

MS Balances



The MS Balance Line

Performance you can trust

Reassuringly easy to use

Trusted Results at Your Fingertips
Worry-free Weighing

METTLER TOLEDO

Trusted Results at Your Fingertips

Worry-free Weighing

In today's high pressure research and manufacturing environments, having the right equipment is key to achieving quality and efficiency. With customers demanding short lead times and reliable delivery dates, you need a balance you can trust to deliver accurate results - and which is convenient and reassuringly easy to use.

METTLER TOLEDO's MS balances fit the bill. These robust balances incorporate advanced security features so that you know you can trust your results. User guidance, an intuitive graphical user interface and built-in applications make daily weighing tasks simple, even for untrained operators. Clever design features make MS balances easy to clean and take care of too.

Worry-free weighing with the MS balance portfolio

Intuitive to operate and easy to clean, MS balances bring a new level of comfort to your daily weighing tasks.

Precision balances Small and large platform



Max. capacity: 320 g – 32 kg
Readability: 1 mg – 5 g

Analytical and semi-micro balances



Max. capacity: 120 g – 320 g
Readability: 0.01 mg – 0.1 mg



Instruments reduced to the max ensure that everyone in the Inprocess Lab can weigh productively without worries.



Erwin W. Studer
Co-Owner, profact AG,
Manufacturing Consultants Switzerland

"Today, advanced companies run lean laboratories which are focused on delivering results in the most efficient way in terms of cost, speed and quality. Every device should support this goal."

With trusted performance and comfortable operation, MS balances fulfill your lean laboratory needs.

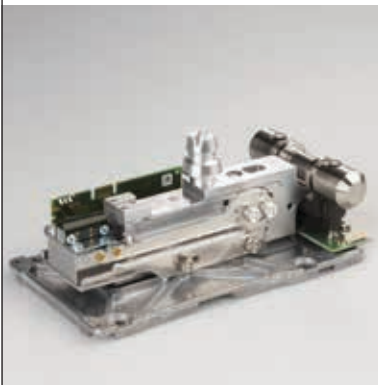
Small Precision Balances

Engineered for Reliable Performance

The robust construction of the MS small platform precision balances makes them perfect for heavier tasks in the laboratory or out on the factory floor. The unique MonoBloc weighing cell delivers the accuracy you need and is fully protected against accidental overload.

Delivering consistently reliable results, even in harsh environments, these balances will also deliver a fast return on your investment.

Proven weighing cell delivers reliable results



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

Automatic adjustment guarantees secure results



Fully automatic time and temperature controlled internal adjustment compensates for changes in ambient temperature which may affect the accuracy of your weighing results.

Improved stability means faster results

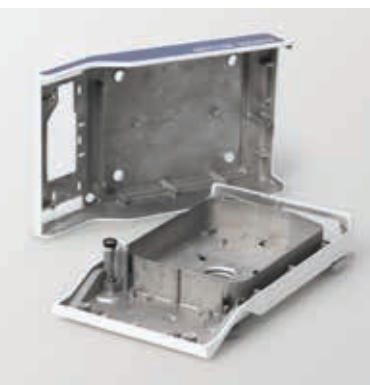


With three fixed feet and two LevelLock stands, MS balances are easy to level and sit solidly on your workbench. With the balance less susceptible to vibration, you get faster results.



The green screen clearly indicates that the result is within your pre-defined tolerances – this instant confirmation means applications such as check-weighing are much faster with fewer errors.

Metal housing ensures long balance lifetime



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

Small Precision Balances

Designed for Easy Operation

The built-in applications on MS balances provide you with straightforward user guidance, so you have the comfort of knowing that tasks are carried out correctly. Warning features, such as LevelControl and MinWeigh, give you a higher level of confidence in your results.

The extra-large touchscreen display is simple to operate, even whilst wearing gloves, and, with digits up to 18 mm in size, your results are clear to read. And when weighing tasks are complete, cleaning-up is easy thanks to the smooth, wipe-clean surfaces.

Optimized display makes daily tasks easier



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

Built-in function simplifies balance leveling



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

MinWeigh function assists dosing process



During weighing-in, the weight value remains red until the net sample is above the pre-programmed minimum value. It's clear to see when process tolerances have been met.



The large draft shield protects the balance from air currents – ideal for delicate applications, such as determining the weight of coatings by differential weighing.



Personalized user profiles provide security and ease of use

- Operate the balance in your own language
- Save time with built-in applications
- Use passcodes to protect balance settings

► www.mt.com/ms-precision

Large Precision Balances

Tough Performers Built to Last

Accommodating loads up to 32 kg, MS large platform precision balances are built to take on your toughest jobs. The MonoBloc weighing cell, Ingress Protection rating IP65 and extreme overload protection ensure you get reliable results in even the most challenging industrial environments.

The large weighing platform is ideally suited to applications involving large containers, large sample sizes or when many ingredients need to be added to the same container. Easy-clean surfaces mean taking care of your balance is effortless too.

Robust construction handles your heavy samples



The tough metal housing and extreme overload protection of more than 100 kg safeguard your balance when working with heavy sample containers. The large weighing pan provides extra convenience.

Chemical resistance ensures longevity



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

IP65 protects against the toughest environments



To withstand the harshest of weighing conditions, selected MS large platform precision balances meet IP65 requirements for full protection against the ingress of dust and jets of liquid.



The large weighing platform is really convenient for totalization tasks with larger quantities of ingredients.



Clever design details support your daily tasks

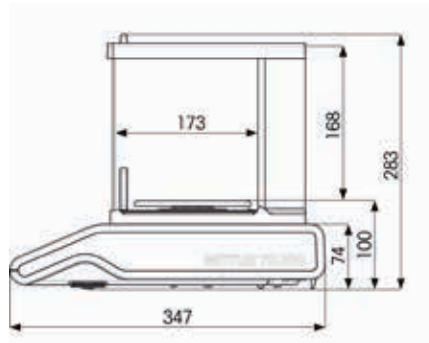
For example, the groove in the top of the weighing pan allows cylindrical samples to be placed directly on the balance without the need for an extra container.



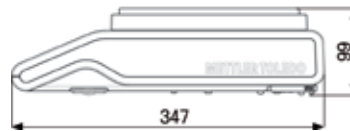
MS Precision Balances

Technical Specifications

MS-TS Precision Balances, with Draft Shield



MS-TS Precision Balances



MS-L Precision Balances



All dimensions are given in mm.

MS-TS Precision Balances	1 mg, with draft shield				0.01 g – 0.1 g	
	Model	MS303TS	MS403TS	MS603TS	MS1003TS	MS1602TS
Maximum capacity	320 g	420 g	620 g	1020 g	1620 g	3200 g
Readability	1 mg	1 mg	1 mg	1 mg	0.01 g	0.01 g
Repeatability (at nominal load)	1 mg	1 mg	1 mg	1 mg	0.01 g	0.01 g
Settling time*	1.5 s	1.5 s	1.5 s	1.5 s	1.5 s	1.5 s
Minimum sample weight* (acc. to USP)	1.4 g	1.4 g	1.4 g	1.4 g	14 g	14 g
Minimum sample weight* (U=1 %, k=2)	0.14 g	0.14 g	0.14 g	0.14 g	1.4 g	1.4 g

MS-TS Precision Balances	0.01 g – 0.1 g					
	Model	MS4002TS	MS4002TS DR	MS6002TS	MS6002TS DR	MS120002TS
Maximum capacity (fine range/full range)	4200 g	820 /4200 g	6200 g	1220 / 6200 g	12200 g	8200 g
Readability, full range	0.01 g	0.1 g	0.01 g	0.1 g	0.01 g	0.1 g
Readability, fine range	-	0.01 g	-	0.01 g	-	-
Repeatability (at nominal load)	0.01 g	0.01 g	0.01 g	0.01 g	0.01 g	0.1 g
Settling time*	1.5 s	1.5 s	1.5 s	1.5 s	1.5 s	1 s
Minimum sample weight* (acc. to USP)	14 g	14 g	14 g	14 g	14 g	120 g
Minimum sample weight* (U=1 %, k=2)	1.4 g	1.4 g	1.4 g	1.4 g	1.4 g	12 g

MS-L Precision Balances	0.1 g – 1 g				1 g – 5 g, with IP65			
	Model	MS12001L	MS16001L	MS32001L	MS32000L	MS15KLE	MS30KLE	MS15KLIPE
Maximum capacity	12200 g	16200 g	32200 g	32200 g	15 kg	30 kg	15 kg	24 kg
Maximum capacity (approved version)	-	-	-	-	6 kg / 15 kg	15 kg / 30 kg	6 kg / 15 kg	15 kg / 24 kg
Readability	0.1 g	0.1 g	0.1 g	1 g	2 g	5 g	2 g	5 g
Readability (approved version)	-	-	-	-	2 g / 5 g	5 g / 10 g	2 g / 5 g	5 g / 10 g
Repeatability (at nominal load)	0.1 g	0.1 g	0.1 g	1 g	1 g	2 g	1 g	2 g
Settling time*	2 s	2 s	2 s	1.5 s	0.8 s	0.8 s	0.8 s	0.8 s
Minimum sample weight* (acc. to USP)	140 g	140 g	140 g	1000 g	1640 g	4100 g	1640 g	4100 g
Minimum sample weight* (U=1 %, k=2)	14 g	14 g	14 g	100 g	164 g	410 g	164 g	410 g

* = typical value ** = High Capacity *** = Heavy Duty

Features		Small Platform	Large Platform	
		MS-TS Precision Balances	MS-L Precision Balances**	MS-L Precision Balances with IP65***
Accurate Results	MonoBloc weighing cell and overload protection	•	•	
	Strain gauge weighing technology			•
	proFACT - fully automatic time- and temperature-controlled internal adjustment	•	•	
	CalExt adjustment with an external weight			•
	MinWeigh warning function	•		
	Full metal housing	•	•	•
Efficient Operation	7" Extra large color TFT touchscreen (18 mm high digits)	•		
	HCD High contrast display (18 mm high digits)		•	•
	LevelControl function	•		
	Statistics - improved management of weighing data	•		
	Easy cleaning thanks to smooth, wipe-clean surfaces	•	•	•
	LevelLock – greater balance stability	•		
	Battery operation			•
	IP65 - for full protection against the ingress of dust and jets of liquid			•
Quality Assurance	ISO-Log-records important changes, e.g. adjustments, leveling status	•		
	Sample ID – avoids confusion between samples and provides traceability	•		
	Passcode protection - only authorized users can make adjustments	•		
	Menulock (settings protection)		•	•
Seamless Process	3 interfaces - USB device, USB host and RS232	•		
	2 interfaces - USB and RS232		•	
	RS232			•
	Bluetooth option	•	•	•
	PC Direct application for easy data transfer (no software needed)	•	•	•

METTLER TOLEDO Services

Ensure Consistently Reliable Results

From evaluating your needs to select the right balance, through to daily routine operation in your lab, the METTLER TOLEDO Sales & Service Team can accompany you every step of the way. Our expertise means you can enjoy excellent performance, maximum uptime and full compliance with the norms and standards relevant to your industry.



Good Weighing Practice™

METTLER TOLEDO developed GWP® (Good Weighing Practice™) as a standardized scientific methodology for the secure selection, operation and calibration of weighing equipment. GWP® is applicable to all weighing equipment from any manufacturer.

Evaluation and selection



Our GWP® Recommendation service helps you select the right balance according to your specific process and quality requirements. Documentary evidence is provided to show that the selected balance meets metrological, environmental and regulatory requirements.



Global Reach – Local Presence! A team of 5,000 specialists represent METTLER TOLEDO Sales and Service in more than 140 countries worldwide.



Installation



We document the installation and qualification of your balance in accordance with the relevant industry regulations. Operator training right after installation leads to improved productivity.

Calibration



Balance calibration is at the core of accurate weighing results. Each calibration certificate declares the balance's minimum weight and measurement uncertainty – essential information for reliable weighing processes.

Routine operation



GWP® Verification provides clear guidance for performance verification of your balance to save you time and money. Included is an optimal routine testing and calibration schedule, specifications of the required test weights, and the ideal maintenance plan.

Accessories and Options for Worry-free Weighing

METTLER TOLEDO balances can be customized with accessories and peripheral devices to meet the needs of virtually any application. Our carefully designed accessories make your work easier, convenient and help increase efficiency.

Reliable sample transfer



SmartPrep™ single-use, antistatic funnels enable safe and fast weighing-in of powders. Simply weigh, transfer and rinse. Fits nearly any standard 10 – 250 mL flask.

Protect results from static



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

Fast density determination



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

No cables with Bluetooth



Simply plug in a BT adapter where there is no built-in BT interface to wirelessly send data between your balance and a PC, tablet or printer. No additional software needed.

Easy documentation



The P-5x thermal printers generate fast, high quality printouts on paper, self-adhesive labels and continuous self-adhesive paper (including barcodes).

Faster results



The large draft shield protects your balance from air currents which may prevent your balance settling, e.g. from air conditioning. Get faster and more accurate results.



The built-in PC Direct application transfers results immediately to an open application on your tablet or PC, e.g. an Excel spreadsheet.



Easy Data Transfer

Flexible connectivity options for balances simplify and speed up your daily work in the laboratory.

LabX direct balance software simplifies data management:

- Configurable data layout
- Transfer date, time, unit and sample ID
- Fast and error-free data transfer (e.g. MS Office application, ERP system)



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Use the above details to contact us if this literature doesn't answer all your questions.

Pricing on any accessories shown can be found by keying the part number into the search box on our website.

The specifications listed in this brochure are subject to change by the manufacturer and therefore cannot be guaranteed to be correct. If there are aspects of the specification that must be guaranteed, please provide these to our sales team so that details can be confirmed.

