

# MA Analytical 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 automatic 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



	MA55	MA95	MA155DU
<b>Limit values</b>			
Capacity	52 g	92 g	152 g
Readability	0.01 mg	0.01 mg	0.1 mg
Capacity of fine range	–	–	62 g
Readability in fine range	–	–	0.01 mg
Repeatability (at 5% load)	0.03 mg	0.03 mg	0.03 mg
Linearity deviation	0.1 mg	0.1 mg	0.2 mg
Sensitivity offset (at nominal load) ▲	0.4 mg	0.4 mg	0.8 mg
<b>Typical values</b>			
Repeatability (at 5% load)	0.015 mg	0.015 mg	0.015 mg
Linearity deviation	0.03 mg	0.03 mg	0.06 mg
Sensitivity offset (at nominal load) ▲	0.25 mg	0.25 mg	0.5 mg
Minimum weight (USP, tolerance = 0.10%) ▼	30 mg	30 mg	30 mg
Minimum weight (tolerance = 1%) ▼	3 mg	3 mg	3 mg
Settling time	4 s	4 s	4 s
<b>Dimensions and other specifications</b>			
Balance dimensions (W × D × H)	209 × 354 × 354 mm	209 × 354 × 354 mm	209 × 354 × 354 mm
Weighing pan dimensions (W × D)	–	–	–
Weighing pan diameter	80 mm	80 mm	80 mm

▲ after adjustment with internal weight

▼ determined at 5% load, k = 2

All models are available as approved versions.



	MA54	MA104	MA204
<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
Sensitivity offset (at nominal load) ▲	0.3 mg	0.5 mg	0.8 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) ▲	0.15 mg	0.3 mg	0.5 mg
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 and other specifications</b>			
Balance dimensions (W × D × H)	209 × 354 × 354 mm	209 × 354 × 354 mm	209 × 354 × 354 mm
Weighing pan dimensions (W × D)	–	–	–
Weighing pan diameter	90 mm	90 mm	90 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).

# 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.



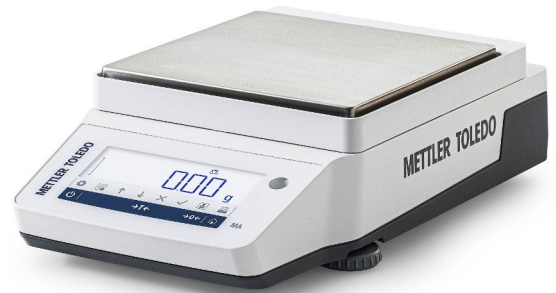
### Trusted Performance

With proven weighing technologies and automatic 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
<b>Limit values</b>				
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
<b>Typical values</b>				
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
<b>Dimensions and other specifications</b>				
Balance dimensions (W × D × H)	209 × 354 × 354 mm	209 × 354 × 354 mm	209 × 354 × 354 mm	209 × 354 × 354 mm
Weighing pan dimensions (W × D)	–	–	–	–
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
<b>Limit values</b>				
Capacity	620 g	1.2 kg	2.2 kg	3.2 kg
Readability	10 mg	10 mg	10 mg	10 mg
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 g	80 g
<b>Typical values</b>				
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
<b>Dimensions and other specifications</b>				
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
Weighing pan diameter	–	–	–	–

▲ 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
<b>Limit values</b>			
Capacity	4.2 kg	6.2 kg	5.2 kg
Readability	10 mg	10 mg	100 mg
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
<b>Typical values</b>			
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
<b>Dimensions and other specifications</b>			
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
Weighing pan diameter	–	–	–

▲ 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
<b>Limit values</b>				
Capacity	12.2 kg	16.2 kg	32.2 kg	32.2 kg
Readability	100 mg	100 mg	100 mg	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
<b>Typical values</b>				
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
<b>Dimensions and other specifications</b>				
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
Weighing pan diameter	–	–	–	–

▲ 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
- 10 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
- Overload protection
- Easy-to-clean QuickLock draft shield

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



### Mettler-Toledo GmbH

Im Langacher 44  
8606 Greifensee, Switzerland  
[www.mt.com/contact](http://www.mt.com/contact)

Subject to technical changes.  
© 10/2023 METTLER TOLEDO. All rights reserved.  
30839980A en  
Group Marketing

[www.mt.com/MA-precision](http://www.mt.com/MA-precision)

For more information



30839980