

A Top Quality series of Analytical Balances that combine elegance with highly reliable measuring performance. Double case structure, ergonomic keypad, external or internal calibration. Many embedded advanced features make them perfect for use in laboratory, research departments, formulation and quality control applications.

The -ION models are equipped with an integrated ioniser on the rear of the balance with the purpose to neutralize static electricity on charged samples like plastic parts, containers or films..

Main features

- Electromagnetic force restoration weighing system
- User selectable environmental filter
- External or automatic internal calibration
- LCD with backlight with adjustable contrast
- Integrated ioniser on rear of balance for -ION models
- Large glass draftshield with 3 sliding doors for easy access to the items being weighed
- RS232 serial interface
- Plastic protection cover

Accessories

- Portable ioniser Ion-A15 (BL0371)
- Serial Printer TLP-50, with date/time (C054)
- Dot-matrix Printer TX-110, with functions (AC030)
- Serial Printer DPP-250 (AC007)
- Density KIT for solids and liquids (AC002)
- PC data collection software (BL0476)
- Serial to USB converter (E1002)
- Factory Calibration certificate (BL0333)
- Conformity Declaration (Verification) ⁽²⁾

Technical data

Common features

- Span drift (+ 10...+ 30 °C): +/- 3ppm/°C
- Dimensions LxWxH (mm): 345x215x345
- Weighing chamber dimensions LxWxH (mm): 162x171x225
- Power supply 110-230Vac, 50/60Hz; output 24V 1A multi plug

External calibration models

- Net Weight: 6,3Kg

Internal calibration models

- Net Weight: 6,6Kg



Verified models: see page 34



Model	Max (g)	Readability [d] (mg)	Pan (mm)	Repeatability (St.Dev.) (mg)	Linearity (mg)	Response time (sec.)
External calibration						
M124A	120	0,1	Ø 80	0,1	± 0,3	≤ 4
M214A	220	0,1	Ø 80	0,1	± 0,3	≤ 4
M254A	250	0,1	Ø 80	0,1	± 0,3	≤ 4

Automatic internal calibration						
Model	Max (g)	Readability [d] (mg)	Pan (mm)	Repeatability (St.Dev.) (mg)	Linearity (mg)	Response time (sec.)
M124Ai	120	0,1	Ø 80	0,1	± 0,3	≤ 4
M214Ai	220	0,1	Ø 80	0,1	± 0,3	≤ 4
M254Ai	250	0,1	Ø 80	0,1	± 0,3	≤ 4
M314Ai	310	0,1	Ø 80	0,1	± 0,4	≤ 4
M314Ai-ION	310	0,1	Ø 80	0,1	± 0,4	≤ 4
HPB-514Ai	510	0,1	Ø 80	0,1mg if weight ≤ 220g 0,3mg from 220g to 310g 0,35mg from 310g to 510g	± 0,5	≤ 4
HPB-514Ai-ION	510	0,1	Ø 80	0,1mg if weight ≤ 220g 0,3mg from 220g to 310g 0,35mg from 310g to 510g	± 0,5	≤ 4
HPB-614Ai	610	0,1	Ø 80	0,1mg if weight ≤ 220g 0,3mg from 220g to 310g 0,35mg from 310g to 610g	± 0,5	≤ 4
HPB-614Ai-ION	610	0,1	Ø 80	0,1mg if weight ≤ 220g 0,3mg from 220g to 310g 0,35mg from 310g to 610g	± 0,5	≤ 4
HPB-1004Ai	1000	0,1	Ø 80	0,3mg if weight ≤ 500g 0,4mg from 500g to 1000g	± 0,5	≤ 6
HPB-1004Ai-ION	1000	0,1	Ø 80	0,3mg if weight ≤ 500g 0,4mg from 500g to 1000g	± 0,5	≤ 6



Verified models:
see page 35



Model	Max (g)	Readability [d] (mg)	Pan (mm)	Repeatability (St.Dev.) (mg)	Linearity (mg)	Response time (sec.)
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External calibration

MG124A	120	0,1	Ø 80	0,1	± 0,3	≤ 4
MG214A	220	0,1	Ø 80	0,1	± 0,3	≤ 4
MG254A	250	0,1	Ø 80	0,1	± 0,3	≤ 4

Automatic internal calibration

MG124Ai	120	0,1	Ø 80	0,1	± 0,3	≤ 4
MG214Ai	220	0,1	Ø 80	0,1	± 0,3	≤ 4
MG254Ai	250	0,1	Ø 80	0,1	± 0,3	≤ 4
MG314Ai	310	0,1	Ø 80	0,1	± 0,4	≤ 4
MG314Ai-ION	310	0,1	Ø 80	0,1	± 0,4	≤ 4
HPBG-514Ai	510	0,1	Ø 80	0,1mg if weight ≤ 220g 0,3mg from 220g to 310g 0,35mg from 310g to 510g	± 0,5	≤ 4
HPBG-514Ai-ION	510	0,1	Ø 80	0,1mg if weight ≤ 220g 0,3mg from 220g to 310g 0,35mg from 310g to 510g	± 0,5	≤ 4
HPBG-614Ai	610	0,1	Ø 80	0,1mg if weight ≤ 220g 0,3mg from 220g to 310g 0,35mg from 310g to 610g	± 0,5	≤ 4
HPBG-614Ai-ION	610	0,1	Ø 80	0,1mg if weight ≤ 220g 0,3mg from 220g to 310g 0,35mg from 310g to 610g	± 0,5	≤ 4
HPBG-1004Ai	1000	0,1	Ø 80	0,3mg if weight ≤ 500g 0,4mg from 500g to 1000g	± 0,5	≤ 6
HPBG-1004Ai-ION	1000	0,1	Ø 80	0,3mg if weight ≤ 500g 0,4mg from 500g to 1000g	± 0,5	≤ 6

All these models are equipped with a large graphic display for easy reading and user friendly operations with many functions. Double case structure, ergonomic keypad. These balances have an extensive recipe database, GLP and many embedded advanced features that make them well suited for use in laboratory, research departments, compounds formulation and quality control applications.

The -ION models are equipped with an integrated ioniser on the rear of the balance with the purpose to neutralize static electricity on charged samples like plastic parts, containers or films for acquiring the most accurate results.

Main features

- Electromagnetic force restoration weighing system
- User selectable environmental filter
- External or automatic internal calibration
- Recipe database: 99 recipes can be stored, each with up to 20 ingredients
- Large Graphic display allows efficient and easy operations
- Multi Language: EN-DE-FR-IT-ES-PT
- GLP/ISO record of last stored calibration data
- Integrated ioniser on rear of balance for -ION models
- Large glass draftshield with 3 sliding doors for easy access to the items being weighed
- RS232 serial interface
- Plastic protection cover

Accessories

- Portable ioniser Ion-A15 (BL0371)
- Communication KIT balance/PC (BL0476)
- Serial Printer TLP-50, with date/time (C054)
- Serial Printer DPP-250 (AC007)
- Density KIT for solids and liquids (AC002)
- Serial to USB converter (E1002)
- Serial cable for serial output to printer or PC (E743)
- Factory Calibration certificate (BL0333)
- Conformity Declaration (Verification)

Technical data

Common features

- Span drift (+ 10...+ 30 °C): +/- 3ppm/°C
- Dimensions LxWxH (mm): 345x215x345
- Weighing chamber dimensions LxWxH (mm): 162x171x225
- Power supply 110-230Vac, 50/60Hz; output 24V 1A multi plug

External calibration models

- Net Weight: 6,3Kg

Internal calibration models

- Net Weight: 6,6Kg

M5 analytical balances are the most innovative and advanced series made by BEL Engineering. Equipped with large 5" color touch screen display, it gives a user-friendly access to all the balance's advanced applications and internal databases.

The user has easy and intuitive access to all the functions thanks to the icon-driven menus. This means more efficiency, productivity and interactivity.

The -ION models are equipped with an integrated ioniser on the rear of the balance with the purpose to neutralize static electricity on charged samples like plastic parts, containers or films for acquiring the most accurate results.

A double case structure protects the heart of the balance: an aluminum inner case and a composite plastic external case.

Main features

- Electromagnetic force restoration weighing system
- User selectable environmental filter
- Highly integrated weighing cell
- Automatic internal calibration
- 5" Touch-screen Display 800x480
- RS232 serial interface
- Selectable and customizable measuring units
- Internal Database
- GLP
- Multi Languages (EN-DE-FR-IT-SP-PT-CN-RU)
- Multi-user with password protection
- USB port for import/export database data
- Advanced piececounting function with Statistics report
- Pipette check
- Textile function to measure fibers with Statistics report
- Advanced Density function, with density index (DI) calculation
- Formulation (Recipe)
- Checkweighing
- Percentual weighing
- Accumulation function
- Animal weighing
- Max load determination (Peak hold)
- Large glass draftshield with 3 sliding doors for easy access to the items being weighed



Model	Max (g)	Readability [d] (mg)	Pan (mm)	Repeatability (St.Dev.) (mg)	Linearity (mg)	Response time (sec.)
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Automatic internal calibration

M5-M214Ai	220	0,1	Ø 80	0,1	± 0,3	≤ 4
M5-M214Ai-ION	220	0,1	Ø 80	0,1	± 0,3	≤ 4
M5-M254Ai	250	0,1	Ø 80	0,1	± 0,3	≤ 4
M5-M254Ai-ION	250	0,1	Ø 80	0,1	± 0,3	≤ 4
M5-M314Ai	310	0,1	Ø 80	0,1	± 0,3	≤ 4
M5-M314Ai-ION	310	0,1	Ø 80	0,1	± 0,3	≤ 4
M5-HPB-514i	510	0,1	Ø 80	0,1mg if weight ≤ 220g 0,3mg from 220g to 310g 0,35mg from 310g to 510g	± 0,5	≤ 4
M5-HPB-514i-ION	510	0,1	Ø 80	0,1mg if weight ≤ 220g 0,3mg from 220g to 310g 0,35mg from 310g to 510g	± 0,5	≤ 4
M5-HPB-614i	610	0,1	Ø 80	0,1mg if weight ≤ 220g 0,3mg from 220g to 310g 0,35mg from 310g to 610g	± 0,5	≤ 4
M5-HPB-614i-ION	610	0,1	Ø 80	0,1mg if weight ≤ 220g 0,3mg from 220g to 310g 0,35mg from 310g to 610g	± 0,5	≤ 4
M5-HPB-1004i	1000	0,1	Ø 80	0,3mg if weight ≤ 500g 0,4mg from 500g to 1000g	± 0,5	≤ 6
M5-HPB-1004i-ION	1000	0,1	Ø 80	0,3mg if weight ≤ 500g 0,4mg from 500g to 1000g	± 0,5	≤ 6

Verified models:
see page 36