

Advanced & Standard Level



Laboratory Balances

Accurate weighing

Intuitive to use

Compact and durable

Analytical and Precision Balances

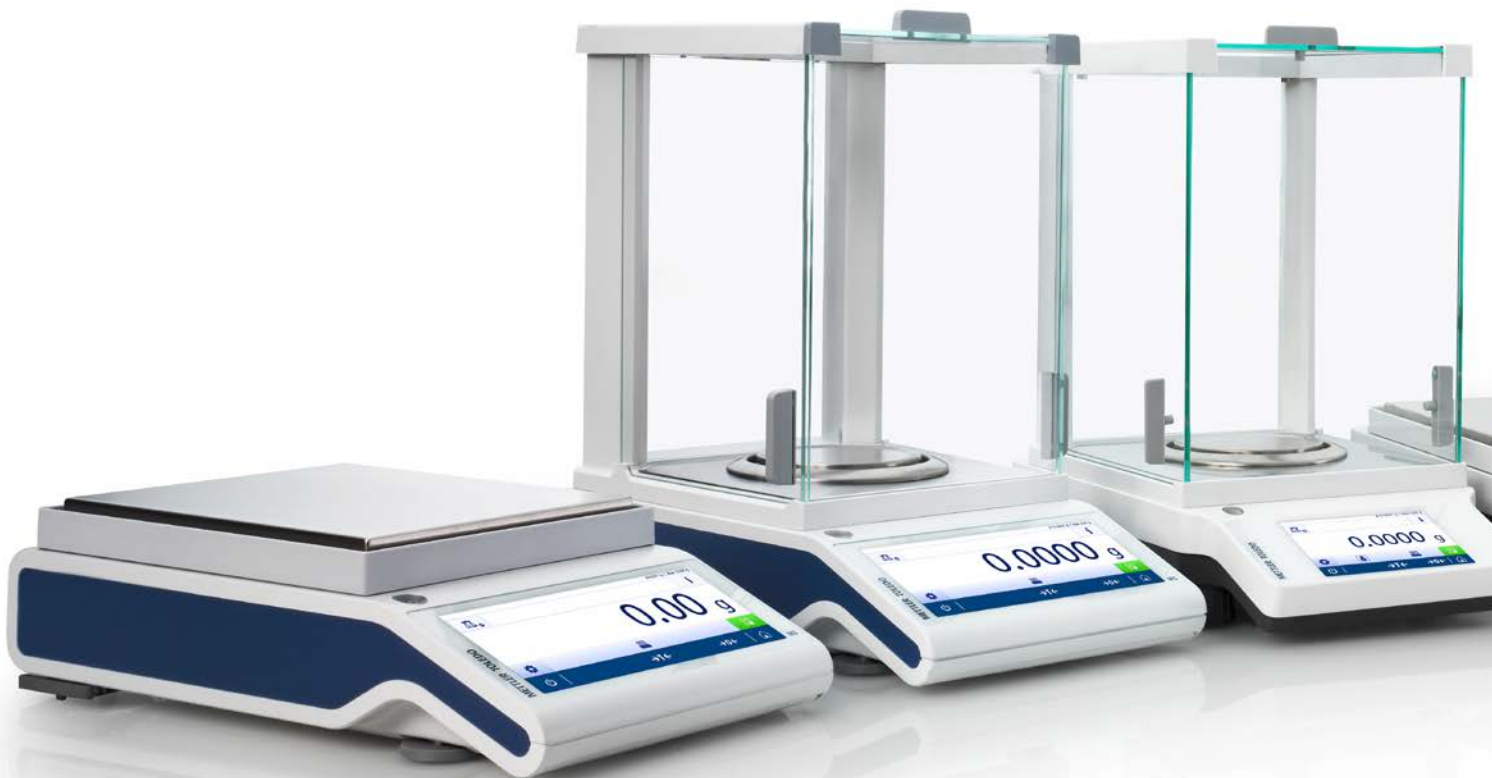
Robust Performance for Reliable Results

METTLER TOLEDO

Advanced and Standard Level Balances You Can Rely On

Advanced and Standard Level balances are the workhorses in your laboratory. These tough balances are expertly engineered to provide you with great performance day after day. Constructed from quality materials and with high performance weighing cells, you can rely on these robust instruments to deliver accurate results for all your daily weighing tasks.

The Advanced and Standard Level portfolio includes a wide variety of analytical and precision balances suitable for all your everyday weighing requirements. A semi-micro balance offers 0.01 milligram readability for weighing the smallest of samples whilst the large platform precision balance can handle loads of up to 32 kilograms. Plus, our portable balances give you the flexibility to weigh anywhere.





You can rely on Advanced and Standard Level balances to deliver accurate results day after day.



How to Choose The Right Laboratory Balance

METTLER TOLEDO offers a huge range of high-quality balances. However, which one is right for your specific process and accuracy requirements? And which one offers the most simple and convenient handling?

Excellence Level Balances - Outstanding weighing performance and innovative sample-handling technologies help make your challenging weighing tasks efficient, error-free and compliant.

Advanced Level Balances - The right choice when you need great performance and durability. Intuitive operation and integrated applications make your weighing processes fast and convenient.

Standard Level Balances - Enter the professional world of weighing with our robust and easy-to-use Standard Level Balances. High-quality construction and solid performance ensure consistent and precise weighing results.

GWP® Recommendation helps you to select the right balance. It provides the security you need before making a purchase decision.

► www.mt.com/gwp-recommendation

EasyDirect™ Balance Software

Electronic data handling saves time and helps prevent manual transcription errors. All data is stored securely in an SQL database.



Connect a Printer

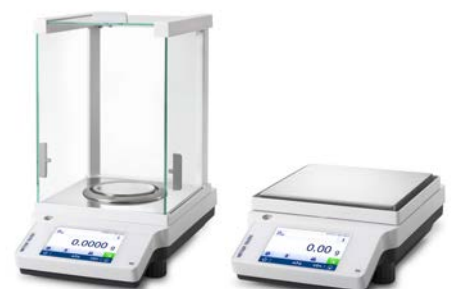
Save time and avoid handwriting errors by printing out and archiving your results.



Data Management
Performance
Productivity

Standard Level Balances

Essential Functionalities, Affordability



ME-T, ME and PL-E

LabX® Software

Comprehensive data management functions take care of all your data automatically and assist in compliance with FDA CFR 21 part 11.



Excellence Level Balances

Performance, Productivity and Compliance



XPR and XSR

- ▶ www.mt.com/excellence-analytical
- ▶ www.mt.com/excellence-precision

Advanced Level Balances

Reliability, Versatility and Comfort



MS-TS, ML-T, MS and MS-L



MS-TS Balances

Reliable and Intuitive

MS-TS analytical and precision balances support your daily weighing activities with an intuitive user interface and built-in functions for electronic transfer and publication of weighing data. 11 smart weighing applications further simplify your tasks whilst the renowned MonoBloc weighing cell with FACT* functionality delivers high weighing performance.

Boost efficiency even more by connecting your MS-TS balance to our EasyDirect™ Balance PC software and have all the weighing data from up to 10 balances handled automatically. Offering accurate results and increased productivity, MS-TS balances are a sound investment in any laboratory.

Large Color Touchscreen



The large 7" color TFT touchscreen display is operable through cotton, silicon and nitrile gloves. An intuitive user interface and 18mm high digits bring comfort to your daily tasks.

Advanced Publishing



Configure how you want to save, print and export your results and associated weighing data. PDF, CSV and XML files can be saved on a USB memory stick or even to an FTP server.

Full Metal Housing



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.

*FACT automatic time and temperature controlled internal adjustment ensures ongoing weighing accuracy and can reduce the necessary frequency of routine balance tests



Easy Data Management



Collect weighing data from up to 10 balances automatically with EasyDirect Balance PC software. Electronic data handling saves time and minimizes transcription errors. All data is saved securely in an SQL database.

User Management



Roles and rights can be defined and set for each user. With user management activated, each individual user's activities are fully traceable.

- ▶ www.mt.com/ms-analytical
- ▶ www.mt.com/ms-precision

ML-T Balances

Big Features Go Compact

A high performance weighing cell, multiple communication interfaces and 10 easy-to-use weighing applications are packed into the sleek design of the ML-T analytical and precision balances. Accurate results are assured, thanks to the guided LevelControl system and FACT functionality.

The flexible connectivity options make it easy for you to quickly plug in a barcode reader and a printer to simplify and speed up your weighing processes. Plus, you can have all your weighing data handled electronically by connecting to our EasyDirect™ Balance PC software.

Compact Housing



The compact design makes the most of your workspace, giving you the extra space you need to have all your equipment and samples nearby. Especially handy when you have bulky samples or large containers.

Robust Weighing Cell



Our renowned MonoBloc weighing cell, with automatic internal adjustment, delivers consistently reliable results. With built-in overload protection, you can be sure of a long balance lifetime.

Smart Weighing Guide



The weighing-in guide at the top of the display helps you dose to target. The green screen in the check weighing application indicates at a glance that the weighing result lies within your pre-defined process tolerances.



RS232, USB and LAN



Multiple interfaces, including LAN and an optional WLAN, enable simple, error-free data handling. Data can be transferred to a PC, FTP server, memory stick or printer in various formats, including XML and CSV files.

Guided Balance Leveling



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

- ▶ www.mt.com/mlt-analytical
- ▶ www.mt.com/mlt-precision

MS Semi-Micro Balances For Higher Accuracy Needs

When you need to weigh very small samples with a high degree of accuracy, MS semi-micro balances are an excellent choice. With a High Resolution Technology (HRT) weighing cell and FACT, MS semi-micro balances offer 5 decimal place readability (0.01 mg), perfect for weighing very small quantities and for maximizing usage of scarce and precious substances.

Ergonomic doors, pre-programmed applications and fast settling times mean using your MS semi-micro balance is simple and efficient, making best use of your valuable time.

Accurate Results



The HRT weighing cell provides up to 5 decimal place readability (0.01 mg), Combined with FACT and two internal test weights, you can weigh your smallest samples with the utmost accuracy.

Ergonomic Weighing



Reduce the number of movements needed for every weighing: the ErgoDoor enables you to open the right door with your left hand (and vice versa) making weighing faster and more comfortable.

Space Saving



Save working space thanks to the split draft shield doors that do not project beyond the balance. The connectors at the back of the balance are mounted sideways for easy access and to save more space.



Easy Cleaning



Cleaning has never been this easy: the QuickLock draft shield is dismantled in a few short steps, and then the glass panels and drip tray can be simply washed in the dishwasher.

Pipette Check



It is quick and easy to convert your MS semi-micro balance into a pipette checking station by installing an evaporation trap. The built-in application guides you through the pipette check process.

► www.mt.com/semimicro-analytical

MS-L Large Platform Balances

Robust Performance for Tough Jobs

Accommodating loads of up to 32 kilograms, MS-L large platform precision balances are built to take on your toughest jobs. The highly robust design and extreme overload protection ensure you get reliable results in even the most challenging weighing environments, whilst the MonoBloc weighing cell and FACT provide you with the assurance that your results are accurate to one tenth of a gram.

MS-L large platform precision balances meet the challenge of delivering accurate results at high loads.

Robust Construction



The tough metal housing and extreme overload protection of more than 100 kilograms safeguard your balance and ensure consistent performance year after year – even with intensive use.

Chemical Resistance



The weighing pan and balance housing are resistant to the harshest of chemicals, including acetone, helping to ensure a long balance lifetime.

Clever Design Details



For example, the groove in the top of the weighing pan allows cylindrical samples to be placed directly on the balance without the need for an extra container.



High Contrast Display



The large bright display ensures results can be read quickly and without error. Three freely programmable SmartKeys enable routine tasks to be started at the touch of a button.

Easy Stocktaking



The generous weighing pan and built-in piece counting application make these large platform balances perfect for logging your inventory.

► www.mt.com/msl-precision

ME-T Balances

Designed for Simplicity

Access your applications easily from the home screen, follow the onscreen guidance, and send your results to a printer or PC using the built-in functions. ME-T analytical and precision balances are designed to make your weighing tasks simple, fast and efficient.

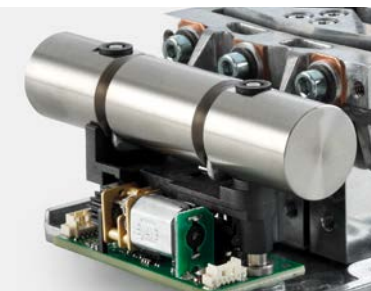
With robust construction, durable components and overload protection, ME-T balances will deliver reliable results for years to come.

Color Touchscreen



The 4.5" color touchscreen interface is simple and intuitive and can be operated while wearing gloves. Instructions and graphics guide you through your weighing procedures, helping to reduce errors.

Automatic Adjustment



The Electromagnetic Force Compensation Technology (EMFC) weighing cell incorporates FACT technology which adjusts the balance automatically using the internal weights to ensure your results are accurate even when the ambient temperature changes.

Guided Applications



The 10 built-in applications are easily accessed from the home screen. Onscreen guidance is provided so you can quickly start working on check-weighing, density determination, statistics, formulation and more.



Multiple Interfaces



The USB and RS232 ports, plus the optional Bluetooth adapter, enable you to connect a barcode reader, printer and even a PC. Data transfer is quick and easy, and transcription errors are avoided.

Passcode Protection



Benefit from additional security with the possibility to assign a passcode to protect balance settings. You can therefore restrict access to settings to authorized personnel only and avoid accidental changes.

▶ www.mt.com/met-analytical
 ▶ www.mt.com/met-precision

ME Balances

Everyday Essentials

ME analytical and precision 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 balances an essential in every laboratory.

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.

▶ www.mt.com/me-analytical
▶ www.mt.com/me-precision

PL-E Balances

Compact and Portable

PL-E balances offer you the convenience of being able to weigh wherever and whenever you want. These light, yet solidly-built, balances can be operated using batteries so you can conveniently take your balance to wherever you need to weigh. Their compact size is also ideal when you have very little room available.

Whether you need space, portability or convenience, but want to be sure of reliable weighing results, PL-E balances are the answer.

Small Footprint



The ultra-sleek design makes PL-E balances perfect for small spaces. These compact balances are solidly built from quality materials yet are still light enough to pick up and carry anywhere.

Battery Operation



When you need to weigh on-the-go or a reliable power supply is not available, these balances can be operated using batteries, giving you total weighing flexibility.

Bright Display



The bright backlit display is easy to read in both bright and dim lighting conditions. Plus, the large numbers mean the weight result can be seen clearly from many angles.



Durable in Action



These tough balances have a scratch-resistant stainless steel weighing pan and smooth, easy-clean surfaces. Overload protection safeguards the balance in use so you can rely on great performance day after day.

Safe Transportation





The optional transport case protects your portable balance from damage during relocation and ensures a long balance lifetime.

► www.mt.com/ple-precision

Analytical Balances

Model Comparison




| Model | MS-TS | | ML-T | |
|--------------------------------|--|---|--|-------------------------------------|
| |  | |  | |
| Ease of Use | ● ● ● ● ● | Large color touchscreen | ● ● ● ● ● | Color touchscreen |
| Connectivity & Data Management | ● ● ● ● ● | EasyDirect Ready, Web Access | ● ● ● ● ● | EasyDirect Ready |
| Compliance | ● ● ● ● ● | User management with up to 20 users | ● ● ● ● ● | User management with up to 10 users |
| Easy Cleaning | ● ● ● ● ● | Draft shield and glass panels with QuickLock release; full metal housing for strong chemical resistance | ● ● ● ● ● | Glass panels with QuickLock release |
| Display | 7" color TFT touchscreen | | 4.5" color TFT touchscreen | |
| Interfaces | In-built: RS232, USB Device ¹⁾ , USB Host ²⁾ , LAN Optional: WLAN/Bluetooth | | In-built: RS232, USB Device ¹⁾ , USB Host ²⁾ , LAN Optional: WLAN/Bluetooth | |
| Capacity | 120 g – 320 g | | 52 g – 320 g | |
| Readability | 0.1 mg | | 0.1 mg | |

¹⁾ USB Port to connect the balance to a PC

²⁾ USB Port to connect peripheral device (e.g. Printer, Barcode Reader, etc.)






Find the right balance for your needs
 ► www.mt.com/gwp-recommendation

| ME-T | | ME | | MS Semi-Micro | |
|---|---|--|---|--|-------------------------------------|
|  | |  | |  | |
| ● ● ● ● ● ● | Color touchscreen | ● ● ● ● ● ● | 10 built-in applications | ● ● ● ● ● ● | Programmable function keys |
| ● ● ● ● ● ● | Printing, USB memory stick | ● ● ● ● ● ● | Printing | ● ● ● ● ● ● | Printing |
| ● ● ● ● ● ● | Passcode protection of balance settings | ● ● ● ● ● ● | GMP/GLP compliant printouts | ● ● ● ● ● ● | GMP/GLP compliant printouts |
| ● ● ● ● ● ● | Smooth edges and easy to clean surfaces | ● ● ● ● ● ● | Smooth edges and easy to clean surfaces | ● ● ● ● ● ● | Glass panels with QuickLock release |
| 4.5" color TFT touchscreen | | LCD Backlit | | LCD Backlit | |
| In-built: RS232, USB Device ¹⁾ , USB Host ²⁾ Optional: Bluetooth | | In-built: RS232 Optional: Bluetooth | | In-built: RS232, USB Device ¹⁾ Optional: Bluetooth | |
| 52 g – 220 g | | 52 g – 220 g | | 120 g – 220 g | |
| 0.1 mg | | 0.1 mg | | 0.01 mg – 0.1 mg | |

Precision Balances

Model Comparison




| Model | MS-TS | | ML-T | | ME-T | |
|--------------------------------|--|---|--|---|---|---|
| |  | |  | |  | |
| Ease of Use | ● ● ● ● ● ● | Large color touchscreen | ● ● ● ● ● ● ● | Color touchscreen | ● ● ● ● ● ● ● | Color touchscreen |
| Connectivity & Data Management | ● ● ● ● ● ● | EasyDirect Ready, Web Access | ● ● ● ● ● ● ● | EasyDirect Ready | ● ● ● ● ● ● ● | Printing, USB memory stick |
| Compliance | ● ● ● ● ● ● ● | User management with up to 20 users | ● ● ● ● ● ● ● | User management with up to 10 users | ● ● ● ● ● ● ● | Passcode protection of balance settings |
| Easy Cleaning | ● ● ● ● ● ● ● | Full metal housing for strong chemical resistance | ● ● ● ● ● ● ● | Protection cover included; weighing pan and wind ring easy to dismantle | ● ● ● ● ● ● ● | Protection cover included; weighing pan and wind ring easy to dismantle |
| Display | 7" color TFT touchscreen | | 4.5" color TFT touchscreen | | 4.5" color TFT touchscreen | |
| Interfaces | In-built: RS232, USB Device ¹⁾ , USB Host ²⁾ , LAN Optional: WLAN/Bluetooth | | In-built: RS232, USB Device ¹⁾ , USB Host ²⁾ , LAN Optional: WLAN/Bluetooth | | In-built: RS232, USB Device ¹⁾ , USB Host ²⁾ Optional: Bluetooth | |
| Capacity | 320 g – 12.2 kg | | 220 g – 6.2 kg | | 120 g – 6.2 kg | |
| Readability | 0.001 g – 0.1 g | | 0.001 g – 0.1 g | | 0.001 g – 0.1 g | |

¹⁾ USB Port to connect the balance to a PC

²⁾ USB Port to connect peripheral device (e.g. Printer, Barcode Reader, etc.)



Find the right balance for your needs
 ► www.mt.com/gwp-recommendation

| ME | | PL-E | | MS Large | |
|--|---|--|---|--|---|
|  | |  | |  | |
| ● ● ● ● ● ● | 10 built-in applications | ● ● ● ● ● ● | Programmable function keys | ● ● ● ● ● ● | Programmable function keys |
| ● ● ● ● ● ● | Printing | ● ● ● ● ● ● | Printing | ● ● ● ● ● ● | Printing |
| ● ● ● ● ● ● | GMP/GLP compliant printouts | ● ● ● ● ● ● | GMP/GLP compliant printouts | ● ● ● ● ● ● | GMP/GLP compliant printouts |
| ● ● ● ● ● ● | Protection cover included; weighing pan and wind ring easy to dismantle | ● ● ● ● ● ● | Protection cover included; weighing pan easy to dismantle | ● ● ● ● ● ● | Full metal housing for strong chemical resistance |
| LCD Backlit | | LCD Backlit | | LCD Backlit | |
| In-built: RS232 Optional: Bluetooth | | In-built: RS232 Optional: Bluetooth | | In-built: RS232, USB Device ¹⁾ Optional: Bluetooth | |
| 120 g – 5.2 kg | | 620 g – 6.2 kg | | 12.2 kg – 32.2 kg | |
| 0.001 g – 0.1 g | | 0.01 g – 0.1 g | | 0.1 g – 1 g | |

Accessories and Software

For Efficient Weighing Processes

EasyDirect™ Balance



Collect weighing data from up to 10 balances automatically, create reports, perform statistical analyses, and have a clear overview of the status of your balances. All weighing data is saved securely in an SQL database and can be exported manually or automatically in various formats (XML, CSV, XLSX or PDF).

Density Measurement



Install a density kit on your balance to determine the density of solid, liquid and porous samples. The built-in application guides you through the process.

Printer



Ensure traceability with fast high-quality printouts of your results. Customize the printouts to include other relevant weighing data such as date, time, user ID, sample ID and batch number.

Bluetooth / Wi-Fi Adapter



Send results wirelessly from your balance to your PC. You work electronically but avoid the need for cables.

Test Weights



Ensure ongoing weighing accuracy by testing your balance efficiently with just two test weights; testing at 5% and close to 100% of the balance capacity is all that is needed.



EasyDirect™ Balance PC software is compatible with all MS, ML and ME analytical and precision balances, providing you with fast and error-free documentation, whatever your application. The most convenient way to realize this is with MS-TS and ML-T balances via Ethernet.

Free Software Trial

Connect your balance to EasyDirect™ Balance PC software to handle all your weighing data electronically. Documenting your results becomes quick, easy and error-free. Installation and setup are simple.

Try EasyDirect™ Balance free for 45 days:

► www.mt.com/EasyDirectBalance

Simplify Your Work and Reduce Errors

METTLER TOLEDO balances can be customized with accessories and peripheral devices to meet the needs of virtually any application. Our expertly designed accessories make your work easier, reduce fatigue, and increase accuracy and productivity.

View our large range of accessories online:

► www.mt.com/accessories

Service Solutions For Lifetime Accuracy

Selecting the right balance for your specific application requirements is just the first step in an important process of ensuring you get accurate results throughout the lifetime of your weighing instrument.

METTLER TOLEDO can support you to achieve continuous excellent performance and high measurement accuracy. To help you to guarantee product quality, on-time deliveries, regulatory compliance and appropriate user skills, our services include installation, preventive maintenance, calibration and equipment repair – for any industry, environment or regulations!

View our complete service portfolio online:

► www.mt.com/labbalances-service

Professional Installation and Qualification



Ensure your balance is delivering accurate results from day one and placed in the optimum location. We offer three different installation and qualification Pacs to meet your specific application and regulatory requirements.

► www.mt.com/installation

Calibration and Testing



Our Accuracy Calibration Certificate (ACC) documents the accuracy of your balance on site at its place of use. GWP® Verification specifies a risk-based calibration and routine testing schedule to maintain accuracy over time.

► www.mt.com/calibration-acc

Extended Care



Extended Care helps you control your budget by avoiding unplanned expenditures on instrument breakdowns. It includes added cover for 24 months after installation and two preventive maintenance visits.



METTLER TOLEDO Service



PERFORMANCE
Maintenance & Optimization

COMPLIANCE
Calibration & Quality



UPTIME
Support & Repair



EXPERTISE
Training & Consulting

A complete service offering METTLER TOLEDO Service provides you with the confidence to enhance your efficiency, performance and productivity by providing service products based on our service values - uptime, performance, compliance and training.

Good Weighing Practice™



Good Weighing Practice™ (GWP®) is a global standard that ensures consistent accuracy, quality and compliance in any weighing process. It is applicable to new or existing weighing devices from any manufacturer.

www.mt.com/gwp

Global Service Presence



METTLER TOLEDO serves you with a global network of sales and service specialists. Our over 5000 factory-trained and authorized Service technicians use proprietary tools and spare parts and follow worldwide standardized work procedures.

Visit Our Lab Library

For Guides, White Papers, Videos and Webinars

Get more information on:

► www.mt.com/lab-library



www.mt.com/balances

For more information

METTLER TOLEDO Group

Laboratory Weighing

Local contact: www.mt.com/contacts

Subject to technical changes

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