

MA Precision Balances

Efficient and Simple



Simple Operation

The large, bright screen is easy to read, while on-screen instructions guide you through each weighing procedure. Calculations are performed automatically and it's simple to print out results or transfer them to a storage device.



Multiple Interfaces

Thanks to the USB-A and RS232 interfaces, you can transfer your weighing data quickly and without error to a printer or a computer or connect to a USB storage device for simple data transfer.



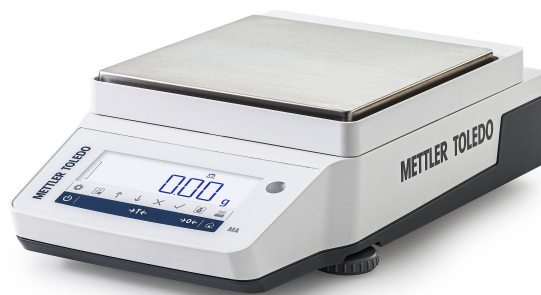
Trusted Performance

With proven weighing technologies and built-in adjustment using the internal test weights, you can trust your results to be consistent and precise.



Built to Last

Thanks to high-quality materials and solid construction, these balances are highly resilient. Even with intensive use in challenging weighing environments, you can depend on many years of reliable service.



Easy Everyday Weighing For Your Routine Tasks

You can rely on accurate results with these high-quality balances that are intuitive to operate and easy to clean. Built-in applications provide simple instructions, while automatic calculations and electronic data transfer minimize errors and make documentation easy.

The bright LCD screen provides excellent readability, while the glass surface resists wear and tear and is easy to clean. The touch keys make it simple to operate the balance and navigate through the menus in the user interface.

Technical Specifications



	MA103	MA203	MA303	MA503
Limit values				
Capacity	120 g	220 g	320 g	520 g
Readability	1 mg	1 mg	1 mg	1 mg
Repeatability (at 5% load)	1 mg	1 mg	1 mg	1 mg
Linearity deviation	2 mg	2 mg	2 mg	2 mg
Sensitivity offset (at nominal load) ▲	6 mg	8 mg	8 mg	8 mg
Typical values				
Repeatability (at 5% load)	0.7 mg	0.7 mg	0.7 mg	0.7 mg
Linearity deviation	0.6 mg	0.6 mg	0.6 mg	0.6 mg
Sensitivity offset (at nominal load) ▲	4 mg	5 mg	5 mg	5 mg
Minimum weight (USP, tolerance = 0.10%) ▼	1.4 g	1.4 g	1.4 g	1.4 g
Minimum weight (tolerance = 1%) ▼	140 mg	140 mg	140 mg	140 mg
Settling time	1.5 s	1.5 s	1.5 s	1.5 s
Dimensions and other specifications				
Balance dimensions (W × D × H)	209 × 354 × 354 mm	209 × 354 × 354 mm	209 × 354 × 354 mm	209 × 354 × 354 mm
Weighing pan diameter	120 mm	120 mm	120 mm	120 mm

▲ after adjustment with internal weight

▼ determined at 5% load, k = 2

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



	MA602	MA1002	MA2002	MA3002
Limit values				
Capacity	620 g	1.2 kg	2.2 kg	3.2 kg
Readability	0.01 g	0.01 g	0.01 g	0.01 g
Repeatability (at 5% load)	10 mg	10 mg	10 mg	10 mg
Linearity deviation	20 mg	20 mg	20 mg	20 mg
Sensitivity offset (at nominal load) ▲	40 mg	60 mg	80 mg	80 mg
Typical values				
Repeatability (at 5% load)	7 mg	7 mg	7 mg	7 mg
Linearity deviation	6 mg	6 mg	6 mg	6 mg
Sensitivity offset (at nominal load) ▲	25 mg	40 mg	50 mg	50 mg
Minimum weight (USP, tolerance = 0.10%) ▼	14 g	14 g	14 g	14 g
Minimum weight (tolerance = 1%) ▼	1.4 g	1.4 g	1.4 g	1.4 g
Settling time	1 s	1 s	1 s	1 s
Dimensions and other specifications				
Balance dimensions (W × D × H)	209 × 354 × 100 mm	209 × 354 × 100 mm	209 × 354 × 100 mm	209 × 354 × 100 mm
Weighing pan dimensions (W × D)	180 × 180 mm	180 × 180 mm	180 × 180 mm	180 × 180 mm

▲ after adjustment with internal weight

▼ determined at 5% load, k = 2

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



	MA4002	MA6002	MA5001
Limit values			
Capacity	4.2 kg	6.2 kg	5.2 kg
Readability	0.01 g	0.01 g	0.1 g
Repeatability (at 5% load)	10 mg	10 mg	80 mg
Linearity deviation	20 mg	20 mg	60 mg
Sensitivity offset (at nominal load) ▲	80 mg	80 mg	240 mg
Typical values			
Repeatability (at 5% load)	7 mg	7 mg	50 mg
Linearity deviation	6 mg	6 mg	20 mg
Sensitivity offset (at nominal load) ▲	50 mg	50 mg	150 mg
Minimum weight (USP, tolerance = 0.10%) ▼	14 g	14 g	100 g
Minimum weight (tolerance = 1%) ▼	1.4 g	1.4 g	10 g
Settling time	1 s	1 s	1 s
Dimensions and other specifications			
Balance dimensions (W × D × H)	209 × 354 × 100 mm	209 × 354 × 100 mm	209 × 354 × 100 mm
Weighing pan dimensions (W × D)	180 × 180 mm	180 × 180 mm	180 × 180 mm

▲ after adjustment with internal weight

▼ determined at 5% load, k = 2

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



	MA12001L	MA16001L	MA32001L	MA32000L
Limit values				
Capacity	12.2 kg	16.2 kg	32.2 kg	32.2 kg
Readability	0.1 g	0.1 g	0.1 g	1 g
Repeatability (at 5% load)	80 mg	80 mg	80 mg	600 mg
Linearity deviation	200 mg	200 mg	250 mg	300 mg
Sensitivity offset (at nominal load) ▲	600 mg	800 mg	900 mg	1 g
Typical values				
Repeatability (at 5% load)	40 mg	40 mg	40 mg	400 mg
Linearity deviation	60 mg	60 mg	80 mg	100 mg
Sensitivity offset (at nominal load) ▲	400 mg	500 mg	550 mg	650 mg
Minimum weight (USP, tolerance = 0.10%) ▼	82 g	82 g	82 g	820 g
Minimum weight (tolerance = 1%) ▼	8.2 g	8.2 g	8.2 g	82 g
Settling time	1.5 s	1.5 s	1.5 s	1.2 s
Dimensions and other specifications				
Balance dimensions (W × D × H)	354 × 380 × 126 mm	354 × 380 × 126 mm	354 × 380 × 126 mm	354 × 380 × 126 mm
Weighing pan dimensions (W × D)	352 × 246 mm	352 × 246 mm	352 × 246 mm	352 × 246 mm

▲ after adjustment with internal weight

▼ determined at 5% load, k = 2

All models are available as approved versions.

Features

Performance

- Electromagnetic Force Compensation (EMFC) weighing cell
- Internal adjustment

Efficient Operation

- LCD hybrid touchscreen
- 11 built-in applications
- Statistical data analysis
- Hook for weighing below the balance
- Plug & Play

Quality Assurance

- OIML/NTEP approved
- Front level indicator
- Sample ID

Data Management

- 2 interfaces: USB-A, RS232
- Bluetooth option
- Transfer weight function for easy data transfer
- MT-SICS
- EasyDirect Balance software

Sustainable Value

- Metal base, PBT top housing
- IP43 (10 mg – 1 g models)
- Overload protection
- Easy-to-clean QuickLock draft shield

Power Consumption

Instrument Steady State	Approx. Power Consumption (W)*
Operational Mode	1.3
Standby Mode	1.2

*Test results conducted by METTLER TOLEDO under ideal conditions.

Operational Mode = Default balance settings



Applications

- Weighing
- Piece Counting
- Density Determination
- Formulation
- Dynamic Weighing
- Check Weighing
- Totalling
- Percent Weighing
- Factor Weighing
- Statistics
- Interval Weighing



Accessories

Enhance performance, improve ergonomics, and handle your data efficiently with our wide range of accessories, including EasyDirect Balance data management software, printers, weights, and density kit.

For further information on accessories, please visit our web page.

► www.mt.com/lab-accessories



Professional Service

With a professional installation, your balance is expertly set up to deliver accurate results from day one.

To learn more about our service offerings, scan the QR code or visit our website:

► www.mt.com/professional-service



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