatible)</li> <li>• ErgoClip for direct dosing</li> <li>• SmartSens for touch-less door operation</li> <li>• SmartTrac dosing guide</li> <li>• SmartGrid weighing pan</li> <li>• Built-in results notepad</li> <li>• Storage of methods</li> <li>• Automatic draft shield doors</li> </ul>	<ul style="list-style-type: none"> <li>• GWP Approved built-in quality assurance monitoring</li> <li>• MinWeigh warning function</li> <li>• Balance ready StatusLight</li> <li>• LevelControl: Level warning with graphical levelling guide</li> <li>• Tolerance profiles</li> <li>• User management</li> <li>• Adjustment and routine test history</li> <li>• Change history function</li> </ul>	<ul style="list-style-type: none"> <li>• LabX ready</li> <li>• Calibry ready</li> <li>• Multiple ports for easy connectivity and data export: 4×USB, 1×LAN</li> <li>• Upgradable to automatic powder and/or liquid dosing</li> </ul>



## Software and Accessories



### Antistatic Solutions

Single antistatic components and integrated solutions for detection and elimination of static charges from samples and vessels



### Printers

High quality printers and label printers for improved data management, less transcription errors and faster processes



### CarePacs®

Everything you need for efficient balance routine testing—two selected test weights, calibration certificate and accessories

## Other Selected Accessories

	Material number
Compact external ionizer with stand	30499859
Optional built-in ionizer module	30460823
ErgoSens USB, optical sensor for remote operation	30300915
P-58RUE printer (thermal printer for label and protocol printing)	30094674
P-56RUE printer (thermal printer for protocol printing)	30094673
P-52RUE printer (dot matrix printer for protocol printing)	30237290
Bluetooth adapter for printer (P-58, P-56, P-52)	30086494
Bluetooth USB adapter for balance	30416089
Barcode reader USB	30417466
USB-RS232 converter	64088427

CarePacs on ► [www.mt.com/carepacs](http://www.mt.com/carepacs)

View the full range of accessories online at ► [www.mt.com/lab-accessories](http://www.mt.com/lab-accessories)

## LabX Laboratory Software

Connect your balance to LabX software to benefit from a fully integrated solution which can satisfy all your data handling needs.

- SOP user guidance on the instrument
- Automatic data handling and calculations
- Easy data access and documentation
- Full process and results traceability
- Centralized management of multiple instruments



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## XPR Automatic Balance

### Automated Powder and Liquid Weighing



#### Smallest Minimum Weight

Thanks to the outstanding accuracy of automated weighing, the balance minimum weight can be reduced by up to 30%. This means you can make considerable savings by using less of your expensive and rare samples.



#### Maximum User Protection

Automated weighing protects you from toxic and chemically aggressive substances. Hazardous samples are dispensed directly into the target container, avoiding manual sample handling and eliminating spills.



#### Flexibility of Use

With just one click, the dosing head moves up and you can use your balance for all your manual weighing applications in the usual way.



#### Perfect Concentrations

Prepare highly accurate concentrations as low as 0.1 mg/g in just one step. The balance calculates the precise amount of solvent required based on the amount of substance dosed to produce the target concentration.



#### Automation, Safety and Compliance for Maximum Return on Investment

XPR Automatic Balances offer a standalone solution for highly accurate, reproducible and safe automated weighing of powders and liquids.

Automated weighing reduces OOS results and other errors by up to 50%. XPR Automatic Balances combine all the benefits of automated dispensing with METTLER TOLEDO advanced weighing technologies.

Weighing small amounts of substances is now considerably faster, giving you more time to focus on other critical elements of your analysis.

# XPR Automatic Balance Models—Weighing and Dispensing in One

## Technical Specifications

	XPR106DUHQ	XPR226DRQ	XPR305D5Q
Typical use	For automated weighing of small amounts of precious samples	For a wide range of weighing applications	For automated weighing using heavier tare vessels
Material number	30591875	30591935	30586237
Capacity (full range/fine range)	120/41 g	220/121 g	320 g
Readability (full range/fine range)	0.005/0.002 mg	0.01/0.005 mg	0.05 mg
Minimum weight automated (tolerance = 1%)	0.4 mg	0.7 mg	4.1 mg
Minimum weight automated (USP, tolerance = 0.10%)	4 mg	7 mg	41 mg
Minimum weight (tolerance = 1%)	0.6 mg	1 mg	4.1 mg
Minimum weight (USP, tolerance = 0.10%)	6 mg	10 mg	41 mg
Target vessel	Opening diameter of >6 mm. Suitable for capsules, bottles, vials, tubes with maximum height of 212 mm (135 mm for XPR106DUHQ)		

Sample characteristics	Powder	Liquid
Dispensing range (typical values)	1 mg–5 g*	100 mg–10 g (0.1 mL–10 mL for water)
Suitable samples	Free-flowing, fluffy, granular, electrostatically charged	Low-viscosity solvents (<20 cP), e.g. water, acetonitrile, methanol, ethanol, DMSO
Average dispensing time	10–60 s, depending on target weight, powder flow and required accuracy	Maximum flow rate 30 g/min (0.5 bar pressure)
Lowest automated concentration**	n/a	0.1 mg/g (0.1 mg/mL for water)

\* Recommended maximum weight for automated powder dispensing

\*\* Lowest value achieved with automated dispensing. Lower concentrations are easily achieved via dilution.



### Smart Accessories

Choose from our range of vial and capsule adapters, special dosing heads, anti-static solutions, and more.



### Increased Throughput

With the Sample Changer, you can weigh up to 30 powder or liquid samples in just one run.



### Substance Tracking

Each dosing head has an integrated RFID chip to store data such as substance ID, quantity etc.



### LabX – digital data handling and automatic documentation

Connect your XPR Automatic Balance to LabX laboratory software and benefit from:

- Full traceability
- Workflow guidance on the balance terminal
- Seamless connectivity to e.g. chromatography software or LIMS
- Central data storage

All data and process information is saved securely, assisting in compliance with FDA 21 CFR Part 11.

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