

Our solutions.

These guidelines are intended to help you select the right balance for your process.

	<p>MinWeigh warns you when your sample weight is below the defined minimum weight. Small minimum weights increase the yield of the substance and are therefore cost-saving. Our recommendation for typical minimum weights:</p> <p>from 0.6 mg: UMX2 from 2.1 mg: XP26/56 from 1.5 mg: MX5 from 24 mg: XP205</p> <p>► Models: UMX / MX / XP</p>
	<p>SmartSens, the sensor for hands-free operation. Thanks to SmartSens, you can weigh without touching the balance. Tare, open the door, close the door, weigh, print: Everything is automatic and hands-free. You can focus completely on the sample, and weigh valuable or dangerous substances safely and without spilling.</p> <p>► Models: UMX / MX / XP</p>
	<p>SmartGrid, the grid weighing pan for fast and stable results, successfully minimizes the effects of turbulence in the weighing chamber. The result: The display reacts like lightning, and you get measuring results fast. ErgoClip taring container holder for ergonomic weighing. The ErgoClip holder allows you to securely position any type of tare container so that nothing goes wrong with your sample.</p> <p>► Models: XP / XS</p>
	<p>8 Users, to enter individual user profiles. Saves time and helps prevent mistakes. XP analytical balance together with User Management: Configuration of access rights, option to deactivate profiles and functions that are never used.</p> <p>► Models: UMX / MX / XP</p>
	<p>Integrable antistatic kit ensures precise weighing under the most difficult conditions. Thanks to the integrable ionizer, the electrostatically charged object is immediately neutralized. The forces that falsify the weighing are eliminated.</p> <p>► Model: XP</p>
	<p>Service XXL, for ensuring daily operational security throughout the year. FACT or proFACT for fully automatic internal adjustment. LevelControl, the audible warning function that indicates when the balance is not level. BalanceCheck, automatically prompts to check the balance with external weights.</p>
	<p>Flexible interface system for fast and reliable data management, and LabX balance, the PC software for instrument and data management in accordance with 21 CFR Part 11.</p>

Minimum Sample Weights for maximum profitability!

If you are able to weigh in smaller sample amounts with the same level of confidence, this raises the yield of your substance and reduces costs - sometimes dramatically. And if you are able to weigh the same amount of sample with even greater accuracy, the quality of your weighing results is enhanced. Both of these factors are critical when dealing with precious substances. For these types of application, be sure to choose a balance that offers a very low minimum sample weight as well as a large weighing range - so you can weigh in directly into the tare container placed on the balance!

1 The right balance for your application

Choose a balance which meets your defined tolerances for minimum sample weight, as specified in the manufacturer's typical specifications.

► XP56
52g capacity & 0.001mg resolution
Typical minimum sample weight according to USP: 2.1mg





2 On-site equipment qualification

Let our Service Technician perform IQ, OQ, even PQ qualifications of your balance in the exact location where it will be used - for maximum performance and minimum uncertainty.

► On-site Service Technician

- Determines measurement uncertainty for the smallest sample quantities
- Produces a certificate for documented weighing performance
- Activates the MinWeigh function to ensure minimum weight values are always within specifications

3 The result

Using a high-resolution microbalance such as the XP56, smaller sample quantities can be weighed with the same levels of accuracy and weighing confidence.

► MinWeigh





Your benefits

Smaller sample quantities of valuable and hazardous substances mean:

- Less sample material = cost savings
- Less waste disposal = cost savings
- Less risk for staff = more safety (hazardous substances)
- Less environmental waste = more ecological (hazardous substances)

Increased weighing range combined with maximum readability means:

- One can weigh directly into the tare container
- Spillage is prevented = cost savings
- Increased certainty of results
- Increased safety of users (hazardous substances)

Less cost & More safety

Excellence Balances



METTLER TOLEDO
Microbalances and Analytical Balances at the Excellence Level

Guidelines for Selecting the Right Analytical Balance



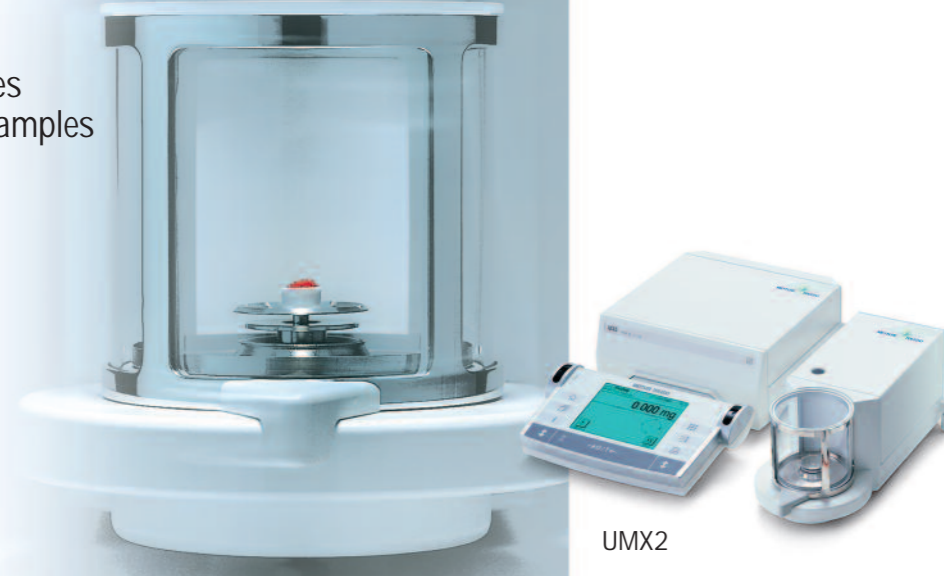
Your requirements? Precise weighing is the backbone of many laboratory processes. Non-compliance with defined maximum limits can have disastrous consequences in regulated areas. Measurement sequences must be repeated, and valuable substances are lost. Invalid values can even cause production stops.

<p>Correct and reliable data, weighing valuable substances Is high measurement certainly important for you? Are you required to weigh within defined tolerances? Is your substance expensive or difficult to obtain? Is it important for you to be able to weigh extremely small quantities with extremely high accuracy?</p>	<p>Yes</p>	<p>For correct and reliable data: MinWeigh</p>
<p>Hazardous material Do you work with toxic substances? Is it important for you that users are protected? Would you like to avoid cross contamination?</p>	<p>Yes</p>	<p>For the protection of users and samples: SmartSens</p>
<p>Fast weighing to the target weight, even under difficult environmental conditions Is it important to you that the balance shows precise results fast? Do you weigh under difficult environmental conditions? Is it important to you that the weighing process is as short as possible?</p>	<p>Yes</p>	<p>For the fastest measuring results: SmartGrid and ErgoClips</p>
<p>User profiles and access rights Do different users work on one balance? Are you required to document what is weighed, when and how it is weighed, and who weighs it?</p>	<p>Yes</p>	<p>For secure operation through individual configurations: 8 Users</p>
<p>Electrostatically charged samples Are your samples electrostatically charged, making it difficult to obtain stable and exact weighing results?</p>	<p>Yes</p>	<p>For immediate neutralization of electrostatically charged samples: Antistatic Kit</p>
<p>Ensuring weighing performance Are you required to check your balance on a regular basis? Are you audited by external bodies?</p>	<p>Yes</p>	<p>For ensuring weighing performance: ServiceXXL, FACT or proFACT, LevelControl and BalanceCheck</p>
<p>Fully traceable documentation Are you required to provide seamless documentation of your results? Is it important to clearly identify your samples? Is the data integrated into a network (LIMS)?</p>	<p>Yes</p>	<p>For data management and data security: Flexible interface system and LabX balance software</p>

Performance Class

UMX/MX Microbalances for weighing smallest samples

Precise weighing of the smallest samples. Guarantees maximum yield of valuable substances.



UMX2

XP Analytical Balances for secure weighing processes

Security knows no alternative. Optimal measuring, user and data security, combined with high speed and maximum operating comfort.



XP56



XP205

XS Analytical Balances for the daily routine

Maximum productivity. Innovative ergonomics and high speed for unmatched weighing efficiency.



XS205DU

Area of Application	Main Features and Safety Functions	Model	Readability	Repeatability *	Weighing range								Weighing pan	Minimum Sample Weight**	Price	Printer, Software and Accessories		
					2g	5g	20g	50g	100g	200g	300g	500g						
<ul style="list-style-type: none"> In regulated areas (e.g. GxP, FDA, BRC) For the smallest samples, e.g. according to the U.S. Pharmacopeia For optimal traceability and compliance with specifications For working with toxic substances For different users with various user profiles Under difficult environmental conditions, and in clean rooms For work with electrostatically charged samples (integrable anti-static kit for XP analytical balances) For specific weighing tasks and applications, such as density determination, statistical evaluation and formula weighing Data management in networked environments, LIMS connectivity 	<p>MinWeigh For typical minimum sample weights from 0.6 mg. Warning and protective functions for adhering to defined tolerances.</p> <p>proFACT Freely configurable time- and/or temperature-controlled adjustment and linearization, with two built-in weights.</p> <p>8 Users Saves time and helps prevent mistakes. Enter up to 8 individual user profiles.</p> <p>Motorized draft shield Automatic, fully configurable hands-free operation of the draft shield doors.</p> <p>TouchScreen Display with touch-screen technology for safe and simple operation.</p> <p>SmartSens Hands-free draft shield operation. Helpful when handling toxic substances.</p> <p>Connectivity 4 interface options.</p> <p>GxP Seamless documentation according to GxP, simple and flexible configuration. Alphanumeric sample identification.</p>	UMX5 Comparator	0.1 µg	0.00025 mg									∅ 16 mm	≥ 0.6 mg		<p>Bluetooth printer BT-P42 With wireless connection to the balance.</p> <p>GxP-compliant reporting The report header and sample identification are selected with the extremely clear and easy touch screen operation.</p> <p>ErgoSens Freely positionable optical sensor for hands-free operation of the XP and XS analytical balances.</p> <p>PC software LabX balance For simple and reliable transfer of weighing results into spreadsheet programs such as Excel, as well as for instrument and data management. In addition to all the functionalities of LabX light balance, LabX pro balance offers conformity according to 21 CFR Part 11.</p> <p>For more information, visit www.mt.com/labx</p> <p>OIML weights For the systematic inspection, test, and control of analytical balances, we offer a comprehensive assortment of METTLER TOLEDO OIML weights.</p>		
		UMX2	0.1 µg	0.00025 mg										∅ 16 mm	≥ 0.6 mg			
		MX5	1 µg	0.0008 mg											∅ 27 mm		≥ 1.5 mg	
		XP56	1 µg	0.0015 mg											40x40 mm		≥ 2.1 mg	
		XP56 DeltaRange	0.01 / 0.002 mg	0.006/0.002 mg											40x40 mm		≥ 3.6 mg	
		XP26	1 µg	0.0015 mg											40x40 mm		≥ 2.1 mg	
		XP26 DeltaRange	0.01 / 0.002 mg	0.005/0.002 mg											40x40 mm		≥ 3.6 mg	
		XP205	0.01 mg	0.015 mg											73x78 mm		≥ 24 mg	
		XP205 DeltaRange	0.1 / 0.01 mg	0.05/0.015 mg											73x78 mm		≥ 24 mg	
		XP105 DeltaRange	0.1 / 0.01 mg	0.05 / 0.015 mg											73x78 mm		≥ 24 mg	
XP504	0.1 mg	0.1 mg											73x78 mm	≥ 120 mg				
XP504 DeltaRange	1 / 0.1 mg	0.5/ 0.1 mg											73x78 mm	≥ 120 mg				
XP204	0.1 mg	0.05 mg											73x78 mm	≥ 120 mg				
<ul style="list-style-type: none"> For high productivity and fast results in routine operation Under difficult environmental conditions, such as exhaust booths For specific weighing tasks and applications, such as density determination, statistical evaluation and formula weighing 	<p>FACT Automatic internal adjustment and linearization.</p> <p>GxP Seamless documentation according to GxP, simple and flexible configuration. Alphanumeric sample identification.</p> <p>TouchScreen Display with touch screen-technology for safe and simple operation.</p> <p>SmartGrid For fast weighing processes and different taring containers. Weighing pan with grid structure, minimum surface area, ultra-fast results.</p> <p>Connectivity Complete flexibility through 7 interface options, including Bluetooth and Ethernet.</p>	XS205 DualRange	0.1 / 0.01 mg	0.05/ 0.02 mg									73 x 78 mm	≥ 30 mg				
		XS105 DualRange	0.1 / 0.01 mg	0.05/ 0.02 mg											73 x 78 mm	≥ 30 mg		
		XS204	0.1 mg	0.07 mg											73 x 78 mm	≥ 120 mg		
		XS104	0.1 mg	0.07 mg											73 x 78 mm	≥ 120 mg		
		XS204 DeltaRange	1 / 0.1 mg	0.5/0.1 mg											73 x 78 mm	≥ 120 mg		
		XS64	0.1 mg	0.07 mg											73 x 78 mm	≥ 120 mg		

Know one – know all. Consistent touch-screen user interface, seven languages, individually configurable. Increases efficiency and reduces training costs.

Complete information is available at www.mt.com/excellence-analytical

DeltaRange Ten times higher readability across the entire weighing range. This fine range covers up to 40% of the coarse range, depending on the model.

DualRange Dual-range balance. Fine range from 0 to up to 40% of the weighing range, depending on the model.

* At minimal load
** Typical minimum weight (Acc. to USP): Uncertainty of 0.1% and three standard deviations (3 sd) at low load using small tare containers.

Interested in even smaller minimum sample weights? See backpage.

For more information, visit www.mt.com/weights

Filter kits
For MX and UMX.
For weighing filters with a diameter of up to 110 mm.

Density kit for XP/ XS
For determining the density of liquids and solids. Fast and secure, together with the built-in density application software.

ErgoClips
Holders for round-bottom flasks and graduated flasks, various test tubes and a wide variety of single-use weighing pans. Allow safe positioning on all XP/XS models.

- For round-bottom flasks
- For graduated flasks
- For large taring containers, such as titration beakers

- For weighing boats

MinWeigh Door
Draft shield with adjustable opening. Combined with the ErgoClip Flask, it enables direct weighing into the tare container and shorter stabilization times.

Antistatic kit for XP analytical balances
The fully integrable ionizer generates positive and negative ions which immediately eliminate disruptive electrostatic charge.
The system does not swirl any of the sample substances. Toxic substances no longer pose a threat to users, and cross contamination of samples is avoided.
The antistatic kit ensures the fastest possible weighing under the most difficult conditions.

Excellence Plus

Excellence